

**REQUEST FOR PROPOSALS  
RFP-484-04202018DB-B**

**TO DESIGN AND CONSTRUCT**

**THE FY 18 BRIDGE REPLACEMENT PROJECT**

**THROUGH A**

**DESIGN BUILD AGREEMENT**

**PROJECT NUMBER**

**P.I. No. 0015913**

**INSTRUCTIONS TO PROPOSERS**

**GEORGIA DEPARTMENT OF TRANSPORTATION**

**RFP Issued: April 20, 2018**

**Proposals Due: June 18, 2018 at 11:00 AM EDT**

**Georgia Department of Transportation  
One Georgia Center  
600 West Peachtree Street, NW  
Atlanta, Georgia 30308**

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Form C	Conflict of Interest Disclosure Statement
Form D	Form of Proposal Bond
Form E	Construction Contractors Bid Opportunity List
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## SECTION 1.0 INTRODUCTION AND GENERAL PROVISIONS

### 1.1 Introduction

The Georgia Department of Transportation (GDOT), an agency of the State of Georgia (State), issued a Request for Qualifications (RFQ) for the FY 18 Bridge Replacement Project (as described in more detail in Section 1.3, the “Project,”) dated February 9, 2018. GDOT issued a Request for Proposals (RFP), dated April 13, 2018, as the second step in the procurement process for the Project, pursuant to Section 32-2-81 of the Official Code of Georgia Annotated (Code), Chapter 672-18 of the Rules of the Georgia Department of Transportation (Rules), and other applicable laws and guidelines.

The RFP solicits competitive detailed Proposals (as described in more detail in Section 1.5.1) from qualified DB Teams that respond to this solicitation (Proposers) to develop the Project by means of a Design-Build Agreement (Agreement) between the successful Proposer and GDOT. Under such Agreement, the DB Team will be required to design and construct the Project during the Contract Time.

Following the release of the initial RFP, GDOT may opt to engage in a series of confidential meetings and discussions with the Proposers, all in accordance with the procedures set forth in the RFP. In response to feedback and input received from the Proposers and other stakeholders, GDOT may opt to issue amendments to the Instructions to Proposers (ITP) and/or RFP. If GDOT issues any amendments to the RFP, the amendments will supplement or replace the RFP in part or in whole.

Proposals will only be considered from those entities that are selected as the most-qualified Proposers based on their Statements of Qualifications (SOQs) submitted in response to the RFQ. This set of Instructions to Proposers (ITP) provides instructions to be followed by Proposers in their responses to the RFP. Proposals must comply with all ITP requirements.

Refer to Exhibit 1 of the Agreement for the meaning of various capitalized terms and acronyms used but which are not defined herein. Unless otherwise specified, references to Sections, Exhibits, and Forms within this ITP shall mean Sections of the ITP and Exhibits and Forms attached to the ITP. All times in this ITP are Eastern Standard Time (EST) or Eastern Daylight Time (EDT), as applicable.

### 1.2 RFP Documents

The RFP consists of the items listed below, and any other documents that may be issued by amendment, as such documents may be revised and supplemented:

- (a) Instructions to Proposers (ITP) (including the attached Exhibits and Forms);
- (b) DB Documents; and
- (c) Reference Information Documents (RIDs).

Refer to Article 1.2 of the Agreement for a list of the DB Documents and their order of precedence. The RIDs are listed in Exhibit H hereto.

The ITP and the RIDs are not contract documents and will not form a part of the DB Documents. GDOT does not make any representation or guarantee as to the accuracy, completeness, or fitness of the RIDs. GDOT does not take any responsibility for the RIDs and Proposers are responsible for any conclusions they may draw from the RIDs. GDOT is making the RIDs

available to Proposers for the sole purpose of providing information in the possession of GDOT, regardless of whether such information is accurate, complete, pertinent, or of any value.

### 1.3 General Project Description

The Project is to design and construct the replacement of five (5) bridges.

The Design-Build Team will provide design and construction services necessary to replace bridges at locations identified in Volume 2, Attachment 1-1.

The Design-Build Team will be responsible for the design and construction of the Project during the Contract Time. As part of such Work, the Design-Build Team will be responsible for undertaking and completing certain Utility Adjustments pursuant to Article 7.5 of the Agreement and Section 6 of the Technical Provisions.

### 1.4 Procurement Schedule

The procurement schedule is as follows:

	Activity	Date	Time
1.	Issue RFP	4/20/2018	
2.	Deadline for Proposers to submit questions regarding RFP	5/18/2018	5:00 P.M.
3.	Deadline for submission of changes to Proposer's organization	5/18/2018	5:00 P.M.
4.	Proposal Due Date	6/18/2018	11:00 A.M.
5.	Letting (Selection of Apparent Successful Proposer)	6/18/2018	11:00 A.M.

All dates set forth above and in the RFP are subject to change in GDOT's sole discretion. To the extent such dates are changed, GDOT shall formally notify each Proposer through the Georgia Procurement Registry (GPR) site described in Section 2.2 below.

### 1.5 General Provisions Regarding Proposals

#### 1.5.1 Proposal Contents

As used in this procurement, the term "Proposal" means a Proposer's complete response to the RFP, including but not limited to the Proposer's:

- (a) Administrative Information Submittals; and
- (b) Price Proposal for the Project.

Detailed instructions regarding the Administrative Information Submittals and the Price Proposal are provided in Exhibit B and Exhibit D. Forms required for inclusion in the Proposals are attached to this ITP. Each Proposal component shall be clearly titled and identified, and shall be submitted without reservations, qualifications, conditions, or assumptions. Any failure to provide all the information and all completed forms in the format specified by the ITP may result in GDOT's rejection of the Proposal. All blank spaces in the Proposal forms must be filled in as noted. No substantive change(s) shall be made to the Proposal Forms. The successful Proposer will be required to deliver an original copy of Form L prior to the execution of the Agreement.

### **1.5.2 Inclusion of Proposal in DB Documents**

Portions of the successful Proposer's Proposal will become part of the DB Documents, as applicable and to the extent specified in the Agreement. All other information is for evaluation purposes only and will not become part of the DB Documents.

### **1.5.3 Commitments in the Proposal**

GDOT will give no consideration to tentative or qualified commitments in the Proposals. For example, GDOT will give no consideration to phrases such as "we may," "are considering," "will endeavor to," or phrases of a similar nature in the evaluation process because they do not indicate a firm commitment.

### **1.5.4 Property of GDOT**

All documents included in the Proposals submitted by Proposers in response to the RFP shall become the property of GDOT and will not be returned to Proposer.

## **1.6 Improper Conduct**

### **1.6.1 Prohibited Activities**

If the Proposer, or anyone representing the Proposer, offers or gives any advantage, gift, gratuity, discount, bribe, or loan of any sort to GDOT, the State Transportation Board, or the officers, administrators, staff, or consultants of GDOT or the State Transportation Board, including agents or anyone representing the foregoing at any time during the Project procurement process: (1) GDOT shall immediately disqualify the Proposer; (2) the Proposer shall forfeit its Proposal Bond; and (3) GDOT may sue the Proposer for damages.

### **1.6.2 Non-Collusion**

The Proposer shall not undertake any of the prohibited activities identified in the Non-Collusion Affidavit (Form B). Note that multiple parties are required to execute copies of Form B.

### **1.6.3 Organizational Conflicts of Interest**

Proposers are advised that the Conflicts of Interest Policy and the organizational conflict of interest rules found in 23 C.F.R. § 636, Subpart A, including 23 C.F.R. § 636.116, apply to this procurement.

Each Proposer must include in its Proposal a full disclosure of all potential organizational conflicts of interest within its team (Form C). Note that multiple parties are required to execute copies of Form C.

The Proposer is prohibited from receiving any advice or discussing any aspect of the Project or the procurement of the Project with any person or entity with an organizational conflict of interest, including, but not limited to, the entities and individuals listed in Exhibit G (List of GDOT Project Team); and any parent, affiliate, or subsidiary of any of the foregoing entities, or an entity that is under common ownership, control or management with any of the foregoing entities.

By submitting its Proposal, each Proposer agrees that, if an organizational conflict of interest is thereafter discovered, Proposer must make an immediate and full written disclosure to GDOT that includes a description of the action that Proposer has taken or proposes to take to avoid or mitigate such conflicts. If the Apparent Successful Proposer was aware of an organizational

conflict of interest prior to award of the DB Agreement and did not disclose the conflict to GDOT, GDOT may terminate the Proposal for default and may award the Agreement to the responsive Proposer with the next lowest-Price Proposal.

#### **1.6.4 Restrictions on Participation**

Proposers are advised that the following entities and individuals are precluded from submitting a Proposal and from participating on a Proposer team as a Participating Member, Major Non-Participating Member, Contractor, Subcontractor or subconsultant:

- (a) any entity or individual listed in Exhibit G (List of GDOT Project Team). GDOT has contracted with these entities or individuals, as the case may be, to aid in the development of the RFQ, RFP, estimates or scope of services for the Project, or to participate in the SOQ or Proposal evaluation process;
- (b) any entity that is a parent, affiliate, or subsidiary of any of the entities listed in Exhibit G, or that is under common ownership, control or management with any of the foregoing entities; and
- (c) any contractor who is currently suspended, debarred or voluntarily excluded under 49 CFR Part 29 or is otherwise determined to be ineligible to participate in the federal-aid highway program.

#### **1.6.5 No Participation on More Than One Proposer Team**

To ensure a fair procurement process, Participating Members and Major Non-Participating Members of Proposer teams are forbidden from participating, in any capacity, on another Proposer team on this Project during the course of the Project procurement (i.e. until execution of the Agreement by GDOT). The foregoing prohibition extends to affiliated entities of Participating Members and Major Non-Participating Members. GDOT reserves the right to disqualify any Proposer that fails to comply with this prohibition. If a Proposer has any question as to whether or not its proposed team would be in compliance with the terms of this Section 1.6.5, such Proposer may submit the issue to GDOT in writing, describing in reasonable detail the proposed structure, and seeking clarification.

#### **1.6.6 Reserved**

### **1.7 Equal Employment Opportunity**

Proposers shall not, in connection with the RFP and the DB Documents, discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, marital status, or disability. Proposers shall take affirmative action to ensure that applicants for employment and employees are not discriminated against because of their race, color, religion, sex, national origin, age, marital status, or disability. The areas requiring such affirmative action shall include, but not be limited to, the following: layoff or termination, rates of pay or other forms of compensation, employment, job assignment, promotion, demotion, transfer, recruitment and recruitment advertising, and selection for training, including apprenticeship, pre-apprenticeship, and on-the-job training. See Attachment 6 to Exhibit 8 of the Agreement for the State equal employment opportunity provisions that apply to the Project.

Each Proposer must include in its Proposal an Equal Employment Opportunity Certification (Form H). Note that multiple parties are required to execute copies of Form H.



## 1.8 DBE Participation

The purpose of this section is to establish criteria for acceptability of Disadvantaged Business Enterprise (DBE) firms for Work performed on this contract. The intent is to ensure all participation counted toward fulfillment of the DBE goals is (1) real and substantial, (2) actually performed by viable, independent, DBE owned firms; and (3) in accordance with the spirit of applicable laws and regulations.

The policy of GDOT is to ensure compliance with Title VI of the Civil Rights Act of 1964, 49 Code of Federal Regulations, Part 26, and related statutes and regulations in all program activities.

GDOT does not discriminate and shall take all necessary and reasonable steps to ensure nondiscrimination on the basis of race, color, religion, sex, national origin, age, marital status, or disability in the award, administration and performance of any GDOT assisted contract or in the administration of its Disadvantaged Business Enterprise Program.

All Proposers shall submit a completed "Construction Contractors Bid Opportunity List" (Form E) to GDOT in accordance with ITP Exhibit B, Section B.2.1 as a matter of Proposer responsibility.

DBE payments and commitments shall be separate and distinct and cannot be transferred or combined in any manner.

The DBE Goal specified in the Agreement will be a percentage representing the DBE Race Conscious Participation. The Design-Build Team (DB Team) will strive to achieve an additional percentage during the course of the Project, in order to assist GDOT in meeting the overall State DBE goal.

The DBE Goal for this project is identified in Form I. The Proposer is encouraged to meet this goal throughout the Term of the Agreement.

GDOT's overall statewide DBE goal is fifteen percent (15%) of the overall Project design and construction costs, with respect to the race conscious participation by the DB Team.

For further information regarding GDOT's DBE program and the DB Team's DBE obligations, Proposers may contact GDOT's Equal Opportunity Office, during regular business hours at (404) 631-1972.

## 1.9 Reserved

### 1.10 Status of Environmental Documents

The Environmental Documents are being pursued for the Project by GDOT in coordination with the concept design efforts.

GDOT will be preparing the Environmental Documents and associated studies. See Volume 2, Attachment 1-1 for additional Project requirements.

### 1.11 Qualification of Construction and Design Firms

Proposers shall ensure that the entities identified in Sections 1.11.1 and 1.11.2 have satisfied the pre-qualification requirements set forth in this Section 1.11.

In addition, before commencing performance of any Work, all firms must register to do business in the State. This can be accomplished by contacting the Georgia Secretary of State Corporations Division Office at (404) 656-2817 or visiting their website at:

<http://www.sos.ga.gov/corporations/>

### **1.11.1 Required Pre-Qualification for Contractors**

The Lead Contractor shall be pre-qualified with GDOT prior to the Proposal Due Date. If the roadway work is not performed by the pre-qualified Lead Contractor, the entity performing the roadway work shall also be pre-qualified prior to initiating any Work. Any proposed changes to the team must be approved by GDOT.

The pre-qualification process involves, but is not limited to, submitting (a) a completed contractor qualification form and (b) financial statements to GDOT. For further information regarding the pre-qualification process, see:

<http://www.dot.ga.gov/PS/Business/Prequalification>

### **1.11.2 Required Pre-Qualification for Engineers**

Proposer shall only use entities prequalified in their respective disciplines (engineering, design, traffic analysis, geotechnical, NEPA, construction, etc.) as presented in the SOQ. Any proposed changes to the DB Team must be approved by GDOT. All Work must be performed by entities which are prequalified by GDOT.

If the Proposer's design for the Project includes design work outside the scope of the area classes set forth in the RFQ, at least one team member shall be prequalified with GDOT in the appropriate area class.

The prequalification requirement does not apply to any area class that is not implicated by a Proposer's design for the Project. The pre-qualification process involves submitting (a) a pre-qualification form and (b) grid sheet to GDOT. For further information regarding the pre-qualification of engineers, see:

<http://www.dot.ga.gov/PartnerSmart/Business/Prequalification/Pages/default.aspx>

### **1.11.3 Pre-Qualification Assistance**

For assistance with the contractor pre-qualification process, contact the Construction Prequalification Unit at (404) 631-1213. Proposers can obtain assistance with the engineering pre-qualification process by contacting the Transportation Services Procurement office at (404) 631-1426 or:

[consultants\\_prequals@dot.ga.gov](mailto:consultants_prequals@dot.ga.gov).

## **1.12 Establishment of Single Purpose Entity(ies)**

If the Apparent Successful Proposer contemplates the creation of one or more single purpose entities as the parties that will execute the DB Documents, the Apparent Successful Proposer is required to establish each such single purpose entity and submit executed copies of the articles of incorporation and any other corporate formation documents for the single purpose entity to GDOT within sixty (60) days of GDOT's announcement of the Apparent Successful Proposer. Proposers anticipating the creation of any such single purpose entity must include pro forma corporate formation documents in the Proposal, as described in Exhibit B. Failure to meet the

requirements in this Section 1.12 will result in forfeiture of the Apparent Successful Proposer's Proposal Bond. Establishment of the single purpose entity(ies), if any, is a prerequisite to execution of the DB Documents.

## **SECTION 2.0 PROCUREMENT PROCESS**

### **2.1 Method of Procurement**

GDOT is issuing the RFP in accordance with the provisions of Sections 32-2-81 of the Code, Chapter 672-18 of the Rules, and other applicable laws and guidelines. GDOT will award the DB Documents (if at all) to the Proposer that submits the lowest price responsive Proposal. Subject to Section 8.1, GDOT will base the evaluation of Proposals on information submitted in the Proposals, and will involve both pass/fail evaluation factors and price criteria, as further detailed in Section 5 below and in the Exhibits to this ITP.

### **2.2 Communications between GDOT and Proposers**

The RFP will be issued to Proposers in electronic format on the GPR. Each Proposer is required to check the GPR regularly for amendments to the RFP and for other procurement-related information.

RIDs are posted to the GDOT Design-Build SharePoint site for the Project (the "SharePoint Site"). Each Proposer is to check the SharePoint Site regularly for additions or revisions to the RIDs. Instructions to review and download information from the SharePoint Site are as follows:

1. Enter <http://mydocs.dot.ga.gov/info/designbuild/default.aspx>
2. Select 'FY 2018 Bridge Program'

#### **2.2.1 Designated Point of Contact**

The Procurement Officer for the Project (the "Authorized Representative") is Rick Merritt. He can be contacted at:

Georgia Department of Transportation  
Attention: Rick Merritt, Innovative Finance Program Manager  
Office of Innovative Delivery  
One Georgia Center, 19<sup>th</sup> Floor  
600 West Peachtree Street, NW  
Atlanta, Georgia 30308  
E-mail: [fy18bridges@dot.ga.gov](mailto:fy18bridges@dot.ga.gov)

From time to time during the procurement or during the Term of the Agreement, GDOT may designate another Authorized Representative to carry out some or all of the obligations pertaining to the Project.

#### **2.2.2 Rules of Contact**

Unless specifically authorized elsewhere in this ITP, the Authorized Representative, as may be changed in writing by GDOT, is the single contact and single source of information for this procurement.

The rules of contact set forth in this Section 2.2.2 shall apply during the Project procurement, commencing with the issuance of this ITP. These rules are designed to promote a fair, unbiased,

and legally defensible procurement process. Contact, as used herein, includes face-to-face, telephone, electronic-mail (e-mail), text, or any other form of informal and formal written communication.

The specific rules of contact are as follows:

- (a) Neither a Proposer nor any of its team members may communicate with another Proposer or members of another Proposer's team with regard to the RFP or either team's Proposal. This prohibition does not apply to (1) Proposer communication with a Contractor that is on both its team and another Proposer's team, provided that the Contractor shall not act as a conduit of information between the two Proposers; and (2) public discussion regarding the RFP at GDOT-sponsored informational meetings.
- (b) Unless otherwise specifically noted in this ITP or authorized by the Authorized Representative, all Proposer communication with GDOT will be between Proposer's identified representatives and the Authorized Representative. All such communication must be in writing (by mail or e-mail).
- (c) Under normal circumstances, the Authorized Representative will contact a Proposer in writing through Proposer's designated representative.
- (d) Continuing until the earliest of (1) execution and delivery of the DB Documents, (2) GDOT's rejection of all Proposals or (3) cancellation of the Project procurement, neither a Proposer nor its agents may have ex parte communications with GDOT employees, members of the Technical Review Committee, the Bid Review Committee, the State Transportation Board, any other person who will evaluate the Proposals, or any person identified in Section 1.6.4 regarding the Project, except for communications expressly permitted in this ITP or through the process identified above. The foregoing restriction shall not, however, preclude or restrict communications regarding matters unrelated to the Project or from participating in public meetings or any public or Proposer workshop related to the Project. GDOT may, in its sole discretion, disqualify any Proposer engaging in such prohibited communications.
- (e) Any contact by a Proposer determined by GDOT to be improper may result in disqualification of that Proposer.
- (f) Written communications regarding the Project will be disseminated from GDOT on GDOT letterhead. The Authorized Representative will sign such communications. Alternatively, the Authorized Representative may communicate via email originating from GDOT's server.
- (g) GDOT will not be responsible for or bound by (1) any oral communication, or (2) any other information or contact that occurs outside the official communication process specified herein, unless confirmed in writing by the Authorized Representative.

### **2.2.3 Language and United States Dollar Requirements**

All correspondence regarding the RFP, the Proposal, the DB Documents and all other matters pertaining to this procurement is to be in the English language. If any original documents required for the Proposal are in any other language, the Proposer shall provide a certified English translation, which shall take precedence in the event of conflict with the original language. The Proposer shall exclusively use United States dollars in its Proposal, except in pre-printed or

reference materials. Unless otherwise specified, all references to monetary values shall be in United States dollars. In the evaluation of Proposals, GDOT may choose to disregard any financial figures provided by the Proposer in denominations other than United States dollars.

## **2.3 Questions and Responses Regarding the RFP**

Proposers shall be responsible for reviewing the RFP and any amendments issued by GDOT prior to the Proposal Due Date, and for requesting written clarification or interpretation of any perceived discrepancy, deficiency, ambiguity, error, or omission contained therein; or of any provision which the Proposer fails to understand. Proposers shall submit, and GDOT will respond to, such requests in accordance with this Section 2.3. Any responses to these requests will not be considered part of the DB Documents.

### **2.3.1 Form of Requests**

Proposers shall deliver any requests to the Authorized Representative via e-mail or certified U.S. mail. GDOT will only consider written requests made by Proposers' designated representatives and will not consider telephone or other oral requests. Proposers are responsible for ensuring that requests clearly indicate on the first page or in the subject line, as applicable, that the material relates to the Project. Requests must include the requestor's name, address, telephone, and email address; and the Proposer he/she represents. If a question has more than one subpart, each subpart will be considered a separate question. Corrections of typographical errors, incorrect cross references, or inconsistencies within or among the RFP documents will be excluded from the above numerical limitations. Proposers may submit written comments and questions with respect to the RFP for discussion during the one-on-one meetings (if such meetings are held; refer to Section 1.1); however, GDOT's response to such comments and questions, if any, will be provided solely as changes to the final RFP in the form of amendment(s).

### **2.3.2 Timing of Requests**

Proposers must submit any requests under this Section 2.3 prior to the deadline for such requests in Section 1.4. GDOT is not required to answer any questions submitted by Proposers after this deadline.

### **2.3.3 Responses and Confidential Information**

GDOT's responses to questions submitted under this Section 2.3 will be in writing and GDOT will post these responses on the GPR to all Proposers, except that GDOT may in its discretion respond individually to those questions identified by a Proposer and deemed by GDOT as containing confidential or proprietary information. GDOT reserves the right to disagree with a Proposer's characterization of the confidentiality of any information it may provide. In the event that GDOT disagrees with a Proposer's characterization regarding confidentiality, GDOT will notify the applicable Proposer and give such Proposer the opportunity to retract the question(s). GDOT may rephrase or consolidate questions as it deems appropriate.

## **2.4 Amendments**

GDOT reserves the right, in its sole discretion, to revise, modify or change the RFP and/or procurement process at any time before the Proposal Due Date. Any such revisions will be implemented through issuance of amendments to the RFP. Amendments will be posted on the GPR, and Proposers will be notified of the issuance of such amendments. If any amendment significantly impacts the RFP, as determined in GDOT's sole discretion, GDOT may change the

RFP schedule, including the Proposal Due Date. The announcement of such new schedule will be included in the amendment. In addition, the amendment will indicate the latest date for submittal of any clarification requests concerning the amendment.

GDOT will not be bound by, and the Proposer shall not rely on, any oral communication or representation regarding the RFP documents, or any written communication except to the extent that it is contained in the RFP or in an amendment to the RFP and is not superseded by a later amendment to the RFP.

## **2.5 Reserved**

## **2.6 Examination of the Request for Proposals Package and Project Site**

GDOT shall permit Proposers to access the Project Site within the Existing Right of Way to perform limited investigations. Proposers must notify the GDOT Area Office prior to entering the Project Site and must follow all applicable state laws, including erosion control and traffic control. Proposers are expected to carefully examine the Project Site and the complete RFP package before submitting a Proposal.

Each Proposer shall, by submission of a Proposal, be deemed to have made such examination and to have satisfied itself as to the conditions to be encountered in performing the work under the DB Documents.

## **2.7 Changes to Proposer's Organization**

Proposers are advised that, in order for a Proposer to remain qualified to submit a Proposal, a Proposer's organization as identified in the SOQ must remain intact for the duration of the procurement process, unless otherwise approved in writing by GDOT. This restriction applies to any changes in the following:

- (a) the Participating Members and Major-Non-Participating Members of Proposer;
- (b) the lead individual from each Participating Member and Major Non-Participating Member; and
- (c) any Key Personnel, including:
  - 1. the Lead Contractor Project Manager;
  - 2. the Lead Engineering Firm (Lead Design Consultant) Design Manager; and
  - 3. any other key members of Proposer's management team or other individuals that Proposer identified in its SOQ, which must include the Engineer of Record if is not the Lead Engineering Firm's Design Manager.

If a Proposer wishes to change the organization represented in its SOQ by adding, removing, or substituting any of the individuals listed above, by changing the role of one of these individuals, by changing or adding a Participating Member or Major Non-Participating Member to the Proposer team, or by changing the level of participation of one or more Participating Members of its team, the Proposer must submit to the Authorized Representative a written request to change its organization no later than the date specified in [Section 1.4](#). If a request is made to allow an addition to the team, including a new Participating Member or Major Non-Participating Member,

the Proposer shall submit with its request the information required by the RFQ for the position the proposed individual will fill. If a request is made to allow deletion of one of the individuals listed above, the Proposer shall submit such information as GDOT may require to demonstrate that the changed Proposer team is equal to or better than the team shortlisted by GDOT during the RFQ phase of this procurement.

GDOT shall have sole discretion to grant or withhold approval of any requested change and to waive the requirement that Proposer submit such change no later than the date specified in Section 1.4.

### **SECTION 3.0 RESERVED**

## **SECTION 4.0 PROPOSAL CONTENT AND SUBMITTAL REQUIREMENTS**

### **4.1 Format**

To facilitate the evaluation of Administrative Information Submittals and Price Proposals and to help protect the confidentiality of proprietary information, the proposal submittal described in this Section 4 shall be submitted in two (2) separate sealed packages, one (1) containing the Administrative Information Submittal and one (1) containing the Price Proposal.

Unless otherwise specified in this ITP, all written submittals must be prepared on 8-1/2" x 11" white paper. All written submittals, regardless of paper size, must be prepared on white paper and included in the applicable binder. Each section within each volume shall have sequentially numbered pages, shall be separated by a divider with a tab, and shall be prepared using no smaller than 11-point font size, except for tables, which may be prepared using no smaller than 10-point font size. Some of the required documents have specified page limitations, as set forth in Exhibits B and Exhibit D. GDOT may disregard documents not complying with these page limitations. Pages may be printed on two sides, in which event each side shall be considered one page. Printed lines may be single-spaced. Proposers shall not include standard corporate brochures, awards, licenses and marketing materials and GDOT will not evaluate such materials.

### **4.2 Contents and Organization**

Proposers shall clearly index their Administrative Information Submittals, and Price Proposal using pages with tabs and organize them in the order set forth in this Section 4.2. The Proposal shall contain separately bound and labeled Administrative Information Submittals and Price Proposal, each in a separate loose-leaf three ring binder, including the information described in this Section 4. Proposers may subdivide each Administrative Information Submittal and Price Proposal further as needed. The electronic submittals (portable flash drives for each volume, physically attached securely to each volume) shall follow equivalent organizational standards, and shall use a searchable format with appropriate bookmarks.

If the Proposer has any items that it deems confidential, trade secret, or proprietary information, the first page of the Administrative Information Submittals must be a page executed by the Proposer that sets forth the specific items the Proposer deems confidential, trade secret, or proprietary information protected from public disclosure under the Open Government Laws. The Proposer shall list the specific statute within the Open Government Laws that the Proposer has reasonably determined is exempt from disclosure under Section 50-18-72 of the Code or any other applicable law. The list required under this Section 4.2 and in Exhibit B is intended to provide input to GDOT as to the confidential nature of a Proposer's Proposal, but in no event shall

such list be binding on GDOT or determinative of any issue relating to confidentiality. Blanket designations that do not identify the specific information or the applicable statute(s) shall not be acceptable and may be cause for GDOT to treat the entire Proposal as public information. In no event shall the State, GDOT or any of their respective agents, representatives, consultants, directors, officers or employees be liable to a Proposer or Proposer team member for the disclosure of all or a portion of a Proposal submitted under this RFP. Additionally, the Proposer shall add a “confidential” watermark to each page that it deems confidential under this paragraph.

If GDOT receives a request for public disclosure of all or any portion of the materials identified as confidential and included in any part of a Proposal, GDOT will promptly notify the applicable Proposer of the request. The Proposer may seek a protective order or other appropriate remedy at such Proposer's sole cost and expense. If GDOT determines in good faith that the materials identified as “confidential” are not exempt from the Open Government Laws, GDOT will release the requested information. GDOT shall make the final determination regarding whether the requested information is to be disclosed or withheld.

Nothing contained in this provision shall modify or amend requirements and obligations imposed on GDOT by the Open Government Laws or other applicable law, and the provisions of the Open Government Laws or other laws shall control in the event of a conflict between the procedures described above and the applicable law.

See **Exhibit B** and **Exhibit D** for special instructions regarding submission of information relating to the Price Proposal.

#### **4.2.1 Administrative Information Submittals**

The Administrative Information Submittals will contain the components described in Exhibit B, organized, separated and labeled appropriately.

#### **4.2.2 Reserved**

#### **4.2.3 Price Proposal**

The Price Proposal (Form F) shall contain the components described in Exhibit D, organized, separated, sealed and labeled appropriately.

Any financial statements or updates to financial statements, as required for Proposers acting as a Joint Venture or Partnership, shall be submitted electronically to the extent possible, including links to SEC filings. If hard copies are submitted they must be provided in a separate notebook.

If a Proposer is not a Joint Venture or Single Purpose Entity, the Price Proposal should only consist of a sealed envelope containing the required components described in Exhibit D.

### **4.3 Submission of Proposals**

Proposers shall submit the following to GDOT:

- (a) One (1) bound and sealed, original paper version of the Administrative Information Submittals and Price Proposal (marked “ORIGINAL”).
- (b) Four (4) bound paper copies of the Administrative Information Submittals.
- (c) One (1) electronic copy of the Administrative Information Submittals and one (1) electronic copy of the Price Proposal (Financial Information Only) in both “PDF” and original/native



file format(s). Each electronic copy shall be on a single portable flash drive securely attached to the original Administrative Information Submittal.

Proposers shall submit and individually label all packages making up its Proposal as follows:

Proposal for the FY 18 Bridge Replacement Project  
Re: Administrative Information Submittals

Proposal for the FY 18 Bridge Replacement Project  
Re: Price Proposal

Proposals shall be delivered no later than the Proposal Due Date (as specified in Section 1.4) to:

Georgia Department of Transportation  
Attention: Rick Merritt, Innovative Finance Program Manager  
Office of Innovative Delivery  
One Georgia Center, 19<sup>th</sup> Floor  
600 West Peachtree Street, NW  
Atlanta, Georgia 30308

Acknowledgment of receipt of Proposals will be evidenced by the issuance of a receipt by a member of GDOT staff. GDOT will not accept Proposals submitted via facsimile or e-mail.

GDOT will not accept any Proposals delivered after the Proposal Due Date and time as specified in Section 1.4. Any Proposals received after the specified time on the Proposal Due Date will be rejected and not considered. Proposers are solely responsible for assuring that GDOT receives their Proposals by the specified time on the Proposal Due Date at the address listed above. GDOT shall not be responsible for delays in delivery caused by weather, difficulties experienced by couriers or delivery services, delays due to security check-in process, misrouting of packages by courier or delivery services, improper, incorrect or incomplete addressing of deliveries and other occurrences beyond the control of GDOT.

#### **4.4 Disclosure of Proposals**

No Proposal shall be made public until the procurement phase of the Project, including any evaluation, one-on-one meetings, negotiations, and award has been completed. It is GDOT's intent to publish all Proposals, upon the execution of the DBA in accordance with Section 1.5.4.

#### **4.5 Validity of Proposals**

Proposals submitted and not withdrawn as of the Proposal Due Date shall be valid for a period of ninety (90) days commencing on the Proposal Due Date. No Proposer shall withdraw its Proposal within the ninety (90) day period, unless notified by GDOT that (i) the DB Documents for the Project will not be awarded by GDOT pursuant to the RFP or (ii) GDOT has awarded the DB Documents to another Proposer, has received the executed DB Documents and other required documents, and does not intend to award the DB Documents to the Proposer that is requesting the withdrawal of the submitted Proposal.

Any Proposer may elect, in its sole discretion, to extend the validity of its Proposal beyond the time periods set forth above.

#### 4.6 Proposal Bond

Each Proposer shall submit a Proposal Bond, as described in Exhibit D and in the form provided in Form D. The Proposal Bond shall be in the amount of 5% of the DB Price Proposal.

#### 4.7 Forfeiture of Proposal Bond

Each Proposer understands and agrees that if it has submitted and not withdrawn its Proposal as of the Proposal Due Date and (i) withdraws any part or all of its Proposal (without the consent of GDOT) while the Proposal is valid, or (ii) if it is selected as the Apparent Successful Proposer pursuant to Section 6.2 or Section 6.2.2, should refuse or be unable to furnish any commitments made in its Proposal, GDOT shall be entitled to draw on the Proposal Bond in its entirety and the Proposer shall not be entitled to the Payment for Work Product.

The Proposer acknowledges that the forfeiture of the Proposal Bond constitutes liquidated damages and is not a penalty, and the amount forfeited is fair and reasonable. Such payment represents a reasonable estimate of fair compensation to GDOT for the work required to re-procure the Project and the reputational losses which may accrue.

Subject to Section 6.2.1, GDOT will retain the Proposal Bond for all Proposers until the DB Documents have been fully executed, GDOT has canceled the RFP or the conclusion of the validity period described in Section 4.5; after which GDOT will return the Proposal Bond for each unsuccessful Proposer, except any Proposal Bond drawn upon by GDOT. Further, GDOT shall return the Proposer Bond to the Apparent Successful Proposer within two (2) Business Days of GDOT's receipt of the Payment and Performance Bonds, in accordance with Section 5.6.

The Proposer understands that any material alteration, as determined by GDOT in its sole discretion, of documents specified in this Section 4 or the Form of Proposal Bond (Form D) will render the Proposal non-responsive and non-compliant, unless such alteration was authorized by GDOT in writing prior to the Proposal Due Date.

#### 4.8 Cost of Preparing Proposal

The cost of preparing the Proposal and any costs incurred at any time before or during the Proposal process shall be borne by the Proposer.

#### 4.9 Non-Compliant Proposal

The Proposer shall submit a Proposal that provides all the information required by the ITP. If the Proposal does not fully comply with these requirements, GDOT may deem the Proposal non-responsive in which case the Proposer shall be disqualified. In addition, GDOT may consider Proposals non-responsive and the Proposer disqualified for the following reasons:

- (a) If the Proposal is not submitted in the format specified in this ITP, is illegible, or is incomplete;
- (b) If the Proposal contains multiple, conditional, or alternate Proposals or contains any omission, erasures, alterations, unauthorized additions, or other irregularities of any kind; or
- (c) If the Proposer is in arrears in the payment of any obligation due and owing the State, including the payment of taxes and/or employee benefits.

#### **4.10 Insurance Requirements**

Proposers are cautioned to carefully review the minimum insurance requirements set forth in the DB Documents and to take these minimum requirements into account in putting together their Proposal.

### **SECTION 5.0 EVALUATION PROCESS AND CRITERIA**

Upon GDOT's receipt of the Proposals, GDOT will proceed to review the Proposals using the pass/fail factors set forth in Section 5.1. As set forth in Section 5.4, the evaluation process may, at GDOT's sole discretion, include a request for revised Proposals. GDOT will determine which Proposal is the Apparent Successful Proposer in accordance with the selection process set forth in this Section 5.

GDOT may, in its sole discretion, reject all Proposals or advertise for new Proposals, if, in the judgment of GDOT, the best interests of the public will be promoted by doing so.

#### **5.1 Pass/Fail and Responsiveness Evaluation**

Each Proposal will be reviewed (a) for responsiveness to Proposal requirements and (b) based on the pass/fail criteria set forth in this Section 5.1. Each Proposer must satisfy each pass/fail requirement set forth in Section 5.1.2 and be deemed to have submitted a responsive Proposal pursuant to Section 5.1.1 in order for GDOT to consider the Proposal responsive. Proposers are advised that failure to achieve a "pass" rating on any "pass/fail" factor will result in GDOT declaring the Proposal non-responsive and the Proposer being disqualified. Prior to making such determination, GDOT may, in its sole discretion, request clarifications of the information submitted in the Proposal (see Section 5.3).

##### **5.1.1 Responsiveness**

Each Proposal will be reviewed for conformance and responsiveness to the requirements set forth in the RFP. Proposers that GDOT determines are non-responsive to the RFP may be excluded from further consideration. Proposers will be advised regarding a determination of non-responsiveness.

##### **5.1.2 Administrative Information Submittals Pass/Fail Requirements**

The Administrative Information Submittals will be reviewed for conformance on a pass/fail basis to determine if it meets the requirements of Exhibit B.

##### **5.1.3 Reserved**

#### **5.2 Price Proposal Evaluation**

The Proposer submitting the lowest-price responsive Proposal will be identified as the Apparent Successful Proposer.

#### **5.3 Requests for Clarification**

GDOT may at any time issue one or more requests for clarification to the individual Proposers, requesting additional information or clarification from a Proposer, or may request a Proposer to verify or certify certain aspects of its Proposal. Any requests for clarification shall be in writing to

the Proposer's designated representative. Proposers shall respond to any such requests within two (2) Business Days (or such other time as is specified by GDOT) from receipt of the request. The scope, length and topics to be addressed in clarifications shall be prescribed by, and subject to the discretion of, GDOT.

Upon receipt of requested clarifications and additional information as described above, if any, the Proposals may be re-evaluated to factor in the clarifications and additional information.

#### **5.4 Request for Proposal Revisions**

GDOT may, at any time after receipt of Proposals and prior to final award, determine that it is appropriate to request changes to the Proposals ("Proposal Revisions"). If Proposal Revisions are requested, GDOT will follow the requirements described in 23 CFR Part 636. GDOT may request Proposal Revisions with or without discussions as described therein. The request for Proposal Revisions will identify any revisions to the RFP and will specify terms and conditions applicable to the Proposal Revisions, including identifying a time and date for delivery. In the event that Proposal Revisions are requested, the term "Proposal," as used in the RFP, shall mean the original Proposal, as modified by the Proposal Revisions.

#### **5.5 Proposal Re-evaluation following Revisions**

Upon receipt of Proposal Revisions pursuant to Section 5.4 above, GDOT will re-evaluate the Proposals as revised in accordance with the methodology described in Section 5.2.

#### **5.6 Payment and Performance (P&P) Bonding Requirements**

On the Effective Date of Agreement, the Apparent Successful Proposer shall deliver to GDOT P&P Bonds in compliance with GDOT Specification 103.05.

#### **5.7 Price Proposal Opening**

GDOT will publicly open the Price Proposals in alphabetical order and will enter the prices into a spreadsheet for public viewing. Results of the letting will not be final until after confirming all information required to be submitted in the Price Proposal envelope are included and are in order.

### **SECTION 6.0 AGREEMENT AWARD AND EXECUTION**

#### **6.1 No Obligation to Award**

GDOT shall be under no obligation to award the Project to any Proposer or award the Project at all.

#### **6.2 Award and Execution**

Unless GDOT rejects all Proposals or cancels this procurement, GDOT shall select as the Apparent Successful Proposer the Proposer with the Apparent Successful Proposal, taking into consideration the evaluation criteria and procedures set forth in Section 5. GDOT's selection of Apparent Successful Proposer with respect to the Project shall be deemed to have occurred upon public notification of such selection.

Following such selection of Apparent Successful Proposer, GDOT and the Apparent Successful Proposer shall finalize the executable versions of the DB Documents, filling in blanks and inserting

information that the forms of the DB Documents indicate is required from the Proposal. By submitting its Proposal, each Proposer commits to enter into the form of DB Documents included in the RFP, without variation, except as provided in this paragraph.

Upon completion of all negotiations and execution of all DB Documents and issuance of Notice to Proceed (NTP) 1, GDOT may at its discretion post the executed DB Contract to the GDOT DB webpage at <http://www.dot.ga.gov/PS/Innovative/DesignBuild>.

### **6.2.1 Delivery of Drafts, Execution of DB Documents**

Within twenty (20) days of GDOT's selection of the Apparent Successful Proposer, such Apparent Successful Proposer shall:

- (a) deliver to GDOT specimens of the Insurance Policies required under the Agreement for GDOT's review and approval; and
- (b) if the Apparent Successful Proposer is a Joint Venture or Partnership, identify the attorney or law firm that will provide the legal opinions set forth on Form S hereto to be delivered concurrently with GDOT's execution of the Agreement and provide a draft opinion letter (consistent with such on Form S) to GDOT for GDOT's approval, not to be unreasonably withheld. Such opinion letter may be rendered by in-house or outside counsel, provided that (i) the organization/authorization/execution opinion shall be provided by an attorney licensed in the state of the formation/organization of the entity for which the opinion is rendered (i.e., DB Team, joint venture member, etc.) and (ii) the qualification to do business in Georgia and the enforceability opinion shall be provided by an attorney licensed in the state of Georgia, provided, however, that the organization, authorization, or execution opinion for an entity formed or organized under the laws of the state of Delaware may be issued by an in-house or outside counsel not licensed in Delaware.
- (c) Notify GDOT in writing of the name and address of its agent for service of legal process for this Project. The Proposer shall not change this authorized agent without prior written notice to GDOT;
- (d) If applicable, complete the establishment of the single purpose entity for the Project and submit certified copies of the single purpose entity-related documents to GDOT as described in Section 1.12;
- (e) Notify GDOT in writing of the Proposer's Federal Internal Revenue Service Employer Identification Number;
- (f) Deliver to GDOT four (4) signed sets of the Agreement, together with evidence as to the authority, power, and capacity of the individuals executing the DB Documents to bind the Proposer to the DB Documents;
- (g) Deliver to GDOT P&P Bonds meeting the requirements of GDOT Specification 103.05;
- (h) Deliver to GDOT evidence of insurance required to be provided by the DB Team under the DB Documents; and
- (i) Deliver to GDOT the legal opinion in the form, and from the counsel, previously approved by GDOT.

Should the Apparent Successful Proposer fail to comply with any of the requirements in this Section 6.2.1, GDOT may, in its sole discretion, call upon the Apparent Successful Proposer's Proposal Bond in its entirety, provided that Proposer's time period to satisfy the requirements of this Section 6.2.1 shall be extended by the period of delay in the Proposer's ability to execute the Agreement solely and directly caused by the issuance of a temporary restraining order or other form of injunction by a court with jurisdiction that prohibits prosecution of any portion of the Project.

The Proposer acknowledges that the forfeiture of the Proposal Bond constitutes liquidated damages and is not a penalty, and the amount forfeited is fair and reasonable and such payment represents a reasonable estimate of fair compensation to GDOT for the work required to procure the Project and the reputational losses which may accrue.

It is contemplated that GDOT will execute the Agreement no later than thirty (30) days after selection of the Apparent Successful Proposer, subject to such Apparent Successful Proposer's compliance with the terms of this Section 6.2.1. GDOT will retain two (2) sets of the executed DB Documents. GDOT will deliver the other two (2) executed sets to the Proposer. The DB Documents will not be effective until fully executed by all of the parties thereto.

### **6.2.2 Initial Successful Proposer's Failure to Comply**

If the initial Apparent Successful Proposer fails to comply with the requirements of Section 6.2.1, GDOT may (in its sole discretion) award the DB Documents to the Proposer whose Proposal was the next best Apparent Successful Proposer, re-advertise and complete the Work under a different contract, cancel the Project, or pursue any other option it chooses.

### **6.3 Reserved**

### **6.4 Debriefing of Unsuccessful Proposers**

GDOT shall debrief unsuccessful Proposers upon their written request submitted to the Point of Contact no earlier than NTP 1 and no later than thirty (30) calendar days after GDOT's issuance of NTP 1 for the Project. Written requests for debriefing must be submitted within thirty (30) calendar days of the GDOT Design-Build Project award announcement. Email requests are considered acceptable.

GDOT will prepare a summary of the requesting Proposer's relevant evaluation information. GDOT will provide the information in writing to the requesting Proposer within thirty (30) calendar days of the unsuccessful Proposer's request.

### **6.5 Award Protest Procedures**

Each DB Team, by submitting its Proposal, expressly recognizes the limitation on its rights to protest contained herein, expressly waives all other rights and remedies, and agrees that the decision on any protest, as provided herein, will be final and conclusive. These provisions are included in the RFP expressly in consideration for such waiver and agreement by the DB Team. If a DB Team disregards, disputes, or does not follow the exclusive protest remedies set forth in the RFP, it shall indemnify, defend, and hold GDOT, other agencies and their respective directors, officers, officials, employees, agents, representatives, advisors and consultants harmless from and against all liabilities, expenses, costs (including attorneys' fees and costs), fees, and damages incurred or suffered as a result of such DB Team's actions. The submission of a Proposal by the DB Team shall be deemed DB Team's irrevocable and unconditional agreement with such indemnification obligation.

Notwithstanding the existence of a protest, GDOT may, in its sole discretion, continue the procurement process or any portion thereof.

If a DB Team elects to protest the award for this project, as permitted, the DB Team shall submit the protest to GDOT in writing, signed by a company officer authorized to sign contracts on behalf of the DB Team within the filing period.

At a minimum, the protest must include the following:

- (a) The name and address of the DB Team protestor;
- (b) Appropriate identification of the solicitation/sole source notice;
- (c) A statement of reasons for the protest;
- (d) Supporting exhibits, evidence, or documents to substantiate any claims unless not available within the filing time (in which case the DB Team must proceed to file the protest within the filing period, but state the expected availability of the material supporting its claim); and
- (e) The desired remedy.

The DB Team is required to identify all grounds for protest during the protest filing period. GDOT, at its discretion, may deem issues not raised in the protest filing period as voluntarily relinquished by the protesting DB Team. After the protest filing period expires, any grounds for protest voluntarily relinquished by the protesting DB Team may not be introduced by the protesting DB Team at any time during the protest process or any subsequent litigation.

The DB Team shall label all packages comprising its award protest as follows:

Award Protest for The FY 18 Bridge Replacement Project

Award protests shall be delivered no later than sixty (60) calendar days at 11:00 a.m. EST/EDT from Project letting to:

Georgia Department of Transportation  
Attention: Rick Merritt, Innovative Finance Program Manager  
Office of Innovative Delivery  
One Georgia Center, 19th Floor  
600 West Peachtree Street, NW  
Atlanta, Georgia 30308

## **SECTION 7.0 NON-RESPONSIVE PROPOSAL PROCEDURES**

### **7.1 GDOT's Responsibilities**

In the event GDOT deems a Proposer's Proposal non-responsive, GDOT shall, within two (2) Business Days of such determination, provide each non-responsive Proposer a written explanation as to the reason(s) that their Proposal was deemed non-responsive. For purposes of this Section 7.1, an email is considered a proper written notification.

## 7.2 Proposer's Responsibilities

Upon receipt of GDOT's written explanation, the Proposer shall have five (5) Business Days to request GDOT reconsider the non-responsiveness determination. The Proposer's request shall be in writing to the Procurement Officer; shall clearly state the reasons the Proposer believes that GDOT's determination is in error; and shall include supporting documentation as the Proposer deems appropriate.

## 7.3 Proposal Resolution

Upon GDOT's receipt of a Proposer's written request for reconsideration of the non-responsiveness determination, GDOT will respond in writing within three (3) Business Days with a final determination or an estimate of when a final determination will be made.

## 7.4 Time Frames

The time frames included are approximate, and may be modified by GDOT.

## 7.5 Costs and Damages

All costs for requests for GDOT to reconsider the non-responsiveness determination shall be the responsibility of the Proposer and shall be undertaken at the Proposer's expense.

## SECTION 8.0 GDOT'S RIGHTS AND DISCLAIMERS

### 8.1 GDOT's Rights

In connection with this procurement, GDOT reserves to itself all rights (which rights shall be exercisable by GDOT in its sole discretion) available to it under applicable law, including without limitation, with or without cause, and with or without notice, the right to:

- (a) Develop the Project in any manner that it, in its sole discretion, deems necessary. If GDOT does not execute the Agreement with the Proposer that submitted the Apparent Successful Proposal, GDOT may proceed to the next lowest Price Proposal, terminate this procurement and pursue other development or solicitations relating to the Project, or exercise such other rights under the provisions of State law as it deems appropriate;
- (b) Investigate the qualifications of any Proposer under consideration, require confirmation of information furnished by a Proposer, require additional information concerning a Proposer's Proposal, require additional evidence of qualifications to perform the Work, and seek or obtain data from any source that has the potential to improve the understanding and evaluation of the Proposals;
- (c) Reject all Proposals;
- (d) Reject any Proposals received for non-responsiveness to or non-compliance with the RFP requirements;
- (e) Issue a new RFP;



- (f) Cancel, modify, or withdraw the RFP in whole or in part at any time prior to the execution of the DB Documents, including adding or deleting Proposer responsibilities contained in the RFP;
- (g) Modify all dates set or projected in the RFP, including this ITP;
- (h) Issue amendments;
- (i) Disqualify any Proposer who changes its Proposal, members of its team or Key Personnel without GDOT approval;
- (j) Review Proposals for adequate DBE participation to include review and analysis of the Proposers DBE Plan to ensure that appropriate goal attainment and good faith effort considerations are contained within the Proposal and that those considerations contemplate the utilization of DBE firms throughout the life of the Project in both the preconstruction and construction phases;
- (k) Appoint evaluation committees to review Proposals and seek the assistance of outside technical experts and consultants in evaluating the Proposals;
- (l) Accept and review non-conforming Proposals or seek and receive clarifications or supplements to a Proposal;
- (m) Waive minor irregularities in Proposals. Minor irregularities are defined as those that will not have an adverse effect on GDOT's interest and will not give a Proposer an advantage or benefit not enjoyed by other Proposers;
- (n) Suspend and terminate the procurement at any time; and/or
- (o) Exercise any other right reserved or afforded to GDOT under this ITP and applicable law.

## 8.2 Disclaimers

The RFP does not commit GDOT to enter into an Agreement, nor does it obligate GDOT to pay for any costs incurred in preparation and submission of Proposal(s) or in anticipation of the DB Documents. By submitting a Proposal, a Proposer disclaims any right to be paid for such costs, except for payments related to the Payment for Work Product.

The execution and performance of the DB Documents pursuant to the RFP is contingent upon sufficient appropriations and authorizations being made by the Georgia General Assembly for performance of the Agreement between the successful Proposer and GDOT.

In no event shall GDOT be bound by, or be liable for, any obligations regarding the Work or the Project until such time (if at all) as the DB Documents have been executed, authorized, and delivered.

In submitting a Proposal in response to the RFP, the Proposer is specifically acknowledging these disclaimers.

## EXHIBIT A

### Definitions

Definitions for the ITP are included in the DBA Exhibit 1.

## EXHIBIT B

### ADMINISTRATIVE INFORMATION SUBMITTAL REQUIREMENTS

#### **B.1 General Instructions**

This Exhibit B describes the required information and submission format regarding Administrative Information Submittals. Proposers shall submit the administrative information required by this Exhibit B, separated and labeled appropriately. The Administrative Information Submittals shall be limited to the page limitations (if any) specified for that submittal.

#### **B.2 Contents of the Administrative Information Submittals**

Proposers are to provide all information set out in this Exhibit B.

The Administrative Information Submittals shall consist of the following major elements: Proposer information, certifications and documents (including required forms).

##### **B.2.1. Proposer Information, Certifications and Documents**

###### **B.2.1.0 List of Confidential, Trade Secret, or Proprietary Information (if Applicable)**

If deemed applicable by the Proposer, the Proposal shall include a page executed by the Proposer that sets forth the specific items the Proposer deems confidential, trade secret or proprietary information protected from public disclosure under the Open Government Laws, in accordance with Section 4.2 of the ITP.

###### **B.2.1.1 Proposal Letter – Form A**

The Proposal shall include the Proposal Letter (Form A). The Proposer shall attach to the Proposal Letter evidence of authorization to execute and deliver the Proposal and the Agreement, shall identify its authorized representative(s) and shall include all necessary authorization documents (as requested in the Proposal Letter – Form A). A Word version of Form A is available with the RIDs on the SharePoint site for Proposers' use.

###### **B.2.1.2 Non-Collusion Affidavit – Form B**

The Proposal shall include Form B, certifying that the Proposal is not the result of and has not been influenced by collusion. Note that multiple parties are required to execute copies of Form B.

###### **B.2.1.3 Conflict of Interest Disclosure Statement – Form C**

Pursuant to Section 1.6.3, the Proposal shall include a certification on Form C describing potential organizational conflicts of interest, including disclosure of all relevant facts concerning any past, present, or currently planned interest that may present an organizational conflict of interest. Note that multiple parties are required to execute copies of Form C.

**B.2.1.4 Construction Contractors Bid Opportunity List – Form E**

The Proposal shall include a completed Construction Contractors Bid Opportunity List as specified in Form E detailing a listing of all firms participating or attempting to participate on this Project.

**B.2.1.5 Participating Members, Contractors, and Key Personnel Commitment – Form G**

- (a) The Proposal shall include a completed Form G confirming the identity, current availability and commitment to the Project of the Participating Members, Major Non-Participating Members, Key Personnel, and any other key members of Proposer's management team or other individuals that were listed by the Proposer in their SOQ.
- (b) The Proposal shall include a completed Form G confirming the identity, current availability and commitment to the Project of the Participating Members, Major Non-Participating Members, Key Personnel, and any other key members of Proposer's management team or other individuals for which approval by GDOT was secured, in accordance with Section 2.7 of the ITP and consistent with Section B.2.1.14 below, include the written GDOT approval for each such change to personnel.

**B.2.1.6 Equal Employment Opportunity Certification – Form H**

The Proposal shall include an executed copy of Form H, regarding participation in contracts subject to federal equal employment opportunity requirements. Note that multiple parties are required to execute copies of Form H.

**B.2.1.7 Buy America**

GDOT supports the federal "Buy America" requirements and encourages, but does not require the use of "Buy America" on the Project.

**B.2.1.8 Use of Contract Funds for Lobbying Certification – Form K**

The Proposal shall include an executed copy of Form K, regarding use of contract funds for lobbying.

**B.2.1.9 Debarment and Suspension Certification – Form L**

The Proposal shall include an executed copy of Form L, regarding debarment and suspension of contractors.

**B.2.1.10 Reserved**

**B.2.1.11 Georgia Immigration Security and Compliance Act Affidavit – Form R**

The Proposal shall include an executed copy of Form R, regarding participation in the Employment Eligibility Verification Program.

**B.2.1.12 Drug Free Workplace – Form T**

The Proposal shall include an executed copy of Form T, regarding Drug Free Workplace. Note that multiple parties are required to execute copies of Form T.

**B.2.1.13 Prioritization Schedule**

The Proposal shall include a maximum of one-page Prioritization Schedule that shall show the start and finish dates for construction, including start and end dates for road closures for each bridge site, which Prioritization Schedule will comply with the Maximum Closure Duration limitations identified in Exhibit 9 to Volume 1. Proposers shall assume 45 days after award for issuance of Notice to Proceed 1.

**B.2.1.14 Changes in Proposer's Organization**

The Proposal shall include a copy of the letter(s) (if any) issued by GDOT approving changes to the composition of a Proposer's team (including additions to a Proposer team) or the percentage of equity participation of one or more Participating Members of a team that is a consortium, partnership or joint venture following GDOT's decision to qualify Proposer. Such approval is required under Section 2.7 of the ITP. If a Proposer includes any such letter(s), it shall also include a brief description (two-page maximum) of these changes.

**B.2.1.15 Draft Single Purpose Entity Corporate Formation Documents**

If Proposer contemplates the creation of one or more single purpose entities as the party to execute the DB Contracts, the Proposal shall include a statement acknowledging that the organizational documents for the single purpose entity(ies) will be provided within twenty (20) days of GDOT's award announcement pursuant to Section 6.2.1 of the ITP and the Proposal shall include applicable draft documents for such entity.

**B.2.1.16 Executed Copy of Partnering/Consortium Agreement**

If the Proposer is a consortium, partnership, or any other form of joint venture, the Proposal shall contain an executed teaming agreement or, if the entities making up the Proposer have not executed a teaming agreement, a summary of the key terms of the anticipated agreement.

**B.3 No DB Contract Sum Information**

**THE ADMINISTRATIVE INFORMATION OR ANY PART THEREOF, INCLUDING, WITHOUT LIMITATION, DELIVERABLES UNDER SECTIONS B.2.1.15 OR B.2.1.16, MUST NOT**

**CONTAIN THE PROPOSER'S PROPOSED DB CONTRACT SUM OR OTHER INFORMATION THAT WOULD ALLOW SUCH PROPOSED DB CONTRACT SUM TO BE CALCULATED.**

**EXHIBIT C**  
**RESERVED**

## EXHIBIT D

### **PRICE PROPOSAL AND PROPOSAL BOND SUBMITTAL REQUIREMENTS**

The Proposer shall submit the Price Proposal in accordance with this Exhibit D. The Price Proposal shall be separated and labeled appropriately and organized in accordance with the following requirements.

#### **D.1 General Instructions**

This Exhibit D describes the required information and submission format for the Price Proposal.

The Proposer shall submit the information required by this Exhibit D in the format specified herein. The Proposer shall not amend the order or change the section headings. Each component of the Price Proposal shall be clearly titled and identified.

All forms named herein are attached to the ITP. All blank spaces in the Proposal forms must be filled in as appropriate. No substantive change shall be made in the Proposal forms.

The Proposer shall indicate its Proposal Price as indicated on Form F.

#### **D.2 Format of Price Proposal**

All financial information provided in the Price Proposal shall be in U.S. Dollar currency only and all amounts shall be legible and clearly identified as nominal dollars. In the event that any entry is not legible, GDOT may, in its sole discretion, reject the Price Proposal.

If there are any discrepancies between the hard copy and electronic copy of any non-sealed information provided in the Price Proposal, the hard copy version will prevail. If there are any differences between the sum of the individual line amounts and the Total Proposal Price, the sum of the individual line amounts will prevail.

If required due to the Proposer being a Single Purpose Entity or Joint Venture, Financial Statements and Financial Capacity Information shall be submitted in a separate binder in accordance with Section D.3.1 and Section D.3.2 below.

**ALL OTHER REQUIREMENTS OF Exhibit D SHALL BE SUBMITTED IN A SEPARATE SEALED ENVELOPE OR PACKAGE WITH A LABEL CONTAINING ONLY THE NAME OF THE PROPOSER AND "Exhibit D - PRICE PROPOSAL". NO OTHER PART OF THE PROPOSAL SHOULD CONTAIN THE PROPOSER'S PROPOSED DB CONTRACT SUM OR OTHER INFORMATION THAT WOULD ALLOW SUCH DB CONTRACT SUM TO BE CALCULATED.**

#### **D.3 Contents of Price Proposal**

##### **D.3.1. Financial Statements (For Single Purpose Entities or Joint Ventures Only)**

Subject to Section D.3.2(b) below, the Price Proposal shall include electronic financial statements to the extent available for the Proposer, the Participating Members and, if applicable, any partners to a joint venture, for all periods subsequent to those statements previously submitted to GDOT during the procurement process.



These subsequent statements must be audited by a certified public accountant in accordance with U.S. Generally Accepted Accounting Standards (GAAP), International Financial Reporting Standards (IFRS) or accompanied by a letter in the form specified in paragraph (f) below.

Financial statements shall be provided in U.S. Dollars where practicable, but financial statements in other currencies will be allowed if the conversion rates for each exhibit are clearly stated and can be confirmed. If audited financial statements are not available for a Participating Member or Major Non- Participating Member, the Proposal shall include unaudited financials for such member, certified as true, correct, and complete by the chief financial officer or treasurer of the entity.

If audited financial statements are not available, the Proposal shall include unaudited financial statements for such entity, certified as true, correct, and accurate by the chief financial officer or treasurer of the entity.

The financial statements, whether for the most recent completed fiscal year or for the period since the most recent completed fiscal year, must include the following:

- (a) Opinion Letter (Auditor's Report).
- (b) Balance Sheet.
- (c) Income Statement.
- (d) Statement of Changes in Cash Flow.
- (e) Notes to the financial statements.
- (f) If financial statements are prepared in accordance with principles other than U.S. GAAP or IFRS, a letter must be provided from the certified public accountant of the applicable entity, addressing the areas of the financial statements that would be affected by a conversion to U.S. GAAP or IFRS, and the financial impact thereof. A restatement of the financial information in U.S. GAAP or IFRS is not required.

**D.3.2. Other Financial Capacity Information (For Single Purpose Entities or Joint Ventures Only)**

- (a) **Newly Formed Entity** - If the Proposer is a newly formed entity and does not have independent financial statements, financial statements for the Participating Members and Major Non-Participating Members (if any) and, if applicable, any joint ventures making up the Major Non-Participating Members, shall be sufficient (and the Proposer shall expressly state that the Proposer is a newly formed entity and does not have independent financial statements – but shall nonetheless provide sufficient background information on such entity – i.e. organizational, legal, ownership structure, initial funding, purpose, etc.).
- (b) **SEC Filings** - If any other entity for whom financial information is submitted hereby files reports with the Securities and Exchange Commission, then such reports shall be provided through a copy of their annual report on Form 10-K. Also, for all subsequent quarters, provide a copy of any report filed on Form 10-Q or Form 8-K which has been filed since the latest filed 10-K. If any of these reports have

previously been submitted to GDOT during the procurement process, they are not required to be resubmitted.

- (c) **Credit Ratings** - Credit ratings must be supplied for the Proposer, each Participating Members, each Major Non-Participating Members (if any), each joint venturer making up the Major Non-Participating Members (if applicable) and each Guarantor, to the extent such entities have credit ratings. If no credit ratings exist, include a statement specifying that no credit ratings exist for that entity. If the ratings have been submitted and not changed (and there has not been a change on the rating outlook either, i.e. positive, neutral or negative), there is no need to resubmit.
- (d) **Material Changes in Financial Condition** - A letter from the chief financial officer ("CFO") or treasurer of the Proposer, each Participating Member, each Major Non-Participating Member (if any), each joint venturer making up the Major Non-Participating Members (if applicable) and each Guarantor, in each case providing information on any material changes in financial condition of such entity and, if applicable, its direct or indirect parent entities, since submission of the SOQs and those that are pending. Additionally, Proposers shall be required to provide updated financial information following the Proposal Due Date if the dissemination of such information is permitted by law.

At the discretion of GDOT, any failure to disclose a prior or pending material change may result in disqualification from further participation in the selection process. In instances where a material change has occurred, or is anticipated, the affected entity shall provide a statement describing each material change in detail, the likelihood that the developments will continue during the period of performance of the project development, and the projected full extent of the changes likely to be experienced in the periods ahead. Estimates of the impact on revenues, expenses and the change in equity shall be provided separately for each material change as certified by the CFO or treasurer. References to the notes in the financial statements are not sufficient to address the requirement to discuss the impact of material changes. The affected entity shall also provide a discussion of measures that would be undertaken to insulate the project from any recent material adverse changes, and those currently in progress or reasonably anticipated in the future. If the financial statements indicate that expenses and losses exceed income in the periods between submission of the SOQs and the most recent completed periods (even if there has not been a material change), the affected entity shall provide a discussion of measures that will be undertaken to make the entity profitable in the future and an estimate of when the entity will be profitable.

The following list identifies certain items that GDOT would consider a material change in financial condition. This list is intended to be indicative only.

List of Indicative Material Changes:

- i. An event of default or bankruptcy involving the affected entity, a related business unit within the same corporation, or the parent corporation of the affected entity.
- ii. A downward change in tangible net worth of 10% of shareholder equity.
- iii. A sale, merger or acquisition exceeding 10% of the value of shareholder

- equity prior to the sale, merger or acquisition which in any way involves the affected entity, a related business unit, or parent corporation of the affected entity.
- iv. A downward change in credit rating for the affected entity, a related business unit, or parent corporation of the affected entity.
  - v. Inability to meet conditions of loan or debt covenants by the affected entity, a related business unit or parent corporation of the affected entity which has required or will require a waiver or modification of agreed loan stipulations, or additional credit support from shareholders or other third parties.
  - vi. The affected entity, a related business unit in the same corporation, or the parent corporation of the affected entity either: (i) incurred a net operating loss; (ii) sustained charges exceeding 5% of the then shareholder equity due to claims, changes in accounting, write-offs or business restructuring; or (iii) implemented a restructuring/reduction in salaried personnel exceeding 200 positions or involving the disposition of assets exceeding 10% of the then shareholder equity.
  - vii. Other events known to the affected entity, a related business unit or parent corporation of the affected entity which represents a material change in financial condition since submission of the SOQs or may be pending for the next reporting period.
- (e) **Letter of Parent Company Support** - Where a Participating Member or Major Non-Participating Member of a Proposer team is a subsidiary of another company, provide a letter from the parent company, signed by a parent company officer, confirming their intention to support the subsidiary's participation in the Project. This letter must clearly state that the parent company will provide the financial support and human resources needed by the subsidiary to successfully carry out the Project.
- (f) **Off-Balance Sheet Liabilities** - A letter from the CFO, treasurer or certified public accountant for each entity for which financial information is submitted, identifying all material off balance sheet liabilities.
- (g) **Non-recourse financing** - A letter from the CFO, treasurer or certified public accountant for each entity for which financial information is submitted, identifying the amount of non-recourse financing on the balance sheet.

The information required under this Section D.3.2 shall be packaged separately for each separate entity with a cover sheet identifying the name of the organization and its role in the Proposer's organization (i.e., Participating Member).

### D.3.3. Proposal Bond – Form D

The Proposal shall include a properly executed Proposal Bond in the amount described in Section 4.6 of the ITP and in the form provided in Form D (Form of Proposal Bond). A Word version of Form D is available with the RIDs on the SharePoint site for Proposers' use.

#### **D.3.4. DBE Certification– Form I**

The Proposal shall include an executed copy of Form I confirming, among other things, that the Proposer will make a good faith effort to obtain DBE commitments equal to or exceeding the DBE participation goal in Section 1.8.

The Proposal shall also include a commitments list for the project as specified in Form I.

#### **D.3.5. Reserved**

#### **D.3.6. Reserved**

#### **D.3.7. DB Contract Sum Information**

#### **THE PRICE PROPOSAL SUBMISSION MUST INCLUDE, WITHOUT LIMITATION, COMPLETED FORMS F AND D.**

The Proposal shall include the completed Section A of Form F with respect to the DB Contract Sum, and DB Schedule of Values, as described in this Section D.3 and Form F itself. Such DB Contract Sum shall include all DB Team costs and expenses. The Proposal shall also include Form D.

#### **D.4 Verification**

Each Proposer shall satisfy itself as to the costs and tax consequences of entering into an Agreement. GDOT makes no representations or warranties, express or implied, and assumes no liability whatsoever, with respect to costs or the consequences of federal or state income tax treatment of DB Team under the Agreement.

**EXHIBIT E**  
**RESERVED**

**EXHIBIT F**  
**RESERVED**

## EXHIBIT G

### LIST OF GDOT PROJECT TEAM

A list of restricted firms (including any affiliates) include:

- HNTB Corporation
- ARCADIS
- Michael Baker International
- Edwards-Pitman Environmental, Inc.
- Southeastern Engineering, Inc.
- Moreland Altobelli Associates, Inc. (restricted for Batch 2)
- Atkins Global
- AECOM

**EXHIBIT H**

**LIST OF REFERENCE INFORMATION DOCUMENTS\***

<b>Name of Document</b>
Costing Plans
Bridge Hydraulic Analysis Memo and existing condition HEC_RAS model
Low Impact Bridge Program Checklist
Survey Database
Utilities Impact Analysis
Design Exceptions, Variances, and Deviations
MicroStation Files
Boring Logs
Approved Subsurface Utility Engineering (SUE) Plans – QL D
Environmental Studies (Air, Archaeology, Ecology, History)
Existing Bridge Information
Attachment E - Reference Sheet for LIBP Designers
Cast-In-Place Concrete Barriers (Implementation of MASH)
Form A in Word format

\* RIDs are posted to the GDOT Design-Build SharePoint site for the Project. Each Proposer is to check the SharePoint Site regularly for additions or revisions to the RIDs.



**FORM A**  
**Proposal Letter**

PROPOSER: \_\_\_\_\_

Proposal Date: \_\_\_\_\_, 2018

Georgia Department of Transportation  
One Georgia Center  
600 West Peachtree Street, NW  
Atlanta, Georgia 30308

The undersigned (“**Proposer**”) submits this proposal (this “**Proposal**”) in response to that certain Request for Proposals (the “**RFP**”) issued by the Georgia Department of Transportation (“**GDOT**”), an agency of the State of Georgia, dated February 9, 2018, as amended, to develop the FY 18 Bridge Replacement Project (the “**Project**”), as more specifically described herein and in the documents provided with the RFP. Initially capitalized terms not otherwise defined herein shall have the meanings set forth in the RFP.

In consideration for GDOT supplying us, at our request, with the RFP and agreeing to examine and consider this Proposal, the undersigned undertakes [jointly and severally] ***[if the Proposer is a joint venture or association other than a corporation, limited liability company or a partnership, leave in the words “jointly and severally,” otherwise delete]***:

a) to keep this Proposal open for acceptance for a period of ninety (90) days without unilaterally varying or amending its terms and without any member or partner withdrawing or any other change being made in the composition of the partnership/joint venture/limited liability company/consortium on whose behalf this Proposal is submitted, without first obtaining the prior written consent of GDOT, in GDOT’s sole discretion; and

b) to provide security (including bonds and insurance) for the due performance of the Design Build Agreement (the “**Agreement**”) as stipulated therein.

If selected by GDOT, the Proposer agrees to: (a) enter into the Agreement and satisfy all other conditions to award of the Agreement as set forth in Section 6 of the Instructions to Proposers (“**ITP**”) included in the RFP; and (b) perform its obligations as set forth in the Agreement, including compliance with all commitments contained in this Proposal.

Enclosed, and by this reference incorporated herein and made a part of this Proposal, are the following Proposal components:

- Administrative Information Submittals; and
- Price Proposal

The Proposer acknowledges receipt, understanding and full consideration of the following:

- ***[list any addenda to the RFP]***

The Proposer certifies the following: the Proposal is submitted without reservation, qualification, assumptions or conditions; the Proposer has carefully examined and is fully familiar with all of the RFP documents and is satisfied that the RFP documents provide sufficient detail regarding the intended Design-Build Team's obligations and do not contain internal inconsistencies; the Proposer has carefully checked all the words, figures and statements in the Proposal; the Proposer has conducted such other field investigations and additional design development as is prudent and reasonable in preparing this Proposal; the Proposer has requested clarification or interpretation with respect to any perceived deficiency in or omission from the RFP documents or other documents provided by GDOT; and the Proposer has notified GDOT of any unusual site conditions observed prior to the date hereof.

By signature below and submittal of Form F, the Proposer hereby certifies it has reviewed its proposed schedule and proposal estimates for the Project and that all Work can be completed within the Milestone Completion deadlines, including all Maximum Closure Durations as shown on Exhibit 9 of the Agreement, Substantial Completion, and Final Acceptance.

Proposer represents that all statements made in the Statement of Qualifications previously delivered to GDOT by the Proposer are true, correct, and accurate as of the date hereof, except as otherwise specified in the enclosed Proposal and Proposal forms. The Proposer agrees that such Statement of Qualifications, except as modified by the enclosed Proposal and Proposal forms, is incorporated as if fully set forth herein.

The Proposer understands that GDOT is not bound to award the Agreement to the Proposer submitting the Proposal with the lowest proposed bid, the highest scoring Proposal, or any Proposal GDOT may receive.

Except for any payment for Work Product paid to the Proposer in accordance with the ITP and the separate Contractual Services Certification, the Proposer further understands that all costs and expenses incurred by it in preparing this Proposal and participating in the RFP process will be borne solely by the Proposer.

The Proposer acknowledges they have read and understand Exhibit 18 and the Liquidated Damages and Nonrefundable Deductions which may be imposed. The amounts of Liquidated Damages and Nonrefundable Deductions represent good faith estimates as to the actual potential damages that GDOT would incur as a result for failure to meet requirements of the Agreement with associated Liquidated Damages and Nonrefundable Deductions.

The Proposer agrees that GDOT will not be responsible for any errors, omissions, inaccuracies or incomplete statements in the Proposal.

The Proposal shall be governed by and construed in all respects according to the laws of the State of Georgia.

Proposer's business address:

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(No.) (Street) (Floor or Suite)

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(City) (State or Province) (ZIP or Postal Code) (Country)

State or Country of Incorporation/Formation/Organization: \_\_\_\_\_

*[insert appropriate signature block from following pages]*

1. Sample signature block for corporation or limited liability company:

*[Insert the Proposer's name]*

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

2. Sample signature block for partnership or joint venture:

*[Insert the Proposer's name]*

By: *[Insert general partner's or member's name]*

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

*[Add signatures of additional general partners or members as appropriate]*

3. Sample signature block for attorney in fact:

*[Insert the Proposer's name]*

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Attorney in Fact

ADDITIONAL REQUIREMENTS FOR SINGLE PURPOSE ENTITIES AND JOINT VENTURES ONLY:

- A. If the Proposer is a corporation, enter the state or country of incorporation in addition to the business address. If the Proposer is a partnership, enter the state or country of formation. If the Proposer is a limited liability company, enter the state or country of organization.
- B. Describe in detail the legal and organizational structures of the entity making the Proposal.
1. Provide a table or tables showing the legal and organizational structure of the anticipated Design-Build Team and any Major Non-Participating Members entity. This table shall describe the role of all Participating Members, Major Non-Participating Members, and Contractors.
  2. If the Proposer (or any member, partner or joint venturer of the Proposer) is a corporation or includes a corporation as a joint venturer, partner or member, provide articles of incorporation and bylaws for the Proposer and each corporation certified by an appropriate individual.
  3. If the Proposer (or any member, partner or joint venturer of the Proposer) is a partnership or includes a partnership as a joint venturer, partner or member, attach full names and addresses of all partners and the equity ownership interest of each entity, provide the incorporation, formation and organizational documentation for the Proposer and each general partner (partnership agreement and certificate of partnership for a partnership, articles of incorporation and bylaws for a corporation, operating agreement for a limited liability company and joint venture agreement for a joint venture) certified by an appropriate individual.
  4. If the Proposer (or any member, partner or joint venturer of the Proposer) is a joint venture or includes a joint venture as a joint venturer, partner or member, attach the full names and addresses of all joint venturers and the equity ownership interest of each entity, provide the incorporation, formation and organizational documentation for the Proposer and each joint venturer (partnership agreement and certificate of partnership for a partnership, articles of incorporation and bylaws for a corporation, operating agreement for a limited liability company and joint venture agreement for a joint venture) certified by an appropriate individual.
  5. If the Proposer (or any member, partner or joint venturer of the Proposer) is a limited liability company or includes a limited liability company as a joint venturer, partner or member, attach full names and addresses of all members and the equity ownership interest of each entity, provide the incorporation, formation and organizational documentation for the Proposer and each member (partnership agreement and certificate of partnership for a partnership, articles of incorporation and bylaws for a corporation, operating agreement for a limited liability company and joint venture) certified by an appropriate individual. Attach evidence to the Proposal and to each letter that the person signing has authority to do so.
- C. With respect to authorization of execution and delivery of the Proposal and validity thereof, if the Proposer is a corporation, it shall provide evidence in the form of a resolution of its governing body certified by an appropriate officer of the corporation. If the Proposer is a partnership, such evidence shall be in the form of a partnership resolution and a general

partner resolution (as to each general partner) providing such authorization, in each case, certified by an appropriate officer of the general partner. If the Proposer is a limited liability company, such evidence shall be in the form of a limited liability company resolution and a managing member(s) resolution providing such authorization, certified by an appropriate officer of the managing member(s). If there is no managing member, each member shall provide the foregoing information. If the Proposer is a joint venture, such evidence shall be in the form of a resolution of each joint venturer, certified by an appropriate officer of such joint venturer. If the Proposer is a joint venture or a partnership, the Proposal must be executed by all joint venture members or all general partners, as applicable.

- D. The Proposer's partnership agreement, limited liability company operating agreement, and joint venture agreement, as applicable, must include an express provision satisfactory to GDOT, in its sole discretion, stating that, in the event of a dispute between or among joint venturers, partners or members, as applicable, no joint venturer, partner or member, as applicable, shall be entitled to stop, hinder or delay work on the Project. Proposers shall submit the applicable agreement to GDOT and identify on a cover page where in the agreement the provision can be found.



\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Name Printed)

\_\_\_\_\_  
(Name Printed)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Title)

Subscribed and sworn to before me this \_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary Public in and for  
said County and State

[Seal]

My commission expires: \_\_\_\_\_.

*[Proposers shall duplicate or modify this form as necessary so that it accurately describes the entity making the Proposal and so that it is signed on behalf of all partners, members, joint venture members, Participating Members and Major Non-Participating Members.]*



**FORM C**

**Conflict of Interest Disclosure Statement**

Proposer's Name: \_\_\_\_\_ ("Proposer")

The Proposer's attention is directed to Section 1.6.3 of the ITP regarding organizational conflicts of interest and the restrictions applicable to such conflicts. Proposers are advised that certain firms will not be allowed to participate on any Proposer's team for the FY 18 Bridge Replacement Project ("**Project**") because of their work with GDOT in connection with the Project procurement.\*

\* Initially capitalized terms not otherwise defined herein shall have the meanings ascribed thereto pursuant to the Instructions to Proposers within the Request for Proposals for the Project.

**1. Required Disclosure of Conflicts**

In the space provided below, and on supplemental sheets as necessary, identify all relevant facts relating to past, present, or planned interest(s) of the Proposer's team (including the Proposer, Participating Members, Major Non-Participating Members, proposed consultants and proposed subcontractors, and their respective chief executives, directors, and other key personnel for the project) which may result, or could be viewed as, an organizational conflict of interest in connection with this RFP.

For any facts relating to past, present, or planned interest(s) of the Proposer's team (including the Proposer, Participating Members, Major Non-Participating Members, proposed consultants and proposed subcontractors, and their respective chief executives, directors, and other key personnel for the project) which may result, or could be viewed as, an organizational conflict of interest in connection with this RFP, the Proposer shall disclose (a) any current contractual relationships with GDOT, (b) any past, present, or planned contractual or employment relationships with any officer or employee of GDOT, and (c) any other circumstances that might be considered to create a financial interest in the contract by any GDOT member, officer or employee, if the Proposer is awarded the DBA. The Proposer shall also disclose matters such as ownership of 10% or more of the stock of, or having directors in common with, any of the individuals or entities involved in preparing the RFP. The Proposer shall also disclose contractual relationships (i.e. joint ventures) with any of the individuals or entities involved in preparing the RFP, including those identified in ITP Exhibit G, as well as relationships wherein such individual or entity is a contractor or consultant (or subcontractor or subconsultant) to the Proposer or a member of the Proposer's team. The foregoing is provided by way of example, and shall not constitute a limitation on the disclosure obligations.

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**2. Explanation**

In the space provided below, and on supplemental sheets as necessary, identify steps the Proposer or other entities have taken or will take to avoid, neutralize, or mitigate any organizational conflicts of interest described herein.

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**3. Certification**

The undersigned hereby certifies that, to the best of his or her knowledge and belief, no interest exists that is required to be disclosed in this Conflict of Interest Disclosure Statement, other than as disclosed above.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Company Name

\_\_\_\_\_, 201\_  
Date

**FORM D**

**Form of Proposal Bond**

**Bond No.** \_\_\_\_\_

**KNOW ALL PERSONS BY THESE PRESENTS**, that the \_\_\_\_\_, as Principal and \_\_\_\_\_, as Surety or as Co-Sureties, each a corporation duly organized under the laws of the State indicated on the attached page, having its principal place of business at the address listed on the attached page, in the State indicated on the attached page, and authorized as a surety in the State of Georgia, are hereby jointly and severally held and firmly bound unto the Georgia Department of Transportation ("GDOT"), in the sum of five percent (5%) of the Price Proposal amount of XXXXXXXX United States Dollars (US \$XXX,XXX,XXX) (the "Bonded Sum"), the payment of which we each bind ourselves, and our heirs, executors, administrators, representatives, successors, and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, the Principal is herewith submitting its Proposal to design and build the FY18 Bridge Replacement Project (the "**Project**"), which Proposal is incorporated herein by this reference and has been submitted pursuant to GDOT's Request for Proposals dated as April 20, 2018 (as amended or supplemented, the "RFP");

**NOW, THEREFORE**, the condition of this bond is such that, upon occurrence of any of the events set forth below in subsections (a)-(c), then this obligation shall be null and void; otherwise it shall remain in full force and effect, and the Bonded Sum will be forfeited to GDOT as liquidated damages and not as a penalty, upon receipt by the Principal and Surety or by the Principal and Sureties listed on the attached page (the "Co-Sureties") of notice of such forfeiture from GDOT:

- (a) The Principal's receipt of written notice from GDOT that either (i) GDOT will not award the DBA for the Project pursuant to the RFP, or (ii) GDOT has awarded the DBA for the Project, has received the executed DBA and other required documents and does not intend to award the DBA to the Principal;
- (b) The Principal's performance of all of its obligations under the RFP in connection with award of the DBA; or
- (c) Failure of GDOT to award the DBA to the Principal within ninety (90) Calendar days after the Proposal Due Date.

If the Principal shall (i) fail to promptly and properly fully satisfy on a timely basis the conditions for release set forth in (b) above (including, without limitation, any failure to comply on a timely basis with the terms of Section 5.6 of the Instructions to Proposers within the RFP (the "ITP")) or (i) withdraw its Proposal in a manner that is not permitted by the ITP, the Principal and the Surety or Co-Sureties hereby agree to pay to GDOT the full Bonded Sum herein above set forth, as liquidated damages and not as a penalty, within ten (10) days after such failure.

In accordance with Section 4.7 of the ITP, GDOT shall return this Proposal Bond to the Principal following GDOT's receipt from Principal of conforming Payment and Performance Bonds.

The following terms and conditions shall apply with respect to this bond:

1. If suit is brought on this bond by GDOT and judgment is recovered, the Principal and Surety or Co-Sureties shall pay all costs incurred by GDOT in bringing such suit, including, without limitation, reasonable attorneys' fees and costs as determined by the court.

2. Any extension(s) of the time for award of the DBA that the Principal may be granted in accordance with the ITP or otherwise, shall be subject to the reasonable approval of Surety or Co-Sureties.

3. The Co-Sureties agree to empower a single representative with authority to act on behalf of all of the Co-Sureties with respect to this Bond, so that Obligee will have no obligation to deal with multiple sureties hereunder. All correspondence from Obligee to the Co-Sureties and all claims under this Bond shall be sent to such designated representative. The Co-Sureties also agree to designate a single agent for service of process with respect to any actions on this Bond, which agent shall either be (a) a natural person or (b) a corporation qualified to act as an agent for service of process under Georgia law. The designated representative and agent for service of process may be changed only by delivery of written notice (by personal delivery or by certified mail, return receipt requested) to Obligee designating a single new representative and/or agent, signed by all of the Co-Sureties. The initial representative shall be:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
[name and address]

and the initial agent for service of process shall be:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
[name and address]

**SIGNED and SEALED** this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

\_\_\_\_\_  
Principal

By: \_\_\_\_\_

\_\_\_\_\_  
Co-Surety

By: \_\_\_\_\_  
Attorney in Fact

By: \_\_\_\_\_

\_\_\_\_\_  
Co-Surety

By: \_\_\_\_\_  
Attorney in Fact

By: \_\_\_\_\_

\_\_\_\_\_  
Co-Surety

By: \_\_\_\_\_  
Attorney in Fact

[ADD APPROPRIATE SURETY ACKNOWLEDGMENTS]

CO-SURETIES

SURETY NAME

SURETY ADDRESS

INCORPORATED IN

**FORM E**

STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION FORM EEO  
CONSTRUCTION CONTRACTORS  
BID OPPORTUNITY LIST

PREQUALIFICATION OFFICE  
Revised 05/16/11

This information shall be submitted in accordance with ITP Section 1.8

---

Prime Contractor/Consultant: \_\_\_\_\_  
Address/Telephone Number: \_\_\_\_\_  
Bid/Proposal Number: \_\_\_\_\_  
Quote Submitted MM/YY: \_\_\_\_\_

49 CRF Part 26.11 requires the Georgia Department of Transportation to develop and maintain a "bid opportunity list". The list is intended to be a listing of all firms participating or attempting to participate, on DOT assisted contracts. The list must include all firms that bid on prime contracts, or bid or quote subcontracts and materials supplies on DOT-assisted projects, including both DBEs and non-DBEs. For consulting companies, this list must include all subconsultants contacting you and expressing an interest in teaming with you on a specific DOT assisted project. Prime contractors and consultants must provide information for Nos. 1, 2, 3, and 4 and must provide information they have available on Numbers 5, 5.A., 6, 7, 8 and 9 for themselves, and their subcontractors and subconsultants.

- |                                 |   |
|---------------------------------|---|
| 1. Federal Tax ID Number: _____ | 6. <input type="checkbox"/> DBE           |
| 2. Firm Name: _____             | <input type="checkbox"/> Non-DBE          |
| 3. Phone: _____                 | 7. <input type="checkbox"/> Subcontractor |
| 4. Address: _____               | 8. <input type="checkbox"/> Subconsultant |
|                                 | 9. <input type="checkbox"/> Supplier      |

5. Contact \_\_\_\_\_  
5.A. Company E mail address \_\_\_\_\_

- 
- |                                 |   |
|---------------------------------|---|
| 1. Federal Tax ID Number: _____ | 6. <input type="checkbox"/> DBE           |
| 2. Firm Name: _____             | <input type="checkbox"/> Non-DBE          |
| 3. Phone: _____                 | 7. <input type="checkbox"/> Subcontractor |
| 4. Address: _____               | 8. <input type="checkbox"/> Subconsultant |
|                                 | 9. <input type="checkbox"/> Supplier      |

5. Contact \_\_\_\_\_  
5.A. Company E mail address \_\_\_\_\_

- 
- |                                 |   |
|---------------------------------|---|
| 1. Federal Tax ID Number: _____ | 6. <input type="checkbox"/> DBE           |
| 2. Firm Name: _____             | <input type="checkbox"/> Non-DBE          |
| 3. Phone: _____                 | 7. <input type="checkbox"/> Subcontractor |
| 4. Address: _____               | 8. <input type="checkbox"/> Subconsultant |
|                                 | 9. <input type="checkbox"/> Supplier      |

5. Contact \_\_\_\_\_  
5.A. Company E mail address \_\_\_\_\_

**FORM F**

**Design-Build Price Proposal**

Proposer Name: \_\_\_\_\_

The Proposer shall complete the required fields of Section A, Section B, and Section C below. See Exhibit D for additional explanation and requirements.

**A. Design-Build Contract Sum**

**The Proposer shall indicate its proposed Design-Build Contract Sum on this Form F; such Design-Build Contract Sum shall include all Design-Build Team costs and expenses.**

Proposal Line Number	Item ID Description	Quantity and Units	Price Proposal Dollars
1	Construction Complete Structure ID 075-5041-0 (Cook County)	Lump Sum	
2	Construction Complete Structure ID 075-5043-0 (Cook County)	Lump Sum	
3	Construction Complete Structure ID 267-5021-0 (Tattnall County)	Lump Sum	
4	Construction Complete Structure ID 269-5001-0 (Taylor County)	Lump Sum	
5	Construction Complete Structure ID 315-0037-0 (Wilcox County)	Lump Sum	
		Total Proposal Price	

**B. Reserved**

**C. Reserved**

**D. Reserved**

BY SIGNATURE BELOW AND SUBMITTAL OF THIS FORM F, THE PROPOSER HEREBY CERTIFIES IT HAS REVIEWED ITS PROPOSAL SCHEDULE AND PROPOSAL ESTIMATES FOR THE PROJECT AND THAT ALL WORK CAN BE COMPLETED WITHIN THE COMPLETION DEADLINES, INCLUDING ACCOUNTING FOR THE AGGREGATE MAXIMUM CLOSURE DURATIONS.



**Date:**

\_\_\_\_\_

**Signature:**

\_\_\_\_\_

**Design-Build Team:**

\_\_\_\_\_

**Vender No.:**

\_\_\_\_\_

**FORM G**

**Form of Participating Members, Major Non-Participating Members, Contractors and Key Personnel Commitment**

Proposer's Name: \_\_\_\_\_ ("Proposer")

The Proposer hereby commits that, if awarded the FY 18 Bridge Replacement Project ("**Project**"), the Proposer will use the entities and individuals listed below for their stated positions and that, to the extent within the Proposer's control, such entities and individuals will be available to fulfill their Project-related responsibilities (add lines as applicable).

**Participating Member:** \_\_\_\_\_

**Participating Member:** \_\_\_\_\_

**Major Non-Participating Member:** \_\_\_\_\_

**Major Non-Participating Member:** \_\_\_\_\_

**Key Personnel:**

- **Lead Contractor Project Manager:** \_\_\_\_\_
- **Lead Engineering Firm (Lead Design Consultant) Design Manager:** \_\_\_\_\_
- **Other Key Personnel (Participating Members and Major Non-Participating Members, as appropriate):**
  - **Engineer of Record (if different than the Lead Engineering Firm Design Manager):** \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_

Signed: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**FORM H**

**Equal Employment Opportunity Certification**

*[To be executed by the Proposer, Participating Members, Major Non-Participating Members, and proposed Contractors]*

The undersigned certifies on behalf of \_\_\_\_\_, that:  
*(Name of entity making certification)*

*[check one of the following boxes]*

- It has developed and has on file at each establishment affirmative action programs pursuant to 41 CFR Part 60-2 (Affirmative Action Programs).
- It is not subject to the requirements to develop an affirmative action program under 41 CFR Part 60-2 (Affirmative Action Programs).

*[check one of the following boxes]*

- It has not participated in a previous contract or subcontract subject to the equal opportunity clause described in Executive Orders 10925, 11114 or 11246.
- It has participated in a previous contract or subcontract subject to the equal opportunity clause described in Executive Orders 10925, 11114 or 11246 and, where required, it has filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

If not the Proposer, relationship to the Proposer: \_\_\_\_\_

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b)(1)), and must be submitted by Proposers only in connection with contracts which are subject to the equal opportunity clause. Contracts that are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally, only contracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by Executive Orders or their implementing regulations.

Proposers, Participating Members, Major Non-Participating Members or proposed Contractors who have participated in a previous contract subject to the Executive Orders and have not filed the required reports shall note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

**FORM I**

**DBE Certification**

**DISADVANTAGED BUSINESS ENTERPRISES REQUIREMENTS**

The following Project goal for participation by DBEs is established for professional services and construction work:

**DBE GOAL**

**6.0% of the overall Project design and construction costs, with respect to the race conscious participation by the Design-Build Team.**

**DBE Certification**

By signing below, the Proposer certifies that (1) the Design-Build Team will provide a good faith effort to meet the goal; and (2) the Design-Build Team will direct its efforts toward the utilization of DBE firms in both design and construction components of the Project, (3) the Design-Build Team will submit a DBE Commitments List meeting the requirements set forth in Attachment 6 to Exhibit 8 to the DB Agreement, (4) the Design-Build Team will submit monthly and annual summary reports of the DBE goal attainment on the Project, identifying the components of the Project on which DBE firms are/have been utilized See the following page of this form for the Commitments List requirements.

Failure to submit the DBE Commitments List will be considered a breach of the requirements of the RFP. As a result, the Proposal Bond provided by the Proposer will become property of GDOT and the Proposer will be precluded from participating in any re-procurement of the Agreement for the Project.

\_\_\_\_\_  
[name]

\_\_\_\_\_  
[title]

The DBE firms to be utilized as counting toward the proposed goal must be listed on this form, along with their addresses, type of work and the amount to be paid to each of the certified DBE firms. The amount entered will not necessarily be the contract amount, but must be the actual amount that will be paid to the DBE firm. In the case of a DBE supplier, the amount paid and 60% of that amount both will be entered; and only the 60% figure should be added to the total. An example of this is shown in Table I-1:

Table I-1: Example Commitments Chart

Vender Number	Company Name and Address (City and State)	Type of Work	*Work Code	Race Neutral	Race Conscious	Amount
	ABC Oil Company Atlanta, GA	Diesel Fuel Supplier				\$80,000.00 (60%= \$48,000.00)

The Contractor shall indicate for each DBE and Type of Work whether the DBE Participant is Race Neutral or Race Conscious by placing a checkmark in the appropriate column.

**PLEASE NOTE:** For 60% of the amount paid to a DBE supplier to be eligible to count toward fulfilling the DBE goal, the supplier must be an established “regular dealer” in the product involved, and not just a broker. A “regular dealer” would normally sell the product to several customers and would usually have product inventory on hand.

**FORM J**  
**RESERVED**

## FORM K

### Use of Contract Funds for Lobbying Certification

The undersigned Proposer certifies on behalf of itself and all contractors (at all tiers) the following:

1. The Proposer certifies, to the best of its knowledge and belief, that:
  - a. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
  - b. If any funds (other than federal appropriated funds) received by the Proposer under the RFP or Agreement have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions, and shall include a copy of said form in its proposal or bid, or submit it with the executed DBA or any or Subcontract.
2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
3. The Proposer shall require that the language of this certification be included in all lower tier subcontracts which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.
4. The undersigned certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the undersigned understands and agrees that the provisions of 31 U.S.C. §3801, et seq., apply to this certification and disclosure, if any.

[Note: Pursuant to 31 U.S.C. §1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty

of not less than \$10,000 and not more than \$100,000 for each expenditure or failure.]

Date: \_\_\_\_\_

Proposer: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_



**FORM L**

**Debarment and Suspension Certification**

The undersigned Proposer certifies on behalf of itself, and all Participating Members, Major Non-Participating Members and Contractors identified by such Proposer as of the date hereof, as follows:

The undersigned certifies to the best of its knowledge and belief, that it and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
- b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, State or local) transaction or contract under a public transaction; violation of federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (federal, State or local) terminated for cause or default.

Where the Proposer is unable to certify to any of the statements in this certification, it shall attach a certification to its proposal or bid stating that it is unable to provide the certification and explaining the reasons for such inability.

Date: \_\_\_\_\_

Proposer: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

**FORM M**  
**RESERVED**

**FORM N**  
**RESERVED**

**FORM O**  
**RESERVED**

**FORM P**  
**RESERVED**

**FORM Q**  
**RESERVED**

**FORM R**

**GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT AFFIDAVIT**

Contract No. and Name:

Design-Build Agreement for the FY 18 Bridges Reconstruction Project (the "**Project**")

Name of Contracting Entity: \_\_\_\_\_

By executing this affidavit, the undersigned person or entity verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm, or corporation which is contracting with the Georgia Department of Transportation has registered with, is authorized to participate in, and is participating in the federal work authorization program commonly known as E-Verify,<sup>1</sup> in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91.

The undersigned person or entity further agrees that it will continue to use the federal work authorization program throughout the contract period, and it will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the undersigned with the information required by O.C.G.A. § 13-10-91(b).

The undersigned person or entity further agrees to maintain records of such compliance and provide a copy of each such verification to the Georgia Department of Transportation at the time the subcontractor(s) is retained to perform such service.

\_\_\_\_\_  
EEV/E-Verify™ User Identification Number

\_\_\_\_\_  
Date of Authorization

\_\_\_\_\_  
BY: Authorized Officer or Agent  
(Name of Person or Entity)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title of Authorized Officer or Agent  
Agent

\_\_\_\_\_  
Printed Name of Authorized Officer or

SUBSCRIBED AND SWORN BEFORE ME  
ON THIS THE

\_\_\_\_ DAY OF \_\_\_\_\_ 201\_\_

[NOTARY SEAL]

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

<sup>1</sup> or any subsequent replacement operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify Information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603.

List of states that verify immigration status prior to issuance of a driver's license or I.D. card and only issue to persons lawfully present in the United States, as required by O.C.G.A Section 13-10-91(b)(5).

**Compliant**

Alabama	Kentucky*	North Dakota*
Alaska*	Louisiana**	Ohio
Arizona	Maine*	Oklahoma*
Arkansas	Maryland	Oregon*
California*	Massachusetts*	Pennsylvania*
Colorado	Michigan**	Rhode Island*
Connecticut	Minnesota*	South Carolina*
Delaware	Mississippi	South Dakota
District of Columbia	Missouri*	Tennessee
Florida	Montana*	Texas
Georgia	Nebraska	Utah
Hawaii	Nevada	Vermont
Idaho*	New Hampshire*	Virginia*
Illinois*	New Jersey*	West Virginia
Indiana	New Mexico	Washington*
Iowa	New York**	Wisconsin
Kansas	North Carolina	Wyoming

US Territories Guam, Puerto Rico and the U.S. Virgin Islands also have an extension through October 10, 2018

US Territories American Samoa and Northern Mariana Islands are currently under review.

\*Indicates an extension allowing Federal agencies to accept their driver's licenses through October 10, 2018.

\*\*DHS is currently reviewing extension requests from these states with extensions that expired on October 10th, 2017. States will have a grace period until January 22, 2018, meaning that Federal agencies (including TSA) will continue to accept driver's license and identification cards issued by these states in accordance with each agency's policies.



## FORM S

### Opinion of Counsel

[Letterhead of independent law firm or in-house counsel – See Section 6.2.1 of the ITP for legal counsel requirements- If applicable]

Mr. Matthew Cline  
Georgia Department of Transportation  
One Georgia Center  
600 West Peachtree Street, NW  
Atlanta, Georgia 30308

**Re:** Design-Build Agreement for the [Insert Project Name] Project (the “**Project**”)

Dear Mr. Cline,

This letter is provided with regard to the Design-Build Agreement dated as of \_\_\_\_\_, 2018 (the “Agreement”), by and between the Georgia Department of Transportation (“**GDOT**”), an agency of the State of Georgia, and \_\_\_\_\_ (the “Design-Build Team”) for the [Insert Project Name] Project (the “**Project**”).

*[Describe relationship to Design-Build Team and its joint venture members, general partners, members, as applicable, and any other entities whose approval is required in order to authorize execution of the Agreement.]*

[This letter is provided to you pursuant to Section 6.2.1 of the Instructions to Proposers of that certain Request for Proposals issued by GDOT on April 20, 2018, as amended.]

In giving this opinion, we have examined \_\_\_\_\_. We have also considered such questions of law and we have examined such documents and instruments and certificates of public officials and individuals who participated in the procurement process as we have deemed necessary or advisable. *[if a certificate is used/obtained from Design-Build Team, such certificate shall also run in favor of GDOT, and shall be attached to the opinion]*

In giving this opinion, we have assumed that all items submitted to us or reviewed by us are genuine, accurate and complete, and if not originals, are true and correct copies of originals, and that all signatures on such items are genuine.

Subject to the foregoing, we are of the opinion that:

1. [opinion regarding organization/formation and existence of the Design-Build Team and that the Design-Build Team has corporate power to own its properties and assets, carry on its business, enter into the Agreement and to perform its obligations under the Agreement] *[if Design-Build Team is a partnership/joint venture, these opinions are also required for each of its joint venture members and general partners]*

2. [opinion regarding good standing and qualification to do business in the state of Georgia for Design-Build Team] *[if Design-Build Team is a partnership/joint venture, these opinions are also required for each of its joint venture members and general partners]*

3. [opinion that the Agreement has been duly authorized by all necessary corporate action on the part of Design-Build Team and the Agreement have been duly executed and delivered by Design-Build Team] *[if Design-Build Team is a partnership/joint venture, add: “and its joint venture members/general partners” after the first and second “Design-Build Team”]*

4. [opinion that the Agreement constitute a legal, valid and binding obligation of Design-Build Team enforceable against Design-Build Team in accordance with its terms] *[if Design-Build Team is a partnership/joint venture, add: “and its joint venture members/general partners” after the second “Design-Build Team”]*

5. [opinion that all required approvals have been obtained with respect to execution, delivery and performance of the Agreement; and that the Agreement does not conflict with any agreements to which Design-Build Team is a party *[if Design-Build Team is a partnership/joint venture, add: “and its joint venture members/general partners are a party”]* or with any orders, judgments or decrees by which Design-Build Team is bound *[if Design-Build Team is a partnership/joint venture, add: “and its joint venture members/general partners are bound”]*

6. [opinion that execution, delivery and performance of all obligations by Design-Build Team under the Agreement do not conflict with, and are authorized by, the articles of incorporation and bylaws of Design-Build Team *[if Design-Build Team is a partnership, replace “articles of incorporation and bylaws” with “partnership agreement and (if applicable) certificate of limited partnership”; if Design-Build Team is a joint venture, replace “articles of incorporation and bylaws” with “joint venture agreement”; if Design-Build Team is a limited liability company, replace “articles of incorporation and bylaws” with “operating agreement and certificate of formation”]*

7. [opinion that execution and delivery by Design-Build Team of the Agreement does not, and Design-Build Team’s performance of its obligations under the Agreement will not, violate any current statute, rule or regulation applicable to Design-Build Team or to transactions of the type contemplated by the Agreement]

8. [opinion that the Design-Build Team agreements (as applicable) have been duly authorized by all necessary corporate action on the part of Design-Build Team and such agreements have been duly executed and delivered by Design-Build Team] *[if Design-Build Team is a partnership/joint venture, add: “and its joint venture members/general partners” after the first and second “Design-Build Team”]*

9. [opinion that the Design-Build Team agreements constitute legal, valid and binding obligations of Design-Build Team enforceable against Design-Build Team in accordance with their terms] *[if Design-Build Team is a partnership/joint venture, add: “and its joint venture members/general partners” after the second “Design-Build Team”]*

**FORM T**

**Drug Free Workplace**

STATE OF \_\_\_\_\_ )  
 )SS:  
COUNTY OF \_\_\_\_\_ )

Each of the undersigned, being first duly sworn, deposes and says that:

\_\_\_\_\_ is the \_\_\_\_\_ of \_\_\_\_\_ and \_\_\_\_\_ is the \_\_\_\_\_ of \_\_\_\_\_, which entity(ies) are the \_\_\_\_\_ of \_\_\_\_\_, the entity making the foregoing Proposal.

The undersigned certifies that the provisions of Code Sections 50-24-1 through 50-24-6 of the Official Code of Georgia Annotated, relating to the "Drug-free Workplace Act", have been complied with in full.

The undersigned further certifies that:

- (1) A drug-free workplace will be provided for the Contractor's employees during the performance of the Contract; and
- (2) Each Contractor who hires a Subcontractor to work in a drug-free workplace shall secure from that Subcontractor the following written certification:

"As part of the subcontracting agreement with (Contractor's name)\_\_\_\_\_, (Subcontractor's name)\_\_\_\_\_ certifies to the Contractor that a drug free workplace will be provided for the Subcontractor's employees during the performance of this Contract pursuant to paragraph (7) of subsection (b) of Code Section 50-24-3."

Also, the undersigned further certifies that he will not engage in the unlawful manufacture, sale distribution, dispensation, possession, or use of a controlled substance or marijuana during the performance of the Contract.

*[signature page follows]*

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Name Printed)

\_\_\_\_\_  
(Name Printed)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Title)

Subscribed and sworn to before me this \_\_\_ day of \_\_\_\_\_, 2018.

\_\_\_\_\_  
Notary Public in and for  
said County and State

[Seal]

My commission expires: \_\_\_\_\_

*[Proposers shall duplicate or modify this form as necessary so that it accurately describes the entity making the Proposal and so that it is signed on behalf of all partners, members, joint venture members, Participating Members and Major Non-Participating Members.]*

**DESIGN-BUILD AGREEMENT  
FOR  
FY 18 BRIDGE REPLACEMENT PROJECT  
PI No. 0015913**

**Between**

**Georgia Department of Transportation,**

**State of Georgia**

**and**

\_\_\_\_\_,  
a \_\_\_\_\_

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**DESIGN-BUILD AGREEMENT  
FOR THE FY 18 BRIDGE REPLACEMENT PROJECT**

This Design and Build Agreement for the FY 18 Bridge Replacement Project (this "Agreement", or "DB Agreement" or the "DBA") is entered into and effective as of \_\_\_\_\_, 2018, by and between the Georgia Department of Transportation ("GDOT"), an agency of the State of Georgia, and \_\_\_\_\_, a \_\_\_\_\_ ("DB Team").

**R E C I T A L S**

A. Pursuant to Section 32-2-81 (c) of the Official Code of Georgia Annotated (the "Code"), GDOT is authorized to "combine any or all of the environmental services, utility relocation services, right of way services, design services, and construction phases of a public road or other transportation purpose project into a single contract using a design-build procedure."

B. Pursuant to Section 32-2-81 of the Code, "the term 'design-build procedure' means a method of contracting under which GDOT "contracts with another party for the party to both design and build the structures, facilities, systems, and other items specified in the contract." GDOT may use the design-build procedure for buildings, bridges and approaches, rail corridors, technology deployments, and limited or controlled access projects or projects that may be constructed within existing rights of way where the scope of work can be clearly defined or when a significant savings in project delivery time can be attained.

C. Pursuant to the provisions of the Code and Chapter 672-18 of the Rules of the State Department of Transportation (the "Rules"), GDOT issued a Request for Qualifications ("RFQ") on February 9, 2018, as amended, requesting submittals of a Statement of Qualifications ("SOQ") from respondents desiring to develop the FY 18 Bridge Replacement Project (the "Project") through a Design-Build Agreement.

D. GDOT received two (2) responsive SOQs by March 16, 2018, and subsequently shortlisted or qualified two (2) responsive Proposers.

E. On April 20, 2018, GDOT issued to the shortlisted Proposers a Request for Proposals ("RFP") with respect to the Project.

F. On June 18, 2018, GDOT received responses to the RFP, including the response of \_\_\_\_\_ on behalf of DB Team (the "Proposal").

G. As part of the RFP, GDOT required that shortlisted Proposers commit to entering into an Agreement with GDOT for the design and construction of the Project.

H. An RFP Technical Review Committee comprised of GDOT staff determined the DB Team was the Proposer that best met the selection criteria contained in the RFP.

NOW, THEREFORE, in consideration of the Work to be performed by DB Team, and DB Team's obligations with respect thereto, the foregoing premises and the covenants and agreements set forth herein, the Parties hereby agree as follows:

**Article 1      DEFINITIONS; DB DOCUMENTS; ORDER OF PRECEDENCE;  
PRINCIPAL PROJECT DOCUMENTS**

**1.1      Abbreviations and Definitions**

Abbreviations and definitions for certain terms used in this Agreement and the other DB Documents are contained in Exhibit 1. Other definitions may be identified within the text of the DB Documents.

**1.2      DB Documents; Order of Precedence**

Each of the DB Documents is an essential part of the agreement between the Parties. The DB Documents are intended to be complementary and to be read together with this Agreement as a complete agreement. Each of the DB Documents (other than this Agreement) is hereby expressly incorporated herein by reference.

**1.2.1**      Subject to Article 1.2.2, in the event of any conflict, ambiguity or inconsistency among the DB Documents, the order of precedence, from highest to lowest, shall be as follows:

**1.2.1.1**      Supplemental Agreements, Agreement amendments, and all exhibits, riders, and attachments thereto;

**1.2.1.2**      The Agreement (also referred to as Volume 1) and all exhibits thereto (other than Exhibit 2);

**1.2.1.3**      Volume 2 “Technical Provisions for Design-Build Agreement” amendments, and all exhibits and attachments to such amendments;

**1.2.1.4**      Volume 2 “Technical Provisions for Design-Build Agreement”, and all exhibits and attachments to the Technical Provisions;

**1.2.1.5**      Volume 3 “Programmatic Technical Provisions for Design-Build Agreement” amendments, and all exhibits and attachments to such amendments (excluding Attachment 3-1);

**1.2.1.6**      Volume 3 “Programmatic Technical Provisions for Design-Build Agreement” and all exhibits and attachments thereto, excluding Attachment 3-1;

**1.2.1.7**      Volume 3, Attachment 3-1 “Manuals” (Technical Documents) amendments; provided that GDOT in its sole discretion may designate that such amendments or portions thereof take precedence over the Technical Provisions to the extent provided in Article 7.2.5;

**1.2.1.8**      Volume 3, Attachment 3-1 “Manuals” (Technical Documents);

**1.2.1.9**      DB Team’s Proposal commitments set forth in Exhibit 2 hereto; provided that, to the extent specified in Exhibit 2, certain provisions therein shall supersede the specified provisions of the other DB Documents.

**1.2.2** If the Proposal includes statements, offers, terms, concepts or designs that can reasonably be interpreted as offers to provide higher quality items than otherwise required by the other DB Documents or to perform services or meet standards in addition to or better than those otherwise required, or otherwise contains terms or designs which are more advantageous to GDOT than the requirements of the other DB Documents, as reasonably determined by GDOT, then DB Team's obligations hereunder shall include compliance with all such statements, offers, terms, concepts and designs, which shall have the priority of Agreement amendments (Article 1.2.1.1) and Technical Provisions amendments (Article 1.2.1.3), as applicable.

**1.2.3** If the DB Documents contain differing provisions on the same subject matter, the provisions that establish the higher quality manner or method of performing the Work or use more stringent standards will prevail. Additional details in a lower priority DB Document shall be given effect except to the extent they irreconcilably conflict with requirements, provisions and practices contained in the higher priority DB Document. If the DB Documents contain differing provisions on the same subject matter that cannot be reconciled by applying the foregoing rules, then the provisions (whether setting forth performance or prescriptive requirements) contained in the document of higher order of precedence shall prevail over the provisions (whether setting forth performance or prescriptive requirements) contained in the document of lower order of precedence.

**1.2.4** Where there is an irreconcilable conflict among any standards, criteria, requirements, conditions, procedures, specifications or other provisions applicable to the Project set forth in one or more manual(s) or publication(s) referenced within a DB Document or set of DB Documents with the same order of priority (including within documents referenced therein), the standard, criterion, requirement, condition, procedure, specification or other provision offering higher quality or better performance will apply, unless GDOT in its sole discretion approves otherwise in writing. If there is an irreconcilable conflict between manuals or publications referenced in DB Document of differing priorities, the order of precedence set forth in Article 1.2.1 will apply. If either Party becomes aware of any such conflict, it shall promptly notify the other party of the conflict in writing. GDOT shall issue a written determination respecting which of the conflicting items is to apply promptly after it becomes aware of any such conflict.

### **1.3 Construction and Interpretation of the DB Documents**

**1.3.1** The headers or captions of the Articles of this Agreement and Sections in the other DB Documents are for convenience only and shall not be deemed part of this Agreement or the DB Documents or considered in construing this Agreement or the DB Documents.

**1.3.2** The language in all parts of the DB Documents shall in all cases be construed simply, as a whole and in accordance with its fair meaning and not strictly for or against any Party. The Parties hereto acknowledge and agree that the DB Documents are the product of an extensive and thorough, arm's length exchange of ideas, questions, answers, information and drafts during the Proposal preparation process, that each Party has been given the opportunity to independently review the DB Documents with legal counsel, and that each Party has the requisite experience and sophistication to negotiate, understand, interpret and agree to the particular language of the provisions of the DB Documents. Accordingly, in the event of an ambiguity in or Dispute regarding the

interpretation of the DB Documents, the DB Documents shall not be interpreted or construed against the Party preparing it, and instead other rules of interpretation and construction shall be utilized. GDOT's final answers to the questions posed during the Proposal preparation process for this Agreement shall in no event be deemed part of the DB Documents and shall not be relevant in interpreting the DB Documents except as they may clarify provisions otherwise considered ambiguous.

**1.3.3** Reserved.

**1.3.4** References in this instrument to this "Agreement" mean, refer to and include this instrument as well as any riders, exhibits, amendment and attachments hereto (which are hereby incorporated herein by reference) or other documents expressly incorporated by reference in this instrument. Any references to any covenant, condition, obligation and/or undertaking "herein," "hereunder" or "pursuant hereto" (or language of like import) mean, refer to and include the covenants, conditions, obligations and undertakings existing pursuant to this instrument and any riders, exhibits, amendment, attachments or other documents affixed to or expressly incorporated by reference in this instrument. All terms defined in this instrument shall be deemed to have the same meanings in all riders, exhibits, amendment, attachments or other documents affixed to or expressly incorporated by reference in this instrument unless the context thereof clearly requires the contrary. Unless expressly provided otherwise, all references to exhibits, articles and sections refer to same as set forth in this Agreement. Where a specific section is referenced, such reference shall include all subsections thereunder. Unless otherwise stated in this Agreement or the other DB Documents, words that have well-known technical or construction industry meanings are used in this Agreement or the other DB Documents in accordance with such recognized meaning. All references to a subsection or clause "above" or "below" refer to the denoted subsection or clause within the section in which the reference appears. Wherever the word "including," "includes" or "include" is used in the DB Documents, it shall be deemed to be followed by the words "without limitation". Wherever reference is made in the DB Documents to a particular Governmental Entity, it includes any public agency succeeding to the powers and authority of such Governmental Entity.

**1.3.5** As used in this Agreement and the other DB Documents and as the context may require, the singular includes the plural and vice versa, and the masculine gender includes the feminine and vice versa.

**1.4** Reserved

**1.5** Reference Information Documents

**1.5.1** DB Team acknowledges that GDOT has provided and disclosed to DB Team the Reference Information Documents ("RIDs"). The RIDs are not mandatory or binding on DB Team. DB Team is not entitled to rely on the RIDs as presenting design, engineering, operating or maintenance solutions or other direction, means or methods for complying with the requirements of the DB Documents, Governmental Approvals or Law.

**1.5.2** Except as expressly set forth herein, DB Team acknowledges that GDOT neither represents nor warrants that the information contained in the RIDs is complete or accurate or that such information is in conformity with the requirements of the DB Documents, Governmental Approvals or Laws, and GDOT is not responsible or liable in

any respect for any causes of action, claims or Losses whatsoever suffered by any DB Team-Related Entity by reason of any use of information contained in, or any action or forbearance in reliance on, the RIDs.

## **1.6 Errata to the GDOT Standard Specifications**

**1.6.1** In interpreting standards, policies and specifications referenced in the latest edition of the GDOT Standard Specifications, Construction of Transportation Systems, as well as the Manuals listed in Volume 3, Attachment 3-1, the following apply:

- (a) References to the “Department” shall mean GDOT.
- (b) References to the “Contractor” shall mean the DB Team.
- (c) References to “Resident Engineer” or “Engineer” in the context of the provider of compliance judgment may mean the Designer Quality Assurance Manager or Engineer of Record, as applicable, or it may mean a GDOT representative, or any combination thereof, depending on the context, and as determined by GDOT in its sole discretion and without recourse for the DB Team.
- (d) References to the “Contract” shall mean the Agreement.
- (e) References to the “Inspector” shall mean a representative of GDOT.
- (f) References to “plan(s)” shall mean the DB Documents.
- (g) References to “The Work” shall mean the Work.
- (h) Cross-references to measurement and payment provisions contained in the referenced standards, policies, and specifications shall be deemed to refer to the measurement and payment provisions contained in the DB Documents.
- (i) Any conflicts, ambiguities, or lack of clarity in regard to items included in the provisions, terms, or definitions used will be interpreted and defined by GDOT in its sole discretion. The DB Team shall not take advantage of any apparent conflict, omission, ambiguity, inconsistency, inaccuracy, deficiency, or inadequacy related to the application of a requirement, action to be taken, or the definition of roles and responsibilities in the execution of the Work. Should it appear that any definition of roles and responsibilities is contrary to the philosophy of those established by the Agreement, it is the responsibility of the DB Team to request a determination by GDOT related to the respective roles and responsibilities of the DB Team and GDOT.

## **Article 2 GRANT OF AUTHORITY AND RIGHT OF WAY**

### **2.1 Grant of Authority for Undertaking**

**2.1.1** GDOT hereby grants to DB Team the revocable right, and DB Team accepts the obligation, to design and construct (including any maintenance obligations

during such period as required pursuant to the DB Documents) the Project in accordance with the requirements of this Agreement and the other DB Documents.

## **2.2 Right of Way; Construction Easement; Ownership**

**2.2.1** The Project shall be constructed on and within the Existing Right of Way and Proposed Right of Way. GDOT shall be responsible to provide DB Team with access rights to the Property, together with the Existing Right of Way and State Proposed/State Acquired Right of Way as set forth in this Article 2.2.

**2.2.1.1** GDOT and DB Team acknowledge and agree that GDOT is and shall remain throughout the Term the sole owner of fee title to the Property, and that the Project and all improvements located thereon from time to time shall be and remain the property of GDOT.

**2.2.1.2** GDOT has reserved the right to enter upon, possess, control and utilize the Property with or without payment of compensation to DB Team in accordance with this Agreement.

**2.2.1.3** GDOT has granted, and has further reserved the right to grant, to other parties, utility and other permits and easements and modifications thereto and rights of use to the Property subject to the limitations of the DB Documents.

### **2.2.2 Existing Right of Way, State Proposed/State Acquired Right of Way**

**2.2.2.1** Upon the terms and conditions of this Agreement, including as set forth in this Article 2.2, and subject to the terms and conditions of the DB Documents, as of the Effective Date, GDOT shall and does, subject to and upon issuance of NTP 1:

- (a) grant to DB Team a non-exclusive right of access, ingress and egress (and the right to grant to DB Team-Related Entities a non-exclusive right of access, ingress and egress) to all real property comprising the Existing Right of Way as more particularly described and designated in Exhibit 4, subject to the exclusions and reservations set forth in this Agreement, in accordance with the terms described in the DB Documents, and
- (b) as and to the extent that GDOT, has acquired a right of access or interest in State Proposed/State Acquired Right of Way as described and designated in Exhibit 4, grant to DB Team a non-exclusive right of access, ingress and egress (and the right to grant other DB Team-Related Entities a non-exclusive right of access, ingress and egress) to such State Proposed/State Acquired Right of Way.

**2.2.2.2** GDOT shall be responsible for all costs, expenses and delays (including the purchase prices and court awards or judgments) associated with acquiring the State Proposed/State Acquired Right of Way.



### **2.2.3 State Proposed/DB Team Acquired Right of Way**

**2.2.3.1** Upon the terms and conditions of this Agreement, including as set forth in this Article 2.2, and subject to the terms and conditions of the DB Documents, as of the Effective Date, DB Team agrees to provide acquisition services set out in Section 5 of the Technical Provisions with respect to the State Proposed/DB Team Acquired Right of Way prior to the State Proposed/DB Team Acquired ROW Acquisition Date.

**2.2.3.2** Except as provided in this Article 2.2.3.2 and Article 2.2.3.3, DB Team shall be responsible for its costs, expenses (other than the actual purchase prices and any relocation costs or costs to cure), and delays associated with acquiring State Proposed/DB Team Acquired Right of Way under this Agreement, including (a) the cost of acquisition services and document preparation in connection thereto, (b) the cost of providing a condemnation coordinator for twelve (12) months post filing of the condemnation petition as provided for in Section 5.12.5 of Volume 3 of the DBA, (c) the cost of permanent or temporary acquisition of leases, easements, and other interests in real property, including for temporary drainage, temporary work space, lay down areas, material storage areas, earthwork borrow sites, and any other convenience of DB Team, and (d) the processing cost of any required permitting. If GDOT incurs any such costs and expenses on DB Team's behalf, GDOT may submit any invoices for such costs and expenses to DB Team, in which case DB Team shall pay the invoices within thirty (30) days of DB Team's receipt of such invoices. The DB Team shall not be entitled to payment or reimbursement for any costs or expenses as set forth in this Article 2.2, nor shall such costs or expenses be included on account of any Compensation Event.

**2.2.3.3** GDOT shall be responsible for the purchase prices, relocation costs, costs to cure, court awards or judgments, for all parcels constituting the State Proposed/DB Team Acquired Right of Way.

**2.2.3.4** If after reasonable effort the DB Team is unable to acquire the State Proposed/DB Team Acquired Right of Way, the DB Team may request that GDOT undertake and complete the acquisition of State Proposed/DB Team Acquired Right of Way, subject to this Article 2.2.3, Section 5 of the Technical Provisions, and all applicable Laws relating to such acquisition, including the Uniform Act.

### **2.2.4 DB Team Proposed/DB Team Acquired Right of Way**

**2.2.4.1** DB Team is responsible for the acquisition of any DB Team Proposed/DB Team Acquired Right of Way. DB Team shall give written notice to GDOT, setting forth with specificity the legal description of any DB Team Proposed/DB Team Acquired Right of Way, within ten (10) days of DB Team's determination of such need, including whether or not DB Team requires assistance from GDOT with the acquisition of such DB Team Proposed/DB Team Acquired Right of Way.

**2.2.4.2** If after reasonable effort the DB Team is unable to acquire the DB Team Proposed/DB Team Acquired Right of Way, the DB Team may request

that GDOT undertake and complete the acquisition of DB Team Proposed/DB Team Acquired Right of Way, subject to this Article 2.2.4, Section 7 of the Technical Provisions, and all applicable Laws relating to such acquisition, including the Uniform Act.

**2.2.4.3** Except as provided in this Article 2.2.4, DB Team shall be responsible for all costs, expenses, and delays associated with acquiring all DB Team Proposed/DB Team Acquired Right of Way under this Agreement, including (a) the cost of acquisition services and document preparation, (b) the cost of condemnation proceedings required by the Attorney General, through jury trials and appeals, including attorneys' and expert witness fees, and all fees and expenses for exhibits, transcripts, photos and other documents and materials production, (c) the purchase prices, costs to cure, court awards or judgments, for all parcels required for the Project or the Work, (d) the cost of permanent or temporary acquisition of leases, easement and other interests in real property, including for drainage, temporary work space, lay down areas, material storage areas, earthwork borrow sites, and any other convenience of DB Team, (e) the cost of permitting, (f) closing costs associated with parcel purchases, in accordance with the Uniform Act and GDOT policies, and (g) relocation assistance payments and costs, in accordance with the Uniform Act. If GDOT incurs any such costs and expenses on DB Team's behalf, GDOT may submit any invoices for such costs and expenses to DB Team, in which case DB Team shall pay the invoices within thirty (30) days of DB Team's receipt of such invoices. As a condition precedent to GDOT exercising its condemnation powers and the Attorney General initiating any condemnation proceedings with respect to a parcel, DB Team shall pay to GDOT the estimated amount of the costs of the condemnation proceedings, including the required monetary court deposit associated with such parcel and estimated attorneys' fees. If GDOT pays any such costs and expenses on DB Team's behalf, DB Team shall reimburse GDOT within thirty (30) days of DB Team's receipt of an invoice therefor. Other than excess amounts, if any, remaining after such condemnation proceedings, which shall be returned to DB Team, DB Team shall not be entitled to payment or reimbursement for any costs or expenses as set forth in this Article 2.2.4, nor shall such costs or expenses be included on account of any Compensation Event.

**2.2.5** All State Proposed Right of Way and DB Team Proposed/DB Team Acquired Right of Way other than temporary interests in property for Project Specific Locations, shall be acquired in the name of GDOT.

**2.2.6** DB Team represents that it has reviewed the Existing Right of Way and State Proposed Right of Way, together with the scheduled delivery dates for the State Proposed Right of Way and confirmed that the access rights to the property and timing for the grant of such rights as identified therein are sufficient and complete so as to allow DB Team access to all areas of the Property as required for the performance and completion of the Work.

**2.2.7** Except as otherwise authorized by Law for temporary Project Specific Locations, GDOT (a) shall not be obligated to exercise its power of eminent domain in connection with DB Team's acquisition of any such temporary right or interest, nor shall

(b) have any obligations or responsibilities with respect to the acquisition, maintenance or disposition of such temporary rights or interests.

**2.2.8** Except for GDOT's failure to deliver such portion of the State Proposed/State Acquired Right of Way, as required pursuant to this Article 2.2, and solely to the extent (a) any such delay in delivery of access to any portion of the State Proposed/State Acquired Right of Way (i) results in a GDOT-Caused Delay which constitutes a Relief Event, (ii) is as a result of a GDOT Change, or (b) this Agreement expressly otherwise provides for a Relief Event and/or Compensation Event on account thereof, DB Team shall be solely responsible for all costs and delay associated therewith. Further, DB Team shall be solely responsible for all costs and delay associated with the acquisition of any DB Team Proposed/DB Team Acquired Right of Way.

## **Article 3 CONTRACT TIME**

### **3.1 Term of Agreement**

**3.1.1** This Agreement shall remain in effect until Final Acceptance, subject to the survival of all such obligations as expressly provided herein, including without limitation, any warranty periods (the "Term"); provided that this Agreement shall be subject to earlier termination in accordance with the terms of this Agreement and the DB Documents.

### **3.2 Project Schedule**

**3.2.1** As a material consideration for entering into this Agreement, DB Team hereby commits, and GDOT is relying upon DB Team's commitment, to develop, design, and fully construct the Project in accordance with the milestones and time periods set forth in this Agreement and the other DB Documents, including without limitation, in the Technical Provisions and the Project Schedule and Milestone Schedule Deadlines, subject only to delays caused by Relief Events specifically provided hereunder.

**3.2.2** The time limitations set forth for DB Team's performance of its covenants and obligations as required pursuant to the DB Documents, including without limitation performance of the Work as required pursuant to the Milestone Schedule Deadlines and Project Schedule, are of the essence, and except where this Agreement expressly provides for extension of time due to a Relief Event or allows delay subject to payment of Liquidated Damages or other compensation to GDOT, DB Team waives any right at law or in equity to tender or complete performance beyond the applicable time period, or to require GDOT to accept such performance. All references to days shall mean Calendar Days unless otherwise specified.

**3.2.3** DB Team shall achieve Substantial Completion on or before the Substantial Completion Deadline and Final Acceptance on or before the Final Acceptance deadline, time being of the essence.

**3.2.4** DB Team hereby represents and warrants that the Project Baseline Schedule will be in the form described in the Technical Provisions, will be developed in accordance with Section 2.5 of the Technical Provisions, and will be consistent with the

Milestone Schedule set forth in Exhibit 9 to this Agreement. The Parties shall use the Project Baseline Schedule for planning and monitoring the progress of the Work.

**3.2.5** All Float contained in the Project Baseline Schedule shall be considered a shared resource among GDOT and the DB Team, available to any or all such parties as needed to absorb delay caused to the Critical Path components as set forth in the Project Schedule or Milestone Schedule deadlines, whether on account of Relief Events or other events of delay not constituting Relief Events. All Float shall be shown as such in the Project Schedule on each affected schedule path. GDOT shall have the right to examine the identification of (or failure to identify) Float on the Project Schedule in determining whether to accept the Project Schedule. Once identified, DB Team shall monitor and account for Float in accordance with Critical Path methodology.

### **3.3 Contract Time, Date of Commencement, and Notice to Proceed**

**3.3.1** DB Team's time period for completion of the Work is the period from the Effective Date through the Final Acceptance Date, as may be adjusted for any Relief Event as expressly provided in the Agreement (the "Contract Time"). All Work shall be performed in accordance with the Milestone Schedule attached as Exhibit 9.

**3.3.1.1** GDOT anticipates issuing NTP 1 promptly following the Effective Date, and shall in any case provide for issuance of NTP 1 within thirty (30) days from DB Team's satisfaction of the conditions for execution of the Agreement. Issuance of NTP 1 authorizes DB Team to commence preliminary design activities. Title 23, Code of Federal Regulations (CFR), Section 636.103 (23 CFR Section 636.103) defines preliminary design to include, but is not limited to, preliminary engineering and other activities and analyses, such as topographic surveys, metes and bounds surveys, geotechnical investigations, hydrologic analysis, hydraulic analysis, utility engineering, traffic studies, financial plans, revenue estimates, hazardous materials assessments, general estimates of the types and quantities of materials, and other Work needed to establish the parameters for the Final Design. Prior to completion of the Environmental Documents review process, any such preliminary engineering and other activities and analyses must not materially affect the objective consideration of alternatives in the Environmental Documents review process. Preliminary design activities shall be completed in accordance with the Management Plans, the Technical Provisions, and other activities anticipated to be performed after NTP 1, including satisfying the conditions to issuance of NTP 3 under Article 3.3.1.3.

**3.3.1.2** Issuance of NTP 2 authorizes the DB Team to perform all NTP 1 activities, Final Design activities, and any other activities required for start of the Construction Work. A separate NTP 2 will be issued for each bridge site upon acceptance of the preliminary bridge plans by GDOT for the bridge site. Title 23, CFR, Section 636.103 (23 CFR Section 636.103) defines Final Design as any design activities following preliminary design and expressly includes the preparation of final construction Plans and detailed specifications for the performance of Construction Work.

**3.3.1.3** Issuance of NTP 3 authorizes DB Team to perform all other Work and activities pertaining to the Project, subject to conforming RFC Plans as may be related to commencement of any Element of the Construction Work. An

NTP 3 may be issued for the entire project or any Construction Phase of the project. GDOT anticipates issuing individual NTP 3 notices for each bridge site within five (5) days from DB Team's satisfaction of the following conditions:

- (a) Submittal by DB Team to GDOT and acceptance by GDOT of the Project Quality Management Plan and other Quality Management Plans in accordance with Article 9 of this Agreement and Section 2.3 of the Technical Provisions;
- (b) Submittal by DB Team to GDOT and acceptance by GDOT of DB Team's Safety Plan under Section 2.4 of the Technical Provisions;
- (c) Submittal by DB Team to GDOT and acceptance by GDOT of DB Team's Released for Construction Plans for each Construction Phase of the Project under Section 3 of the Technical Provisions;
- (d) Submittal by DB Team to GDOT and acceptance by GDOT of DB Team's proposed Schedule of Values under Section 2.5 of the Technical Provisions;
- (e) Submittal by DB Team to GDOT and acceptance by GDOT of the DB Team's proposed Project Baseline Schedule under Section 2.5 of the Technical Provisions;
- (f) Submittal by DB Team to GDOT and acceptance by GDOT of DB Team's Traffic Control Plan under Section 18.3 of the Technical Provisions for the approved Construction Phase;
- (g) Submittal by DB Team to GDOT and acceptance by GDOT of DB Team's Submittals Schedule under Section 2.2.5 of the Technical Provisions;
- (h) Submittal by DB Team to GDOT and acceptance by GDOT of DB Team's Construction Phasing Plan of Project under Section 2.2.5 of the Technical Provisions;
- (i) Submittal by DB Team to GDOT and acceptance by GDOT of DB Team's proposed Design Variances or Design Exceptions under Section 2.3.2.2 of the Technical Provisions;
- (j) Submittal by DB Team to GDOT and acceptance by GDOT of DB Team's Erosion Sedimentation and Pollution Control Plans under Section 3.6 of the Technical Provisions;
- (k) Submittal by DB Team to GDOT and acceptance by GDOT of DB Team's Demolition and Abandonment Plan under Section 10.2 of the Technical Provisions;
- (l) Evidence by DB Team of all required Government Approvals as required under Article 6.2 for the approved Construction Phase;

- (m) Submittal by DB Team to GDOT and acceptance by GDOT of the Post-Construction Stormwater Report under Section 12.3 of the Technical Provisions;
- (n) Submittal by DB Team to GDOT and acceptance by GDOT of all Standard Utility Agreements, Utility Encroachment Permits, Utility Relocation Plans, and/or Certification of “No-Conflict” for the approved Construction Phase, if required, under Article 7.5 of the Agreement and Section 6 of the Technical Provisions;
- (o) Submittal by DB Team to GDOT of qualified Worksite Utility Control Supervisor (WUCS), Worksite Erosion Control Supervisor (WECS), and Worksite Traffic Control Supervisor (WTCS);
- (p) Submittal by DB Team to GDOT and acceptance by GDOT of all other Project Management Plans and other submittals required by the DB Documents required to be submitted and/or accepted or approved prior to NTP 3 or start of the Construction Work for that Construction Phase or Element of the Project.
- (q) Evidence of environmental recertification by GDOT; and
- (r) Evidence of right of way certification by GDOT.

**3.3.1.4** Notwithstanding any provision to the contrary in this Article 3.3, DB Team shall not perform, nor be obligated to perform, any portion of the Work prior to issuance of approval of the Environmental Documents, except for Work authorized under 23 C.F.R. 636.103, Preliminary Work.

**3.3.1.5** NTP 3 can be issued per bridge location. DB Team shall satisfy the conditions of Article 3.3.1.3 (a), (b), (d), (e), (g), (i), and (o) for all bridge locations prior to issuance of any individual NTP 3. DB Team shall also satisfy the conditions of Article 3.3.1.3 (c), (f), (h), (j), (k), (l), (m), (n) (p), (q), and (r) prior to issuance of an NTP 3 for any individual bridge location (if any). DB Team shall satisfy all conditions to commencement of the Construction Work and commence such Construction Work with diligence and continuity, by the deadlines set forth in Milestone Schedule attached as Exhibit 9, and any adjustments set forth therein, all as the same may be extended pursuant to this Agreement.

**3.3.2** Prior to the start of any Construction Work, the DB Team shall satisfy all conditions set forth in Section 2 and Section 3 of the Technical Provisions.

## **Article 4 CONTROL OF THE WORK**

### **4.1 DB Team Quality Management**

The DB Team shall perform the quality control, that is all operation techniques and activities performed or conducted to fulfill the contract requirements, and quality management necessary to meet its obligations under the DB Documents and in accordance with GDOT Standard Specification 105.

**4.2 Reserved**

**4.3 Reserved**

**4.4 Limitations on DB Team's Right to Rely**

**4.4.1** No review, comment, objection, rejection, acceptance, disapproval, acceptance certification (including certificates of Substantial Completion and Final Acceptance), concurrence, monitoring, testing, verification sampling, inspection, spot checking, or auditing or other oversight by or on behalf of GDOT, and no lack thereof by GDOT, or its representatives or agents, shall constitute acceptance of materials or Work or waiver of any legal or equitable right under the DB Documents, at Law, or in equity. GDOT shall be entitled to remedies for Nonconforming Work and to identify additional Work which must be done to bring the Work and Project into compliance with requirements of the DB Documents, regardless of whether previous review, comment, objection, rejection, acceptance, disapproval, acceptance, certification, concurrence, monitoring, testing, inspection, spot checking, auditing or other oversight were conducted or given by GDOT, or its representatives or agents. Regardless of any such activity or failure to conduct any such activity by GDOT, or its representatives or agents, DB Team at all times shall have an independent duty and obligation to fulfill the requirements of the DB Documents. DB Team agrees and acknowledges that any such activity or failure to conduct any such activity by GDOT, or its representatives or agents:

- (a) is solely for the benefit and protection of GDOT;
- (b) does not relieve DB Team of its responsibility for the selection and the competent performance of all DB Team-Related Entities;
- (c) does not create or impose upon GDOT any duty or obligation toward DB Team to cause it to fulfill the requirements of the DB Documents;
- (d) shall not be deemed or construed as any kind of warranty, express or implied, by GDOT;
- (e) may not be relied upon by DB Team or used as evidence in determining whether DB Team has fulfilled the requirements of the DB Documents;
- (f) may not be asserted by DB Team against GDOT as a defense, legal or equitable, to, or as a waiver of or relief from, DB Team's obligation to fulfill the requirements of the DB Documents; and
- (g) shall not be deemed or construed as any assumption of risk by GDOT as to the quality of Work or materials.

**4.4.2** DB Team shall not be relieved or entitled to reduction of its obligations to perform the Work in accordance with the DB Documents, or any of its other liabilities and obligations, including its indemnity obligations, as the result of any activity identified in Article 4.4.1 or failure to conduct any such activity by GDOT. Such activity by GDOT shall not relieve DB Team from liability for, and responsibility to cure and correct Nonconforming Work or DB Team Defaults.

**4.4.3** To the maximum extent permitted by Law, DB Team hereby releases and discharges GDOT from any and all duty and obligation to cause DB Team's Work or the Project to satisfy the standards and requirements of the DB Documents. GDOT is an intended third-party beneficiary of this Article 4.4.

**4.4.4** Notwithstanding the provisions of Articles 4.4.1, 4.4.2 and 4.4.3:

- (a) DB Team shall be entitled to rely on written approvals, acceptances, lack of responses from GDOT (i) for the limited purpose of establishing that the approval, acceptance or lack of response occurred or (ii) that are within its sole discretion, but only to the extent that DB Team is prejudiced by a subsequent decision of such party to rescind such approval or acceptance;
- (b) DB Team shall be entitled to rely on the certificates of Substantial Completion and Final Acceptance from GDOT for the limited purpose of establishing that Substantial Completion and Final Acceptance, as applicable, have occurred, and the respective dates thereof;
- (c) GDOT is not relieved from any liability arising out of a knowing and intentional material misrepresentation under any written statement GDOT delivers to DB Team; and
- (d) GDOT is not relieved from performance of its express responsibilities under the DB Documents in accordance with all standards applicable thereto.

#### **4.5 Inspection and Testing; Limitations**

**4.5.1** At all times during the term of this Agreement, GDOT shall have the right to conduct testing, acceptance testing, materials sampling and testing, oversight, inspection, acceptance inspection, monitoring, verification, and validation, of DB Team's Work, as well as auditing and other oversight functions set forth in the DB Documents, including without limitation:

- (a) monitoring and auditing DB Team and its processes, books and records, and deliverables to determine compliance with requirements of the DB Documents and the accepted Management Plans, including audit review of Design Documents, Plans, Construction Documents and other Submittals;
- (b) conducting field monitoring and inspections on an audit basis as indicated in the DB Documents, including in connection with GDOT's certifications of Substantial Completion and Final Acceptance;
- (c) develop quality reports, regular audit reports, reports on Defects, other reports, and findings, opinions, evaluations, comments, objections and recommendations, all as more particularly set forth in the DB Documents;
- (d) reviewing and commenting on all Submittals for which GDOT review and comment or acceptance is required under the DB Documents, unless expressly provided otherwise in the DB Documents, or unless waived in writing by the Parties for a specific Submittal or type of Submittal;
- (e) attending and witnessing DB Team's tests and inspections;



- (f) auditing the books and records of Key Contractors to confirm compliance with the DB Documents and applicable Law;
- (g) investigating, analyzing and reporting on Safety Compliance and performance of Safety Compliance Orders; and
- (h) reviewing, commenting on and giving recommendations, objections or disapprovals regarding the Project Payment Request and revisions thereto, and processing such Project Payment Request.

**4.5.2** GDOT shall have the right to perform, attend, and witness any tests and verifications to be conducted pursuant to the Technical Provisions and applicable Management Plans.

#### **4.6 Oversight by GDOT for Federal Compliance**

**4.6.1** In addition to GDOT's rights of testing, acceptance testing, materials verification sampling and testing, oversight, inspection, acceptance inspection, monitoring, verification, validation, and auditing of DB Team's Work, GDOT shall independently have the right at all times to monitor, inspect, sample, measure, attend, observe or conduct tests and investigations, and conduct any other oversight respecting any part or aspect of the Project or the Work, to the extent necessary or advisable (a) to comply with U.S. Army Corps of Engineers or other applicable federal agency requirements, and (b) to verify on an audit basis DB Team's compliance with the DB Documents and Management Plans as provided in Article 22.2.

**4.6.2** DB Team acknowledges and agrees that GDOT will have the right to audit, monitor and inspect DB Team and its Contractors compliance with Good Industry Practice and its responsibilities and obligations under the DB Documents.

**4.6.3** GDOT will not conduct formal prior reviews of Design Documents except to the extent necessary or advisable to comply with U.S. Army Corps of Engineers or other applicable federal agency requirements, provided that the aforementioned shall not limit GDOT's rights pursuant to this Agreement. GDOT reserves the right to conduct "over-the-shoulder" reviews of Design Documents or other Submittals as they may deem necessary or appropriate, including pursuant to Article 17.3.8, provided that they shall not have any obligation to conduct such reviews nor assume any responsibility for DB Team's Work, regardless of whether or not electing to perform or performing any such reviews.

**4.6.4** Nothing in the DB Documents shall preclude, and DB Team shall not interfere with, any review, audit or oversight of Submittals, Work or books and records that GDOT may desire to conduct.

#### **4.7 Rights of Cooperation and Access; Increased Oversight**

**4.7.1** DB Team shall coordinate and cooperate, and require its Contractors to coordinate and cooperate, with GDOT and any such parties as provided in Article 4.5 and Article 4.6 to facilitate the full, efficient, effective and timely performance of all such monitoring, inspection, sampling, measuring, testing, reporting, auditing, and other quality acceptance and oversight functions. DB Team shall cause its representatives to be

available at all reasonable times for consultation with GDOT and such other parties as required.

**4.7.2** Without limiting the foregoing and subject to GDOT complying with DB Team's reasonable safety requirements, DB Team shall afford GDOT (a) safe and unrestricted access to the Project at all times, (b) safe access during normal business hours to DB Team's Project offices and operations buildings, (c) safe access during normal business hours to the Project Specific Locations and (d) unrestricted access to data respecting the Project design, construction, operations and maintenance, and the Utility Adjustment Work. Without limiting the foregoing, DB Team shall deliver to GDOT upon request accurate and complete books, records, data and information regarding Work, the Project and the Utility Adjustment Work, in the format required by the Technical Provisions.

**4.7.3** GDOT shall have the right to increase the type and level of their oversight as provided in Article 4.6 and Article 17.3.8.

#### **4.8 Limits of Responsibility for Oversight, Review, Recommendations, Inspection and Acts by GDOT**

**4.8.1** Although GDOT, and its representatives and agents, may consult with DB Team during the course of the Work, no such party shall have control over, charge of, or responsibility for any of the Work, including without limitation, any design or engineering thereof, or means, methods, techniques, sequences or procedures in connection therewith, nor shall any such party be responsible for DB Team's failure to perform the Work in accordance with the requirements of the DB Documents. Any such review is not for the purpose of determining the accuracy and completeness of information or work product, all of which are DB Team's responsibility. Any review, recommendation, acceptance, inspection, response, act or omission with respect to any Submittals, or with respect to the Project, the Work (whether Construction Work or Design Work), or the Construction Documents shall be pursuant to, and solely in furtherance of the inspection powers as set forth in O.C.G.A. § 50-21-24(8).

**4.8.2** DB Team shall, at all times and notwithstanding any such acts or omissions by GDOT as provided in this Article 4 or elsewhere in this Agreement, be fully responsible for all architectural design and engineering required for the Project. DB Team expressly waives and releases (a) all claims for right of contribution against GDOT or its representatives and agents, other than for such parties' sole negligence, arising from or related to any third-party claims, including without limitation for personal injury, death, or property damage, and (b) all claims and defenses by DB Team against GDOT or its representatives and agents in derogation of the limitations of this Article 4, including this Article 4.8, and/or that any or all of such parties otherwise have, or by their acts or omissions, assumed any responsibility for, or related to, the design or construction of the Project, or any means, methods, or techniques in respect thereof. DB Team hereby further expressly waives any claim or defense the basis of which is to assert that GDOT may not delegate the responsibility for any Element of the design and construction of the Project involving public roadways, signs, or traffic controls to DB Team as provided in this Agreement.

**4.8.3** The oversight, spot checks, assessments, reviews, tests, inspections, acceptances, and approvals by GDOT does not constitute Final Acceptance of the

particular material or Work, or waiver of any legal or equitable right with respect thereto. GDOT may reject or require the DB Team to remedy any Nonconforming Work and/or identify additional Work which must be done to bring the Project into compliance with DB Document requirements at any time prior to Final Acceptance, whether or not previous oversight, spot checks, assessments, reviews, tests, inspections, acceptances, or approvals were conducted by any Person.

## **Article 5 CONTRACT SUM, PAYMENTS, AND PUBLIC FUNDS**

### **5.1 Payment of Contract Sum**

**5.1.1** GDOT shall pay DB Team the Contract Sum for Work properly performed in accordance with the DB Documents and the terms and conditions set forth in GDOT Standard Specifications, Section 109. DB Team, in consideration for all Work performed in accordance with the DB Documents, shall be entitled to receive the Contract Sum, which amount is inclusive of all fees, overhead, profit, insurance and bond premiums, labor and material costs, installations, delivery, warehouse and handling charges, duties, taxes and other assessments.

### **5.2 Reserved**

### **5.3 Reserved**

### **5.4 GDOT Monetary Obligations and Overall Limitation of Liability**

**5.4.1** Notwithstanding anything to the contrary in the DB Documents, in no event shall GDOT's outstanding liability to DB Team under the DB Documents, including liability related to Compensation Events and Compensation Amounts, exceed the amount of compensation that would be payable to DB Team pursuant to a Termination for Convenience under Article 19.1.

## **Article 6 PROJECT PLANNING AND ACCEPTANCES; PROJECT ADMINISTRATION, REVIEW AND OVERSIGHT; PUBLIC INFORMATION**

### **6.1 Preliminary Planning and Engineering Activities; Site Conditions**

**6.1.1** DB Team shall perform or cause to be performed all architectural and engineering activities appropriate for design and construction of the Project in accordance with Good Industry Practice and the DB Documents, which may include, subject to the scope of Work set forth in the DB Documents or as required by GDOT by Supplemental Agreement or Directive Letter: (a) Utility Adjustments (b) technical studies and analyses; (c) geotechnical investigations; (d) right of way mapping, surveying and appraisals; (e) Subsurface Utility Engineering (SUE) investigations and mapping; (f) Hazardous Materials investigations; and (g) design and construction surveys.

**6.1.2** Except to the extent that DB Team is entitled to a Relief Event and/or a Compensation Event under this Agreement, DB Team shall bear the risk of any incorrect or incomplete review, examination and investigation by it of the Site or the Existing Improvements and surrounding locations, and of any incorrect or incomplete information resulting from preliminary architectural and engineering activities conducted by DB Team,

GDOT or any other Person. DB Team acknowledges and agrees that GDOT does not make any warranties or representations as to any surveys, data, reports or other information provided by GDOT or other Persons concerning surface conditions and subsurface conditions, including the presence of Utilities, Hazardous Materials, contaminated groundwater, archeological, paleontological and cultural resources, and Threatened or Endangered Species, affecting the Site, the Existing Improvements, or surrounding locations. DB Team acknowledges that such information is for DB Team's reference only and has not been verified.

**6.1.3** Except to the extent that DB Team is entitled to a Relief Event and/or a Compensation Event under this Agreement, DB Team shall bear the risk of all conditions occurring on, under or at the Site and the Existing Improvements, including (a) physical conditions of an unusual nature, differing materially from those ordinarily encountered in the area, (b) changes in surface topography, (c) variations in subsurface moisture content, (d) Utility facilities, (e) the discovery at, near or on the Property of any archeological, paleontological or cultural resources, and (f) the discovery at, near or on the Property of any Threatened or Endangered Species.

## **6.2 Governmental Approvals and Third-Party Agreements**

**6.2.1** GDOT has responsibility for obtaining all Governmental Approvals for the Project specifically listed in Section 4.2 of the Technical Provisions ("Provided Approvals") based on the design schematic contained in the approved Environmental Documents. GDOT shall deliver to DB Team true and complete copies of all Provided Approvals. The DB Team shall obtain all other Governmental Approvals and, except to the extent the DB Documents expressly provide GDOT is responsible therefor, all third-party approvals and agreements required in connection with the Project or the Work, including any modifications, renewals and extensions of the Provided Approvals (including those required in connection with a Compensation Event). DB Team shall deliver to GDOT true and complete copies of all new or amended Governmental Approvals and third-party approvals and agreements. In no event shall GDOT be responsible or liable for any delays in obtaining Provided Approvals to the extent such delays are caused by differences between the schematic contained in the approved Environmental Documents and DB Team's Final Design, unless such differences are due to a GDOT Change.

**6.2.2** Prior to submitting to a Governmental Entity any application for a Governmental Approval (or any proposed modification, renewal, extension or waiver of a Governmental Approval or provision thereof), DB Team shall submit the same, together with any supporting environmental studies and analyses, to GDOT (a) for acceptance or (b) for review and comment, as specified in the Technical Provisions in Table 4-2.

**6.2.3** Except as expressly set forth in this Agreement to the contrary, in the event DB Team's design differs from the schematic contained in the approved Environmental Documents upon which the Provided Approvals were based, as among GDOT and DB Team, DB Team shall support necessary actions, and shall bear all risk of delay, resulting from or arising out of any associated change in the Project location and design, including (a) conducting all necessary environmental studies and preparing all necessary Environmental Documents in compliance with applicable Environmental Laws, and (b) obtaining and complying with all necessary new Governmental Approvals (including any modifications, renewals and extensions of the Provided Approvals, and

other existing Governmental Approvals). GDOT and the Governmental Entities will independently evaluate all environmental studies and documents.

**6.2.4** Subject to clauses of Article 14.2 for Compensation Event and clauses of Article 14.1 for Relief Event and except to the extent required under the Technical Provisions, in the event DB Team is unable to obtain necessary Governmental Approvals for any design that differs from the schematics contained in the approved Environmental Documents upon which Provided Approvals were based, DB Team shall be obligated to design and construct the Project according to a design in compliance with the requirements of the Provided Approvals, and no such circumstance shall constitute a Relief Event or Compensation Event.

**6.2.5** At DB Team's request, GDOT shall reasonably assist and cooperate with DB Team in obtaining from Governmental Entities the Governmental Approvals (including any modifications, renewals and extensions of existing Governmental Approvals from Governmental Entities) required to be obtained by DB Team under the DB Documents.

**6.2.5.1** GDOT and DB Team shall work jointly to establish a scope of work and budget for GDOT Recoverable Costs related to the assistance and cooperation GDOT will provide as contemplated herein, subject to any rights of DB Team in the case of a Compensation Event.

**6.2.5.2** Such costs and expenses shall be subject to the limitations for GDOT Recoverable Costs provided however that, notwithstanding the limitations of subpart (a) in the definition of GDOT Recoverable Costs, such reimbursable amounts shall expressly include costs and expenses incurred to conduct further or supplemental environmental studies as a result of (i) any DB Team Proposed Right of Way or (ii) DB Team Release(s) of Hazardous Material.

**6.2.6** DB Team shall comply with all conditions imposed by and undertake all actions required by and all actions necessary to maintain in full force and effect all Governmental Approvals, including performance of all environmental mitigation measures required by the DB Documents or Governmental Approvals and including payment of any other fees required for Governmental Approvals, except to the extent that responsibility for performance of such measures and payment is expressly assigned to GDOT in the DB Documents.

**6.2.7** In the event that any Governmental Approvals required to be obtained by DB Team must formally be issued in GDOT's name, DB Team shall undertake necessary efforts to obtain such approvals subject to GDOT's reasonable cooperation with DB Team, as the case may be, at DB Team's expense (except in connection with a Compensation Event), in accordance with Article 6.2.5, including execution and delivery of appropriate applications and other documentation in form accepted by GDOT. Refer to Section 4.2 of the Technical Provisions for more specific provisions on applications in GDOT's name for Environmental Approvals.

**6.2.8** In the event that GDOT must act as the lead agency and directly coordinate with a Governmental Entity in connection with obtaining Governmental Approvals which are the responsibility of DB Team, DB Team shall provide all necessary support to facilitate the approval, mitigation or compliance process. Such support may

include conducting necessary field investigations, surveys, and preparation of any required reports, documents and applications.

**6.2.9** DB Team shall be responsible for compliance with all applicable Laws in relation to Project Specific Locations and Additional Properties for obtaining any Environmental Approval or other Governmental Approval required in connection with Project Specific Locations.

**6.2.10** DB Team shall not enter into any agreement with any Governmental Entity, Utility Owner, railroad, property owner or other third party having regulatory jurisdiction over any aspect of the Project or Work or having any property interest affected by the Project or the Work that in any way purports to obligate GDOT, or the State or an agency or department thereof, or states or implies that GDOT has an obligation, to the third party to carry out any installation, design, construction, maintenance, repair, operation, control, supervision, regulation or other activity after the end of the Term, unless GDOT otherwise accepts in writing in its sole discretion. DB Team has no power or authority to enter into any such agreement with a third party in the name or on behalf of GDOT.

### **6.3 Review and Oversight**

#### **6.3.1 Submittal, Review and Acceptance Terms and Procedures**

**6.3.1.1** This Article 6.3 sets forth uniform terms and procedures that shall govern all Submittals pursuant to the DB Documents and component plans thereunder. In the event of any irreconcilable conflict between the provisions of this Article 6.3 and any other provisions of the DB Documents and component plans thereunder concerning submission, review and acceptance, rejection, or approval procedures, this Article 6.3 shall exclusively govern and control, except to the extent that the conflicting provision expressly states that it supersedes this Article 6.3.

#### **6.3.2 Time Periods**

**6.3.2.1** Except as expressly set forth in Section 3 of the Technical Provisions or as provided below, whenever GDOT is entitled to review and comment or accept a Submittal, GDOT shall promptly respond within thirty (30) days from the date it receives an accurate and complete Submittal, together with a completed transmittal form, in form to be mutually agreed upon, and all necessary information and documentation concerning the subject matter included. Any period of review by GDOT more than thirty (30) days, except where Section 3 of the Technical Provisions provides for a longer time period, may be deemed a GDOT Caused-Delay and give rise to Relief Event, subject to the provisions and satisfying all DB Document requirements for Relief Events. The time periods set forth in the DB Documents for GDOT's review and acceptance or approval of Submittals, as and to the extent required shall apply to and restart with all re-submittals which DB Team may be required to provide.

**6.3.2.2** The time periods set forth herein with respect to GDOT's review and acceptance, rejection, or approval, or comment on Submittals shall be subject

to adjustment as provided in Section 3 of the Technical Provisions for multiple concurrent Submittals.

**6.3.2.3** All time periods for GDOT to act upon Submittals shall be extended by the period of any delay caused by any Relief Event impacting same, including as set forth in clauses of Article 14.1 for Relief Event or otherwise as and to the extent of any delay of DB Team or any DB Team-Related Entity.

**6.3.2.4** During any time that GDOT is entitled under Article 17.3.8 to increase the level of its auditing, monitoring, inspection, sampling, measuring, testing and oversight of the Project, the Utility Adjustments and DB Team's compliance with its obligations under the DB Documents, the applicable period for GDOT to act on any Submittals received during such time and not related to curing the DB Team Default(s) that instigated the Article 17.3.8 action shall automatically be extended by fourteen (14) days.

**6.3.2.5** GDOT shall endeavor to reasonably accommodate a written request from DB Team for expedited action on a specific Submittal, within the practical limitations on availability of personnel appropriate for acting on the types of Submittal in question; provided DB Team sets forth in its request specific, abnormal circumstances demonstrating the need for expedited action. This provision shall not apply, however, during any time described in Articles 6.3.2.3 and Article 6.3.2.4.

### **6.3.3 GDOT Discretionary Acceptances**

If the Submittal is one where the DB Documents indicate approval or acceptance is required from GDOT in its sole discretion, then GDOT's lack of determination, decision, or other action within the applicable time period under Article 6.3.2 shall be deemed non-acceptance.

### **6.3.4 Other GDOT Acceptances**

**6.3.4.1** Whenever the DB Documents indicate that a Submittal or other matter is subject to GDOT's approval or acceptance, and no particular standard therefor is stated, then the standard shall be reasonableness.

**6.3.4.2** If the reasonableness standard applies to GDOT's right of approval or acceptance of a Submittal, and GDOT delivers no approval or acceptance within the applicable time period under Article 6.3.2, then DB Team may deliver to GDOT a written notice stating the date within which GDOT was to have decided or acted. If GDOT does not respond or act within seven (7) days after receipt of the notice, then a delay may constitute GDOT-Caused Delay under Article 14, subject to the provisions and satisfying all DB Document requirements for Relief Events and Compensation Events. Regardless of the actual days of delay, the start of any GDOT-Caused Delay shall be measured from fourteen (14) days from the end of the last review period for that Submittal. DB Team hereby agrees to plan for and account for such notice periods within the Project Schedule.

**6.3.4.3** If GDOT requires an approval of a Submittal, such approval is a formal conditional determination in writing by GDOT that a particular matter,

Submittal, or item is good or satisfactory for the Project. Such determination may be based on requirements or commitments beyond those set forth in the DB Documents and may reflect preferences of GDOT.

### **6.3.5 GDOT Review and Comment**

**6.3.5.1** Whenever the DB Documents indicate that a Submittal or other matter is subject to GDOT's review, comment, review and comment, disapproval or similar action not entailing a prior approval or acceptance and GDOT delivers no comments, exceptions, objections, rejections or disapprovals within the applicable time period under Article 6.3.2, then DB Team may proceed thereafter at its election and risk, without prejudice to GDOT's rights to later object, reject, or disapprove.

**6.3.5.2** No such failure or delay by GDOT in delivering comments, exceptions, objections, rejections or disapprovals within the applicable time period under Article 6.3.2 shall constitute a GDOT-Caused Delay, GDOT Change, Relief Event or Compensation Event.

**6.3.5.3** When used in the DB Documents, the phrase "completion of the review and comment process" or similar terminology means either (a) GDOT has reviewed, provided comments, exceptions, objections, rejections or disapprovals, and all the same have been resolved, or (b) the applicable time period has passed without GDOT providing any comments, exceptions, objections, rejections or disapprovals.

### **6.3.6 Submittals Not Subject to Prior Review, Comment or Acceptance**

Whenever the DB Documents indicate that DB Team is to deliver a Submittal to GDOT but express no requirement for GDOT review, comment, disapproval, prior acceptance or other GDOT action, then DB Team is under no obligation to provide GDOT any period of time to review the Submittal or obtain acceptance of it before proceeding with further Work, and GDOT shall have the right, but is not obligated, to at any time review, comment on, take exception to, object to, reject or disapprove the Submittal. No failure or delay by GDOT in delivering comments, exceptions, objections, rejections or disapprovals with respect to any Submittal as set forth in this Article 6.3 shall constitute a Relief Event or Compensation Event.

### **6.3.7 Resolution of GDOT Comments and Objections**

**6.3.7.1** If the Submittal is one not governed by Article 6.3.3 or Article 6.3.6, GDOT's exception, objection, rejection or disapproval shall be deemed reasonable, valid and binding if based on any of the following grounds:

- (a) The Submittal or subject provision thereof fails to comply with any applicable covenant, condition, requirement, commitment, term, or provision of the DB Documents or Management Plans thereunder;
- (b) The Submittal or subject provision thereof is not to a standard equal to or better than the requirements of Good Industry Practice;



- (c) DB Team has not provided all content or information required in respect of the Submittal or subject provisions thereof, provided that GDOT assumes no duty, obligation or liability regarding completeness or correctness of any Submittal, including a Submittal that is to be delivered to a Governmental Entity as a proposed Governmental Approval, or in order to obtain, modify, amend, supplement, renew, extend, waive or carry out a Governmental Approval;
- (d) Adoption of the Submittal or subject provision thereof, or of any proposed course of action thereunder, would result in a conflict with or violation of any Law or Governmental Approval; or
- (e) In the case of a Submittal that is to be delivered to a Governmental Entity as a proposed Governmental Approval, or in order to obtain, modify, amend, supplement, renew, extend, waive or carry out a Governmental Approval, it proposes commitments, requirements, actions, terms or conditions that are not arrangements that GDOT offers or accepts for addressing similar circumstances affecting its own projects.

**6.3.7.2** DB Team shall timely and promptly respond to all of GDOT's comments and objections to a Submittal and, except as provided below, make modifications to the Submittal as necessary to fully reflect and resolve all such comments and objections, in accordance with the review processes set forth in this Article 6.3. DB Team acknowledges that GDOT may provide comments and objections which reflect concerns regarding interpretation or preferences of the commenter or which otherwise do not directly relate to grounds set forth in Article 6.3.7.1. DB Team agrees to undertake reasonable efforts to accommodate or otherwise resolve any such comments or objections through the review processes described in this Article 6.3.

**6.3.7.3** If DB Team fails to notify GDOT within such time period, GDOT may deliver to DB Team a written notice stating the date by which DB Team was to have addressed GDOT's comments and that if DB Team does not address those comments within five (5) Business Days after receipt of this notice, then that failure shall constitute DB Team's agreement to make all changes necessary to accommodate and resolve the comment or objection and full acceptance of all responsibility for such changes without right to a Relief Event or Compensation Event.

**6.3.7.4** The foregoing shall in no way be deemed to obligate DB Team to incorporate any comments or resolve objections that would render the Submittal erroneous, defective or less than Good Industry Practice, except pursuant to a GDOT Change.

**6.3.7.5** After GDOT receives DB Team's explanation as to why the modifications are not required as provided in Article 6.3.7.2, Article 6.3.7.3 and Article 6.3.7.4, the Parties shall attempt in good faith to resolve the Dispute. If they are unable to resolve the Dispute, it shall be resolved according to Article 17.7 except (a) as provided otherwise in Article 6.3.3, and (b) if GDOT elects to issue a Directive Letter pursuant to Article 13.1 with respect to the disputed matter, the DB

Team shall proceed in accordance with GDOT's directive while retaining any claim as to the disputed matter.

#### **6.4 Community Outreach and Public Information**

DB Team shall provide on-going information to the public concerning the development of the Project, in accordance with the Public Information and Communications Plan prepared by DB Team pursuant to Section 2.7 of the Technical Provisions, if applicable.

### **Article 7 DEVELOPMENT OF THE PROJECT**

#### **7.1 General Obligations of DB Team**

DB Team, in addition to performing all other requirements of the DB Documents, shall:

**7.1.1** Furnish all design, engineering and other services, provide construction management and all work, including all materials, equipment, labor, and installations, and undertake all efforts necessary or appropriate (excluding only those materials, services and efforts which the DB Documents expressly specify will be undertaken by GDOT or other Persons) to construct the Project and maintain it during construction, so as to achieve Substantial Completion and Final Acceptance by the applicable Milestone Schedule Deadlines;

**7.1.2** At all times provide a Project Manager approved by GDOT who (a) will have full responsibility for the prosecution of the Work, including Design Work and Construction Work, (b) will act as agent and be a single point of contact in all matters on behalf of DB Team, (c) will be present (or his/her designee approved by GDOT will be present) at the Site at all times that Construction Work is performed, and (d) will be available to respond to GDOT;

**7.1.3** Comply with, and require that all Contractors comply with, all requirements of all applicable Laws;

**7.1.4** Cooperate with GDOT, and Governmental Entities with jurisdiction in all matters relating to the applicable portions of the Work, including Design Work and Construction Work for the Project, including their review, inspection and oversight of the design and construction; and

**7.1.5** Use commercially reasonable efforts to mitigate delay to design and construction of the Project and mitigate damages due to delay in all circumstances, to the extent possible, including by re-sequencing, reallocating, or redeploying DB Team's and its Contractors' forces to other work.

#### **7.2 Performance, Design and Construction Standards**

**7.2.1** DB Team shall furnish all aspects of the Design Work and all Design Documents, and shall construct the Project and perform the Construction Work as designed, free from Defects, and in accordance with (a) Good Industry Practice, (b) the requirements, terms and conditions set forth in the DB Documents, (c) the Project Schedule, (d) all Laws, (e) the requirements, terms and conditions set forth in all

Governmental Approvals, and (f) the requirements of the accepted Quality Management Plan (QMP) or to be prepared thereunder, in each case taking into account the Existing Right of Way, Proposed Right of Way, and any Additional Property limits and other constraints affecting the Project and the Property.

### **7.2.2 Reserved**

**7.2.3** DB Team acknowledges that prior to the Effective Date it had the opportunity to identify any provisions of the Technical Provisions or Technical Documents that are erroneous or create a potentially unsafe condition, and the opportunity and duty to notify GDOT in writing of such fact and of the changes to the provision that DB Team believed were the minimum necessary to render it correct and safe. If it is reasonable or necessary to adopt changes to the Technical Provisions or Technical Documents after the Effective Date to make the provisions correct and safe, such changes shall not be grounds for a Relief Event or Compensation Event unless (a) DB Team neither knew nor had reason to know prior to the Effective Date that the provision was erroneous or created a potentially unsafe condition or (b) DB Team knew of and reported to GDOT the erroneous or potentially unsafe provision prior to the Effective Date and GDOT did not adopt reasonable and necessary changes. Except for a circumstance as set forth under (b) herein, if DB Team commences or continues any Design Work or Construction Work affected by such a change after the need for the change was discovered or suspected, or should have been discovered or suspected through the exercise of reasonable care, DB Team shall bear any additional costs associated with redoing the Work already performed. Inconsistent or conflicting provisions of the DB Documents shall not be treated as erroneous provisions under this Article 7.2.3, but instead shall be governed by Article 1.2.

**7.2.4** References in the Technical Provisions or Technical Documents to manuals or other publications governing the Design Work or Construction Work prior to the Substantial Completion Date shall mean the most recent editions in effect thirty (30) Days prior to the Proposal Due Date, unless expressly provided otherwise. Any changes to the Technical Provisions and Technical Documents, including Safety Standards, respecting Design Work or Construction Work prior to the Substantial Completion Date shall be subject to the Supplemental Agreement process for a GDOT Change in accordance with Article 13. Safety Compliance changes shall be in accordance with Article 12.1.

**7.2.5** The Parties anticipate that from time to time after the Effective Date, GDOT will adopt, through revisions to existing manuals and publications or new manuals and publications, changed, added or replacement standards, criteria, requirements, conditions, procedures, specifications and other provisions, including Safety Standards, relating to Design Work and Construction Work. GDOT shall have the right to add such changed, added or replacement standards, criteria, requirements, conditions, procedures, specifications and other provisions, including Safety Standards, to Volume 3 by notice to DB Team, whereupon they shall constitute amendments, and become part, of the Technical Documents. If such changed, added or replacement Technical Documents or Safety Standards encompass matters that are addressed in the Technical Provisions or Technical Documents as of the Effective Date, they may, upon inclusion in Volume 3, replace and supersede inconsistent provisions of the Technical Provisions and Technical Documents to the extent designated by GDOT in its sole discretion. GDOT will identify the superseded provisions in its notice to DB Team. Notwithstanding the foregoing, in the

absence of a GDOT Change and except as provided otherwise in Article 7.5.3 with respect to Adjustment Standards, if GDOT adopts the changed, added or replacement standards, criteria, requirements, conditions, procedures, specifications and other provisions, including changed, added or replacement Safety Standards, prior to the Final Acceptance Date, DB Team shall not be obligated to (but may) incorporate the same into its design and construction of the Project prior to the Final Acceptance Date.

### **7.3 Design Implementation and Submittals**

**7.3.1** DB Team, through the appropriately qualified and licensed design professionals identified in DB Team's Key Personnel as identified in Exhibit 2 and in accordance with Section 2 of the Technical Provisions, shall prepare designs, Plans and specifications in accordance with the DB Documents. DB Team shall cause the Engineer of Record for the Project to sign and seal all Released for Construction Documents, any revisions to the Released for Construction Documents, all design changes, all Shop Drawings; and for conformance, the Record Drawings (As-Builts).

**7.3.2** DB Team shall deliver to GDOT accurate and complete duplicates of all Interim Design, and Preliminary and Final Plans and Construction Documents within the time and in the form required by the Technical Provisions.

**7.3.3** The Engineer of Record shall initiate or sign-off on all requests for information prior to their being submitted to GDOT.

### **7.4 Reserved**

### **7.5 Utility Adjustments**

#### **7.5.1 DB Team's Responsibility**

**7.5.1.1** DB Team is responsible for causing, in accordance with the Project Schedule, all Utility Adjustments necessary to accommodate construction, operation, maintenance and/or use of the Project. DB Team shall coordinate, monitor, and otherwise undertake the necessary efforts to cause Utility Owners performing Utility Adjustment Work to perform such work timely, in coordination with the Work, and in compliance with the standards of design and construction and other applicable requirements specified in the DB Documents.

**7.5.1.2** In addition to GDOT's Project administration, GDOT shall independently have the right at all times to approve Utility Adjustments as provided herein. DB Team shall coordinate and be required to procure GDOT approval as required.

**7.5.1.3** Regardless of the arrangements made with the Utility Owners, the DB Team shall continue to be the responsible party to GDOT for timely performance of all Utility Adjustment Work so that upon completion of the Work, all Utilities that might impact the Project or be impacted by it (whether located within or outside the Construction Maintenance Limits) are compatible with the Project. GDOT to provide to DB Team the benefit of any provisions in recorded utility or other easements affecting the Project which require the easement holders to relocate at their own expense (unless specified otherwise in the Technical

Provisions or a Utility Agreement), subject, however, to any provisions of applicable Law affecting the easement holder's obligations for Utility Adjustments.

### **7.5.2 Standard Utility Agreements**

The DB Team will be responsible for completion of all required Standard Utility Agreements. The DB Team will work with the State Utilities Preconstruction Manager, or assigned designee, to acquire the appropriate Agreement template and coordinate the completion of all required Standard Utility Agreements with Utility Owners. Upon completion of the Standard Utility Agreement with the Utility Owner, the signed agreement should be forwarded to the District Utilities Manager for review and acceptance. Upon the acceptance by the District, the Standard Utility Agreement shall be forwarded to the State Utilities Preconstruction Manager for processing and final acceptance. As described in the GDOT Utility Accommodation Policy and Standards Manual ("UAM"), Chapter 4.2.F Agreements cover all requirements for Standard Utility Agreements.

### **7.5.3 Requirements**

Each Utility Adjustment (whether performed by DB Team, Sub-Contractor or by the Utility Owner) shall comply with the Adjustment Standards in effect as of the date of advertisement of the contract, together with any subsequent amendments and additions to those standards that (a) are necessary to conform to applicable Law, or (b) are adopted by the Utility Owner and affect the Utility Adjustment pursuant to the applicable Standard Utility Agreement(s). In addition, all Utility Adjustment Work shall comply with all applicable Laws, the applicable Standard Utility Agreement(s), and all other requirements specified in Section 6 of the Technical Provisions.

### **7.5.4 Failure of Utility Owners to Cooperate/Escalation**

DB Team shall use diligent efforts to obtain the cooperation of each Utility Owner as necessary for Utility Adjustments. It shall be the DB Team's responsibility to coordinate and track each utilities progress in relation to the Utility Work Plan or Revised Utility Work Plan previously accepted by GDOT. Once the DB Team has determined that the Utilities work progress is at least 20% behind the accepted Utility Work Plan; the DB Team will notify the Utility Owner, and GDOT of such apparent delay through written correspondence. Such written correspondence shall detail the delay in question and request the Utility to submit a proposal on how the Utility Owner plans to rectify such delay and maintain the project's schedule prescribed by the previously accepted Utility Work Plan. The Utility will respond to this letter within ten (10) Business Days. The response shall include a proposal to cure the delay identified by the DB Team. In some cases, the complexity of the project may require that a utility coordination meeting be held to address the issues identified by the DB Team. If the Utility determines that this is the case, then the Utilities response letter shall include a request to hold a utility coordination meeting with the DB Team, the Office of Innovative Delivery Utility Liaison, the District Utility Manager and the Construction Manager for utility delay resolution. If the utility delay cannot be resolved through the coordination efforts described above after twenty (20) Business Days from the date provided in the DB Team's original written correspondence; the said Dispute shall escalate to the State Construction Engineer for further consideration. If additional escalation is required, the DB Team shall follow escalation procedures as outlined in the UAM, Chapter 672-19 of the Rules, and O.C.G.A. § 32-6-171.

### **7.5.5 Utility Permits (GUPS)**

**7.5.5.1** It is anticipated that during the design and construction phases of the Work, from time to time Utility Owners will apply for utility permits to install new Utilities that would cross or longitudinally occupy the Property, or to modify, upgrade, repair, relocate or expand existing Utilities within the Property for reasons other than accommodation of the Project.

**7.5.5.2** As specified in Article 7.5.5.1, for all such utility permit applications pending as of or submitted after the Effective Date, DB Team shall furnish the most recent Project design information and/or as-built Plans, as applicable, to the applicants, and shall assist each applicant with information regarding the location of other proposed and existing Utilities. DB Team shall keep records of its costs related to new Utilities separate from other Project Costs.

### **7.5.6 Unexpected Utility Adjustments**

Within one hundred twenty (120) days after the initial NTP 2, DB Team shall conduct an investigation for any unidentified Utility. If DB Team finds an unidentified Utility during the one hundred twenty (120) day time frame, DB Team may be entitled to a Compensation Event or a Relief Event. If DB Team finds an unidentified Utility after the one hundred twenty (120) day time frame, DB Team shall not be entitled to a Compensation Event or a Relief Event. If a Utility is shown on the SUE Plans and not to be impacted by DB Team's Final Design, but is later identified by DB Team as needing to be relocated, DB Team shall not be entitled to a Compensation Event or a Relief Event. Notwithstanding the foregoing, DB Team shall not be entitled to a Compensation Event or a Relief Event for any Utility whose location, size and dimensions were reasonably accurate and shown on the SUE Plans.

### **7.5.7 Early Adjustments**

If any Adjustments are designated as Early Adjustments in Section 6 of the Technical Provisions, such Adjustments are anticipated to be completed by the Utility Owner prior to the deadline therefore set forth in the Technical Provisions. DB Team's obligation to provide Protection in Place for Utilities includes any Early Adjustments, whether or not timely completed. DB Team shall coordinate with GDOT and the Utility Owner as may be necessary for orderly completion of any Early Adjustments, and DB Team shall conduct its Work without interfering with or hindering the progress or completion of any Early Adjustments.

## **7.6 Conditions to Commencement of Construction Work**

### **7.6.1 Construction Work Generally**

Except to the extent expressly permitted in writing by GDOT, DB Team shall not commence or permit or suffer commencement of construction of the Project, or applicable portion thereof, until GDOT issues NTP 3 and all of the conditions of Article 3.3.1.3 have been met.

## **7.6.2 Utility Adjustments**

DB Team shall not commence or permit or suffer commencement of construction of a Utility Adjustment included in the Construction Work until GDOT issues NTP 3, and the requirements of Article 7.5 have been met.

## **7.7 Substantial Completion, Punch List, Final Acceptance**

### **7.7.1 Substantial Completion**

**7.7.1.1** GDOT will issue a written certificate of Substantial Completion at such time as Substantial Completion occurs which shall be subject to the terms and conditions of this Article 7.7.1.

**7.7.1.2** Substantial Completion shall occur upon satisfactory completion of the requirements of GDOT Standard Specification 108.07.G.

**7.7.1.3** All comments from EPD on the Post-Construction Stormwater Report have been addressed by the DB Team, and the EPD's 90-day Post-Construction Stormwater Report disapproval period has expired.

**7.7.1.4** DB Team shall provide GDOT with not less than twenty (20) days prior written notification of the date DB Team determines it will achieve Substantial Completion. A written request for Substantial Completion will not be taken into consideration unless the requirements of the DB Documents have been met, and the request has been approved in writing by the Engineer of Record confirming Substantial Completion requirements of Article 7.7 are met. During such notice period, DB Team and GDOT shall meet and confer and exchange information on a regular cooperative basis with the goal being GDOT's orderly, timely inspection and review of the Project and the applicable Final Plans and Construction Documents, and GDOT's issuance of a written certificate of Substantial Completion.

**7.7.1.5** During the period specified in Article 7.7.1.4, GDOT shall conduct an inspection of the Project and its components, a review of the applicable Final Plans and Construction Documents and such other investigation as may be necessary to evaluate whether Substantial Completion is achieved. GDOT shall deliver a written report of findings and recommendations to the DB Team following such inspection, review and investigation and within five (5) days after the end of the period specified in Article 7.7.1.4. GDOT shall then either (a) issue the written certificate of Substantial Completion or (b) notify DB Team in writing setting forth, as applicable, why the Project has not reached Substantial Completion. If GDOT and DB Team cannot agree that the Substantial Completion has been completed by the Substantial Completion Date defined in Exhibit 9, such Dispute shall be resolved according to Article 17.

### **7.7.2 Punch List**

**7.7.2.1** GDOT will prepare and maintain the final Punch List. Each participant shall have the right to add items to the Punch List and none shall remove any item added by any other without such other's express permission. If

DB Team objects to the addition of an item by GDOT, the item shall be noted as included under protest, and if the Parties thereafter are unable to reconcile the protest, the Dispute shall be resolved according to Article 17.

**7.7.2.2** DB Team shall immediately commence work on the Punch List items and diligently prosecute such work to completion, consistent with the DB Documents, prior to issuance of Final Acceptance.

### **7.7.3 Final Acceptance**

**7.7.3.1** Promptly after achieving Substantial Completion, DB Team shall perform all remaining Construction Work for the Project, including completion of all Punch List items, all landscaping other than vegetative ground cover, and aesthetic features. DB Team shall prepare and adhere to a timetable for planting and establishing the vegetative ground cover landscaping, taking into account weather conditions necessary for successful planting and growth, which timetable shall in any event provide for vegetative ground cover landscaping to be planted and established by twelve (12) months after Substantial Completion.

**7.7.3.2** GDOT will issue a written certificate of Final Acceptance at such time as all of the following have occurred for the Project:

- (a) All requirements for Substantial Completion have been satisfied;
- (b) All Punch List items have been completed and delivered to the reasonable satisfaction of GDOT;
- (c) GDOT has received a complete set of the Record Drawings in form and content required by Section 3.9 of the Technical Provisions;
- (d) All Utility Adjustment Work and other work that DB Team is obligated to perform for or on behalf of third parties has been accepted by such third parties, and DB Team has paid for all work by third parties that DB Team is obligated to pay for, other than disputed amounts;
- (e) DB Team has paid in full all Liquidated Damages that are due to GDOT pursuant to this Agreement and are not in Dispute, and has provided to GDOT reasonable security for the full amount of Liquidated Damages that may then be the subject of an unresolved Dispute;
- (f) There exist no uncured DB Team Defaults that are the subject of a Warning Notice, or with the giving of notice or passage of time, or both, could become the subject of a Warning Notice (except any DB Team Default for which Final Acceptance will affect its cure);
- (g) DB Team has received, and paid all associated fees for, all applicable Governmental Approvals and other applicable third-party approvals required pursuant to the DB Documents, and there exists no uncured material violation of the terms and conditions of any such Governmental Approval or other third-party approvals;



- (h) DB Team has delivered to GDOT all warranties, manuals and other Deliverables as required pursuant to the Technical Provisions; and
- (i) DB Team has delivered to GDOT verification of all required post construction period, including completed operations, Insurance Policies required under the DB Documents.

**7.7.3.3** DB Team shall provide GDOT with written notification when DB Team determines it has achieved Final Acceptance. During the fifteen (15) day period following receipt of such notification, DB Team, GDOT shall meet and confer and exchange information on a regular cooperative basis with the goal being GDOT's orderly, timely inspection and review of the Project and the Record Drawings, and GDOT's issuance of a written certificate of Final Acceptance.

**7.7.3.4** During such fifteen (15) day period, GDOT shall conduct an inspection of the Punch List items, a review of the Record Drawings and such other investigation as may be necessary to evaluate whether the conditions to Final Acceptance are satisfied. GDOT shall deliver a written report of findings and recommendations to DB Team following such inspection, review and investigation and in any case by the end of such fifteen (15) day period.

**7.7.3.5** Within five (5) days after expiration of such fifteen (15) day period GDOT shall either (a) issue a certificate of Final Acceptance or (b) notify DB Team in writing setting forth, as applicable, why Final Acceptance has not been achieved. If GDOT and DB Team cannot agree as to the date of Final Acceptance, such Dispute shall be resolved according to Article 17.

#### **7.7.4 Early Opening of Portions of the Project**

The Proposer may open portions of the Work before Substantial Completion, in which case each will be identified in the Project Baseline Schedule and, with the same duration from NTP 1, the Baseline Schedule when each of those portions will be safe to open.

If the DB Team determines that a portion of Work is safe to open, the DB Team may notify GDOT thereof through written notice identifying the portion of the Work and asserting that the DB Team believes that it is safe to open. Prior to notifying GDOT, the Engineer of Record shall review the condition of that portion of the Work and make a determination that it is safe to open or will produce a checklist of any remaining Work that must be completed prior to that portion of the Work being considered safe to open, with required changes to the Work identified, and submit the checklist to GDOT. Upon receipt of such list, GDOT will review the list and accept, revise, or reject the list for completeness or sufficiency of the items identified and proposed resolution. The DB Team may not open any portion of the Work unless GDOT provides written notice to the DB Team that such portion of Work is safe to open.

The DB Team and GDOT together will inspect that portion of the Work asserted to be safe to open. GDOT will respond within five (5) days after the agreed-upon date of the inspection. If GDOT concurs, GDOT will provide written notice to the DB Team that such portion of the Segment is safe to open. If GDOT does not concur, it will provide the DB Team a list of the items that need to be corrected or completed prior to opening that portion of the Work. This process will repeat until GDOT concurs and provides written notice that

that portion of the Work is safe to open and will identify the date when GDOT's determination was made. The date so identified will be measured against the Maximum Closure Duration for the particular bridge site.

If the safe to open date is later than the date calculated for the Maximum Closure Duration for the particular bridge site, as identified in Exhibit 9 to the Agreement, the DB Team is liable for Liquidated Damages per Article 17.4.1.

Designation of safe to open for any portion of the Project shall not void or alter any terms of the Agreement.

Opening of portions of the Project prior to Substantial Completion or Final Acceptance does not constitute a waiver of any provisions of the DB Documents.

## **7.8 Hazardous Materials Management**

DB Team shall comply with all requirements set forth in GDOT Standard Specification 107.22 and Exhibit 11.

## **7.9 Environmental Compliance**

Throughout the course of the Design Work and Construction Work, DB Team's Work shall take into account, be coordinated to allow for, and be performed in accordance with all environmental mitigation measures required under the Environmental Document approvals and any other Governmental Approvals for the Project, or under the DB Documents, and shall comply with all other conditions and requirements of the Environmental Approvals in accordance with Section 4 of the Technical Provisions, provided that the foregoing shall not require nor imply any requirement for DB Team to perform any remediation or disposal of Pre-existing Hazardous Materials or GDOT Release(s) of Hazardous Materials.

## **7.10 Meetings**

**7.10.1** DB Team shall conduct regular progress meetings with GDOT at least once a month during the course of Design Work and Construction Work. These meetings shall be attended by the DB Team's Lead Contractor's project manager and the Engineer of Record or Authorized Representatives of each and any other Key Personnel and other personnel as needed for productive use of the meetings.

**7.10.1.1** In addition, GDOT and DB Team, through their respective Authorized Representatives, shall meet from time to time at the other Party's request to discuss and resolve matters relating to the Work or the Project.

**7.10.1.2** DB Team shall schedule all meetings with GDOT at a date, time and place reasonably convenient to both Parties and, except in the case of urgency, shall provide GDOT with written notice and a meeting agenda at least three (3) Business Days in advance of each meeting.

**7.10.1.3** DB Team shall be responsible to document and maintain the full subject matter of all meetings, and shall upload to GDOT's Project Management Control System and distribute copies of meeting minutes to GDOT not later than

the timeframes specified in the Technical Provisions, and in the absence of any specified timeframe, within five (5) days following such meetings.

## **7.11 Contractor Warranties and Correction of Non-Conforming and Defective Work**

**7.11.1** DB Team shall obtain customary and reasonable warranties from all Contractors with respect to design, materials, workmanship, installations, equipment, tools, supplies, software or services, all of which DB Team shall cause to be expressly extended and assigned to GDOT, or its designee; provided that the foregoing requirement shall not apply to standard, pre-specified manufacturer warranties of mass-marketed materials, products (including software products), equipment or supplies where the warranty cannot be extended to GDOT using commercially reasonable efforts. To the extent that any Contractor warranty would be voided by reason of DB Team's negligence in incorporating material or equipment into the Work, DB Team shall be responsible for correcting such defect.

**7.11.2** Contractor warranties (if any) are in addition to all rights and remedies available under the DB Documents or applicable Law or in equity, and shall not limit DB Team's liability or responsibility imposed by the DB Documents or applicable Law or in equity with respect to the Work, including liability for design defects, latent construction defects, strict liability, breach, negligence, willful misconduct or fraud.

**7.11.3** When any act, omission, or other action of DB Team occurs that violates the requirements, conditions, or terms of the DB Documents, or affects the health, safety, or welfare of the public or natural resources, GDOT shall have the right, but not the obligation, to require and direct DB Team to take prompt action to replace, repair, or restore such damage, injury or condition within a time frame established by GDOT, at DB Team's sole cost and expenses and without entitlement to a Relief Event or Compensation Event.

## **7.12 Maintenance During Construction Work**

**7.12.1** GDOT shall be responsible for the operation and maintenance of the Existing Right of Way and any acquired right or interest in any Proposed Right of Way until the Construction Commencement Date. Upon NTP 3, DB Team shall assume full responsibility for maintenance of all Elements within the Construction Maintenance Limits in accordance with the Construction Maintenance Limits Plan and the requirements of the DB Documents.

**7.12.2** Upon Final Acceptance, GDOT will assume responsibility for the operation and maintenance of the entire Project, provided that where GDOT has opened any portion of the Project to the public prior to Final Acceptance, GDOT shall then assume responsibility for the operations and maintenance of such portions of the Project at such earlier time, provided, however that in all cases, DB Team shall remain responsible for all Work until Final Acceptance and nothing contained herein shall otherwise limit any warranty obligations of DB Team with respect to any Defect or non-conforming Work.

### **7.13 For Best Value Projects Only: Impact of ATCs on the Project**

**7.13.1** If implementation of an ATC forming part of the Project requires the approval or consent of any Government Entity (other than GDOT) or other third party, then (a) DB Team will have full responsibility for, and bear the full risk of, obtaining any such approval or consent, and (b) if such approval or consent is not granted, or there is an unreasonable and unjustified delay in obtaining such approval or consent (subject to Article 13) (i) DB Team shall perform the Work as if such ATC had never formed part of the Project, and shall not be entitled to any additional time or compensation as a result thereof. The foregoing shall not limit DB Team's rights under Article 14.2 (l) for Compensation Events or under Article 14.1 (s) for Relief Event on account of delays or impact costs solely related to the re-evaluation of the NEPA Approval after expiration of the GDOT Re-evaluation Period.

## **Article 8 SECURITY AND INCIDENT RESPONSE**

### **8.1 Security and Incident Response**

**8.1.1** DB Team is responsible for the safety and security of the applicable portion of the Project that is under the control of any DB Team-Related Entity and the workers and public thereon during the performance of the Work.

**8.1.2** DB Team shall comply with all rules, directives and guidance of the U.S. Department of Homeland Security and comparable State agency, and shall coordinate and cooperate with all Governmental Entities providing security, first responder and other public emergency response services, including, without limiting the foregoing, whenever the National Terrorism Advisory System (NTAS) or successor system issues an "Imminent" or "Elevated" Threat Alert or comparable level of threat or alert for any region in which the Project is located or which the Project serves. Unless directed otherwise by DB Team, at its expense, shall assign management personnel with decision-making authority to be personally present at the relevant emergency operations center serving the region, including during a disaster affecting the Project proclaimed by the Governor of Georgia, the President of the United States, or their respective designees. DB Team shall provide such service twenty-four (24) hours a day, seven (7) days a week, until such level or threat or alert has expired, or until the lead agency at the operations center determines such staffing level is no longer necessary.

**8.1.3** DB Team shall perform and comply with the provisions of the Technical Provisions concerning Incident Response, safety and security.

## **Article 9 MANAGEMENT SYSTEMS AND OVERSIGHT**

### **9.1 Project Management**

**9.1.1** DB Team is responsible for all quality control and quality assurance activities necessary to manage the Work, including the Utility Adjustment Work. DB Team shall undertake all required aspects of quality control and quality assurance for the Project and Work in accordance with the DB Documents and Good Industry Practice.

**9.1.2** DB Team shall develop the necessary plans and documentation in accordance with the Proposal, this Agreement, and Section 2 and Section 3 of the Technical Provisions, and Good Industry Practice.

**9.1.3** DB Team shall submit to GDOT for acceptance in its good faith discretion in accordance with the procedures described in Article 6.3 of this Agreement and the Technical Provisions each component part, plan and any proposed changes or additions to or revisions of any such component part, plan or other documentation identified in the DB Documents. Each component part, plan and other documentation of the Management Plans or any submittal identified in this Agreement, Section 3 of the Technical Provisions, including in Table 3-1, and the DB Documents, and each proposed change or addition to or revision of any such component part, plan or other documentation shall constitute a separate Submittal for purposes of Article 6.3. GDOT may propose any change required to comply with Good Industry Practice or to reflect a change in working practice to be implemented by DB Team.

**9.1.4** DB Team shall not commence or permit the commencement of any aspect of the design or construction before the relevant component parts, plans and other documentation of the Management Plans applicable to such Work have been submitted to and accepted by GDOT.

**9.1.5** Reserved.

**9.1.6** DB Team shall carry out internal audits of the Management Plans at the times prescribed in the Management Plans.

**9.1.7** DB Team shall cause each of its Contractors at every level to comply with the applicable requirements of the DB Documents.

**9.1.8** The DB Team shall designate a Quality Manager who shall, irrespective of their other responsibilities, have defined authority for ensuring the establishment and maintenance of the Management Plans and reporting to GDOT on the performance of the Management Plans.

## **9.2 Traffic Management**

**9.2.1** Upon GDOT issuance of NTP 3 and until Final Acceptance of the Project, DB Team shall be responsible for the general management of traffic on the applicable portion of the Project under the control of any DB Team-Related Entity. DB Team shall manage traffic to preserve and protect safety of traffic on such portions and Related Transportation Facilities and, to the maximum extent practicable, to avoid disruption, interruption or other adverse effects on traffic flow, throughput or level of service on the Related Transportation Facilities. DB Team shall conduct and carry out traffic management in accordance with all applicable Technical Provisions, Technical Documents, Laws and Governmental Approvals, and in accordance with the Traffic Control Plan, as well as any directives as may be required pursuant to Article 8.1.2.

**9.2.2** Reserved

**9.2.3** GDOT shall have at all times, without obligation or liability to DB Team, the right to:

**9.2.3.1** Issue a Directive Letter to DB Team regarding traffic management and control (with which DB Team shall comply), or directly assume traffic management and control, of the Project during any period that (a) GDOT designates the Project or portion of the Project for immediate use as an emergency evacuation route or a route to respond to a disaster proclaimed by the Governor of Georgia, the President of the United States, or by any other federal or State agency, or any of the aforementioned respective designees, including reversing the direction of traffic flow during such period, (b) GDOT designates the Project or a portion of the Project for immediate use as an alternate route for diversion of traffic from any interstate or Highway temporarily closed to all lanes in one or both directions due to Incident or Emergency or (c) the Commissioner determines such action will be in the public interest as a result of an emergency or natural disaster; and

**9.2.3.2** Provide on the Project, via message signs or other means consistent with Good Industry Practice, non-discriminatory traveler and driver information, and other public information (e.g. AMBER alerts), provided that the means to disseminate such information does not materially interfere with the Work.

## **Article 10 CONTRACTING AND LABOR PRACTICES**

### **10.1 Reserved**

### **10.2 Responsibility for Work, Contractors and Employees**

**10.2.1** DB Team shall retain or cause to be retained only Contractors that are qualified, experienced and capable in the performance of the portion of the Work assigned. DB Team shall assure that each Contractor has at the time of execution of the Contract, and maintains at all times during performance of the assigned Work, all licenses required by applicable Laws. DB Team shall require all Contractors to adhere to the requirements herein with respect to Subcontractors.

**10.2.2** The retention of Contractors by DB Team will not relieve DB Team of its responsibilities hereunder or for the quality of the Work or materials or services provided by it.

**10.2.3** Each Contract shall include terms and conditions sufficient to ensure compliance by all Contractors and Subcontractors, all parties performing any Work on behalf thereof, with the requirements of the DB Documents, and shall include those terms that are specifically required by the DB Documents to be included therein, including, to the extent applicable, those set forth in Exhibit 8 and any other applicable Federal Requirements.

**10.2.4** Nothing in the DB Documents will create any contractual relationship between GDOT and any Subcontractor. No Contract entered into by or under DB Team shall impose any obligation or liability upon GDOT to any Subcontractor, or any of their respective employees.

**10.2.5** DB Team shall supervise and be fully responsible for the actions, omissions, negligence, willful misconduct, or breach of applicable Law or contract by any Contractor or DB Team-Related Entity, or their respective members, officers, directors, partners, and employees, as though DB Team directly employed all such individuals.

### **10.3 Reserved**

### **10.4 Key Personnel**

**10.4.1** DB Team shall retain, employ and utilize the individuals specifically listed in Exhibit 2 to fill the corresponding Key Personnel positions listed therein. DB Team shall not change or substitute any such individuals except due to retirement, death, disability, incapacity, or voluntary or involuntary termination of employment, or as otherwise accepted by GDOT pursuant to Article 10.4.2. In such circumstances, DB Team shall promptly propose a replacement with comparable experience for such position.

**10.4.2** DB Team shall notify GDOT in writing of any proposed replacement for any Key Personnel position. Any proposed replacement for a Key Personnel position must be equal or better than the original Key Personnel. GDOT shall have the right to review the qualifications and character of each individual to be appointed to a Key Personnel position (including personnel employed by Contractors to fill any such position) and to accept or disapprove use of such individual in such position prior to the commencement of any Work by such individual. If DB Team fails to provide a proposed replacement that is sufficiently qualified to GDOT within thirty (30) days after notifying GDOT of a proposed replacement for any Key Personnel position, then such failure shall constitute a DB Team Default pursuant to Article 17.1.1.

**10.4.3** DB Team shall cause each individual filling a Key Personnel position to dedicate the full amount of time necessary for the proper prosecution and performance of the Work.

**10.4.4** DB Team shall provide GDOT phone numbers and email addresses for all Key Personnel. GDOT requires the ability to contact Key Personnel twenty-four (24) hours per day, seven (7) days per week.

### **10.5 Reserved**

### **10.6 Labor Standards**

**10.6.1** In the performance of its obligations under the DB Documents, DB Team at all times shall comply, and require by contract that all Contractors and vendors comply, with all applicable federal and State labor, occupational safety and health standards, rules, regulations and federal and State orders.

**10.6.2** All individuals performing the Work shall have the skill and experience and any licenses or certifications required to perform the Work assigned to them.

**10.6.3** If any individual employed by DB Team or any Contractor is not performing the Work in a proper, safe and skillful manner, then DB Team shall, or shall cause such Contractor to, remove such individual and such individual shall not be re-employed on the Work. If, after notice and reasonable opportunity to cure, such individual

is not removed or if DB Team fails to ensure that skilled and experienced personnel are furnished for the proper performance of the Work, then GDOT may suspend the affected portion of the Work by delivering to DB Team written notice of such suspension. Such suspension shall in no way relieve DB Team of any obligation contained in the DB Documents or entitle DB Team to any additional compensation or time extension hereunder.

**10.6.4** DB Team and its Contractors shall comply with the Georgia Immigration & Compliance Act ("Immigration Act"), O.C.G.A. § 13-10-90, *et seq.* DB Team must certify compliance with the Immigration Act using the form attached as Exhibit 19. The required certificates and affidavits must be filed with GDOT and copies maintained by DB Team and each Contractor as of the Effective Date, recertified as of July 15 of each year, and again recertified upon final completion of the Work under the applicable Contract. State officials, including officials of the Georgia Department of Labor and GDOT, retain the right to inspect and audit the Project and employment records of DB Team and all Contractors without notice during normal working hours until the Work under the applicable Contract is complete, and as otherwise specified by Law.

## **10.7 Reserved**

## **10.8 Non-Discrimination; Equal Employment Opportunity**

**10.8.1** DB Team shall not, and shall cause the Contractors to not, discriminate on the basis of race, color, national origin, sex, age, religion or handicap in the performance of the Work under the DB Documents. DB Team shall carry out, and shall cause the Contractors to carry out, applicable requirements of 49 CFR Part 26. Failure by DB Team to carry out these requirements is a material breach of this Agreement, which may result in a Default Termination Event and the termination of this Agreement or such other remedy permitted hereunder as GDOT deems appropriate (subject to DB Team's rights to notice and opportunity to cure set forth in this Agreement), but is not limited to (1) withholding monthly progress payments; (2) assessing sanctions; (3) liquidated damages; and/or (4) disqualifying the Contractor from future bidding as non-responsible.

**10.8.2** DB Team shall include the immediately preceding paragraph in every Contract (including purchase orders and in every Contract of any DB Team-Related Entity for Work), and shall require that they be included in all Contracts at lower tiers, so that such provisions will be binding upon each Contractor.

## **10.9 Disadvantaged Business Enterprise**

### **10.9.1 General**

**10.9.1.1** DB Team shall comply with 49 CFR Part 26 and GDOT's Disadvantaged Business Enterprise (DBE) policy and program. The purpose of GDOT's DBE policy and program is to ensure that DBEs shall have an equal opportunity to participate in the performance of contracts financed in whole or in part with federal funds. DB Team shall comply with all applicable requirements set forth in GDOT's DBE policy and program.

**10.9.1.2** DB Team shall include provisions to effectuate GDOT's DBE policy and program in every Contract to which it is a party (including purchase



orders and task orders for Work), and shall require that they be included in all Contracts at lower tiers (including purchase orders and task orders for Work), so that such provisions will be binding upon each Contractor. The DB Team shall ensure that all contracts and subcontracts (including purchase orders and task orders for Work) with DBEs to supply labor or materials are required to be performed in accordance with 49 CFR Part 26.53.

### **10.9.2 DBE Participation Goals**

**10.9.2.1** The DBE Project goal is six percent (6.0%) of the overall Project cost (including design, construction, professional services, management and administration) with respect to the race conscious participation by the DB Team. DB Team's DBE commitments list is attached as Exhibit 14.

**10.9.2.2** DB Team shall exercise good faith efforts to achieve such DBE participation goal for the Project.

**10.9.2.3** DBE reporting shall meet all GDOT's DBE policy and program requirements except that reporting will be done yearly throughout the Term of the Agreement. Failure to meet the participation goal or any of the commitments made in Exhibit 14 in any year shall require a recovery plan. The recovery plan shall be submitted within thirty (30) Days from the yearly reporting describing why the participation goal was not achieved and why commitment(s) are not met. In addition, describe proposed actions to be taken in subsequent quarters to attain the participation goal and meet Exhibit 14 commitments. The recovery plan and proposed actions must be acceptable by GDOT.

### **10.9.3 Compliance with DBE Participation Goals**

**10.9.3.1** DB Team shall not terminate, and shall not allow a Contractor to terminate, a DBE Subcontractor listed in its Proposal (or an approved substitute DBE firm) without GDOT's prior written consent. This includes, but is not limited to, instances in which a Contractor seeks to perform work originally designated for a DBE Subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

**10.9.3.2** DB Team shall include a provision in every Contract to which it is a party stating that the Contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains GDOT's consent as provided in 49 CFR Part 26.3(f) and that unless GDOT's consent is provided under 49 CFR Part 26.3(f), the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

**10.9.3.3** DB Team shall make available to GDOT upon request a copy of all DBE subcontracts.

**10.9.3.4** Before transmitting to GDOT a request to terminate and/or substitute a DBE Subcontractor, the DB Team or Contractor must give notice in writing to the DBE Subcontractor, with a copy to GDOT, of its intent to request to terminate and/or substitute, and the reason for the request. The DB Team or

Contractor must give the DBE five (5) days to respond to the notice and advise GDOT and the DB Team or Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why GDOT should not approve the termination and/or substitution.

**10.9.3.5** GDOT may only provide written consent allowing the DB Team or a Contractor to terminate a DBE firm listed in the Proposal if GDOT agrees that that the DB Team or Contractor has good cause to terminate the DBE firm. For the purposes of 49 CFR Part 26.3(f), good cause includes the following circumstances:

- (a) The listed DBE Subcontractor fails or refuses to execute a written contract;
- (b) The listed DBE Subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE Subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the DB Team or Contractor;
- (c) The listed DBE Subcontractor fails or refuses to meet the DB Team's or Contractor's reasonable, nondiscriminatory bond requirements.
- (d) The listed DBE Subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (e) The listed DBE Subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to 23 CFR Parts 180, 215 and 1,200 or applicable state law;
- (f) The listed DBE Subcontractor voluntarily withdraws from the project and provides written notice of its withdrawal;
- (g) GDOT has determined that the listed DBE Subcontractor is not a responsible contractor;
- (h) The listed DBE is ineligible to receive DBE credit for the type of work required;
- (i) A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract;
- (j) Other documented good cause that GDOT determines compels the termination of the DBE Subcontractor. Provided, that good cause does not exist if the DB Team or Contractor seeks to terminate a DBE it relied upon to obtain the work so that the DB Team or Contractor can self-perform the work for which the DBE contractor was engaged or so that the DB Team or Contractor can substitute another DBE or non-DBE contractor after contract award.

**10.9.3.6** When a DBE Subcontractor is terminated as provided above, or fails to complete its work for any reason, DB Team or Contractor is required to make good faith efforts to find another DBE Subcontractor to substitute for the original DBE. These good faith efforts shall be directed at finding another DBE to

perform at least the same amount of work under the Contract as the DBE that was terminated, to the extent needed to meet the established DBE participation goal. The good faith efforts shall be documented by the DB Team or Contractor. If GDOT requests documentation of such good faith efforts, the DB Team or Contractor shall submit the documentation within seven (7) days, which may be extended for an additional seven (7) days if necessary at the request of the DB Team or Contractor, and GDOT shall provide a written determination stating whether or not good faith efforts have been demonstrated.

#### **10.10 Job Training Program**

DB Team will not be required to provide any on-the-job training for this project.

#### **10.11 Reserved**

#### **10.12 Prompt Payment to Contractors and Pay When Paid Provisions**

DB Team shall comply with the Georgia Prompt Payment Act, Code Section 13-11-1 *et seq.* Further, neither DB Team, the Design-Build Contractor or Contractor, nor any Subcontractor shall impose retainage upon any consultant, laborer, subcontractor, vendor, materialman, or supplier with whom any of them have contracted.

#### **10.13 Suspension and Debarment**

DB Team shall deliver to GDOT, not later than January 31 of each year through Final Acceptance, and upon Final Acceptance, signed certifications regarding suspension, debarment, ineligibility, voluntary exclusion, convictions and civil judgments from DB Team, from each affiliate of DB Team (as "affiliate" is defined in 29 CFR 98.905 or successor regulation of similar import), and from each Contractor whose Contract amount equals or exceeds \$100,000.

#### **10.14 DB Team Identification**

Any uniforms, badges, logos and other identification worn by personnel of DB Team-Related Entities or on vehicles used to access the Project site shall bear colors, lettering, design or other features to assure clear differentiation from those of GDOT and their employees.

### **Article 11 RELATED AND OTHER FACILITIES**

#### **11.1 Integration with Related Transportation Facilities**

**11.1.1** DB Team shall locate, configure, design, and construct the termini, entrances and exits of the Project so that the Project will be compatible and integrated with the location, configuration, design, operation and maintenance of, and provide a smooth, safe transition of traffic to and from, Related Transportation Facilities, as set forth in Section 1 and Section 11 of the Technical Provisions. The design for the Project shall include and provide for such compatibility, integration and transition. The design and construction of the Project shall satisfy all provisions of the Technical Provisions and Management Plans relating to compatibility, integration and transition with or at Related Transportation Facilities, including those concerning signage, signaling and communications with Users.

**11.1.2** Without limiting the foregoing, DB Team shall cooperate and coordinate with GDOT and any third party that owns, constructs, manages, operates or maintains a Related Transportation Facility with regard to the construction, maintenance and repair programs and schedules for such Related Transportation Facilities, in order to minimize disruption to the operation thereof.

**11.1.3** To assist DB Team, GDOT shall provide to DB Team during normal working hours, reasonable access to plans, surveys, drawings, as-built drawings, specifications, reports and other documents and information in the possession of GDOT or their contractors and consultants pertaining to Related Transportation Facilities. DB Team, at its expense, shall have the right to make copies of the same. DB Team, at its expense, shall conduct such other inspections, investigations, document searches, surveys and other work as may be necessary to achieve compatibility, integration and transition with those Related Transportation Facilities identified in Section 11 of the Technical Provisions.

**11.1.4** GDOT shall provide reasonable assistance to DB Team, upon its request and at its expense, in obtaining cooperation and coordination from third parties that own, manage, operate or maintain Related Transportation Facilities and in enforcing rights, remedies and warranties that DB Team may have against any such third parties. Such assistance may include GDOT's participation in meetings and discussions. In no event shall GDOT be required to bring any legal action or proceeding against any such third party.

**11.1.5** GDOT shall have at all times, without obligation or liability to DB Team, the right to conduct traffic management activities on GDOT's Related Transportation Facilities and all other facilities of the State transportation network in the area of the Project in accordance with its standard traffic management practices and procedures in effect from time to time.

## **Article 12 SAFETY COMPLIANCE**

### **12.1 Safety Compliance**

#### **12.1.1 Safety Compliance Orders**

**12.1.1.1** GDOT shall use good faith efforts to inform DB Team at the earliest practicable time of any circumstance or information relating to the Project which in GDOT's reasonable judgment is likely to result in a Safety Compliance Order. Except in the case of Emergency, GDOT shall consult with DB Team prior to issuing a Safety Compliance Order concerning the risk to public or worker safety, alternative compliance measures, cost impacts, and the availability of DB Team resources to fund the Safety Compliance work.

**12.1.1.2** GDOT's duties shall include monitoring and inspecting for the purpose of determining whether any circumstances exist that warrant issuance of a Safety Compliance Order with respect to the Design Work and the Construction Work, and giving reports and recommendations to the DB Team with respect thereto.

**12.1.1.3** Subject to conducting such prior consultation, GDOT may issue Safety Compliance Orders to DB Team at any time from and after the Effective Date.

### **12.1.2 Duty to Comply**

**12.1.2.1** Subject to Article 12.1.1, DB Team shall implement all Safety Compliance as expeditiously as reasonably possible following issuance of the Safety Compliance Order. DB Team shall diligently prosecute the work necessary to achieve such Safety Compliance until completion, subject to any remedies allowed from the occurrence of a Relief Event.

**12.1.2.2** DB Team shall perform all work required to implement Safety Compliance at DB Team's sole cost and expense. Without limiting the foregoing and for the avoidance of doubt, in no event shall DB Team be entitled to (a) issue a Change Request, or (b) except as provided in Article 12.1.3, claim that a Compensation Event or Relief Event has occurred or resulted from the existence of a Safety Compliance Order.

### **12.1.3 Contesting Safety Compliance Orders**

DB Team may contest a Safety Compliance Order by delivering to GDOT written notice setting forth (a) DB Team's claim that no Safety Compliance conditions exist to justify the Safety Compliance Order, (b) DB Team's explanation of its claim in reasonable detail and (c) DB Team's estimate of impacts on costs and schedule attributable to the contested Safety Compliance Order. If GDOT does not receive such written notice prior to issuance of a Safety Compliance Order, or within fifteen (15) days after GDOT issues an emergency Safety Compliance Order, then DB Team thereafter shall have no right to contest. If DB Team timely contests a Safety Compliance Order, DB Team nevertheless shall implement the Safety Compliance Order, but if it is finally determined under the Dispute Resolution Procedures that Safety Compliance conditions did not exist, then the Safety Compliance Order shall be treated as a Directive Letter for a GDOT Change.

## **Article 13 GDOT CHANGES; DB TEAM CHANGES; DIRECTIVE LETTERS**

This Article 13 sets forth the requirements for obtaining all Supplemental Agreements under this Agreement. DB Team hereby acknowledges and agrees that the Contract Sum is full and adequate compensation for performance of all of the Work, subject only to those exceptions specified in Article 14 and this Article 13.

DB Team unconditionally and irrevocably waives the right to any monetary compensation or other relief in addition to that specifically provided under the terms of this Agreement, except in accordance with Article 14 and this Article 13. The foregoing waiver encompasses all theories of liability, whether in contract, tort (including negligence), equity, quantum meruit or otherwise, and encompasses all theories to extinguish contractual obligations, including impracticability, mutual mistake, and frustration of purpose. Nothing in the Technical Provisions or Technical Documents shall have the intent or effect or shall be construed to create any right of DB Team to any Supplemental Agreement or additional monetary compensation or other relief, any provision in the Technical Provisions or Technical Documents to the contrary notwithstanding.

## 13.1 Directive Letters

**13.1.1** GDOT may at any time issue a Directive Letter to DB Team regarding any matter for which a Supplemental Agreement can be issued or in the event of any Dispute regarding the interpretation of requirements, scope of the Work, or whether DB Team has performed in accordance with the requirements of the DB Documents. The Directive Letter will state that it is issued under this Article 13.1, will describe the Dispute or Work in question, articulate GDOT's position, provide direction, and will state the basis for determining compensation, if any. If applicable and subject to Article 13.2.5, DB Team shall proceed immediately as directed in the letter, pending the execution of a formal Supplemental Agreement (or, if the letter states that the Work is within DB Team's original scope of Work or is necessary to comply with the requirements of the DB Documents, DB Team shall proceed with the Work as directed but shall have the right to assert that a GDOT Change has occurred).

**13.1.2** The fact that a Directive Letter was issued by GDOT shall not be considered evidence that in fact that a GDOT Change occurred. The determination whether a GDOT Change in fact occurred shall be based on an analysis of the original requirements of the DB Documents and a determination as to whether the Directive Letter in fact constituted a change in those requirements.

**13.1.3** In the event that a Directive Letter is issued, which results in a Force Account, the procedures of Article 14.4 will be followed.

## 13.2 GDOT Changes

GDOT may, at any time and without notice to any Surety, authorize, cause and/or require, pursuant to a Request for Change Proposal or Directive Letter, changes in the Work, including additions or deletions, or in terms and conditions of the Technical Provisions or Technical Documents (including changes in the standards applicable to the Work).

### 13.2.1 GDOT's Request for Change Proposal

**13.2.1.1** If GDOT desires to initiate a GDOT Change or to evaluate whether to initiate such a change, then GDOT may, at its discretion, issue a Request for Change Proposal. The Request for Change Proposal shall set forth the nature, extent and details of the proposed GDOT Change.

**13.2.1.2** Within seven (7) days after DB Team receives a Request for Change Proposal, or such longer period to which the Parties may mutually agree, GDOT and DB Team shall consult to define the proposed scope of the change. Within seven (7) days after the initial consultation, or such longer period to which the Parties may mutually agree, GDOT and DB Team shall consult concerning the estimated financial and schedule impacts.

**13.2.2** Within thirty (30) days following GDOT's delivery to DB Team of the Request for Change Proposal, DB Team shall provide GDOT with a written response as to whether, in DB Team's opinion, the proposed change constitutes a GDOT Change, will impact DB Team's costs and/or will cause a delay to a Completion Deadline, and if so, a detailed assessment of the cost and schedule impact of the proposed GDOT Change, including the following:

**13.2.2.1** DB Team's detailed estimate of the impacts on costs of carrying out the proposed GDOT Change;

**13.2.2.2** The effect of the proposed GDOT Change on the Project Schedule, including achievement of the Milestone Schedule Deadlines, taking into consideration DB Team's duty to mitigate any delay to the extent reasonably practicable; and

**13.2.2.3** Any other relevant information related to carrying out the proposed GDOT Change.

**13.2.3** GDOT shall be entitled, but not required, to obtain, from a qualified independent consultant of GDOT's choosing, a report prepared in accordance with Good Industry Practice as to the proposed GDOT Change related to the Design Work or the Construction Work, including recommendations and comments concerning DB Team's estimate of the cost impacts and projected impact on the Project Schedule and Milestone Schedule Deadlines. GDOT shall pay for the work of any such consultant.

**13.2.4** GDOT and DB Team, giving due consideration to any such report and study as may be commissioned by GDOT, shall exercise good faith efforts to negotiate a mutually acceptable Supplemental Agreement, including adjustment of the Project Schedule and Completion Deadlines, any Compensation Amount to which DB Team is entitled, and the timing and method for payment of any Compensation Amount, in accordance with Article 14.

**13.2.5** If GDOT and DB Team are unable to reach agreement on a Supplemental Agreement, GDOT may, in its sole discretion, deliver to DB Team a Directive Letter pursuant to Article 13.1 directing DB Team to proceed with the performance of the Work in question notwithstanding such disagreement under Force Account provisions. Upon receipt of such Directive Letter, (a) DB Team shall implement and perform the Work in question as directed by GDOT and (b) GDOT will make interim payment(s) to DB Team on a monthly basis for the costs of the Work in question subject to Article 5, to the extent they satisfy Force Account provisions.

**13.2.6** GDOT shall be responsible for payment of the Compensation Amount agreed upon, or under Force Account provisions, or determined through the Dispute Resolution Procedures, through one of the payment mechanisms set forth in Articles 13.4 and 13.5 and the Project Schedule and Milestone Deadlines shall be adjusted as agreed upon or determined through the Dispute Resolution Procedures, and in accordance with this Article 13 to reflect the effects of the Supplemental Agreement.

### **13.3 DB Team Changes**

#### **13.3.1 DB Team's Change Requests**

**13.3.1.1** DB Team may request GDOT to accept modifications to the Technical Provisions or Technical Documents by submittal of a written Change Request using a form approved by GDOT. The Change Request shall set forth DB Team's detailed estimate of impacts on costs and schedule attributable to the requested change.

**13.3.1.2** GDOT, in its sole discretion, may accept or reject any Change Request proposed by DB Team, provided that GDOT will accept a Change Request necessary to bring the Technical Provisions or Technical Documents into compliance due to an applicable Change in Law per Article 14.2(a). GDOT may condition its acceptance on new or a modification of compensation for GDOT under this Agreement in order to benefit equally in the estimated net cost savings and revenue benefit, if any, attributable to the proposed change. If GDOT accepts such change, DB Team shall execute a Supplemental Agreement and shall implement such change in accordance with the Supplemental Agreement, applicable Technical Provisions, Technical Documents, the Management Plans, Good Industry Practice, and all applicable Laws.

**13.3.1.3** DB Team shall be solely responsible for payment of any increased costs and for any Project Schedule delays or other impacts resulting from a DB Team proposed Change Request. If the Change Request results in a decrease in the costs of designing, constructing or operating the Project, the savings in costs shall be allocated between DB Team and GDOT as set forth in the Supplemental Agreement.

**13.3.1.4** DB Team may implement and permit a Utility Owner to implement, without a Change Request or Supplemental Agreement, changes to a Utility Adjustment design that do not vary from the Technical Provisions or Technical Documents, but such changes are subject to GDOT's acceptance as part of a Utility Work Plan as provided in Section 6.3.2.5 of the Technical Provisions.

**13.3.1.5** No Change Request shall be required to implement any change to the Work that is not specifically regulated or addressed by the DB Documents or applicable Law.

**13.3.1.6** Certain minor changes without significant cost savings or revenue benefits may be accepted in writing by GDOT, and in such event, shall not require a Supplemental Agreement. Any other change in the requirements of the DB Documents shall require a Supplemental Agreement.

### **13.3.2 DB Team's Notice of Compensation Event and/or Relief Event**

Except as otherwise expressly provided in this Agreement, if at any time DB Team determines that a change to the work has occurred or is imminent, and that change creates a Compensation Event or Relief Event, DB Team shall submit a written notice of Compensation Event and/or Relief Event to GDOT per this Article 13 stating that a Relief Event, Compensation Event, or both has occurred or will occur. The first notice shall be labeled "Compensation/Relief Event No. 1" and subsequent notices shall be numbered sequentially.

Time is of the essence in DB Team's delivery of its written notice of Compensation Event or written notice of a Relief Event. Accordingly, if for any reason DB Team fails to deliver



a notice of Compensation Event and/or Relief Event in strict accordance with this Article 13.3.2:

- (a) Within seven (7) days following the date (herein the “starting date”) on which DB Team first became aware (or should have been aware, using all reasonable due diligence) of the Relief Event, DB Team shall be deemed to have irrevocably and forever waived and released the right to relief for adverse effect attributable to the Relief Event accruing after such seven (7) day deadline and until the date DB Team submits the written notice of Compensation Event and/or Relief Event for the Relief Event; and
- (b) Within ninety (90) days following the starting date, DB Team shall be deemed to have irrevocably and forever waived and released any and all right to relief (including extension of time for performance of Design Work or Construction Work) for any adverse effect attributable to such Relief Event.

**13.3.2.2 Notices for Compensation Events shall include:**

- (a) a description of the Compensation Event and its date of occurrence in reasonable detail;
- (b) the reasons why the DB Team believes additional compensation will or may be due;
- (c) a detailed statement of the basis that the work is not required by the Agreement;
- (d) identify particular elements of performance for which additional compensation may be sought;
- (e) DB Team’s current estimate of the anticipated adverse and beneficial effects of the Compensation Event on the Project and on DB Team’s ability to perform any of its obligations under the DB Documents;
- (f) a written analysis and calculation of DB Team’s current estimate of the estimated increase or decrease in costs, (including a separate breakdown of costs that impact design and those that impact construction activities) the extent applicable to the Compensation Event: and
- (g) provide an estimate of the time within which a response to the notice is required to minimize cost or delay of performance.

**13.3.2.3** If, following issuance of the notice of Compensation event, DB Team receives or becomes aware of any further information relating to the Compensation Event, it shall submit such further information to GDOT not later than seven (7) days of DB Team’s receipt or knowledge, as the case may be. GDOT may request from DB Team any further information that GDOT may reasonably require, and DB Team shall supply the same within a reasonable period but not later than seven (7) days after such GDOT request.

**13.3.2.4** Notices of Relief Events shall include:

- (a) a statement of the Relief Event upon which the delay or inability to perform is based, including its nature, the reasons why the DB Team believes additional time will or may be due, and the date of its occurrence and its actual or, if it has not concluded, its anticipated duration;
- (b) the effect of the Relief Event on DB Team's ability to perform any of its obligations under the DB Documents, including details of the relevant obligations,
- (c) an impacted delay analysis meeting the requirements of Section 2.5 of the Technical Provisions regarding a Time Impact Analysis and indicating all affected activities on any Critical Path, with activity durations, predecessor and successor activities and resources; and showing Float available pursuant to Article 3.2.5, the likely duration of that effect, and identify any potential impact to the Critical Path affecting a Completion Deadline; and
- (d) an explanation of the measures that DB Team proposes to undertake to mitigate the delay and other consequences of the Relief Event.

**13.3.2.5** Within seven (7) days of the conclusion of an asserted Relief Event, DB Team shall update its notice of a Relief Event with the date of its actual or estimated conclusion. If, following issuance of a notice of Relief Event, but prior to its conclusion, DB Team receives or becomes aware of any further information relating to the Relief Event and/or any delay in performance or failure to perform, it shall submit such further information to GDOT not later than seven (7) days of DB Team's receipt or knowledge of the additional information. GDOT may request from DB Team any further information that GDOT may reasonably require, and DB Team shall supply the same within a reasonable period but not later than seven (7) days after such GDOT request.

**13.3.2.6** If any notice of Compensation or Relief Event concerns any hazardous condition or material described in Article 7.8, the DB Team shall be deemed to have waived the right to collect any and all costs incurred in connection therewith to the extent that GDOT is not afforded the opportunity to inspect such material or condition before it is disturbed.

**13.3.3 Proposed Supplemental Agreement Procedure**

**13.3.3.1** The DB Team shall deliver a Proposed Supplemental Agreement under this Article 13.3.3 to GDOT within thirty (30) days (or longer time period if acceptable to GDOT) after delivery of the notice of Compensation and/or Relief Event in a form acceptable to GDOT. GDOT may require design and construction costs to be covered by separate Supplemental Agreements. If the DB Team requests a time extension, then GDOT, in its sole discretion, may require the DB Team to provide two alternative Proposed Supplemental Agreements, one of which shall provide for a time extension and any additional costs permitted thereunder, and the other of which shall show all acceleration costs associated with meeting an original Completion Deadline, as well as any additional costs permitted hereunder. If it is not feasible to recover to the original Completion

Deadline or if the DB Team believes that the costs associated with such a recovery are prohibitive, then the DB Team shall recommend a date to be shown in the alternative Supplemental Agreement form.

**13.3.3.2** DB Team shall prepare a scope of work, cost estimate, Time Impact Analysis, if any, and other information as required by the DB Documents for each Proposed Supplemental Agreement. All Proposed Supplemental Agreements shall satisfy the requirements of Article 14 and shall be sufficient in detail to enable GDOT to ascertain the basis and the amount of each Proposed Supplemental Agreement. The Proposed Supplemental Agreement shall at a minimum include:

- (a) A scope of work describing in detail satisfactory to the GDOT all activities associated with the asserted change event.
- (b) A cost estimate that sets out the estimated costs in such a way and in sufficient detail that a fair evaluation can be made. It shall be in a form approved by GDOT and shall include as separate items: labor, materials, equipment, overhead (which includes all indirect costs) and profit, as and to the extent allowed under Articles 13 and 14. If the work is to be performed by Subcontractors and if the work is sufficiently defined to obtain Subcontractor quotes, DB Team shall obtain quotes (with breakdowns showing cost of labor, materials, equipment, overhead and profit) on the Subcontractor's stationery and shall include such quotes as back-up for the DB Team estimate.
- (c) If the DB Team claims that a Relief Event has occurred affecting the Critical Path and a Completion Deadline, it shall provide or update a prior submitted Time Impact Analysis indicating all activities represented or affected by the asserted change in accordance with this Article 13 and Section 2.5 of the Technical Provisions. The impacted delay analysis shall only modify the Activities that have been impacted by the event that justifies the extension.
- (d) The DB Team shall provide such other supporting documentation as may be required by GDOT.
- (e) All Proposed Supplemental Agreements shall include a narrative justification detailing all causes of the asserted change, making specific reference and cite to the applicable provisions of the Agreement and DB Documents that permit a Supplemental Agreement to be issued, and describing the data and documents that establish the necessity of such asserted change.

**13.3.3.3** Each lump sum and force account Proposed Supplemental Agreement shall meet all applicable requirements of Articles 13 and 14. The Proposed Supplemental Agreement submitted by DB Team will address any and all costs and delays and meet all requirements of this Article 13.3.3. GDOT shall review the Proposed Supplemental Agreement, and after negotiation and upon agreement of the terms and verification that all applicable requirements of Articles 13 and 14 are met, The DB Team and GDOT shall execute a Supplemental Agreement.

#### 13.3.3.4 DB Team Representation

Each Proposed Supplemental Agreement shall contain a sworn certification in form acceptable to GDOT by the DB Team (and Subcontractor(s), for any Subcontractor involved in the Work or event contemplated by the Supplemental Agreement) that the Proposed Supplemental Agreement is made in good faith and in accordance with the terms of the DB Documents, the amount of time and/or compensation requested accurately reflects the appropriate adjustments and includes all known and anticipated impacts or amounts whatsoever that may be incurred as a result of the event or matter giving rise to such proposed change and that the DB Team (and Subcontractor(s), as applicable) has no reason to believe and does not believe that the factual basis for the Supplemental Agreement is falsely represented.

#### 13.4 Final Relief Event and Compensation Event Determinations

Any final Relief Event Determination and/or final Compensation Event Determination that has been mutually accepted by GDOT and DB Team shall be set forth in a Supplemental Agreement in accordance with Article 13.3. Such Supplemental Agreement shall provide for modification of the Contract Time and the Project Schedule, including to the extent so established by such Relief Event Determination, the Milestone Schedule Deadlines, and modification of the Contract Sum pursuant to any such Compensation Event Determination, as the case may be. All Supplemental Agreements shall be all-inclusive, comprehensive, and complete, and shall not include any conditions with respect to pricing or schedule or any other matters. The DB Team is not entitled to any additional costs or time whether deriving from or related to a Supplemental Agreement.

#### 13.5 Reserved

### Article 14 RELIEF EVENTS; COMPENSATION EVENTS

#### 14.1 Relief Events

**14.1.1** A Relief Event is one or more of the following events, subject to any limitations, claims, submission requirements, and other conditions set forth in the Agreement, provided that no relief will be available to the extent that (i) the events are within DB Team's control or are due to any wrongful act, wrongful omission, negligence, recklessness, willful misconduct, breach of contract or Law or violation of a Governmental Approval of any of the DB Team-Related Entities; or (ii) the events (or the effects of such events) could have been avoided by the exercise of reasonable caution, due diligence, or other reasonable efforts by Design-Build Team:

- (a) Force Majeure Event;
- (b) Latent defects in Existing Improvements;
- (c) Change in Law;
- (d) Discriminatory Action;

- (e) GDOT's failure to perform or observe (or failure to cause GDOT to perform or observe) any of the covenants or obligations of GDOT under the Agreement or other DB Documents;
- (f) GDOT Change;
- (g) GDOT-Caused Delay;
- (h) Performance of work in the Construction Maintenance Limits or Operations and Maintenance Limits, by Separate Contractors within the ROW, carried out by or on behalf of GDOT or a Governmental Entity, excluding any Utility Adjustment Work by a Utility Owner, that directly disrupts DB Team's onsite Work, and delays the Critical Path of the Work;
- (i) Discovery at, near or on the Existing Right of Way or Property of (a) any Pre-existing Hazardous Materials or Hazardous Materials not otherwise constituting a DB Team Release of Hazardous Materials, provided that where such condition was identified in the existing Phase 1 Hazardous Materials Investigation in the RIDs, in which case DB Team shall account for same in the Project Schedule and impacts shall be limited to such conditions not identified therein (whether in type or quantity), or (b) any archeological, paleontological or cultural resources not known or which should have reasonably been known, to the DB Team prior to the Proposal Due Date;
- (j) Discovery at, near or on the Existing Right of Way or Property of any Threatened or Endangered Species (regardless of whether the species is listed as threatened or endangered as of the Proposal Due Date), excluding any such presence of species known to DB Team prior to the Proposal Due Date or that would become known to DB Team by undertaking reasonable investigation prior to the Proposal Due Date;
- (k) Any spill of Hazardous Material by a third party who is not acting in the capacity of a DB Team-Related Entity which (i) occurs after the Proposal Due Date, (ii) is required to be reported to a Governmental Entity and (iii) renders use of the roadway or construction area unsafe or potentially unsafe absent assessment, containment and/or remediation;
- (l) Issuance of a temporary restraining order or other form of injunction by a court that prohibits prosecution of any material portion of the Work, unless the injunction is the result of an action or inaction by the Design-Build Team;
- (m) Suspension, termination or interruption of an approval of Environmental Documents, except to the extent that such suspension, termination or interruption results from failure by any DB Team-Related Entity to locate or design the Project or carry out the work in accordance with the approval of Environmental Documents or other Governmental Approval (which failure may include (i) modification by or on behalf of Design-Build Team of the design concept included in the Environmental Documents approval, (ii) means or methods used by any Design-Build Team-Related Entity for carrying out the Work, or (iii) decision or action by or on behalf of Design-Build Team to use or acquire Additional Property);
- (n) Any change in the design concept of the Project or any portion thereof resulting from judicial or administrative action taken with respect to a legal challenge to any approval of Environmental Documents as compared to the design concept indicated in the

alternative that was the subject of the approval of Environmental Documents, except to the extent the change in design concept had already been incorporated into Design-Build Team's design schematics assumed in connection with the DB Contract Sum;

- (o) Subject to clause (s) of this Article 14.1, failure to obtain, or unreasonable and unjustified delay in obtaining or otherwise maintaining once issued, a Governmental Approval from any Governmental Entity, except to the extent that such failure or delay results from failure by any Design-Build Team-Related Entity to locate or design the Project or carry out the work in accordance with the approval of Environmental Documents or other Governmental Approval (which failure may include (i) modification by or on behalf of Design-Build Team of the design concept included in the approval of Environmental Documents, (ii) means or methods used by any Design-Build Team-Related Entity for carrying out the Work, or (iii) decision or action by or on behalf of Design-Build Team to use or acquire Additional Property);
- (p) GDOT's (i) lack of good and sufficient title to any parcel in the Existing Right of Way or the Property, to the extent it interferes with or adversely affects performance of Work, (ii) inability or failure to obtain an interest (including by easement or other right of access) to real property not identified in the Proposed Right of Way and required for construction of the Project as demonstrated by Design-Build Team, exclusive of any Additional Properties, Project Specific Locations, or parcels that are solely for the convenience of Design-Build Team, to the extent it interferes with or adversely affects performance of Work, or (iii) the existence at any time following issuance of NTP 3 of any title reservation, condition, easement or encumbrance on any parcel in the Existing Right of Way or Property owned by GDOT, of record or not of record, to the extent it interferes with or adversely affects performance of Work, except any title reservations, conditions, easements or encumbrances concerning Utilities or otherwise caused, permitted or suffered by a Design-Build Team-Related Entity;
- (q) Unreasonable and unjustified delay by a Utility Owner with whom Design-Build Team has been unable to enter into a Utility Agreement in connection with a Utility Adjustment, or failure or delay of any Utility in obtaining any required easement, right of way, or other property interest as may be required, provided that all of the "conditions to assistance" described in Article 7.5.4 of the Agreement have been satisfied;
- (r) Failure to obtain, or unreasonable and unjustified delay in obtaining, an approval from GDOT with respect to a Permitted Design Exception, except to the extent that such failure or delay in obtaining the GDOT approval results from failure by any Design-Build Team-Related Entity to carry out the Work in accordance with the DB Documents;
- (s) Failure to obtain, or unreasonable and unjustified delay in obtaining, a Governmental Approval required for a re-evaluation of an approval of Environmental Documents due to an approved ATC; provided that Design-Build Team shall only be entitled to relief for such failure or delay after expiration of the applicable GDOT Re-evaluation Period; or
- (t) Material delays as a result of any modification to the approval of Environmental Documents, as a result of the Environmental Documents, and all approved supplements and re-evaluations pertaining to the Project as of the Effective Date provided that any such modifications are not the result of an ATC, Additional Properties, or attributable to Design-Build Team's design.

### **14.1.2 Extensions of Time for Relief Events**

**14.1.2.1** If DB Team complies with the notice and information requirements in this Article 14.1, then within sixty (60) days after receiving the Proposed Supplemental Agreement (and, if applicable, any required updates thereto) GDOT, acting reasonably, shall issue a Relief Event Determination. GDOT shall specify in the Relief Event Determination (a) the relevant obligations for which relief is given, (b) the period of time that Milestone Schedule Deadlines or periods set forth in the Project Schedule will be extended based on the number of days of delay affecting a Critical Path, after consumption of Float available pursuant to Article 3.2.5, that is directly attributable to the Relief Event and that cannot be avoided through reasonable mitigation measures and (c) if applicable, the period of time, if any, that the Contract Time will be extended. DB Team shall be relieved from the performance of obligations to the extent specified in the Relief Event Determination.

**14.1.2.2** DB Team shall not be excused from compliance with applicable Laws, Technical Provisions or Technical Documents due to the occurrence of a Relief Event, except temporary inability to comply as a direct result of a Relief Event.

**14.1.2.3** If GDOT is obligated to but does not provide a Relief Event Determination within such thirty (30) day period or if DB Team disagrees with the length of the extension of the Contract Time or other relief set forth in the Relief Event Determination, DB Team shall have the right to assert a claim against GDOT for the relevant Relief Event and have such claim determined according to the Dispute Resolution Procedures. Any Dispute regarding the occurrence of a Relief Event, the terms of the Relief Event Determination or waiver of DB Team's right to relief shall be resolved according to the Dispute Resolution Procedures.

**14.1.2.4** Without limiting DB Team's rights with respect to monetary relief for Compensation Events as set forth in this Agreement, the extensions of time as provided, if any, pursuant to this Article 14.1 are DB Team's sole remedy for a Relief Event.

### **14.1.3 Limitations on Time Extensions**

The DB Team shall be required to demonstrate to GDOT's satisfaction that the change in the Work or other event or situation which is being asserted as a Relief Event will result in or has caused an identifiable and measurable delay of the Work which will impact or has impacted the Critical Path affecting a Completion Deadline.

Any extension of a Completion Deadline allowed hereunder shall exclude any delay to the extent that it did not impact the Critical Path affecting a Completion Deadline or was a concurrent delay with any other delay for which the DB Team is not entitled to an extension.

## **14.2 Compensation Events**

A Compensation Event is any of the following events, subject to any limitations, claims submission requirements, and other conditions set forth in the Agreement, provided that no relief will be

available to the extent that (i) the events are within Design-Build Team's control, or are due to any wrongful act, wrongful omission, negligence, recklessness, willful misconduct, breach of contract or Law or violation of a Governmental Approval of any of the Design-Build Team-Related Entities; (ii) the events (or the effects of such events) could have been avoided by the exercise of reasonable caution, due diligence, or other reasonable efforts by Design-Build Team:

- (a) Change in Law;
- (b) Discriminatory Action;
- (c) Material breach by GDOT of its material obligations under the Agreement or other DB Documents, including unreasonable failure to issue a certificate of Substantial Completion or a certificate of satisfaction of conditions precedent to Final Acceptance after Design-Build Team satisfies all applicable conditions and requirements for obtaining such certificates;
- (d) GDOT-Caused Delay, other than with respect to GDOT's failure to provide response to Design-Build Team Submittals as provided under clause (d) of the definition of a GDOT-Caused Delay;
- (e) GDOT Change;
- (f) A GDOT Release of Hazardous Material or remediation of Pre-Existing Hazardous Materials, but excluding the extent of any Design-Build Team Release of Hazardous Materials;
- (g) Issuance by a court in a legal proceeding challenging any approval of Environmental Documents or a temporary restraining order or other form of temporary injunction that prohibits prosecution of any material portion of the Work, unless the injunction is the result of an action or inaction by the Design-Build Team;
- (h) Any change in the design concept of the Project or any portion thereof resulting from judicial or administrative action taken with respect to a legal challenge to any approval of Environmental Documents as compared to the design concept indicated in the alternative that was the subject of the approval of Environmental Documents, except to the extent the change in design concept had already been incorporated into Design-Build Team's design schematics as approved pursuant to this Agreement;
- (i) Subject to clause (n) of this Article 14.2, failure to obtain, or unreasonable and unjustified delay in obtaining or otherwise maintaining once issued, a Governmental Approval from any Governmental Entity, except to the extent that such failure or delay results from failure by any Design-Build Team-Related Entity to locate or design the Project or carry out the work in accordance with the approval of Environmental Documents or other Governmental Approval (which failure may include (i) modification by or on behalf of Design-Build Team of the design concept included in the approval of Environmental Documents, (ii) means or methods used by any Design-Build Team-Related Entity for carrying out the Work, or (iii) decision or action by or on behalf of Design-Build Team to use or acquire Additional Property);
- (j) GDOT's (i) lack of good and sufficient title to any parcel in the Existing Right of Way or the State Proposed/State Acquired Right of Way or Property owned by GDOT, to the extent it interferes with or adversely affects performance of Work, (ii) inability or failure to obtain an interest (including by easement or other right of access) to



real property not identified in the State Proposed/State Acquired Right of Way and required for construction of the Project as demonstrated by Design-Build Team, exclusive of any Additional Properties, Project Specific Locations, or parcels that are solely for the convenience of Design-Build Team, to the extent it interferes with or adversely affects performance of Work, or (iii) the existence at any time following issuance of NTP 3 of any title reservation, condition, easement or encumbrance on any parcel in the Existing Right of Way or Property owned by GDOT, of record or not of record, to the extent it interferes with or adversely affects performance of Work, except any title reservations, conditions, easements or encumbrances (A) concerning Utilities or (B) caused, permitted or suffered by a Design-Build Team-Related Entity;

- (k) Failure to obtain, or unreasonable and unjustified delay in obtaining, an approval from GDOT with respect to a Permitted Design Exception, except to the extent that such failure or delay in obtaining the GDOT approval results from failure by any Design-Build Team-Related Entity to carry out the Work in accordance with the DB Documents;
- (l) Failure to obtain, or unreasonable and unjustified delay in obtaining, a Governmental Approval required for a re-evaluation of an approval of Environmental Documents due to an approved ATC; provided that Design-Build Team shall only be entitled to compensation for such failure or delay after expiration of the applicable GDOT Re-evaluation Period;
- (m) Performance of work in the Construction Maintenance Limits or Operations and Maintenance Limits, by Separate Contractors within the ROW, carried out by or on behalf of GDOT or a Governmental Entity, excluding any Utility Adjustment Work by a Utility Owner, that directly disrupts DB Team's onsite Work; or
- (n) Material delays as a result of any modification to the approval of Environmental Documents, as a result of the Environmental Documents, and all approved supplements and re-evaluations pertaining to the Project as of the Effective Date provided that any such modifications are not the result of an ATC, Additional Properties, or attributable to Design-Build Team's design.

#### **14.2.1 Determining Compensable Amounts**

The Compensation Amount, if any, for design or construction shall be determined by applying the following provisions.

##### **14.2.1.1 Cost impacts shall:**

- (a) Exclude (i) third-party entertainment costs, lobbying and political activity costs, costs of alcoholic beverages, costs for first class travel in excess of prevailing economy travel costs, and costs of club memberships, in each case to the extent that such costs would not be reimbursed to an employee of GDOT in the regular course of business, and (ii) unallowable costs under the following provisions of the federal Contract Cost Principles, 48 CFR 31.205: 31.205-8 (contributions or donations), 31.205-13 (employee morale, health, welfare, food service, and dormitory costs and credits), 31.205-14 (entertainment costs), 31.205-15 (fines, penalties, and mischarging costs), 31.205-27 (organization costs), 31.205-34 (recruitment costs), 31.205-35 (relocation costs), 31.205-43 (trade, business, technical and professional activity costs),

31.205-44 (training and education costs), and 31.205-47 (costs related to legal and other proceedings);

- (b) Exclude amounts paid or to be paid to Affiliates in excess of the pricing DB Team could reasonably obtain in an arms' length, competitive transaction with an unaffiliated Contractor;
- (c) Exclude those costs incurred in asserting, pursuing, or enforcing any Compensation Event, Relief Event or Dispute;
- (d) Be reduced by any savings in costs resulting from the Compensation Event;
- (e) Be subject to DB Team's obligation to mitigate cost increases and augment cost decreases in accordance with this Article 14.2.
- (f) Costs caused by the breach of contract or fault or negligence, or act or failure to act of any DB Team-Related Entity.
- (g) Costs, which could reasonably, and in accordance with Good Industry Practice, have been avoided by the DB Team, including by resequencing, reallocating, or redeploying its forces to other portions of the Work (including any additional costs reasonably incurred in connection with such reallocation or redeployment) or to other activities unrelated to the Work.
- (h) Costs for any rejected Work that failed to meet the requirements of the DB Documents and any necessary remedial Work.
- (i) Damages or expenses barred under Section 105.13 of the latest edition of GDOT Standard Specifications: Construction of Transportation Systems.

**14.2.1.2** In all cases the Compensation Amount shall be net of all insurance available to DB Team including deductibles, or deemed to be self-insured by DB Team under Article 16, with respect to cost or revenue impacts of the Compensation Event.

**14.2.1.3** The Compensation Amount shall not include any amount on account of federal, State, or local income taxes. Further and notwithstanding anything to the contrary herein, the Compensation Amount shall not include, under any circumstances, costs incurred by DB Team or any Contractors on account of charges or expenses due to (a) the business organization existence or maintenance of its business of any DB Team-Related Entity or (b) labor or employment matters as a result of any Change in Law.

**14.2.2** If the Compensation Event is under clause (g) of Article 14.2, then the Compensation Amount shall be limited to the incremental increase in costs of initial design and construction due to delay and disruption directly attributable to the court order.

**14.2.3** DB Team shall share with GDOT all data, documents, and information pertaining to bids for any work that is the subject of a Compensation Amount, and all of the aforementioned shall be on an Open Book Basis.

**14.2.4** Any Dispute between GDOT and the DB Team regarding occurrence of a Compensation Event, determination of the Compensation Amount or waiver of DB Team's right to compensation shall be resolved according to the Dispute Resolution Procedures. The dispute resolution body(ies) shall apply the provisions of this Article 14.2 in determining the Compensation Amount.

**14.2.5** Following a determination of the Compensation Amount by mutual agreement or the Dispute Resolution Procedures, GDOT shall pay such Compensation Amount (a) through periodic payments of the Compensation Amount in accordance with the scheduling and payment provisions in Section 2 of the Technical Provisions, (b) in a lump sum, payable as determined by mutual agreement or through the Dispute Resolution Procedures, or (c) in such other manner as agreed upon by the Parties. GDOT, in its sole discretion, shall be entitled to select one or any combination of the foregoing methods of compensation.

**14.2.6** Without limiting DB Team's rights with respect to non-monetary relief for Relief Events as set forth in this Agreement, the Compensation Amount shall represent the sole right to compensation and damages for the adverse financial effects of a Compensation Event. As a condition precedent to GDOT's obligation to pay any portion of the Compensation Amount, DB Team shall execute a full, unconditional, irrevocable release, in form reasonably acceptable to GDOT, of any claims, Losses or other rights to compensation or other monetary relief associated with such Compensation Event, except for the right to the subject Compensation Amount, DB Team's right to non-monetary relief for a Relief Event, and the right to terminate this Agreement in accordance with Article 19.4 and to receive any applicable Termination Compensation.

#### **14.2.7 Limitations on Acceleration Costs**

Acceleration costs shall be compensable hereunder only with respect to Supplemental Agreements issued by GDOT.

Acceleration costs are those fully documented increased costs reasonably incurred by the DB Team (i.e., costs over and above what the DB Team would otherwise have incurred) which are directly attributable to increasing the performance level of the Work in an attempt to complete necessary activities of the Work earlier than otherwise anticipated, such as for additional equipment, additional crews, overtime and shift premiums, increased supervision, and any unexpected movement of materials, equipment, or crews necessary for resequencing in connection with acceleration efforts. Acceleration costs do not include any costs for disruption damages as described below in Article 14.2.8.

#### **14.2.8 No Disruption Damages**

Disruption damages, whether from a single event or continual, multiple or repetitive events, are not allowed or recoverable under the Agreement. Disruption damages include costs of (i) rearranging the DB Team's Work plan not associated with an extension of a Completion Deadline, and (ii) loss of efficiency, momentum or productivity.

#### **14.2.9 Limitations on Delay Damages**

**14.2.9.1** Delay damages are compensable and are limited to the provisions of Standard Specifications 105.13.B.

**14.2.9.2** Before the DB Team may obtain any increase in the Contract Sum to compensate for any delay damages or acceleration costs, the DB Team shall have demonstrated to GDOT's satisfaction that:

- (a) The Project Schedule in fact sets forth a reasonable method for completion of the Work;
- (b) The change in the Work or other event or situation that is the subject of the requested Supplemental Agreement has caused or will result in an identifiable and measurable delay of the Work and impact the Critical Path affecting milestones listed in Exhibit 9;
- (c) The delay damage was not due to any breach of contract or fault or negligence, or act or failure to act of any DB Team-Related Entity, and could not reasonably have been avoided by the DB Team, including by resequencing, reallocating or redeploying its forces to other portions of the Work (subject to reimbursement for additional costs reasonably incurred in connection with such reallocation or redeployment) or other activities unrelated to the Work;
- (d) The delay for which compensation is sought is not concurrent with any other delay for which the DB Team is not entitled to delay damages; and
- (e) The DB Team has suffered or will suffer actual costs due to such delay, each of which costs shall be justified and documented in a manner satisfactory to GDOT.

**14.2.9.3** Delay damages shall only be available for delays to the Completion Deadline for Substantial Completion. For delays to any other Completion Deadline the only relief available is suspension of Liquidated Damages for the duration of the proven delay.

### **14.3 Lump Sum Compensation**

The preferred approach by both parties is that Supplemental Agreements will be paid on a lump sum basis, if the parties can agree on a lump sum amount. Lump sum prices shall be based on the original allocations of the Contract Sum to comparable activities. If reference to price allocations is inappropriate, or when requested by GDOT or the DB Team, negotiation for lump sum Supplemental Agreements shall be on an Open Book Basis and may be based on the pricing contained in the escrowed bid documents as well as Subcontractors' bid prices.

If the parties cannot agree on a lump sum amount for Supplemental Agreements, the Supplemental Agreements will be paid as Force Account Supplemental Agreements described in Article 14.4.

### **14.4 Force Account Compensation**

**14.4.1** GDOT may at its discretion issue a Directive Letter or Force Account Supplemental Agreement whenever the Parties cannot agree to a lump sum Supplemental Agreement or GDOT determines that a Force Account Supplemental Agreement is advisable.

**14.4.2** The Force Account shall instruct the DB Team to perform the Work, indicating expressly the intention to treat the items as changes in the Work, and setting forth the kind, character, and limits of the Work as far as they can be ascertained, the terms under which changes to the Contract Sum will be determined, and the estimated total change in the Contract Sum anticipated thereunder.

**14.4.3** Force Account work is subject to the provisions of 109.05.B of the latest edition of GDOT Standard Specifications: Construction of Transportation Systems. No other direct or indirect compensation will be allowed, including for other miscellaneous costs for which no specific allowance is provided.

**14.4.4** Upon final determination of the allowable costs, GDOT shall issue a modified Supplemental Agreement setting forth the final adjustment to the Contract Sum.

#### **14.4.5 Force Account Records**

**14.4.5.1** Unless and until a lump sum Supplemental Agreement is issued, or in the case that a Directive Letter or Supplemental Agreement is issued directing work be performed under Force Account provisions, the DB Team shall maintain its records in such a manner as to provide a clear distinction between: (i) the direct cost of Work for which it is entitled (or for which it believes it is entitled) to an increase in the Contract Sum; and (ii) the costs of all other operations.

**14.4.5.2** The DB Team shall contemporaneously collect, record in writing, segregate, and preserve: (a) all data necessary to determine the costs described in this Article 14.4 with respect to all Work which is the subject of a requested Supplemental Agreement, specifically including costs associated with Design Work (for which a negotiated Supplemental Agreement has not been issued); and (b) all data necessary to show the actual impact (if any) of any change on the Critical Path affecting a Completion Deadline with respect to all Work which is the subject of a Supplemental Agreement or a Proposed Supplemental Agreement, if the impact on the Critical Path affecting a Completion Deadline is in dispute.

**14.4.5.3** Such data shall be provided on forms approved by GDOT. The cost of furnishing such reports is included in the DB Team's predetermined overhead and profit.

**14.4.5.4** The DB Team shall furnish daily, on forms approved by GDOT, reports of all Force Account Work. The cost of furnishing such reports shall be included in the DB Team's overhead and profit percentages. The reports shall include:

- (a) Name, classification, date, daily hours, total hours, rate, and extension for each laborer, equipment operator, and supervisor, excluding superintendents.
- (b) Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
- (c) Quantities of materials, prices and extensions.

- (d) Transportation costs of materials, machinery, and equipment.
- (e) Invoices for materials used and for transportation charges.
- (f) Cost of property damage, liability, and worker's compensation insurance premiums, unemployment insurance contributions, and Social Security tax.

The reports shall also state the total costs to date for the Force Account Work.

**14.4.5.5** Labor costs for Project management and administration, and construction field management above but not including the Superintendent, according to the DB Team's organization and standard work practices, are included in the markup as provided in Standard Specification 109.05.B.1.

**14.4.5.6** The cost of labor for non-construction-related Work, whether provided by the DB Team or a Subcontractor, will equal the sum of the following: (i) actual wages (i.e. the base wage paid to the employee exclusive of any fringe benefits); plus (ii) an overhead based on the audited Federal Acquisition Regulations (FAR) field rates. The DB Team will also be paid for profit on non-construction labor of five (5) percent of labor costs plus overhead.

**14.4.5.7** If materials used on the Force Account Supplemental Agreement Work are not specifically purchased for the Work but are taken from the DB Team's stock, the DB Team shall furnish an affidavit certifying that such materials were taken from the DB Team's stock, that the quantity claimed was actually used, and that the price and transportation costs claimed represent actual costs to the DB Team.

**14.4.5.8** All Force Account Supplemental Agreement reports shall be signed by the Project Manager. GDOT will compare its records with the DB Team's reports, make the necessary adjustments, and compile the costs of Force Account Supplemental Agreement Work. When such reports are agreed upon and signed by both parties, they will become the basis of payment and may be billed in the next Payment Request, but shall not preclude subsequent adjustment based on a later audit.

## **Article 15 REPRESENTATIONS AND COVENANTS**

### **15.1 DB Team Representations and Covenants**

DB Team hereby represents to and covenants with GDOT as follows:

**15.1.1** During all periods necessary for the performance of the Work, DB Team and its Contractor(s) will maintain all required authority, license status, professional ability, skills and capacity to perform the Work.

**15.1.2** As of the Effective Date, DB Team has evaluated the constraints affecting design and construction of the Project, including the Property, the Existing Right of Way and Proposed Right of Way limits as well as the conditions of the Environmental

Documents, and has reasonable grounds for believing and does believe that the Project can be designed and built within such constraints.

**15.1.3** Except as to parcels that GDOT lacked title or access to prior to the Effective Date, DB Team, in accordance with Good Industry Practice and the requirements of the DB Documents, shall have examined the Site and surrounding locations, performed appropriate field studies and geotechnical investigations of the Site, investigated and reviewed available public and private records, and undertook other activities sufficient to familiarize itself with surface conditions and subsurface conditions, including the presence of Utilities, Hazardous Materials, contaminated groundwater, archeological, paleontological and cultural resources, and Threatened or Endangered Species, affecting the Site or surrounding locations; and as a result of such review, inspection, examination and other activities DB Team is familiar with and accepts the physical requirements of the Work, subject to GDOT's obligations regarding Hazardous Materials under Article 7.8 and Exhibit 11 and DB Team's rights to seek relief under Article 14 .

**15.1.4** DB Team has familiarized itself with the requirements of any and all applicable Laws, including with limitation O.C.G.A. §48-13-30, et. seq., and the conditions of any required Governmental Approvals prior to entering into this Agreement. Except as specifically permitted under Article 13 or Article 14, DB Team shall be responsible for complying with the foregoing at its sole cost and without any additional compensation or time extension on account of such compliance, regardless of whether such compliance would require additional time for performance or additional labor, equipment and/or materials not expressly provided for in the DB Documents. As of the Effective Date, DB Team has no reason to believe that any Governmental Approval required to be obtained by DB Team will not be granted in due course and thereafter remain in effect so as to enable the Work to proceed in accordance with the DB Documents.

**15.1.5** All Work furnished by DB Team will be performed by or under the supervision of Persons who hold all necessary, valid licenses to practice in the State, by personnel who are skilled, experienced and competent in their respective trades or professions, who are professionally qualified to perform the Work in accordance with the DB Documents and who shall assume professional responsibility for the accuracy and completeness of the Design Documents, Construction Documents and other documents prepared or checked by them.

**15.1.6** As of the Effective Date, DB Team is a [REDACTED] duly organized and validly existing under the laws of [REDACTED] has the requisite power and all required licenses to carry on its present and proposed activities, and has full power, right and authority to execute and deliver the DB Documents, Principal Project Documents as and to the extent applicable, and to perform each and all of the obligations of DB Team provided for herein and therein. DB Team is duly qualified to do business, and is in good standing, in the State as of the Effective Date, and will remain duly qualified and in good standing throughout the term of this Agreement and for as long thereafter as any obligations remain outstanding under the DB Documents.

**15.1.7** The execution, delivery and performance of the DB Documents, and all other Principal Project Documents to which DB Team is (or will be) a party have been (or will be) duly authorized by all necessary corporate action of DB Team; each Person executing the DB Documents and all other such Project related documents, on behalf of

DB Team has been (or at the time of execution will be) duly authorized to execute and deliver each such document on behalf of DB Team; and the DB Documents, and all such other Project related documents have been (or will be) duly executed and delivered by DB Team.

**15.1.8** Neither the execution and delivery by DB Team of the DB Documents and the Principal Project Documents to which DB Team is (or will be) a party, nor the consummation of the transactions contemplated hereby or thereby, is (or at the time of execution will be) in conflict with or has resulted or will result in a default under or a violation of the governing instruments of DB Team.

**15.1.9** As of the Effective Date, each of the DB Documents, the Principal Project Documents to which DB Team is (or will be) a party constitutes (or at the time of execution and delivery will constitute) the legal, valid and binding obligation of DB Team, enforceable against DB Team and, if applicable, each member of DB Team, in accordance with its terms, subject only to applicable bankruptcy, insolvency and similar laws affecting the enforceability of the rights of creditors generally and the general principles of equity.

**15.1.10** As of the Effective Date, there is no action, suit, proceeding, investigation or litigation pending and served on DB Team which challenges DB Team's authority to execute, deliver or perform, or the validity or enforceability of, the DB Documents, and all other Project related documents to which DB Team is a party, or which challenges the authority of DB Team official executing the DB Documents, or the Principal Project Documents. DB Team has disclosed to GDOT prior to the Effective Date any pending and un-served or threatened action, suit, proceeding, investigation or litigation with respect to such matters of which DB Team is aware.

**15.1.11** As of the Proposal Due Date, DB Team disclosed to GDOT in writing all organizational conflicts of interest of DB Team and its Contractors of which DB Team was actually aware; and between the Proposal Due Date and the Effective Date, DB Team has not obtained knowledge of any additional organizational conflict of interest, and there have been no organizational changes to DB Team or its Contractors identified in its Proposal, which have not been accepted in writing by GDOT. For this purpose, organizational conflict of interest has the meaning set forth in Section 1.6 of the ITP (Instructions to Proposers).

**15.1.12** To the extent the Design-Build Contractor is not the DB Team, DB Team represents and warrants, as of the effective date of the Design-Build Contract, as follows: (a) the Design-Build Contractor is duly organized, validly existing and in good standing under the laws of the state of its organization; (b) with respect to Persons that individually hold more than ten percent (10%) of the capital stock of the Design-Build Contractor (including options, warrants and other rights to acquire capital stock), such stock is owned by the Persons whom DB Team has set forth in a written certification delivered to GDOT prior to the Effective Date; (c) the Design-Build Contractor has the power and authority to do all acts and things and execute and deliver all other documents as are required to be done, observed or performed by it in connection with its engagement by DB Team; (d) the Design-Build Contractor has all necessary expertise, qualifications, experience, competence, skills and know-how to perform the design and construction of the Project in accordance with the DB Documents; and (e) the Design-Build Contractor is not in breach



of any applicable Law that would have a material adverse effect on the design and construction of the Project.

**15.1.13** The execution and delivery by DB Team of this Agreement and all other Project related documents to which DB Team is a party will not result, at the time of execution, in a default under any other agreement or instrument to which it is a party or by which it is bound.

**15.1.14** The execution and delivery by DB Team of the DB Documents and performance by DB Team of its obligations thereunder will not conflict with any Laws applicable to DB Team that are valid and in effect on the Effective Date.

**15.1.15** The Design-Build Contractor shall comply in full with the provisions of Code Sections 50-24-1 through 50-24-6 of the Official Code of Georgia Annotated, relating to the "Drug-free Workplace Act".

**15.1.16** No event which, with the passage of time or the giving of notice, would constitute a DB Team Default has occurred and has not yet been cured.

**15.1.17 Reserved**

**15.1.18** DB Team certifies, by entering into this Agreement, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from entering into this Agreement by any federal agency or by any department, agency or political subdivision of the State, including GDOT. For purposes of this Article 15.1.18, the term "principal" means an officer, director, owner, partner, Key Personnel, employee, or other person with primary management or supervisory responsibilities, or a person who has a critical influence on or substantive control over the operations of DB Team.

**15.1.19** DB Team represents, warrants and certifies by entering into this Agreement, that neither it nor its Affiliates is presently in arrears in payment of Taxes, permit fees or other statutory, regulatory or judicially required payments to GDOT or the State.

**15.1.20** DB Team acknowledges and agrees, that as a requirement to enter into the DB Documents, the Proposal documents delivered pursuant to the RFP constitute all the information used in the preparation of the Proposal, and that no other Proposal preparation information will be considered in the resolution of Disputes. The DB Team also agrees that nothing in the Proposal documents delivered pursuant to the RFP shall change or modify the terms or conditions of the DB Documents.

**15.2 GDOT Representations and Covenants**

GDOT hereby represents to and covenants with DB Team as follows:

**15.2.1** As of the Effective Date, GDOT has full power, right and authority to execute, deliver and perform the DB Documents and the Principal Project Documents to which GDOT is a party and to perform each and all of the obligations of GDOT provided for herein and therein.

**15.2.2** As of the Effective Date, each of the DB Documents and the Principal Project Documents to which GDOT is (or will be) a party constitutes (or at the time of execution and delivery will constitute) the legal, valid and binding obligation of GDOT, enforceable against GDOT in accordance with its terms, subject only to applicable bankruptcy, insolvency and similar laws affecting the enforceability of the rights of creditors generally and the general principles of equity.

**15.2.3** The execution and delivery by GDOT of this Agreement and the Principal Project Documents to which GDOT is a party will not result, at the time of execution, in a default under any other agreement or instrument to which it is a party or by which it is bound.

**15.2.4** The execution and delivery by GDOT of the DB Documents and performance by GDOT of its obligations thereunder will not conflict with any Laws applicable to GDOT that are valid and in effect on the Effective Date.

**15.2.5** As of the Effective Date, there is no action, suit, proceeding, investigation or litigation pending and properly served on GDOT, or, to GDOT's knowledge, without obligation to investigate, threatened, which challenges GDOT's authority to execute, deliver or perform, or the validity or enforceability of, the DB Documents, and all other Project related documents to which GDOT is a party.

### **15.3 Survival of Representations and Covenants**

The representations and covenants of DB Team and GDOT contained herein shall survive expiration or earlier termination of this Agreement.

### **15.4 Special Remedies for Mutual Breach of Representations and Covenants**

Notwithstanding any other provision of this Agreement, if there exists or occurs any circumstance or event that constitutes or results in a concurrent breach of any of the representations or covenants set forth in this Article 15 by both DB Team and GDOT but does not also constitute or result in any other breach or default by either Party, then such breaches shall not form the basis for a Compensation Event by the DB Team or damage claim by GDOT against DB Team. Instead, the only remedies shall be for the Parties to take action to rectify or mitigate the effects of such circumstance or event, to pursue severance and reformation of the DB Documents and Principal Project Documents as set forth in Article 24.13, or Termination by Court Ruling as set forth in Article 19.11 and Exhibit 20.

## **Article 16 INSURANCE; PERFORMANCE SECURITY; INDEMNITY**

### **16.1 Insurance Policies and Coverage**

#### **16.1.1 Insurance Certificates and Additional Insured Endorsements Requirements**

**16.1.1.1 Certificates of Insurance.** The DB Team shall procure the insurance coverages identified below at the DB Team's expense and shall furnish GDOT an insurance certificate listing GDOT as the certificate holder and as an

additional insured. Certificates of Insurance shall be on a form approved for use in the State of Georgia by the Commissioner of Insurance that provides the following:

- (a) Name and address of authorized agent
- (b) Name and address of insured
- (c) Name of insurance company(ies)
- (d) Description of policies
- (e) Policy number(s)
- (f) Policy Period(s)
- (g) Limits of liability
- (h) Name and address of GDOT as certificate holder
- (i) Project Name and Number
- (j) Signature of authorized agent
- (k) Telephone number of authorized agent
- (l) Mandatory thirty (30) Day notice of cancellation or non-renewal (except ten (10) Days for non-payment).

**16.1.2** Insurer Qualifications, Insurance Requirements. Each of the insurance coverages required below (i) shall be issued by a company licensed by the Insurance Commissioner to transact the business of insurance in the State of Georgia for the applicable line of insurance, and (ii) shall be an insurer (or, for qualified self-insureds or group self-insureds, a specific excess insurer providing statutory limits) with a Best Policyholders Rating of "A-" or better and with a financial size rating of Class V or larger. Each such policy shall contain the following provisions:

**16.1.2.1** The insurance company agrees that the policy shall not be canceled, changed, allowed to lapse or allowed to expire until thirty (30) days after GDOT has received written notice thereof, as evidenced by return receipt of certified mail or statutory mail, or until such time as other insurance coverage providing protection equal to protection called for in this Contract shall have been received, accepted and acknowledged by GDOT. Such notice shall be valid only as to the Project as shall have been designated by Project Number and Name in said notice.

**16.1.2.2** The policy shall not be subject to invalidation as to any insured by reason of any act or omission of another insured or any of its officers, employees, agents or other representatives ("Separation of Insureds").

**16.1.2.3** Each Insurer is hereby notified that the statutory requirement that the Attorney General shall represent and defend the Indemnities remains in

full force and effect and is not waived by issuance of any policy of insurance. In the event of litigation, any settlement on behalf of the indemnities must be expressly approved by the Attorney General. The DB Team and its insurance carrier may retain, but are not obligated to retain, counsel to assist with the defense of the Indemnities, in which case there will be mutual cooperation between the Attorney General and such counsel. See O.C.G.A. §45-15-12.

**16.1.2.4** All deductibles shall be paid for by the DB Team.

**16.1.2.5** The maximum deductible, except for Worker's Compensation qualified self-insurers or group self-insurers, in any policy shall not exceed \$100,000.00.

**16.1.3** Required Insurance Coverages. The DB Team also agrees to purchase insurance and have the authorized agent state on the insurance certificate that the DB Team has purchased the following types of insurance coverages, consistent with the policies and requirements of O.C.G.A. §50-21-37. The minimum required coverages and liability limits are as follows:

**16.1.3.1** Workers' Compensation Insurance. The DB Team agrees to provide at a minimum Workers' Compensation coverage in accordance with the statutory limits as established by the General Assembly of the State of Georgia. A group insurer must submit a certificate of authority from the Insurance Commissioner approving the group insurance plan. A self-insurer must submit a certificate from the Georgia Board of Workers' Compensation stating the DB Team qualifies to pay its own workers' compensation claims. The DB Team shall require all Subcontractors performing work under this Agreement to obtain an insurance certificate showing proof of Workers' Compensation Coverage and shall submit a certificate on the letterhead of the DB Team in the following language:

*This is to certify that all subcontractors performing work on this Project are covered by their own workers' compensation insurance or are covered by the DB Team's workers' compensation insurance.*

**16.1.3.2** Employers' Liability Insurance. The DB Team shall also maintain Employer's Liability Insurance Coverage with limits of at least:

- (a) Bodily Injury by Accident - \$1,000,000 each accident; and
- (b) Bodily Injury by Disease - \$1,000,000 each employee.

The DB Team shall require all Subcontractors performing work under this Contract to obtain an insurance certificate showing proof of Employers Liability Insurance Coverage and shall submit a certificate on the letterhead of the DB Team in the following language:

*This is to certify that all subcontractors performing work on this Project are covered by their own Employers Liability Insurance Coverage or are covered by the DB Team's Employers Liability Insurance Coverage.*

**16.1.3.3 Commercial General Liability (CGL) Insurance.** The DB Team shall provide Commercial General Liability Insurance (2004 ISO Occurrence Form or equivalent) that shall include, but need not be limited to, coverage for bodily injury and property damage arising from premises and operations liability, products and completed operations liability, blasting and explosion, collapse of structures, underground damage, personal injury liability and contractual liability. The CGL policy must include separate aggregate limits per Project and shall provide at a minimum the following limits:

<b>Coverage</b>	<b>Limit</b>
1. Premises and Operations	\$ 1,000,000.00 per Occurrence
2. Products and Completed Operations	\$ 1,000,000.00 per Occurrence
3. Personal Injury	\$ 1,000,000.00 per Occurrence
4. Contractual	\$ 1,000,000.00 per Occurrence
5. General Aggregate	\$ 2,000,000.00 per Project

Additional Requirements for Commercial General Liability Insurance are shown below at Article 16.1.3.6.

**16.1.3.4 Commercial Business Automobile Liability Insurance.** The DB Team shall provide Commercial Business Automobile Liability Insurance that shall include coverage for bodily injury and property damage arising from the operation of any owned, non-owned, or hired automobile. The Commercial Business Automobile Liability Insurance Policy shall provide not less than \$1,000,000 Combined Single Limits for each occurrence. Additional Requirements for Commercial Business Automobile Liability Insurance are shown below at Article 16.1.3.6.

**16.1.3.5 Commercial Umbrella Liability Insurance.** The DB Team shall provide a Commercial Umbrella Liability Insurance to provide excess coverage above the Commercial General Liability, Commercial Business Automobile Liability and the Workers' Compensation and Employers' Liability to satisfy the minimum limits set forth herein. The umbrella coverage shall follow form with the Umbrella limits required as follows:

<i>For Contract Sum Amounts Less Than \$5,000,000:</i>	<i>For Contract Sum Amounts Equal to or Greater than \$5,000,000:</i>
\$ 2,000,000 per Occurrence	\$ 2,000,000 per Occurrence
\$ 4,000,000 Aggregate	\$ 10,000,000 Aggregate

Additional Requirements for Commercial Umbrella Liability Insurance are shown below at Article 16.1.3.6.

**16.1.3.6 Additional Requirements for Commercial Policies in Articles 16.1.3.3 through 16.1.3.5**

- (a) The DB Team shall cause its insurer to issue an Additional Insured Endorsement naming the officers, members, and employees of GDOT as additional Insureds.

- (b) The policy must be on an “occurrence” basis.

**16.1.3.7 Professional Liability (Errors and Omissions) Insurance.** Limits shall not be less than the following:

- (a) Valuable Papers: Insurance in an amount sufficient to assure the restoration of any plans, drawings, field notes or other similar data relating to the work covered by the Project is required. Insurance is to be maintained in full force and effect during the life of the Agreement.
- (b) Professional Liability (Errors and Omissions): Insurance in an amount not less than one million dollars (\$1,000,000) per claim (with a maximum of two hundred and fifty thousand dollars (\$250,000) deductible per claim) during the agreement term and for a period of at least five (5) years after this Agreement is closed is required. Such a policy is to cover all the DB Team’s professional liabilities, whether occasioned by the by the DB Team, his employees, subcontractors or other agents arising out of services performed under or in accordance with this Agreement.
- (c) This form should be submitted to GDOT along with the Contract at the Post Award meeting.

**16.1.3.8 Maximum Deductible.** No policies shall specify a deductible of more than \$250,000 per claim. If demanded in writing by the insurer and with the GDOT’s approval, the deductible limit may be increased to an amount not in excess of the limit established for Design Professionals under the usual deductible guidelines of the insurer.

**16.1.3.9 Disposition of Insurance Documents.** One original certificate of insurance with all endorsements attached must be deposited with GDOT for each insurance policy required.

**16.1.4 Termination of Obligation to Insure.** Unless otherwise expressly provided to the contrary, the obligation to insure as provided herein shall not terminate until GDOT shall have executed the certificate of Final Acceptance.

**16.1.5 Failure of Insurers.** The DB Team is responsible for any delay resulting from the failure of his insurance carriers to furnish proof of proper coverage in the prescribed form.

## **16.2 Performance and Payment Security**

DB Team shall furnish Performance & Payment Bonds (“P&P Bonds”) meeting the requirements of this Article 16.2 as performance and payment security for the Work.

### **16.2.1 P&P Bonds**

**16.2.1.1** The DB Team shall furnish, or cause the furnishing of, P&P Bonds. DB Team shall obtain and deliver P&P Bonds in such amount as required pursuant to the terms set forth in the Standard Specification Section 103.05, identifying DB Team as the P&P Obligor, securing DB Team’s obligations to

perform the Work and to ensure that payments owing to Claimants are made with respect to such Work.

**16.2.1.2** The P&P Bonds shall be issued by a properly licensed and U.S. Treasury listed surety(ies) that have not less than “A” or better and Class VIII by A.M. Best and Company’s Insurance Reports Key Rating Guide, and listed on Treasury Department Circular 570, and be on the list of companies approved by the State for at least three (3) of the last five (5) years from the date of the proposed bond issuance. If P&P Bonds are issued by more than one surety, such P&P Bonds shall be executed on a joint and several basis.

### **16.3 Prosecution of Claims**

**16.3.1** Unless otherwise directed by GDOT in writing with respect to GDOT’s insurance claims and subject to the requirements of Articles 16.5 and 16.6 below, DB Team shall be responsible for reporting and processing all potential claims by GDOT or DB Team against the Insurance Policies required hereunder. DB Team agrees to report timely to the insurer(s) under such Insurance Policies any and all matters which may give rise to an insurance claim by DB Team or GDOT or another Indemnified Party and to promptly and diligently pursue such insurance claims in accordance with the claims procedures specified in such Insurance Policies, whether for defense or indemnity or both. DB Team shall enforce all legal rights against the insurer under the applicable Insurance Policies and applicable Laws in order to collect thereon, including pursuing necessary litigation and enforcement of judgments, provided that DB Team shall be deemed to have satisfied this obligation if a judgment is not collectible through the exercise of lawful and diligent means.

**16.3.2** GDOT agrees to promptly notify DB Team of GDOT’s incidents, potential claims against GDOT, and matters which may give rise to an insurance claim against GDOT, to tender to the insurer GDOT’s defense of the claim under such Insurance Policies, and to cooperate with DB Team as necessary for DB Team to fulfill its duties hereunder.

**16.3.3** If in any instance DB Team has not performed its obligations respecting insurance coverage set forth in the DB Documents or is unable to enforce and collect any such insurance for failure to assert claims in accordance with the terms of the Insurance Policies or to prosecute claims diligently, then for purposes of determining DB Team’s liability and the limits thereon or determining reductions in compensation due from GDOT to DB Team on account of available insurance, DB Team shall be treated as if it has elected to self-insure up to the full amount of insurance coverage which would have been available had DB Team performed such obligations and not committed such failure. Nothing in this Article 16.3.3 or elsewhere in this Article 16.3 shall be construed to treat DB Team as electing to self-insure where DB Team is unable to collect due to the bankruptcy or insolvency of any insurer which at the time the Insurance Policy is written meets the rating qualifications set forth in this Article 16.3.

**16.3.4** DB Team shall not settle or accept any settlement of any insurance claim which is in excess of \$100,000 or which involves any claim that has been asserted against GDOT, the State or any agency or department thereof, without prior written approval of GDOT, provided that DB Team shall not be required to obtain GDOT approval for workers compensation claims.

**16.3.5** If in any instance DB Team has not promptly performed its obligation to report to applicable insurers and process any potential insurance claim tendered by GDOT or another Indemnified Party, then GDOT or the other Indemnified Party may, but is not obligated to, (a) notify DB Team in writing of GDOT's intent to report the claim directly with the insurer and thereafter process the claim, and (b) proceed with reporting and processing the claim if GDOT or the other Indemnified Party does not receive from DB Team, within ten (10) days after so notifying DB Team, written proof that DB Team has reported the claim directly to the insurer. GDOT or the other Indemnified Party may dispense with such notice to DB Team if GDOT or the other Indemnified Party has a good faith belief that more rapid reporting is needed to preserve the claim.

#### **16.4 Reserved**

#### **16.5 Indemnity by DB Team**

**16.5.1** Subject to Article 16.5.2, DB Team shall release, protect, defend, indemnify and hold harmless the Indemnified Parties from and against any and all Third-Party Claims and Third-Party Losses arising out of, relating to or resulting from:

**16.5.1.1** The breach or alleged breach of the DB Documents by DB Team;

**16.5.1.2** The failure or alleged failure by any DB Team-Related Entity to comply with the Governmental Approvals, any applicable Environmental Laws or other Laws (including Laws regarding Hazardous Materials Management);

**16.5.1.3** Any alleged patent or copyright infringement or other allegedly improper appropriation or use by any DB Team-Related Entity of trade secrets, patents, proprietary information, know-how, copyright rights or inventions in performance of the Work, or arising out of any use in connection with the Project of methods, processes, designs, information, or other items furnished or communicated to GDOT or another Indemnified Party pursuant to the DB Documents; provided that this indemnity shall not apply to any infringement resulting from GDOT's failure to comply with specific written instructions regarding use provided to GDOT by DB Team;

**16.5.1.4** The actual or alleged culpable act or omission, culpable error or misconduct of any DB Team-Related Entity in or associated with performance of the Work;

**16.5.1.5** Any and all claims by any governmental or taxing authority claiming taxes based on gross receipts, purchases or sales, the use of any property or income of any DB Team-Related Entity with respect to any payment for the Work made to or earned by any DB Team-Related Entity;

**16.5.1.6** Any and all stop notices, liens and claims filed in connection with the Work, including all expenses and attorneys', accountants' and expert witness fees and costs incurred in discharging any stop notice, lien or claim, and any other liability to Contractors, laborers and Suppliers for failure to pay sums due for their work, services, materials, goods, equipment or supplies, including interest



and attorney's fees, provided that GDOT is not in default in payments owing (if any) to DB Team with respect to such Work;

**16.5.1.7** Any actual or threatened DB Team Release of Hazardous Materials;

**16.5.1.8** The claim or assertion by any other developer or contractor that any DB Team-Related Entity interfered with or hindered the progress or completion of work being performed by the other contractor or developer, or failed to cooperate reasonably with the other developer or contractor, so as to cause inconvenience, disruption, delay or loss, except where the DB Team-Related Entity was not in any manner engaged in the management, prosecution, protection or performance of the Work;

**16.5.1.9** Any dispute or claim by a Utility Owner related to any DB Team-Related Entity's performance of, or failure to perform, the obligations under any Standard Utility Agreement;

**16.5.1.10** (a) Any DB Team breach of or failure to perform an obligation that GDOT owes to a third Person, including, but not limited to, Governmental Entities, under Law or under any agreement between GDOT and a third Person, where GDOT has delegated performance of the obligation to DB Team pursuant to the terms of the DB Documents, or (b) the negligent or willful acts or omissions of any DB Team-Related Entities which render GDOT unable to perform or abide by an obligation that GDOT owes to a third Person, including, but not limited to, Governmental Entities, under any agreement between GDOT and a third Person, where the agreement is previously disclosed or known to DB Team;

**16.5.1.11** The fraud, bad faith, arbitrary or capricious acts, willful misconduct, negligence or violation of Law or contract by DB Team or Design-Build Contractor or any Affiliate of either in connection with DB Team's performance of real property acquisition services under the DB Documents;

**16.5.1.12** Inverse condemnation, trespass, nuisance, interference with use and enjoyment of property or similar taking of or harm to real property by reason of (a) the failure of any DB Team-Related Entity to comply with Good Industry Practice, requirements of the DB Documents, Management Plans or Governmental Approvals, (b) the intentional misconduct or negligence of any DB Team-Related Entity, or (c) the entry onto or encroachment upon another's property by any DB Team-Related Entity;

**16.5.1.13** If applicable, any violation of any federal or state securities or similar law by any DB Team-Related Entity;

**16.5.1.14** Errors, inconsistencies or other defects in the design or construction of the Project and/or of Utility Adjustments, or the Work, included in the Design Work and/or Construction Work; or

**16.5.1.15** Any claim asserted or alleged against GDOT in contradiction of Article 4.8.1.

**16.5.2** Subject to the releases and disclaimers herein, including all the provisions set forth in Article 4.4, DB Team's indemnity obligation shall not extend to any Third-Party Claims and Third-Party Losses to the extent caused or contributed to by:

**16.5.2.1** The sole negligence, recklessness or willful misconduct, bad faith or fraud of the Indemnified Party;

**16.5.2.2** GDOT's breach of any of obligations under the DB Documents;

**16.5.2.3** An Indemnified Party's violation of any Laws or Governmental Approvals;

**16.5.2.4** Any material defect inherent in a prescriptive design, or construction specification included in the DB Documents that was not drafted or provided by DB Team under this Agreement, but only where prior to occurrence of the Third-Party Loss DB Team complied with such specification and did not actually know, or would not reasonably have known, while exercising reasonable diligence, that it was deficient or, if DB Team actually knew of the deficiency, unsuccessfully sought GDOT's waiver or acceptance of a Change Request from such specification; or

**16.5.2.5** Any Compensation Event or Relief Event.

**16.5.3** In claims by an employee of DB Team, a Contractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Article 16.5 shall not be limited by a limitation on the amount or type of damages, compensation or benefits payable by or for DB Team or a Contractor under workers' compensation, disability benefit or other employee benefits laws.

**16.5.4** For purposes of this Article 16.5, "Third-Party Claim" includes a claim, dispute, disagreement, cause of action, demand, suit, action, judgment, investigation, or legal or administrative proceeding which (a) is asserted, initiated or brought by any Indemnified Party's employee, agent or contractor against an Indemnified Party, (b) is within the scope of the indemnities and (c) is not covered by the Indemnified Party's worker's compensation program. For purposes of this Article 16.5, "Third-Party Loss" includes any actual or alleged Loss sustained or incurred by such employee, agent or contractor.

## **16.6 Defense and Indemnification Procedures**

**16.6.1** If any of the Indemnified Parties receives notice of a claim that it believes is within the scope of the indemnities under Article 16.5, GDOT shall by writing as soon as practicable after receipt of the claim, (a) inform DB Team of the claim, (b) send to DB Team a copy of all written materials GDOT has received asserting such claim and (c) notify DB Team that should no insurer accept defense of the claim, the Indemnified Party will conduct its own defense unless DB Team accepts the tender of the claim in accordance with Article 16.6.3. As soon as practicable after DB Team receives notice of a claim or otherwise has actual knowledge of a claim, it shall tender the claim in writing to the insurers under all potentially applicable Insurance Policies and comply with all notice

requirements contained in such Insurance Policies. GDOT and other Indemnified Parties also shall have the right to tender such claims to such insurers.

**16.6.2** Subject to Article 16.6.4, if the insurer under any applicable Insurance Policy accepts the tender of defense, GDOT and DB Team shall cooperate in the defense as required by the Insurance Policy. If no insurer under potentially applicable Insurance Policies provides defense, then Article 16.6.3 shall apply.

**16.6.3** If the defense is tendered to DB Team, then within thirty (30) days after receipt of the tender it shall notify the Indemnified Party whether it has tendered the matter to an insurer and (if not tendered to an insurer or if the insurer has rejected the tender) shall deliver a written notice stating that DB Team:

**16.6.3.1** Accepts the tender of defense and confirms that the claim is subject to full indemnification hereunder without any “reservation of rights” to deny or disclaim full indemnification thereafter;

**16.6.3.2** Accepts the tender of defense but with a “reservation of rights” in whole or in part, with a detailed statement as to the reasons for the “reservation of rights”; or

**16.6.3.3** Rejects the tender of defense based on a determination that it is not required to indemnify against the claim under the terms of this Agreement, with a detailed statement as to the reasons for the denial.

**16.6.4** If DB Team accepts the tender of defense under Article 16.6.3.1, DB Team acknowledges and agrees (and has caused the insurer to be so notified of the statutory requirements) that the Attorney General shall represent and defend the State, GDOT and any officer, director, commissioner or employee of such Indemnified Parties; but GDOT will request that the Attorney General, without limiting the authority of the Attorney General, consider attorneys recommended by DB Team for appointment as Special Assistant Attorney General to represent and defend the referenced Indemnified Parties. DB Team may, at the option of the Attorney General, have the right to participate in the defense of the Indemnified Parties. In the event of litigation, any settlement on behalf of the Indemnified Parties must be expressly approved by the Attorney General. The foregoing shall not relieve DB Team’s obligation to bear the fees and costs of defending and settling such claim. During such defense:

**16.6.4.1** DB Team shall fully and regularly inform the Indemnified Party and the Attorney General of the progress of the defense and of any settlement discussions; and

**16.6.4.2** Each Indemnified Party shall fully cooperate in said defense, provide to DB Team all materials and access to personnel it requests as necessary for defense, preparation and trial and which or who are under the control of or reasonably available to the Indemnified Party, and maintain the confidentiality of all communications between it and DB Team concerning such defense.

**16.6.5** If DB Team responds to the tender of defense as specified in Article 16.6.3.2 or Article 16.6.3.3, such Indemnified Parties shall also be represented by the Attorney General who shall otherwise control the defense of such claim, including

settlement. The foregoing shall not relieve DB Team from its obligations to bear the fees and costs of defending and settling such claim.

**16.6.6** Even if the Attorney General has appointed counsel selected by DB Team to represent any of the Indemnified Parties, the Attorney General may assume the defense of the applicable Indemnified Parties by delivering to DB Team written notice of such election and the reasons therefor, if the Indemnified Parties, at the time it gives notice of the claim or at any time thereafter, reasonably determines that:

**16.6.6.1** A conflict exists between it and DB Team which prevents or potentially prevents DB Team from presenting a full and effective defense;

**16.6.6.2** DB Team is otherwise not providing an effective defense in connection with the claim; or

**16.6.6.3** DB Team lacks the financial capacity to satisfy potential liability or to provide an effective defense.

**16.6.7** If any of the Indemnified Parties is entitled and elects to conduct its own defense pursuant hereto of a claim for which it is entitled to indemnification, DB Team shall reimburse on a current basis all reasonable costs and expenses any such Indemnified Parties incurs in investigating and defending, including, but not limited to, attorney's fees. In the event the Indemnified Parties are entitled to and elect to conduct their own defense, then:

**16.6.7.1** In the case of a defense conducted under Article 16.6.3.1, it shall have the right to settle or compromise the claim with DB Team's prior written consent, which shall not be unreasonably withheld or delayed;

**16.6.7.2** In the case of a defense conducted under Article 16.6.3.2, it shall have the right to settle or compromise the claim with DB Team's prior written consent, which shall not be unreasonably withheld or delayed, or with approval of the court following reasonable notice to DB Team and opportunity to be heard and without prejudice to the Indemnified Party's rights to be indemnified by DB Team; and

**16.6.7.3** In the case of a defense conducted under Article 16.6.3.3, it shall have the right to settle or compromise the claim without DB Team's prior written consent and without prejudice to its rights to be indemnified by DB Team.

**16.6.8** A refusal of, or failure to accept, a tender of defense, as well as any Dispute over whether an Indemnified Party which has assumed control of defense is entitled to do so under Article 16.6.6, shall be submitted in accordance with the Dispute Resolution Procedures. DB Team shall be entitled to contest an indemnification claim and pursue, through the Dispute Resolution Procedures, recovery of defense and indemnity payments it has made to or on behalf of the Indemnified Party.

**16.6.9** In determining responsibilities and obligations for defending suits pursuant to this Article 16.6, specific consideration shall be given by the Parties to the following factors: (a) the party performing the activity in question; (b) the location of the

activity and Incident; (c) contractual arrangements then governing the performance of the activity; and (d) allegations of respective fault contained in the claim.

**16.6.10** Notwithstanding anything to the contrary set forth in Article 16.5 or this Article 16.6, the Attorney General is the only counsel authorized to represent GDOT or any State affiliated agencies or departments. In the event that there is any potential conflict of interest that could reasonably arise in the representation of any Indemnified Party and DB Team in the defense of any action, suit or proceeding pursuant to Article 16.5 above or in the event that state or local law requires the use of specific counsel, (i) such Indemnified Party may elect in its sole and absolute discretion whether to waive such conflict of interest, and (ii) unless such Indemnified Party elects to waive such conflict of interest, or in any event if required by state or local law, then the counsel designated by the Indemnified Party shall solely represent such Indemnified Party and, if applicable, DB Team shall retain its own separate counsel, each at DB Team's sole cost and expense. The Attorney General will consider counsel recommended by DB Team for appointment as a Special Assistant Attorney General.

**16.6.11** If a suit or proceeding based on a claimed infringement of a patent or copyright is brought against any of the Indemnified Parties, DB Team shall, at its own expense, defend or settle any such suit or proceeding if authorized to do so in writing by the Attorney General subject to the obligations of indemnification as set forth in Article 16.5.

**16.6.12** DB Team, subject to Article 16.6, may settle the claim without the consent or agreement of the Indemnified Parties, unless the settlement (i) would result in injunctive relief or other equitable remedies or otherwise require the Indemnified Parties to comply with restrictions or limitations that adversely affect or materially impair the reputation and standing of the Indemnified Parties, (ii) would require the Indemnified Parties to pay amounts that DB Team or its insurer does not fund in full, (iii) would not result in the Indemnified Parties full and complete release from all liability to the plaintiffs or Claimants who are parties to or otherwise bound by the settlement, or (iv) directly involves any such Indemnified Parties (in which case the Attorney General shall be the only counsel authorized to represent such parties with respect to any such settlement).

## **Article 17 DEFAULT; REMEDIES; CLAIM FOR ADJUSTMENTS AND DISPUTES**

### **17.1 Default by DB Team; Cure Periods**

#### **17.1.1 DB Team Default**

Subject to relief from its performance obligations pursuant to Article 14.1.2.1 and Article 13.3.2.2, DB Team shall be in breach under this Agreement upon the occurrence of any one or more of the following events or conditions (each a "DB Team Default"):

**17.1.1.1** DB Team (a) fails to begin the applicable Work within thirty (30) days following issuance of NTP 1; (b) fails to satisfy all conditions to issuance of NTP 3 under Article 3.3.1 by the NTP 3 Conditions Deadline; or (c) fails to satisfy all conditions to commencement of the applicable Construction Work, and fails to commence such Construction Work with diligence and continuity, as the same may be extended pursuant to this Agreement;

**17.1.1.2** An Abandonment;

**17.1.1.3** DB Team fails to achieve Substantial Completion by the Substantial Completion Deadline, as the same may be extended pursuant to this Agreement;

**17.1.1.4** DB Team fails to achieve Final Acceptance by the Final Acceptance Deadline, or fails to achieve such required Elements of the Work by any applicable Milestone Deadline, as any such dates may be extended pursuant to this Agreement;

**17.1.1.5** Any representation or covenant in the DB Documents made by DB Team, or any certificate, schedule, report, instrument or other document delivered by or on behalf of DB Team to GDOT pursuant to the DB Documents is materially false, materially misleading or materially inaccurate when made or omits material information when made;

**17.1.1.6** DB Team fails to obtain, provide and maintain any insurance, bonds, or other performance security as and when required under this Agreement for the benefit of relevant parties, or fails to comply with any requirement of this Agreement pertaining to the amount, terms or coverage of the same;

**17.1.1.7** DB Team makes or attempts to make or suffers a voluntary or involuntary assignment or transfer of all or any portion of this Agreement, the Project or DB Team's Interest, or there occurs a Change of Control, in violation of Article 21;

**17.1.1.8** DB Team materially fails to timely observe or perform or cause to be observed or performed any other material covenant, agreement, obligation, term or condition required to be observed or performed by DB Team under the DB Documents (including material failure to perform the Design Work, Construction Work, or any material portion thereof in accordance with the DB Documents); provided that this Article 17.1.1.8 shall not apply to DB Team Defaults specifically addressed by other provisions of Article 17.1.1;

**17.1.1.9** After exhaustion of all rights of appeal, there occurs any suspension or debarment (distinguished from ineligibility due to lack of financial qualifications), or there goes into effect an agreement for voluntary exclusion, from bidding, proposing or contracting with any federal or State department or agency of (a) DB Team, (b) any member of DB Team with a material financial obligation owing to DB Team for equity or shareholder loan contributions, (c) any Affiliate of DB Team for whom transfer of ownership would constitute a Change of Control, or (d) any Key Contractor whose work is not completed;

**17.1.1.10** DB Team fails to (a) deliver to GDOT any remedial plan as may be required pursuant to Article 17.3.5 or (b) otherwise fails to fully comply with the schedule or specific elements of, or actions required under, any such accepted remedial plan;

**17.1.1.11** DB Team commences a voluntary case seeking liquidation, reorganization or other relief with respect to itself or its debts under any U.S. or

foreign bankruptcy, insolvency or other similar Law now or hereafter in effect, seeks the appointment of a trustee, receiver, liquidator, custodian or other similar official of it or any substantial part of its assets; becomes insolvent, or generally does not pay its debts as they become due; admits in writing its inability to pay its debts; makes an assignment for the benefit of creditors; or takes any action to authorize any of the foregoing; or

**17.1.1.12** An involuntary case is commenced against DB Team seeking liquidation, reorganization, dissolution, winding up, a composition or arrangement with creditors, a readjustment of debts or other relief with respect to DB Team or DB Team's debts under any U.S. or foreign bankruptcy, insolvency or other similar Law now or hereafter in effect; seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of DB Team or any substantial part of DB Team's assets; seeking the issuance of a writ of attachment, execution, or similar process; or seeking like relief, and such involuntary case shall not be contested by DB Team in good faith or shall remain undismissed and unstayed for a period of sixty (60) days.

### **17.1.2 Forbearance and Cure Periods**

For the purpose of GDOT's exercise of other remedies, subject to Article 17.2.2 and subject to remedies that this Article 17 expressly states may be exercised before lapse of a cure period, DB Team shall have the following cure periods with respect to the following DB Team Defaults:

**17.1.2.1** Respecting a DB Team Default under Article 17.1.1.10, a period of five (5) days after GDOT delivers to DB Team written notice of the DB Team Default;

**17.1.2.2** Respecting a DB Team Default under Article 17.1.1.6 or Article 17.1.1.7, a period of fifteen (15) days after GDOT delivers to DB Team written notice of the DB Team Default; provided that GDOT shall have the right, but not the obligation, to effect cure, at DB Team's expense, if a DB Team Default under Article 17.1.1.6 continues beyond five (5) days after such notice is delivered;

**17.1.2.3** Respecting a DB Team Default under Article 17.1.1.1 or Article 17.1.1.2, a period of thirty (30) days after GDOT delivers to DB Team written notice of the DB Team Default; provided that as to a DB Team Default under Article 17.1.1.1, such cure period shall not preclude or delay GDOT's immediate exercise, without notice or demand, of its right, but not the obligation, to effect cure, at DB Team's expense;

**17.1.2.4** Respecting a DB Team Default under Article 17.1.1.5, Article 17.1.1.8 or Article 17.1.1.9, a period of thirty (30) days after GDOT delivers to DB Team written notice of the DB Team Default; provided that (a) if the DB Team Default is of such a nature that the cure cannot with diligence be completed within such time period and DB Team has commenced meaningful steps to cure immediately after receiving the default notice, DB Team shall have such additional period of time, up to a maximum cure period of one hundred and eighty (180) days, as is reasonably necessary to diligently effect cure, (b) as to Article 17.1.1.5, cure will be regarded as complete when the adverse effects of the breach are cured,

and (c) as to Article 17.1.1.9, if the debarred or suspended Person is a managing member, general partner or controlling investor of DB Team, cure will be regarded as complete when DB Team proves it has removed such Person from any position or ability to manage, direct or control the decisions of DB Team or to perform Work;

**17.1.2.5** Respecting a DB Team Default under Article 17.1.1.11 or Article 17.1.1.12, no cure period, and there shall be no right to notice of a DB Team Default under Article 17.1.1.11 or Article 17.1.1.12; and

**17.1.2.6** Respecting a DB Team Default arising from DB Team's failure to achieve any Milestone Deadline other than the Substantial Completion Deadline or Final Acceptance Deadline, a forbearance period of thirty (30) days from the date of such DB Team Default shall apply, provided that DB Team shall, as a condition to such forbearance period, be required to (a) deliver to GDOT a remedial action plan within ten (10) days after written notice of such DB Team Default, pursuant to Article 17.3.5 (without further demand or notice by GDOT), and (b) with the delivery of such remedial action plan, acknowledge any associated Liquidated Damages that are accruing. Where such remedial action plan has been accepted by GDOT in writing, then such forbearance period as provided herein shall be extended or abbreviated as required by such remedial action plan, subject to DB Team's diligent prosecution of the Work in accordance therewith. Any such DB Team Default shall be deemed cured upon satisfaction of the conditions set forth in such accepted remedial action plan and any Liquidated Damages shall cease to accrue upon the date of such satisfaction. Notwithstanding anything to the contrary herein, Liquidated Damages accruing during such forbearance period, as may be extended, shall not be waived by this Article 17.1.2.6 and shall be payable pursuant to the terms of this Agreement.

### **17.1.3 Certain Curative Actions; Status Report**

**17.1.3.1** If the DB Team Default consists of failure to give GDOT a required prior notice and opportunity to complete an applicable review and comment or acceptance procedure under Article 6.3 before action is taken by DB Team, such DB Team Default shall be curable only by reversing or suspending the action until the notice and review and comment or acceptance procedures are followed and completed, unless DB Team finished the action before receiving the notice of DB Team Default or unless waived by GDOT.

**17.1.3.2** If the DB Team Default consists of any DB Team activity or failure to act which constitutes a change from DB Team's activities immediately prior to the DB Team Default, such DB Team Default shall be curable only by reinstating the activity as it was being performed immediately prior to the DB Team Default.

**17.1.3.3** For any DB Team Default for which a Warning Notice has been delivered by GDOT to DB Team, DB Team may request from GDOT a status report as to DB Team's progress in effecting a cure, by delivering to GDOT a written request accompanied by DB Team's own report as to its progress in effecting a cure. GDOT shall provide its response within ten (10) Business Days after receipt of DB Team's written request and report. The response shall be provided solely for purposes of informing DB Team as to GDOT's view of the progress in effecting



a cure for the DB Team Default, shall not constitute an admission of any fact, shall not be admissible in evidence for any purpose, shall not form the basis for any Dispute, and shall not limit in any way GDOT's right to terminate this Agreement in accordance with Article 19.3 should cure not be effected within the relevant period.

## **17.2 Warning Notices**

### **17.2.1 Warning Notice Events**

Without prejudice to any other right or remedy available to GDOT, GDOT may, but in no case shall be required to, deliver a written notice (a "Warning Notice") to DB Team, stating explicitly that it is a "Warning Notice" and stating in reasonable detail the matter or matters giving rise to the notice and, if applicable, amounts due from DB Team, and reminding DB Team of the implications of such notice, whenever there occurs any of the following:

**17.2.1.1** Any DB Team Default under Article 17.1.1.1, 17.1.1.2, 17.1.1.7, 17.1.1.8, or 17.1.1.10;

**17.2.1.2** Delay or failure to achieve any Milestone Deadline; or

**17.2.1.3** Any other material DB Team Default.

### **17.2.2 Effect of Warning Notice on DB Team Cure Period**

**17.2.2.1** Any notice of a DB Team Default issued under Article 17.1 may, if it concerns a matter under Article 17.2.1, also be issued as a Warning Notice. In such case, the cure period available to DB Team, if any, shall be as set forth in Article 17.1.2.

**17.2.2.2** If GDOT issues a Warning Notice under Article 17.2.1 for any DB Team Default after it issues a notice of such DB Team Default, then the cure period available to DB Team, if any, for such DB Team Default before GDOT may seek to appoint a receiver for DB Team, remove DB Team or terminate this Agreement on account of such DB Team Default shall be extended by the time period between the date the notice of such DB Team Default was issued and the date the Warning Notice is issued. No later issuance of a Warning Notice shall extend the time when GDOT may exercise any other remedy respecting such DB Team Default.

### **17.2.3 Other Effects of Warning Notice**

**17.2.3.1** The issuance of a Warning Notice shall entitle GDOT to increase the level of oversight as provided in Article 17.3.8.

**17.2.3.2** The issuance of a Warning Notice may trigger a Default Termination Event as provided in Article 19.3.

## 17.3 Remedies for DB Team Default

### 17.3.1 Termination

In the event of any DB Team Default that is or becomes a Default Termination Event set forth in Article 19.3.1, GDOT may terminate this Agreement and GDOT thereupon may take control of the Work, which termination shall, among other things, automatically terminate all of DB Team's rights under Article 2, whereupon DB Team shall take all action required to be taken by DB Team under Article 19.5.

### 17.3.2 Remedies for Failure to Meet Safety Standards or Perform Safety Compliance

**17.3.2.1** Subject to Article 17.3.2.4, if at any time DB Team fails to meet any Safety Standard or timely perform Safety Compliance or GDOT and DB Team cannot reach an agreement regarding the interpretation or application of a Safety Standard or the valid issuance of a Safety Compliance Order within a period of time acceptable to GDOT, acting reasonably, GDOT shall have the absolute right and entitlement to undertake or direct DB Team to undertake any work required to ensure implementation of and compliance with Safety Standards as interpreted or applied by GDOT or with the Safety Compliance Order.

**17.3.2.2** To the extent that any work done pursuant to Article 17.3.2.1 is undertaken by GDOT and is reasonably necessary to comply with Safety Standards or perform validly issued Safety Compliance Orders, DB Team shall pay to GDOT on demand GDOT Recoverable Costs in connection with such work, and GDOT (whether it undertakes the work or has directed DB Team to undertake the work) shall have no obligation or liability to compensate DB Team for any Losses DB Team suffers or incurs as a result thereof.

**17.3.2.3** To the extent that any work done pursuant to Article 17.3.2.1 is undertaken by GDOT and is not reasonably necessary to comply with Safety Standards or perform validly issued Safety Compliance Orders, GDOT shall compensate DB Team only for Losses DB Team suffers or incurs as a direct result thereof.

**17.3.2.4** To the extent that any Safety Compliance Order work pursuant to Article 17.3.2.1 is undertaken by DB Team under written protest delivered prior to starting the work and it is finally determined that the Safety Compliance work was not necessary, the unnecessary work under the Safety Compliance Order shall be treated as a GDOT Change.

**17.3.2.5** Notwithstanding anything to the contrary contained in the DB Documents, if in the good faith judgment of GDOT, DB Team has failed to meet any Safety Standards or perform Safety Compliance and the failure results in an Emergency or danger to persons or property, and if DB Team is not then diligently taking all necessary steps to rectify or deal with such Emergency or danger, GDOT may, without notice and without awaiting lapse of the period to cure any breach, and in addition and without prejudice to its other remedies, (but is not obligated to) (a) immediately take such action as may be reasonably necessary to rectify the Emergency or danger, in which event DB Team shall pay to GDOT on demand the

cost of such action, including GDOT Recoverable Costs, or (b) suspend Construction Work and/or close or cause to be closed any and all portions of the Project affected by the Emergency or danger. So long as GDOT undertakes such action in good faith, even if under a mistaken belief in the occurrence of such failure or existence of an Emergency or danger as a result thereof, such action shall not be deemed unlawful or a breach of this Agreement, shall not expose GDOT to any liability to DB Team and shall not entitle DB Team to any other remedy, it being acknowledged that GDOT has a high priority, paramount public interest in protecting public and worker safety at the Project and adjacent and connecting areas. GDOT's good faith determination of the existence of such a failure, Emergency or danger shall be deemed conclusive in the absence of clear and convincing evidence to the contrary. Immediately following rectification of such Emergency or danger, as determined by GDOT, acting reasonably, GDOT shall allow the Construction Work to continue or such portions of the Project to reopen, as the case may be. The foregoing shall not, however, protect GDOT from DB Team's lawful claims to indemnity or contribution for third-party bodily injury or property damage arising out of any such GDOT action, if and to the extent (i) GDOT was mistaken in believing such a DB Team Default occurred, (ii) the third-party liability is not insured and not required to be insured under the DB Documents, and (iii) such injury or property damage was caused by GDOT's negligence, recklessness or intentional misconduct.

### **17.3.3 Step-in Rights**

Upon the occurrence of a DB Team Default and expiration, without full and complete cure, of the cure period, if any, available to DB Team, without necessity for a Warning Notice, and without waiving or releasing DB Team from any obligations, GDOT shall have the right, but not the obligation, for so long as such DB Team Default remains uncured by GDOT or DB Team, to pay and perform all or any portion of DB Team's obligations and the Work that are the subject of such DB Team Defaults, as well as any other then-existing breaches or failures to perform for which DB Team received prior written notice from GDOT but has not commenced diligent efforts to cure provided, that (i) except with respect to DB Team's lawful claims for third-party bodily injury or property damage arising out of such GDOT action, GDOT will incur any liability to DB Team for any act or omission of GDOT or any other Person in the course of remedying or attempting to remedy any DB Team Default and (ii) GDOT's cure of any DB Team Default will not waive or affect GDOT's rights against DB Team by reason of the DB Team Default.

**17.3.3.1** In connection with such action, GDOT may, to the extent and only to the extent reasonably required for or incident to curing the DB Team Default or such other breaches or failures to perform for which DB Team received prior written notice from GDOT but has not commenced and continued diligent efforts to cure:

- (a) Employ security guards and other safeguards to protect the Project;
- (b) Spend such sums as are reasonably necessary to employ and pay such architects, engineers, consultants and contractors and obtain materials and equipment as may be required, without obligation or liability to DB Team or

any Contractors for loss of opportunity to perform the same Work or supply the same materials and equipment;

- (c) Draw on and use proceeds from payment and performance bonds and other performance security to the extent available under the terms thereof to pay such sums;
- (d) Execute all applications, certificates and other documents as may be required;
- (e) Make decisions respecting, assume control over and continue Work as may be reasonably required;
- (f) Meet with, coordinate with, direct and instruct contractors and suppliers, process invoices and applications for payment from contractors and suppliers, pay contractors and suppliers, and resolve claims of contractors, subcontractors and suppliers, and for this purpose DB Team irrevocably appoints GDOT as its attorney-in-fact with full power and authority to act for and bind DB Team in its place and stead;
- (g) Take any and all other actions as may be reasonably required or incident to curing; and
- (h) Prosecute and defend any action or proceeding incident to the Work undertaken.

**17.3.3.2** DB Team shall reimburse GDOT on demand GDOT Recoverable Costs in connection with the performance of any act or Work authorized by this Article 17.3.3.

**17.3.3.3** GDOT, and any of their Authorized Representatives, contractors, subcontractors, vendor and employees shall not be liable to DB Team in any manner for any inconvenience or disturbance arising out of its entry onto the Project or Project Specific Locations in order to perform under this Article 17.3.3, unless caused by the gross negligence, recklessness, willful misconduct or bad faith of such Person. If any Person exercises any right to pay or perform under this Article 17.3.3, it nevertheless shall have no liability to DB Team for the sufficiency or adequacy of any such payment or performance, or for the manner or quality of design, or construction unless caused by the gross negligence, recklessness, willful misconduct or bad faith of such Person.

**17.3.3.4** The rights under this Article 17.3.3 are subject to the right of any Surety under payment and performance bonds to assume performance and completion of all bonded work.

**17.3.3.5** In the event GDOT takes action described in this Article 17.3.3 and it is later finally determined that GDOT lacked the right to do so because there did not occur a DB Team Default and expiration, without full and complete cure, of the cure period, if any, available to DB Team, then GDOT's action shall be treated as a Directive Letter for a GDOT Change.

### **17.3.4 Damages; Offset**

**17.3.4.1** Subject to Article 17.3.10 and Article 17.3.11 and the provisions on Liquidated Damages set forth in Article 17.4, GDOT shall be entitled to recover any and all damages available at Law (subject to the duty at Law to mitigate damages and without duplicate recovery) on account of the occurrence of a DB Team Default, including, to the extent available at Law, (a) loss of any compensation due GDOT under the DB Documents proximately caused by the DB Team Default, (b) actual and projected costs to remedy any defective part of the Work, (c) actual and projected costs to rectify any breach or failure to perform by DB Team and/or to bring the condition of the Project to the standard it would have been in if DB Team had complied with its obligations to carry out and complete the Work in accordance with the DB Documents, (d) actual and projected costs to GDOT to terminate, take over the Project, re-procure and replace DB Team, and (e) actual and projected increases in costs to GDOT to complete the Project if not completed, together with interest thereon at the Default Interest Rate commencing from the date any amount becomes due to GDOT until paid. DB Team shall owe any such damages that accrue after the occurrence of the DB Team Default and the delivery of notice thereof, if any, required by this Agreement regardless of whether the DB Team Default is subsequently cured.

**17.3.4.2** GDOT may deduct and offset any claim amount owing to it, provided such claim amount has been liquidated through Dispute Resolution Procedures or otherwise, from and against any amounts GDOT may owe to DB Team or any Affiliate pursuant to this DB Agreement; provided that GDOT shall first draw on all amounts held in respect of the claim in the GDOT Claims Account.

**17.3.4.3** If the claim amount is not liquidated, GDOT may elect to exercise its right to direct a payment from DB Team up to the disputed portion of the claim which payment shall be deposited into the GDOT Claims Account. Upon liquidation, the disputed portion of the claim shall be satisfied first from the amounts held in the GDOT Claims Account, and then through GDOT's right of offset with respect to the liquidated claim amounts.

### **17.3.5 Remedial Action Plan Delivery and Implementation**

**17.3.5.1** Upon the occurrence of a DB Team Default, GDOT shall have the right, but is not obligated, to demand that DB Team shall, within ten (10) days after written notice of such DB Team Default, be required to prepare and submit a remedial action plan for approval.

**17.3.5.2** The remedial action plan shall set forth a schedule and specific actions to be taken by DB Team to improve its performance and cure the DB Team Default. Such actions may include improvements to DB Team's quality management practices, plans and procedures, revising and restating components of the Management Plans, changes in organizational and management structure, increased monitoring and inspections, changes in Key Personnel and other important personnel, replacement of Contractors, corrective measures necessary to expedite the progress of construction and to demonstrate ability to achieve any Milestone Deadline including, without limitation, (i) working additional shifts or

overtime and/or (ii) supplying additional manpower, equipment and facilities, and delivery of security to GDOT.

**17.3.5.3** DB Team's failure to diligently prosecute the Work in accordance with any such approved remedial action plan shall be deemed a further DB Team Default.

### **17.3.6 Performance Security**

**17.3.6.1** Upon the occurrence of a DB Team Default and expiration, without full and complete cure, of the applicable cure period, if any, under Article 17.1.2, without necessity for a Warning Notice, and without waiving or releasing DB Team from any obligations, and subject to Article 16 as applicable, GDOT shall be entitled to make demand upon and enforce any bond, and make demand upon, draw on and enforce and collect any guaranty or other payment or performance security available to GDOT under this Agreement with respect to the DB Team Default in question in any order in GDOT's sole discretion. Where access to a bond or other payment or performance security is to satisfy damages owing, GDOT shall be entitled to make demand, draw, enforce and collect regardless of whether the DB Team Default is cured subsequent to such draw. GDOT will apply the proceeds of any such action to the satisfaction of DB Team's obligations under the DB Documents, including payment of amounts due GDOT. The foregoing does not limit or affect any other right of GDOT to make demand upon and enforce any bond, and make demand upon, draw on and enforce and collect any guaranty or other payment or performance security, immediately after GDOT are entitled to do so under the bond, guaranty or other payment or performance security.

### **17.3.7 Suspension of Work**

**17.3.7.1** Upon GDOT's delivery of notice of DB Team Default for any of the following breaches or failures to perform and DB Team's failure to fully cure and correct, within the applicable cure period, if any, available to DB Team under Article 17.1.2, GDOT shall have the right and authority to suspend any affected portion of the Work by written order to DB Team:

- (a) Performance of Nonconforming Work;
- (b) Failure to comply with any Law or Governmental Approval (including failure to handle, preserve and protect archeological, paleontological or historic resources, or failure to handle Hazardous Materials, in accordance with applicable Laws and Governmental Approvals);
- (c) Certain failures to remove and replace personnel as set forth in Article 10.6.3;
- (d) Failure to provide proof of required insurance coverage as set forth in Article 16.1.1.1;
- (e) Failure to carry out and comply with Directive Letters;

- (f) Failure to satisfy any condition to commencement of construction set forth in Article 7.6; and
- (g) Failure to maintain, extend or replace performance and payment security required under the Agreement, including any P&P Bonds, unless a drawing has been made under same in the amount of the required coverage provided for in Article 16.2 and the proceeds of such drawing are held by GDOT.

GDOT will lift the suspension order promptly after DB Team fully cures and corrects the applicable breach or failure to perform.

**17.3.7.2** In addition, GDOT shall have the right and authority to suspend any affected portion of the Work by written notice to DB Team for the following reasons:

- (a) To comply with any court order or judgment (although it may qualify as a Compensation Event under Article 14.2(g) or a Relief Event under Article 14.1(l));
- (b) GDOT's performance of data recovery respecting archeological, paleontological or cultural resources (although it may qualify as a Relief Event under Article 14.1(i));
- (c) The existence of conditions unsafe for workers, other Project personnel or the general public, including certain failures to comply with Safety Standards or perform Safety Compliance as set forth in Article 17.3.2.5; or
- (d) DB Team has failed to (i) pay in full when due sums owing any Contractor for services, materials or equipment, except only for retainage provided in the relevant Contract and amounts in dispute, or (ii) deliver any certificate, release, certified payroll or affidavit of wages paid required with any Payment Request or required under this Agreement.

**17.3.7.3** DB Team shall promptly comply with any such written suspension order, even if DB Team disputes the grounds for suspension. DB Team shall promptly recommence the Work upon receipt of written notice from GDOT directing DB Team to resume Work.

**17.3.7.4** In addition to the protections from liability under Article 17.3.2.5, GDOT shall have any liability to DB Team, and DB Team shall have no right to a Relief Event or Compensation Event, in connection with any suspension properly founded on any of the other grounds set forth in this Article 17.3.7 (except potential Relief Events or Compensation Events in the case of suspensions under Articles 17.3.7.2(a) and 17.3.7.2(b)). If GDOT orders suspension of Work on one of the foregoing grounds but it is finally determined under the process set forth under Dispute Resolution Procedures that such grounds did not exist, or if GDOT orders suspension of Work for any other reason, it shall be treated as a Directive Letter for a GDOT Change, except as provided in Article 17.3.2.5.

### **17.3.8 Increased Oversight, Testing, and Inspection**

**17.3.8.1** Upon GDOT's delivery of notice of DB Team Default for any of the following breaches or failures to perform and DB Team's failure to fully cure and correct, within the applicable cure period, if any, available to DB Team under Article 17.1.2, GDOT shall have the right and authority to suspend any affected portion of the Work by written order to DB Team.

**17.3.8.2** If GDOT cannot confirm that: (a) a portion of the Design Work or the Construction Work is in accordance with the requirements of the DB Documents due to a lack of documented inspection or testing by DB Team as required under the DB Documents, or (b) DB Team is implementing, revising, or updating a testing and inspection plan in accordance with the DB Documents for the Design Work or the Construction Work, GDOT shall have the right but not the obligation to inform DB Team that increased monitoring, inspection, sampling, measuring, testing and oversight should be provided. If the increased monitoring, inspection, sampling, measuring, testing and oversight reveal: (i) a failure to perform such Work in accordance with the Quality Management Plan, (ii) that the Quality Management Plan does not comply with the DB Documents, or (iii) that such Work is not in accordance with the DB Documents, DB Team shall be responsible for the costs of such increased monitoring, inspection, sampling, measuring, testing and oversight as described in this Article 17.3.8. DB Team shall correct such deficiencies and the increased monitoring, inspection, sampling, measuring, testing and oversight will continue until those deficiencies have been corrected. If such Work was performed, inspected and documented by DB Team in accordance with the DB Documents, the costs of the increased monitoring, inspection, sampling, measuring, testing and oversight shall be borne by GDOT.

**17.3.8.3** If GDOT increases the level of monitoring, inspection, sampling, measuring, testing, auditing and oversight under Article 17.3.8.2 and Liquidated Damages are not provided for under this Agreement in connection with such action, then DB Team shall pay and reimburse GDOT within thirty (30) days after receipt of written demand and reasonable supporting documentation for all increased costs and fees GDOT incurs in connection with such action, including GDOT Recoverable Costs.

**17.3.8.4** The foregoing does not preclude GDOT, at its sole discretion and expense, from increasing its level of monitoring, inspection, sampling, measuring, testing, auditing and oversight at other times.

### **17.3.9 Other Rights and Remedies**

Subject to Article 17.3.11, Article 17.4.5.2 and Article 19.9, GDOT shall also be entitled to exercise any other rights and remedies available under this Agreement or any other DB Documents, or available at law or in equity.

### **17.3.10 Cumulative, Non-Exclusive Remedies**

Subject to Articles 17.3.11, 17.4.5.2 and 19.9, each right and remedy of GDOT hereunder shall be cumulative and shall be in addition to every other right or remedy provided herein or now or hereafter existing at Law or in equity or by statute or otherwise,



and the exercise or beginning of the exercise by GDOT of any one or more of any of such rights or remedies shall not preclude the simultaneous or later exercise by GDOT of any or all other such rights or remedies.

### **17.3.11 Limitation on Consequential Damages**

**17.3.11.1** Notwithstanding any other provision of the DB Documents and except as set forth in Article 17.3.11.2, to the extent permitted by applicable Law, DB Team shall not be liable for punitive damages or special, indirect or incidental, or consequential damages, whether arising out of breach of this Agreement, tort (including negligence) or any other theory of liability, and GDOT releases DB Team from any such liability, other than for Liquidated Damages for delay, as provided pursuant to this Agreement or otherwise to the extent recoverable from insurance.

**17.3.11.2** The foregoing limitation on DB Team's liability for consequential damages shall not apply to or limit any right of recovery GDOT may have respecting the following:

- (a) Losses (including defense costs) to the extent (i) covered by the proceeds of insurance required to be carried pursuant to Article 16.1, (ii) covered by the proceeds of insurance actually carried by or insuring DB Team under policies solely with respect to the Project and the Work, regardless of whether required to be carried pursuant to Article 16.1, or (iii) DB Team is deemed to have self-insured the Loss pursuant to Article 16.3.3;
- (b) Losses arising out of fraud, criminal conduct, intentional misconduct (which does not include any intentional DB Team Default), recklessness, bad faith or gross negligence on the part of DB Team or Contractor or any Affiliate of either;
- (c) DB Team's obligation to pay Liquidated Damages in accordance with Article 17.4 or any other provision of the DB Documents;
- (d) Losses arising out of DB Team Releases of Hazardous Materials;
- (e) Reserved;
- (f) Amounts DB Team may be obligated to reimburse to GDOT or that are otherwise due from DB Team to GDOT under the express provisions of the DB Documents, including GDOT Recoverable Costs;
- (g) Interest, late charges, fees, transaction fees and charges, penalties and similar charges that the DB Documents expressly state are due from DB Team to GDOT; and
- (h) Any credits, deductions or offsets that the DB Documents expressly provide to GDOT against amounts owing DB Team.

## **17.4 Liquidated Damages and Nonrefundable Deductions**

### **17.4.1 Liquidated Damages for Delayed Substantial Completion Deadline, or Final Acceptance; Incident Based Liquidated Damages**

**17.4.1.1** DB Team shall be liable for and pay to GDOT Liquidated Damages with respect to any failure to reopen any bridge site within the Maximum Closure Duration for the bridge site, any failure to achieve Substantial Completion by the Substantial Completion Deadline, or any failure to achieve Final Acceptance by the Final Acceptance Deadline, as the same may be extended pursuant to this Agreement, or for any other breach of the requirements of the DB Documents as set forth pursuant to Section 1.1 of Exhibit 18. Such liability shall apply even though (a) a cure period remains available to DB Team under Article 17.1.2 or (b) cure occurs. The amounts of such Liquidated Damages are set forth in Exhibit 18. Such Liquidated Damages shall commence on the Substantial Completion Deadline or the Final Acceptance Deadline, as applicable, or upon the date of breach for each such incident based default pursuant to Section 1.2 of Exhibit 18, as the same may be extended pursuant to this Agreement, and shall continue to accrue until the date of Substantial Completion, the date of Final Acceptance, the cure of any such incident based breach, all as applicable, or until termination of this Agreement.

**17.4.1.2** Reserved.

### **17.4.2 Incident Based Nonrefundable Deductions**

**17.4.2.1** DB Team shall be liable for and pay to GDOT Nonrefundable Deductions with respect to the occurrence of the incidents listed or other breach of the requirements of the DB Documents as set forth pursuant to Section 1.3 of Exhibit 18. Unless otherwise stated in Article 17.4, nonrefundable deductions shall be applied at the time of the incident. The amounts of such Incident Based Nonrefundable Deductions are set forth in Exhibit 18.

**17.4.2.2** Within ten (10) days prior to GDOT issuing any nonrefundable deductions pursuant to Sections 1.3.1 and 1.3.2 of Exhibit 18, GDOT shall execute the following:

**17.4.2.3** Issuance of a warning via email to the DB Team to correct the incident within seven (7) days of receipt of the email; and

**17.4.2.4** Issuance of a formal written warning to the DB Team to correct the incident within three (3) days. If the DB Team has failed to comply with subsection 17.4.2.3 to correct the incident at the end of the third day then DB Team shall be liable for and shall pay GDOT the Nonrefundable Deduction.

### **17.4.3 Acknowledgements Regarding Liquidated Damages**

DB Team further agrees and acknowledges that:

**17.4.3.1** In the event that DB Team fails to achieve Substantial Completion by the Substantial Completion Deadline or Final Acceptance by the Final Acceptance Deadline, GDOT will incur substantial damages;

**17.4.3.2** In the event that DB Team causes occurrence of the incidents listed pursuant to Sections 1.2 and 1.3 of Exhibit 18, GDOT will incur substantial damages;

**17.4.3.3** Such damages are incapable of accurate measurement and difficult to prove for the reasons stated in this Article 17.4;

**17.4.3.4** As of the Effective Date, the amounts of Liquidated Damages under this Article 17.4 represent good faith estimates and evaluations by the Parties as to the actual potential damages that GDOT would incur as a result of late Substantial Completion or late Final Acceptance or should the incidents listed occur, and do not constitute a penalty or to otherwise operate as a deterrent for the breach of any obligations of DB Team under this Agreement;

**17.4.3.5** The Parties have agreed to such Liquidated Damages in order to fix and limit DB Team's costs and to avoid later Disputes over what amounts of damages are properly chargeable to DB Team;

**17.4.3.6** Such sums are reasonable in light of the anticipated or actual harm caused by delayed Substantial Completion or delayed Final Acceptance or should the incidents listed occur, the difficulties of the proof of loss, and the inconvenience or infeasibility of otherwise obtaining an adequate remedy;

**17.4.3.7** DB Team acknowledges that such Liquidated Damages are reasonable, as determined as of the Effective Date, in light of the respective injuries and damages that may be caused by DB Team's breach and given that such injuries and damages, which include but shall not be limited to, public inconvenience, increased administration and oversight by GDOT (and any other related agencies), and other damages to the general public, GDOT (and other related agencies); and

**17.4.3.8** Such Liquidated Damages are not intended to, and do not, liquidate DB Team's liability under the indemnification provisions of Article 16.5, even though Third-Party Claims against Indemnified Parties may arise out of the same event, breach or failure that gives rise to such Liquidated Damages.

#### **17.4.4 Payment; Satisfaction; Waiver**

**17.4.4.1** GDOT shall withhold Liquidated Damages owing under this Article 17.4 from the subsequent DB Team pay application. Liquidated damages shall be withheld by GDOT without right of offset, deduction, reduction or other charge, except as provided in Article 17.6.3.

**17.4.4.2** GDOT shall have the right to deduct and offset Liquidated Damages from any amounts owing DB Team to the extent provided in

Article 17.3.4. GDOT also shall have the right to draw on any bond, certificate of deposit, or other security provided by DB Team pursuant to this Agreement, to satisfy Liquidated Damages not paid when due.

**17.4.4.3** Permitting or requiring DB Team to continue and finish the Work or any part thereof after the Substantial Completion Deadline or Final Acceptance Deadline shall not act as a waiver of GDOT's right to receive Liquidated Damages hereunder or any rights or remedies otherwise available to GDOT.

#### **17.4.5 Non-Exclusive Remedy**

**17.4.5.1** Each item of Liquidated Damages provided under this Article 17.4 is in addition to, and not in substitution for, any other item of Liquidated Damages assessed under this Article 17.4.

**17.4.5.2** GDOT's right to, and imposition of, Liquidated Damages are in addition, and without prejudice, to any other rights and remedies available to GDOT under the DB Documents, at law or in equity respecting the breach, failure to perform or DB Team Default that is the basis for the Liquidated Damages or any other breach, failure to perform or DB Team Default, except for recovery of the monetary damage for delay that the Liquidated Damages are intended to compensate and for which Liquidated Damaged shall be the only amount recoverable on account of delay damages.

### **17.5 Default by GDOT; Cure Periods**

#### **17.5.1 GDOT Default**

GDOT shall, subject to any applicable cure period as set forth in Article 17.5.2 below, be in breach under this Agreement upon the occurrence of any one or more of the following events or conditions (each a "GDOT Default"):

**17.5.1.1** GDOT fails to make any payment due DB Team under this Agreement within thirty (30) days of the date that any such payment shall be due;

**17.5.1.2** Any representation or covenant made by GDOT in this Agreement is false or materially misleading or materially inaccurate when made or omits material information when made;

**17.5.1.3** GDOT fails to observe or perform any covenant, agreement, term or condition required to be observed or performed by GDOT under the DB Documents;

**17.5.1.4** GDOT makes an assignment other than as permitted pursuant to Article 21.3; or

**17.5.1.5** GDOT or other State Governmental Entity confiscates or appropriates the Project or any other material part of DB Team's Interest, excluding a Termination for Convenience or any other exercise of a right of termination set forth in this Agreement.

## **17.5.2 Cure Periods**

GDOT shall have the following cure periods with respect to the any of the conditions set forth in Article 17.5.1 above:

**17.5.2.1** Respecting a GDOT Default under Article 17.5.1.1, a period of thirty (30) days after DB Team delivers to GDOT written notice of the GDOT Default;

**17.5.2.2** Respecting a GDOT Default under Article 17.5.1.2 or Article 17.5.1.3, a period of sixty (60) days after DB Team delivers to GDOT written notice of the GDOT Default; provided that (a) if the GDOT Default is of such a nature that the cure cannot with diligence be completed within such time period and GDOT has commenced meaningful steps to cure immediately after receiving the default notice, GDOT shall have such additional period of time, up to a maximum cure period of one hundred eighty (180) days, as is reasonably necessary to diligently effect cure, and (b) as to Article 17.5.1.2, cure will be regarded as complete when the adverse effects of the breach are cured;

**17.5.2.3** Respecting a GDOT Default under Article 17.5.1.4, a period of forty-five (45) days after DB Team delivers to GDOT written notice of the GDOT Default; and

**17.5.2.4** Respecting a GDOT Default under Article 17.5.1.5, a period of thirty (30) days after DB Team delivers to GDOT written notice of the GDOT Default; provided that if the GDOT Default is of such a nature that the cure cannot with diligence be completed within such time period and GDOT has commenced meaningful steps to cure immediately after receiving the default notice, GDOT shall have such additional period of time, up to a maximum cure period of one hundred and twenty (120) days, as is reasonably necessary to diligently effect cure.

## **17.6 DB Team Remedies for GDOT Default**

### **17.6.1 Termination and Suspension**

**17.6.1.1** Subject to Article 19.9, DB Team will have the right to suspend performance of the Work on account of a GDOT Default subject to any applicable notice and cure periods as set forth in Article 17.5.2.

**17.6.1.2** Further, DB Team may upon written notice of not less than fifteen (15) days to GDOT following expiration of such applicable cure period, where such GDOT Default is continuing, exercise the right to terminate this Agreement and recover termination damages as more particularly set forth in, and subject to the terms and conditions of Article 19.4.

### **17.6.2 Damages and Other Remedies**

DB Team shall have and may exercise the following remedies upon the occurrence of a GDOT Default and expiration, without cure, of the applicable cure period:

**17.6.2.1** If DB Team does not terminate this Agreement, then, subject to Article 17.6.4, DB Team may treat the GDOT Default as a Compensation Event on the terms and conditions set forth in Article 14.2 and GDOT shall pay the full Compensation Amount and interest in accordance with Articles 14.2.6 and 14.2.7;

**17.6.2.2** If the GDOT Default is a failure to pay when due any undisputed portion of a progress payment owing under a Supplemental Agreement and GDOT fails to cure such GDOT Default within thirty (30) days after receiving from DB Team written notice thereof, DB Team shall be entitled to suspend the Work under the Supplemental Agreement until the default is cured; and

**17.6.2.3** Subject to Articles 17.6.4 and 19.9, DB Team also shall be entitled to exercise any other remedies available under this Agreement or at Law or in equity, including offset rights to the extent and only to the extent available under Article 17.6.3. Subject to Articles 17.6.4 and 19.9, each right and remedy of DB Team hereunder shall be cumulative and shall be in addition to every other right or remedy provided herein or now or hereafter existing at Law or in equity or by statute or otherwise, and the exercise or beginning of the exercise by DB Team of any one or more of any of such rights or remedies shall not preclude the simultaneous or later exercise by DB Team of any or all other such rights or remedies.

### **17.6.3 Offset Rights**

DB Team may deduct and offset any claim amount owing to it, provided such claim amount has been liquidated through the Dispute Resolution Procedures, as provided in Article 17.7 or otherwise, from and against any amounts DB Team may owe to GDOT pursuant hereto.

### **17.6.4 Limitations on Remedies**

**17.6.4.1** Notwithstanding any other provision of the DB Documents and except as forth in Article 17.6.4.2, to the extent permitted by applicable Law, GDOT shall not be liable for punitive damages or any indirect, incidental or consequential damages, whether arising out of breach of this Agreement or any DB Documents, tort (including negligence) or any other theory of liability, and DB Team releases GDOT from any such liability.

**17.6.4.2** The foregoing limitation on GDOT's liability for consequential damages shall not apply to or limit any right of recovery DB Team may have respecting the following:

- (a) Losses arising out of fraud, criminal conduct, intentional misconduct (which does not include any intentional GDOT Default), recklessness, bad faith or gross negligence on the part of GDOT;
- (b) Losses arising out of GDOT Release(s) of Hazardous Materials or Pre-Existing Hazardous Materials;

- (c) Any amounts GDOT may owe or be obligated to reimburse under the express provisions of this Agreement for Compensation Events or events of termination;
- (d) Any other specified amounts GDOT may owe or be obligated to reimburse to DB Team under the express provisions of the DB Documents;
- (e) Interest and charges that the DB Documents expressly state are due from GDOT to DB Team; and
- (f) Any credits, deductions or offsets that the DB Documents expressly provide to DB Team against amounts owing GDOT.

**17.6.4.3** The measure of compensation available to DB Team as set forth in this Agreement for a Compensation Event or an event of termination shall constitute the sole and exclusive monetary relief and damages available to DB Team from the State or GDOT arising out of or relating to such event; and DB Team irrevocably waives and releases any right to any other or additional damages or compensation from the State or GDOT. No award of compensation or damages shall be duplicative.

**17.6.4.4** Without limiting the effect of Article 17.6.4.3, in the event GDOT wrongfully withholds an acceptance or consent required under this Agreement, or wrongfully issues an objection to or disapproval of a Submittal or other matter under this Agreement, DB Team's sole remedies against GDOT shall be extensions of time to the extent provided in Article 14.1 for a Relief Event and damages to the extent provided in Article 14.2 for a Compensation Event.

### **17.6.5 Procedure for Payment of Judgments**

Promptly after any final, non-appealable order or judgment awarding compensation or damages to DB Team, GDOT shall institute payment procedures as set forth in applicable Law.

## **17.7 Dispute Resolution Procedures**

**17.7.1** The Parties shall endeavor to resolve any Dispute that may arise between them through good faith negotiations and/or partnering in accordance with Section 2.1.2 of the Technical Provisions. If the Dispute is not resolved to the mutual satisfaction of all Parties within thirty (30) days after written notification of such Dispute, or such longer time as is mutually agreed, the dispute shall next be submitted in accordance with Article 17.7.2.

**17.7.2** If, despite good faith negotiations between the Parties, any Disputes are not resolved within thirty (30) days after written notification of such Dispute, then the Dispute shall be submitted administratively to mediation as set forth below.

**17.7.2.1** The Parties shall mutually select a private mediator to formally mediate the Disputes. If the Parties cannot mutually select a private mediator, GDOT shall select a mediator. Mediation shall normally be scheduled within forty-five (45) calendar days of notification of the decision by either party to submit the

Dispute to mediation. GDOT and DB Team shall each pay one-half of the fees and administrative costs charged by the selected mediator. Other parties, such as GDOT and Contractors, may be invited to the mediation as may be appropriate for the mediation.

**17.7.2.2** The Parties, to provide economies of scale, may mutually agree in writing to submit one or more Disputes, whether or not factually related, to a single mediation. In such event, time periods may be extended by mutual written agreement to facilitate preparation for the mediation.

**17.7.2.3** If the Dispute has not been settled within forty-five (45) calendar days following written notification of the Dispute to mediation or within such other period that the Parties may agree in writing, such Dispute may be submitted to litigation by either party in accordance with Article 17.7.4.

**17.7.3** No litigation may be filed by either Party concerning any Dispute prior to using the procedure described in Article 17.7.2. This procedure is a condition precedent for any Party to commence a civil action for resolution of a Dispute.

**17.7.4** All litigation between the Parties arising out of or pertaining to this Agreement or its breach shall be filed, heard and decided in the Superior Court of Fulton County, Georgia, which shall have exclusive jurisdiction and venue pursuant to O.C.G.A. § 50-21-1. Each Party shall bear its own attorney's fees and costs in any dispute or litigation arising out of or pertaining to this Agreement, and no Party shall seek or accept an award of attorney's fees or costs.

## **Article 18      RESERVED**

## **Article 19      TERMINATION**

### **19.1    Termination for Convenience**

**19.1.1** GDOT may terminate this Agreement, if GDOT determines, in its sole discretion, that a termination is in GDOT's best interest (a "Termination for Convenience"). Termination of this Agreement shall not relieve GDOT, DB Team or any Guarantor or Surety of its obligation for any claims arising prior to termination.

**19.1.2** GDOT may exercise Termination for Convenience by delivering to DB Team a written notice of termination for Convenience specifying the election to terminate. Termination for Convenience shall be effective as and when provided in Exhibit 20.

**19.1.3** In the event of a Termination for Convenience, DB Team will be entitled to compensation determined in accordance with Exhibit 20. Payment will be due and payable as and when provided in Exhibit 20.

**19.1.4** If GDOT terminates this Agreement on grounds or in circumstances beyond GDOT's termination rights specifically set forth in this Agreement, such termination shall be deemed a Termination for Convenience for the purpose of determining the Termination Compensation due.



## **19.2 Reserved**

## **19.3 Termination for DB Team Default**

### **19.3.1 DB Team Defaults Triggering GDOT Termination Rights**

The following DB Team Defaults (each a “Default Termination Event”), and no other DB Team Defaults, shall entitle GDOT, at its sole election, to terminate this Agreement, effective immediately upon delivery of written notice of termination to DB Team. DB Team agrees and acknowledges and stipulates that any of the following DB Team Defaults would result in material and substantial harm to GDOT’s rights and interests under this Agreement and therefore constitute a material DB Team Default justifying termination if not cured within the applicable cure period, if any.

**19.3.1.1** The DB Team fails to achieve Substantial Completion by the Substantial Completion Deadline, as the same may be extended pursuant to this Agreement;

**19.3.1.2** There occurs any other DB Team Default for which GDOT issues a Warning Notice under Article 17.2 or 17.3, and such DB Team Default is not fully and completely cured within the applicable cure period, if any, set forth in Article 17.2.2.1 or 17.3;

**19.3.1.3** There occurs any DB Team Default under Article 17.1.1.11 or 17.1.1.12; or

**19.3.1.4** The DB Team fails to diligently prosecute and adhere to the requirements of any remedial action plan as provided and accepted by GDOT pursuant to Article 17.3.5.

### **19.3.2 Compensation to DB Team**

If GDOT issues notice of termination of this Agreement due to a Default Termination Event, or if DB Team terminates this Agreement on grounds or in circumstances beyond DB Team’s termination rights specifically set forth in this Agreement, DB Team will be entitled to compensation to the extent, and only to the extent, provided in Exhibit 20. Payment shall be due and payable as and when provided in Exhibit 20.

### **19.3.3 Finality**

If GDOT issues notice of termination of this Agreement due to a Default Termination Event, termination shall be effective and final immediately upon delivery of written notice as provided in Article 19.3.1 regardless of whether GDOT is correct in determining that GDOT has the right to terminate for DB Team Default. In the event it is determined that GDOT lacked such right, then such termination shall be treated as a Termination for Convenience as provided in Article 19.1.4 for the purpose of determining the Termination Compensation due.

## **19.4 Termination for GDOT Default, Suspension of Work, Force Majeure Event, or Materially Delayed Notice to Proceed**

**19.4.1** In the event of a material GDOT Default under Article 17.5.1.1 (failure to pay money due) that remains uncured following notice and expiration of the applicable cure period under Article 17.5.2, DB Team may deliver to GDOT a further written notice setting forth such GDOT Default and warning GDOT that DB Team may elect to terminate this Agreement and if GDOT does not cure such GDOT Default within sixty (60) days after the delivery of such notice with respect to a GDOT Default under Article 17.5.1.1. GDOT may avoid termination by effecting cure within such sixty (60) day period. Failing such cure, DB Team shall have the right to terminate this Agreement, effective immediately upon delivery of written notice of termination to GDOT. In the event of such termination, DB Team will be entitled to compensation determined in accordance with Exhibit 20. Payment shall be due and payable as and when provided in Exhibit 20. Any Dispute arising out of the determination of such compensation shall be resolved according to the Dispute Resolution Procedures.

**19.4.2** In the event (i) GDOT orders DB Team to suspend Work on all or any material portion of the Project for a reason other than those set forth in Article 17.3.7.1, or (ii) as a result of a Force Majeure Event, and such suspension of Work continues for a period of one hundred and eighty (180) consecutive days or more, DB Team shall have the right to terminate this Agreement, effective immediately upon delivery of written notice of termination to GDOT. In the event of such termination, DB Team will be entitled to compensation determined in accordance with Exhibit 20. Payment shall be due and payable as and when provided in Exhibit 20. Any Dispute arising out of the determination of such compensation shall be resolved according to the Dispute Resolution Procedures.

**19.4.3** In the event GDOT, due to no fault of a DB Team-Related Entity, does not issue NTP 1, NTP 2, or NTP 3 within three hundred and sixty-five (365) days after the anticipated issuance date set forth in Article 3.3, DB Team shall have the right to terminate this Agreement, effective immediately upon delivery of written notice of termination to GDOT. In the event of such termination, DB Team will be entitled to compensation determined in accordance with Exhibit 20. Payment shall be due and payable as and when provided in Exhibit 20. Any Dispute arising out of the determination of such compensation shall be resolved according to the Dispute Resolution Procedures.

**19.4.4** If DB Team issues notice of termination of this Agreement due to a material GDOT Default under Article 17.5.1.1, termination shall be effective and final immediately upon delivery as provided in Article 19.4.1 regardless of whether DB Team is correct in determining that it has the right to terminate for such GDOT Default. In the event it is determined that DB Team lacked such right, then such termination shall be treated as a termination due to material DB Team Default and Article 19.3.2 shall govern the measure of the Termination Compensation.

## **19.5 Termination Procedures and Duties**

**19.5.1** Upon expiration of the Term or any earlier termination of this Agreement for any reason, including due to GDOT Default, the provisions of this Article 19.5 shall apply. DB Team shall timely comply with such provisions independently of, and without regard to, the timing for determining, adjusting, settling and paying any amounts due DB Team or GDOT on account of termination.

**19.5.2** In any case where notice of termination precedes the effective Early Termination Date:

**19.5.2.1** DB Team shall continue performing the Work in accordance with, and without excuse from, all the standards, requirements and provisions of the DB Documents, and without curtailment of services, quality and performance;

**19.5.2.2** Reserved

**19.5.2.3** At GDOT's option, it may increase the level of its monitoring, inspection, sampling, measuring, testing, auditing and oversight of the Project and DB Team's compliance with the obligations under the DB Documents, to such level as GDOT reasonably sees fit to protect against curtailment of services, quality and performance; and

**19.5.2.4** Within three (3) days after receipt of a notice of termination, DB Team shall meet and confer with GDOT for the purpose of developing an interim transition plan for the orderly transition of Work, demobilization and transfer of the Project control to GDOT. The Parties shall use diligent efforts to complete preparation of the interim transition plan within fifteen (15) days after the date DB Team receives the notice of termination. The Parties shall use diligent efforts to complete a final transition plan within thirty (30) days after such date. The transition plan shall be in form and substance acceptable to GDOT in its good faith discretion and shall include and be consistent with the other provisions and procedures set forth in this Article 19.5, all of which procedures DB Team shall immediately follow, regardless of any delay in preparation or acceptance of the transition plan.

**19.5.3** On the Termination Date, or as soon thereafter as is possible, DB Team shall relinquish and surrender full control and possession of the Project to GDOT, and shall cause all persons and entities claiming under or through DB Team to do likewise, in at least the condition required by the Termination turnover requirements.

**19.5.4** On the later of the Termination Date or the date DB Team relinquishes full control and possession, GDOT shall assume responsibility, at its expense, for the Project, subject to any rights to damages that GDOT has against DB Team where the termination is due to a Default Termination Event.

**19.5.5** Reserved.

**19.5.6** Reserved.

**19.5.7** Within thirty (30) days after notice of termination is delivered, DB Team shall provide GDOT with true and complete list of all materials, goods, machinery, equipment, parts, supplies and other property in inventory or storage (whether held by DB Team or any Person or entity on behalf of or for the account of DB Team) for use in or respecting the Work or the Project, or on order or previously completed but not yet delivered from Suppliers for use in or respecting the Work or the Project. In addition, on or about the Termination Date, DB Team shall transfer title and deliver to GDOT or GDOT's Authorized Representative, through bills of sale or other documents of title, as

directed by GDOT, all such materials, goods, machinery, equipment, parts, supplies and other property.

**19.5.8** DB Team shall take all action that may be necessary, or that GDOT may direct, for the protection and preservation of the Project, the Work and such materials, goods, machinery, equipment, parts, supplies and other property.

**19.5.9** On or about the Termination Date, DB Team shall execute and deliver to GDOT the following, together with an executed bill of sale or other written instrument, in form and substance acceptable to GDOT, acting reasonably, assigning and transferring to GDOT all of DB Team's right, title and interest in and to the following:

**19.5.9.1** All completed or partially completed drawings (including plans, elevations, sections, details and diagrams), specifications, designs, Design Documents, as-built and record plans, surveys, and other documents and information pertaining to the design or construction of the Project or the Utility Adjustments;

**19.5.9.2** All samples, borings, boring logs, geotechnical data and similar data and information relating to the Project;

**19.5.9.3** All books, records, reports, test reports, studies and other documents of a similar nature relating to the Work, the Project;

**19.5.9.4** All data and information relating to the use of the Project, including all studies, reports, and other information provided that the transfer of any Intellectual Property shall be subject to Article 22.4; and

**19.5.9.5** All other work product and Intellectual Property used or owned by DB Team or any Affiliate relating to the Work, the Project, provided that the transfer of any Intellectual Property shall be subject to Article 22.4.

**19.5.10** Reserved.

**19.5.11** On or about the Termination Date, DB Team shall execute and deliver to GDOT a written assignment, in form and substance acceptable to GDOT, acting reasonably, of all DB Team's right, title and interest in and to all warranties, claims and causes of action held by DB Team against third parties in connection with the Project or the Work.

**19.5.12** DB Team shall otherwise assist GDOT in such manner as GDOT may require prior to and for a reasonable period following the Termination Date to ensure the orderly transition of the Project and its management to GDOT.

**19.6** Reserved

**19.7** Contracts and Agreements

**19.7.1** Regardless of GDOT's prior actual or constructive knowledge thereof, no contract or agreement to which DB Team is a party (unless GDOT is also a party thereto) as of the Termination Date shall bind GDOT, unless GDOT elects to assume such contract

or agreement in writing. Except in the case of GDOT's express written assumption, no such contract or agreement shall entitle the contracting party to continue performance of work or services respecting the Project following DB Team's relinquishment to GDOT of possession and control of the Project, or to any claim, legal or equitable, against GDOT.

## **19.8 Liability After Termination; Final Release**

**19.8.1** No termination of this Agreement shall excuse either Party from any liability arising out of any default as provided in this Agreement that occurred prior to termination. Notwithstanding the foregoing, any termination of this Agreement shall automatically extinguish any claim of DB Team to payment of Compensation Amounts for adverse cost and revenue impacts accruing after the Early Termination Date from Compensation Events that occurred prior to termination.

**19.8.2** If this Agreement is terminated under Article 19.1, 19.3.1, 19.4, or 19.11, then GDOT's payment to DB Team of the amounts required thereunder (if any) shall constitute full and final satisfaction of, and upon payment GDOT shall be forever released and discharged from, any and all claims, causes of action, suits, demands and Losses, known or unknown, suspected or unsuspected, that DB Team may have against GDOT arising out of or relating to this Agreement or termination thereof, or the Project, are unresolved at the time of such payment and are not related to termination or Termination Compensation. Upon such payment, DB Team shall execute and deliver to GDOT all such releases and discharges as GDOT may reasonably require to confirm the foregoing, but no such written release and discharge shall be necessary to give effect to the foregoing satisfaction and release.

## **19.9 Exclusive Termination Rights**

This Article 19, together with the express provisions on termination set forth in Articles 17.3.1 and 17.6.1, contain the entire and exclusive provisions and rights of GDOT and DB Team regarding termination of this Agreement, and any and all other rights to terminate at law or in equity are hereby waived to the maximum extent permitted by Law.

## **19.10 Access to Information**

DB Team shall conduct all discussions and negotiations to determine any Termination Compensation, and shall share with GDOT all data, documents and information pertaining thereto, on an Open Book Basis.

## **19.11 Termination by Court Ruling**

**19.11.1** Except in the circumstances described in Exhibit 20, Termination by Court Ruling means, and becomes effective upon, (a) issuance of a final order by a court of competent jurisdiction to the effect that this Agreement is void and/or unenforceable or impossible to perform in its entirety, (b) issuance of a final order by a court of competent jurisdiction upholding the binding effect on DB Team or GDOT of a Change in Law that causes impossibility of performance of a fundamental obligation by DB Team or GDOT under the DB Documents or impossibility of exercising a fundamental right of DB Team or GDOT under the DB Documents, (c) occurrence of the circumstances described in Article 24.13.2, or (d) issuance of a final order by a court of competent jurisdiction to the effect that a material provision under the Estate for Years, Intergovernmental Agreement

or the DB Documents is void and/or unenforceable so as to deprive DB Team of its ability to exercise a fundamental right granted to DB Team under the DB Documents and such inability resulting from such order cannot be otherwise remedied through a Compensation Event, Relief Event or other contractual remedy. The final court order shall be treated as the notice of termination.

**19.11.2** Once Termination by Court Ruling becomes effective, GDOT and DB Team shall cooperate to implement Articles 19.5, 19.8, and 19.10.

**19.11.3** Notwithstanding Article 19.11.2, if a Termination by Court Ruling occurs, DB Team shall be entitled to compensation to the extent, and only to the extent, provided in Exhibit 20. Payment shall be due and payable as and when provided in Exhibit 20. Any Dispute arising out of the determination of such compensation shall be resolved according to the Dispute Resolution Procedures.

## **Article 20 RESERVED**

## **Article 21 ASSIGNMENT AND TRANSFER**

### **21.1 Restrictions on Assignment, Subletting and Other Transfers**

**21.1.1** DB Team shall not voluntarily or involuntarily sell, assign, convey transfer, pledge, mortgage or otherwise encumber the DB Team's Interest or any portion thereof without GDOT's prior written acceptance (including under any Direct Agreement), except:

**21.1.1.1** To any entity that is under the same ultimate management control as DB Team.

**21.1.2** DB Team shall not grant any other special occupancy or use of the Project to any other Person that is not in the ordinary course of DB Team performing the Work, without GDOT's prior written acceptance.

**21.1.3** Any sale, assignment, conveyance, transfer, pledge, mortgage, encumbrance, or grant of other special occupancy or use in violation of this provision shall be null and void *ab initio* and GDOT may, by Warning Notice, declare any such attempted action to be a material DB Team Default.

### **21.2 Standards and Procedures for GDOT Acceptance**

**21.2.1** Where GDOT's prior acceptance is required for a proposed sale, assignment, conveyance, transfer, pledge, mortgage, encumbrance, sublease or grant of other special occupancy or use, or for any proposed Change of Control, GDOT may withhold or condition its acceptance in its sole discretion. Any such decision of GDOT to withhold consent shall be final, binding and not subject to the Dispute Resolution Procedures.

**21.2.2** Thereafter, GDOT shall not unreasonably withhold its acceptance thereto. Among other reasonable factors and considerations, it shall be reasonable for GDOT to withhold its acceptance if:

**21.2.2.1** DB Team fails to demonstrate to GDOT's reasonable satisfaction that the proposed assignee, sublessee, grantee or transferee, or the proposed transferee of rights and/or equity interests that would amount to a Change of Control (for purposes of these Articles 21.2 through 21.5, collectively the "Transferee"), and its proposed contractors (a) have the financial resources, qualifications and experience to timely perform DB Team's obligations under the DB Documents and Principal Project Documents and (b) are in compliance with GDOT's rules, regulations and adopted written policies regarding organizational conflicts of interest;

**21.2.2.2** Less than all of DB Team's Interest is proposed to be assigned, conveyed, transferred, pledged, mortgaged, encumbered, or granted; or

**21.2.2.3** At the time of the proposed sale, assignment, conveyance, transfer, pledge, mortgage, encumbrance, sublease or grant of other special occupancy or use requiring GDOT's prior acceptance, or of any proposed Change of Control, there exists any uncured DB Team Default or any event or circumstance that with the lapse of time, the giving of notice or both would constitute a DB Team Default, unless GDOT receives from the proposed Transferee assurances of cure and performance acceptable to GDOT in its good faith discretion.

**21.2.3** GDOT will accept or disapprove within thirty (30) days after it receives from DB Team a Submittal consisting of a request for acceptance together with (a) a reasonably detailed description of the proposed transaction, (b) such information, evidence and supporting documentation as GDOT may request concerning the identity, financial resources, qualifications, experience and potential conflicts of interest of the proposed Transferee and its proposed contractors and (c) such evidence of organization and authority, and such incumbency certificates, certificates regarding debarment or suspension, and other certificates, representations and warranties as GDOT may reasonably request. GDOT will evaluate the identity, financial resources, qualifications, experience and potential conflicts of interest using the same standards and criteria that it is then currently applying, or if there is no current application, then the same standards and criteria it most recently applied, to the evaluation of Persons responding to GDOT requests for qualifications for concession or similar agreements for comparable projects and facilities.

**21.2.4** If for any reason GDOT does not act within such thirty (30) day period, or any extension thereof by mutual agreement of the Parties, then the provisions of Article 6.3.4.2 shall apply.

### **21.3 Assignment by GDOT**

GDOT may assign all or any portion of its rights, title and interests in and to the DB Documents, payment and performance bond(s), guarantees, and other security for payment or performance, (a) without DB Team's consent, to any other Person that succeeds to the governmental powers and authority of GDOT, and (b) to others with the prior written consent of DB Team.

## **21.4 Notice and Assumption**

**21.4.1** Assignments and transfers of the DB Team's Interest permitted under this Article 21 (other than pursuant to Article 21.1.1.1) or otherwise accepted in writing by GDOT shall be effective only upon GDOT's receipt of written notice of the assignment or transfer and a written recordable instrument executed by the Transferee, in form and substance acceptable to GDOT, in which the Transferee, without condition or reservation, assumes all of DB Team's obligations, duties and liabilities under the DB Documents and agrees to perform and observe all provisions thereof applicable to DB Team.

**21.4.2** Each Transferee, including any Person who acquires the DB Team's Interest pursuant to foreclosure, transfer in lieu of foreclosure or similar proceeding, shall take the DB Team's Interest subject to, and shall be bound by, the Management Plans, the Key Contracts, the Standard Utility Agreements, all agreements between the transferor and railroads, the Governmental Approvals, and all agreements between the transferor and Governmental Entities with jurisdiction over the Project or the Work, except to the extent otherwise accepted by GDOT in writing in its good faith discretion.

**21.4.3** Except with respect to assignments and transfers pursuant to foreclosure, transfer in lieu of foreclosure or similar proceeding, the transferor and Transferee shall give GDOT written notice of the assignment not less than thirty (30) days prior to the effective date thereof.

## **21.5 Change of Organization or Name**

**21.5.1** DB Team shall not change the legal form of its organization in a manner that adversely affects GDOT's rights, protections and remedies under the DB Documents without the prior written acceptance of GDOT, which consent may be granted or withheld in GDOT's sole discretion.

**21.5.2** In the event either Party changes its name, such Party agrees to promptly furnish the other Party with written notice of change of name and appropriate supporting documentation.

## **Article 22 RECORDS AND AUDITS; INTELLECTUAL PROPERTY**

### **22.1 Maintenance and Inspection of Records**

**22.1.1** DB Team shall keep and maintain at a single location as approved by GDOT all books, records and documents relating to the Project, Utility Adjustments or Work, including copies of all original documents delivered to GDOT. DB Team shall keep and maintain such books, records and documents in accordance with applicable provisions of the DB Documents, Section 2 of the Technical Provisions, and of the Management Plans, and in accordance with Good Industry Practice. DB Team shall notify GDOT where such records and documents are kept.

**22.1.2** DB Team shall make all its books, records and documents available for inspection by GDOT, its representatives and legal counsel at DB Team's principal offices in Georgia, at all times during normal business hours, without charge. GDOT may conduct any such inspection upon forty-eight (48) hours' prior written notice, or unannounced and



without prior notice where there is good faith suspicion of fraud. The right of inspection includes the right to make extracts and take notes. The provisions of this Article 22.1.2 are subject to the following:

**22.1.2.1** DB Team reserves the right to assert exemptions from disclosure for information that would be exempt under applicable State Law from discovery or introduction into evidence in legal actions; and

**22.1.2.2** Unless otherwise lawfully required by FHWA, federal Law or the Open Government Laws, DB Team may make available copies of books, records and documents containing trade secrets and confidential proprietary information with such information redacted. Unless otherwise lawfully required by federal Law or the Open Government Laws, GDOT shall have no right to make extracts of such trade secrets and confidential proprietary information except in connection with resolution of Disputes.

**22.1.2.3** DB Team shall retain records and documents for a minimum of five (5) years after the date the record or document is generated; provided that if the DB Documents or applicable Law specify any longer time period for retention of particular records, such time period shall control. With respect to records and documents generated prior to Final Acceptance, the time period for retention shall commence upon Final Acceptance. Notwithstanding the foregoing, all records which relate to any actions brought forth under the Dispute Resolution Procedures shall be retained and made available until any later date that such actions are finally resolved.

## **22.2 Audits**

**22.2.1** GDOT shall have such rights to review and audit DB Team, its Contractors and their respective books and records as and when GDOT deems necessary for purposes of verifying compliance with the DB Documents and applicable Law. Without limiting the foregoing, GDOT shall have the right to audit DB Team's Management Plans and compliance therewith, including the right to inspect Work and/or activities and to verify the accuracy and adequacy of the Management Plans and its component parts, plans and other documentation. GDOT may conduct any such audit of books and records upon forty-eight (48) hours' prior written notice, or unannounced and without prior notice where there is good faith suspicion of fraud.

**22.2.2** All claims filed against GDOT shall be subject to audit at any time following the filing of the claim. The audit may be performed by employees of GDOT or by an auditor under contract with GDOT. Notice shall not be required before commencing any audit prior to sixty (60) days after the expiration of the term of this Agreement. Thereafter, GDOT shall provide twenty (20) days notice to DB Team, any Contractors or their respective agents before commencing an audit. DB Team, Contractors or their agents shall provide adequate facilities, acceptable to GDOT, for the audit during normal business hours. DB Team, Contractors or their agents shall cooperate with the auditors. Failure of DB Team, Contractors or their agents to maintain and retain sufficient books and records to allow the auditors to verify all or a portion of the claim or to permit the auditor access to such books and records shall constitute a waiver of the claim and shall bar any recovery thereunder. At a minimum, the auditors shall have available to them the following documents relating to the claim:

- 22.2.2.1 Daily time sheets and supervisor's daily reports;
- 22.2.2.2 Union agreements;
- 22.2.2.3 Insurance, welfare, and benefits records;
- 22.2.2.4 Payroll registers;
- 22.2.2.5 Earnings records;
- 22.2.2.6 Payroll tax forms;
- 22.2.2.7 Material invoices and requisitions;
- 22.2.2.8 Material cost distribution work sheet;
- 22.2.2.9 Equipment records (list of company equipment, rates, etc.);
- 22.2.2.10 Contractors' (including Suppliers') invoices;
- 22.2.2.11 Contractors' and agents' payment certificates;
- 22.2.2.12 Canceled checks (payroll and Suppliers);
- 22.2.2.13 Job cost report;
- 22.2.2.14 Job payroll ledger;
- 22.2.2.15 General ledger;
- 22.2.2.16 Cash disbursements journal;

22.2.2.17 All documents that relate to each and every claim together with all documents that support the amount of damages as to each claim; and

22.2.2.18 Work sheets used to prepare the claim establishing (a) the cost components of the claim, including labor, benefits and insurance, materials, equipment, Contractors, all documents that establish the time periods, individuals involved, the hours for the individuals, and the rates for the individuals, and (b) the lost revenue components of the claim.

22.2.3 Full compliance by DB Team with the provisions of this Article 22.2 is a contractual condition precedent to DB Team's right to seek relief on a Dispute under Article 17.7.

#### 22.2.4 Reserved

22.2.5 GDOT's right of audit include the right to observe the business operations of DB Team and its Contractors to confirm the accuracy of books and records.

**22.2.6** DB Team shall include in the Quality Management Plans internal procedures to facilitate review and audit by GDOT and, if applicable, FHWA.

**22.2.7** DB Team represents and warrants the completeness and accuracy in all material respects of all information it or its agents provides in connection with GDOT audits, and shall cause all Contractors other than Governmental Entities acting as Contractors to warrant the completeness and accuracy in all material respects of all information such Contractors provide in connection with GDOT audits.

**22.2.8** DB Team's internal and third-party quality and compliance auditing responsibilities shall be set forth in the Quality Management Plans.

**22.2.9** Nothing in the DB Documents shall in any way limit the constitutional and statutory powers, duties and rights of elected State officials, including the independent rights of the State Auditor, in carrying out his or her legal authority. DB Team understands and acknowledges that (a) the State auditor may conduct an audit or investigation of any entity receiving funds from the State directly under this Agreement or indirectly through a Contract, (b) acceptance of funds directly under this Agreement or indirectly through a Contract acts as acceptance of the authority of the State auditor to conduct an audit or investigation in connection with those funds, and (c) an entity that is the subject of an audit or investigation must provide the State auditor with access to any information the State auditor considers relevant to the investigation or audit.

### **22.3 Open Government Laws and Freedom of Information Act**

**22.3.1** DB Team acknowledges and agrees that all Submittals, records, documents, drawings, Plans, specifications and other materials in GDOT's possession, including materials submitted by DB Team to GDOT (whether directly or indirectly), are subject to the provisions of the Open Government Laws, subject only to certain exceptions and exemptions contained therein. DB Team also acknowledges that, pursuant to O.C.G.A. § 50-18-70(a), "records received or maintained by a private person, firm, corporation, or other private entity in the performance of a service or function for or on behalf of an agency, a public agency, or a public office shall be subject to disclosure to the same extent that such records would be subject to disclosure if received or maintained by such agency, public agency, or public office." If DB Team believes information or materials submitted or otherwise made available to GDOT constitute trade secrets, proprietary information or other information that is not subject to the Open Government Laws or is excepted from disclosure under the Open Government Laws, DB Team shall be solely responsible for specifically and conspicuously designating that information by placing "CONFIDENTIAL" in the center header of each such document or page affected, as it determines to be appropriate. Any specific proprietary information, trade secrets or confidential commercial and financial information shall be clearly identified as such, and shall be accompanied by a concise statement of reasons supporting the claim. Nothing contained in this Article 22.3.1 shall modify or amend requirements and obligations imposed on GDOT by the Open Government Laws or other applicable Law, and the provisions of the Open Government Laws or other Laws shall control in the event of a conflict between the procedures described above and the applicable Law. DB Team is advised to contact legal counsel concerning such Law and its application to DB Team.

**22.3.2** If GDOT receives a request for public disclosure of materials marked "CONFIDENTIAL," GDOT (as the case may be) will endeavor to notify DB Team of the

request. DB Team may seek a protective order or other appropriate remedy. If GDOT determines in good faith that the materials identified as "CONFIDENTIAL" are not exempt from the Open Government Laws, GDOT will release the requested information within the applicable statutory time period, unless otherwise directed by an order of a court of competent jurisdiction. GDOT shall make the final determination regarding whether the requested information is to be disclosed or withheld.

**22.3.3** In the event of any proceeding or litigation concerning the disclosure of any material submitted by DB Team to GDOT, DB Team shall be fully responsible for otherwise prosecuting or defending any action concerning the materials at its sole cost and risk; provided, however, that the Attorney General shall represent GDOT who will participate in the litigation in such manner as they each may deem necessary or desirable. Except in the case of GDOT's voluntary intervention in litigation, DB Team shall pay and reimburse GDOT (as the case may be) within thirty (30) days after receipt of written demand and reasonable supporting documentation for all costs and fees, including attorneys' fees and costs, GDOT incurs in connection with any litigation, proceeding or request for disclosure.

#### **22.3.4 Reserved**

### **22.4 Intellectual Property**

**22.4.1** All Proprietary Intellectual Property, including with respect to Technology Enhancements, Source Code and Source Code Documentation, shall remain exclusively the property of DB Team or its Affiliates or Contractors that supply the same, notwithstanding any delivery of copies thereof to GDOT.

**22.4.2** GDOT shall have and is hereby granted a nonexclusive, transferable, irrevocable, fully paid up right and license to use, reproduce, modify, adapt and disclose, and sublicense others to use, reproduce, modify, adapt and disclose, the Proprietary Intellectual Property of DB Team, including with respect to Technology Enhancements, Source Code and Source Code Documentation, solely in connection with the Project and any Highway, tolled or not tolled, owned and operated by GDOT or a State or regional Governmental Entity.

**22.4.3** Subject to the license and rights granted to GDOT pursuant to Article 22.4.2, GDOT shall not at any time sell any Proprietary Intellectual Property of DB Team or use, reproduce, modify, adapt and disclose, or allow any party to use, reproduce, modify, adapt and disclose, any such Proprietary Intellectual Property for any other purpose not consistent with Article 22.4.2 above.

**22.4.4** The right to transfer the license is limited to any Governmental Entity that succeeds to the power and authority of GDOT generally or with respect to the Project.

**22.4.5** The right to sublicense is limited to State or regional Governmental Entities that own or operate a Highway or other road, tolled or not tolled, and to the concessionaires, contractors, subcontractors, employees, attorneys, consultants and agents that are retained by or on behalf of GDOT or any such State or regional Governmental Entity in connection with the Project or another Highway or other road, tolled or untolled. All such sublicenses shall be subject to Article 22.4.6.

**22.4.6** Subject to Article 22.3, GDOT shall:

**22.4.6.1** Not disclose any Proprietary Intellectual Property of DB Team to any Person other than authorized transferees and sublicensees who agree to be bound by any confidentiality obligations of GDOT relating thereto;

**22.4.6.2** Enter into a commercially reasonable confidentiality agreement if requested by DB Team with respect to the licensed Proprietary Intellectual Property; and

**22.4.6.3** Include, or where applicable require such State or regional Governmental Entity to include, in the contract with the sublicensee its covenant to employ sound business practices no less diligent than those used for its own confidential information, and no less diligent than required by commercially reasonable standards of confidentiality, to protect all Proprietary Intellectual Property of DB Team and other materials provided under the sublicense against disclosure to third parties not in receipt of a sublicense, and to use the sublicense only for the permitted purposes.

**22.4.7** Notwithstanding any contrary provision of the DB Documents, in no event shall GDOT or any of their respective directors, officers, employees, consultants or agents be liable to DB Team, any Affiliate or any Contractor for any damages, including loss of profit, arising out of breach of the duty of confidentiality set forth in Article 22.4.6 if such breach is not the result of gross negligence or intentional misconduct or is required under the provisions of the Open Government Laws or a court order or other legal requirement.

**22.4.8** DB Team shall continue to have a full and complete right to use any and all duplicates or other originals of its Proprietary Intellectual Property in any manner it chooses.

**22.4.9** With respect to any Proprietary Intellectual Property, including with respect to Technology Enhancements, Source Code and Source Code Documentation, owned by a Person other than DB Team, including any Affiliate, and other than GDOT or a Governmental Entity acting as a Contractor, DB Team shall obtain from such owner, concurrently with execution of any contract, subcontract or purchase order with such owner or with the first use or adaptation of the Proprietary Intellectual Property in connection with the Project, for DB Team, and GDOT, nonexclusive, transferable, irrevocable, fully paid up licenses to use, reproduce, modify, adapt and disclose such Proprietary Intellectual Property solely in connection with the Project and any Highway, tolled or not tolled, owned and operated by GDOT or a State or regional Governmental Entity, of at least identical scope, purpose, duration and applicability as the license granted under Article 22.4.1. The foregoing requirement shall not apply, however, to mass-marketed software products (sometimes referred to as “shrink wrap software”) owned by such a Person where such a license cannot be extended to GDOT using commercially reasonable efforts. The limitations on sale, transfer, sublicensing and disclosure by GDOT set forth in Articles 22.4.3 through 22.4.6 shall also apply to GDOT’s licenses in such Proprietary Intellectual Property.

**22.5 Reserved**

**Article 23 RESERVED**

**Article 24 MISCELLANEOUS**

**24.1 Taxes**

DB Team shall pay, prior to delinquency, all applicable Taxes. DB Team shall have no right to a Compensation Event or a Relief Event due to its misinterpretation of Laws respecting Taxes or incorrect assumptions regarding applicability of Taxes.

**24.2 Amendments**

The DB Documents may be amended only by a written instrument duly executed by the Parties or their respective successors or assigns, except to the extent expressly provided otherwise in this Agreement.

**24.3 Waiver**

**24.3.1** No waiver of any term, covenant or condition of this Agreement or the other DB Documents shall be valid unless in writing and signed by the obligee Party.

**24.3.2** The exercise by a Party of any right or remedy provided under this Agreement or the other DB Documents shall not waive or preclude any other or further exercise thereof or the exercise of any other right or remedy. No waiver by any Party of any right or remedy under this Agreement or the other DB Documents shall be deemed to be a waiver of any other or subsequent right or remedy under this Agreement or the other DB Documents. The consent by one Party to any act by the other Party requiring such consent shall not be deemed to render unnecessary the obtaining of consent to any subsequent act for which consent is required, regardless of whether similar to the act for which consent is given.

**24.3.3** Except as provided otherwise in the DB Documents, no act, delay or omission done, suffered or permitted by one Party or its agents shall be deemed to waive, exhaust or impair any right, remedy or power of such Party hereunder, or to relieve the other Party from the full performance of its obligations under this Agreement or the other DB Documents.

**24.3.4** Either Party's waiver of any breach or failure to enforce any of the terms, covenants, conditions or other provisions of the DB Documents at any time shall not in any way limit or waive that Party's right thereafter to enforce or compel strict compliance with every term, covenant, condition or other provision, any course of dealing or custom of the trade notwithstanding. Furthermore, if the Parties make and implement any interpretation of the DB Documents without documenting such interpretation by an instrument in writing signed by both Parties, such interpretation and implementation thereof will not be binding in the event of any future Disputes.

**24.3.5** Subject to Article 14.2.6, the acceptance of any payment or reimbursement by a Party shall not waive any preceding or then-existing breach or default

by the other Party of any term, covenant or condition of this Agreement or the other DB Documents, other than the other Party's prior failure to pay the particular amount or part thereof so accepted, regardless of the paid party's knowledge of such preceding or then-existing breach or default at the time of acceptance of such payment or reimbursement. Nor shall such acceptance continue, extend or affect: (a) the service of any notice, any Disputes or final judgment; (b) any time within which the other Party is required to perform any obligation; or (c) any other notice or demand.

#### **24.4 Independent Contractor**

**24.4.1** DB Team is an independent contractor, and nothing contained in the DB Documents shall be construed as constituting any relationship with GDOT other than that of an independent contractor under this Agreement.

**24.4.2** Nothing in the DB Documents is intended or shall be construed to create any partnership, joint venture or similar relationship between GDOT and DB Team; and in no event shall either Party take a position in any tax return or other writing of any kind that a partnership, joint venture or similar relationship exists. While the term "public-private partnership" may be used on occasion to refer to contractual relationships of the type hereby created, the Parties do not thereby express any intention to form or hold themselves out as a *de jure* or *de facto* partnership, joint venture or similar relationship, to share net profits or net losses, or to give GDOT control or joint control over DB Team's financial decisions or discretionary actions concerning the Project and Work.

**24.4.3** In no event shall the relationship between GDOT and DB Team be construed as creating any relationship whatsoever between GDOT and DB Team's employees. Neither DB Team nor any of its employees is or shall be deemed to be an employee of GDOT. Except as otherwise specified in the DB Documents, DB Team has sole authority and responsibility to employ, discharge and otherwise control its employees and has complete and sole responsibility as a principal for its agents, for all Contractors and for all other Persons that DB Team or any Contractor hires to perform or assist in performing the Work.

#### **24.5 Successors and Assigns**

The DB Documents shall be binding upon and inure to the benefit of GDOT and DB Team and their permitted successors, assigns and legal representatives.

#### **24.6 Designation of Representatives; Cooperation with Representatives**

**24.6.1** GDOT and DB Team shall each designate an individual or individuals who shall be authorized to make decisions and bind the Parties on matters relating to the DB Documents ("Authorized Representative"). In addition, for purposes of Project administration and oversight to be performed by GDOT as provided in this Agreement, GDOT shall designate an individual or individuals who shall be authorized to make decisions and bind GDOT and upon such person(s) direction DB Team may rely. Exhibit 22 provides the initial Authorized Representative designations. A Party may change such designations by a subsequent writing delivered to the other Party in accordance with Article 24.11. For purposes of this Agreement, the Parties, except where expressly stated to the contrary, all communications and deliveries, including submittals, shall be through the respective Authorized Representative for each party.

**24.6.2** DB Team shall cooperate with GDOT and all representatives of GDOT designated as described above.

## **24.7 Survival**

DB Team's and GDOT's representations, covenants, warranties, the dispute resolution provisions contained in Article 17.7, the express obligations of the Parties following termination, and all other provisions which by their inherent character should survive expiration or earlier termination of this Agreement and/or completion of the Work shall survive the expiration or earlier termination of this Agreement and/or the completion of the Work. The provisions of Article 17.7 shall continue to apply after expiration or earlier termination of this Agreement to all Disputes between the parties arising out of the DB Documents.

## **24.8 Limitation on Third-Party Beneficiaries**

**24.8.1** It is not intended by any of the provisions of the DB Documents to create any third-party beneficiary hereunder or to authorize anyone not a Party hereto to maintain a suit for personal injury or property damage pursuant to the terms or provisions hereof, except to the extent provided in Article 24.9.2 and other specific provisions (such as the warranty and indemnity provisions) that identify third parties and state that they are entitled to benefits hereunder. Except as otherwise provided in this Article 24.8, the duties, obligations and responsibilities of the Parties to the DB Documents with respect to third parties shall remain as imposed by Law. The DB Documents shall not be construed to create a contractual relationship of any kind between GDOT and a Contractor or any Person other than DB Team.

**24.8.2** GDOT shall be a third-party beneficiary, and entitled to the benefits, with respect to the rights under the DB Documents related to the following:

**24.8.2.1** Oversight, review, inspection, testing, monitoring, acceptance, and enforcement of DB Team's obligations to perform the design and construction of the Project in accordance with the DB Documents and applicable Law.

**24.8.2.2** Review, audit, inspection and copying of data, information, documents, books and records of DB Team and any other DB Team-Related Entity.

**24.8.2.3** Step in rights upon the occurrence of a DB Team Default.

## **24.9 No Personal Liability of GDOT Employees; No Tort Liability**

**24.9.1** GDOT's officers, employees, representatives are acting solely as agents and representatives of such respective entities, as applicable, when carrying out the provisions of or exercising the power or authority granted to them under this Agreement and the DB Documents. They shall not be liable either personally or as employees of GDOT for actions in their ordinary course of employment.

**24.9.2** The Parties agree to provide to each other with written notice of any claim which such Party may receive from any third party relating in any way to the matters addressed in this Agreement, and shall otherwise provide notice in such form and within such period as is required by Law.



## 24.10 Governing Law

The DB Documents shall be governed by and construed in accordance with the laws of the State of Georgia.

## 24.11 Notices and Communications

**24.11.1** Notices under the DB Documents shall be in writing and: (a) delivered personally; (b) sent by certified mail, return receipt requested; (c) sent by a recognized overnight mail or courier service, with delivery receipt requested, or (d) sent by facsimile or email communication followed by a hard copy and with receipt confirmed by telephone, to the following addresses (or to such other address as may from time to time be specified in writing by such Person):

**24.11.2** All notices, correspondence and other communications to DB Team shall be delivered to the following address or as otherwise directed by DB Team's Authorized Representative:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Telephone: \_\_\_\_\_  
Facsimile: \_\_\_\_\_  
E-mail: \_\_\_\_\_

**24.11.3** All notices, correspondence, submittals, transmittals, and other communications to GDOT shall be marked as regarding the "FY 18 Bridge Replacement Project" and shall be delivered to the following addresses or as otherwise directed by GDOT's Authorized Representative:

Darryl D. VanMeter, P.E.  
Georgia Department of Transportation  
Office of Innovative Delivery  
600 West Peachtree Street, Floor 19  
Atlanta, Georgia 30308  
E-mail: [dvanmeter@dot.ga.gov](mailto:dvanmeter@dot.ga.gov)

In addition, copies of all notices regarding Disputes, and termination and default notices shall be delivered to the following person:

Georgia Department of Transportation  
Office of General Counsel  
600 West Peachtree Street, Suite 2300  
Atlanta, Georgia 30308  
E-mail: [mcline@dot.ga.gov](mailto:mcline@dot.ga.gov)

**24.11.4** Notices shall be deemed received when actually received in the office of the addressee (or by the addressee if personally delivered) or when delivery is refused, as shown on the receipt of the U.S. Postal Service, private carrier or other Person making

the delivery. Notwithstanding the foregoing, notices sent by facsimile after 12:00 p.m. Eastern Standard or Daylight Time (as applicable) and all other notices received after 12:00 p.m. shall be deemed received on the first Business Day following delivery (that is, in order for a fax to be deemed received on the same day, at least the first page of the fax must have been received before 12:00 p.m.). Any technical or other communications pertaining to the Work shall be conducted by DB Team's Authorized Representative and technical representatives designated by GDOT.

#### **24.12 Integration of DB Documents**

GDOT and DB Team agree and expressly intend that, subject to Article 24.13, this Agreement, and other DB Documents constitute a single, non-severable, integrated agreement whose terms are interdependent and non-divisible.

#### **24.13 Severability**

**24.13.1** If any clause, provision, section or part of this Agreement or the other DB Documents or any other Principal Project Document (other than the Design-Build Contract) is ruled invalid (including invalid due to Change in Law) by a court having proper jurisdiction, then the Parties shall: (a) promptly meet and negotiate a substitute for such clause, provision, section, or part, which shall, to the greatest extent legally permissible, effect the original intent of the Parties; and (b) if necessary or desirable, apply to the court or other decision maker (as applicable) which declared such invalidity for an interpretation of the invalidated portion to guide the negotiations. The invalidity or unenforceability of any such clause, provision, section, or part shall not affect the validity or enforceability of the balance of the DB Documents or such other Principal Project Documents, which shall be construed and enforced as if the DB Documents or such other Principal Project Documents did not contain such invalid or unenforceable clause, provision, section, or part.

**24.13.2** If after the efforts required by Article 24.13.1, the Parties mutually agree that without the section or part of the DB Documents or such other Principal Project Documents that the court ruled to be invalid, there is no interpretation or reformation of the DB Documents or such other Principal Project Documents that can reasonably be adopted which will return the Parties to the benefits of their original bargain, the Parties can mutually agree to treat the court order as a Termination by Court Ruling pursuant to Article 19.11.

#### **24.14 Usury Savings**

The DB Documents are subject to the express condition that at no time shall either Party be obligated or required to pay interest on any amount due the other Party at a rate which could subject the other Party to either civil or criminal liability as a result of being in excess of the maximum non-usurious interest rate permitted by Georgia Law (the "maximum legal rate"), if any. If, by the terms of the DB Documents either Party at any time is obligated to pay interest on any amount due in excess of the maximum legal rate, then such interest shall be deemed to be immediately reduced to the maximum legal rate and all previous payments in excess of the maximum legal rate shall be deemed to have been payments in reduction of the principal amount due and not on account of the interest due. All sums paid or agreed to be paid to a Party for the use, forbearance, or detention of the sums due that Party under the DB Documents shall, to the extent permitted by applicable Georgia Law, be amortized, prorated, allocated, and spread

throughout the full period over which the interest accrues until payment in full so that the rate or amount of interest on account of the amount due does not exceed the maximum legal rate in effect from time to time during such period. If after the foregoing adjustments a Party still holds interest payments in excess of the maximum legal rate, it shall promptly refund the excess to the other Party.

**24.15 Reserved**

**24.16 Entire Agreement**

This Agreement and the other DB Documents contain the entire understanding of the Parties with respect to the subject matter thereof and supersede all prior agreements, understandings, statements, representations and negotiations between the Parties with respect to their subject matter.

**24.17 Counterparts**

This instrument may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

CONTRACT IDENTIFICATION NUMBER <b>XXXX</b>	DATE CONTRACT EXECUTED <b>Date</b>
PROJECT NUMBER(S) <b>XXXXXXXX</b>	COUNTY(IES) <b>[ ]</b> County
CONTRACTOR <b>DB Team Name</b>	
DESCRIPTION OF IMPROVEMENTS AND FACILITY <b>FY 18 Bridges</b>	
CONTRACT SUM <b>\$</b>	

[Signature Page Immediately Follows]

IN WITNESS WHEREOF, the Parties, intending to be legally bound, have executed this Agreement, including the requirements of the DB Documents, as of the date first above written.

[DB TEAM]

DEPARTMENT OF TRANSPORTATION,  
STATE OF GEORGIA

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: Commissioner

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

Attested By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: Treasurer

**EXHIBIT 1**

**ABBREVIATIONS AND DEFINITIONS**

Unless otherwise specified, wherever the following abbreviations or terms are used in this Agreement and the Technical Provisions, they have the meanings set forth below:

<b>AASHTO</b>	American Association of State Highway and Transportation Officials
<b>ADA</b>	Americans with Disabilities Act
<b>AGC</b>	Associated General Contractors of America
<b>AMRL</b>	AASHTO Materials Reference Laboratory
<b>ANSI</b>	American National Standards Institute
<b>APE</b>	Area of Potential Effects
<b>ARC</b>	Atlanta Regional Commission
<b>AREMA</b>	American Railway Engineering and Maintenance of Way Association
<b>ASTM</b>	American Society of Testing and Materials
<b>BFI</b>	Bridge Foundation Investigation
<b>AWS</b>	American Welders Society
<b>BMP</b>	Best Management Practice
<b>CAD</b>	Computer Aided Design
<b>CAPWAP</b>	Case Pile Wave Analysis program
<b>CE</b>	Categorical Exclusion
<b>CEI</b>	Construction Engineering and Inspection
<b>CEPP</b>	Comprehensive Environmental Protection Program
<b>CFR</b>	Code of Federal Regulations
<b>CIA</b>	Contract Item Agreement
<b>CMS</b>	Changeable Message Sign
<b>CPI</b>	Consumer Price Index
<b>CQAF</b>	Construction Quality Assurance Firm
<b>CQAP</b>	Construction Quality Assurance Program
<b>CQAM</b>	Construction Quality Assurance Manager
<b>CQMP</b>	Construction Quality Management Plan
<b>CSC</b>	Customer Service Center
<b>CSJ</b>	Control Section Job
<b>CWA</b>	Clean Water Act
<b>DB</b>	Design-Build
<b>DBA</b>	Design-Build Agreement
<b>DBE</b>	Disadvantaged Business Enterprise, as set forth in 49 CFR Part 26
<b>DEIS</b>	Draft Environmental Impact Statement
<b>DMS</b>	Dynamic Message Signs
<b>DNR</b>	Georgia Department of Natural Resources
<b>DQAM</b>	Design Quality Assurance Manager

<b>DQMP</b>	Design Quality Management Plan
<b>DSS</b>	Decent, Safe and Sanitary
<b>EA</b>	Environmental Assessment
<b>ECM</b>	Environmental Compliance Manager
<b>EDG</b>	GDOT Electronic Data Guidelines
<b>EP</b>	Extraction Procedure (toxicity)
<b>EPA</b>	Environmental Protection Agency
<b>EPD</b>	Georgia Department of Natural Resources, Environmental Protection Division
<b>EPIC</b>	Environmental Permits Issues and Commitments
<b>ESA</b>	Endangered Species Act of 1973, 16 U.S.C. §§ 1531 <i>et seq.</i> , as amended from time to time
<b>EUC</b>	Emergency Utility Coordinator
<b>FAA</b>	Federal Aviation Administration
<b>FAPG</b>	Federal-Aid Policy Guide
<b>FEMA</b>	Federal Emergency Management Agency
<b>FHWA</b>	U.S. Federal Highway Administration
<b>FEIS</b>	Final Environmental Impact Statement
<b>FONSI</b>	Finding of No Significant Impact
<b>FTP</b>	File Transfer Protocol
<b>FWCA</b>	Fish and Wildlife Coordination Act, 16 U.S.C. §§661 <i>et seq.</i> , as amended from time to time
<b>GDOT</b>	Georgia Department of Transportation
<b>GEPA</b>	Georgia Environmental Policy Act, Section 12-16-1, <i>et seq.</i> of the Official Code of Georgia Annotated
<b>GIS</b>	Geographical Information System
<b>GP</b>	General Purpose
<b>HEC-FFA</b>	Hydraulic Engineering Circular – Flood Frequency Analysis
<b>HCR</b>	Highway Conditions Report
<b>HOV</b>	High Occupancy Vehicle
<b>IA</b>	Independent Assurance
<b>ICD</b>	Interface Control Document
<b>ID</b>	Form of Identification
<b>IH</b>	Interstate Highway
<b>IRI</b>	International Roughness Index
<b>ISO</b>	International Organization for Standardization
<b>ITS</b>	Intelligent Transportation System
<b>IWP</b>	Investigative Work Plan
<b>MDS</b>	Microwave Detection System
<b>MOA</b>	Memorandum of Agreement
<b>MOT</b>	Maintenance of Traffic
<b>MOU</b>	Memorandum of Understanding

<b>MPH</b>	Miles Per Hour
<b>MPO</b>	Metropolitan Planning Organization
<b>MS4</b>	Municipal Separate Storm Sewer System
<b>MSDS</b>	Materials Safety Data Sheets
<b>MSE</b>	Mechanically Stabilized Earth
<b>MUTCD</b>	Manual of Traffic Control Devices
<b>NAVD</b>	North American Vertical Datum
<b>NBIS</b>	National Bridge Inspection Standards
<b>NCHRP</b>	National Cooperative Highway Research Program
<b>NCR</b>	Nonconformance Report
<b>NEPA</b>	National Environmental Policy Act, 42 U.S.C. § 4321 <i>et seq.</i> , as amended from time to time
<b>NFIP</b>	National Flood Insurance Program
<b>NMFS</b>	National Marine Fisheries Service
<b>NOI</b>	Notice of Intent
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>NOT</b>	Notice of Termination
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>NRCS</b>	Natural Resource Conservation Service
<b>NRHP</b>	National Register of Historic Places
<b>NTP</b>	Notice to Proceed
<b>NTAS</b>	National Terrorism Advisory System
<b>OCGA</b>	Official Code of Georgia Annotated
<b>OCR</b>	Optical Character Recognition
<b>OSAH</b>	Georgia Office of State Administrative Hearings
<b>OSHA</b>	Occupational Safety and Health Administration
<b>OVF</b>	Owner Verification Firm
<b>OVT</b>	Owner Verification Tests or Owner Verification Testing
<b>PA</b>	Programmatic Agreement
<b>PACES</b>	Pavement Condition Evaluation System
<b>PDP</b>	GDOT Plan Development Process
<b>PIC</b>	Public Information Coordinator
<b>PICP</b>	Public Information and Communications Plan
<b>PLS (or RPLS)</b>	Professional Land Surveyor
<b>PMCS</b>	Project Management Controls System
<b>PMP</b>	Project Management Plan
<b>PPE</b>	Personal Protection Equipment
<b>PQMP</b>	Project Quality Management Plan
<b>PUA</b>	Possession and Use Agreement
<b>QA</b>	Quality Assurance or Quality Acceptance, depending on context

<b>QC</b>	Quality Control
<b>QMP</b>	Quality Management Plan
<b>RCP</b>	Reinforced Concrete Pipe
<b>RFC</b>	Release for Construction
<b>RFI</b>	Request for Information
<b>RFQ</b>	Request for Qualifications
<b>RFP</b>	Request for Proposals
<b>RLM</b>	Residual Life Methodology
<b>ROD</b>	Record of Decision
<b>ROW</b>	Right of Way
<b>ROW AM</b>	Right of Way Acquisition Manager
<b>ROWIS</b>	Right of Way Information System
<b>RTF</b>	Related Transportation Facilities
<b>SAAG</b>	Special Assistant to the (Georgia) Attorney General
<b>SDEIS</b>	Supplemental Draft Environmental Impact Statement
<b>SH</b>	State Highway
<b>SHPO</b>	State Historic Preservation Officer
<b>SME</b>	Subject Matter Expert
<b>SOQ</b>	Statement of Qualifications
<b>SOV</b>	Single Occupancy Vehicle or Schedule of Values, depending on context
<b>SSTR</b>	Single Slope Traffic Railing
<b>STA</b>	State Transportation Agency
<b>SUA</b>	Standard Utility Agreement
<b>SUE</b>	Subsurface Utility Engineering
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TIR</b>	Traffic Interruption Request
<b>TMC</b>	Traffic Management Center
<b>TMP</b>	Transportation Management Plan
<b>UAM</b>	Utility Accommodation Manual
<b>UAT</b>	Utility Adjustment Team
<b>UCS</b>	User Classification Subsystem
<b>UDC</b>	Utility Design Coordinator
<b>UJUA</b>	Utility Joint Use Acknowledgment or Utility Joint Use Agreement
<b>UM</b>	Utility Manager
<b>US</b>	United States Highway
<b>USACE</b>	United States Army Corps of Engineers
<b>U.S. DOT</b>	United States Department of Transportation
<b>USFWS</b>	United States Fish and Wildlife Service
<b>U.S. GAAP</b>	U.S. Generally Accepted Accounting Principles
<b>USPAP</b>	Uniform Standard of Professional Appraisal Practices
<b>UST</b>	Underground Storage Tank



<b>UTM</b>	Universal Transverse Mercator
<b>VDS</b>	Video Detection System
<b>VES</b>	Video Exception Sub-system
<b>WBS</b>	Work Breakdown Structure
<b>WFI</b>	Wall Foundation Investigation
<b>WECS</b>	Worksite Erosion Control Supervisor
<b>WTCS</b>	Worksite Traffic Control Supervisor
<b>WUCS</b>	Worksite Utility Coordination Supervisor

**Abandonment** means that Design-Build Team abandons all or a material part of the Project, which abandonment shall have occurred if (a) Design-Build Team demonstrates through acts or omissions an intent not to continue, for any reason other than a Relief Event that materially interferes with ability to continue, to construct or operate all or a material part of the Project and (b) no significant Work (taking into account the Project Baseline Schedule, if applicable, and any Relief Event) on the Project or a material part thereof is performed for a continuous period of more than forty five (45) days.

**Additional Properties** means those parcels or portions of property proposed by Design-Build Team in addition to the ROW, including with respect to an approved ATC or otherwise contiguous to the Property and to be used for Project or in connection with the construction thereof, all as expressly designated as “Additional Properties” within the Right of Way Acquisition Plan. Additional Properties shall not include any Project Specific Locations.

**Adjust** means to perform a Utility Adjustment.

**Adjustment** means a Utility Adjustment.

**Adjustment Standards** means the standard specifications, standards of practice, and construction methods that a Utility Owner customarily applies to facilities (comparable to those being Adjusted on account of the Project) constructed by the Utility Owner (or for the Utility Owner by its contractors), at its own expense. Unless the context requires otherwise, references in the DB Documents to a Utility Owner’s “applicable Adjustment Standards” refer to those that are applicable pursuant to Article 7.5.3 of the Agreement.

**Administrative Information Submittals** means those submittals Proposers are required to submit with their respective Proposal.

**Affidavit of Property Interest** means the form of documentation of Existing Utility Property Interests described in Section 6.2.2 of the Technical Provisions.

**Affiliate** means:

- (a) any shareholder, member, partner or joint venture member of Design-Build Team,
- (b) any Person which directly or indirectly through one or more intermediaries controls, or is controlled by, or is under common control with, Design-Build Team or any of its shareholders, members, partners or joint venture members; and
- (c) any Person for which ten percent (10%) or more of the equity interest in such Person is held directly or indirectly, beneficially or of record by (i) Design-Build Team, (ii) any of Design-Build Team’s shareholders, members, partners or joint venture members or (iii) any Affiliate of Design-Build Team under clause (b) of this definition.

For purposes of this definition the term “control” means the possession, directly or indirectly, of the power to cause the direction of the management of a Person, whether through voting securities, by contract, family relationship or otherwise.

**Age** means the elapsed time since an Element was first constructed or installed or, if applicable, last reconstructed, rehabilitated, restored, renewed or replaced.

**Agreement, DBA, Design-Build Agreement, or DB Agreement** means this certain Design-Build Agreement executed by GDOT and Design-Build Team, including any and all exhibits, attachments, riders, and amendments thereto.

**Alternative Technical Concept (ATC)** means an alternative technical concept proposed by Design-Build Team pursuant to the terms set forth in the RFP.

**Amendment** means supplemental additions, deletions, and modifications to the provisions of the RFP after the release of the draft RFP.

**Apparent Successful Proposer** means the Proposer with the apparent Successful Proposal, taking into consideration the evaluation criteria and procedures.

**Area of Potential Effects (APE)** means the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of Historic Properties, if such properties exist.

**Authorized Representative** has the meaning set forth in Article 24.6.1 of the Agreement, and shall be applicable person(s) and/or party(ies) authorized to act on behalf of each of GDOT and the Design-Build Team respectively, as initially set forth pursuant to Exhibit 22 of the Agreement. All notices, deliveries, responses, approvals, and other communications among GDOT and/or the Design-Build Team shall be directed to the respective Authorized Representative for each of the aforementioned, unless expressly provided to the contrary in this Agreement.

**Best Management Practices (BMP)** has the meaning set forth in *Storm Water Management For Construction Activities: Developing Pollution Prevention Plans and Best Management Practices* (EPA Document 832 R 92-005).

**Best Value Proposal** means the Proposal meeting the standards set by the RFP that GDOT determines, through the evaluation process and evaluation criteria described in this ITP, to present the best value and to be in the best interest of GDOT and the State.

**Betterment** has, with respect to a given Utility being Adjusted, the meaning (if any) set forth in the Utility Agreement(s) applicable to the Utility; in all other cases, “Betterment” means any upgrading of the Utility in the course of such Utility Adjustment that is not attributable to the construction of the Project and is made solely for the benefit of and at the election of the Utility Owner, including an increase in the capacity, capability, efficiency or function of an Adjusted Utility over that which was provided by the existing Utility. Notwithstanding the foregoing, the following are not considered Betterments unless otherwise provided in the applicable Utility Agreement(s):

- (a) any upgrading which is required for accommodation of the Project;
- (b) replacement devices or materials that are of equivalent standards although not identical;
- (c) replacement of devices or materials no longer regularly manufactured with an equivalent or next higher grade or size;
- (d) any upgrading required by applicable Law;

(e) replacement devices or materials that are used for reasons of economy (e.g., non-stocked items may be uneconomical to purchase); and

(f) any upgrading required by the Utility Owner's applicable Adjustment Standards.

With respect to any Replacement Utility Property Interest, "**Betterment**" has the meaning (if any) set forth in the applicable Utility Agreement(s). In all other cases, a Replacement Utility Property Interest shall be considered a Betterment, except to the extent that reinstallation of a Utility in the Replacement Utility Property Interest (i) is necessary in order to meet the requirements of the DB Documents, or (ii) is called for by Design-Build Team in the interest of overall economy for the Project.

**Business Day, work day, or working day** means any Calendar Day less Saturday, Sunday and State of Georgia holidays.

**Calendar Day** means any day shown on the calendar, beginning and ending at midnight.

**Change in Law** means (a) the adoption of any Law after the date that is ninety (90) days prior to the Proposal Due Date, or (b) any change, amendment to, repeal or revocation of any Law or in the interpretation or application thereof by any Governmental Entity after the date that is ninety (90) days prior to the Proposal Due Date, in each case that is materially inconsistent with Laws in effect ninety (90) days prior to the Proposal Due Date; excluding, however, any such Change in or new Law that also constitutes or causes a change in or new Adjustment Standards, as well as any change in or new Law passed or adopted but not yet effective as of the date that is ninety (90) days prior to the Proposal Due Date.

**Change of Control** means any assignment, sale, financing, grant of security interest, transfer of interest or other transaction of any type or description, including by or through voting securities, asset transfer, contract, merger, acquisition, succession, dissolution, liquidation or otherwise, that results, directly or indirectly, in a change in possession of the power to direct or control or cause the direction or control of the management of Design-Build Team or a material aspect of its business. A change in the power to direct or control or cause the direction or control of the management of a shareholder, member, partner or joint venture member of Design-Build Team may constitute a Change of Control of Design-Build Team if such shareholder, member, partner or joint venture member possesses the power to direct or control or cause the direction or control of the management of Design-Build Team. Notwithstanding the foregoing, the following shall not constitute a Change of Control:

(a) A change in possession of the power to direct or control the management of Design-Build Team or a material aspect of its business due solely to a bona fide open market transaction(s) in securities effected on a recognized public stock exchange, including such transactions involving an initial public offering;

(b) A change in possession of the power to direct or control the management of Design-Build Team or a material aspect of its business due solely to a bona fide transaction involving beneficial interests in the ultimate parent organization of a shareholder, member, partner or joint venture member of Design-Build Team, (but not if the shareholder, member, partner or joint venture member is the ultimate parent organization), unless the transferee in such transaction is at the time of the transaction suspended or debarred or subject to a proceeding to suspend or debar from bidding, proposing or contracting with any federal or State department or agency;

(c) An upstream reorganization or transfer of direct or indirect interests in Design-Build Team so long as there occurs no change in the entity with ultimate power to direct or control or cause the direction or control of the management of Design-Build Team;

(d) A transfer of interests between managed funds that are under common ownership or control other than a change in the management or control of a fund that manages or controls Design-Build Team;

(e) The exercise of minority veto or voting rights (whether provided by applicable Law, by Design-Build Team's organizational documents or by related member or shareholder agreements or similar agreements) over major business decisions of Design-Build Team, provided that if such minority veto or voting rights are provided by shareholder or similar agreements, GDOT has received copies of such agreements; or

**Change Order** means a written approval by GDOT, counter-signed by Design-Build Team, with respect to a GDOT Change or Change Request, which shall set forth any adjustments to the DB Contract Sum and/or the Contract Time, including on account of a Relief Event or Compensation Event, as provided in the Agreement.

**Change Request** means a written request from Design-Build Team seeking to change the character, quantity, quality, description, scope or location of any part of the Work, to modify the DB Documents.

**Chief Executive Officer of the Design-Build Team** means the chief executive officer, president or other senior officer of the Design-Build Team, or the governing body of Design-Build Team, in each case having authority to negotiate and resolve a Dispute with the Commissioner and bind Design-Build Team by his or her decision in regard to such Dispute.

**Claimant** means any Person that would be entitled to protection of payment bond under Code Section 13-10-63, including any P&P Bonds.

**Code** has the meaning set forth in Recital C of the Agreement.

**Commissioner** means the Commissioner of GDOT appointed by the State Transportation Board and any successor thereto having substantially similar powers and authority.

**Communications Plan** has the meaning set forth in Section 2.7 of the Technical Provisions.

**Comparable Limited Access Highways** means Highways that have full control of access, are divided, have grade separations at intersections and are in other respects substantially similar to the Project and associated facilities, as applicable. For purposes of this definition, determination of what portions of the Limited Access Highway system are substantially similar to the Project shall be based on any one or more of similar age, design, engineering, construction, topographical features, operating systems and features, or other features or situations, and/or based on a geographical area in which Highways have been or are susceptible to being affected by a common event (such as but not limited to hurricane or tornado). The presence or absence of tolling and tolling facilities shall not be a factor in determining whether a Highway is substantially similar to the Project.

**Compensation Amount** means the amount of compensation to be paid to Design-Build Team for a Compensation Event as set forth and subject to the limitations of the Agreement, including Article 14.2 therein.

**Compensation Event** means the written notice submitted by Design-Build Team in accordance with Article 14.2 of the Agreement.

**Compensation Event Notice** means the written notice submitted by Design-Build Team in accordance with Article 13.3.2 of the Agreement.

**Completed Payment Activity** means a Payment Activity that Design-Build Team has certified as acceptable and ready for the following activity to begin.

**Completion Date** means the date the Design-Build Team has satisfied all conditions and requirements of and for a Completion Deadline, including the Substantial Completion Deadline, and Final Acceptance, as may be adjusted pursuant to any Supplemental Agreement, including on account of any Relief Events.

**Completion Deadline** means the critical milestones for commencement or completion of the Work as set forth in Exhibit 9 to the Agreement, including without limitation the Substantial Completion Deadline and the Final Acceptance Deadline, as may be adjusted upon approval of the Project Baseline Schedule as set forth in Article 3.2 of the Agreement, and as further adjusted pursuant to any Supplemental Agreement, including on account of any Relief Events.

**Conceptual Layout Plan** means the schematic layout which provides alignment and lane configuration information necessary to verify lane continuity and general scope compliance for the entire Project.

**Construction Commencement Date** means for the date on which Design-Build Team first commences construction of the Project or such relative phase thereof.

**Construction Documents** means all shop drawings, working drawings, fabrication plans, material and hardware descriptions, specifications, construction quality control reports, construction quality assurance reports and samples necessary or desirable for construction of the Project and/or the Utility Adjustments included in the Construction Work, in accordance with the DB Documents.

**Construction Maintenance Limits** means the physical boundaries of Design-Build Team's maintenance responsibilities for the Construction Work.

**Construction Maintenance Limits Plan** means the deliverable to identify the physical boundaries of Design-Build Team's maintenance responsibilities for the Construction Work.

**Construction Phase** has the meaning set forth in Section 2.2.5 of the Technical Provisions.

**Construction Phasing Plan** has the meaning set forth in Section 2.2.5 of the Technical Provisions.

**Construction Work** means all portions of the all Work necessary to build or construct, make, form, manufacture, furnish, install, supply, deliver or equip the Project and/or the Utility Adjustments. Construction Work includes landscaping.

**Contract** means any agreement, and any supplement or amendment thereto, by either (a) Design-Build Team with any other Person or Contractor, or (b) any Contractor with any Person or Subcontractor, to perform any part of the Work or provide any materials, equipment or supplies for any part of the Work, or any such agreement, supplement or amendment at a lower tier, between a Subcontractor and its lower tier sub-subcontractor or supplier. The term “Contract” excludes Utility Agreements and any agreement with GDOT.

**Contract Item Agreement (CIA)** means an Agreement used for including Utility work in the Department’s project and performed by the Department’s Contractor awarded by competitive bid.

**Contract Sum** means the lump sum amount identified in the Agreement (preceding signatures under Article 24).

**Contract Time** means the time period provided for Design-Build Team’s completion of the Work as provided in Article 3.3.1 of the Agreement.

**Contractor** means any Person, including any Subcontractor with whom Design-Build Team has entered into any Contract to perform any part of the Work or provide any materials, equipment or supplies for the Project and/or the Utility Adjustments included in the Construction Work, on behalf of Design-Build Team. The term “Contractor” excludes GDOT.

**Cost to Cure** means an appraisal method applied to estimate a proper adjustment for damages to a property that can be physically and economically corrected, as described in further detail in the GDOT ROW Manual.

**Critical Path** means the sequence of activities that must be completed on schedule for the entire Project to be completed on in accordance with the Milestone Deadlines. This is the longest duration path through the work plan, in terms of time, of logically connected activities on the Project Baseline Schedule ending with the relative Milestone Deadline in respect thereof.

**Customer Groups** means groups, Persons and entities having a perceived stake or interest in the Project, including: the media, elected officials, Governmental Entities, general public residing or working within the general vicinity of the Project or traveling within or across the limits of the Project, business owners within or adjacent to the Project corridor, Utility Owners, railroads, transportation authorities and providers, community groups, local groups (neighborhood associations, business groups, chambers of commerce, convention and visitors bureaus, contractors, etc.) and other Persons or entities affected by the Project, including those identified in Section 2.7 of the Technical Provisions.

**Day** or **day** means calendar day unless otherwise expressly specified.

**Decent, Safe and Sanitary (DSS)** means the condition of a dwelling such that it meets applicable housing and occupancy codes.

**Default Interest Rate** means the statutory interest rate applicable to GDOT for contract payment defaults.

**Default Termination Event** means each of the Design-Build Team Defaults listed in Article 19.3.1 of the Agreement.

**Defect** means any Work that does not otherwise conform with the DB Documents, or otherwise is a defect, whether by design, construction, installation, affecting the condition, use, functionality or operation of any portion of the Work which, ordinary wear and tear excepted, would cause or have the potential to cause one or more of the following:

- (a) a hazard, nuisance or other risk to public or worker health or safety, including the health and safety of Users;
- (b) a structural deterioration of the affected Element or any other part of the Project;
- (c) damage to a third party's property or equipment;
- (d) damage to the Environment;
- (e) failure of the affected Element or any other part of the Project to meet a Performance Requirement; or
- (f) failure of an Element to meet the Target for a measurement record as set forth in the columns headed "Target" and "Measurement Record" in the Performance and Measurement Table Baseline.

**Design-Build Agreement, DB Agreement, or DBA** - see definition for Agreement.

**Design-Build Contract Sum** or **DB Contract Sum** means the total contract sum to be paid to Design-Build Team on account of the fully and properly performed Work as set forth in the Agreement, as adjusted pursuant to Supplemental Agreements (including to reflect adjustments for Compensation Events or Change Orders as provided in the Agreement), including without limitation all of Design-Build Team's profit, fees, financing costs and interest expense for Design-Build Team Debt, all costs of work and services, materials, equipment, supplies, general conditions costs, overhead and administrative expenses, professional fees and subconsultant costs, acquisition and other costs associated with acquisition of any Approved Properties, insurance and bond premiums, sales taxes, assessments, tariffs, permit, license and registration fees, and all other related costs and expenses.

**Design-Build Documents** or **DB Documents** means those documents as set forth in Article 1.2 of the Agreement and all such other agreements entered into by GDOT and Design-Build Team or any Design-Build Team-Related Entity, or otherwise executed by Design-Build Team or a Design-Build Team-Related Entity and delivered to GDOT, with respect to or in connection with this Agreement, including without limitation Supplemental Agreements.

**Design-Build Period** means the period commencing with NTP 1 and ending when Design-Build Team achieves Final Acceptance.

**Design-Build Team** or **DB Team** means the party identified as such in the opening paragraph of this Agreement, together with its permitted successors and assigns.

**Design-Build Team Default** or **DB Team Default** has the meaning set forth in Article 17.1.1 of the Agreement.



**Design-Build Team’s Interest** or **DB Team’s Interest** means all right, title, and interest of Design-Build Team in, to, under or derived from the Agreement and the other DB Documents.

**Design-Build Team Proposed/ Design-Build Team Acquired Right of Way** means Additional Properties; see Section 7 of the Technical Provisions.

**Design-Build Team-Related Entities** or **DB Team Team-Related Entities** means (a) Design-Build Team, (b) Design-Build Team’s shareholders, partners, joint venture members and/or members, (c) the Contractor and all other Subcontractors (including Suppliers), (d) any other Persons performing any of the Work, (e) any other Persons for whom Design-Build Team may be legally or contractually responsible, and (f) the employees, agents, officers, directors, shareholders, representatives, consultants, successors and assign of any of the foregoing; provided, however, that GDOT shall be considered a Design-Build Team-Related Entity.

**Design-Build Team Release(s) of Hazardous Material** or **DB Team Release(s) of Hazardous Material** means (a) Release(s) of Hazardous Material, or the exacerbation of any such release(s), attributable to the culpable actions, culpable omissions, negligence, willful misconduct, or breach of applicable Law or contract by any Design-Build Team-Related Entity; (b) Release(s) of Hazardous Materials arranged to be brought onto the Site or elsewhere by any Design-Build Team-Related Entity; regardless of cause, or (c) use, containment, storage, management, handling, transport and disposal of any Hazardous Materials by any Design-Build Team-Related Entity in violation of the requirements of the DB Documents or any applicable Law or Governmental Approval.

**Design-Build Team Vehicle** or **DB Team Vehicle** means any vehicle authorized by Design-Build Team performing construction, maintenance or operation of the Project, or other related activity.

**Design Deviation** means any deviation from criteria defined in the GDOT Design Policy Manual as a “guideline”. Failure to adhere to the “10 Controlling Criteria” mandated by FHWA and/or the GDOT Standard Design Criteria mandated by GDOT does not qualify as a Design Deviation.

**Design Documents** means all drawings (including plans, profiles, cross-sections, notes, elevations, typical sections, details and diagrams), specifications, reports, studies, calculations, electronic files, records and submittals necessary for, or related to, the design of the Project and/or the Utility Adjustments included in the Design Work and/or the Construction Work.

**Design Speed** means the speed used to determine the various geometric design features of the roadway.

**Design Submittal Guide** shall have the meaning set forth in Section 2.2.5 of the Technical Provisions.

**Design Work** means all Work of design, engineering or architecture for the Project or Utility Adjustments.

**Deviation** means any proposed or actual change, deviation, modification, alteration or exception from this Agreement, the Technical Provisions, Technical Documents or Governmental Approvals.

**Directive Letter** means the letter described in Article 13.1 of the Agreement.

**Disadvantaged Business Enterprise** or **DBE** has the meaning set forth 49 CFR 23 and further described in Attachment 1 to Exhibit 8 to the Agreement.

**Discipline Groups** has the meaning set forth in Section 3.6.10 of the Technical Provisions.

**Discriminatory** or **Discriminatory Action** means (a) materially more onerous application to Design-Build Team or the Project of changes or additions to Technical Provisions or Technical Documents than the application thereof to other Comparable Limited Access Highways, or (b) selective application of changes or additions to Technical Provisions or Technical Documents to Design-Build Team or the Project and not to other Comparable Limited Access Highways. Notwithstanding the foregoing, the following actions are not Discriminatory or Discriminatory Actions: (i) any such application in response to any act or omission by or on behalf of Design-Build Team in violation of Law or the DB Documents; (ii) Safety Compliance; (iii) any such application in response to a directive by the U.S. Department of Homeland Security or comparable State agency, unless such directive is directed solely at or solely affects the Project and such application requires specific changes in Design-Build Team's normal design, construction, operation or maintenance procedures in order to comply; and (iv) any other actions necessary to address potential safety concerns arising from a specific condition or feature peculiar to the Project.

**Dispute** means any claim, dispute, disagreement or controversy between GDOT and Design-Build Team concerning their respective rights and obligations under the DB Documents, including concerning any alleged breach or failure to perform and remedies.

**Dispute Resolution Procedures** means the procedures for resolving Disputes set forth in Article 17.7 of the Agreement.

**Early Adjustment** means a Utility identified as such in Section 6 of the Volume 2.

**Early Termination Date** means the effective date of termination of the Agreement for any reason prior to the stated expiration Final Acceptance Deadline, as specified in the relevant provisions of Article 19.

**Effective Date** means the date of the Agreement or such other date as shall be mutually agreed upon in writing by GDOT and Design-Build Team.

**Element** means an individual component, system or subsystem of the Work.

**Emergency** means an unforeseen event affecting the Project whether directly or indirectly which (a) causes or has the potential to cause disruption to the free flow of traffic on the Project or a threat to the safety of the public; (b) is an immediate or imminent threat to the long term integrity of any part of the infrastructure of the Project, to the Environment, to property adjacent to the Project or to the safety of Users or the traveling public; or (c) is recognized by the Georgia Department of Public Safety as an emergency.

**Engineer of Record** means a Professional Engineer as defined in this Exhibit 1 on the Design-Build Team who is responsible and liable for the adequacy and safety of the design. This

individual will sign and seal the Released for Construction plans, as well as revisions on construction and shop drawings.

**Environment** means air, soils, surface waters, groundwater, land, stream sediments, surface or subsurface strata, biological resources, including endangered, threatened and sensitive species, natural systems, including ecosystems, and historic, archeological and paleontological resources.

**Environmental Approvals (also Environmental Document Approvals)** means all Governmental Approvals arising from or required by any Environmental Law in connection with development of the Project, including approvals and permits required under NEPA/GEPA.

**Environmental Commitment (also Environmental Permits, Issues and Commitments)** means an environmental requirement that must be fulfilled before, during or after construction. Environmental Commitments include commitments to avoid impacts in specified areas, complete environmental investigations before construction impacts, or to perform specified actions after completion of construction.

**Environmental Documents** means all required documents and submittals pertaining to either federal or state laws and permits which are necessary to complete the Project. This may include but not be limited to NEPA, GEPA, and/or other state and federal environmental laws.

**Environmental Law** means any Law applicable to the Project or the Work regulating or imposing liability or standards of conduct that pertains to the Environment, Hazardous Materials, contamination of any type whatsoever, or environmental health and safety matters, and any lawful requirements and standards that pertain to the Environment, Hazardous Materials, contamination of any type whatsoever, or environmental health and safety matters, set forth in any permits, licenses, approvals, plans, rules, regulations or ordinances adopted, or other criteria and guidelines promulgated, pursuant to Laws applicable to the Project or the Work, as such have been or are amended, modified, or supplemented from time to time (including any present and future amendments thereto and reauthorizations thereof) including those relating to:

- (a) The manufacture, processing, use, distribution, existence, treatment, storage, disposal, generation, and transportation of Hazardous Materials;
- (b) Air, soil, surface and subsurface strata, stream sediments, surface water, and groundwater;
- (c) Releases of Hazardous Materials;
- (d) Protection of wildlife, Threatened or Endangered Species, sensitive species, wetlands, water courses and water bodies, historical, archeological, and paleontological resources, vegetative buffers, and natural resources;
- (e) The operation and closure of underground storage tanks;
- (f) and safety of employees and other persons; and
- (g) Notification, documentation, and record keeping requirements relating to the foregoing.

Without limiting the above, the term “Environmental Laws” shall also include the following:

- (i) The National Environmental Policy Act (42 U.S.C. §§ 4321 *et seq.*), as amended;
- (ii) The Georgia Environmental Policy Act (Section 12-16-1, *et seq.* of the Official Code of Georgia Annotated), as amended;
- (iii) State species laws, including Georgia Endangered Wildlife Act and/or, Georgia Wildflower Preservation Act;
- (iv) The Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. §§ 9601 *et seq.*), as amended;
- (v) The Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 *et seq.*);
- (vi) The Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. §§ 11001 *et seq.*), as amended;
- (vii) The Clean Air Act (42 U.S.C. §§ 7401 *et seq.*), as amended;
- (viii) The Federal Water Pollution Control Act, as amended by the Clean Water Act (33 U.S.C. §§ 1251 *et seq.*);
- (ix) The Resource Conservation and Recovery Act (42 U.S.C. §§ 6901, *et seq.*), as amended;
- (x) The Toxic Substances Control Act (15 U.S.C. §§ 2601 *et seq.*), as amended;
- (xi) The Hazardous Materials Transportation Act (49 U.S.C. §§ 1801 *et seq.*), as amended;
- (xii) The Oil Pollution Act (33 U.S.C. §§ 2701, *et seq.*), as amended;
- (xiii) The Federal Insecticide, Fungicide and Rodenticide Act (7 U.S.C. §§ 136 *et seq.*), as amended;
- (xiv) The Federal Safe Drinking Water Act (42 U.S.C. §§ 300 *et seq.*), as amended;
- (xv) The Federal Radon and Indoor Air Quality Research Act (42 U.S.C. §§ 7401 *et seq.*), as amended;
- (xvi) The Occupational Safety and Health Act (29 U.S.C. §§ 651 *et seq.*);
- (xvii) The Endangered Species Act (16 U.S.C. §§ 1531 *et seq.*), as amended;
- (xviii) The Fish and Wildlife Coordination Act (16 U.S.C. §§ 661 *et seq.*), as amended;
- (xix) The National Historic Preservation Act (16 U.S.C. §§ 470 *et seq.*), as amended;
- (xx) The Coastal Zone Management Act (33 U.S.C. §§ 1451 *et seq.*), as amended;

- (xxi) Georgia Water Quality Act (O.C.G.A. § 12-5-20);
- (xxii) Georgia Erosion and Sedimentation Act (O.C.G.A. § 12-7-1), as amended;
- (xxiii) Best Management Practices (O.C.G.A. § 12-7-6(b)(15)); and
- (xxiv) Georgia Underground Storage Act (O.C.G.A. § 12-13-1)).

**Exhibits** means all exhibits, riders, and other attachments to the DB Documents, including without limitation Volume 1, Volume 2, and Volume 3, as well as, any of the aforementioned, which are incorporated into any DB Documents by reference, and all amendments, modifications, and supplements thereto.

**Existing Improvements** means the existing highway, bridge, and related improvements as of the date that is ninety (90) days prior to the Proposal Due Date within the Construction Maintenance Limits.

**Existing Right of Way** or **Existing ROW** means any real property (which term is inclusive of all estates and interests in real property), improvements and fixtures (i) as provided in Article 2.2 of the Agreement and more specifically described and identified as “Existing ROW” within Exhibit 4, in which GDOT has a leasehold estate and interest pursuant to the Estate for Years or other property right or interest, and including any locally-acquired easements, and (ii) any Proposed Right of Way, which GDOT at any time after the Effective Date, shall acquire a leasehold estate or other property interest. The term specifically includes all air space, surface rights and subsurface rights within the limits of the Existing Right of Way.

**Existing Utility Property Interest** means any right, title or interest in real property (e.g., a fee or an easement) claimed by a Utility Owner as the source of its right to maintain an existing Utility in such real property, which is compensable in eminent domain.

**Federal Requirements** means the provisions required to be part of federal-aid construction contracts.

**Final Acceptance** means the occurrence of all the events and satisfaction of all the conditions set forth in Article 7.7.3 of the Agreement, as and when confirmed by GDOT’s issuance of a certificate in accordance with the procedures and within the timeframe established in Article 7.7.3 of the Agreement.

**Final Acceptance Date** means the date upon which Design-Build Team has satisfied all conditions of and for Final Acceptance and GDOT has certified same.

**Final Acceptance Deadline** means the deadline for achieving Final Acceptance, as set forth in the Milestone Schedule, as such deadline may be extended for any Relief Event or Change Order as and to extend provided in the Agreement.

**Final Design** shall have the meaning set forth in Article 3.3.1.2 of the Agreement.

**Final Plans** means the Design Documents which provide the complete and final documents necessary for the construction, operations, and maintenance of the Project or any portion thereof including any Utility Adjustments required by the Project.

**Final ROW Lines** means the final location of all Right of Way within the project limits.

**Fiscal Year** means the twelve (12) month fiscal year used by GDOT for budgeting purposes.

**Float** means the amount of time that any given activity or logically connected sequence of activities shown on the Preliminary Baseline Schedule and Project Baseline Schedule, as the case may be, may be delayed before it will affect completion of any Work as required to achieve any Milestone Schedule Deadline, including the Substantial Completion Deadline and Final Acceptance Deadline.

**Force Majeure Event** means the occurrence of any of the following events that materially and adversely affects performance of Design-Build Team's obligations, provided that such events (or the effects of such events) could not have been avoided by the exercise of caution, due diligence, or reasonable efforts by Design-Build Team: (a) war (including civil war and revolution), invasion, armed conflict, violent act of foreign enemy, military or armed blockade, or military or armed takeover of the Project, in each case occurring within the State; (b) any act of terrorism or sabotage that causes direct physical damage to the Project; (c) nuclear explosion or contamination, in each case occurring within the State; (d) riot and civil commotion on or in the immediate vicinity of the Project; (e) fire, explosion, flood, earthquake, hurricane, or tornado, in each case that causes direct physical damage to the Project; or (f) national or statewide (i.e. State of Georgia) strike that has a direct adverse impact on Design-Build Team's ability to obtain materials, equipment or labor for the Project.

**Formal Consultation** means during Section 7 Consultation (Endangered Species Act) that a Federal agency determines, through a biological assessment or other review, that its action is likely to adversely affect a listed species.

**GDOT** means the Georgia Department of Transportation, as set forth in the recitals of the Agreement, and any entity succeeding to the powers, authorities and responsibilities of GDOT invoked by or under the DB Documents.

**GDOT-Caused Delay** means any of the following events, to the extent they result in a material delay or interruption in performance of any material obligation under the Agreement, and provided such events are beyond Design-Build Team's control and are not due to any act, omission, negligence, recklessness, willful misconduct, breach of contract or Law of any of the Design-Build Team-Related Entities, solely to the extent not concurrent or overlapping with any delay attributable to Design-Build Team, and further provided that such events (or the effects of such events) could not have been avoided by the exercise of caution, due diligence, or reasonable efforts by Design-Build Team, and with respect to any Compensation Event, solely to the extent that the cumulative effect of any such delays as set forth below have or shall result in delays, after taking into account any available Float, in excess of ninety (90) days:

(a) Failure of GDOT to issue NTP 1 as provided pursuant to Article 3.3.1.1 of the Agreement and/or failure to issue NTP 2 or NTP 3 as provided pursuant to Article 3.3.1.2 and Article 3.3.1.3 of the Agreement;

(b) GDOT Changes;

(c) Failure of GDOT to provide the GDOT-Provided Approvals within the time periods set forth in Section 4.2.2 of the Technical Provisions, subject to Article 6.2.1 of the Agreement; or

(d) Failure of GDOT to provide responses to proposed schedules, plans, Design Documents, condemnation and acquisition packages, and other Submittals and matters submitted to GDOT after the Effective Date for which response is required under the DB Documents as an express prerequisite to Design-Build Team's right to proceed or act, within the time periods (if any) indicated in the DB Documents, or if no time period is indicated, within a reasonable time, taking into consideration the nature, importance and complexity of the submittal or matter, following delivery of written notice from Design-Build Team requesting such action in accordance with the terms and requirements of the DB Documents;

(e) Failure of GDOT to provide Design-Build Team with access to the Right of Way as required; or

(f) The occurrence of a GDOT Release of Hazardous Materials.

Any proper suspension of Work pursuant to Article 17.3.7 of the Agreement shall not be considered a GDOT -Caused Delay.

**GDOT Change** means:

(a) Any change in the scope of the Work or terms and conditions of the Technical Provisions or Technical Documents (including changes in the standards applicable to the Work) that GDOT has directed Design-Build Team to perform through a Supplemental Agreement as described in Article 13 of the Agreement or a Directive Letter pursuant to Article 13.1 of the Agreement; and

(b) Any other event that the DB Documents expressly state shall be treated as a GDOT Change.

**GDOT Claims Account** means the designated account for the benefit of GDOT and Design-Build Team to be administered and maintained by GDOT for payments on account of Claims as required by GDOT pursuant to Article 17.3.4.3 of the Agreement.

**GDOT Default** has the meaning set forth in Article 17.5.1 of the Agreement.

**GDOT Re-evaluation Period** means the specified amount of time set forth as a condition in an approved ATC for GDOT to obtain the applicable Governmental Approval required for a re-evaluation of the NEPA/GEPA Approval, prior to Design-Build Team being entitled to a Relief Event or Compensation Event; provided, however, that such time shall commence upon the date that GDOT has received a full and complete document package from Design-Build Team required for GDOT to process such re-evaluation.

**GDOT Recoverable Costs** means:

(a) The costs of any assistance, action, activity or Work undertaken by GDOT which Design-Build Team is liable for or is to reimburse under the terms of the DB Documents, including the charges of third party contractors, and reasonably allocated wages, salaries, compensation and overhead of GDOT staff and employees, performing such action, activity or Work (exclusive or ordinary and customary administration and review activities by GDOT employees or consultants (except for such consultant fees and expenses as expressly reserved in the Agreement); plus

(b) Third-party costs GDOT incurs to publicly procure any such third-party contractors;  
plus

(c) Reasonable fees and costs of attorneys (including the reasonably allocable fees and costs of the Georgia Attorney General's Office), financial advisors, engineers, architects, insurance brokers and advisors, investigators, traffic and revenue consultants, risk management consultants, other consultants, and expert witnesses, as well as court costs and other litigation costs, in connection with any such assistance, action, activity or Work, including in connection with defending claims by and resolving disputes with third party contractors; plus

(d) Any expense or cost for which GDOT is to be reimbursed by Design-Build Team pursuant to the express terms of the Agreement; including without limitation Articles 2.2.3.2, 6.2.5, 7.5.7.2, 16.1.2.4, 16.6.7, 17.3.3.2, 17.3.8.3, 17.3.11.2, and 22.3.3; plus

(e) Interest on all the foregoing sums at the Default Interest Rate from the date due under the applicable terms of the DBA Documents and continuing until paid.

**GDOT Release(s) of Hazardous Materials** means, except as provided below, the introduction in, on or under the Construction Maintenance Limits or Operation and Maintenance Limits of Hazardous Material directly by GDOT, and their respective agents and contractors (excluding Design-Build Team). GDOT Release(s) of Hazardous Material excludes, however, (i) any Hazardous Materials so introduced that are in or part of construction materials and equipment incorporated into the Project and (ii) any Hazardous Materials identified in the phase 1 investigation and report described in clause (i) of the definition of Pre-Existing Hazardous Materials.

**GDOT Standard Specifications** means the Georgia Department of Transportation Standard Specifications, Construction of Transportation Systems.

**General Purpose Lanes** means Limited Access Highway lanes within the Existing Right of Way other than the Managed Lanes.

**Geotechnical Engineering Reports** means the reports which meet the requirements described in Section 8.2 of the Technical Provisions.

**GEPA** means the Georgia Environmental Policy Act, as amended and as it may be amended from time to time.

**GEPA Approval** means the (a) GEPA document as approved by Georgia DOT including any studies, reports, Environmental Commitments, and all other procedural requirements and documents required for the Project or a portion of the Project, as (b) may be modified pursuant to all Georgia EPD, USACE, USFWS approvals, and approved supplements and re-evaluations pertaining to the Project.

**Good Industry Practice** means the exercise of the degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected from time to time from a skilled and experienced designer, engineer, or constructor, seeking in good faith to comply with its contractual obligations, complying with the DB Documents, all applicable Laws and Governmental Approvals, and engaged in the same type of undertaking in the United States under similar circumstances and conditions.



**Governmental Approval** means any permit, license, consent, concession, grant, franchise, authorization, waiver, variance or other approval, guidance, protocol, mitigation agreement, special provision, or memoranda of agreement/understanding, and any amendment or modification of any of them provided by Governmental Entities including State, local, or federal regulatory agencies, agents, or employees, which authorize or pertain to the Project or the Work.

**Governmental Entity** means any federal, State or local government and any political subdivision or any governmental, quasi-governmental, judicial, public or statutory instrumentality, administrative agency, authority, body or entity other than GDOT.

**Guarantor** means any Person that is the obligor under any guaranty in favor of GDOT required under the Agreement, including any Design-Build Guaranty.

**Hazardous Materials** means any element, chemical, compound, material or substance, whether solid, liquid or gaseous, which at any time is defined, listed, classified or otherwise regulated in any way under any Environmental Laws, or any other such substances or conditions (including mold and other mycotoxins or fungi) which may create any unsafe or hazardous condition or pose any threat to human health and safety. "Hazardous Materials" includes the following:

(a) Hazardous wastes, hazardous material, hazardous substances, hazardous constituents, and toxic substances or related materials, whether solid, liquid, or gas, including substances defined as or included in the definition of "hazardous substance", "hazardous waste", "hazardous material", "extremely hazardous waste", "acutely hazardous waste", "radioactive waste", "radioactive materials", "bio-hazardous waste", "pollutant", "toxic pollutant", "contaminant", "restricted hazardous waste", "infectious waste", "toxic substance", "toxic waste", "toxic material", or any other term or expression intended to define, list or classify substances by reason of properties harmful to health, safety or the indoor or outdoor environment (including harmful properties such as ignitability, corrosivity, reactivity, carcinogenicity, toxicity, reproductive toxicity, "TCLP" toxicity" or "EP toxicity" or words of similar import under any applicable Environmental Laws);

(b) Any petroleum, including crude oil and any fraction thereof, and including any refined petroleum product or any additive thereto or fraction thereof or other petroleum derived substance; and any waste oil or waste petroleum byproduct or fraction thereof or additive thereto;

(c) Any drilling fluids, produced waters and other wastes associated with the exploration, development or production of crude oil, natural gas or geothermal resources;

(d) Any flammable substances or explosives;

(e) Any radioactive materials;

(f) Any asbestos or asbestos-containing materials;

(g) Any lead and lead-based paint;

(h) Any radon or radon gas;

(i) Any methane gas or similar gaseous materials;

- (j) Any urea formaldehyde foam insulation;
- (k) Electrical equipment which contains any oil or dielectric fluid containing regulated levels of polychlorinated biphenyls;
- (l) Pesticides;
- (m) Any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any Governmental Entity or which may or could pose a hazard to the health and safety of the owners, operators, Users or any Persons in the vicinity of the Project or to the indoor or outdoor Environment; and
- (n) Soil, or surface water or ground water, contaminated with Hazardous Materials as defined above.

**Hazardous Materials Management** means procedures, practices and activities to address and comply with Environmental Laws and Environmental Approvals with respect to Hazardous Materials encountered, impacted, caused by or occurring in connection with the Project or the Work, as well as investigation and remediation of such Hazardous Materials. Hazardous Materials Management may include sampling, stock-piling, storage, backfilling in place, asphalt batching, recycling, treatment, clean-up, remediation, transportation and/or off-site disposal of Hazardous Materials, whichever approach is effective, most cost-efficient and authorized under applicable Law.

**Highway** means a travel way for vehicular traffic that is included in the State or federal highway system.

**Highway Service Systems** means GDOT's or a Governmental Entity's lighting and electrical systems, traffic control systems, communications systems and irrigation systems serving street or highway purposes (including ITS and Intelligent Vehicle Highway System facilities).

**Historic Property** means any prehistoric or historic district, site, building, structure or object included in, or eligible for inclusion in, either the National Register of Historic Places or the Georgia Register of Historic Places.

**High Occupancy Vehicle (HOV)** means a passenger vehicle carrying a legally specified minimum number of passengers. HOVs include carpools, vanpools, motorcycles and buses.

**Immigration Act** means the Georgia Immigration & Compliance Act, O.C.G.A. § 13-10-90, *et seq.* as set forth in Article 10.6.4 of the Agreement.

**Incident** means any unplanned event during the course of construction.

**Incident Management Plan** means Design-Build Team's plan for detection and response to Incidents or Emergencies, as part of the PMP.

**Indemnified Parties** means GDOT, the State, the State Transportation Board, and their respective successors, assigns, officeholders, officers, directors, commissioners, agents, representatives, consultants and employees. Indemnified Party shall mean any of the aforementioned.

**Informal Consultation** means during Section 7 Consultation (Endangered Species Act) that a Federal agency determines that its action may affect a listed species.

**Instructions to Proposers (ITP)** means the document that provides instructions to be followed by Proposers in their responses to the RFP.

**Insurance Policies** means all of the insurance policies Design-Build Team is required to carry pursuant to Article 16.1 of the Agreement.

**Intellectual Property** means all current and future legal and/or equitable rights and interests in know-how, patents (including applications), copyrights (including moral rights), trademarks (registered and unregistered), service marks, trade secrets, designs (registered and unregistered), utility models, circuit layouts, plant varieties, business and domain names, inventions, solutions embodied in technology, and other intellectual activity, and applications of or for any of the foregoing, subsisting in or relating to the Project, Project design data or Project traffic data. Intellectual Property includes toll-setting and traffic management algorithms, and software used in connection with the Project (including but not limited to software used for management of traffic on the Project), and Source Code. Intellectual Property also includes the trade secret information contained in proprietary pricing information. Intellectual Property is distinguished from physical construction and equipment itself and from drawings, plans, specifications, layouts, depictions, manuals and other documentation that disclose Intellectual Property.

**Intelligent Transportation System (ITS)** means an advanced application which, without embodying intelligence as such, aims to provide innovative services relating to different modes of transport and traffic management and enable various users to be better informed and make safer, more coordinated, and 'smarter' use of transport networks.

**Interim Design** means any submittal of Design Documents after the Preliminary Plans have been accepted but prior to submittal of Final Plans for the entire Project or any approved Project segment. Interim Designs are intended to resolve conflicts and unresolved comments from the Preliminary Plans submittal.

**Joint Project Inspection** has the meaning set forth in Section 2.1.6 of the Technical Provisions.

**Key Contract** means any one of the following Contracts for Work that Design-Build Team or Design-Build Team's Contractor's causes to be performed:

- (a) All prime construction Contracts;
- (b) All project or program management services, architectural design, or engineering Contracts; and
- (c) All other Contracts with a single Contractor or Subcontractor which individually or in the aggregate total in excess of \$25 million.

**Key Contractor** means any Contractor or Subcontractor, as the case may be, under any Key Contract.

**Key Personnel** or **Key Team Members** means those individuals appointed by Design-Build Team and approved by GDOT from time to time to fill the “Key Personnel” positions. The specific individuals appointed by Design-Build Team and approved by GDOT to initially fill certain of the Key Personnel positions are identified in Exhibit 2 to the Agreement.

**Landscape Enhancement Plan** has the meaning set forth in Section 15.3.1 of the Technical Provisions.

**Law** or **Laws** means (a) any statute, law, code, regulation, ordinance, rule or common law, (b) any binding judgment (other than regarding a Dispute), (c) any binding judicial or administrative order or decree (other than regarding a Dispute), (d) any written directive, guideline, policy requirement or other governmental restriction (including those resulting from the initiative or referendum process, but excluding those by GDOT within the scope of its administration of the DB Documents or in the normal course of its adoption of new or revised technical standards pursuant to Article 7.2.5 of the Agreement) or (e) any similar form of decision of or determination by, or any written interpretation or administration of any of the foregoing by, any Governmental Entity, in each case which is applicable to or has an impact on the Project or the Work, whether taking effect before or after the Effective Date, including Environmental Laws. “Laws”, however, excludes Governmental Approvals.

**Lead Contractor** shall mean the entity designated as a Proposer’s “Lead Contractor” in its SOQ. There may only be one Lead Contractor per Proposer team.

**Lead Engineering Firm or Lead Design Consultant** shall mean the entity designated as a Proposer’s “Lead Design Consultant” in its SOQ. There may only be one Lead Design Consultant per Proposer team.

**Line** or **line** means, in the context of Utilities or Highway Service Systems, a line, pipeline, conduit or cable used for utility purposes, including underground, surface or overhead facilities.

**Liquidated Damages** means such liquidated damages as may accrue and be due and payable by Design-Build Team to GDOT as set forth under Article 17.4 of the Agreement and as set forth under Exhibit 18 thereto.

**Loss** or **Losses** means any loss, damage, injury, liability, obligation, cost, response cost, expense (including attorneys’, accountants’ and expert witnesses’ fees and expenses (including those incurred in connection with the enforcement of any indemnity or other provision of the Agreement)), fee, charge, judgment, penalty or fine. Losses include injury to or death of persons, damage or loss of property, and harm or damage to natural resources.

**Maintenance Acceptance** means the point at which the DB Team has made a written request and GDOT has issued a written determination of Maintenance Acceptance, subject to the following: (a) all Work at that bridge location shall meet the standards for completion listed in Article 7.7.1.3 through 7.7.1.5 and Article 7.7.2.1; (b) upon satisfactory completion of all Punch List items for a bridge, GDOT will issue a determination of Maintenance Acceptance for that bridge; and (c) Maintenance Acceptance does not constitute Substantial Completion or Final Acceptance and is for the limited purpose identified in Sections 104.05 and 105.14 of the GDOT Standard Specifications.

**Major Culvert** means a culvert that provides an opening of more than 35 square feet in a single installation or multiple installations. A Major Culvert may consist of a single round pipe,

pipe arch, open or closed-bottom box, bottomless arch, or multiple installations of these structures placed adjacent or contiguous as a unit. Certain Major Culverts are classified as bridges when they provide an opening of more than 20 feet, measured parallel to the roadway; such culverts may be included in the bridge inventory.

**Major Non-Participating Member** means a Proposer's Lead Contractor and Lead Engineering Firm. If any of these entities qualify as a Participating Member, then that entity shall not be treated as a Major Non-Participating Member. Major Non-Participating Members are not considered Contractors to Proposer regardless of their role in the performance of Project-related services.

**Major River Crossing** means a crossing with a 100-year storm event flow in excess of 10,000 cubic feet per second (cfs).

**Management Plans** means all of the management plans identified in Section 2 of the Technical Provisions.

**Maximum Closure Duration** has the meaning set forth in Exhibit 9 to the Agreement.

**Memorandum of Understanding (MOU)** means a formal agreement between GDOT and one or more agencies, organizations or providers.

**Milestone Deadline** shall have the same meaning as any Milestone Schedule Deadline.

**Milestone Schedule** means the schedule of deadlines set forth in Exhibit 9 to the Agreement, as may be adjusted upon approval of the Project Baseline Schedule as set forth in Article 3.3 of the Agreement and as may be further adjusted pursuant to any Supplemental Agreement, including on account of any Relief Events.

**Milestone Schedule Deadline** means the critical milestones for commencement and/or completion of the Work as set forth in Exhibit 9 to the Agreement, including without limitation the Substantial Completion Deadline and the Final Acceptance Deadline, as may be adjusted upon approval of the Project Baseline Schedule as set forth in Article 3.3 of the Agreement, and as further adjusted pursuant to any Supplemental Agreement, including on account of any Relief Events.

**Minor Culvert** means any culvert not classified as a Major Culvert.

**Mobilization** means Work to establish and remove offices, plants, and facilities; and to move personnel, equipment, and supplies to and from the Project site to begin Work or complete Work.

**NEPA** means the National Environmental Policy Act, 42 U.S.C. § 4321 *et seq.*, as amended and as it may be amended from time to time.

**NEPA Approval** means the (a) NEPA document as approved by FHWA including any studies, reports, Environmental Commitments, and all other procedural requirements and documents required for FHWA approval for the Project or a portion of the Project, as (b) may be modified pursuant to all approved supplements and re-evaluations pertaining to the Project.

**NEPA Finality Date** means the date NEPA Approval becomes final and non-appealable and the federal statute of limitations for commencing legal action to challenge the validity of any NEPA Approval has expired.

**Nonconforming Work** means Work that does not conform to the requirements of the DB Documents, the Governmental Approvals, applicable Law or the Design Documents.

**Nonrefundable Deductions** means such nonrefundable deductions as may accrue and be due and payable by Design-Build Team to GDOT as set forth under Article 17.4 of the Agreement and as set forth under Exhibit 18 thereto.

**Notice of Termination for Convenience** means written notice issued by GDOT to Design-Build Team terminating the Agreement in whole or in part for convenience.

**Notice to Proceed** or **NTP** means a written notice issued by GDOT to Design-Build Team authorizing Design-Build Team to proceed with the portion or phase of the Work as being designated as subject to such notice to proceed in the Preliminary Baseline Schedule, the Project Baseline Schedule, or otherwise in the Agreement Documents, including without limitation NTP 1, NTP 2, and NTP 3.

**NTP 1** means a written notice issued by GDOT to Design-Build Team authorizing Design-Build Team to proceed with the portion of the Work described in Article 3.3.1.1 of the Agreement.

**NTP 1 Conditions Deadline** means the outside date set forth in the Milestone Schedule (or the Project Baseline Schedule as to the extent such outside date is adjusted thereby) by which Design-Build Team is obligated under the Agreement to satisfy all conditions to issuance of NTP 1, as such deadline may be extended for Relief Events from time to time pursuant to the Agreement.

**NTP 2** means a written notice issued by GDOT to Design-Build Team authorizing Design-Build Team to proceed with the portion of the Work described in Article 3.3.1.2 of the Agreement.

**NTP 2 Conditions Deadline** means the outside date set forth in the Milestone Schedule (or the Project Baseline Schedule as to the extent such outside date is adjusted thereby) by which Design-Build Team is obligated under the Agreement to satisfy all conditions to issuance of NTP 2, as such deadline may be extended for Relief Events from time to time pursuant to the Agreement.

**NTP 3** means a written notice issued by GDOT to Design-Build Team pursuant to Article 3.3.1.3 of the Agreement authorizing Design-Build Team to proceed with the remaining Work and other activities pertaining to the Project.

**NTP 3 Conditions Deadline** means the outside date set forth in the Milestone Schedule (or the Project Baseline Schedule as to the extent such outside date is adjusted thereby) by which Design-Build Team is obligated under the Agreement to satisfy all conditions to issuance of NTP 3, as such deadline may be extended for Relief Events from time to time pursuant to the Agreement.

**Open Book Basis** means allowing the relevant Party to review all underlying assumptions and data associated with the issue in question, including, but not limited to, assumptions as to costs of the Work, schedule, composition of equipment spreads, equipment rates, labor rates,

productivity, estimating factors, design and productivity allowance, contingency and indirect costs, risk pricing, discount rates, interest rates, inflation and deflation rates, and other items reasonably required by the relevant Party.

**Open Government Laws** mean, collectively, the Georgia Open Records Act, Ga. Code Ann. §§ 50-18-70 *et seq.*, Section 32-2-80(a)(40) of the Code and Section 672-17.06 of the Rules, as amended from time to time.

**Optical Character Recognition (OCR)** means the process of converting an image to text.

**Owner Verification Tests (OVT)** means the material tests performed in accordance with the applicable GDOT test method to verify the accuracy of the tests performed by Design-Build Team and pursuant to the approved Quality Management Plan to ensure that only materials of specified quality or better are accepted and incorporated into the Project.

**P&P Bonds or Performance and Payment Bonds** means the bonds meeting the requirements of Article 16.2.1 of the Agreement.

**P&P Obligor** means the Person identified as the obligor or account party in the P&P Bonds, as applicable.

**Participating Agency** means a public, quasi-public, or private agency that has agreed to cooperate with and assist Design-Build Team during an Emergency.

**Participating Member** means (a) if the Proposer is a joint venture, partnership, or limited liability company, each member of the joint venture, partnership or limited liability company; or (b) if the Proposer is a corporation or other corporate entity, the Proposer.

**Party** means Design-Build Team or GDOT, as the context may require, and “**Parties**” means Design-Build Team and GDOT, collectively.

**Payment Activity** means completion of an Element of the Work for which payment on account of the DB Contract Sum shall be due, subject to the terms of this Agreement and as follows:

(a) The first Payment Request (after NTP 1) may include the Payment and Performance Bond amounts;

(b) The first Payment Request (after NTP 3) for each Construction Phase may include 3% of the of the construction cost for Mobilization apportioned to each bridge location for which NTP 3 has been issued set forth in the Schedule of Values, whichever is less;

(c) Design-Build Team’s indirect costs such as administration, contingencies, site cleanup and maintenance, access, off site access roads and security costs related to design-build costs shall be prorated through all Payment Activities.

**Payment Request** means the request for payment on account of the Work all in accordance with the terms and conditions set forth in GDOT Standard Specification 109.03.

**Permanent Works** are permanent structures and parts thereof required of the completed DB Documents.

**Permitted Design Exceptions** means design exceptions identified in Section 11.2 of the Technical Provisions that are allowed to be implemented on the Project.

**Person** means any individual, corporation, joint venture, limited liability company, company, voluntary association, partnership, trust, unincorporated organization, Governmental Entity, or GDOT.

**Phase 1 Hazardous Materials Investigation** means an environmental assessment conducted in accordance with the DB Documents and ASTM E-1527-05, or any future revision or replacement thereof, to identify Recognized Environmental Conditions and potential Recognized Environmental Conditions.

**Plans** means (only where capitalized) contract drawings, working drawings, supplemental drawings, detail sheets or exact reproductions thereof, which show the location, character, dimensions and details of the Construction Work to be done.

**Pre-existing Hazardous Materials** means Hazardous Materials that meet all the following criteria:

(a) The Hazardous Materials are in, on or under the Right of Way as of the date GDOT makes available to Design-Build Team the affected parcel; or

(b) The Hazardous Materials are not located in, on or under any Project Specific Locations or Additional Properties, except Additional Properties required due to GDOT Changes (including GDOT Changes regarding the initial construction).

For purposes of determining whether Hazardous Materials were in, on or under the Right of Way or any Additional Properties required by GDOT to be included in the Property as a result of GDOT Changes, as of the date on which GDOT makes available to Design-Build Team the affected parcel, Design-Build Team shall have the burden of proof to demonstrate it was not a Design-Build Team Release of Hazardous Materials:

(i) As to any Hazardous Materials not identified as being present as of such date in the Phase 1 investigations of the Project conducted by GDOT prior to the Effective Date or any Phase 1 Hazardous Materials Investigation or Phase 2 Hazardous Materials Investigation supplementing the foregoing report prepared prior to the Effective Date; and

(ii) As to any Additional Properties required by GDOT to be included in the Property as a result of GDOT Changes, any Phase 1 Hazardous Materials Investigation thereof prepared and delivered prior to the Effective Date.

For the purpose of this definition, “makes available” means:

(x) The Effective Date, except for parcels not yet acquired as of the Effective Date; and

(y) As to parcels not yet acquired as of the Effective Date and as to Additional Properties required by GDOT to be included in the Property as a result of GDOT Changes, the date Design-Build Team first receives the right to take and maintain possession of the parcel for all purposes for the remainder of the Term in accordance with the DB Documents, including commencement of construction, as the result of GDOT’s having secured title or right of



possession by contract or title instrument or by a special commissioners' award through the eminent domain process or otherwise.

**Preliminary Baseline Schedule** means the high level, logic based, critical path schedule representing Design-Build Team's plan to complete performance of the Work beginning on the date of NTP 1 to Final Acceptance of the Work, submitted with the Proposal, as set forth on Exhibit 10 to the Agreement. The Preliminary Baseline Schedule shall not mean the Project Status Schedule Updates as set forth in Section 2.5 of the Technical Provisions, nor shall such Project Status Schedule Updates constitute revisions or amendments to the Preliminary Baseline Schedule.

**Preliminary Plans** means the Design Documents which provide the preliminary design necessary for the related to construction, operations, and maintenance of the entire Project including any Utility Adjustments required by the Project.

**Presidential Disaster Declaration** means a declaration of a major disaster by the President of the United States triggering assistance from FEMA pursuant to the Disaster Relief Act of 1974 (Pub. L. No. 93-288, as amended).

**Price Proposal** means the price component of the Proposal evaluation as described in the ITP.

**Principal Project Documents** means the Security Instruments and the Design-Build Contract.

**Prioritization Schedule** means the schedule of intended sequencing of construction as submitted with Proposer's Proposal per Exhibit B of the ITP.

**Professional Engineer** means a person who is duly licensed and registered by the Georgia State Board of Registration for Professional Engineers and Land Surveyors to engage in the practice of engineering in the State of Georgia.

**Professional Land Surveyor** means a person registered by the Georgia State Board of Registration for Professional Engineers and Land Surveyors to practice the profession of land, boundary, or property surveying or other similar professional practices.

**Project** means the Project as defined in the RFP, that is the subject of this Agreement, and which shall include the transportation facilities and all related structures, and improvements, including integration of the ITS, and communications systems used in connection with operation of such transportation facilities, to be designed and constructed pursuant to the terms of the DB Documents.

**Project Baseline Schedule** shall have the meaning set forth in Section 2.5 of the Technical Provisions.

**Project Extension** means a linear addition to the original Project by Design-Build Team, including any at either terminus of the original Project and any linear improvement that interconnects with the original Project.

**Project Information Coordinator** means the person designated by Design-Build Team to manage Design-Build Team’s public information activities as more particularly described in Section 2.7.3 of the Technical Provisions.

**Project Manager** means the individual designated by Design-Build Team and approved in writing by GDOT in the position to take full responsibility for the prosecution of the Work and will act as a single point of contact on all matters on behalf of Design-Build Team.

**Project Schedule** shall have the meaning set forth in Section 2.5 of the Technical Provisions.

**Project Specific Locations** means any additional temporary property interests or rights, other than ROW or Additional Properties, which are not contiguous to the Property, that Design-Build Team may require for performance of the Work, including for temporary activities in connection with the Construction Work, such as construction work sites, temporary work areas, staging areas, storage areas, and earthwork material borrow sites.

**Project Status Schedule Update** means the logic-based critical path schedule submitted monthly containing progress status and enabling comparison to the Project Baseline Schedule.

**Property** has the meaning set forth in Article 2.2.1 of the Agreement and shall include only such property as identified in the Environmental Document Approval.

**Proposal** has the meaning set forth in Recital F of the Agreement.

**Proposal Bond** means the security that Proposers submit to GDOT with their Proposals.

**Proposal Revisions** has the meaning set forth in Section 5.4 of the ITP.

**Proposal Due Date** means the deadline for submission of the Proposal to GDOT as defined in the ITP Section 1.4.

**Proposed Right of Way** or **Proposed ROW** means any real property (which term is inclusive of all estates and interests in real property), improvements and fixtures within the lines established in and designated as “Proposed ROW” within Exhibit 4 to the Agreement for which GDOT or the Design-Build Team acting on behalf of GDOT, depending on the context, is obligated to provide access to Design-Build Team and/or acquire a leasehold estate or other similar property interest or rights pursuant to Article 2.2 of the Agreement. The term specifically includes all air space, surface rights and subsurface rights within the limits of the Proposed Right of Way and specifically excludes any Additional Properties. All portions of the Proposed Right of Way, as and to the extent of any property interests in same acquired by GDOT or the DB Team acting on behalf of GDOT, shall thereafter and without further amendment to Exhibit 4 be deemed Existing Right of Way.

**Proposed Supplemental Agreement** means a submittal by the Design-Build Team for consideration for changes in the Work under Article 13 of the Agreement, including on account of any Relief Event Determination and/or Compensation Event Determination as set forth under Article 13.4 of the Agreement.

**Proposer** or **Proposers** has the meaning set forth in Section 1.1 in the ITP.

**Proprietary Intellectual Property** means Intellectual Property created, used, applied or reduced to practice in connection with the Project or the Work that derives commercial value from its protection as a trade secret under applicable Law or from its protection under patent law.

**Protection in Place** means any action taken to avoid damaging a Utility which does not involve removing or relocating that Utility, including staking the location of a Utility, exposing the Utility, avoidance of a Utility's location by construction equipment, installing steel plating or concrete slabs, encasement in concrete, temporarily de-energizing power lines, and installing physical barriers. The term includes both temporary measures and permanent installations meeting the foregoing definition.

**Provided Approvals** means the Governmental Approvals for the Project obtained or to be obtained by GDOT, as specifically listed in Section 4.2 of the Technical Provisions (including any such approvals as may be required from GDOT independent of GDOT's Project administration pursuant to Article 6.2 of the Agreement).

**Public Information and Communications Plan (PICP)** has the meaning set forth in Section 2.7.2.1 of the Technical Provisions.

**Punch List** means an itemized list of Construction Work that remains to be completed following Substantial Completion but as a condition to Final Acceptance, provided that the nature of any such incomplete Work, and the correction and completion of same, will have no material or adverse effect on the normal and safe use and operation of the Project.

**Punch List Period** means the time provided for Design-Build Team's completion of Punch List Work, which shall be the time between Substantial Completion and Final Acceptance as provided in the Project Baseline Schedule.

**QA** means quality assurance or quality acceptance, depending on the context.

**QA/QC** means quality assurance and quality control.

**Quality Management Plan (QMP)** means the set of GDOT-approved plans for quality management and control of the Project and Work, as set forth in Section 2.3 of the Technical Provisions.

**Quality Assurance Manager (QAM)** means the individual retained by Design-Build Team as the Key Personnel with the authority and responsibility for ensuring establishment and maintenance of, and compliance with, the Quality Management Plan. The Quality Assurance Manager shall be a Professional Engineer as defined in this Exhibit 1.

**Quitclaim Deed** means a quitclaim deed to be executed by a Utility Owner relinquishing its rights to maintain a Utility in a particular location, as more particularly described in Section 6.2.2 of the Technical Provisions.

**Railroad Right of Entry Agreement** has the meaning described in Section 14.3.1.3 of the Technical Provisions.

**Recognized Environmental Condition** has the meaning set forth in ASTM E-1527-00.

**Record Drawings (also known as As-Builts, as-builts, or as-built drawings)** means construction drawings and related documentation revised to show as-built changes to the Project at Final Acceptance. Interim marked-in-the-field or red-lined drawings to be provided during the progress of the Work as required pursuant to the Technical Provisions shall not constitute the final Record Drawings.

**Reference Information Documents (RIDs)** means the collection of information, data, documents and other materials that GDOT has provided to Design-Build Team for general or reference information only.

**Related Transportation Facility(ies)** means all existing and future highways, streets and roads, including upgrades and expansions thereof, that is/are or will be adjacent to, connecting with or crossing under or over the Project, as specifically identified in the Technical Provisions.

**Release(d) for Construction** or **RFC** means the written authorization by GDOT to proceed with any designated phase of the Construction Work based on the accepted Final Plans.

**Release of Hazardous Materials** means any spill, leak, emission, release, discharge, injection, escape, leaching, dumping or disposal of Hazardous Materials into the soil, air, water, groundwater or environment, including any exacerbation of an existing release or condition of Hazardous Materials contamination.

**Relief Event** has the meaning set forth in Article 14.1.1 of the Agreement.

**Relief Event Determination** has the meaning set forth in Article 14.1.1 of the Agreement.

**Relief Event Notice** means the written notice required to be provided by Design-Build Team under Article 13.3.2 of the Agreement.

**Replacement Housing Calculation** means the opportunity to provide the displaced person with the financial assistance to purchase or rent and occupy a comparable replacement dwelling without involuntarily incurring additional financial means due to the displacement.

**Replacement Utility Property Interest** means any permanent right, title or interest in real property outside of the Property (e.g., a fee or an easement) that is acquired for a Utility being reinstalled in a new location as a part of the Utility Adjustment Work. The term specifically excludes any statutory right of occupancy or permit granted by a Governmental Entity for occupancy of its real property by a Utility.

**Request for Change Proposal** means a written notice issued by GDOT to Design-Build Team setting forth a proposed GDOT Change and requesting Design-Build Team's assessment of cost, and schedule impacts thereof, as set forth in Article 13.2.1 of the Agreement.

**Request for Information (RFI)** means a written request by the Design-Build Team to GDOT requesting clarification of the DB Document requirements.

**Request for Proposals (RFP)** means all documents, whether attached or incorporated by reference, utilized for soliciting proposals. The RFP is the only solicitation utilized by the Department in the One Phase Low Bid selection method. The RFP is the second phase utilized by the Department for the Two Phase Low Bid and Best Value selection methods.

**Request for Qualifications (RFQ)** means all documents, whether attached or incorporated by reference, utilized by the Department for soliciting interested Proposers to apply for prequalification including instruction for submitting a Statement of Qualification (SOQ), evaluation criteria and minimum qualifications required of a Design-Build Team. The RFQ is the first phase of a two-phase process utilized by the Department for the Two Phase Low Bid and Best Value selection methods.

**Reserved** means a section of the DB Documents (Design-Build Agreement and Technical Provisions) that is not being utilized for this contract. Sections marked Reserved have no requirements and references to sections marked Reserved shall mean that there are no additional requirements beyond the reference point.

**Right of Way (ROW)** means the Existing Right of Way and Proposed Right of Way.

**Right of Way Acquisition Plan** or **ROW Acquisition Plan** has the meaning set forth in Section 5 of Volume 3.

**Rules** have the meaning set forth in Recital C of the Agreement.

**Safety Compliance** means any and all improvements, repair, reconstruction, rehabilitation, restoration, renewal, replacement and changes in configuration or procedures respecting the Project to correct a specific safety condition or risk of the Project that GDOT has reasonably determined to exist by investigation or analysis and that is in violation of the requirements of the DB Documents.

**Safety Compliance Order** means a written order or directive from GDOT to Design-Build Team to implement Safety Compliance measures.

**Safety Standards** means those provisions of the Technical Provisions or Technical Documents that GDOT, FHWA, OSHA, or AASHTO considers to be important measures to protect public safety or worker safety. As a matter of clarification, provisions of Technical Provisions or Technical Documents primarily directed at durability of materials or equipment, where the durability is primarily a matter of life cycle cost rather than protecting public or worker safety, are not Safety Standards.

**Schedule of Values (SOV)** means a detailed line item valuation for all Elements of the Work which lists all Payment Activities in a format that provides a sufficiently detailed breakdown of the Pay Items. Include with the Schedule of Values a rational basis for partial payments of the Lump Sum bid based on the completed portion of the item and definitive activities. Payment will not be made for individual construction activities. No payments will be made until the Schedule of Values is accepted. Mobilization, and Payment and Performance Bonds may be included as separate line items in the Schedule of Values. Any amount for Mobilization set forth in the Schedule of Values shall not exceed 3.0% of the total construction cost.

**Schematic Plan of Project** means Design-Build Team's Schematic Plan specific to the preliminary roadway plans showing the concept and technical solutions in accordance with the provisions of Exhibit C of the ITP. A Schematic Plan may include but is not limited to standard design plan sheets, roll plots, and conceptual drawings.

**Security Document** means any mortgage, deed of trust, pledge, lien, indenture, trust agreement, hypothecation, assignment, collateral assignment, financing statement under the

Uniform Commercial Code of any jurisdiction, security instrument or other charge or encumbrance of any kind, including any lease in the nature of a security instrument, given to any Person as security for Design-Build Team Debt or Design-Build Team's obligations pertaining to Design-Build Team Debt and encumbering the Design-Build Team's Interest.

**Selection Recommendation Committee** means the group of individuals authorized by GDOT (if any) to recommend the Best Value Proposer to the Steering Committee.

**Separate Contractor(s)** means each and any separate contractor or vendor engaged by GDOT or any other governmental authority or agency of the State to perform, provide, and/or supply work, services, labor or materials for the Project that is expressly excluded from Design-Build Team's Work pursuant to the DB Documents.

**Service Line** means a Utility line, the function of which is to directly connect the improvements on an individual property to another Utility line located off such property, which other Utility line connects more than one such individual line to a larger system. However, unless otherwise noted in the Technical Provisions, the term "Service Line" excludes any line that supplies an active feed from a Utility Owner's facilities to supply, activate or energize GDOT's or a Governmental Entity's Highway Service System. Such line, including its actual connection to the Utility facility, shall instead be considered to be part of the applicable Highway Service System.

**Site** means the Property and any temporary rights or interests that Design-Build Team may acquire in connection with the Project or the Utility Adjustments included in the Construction Work, including Project Specific Locations.

**Source Code** and **Source Code Documentation** mean software written in programming languages, such as C++ and Fortran, including all comments and procedural code, such as job control language statements, in a form intelligible to trained programmers and capable of being translated into object or machine readable code for operation on computer equipment through assembly or compiling, and accompanied by documentation, including flow charts, schematics, statements of principles of operations, architectural standards, and commentary, explanations and instructions for compiling, describing the data flows, data structures, and control logic of the software in sufficient detail to enable a trained programmer through study of such documentation to maintain and/or modify the software without undue experimentation. Source Code and Source Code Documentation also include all modifications, additions, substitutions, updates, upgrades and corrections made to the foregoing items.

**Staged Design Submittals** shall have the meaning set forth in Section 3.6.1 in the Technical Provisions.

**Standard Utility Agreement (SUA)** means an Agreement providing for relocation or adjustment work to be performed by the Utility and/or its consultant or contractor and modification of easement limited provisions, if applicable. To the extent practical, reimbursement by the Department will be made based upon the Department's specifications, agreements and forms or consultant and construction contract work. The payment method may be actual cost, unit price, or lump sum as appropriate.

**State** means the State of Georgia.

**State and Local Government Series (SLGS) Index** means the State and Local Government Series (SLGS) Index published and maintained by the United States Department of the Treasury.

**State Highway** means a highway designated as part of the state highway system under Code 32-4-21.

**Statement of Qualifications** or **SOQ** has the meaning set forth in Section 1.1 of the ITP.

**State Proposed/DB Team Acquired Right of Way** or **State Proposed/DB Team Acquired ROW** means any Proposed Right of Way or Proposed ROW for which DB Team is responsible to acquire a leasehold estate or other similar property interest or rights. The term specifically excludes any DB Team Proposed/DB Team Acquired Right of Way or Additional Properties.

**State Proposed Right of Way** or **State Proposed ROW** means the Proposed Right of Way or Proposed ROW.

**State Proposed/State Acquired Right of Way** or **State Proposed/State Acquired ROW** means any Proposed Right of Way or Proposed ROW for which GDOT is obligated to provide access to Developer and/or acquire a leasehold estate or other similar property interest or rights.

**Stipulated Fee** means the amount GDOT will pay unsuccessful responsive Proposers for their Work Product.

**Subcontractor** means any other Person, including any Supplier with whom any Contractor has further subcontracted, purchased or procured any part of the Work, at all tiers.

**Submittal** means any document, work product or other written or electronic end product or item required under the DB Documents to be delivered or submitted to GDOT, as applicable.

**Substantial Completion** means satisfaction of the criteria for completion of Construction Work as set forth in Article 7.7 of the Agreement, as and when confirmed by GDOT's issuance of a certificate in accordance with the procedures and within the time frame established in Article 7.7.1 of the Agreement.

**Substantial Completion Date** means the date upon which Design-Build Team has satisfied all conditions of and for Substantial Completion.

**Substantial Completion Deadline** means the deadline and required date for Substantial Completion of the Project as set forth in the Milestone Schedule, as such deadline may be extended for Relief Events from time to time pursuant to the Agreement, time being of the essence.

**Substitute** has the meaning set forth in the Direct Agreement.

**Subsurface Utility Engineering (SUE)** means an engineering process for accurately identifying the quality of subsurface utility information needed for highway plans, and for acquiring and managing that level of information during the development of a highway project, as more particularly described at the FHWA website <http://www.fhwa.dot.gov/programadmin/sueindex.cfm>

**Supplemental Agreement** means a mutual agreement between GDOT and Design-Build Team for changes in the Work under Article 13 of the Agreement, including on account of any Relief Event Determination and/or Compensation Event Determination as set forth under Article 13.4 of the Agreement.

**Supplier** means any Person not performing work at or on the Site that supplies machinery, equipment, materials, hardware, software, systems or any other appurtenance to the Project to Design-Build Team or to any Contractor in connection with the performance of the Work. Persons who merely transport, pick up, deliver or carry materials, personnel, parts or equipment or any other similar items or persons to or from the Site shall not be deemed to be performing Work at the Site.

**Surety** means each properly licensed surety company, insurance company or other Person approved by GDOT, which has issued any of the P&P Bonds.

**Taxes** means federal, State, local or foreign income, margin, gross receipts, sales, use, excise, transfer, consumer, license, payroll, employment, severance, stamp, business, occupation, premium, windfall profits, environmental (including taxes under Section 59A of the Internal Revenue Code of 1986, as amended), customs, permit, capital stock, franchise, profits, withholding, social security (or similar), unemployment, disability, real property, personal property, registration, value added, alternative or add-on minimum, estimated or other taxes, levies, imposts, duties, fees or charges imposed, levied, collected, withheld or assessed at any time, whether direct or indirect, relating to, or incurred in connection with, the Project, the performance of the Work, or act, business, status or transaction of Design-Build Team, including any interest, penalty or addition thereto, and including utility rates or rents, in all cases whether disputed or undisputed.

**Technical Documents** means all the standards, criteria, requirements, conditions, procedures, specifications and other provisions set forth in the manuals and documents identified in the DB Documents, as such provisions may (a) have been generally revised from time to time up the RFP advertisement date, or (b) be changed, added to or replaced pursuant to the Agreement.

**Technical Proposal** means the technical component of the Proposal evaluation as described ITP.

**Technical Provisions** means Volume 2 and Volume 3; as such documents may (a) have been generally revised from time to time prior to the Proposal Due Date, or (b) be changed, added to or replaced pursuant to the Agreement.

**Technology Enhancements** means modifications, additions, refinements, substitutions, revisions, replacements and upgrades made to or in place of electronic toll collection and enforcement systems deployed on or for the Project or to any other computer systems or other technology used for the operation of the Project, or to any related documentation, that accomplish incidental, performance, structural, or functional improvements. The term specifically includes modifications, updates, revisions, replacements and upgrades made to or in place of software or any related documentation that correct errors or safety hazards or support new models of computer hardware with which the software is designed to operate. Technology Enhancements also include such new models of computer hardware.



**Temporary Works** is any temporary construction work necessary for the construction of the Permanent Works. This includes falsework, formwork, scaffolding, shoring, temporary earthworks, sheeting, cofferdams, special erection equipment, etc.

**Term** has the meaning set forth in Article 3.1.1 of the Agreement.

**Termination by Court Ruling** has the meaning set forth in Article 19.11 of the Agreement.

**Termination Compensation** means each of the measure of compensation owing from GDOT to Design-Build Team upon termination of the Agreement prior to the stated expiration of the Term, pursuant to Article 19, and as set forth in Exhibit 20 to the Agreement.

**Termination Date** means (a) the date of expiration of the Term or (b) if applicable, the Early Termination Date.

**Termination for Convenience** has the meaning set forth in Article 19.1.1 of the Agreement.

**Third-Party Claims** means, subject to Article 16.5.4 of the Agreement, any and all claims, disputes, disagreements, causes of action, demands, suits, actions, investigations, or legal or administrative proceedings asserted, initiated or brought by a Person that is not an Indemnified Party or Design-Build Team with respect to any Third-Party Loss.

**Third-Party Loss** means, subject to Article 16.5.4 of the Agreement, any actual or alleged Loss sustained or incurred by a Person that is not an Indemnified Party or Design-Build Team.

**Threatened or Endangered Species** means any species listed by the USFWS as threatened or endangered pursuant to the Endangered Species Act, as amended, 16 U.S.C. §§ 1531, *et seq.*

**Traffic Management Center** is a center for the management and distribution of information to Users on a regional or statewide basis.

**Transferee** means any party as defined pursuant to Article 21.2.2.1 of the Agreement, solely for purposes of Articles 21.2 through 21.5 of the Agreement.

**Transportation Management Plan** means Design-Build Team's plan for transportation management throughout the Term, as more particularly described Section 18.2.1 of the Technical Provisions.

**Travel Lane** means the portion of roadway for the movement of vehicles, exclusive of shoulders.

**Uniform Act** means the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act, P.L. 91-646, as amended.

**Uninsurable Risk** means a risk, or any component of a risk, against which Design-Build Team or a Contractor is required to insure pursuant to the Agreement and for which, at any time after the Effective Date, either:

(a) the insurance coverage required under the Agreement is not available in relation to that risk from insurers that meet the qualifications set forth in Article 16.1.2 of the Agreement; or

(b) the terms and conditions for insuring that risk are such that the risk is not generally being insured against in the insurance market under commercially reasonable terms from insurers that meet the qualifications set forth in Article 16.1.2 of the Agreement.

**User(s)** means any Person or Vehicle traveling on the Facility or any portion thereof; or, as pertains to tolled or to be tolled facilities, means the registered owner of, or any other Person responsible under Code 32-10-64 for payment of a toll for, a Permitted Vehicle traveling on the Facility or any portion thereof.

**Utility** or **utility** means any of the following:

(a) a public, private, cooperative, municipal and/or government line, facility or system used for the carriage, transmission and/or distribution of cable television, electric power, telephone, telegraph, water, gas, oil, petroleum products, steam, chemicals, hydrocarbons, telecommunications, sewage, and similar commodities, that directly or indirectly serves the public;

(b) a line, facility or system which (i) carries or transmits a commodity referenced in clause (a) above but does not directly or indirectly serve the public, and (ii) is designated in Volume 1 or Volume 2 to be treated, for purposes of the DB Documents only, in the same manner as a line, facility or system that qualifies as a Utility under clause (a) above; and

(c) a radio tower or transmission tower (including cellular) that directly or indirectly serve the public.

Notwithstanding the foregoing, the term “Utility” or “utility” excludes:

(a) all storm water lines, facilities, and systems that are part of the drainage system for the Property or connect to that system; and

(b) GDOT’s or a Governmental Entity’s Highway Service Systems.

The necessary appurtenances to each Utility facility shall be considered part of such Utility. Any Service Line connecting directly to a Utility shall be considered an appurtenance to that Utility, regardless of the ownership of such Service Line.

**Utility Accommodation Manual (UAM)** means the Utility Accommodation Manual issued by GDOT, at Ga. Comp. R. & Regs. r. 672-11-.01 through -.04, as the same may be amended, supplemented or replaced by GDOT from time to time.

**Utility Adjustment Field Modification** means any horizontal or vertical design change to a Utility Adjustment required by Design-Build Team or proposed by a Utility Owner due either to roadway design or to conditions not accurately reflected in the corresponding Utility Work Plan for which the review and comment/approval process has been completed, that alters the design included in the approved Utility Work Plan. An example would be shifting the alignment of an 8” water line to miss a roadway drainage structure. A minor change (e.g., an additional water valve, an added Utility marker at ROW line, a change in vertical bend, etc.) will not be considered a Utility Adjustment Field Modification, but shall be shown in the Record Drawings.

**Utility Adjustment** means each relocation (temporary or permanent), abandonment, Protection in Place, removal (of previously abandoned Utilities as well as of newly abandoned Utilities), replacement, reinstallation, and/or modification of existing Utilities necessary to accommodate construction, operation, maintenance and/or use of the Project; provided, however, that the term “Utility Adjustment” shall not refer to any of the work associated with facilities owned by any railroad. For any Utility crossing the Property, the Utility Adjustment Work for each crossing of the Property by that Utility shall be considered a separate Utility Adjustment. For any Utility installed longitudinally within the Property, the Utility Adjustment Work for each continuous segment of that Utility located within the Property shall be considered a separate Utility Adjustment.

**Utility Adjustment Work** means all efforts and costs necessary to accomplish the required Utility Adjustments, including all coordination, design, design review, permitting, construction, inspection, maintenance of records, relinquishment of Existing Utility Property Interests, preparation of Utility Joint Use Acknowledgements, and acquisition of Replacement Utility Property Interests, whether provided by Design-Build Team or by the Utility Owners. The term also includes any reimbursement of Utility Owners which is Design-Build Team’s responsibility pursuant to Article 7.5 of the Agreement. Any Utility Adjustment Work furnished or performed by Design-Build Team is part of the Work; any Utility Adjustment Work furnished or performed by a Utility Owner is not part of the Work.

**Utility Enhancement** means a Betterment or a Utility Owner Project, as referenced in Section 6.1.4.1 of the Technical Provisions.

**Utility Joint Use Acknowledgment** or **Utility Joint Use Agreement** means an agreement between GDOT and a Utility Owner that establishes the rights and obligations of GDOT and the Utility Owner with respect to occupancy of the Property by such Utility Owner’s Utility.

**Utility Manager (UM)** means the senior staff person designated by Design-Build Team to be responsible for coordination and oversight of Utility Adjustment operations during the planning, design, and construction phases of the Work, as more particularly described in Section 6.1.3.4 of the Technical Provisions.

**Utility Owner** means the owner or operator of any Utility (including both privately held and publicly held entities, cooperative utilities, and municipalities and other governmental agencies).

**Utility Owner Project** means the design and construction by or at the direction of a Utility Owner (or by Design-Build Team) of a new Utility other than (a) as part of a Utility Adjustment or (b) to provide service to the Project. Betterments are not Utility Owner Projects. Utility Owner Projects are entirely the financial obligation of the Utility Owner.

**Utility Tracking Report** means the report regarding Utilities likely to be impacted by the Project, which Design-Build Team shall maintain on a current basis, as more particularly described in Section 6.5.1 of the Technical Provisions.

**Utility Work Plan** has the meaning set forth in Section 6.3.2.5 of the Technical Provisions. Depending on the context, the term also refers to Supplemental Utility Work Plans and Utility Work Plan Retention Requests (both also described in Section 6.3.2.5 of the Technical Provisions).

**Utility Work Plan Checklist** means a checklist listing the required components of a Utility Work Plan, as referenced in Section 6.3.2.5 of the Technical Provisions.

**Utility Work Plan Retention Request** means the collection of plans and other information and materials which Design-Build Team is required to submit to GDOT in connection with each Utility proposed to remain at its original location within the Existing Right of Way or Property, as more particularly described in Section 6.3.2.5 of the Technical Provisions; a single Utility Work Plan Retention Request may address more than one such Utility.

**Volume 1** means the Design-Build Agreement or the Agreement.

**Volume 2** means the project-specific technical provisions entitled “Technical Provisions - Volume 2”.

**Volume 3** means GDOT’s technical provisions entitled “Programmatic Technical Provisions - Volume 3”.

**Warning Notice** means a written notice that GDOT delivers to Design-Build Team pursuant to Article 17.2 of the Agreement.

**Work** means all of the work required to be furnished and provided by Design-Build Team under the DB Documents for the Project, including without limitation, all administrative, management, design, engineering, other professional services, construction, Utility Adjustment, utility accommodation, support services, software integration, and coordination, except for those efforts which such DB Documents expressly specify will be performed by Persons other than Design-Build Team-Related Entities, all as required and as may reasonably be inferred for full and proper completion of the Project in accordance with this Agreement and the DB Documents.

**Work Breakdown Structure (WBS)** means a deliverable-oriented hierarchical structure that breaks the Work into elements that have distinct identification and that contain specific scope characteristics. Each descending WBS level represents an increasingly detailed delineation of elements of the total Project scope. The WBS will contain elements of Design Work and Construction Work. There shall be clearly identifiable linkage between the WBS, the elements of the Work, and Project Schedule. The WBS numbering convention shall be compatible with Project Baseline Schedule coding and may be compatible with document control coding.

**Work Code** means a code assigned to a contract line item. Example: 400 is asphalt paving, 653 is highway traffic striping. The Work Codes were established and predefined by a GDOT Committee comprised of the Office of EEO, Construction, Bidding Administration, and Prequalification, in 2012. Not every item has a work code, only those items that are predominantly used on Highway construction projects. Contractors and Subcontractors in the GDOT directories are assigned work codes based upon their work description. Work codes are the most refined data available.

**Work Product** means any design files, concepts, ideas, technology, techniques, methods, processes, drawings, reports, plans and specifications used in the development of the bid and technical proposal including any ATCs being acquired by GDOT.

**EXHIBIT 2**

**DESIGN-BUILD TEAM'S PROPOSAL COMMITMENTS and KEY PERSONNEL**

[Include completed Form A in executed version]

[include completed Form G in executed version]

**EXHIBIT 3**

**RESERVED**

**EXHIBIT 4**

**RIGHT OF WAY**

**(Existing Right of Way and Proposed Right of Way)**

The form and content of this Exhibit 4 is set forth in Attachment 1-1 in Volume 2 Technical Provisions.

**EXHIBIT 5**

**RESERVED**



**EXHIBIT 6**

**RESERVED**

**EXHIBIT 7**  
**PRICE PROPOSAL**

[Include completed Form F in executed version]

**EXHIBIT 8**

**STATE FUNDED REQUIREMENTS**

Attachment 1 Small, Veteran, and Disadvantaged Business Special Provision (SVDDBE)

**ATTACHMENT 1 TO EXHIBIT 8**

**State Funded Projects**

**Small, Veteran, and Disadvantaged Business Special Provision**

**(SVDDBE)**

**I. General Description**

Subcontract a portion of the work to firms designated by the Department as Small, Veterans, or Disadvantaged Business Enterprise.

A Small, Veteran, and Disadvantaged Business Enterprise (SVDDBE) Goal is specified in certain contracts funded through the Georgia Transportation Act of 2015. A portion of the project goal, not greater than 50% of the specified Goal, may be achieved through the use of Small and/or Veteran owned businesses. The entire goal may be met through the use of GDOT approved DBEs.

**II. SVDDBE Directories**

- Small Business entities are those firms identified as such in the Georgia Procurement Registry at the time of the bid submission.
- Veteran Owned firms are those firms identified by the U.S. Department of Veteran Affairs at the time of the bid submission.
- DBE firms are those identified by the Georgia Department of Transportation's Unified Certification Program at the time of the bid submission.

**III. Bid Proposal Submittals**

The Department reserves the right to reject and disqualify any Proposal if the apparent low bidder fails to provide a list of bona fide SVDDBE participants within 7 calendar days after the bid letting date. The submission shall provide participation meeting at least the established goal.

The Department may consider for award a proposal with less participation than the established goal if both:

- The bidder can demonstrate that no greater participation could be obtained and;
- The participation proposed by the low bidder is not substantially less than the participation proposed by the other bidders on the same contract.

Contractor(s) demonstrating good business judgment shall consider a number of factors in negotiating with SVDBEs, and shall take a firm's price and capabilities as well as contract goals into consideration. The fact there may be some additional costs involved in finding and using SVDBEs is not in itself sufficient reason for a bidder's failure to meet the contract SVDBE goal, so long as such costs are reasonable.

Contractors are not required to accept higher quotes from a SVDBE if the price difference is excessive or unreasonable. The ability or desire of a Contractor to perform the work of a contract with its own organization does not relieve the Contractor of the responsibility to make good faith efforts.

Issuance of the Notice to Proceed does not approve the individual SVDBE firms. Department reserves the right to approve or disapprove a SVDBE firm after review of the SVDBE firm and contract agreements. SVDBE firms must be Registered or Prequalified with the Georgia Department of Transportation to perform work on projects unless otherwise stated in Specification Section 108.

#### **IV. Participation Requirements**

Submit a "SVDBE Participation Report" monthly to the Department's Engineer. The report shall include the following:

- 1) Name of each firm participating in the contract.
- 2) Designation of the participating firm/s as DBE, Small Business or Veteran Owned firm.
- 3) Description of the work to be performed, materials, supplies, and/or services provided by each SVDBE.
- 4) Whether each SVDBE is a supplier, subcontractor, owner/operator, or other.
- 5) Dollar value of each SVDBE subcontract or supply agreement.
- 6) Actual payment to date of each SVDBE participating in the contract.

#### **V. Measurement**

Copy of the SVBE Report shall be transmitted promptly to the Engineer. Failure to submit the report within 30 calendar days following the end of the month may cause payment to the contractor to be withheld.

To substitute a SVDBE listed in the SVDBE plan, take all reasonable efforts to replace a SVDBE Subcontractor with another SVDBE. Send all removal and replacement requests to the Department for approval prior to the substituted firm beginning work.

Actively demonstrate Good Faith Efforts in meeting the Goal throughout the contract time. Good Faith Efforts may be actions taken to assist interested SVDBEs in obtaining bonding, lines of credit, or insurance as required by the contractor, actions taken to assist interested SVDBEs in obtaining necessary equipment, supplies, materials, or related assistance or services, and/or using the services available from minority/women centered community organizations; Contractors' groups; local, state, and Office of EEO Supportive Services Staff; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of SVDBEs.

## **VI. Payment**

Issuance of the Contract Award and/or Notice to Proceed does not approve the individual SVDBE firms. Payment to the Contractor under the contract may be withheld until final approval of the listed SVDBE is granted by the Department through the subcontract approval process.

Progress Payments for any work performed may be withheld to a Contractor found to be in noncompliance with this provision, until corrective action is taken.

Questions concerning DBE Certification/Criteria or other small or veteran owned business issues should be directed to the EEO Office at (404) 631-1972.

**EXHIBIT 9**

**MILESTONE SCHEDULE**

<b>Milestone</b>	<b>Deadline</b>
Substantial Completion Deadline	1,005 Days after the date GDOT issues NTP 1
Final Acceptance Deadline	1,095 Days after the date GDOT issues NTP 1

**[Batch 2]**

<b>Bridge Serial Number</b>	<b>Roadway</b>	<b>Intermediate Completion (Allowable number of Calendar days for roadway closure)*</b>
075-5041-0	Fellowship Road	120
075-5043-0	Old Union Road	120
267-5021-0	Hillview Road	150
269-5001-0	Hobbs Road	120
315-0037-0	Biar Road	120

**\*Closure duration at each location must be continuous; only one closure is allowed per location.**

**EXHIBIT 10**

**RESERVED**



**EXHIBIT 11**

**HAZARDOUS MATERIALS RISK ALLOCATION TERMS**

1. Design-Build Team shall be solely responsible for Hazardous Materials Management, including all required remediation and disposal of Hazardous Materials that constitute Design-Build Team Releases of Hazardous Materials or which are otherwise with respect to any Additional Properties or Project Specific Locations, Design-Build Team shall be responsible for all Hazardous Materials Management for Design-Build Team Release(s) of Hazardous Materials or with respect to Additional Properties, even if the required Hazardous Materials Management extends beyond the end of the Term or Final Acceptance of the Work.
2. Other than a Design-Build Team Releases of Hazardous Materials or with respect to any Additional Properties or Project Specific Locations, GDOT shall, at its own expense shall manage, treat, handle, store, remediate, remove, transport (where applicable), investigate, oversee and dispose of such Hazardous Materials in accordance with applicable Law and Governmental Approvals or otherwise enter into a Supplement Agreement with the Design-Build Team, or order such Work pursuant to Directive Letter (provided that GDOT may not require any long term monitoring of Hazardous Materials under any such Directive Letter), with respect to same.
3. Notwithstanding the aforementioned or anything to the contrary in the Agreement, none of the following costs and expenses shall be chargeable to or reimbursed by GDOT:
  - (a) Costs and expenses to the extent attributable to Design-Build Team Releases of Hazardous Materials;
  - (b) Delay and disruption costs and expenses, except to the extent expressly set forth under the Agreement;
  - (c) Costs and expenses that could be avoided by the exercise of commercially reasonable efforts to mitigate and reduce cost; and
  - (d) Attorney's fees or other expenses incurred by Design-Build Team in demonstrating or determining the proportionate responsibility between the parties as to Design-Build Team Releases of Hazardous Materials, GDOT Releases of Hazardous Materials, Pre-existing Hazardous Materials, and/or Hazardous Materials due to any third party.
4. Nothing contained herein shall be interpreted to limit Design-Build Team's obligations with respect to Articles 7.8 or 7.9 of the Agreement.

**EXHIBIT 12**

**OPINION OF COUNSEL**

[Include completed Form S in executed version]

**EXHIBIT 13**

**RESERVED**

**EXHIBIT 14**

**DESIGN-BUILD TEAM'S DBE COMMITMENTS LIST**

**[To be provided with execution version]**

**EXHIBIT 15**

**RESERVED**

**EXHIBIT 16**

**RESERVED**

**EXHIBIT 17**

**RESERVED**

**EXHIBIT 18**

**MEASURES OF LIQUIDATED DAMAGES and NONREFUNDABLE DEDUCTIONS**

**1.1 For Late Substantial Completion, Late Final Acceptance, and Exceeding a Maximum Closure Duration(s)**

(a) Liquidated damages for late Substantial Completion for the Project shall equal **\$713 per day** for each bridge site that is not completed according to the DB Document requirements by the Substantial Completion Deadline, as the Substantial Completion Deadline may be extended pursuant to this Agreement.

(b) Liquidated damages for late Final Acceptance shall equal **\$713 per day** that the date of Final Acceptance is later than the Final Acceptance Deadline, as the Final Acceptance Deadline may be extended pursuant to this Agreement.

(c) Liquidated damages on account of any failure to achieve Final Acceptance by the Final Acceptance Deadline shall not be in cumulative and addition to liquidated damages under subpart (a) above where Substantial Completion is not achieved by the Substantial Completion Deadline, provided that where any such liquidated damages under subpart (a) cease to then accrue as a result of achieving Substantial Completion, and the Final Acceptance Deadline, as may thereafter be revised is not met, subpart (b) shall then apply.

(d) Liquidated damages for exceeding the Maximum Closure Duration for each bridge site shall equal **\$713 per day** for each day that the actual closure duration is longer than the Maximum Closure Duration per site, as the Maximum Closure Duration may be extended pursuant to this Agreement.

**1.2 Incident Based Liquidated Damages**

Liquidated damages will be assessed at the following rates. The liquidated damages under this Article 1.2 are in addition to the liquidated damages identified in Article 1.1 above.

- 1 Failure to reopen lanes specified in Volume 2, Section 18 **\$1,000 per hour\***
- 2 Failure to cover milled surfaces specified in Volume 2, Section 18 **\$713 per day\***

\*In addition to liquidated damages, DB Team shall be liable for any fines assessed against GDOT as a result of the any noncompliance event as provided herein.

**1.3 Incident Based Nonrefundable Deductions**

Nonrefundable deductions upon the occurrence of the following, which shall not be cumulative, for any single occurrence. Where there are multiple incidents as set forth below contributing to a single occurrence, the highest applicable incident based liquidated damages relative to such occurrence shall apply.

- 1 Causing environmental damage in contravention of Section 4 of the Technical Provisions and approved Environmental Documents. **\$500 per occurrence\***



- Failure to follow the approved procedures outlined in the
- 2** Utility Emergency Procedures Plan as required in **\$1,000** per occurrence\*  
Section 6 of the Technical Provisions.

\*In addition to nonrefundable deductions, DB Team shall be liable for any fines assessed against GDOT as a result of the any noncompliance event as provided.

**EXHIBIT 19**

**GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT AFFIDAVIT**

[Insert completed Form R in executed version]

**EXHIBIT 20**

**TERMS FOR TERMINATION COMPENSATION**

**A. Compensation on Termination for Convenience, for GDOT Default, or for GDOT Suspension of Work**

1. In the event of termination of the Agreement under Article 19.1 (Termination for Convenience) or Article 19.4 (Termination for GDOT Default or Suspension of Work), the Termination Compensation shall equal:

(i) That portion of the DB Contract Sum on account of (a) Work performed that has not already been paid; plus

(ii) The amount necessary to reimburse reasonable and documented out-of-pocket costs of third party and Affiliate Contractors to demobilize and terminate under Contracts between Design-Build Team and third parties or Affiliates for performance of Work, excluding Design-Build Team's non-contractual liabilities and indemnity liabilities (contractual or non-contractual) to third parties or Affiliates; plus

(iii) If termination occurs prior to Substantial Completion, Design-Build Team's own reasonable and documented out-of-pocket costs to demobilize (without duplication) and carry out termination obligations as may be directed by GDOT or required pursuant to the Agreement; minus

(vi) The sum of (i) the greater of (A) the proceeds received from insurance (including casualty insurance and business interruption insurance) that is required to be carried pursuant to Article 16.1 of the Agreement and provides coverage to pay, reimburse or provide for any of the costs and losses attributable to any Force Majeure Event, and (B) the proceeds received from insurance that is actually carried by or insuring Design-Build Team under policies solely with respect to the Project and the Work, regardless of whether required to be carried pursuant to Article 16.1 of the Agreement, and that provides coverage to pay, reimburse or provide for any of the costs and losses attributable to any Force Majeure Event, (exclusive of payments on account of replacement Work performed and to be reimbursed under the builder's risk insurance coverage), plus (ii) the foregoing costs and losses that Design-Build Team is deemed to have self-insured pursuant to Article 16.3.3 of the Agreement; minus

(v) The portion of any Compensation Amounts previously paid to (or charged against) Design-Build Team that compensated Design-Build Team for Work attributable to the period after the Early Termination Date.

2. In the event of termination of the Agreement under Article 19.1 (Termination for Convenience) or Article 19.4 (Termination for GDOT Default or Suspension of Work), any such Termination Compensation shall be payable by GDOT as follows:

(i) For Termination for Convenience

(a) Termination for Convenience shall be valid and effective on the date set forth in the Notice of Termination for Convenience, which date shall not be more than three (3) months after the date the notice is delivered.

(b) GDOT shall deliver to Design-Build Team, in immediately available funds, within sixty (60) days after the Early Termination Date, the Termination Compensation due, less a holdback amount equal to GDOT's reasonable estimate of the costs Design-Build Team will thereafter incur to perform and complete its post-termination obligations under Article 19.5 of the Agreement. In the event that the Termination Compensation is negative, then the Design-Build Team shall deliver the Compensation Payment due to GDOT within sixty (60) days after the Early Termination Date.

(ii) For Termination for GDOT Default or Suspension of Work

(a) If the Agreement is terminated due to Design-Build Team's exercise of its right to terminate under Article 19.4 of the Agreement, termination shall be valid and effective on the date notice of termination is delivered; and, subject to Articles 19.3.2 and 19.4.4, GDOT shall deliver to Design-Build Team, in immediately available funds, within sixty (60) days after the Early Termination Date, the Termination Compensation due, less a holdback amount equal to GDOT's reasonable estimate of the costs Design-Build Team will thereafter incur to perform and complete its post-termination obligations under Article 19.5 of the Agreement.

(b) GDOT shall pay the holdback amount to Design-Build Team within ten (10) days after Design-Build Team completes all its post-termination obligations under Article 19.5 of the Agreement.

(c) If as of the date GDOT tenders payment under clause (a) above the Parties have not agreed upon the amount of Termination Compensation due, then:

(i) GDOT shall proceed with such payment to Design-Build Team;

(ii) Within thirty (30) days after receiving such payment Design-Build Team shall deliver to GDOT written notice of the additional amount of Termination Compensation that Design-Build Team in good faith determines is still owing (the "disputed portion");

(iii) GDOT shall pay the disputed portion of the Termination Compensation to Design-Build Team in immediately available funds within thirty (30) days after the disputed portion is determined by settlement, final order or final judgment, and also shall pay interest thereon, at the Default Interest Rate from the Early Termination Date until paid; and

(iv) A failure by GDOT to effect payment by such date shall not entitle Design-Build Team to reinstatement of the Design-Build Team's Interest or to rescission of the termination.

(d) From and after the Early Termination Date until the Termination Compensation is finally determined and paid, the provisions of Article 19.10 of the Agreement shall apply.

(e) If it is determined by settlement or final judgment that the Termination Compensation due from GDOT is less than the payment previously made

by GDOT, then within thirty (30) days after the date of settlement or final judgment Design-Build Team shall reimburse the excess payment, together with interest thereon at the Default Interest Rate from the date of overpayment until the date of reimbursement.

(f) Any amounts to be paid by GDOT pursuant hereto shall be subject to Default Interest Rate from the date that such payment shall be due until paid.

**B. Compensation on Termination for Design-Build Team Default**

1. Design-Build Team shall not be entitled to receive any compensation where the Agreement is terminated by GDOT pursuant to Article 19.3 as a result a Design-Build Team Default if it has been determined by GDOT that the damages incurred by GDOT and costs to complete the Work as a result of the Design-Build Team Default exceed the unpaid balance of the DB Contract Sum. In no event shall Design-Build Team be entitled to any direct costs, including demobilization, associated with a termination by GDOT pursuant to Article 19.3. In the event that the Termination Compensation is negative, then the Design-Build Team shall deliver the Compensation Payment due to GDOT within sixty (60) days after the Early Termination Date.

**C. Claims**

1. Notwithstanding anything to the contrary herein, Termination Compensation shall include and be adjusted on account of any outstanding Claim that is independent of the event of termination and which is not otherwise resolved as of the effective date of such termination. The Parties shall adjust the Termination Compensation by the amount of the unpaid award, if any, on the Claim.

2. At GDOT's sole election, it may hold back from payment of the Termination Compensation for deposit into the GDOT Claims Account the amount of any Claim of GDOT against Design-Build Team not resolved prior to payment. GDOT shall provide written notice to Design-Build Team of any such election, the subject Claim and the amount deposited or to be deposited, prior to or concurrently with tendering payment of the Termination Compensation.

3. If as of the date GDOT tenders payment under clause (a) above the Parties have not agreed upon the amount of Termination Compensation due, then:

(i) GDOT shall proceed with such payment to Design-Build Team;

(ii) Within thirty (30) days after receiving such payment Design-Build Team shall deliver to GDOT written notice of the additional amount of Termination Compensation that Design-Build Team in good faith determines is still owing (the "disputed portion");

(iii) GDOT shall pay the disputed portion of the Termination Compensation to Design-Build Team in immediately available funds within thirty (30) days after the disputed portion is determined by settlement, final order or final judgment, together with interest thereon at the Default Interest Rate from the later of the two dates set forth in clause (a) above until paid; and

(iv) Failure by GDOT to effect payment by such date shall not entitle Design-Build Team to reinstatement of the Design-Build Team's Interest or to rescission of the termination.

4. If it is determined by settlement or final judgment that the Termination Compensation due from GDOT is less than the payment previously made by GDOT, then within thirty (30) days after the date of settlement or final judgment Design-Build Team shall reimburse the excess payment, together with interest thereon at the Default Interest Rate from the date of overpayment until the date of reimbursement.

**EXHIBIT 21**

**NON-COLLUSION AFFIDAVIT**

[Insert completed Form B In Executed Version]

**EXHIBIT 22**

**INITIAL DESIGNATION OF AUTHORIZED REPRESENTATIVES**

**GDOT's Authorized Representative:**

GDOT hereby designates the persons from time to time serving as the Commissioner of GDOT as its Authorized Representatives and such other persons as the Commissioner may from time to time designate by delivering written notice thereof to Design-Build Team. Any such designations by the Commissioner may be limited in scope and duration and may be revoked at any time by delivery of written notice thereof to Design-Build Team pursuant to Article 24.11 of the Agreement.

**Design-Build Team's Authorized Representative:**

Design-Build Team hereby designates the persons from time to time serving as the Chief Executive Officer of Design-Build Team as its Authorized Representatives and such other persons as the Chief Executive Officer may from time to time designate by delivering written notice thereof to GDOT. Any such designations by the Chief Executive Officer may be limited in scope and duration and may be revoked at any time by delivery of written notice thereof to GDOT pursuant to Article 24.11 of the Agreement.



**EXHIBIT 23**

**DRUG FREE WORKPLACE**

[Insert completed Form T in executed version]

**Georgia Department of Transportation**  
**VOLUME 2**  
**Technical Provisions**  
**For**  
**Design-Build Agreement**  
**FY 18 Bridge Replacement Project**

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Attachment 11-1	Guidelines for Pavement Sections for Minor Projects, and Criteria for Use of Asphaltic Concrete Layer and Mix Types
Attachment 11-2	Pavement Reinforced Fabric Transition Detail
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# 1 GENERAL

## 1.1 Project Design

Supplement Section 1.1 with the following:

The Project is to design and construct the replacement of bridges.

The DB Team's Design Documents for the Project shall comply with all requirements set forth in the DB Documents. The DB Team's Design Documents for the Project shall be consistent with the following:

- Environmental Document Approvals
- Attachment 1-1

## 1.2 Project Scope

Supplement Section 1.2 with the following:

The DB Team shall be responsible for the design and construction of the Project as required by the Design-Build Agreement including design, design-related activities, permitting, Utility Adjustments, Right of Way acquisition services, construction, construction engineering of the Project to replace bridges at locations identified in Attachment 1-1.

The DB Team shall not rely on the physical description contained herein to identify all Project components. The DB Team shall determine the full scope of the Project through thorough examination of the DB Documents and the Project or as may be reasonably inferred from such examination.

### 1.2.1 Design and Construction Requirements

Supplement Section 1.2.1 with the following:

NTP 3 can be issued for each individual bridge site.

Maintenance Acceptance can be issued for each individual bridge site.

## 1.3 Transitions to Adjacent Infrastructure, Roadways and Facilities

*There are no changes to this Section.*

## 2 PROJECT MANAGEMENT

### 2.1 General Requirements

#### 2.1.1 Management Organization and Personnel

*There are no changes to this Section.*

##### 2.1.1.1 DBE Manager

*Delete this Section.*

#### 2.1.2 Partnering

*Delete this Section.*

#### 2.1.3 Project Communications

The DB Team attendance at each meeting shall, at a minimum, include all appropriate staff necessary to make decisions regarding the subject matter of the meeting to progress the Project and maintain the schedule. The DB Team shall “own” the meetings and shall prepare meeting agendas and distribute agendas a minimum of 24 hours in advance, and shall cause meeting minutes to be prepared and distributed within three (3) business days after the meeting. The DB Team shall, at the request of GDOT or its representative(s), hold additional meetings, and the DB Team shall cause additional staff to attend all meetings if requested by GDOT or its representative(s). At a minimum, the DB Team shall hold, participate, and prepare minutes in the following regular meetings with GDOT.

##### 2.1.3.1.1 *Monthly Meeting Requirements*

1. Progress Meeting
2. Construction Meeting (starting after NTP 3)
3. Schedule Review Meeting
4. Quality Management/Compliance Team Meeting
5. Environmental Management Meeting
6. Materials Team Meeting
7. Payment Request/Progress Status Team Meeting
8. Utility Coordination Team Meeting
9. Submittals Review Team Meeting

As the Project progresses, the DB Team shall also hold work sessions with GDOT on Project technical design elements; these may include roadways, structures, utilities relocations, drainage and MS4, and other disciplines as needed to facilitate timely input from GDOT.

#### **2.1.4 Project Management Controls System (PMCS)**

*Supplement Section 2.1.4 with the following:*

The DB Team shall use GDOT's PMCS, e-Builder, for contract administration processes, including requests for information, Supplemental Agreements, Payment Requests, and GDOT-DB Team official correspondence. The DB Team shall attend a training session at GDOT's office, or other mutually agreeable location, within thirty (30) days of the execution of the Agreement. The DB Team shall contact GDOT's project manager within fourteen (14) days of the execution of the Agreement to schedule the training session. Failure to timely attend the training session may result in delays to the Project.

#### **2.1.5 Document Management**

*There are no changes to this Section.*

#### **2.1.6 Joint Project Inspection**

*Delete this Section.*

#### **2.1.7 Photography**

*Delete this Section and replace with the following:*

The DB Team shall provide photo submittals (both high resolution and low resolution digital files) prior to start of Construction Work and upon Maintenance Acceptance at each bridge. The submittals shall include no less than four (4) photos per bridge site on the Project. Photos shall be taken from the same location as previously taken.

All the data shall become property of GDOT. The DB Team will be responsible for any photography equipment installation, including power, and maintenance of the equipment at all times. All photographs shall be labeled and cataloged with the date and time the photograph was taken, and a brief description of the location and view.

In addition to the requirements for photography submittals found elsewhere in these Technical Provisions, one electronic copy of all photographs shall be filed in a single folder on the PMCS, cataloged in a logical manner as approved by GDOT.

#### **2.1.8 Requirements for GDOT Office and Equipment**

*Delete this Section.*

### **2.2 Project Management Plans**

*There are no changes to this Section.*

#### **2.2.1 Project Management Plan Requirements**

*Delete this Section and replace with the following:*

The DB Team shall submit the following management plans for GDOT review and comment:

1. Project Quality Management Plan and other Quality Management Plans, pursuant to Section 2.3.
2. Safety Plan, pursuant to Section 2.2.4.
3. Construction Phasing Plan, pursuant to Section 2.2.5.
4. Demolition and Abandonment Plan, pursuant to Section 10.2.
5. Submittal Schedule, pursuant to Section 2.2.5.

All audits, findings, and reports shall be provided to GDOT with all submittals.

A QA/QC statement letter shall be submitted with all Submittals.

### **2.2.2 Administrative Functions**

*There are no changes to this Section.*

### **2.2.3 Project Team Communications**

*There are no changes to this Section.*

### **2.2.4 Safety Plan**

*There are no changes to this Section.*

### **2.2.5 Construction Phasing Plan and Submittal Schedule**

*There are no changes to this Section.*

### **2.2.6 Public Information and Communications Plan**

*There are no changes to this Section.*

### **2.2.7 Comprehensive Environmental Protection Program**

*Delete this Section.*

### **2.2.8 Right of Way Acquisition Plan**

*Delete this Section.*

### **2.2.9 Demolition and Abandonment Plan**

*There are no changes to this Section.*

### **2.2.10 Transportation Management Plan**

*Delete this Section.*

### **2.2.11 Construction Maintenance Limits Plan**

*Delete this Section.*

## **2.2.12 Maintenance Management Plan**

*Delete this Section.*

## **2.2.13 Hazardous Materials Management Plan**

*Delete this Section.*

## **2.3 Quality Management Requirements**

### **2.3.1 General**

Personnel assigned to perform independent design reviews or monitoring of characteristics for quality control shall not be those personnel performing or directly supervising the Work being accepted. The DB Team's Quality Assurance Manager and quality control staff shall have no responsibilities in the production of the Work.

The Quality Assurance Manager shall prepare a monthly report of the quality reviews, inspections and tests performed, results of such reviews, inspections and tests, and occurrences and resolution of non-conformance discoveries. The DB Team shall submit the monthly reports to GDOT for review.

The DB Team's Quality Assurance Manager and quality control manager(s) shall have the authority to stop Work for quality-related issues. The DB Team shall conduct all work necessary to meet the requirements of the DB Documents and this Section 2.3 and to satisfy all functional needs and characteristics of the quality program, including quality control (QC), quality assurance, and quality improvement.

The DB Team is responsible for all aspects of quality related to all aspects of the Work and must accommodate and cooperate with GDOT's Quality Acceptance (QA) and Independent Assurance program. The DB Team's approach to quality, including coordination with GDOT's QA efforts, shall be developed in the DB Team's quality program. The DB Team's quality program shall be documented in a Quality Management Plan (QMP). The DB Team shall create the quality program and develop the QMP in cooperation with GDOT.

Materials and equipment installed as part of any permanent construction shall be new, unless otherwise specified. The DB Documents contemplate the use of first-class materials and equipment throughout the performance of the Work. For any material for which no particular specification is given, the DB Team shall provide the applicable specification and the material shall be of the highest quality of its class or kind. For the purpose of this provision, "new" shall mean purchased specifically for the Project.

### **2.3.2 Quality Management Plan**

The DB Team shall submit a comprehensive Quality Management Plan (QMP) to GDOT for quality control activities, coordination with quality acceptance, and which conforms to the quality assurance procedures with provisions contained in GDOT's Quality Control and Quality Assurance Program and 23 Code of Federal Regulations 636 and 637. The



QMP shall be submitted to GDOT for review no later than thirty (30) days from NTP 1. GDOT approval of the QMP is a condition precedent to issuance of NTP 3. All audits, findings and reports shall be provided to GDOT with all design and construction submittals.

The DB Team shall develop, implement, and maintain the QMP for the Term. The QMP shall describe the system, policies, and procedures that ensure the Work meets the requirements of the DB Documents and provides documented evidence of same.

The complete QMP shall encompass all Work performed by the DB Team and Contractors of all tiers.

The QMP shall contain detailed procedures for DB Team's quality control and quality assurance activities. DB Team's quality process shall incorporate planned and systematic verifications and audits undertaken by construction quality assurance staff and the Independent Design Reviewer (IDR). DB Team shall conduct all quality control, quality assurance, and design overlay and coordination among design disciplines, all in accordance with the QMP and the requirements of the DB Documents.

When required by GDOT Specifications and/or DB Documents, inspections, reviews, and testing performed by the DB Team shall only be performed by entities prequalified by GDOT with training, qualifications, and certifications using equipment that is accurately calibrated and maintained in good operating condition at an AASHTO Materials Reference Laboratory (AMRL) (American Association of State Highway and Transportation Officials (AASHTO) R18, "Establishing and Implementing a Quality System for Construction Materials Testing Laboratories") accredited facility, or at a facility with comparable certification (e.g., International Organization for Standardization (ISO) 17025, "General Requirements for the Competence of Testing and Calibration Laboratories").

### **2.3.2.1 Project Quality Management Plan**

The DB Team shall organize the QMP as follows:

1. Project Quality Management Plan (PQMP) - a quality policy statement shall be provided which contains a complete description of the quality policies and objectives that the DB Team will implement throughout its organization. The policy shall demonstrate the DB Team senior management's commitment to implement and continually improve the quality management system for the Work. The Quality Management Plan will also include policies, plans, processes and procedures for:
  - a. Organizational requirements with contact information of the DB Team's Organization as defined
  - b. Roles and responsibilities of the Quality Team
  - c. Administrative processes and procedures common to both design and construction quality management
  - d. Quality records management processes and procedures

- e. A comprehensive noncompliance process
  - f. DB Team's internal and third party quality and compliance auditing processes and procedures
  - g. Document control
  - h. Independent auditing of administrative and management processes
  - i. Certification process for all Payment Requests and Completion Deadlines
2. Design Quality Management Plan (DQMP) - including plans, processes and procedures for:
- a. Design development, including checking, peer review, cross-discipline coordination for developing Project plans, specifications, and estimates with supporting technical documentation
  - b. Managing design reviews and changes during design and construction
  - c. Design decision making
  - d. Design communication, coordination, and collaboration
  - e. IDR activities and comment resolution
  - f. Managing GDOT reviews and responses to submittals, Work Change Directives, and Change Requests
  - g. Design and engineering support during construction, witnesses tests, reviewing quality inspection and test records, responding to Request For Information (RFI's) applications and field changes
  - h. Independent auditing of design quality management
  - i. Design criteria adherence
  - j. Non-compliance management
3. Construction Quality Management Plan (CQMP) - including but not limited to plans, processes and procedures for:
- a. Tracking, Measuring and documenting construction progress
  - b. Construction decision making
  - c. Ensuring that only the most up to date Released for Construction documents are be used
  - d. Plan/Protocols for inspection, testing and maintaining quality certifications
  - e. Managing reviews and responses to Construction Documentation (RFIs, Field Changes, Design Changes, Construction Changes, Claims, etc., during construction)
  - f. Managing and tracking accepted construction changes
  - g. Managing and controlling construction schedule

- h. Construction communication, coordination, and collaboration
- i. Environmental compliance
- j. Non-compliance management

Quality Management Plan forms and checklists are to be used to facilitate and document QA efforts including pre-work activity checklists that depict all items required to perform the particular design, construction and operational efforts, such as; means and methods, subcontractor involvement, materials and inspection / testing requirements.

The DB Team shall maintain construction workmanship and materials quality records of all inspections and tests performed per the approved CQMP. These records shall include factual evidence that the required inspections or tests have been performed by GDOT and its representative, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken. These records shall cover both conforming and defective or deficient features, and shall include a statement that all supplies and materials incorporated in the Work are in full compliance with the terms of the DB Documents. These records shall be available for review and audit to GDOT inspectors.

#### **2.3.2.2 Independent Design Review and Checks**

The DQAM, through the DB Team, shall provide to GDOT and the Utility Adjustment Team (UAT) a plan and written procedures for the independent design check. An independent design check shall be provided for each design Submittal prior to being submitted to GDOT. The DB Team shall provide, when requested by GDOT, all comments and comment responses between the DB Team's EOR and the DQAM's independent design review for each Submittal review.

The independent design review personnel may not be involved in the production of the design being reviewed and shall either be employed by a different engineering firm than the EOR, or if employed by the same engineering firm, the independent design review personnel and DQAM must be appropriately firewalled from the design production. Those performing the checks should have equal or greater qualifications and experience as the EOR for the design being checked.

Independent design checks are comprised of design assessments and analytical checks as follows:

Design Assessment – a review of general compliance with the requirements of the DBA, including taking into consideration the following areas:

1. Project design criteria
2. Applicable codes and standards
3. Methods of analysis
4. Computer software and its validation

5. Interface requirements
6. Materials and material properties
7. Durability requirements
8. Constructability
9. Context Sensitivity
10. Environmental compliance
11. Any required Design Exceptions or Variances

The DB Team shall submit to GDOT, and FWHA as appropriate, all requests for Design Exceptions and Design Variances, including justification and supporting documentation, for review and approval.

Analytical Check – a review using separate calculations (and without reference to Designer’s calculations) to establish the structural adequacy and integrity of structural members. This includes:

1. Structural geometry and modeling
2. Material properties
3. Member properties
4. Loading intensities
5. Foundation loads
6. Structural boundary conditions

### **2.3.2.3 Submittal Requirements**

The DB Team shall obtain GDOT’s approval of the QMP in two stages: first, for all non-Construction Work related procedures and plans (Stage 1); second, for all elements of the Work, including Construction Work-related procedures and plans (Stage 2).

GDOT will deliver its approval or disapproval and provide comments on the QMP submission within thirty (30) Calendar days following GDOT’s receipt of the QMP. The DB Team shall revise its QMP within seven (7) Calendar days upon notification by GDOT of its disapproval or receipt of comments. Each subsequent submittal or iteration of the QMP shall include the same review duration for GDOT and revision duration for the DB Team.

The Stage 1 QMP, shall be submitted to GDOT for review no later than thirty (30) days after NTP 1 and no administrative or design Submittal will be reviewed by GDOT until

Stage 1 of the QMP is approved. NTP 3 will not be issued and no Construction Work can commence until the entire QMP is approved.

#### **2.3.2.4 GDOT Access and Quality Reporting**

The QMP shall incorporate all GDOT access and the DB Team reporting requirements of the DB Documents, including the following:

1. The DB Team shall immediately file all quality documentation and make all quality records available to GDOT at all times and shall provide GDOT with a hard copy of any and all quality records within twenty-four (24) hours of when requested.
2. The DB Team shall submit to GDOT the results of all internal audits within seven (7) days of their completion.
3. The DB Team shall promptly submit to GDOT non-conformance reports, but no later than twenty-four (24) hours of their issuance and again from their resolution.

The QMP shall outline a reporting process for recording, organizing, and distributing a record of internal quality activities. Quality reports shall be distributed to the DB Team's and GDOT's management personnel. Reports must be prepared and submitted monthly with the progress reports. These reports shall include a summary of all internal quality activities for the reporting period, and the status of any Non-Conformance Reports (NCRs) issued or unresolved during the reporting period. The reports shall also include a summary of Quality improvements, and include all proposed or actual corrective actions suggested or taken by the DB Team and the associated GDOT responses.

#### **2.3.2.5 Quality Management Plan Updates**

After the QMP has been approved, the QMP shall be subject to changes from time to time (including clarifications, modifications, additions, and deletions), which may be initiated by the DB Team, the CQAM, or GDOT. Such changes initiated by GDOT are made under GDOT's approval authority and may result in the DB Team expending additional resources and time to comply with the revised QMP. No such change constitutes a Compensation or Relief event and is not eligible for additional compensation or time extension. Any revisions to the QMP initiated by the DB Team or CQAM requires prior GDOT approval. Upon GDOT approval, the revised QMP shall then be in effect.

The DB Team shall regularly maintain and update the QMP to ensure it is accurate and up-to-date, including for the following information:

1. The organizational chart identifying all quality management personnel, their roles, authorities, and line reporting relationships.
2. Names and descriptions of the roles and responsibilities of all quality management personnel and including which have the authority to stop Work.

3. Identification of testing agencies, including information on each agency's capability to provide the specific services required for the Work, certifications held, equipment, and location of laboratories.

The QMP shall be conformed and updated annually. The DB Team shall revise its QMP within fourteen (14) days of GDOT or DB Team detection of a substantial or systemic problem related to the Work, or as directed by GDOT. Submissions of the QMP and all updates to the QMP shall include both a clean copy and a copy tracking all changes since the previous approval.

### **2.3.3 Nonconforming Work and Corrective Action**

The QMP will identify a process for documenting, reporting, and tracking all elements of the Work in a manner consistent with ISO 9001 that have not conformed, or are believed not to conform, to the requirements of the DB Documents. NCRs shall be issued as a result of such non-conformances. Examples of nonconformance include: physical defects; test failures; incorrect or inadequate documentation; or deviation from the design processes, inspection, or test procedures described in the Project QMP. The process developed within the QMP shall address the tracking and reporting of issuance, comments and discussions, and ultimate resolution of all NCRs.

#### **2.3.3.1 General**

The QMP will identify the process for responding to all NCRs. The NCR remediation process will include a report which clearly describes the element of Work that is non-conforming, the reason for the non-conformance, and details the remedial actions proposed (rework or repair) to achieve conformance to the Contract requirements. Any proposed remediation shall be approved by GDOT prior to it being performed. The remedial actions employed will undergo the same level of inspection and testing as required for the original Work.

GDOT will implement and the DB Team must use a PMCS, which will have the capability for documenting and implementing the NCRs, that includes the description of the NCR, corrective action, action to prevent, the defined roles, dispositions, tracking log, and work-flow states.

The DB Team shall provide a full description of the NCR's nature, date, location, and any other pertinent facts, and also indicate the root cause, corrective action(s), and other action(s) to prevent its recurrence. The responsible organization shall submit a proposed disposition to GDOT of the nonconforming Work that has been reviewed and approved by the DB Team's Quality Assurance Manager (QAM) and EOR. If the disposition is not accepted by GDOT, the NCR will remain opened until the disposition is accepted by GDOT.

The QAM will maintain a log of all NCRs and submit it weekly to GDOT. Number each NCR sequentially and provide a brief description and status.

### 2.3.3.2 Initiating an NCR

The DB Team, CQAM, or GDOT can initiate an NCR. Only the initiating party may close an NCR they initiated. The Originator closes the NCR document once all requirements have been met. An NCR cannot be closed until all requirements have been met and the disposition approved by GDOT.

**Table 2-1: Non-Conformance Report Workflow States**

State	Description
Draft	Indicates that the NCR is being written.
Active	Indicates that the NCR has been submitted to the DB Team, which shall provide causes, corrective actions, actions to prevent recurrence, and a disposition for the nonconforming Work.
Pending Review/Correction	Indicates that the DB Team has responded with a proposed disposition, and the disposition is under review. The document is routed to appropriate parties for approval of the disposition.
Pending Closure	Indicates that the nonconforming Work has been corrected, and the DB Team is waiting for inspection, verification and closure.
Closed	Indicates that the nonconformance has been resolved satisfactorily, and the NCR is closed.

### 2.3.3.3 Disposition Options

After an NCR is initiated, the initiating party provides a proposed disposition. Options available for the disposition are:

- **Reject** – The Work is unsuitable for its intended use and incapable of being reworked or repaired to meet the specified requirements of the DB Documents.
- **Rework** – The deficiency can be brought into conformance with the DB Documents through re-machining, reassembling, reprocessing, reinstalling, or completing the required operations. In cases of rework, an inspection is required after completion to verify the rework is satisfactory.
- **Repair** – Action is required that will result in making the Work acceptable for its intended use, as determined by an engineering evaluation, although the item might not meet all of the requirements of the DB Documents. In cases of repair, an inspection is required after completion to verify the rework is satisfactory. If the repair does not meet all of the requirements of the DB Documents, it may be subject to a deduction for non-conforming Work, upon the discretion of GDOT.

- Accept-as-is – Allows the use of the Work completed that does not meet all requirements of the DBA, but it is determined by engineering evaluation that the Work will satisfy its intended use. If the Work is Accepted-as-is and does not meet all of the requirements of the DB Documents, it may be subject to a deduction for non-conforming Work, upon the discretion of GDOT.

#### **2.3.3.4 Corrective Action**

In addition to the resolution of a nonconformance on an individual basis, the corrective action process will urgently recognize, report, and resolve systemic and serious deficiencies, including:

- Repetitive NCRs that indicate inadequacies in either production processes or inspections.
- Issues of safety or conditions likely to have a significant effect on the Project.
- Quality procedures not being carried out in a timely fashion.

The Corrective Action mechanism will address the possibility that the personnel responsible for the relevant activity might be a primary cause of the deficiencies. Remedial action might involve additional training and, in some cases, removal of personnel or Contractors or Subcontractors from the activity or Project.

#### **2.3.4 Quality Terminology**

Quality terminology, unless defined or modified elsewhere in the DB Documents, shall have the meaning defined in ISO 9001. Terms used in ISO 9001 shall have the meanings defined below:

- Organization: The DB Team's organization, including any Affiliates and Contractors.
- Customers: The Users of the roadways, GDOT, SRTA, and Customer Groups

#### **2.3.5 Quality Organization**

The DB Team shall provide QA and QC for management, design, and construction of the Project, and verify that all environmental and permit commitments are met to ensure the Work conforms to the DB Document requirements. The QMP shall detail the quality organization.

In preparing the QMP, the DB Team shall ensure that the QMP complies with the applicable environmental requirements and the GDOT and AASHTO publications listed in these Technical Requirements. The DB Team shall revise the QMP and its implementation when repetitive or recurring quality issues arise.

The DB Team's QMP shall include an organizational chart of the QA and QC personnel, or quality team, including the Project QAM, the CQAM, the DQAM, the QC manager/superintendents, personnel in charge of QA and QC activities, and any other



personnel the DB Team acknowledges as having significant quality-related responsibilities from the DB Team to the quality team. The QMP shall list the number of full-time equivalent employees, specific responsibilities for each employee, and the lines of authority and reporting responsibilities.

This organizational chart shall be updated to reflect any changes in QA and QC personnel as the Project progresses.

### **2.3.6 Responsibility and Authority of DB Team Staff**

The personnel and organizations performing QA functions shall have sufficient authority and organizational autonomy to identify quality issues, and to be able to initiate, recommend, and verify implementation of Corrective Action plans. Personnel performing QA functions shall be at an organizational level that ensures they will not be influenced by the impact of the QA measures on the Project schedule, performance, or cost. The QMP shall list by discipline the name, qualifications, applicable certifications, duties, responsibilities, and authority for all personnel proposed to be responsible for QA and QC. Personnel performing QA functions shall not be assigned to perform conflicting duties.

The DB Team's QA team is responsible for obtaining all documentation necessary for approval and acceptance of materials; obtaining materials certifications as required; ensuring that all required materials testing is completed; and ensuring that all test results meet the DB Document requirements. The DB Team's QA team shall inspect all Work and ensure that sufficient QA staff is present to determine whether the Work complies with DB Document requirements, in accordance with the process required in the Contract Documents and the approved QMP.

Personnel assigned to perform inspection, testing, or monitoring of characteristics for QC shall not be those personnel performing or directly supervising the Work being accepted. The DB Team's QAM and QA managers and staff shall have no responsibilities in the production of the Work.

The QM shall prepare a monthly report of the quality inspections and tests performed, results of such inspections and tests, and occurrences and resolution of non-conformance discoveries. The DB Team shall submit the monthly reports to GDOT for review.

The DB Team's QAM, CQAM, DQAM, and QC Manager(s) shall have the authority to suspend all or a portion of the Work because of quality-related issues.

#### **2.3.6.1 Project Quality Assurance Manager**

The DB Team shall designate a Project Quality Assurance Manager (QAM) who shall be responsible for developing and updating the QMP, ensuring that all elements of Work are performed in accordance with the DB Documents, and ensuring adequate staffing and expertise is being utilized for the DB Team's QA and QC efforts.

The Project QAM shall report directly to the person or group with overall Project management responsibilities such as the Project Manager, an off-Site principal with

binding authority for the DB Team, or an executive oversight committee established for the Project. The QAM could be an employee of the DB Team or be the DQAM, or the CQAM but cannot be both the Design and Construction QA Managers.

#### **2.3.6.1.1 *Minimum Qualifications***

The Project Quality Assurance Manager shall have recent experience in the management of a quality management program.

#### **2.3.6.2 *Design Quality Assurance Manager***

The DB Team shall designate a Design QAM (DQAM) who shall have overall responsibility for the design portion of the QMP. Through audits, the DQAM shall be responsible for verifying and validating that the QA and QC procedures required by the QMP are administered and being followed. The DQAM shall audit design packages for both temporary and permanent Work. The DQAM shall report to the Project QAM. The DQAM could also be the Project QAM, but cannot be the CQAM.

In accordance with this Section 2.3.6.2 and the QMP, the DQAM shall certify that all Design Documents have been subjected to all required QC checking procedures; all documentation has been completed and filed in an acceptable manner; and all design packages have been subjected to a QA audit prior to submittal to GDOT or prior to release.

#### **2.3.6.2.1 *Minimum Qualifications***

The DQAM shall be a Licensed Professional Engineer in the State of Georgia and have recent experience in the design of highway or bridge projects. Generally, the DQAM must have equal or greater qualifications and experience as the EOR.

#### **2.3.6.3 *Construction Quality Assurance Manager***

The DB Team shall employ a Construction Quality Assurance Manager, who shall have overall responsibility for development and implementation of the construction portion of the QMP. The CQAM shall be responsible for implementing, monitoring, and adjusting the processes to ensure acceptable quality. The CQAM shall report directly to the Project Quality Manager. The CQAM could also be the Project Quality Manager (QM) but cannot also be the DQAM.

It is the responsibility of the CQAM to implement quality planning and coordinate with GDOT's testing and inspection requirements. All duties listed for the Project CQAF shall be the responsibility of the CQAM or designee. The CQAM shall not be assigned to perform conflicting duties on the Project. The CQAM shall have the authority to stop any Work that does not meet the standards, specifications, or criteria established for the Project.

The CQAM or a designated Assistant CQAM shall be on the Project at all times Construction Work is being performed or available so that they can be on the Project Site within 2 hours of being notified of a problem regarding the QA of any Work being performed by the DB Team, or any of its subcontractors or agents.

### **2.3.6.3.1 Minimum Qualifications**

The CQAM shall have recent experience in construction quality management for highway or bridge projects..

### **2.3.6.4 QA Staffing and Training**

Quality personnel, including employees of the DB Team and its subconsultants and subcontractors, shall have been trained in the applicable quality procedures, including for inspection of the Work, environmental monitoring, and material sampling and testing. The professional training and experience of the quality personnel shall be commensurate with the scope, complexity, and nature of the activity to be checked or monitored.

### **2.3.7 Design Quality Management**

The DB Team is solely responsible to provide Project Design Documents of such a nature to deliver the finished construction Work in accordance with all DB Document requirements. GDOT comments pertaining to Design Documents shall not relieve the DB Team of that responsibility. The DB Team shall not begin Construction Work until all GDOT comments on the applicable design Submittal are resolved to the satisfaction of GDOT, and the plan is issued as an RFC.

The DB Team shall assign a Design Quality Assurance Manager that shall be responsible for the supervision and quality of all Design Work and design processes, including the following:

1. Accuracy
2. Adequacy
3. Conformance to professional standards of practice
4. Compliance with all legal requirements and standards mandated by the DBA
5. Cost effectiveness
6. Quality
7. Fitness for purpose and function as specified or implied in the DB Documents

At GDOT's discretion, GDOT will perform periodic audits of the DB Team's design quality management at a frequency no less than monthly.

### **2.3.8 Construction Quality Management**

Prior to the commencement of any construction activities, the Design-Build (DB) Team shall develop and implement a Construction Quality Management Plan (CQMP) for all phases of construction.

#### **2.3.8.1 Quality Control Program**

The DB Team shall be fully responsible for the quality of the Work, QC, and for all QC activities specified by the DB Documents. The DB Team's QC portion of the CQMP shall include the internal procedures used by the DB Team that will ensure that the Work is delivered in accordance with the released-for-construction plans, shop drawings, working

drawings, and specifications (as applicable). The DB Team's CQMP shall establish a systematic approach to define the processes, methods, procedures, and documentation for delivery of QC on the Project. These methods and procedures shall clearly define the authority and responsibility for the administration of the DB Team's QC plan. The DB Team's QC shall not be part of the acceptance program.

### **2.3.8.2 Control Point Inspections**

A control point is a point in time when construction has proceeded to a defined stage and at which representatives of the DB Team's production and QC staff determine the conformance of the Work to that point.

The DB Team shall notify GDOT in writing three (3) days in advance prior to the expected inspection time and 24 hours in advance of the actual inspection for the following activities: pre-pour conferences; pre-pour checks for footing rebar, cap rebar, column rebar, deck rebar, approach slab rebar, and barrier wall rebar; driving piles; setting beams; subgrade compaction; sub-base compaction; and compaction under the approach slabs.

The QMP shall specify processes for monitoring the progression of Work through the tracking of control points. The process should be designed to aid in progressing Work, verifying payments, and avoiding duplicate inspection, testing, and reporting. The DB Team shall provide this information on the five week look ahead schedules required by Section 2.5.4 for all upcoming Work to be inspected.

GDOT or the DB Team may identify additional control points, subject to acceptance by GDOT, to be included at any time throughout the Project which addition, individually or in aggregate, shall not constitute a Compensation Event or Relief Event. GDOT will coordinate to define the procedures and criteria for additional control points.

### **2.3.8.3 Environmental Compliance**

The QMP shall describe the methods, processes, and procedures to provide for the effective implementation and documentation of the environmental protection, training, compliance, and monitoring program. The DB Team, through the QMP, shall be responsible for the quality of Work, including the workmanship and products of Affiliates, Contractors, Subcontractors, fabricators, suppliers, and vendors for environmental compliance monitoring.

### **2.3.8.4 Non-Field-Tested Materials**

GDOT will provide construction engineering acceptance inspection and testing through the Office of Innovative Delivery, or its designee, in accordance with GDOT Specifications and the Design Documents.

GDOT will provide plant inspection, testing and certification of plant produced materials at existing GDOT approved plant locations, such as for precast/pre-stressed concrete, asphalt, and structural steel fabrication.

### **2.3.9 Final Inspection**

At the completion of constructed elements of the Work, the CQAM will jointly conduct a final inspection with GDOT and the DB Team.

During the inspection, GDOT, the CQAM, and the DB Team will jointly agree upon punch list items and an agreed date of correction of the items.

### **2.3.10 Quality Documentation**

The DB Team shall establish and maintain an electronic and hard copy document control system to store, catalog, and retrieve all Project-related documents in a format that is approved for use by GDOT. Unless otherwise directed by GDOT, record retention shall comply with the requirements included in the Retention Schedules for State Government Paper and Electronic Records, and the State Agency Specific Schedules for Departments of Transportation, and they shall be provided to GDOT at the time of the expiration or earlier termination of the Agreement.

Design quality records shall be maintained by the DB Team in an auditable format according to the QMP procedures. GDOT has the right to audit the quality records for compliance with the QMP and the DBA requirements. Upon completion of the Project, the quality records shall be turned over to GDOT.

## **2.4 Safety and Security**

*There are no changes to this Section.*

### **2.4.1 Safety and Security**

*There are no changes to this Section.*

### **2.4.2 Worksite and Jobsite Analysis**

*There are no changes to this Section.*

### **2.4.3 Hazard Prevention and Personal Safety**

*There are no changes to this Section.*

### **2.4.4 Training**

*There are no changes to this Section.*

### **2.4.5 Incident and Emergency Management**

*There are no changes to this Section.*

## 2.5 Schedule Requirements

### 2.5.1 General Schedule Requirements

The DB Team shall comply with the Critical Path Method (CPM) schedule requirements as defined in this Section 2.5. The DB Team shall be responsible for ensuring that all work sequences are logical and that the CPM schedule indicates a coordinated plan. The CPM schedule shall indicate the order and interdependence of activities and the sequence for accomplishing the work. The CPM schedule shall illustrate all activities that occur during the contractual life of the Project, whom is responsible for each respective activity, and the duration for each activity as set forth in the DB Documents.

The DB Team shall utilize Primavera software, specifically Primavera P6 Version 7.x or greater for the development and maintenance of all project schedules.

### 2.5.2 Project Baseline Schedule Requirements

DB Team shall submit a Project Baseline Schedule to GDOT for review and approval. The schedule shall show milestones for Milestone Completion Deadlines no later than those specified in the DBA. All specified closure or restriction periods, non-work periods or any other time restrictions in the DBA shall be incorporated in the Project Baseline Schedule. The Project Baseline Schedule shall be submitted no later than sixty (60) calendar days after NTP 1.

The Project Baseline Schedule shall include all major Work activities required under the DB Documents, in sufficient detail to monitor and evaluate design and construction progress, from commencement of the Work to Final Acceptance of the Work. The Project Baseline Schedule shall also include activities for the acquisition of any Proposed Right of Way (whether State Proposed/State Acquired or DB Team Proposed/DB Team Acquired), as well as for any DB Team identified Additional Properties, Utility Adjustments, permit acquisitions, and interfaces with other projects, localities, municipalities and other Governmental Entities. For each major activity, the DB Team shall indicate the duration (in Days) required to complete the activity, the anticipated start and finish date of each activity. In addition, the Project Baseline Schedule shall indicate the sequence of performing each major activity and the logical dependencies and inter-relationships between the activities.

The Project Baseline Schedule shall include a listing of all Submittals as called out in Volume 3, Section 2 and Section 3 and Volume 2, Table 3-1, other sections of the DB Documents, or as required to obtain any acceptance by GDOT or any other Government Entity. Submittal activity durations shall include specific durations for GDOT review and/or acceptance of DB Team's submittals.

Float shall be considered as a jointly owned resource available to the Project and shall not be used to the sole benefit or detriment of either GDOT or the DB Team. Any method utilized to sequester Float calculations is prohibited. Any schedule, including the Project Baseline Schedule and all updates thereto, showing an early completion date shall show

the time between the scheduled completion date and the applicable Milestone Schedule Deadline as “Project Float.”

The Project Baseline Schedule shall define the timeframe for completion of the Project and achievement of all contractual milestones, and be used to monitor progress and denote changes that occur during design and construction. Additional schedule requirements are as follows:

1. Each Project Schedule (Baseline and Updates) shall include a Work Breakdown Structure (WBS) and activity codes to enhance the ability of the DB Team and GDOT to plan, analyze, monitor, and record the progress of the Work. The DB Team shall coordinate with GDOT prior to submittal of the Project Baseline Schedule to ensure an adequate WBS and activity codes have been developed and assigned to each activity to the satisfaction of GDOT. GDOT reserves the right to request additional WBS levels and activity codes be added and assigned throughout the Project. Project Schedule activities shall be mapped to, organized by, and rolled-up to a deliverable-based, hierarchal WBS. The organization and breakdown of the WBS shall reflect the DB Team’s overall approach to the planning, scheduling, and execution of the Work and shall conform to all Project-specific phasing, staging, sequencing, design, and deliverable requirements. The first and second levels of the WBS shall be Project and Phase (respectively) where Phase is the code value used to describe the Phase of Work (Project Management, Design, Right-of-Way, Utility Adjustments, Construction, Operations During Construction, and Maintenance During Construction). The design phase WBS shall identify each design package required for construction phasing and sequencing and shall identify each stage of the design. The DB Team shall further develop and detail the base WBS. Activity Codes assigned to activities shall be “Project” level only (i.e., not global). All Activity Code definitions shall include the PI number in the description (i.e. PI#####\_Phase; etc.). The use of hierarchical activity code structure is acceptable to GDOT.
2. The Project Baseline Schedule shall divide the Work into activities with appropriate logic ties to show the DB Team’s overall approach to the planning, scheduling, and execution of the Work. This includes sufficient hard logic (also known as construction logic) and sufficient preferential logic (also known as trade flow or soft logic). Preferential logic shall include logic ties that dictate the planned flow of Work on an early date basis, as well as sufficient logic to ensure the late date basis represents a reasonable plan, production rates, and resource constraints that can be met. Resource constraints shall be explicitly identified using activity relationships and a detailed description in the schedule narrative. The duration and logical relationships of the activities (or summaries at the project phase level) shall be based on the actual duration, production rates, and relationships anticipated. The DB Team shall not use calendar dates or constraints to logically begin or complete any activity unless calendar dates are shown in the DB Documents (In a case where a specific date is required to start or finish an activity only a start-on-or-before or a finish-on-or-before constraint is to be used).

3. Activity Identification: DB Team shall use standard and consistent activity identification numbers and textual descriptions in a manner acceptable to GDOT. Only use an alphanumeric coding structure with no spaces, hyphens, symbols or special characters in the activity identification numbers. Each activity shall have a unique activity identification number which shall not be modified or reassigned to different work activities once assigned to an activity. Each activity shall be uniquely named and consist of a verb, noun, and location. Physical locations of activities within definable geometric limits (e.g., from station to station, within a single ramp, etc.) shall be included in the activity description consistent with the WBS.
4. The Project Baseline Schedule submittal shall be clearly identified. Resubmissions of a Project Baseline Schedule shall use the same revision number as the original submission individually identified by a sequential appended letter (A, B, etc.), as an indication of a revised version.
5. Each required milestone as set forth in Volume 1, Exhibit 9 shall be included in the schedule and conform to the scheduling requirements set forth in the DB Documents, and be assigned a “finish on or before” constraint date.
6. No unspecified milestones, constraints, float suppression techniques, or use of activity durations, logic ties, and/or sequences deemed unreasonable by GDOT, shall be used in the Project Baseline Schedule. Each Project Baseline Schedule submittal shall clearly and individually define the progression of the Work within the applicable time frame by using separate activities.
7. The Project Baseline Schedule shall be used by all Parties for planning and monitoring the progress of the Work and may serve as supporting documentation for determining the Payment Request amount that may be compensable to be made to DB Team. The updated Project Baseline Schedule shall show actual progress and not calculated progress. Accepted logic changes and approved changes to the DB Documents shall be incorporated into the Project Baseline Schedule (these changes are to be identified with either the change notice number or other method accepted by GDOT to identify the change to the schedule) and identified in the narrative with each submittal.
8. The WBS for each work element shall indicate the duration, timing, and logical relationship to other work elements, including relationships to activities other than the parent activity of the particular Work element. Activities shall be broken down minimally to work elements (for example, bridges shall be broken down into foundations, substructure, superstructure, and decks). All Work shall be broken down to similar manageable work elements. Each activity shall describe Work associated with only one operation. For Utility Adjustment Work, if the Work is not shown as an activity itself, such Work shall be shown as a work element, where applicable. For Mobilization activities or work elements, DB Team shall provide a list of work items that are included in each activity or work element.



9. The Project Baseline Schedule shall define the timeframe for completion of the Project and achievement of milestones, and be used to monitor progress and denote changes that occur during design and construction.
10. The Project Baseline Schedule shall satisfactorily account for anticipated adverse weather. Prior to submittal of the Project Baseline Schedule, provide in writing the planned methodology to account for anticipated adverse weather days over the course of the Project. This may be achieved via activity durations, calendar non-work days clearly defined for weather, or other equally effective means as specifically identified to, and approved by, GDOT.

Project Baseline Schedule submittals shall include:

1. Electronic copy (Primavera P6 Version 7.x or greater) of the file used for the proposed Project Baseline Schedule revision
2. A schedule narrative meeting the requirements of this Section 2.5.
3. A critical path schedule plot (in .pdf format)
4. A full schedule plot (in .pdf format)

After the DB Team submits the Project Baseline Schedule, GDOT will review and provide written acceptance or direction for the DB Team to revise and resubmit the Project Baseline Schedule within fourteen (14) days of being directed by GDOT.

#### **2.5.2.1 Logic Requirements**

Logic ties shall refer to all relationship types. All activities/tasks on the Project Baseline Schedule shall meet the logic requirements below:

1. A maximum duration of thirty (30) Calendar Days, and not less than one (1) Day, except activities relating to acceptances and reviews by Governmental Entities, procurement activities, or as otherwise accepted by GDOT.
2. Activity relationships shall be Finish-to-Start (FS) with no leads or lags, Finish-to-Finish (FF) or Start-to-Start (SS) with lags no more than one-half of the predecessor's duration.
3. The use of lags with a negative value shall not be allowed on any activity relationship type.
4. The schedule shall provide sufficient time for all submittals and re-submittal review times required in the DB Documents. All GDOT/Agency review periods are to be 30 calendar days unless noted in Table 3-1.
5. All activities shown in the schedule, with the exception of the first and last activity, shall have a minimum of one predecessor and a minimum of one successor activity.

### **2.5.2.2 Calendar Requirements**

All calendars utilized on the project schedules shall be project level calendars. The DB Team shall not use or reference global level calendars. The use of standard GDOT calendars is required for scheduling the Project. The DB Team shall be allowed to add calendars as needed for their specific use provided that the additional calendars are defined and have a justified basis.

### **2.5.2.3 Narrative Requirements**

The Project Baseline Schedule and all schedule updates shall include a separate narrative report. The narrative report shall be updated with each schedule submission and pertain to the work identified in the schedule.

For the Project Baseline Schedule submittals, the narrative report shall include the following separated into sections:

1. An explanation of the overall plan to complete the project, including where the work will begin and how the work and crews will progress through the project.
2. An explanation of the use and application of the workdays per week, number of shifts per day, number of hours per shift, holidays observed and how the schedule accommodates anticipated weather days for each month. Submit a list of the calendars used in the schedule and a definition of their type.
3. Description of the work to be completed each season for multi-year projects.
4. A description of the critical path.
5. An explanation of the use of any allowed constraints, including the reason and purpose for each constraint.
6. A statement describing the status of any required permits.
7. The DB Team's proposed methods of operation for designing and constructing the major portions of the Work required by the DB Documents.

For Project Schedule Updates the narrative shall also include the following:

1. A description of the work performed since the last schedule update. The work performed shall match the work scheduled to be performed since the last schedule update. If the work performed does not match the work scheduled to be performed, the DB Team shall include a detailed description of why there is a discrepancy between the activities that should have been completed or progressed as indicated in the previous schedule submittal. GDOT may withhold payment if the reason for the discrepancy is not deemed an acceptable change in sequencing of activities or outside the DB Team's control (third party or weather related) until additional documentation or recovery plan is submitted and accepted as appropriate.

2. A description of the status of the scheduled completion date, focusing on any changes since the previous submission including an explanation if a scheduled completion date is projected to occur after the Milestone Schedule Deadline.
3. An explanation if any Milestone Schedule Deadlines are projected to occur after the dates set out in the DBA.
4. A description of unusual labor, shift, equipment or material conditions or restrictions encountered.
5. A description of any problems encountered or anticipated since the last schedule update.
6. A statement that identifies any current and anticipated delays. A discussion of delays in the narrative report does not constitute notice in accordance with Standard Specification 105.13.B.9. The statement should include identification of the delayed activity, the type of delay, the cause of the delay, the effect of the delay on other activities and project milestones and identification of actions required to mitigate the delay.

### **2.5.3 Project Schedule Update Requirements**

DB Team shall update, on a monthly basis, the accepted Project Schedule to reflect the current status of the Project, and any accepted Compensation or Relief Events by GDOT. The Schedule Update shall be submitted on or before the seventh day of the month after acceptance of the Project Baseline Schedule and shall be developed in accordance with the applicable provisions of the DB Documents, including those specified for a Project Baseline Schedule. The data date of each update shall be the 1<sup>st</sup> of the month.

Each Project Schedule Update shall accurately reflect all activities completed as of the Data Date of the updated Project Schedule. All completed or started activities are to be at least one day prior to the Data Date of the schedule. Actual dates inputted shall be limited to the active update period. Previously stated activities shall not be subsequently edited from update-to-update without prior written explanation to, and approval from, GDOT.

The Project Schedule Update shall include the following:

1. Electronic copy (Primavera P6 Version 7.x or greater) of the file used for the proposed Project Baseline Schedule revision
2. A schedule narrative meeting the requirements of this Section 2.5.4
3. A critical path schedule plot (in .pdf format)
4. A full schedule plot (in .pdf format)
5. A five (5) week look ahead schedule for the activities to be completed between the schedule submittal and the following month's schedule update (in .pdf format)

6. A detailed variance report of the previous months five (5) week look ahead schedule.
7. A letter stating the dates which the DB Team could not work on activities identified on the critical path due to weather. If there were no weather delays experienced during the previous month the letter should state as such.

No changes in activity durations, calendar assignments, logic ties, or constraints will be allowed in the Project Schedule Update without written acceptance of GDOT.

The monthly Project Schedule Update(s) shall reflect updated progress to the Data Date, forecast the finish dates for in-progress activities, and reforecast early dates and late dates for remaining activities, but shall otherwise contain no changes in activity durations, logic ties, or constraints without acceptance from GDOT. The Project Schedule Update(s) shall also incorporate and fully specify all appropriate information from the previously accepted Project Baseline Schedule. Interruptions to an activity, after that activity has begun, shall be added as a separate activity. The activity that is interrupted shall be split into two activities; the initial activity shall be marked as completed and the new activity shall have a FS relationship with the added interruption activity.

GDOT will review the monthly Project Schedule Update(s) for consistency with the current accepted Project Baseline Schedule and the previous months accepted update for conformance with the DB Documents. GDOT will review and provide written acceptance or direction for the DB Team to revise and resubmit the Project Schedule Update within 14 days of being directed by GDOT. GDOT may withhold payment until the Project Schedule Update is submitted.

#### **2.5.4 Revised Project Baseline Schedule**

A Revised Project Baseline may be required if any of the following occur: work sequence changes, contractual changes (accepted Relief Events or Compensation Events), field condition changes, or a Revised Project Baseline schedule is requested by GDOT. GDOT shall have final acceptance authority for any changes to the Project Baseline Schedule. No changes to the Project Baseline Schedule shall be made without the prior written acceptance of GDOT. Until GDOT approves a Revised Project Baseline Schedule, all Project Schedule Update submittals shall be tracked against the previously accepted Project Baseline Schedule. The Revised Project Baseline Schedule shall meet requirements of a Project Baseline Schedule (as applicable).

The Revised Project Baseline Schedule submittals shall include:

1. Electronic copy (Primavera P6 Version 7.x or greater) of the file used for the proposed Project Baseline Schedule revision
2. Narrative describing in detail any proposed changes to the current version of the Project Baseline Schedule with justification for the changes, including, at the minimum, the following:
  - Changes to activity original durations,
  - Changes to activity relationships and/or schedule logic,

- Identification of activities that have been added, deleted, or modified,
- Changes to the Project Baseline Schedule critical path, and /or
- Changes or delay in any Milestone Schedule Deadlines since the last Project Baseline Schedule submittal.

GDOT will review and provide written acceptance or direction for the DB Team to revise and resubmit the Revised Project Baseline within 14 days of being directed by GDOT. Once a Revised Project Baseline Schedule is accepted by GDOT, it shall become the Project Baseline Schedule of record and be used as the basis for subsequent Project Schedule Update(s).

## **2.5.5 Project Schedule of Values (SOV)**

### **2.5.5.1 Establishing the Project SOV**

Within fifteen (15) days of NTP 1, submit a proposed Project SOV, with the line items identified in Section 2.5.5.2. Alternatively, the DB Team may cost-load the Project Schedule to form the Project SOV.

GDOT will review the Project SOV submittal and return it within fifteen (15) days of submission as either approved or to revise and resubmit. The submittal process shall be repeated until the Project SOV is approved by GDOT.

The sum of the costs of all Project SOV payment activities shall equal the Contract Sum and be allocated according to the following requirements:

1. The amount allocated for each bridge shall be equal to the amount identified in Exhibit 7.
2. The cost for each payment activity shall accurately represent the value of the Work identified in the activity.
3. SOV payment activities shall not be front-end loaded (within bridge payment activities and between the bridge amounts).

Once approved by GDOT, the DB Team shall not modify the approved Project SOV without prior GDOT approval.

### **2.5.5.2 SOV Payment Activities**

For each bridge identified in Exhibit 7 and Attachment 1-1, cost load the following payment activities:

1. Management Plans
2. Design
3. Permitting
4. Mobilization
5. Structure Demolition
6. Foundations
7. Substructure Concrete
8. Superstructure

9. Superstructure Beams
10. Approach slabs
11. Traffic Control
12. Erosion Control
13. Grading
14. Drainage
15. Guardrail
16. Aggregate Base Course
17. Asphalt Paving
18. Striping and Signage
19. Punch list, Demobilization and final close-out

### **2.5.5.3 Project SOV Updates**

Each progressed Project SOV shall be accompanied by a Progress Schedule submittal. The DB Team and GDOT will agree upon the progress percent complete for Work in place related to each SOV payment activity. The progressed Project SOV shall be submitted with and shall justify the DB Team's monthly Payment Requests. The Project SOV shall show for each payment activity, individually and in aggregate: SOV value, progress percent completed to date, prior percent completed, percentage remaining, and the associated dollar amount. Supplemental Agreements that include changes to the Contract Sum will be incorporated into the Project SOV.

## **2.6 Progress, Payment Requests, and Payment**

*Delete this Section.*

## **2.7 Public Information and Communications**

### **2.7.1 General Requirements**

*There are no changes to this Section.*

### **2.7.2 Administrative Requirements**

*There are no changes to this Section.*

### **2.7.3 Project Information Coordinator (PIC)**

*There are no changes to this Section.*

### **2.7.4 Monthly Public Information and Communications Reporting**

*There are no changes to this Section.*

### **2.7.5 Emergency Event Communications**

*There are no changes to this Section.*

### 2.7.6 Disseminating Public Information

*There are no changes to this Section.*

### 2.7.7 Public Involvement Action Items

*Delete this Section and replace with the following:*

Table 2-2 summarizes the responsibilities for the DB Team and GDOT on each of the Project information tasks. It also describes the general timeframe and audience for these activities.

**Table 2-2: DB Team Project Information Tasks and Responsibilities**

Task	Audience	Timeframe	Responsibility
Responding to General Public Inquiries/ comments	General Public	Project Duration	GDOT Project Communications Manager (PCM) to coordinate and facilitate with support from DB Team.
Continuous Communications with Elected/ Public Officials	All Audiences	Monthly at Key Milestones and as requested	GDOT to coordinate and facilitate with support from the DB Team
Public Information Meetings	General Public	Key Milestones and as requested	GDOT to coordinate and facilitate with support from the DB Team
Public Outreach Meetings	Selected Groups	Project Duration, as Necessary	GDOT to coordinate and facilitate with support from the DB Team
Traffic Impact and Lane, Ramp and Road Closure Notices	General Public	Duration of Construction Period	The DB Team to provide information to GDOT in advance of traffic impacts. Weekday traffic interruptions for the next week shall be disseminated by the DB Team no later than noon the Thursday before.  Weekend traffic interruptions for the next weekend shall be disseminated by the DB Team no later than the close of business the Wednesday before.  Ramp and road closure notices shall be requested by the DB Team a minimum of two weeks prior to the closure.
Website Information	General Public	Project Duration	GDOT with support from DB Team
News Releases and Traffic Advisories	General Public	Project Duration	GDOT with support from the DB Team

<b>Task</b>	<b>Audience</b>	<b>Timeframe</b>	<b>Responsibility</b>
Crisis Communications	General Public	As Necessary During Project	GDOT with support from the DB Team per Emergency Plan
Responding to News Media Inquiries	General Public (via media)	Project Duration	GDOT Project support staff to serve as media contact with support from the DB Team
Electronic Communications, Social Media, E-newsletter	All Audiences	Project Duration	GDOT with support from the DB Team
Special Events Highlighting Project Milestones	Targeted Stakeholders	Groundbreaking and Open to Traffic	GDOT with support from the DB Team
Print Materials	All Audiences	Project Duration	GDOT with support from the DB Team
Project Site Visits	Special Groups	Special Coordination During Construction Period	GDOT in coordination with DB Team and appropriate technical staff.



### **3 DESIGN AND SUBMITTALS**

#### **3.1 General**

*There are no changes to this Section.*

##### **3.1.1 GDOT Standards and Manuals**

*Supplement Section 3.1.1 with the following:*

The DB Team shall meet all requirements of the AASHTO Manual for Assessing Safety Hardware (MASH), 2nd Edition, 2016. The DB Team shall ensure that its designs and installation meet the required MASH implementation dates during the life of the contract.

Special Provision 621 (Concrete Barrier) is required; see Volume 2 Attachment 3-1.

##### **3.1.2 Detailed Estimate of Quantities**

*There are no changes to this Section.*

#### **3.2 Design**

##### **3.2.1 Design Workshop**

*There are no changes to this Section.*

##### **3.2.2 Design Reviews**

*Supplement Section 3.2.2 with the following:*

The DB Team shall facilitate field plan reviews with GDOT for review of the DB Team's design plans. The DB Team's Engineer of Record (EOR) or design project manager and a representative of the DB Team's contractor shall attend at a minimum. A field plan review shall be held at each bridge location.

The design kick-off meeting shall also include discussion on the bridge(s) specific information and requirements, including the design, any environmental issues, traffic control, schedule, general Work activities, quality control, and any known or anticipated issues with successful and timely completion of the bridge(s). Based on the design development schedule, the EOR may organize and facilitate multiple design kick-off meetings.

*Delete the last sentence of the fourth paragraph and replace with the following:*

The DB Team shall prepare and distribute minutes from the review meetings within seven (7) days of the meeting.

##### **3.2.3 Changes Subsequent to Review**

*There are no changes to this Section.*

### 3.3 Other Agency Approvals

#### 3.3.1 Federal Aviation Administration

*There are no changes to this Section.*

### 3.4 Design Data Book

*There are no changes to this Section.*

### 3.5 Design Submittals and Progress of Design Work

Supplement Section 3.5 with the following:

The DB Team shall provide Project Submittals included in Table 3-1: Master Submittal List. Each required Submittal shall be delivered to GDOT in compliance with the review times provided. The times provided are specifically for the review period required for GDOT to comment and subsequently accept (if all requirements of the DB Documents are met) or approve, as applicable. Not all Submittals listed in Table 3-1: Master Submittal List may be required for the Project and some Submittals may be combined into a single Submittal such as the Project Management Plans; DB Team shall coordinate with GDOT prior to combining any Submittals and receive GDOT approval prior to omitting any listed Submittals.

#### ABBREVIATIONS FOR TABLE

ASC	Point File for Survey Data
AR	As Required
DTM	Digital Terrain Model
FS	Full-size paper – meets GDOT Plan Presentation Guide
HC	Hard Copy – 8 ½ x 11 unless otherwise noted
HS	Half-size paper – meets GDOT Plan Presentation Guide
MP	Microsoft Project
MS	MicroStation File – Electronic
NA	Not Applicable
NTP	Notice to Proceed
PAS	Per Approved Schedule
PDF	Adobe PDF – One complete file and individual plan sheet files that meet GDOT Electronic Plans Process requirements

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**Table 3-1: Master Submittal List**

Section	Volume	Submittal Item	Format	Quantity	Delivery Date	Review Period* (Days)
3	3	Design & Construction Quality Records	AR, PDF	1	Always Auditable; submit at project completion	N/A
2	3	Interim (Optional Design Submittals)	AR, PDF	1	Per approved Submittal Schedule	14
2	3	Schedule of Values	AR, PDF	1	Within 15 days from NTP 1	14
2	3	Submittal Schedule	AR, P6, PDF	1	Within 30 days from NTP 1	30
3	3	Project Design Data Book (Final Plan Submittal)	AR, HC, PDF	3, 1	Within 30 days from NTP 1	30
2	3	Design Review meeting minutes	AR, PDF	1	Within 7 days of Design Review meetings	7
<b>Management Plans</b>						
2	3	Project Management Plan and any updates	AR, PDF	1	See Section 2 of Volume 3	30
2	3	Design Quality Management Plan	AR, PDF	1	Within 30 days from NTP 1	30
2	3	Construction Quality Management Plan	AR, PDF	1	See Section 2 of Volume 3	30
2	3	Safety Plan	AR, PDF	1	With Project Management Plan	30
2	3	Quality Management Plan	AR, PDF	1	Within 30 days from NTP 1	30
2	3	Monthly Status Reports (includes cost, schedule, quality, status, etc.)	AR, PDF	1	Monthly	NA
2	3	DB Team Internal Quality Audits	AR, PDF	1	As needed	NA
2	3	DB Team Non-Conformance Reports	AR, PDF	1	As needed	NA
2	3	GDOT-DB Team Communications Plan	AR, PDF	1	Within 30 days of NTP 1	30
2,10	3	Demolition and Abandonment Plan	AR, PDF	1	**	14
<b>Schedules</b>						

Section	Volume	Submittal Item	Format	Quantity	Delivery Date	Review Period* (Days)
2	3	Project Baseline Schedule	AR, P6, PDF	1, 3, 1, 1	Within 60 days from NTP 1	30
2	3	Revised Baseline Schedule	AR, P6, PDF	1, 1, 1	As required	30
2	3	Monthly Schedule Update	AR, P6, PDF	1, 1, 1	1 <sup>st</sup> of each Month	14
<b>Existing Infrastructure</b>						
2	3	Pre-Construction Photos	AR, PDF	1	Within 180 days from NTP 1, and Prior to Start of Construction	30
<b>Public Information and Communications</b>						
2	2	Agenda, Meeting Plan, and Logistical Information for Public Meetings	AR, PDF	As Needed	30 days in Advance of Meeting	14
2	2	Public Information Materials	AR, PDF	See Section 2.7, Volume 3	As needed	14
2	3	DB Team Reviews of Public Information Materials	AR, PDF	1	As needed	14
2	3	Development Assistance for Project -Related Information for Project Website	AR, PDF	1	As needed	NA
<b>Environmental</b>						
4	2	Ecology Addendum	AR, PDF	1	As needed	Table 4-1
4	3	Information to support GDOT - Led Governmental Approvals	AR, PDF	1	As needed, per the approved Submittal Schedule	Table 4-1
4	3	Section 404, CWA, permit	AR, PDF	1	**	Table 4-2
4	3	Water Quality Certification (concurrently with the USACE Nationwide Permit)	AR, PDF	1	**	Table 4-1
4	3	Applications to Regulatory Agencies, Application revisions, supplements	AR, PDF	1	As needed	***

Section	Volume	Submittal Item	Format	Quantity	Delivery Date	Review Period* (Days)
<b>Utilities</b>						
6	3	Supplemental verification of Overhead/Subsurface Utility Engineering (SUE) Investigations - QL-B	AR, MS PDF	1	NTP (1) + 45 Calendar days (Or as Determined by State Subsurface Utilities Engineer at the SUE Kick-Off meeting which is concurrent with the first utility coordination meeting)	NA
6	3	SUE Utility Impact Analysis "UIA"	AR, PDF	1	NTP 1 + 120 Calendar days (Or as Determined by State Subsurface Utilities Engineer at the SUE Kick-Off meeting which is concurrent with the first utility coordination meeting)	NA
6	3	Overhead/Subsurface Utility Engineering (SUE) Investigations - QL-A as required	AR, MS, PDF	Plans: 2 for each Utility Owner +3 for Dept. and MS files	UIA + 45 Calendar days	NA
6	3	Overhead/Subsurface Utilities Engineering (SUE) Information to Utilities for Review (URPN Letter 1a - SUE Submit to Utility Companies Revise)	FS, HS, PDF, MS	Plans: 2 for each Utility Owner +3 for Dept. and MS files	NTP 1 + 5 Calendar days (Or as Determined by District Utilities Engineer at SUE Kick-Off meeting)	5 days for Dept. + 30 days for each Utility Owner

Section	Volume	Submittal Item	Format	Quantity	Delivery Date	Review Period* (Days)
6	3	Relocated Utility Plans (URPN Letter 2 - 2nd Submission Letter (Existing and Proposed))	FS, HS, PDF, MS	3, 1	Concurrently with Accepted SUE Verification by Utility Owner	5 days for Dept. + 90 days for each Utility Owner
6	3	Utility Retention Request	AR, PDF	1	As needed	14
6	3	Preliminary Utility Status Report	HC, PDF	Agreements: 3 hard copy, 1 electronic pdf Plans: 2 for each Utility Owner + 3 for Dept. and MS files	NTP 1 + 180 days Concurrently with Accepted Relocated Utility Plans and (URPN Letter 6 - Notice to Proceed with Permit)	10-days + 5 days

Section	Volume	Submittal Item	Format	Quantity	Delivery Date	Review Period* (Days)
6	3	Utility Plans/Agreements (Utility NTP Letter)	Plans/ Agreements HS, PDF, MS	1, 3, 1, 1	See Section 6 of Volume 3	Agreements: 30 days for Dept. + 60 days for each Utility Owner  Plans: 30 days
6	3	Utility A/O Claims of Real Property Interests	AR, PDF	1	See Section 6 of Volume 3	14
6	3	Utility Adjustment Field Modification Procedure	AR, PDF	1	Prior to submittal of any Utility Work Plan	14
6	3	Utility Emergency Response Plan	PDF	1	30 days Prior to NTP 3	14
6	3	Utility Record Drawings (As-Built Plans)	FS, HS, PDF, MS	1	Concurrently w/Accepted Construction As-Built Plans	30 days for GDOT plus 30 days for Utility Owners
6	3	All Utility Meeting Minutes	AR, PDF	1	Within 7 days of Utility Meeting	7
<b>Geotechnical</b>						
8	3	Geotechnical Reports	AR, PDF	1	See Section 8 of Volume 3	30
8	3	WFI (Wall Foundation Investigation)	AR, PDF	1	**	30
8	3	BFI (Bridge Foundation Investigation)	AR, PDF	1	**	30

Section	Volume	Submittal Item	Format	Quantity	Delivery Date	Review Period* (Days)
8	3	Acceptance letter for Borings	AR, PDF	1	Per approved submittal schedule	N/A
<b>Survey</b>						
9	3	Property Owner Notification Letters	AR, PDF	1	As needed	10
9	3	Survey Control Package	AR, ASC, PDF	1	Prior to Project Completion	N/A
9	3	Bound Field Notes	AR, PDF	1	Prior to Project Completion or upon GDOT request	N/A
9	3	Topographic Mapping	AR, DTM, PDF	1	Prior to Project Completion	N/A
<b>Grading/Roadway</b>						
11	2	Design Exceptions or Design Variances	AR, PDF	1	Within 60 Days of NTP 1	60
<b>Lighting/Electric/Power</b>						
<b>Drainage</b>						
12	3	Drainage Design Report (Phased)	AR, PDF	1	As required per bridge location	30
12	2	Stormwater System Report(s)	AR, PDF	1	As required per bridge location	14
12	3	Annual Outfall Inspection Report	AR, PDF	1	As required per bridge location	30
12	3	Post-Construction Stormwater Report	AR, PDF	1	As required per bridge location	30
<b>Structures/Bridges</b>						
13	3	Preliminary Bridge Layouts - (shall be submitted together with the Hydraulic and Hydrology Report); No more than two (2) Preliminary Bridge Layouts and Hydraulic and Hydrology Reports shall be submitted in the same thirty (30) day period.	AR, FS, HS, PDF	2, 6, 1	**	30
13	3	Preliminary Wall Layouts	AR, FS, HS, PDF	2, 6, 1	**	21



Section	Volume	Submittal Item	Format	Quantity	Delivery Date	Review Period* (Days)
13	3	Final Bridge Plans - No more than two (2) Final Bridge Plans shall be submitted in the same thirty (30) day period.	AR, FS, HS, PDF	2, 6, 1	**	30
13	3	Final Wall Plans	AR, FS, HS, PDF	2, 6, 1	**	30
<b>Railroad</b>						
<b>Signing, Pavement Marking and Signalization</b>						
<b>ITS and Network</b>						
<b>Traffic Control</b>						
18	2	Detour Report	AR, PDF	1	30 Days prior to implementation	7
18	3	Traffic Control Plans (each bridge site)	AR, PDF	1	Per the approved Submittal Schedule	14
<b>Maintenance During the Design-Build Period</b>						
<b>Additional Submittals</b>						
2	3	Post-Construction Photos	AR, PDF	1	Prior to Maintenance Acceptance for each bridge location	30
3	3	Field Plan Review Plans (90%) per bridge location	AR, HS, PDF	5, 1	**	45
3	3	Interim Design	AR, FS, HS, PDF	6, 10, 1	**	30
3	3	Back-check set of Released for Construction Plans (RFC) per bridge location (complete set)	AR, HS, PDF	1, 1	**	14
3	3	Accepted Released for Construction Plans (RFC) per bridge location (complete set)	AR, FS, HS, PDF	3, 15, 1	**	NA

Section	Volume	Submittal Item	Format	Quantity	Delivery Date	Review Period* (Days)
3, 4	3	Notice of Intent (NOI) with final/signed Erosion Control Plans	AR, PDF	1	**	14
3	3	Shop Drawings	AR, PDF	1	**	14
3	3	Temporary Works - where public safety may be affected	AR, PDF	1	**	14
3	3	Plan Revisions During Construction	AR, FS, HS, PDF	1, 1, 1	**	14
3	3	Record Drawings (As-Built Plans) per Construction Phase	AR, FS, HS, PDF	6, 10, 1	**	14
3, 12	3	Hydraulic and Hydrology Report (submit with Preliminary Bridge Layout)	AR, PDF	1	**	30
3	3	Draft Design Specifications, Reports, Whitepapers, etc	AR, PDF	1	**	14
3	3	Final Design Specifications, Reports, Whitepapers, etc.	AR, PDF	1	**	14
3	3	Site observation compliance report	AR, PDF	1	See Section 3 of Volume 3	14
All	All	Meeting Minutes	AR, PDF	1	Within 3 days of meeting	14
N/A	N/A	Subcontracts	AR, PDF	1	In accordance with the Construction Manual	14

\*Review period is the period required for the generation of comments or the review time to determine the completeness of the submittal and the state or status of the document. Multiple review periods may be required for any submittal and shall be planned for by the DB Team in securing "accepted" or "approved" status from GDOT.

If a submittal is not listed, the review time shall be 30 days per Volume 1, Article 6.3.2.

\*\* Based upon the accepted Baseline Schedule

\*\*\* Time of review will be based upon actual impact to Project

\*\*\*\* See Technical Provisions

### **3.6 Additional Submittal Requirements**

*Delete this section and replace with the following:*

The DB Team is responsible for obtaining any Government Approvals or other approvals required to allow for implementation and construction of the phasing plan.

**The DB Team shall not begin any Construction Work until the requirements of Volume 1 Article 3.3.1.3 have been met.**

#### **3.6.1 Staged Design Submittals**

*There are no changes to this Section.*

#### **3.6.2 Changes to Accepted and Released for Construction Submittals**

*There are no changes to this Section.*

#### **3.6.3 Presentation Requirements**

*There are no changes to this Section.*

#### **3.6.4 Construction Plans Organization and Sheet Index**

*There are no changes to this Section.*

#### **3.6.5 Computations**

*There are no changes to this Section.*

#### **3.6.6 Submittal Formats**

*There are no changes to this Section.*

#### **3.6.7 Additional Specifications**

*There are no changes to this Section.*

#### **3.6.8 Submittals Process**

*There are no changes to this Section.*

#### **3.6.9 Required Participants of the Process**

*There are no changes to this Section.*

#### **3.6.10 GDOT Design Review Process**

*There are no changes to this Section.*

## **3.7 Shop Drawings and Temporary Works Submittals**

### **3.7.1 General**

*There are no changes to this Section.*

### **3.7.2 Work Items Requiring Shop Drawings**

Supplement Section 3.7.2 with the following:

Erection plans shall be submitted for curved steel bridges.

### **3.7.3 Schedule of Submittals**

*There are no changes to this Section.*

### **3.7.4 Style, Numbering, and Material of Submittals**

#### **3.7.4.1 Drawings**

*There are no changes to this Section.*

#### **3.7.4.2 Other Documents**

*There are no changes to this Section.*

#### **3.7.4.3 Qualified Products**

*There are no changes to this Section.*

#### **3.7.4.4 DB Team-Originated Design**

*There are no changes to this Section.*

#### **3.7.4.5 Temporary Works**

*There are no changes to this Section.*

#### **3.7.4.6 Formwork and Scaffolding**

*There are no changes to this Section.*

#### **3.7.4.7 Other Miscellaneous Design and Structural Details Furnished by the DB Team in Compliance with the Contract**

*There are no changes to this Section.*

### **3.7.5 Processing of Shop Drawings**

#### **3.7.5.1 DB Team Responsibility for Accuracy and Coordination of Shop Drawings**

*There are no changes to this Section.*

### **3.7.5.2 Scope of Review by the Shop Drawing Checking Engineer**

*There are no changes to this Section.*

### **3.7.5.3 Special Review by the Shop Drawing Checking Engineer of Shop Drawings for Construction Affecting Public Safety**

*There are no changes to this Section.*

## **3.7.6 Other Requirements for Shop Drawings for Bridges**

### **3.7.6.1 Shop Drawings for Structural Steel and Miscellaneous Metals**

*There are no changes to this Section.*

### **3.7.6.2 Shop Drawings for Concrete Structures**

*There are no changes to this Section.*

### **3.7.6.3 Special Construction Submittals**

*There are no changes to this Section.*

### **3.7.6.4 Shop Drawings Requiring Railroad Coordination**

*There are no changes to this Section.*

### **3.7.6.5 Modifications on Construction**

*There are no changes to this Section.*

## **3.8 Release for Construction Documents**

*There are no changes to this Section.*

## **3.9 Record Drawings and Project Closeout**

*There are no changes to this Section.*

### **3.9.1 Final Inspection**

*There are no changes to this Section.*

### **3.9.2 Required Documents**

*There are no changes to this Section.*

### **3.9.3 Final Acceptance**

*There are no changes to this Section.*

## 4 ENVIRONMENTAL

### 4.1 General

*There are no changes to this Section.*

### 4.2 Environmental Approvals

#### 4.2.1 Responsibilities Regarding Environmental Documents

Supplement Section 4.2.1 with the following:

Restrictions and conditions as applicable to the Site are described in Attachment 1-1.

The DB Team shall implement the commitment(s) per the Environmental Document Environmental Commitments and adhere to Special Provision 107.23H requirements (Attachment 4-1).

The DB Team shall prepare an ecology addendum for each bridge site based on final design, which shows updated temporary and permanent impacts.

#### 4.2.2 GDOT Review and Approval of Environmental Documents and Permits

Replace Table 4-2 and the accompanying notes with the following:

**Table 4-2: DB Team-Led Environmental Permit Approval**

Permit Required	Agency Review and Issuance Time Period (Calendar Days) <sup>(4)</sup>	Listed Applicant	Preparer of Application
United States Army Corps of Engineers (USACE) Section 404 Section 404 General Permit <sup>(1)</sup>	140	GDOT	DB Team
Section 404 Individual Permit <sup>(2)</sup>	240	GDOT	DB Team
Subsurface testing of all Underground Storage Tanks and Hazardous Materials	150	GDOT	DB Team
National Pollutant Discharge Elimination System (NPDES) Construction General Permit (GAR100002), Notice of Intent (NOI) <sup>(3)</sup>	14	DB Team	DB Team
NPDES Construction General Permit (GAR100003), Notice of Intent (NOI) <sup>(3)</sup>	90	DB Team	DB Team

Permit Required	Agency Review and Issuance Time Period (Calendar Days) <sup>(4)</sup>	Listed Applicant	Preparer of Application
NPDES Construction General Permit (GAR150000), Notice of Termination (NOT) <sup>(3)</sup>	90	DB Team	DB Team
Georgia Stream Buffer Variance	150	GDOT	DB Team

<sup>(1)</sup> This applies to Section 404 permitting and if additional impacts are incurred after the permit has been approved, a new permit that covers all impacts is required and the original review times apply to the new permit. No work is authorized in the areas of the previous permit until the new permit is approved and construction authorization is received.

<sup>(2)</sup> This applies to Section 404 permitting impacts which may exceed the cumulative threshold for a General Permit.

<sup>(3)</sup> The current NPDES General Permit is set to expire July 31, 2018. A new NPDES General Permit is anticipated to go into effect on August 1, 2018. Information on the permit and proposed changes can be found at <https://epd.georgia.gov/npdes-construction-storm-water-general-permits>.

<sup>(4)</sup> The review and issuance time periods shall commence once a completed permit package that complies with the requirements of the DB Documents is accepted by GDOT and submitted to the issuing agency and end once the permit is issued by the appropriate Governmental Entity. Therefore, the DB Team shall schedule several review periods to ensure proper planning to accomplish the entire process for each required permit. Each GDOT review period is thirty (30) days. Should the Submittal not be complete or rejected as provided in Section 3, each subsequent review period shall be fifteen (15) days, and is excluded from the timeframe in Table 4-2 above.

One Section 404 permit shall be prepared per project site. GDOT will be responsible for purchasing all stream/wetland mitigation credits.

### 4.3 Comprehensive Environmental Protection Program

*Delete this Section.*

### 4.4 Hazardous Materials Management Plan

*Delete this Section.*

## **5 RIGHT OF WAY (ROW) – DB Team Acquisitions**

### **5.1 General**

*Delete this Section.*

#### **5.1.1 Standards**

*Delete this Section.*

### **5.2 Administrative Requirements**

*Delete this Section.*

### **5.3 DB Team’s ROW Scope of Services**

*Delete this Section.*

### **5.4 DB Team Conflict of Interest**

*Delete this Section.*

### **5.5 Responsibilities of DB Team**

*Delete this Section.*

### **5.6 Responsibilities of GDOT**

*Delete this Section.*

### **5.7 Responsibilities of the Office of the Attorney General**

*Delete this Section.*

### **5.8 ROW Acquisition Plan**

*Delete this Section.*

### **5.9 Acquisition Process Summary**

*Delete this Section.*

### **5.10 Advanced ROW Acquisition**

*Delete this Section.*



## **5.11 Pre-Acquisition Activities**

*Delete this Section.*

### **5.11.1 ROW Plans and Engineering**

*Delete this Section.*

### **5.11.2 Title Services**

*Delete this Section.*

### **5.11.3 Property Owner's Meeting**

*Delete this Section.*

### **5.11.4 Project Inspection Checklist**

*Delete this Section.*

### **5.11.5 Appraisal Services**

*Delete this Section.*

## **5.12 Acquisition Activities**

*Delete this Section.*

### **5.12.1 DB Team Responsibilities during ROW Negotiations**

*Delete this Section.*

### **5.12.2 DB Team Responsibilities during Relocation Assistance**

*Delete this Section.*

### **5.12.3 DB Team Responsibilities during Closings**

*Delete this Section.*

### **5.12.4 DB Team Responsibilities during Administrative Appeal**

*Delete this Section.*

### **5.12.5 DB Team Responsibilities for Condemnation Support**

*Delete this Section.*

## **5.13 Post-Acquisition Activities**

*Delete this Section.*

### **5.13.1 Certification and Release**

*Delete this Section.*

### **5.13.2 DB Team Responsibilities for Clearance of ROW**

*Delete this Section.*

### **5.13.3 DB Team Responsibilities for Property Fencing**

*Delete this Section.*

## **5.14 Schedule and Reviews**

*Delete this Section.*

### **5.14.1 Schedule**

*Delete this Section.*

### **5.14.2 GDOT and/or FHWA Reviews**

*Delete this Section.*

## **5.15 Meetings**

*Delete this Section.*

## **5.16 Correspondence**

*Delete this Section.*

## **5.17 File Management and Document Control**

*Delete this Section.*

## **5.18 Project Tracking and Reporting**

*Delete this Section.*

## **5.19 Quality Assurance, Quality Control, and Audits**

*Delete this Section.*

## **6 UTILITY ADJUSTMENTS**

### **6.1 General**

*There are no changes to this Section.*

#### **6.1.1 Standards**

*There are no changes to this Section.*

#### **6.1.2 Memorandum of Understanding (MOU)**

Supplement Section 6.1.2 with the following:

See Attachment 6-1: Utility MOUs for requirements related to coordination and relocations for all Utility owners within the Project Limits.

#### **6.1.3 Responsibilities of the DB Team**

Supplement Section 6.1.2 with the following:

See Attachment 6-2: Utility Insurance Requirements and Special Provisions for the shelf special provisions regarding the insurance, coordination, design, construction and relocation of utilities.

##### **6.1.3.1 DB Team Pre-Construction Coordination**

*There are no changes to this Section.*

##### **6.1.3.2 DB Team Design Activities**

*There are no changes to this Section.*

##### **6.1.3.3 DB Team Construction Activities**

*There are no changes to this Section.*

##### **6.1.3.4 Worksite Utility Coordination Supervisor (WUCS)**

*There are no changes to this Section.*

##### **6.1.3.5 General Responsibilities of GDOT**

*There are no changes to this Section.*

##### **6.1.3.6 Utility Adjustment Relocation**

*There are no changes to this Section.*

##### **6.1.3.7 When Utility Adjustment is Required**

*There are no changes to this Section.*

## **6.1.4 Certain Components of the Utility Adjustment Work**

### **6.1.4.1 Betterments**

*There are no changes to this Section.*

### **6.1.4.2 Protection in Place**

*There are no changes to this Section.*

### **6.1.4.3 Early Adjustments**

*There are no changes to this Section.*

## **6.2 Administrative Requirements**

### **6.2.1 Communications**

#### **6.2.1.1 Communication with Utility Owners: Meetings and Correspondence**

*There are no changes to this Section.*

### **6.2.2 Real Property Matters**

*There are no changes to this Section.*

#### **6.2.2.1 Documentation of Existing Utility Property Interests - Affidavits**

*There are no changes to this Section.*

#### **6.2.2.2 Acquisition of Replacement Utility Property Interests**

*There are no changes to this Section.*

#### **6.2.2.3 Georgia Utility Permitting System (GUPS)**

*There are no changes to this Section.*

#### **6.2.2.4 Documentation Requirements**

*There are no changes to this Section.*

#### **6.2.2.5 Record Keeping**

*There are no changes to this Section.*

## **6.3 Design**

### **6.3.1 DB Team's Responsibility for Utility Identification**

*There are no changes to this Section.*

### **6.3.2 Utility Relocation Plans**

*There are no changes to this Section.*

#### **6.3.2.1 Plans Prepared by the DB Team**

*There are no changes to this Section.*

#### **6.3.2.2 Plans Prepared by the Utility Owner**

*There are no changes to this Section.*

#### **6.3.2.3 Design Documents**

*There are no changes to this Section.*

#### **6.3.2.4 Certain Requirements for Underground Utilities**

*There are no changes to this Section.*

#### **6.3.2.5 Utility Work Plan**

*There are no changes to this Section.*

#### **6.3.2.6 Utility Adjustment Schedule (UAS)**

*There are no changes to this Section.*

#### **6.3.2.7 Revised Work Plan Acceptance**

*There are no changes to this Section.*

#### **6.3.2.8 Post-Let Utility Certification**

*There are no changes to this Section.*

## **6.4 Construction**

### **6.4.1 Reserved**

*Delete this Section.*

### **6.4.2 General Construction Criteria**

*There are no changes to this Section.*

### **6.4.3 Inspection of Utility Owner Construction**

*There are no changes to this Section.*

### **6.4.4 Scheduling Utility Adjustment Work**

*There are no changes to this Section.*

#### **6.4.5 Standard of Care Regarding Utilities**

*There are no changes to this Section.*

#### **6.4.6 Emergency Procedures**

*There are no changes to this Section.*

#### **6.4.7 Switch Over to New Facilities**

*There are no changes to this Section.*

#### **6.4.8 Traffic Control**

*There are no changes to this Section.*

### **6.5 Deliverables**

*There are no changes to this Section.*

#### **6.5.1 Utility Work Plan Submittals**

*There are no changes to this Section.*

#### **6.5.2 Preliminary Utility Status Report**

*There are no changes to this Section.*

#### **6.5.3 Subsurface Utility Engineering (SUE) Requirements**

*There are no changes to this Section.*

#### **6.5.4 Utility As-Built Standard**

##### **6.5.4.1 General As-Built Utility Requirements**

*There are no changes to this Section.*

##### **6.5.4.2 As-Built Utility CADD Files and Plans Preparation**

*There are no changes to this Section.*

##### **6.5.4.3 Utility Record Drawings Review and Submittal Process**

*There are no changes to this Section.*

##### **6.5.4.4 Utility Record Drawings Review and Submittal Process**

*There are no changes to this Section.*

## **7 RIGHT OF WAY (ROW) – Additional Properties**

### **7.1 General**

*Delete this Section.*

#### **7.1.1 Standards**

*Delete this Section.*

### **7.2 Administrative Requirements**

*Delete this Section.*

### **7.3 DB Team’s ROW Scope of Services**

*Delete this Section.*

### **7.4 DB Team Conflict of Interest**

*Delete this Section.*

### **7.5 Responsibilities of DB Team**

*Delete this Section.*

### **7.6 Responsibilities of GDOT**

*Delete this Section.*

### **7.7 Responsibilities of the Office of the Attorney General**

*Delete this Section.*

### **7.8 ROW Acquisition Plan**

*Delete this Section.*

### **7.9 Acquisition Process Summary**

*Delete this Section.*

### **7.10 Reserved**

*Delete this Section.*

## **7.11 Pre-Acquisition Activities**

### **7.11.1 ROW Plans and Engineering**

*Delete this Section.*

### **7.11.2 Title Services**

*Delete this Section.*

### **7.11.3 Reserved**

*Delete this Section.*

### **7.11.4 Project Inspection Checklist**

*Delete this Section.*

### **7.11.5 Appraisal Services**

*Delete this Section.*

## **7.12 Acquisition Activities**

*Delete this Section.*

## **7.13 Post-Acquisition Activities**

*Delete this Section.*

## **7.14 Schedule and Reviews**

*Delete this Section.*

## **7.15 Meetings**

*Delete this Section.*

## **7.16 Correspondence**

*Delete this Section.*

## **7.17 File Management and Document Control**

*Delete this Section.*

## **7.18 Project Tracking and Reporting**

*Delete this Section.*



## **7.19 Quality Assurance Quality Control and Audits**

*Delete this Section.*

## **8 GEOTECHNICAL**

### **8.1 General**

*There are no changes to this Section.*

#### **8.1.1 Standards**

*There are no changes to this Section.*

### **8.2 Design Requirements**

#### **8.2.1 Subsurface Geotechnical Investigation by DB Team**

Supplement Section 8.2.1 with the following:

The DB Team shall conduct Bridge Foundation Investigations (BFI) at each bridge location for this Project. The DB Team shall conduct Wall Foundation Investigations (WFI) for proposed non-standard walls. The DB Team may accept and use the boring logs provided at each bridge for this project; however, the boring logs are only provided as a RID and GDOT accepts no liability for the accuracy of the boring logs.

If the DB Team chooses to use the AASHTO Standard Specifications for Highway Bridges, 17<sup>th</sup> Edition, 2002 for the design of the bridges and walls, the Bridge Foundation Investigations (BFI) and Wall Foundation Investigations (WFI) are not required to adhere to Load and Resistance Factor Design (LRFD) specifications.

#### **8.2.2 Bridge Foundation Investigation (BFI)**

*There are no changes to this Section.*

#### **8.2.3 Dynamic Pile Testing**

*There are no changes to this Section.*

#### **8.2.4 Soil Survey (SS)**

*Delete this Section.*

#### **8.2.5 Pavement Design**

*There are no changes to this Section.*

#### **8.2.6 Wall Foundation Investigation (WFI)**

*There are no changes to this Section.*

#### **8.2.7 High Mast Lighting Foundation**

*Delete this Section.*

### **8.3 Construction**

*There are no changes to this Section.*

### **8.4 Reserved**

*Delete this Section.*

## **9 SURVEYING AND MAPPING**

### **9.1 General**

*Supplement Section 9.1 with the following:*

The DB Team may accept and use the survey database provided at each bridge location in the RIDs for this project. However, the document is only provided as a RID and GDOT accepts no liability for the accuracy of the surveys.

#### **9.1.1 Standards**

*There are no changes to this Section.*

### **9.2 Administrative Requirements**

#### **9.2.1 Ownership**

*There are no changes to this Section.*

#### **9.2.2 Property Owner Notification**

*There are no changes to this Section.*

### **9.3 Design Requirements**

*There are no changes to this Section.*

#### **9.3.1 Units**

*There are no changes to this Section.*

#### **9.3.2 Survey Control Requirements**

*There are no changes to this Section.*

#### **9.3.3 Conventional Method (Horizontal & Vertical)**

*There are no changes to this Section.*

##### **9.3.3.1 Horizontal Accuracy Requirements for Conventional Surveys**

*There are no changes to this Section.*

##### **9.3.3.2 Vertical Accuracy Requirements for Conventional Surveys**

*There are no changes to this Section.*

#### **9.3.4 Reserved**

*Delete this Section.*

### **9.3.5 Right of Way Survey**

*There are no changes to this Section.*

#### **9.3.5.1 Accuracy Standard**

*There are no changes to this Section.*

### **9.3.6 Survey Records and Reports**

*There are no changes to this Section.*

## **9.4 Construction Requirements**

### **9.4.1 Units**

*There are no changes to this Section.*

### **9.4.2 Construction Surveys**

*There are no changes to this Section.*

### **9.4.3 ROW Monuments**

*There are no changes to this Section.*

## **9.5 Reserved**

*Delete this Section.*

## **10 GRADING**

### **10.1 General**

*Supplement Section 10.1 with the following:*

DB Team shall replace all woven wire fence relocated within the Project limits with new woven wire fence.

The DB Team shall coordinate with adjacent property owners to ensure all privately-owned fencing is in place to ensure security of the Site during construction.

All existing side drain pipes and all drain pipes encountered within the full depth sections of the Project shall be removed.

#### **10.1.1 Standards**

*There are no changes to this Section.*

### **10.2 Demolition and Abandonment Plan**

*There are no changes to this Section.*

### **10.3 Slopes and Topsoil**

*There are no changes to this Section.*

### **10.4 Special Flood Hazard Areas Fill Mitigation**

*Special flood hazard areas fill mitigation is not required.*

# 11 ROADWAYS

## 11.1 General

*There are no changes to this Section.*

### 11.1.1 Standards

*There are no changes to this Section.*

## 11.2 Design Requirements

*There are no changes to this Section.*

### 11.2.1 Design Criteria Order of Precedence

*There are no changes to this Section.*

### 11.2.2 Vibration Control

*There are no changes to this Section.*

### 11.2.3 Blasting

*There are no changes to this Section.*

### 11.2.4 Control of Access

*There are no changes to this Section.*

### 11.2.5 Typical Section(s) and Pavement Design

*Supplement Section 11.2.5 with the following:*

**Table 11-1:** Typical Section(s) for Roadway Design:

Roadway	Number of Lane(s)	Lane Width(s)	Outside Paved Shoulder Width(s)	Outside Unpaved Shoulder Width(s)	
All	Match Existing	10' minimum or match existing; whichever is greater	2' minimum or match existing; whichever is greater	2' beyond the outside paved shoulder	

**Table 11-2: Pavement Design(s)**

Material	Spread Rate
RECYCLED ASPH CONC 9.5mm SUPERPAVE, TYPE II, GP 2 ONLY, INCL BITUM MATL & H LIME <sup>(1)(4)</sup>	LBS/SY <sup>(2)</sup>
RECYCLED ASPH CONC 19mm SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	LBS/SY <sup>(2)</sup>
RECYCLED ASPH CONC 25mm SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	LBS/SY <sup>(2)</sup>
GRADED AGGREGATE BASE <sup>(3)</sup>	N/A

(1) Place 9.5 mm SP, Type II when ADT < 4,000 vpd per Attachment 11-1.

(2) Spread rates to be designed in accordance with Attachment 11-1 per site.

(3) Amount of graded aggregate base to be designed by the Engineer of Record in accordance with Attachment 11-1 per site.

(4) Leveling may be required to match the new roadway grade.

**Table 11-3: Driveway Pavement Design(s)**

Material	Spread Rate
<b>Residential Asphaltic Concrete Driveways</b>	
RECYCLED ASPH CONC 9.5 mm SUPERPAVE, TYPE II, GP 2 ONLY, INCL BITUM MATL & H LIME <sup>(1)</sup>	LBS/SY <sup>(2)</sup>
GRADED AGGREGATE BASE COURSE – 6 INCH DEPTH INCL MATL	N/A
<b>Commercial Asphaltic Concrete Driveways</b>	
RECYCLED ASPH CONC 9.5 mm SUPERPAVE, TYPE II, GP 2 ONLY, INCL BITUM MATL & H LIME <sup>(1)</sup>	LBS/SY <sup>(2)</sup>
RECYCLED ASPH CONC 19 mm SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME <sup>(1)</sup>	LBS/SY <sup>(2)</sup>
GRADED AGGREGATE BASE COURSE – 6 INCH DEPTH INCL MATL	N/A
<b>Residential Concrete Driveways</b>	
PORTLAND CEMENT CONCRETE – 6”	N/A
GRADED AGGREGATE BASE – 6” DEPTH	N/A



Material	Spread Rate
<b>Commercial Concrete Driveways</b>	
PORTLAND CEMENT CONCRETE – 8”	N/A
GRADED AGGREGATE BASE – 10” DEPTH	N/A

(1) For the surface layer, the Driveway Pavement Design material shall match the pavement design as per Table 11-2 per site.

(2) Spread rates to match the pavement design as per Table 11-2 per site.

### 11.2.6 Additional Roadway Design Requirements

*Supplement Section 11.2.6 with the following:*

The DB Team shall place full depth pavement a minimum of 50 linear feet from the approach slab limits on each side of the bridge. Beyond this requirement, pavement shall be designed by the Engineer of Record for alignment tie-ins. Typical section and pavement design shall adhere to the requirements listed in Section 11.2.5. In no case shall the existing pavement width be narrowed. Additional roadway requirements can be found in Attachment 1-1. All approach slabs shall be reinforced concrete with asphalt inlay, 30-foot in length and adhering to GDOT’s Standards.

All guardrail within the project limits including guardrail not impacted by construction shall be replaced and upgraded to current GDOT standards. Guardrail located outside of the construction limits does not warrant replacement.

The DB Team shall utilize the details shown in Attachment 11-2 at all transitions from a milled to new asphalt section.

### 11.2.7 Allowable Design Exception(s)/Variance(s)

*Supplement Section 11.2.7 with the following:*

No additional Design Exceptions or Variances proposed by the DB Team shall be allowed. Any existing conditions that do not meet the requirements of the AASHTO “10 Controlling Criteria” and/or the GDOT Standard Design Criteria, as denoted in the GDOT Design Policy Manual, must be presented to GDOT and shall be upgraded to meet the required criteria or mandatory practice with the proposed design of the Project.

DB Team is permitted to retain Design Deviations that are present within the existing conditions. Any existing Design Deviations that are identified within the Project limits and that are intended to be retained in the proposed design must be presented to GDOT.

Refer to Attachment 1-1 and the RIDs for the allowable Design Exception(s)/Variance(s) for the Project permitted for each site.

### **11.2.8 Visual Quality**

*There are no changes to this Section.*

### **11.2.9 Permanent Lighting**

*There are no changes to this Section.*

### **11.2.10 Related Transportation Facilities**

*There are no changes to this Section.*

## **11.3 Construction**

*There are no changes to this Section.*

## 12 DRAINAGE

### 12.1 General

*There are no changes to this Section.*

#### 12.1.1 Standards

*There are no changes to this Section.*

### 12.2 Administrative Requirements

#### 12.2.1 Data Collection

*There are no changes to this Section.*

#### 12.2.2 Coordination with Other Agencies

*There are no changes to this Section.*

### 12.3 Design Requirements

Supplement Section 12.3 with the following:

Delete the following in Drainage Manual Section 2.5.3:

“4. For a bridge crossing a floodplain that is shown on a FIRM map, but does not have a regulatory floodway, the bridge will be sized to limit the backwater to no more than a 1-foot increase in the existing base flood elevation, unless the local community’s ordinances are more stringent. In which case, the local regulation shall apply.”

*and replace with:*

“4. For a bridge crossing a floodplain that is shown on a FIRM map, but does not have a regulatory floodway, the bridge will be sized to limit water surface increases to no more than 1-foot from the existing base flood elevation, unless the local community’s ordinances are more stringent. In which case, the local regulation shall apply.”

#### 12.3.1 Surface Hydrology

*There are no changes to this Section.*

##### 12.3.1.1 Design Frequencies

*There are no changes to this Section.*

##### 12.3.1.2 Hydrologic Analysis

*There are no changes to this Section.*

### **12.3.2 Storm Sewer Systems**

*Supplement Section 12.3.2 with the following:*

All installed pipes shall be RCP. Where proposed construction impacts existing pipes/culverts or the hydraulic functionality of those pipes/culverts, the structural and hydraulic sufficiency must be demonstrated to GDOT by the EOR for the pipes/culverts to remain in place. Rehabilitation of pipes and box culverts will be allowed as long as hydraulic capacity and structural integrity are achieved.

#### **12.3.2.1 Pipes**

*There are no changes to this Section.*

#### **12.3.2.2 Municipal Separate Storm Sewer System (MS4)**

*There are no changes to this Section.*

#### **12.3.2.3 Gutter Spread/Ponding**

*There are no changes to this Section.*

### **12.3.3 Hydraulic Structures (Culverts/Bridges)**

*Supplement Section 12.3.3 with the following:*

The DB Team may accept and use the HEC-RAS model provided at each bridge location in the RIDs for this project. However, the document is only provided as a RID and GDOT accepts no liability for the accuracy of the report.

#### **12.3.3.1 Method Used to Estimate Flows**

*There are no changes to this Section.*

#### **12.3.3.2 Design Frequency**

*There are no changes to this Section.*

#### **12.3.3.3 Hydraulic Analysis**

*There are no changes to this Section.*

#### **12.3.3.4 Riverine Bridge/Bridge Culvert Design**

*There are no changes to this Section.*

#### **12.3.3.5 Bridge Deck Drainage**

*There are no changes to this Section.*

#### **12.3.3.6 Drainage Report for Hydraulic Structures**

*There are no changes to this Section.*

## **12.4 Construction Requirements**

*There are no changes to this Section.*

## **12.5 Deliverables**

*There are no changes to this Section.*

## 13 STRUCTURES

### 13.1 General

*There are no changes to this Section.*

#### 13.1.1 Standards

*There are no changes to this Section.*

### 13.2 Design Requirements

#### 13.2.1 Design Parameters

*Supplement Section 13.2.1 with the following:*

Bridges shall be designed either in accordance with the AASHTO Standard Specifications for Highway Bridges, 17th Edition, 2002 or the current AASHTO LRFD Bridge Design Specifications (LRFD Specifications).

Retaining walls shall be designed either in accordance with the AASHTO Standard Specifications for Highway Bridges, 17th Edition, 2002 or the current AASHTO LRFD Bridge Design Specifications (LRFD Specifications).

No portion of the existing bridge shall be used in the new bridge construction.

Neither culverts nor bottomless culverts shall be allowed at any bridge location.

Endrolls at bridge abutments shall utilize a maximum 2:1 slope normal to the end bent.

Final Bridge Plan acceptance shall be contingent on the acceptance of the BFI.

Final Wall Plan acceptance shall be contingent on the acceptance of the WFI.

#### 13.2.2 Bridge Decks and Superstructures

*Supplement Section 13.2.2 with the following:*

Minimum span length shall be 30'-0".

Cored slabs and box beams shall not be skewed.

Span lengths for cored slabs and box beams shall not exceed limits in Table 3.8.1-1 in the *GDOT Bridge Manual*.

Minimum asphalt overlay for cored slabs and box beams shall be 3.5 inches.

Superelevation transitions shall not be allowed on bridges, unless noted in Attachment 1-1. If a superelevation transition is unavoidable, transition point(s) shall be at bent locations.

The location of the low-point of a vertical curve on a bridge or approach slab shall not be allowed, unless noted in Attachment 1-1.

Unpainted weathering steel is permitted for use on bridge superstructure. If unpainted weathering steel is used, DB Team shall paint beam ends at expansion joints and ends of bridge a distance of 1.5 times the beam depth.

The use of ASTM A709 Grade 50W Steel and Grade HPS 70W Steel is permitted for steel bridge superstructure. Both steel types are considered weathering steel and shall be painted as required by the provisions of these Technical Specifications.

Maximum girder spacing for plate girder bridges shall be ten feet six inches (10'-6").

The paving rest shall be twelve inches (12") wide.

Pot bearings shall not be used.

Groove the entire length of the bridges transversely as per sub section 500.3.05.T.9.C of the Georgia DOT Standard Specifications.

### **13.2.3 Bridge/ Retaining Wall Foundations**

*Supplement Section 13.2.3 with the following:*

Concrete pile encasements shall be used for steel H-piles located within limits of design flood.

Geosynthetic Reinforced Soils (GRS) Integrated Bridge System (IBS) technology may be utilized in the project. If GRS-IBS is used, the foundation shall be at or below the scour line as determined in the hydraulic and hydrologic study. The GRS-IBS abutment shall not be overtopped during the 100-year flood. Countermeasures shall be designed and provided. A minimum of 24-inch Type I rip rap on the endroll and apron shall be provided.

### **13.2.4 Bridge Railing and Barriers**

*Supplement Section 13.2.4 with the following:*

Barriers shall meet NCHRP 350, at a minimum.

### **13.2.5 Retaining Walls**

*There are no changes to this Section.*

### **13.2.6 Aesthetics**

*There are no changes to this Section.*

### **13.2.7 Drainage Structures**

*There are no changes to this Section.*

### **13.2.8 Sign, Illumination, and Traffic Signal Supports**

*There are no changes to this Section.*

### **13.2.9 Widening/Modification of Existing Structure**

*There are no changes to this Section.*

### **13.2.10 Reserved**

*Delete this Section.*

## **13.3 Construction Requirements**

Supplement Section 13.3 with the following:

Refer to Section 18 for Traffic Control requirements related to bridge construction.

All welding on GDOT projects shall be performed by certified welders that have in their possession a current welding certification card issued by the Office of Materials and Testing. Only use E70XX (excluding E7014 and E7024) low hydrogen electrodes for manual shielded metal arc welding.

See Attachment 13-1 for additional Special Provisions.

### **13.3.1 Concrete Finishes**

*There are no changes to this Section.*

### **13.3.2 Structure Metals**

*There are no changes to this Section.*

## **13.4 Final Bridge Inspection Prior to Substantial Completion**

*There are no changes to this Section.*

## **13.5 Deliverables**

*There are no changes to this Section.*



## **14 RAIL**

### **14.1 General**

*Delete this Section.*

#### **14.1.1 Standards**

*Delete this Section.*

### **14.2 Railroad Design Standards**

*Delete this Section.*

#### **14.2.1 Design Railroad Live Load**

*Delete this Section.*

#### **14.2.2 Design Lateral Pressures for Railroad Live Load Surcharge**

*Delete this Section.*

#### **14.2.3 Clearances**

*Delete this Section.*

##### **14.2.3.1 Permanent Clearances**

*Delete this Section.*

##### **14.2.3.2 Temporary Clearances**

*Delete this Section.*

#### **14.2.4 Crashwalls**

*Delete this Section.*

#### **14.2.5 Drainage**

*Delete this Section.*

#### **14.2.6 Erosion Control**

*Delete this Section.*

#### **14.2.7 Utilities**

*Delete this Section.*

#### **14.2.8 Miscellaneous**

*Delete this Section.*

## **14.3 Project Work Affecting Railroad Operations**

*Delete this Section.*

### **14.3.1 Railroad Agreements**

*Delete this Section.*

#### **14.3.1.1 Permanent ROW Encroachment Agreement(s)**

*Delete this Section.*

#### **14.3.1.2 Reserved**

*Delete this Section.*

#### **14.3.1.3 Railroad Right of Entry Agreement(s)**

*Delete this Section.*

### **14.3.2 Operation Safety**

*Delete this Section.*

### **14.3.3 Insurance Requirements**

*Delete this Section.*

## **14.4 Construction Requirements**

*Delete this Section.*

### **14.4.1 General**

*Delete this Section.*

### **14.4.2 Track Clearances**

*Delete this Section.*

### **14.4.3 Temporary Excavation**

*Delete this Section.*

### **14.4.4 Excavation for Structures**

*Delete this Section.*

### **14.4.5 Demolition, Erection, Hoisting**

*Delete this Section.*

### **14.4.6 Blasting**

*Delete this Section.*

#### **14.4.7 Maintenance and Repair of Railroad Facilities**

*Delete this Section.*

#### **14.4.8 Storage of Materials and Equipment**

*Delete this Section.*

#### **14.4.9 Cleanup**

*Delete this Section.*

### **14.5 Damages**

*Delete this Section.*

### **14.6 Flagging Services**

#### **14.6.1 When Required**

*Delete this Section.*

#### **14.6.2 Scheduling and Notification**

*Delete this Section.*

#### **14.6.3 Payment**

*Delete this Section.*

#### **14.6.4 Verification**

*Delete this Section.*

### **14.7 Transporting Materials and Equipment Across Tracks**

*Delete this Section.*

### **14.8 Work for Benefit of DB Team**

*Delete this Section.*

### **14.9 Cooperation and Delays**

*Delete this Section.*

### **14.10 Safety Guidelines**

#### **14.10.1 Guidelines for Personnel on Railroad ROW**

*Delete this Section.*

## **14.10.2 Guidelines for Equipment on Railroad ROW**

*Delete this Section.*

## **14.11 Insurance**

### **14.11.1 Requirements**

*Delete this Section.*

#### **14.11.1.1 DB Team's Liability Insurance**

*Delete this Section.*

#### **14.11.1.2 Railroad Protective Liability Insurance**

*Delete this Section.*

### **14.11.2 Evidence of Insurance**

*Delete this Section.*

### **14.11.3 Subletting**

*Delete this Section.*

### **14.11.4 Cancellation**

*Delete this Section.*

## **14.12 Failure to Comply**

*Delete this Section.*

## **15 LANDSCAPE AND HARDSCAPE ENHANCEMENTS**

*There are no changes to this Section.*

## **16 SIGNING, PAVEMENT MARKING, SIGNALIZATION**

### **16.1 General**

*Supplement Section 16.1 with the following:*

GDOT will provide to the DB Team, two (2) “Your Dollars Building A Better Georgia” logo signs either 24” X 36” or 36” X 48”. The signs shall be installed by the DB Team on each end of the Project, prior to beginning construction. The signs shall be removed by the DB Team when GDOT issues Substantial Completion on the Project. Upon removal, the signs shall be returned to GDOT.

#### **16.1.1 Standards**

*There are no changes to this Section.*

### **16.2 Administrative Requirements**

#### **16.2.1 Meetings**

*There are no changes to this Section.*

### **16.3 Design Requirements**

#### **16.3.1 Final Plans**

*There are no changes to this Section.*

#### **16.3.2 Permanent Signing and Delineation**

*There are no changes to this Section.*

#### **16.3.3 Project Signs – Outside the Existing and Proposed ROW**

*There are no changes to this Section.*

#### **16.3.4 Reserved**

*Delete this Section.*

#### **16.3.5 Specific Service Signs**

*There are no changes to this Section.*

#### **16.3.6 Sign Support Structures**

*There are no changes to this Section.*

#### **16.3.7 Permanent Pavement Marking**

*There are no changes to this Section.*

### **16.3.8 Permanent Signalization**

*There are no changes to this Section.*

#### **16.3.8.1 Traffic Signal Requirements**

*There are no changes to this Section.*

#### **16.3.8.2 Traffic Signal Timing Plans**

*There are no changes to this Section.*

#### **16.3.8.3 Traffic Signal Permit**

*There are no changes to this Section.*

#### **16.3.8.4 Traffic Signal Support Structures**

*There are no changes to this Section.*

## **16.4 Construction Requirements**

### **16.4.1 Permanent Pavement Marking**

Supplement Section 16.4.1 with the following:

Contrast pavement marking shall be used on bridges and all other concrete surfaces.

### **16.4.2 Permanent Signing and Delineation**

Supplement Section 16.4.2 with the following:

New W8-13 signs shall be required in advance of any bridge. Signs indicating the waterway the bridge crosses shall be required if the waterway is on the current edition of the Georgia State Highway and Transportation Map.

All existing signs on the approach or at the bridge shall be reviewed to determine if they shall be replaced or removed. Signs no longer applicable shall be removed prior to opening the bridge to traffic, including but not limited to, weight restriction signs and/or narrow bridge signs, even if outside of the proposed construction limits. All other existing signs on the approach or at the bridge shall be replaced.

### **16.4.3 Permanent Signalization**

*There are no changes to this Section.*

## 17 INTELLIGENT TRANSPORTATION SYSTEMS

*Delete this Section.*



## 18 TRAFFIC CONTROL

### 18.1 General

*There are no changes to this Section.*

#### 18.1.1 Standards

*There are no changes to this Section.*

### 18.2 Administrative Requirements

#### 18.2.1 Transportation Management Plan

*Delete this Section and replace with the following:*

A detailed plan for all Project detours, including a narrative of all detour activities, detour schedules and timelines, and detour maps, shall be developed by the DB Team and included within each Traffic Control Plan. The DB Team shall include descriptions of their approach for communicating this information to the traveling public.

#### 18.2.2 Worksite Traffic Control Supervisor (WTCS)

*There are no changes to this Section.*

### 18.3 Design Requirements

#### 18.3.1 Traffic Control Plans

*There are no changes to this Section.*

##### 18.3.1.1 Roadway Guidelines

*There are no changes to this Section.*

##### 18.3.1.1.1 *Design Parameters for Traffic Control*

*There are no changes to this Section.*

##### 18.3.1.1.2 *Allowable Shoulder/Lane/Roadway Closures and Traffic Stage Changes*

*Supplement the “Lane and Shoulder Closure During Design-Build Period” portion of Section 18.3.1.1.2 with the following:*

1. Roads within project limits: A single lane closure may be permitted to perform construction activities, which will be subject to review and acceptance by GDOT.
2. No other cross streets will be allowed to be closed unless approved by GDOT or the Governmental Entity having jurisdiction of the cross street. The DB Team shall

coordinate with each Local Government Agency having jurisdiction to determine acceptable times for closure to occur.

The full roadway within the project limits can be closed upon completion of all applicable environmental commitments and issuance of NTP 3 for construction activities. Partial or full closure of the roadway shall not occur prior to these activities.

The DB Team shall furnish two (2) changeable message signs to be placed along the roadway to notify the public thirty (30) days prior to closing the roadway. Final placement of the changeable message signs will be subject to acceptance by GDOT. The DB Team shall be required to maintain messages on all message boards 24 hours a day, 7 days a week as directed by GDOT. The changeable message signs shall meet all requirements of Standard Specification Section 632 Changeable Message Sign, Portable Type 3.

The DB Team shall provide written notification sixty (60) days in advance of any closure to the following applicable county offices:

- County Commissioner's Office;
- County Sheriff's Office;
- County Board of Education Superintendent; and
- County EMS and other first responders.

The location of the full roadway closure on the roadway shall not hinder the movement of traffic in and out of the surrounding businesses, residential, or commercial properties and any and all other driveways within the project limits. The location of the full roadway closure on the roadway shall provide enough distance for a school bus to turn around using a 3-point turn from the nearest driveway. The final location and limits of the full roadway closure will be subject to acceptance by GDOT.

Refer to Volume 1 Exhibit 9 for maximum duration of roadway closure (allowable number of Calendar days) at each location. Only one roadway closure allowed per location. Opening of the roadway shall constitute that the DB Team has constructed and installed all final pavement, guardrail, signage, and striping on the roadway and bridge complete.

The road closures will be exempt from Holiday Restrictions.

## **18.4 Construction Requirements**

*There are no changes to this Section.*

### **18.4.1 DB Team Responsibility**

*Supplement Section 18.4.1 with the following:*

All milled surfaces shall be covered before they are opened to traffic. Failure to cover milled surfaces with asphaltic concrete mix as required by the applicable typical section shall be considered a failure to comply with the requirements of Section 150 Traffic

Control and shall result in the assessment of non-refundable deductions as specified in Special Provision Section 150.08 Enforcement.

Payment for workzone law enforcement shall be covered under the Construction Complete.

#### **18.4.2 Access**

*There are no changes to this Section.*

#### **18.4.3 Detours**

*Supplement Section 18.4.3 with the following:*

All sites shall utilize off-site detours. The off-site detours to be used are included in Attachment 18-1. A Detour Report shall be required for all project sites. If for any reason DB Team needs to change a detour route, a new detour route must be submitted to GDOT thirty (30) days before implementation. DB Team shall coordinate with GDOT, adjacent Governmental Entities and other third parties as appropriate to the detour.

The Detour Report shall include a narrative of all detour activities, detour schedules and timelines, and detour maps, shall be developed by the DB Team and included within each Traffic Control Plan. The DB Team shall include descriptions of their approach for communicating this information to the traveling public.

Detours shall be limited to the requirements of Section 18.3.1.1.2. No other detours will be allowed unless otherwise approved in advance by GDOT.

## **19 MAINTENANCE DURING THE DESIGN-BUILD PERIOD**

*There are no changes to this Section.*

### **19.1 General**

#### **19.1.1 Standards**

*There are no changes to this Section.*

#### **19.1.2 Reserved**

*Delete this Section.*

#### **19.1.3 GDOT Obligation to Repair**

*There are no changes to this Section.*

### **19.2 Construction Maintenance Limits Plan**

*Supplement Section 19.2 with the following:*

A Construction Limits Maintenance Plan is not required. However, the DB Team shall provide maintenance as required:

1. Maintenance shall constitute continuous and effective work prosecuted day by day or at the direction of GDOT.
2. DB Team shall restore any local roads utilized for hauling, staging or other construction-related activity to their original condition, whether within or outside of the Project limits. The repair shall be made within a reasonable period of time as determined by GDOT. Multiple repairs may be required if the damage occurs more than once or after an initial repair. All repairs must be in satisfactory condition as determined by GDOT prior to Final Acceptance.
3. If repaving is required, the pavement sections shall match existing. For repair of any driveways (residential or commercial), the requirements of Table 11-3 shall be met.

### **19.3 Maintenance Management Plan**

*Delete this Section.*

## **20 BICYCLE AND PEDESTRIAN FACILITIES**

*There are no changes to this Section.*

## 21 RESERVED

## **22 NOISE BARRIERS**

*There are no changes to this Section.*

## **23 RESERVED**



# Georgia Department of Transportation

## Technical Provisions For Design-Build Agreement P.I. No. 0015913

### FY 18 Bridge Replacement Project

## VOLUME 2 ATTACHMENTS

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# **Georgia Department of Transportation**

## **Technical Provisions**

**For**

## **Design-Build Agreement**

**P.I. No. 0015913**

### **Attachment 1-1**

## **Additional Location Requirements**

## Additional Location Requirements

### BATCH 2

Each of the following bridges shall be replaced:

Bridge Serial Number	Feature Carried	Feature Intersected	County Name	GDOT District
075-5041-0	Fellowship Road	Hutchinson Mill Creek	Cook	4
075-5043-0	Old Union Road	Morrison Creek	Cook	4
267-5021-0	Hillview Road	Cedar Creek	Tattnall	5
269-5001-0	Hobbs Road	Whitewater Creek	Taylor	3
315-0037-0	Biar Road	Bear Creek	Wilcox	4

### Bridge Details

At the following bridge locations:

- 075-5041-0 (Cook County)
  - No bents shall be placed within the limits of the stream. Bents shall be placed outside of the stream banks (minimum 5'-0" for pile bents and 10'-0" for concrete bents).
- 075-5043-0 (Cook County)
  - No bents shall be placed within the limits of the stream. Bents shall be placed outside of the stream banks (minimum 5'-0" for pile bents and 10'-0" for concrete bents)).
- 267-5021-0 (Tattnall County)
  - No more than two (2) bents shall be located within the existing stream. Bents shall be placed outside of the stream banks (minimum 5'-0" for pile bents and 10'-0" for concrete bents). If one or more bents are placed within the limits of the stream, no bent shall be placed within 10'-0" of the thalweg.
- 269-5001-0 (Taylor County)
  - No more than one (1) bent shall be located within the stream. Bents shall be placed outside of the stream banks (minimum 5'-0" for pile bents and 10'-0" for concrete bents). If a bent is placed within the limits of the stream, no bent shall be placed within 10'-0" of the thalweg.
- 315-0037-0 (Wilcox County)
  - No bents shall be placed within the limits of the stream. Bents shall be placed outside of the stream banks (minimum 5'-0" for pile bents and 10'-0" for concrete bents).

## Environmental Details

### Seasonal Restriction Table

Bridge Serial Number	County Name	Non-Seasonal Enhanced Erosion Control Measures Required	Potential Seasonal Restriction Range* for In-Stream Work**	Potential Seasonal Restriction Range for Bridge Demolition	Potential Seasonal Restriction Range for Clearing of Woody Vegetation	Deck Drains Permitted*****
075-5043-0	Cook		March 15 – August 31	April 1 – August 31	NA	No
315-0037-0	Wilcox		NA	April 1 – August 31	NA	Yes*****
269-5001-0	Taylor		March 15 – August 31	April 1 – August 31	NA	No
075-5041-0	Cook		March 15 – August 31	April 1 – August 31	NA	No
267-5021-0	Tattnell		NA	April 1 – August 31	NA	No

\* These seasonal restriction ranges represent the current status of regulatory coordination. With enhanced erosion control measures and adequate implementation of aquatic resource impact avoidance/minimization and/or additional agency coordination, these seasonal restrictions may be shortened.

\*\* In stream work is defined as any construction/demolition/de-watering/or access that would occur within the stream.

\*\*\* Bridge survey for roosting bats required within 14 days before demolition (if no signs of bat roosting were observed during initial ecology survey). If no bats are present during the pre-demolition survey, seasonal restriction would end on August 31 (if exclusionary devices for migratory birds are in place, demolition can commence).

\*\*\*\* If exclusionary devices (e.g., netting) for migratory birds are placed prior to March 1 or after August 31, no seasonal restriction would apply unless roosting non-listed bat species are observed on the bridge during ecology field surveys. Seasonal restrictions for bridge demolition would apply if roosting non-listed bat species are present (coordination with Georgia Department of Natural Resources Nongame Conservation Section required to determine timeframe for demolition restriction).

\*\*\*\*\*Use of deck drains on bridge structure not permitted directly above areas designated as Waters of the US and associated vegetative buffers.

### Roadway Details

The Engineer of Record (EOR) shall use the design criteria for each location as shown in the attached tables for the full length of the construction limits.

The following are anticipated Design Exception(s)/Variance(s)/Deviation(s) for the Project:

- 075-5041-0 (Cook County)

No Design Exception(s)/Variance(s)/Deviation(s) anticipated.

- 075-5043-0 (Cook County)

No Design Exception(s)/Variance(s)/Deviation(s) anticipated.

- 267-5021-0 (Tattnall County)

No Design Exception(s)/Variance(s)/Deviation(s) anticipated.

- 269-5001-0 (Taylor County)

Design Variance for Design Speed - The existing substandard design speed that does not meet 2011 AASHTO guidelines may remain per the design variance.

Design Variance for Lane Width - The existing substandard lane width that does not meet 2011 AASHTO guidelines may remain per the design variance.

Design Deviation for Cross Slope - The proposed 2.5% bridge cross-slope deviates from the 2011 AASHTO guideline may be built per the design deviation.

Provide advisory speed signs, "no passing" signs and pavement markings for delineation at bridge approaches.

- 315-0037-0 (Wilcox County)

No Design Exception(s)/Variance(s)/Deviation(s) anticipated.

# **Georgia Department of Transportation**

## **Technical Provisions**

**For**

## **Design-Build Agreement**

**P.I. No. 0015913**

### **Attachment 3-1**

## **Special Provision 621 (Concrete Barrier)**

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
SPECIAL PROVISION**

**P.I. NO: 0015913**

**COUNTY: Cook, Tattnall, Taylor, Wilcox**

**Section 621—Concrete Barrier**

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*Delete Subsection 621.2 and substitute the following:*

**621.2 Materials**

Use materials that meet the requirements of the following Specifications:

<b>Material</b>	<b>Section</b>
Portland Cement Concrete, Class AA	500
Steel Bars for Concrete Reinforcement	853.2.01
Joint Fillers and Sealers	833

Ensure that barrier walls and parapets on bridges are Class “AA” concrete unless otherwise specified on the Plans.

**621.2.01 Delivery, Storage, and Handling**

General Provisions 101 through 150.

*Delete Subsection 621.3.05 A -- and substitute the following:*

**621.3.05 Construction**

**A. Formed or Slip Formed Barrier**

Ensure that the barriers are Class AA concrete as defined in Section 500 and are constructed according to Plan details.

1. Place the concrete using conventional forms or an approved self-propelled extrusion machine. When using forms, give the barrier a Type III finish, and cured according to Section 500.
2. Construct joints of the type and at the locations specified on the Plans.
  - a. When emergencies interrupt placement, the Engineer will decide whether to allow a construction joint and will direct where and how to construct the joint.
  - b. Joints may be sawed or formed. If the joint is sawed within 24 hours of placement to at least 3 in (75 mm) deep using a template, immediately remove the following material:
    - Material that may damage the adjacent concrete by blocking the sawed joint
    - Material that may prevent later operation or cleaning after the sawing operation is complete
  - c. Saw the joints through the footing.

## **Section 621—Concrete Barrier**

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3. The outside vertical face of the side barrier or parapet may be battered as directed by the Engineer. Radii, as approved by the Engineer, may be used at intersecting surfaces of the barrier.  
Make approved requested changes at no cost to the Department.



# **Georgia Department of Transportation**

## **Technical Provisions**

**For**

## **Design-Build Agreement**

**P.I. No. 0015913**

## **FY 18 Bridge Replacement Project**

### **Attachment 4-1**

### **SPECIAL PROVISION 107.23H**

[Not available at this time]

# **Georgia Department of Transportation**

## **Technical Provisions**

**For**

## **Design-Build Agreement**

**P.I. No. 0015913**

## **FY 18 Bridge Replacement Project**

**Attachment 6-1**

**UTILITY MOUs**

Georgia DOT Project: FY 18 Bridge Replacement  
GDOT P.L. 0015913

(3)  
SIGN

**DESIGN-BUILD  
MEMORANDUM OF UNDERSTANDING**

between the  
Georgia Department of Transportation (hereafter the DEPARTMENT)  
and  
Canoochee EMC (hereafter the OWNER)

Whereas GDOT, hereafter referred to as the DEPARTMENT proposes to undertake a design-build project hereafter referred to as FY 18 Bridge Replacement PROJECT to replace the bridge on Hillview Rd. at Cedar Creek in Tatnall County, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor, hereafter referred to as CONTRACTOR; and the utility owner hereafter referred to as the OWNER, and

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

**1. Type of Utility**

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) \_\_\_\_\_

## 2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

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## 3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT, CONTRACTOR and the OWNER to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA. **Betterment costs will be the OWNER'S responsibility.**

**NOTE: Water and Sewer Design and Construction relocation work put in the contract will automatically be accomplished by the DEPARTMENT'S CONTRACTOR. The UTILITY OWNER will still have design approval authority. (No Pre-Approved Contractor/Consultant List required, leave page 6 blank). If you are a Water & Sewer Utility and choose to put your relocation Design and Construction in the contract, please check Design and Construction under Option 2 under 3B. Owner's electing to perform their own design, at their own cost, please select design under 3C.**

OWNER hereby intends to:

- 3A. OWNER, at the DEPARTMENT'S cost through an Agreement, will provide the following services for the properties for which it has established prior rights (Check to signify):

Design   
Construction

3B. OWNER, at the CONTRACTOR'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The CONTRACTOR will add the removal, relocation, protection, materials, adjustment and/or design cost, excluding betterment, to the overall PROJECT's cost. (Check to signify):

**Option 1: OWNER wants the work to be performed by the OWNER's pre-approved Design Consultants and/or Contractors.**

Design \_\_\_\_\_  
Construction \_\_\_\_\_

**Option 2: OWNER wants the DEPARTMENT'S CONTRACTOR to perform the design and/or construction. (Check to signify):**

Design \_\_\_\_\_  
Construction \_\_\_\_\_ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (Check none or list any work items to be performed by the OWNER)

None \_\_\_\_\_

Excluded Items \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3C. OWNER, at OWNER'S cost, will provide the following services (Check to signify):

Design   /    
Construction   /

**The following is hereby mutually agreed to and understood by both parties:**

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the contract. If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the PROJECT, the CONTRACTOR will research any claimed compensable property interest for each OWNER claiming prior rights under section 3A and present the findings to the DEPARTMENT and OWNER for approval. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT or the CONTRACTOR.
4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the contract is accomplished in accordance with the PROJECT's plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER's facility.
5. For utility work included in the contract, the CONTRACTOR shall ensure that the design/construction and installation of the OWNER'S facilities is performed by a contractor/design consultant pre-approved/registered with both the DEPARTMENT and the OWNER. For any work included in the contract, excluding water and sewer, the OWNER will provide a list of pre-approved/registered contractors/design consultants on page 6 of the MOU.
6. For Utility work included in the contract, the OWNER or the OWNER's Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S Utility Accommodations Policy and Standards Manual (UAM), current edition" and any agreements in effect without further cost to the DEPARTMENT or it's CONTRACTOR. Final acceptance of the utility relocation work is accomplished by the execution of the Utility Facility Relocation Acceptance Form. The CONTRACTOR shall provide the OWNER with a complete set of "As-Built Plans" for review and approval reflecting the relocation work performed by the CONTRACTOR. Upon completion of the Utility Facility Relocation Acceptance Form and the exchange of the final OWNER approved "As-Built Plans", the OWNER will operate and maintain the installed facilities going forward based on the date of execution of the Utility Facility Relocation Acceptance Form by the DEPARTMENT.
8. For utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S UAM and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.

9. All Utility work included in the PROJECT's contract and Utility work completed by the OWNER that is reimbursed by the DEPARTMENT through an agreement shall be in accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
- a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, and guardrail steel supports for signs, signals and luminaires. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.
  - b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled "Buy America Certificate of Compliance" is attached to this agreement as "Exhibit A." Records to be maintained by the Developer for this certification shall include a signed mill test report and a signed certification by each supplier, distributor, fabricator, and manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.

The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater. The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

| Michael Arlin /  
(Signature)

| 3/19/2018 /  
(Date)

| CHIEF OPERATING OFFICER /  
(Title)

APPROVED FOR THE DEPARTMENT BY:

| [Signature] /  
(Signature)

| 4/4/18 /  
(Date)

STATE UTILITIES ADMINISTRATOR

### **Pre-Approved Contractor List**

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

**Please provide a minimum of three.**

### **Pre-Approved Design Consultant List**

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:



**Georgia DOT Project: FY 18 Bridge Replacement**  
**GDOT P.I. 0015913**

**DESIGN-BUILD**  
**MEMORANDUM OF UNDERSTANDING**

between the  
Georgia Department of Transportation (hereafter the DEPARTMENT)  
and  
Colquitt EMC (hereafter the OWNER)

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Whereas GDOT, hereafter referred to as the DEPARTMENT proposes to undertake a design-build project hereafter referred to as FY 18 Bridge Replacement PROJECT to replace the bridge on Old Union Rd. at Morrison Creek in Cook County, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor, hereafter referred to as CONTRACTOR; and the utility owner hereafter referred to as the OWNER, and

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

**1. Type of Utility**

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) \_\_\_\_\_

## 2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

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---

## 3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT, CONTRACTOR and the OWNER to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA. **Betterment costs will be the OWNER'S responsibility.**

**NOTE: Water and Sewer Design and Construction relocation work put in the contract will automatically be accomplished by the DEPARTMENT'S CONTRACTOR. The UTILITY OWNER will still have design approval authority. (No Pre-Approved Contractor/Consultant List required, leave page 6 blank). If you are a Water & Sewer Utility and choose to put your relocation Design and Construction in the contract, please check Design and Construction under Option 2 under 3B. Owner's electing to perform their own design, at their own cost, please select design under 3C.**

OWNER hereby intends to:

- 3A. OWNER, at the DEPARTMENT'S cost through an Agreement, will provide the following services for the properties for which it has established prior rights (Check to signify):

Design              X    
 Construction      X

3B. OWNER, at the CONTRACTOR'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The CONTRACTOR will add the removal, relocation, protection, materials, adjustment and/or design cost, excluding betterment, to the overall PROJECT's cost. (Check to signify):

**Option 1: OWNER wants the work to be performed by the OWNER's pre-approved Design Consultants and/or Contractors.**

Design \_\_\_\_\_  
Construction \_\_\_\_\_

**Option 2: OWNER wants the DEPARTMENT'S CONTRACTOR to perform the design and/or construction. (Check to signify):**

Design \_\_\_\_\_  
Construction \_\_\_\_\_ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (Check none or list any work items to be performed by the OWNER)

None \_\_\_\_\_

Excluded Items \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3C. OWNER, at OWNER'S cost, will provide the following services (Check to signify):

Design \_\_\_\_\_  
Construction \_\_\_\_\_

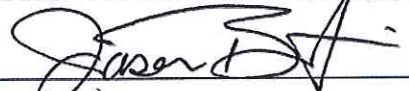
**The following is hereby mutually agreed to and understood by both parties:**

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the contract. If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the PROJECT, the CONTRACTOR will research any claimed compensable property interest for each OWNER claiming prior rights under section 3A and present the findings to the DEPARTMENT and OWNER for approval. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT or the CONTRACTOR.
4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the contract is accomplished in accordance with the PROJECT's plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER's facility.
5. For utility work included in the contract, the CONTRACTOR shall ensure that the design/construction and installation of the OWNER'S facilities is performed by a contractor/design consultant pre-approved/registered with both the DEPARTMENT and the OWNER. For any work included in the contract, excluding water and sewer, the OWNER will provide a list of pre-approved/registered contractors/design consultants on page 6 of the MOU.
6. For Utility work included in the contract, the OWNER or the OWNER's Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S Utility Accommodations Policy and Standards Manual (UAM), current edition" and any agreements in effect without further cost to the DEPARTMENT or it's CONTRACTOR. Final acceptance of the utility relocation work is accomplished by the execution of the Utility Facility Relocation Acceptance Form. The CONTRACTOR shall provide the OWNER with a complete set of "As-Built Plans" for review and approval reflecting the relocation work performed by the CONTRACTOR. Upon completion of the Utility Facility Relocation Acceptance Form and the exchange of the final OWNER approved "As-Built Plans", the OWNER will operate and maintain the installed facilities going forward based on the date of execution of the Utility Facility Relocation Acceptance Form by the DEPARTMENT.
8. For utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S UAM and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.

9. All Utility work included in the PROJECT's contract and Utility work completed by the OWNER that is reimbursed by the DEPARTMENT through an agreement shall be in accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
- a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, and guardrail steel supports for signs, signals and luminaires. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.
  - b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled "Buy America Certificate of Compliance" is attached to this agreement as "Exhibit A." Records to be maintained by the Developer for this certification shall include a signed mill test report and a signed certification by each supplier, distributor, fabricator, and manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.

The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater. The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

  
 \_\_\_\_\_  
 (Signature)

3-16-18  
 \_\_\_\_\_  
 (Date)

District Eng. Super.  
 \_\_\_\_\_

(Title)

APPROVED FOR THE DEPARTMENT BY:

  
 \_\_\_\_\_  
 (Signature)

4/4/18  
 \_\_\_\_\_  
 (Date)

STATE UTILITIES ADMINISTRATOR

### **Pre-Approved Contractor List**

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

**Please provide a minimum of three.**

### **Pre-Approved Design Consultant List**

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:



Georgia DOT Project: FY 18 Bridge Replacement  
GDOT P.I. 0015913

DESIGN-BUILD  
MEMORANDUM OF UNDERSTANDING

between the  
Georgia Department of Transportation (hereafter the DEPARTMENT)  
and  
Flint EMC (hereafter the OWNER)

Whereas GDOT, hereafter referred to as the DEPARTMENT proposes to undertake a design-build project hereafter referred to as FY 18 Bridge Replacement PROJECT to replace the bridge on Hobbs Rd. at Whitewater Creek in Taylor County, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor, hereafter referred to as CONTRACTOR; and the utility owner hereafter referred to as the OWNER, and

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

**1. Type of Utility**

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) \_\_\_\_\_

## 2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.  
Insert here or attach a detailed description of proposed new additional utility installations:

N/A

---

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## 3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT, CONTRACTOR and the OWNER to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA. **Betterment costs will be the OWNER'S responsibility.**

**NOTE: Water and Sewer Design and Construction relocation work put in the contract will automatically be accomplished by the DEPARTMENT'S CONTRACTOR. The UTILITY OWNER will still have design approval authority. (No Pre-Approved Contractor/Consultant List required, leave page 6 blank). If you are a Water & Sewer Utility and choose to put your relocation Design and Construction in the contract, please check Design and Construction under Option 2 under 3B. Owner's electing to perform their own design, at their own cost, please select design under 3C.**

OWNER hereby intends to:

3A. OWNER, at the DEPARTMENT'S cost through an Agreement, will provide the following services for the properties for which it has established prior rights (Check to signify):

Design        
Construction



3B. OWNER, at the CONTRACTOR'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The CONTRACTOR will add the removal, relocation, protection, materials, adjustment and/or design cost, excluding betterment, to the overall PROJECT's cost. (Check to signify):

**Option 1: OWNER wants the work to be performed by the OWNER's pre-approved Design Consultants and/or Contractors.**

Design \_\_\_\_\_  
Construction \_\_\_\_\_

**Option 2: OWNER wants the DEPARTMENT'S CONTRACTOR to perform the design and/or construction. (Check to signify):**

Design \_\_\_\_\_  
Construction \_\_\_\_\_ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (Check none or list any work items to be performed by the OWNER)

None \_\_\_\_\_

Excluded Items \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3C. OWNER, at OWNER'S cost, will provide the following services (Check to signify):

Design \_\_\_\_\_  
Construction \_\_\_\_\_

**The following is hereby mutually agreed to and understood by both parties:**

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the contract. If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the PROJECT, the CONTRACTOR will research any claimed compensable property interest for each OWNER claiming prior rights under section 3A and present the findings to the DEPARTMENT and OWNER for approval. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT or the CONTRACTOR.
4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the contract is accomplished in accordance with the PROJECT's plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER's facility.
5. For utility work included in the contract, the CONTRACTOR shall ensure that the design/construction and installation of the OWNER'S facilities is performed by a contractor/design consultant pre-approved/registered with both the DEPARTMENT and the OWNER. For any work included in the contract, excluding water and sewer, the OWNER will provide a list of pre-approved/registered contractors/design consultants on page 6 of the MOU.
6. For Utility work included in the contract, the OWNER or the OWNER's Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S Utility Accommodations Policy and Standards Manual (UAM), current edition" and any agreements in effect without further cost to the DEPARTMENT or it's CONTRACTOR. Final acceptance of the utility relocation work is accomplished by the execution of the Utility Facility Relocation Acceptance Form. The CONTRACTOR shall provide the OWNER with a complete set of "As-Built Plans" for review and approval reflecting the relocation work performed by the CONTRACTOR. Upon completion of the Utility Facility Relocation Acceptance Form and the exchange of the final OWNER approved "As-Built Plans", the OWNER will operate and maintain the installed facilities going forward based on the date of execution of the Utility Facility Relocation Acceptance Form by the DEPARTMENT.
8. For utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S UAM and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the

CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.

- 9. All Utility work included in the PROJECT's contract and Utility work completed by the OWNER that is reimbursed by the DEPARTMENT through an agreement shall be in accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
  - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, and guardrail steel supports for signs, signals and luminaires. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.
  - b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled "Buy America Certificate of Compliance" is attached to this agreement as "Exhibit A." Records to be maintained by the Developer for this certification shall include a signed mill test report and a signed certification by each supplier, distributor, fabricator, and manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.

The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater. The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

  
(Signature)

3-19-18  
(Date)

Supervisor of Staking Service  
(Title)

APPROVED FOR THE DEPARTMENT BY:

  
(Signature)

4/4/18  
(Date)

STATE UTILITIES ADMINISTRATOR

### **Pre-Approved Contractor List**

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

**Please provide a minimum of three.**

### **Pre-Approved Design Consultant List**

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Georgia DOT Project: FY 18 Bridge Replacement  
GDOT P.I. 0015913

**DESIGN-BUILD  
MEMORANDUM OF UNDERSTANDING**

between the  
Georgia Department of Transportation (hereafter the DEPARTMENT)  
and  
Middle GA EMC (hereafter the OWNER)

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Whereas GDOT, hereafter referred to as the DEPARTMENT proposes to undertake a design-build project hereafter referred to as FY 18 Bridge Replacement PROJECT to replace the bridge on Biar Rd. at Bear Creek in Wilcox County, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor, hereafter referred to as CONTRACTOR; and the utility owner hereafter referred to as the OWNER, and

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

**1. Type of Utility**

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) \_\_\_\_\_

## 2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.  
Insert here or attach a detailed description of proposed new additional utility installations:

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## 3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT, CONTRACTOR and the OWNER to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA. **Betterment costs will be the OWNER'S responsibility.**

**NOTE: Water and Sewer Design and Construction relocation work put in the contract will automatically be accomplished by the DEPARTMENT'S CONTRACTOR. The UTILITY OWNER will still have design approval authority. (No Pre-Approved Contractor/Consultant List required, leave page 6 blank). If you are a Water & Sewer Utility and choose to put your relocation Design and Construction in the contract, please check Design and Construction under Option 2 under 3B. Owner's electing to perform their own design, at their own cost, please select design under 3C.**

OWNER hereby intends to:

- 3A. OWNER, at the DEPARTMENT'S cost through an Agreement, will provide the following services for the properties for which it has established prior rights (Check to signify):

Design \_\_\_\_\_  
Construction \_\_\_\_\_

3B. OWNER, at the CONTRACTOR'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The CONTRACTOR will add the removal, relocation, protection, materials, adjustment and/or design cost, excluding betterment, to the overall PROJECT's cost. (Check to signify):

**Option 1: OWNER wants the work to be performed by the OWNER's pre-approved Design Consultants and/or Contractors.**

Design   
Construction

**Option 2: OWNER wants the DEPARTMENT'S CONTRACTOR to perform the design and/or construction. (Check to signify):**

Design   
Construction  **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (Check none or list any work items to be performed by the OWNER)

None

Excluded Items \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3C. OWNER, at OWNER'S cost, will provide the following services (Check to signify):

Design   
Construction



**The following is hereby mutually agreed to and understood by both parties:**

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the contract. If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the PROJECT, the CONTRACTOR will research any claimed compensable property interest for each OWNER claiming prior rights under section 3A and present the findings to the DEPARTMENT and OWNER for approval. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT or the CONTRACTOR.
4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the contract is accomplished in accordance with the PROJECT's plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER's facility.
5. For utility work included in the contract, the CONTRACTOR shall ensure that the design/construction and installation of the OWNER'S facilities is performed by a contractor/design consultant pre-approved/registered with both the DEPARTMENT and the OWNER. For any work included in the contract, excluding water and sewer, the OWNER will provide a list of pre-approved/registered contractors/design consultants on page 6 of the MOU.
6. For Utility work included in the contract, the OWNER or the OWNER's Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S Utility Accommodations Policy and Standards Manual (UAM), current edition" and any agreements in effect without further cost to the DEPARTMENT or it's CONTRACTOR. Final acceptance of the utility relocation work is accomplished by the execution of the Utility Facility Relocation Acceptance Form. The CONTRACTOR shall provide the OWNER with a complete set of "As-Built Plans" for review and approval reflecting the relocation work performed by the CONTRACTOR. Upon completion of the Utility Facility Relocation Acceptance Form and the exchange of the final OWNER approved "As-Built Plans", the OWNER will operate and maintain the installed facilities going forward based on the date of execution of the Utility Facility Relocation Acceptance Form by the DEPARTMENT.
8. For utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S UAM and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.



9. All Utility work included in the PROJECT's contract and Utility work completed by the OWNER that is reimbursed by the DEPARTMENT through an agreement shall be in accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
- a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, and guardrail steel supports for signs, signals and luminaires. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.
  - b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled "Buy America Certificate of Compliance" is attached to this agreement as "Exhibit A." Records to be maintained by the Developer for this certification shall include a signed mill test report and a signed certification by each supplier, distributor, fabricator, and manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.

The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater. The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

  
 \_\_\_\_\_  
 (Signature)

March 15, 2018  
 \_\_\_\_\_  
 (Date)

**Senior Vice President**

(Title)

APPROVED FOR THE DEPARTMENT BY:

  
 \_\_\_\_\_  
 (Signature)

4/4/18  
 \_\_\_\_\_  
 (Date)

STATE UTILITIES ADMINISTRATOR

### Pre-Approved Contractor List

Company Name: Pike  
Address: 100 Pike Way, P.O. Box 868, Mount Airy, NC 27030  
Phone: 912-258-0645  
Contact Person: Barry McCarty  
E-Mail:

Company Name: Sumter Utilities  
Address: 1151 North Pike West, Sumter, SC 29151  
Phone: 803-469-8585  
Contact Person:  
E-Mail:

Company Name: Musgrove Construction  
Address: 8708 U.S. 90 Live Oak, Florida 32060  
Phone: 386-362-7048  
Contact Person:  
E-Mail: tsmith112@musgroveinc.com

**Please provide a minimum of three.**

### Pre-Approved Design Consultant List

Company Name: McLean Engineering  
Address: 815 S Main St. Moultrie Ga 31768  
Phone: 229-985-1148  
Contact Person: Todd Taylor  
E-Mail:

Company Name: Power Services  
Address: 1616 E. Millbrook Road, Raleigh, NC  
Phone: 919-256-5900  
Contact Person: Stuart Griffin – 478-955-2255  
E-Mail:

Company Name: Patterson & Dewar Engineers, Inc  
Address: 850 Center Way, Norcross, Ga 30071  
Phone: 770-453-1410  
Contact Person:  
E-Mail:



Georgia DOT Project: FY 18 Bridge Replacement  
GDOT P.I. 0015913

**DESIGN-BUILD**  
**MEMORANDUM OF UNDERSTANDING**  
between the  
Georgia Department of Transportation (hereafter the DEPARTMENT)  
and  
Public Service Telephone (hereafter the OWNER)

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Whereas GDOT, hereafter referred to as the DEPARTMENT proposes to undertake a design-build project hereafter referred to as FY 18 Bridge Replacement PROJECT to replace the bridge on Hobbs Rd. at Whitewater Creek in Taylor County, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor, hereafter referred to as CONTRACTOR; and the utility owner hereafter referred to as the OWNER, and

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

**1. Type of Utility**

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) \_\_\_\_\_

**2. New Utility Facilities Proposed (Betterment)**

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

---

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**3. Assignment of Responsibilities for Design and Construction**

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT, CONTRACTOR and the OWNER to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA. **Betterment costs will be the OWNER'S responsibility.**

**NOTE: Water and Sewer Design and Construction relocation work put in the contract will automatically be accomplished by the DEPARTMENT'S CONTRACTOR. The UTILITY OWNER will still have design approval authority. (No Pre-Approved Contractor/Consultant List required, leave page 6 blank). If you are a Water & Sewer Utility and choose to put your relocation Design and Construction in the contract, please check Design and Construction under Option 2 under 3B. Owner's electing to perform their own design, at their own cost, please select design under 3C.**

OWNER hereby intends to:

3A. OWNER, at the DEPARTMENT'S cost through an Agreement, will provide the following services for the properties for which it has established prior rights (Check to signify):

Design          
Construction



3B. OWNER, at the CONTRACTOR'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The CONTRACTOR will add the removal, relocation, protection, materials, adjustment and/or design cost, excluding betterment, to the overall PROJECT's cost. (Check to signify):

**Option 1: OWNER wants the work to be performed by the OWNER's pre-approved Design Consultants and/or Contractors.**

Design \_\_\_\_\_  
Construction \_\_\_\_\_

**Option 2: OWNER wants the DEPARTMENT'S CONTRACTOR to perform the design and/or construction. (Check to signify):**

Design \_\_\_\_\_  
Construction \_\_\_\_\_ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (Check none or list any work items to be performed by the OWNER)

None \_\_\_\_\_

Excluded Items \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Comments:  
Public Service Telephone will relocate our facilities with our own forces if in conflict. Facilities located off the right of way will be reimbursable through an agreement.

3C. OWNER, at OWNER'S cost, will provide the following services (Check to signify):

Design   X    
Construction   X

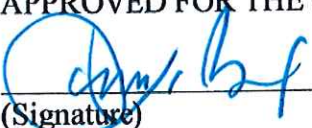
**The following is hereby mutually agreed to and understood by both parties:**

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the contract. If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the PROJECT, the CONTRACTOR will research any claimed compensable property interest for each OWNER claiming prior rights under section 3A and present the findings to the DEPARTMENT and OWNER for approval. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT or the CONTRACTOR.
4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the contract is accomplished in accordance with the PROJECT's plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER's facility.
5. For utility work included in the contract, the CONTRACTOR shall ensure that the design/construction and installation of the OWNER'S facilities is performed by a contractor/design consultant pre-approved/registered with both the DEPARTMENT and the OWNER. For any work included in the contract, excluding water and sewer, the OWNER will provide a list of pre-approved/registered contractors/design consultants on page 6 of the MOU.
6. For Utility work included in the contract, the OWNER or the OWNER's Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S Utility Accommodations Policy and Standards Manual (UAM), current edition" and any agreements in effect without further cost to the DEPARTMENT or it's CONTRACTOR. Final acceptance of the utility relocation work is accomplished by the execution of the Utility Facility Relocation Acceptance Form. The CONTRACTOR shall provide the OWNER with a complete set of "As-Built Plans" for review and approval reflecting the relocation work performed by the CONTRACTOR. Upon completion of the Utility Facility Relocation Acceptance Form and the exchange of the final OWNER approved "As-Built Plans", the OWNER will operate and maintain the installed facilities going forward based on the date of execution of the Utility Facility Relocation Acceptance Form by the DEPARTMENT.
8. For utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S UAM and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.

9. All Utility work included in the PROJECT's contract and Utility work completed by the OWNER that is reimbursed by the DEPARTMENT through an agreement shall be in accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
- a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, and guardrail steel supports for signs, signals and luminaires. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.
  - b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled "Buy America Certificate of Compliance" is attached to this agreement as "Exhibit A." Records to be maintained by the Developer for this certification shall include a signed mill test report and a signed certification by each supplier, distributor, fabricator, and manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.

The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater. The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

  
\_\_\_\_\_  
(Signature)

3/15/18  
\_\_\_\_\_  
(Date)

\_\_\_\_\_  
President  
\_\_\_\_\_  
(Title)

APPROVED FOR THE DEPARTMENT BY:

  
\_\_\_\_\_  
(Signature)

4/4/13  
\_\_\_\_\_  
(Date)

STATE UTILITIES ADMINISTRATOR



### Pre-Approved Contractor List

Company Name: Public Service Telephone Company  
Address: PO Box 397 Reynolds, GA 31078  
Phone: 478-837-3877  
Contact Person: Mitchell Harris  
E-Mail: mharris@pstel.com

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

**Please provide a minimum of three.**

### Pre-Approved Design Consultant List

Company Name: Public Service Telephone Company  
Address: PO Box 397 Reynolds, GA 31078  
Phone: 478-837-3877  
Contact Person: Mitchell Harris  
E-Mail: mharris@pstel.com

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:



Georgia DOT Project: FY 18 Bridge Replacement  
GDOT P.I. 0015913

**DESIGN-BUILD**  
**MEMORANDUM OF UNDERSTANDING**  
between the  
Georgia Department of Transportation (hereafter the DEPARTMENT)  
and  
Windstream (hereafter the OWNER)

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Whereas GDOT, hereafter referred to as the DEPARTMENT proposes to undertake a design-build project hereafter referred to as FY 18 Bridge Replacement PROJECT to replace the bridge on Fellowship Rd. at Hutchinson Mill Creek in Cook County, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor, hereafter referred to as CONTRACTOR; and the utility owner hereafter referred to as the OWNER, and

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

**1. Type of Utility**

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) \_\_\_\_\_

**2. New Utility Facilities Proposed (Betterment)**

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

**3. Assignment of Responsibilities for Design and Construction**

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT, CONTRACTOR and the OWNER to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA. **Betterment costs will be the OWNER'S responsibility.**

**NOTE: Water and Sewer Design and Construction relocation work put in the contract will automatically be accomplished by the DEPARTMENT'S CONTRACTOR. The UTILITY OWNER will still have design approval authority. (No Pre-Approved Contractor/Consultant List required, leave page 6 blank). If you are a Water & Sewer Utility and choose to put your relocation Design and Construction in the contract, please check Design and Construction under Option 2 under 3B. Owner's electing to perform their own design, at their own cost, please select design under 3C.**

OWNER hereby intends to:

3A. OWNER, at the DEPARTMENT'S cost through an Agreement, will provide the following services for the properties for which it has established prior rights (Check to signify):

Design \_\_\_\_\_  
Construction \_\_\_\_\_

3B. OWNER, at the CONTRACTOR'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The CONTRACTOR will add the removal, relocation, protection, materials, adjustment and/or design cost, excluding betterment, to the overall PROJECT's cost. (Check to signify):

**Option 1: OWNER wants the work to be performed by the OWNER's pre-approved Design Consultants and/or Contractors.**

Design \_\_\_\_\_  
Construction \_\_\_\_\_

**Option 2: OWNER wants the DEPARTMENT'S CONTRACTOR to perform the design and/or construction. (Check to signify):**

Design \_\_\_\_\_  
Construction \_\_\_\_\_ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (Check none or list any work items to be performed by the OWNER)

None \_\_\_\_\_

Excluded Items \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3C. OWNER, at OWNER'S cost, will provide the following services (Check to signify):

Design   x    
Construction   x

**The following is hereby mutually agreed to and understood by both parties:**

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the contract. If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the PROJECT, the CONTRACTOR will research any claimed compensable property interest for each OWNER claiming prior rights under section 3A and present the findings to the DEPARTMENT and OWNER for approval. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT or the CONTRACTOR.
4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the contract is accomplished in accordance with the PROJECT's plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER's facility.
5. For utility work included in the contract, the CONTRACTOR shall ensure that the design/construction and installation of the OWNER'S facilities is performed by a contractor/design consultant pre-approved/registered with both the DEPARTMENT and the OWNER. For any work included in the contract, excluding water and sewer, the OWNER will provide a list of pre-approved/registered contractors/design consultants on page 6 of the MOU.
6. For Utility work included in the contract, the OWNER or the OWNER's Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S Utility Accommodations Policy and Standards Manual (UAM), current edition" and any agreements in effect without further cost to the DEPARTMENT or it's CONTRACTOR. Final acceptance of the utility relocation work is accomplished by the execution of the Utility Facility Relocation Acceptance Form. The CONTRACTOR shall provide the OWNER with a complete set of "As-Built Plans" for review and approval reflecting the relocation work performed by the CONTRACTOR. Upon completion of the Utility Facility Relocation Acceptance Form and the exchange of the final OWNER approved "As-Built Plans", the OWNER will operate and maintain the installed facilities going forward based on the date of execution of the Utility Facility Relocation Acceptance Form by the DEPARTMENT.
8. For utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S UAM and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.

9. All Utility work included in the PROJECT's contract and Utility work completed by the OWNER that is reimbursed by the DEPARTMENT through an agreement shall be in accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
- a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, and guardrail steel supports for signs, signals and luminaires. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.
  - b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled "Buy America Certificate of Compliance" is attached to this agreement as "Exhibit A." Records to be maintained by the Developer for this certification shall include a signed mill test report and a signed certification by each supplier, distributor, fabricator, and manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.

The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater. The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

Chit Demmer  
(Signature)

3-22-18  
(Date)

OSP SUPERVISOR  
(Title)

APPROVED FOR THE DEPARTMENT BY:

[Signature]  
(Signature)

4/4/18  
(Date)

STATE UTILITIES ADMINISTRATOR

### Pre-Approved Contractor List

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

**Please provide a minimum of three.**

### Pre-Approved Design Consultant List

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

300

Georgia DOT Project: FY 18 Bridge Replacement  
GDOT P.I. 0015913

DESIGN-BUILD  
MEMORANDUM OF UNDERSTANDING

between the  
Georgia Department of Transportation (hereafter the DEPARTMENT)  
and  
Windstream (hereafter the OWNER)

Whereas GDOT, hereafter referred to as the DEPARTMENT proposes to undertake a design-build project hereafter referred to as FY 18 Bridge Replacement PROJECT to replace the bridge on Old Union Road at Morrison Creek in Cook County, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor, hereafter referred to as CONTRACTOR; and the utility owner hereafter referred to as the OWNER, and

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

**1. Type of Utility**

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) \_\_\_\_\_

## 2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

## 3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT, CONTRACTOR and the OWNER to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA. **Betterment costs will be the OWNER'S responsibility.**

**NOTE: Water and Sewer Design and Construction relocation work put in the contract will automatically be accomplished by the DEPARTMENT'S CONTRACTOR. The UTILITY OWNER will still have design approval authority. (No Pre-Approved Contractor/Consultant List required, leave page 6 blank). If you are a Water & Sewer Utility and choose to put your relocation Design and Construction in the contract, please check Design and Construction under Option 2 under 3B. Owner's electing to perform their own design, at their own cost, please select design under 3C.**

OWNER hereby intends to:

- 3A. OWNER, at the DEPARTMENT'S cost through an Agreement, will provide the following services for the properties for which it has established prior rights (Check to signify):

Design  
Construction



3B. OWNER, at the CONTRACTOR'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The CONTRACTOR will add the removal, relocation, protection, materials, adjustment and/or design cost, excluding betterment, to the overall PROJECT'S cost. (Check to signify):

**Option 1: OWNER wants the work to be performed by the OWNER'S pre-approved Design Consultants and/or Contractors.**

Design \_\_\_\_\_  
Construction \_\_\_\_\_

**Option 2: OWNER wants the DEPARTMENT'S CONTRACTOR to perform the design and/or construction. (Check to signify):**

Design \_\_\_\_\_  
Construction \_\_\_\_\_ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (Check none or list any work items to be performed by the OWNER)

None \_\_\_\_\_

Included Items

Comments:

3C. OWNER, at OWNER'S cost, will provide the following services (Check to signify):

Design  X   
Construction  X

**The following is hereby mutually agreed to and understood by both parties:**

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the contract. If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the PROJECT, the CONTRACTOR will research any claimed compensable property interest for each OWNER claiming prior rights under section 3A and present the findings to the DEPARTMENT and OWNER for approval. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT or the CONTRACTOR.
4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the contract is accomplished in accordance with the PROJECT's plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER's facility.
5. For utility work included in the contract, the CONTRACTOR shall ensure that the design/construction and installation of the OWNER'S facilities is performed by a contractor/design consultant pre-approved/registered with both the DEPARTMENT and the OWNER. For any work included in the contract, excluding water and sewer, the OWNER will provide a list of pre-approved/registered contractors/design consultants on page 6 of the MOU.
6. For Utility work included in the contract, the OWNER or the OWNER's Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S Utility Accommodations Policy and Standards Manual (UAM), current edition" and any agreements in effect without further cost to the DEPARTMENT or it's CONTRACTOR. Final acceptance of the utility relocation work is accomplished by the execution of the Utility Facility Relocation Acceptance Form. The CONTRACTOR shall provide the OWNER with a complete set of "As-Built Plans" for review and approval reflecting the relocation work performed by the CONTRACTOR. Upon completion of the Utility Facility Relocation Acceptance Form and the exchange of the final OWNER approved "As-Built Plans", the OWNER will operate and maintain the installed facilities going forward based on the date of execution of the Utility Facility Relocation Acceptance Form by the DEPARTMENT.
8. For utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S UAM and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.

9. All Utility work included in the PROJECT's contract and Utility work completed by the OWNER that is reimbursed by the DEPARTMENT through an agreement shall be in accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
- a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, and guardrail steel supports for signs, signals and luminaires. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.
  - b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled "Buy America Certificate of Compliance" is attached to this agreement as "Exhibit A." Records to be maintained by the Developer for this certification shall include a signed mill test report and a signed certification by each supplier, distributor, fabricator, and manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.

The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater. The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

Chit Demum  
(Signature)

3-22-18  
(Date)

OSP SUPERVISOR  
(Title)

APPROVED FOR THE DEPARTMENT BY:

[Signature]  
(Signature)

4/4/18  
(Date)

STATE UTILITIES ADMINISTRATOR

### Pre-Approved Contractor List

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

**Please provide a minimum of three.**

### Pre-Approved Design Consultant List

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Georgia DOT Project: FY 18 Bridge Replacement  
GDOT P.I. 0015913

**DESIGN-BUILD**  
**MEMORANDUM OF UNDERSTANDING**  
between the  
Georgia Department of Transportation (hereafter the DEPARTMENT)  
and  
Windstream (hereafter the OWNER)

---

Whereas GDOT, hereafter referred to as the DEPARTMENT proposes to undertake a design-build project hereafter referred to as FY 18 Bridge Replacement PROJECT to replace the bridge on Hillview Road at Cedar Creek in Tatnall County, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor, hereafter referred to as CONTRACTOR; and the utility owner hereafter referred to as the OWNER, and

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

**1. Type of Utility**

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) \_\_\_\_\_

## 2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

---

## 3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT, CONTRACTOR and the OWNER to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA. **Betterment costs will be the OWNER'S responsibility.**

**NOTE: Water and Sewer Design and Construction relocation work put in the contract will automatically be accomplished by the DEPARTMENT'S CONTRACTOR. The UTILITY OWNER will still have design approval authority. (No Pre-Approved Contractor/Consultant List required, leave page 6 blank). If you are a Water & Sewer Utility and choose to put your relocation Design and Construction in the contract, please check Design and Construction under Option 2 under 3B. Owner's electing to perform their own design, at their own cost, please select design under 3C.**

OWNER hereby intends to:

- 3A. OWNER, at the DEPARTMENT'S cost through an Agreement, will provide the following services for the properties for which it has established prior rights (Check to signify):

Design \_\_\_\_\_  
Construction \_\_\_\_\_

- 3B. OWNER, at the CONTRACTOR'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The CONTRACTOR will add the removal, relocation, protection, materials, adjustment and/or design cost, excluding betterment, to the overall PROJECT's cost. (Check to signify):

**Option 1: OWNER wants the work to be performed by the OWNER's pre-approved Design Consultants and/or Contractors.**

Design \_\_\_\_\_  
Construction \_\_\_\_\_

**Option 2: OWNER wants the DEPARTMENT'S CONTRACTOR to perform the design and/or construction. (Check to signify):**

Design \_\_\_\_\_  
Construction \_\_\_\_\_ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (Check none or list any work items to be performed by the OWNER)

None \_\_\_\_\_

Excluded Items \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 3C. OWNER, at OWNER'S cost, will provide the following services (Check to signify):

Design   X    
Construction   X

**The following is hereby mutually agreed to and understood by both parties:**

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the contract. If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the PROJECT, the CONTRACTOR will research any claimed compensable property interest for each OWNER claiming prior rights under section 3A and present the findings to the DEPARTMENT and OWNER for approval. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT or the CONTRACTOR.
4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the contract is accomplished in accordance with the PROJECT's plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER's facility.
5. For utility work included in the contract, the CONTRACTOR shall ensure that the design/construction and installation of the OWNER'S facilities is performed by a contractor/design consultant pre-approved/registered with both the DEPARTMENT and the OWNER. For any work included in the contract, excluding water and sewer, the OWNER will provide a list of pre-approved/registered contractors/design consultants on page 6 of the MOU.
6. For Utility work included in the contract, the OWNER or the OWNER's Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S Utility Accommodations Policy and Standards Manual (UAM), current edition" and any agreements in effect without further cost to the DEPARTMENT or it's CONTRACTOR. Final acceptance of the utility relocation work is accomplished by the execution of the Utility Facility Relocation Acceptance Form. The CONTRACTOR shall provide the OWNER with a complete set of "As-Built Plans" for review and approval reflecting the relocation work performed by the CONTRACTOR. Upon completion of the Utility Facility Relocation Acceptance Form and the exchange of the final OWNER approved "As-Built Plans", the OWNER will operate and maintain the installed facilities going forward based on the date of execution of the Utility Facility Relocation Acceptance Form by the DEPARTMENT.
8. For utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S UAM and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.



9. All Utility work included in the PROJECT's contract and Utility work completed by the OWNER that is reimbursed by the DEPARTMENT through an agreement shall be in accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
- a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, and guardrail steel supports for signs, signals and luminaires. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.
  - b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled "Buy America Certificate of Compliance" is attached to this agreement as "Exhibit A." Records to be maintained by the Developer for this certification shall include a signed mill test report and a signed certification by each supplier, distributor, fabricator, and manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.

The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater. The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

Chet Lemmon  
(Signature)

3-19-18  
(Date)

OSP SUPERVISOR  
(Title)

APPROVED FOR THE DEPARTMENT BY:

Pat Sk  
(Signature)

4/4/18  
(Date)

STATE UTILITIES ADMINISTRATOR

### **Pre-Approved Contractor List**

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

**Please provide a minimum of three.**

### **Pre-Approved Design Consultant List**

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Georgia DOT Project: FY 18 Bridge Replacement  
GDOT P.I. 0015913

**DESIGN-BUILD**  
**MEMORANDUM OF UNDERSTANDING**  
between the  
Georgia Department of Transportation (hereafter the DEPARTMENT)  
and  
Windstream (hereafter the OWNER)

---

Whereas GDOT, hereafter referred to as the DEPARTMENT proposes to undertake a design-build project hereafter referred to as FY 18 Bridge Replacement PROJECT to replace the bridge on Biar Road at Bear Creek in Wilcox County, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor, hereafter referred to as CONTRACTOR; and the utility owner hereafter referred to as the OWNER, and

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

**1. Type of Utility**

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) \_\_\_\_\_

## 2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.  
Insert here or attach a detailed description of proposed new additional utility installations:

## 3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT, CONTRACTOR and the OWNER to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA. **Betterment costs will be the OWNER'S responsibility.**

**NOTE: Water and Sewer Design and Construction relocation work put in the contract will automatically be accomplished by the DEPARTMENT'S CONTRACTOR. The UTILITY OWNER will still have design approval authority. (No Pre-Approved Contractor/Consultant List required, leave page 6 blank). If you are a Water & Sewer Utility and choose to put your relocation Design and Construction in the contract, please check Design and Construction under Option 2 under 3B. Owner's electing to perform their own design, at their own cost, please select design under 3C.**

OWNER hereby intends to:

- 3A. OWNER, at the DEPARTMENT'S cost through an Agreement, will provide the following services for the properties for which it has established prior rights (Check to signify):

Design  
Construction

- 3B. OWNER, at the CONTRACTOR'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The CONTRACTOR will add the removal, relocation, protection, materials, adjustment and/or design cost, excluding betterment, to the overall PROJECT's cost. (Check to signify):

**Option 1: OWNER wants the work to be performed by the OWNER's pre-approved Design Consultants and/or Contractors.**

Design \_\_\_\_\_  
Construction \_\_\_\_\_

**Option 2: OWNER wants the DEPARTMENT'S CONTRACTOR to perform the design and/or construction. (Check to signify):**

Design \_\_\_\_\_  
Construction \_\_\_\_\_ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (Check none or list any work items to be performed by the OWNER)

None \_\_\_\_\_

Excluded Items \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 3C. OWNER, at OWNER'S cost, will provide the following services (Check to signify):

Design   X    
Construction   X

**The following is hereby mutually agreed to and understood by both parties:**

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the contract. If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the PROJECT, the CONTRACTOR will research any claimed compensable property interest for each OWNER claiming prior rights under section 3A and present the findings to the DEPARTMENT and OWNER for approval. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT or the CONTRACTOR.
4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the contract is accomplished in accordance with the PROJECT's plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER's facility.
5. For utility work included in the contract, the CONTRACTOR shall ensure that the design/construction and installation of the OWNER'S facilities is performed by a contractor/design consultant pre-approved/registered with both the DEPARTMENT and the OWNER. For any work included in the contract, excluding water and sewer, the OWNER will provide a list of pre-approved/registered contractors/design consultants on page 6 of the MOU.
6. For Utility work included in the contract, the OWNER or the OWNER's Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S Utility Accommodations Policy and Standards Manual (UAM), current edition" and any agreements in effect without further cost to the DEPARTMENT or it's CONTRACTOR. Final acceptance of the utility relocation work is accomplished by the execution of the Utility Facility Relocation Acceptance Form. The CONTRACTOR shall provide the OWNER with a complete set of "As-Built Plans" for review and approval reflecting the relocation work performed by the CONTRACTOR. Upon completion of the Utility Facility Relocation Acceptance Form and the exchange of the final OWNER approved "As-Built Plans", the OWNER will operate and maintain the installed facilities going forward based on the date of execution of the Utility Facility Relocation Acceptance Form by the DEPARTMENT.
8. For utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S UAM and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.



9. All Utility work included in the PROJECT's contract and Utility work completed by the OWNER that is reimbursed by the DEPARTMENT through an agreement shall be in accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
- a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, and guardrail steel supports for signs, signals and luminaires. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.
  - b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled "Buy America Certificate of Compliance" is attached to this agreement as "Exhibit A." Records to be maintained by the Developer for this certification shall include a signed mill test report and a signed certification by each supplier, distributor, fabricator, and manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.

The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater. The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

Chit Demmon  
(Signature)

3-19-18  
(Date)

OSP SUPERVISOR  
(Title)

APPROVED FOR THE DEPARTMENT BY:

[Signature]  
(Signature)

4/4/18  
(Date)

STATE UTILITIES ADMINISTRATOR

### Pre-Approved Contractor List

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

**Please provide a minimum of three.**

### Pre-Approved Design Consultant List

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:

Company Name:  
Address:  
Phone:  
Contact Person:  
E-Mail:



# Georgia Department of Transportation

## Technical Provisions For Design-Build Agreement P.I. No. 0015913

### Attachment 6-2

## UTILITY INSURANCE REQUIREMENTS AND SPECIAL PROVISIONS

SP Utility Conflicts

SP Insurance Protection of Utility Interests

SP 660 Sanitary Sewer System

SP 663 Electric Transmission Systems

SP 664 Electric Distribution Systems

SP 665 Gas Distribution System

SP 670 Water Distribution System

SP 950 Telecommunication Facilities

SP 951 Cable Systems

First Use Date: January 1, 2007

Revised: March 26, 2008

March 5, 2009

September 30, 2009

August 6, 2012

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**SPECIAL PROVISION**

**Utility Conflicts**

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Utility companies having known facilities that conflict with the construction of this project will be directed by the Department to adjust or relocate their facilities and will be notified of the contract award.

Conform to all the requirements of the Specifications as they relate to cooperation with utility owners and the protection of utility installations that exist on the project. Refer to the requirements of Section 107, Legal Regulations and Responsibility to the Public, with particular attention to Subsection 107.21.

Coordinate The Work with any work to be performed by others in any right of way clearance and arrange a schedule of operations that will allow for completion of the Project within the specified contract time. Where stage construction is required, notify the utility owner when each stage of work is completed and the site is available for utility work to proceed.

Information concerning utility facilities known to exist within the project limits, including the list of owners, is available for reference.

Under Georgia Code Section 32-6-171, utilities are required to remove or relocate their facilities. The Department is required to give the utility at least 60 days written notice directing the removal, relocation, or adjustment and the utility owner is required to begin work within the time specified in the utility's work plan or revised work plan.

Upon request, copies of all approved Work Plans submitted by utility companies having facilities on this project will be made available for examination by the Contractor at the Department's District Office. Utility Adjustment Schedules, when submitted to the Department by the utilities, will be made available to the Contractor after the Notice to Contractors has been posted by the Office of Construction Bidding Administration. The Contractor is responsible for considering in its bid all existing and proposed utility locations and the removals, relocations, and adjustments specified in the Utility's Work Plan.

For this Project, Utility Owners that are required to remove, relocate, or adjust their facility to accommodate the construction of this Project may be liable to the Contractor for damages or delay costs resulting from the Utility Owner's failure to clear conflicts

within the time specified in the approved Utility Work Plan. If the Utility Owner is unable to submit and obtain Department approval of a revised Work Plan or fails to complete the removal, relocation, or adjustment of its facilities in accordance with the approved Work Plan, the Utility Owner may be liable to the Department, or the Contractor, for damages or delay costs.

In accordance with Subsection 105.06 of the Specifications, the Department is not liable for payment of any claims due to utility delays, inconvenience or damage sustained by the Contractor due to interference of any utilities or appurtenances, or the operation of moving them.

In any case in which the Contractor believes that it will be entitled to damages or delay costs from the Utility Owner in accordance with O.C.G.A. 32-6-171, the Contractor shall provide written notice to the Utility Owner and the Department within ten (10) days from the time of the dispute or potential dispute is identified. The Contractor shall follow the Procedures for Utility Damages or Delay Costs outlined in the latest edition of The Utility Accommodation Policy and Standards Manual. Failure to follow the above will result in waiver of the Contractor's claim against the Utility Owner for damages or delay costs.

In accordance with Subsection 107.21.G delays by utilities will continue to be considered by the Department in charging Contract Time. For purposes of applying provisions of this paragraph, railroads and the Metropolitan Atlanta Rapid Transit Authority (MARTA) are considered utilities.

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**SPECIAL PROVISION**

**PROJECT No.:**

**P.I. No.:** 0015913

**County:** Cook, Tattnall, Taylor, Wilcox

**PROTECTION OF UTILITY INTERESTS**

**XYZ Utility Owner**

XYZ Utility Owner is the owner and operator (also herein after referred to as Facility Owner) of a [Facility Size and Type] and/or appurtenant facilities within the project along [Project Description] in [ABC] County, Georgia.

All reference to liability, indemnification, insurance, etc. in this special provision shall apply only to those [Facility Type] located in the required right-of-way areas from station [000+00] to station [000+00] along [Route], these areas having been acquired by the Department.

The contractor shall and does hereby agree to indemnify, save harmless and defend The Facility Owner from the payment of any sum of money to any person whomsoever on account of claims or suits growing out of injuries to persons, including death, or damage to property caused by the contractor, his employees, agents or subcontractors or in any way attributable to the performance and prosecution of the work herein contracted for, including (but without limiting the generality of the foregoing), all claims for injuries to persons or damage to property, liens, garnishments, attachments, claims, suits, costs, attorney's fees, costs of investigation and of defense.

The contractor hereby waives and relinquishes any right of subrogation it might have against the Facility Owner under the provisions of the Workmen's Compensation Act of Georgia or of any other State on account of any injury to its employees or sub-contractor caused in whole or in part by The Facility Owner's transmission facilities. The contractor further agrees that it will require its workmen's compensation insurer, if any, to likewise waive and relinquish such subrogation rights.

**I. Insurance**

A. In addition to any other forms of insurance or bonds required under the terms of the contract and specification, the contractor will be required to furnish and maintain policies of insurance covering:

- (1) The legal liability of the contractor, and his sub-contractors under the Georgia Workmen's Compensation Act for claims for personal injuries and death to employees engaged in the work.
- (2) The legal liability (including contractual) of the contractor, and his sub-contractors who may be engaged in the work, for claims of damages for personal injuries or for death resulting therefrom arising out of the work to be performed under this contract by the contractor, or his sub-contractors, to persons other than employees of the contractor or sub-contractors engaged in the work included in this contract in an amount not less than:

\$1,000,000 for any one person  
\$2,000,000 for any one accident

- (3) The legal liability (including contractual) of the contractor, and his sub-contractors who may be engaged in this work, to pay claims for damages to property belonging to others than such contractor, or his sub-contractors, in the amount not less than:

\$1,000,000 for any one accident

B. All of the aforementioned insurance shall be placed with an insurance company which is licensed to do business in the State of Georgia and shall be endorsed to cover the liability assumed by the contractor under the provisions of this contract.

- (1) It is understood, however, that the provisions requiring the contractor to carry said insurance shall not be construed as in any manner waiving or restricting the liability of the contractor pursuant to the terms hereof which may not be insured under said insurance policies above required.
- (2) As evidence of this insurance, and prior to the beginning of any work in connection with this contract, the contractor shall submit to the department of transportation, State of Georgia, and the Facility Owner a certificate providing the above coverage and which certifies that the said policies have been properly endorsed to meet the above requirements and that the facility owner is named as additional insured.

C. If any part of the work is sublet, similar insurance and evidence thereof, in the same amounts as required of the prime contractor, shall be provided by or in behalf of the sub-contractor to cover his operations, endorsements to the prime contractor's policies specifically naming sub-contractors and describing their operations will be acceptable for this purpose.

D. All insurance hereinbefore specified shall be carried until all work required to be performed under the terms of the contract has been satisfactorily completed as evidenced by the formal acceptance by the State. Insuring companies may cancel insurance by permission of the State,

The Facility Owner, or on thirty (30) days written notice to the Department and The Facility Owner as follows:

**Notice to:**

[Title]

[Facility Owner]

[123 Unknown Street]

[City, State Zip Code]

**Copy notice to:**

State Utilities Engineer

Georgia Department of Transportation

One Georgia Center

600 W. Peachtree St., 10<sup>th</sup> Floor

Atlanta, Georgia 30308

II. **Failure to comply**

In the event of cancellation or lapse of insurance policy:

The Facility Owner may require that the contractor vacate the aforementioned Facility Owner's right-of-way or easement area.

The highway engineer may withhold all monies due the contractor on monthly statements.

Any such orders shall remain in effect until the contractor has remedied the situation to the satisfaction of the Facility Owner's representative and the highway engineer.

III. **Payment for cost of compliance:**

No separate payment will be made for any extra cost incurred on account of compliance with this special provision. All such cost shall be included in prices bid for other items of the work.

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**SPECIAL PROVISION**

**PROJECT: FY 18 Bridge Replacement**

**COUNTY: Cook, Tattnall, Taylor, Wilcox**

**P.I.:0015913**

**Section 660—Sanitary Sewers**

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*Delete Section 660 and substitute the following:*

**660.1 General Description**

This Work consists of furnishing materials, labor, tools, equipment, and other items necessary for installing, removing, abandoning, relocating, and adjusting sanitary sewer and force main systems and appurtenances to the Plans and Specifications.

**660.1.01 Definitions**

- A. General Provisions 101 through 150
- B. The term “The Facility Owner” shall be understood to mean “**place utility company name**” or “**add if more than one company**”.
- C. The term “Project Manager” shall mean the authorized individual having the authority to give instructions pertaining to the work and to approve or reject the work. The “Project Manager” shall not however be authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract, Plans, and Specifications, nor shall they act as an agent for the Contractor. All Contract items pertaining to the Utility Owner shall be coordinated with the Georgia Department of Transportation’s (GDOT) Project Coordinator and the Utility Owner.

**660.1.02 Related References**

**A. Standard Specifications**

- [Section 104—Scope of Work](#)
- [Section 107—Legal Regulations and Responsibility to the Public](#)
- [Section 108—Prosecution and Progress](#)
- [Section 205—Roadway Excavation](#)
- [Section 207—Excavation and Backfill for Minor Structures](#)
- [Section 400—Hot Mix Asphaltic Concrete Construction](#)
- [Section 444—Sawed Joints in Existing Pavements](#)
- [Section 500—Concrete Structures](#)
- [Section 600—Controlled Low Strength Flowable Fill](#)

[Section 615—Jack or Boring Pipe](#)

[Section 611—Relaying, Reconstructing, or Adjusting to Grade of Miscellaneous Roadway Structures](#)

[Section 668—Miscellaneous Drainage Structures](#)

[Section 801—Fine Aggregate](#)

[Section 810—Roadway Materials](#)

**B. Related Documents**

1. General Provisions 101 through 150.
2. All products supplied and all work performed shall be in accordance with The Facility Owner’s Standard Specifications, applicable standards from American Society for Testing and Material (ASTM), American Water Works Association (AWWA), American National Standards Institute (ANSI), GDOT Utility Accommodation Policy and Standards, and the Georgia Environmental Protection Division (EPD) Guidelines for Sewage Collection Systems. Latest revisions of all standards shall apply.

**660.1.03 Submittals**

**A.** General Provisions 101 through 150.

**B.** Refer to The Facility Owner’s Standard Specifications, current published edition, for sanitary sewer utility submittal requirements. Copies of all submittals and documentation shall be submitted to GDOT, who shall distribute to the Utility Owner.

**C. Shop Drawings / Product Data**

1. Submit 6 copies of the following submittals to the GDOT Project Coordinator:
  - a. Product data, including size, dimension, capacity, pressure rating, accessories, and special features, installation instructions, and operating characteristics for all proposed materials to show compliance with the requirements of this Special Provision.
  - b. Test reports specified in the Quality Acceptance section of this Special Provision.
  - c. Pipe manufacturer certification of compliance with specifications.
  - d. Operation and maintenance literature, warranties, and other specified information.

**D. Construction Record Documentation**

1. The Contractor shall record on two set of utility as-built drawings that will record changes and deviations from the Contract Drawings in sizes, lines or grade. Record also the exact final horizontal and vertical locations of underground utilities and appurtenances to an accuracy of +/- 0.2ft, referenced to permanent surface improvements. Drawings shall utilize State Plane Coordinates and shall be legibly marked to record actual construction and submitted to the GDOT no later than 30 days after installation and prior to Final Acceptance of the Project. The Utility Owner shall determine if the utility record drawings are complete prior to Final Acceptance of the project.
2. Record Drawings shall be signed and sealed by a professional engineer or land surveyor registered in the State of Georgia.
3. Record Drawings shall also be submitted in digital format as indicated in accordance with the Department’s current Electronic Utility File Guidelines.
4. Except for standard bound materials, bind all 8.5”x11” (A4) documentation, including 11” x 17” (A3) drawings folded to 8.5”x11” (A4), in logical groupings in loose-leaf binders of either the 3-ring or plastic slide-ring type. Permanently and appropriately label each such bound grouping of documentation.

**660.1.04 Quality Assurance**

- A.** The Contractor shall comply with applicable codes, ordinances, rules, regulations and laws of local, municipal, state or federal authorities having jurisdiction over the Project.
- B.** Furnish manufactured items, pipe, fittings, valves, service components, and appurtenances from manufacturers having regularly produced such items as specified herein which have proven satisfactory in actual service, over at least a 2-year period, or as approved by the GDOT and Utility Owner.



- C. Regardless of tolerances permitted by industry standards specified herein, GDOT Project Manager may reject pipe or appurtenances at the manufacturing plant or project site which have cracks, chips, blisters, rough interior or exterior surface, evidence of structural weakness, joint defects, or other imperfections that might in the opinion of the Project Coordinators contribute to reduced functional capability, accelerated deterioration or reduced structural strength.
- D. The Utility Owner and the Utility Owner's consultant shall have the right to visit and inspect the work at any time. The Utility Owner may also have an Inspector assigned to the project authorized to inspect portions or all of the utility work done and the preparation, fabrication, or manufacture of the materials to be used. The Utility Owner shall be able to advise GDOT Project Manager of any observed discrepancies or potential problems. The cost of these inspections shall be the responsibility of the Utility Owner.
- E. GDOT shall notify the Utility Owner before authorizing any changes or deviations which might affect the Utility Owner's facilities. Contractor shall notify GDOT and Utility Owner a minimum of 24 hours prior to beginning work on utilities.
- F. The Utility Owner shall be notified by GDOT Project Manager when all utility work is complete and ready for final inspection. The Utility Owner shall be invited to attend the final inspection and may provide a corrections list to GDOT Project Manager prior to the final inspection.
- G. The Contractor shall verify the actual location and depth of all utilities prior to construction. All utilities and structures shall be protected during construction. Any damaged facilities shall be repaired or replaced at the Contractor's expense.

## **660.2 Materials**

- H. All materials provided shall be in conformance with the requirements and standards set forth in the Facility Owner's specification document, current published edition.

### **660.2.01 Sanitary Sewer Piping Systems and Appurtenances**

#### **A. Ductile Iron Pipe and Fittings**

Ductile iron pipe shall meet the latest edition of ANSI/AWWA C150/A21.50 and C151/A21.51 for the class and joint specified with a nominal laying length of 18 (5.5 m) to 20 feet (6 m). Joints for buried ductile iron pipe shall be mechanical or push-on joints. Unless specified otherwise in the Plans or The Facility Owner's Standard Specifications, ductile iron pipe diameters 12 inch (300 mm) or less shall be minimum Pressure Class 350, while pipe diameters greater than 12 inch (300 mm) shall be minimum Pressure Class 250.

1. Ductile iron pipe for the interior of structures and above ground installations shall be flanged. Flanges shall be ductile iron and shall be threaded-on flanges conforming to ANSI/AWWA C115/A21.15 or cast-on flanges conforming to ANSI/AWWA C110/A21.10. The minimum class thickness for ductile iron flanged pipe to be threaded is Class 53.
2. Interior surfaces of ductile iron pipe and fittings shall be ceramic epoxy lined. Epoxy lining shall be 40-mil nominal dry film thickness. The interior of the ductile iron pipe and fittings shall not have been lined with any substance prior to the application of the specified lining material and no coating shall have been applied to the first 6 inches (150 mm) of the exterior of the spigot ends. The lining shall be applied by a competent firm with a successful history of applying linings to the interior of ductile iron pipe and fittings. Surface preparation, lining of pipe, coating of bell sockets and spigot ends, number of coats, and touch up and repair shall be in accordance with the manufacturer's recommendations. The pipe or fitting manufacturer shall supply a certificate attesting that the applicator met the requirements of this specification; that the material used was as specified; that the linings have the nominal dry film thickness specified; and that the linings have no pinholes when tested with a nondestructive 2,500 volt test. Lined pipe and fittings shall be handled only from the outside of the pipe and fittings.
3. Ductile iron shall have an exterior asphaltic coating as specified in AWWA C151 for ductile iron pipe and AWWA C153/C110 for ductile iron fittings.
4. Buried ductile iron pipe and fittings shall be polyethylene encased at locations indicated on the Plans or as conditions warrant. Polyethylene encasement tubing shall be in accordance with ANSI/AWWA C105/A21.5 and ASTM A674 and shall have a minimum thickness of 8 mils. Polyethylene tubing shall be green in color to designate wastewater.
5. Fittings: Ductile iron fittings shall be epoxy coated and meet the requirements of ANSI/AWWA C153/A21.53 or

ANSI/AWWA C110 A21.10 with a minimum pressure rating of 250 psi. Pressure pipe fittings shall be restrained mechanical joint.

6. Mechanical Joint Fittings: Mechanical joints consisting of bell, socket, gland, gasket, bolts, and nuts shall conform to ANSI/AWWA C111/A21.11.
7. Push-On Joints: Push-on joints shall be designed in accordance with ANSI/AWWA C111/A21.11. Joint lubrication shall be as furnished by the manufacturer.
8. Rubber gasket joints for push-on or mechanical joints shall conform to the requirements of ANSI/AWWA C111/A21.11.
9. Restrained Joints: Restrained joints shall be provided as shown on the Plans and where required for thrust restraint. Restrained joints shall not require field welding or grooves cut into the pipe barrel for restraint. The restraining joints for mechanical joint fittings shall conform to the requirements of ANSI/AWWA C111/A21.11 with assembly in conformance with AWWA C600 and manufacturer's recommendations. Restrained joints for pipe shall be mechanical joints with ductile iron retainer or push-on type joints and shall have a minimum rated working pressure of 250 psi.
10. Mechanical joint retainer glands may be used to restrain mechanical joint pipe and fittings to the plain end of ductile iron pipe and fittings. Restrainer glands shall be manufactured of ductile iron per ASTM A536.
11. Corrosion-resistant bolts used with ductile iron joints shall be high-strength, low-alloy steel as specified in ANSI/AWWA C111/A21.11.
12. Welded Outlets: Welded outlets in ductile iron pipe shall be provided where specified and indicated on the Plans. Outlets shall be fabricated by welding sections of ductile iron pipe manufactured in accordance with ANSI/AWWA C151/A21.51. Welded outlet pipe shall be fabricated only by the pipe manufacturer. The minimum ductile iron pipe thickness for fabrication of welded outlet pipe shall be Thickness Class 53 for 4 inch to 54 inch (100 mm to 1350 mm) diameter pipe. All joints on welded-on branch outlets shall be provided in accordance with the latest revision of ANSI/AWWA C111/A21.11 and/or ANSI/AWWA C115/A21.15 as applicable. After the outlets are welded together and prior to finishing, the assembly shall be subjected to a 15 psi air test for leakage. The maximum size and laying length of the welded-on branch outlet shall be recommended by the pipe manufacturer and acceptable to the Utility Owner for the field conditions and connecting pipe or valve.

#### **B. Polyvinyl Chloride (PVC) Pipe**

1. C900 PVC pipe diameters 4-inch (100 mm) through 12-inch (300 mm) shall meet ANSI/AWWA C900 requirements, and shall be a minimum pipe dimension ratio (DR) 18, Pressure Class 235 psi. C905 PVC pipe diameters 14-inch (350 mm) and greater shall meet ANSI/AWWA C905 requirements, shall be DR 18 minimum, Pressure Class 235 psi. Pipe shall have a bell with an integral wall section with a factory installed, solid cross section elastomeric ring in accordance with ASTM F477.
2. PVC solid wall gravity sewer pipe shall be integral bell and spigot joint pipe, and shall comply with ASTM D3034 for pipes 15-inch (380 mm) and smaller, with minimum standard dimension ratio (SDR) 26. Pipes larger than 15-inch shall comply with ASTM F679 with the minimum thickness as specified in the Plans or The Facility Owner's specification document. Joints shall be of the bell and spigot gasketed type in accordance with ASTM D3212 and ASTM F477.
3. All PVC pipe shall be formulated for sunlight exposure and shall be green in color to designate wastewater.
4. PVC pipe shall have the same outside diameter (OD) as ductile iron pipe and be compatible for use with ductile iron fittings.
5. Fittings for PVC pipe 4 inches (100 mm) and larger shall be ductile iron mechanical joint and comply with the requirements set forth in the specifications for Ductile Iron Pipe and Fittings.
6. Restrained Joints: Restrained joints shall be provided as shown on the Plans and where required for thrust restraint. Restrained joints shall comply with the requirements set forth in the specifications for Ductile Iron Pipe and Fittings, with assembly in conformance with AWWA C600 and manufacturer's recommendations.

7. Unless specified otherwise in the Plans or The Facility Owner's specification document, 2-inch (50 mm) and 3-inch (80 mm) diameter PVC pipe shall conform to the requirements of ASTM D2241 Class 1120 or 1220 (SDR 21) with a working pressure rating of 200 psi with integral bell gasketed joints. Pipe is to be manufactured to IPS standard pipe equivalent outside diameters.
8. Schedule 80 PVC pipes smaller than 4-inch (100 mm) nominal diameter shall be in accordance with ASTM D1785. Schedule 80 pipe shall have threaded joints. Solvent cemented joints shall not be used. Threaded type fittings for Schedule 80 PVC pipe shall be in conformance with ASTM D2464. All threaded joints shall be watertight.
9. Flanges for Schedule 80 PVC pipe shall be rated for a 150 psi working pressure with ANSI B16.1 dimensions and bolting pattern. Flanges shall be connected to PVC piping with threaded joints in accordance with ASTM D2467 or ASTM 2464, respectively.

**C. Fusible PVC Pipe**

1. Fusible PVC pipe sizes 4-inch (100 mm) to 36-inch (900 mm) shall conform to AWWA C900/C905 as applicable and follow the dimension ratios (DR) set forth in the requirements listed for C900 PVC pipe.
2. Fusible PVC pipe shall be green in color to designate wastewater.
3. Fusible PVC pipe shall be extruded with plain ends. The ends shall be square to the pipe and free of any bevel or chamfer. There shall be no bell or gasket of any kind incorporated into the pipe.
4. Fusible PVC pipe shall be manufactured in a standard 40-foot nominal length or custom lengths as specified.
5. Joints shall be made by butt fusing sections of pipe with manufacturer-approved equipment.
6. Fittings shall be ductile iron mechanical joint and comply with the requirements set forth in the specifications for Ductile Iron Pipe and Fittings.

**D. High Density Polyethylene (HDPE) Pipe**

HDPE pipe sizes 4-inch (100 mm) and larger shall be a PE 4710/3408 high density, extra-high molecular weight polyethylene manufactured from first-quality high density polyethylene resin containing no additives, fillers, or extenders. The HDPE pipe shall have an ASTM D3350 cell classification of PE 445574C, and shall meet the requirements of AWWA C906, and shall be sized based upon the ductile iron pipe size (DIPS), outside diameter (OD) sizing system. HDPE shall be a minimum DR 11, pressure class 160 psi. For gravity sewer pipe, the DR of the pipe shall be as indicated in the Plans or The Facility Owner's Standard Specifications.

1. HDPE pipe shall be green or marked with a permanent green stripe to designate wastewater.
2. Joints shall be made by butt fusing sections of pipe with manufacturer-approved equipment.
3. Fittings shall be ductile iron mechanical joint meeting the requirements of ANSI/AWWA C110/A21.10 and ANSI/AWWA C111/A21.11.
4. The pipe shall have fusion welded restrainer ring, follower gland, and a 12-inch (300 mm) stainless steel insert for the mechanical joint connection.
5. HDPE sewer mains shall be properly sized utilizing the inside diameter of the nominal pipe diameter. If during construction HDPE is substituted for other pipe materials, the Contractor shall verify that the inside diameter of the HDPE is the same or larger than the inside diameter of the pipe originally specified.

**E. Concrete Pipe**

1. Concrete pipe for gravity sewers shall be epoxy lined, reinforced concrete bell and spigot pipe with type two cement and calcareous aggregate conforming to ASTM C76 for Wall C pipe. Pipe shall be supplied in lengths of at least eight feet (2.5 m).
2. Pipe shall have rubber gasket type joints with steel end rings conforming to ASTM C443. A rectangular groove shall be supplied in the spigot end to receive the rubber gasket, and it shall be so formed to a rectangular shape and confined on all four sides. Bell and spigot surfaces shall be accurately formed and smooth to provide a close sliding fit with a nominal clearance of 1/16-inch (1.5 mm).

3. Pipe shall not have cracks, blisters, imperfect surfaces, damaged ends, or damaged gasket grooves. Repaired or patched pipe or pipe with repaired or patched gasket grooves or shoulders shall not be used.
4. The testing of concrete pipe for crushing strength, absorption, hydrostatic requirements, and permeability shall be at the direction of the Utility Owner / GDOT Project Coordinators and shall be performed in accordance with ASTM C497.

#### **F. Steel Casing Pipe**

1. All materials, design, fabrication, handling, and testing of steel casing pipe shall conform to the requirements of ASTM A139, AWWA C200 and AWWA Manual M11 "Steel Pipe – A Guide for Design and Installation."
2. Steel casing pipe shall be new, smooth-wall, carbon steel pipe conforming to ASTM Specification A139, Grade B with minimum yield strength of 35,000 psi. Steel casings shall be used with the size, minimum thickness, length, and coating specified on the Plans or The Facility Owner's specification document.
3. Additional anti-corrosion measures, as specified by the manufacturer or indicated on the Plans, shall be provided at connectors, couplings, rollers, restraints, etc.
4. Unless specified otherwise in the Plans or The Facility Owner's specification document, casing pipe end seals shall consist of 1/8-inch (6 mm) thick flexible synthetic rubber boot with adjustable stainless steel banding straps. The annular space of the casing shall not be filled with concrete or grout.
5. Casing spacers shall consist of a stainless steel shell, PVC ribbed liner, and non-conducting separators to keep the carrier pipe from touching the casing pipe. Spacers shall be provided at a maximum of 10-foot intervals and within 2 feet (0.6 m) of the end of the casing pipe.

#### **G. Cured-In-Place-Pipe (CIPP) Liners**

1. CIPP liners shall be installed at the locations indicated on the Plans for the renovation of existing sanitary sewer pipes. The CIPP process shall consist of furnishing and inserting a resin-impregnated flexible tube within an existing sanitary sewer pipe and permanently forming the tube to the original conduit by curing with hot water under hydrostatic pressure or by a compressed air/stream combination.
2. CIPP pipeliner components shall be made from approved materials and manufactured in accordance with ASTM F1216, ASTM F1743, ASTM D5813, and ASTM D790.
3. CIPP tube shall meet the following criteria:
4. Made up of one or more layers of felt fabric
5. Meets or exceeds ASTM F1216 or ASTM F1743, Section 5
6. Withstands installation pressure and is strong enough to bridge missing pipe sections where necessary.
7. Stretches to fit irregular pipe sections
8. After wetout (impregnating of the tube with resin), shall maintain a uniform thickness meeting or exceeding the design thickness when compressed at installation pressures
9. Sewn to a size fitting tightly within the internal circumference and length of the original pipe when installed and shall provide required allowance for circumferential stretching during inversion
10. Does not utilize overlapping layers of felt in longitudinal seams causing lumps in the final product
11. Utilizes an impermeable, flexible membrane coated on the outside layer of the tube prior to wetout to contain the resin and facilitate monitoring of resin saturation during the wetout procedure
12. Is homogenous across the entire wall thickness and contains no intermediate or encapsulated elastomeric layers
13. Does not utilize material in the tube causing delamination in the CIPP pipeliner
14. Seams in the tube are stronger than the non-seamed felt
15. Outside of the tube is marked for distance at regular intervals along its length. Marking intervals do not exceed 5 feet (1.5 meters) and include the Manufacturer's name or identifying symbol.
16. CIPP resin system shall produce CIPP pipeliners which comply with the structural and chemical resistance requirements of this specification. Resin system shall be corrosion resistant, consist of a vinyl ester and catalyst system, and contain 5% or less resin filler. When properly cured within the tube composite, the resin shall meet or exceed the requirements of ASTM F1216 and ASTM F1743, the physical properties herein, and those which are to be utilized in the design of the CIPP liner.

17. CIPP pipeliners shall meet the following criteria:
18. Requirements of ASTM F1216, Appendix XI.
19. No bonding to original pipe wall assumed
20. Utilizes a long-term, time dependent flexural modulus value obtained from long-term testing results for flexural creep of the CIPP material installed by the installer on previous projects consisting of the same work
21. Utilizes a percentage of the instantaneous flexural modulus value as measured by ASTM D790 testing in design calculation for external buckling. Does not use values in excess of 50% unless substantiated by qualified

independent testing laboratory data.

22. Produced using materials of equal quality or better than the materials used in the long-term test with respect to the initial flexural modulus used in design.
23. Utilizes an enhancement Factor “K” value of 7 for “partially deteriorated” design conditions. Does not use Enhancement (K) factors in excess of 7 unless substantiated by qualified independent testing laboratory data.
24. Produced with uniformly bonded layers. Any two layers cannot be cleanly separated with a probe or point of a knife blade or separated in a manner that allows the probe or knife to move freely between layers.
25. Produces with light, a reflective interior wall color to allow clear, detailed examination with closed circuit television inspection equipment.
26. Conforms to the structural properties listed in the following table:

<b>MINIMUM STRUCTURAL PROPERTIES</b>			
<b>Property</b>	<b>Test Method</b>	<b>Cured Composite per ASTM F1216</b>	<b>Cured Composite (400k Resin)</b>
Modulus of Elasticity	ASTM D790 (short term)	250,000 psi (1,722,500 kPa)	400,000 psi (2,756,000 kPa)
flexural Stress	ASTM D790	4,500 psi (31,000 kPa)	4,500 psi (31,000 kPa)

- a. Produced with a minimum wall thickness of ¼ in (6 mm) throughout the line. Wall thickness is based on the physical properties listed in the table above and the design equations in the appendix of ASTM F1216, using the design parameters listed in the following table:

<b>DESIGN PARAMETERS</b>	
Design Safety Factor	2.0
Retention Factor for Long-Term Flexural Modulus (determined by long-term testing described above)	1%-60%
Ovality	2%
Enhancement Factor, k	7

- b. Layers of the tube not saturated with resin prior to insertion into the existing pipe are not included in the structural CIPP pipeliner wall thickness computation.

- c. Meets or exceeds chemical resistance requirements of ASTM F116, Appendix X2
- d. Contains no dry or saturated layers

#### **H. Pipe Detection Wire**

Unless otherwise specified in the Plans or The Facility Owner's Standard Specifications, open cut installations of non-metallic pipe shall include minimum #12 gauge tracing wire. Pipe installed by directional drill shall include two (2) insulated 8 gauge tracer wire. Wire shall be solid copper insulated with HDPE installed along pipe, wrapped around service line stub outs and stubbed into valve boxes for locating purposes. Wire shall be properly spliced to provide continuous conductivity.

#### **I. Warning Tape**

Sanitary sewer mains shall be installed with polyethylene film warning tape manufactured for marking and identifying underground wastewater utilities. Tape shall be a minimum of 2 inches (50 mm) wide and 4 mils thick, green in color, with continuously printed letters reading "CAUTION BURIED SEWER LINE BELOW".

#### **J. Gate Valves**

1. Gate valves sizes 3-inch (80 mm) and larger shall be of the resilient seat type meeting the requirements of AWWA C509 or C515. Valves shall be iron body, bronze trimmed, with non-rising stems, and shall be fusion-bonded epoxy coated per ANSI/AWWA C550. Valves shall have a minimum design working pressure of 200 psi.

Valves shall be manually operated by nut and open counter-clockwise unless specified otherwise in the Plans or The Facility Owner's Standard Specifications.

2. The resilient seating arrangement shall provide zero leakage at the design working pressure when installed with line flow in either direction. All ferrous surfaces inside and outside shall have a fusion bonded epoxy coating. All valves shall be provided with O-ring seals. The design and machining of valves shall be such as to permit replacing the O-ring seals in the valves while in service without leakage.
3. All gate valves, when fully opened, shall have an unobstructed waterway diameter equal to or larger than the full nominal diameter of the valve.
4. In general, valves shall be designed for vertical installation. Valves installed in the horizontal position shall be provided with bevel gears, extended gear case, rollers, tracks, and scrapers.
5. Exposed or above-ground gate valves shall be outside screw and yoke (OS&Y) flanged joint type with an operating hand wheel. The face-to-face dimensions and drilling shall conform to ANSI B16.10 for Class 125 flanged joint end gate valves.
6. Valves shall include mechanical joints, bolts, glands, gaskets, and all other materials necessary to join to existing work.
7. Provide brass identification tag imprinted with "SEWER", valve size, valve type, and direction and number of turns to open. Provide a 1/4-inch (8 mm) hole in the brass tag and attach the tag to the end of the locate wire (twist wire around tag). Tag shall be 2-inch (50 mm) diameter and 1/8-inch thick brass with a 1/4-inch (8 mm) hole.

#### **K. Insertion Valves**

1. Insertion type valves shall be resilient wedge gate valves designed to be installed into an existing pressurized force main without interruption of flow through the pipe and no reduction of line pressure.
  - a. Valve shall be fusion-bonded epoxy coated in compliance with AWWA C550.
  - b. The construction of the resilient wedge shall comply with AWWA C509 requirements.
  - c. The resilient wedge shall be fully encapsulated with EPDM rubber and shall seat on the valve body and not the pipe. The resilient wedge shall be totally independent of the carrier pipe.
  - d. Valve shall be restrained to the pipe.
  - e. Valves shall be suitable for operating pressures up to 250 psi.

#### **L. Plug Valves**

1. All plug valves shall be of the non-lubricated eccentric type with resilient faced plugs and shall comply with

AWWA C517 requirements. The pipe connections shall be flanged or mechanical joint as required. Flanged valves shall be in accordance with ANSI B16.1, Class 125 and ANSI B16.5, Class 150. Mechanical joint valves shall be in accordance ANSI/AWWA C111/A21.11. Buried plug valves shall have mechanical joint ends. Valve and gearing shall be rated for a minimum of 150 psi pressure rating.

2. Valves shall be coated with an epoxy coating applied to both the exterior and the interior surfaces prior to assembly of the valves.
3. Unless specified otherwise in the Plans or The Facility Owner's Standard Specifications, the port area shall be 100% of standard full pipe area. The body of the valve shall be constructed of cast iron ASTM A126 Class B. Valves shall be furnished with permanently lubricated stainless steel or oil-impregnated bronze upper and lower plug stem bushings. These bearings shall comply with current AWWA Standards. Both nut and gear operated valves shall have a 2-inch (50 mm) square nut for operation.
4. Provide brass identification tag imprinted with "SEWER", valve size, valve type, and direction and number of turns to open. Provide a 1/4-inch (8 mm) hole in the brass tag and attach the tag to the end of the locate wire (twist wire around tag). Tag shall be 2-inch (50 mm) diameter and 1/8-inch (6 mm) thick brass with a 1/4-inch (8 mm) hole.

#### **M. Check Valves**

1. Swing check valves sizes 4-inch (100 mm) through 30-inch (750 mm) shall be constructed of a cast iron body with a bronze seat ring, and a noncorrosive shaft for attachment of weight and lever. Check valves shall comply with AWWA C508 requirements and have a 150 psi minimum pressure rating.
2. The valve disc shall swing completely clear of the waterway when valve is fully open, permitting full flow. The disc shall be cast iron, rubber faced.
3. Check valves shall be flanged in accordance with ANSI 16.1, Class 125, and installed inside a vault or pit.
4. Provide brass identification tag imprinted with "SEWER", valve size, valve type, and direction and number of turns to open. Provide a 1/4-inch (8 mm) hole in the brass tag and attach the tag to the end of the locate wire (twist wire around tag). Tag shall be 2-inch (50 mm) diameter and 1/8-inch (6 mm) thick brass with a 1/4-inch (8 mm) hole.

#### **N. Tapping Sleeves and Valve Assembly**

1. Tapping sleeves and valves sizes 4-inch (100 mm) and larger shall be stainless steel with wraparound gasket style, or ductile iron of the split-sleeve, mechanical joint type. Tapping sleeves shall be rated for a minimum 150 psi working pressure in accordance with ANSI/AWWA C110/A21.10.
2. When tapping an existing asbestos cement pipe, a stainless steel tapping sleeve which contains a full gasketed surface within the sleeve body shall be used due to variances in the manufactured outside diameter of the asbestos cement pipe.
3. Tapping sleeve shall have an outlet flange per ANSI B16.1, Class 125 standard.
4. The Contractor shall determine the outside diameter of the existing main before ordering the sleeve.
5. Tapping valves shall be mechanical joint outlet, non-rising stem, resilient seated gate valves meeting the applicable requirements of ANSI/AWWA C509/C515 and C550 with a minimum design working pressure of 200 psi.
6. Tapping valves shall be specifically designed for pressure tapping with sufficient seat opening to allow full diameter taps to be made.
7. Tapping valves shall be manufactured with an integral tapping flange having a raised lip design.
8. Tapping valves shall be furnished with a combination flange and mechanical joint for connecting the branch to the main.

#### **O. Valve Boxes**

1. All valves shall be equipped with valve boxes. The valve boxes shall be heavy, roadway type boxes. The valve box cover shall be marked "SEWER VALVE" or "SEWER".
2. Valve box materials shall conform to the requirements and standards set forth in The Facility Owner's Standard Specifications.

3. The valve boxes shall be adjustable up or down from the nominal required cover over the pipe. Extensions shall be provided as necessary. A precast concrete ring shall be placed around the valve box opening when outside of paved areas.
4. Valves shall be furnished with extension stems as necessary to bring the operating nut to within 24 inches (600 mm) minimum of the top of the valve box.

**P. Tapping Saddles**

1. Tapping saddles shall have ductile iron or bronze body with stainless steel, double-tie straps and nuts with pressure rating not less than that of the pipe to which it is to be connected.
2. Saddles shall have a rubber gasket cemented to the body with compatible threading between the saddle and corporation stop. Saddles shall conform to ANSI/AWWA C800 standards.
3. The tapping saddle shall provide full support around the circumference of the pipe, providing a bearing area of sufficient width so that pipe will not distort when the saddle is tightened.

**Q. Concrete Vault**

1. Concrete vaults shall conform to the requirements and standards set forth in The Facility Owner's Standard Specifications and standard details.

**R. Air Release Valves**

1. Air release, air/vacuum valves, and combination air valves shall be suitable for use with wastewater and manufactured in compliance with ANSI/AWWA C512.
2. Air release valves shall have a small venting orifice to vent the accumulation of air and other gases in the line or system under pressure.
3. Air/vacuum valves shall have a large venting orifice to permit the release of air as the line is filling or relieve the vacuum as the line is draining or is under negative pressure
4. Combination air valves shall have operating features of both the air/vacuum valve and air release valve.
5. Valves shall be suitable for pressures up to 250 psi.
6. Air release, air/vacuum valves, and combination air valves shall conform to the requirements and standards set forth in The Facility Owner's Standard Specifications and standard details.

**S. Thrust Collars and Thrust Blocks**

1. Concrete used for thrust collars or thrust blocks on force mains shall meet the "Class A" requirements for concrete listed in Section 500.
2. Thrust collars shall include welded-on collars attached by the pipe manufacturer or retainer glands. Concrete shall be poured continuous around the pipe and bear against undisturbed earth.
3. Reinforcing steel shall meet the requirements set forth in the Plans or The Facility Owner's Standard Specifications.
4. Mechanical joint restraints shall be utilized in lieu of thrust blocks with the approval of the Utility Owner.

**T. Manholes**

1. Manholes shall be precast concrete or as indicated in the Plans and per The Facility Owner's Standard Specifications.
2. The minimum diameter for manholes shall be 48 inches (1200 mm). The minimum diameter for inside drop manholes shall be 60 inches (1500 mm). Manhole Types and Classes are described in Section 668.
3. Precast reinforced manholes shall be manufactured in accordance with ASTM C478 and shall have a minimum wall thickness of 5 inches (127 mm). All concrete shall have a minimum compressive strength of 4,000 psi when tested in accordance with ASTM C478.



4. The bases shall be monolithically cast and shall consist of a manhole bottom and a wall which shall extend a minimum of 6 inches (150 mm) above the top of the highest in-flowing sewer. The top of the base section shall be tongue and groove section.
5. There shall be a minimum distance of 6 inches (150 mm) between the invert of the lowest out flowing sewer and floor of the precast base to provide for the construction of a formed invert and bench wall within the manhole. There shall be a minimum 0.05-foot drop between the inlet and outlet inverts. Inverts shall be constructed of 4,000 psi plant mix concrete. Bench shape and discharge of force mains into manholes shall conform to the requirements of the Georgia EPD Guidelines for Sewage Collection Systems.
6. Joints between precast sections shall be sealed by means of rubber O-ring gaskets or flexible butyl rubber sealant.
7. Manholes shall have factory applied coatings on the interior and exterior. Surface preparation and coating application shall comply with the manufacturer's recommendations.
8. Manhole sections shall be rejected if abused during shipping or placement and if pipe openings are not properly aligned.
9. A protective coating or lining for corrosion protection shall be applied to all interior surfaces of manholes when called for in the Plans or The Facility Owner's Standard Specifications.
10. Pipe entry holes shall be either precast or cored. Connections between reinforced concrete manhole structures and sewer pipe shall be flexible connectors conforming to ASTM C 923 latest revision.
11. Frame and covers shall be cast or ductile iron and set in a bed of mortar on the top of the manhole and flush with finished grade. Covers shall be marked as indicated in the Utility Owner standard details.
12. Watertight manhole rings and covers are to be used if the manhole is located within the 100-year floodplain boundary or may be flooded by street runoff.
13. Riser adjusting rings shall be a minimum of 3 inches (80 mm) on cone sections. Manhole adjustment rings shall be sealed with a flexible rubber seal.
14. Drop manhole: Inside or outside drop inlets shall be provided into sanitary sewer manholes for incoming lines having inverts 2 feet (0.6 m) or more above the inverts of the manhole outlet lines. Drop pipes shall be the same size as the sewer that they serve. Openings in walls of precast concrete manholes for outside drop connections shall not be made at joints. Outside drop piping materials and encasement/embedment shall be as indicated in the Plans. Concrete used to encase the outside drop piping shall be 4,000 psi plant mix concrete unless otherwise indicated on the Plans.

#### **660.2.02 Delivery, Storage, and Handling**

- A. Handle pipe, fittings, valves, and accessories carefully to prevent damage. Handle pipe by rolling on skids, forklift, or front end loader. Do not use material damaged in handling. Slings, hooks, or pipe tongs shall be padded and used in such a manner as to prevent damage to the exterior coatings or internal lining of the pipe. Do not use chains in handling pipe, fittings, and appurtenances.
- B. To unload pipe, carefully lift and lower it into position using approved padded slings, hooks, or clamps. Furnish equipment and facilities for unloading, handling, distributing, and storing pipe, fittings, valves, and accessories. Make equipment available at all times for use in unloading. Do not roll, drop or dump materials. Any materials dropped or dumped shall be subject to rejection without additional justification.
- C. Stored materials including salvaged materials shall be kept in suitable areas safe from damage. The interior of all pipe, fittings, and other appurtenances shall be kept free from dirt or foreign matter at all times. Store and support plastic pipe to prevent sagging and bending. Store plastic pipe and gaskets to prevent exposure to direct sunlight. Valves shall be stored and protected from damage by freezing.
- D. Pipe shall not be stacked higher than the limits recommended by the manufacturer. The bottom tier shall be kept off the ground on timbers, rails, or concrete.

#### **660.3 Construction Requirements**

##### **660.3.01 Personnel**

- A. General Provisions 101 through 150.

- B. Construction and installation of all wastewater utilities shall be performed by a Contractor prequalified/registered with GDOT.
- C. All work specified in this section shall be performed by a Contractor with a valid Utility Contractor's license issued by the State of Georgia. Sewer service line installation shall be performed by either a Utility Contractor licensed in the State of Georgia or by a Master Plumber licensed in the State of Georgia.

### **660.3.02 Equipment**

- A. Ensure all equipment used is in conformance with the requirements and standards set forth in The Facility Owner's Standard Specifications.

### **660.3.03 Preparation**

General Provisions 101 through 150.

### **660.3.04 Fabrication**

General Provisions 101 through 150.

### **660.3.05 Construction**

#### **A. Finding Existing Underground Utilities and Obstructions**

1. Comply with Subsection 107.13 and Subsection 107.21.
2. According to the best information available to GDOT, all known sewer lines, water lines, gas lines, telephone conduits, drainage structures, etc. are shown on the Plans. However, to find such installations, use an electronic pipe and cable finder for locating existing installations or obstructions to the work.
3. Obtain approval from GDOT Project Manager and the Utility Owner prior to disruption of wastewater services required for the installation of the facilities shown on the project Plans.

#### **B. Jack and Bore**

Comply with Section 615 for sewer main installations by jack and bore.

#### **C. Directional Drilling**

1. Install sewer mains and services by means of directional drilling at locations shown on the Plans or where approved by GDOT or Utility Owner. Provide submittals and follow all relevant procedures and requirements set forth in The Facility Owner's Standard Specifications.
2. The Contractor shall not initiate horizontal directional drilling until all submittals are received, reviewed, and accepted by GDOT and the Utility Owner, and all required permits are obtained.
3. The Contractor shall select drilling additives and fluid mixture proportions to ensure continuous circulation, bore stability, reduce drag on the pipe, and completely fill the annular space between the bore and the pipe to ensure stability and control settlement.
4. The Contractor shall submit contingency plans for remediation of potential problems that may be encountered during the drilling operations. The contingency plans shall address the observations that would lead to the discovery of the problem and the methods that would be used to mitigate the problem. Potential problems that shall be addressed include:
  - a. Loss of returns/loss of circulation of drilling fluid.
  - b. Encountering obstruction during pilot bore or reaming/pullback.
  - c. Drill pipe or product pipe cannot be advanced.
  - d. Deviations from design line and grade exceed allowable tolerances.
  - e. Drill pipe or product pipe broken off in borehole.
  - f. Product pipe collapse or excessive deformation occurs
  - g. Utility strike.

- h. Hydrolock occurs or is suspected.
  - i. Excessive ground settlement or heave of ground surface or existing utilities.
  - j. Inadvertent returns/hydrofracture or surface spills resulting in drilling fluids entering water or reaching the surface.
5. Pipe damaged in directional drilling operations shall be removed and replaced at no additional expense to GDOT or the Utility Owner.
  6. Voids developed or encountered during the installation operation shall be pressure grouted with a grout mix approved by GDOT.
  7. Installation shall include a locatable conduit system, with identification markers on each side of GDOT right-of-way where applicable. Two (2) insulated 8 gauge solid copper tracers wire shall be attached to the leading end of the pipe pulling head and shall extend the full length of the installed pipe.
  8. The location and alignment of the pilot drill progress shall be continuously monitored for compliance with the proposed installation alignment and for verification of the depth of the bore. Monitoring shall be accomplished by computer generated bore logs which map the bore path based on x, y, z coordinate information provided by the locating/tracking system. Readings or plots shall be obtained on every drill rod, and shall be provided to the Inspector on a daily basis. Deviations between the recorded and design bore path shall be calculated and reported on the daily log. If the deviations exceed tolerances specified elsewhere, such occurrences shall be reported immediately to GDOT. The Contractor shall undertake all necessary measures to correct deviations and return to design line and grade.
  9. Upon completion of the directional drill the Contractor shall furnish GDOT and the Utility Owner an as-built drawing along with a report of the monitoring of the drilling fluids during the pilot hole and back reamed hole.
  10. Drilling fluid pressures, flow rates, viscosity, and density shall be monitored and recorded by the Contractor. The pressures shall be monitored at the pump. These measurements shall be included in daily logs submitted to GDOT. The Contractor shall document modifications to the drilling fluids, by noting the types and quantities of drilling fluid additives and the dates and times when introduced. The reason for the addition of drilling fluid additives or other modifications shall be documented and reported.
  11. Management and disposal of drilling fluids shall be the Contractor's responsibility. Excess drilling fluids shall be contained at the entry and exit points until recycled or removed from the site. All drilling fluids shall be disposed of in a manner acceptable to the appropriate local, state and federal regulations. The Contractor's work will be immediately suspended by GDOT whenever drilling fluids seep to the surface other than in the boring entrance or exit pit, or when a paved surface is displaced.
  12. Surfaces damaged by the work shall be restored to their preconstruction conditions at no additional cost to GDOT or Utility Owner, and with no increase in contract time.
  13. The following items shall be as shown on the Plans, unless otherwise approved in writing by GDOT:
    - a. Entry / exit points
    - b. Drill entry / exit angles
    - c. Pilot bore path
      - 1) Radius of Curvature
      - 2) Entry / exit tolerances: Contractor shall be solely responsible for all work necessary to correct excessive deviations from line and grade, including re-drilling, redesigning connections, and acquiring additional easement, at no additional cost to GDOT or Utility Owner and without schedule extension.
  14. The pilot bore shall be pre-reamed and reamed using equipment and methods submitted by the Contractor. The Contractor shall completely ream the bore to the final diameter prior to pullback.
  15. Pullback: The pipe shall be installed by pulling it into the reamed bore path in a continuous operation, behind a final reaming tool selected by the Contractor. The pipe shall be isolated from excessive torsional and axial stresses by a swivel device with a pre-established breakaway tensile capacity that is lower than the allowable tensile strength of the pipe. The maximum pull (axial tension force) exerted on the pipelines shall be measured continuously and limited

to the maximum allowed by the pipe manufacturer with an appropriate factor of safety so that the pipe or joints are not overstressed. The end of the pipe shall be closed during the pull back operation.

16. Pipelines shall be adequately supported during installation so as to prevent overstressing or buckling. The Contractor shall provide adequate support/rollers along the pipe layout area to support the required length of pipe for the bore. The pipe layout area shall be cleared of all large stones, construction debris, or other foreign objects that could damage the pipe during pullback. The Contractor shall monitor and inspect pipe rollers and method for suspending pipe at entry during the pullback operation to avoid damage to the pipe.
17. The end of the pipe shall be closed during the pull back operation.
18. Each length of pipe shall be inspected and cleaned as necessary to be free of debris immediately before joining.
19. The Contractor shall at all times handle the pipe in a manner that does not overstress or otherwise damage the pipe. Vertical and horizontal curves shall be limited so that wall stresses do not exceed 50% of yield stress for flexural bending of the pipe. If the pipe is buckled or otherwise damaged, the damaged section shall be removed and replaced by the Contractor at his expense. The Contractor shall take appropriate steps during pullback to ensure that the pipe and tracer wires will be installed without damage.
20. If necessary, the pipe shall have water added as it enters the bore to achieve neutral buoyancy and reduce pullback loads and to ensure that adequate internal pressure is maintained at all points to counter balance collapse pressures.
21. The Contractor shall cease pullback operations if the pipe is damaged and shall remove the pipe from the bore and repair the pipe using the manufacturer's recommended procedure or replace the damaged pipe before resuming installation.
22. Damage to the pipe resulting from manufacturer defects, installation, or grouting is the responsibility of the Contractor, including costs for replacement and labor and materials. To confirm no damage to the pipe, upon completion of pull back, the Contractor shall pull a sphere or pig through the entire length of the pipeline. The pig shall be one inch less in diameter than the internal diameter of the product pipe, capable of allowing water to pass through it, complete with a pulling cable on either side. If the pig or sphere cannot pass through the pipe, it shall be considered collapsed and damaged.
23. After the carrier pipe is completely pulled through the bore, a sufficient relaxation period as recommended by the pipe manufacturer shall be provided before the final pipe tie-in.
24. The Contractor shall conduct a final hydrostatic test of the installed pipeline. Final test shall be in accordance with these specifications. The Contractor shall repair any defects discovered during this test, and repeat until the pipe passes the test.

#### **D. Excavating Trenches**

1. The Contractor shall provide all necessary shoring and bracing materials as required to assure safe working conditions and to protect the excavations. The Contractor shall be required to fully comply with all applicable OSHA Excavation Safety Standards. No separate payment shall be made for any special procedure used in connection with the excavation.
2. Excavate trenches to the proper depth and width as follows:
  - a. Trench to Grade: Excavated trench bottoms shall be firm, free from boulders, and conform to the established grade. Limit open trench excavation to a maximum of three 300 feet (90 m) ahead of completed backfill.
  - b. Care shall be taken not to over excavate except where necessary to remove unstable material, irregularities, lumps, rock, and projections. Unnecessary over excavation shall be replaced at the Contractor's sole expense and in accordance with Subsection 660.3.05.
  - c. Excavation carried below the established grade lines shown or established by the Utility Owner shall be backfilled according to Section 207 and Subsection 660.3.05. Use Class I or Class II Soils (defined in Section 810) and firmly compact the soil.
  - d. Where the established grade of a trench is in rock, undercut the bottom of the trench by at least 6 inches (150

mm) beneath the pipe or conduit and the greater of 24 inches (600 mm) wider than the pipe/conduit (12 inches or 300 mm each side) or 42 inches (1050 mm) wide, then backfill and compact according to Subsection 660.3.05.

- e. Open cut excavation in pavement and pavement patching shall be according to GA Standard No. 1401. Remove the pavement according to Section 444, except no separate payment shall be made for sawed joints.
  - f. Dewatering: Remove all water from excavations and maintain the excavations free of water while construction therein is in progress. Provide dewatering equipment as necessary to conform to this requirement. Dewatering procedures must meet all state and local regulatory requirements.
3. Minimum Trench Depth
- a. Excavate trenches to provide at least 48 inches (1.2 m) cover depth directly above the pipe to the finished pavement surface, sidewalk, grass, etc. unless indicated otherwise on the Plans or by GDOT Project Manager and Utility Owner. In order to avoid existing utilities, it may be necessary for the pipe to be laid shallower or deeper than the minimum cover specified. At such time the Contractor shall not be allowed extra compensation for additional excavation necessary for deeper installations.
  - b. Side slopes of the trenches shall be as nearly vertical as practicable. Trenches in excess of 5 feet (1.5 m) deep shall either have the trench sides laid back to conform to OSHA requirements for trench safety, if such area is available within the limits of excavation, or, alternatively, trenches deeper than 5 feet (1.5 m) shall be excavated via trench box or shored and braced.
4. Trench Width: Excavate trenches to uniform widths, wide enough to allow proper installation of pipe, fittings, and other materials, a minimum of 6 inches (150 mm) and a maximum of 12 inches (300 mm) each side of the pipe or conduit.
5. Trench Bell Holes: Excavate bell holes deeply and widely enough to make joints and to allow the pipe barrel to rest firmly on the trench bottom.
6. Trench bottom: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduits. Shape subgrade to provide continuous support of bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits/pipes. Remove projecting stones, tree roots, debris, and sharp objects along trench subgrade. Abrupt changes in grade of the trench bottom shall be avoided. Unless otherwise indicated in the Plans or The Facility Owner's Standard Specifications, trenches for force mains shall be graded to avoid high and low points that necessitate air release valves.
7. Excavations may be excavated and refilled either by hand or by machinery. Hand tool excavation shall be conducted where necessary to protect existing utilities and structures.
8. In the event that unsuitable material is encountered at or below the excavation depth specified or shown on the Plans, GDOT Project Manager shall be notified immediately before proceeding with any additional work. Such material shall be removed and replaced with suitable material in accordance with Section 205.

#### **E. Connecting to Existing Mains**

1. Connect to an existing main with the appropriate fittings according to the Plans or The Facility Owner's Standard Specifications and GDOT Project Manager. When making connections under pressure, furnish and use a tapping sleeve and valve assembly or line stop fittings as indicated. Coordinate with Utility Owner 72 hours in advance for wastewater service interruptions and temporary shut-offs. Evening or weekend work may be required to complete direct connections and tie-ins. Connect to existing mains as follows:
  - a. Before opening new pipeline trenches, locate the various points of connection to be made into existing pipelines. If necessary, uncover pipelines for the Utility Owner and GDOT Project Manager to prescribe the connections and fittings needed.
  - b. Connect to existing pipelines only to meet operating requirements. Cut existing lines only after obtaining the Utility Owner and GDOT Project Manager's permission.
  - c. Provide temporary line stops, associated fittings, and bypass pumping as indicated on the Plans and as necessary when cutting and plugging existing sewer mains to prevent service interruptions. Line stop and associated

fittings shall be suitable for working pressures of 250 psi.

- d. Connections to existing asbestos cement pipe shall be performed as indicated on the Plans or in The Facility Owner's Standard Specifications. Cutting, removing, handling, and disposing of asbestos cement pipe shall be in accordance with requirements established by EPA, OSHA, GDOT, NIOSH, and the State of Georgia Environmental Protection Division, and any other applicable laws and ordinances.

## **F. Laying Sewer Mains and Appurtenances**

### **1. Preparing and Handling Pipes**

- a. Thoroughly clean the pipe and fittings before laying them. Keep them clean until accepted.
- b. Use suitable tools and equipment. Do not damage the pipe, especially the lining inside the pipe.
- c. Cut pipe in a manner to avoid damage to pipe or lining, leaving a smooth end at right angles to pipe axis. Smooth and bevel edges of cut pipe for push-on, gasket type joints.
- d. Bedding shall be provided as specified by the Utility Owner or pipe manufacturer for the type of conditions encountered. Bedding typically consists of granular soil free of lumps, clods, cobbles, and frozen materials, and shall be graded to a firm-but-yielding surface without abrupt changes in bearing value. Unstable soils and rock ledges shall be undercut from the bedding zone and replaced with suitable material.
- e. Bed pipe on coarse granular material in flat bottom trench with entire pipe barrel bearing uniformly on coarse granular material, except for an approximately 18-inch (450 mm) gap at pipe balance point for sling removal. Hand excavate and backfill as required to provide uniform and continuous bearing and support for the pipe. Do not support pipe on hubs or end bells. Consolidate coarse granular material under and around pipe up to pipe centerline by tamping.
- f. Join pipe with bells facing direction in which laying operation is progressing. Lay pipe upgrade wherever line grade exceeds 10%.
- g. Carefully examine pipe for cracks and other defects and do not lay defective pipe. If pipe or castings appear to be cracked, broken, or defective after laying, remove and replace those sections.

### **2. Alignment and Gradient**

- a. Ensure that pipe alignment and gradient are according to the lines and grades on the Plans. Pressure pipe alignment shall be either straight or deflected to closely follow true curves. Deflect pipe lines only where required, within allowable horizontal and vertical deflection angles according to the manufacturer.
- b. Sewers shall be laid at least 10 feet (3 m) horizontally from any existing or proposed water main. The distance shall be measured edge-to-edge. When local conditions prevent a horizontal separation of 10 feet (3 m), the sewer may, on a case-by-case basis, be laid closer to a water main provided the water main is in a separate trench or on an undisturbed earth shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 18 inches (450 mm) above the top of the sewer.
- c. Maintain a vertical separation of at least 18 inches (450 mm) between the crown of sanitary sewers and the invert of existing or proposed water mains with the sewer main located below the water main.
- d. Where a vertical separation of 18 inches (450 mm) cannot be provided, and the sewer main cannot be relocated to provide adequate clearance, the section of sewer main passing over or under water mains shall be constructed of materials and with joints that are equivalent to water main standards of construction and in accordance with [Section 670](#), or the sewer line shall be encased in a watertight carrier pipe in accordance with [Section 670](#), extending 10 feet (3 m) on both sides of the crossing measured perpendicular to the water main and shall be pressure tested to assure water-tightness to 150 psi prior to backfilling.

### **3. Special Requirements for Laying Sewer Mains**

- a. Excavate, clean, lay, joint, and backfill progressively and uniformly according to these requirements:
  - 1) Never leave pipe in the trench overnight without completely jointing and capping.
  - 2) Do not leave completed pipeline exposed in the trench. Backfill and compact the trench as soon as possible after laying, jointing, and testing are complete.
  - 3) At the close of work each day and when laying pipe, close the exposed end of the pipeline in the trench

with an approved wood or metal head or barrier.

- 4) If necessary to cover the end of an incomplete pipeline with backfill, close the end of the pipe with a satisfactory cap or plug.

#### **G. Installing Sewer Mains by Open Cut**

1. Use the following flexible joints for connections inside the roadway shoulders or curbs and gutters:
  - a. Mechanical Joints
    - 1) When using mechanical joints, thoroughly wash bell sockets, spigots, gland, gasket, nuts, and bolts with soapy water before assembly. Keep these parts wet until the jointing operation is complete.
    - 2) Tighten nuts within the torque range recommended by the manufacturer. Check the tightening tolerance with a torque wrench.
    - 3) If effective sealing is not attained at the maximum recommended torque, disassemble, thoroughly clean, and then reassemble the joint.
    - 4) Do not overstress bolts to compensate for improper installation or defective parts.
  - b. Push-On Type Joints
    - 1) Use push-on joints made according to the manufacturer's recommendations.
    - 2) Install PVC pipe in accordance with AWWA C605.
    - 3) Install ductile iron pipe in accordance with AWWA C600.
2. Restraints for pipe joints and fittings shall be provided as specified and as shown on the Plans. Restraints shall be installed per manufacturer's recommendations.
3. Buried ductile iron pipe and fittings shall be polyethylene encased as specified and as indicated on the Plans. Polyethylene encasement tubing shall be secured with polyethylene tape and installed in accordance with ANSI/AWWA C105/A21.5.
4. Unless otherwise specified by The Facility Owner's Standard Specifications, provide pipe detection wire on all non-metallic pipe systems. Tape the tracer wire to the top center of the pipe at intervals which prevent wire displacement during backfilling operations. Stub tracer wire up 6 inches (150 mm) above finished grade at all valves. For splices, use direct bury kits. After backfilling is complete, test electrical continuity of each tracer wire segment and provide test results to Utility Owner and GDOT Project Manager.
5. Install continuous underground warning tape during backfilling of trench for underground water distribution piping. Install 12 inches (300 mm) below finished grade, or 6 inches (150 mm) below subgrade under pavements and walkways, and buried directly over piping.
6. Use pipe cutters when cutting pipe or special castings. Do not use a hammer, chisel, or a cutting torch.
7. Force mains that do not meet minimum depth of cover, vertical clearance requirements, or other installation requirements at special locations (e.g. creek crossings) shall include concrete encasement. Concrete encasement shall be installed per The Facility Owner's Standard Specifications.
8. If HDPE pipe is to be installed where high groundwater table or water surrounding the pipe is expected, precautions shall be taken to provide neutral buoyancy to prevent floatation or a change in alignment.
9. Valves on Sewer Mains: Install and joint gate, plug, and check valves in accordance with AWWA C600. Include the valve box and valve marker where required.
10. Air release valves shall be installed at high elevation points on the force main and at locations indicated on the Plans. Air release valves shall be installed in accordance with manufacturer's recommendations.
  - a. Unless specified otherwise in the Plans or The Facility Owner's Standard Specifications, air release valves shall be installed in a shallow manhole or vault. Automatic air relief valves shall not be used in areas where flooding of the manhole or vault may occur.
  - b. An isolation valve shall be installed between the air release assembly and the connection to the main.
  - c. The Contractor shall furnish and install at no additional cost to GDOT or Utility Owner all necessary fittings for the installation of air release valves at high points.

11. Thrust Collars and Thrust Blocks: If required, furnish materials and install thrust collars or concrete blocking along force mains as indicated in Subsection 660.2.01. Form and pour concrete thrust collars or blocks in accordance with the Plans and The Facility Owner's Standard Specifications. Blocking shall be poured against undisturbed earth and all forms shall be removed before backfilling.
12. Backfilling
  - a. Furnish equipment, labor, and when necessary, suitable material to conform with The Facility Owner's Standard Specifications required for backfilling the pipe line trenches according to Section 207, and as follows:
    - 1) When testing for leaks in open trenches, do not backfill until testing is complete and leaks are eliminated.
    - 2) When retaining pavement adjacent to trenches, replace removed pavement with the same or better material when approved in accordance with the appropriate Section for the pavement type replaced.
    - 3) Place backfill on subgrades free of mud, frost, snow, or ice.
    - 4) Place and compact bedding course on trench bottoms and where indicated. Shape the bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits/pipes.
    - 5) Backfill shall include Class I or Class II Soils as defined in Section 810 or suitable material that conforms with The Facility Owner's Standard Specifications.
    - 6) Backfill shall be placed in two stages: first, side fill to a height of 12 inches (300 mm) above the top of pipe; second, overfill to former surface grade. Side fill shall consist of granular material laid in 6-inch (150 mm) layers each consolidated by mechanical tamping and controlled addition of moisture, to a density of 95% as determined by the Standard Proctor test (AASHTO T-99 Method D) or GDT 67. Overfill shall be layered and consolidated to match the entrenched material in cohesion and compaction. The top 12 inches (300 mm) shall be compacted to 100% of specified density. Consolidation by saturation or ponding shall not be permitted.
    - 7) Soil Moisture Control: Uniformly moisten and aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2% of optimum moisture content. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2% and is too wet to compact to specified dry unit weight.
    - 8) Initial backfill shall be carefully compacted under pipe haunches and evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Place and compact fill and backfill of satisfactory soil to final subgrade elevation. Backfill voids with satisfactory soil while removing shoring and bracing and/or trench boxes.
    - 9) After backfilling, maintain temporary surface restoration per GA Standard No. 1401 until permanent repaving is complete. No separate payment shall be made for replaced pavement.

#### **H. Installation of Manholes**

1. Each manhole location within the trench shall be over excavated to receive a minimum of 8 inches (200 mm) of No. 57 stone to establish a firm foundation for the manhole. Where the excavation reveals an unsuitable foundation, whether rock or muck, the Contractor shall remove unsuitable material and install No. 57 stone in 6-inch (150 mm) lifts to a maximum of 2 feet (0.6 m) as a foundation for the structure.
2. All manholes shall be installed plumb.
3. Horizontal joint sealant protruding into the manhole shall be cut smooth against the interior wall. Interior joints shall not be grouted unless otherwise directed.
4. Exterior wrap shall be installed centered over joints between manhole sections. Exterior manhole wall shall be clean prior to installing wrap.
5. Backfill adjacent to manholes shall be mechanically compacted in 12-inch (300 mm) lifts symmetrically around the perimeter of the manhole up to the frame and cover, and in accordance with Subsection 660.3.05.
6. Manholes shall be set flush with finished pavement grades where located beneath roadways, sidewalks, or other paved surfaces.



7. All lifting holes or equipment mounting holes shall be filled in completely and made watertight per manufacturer's recommendations.

#### **I. Connections to Existing Manholes**

1. Whenever new sewers are connected to existing manholes, pipe openings shall be core drilled with approved equipment to accommodate new pipe. Such connections to existing manholes shall be installed in accordance with manufacturer's recommendations for neoprene boot, link seal or equal. All cuts shall be coated with an appropriate protective coating.
2. The bottom of the manhole shall be reworked and shaped to accommodate the new connections.

#### **J. Laying Sewer Laterals and Appurtenances**

1. Except as modified in this Section, construct and install sewer laterals according to the Plans and the requirements for laying sewer mains. Install service lines at locations shown on the Plans or where designated by the Utility Owner and GDOT Project Coordinators.
2. Trench depth and backfill cover may be adjusted at the discretion of the Utility Owner and GDOT Project Coordinators to provide at least 18 inches (450 mm) of cover.
3. Install wyes or tees in the locations shown on the Plans for connection of existing or future service lines. Install laterals with proper grade and alignment to the property line shown on the Plans.
4. New laterals shall extend from the sewer main to the edge of the right-of-way (no more than 5 feet (1.5 m) from the edge of the right-of-way line) where they shall be plugged using a stopper of appropriate size. Sewer laterals shall be tapped into sewer trunk lines using the appropriate tapping machine.
5. Laterals shall be bedded and backfilled in accordance with bedding requirements shown on the Plans and specified herein.
6. Lateral connections shall not be made by knocking a hole in the main or manhole, inserting the lateral pipe, and sealing with grout.
7. Unless otherwise indicated in the Plans or The Facility Owner's Standard Specifications, sewer laterals shall be a minimum of 6 inches (150 mm) in diameter and shall extend from the main and terminate with a clean-out constructed at the edge of right-of-way.

#### **K. Cutting and Capping Existing Sewer Mains**

Disconnect by sawing or cutting and removing a segment of existing pipe where cutting and capping or plugging is shown on the Plans or directed by The Facility Owner's or GDOT Project Coordinators. Provide a watertight pipe cap or plug and restraint mechanism to seal off existing mains indicated to remain in service. If sewer main is to be abandoned or removed and not specified to be grout filled, seal ends with a pipe cap or plug or with a masonry plug and minimum 6-inch (150 mm) cover of concrete on all sides around the end of the pipe.

1. The Contractor shall be responsible for uncovering and verifying the size and material of the existing main to be capped or plugged.
2. Abandoned manholes and sewer mains larger than 6 inches (150 mm) shall be removed or filled with flowable fill per Section 600 at the locations indicated on the Plans. Air release valves along abandoned pressure pipe shall be plugged prior to grouting. Prior to backfilling, the bottom of the manhole shall be broken up in such a manner that water will readily pass through and all pipes entering the manhole shall be plugged or grout filled. The top portion of the manhole structure shall be removed in order to establish a minimum of 3 feet cover from subgrade or finished grade when not under the pavement and filled with sand or suitable backfill.
3. Sewer mains shall be cleaned prior to placement of flowable fill. Use concrete or grout pumps capable of continuous delivery at planned placement rate with sufficient pressure to overcome friction and fill the sewer main.

#### **L. Cured-In-Place Pipe (CIPP) Liner Installation**

1. Work shall only be performed by personnel trained, experienced, and skilled in the CIPP process.
2. Bypass Pumping: Provide bypass pumping for the flow of sewage around the section or sections of pipe designated

for renovation. Accomplish bypass pumping by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole. Pump sizing shall be adequate to handle the flow. Provide bypass pumping during pre-installation and post-installation video inspections and during the CIPP liner installation.

3. Pre-Installation: Inspect pipelines for breaks, obstacles, and service connections by close circuit television (CCTV) and produce permanent video record (DVD). Camera used for inspection shall be equipped with rotating head that is capable of 90 degree rotation for horizontal and 360 degree rotation about its centerline and has a minimum resolution of 400 vertical lines and 460 horizontal lines. Camera shall be operative in 100% humidity. Utilize power winches, TV cable, and power rewinds to move camera through sewer line at a speed less than 30 feet (10 m) per minute. Provide voice over description on the video with stationing of services and areas for point repair indicated on the video. Inspect interior of pipeline to determine existing conditions that may prevent proper installation of the CIPP pipeliner. Designate areas for point repair by evaluating any obstructions that can't be removed by conventional sewer cleaning equipment such as a protruding service connection, dropped joint, or collapse. Confirm locations for all branch service connections. Transfer possession and property rights of the inspection video record to the Utility Owner.
4. Cleaning: Clear the line of all solids and roots. Remove all internal debris from the sewer line to prevent interference with the CIPP. Properly dispose of all debris removed from the sewer line.
5. Point Repair: Excavate and repair any protruding service connection, dropped joint, or collapsed pipe observed during the inspection process.
6. Customer sewer service shall be maintained throughout the duration of the project whenever possible. If maintaining customer sewer service is not possible, limit outage duration for sewer customers to a maximum of 8 hours. Each home or business being affected shall be contacted and informed of the work being conducted, when service will be unavailable, and the duration of the outage. Contact shall be made a minimum of 7 calendar days prior to service outage. Deliver a written notice to each affected home or business a minimum of one business day prior to beginning work informing them when service will be unavailable, the duration of the outage, and a local telephone number for customers to call and discuss any issues.
7. Install CIPP in accordance with ASTM F1216, Section 7, or ASTM F1743, Section 6 with the following modifications:
  - a. Quantity of resin used for tube impregnation is sufficient to fill the volume of air voids in the tube with additional allowances for polymerization shrinkage and the loss of resin through cracks and irregularities in the original pipe wall.
  - b. Thorough resin saturation is achieved throughout the length of the felt tube.
  - c. Point of vacuum is not further than 25 feet from the point of initial resin introduction.
  - d. Vacuum point is no further 75 feet from the leading edge of the resin after a vacuum in the tube is established.
  - e. Leading edge of the resin slug is as near to perpendicular as possible.
8. Tube insertion: Position the wetout tube in the pipeline using either inversion or a pull-in method. If pulled into place, utilize power winching equipment suitable for intended purpose and ensure the tube is not damaged as a result of pull-in friction. The tube shall be pulled-in or inverted through an existing manhole or approved access point and shall extend fully to the next designated manhole or termination point.
9. Temperature Monitoring: Place temperature gauges inside the tube at the invert level of each end and monitor the temperature during the CIPP cure cycle.
10. Reopen service connections without excavation.
11. Following installation and reinstatement of service connections, perform post-installation inspection utilizing CCTV requirements for pre-installation.
12. Perform visual inspection of the CIPP pipeliner in accordance with ASTM F1743, Section 8.6.
13. Prepare CIPP pipeliner samples and test physical properties in accordance with ASTM F1216 or ASTM F1743,

Section 8, using either method proposed. Flexural properties shall meet or exceed the values listed in Table 1 of the applicable ASTM. Provide for testing of flexural properties and reporting of test data for each line segment by an independent testing laboratory accredited by AASHTO Accreditation Program.

14. Obtain wall thickness samples for analysis from each line segment installed and at the end farthest from the cure source. Determine wall thickness of samples as described in paragraph 8.1.6 of ASTM F1743. The minimum wall thickness at any point shall not be less than 87.5% of the design thickness as specified in Subsection 660.2.01. Provide for testing of wall thickness samples and reporting of test data for each line segment by an independent testing laboratory accredited by AASHTO Accreditation Program.

#### **M. Relocating, Adjusting, and Removing**

1. Sewer Valves and Air Release Valves
  - a. Relocate, adjust to grade, or remove valves and valve boxes according to the Plans or as designated by the GDOT Project Manager and Utility Owner.
  - b. Protect items during removal and relocation. Contractor shall replace lost or damaged Items at no expense to GDOT.
  - c. Disconnect each joint before removing items from the trench.
  - d. Test for leakage, adjust, and retest until no leaks appear.
  - e. Backfill as specified in Subsection 660.3.05.
  - f. Consider valve boxes part of the valve assembly and remove them intact with the valve.
2. Existing Valve Boxes
  - a. Lower, raise, or relocate existing valve boxes to the location and grade established on the Plans or by the GDOT Project Manager and Utility Owner according to Section 611.
3. Lift Stations
  - a. Demolish and install new lift station (if required) as indicated on the Plans.
4. Manholes
  - a. Frames and covers shall be removed and manhole shall be adjusted to grade. Adjustment shall be made by adding or removing brickwork, concrete, riser rings, or other materials in accordance with the Plans and The Facility Owner's.
  - b. Within roadways, manholes shall be brought to final grade prior to paving. A minimum area of 12 inches (300 mm) wide (from edge of manhole ring) and a minimum of 12 inches deep shall be excavated around the adjusted frame and cover prior to final paving. The excavated area shall be brought to the grade of the roadway base material with a minimum of 3,000 psi concrete in preparation of final paving.
5. Utility related items identified on the Plans to be salvaged are the property of the Utility Owner. Contractor shall coordinate with Utility Owner on delivery of salvaged materials. Should the Utility Owner choose to not accept these materials they shall be removed from the project site as soon as practical.

#### **N. Aerial Crossings**

1. When the aerial crossing is accomplished by attachment to a bridge or drainage structure, the crossing shall meet all requirements of the agencies that own or have jurisdiction over such structures.
2. Support must be provided for all joints in pipes utilized for aerial crossings. The supports must be installed to prevent frost heave, overturning, and settlement. Precautions against freezing, such as insulation and increased slope, must be provided.
3. Expansion joints shall be provided between above ground and below ground sewers. Where buried sewers change to aerial sewers, construction shall minimize frost heaving.
4. Aerial installations shall avoid or minimize stream blockage during normal high water events.
5. For pressure pipe, underground valves shall be provided at both ends of the aerial crossing so that the section can be isolated for testing or repair. The valves shall be restrained, easily accessible, and not subject to flooding. An air release/vacuum relief valve shall be installed at all high points along the aerial crossing.

6. Appropriate guards shall be installed at both ends of the aerial crossing to prevent public access to the pipe.

### **660.3.06 Quality Acceptance**

#### **A. Materials Certification**

For certain products, assemblies and materials, in lieu of normal sampling and testing procedures by the Contractor, the GDOT, and Utility Owner may accept from the Contractor the manufacturer's certification with respect to the product involved under the conditions set forth in the following paragraphs:

1. Material certifications shall be provided to GDOT, who shall distribute to the Utility Owner. Material certifications shall be approved by GDOT and the Utility Owner prior to construction. The certification shall state/specify that the named product conforms to these specifications and requirements of the Utility Owner and GDOT, and representative samples thereof have been sampled and tested as specified.
2. The certification shall either:
  - a. Be accompanied by a certified copy of the test results, or on GDOT QPL list, or
  - b. Certify such test results are on file with the manufacturer and will be furnished to the GDOT Project Manager and Utility Owner upon demand.
3. The certification shall state/specify the name and address of the manufacturer and the testing agency and the date of tests; and sets forth the means of identification which shall permit field determination of the product delivered to the project as being the product covered by the certification.
4. Submit certification with two copies of the covered product to the GDOT Project Manager, and Utility Owner.
5. GDOT or the Utility Owner will not be responsible for any costs of certification or for any costs of the sampling and testing of products in connection therewith.
6. GDOT and the Utility Owner reserve the right to require samples and test products for compliance with pertinent requirements irrespective of prior certification of the products by the manufacturer. Any materials that fail to meet specification requirements will be rejected.
7. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
  - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail steel supports for signs, signals and luminaires. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.
  - b. Records to be provided by the Contractor for this certification shall include a signed mill test report and a signed certification by each supplier, distributor, fabricator, and manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
  - c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

**B. Hydrostatic Testing of Pressure Pipe**

1. When the Utility Owner and GDOT Project Manager approve a section of pressure pipe for testing, the Contractor shall furnish the materials, equipment, and labor to conduct the pressure and leakage tests. Use a test pump, pressure gauge, and a means of measuring the water necessary to maintain the required pressure during the prescribed testing time. All pressure and leakage testing shall be done in the presence of the Utility Owner and GDOT Project Manager as a condition precedent to the approval and acceptance of the system. All pipes shall have been thoroughly flushed prior to testing. Simultaneous or separate pressure and leakage tests may be performed.
2. All water for testing and flushing shall be water provided by the Contractor, at no cost to the Utility Owner or GDOT, from an approved source. Flow velocity during line filling shall not exceed 2 feet (0.6 m) per second (fps).
3. Testing Requirements
  - a. Force main testing shall be done immediately after installation and backfilling has been completed.
  - b. Force mains shall be tested in accordance with the latest revision of AWWA C600 for ductile iron and C605 for PVC under an average hydrostatic pressure of the greater of 1.5 times the maximum working pressure or 150 psi as measured at the lowest point in the system for a minimum of 2 hours. Pressure shall be maintained until all sections under testing have been checked for evidence of leakage.
  - c. While the system is being filled with water, air shall be carefully and completely exhausted. If permanent air vents are not located at all high points, the Contractor shall install corporation stops or fittings and valves at such points at no additional expense to the Utility so the air can be expelled as the pipe system is slowly filled.
  - d. Makeup water shall be added, as required, to maintain the pressure within 5 psi of the test pressure. The quantity used shall be measured by pumping from a calibrated container. The maximum amount of makeup water allowed shall be determined by the following formula:

$$L = \frac{S * D * P^{0.5}}{148,000}$$

in which,

L = Allowable Leakage in gallons per hour

S = Length of pipe being tested in feet

D = Nominal pipe diameter in inches

P = Average test pressure during the test in psi gauge

- e. Visible leaks shall be corrected regardless of total leakage shown by test. All pipe fittings and other materials found to be defective under test shall be removed and replaced. Lines which fail to meet test requirements shall be repaired and retested as necessary until test requirements are met. No additional compensation shall be made for repairs or retesting.

**C. Alignment Testing**

1. Straight alignment of gravity sewers shall be checked by either using a laser beam or lamping. Each segment between manholes shall show at least 90% of the full pipe circle visible when looking from manhole to manhole.

**D. CCTV Inspection**

1. All new gravity sewers shall be inspected via closed-circuit televising (CCTV) in accordance with The Facility Owner's Standard Specifications. The Contractor shall thoroughly clean the entire sewer system by jetting or applicable methods prior to the TV inspection. If conditions indicate repairs are necessary, re-televising may be required. The initial inspection shall be scheduled with the Utility Owner and GDOT Project Manager when the Contractor advises that all sewer lines are ready for testing.

2. All TV inspections shall be performed by persons and/or firms qualified in such work.
3. The Contractor shall provide the TV inspection deliverables according to the format indicated in The Facility Owner's Standard Specifications.

#### **E. Manhole Vacuum Testing**

1. A vacuum test shall be performed on each manhole to assure water-tightness in accordance with ASTM C1244. The manholes shall be tested separately from sewer lines.
2. If the manhole fails the initial test, necessary repairs shall be made at the Contractor's expense and the manhole retested until a satisfactory test is obtained.

#### **F. Deflection Testing**

Utility Owner may require deflection tests utilizing a mandrel to be performed on flexible gravity sewer pipes. Deflection tests shall be conducted after the final backfill has been in place to permit stabilization of the soil-pipe system and follow the requirements of The Facility Owner's Standard Specifications. No mechanical pulling devices shall be used. All pipes not passing this mandrel shall be re-laid or replaced by the Contractor at no additional cost to GDOT or Utility Owner.

#### **G. Leakage Testing**

1. The Contractor shall conduct tests to determine the water-tightness of gravity sewers when completed. The Utility Owner shall observe the tests with the Contractor furnishing all required labor, equipment, and materials.
2. Sewers shall be tested in sections with each section extending between two adjacent manholes or from the end of the sewer to the nearest manhole. The Contractor shall utilize an infiltration test, an exfiltration test, or a low pressure air test at the direction of the Utility Owner and in accordance with The Facility Owner's Standard Specifications.
  - a. Infiltration: Each section shall be covered with no less than two feet (0.6 m) of water above the top of the pipe at the highest point. The infiltration will be measured by means of a weir located in the downstream manhole. The pressure head of 2 feet (0.6 m) shall be maintained for a period of not less than 24 hours before the weir measurements are made.
  - b. Exfiltration: The sewer at the upstream side of the lower manhole and the upstream side of upper manhole in each section shall be closed with a watertight bulkhead and the sewer filled with water until the water elevation in the upstream manhole is not less than two feet (0.6 m) above the top of the sewer pipe or two feet (0.6 m) above ground water elevation in the trench, whichever is higher. The exfiltration will be determined by measuring the amount of water required to maintain the above stated water elevation for a period of one hour from the start of the test. The entire length of section to be tested shall be filled and maintained full of water for a period of approximately 24 hours prior to the start of the test.
  - c. The amount of exfiltration or infiltration shall not exceed 50 gallons per inch of pipe diameter per 24 hours per mile of sewer in each and every section tested in accordance with the above.
  - d. In the event the allowable leakage rates are not met, the Contractor shall determine the location(s) where excess water is entering or leaving the sewer. The sewer and/or the manholes shall be repaired and retested until the leakage in the sewer is within the allowable limits.
3. Air test: Low pressure air testing shall be completed to detect leaks in sewers where hydrostatic testing is not practical. The Contractor shall perform the low pressure air test as specified in ASTM C924 for concrete and Uni-Bell UNI-B-6-98 for plastic pipe.

#### **660.3.07 Contractor Warranty and Maintenance**

General Provisions 101 through 150.

## **660.4 Measurement**

Incidentals including excavation, rock removal, backfilling, flushing, testing, temporary water connections, pavement removal, pavement replacement, and other incidentals required for the installation of sanitary sewer items are not measured for separate payment and shall be included in the applicable Pay Items below. Gravity sewer mains, manholes, force mains, and laterals, and associated items of work in this Specification, complete, in place, and accepted, are measured for payment as follows:

### **A. Ductile Iron Sewer Main**

Ductile iron sewer mains shall be measured in linear feet (meters) for each size and thickness class installed. Measurement shall be horizontally above the centerline of the pipe and shall include the length of valves and fittings.

### **B. PVC Sewer Force Main**

PVC sewer mains shall be measured in linear feet (meters) for each size and thickness installed. Measurement shall be horizontally above the centerline of the pipe and shall include the length of valves and fittings.

### **C. PVC Sewer Gravity Main**

PVC sewer mains shall be measured in linear feet (meters) for each size and thickness installed. Measurement shall be horizontally above the centerline of the pipe and shall include the length of valves and fittings.

### **D. Fusible PVC Sewer Main**

Fusible PVC sewer mains shall be measured in linear feet (meters) for each size and type installed. Measurement shall be horizontally above the centerline of the pipe and shall include the length of valves and fittings.

### **E. HDPE Sewer Main**

HDPE sewer mains shall be measured in linear feet (meters) for each size and type installed. Measurement shall be horizontally above the centerline of the pipe and shall include the length of valves and fittings.

### **F. Concrete Sewer Main**

Concrete sewer mains shall be measured in linear feet (meters) for each size and type installed. Measurement shall be horizontally above the centerline of the pipe and shall include the length of valves and fittings.

### **G. Ductile Iron Fittings**

Ductile iron fittings shall be included in the overall pipe measurements acceptably installed. This Item includes, but is not limited to, wyes, tees, bends, crosses, sleeves, plugs and caps, and reducers.

### **H. Restrained Joints**

Joint restraints used with the installation of PVC or ductile iron pipe shall be included in the overall pipe measurements acceptably installed on the number of each size restraint device installed.

### **I. Manholes**

Manholes shall be measured on an individual basis on the depth and type of manhole acceptably installed in accordance to Section 668.

### **I. Drop Manholes**

Drop Manholes shall be measured on an individual basis on the depth and type of manhole acceptably installed in accordance to Section 668.

### **J. Connection to Existing Manholes**

Connections to existing manholes shall be included in the Contract price for sewer line connection acceptably installed.

### **K. Gate Valves**

Gate valves shall be measured on an individual basis for each size valve and box assembly acceptably installed.

**L. Check Valves**

Check valves shall be measured on an individual basis on the number of each size valve and box assembly acceptably installed.

**M. Plug Valves**

Plug valves shall be measured on an individual basis on the number of each size valve and box assembly acceptably installed.

**N. Tapping Sleeve and Valve Assembly**

Tapping sleeve and valve assemblies shall be measured on an individual basis on the number of each size tapping sleeve and valve assembly acceptably installed.

**O. Sewer Laterals**

Sewer laterals shall be measured on an individual basis on the size of lateral acceptably installed.

**P. Cleanouts**

Sewer laterals shall be measured on an individual basis on the number of each cleanout acceptably installed.

**Q. Air Release Valve Assemblies**

Air release valve assemblies shall be measured on an individual basis on the number of each size and type of air release valve assembly acceptably installed.

**R. Steel Casing**

Steel casing pipe of the wall thickness and diameter specified shall be measured by the linear foot for each size and thickness of steel casing pipe installed. Measurement shall be horizontally above the centerline of the casing.

**S. Relocation of Existing Air Release Valves**

Relocation of existing air release valves shall be measured on an individual basis on the number of each acceptably relocated.

**T. Adjustment of Existing Valve Boxes to Grade**

Adjustment of existing valve boxes adjusted to grade in their original locations shall be measured on an individual basis on the number of each valve box acceptably adjusted in accordance with section 611.

**U. Removal of Air Release Valves**

Removal of existing air release valves shall be measured on an individual basis on the number of each removed.

**V. Removal of Manholes**

Removal of existing manholes shall be measured on an individual basis on the number of each manhole removed in accordance to Section 610.

**W. Adjustment of Manholes**

Adjustment of existing manholes adjusted to grade in their original locations shall be measured on an individual basis on the number of each manhole acceptably adjusted in accordance to Section 611.

**X. Reconstruct Manhole**

Reconstruction of existing manholes to grade in their original locations shall be measured on an individual basis on the number of each acceptably reconstructed manhole in accordance to Section 611.

**Y. Adjustment of Cleanout**

Adjustment of cleanouts to grade shall be measured on an individual basis on the number of each cleanout acceptably adjusted in accordance to Section 611.



**Z. Concrete Thrust Blocks**

Concrete thrust blocking installed shall be measured as indicated in Section 500 per cubic yard of concrete acceptably installed. When Concrete Thrust Blocks is not shown as a pay item, include the cost of the work in the bid price for the sewer pipe.

**AA. Concrete Thrust Collars**

Thrust collars shall be measured on an individual basis on the number of each size thrust collar acceptably installed. When Concrete Thrust Collars is not shown as a pay item, include the cost of the work in the bid price for the sewer pipe.

**BB. Cut and Plug Sewer Main**

Cutting and plugging of sewer mains shall be measured on an individual basis per each instance of cutting and plugging existing mains as shown on the Plans.

**CC. Removal of Sewer Mains**

Removal of sewer mains shall be measured per linear foot for each size pipe actually removed in accordance to Section 610. Measurement shall be horizontally above the centerline of the pipe removed and shall include the length of valves and fittings.

**DD. Line Stop**

Line stops shall be measured on an individual basis on the number of each size line stop actually installed.

**EE. Flowable Fill**

Flowable fill shall be measured as indicted in Section 600 per cubic yard of flowable fill acceptably installed. When flowable fill is not shown as a pay item, include the cost of the work in the bid price for the appropriate item.

**FF. Cured-In-Place-Pipe (CIPP) Liners**

CIPP liners shall be measured per linear foot for each size CIPP installed. Measurement shall be horizontally above the centerline of the host pipe from center of manhole to center of manhole.

**GG. Insertion Valve**

Insertion valves shall be measured on an individual basis on the number of each size valve acceptably installed.

**HH. Closed Circuit Television (CCTV) Inspection**

CCTV inspection shall be measured per linear foot of CCTV inspection price to be included in the Contract price for sewer pipe acceptably performed.

**II. Three-Dimensional (3D) Survey**

Three-dimensional survey shall be measured as one lump sum for a complete and accepted survey price to be included in the Contract price for sewer pipe acceptably performed.

**660.4.01 Limits**

General Provisions 101 through 150.

**660.5 Payment**

The Contract Unit Price for each Item, complete and accepted, shall include all costs incidental to the construction of the item according to the Plans and as specified in this Section. The unit prices bid shall include due allowance for the salvage value of all materials removed from existing or temporary lines and not installed in the completed work. All such surplus items shall become the property of the Contractor unless such surplus items are specified to be salvaged.

Payment for any item listed below is full compensation for the Item or Items complete in place.

**A. Ductile Iron Sewer Mains**

Ductile iron sewer mains shall be paid for at the unit price per linear foot for each diameter pipe installed and shall cover

the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of pipe, joints and jointing materials, anchoring, warning tape, polyethylene encasement, protection of existing utilities, connections to existing mains, flushing, backfilling, backfill materials, disposal of unsuitable backfill material, clean backfill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the pipe into service.

**B. PVC Force Main**

PVC sewer mains shall be paid for at the unit price per linear foot for each diameter and thickness pipe installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of pipe, joints and jointing materials, anchoring, tracer wire, warning tape, protection of existing utilities, connections to existing mains, flushing, backfilling, backfill materials, disposal of unsuitable backfill material, clean backfill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the pipe into service.

**C. PVC Gravity Main**

PVC sewer mains shall be paid for at the unit price per linear foot for each diameter and thickness pipe installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of pipe, joints and jointing materials, tracer wire, warning tape, protection of existing utilities, connections to existing mains, flushing, backfilling, backfill materials, disposal of unsuitable backfill material, clean backfill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the pipe into service.

**D. Fusible PVC Sewer Main**

Fusible PVC sewer mains shall be paid for at the unit price per linear foot for each diameter pipe installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, entry/exit pits, installation of pipe, joints and jointing materials, tracer wire, warning tape, mechanical joint adapters, protection of existing utilities, connections to existing sewer mains, fusion process materials and equipment, directional drilling materials and equipment, tracking system, assembling, welding, supporting, stringing, pulling, pigging, cleaning, flushing, backfilling, backfill materials, disposal of unsuitable backfill material, clean backfill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, and restoration, and all incidentals necessary to place the pipe into service except where such items are shown to be paid for under a separate Pay Item.

**E. HDPE Sewer Main**

HDPE sewer mains shall be paid for at the unit price per linear foot for each diameter pipe installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, entry/exit pits, installation of pipe, tracer wire, warning tape, mechanical joint adapters, protection of existing utilities, connections to existing mains, fusion process materials and equipment, directional drilling materials and equipment, tracking system, assembling, welding, supporting, stringing, pulling, pigging, cleaning, flushing, backfilling, disposal of unsuitable backfill material, clean backfill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, and restoration, and all incidentals necessary to place the pipe into service except where such items are shown to be paid for under a separate Pay Item.

**F. Concrete Sewer Main**

Concrete sewer mains shall be paid for at the unit price per linear foot for each diameter pipe installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of pipe, anchoring, tracer wire, warning tape, protection of existing utilities, connections to existing mains, flushing, backfilling, backfill materials, disposal of unsuitable backfill material, clean backfill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the pipe into service.

**G. Ductile Iron Fittings**

Ductile iron fittings will not be paid for separately but shall be included in the overall pipe measurements acceptably installed each fitting as denoted in the manufacturers' catalogues and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of fittings, joints and jointing materials, anchoring,

warning tape, polyethylene encasement, protection of existing utilities, flushing, backfilling, backfill materials, disposal of unsuitable backfill material, clean fill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, all other related and necessary materials, work, and equipment required to install a complete and operable pipeline fitting. This Item includes, but is not limited to, wyes, tees, bends, crosses, sleeves, plugs and caps, couplings, and reducers.

#### **H. Restrained Joints**

Restrained joints not be paid for separately but shall be included in the overall pipe measurements acceptably installed each fitting as denoted and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting, shoring, installation of the restraint device, polyethylene encasement, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the restrained joint.

#### **I. Gate Valves**

Gate valves shall be paid for at the unit price per each size gate valve and box assembly installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the gate valves including valve box, concrete pad or collar, valve identification disc, valve marker, valve tag, polyethylene encasement, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the gate valve and place it in service.

#### **J. Plug Valves**

Plug valves shall be paid for at the unit price per each size plug valve and box assembly installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the butterfly valves (including valve box), concrete pad or collar, valve identification disc, valve marker, valve tag, polyethylene encasement, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the plug valve and place it in service.

#### **K. Check Valves**

Check valves shall be paid for at the unit price per each size check valve and box assembly installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the check valves, concrete vault or manhole, concrete pad or collar, valve identification disc, valve marker, valve tag, polyethylene encasement, protection of existing utilities, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration and all work and materials necessary to install the check valve and place it in service.

#### **L. Tapping Sleeve and Valve Assembly**

Tapping sleeve and valve assemblies shall be paid for at the unit price per each size tapping sleeve and valve assembly installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of tapping sleeves and valve assemblies including valve box, concrete pad or collar, valve marker, polyethylene encasement, protection of existing utilities, tapping the force main, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and necessary hardware to install the tapping sleeve and valve assembly and place it in service.

#### **M. Manholes**

Sanitary sewer manholes shall be paid for at the unit price in accordance to Section 668 ,according to the depth and type of each manhole installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of manholes including ring and covers, inverts, coatings, protection of existing utilities, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the manhole and place into service.

**N. Drop Manholes**

Sanitary sewer drop manholes shall be paid for at the unit price per each manhole installed in accordance to Section 668 and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of manholes including ring and covers, inverts, coatings, outside drop piping and fittings, concrete encasement, protection of existing utilities, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the manhole and place into service.

**O. Connections to Existing Manholes**

Connections to existing manholes shall be paid for in the Contract Price for sewer pipe and shall cover the cost for all material, transportation, labor, equipment, excavation, sheeting and shoring, installation of manhole connection, rework of inverts, grout, coatings, protection of existing utilities, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, bypass pumping (as required), restoration, and all work and materials necessary to acceptably install the manhole connection.

**P. Sewer Laterals**

Sewer laterals shall be paid for at the unit price per size of each size installed to the property line and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, piping, installation of sewer lateral including connection to existing pipe, cleanout, cleanout marker, fittings including wyes, bends, pipe, cap with screw plug, tracer wire, casting, concrete collar or pad, valve box and cover, bypass pumping (as required), protection of existing utilities, backfilling, backfill materials, disposal of unsuitable backfill material, clean fill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the sewer lateral into service.

**Q. Cleanouts**

Sewer cleanouts shall be paid for at the unit price per each cleanout installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, piping, installation of cleanout including connection to existing pipe, fittings including wyes, bends, pipe, cap with screw plug, tracer wire, casting, concrete collar or pad, valve box and cover, bypass pumping (as required), protection of existing utilities, backfilling, backfill materials, disposal of unsuitable backfill material, clean fill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the cleanout into service.

**R. Air Release Valve Assembly**

Air release valves shall be paid for at the unit price per each size and type of air release valve installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the air release assembly, tapping saddle, isolation valve, reducers, piping, restraints, fittings, tracer wire, concrete manhole or vault, protection of existing utilities, backfilling, backfill materials, disposal of unsuitable backfill material, clean fill, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the air release assembly into service.

**S. Steel Casing**

Steel casing pipe shall be paid for at the unit price per linear foot according to the diameter and thickness of the steel casing installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, protection of existing utilities, steel casing pipe, skid, steel straps, coatings, casing spacers, end seals, boring and jacking pits, backfilling, backfill materials, disposal of unsuitable backfill material, clean fill, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the steel casing except where such items are shown to be paid for under a separate Item. The carrier pipe shall be paid for as a separate Pay Item.

**T. Relocation of Existing Air Release Valves**

Relocation of air release valves shall be paid for at the unit price per each air release valve assembly relocated and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing air

release valve assembly, installation at location indicated in Plans, piping, restraints, tracer wire, fittings, adjustment to final grade, polyethylene encasement, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work necessary to locate, remove, and relocate the air release valve except where such items are shown to be paid for under a separate Pay Item.

**U. Adjustment of Existing Valve Boxes to Grade**

Adjustment of existing valve boxes shall be paid for which shall be paid for in accordance with Section 611, at the unit price per each valve box adjusted to final grade and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, valve case and lid, trench adapter and operating nut extensions/reductions, tracer wire and splices, tracer wire riser and threaded plug, concrete pad, valve identification disc, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to adjust the valve box.

**V. Adjustment of Existing Manhole**

Manhole tops to be raised or lowered 2 feet (0.6 m) or less are considered adjustment of existing manholes, which shall be paid for in accordance with Section 611, at the unit price per each manhole adjusted to final grade and shall cover the cost of all materials, including new ring and covers for sanitary manholes, transportation, labor, equipment, plugs, riser sections, brick and mortar, adjustment rings, excavation, sheeting and shoring, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, dewatering, trench stabilization, clean-up, bypass pumping (as required), restoration, and all work and materials necessary to install the new ring and cover and adjust to final grade.

**W. Reconstruct Existing Manhole**

Manhole tops to be raised between 2 feet (0.6 m) and 6 feet (1.5 m), or tops to be lowered more than 2 feet (0.6 m) are considered the reconstruction of an existing manhole, which shall be paid for which shall be paid for in accordance with Section 611, at the unit price per each manhole adjusted to final grade and shall cover the cost of all materials, including new ring and covers for sanitary manholes, transportation, labor, equipment, plugs, riser sections, brick and mortar, excavation, sheeting and shoring, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, dewatering, trench stabilization, clean-up, bypass pumping (as required), restoration, and all work and materials necessary to reconstruct the manhole. Tapping a new pipeline into an existing manhole is not considered reconstruction.

**X. Adjustment of Cleanout**

Adjustment of cleanouts shall be paid for at the unit price per each cleanout adjusted to finished grade and shall cover the cost of all materials, including transportation, labor, equipment, excavation, sheeting and shoring, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, dewatering, trench stabilization, clean-up, bypass pumping (as required), restoration, and all work and materials necessary to adjust the cleanout to final grade.

**Y. Removal of Manhole**

Removal of manholes shall be paid for which shall be paid for in accordance with Section 610, at the unit price per each manhole removed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, dewatering, trench stabilization, clean-up, bypass pumping (as required), restoration, and all work necessary to remove and dispose of manholes including ring and covers.

**Z. Removal of Air Release Valve**

Removal of air release valves shall be paid for which shall be paid for in accordance with Section 610, at the unit price per each air release valve removed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, removal of air release valve assemblies, piping, manholes, concrete vaults and fabricated enclosures, backfilling, backfill materials, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, storage and delivery of air release valves identified to be salvaged,

and all work necessary to remove the air release valve.

**AA. Concrete Thrust Blocks**

Concrete thrust blocks shall be paid for at the unit price per cubic yard of concrete complete in place as indicated in Section 500 and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, concrete, forming, reinforcement, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install a complete thrust block. Concrete Thrust Blocks is not shown as a pay item; include the cost of the work in the bid price for the sewer pipe.

**BB. Concrete Thrust Collars**

Concrete thrust collars shall be paid for at the unit price per each size of thrust collar and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, reinforced concrete thrust collars, retainer glands, reinforcement, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install a complete thrust collar. Concrete Thrust Collars is not shown as a pay item; include the cost of the work in the bid price for the sewer pipe.

**CC. Removal of Sewer Mains**

Removal of sewer mains shall be paid for which shall be paid for in accordance with Section 610, at the unit price per linear feet (meters) of the size of sewer main to be removed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, dewatering, trench stabilization, clean-up, bypass pumping (as required), restoration, and all work and materials necessary to locate, remove and dispose of the pipe and associated appurtenances. Unless indicated for removal as a separate Pay Item, appurtenances to be removed shall include but not be limited to fittings, isolation valves, air release valves, valve boxes, steel casings, casing spacers, service laterals, thrust blocks, and concrete. All such surplus items shall become the property of the Contractor unless specified to be salvaged by the Utility Owner.

**DD. Cut and Plug Existing Sewer Main**

Cutting and plugging of existing sewer mains shall be paid for at the unit price per each installation and shall cover all materials, transportation, labor, equipment, excavation, sheeting and shoring, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to cut and plug existing sewer mains except where such items are shown to be paid for under a separate Pay Item.

**EE. Line Stops**

Line stops shall be paid for at the unit price per each size line stop installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the line stop assemblies, valves, valve boxes, fittings, restraints, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the gate valve and place it in service.

**FF. Flowable Fill**

Flowable fill shall be paid for at the unit price per cubic yard of flowable fill installed as indicated in Section 600 and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, flushing, plugging air release valves and service connections, installation of flowable fill, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to complete the installation. When flowable fill is not shown as a pay item for the sewer items, include the cost of the work in the bid price for the appropriate item.

**GG. Cured-In-Place-Pipe (CIPP) Liner**

CIPP liners shall be paid for at the unit price per linear foot and diameter of liner acceptably installed and shall cover the cost for all materials, transportation, labor, equipment, bypass pumping, cleaning, root removal, flushing, coordination with and protection of existing utilities, distributing project notices, removal of protruding service connections, supplying and installing liner, reinstatement of service connections, inspection, testing, clean-up, restoration, and all work and materials necessary to complete the liner installation including incidentals and associated labor for which payment is not provided under a separate Pay Item. Point repairs shall be paid for under the unit price per linear foot of the diameter and material of pipe being replaced.

**HH. Insertion Valve**

Insertion valves shall be paid for at the unit price per each size valve inserted and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the valve, valve boxes, fittings, restraints, concrete pad or collar, valve identification disc, valve marker, polyethylene encasement, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, clean fill, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the insertion valve and place it in service.

**II. Closed Circuit Television (CCTV) Inspection**

CCTV inspection shall be included in the Contract price for sewer pipe inspection acceptably performed and shall cover the costs for all materials, transportation, labor, equipment, excavation, sheeting, shoring, bypass pumping, protection of existing utilities, CCTV inspection, CDs / DVDs, inspection reports, clean-up, restoration, and all work and materials necessary to perform the CCTV inspection.

**JJ. Three-Dimensional (3D) Survey**

Three-dimensional survey shall be price to be included in the Contract price for sewer pipe, and shall cover the costs for all non-destructive methods of locating installed utilities and associated electronic deliverables per Utility Owner specifications.

Payment will be made under:

Item No. 660	Sewer Force Main, ____in (mm)	Per linear foot (meter)
Item No. 660	Sewer Gravity Main, ____in (mm)	Per linear foot (meter)
Item No. 660	Sewer Main, Ductile Iron, ____in (mm)	Per linear foot (meter)
Item No. 660	Sewer Main, Fusible PVC, ____in (mm)	Per linear foot (meter)
Item No. 660	Sewer Main, HDPE, ____in (mm)	Per linear foot (meter)
Item No. 660	Sewer Main, Concrete, _____in (mm)	Per linear foot (meter)
Item No. 660	Cured-in-Place Pipe (CIPP) Liner, ____in (mm)	Per linear foot (meter)
Item No. 660	Sewer Main, ____in (mm)	Per linear foot (meter)
Item No. 660	Steel Casing, _____in (mm)	Per linear foot (meter)
Item No. 660	Cleanouts, _____in (mm)	Per each
Item No. 660	Tapping Sleeve and Valve Assembly, _____in (mm)	Per each
Item No. 660	Relocation of Existing Air Release Valve Assembly, ____in (mm)	Per each
Item No. 660	Removal of Air Release Valve, ____in (mm)	Per each
Item No. 660	Cut and Plug Sewer Main, ____in (mm)	Per each

Item No. 660	Concrete Thrust Collar, _____ in (mm)	Per each
Item No. 660	Gate Valve, _____ in (mm)	Per each
Item No. 660	Check Valve, _____ in (mm)	Per each
Item No. 660	Plug Valve, _____ in (mm)	Per each
Item No. 660	Insertion Valve, _____ in (mm)	Per each
Item No. 660	Air Release Valve Assembly, _____ in (mm)	Per each
Item No. 660	Sewer Lateral, _____ in (mm)	Per each
Item No. 660	Line Stop, _____ in (mm)	Per each

**660.5.01 Adjustments**

General Provisions 101 through 150.



**DEPARTMENT OF TRANSPORTATION**

**STATE OF GEORGIA**

**SPECIAL PROVISION**

**PROJECT: FY 18 Bridge**

**Replacement**

**COUNTY: Cook, Tattnall,**

**Taylor, Wilcox**

*Add the following:*

**PI NO: 0015913**

**Section 663 - Electric Transmission Systems**

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**663.1 General Description**

This Work consists of furnishing material, labor, tools, equipment, and other items necessary for the installation, relocation, and adjustment of overhead and underground electric transmission systems in accordance with the Project plans, Job Specification Book, and Specifications. Correct all deficiencies in the Work indicated by testing, inspecting, and as directed by the Engineer.

**663.1.01 Definitions**

General Provisions 101 through 150

Whenever the terms “Company” or “Georgia Power Company” are used in this Special Provision and its related documents, they mean Georgia Power Company, Inc., its subsidiaries, successors and/or assigns. Whenever the term “Plan” is used in this Special Provision and related documents, this includes the Electric Transmission Relocation Plans. The term “Southern Company” is synonymous with Georgia Power Company.

The term “Transmission Engineer” means the Company’s authorized individual having the authority to give instructions pertaining to the Work. The Transmission Engineer has authority to approve or reject the Work and otherwise represent the Company. The “Transmission Engineer” is not authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract, Plans, and Specifications nor will they act as an agent for the Contractor. Ensure Transmission Engineer has access to all of the Work for inspection and testing. Ensure Transmission Engineer attends Closing Conference and Final Inspection.

During emergency situations involving the Company’s facilities, such as weather related incidents or power outages, or for system maintenance, the Transmission Engineer has the authority to direct the Work and to add Company crews as necessary. Additional items required for any emergency work, power outages, or system maintenance will be addressed as specified in [Section 104.03 Alteration of Plans or Character of Work](#).

**663.1.02 Related References**

General Provisions 101 through 150

## Section 663 - Electric Transmission Systems

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### **A. Standard Specifications**

[Section 201-Clearing and Grubbing](#)

[Section 205-Roadway Excavation](#)

[Section 207-Excavation and Backfill for Minor Structures](#)

[Section 208-Embankments](#)

[Section 209-Subgrade Construction](#)

[Section 310-Graded Aggregate Construction](#)

[Section 400-Hot Mix Asphaltic Concrete Construction](#)

[Section 441-Miscellaneous Concrete](#)

[Section 500-Concrete Structures](#)

[Section 852-Miscellaneous Steel Materials](#)

[Section 861-Piling and Round Timber](#)

[Section 863-Preservative Treatment of Timber Products](#)

### **B. Related Documents**

1. Core Function, Line Design Segment of the Southern Company Transmission Playbook (online)
2. National Electric Safety Code, ANSI – C2 (NESC)  
Available from the Institute of Electrical and Electronics Engineers  
<http://www.ieee.org/portal/site/iportals/>

For access to and copies of the Related Documents, please contact:

Georgia Power Company  
Mr. Mark Tilden  
Bin 10140  
241 Ralph McGill Boulevard, NE  
Atlanta, Georgia 30308-3374  
404-506-4203

If there is a conflict or discrepancy between the Specifications and the Core Function, Line Design Segment of the Southern Company Transmission Playbook or the National Electric Safety Code, perform the Work in accordance with the Core Function, Line Design Segment of the Southern Company Transmission Playbook and National Electric Safety Code, current editions. If the Southern Company Standards and National Electric Safety Codes are revised after notice to contractors date, perform the Work specified in the Plans, Job Specification Book, and Specifications using the revised standards and codes. If revisions to the Southern Company Standards and National Electric Safety Codes are dated on or after the letting date shown on the bid proposal, notify the Engineer in writing of such revisions.

### **663.1.03 Submittals**

General Provisions 101 through 150

## Section 663 - Electric Transmission Systems

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Refer to the Core Function, Line Design Segment of the Southern Company Transmission Playbook, current published edition, for electric utility submittal requirements.

### A. Completion Letter and As-Built Documentation

Provide no later than 30 days after the completion of the work a Completion Letter and As-Built Documentation to both the Engineer and the Contract Coordinator consisting of the following information.

1. Include in the Completion Letter the date all electrical transmission pay items are completed and ready to be turned over to the Company. Also, include a detailed estimate of quantities in place and explanation of any deviations or overruns.
2. Provide As-Built Documentation of the in-place and accepted electrical transmission facilities. Documentation shall consist of two sets of full size plans and electronic files in the form of a Bentley MicroStation file using the same version and format in which the Electrical Transmission Plans were created.

## 663.2 Materials

### A. Overhead and Underground Electric Transmission System

Any new materials required for the construction of proposed electric facilities shown on the Plans and listed in the Job Specification Book are to be purchased by the Contractor from Georgia Power Company. When required by the Plans and Job Specification Book, transfer all existing materials to the required locations as specified. Replace in-kind any material damaged during transfer.

Any other materials needed to complete the electric transmission system installation shall be transferred from the existing locations specified in the Plans. Incidental materials required to complete the Work will be supplied by the Contractor. Ensure all materials used are in conformance with the requirements and standards set forth in the Core Function, Line Design Segment of the Southern Company Transmission Playbook. Items required for the Work but not shown in the Plans or the Job Specification Book will require the review and approval by the Engineer and Transmission Engineer prior to incorporating such material into the Work. If there are revisions to the Work, the Company will provide a revised material list. The additional items required for the Work will be addressed as specified in [Section 104.03 Alteration of Plans or Character of Work](#).

Because Georgia Power Company is supplying materials necessary for the Work, do not request a Materials Allowance as provided for in [Section 109.07 Partial Payments](#)

### 663.2.01 Delivery, Storage, and Handling

General Provisions 101 through 150

Coordinate with the Georgia Power Company representative listed below to ensure all necessary materials are available for installation as required on the Plans, including the roadway staging plans. Follow any delivery, storage and handling procedures set forth in the Core Function, Line Design Segment of the Southern Company Transmission Playbook. Coordinate with Georgia Power Company to take delivery of required material, load required material, and transport all required material to the project. All of the material may be received by Georgia Power Company at once or receipt can be made on an as needed basis. If material storage is required, properly store the material at pre-approved locations within the project limits or at pre-approved locations off the project limits. Return or dispose of all unused and remaining material as detailed in subsection 663.3.05.H.

The Contractor is responsible for all materials from the time of delivery from Georgia Power Company to the return of remaining materials to Georgia Power Company or disposal. When all Work is complete, the Transmission Engineer, in the presence of the Engineer and Contractor, will field verify and document the Work's in-place material. From the Transmission Engineer's field work, verify with the Engineer and Transmission Engineer material quantities used are in-line with what was taken from the Company and what was returned to the Company.

Georgia Power Company  
Mr. Mark Tilden  
Bin 10140  
241 Ralph McGill Boulevard, NE  
Atlanta, Georgia 30308-3374  
404-506-4203

### **663.3 Construction Requirements**

#### **663.3.01 Personnel**

General Provisions 101 through 150

Ensure the construction and installation of all electric transmission facilities is performed by a subcontractor who is prequalified with Georgia Power Company and is registered with the Department. Contact the Georgia Power Company representative listed below to obtain a list of prequalified electric contractors. Electric contractors not prequalified with Georgia Power Company will not be registered and approved as a subcontractor for the Department. Ensure the transmission contractor selected for the bidding process is prequalified with Georgia Power Company.

Georgia Power Company  
Mr. Mark Tilden  
Bin 10140  
241 Ralph McGill Boulevard, NE  
Atlanta, Georgia 30308-3374  
404-506-4203

#### **663.3.02 Equipment**

General Provisions 101 through 150

Ensure all equipment used is in conformance with the requirements and standards set forth in the Core Function, Line Design Segment of the Southern Company Transmission Playbook, current edition. Obtain prior approval from the Engineer before starting Work on specialty items such as boring equipment and others of similar complexity.

#### **663.3.03 Preparation**

General Provisions 101 through 150

Follow all preparation procedures set forth in the Core Function, Line Design Segment of the Southern Company Transmission Playbook. Perform necessary preliminary engineering, field engineering, survey, and construction staking and layout for the installation of the specified electric transmission system.

#### **663.3.04 Fabrication**

### General Provisions 101 through 150

Ensure fabrication procedures and requirements conform to those set forth in Core Function, Line Design Segment of the Southern Company Transmission Playbook. Submit shop drawings to the Engineer and Transmission Engineer for any items requiring fabrication. Obtain approval from the Engineer and Transmission Engineer prior to ordering materials.

For projects with joint use poles, coordinate with the Transmission Engineer, Engineer, pole owner, and attaching utility owners. Prior to fabrication, obtain approval of shop drawings from the Transmission Engineer, Engineer, pole owner, and attaching utility owners. If poles are supplied by the pole owner, provide the necessary design information including attachment heights and loads to the pole owner. Coordinate with all parties to ensure the poles meet the requirements of the Plans and Specifications, can accommodate the attaching owner's requirements, and comply with the pole owner's standards.

### **663.3.05 Construction**

Review the Plans and Job Specification Book to ensure all items required for the Work are included in the price bid for each electric transmission bid item. Provide a detailed list of materials required to complete the Work to the Engineer and Transmission Engineer prior to ordering and taking delivery from Georgia Power Company. In the required detailed list of materials, identify any material required to complete the Work not shown in the Plans or in the Job Specification Book. The contractor will need to confirm that all easements have been acquired and dependent activities have been completed before any work can commence in the affected areas.

#### **A. Permission to Enter Private Property**

Comply with [Section 107—Legal Regulations and Responsibility to the Public](#).

Through an agreement between the Department and the Company; the Contractor is given the permission to enter upon private properties found outside the project's construction limits. This permission is granted for the sole purpose of activities relating to the installation and/or adjustments of transmission facilities only and is limited to the area of existing easements obtained by the company. Such permission to enter upon private properties is temporary and such rights commence upon project award and automatically expire upon completion and project final acceptance by the Department.

In all cases where it is necessary to enter upon private property; it is the Contractors sole responsibility to minimize any disruptions to personal property in the commencement of such work thereof. Additionally, the following restrictions and requirements apply:

1. All Work is limited to the installation, relocation, or replacement of transmission facilities, including the Work necessary to restore each private property as required in number 6 of this subsection.
2. Notify the Engineer and the private property owner, and resident 72 hours before commencing Work on said private property.
3. Only vehicles and equipment required for the Work are allowed on any private property.
4. Do not store any materials, vehicles, or equipment on any private property longer than the duration required to perform the Work.
5. Do not use any private property as an on-site detour or vehicle path.
6. Immediately following any construction located on private property, restore all areas of the same parcel to a condition substantially the same as existed immediately prior to any such disturbances, including without limitation, any and all necessary repairs, and replacement of grassing, landscaping and pavement which may be removed and

excavated by the Contractor. Ensure all necessary repairs are made to restore the original contours and re-establish the ground cover to control erosion.

### **B. Finding Existing Underground Utilities and Obstructions**

Comply with [Subsection 107.13](#) and [Subsection 107.21](#). When unforeseen conflicts or site conditions require Plan changes, perform the Work as altered according to [Subsection 104.03](#) and [Subsection 104.04](#).

Follow all customer notification requirements and obtain approval from the Transmission Engineer prior to disrupting existing services required for the installation of the transmission facilities shown on the Plans and Job Specification Book and for the installation of any required temporary transmission facilities.

### **C. Installation of Electric Transmission Systems**

Follow all relevant procedures set forth in the Core Function, Line Design Segment of the Southern Company Transmission Playbook. Construct all temporary and proposed electric transmission facilities in accordance with the requirements set forth in the Plans, Job Specification Book, and as instructed by the Transmission Engineer.

### **D. Excavating Trenches**

Excavate trenches to the proper grade, depth, and width as follows:

#### 1. Trench to Grade

Ensure excavated trench bottoms are firm, free from boulders, and conform to the established grade.

- a. Backfill, according to [Section 207](#), any part of the trench excavated below the established grade. Use Class I or Class II Soils ([Section 810](#)), and firmly compact the soil.
- b. Where the established grade of a trench is in rock, undercut the bottom of the trench by at least 6 in (150 mm), then backfill and compact according to [Section 207](#).

Conduct blasting operations according to [Subsection 107.12](#).

- c. Excavate trenches under pavement to grade as follows:

- i. To remove the pavement, cut it at least 12 in (300 mm) wider than each trench edge to provide solid bearing for the pavement edges when replaced. Remove the pavement according to [Section 444](#), except no separate payment will be made for sawed joints.
- ii. Directional bore under existing sidewalks, curbs, gutters, and pavements according to [Section 615](#).

#### 2. Minimum Trench Depth

Excavate trenches to provide at least 48 in (1.2 m) cover depth from the Work to the finished pavement surface, sidewalk, grass plot, etc. unless indicated otherwise on the Plans or by the Engineer.

If any part of a transmission facility is to be placed in or under a new embankment, finish the embankment to at least a 2 ft (600 mm) plane above the top of the proposed facility before excavating the trench.

#### 3. Trench Width

Excavate trenches wide enough to allow proper installation of the Work.

### **E. Directional Boring**

This Work consists of installing various sizes of bores by directional boring through whatever materials may be encountered.

Furnish, for the Engineer's approval, a plan showing the proposed methods for the installation of the horizontal directional bore. The Engineer will review the proposed installation plan within 10 working days of receipt by the Department. No

## Section 663 - Electric Transmission Systems

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directional boring Work will be allowed until the Contractor's submitted plan is approved by the Engineer. Include the following detail in the plan, as a minimum:

1. List of projects completed by the company performing the boring operation, environment of installation (urban work, river crossing, freeway), diameter of product installation and length of bores. Include the name, address and phone number of an owner's representative with knowledge of the performance of the Work. Provide at least five previously completed projects of similar scope as the boring Work included in this contract.
2. List of the Contractor's key personnel with a resume of boring experience. The Department will be the sole judge of the qualifications of the foreman and the drill operators.
3. Location of all proposed boring entry and exit pits.
4. Proposed alignment of bore both horizontal and vertical. For the proposed alignment, maintain a minimum clearance of 18 inches (450 mm) or 2 times the diameter of the final product installation, whichever is greater, at any obstruction. Do not perform boring in select backfill areas such as at mechanically stabilized wall locations.
5. Proposed diameter of bore. This diameter is the diameter of the final product installation.
6. Proposed diameter of pilot borehole.
7. Proposed diameter of back reamer. Do not allow the diameter of the back reamer to exceed 1.5 times the diameter of the final product installation.
8. Proposed depth of cover. Ensure the depth of cover will be equal to or greater than 10 times the diameter of the final product installation. Under paved shoulders, maintain a minimum depth of cover of 4 feet (1.22 meters). Under travel lanes or outside of paved shoulders, maintain a minimum depth of cover of 8 feet (2.44 meters).
9. Evaluation of soil conditions to be encountered. A complete soil survey is not required. As a minimum, excavate the entrance and exit pits for the proposed bore and determine the nature of the material likely to be encountered. Base the drilling fluid composition on the evaluation of the materials encountered in the bore pit excavation.
10. Proposed composition of drilling fluid.
11. Proposed drilling fluid pressure and flow rates.
12. Proposed drilling fluid management plan.
13. Proposed pull back rate.
14. Type of tracking system.

Excavate suitable pits or trenches for the boring operation and for placing end joints or termination connectors of conduit when required. Securely sheet and brace pits or trenches where necessary to prevent caving. Where directional boring is required under railroads, highways, streets or other facilities, perform construction in a manner that will not interfere with the operation of the facility, and not weaken the roadbed or structure. Do not disturb or excavate any roadway pavement, subgrade, roadbed, paved shoulder, or unpaved median as part of the boring or pipe placing operation for any reason without written authorization by the Engineer.

In the above areas, unless otherwise authorized in writing by the Engineer, abandon in place any broken or damaged boring rod/stem, boring head (including transmitter/transponder locating heads and cutter heads), couplings (including back reaming, swivel or connector couplings), or any other material that cannot be retrieved as part of the pullback operation. Abandoned material will become the property of the Department. No additional payment for abandoned material will be made.

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Continuously monitor the location and alignment of the pilot drill progress to insure compliance with the proposed installation alignment and to verify depth of the bore. Accomplish monitoring by manual plotting based on location and depth readings provided by the locating/tracking system or by computer generated bore logs which map the bore path based on information provided by the locating/tracking system. Obtain readings or plots on every drill rod and provide to the Engineer on a daily basis for as-built plans.

Monitor drilling fluids such as the pumping rate, pressures, viscosity and density during the pilot bore, back reaming, and/or pipe installation stages to ensure adequate removal of soil cuttings and to ensure the stability of the borehole is maintained. Do not allow drilling fluid pressures to exceed that which can be supported by the overburden (soil) pressure to prevent heaving or a hydraulic fracture of the soils. Contain excessive drilling fluids at the entry and exit points until recycled or removed from the site. Dispose of all drilling fluids in a manner acceptable to the appropriate local, state and federal regulations. The Work will be immediately suspended whenever drilling fluids seep to the surface other than in the boring entrance or exit pit. Propose a method to prevent further seepage and remove and dispose of any drilling fluid on the surface prior to resuming the boring operation.

To minimize heaving during pullback, determine the pullback rate to maximize the removal of soil cuttings and minimize compaction of the ground surrounding the borehole. Ensure the pullback rate minimizes over cutting of the borehole during the back reaming operation to ensure excessive voids are not created resulting in post installation settlement. Restore any surfaces damaged by the Work to their preconstruction conditions. All costs associated with the restoration are to be borne by the Contractor.

The distance the excavation extends beyond the end of the bore will depend upon the character of the excavated material. Do not exceed 2 feet (0.61 meters) in any case. If the character of the material being excavated makes it desirable, decrease the distance on instructions from the Engineer. Once the directional boring has commenced, insofar as practical, continue the operation without interruption. After the boring has been completed, immediately backfill the pits or trenches excavated to facilitate boring operations.

Proceed with the Work from a surface staging area provided for the boring equipment and workers. Obtain approval from the Engineer on the proposed location of the staging area. Bore the holes mechanically. Place excavated material near the top of the working pit and dispose of as required. Water or other fluids in connection with the boring operation will be permitted only to the extent necessary to lubricate cutting. Do not perform jetting. Excavation will not be measured for payment.

In unconsolidated soil formations, a gel-forming colloidal drilling fluid consisting of at least 10% high grade carefully processed bentonite may be used to consolidate excavated material, seal the walls of the hole, and furnish lubrication for subsequent removal of material and immediate back reaming/installation of conduit. Continuously monitor and maintain the flow pressure on the drilling fluid at the minimal pressure required to place the fluid. In normal circumstances, do not exceed a flow pressure of 200 psi (1379 k Pa). At any time during boring operations, do not exceed a flow pressure of 500 psi (3448 k Pa). Remove all drilling fluid spoils from both ends of the bore and properly dispose of material at a properly permitted location.

The maximum allowable variation from line and grade is a maximum of 2 percent. Pressure grout any voids, with an approved mix, that develop during the installation operation and are determined by the Engineer to be detrimental to the Work.

Directional boring operations inherently include the risk of encountering below grade obstructions that begin to alter the bore direction. Should an obstruction be encountered, notify the Engineer immediately. Boring deeper or shallower (if minimum pipe depth can be maintained), moving the boring head to the right or left of the obstruction, or attempt to bore through the obstruction (if other than solid rock) are acceptable corrective measures to restore bore alignment. To restore the bore alignment, perform a minimum of three attempts at each encountered obstruction with different corrective measures. The Engineer may authorize a relocation of the bore if a suitable bore alignment cannot be restored.

### **F. Removals**



Follow all relevant procedures set forth in the Core Function, Line Design Segment of the Southern Company Transmission Playbook. Remove all temporary and existing electric transmission facilities in accordance with the requirements set forth in the Plans, Job Specification Book, and as instructed by the Transmission Engineer. Cutting of poles specified for removal or abandonment will not be permitted. Remove pole(s) and backfill void in accordance with [Section 207](#). Backfill any voids remaining from the removal of underground facilities in accordance with [Section 207](#). Replace, in-kind (material and depth), any voids remaining in roadway structures.

### **G. Transfers**

Follow all relevant procedures set forth in the Core Function, Line Design Segment of the Southern Company Transmission Playbook. Transfer all electric transmission facilities in accordance with the requirements set forth in the Plans, Job Specification Book, and as instructed by the Transmission Engineer.

### **H. Remaining Material**

#### 1. Material Originating from Georgia Power Company

Return all unused material to Georgia Power Company. The Transmission Engineer will verify and accept or reject all returned material. No credit will be given the Contractor for any material rejected by Georgia Power Company due to, but not limited to, damage, material loss, or material theft.

#### 2. Material Originating from the Project Site – Existing or Surplus Material

Properly dispose of all surplus material. With exception to transformers, surplus and properly dispose of any material originating from the project and is not required, or no longer required, for the completion of the Work. Return all transformers to Georgia Power Company.

### **I. Staging, Mobilization, and De-mobilization**

Perform the Work in accordance with the staging plans. If there are changes to the staging plans, obtain concurrence from the Engineer and Transmission Engineer. There will be no separate measurement and payment for mobilization or de-mobilization required by the staging plans or required by the staging plans proposed by the Contractor.

## **663.3.06 Quality Acceptance**

### **A. Testing**

Follow all relevant procedures set forth in the Core Function, Line Design Segment of the Southern Company Transmission Playbook, current edition. Ensure Transmission Engineer is present at all inspection and testing.

### **B. Semi-Final Utility Inspection**

When the contractor has finished the Electrical Transmission System Work, the Contractor may, by written notice, request that a semi-final utility inspection be made. The Engineer, along with the Transmission Engineer, will determine if the Electrical Transmission System Work is ready for semi-final utility inspection. The Engineer, in agreement with the Transmission Engineer, will have the final decision on when the Electrical Transmission System Work is complete and thereby ready for semi-final utility inspection. If all the Electrical Transmission System Work provided for and contemplated by the Contract is found to be complete to the Engineer's satisfaction and all documents required in connection with the Electrical Transmission System Work has been submitted and accepted then, the Contractor may request transfer of the completed Electrical Transmission System Work to the Owner.

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Once the new facilities are in service and accepted by the Owner, provide written correspondence notifying the Engineer and Owner that utility location services will be the responsibility of said Owner.

Such partial acceptance shall in no way relieve the Contractor of the responsibility for satisfactory completion of the Contract, or for failure of any portion of the Electrical Transmission System Work prior to Final Acceptance of the Project.

### **663.3.07 Contractor Warranty and Maintenance**

General Provisions 101 through 150

## **663.4 Measurement**

Overhead and underground electric transmission systems, and other items of Work in this Specification, in place, operational, and accepted, are measured for payment as follows:

### **A. Overhead Electric Transmission**

Overhead Electric Transmission is measured in linear feet for each size (kV) facility installed. The facility is measured along the centerline of the facility from pole structure to pole structure through all fittings, switches, and transformers and shall include the installation of the pole structures and any materials required by the Core Function, Line Design Segment of the Southern Company Transmission Playbook, current edition. Measurement includes all wire to complete the work regardless of the number of phase conductors specified. Measurement will begin and end at existing pole structures where the newly installed Work ties back to the existing facility or specified ending structure. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and payment for the transfer of existing materials to new location. Include the costs of transferring materials in the costs for the installation of Overhead and Underground Electric Transmission System, temporary or permanent. If shown on the Plans, installation of transmission secondary/service lines will be measured from the newly installed pole structure to the existing residential or commercial pole structure or first attachment.

Obtain measurements with electronic survey equipment and provide Engineer with printout of installed facilities indicating State Plane Coordinates and station numbers of each pole structure and indicate distances between pole structures starting from the beginning of the Work (existing facility pole structure).

### **B. Overhead Electric Transmission (Temporary)**

Temporary Overhead Electric Transmission is measured in linear feet for each size (kV) facility installed. The facility is measured along the centerline of the facility from pole structure to pole structure through all fittings, switches, and transformers and shall include the installation of the pole structures and any materials required by the Core Function, Line Design Segment of the Southern Company Transmission Playbook, current edition. Measurement includes all wire to complete the work regardless of the number of phase conductors specified. Measurement will begin and end at existing pole structures where the newly installed Work connects to the existing facility or specified ending structure. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and payment for the transfer of existing materials to new location. Include the costs of transferring materials in the costs for the installation of Overhead and Underground Electric Transmission System, temporary or permanent.

Obtain measurements with electronic survey equipment and provide Engineer with printout of installed facilities indicating State Plane Coordinates and station numbers of each pole structure and indicate distances between pole structures starting from the beginning of the Work (existing facility pole structure).

### **C. Underground Electric Transmission**

Underground Electric Transmission is measured in linear feet for each size (kV) facility installed. The facility is measured along the center following the existing ground line from structure to structure through junction boxes, transformers, and

vaults and shall include the installation of the pole structures and any materials required by the Core Function, Line Design Segment of the Southern Company Transmission Playbook, current edition. Measurement includes all wire to complete the work regardless of the number of phase conductors specified. Measurement will begin and end at existing pole structures, vault structures, splice point, or termination cabinet where the newly installed Work connects to the existing facility. All measurements will begin and terminate at the intersection of the structure and grade. Measurement for buried facilities that transition up pole structures to tie to the overhead facilities will not be made. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and payment for the transfer of existing materials to new location. Include the costs of transferring materials in the costs for the installation of Overhead and Underground Electric Transmission System, temporary or permanent. Measurement of unsuccessful boring attempts will not be made. Successful directional bores will not be measured for payment.

Obtain measurements with electronic survey equipment and provide Engineer with printout of installed facilities indicating State Plane Coordinates and station numbers of each underground structure and pole structure and indicate distances between structures starting from the beginning of the Work (existing facility structure).

### **D. Installation of Poles**

Installation of Steel, Concrete, and Wood Poles will not be measured separately for payment. Steel, Concrete, and Wood Poles are included in the measurement of the overhead or underground electric transmission, permanent or temporary.

### **E. Installation of Electric Wire**

Installation of Electric Wire will not be measured separately for payment. Wire is included in the measurement of the overhead or underground electric transmission, permanent or temporary.

### **F. Removal of Overhead Electric Transmission**

Removal of the Overhead Electric Transmission is measured in linear feet for each size (kV) facility removed. The facility is measured along the centerline of the facility from pole structure to pole structure through the equipment mounted on the poles including, but not limited to, wire, transformers, switches, capacitor banks, street lights, and reclosers. Measurement will begin and end at existing pole structures where the transmission facility specified for removal connects to the existing facility to remain. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and payment for the transfer of existing materials to new location. Include the costs of transferring materials in the costs for the installation of Overhead and Underground Electric Transmission System, temporary or permanent. There will be no separate measurement and payment for backfilling of voids remaining from removal or replacement of roadway section. Measurement includes the removal of all wire regardless of the number of phase conductors specified. If shown on the Plans, removal of transmission secondary/service lines will be measured from the existing transmission pole specified to be removed to the existing residential or commercial pole structure or first attachment.

Obtain measurements with electronic survey equipment and provide Engineer with printout of existing facilities indicating State Plane Coordinates and station numbers of each pole structure and indicate distances between pole structures starting from the beginning of the Work (existing facility pole structure). Obtain approval from the Engineer of existing measurements prior to beginning removal Work.

### **G. Removal of Overhead Electric Transmission (Temporary)**

Removal of the Overhead Electric Transmission (Temporary) is measured in linear feet for each size (kV) facility removed. The facility is measured along the centerline of the facility from pole structure to pole structure through the equipment mounted on the poles including, but not limited to, wire, transformers, switches, capacitor banks, street lights, and reclosers. Measurement will begin and end at existing pole structures where the transmission facility specified for removal connects to the existing facility to remain. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and payment for the transfer of existing materials to new location. Include the costs of transferring materials in the costs for the installation of Overhead and Underground Electric Transmission System, temporary or permanent. There will be no separate measurement and payment for backfilling of voids remaining from removal or

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replacement of roadway section. Measurement includes the removal of all wire regardless of the number of phase conductors specified.

Obtain measurements with electronic survey equipment and provide Engineer with printout of existing facilities indicating State Plane Coordinates and station numbers of each pole structure and indicate distances between pole structures starting from the beginning of the Work (existing facility pole structure). Obtain approval from the Engineer of existing measurements prior to beginning removal Work.

### **H. Removal of Underground Electric Transmission**

Removal of Underground Electric Transmission is measured in linear feet for each size (kV) facility removed. The lines are measured along the center following the existing ground line from structure to structure through junction boxes, transformers, and vaults and shall include the removal, if required by the plans, of any materials that are integral to the temporary facility. This includes, but is not limited to, junction boxes, transformers, switching cubicle, and vaults. Measurement will begin and end at existing pole structures or vault structures where the newly installed facility connects to the existing facility. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and payment for the transfer of existing materials to new location. Include the costs of transferring materials in the costs for the installation of Overhead and Underground Electric Transmission System, temporary or permanent. There will be no separate measurement and payment for backfilling of voids remaining from removal or replacement of roadway section. Measurement includes the removal of all wire regardless of the number of phase conductors specified.

Obtain measurements with electronic survey equipment and provide Engineer with printout of existing facilities indicating State Plane Coordinates and station numbers of each underground structure and pole structure and indicate distances between structures starting from the beginning of the Work (existing facility structure). There will be no measurement and payment for backfilling of voids left by removed underground equipment. Obtain approval from the Engineer of existing measurements prior to beginning removal Work.

### **I. Removal of Poles**

Removal of Steel, Concrete, and Wood Poles will not be measured separately for payment. Removal is included in the measurement of the removal of overhead or underground electric transmission, permanent or temporary.

## **663.4.01 Limits**

General Provisions 101 through 150

## **663.5 Payment**

The Contract Unit Price for each Item shall include all costs incidental to the construction of the Item according to the Plans, Job Specification Book, and as specified in this Section. All such surplus items will become the property of Georgia Power Company unless otherwise specified. Payment for any Item listed below is full compensation for the Item or Items in place, operational, and accepted.

### **A. Overhead Electric Transmission**

Overhead Electric Transmission will be paid for at the contract unit price per linear foot for each size (kV) facility installed. Payment is full compensation for materials, handling, delivery, and storage of material and installation of material in accordance with the Plans and Job Specification Book. Payment is full compensation for necessary handling and delivery of surplus material to Georgia Power Company. Payment is full compensation for all the necessary material, equipment and labor to install the Overhead Electric Transmission, including all items necessary and items specified in the Job Specification Book and Plans. Payment is full compensation for the entire linear feet required to span the portion of the project specified and to tie back to existing facilities. This includes items such as wire (regardless of the number of phase conductors

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specified), transformers, poles (wood, steel, or concrete), framing assemblies, utility assemblies, conductors, hardware, guy assemblies, street lights, switches, capacitor banks, reclosers and any other item(s) necessary to provide for an in place and accepted operational Overhead Electric Transmission of the size specified in the Plans and Job Specification Book. If shown on the Plans, installation of transmission service lines will be paid for as specified in this Section.

### **B. Overhead Electric Transmission (Temporary)**

Temporary Overhead Electric Transmission will be paid for at the contract unit price per linear foot for each size (kV) facility installed. Payment is full compensation for material, handling, delivery, and storage of materials and installation of materials in accordance with the Plans and Job Specification Book. Payment is full compensation for any work required to accommodate project staging, detours, or structures not shown on the Plans or Job Specification Book. Payment is full compensation for necessary handling and delivery of surplus material to Georgia Power Company. Payment is full compensation for all the necessary material, equipment and labor to install the Temporary Electric Transmission, including all items necessary and items specified in the Job Specification Book and Plans. Payment is full compensation for the entire linear feet required to span the portion of the project specified and to tie back to existing facilities. This includes items such as wire (regardless of the number of phase conductors specified), transformers, poles (wood, steel, or concrete), framing assemblies, utility assemblies, conductors, hardware, guy assemblies, street lights, switches, capacitor banks, reclosers and any other item(s) necessary to provide for an in place and accepted operational Overhead Electric Transmission of the size specified in the Plans and Job Specification Book.

### **C. Underground Electric Transmission**

Underground Electric Transmission will be paid for at the contract unit price per linear foot for each size (kV) facility installed. Payment is full compensation for material, handling, delivery, and storage of material and installation of material in accordance with the Plans and Job Specification Book. Payment is full compensation for necessary handling and delivery of surplus material to Georgia Power Company. Payment is full compensation for all the necessary material, equipment and labor to install the Underground Electric Transmission, including all items necessary and items specified in the Job Specification Book and Plans. Payment is full compensation for the entire linear feet required to traverse, below grade, the portion of the project specified and to tie back to existing facilities. This includes items such as directional boring, wire (regardless of the number of phase conductors specified), conduit, transformers, vaults, switching cubicle, hardware, and any other item(s) necessary to provide for an in place and accepted operational Underground Electric Transmission of the size specified in the Plans and Job Specification Book. Payment of unsuccessful boring attempts will not be made. Successful directional bores will not be paid for separately.

### **D. Installation of Poles**

No separate payment will be made for the installation of Steel, Concrete, or Wood Poles. Costs for the installation of poles are included in the price for overhead or underground electric transmission, permanent or temporary.

### **E. Installation of Electric Wire**

No separate payment will be made for the installation of electric wire. Costs for the installation of electric wire are included in the price for overhead or underground electric transmission, temporary or permanent.

### **F. Removal of Overhead Electric Transmission**

Removal of Overhead Electric Transmission will be paid for at the contract unit price per linear foot for each size (kV) facility removed. Payment is full compensation for removal, handling, delivery, storage, and surplus of materials. Payment is full compensation for necessary handling and delivery of surplus material to Georgia Power Company. Payment is full compensation for all the necessary equipment and labor to remove the Overhead Electric Transmission. Payment is full compensation for the entire linear feet removed back to existing or new facilities as shown on the plans. This includes items such as wire (regardless of the number of phase conductors specified), transformers, poles (wood, steel, or concrete), framing assemblies, utility assemblies, conductors, hardware, guy assemblies, street lights, and any other item(s) necessary for complete removal. If shown on the Plans, removal of transmission service lines will be paid for as specified in this Section.

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All material removed and not re-used becomes the property of Georgia Power Company. Payment for Removal of Overhead Electric Transmission includes the removal, handling, delivery, and off-loading of all material at a Georgia Power Company Operating Headquarters specified by the Transmission Engineer.

### **G. Removal of Overhead Electric Transmission (Temporary)**

Removal of Overhead Electric Transmission (Temporary) will be paid for at the contract unit price per linear foot for each size (kV) facility removed. Payment is full compensation for removal, handling, delivery, storage, and surplus of materials. Payment is full compensation for all the necessary equipment and labor to remove the Temporary Electric Transmission. Payment is full compensation for the entire linear feet removed back to existing or new facilities as shown on the Plans. This includes items such as wire (regardless of the number of phase conductors specified), transformers, poles (wood, steel, or concrete), framing assemblies, utility assemblies, conductors, hardware, guy assemblies, street lights, and any other item(s) necessary for complete removal.

All material removed and not re-used becomes the property of Georgia Power Company. Payment for Removal of Overhead Electric Transmission (Temporary) includes the removal, handling, delivery, and off-loading of all material at a Georgia Power Operating Headquarters specified by the Transmission Engineer.

### **H. Removal of Underground Electric Transmission**

Removal of Underground Electric Transmission will be paid for at the contract unit price per linear foot for each size (kV) facility removed. Payment is full compensation for removal, handling, delivery, storage, and surplus of materials. Payment is full compensation for all the necessary equipment and labor to remove the Underground Electric Transmission. Payment is full compensation for the entire linear feet removed back to existing or new facilities as shown on the Plans. This includes removal of items such as wire (regardless of the number of phase conductors specified), conduit, transformers, vaults, hardware, and any other item(s) necessary for complete removal.

All material removed and not re-used becomes the property of Georgia Power Company. Payment for Removal of Overhead Electric Transmission includes the removal, handling, delivery, and off-loading of all material at a Georgia Power Operating Headquarters specified by the Transmission Engineer.

### **I. Removal of Poles**

No separate payment will be made for the removal of Steel, Concrete, or Wood Poles. Costs for the removal of poles are included in the price for removal of overhead or underground electric transmission, permanent or temporary.

Payment will be made under:

Item No. 663	Overhead Electric Transmission - _____ kV	Per linear foot (meter)
Item No. 663	Overhead Electric Transmission (Secondary/Service) - _____ kV	Per linear foot (meter)
Item No. 663	Overhead Electric Transmission (Temporary) - _____ kV	Per linear foot (meter)
Item No. 663	Underground Electric Transmission - _____ kV	Per linear foot (meter)
Item No. 663	Removal of Overhead Electric Transmission - _____ kV	Per linear foot (meter)

## Section 663 - Electric Transmission Systems

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Item No. 663	Removal of Overhead Electric Transmission (Secondary/Service) - ____kV	Per linear foot (meter)
Item No. 663	Removal of Overhead Electric Transmission (Temporary) - _____kV	Per linear foot (meter)
Item No. 663	Removal of Underground Electric Transmission - _____kV	Per linear foot (meter)

### **663.5.01 Adjustments**

General Provisions 101 through 150.





**DEPARTMENT OF TRANSPORTATION**

**STATE OF GEORGIA**

**SPECIAL PROVISION**

**PROJECT: FY 18 Bridge**

**Replacement**

**COUNTY: Cook, Tattnall, Taylor,**

**Wilcox**

**PI NO: 0015913**

**Section 664 - Electric Distribution Systems**

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*Add the following:*

**664.1 General Description**

This Work consists of furnishing materials, labor, tools, equipment, and other items necessary for the installation, relocation, and adjustment of overhead and underground electric distribution systems in accordance with the Project plans, Work Summary Location Reports, and Specifications. Correct all deficiencies in the Work indicated by testing, inspecting, and as directed by the Engineer.

**664.1.01 Definitions**

General Provisions 101 through 150

Whenever the terms “Company” or “Georgia Power Company” are used in this Special Provision and its related documents, they mean Georgia Power Company, Inc., its subsidiaries, successors and/or assigns. Whenever the term “Plan” is used in this Special Provision and related documents, this includes the Electric Distribution Relocation Plans. The term “Southern Company” is synonymous with Georgia Power Company.

The term “Distribution Engineer” means the Company’s authorized individual having the authority to give instructions pertaining to the Work. The Distribution Engineer has authority to approve or reject the Work and otherwise represent the Company. The “Distribution Engineer” is not authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract, Plans, and Specifications nor will they act as an agent for the Contractor. Ensure Distribution Engineer has access to all of the Work for inspection and testing. Ensure Distribution Engineer attends Closing Conference and Final Inspection.

During emergency situations involving the Company’s facilities, such as weather related incidents or power outages, or for system maintenance, the Distribution Engineer has the authority to direct the Work and to add Company crews as necessary. Additional items required for any emergency work, power outages, or system maintenance will be addressed as specified in

## Section 664 - Electric Distribution Systems

### [Section 104.03 Alteration of Plans or Character of Work.](#)

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#### **664.1.02 Related References**

General Provisions 101 through 150

##### **A. Standard Specifications**

[Section 201-Clearing and Grubbing](#)

[Section 205-Roadway Excavation](#)

[Section 207-Excavation and Backfill for Minor Structures](#)

[Section 208-Embankments](#)

[Section 209-Subgrade Construction](#)

[Section 310-Graded Aggregate Construction](#)

[Section 400-Hot Mix Asphaltic Concrete Construction](#)

[Section 441-Miscellaneous Concrete](#)

[Section 500-Concrete Structures](#)

[Section 852-Miscellaneous Steel Materials](#)

[Section 861-Piling and Round Timber](#)

[Section 863-Preservative Treatment of Timber Products](#)

##### **B. Related Documents**

1. Southern Company Overhead Distribution Standards, current edition
2. Southern Company Underground Distribution Standards, current edition
3. National Electric Safety Code, ANSI – C2 (NESC)

Available from the Institute of Electrical and Electronics Engineers

<http://www.ieee.org/portal/site/iportals/>

For copies of Southern Company's distribution standards, please contact:

Georgia Power Company

Mr. Mark Tilden

Bin 10140

241 Ralph McGill Boulevard, NE

Atlanta, Georgia 30308-3374

404-506-4203

If there is a conflict or discrepancy between the Specifications and the Southern Company Standards or the National Electric Safety Code, perform the Work in accordance with the Southern Company Standards and National Electric Safety Code, current editions. If the Southern Company Standards and National Electric Safety Codes are revised after notice to contractors date, perform the Work specified in the Plans, Work Location Summary Reports, and Specifications using the revised standards and codes. If revisions to the Southern Company Standards and National Electric Safety Codes are dated on or after the letting date shown on the bid proposal, notify the Engineer in writing of such revisions.

#### **664.1.03 Submittals**

General Provisions 101 through 150

Refer to the Southern Company Overhead Distribution Standards and Southern Company Underground Distribution

## Section 664 - Electric Distribution Systems

Standards, current published edition, for electric utility submittal requirements.

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### **A. Completion Letter and As-Built Documentation**

Provide no later than 30 days after the completion of the work a Completion Letter and As-Built Documentation to both the Engineer and the Contract Coordinator consisting of the following information.

1. Include in the Completion Letter the date all electrical pay items are completed and ready to be turned over to the Company. Also, include a detailed estimate of quantities in place and explanation of any deviations or overruns.
2. Provide As-Built Documentation of the in-place and accepted electrical facilities. Documentation shall consist of two sets of full size plans and electronic files in the form of a Bentley MicroStation file using the same version and format in which the Electrical Distribution Plans were created.

## **664.2 Materials**

### **A. Overhead and Underground Electric Distribution System**

Any new materials required for the construction of proposed electric facilities shown on the Plans and listed in the Work Location Summary Reports are to be purchased from Georgia Power Company. When required by the Plans and Work Location Summary Reports, transfer all existing materials to the required locations as specified. Replace in-kind any existing material damaged during transfer.

Any other materials needed to complete the electric distribution system installation shall be transferred from the existing locations specified in the Plans. Incidental materials required to complete the Work will be supplied by the Contractor. Ensure all materials used are in conformance with the requirements and standards set forth in the Southern Company Overhead Distribution Standards and Southern Company Underground Distribution Standards, current edition. Items required for the Work but not shown in the Plans or the Work Location Summary Reports will require the review and approval by the Engineer and Distribution Engineer prior to incorporating such material into the Work. If there are revisions to the Work, the Company will provide a revised material list. The additional items required for the Work will be addressed as specified in [Section 104.03 Alteration of Plans or Character of Work](#).

Because Georgia Power Company is supplying materials necessary for the Work, do not request a Materials Allowance as provided for in [Section 109.07 Partial Payments](#)

### **664.2.01 Delivery, Storage, and Handling**

General Provisions 101 through 150

Coordinate with the Georgia Power Company representative listed below to ensure all necessary materials are available for installation as required on the Plans, including the roadway staging plans. Follow any delivery, storage and handling procedures set forth in the Southern Company Overhead Distribution Standards and Southern Company Underground Distribution Standards, current edition. Coordinate with Georgia Power Company to take delivery of required material, load required material, and transport all required material to the project. All of the material may be picked up from Georgia Power Company at once or receipt can be made on an as needed basis. If material storage is required, properly store the material at pre-approved locations within the project limits or at pre-approved locations off the project limits. Return or dispose of all unused and remaining material as detailed in subsection 664.3.05.H.

The Contractor is responsible for all materials from the time of receipt from Georgia Power Company to the return of remaining materials to Georgia Power Company or disposal. When all Work is complete, the Distribution Engineer, in the presence of the Engineer and Contractor, will field verify and document the Work's in-place material. From the Distribution Engineer's field work, verify with the Engineer and Distribution Engineer material quantities used are in-line with what was taken from the Company and what was returned to the Company.

Georgia Power Company

Mr. Mark Tilden  
Bin 10140  
241 Ralph McGill Boulevard, NE  
Atlanta, Georgia 30308-3374  
404-506-4203

### **664.3 Construction Requirements**

#### **664.3.01 Personnel**

General Provisions 101 through 150

Ensure the construction and installation of all electric distribution facilities is performed by a subcontractor who is prequalified with Georgia Power Company and is registered with the Department. Contact the Georgia Power Company representative listed below to obtain a list of prequalified electric contractors. Electric contractors not prequalified with Georgia Power Company will not be registered and approved as a subcontractor for the Department. Ensure the distribution contractor selected for the bidding process is prequalified with Georgia Power Company.

Georgia Power Company  
Mr. Mark Tilden  
Bin 10140  
241 Ralph McGill Boulevard, NE  
Atlanta, Georgia 30308-3374  
404-506-4203

#### **664.3.02 Equipment**

General Provisions 101 through 150

Ensure all equipment used is in conformance with the requirements and standards set forth in the Southern Company Overhead Distribution Standards and Southern Company Underground Distribution Standards, current edition. Obtain prior approval from the Engineer before starting Work on specialty items such as boring equipment and others of similar complexity.

#### **664.3.03 Preparation**

General Provisions 101 through 150

Follow all preparation procedures set forth in the Southern Company Overhead Distribution Standards and Southern Company Underground Distribution Standards, current edition. Perform necessary preliminary engineering, field engineering, survey, and construction staking and layout for the installation of the specified electric distribution system.

#### **664.3.04 Fabrication**

General Provisions 101 through 150

Ensure fabrication procedures and requirements conform to those set forth in Southern Company Overhead Distribution Standards and Southern Company Underground Distribution Standards, current edition. Submit shop drawings to the

Engineer and Distribution Engineer for any items requiring fabrication. Obtain approval from the Engineer and Distribution Engineer prior to ordering materials.

### **664.3.05 Construction**

Review the Plans and Work Summary Location Reports to ensure all items required for the Work are included in the price bid for each electric distribution bid item. Provide a detailed list of materials required to complete the Work to the Engineer and Distribution Engineer prior to ordering and taking delivery from Georgia Power Company. In the required detailed list of materials, identify any material required to complete the Work not shown in the Plans or in the Work Summary Location Report. The contractor will need to confirm that all easements have been acquired and dependent activities have been completed before any work can commence in the affected areas.

#### **A. Permission to Enter Private Property**

Comply with [Section 107—Legal Regulations and Responsibility to the Public](#).

Through an agreement between the Department and the Company; the Contractor is given the permission to enter upon private properties found outside the project's construction limits. This permission is granted for the sole purpose of activities relating to the installation and/or adjustments of distribution facilities only and is limited to the area of existing easements obtained by the company. Such permission to enter upon private properties is temporary and such rights commence upon project award and automatically expire upon completion and project final acceptance by the Department.

In all cases where it is necessary to enter upon private property; it is the Contractors sole responsibility to minimize any disruptions to personal property in the commencement of such work thereof. Additionally, the following restrictions and requirements apply:

1. All Work is limited to the installation, relocation, or replacement of distribution facilities, including the Work necessary to restore each private property as required in number 6 of this subsection.
2. Notify the Engineer and the private property owner, and resident 72 hours before commencing Work on said private property.
3. Only vehicles and equipment required for the Work are allowed on any private property.
4. Do not store any materials, vehicles, or equipment on any private property longer than the duration required to perform the Work.
5. Do not use any private property as an on-site detour or vehicle path.
6. Immediately following any construction located on private property, restore all areas of the same parcel to a condition substantially the same as existed immediately prior to any such disturbances, including without limitation, any and all necessary repairs, and replacement of grassing, landscaping and pavement which may be removed and excavated by the Contractor. Ensure all necessary repairs are made to restore the original contours and re-establish the ground cover to control erosion.

#### **B. Finding Existing Underground Utilities and Obstructions**

Comply with [Subsection 107.13](#) and [Subsection 107.21](#). When unforeseen conflicts or site conditions require Plan changes, perform the Work as altered according to [Subsection 104.03](#) and [Subsection 104.04](#).

Follow all customer notification requirements and obtain approval from the Distribution Engineer prior to disrupting existing services required for the installation of the distribution facilities shown on the Plans and Work Summary Location Reports and for the installation of any required temporary distribution facilities.

### C. Installation of Electric Distribution Systems

Follow all relevant procedures set forth in the Southern Company Overhead Distribution Standards and Southern Company Underground Distribution Standards, current published edition. Construct all temporary and proposed electric distribution facilities in accordance with the requirements set forth in the Plans, Work Location Summary Reports, and as instructed by the Distribution Engineer.

### D. Excavating Trenches

Excavate trenches to the proper grade, depth, and width as follows:

#### 1. Trench to Grade

Ensure excavated trench bottoms are firm, free from boulders, and conform to the established grade.

- a. Backfill, according to [Section 207](#), any part of the trench excavated below the established grade. Use Class I or Class II Soils ([Section 810](#)), and firmly compact the soil.
- b. Where the established grade of a trench is in rock, undercut the bottom of the trench by at least 6 in (150 mm), then backfill and compact according to [Section 207](#).  
Conduct blasting operations according to [Subsection 107.12](#).
- c. Excavate trenches in pavement to grade as follows:
  - i. Remove the pavement according to GDOT construction standard 1401.
  - ii. Directional bore under existing sidewalks, curbs, gutters, and pavements according to [Section 615](#).

#### 2. Minimum Trench Depth

Excavate trenches to provide at least 48 in (1.2 m) cover depth from the Work to the finished pavement surface, sidewalk, grass plot, etc. unless indicated otherwise on the Plans or by the Engineer.

If any part of a distribution facility is to be placed in or under a new embankment, finish the embankment to at least a 2 ft (600 mm) plane above the top of the proposed facility before excavating the trench.

#### 3. Trench Width

Excavate trenches wide enough to allow proper installation of the Work.

### E. Directional Boring

This Work consists of installing various sizes of bores by directional boring through whatever materials may be encountered. Furnish, for the Engineer's approval, a plan showing the proposed methods for the installation of the horizontal directional bore. The Engineer will review the proposed installation plan within 10 working days of receipt by the Department. No directional boring Work will be allowed until the Contractor's submitted plan is approved by the Engineer. Include the following detail in the plan, as a minimum:

1. List of projects completed by the company performing the boring operation, environment of installation (urban work, river crossing, freeway), diameter of product installation and length of bores. Include the name, address and phone number of an owner's representative with knowledge of the performance of the Work. Provide at least five previously completed projects of similar scope as the boring Work included in this contract.
2. List of the Contractor's key personnel with a resume of boring experience. The Department will be the sole judge of the qualifications of the foreman and the drill operators.
3. Location of all proposed boring entry and exit pits.
4. Proposed alignment of bore both horizontal and vertical. For the proposed alignment, maintain a minimum clearance of 18 inches (450 mm) or 2 times the diameter of the final product installation, whichever is greater, at any obstruction. Do not perform boring in select backfill areas such as at mechanically stabilized wall locations.

## Section 664 - Electric Distribution Systems

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5. Proposed diameter of bore. This diameter is the diameter of the final product installation.
6. Proposed diameter of pilot borehole.
7. Proposed diameter of back reamer. Do not allow the diameter of the back reamer to exceed 1.5 times the diameter of the final product installation.
8. Proposed depth of cover. Ensure the depth of cover will be equal to or greater than 10 times the diameter of the final product installation. Under paved shoulders, maintain a minimum depth of cover of 4 feet (1.22 meters). Under travel lanes or outside of paved shoulders, maintain a minimum depth of cover of 8 feet (2.44 meters).
9. Evaluation of soil conditions to be encountered. A complete soil survey is not required. As a minimum, excavate the entrance and exit pits for the proposed bore and determine the nature of the material likely to be encountered. Base the drilling fluid composition on the evaluation of the materials encountered in the bore pit excavation.
10. Proposed composition of drilling fluid.
11. Proposed drilling fluid pressure and flow rates.
12. Proposed drilling fluid management plan.
13. Proposed pull back rate.
14. Type of tracking system.

Excavate suitable pits or trenches for the boring operation and for placing end joints or termination connectors of conduit when required. Securely sheet and brace pits or trenches where necessary to prevent caving. Where directional boring is required under railroads, highways, streets or other facilities, perform construction in a manner that will not interfere with the operation of the facility, and not weaken the roadbed or structure. Do not disturb or excavate any roadway pavement, subgrade, roadbed, paved shoulder, or unpaved median as part of the boring or pipe placing operation for any reason without written authorization by the Engineer.

In the above areas, unless otherwise authorized in writing by the Engineer, abandon in place any broken or damaged boring rod/stem, boring head (including transmitter/transponder locating heads and cutter heads), couplings (including back reaming, swivel or connector couplings), or any other material that cannot be retrieved as part of the pullback operation. Abandoned material will become the property of the Department. No additional payment for abandoned material will be made.

Continuously monitor the location and alignment of the pilot drill progress to insure compliance with the proposed installation alignment and to verify depth of the bore. Accomplish monitoring by manual plotting based on location and depth readings provided by the locating/tracking system or by computer generated bore logs which map the bore path based on information provided by the locating/tracking system. Obtain readings or plots on every drill rod and provide to the Engineer on a daily basis for as-built plans.

Monitor drilling fluids such as the pumping rate, pressures, viscosity and density during the pilot bore, back reaming, and/or pipe installation stages to ensure adequate removal of soil cuttings and to ensure the stability of the borehole is maintained. Do not allow drilling fluid pressures to exceed that which can be supported by the overburden (soil) pressure to prevent heaving or a hydraulic fracture of the soils. Contain excessive drilling fluids at the entry and exit points until recycled or removed from the site. Dispose of all drilling fluids in a manner acceptable to the appropriate local, state and federal regulations. The Work will be immediately suspended whenever drilling fluids seep to the surface other than in the boring entrance or exit pit. Propose a method to prevent further seepage and remove and dispose of any drilling fluid on the surface prior to resuming the boring operation.

To minimize heaving during pullback, determine the pullback rate to maximize the removal of soil cuttings and minimize compaction of the ground surrounding the borehole. Ensure the pullback rate minimizes over cutting of the borehole during the back reaming operation to ensure excessive voids are not created resulting in post installation settlement. Restore any

## Section 664 - Electric Distribution Systems

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surfaces damaged by the Work to their preconstruction conditions. All costs associated with the restoration are to be borne by the Contractor.

The distance the excavation extends beyond the end of the bore will depend upon the character of the excavated material. Do not exceed 2 feet (0.61 meters) in any case. If the character of the material being excavated makes it desirable, decrease the distance on instructions from the Engineer. Once the directional boring has commenced, insofar as practical, continue the operation without interruption. After the boring has been completed, immediately backfill the pits or trenches excavated to facilitate boring operations.

Proceed with the Work from a surface staging area provided for the boring equipment and workers. Obtain approval from the Engineer on the proposed location of the staging area. Bore the holes mechanically. Place excavated material near the top of the working pit and dispose of as required. Water or other fluids in connection with the boring operation will be permitted only to the extent necessary to lubricate cutting. Do not perform jetting. Excavation will not be measured for payment.

In unconsolidated soil formations, a gel-forming colloidal drilling fluid consisting of at least 10% high grade carefully processed bentonite may be used to consolidate excavated material, seal the walls of the hole, and furnish lubrication for subsequent removal of material and immediate back reaming/installation of conduit. Continuously monitor and maintain the flow pressure on the drilling fluid at the minimal pressure required to place the fluid. In normal circumstances, do not exceed a flow pressure of 200 psi (1379 k Pa). At any time during boring operations, do not exceed a flow pressure of 500 psi (3448 k Pa). Remove all drilling fluid spoils from both ends of the bore and properly dispose of material at a properly permitted location.

The maximum allowable variation from line and grade is a maximum of 2 percent. Pressure grout any voids, with an approved mix, that develop during the installation operation and are determined by the Engineer to be detrimental to the Work.

Directional boring operations inherently include the risk of encountering below grade obstructions that begin to alter the bore direction. Should an obstruction be encountered, notify the Engineer immediately. Boring deeper or shallower (if minimum pipe depth can be maintained), moving the boring head to the right or left of the obstruction, or attempt to bore through the obstruction (if other than solid rock) are acceptable corrective measures to restore bore alignment. To restore the bore alignment, perform a minimum of three attempts at each encountered obstruction with different corrective measures. The Engineer may authorize a relocation of the bore if a suitable bore alignment cannot be restored.

### **F. Removals**

Follow all relevant procedures set forth in the Southern Company Overhead Distribution Standards and Southern Company Underground Distribution Standards, current published edition. Remove all temporary and existing electric distribution facilities in accordance with the requirements set forth in the Plans, Work Location Summary Reports, and as instructed by the Distribution Engineer. Cutting of poles specified for removal or abandonment will not be permitted. Remove pole(s) and backfill void in accordance with [Section 207](#). Backfill any voids remaining from the removal of underground facilities in accordance with [Section 207](#). Replace, in-kind (material and depth), any voids remaining in roadway structures.

### **G. Transfers**

Follow all relevant procedures set forth in the Southern Company Overhead Distribution Standards and Southern Company Underground Distribution Standards, current published edition. Transfer all electric distribution facilities in accordance with the requirements set forth in the Plans, Work Location Summary Reports, and as instructed by the Distribution Engineer.

### **H. Remaining Material**



### 1. Material Originating from Georgia Power Company

Return all unused material to Georgia Power Company. The Distribution Engineer will verify and accept or reject all returned material. No credit will be given the Contractor for any material rejected by Georgia Power Company due to, but not limited to, damage, material loss, or material theft.

### 2. Material Originating from the Project Site – Existing or Surplus Material

Properly dispose of all surplus material. With exception to transformers, surplus and properly dispose of any material originating from the project and is not required, or no longer required, for the completion of the Work. Return all transformers to Georgia Power Company.

## **I. Staging, Mobilization, and De-mobilization**

Perform the Work in accordance with the staging plans. If there are changes to the staging plans, obtain concurrence from the Engineer and Distribution Engineer. There will be no separate measurement and payment for mobilization or de-mobilization required by the staging plans or required by the staging plans proposed by the Contractor.

### **664.3.06 Quality Acceptance**

#### **A. Testing**

Follow all relevant procedures set forth in the Southern Company Overhead Distribution Standards and Southern Company Underground Distribution Standards, current edition. Ensure Distribution Engineer is present at all inspection and testing. Correct all deficiencies in the Work indicated by testing, inspecting, and as directed by the Engineer or Distribution Engineer.

#### **B. Semi-Final Utility Inspection**

When the contractor has finished the Electrical Distribution System Work, the Contractor may, by written notice, request that a semi-final utility inspection be made. The Engineer, along with the Distribution Engineer, will determine if the Electrical Distribution System Work is ready for semi-final utility inspection. The Engineer, in agreement with the Distribution Engineer, will have the final decision on when the Electrical Distribution System Work is complete and thereby ready for semi-final utility inspection. If all the Electrical Distribution System Work provided for and contemplated by the Contract is found to be complete to the Engineer's satisfaction and all documents required in connection with the Electrical Distribution System Work has been submitted and accepted then, the Contractor may request transfer of the completed Electrical Distribution System Work to the Owner.

Once the new facilities are in service and accepted by the Owner, provide written correspondence notifying the Engineer and Owner that utility location services will be the responsibility of said Owner.

Such partial acceptance shall in no way relieve the Contractor of the responsibility for satisfactory completion of the Contract, or for failure of any portion of the Electrical Distribution System Work prior to Final Acceptance of the Project.

### **664.3.07 Contractor Warranty and Maintenance**

General Provisions 101 through 150

## **664.4 Measurement**

Overhead and underground electric distribution systems, and other items of Work in this Specification, in place, operational, and accepted, are measured for payment as follows:

### **A. Overhead Electric Distribution**

Overhead Electric Distribution and secondary/service lines are measured in linear feet for each size (kV or V) facility installed. The facility is measured along the centerline of the facility from pole structure to pole structure through all fittings, switches, and transformers and shall include the installation of the pole structures and any materials required by the Southern Company Overhead Distribution Standards and Southern Company Underground Distribution Standards, current edition. Measurement includes all wire to complete the work regardless of the number of phase conductors specified or transferred. Measurement will begin and end at existing pole structures where the newly installed Work ties back to the existing facility or specified ending structure. There will be no compensation for replacement of damaged or lost materials. Measurement and payment for the transfer of existing materials to new location will be made in the same manner as a new installation. Include the costs of transferring materials in the costs for the installation of Overhead Electric Distribution System, temporary or permanent. If shown on the Plans, installation of distribution secondary/service lines will be measured from the newly installed pole structure to the existing residential or commercial pole structure or first attachment even if transferred. Obtain measurements with electronic survey equipment and provide Engineer with printout of installed facilities indicating State Plane Coordinates and station numbers of each pole structure and indicate distances between pole structures starting from the beginning of the Work (existing facility pole structure).

### **B. Overhead Electric Distribution (Temporary)**

Temporary Overhead Electric Distribution and secondary/service lines are measured in linear feet for each size (kV or V) facility installed. The facility is measured along the centerline of the facility from pole structure to pole structure though all fittings, switches, and transformers and shall include the installation of the pole structures and any materials required by the Southern Company Overhead Distribution Standards and Southern Company Underground Distribution Standards, current edition. Measurement includes all wire to complete the work regardless of the number of phase conductors specified or transferred. Measurement will begin and end at existing pole structures where the newly installed Work connects to the existing facility or specified ending structure. There will be no compensation for replacement of damaged or lost materials. Measurement and payment for the transfer of existing materials to new location will be made in the same manner as a new installation. Include the costs of transferring materials in the costs for the installation of Overhead Electric Distribution System, temporary or permanent. Obtain measurements with electronic survey equipment and provide Engineer with printout of installed facilities indicating State Plane Coordinates and station numbers of each pole structure and indicate distances between pole structures starting from the beginning of the Work (existing facility pole structure).

### **C. Underground Electric Distribution**

Underground Electric Distribution and secondary/service lines are measured in linear feet for each size (kV or V) facility installed. The facility is measured along the top and center of cable(s) from structure to structure through junction boxes, transformers, and vaults and shall include the installation of the pole structures and any materials required by the Southern Company Overhead Distribution Standards and Southern Company Underground Distribution Standards, current edition. Measurement includes all wire to complete the work regardless of the number of phase conductors specified. Measurement will begin and end at existing pole structures, vault structures, splice point, or termination cabinet where the newly installed Work connects to the existing facility. All measurements will begin and terminate at the intersection of the structure and grade. Measurement for buried facilities that transition up pole structures to tie to the overhead facilities will not be made. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and

payment for the transfer or uncovering and relocating of existing materials to new location. Include the costs of transferring materials in the costs for the installation of Underground Electric Distribution System, temporary or permanent.

Measurement of unsuccessful boring attempts will not be made. Successful directional bores will not be measured for payment.

Obtain measurements with electronic survey equipment and provide Engineer with printout of installed facilities indicating State Plane Coordinates and station numbers of each underground structure and pole structure and indicate distances between structures starting from the beginning of the Work (existing facility structure).

### **D. Installation of Poles**

Installation of Steel, Concrete, and Wood Poles will not be measured separately for payment. Steel, Concrete, and Wood Poles are included in the measurement of the overhead or underground electric distribution, permanent or temporary.

### **E. Installation of Electric Wire**

Installation of Electric Wire will not be measured separately for payment. Wire is included in the measurement of the overhead or underground electric distribution, permanent or temporary.

### **F. Removal of Overhead Electric Distribution**

Removal of the Overhead Electric Distribution and secondary/service lines are measured in linear feet for each size (kV or V) facility removed. The facility is measured along the centerline of the facility from pole structure to pole structure through the equipment mounted on the poles including, but not limited to, wire, transformers, switches, capacitor banks, street lights, and reclosers. Measurement will begin and end at existing pole structures where the distribution facility specified for removal connects to the existing facility to remain. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and payment for backfilling of voids remaining from removal or replacement of roadway section. Measurement includes the removal of all wire regardless of the number of phase conductors specified. If shown on the Plans, removal of distribution secondary/service lines will be measured from the existing distribution pole specified to be removed to the existing residential or commercial pole structure or first attachment. Measurement and payment where existing materials is to be transferred will be made in the same manner as removed.

Obtain measurements with electronic survey equipment and provide Engineer with printout of existing facilities indicating State Plane Coordinates and station numbers of each pole structure and indicate distances between pole structures starting from the beginning of the Work (existing facility pole structure). Obtain approval from the Engineer of existing measurements prior to beginning removal Work.

### **G. Removal of Overhead Electric Distribution (Temporary)**

Removal of the Overhead Electric Distribution (Temporary) and secondary/service lines are measured in linear feet for each size (kV or V) facility removed. The facility is measured along the centerline of the facility from pole structure to pole structure through the equipment mounted on the poles including, but not limited to, wire, transformers, switches, capacitor banks, street lights, and reclosers. Measurement will begin and end at existing pole structures where the distribution facility specified for removal connects to the existing facility to remain. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and payment for backfilling of voids remaining from removal or replacement of roadway section. Measurement includes the removal of all wire regardless of the number of phase conductors specified. If shown on the Plans, removal of temporary distribution secondary/service lines will be measured from the existing distribution pole specified to be removed to the existing residential or commercial pole structure or first attachment. Measurement and payment where temporary materials are to be transferred will be made in the same manner as removed.

## Section 664 - Electric Distribution Systems

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Obtain measurements with electronic survey equipment and provide Engineer with printout of existing facilities indicating State Plane Coordinates and station numbers of each pole structure and indicate distances between pole structures starting from the beginning of the Work (existing facility pole structure). Obtain approval from the Engineer of existing measurements prior to beginning removal Work.

### **H. Removal of Underground Electric Distribution**

Removal of Underground Electric Distribution and secondary/service lines are measured in linear feet for each size (kV or V) facility removed. The facility is measured along the top and center of cable(s) from structure to structure through junction boxes, transformers, and vaults and shall include the removal, if required by the plans, of any materials that are integral to the temporary facility. This includes, but is not limited to, junction boxes, transformers, switching cubicle, and vaults. Measurement will begin and end at existing pole structures or vault structures where the newly installed facility connects to the existing facility. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and payment for backfilling of voids remaining from removal or replacement of roadway section. Measurement includes the removal of all wire regardless of the number of phase conductors specified.

Obtain measurements with electronic survey equipment and provide Engineer with printout of existing facilities indicating State Plane Coordinates and station numbers of each underground structure and pole structure and indicate distances between structures starting from the beginning of the Work (existing facility structure). There will be no measurement and payment for backfilling of voids left by removed underground equipment. Obtain approval from the Engineer of existing measurements prior to beginning removal Work.

### **I. Removal of Poles**

Removal of Steel, Concrete, and Wood Poles will not be measured separately for payment. Removal is included in the measurement of the removal of overhead or underground electric distribution, permanent or temporary.

#### **664.4.01 Limits**

General Provisions 101 through 150

#### **664.5 Payment**

The Contract Unit Price for each Item shall include all costs incidental to the construction of the Item according to the Plans, Work Summary Location Report, and as specified in this Section. All such surplus items will become the property of Georgia Power Company unless otherwise specified. Payment for any Item listed below is full compensation for the Item or Items in place, operational, and accepted.

### **A. Overhead Electric Distribution**

Overhead Electric Distribution and secondary/service lines will be paid for at the contract unit price per linear foot for each size (kV or V) facility installed. Payment is full compensation for material, handling, delivery, and storage of material and installation of material in accordance with the Plans and Work Summary Location Reports. Payment is full compensation for necessary handling and delivery of surplus material to Georgia Power Company. Payment is full compensation for all the necessary material, equipment and labor to install the Overhead Electric Distribution, including all items necessary and items specified in the Work Summary Location Report and Plans. Payment is full compensation for the entire linear feet required to span the portion of the project specified and to tie back to existing facilities. This includes items such as wire (regardless of the number of phase conductors specified), transformers, poles (wood, steel, or concrete), framing assemblies, utility assemblies, conductors, hardware, guy assemblies, street lights, switches, capacitor banks, reclosers and any other item(s)

necessary to provide for an in place and accepted operational Overhead Electric Distribution of the size specified in the Plans and Work Summary Location Report.

### **B. Overhead Electric Distribution (Temporary)**

Temporary Overhead Electric Distribution and secondary/service lines will be paid for at the contract unit price per linear foot for each size (kV or V) facility installed. Payment is full compensation for material, handling, delivery, and storage of materials and installation of materials in accordance with the Plans and Work Summary Location Reports. Payment is full compensation for any work required to accommodate project staging, detours, or structures not shown on the Plans or Work Summary Location Reports. Payment is full compensation for necessary handling and delivery of surplus material to Georgia Power Company. Payment is full compensation for all the necessary material, equipment and labor to install the Temporary Electric Distribution, including all items necessary and items specified in the Work Summary Location Report and Plans. Payment is full compensation for the entire linear feet required to span the portion of the project specified and to tie back to existing facilities. This includes items such as wire (regardless of the number of phase conductors specified), transformers, poles (wood, steel, or concrete), framing assemblies, utility assemblies, conductors, hardware, guy assemblies, street lights, switches, capacitor banks, reclosers and any other item(s) necessary to provide for an in place and accepted operational Overhead Electric Distribution of the size specified in the Plans and Work Summary Location Report.

### **C. Underground Electric Distribution**

Underground Electric Distribution will be paid for at the contract unit price per linear foot for each size (kV) facility installed. Payment is full compensation for material, handling, delivery, and storage of material and installation of material in accordance with the Plans and Work Summary Location Reports. Payment is full compensation for necessary handling and delivery of surplus material to Georgia Power Company. Payment is full compensation for all the necessary material, equipment and labor to install the Underground Electric Distribution, including all items necessary and items specified in the Work Summary Location Report and Plans. Payment is full compensation for the entire linear feet required to traverse, below grade, the portion of the project specified and to tie back to existing facilities. This includes items such as directional boring, wire (regardless of the number of phase conductors specified), conduit, transformers, vaults, switching cubicle, hardware, and any other item(s) necessary to provide for an in place and accepted operational Underground Electric Distribution of the size specified in the Plans and Work Summary Location Report. Payment of unsuccessful boring attempts will not be made. Successful directional bores will not be paid for separately.

### **D. Installation of Poles**

No separate payment will be made for the installation of Steel, Concrete, or Wood Poles. Costs for the installation of poles are included in the price for overhead or underground electric distribution, permanent or temporary.

### **E. Installation of Electric Wire**

No separate payment will be made for the installation of electric wire. Costs for the installation of electric wire are included in the price for overhead or underground electric distribution, temporary or permanent.

### **F. Removal of Overhead Electric Distribution**

Removal of Overhead Electric Distribution and secondary/service lines will be paid for at the contract unit price per linear foot for each size (kV or V) facility removed. Payment is full compensation for removal, handling, delivery, storage, and surplus of materials. Payment is full compensation for necessary handling and delivery of surplus material to Georgia Power Company. Payment is full compensation for all the necessary material, equipment and labor to remove the Overhead Electric Distribution. Payment is full compensation for the entire linear feet removed back to existing or new facilities as shown on the plans. This includes items such as wire (regardless of the number of phase conductors specified), transformers, poles

## Section 664 - Electric Distribution Systems

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(wood, steel, or concrete), framing assemblies, utility assemblies, conductors, hardware, guy assemblies, street lights, and any other item(s) necessary for complete removal.

All material removed and not re-used becomes the property of Georgia Power Company. Payment for Removal of Overhead Electric Distribution includes the removal, handling, delivery, and off-loading of all material at a Georgia Power Company Operating Headquarters specified by the Distribution Engineer.

### **G. Removal of Overhead Electric Distribution (Temporary)**

Removal of Overhead Electric Distribution and secondary/service lines (Temporary) will be paid for at the contract unit price per linear foot for each size (kV or V) facility removed. Payment is full compensation for removal, handling, delivery, storage, and surplus of materials. Payment is full compensation for all the necessary equipment and labor to remove the Temporary Electric Distribution. Payment is full compensation for the entire linear feet removed back to existing or new facilities as shown on the Plans. This includes items such as wire (regardless of the number of phase conductors specified), transformers, poles (wood, steel, or concrete), framing assemblies, utility assemblies, conductors, hardware, guy assemblies, street lights, and any other item(s) necessary for complete removal.

All material removed and not re-used becomes the property of Georgia Power Company. Payment for Removal of Overhead Electric Distribution (Temporary) includes the removal, handling, delivery, and off-loading of all material at a Georgia Power Operating Headquarters specified by the Distribution Engineer.

### **H. Removal of Underground Electric Distribution**

Removal of Underground Electric Distribution and secondary/service lines will be paid for at the contract unit price per linear foot for each size (kV or V) facility removed. Payment is full compensation for removal, handling, delivery, storage, and surplus of materials. Payment is full compensation for all the necessary equipment and labor to remove the Underground Electric Distribution. Payment is full compensation for the entire linear feet removed back to existing or new facilities as shown on the Plans. This includes removal of items such as wire (regardless of the number of phase conductors specified), conduit, transformers, vaults, hardware, and any other item(s) necessary for complete removal.

All material removed and not re-used becomes the property of Georgia Power Company. Payment for Removal of Overhead Electric Distribution includes the removal, handling, delivery, and off-loading of all material at a Georgia Power Operating Headquarters specified by the Distribution Engineer.

### **I. Removal of Poles**

No separate payment will be made for the removal of Steel, Concrete, or Wood Poles. Costs for the removal of poles are included in the price for removal of overhead or underground electric distribution, permanent or temporary.

Payment will be made under:

Item No. 664	Overhead Electric Distribution - _____kV	Per linear foot (meter)
Item No. 664	Overhead Electric Distribution (Secondary/Service) - _____kV	Per linear foot (meter)
Item No. 664	Overhead Electric Distribution (Temporary) - _____kV	Per linear foot (meter)
Item No. 664	Underground Electric Distribution - _____kV	Per linear foot (meter)
Item No. 664	Removal of Overhead Electric Distribution - _____kV	Per linear foot (meter)

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Item No. 664	Removal of Overhead Electric Distribution (Secondary/Service) - ____kV	Per linear foot (meter)
Item No. 664	Removal of Overhead Electric Distribution (Temporary) - _____kV	Per linear foot (meter)
Item No. 664	Removal of Underground Electric Distribution - _____kV	Per linear foot (meter)

**664.5.01 Adjustments**

General Provisions 101 through 150

Office of Utilities

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**SPECIAL PROVISION**

**PROJECT NO:**

**PI NO: 0015913**

**Section 665—Gas Distribution System**

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*Add the following:*

**665.1 General Description**

This Work consists of furnishing materials, labor, tools, equipment, and other items necessary for the complete installation abandonment, removal, relocation, and adjustment of gas distribution systems in accordance to the plans and Specifications.

**665.1.01 Definitions**

General Provisions 101 through 150

Whenever the terms “Company” or [Name of Utility] Natural Gas are used in this Special provision and its related documents, it shall be understood to mean [Name of Utility] Natural Gas its subsidiaries, successors and/or assigns.

The term “Project Coordinator” shall mean the Company’s authorized individual having the authority to give instructions pertaining to the work, to approve or reject the work, and otherwise represent the Company. The “Project Coordinator” shall not however be authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract, Plans, and Specifications nor will they act as an agent for the Contractor.

Blast/Hammer Rock: Any formation requiring blasting or means other than a backhoe or ditching machine.

**665.1.02 Related References**

General Provisions 101 through 150.

**A. Standard Specifications**

[Section 104—Scope of Work](#)

[Section 107—Legal Regulations and Responsibility to the Public](#)

[Section 108—Prosecution and Progress](#)

[Section 205—Roadway Excavation](#)

[Section 207—Excavation and Backfill for Minor Structures](#)

[Section 210—Grading Complete](#)

[Section 400—Hot Mix Asphaltic Concrete Construction](#)

[Section 444—Sawed Joints in Existing Pavements](#)

[Section 500—Concrete Structures](#)

[Section 611—Relaying, Reconstructing or Adjusting to Grade of Miscellaneous Roadway Structures](#)

[Section 615—Jacking or Boring Pipe](#)

[Section 810—Roadway Materials](#)



**B. Related Documents**

[Insert relevant documents from utility company]

**665.1.03 Submittals**

General Provisions 101 through 150.

Refer to the [insert utility company document], current published edition, for gas utility submittal requirements.

**A. As-Built Documentation**

Submit to the Project Coordinator and the Engineer as built documentation of all work provided in accordance with this specification prior to Final Acceptance of the Project. Include in the as-built documents the following documents as a minimum as they are applicable. Supply any installation diagrams at the time of installation. Deliver as -built no later than 30 days after completion of installation.

1. As Built Drawings  
Provide the Department and [name of utility company] Natural Gas with drawings that detail the final installation route of all gas facilities.  
Except for standard bound materials, bind all 8.5"x11" (A4) documentation, including 11" x 17" (A3) drawings folded to 8.5"x11" (A4), in logical groupings in loose-leaf binders of either the 3-ring or plastic slide-ring type. Permanently and appropriately label each such bound grouping of documentation.  
Furnish at least five (5) copies of all bound documentation to both the Engineer and the Project Coordinator.

**665.2 Materials**

**A. Gas Main and Service Line Pipes, Fittings, and Appurtenances**

Ensure all materials provided are in conformance with the requirements and standards set forth in the [name of utility company document], current published edition.

**B. Gas Regulator Station**

Materials to be included in a gas regulator station shall be as follows:

Item #	Quantity	Description
1	3	2" Weld Tee Sch 40
2	1	2" Weld Ell 90 degree Sch 40
3	2	2" Kerotest Weldball Valve ANSI 300 Regular Port WxW
4	5	1/2" Ball Valve 1000# rated, 1/2" x3" Sch 80 Nipple, 1/2" Threadolet, 1/2" Heavy Steel Screw Plug
5	2	2" Fisher 627 Regulator - 1/4" orifice 40# set pressure
6	3	2" Kerotest Weldball Valve ANSI 150 Regular Port WxW
7	1	2" x 6" Sch 80 Steel Nipple Threaded One End
8	1	1" Fisher 1808 Right Angle Body Relief Valve set 45"
9	2	2" x 3" Sch 80 Steel Nipple
10	1	2" x2" x2" Heavy Steel Threaded Tee
11	3	2" Sch 80 Steel Pipe Cut to Length
12	1	2" Rain Cap
13	1	2" Heavy Steel Screw Cap
14	1	1/2" Ball Valve 1000# rated, 1/2" x3" Sch 80 Nipple, 1/2" Threadolet, 1/2" - 3" Dial Pressure Gauge 0-100# Range
15	1	1/2" Ball Valve 1000# rated, 1/2" x3" Sch 80 Nipple, 1/2" Threadolet, 1/2" - 3" Dial Pressure Gauge 0-500# Range

### 665.2.01 Materials Certification

For certain products, assemblies, and materials, in lieu of normal sampling and testing procedures by the Contractor, the Company, and the Department, the Engineer and Project Coordinator may accept from the Contractor the manufacturer's certification with respect to the product involved, under the conditions set forth in the following paragraphs:

1. Ensure certification states/specifies the named product conforms to the [name of utility company document] and representative samples thereof have been sampled and tested as specified.
2. The certification shall either:
  - a. Is accompanied with a certified copy of the test results, or
  - b. Certify such test results are on file with the manufacturer and will be furnished to the Engineer and Project Coordinator upon demand.
3. Ensure certification states/specifies the name and address of the manufacturer and the testing agency and the date of tests; and sets forth the means of identification which will permit field determination of the product delivered to the project as being the product covered by the certification.
4. Submit certification in duplicate with one copy to be sent with the shipment of the covered product to the Department's Project Engineer, and with one copy sent to the Department's State Materials and Research Engineer at 15 Kennedy Drive, Forest Park, Georgia. Ensure certification specifies the project number and contract ID number.  
No Certificate will be required for Portland Cement when furnished from a manufacturer approved by the Department.
5. The Department or the Company will not be responsible for any costs of certification or for any costs of the sampling and testing of products in connection therewith.
6. The Department and the Company reserves the right to require samples and to test products for compliance with pertinent requirements irrespective of prior certification of the products by the manufacturer. Any materials that fail to meet specification requirements will be rejected.

### 665.2.02 Delivery, Storage, and Handling

General Provisions 101 through 150.

Follow all delivery, storage and handling procedures set forth in the [name of utility company document], current published edition.

## 665.3 Construction Requirements

### 665.3.01 Personnel

General Provisions 101 through 150.

Ensure that the construction and installation of all gas utilities is performed by a contractor prequalified/registered by [name of utility company]. A prequalified contractor shall be used. Contact [name of utility company] at the following to obtain the current list of [name of utility company] prequalified Contractors:

[name of utility company]

[name of utility company contact person]

[utility company address]

[utility company phone numbers]

### 665.3.02 Equipment

General Provisions 101 through 150.

Ensure all equipment used is in conformance with the requirements and standards set forth in the [name of utility company document], current published edition.

### 665.3.03 Preparation

General Provisions 101 through 150.

Follow all preparation procedures set forth in the [name of the utility company document], current published edition.

### 665.3.04 Fabrication

General Provisions 101 through 150.

Ensure fabrication procedures and requirements conform to those set forth in the [\[name of the utility company document\]](#), current published edition.

### **665.3.05 Construction**

#### **A. Permission to Enter Private Property**

Comply with [Section 107—Legal Regulations and Responsibility to the Public](#)

Through an agreement between the Department and the Company; the Contractor is given the permission to enter upon private properties found outside the project's construction limits. This permission is granted for the sole purpose of installing gas service lines only and is limited to the area of existing easements obtained by the company. Such permission to enter upon private properties is temporary and such rights shall commence upon project award and automatically expire upon completion and project final acceptance by the Department.

In all cases where it is necessary to enter upon private property; it is the Contractor's sole responsibility to minimize any disruptions to personal property in the commencement of such work thereof. Additionally the following restrictions and requirements shall apply:

1. All work is limited to the installation, relocation, or replacement of gas service lines, including the work necessary to restore each private property as required in number 6 of this subsection.
2. Notify the Engineer and the private property owner, and resident 72 hours before commencing work on said private property.
3. No vehicles or equipment shall be allowed on any private property except for that which is normally required for the installation of said gas service lines.
4. Do not store any materials, vehicles, or equipment on any private property longer than the duration required to perform the said gas service line installation.
5. Do not use any private property as an on-site detour or vehicle path.
6. Immediately following any construction located on private property the contractor at its sole expense shall restore all areas of the same parcel to a condition substantially the same as existed immediately prior to any such disturbances, including without limitation, any and all necessary repairs, and replacement of grassing, landscaping and pavement which may be removed and excavated by the Contractor. Additionally, the Contractor shall be responsible for all necessary repairs to restore the original contours and re-establish the ground cover to control erosion.

#### **B. Finding Existing Underground Utilities and Obstructions**

Comply with [Subsection 107.13](#) and [Subsection 107.21](#).

When unforeseen conflicts require Plan changes, perform the work as altered according to [Subsection 104.03](#) and [Subsection 104.04](#).

Follow all customer notification requirements and obtain approval from the Project Coordinator prior to disrupting existing any gas services required for the installation of the gas facilities shown on the project plans.

#### **C. Excavating Trenches**

Excavate trenches to the proper grade, depth, and width as follows:

##### **7. Trench to Grade**

Ensure excavated trench bottoms are firm, free from boulders, and conform to the established grade.

- a. Backfill, according to Subsection 665.3.05.G, any part of the trench excavated below the established grade. Use Class I or Class II Soils ([Section 810](#)), and firmly compact the soil.
- b. Where the established grade of a trench is in rock, undercut the bottom of the trench by at least 6 in (150 mm), then backfill and compact according to Subsection 665.3.05.G.

Conduct blasting operations strictly according to [Subsection 107.12](#).

- c. Excavate trenches under pavement to grade as follows:

- 1) To remove the pavement, cut it at least 24 in (600 mm) wider than each trench edge to provide solid bearing for the pavement edges when replaced. Remove the pavement according to [Section 444](#), except no separate payment will be made for sawed joints.
- 2) Directional Bore under existing sidewalks, curbs, gutters, and pavements according to [Section 555](#).

- 3) Where possible, jack pipe under an existing pavement according to [Section 615](#), except no separate payment will be made for jacking and boring pipe.

8. **Minimum Trench Depth**

Excavate trenches to provide at least 48 in (1.2 m) cover depth from the pipe to the finished pavement surface, sidewalk, grass plot, etc. unless indicated otherwise on the Plans or by the Engineer.

If any part of a gas main is to be placed in or under a new embankment, finish the embankment to at least a 2 ft (600 mm) plane above the pipe barrel before excavating the trench.

9. **Trench Width**

Excavate trenches wide enough to allow proper installation of pipe, fittings, and other materials.

**D. Directional Boring**

1. Install gas mains and services by means of directional boring at locations shown on the plans or where approved by the Engineer.
2. Ensure the trench width of the excavation conforms to the outside diameter of the pipe as closely as possible.
3. Remove and replace pipe damaged in boring operations at no additional expense to the Department.
4. Use an approved mix to pressure grout voids developed during the installation operation and the Engineer determines are detrimental to the Work.
5. In unconsolidated soil formations, use a gel-forming colloidal drilling fluid with at least 10 percent of high grade carefully processed bentonite to consolidate excavated material, seal the walls of the hole, and lubricate subsequent removal of material and immediate pipe installation.
6. Follow all relevant procedures set forth in the [\[name of utility company document\]](#), current published edition.
7. Ensure the total installation includes a locatable conduit system, with identification markers on each DOT right-of-way fence line where applicable.
8. Continuously monitor the location and alignment of the pilot drill progress to ensure compliance with the proposed installation alignment and to verify depth of the bore. Ensure Monitoring is accomplished by computer generated bore logs which map the bore path based on information provided by the locating/tracking system. Ensure readings or plots are obtained on every drill rod, and are provided to the Inspector on a daily basis. Upon completion of the bore the Contractor will furnish the Engineer an As-built drawing along with a report of the Monitoring of the drilling fluids during the pilot hole and backreamed hole.
9. Ensure excess drilling fluids are contained at the entry and exit points until recycled or removed from the site as directed by the Engineer at no additional cost to the Department. Ensure that all drilling fluids are disposed of in a manner acceptable to the appropriate local, state and federal regulations. The Contractor's work will be immediately suspended by the Engineer whenever drilling fluids seep to the surface other than in the boring entrance or exit pit, or when a paved surface is displaced. The Contractor shall then propose a method to prevent further seepage and/or displacement, and shall remove and dispose of any drilling fluid, slurry and soil from the paved surface prior to resuming the boring operation.
10. Ensure surfaces damaged by the work are restored to their preconstruction conditions at no additional cost to the Department, and with no increase in contract time.

**E. Connecting to Existing Gas Mains**

Connect to existing gas mains at locations shown on the Plans or where approved by the Engineer or Project Coordinator.

Follow all relevant procedures set forth in the [\[name of utility company document\]](#), current published edition.

**F. Laying Gas Mains and Appurtenances**

Follow all relevant procedures set forth in the [\[name of utility company document\]](#), current published edition.

**G. Installing Gas Mains**

Install gas mains at locations shown on the Plans or where approved by the Engineer or Project Coordinator.

Follow all relevant procedures set forth in the [\[name of utility company document\]](#), current published edition.

1. Backfilling

Furnish equipment, labor, and when necessary material required for backfilling the pipe line trenches according to [Section 207](#).

- d. When testing for leaks in open trenches, do not backfill until testing is complete and leaks are eliminated.
- e. When retaining pavement adjacent to trenches, replace removed pavement with the same or better material when approved.
- f. After backfilling, maintain a smooth riding surface until the repaving is complete. No separate payment will be made for replaced pavement unless a bid Item for this work is contained in the Proposal.

**H. Laying Service Lines and Appurtenances**

Install service lines at locations shown on the Plans or where approved by the Engineer or Project Coordinator. Install new pipe from the gas main to the final location of the meter or to points approved by the Engineer to connect with existing or future service lines on abutting property.

Follow all relevant procedures set forth in the [\[name of utility company document\]](#), current published edition.

**I. Lowering Existing Gas Lines**

Lower existing gas mains and services at locations shown on the plans or where approved by the Engineer or Project Coordinator.

Follow all relevant procedures set forth in the [\[name of utility company document\]](#), current published edition.

**J. Service Line Tie-Over**

Tie existing service line to new service line as shown on the plans or where approved by the Engineer or Project Coordinator. Install new pipe from the gas main to the final location of the Service Line Tie-Over or to points approved by the Engineer or Project Coordinator to connect with existing service lines on abutting property.

Follow all relevant procedures set forth in the [\[name of utility company document\]](#), current published edition.

**K. Regulator Station**

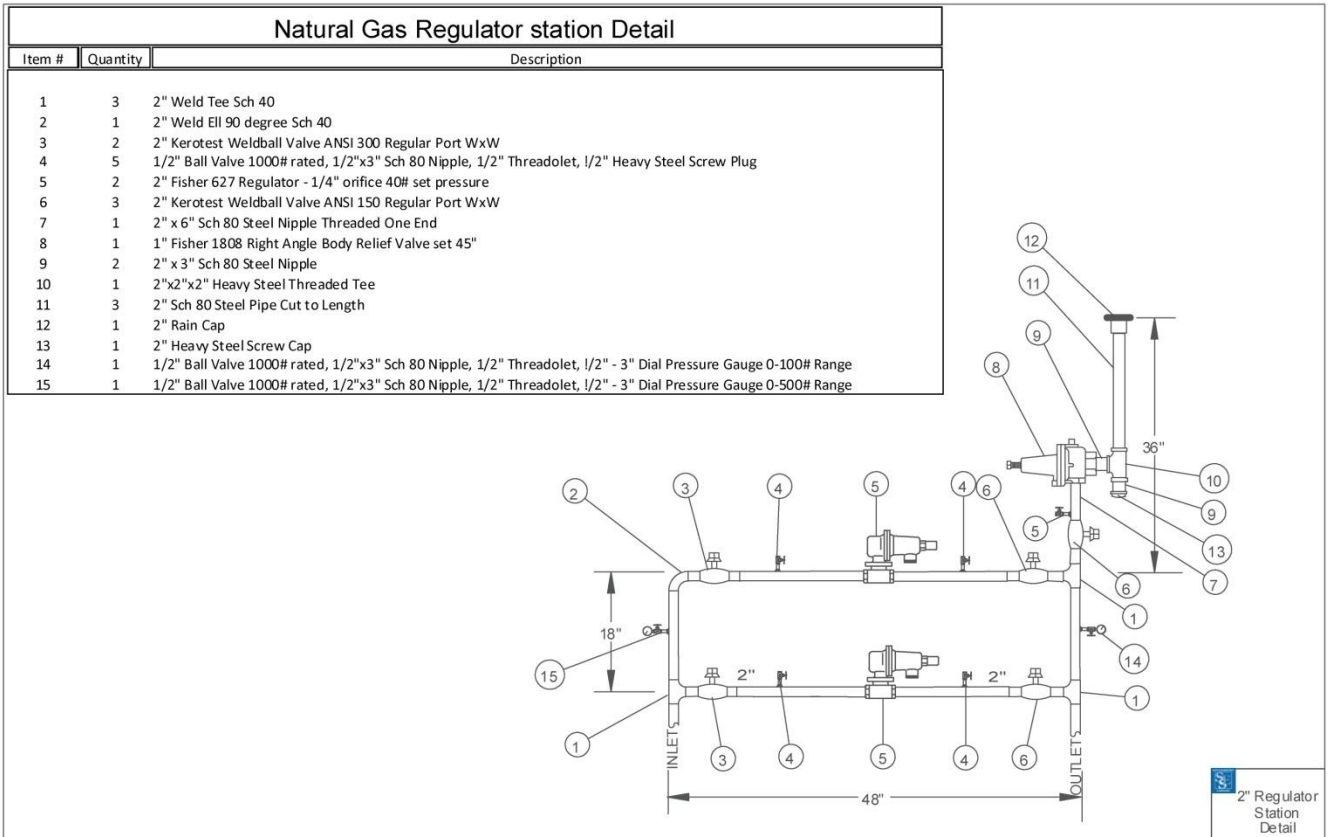
Install new gas regulator station at locations shown on the plans or where designated by the Engineer or Project Coordinator.

Construct all piping, valves, and regulator in accordance with the following detail.

**L. Raising/Lower Existing Gas Valves**

Raise/lower existing gas valves at locations shown on the plans or where approved by the Engineer or Project Coordinator.

Follow all relevant procedures set forth in the [\[name of utility company document\]](#), current published edition.



**665.3.06 Quality Acceptance**

**A. Testing Gas Mains and Service Connections**

Follow all relevant procedures set forth in the [name of utility company document], current published edition.

**B. Semi-Final Utility Inspection**

When the contractor has finished the Gas Distribution System Work, the Contractor may, by written notice, request that a semi-final utility inspection be made. The Engineer, along with the Project Coordinator, will determine if the Gas Distribution System Work is ready for semi-final utility inspection. The Engineer, in agreement with the Project Coordinator, will have the final decision on when the Gas Distribution System Work is complete and thereby ready for semi-final utility inspection. If all the Gas Distribution System Work provided for and contemplated by the Contract is found to be complete to the Engineer’s satisfaction and all documents required in connection with the Gas Distribution System Work has been submitted and accepted then, the Contractor may request transfer of the completed Gas Distribution System Work to [name of utility company].

Once the new facilities are in service and accepted by the Company, provide written correspondence notifying the Engineer and Owner that utility location services will be the responsibility of [name of utility company].

Such partial acceptance shall in no way relieve the Contractor of the responsibility for satisfactory completion of the Contract, or for failure of any portion of the Gas Distribution System Work prior to Final Acceptance of the Project.

**665.3.07 Contractor Warranty and Maintenance**

General Provisions 101 through 150.

**665.4 Measurement**

Gas mains, service lines, and other items of work in this Specification, complete, in place, and accepted, are measured for payment as follows:

**A. Gas Mains**

Gas mains are measured in linear feet (meter) for each size installed. The mains are measured along the center, parallel to the slope of the pipe, from end of each installation through all valves and fittings, and shall include the installation of valves, anodes, test wires, and test stations as dictated by the [name of utility company document], current published edition.

**B. Fittings**

Pipe fittings are considered incidental to the gas line in which they are used and are not measured for separate payment.

**C. Tie-ins and Valves Installations**

All tie-ins and valve installations associated with tie-ins and regulator stations are not measured for separate payment and shall be included in the per foot price of installed gas main.

**D. Service Line Tie-Over**

Service line Tie-Overs are measured by the number of each size, material, and type installed. The types specified will either be short side service tie-over for those that do not require the crossing of a street or roadway; and long side service tie-over when the installation will span a roadway.

**E. Service Lines**

Service lines are measured by the number of each size, material, and type installed. The types specified will either be short side service for those that do not require the crossing of a street or roadway; and long side service when the installation will span a roadway.

**F. Gas Facilities to be Abandoned or Removed**

The abandonment or removal of all deactivated facilities is not measured for separate payment and shall be included in the per foot price of installed gas main. Abandoned or removal of facilities include: main, valves, service, service risers and regulator stations and pits.

**G. Blast/Hammer Rock**

Blast/Hammer Rock is not measured for payment separately.

**H. Gas Main and Service Testing**

There is no separate measurement for payment on the testing of gas mains and services, as required by the Company and addressed in the [name of utility company document].

**I. Steel Casing**

Steel Casings are measured per linear foot (meter) for each size of casing installed. Payment is full compensation for furnishing all materials, excavating, backfilling, removing, and replacing pavement, and providing other incidentals necessary to complete the Item.

**J. Regulator Station**

This will be measured per each for each size of regulator installed.

**K. Excavation for Trenches or Directional Boring**

Excavation or Directional Boring is not measured for payment separately, but their costs are included in the amount bid for the Item to which it pertains.

**L. Incidentals**

Backfilling, pavement removed, pavement replaced, and other incidentals are not measured for separate payment.

**M. Raise/Lower Gas Valves**

This will be measured per each for gas valves raised or lowered.



### **665.4.01 Limits**

General Provisions 101 through 150.

### **665.5 Payment**

The Contract Unit Price for each Item, complete and accepted, will include all costs incidental to the construction of the Item according to the Plans and as specified in this Section.

The Unit Prices bid will include due allowance for the salvage value of all materials removed from existing or temporary lines, and not installed in the completed work. All such surplus items will become the property of the Contractor unless otherwise specified.

Payment for any Item listed below is full compensation for the Item or Items, complete in place. When placing gas mains or service lines in casings, receive separate payment for the cost of furnishing and installing the casings.

#### **A. Gas Mains**

Gas Mains will be paid for at the Contract Unit Price per linear foot (meter) for each size of pipe installed. Payment is full compensation for furnishing all materials including fittings, excavating, backfilling, removing, and replacing pavement, testing and sterilizing, and providing other incidentals necessary to complete the Item. Payment will also include the cost of laying pipe in casing when required.

#### **B. Service Line Tie-Over**

Service Line Tie-Overs will be paid for at the Contract Unit Price per each for each type (Long Side, or Short Side), size and material installed. Payment is full compensation for excavating, erosion control, backfilling, removing, and replacing pavement, testing and placing fittings, jointing, and connecting to the main, and providing other incidentals necessary to complete the Item. Payment will also include all work referenced in Section 665.3.05.A.6 of this specification and laying pipe in casing when required.

#### **C. Service Lines**

Service Lines will be paid for at the Contract Unit Price per each for each type (Long Side, or Short Side), size and material installed. Payment is full compensation for excavating, erosion control, backfilling, removing, and replacing pavement, testing and placing fittings, jointing, and connecting to the main, and providing other incidentals necessary to complete the Item. Payment will also include all work referenced in Section 665.3.05.A.6 of this specification and laying pipe in casing when required.

#### **D. Excavation for Trenches or Directional Boring**

No separate payment will be made for excavation or directional boring.

#### **E. Blast/Hammer Rock**

No separate payment will be made for Blast/Hammer Rock, but its costs are included in the project's total amount bid for earthwork.

#### **F. Steel Casing**

Steel Casings will be paid for at the Contract Unit Price per linear foot (meter) for each size of casing installed. Payment is full compensation for furnishing all materials, excavating, backfilling, removing and replacing pavement, and providing other incidentals necessary to complete the Item.

#### **G. Regulator Station**

This will be paid for at the Contract Unit Price per each for each size of regulator installed. Payment is full compensation for furnishing all materials, excavating, backfilling, removing and replacing pavement, and providing other incidentals necessary to complete the Item.

#### **H. Raising/Lowering Gas Valves**

This will be paid for at the Contract Unit Price per each for gas valve raised or lowered. Payment is full compensation for furnishing all materials, excavating, backfilling, removing and replacing pavement, and providing other incidentals necessary to complete the Item.



## Section 665—Gas Distribution System

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Payment will be made under:

Item No. 665	Plastic Gas Main _____ in (mm)	Per linear foot (meter)
Item No. 665	Steel Gas Main _____ in. (mm)	Per linear foot (meter)
Item No. 665	Steel Casing _____ in (mm)	Per linear foot (meter)
Item No. 665	Long Side Service ___in (mm), ( <u>material</u> )	Per each
Item No. 665	Short Side Service ___in (mm), ( <u>material</u> )	Per each
Item No. 665	Long Side Service Tie-Over ___in (mm), ( <u>material</u> )	Per each
Item No. 665	Short Side Service Tie-Over ___in (mm), ( <u>material</u> )	Per each
Item No. 665	Regulator Station _____in. (mm)	Per each
Item No. 665	Raise/Low er Gas Valve	Per each

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**SPECIAL PROVISION**

**PROJECT: FY 18 Bridge Replacement**

**COUNTY: Cook, Tattnall, Taylor, Wilcox**

**P.I.: 0015913**

**Section 670—Water Distribution System**

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*Delete Section 670 and substitute the following:*

**670.1 General Description**

This work consists of furnishing materials, labor, tools, equipment, and other items necessary for installing, removing, abandoning, relocating, and adjusting water distribution systems according to the Plans and Specifications.

**670.1.01 Definitions**

- A. General Provisions 101 through 150
- B. The term “The Facility Owner” shall be understood to mean “**place utility company name**” or “**add if more than one company**”.
- C. The term “Project Manager” shall mean the authorized individual having the authority to give instructions pertaining to the work and to approve or reject the work. The “Project Manager” shall not however be authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract, Plans, and Specifications, nor shall they act as an agent for the Contractor. All Contract items pertaining to the Utility Owner shall be coordinated with the Georgia Department of Transportation’s (GDOT) Project Manager and the Utility Owner.

**670.1.02 Related References**

**A. Standard Specifications**

[Section 104—Scope of Work](#)

[Section 107—Legal Regulations and Responsibility to the Public](#)

[Section 108—Prosecution and Progress](#)

[Section 205—Roadway Excavation](#)

[Section 207—Excavation and Backfill for Minor Structures](#)

[Section 210—Grading Complete](#)

[Section 400—Hot Mix Asphaltic Concrete Construction](#)

[Section 444—Sawed Joints in Existing Pavements](#)

[Section 500—Concrete Structures](#)

[Section 600—Controlled Low Strength Flowable Fill](#)

[Section 611—Relaying, Reconstructing or Adjusting to Grade of Miscellaneous Roadway Structures](#)

[Section 615—Jacking or Boring Pipe](#)

[Section 810—Roadway Materials](#)

### **B. Related Documents**

1. General Provisions 101 through 150.
2. All products supplied and all work performed shall be in accordance with The Facility Owner's Standard Specifications, applicable standards from American Society for Testing and Material (ASTM), American Water Works Association (AWWA), American National Standards Institute (ANSI), GDOT Utility Accommodation Policy and Standards, and the Georgia Environmental Protection Division (EPD) Minimum Standards for Public Water Systems. Latest revisions of all standards shall apply.

### **670.1.03 Submittals**

**A.** General Provisions 101 through 150.

**B.** Refer to The Facility Owner's Standard Specifications, current published edition, for water utility submittal requirements. Copies of all submittals and documentation shall be submitted to GDOT, who shall distribute to the Utility Owner.

### **C. Shop Drawings / Product Data**

1. Submit [6] copies of the following submittals to the GDOT Project Manager:
  - a. Product data, including size, dimension, capacity, pressure rating, accessories, and special features, installation instructions, and operating characteristics for all proposed materials to show compliance with the requirements of this Special Provision.
  - b. Test reports specified in the Quality Acceptance section of this Special Provision.
  - c. Pipe manufacturer certification of compliance with specifications.
  - d. Operation and maintenance literature, warranties, and other specified information.

### **D. Construction Record Documentation**

1. The Contractor shall record on two sets of utility as-built drawings that will record changes and deviations from the Contract Drawings in sizes, lines or grade. Record also the exact final horizontal and vertical locations of underground utilities and appurtenances to an accuracy of +/- 0.2 ft, referenced to permanent surface improvements. Drawings shall utilize State Plane Coordinates and shall be legibly marked to record actual construction and submitted to GDOT no later than 30 days after installation and prior to Final Acceptance of the Project. The Utility Owner shall determine if the utility record drawings are complete prior to Final Acceptance of the project.
2. Record Drawings shall be signed and sealed by a professional engineer or land surveyor registered in the State of Georgia.
3. Record Drawings shall also be submitted in digital format as indicated in accordance with the Department's current Electronic Utility File Guidelines.
4. Except for standard bound materials, bind all 8.5"x11" (A4) documentation, including 11" x 17" (A3) drawings folded to 8.5"x11" (A4), in logical groupings in loose-leaf binders of either the 3-ring or plastic slide-ring type. Permanently and appropriately label each such bound grouping of documentation.

#### **670.1.04 Quality Assurance**

- A.** The Contractor shall comply with applicable codes, ordinances, rules, regulations and laws of local, municipal, state or federal authorities having jurisdiction over the Project.
- B.** Furnish manufactured items, pipe, fittings, valves, service components, and appurtenances from manufacturers having regularly produced such items as specified herein which have proven satisfactory in actual service, over at least a 2-year period, or as approved by the Utility Owner and GDOT.
- C.** Regardless of tolerances permitted by industry standards specified herein, the Utility Owner or the GDOT Project Manager may reject pipe or appurtenances at the manufacturing plant or project site which have cracks, chips, blisters, rough interior or exterior surface, evidence of structural weakness, joint defects, or other imperfections that might in the opinion of the Project Manager contribute to reduced functional capability, accelerated deterioration or reduced structural strength.
- D.** The Utility Owner and the Utility Owner's consultant shall have the right to visit and inspect the work at any time. The Utility Owner may also have an Inspector assigned to the project authorized to inspect portions or all of the utility work done and the preparation, fabrication, or manufacture of the materials to be used. The Utility Owner shall be able to advise GDOT Project Manager of any observed discrepancies or potential problems. The cost of these inspections shall be the responsibility of the Utility Owner.
- E.** GDOT shall notify the Utility Owner before authorizing any changes or deviations which might affect the Utility Owner's facilities. Contractor shall notify GDOT and Utility Owner a minimum of 24 hours prior to beginning work on utilities.
- F.** The Utility Owner shall be notified by GDOT Project Manager when all utility work is complete and ready for final inspection. The Utility Owner shall be invited to attend the final inspection and may provide a corrections list to GDOT Project Manager prior to the final inspection.
- G.** The Contractor shall verify the actual location and depth of all utilities prior to construction. All utilities and structures shall be protected during construction. Any damaged facilities shall be repaired or replaced at the Contractor's expense.

#### **670.2 Materials**

All materials provided shall be in conformance with the requirements and standards set forth in The Facility Owner's Standard Specifications, current published edition. All pipeline and appurtenance materials in contact with potable water shall be National Sanitation Foundation (NSF) 61 Certified and part of GDOT QPL list.

Pipes and appurtenances shall comply with Section 1417(a)(1) of the Safe Water Drinking Act as amended in 2011 which prohibits the use of any pipe, any pipe or plumbing fitting or fixture, and solder, or any flux, after June 1986, in the installation or repair of (i) any public water system; or (ii) any plumbing in a residential or non-residential facility providing water for human consumption, that is not lead free as defined in Section 1417(d).

##### **670.2.01 Water Piping systems and Appurtenances**

#### **A. Ductile Iron Pipe and Fittings**

- 1. Ductile iron pipe shall meet the latest edition of ANSI/AWWA C150/A21.50 and C151/A21.51 for the class and joint specified with a nominal laying length of 18 (5.5 m) to 20 feet (6 m). Joints for buried ductile iron pipe shall be mechanical or push-on joints. Unless specified otherwise in The Facility Owner's Standard Specifications, ductile iron pipe diameters 12 inch (300 mm) or less shall be minimum Pressure Class 350, while pipe diameters greater than 12 inch (300 mm) shall be minimum Pressure Class 250.
- 2. Ductile iron pipe for the interior of structures and above ground installations shall be flanged. Flanges shall be ductile iron and shall be threaded-on flanges conforming to ANSI/AWWA C115/A21.15 or cast-on flanges conforming to ANSI/AWWA C110/A21.10. The minimum class thickness for ductile iron flanged pipe to be threaded is Class 53.
- 3. Interior surfaces of ductile iron pipe and fittings shall be cement mortar lined in accordance with AWWA C104.

4. Ductile iron shall have an exterior coating as specified in AWWA C151 for ductile iron pipe and AWWA C153/C110 for ductile iron fittings.
5. Buried ductile iron pipe and fittings shall be polyethylene encased at locations indicated on the Plans or as conditions warrant. Polyethylene encasement tubing shall be in accordance with ANSI/AWWA C105/A21.5 and ASTM A674 and shall have a minimum thickness of 8 mils. Polyethylene encasement tubing shall be blue in color to designate potable water.
6. Fittings: Ductile iron fittings shall be epoxy coated and meet the requirements of ANSI/AWWA C153/A21.53 or ANSI/AWWA C110 A21.10 with a minimum pressure rating of 250 psi. Ends shall be restrained mechanical joint. All ductile iron fittings shall bear the NSF approval seal for potable water pipe.
7. Mechanical Joint Fittings: Mechanical joints consisting of bell, socket, gland, gasket, bolts, and nuts shall conform to ANSI/AWWA C111/A21.11.
8. Push-On Joints: Push-on joints shall be designed in accordance with ANSI/AWWA C111/A21.11. Joint lubrication shall be as furnished by the manufacturer.
9. Rubber gasket joints for push-on or mechanical joints shall conform to the requirements of ANSI/AWWA C111/A21.11.
10. Restrained Joints: Restrained joints shall be provided as shown on the Plans and where required for thrust restraint. Restrained joints shall not require field welding or grooves cut into the pipe barrel for restraint. The restraining joints for mechanical joint fittings shall conform to the requirements of ANSI/AWWA C111/A21.11 with assembly in conformance with AWWA C600 and manufacturer's recommendations. Restrained joints for pipe shall be mechanical joints with ductile iron retainer or push-on type joints and shall have a minimum rated working pressure of 250 psi.
11. Mechanical joint retainer glands may be used to restrain mechanical joint pipe and fittings to the plain end of ductile iron pipe and fittings. Restrainer glands shall be manufactured of ductile iron per ASTM A536.
12. Corrosion-resistant bolts used with ductile iron joints shall be high-strength, low-alloy steel as specified in ANSI/AWWA C111/A21.11.
13. Welded Outlets: Welded outlets in ductile iron pipe shall be provided where specified and indicated on the Plans. Outlets shall be fabricated by welding sections of ductile iron pipe manufactured in accordance with ANSI/AWWA C151/A21.51. Welded outlet pipe shall be fabricated only by the pipe manufacturer. The minimum ductile iron pipe thickness for fabrication of welded outlet pipe shall be Thickness Class 53 for 4-inch to 54-inch (100 to 1350 mm) diameter pipe. All joints on welded-on branch outlets shall be provided in accordance with the latest revision of ANSI/AWWA C111/A21.11 and/or ANSI/AWWA C115/A21.15, as applicable. After the outlets are welded together and prior to finishing, the assembly shall be subjected to a 15 psi air test for leakage. The maximum size and laying length of the welded-on branch outlet shall be recommended by the pipe manufacturer and acceptable to the Utility Owner for the field conditions and connecting pipe or valve.

**B. Polyvinyl Chloride (PVC) Pipe**

1. PVC pipe diameters 4-inch through 12-inch (100 mm to 300 mm) shall meet ANSI/AWWA C900 requirements, and shall be a minimum pipe dimension ratio (DR) 18, Pressure Class 235 psi. PVC pipe diameters 14-inch (350 mm) and greater shall meet ANSI/AWWA C905 requirements, shall be DR 18 minimum, Pressure Class 235 psi. Pipe shall have a bell with an integral wall section with a factory installed, solid cross section elastomeric ring in accordance with ASTM F477.
2. All PVC pipe shall be formulated for sunlight exposure, be blue in color to designate potable water, and bear the NSF approval seal.
3. Joints for 4-inch (100 mm) and larger PVC pipe shall meet the requirements of AWWA C900/C905, latest edition. The rubber gaskets used for the joints shall consist of flexible elastomeric material conforming to ASTM F477.

4. PVC pipe shall have the same outside diameter (OD) as ductile iron pipe and be compatible for use with ductile iron fittings.
5. Fittings for PVC pipe 4 inches (100 mm) and larger shall be ductile iron mechanical joint and comply with the requirements set forth in the specifications for Ductile Iron Pipe and Fittings.
6. Restrained Joints: Restrained joints shall be provided as shown on the Plans and where required for thrust restraint. Restrained joints shall comply with the requirements set forth in the specifications for Ductile Iron Pipe and Fittings.
7. Unless specified otherwise in the Plans or The Facility Owner's Standard Specifications, 2-inch (50 mm) and 3-inch (75 mm) diameter PVC pipe shall conform to the requirements of ASTM D2241 Class 1120 or 1220 (SDR 21) with a working pressure rating of 200 psi with integral bell gasketed joints. Pipe is to be manufactured to IPS standard pipe equivalent outside diameters.
8. Schedule 80 PVC pipes smaller than 4-inch (100 mm) nominal diameter shall be in accordance with ASTM D1785. Schedule 80 pipe shall have threaded joints. Solvent cemented joints are not allowed for buried pipes. Threaded type fittings for Schedule 80 PVC pipe shall be in conformance with ASTM D2464. All threaded joints shall be watertight.
9. Flanges for Schedule 80 PVC pipe shall be rated for a 150 psi working pressure with ANSI B16.1 dimensions and bolting pattern. Flanges shall be connected to PVC piping with threaded joints in accordance with ASTM D2467 or ASTM 2464, respectively.

**C. Fusible PVC Pipe**

1. Fusible PVC pipe sizes 4-inch (100 mm) to 36-inch (900 mm) shall conform to AWWA C900/C905 as applicable and follow the dimension ratios (DR) set forth in the requirements listed for PVC pipe.
2. Fusible PVC pipe shall be blue in color to designate potable water.
3. Fusible PVC pipe shall be extruded with plain ends. The ends shall be square to the pipe and free of any bevel or chamfer. There shall be no bell or gasket of any kind incorporated into the pipe.
4. Fusible PVC pipe shall be manufactured in a standard 40-foot nominal length-, or custom lengths as specified.
5. Joints shall be made by butt fusing sections of pipe with manufacturer-approved equipment.
6. Fittings shall be ductile iron mechanical joint and comply with the requirements set forth in the specifications for Ductile Iron Pipe and Fittings.

**D. High Density Polyethylene (HDPE) Pipe**

1. HDPE pipe sizes 4-inch (100 mm) and larger shall be a PE 4710/3408 high density, extra-high molecular weight polyethylene manufactured from first-quality high density polyethylene resin containing no additives, fillers, or extenders. The HDPE pipe shall have an ASTM D3350 cell classification of PE 445574C , shall meet the requirements of AWWA C906, and shall be sized based upon the ductile iron pipe size (DIPS), outside diameter (OD) sizing system.. The HDPE pipe shall be a minimum DR 11, pressure class 160 psi, and shall bear the NSF approval seal.
2. HDPE pipe shall be blue or marked with a permanent blue stripe to designate potable water.
3. Joints shall be made by butt fusing sections of pipe with manufacturer-approved equipment.
4. Fittings shall be ductile iron mechanical joint meeting the requirements of ANSI/AWWA C110/A21.10 and ANSI/AWWA C111/A21.11.
5. The pipe shall have fusion welded restrainer ring, follower gland, and a 12-inch (300 mm) stainless steel insert for the mechanical joint connection.
6. HDPE water mains shall be properly sized utilizing the inside diameter of the nominal pipe diameter. If during construction HDPE is substituted for other pipe materials, the Contractor shall verify that the inside diameter of the HDPE is the same or larger than the inside diameter of the pipe originally specified.

**E. Steel Casing Pipe**

1. All materials, design, fabrication, handling, and testing of steel casing pipe shall conform to the requirements of ASTM A139, AWWA C200 and AWWA Manual M11 "Steel Pipe – A Guide for Design and Installation."
2. Steel casing pipe shall be new, smooth-wall, carbon steel pipe conforming to ASTM Specification A139, Grade B with a minimum yield strength of 35,000 psi. Steel casings shall be used with the size, minimum thickness, length, and coating specified on the Plans or The Facility Owner's Standard Specifications.
3. Additional anti-corrosion measures, as specified by the manufacturer or indicated on the Plans, shall be provided at connectors, couplings, rollers, restraints, etc.
4. Unless specified otherwise in the Plans or The Facility Owner's Standard Specifications, casing pipe end seals shall consist of 1/8-inch (6 mm) thick flexible synthetic rubber boot with adjustable stainless steel banding straps. The annular space of the casing shall not be filled with concrete or grout.
5. Casing spacers shall consist of a stainless steel shell, PVC ribbed liner, and non-conducting separators to keep the carrier pipe from touching the casing pipe. Spacers shall be provided at a maximum of 10-foot intervals and within 2 feet (0.6 m) of the end of the casing pipe.

**F. Pipe Detection Wire**

1. Unless otherwise specified by the Plans or The Facility Owner's Standard Specifications, open cut installations of non-metallic pipe shall include minimum #12 gauge tracing wire. Pipe installed by directional drill shall include two (2) insulated 8 gauge tracer wire. Wire shall be solid copper insulated with HDPE installed along pipe, wrapped around service line stub outs and stubbed into valve boxes for locating purposes. Wire shall be properly spliced to provide continuous conductivity.

**G. Warning Tape**

1. Water mains shall be installed with polyethylene film warning tape manufactured for marking and identifying underground water utilities. Tape shall be a minimum of 2 inches (50 mm) wide and 4 mils thick, blue in color, with continuously printed letters reading "CAUTION BURIED WATER LINE BELOW".

**H. Gate Valves**

1. Gate valves 3 inches (80 mm) and larger shall be of the resilient seat type meeting the requirements of AWWA C509 or C515. Valves shall be iron body, bronze trimmed, with non-rising stems, and shall be fusion-bonded epoxy coated per ANSI/AWWA C550. Valves shall have a minimum design working pressure of 200 psi.
2. Valves shall be manually operated by nut and open counter-clockwise unless specified otherwise in the Plans or The Facility Owner's Standard Specifications.
3. The resilient seating arrangement shall provide zero leakage at the design working pressure when installed with line flow in either direction. All ferrous surfaces inside and outside shall have a fusion bonded epoxy coating. All valves shall be provided with O-ring seals. The design and machining of valves shall be such as to permit replacing the O-ring seals in the valves while in service without leakage.
4. All gate valves, when fully opened, shall have an unobstructed waterway diameter equal to or larger than the full nominal diameter of the valve.
5. In general, valves shall be designed for vertical installation. Valves installed in the horizontal position shall be provided with bevel gears, extended gear case, rollers, tracks, and scrapers.
6. Exposed or above-ground gate valves shall be outside screw and yoke (OS&Y) flanged joint type with an operating hand wheel. The face-to-face dimensions and drilling shall conform to ANSI B16.10 for Class 125 flanged joint end gate valves.
7. Valves shall include mechanical joints, bolts, glands, gaskets, and all other materials necessary to join to existing work.

8. Provide brass identification tag imprinted with “WATER”, valve size, valve type, and direction and number of turns to open. Provide a ¼-inch (8 mm) hole in the brass tag and attach the tag to the end of the locate wire (twist wire around tag). Tag shall be 2-inch (50 mm) diameter and ⅛-inch (6 mm) thick brass with a ¼-inch (8 mm) hole.

**I. Insertion Valve**

1. Insertion type valves shall be resilient wedge gate valves designed to be installed into an existing pressurized potable water main without interruption of flow through the pipe and no reduction of line pressure.
  - a. Valve shall be fusion-bonded epoxy coated in compliance with AWWA C550.
  - b. The construction of the resilient wedge shall comply with AWWA C509 requirements.
  - c. The resilient wedge shall be fully encapsulated with EPDM rubber and shall seat on the valve body and not the pipe. The resilient wedge shall be totally independent of the carrier pipe.
  - d. Valve shall be restrained to the pipe.
  - e. Valves shall be suitable for operating pressures up to 250 psi.

**J. Butterfly Valves**

1. Butterfly valves shall be of the tight-closing, rubber seated type, with rubber seat positively locking in place sealing against flow from either direction. Valves shall be hand operated with cast or ductile iron bodies. Valves shall conform to the requirements of AWWA C504, Class 150B, and shall be fusion-bonded epoxy coated per ANSI/AWWA C550.
2. Valves shall have a 2-inch (50 mm) square operating nut and shall be installed with extension stems to extend the operating nut in accordance with the project details. Valves shall open by turning the operating nut counter clockwise unless specified otherwise in the Plans or The Facility Owner’s Standard Specifications.
3. Valve shafts shall be of 304 or 316 stainless steel.
4. Buried butterfly valve end connections shall be installed using restrained mechanical joints.
5. Flanged valves shall be fully faced and drilled in accordance with ANSI Standard B16.1, Class 125.
6. Provide brass identification tag imprinted with “WATER”, valve size, valve type, and direction and number of turns to open. Provide a ¼-inch (8 mm) hole in the brass tag and attach the tag to the end of the locate wire (twist wire around tag). Tag shall be 2-inch (50 mm) diameter and ⅛-inch (6 mm) thick brass with a ¼-inch (8 mm) hole.

**K. Ball Valves**

1. Ball valves 2-inch (50 mm) and smaller shall be designed for a working pressure of not less than 175 psi. End connection shall be threaded. The body and all parts shall be made in accordance with AWWA C800 and ASTM B62 latest revision.

**L. Tapping Sleeves and Valve Assembly**

1. Tapping sleeves and valves sizes 4-inches (100 mm) and larger shall be stainless steel with wraparound gasket style, or ductile iron of the split-sleeve, mechanical joint type. Tapping sleeves shall be rated for a minimum 150 psi working pressure in accordance with ANSI/AWWA C110/A21.10.
2. When tapping an existing asbestos cement pipe, a stainless steel tapping sleeve which contains a full gasketed surface within the sleeve body shall be used due to variances in the manufactured outside diameter of the asbestos cement pipe.
3. Tapping sleeve shall have an outlet flange per ANSI B16.1, Class 125 standard.
4. The Contractor shall determine the outside diameter of the existing main before ordering the sleeve.
5. Tapping valves shall be mechanical joint outlet, non-rising stem, resilient seated gate valves meeting the applicable requirements of ANSI/AWWA C509/C515 and C550 with a minimum design working pressure of 200 psi.
6. Tapping valves shall be specifically designed for pressure tapping with sufficient seat opening to allow full diameter taps to be made.
7. Tapping valves shall be manufactured with an integral tapping flange having a raised lip design.



8. Tapping valves shall be furnished with a combination flange and mechanical joint for connecting the branch to the main.

**M. Valve Boxes**

1. All valves shall be equipped with valve boxes. The valve boxes shall be heavy, roadway type boxes. The valve box cover shall be marked "WATER VALVE" or "WATER".
2. Valve box materials shall conform to the requirements and standards set forth in the The Facility Owner's Standard Specifications, current published edition.
3. The valve boxes shall be adjustable up or down from the nominal required cover over the pipe. Extensions shall be provided as necessary. A precast concrete ring shall be placed around the valve box opening when outside of paved areas.
4. Valves shall be furnished with extension stems as necessary to bring the operating nut to within 24 inches (600 mm) minimum of the top of the valve box.

**N. Service Connection Assemblies**

1. Water service connections and plumbing should conform to the standards set forth in The Facility Owner's Standard Specifications and relevant local and/or state plumbing codes or to the Standard Plumbing Code as applicable within the jurisdiction in which the system is located.
2. Service connection assemblies shall be provided for all new service line connections to existing meters. Existing service lines indicated for replacement shall be replaced with new materials from the water main to the existing or new water meter.
3. Service connection assemblies shall include:
  - a. Service saddle
  - b. Corporation stop
  - c. Service line
  - d. Fittings
  - e. Curb stop
  - f. Water meter box
  - g. Water meter (separate Pay Item for new service connections)
  - h. Backflow preventer (separate Pay Item for new service connections)

**O. Service Saddles**

1. Service saddles shall have ductile iron or bronze body with stainless steel epoxy coated double tie straps and nuts with pressure rating not less than that of the pipe to which it is to be connected.
2. Saddles shall have a rubber gasket cemented to the body, with compatible threading between the saddle and corporation stop. Saddles shall conform to ANSI/AWWA C800 standards.
3. The service saddle shall provide full support around the circumference of the pipe, providing a bearing area of sufficient width so that pipe will not distort when the saddle is tightened.

**P. Water Service Pipe**

1. Polyethylene (PE) pipe for water service lines shall conform to AWWA C901 and ASTM D-2737 and shall be 200 psi pipe, SDR 9 for copper tube size (CTS). Polyethylene extrusion compound from which the polyethylene pipe is extruded shall comply with applicable requirements for PE 3408 ultra-high molecular weight polyethylene plastic material as specified in AWWA C901.
2. Marking on the PE service pipe shall include the nominal pipe or tubing size, the type of plastic material, the standard thermoplastic pipe dimension ratio or the pressure rating in psi, the ASTM designation with which the pipe complies, and manufacturer's name or trade mark and code. It shall also include the NSF seal of approval for use with potable water.

3. Copper tubing for water service lines shall be seamless and shall conform to ANSI/AWWA C800 and ASTM B88, Type K soft, suitable for potable water use with a working pressure of 150 psi.
4. Water service line fittings shall be as indicated in The Facility Owner's Standard Specifications.

**Q. Corporation and Curb Stops**

1. Corporation stops, curb stops, and other appurtenances for plastic or copper service lines shall meet the requirements of ASTM B62 and AWWA C800.
2. Service line taps shall be equipped with corporation stops. Corporation stops in sizes 1-inch (25 mm) through 2-inch (50 mm) shall be manufactured from cast bronze with machined fitting surfaces. The corporation shall be pressure rated to no less than 150 psi.
3. Curb stops shall be ball valve type and made of bronze. Pipe connections shall be suitable for the type of service pipe used and shall be pressure rated for no less than 150 psi.

**R. Water Meters**

1. Water meters shall conform to the requirements and standards set forth in The Facility Owner's Standard Specifications.

**S. Meter Boxes**

1. Water meter boxes shall be high density reinforced plastic body with one piece cast iron lid with lettering "WATER METER" on cover unless otherwise indicated on the Plans. Recessed hole shall be included in lid, if required by Utility Owner for electronic reading capability. Provide box of size and height appropriate to installation of meter and accessories required. Meter and curb stop shall be fully encased by the meter box.

**T. Concrete Vault**

1. Concrete vaults shall conform to the requirements and standards set forth in The Facility Owner's Standard Specifications and standard details.

**U. Air Release Valve Assembly**

1. Air release, air/vacuum valves, and combination air valves shall be suitable for use with potable water systems and manufactured in compliance with ANSI/AWWA C512.
2. Air release valves shall have a small venting orifice to vent the accumulation of air and other gases in the line or system under pressure.
3. Air/vacuum valves shall have a large venting orifice to permit the release of air as the line is filling or relieve the vacuum as the line is draining or is under negative pressure.
4. Combination air valves shall have operating features of both the air/vacuum valve and air release valve.
5. Valves shall be suitable for pressures up to 250 psi.
6. Air release, air/vacuum valves, and combination air valves shall conform to the requirements set forth in The Facility Owner's Standard Specifications and standard details.

**V. Fire Hydrant Assembly**

1. Fire hydrants shall be the compressive, post style, dry barrel type, and shall conform to the requirements of ANSI/AWWA C502 and local code requirements. The valve opening shall not be less than 4½-inch (115 mm). All hydrants shall be complete including joint assemblies.
2. Hydrants shall be suitable for working pressure of 150 psi and shall be hydrostatically factory tested to 300 psi.
3. All working parts, including the seat ring, shall be removable through the top without excavating or disturbing the barrel of the hydrant.
4. Hydrants shall be constructed with a lubricant chamber which encloses the operating threads and which provides automatic lubrication of the threads and bearing surfaces each time the hydrant is operated. This assembly shall be

comprised of a top O-ring serving as a dirt and moisture barrier and a lower O-ring which will serve as a pressure seal.

5. Hydrants shall include two 2½-inch (65 mm) hose nozzles and one 4½-inch (115 mm) pumper connection with National Standard Fire Hose Threads unless specified otherwise in the Plans or The Facility Owner's Standard Specifications. Hydrant threads shall comply with the specifications of the local agency providing fire service.
6. Hydrant nozzle shall be constructed to face in any direction at any time by removing the safety flange bolts and revolving the head without digging or shutting off water.
7. Hydrants shall have pentagon operating nut measuring 1½-inch (40 mm) point to flat and shall open by turning counter-clockwise.
8. Hydrant shall have a safety-type vertical barrel with a minimum 3½-foot bury and be designed with safety flange and/or bolts to protect the barrel and stem from damage, eliminate flooding, and allow rapid replacement if hydrant is struck. All risers necessary for deeper bury applications shall be provided by the hydrant manufacturer.
9. Hydrants shall include positive, automatic drain valves which shall be fully closed when the main valve is open.
10. Bottom inlet of hydrant shall be provided with mechanical joint connection complete with accessories as specified and shall be 6-inch (150 mm) nominal diameter.
11. Fire hydrant shall be painted above ground with rust inhibiting enamel paint in accordance with The Facility Owners Standard Specifications.
12. Hydrant assemblies shall be restrained from the hydrant to the tee at the main.

### **W. Backflow Prevention Devices**

1. Backflow prevention devices shall be installed where indicated on the Plans and shall meet all applicable AWWA, State, and local code/ordinance requirements.
2. Backflow preventer materials shall conform to the requirements and standards set forth in The Facility Owner's Standard Specifications.

### **X. Thrust Collars and Thrust Blocks**

1. Concrete used for thrust collars or thrust blocks shall meet the "Class A" requirements for concrete listed in Section 500.
2. Thrust collars shall include welded-on collars attached by the pipe manufacturer or retainer glands. Concrete shall be poured continuous around the pipe and bear against undisturbed earth.
3. Reinforcing steel shall meet the requirements set forth in the Plans or The Facility Owner's Standard Specification].
4. Mechanical joint restraints shall be utilized in lieu of thrust blocks with the approval of Utility Owner.

### **Y. Manholes**

1. Precast reinforced manholes shall be manufactured in accordance with ASTM C478 and shall have a minimum wall thickness of 5 inches (127 mm). All concrete shall have a minimum compressive strength of 4,000 psi when tested in accordance with ASTM C478.
2. Joints between precast sections shall be sealed by means of rubber O-ring gaskets or flexible butyl rubber sealant.
3. Non-shrinking grout or a flexible seal shall be used to seal the pipe penetrations and prevent water from entering the manhole.
4. Manhole rings and cover shall be per The Facility Owner's Standard Specifications and standard details.

### **670.2.02 Delivery, Storage, and Handling**

- A.** Handle pipe, fittings, valves, and accessories carefully to prevent damage. Handle pipe by rolling on skids, forklift, or front end loader. Do not use material damaged in handling. Slings, hooks, or pipe tongs shall be padded and used in such a manner as to prevent damage to the exterior coatings or internal lining of the pipe. Do not use chains in handling pipe, fittings, or appurtenances.

- B.** To unload pipe, carefully lift and lower it into position using approved padded slings, hooks, or clamps. Furnish equipment and facilities for unloading, handling, distributing, and storing pipe, fittings, valves, and accessories. Make equipment available at all times for use in unloading. Do not roll, drop or dump materials. Any materials dropped or dumped shall be subject to rejection without additional justification.
- C.** Stored materials including salvaged materials shall be kept in suitable areas safe from damage. The interior of all pipe, fittings, and other appurtenances shall be kept free from dirt or foreign matter at all times. Store and support plastic pipe to prevent sagging and bending. Store plastic pipe and gaskets to prevent exposure to direct sunlight. Valves and hydrants shall be stored and protected from damage by freezing.
- D.** Pipe shall not be stacked higher than the limits recommended by the manufacturer. The bottom tier shall be kept off the ground on timbers, rails, or concrete.

### **670.3 Construction Requirements**

#### **670.3.01 Personnel**

- A.** General Provisions 101 through 150.
- B.** Construction and installation of all water utilities shall be performed by a Contractor prequalified/registered with GDOT.
- C.** All work specified in this section, except for water system service line installation shall be performed by a Contractor with a valid Utility Contractor's license issued by the State of Georgia. Water service line installation shall be performed by either a Utility Contractor licensed in the State of Georgia or by a Master Plumber licensed in the State of Georgia.

#### **670.3.02 Equipment**

- A.** Ensure all equipment used is in conformance with the requirements and standards set forth in The Facility Owner's Standard Specifications, current published edition.

#### **670.3.03 Preparation**

General Provisions 101 through 150.

#### **670.3.04 Fabrication**

General Provisions 101 through 150.

#### **670.3.05 Construction**

##### **A. Finding Existing Underground Utilities and Obstructions**

1. Comply with Subsection 107.13 and Subsection 107.21.
2. According to the best information available to GDOT, all known water lines, sewer lines, gas lines, telephone conduits, drainage structures, etc. are shown on the Plans. However, to find such installations, use an electronic pipe and cable finder in locating existing installations or obstructions to the work.
3. When unforeseen conflicts require Plan changes, perform the work as altered according to Subsection 104.03 and Subsection 104.04.
4. Follow all Utility Owner customer notification requirements and obtain approval from the Utility Owner and GDOT Project Manager prior to disrupting any existing water services as required to install the water facilities shown on the Plans.

##### **B. Jack and Bore**

Comply with Section 615 for water main installations by jack and bore.

##### **C. Directional Drilling**

1. Install water mains and services by means of directional drilling at locations shown on the Plans or where approved by GDOT or Utility Owner. Provide submittals and follow all relevant procedures and requirements set forth in The Facility Owner's Standard Specifications.
2. The Contractor shall not initiate horizontal directional drilling until all submittals are received, reviewed, and accepted by GDOT and the Utility Owner, and all required permits are obtained.

3. The Contractor shall select drilling additives and fluid mixture proportions to ensure continuous circulation, bore stability, reduce drag on the pipe, and completely fill the annular space between the bore and the pipe to ensure stability and control settlement.
4. The Contractor shall submit contingency plans for remediation of potential problems that may be encountered during the drilling operations. The contingency plans shall address the observations that would lead to the discovery of the problem and the methods that would be used to mitigate the problem. Potential problems that shall be addressed include:
  - a. Loss of returns/loss of circulation of drilling fluid.
  - b. Encountering obstruction during pilot bore or reaming/pullback.
  - c. Drill pipe or product pipe cannot be advanced.
  - d. Deviations from design line and grade exceed allowable tolerances.
  - e. Drill pipe or product pipe broken off in borehole.
  - f. Product pipe collapse or excessive deformation occurs
  - g. Utility strike.
  - h. Hydrolock occurs or is suspected.
  - i. Excessive ground settlement or heave of ground surface or existing utilities.
  - j. Inadvertent returns / hydrofracture or surface spills resulting in drilling fluids entering water or reaching the surface.
5. Pipe damaged in directional drilling operations shall be removed and replaced at no additional expense to GDOT or the Utility Owner.
6. Voids developed or encountered during the installation operation shall be pressure grouted with a grout mix approved by GDOT.
7. Installation shall include a locatable conduit system, with identification markers on each side of GDOT right-of-way where applicable. Two (2) insulated 8 gauge solid copper tracers wire shall be attached to the leading end of the pipe pulling head and shall extend the full length of the installed pipe.
8. The location and alignment of the pilot drill progress shall be continuously monitored for compliance with the proposed installation alignment and for verification of the depth of the bore. Monitoring shall be accomplished by computer generated bore logs which map the bore path based on x, y, z coordinate information provided by the locating/tracking system. Readings or plots shall be obtained on every drill rod, and shall be provided to the Inspector on a daily basis. Deviations between the recorded and design bore path shall be calculated and reported on the daily log. If the deviations exceed tolerances specified elsewhere, such occurrences shall be reported immediately to GDOT. The Contractor shall undertake all necessary measures to correct deviations and return to design line and grade.
9. Upon completion of the directional drill the Contractor shall furnish GDOT and the Utility Owner an as-built drawing along with a report of the monitoring of the drilling fluids during the pilot hole and back reamed hole.
10. Drilling fluid pressures, flow rates, viscosity, and density shall be monitored and recorded by the Contractor. The pressures shall be monitored at the pump. These measurements shall be included in daily logs submitted to GDOT. The Contractor shall document modifications to the drilling fluids, by noting the types and quantities of drilling fluid additives and the dates and times when introduced. The reason for the addition of drilling fluid additives or other modifications shall be documented and reported.
11. Management and disposal of drilling fluids shall be the Contractor's responsibility. Excess drilling fluids shall be contained at the entry and exit points until recycled or removed from the site. All drilling fluids shall be disposed of in a manner acceptable to the appropriate local, state and federal regulations. The Contractor's work will be immediately suspended by GDOT whenever drilling fluids seep to the surface other than in the boring entrance or exit pit, or when a paved surface is displaced.

12. Surfaces damaged by the work shall be restored to their preconstruction conditions at no additional cost to GDOT or Utility Owner, and with no increase in contract time.
13. The following items shall be as shown on the Plans, unless otherwise approved in writing by GDOT:
  - a. Entry / exit points
  - b. Drill entry / exit angles
  - c. Pilot bore path
    - 1) Radius of Curvature
    - 2) Entry / exit tolerances: Contractor shall be solely responsible for all work necessary to correct excessive deviations from line and grade, including re-drilling, redesigning connections, and acquiring additional easement, at no additional cost to GDOT or Utility Owner and without schedule extension.
14. The pilot bore shall be pre-reamed and reamed using equipment and methods submitted by the Contractor. The Contractor shall completely ream the bore to the final diameter prior to pullback.
15. Pullback: The pipe shall be installed by pulling it into the reamed bore path in a continuous operation, behind a final reaming tool selected by the Contractor. The pipe shall be isolated from excessive torsional and axial stresses by a swivel device with a pre-established breakaway tensile capacity that is lower than the allowable tensile strength of the pipe. The maximum pull (axial tension force) exerted on the pipelines shall be measured continuously and limited to the maximum allowed by the pipe manufacturer with an appropriate factor of safety so that the pipe or joints are not overstressed. The end of the pipe shall be closed during the pull back operation.
16. Pipelines shall be adequately supported during installation so as to prevent overstressing or buckling. The Contractor shall provide adequate support/rollers along the pipe layout area to support the required length of pipe for the bore. The pipe layout area shall be cleared of all large stones, construction debris, or other foreign objects that could damage the pipe during pullback. The Contractor shall monitor and inspect pipe rollers and method for suspending pipe at entry during the pullback operation to avoid damage to the pipe.
17. The end of the pipe shall be closed during the pull back operation.
18. Each length of pipe shall be inspected and cleaned as necessary to be free of debris immediately before joining.
19. The Contractor shall at all times handle the pipe in a manner that does not overstress or otherwise damage the pipe. Vertical and horizontal curves shall be limited so that wall stresses do not exceed 50% of yield stress for flexural bending of the pipe. If the pipe is buckled or otherwise damaged, the damaged section shall be removed and replaced by the Contractor at his expense. The Contractor shall take appropriate steps during pullback to ensure that the pipe and tracer wires will be installed without damage.
20. If necessary, the pipe shall have water added as it enters the bore to achieve neutral buoyancy and reduce pullback loads and to ensure that adequate internal pressure is maintained at all points to counter balance collapse pressures.
21. The Contractor shall cease pullback operations if the pipe is damaged and shall remove the pipe from the bore and repair the pipe using the manufacturer's recommended procedure or replace the damaged pipe before resuming installation.
22. Damage to the pipe resulting from manufacturer defects, installation, or grouting is the responsibility of the Contractor, including costs for replacement and labor and materials. To confirm no damage to the pipe, upon completion of pull back, the Contractor shall pull a sphere or pig through the entire length of the pipeline. The pig shall be one inch less in diameter than the internal diameter of the product pipe, capable of allowing water to pass through it, complete with a pulling cable on either side. If the pig or sphere cannot pass through the pipe, it shall be considered collapsed and damaged.
23. After the carrier pipe is completely pulled through the bore, a sufficient relaxation period as recommended by the pipe manufacturer shall be provided before the final pipe tie-in.
24. The Contractor shall conduct a final hydrostatic test of the installed pipeline. Final test shall be in accordance with these specifications. The Contractor shall repair any defects discovered during this test, and repeat until the pipe passes the test.

**D. Excavating Trenches**

1. The Contractor shall provide all necessary shoring and bracing materials as required to assure safe working conditions and to protect the excavations. The Contractor shall be required to fully comply with all applicable OSHA Excavation Safety Standards. No separate payment shall be made for any special procedure used in connection with the excavation.
2. Excavate trenches to the proper depth and width as follows:
  - a. Trench to Grade: Excavated trench bottoms shall be firm, free from boulders, and conform to the established grade. Limit open trench excavation to a maximum of three 300 feet (90 m) ahead of completed backfill.
  - b. Care shall be taken not to over excavate except where necessary to remove unstable material, irregularities, lumps, rock, and projections. Unnecessary over excavation shall be replaced at the Contractor's sole expense and in accordance with Subsection 670.3.05.
  - c. Excavation carried below the established grade lines shown or established by the Utility Owner shall be backfilled according to Section 207 and Subsection 670.3.05. Use Class I or Class II Soils (defined in Section 810) and firmly compact the soil.
  - d. Where the established grade of a trench is in rock, undercut the bottom of the trench by at least 6 inches (150 mm) beneath the pipe or conduit and the greater of 24 inches (600 mm) wider than the pipe/conduit (12 inches or 300 mm each side) or 42 inches (1050 mm) wide, then backfill and compact according to Subsection 670.3.05.
  - e. Excavation in pavement and pavement patching shall be according to GA Standard No. 1401. Remove the pavement according to Section 444, except no separate payment shall be made for sawed joints.
  - f. Dewatering: Remove all water from excavations and maintain the excavations free of water while construction therein is in progress. Provide dewatering equipment as necessary to conform to this requirement. Dewatering procedures must meet all state and local regulatory requirements.
3. Minimum Trench Depth
  - a. Excavate trenches to provide at least 48 inches (1.2 m) cover depth directly above the pipe to the finished pavement surface, sidewalk, grass, etc. unless indicated otherwise on the Plans or by the Utility Owner and GDOT Project Manager. In order to avoid existing utilities, it may be necessary for the pipe to be laid shallower or deeper than the minimum cover specified. At such time the Contractor shall not be allowed extra compensation for additional excavation necessary for deeper installations.
  - b. Side slopes of the trenches shall be as nearly vertical as practicable. Trenches in excess of 5 feet (1.5 m) deep shall either have the trench sides laid back to conform to OSHA requirements for trench safety, if such area is available within the limits of excavation, or, alternatively, trenches deeper than 5 feet (1.5 m) shall be excavated via trench box or shored and braced.
  - c. If any part of a water main is to be placed in or under a new embankment, finish the embankment to at least a 2-foot plane above the outermost portion of the pipe barrel before excavating the trench.
4. Trench Width: Excavate trenches to uniform widths wide enough to allow proper installation of pipe, fittings, and other materials, a minimum of 6 inches (150 mm) and a maximum of 12 inches (300 mm) each side of the pipe or conduit.
5. Trench Bell Holes: Excavate bell holes deeply and widely enough to make joints and to allow the pipe barrel to rest firmly on the trench bottom.
6. Trench bottom: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduits. Shape subgrade to provide continuous support of bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits/pipes. Remove projecting stones, tree roots, debris, and sharp objects along trench subgrade. Abrupt changes in grade of the trench bottom shall be avoided. Unless otherwise indicated in the Plans or The Facility Owner's Standard Specifications, trenches for water mains shall be graded as much as possible to avoid high and low points that necessitate air release valves.

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7. Excavations may be completed and refilled either by hand or by machinery. Hand tool excavation shall be conducted where necessary to protect existing utilities and structures.
8. In the event that unsuitable material is encountered at or below the excavation depth specified or shown on the Plans, the Utility Owner and GDOT Project Manager shall be notified. Such material shall be removed and replaced with suitable material in accordance with Section 205 by the written request of the GDOT Manager.

### **E. Connecting to Existing Mains**

1. Connect to an existing main with the appropriate fittings according to the Plans or the Utility Owner and GDOT Project Manager. When making connections under pressure, (i.e. when normal water service must be maintained), furnish and use a tapping sleeve and valve assembly or line stop fittings as indicated. Coordinate with Utility Owner 72 hours in advance for water service interruptions and temporary shut-offs. Evening or weekend work may be required to complete direct connections and tie-ins. Connect to existing mains as follows:
  - a. Before opening new pipeline trenches, locate the various points of connection to be made into existing pipelines. If necessary, uncover pipelines for the Utility Owner and GDOT Project Coordinators to prescribe the connections and fittings needed.
  - b. Connect to existing pipelines only to meet operating requirements. Cut existing lines only after obtaining the Utility Owner and GDOT Project Manager' permission.
  - c. Provide temporary line stops, associated fittings, and bypass pumping as indicated on the Plans and as necessary when cutting and plugging existing water mains to prevent service interruptions. Line stop and associated fittings shall be suitable for working pressures of 250 psi.
  - d. Connections to existing asbestos cement pipe shall be installed as indicated on the Plans or in The Facility Owner's Standard Specifications. Cutting, removing, handling, and disposing of asbestos cement pipe shall be in accordance with requirements established by EPA, OSHA, GDOT, NIOSH, and the State of Georgia Environmental Protection Division, and any other applicable laws and ordinances.

### **F. Laying Water Mains and Appurtenances**

1. Preparing and Handling Pipes
  - a. Thoroughly clean the pipe and fittings before laying them. Keep them clean until accepted.
  - b. Use suitable tools and equipment. Do not damage the pipe, especially the cement lining inside the pipe.
  - c. Cut pipe in a manner to avoid damage to pipe or lining, leaving a smooth end at right angles to pipe axis. Smooth and bevel edges of cut pipe for push-on, gasket type joints.
  - d. Bedding shall be provided as specified by the Utility Owner or pipe manufacturer for the type of conditions encountered. Bedding typically consists of granular soil free of lumps, clods, cobbles, and frozen materials, and shall be graded to a firm-but-yielding surface without abrupt changes in bearing value. Unstable soils and rock ledges shall be undercut from the bedding zone and replaced with suitable material.
  - e. Bed pipe on coarse granular material in flat bottom trench with entire pipe barrel bearing uniformly on coarse granular material, except for an approximately 18-inch (450 mm) gap at pipe balance point for sling removal. Hand excavate and backfill as required to provide uniform and continuous bearing and support for the pipe. Do not support pipe on hubs or end bells. Consolidate coarse granular material under and around pipe up to pipe centerline by tamping.
  - f. Join pipe with bells facing direction in which laying operation is progressing. Lay pipe upgrade wherever line grade exceeds 10%.
  - g. Carefully examine pipe for cracks and other defects and do not lay defective pipe. If pipe or castings appear to be cracked, broken, or defective after laying, remove and replace those sections.
2. Alignment and Gradient



- a. Pipe alignment and gradient shall conform to the Plans. Deflect pipe lines only where indicated on the Plans, within allowable horizontal and vertical deflection angles according to the manufacturer.
  - b. Water mains shall be laid at least 10 feet (3 m) horizontally from any existing or proposed sanitary sewer, storm sewer or sewer manhole. The distance shall be measured edge-to-edge. When local conditions prevent a horizontal separation of 10 feet (3 m), the water main may, on a case-by-case basis, be laid closer to a sewer provided the water main is laid in a separate trench or on an undisturbed earth shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 18 inches (450 mm) above the top of the sewer.
  - c. Maintain a vertical separation of at least 18 inches (450 mm) between the crown of sanitary sewers and the invert of existing or proposed water mains with the sewer located below the water main. Where a vertical separation of 18 inches (450 mm) cannot be provided, and the water main cannot be relocated to provide adequate clearance, center one full length of water main over the sewer so that both joints of the water main will be as far from the sewer as possible.
3. Special Requirements for Laying Water Mains
- a. Excavate, clean, lay, joint, and backfill progressively and uniformly according to these requirements:
    - 1) Never leave pipe in the trench overnight without completely jointing and capping.
    - 2) Do not leave completed pipeline exposed in the trench. Backfill and compact the trench as soon as possible after laying, jointing, and testing are complete.
    - 3) At the close of work each day and when laying pipe, close the exposed end of the pipeline in the trench with an approved wood or metal head or barrier.
    - 4) If necessary to cover the end of an incomplete pipeline with backfill, close the end of the pipe with a satisfactory cap or plug.

**G. Installing Water Mains by Open Cut**

1. Use the following flexible joints for connections inside the roadway shoulders or curbs and gutters:
  - a. Mechanical Joints:
    - 1) When using mechanical joints, thoroughly wash bell sockets, spigots, gland, gasket, nuts, and bolts with soapy water before assembly. Keep these parts wet until the jointing operation is complete.
    - 2) Tighten nuts within the torque range recommended by the manufacturer. Check the tightening tolerance with a torque wrench.
    - 3) If effective sealing is not attained at the maximum recommended torque, disassemble, thoroughly clean, then reassemble the joint.
    - 4) Do not overstress bolts to compensate for improper installation or defective parts.
  - b. Push-On Type Joints
    - 1) Use push-on joints made according to the manufacturer's recommendations.
    - 2) Install PVC pipe in accordance with AWWA C605.
    - 3) Install ductile iron pipe in accordance with AWWA C600.
2. Restraints for pipe joints and fittings shall be provided as specified and as shown on the Plans. Restraints shall be installed per manufacturer's recommendations.
3. Buried ductile iron pipe and fittings shall be polyethylene encased as specified and as indicated on the Plans. Polyethylene encasement tubing shall be secured with polyethylene tape and installed in accordance with ANSI/AWWA C105/A21.5.
4. Unless otherwise specified by The Facility Owner's Standard Specifications, provide pipe detection wire on all non-metallic pipe systems. Tape the tracer wire to the top center of the pipe at intervals which prevent wire displacement during backfilling operations. Stub tracer wire up 6 inches (150 mm) above finished grade at all valves

- and fire hydrants. For splices, use direct bury kits. After backfilling is complete, test electrical continuity of each tracer wire segment and provide test results to Utility Owner and GDOT Project Manager.
5. Install continuous underground warning tape during backfilling of trench for underground water distribution piping. Install 12 inches (300 mm) below finished grade, or 6 inches (150 mm) below subgrade under pavements and walkways, and buried directly over piping.
  6. Use pipe cutters when cutting pipe or special castings. Do not use a hammer, chisel, or a cutting torch.
  7. Locations where water mains do not meet minimum depth of cover requirements shall include a steel casing or concrete encasement installed per The Facility Owner's Standard Specifications.
  8. If HDPE pipe is to be installed where high groundwater table or water surrounding the pipe is expected, precautions shall be taken to provide neutral buoyancy to prevent floatation or a change in alignment.
  9. Isolation Valves on Water Mains: Install and joint gate and butterfly valves as specified in Subsection 670.2.01 in accordance with AWWA C600. Include the valve box and valve marker where required.
  10. Air release valves shall be located at high elevation points on the pipeline. Air release valves shall be installed at locations indicated in the Plans and in accordance with manufacturer's recommendations.
    - a. Air release valves shall be installed in a shallow manhole or vault as indicated in the Plans and The Facility Owner's Standard Specifications. Automatic air relief valves shall not be used in areas where flooding of the manhole or vault may occur.
    - b. An isolation valve shall be installed between the air release assembly and the connection to the main.
    - c. The Contractor shall furnish and install at no additional cost to GDOT or Utility Owner all necessary fittings for the installation of air release valves at high points.
  11. Pressure reducing/sustaining valves of the size and type indicated shall be installed as shown on the Plans per manufacturer's recommendations and The Facility Owner's Standard Specifications.
  12. Fire Hydrants: Install and joint hydrants as specified in Subsection 670.2.01 and in accordance with AWWA C600. Include required vertical extension sections. Also, include pipe strap installation, restraints, crushed stone drain, and backfill according to the Plans and this Section. Spacing of fire hydrants shall be as indicated in The Facility Owner's Standard Specifications.
  13. Concrete Thrust Collars and Thrust Blocks: If required, furnish materials and install thrust collars or concrete blocking according to Subsection 670.2.01. Form and pour concrete thrust collars or blocks in accordance with the Plans and The Facility Owner's Standard Specifications. Blocking shall be poured against undisturbed earth and all forms shall be removed before backfilling.
  14. Backfilling
    - a. Furnish equipment, labor, and when necessary material required for backfilling the pipe line trenches according to Section 207, and as follows:
      - 1) When testing for visual leaks in open trenches, do not backfill until testing is complete and leaks are eliminated.
      - 2) When retaining pavement adjacent to trenches, replace removed pavement with the same or better material when approved in accordance with the appropriate Section for the pavement type replaced.
      - 3) Place backfill on subgrades free of mud, frost, snow, or ice.
      - 4) Place and compact bedding course on trench bottoms and where indicated. Shape the bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits/pipes.
      - 5) Backfill shall include Class I or Class II Soils as defined in Section 810 or suitable material that conforms with The Facility Owner's Standard Specifications.
      - 6) Backfill shall be placed in two stages: first, side fill to a height of 12 inches (300 mm) above the top of pipe; second, overfill to former surface grade. Side fill shall consist of granular material laid in 6-inch (150

mm) layers each consolidated by mechanical tamping and controlled addition of moisture, to a density of 95% as determined by as determined by the Standard Proctor test (AASHTO T-99 Method D) or GDT 67. Overfill shall be layered and consolidated to match the entrenched material in cohesion and compaction. The top 12 inches (300 mm) shall be compacted to 100% of specified density. Consolidation by saturation or ponding shall not be permitted.

- 7) Soil Moisture Control: Uniformly moisten and aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2% of optimum moisture content. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2% and is too wet to compact to specified dry unit weight.
- 8) Initial backfill shall be carefully compacted under pipe haunches and evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Place and compact fill and backfill of satisfactory soil to final subgrade elevation. Backfill voids with satisfactory soil while removing shoring and bracing and/or trench boxes.
- 9) After backfilling, maintain temporary surface restoration per GA Standard No. 1401 until permanent repaving is complete. No separate payment shall be made for replaced pavement.

15. Disinfection of Water Mains

- a. New and existing pipelines and appurtenances shall be disinfected before placing into service. Disinfection can be conducted in conjunction with the pressure test.
- b. Before the main is chlorinated, it shall be filled to eliminate air pockets and shall be flushed to remove particulates.
- c. During disinfection of the water mains, an appropriate cross-connection control device, consistent with the degree of hazard, shall be provided for backflow protection of the active distribution system.
- d. Chlorination: Sterilize using only potable water with calcium hypochlorite (HTH), 1% chlorine solution, or other products acceptable to the Utility Owner and GDOT Project Manager and Department of Public Health. Comply with AWWA C651 including Section 9 procedures on final connections to existing mains.
  - 1) The chlorine solution used for disinfection of water mains shall have a free chlorine residual concentration not less than 25 mg/L or in accordance with The Facility Owner's Standard Specifications.
  - 2) Add enough disinfectant to provide a chlorine residual of not less than 10 parts per million (ppm) in 24 hours or as required in The Facility Owner's Standard Specifications. All valves and hydrants shall be operated to ensure disinfection of the appurtenances.
  - 3) At the end of 24 hours, check the chlorine residual. If it is less than 10 ppm, add additional chlorine and check the line again after 24 hours.
- e. After the applicable retention period, the chlorinated water must not be disposed in a manner that will harm the environment. Neutralizing chemicals, such as Sulfur Dioxide, Sodium Bisulfite, Sodium Sulfite or Sodium Thiosulfate can be used to neutralize the chlorine residual remaining in the water to be wasted.
- f. After sterilization, flush the line with potable water until the chlorine residual is equal to the existing system.
  - 1) After final flushing and before the water main is placed into service, water samples shall be collected from the main and tested for microbiological quality in accordance with the Georgia Rules for Safe Drinking Water. Samples shall be taken in the presence of the Utility Owner and GDOT Project Manager.
  - 2) When test results are not satisfactory, the pipeline shall be flushed and disinfected again as necessary without additional compensation until satisfactory results are obtained.

**H. Laying Service Lines and Appurtenances**

1. Except as modified in this Section, construct and install service connection assemblies and lines according to the Plans and the requirements for laying water mains. Install service lines at locations shown on the Plans or where designated by the Utility Owner and GDOT Project Manager.

2. Install new pipe from the water main to the final location of the meter or to points designated by the Utility Owner and GDOT Project Manager to connect with existing or future service lines on abutting property.
3. No water service connections shall be performed until the main is tested and disinfected. Water service lines shall be tested and disinfected prior to connection to the main.
4. If required, install water service line inside casing pipe according to the Plans or The Facility Owner's specification document.
5. At roads, paved drives, retaining walls, and other paved areas, install service tubing or casing pipe by pushing, pulling, or augering techniques. At all other locations, install service tubing by trenching and backfilling unless directed otherwise by GDOT.
6. Service line installation includes all connections using saddles, unions, valves, fittings, corporation stops, curb stops, casing, and any and all appurtenant work required to provide a complete water service connection.
7. Excavate for service lines as specified in Subsection 670.3.05 with the following exceptions:
  - a. Ensure that trenches under pavements and across driveways are deep enough to provide at least 48 in (1.2 m) of cover, unless otherwise specified by The Facility Owner's Standard Specifications or directed by the Utility Owner and GDOT Project Manager.
  - b. At other areas, trench depth and backfill cover may be adjusted at the discretion of the Utility Owner and GDOT Project Manager to provide at least 18 in (450 mm) of cover.
8. Backfill service lines as specified in Subsection 670.3.05.
9. All service lines, fittings, and appurtenances necessary for the water service connections shall be installed and backfilled in accordance with the manufacturer's recommendations and as per The Facility Owner's Standard Specifications and standard details.

### **I. Cutting and Capping Existing Water Mains**

1. Disconnect by sawing or cutting and removing a segment of existing pipe where cutting and capping or plugging is shown on the Plans or directed by the Utility Owner or GDOT Project Manager. Provide a watertight pipe cap or plug and restraint mechanism to seal off existing mains indicated to remain in service. If water main is to be abandoned or removed and not specified to be grout filled, seal ends with a pipe cap or plug or with a masonry plug and minimum 6-inch (150 mm) cover of concrete on all sides around the end of the pipe.
2. The Contractor shall be responsible for uncovering and verifying the size and material of the existing main to be capped or plugged.
3. Abandoned manholes and water mains greater than 6-inch (150 mm) shall be filled with flowable fill per Section 600 at the locations indicated on the Plans. Air release valves and water service connections along the abandoned main shall be plugged prior to grouting. Prior to backfilling, the bottom of the manhole shall be broken up in such a manner that water will readily pass through. The top portion of the manhole structure shall be removed in order to establish a minimum of 3 feet cover from subgrade or finished grade when not under the pavement and filled with sand or suitable backfill.
4. Water mains shall be flushed prior to placement of flowable fill. Use concrete or grout pumps capable of continuous delivery at planned placement rate with sufficient pressure to overcome friction and fill the sewer main.

### **J. Relocating, Adjusting, and Removing**

1. Fire Hydrant Assemblies
  - a. Relocate, adjust to grade, or remove fire hydrant assemblies including valve and valve boxes according to the Plans or as designated by the Utility Owner and GDOT Project Manager.
  - b. Protect items during removal and relocation. Replace lost or damaged Items at no expense to GDOT or the Utility Owner.
  - c. Disconnect each joint before removing items from the trench.

- d. Install relocated fire hydrant assemblies with tapping sleeve, and as specified herein for new fire hydrant assemblies.
  - e. Test for leakage, adjust, and retest until no leaks appear.
  - f. Backfill as specified in Subsection 670.3.05.
  - g. Consider valve boxes part of the valve assembly and remove them intact with the valve.
2. Water Valves and Boxes
    - a. Adjust or remove water valves and valve boxes according to the Plans or as designated by the Utility Owner and GDOT Project Manager.
    - b. Protect items during adjustment or removal. Replace lost or damaged Items at no expense to GDOT or the Utility Owner.
    - c. Disconnect each joint before removing items from the trench.
    - d. Test for leakage, adjust, and retest until no leaks appear.
    - e. Backfill as specified in Subsection 670.3.05.
    - f. Consider valve boxes part of the valve assembly and remove them intact with the valve.
3. Existing Water Meters and Boxes
    - a. Relocate existing water meters and boxes according to the Plans or the Utility Owner and GDOT Project Manager.
    - b. To relocate water meters, remove the existing meter, associated backflow preventer, and box and replace with a short section of pipe.
    - c. Inspect along with the Utility Owner and GDOT Project Manager each meter and backflow preventer before removal to determine the condition of each.
    - d. Unless specified otherwise in the Plans or The Facility Owner's Standard Specifications, new water meters and backflow preventers shall be furnished by the Contractor as necessary if these devices are deemed unsuitable for reuse. Contractor shall provide new water meter boxes if deemed unsuitable for reuse. The Contractor shall coordinate delivery of the water meters and backflow preventers to correspond to construction operations to minimize service interruptions.
    - e. Relocation of water meters and boxes shall include without additional compensation, required pipe, unions and appurtenances, adapter fittings, necessary storage protection, and installation of meter, backflow preventer, meter box, and curb stop in the existing service line.
  4. Existing Water Service Lines
    - a. Water lines shall be adjusted to grade by excavating the existing lines, lowering or raising the lines, and backfilling according to the Plans or the Utility Owner and GDOT Project Manager.
    - b. Furnish new materials or fittings required for the adjustment without additional compensation.
    - c. Change connections at the main that result from this work.
    - d. Repair leaks and damage caused by the operations at no expense to GDOT.
    - e. When retaining a water meter where an existing service line is to be adjusted, adjust the existing meter and box to the proper grade without additional compensation.
  5. Other Water Appurtenances
    - a. Relocate, adjust to grade, or remove water main appurtenances including but not limited to air release valves, backflow preventers, pressure reducing/sustaining valves according to the Plans or as designated by the Utility Owner and GDOT Project Manager.
  6. Utility related items identified on the Plans to be salvaged are the property of the Utility Owner. Contractor shall coordinate with Utility Owner on delivery of salvaged materials. Should the Utility Owner choose to not accept these materials they shall be removed from the project site as soon as practical.

### **K. Aerial Crossings**

1. Support must be provided for all joints in pipes utilized for aerial crossings. The supports must be installed to prevent frost heave, overturning, and settlement. Precautions against freezing, such as insulation, shall be provided.

2. When the aerial crossing is accomplished by attachment to a bridge or drainage structure, the crossing shall meet all requirements of the agencies that own or have jurisdiction over such structures.
3. Aerial installations shall be installed to avoid or minimize stream blockage during normal high water events.
4. Underground valves shall be provided at both ends of the aerial crossing so that the section can be isolated for testing or repair. The valves shall be restrained, easily accessible, and not subject to flooding. An air release/vacuum relief valve shall be installed at all high points along the aerial crossing.
5. Appropriate guards shall be installed at both ends of the aerial crossing to prevent public access to the pipe.

### 670.3.06 Quality Acceptance

#### A. Materials Certification

For certain products, assemblies and materials, not on GDOT QPL List, and in lieu of normal sampling and testing procedures by the Contractor, the Utility Owner, and GDOT may accept from the Contractor the manufacturer's certification with respect to the product involved under the conditions set forth in the following paragraphs:

1. Material certifications shall be provided to GDOT, who shall distribute to the Utility Owner. Material certifications shall be approved by GDOT and the Utility Owner prior to construction. The certification shall state/specify that the named product conforms to these specifications and requirements of the Utility Owner and GDOT, and representative samples thereof have been sampled and tested as specified.
2. The certification shall either:
  - a. Be accompanied by a certified copy of the test results, or
  - b. Certify such test results are on file with the manufacturer and will be furnished to the Utility Owner and GDOT Project Coordinators upon demand.
3. The certification shall state/specify the name and address of the manufacturer and the testing agency and the date of tests; and sets forth the means of identification which shall permit field determination of the product delivered to the project as being the product covered by the certification.
4. Submit certification in triplicate with two copies of the covered product to the GDOT Project Coordinator, and one copy sent to GDOT's State Materials and Research Engineer at 15 Kennedy Drive, Forest Park, Georgia. The certification shall specify the project number and contract ID number. No certificate shall be required for Portland cement when furnished from a manufacturer approved by GDOT.
5. GDOT or the Utility Owner will not be responsible for any costs of certification or for any costs of the sampling and testing of products in connection therewith.
6. GDOT and the Utility Owner reserve the right to require samples and test products for compliance with pertinent requirements irrespective of prior certification of the products by the manufacturer. Any materials that fail to meet specification requirements will be rejected.
7. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
  - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail steel supports for signs, signals and luminaires. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. Records to be provided by the Contractor for this certification shall include a signed mill test report and a signed certification by each supplier, distributor, fabricator, and manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

**B. Flushing**

- 1. Prior to testing, water mains shall be cleaned and flushed to remove all sand and foreign matter. Water used for filling and cleaning shall be from an approved potable water source. Sufficient flushing water shall be introduced into the mains to produce a scouring velocity of not less than 3.5 feet per second to resuspend the solids, and this rate of flow shall be continued until the discharge is clear and no evidence of silt or foreign matter is visible. The Contractor shall dispose of all water used for flushing without causing a nuisance or property damage.
- 2. In the event that the Contractor cannot obtain the flushing velocity, a poly-pig swab may be used to clean the pipeline. The Contractor shall submit pigging plan to the Utility Owner and GDOT for review. The plan shall include type of pig material, water flow rate, discharge points, poly-pig detector and retrieval options.

**C. Hydrostatic Testing of Water Mains**

- 1. When the Utility Owner and GDOT Project Manager approve a section of pipe for testing, the Contractor shall furnish the materials, equipment, and labor to conduct the pressure and leakage tests. Use a test pump, pressure gauge, and a means of measuring the water necessary to maintain the required pressure during the prescribed testing time. All pressure and leakage testing shall be done in the presence of the Utility Owner and GDOT Project Coordinators as a condition precedent to the approval and acceptance of the system. All pipes shall have been thoroughly flushed prior to testing. Simultaneous or separate pressure and leakage tests may be performed.
- 2. All water for testing and flushing shall be potable water provided by the Contractor, at no cost to the Utility Owner or GDOT, from an approved source. Flow velocity during line filling shall not exceed 2 feet (0.6 m) per second (fps).
- 3. Testing Requirements
  - a. Water mains shall be tested in sections between valves, thereby, testing each valve for secure closure. Testing shall be done immediately after installation and backfilling has been completed.
  - b. The mains shall be tested in accordance with the latest revision of AWWA C600 for ductile iron and C605 for PVC under an average hydrostatic pressure of the greater of 1.5 times the maximum working pressure or 150 psi as measured at the lowest point in the system for a minimum of 2 hours. Pressure shall be maintained until all sections under testing have been checked for evidence of leakage.
  - c. While the system is being filled with water, air shall be carefully and completely exhausted. If permanent air vents are not located at all high points, the Contractor shall install corporation stops or fittings and valves at such points at no additional expense to the Utility so the air can be expelled as the pipe system is slowly filled.
  - d. Makeup water shall be added, as required, to maintain the pressure within 5 psi of the test pressure. The quantity used shall be measured by pumping from a calibrated container. The maximum amount of makeup water allowed shall be determined by the following formula:

$$L = \frac{S * D * P^{0.5}}{148,000}$$

in which,

L = Allowable Leakage in gallons per hour

S = Length of pipe being tested in feet

D = Nominal pipe diameter in inches

P = Average test pressure during the test in psi gauge

- e. Visible leaks shall be corrected regardless of total leakage shown by test. All pipe fittings and other materials found to be defective under test shall be removed and replaced. Lines which fail to meet test requirements shall be repaired and retested as necessary until test requirements are met. No additional compensation shall be made for repairs or retesting.

### **670.3.07 Contractor Warranty and Maintenance**

General Provisions 101 through 150.

### **670.4 Measurement**

Incidentals including excavation, rock removal, backfilling, disinfection, testing, temporary water connections, pavement removal, pavement replacement, and other incidentals required for the installation of water distribution items are not measured for separate payment and shall be included in the applicable Pay Items below. Water mains, service lines, and other associated Items of work in this Specification, complete, in place, and accepted, are measured for payment as follows:

#### **A. Ductile Iron Water Mains**

Ductile iron water mains shall be measured in linear feet (meters) for each size, thickness class, and type (restrained, non-restrained) installed. Measurement shall be horizontally above the centerline of the pipe and shall include the length of valves and fittings.

#### **B. PVC Water Main**

PVC water mains shall be measured in linear feet (meters) for each size and type (restrained, non-restrained) installed. Measurement shall be horizontally above the centerline of the pipe and shall include the length of valves and fittings.

#### **C. Fusible PVC Water Main**

Fusible PVC water mains shall be measured in linear feet (meters) for each size and type installed. Measurement shall be horizontally above the centerline of the pipe and shall include the length of valves and fittings.

#### **D. HDPE Water Main**

HDPE water mains shall be measured in linear feet (meters) for each size and type installed. Measurement shall be horizontally above the centerline of the pipe and shall include the length of valves and fittings.

#### **E. Ductile Iron Fittings**

Ductile iron fittings are considered subsidiary to the water line in which they are used and are not measured for separate payment. This Item includes, but is not limited to, wyes, tees, bends, crosses, sleeves, plugs and caps, and reducers.

#### **F. Restrained Joints**

Joint restraints used with the installation of PVC or ductile iron pipe are considered subsidiary to the water line in which they are used and are not measured for separate payment.

#### **G. Gate Valves**

Gate valves shall be measured on an individual basis for each size valve and box assembly acceptably installed.



**H. Butterfly Valves**

Butterfly valves shall be measured on an individual basis on the number of each size valve and box assembly acceptably installed.

**I. Tapping Sleeve and Valve Assembly**

Tapping sleeve and valve assemblies shall be measured on an individual basis on the number of each size tapping sleeve and valve assembly acceptably installed.

**J. Double Strap Saddle**

Double strap saddles shall be measured on an individual basis on the number of each size double strap saddle acceptably installed.

**K. Fire Hydrant Assemblies**

Fire hydrant assemblies shall be measured on an individual basis on the number of hydrants acceptably installed.

**L. Water Service Lines**

Service lines shall be measured in linear feet (meters) for each size of service pipe installed. Measurements are made from end to end and from center of lines to ends of branches and include tapping saddle, sleeve, valves, service connection assemblies, sleeves, adapters, and fittings.

**M. Air Release Valve Assembly**

Air release valve assemblies shall be measured on an individual basis on the number of each size and type of air release valve assembly acceptably installed.

**N. Pressure Reducing / Sustaining Valve**

Pressure reducing/sustaining valve shall be measured on an individual basis on the number of each pressure reducing/sustaining valves acceptably installed.

**O. Blow-Off Assemblies**

Blow-off assemblies shall be measured on an individual basis on the number of each blow-off assembly acceptably installed.

**P. Backflow Prevention Assembly**

Backflow prevention assemblies shall be measured on an individual basis on the number of each size and type backflow preventer acceptably installed.

**Q. Water Meter**

Water meters shall be measured on an individual basis on the number of each size meter acceptably installed.

**R. Steel Casing**

Steel casing pipe of the wall thickness and diameter specified shall be measured by the linear foot for each size and thickness of steel casing pipe installed. Measurement shall be horizontally above the centerline of the casing.

**S. Relocation of Existing Fire Hydrant Assemblies, Air Release Valves, Water Meters, Water Backflow Preventers, Pressure Reducing or Sustaining Valves, Water Valves and Water Meter including Bypass and Vault**

Relocation of existing fire hydrant assemblies, air release valves, water meters, backflow preventers, pressure reducing or sustaining valves, water valves, and water meter including bypass and vault shall be measured on an individual basis on the number of each acceptably relocated including relocation and final adjustment of boxes.

**T. Adjustment of Existing Meter Boxes and Valve Boxes to Grade**

Adjustment of existing meter boxes and valve boxes adjusted to grade in their original locations shall be measured on an individual basis on the number of each acceptably adjusted in accordance with Section 611.

**U. Adjustment of Blow-Off Assembly**

Adjustment of blow-off assembly to grade in their original locations shall be measured on an individual basis on the number of each acceptably adjusted.

**V. Adjustment of Existing Fire Hydrant Assembly**

Adjustment of existing fire hydrant assembly to grade in their original locations shall be measured on an individual basis on the number of each acceptably adjusted.

**W. Adjustment of Existing Backflow Preventers**

Adjustment of existing backflow preventers to grade in their original locations shall be measured on an individual basis on the number of each acceptably adjusted.

**X. Removal of Water Meters, Fire Hydrant Assemblies, Backflow Preventers, Water Valves, and Air Release Valves**

Removal of existing water meters and boxes, fire hydrants assemblies, backflow preventers, water valves, and air release valves, shall be measured on an individual basis on the number of each removed.

**Y. Adjustment of Water Service Lines**

Adjustment of water service lines shall be measured in linear feet (meters) of service line pipe lowered or raised, and shall include the length of valves, fittings, meters, boxes, and other appurtenances. Measurements are made from end to end of actual adjustments.

**Z. Concrete Thrust Blocks**

Concrete thrust blocking installed shall be measured as indicated in Section 500 per cubic yard of concrete acceptably installed. When Concrete Thrust Blocks is not shown as a pay item, include the cost of the work in the bid price for the appropriate item.

**AA. Concrete Thrust Collars**

Concrete thrust collars shall be measured on an individual basis on the number of each size thrust collar acceptably installed. When Concrete Thrust Collars is not shown as a pay item, include the cost of the work in the bid price for the appropriate item

**BB. Cut and Plug Existing Water Main**

Cutting and plugging of existing water mains shall be measured on an individual basis per each instance of cutting and plugging existing mains as shown on the Plans.

**CC. Removal of Water Mains**

Unless specified removal of water mains shall be removed in accordance with Section 210. If specified removal of water mains shall be measured per linear foot for each size pipe actually removed in accordance with Section 610. Measurement shall be horizontally above the centerline of the pipe removed and shall include the length of valves and fittings.

**DD. Line Stop**

Line stops shall be measured on an individual basis on the number of each size line stop actually installed.

**EE. Flowable Fill**

Flowable fill shall be measured as indicted in Section 600 per cubic yard of flowable fill acceptably installed. When flowable fill is not shown as a pay item, include the cost of the work in the bid price for the appropriate item.

**FF. Insertion Valve**

Insertion valves shall be measured on an individual basis on the number of each size valve acceptably installed.

**GG. Three-Dimensional (3D) Survey**

Three-dimensional survey shall be measured as one lump sum for a complete and accepted survey. This item will be included in the overall pipe measurement. No separate payment for this work.

**670.4.01**

**Limits**

General Provisions 101 through 150.

**670.5**

**Payment**

The Contract Unit Price for each Item, complete and accepted, shall include all costs incidental to the construction of the Item according to the Plans and as specified in this Section. The unit prices bid shall include due allowance for the salvage value of all materials removed from existing or temporary lines and not installed in the completed work. All such surplus items shall become the property of the Contractor unless such surplus items are specified to be salvaged. Payment for any Item listed below is full compensation for the Item or Items complete in place.

**A. Ductile Iron Water Mains**

Ductile iron mains shall be paid for at the unit price per linear foot for each diameter pipe installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of pipe, joints and jointing materials, anchoring, warning tape, polyethylene encasement, protection of existing utilities, connections to existing water mains, sampling taps, temporary blow-offs, flushing, cleaning, pigging, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration and all work and materials necessary to place the pipe into service.

**B. PVC Water Main**

PVC water mains shall be paid for at the unit price per linear foot for each diameter pipe installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of pipe, anchoring, tracer wire, warning tape, protection of existing utilities, connections to existing water mains, sampling taps, temporary blow-offs, flushing, cleaning, pigging, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the pipe into service.

**C. Fusible PVC Water Main**

Fusible PVC water mains shall be paid for at the unit price per linear foot for each diameter pipe installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, entry/exit pits, installation of pipe, joints and jointing materials, tracer wire, warning tape, mechanical joint adapters, protection of existing utilities, connections to existing water mains, fusion process materials and equipment, directional drilling materials and equipment, tracking system, assembling, welding, supporting, stringing, pulling, pigging, cleaning, sampling taps, temporary blow-offs, flushing, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, and restoration, and all incidentals necessary to place the pipe into service except where such items are shown to be paid for under a separate Pay Item.

**D. HDPE Water Main**

HDPE water mains shall be paid for at the unit price per linear foot for each diameter pipe installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, entry/exit pits, installation of pipe, tracer wire, warning tape, mechanical joint adapters, protection of existing utilities, connections to existing water mains, fusion process materials and equipment, directional drilling materials and equipment, tracking system, assembling, welding, supporting, stringing, pulling, pigging, cleaning, sampling taps, temporary blow-offs, flushing,

chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, and restoration, and all incidentals necessary to place the pipe into service except where such items are shown to be paid for under a separate Pay Item.

**E. Ductile Iron Fittings**

Ductile iron fittings are considered subsidiary to the water line in which they are used and are not measured for separate payment as outlined in the manufacturers' catalogues and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of fittings, joints and jointing materials, anchoring, warning tape, polyethylene encasement, protection of existing utilities, flushing, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, all other related and necessary materials, work and equipment required to install a complete and operable pipeline fitting. This Item includes, but is not limited to, wyes, tees, bends, crosses, sleeves, plugs and caps, couplings, and reducers.

**F. Restrained Joints**

Restrained joints are considered subsidiary to the water line in which they are used and are not measured for separate payment as outlined in the manufacturers' catalogues and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting, shoring, installation of the restraint device, polyethylene encasement, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the restrained joint.

**G. Gate Valves**

Gate valves shall be paid for at the unit price per each size gate valve and box assembly installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the gate valves (including valve box), concrete pad or collar, valve identification disc, valve marker, valve tag, polyethylene encasement, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the gate valve and place it in service.

**H. Butterfly Valves**

Butterfly valves shall be paid for at the unit price per each size butterfly valve and box assembly installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the butterfly valves including valve box, concrete pad or collar, valve identification disc, valve marker, valve tag, polyethylene encasement, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration and all work and materials necessary to install the butterfly valve and place it in service.

**I. Tapping Sleeve and Valve Assembly**

Tapping sleeve and valves assemblies shall be paid for at the unit price per each size tapping sleeve and valve assembly installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of tapping sleeves and valve assemblies including valve box, concrete pad or collar, valve marker, valve tag, polyethylene encasement, protection of existing utilities, tapping the potable water main, chlorine for disinfection, disinfection, sampling points, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and necessary hardware to install the tapping sleeve assembly and valve and place it in service.

**J. Tapping Sleeve**

Tapping sleeves shall be paid for at the unit price per each size tapping sleeve installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of tapping sleeves, concrete pad

or collar, valve marker, valve tag, polyethylene encasement, protection of existing utilities, tapping the potable water main, chlorine for disinfection, disinfection, sampling points, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and necessary hardware to install the tapping sleeve and place it in service.

**K. Double Strap Saddle**

Double strap saddles shall be paid for at the unit price per each size double strap saddle installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of double strap saddles, concrete pad or collar, valve marker, valve tag, polyethylene encasement, protection of existing utilities, tapping the potable water main, chlorine for disinfection, disinfection, sampling points, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and necessary hardware to install the double strap saddle.

**L. Fire Hydrant Assembly**

Fire hydrant assemblies shall be paid for at the unit price per each hydrant installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the fire hydrant assemblies (all configurations), vertical extensions, tapping sleeve, valve, hydrant lead piping, joint connections, fittings, tees, restraints, crushed stone drain, polyethylene encasement, protection of existing utilities, valve box, concrete pad or collar, valve identification disc, valve marker, valve tag, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the fire hydrant assembly and place it in service.

**M. Water Service Line**

Water service lines shall be paid for at the unit price per linear feet (meters) of the size service line installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of water service line, tracer wire, tapping saddle, sleeve, corporation stops, fittings, curb stops, casing pipe, plugging abandoned water service connection, removal of abandoned water service line, protection of existing utilities, locating and connection to existing or new water main, chlorine for disinfection, disinfection, sampling points, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the water service line into service. Water meter and box shall be paid for under a separate Pay Item.

**N. Water Meter and Box**

Water meters shall be paid for at the unit price per each size water meter installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the meter and box, adjustment to final grade, fittings, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the meter into service except where such items are to be paid for under a separate Pay Item.

**O. Backflow Prevention Assembly**

Back flow prevention assemblies shall be paid for at the unit price per each type backflow preventer installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the backflow preventer, concrete vault, adjustment to final grade, testing and certification, fittings, tees, restraints, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the meter into service except where such items are to be paid for under a separate Pay Item.

**P. Air Release Valve Assembly**

Air release valve assemblies shall be paid for at the unit price per each size and type of air release valve assembly installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the air release assembly, tapping saddle, isolation valve, reducers, piping, restraints, fittings, tracer wire, concrete manhole or vault, ring and cover, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the air release assembly into service.

**Q. Pressure Reducing / Sustaining Valve**

Pressure reducing / sustaining valve shall be paid for at the unit price per each size and type of pressure reducing / sustaining valve installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the pressure reducing / sustaining valve, reducers, piping, restraints, fittings, tracer wire, concrete manhole or vault, ring and cover, tracer wire, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the pressure reducing / sustaining valve into service.

**R. Blow-Off Assembly**

Blow-off assemblies shall be paid for at the unit price per each blow-off assembly installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the blow-off assembly, valves, valve boxes, concrete pad or collar, piping, restraints, fittings, tracer wire, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the blow-off assembly into service.

**S. Steel Casing**

Steel casing pipe shall be paid for at the unit price per linear foot according to the diameter and thickness of the steel casing installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, protection of existing utilities, steel casing pipe, skid, steel straps, coatings, casing spacers, end seals, boring and jacking pits, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the steel casing except where such items are shown to be paid for under a separate Item. The carrier pipe shall be paid from other applicable Pay Item.

**T. Relocation of Existing Air Release Valve**

Relocation of air release valves shall be paid for at the unit price per each air release valve assembly relocated and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing air release valve assembly, installation at another location, piping, restraints, tracer wire, fittings, adjustment to final grade, polyethylene encasement, protection of existing utilities, chlorine for disinfection, disinfection backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration and all work necessary to locate, remove and relocate the air release valve except where such items are shown to be paid for under a separate Pay Item.

**U. Relocation of Existing Fire Hydrant Assembly**

Relocation of fire hydrants shall be paid for at the unit price per each hydrant assembly relocated and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing fire hydrant assembly, installation at another location, vertical extensions, hydrant lead piping, joint connections, fittings, tees,

restraints, crushed stone drain, polyethylene encasement, valve box, concrete pad or collar, valve identification disc, valve marker, adjustment to final grade, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work necessary to locate, remove and relocate the hydrant.

**V. Relocation of Existing Backflow Prevention Devices**

Relocation of backflow prevention devices shall be paid for at the unit price per each backflow preventer relocated and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing backflow preventer, installation at another location, adjustment to final grade, testing and certification, fittings, tees, restraints, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work necessary to locate, remove and relocate the backflow prevention device. The service line from the main to the relocated backflow preventer shall be paid for under a separate Pay Item.

**W. Relocation of Water Meter and Box**

Relocation of existing water meter and boxes shall be paid for at the unit price of each water meter and box relocated and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, removal of existing water meter and box, installation at another location, adjustment to final grade, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to relocate the water meter and box except where such items are shown to be paid for under a separate Item. The new service line from the main to the relocated meter shall be paid for under a separate Pay Item.

**X. Relocation of Water Meter, including Bypass and Vault**

Relocation of existing water meter including bypass and vault shall be paid for at the unit price of each water meter including bypass and vault relocated and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, removal of existing water meter, bypass and vault, installation at another location, adjustment to final grade, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to relocate the water meter including bypass and vault except where such items are shown to be paid for under a separate Item. The new service line from the main to the relocated meter, bypass and vault shall be paid for under a separate Pay Item.

**Y. Relocation of Pressure Reducing/Sustaining Valve**

Relocation of pressure reducing/sustaining valve shall be paid for at the unit price of each pressure reducing/sustaining valve relocated and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, removal of existing water meter and box, installation at another location, adjustment to final grade, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to relocate the water meter and box except where such items are shown to be paid for under a separate Item. The new service line from the main to the relocated pressure reducing/sustaining valve shall be paid for under a separate Pay Item.

**Z. Relocation of Water Valve and Box**

Relocation of existing water valves and boxes shall be paid for at the unit price of each water valve and box relocated and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, removal of existing water meter and box, installation at another location, adjustment to final grade, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials

necessary to relocate the water meter and box except where such items are shown to be paid for under a separate Item. The new service line from the main to the relocated valve shall be paid for under a separate Pay Item.

**AA. Adjustment of Existing Water Service Line**

Adjustment of existing water service lines shall be paid in accordance with Section 611, for at the unit price per linear foot of service line adjusted and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, adjustment of service line, tracer wire and splices, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to adjust the service line except where such items are shown to be paid for under a separate Pay Item.

**BB. Adjustment of Existing Water Valve Boxes to Grade**

Adjustment of existing valve boxes shall be paid for in accordance with Section 611, at the unit price per each valve box adjusted to final grade and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, valve case and lid, trench adapter and operating nut extensions/reductions, tracer wire and splices, tracer wire riser and threaded plug, concrete pad, valve identification disc, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to adjust the valve box.

**CC. Adjustment of Blow-off Assembly**

Adjustment of existing blow-off assemblies shall be paid for at the unit price per each blow-off adjusted to final grade and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, valve case and lid, trench adapter and operating nut extensions/reductions, tracer wire and splices, tracer wire riser and threaded plug, piping, concrete pad or collar, valve identification disc, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to adjust the blow-off assembly.

**DD. Adjustment of Existing Water Meter Boxes to Grade**

Adjustment of existing meter boxes shall be paid for at the unit price per each meter box adjusted to finished grade and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, adjustment of water meter box to final grade, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to adjust the water meter box.

**EE. Adjustment of Backflow Preventer**

Adjustment of existing backflow preventers shall be paid for at the unit price per each backflow preventer adjusted to finished grade and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, adjustment of backflow preventer to final grade, adjustment of backflow preventer vault to final grade, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to adjust the water meter box.

**FF. Adjustment of Existing Fire Hydrant Assembly to Grade**

Adjustment of existing fire hydrants shall be paid for , at the unit price per each hydrant adjusted to finished grade and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, adjustment of hydrant, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to adjust the hydrant.



**GG. Removal of Water Valve and Box**

Removal of water valves shall be paid for at the unit price per each valve removed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing water valve and box, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, storage and delivery of removed valves identified to be salvaged, and all work necessary to remove the valve and box.

**HH. Removal of Water Meter and Box**

Removal of water meters shall be paid for at the unit price per each meter removed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing water meter and box, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, storage and delivery of removed meters and boxes identified to be salvaged, and all work necessary to remove the meter.

**II. Removal of Fire Hydrant Assembly**

Removal of fire hydrant assemblies shall be paid for at the unit price per each hydrant assembly removed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing fire hydrant assembly, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, storage and delivery of removed hydrants identified to be salvaged, and all work necessary to remove the hydrant.

**JJ. Removal of Air Release Valve**

Removal of air release valves shall be paid for at the unit price per each air release valve removed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, removal of air release valve assemblies, piping, concrete manholes or vaults, and fabricated enclosures, backfilling, backfill materials, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, storage and delivery of air release valves identified to be salvaged, and all work necessary to remove the air release valve.

**KK. Removal of Backflow Prevention Devices**

Removal of backflow prevention devices shall be paid for at the unit price per each backflow preventer removed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing backflow preventer and vault, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, storage and delivery of removed backflow preventers identified to be salvaged, and all work necessary to remove the backflow preventers.

**LL. Concrete Thrust Blocks**

Concrete thrust blocks shall be paid for at the unit price per cubic yard of concrete complete in place as indicated in Section 500 and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, concrete, forming, reinforcement, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install a complete thrust block. When Concrete Thrust Blocks is not shown as a pay item, include the cost of the work in the bid price for the appropriate item

**MM. Concrete Thrust Collars**

Concrete thrust collars shall be paid for at the unit price per each size of thrust collar and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, reinforced concrete thrust collars, retainer glands, reinforcement, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install a complete thrust collar. When Concrete Thrust Collar is not shown as a pay item, include the cost of the work in the bid price for the appropriate item.

**NN. Removal of Water Main**

Removal of water mains shall be paid for at the unit price per linear foot of the size of water main to be removed in accordance with Section 610 and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, bypass pumping (as required), restoration, and all work and materials necessary to locate, remove and dispose of the pipe and associated appurtenances. Unless indicated for removal in a separate Pay Item, appurtenances to be removed shall include but not be limited to fittings, isolation valves, air release valves, valve boxes, blow-offs, steel casings, casing spacers, fire hydrant assemblies, water service lines, water meter boxes, thrust blocks, and concrete. All such surplus items shall become the property of the Contractor unless specified to be salvaged by the Utility Owner.

**OO. Cut and Plug Existing Water Main**

Cutting and plugging of existing water mains shall be paid for at the unit price per each installation and shall cover all materials, transportation, labor, equipment, excavation, sheeting and shoring, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to cut and plug existing water mains, except where such items are shown to be paid for under a separate Pay Item.

**PP. Line Stops**

Line stops shall be paid for at the unit price per each size line stop installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the line stop assemblies, valves, valve boxes, fittings, restraints, protection of existing utilities, chlorine for disinfection, disinfection, sampling points, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the gate valve and place it in service.

**QQ. Flowable Fill**

Flowable fill shall be paid for at the unit price per cubic yard of flowable fill complete in place as indicated in Section 600 and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, flushing, plugging air release valves and service connections, installation of flowable fill, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the gate valve and place it in service. When flowable fill is not shown as a pay item, include the cost of the work in the bid price for the appropriate item

**RR. Insertion Valve**

Insertion valves shall be paid for at the unit price per each size valve inserted and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the valve, valve boxes, fittings, restraints, concrete pad or collar, valve identification disc, valve marker, polyethylene encasement, protection of existing utilities, chlorine for disinfection, disinfection, sampling points, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the insertion valve and place it in service.

**SS. Three-Dimensional (3D) Survey**

Three-dimensional survey cost will be included in the overall pipe measurement and no separate payment for this work will be made, and it shall cover the costs for all non-destructive methods of locating installed utilities and associated electronic deliverables per Utility Owner specifications.

Payment will be made under:

Item No. 670	Water Main _____ in (mm)	Per linear foot (meter)
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Section 670—Water Distribution System

Item No. 670	Gate Valve_____in (mm)	Per each
Item No. 670	Tapping Sleeve and Valve Assembly __ in (mm) x_____in (mm)	Per each
Item No. 670	Fire Hydrant	Per each
Item No. 670	Water Service Line_____in (mm)	Per linear foot (meter)
Item No. 670	Relocate Existing Fire Hydrant	Per each
Item No. 670	Relocate Existing Air Release Valve Assembly	Per each
Item No. 670	Relocate Existing Water Valve including Box	Per each
Item No. 670	Relocate Existing Water Meter including Box	Per each
Item No. 670	Adjust Water Service Line to Grade	Per linear foot (meter)
Item No. 670	Remove Existing Water Meter including Box	Per each
Item No. 670	Steel casing_____in (mm)	Per linear foot (meter)
Item No. 670	Butterfly valve_____in (mm)	Per each
Item No. 670	Double strap saddle_____in (mm) x_____in (mm)	Per each
Item No. 670	Tapping Valve, ___in(mm)	Per each
Item No. 670	Air Release Valve Assembly_____in (mm)	Per each
Item No. 670	Water Meter, ___in	Per each
Item No. 670	Insertion Valve, ___in	Per each
Item No. 670	Line Stop_____in (mm)	Per each
Item No. 670	Cut and Plug Existing Water Main	Per each
Item No. 670	Blow-Off Assembly, Complete	Per each
Item No. 670	Pressure Reducing/Sustaining Valve	Per each
Item No. 670	Backflow Prevention Assembly	Per each
Item No. 670	Concrete Thrust Collar, _____in	Per each
Item No. 670	Relocate Backflow Prevention Assembly	Per each
Item No. 670	Relocate Existing Water Meter, including Bypass & Vault_____in (mm)	Per each
Item No. 670	Relocate Pressure Reducing/Sustaining Valve	Per each
Item No. 670	Adjust Blowoff Assembly	Per each
Item No. 670	Adjust Fire Hydrant Assembly	Per each
Item No. 670	Adjust Backflow Preventer	Per each
Item No. 670	Remove Existing Water Valve, including Box	Per each
Item No. 670	Remove Existing Fire Hydrant	Per each
Item No. 670	Remove Existing Backflow Preventer	Per each
Item No. 670	Remove Existing Air Release Valve	Per each

**670.5.01 Adjustments**

General Provisions 101 through 150.

**DEPARTMENT OF TRANSPORTATION**

**STATE OF GEORGIA**

**SPECIAL PROVISION**

**PROJECT: FY 18 Bridge Replacement**

**COUNTY: Cook, Tattnall, Taylor, Wilcox**

**PI NO: 0015913**

**Section 950 - Telecommunication Facilities**

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*Add the following:*

**950.1 General Description**

This Work consists of furnishing materials, labor, tools, equipment, and other items necessary for the installation, relocation, and adjustment of underground or direct buried telecommunication facilities in accordance with the Project Plans, Telecommunication Plans, and Specifications. This work includes the partial installation of telecommunication facilities on bridge structures when specified in the Plans. This Work does not include aerial telecommunication facilities and any splicing work, whether underground or aerial. This work does not include the placing or pulling of any wire or fiber optic cable through conduit, whether underground, aerial, or bridge attachment.

**950.1.01 Definitions**

General Provisions 101 through 150

Whenever the terms "Company" or "BellSouth" or "AT&T" are used in this Special Provision and its related documents, they mean American Telephone & Telegraph, its subsidiaries, successors and/or assigns.

Whenever the term "Plan" is used in this Special Provision and related documents, this includes the Telecommunication Plans.

The term "Contract Coordinator" means the Company's authorized individual having the authority to give instructions pertaining to the Work. The Contract Coordinator has authority to approve or reject the Work and otherwise represent the Company. The Contract Coordinator is not authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract, Plans, and Specifications nor will they act as an agent for the Contractor. Ensure Contract Coordinator has access to all of the Work for inspection and testing and is invited to participate in any project meeting where Telecommunication Facilities may be discussed.

**950.1.02 Related References**

General Provisions 101 through 150

## Section 950 - Telecommunication Facilities

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### A. Standard Specifications

[Section 107 – Legal Regulations and Responsibility to the Public](#)

[Section 201 - Clearing and Grubbing](#)

[Section 205 - Roadway Excavation](#)

[Section 207 - Excavation and Backfill for Minor Structures](#)

[Section 208 - Embankments](#)

[Section 209 - Subgrade Construction](#)

[Section 310 - Graded Aggregate Construction](#)

[Section 400 - Hot Mix Asphaltic Concrete Construction](#)

[Section 441 - Miscellaneous Concrete](#)

[Section 444 – Sawed Joints in Existing Pavements](#)

[Section 500 - Concrete Structures](#)

[Section 810 – Roadway Materials](#)

[Section 852 - Miscellaneous Steel Materials](#)

[Section 861 - Piling and Round Timber](#)

[Section 863 - Preservative Treatment of Timber Products](#)

### B. Related Documents

1. [National Electric Safety Code](#), ANSI – C2 (NESC)

Obtain from the Institute of Electrical and Electronics Engineers at:

<http://www.ieee.org/portal/site/iportals/>

2. AT&T telecommunication construction standards/details/specifications

Obtain AT&T's telecommunication construction standards/details/specifications from:

AT&T Georgia

If there is a conflict or discrepancy between the Specifications and the telecommunication standards/details/specifications or the [National Electric Safety Code](#), perform the Work in accordance with the Company's telecommunication construction standards/details/specifications and [National Electric Safety Code](#), current editions. If any of the Company's telecommunication construction standards/details/specifications and [National Electric Safety Codes](#) are revised after Notice to Contractors date, perform the Work specified in the Plans and Specifications using the revised telecommunication

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construction standards/details/specifications and National Electric Safety Code. If revisions to the Company's telecommunication construction standards/details/specifications and National Electric Safety Codes are dated on or after the letting date shown on the bid proposal, notify the Engineer in writing of such revisions.

### **950.1.03 Submittals**

General Provisions 101 through 150

#### **A. Completion Letter and As-Built Documentation**

Provide no later than 30 days after the completion of the work a Completion Letter and As-Built Documentation to both the Engineer and the Contract Coordinator consisting of the following information.

1. Include in the Completion Letter the date all telecommunication pay items are completed and ready to be turned over to the Company. Also, include a detailed estimate of quantities in place and explanation of any deviations or overruns.
2. Provide As-Built Documentation of the in-place and accepted telecommunication facilities. Documentation shall consist of two sets of full size plans and electronic files in the form of a Bentley MicroStation file using the same version and format in which the Telecommunication Plans were created.

### **950.2 Materials**

#### **A. Underground Telecommunication Facilities**

Provide any materials required for the construction of proposed telecommunication facilities shown on the Plans but not furnished by the Company. Furnish for the completion of the Work all materials, tools, equipment, and labor in conformance with the requirements and standards set forth in the telecommunication construction standards/details/specifications, current edition. When required by the Plans, transfer all existing materials supplied by the Company to the required locations as specified. Replace in-kind any existing material damaged or lost during transfer.

#### **950.2.01 Delivery, Storage, and Handling**

General Provisions 101 through 150

Coordinate with the Contract Coordinator to ensure all required materials for the Work are from sources approved by AT&T. Follow any delivery, storage and handling procedures set forth in the telecommunication construction standards/details/specifications, current edition.

### **950.3 Construction Requirements**

#### **950.3.01 Personnel**

General Provisions 101 through 150

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Contractors or Subcontractors performing work consisting of the construction and installation of telecommunication facilities must be prequalified with the Company and registered with the Department.

### 950.3.02 Equipment

General Provisions 101 through 150

Ensure all equipment used is in conformance with the requirements and standards set forth in the Company's telecommunication construction standards/details/specifications, current edition. Obtain prior approval from the Engineer before starting Work on specialty items such as boring equipment and others of similar complexity.

### 950.3.03 Preparation

General Provisions 101 through 150

Follow all preparation procedures set forth in the Company's telecommunication construction standards/details/specifications, current edition, and the Specifications. Perform necessary preliminary engineering, field engineering, survey, and construction staking and layout for the installation of the specified underground telecommunication facilities.

### 950.3.04 Fabrication

General Provisions 101 through 150

Ensure fabrication procedures and requirements conform to those set forth in the Company's telecommunication construction standards/details/specifications, current edition. Submit shop drawings to the Engineer and Contract Coordinator for any items requiring fabrication. Obtain approval from the Engineer and Contract Coordinator prior to ordering materials.

### 950.3.05 Construction

Review the Plans to ensure all items required for the Work are included in the price bid for each telecommunication bid item. Identify any material required to complete the Work not shown in the Plans. Communicate with the Contract Coordinator to ensure AT&T is given 30 (thirty) calendar days notice for AT&T's portion of the Work.

#### A. Permission to Enter Private Property

Comply with [Section 107—Legal Regulations and Responsibility to the Public](#).

Through an agreement between the Department and the Company; the Contractor is given the permission to enter upon private properties found outside the project's construction limits. This permission is granted for the sole purpose of activities relating to the installation and/or adjustments of telecommunication facilities only and is limited to the area of existing easements obtained by the Company. Such permission to enter upon

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private properties is temporary and such rights commence upon project award and automatically expire upon completion and project final acceptance by the Department.

In all cases where it is necessary to enter upon private property; take sole responsibility for and minimize any disruptions to personal property in the commencement of such work thereof. Additionally, ensure compliance to the following restrictions and requirements:

1. Limit all Work to the installation, relocation, or replacement of telecommunication facilities; and, Work necessary to restore each private property in compliance with subsection 950.3.05.A.6.
2. Notify the Engineer, private property owner, and resident(s) 72 hours before commencing Work on said private property.
3. Ensure only vehicles and equipment required for the Work are allowed on any private property.
4. Do not store any materials, vehicles, or equipment on any private property longer than the duration required to perform the Work.
5. Do not use any private property as an on-site detour or vehicle path.
6. Immediately following any construction located on private property, restore all areas of the same parcel to a condition substantially the same as existed immediately prior to any such disturbances, including without limitation, any and all necessary repairs, and replacement of grassing, landscaping and pavement which may be removed and excavated by the Contractor. Ensure all necessary repairs are made to restore the original contours and re-establish the ground cover to control erosion.

### **B. Customer Notification Requirements**

Follow all customer notification requirements as provided by the Company and obtain approval from the Contract Coordinator prior to disrupting existing services required for the installation of the telecommunication facilities shown on the Plans.

### **C. Installation or Adjustment of Telecommunication Facilities**

Follow all relevant procedures set forth in the Company's telecommunication construction standards/details/specifications, current edition. Construct all proposed underground telecommunication facilities in accordance with the requirements set forth in the Plans and as instructed by the Contract Coordinator.

### **D. Excavating Trenches**

Excavate trenches to the proper grade, depth, and width as follows:

#### **1. Trench to Grade**

Ensure excavated trench bottoms are firm, free from boulders, and conform to the established grade.

- a. Backfill, according to [Section 207](#), any part of the trench excavated below the established grade. Use Class I or Class II Soils ([Section 810](#)), and firmly compact the soil.



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- b. Where the established grade of a trench is in rock, undercut the bottom of the trench by at least 6 in (150 mm), then backfill and compact according to [Section 207](#).
- c. Conduct blasting operations according to [Subsection 107.12](#).
- d. Excavate trenches under pavement to grade as follows:
  - 1) To remove the pavement, cut it at least 12 in (300 mm) wider than each trench edge to provide solid bearing for the pavement edges when replaced. Remove the pavement according to [Section 444](#), except no separate payment will be made for sawed joints.
  - 2) Directional bore under existing sidewalks, curbs, gutters, and pavements according to subsection 950.3.05.E.

### 2. Minimum Trench Depth

Excavate trenches to provide at least 48 in (1.2 m) cover depth from the Work to the finished pavement surface, sidewalk, grass plot, etc. unless indicated otherwise on the Plans or by the Engineer.

If any part of a telecommunication facility is to be placed in or under a new embankment, finish the embankment to at least a 2 ft (600 mm) plane above the top of the proposed facility before excavating the trench.

### 3. Trench Width

Excavate trenches wide enough to allow proper installation of the Work.

## E. Directional Boring

This Work consists of installing various sizes of bores by directional boring through whatever materials may be encountered.

Furnish, for the Engineer's approval, a plan showing the proposed methods for the installation of horizontal directional bores. The Engineer will review the proposed installation plan within 10 working days of receipt by the Department. No directional boring Work will be allowed until the Contractor's submitted plan is approved by the Engineer. Include the following detail in the plan, as a minimum:

1. List of projects completed by the company performing the boring operation, environment of installation (urban work, river crossing, freeway), diameter of product installation and length of bores. Include the name, address and phone number of an owner's representative with knowledge of the performance of the Work. Provide at least five previously completed projects of similar scope as the boring Work included in this contract.
2. List of the Contractor's key personnel with a resume of boring experience. The Department will be the sole judge of the qualifications of the foreman and the drill operators.
3. Location of all proposed boring entry and exit pits.
4. Proposed alignment of bore both horizontal and vertical. For the proposed alignment, maintain a minimum clearance of 18 inches (450 mm) or 2 times the diameter of the final product installation,

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whichever is greater, at any obstruction. Do not perform boring in select backfill areas such as at mechanically stabilized wall locations.

5. Proposed diameter of bore. This diameter is the diameter of the final product installation.
6. Proposed diameter of pilot borehole.
7. Proposed diameter of back reamer. Do not allow the diameter of the back reamer to exceed 1.5 times the diameter of the final product installation.
8. Proposed depth of cover. Ensure the depth of cover will be equal to or greater than 10 times the diameter of the final product installation. Under paved shoulders, maintain a minimum depth of cover of 4 feet (1.22 meters). Under travel lanes or outside of paved shoulders, maintain a minimum depth of cover of 8 feet (2.44 meters).
9. Evaluation of soil conditions to be encountered. A complete soil survey is not required. As a minimum, excavate the entrance and exit pits for the proposed bore and determine the nature of the material likely to be encountered. Base the drilling fluid composition on the evaluation of the materials encountered in the bore pit excavation.
10. Proposed composition of drilling fluid.
11. Proposed drilling fluid pressure and flow rates.
12. Proposed drilling fluid management plan.
13. Proposed pull back rate.
14. Type of tracking facilities.

Excavate suitable pits or trenches for the boring operation and for placing end joints or termination connectors of conduit when required. Securely sheet and brace pits or trenches where necessary to prevent caving. Where directional boring is required under railroads, highways, streets or other facilities, perform construction in a manner that will not interfere with the operation of the facility, and not weaken the roadbed or structure. Do not disturb or excavate any roadway pavement, subgrade, roadbed, paved shoulder, or unpaved median as part of the boring or conduit placing operation for any reason without written authorization by the Engineer.

In the above areas, unless otherwise authorized in writing by the Engineer, abandon in place any broken or damaged boring rod/stem, boring head (including transmitter/transponder locating heads and cutter heads), couplings (including back reaming, swivel or connector couplings), or any other material that cannot be retrieved as part of the pullback operation. Abandoned material will become the property of the Department. No additional payment for abandoned material will be made.

Continuously monitor the location and alignment of the pilot drill progress to insure compliance with the proposed installation alignment and to verify depth of the bore. Accomplish monitoring by manual plotting based on location and depth readings provided by the locating/tracking facilities or by computer generated bore logs which map the bore path based on information provided by the locating/tracking facilities. Obtain readings or plots on every drill rod and provide to the Engineer on a daily basis for as-built plans.

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Monitor drilling fluids such as the pumping rate, pressures, viscosity and density during the pilot bore, back reaming, and/or conduit installation stages to ensure adequate removal of soil cuttings and to ensure the stability of the borehole is maintained. Do not allow drilling fluid pressures to exceed that which can be supported by the overburden (soil) pressure to prevent heaving or a hydraulic fracture of the soils. Contain excessive drilling fluids at the entry and exit points until recycled or removed from the site. Dispose of all drilling fluids in a manner acceptable to the appropriate local, state and federal regulations. The Work will be immediately suspended whenever drilling fluids seep to the surface other than in the boring entrance or exit pit. Propose a method to prevent further seepage and remove and dispose of any drilling fluid on the surface prior to resuming the boring operation.

To minimize heaving during pullback, determine the pullback rate to maximize the removal of soil cuttings and minimize compaction of the ground surrounding the borehole. Ensure the pullback rate minimizes over cutting of the borehole during the back reaming operation to ensure excessive voids are not created resulting in post installation settlement. Restore any surfaces damaged by the Work to their preconstruction conditions. All costs associated with the restoration are to be borne by the Contractor.

The distance the excavation extends beyond the end of the bore will depend upon the character of the excavated material. Do not exceed 2 feet (0.61 meters) in any case. If the character of the material being excavated makes it desirable, decrease the distance on instructions from the Engineer. Once the directional boring has commenced, insofar as practical, continue the operation without interruption. After the boring has been completed, immediately backfill the pits or trenches excavated to facilitate boring operations.

Proceed with the Work from a surface staging area provided for the boring equipment and workers. Obtain approval from the Engineer on the proposed location of the staging area. Bore the holes mechanically. Place excavated material near the top of the working pit and dispose of as required. Water or other fluids in connection with the boring operation will be permitted only to the extent necessary to lubricate cutting. Do not perform jetting.

Excavation will not be measured for payment.

In unconsolidated soil formations, a gel-forming colloidal drilling fluid consisting of at least 10% high grade carefully processed bentonite may be used to consolidate excavated material, seal the walls of the hole, and furnish lubrication for subsequent removal of material and immediate back reaming/installation of conduit. Continuously monitor and maintain the flow pressure on the drilling fluid at the minimal pressure required to place the fluid. In normal circumstances, do not exceed a flow pressure of 200 psi (1379 k Pa). At any time during boring operations, do not exceed a flow pressure of 500 psi (3448 k Pa). Remove all drilling fluid spoils from both ends of the bore and properly dispose of material at a properly permitted location.

Limit allowable variation from line and grade to a maximum of 2 percent.

Pressure grout any voids that develop during the installation operation and are determined by the Engineer to be detrimental to the Work with an approved mix.

Directional boring operations inherently include the risk of encountering below grade obstructions that begin to alter the bore direction. Should an obstruction be encountered, notify the Engineer immediately. Attempt to restore the bore alignment by performing a minimum of three attempts at each encountered obstruction with different corrective measures. Boring deeper or shallower (if minimum conduit depth can

## Section 950 - Telecommunication Facilities

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be maintained), moving the boring head to the right or left of the obstruction, or attempting to bore through the obstruction (if other than solid rock) are acceptable corrective measures to restore bore alignment. The Engineer may authorize a relocation of the bore if a suitable bore alignment cannot be restored.

### F. Removals

Follow all relevant procedures set forth in the Telecommunication Plans or Company's telecommunication construction standards/details/specifications, current edition. Remove all existing telecommunication facilities in accordance with the requirements set forth in the Plans and as instructed by the Contract Coordinator. Cutting of poles specified for removal or abandonment will not be permitted. Remove pole(s) and backfill void in accordance with [Section 207](#). Backfill any voids remaining from the removal of underground facilities in accordance with [Section 207](#). Replace, in-kind (material and depth), any voids remaining in roadway structures.

### 951.3.06 Quality Acceptance

#### A. Testing

Follow all relevant procedures set forth in the Telecommunication Plans or Company's telecommunication construction standards/details/specifications, current edition. Ensure Contract Coordinator is present at all inspection and testing. Correct all deficiencies in the Work indicated by testing, inspecting, and as directed by the Engineer or Contract Coordinator.

#### B. Semi-Final Utility Inspection

When the contractor has finished the Telecommunication System Work, the Contractor may, by written notice, request that a semi-final utility inspection be made. The Engineer, along with the Contract Coordinator, will determine if the Telecommunication System Work is ready for semi-final utility inspection. The Engineer, in agreement with the Contract Coordinator, will have the final decision on when the Telecommunication System Work is complete and thereby ready for semi-final utility inspection. If all the Telecommunication System Work provided for and contemplated by the Contract is found to be complete to the Engineer's satisfaction and all documents required in connection with the Telecommunication System Work has been submitted and accepted then, the Contractor may request transfer of the completed Telecommunication System Work to the Owner.

Once the new facilities are in service and accepted by the Owner, provide written correspondence notifying the Engineer and Contract Coordinator that utility location services will be the responsibility of said Owner.

Such partial acceptance shall in no way relieve the Contractor of the responsibility for satisfactory completion of the Contract, or for failure of any portion of the Telecommunication System Work prior to Final Acceptance of the Project.

### 950.3.07 Contractor Warranty and Maintenance

General Provisions 101 through 150

### 950.4 Measurement

## **Section 950 - Telecommunication Facilities**

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Installation and Adjustment of Telecommunication Facilities, and other items of Work in this Specification, in place, operational, and accepted, are measured for payment as follows:

### **A. Installation of Telecommunication Facilities**

Installation is measured in linear feet for each type, size, and capacity of facility installed and accepted. The facility is measured along the center following the existing ground line or bridge deck grade from structure to structure through all equipment and hardware and includes the installation of any materials required by the Plans and Company's telecommunication construction standards/details/specifications, current edition. Measurement will begin and end at existing pole structures, vault structures, splice point, or termination cabinet where the newly installed Work connects to the existing facility. All measurements will begin and terminate at the intersection of the structure and grade. Measurement for the portions of buried facilities that transition up pole structures to tie to the overhead facilities will not be made. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and payment for the transfer of existing materials to new location. Include the costs of transferring materials in the costs for the installation of Telecommunication Facilities. Measurement of unsuccessful boring attempts will not be made. Successful directional bores are measured in linear feet for each size and capacity of bored facility installed and accepted.

Obtain measurements with electronic survey equipment and provide Engineer with printout of Installed Telecommunication Facilities indicating State Plane Coordinates and station numbers of each underground structure and pole structure and indicate distances between structures starting from the beginning of the Work (existing facility structure).

### **B. Adjustment of Telecommunication Facilities**

Adjustment is measured in linear feet for each type, size, and capacity of facility adjusted. The facility is measured along the center following the existing ground line from structure to structure through all equipment and hardware and includes the installation of any materials required by the Plans and Company's telecommunication construction standards/details/specifications, current edition. Measurement will begin and end at existing pole structures, vault structures, splice point, or termination cabinet where the newly installed Work connects to the existing facility. All measurements will begin and terminate at the intersection of the structure and grade. Measurement for the portions of buried facilities that transition up pole structures to tie to the overhead facilities will not be made. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and payment for the transfer of existing materials to new location. Include the costs of transferring materials in the costs for the Adjustment of Telecommunication Facilities.

Obtain measurements with electronic survey equipment and provide Engineer with printout of Adjusted Telecommunication Facilities indicating State Plane Coordinates and station numbers of each underground structure and pole structure and indicate distances between structures starting from the beginning of the Work (existing facility structure).

### **C. Installation of Telecommunication Facilities, Manholes**

Installation is measured per the number of each type and size of manhole installed.

### **D. Material Credit**

## **Section 950 - Telecommunication Facilities**

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Material Credit is a dollar amount credited to the Department for the value of unused or remaining Company provided materials rejected by the Company as being damaged or destroyed or materials lost or stolen. The amount will be tabulated based on an itemized list from the Company of all Company provided materials and based on the unused material remaining from the Work that was not returned to the Company or was rejected by the Company.

### **950.4.01 Limits**

General Provisions 101 through 150

### **950.5 Payment**

The Contract Unit Price for each Item shall include all costs incidental to the construction of the Item according to the Plans and as specified in this Section. Payment for any Item listed below is full compensation for the Item or Items in place, operational, and accepted.

#### **A. Installation of Telecommunications Facilities**

Installation will be paid for at the contract unit price per linear foot for each type, size, and capacity of facility installed. Payment is full compensation for purchasing, handling, delivery, and storage of material and installation of material in accordance with the Plans. Payment is full compensation for all the necessary equipment and labor for installation, including all items necessary and items specified in the Plans. Payment is full compensation for the entire linear feet required to traverse, below grade, the portion of the project specified and to tie back to existing facilities. This includes items such as directional boring, conduit, hardware, and any other item(s) necessary to provide for an in place and accepted operational facility of the type, size, and capacity specified in the Plans.

#### **B. Adjustment of Telecommunications Facilities**

Adjustment will be paid for at the contract unit price per linear foot for each type, size, and capacity of facility adjusted. Payment is full compensation for purchasing, handling, delivery, and storage of material and installation of material in accordance with the Plans. Payment is full compensation for all the necessary equipment and labor for adjustment and installation, including all items necessary and items specified in the Plans. Payment is full compensation for the entire linear feet required to traverse, below grade, the portion of the project specified and to tie back to existing facilities. This includes items such as conduit, hardware, and any other item(s) necessary to provide for an in place and accepted operational facility of the type, size, and capacity specified in the Plans.

#### **C. Installation of Telecommunication Facilities, Manholes**

Installation will be paid for at the contract unit price per each for each type and size of manhole installed. Payment is full compensation for all the necessary material, equipment, and labor for the installation, including all items necessary and all items specified in the Plans.

#### **D. Material Credit**

## Section 950 - Telecommunication Facilities

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Material Credit is a dollar amount credited to the Department for the value of unused or remaining Company provided materials rejected by the Company as being damaged or destroyed or materials lost or stolen. The amount will be tabulated based on an itemized list from the Company of all Company provided materials and based on the unused material remaining from the Work that was not returned to the Company or was rejected by the Company.

Payment will be made under:

Item No. 950	Installation of Telecommunication Facilities, Conduit, Concrete Encased - ____ in, ____ way	Per linear foot (meter)
Item No. 950	Installation of Telecommunication Facilities, Conduit, Non-Concrete Encased - ____ in, ____ way	Per linear foot (meter)
Item No. 950	Installation of Telecommunication Facilities, Conduit, Directional Bore - ____ in, ____ way	Per linear foot (meter)
Item No. 950	Installation of Telecommunication Facilities, Conduit, Bridge Attachment - ____ in, ____ way	Per linear foot (meter)
Item No. 950	Adjustment of Telecommunication Facilities, Conduit, Concrete Encased - ____ in, ____ way	Per linear foot (meter)
Item No. 950	Adjustment of Telecommunication Facilities, Conduit, Non-Concrete Encased - ____ in, ____ way	Per linear foot (meter)
Item No. 950	Installation of Telecommunication Facilities, Copper Twisted Pair Cable, Direct Burial - ____ in	Per linear foot (meter)
Item No. 950	Installation of Telecommunication Facilities, Fiber Optic Cable, Direct Burial - ____ in	Per linear foot (meter)
Item No. 950	Installation of Telecommunication Facilities, Precast Manhole – Type 1 – Class 1	Each
Item No. 950	Installation of Telecommunication Facilities, Cast-in -place Manhole – Type 1 – Class 1	Each
Item No. 950	Telecommunication Facilities, Material Credit	\$

### 950.5.01 Adjustments

General Provisions 101 through 150

### Buy America Language for Utility Agreements

2013-11-19

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In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at

## Section 950 - Telecommunication Facilities

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least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.

- (a) Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.
  
- (b) A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. Records to be maintained by the RAILROAD/UTILITIES and the DEPARTMENT for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
  
- (c) The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.



**DEPARTMENT OF TRANSPORTATION**  
**STATE OF GEORGIA**  
**SPECIAL PROVISION**  
**PROJECT: FY 18 Bridge Replacement**  
**COUNTY: Cook, Tattall, Taylor, Wilcox**  
**PI NO: 0015913**

**Section 951 – Cable Systems**

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*Add the following:*

**951.1 General Description**

This Work consists of furnishing labor, tools, equipment, and other items necessary for the installation, relocation, and adjustment of overhead and underground Cable Television Systems in accordance with the Project Plans, Owner Standards/Details/Specifications and Related Documents, and Specifications.

**951.1.01 Definitions**

General Provisions 101 through 150

Whenever the terms “Owner” or “Comcast” are used in this Special Provision and its related documents, they mean Comcast Cable Communications, Inc., its subsidiaries, successors and/or assigns.

Whenever the term “Plans” is used in this Special Provision and related documents, this includes the Cable Relocation Plans.

The term “Owner Project Manager” means the Owner’s authorized individual having the authority to give instructions pertaining to the Work. The Owner Project Manager has authority to approve or reject the Work and otherwise represent the Owner. The Owner Project Manager is not authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract, Plans, and Specifications nor will they act as an agent for the Contractor. Ensure Owner Project Manager has access to all of the Work for inspection and testing and is invited to participate in any project meeting where Cable Television Systems may be discussed.

**951.1.02 Related References**

General Provisions 101 through 150

**A. Standard Specifications**

[Section 107-Legal Regulations and Responsibility to the Public](#)

[Section 201-Clearing and Grubbing](#)

[Section 205-Roadway Excavation](#)

[Section 207-Excavation and Backfill for Minor Structures](#)

[Section 208-Embankments](#)

## Section 951 – Cable Systems

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[Section 209-Subgrade Construction](#)

[Section 310-Graded Aggregate Construction](#)

[Section 400-Hot Mix Asphaltic Concrete Construction](#)

[Section 441-Miscellaneous Concrete](#)

[Section 444-Sawed Joints in Existing Pavements](#)

[Section 500-Concrete Structures](#)

[Section 810-Roadway Materials](#)

[Section 852-Miscellaneous Steel Materials](#)

[Section 861-Piling and Round Timber](#)

[Section 863-Preservative Treatment of Timber Products](#)

### **B. Owner Standards/Details/Specifications and Related Documents**

1. Comcast Notice to Proceed (NTP)
2. Comcast Scheduled Maintenance Document (SMR/SM)
3. Comcast Post Construction Inspection Report/Corrective Action List
4. Comcast Overhead and Underground Cable Construction Standards, current edition
5. National Electric Code of the National Fire Protection Association, current edition
6. National Electric Safety Code, ANSI – C2 (NESC)

Available from the Institute of Electrical and Electronics Engineers at:

<http://www.ieee.org/portal/site/iportals/>

7. Society of Cable Televisions Engineers, Cable Television Construction Standards, current edition

If there is a conflict or discrepancy between the Specifications and the Owner Standards/Details/Specifications and Related Documents, perform the Work in accordance with the Owner Standards/Details/Specifications and Related Documents, current editions. If any of the Owner Standards/Details/Specifications and Related Documents are revised after Notice to Contractors date, perform the Work specified in the Plans and Specifications using the revised Owner Standards/Details/Specifications and Related Documents. If revisions to the Owner Standards/Details/Specifications and Related Documents are dated on or after the letting date shown on the bid proposal, notify the Engineer in writing of such revisions.

### **951.1.03 Submittals**

General Provisions 101 through 150

Provide submittals in accordance with Comcast Overhead and Underground Cable Construction Standards, current published edition.

#### **A. Completion Letter and As-Built Documentation**

Provide no later than thirty (30) calendar days after the completion of the work a Completion Letter and As-Built Documentation to both the Engineer and the Owner Project Manager consisting of the following information.

## **Section 951 – Cable Systems**

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1. Include in the Completion Letter the date all cable television system pay items are completed and ready to be turned over to the Owner. Also, include a detailed estimate of quantities in place and explanation of any deviations or overruns.
2. Provide As-Built Documentation of the in-place and accepted cable television system. Documentation shall consist of two sets of full size plans and electronic files in the form of an AutoCAD version 2011 file or the same version and format in which the Cable Television System Plans were created.

### **951.2 Materials**

#### **A. Overhead and Underground Cable Television System**

Provide any materials required for the construction of proposed cable television system shown on the Plans but not furnished by the Owner. Furnish for the completion of the Work all materials, tools, equipment, and labor in conformance with the Plans and current edition of the Owner Standards/Details/Specifications and Related Documents. When required by the Plans or Owner Standards/Details/Specifications and Related Documents, transfer all existing materials to the required locations as specified. Replace in-kind any existing material damaged during transfer.

#### **951.2.01 Delivery, Storage, and Handling**

General Provisions 101 through 150

Coordinate with the Owner Project Manager and Owner representative listed below to ensure all necessary materials are available for installation as required on the Plans, including the roadway staging plans. Follow any delivery, storage and handling procedures set forth in the Owner Standards/Details/Specifications and Related Documents. Coordinate with the Owner to take delivery of required material, load required material, transport all required material to the project, and properly store the material within the project limits or at Owner approved locations off the project limits. Return or dispose of all unused and remaining material as specified in subsection 951.3.05.H.

A bill of material will be provided by the Owner to the Contractor. Provide the Engineer with a copy of the bill of materials each time receipt and delivery of materials is made for the Project. Document all material received from the Owner and all material returned to the Owner. The Engineer and Owner Project Manager will be present when the contractor takes delivery from the Owner and when the Contractor returns material back to the Owner. With the Contractor, the Engineer and Owner Project Manager will verify materials to ensure all material delivered are documented, verified, and acknowledged in writing by all parties. The Contractor is responsible for all materials from the time of delivery from the Owner to the return of remaining materials to the Owner or disposal. The Owner Project Manager will verify and document all in place material and will notify the Engineer of any discrepancies.

### **951.3 Construction Requirements**

#### **951.3.01 Personnel**

General Provisions 101 through 150

Contractors or Subcontractors performing work consisting of the construction and installation of cable television systems must be prequalified with the Owner and registered with the Department.

#### **951.3.02 Equipment**

General Provisions 101 through 150

## Section 951 – Cable Systems

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Ensure all equipment used is in conformance with the requirements and standards set forth in the Owner Standards/Details/Specifications and Related Documents. Obtain prior approval from the Engineer and Owner Project Manager before starting Work on specialty items such as fiber splicing equipment, boring equipment and others of similar complexity.

### **951.3.03 Preparation**

General Provisions 101 through 150

Follow all preparation procedures set forth in the documents referenced in the Owner Standards/Details/Specifications and Related Documents. Perform necessary preliminary engineering, field engineering, survey, and construction staking and layout for the installation of the specified Cable Television System.

### **951.3.04 Fabrication**

General Provisions 101 through 150

Ensure fabrication procedures and requirements conform to those set forth in the current edition of the Owner Standards/Details/Specifications and Related Documents. Submit shop drawings to the Engineer and Owner Project Manager for any items requiring fabrication. Obtain approval from the Engineer and Owner Project Manager prior to ordering materials.

### **951.3.05 Construction**

Review the Plans and Owner Standards/Details/Specifications and Related Documents to ensure all items required for the Work are included in the price bid for each Cable Television System bid item. Provide a detailed list of materials required to complete the Work to the Engineer and Owner Project Manager prior to ordering and taking delivery from Comcast. In the required detailed list of materials, identify any material required to complete the Work not shown in the Plans. Communicate with the Owner Project Manager to insure the Owner is given 30 (thirty) calendar days notice for the Owner's portion of the Work.

#### **A. Permission to Enter Private Property**

Comply with Section 107—Legal Regulations and Responsibility to the Public.

Through an agreement between the Department and the Owner; the Contractor is given the permission to enter upon private properties found outside the project's construction limits. This permission is granted for the sole purpose of activities relating to the installation and/or adjustments of Cable Television Systems only and is limited to the area of existing easements obtained by the Owner. Such permission to enter upon private properties is temporary and such rights commence upon project award and automatically expire upon completion and project final acceptance by the Department.

In all cases where it is necessary to enter upon private property; take sole responsibility for and minimize any disruptions to personal property in the commencement of such work thereof. Additionally, comply with the following restrictions and requirements:

1. Limit all activities to the installation, relocation, or replacement of Cable Television facilities; and, work necessary to restore each private property as required in subsection 951.3.05.A.6.
2. Notify the Engineer, the private property owner and resident(s) 72 hours before commencing Work on said private property.
3. Ensure only vehicles and equipment required for the Work are allowed on any private property.

## Section 951 – Cable Systems

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4. Do not store any materials, vehicles, or equipment on any private property longer than the duration required to perform the Work.
5. Do not use any private property as an on-site detour or vehicle path.
6. Immediately following any construction located on private property, restore all areas of the same parcel to a condition substantially the same as existed immediately prior to any such disturbances, including without limitation, any and all necessary repairs, and replacement of grassing, landscaping and pavement which may be removed and excavated by the Contractor. Ensure all necessary repairs are made to restore the original contours and re-establish the ground cover to control erosion.

### B. Customer Notification Requirements

Follow all customer notification requirements as provided by the Owner and obtain approval from the Owner Project Manager prior to disrupting existing services required for the installation of the Cable Television Systems shown on the Plans.

### C. Installation of Cable Television Systems

Follow all relevant procedures set forth in the current editions of the Owner Standards/Details/Specifications and Related Documents. Construct all temporary and proposed Cable Television Systems in accordance with the requirements set forth in the Contract, current editions of the Owner Standards/Details/Specifications and Related Documents, and as instructed by the Owner Project Manager.

### D. Excavating Trenches

Excavate trenches to the proper grade, depth, and width as follows:

#### 1. Trench to Grade

Ensure excavated trench bottoms are firm, free from boulders, and conform to the established grade.

- a. Backfill, according to [Section 207](#), any part of the trench excavated below the established grade. Use Class I or Class II Soils ([Section 810](#)), and firmly compact the soil.
- b. Where the established grade of a trench is in rock, undercut the bottom of the trench by at least 6 in (150 mm), then backfill and compact according to [Section 207](#).
- c. Conduct blasting operations according to [Subsection 107.12](#).
- d. Excavate trenches under pavement to grade as follows:
  - 1) To remove the pavement, cut it at least 12 in (300 mm) wider than each trench edge to provide solid bearing for the pavement edges when replaced. Remove the pavement according to [Section 444](#), except no separate payment will be made for sawed joints.
  - 2) Directional bore under existing sidewalks, curbs, gutters, and pavements according to subsection 951.3.05.E

#### 2. Minimum Trench Depth

Excavate trenches to provide at least 48 in (1.2 m) cover depth from the Work to the finished pavement surface, sidewalk, grass plot, etc. unless indicated otherwise on the Plans or by the Engineer.

If any part of a Cable Television System is to be placed in or under a new embankment, finish the embankment to at least a 2 ft (600 mm) plane above the top of the proposed facility before excavating the trench.

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### 3. Trench Width

Excavate trenches wide enough to allow proper installation of the Work.

### E. Directional Boring

This Work consists of installing various sizes of bores by directional boring through whatever materials may be encountered.

Furnish, for the Engineer's approval, a plan showing the proposed methods for the installation of the horizontal directional bore. The Engineer will review the proposed installation plan within 10 working days of receipt by the Department. No directional boring Work will be allowed until the Contractor's submitted plan is approved by the Engineer. Include the following detail in the plan, as a minimum:

1. List of projects completed by the company performing the boring operation, environment of installation (urban work, river crossing, freeway), diameter of product installation and length of bores. Include the name, address and phone number of an owner's representative with knowledge of the performance of the Work. Provide at least five previously completed projects of similar scope as the boring Work included in this contract.
2. List of the Contractor's key personnel with a resume of boring experience. The Department will be the sole judge of the qualifications of the foreman and the drill operators.
3. Location of all proposed boring entry and exit pits.
4. Proposed alignment of bore both horizontal and vertical. For the proposed alignment, maintain a minimum clearance of 18 inches (450 mm) or 2 times the diameter of the final product installation, whichever is greater, at any obstruction. Do not perform boring in select backfill areas such as at mechanically stabilized wall locations.
5. Proposed diameter of bore. This diameter is the diameter of the final product installation.
6. Proposed diameter of pilot borehole.
7. Proposed diameter of back reamer. Do not allow the diameter of the back reamer to exceed 1.5 times the diameter of the final product installation.
8. Proposed depth of cover. Ensure the depth of cover will be equal to or greater than 10 times the diameter of the final product installation. Under paved shoulders, maintain a minimum depth of cover of 4 feet (1.22 meters). Under travel lanes or outside of paved shoulders, maintain a minimum depth of cover of 8 feet (2.44 meters).
9. Evaluation of soil conditions to be encountered. A complete soil survey is not required. As a minimum, excavate the entrance and exit pits for the proposed bore and determine the nature of the material likely to be encountered. Base the drilling fluid composition on the evaluation of the materials encountered in the bore pit excavation.
10. Proposed composition of drilling fluid.
11. Proposed drilling fluid pressure and flow rates.
12. Proposed drilling fluid management plan.
13. Proposed pull back rate.
14. Type of tracking system.

Excavate suitable pits or trenches for the boring operation and for placing end joints or termination connectors of conduit when required. Securely sheet and brace pits or trenches where necessary to prevent

## Section 951 – Cable Systems

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caving. Where directional boring is required under railroads, highways, streets or other facilities, perform construction in a manner that will not interfere with the operation of the facility, and not weaken the roadbed or structure. Do not disturb or excavate any roadway pavement, subgrade, roadbed, paved shoulder, or unpaved median as part of the boring or pipe placing operation for any reason without written authorization by the Engineer.

In the above areas, unless otherwise authorized in writing by the Engineer, abandon in place any broken or damaged boring rod/stem, boring head (including transmitter/transponder locating heads and cutter heads), couplings (including back reaming, swivel or connector couplings), or any other material that cannot be retrieved as part of the pullback operation. Abandoned material will become the property of the Department. No additional payment for abandoned material will be made.

Continuously monitor the location and alignment of the pilot drill progress to insure compliance with the proposed installation alignment and to verify depth of the bore. Accomplish monitoring by manual plotting based on location and depth readings provided by the locating/tracking system or by computer generated bore logs which map the bore path based on information provided by the locating/tracking system. Obtain readings or plots on every drill rod and provide to the Engineer on a daily basis for as-built plans.

Monitor drilling fluids such as the pumping rate, pressures, viscosity and density during the pilot bore, back reaming, and/or pipe installation stages to ensure adequate removal of soil cuttings and to ensure the stability of the borehole is maintained. Do not allow drilling fluid pressures to exceed that which can be supported by the overburden (soil) pressure to prevent heaving or a hydraulic fracture of the soils. Contain excessive drilling fluids at the entry and exit points until recycled or removed from the site. Dispose of all drilling fluids in a manner acceptable to the appropriate local, state and federal regulations. The Work will be immediately suspended whenever drilling fluids seep to the surface other than in the boring entrance or exit pit. Propose a method to prevent further seepage and remove and dispose of any drilling fluid on the surface prior to resuming the boring operation.

To minimize heaving during pullback, determine the pullback rate to maximize the removal of soil cuttings and minimize compaction of the ground surrounding the borehole. Ensure the pullback rate minimizes over cutting of the borehole during the back reaming operation to ensure excessive voids are not created resulting in post installation settlement. Restore any surfaces damaged by the Work to their preconstruction conditions. All costs associated with the restoration are to be borne by the Contractor.

The distance the excavation extends beyond the end of the bore will depend upon the character of the excavated material. Do not exceed 2 feet (0.61 meters) in any case. If the character of the material being excavated makes it desirable, decrease the distance on instructions from the Engineer. Once the directional boring has commenced, insofar as practical, continue the operation without interruption. After the boring has been completed, immediately backfill the pits or trenches excavated to facilitate boring operations.

Proceed with the Work from a surface staging area provided for the boring equipment and workers. Obtain approval from the Engineer on the proposed location of the staging area. Bore the holes mechanically. Place excavated material near the top of the working pit and dispose of as required. Water or other fluids in connection with the boring operation will be permitted only to the extent necessary to lubricate cutting. Do not perform jetting.

## Section 951 – Cable Systems

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Excavation will not be measured for payment.

In unconsolidated soil formations, a gel-forming colloidal drilling fluid consisting of at least 10% high grade carefully processed bentonite may be used to consolidate excavated material, seal the walls of the hole, and furnish lubrication for subsequent removal of material and immediate back reaming/installation of conduit. Continuously monitor and maintain the flow pressure on the drilling fluid at the minimal pressure required to place the fluid. In normal circumstances, do not exceed a flow pressure of 200 psi (1379 k Pa). At any time during boring operations, do not exceed a flow pressure of 500 psi (3448 k Pa). Remove all drilling fluid spoils from both ends of the bore and properly dispose of material at a properly permitted location.

Limit allowable variation from line and grade to a maximum of 2 percent.

Pressures grout any voids that develop during the installation operation and are determined by the Engineer to be detrimental to the Work with an approved mix.

Directional boring operations inherently include the risk of encountering below grade obstructions that begin to alter the bore direction. Should an obstruction be encountered, notify the Engineer immediately. Attempt to restore the bore alignment by performing a minimum of three attempts at each encountered obstruction with different corrective measures. Boring deeper or shallower (if minimum conduit depth can be maintained), moving the boring head to the right or left of the obstruction, or attempting to bore through the obstruction (if other than solid rock) are acceptable corrective measures to restore bore alignment. The Engineer may authorize a relocation of the bore if a suitable bore alignment cannot be restored.

### F. Removals

Remove all temporary and existing Cable Television facilities in accordance with the requirements set forth in the Plans, Owner Standards/Details/Specifications and Related Documents, and as instructed by the Owner Project Manager. Cutting of poles specified for removal or abandonment will not be permitted. Remove pole(s) and backfill void in accordance with Section 207. Backfill any voids remaining from the removal of underground facilities in accordance with Section 207. Replace, in-kind (material and depth), any voids remaining in roadway structures.

### G. Transfers

Transfer all Cable Television Systems in accordance with the requirements set forth in the Plans, Owner Standards/Details/Specifications and Related Documents, and as instructed by the Owner Project Manager.

### H. Remaining Material

#### 1. Material Originating from The Owner:

Return all unused material to the Owner. Provide a detailed summary to the Engineer comparing quantities of material received from the Owner and material to be returned to the Owner. The Owner Project Manager will verify and accept or reject all returned material. Credit the Department for any material rejected by the Owner due to, but not limited to, damage, material loss, or material theft.

#### 2. Material Originating from the Project Site – Existing or Surplus Material:

All surplus material originating from the project site that is removed and not intended for re-use on the project becomes the property of the Owner. Surplus materials will be inspected and accepted for



## Section 951 – Cable Systems

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salvage or designated waste by the Owner Project Manager. Transport salvaged materials to the Owner. Return all electrical equipment to the Owner. The Owner Project Manager will verify all materials are returned to the Owner.

### 951.3.06 Quality Acceptance

#### A. Testing

Follow all relevant procedures set forth in the documents Owner Standards/Details/Specifications and Related Documents. Ensure Owner Project Manager is present at all inspection and testing. Correct all deficiencies in the Work indicated by testing, inspecting, and as directed by the Engineer or Owner Project Manager.

#### B. Semi-Final Utility Inspection

When the contractor has finished the Cable Television System Work, the Contractor may, by written notice, request that a semi-final utility inspection be made. The Engineer, along with the Owner, will determine if the Cable Television System Work is ready for semi-final utility inspection. The Engineer, in agreement with the Owner, will have the final decision on when the Cable Television System Work is complete and thereby ready for semi-final utility inspection. If all the Cable Television System Work provided for and contemplated by the Contract is found to be complete to the Engineer's satisfaction and all documents required in connection with the Cable Television System Work has been submitted and accepted then, the Contractor may request transfer of the completed Cable Television System Work to the Owner.

Once the new facilities are in service and accepted by the Owner, provide written correspondence notifying the Engineer and Owner that utility location services will be the responsibility of said Owner.

Such partial acceptance shall in no way relieve the Contractor of the responsibility for satisfactory completion of the Contract, or for failure of any portion of the Cable Television System Work prior to Final Acceptance of the Project.

### 951.3.07 Contractor Warranty and Maintenance

Abide by and honor the following Warranty Statement:

Contractor hereby warrants for a period of one (1) year (or longer, if so provided by law, and to the extent provided by law) from and after the date of Completion of work detailed in the Plans that all labor, workmanship, components, materials or other parts of the Work will be free from defects in material and workmanship under normal use and service. Contractor shall, at its own expense, repair or replace any defective components or parts supplied by Contractor or any Sub-Contractor. In addition, provided that the defect is the result of, or is any way caused by, any act or omission of Contractor or any Sub-Contractor, Contractor shall, at its own expense, repair or replace any defective components or parts supplied by the Owner. Such repairs or replacement parts are warranted for one (1) year from the date of incorporation in the Work or the remainder of the original warranty period, whichever is longer. Contractor will pay all reasonable costs (including without limitation attorneys' fees) incurred by or on behalf of the Owner in identifying a defect found to be the responsibility of Contractor. Upon notice from the Owner, Contractor will immediately correct and remedy any defects occurring during the warranty period without cost or expense to the Owner. Nothing contained herein, however, shall be construed to define or limit the rights of the Owner as otherwise provided by law or elsewhere in the Documents in the event such defects occur. After construction is completed and during the balance of the warranty period, the Owner may choose to have its agents, employees or other contractors perform any required replacement or repairs. If the

## Section 951 – Cable Systems

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Owner or its agent performs the repairs or replacement, the Owner shall invoice Contractor for the Owner's reasonable costs, including without limitation, labor costs, and Contractor shall pay the Owner for such costs within thirty (30) days after receipt of an invoice or, at the Owner's option, the Owner may deduct such costs from any Retained Amount or from any amount owed by the Owner or any of its Affiliates to Contractor or any of its Affiliates in connection with this or any other agreement. With respect to installation, Audit or Disconnect work, if the Owner discovers defects in the Work within one (1) year after Completion of the installation, Audit or Disconnect, the Owner may require Contractor to correct the defects at no expense to the Owner, or may elect to have the Work corrected by the Owner's personnel or other Contractors of the Owner and charge the cost thereof to Contractor as provided above.

General Provisions 101 through 150

### **951.4 Measurement**

Overhead and underground Cable Television Systems, and other items of Work in this Specification, in place, operational, and accepted, are measured for payment as follows:

#### **A. Overhead Cable Television**

Overhead Cable Television is measured in linear feet (meter) for the facility installed and accepted. The facility is measured along the centerline of the facility from pole structure to pole structure through all connections, active and passive devices, amplifiers, and all other electrical equipment and shall include the installation of the pole structures, if specified in the Plans, and any materials required by the Owner Standards/Details/Specifications and Related Documents. Measurement will begin and end at existing pole structures where the newly installed Work ties back to the existing facility or specified ending structure. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and payment for the transfer of existing materials to new location. Include the costs of transferring materials in the costs for the installation of Overhead Cable Television System, temporary or permanent.

Obtain measurements with electronic survey equipment and provide Engineer with printout of installed facilities indicating State Plane Coordinates and station numbers of each pole structure and indicate distances between pole structures starting from the beginning of the Work (existing facility pole structure).

#### **B. Overhead Cable Television (Temporary)**

Temporary Overhead Cable Television is measured in linear feet (meter) for the facility installed. The facility is measured along the centerline of the facility from pole structure to pole structure through all connections, active and passive devices, amplifiers, and all other electrical equipment and shall include the installation of the pole structures, if specified in the plans, and any materials required by the Owner Standards/Details/Specifications and Related Documents. Measurement will begin and end at existing pole structures where the newly installed Work connects to the existing facility or specified ending structure. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and payment for the transfer of existing materials to new location. Include the costs of transferring materials in the costs for the installation of Overhead Cable Television System, temporary or permanent.

## Section 951 – Cable Systems

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Obtain measurements with electronic survey equipment and provide Engineer with printout of installed facilities indicating State Plane Coordinates and station numbers of each pole structure and indicate distances between pole structures starting from the beginning of the Work (existing facility pole structure).

### **C. Underground Cable Television**

Underground Cable Television is measured in linear feet (meter) for the facility installed. The facility is measured along the center following the existing ground line from structure to structure through pedestals, vaults, junction boxes, and all other electrical equipment and shall include the installation of the pole structures, if specified in the plans, and any materials required by the Owner Standards/Details/Specifications and Related Documents. Measurement will begin and end at existing pole structures, vaults, pedestals, junction boxes, or splice points where the newly installed Work connects to the existing facility. All measurements will begin and terminate at the intersection of the structure and grade. Measurement for buried facilities that transition up pole structures to tie to the overhead facilities will not be made. There will be no compensation for replacement of damaged or lost materials. There will be no separate measurement and payment for the transfer of existing materials to new location. Include the costs of transferring materials in the costs for the installation of Underground Cable Television System, temporary or permanent. There will be no separate measurement and payment for directional boring. Include the costs of directional boring in the costs of Underground Cable Television System, Temporary or Permanent.

Obtain measurements with electronic survey equipment and provide Engineer with printout of installed facilities indicating State Plane Coordinates and station numbers of each underground structure and pole structure and indicate distances between structures starting from the beginning of the Work (existing facility structure).

### **D. Installation of Poles**

Installation of Steel, Concrete, and Wood Poles will not be measured separately for payment. Steel, Concrete, and Wood Poles are included in the measurement of the Overhead or Underground Cable Television, Permanent or Temporary.

### **E. Installation of Cable Television Wire**

Installation of cable for a feeder, trunk, or fiber lines will not be measured separately for payment. Cable is included in the measurement of the Overhead or Underground Cable Television, Permanent or Temporary.

### **F. Removal of Overhead Cable Television, Permanent or Temporary**

Removal of the Overhead Cable Television is measured in linear feet (meter) for the facility removed. The facility is measured along the centerline of the facility from pole structure to pole structure through all connections, active and passive devices, amplifiers, and all other electrical equipment. Measurement will begin and end at existing pole structures where the Cable Television facility specified for removal connects to the existing facility to remain. There will be no separate measurement and payment for the transfer of existing materials to new location. Include the costs of transferring materials in the costs for the installation of Overhead Cable Television System, Temporary or Permanent. There will be no separate measurement and payment for backfilling of voids remaining from removal or replacement of roadway sections. Removal of Cable television service lines will be measured as specified in this Section.

## Section 951 – Cable Systems

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Obtain measurements with electronic survey equipment and provide Engineer with printout of removed facilities indicating State Plane Coordinates and station numbers of each pole structure and indicate distances between pole structures starting from the beginning of the Work (existing facility pole structure).

### **G. Removal of Underground Cable Television, Permanent or Temporary**

Removal of Underground Cable Television is measured in linear feet (meter) for the facility removed. The facility is measured along the center following the existing ground line from structure to structure through pedestals, vaults, junction boxes, and all other electrical equipment, and shall include the removal, if required by the plans, of any materials that are integral to the temporary facility. Measurement will begin and end at existing pole structures or vault structures where the newly installed facility connects to the existing facility. There will be no separate measurement and payment for the transfer of existing materials to new location. Include the costs of transferring materials in the costs for the installation of Underground Cable Television System, Temporary or Permanent. There will be no separate measurement and payment for backfilling of voids left by removed underground equipment or from removal or replacement of roadway section.

Obtain measurements with electronic survey equipment and provide Engineer with printout of removed facilities indicating State Plane Coordinates and station numbers of each underground structure and pole structure and indicate distances between structures starting from the beginning of the Work (existing facility structure).

### **H. Removal of Poles**

Removal of Steel, Concrete, and Wood Poles will not be measured separately for payment. Removal is included in the measurement of the removal of Overhead or Underground Cable Television, permanent or temporary.

### **I. Material Credit**

Material Credit is a dollar amount credited to the Department for unused or remaining Owner provided materials rejected by the Owner as being damaged or destroyed or materials lost or stolen. The amount will be tabulated based on an itemized list from the Owner and based on unused material remaining from the Work.

### **951.4.01 Limits**

General Provisions 101 through 150

### **951.5 Payment**

The Contract Unit Price for each Item shall include all costs incidental to the construction of the Item according to the Plans, Owner Standards/Details/Specifications and Related Documents, and as specified in this Section. Payment for any Item listed below is full compensation for the Item or Items in place, operational, and accepted.

#### **A. Overhead Cable Television**

Overhead Cable Television will be paid for at the contract unit price per linear foot (meter) for the facility installed. Payment is full compensation for handling, delivery, and storage of material and installation of material in accordance with the Plans and Owner Standards/Details/Specifications and Related Documents. Payment is full compensation for necessary handling and delivery of surplus material to the Owner. Payment

## Section 951 – Cable Systems

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is full compensation for all the necessary equipment and labor to install the Overhead Cable Television, including all items necessary and items specified in the Owner Standards/Details/Specifications and Related Documents and Plans. Payment is full compensation for the entire linear feet required to span the portion of the project specified and to tie back to existing facilities. This includes items such as cable, connectors, active and passive devices, amplifiers, poles (wood, steel, or concrete), and any other item(s) necessary to provide for an in place and accepted operational Overhead Cable Television of the size specified in the Plans and Owner Standards/Details/Specifications and Related Documents.

### **B. Overhead Cable Television (Temporary)**

Temporary Overhead Cable Television will be paid for at the contract unit price per linear foot (meter) for the facility installed. Payment is full compensation for handling, delivery, and storage of materials and installation of materials in accordance with the Plans and Owner Standards/Details/Specifications and Related Documents. Payment is full compensation for any work required to accommodate project staging, detours, or structures not specified for payment elsewhere in the contract. Payment is full compensation for necessary handling and delivery of surplus material to the Owner. Payment is full compensation for all the necessary equipment and labor to install the Temporary Cable Television, including all items necessary and items specified in the Owner Standards/Details/Specifications and Related Documents and Plans. Payment is full compensation for the entire linear feet required to span the portion of the project specified and to tie back to existing facilities. This includes items such as cable, connectors, active and passive devices, amplifiers, poles (wood, steel, or concrete) and any other item(s) necessary to provide for an in place and accepted operational Overhead Cable Television of the size specified in the Plans and Owner Standards/Details/Specifications and Related Documents.

### **C. Underground Cable Television**

Underground Cable Television will be paid for at the contract unit price per linear foot (meter) for the facility installed. Payment is full compensation for handling, delivery, and storage of material and installation of material in accordance with the Plans and Owner Standards/Details/Specifications and Related Documents. Payment is full compensation for necessary handling and delivery of surplus material to the Owner. Payment is full compensation for all the necessary equipment and labor to install the Underground Cable Television, including all items necessary and items specified in the Owner Standards/Details/Specifications and Related Documents and Plans. Payment is full compensation for the entire linear feet (meter) required to traverse, below grade, the portion of the project specified and to tie back to existing facilities. This includes items such as pole structures, directional boring, wire, conduit, vaults, pedestals, junction boxes, splice points, and any other item(s) necessary to provide for an in place and accepted operational Underground Cable Television of the size specified in the Plans and Owner Standards/Details/Specifications and Related Documents. There will be no separate measurement and payment for directional boring. Include the costs of directional boring in the costs of Underground Cable Television System, Temporary or Permanent.

### **D. Installation of Poles**

No separate payment will be made for the installation of Steel, Concrete, or Wood Poles. Costs for the installation of poles are included in the price for Overhead or Underground Cable Television, Permanent or Temporary.

## Section 951 – Cable Systems

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### E. Installation of Cable Television Wire

No separate payment will be made for the installation of cable for feeder, trunk, or fiber lines. Costs for the installation of cable are included in the price for Overhead or Underground Cable Television, Temporary or Permanent.

### F. Removal of Overhead Cable Television, Permanent or Temporary

Removal of Overhead Cable Television will be paid for at the contract unit price per linear foot (meter) for the facility removed. Payment is full compensation for removal, handling, delivery, storage, and surplus of materials. Payment is full compensation for necessary handling and delivery of surplus material to the Owner. Payment is full compensation for all the necessary equipment and labor to remove the Overhead Cable Television. Payment is full compensation for the entire linear feet (meter) removed back to existing or new facilities as shown on the Plans. This includes items such as cable, connectors, active and passive devices, amplifiers, poles (wood, steel, or concrete), and any other item(s) necessary for complete removal.

All material removed and not re-used becomes the property of the Owner. Payment for Removal of Overhead Cable Television includes the removal, handling, delivery, and off loading of all material at a Comcast Operating Headquarters specified by the Owner Project Manager.

### G. Removal of Underground Cable Television, Permanent or Temporary

Removal of Underground Cable Television will be paid for at the contract unit price per linear foot (meter) for the facility removed. Payment is full compensation for removal, handling, delivery, storage, and surplus of materials. Payment is full compensation for all the necessary equipment and labor to remove the Underground Cable Television. Payment is full compensation for the entire linear feet (meter) removed back to existing or new facilities as shown on the Plans. This includes removal of items such as wire, conduit, transformers, vaults, hardware, and any other item(s) necessary for complete removal.

All material removed and not re-used becomes the property of the Owner. Payment for Removal of Overhead Cable Television includes the removal, handling, delivery, and off loading of all material at a Comcast Operating Headquarters specified by the Owner Project Manager.

### H. Removal of Poles

No separate payment will be made for the removal of Steel, Concrete, or Wood Poles.

### I. Material Credit

Material Credit is a dollar amount credited to the Department for the value of unused or remaining Owner provided materials rejected by the Owner as being damaged or destroyed or materials lost or stolen. The amount will be tabulated based on an itemized list from the Owner or all Owner provided materials and based on the unused material remaining from the work that was not returned to the Owner or was rejected by the Owner.

Payment will be made under:

Item No. 951	Overhead Cable Television, Feeder – Coax, ____ in	Per linear foot (meter)
Item No. 951	Overhead Cable Television, Service, RG6, – Coax, ____ in	Per linear foot (meter)

**Section 951 – Cable Systems**

Item No. 951	Overhead Cable Television, Service, RG11 – Coax, ____ in	Per linear foot (meter)
Item No. 951	Overhead Cable Television, Temporary – Coax, ____ in	Per linear foot (meter)
Item No. 951	Overhead Cable Television, Trunk – Coax, ____ in	Per linear foot (meter)
Item No. 951	Overhead Cable Television, Fiber, Single mode, ____ count	Per linear foot (meter)
Item No. 951	Underground Cable Television, Feeder – Coax, ____ in	Per linear foot (meter)
Item No. 951	Underground Cable Television, Service, RG6, – Coax, ____ in	Per linear foot (meter)
Item No. 951	Underground Cable Television, Service, RG11 – Coax, ____ in	Per linear foot (meter)
Item No. 951	Underground Cable Television, Temporary – Coax, ____ in	Per linear foot (meter)
Item No. 951	Underground Cable Television, Trunk – Coax, ____ in	Per linear foot (meter)
Item No. 951	Underground Cable Television, Fiber, Single mode, ____ count	Per linear foot (meter)
Item No. 951	Removal of Overhead Cable Television, Feeder – Coax	Per linear foot (meter)
Item No. 951	Removal of Overhead Cable Television, Service – Coax	Per linear foot (meter)
Item No. 951	Removal of Overhead Cable Television, Temporary – Coax	Per linear foot (meter)
Item No. 951	Removal of Overhead Cable Television, Trunk – Coax	Per linear foot (meter)
Item No. 951	Removal of Overhead Cable Television, Fiber	Per linear foot (meter)
Item No. 951	Removal of Underground Cable Television, Feeder – Coax	Per linear foot (meter)
Item No. 951	Removal of Underground Cable Television, Service – Coax	Per linear foot (meter)
Item No. 951	Removal of Underground Cable Television, Temporary – Coax	Per linear foot (meter)
Item No. 951	Removal of Underground Cable Television, Trunk – Coax	Per linear foot (meter)
Item No. 951	Removal of Underground Cable Television, Fiber	Per linear foot (meter)
Item No. 951	Cable Television Systems, Material Credit	\$

**951.5.01 Adjustments**

General Provisions 101 through 150

Office of Utilities

# **Georgia Department of Transportation**

## **Technical Provisions**

**For**

## **Design-Build Agreement**

**P.I. No. 0015913**

## **FY 18 Bridge Replacement Project**

### **Attachment 11-1**

### **GUIDELINES FOR PAVEMENT SECTIONS FOR MINOR PROJECTS**

### **CRITERIA FOR USE OF ASPHALTIC CONCRETE LAYER AND MIX TYPES**



**DEPARTMENT OF TRANSPORTATION**

**STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE** Pavement Design **OFFICE** Materials and Testing  
Forest Park, Georgia  
**DATE** January 26, 2018

**FROM**   
Monica L. Flournoy, P.E., State Materials Engineer

**TO** Brent A. Story, P.E., State Design Policy Engineer

**SUBJECT** **Guidelines for Minor Pavement Projects**

The Office of Materials and Testing (OMAT) recommends the attached Guidelines for Minor Pavement Projects replace all previously published guidelines related to pavement sections for minor projects.

These guidelines are applicable for all non-interstate roads with a design year two-way average daily traffic (ADT) less than or equal to 10,000 vehicles per day (vpd), a design year two-way average daily truck traffic (ADTT) less than or equal to 1,000 vpd, and a maximum of 475 total daily loadings. The total daily loadings shall be calculated using the assumptions and equations provided in these guidelines. In addition, the guidelines should be used for pavement work constructed by permit within the GDOT right-of-way.

In general, all routes that meet the criteria of these guidelines should use 9.5 mm Superpave, Type II as the asphaltic concrete surface course. However, roundabout sections on routes that meet the criteria of these guidelines should use 12.5 mm Superpave with polymer modified asphaltic cement as the asphaltic concrete surface course.

The guidelines are for immediate implementation. Where projects meet the minor pavement project criteria and pavement designs reflect the appropriate pavement section in the guidelines, pavement designs shall not require review and approval by the State Pavement Engineer.

Alternately for designs that meet all criteria of the guidelines, the Design Phase Leader may prepare pavement designs using the current GDOT Pavement Design Tool, for submission by the Project Manager to OMAT for review and approval by the State Pavement Engineer.

Pavement Evaluation Summary (PES) reports are still required for projects when recommended in the Plan Development Process (PDP) Manual. For projects that meet the guidelines and require a PES, the Design Phase Leader should prepare pavement full-depth designs using the current GDOT Pavement Design Tool, for submission by the Project Manager to OMAT for review and approval by the State Pavement Engineer. Using the GDOT Pavement Design Tool in lieu of these guidelines could result in a thinner and more cost effective design than what is provided in these guidelines.

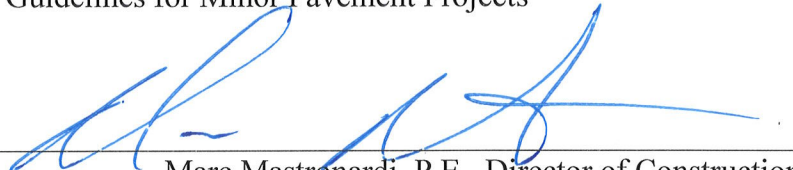
Furthermore, for projects that meet the guidelines and where recommended by the PES report, the Design Phase Leader should prepare pavement overlay designs using the current GDOT Pavement Design Tool, for submission by the Project Manager to OMAT for review and approval by the State Pavement Engineer.

If additional information is needed, please contact Ian Rish at (404) 608-4849 (Direct) or (404) 608-4770 (Main).

MLF:JTR:IDR

Attachments: Guidelines for Minor Pavement Projects

Concurs:

  
\_\_\_\_\_  
Marc Mastronardi, P.E., Director of Construction

Recommends:

  
\_\_\_\_\_  
Hiral Patel, P.E., Director of Engineering

Approves:

  
\_\_\_\_\_  
Meg Pirkle, P.E., Chief Engineer

## GUIDELINES FOR MINOR PAVEMENT PROJECTS

### Criteria for use of the Minor Pavement Project Guidelines (MPPG):

- Non-interstate roadways that require up to a 20-year design life
- Design Year Two-Way ADT  $\leq$  10,000 vehicles per day (vpd)
- Design Year Two-Way ADTT  $\leq$  1,000 vpd
- Total Daily Loadings (TDL)  $\leq$  475

### The use of the guidelines requires the following information:

- Traffic data that has been approved by GDOT.
- The soil support value (SSV) and regional factor (RF) for the project. If available, the SSV should be taken from the Soil Survey Summary Report. If the Soil Survey Summary Report is unavailable, the SSV should be taken from the “Georgia Map for Regional Factors, Typical Soil Support Values, and ‘k’ Values.”
- The calculated TDL for each pavement thickness to be designed. The TDL can be calculated manually or by use of the current Guidelines for Minor Pavement Projects Tool. In the calculation of the TDL, the following assumption and equations shall be used:
  - Lane Distribution Factor (LDF) = 1.0
  - Design Year One-Way ADTT = (Design Year One-Way ADT) \* (24-Hour Truck %)
  - 18-Kip ESAL Factor = (S.U. Truck %)  $\div$  (24 Hour Truck %) \* 0.40 + (M.U. Truck %)  $\div$  (24 Hour Truck %) \* 1.50
  - TDL = (Design Year One-Way ADTT) \* (LDF) \* (18-Kip ESAL Factor)

### Example of the Manual Calculation of the Total Daily Loadings (or Daily ESALs)

Given:

Design Year One-Way ADT = 5,000 vpd  
24-Hour Truck % = 10%  
S.U. Truck % = 5%  
M.U. Truck % = 5%  
LDF = 1.0 } Default

**Design Year One-Way ADTT = (Design Year One-Way ADT) \* (24-Hour Truck %)**

Design Year One-Way ADTT = (5,000) \* (10%)

Design Year One-Way ADTT = 500 vpd

**18-Kip ESAL Factor = (S.U. Truck %)  $\div$  (24 Hour Truck %) \* 0.40 +  
(M.U. Truck %)  $\div$  (24 Hour Truck %) \* 1.50**

18-Kip ESAL Factor = (5%)  $\div$  (10%) \* 0.40 + (5%)  $\div$  (10%) \* 1.50

18-Kip ESAL Factor = 0.95

**TDL = (Design Year One-Way ADTT) \* (LDF) \* (18-Kip ESAL Factor)**

TDL = (500 vpd) \* (1.0) \* (0.95)

TDL = 475 (Note: this is also the maximum TDL possible under these Guidelines.)

### Explanation of the MPPG Pavement Sections

- The attached map for RF and typical SSV provides historical values that have been successfully used in the design of pavement sections by the Department. This map can be used when no Soil Survey Summary has been prepared.
- From Table 1, the recommended MPPG pavement section is obtained given the SSV, RF, and calculated TDL. For example, the recommended section for a road with a SSV = 4.0, RF = 1.7, and calculated TDL = 475 is MPPG Pavement Section C-8.
- Table 2 and Table 3 indicate that MPPG Pavement Section C-8 is equivalent to an asphaltic concrete pavement thickness of 8.25 inches and 8.50 inches, respectively. The hyphenated number indicates the recommended graded aggregate base (GAB) thickness, which for this example is 8 inches.



## GUIDELINES FOR MINOR PAVEMENT PROJECTS

**Table 1: Minor Pavement Project Guideline Pavement Sections**

Soil Support Value	Regional Factor	Total Daily Loadings	MPPG Pavement Section	
4.5	1.6	≤ 328	A-8	
		329 to 475	B-8	
4.0	1.6 to 1.7	≤ 201	A-8	
		202 to 329	B-8	
		330 to 475	C-8	
	1.4 to 1.5	≤ 228	A-8	
		229 to 372	B-8	
		373 to 475	C-8	
3.5	2.0	≤ 188	A-10	
		189 to 300	B-10	
		301 to 472	C-10	
		473 to 475	D-10	
	1.7 to 1.8	≤ 209	A-10	
		210 to 334	B-10	
		335 to 475	C-10	
	1.4 to 1.6	≤ 235	A-10	
		236 to 375	B-10	
		376 to 475	C-10	
	3.0	2.4	≤ 102	A-10
			103 to 163	B-10
164 to 256			C-10	
257 to 397			D-10	
398 to 475			E-10	
2.0		≤ 122	A-10	
		123 to 195	B-10	
		196 to 307	C-10	
		308 to 475	D-10	
1.7 to 1.8		≤ 136	A-10	
		137 to 217	B-10	
		218 to 342	C-10	
		343 to 475	D-10	
1.5 to 1.6		≤ 153	A-10	
		154 to 244	B-10	
		245 to 384	C-10	
		385 to 475	D-10	
1.4		≤ 175	A-10	
		176 to 279	B-10	
		280 to 439	C-10	
		440 to 475	D-10	

## GUIDELINES FOR MINOR PAVEMENT PROJECTS

Soil Support Value	Regional Factor	Total Daily Loadings	MPPG Pavement Section
2.5	2.2 to 2.4	≤ 109	A-12
		110 to 172	B-12
		173 to 266	C-12
		267 to 406	D-12
		407 to 475	E-12
	1.8 to 2.0	≤ 131	A-12
		132 to 206	B-12
		207 to 319	C-12
		320 to 475	D-12
	1.5 to 1.6	≤ 164	A-12
		165 to 258	B-12
		259 to 399	C-12
400 to 475		D-12	
2.0	2.0	≤ 85	A-12
		86 to 134	B-12
		135 to 208	C-12
		209 to 317	D-12
		318 to 475	E-12
	1.6 to 1.8	≤ 95	A-12
		96 to 149	B-12
		150 to 231	C-12
		232 to 352	D-12
		353 to 475	E-12

**Table 2: MPPG Pavement Section Codes for Asphaltic Concrete Pavement Thicknesses (Excluding Roundabout Sections)**

MPG Pavement Section Code	Total Asphaltic Concrete Thickness (inches)	9.5 mm SP Type II*	19mm SP	25mm SP
A	6.25	1.25	2	3
B	7.25	1.25	2	4
C	8.25	1.25	2	5
D	9.25	1.25	2	6
E	10.25	1.25	2	7

\*For ADT < 4,000 vpd, use pay item number 402-3102.

For 4,000 vpd ≤ ADT ≤ 10,000 vpd, use pay item number 402-3103.

**Table 3: MPPG Pavement Section Codes for Asphaltic Concrete Pavement Thicknesses (Roundabout Sections)**

MPG Pavement Section Code	Total Asphaltic Concrete Thickness (inches)	12.5 mm SP w/ Polymer Modified AC	19mm SP	25mm SP
A	6.50	1.50	2	3
B	7.50	1.50	2	4
C	8.50	1.50	2	5
D	9.50	1.50	2	6
E	10.50	1.50	2	7






**DEPARTMENT OF TRANSPORTATION**  
**STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE** Pavement Design **OFFICE** Materials and Testing  
Forest Park, Georgia  
**DATE** January 19, 2018

**FROM**   
Monica L. Flournoy, P.E., State Materials Engineer

**TO** Meg Pirkle, P.E., Chief Engineer

**SUBJECT** Criteria for Use of Asphaltic Concrete Layer and Mix Types

The Office of Materials and Testing (OMAT) recommends that the “Guidelines for Superpave Mix and Other Mix Types Selection – Revision” dated March 18, 2011 be revised. This revision to the guidelines corresponds with current construction practice and specifications.

These guidelines supersede the current guidelines dated March 18, 2011. All changes and recommendations have been incorporated into the attached two-page “Criteria for Use of Asphaltic Concrete Layer and Mix Types” dated January 19, 2018, which is effective immediately.

Maintenance projects shall use the separate guidelines “Criteria for Use of Asphaltic Concrete Layer and Mix Types for Maintenance Projects.”

If you have any questions, please contact Peter Wu at (404) 608-4840 or J.T. Rabun at (404) 608-4740.

MLF:PW:JTR:IR

Attachment: Criteria for Use of Asphaltic Concrete Layer and Mix Types

Concurs:   
\_\_\_\_\_  
Marc Mastronardi, P.E., Director of Construction

Recommends:   
\_\_\_\_\_  
Hiral Patel, P.E., Director of Engineering

Approves:   
\_\_\_\_\_  
Meg Pirkle, P.E., Chief Engineer



**CRITERIA FOR USE OF ASPHALTIC CONCRETE LAYER AND MIX TYPES**  
(Use Design Year Two-Way ADT and ADTT)

	PAY ITEM	Two-Way Average Daily Traffic (ADT)	Maximum Two-Way Average Daily Truck Traffic (ADTT)	MIX TYPE	LAYER THICKNESS AND/OR SPREAD RATE Customary, (Metric)			REMARKS
					(Minimum)	USE	(Maximum)	
Drainage	400-3206	>25,000	N/A	12.5 mm OGFC	85 lbs/yd <sup>2</sup> , (46 kg/m <sup>2</sup> )	100 lbs/yd <sup>2</sup> , (54 kg/m <sup>2</sup> )	110 lbs/yd <sup>2</sup> , (60 kg/m <sup>2</sup> )	For Interstate Routes. For High ADT State Routes with speed limits ≥ 55 mph only when recommended by the Office of Materials and Testing (OMAT).
Surface**	402-3102	0 to 4,000	1,000	9.5 mm Type II Superpave	1-1/8", 125 lbs/yd <sup>2</sup> , (29 mm, 68 kg/m <sup>2</sup> )	1-1/4", 135 lbs/yd <sup>2</sup> , (32 mm, 73 kg/m <sup>2</sup> )	1-1/2", 165 lbs/yd <sup>2</sup> , (38 mm, 90 kg/m <sup>2</sup> )	For State and Off-system Routes .
	402-3103	4,000 to 10,000	1,000		1-3/8", 150 lbs/yd <sup>2</sup> , (35 mm, 81 kg/m <sup>2</sup> )	1-1/2", 165 lbs/yd <sup>2</sup> , (38 mm, 90 kg/m <sup>2</sup> )	2-1/2", 275 lbs/yd <sup>2</sup> , (64 mm, 149 kg/m <sup>2</sup> )	
	402-3130	10,000 to 25,000	2,500	12.5 mm Superpave	1-3/8", 150 lbs/yd <sup>2</sup> , (35 mm, 81 kg/m <sup>2</sup> )	1-1/2", 165 lbs/yd <sup>2</sup> , (38 mm, 90 kg/m <sup>2</sup> )	2-1/2", 275 lbs/yd <sup>2</sup> , (64 mm, 149 kg/m <sup>2</sup> )	
	402-4510	25,000 to 50,000	N/A	12.5 mm Superpave w/ Polymer Modified AC	1-3/8", 150 lbs/yd <sup>2</sup> , (35 mm, 81 kg/m <sup>2</sup> )	1-1/2", 165 lbs/yd <sup>2</sup> , (38 mm, 90 kg/m <sup>2</sup> )	2-1/2", 275 lbs/yd <sup>2</sup> , (64 mm, 149 kg/m <sup>2</sup> )	For high ADT State Routes, Interstate Routes when recommended by OMAT, all flexible pavement Interstate Ramps, and all flexible pavement roundabouts.
	402-3600	>50,000	N/A	12.5 mm SMA	1-3/8", 150 lbs/yd <sup>2</sup> , (35 mm, 81 kg/m <sup>2</sup> )	1-1/2", 165 lbs/yd <sup>2</sup> , (38 mm, 90 kg/m <sup>2</sup> )	3", 330 lbs/yd <sup>2</sup> , (75 mm, 180 kg/m <sup>2</sup> )	For Interstate Routes and for State Routes when recommended by OMAT. <b>OMAT may recommend 2-inch lift 12.5 mm SMA on Interstates.</b>
Intermediate	402-3190	N/A	N/A	19 mm Superpave	1-3/4", 190 lbs/yd <sup>2</sup> , (44 mm, 103 kg/m <sup>2</sup> )	2", 220 lbs/yd <sup>2</sup> , (50 mm, 120 kg/m <sup>2</sup> )	3", 330 lbs/yd <sup>2</sup> , (75 mm, 180 kg/m <sup>2</sup> )	All routes. 2 inches is optimum for smoothness. If additional structure of greater than 3" is required, use 25 mm Superpave. Trench widening Thickness = 6", 660 lbs/yd <sup>2</sup> , (150 mm, 360 kg/m <sup>2</sup> )
Base	402-3121	N/A	N/A	25 mm Superpave	3", 330 lbs/yd <sup>2</sup> , (75 mm, 180 kg/m <sup>2</sup> )	3", 330 lbs/yd <sup>2</sup> , (75 mm, 180 kg/m <sup>2</sup> )	5", 550 lbs/yd <sup>2</sup> , (125 mm, 300 kg/m <sup>2</sup> )	All routes. 3 or 4 inches is a standard lift thickness. Trench widening Thickness = 6", 660 lbs/yd <sup>2</sup> , (150 mm, 360 kg/m <sup>2</sup> )

Note: Mix type to be used for patching and leveling will depend on thickness to be placed according to Section 400.3.03.B.4, Table 3 in Shelf Special Provision.

\*\*Use of the shown pay items for Surface mixes will comply with GDOT Policy 5520-8 in relation to the allowed aggregate Group/Blend for friction and ADT.



**CRITERIA FOR USE OF ASPHALTIC CONCRETE LAYER AND MIX TYPES**

(Use Design Year Two-Way ADT and ADTT)

Mixes Used on an Infrequent Basis (Contact OMAT for Guidance before using)

	PAY ITEM	Two-Way ADT	Maximum Two-Way ADTT	MIX TYPE	LAYER THICKNESS AND/OR SPREAD RATE			REMARKS
					Customary, (Metric)			
					(Minimum)	USE	(Maximum)	
Drainage	400-3150	N/A	N/A	9.5 mm OGFC	55 lbs/yd <sup>2</sup> , (30 kg/m <sup>2</sup> )	60 lbs/yd <sup>2</sup> , (33 kg/m <sup>2</sup> )	65 lbs/yd <sup>2</sup> , (35 kg/m <sup>2</sup> )	Limited use on State Routes to address specific drainage problems and for High ADT State Routes with speed limits ≥ 55 mph only when recommended by OMAT.
	400-3624	N/A	N/A	12.5 mm PEM	110 lbs/yd <sup>2</sup> , (60 kg/m <sup>2</sup> )	135 lbs/yd <sup>2</sup> , (73 kg/m <sup>2</sup> )	165 lbs/yd <sup>2</sup> , (90 kg/m <sup>2</sup> )	For Interstate Routes only when recommended by OMAT.
Surface**	402-3100	<800	N/A	9.5 mm Type I Superpave	7/8", 90 lbs/yd <sup>2</sup> , (22 mm, 49 kg/m <sup>2</sup> )	1-1/4"*, 135 lbs/yd <sup>2</sup> , (32 mm, 73 kg/m <sup>2</sup> )	1-1/4", 135 lbs/yd <sup>2</sup> , (32 mm, 73 kg/m <sup>2</sup> )	For use on Off-System Routes. *For Off-system Routes <u>only</u> USE: 1-1/8", 125 lbs/yd <sup>2</sup> , (29 mm, 68 kg/m <sup>2</sup> )
	402-3101	800 to 2,000	N/A		For use in parking lot construction. For use on State Routes only when recommended by OMAT.			
	402-4506	N/A	N/A	9.5 mm Type II Superpave w/ Polymer Modified AC	7/8", 90 lbs/yd <sup>2</sup> , (22 mm, 49 kg/m <sup>2</sup> )	1-1/4", 135 lbs/yd <sup>2</sup> , (32 mm, 73 kg/m <sup>2</sup> )	1-1/2", 165 lbs/yd <sup>2</sup> , (38 mm, 90 kg/m <sup>2</sup> )	Only when recommended by OMAT.
	402-3575	10,000 to 50,000	N/A	9.5 mm SMA	1-1/8", 125 lbs/yd <sup>2</sup> , (29 mm, 68 kg/m <sup>2</sup> )	1-1/4", 135 lbs/yd <sup>2</sup> , (32 mm, 73 kg/m <sup>2</sup> )	1-1/2", 165 lbs/yd <sup>2</sup> , (38 mm, 90 kg/m <sup>2</sup> )	May be used as alternate surface on State Routes <i>only</i> when recommended by OMAT.
	402-4610	N/A	N/A	12.5 mm Superpave w/ Highly Polymer Modified AC	1-3/8", 150 lbs/yd <sup>2</sup> , (35 mm, 81 kg/m <sup>2</sup> )	1-1/2", 165 lbs/yd <sup>2</sup> , (38 mm, 90 kg/m <sup>2</sup> )	2-1/2", 275 lbs/yd <sup>2</sup> , (64 mm, 149 kg/m <sup>2</sup> )	May be used as alternate surface <i>only</i> when recommended by OMAT.
Intermediate	402-4514	N/A	N/A	19 mm Superpave w/ Polymer Modified AC	1-3/4", 190 lbs/yd <sup>2</sup> , (44 mm, 103 kg/m <sup>2</sup> )	2", 220 lbs/yd <sup>2</sup> , (50 mm, 120 kg/m <sup>2</sup> )	3", 330 lbs/yd <sup>2</sup> , (75 mm, 180 kg/m <sup>2</sup> )	Only when recommended by OMAT.
	402-3606	N/A	N/A	19 mm SMA	1-3/4", 190 lbs/yd <sup>2</sup> , (44 mm, 103 kg/m <sup>2</sup> )	2", 220 lbs/yd <sup>2</sup> , (50 mm, 120 kg/m <sup>2</sup> )	3", 330 lbs/yd <sup>2</sup> , (75 mm, 180 kg/m <sup>2</sup> )	Only for special circumstances, with concurrence of OMAT.

Note: Mix type to be used for patching and leveling will depend on thickness to be placed according to Section 400.3.03.B.4, Table 3 in Shelf Special Provision.

\*\*Use of the shown pay items for Surface mixes will comply with GDOT Policy 5520-8 in relation to the allowed aggregate Group/Blend for friction and ADT.

# **Georgia Department of Transportation**

## **Technical Provisions**

**For**

## **Design-Build Agreement**

**P.I. No. 0015913**

## **FY 18 Bridge Replacement Project**

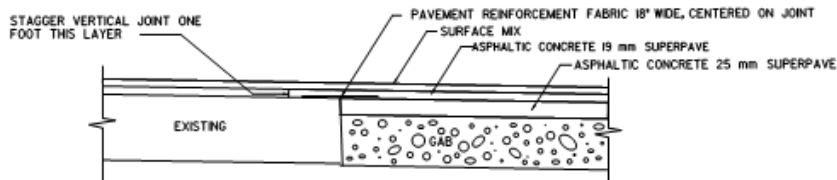
### **Attachment 11-2**

# **PAVEMENT REINFORCED FABRIC TRANSITION DETAIL**

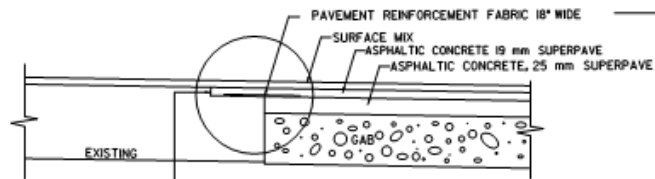
## ATTACHMENT 11-2

### PAVEMENT REINFORCED FABRIC TRANSITION DETAIL

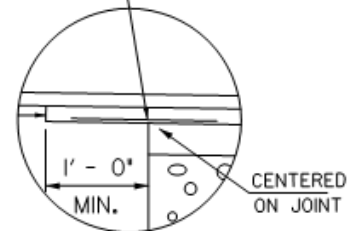
TYPICAL SECTION DETAIL TO BE USED WHEN  
EXISTING PAVEMENT IS TO BE RESURFACED WITH  
TWO INCHES OR MORE OF ASPHALTIC CONCRETE



TYPICAL SECTION DETAIL TO BE USED WHEN  
EXISTING PAVEMENT IS TO BE RESURFACED WITH  
LESS THAN TWO INCHES OF ASPHALTIC CONCRETE



MILL EXISTING LANE ONE FOOT WIDE  
TO DEPTH OF ADJOINING LAYER TO  
BE PLACED. COST OF MILLING FOR THIS WORK  
TO BE INCLUDED IN THE UNIT PRICE BID FOR  
PAVEMENT REINFORCING FABRIC.



# Georgia Department of Transportation

## Technical Provisions

For

## Design-Build Agreement

P.I. No. 0015913

## FY 18 Bridge Replacement Project

### Attachment 13-1

## STRUCTURES SPECIAL PROVISIONS

SP 443 Elastomeric Profile Bridge Joint Seals

SP 447 Modular Expansion Joints

SP 449 Bridge Deck Joint Seals

SP 449 Silicone Seal

SP 500 HPC

SP 500 Light Weight Concrete

SP 500 Class D

SP 500 Mass Concrete

SP 511 Mechanical Bar Splice

SP 865 Manufacture of Precast Concrete Members

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**SPECIAL PROVISION**

**Project No:  
P.I. No. 0015913**

**SECTION 443 - ELASTOMERIC PROFILE BRIDGE JOINT SEALS**

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**443.1 General Description**

This work consists of furnishing and installing a bridge deck joint seal device to the limits shown on the plans that consists of a monolithic steel strip seal retainer, a polychloroprene gland, and a lubricant adhesive. Only a continuous full length strip seal joint system is acceptable, unless stage construction or excessive length prohibits monolithic installation. Utilize a prequalified expansion device manufacturer with a five year proven history of successful product manufacture.

Provide an expansion joint device designed for HS-20 truck loading and impact in accordance with 2002 AASHTO specifications.

**443.1.01 Definitions**

**A. Strip Seal Expansion Joint Device**

This device is constructed of steel elements designed with a locking mechanism capable of securely locking the edges of a continuous non-reinforced polychloroprene gland. The steel elements are anchored to the structure in accordance with the specification. All materials are as specified in the contract documents or as recommended by the manufacturer of the strip seal joint assembly. The strip seal joint assembly is referred to throughout the specifications as the expansion joint device.

**B. Joint**

Provide joint opening between two portions of a structure to allow for expansion and contraction.

**443.1.02 Related Refernces**

General Provisions 101 through 150.

**443.1.02 Submittals**

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Submit for review by the Engineer, complete shop drawings and product data for the expansion device. Submit seven (7) complete sets of information. At the discretion of the Engineer, furnish facilities for inspection of the completed device or a representative sample in the manufacturer's plant. Allow the inspector free access to the necessary parts of the manufacturer's plant. Accurately set and securely support at the correct grade and elevation and the correct joint opening based on temperature as shown on the plans and on the approved shop drawings.

## 443.2 Materials

Furnish a manufacturer's certification that the materials proposed for use on the project have been pretested and meet the requirements as set forth in the specification and as detailed in the corresponding contract drawings. Do not install materials in the field prior to the Engineer's approval. The strip seal expansion joint device, including anchorages, is to be supplied by the manufacturer. The following requirements for each component are to be verified by the manufacturer:

### A. Steel Elements

Provide ASTM A-588 weathering grade steel for the material utilized to produce a shape suitable to mechanically lock the sealing element in place throughout the normal movement cycle of the joint. Provide a minimum thickness of 1/4 in. as measured from the internal locking mechanism cavity to the top surface of the steel retainer. Provide minimum dimensions of 2-1/4 in. width and 3 in. height.

Provide steel strip seal retainers that are a monolithic steel shape with a machined seal retainer cavity. Multiple component welded steel shapes and rolled steel, that is bent or crimped to achieve final shape and/or seal retainer cavity, is not permitted. Perform all welding in accordance to the Georgia Standard Specifications and paragraph D-1.5 of the AWS welding code. Provide full penetration groove welds for splices between sections of steel strip seal retainers.

### B. Continuous Polychloroprene Gland

Supply and install the polychloroprene gland in one continuous length. Provide a gland with a shape that promotes self-removal of foreign material during normal joint operation. Provide a gland with physical properties generally in accordance with the following:

<u>PHYSICAL PROPERTY</u>	<u>ASTM TEST METHOD</u>	<u>REQUIREMENTS</u>
Tensile strength, min, psi	D-412	2000
Elongation @ break, min, %	D-412	250%
Hardness, Type A durometer	D-2240 Modified	55 ± 5% points
Oven aging, 70h @ 212°F	D-573	
Tensile strength, max % loss		20% max
Elongation, max % loss		20% max
Hardness, Type A durometer, points change		0 to + 10
Oil Swell, ASTM Oil No. 3, 70h @ 212°F	D-471	
Weight change, max %		45%

Ozone resistance 20% strain, 300 pphm in air 70h @ 104°F	D-1149 Modified	no cracks
Low temperature stiffening, 7 days @ 14°F Hardness, Type A durometer, points change		0 to + 15
Compression Set, 70h @ 212°F max	D-395 Method B (modified)	40%

**C. Lubricant Adhesive**

Use a one part moisture curing polyurethane and hydrocarbon solvent mixture meeting the requirements of ASTM D-4070-81 for the material used in bonding the polychloroprene gland to the steel elements.

**D. Anchorage**

Provide an anchorage as detailed on the contract drawings with a minimum of 0.75 in<sup>2</sup> of bolt area per 1.0 linear foot of joint (Minimum ½ in. diameter hardware at 6 in. O.C. both sides of joint).

**443.2.01 Delivery, Storage and Handling**

General Provisions 101 through 150.

Store all materials to prevent damage from the elements and to ensure the preservation of its quality and fitness for the work. Avoid contact with flame.

Inspect all stored materials, although accepted before storage, prior to their use in the work. Ensure that all stored materials meet the requirements of the Contract at the time of use.

Remove from the site of the work immediately, any material rejected because of failure to meet the required tests or rejected because of damage. Replace all removed material at no additional cost to the Department.

**443.3 Construction Requirements**

**443.3.01 Personnel**

General Provision 101 through 150.

**443.3.02 Equipment**

General Provisions 101 through 150.

**443.3.03 Preparation**

General Provisions 101 through 150.

**443.3.04 Fabrication**

General Provisions 101 through 150.

#### **443.3.05 Construction**

Measure and record the surface temperature of the concrete and/or steel with a surface thermometer as described below. Record the temperature of the underside of the concrete slab at each end of the superstructure element adjacent to the expansion joint. Take the average of the readings to use with the temperature shown on the shop drawings.

Immediately prior to installation, inspect the joint system for proper alignment and complete bond between the neoprene sealer and the steel and proper stud placement and effectiveness. No bends or kinks in the joint system are allowed, except as necessary to follow the roadway grades. Any joint system exhibiting bends or kinks due to transporting or as a result of mishandling are to be removed from the work site, and replaced by a new joint system, at no additional expense to the Department. Where stage construction is required, connect all steel sections using full penetration groove welds.

Inspect studs visually and give each a light blow with a 4 lb. hammer to ensure full connection to steel. Replace any stud which does not have a complete end weld, or does not emit a ringing sound when struck with a light blow by hammer. Carefully remove studs located more than 1 inch in any direction from the location shown on the shop drawings and provide a new stud placed on the proper location. Perform all stud replacements at no additional expense to the Department.

Blast clean all metal surfaces to come in contact with the neoprene sealer in accordance with the requirements of Steel Structures Painting Council Surface Preparation NO. 6 (SSPC-SP6)-Commercial Blast Cleaning. After cleaning, all cleaned surfaces are to exhibit a clean quality of C SA 2, or better, as defined by Steel Structures Painting Council Standard SSPC-VIS 1.

Protect cleaned metal surfaces until such time as the sealer and lubricant adhesive are placed against the metal surface. Reclean any metal surface upon which rusting appears in accordance with the foregoing, at no additional expense to the Department. Replace neoprene seals not fully bonded to the steel at no additional expense to the Department.

After installation and when the adjacent concrete is cured, water test the expansion joint device under the Engineer's direction and supervision. Seeping of water through the joint is cause for rejection of the expansion joint device.

#### **443.4 Measurement**

Measurement for the expansion device is per each device completely installed, which is the expansion joint device in place with the concrete placed and finished and the watertight integrity test performed as described above.

#### **443.5 Payment**

Payment for the expansion device as specified above is paid for at the Contract Unit price bid per each. Such payment is full compensation for furnishing all equipment and materials and performing the work in accordance with the Plans and Specifications.

Payment will be made under:



Item No. 443	Elastomeric Profile Bridge Joint Seals, Bridge No - ____, Bent No - __	Per each
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**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**SPECIAL PROVISION**

**PROJECT NO.  
P.I. NO. 0015913**

**Section 447—Modular Expansion Joints**

*Delete Section 447 and substitute the following:*

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**Section 447—Modular Expansion Joints**

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**447.1 General Description**

This work includes fabricating, furnishing, and installing a modular expansion joint device at the locations shown on the plans and in accordance with these specifications. Seal the deck surface and side barriers to prevent water from seeping through the bridge deck. Any seeping of water through the joint will be cause for rejection of the expansion device.

Use a modular expansion joint device supplied by one of the following:

- (a) Wabo Modular Expansion Joint System— as furnished by:

Watson Bowman Acme  
95 Pineview Drive  
Amherst, New York 14228      Tel. (716) 691-7566

- (b) Steelflex Modular Expansion Joint System— as furnished by:

D.S. Brown Company  
300 East Cherry Street  
North Balitmore, Ohio 45872      Tel. (419) 257-3561

Only a continuous full length modular joint device supplied by one of the foregoing suppliers is acceptable. No other supplier will be considered. Only one type of modular joint device will be permitted to be installed at all locations. The installation of two different types at separate locations will not be permitted.

**447.1.01 Definitions**

The term modular expansion device includes the following items:

- Elastomeric joint seals
- Support bar
- Center beam

## Section 447 – Modular Expansion Joints

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- Edge beam
- Sliding elastomeric bearings

### 447.1.02 Related References

#### A. Standard Specifications

Section 501—Steel Structures

Section 535—Painting Structures

Section 645—Repair of Galvanized Coatings

Section 851—Structural Steel

#### B. Referenced Documents

General Provisions 101 through 150.

### 447.1.03 Submittals

#### A. Shop Drawings

Submit shop drawings in accordance with Section 501 of the Specifications. Include the manufacturer's instructions for proper installation of the expansion joint device. Show details of the expansion device at the barrier. Furnish the facilities for testing and inspecting the completed device or have the manufacturer provide a representative sample expansion device in his plant or at an independent test facility. Allow inspectors free access to the necessary parts of the manufacturer's plant and test facility and cooperate with the Inspector.

## 447.2 Materials

Ensure that materials meet the following requirements:

MATERIAL	SPECIFICATION
Structural Steel (except center beams, edge beams and support bars)	ASTM A 709 Gr 36 (A 709 Gr 250)
Center Beams, Edge Beams and Support Bars	ASTM A 709 Gr 50 (A 709 Gr 345) or ASTM A 709 Gr 50W (A 709 Gr 345W)
Headed Studs	ASTM A 108
Premolded Seals, Lubricant, Adhesive, and Sliding Surfaces	As per manufacturer's current literature and recommendations
Stainless Steel Bearing Surfaces	ASTM A 167 or A 240M/A 240, Type 304

### 447.2.01 Delivery, Storage, and Handling

General Provisions 101 through 150.

## 447.3 Construction Requirements

### 447.3.01 Personnel

Ensure that the manufacturer provides an experienced representative familiar with the installation of the expansion device to be present at all times while the expansion device is being installed. Notify the expansion device manufacturer of the scheduled installation a minimum of two (2) weeks prior to the installation date.

**447.3.02 Fabrication**

**A. Modular Unit**

1. Use a device consisting of premolded elastomeric expansion joint strip seals mechanically held in place by steel center beams and edge beams. Box seals will not be permitted. Ensure that the components meet the following requirements:
  - Each transverse center beam is a one-piece monolithic shape individually supported by, and welded to, an independent support bar.
  - Edge beams that are a minimum of 4 ¾ inches (120 mm) in height and have a machined or extruded retainer shape.
  - Securely anchored into concrete.
  - Support bars supported by sliding elastomeric bearings.
  - Provide equal-distance control of the premolded elastomeric seals.
2. Paint or galvanize all structural steel not in contact with elastomers or embedded in concrete in accordance with Section 501. Either painting or galvanizing may be used, unless noted otherwise on the plans. Galvanize (do not paint) portions of structural steel in contact with elastomeric seals or embedded in concrete. Shop apply all paint coats.

**B. Center Beams and Support Bars**

Design center beams, support bars, and their connections to satisfy the applicable requirements of the current edition of AASHTO Standard Specifications for Highway Bridges. In addition, design center beams and support bars to satisfy the minimum criteria:

- The maximum spacing of the support bars connected to a center beam is 4.0 feet (1.22 m) along the center beam.
- The minimum area of the center beam is 4.9 square inches (645 mm<sup>2</sup>).
- Minimum section modulus about the horizontal axis for the bottom fiber of a center beam is 5.9 cubic inches (96 684 mm<sup>3</sup>).
- For the support bar, the minimum area (A) and minimum section modulus, about the horizontal axis for the top fiber (S), is as follows:

	<u>Rated Movement (inches/millimeters)</u>						
	<u>0-6/150</u>	<u>0-9/230</u>	<u>0-12/305</u>	<u>0-15/380</u>	<u>0-18/460</u>	<u>0-21/535</u>	<u>0-21/610</u>
A (in <sup>2</sup> /mm <sup>2</sup> )	5.1/3290	6.2/4010	7.0/4516	7.7/4968	8.5/5484	9.1/5871	9.7/6258
S (in <sup>3</sup> /mm <sup>3</sup> )	2.9/47 522	4.2/68 826	5.5/90 129	6.7/109 793	8.0/131 097	9.3/152 400	10.4/170 426

- Ensure that the center beams and support bars are sufficiently detailed in the shop drawings so that the above minimum section properties can be independently verified using the information contained in the shop drawings.

**447.3.03 Construction**

Install the modular expansion joint device in strict accordance with the manufacturer’s written instructions, the advice of their representative, and these specifications. Ensure that the permanently installed expansion joint device matches the finished roadway profile and grade.

Immediately prior to installation, have the Engineer inspect the expansion joint device for proper alignment, and complete bond between the premolded elastomeric seals and the steel, and proper stud placement and constructability. Bond any

## Section 447 – Modular Expansion Joints

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premolded elastomeric seals not fully bonded to the steel. Ensure that all bolted connections are checked and tightened if found to be loose.

Do not allow any bends or kinks in the expansion joint steel (except as necessary to follow the roadway grades). Straightening of bends or kinks will not be allowed. Remove any expansion joint device exhibiting bends or kinks from the work site, and replace it with a new expansion device.

Ensure that the manufacturer presets the expansion joint device prior to shipment. Preset the joint opening at 70° F (21° C) or as indicated on the plans. Remove any mechanical devices supplied to set the expansion joint to the proper width following final adjustment for temperature.

Inspect the concrete anchorages visually and give each one a light blow with a 4 lb (18 N) hammer. Replace any anchorage which does not have a complete weld or does not emit a ringing sound when struck with a light blow of the hammer.

Weld stainless steel sheet to the support member. Adhesive will not be allowed.

Anchor the expansion device as shown on the plans or as shown on the shop drawings approved by the Engineer. Where support bar boxes interfere with the edge beam anchorage method, weld the edge beam to the support bar boxes. For portions of the support bar boxes embedded in concrete, weld all plate connections perimeter in a manner that will prevent water or mortar from entering the box.

Accurately set and securely support the expansion device at the correct grade and elevation, and the correct joint opening as shown on the plans and on the shop drawings. If the maximum time between setting the joint opening and placing concrete exceeds four hours, check and adjust the opening as necessary.

Measure the structure temperature by recording the surface temperature of the concrete and/or steel with a surface thermometer as described below.

1. Concrete bridges: Record the temperature of the underside of the concrete slab at each end of the superstructure element adjacent to the expansion joint. Take the average of the readings to use with the temperature adjustment shown on the plans or on the approved shop drawings.
2. Steel bridges: Record the concrete slab temperature as described above. In addition, record the surface temperature of the shaded portion of the girder web at each location. Average the readings of the steel and concrete to use with the temperature adjustment.

Blast clean all non-galvanized metal surfaces that come in contact with the premolded elastomeric seal and lubricant adhesive in accordance with the requirements of Steel Structures Painting Council Surface Preparation Specification No. 6 (SSPC-SP6, Commercial Blast Cleaning).

Protect the cleaned metal surfaces from rusting until the premolded elastomeric seal and lubricant adhesive are placed against the metal surface. Reclean any previously cleaned metal on which rusting appears in accordance with the foregoing.

In order to perform the work of installing the expansion joint device in a proper manner, some portions of the barrier and bridge deck cannot be constructed until after the expansion joint is installed. After the modular expansion joint device has been set to its final line and grade, fill recess openings in the deck and barrier with concrete (Class AA).

### 447.3.04 Quality Acceptance

#### A. Fatigue Testing

Perform fatigue testing by an independent testing laboratory on multiple spans of one or more full-size center beams. Test the same support and connections of the center beams and support bars as for the designed unit. Apply a simultaneous horizontal load, equal to a minimum of 20% of the vertical load. Perform the fatigue testing in accordance with the manufacturer's recommendations and approved procedures.

#### B. Watertight Integrity

After the expansion joint device has been permanently installed, test the full length of the device for watertight integrity. Use a method satisfactory to the Engineer.

Cover the entire joint system with water, either ponded or flowing, for a minimum duration of 15 minutes. Inspect the concrete surfaces under the joint during this 15 minute period and also for a minimum of 45 minutes after the supply of water has stopped, for any evidence of dripping water on any surface on the underside of the joint. Patches of moisture are not a cause for non-acceptance.

**Section 447 – Modular Expansion Joints**

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If the joint system exhibits evidence of water leakage at any place whatsoever, locate the leakage and take measures to correct the leakage as approved by the Engineer. Subsequent to corrective measures, perform the watertightness integrity test subject to the same conditions as the original test.

The words “permanently installed” as used above include completion of the portions of the barrier and deck that cannot be constructed until after the expansion device installed. This applies even though this work is to be paid for under other contract items.

**C. Contractor Certification**

Provide written certification to the Engineer that the expansion joint device was installed in accordance with the manufacturer’s instructions, the advice of their representative, and these specifications. Also, provide in writing any certification from the joint manufacturer’s representative

**447.4 Measurement**

Bridge expansion device will be measured as a unit, completely installed and accepted.

The words “completely installed” mean that the expansion joint device is in place with concrete placed and finished, and that the watertight integrity test has been successfully performed.

**447.5 Payment**

Each expansion joint device will be paid for at the Contract Price per each, complete in place. Payment will be full compensation for all work necessary to furnish, test, and install a modular expansion device, steel angles, concrete anchorages, placing and finishing concrete in block-outs.

Payment will be made under;

Item No. 447-1050 Modular Expansion Joint, Br No - , Bt No - ..... per each

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**SPECIAL PROVISION**

**PROJECT No:  
P.I. NO. 0015913**

**SECTION 449 – Bridge Deck Joint Seals**

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*Add the following Subsections to Section 449:*

**449.1 General Description**

- A Preformed Pre-compressed, Silicone Coated, Self-Expanding Sealant System

**449.2 Materials**

**J. Preformed Pre-compressed, Silicone Coated, Self-Expanding Sealant System**

The preformed pre-compressed silicone joint seal shall as a minimum:

- Sealant system shall be comprised of three components: 1.) cellular polyurethane foam impregnated with hydrophobic 100% acrylic, water-based emulsion, factory coated with highway-grade, fuel resistant silicone; 2) field-applied epoxy adhesive primer, 3) field-injected silicone sealant bands.
- Be held in place by a non-sag, high modulus silicone adhesive.
- Be compatible with the epoxy and header material.
- Withstand the effects of vertical and lateral movements, skew movements and rotational movement without adhesive or cohesive failure.
- Designed so that, the material is capable of movement of +50%, -50% (100% total) of nominal material size.
- Changes in plane and direction shall be executed using factory fabricated 90 degree transition assemblies. The transitions shall be watertight at the inside and outside corners through the full movement of the product.
- The depth of the joint shall be recessed 1/2" below the riding surface throughout the normal limits of joint movement.
- Be resistant to ultraviolet rays
- Be resistant to abrasion, oxidation, oils, gasoline, salt, and other materials that may be spilled on or applied to the surface.
- Certify to the Engineer that the joint composition shall be free of any waxes or wax compounds; asphalts or asphalt compounds.

Ensure the joint meets the following physical properties:

Test	Requirements	Test Method
Tensile Strength of Silicone Coating (min)	140 psi	ASTM D 412
UV Resistance of Joint System	No Changes--2000 Hours	ASTM G155-00A
Density of Cellular Polyurethane Foam	200kg/m <sup>3</sup> (12.5lb/ft <sup>3</sup> )	ASTM D545
Heat Aging Effects (Silicone Coating)	No cracking, chalking	ASTM C 792
Resilience (Silicone Coating)	≥ 95%	ASTM D 5329
Joint System Operating temp range (min)	-40° F to 185° F	ASTM C 711

The adhesive shall be a two-component, 100% solid, modified epoxy meeting the requirements of ASTM C881, Type I, Grade 3, Class B & C. The adhesive shall also have the following properties:

Tensile Strength	2,500 psi (24 MPa) min.
Compressive Strength	7000 psi (48 MPa) min.
Bond Strength (Dry Cure)	2000 psi (28MPa) min
Water Absorption	0.1% by weight

The silicone band adhesive shall have the following properties:

Test	Requirements	Test Method
Movement Capability	+100/-50%	ASTM C 719
Elongation at Break	>1400%	ASTM D 412
Slump	≤0.3"	ASTM D 2202
Hardness (Shore A) max.	20	ASTM C 661
Tack free time (max)	60 minutes	ASTM C 679
Heat Aging Effects	No cracking, chalking	ASTM C 792
Resilience	≥ 95%	ASTM D5329
Bond	0% Adhesive or Cohesive Failure after 5 cycles @ 100% extension	ASTM D 5329



### 449.3.03 Preparation

#### A. Surface Preparation

##### 2. Preparation for Joint Seal

**Delete:** "Saw-cutting of the concrete deck may be necessary to provide an acceptable attachment surface for the joint seal".

### 449.3.05 Construction

#### H. Preformed Pre-compressed, Silicone Coated, Self-Expanding Sealant System

1. After the epoxy or elastomeric concrete had developed enough strength to be traffic ready, remove the temporary joint filler (when called for) and thoroughly clean the joint faces of all joint filler.
2. Lightly sandblast the joint to remove all residues. Prior to installation ensure surfaces are completely dry and all recommendations of the manufacture have been completed.
3. Clean the seal prior to installation by wiping it down with a cloth saturated with acetone .
4. Apply epoxy adhesive to substrate in a thin layer inside cleaned substrate.
5. Install the foam length into the wet epoxy adhesive so that the top of the bellows is 1/2" below the deck surface.
6. Inject a 3/4-inch band of Silicone between the substrate and the foam.
7. Tool the excess Silicone and remove excess Silicone from bellows at the joins . Coat any exposed foam ends.

### 449.5 Payment

Payment will be made under:

Item No. 449	Preformed Pre-compressed, Silicone Coated, Self-Expanding Sealant System, Bridge No - _____, Bent No - ____	Per Linear Foot (meter)
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**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**SPECIAL PROVISION**

**P.I. No: 0015913  
Cook, Tattnall, Taylor, Wilcox County**

**SECTION 449 – Bridge Deck Joint Seals**

---

*Add the following Subsections to Section 449:*

**449.1 General Description**

- A preformed silicone joint seal, or

**449.2 Materials**

**J. Performed Silicone Joint Seal**

The preformed silicone joint seal shall as a minimum:

- Be held in place by a non-sag, high modulus silicone adhesive.
- Be compatible with epoxy and elastomeric concrete header material and steel headers (if required).
- Withstand the effects of vertical and lateral movements, skew movements and rotational movement without adhesive or cohesive failure.
- The depth of the joint shall be recessed below the riding surface throughout the normal limits of joint movement.
- Be resistant to ultraviolet rays
- Be resistant to abrasion, oxidation, oils, gasoline, salt, and other materials that may be spilled on or applied to the surface.

Ensure the joint meets the following physical properties:

Test	Requirements	Test Method
Hardness Type A durometer	53 ± 5	ASTM D 2240
Tensile Strength (min)	550 psi (3.8 Mpa)	ASTM D 412
Elongation at break (min)	350%	ASTM D 412
Tear Strength (min)	80 lb/in (92 kg/cm)	ASTM D 624
Compression set (max)	30% at 350o F	ASTM D 395
Operating temp range (min)	-60° F to 450° F (51° C to 232° C)	

The adhesive shall also have the following properties:

Test	Requirements	Test Method
Sag/flow (max)	3/16” (4.8 mm)	ASTM C 639
Hardness	23 ± 3	ASTM C 661
Tack free time (max)	30 minutes	ASTM C 679
Skin over time (tooling Time) (max)	5 minutes	AT 75° F/50% RH
Cure through to ¼” thickness (max)	16 hours	AT 75° F/50% RH
Resistance to UV	No Degradation	ASTM C 793
Peel Adhesion to substrates (min)	50 lb/in (58kg/cm)	ASTM C 794

### 449.3.03 Preparation

#### A. Surface Preparation

##### 2. Preparation for Joint Seal

**Delete:** “Saw-cutting of the concrete deck may be necessary to provide an acceptable attachment surface for the joint seal”.

### 449.3.05 Construction

#### H. Preformed Silicone Joint Seal

1. After the epoxy or elastomeric concrete has developed enough strength to be traffic ready, remove the temporary joint filler (when called for) and thoroughly clean the joint faces of all joint filler.
2. Lightly sandblast the joint to remove all residues. Prior to installation, ensure surfaces are completely dry and all recommendations of the manufacture have been completed.
3. Clean the seal prior to installation by wiping it down with a cloth saturated with denatured alcohol.
4. Apply a 3/8" thick bead of adhesive along both sides of the joint at the depth recommended by the manufacturer.
5. Position the joint seal to the proper depth as recommended by the manufacturer.
6. Apply a bead of adhesive along the top side of the joint on each side as recommended by the manufacturer.
7. Tool the adhesive twice to insure complete contact with the vertical edge.

### 449.5 Payment

Payment will be made under:

Item No. 449	Preformed Silicone Joint Seal, Bridge No - _____, Bent No - _____	Per Linear Foot (meter)
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**Georgia Department of Transportation**

**State of Georgia**

**Special Provision**

**PROJECT NO.:**

**P.I. NO.: 0015913**

**Section 500—Concrete Structures**

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*Delete Subsection 500.1 and substitute the following:*

This work consists of manufacturing and using High Performance Portland cement concrete to construct precast-prestressed concrete bridge members as shown in the plans and using normal weight Portland cement concrete to construct structures as shown in the Plans.

*Add the following to Subsection 500.1.02.A:*

Section 831—Admixtures

*Add the following to Subsection 500.1.02.B:*

AASHTO T 277

*Add the following to Subsection 500.1.03.A:*

**High Performance Concrete Mix Designs**

The Fabricator is responsible for all concrete mix designs. Ensure that concrete mixes contain enough cement to produce workability within the water-cement ratio specified in Table 1A—High Performance Concrete Mix Table, below.

Submit a mix design for approval to the Office of Materials and Research. Include the sources and actual quantity of each ingredient and laboratory results that demonstrate the ability of the design to attain both the required compressive strength and chloride permeability at 56 days.

Include laboratory compressive strength test results of at least eight test cylinders prepared and cured according to AASHTO T 126. Ensure these test cylinders are made from two or more separate batches with an equal number of cylinders made from each batch.

Also include laboratory chloride permeability test results of at least two test specimens prepared and tested according to AASHTO T 277. Ensure these test specimens are made from two or more separate batches with an equal number of specimens made from each batch.

**Section 500—Concrete Structures**

**Table 1A—High Performance Concrete Mix Table**

English									
Class of Concrete	Coarse Aggregate Size No.	(1) Minimum Cement Factor (lbs/yd <sup>3</sup> )	Maximum Water/Cement ratio (lbs/lbs)	(2) Slump Acceptance Limits (in) Lower-Upper		Entrained Air Acceptance Limits (%) Lower-Upper		(3) Minimum Compressive Strength at 56 days (psi)	Maximum Chloride Permeability at 56 days (Coulombs)
"AAA HPC"	67	650	.330	2	7	3.5	6.5	Beams – As shown on the Plans Piling – 5000	Beams – 3,000 Piling – 2,000
Metric									
Class of Concrete	Coarse Aggregate Size No.	(1) Minimum Cement Factor (kg/m <sup>3</sup> )	Maximum Water/Cement ratio (kg/kg)	(2) Slump acceptance Limits (mm) Lower-Upper		Entrained Air Acceptance Limits (%) Lower-Upper		(3) Minimum Compressive Strength at 56 days (MPa)	Maximum Chloride Permeability At 56 days (Coulombs)
"AAA HPC"	67	386	.330	50	180	3.5	6.5	Beams – As shown on the Plans Piling – 35	Beams – 3,000 Piling – 2,000

1. Determine the slump acceptance after the addition of high-range water reducer.
2. Determine the minimum compressive strength at 56 days using 4 in. diameter x 8 in. high (100 mm x 200 mm) cylinders.

*Add the following to Subsection 500.2 Table 3:*

Fly Ash	831.2.03.A.1
Silica Fume	831.2.03.A.4

*Add the following note to Subsection 500.2 Table 3:*

4. Use Type I or III Portland cement in High Performance concrete. Do not use air-entraining cement.

*Add the following to Subsection 500.3.04.D.4:*

- f. For High Performance concrete, fly ash may be used as an additive at an addition rate not to exceed 15% of the cement by weight.

*Add the following to Subsection 500.3.04.D:*

6. Silica Fume  
Silica Fume may be used as an additive at an addition rate not to exceed 10% of the cement by weight.

**Georgia Department of Transportation**

**State of Georgia**

**Special Provision**

**PROJECT NO.:**

**P.I. NO.: 0015913**

**Section 500—Concrete Structures**

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*Add the following to Subsection 500.1:*

This work consists of manufacturing and using Portland cement concrete with lightweight aggregate to construct structures as shown in the Plans.

*Add the following to Subsection 500.1.02.B*

ASTM C 567

AASHTO T 96

AASHTO T 104

AASHTO M 195

AASHTO T 196

GDT 32

*Add the following to Subsection 500.3.01:*

C. ACI Concrete Technician

Provide a GDOT certified ACI Concrete Technician, from an independent GDOT prequalified consultant firm, which is certified to perform Field Testing of Roadway Construction Materials.

*Add the following to Subsection 500.3.04.F.1:*

f. Lightweight Concrete—Concrete composed of a mixture of cementitious material, normal weight fine aggregate, lightweight coarse aggregate conforming to AASHTO M 195, water and admixtures. All structural lightweight concrete will have a maximum equilibrium density of 115 lbs/ft<sup>3</sup> (1840 kg/m<sup>3</sup>) as determined by ASTM C 567.

g. Lightweight concrete will comply with the applicable requirements of Section 500 of the Standard Specifications. Use GDT 32 or AASHTO T 196 to determine air content of structural lightweight concrete.

Use lightweight coarse aggregate from an approved source or stockpile meeting the requirements of AASHTO M 195 and the Sulfate Soundness (AASHTO T 104) and Los Angeles Abrasion (AASHTO T 96) requirements of Section 800.2. Nominal sizes of lightweight coarse aggregates are as specified in AASHTO M 195 as 3/4, 1/2 or 3/8 in. (19.0, 12.5 or 9.5 mm).

The use of lightweight aggregate in concrete in a particular component of a structure will be shown on the Plans or called for in the specifications.

*Add the following to Subsection 500.3.06:*

F. Air Content Testing of Structural Lightweight Concrete

Provide testing of structural lightweight concrete per Subsection 500.3.04.F.1.g, and in accordance with test frequencies outlined in the Sampling, Testing and Inspection Quick Guide. Perform air content by a technician meeting the requirements of Subsection 500.3.01.C and who is approved by the Engineer. Submit test results to the Engineer. No separate measurement for payment will be made for testing of structural lightweight concrete.

MATERIALS AND RESEARCH



**DEPARTMENT OF TRANSPORTATION  
 STATE OF GEORGIA**

**SPECIAL PROVISION**

**PROJECT NO.:**

**P.I. NO.: 0015913**

**Section 500—Concrete Structures**

*Add the following to 500.1.03.A:*

The Contractor is responsible for all concrete mix designs. Submit a mix design for approval to the Office of Materials and Testing. Include the sources, actual quantity of each ingredient, design slump, design air and laboratory results that demonstrate the ability of the design to attain the required compressive strength at 28 days.

Prepare and test at least 8 cylinders according to ASTM C192 and AASHTO T22 to ensure that the demonstrated laboratory compressive strength at 28 days exceeds the minimum acceptance strength (X). Make the specimens from two or more separate batches with an equal number of cylinders made from each batch. The minimum acceptance strength is:

$$X = f'c + 500 \text{ psi} (X = f'c + 3.4 \text{ MPa})$$

Where,  $f'c$  is the required minimum compressive strength at 28 days for Class D concrete as shown in Table 1—Concrete Mix Table.

*Add the following to Table 1—Concrete Mix Table:*

**Table 1—Concrete Mix Table**

English								
Class of Concrete	(2) Coarse Aggregate Size No.	(1 & 6) Minimum Cement Factor lbs/yd <sup>3</sup>	Max Water/Cement Ratio lbs/lbs	(5) Slump Acceptance Limits (in) Lower - Upper		(3 & 7) Entrained Air Acceptance Limits (%) Lower - Upper		Minimum Compressive Strength at 28 days (psi)
Class D	57,67	650	0.445	2	4	3.5	7.0	4000
Metric								
Class of Concrete	(2) Coarse Aggregate Size No.	(1 & 6) Minimum Cement Factor kg/m <sup>3</sup>	Max Water/Cement Ratio kg/kg	(5) Slump Acceptance Limits (mm) Lower - Upper		(3 & 7) Entrained Air Acceptance Limits (%) Lower - Upper		Minimum Compressive Strength at 28 days (MPa)
Class D	57,67	386	0.445	50	100	3.5	7.0	28

*Delete Subsection 500.3.04.F.1.b*

*Add the following to Subsection 500.3.04.F.1:*

- f. Class D—Bridge superstructure concrete or as called for on the Plans

March 11, 2016

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
SPECIAL PROVISION**

**PROJECT NO.:**

**P.I. NO.: 0015913**

**Section 500—Concrete Structures**

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*Add the following to Subsection 500.1.02:*

**B. Referenced Documents**

“Guide to Mass Concrete”, ACI 207.1R-05.

“Report on Thermal and Volume Change Effects on Cracking of Mass Concrete”, ACI 207.2R-07.

“Cooling and Insulating Systems for Mass Concrete”, ACI 207.4R-05.

“Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete”, ACI 211.1-91

“Control of Cracking Concrete Structures”, ACI 224R-01.

“Specification of Structural Concrete”, Section 8, ACI 301-10.

“Compressive Strength of Cylindrical Concrete Specimens”, AASHTO T 22-10

“Making and Curing Concrete Test Specimens in the Laboratory”, ASTM C192

*Add the following to Subsection 500.3.05:*

**AM. Mass Concrete**

Mass concrete is defined as “Any large volume of concrete with dimensions large enough to require that measures be taken to cope with the generation of heat and attendant volume change to minimize cracking”. Any concrete element with a least plan dimension greater than 5ft (or greater than 6 ft diameter for a drilled shaft) shall be designated as mass concrete and will use this specification. To account for variability in as-built dimension versus plan dimension, such as telescoping casing during construction, any concrete element with a least as-built dimension greater than 5 ½ ft (or great than 6 ½ ft diameter for a drilled shaft) shall be designated as mass concrete and use this specification. The introduction of a construction joint at a dimension less than 5 ft does not ensure that the maximum temperature attained by or the differential temperature in concrete is adequately controlled. Proposals for large volume concrete shall thus be evaluated based on the heat development and a Thermal Control Plan.

**a. Temperature Specifications for Mass Concrete**

Mass concrete shall conform to the concrete acceptance criteria and the following temperature requirements to prevent delayed ettringite formation (DEF) and thermally induced stress cracks:

1. The maximum allowable internal temperature of mass concrete meeting the requirements of Subsection 500.3.05.AM.b.1, shall not exceed 158 °F.
2. The maximum temperature differential between interior and exterior portions of the designated mass concrete element shall not exceed 35 °F.
3. The maximum temperature of the concrete when delivered and prior to placement shall be 85 °F.

**b. Materials Selection and Mix Design Development**

Materials used for mass concrete shall conform to the provisions in Section 500-Concrete Structures of *GDOT Standard Specifications-Construction of Transportation Systems* and the following requirements. When in conflict, materials shall conform to the special provisions below rather than those in Section 500.

1. Use Class F fly ash (no Class C fly ash is allowed), granulated iron blast-furnace slag or other pozzolans, if approved by the Department in all mass concrete. Slag may comprise no more than 75% by mass of total cementitious and pozzolanous materials. Class F fly ash may comprise no more than 40% by mass of total cementitious and pozzolanous materials. When a combination of multiple different pozzolans is used, the total amount may be no more than 75% by mass of total cementitious and pozzolanous materials.
2. High-early-strength (ASTM C150 Type III or ASTM C1157 HE) cement, metakaolin, silica fume calcium chloride and accelerating type admixtures shall not be used unless an adiabatic temperature study is completed showing temperature rise significantly less than that of plain unmodified concrete.
3. A retarding admixture, pretested with the job materials under job conditions, may be permitted to prevent cold joints due to the quantity of concrete placed, as approved by the Engineer.
4. Coarse aggregate larger than #5 stone maximum size aggregate is permitted to be used for mass concrete, if approved by the Engineer.
5. Other materials and/or mix designs may be proposed to the Engineer for approval, with documentation that the proposed mix designs meet temperature specifications from Subsection 500.3.05.AM.a for mass concrete.

6. Laboratory-designed mix proportions of materials are permitted for commonly used combinations of materials. Request these mixes in writing from the State Materials Engineer specifying the class of concrete and the source of ingredients.
7. Degree of Alkali-Silica Reactivity (ASR) of either fine or coarse aggregate is determined by testing the aggregates in ASTM C1260, or ASTM C1567 (either expansion shall be less than 0.10% after 14 days immersion). Unless the results of petrography indicate a significant change in the composition of materials in quarries, ASTM 1293 (expansion <0.04% at 1 year) is not required to be conducted, before a mix design can be approved by the Engineer. Alternatively obtain low ARS risk aggregate materials from certified suppliers.
8. The mixture will be capable of demonstrating a laboratory compressive strength at 28 days meeting the requirements of Table 1 – Concrete Mix Table, *Subsection 500.1.03.A*. Compressive strength will be determined based upon result of six cylinders prepared and tested in accordance with AASHTO T 22 and ASTM C192.

**c. Thermal Control Plan**

At least 30 calendar days prior to placing any concrete defined as mass concrete, the contractor shall submit to the Engineer for approval a Thermal Control Plan (TCP). The TCP shall show complete analysis of the anticipated thermal developments in the mass concrete elements for all expected project temperature ranges using the proposed mix design, casting procedures and materials. A primary focus of the TCP is actions to take when any of the temperature controls noted in Subsection 500.3.05.AM are exceeded or are anticipated to be exceeded. As a minimum, the TCP shall include details about the following:

1. Concrete mix design showing composition, proportions, and sources for all components.
2. Proposed methods to control concrete temperature at time of placement, such as pre-cooling of raw materials or concrete.
3. Duration and method of curing.
4. Calculations of maximum concrete temperatures for the range of expected air, water (for underwater construction) and concrete temperatures.
5. Proposed methods to control maximum temperature during curing. A mechanical cooling system may be used to control the internal temperature of mass concrete during curing but shall be designed in conformance with the Thermal Control Plan. If a mechanical cooling system is used, the plans for the cooling system operation and final grouting after cooling shall be submitted to the Engineer for approval.
6. When the maximum concrete temperature nears 140 °F, notify the Engineer and take corrective measures immediately to retard further increase in the temperature to limit it to the 158 °F maximum. Utilize the mechanical cooling system, if installed, to lower the overall temperature. Other active measures may include, but not limited to

for any further pours: chilled water for mixing, precooling aggregate stockpiles, ice for mixing water, nitrogen gas, and shade for aggregate stockpiles. Cease placement of concrete until the maximum temperature has been lowered.

7. Proposed methods to control temperature differentials during curing that could include insulation for the forms and exposed portions of concrete. Contractor must take actions that prevent the exterior surfaces of the concrete from getting too cool, too quickly such as using insulation or heater or by preventing the core from getting too hot.
8. When the internal concrete temperature differential between interior and exterior concrete nears 30°F, notify the Engineer and take corrective measures immediately to retard further increase in the temperature differential to limit it to the 35°F maximum. Utilize the mechanical cooling system, if being use, to lower the internal temperature. Other active measures may include, but not limited to: chilled water for mixing, precooling aggregate stockpiles, ice for mixing water, nitrogen gas, and shade for aggregate stockpiles. Cease placement of concrete until the temperature differential has been lowered.
9. Calculations of maximum temperature gradients within each concrete element during curing. Calculations shall include maximum possible temperature induced tensile stress in the concrete in addition to tensile stresses at 1 day, 3 days, 7 days, 28 days, and 56 days after placement. The thermal calculation model and/or computational software shall be submitted to the Engineer for approval.
10. Temperature monitoring and recording system, that shall consist of temperature sensors connected to a data acquisition system. The temperature sensor types and locations shall be specified.
11. Results of strength tests of sample cylinders. The concrete shall attain the specified strength at an age (28 or 56 days) as specified by the Engineer. Match curing of concrete is required. Match curing shall be conducted according to temperature history obtained using thermocouples typically 4 inches from surface and at the centroid of the concrete pour. The depth of the thermocouple may need to be established by the depth of rebar or other anchoring structure (See Subsection 500.3.05.AM.d.3 and Subsection 500.3.05.AM.d.5).
12. For all mass concrete construction, the TCP shall be developed by a Professional Engineer, licensed in the State of Georgia, who shall be competent in the modeling, design, and temperature control of mass concrete with at least three mass concrete projects experience that can be verified by the Department.

Place no concrete until the mass concrete mix design and the proposed TCP is reviewed and approved by the Engineer. If concrete design mixture is changed, the TCP must be updated and approved by the Engineer.

#### **d. Temperature Monitoring and Recording System**

1. Install within the concrete placed in each mass pour and in the surrounding environment of the concrete, temperature sensing devices (thermocouples) of a type approved by and at locations based on the plan approved by the Engineer.

2. The sensing system will contain as a minimum two independent sets of sensing devices in order to assure readings if one of the systems fail. The sensing devices shall be accurate to within 2°F range.
3. Thermocouples shall be placed at the centroid of the pour, or wherever the point of expected maximum temperature is anticipated. Additional thermocouples shall be placed on the exterior to monitor the maximum temperature differential. Ensure the thermocouples are placed at a depth of 2 to 6 inches below the surface.
4. The temperature monitoring and recording system for mass concrete shall consist of temperature sensors connected to a data acquisition system capable of printing, storing, and downloading data to a computer. Data shall be printed and submitted to the Engineer daily with a copy sent to Office of Materials and Testing.
5. Two independent sets of sensing devices shall be placed at each of the following locations and readings to be taken hourly: (1) center of the mass pour; (2) midpoint of the side which is the shortest distance from the center; (3) midpoint of the top surface; (4) midpoint of the bottom surface; and (5) corner of the mass pour which is furthest distance from the center. Ensure the thermocouples are placed at a depth of 2 to 6 inches below the surface.

**e. Placing and Curing Mass Concrete**

When placing and curing mass concrete do the following:

1. Maintain a temperature differential of 35 °F or less between the interior and exterior portions of the designated mass elements.
2. Monitor and maintain records of the concrete temperature, beginning with casting and continuing until the maximum temperature is reached and begins decreasing to a differential of no more than 35°F from the mean annual ambient temperature of the surrounding environment, for three consecutive days.
3. The contractor shall suggest consolidation techniques based on the placement technique to be used for mass concrete. The consolidation technique shall be reviewed and approved by the Engineer before start of placement of mass concrete. Slump tests or slump-flow (ASTM C 1611) tests, as applicable, shall be used to provide quality control from batch to batch.
4. Maintain a minimum concrete placement rate of 30 cubic yards per hour or as designated on the plans or in the Special Provisions. Any requested change from this placement rate is to be approved by the Engineer.

**f. Acceptance**

Mass concrete shall conform to the concrete acceptance criteria and the temperature requirements as stated earlier to prevent delayed ettringite formation (DEF) and thermally induced stress cracks.

If the Contractor fails to conform to any of the above temperature requirements in any one pour, any additional mass concrete pours will cease. The Engineer may, at its sole discretion, direct that the concrete be removed or otherwise mitigated, at no cost to the Department. The contractor shall revise the Thermal Control Plan and design calculations to correct the problem and resubmit the revised Thermal Control Plan. Mass concrete placement shall not begin until the Engineer has approved the revised Thermal Control Plan. No extension of time or compensation will be made for any rejected mass concrete element or revisions of the Thermal Control Plan.

Office of Materials and Testing

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
SPECIAL PROVISION**

**PROJECT NO.**

**P.I. NO. 0015913**

**Section 511 – Reinforcement Steel**

---

*Add the following to 511.2 Materials, B. Fabrication:*

- 2. Reinforcement Steel Couplers.** When couplers are indicated on the Plans, use mechanical butt splices from an approved source listed on QPL 93.

Provide mechanical butt splices which develop a minimum of 125% of the guaranteed yield strength of the reinforcing steel to be spliced. Limit the total slip of the reinforcing bars within the splice sleeve after loading to 30 kips per square inch (207 MPa) and relaxing to 3 kips per square inch (21 MPa) to no more than the following, as measured between gauge points clear of the splice sleeve: 0.010 of an inch (.25mm) for reinforcing bars no. 14 (43) or smaller, or 0.030 of an inch (.76mm) for reinforcing bars no. 18 (57).

Prior to installation on GDOT projects, the contractor is required to submit job-control samples for testing to the Office of Materials and Testing. This is to ensure that the installer is qualified to construct the units. Make test specimens in the presence of the Engineer or his authorized representative using reinforcing steel consigned for the work. A test specimen consists of a splice made at the job site to connect two 24 inch (600mm) or longer bars using the same splice materials, position, location, and equipment, and following the same procedures to be used to make splices in the work. Prior to incorporating couplers into the work, make and test three specimens that meet the above criteria.

Perform all testing required above by the Office of Materials and Testing or at a testing laboratory approved by the Department.

If threaded couplers are used, equip them with approved devices which will prevent rotation after installation.

After installation, clean all couplers with a power wire brush or by other approved methods and recoat the couplers with a material prepared and recommended by the coating manufacturer.

Install the couplers in strict accordance with the manufacturer's instructions and as approved by the Engineer.

All costs for the couplers, test samples (including reinforcing steel for tests) and testing of couplers shall be included in the costs of reinforcing steel.



**Georgia Department of Transportation**

**State of Georgia**

**Special Provision**

**PROJECT NO.:**

**P.I. NO.: 0015913**

**Section 865—Manufacture of Prestressed Concrete Bridge Members**

---

*Delete Subsection 865.1 and substitute the following:*

This section includes the following requirements for precast-prestressed concrete bridge members and piling using High Performance Portland cement concrete as shown in the Plans:

- Manufacturing
- Inspecting
- Testing
- Marking
- Painting
- Rubbing as specified
- Plant handling
- Storing
- Shipping

The term “precast-prestressed concrete” is referred to as “prestressed concrete” in the rest of this Section.

*Add the following to Subsection 865.2:*

<b>Material</b>	<b>Section</b>
Concrete, Class AAA HPC	500

*Add the following to the end of Subsection 865.2.01.B.7.a.6:*

Optional Method of Curing for Release Strengths with HPC: Temperature match curing (“Sure Cure” or equivalent methods) is allowed for specimens used to determine when stress may be transferred to the concrete for High Performance Concrete Units.

# **Georgia Department of Transportation**

## **Technical Provisions**

**For**

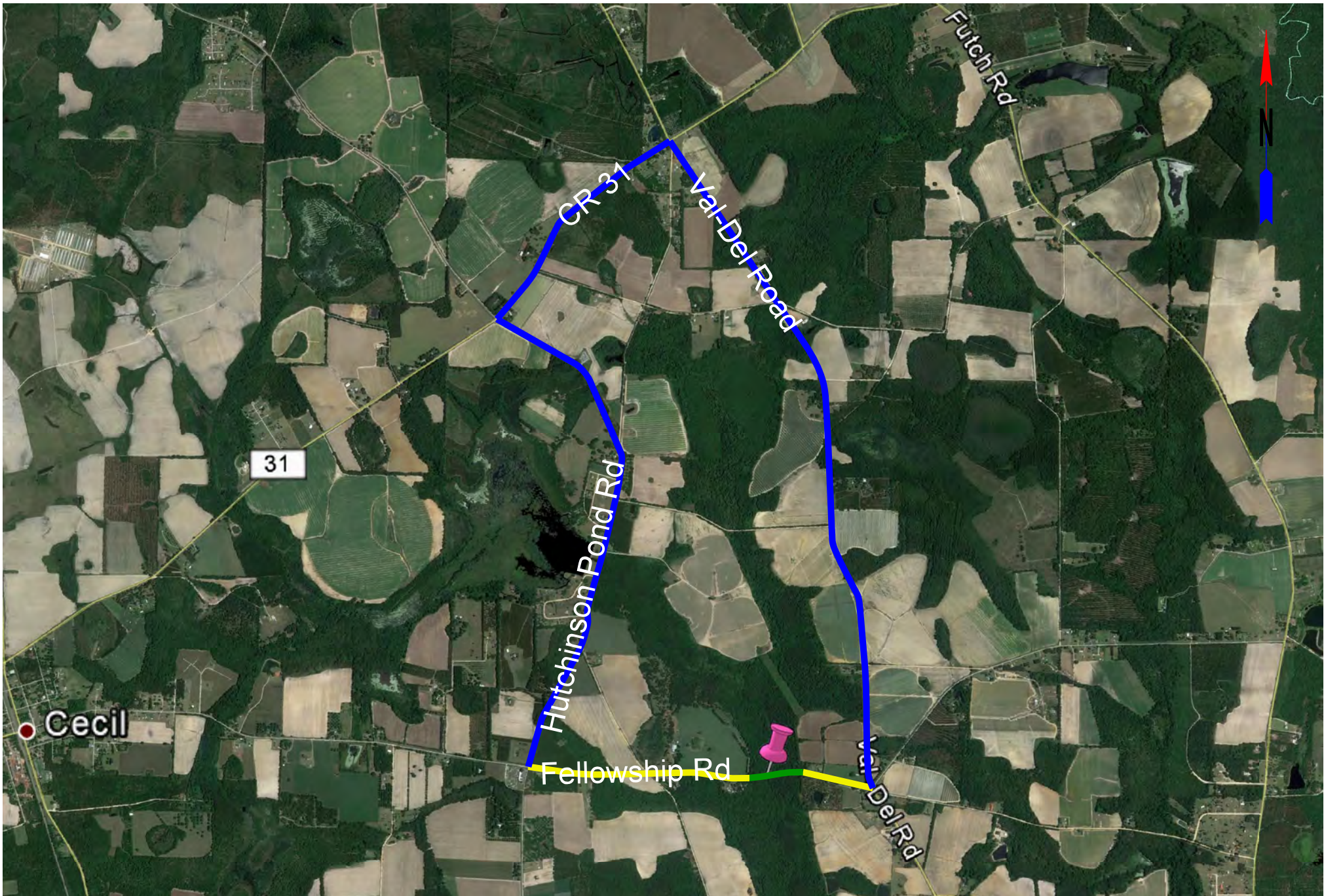
## **Design-Build Agreement**

**P.I. No. 0015913**

## **FY 18 Bridge Replacement Project**

**Attachment 18-1**

**DETOUR MAPS**



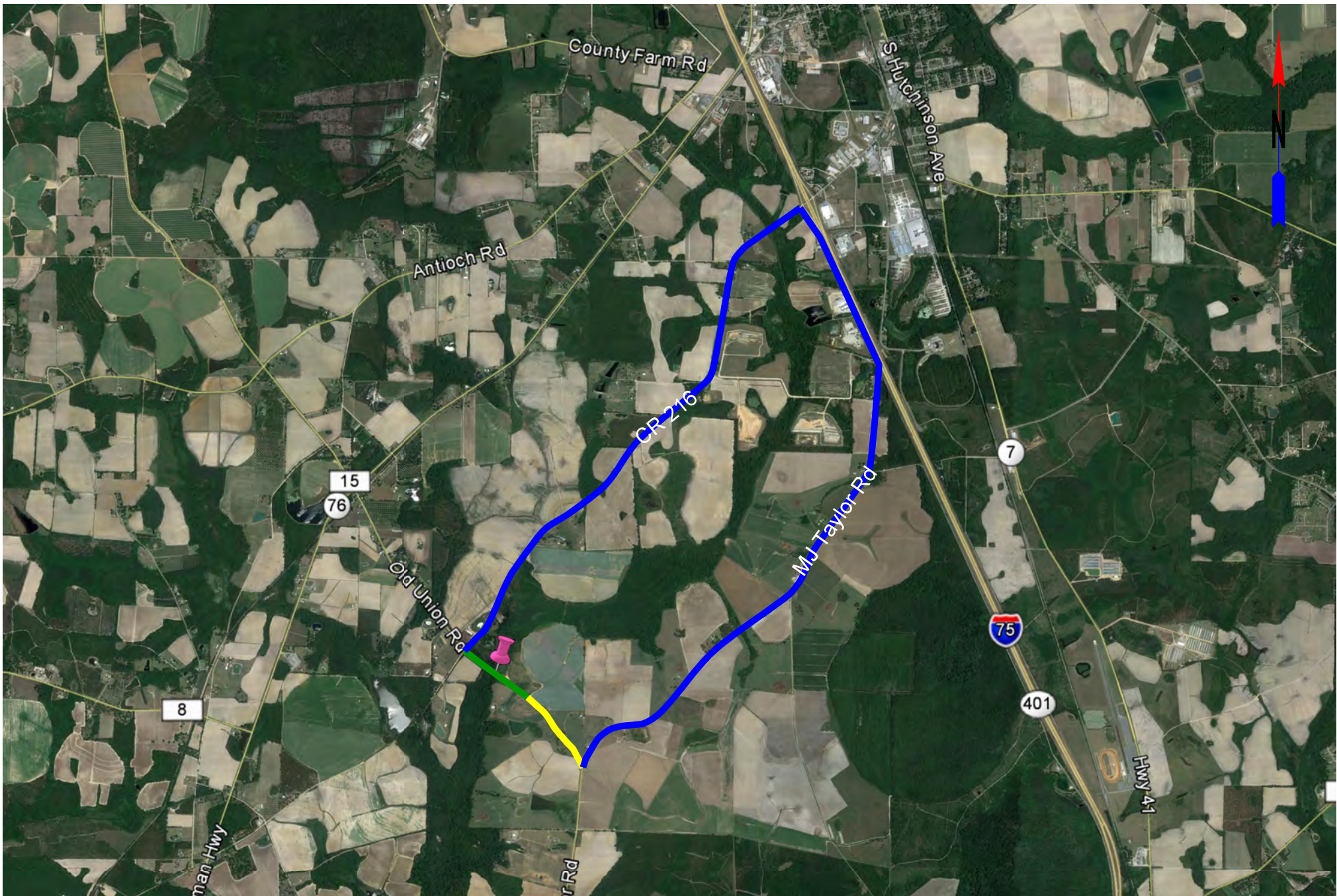
## LOCATION MAP

BRIDGE SERIAL NO: 075-5041-0  
 COOK COUNTY

### Fellowship Road over Hutchinson Mill Creek

- Road Closure (0.23 mi)
- Open to Local Traffic (1.24 mi)
- Proposed Detour Route (6.22 mi)





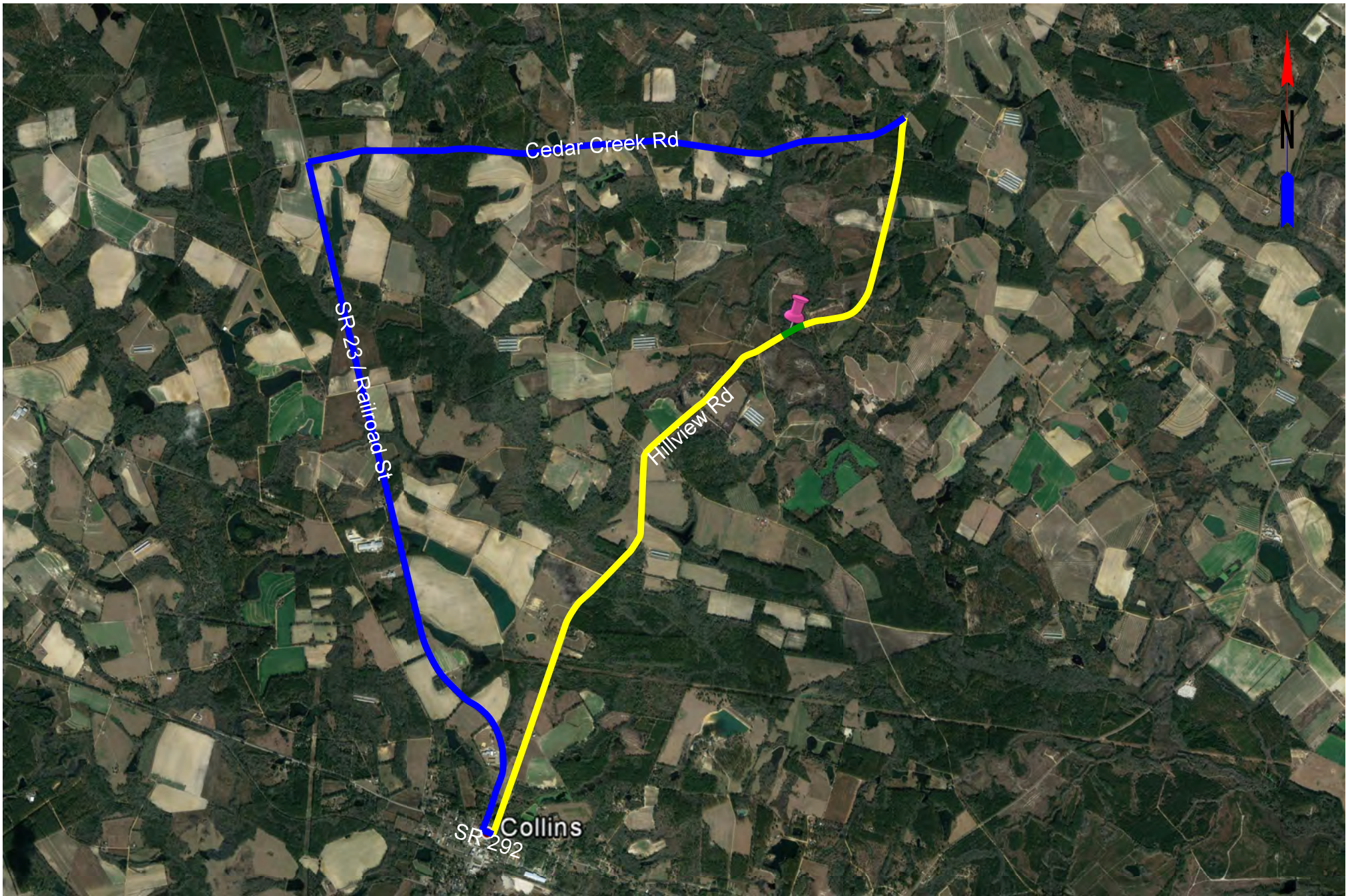
## LOCATION MAP

BRIDGE SERIAL NO: 075-5043-0  
 COOK COUNTY

### Old Union Road over Morrison Creek

- █ Road Closure (0.47 mi)
- █ Open to Local Traffic (0.54 mi)
- █ Proposed Detour Route (7.68 mi)





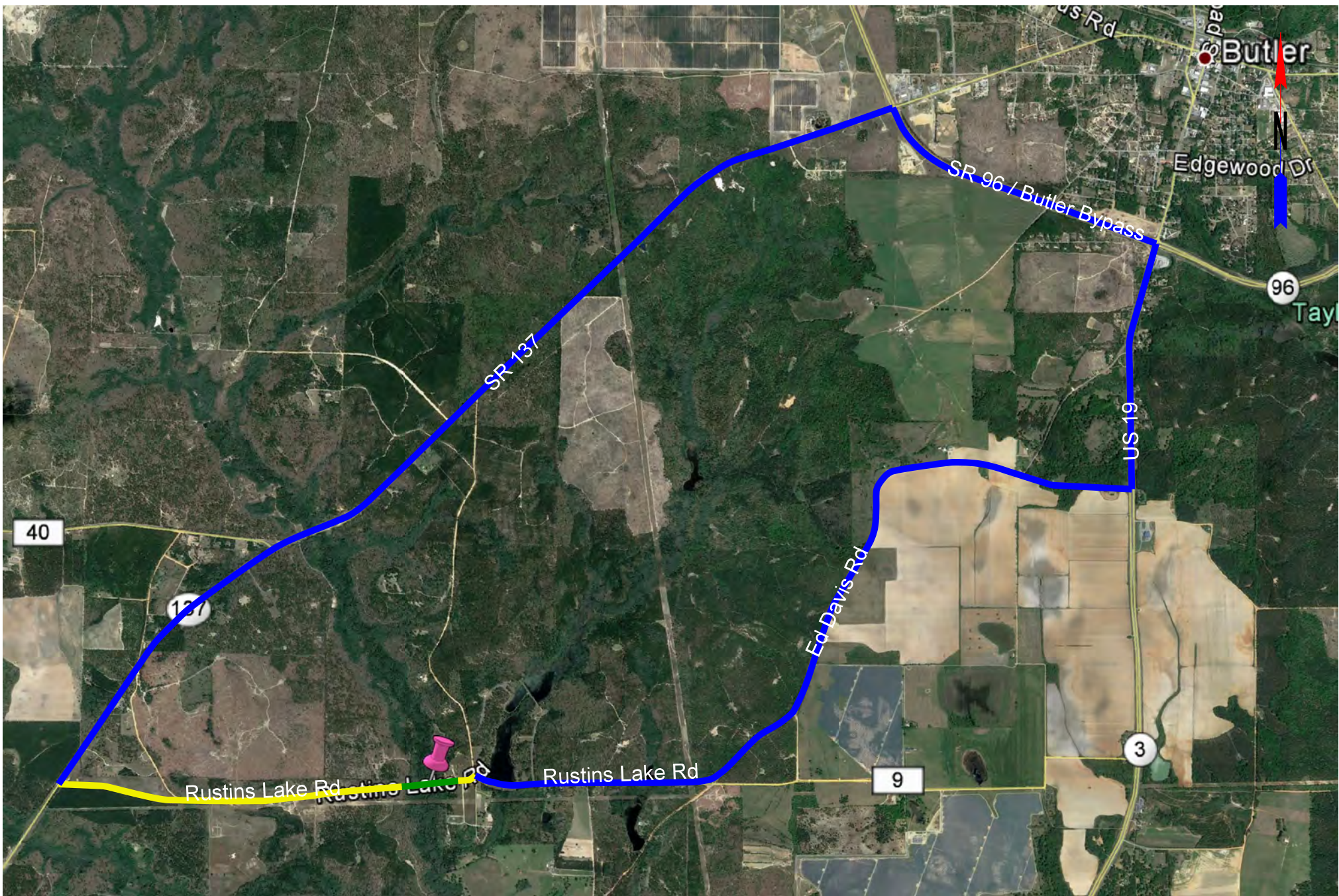
## LOCATION MAP

BRIDGE SERIAL NO: 267-5021-0  
TATTNALL COUNTY

### Hillview Road over Cedar Creek

- █ Road Closure (0.13 mi)
- █ Open to Local Traffic (4.64 mi)
- █ Proposed Detour Route (7.20 mi)





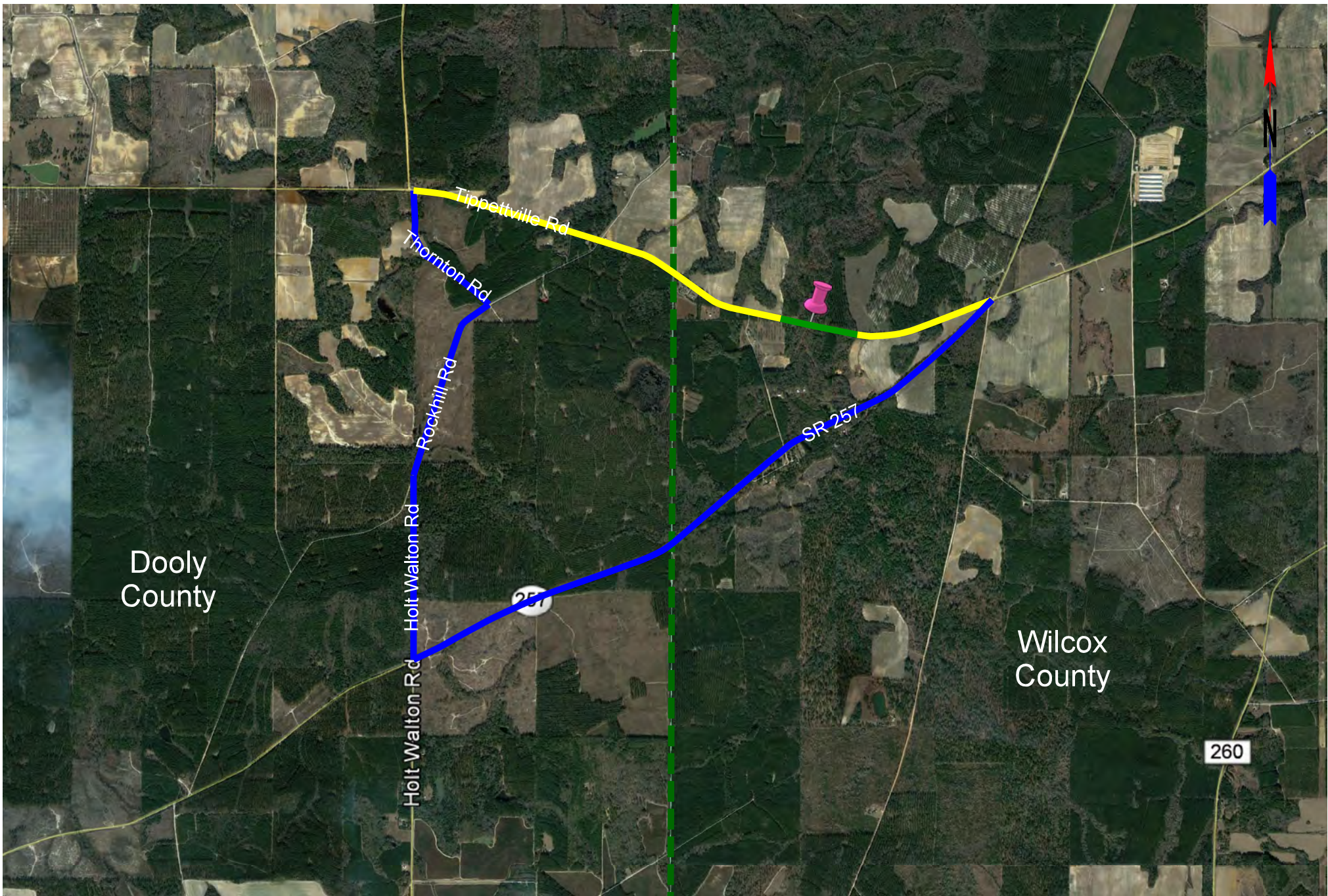
## LOCATION MAP

BRIDGE SERIAL NO: 269-5001-0  
TAYLOR COUNTY

### Hobbs Road over Whitewater Creek

- █ Road Closure (0.27 mi)
- █ Open to Local Traffic (1.73 mi)
- █ Proposed Detour Route (11.91 mi)





Dooly County





Wilcox County



## LOCATION MAP

BRIDGE SERIAL NO: 315-0037-0  
WILCOX COUNTY

### Biar (Tippettville) Road over Bear Creek

-  County Line
-  Road Closure (0.33 mi)
-  Open to Local Traffic (2.25 mi)
-  Proposed Detour Route (5.11 mi)

**Georgia Department of Transportation**  
**VOLUME 3**  
**Programmatic Technical Provisions**  
**For**  
**Design-Build Agreement**  
**FY 18 Bridge Replacement Project**



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## Volume 3 Attachments

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Attachment 2-2	Not Used
Attachment 2-3	Not Used
Attachment 2-4	Not Used
Attachment 3-1	Manuals
Attachment 6-1	Utility Facility Relocation Acceptance Form Template
Attachment 12-1	MS4 Responsibilities – Design-Build Project
Attachment 12-2	Supplemental Specification 169 – Post-Construction Stormwater BMP Items
Attachment 22-1	Not Used

# **1 GENERAL**

## **1.1 Project Design**

*Refer to Volume 2.*

## **1.2 Project Scope**

*Refer to Volume 2.*

### **1.2.1 Design and Construction Requirements**

The DB Team shall design and construct the Project to comply with the requirements of the DB Documents.

The DB Team shall coordinate with GDOT and adjacent Governmental Entities and other third parties as appropriate to determine the design criteria, standards, and specifications of those components of Work that the DB Team will construct but are to be maintained by others. For components of Work that potentially or actually impact the infrastructure of any Governmental Entity or third-party entity, the DB Team's design shall conform to the design requirements of such entity.

### **1.3 Transitions to Adjacent Infrastructure, Roadways and Facilities**

Design and construct Project transitions and interconnections with adjacent infrastructure, roadway, and facilities and related appurtenances to be compatible and uniform at all interfaces. The DB Team shall coordinate with Persons, including other contractors, performing work at or adjacent to the Site to provide seamless transitions from the Project to any work proposed, being developed, or existing. The DB Team shall remove any temporary transitions that are not intended to accommodate permanent traffic operations connecting the proposed improvements to existing roadways and shall restore all areas within the Work or impacted by the Work. The DB Team shall minimize disruption to traffic operations and adjacent property access throughout the performance of the Work.



## **2 PROJECT MANAGEMENT**

### **2.1 General Requirements**

#### **2.1.1 Management Organization and Personnel**

The DB Team shall establish and maintain an organization that effectively manages all Elements of the Work. This project management effort shall be defined by and follow the Project Management Plan (PMP), which is a collection of several management plans describing discrete Elements of the Work. The PMP is an umbrella document that describes the DB Team's managerial approach, strategy, and quality procedures to design and build the Project and to achieve all requirements of the DB Documents.

##### **2.1.1.1 DBE Manager**

*Refer to Volume 2.*

##### **2.1.2 Partnering**

*Refer to Volume 2.*

##### **2.1.3 Project Communications**

*Refer to Volume 2.*

##### **2.1.4 Project Management Controls System (PMCS)**

GDOT will implement a project management controls system (PMCS) throughout the Term of the Agreement for workflows, file storage, communication, and correspondence. The DB Team shall utilize the PMCS provided by GDOT.

This PMCS provides all Project team members:

1. Centralized data that acts as a single source of truth and eliminates data redundancy.
2. Clear, efficient, and targeted access to Project information.
3. Efficient prosecution of the Work through consistent, streamlined processes.
4. Accountability with automated ball-in-court tracking.
5. Informed and streamlined decision-making.
6. Reporting to achieve the Program and Project objectives.

All Project team members shall be required to use this system for all official Project communications and interactions, including:

1. Correspondence, including payment items, notices of potential claims, and Supplemental Agreements

2. Project Management Plans in accordance with Section 2.2
3. Issues
4. Meetings/Meeting Minutes/Action Items
5. Design Management
6. Requests for Information (RFI)
7. Submittals as listed in Section 3
8. Schedule submittals as listed in Section 2.5
9. Nonconformance reporting (NCR's)
10. Punch Lists
11. Reporting
12. Document Management (see Section 2.1.4.1.1 for the required File Naming Convention)
13. Construction Drawing Management (including management markups, versions and revisions)
14. Project Archiving and Closeout
15. Record Drawing Management

**All Project team members shall utilize the PMCS on a daily basis to perform their Project responsibilities.**

Additional requirements/guidelines of the system:

1. The PMCS shall be used to track and manage the Project and will be an official record of all Project communication. Organizations shall upload all Project-related information to the PMCS.
2. No later than thirty (30) calendar days after NTP 1, all Project team organizations involved shall designate a PMCS coordinator (an internal point of contact) and provide the coordinator's name, phone, and e-mail to GDOT and the DB Team.
3. All users of this PMCS must complete training prior to having access to the system provided by GDOT.
4. All Project team members will be solely responsible for establishing and furnishing high-speed internet connectivity (fiber, cable modem, or DSL connectivity is recommended) to access the PMCS.
5. Submittals must be uploaded, submitted, tracked, and reviewed via the PMCS. In the case where physical samples are required, the submittal will still be reviewed and tracked via the system. The sample itself will be transmitted to the reviewer via traditional means.
6. The DB Team shall utilize the filing naming convention as provided in Section 2.1.4.1.1.

All Submittals shall be uploaded to the PMCS. Project documents shall comply with the naming convention requirements of GDOT’s Electronic Data Guidelines (EDG). When not specified in the EDG, Project documents transmitted via the system must comply with the following electronic formats:

1. Documents generated in Computer Aided Design (CAD) applications (MicroStation V8 or InRoads) shall be submitted in Portable Document Format (PDF) generated by a PDF writer from the CAD application.
2. Documents that are marked up or unavailable in electronic format (drawings, sketches, correspondence, etc. generated by hand drafting methods) shall be scanned to Tagged Image Format version 5 or 6 [TIFF 5 or 6 (.TIF)], Bitonal [or Black and White (a.k.a. Line Art), on some scanners] (.tif) or PDF (.pdf), black and white with a resolution of 200 dpi using CCITT Group 4 (2d Fax) compression.
3. Documents that have been generated using PDF printer drivers (not scanned) shall be submitted via the system.
4. Electronic photographs shall be submitted in Joint Photographic Experts Group (JPEG) (.jpg) file format, sized at a minimum resolution of 1024 x 768 pixels.
5. Grayscale or color photo images that are scanned shall be saved in JPEG (.jpg) file format with medium to low quality compression at a resolution of 200 dpi.
6. Product data that is available for download from the manufacturer’s website that has been generated using PDF printer drivers (not scanned) may also be submitted via the system.

**2.1.4.1.1 File Naming Convention**

PROJECT	Project Number. i.e.: XXXXXXX (7 digit)
YYYY	The digits representing the calendar year (e.g., 2018) the document is dated
MM	The two digits representing the calendar month (e.g., 01 for January) the document is dated
DD	The two digits representing the calendar day the document is dated
LTR	The 3-digit document type (e.g., LTR = Letter, TRN = Transmittal. RPT = Report)
SSSS	The Sender company (e.g., PMC) *Companies may have between 4 and 6 letters (communication documents)
RRRR	The Recipient company (e.g., GDOT) *Companies may have between 4 and 6 letters (communication documents)
Descr	Document title
Rev	The 2-digit revision or version number if applicable

The following file naming convention shall be used on all correspondence created or issued by the Project and for filing any document.

**PI\_YYYY-MM-DD\_\_DocType\_File Name**

For example, July 4, 1776, will be represented as 1776-07-04.

All FINAL versions of documents shall be clearly identified and saved in the “**Final Deliverables**” folder as follows:

**PI\_Date\_File Type ID\_File Name Final**

The DB Team may use “versions” or “drafts” included in the file name portion of the naming convention at the end of the file name for the non-final document. The following are file naming guidelines:

1. Correspondence Files: The file names of correspondence shall include the name of the correspondent, an indication of the subject, the date of the correspondence, and whether it is incoming or outgoing correspondence.
2. Dates: Dates shall always be presented ‘back to front’, that is with the year first (always given as a four-digit number), followed by the month (always given as a two-digit number), and the day (always given as a two-digit number)
3. Keep File Names Short but Meaningful: Some words add length to a file name but do not contribute towards the meaning, for example words like “the”, “a”, and “and”.
4. No Spaces in File Names: The use of an underscore “\_” or a dash “-” “heading fields and words for ease in sorting. Use of caps to distinguish words for ease of reading is encouraged (i.e., Document\_Management\_Plan).
5. Numbers in File Names: To maintain the numeric order when file names include numbers, it is important to include the zero for numbers 0-9. This helps to retrieve the latest record number. i.e. 01, 02 ... 99, unless it is a year or another number with more than two digits.
6. Special Characters: The use of special characters can cause problems with uploading, viewing and downloading documents over the internet. Special characters @ # \$ % ^ & \* . , ? shall not be used in filenames. Even if your operating system allows you to save the file you may encounter difficulties if you try to transport the file to another operating system; for example, the file may not be recognized, or if you send it to someone else they may not be able to open it.

**Table 2-1: File Type Identification Table**

<i>File Type ID</i>	<i>File Type</i>	<i>File Type</i>
ACC	Accidents	
ADV	Advertisement	Advertisements to the public, such as advertisement for intent to post RFQ, advertisements for public meetings (Public Information Open House (PIOH) and Public Hearing Open House (PHOH)), etc.
ACP	Acceptances	
BND	Bond Related	All bond related items.
CAL	Calculations	
CIN	Contractor Invoices	
CLM	Claims	
CMR	Construction Management Related	
COM	Comments	
COR	Correspondence	Not to be used for letters (see LTR) and memorandums (see MEM).
CRP	Construction Reports	Construction reports of any frequency; the name of the file will clarify frequency of reporting/
CST	Cost Estimate	
CDO	Contract Document, RFP, RFQ	
DBE	Disadvantaged Business Enterprise	
DAU	Document Audit	
DWG	Drawing	Examples: PDF of CAD drawings.
EEO	Equal Employment Opportunity	
EML	E-Mail	Emails are NOT considered deliverables, this is for record keeping purposes.
ENV	Environmental	All Environmental Documents, including special studies.
FAX	Facsimile	
FPL	Financial Plan	
INS	Insurance Related	All insurance related items.

<i>File Type ID</i>	<i>File Type</i>	<i>File Type</i>
IGA	Intergovernmental Agreements	
ISS	Issues	Design related issues and request for information.
LCR	Lane Closure Requests	
LDA	Liquidated Damages	
LOG	Log	
LTR	Letter	
MAT	Materials Related	
MDR	Materials Deficiency Reports	
MEM	Memorandum	To be used for correspondence with "memorandum" in the subject line.
MOM	Meeting Minutes	
MOT	Maintenance of Traffic	
MPL	Project Master Plans, Planning Documents	
MSC	Miscellaneous	
MSI	Meeting Minutes Sign-In Sheet	
MTGA	Meeting Agenda	
MUN	Municipal	
NCR	Non-Conformance Report	
NOI	Notice of Intent	
NTF	Note to File	
NTP	Notice to Proceed	
OMM	Operation & Maintenance	
PCR	Project Change Request Document	
PDI	Product Data and Information	Examples: bottomless culvert product catalog, guardrail beam information, etc.
PER	Permit Related	
PIX	Photos	
PLI	Punch List	

<b><i>File Type ID</i></b>	<b><i>File Type</i></b>	<b><i>File Type</i></b>
PJM	Project Management	All project management related documents and files.
PPR	Program Procedure	
PPM	Policies and Procedures Manual	
PSP	Plan Specification(s)	
PST	Presentation	PowerPoint and other types of presentations; not to be used for animations (see VID)
PRT	Permit	
PUB	Public Involvement	To be used for all outreach related documents and files, including stakeholder, industry, agency and legislator outreach
QAD	Quality Acceptance or Assurance	
QCD	Quality Control	
RDW	Record Drawings	
REG	Regulatory Agencies	To be used for documents and guidelines published by regulatory agencies; not to be used for permitting related files and documents (see PT).
RES	Research	
REV	Plan Revisions	
RFC	Released for Construction	
RFI	Request for Information	Construction related issues and request for information.
RFP	Request for Proposal	
RFQ	Request for Qualifications	
ROW	Right of Way	
RPT	Report (All Technical Reports)	All technical analyses, studies, whitepapers, etc.; excludes environmental related documents and files (see ENV).
SAD	Supplemental Agreement Documents	

<i>File Type ID</i>	<i>File Type</i>	<i>File Type</i>
SCH	Schedule	
SDW	Shop Drawing	
SPC	Specification/Special Provision	
SRV	Submittal Review	Not to be used for plan revisions (see REV).
STD	Project Standards	
SUB	Subcontractors	
SUR	Survey	Land survey information and documents, not question surveys
TXT	Time Extension	
TRF	Traffic Related	
TRN	Transmittal	
UTL	Utility	
VID	Video	Animations; daily videos of construction sites
WAR	Warranty Related	All warranty related items

### 2.1.5 Document Management

The DB Team shall establish and maintain an electronic and hardcopy document control system to manage, store, catalog, and retrieve all Project-related documents in a format that is accepted for use by GDOT. Unless otherwise directed by GDOT, record retention shall comply with the requirements included in the Retention Schedules for State Government Paper & Electronic Records, State Agency Specific Schedules for GDOT, and any other applicable local, state, and federal guidelines. All documentation and content shall be provided to GDOT at the time of the expiration or earlier termination of the Agreement.

At a minimum, the DB Document Management System shall:

1. Establish standardize procedures for document control.
2. Provide for effective PMCS training.
3. Ensure that documents are safely secured, protected from loss, damage or deterioration, maintained and readily retrievable and available for use by persons with access approval.
4. Index documents received or collected for systematic filing.
5. Preserve all Project records.



6. Ensure auditability.
7. Provide an audit function to ensure that Document Management policies and procedures are being consistently followed.

#### **2.1.5.1 Backup of Electronic Files and Protection of Hardcopy Files**

All Project content shall be protected from loss, damage, and deterioration. The DB Team shall provide a secure, fireproof location with controlled access in which to store electronic and hardcopy backup files.

#### **2.1.6 Joint Project Inspection**

The DB Team shall conduct a Joint Project Inspection of the Project area with the Construction Maintenance Limits Plan and obtain GDOT approval no later than one hundred and eighty (180) days after NTP 1. The physical in-field Joint Project Inspection shall be performed by a GDOT-authorized representative and the DB Team, and attended by GDOT, if desired. The purpose of the Joint Project Inspection is to create a physical baseline of the existing real estate and permanent fixtures and assets of GDOT prior to the start of construction. The area shall encompass the entire Project area including areas outside the limits of the Project, as there will be required Elements outside the actual Project limits.

The DB Team shall clean the existing drainage system sufficiently enough to allow for the proper detailed inspection of the system during the joint inspection within the Construction Maintenance Limits and as required in Section 19.

The Joint Project Inspection Submittal shall include the following:

1. Preliminary Plan or Construction Maintenance Limits Plan providing marked-up notes of deficiencies and location reference for cross-referencing any photographs or additional information denoting the existing condition of the infrastructure within the proposed Construction Maintenance Limits Plan area.
2. Pre-construction digital photographs and high-resolution digital video of the Project Area including all existing facilities, structures, and environmentally sensitive areas that can readily depict the exact conditions of the existing Elements of the Work. The DB Team shall provide a sample report of a section of the Project to determine the level of expected accuracy and increments of the photo documentation.
3. Intermittent photographs along the pavement and shoulders to clearly depict the existing condition of the pavement and shoulders that will be utilized during construction. The DB Team shall be responsible for maintaining the existing pavement and shoulders to a condition equal to or better than existing conditions at all times during the Design-Build Period.
4. Video recording prior to the beginning of construction and at Final Acceptance of all existing underground storm and sanitary sewer systems within the Construction

Maintenance Limits Plan or to the nearest structure outside the Construction Maintenance Limits Plan, whichever is greater.

5. Pre-construction digital photographs and high-resolution digital video of existing bench marks, temporary bench marks, existing utilities, and trees and plants to remain.

The DB Team shall restore the Existing ROW outside the General Purpose lanes and within the Construction Maintenance Limits to a condition equal to or better than existing conditions by Substantial Completion.

### **2.1.7 Photography**

The DB Team shall provide monthly aerial photo submittals (one hardcopy and both high-resolution and low-resolution digital files), a minimum of two (2) photos of the entire Project and three to four (3-4) photos per phase at GDOT-specified locations on the Project for the various phases of construction. Photos shall be taken from the same angle, elevation and location as previously taken, in order to show the progress of the Work from commencement of construction to Substantial Completion. Hardcopy photographs shall be 8-inch by 10-inch size.

All data shall become property of GDOT. The DB Team will be responsible for any photography equipment installation, including power, and maintenance of the equipment at all times. All photographs shall be labeled and cataloged with the date and time the photograph was taken, and a brief description of the location and view.

In addition to the requirements for photography submittals found elsewhere in these Technical Provisions, one electronic copy of all photographs shall be filed in a single folder on the PMCS, cataloged in a logical manner as approved by GDOT.

### **2.1.8 Requirements for GDOT Office and Equipment**

*Refer to Volume 2.*

## **2.2 Project Management Plans**

The Project Management Plan shall document the procedures and processes that are in effect to provide timely information to the Project decision makers to effectively manage the scope, costs, schedules, and quality of, and the Federal requirements applicable to, the Project; and the role of the agency leadership and management team in the delivery of the Project. The DB Team is required to complete the following Management Plans/documents and include as Appendices to the Project Management Plan in addition to the Project Management Plan requirements in this Section 2. The requirements of these management plans and documents can be found throughout the Technical Provisions.

### **2.2.1 Project Management Plan Requirements**

The DB Team shall submit the following management plans for GDOT review and acceptance:

1. Design Schematic of the Project (Project Differences from Reference Information Documents and incorporating approved ATC concepts, provided at time of Proposal Submission)
2. Project Quality Management Plan and other Quality Management Plans, pursuant to Section 2.3
3. Safety Plan, pursuant to Section 2.2.4
4. Construction Phasing Plan, pursuant to Section 2.2.5
5. Public Information and Communications Plan (PICP), pursuant to Section 2.7.2.1
6. Comprehensive Environmental Protection Program (CEPP), pursuant to Section 4.3
7. Hazardous Materials Management Plan, pursuant to Section 4.4
8. ROW Acquisition Plan, pursuant to Section 5.8
9. Demolition and Abandonment Plan, pursuant to Section 10.2
10. Transportation Management Plan (TMP), pursuant to Section 18.2.1
11. Construction Maintenance Limits Plan, pursuant to Section 19.2
12. Maintenance Management Plan, pursuant to Section 19.3

All audits, findings and reports shall be provided to GDOT with all submittals.

A QA/QC statement letter shall be submitted with all Submittals.

### **2.2.2 Administrative Functions**

The Project Management Plan shall include the DB Team's plan for planning, organizing, staffing, directing, and controlling the day-to-day operations necessary for effective decision-making and Project performance.

### **2.2.3 Project Team Communications**

Project Team communications shall be identified in the Project Management Plan.

### **2.2.4 Safety Plan**

The DB Team shall submit to GDOT for acceptance a comprehensive safety plan ("Safety Plan") that is consistent with and expands upon the preliminary safety plan submitted with the Proposal. The Safety Plan shall fully describe the DB Team's policies, plans, training programs, Work Site controls, and Incident response plans to ensure the health and safety of personnel involved in the Project and the general public affected by the Project during the Term of the Agreement.

The DB Team's Safety Plan shall address procedures for immediately notifying GDOT of all Incidents arising out of or in connection with the performance of the Work, whether on the Site or not.

See [Section 2.4](#) for additional requirements.

### **2.2.5 Construction Phasing Plan and Submittal Schedule**

The DB Team may design and construct the Project in multiple phases. A Construction Phase is a portion (segment) of the overall Project. If the Project will be designed and constructed in multiple phases, then the DB Team shall provide a Construction Phasing Plan and Submittals Schedule for each construction phase within thirty (30) days from NTP 1.

The Construction Phasing Plan shall provide logical termini for each proposed segment or phase of the Work and must consider any phasing of required acceptances. For each given Construction Phase, the DB Team shall be allowed to either submit a complete set of drawings or make a series of Staged Design Submittals (components). The timing and content of Staged Design Submittals must be logical and shall include or be preceded by related items (e.g., bridge submittals must include or be preceded by related highway geometry; a bridge and its related retaining walls must be submitted together; etc.). The Submittals Schedule shall identify all proposed Staged Design Submittals and what components will be included in each.

The DB Team must obtain GDOT acceptance of the Construction Phasing Plan and the Submittals Schedule prior to providing any design submittals for GDOT review. In addition, a "Design Submittal Guide" including a proposed index of plan sheets for each Construction Phase must be submitted and accepted prior to providing any design submittal. Once accepted, this Design Submittal Guide shall be updated and provided with each subsequent design submittal. File naming of each plan sheet in a submittal shall correspond to the final index name of the plans for ease of reference to create the final set of drawings. The Design Submittal Guide shall also include all reports, specifications, studies, calculations, and supporting documents and information.

The DB Team has the right to propose phasing the design and construction of the Project to accelerate the schedule and provide added value. GDOT reserves the right to review, require revisions, or request additional conditions to the proposed phasing plan prior to acceptance. Each phase of the proposed plan will require an NTP. The Project Phasing may be proposed during the procurement phase for the Project or after the issuance of NTP 1.

### **2.2.6 Public Information and Communications Plan**

The DB Team shall support the execution of an approved Public Information and Communications Plan under GDOT supervision that includes stakeholder involvement and public information strategies to engage and inform key stakeholders. Refer to [Section 2.7](#) for further information and requirements.

### **2.2.7 Comprehensive Environmental Protection Program**

The DB Team shall develop, execute, and maintain a Comprehensive Environmental Protection Program (CEPP) for the Work to ensure environmental compliance with all applicable environmental laws and commitments. The DB Team's CEPP shall comply with the requirements of Section 4.3.

### **2.2.8 Right of Way Acquisition Plan**

The DB Team shall provide a Right of Way Acquisition Plan in accordance with Section 5.8, and shall provide Right of Way plans for any required Additional Properties identified in Section 7.2.

### **2.2.9 Demolition and Abandonment Plan**

The DB Team shall develop a Demolition and Abandonment Plan for all existing structures, features, and utilities as described in Section 10.2 (types and sizes) that will be removed, abandoned or partially abandoned during the Term. The Plan shall ensure that said structures are structurally sound after the abandonment procedure. The Plan shall show the locations of all existing features that will be abandoned and shall show sufficient detail for the Abandonment.

### **2.2.10 Transportation Management Plan**

The DB Team shall develop a Transportation Management Plan and a traffic control plan for each phase of its Work. The DB Team's Transportation Management Plan and the traffic control plans shall comply with the requirements of Section 18.

### **2.2.11 Construction Maintenance Limits Plan**

The DB Team shall develop a Construction Maintenance Limits Plan; refer to Section 19 for additional requirements. The plan shall identify the physical boundaries of the DB Team's maintenance responsibilities for the construction Work during the Design-Build Period. If the DB Team decides to use part of the facility outside of the specified maintenance limits by any means, such as lane/shoulder closures, staging, or any other activity, the DB Team will be obligated to maintain and repair any element affected as required above, and the Construction Maintenance Limits Plan shall be revised to incorporate the new maintenance limits.

### **2.2.12 Maintenance Management Plan**

The DB Team shall develop, implement, and maintain, for the Term, a Maintenance Management Plan for routine maintenance of all existing infrastructure as described in Section 19.3. The Plan shall identify maintenance elements, frequency of monitoring and inspection, levels of importance (emergency, urgent, periodic/routine), processes and repair and/or execution periods per the standards in Section 19. The DB Team shall provide the information in tabular format for ease of review and monitoring.

### **2.2.13 Hazardous Materials Management Plan**

The DB Team shall develop, execute, and maintain a Hazardous Materials Management Plan (HMMP) for the Work to ensure compliance with all applicable environmental laws and commitments dealing with hazardous materials. The DB Team's HMMP shall comply with the requirements of Section 4.4

## **2.3 Quality Management Requirements**

*Refer to Volume 2.*

## **2.4 Safety and Security**

The DB Team shall be responsible for the safety of its personnel and of the general public affected by the Project. See Section 2.2.4 regarding basic Safety Plan requirements.

This following defines the requirements to be incorporated into the Project and included in the Safety Plan in order to ensure that the Project is a safe and secure environment for all individuals working on the Project. The prevention of accidents during execution of the project shall be a primary concern of all participants, and shall be the responsibility of all levels of management. Safety shall never be sacrificed for production, but shall be considered an integral part of an efficient and quality Project.

Safety and security procedures shall include and/or address the following:

1. Safety and health standards to be adhered to
2. Roles and responsibilities of the safety/security staff
3. Contractors (meaning prime contractors and subcontractors combined) having a Safety Director and an accepted safety manual (or plan) available to all employees
4. Contractors holding periodic on-site safety meetings
5. Contractors conducting periodic on-site safety inspections
6. Contractors providing safety training for all new employees, and refresher training for all employees
7. Contractors conducting drug screening for all new hires
8. Contractors establishing daily housekeeping and clean-up procedures
9. Possible employee sharing of accident prevention savings
10. Having first-aid and medical kits readily available
11. Having a site security plan, possibly including such items as restricted parking near vulnerable structures, physical barriers (fences, barricades, etc.), coordinated efforts with local law enforcement officials during heightened threat levels, video surveillance, alarm systems, emergency telephones, etc.

12. Having an emergency preparedness and incident management plan, including roles and responsibilities, emergency evacuations, communications, first responder awareness training, and field drills
13. Establishment of an employee identification (ID) system
14. Level and frequency of audit and oversight safety/security reviews to be performed by GDOT, FHWA, independent consultants, and/or other agencies (as applicable)
15. Safety and security periodic reporting (no less than monthly)

In addition, appropriate threat and vulnerability assessments shall be made and taken into consideration throughout the Project's life cycle. The transportation elements of the Project could have a significant impact on regional safety and security plans.

#### **2.4.1 Safety Management**

The DB Team management has a responsibility to provide health and safety leadership, and promote and support a safe working environment. It is expected that all DB Team management and Contractors will support the DB Team's safety department personnel in the implementation and enforcement of the Safety Plan program.

The DB Team shall designate a safety manager ("Safety Manager") who shall be responsible for the development of the Safety Plan and the enforcement of safety and health policies, procedures, and work practices. The Safety Manager will provide Project direction to maintain a safe, healthy, and secure work environment for all employees, Contractors and the general public.

Field supervisors and managers shall be responsible for monitoring their direct hire employees and subcontractors to ensure that the work is being performed in a manner consistent with safety policies, procedures and work practices of the DB Team. They are responsible for promoting a safe, healthful and secure work environment for workers and visitors that is free from violence, threats, harassment, and intimidation, and protects the general public from harm in connection with jobsite operations.

All workers are responsible for planning and completing all work in a safe manner by following all applicable policies, procedures, and safe work practices.

#### **2.4.2 Worksite and Jobsite Analysis**

The DB Team shall conduct and shall require of each contractor and subcontractor a job hazard analysis for each task to be performed at the beginning of each shift and whenever there is a change in the task or in the environmental conditions. The job hazard analysis shall solicit input from all members of the crew and shall be documented in writing.

#### **2.4.3 Hazard Prevention and Personal Safety**

The DB Team shall be responsible for the safety of its personnel and of the general public affected by the Project.

The prevention of accidents during execution of the Project shall be a primary concern of all participants, and shall be the responsibility of all levels of management. Safety shall never be sacrificed for production and shall be considered an integral part of an efficient and quality Project.

#### **2.4.4 Training**

The Safety Manager shall ensure that all personnel on the Project are provided a thorough safety orientation and periodic refreshers on the Project site safety requirements. The safety orientation shall include:

1. Roles and responsibilities
2. Hazard communications
3. Job hazard analysis
4. Reporting of incidents and accidents
5. Drug and alcohol policies
6. Driving policies
7. Disciplinary procedures
8. General health and safety requirements including proper usage of personal protective equipment (PPE)
9. General site safety rules

#### **2.4.5 Incident and Emergency Management**

The DB Team shall prepare (for GDOT review and comment) and implement plan(s) for responding to incidents and Project and Work emergencies. The plans shall identify responsibilities and procedures for responding to incidents and emergencies, including coordination and cooperation with first responders in the performance of their normal duties.

The incident and emergency management plan(s) shall include:

1. The DB Team's incident response team availability.
2. The DB Team's incident response team training to effectively respond to accidents, incidents and emergencies.
3. Incident site security, including traffic control measures and eliminating hazards to other road users.
4. Debris clearing and site assessment for damage repair.
5. Reporting and evaluation protocol and procedures prior to the dispatch of the DB Team's response crews or arrival of first responders.



## **2.5 Schedule Requirements**

Refer to Volume 2.

## **2.6 Progress, Payment Requests, and Payment**

Refer to Volume 2.

## **2.7 Public Information and Communications**

### **2.7.1 General Requirements**

It is vital to the success of the Project that GDOT and the DB Team gain and maintain public awareness and support. This shall be accomplished through proactive communication of Project information to all Project Stakeholders in a timely manner, providing advanced notification of potential impacts, allowing meaningful opportunities for stakeholders to identify issues and recommend solutions, facilitating timely and appropriate feedback from GDOT, and supporting the execution of a high-quality, well executed communications plan to keep stakeholders informed, engaged, and educated. The DB Team shall coordinate with GDOT on items necessary to comply with GDOT's adopted *Public Involvement Plan*.

This Section 2.7 describes the requirements with which the DB Team shall comply during the Term of the Agreement regarding the provision of information and communication with GDOT to facilitate outreach and education to Project Stakeholders.

#### **2.7.1.1 Public and Stakeholder Meetings**

When requested by GDOT, the DB Team shall participate and provide necessary staff support in meetings with the public arranged and conducted by GDOT. During such meetings, the DB Team shall be in attendance to assist GDOT in providing the public with an update on the progress the Project and discussing key issues as they emerge, or as requested by GDOT.

The DB Team's Project Information Coordinator (PIC) shall assist in implementing public and stakeholder meetings by performing the following responsibilities:

- Conduct media and other stakeholder group tours of the Project, as requested.
- Upon request and with GDOT's acceptance, the PIC and other DB Team members shall attend meetings with key elected officials, the general public, representatives of civic organizations, businesses, and special interest groups within the Project corridor (individually or in groups) for the purpose of informing and building rapport with affected Project stakeholders.
- Support GDOT in the planning and implementation of public meetings, stakeholder working group meetings, and public outreach presentations to inform stakeholders and the public of construction plans and detours. Support shall include, but not be limited to, attendance of PIC and other SME's at meetings, upon request.

## **2.7.2 Administrative Requirements**

### **2.7.2.1 Public Information and Communications Plan**

The DB Team shall support the execution of an approved Public Information and Communications Plan (PICP) under GDOT supervision that includes stakeholder involvement and public information strategies to engage and inform key stakeholders.

The DB Team will provide input and content to the comprehensive PICP. The PICP shall include detailed strategies and action steps to inform, educate, and engage Project Stakeholders throughout every Project phase. The DB Team shall provide input into an Emergency Event Communications plan that outlines guidelines for communications protocol, roles and responsibilities, specific activities, and timelines to adhere to during emergency situations. The DB Team shall coordinate and collaborate with GDOT on the development of the PICP. The DB Team shall also comply with the PICP throughout the Term of the Agreement. The PICP will also include a Project-specific stakeholder list that will be developed, maintained, and updated by the DB Team throughout design and construction activities to ensure that all interested and affected Project Stakeholders will be notified about meetings and Project updates. Additionally, the PICP will include a general schedule of public information activities for the Project over the entire Term of the Agreement.

The PICP will be flexible, to capture the full magnitude of yet-to-be-determined impacts as a result of Project activities such as design, construction, and the public's reaction to these and other impacts. The PICP will also be resilient, to successfully guide the implementation of the outlined strategies, given the ever-changing desire for depth, breadth, and frequency of information by a variety of Project Stakeholders such as the media, elected officials, transportation stakeholders, and the general public. The DB Team shall coordinate with GDOT throughout the Project to ensure information is shared in a timely manner and effective resources are allocated for outreach needs.

The PICP shall provide a protocol for communicating with Project Stakeholders in coordination with GDOT. GDOT will approve all Project Stakeholder communications. GDOT and the DB Team will share responsibilities for disseminating information to the public, as specified in the PICP.

The PICP shall detail the communication hierarchy for information distribution related to compliance with approved Environmental Documents, as described in [Section 4](#) (Environmental). The PICP shall also include names and contact information, including Emergency contact information, and the preferred methods of both routine and Emergency communications distribution. The DB Team shall ensure that any changes to contact information pertaining to the CEPP are incorporated into the PICP within five (5) Business days.

### **2.7.3 Project Information Coordinator (PIC)**

The DB Team shall designate a member of the Project team or subconsultant team to carry out the role of the Public Information Coordinator (PIC), who will lead the DB Team's

responsibility for public information and involvement activities on a day-to-day basis throughout the Term of the Agreement until Final Acceptance. The PIC should be proficient in Microsoft Word, PowerPoint and InDesign or similar graphic design software. Relevant communications experience is preferred. The PIC or another member of the DB Team familiar with the PICP shall be available 24 hours a day, seven (7) days a week.

PIC responsibilities shall include coordinating with GDOT to facilitate communication between the DB Team, GDOT personnel (including GDOT's communications officers), and Project Stakeholders. Responsibilities shall also include interacting with affected stakeholders and representing the interests of the Project at public meetings and other formal and informal outreach events, upon GDOT request.

The PIC shall assist GDOT by performing the following responsibilities to implement the PICP:

1. Notify GDOT no less than twenty-one (21) days in advance of the start of any construction activity that will impact the general public such as any changes in traffic patterns to the existing general purpose lanes or existing transportation facilities so that GDOT can communicate the potential impacts of these activities with all Project Stakeholders to include the general public, the media, and adjacent Government Entities.
2. Disseminate Project Public Information materials in community locations specified in the PICP or as requested by GDOT.
3. Be available to answer questions via a direct telephone number, U.S. mail, email, and in person during normal business hours and Emergency situations. If the PIC is unavailable, these duties shall be fulfilled by another designated member of the DB Team as defined in the PICP.
4. Maintain an electronic database to document public inquiries and complaints including, at a minimum, the complaint, the response, and the date the complaint was resolved. The PIC will make this information available to GDOT at a frequency defined in the PICP and upon request.
5. Participate, as requested, in communication with Project Stakeholders and GDOT.
6. Provide supportive information for media and citizen inquiries when requested by GDOT.
7. Staff Project outreach events upon request from GDOT.
8. Provide GDOT with information, maps and print or digital graphics on Project status, traffic impacts and other information for communicating to key stakeholder groups and the general public. Information may be communicated using channels including email, text, a GDOT-hosted Project webpage, outreach presentations, newsletters, public meetings, video, and social media.

#### **2.7.4 Monthly Public Information and Communications Reporting**

The DB Team shall provide a monthly Public Information and Communication Report to GDOT. The report shall include, but not be limited to, the following information:

1. Environmental, design, and construction issues affecting adjacent residential areas, frontage roads, local streets, and utilities, grading, drainage, and noise, retaining walls, lane closures, ramp closures, local road closures and traffic shifts (changes in any use of exiting traffic);
2. Street and roadway detour design and implementation;
3. Scheduling and duration of work, including hours of construction;
4. Haul routes;
5. Methods to minimize noise and dust;
6. Environmental mitigation measures;
7. Number of public inquiries and complaints received, including an attachment of details and resolution;
8. Number of safety or emergency incidents, if any; and
9. Thirty (30)-day look ahead of anticipated construction activities.

### **2.7.5 Emergency Event Communications**

For all Emergency events, such as vehicle collisions, ice/snow conditions, flooding, Hazardous Material spills, construction failures or injuries, Force Majeure Events, or other unforeseen events, the PIC shall take timely and appropriate action to inform GDOT of all pertinent details. The PIC shall provide these details through the agreed-upon protocol to ensure effective and timely communication to GDOT representatives who will, in turn, inform the media, elected and local officials, and all key stakeholders.

As indicated in Section 2.7.2, the DB Team shall provide input into an Emergency Response plan in collaboration with GDOT, to define communications protocol in Emergency situations. This plan shall include a twenty-four (24) hour contact list and protocol (hierarchy of team notification) for all of the Project team members including the local Emergency response members adjacent to the Project, counties, municipalities, utility companies with facilities within Project limits and FHWA. Notification tools include: overhead changeable message signs (CMS), temporary changeable message signs, GDOT's web-based information tool, email/web alerts, telephone notification, texts, facsimiles, and media releases/interviews, as appropriate. The DB Team shall continue to provide updated information, as available and on a timely basis, until the Emergency has been resolved.

In the event of an unforeseen Emergency, timely notification shall occur as soon as practicable, but no longer than fifteen (15) minutes from of the start of the occurrence. If advance warning is available for an Emergency event such as ice/snow, timely notification shall mean as soon as practicable, but no more than fifteen (15) minutes from the time the information was made available. In both situations, the DB Team shall continue to provide updated information to GDOT, as available and on a timely basis, until the Emergency has been resolved.

### **2.7.6 Disseminating Public Information**

The PIC and the DB Team shall assist GDOT in the development of and review of public information materials. Activities shall include:

1. The PIC and the DB Team shall assist in the review of materials regarding Project-related subjects, for use in meetings, news releases, telephone correspondence, newsletters, email, GDOT's web based information tool, overhead dynamic and changeable message board signs, web alerts, maps, displays, renderings, presentations, digital renderings/animations, photos, brochures, pamphlets, and any other relevant public information materials.
2. The PIC and the DB Team shall provide weekly Traffic Interruption Request summaries for public information purposes. The PIC will provide draft press releases and detour maps of planned impacts to affected stakeholders or the traveling public. The DB Team shall provide to the PIC any lane closure and detour requirements 72 hours in advance of closure and detour activities.
3. The PIC shall provide narrative content, photos and graphic information for weekly social media posts and monthly Project e-newsletters.
4. The PIC and the DB Team shall support the planning and implementation of special events including a groundbreaking ceremony at commencement of construction and ribbon cutting at Project completion.
5. The DB Team shall supply high-quality construction progress photos and video (detail images and aerial) monthly and at major construction milestones.
6. The DB Team also shall assist in the development of Project-related information for the GDOT Project website, including:
  - a. Narrative Project updates
  - b. Project maps
  - c. Digital renderings and/or animations
  - d. Frequently asked questions (FAQs)
  - e. Current Project activities addressing design and construction
  - f. Timing of road and ramp closures and openings
  - g. Any utility disruptions
  - h. Recommended route alternatives during closures

### **2.7.7 Public Involvement Action Items**

Table 2-2 summarizes the responsibilities for the DB Team and GDOT on each of the Project information tasks. It also describes the general timeframe and audience for these activities.

**Table 2-2: DB Team Project Information Tasks and Responsibilities**

<b>Task</b>	<b>Audience</b>	<b>Timeframe</b>	<b>Responsibility</b>
Responding to General Public Inquiries/ comments	General Public	Project Duration	DB Team with oversight from GDOT
Continuous Communications with Elected/ Public Officials	All Audiences	Monthly at Key Milestones and as requested	GDOT to coordinate and facilitate with support from the DB Team
Public Information Meetings	General Public	Key Milestones and as requested	GDOT to coordinate and facilitate with support from the DB Team
Public Outreach Meetings	Selected Groups	Project Duration, as Necessary	GDOT to coordinate and facilitate with support from the DB Team
Traffic Impact and Lane, Ramp and Road Closure Notices	General Public	Duration of Construction Period	<p>The DB Team to provide information to GDOT in advance of traffic impacts. Weekday traffic interruptions for the next week shall be disseminated by the DB Team no later than noon the Thursday before.</p> <p>Weekend traffic interruptions for the next weekend shall be disseminated by the DB Team no later than the close of business the Wednesday before.</p> <p>Ramp and road closure notices shall be requested by the DB Team a minimum of two weeks prior to the closure.</p>
Website Information	General Public	Project Duration	GDOT with support from DB Team
News Releases and Traffic Advisories	General Public	Project Duration	GDOT with support from the DB Team
Crisis Communications	General Public	As Necessary During Project	GDOT with support from the DB Team per Emergency Plan
Responding to News Media Inquiries	General Public (via media)	Project Duration	GDOT Project support staff to serve as media contact with support from the DB Team
Electronic Communications, Social Media, E-newsletter	All Audiences	Project Duration	GDOT with support from the DB Team

<b>Task</b>	<b>Audience</b>	<b>Timeframe</b>	<b>Responsibility</b>
Special Events Highlighting Project Milestones	Targeted Stakeholders	Groundbreaking and Open to Traffic	GDOT with support from the DB Team
Print Materials	All Audiences	Project Duration	GDOT with support from the DB Team
Project Site Visits	Special Groups	Special Coordination During Construction Period	DB Team to coordinate with staffing by appropriate technical staff in collaboration with GDOT

### 3 DESIGN AND SUBMITTALS

#### 3.1 General

The DB Team shall provide Project Submittals in both electronic and hard copy format.

The DB Team may design and construct the Project in multiple phases. See [Section 2.2.5](#) for requirements of the Construction Phasing Plan and Submittal Schedule.

Sufficient review and revision time shall be provided in the schedule and shall account for possible multiple re-submittals to secure Released for Construction (RFC) status prior to starting construction on any particular Element of the Work. Construction shall not proceed on any of the work until the design submittal has been reviewed, accepted, and Released for Construction.

Proprietary structural design software may be used in lieu of GDOT specific computer software programs. All alternative software programs are subject to prior GDOT approval, and upon such approval may be used to design the following structural elements:

1. Prestressed concrete beams,
2. Steel girders (both curved and straight),
3. Concrete decks,
4. Bridge substructure, including end bents and intermediate bents;
5. Foundations, including pilings and drilled caissons; and
6. Bearings.

Structural analysis software may be used to perform complex analysis or finite element modeling of bridges and bridge elements.

The DB Team may utilize spreadsheets or MathCad type programs to develop “hand calculations” for repetitive design elements.

All software, spreadsheets, and MathCad output shall be present in design documentation so that it can be verified to be compliant with design requirements by an independent checker. For hand calculations developed using software, the input, formulas (with code references shown) and output shall be provided so that it can be verified. Proprietary software output shall not be a “black box” type output and all code checks shall be visible to be verified by an independent checker. GDOT may require further verification of results of any design software using GDOT bridge design programs, hand calculations, or structural analysis software. The DB Team shall seek GDOT determination of any such reviews and account for any additional GDOT review time in the Project Schedule, which additional time shall not constitute a Relief Event.

Use of any software does not relieve the designer of their responsibility to perform required QA/QC of designs performed using this software. “Bugs” or errors or



deficiencies that exist in any proprietary or “out of the box” software which produces errors in the design or construction will be the responsibility of the DB Team.

INROADS output and Microsoft Excel spreadsheets may be subject to verification of results using GDOT’s bridge geometry program.

### **3.1.1 GDOT Standards and Manuals**

All Work shall conform with all applicable Manuals and Guidelines developed for and including AASHTO, FHWA, GDOT, and additional requirements stated in Attachment 3-1 Manuals and reasonably inferred therefrom.

### **3.1.2 Detailed Estimate of Quantities**

The DB Team shall provide a detailed estimate with the RFC Plans that identifies GDOT Pay Items, pay item descriptions, units, and estimated quantities for the Project. The DB Team shall provide quantities in the Final Bridge Plans in accordance with the *GDOT Bridge and Structures Design Manual*.

## **3.2 Design**

### **3.2.1 Design Workshop**

Within fifteen (15) days of NTP 1, the DB Team shall arrange a design workshop which shall be attended by the Designer’s personnel, GDOT, and the UAT and any invited participants of the Project. The purpose will be to familiarize involved personnel with the design concepts, issues, status, and review procedures. The DB Team and GDOT will jointly develop the agenda of the workshop and agree upon how it will be organized (such as by GDOT department and engineering discipline). During the design workshop, the DB Team and GDOT will discuss the application of Interim Design Reviews to reach resolution for Project elements that pose complex constraints or entail additional review effort. The workshop will also discuss the extent of GDOT and UAT reviews. The primary goal of the workshop is to make the design review process more effective and efficient for all parties. Agreements made regarding design review times shall be aspirational only and shall not override the durations stipulated in the DB Documents.

### **3.2.2 Design Reviews**

Design reviews and meetings shall be conducted by the DB Team’s Engineer of Record (EOR). The DQAM, the DB Team’s independent design reviewer(s), and any design professionals having significant input into the design under review shall be present. The DB Team shall notify and invite GDOT and the UAT to participate in all design reviews.

Design review meetings shall be scheduled no less frequently than every other month, or to the frequency determined by GDOT, until all Submittals have been accepted and Final Design achieved. GDOT’s participation in design reviews shall not relieve the DB Team of its responsibility for the satisfactory completion of the Work in accordance with all requirements of the DB Documents.

The DB Team's EOR or designated design leads shall provide the agendas of the meetings at least three (3) days in advance of the meetings which shall include a detailed summary status of all submittals provided to GDOT that are the subject of the meeting. A design submittal detailed summary status list shall be provided monthly and, at a minimum, shall provide date submitted, to whom it was submitted, contractual required review period, total days in submission, date accepted, and associated comments for each submittal transmitted to GDOT or any other Person.

The DB Team shall provide or make available to review meeting participants all design documents (e.g., drawings, reports, specifications, basis of design memorandums, and other technical memorandums as necessary to support design decisions) pertinent to the design review, including all prior comments and actions resulting therefrom. The DB Team shall prepare and distribute minutes from the review meetings within three (3) days of the meeting.

Design quality records shall be maintained by the DB Team in an auditable format according to the QMP procedures. GDOT has the right to audit the quality records for compliance with the QMP and DB Document requirements. Upon completion of the Project, all quality records shall be turned over to GDOT.

### **3.2.3 Changes Subsequent to Review**

If the design is amended subsequent to design review and acceptance by GDOT, the DB Team shall re-check and re-certify the design as an additional design review. Substantive changes to plans and specifications initiated by the DB Team and already checked by the EOR and certified by the DQAM shall be subjected to the design review process as an entirely new design.

## **3.3 Other Agency Approvals**

### **3.3.1 Federal Aviation Administration**

Unless otherwise specified in the DB Documents, the DB Team shall be responsible for all costs for ascertaining and obtaining all required approvals, permits, and agreements for performance of the Work with the Federal Aviation Administration (FAA). The DB Team is responsible for all costs of the Work, whether incurred by the DB Team or by the FAA.

The DB Team shall ensure that design and permanent and temporary construction complies with requirements of the Federal Aviation Administration (FAA) aeronautical study.

## **3.4 Design Data Book**

The DB Team shall document all design criteria and design decisions in a Project Design Data Book submitted for approval, and kept with the Project files. The Project Design Data Book shall include complete and up-to-date design parameters and decisions (as

applicable to the Project) as presented in Chapter 5, Concept Design of the GDOT Plan Development Process (GDOT PDP) included in Attachment 3-1 Manuals.

The DB Team shall submit the initial Project Design Data Book for GDOT review and approval no later than thirty (30) days after NTP 1. The DB Team shall not submit any Design Submittal until the Project Design Data Book has been approved.

The DB Team shall update and include the relevant portions, or as requested by GDOT, of the Project Design Data Book with each design submittal, including Preliminary Design, Final Design, RFC, and RFC revisions. The DB Team shall include the finalized and comprehensive Design Project Data Book with the Record Drawings submittal.

### **3.5 Design Submittals and Progress of Design Work**

Documents received after 12:00 p.m. (noon) Eastern Standard or Daylight Time (as applicable), including all notices, correspondence, communications (including e-mail and facsimile), or other Submittals received after 12:00 p.m. (noon) shall be deemed received on the first Business Day following delivery (for example, in order for a fax to be deemed received on the same day, at least the first page of the fax must have been received before 12:00 p.m.).

Each required Submittal shall be delivered to GDOT in conformance of the review times provided in Article 6.3.2 and in Table 3-1: Master Submittal List. The times provided in Table 3-1 are specifically for the review period required for GDOT to comment and GDOT to subsequently accept. Accuracy, completeness, and time spent to address GDOT comments and resubmit for re-review are the responsibility of the DB Team.

No fabrication, casting, or construction will occur until all related design review and shop drawing review comments are resolved and the corresponding drawings and specifications have been accepted by GDOT and stamped “Released for Construction.”

All design Submittals shall be complete along with all the supporting information necessary for review. The Submittal and supporting information must represent logical Work activities and must show impacts on subsequent Work on this Project. Any modification to the component construction due to subsequent design changes or as a result of design development is solely at the DB Team’s risk, regardless of GDOT acceptance.

The DB Team shall provide Project Submittals detailed in Volume 2, Table 3-1: Master Submittal List. Each required Submittal shall be delivered to GDOT in conformance of the review times provided. As indicated above, the times provided are specifically for the review period required for GDOT to comment and GDOT to subsequently accept (if all requirements of the DB Documents are met) or approve, as applicable. Not all Submittals listed in Table 3-1: Master Submittal List may be required for the Project and some Submittals may be combined into a single Submittal such as the Project Management Plans; the DB Team shall coordinate with GDOT prior to combining any Submittals and receive GDOT approval prior to omitting any listed Submittals.

### **3.6 Additional Submittal Requirements**

The DB Team is responsible for obtaining any Government Approvals or other approvals required to allow for implementation and construction of the Construction Phasing plan.

#### **3.6.1 Staged Design Submittals**

Once the Conceptual Layout Plan for the entire Project has been accepted by GDOT, the DB Team is allowed to submit Staged Design Submittals (components) instead of a completed set of drawings for an entire accepted Construction Phase. A Staged Design Submittal is a submittal that consists of a portion or portions of the Work within the limits of an accepted Construction Phase. For example, a Staged Design submittal for a bridge might be categorized as foundations, substructures, abutments, or complete continuous units of superstructure. Staged Design Submittals for other components of the Project might include grading, drainage, signing and pavement marking, and erosion control. If the DB Team chooses to provide Staged Design Submittals, the list of Staged Design Submittals shall be identified as part of the proposed Construction Submittals Schedule.

#### **3.6.2 Changes to Accepted and Released for Construction Submittals**

After a design package has been Released for Construction, any subsequent plan or design changes must be submitted to GDOT with documentation sufficient to justify the reasoning behind the change request. GDOT must accept the requested change with written notice to the DB Team prior to its implementation by the DB Team as a plan revision and also prior to any related subsequent construction activity.

#### **3.6.3 Presentation Requirements**

The DB Team shall provide all plan submittals as required by and in accordance with the GDOT Plan Development Process (PDP), Electronic Data Guidelines (EDG) and the Plan Presentation Guide (PPG).

The Plans shall be fully dimensioned in English units; all elevations necessary for construction shall be shown similar to GDOT's normal practice. All plans are to be prepared on the scales according to GDOT's Plan Presentation Guide (PPG).

Each location shall include details for all civil elements and calculations within proximity of the site so that these locations can be reviewed holistically and connections with communication and electrical networks are clearly understood.

#### **3.6.4 Construction Plans Organization and Sheet Index**

Construction plans shall be assembled according to the GDOT Plan Presentation Guide (PPG).

#### **3.6.5 Computations**

All design computations and computer printouts shall be neatly recorded on 8 ½- by 11-inch sheets, fully titled, numbered, indexed, dated and signed by the designer/Project

manager and checker. The computer files and two copies of the computations fully checked and appropriately bound, shall be submitted to GDOT with the plans. A complete tabulation of the drainage analysis along with the calculations used to determine the size of drainage structures shall be submitted to GDOT.

### **3.6.6 Submittal Formats**

Each design submittal shall, in addition to electronic delivery in .pdf format on the PMCS, consist of ten (10) sets of scalable 11- x 17-inch or 12- x 18-inch drawings, six (6) full size 24- x 36-inch design drawings and six (6) sets of calculations and a portable flash drive of the submittal including all InRoads, MicroStation V8 format files. For all Final Plan submittals (plans, calculations, specifications, reports, etc.), each document shall be sealed by a qualified Professional Engineer. In addition to written design review comments (if any), design drawings may be returned to the DB Team with any remarks indicated. After a design drawing submittal is "Released for Construction", the DB Team shall, in addition to posting the complete electronic files on the PMCS, furnish GDOT with three (3) full size 24- x 36-inch sets and ten (10) sets of 11- x 17-inch or 12- x 18-inch corrected design drawings as well a portable flash drive containing the design drawings in In-Roads, Micro-station V8 format. After all individual Staged Design Submittals have been accepted for a particular Construction Phased Plan; a final complete set of plans for the Construction Phase will be compiled and provided to GDOT as the Released for Construction set.

### **3.6.7 Additional Specifications**

In addition to the design drawings that include Georgia standards and details, the DB Team shall prepare and submit specifications for construction work included in the plans which are not covered by GDOT's Standard Specifications, the Supplemental Specifications and/or the Special Provisions as required in Attachment 3-1 Manuals.

Any submittal(s) received by GDOT after 12 PM (noon) shall be considered as being received the following Business Day.

### **3.6.8 Submittals Process**

Review of the Design Documents by GDOT may be limited to the basic requirements of the DB Documents, relating to design compliance and material type(s) and may not include detailed review or checking of design of components and related details or the accuracy with which such designs are depicted on the design drawings.

Review or acceptance by GDOT or other Persons of any Design Documents shall not relieve the DB Team of responsibility under the Contract, including the overall correctness of Design Documents including engineering mathematical computations. All Design Documents, including plans, specifications, reports, calculations, shop drawings (where public safety is affected) and Permit documents shall be submitted to GDOT.

The DB Team shall provide all copies for distribution. GDOT will be responsible for distributing the submittals to all required parties of the contract.

All Submittals shall include a cover letter describing the submittal, review period, and the due date for any GDOT response.

All Submittals shall include the DB Team's QA certification statement (in addition to the design consultant's QA certification statement for all design-related submittals). GDOT will reject any submittal if the QA certification statement is not included. Each submittal shall also provide a certification statement that the submittal complies with all terms and conditions of the Agreement, signed by the EOR.

### **3.6.9 Required Participants of the Process**

The QAM and DQAM, except as otherwise required in the DB Documents, will be primarily responsible for verifying that the accepted Design Quality Management Process as required in Section 2.3 has been followed, verifying that the submittal meets all DB Document requirements, ensuring that all necessary Governmental Approvals have been obtained by the DB Team, and performing any review(s) as provided for in Section 3.

The DB Team is responsible to provide all required Submittals in compliance with the DB Documents and in compliance of the accepted Submittals Schedule. The DB Team must further provide a certification that the submittal meets the terms of the DB Documents and has been independently reviewed in accordance with the accepted Design Quality Management Plan (see Section 2.3) with each submittal.

### **3.6.10 GDOT Design Review Process**

The DB Team shall provide the submittal to GDOT via the PMCS and shall provide the required hard copies in accordance with the Submittal Schedule. Submittals shall be categorized into Discipline Groups as follows:

1. Right of Way, Railroad, and Utilities (RRU Group)
2. Roadway, Drainage, and Maintenance of Traffic (RDMOT Group)
3. Bridge, Structures, Retaining Walls, and Aesthetics (BSRA Group)
4. ITS, Traffic (includes signing, pavement marking, signals and lighting) (ITSTT)
5. All types (ALL Group)
6. Other (OTH)

GDOT will log in the submittal and distribute to the required review participants.

The review period begins the following Business Day after any submittal is received for the period prescribed in Article 6.3.2 and Table 3-1: Master Submittal List, except where there is a maximum number of concurrent submittals of a particular type specifically noted in this Section 3. In cases where the maximum is exceeded, the review period will begin when prior submittal reviews are completed so that the maximum number in concurrent review is not exceeded. For the general case where there is not a maximum number of concurrent submittals specifically noted in this Section 3, an additional seven (7) days will

be added to the prescribed review period whenever there are more than five (5) concurrent submittals in review in the subject document's particular Discipline Group. Further, an additional seven (7) days will be added for each additional increment of five (5) concurrent submittals in review in a Discipline Group. For example, if there are six (6) to ten (10) submittals in concurrent review in a Discipline Group, then an additional seven (7) days are added; and if there are eleven (11) to fifteen (15) submittals in concurrent review in a Discipline Group, then an additional fourteen (14) days are added, etc. For purposes of calculating the number of submittals, the accepted Submittal Schedule will generally be used as a guide except that complementary documents, for example bridge plans and bridge calculations, will be considered a single Submittal. Documents that fully integrate multiple disciplines in the presentation, for example roadway and drainage plans, together with the respective calculations would be counted as one submittal. For documents or packages that include multiple bridges or toll gantries, each individual bridge or toll gantry will be counted as a separate submittal. For documents or packages that include multiple retaining walls, noise barriers, BFIs, or WFIs, GDOT will make a determination on the number of Submittals to be counted.

Once a review is complete, the drawings or Submittal will be designated by GDOT as either:

- Accepted
- Accepted with Comments
- Rejected

The terms "Accepted" and "Accepted with Comments" shall mean that the design process may proceed and is not a notice that construction may begin.

- If "Accepted" or "Accepted with Comments", the GDOT representative will deliver the comments and, if necessary, return the drawings or Submittal via PMCS or hard copy to the DB Team. For final Submittals, after updating the documents to resolve all comments (as applicable) and receiving written notice from GDOT that the drawings or Submittal are "Released for Construction", the DB Team shall stamp the accepted set "Released for Construction" and distribute copies to GDOT within three (3) Business days.
- If "Rejected", the GDOT representative shall deliver the rejected drawings or Submittal via PMCS or hard copy to the DB Team. The DB Team shall address the specific comments and resubmit. The resubmittal shall be a new Submittal and shall follow the same time period as provided in Article 6.3.2 and Table 3-1: Master Submittal List. Drawings or Submittals may be rejected without review if the submission is incomplete.

## 3.7 Shop Drawings and Temporary Works Submittals

### 3.7.1 General

Shop drawings include all working, shop, and erection drawings, associated trade literature, calculations, schedules, manuals, and similar documents submitted by the DB Team to define some portion of the Project work. The type of work includes both permanent and temporary works as appropriate to the Project. Permanent works include all the permanent structures and parts thereof required of the completed DB Documents. Temporary works include any temporary construction work necessary for the construction of the permanent works. This includes falsework, formwork, scaffolding, shoring, temporary earthworks, sheeting, cofferdams, special erection equipment, and the like. Falsework includes any temporary construction work used to support the permanent structure until it becomes self-supporting. Falsework includes steel or timber beams, girders, columns, piles and foundations, and any proprietary equipment including modular shoring frames, post shores, and adjustable horizontal shoring. Formwork includes any structure or mold used to retain plastic or fluid concrete in its designated shape until it hardens. Formwork comprises common materials such as wood or metal sheets, battens, soldiers and walers, ties, proprietary forming systems such as stay-in-place metal forms, and proprietary supporting bolts, hangers, and brackets. Formwork may be either permanent formwork requiring a shop drawing submittal such as stay-in-place metal or concrete forms, or may be temporary formwork that requires certification by the Professional Engineer designing the specialized component(s) (the “Specialty Engineer”) for construction affecting public safety and for major and unusual structures. Scaffolding is an elevated work platform used to support workmen, materials and equipment, but not intended to support the structure. Shoring is a component of falsework such as horizontal, vertical or inclined support members. This term is interchangeable with falsework.

Construction affecting public safety is defined as construction that may jeopardize public safety, such as structures spanning functioning vehicular roadways, pedestrian walkways, railroads, navigation channels of navigable waterways, and walls or other structure foundations located in embankments immediately adjacent to functioning roadways. It does not apply to those areas of the Site under the DB Team’s control and outside the limits of, or influence of, normal public access.

For the purpose of shop drawing review and processing as described in this [Section 3.7](#), the term “Shop Drawing Engineer” shall be a Professional Engineer as defined in [Exhibit 1](#) of Volume 1 and will apply to the initiator or producer of shop drawings regardless of whether or not that party is normally the lead Professional Engineer for the design or the EOR; and the term “Shop Drawing Checking Engineer” shall be a Professional Engineer as defined in [Exhibit 1](#) of Volume 1 and will apply to the shop drawing checker and certifier regardless of whether or not that party is normally the EOR, the Shop Drawing Engineer, or the lead Professional Engineer for the design.



### **3.7.2 Work Items Requiring Shop Drawings**

In general, GDOT requires shop drawings for items of work not fully detailed in the plans which require additional drawings and coordination prior to constructing the item, including:

1. Bridge components not fully detailed in the plans (i.e., segments, steel girder details, post-tensioning details, handrails, etc.)
2. Retaining wall systems
3. Precast box culverts
4. Non-standard drainage structures, attenuators, and other nonstructural items
5. Building structures
6. Drainage structures, attenuators, and other nonstructural items
7. Design and structural details furnished by the DB Team in compliance with the DB Documents
8. Temporary Works affecting public safety

### **3.7.3 Schedule of Submittals**

Shop drawings shall be included in the required Submittal Schedule. For each planned shop drawing submittal, the DB Team shall define the type and approximate number of drawings or other documents that are included and the planned submittal date, considering the processing requirements herein. The DB Team shall coordinate subsequent submittals with Project Schedule and Submittal Schedule to allow sufficient time for review and re-submittal as necessary.

### **3.7.4 Style, Numbering, and Material of Submittals**

#### **3.7.4.1 Drawings**

The DB Team shall submit the shop drawings electronically in .pdf format on the PMCS. In addition to the electronic delivery, the DB Team shall furnish four (4) sets of shop drawings to GDOT for review. The DB Team shall consecutively number each sheet in the submittal series, and indicate the total number in the series (i.e., 1 of 12, 2 of 12, . . . , 12 of 12), and shall include on each sheet the following items as a minimum requirement:

1. Bridge Number(s),
2. drawing title and number,
3. a title block showing the names of the fabricator or producer and the DB Team for which the work is being done,
4. the initials of the person(s) responsible for the drawing,
5. the date on which the drawing was prepared,
6. the location of the item(s) within the Project,

7. the DB Team's approval stamp with date and initials, and, when applicable,
8. the signature and seal of the Specialty Engineer.

A re-submittal will be requested when any of the required information is not included.

#### **3.7.4.2 Other Documents**

In addition to electronic delivery in .pdf format on the PMCS, the DB Team shall provide four (4) sets of original documents or clearly legible photographic or xerographic copies of documents other than drawings, such as trade literature, catalogue information, calculations, and manuals. The DB Team shall clearly label and number each sheet in the submittal to indicate the total number of sheets in the series (i.e., 1 of 12, 2 of 12, . . . 12 of 12), and shall provide an additional three (3) sets of documentation for items involved with precast pre-stressed components, and provide an additional two (2) sets of documentation for items involving structural steel components. The DB Team shall bind and submit all documents with a table of contents cover sheet, and list on the cover sheet the total number of pages and appendices, and include a title referencing the submittal item(s), the name of the firm and person(s) responsible for the preparation of the document, the DB Team's approval stamp with date and initials, and, when applicable, the signature and seal of the Specialty Engineer. The DB Team shall submit appropriately prepared and checked calculations and manuals that clearly outline the design criteria, and shall include on the internal sheets the initials of the person(s) responsible for preparing and checking the document. The DB Team shall clearly label trade literature and catalogue information on the front cover with the title, date and name of the firm and person(s) responsible for that document.

#### **3.7.4.3 Qualified Products**

Shop drawings are not required for Qualified Products accepted by GDOT and included on the Qualified Product List as specified in [Attachment 3-1 Manuals](#). For non-Qualified Products, the DB Team shall submit shop drawings to GDOT after the Shop Drawing Checking Engineer has reviewed and accepted for conformance with the DB Documents and compliance to the design intent. Upon completion of GDOT's review, GDOT's red ink review stamp will signify an officially reviewed shop drawing and will state either "Released for Construction" or "Released for Construction as Noted".

#### **3.7.4.4 DB Team-Originated Design**

The DB Team shall submit shop drawings and applicable calculations to the Shop Drawing Checking Engineer for review, and shall ensure that each sheet of the shop drawings and the cover sheet of the calculations are signed and sealed by the Shop Drawing Engineer.

#### **3.7.4.5 Temporary Works**

For construction affecting public safety, the DB Team shall submit shop drawings and the applicable calculations for the design of special erection equipment, false-work,

scaffolding, etc. to the Shop Drawing Checking Engineer, and shall ensure that each sheet of the shop drawings and the cover sheet of the applicable calculations is signed and sealed by the Shop Drawing Engineer.

#### **3.7.4.6 Formwork and Scaffolding**

The DB Team is solely responsible for the safe installation and use of all formwork and scaffolding. GDOT does not require any formwork or scaffolding submittals unless such work would be classified as construction affecting public safety.

#### **3.7.4.7 Other Miscellaneous Design and Structural Details Furnished by the DB Team in Compliance with the Contract**

The DB Team shall submit shop drawings and the applicable calculations to the Shop Drawing Checking Engineer, and shall ensure that each sheet of the shop drawings and the cover sheet of the applicable calculations is signed and sealed by the Shop Drawing Engineer.

### **3.7.5 Processing of Shop Drawings**

#### **3.7.5.1 DB Team Responsibility for Accuracy and Coordination of Shop Drawings**

The DB Team shall coordinate, schedule, and control all submittals, with a regard for the required priority, including those of the various subcontractors, suppliers, and GDOT, to provide for an orderly and balanced distribution of the work. The DB Team shall also coordinate, review, date, stamp, accept, and sign all shop drawings prepared by the DB Team, Contractors, or DB Team-Related Entities (subcontractor, fabricator, supplier, etc.) prior to submitting them to GDOT for review. Submittal of the drawings confirms verification of the work requirements, units of measurement, field measurements, construction criteria, sequence of assembly and erection, access and clearances, catalog numbers, and other similar data. The DB Team shall indicate on each series of drawings the specification section and page or drawing number of the Released for Construction plans to which the submission applies, and shall indicate on the shop drawings all changes from the Released for Construction drawings and itemize all changes in the letter of transmittal. Likewise, whenever a submittal conforms to the Released for Construction plans, the DB Team shall clearly state so in the transmittal letter. The DB Team shall schedule the submission of shop drawings to allow a GDOT review period as specified in the DB Documents. The review period commences upon GDOT's receipt of the valid submittal or re-submittal and terminates upon the transmittal of the submittal back to the DB Team. The DB Team is discouraged from transmitting voluminous submittals of shop drawings at one time. For submittals transmitted in this manner, the DB Team shall allow for additional review time. Only shop drawings distributed by GDOT with the "red ink" stamps are valid and all work that the DB Team performs in advance of GDOT's release of shop drawings will be at the DB Team's risk.

### **3.7.5.2 Scope of Review by the Shop Drawing Checking Engineer**

The Shop Drawing Checking Engineer's review of the shop drawings is for conformity to the requirements of the DB Documents and to the intent of the design. The Shop Drawing Checking Engineer's review of shop drawings, which includes means, methods, techniques, sequences, and construction procedures, is limited to the effects on the permanent works. The Shop Drawing Checking Engineer's review of submittals, which includes means, methods, techniques, sequences, and construction procedures, does not include an in-depth check for the ability to perform the Work in a safe or efficient manner.

### **3.7.5.3 Special Review by the Shop Drawing Checking Engineer of Shop Drawings for Construction Affecting Public Safety**

For construction affecting public safety, the Shop Drawing Checking Engineer will make an independent design review of all relevant shop drawings and similar documents. The DB Team shall not proceed with construction of the permanent works until receiving the Shop Drawing Checking Engineer's approval. The DB Team shall send a copy of the approval letter to GDOT. The review of these shop drawings is for overall structural adequacy of the item to support the imposed loads and does not include a check for economy, efficiency, or ease of construction.

## **3.7.6 Other Requirements for Shop Drawings for Bridges**

### **3.7.6.1 Shop Drawings for Structural Steel and Miscellaneous Metals**

The DB Team shall furnish shop drawings for structural steel and miscellaneous metals. Shop drawings shall consist of working, shop, and erection drawings, welding procedures, and other working plans showing details, dimensions, sizes of material, and other information necessary for the complete fabrication and erection of the metal work.

### **3.7.6.2 Shop Drawings for Concrete Structures**

The DB Team shall furnish shop drawings for concrete components that are not cast-in-place and are not otherwise exempted from submittal requirements, shall also furnish shop drawings for all details that are required for the effective prosecution of the concrete work and are not included in the DB Documents such as: special erection equipment, masonry layout diagrams, and diagrams for bending reinforcing steel, in addition to any details required for concrete components for the permanent work.

### **3.7.6.3 Special Construction Submittals**

In addition to any other requirements, within sixty (60) days from the issuance of Notice to Proceed 1, the DB Team shall submit information to GDOT outlining the plan for

integration into the overall approach to the Project. Where applicable to the Project, include:

1. The overall construction program for the duration of the Agreement. Clearly show the milestone dates (for example, the need to open a structure by a certain time for traffic operations.)
2. The overall construction sequence. The order in which individual structures are to be built, the sequence in which individual spans of girders or cantilevers are erected, and the sequence in which spans are to be made continuous. Erection plans and sequence drawings shall be provided for all bridge construction work to be performed on or over railroad ROW as defined in Section 14 of Volume 3.
3. The general location of any physical obstacles to construction that might impose restraints or otherwise affect the construction, and an outline of how to deal with such obstacles while building the structure(s) (for example, obstacles might include road, rail and waterway clearances, temporary diversions, transmission lines, utilities, property, and the DB Team's own temporary works, such as haul roads, cofferdams, plant clearances, and the like.)
4. The approximate location of any special lifting equipment in relation to the structure, including clearances required for the operation of the equipment (for example, crane positions, operating radii, and the like.)
5. The approximate location of any temporary falsework, and the conceptual outline of any special erection equipment. Provide the precise locations and details of attachments, fixing devices, loads, etc. in later detailed submittals.
6. An outline of the handling, transportation, and storage of fabricated components, such as girders or concrete segments. Provide the precise details in later detailed submittals.
7. Any other information pertinent to the proposed scheme or intended approach.

Clearly and concisely present the above information on as few drawings as possible in order to provide an overall, integrated summary of the intended approach to the Project. GDOT will use these drawings for information, review planning, and to assess the DB Team's approach in relation to the intent of the original design. The delivery to and receipt by GDOT does not constitute any GDOT acceptance or approval of the proposals shown thereon; the DB Team shall include the details of such proposals on subsequent detailed shop drawing submittals, and shall submit timely revisions and re-submittals for all variations from these overall scheme proposals.

#### **3.7.6.4 Shop Drawings Requiring Railroad Coordination**

GDOT acceptance of shop drawings and submittals involving railroad coordination and review does not constitute final acceptance to begin work on these items. Refer to the requirements of Section 14 for coordination and duration of shop drawing reviews for construction work being performed on or over the ROW of the railroad. Direct coordination between GDOT (including the GDOT Bridge Office and/or Utilities Office) and the railroad

will be necessary to ensure that all necessary approvals from the railroad are in place prior to beginning of construction activities in these areas.

### **3.7.6.5 Modifications on Construction**

Where GDOT allows the DB Team to make modifications to the permanent works for the purposes of expediting the DB Team's chosen construction methods, the DB Team shall submit proposals to the EOR for review and approval prior to modifying the works. Proposals for minor modifications shall be submitted under the shop drawing process. The DB Team shall indicate on all drawings the change(s) from the DB Documents and itemize all Change Requests in the letter of transmittal. GDOT will require additional submittals for major modifications. Minor modifications are those items that, in GDOT's sole discretion, do not significantly affect the quantity of measured work, or the integrity or maintainability of the structure or its components (for example, adjusting concrete dimensions, substituting steel plate sizes, changing reinforcing bar size and spacing, etc., all within the acceptable limits of the design). Major modifications are any modifications that, in the opinion of GDOT, significantly affect the quantity of measured work, or the integrity or maintainability of the structure or its components; for example, substituting alternative beam sizes and spacings, changing material strength or type, and the like. The DB Team shall provide signed and sealed revised sheets to GDOT for any required revisions to the Released for Construction plans prior to submitting shop drawings. GDOT's decision on the delineation between a minor and a major modification and the disposition of a proposal is final.

## **3.8 Release for Construction Documents**

Sufficient review and revision time shall be provided in the schedule and account for possible multiple re-submittals to secure a final Release for Construction prior to starting construction on any particular Element of the Work. Construction cannot proceed on any of the Work until the design Submittal has been reviewed, accepted, and Released for Construction.

For final Submittals, after updating the documents to resolve all comments (as applicable) and receiving written notice from GDOT that the drawings or Submittal are "Released for Construction", the DB Team shall stamp the accepted set "Released for Construction" and distribute copies to GDOT within three (3) Business days.

## **3.9 Record Drawings and Project Closeout**

The EOR shall perform a Site visit at no more than thirty (30) days following NTP 3, and subsequent site visits every thirty (30) days thereafter until Substantial Completion is achieved. Additionally, an EOR Site visit shall take place at the midpoint of each and every individual bridge construction. The purpose of the Site visits is for the EOR to visually inspect the progression of the Work for compliance to the RFC Documents. The EOR shall prepare a Site observation compliance report to document elements of the work that are compliant and non-compliant with the RFC Documents. If elements of the

work are not compliant with the RFC Documents, the EOR shall coordinate with the DB Team to determine corrective action and describe the corrective action in the Site observation compliance report. The Site observation compliance report shall be submitted within seven (7) days of the Site visit, and shall be stamped by the EOR.

### **3.9.1 Final Inspection**

The EOR and CQAM shall participate in any final inspection and prepare a final Site observation compliance report to document elements of the work that are compliant and non-compliant with the RFC Documents. If elements of the work are not compliant with the RFC Documents, the EOR shall coordinate with the DB Team to determine corrective action and describe the corrective action in the final Site observation compliance report. This process shall be repeated until no non-compliance items remain. The final Site observation compliance report(s) shall be submitted within seven (7) days of the Site visit, and the last one submitted, once all non-compliance items are corrected and meet the DB Requirements, shall be stamped by the EOR and certified by the CQAM as accurate and complete. Final Acceptance cannot be achieved until this process is complete and the final Site observation compliance report, stamped by the EOR and certified by the CQAM as accurate and complete, is received by GDOT.

Refer also to [Section 2.3.10](#) for additional information regarding the final inspection process.

### **3.9.2 Required Documents**

Within 30 days of Substantial Completion and prior to Final Acceptance, the DB Team shall submit to GDOT a complete set of Final Design documents and Record Drawings for all the Construction Phases of the Project. The Record Drawings and documentation shall be an organized, complete record of Work performed and supporting calculations and details that accurately represent what the DB Team constructed. The DB Team shall ensure that the Record Drawings reflect the actual condition of the constructed Work.

Prior to any portion of the Project being opened to traffic, Record Drawings for that portion of the Project shall be submitted in hard copy and electronic format with a signed statement by the EOR and CQAM that the Record Drawings reflect the actual condition of the constructed Work.

### **3.9.3 Final Acceptance**

Upon completion of the Construction Work, a complete set of Record Drawings, organized by Construction Phase, shall be provided to GDOT as a condition to Final Acceptance in accordance with [Section 3](#) of Volumes 2 and 3, in the following formats:

- A portable flash drive containing:
  - All electronic design files, electronic calculations, etc.
  - Full-size 24- x 36-inch .pdf of each plan sheet and the entire plan set
- Hard copy of the design databook, and drainage calculations

- Full-size 24- x 36-inch set of bond prints
- Half-size 11- x 17-inch or 12- x 18-inch set of bond prints

These Record Drawings shall not be field sketches or redlines, but shall be CAD generated drawings that compile all field changes, redlines, plan revisions, and all non-conforming work into a single “strike-through” format set of plans. Where appropriate, new drawings may be inserted in to the plans to depict portions of the as-built work.

All files shall conform to the criteria for the design platform of choice (CAiCE or InRoads) found in GDOT’s Electronic Data Guidelines (EDG).

The DB Team shall be responsible for all production and delivery of materials needed for GDOT review.

Final Acceptance cannot be achieved until a complete set of Record Drawings is received and accepted by GDOT.



## 4 ENVIRONMENTAL

### 4.1 General

The DB Team shall comply with all environmental laws, regulations, and policies set forth by the federal, state, and local agencies with jurisdiction over the construction activities associated with the Design-Build Project as described in the approved Environmental Documents and permits. The DB Team shall follow all pertinent policies and procedures as described in GDOT - Environmental Procedures Manual and other GDOT sources that describe the environmental process for State Aid Projects. The DB Team shall be responsible for coordination with GDOT, and other required Governmental Entities to ensure that commitments made during the environmental review are being met. Coordination with Governmental Entities shall be conducted by GDOT unless otherwise stipulated and authorized by GDOT to the DB team to contact Governmental Entities directly. The DB Team shall be responsible to reassess Project impacts and for additional associated costs incurred due to any changes in the Project impacts as described in the approved Environmental Document. GDOT shall be responsible for completing the initial Environmental Documents and resubmitting the Environmental Documents and permits to the appropriate Governmental Entities. The associated impacts related to any design element developed by the DB Team that requires additional permitting or that changes previous Environmental Document determinations will be the responsibility of the DB Team, unless otherwise stipulated by GDOT.

GDOT has identified the impacts and the permits anticipated as stipulated in the Reference Information Documents and throughout this RFP. These impacts and any additional impacts realized in the DB Teams design shall be captured in an Environmental Resources Impact Table (ERIT). The DB Team will be responsible for inserting the ERIT into the plans. Its content and accuracy will be confirmed by GDOT staff responsible for environmentally certifying the project.

The DB Team shall execute the Environmental Commitments required by the approved Environmental Documents, DB Documents, Governmental Entities, Governmental Approvals, and all applicable federal and state laws and regulations.

The DB Team's obligation regarding Governmental Approvals and laws, including environmental laws and regulations, and the DB Team's obligation for environmental compliance is set forth in Volume 2, Section 4.1. Limits of the Project and Proposed Right of Way will be described in the approved Environmental Document.

The DB Team shall cause Work to comply with approved Environmental Document, permit, and compliance requirements for any additional actions throughout the Term of the DB Documents. The DB Team shall monitor and document Work activities so that documents providing evidence for compliance are available to Governmental Entities (as applicable) and GDOT for inspection at any time. Evidence of compliance activities may include photo documentation and other appropriate methods to demonstrate compliance.

The DB Team shall execute the environmental mitigation plan, which lists responsible parties for environmental commitments detailed in the approved Environmental Document as agreed on by GDOT and/or other approval agencies.

The DB Team will commit to explore the use of environmentally sustainable practices and/or materials in the development of the Project.

If the Environmental Documents have not yet been approved, the alternative is not “selected”; therefore, the “No-Build” option is still a viable alternative for the Project.

If the “No-Build” alternative is selected, the Project will be terminated according to Article 19 of the Design-Build Agreement.

## **4.2 Environmental Approvals**

### **4.2.1 Responsibilities Regarding Environmental Documents**

Environmental Documents shall be prepared and approved by GDOT prior to the contract award. Restrictions and conditions as applicable to each project site are described in Attachment 1-1. Such approvals may require addendum, amendment, or supplement as the Work progresses or in order to accommodate actions not identified in the approved Environmental Document or covered specifically by existing resource agency coordination and permits.

GDOT shall be responsible for the approval of the required Environmental Documents, as stated in Table 4-1. Associated impacts related to any design element developed by the DB Team that requires additional permitting or that changes previous Environmental Document determinations will be the responsibility of the DB Team, unless otherwise stipulated by GDOT.

The DB Team shall follow GDOT policies and procedures when conducting these activities for the Project.

If the DB Team’s Design Documents deviate from the plan set incorporated into the approved Environmental Documents, then GDOT and/or Governmental Entities will need to conduct an assessment to determine whether the approved Environmental Documents remain valid. DB Team shall provide information to support evaluation of the deviations from the plan set incorporated into the approved Environmental Documents. The DB Team shall facilitate a meeting with GDOT within 45 days of NTP 1 to discuss potential deviations from the approved Environmental Document. The DB Team will be responsible for ensuring compliance with the conditions and schedules set forth in amendments to any approved Environmental Documents due to deviations in the plan set incorporated into the approved Environmental Documents in the Design Documents.

The DB Team assumes all risk arising out of or related to deviations from the plan set incorporated into the approved Environmental Documents. The DB Team is encouraged to minimize deviations from the plan set incorporated into the approved Environmental Documents. The DB Team shall be responsible to provide all information reasonably

required to support evaluation of deviations from the plan set incorporated into the approved Environmental Documents and to comply with all policies and procedures of GDOT and Governmental Entities having jurisdiction over the Project. GDOT shall be responsible for all coordination of environmental studies with appropriate Governmental Entities. The DB Team is responsible to provide GDOT with the information reasonably required for coordination with Governmental Entities. The DB Team is required to have staff that meet the GDOT environmental prequalification requirements.

The approval time frames for Environmental Documents are listed in Tables 4-1 and 4-2. The Tables below do not include any required public comment period and responding to the public comments. GDOT will coordinate and provide approved documentation to the appropriate Governmental Entities. The review and issuance time periods listed in Table 4-1 and 4-2 are per agency and may not occur concurrently. GDOT reserves the right to request to revisions as needed to meet Governmental Entity approval. The timeframe for the development of Environmental Documents are subject to the extent of change proposed by the DB Team; therefore, GDOT reserves the right to develop schedule durations as appropriate after receipt of the DB team’s Design Documents.

**Table 4-1: GDOT-Led Environmental Preparation or Approval**

Document*	Governmental Entity Approval Time Frame	Reviewing Governmental Entity
Ecology Report and Addendum	Review period 1: 30 days Review period 2: 14 days	GDOT
	30 days	USACE
	45 days (informal Section 7)	USFWS
	135 days (for formal Section 7)	USFWS
	45 days (for protected species - for Fish and Wildlife Coordination Act concurrence)	USFWS
	45 days	NMFS
Section 106 AOE Addendum	Prepare AOE Addendum: 21 days	GDOT
	30 days	GDOT
	Revise AOE Addendum: 7 days	GDOT
	14 days	GDOT
	30 days	State Historic Preservation Officer (SHPO)

Document*	Governmental Entity Approval Time Frame	Reviewing Governmental Entity
Noise Report and Addendum	60 days	GDOT
	Revise noise report: 21 days	GDOT
	30 days	FHWA
Air Quality Report and Addendum	Memo to file for no change: 7 days	GDOT
	30 days	GDOT

\*FHWA intends to publish a notice in the Federal Register following Environmental Approval and the Section 404 permit, as applicable. If such a notice is published, claims seeking judicial review of this federal action will be barred unless such claims are filed within one hundred and fifty (150) days after the publication date of the Federal Register notice for each federal action (e.g., Environmental Approval and/or Section 404 permit). At minimum, the period of time may only be limited by the Administrative Procedures Act of 1946 (APA) (5 United States Code [USC] Section 701-06).

#### 4.2.2 GDOT Review and Approval of Environmental Documents and Permits

The DB Team shall be responsible for preparing required permits and permit modifications as stated in Table 4-2. The DB Team is responsible to obtain all other permits not included in Table 4-2 to meet the requirements of the DB Documents. GDOT will be responsible for reviewing the permits and permit modifications and submitting to the appropriate Governmental Entities, unless the applicant is listed as the DB Team or otherwise stipulated by GDOT. Documentation not meeting current submission standards or requirements of Governmental Entities will be returned to GDOT, and shall be revised at DB Team’s cost. GDOT reserves the right to review, comment on, require revisions to, and reject for resubmission documentation submitted to GDOT by the DB Team for environmental compliance or approval. The agency review time frame for permits is specified in Table 4-2. The review and issuance time periods listed in Table 4-2 for DB Team-Led Approvals do not apply to any revisions of the new permit applications proposed by the DB Team’s Design Documents.

One Section 404 permit shall be prepared per project site. GDOT will be responsible for purchasing all stream/wetland mitigation credits and protected species mitigation.

**Table 4-2: DB Team-Led Environmental Permit Approval**

Permit Required	Agency Review and Issuance Time Period (Calendar Days)***	Listed Applicant	Preparer of Application
United States Army Corps of Engineers (USACE) Section 404			
* Section 404 General Permit	140	GDOT	DB Team
** Section 404 Individual Permit	240	GDOT	DB Team
Subsurface testing of all Underground Storage Tanks and Hazardous Materials	150	GDOT	DB Team
National Pollutant Discharge Elimination System (NPDES) Construction General Permit (GAR100002), Notice of Intent (NOI)	14	DB Team	DB Team
NPDES Construction General Permit (GAR100003), Notice of Intent (NOI)	90	DB Team	DB Team
NPDES Construction General Permit (GAR150000), Notice of Termination (NOT)	90	DB Team	DB Team
Georgia Stream Buffer Variance	150	GDOT	DB Team

\* This applies to Section 404 permitting and if additional impacts are incurred after the permit has been approved, a new permit that covers all impacts is required and the original review times apply to the new permit. No work is authorized in the areas of the previous permit until the new permit is approved and construction authorization is received.

\*\* This applies to Section 404 permitting impacts which may exceed the cumulative threshold for a General Permit.

\*\*\* The review and issuance time periods shall commence once a completed permit package that complies with the requirements of the DB Documents is accepted by GDOT and submitted to the issuing agency and end once the permit is issued by the appropriate Governmental Entity. Therefore, the DB Team shall schedule several review periods to ensure proper planning to accomplish the entire process for each required permit. Each GDOT review period is thirty (30) days. Should the Submittal not be complete or rejected as provided in Section 3, each subsequent review period shall be fifteen (15) days, and is excluded from the timeframe in Table 4-2 above.

The above permits and review times do not contemplate offsite plant or other offsite activity that the DB Team may propose for use in construction or other non-permanent construction.

The DB Team shall be responsible for payment of any fines incurred as a result from failure to obtain any necessary permits or approvals, and/or for any fines levied as a result of inadequate or improper installations.

### **4.3 Comprehensive Environmental Protection Program**

The DB Team shall adopt a proactive approach for overseeing and inspecting environmental Work during construction to help guard against unanticipated impacts to the environment. The DB Team shall be responsible for complying with the scope of environmental commitments from the Environmental Documents, including the NEPA/GEPA document, environmental permits, and other Environmental Approvals.

To that end, the DB Team shall develop, execute, and maintain a Comprehensive Environmental Protection Program (CEPP) for the Work to ensure environmental compliance with all applicable environmental laws and commitments. The CEPP shall obligate the DB Team to protect the environment and document the measures taken during the performance of the Work to avoid, minimize, and mitigate impacts on the environment from the design and construction activities of the Project. The CEPP shall effectively demonstrate in detail the DB Team's knowledge of all applicable Project-specific Environmental Approvals, issues, and commitments, as well as applicable environmental laws, as set forth in Volume 2 and Volume 3. It shall also describe the processes that will be followed during the course of the Work to comply with those Environmental Approvals, issues, and commitments and laws, as well as the documentation required to validate compliance. All monitoring and reporting activities shall be concise and consistent throughout the term of the Agreement as applicable to the activities being performed, and shall be in accordance with the requirements set forth in the environmental laws. The CEPP shall also effectively describe the quality control and assurance measures that the DB Team will implement to verify the compliance of the CEPP with all applicable environmental laws. The CEPP shall establish a goal of zero environmental violations during the performance of all Work activities while meeting each regulatory agency's permitting requirements. However, should violations occur, the CEPP shall set forth detailed processes for rectifying such violations in an appropriate and timely manner.

### **4.4 Hazardous Materials Management Plan**

The DB Team shall prepare a Hazardous Materials Management Plan (HMMP) for the safe handling, storage, treatment, and/or disposal of Hazardous Materials, whether encountered at or brought onto the Project Site by the DB Team, encountered or brought onto the Project Site by a third party, or otherwise, during the term of the Agreement. The DB Team shall submit the final HMMP to GDOT for review and approval within sixty (60) days of NTP 1; approval of the Plan by GDOT shall be a condition of commencement of Construction Work. The DB Team shall follow the federal Environmental Protection Agency (EPA), EPD guidelines, and GDOT Policies and Procedures for Underground Storage Tank (UST), and Hazardous Waste (HW) Site Investigation Procedure.

The DB Team's HMMP shall include procedures compliant with all applicable environmental laws and shall include, at a minimum:

1. Updated Material Safety Data Sheets (MSDS) for all chemicals to be used on the Project, per OSHA requirements, for the term of the Agreement
2. Designated individuals responsible for implementation of the plan
3. Procedures for identifying and documenting potential contaminated sites that might impact Project development
4. Procedures for mitigation of known contaminated sites anticipated to impact construction
5. Procedures for mitigation of unanticipated contaminated sites encountered during construction
6. Procedures for developing a detailed Spill Response Plan for the term of the Agreement
7. Process for training personnel for responding to and mitigating incidents involving contamination or waste
8. Provisions for appropriate storage and disposal of all waste encountered or disposed of on the Project for the term of the Agreement
9. Provision for a Hazardous Materials training module as an element of the EPTP component of the CEPP
10. Procedures for preparing Underground Storage Tank/Hazardous Waste (UST/HW) site investigation report(s) and package submittals to the Environmental Testing Unit of the Office of Materials and Testing (OMAT) for review in the event that Hazardous Materials are discovered during construction
11. Identification and contact information for designated responsible individuals

The HMMP shall include provisions for making all workers aware of the potential Hazardous Materials to which they may be exposed, limiting Contractors and other Site workers' exposure to Hazardous Materials and providing all necessary personal protection equipment to protect workers from exposure. The HMMP shall require the DB Team to provide any non-DB Team personnel who visits the Project area with the appropriate personal protection equipment.

The HMMP shall require that all personnel of the DB Team-Related Entities handling Hazardous Materials be trained and certified at least to the minimum requirements established under the current guidelines of OSHA 1910.120 (HAZWOPER Training).

Further, the HMMP shall include procedures for ensuring that all applicable certifications, licenses, authorizations, and Governmental Approvals for the DB Team personnel handling Hazardous Materials are current and valid through the duration of the Work.

## **5 RIGHT OF WAY (ROW) – DB TEAM ACQUISITIONS**

*Refer to Volume 2.*



## 6 UTILITY ADJUSTMENTS

### 6.1 General

By Georgia Statutes, utilities, whether publicly or privately owned, aerial or underground, are permitted by GDOT and local governments to be accommodated within the public Right of Way. To this end, the DB Team shall make every effort to avoid utilities. Design/construction techniques that minimize or avoid utility conflicts may involve increased upfront costs; however, those costs may be offset by savings during construction, in addition to the total cost savings for the Project, GDOT, and the respective Utility Owners. This Section 6 establishes procedures and requirements for Utility Adjustments including such processes as coordination with Utility Owners, administration of the engineering, construction and other activities necessary for Utility Adjustments, and required documentation.

The Utility Plans are a valuable tool used to identify and resolve utility related conflicts/issues prior to beginning the construction of a Project. Also, when these plans are properly prepared per guidance in this Section 6, they will support the vital coordination required between the DB Team and the Utility Owner during construction.

#### 6.1.1 Standards

The DB Team shall provide Utility coordination and Utility adjustment activities in accordance with GDOT's Utility Accommodation Policy and Standards, current edition, AASHTO's A Guide for Accommodating Utilities within Highway Right of Way, AASHTO's A Policy on Geometric Design of Highways and Streets, TRB's Policies for Accommodation of Utilities on Highway Rights-of-Way, Attachment 3-1 Manuals, and other provisions of the DB Documents.

#### 6.1.2 Memorandum of Understanding (MOU)

The allocation of responsibility for the Utility Adjustment work will be specified in the MOU. GDOT has executed MOUs between GDOT and each Utility Owner. Copies of the MOUs can be found in the attachments to Volume 2 Section 6. If a Utility is impacted by the Project and the impact requires a relocation of the Utility, refer to the executed MOU for the Party responsible for the cost of the relocations. See Section 6.1.3.6 regarding the DB Team cost responsibilities for each MOU.

The DB Team shall cause Utility Adjustments to occur either by coordinating the relocation with the Utility Owner self-performing the relocation work, performing the work with its own forces, or by using the Utility Owner's Pre-Approved Design Consultants or Contractors.

#### 6.1.3 Responsibilities of the DB Team

The DB Team shall cause all Utility Adjustments necessary to accommodate the Project.

### **6.1.3.1 DB Team Pre-Construction Coordination**

The DB Team shall communicate, cooperate, and coordinate with GDOT, the Utility Owners, Utility Owner's design consultants and construction contractors, property owners, local Governmental Entities, locally impacted businesses, and potentially affected third parties, as necessary for performance of the Utility Adjustment Work. The DB Team shall provide advance notification to all impacted local Governmental Entities, business and property owners for and planned disruption of service. The DB Team shall coordinate with GDOT for any public outreach for planned utility disruptions as required. The DB Team shall be responsible for assisting in the preparation of all Standard Utility Agreement(s) (SUA) and Contract Item Agreement(s) (CIA) as required. Utility agreement templates can be acquired from the State Pre-Construction Utility Manager. As part of the Pre-construction coordination, the DB team will be required to coordinate with all utility permitting agencies within the Project limits to ensure that any utility permits issued by any agency are reviewed and approved by the DB Team. The DB Team shall notify the Utility Owners that a Georgia Utility Permitting System (GUPS) permit is required for any facilities located inside the Project limits.

All Utility coordination shall be performed to GDOT standards by a prequalified firm in Area Class 3.10 - Utility Coordination. Refer to the following website for a list of current prequalified firms:

<http://www.dot.ga.gov/PS/Business/Prequalification/PrequalConsultants>

The DB Team utility coordination shall include, but not be limited to the following:

1. The DB Team shall schedule and meet with all Utility Owners of Utilities located within the Project limits, GDOT's District Utilities Office, and the State Subsurface Utilities Engineer (or designee) for a utility kick-off meeting within 15 days of NTP 1. The DB Team shall discuss schedule, provide a Project overview and provide Utility Owners with a clear understanding of Design-Build Utility Coordination processes and what the Utility Owners can expect for the duration of the Project.
2. Contacting each Utility Owner to advise of the proposed Project; and obtaining supplemental verification of the locations of existing utility facilities (including the employment of additional Overhead/Underground Subsurface Utility Engineering (SUE) investigations as needed in determining requirements for the relocation or adjustment of facilities.
3. The DB Team shall perform any and all coordination necessary for Utility Adjustments.

### **6.1.3.2 DB Team Design Activities**

The DB Team shall be responsible for the following design activities:

1. The DB Team shall be responsible for collecting the following from each Utility Owner self-performing their relocation work that is located within the Project limits:

- Utility relocation plans; Utility agreements if required; and cost estimates and letters of “no conflict” where the Utility Owner's facilities will not be impacted by the Project.
2. The DB Team shall prepare all engineering design, plans, technical specifications required to perform the necessary utility relocations.
  3. The DB Team shall be responsible for coordinating the design work of its subcontractors, Utility Owners and/or Utility Owners’ contractors. This shall include any required inspection, permitting, testing and monitoring to ensure that the Work is properly performed in accordance with approved design plans.
  4. The resolution of any conflicts between Utilities and the construction of the Project shall be the responsibility of the DB Team.
  5. No additional compensation will be allowed for any delays, inconveniences, or damage sustained by the DB Team or its Subcontractors due to interference from Utilities or the operation of relocating utilities.
  6. The DB Team shall provide each Utility Owner with design plans and preliminary utility plans as soon as the plans have reached a level of completeness adequate to allow the Utility Owner to fully understand the Project impacts. The Utility Owner or Utility Owner’s design consultant will use the DB Team’s design plan for preparing Utility relocation plans, cost estimates, and respective Utility Adjustment Schedules (UAS).
  7. The DB Team shall assist Utility Owners in the preparation and submittal to GDOT a Utility Work Plan Retention Request for any utility that is to remain under the roadway within the construction limits.
  8. If a party other than the Utility Owner prepares Utility relocation plans, there shall be a concurrence box on the plans where the Utility Owner signs and accepts the Utility relocation plans as shown.
  9. The DB Team shall review the utility plans to identify that there are no conflicts with the proposed highway improvements, and ensure that there are no conflicts between each of the Utility Owner's relocation plans.
  10. The DB Team shall show all existing and proposed utilities on the cross sections and drainage profiles.
  11. The DB Team shall furnish the final utility relocation plans to each utility owner to incorporate into the GUPS Project permit. Once the GUPS Project permit is submitted, GDOT will forward to the DB Team for concurrence.
  12. The DB Team shall review all utility relocation plans, Utility agreements, utility estimates, and certificates of eligibility to ensure that relocations comply with GDOT’s Utility Accommodation Policy and Standards Manual.
  13. The DB Team shall certify to GDOT that utility relocation design plans have been reviewed and accepted by the respective Utility Owner.

### **6.1.3.3 DB Team Construction Activities**

The DB Team shall cause Utility Adjustments to occur either by the Utility Owner, the Utility Owner's pre-approved contractors or by self-performing the construction Work.

The DB Team Utility Work construction management shall be performed by the Worksite Utility Coordination Supervisor.

### **6.1.3.4 Worksite Utility Coordination Supervisor (WUCS)**

The DB Team shall designate, prior to beginning any work, a Worksite Utility Coordination Supervisor (WUCS) who shall be responsible for initiating and conducting utility coordination meetings and accurately recording and reporting the progress of utility relocations and adjustment work. Also, the WUCS shall prepare an Emergency Utility Response Plan for the purpose of planning, training, and communicating among the agencies responding to the emergency. The WUCS shall be the primary point of contact between all of the Utility companies, the DB Team and GDOT. The WUCS shall recommend the rate of reoccurrence for utility coordination meetings and GDOT will have the final decision on the regularity for utility coordination meetings. In no case will utility coordination meetings occur less than monthly until controlling items of utility relocations and adjustment milestones are completed. The WUCS shall contact each of the utility companies for the purpose of obtaining information including, but not limited to, a Utility Adjustment Schedule for the controlling items of utility relocations and adjustments. The WUCS shall notify the appropriate utility company and/or utility subcontractors and GDOT of the status of controlling items of relocations and adjustment milestones as they are completed. The WUCS shall furnish GDOT, for approval, a Progress Schedule Chart, immediately following the receipt of the notice to proceed unless otherwise specified, which includes the utility companies controlling items of work and other information in accordance with Standard Specification Section 108.03 or elsewhere in the Contract documents.

#### ***6.1.3.4.1 Qualifications***

The WUCS shall be an employee of the Prime Contractor, shall have at least one year experience directly related to highway and utility construction in a supervisory capacity and have a complete understanding of the Georgia Utilities Protection Center operations, and shall be knowledgeable of the High-voltage Safety Act and shall be trained on the Georgia Utility Facility Protection Act (GUFPA). GDOT does not provide any training on GUFPA but will maintain a list of the Georgia Public Service Commission certified training programs developed by other agencies. Currently the following companies offer approved GUFPA training programs:

Associated Damage Consultants  
Phone: (706) 234-8218 or (706) 853-1362

Georgia Utility Contractors Association  
Phone: (404) 362-9995

Georgia Utilities Protection Center  
Phone: (678) 291-0631 or (404) 375-6209

H B Training & Consulting  
Phone: (706) 619-1669 or (877) 442-4282 (Toll Free)

The DB Team is responsible for obtaining the GUFPA training for their employees. Questions concerning the Georgia Public Service Commission GUFPA training program should be directed to:

Georgia Public Service Commission  
244 Washington St. SW  
Atlanta, GA 30334-5701  
(404) 463-9784

#### ***6.1.3.4.2 Ticket Status***

During the utility coordination meetings, the WUCS shall collect and maintain the Ticket Status information to determine the status of all locate requests within the Project limits. This information will be used to ensure those planning to use mechanized equipment to excavate or work within the Project limits are prepared to begin work when they have reported or estimated beginning work. At points where the DB Team's or utility company's operations are adjacent to or conflict with overhead or underground utility facilities, or are adjacent to other property, damage to which might result in considerable expense, loss, or inconvenience, work shall not commence until all arrangements necessary for the protection thereof have been made.

#### ***6.1.3.4.3 Notice***

The names of known utility companies and the location of known utility facilities will be shown on the Plans, or listed in the Subsurface Utility Engineering Investigation if performed or in the Special Provisions; and the WUCS shall give 24-hour notice to such utility companies before commencing work adjacent to said utility facilities which may result in damage thereto. The WUCS shall further notify utility companies of any changes in the DB Team's work schedules affecting required action by the utility company to protect or adjust their facilities. Notice to the utility companies by GDOT of the Award of Contract, under Subsection 105.06, shall not be deemed to satisfy the notice required by this paragraph. Furthermore, this 24-hour notice shall not satisfy or fulfill the requirements of the DB Team as stated in Chapter 9 of Title 25 of the Official Code of Georgia Annotated, known as the "Georgia Utility Facility Protection Act".

#### ***6.1.3.4.4 Agenda***

The WUCS shall cooperate with the companies of any underground or overhead utility facilities in their removal and relocations or adjustment work in order that these operations may progress in a reasonable manner, that duplication of their removal and relocations or adjustment work may be reduced to a minimum, and services rendered

by those parties will not be unnecessarily interrupted. To promote this effort the WUCS shall prepare an agenda for the utility coordination meetings and circulate same in advance of the meeting to encourage input and participation from all of the utility companies. The agenda will be prepared by an examination of the Project Site and may include photographs of potential/actual utility conflicts.

#### **6.1.3.4.5 Emergency Response Plan**

The WUCS shall prepare an Emergency Utility Response Plan (EURP) no later than 30 days prior to NTP 3. The EURP shall indicate the Project location (which includes street address and or major intersections / major highway route, if possible with a land mark) that would be reported in case of an emergency, WUCS, Emergency Utility Coordinator (EUC), utility company name, utility company emergency contact information to include but not limited to emergency phone number, response time for emergency, working condition of devices needed to facilitate prompt shut off, and primary point of contact name and phone number for the Project.

The Emergency Utility Coordinator (EUC) shall be an employee of the DB Team and shall notify the appropriate utility company and/or utility subcontractors in case of an emergency. The EURP must include the contact details of the EUC, if WUCS is not the primary emergency utility coordinator for this Project.

The EURP will also include a means of reporting emergencies and the Utility Emergency Response Information for each company. The WUCS/EUC shall post the EURP in an area readily accessible to GDOT and Project personnel. Also, WUCS shall distribute the copies of EURP by e-mail and hard copy to GDOT, the DB Team's Project manager, superintendent, and all approved sub-contractors whose work might be in conflict with utilities facilities, personnel of each facility/owner/ operator who has facilities within the Project limits and keep a copy in close proximity to active construction.

In the event of interruption to gas, water or other utility services as a result of accidental breakage or as a result of being exposed or unsupported, the WUCS/EUC shall promptly notify the appropriate emergency officials, the Georgia Utilities Protection Center and the appropriate utility facility company or operator, if known. Until such time as the damage has been repaired, no person shall engage in excavating or blasting activities that may cause further damage to the utility facility.

In order to keep up with the latest / most updated EURP contact information (name and phone numbers), the WUCS shall include an item in the agenda of Utility Coordination meeting about the updates / changes in the EURP plan.

The Emergency Utility Response Plan and Emergency Utility Response Information template can be found at the State of Georgia, Office of Utilities webpage.

#### **6.1.3.4.6 Submission**

Provisions for reporting all utility coordination meetings, the progress of utility relocation and adjustment work milestones and ticket status information will be

reported on a form developed by the WUCS and will be distributed by the WUCS to all of the utility companies as milestones are met and shall be included as part of the Project records. These reports shall be delivered to the Engineer for review, on a monthly basis. The WUCS shall immediately report to the Engineer any delay between the utility relocation and adjustment work, the existing Utility Adjustment Schedule, or the proposed Utility Adjustment Schedule so that these differences can be reconciled.

#### **6.1.3.4.7 Delays**

Under no circumstances will the DB Team be entitled to any additional compensation or time extension hereunder as the result of any Utility Adjustment, whether performed by the DB Team or by the Utility Owner, except as provided in Article 14 of the DBA.

#### **6.1.3.4.8 Facilities Supported on Bridges**

If the utility facilities are to be supported on bridges, the following provisions shall apply:

1. The Plans shall show the location of the facility and the auxiliary items necessary to support the facility.
2. The contractor constructing the bridge shall install anchor bolts, thimbles, inserts, or other auxiliary items attached to the bridge as a part of the support for the utility facility. The Utility Company will furnish these auxiliary items, unless the Contract indicates these items are to be furnished by the DB Team as a part of the bridge construction.
3. The Utility or its subcontractor constructing the utility facility shall install hanger rods, pipe rollers, and other attachments necessary for the support of the utility facility as indicated on the Plans. The Utility Company shall furnish these attachments at no cost to GDOT or the prime contractor unless otherwise specified. This work shall also include:
  - a. Caulking the openings around the utility where it passes through endwalls to prevent the passage of undesirable materials.
  - b. Painting the exposed portions of utility supports unless such supports are corrosion resistant. Painting shall be done in accordance with the applicable portions of Standard Specification Section 535, unless otherwise specified.
4. The sequence of bridge construction work may be set forth in the Plans and/or the Special Provisions and will show at what stage of the Work a utility company will be allowed to make the utility installation. Further, all or any portion of the Work under this Section 6.1.3.4.8 may be included in the Agreement by the Plans and/or the Special Provisions.
5. Any damage to the bridge structure caused by the Utility or its subcontractor shall be repaired to the satisfaction of GDOT at the expense of the Utility or its subcontractor installing the utility facility.

#### **6.1.3.4.9 Clearances**

The Plans shall provide for at least minimum clearance of utilities as required by the National Electrical Safety Code, U.S. Department of Commerce, and National Bureau of Standards. Any additional clearance the DB Team may desire or require in performing the Work shall be arranged by the DB Team with the utility company. GDOT will pay no extra compensation for such additional clearances.

#### **6.1.3.4.10 Utility Relocation Progress Schedule**

The purpose of the Utility Adjustment Schedule is to provide the DB Team with the pertinent information, including any utility staging required, dependent activities, or joint-use coordination that is required for the creation of a feasible progress schedule. A suitable Utility Adjustment Schedule form is available from GDOT for the WUCS to circulate to utility companies for any proposed Project construction staging or should a utility company not duly file a Utility Adjustment Schedule to GDOT during the preconstruction phase of the Project. The WUCS shall submit a Utility Relocation Progress Schedule showing together the Progress Schedule Chart and the proposed Utility Adjustment Schedules from all utility companies to GDOT for review and approval.

#### **6.1.3.5 General Responsibilities of GDOT**

GDOT will provide guidance to the DB Team in the Utility Adjustment process to the extent as described in the Design-Build Documents and the Utility Accommodation Policy and Standards Manual.

#### **6.1.3.6 Utility Adjustment Relocation**

The DB Team shall be responsible for all Utility Adjustment Work associated with the Project, with the exception of Betterment and items explicitly excluded within the MOU's.

#### **6.1.3.7 When Utility Adjustment is Required**

Utility Adjustment may be necessary to accommodate the Work for either or both of the following reasons: (i) a physical conflict between the Work and the Utility, and/or (ii) an incompatibility between the Work and the Utility, even though there may be no physical conflict. The physical limits of all Utility Adjustments shall extend as necessary to replace the existing Utility, whether inside or outside of the Existing ROW and Proposed ROW. Section 6.2.2.2 (Acquisition of Replacement Utility Property Interests) contains provisions that address the acquisition of easements for Utilities to be installed outside of the Existing ROW and Proposed ROW.

### **6.1.4 Certain Components of the Utility Adjustment Work**

#### **6.1.4.1 Betterments**

Replacements for existing Utilities shall be designed and constructed to provide service at least equal to that offered by the existing Utilities, unless the Utility Owner specifies a



lesser replacement or unless a larger size is required to meet current Law, industry standards, or Code. Services include equal access and ability to maintain the facility at its current level of functionality; in other words, like for like in-kind replacement and in accordance with the UAM and GDOT Design Policies.

Utility Enhancements are not included in the Work.

Any Betterment work furnished or performed by the DB Team as part of a Utility Adjustment shall be deemed added to the Work. That proportion of the costs representing improvement or Betterment in a facility shall be excluded from the costs eligible for payment by the DB Team or participation by GDOT, unless required to meet Law, industry standards, or Code.

The DB Team shall pay the in-kind replacement costs or larger facility costs if required to meet current Law, industry standards, or Code for removing, adjusting, and relocating those facilities that are physically in place and in conflict with proposed construction and where replacement is necessary.

#### **6.1.4.2 Protection in Place**

The DB Team shall assist the Utility Owner in the submission of a Utility Work Plan Retention Request to GDOT for review and acceptance for each utility that will remain in place in accordance with GDOT's Utility Accommodation Policy and Standards Manual. The DB Team shall be responsible for Protection in Place through the use of a GDOT approved Utility Work Plan Retention Request of all Utilities impacted by the Project as necessary for their continued safe operation and structural integrity.

#### **6.1.4.3 Early Adjustments**

*Refer to Volume 2.*

## **6.2 Administrative Requirements**

### **6.2.1 Communications**

#### **6.2.1.1 Communication with Utility Owners: Meetings and Correspondence**

The DB Team is responsible for holding meetings and otherwise communicating with each Utility Owner and/or sub-contractor and/or the Utility Owner's pre-approved design consultant and construction contractor as necessary to timely accomplish the Utility Adjustments in compliance with the DB Documents. GDOT may participate in these meetings if requested by the Utility Owner or the DB Team or otherwise as GDOT deems appropriate.

At least seven (7) days in advance of each scheduled meeting, the DB Team shall provide notice and an agenda for the meeting separately to GDOT and the appropriate Utility Owner. The DB Team shall prepare and distribute minutes of all meetings within seven

(7) days of the meeting with Utility Owners and shall keep copies of all correspondence between the DB Team and any Utility Owner.

The DB Team will be allowed to coordinate with Utility Companies for early coordination of Utility Adjustments.

### **6.2.2 Real Property Matters**

The DB Team shall provide the services described below in connection with existing and future occupancy of property by Utilities.

**Determination of Utility Right-of-Way and Easement** – The determination as to the need for replacement right-of-way or easement for utilities will be made as follows:

1. GDOT will determine what right-of-way is required for construction of the Project and will normally provide adequate right-of-way for the existing or typical utility facilities that will be permitted to be accommodated within that right-of-way. The DB Team will coordinate with each Utility to request any special right-of-way requirements necessary for their facilities.
2. If there is not sufficient space for the utility within the right of way or easement that will be required for the construction of the Project, the DB Team will coordinate with the Utility Owner to verify such circumstance and will obtain a written statement as to whether the Utility Owner desires that the DB Team acquire such additional rights of way or easement as may be required for utility relocation under the provisions of the O.C.G.A. § 32-6-172.
3. If the Utility Owner intends to acquire its own right of way or easement:
  - a. The DB Team shall obtain written notification from the Utility Owner of such decision including this acquisition in the Utility Owner's Work Plan.
  - b. The DB Team shall notify the GDOT Project Manager of that status in a format that will be included in GDOT's monthly Right of Way Status Acquisition Reports.
  - c. The DB team shall request from the State Right of Way Office, and forward to such Utility Owner, the Right of Way Status Acquisition Report.

**Method of Acquisition** - The method of acquisition described in Section 4.1.C.6 of the UAM shall apply. It is desirable that replacement right of way and easements for utilities be acquired concurrently with acquisition of right of way for the Project.

### **Adjustment on Projects**

1. **Reimbursable Cases** - When the Utility Owner is entitled to reimbursement for the cost of acquisition of replacement right of way or easements, GDOT will request permission from the Utility Owner, which must be obtained in writing, to acquire necessary utility right of way or easements concurrently with its acquisition of the normal highway right of way. If the Utility Owner has some particular reason

for insisting on acquiring the right of way or easement, this will be included in a Standard Utility Agreement.

2. **Non-Reimbursable Cases** - If the cost of acquisition of replacement right of way or easement is not reimbursable, GDOT will, at the written request of the Utility Owner, acquire such right of way or easement under written agreement and the Utility Owner will reimburse GDOT for such cost in accordance with the State Law. Any acquisition by GDOT will comply with all requirements pertaining to GDOT's acquisition of its own right of way or easement.

**Interest to be Acquired** - If the Utility Owner agrees for the DB Team to acquire replacement right of way, or easement:

1. The DB Team in conjunction with GDOT's Office of Right of Way will determine what interest will be acquired and the instrument (i.e., quitclaim, easement limited agreement, etc.) to be used to transfer such interest from GDOT to the Utility Owner.
2. The State Right of Way Administrator will notify the DB Team, District Utility Manager and the State Utilities Office as to a determination regarding GDOT's agreement to acquire the right of way and of what interest is proposed to acquire.
3. The DB Team will notify the Utility Owner and District Utility Manager of that determination and will promptly notify the State Right-of-Way Office, with a copy to the State Utilities Administrator, of any exceptions the Utility Owner may make to that determination.
4. The State Utilities Administrator will be responsible for the establishment of Easement Limited Agreements (ELA) with the Utility Owner after determination by the State Right of Way Administrator that such ELA is required to complete the rights of way acquisition. A copy of the ELA will be sent to the State Right of Way Office for legal recording.

#### **6.2.2.1 Documentation of Existing Utility Property Interests – Affidavits**

For each Existing Utility Property Interest within the Existing ROW and Proposed ROW claimed by any Utility Owner, the DB Team shall include an easement deed or an Affidavit of Property Interest in the applicable Utility Work Plan, with appropriate documentation of the Existing Utility Property Interest attached. Any such claim shall be subject to GDOT's acceptance as part of a Utility Work Plan review. Except as otherwise directed by GDOT, the DB Team shall prepare all Affidavits of Property Interest using the standard GDOT form.

#### **6.2.2.2 Acquisition of Replacement Utility Property Interests**

Each Utility Owner will be responsible for acquiring any Replacement Utility Property Interests that are necessary for its Utility Adjustments if the DB Team is not responsible as outlined in the MOU. For acquisitions not the responsibility of the DB Team, the DB Team shall have the following responsibilities for each acquisition:

1. The DB Team shall coordinate with, and provide the necessary information to, each Utility Owner as necessary for the Utility Owner to acquire any Replacement Utility Property Interests required for its Utility Adjustments.
2. If any of the DB Team-Related Entities assists a Utility Owner in acquiring a Replacement Utility Property Interest, such assistance shall be by separate contract outside of the Work, and the DB Team shall ensure that the following requirements are met:
  - a. The files and records must be kept separate and apart from all acquisition files and records for the Proposed ROW and Additional Properties.
  - b. The items used in acquisition of Replacement Utility Property Interests (e.g., appraisals, written evaluations and owner contact reports) must be separate from the purchase of the Proposed ROW and Additional Properties.
  - c. Any DB Team Related Entity personnel negotiating the acquisition of Replacement Utility Property Interests must be different from those negotiating the acquisition of Project ROW.

**Condemnation:** The DB Team is not responsible for Utility Owner condemnation proceedings.

#### **6.2.2.3 Georgia Utility Permitting System (GUPS)**

The DB Team shall submit, or shall ensure that each Utility Owner submits, utility permit requests through GUPS for the following:

1. Each Utility proposed to be relocated within the Existing ROW, Proposed ROW and Additional Properties.
2. Each Utility proposed to remain in its existing location within the Existing ROW, Proposed ROW and Additional Properties.

#### **6.2.2.4 Documentation Requirements**

The DB Team shall prepare, negotiate (to the extent permitted by this [Section 6.2.2](#) (Real Property Matters), and obtain execution by the Utility Owner of (and record in the appropriate jurisdiction, if applicable) all agreements and deeds described in this section, including all necessary exhibits and information concerning the Project (e.g., reports, Plans, and surveys). Each agreement or deed shall identify the subject Utility(ies) by the applicable Utility Permit Number, and shall also identify any real property interests by parcel number or highway station number, or by other identification acceptable to GDOT.

#### **6.2.2.5 Record Keeping**

The DB Team shall maintain design, construction and inspection, and other Utility related records in order to ascertain that Utility Adjustment Work is accomplished as required by the Design-Build Documents and the applicable Utility agreement(s).

## 6.3 Design

### 6.3.1 DB Team's Responsibility for Utility Identification

All Design Documents for Utility Adjustment Work, whether furnished by the DB Team or by the Utility Owner or pre-approved design consultant, shall be consistent and compatible with the following:

1. The applicable requirements of the DB Documents, including Section 6.1.1 (Standards)
2. Any Utilities remaining in, or being installed in, the same vicinity
3. All applicable Governmental Approvals
4. Private approvals of any third parties necessary for such work

The DB Team shall ensure that the Design Documents are complete and include all utility adjustment schedules (required only if the Utility Owner self performs), utility relocation plans, and associated agreements (if required) necessary to address all foreseeable utility impacts that might affect the Project. This includes utility issues affecting right of way acquisition, environmental clearances, project staging, and project constructability.

The DB Team shall endeavor to design the Project to avoid conflicts with utilities when feasible, and minimize impacts where conflicts cannot be avoided. The DB Team shall submit to GDOT a SUE Utility Impact Analysis (UIA) in GDOT's prescribed format as specified in Volume 2, Section 3, Table 3-1.

When a Utility Owner claims prior rights in the MOU and does not include either design or construction in the Design-Build Documents, the DB Team shall research and verify any compensable prior right claimed in the MOU that would result in reimbursement to the Utility Owner for any relocation design, construction or material cost. If there is a dispute over property interests with a Utility Owner, the DB Team shall be responsible for resolving the dispute. The DB Team shall meet with GDOT's District Utilities Manager to present the property interests information gathered. This information shall be sufficient for the District Utilities Manager (or designee) to certify the extent of the Utility Owner's property interests. GDOT shall have final approval authority as to the DB Team's determination of whether the Utility Owner has property interests. The DB Team will be responsible for all design, construction and material costs when the design and construction are included in the Design-Build Documents.

### 6.3.2 Utility Relocation Plans

The DB Team shall submit final Utility Relocation Plans after the DB Team has reviewed and addressed the DB Team's internal comments on the Utility Adjustment Preliminary Plan.

### **6.3.2.1 Plans Prepared by the DB Team**

Where the DB Team and the Utility Owner have agreed that the DB Team will furnish a Utility Adjustment design, the DB Team shall prepare final Utility Relocation Plans and have an authorized representative of the Utility Owner sign the plans as “reviewed and approved for construction.” The Utility Work Plan (as approved by the Utility Owner) shall be attached to the applicable Utility Agreement (if required), for GDOT’s acceptance.

Unless otherwise specified in the applicable Utility Agreement(s), all changes to final Utility Relocation Plan(s) previously approved by the Utility Owner (excluding estimates, if the Utility Owner is not responsible for any costs) shall require written Utility Owner approval. The DB Team shall transmit any GDOT comments to the Utility Owner, and shall coordinate any modification, re-approval by the Utility Owner and re-submittal to GDOT as necessary to obtain GDOT's acceptance.

### **6.3.2.2 Plans Prepared by the Utility Owner**

For all Utility Adjustments to be furnished by a Utility Owner, the DB Team shall coordinate with the Utility Owner as necessary to confirm compliance with the applicable requirements. Those Utility Adjustments shall be attached to the applicable Utility Agreement (if required), which the DB Team shall include in the appropriate Utility Work Plan for GDOT’s acceptance. The DB Team shall transmit any GDOT comments to the Utility Owner, and shall coordinate any modification, review by the DB Team and re-submittal to GDOT as necessary to obtain GDOT’s acceptance.

### **6.3.2.3 Design Documents**

Each proposed Utility Adjustment shall be shown in the Design Documents, regardless of whether the Utility Relocation Plan is prepared by the DB Team, Utility Owner or Utility Owner’s design consultant.

#### **Required Information**

1. Preliminary Utility Relocation Plans
  - (a) Preliminary Utility Relocation Plan sheets are typically comprised of preliminary roadway plan sheets with the inclusion of all existing utility facility locations (overhead and underground) found within a Project’s limits. The “degree of effort” exerted on the part of GDOT and the Utility Owner varies with the type and location of the utility. GDOT has classified these “degrees of effort” into different quality levels of information.
  - (b) Preliminary Utility Relocation Plans shall be produced and used by the DB Team in the utility coordination/relocation design activities outlined here. The following minimum information shall be shown on the Preliminary Utility Plans:
    - (c) Construction centerlines with Project stations and begin/end Project limits
    - (d) Curb and gutter or edge of pavement (proposed and existing)

- (e) Road and street names
  - (f) Existing and required Right of Way limits, property lines, environmentally sensitive area limits, and property owners
  - (g) All proposed and existing easements (including existing utility easements)
  - (h) Proposed and existing drainage structures/features (excluding drainage text)
  - (i) Proposed construction limits (C/F lines)
  - (j) Topographical planimetrics (i.e., existing buildings/structures, existing tree/vegetation limits)
  - (k) All proposed bridges, walls, other structures and landscape hardscapes
  - (l) All proposed and existing strain poles (signal, sign, lighting)
  - (m) Utilities Legend
  - (n) Miscellaneous General Notes
  - (o) Existing overhead and underground utilities found within the Project's limits, including size and material if known
  - (p) Sanitary sewer manhole top, and invert elevations. Sanitary Sewer pipe flow directions
  - (q) Railroad mainline and spur tracks with their respective property/easement limits
  - (r) Project survey control point locations
2. Final Utility Relocation Plans
- (a) The final Utility Relocation Plans shall clearly show all existing utilities on the plans and clearly indicate all existing utilities are "To Remain" and all proposed relocations necessary to avoid construction conflicts.
  - (b) In addition to the information required for the Preliminary Utility Relocation Plans, the final Utility Relocation Plans shall include: Miscellaneous General Notes required for coordination of utility facilities with roadway construction.

## Sheet Layout

1. The DB Team will ensure that any information and graphic data that is not necessary to depict the disposition of utilities found within the Project's limits is removed by turning off the appropriate CAD levels(s) on which the data is stored. This will help ensure that information pertinent to utility facilities can be clearly seen in the Utility Plan sheets. Examples of extraneous information would be items such as horizontal curve data, superelevation data, roadway dimensions, misc. text, etc. All background information such as pavement limits, existing structures, etc. shall be screened back. Also, the DB Team shall ensure all text, line work, details, and symbols are clear and legible when plans are reduced to half-size (typically, 11" x 17").

2. In order to maintain plan clarity, all applicable general notes, tables, details, and the Utility Legend shall be placed separately from the Utility Plan sheets. A Utility Plan “Cover Sheet” shall be provided for both preliminary and final Utility Relocation Plans. A recommended example utility sheet schedule is provided below:
  - (a) Utility Sheet 1 (Cover Sheet) – Utility General Notes, Utility Legend, Miscellaneous Details
  - (b) Utility Sheet 2 (required as needed) – Additional Miscellaneous Details, Pole Data Table
  - (c) Utility Plan Sheets – Utilities shown in plan view with respect to Project shall be displayed on 24 Series Plan Sheets.
  - (d) Utility Profile and Cross Sections Sheets - Proposed Utility facility profiles and cross sections (as required)
  - (e) Miscellaneous Utilities Sheets – Miscellaneous proposed utility details (as required)

The above sheet schedule shall also be generally followed for all separate utility relocation plans (i.e., water and sewer plans) included in the Project plans.

The DB Team shall note on the Utility Relocation Plans whose responsibility it is for utility adjustment. For bridge plans required, the DB Team shall ensure the plans have made accommodations for utility crossings and attachments, if applicable. Any new utility crossings requests shall include the size, weight, and type of utility. In addition, the method of attachment to the bridge shall be fully detailed. Such requests shall be reviewed by the DB Team to ensure adequacy and constructability and final acceptance shall be obtained by the DB Team from GDOT. The DB Team shall follow the approval process within this specification. The DB Team is responsible to ensure that all proposed and existing utilities are coordinated with the respective Project’s Construction Staging Plans and Erosion Control Plans.

Upon completion of the Utility relocation plans, the DB Team shall ensure that any additional environmental impacts due to utilities are addressed in the Project’s Environmental Document and/or Permit.

#### **6.3.2.4 Certain Requirements for Underground Utilities**

Casing as specified in the Utility Accommodation Policy and Standards Manual shall be used for all underground Utilities crossing the Existing ROW, Proposed ROW and/or Additional Properties.

The WUCS shall ensure that all Georgia 811 requirements are met.



### **6.3.2.5 Utility Work Plan**

Utility Work Plan means the combination of the Utility Relocation Plans and the Utility Adjustment Schedule (if required), and any required agreements, specifications, cost estimates (if required), and any other information and materials which the Design-Build Team is required to submit to GDOT in connection with each Utility Relocation. The Utility Work Plan also includes the Utility Owner's approval of plans, specifications, and cost estimates (if required). The term Utility Work Plan also refers to Supplemental Utility Work Plans and Utility Work Plan Retention Requests.

Each Utility Adjustment (as well as each Utility remaining in place and not requiring any Protection in Place or other Utility Adjustment) shall be addressed in a Utility Work Plan prepared by the DB Team and submitted to GDOT for its review and acceptance. The DB Team shall provide Utility Work Plans for each individual Utility Owner and the Utility Work Plan shall be provided in accordance with the Utility Accommodations Policy and Standards Manual. The DB Team shall coordinate with the Utility Owner or Utility Owner's design consultant to prepare all components of each Utility Work Plan. Completion of the review and comment process for the applicable Utility Work Plan, as well as issuance of any required GDOT acceptances, shall be required before the start of construction for the affected Utility Adjustment Work.

Provisions governing the procedure for and timing of Utility Work Plan submittals are in [Section 6.5](#)

All Utility Adjustments covered by the same initial Utility Agreement shall be addressed in a single full Utility Work Plan.

### **6.3.2.6 Utility Adjustment Schedule (UAS)**

The purpose of the UAS is to provide the DB Team with the pertinent information when Utility Owners are self-performing. When the DB Team is performing the relocation work or if the relocation work has been included in the contract to be accomplished by the Utility Owner pre-approved contractor, no UAS will be required, unless there is a dependent activity by the Utility Owner to facilitate this work.

The DB Team shall schedule all utility relocations and adjustments. The DB Team shall obtain a written schedule from the Utility Owner or a Utility Owner pre-approved contractor.

### **6.3.2.7 Revised Work Plan Acceptance**

If previously unforeseen utility removal, relocation, or adjustment work is found necessary by the DB Team, the Utility, or the DB Team after the start of construction of a project, the DB Team shall obtain from the Utility (if self-performing) a revised Utility Work Plan within 30 days after becoming aware of such work or upon receipt of the DB Team's written notification advising of such work. The incorporation of this revised Utility Work Plan into the overall project schedule is not intended to correct errors and omissions with

the original or current accepted Utility Work Plans submitted to GDOT. If such errors or omissions occur, it will be the Utility's responsibility to adhere to the original or current Utility Work Plan submitted and approved. However, when it is deemed appropriate for a revised Utility Work Plan to be submitted, the following procedure shall be followed for its acceptance:

1. The DB Team shall review all revised Utility Work Plans submitted by the Utility found within a project's limits.
2. After review and acceptance, the revised Work Plan shall be submitted to GDOT for review and acceptance by the District Utility Manager. Note that the District Utility Manager will typically consult with the District Construction Office and GDOT Project Manager to determine the reasonability of such revised Work Plans. If, upon review, the District Utilities Manager determines a revised Work Plan to be unreasonable based on the required scope of Utility Adjustment and/or relocation required to accommodate a project, the District Utility Manager will initiate the escalation process to resolve such disputes involving the revised Utility Work Plan if disputes occur.

#### **6.3.2.8 Post-Let Utility Certification**

The DB Team shall develop the Preliminary Utility Status Report. This report shall include a listing of all Utility Owners located within the Project limits and a recommendation as to the extent of each Utility Owner's property interests. This report shall include copies of easements, plans, or other supporting documentation that substantiates any property interests of the Utility Owners. The report shall list each Utility Owner with contact information, any Utility Agreements, current UIA, and a preliminary assessment of the impact to each Utility Owner.

Upon receipt of the accepted utility relocation plans and the Preliminary Utility Status Report, the DB Team will review and forward that information to the District Utility Manager for review. The District Utility Manager will review the information and forward to the State Pre-Construction Utility Manager for final acceptance. The State Pre-Construction Utility Manager will perform the post-let utility certification and issue notice to proceed (NTP 3) released for construction.

### **6.4 Construction**

#### **6.4.1 Reserved**

#### **6.4.2 General Construction Criteria**

At the time the DB Team notifies GDOT that the DB Team deems the Project to have reached Substantial Completion, the DB Team shall certify to GDOT that all Utilities have been identified and that those Utility Owners with property interests or other claims related to relocation or coordination with the Project have been relocated or their claims otherwise satisfied or shall be satisfied by the DB Team.

In addition to the above, the DB Team shall comply with all provisions set forth under subsection 107.21 of the Georgia Department of Transportation's Specifications, Construction of Transportation Systems, current edition.

All Utility Adjustment construction performed by the DB Team shall conform to the requirements listed below. If the Utility Owner chooses to perform their own relocations and the Utility Owner holds no property interest, the DB Team shall obtain written confirmation from the Utility Owner stating that the Utility Owner will relocate its own facilities at no cost to the DB Team. All construction engineering and contract supervision shall be the responsibility of the DB Team to ensure that all utility relocation work included in the contract is accomplished in accordance with the Utility Owner approved final design plans and specifications. The DB Team will consult with the Utility Owner before authorizing any changes that affect the Utility Owners facilities. For work included in the DB Team's contract, the Utility Owner or Utility Owner's contractor shall have the right to visit and inspect the work at any time and advise the DB Team and GDOT of any observed discrepancies or potential issues. The DB Team will notify the Utility Owner when all utility relocation work is completed and ready for final inspection. Upon final acceptance of the utility relocation included in the contract and upon certification by the Utility Owner that the work has been completed in accordance with the Utility Owner approved final design plans and specifications, the Utility Owner will accept the adjusted, relocated, and additional facilities. In addition, the DB Team is responsible for verifying that all Utility Adjustment construction performed by each Utility Owner conforms to the requirements described below. In case of nonconformance, the DB Team shall cause the Utility Owner (and/or its contractors, as applicable) to complete all necessary corrective work or to otherwise take such steps as are necessary to conform to these requirements:

1. All criteria identified in Section 6.3
2. The Utility Work Plan(s) included in the Utility Agreements approved by GDOT (other than Utility Adjustment Field Modifications complying with Section 6.4).
3. All safety and environmental requirements
4. Overall schedule or proposed ROW schedule described in Sections 2, 5 and 7
5. Ensure that the placed, abandoned, excavated, or relocated utilities within the Project limits are all locatable. Locatable shall mean that the line can be field located using SUE QL-B methodology.

The DB Team shall be responsible for performing all utility removal, relocation, and adjustments required to accommodate the proposed Project in accordance with the MOU and any required Utility Agreements. This shall include any required inspection, permitting, testing, and monitoring to ensure that all the work is properly performed to the approved design plans. The resolution of any conflicts between Utilities and the construction of the Project shall be the responsibility of the DB Team. No additional compensation will be allowed for any delays, inconveniences, or damage sustained by

the DB Team or its subcontractor(s) due to interference from utilities or the operation of relocating utilities.

#### **6.4.3 Inspection of Utility Owner Construction**

The DB Team shall set forth procedures for inspection of all Utility Adjustment Work performed by Utility Owners (and/or their contractors) to verify compliance with the applicable requirements described in Section 6.4.2 and to ensure the work is being accomplished in accordance with the GDOT approved Utility Relocation Plan.

#### **6.4.4 Scheduling Utility Adjustment Work**

The Utility Adjustment Work (other than construction) may begin at any time following issuance of NTP 1. Refer to Article 7.6.2 of the Agreement for the conditions to commencement of Utility Adjustment Construction Work by the DB Team. The DB Team shall not arrange for any Utility Owner to begin any demolition, removal, or other construction Work for any Utility Adjustment until all of the following conditions are satisfied:

1. The Utility Adjustment is covered by an executed Utility Agreement (if required) (and any conditions to commencement of such activities that are included in the Utility Agreement have been satisfied).
2. Availability and access to affected Replacement Utility Property Interests have been obtained by the Utility Owner (and provided to the DB Team, if applicable).
3. Proposed ROW and/or Additional Properties have been obtained in accordance with the applicable requirements of the DB Documents.
4. If applicable, the Alternate Procedure List has been approved by FHWA, and either (a) the affected Utility is on the approved Alternate Procedure List, as supplemented, or (b) the Utility Owner is on the approved Alternate Procedure List, as supplemented.
5. The review and comment process has been completed and required approvals have been obtained for the Utility Work Plan covering the Utility Adjustment.
6. All third-party approvals (such as railroad, governmental, etc.) necessary for the Utility Adjustment construction have been obtained, and any pre-construction requirements contained in those approvals have been satisfied.
7. All other conditions to that Work stated in the DB Documents have been satisfied.

#### **6.4.5 Standard of Care Regarding Utilities**

The DB Team shall carefully and skillfully carry out all Work impacting Utilities and shall mark, support, secure, exercise care, and otherwise act to avoid damage to Utilities in accordance with O.C.G.A. 25-9 (The Georgia Utility Facility Protection Act). At the completion of the Work, the condition of all Utilities shall be at least as safe and permanent as before.

#### **6.4.6 Emergency Procedures**

The WUCS shall prepare and submit to GDOT an Emergency Utility Response Plan in accordance with Section 6.1.3.4.5.

#### **6.4.7 Switch Over to New Facilities**

After a newly adjusted Utility has been accepted by the Utility Owner and is otherwise ready to be placed in service, the DB Team shall coordinate with the Utility Owner regarding the procedure and timing for placing the newly adjusted Utility into service and terminating service at the Utility being replaced.

#### **6.4.8 Traffic Control**

The DB Team shall be responsible for, and the Construction Traffic Control Plan shall cover, all traffic control made necessary for Utility Adjustment Work, whether performed by the DB Team or by the Utility Owner. Traffic control for Adjustments shall be coordinated with GDOT. Traffic control shall comply with the guidelines of the Manual of Traffic Control Devices (MUTCD), current edition, and of Section 18.

### **6.5 Deliverables**

The DB Team shall time all Submittals described in this Section 6 to meet the Project Baseline Schedule, taking into account GDOT's applicable review and response times designated in this Section 6, or if not stated therein, then as stated in Article 6.3 of the Design-Build Agreement (Volume 1).

The DB Team will provide to GDOT concurrently with accepted construction Utility Record Drawings (as-built plans), one full-sized, three half-sized, one PDF, and one MicroStation copy of the Utility Record Drawings (as-built plans) for review. GDOT will have 30 days to review and return as accepted or with comments. The DB Team will address any comments and return to GDOT for final review and acceptance. Upon GDOT review and acceptance, the DB Team will provide a copy of the accepted final Utility plans to all Utility Owners whose utility relocation work was performed by the DB Team.

#### **6.5.1 Utility Work Plan Submittals**

The DB Team shall transmit any GDOT comments to the Utility Owner, and shall coordinate any modification, review, and approval by the Utility Owner and re-submittal to GDOT, as necessary to resolve all GDOT comments and/or obtain GDOT's acceptance, as applicable.

#### **6.5.2 Preliminary Utility Status Report**

The DB Team shall prepare and submit to GDOT a Preliminary Utility Status Report concurrently with accepted relocated utility plans in accordance with Section 3.

### **6.5.3 Subsurface Utility Engineering (SUE) Requirements**

The DB Team shall compile and submit to GDOT all SUE deliverables, Utility relocation plans, SUE Utility Impact Analysis, Utility Adjustment Schedules (if required), Utility Agreements (if required), Utility Estimates (if required) (if estimates are provided by the utility owners), and Letters of “no conflict,” as set forth above for the Project. The DB Team is expected to assemble the information included in the Utility Agreements and Utility relocation plans in a final and complete form and in such a manner that GDOT may accept the submittals with minimal review required.

Each Utility Agreement and Utility relocation plan submitted shall be accompanied by a certification from the DB Team stating that the proposed relocation will not conflict with the proposed highway improvement and will not conflict with another Utility Owner's relocation plan.

### **6.5.4 Utility As-Built Standard**

#### **6.5.4.1 General As-Built Utility Requirements**

The DB Team shall be responsible for managing, ensuring the accuracy of, and delivering all utility Record Drawings, which must be provided after utility relocations are completed and prior to Project closeout. The DB Team shall submit detailed as-built utility information, which will include all resulting abandoned or relocated utilities present within the Project limits. A “Record Drawing” will be submitted for each utility on the Project, whether the utility work is included in the contract price or the utility work is performed by the Utility Owner or the Utility's contractor.

The DB Team shall ensure the following:

1. All underground utilities that were relocated within the Project limits will be surveyed at the time of installation to determine the exact location and position of the utility line, including:
  - a) The outside diameter of pipe or width of duct banks and configuration of non-encased multi-conduit systems
  - b) The utility's structural material composition and condition
  - c) Identification of benchmarks used to determine elevations
  - d) Elevations with an accuracy of +/- 0.05 ft and certified accurate to the benchmark(s) used to determine elevations
  - e) Horizontal data accurate to within +/- 0.2 ft or applicable survey standards, whichever is more precise
  - f) Recording and labeling of the average depth below the surface of each run, all change of direction points, and all surface or underground components such as valves, manholes, drop inlets, clean outs, meters, etc.
    - i) For wet facilities – typically at 100' intervals

- ii) For dry facilities – typically at 25'-50' intervals, depending on the vertical alignment
- 2. All resulting abandoned or excavated underground utilities within the Project limits shall be clearly delineated and labeled as “abandoned” or “removed.”
- 3. All relocated aerial facilities shall be recorded to include the following:
  - a) Owner
  - b) Age
  - c) Size
  - d) Height
  - e) Number
  - f) Material type
  - g) General condition of the utility
  - h) Horizontal location surveyed to the same accuracies and precision as is required for the topographic data
  - i) Aerial Utility Owners attached to the pole
  - j) Horizontal connectivity of the utilities between the poles, including major service drops (substations or industrial facilities).

#### **6.5.4.2 As-Built Utility CADD Files and Plans Preparation**

The DB Team shall submit as-built information in GDOT’s current CADD format (Microstation and InRoads) and in PDF format in accordance with GDOT’s current Electronic Data Guidelines (EDG) and Plan Presentation Guide (PPG).

The DB Team shall ensure the as-built utility information is submitted as follows:

#### **CADD Files**

1. All points/data shall be placed in one (1) CADD file per Utility Owner.
2. DGN files shall be named using the naming convention “1234567UTLAB\_XYZ.dgn” (where “1234567” represents the PI# and “XYZ” the Owner’s UPC code).
3. One (1) empty, overall file using the naming convention “1234567UTLEAB.dgn” shall be created with all individual files named “1234567UTLAB\_XYZ.dgn” attached as reference files.
4. All UTLAB files shall follow the conventions set forth in the EDG for the UTLE file.
5. Sheet files, using GDOT’s title block, shall be created for each Utility Owner in accordance with Section 24, and Section 44 (if required) of GDOT’s PPG; levels shall be correctly turned on/off/grayed back to enable future printing if needed.
6. The Project’s scale shall be maintained.

7. Relocated poles shall be numbered and matched to a pole data table.
8. Pole data tables and point data tables shall be included.
9. All street names shall be labeled.
10. All easements and ROW shall be labeled.
11. The location and elevation of the referenced benchmark shall be identified and labeled; if the referenced benchmark is not within the Project limits, then a complete description of its location shall be provided to assist in future locating.
12. Any changes in details of design and/or additional supporting information, such as approved placement details, pipe sizes, material changes, geo-coded photos, etc., shall be labeled.

### **PDF Files**

1. PDFs of the CADD sheet files shall be created for each Utility Owner in accordance with Section 24, and Section 44 (if required) of the GDOT PPG; levels shall be correctly turned on/off/grayed back to enable future printing.
2. Include the name, address, and telephone number of the firm preparing the drawing in the title block.
3. Include the date the as-built data is collected in the revision block of the title block.
4. Include the Professional Surveyor's or Professional Engineer's stamp and statement certifying that Record Drawings reflect the true conditions in the field.
  - a. An electronic stamp may be used.
  - b. Certification applies to new as-built information (not to the existing utility information) provided by GDOT.
5. Provide the Contractors' statement (with an original signature and Project Number on the cover sheet and transmittal letter) verifying that all construction specifications and product qualities have been met.
6. Label "Record Drawing" on each sheet.

#### **6.5.4.3 Utility Record Drawings Review and Submittal Process**

1. The DB Team shall submit completed as-built CADD files and PDFs of the Record Drawings utility plan sheets to the DB Team's EOR for review and comment(s).
2. Each respective Utility Owner, whose work was included in the contract, shall receive a PDF copy of their Record Drawings for review and acceptance at the interval(s) specified in the Project's contract; all comments shall be provided to the DB Team.



3. The DB Team shall revise and make changes or adjustments to the as-built utility-related data, as necessary.
4. Record Drawings shall not be considered complete until the DB Team has responded to all comments from these reviews to the satisfaction of the DB Team's EOR and the Utility Owners.
5. The DB Team shall submit final Record Drawings utility plans to GDOT as follows:
  - a. One (1) overall, final CADD file in GDOT's current CADD Software with each Utility Owner's file appropriately attached as a reference file per GDOT's PPG and EDG
  - b. One (1) PDF set of Section 24, and Section 44 (if required) plans for each Utility Owner's facilities
6. Quality Assurance (QA) shall be performed by GDOT on all deliverables to determine compliance with GDOT's EDG and PPG before final acceptance by GDOT.

#### **6.5.4.4 Utility Facility Relocation Acceptance Form**

The Utility Facility Relocation Acceptance Form (see [Attachment 6-1](#)) shall be completed by the Contractor's Worksite Utility Coordination Supervisor (WUCS). It shall also be signed by an authorized representative of the Utility Owner and by the GDOT Project Manager upon completion and acceptance of the final utility as-built plans by the Utility Owner.

Execution of the Utility Facility Relocation Acceptance Form by the DB Team, Utility Owner and GDOT provides acknowledgement that the utility relocation work accomplished by the DB Team has been visually inspected and accepted by the Utility Owner as to having been constructed in accordance with the Utility Owner approved relocation design plans and their current specifications and the requirements of the Memorandum of Understanding (MOU) as executed by the Utility Owner. Further, the Contractor's WUCS shall provide the Utility Owner with a complete set of Record Drawings (CADD and PDF) reflecting the relocation work performed by the Contractor for review and approval. Upon completion of the Utility Facility Relocation Acceptance Form and the exchange of the final Utility Owner approved Record Drawings, all parties shall agree that the Utility Owner will operate and maintain the installed facilities covered by Utility Facility Relocation Acceptance Form going forward based on the date of execution by the GDOT Project Manager (PM). However, any items inadvertently overlooked and as identified in a subsequent utility punch list shall still be the responsibility of the DB Team to correct and provide up to date Record Drawings to the Utility Owner.

Execution of the Utility Facility Relocation Acceptance Form by GDOT does not confer legitimacy and accuracy or in any way transfers liability for errors or omissions made by the preparer.

## **7 RIGHT OF WAY (ROW) – Additional Properties**

*Refer to Volume 2.*

## 8 GEOTECHNICAL

### 8.1 General

The DB Team shall perform all geotechnical investigations, testing, research, and analysis necessary to effectively determine and understand the existing surface and subsurface geotechnical conditions. The DB Team shall ensure the geotechnical investigations and analyses are both thorough and complete, so as to provide accurate information for the design of roadways, pavements, foundations, structures, and other facilities that result in a Project that is safe and meets operational standards. The DB Team shall design the Project in conformance with GDOT policies, guidelines, and Attachment 3-1 Manuals.

All geotechnical reports, provisions, and recommendations developed by the DB Team and accepted and/or concurred by GDOT will be part of the Project's design and shall be endorsed by the EOR.

#### 8.1.1 Standards

The DB Team shall construct and maintain roadway pavements in conformance to GDOT's Pavement Design Manual and GDOT policies and procedures.

Other Work should be performed in accordance with GDOT's Geotechnical Engineering Manual and guidelines per EOR recommendations.

All other Work shall be performed in accordance with AASHTO guidelines, and Attachment 3-1 Manuals, and other provisions of the DB Documents.

### 8.2 Design Requirements

#### 8.2.1 Subsurface Geotechnical Investigation by the DB Team

The DB Team shall determine the specific locations, frequency, and scope of all subsurface geotechnical investigations, testing, research, and any analysis the DB Team considers necessary to provide a safe and reliable roadway, pavement, foundation, structure, and other facilities for the Project.

The DB Team shall prepare and amend, as needed, Geotechnical Engineering Reports as described later in this Section 8 documenting the assumptions, conditions, and results of the geotechnical investigation and analysis, including the following:

1. The geology of the Project area, including soil and/or rock types, and drainage characteristics.
2. Field investigations and laboratory test results used to characterize engineering and physical properties of soil and rock, including moisture content, plasticity index, gradations for each major soil strata change, levels of shrink/swell potential soil compressibility, and short-term and long-term settlement/ consolidation,

strength tests and engineering properties; recording rock recovery and rock quality designation in the field in addition to laboratory tests to determine compressive and split tensile strength tests of rock cores.

3. A discussion of conditions and results with reference to specific locations on the Project including dewatering plan and its impact on near-by structures.
4. Design and construction parameters resulting from the geotechnical investigation and analysis, including parameters for the design of pavements, pipes, foundations, structures, slopes, and embankments.
5. Plan view locations of field sampling, profile of boring logs and other field data, laboratory test results, calculations, and analyses that support design decisions taking into consideration down-drag on piles and soil squeeze in high embankments.
6. Include the slope stability analysis for embankment and excavation slopes including both short-term (undrained) and long-term (drained) conditions, and discussion of design measures undertaken to ensure stability and safety of all slopes. The analysis shall consider the potential for long-term surficial slide failures common to high plasticity clays in Georgia, and specific recommendations shall be provided to minimize their occurrence. Internal and external stability analysis shall be considered for walls supporting fill/cut within the Project.

Each Geotechnical Engineering Report along with back-up of calculations and input and output of GDOT recognized computer software, upon completion, shall be submitted to GDOT for review and comment as a Submittal.

If environmentally-sensitive conditions such as undocumented contaminated soil or archaeological sites are encountered during the subsurface exploration activities, the DB Team shall notify GDOT immediately. For hazardous materials, the DB Team shall also follow the requirements in Article 7.8 of the DBA and in GDOT Standard Specification 107.22.

### **8.2.2 Bridge Foundation Investigation (BFI)**

The DB Team shall perform a BFI for the Project that include bridge substructure work in conformance with this section, the GDOT Geotechnical Engineering Manual, AASHTO guidelines, and Attachment 3-1 Manuals for all new bridge construction and widening. The BFI report and all recommendations shall be reviewed and endorsed by the EOR.

#### **Pile Foundation**

1. The DB Team shall design and construct the pilings in accordance with all related special provisions per the approved Bridge Foundation Investigation recommendations.

2. All piles shall be embedded a minimum of 10 feet into natural ground and 10 feet below 500 year scour line with additional length determined by the lead Professional Engineer for geotechnical design.
3. Piles shall have minimum embedment in the following materials:

**Table 8-1: Pile Embedment Specifications**

Material and Density	Minimum Embedment
15- to 20-blow count soil	15 feet
40- to 50-plus blow count soil	10 feet
Hard rock (requires pilot holes)	5 feet

4. Pile tips should be set below any soft/loose soils that may settle/consolidate under the design load unless the soft/loose soils are at least deeper than five (5) pile diameters below the pile tip.
5. When piles must penetrate into rock to provide the minimum embedment, use pilot holes drilled a minimum of 5 feet into the rock.

**Drilled Caisson**

1. The DB Team shall design and construct the drilled caissons in accordance with Special Provision 524 per the approved Bridge Foundation Investigation recommendations.
2. When sound rock is encountered, drilled caissons shall be embedded a minimum of 10 feet into sound rock as defined by Special Provision 524.3.05 or per the approved Bridge Foundation Investigation recommendations.

**Spread Footings**

1. Top of footing shall be a minimum of 2 feet below the top of final grade.
2. Spread Footings should bear below the scour line, if applicable.

**8.2.3 Dynamic Pile Testing**

The DB Team shall perform dynamic pile testing using the Pile Driving Analyzer (PDA) to monitor the driving of piles with accelerometer and strain gauges attached to the piles. The DB Team shall perform a minimum of two (2) PDAs (one for the abutment and one for the intermediate bents), but no less than two percent (2%) of the production piles, and additional PDAs will be required for a change in bent type, change in abutment, change in geotechnical material, or as determined by the EOR. The DB Team shall perform the dynamic pile testing in accordance with ASTM D4945-08 and Special Provision 523 per the approved Bridge Foundation Investigation recommendations.

Upon completion of a PDA test, the DB Team shall provide a complete report consisting of but not limited to PDA field monitoring data, results of CAPWAP computer analyses, and the driving criteria recommendation from the geotechnical engineer who developed the BFI. The recommendation shall be endorsed by the EOR. The DB Team shall submit the report electronically in PDF format and the electronic data files of the PDA analysis and CAPWAP to GDOT and allow seven (7) calendar days for review and acceptance before proceeding with driving production piles.

#### **8.2.4 Soil Survey (SS)**

The DB Team shall perform Soil Survey for all Projects that include the design of roadway foundations, embankments, and the treatments for geotechnical and related problems on the Project in conformance with the GDOT Geotechnical Engineering Manual and Attachment 3-1 Manuals. The SS report and all recommendations shall be reviewed and endorsed by the EOR.

#### **8.2.5 Pavement Design**

The DB Team shall comply with the required minimum pavement design provided in Volume 2, Section 11.

If pavement design has not been previously approved by GDOT, then the DB Team shall prepare a pavement design report that confirms or revises the required minimum pavement design provided in Volume 2, Section 11. The pavement design report shall document the assumptions, considerations, and decisions contributing to the Project's pavement design and meet all requirements of GDOT's Pavement Design Manual.

For roadways adjacent to and crossing the Project that are disturbed by the construction activities of the Project:

1. The DB Team shall, at a minimum, match the in-place surface type and structure of the existing roadways.
2. All new shoulders shall be constructed as full depth shoulders unless otherwise specified in Volume 2.
3. The DB Team shall design all tie-in Work to avoid differential settlement between the existing and new surfaces.
4. The DB Team shall coordinate the design and construction of all cross roads with the Governmental Entity having jurisdiction whether a municipality, county, or GDOT.

#### **8.2.6 Wall Foundation Investigation (WFI)**

The DB Team shall perform a WFI for all Projects that include wall structures in conformance with the GDOT Geotechnical Engineering Manual, AASHTO guidelines, and Attachment 3-1 Manuals for all new walls and wall extensions. The WFI report and all recommendations shall be endorsed by the EOR.

### **8.2.7 High Mast Lighting Foundation**

See Volume 2.

## **8.3 Construction**

Materials used to construct the Project shall meet the minimum requirement as specified in GDOT specifications, policies and procedures, guidelines, and Attachment 3-1 Manuals. All materials used to construct the Project shall conform to the requirements of the GDOT Qualified Products List (QPL) or equivalent as approved by GDOT. Testing of materials shall be performed by personnel possessing the requisite GDOT materials certifications.

The DB Team shall be responsible for obtaining and complying with all Governmental Approvals for construction of the Project.

The DB Team shall submit to GDOT for review and acceptance any blasting plan(s). Blasting shall be performed in accordance with State Law, and in accordance with GDOT's specifications, policies and procedures.

## **8.4 Reserved**

## **9 SURVEYING AND MAPPING**

### **9.1 General**

The DB Team shall provide accurate and consistent land surveying and mapping necessary to support ROW acquisition, design, and construction of the Project. The DB Team is responsible for all surveying responsibilities.

The DB Team shall review existing survey data and determine the requirements for updating or extending the existing survey and mapping data. The DB Team is responsible for the final precision, accuracy, and comprehensiveness of all survey and mapping.

#### **9.1.1 Standards**

The DB Team shall provide surveying and mapping activities in accordance with the GDOT Automated Survey Manual and Attachment 3-1 Manuals, and other provisions of the DB Documents.

### **9.2 Administrative Requirements**

#### **9.2.1 Ownership**

The documents produced by the DB Team surveyor or the surveyor's subcontractors are the property of GDOT and release of any such document shall be approved by GDOT.

#### **9.2.2 Property Owner Notification**

The DB Team shall prepare for GDOT review and acceptance a property owner notification letter in accordance with the GDOT Automated Survey Manual prior to entering any private property outside the Existing ROW.

### **9.3 Design Requirements**

#### **9.3.1 Units**

All survey Work shall be performed in U.S survey feet. Work shall conform to state plane coordinates.

The combined sea level and scale factor for the Project shall conform to the GDOT Automated Survey Manual.

#### **9.3.2 Survey Control Requirements**

The DB Team shall ensure that all surveying conforms the Georgia Professional Land Surveying Practices Act, follows the General Rules of Procedures and Practices of the Georgia Board of Professional Engineers and Land Surveying, and otherwise conforms to all applicable Law. The DB Team shall ensure that any person in charge of the survey is proficient in the technical aspects of surveying, and is a Professional Land Surveyor (Surveyor).



The DB Team shall establish all horizontal and vertical primary Project control from approved control provided by GDOT. If the DB Team chooses to use GPS methods, the DB Team shall meet the guidelines as defined in the GDOT Automated Survey Manual.

The DB Team shall establish and maintain additional survey control as needed and final ROW monumentation throughout the duration of the Project.

The DB Team shall tie any additional horizontal and vertical control for the Project to the established primary Project control network.

All survey control points shall be set and/or verified by a Professional Land Surveyor.

The DB Team shall establish and maintain a permanent horizontal and vertical primary survey control network. The control network shall consist of, at minimum, horizontal deltas coordinated and elevated set in intervisible pairs at spacing of no greater than one (1) mile. Control monuments shall be installed per the GDOT Automated Survey Manual. Prior to construction, the DB Team in coordination with GDOT shall provide NOAA no less than a 90-day notification of planned activities that will disturb or destroy any geodetic control monuments. This will provide time to plan for and execute relocation of geodetic monuments. The DB Team shall replace all existing horizontal and vertical primary survey control points disturbed or destroyed. The DB Team shall make all survey computations and observations necessary to establish the exact position and elevation of all other control points based on the primary survey control.

The DB Team shall deliver to GDOT a survey control package in accordance with the criteria in the GDOT Automated Survey Manual. In addition, the DB Team shall deliver to GDOT a revised survey control package when survey monuments or control points are disturbed, destroyed or found to be in error.

### **9.3.3 Conventional Method (Horizontal & Vertical)**

If the DB Team chooses to use conventional methods to establish additional horizontal control, the DB Team shall meet the accuracy of the appropriate level of survey as defined in the GDOT Automated Survey Manual.

#### **9.3.3.1 Horizontal Accuracy Requirements for Conventional Surveys**

Horizontal control is to be established on the Georgia State Plane Coordinate System of 1985 [NAD83 or GCS 85], at a minimum.

Upon request by the DB Team, GDOT will compile and provide to the DB Team a survey control package of existing GDOT approved survey monumented data in the Project vicinity.

#### **9.3.3.2 Vertical Accuracy Requirements for Conventional Surveys**

Vertical control shall be established on the North American Vertical Datum of 1988 (NAVD 1988) as shown in Table 9-1.

**Table 9-1: North American Vertical Datum of 1988**

	1 <sup>st</sup> Order	2 <sup>nd</sup> Order	3 <sup>rd</sup> Order	Remarks and Formulae
Error of Closure	0.013 feet $\sqrt{M}$	0.026 feet $\sqrt{M}$	0.049 feet $\sqrt{M}$	Loop or between control monuments
Maximum Length of Sight	250 feet	300 feet		With good atmospheric conditions
Difference in Foresight and Backsight Distances	±10 feet	±20 feet	±30 feet	Per instrument set up
Total Difference in Foresight and Backsight Distances	±20 feet per second	±50 feet per second	±70 feet per second	Per total section or loop
Recommended Length of Section or Loop	2.0 miles	3.0 miles	4.0 miles	Maximum distance before closing or in loop
Maximum Recommended Distance Between Benchmarks	2000 feet	2500 feet	3000 feet	Permanent or temporary benchmarks set or observed along the route
Level Rod Reading	± 0.001 foot	± 0.001 foot	± 0.001 foot	
Recommended Instruments and Leveling Rods	Automatic or tilting w/ parallel plate micrometer precise rods	Automatic or tilting w/ optical micrometer precise rods	Automatic or quality spirit standard, quality rod	When two or more level rods are used, they should be identically matched
Principal Uses	Broad area control, subsidence or motion studies jig and tool settings	Broad area control, engineering projects basis for subsequent level work	Small area control, drainage studies, some construction and engineering	

**9.3.4 Reserved**

**9.3.5 Right of Way Surveys**

The DB Team shall base all surveys on the primary horizontal and vertical control network established for the Project.

### 9.3.5.1 Accuracy Standard

In performing ROW surveys consisting of boundary locations, the DB Team shall meet the accuracy standards of the appropriate level of survey as defined in the following table.

**Table 9-2: Chart of Tolerances**

	Urban / Rural	Urban Business District	Remarks and Formulae
Error of Closure	1:20,000	1:20,000	Loop or between Control Monuments
Angular Closure	15" $\sqrt{N}$	10" $\sqrt{N}$	$N$ = Number of Angles in Traverse
Accuracy of Bearing in Relation to Source*	20 "	15 "	$\sin \alpha$ = denominator in error of closure divided into 1 (approx.)
Linear Distance Accuracy	0.1 foot per 1,000 feet	0.05 foot per 1,000 feet	$\sin \alpha \times 1000$ (approx.) where $\pm$ = Accuracy of Bearing
Positional Error of any Monument	$AC/10,000$	$AC/15,000$	$AC$ = length of any course in traverse
Adjusted Mathematical Closure of Survey (No Less Than)	1:50,000	1:50,000	

\*GDOT policy requires all bearings or angles be based on the following source: Grid bearing of the Georgia Coordinate System of 1985, with the proper zone and epoch specified.

### 9.3.6 Survey Records and Reports

The DB Team may use electronic field books to collect and store raw data. The DB Team shall preserve original raw data and document any changes or corrections made to field data, such as station name, height of instrument, or target. The DB Team shall also preserve raw and corrected field data in hardcopy output forms in a similar manner to conventional field books for preservation.

Field survey data and sketches that cannot be efficiently recorded in the electronic field volume shall be recorded in a field note volume and stored with copies of the electronic data.

All field notes shall be recorded in permanently bound books. (Loose leaf field notes will not be allowed.) The DB Team shall deliver copies of any or all field note volumes to GDOT upon request.

The documents produced by the Surveyor, or the Surveyor's subcontractors, are the property of GDOT, and release of any such document shall be approved by GDOT prior to release.

All topographic mapping created by the DB Team shall be provided to GDOT in digital terrain model format using the software and version thereof being used by GDOT at the time of delivery.

## **9.4 Construction Requirements**

### **9.4.1 Units**

Comply with the requirements in Section 9.3.

### **9.4.2 Construction Surveys**

Comply with the requirements in Section 9.3.

### **9.4.3 ROW Monuments**

Comply with the requirements in Section 9.3.

Upon completion of the ROW acquisition and all Construction Work, such that the Final ROW Lines will not be disturbed by construction, the DB Team shall set permanent and stable concrete ROW monuments (constructed according to current GDOT specifications) located on the final ROW line at all points of curvature (PCs), points of tangency (PTs), points of intersection (PIs), miters and breaks, points of compound curvature (PCCs), points of reverse curvature (PRCs), and all intersecting crossroad ROW lines. In addition, the DB Team shall set permanent and stable concrete ROW monuments (constructed according to current GDOT specifications) located on all final ROW lines where the distance between such significant ROW line points exceeds fifteen hundred (1,500) feet at no more than 1,000-foot intervals.

The DB Team shall purchase all materials, supplies, and other items necessary for proper survey monumentation.

## **9.5 Reserved**

## 10 GRADING

### 10.1 General

The DB Team shall conduct all Work necessary to meet the requirements of grading, including: clearing and grubbing; excavation and embankment; removal of existing buildings, pavement, and miscellaneous structures; subgrade preparation and stabilization; dust control; aggregate surfacing; and earth shouldering.

All borrow, stockpile, and waste sites for this Project shall be environmentally approved prior to construction activities occurring in them. All common fill or excess material disposed of outside Project Right of Way shall be placed in either a permitted solid waste facility, a permitted inert waste landfill, or in an engineered fill. See Standard Specifications Construction of Transportation Systems, Special Provisions, Shelf Special Provisions, Reference Special Provisions, and Supplemental Specifications thereto for additional information.

Existing bridge and/or construction debris shall not be disposed of within the Project. The DB Team shall provide an environmentally approved site to dispose the existing bridge and/or construction debris at no additional cost to GDOT.

Should the DB Team discover any non-permitted encroachment in the existing right of way, the DB Team shall notify GDOT. The DB Team shall not take any action to remove the encroachment without GDOT approval.

Any features that are abandoned in place, e.g. parking lots, abandoned pavements, sidewalks, driveways, catch basins, drop inlets, pipes, manholes, curbing, retaining walls, utilities, foundations, paved floors, underground tanks, fences, bridges, buildings, and other incidental structures shall be removed to the following depths:

1. Abandoned pavements: Ensure existing pavement inside the Project no longer being used is obliterated, graded to drain, and grassed.
2. Abandoned pipes: Ensure abandoned pipes that are left in place are grout filled or filled with flowable fill.
3. Under pavements: Remove to a depth of at least three (3) feet below the finished subgrade elevation.
4. Underneath other structures: Remove to at least three (3) feet below the foundations of any proposed structure, including installations such as guard rail posts and utility poles.
5. Elsewhere within the ROW and easement areas, remove as follows: Remove to at least three (3) feet below the finished surface of slopes and shoulders and one (1) foot below natural ground outside construction lines.

6. Thoroughly crack or break abandoned structures that may impound water. These structures include but are not limited to concrete floors, basements, catch basins, and other structures within ten (10) feet of finished grade.
7. Break floors so that no section greater than ten (10) square feet remains intact.

### **10.1.1 Standards**

The DB Team shall provide grading activities in accordance with Attachment 3-1 Manuals and other provisions of the DB Documents.

## **10.2 Demolition and Abandonment Plan**

The DB Team shall develop, implement, and maintain, for the Term, a Demolition and Abandonment Plan for all existing structures, features, and utilities as described in Section 10.1 above (types and sizes) that will be removed, abandoned or partially abandoned during the Term. The Plan shall ensure that said structures are structurally sound after the abandonment procedure. The Plan shall show the locations of all existing features as listed in Section 10.1 that will be abandoned and shall show sufficient detail for the Abandonment.

GDOT reserves the right to require the DB Team, at any time to salvage equipment and/or material in an undamaged condition and to deliver to a location designated by GDOT within the GDOT District in which the Project is located. GDOT shall have first right of refusal to retain any salvage material or equipment. If GDOT decides not to salvage the material or equipment, the DB Team shall take possession but not reuse for the Project. All material incorporated into the Project shall be new.

The material from structures designated for demolition shall be the DB Team's property. All material removed shall be properly disposed of by the DB Team outside the limits of the Project.

## **10.3 Slopes and Topsoil**

The DB Team shall comply with Attachment 3-1 Manuals regarding design limitations and roadside safety guidelines associated with the design of slopes along roadways. The DB Team shall adjust grading to avoid and minimize disturbance to the identified waters of the U.S. The DB Team's grading plan shall be in accordance with the approved Environmental Documents. The DB Team shall secure all associated Governmental Approvals to meet the Released for Construction (RFC) plans.

The DB Team shall perform finished grading and place topsoil in all areas suitable for vegetative slope stabilization (and areas outside the limits of grading that are disturbed in the course of the Work) that are not paved.

The DB Team shall clear the entirety of cut slopes within the available Right of Way. Debris shall be removed by the DB Team.

## **10.4 Special Flood Hazard Areas Fill Mitigation**

*Refer to Volume 2*

## 11 ROADWAYS

### 11.1 General

The DB Team shall coordinate its roadway design, construction, maintenance, and operation with all other work planned or under construction by GDOT and/or Governmental Entity.

Whenever the DB Team receives a design request from an adjacent property owner, the DB Team shall, within thirty (30) days of the request, produce a report to GDOT identifying the nature of the request, the financial consequences to GDOT of compliance (if any), the DB Team's assessment of the feasibility of compliance, any Change Requests from the Technical Provisions that would be required, and any potential risks to GDOT that may arise from implementation of the design request such as environmental and permitting risks. Where the DB Team determines that there are no financial consequences to GDOT, time impacts to the Project, or Change Request from the Technical Provisions, and provided that GDOT raises no objection within thirty (30) days of the DB Team's report, the DB Team may proceed with the implementation of the design request at its option and shall advise GDOT in writing of its decision.

No open cutting (removal of pavement to construct, repair, or relocate utilities/drainage structures or for any purposes that cause a full depth cut of existing pavement and removal of any subgrade beneath) of the Travel Lane pavements or ramp pavements shall be allowed without prior approval of GDOT. Any pavement that is open cut as described in this paragraph shall be repaired in kind prior to the Travel Lane or ramp being opened to traffic.

The stockpiling of materials may be permitted on a case-by-case basis provided that participation is based on the appropriate value of approved specification materials delivered by the DB Team to the Project Site, or other designated location in the vicinity of the Project and the terms and conditions below. Stockpiled materials that may qualify for material allowances include materials that are not readily available, can be easily identified and secured for this Project, and, can be stockpiled for long periods without detriment. The procedure identified in GDOT Supplement Specifications 109.07.B shall be used to process a Material Allowance Request. Other provisions include:

1. Stockpiles shall be constructed in conformity with the provisions in the current GDOT Standard Specifications, Construction of Transportation Systems. Appropriate erosion control measures shall be placed and maintained, and the site shall be restored to its original condition.
2. The stockpiled material shall be stored in such a manner that security and inventory can be maintained. The DB Team shall be responsible for storage of said materials at no additional cost to GDOT.



3. The material shall be supported by a paid invoice or receipt for delivery, with the DB Team to furnish the paid invoice within a reasonable time after receiving payment.
4. The material shall comply with the requirements of the plans and specifications.
5. Any damage to material due to the delay in incorporation of the material into the Final Plans, shall be at the risk of the DB Team.
6. The quantity of material shall not exceed the quantity required by the Project, nor shall the value exceed the appropriate portion of the Schedule of Values item in which the material is to be incorporated.
7. If the stockpiled material is embankment or other erodible material, then proper erosion control measures shall be adhered to.

#### **11.1.1 Standards**

The DB Team shall provide activities in this section in accordance with GDOT *Standard Specifications, Construction of Transportation Systems*, other Attachment 3-1 Manuals, and other provisions of the DB Documents.

### **11.2 Design Requirements**

The DB Team shall coordinate its roadway design with the design of all other components of the Project. The Project roadways shall be designed to integrate with streets and roadways that are adjacent or connecting to the Project.

The Project roadways shall be designed to incorporate roadway appurtenances, including fences, noise attenuators, barriers, and hazard protection as necessary to promote safety and to mitigate visual and noise impacts on neighboring properties. Fence type shall be replaced in accordance with GDOT's Construction Standards and Details. Should the existing type of fence not match the type provided in GDOT's Construction Standards and Details, the type of proposed fence shall be submitted to GDOT for approval prior to construction.

The DB Team shall design and construct any and all proposed intersection reconstruction or rehabilitation to meet the requirements of the Environmental Document Approvals and Attachment 3-1 Manuals.

#### **11.2.1 Design Criteria Order of Precedence**

The following requirements shall be adhered to for the design of the Project. The plans provided in the Reference Information Documents are provided for reference only and may contain or conform to some but not all of the design requirements herein. In the event of any conflict, ambiguity or inconsistency among the following design criteria, the order of precedence, from highest to lowest, one being higher than two, shall be as follows:

1. Allowable Design Exception(s)/Variance(s) as set forth in Section 11.2.7
2. Volume 2 and Volume 2 Attachments (Technical Provisions)

### 3. Volume 3 and Volume 3 Attachments (Programmatic Technical Provisions)

#### **11.2.2 Vibration Control**

The DB Team is responsible for any and all vibration-related damages to existing structures or other facilities located in the vicinity of construction related activities. Where vibration-inducing construction activities are to be performed in the vicinity of existing properties, structures, utilities, or other facilities, the DB Team shall evaluate potential impacts and develop a Vibration Control Plan for GDOT review and acceptance. The plan shall include certain triggers of action to ensure no damage to existing structures occurs, as well as a means to resolve public concerns for the vibration at any level. Additional requirements for the Vibration Control Plan are as follows:

1. Use attenuation relationships published by applicable governmental agencies and/or applicable equipment manufacturers to estimate the zones within which vibrations caused by the Project may impact existing properties and facilities.
2. Within the zone of potential vibration impacts, conduct site reconnaissance of properties during site investigations to determine the sensitivity of each structure/facility to vibrations.
3. List all properties that may be adversely affected by vibrations.
4. Conduct a preconstruction survey of each structure determined to be susceptible to vibrations.
5. Provide GDOT with recommendations to mitigate damage to structures and/or properties that may be adversely affected by vibrations.
6. Use the vibration monitoring records to develop attenuation curves for predicting vibrations at varying distances from the source.

The DB Team shall adjust operations immediately if the threshold readings above are exceeded.

#### **11.2.3 Blasting**

The DB Team shall follow GDOT Standard Specification 107.12 and Supplemental Specifications 107.12 2016 Edition.

#### **11.2.4 Control of Access**

The DB Team shall maintain all existing property accesses, including those not shown on the schematic, and shall not revise control of access without GDOT review and the written agreement of the affected property owner. Access control shall be in conformance with the *GDOT Regulations for Driveway and Encroachment Control*.

#### **11.2.5 Typical Section(s) and Pavement Design**

*Refer to Volume 2.*

### **11.2.6 Additional Roadway Design Requirements**

The DB Team shall coordinate, design and construct the improvements on crossing streets in accordance with the requirements of the Governmental Entity having jurisdiction of said roadway.

All roadside safety devices used on the Project shall meet current crash test and other safety requirements that meet or exceed current GDOT requirements.

Longitudinal pavement joints shall not be located in the wheel path of the traveling public unless specifically approved by GDOT in writing.

When designing and constructing hardscape elements at intersections, at a minimum, the DB Team shall use colored textured concrete in all raised medians. Monolithic concrete medians shall not be permitted. Stamped concrete may only be used where the DB Team acquires written agreement, in a manner acceptable to GDOT, from local Governmental Entities to maintain it, and where it meets the requirements in GDOT specifications, policies, procedures, and Attachment 3-1 Manuals.

Concrete paving shall be used in hard to reach mowing areas or under structures, (such as, but not limited to, areas near or next to or between guard fence posts, sign posts, bent columns, next to retaining walls, freeway ramp gores, paved ditches, flumes, ditch inlets, etc.

When construction impacts existing cable barrier that will remain in place, new end terminals shall be installed as required to ensure cable barrier remains in operation at all times. If existing cable barrier cannot remain in operation during construction, temporary concrete barrier shall be installed in the same general location as the existing cable barrier for the full length impacted, including approaches.

### **11.2.7 Allowable Design Exception(s)/Variance(s)**

*Refer to Volume 2.*

### **11.2.8 Visual Quality**

*Refer to Volume 2.*

### **11.2.9 Permanent Lighting**

*Refer to Volume 2.*

### **11.2.10 Related Transportation Facilities**

The DB Team shall design and construct all new roadway and bridges to accommodate the planned expansions or updates of Related Transportation Facilities as found in Volume 2.

## **11.3 Construction**

*Refer to Volume 2.*

## 12 DRAINAGE

### 12.1 General

Effective performance of the drainage design and construction implemented for the Project (“the Drainage System”) is an integral part of the success of the Project. All stormwater runoff that flows through the Project, whether originating within or outside the Project, must be accounted for in the design of the Drainage System. All existing and proposed riverine/tidal bridges, stormwater conveyances (open-channel and closed-conduit), inlets, and stormwater management such as detention/retention ponds are included as part of the Drainage System.

The Drainage System shall meet the following requirements:

1. The analysis, design, and construction of all components of the Drainage System shall address the interim conditions during construction of the Project and the conditions depicted in the RFC Plans.
2. The Drainage System shall have adequate capacity to convey all stormwater through the Project without any adverse impacts to upstream and/or downstream adjacent properties.

#### 12.1.1 Standards

The DB Team shall provide activities in this section in accordance with GDOT's *Manual on Drainage Design for Highways (Drainage Manual)*, Attachment 3-1 Manuals, and other provisions of the DB Documents.

### 12.2 Administrative Requirements

#### 12.2.1 Data Collection

The DB Team shall collect all necessary data, including those components outlined in this Section 12.2.1, to establish a Drainage System that complies with the requirements and accommodates the historical hydrologic flows within the Project limits.

The DB Team shall collect all available data identifying stormwater runoff obligations, including:

1. Water quality regulations as imposed by local, State and federal governments
2. National Wetland Inventory and any other wetland/protected waters inventories
3. Any local floodplain ordinances in effective Federal Emergency Management Agency (FEMA) floodplains
4. Any restrictions on discharging storm water to environmentally sensitive areas, navigable waters or coastal zones

5. Official documents concerning the Project, such as the Environmental Documents and any other drainage or environmental studies

The DB Team shall determine any stormwater runoff issues that may include areas with historically inadequate drainage (evidence of flooding or citizen complaints of flooding), maintenance problems associated with drainage, and areas known to contain Hazardous Materials. The DB Team shall identify watershed boundaries, protected waters, areas classified as wetlands, floodplains, and boundaries between regulatory agencies (e.g., watershed districts and watershed management organizations).

The DB Team shall acquire all applicable municipal drainage plans, watershed management plans, coastal zone management plans, and records of citizen concerns. The DB Team shall acquire all pertinent existing storm drain plans, bridge hydraulic studies and/or survey data, including data for all culverts, drainage systems, storm sewer systems, and bridges within the Project limits. The DB Team shall also identify existing drainage areas and calculate the estimated runoff to the Drainage System.

The DB Team shall obtain photogrammetric and/or geographic information system (GIS) data for the Project that depict any impaired waters as listed by EPD. The DB Team shall conduct surveys for information not available from other sources.

If documentation is not available for certain components of the existing drainage system within the Project limits and these components are scheduled to remain in place, the DB Team shall investigate and video record or photograph these components to determine condition, size, material, location, and other pertinent information.

The data collected shall be taken into account in the Final Plans of the drainage facilities.

### **12.2.2 Coordination with Other Agencies**

The DB Team shall coordinate all stormwater runoff issues with affected interested parties and regulatory agencies, including EPD, USACE, and USFWS.

### **12.3 Design Requirements**

Within the Construction Maintenance Limits, the DB Team shall upgrade all substandard drainage facilities where the design and construction of the Project propose to utilize or impact those facilities. A drainage facility utilized on the Project is any drainage facility receiving Project stormwater runoff and/or any drainage facility conveying stormwater through the Project. A substandard drainage facility is any stormwater drainage system component where the existing structural condition per Section 13 and/or hydraulic capacity per this Section 12 is inadequate to carry additional stormwater generated by the Project. The design of the Drainage System shall include reconfiguration of the existing drainage systems within the Project limits and design of new storm drainage systems as required per the performance requirements, defined in this Section 12.

Damage to existing infrastructure due to the DB Team's operation shall be immediately repaired to maintain existing system capacity at all times. This permanent repair shall be at the DB Team's expense.

The DB Team shall provide facilities compatible with the existing drainage system and all applicable municipal drainage plans or systems in adjacent properties. The DB Team shall preserve existing drainage patterns wherever possible.

The DB Team may utilize the existing drainage facilities, provided overall drainage requirements for the Project are achieved. Modifications of existing systems or installations of new drainage systems to create in-line/buried/subsurface/underground detention or stormwater runoff storage shall not be allowed. The use of blind junctions and/or non-accessible structures shall not be allowed unless otherwise approved in writing by GDOT. The DB Team shall not install and/or utilize longitudinal storm sewer pipe under travel lanes unless approved in writing by GDOT. If no modification or upgrading of the existing GDOT stormwater system is required, the DB Team shall, at a minimum, maintain the existing system. This maintenance includes silt removal from any pipe, ditch, or structure and removal of any debris prior to the use of any existing GDOT stormwater system. This maintenance shall be at the DB Team's expense.

The DB Team shall base its Final Plans on design computations and risk assessments for all aspects of Project drainage.

The DB Team shall design channels and ditches such that erosion within and downstream of the channels and ditches is controlled by channel protection designed with GDOT's channel protection design program ( <http://liningdesign.ce.gatech.edu/> ). Roadside and median channel design shall be based on the design storm events specified in GDOT's Drainage Manual. The design high water elevation shall be at least six (6) inches below the roadway's normal shoulder break point. The travel lane shall not be encroached upon during the 50-year design storm event. On depressed roadways/sections, at low points and sag locations/areas/points, all median drains shall be designed for the 50-year design storm event such that the water will not reach the bottom of the pavement structure. All roadway, berm, surface, and outfall ditches shall be designed such that the 25-year design storm event will not reach the bottom of the pavement structure. A 50-year design storm event shall be used for ditches and channels at low points where flow must escape through an inlet. This requirement does not apply to roadways where water can escape over a curb, roadway, etc. into another channel. If these requirements are not achievable with a channel, the DB Team may design an open concrete-lined conveyance limiting ponding per Section 12.3.2.3, Gutter Spread/Ponding.

The DB Team shall coordinate with FEMA and/or the appropriate local Governmental Entities regarding any impacts to regulatory floodways and floodplains. In the event a Conditional Letter of Map Revision (CLOMR) is required, the DB Team shall obtain local Governmental Entity approval and coordinate the subsequent submission to FEMA as early in the Project timeline as possible. The DB Team shall allow up to one (1) year in the schedule for FEMA approval of any required CLOMR review.

The DB Team shall design the Project to follow FEMA regulations in FEMA regulated floodplains. This may include bridge structures over streams, bridge(s) or bottomless culverts over streams, increasing the tie slope and/or utilizing retaining walls to reduce fill in the floodplain/floodway.

All areas of the Project shall comply with the Post-Construction Stormwater Design Guidelines contained in the Drainage Manual.

Flood damage potential for the completed Project shall not exceed pre-Project conditions.

### **12.3.1 Surface Hydrology**

#### **12.3.1.1 Design Frequencies**

The DB Team shall use the Design Discharge Criteria in the *Drainage Manual* and comply with [CFR Part 650-Bridges, Structures, and Hydraulics](#).

If a design storm frequency is not specified for a given component of the temporary Drainage System, the DB Team shall use the design storm frequency as required for the corresponding facility in the Final Plans.

#### **12.3.1.2 Hydrologic Analysis**

The DB Team shall design the Drainage System to accommodate the Project drainage areas. These areas may extend outside of the Project limits.

The DB Team shall perform hydrologic analyses for the design of drainage features during the staging of construction and for the Final Plans for the Project according to the Drainage Manual.

### **12.3.2 Storm Sewer Systems**

Where precluded from handling runoff with open channels or ditches, the DB Team shall design enclosed storm sewer systems to collect and convey runoff to appropriate discharge points.

The DB Team shall prepare storm sewer analyses, which shall constitute a section of the Drainage Design Report that contains, at a minimum, the following:

1. Drainage area maps with each storm drain inlet and its pertinent data, such as delineated drainage area, topographic contours, runoff coefficients/design curve numbers, times of concentration, land uses, discharges, velocities and headwater elevations.
2. Detailed tabulation of all existing and proposed storm drains. This includes conveyance size and class or gauge; catch basin spacing/location and detailed structure designs.
3. Specifications for the pipe bedding material and structural pipe backfill on all proposed pipes and pipe material alternates.



4. Storm drain profiles, including pipe size, length, type, height of fill, class/gauge, gradient and design hydraulic grade line (HGL); and numbered drainage structures with station offsets from the roadway alignment and elevations.

#### **12.3.2.1 Pipes**

Storm drains shall be designed with design flow velocities greater than or equal to three (3) feet per second (fps) or slopes greater than or equal to 0.0100 ft/ft to prevent sedimentation in the pipe. Storm drains shall be designed to prevent surcharging of the system at the flow rate for the design year event.

All storm drains shall be reinforced concrete unless accepted otherwise by GDOT prior to installation. The DB Team shall adhere to the approved Geotechnical Engineering Report and ensure appropriate materials are used pursuant to Section 8.

Minimum pipe inside diameter shall be eighteen (18) inches. GDOT acceptance shall be required for all existing pipes to be utilized with a diameter less than eighteen (18) inches.

Existing pipe systems not meeting GDOT's maximum structure spacing requirement that are not being impacted by the construction of the Project may remain. If an existing system is impacted it shall be upgraded to meet the requirements of this Section 12.

#### **12.3.2.2 Municipal Separate Storm Sewer System (MS4)**

The DB Team shall follow requirements in the Drainage Manual for compliance with GDOT's General NPDES Stormwater Permit No. GAR 041000 (MS4 Permit). The DB Team shall also be directly responsible for the minimum control measures within the MS4 Permit, as required in Attachment 12-1 MS4 Responsibilities - Design-Build Project. The DB Team shall also adhere to Supplemental Specification 169 – Post-Construction Stormwater BMP Items (Attachment 12-2). BMP details are available on GDOT's website, and special grading sheets related to BMP details are posted in the RIDs.

Thirty (30) days prior to the end of each reporting period, as required in the MS4 Permit, the DB Team shall provide to GDOT annual report data covering the portion of GDOT's MS4 within the Project limits. The DB Team shall submit to GDOT a signed and sealed Post-Construction Stormwater Report prepared per the Drainage Manual for review and approval. Upon GDOT approval, the Report will be sent to EPD per the permit requirements. EPD will have sixty (60) days to disapprove the Report. GDOT will not issue substantial completion until after the 60-day EPD disapproval period ends. The DB Team may proceed with construction at their own risk prior to the 60 days expiring. GDOT will not issue reimbursement for any revisions to installed post construction BMPs as required by EPD.

The DB Team shall:

1. Attend GDOT training courses, Overview of Post-Construction Stormwater (O-PCS), CEI for Post-Construction BMPs (CEI), and Stormwater Pollution Prevention at Facilities (SWPP).

2. Provide GIS data of the existing and proposed storm sewer systems and all ditches within the ROW. This GIS data shall comply with GDOT's Supplemental Specification 156 – GPS Specifications for Conveyance Structures GIS Mapping (available on GDOT's website as part of the Supplemental Specifications Modifying the 2013 Standard Specifications, Construction of Transportation Systems, 2016 Edition); the DB Team shall contact GDOT to obtain the inventory standards and MS4 policy guidance prior to any data collection efforts.
3. Clean the existing drainage system sufficiently enough to allow for the proper detailed inspection of the system within the Project limits and as required in Section 19 for any proposed stormwater systems.

### **12.3.2.3 Gutter Spread/Ponding**

The DB Team shall design pavement drainage systems, in both staging of construction and the Project, to limit ponding to the widths listed below for the design storm frequency:

1. For all interstate highways and all roads other than interstates with design speeds of greater than 45 mph; ponding shall be confined within the shoulder. In no event shall any ponding occur in an interstate travel lane.
2. For all roads other than interstates with design speeds of 45 mph or less, ponding shall be confined to within one-half ( $\frac{1}{2}$ ) the lane adjacent the gutter/shoulder and the gutter/shoulder.
3. For all bridge decks, ponding shall be limited according to Section 13.2.2 Design Spread and Frequency in the Drainage Manual.

Note: Bicycle lanes are considered part of the shoulder for drainage design purposes.

Concentrated stormwater shall not be allowed/released to flow across any travel lane within the Project. The term "shallow-concentrated" shall be synonymous with "concentrated" with respect to flows across travel lanes. Only sheet flow shall be allowed to flow across travel lanes.

### **12.3.3 Hydraulic Structures (Culverts/Bridges)**

The DB Team shall analyze existing and proposed culverts and bridges impacted, replaced, or created by the Project design, for any flooding problems.

For all culverts, the DB Team shall determine the allowable headwater depth (HWd) for the design-year storm per the Drainage Manual and based on items such as potential damage or loss of use to adjacent property, the culvert, roadway, stream and/or floodplain, as well as traffic interruption or hazard to human life.

All hydraulic computations, designs, and recommendations shall be consistent with past studies and projects in the area performed by local, State, or federal agencies.

Where hydraulic design is influenced by upstream storage and/or tidal surges, the analysis of the storage and/or the tidal surges shall be considered in the design of the structure.

Bridge culverts shall have a minimum rise dimension of four (4) feet.

#### **12.3.3.1 Method Used to Estimate Flows**

The DB Team shall ensure the selected hydrologic method is appropriate for the watershed conditions.

As appropriate, the DB Team shall utilize flow information within FEMA Flood Insurance Studies (FIS) and any subsequent Letters of Map Revision (LOMR).

For crossings not located within a FEMA FIS or on a gauged waterway, the DB Team shall utilize the required method for calculating the design flows according to the Drainage Manual.

#### **12.3.3.2 Design Frequency**

Culverts and storm drain systems shall be designed for the Design Storm Event according to the Design Discharge Criteria in the Drainage Manual. Bridges shall be designed for the fifty- (50-) and one hundred- (100-) year frequencies.

#### **12.3.3.3 Hydraulic Analysis**

The DB Team shall evaluate a bridge(s) for contraction and pier scour concerns and shall design for scour protection in accordance with the Drainage Manual.

For bridge abutments in urban areas, the DB Team shall install protection in accordance with Section 15 (Landscape and Hardscape Enhancements).

#### **12.3.3.4 Riverine Bridge/ Bridge Culvert Design**

For existing bridges, the DB Team shall analyze each structure with the proposed flows to ensure it provides the required freeboard per the Drainage Manual. If this requirement is not met, the DB Team shall design and construct a replacement structure with sufficient capacity to pass the Design Storm Event flows while providing the required freeboards.

For existing bridge culverts, the DB Team shall analyze each structure with the proposed flows to ensure the headwater does not exceed that of the allowable headwater per the Drainage Manual. If this requirement is not met, the DB Team shall design and construct a replacement structure with sufficient capacity to pass the proposed Design Storm Event with a resulting headwater depth of no greater than the HWD.

Bridge/bridge culvert design shall maintain the existing channel morphology through the structure, if possible.

### **12.3.3.5 Bridge Deck Drainage**

Runoff from bridge decks shall be carried off the bridge and into the adjoining roadway drainage system. The roadway drainage design shall include bridge approach drains to intercept gutter/shoulder flow at each end of the bridge. Stormwater flowing toward the bridge shall be intercepted upstream of the bridge.

Open deck drains are not permissible for bridges passing over environmentally sensitive areas, roadways or railroads. In these situations, if ponding will exceed width limits, runoff shall be collected in inlets and conveyed in a closed deck drain system before discharging outside of these areas.

### **12.3.3.6 Drainage Report for Hydraulic Structures**

The DB Team shall prepare a Hydraulic and Hydrologic (H&H) Study and any other required documentation for all existing and/or proposed river and tidal bridge sites and for culverts that meet any of the conditions listed in the Drainage Manual (Section 12.1) and any Environmental Commitments identified in the approved Environmental Documents. Additional documentation may include the preparation and submittal of any CLOMR or LOMR required for community and/or FEMA coordination. The H&H Study shall further include the detailed calculations with electronic and printed copies of the computer software input and output files, as well as a discussion about hydrologic and hydraulic analysis and reasons for the design recommendations. At a minimum, for each crossing the H&H Study shall include:

#### Hydrology

1. Drainage area maps with watershed characteristics (hardcopy)
2. Hydrologic calculations (where computer software is used, both hardcopy report and electronic input and output files on a disc)
3. Historical or site data used to review computed flows

#### Hydraulics and Recommended Waterway Opening and/or Structure

1. Photographs of Site (pre- and post-construction)
2. General plan, profile, and elevation of recommended waterway opening and/or structure
3. Calculations – include a hardcopy report of output, in addition to electronic input and output files for all computer models used for final analysis or for permit request(s) as well as a summary of the basis of the models
4. Cross-sections of waterway (a hard copy plot, plus any electronic data used)
5. Channel profiles

#### Scour Analysis

1. Channel cross-sections at bridge(s) showing predicted scour depths

2. Calculations and summary of the calculations table, clearly showing predicted scour and assumptions regarding bridge opening and piers (dimensions, shape, etc.) used to calculate predicted scour
3. Discussion of the potential for long-term degradation/aggradations and effects
4. Recommendation(s) for abutment protection (type, size, dimensions, etc.)

These H&H Studies shall constitute a section in the Drainage Design Report.

## **12.4 Construction Requirements**

The DB Team shall design the Drainage System to accommodate construction staging. The design shall include temporary erosion control, sediment basins and other BMPs needed to satisfy the NPDES and other regulatory requirements. All environmental approval commitments related to drainage design and erosion control shall be included as notes on the plans for each stage of construction.

The DB Team shall obtain GDOT acceptance during the Term to utilize any existing stormwater system (all pipe, structure, ditch, detention/retention system or any other component necessary for the conveyance of stormwater) outside the Project limits. Maintenance responsibility and costs shall be as follows during the Term:

1. Costs to reconstruct or upgrade the substandard drainage facility(ies) outside the Project limits, shall be at the sole cost of the DB Team. Rehabilitation of substandard drainage facilities may be considered upon request from the DB Team. The rehabilitation shall meet the useful life as if the substandard drainage system structure was replaced as new.
2. Any stormwater system accepted by GDOT and constructed for the sole purpose of the Project outside of the Project limits shall be maintained by the DB Team at the DB Team's sole expense.
3. The DB Team, at the DB Team's expense, shall be responsible for maintenance and restoration of the existing system to its original intended purpose for any accepted existing stormwater system whether used jointly by the DB Team and GDOT or for the DB Team's sole use.
4. Maintenance work includes silt removal from any pipe, ditch, or structure, and removal of debris prior to the use of any existing GDOT stormwater system.

## **12.5 Deliverables**

The DB Team shall submit to GDOT for review and acceptance, a Drainage Design Report per the accepted Construction Phasing Plan, which shall be a complete documentation of all components of the Project's drainage system. At a minimum, the report shall include:

1. A set of all drainage computations, both hydrologic and hydraulic, with all support data;

2. Hydraulic notes, models, and tabulations;
3. Bridge and culvert designs and Hydraulic reports. (each riverine bridge layout/design shall be submitted at the same time as their corresponding H&H Study);
4. Pond designs, including a graphic display of treatment areas and maintenance guidelines for operation;
5. A correspondence file;
6. Drainage system data (location, type, material, size, and other pertinent information) in a suitable electronic format such as GIS;
7. A post-Construction Stormwater Report with a Post-Construction BMP Infeasibility Report as applicable; and
8. Storm sewer drainage reports (if applicable) including Temporary and Final Drainage System layout with staged erosion control BMP location details.

## 13 STRUCTURES

### 13.1 General

The structural Elements of the Project, including bridges, culverts, drainage structures, signage supports, illumination assemblies, traffic signals, retaining walls, and noise barrier, shall be designed and constructed in order to provide the general public a safe, reliable, and aesthetically-pleasing facility.

#### 13.1.1 Standards

The DB Team shall provide activities in this section in accordance with GDOT's Bridge and Structures Design Manual (GDOT Bridge Manual) as the primary reference, the current AASHTO LRFD Bridge Design Specifications (AASHTO LRFD Specifications), other Attachment 3-1 Manuals, and other provisions of the DB Documents.

Where AASHTO LRFD Specifications and GDOT Bridge Manual requirements contradict or conflict with one another, the GDOT Bridge Manual requirements shall take precedence.

Unless otherwise noted, design and detailing for all structural elements to be constructed or rehabilitated and incorporated within the Project (not including future replacement structures) shall be based on the LRFD methodology using the GDOT Bridge Manual as the primary reference.

### 13.2 Design Requirements

#### 13.2.1 Design Parameters

The DB Team shall ensure that bridges crossing over waterways are designed in accordance with Section 12 and the DB Documents.

The DB Team shall design and construct all new bridge structures to accommodate any planned expansions or updates of each facility by its respective Governmental Entity or GDOT as designated in their respective current transportation master plans. The current transportation master plans (if any) can be found in Section 11 of Volume 2. For the purpose of the Technical Provisions, superstructure is the portion of the bridge above and including the bearings, and the substructure is the remaining portion of the bridge below the superstructure.

Longitudinal expansion joints shall not be placed in the travel lane.

The DB Team may use GDOT Construction Standards and Details on the Project without updating to meet LRFD requirements. If the DB Team chooses to modify any of the standards and details, the design shall be updated to meet LRFD requirements.

### Vertical Clearances

New bridges constructed over interstate highways shall provide a minimum vertical clearance of seventeen (17) feet. New box girder bridges shall be seventeen (17) feet six (6) inches. All bent substructure elements over interstate highways, including straddle bents, shall provide a minimum vertical clearance of seventeen (17) feet six (6) inches. New bridges constructed over other roads such as State, Rural Secondary, and Urban Routes, as defined by the GDOT Design Policy Manual, shall provide a minimum vertical clearance of sixteen (16) feet nine (9) inches.

### Bridge Design Live Loads and Load Ratings

All new or widened bridges must be designed to carry an HL-93 vehicle live load. The DB Team is responsible for ensuring that each bridge meets the load rating requirements for the design vehicle, as well as all current state legal live loads. GDOT will perform a load rating as part of the final review for each bridge design. Load ratings will be performed according to the current GDOT policy and practices.

### Seismic Design

Bridges shall be designed in accordance with the seismic design guidelines in the GDOT Bridge and Structures Manual, as well as the current AASHTO LRFD Bridge Design Specifications.

### Fatigue Design

Fatigue design shall be in accordance with the GDOT LRFD Bridge and Structures Manual, as well as the current AASHTO LRFD Bridge Design Specifications.

## **13.2.2 Bridge Decks and Superstructures**

Timber bridges, masonry bridges, unpainted weathering steel, and structural plate arches will not be permitted. Bridges shall not use intermediate hinges.

The DB Team shall minimize the number of deck joints wherever possible. The DB Team shall locate joints to provide for maintenance accessibility and future replacement.

To the extent possible, the DB Team shall make bridge superstructures, joints, and bearings accessible for long-term inspection and maintenance. The DB Team shall make open-framed superstructures accessible with walkways or by use of ladders or an under-bridge inspection truck.

The DB Team shall provide concrete diaphragms for pre-stressed concrete beams spanning 40 feet or more.

Galvanized steel diaphragms are allowed on pre-stressed concrete beam bridges, with the following limitations:

1. Only structures with substantial clearance (20 feet or greater) over roadways are acceptable locations for galvanized steel diaphragms.



2. Structures over waterways are acceptable locations for galvanized steel diaphragms.
3. Concrete diaphragms shall be used over roadways where the beams may be impacted by over-height loads.
4. Bolts shall not be exposed on the exterior face of concrete beams.
5. Only steel X-type cross frames shall be used.

The maximum weight of beam that may be transported on State routes is limited. Shipping weights larger than 150,000 pounds, including the truck, shall be submitted to GDOT to determine if a special hauling route is necessary for delivery.

Bolted field splices are allowed for use on steel girders, provided the following requirements are met:

1. Bolts shall be placed in double shear.
2. Splice plates and bolts shall not encroach on the slab design thickness.
3. Direct Tension Indicators (DTIs) shall not be used.

The DB Team shall install locked entryways on all hatches and points of access.

Cover plates are prohibited for use on new steel beams. When widening existing bridges "in kind" that have cover plated members, use a larger member size that will not require plates. For strengthening and rehabilitation work of existing steel beams, the DB Team shall determine if there are other methods available to provide the required capacity before submitting to GDOT for acceptance. If accepted, cover plates shall be checked for fatigue in accordance with GDOT and AASHTO LRFD guidelines.

Fracture critical members (FCMs) shall not be used for bridges. Steel box girder straddle bent caps are considered FCMs due to their non-redundant properties and will not be permitted on the Project. Post-tensioned concrete straddle bent caps are not considered FCMs, as the post-tensioning strands provide internal redundancy. Bridges designed using rolled steel beams, steel plate girders, pre-stressed concrete I-beams and pre-stressed concrete bulb-tee beams as the main members of the bridge superstructure shall be designed and constructed using a minimum of four (4) beams in the bridge typical section. Joints for all grade separation structures shall be sealed.

Box girder superstructures and substructures shall be accessible without impacting traffic below. The DB Team shall make box girders and box beam pier caps with a minimum inside depth of six (6) feet to facilitate interior inspection. The DB Team shall include a minimum access opening of three feet (3'-0") diameter into all cells and between cells of the girders or pier caps to allow free flow of air during inspections. The outside access opening cover shall hinge to the inside of the box girder and pier caps. An electrical system (110V and 220V) shall be incorporated inside the box girder and pier caps with lighting and power outlets. The DB Team shall install air-tight sealed and locked entryways on all hatches and points of access.

### **13.2.3 Bridge/ Retaining Wall Foundations**

The foundation design shall be based on the recommendations of the accepted Bridge or Wall Foundation Investigation report and the requirements of Section 8 of Volumes 2 and 3. The DB Team shall perform LRFD bridge and wall foundation investigations for all proposed walls and bridges to be constructed on this Project. Except as provided in Section 8 of Volume 2, any previously accepted reports provided by GDOT are for informational purposes only and GDOT does not certify or warranty the information contained in these reports.

For bridges crossing streams or any other bodies of water, all foundations shall be evaluated and designed to account for the effects of scour. The design shall include the recommendations of the hydraulics and hydrological report to ensure that footings, piles and caissons/drilled shafts have the proper embedment below the scour line. Protection of slopes with rip rap shall be in accordance with the recommendations of the hydraulics report.

Foundations shall be designed based on LRFD methodology in accordance with Section 8, GDOT and AASHTO guidelines.

### **13.2.4 Bridge Railing and Barriers**

All barrier systems used on the Project shall meet current crash test and other safety requirements as determined by GDOT. All testing and associated costs for non-standard railings shall be the sole responsibility of the DB Team and shall be accomplished through a third party acceptable to GDOT.

### **13.2.5 Retaining Walls**

To the extent possible, the DB Team shall design and construct to provide embankments without the use of retaining walls. Where earthen embankments are not feasible, the DB Team may use retaining walls.

Metal walls, including bin walls and sheet pile walls, recycled material walls, and timber walls, shall not be permitted.

If pipe culverts are to extend through the retaining walls or noise barriers, the pipe shall be installed so that no wall expansion joints are located within two pipe diameters from centerline of the pipe or under the wall.

Weep holes through retaining wall faces shall only be located at the base of the walls.

Modular walls employing interlocking blocks shall not be used where surcharge loads from vehicular traffic are present or as part of bridge abutments.

Mechanically Stabilized Earth (MSE) walls shall not be used to support spread footing abutment foundations on the Project.

### **13.2.6 Aesthetics**

The DB Team shall design retaining/structural walls to be similar in color, texture, and style to other Elements present in the entire Project, such as structures, landscaping, and other highway components.

All embellishments for structural Elements shall be coordinated with the DB Team's structural design team to facilitate constructability and maintain safety requirements. Structural element surfaces exposed to public view shall meet the requirements of the Standard Specifications, Construction of Transportation Systems.

No exposed conduits shall be allowed on bents, columns, bridge beams, overhangs or any other visible surface. The DB Team is to minimize drain pipe exposure to public view.

All bridge substructure columns shall be consistent in form and texture, with similar shapes and details used for all bridges on the Project.

Bridges with all or part of the structure visible to traffic either passing beneath the bridge or travelling in lanes adjacent to the bridge shall use constant depth of fascia beams along the entire length of the bridge to maintain a uniform appearance. An exception to this requirement is at locations where the fascia beam material changes from steel to concrete or vice versa. In this case, cheek walls shall be used at piers to mask transitions where superstructure depth change is required due to the change in material type. Spans crossing mainline interstates shall be constructed with the same superstructure type over both directions of traffic; for example, do not span one direction with concrete and the other direction with steel.

Bridges that are not visible to traffic either passing beneath the bridge or travelling in lanes located adjacent to the elevated portions of the bridge are not required to have all fascia beams constant throughout the bridge length.

### **13.2.7 Drainage Structures**

In developing the design of drainage structures, the DB Team shall account for maximum anticipated loadings. "Step down" design shall not be utilized for any part of the proposed drainage system.

Energy dissipators, if used, shall be considered as structural Elements.

### **13.2.8 Sign, Illumination, and Traffic Signal Supports**

The DB Team shall be responsible for the design of overhead sign supports to accommodate a full load of signs for the Project. The DB Team shall use sign bridge (Type I), butterfly (Type III), or combination (Type IV) in accordance with GDOT's Attachment 3-1 Manuals. Type II sign (cantilever type) structures are not permitted.

Support columns for Type I, III, and IV overhead sign structures or traffic signal mast arms shall not be mounted to any portion of the new or existing bridge superstructure. Where an overhead sign structure or mast arm is required to be placed on a bridge, it shall be mounted either on the bridge substructure directly, such as the concrete pier cap, or on

a pier and foundation separate from the bridge entirely. For a sign structure that is mounted to the pier cap, the bridge pier must be designed for the additional loads and forces the sign structure will induce on the bridge substructure, including dead load, ice load, wind load, and vibration. Loads shall be developed in accordance with the current edition of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. For a sign structure or mast arm mounted to a foundation that is independent from the bridge, the design of the sign foundation shall be in accordance with the current edition of the AASHTO Standard Specification for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

### **13.2.9 Widening/Modification of Existing Structure**

Structures to be widened are listed in Section 13.2.9 of Volume 2. The DB Team shall rehabilitate/strengthen/replace that portion of the existing structure as recommended by the most recent bridge condition and bridge deck condition surveys, and the portions of the existing structure that must be strengthened or upgraded as a direct result of the widening. Examples include strengthening of an existing fascia beam or improving the strength of a pier cap to meet the increased load capacity requirements due to the new load distribution on those elements. Any portion of the existing bridges damaged as a result of the widening operations will be replaced or repaired at the DB Team's cost, as determined by GDOT. The DB Team shall provide any studies, calculations, and plans required for GDOT review and acceptance prior to any bridge widening or modification.

#### **13.2.10 Reserved**

## **13.3 Construction Requirements**

### **13.3.1 Concrete Finishes**

Concrete finishes shall comply with Section 15 and other requirements of the DB Documents.

### **13.3.2 Structure Metals**

Welding shall be in accordance with the requirements of the American National Standards Institute (ANSI)/AASHTO/ American Welders Association (AWS) D1.5M/D1.5:2010 Bridge Welding Code.

## **13.4 Final Bridge Inspection Prior to Substantial Completion**

GDOT will inspect all bridges constructed prior to Substantial Completion. GDOT will perform the initial bridge ratings as part of this Work. Bridges shall not be opened to traffic until accepted by GDOT.

The DB Team shall provide to GDOT an overall schedule of completion for each structure in accordance with the Construction Phasing Plan and coordinate an inspection schedule with GDOT that will meet the Substantial Completion Date.

## 13.5 Deliverables

### Preliminary Bridge Plan Layouts

The DB Team shall prepare Preliminary Bridge Plan Layouts in accordance with the GDOT Bridge Detailing Manual guidelines.

Additionally, the DB Team shall provide a typical section that indicates the following information:

1. The center-to-center spacing of girders
2. Overhang or distance from outside edge of slab to center of exterior girder: This distance (overhang) shall meet AASHTO requirements, but shall not exceed 4'-7½" or one half of the adjacent beam spacing, whichever is less. Overhangs shall be a minimum width of one-half top beam flange plus 6 inches.
3. Cross slope of the deck.
4. Deck thickness between girders and deck thickness at the centerline of girder measured from the top surface of deck to top of the flange
5. Barrier location, height and width
6. Gutter to gutter and out-to-out dimensions
7. Location of the profile grade

The DB Team shall also provide any drawing and/or narrative description of the construction scheme necessary to indicate how the bridge is to be built, including traffic handling sketches and temporary barrier locations.

### Preliminary Wall Plans

The DB Team shall prepare Preliminary Wall Plans in accordance with the GDOT Bridge Detailing Manual guidelines. The acceptable wall types are as follows:

1. MSE (Mechanically Stabilized Earth)
2. Alternate wall types, including cast-in place walls, are permissible. Soil-nail type walls and modular block type walls will not be permitted directly adjacent to areas subject to roadway surcharge loads, including bridge end bents.
3. Any construction sequence requirements that will affect the construction of the walls and which will have to be accounted for in the preparation of retaining wall plans.

### Bridge and Wall Construction Plans

After the preliminary bridge and wall layouts have been accepted by GDOT, the DB Team shall prepare final plans. The DB Team shall arrange a meeting with GDOT to specifically discuss how the plans will be prepared prior to beginning plan preparation on the Project.

The DB Team shall provide Submittals as required in Section 3, Attachment 3-1 Manuals, and in the DB Documents in addition to the following:

- Hardscape Enhancement Plan for bridges, retaining walls, noise barriers, sign structures, and other structure components as required in Section 15.

## **14 RAIL**

*Refer to Volume 2.*

## **15 LANDSCAPE AND HARDSCAPE ENHANCEMENTS**

*Refer to Volume 2.*



## **16 SIGNING, PAVEMENT MARKING, SIGNALIZATION**

### **16.1 General**

The DB Team shall design and construct all signing, delineation, pavement markings, and signalization for the Project.

#### **16.1.1 Standards**

The DB Team shall provide activities in this Section 16 in accordance with GDOT Signing and Marking Design Guidelines, Attachment 3-1 Manuals, Government Approvals, and other provisions of the DB Documents.

### **16.2 Administrative Requirements**

#### **16.2.1 Meetings**

The DB Team shall arrange and coordinate all meetings with local agencies that will assume responsibility for maintaining and operating traffic control devices including traffic signals. The DB Team shall provide GDOT with notification of such meetings a minimum of ten (10) Business Days prior to the start of the meeting. GDOT, in its discretion, may attend such meetings.

The DB Team shall arrange and coordinate all meetings with requesting agencies or individuals regarding special signs.

### **16.3 Design Requirements**

#### **16.3.1 Final Plans**

The DB Team shall submit the Preliminary and Final Plans for the signing, delineation, pavement marking, and signalization for GDOT review and acceptance.

#### **16.3.2 Permanent Signing and Delineation**

Signs for the Project shall include all new signs required for the Project, as well as replacing existing signs and structures impacted by the Project. The DB Team's design shall include the locations of proposed ground-mounted and overhead signs, as well as existing signs that are to remain, graphic representation of all signs, proposed pavement markings, delineation placement, guide sign and special sign details, clearance diagrams, and structural and foundation requirements. Signs shall be located in a manner that avoids conflicts with other signs, vegetation, CMS, lighting, and structures. The DB Team shall ensure that signs are clearly visible, provide clear direction and information for users, and comply with all applicable MUTCD requirements. The DB Team shall ensure that placement, construction and installation activities of signage shall avoid impacts to all environmentally sensitive resources. The DB Team shall prepare preliminary and final

unveiling plans for permanent signing 120 days and 60 days, respectively, prior to opening to traffic.

The DB Team shall ensure that all sign placements meet appropriate sight line requirements and standards. All sign structures and overhead signs shall be designed and located to ensure that they and any existing GDOT overhead signs have sight distance of at least 1,000 feet and shall meet any other MUTCD or GDOT Signing and Marking Design Guidelines, allowable sign spacing requirements.

The DB Team shall review with GDOT all requests for new signs, including traffic generators, or modifications of existing sign legend. Such requests are subject to GDOT's acceptance.

Any existing signs and sign structures impacted by the Project or in conflict with proposed signs shall be replaced with new signs and structures that comply with Attachment 3-1 Manuals, or as otherwise approved by GDOT.

All overhead signs on a single structure shall be the same height with the exception of general information or regulatory signs such as Rest Area or an R554-X.

Arrow per lane guide signs shall be required for all multi-lane exits at major interchanges that have an optional exit lane that also carries the through route and for all splits that include an option lane.

Sign attachments to any existing roadway bridge will not be allowed.

Support columns for Type I, III, and IV overhead sign structures shall not be mounted to any portion of the new bridge superstructure. When an overhead sign structure is required to be placed on a bridge it shall be mounted either on the bridge substructure directly, such as the concrete pier cap, or on a pier and foundation separate from the bridge entirely. For a sign structure that is mounted to the pier cap, the bridge pier must be designed for the additional loads and forces the sign structure will induce on the bridge substructure, including dead load, ice load, wind load and vibration. Loads shall be developed in accordance with AASHTO Standard Specifications for Highway Bridges, 17<sup>th</sup> Edition and the current edition of the AASHTO Standard Specification for Structural Supports for Highway Signs, Luminaires and Traffic Signals. For a sign structure mounted to a foundation that is independent from the bridge, the design of the sign foundation shall be in accordance with the current edition of the AASHTO Standard Specification for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

Supplemental signs on interstate highways shall comply with MUTCD. Guidance on destinations is provided in GDOT's Policies and Procedures 6775-9.

### **16.3.3 Project Signs – Outside the Existing and Proposed ROW**

For signs located outside the Existing ROW, Proposed ROW, and Additional Properties, but within a public ROW, the DB Team shall install the signs in existing rights of way controlled by local or other Governmental Entities. The DB Team shall coordinate with

applicable Governmental Entities for the design, approval, and installation of such signs. This shall include any trailblazing signing required for the Project.

#### **16.3.4 Reserved**

#### **16.3.5 Specific Service Signs**

In addition to the warning, regulatory, and guide signs within the Project, GDOT or Governmental Entities may allow specific service signs, such as LOGO signs, to be installed. The DB Team shall coordinate and cooperate with GDOT or any third party performing such work. The DB Team shall remove and remount any LOGO sign that conflicts with a proposed sign installation and also allow for proper sign spacing in accordance with GDOT Signing and Marking Design Guidelines and the MUTCD.

The DB Team shall contact Georgia Logos, LLC (770-447-6399) prior to removing or resetting LOGO signs. Cost for removing, resetting, and maintaining LOGO signs as necessary shall be included in the Contract Sum. Existing LOGO signs shall be maintained during construction on a moveable structure. Any LOGO signs damaged during construction shall be replaced at no additional cost.

#### **16.3.6 Sign Support Structures**

The DB Team shall determine foundation types and design sign foundations based upon geotechnical surveys/tests. Sign support structures shall be designed in accordance with GDOT Signing and Marking Design Guidelines and AASHTO's Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals. The DB Team design of the structural support for overhead signs shall be provided to GDOT and must provide for the maximum allowable sign area that can be placed onto the structure support as defined in GDOT Signing and Marking Design Guidelines. Type III structures shall be designed to accommodate at least five hundred fifty (550) square feet of sign area. A GDOT structural support number shall be placed on the outside vertical support of the structure. Requirements for the alphanumeric code are specified in the GDOT Signing and Marking Design Guidelines. The DB Team shall use sign bridge (Type I) or butterfly (Type III) overhead sign structures in accordance with GDOT's related standard specifications, policies, guidelines, and Attachment 3-1 Manuals. Designs for sign supports shall also comply with requirements in Section 13, Structures. Type II cantilever signs shall not be used for sign installations. The DB Team assumes all responsibility for ensuring that any existing overhead sign structure that has a change in design sign area and/or load due to new or revised signs must meet all structural requirements in the GDOT Signing and Marking Design Guidelines and AASHTO's Standard Specifications for Structural Supports for Highways Signs, Luminaires, and Traffic Signals.

#### **16.3.7 Permanent Pavement Marking**

The DB Team shall ensure that the design and installation of all pavement markings including Raised Pavement Markings (RPM) comply with the MUTCD, GDOT *Signing and Marking Design Guidelines*, and GDOT *Standards and Details*. RPMs shall be installed where new pavement marking is provided.

## **16.3.8 Permanent Signalization**

### **16.3.8.1 Traffic Signal Requirements**

The DB Team shall design and install fully-actuated permanent traffic signals at all GDOT-permitted intersections within Project limits. In addition, the DB Team shall modify, as appropriate, any existing traffic signals impacted by the Project. The DB Team shall coordinate with GDOT and the applicable local Governmental Entities to define appropriate traffic signal design requirements, local agency oversight of the DB Team's Work, and final acceptance of traffic signals. The DB Team shall coordinate with local Governmental Entities for synchronization of traffic signal networks.

The DB Team shall provide interconnection systems between new or modified signals and any other signal system within the Project Site as required by GDOT or the applicable local Governmental Entity. Connection of the completed system to the Governmental Entity's communications network shall be coordinated with the Governmental Entity. The DB Team shall ensure continuous communication with the traffic signal system within the Project Site, and shall provide all communication hardware/equipment for GDOT or the applicable local Governmental Entity to communicate with the signal systems within the Project Site.

The DB Team shall provide both pedestrian and vehicle detectors at all traffic signals per GDOT and/or applicable local Governmental Entity's (maintaining agency) requirements within the Project Site.

The DB Team shall coordinate with the GDOT TMC and the GDOT District Traffic Operations to ensure that all signalized locations are permitted prior to submission of Final Plans.

### **16.3.8.2 Traffic Signal Timing Plans**

The DB Team shall coordinate and implement signal timing plans that optimize traffic flows and provide signal coordination with adjacent intersections and arterials for all existing and new traffic signals, modified signals, and interconnected signals. The DB Team shall obtain acceptance from GDOT or applicable local Governmental Entity for the initial signal timings and updating signal timing as necessary to maintain optimized flow.

### **16.3.8.3 Traffic Signal Permit**

As part of the design process, the DB Team shall be responsible for obtaining necessary traffic signal permit or permit revisions by following applicable GDOT and/or local Governmental Entities signal permit process(es), prior to any new signal installation or existing signal modification.

#### **16.3.8.4 Traffic Signal Support Structures**

As part of the design process, the DB Team shall coordinate with GDOT and the local Governmental Entities to determine the type of acceptable traffic signal support structures. The DB Team shall obtain the maintaining agency's acceptance of traffic signal support structures to be used on new signal installations.

### **16.4 Construction Requirements**

#### **16.4.1 Permanent Pavement Marking**

The DB Team shall install full pattern pavement markings on all pavement courses before any roadway is opened to traffic in conformance with the MUTCD, GDOT Signing and Marking Design Guidelines, and GDOT's standards, details and specifications. RPMs shall be placed and/or maintained when the roadway is open to traffic.

Before placing any permanent pavement markings, the DB Team shall provide GDOT a layout indicating the proposed location of such items.

#### **16.4.2 Permanent Signing and Delineation**

The DB Team shall use established industry and utility safety practices when erecting or removing signs located near any overhead or underground utilities, and shall consult with the appropriate Utility Owner(s) prior to beginning such work.

The DB Team shall maintain all applicable advance guide signs and/or exit direction signs in place at all times and shall not obstruct the view of the signs to the motorist. The DB Team shall replace any other removed signs before the end of the work day.

Signing reflectivity shall conform to the current edition of the MUTCD and the GDOT Signing and Marking Design Guidelines.

Before placing any permanent signs, delineation, third-party signs, or non-standard sign structures, the DB Team shall provide GDOT a layout as part of the Final Plans indicating the proposed location of such items. Overhead sign structures and locations shall be submitted for review and acceptance by the GDOT Bridge Design and Maintenance Office.

#### **16.4.3 Permanent Signalization**

The DB Team shall coordinate with the Utility Owner(s) and ensure necessary power service is initiated and maintained for permanent signal systems.

The DB Team shall, after implementing accepted timing plans, provide GDOT and Governmental Entities (maintaining agencies) responsible for operation and maintenance of the traffic signal system legible written documentation of all intersection characteristics, timing plan parameters and installation information necessary for GDOT or the

Governmental Entity to incorporate the completed signal installation into the central intersection management software being used.

## **17 INTELLIGENT TRANSPORTATION SYSTEMS**

*Refer to Volume 2 for all Intelligent Transportation System requirements.*

## 18 TRAFFIC CONTROL

### 18.1 General

The DB Team shall provide for the safe and efficient movement of people, goods, and services through and around the Project while minimizing negative impacts to users, residents, and businesses.

#### 18.1.1 Standards

The DB Team shall provide activities in this section accordance with Attachment 3-1 Manuals, Government Approvals, and other provisions of the DB Documents.

### 18.2 Administrative Requirements

#### 18.2.1 Transportation Management Plan

The DB Team shall prepare and implement a Transportation Management Plan (TMP), if required, that meets the requirements of the FHWA Work Zone Mobility and Safety Program which can be found at:

[http://www.ops.fhwa.dot.gov/wz/resources/final\\_rule/tmp\\_examples/tmp\\_dev\\_resources.htm](http://www.ops.fhwa.dot.gov/wz/resources/final_rule/tmp_examples/tmp_dev_resources.htm)

At a minimum, the TMP shall include descriptions of the qualifications and duties of the traffic engineering manager, traffic control coordinator, Worksite Traffic Control Supervisor (WTCS), and other personnel with traffic control responsibilities. Additional requirements of the TMP are below:

1. Procedures to identify and incorporate the needs of transit operators, Utility Owners, Governmental Entities, local governmental agencies, emergency service providers, school districts, business owners, and other related users, Customer Groups or entities in the Project corridor and surrounding affected areas.
2. Procedures for obtaining acceptance of detours, road and lane closures and other traffic pattern modifications from applicable Governmental Entities, and implementing and maintaining those modifications. At a minimum, these procedures must include:
  - a. The DB Team shall notify the traveling public by placing CMSs a minimum of seven (7) days in advance of actual roadway closure or major traffic modifications. Where available and when possible, the DB Team shall coordinate and utilize overhead changeable message signs on the regional ITS system.
  - b. The DB Team shall utilize off-duty uniformed police officers for mainline lane closures.
3. Procedures for signing and marking transitions during construction from one stage to the next and from interim to permanent signing and marking.



4. Procedures for maintenance and replacement of traffic control devices, including pavement markings and traffic barriers, if used.
5. Procedures to regularly evaluate and modify, if necessary, traffic signal timings, and the procedures for the development, GDOT acceptance (and local Governmental Entity acceptance, if necessary), implementation, testing, and maintenance of all affected signals.
6. Procedures to coordinate with the appropriate Governmental Entities operating signal networks along the Project or Project detour routes to ensure temporary system compatibility, establish responsibilities for temporary signal installation, maintenance, operation and removal, and coordinate traffic signal timing with local signal networks.
7. Procedures and processes for the safe ingress and egress of construction vehicles in the work zone.
8. Provisions to provide continuous access to established truck routes and Hazardous Material (HazMat) routes, and to provide suitable detour routes, including obtaining any acceptances required by the appropriate governmental entities for these uses.
9. Procedures to modify plans as needed to adapt to current Project circumstances.
10. If required, procedures to communicate TMP information to the DB Team's public information personnel and notify the public of maintenance of traffic issues in conjunction with the requirements of Section 2.7 of Volume 2.
11. Descriptions of contact methods, personnel available, and response times for any deficiencies or Emergency conditions requiring attention during off-hours.

The TMP shall be submitted within one hundred twenty (120) days from NTP 1. The DB Team must obtain GDOT acceptance prior to NTP 3.

The safe, convenient passage of the traveling public shall be ensured by the DB Team at all times. The DB Team shall prepare contingency traffic control plans for use in relieving travel delays. If in GDOT's sole opinion, sustained traffic control placement creates unnecessary hindrance to the travelling public, the DB Team shall implement contingency plans that will alleviate traffic congestion immediately or cease traffic interruptions immediately upon notification from GDOT.

### **18.2.2 Worksite Traffic Control Supervisor (WTCS)**

The DB Team shall designate a qualified individual as the WTCS. The WTCS shall be responsible for selecting, installing, and maintaining all traffic control devices in accordance with the Plans, Specifications, Special Provisions and the MUTCD. The WTCS shall be currently certified by the American Traffic Safety Services Association (ATSSA) Work Site Traffic Supervisor Certification program or the National Safety Council Certification program. On-line classes will not be accepted.

The WTCS shall be available on a twenty-four (24) hour basis to perform duties. If the Work requires traffic control activities to be performed during the daylight and nighttime hours, it may be necessary for the DB Team to designate an alternate WTCS. An alternate WTCS must meet the same requirements and qualifications as the primary WTCS and be accepted by GDOT prior to beginning any traffic control duties. The WTCS's traffic control responsibilities shall have priority over all other assigned duties.

As the representative of the DB Team, the WTCS shall have full authority to act on behalf of the DB Team in administering the Traffic Control Plan. The WTCS shall have appropriate training in safe traffic control practices in accordance with Part 6 of the MUTCD. In addition to the WTCS, all other individuals making decisions regarding traffic control shall meet the training requirements of the Part 6 of the MUTCD.

The WTCS shall have a copy of Part 6 of the MUTCD and the Contract on the Site. Copies of the current MUTCD may be obtained from the FHWA web page at <http://mutcd.fhwa.dot.gov>.

The WTCS shall supervise the initial installation of traffic control devices. GDOT, prior to the beginning of construction, will review the initial installation. Modifications to traffic control devices as required by sequence of operations or staged construction shall be reviewed by the WTCS.

Any Work performed on interstate highway or limited access highway right-of-way that requires traffic control shall be supervised by a submitted/approved certified WTCS. No work requiring traffic control shall be performed unless the certified WTCS is on the work site. Failure to maintain a Certified WTCS on the work site will be considered as non-performance under Volume 1, Exhibit 18.

The WTCS shall be available on a full-time basis to maintain traffic control devices with access to all personnel, materials, and equipment necessary to respond effectively to an emergency situation within forty-five (45) minutes of notification of the emergency.

The WTCS shall perform inspections, at a minimum once a month, to ensure that traffic control is maintained. For all interstate and limited access highways, the WTCS shall perform, as a minimum, weekly traffic control inspections. The inspections shall start with the installation of the advance warning signs and continue until a Maintenance Acceptance is issued or when the punch list is completed.

An inspection shall include both daytime and nighttime reviews. The inspection shall be reported to GDOT on a Traffic Control Inspection Report (TC-1). Unless modified by the special conditions or by GDOT, routine deficiencies shall be corrected within a twenty-four (24) hour period. Failure to comply with these provisions shall be grounds for dismissal from the duties of WTCS and/or removal of the WTCS from the Project. Failure of the WTCS to execute his duties shall be considered as non-performance. GDOT will periodically review the Work for compliance with the requirements of the Traffic Control Plan.

On projects where traffic control duties will not require full time WCTS supervision, GDOT may allow the DB Team's Project superintendent, foreman, subcontractor, or other designated personnel to serve as the WTCS as long as satisfactory results are obtained. Nevertheless, the individual shall meet the requirements and perform the duties of a WTCS.

## **18.3 Design Requirements**

### **18.3.1 Traffic Control Plans**

The DB Team shall use the procedures in the TMP (if applicable) and the guidelines of the MUTCD, AASHTO's Roadside Design Guide, as well as comply with GDOT Special Provision 150 – Traffic Control to develop detailed traffic control plans which provide for all Construction Phases and construction stages, as well as all required traffic shifts procedures.

The DB Team shall produce a traffic control plan for every Construction Phase that impacts traffic. Each traffic control plan shall be submitted to GDOT for review a minimum of fourteen (14) days prior to implementation. The traffic control plan shall include details for all detours, traffic control devices, striping, and signage applicable to each Construction Phase. Information included in the traffic control plans shall be of sufficient detail to allow verification of design criteria and safety requirements, including typical sections, alignment, striping layout, drop off conditions, and temporary drainage. The traffic control plans shall clearly designate all temporary reductions in speed limits. Changes to posted speed limits will not be allowed unless specific prior acceptance is granted by GDOT.

Opposing traffic on a divided roadway shall be separated with appropriate traffic control devices in accordance the MUTCD based on the roadway Design Speed and Attachment 3-1 Manuals.

The DB Team shall maintain signing continuity on all active roadways within or intersecting the Project at all times.

Throughout the Term, the DB Team shall ensure all streets and intersections remain open to traffic to the greatest extent possible by constructing the Work in stages. The DB Team shall maintain access to all adjacent streets and shall provide for ingress and egress to public and private properties at all times during the term of the Project.

The DB Team shall prepare public information notices, if required, in coordination with Section 2.7, in advance of the implementation of any lane closures or traffic switches. These notices shall be referred to as Traffic Advisories.

#### **18.3.1.1 Roadway Guidelines**

The DB Team shall produce traffic control plans for periods of construction in accordance with Attachment 3-1 Manuals, Special Provision Section 150, and the DB Documents.

### ***18.3.1.1.1 Design Parameters for Traffic Control***

Design Vehicle: Turning movements shall accommodate a design vehicle specified by the GDOT Design Policy Manual for specific road classifications. Turning movements on all other local streets and driveways shall, at a minimum, provide similar characteristics as existing Geometry.

Work Zone Speed Limits: The work zone speed limits on Interstate and State Highways shall be in conformance with Special Provision 150.

Number of Lanes: Except as allowed by Section 18 of Volume 2, the minimum number of lanes to be maintained shall be the number of lanes currently available on each controlled access facility. Lane closures on other roadways may be considered as long as all traffic patterns and accesses are not reduced and are maintained.

Lane Widths: During construction, the minimum lane width for main lanes, frontage roads and major crossing streets is eleven (11) feet. For minor crossing streets, GDOT may, in its sole discretion, allow ten-foot (10') lanes in limited circumstances during construction for short distances after reviewing the DB Team's traffic control plan. See Volume 2 for additional information.

### ***18.3.1.1.2 Allowable Shoulder/Lane/Roadway Closures and Traffic Stage Changes***

The DB Team shall provide GDOT and appropriate Customer Groups a minimum of two (2) weeks advance notice in writing for lane/shoulder closures and/or traffic stage changes planned to be in effect longer than twenty-four (24) hours, and a minimum of twenty-four (24) hours advance notice for lane closures that are planned to be in effect less than twenty four (24) hours, using all appropriate tools as needed. The DB Team shall coordinate the closure restrictions with GDOT on all lane/shoulder closures (or an event that results in lane closures) into GDOT's ITS web-based information tool.

Closures must be coordinated with adjacent projects to ensure the safe convenient passage of the traveling public. During construction of the Project, GDOT will facilitate coordination with all local entities for traffic control.

### **Lane and Shoulder Closure During Design-Build Period**

The DB Team may reduce the number of travel lanes in accordance with the restrictions in Section 18 of Volume 2.

The DB Team shall not install lane and shoulder closures, perform flagging, or move equipment on the travel way of any roads or streets from the Wednesday before Thanksgiving Day to the first Business Day after New Year's Eve yearly between the hours of 5:00 a.m. to 11:00 p.m. Monday thru Friday and between the hours of 7:00 a.m. to 11:00 p.m. Saturday and Sunday; however, the holiday restrictions below shall take precedence for the holidays within the aforementioned timeframe.

Additional lanes may be closed during off peak or nighttime hours upon receipt of written permission from GDOT. Consideration will be given to traffic data collected in VPH/lane formatting during allowed closure periods that clearly demonstrates industry-accepted traffic flow ratios can be maintained.

**Full Roadway Closure**

The DB Team will not be allowed any full roadway (all lanes and shoulders) closures unless accepted by GDOT and Governmental Entities having jurisdiction of roadways affected by the closure.

GDOT will have the right to lengthen, shorten, or otherwise modify the foregoing restrictions as actual traffic conditions may warrant. The detour route for these full roadway closures shall be limited to usage of the on- and off-ramps at the mainline interchange locations. The DB Team shall utilize off-duty uniformed police officers for all detours.

Any complete roadway closure will require a Traffic Control Plan to be submitted and accepted by GDOT and Governmental Entities having jurisdiction of roadways affected by the closure. Availability of frontage roads, ramp locations and detour distances shall be considered in the design.

**Holiday Restrictions**

No Work that restricts or interferes with traffic shall be allowed from 12:00 noon on the day preceding to 10:00 pm on the day after the following holiday schedule. GDOT has the right to lengthen, shorten, or otherwise modify these restrictions as actual or projected traffic conditions may warrant.

		<u>Restriction Begins</u>	<u>Restriction Ends</u>
1.	Easter (Friday through Monday)	Friday at 12:00 noon	Monday at 10:00 pm
2.	Memorial Day Weekend (Friday through Monday)	Friday at 12:00 noon	Monday at 10:00 pm
3.	Independence Day (July 3 through July 5)	July 3 at 12:00 noon	July 5 at 12:00 noon
4.	Labor Day Weekend (Friday through Monday)	Friday at 12:00 noon	Monday at 10:00 pm
5.	Thanksgiving Holiday (Wednesday through Sunday)	Wednesday at 5:00 am	Monday at 11:00 pm
6.	Christmas Holiday (December 23 through 26)	December 23 at 5:00 am	December 26 at 11:00 pm
7.	New Year Holiday (December 31 through January 1)	December 31 at 5:00 am	First Business Day following December 31 at 11:00 pm

**18.4 Construction Requirements**

Traffic control shall be in accordance with GDOT accepted DB Team’s TMP and applicable provisions of the MUTCD and GDOT Special Provision Section 150 – Traffic Control.

### **18.4.1 DB Team Responsibility**

If at any time GDOT determines the DB Team's traffic control operations do not meet the intent of the TMP (if applicable) or any specific traffic control plan, the DB Team shall immediately revise or discontinue such operations to correct the deficient conditions.

The DB Team shall provide GDOT the names of the certified WTCS and support personnel, and the phone number(s) where they can be reached twenty-four (24) hours per day, seven (7) days per week.

Workzone law enforcement consists of utilizing uniformed police officer(s) equipped with a marked patrol vehicle and blue flashing lights to enforce traffic laws in construction workzones and the administration of this service. Workzone law enforcement shall be deployed during lane closures, traffic pacing, and at all other times the DB Team determines necessary for the safety of everyone within the Project limits. The DB Team shall be responsible for coordinating and scheduling the utilization of the Workzone law enforcement.

The DB Team shall provide a daily work record compiled on a form provided by GDOT, signed by the police officer(s) and signed by the DB Team's WTCS attesting that the police officer(s) was utilized during the time recorded. No separate payment will be made for Workzone law enforcement. The DB Team shall be responsible for coordinating, scheduling, and administering Workzone law enforcement.

### **18.4.2 Access**

Existing bicycle and pedestrian access and mobility shall be maintained across all cross streets. Access to existing transit stop locations shall be maintained during construction or reasonable alternative locations shall be provided, if applicable.

### **18.4.3 Detours**

The DB Team shall maintain all detours. A pavement transition, required in accordance with AASHTO's Roadside Design Guide, GDOT guidelines, and the MUTCD, based on the roadway design speed of the section, shall be provided at all detour interfaces.

## **19 MAINTENANCE DURING THE DESIGN-BUILD PERIOD**

### **19.1 General**

The DB Team shall maintain the Project from NTP 3 through the remainder of the Design-Build Period in a manner that provides a safe and reliable transportation system. Upon NTP 3, the DB Team shall be fully responsible for maintenance.

#### **19.1.1 Standards**

The DB Team shall provide activities in this section in accordance with GDOT Standard Specifications 104.05, 105.14, 105.15, Attachment 3-1 Manuals, Government Approvals, and other provisions of the DB Documents.

#### **19.1.2 Reserved**

#### **19.1.3 GDOT Obligation to Repair**

In the period between the Effective Date and NTP 3, GDOT and/or the appropriate local Governmental Entity will reasonably perform the type of routine maintenance of each Element Category of the existing improvement that normally occurs in GDOT's highway maintenance and repair program. Neither GDOT or the appropriate local Governmental Entity is obligated to extend the residual life of any Element through reconstruction, rehabilitation, restoration, renewal, or replacement.

### **19.2 Construction Maintenance Limits Plan**

The DB Team shall provide a Construction Maintenance Limits Plan as a drawing or set of drawings that highlight the exact area of the proposed construction and maintenance responsibilities within the ROW, as well as the limits of any Additional Properties to be acquired for the Project. This Plan will serve as the boundary for construction Work and will also be used as the exact limits for the DB Team to maintain any Element required to construct the Project beginning at the time of NTP 3 through Final Acceptance. The DB Team shall be responsible for all maintenance activities, in accordance with the GDOT Standard Specifications, Construction of Transportation Systems, within these limits that is impacted due to the construction activity of the DB Team, including:

1. Pavement maintenance, including pothole patching, concrete patching, striping, etc.
2. Existing ITS system and Drainage System continuity
3. Landscaping repair
4. Utility Adjustments
5. Existing lighting system

The DB Team shall provide the final Construction Maintenance Limits Plan no later than one hundred and fifty (150) days after NTP 1 or prior to the start of a construction phase, whichever occurs first. The Plan shall show hash marks or a method to clearly depict the area of the construction maintenance limits. The DB Team is required to depict in the Construction Maintenance Limits Plan any and all proposed staging and lay-down areas. All staging and lay-down areas must have prior approval by GDOT.

Notwithstanding GDOT's approval of the Construction Maintenance Limits Plan, the DB Team shall be responsible for any and all maintenance for any area(s) encroached on by the DB Team during the performance of the construction Work. See Section 2 for additional requirements.

### **19.3 Maintenance Management Plan**

In conjunction with the Construction Maintenance Limits Plan, the DB Team shall prepare a Maintenance Management Plan that outlines the frequency of inspection and repair and/or maintenance of those items under the DB Team's responsibility. The plan shall include, as a minimum, the following:

1. Pavement inspection and repair
2. Debris removal on the traveled way
3. Guardrail inspection and safety protections in place where guardrail has been damaged within 48 hours, and repair of damage within 7 days
4. Temporary striping restriping at no longer than 60-day intervals, or more frequently if required



## **20 BICYCLE AND PEDESTRIAN FACILITIES**

*Refer to Volume 2.*

## 21 RESERVED

## **22 NOISE BARRIERS**

*Refer to Volume 2.*

## **23 RESERVED**

**Georgia Department of Transportation**

**Programmatic Technical Provisions**

**For**

**Design-Build Agreement**

**P.I. No. 0015913**

**FY 18 Bridge Replacement Project**

**VOLUME 3 ATTACHMENTS**

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Attachment 2-1	Not Used
Attachment 2-2	Not Used
Attachment 2-3	Not Used
Attachment 2-4	Not Used
Attachment 3-1	Manuals
Attachment 6-1	Utility Facility Relocation Acceptance Form Template
Attachment 12-1	MS4 Responsibilities – Design-Build Project
Attachment 12-2	Supplemental Specification 169 – Post-Construction Stormwater BMP Items
Attachment 22-1	Not Used

# **Georgia Department of Transportation**

## **Programmatic Technical Provisions**

**For**

**Design-Build Agreement**

**P.I. No. 0015913**

**Attachment 3-1**

**Manuals**

## Manuals

All Work shall conform with all applicable Manuals and Guidelines developed for and including AASHTO, FHWA, GDOT, and additional requirements stated in this document and reasonably inferred therefrom. It is the Design-Build Team's responsibility to verify order of the precedence of any State or Federal manual requirement where any potential conflict may exist. The Design-Build Team shall coordinate with the appropriate State and/or Federal agency to confirm the policy and regulations to avoid any conflict of the following manuals prior to design and/or construction. Following is a list of manuals and guidelines that shall be used in the performance of the Work provided that the Work shall not be governed solely by such manuals and guidelines listed herein, and provided further that it is the Design-Build Team's responsibility to locate and utilize the most current edition in effect at the date identified in Article 7.2.4 of Volume 1, including updates, of all such referenced materials for the Work required.

1. AASHTO – A Policy on Geometric Design of Highways and Streets, 6<sup>th</sup> Edition  
[https://bookstore.transportation.org/collection\\_detail.aspx?ID=110](https://bookstore.transportation.org/collection_detail.aspx?ID=110)
2. AASHTO – Guide for High-Occupancy Vehicle Facilities, 3<sup>rd</sup> Edition  
[https://bookstore.transportation.org/Item\\_details.aspx?id=114](https://bookstore.transportation.org/Item_details.aspx?id=114)
3. AASHTO – LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 1<sup>st</sup> Edition  
[https://bookstore.transportation.org/item\\_details.aspx?ID=2369](https://bookstore.transportation.org/item_details.aspx?ID=2369)
4. AASHTO – Roadside Design Guide, 4<sup>th</sup> Edition  
[https://bookstore.transportation.org/item\\_details.aspx?id=1803](https://bookstore.transportation.org/item_details.aspx?id=1803)
5. AASHTO – Roadway Lighting Design Guide  
[https://bookstore.transportation.org/item\\_details.aspx?ID=1412](https://bookstore.transportation.org/item_details.aspx?ID=1412)
6. AASHTO – AASHTO Standard Specifications for Highway Bridges, 17<sup>th</sup> Edition - 2002  
[https://bookstore.transportation.org/Item\\_details.aspx?id=51](https://bookstore.transportation.org/Item_details.aspx?id=51)
7. AASHTO – AASHTO LRFD Bridge Design Specifications, 8<sup>th</sup> Edition - 2017  
[https://bookstore.transportation.org/collection\\_detail.aspx?ID=152](https://bookstore.transportation.org/collection_detail.aspx?ID=152)
8. AASHTO – Manual for Bridge Evaluation, 2<sup>nd</sup> Edition, with 2011 Interim Revisions  
[https://bookstore.transportation.org/item\\_details.aspx?ID=1809](https://bookstore.transportation.org/item_details.aspx?ID=1809)
9. AASHTO – LRFD Bridge Design Specifications, 8<sup>th</sup> Edition  
[https://bookstore.transportation.org/item\\_details.aspx?id=3731](https://bookstore.transportation.org/item_details.aspx?id=3731)
10. AASHTO/AWS – D1.1/D1.1M Structural Welding Code – Steel – 2015, with 2016 Errata  
[https://www.techstreet.com/ieee/standards/aws-d1-1-d1-1m-2015?product\\_id=1898963](https://www.techstreet.com/ieee/standards/aws-d1-1-d1-1m-2015?product_id=1898963)
11. AASHTO/AWS – D1.5M/D1.5 Bridge Welding Code, 7<sup>th</sup> Edition  
[https://bookstore.transportation.org/item\\_details.aspx?ID=2592](https://bookstore.transportation.org/item_details.aspx?ID=2592)

12. AASHTO – Highway Capacity Manual – 2010  
[https://www.techstreet.com/ieee/standards/highway-capacity-manual-2010-u-s-customary-units?product\\_id=1786967](https://www.techstreet.com/ieee/standards/highway-capacity-manual-2010-u-s-customary-units?product_id=1786967)
13. AASHTO – Manual for Assessing Safety Hardware (MASH), 2<sup>nd</sup> Edition – 2016  
[https://bookstore.transportation.org/Item\\_details.aspx?id=2707](https://bookstore.transportation.org/Item_details.aspx?id=2707)
14. Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) and Guideline Handbook  
[http://www.fhwa.dot.gov/environment/noise/construction\\_noise/rcnm/index.cfm](http://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/index.cfm)
15. AISC Manual of Steel Construction, referred to as “AISC Specifications”, 15<sup>th</sup> Edition  
<https://www.aisc.org/products/publication/manuals/steel-construction-manual-15th-ed-print>
16. American National Standards Institute (ANSI)/ Illuminating Engineering Society of North America (IESNA) RP-8-14 – Roadway Lighting  
<https://www.ies.org/store/recommended-practices-and-ansi-standards/roadway-lighting/>
17. America Disabilities Act Accessibility Guidelines (ADAAG)  
<http://www.ada.gov/stdspdf.htm>
18. FHWA – Manual of Uniform Traffic Control Devices (MUTCD)  
<http://mutcd.fhwa.dot.gov/>
19. GDOT – Signing and Marking Design Guidelines, 4.0 – 2016  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>
20. GDOT – Utility Accommodation Policy and Standards Manual – 2016  
<http://www.dot.ga.gov/PS/Utilities>
21. GDOT – Guidelines on Geotechnical Studies  
<http://www.dot.ga.gov/PS/Materials>
22. GDOT – Sampling, Testing and Inspection (STI) Quick Guide and Documents  
<http://www.dot.ga.gov/PS/Business/Source/STI>
23. GDOT – Qualified Products List (QPL)  
<http://www.dot.ga.gov/PS/Materials/QPL>
24. GDOT – Pavement Design Manual  
<http://www.dot.ga.gov/PS/Materials>
25. GDOT – Drainage Design for Highways  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>
26. GDOT – Automated Survey Manual  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>
27. GDOT – Regulations for Driveway and Encroachment Control  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>
28. GDOT – Electronic Data Guidelines  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>
29. GDOT – Plan Development Process  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>
30. GDOT – Plan Presentation Guide  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>



31. GDOT – Preliminary Field Plan Review Checklist  
<http://www.dot.ga.gov/PS/DesignManuals/DesignResources>
32. GDOT – Final Field Plan Review Checklist  
<http://www.dot.ga.gov/PS/DesignManuals/DesignResources>
33. GDOT – Design Policy Manual  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>
34. GDOT – ITS Design Manual  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>
35. GDOT – NPDES General Permit Guidance  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>
36. GDOT – MS4 Special Design Post-Construction Details  
[http://www.dot.ga.gov/PartnerSmart/DesignManuals/NPDES/MS4 Special Design Details.zip](http://www.dot.ga.gov/PartnerSmart/DesignManuals/NPDES/MS4%20Special%20Design%20Details.zip)
37. GDOT – Bridge and Structures Design Manual  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>
38. GDOT – Environmental Procedures Manual  
<http://www.dot.ga.gov/PS/DesignManuals/EnvironmentalProcedures>
39. GDOT – Standard Specifications, Construction of Transportation Systems 2013; Supplemental Specifications 2016  
<http://www.dot.ga.gov/PartnerSmart/Business/Source/specs/DOT2013.pdf>  
[http://www.dot.ga.gov/PartnerSmart/Business/Source/special\\_provisions/2016%20Supplemental%20Specifications/2016SupplementalSpecBook.pdf](http://www.dot.ga.gov/PartnerSmart/Business/Source/special_provisions/2016%20Supplemental%20Specifications/2016SupplementalSpecBook.pdf)
40. GDOT – Special Provisions, Shelf Special Provisions, Reference Special Provisions, Supplemental Specifications  
SharePoint Site
41. GDOT – Construction Standards and Details  
<http://mydocs.dot.ga.gov/info/gdotpubs/ConstructionStandardsAndDetails/Forms/AllItems.aspx>
42. GDOT – Right of Way Manual  
<http://www.dot.ga.gov/PartnerSmart/DesignManuals/ROW/00ExternalRightofWayManual.pdf>
43. GDOT – Acquisition Guide for Local Public Agencies  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>
44. GDOT – Statewide MS4 Permit  
[http://epd.georgia.gov/sites/epd.georgia.gov/files/related\\_files/site\\_page/Final DOT SW NPDES Permit MS4 Dec 2011.pdf](http://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/Final_DOT_SW_NPDES_Permit_MS4_Dec_2011.pdf)
45. GDOT – Design of Post-Construction BMPs  
<http://www.dot.ga.gov/PartnerSmart/DesignManuals/NPDES/GDOT%20Policy%20on%20Post%20Construction%20BMPs%202-08-2013.pdf>  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>

46. Georgia Soil and Water Conservation Commission - Manual for Erosion and Sediment Control in Georgia  
<http://gaswcc.georgia.gov/manuals>
47. GDOT – Facilities Stormwater Pollution Prevention Plan  
<http://mydocs.dot.ga.gov/info/designbuild/Shared%20Documents/0010925/Stormwater%20Manuals/Attach%2012-1%20GDOT%20Facilities%20SWPPP%202014-09-02.pdf>
48. GDOT – Stormwater System Inspection and Maintenance Manual  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>
49. AASHTO – Movable Bridge Inspection, Evaluation, and Maintenance Manual, 2<sup>nd</sup> Edition  
[https://bookstore.transportation.org/Item\\_details.aspx?id=2708](https://bookstore.transportation.org/Item_details.aspx?id=2708)
50. FHWA – Diverging Diamond Interchange Informational Guide  
[https://safety.fhwa.dot.gov/intersection/alter\\_design/pdf/fhwasa14067\\_ddi\\_infoguide.pdf](https://safety.fhwa.dot.gov/intersection/alter_design/pdf/fhwasa14067_ddi_infoguide.pdf)
51. FHWA – Traffic Detector Handbook  
<http://www.fhwa.dot.gov/publications/research/operations/its/06108/06108.pdf>
52. FHWA – Mitigation Strategies for Design Exceptions  
[http://safety.fhwa.dot.gov/geometric/pubs/mitigationstrategies/fhwa\\_sa\\_07011.pdf](http://safety.fhwa.dot.gov/geometric/pubs/mitigationstrategies/fhwa_sa_07011.pdf)
53. FHWA – Traffic Monitoring Guide  
[https://www.fhwa.dot.gov/policyinformation/tmguidetmg\\_fhwa\\_pl\\_17\\_003.pdf](https://www.fhwa.dot.gov/policyinformation/tmguidetmg_fhwa_pl_17_003.pdf)
54. Occupational Safety and Health Administration (OSHA) Standards  
[http://www.osha.gov/pls/oshaweb/owasrch.search\\_form?p\\_doc\\_type=STANDARDS&p\\_toc\\_level=1&p\\_keyvalue=Construction](http://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=STANDARDS&p_toc_level=1&p_keyvalue=Construction)
55. National Electrical Safety Code ANSI C2 (NESC)  
[http://standards.ieee.org/nesc/nesc\\_preprint.html](http://standards.ieee.org/nesc/nesc_preprint.html)
56. U. S. Environmental Protection Agency Regulations  
<http://www.epa.gov/lawsregs/>
57. GDOT – Public Involvement Plan  
<http://www.dot.ga.gov/PartnerSmart/DesignManuals/Environmental/Public%20Involvement%20Plan/PublicInvolvementPlan.pdf>
58. American Railway Engineering and Maintenance-of-Way Association (AREMA)  
<https://www.arema.org/>
59. GDOT – Work Zone Safety and Mobility Policy  
<http://www.dot.ga.gov/PartnerSmart/Training/Documents/WZS/WorkZoneSafety/images/WorkZoneSafetyandMobilityPolicyRevwiithsubpartK.DOCX>
60. GDOT – Quality Control and Quality Assurance Manual  
<http://www.dot.ga.gov/PS/DesignManuals/DesignResources>
61. Federal Railroad Administration Regulations  
<http://www.fra.dot.gov>
62. Public Project Information for Construction and Improvement Projects That May Involve the Railroad (CSX)  
<https://www.csx.com/index.cfm/library/files/about-us/property/public-project-manual/>
63. MUTCD – Standards Highway Signs and Markings  
[http://mutcd.fhwa.dot.gov/ser-shs\\_millennium.htm](http://mutcd.fhwa.dot.gov/ser-shs_millennium.htm)

64. 2016 Edition of the Georgia Stormwater Management Manual Volumes 1 & 2  
<http://www.georgiastormwater.com/>
65. Georgia EPD – Coastal Stormwater Supplement to the Stormwater management Manual  
<https://epd.georgia.gov/georgia-epd-coastal-stormwater-supplement-stormwater-management-manual>
66. GDOT – ITS Strategic Deployment Plan  
SharePoint Site
67. ITE/AASHTO – Traffic Management Data Dictionary (TMDD), Standards for Traffic Management Center to Center Communications, Version 3.03  
<http://www.ite.org/standards/tmdd/3.03.asp>
68. AASHTO – A Policy on Design Standards Interstate System  
[https://bookstore.transportation.org/Item\\_details.aspx?id=2624](https://bookstore.transportation.org/Item_details.aspx?id=2624)
69. Georgia Traffic Incident Management Guidelines  
[http://www.timetaskforce.com/documents/TIM/GeorgiaTIMGuidelines\\_FINAL\\_V0003.pdf](http://www.timetaskforce.com/documents/TIM/GeorgiaTIMGuidelines_FINAL_V0003.pdf)
70. GDOT – Construction Manual and Form Documents  
<http://www.dot.ga.gov/PartnerSmart/Business/Source/Pages/ConstructionSpecs.aspx>
71. Other manuals, documents, procedures and standards as referenced in the DB Documents

# **Georgia Department of Transportation**

## **Programmatic Technical Provisions**

**For**

### **Design-Build Agreement**

**P.I. No. 0015913**

#### **Attachment 6-1**

## **Utility Facility Relocation Acceptance Form Template**



## Utility Facility Relocation Acceptance Form

Project PI Number: 0015913

Project Number:

County(ies): Cook, Tattnall, Taylor, Wilcox

Project Description: FY 18 Bridge Replacement

Utility Owner Name: \_\_\_\_\_

Type of Utility Facilities Installed by Contractor: \_\_\_\_\_

Type of Relocation Work Described Herein (Circle One): Initial Relocation or Revised Relocation

Station Limits: \_\_\_\_\_

General Description of Utility Facilities Installed by Contractor: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Utility Work Completion Date: \_\_\_\_\_

This Utility Facility Relocation Acceptance Form shall be completed by the Contractor's Worksite Utility Coordination Supervisor (WUCS). It shall also be signed by an authorized representative of the Utility Owner and by the GDOT Project Manager upon completion and acceptance of the work described herein.

Execution of this Utility Facility Relocation Acceptance Form by the parties below provides acknowledgement that the work described above, has been visually inspected and accepted by the Utility Owner as to having been constructed in accordance with the Utility Owner approved relocation design plans and their current specifications and the requirements of the Memorandum of Understanding (MOU) as executed by the Utility Owner. Further, the Contractor's WUCS shall provide the Utility Owner with a complete set of "As-Built Plans" for review and approval reflecting the relocation work performed by the Contractor as outlined in the Contract Specifications. Upon completion of this form and the exchange of the final Utility Owner approved "As-Built Plans", all parties agree the Utility Owner will operate and maintain the installed facilities covered by this document going forward based on the date of execution by the GDOT Project Manager (PM). However, any items inadvertently overlooked and as identified in a subsequent utility punch list shall still be the responsibility of the Contractor to correct and provide up to date "As-Built Plans" to the Utility Owner.

Acceptance of this form by the Department does not confer legitimacy and accuracy or in any way transfers liability for errors or omissions made by the preparer.

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**Contractor's WUCS:**

Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

**Utility Owner Representative:**

Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

**GDOT Project Manager:**

Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

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# **Georgia Department of Transportation**

## **Programmatic Technical Provisions**

**For**

### **Design-Build Agreement**

**P.I. No. 0015913**

### **FY 18 Bridge Replacement Project**

#### **Attachment 12-1**

#### **MS4 Responsibilities – Design-Build Project**

### MS4 Responsibilities – Design-Build Project

2017-2022 Permit No. GAR041 000 Ref.	Best Management Practice (BMP)	Activity Description	Design-Build Team	GDOT	PMC	3 <sup>rd</sup> Party
<b>4.2.1</b>	<b>Public Education</b>					
4.2.1-1	DOT website to educate the public regarding stormwater related topics (e.g. litter prevention, Adopt-A-Highway)	N/A		✓		
4.2.1-2	Training program to educate contractors and employees conducting activities that may impact stormwater runoff	Attend periodic training related to stormwater impacts including Construction Engineering & Inspection for Post-Construction BMPs (CEI) course, Facility Stormwater Pollution Prevention (F-SWPP) and Overview of Post-Construction Stormwater (O-PCS).	✓	✓	✓	✓
4.2.1-3	Distribution of stormwater related educational materials to the public	N/A		✓		
4.2.1-4	Storm draining marking, and/or pet waste program in high pedestrian areas, such as welcome centers / rest areas, maintenance facilities, and along streets with sidewalks within a permitted area	N/A		✓		
<b>4.2.2</b>	<b>Public Involvement</b>					
4.2.2-1	Adopt-A-Highway Program	N/A		✓		
4.2.2-2	Public Information Open Houses (PIOHs) to allow public input into projects	Conduct all appropriate public information open houses as applicable. As part of each public information open house, contact GDOT Office of Design Policy to ensure that a Stormwater Management Program display is provided and displayed at the open house. Provide the number of open houses conducted each year.	✓			
4.2.2-3	Memorandum of Agreements	N/A		✓		
<b>4.2.3</b>	<b>Illicit Discharge Detection and Elimination</b>					
4.2.3-1	Outfall Map and Inventory	Provide a list of new outfalls within the project area indicating the location and geographic coordinates for each outfall. Provide all information per SP 156.	✓			
4.2.3-2	A policy that prohibits non-stormwater discharges into the MS4	N/A		✓		
4.2.3-3	An Illicit Discharge Detection and Elimination (IDDE) Plan	Conduct inspections outfalls within the project area each year inspecting the outfalls for the presence of dry weather discharges in accordance with the IDDE plan. For a copy of the IDDE plan, contact the GDOT Office of Design Policy. Provide a copy of the inspection reports (see the IDDE plan) for each outfall inspected. If a dry weather discharge is detected, contact the District Environmental Compliance Engineer for further investigation / action.		✓		
4.2.3-4	Procedures for tracing and eliminating any identified illicit discharges	N/A		✓		



2017-2022 Permit No. GAR041 000 Ref.	Best Management Practice (BMP)	Activity Description	Design-Build Team	GDOT	PMC	3 <sup>rd</sup> Party
4.2.3-5	Education	N/A		✓		
4.2.3-6	Procedures for receiving and responding to complaints related to illicit discharges	Report all complaints related to illicit discharges to the District Environmental Compliance Engineer. Provide a summary of the number of complaints and summary of resolution including the date and time received each year for the project area to GDOT.		✓		
4.2.3-7	Spill response procedures	Report all spills in accordance with the IDDE plan and the Georgia Oil or Hazardous Material Spills and Releases Reporting. If a spill occurs and the spill reaches an MS4 structure, report the spill to the District Environmental Compliance Engineer.	✓			
<b>4.2.4</b>	<b>Construction Site Runoff Stormwater Control</b>					
4.2.4-1	A contractual obligation mechanism	Requires erosion and sediment controls consistent with the Manual for Erosion and Sediment Control in Georgia and the Construction General Permits, as well as penalties to ensure compliance, to the extent allowable, under State or local law.	✓			
4.2.4-2	Erosion, Sedimentation and Pollution Control Plans (ESPCPs)	Prepare and submit to EPD an ESPCP that complies with the requirements of the most recent Construction Activity Permits, which identify the Manual for Erosion and Sediment Control in Georgia (Green Book) and stream buffer requirements for all land disturbance activities that require coverage.	✓			
4.2.4-3	Procedures for receiving and responding to erosion and sedimentation complaints	Report all complaints related to construction site runoff to the District Environmental Compliance Engineer. Provide a summary of the number of complaints and summary of resolution including the date and time received each year for the project area to GDOT.	✓			
4.2.4-4	Site plan review procedures	Incorporate consideration of potential water quality impacts.	✓			
4.2.4-5	Site inspection procedures in accordance with the Construction Activity Permits	Maintain inspections as required in the most recent Construction Activity Permits, which identify the Manual for Erosion and Sediment Control in Georgia (Green Book) and stream buffer requirements for all land disturbance activities that require coverage. Provide a copy of all inspections performed.	✓			
4.2.4-6	Ensure through contracts or other mechanisms that construction site operators control waste that may cause adverse water quality impacts in accordance with the Construction Activity Permits		✓		✓	✓
4.2.4-7	Procedures for bringing contractors back into compliance with the contract requirements	N/A			✓	✓
<b>4.2.5</b>	<b>Post-Construction Stormwater Management</b>					
4.2.5-1	Inventory of post-construction stormwater management structures, designed for filtering and/or detention	Provide an inventory of all permanent Post Construction Stormwater management structures following GDOT acceptance utilizing SP 156 for required data to be provided on each structure.	✓			

2017-2022 Permit No. GAR041 000 Ref.	Best Management Practice (BMP)	Activity Description	Design-Build Team	GDOT	PMC	3 <sup>rd</sup> Party
4.2.5-2	Policy or other regulatory mechanism to address post-construction runoff	N/A		✓		
4.2.5-3	Program for the long-term operation and maintenance of post-construction structures	Inspect and maintain Post Construction Stormwater management structures within the project area utilizing the inspection forms in the current effective GDOT Stormwater System Inspection & Maintenance (I&M) Manual. Report all maintenance performed on each structure utilizing GDOT Maintenance Activity Codes.	✓			
4.2.5-4	Program for ensuring the use of a stormwater design manual and the feasibility of inclusion of the post-construction standards from Section 4.2.5.1 during the project design phase	Submit and secure approval of a Post Construction Stormwater Report for all applicable construction projects within the project area following the specifications in the most current GDOT Drainage Manual.	✓			
4.2.5.4	Green Infrastructure / Low Impact Development					
4.2.5.4-1	Program for conducting a green infrastructure / low impact development (GI/LID) feasibility study, and implementing GI/LID infrastructure, where feasible	Submit and secure approval of a Post Construction Stormwater Report for all applicable construction projects within the project area following the specifications in the most current GDOT Drainage Manual.	✓			
4.2.6	Pollution Prevention / Good Housekeeping for Municipal-Type Operations					
4.2.6-1	Inventory of GDOT facilities conducting municipal-type activities that have the potential to cause pollutant runoff	N/A		✓		
4.2.6-2	Program for inspecting the GDOT facilities for good housekeeping practices	Perform inspections on 20% of all GDOT accepted facilities annually utilizing the F-SWPPP such that all facilities are inspected over the course of 5 years.		✓		
4.2.6-3	Manual detailing procedures for routine maintenance activities at municipal type operations to prevent pollutant runoff	Provide an annual copy of inspections and corrective actions implemented for each GDOT accepted facility utilizing the F-SWPPP for guidance.		✓		
4.2.6-4	Inventory and Map of MS4 structures	Provide an inventory of all MS4 structures following GDOT acceptance utilizing SP 156 for required data to be provided on each structure.	✓			
4.2.6-5	Program for inspecting and maintaining MS4 structures	Perform inspections on 10% of all GDOT MS4 structures within the project area annually utilizing the GDOT Stormwater System Inspection & Maintenance Manual such that all structures are inspected over the course of 5 years. Report all maintenance performed on each structure utilizing GDOT Maintenance Activity Codes.		✓		
4.2.6-6	An employee training program, with the purpose of preventing and reducing stormwater pollution from GDOT facilities and activities	All field personnel with supervisory capacity assigned to the project must have attended a GDOT F-SWPP training course within 5 years of the contract date of the project. For those personnel that have not attended the training course within the previous 5 years, the training course must be completed within 6 months of assignment to the project.	✓			

2017-2022 Permit No. GAR041 000 Ref.	Best Management Practice (BMP)	Activity Description	Design-Build Team	GDOT	PMC	3 <sup>rd</sup> Party
4.2.6-7	Procedures for receiving and responding to complaints related to MS4 structures	Report all complaints related to runoff / pollution from GDOT accepted facilities within the project area to the District Environmental Compliance Engineer. Provide a summary of the number of complaints and summary of resolution including the date and time received each year for the project area to GDOT.		✓		

**Reporting:**

GDOT’s NPDES Phase II MS4 permit requires that an annual report be submitted each year documenting compliance with all aspects of the permit from January 1<sup>st</sup> to December 31<sup>st</sup> (reporting period). To aid in that reporting, the contractor shall submit quarterly update reports documenting those activities undertaken during the reporting period as required in the matrix above. The deadlines for each update report shall be established as shown below:

Quarter	Dates	Quarterly Update Report Due Date
Q1	January 1 <sup>st</sup> – March 31 <sup>st</sup>	April 30 <sup>th</sup>
Q2	April 1 <sup>st</sup> – June 30 <sup>th</sup>	July 31 <sup>st</sup>
Q3	July 1 <sup>st</sup> – September 30 <sup>th</sup>	October 31 <sup>st</sup>
Q4	October 1 <sup>st</sup> – December 31 <sup>st</sup>	January 31 <sup>st</sup>

# **Georgia Department of Transportation**

## **Programmatic Technical Provisions**

**For**

**Design-Build Agreement**

**P.I. No. 0015913**

**Attachment 12-2**

**Supplemental Specification 169**

**Post-Construction Stormwater BMP Items**

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**PROJECT SPECIAL PROVISION**

**PI# 0015913**

**Cook, Tattnall, Taylor, Wilcox Counties**

**Section 169—Post-Construction Stormwater BMP Items**

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**169.1 General Description**

This work includes constructing the following Post-Construction Best Management Practices (BMPs) as shown in the Plans or as directed by the Engineer:

- Bioretention basins
- Bioslopes
- Dry detention basins
- Enhanced dry swales
- Enhanced wet swales
- Infiltration trenches
- Sand filters
- Wet detention ponds
- Other permanent water treatment structures as shown on the Plans or as directed by the Engineer

**169.1.01 Related References**

**A. Standard Specifications**

Section 109—Measurement and Payment

Section 161—Control of Soil Erosion and Sedimentation

Section 208—Embankments

Section 500—Concrete Structures

Section 511—Reinforcement Steel

Section 573—Underdrains

Section 574—Edge Drains

Section 603—Rip Rap

Section 700—Grassing

Section 702—Vine, Shrub, and Tree Planting

Section 708—Plant Topsoil

Section 711—Turf Reinforcement Matting

Section 800—Coarse Aggregate

Section 801—Fine Aggregate

Section 805—Rip Rap and Curbing Stone

Section 806—Aggregate for Drainage

Section 814—Soil Base Materials

Section 830—Portland Cement

Section 839—Corrugated Polyethylene Underdrain Pipe

Section 846—Polyvinyl Chloride (PVC) Drain Pipe

Section 853—Reinforcement and Tensioning Steel

Section 881—Fabrics

Section 890—Seed and Sod

Section 893—Miscellaneous Planting Materials

Section 894—Fencing

Section 910—Sign Fabrication

Section 911—Sign Posts

Section 914—Sign Paint

**B. Referenced Documents**

AASHTO M-252

AASHTO M-294

AASHTO M-304

AASHTO T 215

ASTM D-422

ASTM D-698

ASTM D-1784

ASTM D-1785

ASTM D-2434

ASTM D-2466

ASTM D-2564

ASTM D-2665

ASTM D-3786

ASTM D-4491

ASTM D-4533

ASTM D-4632

ASTM D-4751

ASTM D-4833

ASTM F-758

ASTM F-949

**169.1.02 Submittals**

General Provisions 101 through 150.

## 169.2 Materials

Provide materials shown on the Plans, such as pipe, spillways, wood baffles, plants, and other accessories including an anti-seep collar, when necessary. Materials shall be approved by the Engineer before use.

Materials shall meet the requirements of the following Specifications:

Material	GDOT Section/Requirement
Nonwoven geotextile filter fabric	ASTM D-3786: Mullen burst strength = 280 psi ASTM D-4491: permittivity = 1.30 sec <sup>-1</sup> ASTM D-4533: Trapezoidal tear strength = 60 lb ASTM D-4632: Grab tensile strength = 160 lb ASTM D-4632: Grab tensile elongation = 50% ASTM D-4751: AOS = 70 US standard sieve ASTM D-4833: Puncture Resistance = 85 lb
Class A, AA, and B Concrete	500/ASTM C-76-10
Reinforcement Steel	511
Rip Rap	603, 805
Permanent Grass, Sod, and Other Vegetation	700
Turf Reinforcement Matting	711
Coarse Aggregate	800
Fine Aggregate	801
Soil Base Materials	814
Rip Rap and Curbing Stone	805
Portland Cement	830
Corrugated Polyethylene Underdrain Pipe	839/AASHTO M252 or M294
PVC Underdrains	846/ASTM F-758, ASTM F-949
Reinforcement and Tensioning Steel	853
Fabrics	881
Seed	890
Miscellaneous Planting Materials	893
Mulch	893.2.02
Engineered Topsoil	893.2.08
Signage	910, 911, 914
Landscape Plantings	702

## A. Engineered Soil Mix Requirements

1. Use an engineered soil mix that meets the requirements herein. Do not use a mixture that contains deleterious substances. Obtain the materials from sources approved by the Engineer. Ensure that aggregate retained on No. 10 (2 mm ) sieve is of hard, durable particles.
2. Remove particles with a diameter greater than 2 in (50 mm) before placing the engineered soil mix. Remove particles with screens or by hand if few oversized pieces exist. Otherwise, crush the oversized pieces to less than 2 in and use them in the proportions shown by the gradation table below.
3. Use 5-10% by dry weight composted organic matter as topsoil components. All components shall be free of heavy metals, pathogens, pesticides, and herbicides.

4. Use 90-95% by dry weight inorganic topsoil components with the following properties:

Sieve Size	Percent Passing by Weight
Passing 2 in (50 mm)	100
Passing No. 4 (4.75mm)	98-100
Passing No. 8 (2.36 mm) sieve	95-100
Passing No. 10 (2.0 mm)	86-100
Passing No. 16 (1.18 mm) sieve	70-100
Passing No. 30 (600 µm) sieve	40-75
Passing No. 50 (300 µm) sieve	10-35
Passing No. 100 (150 µm) sieve	2-15
Passing No. 200 (75 µm) sieve	0-10
Clay size (< 2 µm)	0-6

5. Ensure that material passing the No. 10 (2 mm) sieve meets the following requirements:

Property	Value
Liquid Limit (LL)	≤25
Plasticity Index (PI)	≤10
Volume Change, Maximum Percent	12
Maximum Dry Density, lb/ft <sup>3</sup> *	105
Permeability (in/hr)	1 – 6
Phosphorous Index (P-index)	<25
*by standard Proctor	

### 169.2.01 Fabrication

General Provisions 101 through 150.

### 169.2.02 Acceptance

The Contractor is required to submit a minimum of three (3) cubic-foot-sized random soil samples per 150 tons of material per each source to the Department's Geotechnical Bureau of the Materials Office 20 working days before placement for testing to ensure acceptability for use as directed by the Project Engineer. The Department's Geotechnical Bureau of the Materials Office reserves the right to disapprove the engineered soil mix for use if test results show that parameters do not meet the acceptable values specified above. Acceptance must be granted prior to placement.

The Department will test engineered soil mix as follows:



<b>Test</b>	<b>Method</b>
Soil Gradation	GDT 4
Volume Change	GDT 6
Maximum Density	GDT 7 or GDT 67
Liquid Limit	AASHTO T 89
Plastic Limit and Plasticity Index	AASHTO T 90
Permeability	AASHTO T 215

### **169.2.03 Materials Warranty**

General Provisions 101 through 150.

### **169.2.04 Delivery, Storage, and Handling**

General Provisions 101 through 150.

## **169.3 Construction Requirements**

### **169.3.01 Personnel**

General Provisions 101 through 150.

### **169.3.02 Equipment**

General Provisions 101 through 150.

### **169.3.03 Preparation**

General Provisions 101 through 150.

### **169.3.04 Fabrication**

General Provisions 101 through 150.

### **169.3.05 Construction**

#### **A. Bioretention Basins**

Construct bioretention basins as shown in the Plans, or as modified by the Engineer, after final grade and stabilization of the area upstream of each bioretention basin are achieved. If this is not feasible, stormwater flow shall be diverted around the bioretention basin and the basin area protected with temporary erosion and sediment control measures. Once the basin has been stabilized, vegetation shall be established within the bioretention basin per the details shown in the plans. Contractor shall maintain the bioretention basin after construction as outlined in the GDOT Stormwater System Inspection and Maintenance Manual until the project is turned over.

#### **1. Excavation**

Excavation should be limited to the width and length of the bioretention basin per the details shown in the plans or as directed by the Engineer. Avoid placing excavated material near the open trench so as not to jeopardize the stability of the trench sidewalls. The bottom of the excavated trench should be flat across its width and length, shall not be loaded in a way that causes soil compaction, and should be scarified prior to placement of specified materials. The sides of the trench shall be trimmed of all large roots. The sidewalls should be uniform with no voids and scarified prior to placement of materials for specified engineered drainage layers. Trench sidewalls shall be lined with the specified filter fabric. Infiltration testing should be performed prior to excavation of the bioretention basin if the bioretention basin is designed for infiltration. If infiltration is feasible, a second infiltration test is required prior to the placement of the underdrain system/aggregate layer to ensure that infiltration rates were not impacted during excavation.

#### **2. Underdrain System/Aggregate Layer**

Install underdrain system(s) made of perforated polyethylene or perforated PVC pipe at the locations and depth per details shown in the plans for conveyance of stormwater that has filtered through the media. Perforations shall be 3/8-inch diameter and spaced 6-inches on center with four rows running longitudinally. A removable end cap

connected to the underdrain system shall be installed per the details shown in the plans. If infiltration is feasible, the end cap shall be closed except for emergency drainage or maintenance purposes. The underdrain pipe shall be surrounded by an aggregate layer as defined in the details and a 2-3-inch filter blanket of size No. 8 aggregate (Georgia Department of Transportation Specification Section 800) shall be used to segregate the aggregate layer from the engineered soil mix. Aggregates used in underdrain systems shall be double washed and free of fines and organic materials. Cleanouts shall be provided at the end of each underdrain branch. Cleanouts shall extend to an elevation such that they are accessible once the trench is backfilled with the specified media, and shall have a locking screw top lid, to discourage vandalism and tampering.

### **3. Engineered Soil Mix**

Install the engineered soil mix specified above for a 18-inch-minimum-thickness and nonwoven geotextile filter fabric per the details shown in the plans. The engineered soil mix shall be placed in a maximum of 12-inch lifts and shall be protected from contamination by foreign matter during installation. If the engineered soil mix becomes contaminated or the filter fabric is damaged, remove contaminated or damaged materials and replace them at no additional cost to the Department. Avoid using heavy equipment within the basin area during installation to avoid compromising the hydraulic conductivity of the engineered soil mix and to prevent damage to the underdrains.

### **4. Mulch Layer**

The mulch layer of the bioretention basin shall be a minimum thickness of 3 inches and shall consist of triple shredded hardwood mulch resistant to floating (Georgia Department of Transportation Specification Subsection 893.2.02). The mulch layer should be well aged (stockpiled or stored for at least six months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. Grass clippings or pine straw shall not be used as mulch material.

### **5. Plantings**

Plant species used in bioretention basins shall be installed per the details shown in the plans and meet the requirements outlined in Georgia Department of Transportation Specification Section 702. Plants shall be selected on the basis of a specified hydric tolerance zone and shall be capable of surviving both wet and dry conditions. All plants used shall be well grown and healthy and free from disease and infestation by invasive species. Trees shall not be planted in bioretention basins.

### **6. Pretreatment**

Install rip rap forebays, filter strips, level spreaders and other pretreatment devices per the details and at the locations specified in the plans. Rip rap used in pretreatment devices shall meet the requirements outlined in Georgia Department of Transportation Specification Sections 603 and 805 and woven filter fabric shall meet the requirements outlined in Georgia Department of Transportation Specification Section 881.2.05. Grasses used in filter strips shall be tolerant of both wet and dry conditions and meet the requirements outlined in Georgia Department of Transportation Specification Section 700.

### **7. Signage**

Install signage per the details and locations specified in the plans.

## **B. Bioslopes**

Complete bioslopes as shown in the construction Plans, or as modified by the Engineer, after final grade and stabilization of the area upstream of each bioslope is reached. If this is not feasible, stormwater flow shall be diverted around the bioslope and the bioslope protected with temporary erosion and sediment control measures. Contractor shall maintain the bioslope after construction as outlined in the GDOT Stormwater System Inspection and Maintenance Manual until the project is turned over.

### **1. Excavation**

Excavation should be limited to the width and length of bioslope per the details shown in the plans or as directed by the Engineer. Avoid placing excavated material near the open trench so as not to jeopardize the stability of the trench sidewalls. The bottom of the excavated trench should be flat across its width and length, shall not be loaded in a way that causes soil compaction, and should be scarified prior to placement of specified materials. The sides of the trench shall be trimmed of all large roots. Sidewalls should be uniform with no voids and scarified prior to placement of materials for specified engineered drainage layers. Trench sidewalls shall be lined with the specified filter fabric.

### **2. Underdrain System/Aggregate Layer**

Install underdrain system(s) made of perforated polyethylene or perforated PVC pipe at the locations and depth per details shown in the plans for conveyance of stormwater that has filtered through the media. Perforations shall be 3/8-inch diameter and spaced 6-inches on center with four rows running longitudinally. The underdrain pipe shall be

surrounded by an aggregate layer of size No. 57 aggregate. Nonwoven geotextile filter fabric shall be used to protect the aggregate layer from the bioslope media mix. Aggregates used in underdrain systems shall be double washed and free of fines and organic materials. Cleanouts shall be provided at the end of each underdrain branch. Cleanouts shall extend to an elevation such that they are accessible once the trench is backfilled with the specified media and shall have a locking screw top lid to discourage vandalism and tampering.

**3. Bioslope Media Mix**

a) The bioslope media mix shall contain aggregate, dolomite, gypsum, and perlite and shall be mixed as follows:

Material	Quantity
<b>Aggregate:</b> GDOT size No. 89 stone No recycled material Non-limestone material mineral aggregate	3 yd <sup>3</sup> (3 yd <sup>3</sup> used as a baseline for other mixture components: adjust total quantity based on bioslope dimensions)
<b>Perlite:</b> Horticultural grade, free of toxic materials 99-100% passing US No. 4 Sieve 0-30% passing US No. 18 Sieve 0-10% passing US No. 30 Sieve	1 yd <sup>3</sup> per 3 yd <sup>3</sup> of mineral aggregate
<b>Dolomite:</b> calcium magnesium carbonate, CaMg(CO <sub>3</sub> ) <sub>2</sub> Agricultural grade, free of toxic materials 100% passing US No. 8 Sieve 0% passing US No. 16 Sieve	40 pounds per yd <sup>3</sup> of perlite
<b>Gypsum:</b> Non-calcined, agricultural gypsum CaSO <sub>4</sub> •2H <sub>2</sub> O (hydrated calcium sulfate) Agricultural grade, free of toxic materials 100% passing US No. 8 Sieve 0% passing US No. 16 Sieve	12 pounds per yd <sup>3</sup> of perlite

- b) Install the bioslope media mix specified above for the 12-inch-minimum-thickness bioslope media mix layer and nonwoven geotextile filter fabric per the details shown in the plans. Protect the bioslope media mix from contamination by foreign matter during installation. If the bioslope media mix becomes contaminated or the filter fabric is damaged, remove contaminated or damaged materials and replace them at no additional cost to the Department.
- c) Cover the bioslope media mix with turf reinforcement matting 1 (TRM 1). Or as directed by the Engineer.

**4. Engineered Topsoil Application**

1. The top 3 inches of the bioslope should consist of engineered topsoil. Use engineered topsoil that meets the requirements of Subsection 893.2.08. Do not use a mixture that contains deleterious substances. Obtain the materials from sources approved by the Engineer. Ensure that aggregate retained on No. 10 (2 mm ) sieve is of hard, durable particles.
2. Stabilize the disturbed area adjacent to the bioslope per the plans immediately after the bioslope is installed. Permanent vegetation using grass cover shall be established within the bioslope surface area using sod.

**5. Sod Layer**

The sod layer must be grown in primarily sand/sandy-loam soils with less than 6% clay content. Sod shall be half cut or thin cut to promote infiltration. Sod shall consist of at least 75% of the designated grass species specified in the plans.

**6. Pretreatment**

Install filter strips per the details and locations specified in the plans. Grasses used in filter strips shall be tolerant of both wet and dry conditions and meet the requirements outlined in Georgia Department of Transportation Specification Section 700.

**7. Signage**

Install signage per the details and locations specified in the plans.

**C. Dry Detention Basins**

Construct dry detention basins per the Plans at the required locations, or as modified by the Engineer. Construct the basins complete as shown, including but not limited to: grading, drainage, accessories to complete the dry detention basins and temporary mulching and permanent grassing on external slopes. The contractor may propose alternate construction staging for review and approval. Alternate construction submittals for review shall be provided a minimum of 30 days prior to the construction of a dry detention basin. Contractor shall maintain the dry detention basin after construction as outlined in the GDOT Stormwater System Inspection and Maintenance Manual until the project is turned over.

**1. Excavation**

Excavation should be limited to the width and length of the dry detention basin per the details shown in the plans or as directed by the Engineer. Embankments shall be constructed using the materials and methods specified in Section 208 and shall be compacted to at least 95 percent of the maximum laboratory dry density. Stabilize the disturbed areas adjacent to dry detention basins per the plans immediately after each dry detention basin is installed.

**2. Pretreatment**

Install rip rap forebays per the details and at the locations specified in the plans. Rip rap used in forebays shall meet the requirements outlined in Georgia Department of Transportation Specification Sections 603 and 805 and woven filter fabric shall meet the requirements outlined in Georgia Department of Transportation Specification Section 881.2.05.

**3. Signage**

Install signage per the details and locations specified in the plans.

**D. Enhanced Dry Swales**

Construct enhanced dry swales as shown in the Plans, or as modified by the Engineer, after final grade and stabilization of the area upstream of each enhanced dry swale is reached. If this is not feasible, stormwater flow shall be diverted around the swale and the swale protected with temporary erosion and sediment control measures. Contractor shall maintain the enhanced dry swale after construction as outlined in the GDOT Stormwater System Inspection and Maintenance Manual until the project is turned over.

**1. Excavation**

Excavation should be limited to the width and length of the enhanced dry swale per the details shown in the plans or as directed by the Engineer. Avoid placing excavated material near the open trench so as not to jeopardize the stability of the trench sidewalls. The bottom of the excavated trench shall not be loaded in a way that causes soil compaction, and should be scarified prior to placement of specified materials. The sides of the trench shall be trimmed of all large roots. Sidewalls should be uniform with no voids and scarified prior to placement of materials for specified engineered drainage layers. Trench sidewalls shall be lined with the specified filter fabric. Infiltration testing should be performed prior to excavation of the dry enhanced swale if the enhanced dry swale is designed for infiltration. If infiltration is feasible, a second infiltration test is required prior to the placement of the underdrain system/aggregate layer to ensure that infiltration rates weren't impacted during excavation.

**2. Underdrain System/Aggregate Layer**

Install underdrain system(s) made of perforated polyethylene or perforated PVC pipe at the locations and depth per details shown in the plans for conveyance of stormwater that has filtered through the media. Perforations shall be 3/8-inch diameter and spaced 6-inches on center with four rows running longitudinally. A removable end cap connected to the underdrain system shall be installed per the details shown in the plans. If infiltration is feasible, the end cap shall be closed except for emergency drainage or maintenance purposes. The underdrain pipe shall be surrounded by an aggregate layer as defined in the details and a 2-3-inch filter blanket of size No. 89 aggregate (Georgia Department of Transportation Specification Section 800) shall be used to segregate the aggregate layer from the engineered soil mix. Aggregates used in underdrain systems shall be double washed and free of fines and organic materials. Cleanouts shall be provided at the end of each underdrain branch. Cleanouts shall extend to an elevation such that they are accessible once the trench is backfilled with the specified media and shall have a locking screw top lid, to discourage vandalism and tampering.

### **3. Engineered Soil Mix**

Install the engineered soil mix specified above for the 30-inch thick engineered soil mix and nonwoven geotextile filter fabric per the details shown in the plans. The engineered soil mix shall be placed in a maximum of 12-inch lifts and shall be protected from contamination by foreign matter during installation. If the engineered soil mix becomes contaminated or the filter fabric is damaged, remove contaminated or damaged materials and replace them at no additional cost to the Department. Avoid using heavy equipment on the basin area during installation to maintain hydraulic conductivity of the engineered soil mix and to prevent damage to the underdrains.

### **4. Sod Layer**

The sod layer must be grown in primarily sand/sandy-loam soils with a clay content of 10% or less. Sod shall be half cut or thin cut to promote infiltration. Sod shall consist of at least 75% of the designated grass species specified in the plans.

### **5. Pretreatment**

Install rip rap forebays per the details and at the locations specified in the plans. Rip rap used in forebays shall meet the requirements outlined in Georgia Department of Transportation Specification Sections 603 and 805 and woven filter fabric shall meet the requirements outlined in Georgia Department of Transportation Specification Section 881.2.05. Rip rap forebays shall be located at major inflow locations and energy dissipation shall be provided at all concentrated inflow locations. Maintenance access shall be provided to the forebay.

### **6. Signage**

Install signage per the details and locations specified in the plans.

## **E. Enhanced Wet Swales**

Construct enhanced wet swales as shown in the Plans, or as modified by the Engineer, after final grade and stabilization of the area upstream of each enhanced wet swale is reached. If this is not feasible, stormwater flow shall be diverted around the swale and the swale protected with temporary erosion and sediment control measures. Contractor shall maintain the enhanced wet swale after construction as outlined in the GDOT Stormwater System Inspection and Maintenance Manual until the project is turned over.

### **1. Excavation**

Excavation should be limited to the width and length of enhanced wet swale per the details shown in the plans or as directed by the Engineer. Avoid placing excavated material near the open trench so as not to jeopardize the stability of the trench sidewalls. The bottom of the excavated trench shall not be loaded in a way that causes soil compaction, and should be scarified. The sides of the trench shall be trimmed of all large roots, uniform with no voids, and scarified during normal stage construction. Install matted permanent grass slopes adjacent to enhanced wet swales immediately after each enhanced wet swale is installed. Once the basin has been stabilized, vegetation shall be established within the enhanced wet swale per the details shown in the plans.

### **2. Plantings**

Plant species used in enhanced wet swale shall be installed per the details shown in the plans and meet the requirements outlined in Georgia Department of Transportation Specification Section 702. Plants shall be selected on the basis of a specified hydric tolerance zone and shall be capable of surviving wetland conditions. All plants used shall be well grown and healthy and free from disease and infestation by invasive species.

### **3. Pretreatment**

Install rip rap forebays per the details and at the locations specified in the plans. Rip rap used in forebays shall meet the requirements outlined in Georgia Department of Transportation Specification Sections 603 and 805 and woven filter fabric shall meet the requirements outlined in Georgia Department of Transportation Specification Section 881.2.05.

#### **4. Signage**

Install signage per the details and locations specified in the plans.

### **F. Infiltration Trenches**

Construct infiltration trenches as shown in the Plans, or as modified by the Engineer, only after final grade and stabilization of drainage areas upstream of the infiltration trenches are completed to prevent contamination. If this is not feasible, stormwater flow shall be diverted around the trench and the trench area protected with temporary erosion and sediment control measures. Contractor shall maintain the infiltration trench after construction as outlined in the GDOT Stormwater System Inspection and Maintenance Manual until the project is turned over.

#### **1. Excavation**

Excavation should be limited to the width and length of infiltration trench per the details shown in the plans or as directed by the Engineer. Avoid placing excavated material near the open trench so as not to jeopardize the stability of the trench sidewalls. The bottom of the excavated trench should be flat across its width and length, shall not be loaded in a way that causes soil compaction, and should be scarified prior to placement of specified materials. The sides of the trench shall be trimmed of all large roots. The sidewalls should be uniform with no voids and scarified prior to placement of materials for specified engineered drainage layers. Trench sidewalls shall be lined with specified filter fabric. Infiltration testing is required before excavation and prior to placement of the drainage layer to ensure that infiltration rates were not impacted during excavation and that the in-situ soils have a minimum infiltration rate of 0.7 in/hr ( $5.0 \times 10^{-4}$  cm/s)

#### **2. Observation Wells**

Install observation wells made of 2-inch diameter, 0.01-inch-slotted, threaded, schedule 40 PVC pipe at the locations and depth per details shown in the plans for percolation monitoring. Observation wells shall have a threaded or slip-on top cap and shall have a locking steel sleeve to discourage vandalism and tampering.

#### **3. Drainage Layer**

Install the specified materials for drainage layers and filter fabric per the details shown in the plans. The bottom 6 inches of the drainage layer shall consist of size 10 NS sand (Georgia Department of Transportation Specification Section 801). The drainage layer shall consist of size No. 3 drainage aggregate to the depth specified in the plans and filter fabric shall be used to segregate the aggregate layer from the pea gravel/sod layer. All aggregates used in drainage layers shall be double washed and free of fines and organic materials. Protect drainage layers from contamination by foreign matter during installation. If drainage layers become contaminated or filter fabric is damaged, remove contaminated or damaged materials and replace them at no additional cost to the Department.

#### **4. Pea Gravel/Sod Layer**

The top 2 inches of the trenches shall consist of pea gravel topped with sod as specified in the plans. Pea gravel shall be of either size No. 89 or size No. 9 aggregate (Georgia Department of Transportation Specification Section 800). Sod must be washed or grown in primarily sand/sandy-loam soils with 10% or less clay content. Stabilize the disturbed areas adjacent to infiltration trenches per the plans immediately after each infiltration trench is installed.

#### **5. Pretreatment**

Install rip rap forebays, filter strips, level spreaders and other pretreatment devices per the details and at the locations specified in the plans. Rip rap used in pretreatment devices shall meet the requirements outlined in Georgia Department of Transportation Specification Sections 603 and 805 and woven filter fabric shall meet the requirements outlined in Georgia Department of Transportation Specification Section 881.2.05. Grasses used in filter strips shall be tolerant of both wet and dry conditions and meet the requirements outlined in Georgia Department of Transportation Specification Section 700.

#### **6. Signage**

Install signage per the details and locations specified in the plans.

### **G. Sand Filters**

Construct sand filters as shown in the Plans or as modified by the Engineer, after final grade and stabilization of the area upstream of each sand filter is reached/ If this is not feasible, stormwater flow shall be diverted around the sand filter and the area shall be protected with temporary erosion and sediment control measures. Contractor shall maintain the sand filter after construction as outlined in the GDOT Stormwater System Inspection and Maintenance Manual until the project is turned over.

## **1. Excavation**

Excavation should be limited to the width and length of the sand filter per the details shown in the plans or as directed by the Engineer. Avoid placing excavated material near the open trench so as not to jeopardize the stability of the trench sidewalls. The bottom of the excavated trench should be flat across its width and length, shall not be loaded in a way that causes soil compaction, and should be scarified prior to placement of specified materials. The sides of the trench shall be trimmed of all large roots. The sidewalls should be uniform with no voids and scarified prior to placement of materials for specified engineered drainage layers. Trench sidewalls shall be lined with the specified filter fabric.

## **2. Underdrain System/Aggregate Layer**

Install underdrain system(s) made of perforated polyethylene or perforated PVC pipe at the locations and depth per details shown in the plans for conveyance of stormwater that has filtered through the media. Perforations are shall be 3/8-inch diameter and spaced 6-inches on center with four rows running longitudinally. The underdrain pipe shall be surrounded by an aggregate layer as defined in the details. Nonwoven geotextile filter fabric shall be used to segregate the aggregate layer from the sand filter bed. Aggregates used in underdrain systems shall be double washed and free of fines and organic materials. Cleanouts shall be provided at the end of each underdrain branch. Cleanouts shall extend to an elevation such that they are accessible once the trench is backfilled with the specified media and shall have a locking and threaded top lid to discourage vandalism and tampering.

## **3. Sand Filter Bed**

Install the sand filter bed consisting of size 10 NS sand (Georgia Department of Transportation Specification Section 801) for the 18-inch-minimum-thickness sand filter bed layer and nonwoven geotextile filter fabric per the details shown in Plans. The sand filter bed shall be placed in 6-inch lifts and shall be protected from contamination by foreign matter during installation. If the sand filter bed becomes contaminated or the filter fabric is damaged, remove contaminated or damaged materials and replace them at no additional cost to the Department. Avoid using heavy equipment on the filter bed to maintain hydraulic conductivity of the soil media and avoid damaging the underdrains.

## **4. Engineered Topsoil Requirements**

1. The top 4 inches of the sand filter should consist of engineered topsoil. Use engineered topsoil that meets the requirements Subsection 893.2.08. Do not use a mixture that contains deleterious substances. Obtain the materials from sources approved by the Engineer. Ensure that aggregate retained on No. 10 (2 mm ) sieve is of hard, durable particles.
2. Nonwoven geotextile filter fabric shall be installed between the engineered topsoil and sand filter bed and shall be readily separable for maintenance. Stabilize the disturbed area adjacent to the sand filter per the plans immediately after the sand filter is installed. Permanent vegetation using grass cover shall be established within the sand filter using seeding once the basin has been stabilized. Grass used within the sand filter should be capable of withstanding frequent periods of wet and dry conditions.

## **5. Pretreatment-Sediment Chamber**

Rip rap used in sediment chambers shall meet the requirements outlined in Georgia Department of Transportation Specification Sections 603 and 805 and woven filter fabric shall meet the requirements outlined in Georgia Department of Transportation Specification Section 881.2.05.

## **6. Signage**

Install signage per the details and locations specified in the plans.

## **H. Wet Detention Ponds**

Construct wet detention ponds per the Plans at the required locations or as modified by the Engineer. Construct the ponds complete as shown, including but not limited to: grading, drainage, accessories to complete the wet detention ponds and temporary mulching and permanent grassing on external slopes. The contractor may propose alternate construction staging for review and approval. Alternate construction submittals for review shall be provided a minimum of 30 days prior to construction of a wet detention pond. Contractor shall maintain the wet detention pond after construction as outlined in the GDOT Stormwater System Inspection and Maintenance Manual until the project is turned over.

### **1. Excavation**

Excavation should be limited to the width and length of the wet detention pond per the details shown in the plans or as directed by the Engineer. Embankments shall be constructed using the materials and methods specified in Georgia Department of Transportation Specification Section 208 and shall be compacted to at least 95 percent of the maximum laboratory dry density. Infiltration testing shall be performed prior to excavation of the wet detention pond to determine if a permanent pool will be maintained. If infiltration test results show an infiltration rate greater than 1 inch/hour at the proposed wet detention pond invert, an impervious liner shall be approved by the Engineer for use. Install matted permanent grass slopes adjacent to wet detention ponds immediately after each wet detention pond is installed. Once the basin has been stabilized, vegetation shall be established within the wet detention pond per the details shown in the plans.

**2. Liners**

1. If geotechnical testing confirms the need for a liner, acceptable options include one of the following and shall be approved by the Engineer for use: (a) six to 12 inches of clay soil that meets the specifications below, (b) a 30 mm poly-liner, (c) bentonite, (d) use of chemical additives, or (e) a design prepared by a professional engineer registered in the state of Georgia.

<b>Clay Liner Specifications</b>			
<b>Property</b>	<b>Test Method</b>	<b>Unit</b>	<b>Specification</b>
Permeability	ASTM D-2434	cm/sec	$1 \times 10^{-6}$
Plasticity Index of Clay	ASTM D-423/424	%	Not less than 15
Liquid Limit of Clay	ASTM D-2216	%	Not less than 30
Clay Particles Passing	ASTM D-422	%	Not less than 30
Clay Compaction	ASTM D-2216	%	95% of standard proctor density

2. For wet detention ponds designed to have a clay liner, 4” of topsoil shall be added to the top of the clay liner. The topsoil may be amended organic material in order to support plant growth depending on the soil analysis. If a geosynthetic liner is used to reduce exfiltration from the wet detention pond, a minimum of 1 foot of soil shall separate the geosynthetic liner from the planting surface.

**3. Plantings**

Plant species used in wet detention ponds shall be installed per the details shown in the plans and meet the requirements outlined in Georgia Department of Transportation Specification Section 702. Vegetation surrounding the normal pool and along the safety bench shall be water tolerant wetland species and the remaining areas shall be planted with turf grass to prevent erosion. Woody vegetation shall not be planted on the embankment or 25 feet from the outlet structure. Plants shall be selected based on a specified hydric tolerance zone and all plants used shall be well grown and healthy and free from disease and infestation by invasive species.

**3. Pretreatment**

Install rip rap forebays per the details and at the locations specified in the plans. Rip rap used in forebays shall meet the requirements outlined in Georgia Department of Transportation Specification Sections 603 and 805 and woven filter fabric shall meet the requirements outlined in Georgia Department of Transportation Specification Section 881.2.05.

**4. Signage**

Install signage per the details and locations specified in the plans.

**169.3.06 Quality Acceptance**

General Provisions 101 through 150.

**169.3.07 Contractor Warranty and Maintenance**

General Provisions 101 through 150.

**169.4 Measurement**

**A. Bioretention Basins**

Bioretention basins are measured for payment by the entire basin constructed at each location complete in place and accepted. The outlet control structure, underdrain system, engineered soil mix, mulch, any pretreatment (e.g. forebay), any landscape plants, any signage, any outlet pipe, and any outlet apron and/or other energy dissipation devices are included in the cost of the bioretention basin.



## **B. Bioslopes**

Permanent bioslopes are measured for payment by the entire bioslope complete in place and accepted. The outlet control structure, underdrain system, any outlet pipe, any pretreatment, any signage, and any outlet apron and/or other energy dissipation devices are included in the cost of the bioslope. Permanent grassing is not measured and paid for separately.

## **C. Dry Detention Basins**

Dry detention basins are measured for payment by the entire structure constructed at each location complete in place and accepted. The outlet control structure, any outlet pipe, any pretreatment (e.g. forebay), any signage, and any outlet apron and/or other energy dissipation devices are included in the cost of the dry detention basin. Permanent grassing is not measured and paid for separately.

## **D. Enhanced Dry Swales**

Enhanced dry swales are measured for payment by the entire structure constructed at each location complete in place and accepted. The outlet control structure, underdrain system, engineered soil mix, any pretreatment (e.g. forebay), any signage, any outlet pipe, and any outlet apron and/or other energy dissipation devices are included in the cost of the enhanced dry swale.

## **E. Enhanced Wet Swales**

Enhanced wet swales are measured for payment by the entire structure constructed at each location complete in place and accepted. The outlet control structure, any outlet protection, any pretreatment (e.g. forebay), any landscape plants, any signage, and any outlet apron and/or other energy dissipation devices are included in the cost of the enhanced wet swale.

## **F. Infiltration Trenches**

Infiltration trenches are measured for payment by the entire structure constructed at each location complete in place and accepted. Any pretreatment and any signage are included in the cost of the infiltration trench. Sod is not measured and paid for separately.

## **G. Sand filters**

Sand filters are measured for payment by the entire structure constructed at each location complete in place and accepted. The outlet control structure, underdrain system, sand filter bed, sedimentation chamber, any signage, any outlet pipe, and any outlet apron/or other energy dissipation devices are included in the cost of the sand filter.

## **H. Wet Detention Ponds**

Wet detention ponds are measured for payment by the entire structure constructed at each location complete in place and accepted. The outlet control structure, any outlet pipe, any pretreatment (e.g. forebay), landscape plants, any signage, and any outlet apron and/or other energy dissipation devices are included in the cost of the wet detention pond. Permanent grassing is not measured and paid for separately.

### **169.4.01 Limits**

General Provisions 101 through 150.

## **169.5 Payment**

### **A. Bioretention Basins**

Bioretention basins are paid for at the Contract Unit Price per each. The outlet control structure, any outlet pipe, any pretreatment (e.g. forebay), any landscape plants, any signage, and any outlet apron and/or other energy dissipation devices are paid for in the overall cost of the bioretention basin. Payment is full compensation for:

- Furnishing the material and labor
- Preparation and grading required to construct bioretention basins
- Installation of the drainage aggregate, nonwoven geotextile filter fabric, and complete underdrain system as shown in the details for construction of bioretention basins
- Installation of the permeable engineered soil mix, and mulch, as shown in the details for construction of bioretention basins
- Installation of landscape plantings as shown in the plans for construction of bioretention basins
- Any other incidentals such as but not limited to pipe fittings and connections to other specified structures required to construct bioretention basins

## **B. Bioslopes**

Bioslope drains are paid for at the Contract Unit Price per each. The outlet control structure, any outlet pipe, any pretreatment, any signage, and any outlet apron and/or other energy dissipation devices are paid for in the overall cost of the bioslope. Payment is full compensation for:

- Furnishing the material and labor
- Preparation and grading required to construct bioslopes
- Installation of the drainage aggregate, collector pipes, bioslope soil media, nonwoven geotextile filter fabric, and turf reinforcement matting 1, as shown in the details for construction of bioslope drains
- Any incidentals such as but not limited to pipe fittings and connections required to construct the bioslope

## **C. Dry Detention Basins**

Dry detention basins are paid for at the Contract Unit Price per each. The outlet control structure, any outlet pipe, any pretreatment (e.g. forebay), any signage, and any outlet apron and/or other energy dissipation devices are paid for in the overall cost of the dry detention basin. Payment is full compensation for:

- Furnishing the material and labor
- Preparation and grading required to construct dry detention basins
- Any other incidentals such as but not limited to pipe fittings and connections to other specified structures required to construct dry detention basins

## **D. Enhanced Dry Swales**

Enhanced dry swales are paid for at the Contract Unit Price per each. The outlet control structure, any outlet pipe, any pretreatment (e.g. forebay), any signage, and any outlet apron and/or other energy dissipation devices are paid for in the overall cost of the enhanced dry swale. Payment is full compensation for:

- Furnishing the material and labor
- Preparation and grading required to construct enhanced dry swales
- Installation of the drainage aggregate, nonwoven geotextile filter fabric, and complete underdrain system as shown in the details for construction of enhanced dry swales
- Installation of the permeable engineered soil mix, and sod if required, as shown in the details for construction of enhanced dry swales
- Any other incidentals such as but not limited to pipe fittings and connections to other specified structures required to construct enhanced dry swales

## **E. Enhanced Wet Swales**

Enhanced wet swales are paid for at the Contract Unit Price per each. The outlet control structure, any outlet pipe, any pretreatment (e.g. forebay), any landscape plants, any signage, and any outlet apron and/or other energy dissipation devices are paid for in the overall cost of the enhanced wet swale. Payment is full compensation for:

- Furnishing the material and labor
- Preparation and grading required to construct enhanced wet swales
- Installation of landscape plantings as shown in the plans for construction of enhanced wet swales
- Any other incidentals such as but not limited to pipe fittings and connections to other specified structures required to construct wet swales

## **F. Infiltration Trenches**

Infiltration trenches are paid for at the Contract Unit Price per each. Any pretreatment and any signage are paid for in the overall cost of the infiltration trench. Payment is full compensation for:

- Furnishing the material and labor
- Preparation and grading required to construct infiltration trenches
- Installation of the drainage aggregate, nonwoven geotextile filter fabric, and observation wells as shown in the details for construction of infiltration trenches
- Installation of the sod as shown in the details for construction of infiltration trenches

- Any other incidentals such as but not limited to pipe fittings and connections to other specified structures required to construct infiltration trenches

**G. Sand Filters**

Sand filters are paid for at the Contract Unit Price per each. The outlet control structure, the sedimentation chamber, any outlet pipe, any signage, and any outlet apron and/or other energy dissipation devices are paid for in the overall cost of the sand filter. Payment is full compensation for:

- Furnishing the material and labor
- Preparation and grading required to construct sand filters
- Installation of the drainage aggregate, nonwoven geotextile filter fabric, 10 NS sand, and complete underdrain system as shown in the details for construction of sand filters
- Installation of the permeable topsoil as shown in the details for construction of sand filters
- Any other incidentals such as but not limited to pipe fittings and connections to other specified structures required to construct sand filters.

**H. Wet Detention Ponds**

Wet detention ponds are paid for at the Contract Unit Price per each. The outlet control structure, any outlet pipe, any pretreatment (e.g. forebay), any landscape plants, any signage, and any outlet apron and/or other energy dissipation devices are paid for in the overall cost of the wet detention pond. Payment is full compensation for:

- Furnishing the material and labor
- Preparation and grading required to construct wet detention ponds
- Installation of landscape plantings as shown in the plans for construction of wet detention ponds

Any other incidentals such as but not limited to pipe fittings and connections to other specified structures required to construct wet detention ponds

Payment is made under:

Item No. 169	Construct bioretention basin	Per each
Item No. 169	Construct bioslope	Per each
Item No. 169	Construct dry detention basin	Per each
Item No. 169	Construct enhanced dry swale	Per each
Item No. 169	Construct enhanced wet swale	Per each
Item No. 169	Construct infiltration trench	Per each
Item No. 169	Construction sand filter	Per each
Item No. 169	Construct wet detention pond	Per each

**169.5.01 Adjustments**

General Provisions 101 through 150.

**169.6 As-Built Documents**

**169.6.01 Description**

Arrange for the inspection of post-construction stormwater BMPs during construction activities as specified and submit post-construction stormwater BMP as-built documents to the Department within 45 calendar days prior to substantial completion of the Contract.

**169.6.02 Construction**

Submit to the Department within 45 calendar days of completing construction of all post-construction stormwater BMPs in the Contract post-construction stormwater BMP as-built documents that contain the specified information for each post-construction stormwater BMP constructed. Submit two hard copies and one digital copy in PDF format. All post-construction stormwater BMPs shall meet the construction tolerances outlined in Georgia Department of Transportation specification 169.6.03 and will require approval from construction engineering and inspection personnel.

The post-construction stormwater BMP as-built documents include the following content, neatly presented and organized in an easy-to-follow format, for each post-construction stormwater BMP in the Contract.

- A. Red line revision data must be overlaid on the appropriate Contract Plan sheet(s). Red line revision data must be red in color, clearly legible, and easily distinguishable. Printed copies must be submitted on 11 in. X 17 in. sheets.
- B. Applicable supporting computations demonstrating that the functionality of the post-construction stormwater BMP meets the approved design requirements as noted in the approved Post-Construction Stormwater Management (PCS) Report for the Contract. Include any necessary revisions to the final PCS Report.

Upon, written request, the Department will provide CADD files in DGN format for the approved plans and a copy of the PCS Report in PDF format to facilitate completion of the post-construction stormwater BMP as-built documents.

### **169.6.03 Construction Tolerances**

Construction tolerances for post-construction stormwater BMPs shall be as follows.

- A. **Depths:** Depths shall be within 5% of the depths specified in the Contract Documents.
- B. **Water Quality and Channel Protection Volumes:**
  - Measurement of Water Quality volume and Channel Protection volume shall be within 5% of the volumes specified in the Contract Documents.
  - Outlet structure orifices and weirs shall be within 3/16 inch of the Contract Documents.
- C. **Dimensions:**
  - Length of bioslopes, enhanced dry/wet swales, grass channels, infiltration trenches, and filter strips shall be within 5% of the length specified in the Contract Documents not to exceed 10 feet.
  - Width of infiltration trenches and filter strips shall be within 5% of the width specified in the Contract Documents.
  - Surface area for bioretention basins and sand filters shall be within 5% of the surface area specified in the Contract Documents.
  - In lieu of measuring length and width and depth of a post construction structure the average end area method for calculating volume can be used to calculate of post construction structures that have an irregular shape. The accepted tolerance of the difference between the volume measured and the volume derived from the contract documents shall be 10%.

### **169.6.04 Payment**

Post-construction stormwater BMP as-built documents will be paid for at the contract unit price per each. The payment will be full compensation for services of the professional engineer, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

Subsequent inspections and reconstructed post-construction stormwater BMPs because of failure to address deviations from the Contract Documents that exceed specified tolerances and do not meet the design functions as presented in the approved final PCS Report shall be at no additional cost to the Department.

Subsequent revisions to and submissions of the post-construction stormwater BMP as-built documents following the initial submission shall be at no additional cost to the Department.