

AMENDMENT NO. 2**ISSUE DATE: June 5, 2018**

This Addendum shall become and form a part of the RFP for:

**RFP-484-04202018DB-[A]: FY 18 Bridge Replacement Project
P.I. No. 0015912**

Note: please review carefully!

In the event of a conflict between previously released information and the information contained herein, the latter shall control.

NOTE: A signed acknowledgment of this Amendment No. 2 (this page) MUST be attached to your STATEMENT OF QUALIFICATIONS. This signed acknowledgment does not count toward the page limit of the submittal.

Firm Name _____

Signature _____ Date _____

Typed Name and Title _____

Georgia Department of Transportation (GDOT)
 Attention: Rick Merritt
 Innovative Delivery/ P3
 One Georgia Center, 19th Floor
 600 West Peachtree Street, NW
 Atlanta, Georgia 30308

This Amendment, including all articles and corrections listed below, shall become and form a part of the original RFQ package and shall be taken into account in preparing your proposal.

The purpose of this amendment is to provide RFP section corrections:

1. Volume 2 Section 6.1.3 is hereby modified with the following:

*Delete Section 6.1.3 and replace with the following:*Supplement Section 6.1.3 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.

DB Team shall coordinate with fire department and local officials in Walker County to relocate or adjust the dry hydrant as needed at Captain Wood Road over Mud Creek.

2. Volume 2 Attachment 1-1 Additional Location Requirements is hereby modified with the following:

Delete Attachment 1-1 Additional Location Requirements and replace with the attached revised

Attachment 1-1 Additional Location Requirements.

END – AMENDMENT NO. 2

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 6.1.23 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.

DB Team shall coordinate with fire department and local officials in Walker County to relocate or adjust the dry hydrant as needed at Captain Wood Road over Mud Creek.

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.

Additional Location Requirements

BATCH 1

Each of the following bridges shall be replaced:

Bridge Serial Number	Feature Carried	Feature Intersected	County Name	GDOT District
047-5023-0	Houston Valley Road	Dry Creek	Catoosa	6
097-5037-0	Post Road	Dog River	Douglas	7
105-5022-0	Ed Webb Road	Dove Creek	Elbert	1
233-5040-0	Mountain Home Loop Road	Little Cedar Creek	Polk	6
295-5029-0	Captain Wood Road	Mud Creek	Walker	6
297-5006-0	Dewey Hogan Road	Wolf Creek	Walton	1

Bridge Details

At the following bridge locations:

- 047-5023-0 (Catoosa County)
 - No more than one (1) bent shall be located within the stream. Bents shall be placed away from 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. Skew bents to align with the flood flow.
- 097-5037-0 (Douglas County)
 - No bents shall be placed within the limits of the stream. The outside edge of excavation, shoring or temporary casing for any bent shall be outside of stream banks by a minimum of 10'-0". Skew bents to align with the flood flow.
- 105-5022-0 (Elbert County)
 - No more than one (1) bent shall be located within the stream. Bents shall be placed away from 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. Skew bents to align with the flood flow. [If it is infeasible to locate the low point off the approach slab, the low point on the approach slab](#)

shall be located at least 20 feet from the beginning or end of the bridge.

- 233-5040-0 (Polk 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). 2D hydraulics and hydrological modeling shall be utilized to assess the impact of the existing and proposed flood conditions to the surrounding residential structures.
- 295-5029-0 (Walker County)
 - No more than two (2) bents shall be located within the existing stream. Bents shall be placed away from 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 8'-0" of the thalweg. Skew bents to align with the flood flow.
 - Superelevation transition is allowable.
- 297-5006-0 (Walton 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*****
097-5037-0	Douglas		March 15 – August 31	April 1 – August 31	April 1 – October 15	No
297-5006-0	Walton		NA	April 1 – August 31	NA	Yes*****
295-5029-0	Walker		March 15 – August 31	April 1 – August 31	April 1 – October 15	No
233-5040-0	Polk		NA	April 1 – August 31	April 1 – October 15	No
047-5023-0	Catoosa		March 15 – August 31	April 1 – August 31	April 1 – October 15	No
105-5022-0	Elbert		March 15 – August 31	April 1 – August 31	April 1 – October 15	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 additional requirements for the roadway design.

- 047-5023-0 (Catoosa County)
Construction is permitted within the easements shown in the RIDs. The required easements, as designated in the RIDs for the project, will be acquired no later than November 1, 2018.
- 105-5022-0 (Elbert County)
Construction is permitted within the easements shown in the RIDs. The required easements, as designated in the RIDs for the project, will be acquired no later than November 1, 2018.
- 297-5006-0 (Walton County)
Construction is permitted within the easements shown in the RIDs. The required easements, as designated in the RIDs for the project, will be acquired no later than November 1, 2018.

The following are anticipated Design Exception(s)/Variance(s)/Deviation(s) for the Project:

- 047-5023-0 (Catoosa County)

Design Variance for Horizontal Curve radius - The existing substandard horizontal curve that does not meet 2011 AASHTO guidelines may remain per the design variance.

Design Variance for Stopping Sight Distance – The existing stopping sight distance due to substandard horizontal curve that does not meet 2011 AASHTO guidelines may remain per the design variance.

Provide advisory speed signs, “no passing” signs and pavement markings for delineation at bridge approaches.

- 097-5037-0 (Douglas County)

Design Variance for Vertical Alignment – The proposed sag curve that does not meet 2011 AASHTO guidelines may remain per the design variance.

Design Variance for Maximum Grade (%) – The proposed maximum grade that does not meet 2011 AASHTO guidelines may remain per the design variance.

Provide advisory speed signs, “no passing” signs and pavement markings for delineation at bridge approaches.

- 105-5022-0 (Elbert County)

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 “no passing” signs and pavement markings for delineation at bridge approaches.

- 233-5040-0 (Polk County)

No Design Exception(s)/Variance(s)/Deviation(s) anticipated.

- 295-5029-0 (Walker County)

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 “no passing” signs and pavement markings for delineation at bridge approaches.

- 297-5006-0 (Walton County)

No Design Exception(s)/Variance(s)/Deviation(s) anticipated.

Roadway Design Criteria by Functional Classification



Design Element	Bridge - # 047-5023-0				
	Houston Valley Road over Dry Creek, Catoosa County				
	Standard Criteria	State Existing Condition for all below	Proposed Condition	Source	Comments / Design Exception or Design Variance required?
Roadway Classification	Rural - Local			GDOT Design Policy Manual, Section 3.1. Functional Classification / GDOT Functional Classification County Maps and AASHTO, 2011 Section 1.3 Functional System Characteristics	60' ROW
Basic No. of Lanes	2			AASHTO, 2011, Section 6.2.2	
AADT (Year)	690 (2031)			GDOT Bridge Inventory Data	GEOCOUNT 240-460
Design Vehicle	WB-50			GDOT Design Policy Manual, Table 3.1	
Posted Speed (MPH, if observed in field)	N/A	35	35	n/a	Observed and on SIA
FHWA Controlling Criteria					
Design Speed (MPH)	40	unknown	40	AASHTO, 2011 Sections 5.2.1; 5.3.1; 6.2.1; 6.3.1 GDOT Design Policy Manual, Table 3.1	Using local rural, rolling terrain
Design Loading Structural Capacity					
Stopping Sight Distance	305'	unknown	197/ 254'	AASHTO, 2011, Section 5.2.1; Tables 5-3	Will provide DV - Horiz.
Horizontal Curve Radius	485 (6%) or 444 (8%)	unknown	325.25'	AASHTO, 2011 Tables 3-9; 3-10b GDOT Section 4.2	DV will be provided - Existing curve - meets 35mph DS (8% -314')
Maximum Grade (%)	10% max	5.77%	10% max	AASHTO, 2011, Table 5-2	Using local rural, rolling terrain
Vertical Clearance	14.5'-16.75'	N/A	N/A	GDOT Design Policy manual, Table 6.4	
E max	6% or 8%	unknown	4%	Design Policy Manual Table 4.8	4% on bridges
Lane Width	10'	10.5' - 11'	11'	AASHTO, 2011 Sections 5.2.2; 5.3.2	Attach E of LIBP Manual, match existing roadway
Typical Roadway Cross Slope	1.5% to 2%	2%	2%	AASHTO, 2011 Sections 5.2.1 Design Policy Manual Table 6.4	
Shoulder Width - Overall (Paved)	5' (n/a)	3' (0')	5' (2')	AASHTO, 2011 Table 5-5 Design Policy Manual Table 6.4 and Table 6.5	Bridge shoulder 3' - 10 1/2"
GDOT Standard Criteria					
Intersection Sight Distance	445'	N/A	N/A	AASHTO, 2011, Section 9.5.1; Tables 9-6	
Intersection Skew Angle	N/A	N/A	N/A		
Tangent Lengths on Reverse Curves Design Speed ≥ 50	N/A	N/A	N/A	GDOT DPM Section 4.2.2	
Lateral Offset to Obstruction (>CZ)				GDOT DPM Section 5.2.1, AASHTO RDG, GDOT Construction Standard 4000W	CZ (7'-10')
Offset to barrier	4' min / 7' desirable	<2'	4'	AASHTO, 2011 Section 5.2.2, DPM, Figure 11.2	6' posts
Rumble Strips	Continuous Edge Line	none	Raised Pavement Marker, Detail T-15A, T-15C	DPM Table 6.1, Detail T-23A & T-25	Attach E of LIBP Manual
Pavement Edge Treatment / Safety Edge	Provide	unknown	Provide	DPM Section 6.5.2, GDOT Construction Detail P-7	
Median Usage	N/A	N/A	N/A	DPM Section 6.12.	No median
Roundabout Illumination Levels	N/A	N/A	N/A	IES DG 19-08	
Pedestrian, Bicycle, and Transit Warrants	N/A	N/A	N/A	GDOT DPM, Section 9.4	no warrants met
ADA requirement n PROWAG	N/A	N/A	N/A	GDOT DPM, Section 9.5.1	rural roadway, no pedestrian accommodations
GDOT Construction Standards					4000W, 4384, & 4388 - Follow Attach E -LIBP Manual for guidance
GDOT Drainage Manual	N/A	N/A	N/A		See below for spread
Elements of Design					
Gutter Spread on Bridge Deck	Retain minimum of 10' of travel lane outside of spread	unknown	3.158' at SE 4.0% cross slope	GDOT Drainage Manual, Chapter 13	4' spread available. 3.158' spread calculated with no scuppers and SE 4.0% x-slope
Maximum Horizontal Alignment Deflection without use of a Curve	35' 00"	unknown	35' 00"	GDOT Design Policy Manual, Table 4.1	
Driveway Sight Distance	445'	unknown	445'	AASHTO, 2011, Section 9.5.1; Table 9-6	
Maximum change in grade without vertical curve (%)	0.80%	unknown	0.80%	GDOT Design Policy Manual, Table 4.7	
Minimum K Value for Crest Vertical Curve	44	unknown	44	AASHTO, 2011 Table 5-3	
Minimum K Value for Sag Vertical Curve	64	unknown	64	AASHTO, 2011 Table 5-3	

Notes:

Roadway Design Criteria by Functional Classification



Design Element	Bridge- #097-5037-0				
	Post Road (CR 808) over Dog River, Douglas County				
	Standard Criteria (45 mph) ¹	State Existing Condition for all below	Proposed Condition	Source	Comments / Design Exception or Design Variance required?
Roadway Classification	Rural Minor Collector			GDOT Design Policy Manual, Section 3.1. Functional Classification / GDOT Functional Classification County Maps and AASHTO, 2011 Section 1.3 Functional System Characteristics	Off-system
Basic No. of Lanes	2			AASHTO, 2011, Section 6.3.2	
AADT (Year)	5300 (2043)			GDOT Bridge Inventory Data	24 hr T% - Total 10%
Design Vehicle	WB-50			GDOT Design Policy Manual, Table 3.1	
Posted Speed (MPH, if observed in field)	N/A	45	45	n/a	Observed and on SIA
FHWA Controlling Criteria					
Design Speed (MPH)	45	N/A	45	GDOT Design Policy Manual, Table 3.1, Table 6.5	Using rural rolling terrain
Design Loading Structural Capacity					n/a for roadway criteria
Stopping Sight Distance	360'	unknown	>360'	AASHTO, 2011, Section 6.2.1; Tables 6-3; 6-4	
Horizontal Curve Radius	643'	n/a	n/a	AASHTO, 2011 Tables 3-7, 3-9	
Maximum Grade (%)	8%	7.53%	8.575%	AASHTO 2011, Section 6.2.1; Table 6-2 GDOT Design Policy Manual, Table 4.5	Will provide DV. Using rural rolling terrain, match existing
Vertical Clearance	14.5'-16.75'	n/a	n/a	GDOT Design Policy manual, Table 6.4	
E max	6% or 8%	n/a	6%	GDOT Design Policy Manual Table 4.8, Table 6.5 AASHTO, 2011 Table 6-2	
Lane Width	11'-12'	10' - 10.5'	11'	DPM Table 6.5	Attach E of LIBP Manual, match existing roadway
Typical Roadway Cross Slope	2%	0.9 to 2.2%	2%	AASHTO 2011, Sections 4.2.2 Design Policy Manual Table 6.5	
Shoulder Width - Overall (Paved)/Slope	8' (4') / 6%	4' (0')	8' (4') / 6%	AASHTO, 2011 Table 6-5 Design Policy Manual Table 6.5	Bridge shoulder 8'
GDOT Standard Criteria					
Intersection Sight Distance	500'	N/A	N/A	AASHTO, 2011, Section 9.5.1; Tables 9-6	
Intersection Skew Angle	N/A	N/A	N/A		
Tangent Lengths on Reverse Curves Design Speed ≥ 50	N/A	N/A	N/A	GDOT DPM Section 4.2.2	
Lateral Offset to Obstruction (>CZ)				GDOT DPM Section 5.2.1, AASHTO RDG, GDOT Construction Standard 4000W	16'-18' for 1V:6H or Flatter
Offset to barrier	4' min	<1'	8'	AASHTO, 2011 Section 6.2.2, Reference Sheet for LIBP Designers, DPM, Figure 11.2	8' posts
Rumble Strips	Continuous Edge Line	N/A	Raised Pavement Marker, Detail T- 15A, T-15C	DPM Table 6.1, Detail T-23A & T-25	Attach E of LIBP Manual
Safety Edge	Provide	unknown	Provide	DPM Section 6.5.2, GDOT Construction Detail P-7	
Median Usage	N/A	N/A	N/A	DPM Section 6.12.	No median
Roundabout Illumination Levels	N/A	N/A	N/A	IES DG 19-08	n/a
Pedestrian, Bicycle, and Transit Warrants	N/A	N/A	N/A	GDOT DPM, Section 9.4	no warrants met
ADA requirement in PROWAG	N/A	N/A	N/A	GDOT DPM, Section 9.5.1	rural roadway, no pedestrian accommodations
GDOT Construction Standards					4000W, 4384, & 4388 - Follow Attach E -LIBP Manual for guidance
GDOT Drainage Manual	N/A	N/A	N/A		See below for spread
Elements of Design					
Gutter Spread on Bridge Deck	Retain minimum of 10' of travel lane outside of spread	unknown	5.255' at 2.0% cross slope	GDOT Drainage Manual, Chapter 13	8' spread available. 5.255' spread calculated with no scuppers and 2.0% x-slope
Maximum Horizontal Alignment Deflection without use of a Curve	30' 00"	N/A	25' 2.7"	GDOT Design Policy Manual, Table 4.1	
Driveway Sight Distance	500'	N/A	N/A	AASHTO, 2011, Section 9.5.1; Table 9-6	
Maximum change in grade without vertical curve (%)	0.70%	unknown	0.70%	GDOT Design Policy Manual, Table 4.7	
Minimum K Value for Crest Vertical Curve	61	N/A	61	AASHTO, 2011 Table 6-3	
Minimum K Value for Sag Vertical Curve	79	38.46	43.61	AASHTO, 2011 Table 6-3	Will provide DV.

Notes: ¹ Design speed provided by GDOT and SIA report

Design Criteria by Functional Classification



Design Element	Bridge #105-5022-0				
	Ed Webb Road over Dove Creek, Elbert County				
	Standard Criteria	State Existing Condition for all below	Proposed Condition	Source	Comments / Design Exception or Design Variance required?
Roadway Classification	Rural - Local (Unpaved)			GDOT Design Policy Manual, Section 3.1. Functional Classification / GDOT Functional Classification County Maps and AASHTO, 2011 Section 1.3 Functional System Characteristics AASHTO - Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤ 400), Ch.2	Bridge Closed to all traffic - Single lane - Alternating One Way
Basic No. of Lanes	2			AASHTO - Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤ 400)	
AADT (Year)	350 (2043)			GDOT Bridge Inventory Data	24 hr T% - Total 2.5%
Design Vehicle	WB-50			GDOT Design Policy Manual, Table 3.1	
Posted Speed (MPH, if observed in field)	N/A	N/A	N/A	40 mph posted on paved section SIA sheet says 55 mph	No posted speed on unpaved section. Retain existing condition.
FHWA Controlling Criteria					
Design Speed (MPH)	20	N/A	20	AASHTO, 2011 Section 5.2.1, Table 5-1	Will provide Design Speed Memo of Decision. Using mountainous terrain to match existing.
Design Loading Structural Capacity					n/a for roadway criteria
Stopping Sight Distance	115'	provide if possible	115'	AASHTO, 2011, Section 5.2.1; Table 5-3 AASHTO - Guidelines for VLVL	
Minimum Radii of Horizontal Curve	81'	200'	200'	AASHTO - Guidelines for VLVL	
Maximum Profile Grade (%) ²	16% max	13.05%	13.05%	AASHTO, 2011, Section 5.3.1; Tables 5-2 AASHTO - Guidelines for VLVL	
Vertical Clearance	14.5'-16.75'	N/A	N/A	GDOT Design Policy manual, Table 6.4	
E max	6% or 8%	Reverse Crown	6%	Design Policy Manual Table 4.8	Reverse crown for unpaved
Lane Width	9'	Single lane varies 8'-10'	9'	AASHTO, 2011 Sections 5.3.2 AASHTO - Guidelines for VLVL	Attach E of LIBP Manual, match existing roadway
Typical Roadway Cross Slope	2%	3%	2%	AASHTO, 2011 Sections 5.3.1 Design Policy Manual Table 6.4	3% for unpaved
Shoulder Width - Overall (Paved)	2' (0')	0' (0')	2' (0')	AASHTO, 2011 Table 5-5 Design Policy Manual Table 6.4	
GDOT Standard Criteria					
Intersection Sight Distance	225'	N/A	N/A	AASHTO, 2011, Section 9.5.1; Tables 9-6	
Intersection Skew Angle	N/A	N/A	N/A		
Tangent Lengths on Reverse Curves Design Speed ≥ 50	N/A	N/A	N/A	GDOT DPM Section 4.2.2	
Lateral Offset to Obstruction (>CZ)				GDOT DPM Section 5.2.1, AASHTO RDG, GDOT Construction Standard 4000W	7'-10' for 1V:6H or Flatter
Offset to barrier	4' min	2'	4'	AASHTO, 2011 Section 5.2.2, DPM, Figure 11.2	Bridge shoulder 4' - 10 1/2" , 6' posts
Rumble Strips	Continuous Edge Line	none	Raised Pavement Marker, Detail T-15A, T-15C	DPM Table 6.1, Detail T-23A & T-25	Attach E of LIBP Manual
Safety Edge	Provide	none	Provide	DPM Section 6.5.2, GDOT Construction Detail P-7	
Median Usage	N/A	N/A	N/A	DPM Section 6.12.	No median
Roundabout Illumination Levels	N/A	N/A	N/A	IES DG 19-08	
Pedestrian, Bicycle, and Transit Warrants	N/A	N/A	N/A	GDOT DPM, Section 9.4	No warrants met
ADA requirement in PROWAG	N/A	N/A	N/A	GDOT DPM, Section 9.5.1	Rural roadway, no pedestrian accommodations
GDOT Construction Standards					
GDOT Drainage Manual	N/A	N/A	N/A		See below for spread
Elements of Design					
Gutter Spread on Bridge Deck	Retain minimum of 10' of travel lane outside of spread	unknown	3.997' at 2.5% cross slope	GDOT Drainage Manual, Chapter 13	4' spread available. 3.997' spread calculated with curbs and 2.5% x-slope
Maximum Horizontal Alignment Deflection without use of a Curve	90' 00"	unknown	90' 00"	GDOT Design Policy Manual, Table 4.1	
Driveway Sight Distance	225'	unknown	225'	AASHTO, 2011, Section 9.5.1; Table 9-6	
Maximum change in grade without vertical curve (%)	1.20%	unknown	1.20%	GDOT Design Policy Manual, Table 4.7	
Minimum K Value for Crest Vertical Curve	7	unknown	15.92	AASHTO, 2011 Table 5-3 AASHTO - Guidelines for VLVL	Tying into existing unpaved section
Minimum K Value for Sag Vertical Curve	17	unknown	11.04	AASHTO, 2011 Table 5-3 AASHTO - Guidelines for VLVL	Tying into existing unpaved section

Notes:

² For short sections less than 500 feet and for one-way downgrades, the maximum grade may be 1% steeper than the values appearing in Table 4.5 of the GDOT Design Manual.

Design Criteria by Functional Classification



Design Element	Bridge #233-5040-0				
	Mountain Home Loop Road (CR 380) over Little Cedar Creek, Polk County				
	Standard Criteria	State Existing Condition for all below	Proposed Condition	Source	Comments / Design Exception or Design Variance required?
Roadway Classification	Local Road (Rural)			GDOT Design Policy Manual, Section 3.1. Functional Classification / GDOT Functional Classification County Maps and AASHTO, 2011 Section 1.3 Functional System Characteristics	Single lane bridge
Basic No. of Lanes	2			AASHTO, 2011, Section 6.2.2	
AADT (Year)	50 (2043)			GDOT Bridge Inventory Data	24 hr T% - Total 22.5%
Design Vehicle	WB-50			GDOT Design Policy Manual, Table 3.1	
Posted Speed (MPH, if observed in field)	N/A	not observed	35	n/a	No existing posted speed. Retain existing condition. (35mph on SIA)
FHWA Controlling Criteria					
Design Speed (MPH)	30	N/A	35	AASHTO, 2011 Sections 5.2.1; Table 5-1 GDOT Design Policy Manual, Table 3.1	
Design Loading Structural Capacity					
Stopping Sight Distance	200'	unknown	250'	AASHTO, 2011, Section 5.2.1; Tables 5-3	
Horizontal Curve Radius	81'	unknown	340'	AASHTO, 2011 Tables 3-9	
Maximum Grade (%)	10% max	6.77%	10% max	AASHTO, 2011, Section 5.2.1; Tables 5-2	Using local, rural, rolling terrain
Vertical Clearance	14.5'-16.75'	N/A	N/A	GDOT Design Policy manual, Table 6.4	
E max	6% or 8%	unknown	4%	Design Policy Manual Table 4.8 AASHTO, 2011 Section 5.2.1	4% on bridge
Lane Width	9'	8.5'	8.5'-10'	AASHTO, 2011 Sections 5.2.2; Table 5-5 DPM Table 6.4	Attach E of LIBP Manual - match existing roadway width
Typical Roadway Cross Slope	1.5% to 2%	2%	2%	AASHTO, 2011 Sections 5.2.1 Design Policy Manual Table 6.4	
Shoulder Width - Overall (Paved)	2' (n/a)	2' (0')	2' (0')	AASHTO, 2011 Table 5-5 Design Policy Manual Table 6.4	
GDOT Standard Criteria					
Intersection Sight Distance	335'	unknown	390'	AASHTO, 2011, Section 9.5.1; Tables 9-6	
Intersection Skew Angle	N/A	N/A	N/A		
Tangent Lengths on Reverse Curves Design Speed ≥ 50	N/A	N/A	N/A	GDOT DPM Section 4.2.2	
Lateral Offset to Obstruction (>CZ)				GDOT DPM Section 5.2.1, AASHTO RDG, GDOT Construction Standard 4000W	7'-10'
Offset to barrier	4' min	<3'	4'	AASHTO, 2011 Section 6.2.2, DPM, Figure 11.2	Bridge Shoulder 3', 8' posts
Rumble Strips	Continuous Edge Line	none	Raised Pavement Marker, Detail T-15A, T-15C	DPM Table 6.1, Detail T-23A & T-25	Attach E of LIBP Manual
Safety Edge	Provide	unknown	Provide	DPM Section 6.5.2, GDOT Construction Detail P-7	
Median Usage	N/A	N/A	N/A	DPM Section 6.12.	No median
Roundabout Illumination Levels	N/A	N/A	N/A	IES DG 19-08	
Pedestrian, Bicycle, and Transit Warrants	N/A	N/A	N/A	GDOT DPM, Section 9.4	no warrants met
ADA requirement n PROWAG	N/A	N/A	N/A	GDOT DPM, Section 9.5.1	rural roadway, no pedestrian accommodations
GDOT Construction Standards					4000W, 4384, & 4388 - Follow Attach E -LIBP Manual for guidance
GDOT Drainage Manual	N/A	N/A	N/A		See below for spread
Elements of Design					
Gutter Spread on Bridge Deck	Retain minimum of 10' of travel lane outside of spread	unknown	2.567' at 3.7% SE cross slope	GDOT Drainage Manual, Chapter 13	3' spread available. 2.567' spread calculated with no scuppers and 3.7% SE x-slope
Maximum Horizontal Alignment Deflection without use of a Curve	45' 00"	unknown	40' 00"	GDOT Design Policy Manual, Table 4.1	
Driveway Sight Distance	335'	unknown	390'	AASHTO, 2011, Section 9.5.1; Table 9-6	
Maximum change in grade without vertical curve (%)	1.00%	unknown	0.90%	GDOT Design Policy Manual, Table 4.7	
Minimum K Value for Crest Vertical Curve	19	unknown	29	AASHTO, 2011 Table 5-3	
Minimum K Value for Sag Vertical Curve	37	unknown	49	AASHTO, 2011 Table 5-3	(Providing K=19.22 where tying into existing)

Notes:

Roadway Design Criteria by Functional Classification



Design Element	Bridge #297-5006-0				
	Dewey Hogan Road (CR 20) over Wolf Creek, Walton County				
	Standard Criteria	State Existing Condition for all below	Proposed Condition	Source	Comments / Design Exception or Design Variance required?
Roadway Classification	Local Road (Rural)			GDOT Design Policy Manual, Section 3.1. Functional Classification / GDOT Functional Classification County Maps and AASHTO, 2011 Section 1.3 Functional System Characteristics	Off-system
Basic No. of Lanes	2			AASHTO, 2011, Section 6.2.2	
AADT (Year)	100 (2043)			GDOT Bridge Inventory Data	24 hr T% - Total 15.0%
Design Vehicle	WB-50			GDOT Design Policy Manual, Table 3.1	
Posted Speed (MPH, if observed in field)	N/A	not observed	N/A	n/a	No existing posted speed. Retain existing condition.
FHWA Controlling Criteria					
Design Speed (MPH)	30	N/A	35	AASHTO, 2011 Sections 5.2.1, Table 5-1 GDOT Design Policy Manual, Table 3.1	Using SIA - GDOT Bridge Inventory Data
Design Loading Structural Capacity					
Stopping Sight Distance	200'	unknown	250'	AASHTO, 2011, Section 5.2.1; Table 5-3	307' VC
Horizontal Curve Radius	231'	unknown	340'	AASHTO, 2011 Tables 3-9	
Maximum Grade (%)	10% max	7.03%	10% max	AASHTO, 2011, Table 5-2	Using rural, rolling terrain
Vertical Clearance	14.5'-16.75'	N/A	N/A	GDOT Design Policy manual, Table 6.4	
E max	6% or 8%	unknown	6%	Design Policy Manual Table 4.8	
Lane Width	9'	8'	9'	AASHTO, 2011 Sections 5.2.2, Table 5-5 DPM Table 6.4	Attach E of LIBP Manual, match existing roadway
Typical Roadway Cross Slope	1.5% to 2%	2%	2%	AASHTO, 2011 Sections 5.2.1 Design Policy Manual Table 6.4	
Shoulder Width - Overall (Paved)	2' (n/a)	0' (0')	2'(0')	AASHTO, 2011 Table 5-5 Design Policy Manual Table 6.4	Bridge shoulder 3.375'
GDOT Standard Criteria					
Intersection Sight Distance	335'	unknown	390'	AASHTO, 2011, Section 9.5.1; Tables 9-6	
Intersection Skew Angle	N/A	N/A	N/A		
Tangent Lengths on Reverse Curves Design Speed ≥ 50	N/A	N/A	N/A	GDOT DPM Section 4.2.2	
Lateral Offset to Obstruction (>CZ)				GDOT DPM Section 5.2.1, AASHTO RDG, GDOT Construction Standard 4000W	
Offset to barrier	4' min	-2.0'	4' min.	AASHTO, 2011 Section 6.2.2	Bridge shoulder 3.375', 8' posts
Rumble Strips	Continuous Edge Line	none	Raised Pavement Marker, Detail T-15A, T-15C	DPM Table 6.1, Detail T-23A & T-25	Attach E of LIBP Manual
Safety Edge	Provide	unknown	Provide	DPM Section 6.5.2, GDOT Construction Detail P-7	
Median Usage	N/A	N/A	N/A	DPM Section 6.12.	No median
Roundabout Illumination Levels	N/A	N/A	N/A	IES DG 19-08	
Pedestrian, Bicycle, and Transit Warrants	N/A	N/A	N/A	GDOT DPM, Section 9.4	no warrants met
ADA requirement n PROWAG	N/A	N/A	N/A	GDOT DPM, Section 9.5.1	rural roadway, no pedestrian accommodations
GDOT Construction Standards					Attach E -LIBP Manual DPM - Figure 11.2
GDOT Drainage Manual	N/A	N/A	N/A		See below for spread
Elements of Design					
Gutter Spread on Bridge Deck	Retain minimum of 10' of travel lane outside of spread	unknown	3.286' at 2.0% cross slope	GDOT Drainage Manual, Chapter 13	3.375' spread available. 3.286' spread calculated with no scuppers and 2.0% x-slope
Maximum Horizontal Alignment Deflection without use of a Curve	45' 00"	unknown	14' 17.2"	GDOT Design Policy Manual, Table 4.1	
Driveway Sight Distance	335'	unknown	390'	AASHTO, 2011, Section 9.5.1; Table 9-6	
Maximum change in grade without vertical curve (%)	1.00%	unknown	0.90%	GDOT Design Policy Manual, Table 4.7	
Minimum K Value for Crest Vertical Curve	19	unknown	29	AASHTO, 2011 Table 5-3	
Minimum K Value for Sag Vertical Curve	37	unknown	49	AASHTO, 2011 Table 5-3	

Notes:

Design Criteria by Functional Classification



Design Element	Bridge #295-5029-0				
	Captain Wood Rd (CR 101) over West Chickamauga Creek (Mud Creek), Walker County				
	Standard Criteria	State Existing Condition for all below	Proposed Condition	Source	Comments / Design Exception or Design Variance required?
Roadway Classification	Local Road (Rural)			GDOT Design Policy Manual, Section 3.1. Functional Classification / GDOT Functional Classification County Maps and AASHTO, 2011 Section 1.3 Functional System Characteristics	60 feet ROW - cattle fence within ROW
Basic No. of Lanes	2			AASHTO, 2011, Section 6.2.2	
AADT (Year)	60 (2011) 90 (2031)			GDOT Bridge Inventory Data	
Design Vehicle	WB-50			GDOT Design Policy Manual, Table 3.1	
Posted Speed (MPH, if observed in field)	N/A	not observed	N/A	n/a	No existing posted speed. Retain existing condition.
FHWA Controlling Criteria					
Design Speed (MPH)	30	N/A	35	AASHTO, 2011 Sections 5.2.1 GDOT Design Policy Manual, Table 3.1	SIA = 35 mph
Design Loading Structural Capacity					
Stopping Sight Distance	200'	unknown	250'	AASHTO, 2011, Section 5.2.1; Table 5-3	
Minimum Radii of Horizontal Curve	250'	unknown	385'	AASHTO, 2011 Tables 3-8	
Maximum Profile Grade (%)	10% max	6.34%	10% max	AASHTO, 2011, Table 5-2	Using rural, rolling terrain
Vertical Clearance	14.5'-16.75'	N/A	N/A	GDOT Design Policy manual, Table 6.4	
E max	6% or 8%	unknown	6%	Design Policy Manual Table 4.8	4% on bridge
Lane Width	9'	8.5'-9'	10'	AASHTO, 2011 Sections 5.2.2, Table 5-5 AASHTO VLVL, DPM Table 6.4	
Typical Roadway Cross Slope	1.5% to 2%	2%	2%	AASHTO, 2011 Sections 5.2.1 Design Policy Manual Table 6.4	
Outside Shoulder Width - Overall (Paved)	2' (n/a)	2' (0')	2' (0')	AASHTO, 2011 Table 5-5	Bridge shoulder 3'
GDOT Standard Criteria					
Intersection Sight Distance	335'	unknown	390'	AASHTO, 2011, Section 9.5.1; Tables 9-6	
Intersection Skew Angle	N/A	N/A	N/A		
Tangent Lengths on Reverse Curves Design Speed ≥ 50	N/A	N/A	N/A	GDOT DPM Section 4.2.2	
Lateral Offset to Obstruction (>CZ)				GDOT DPM Section 5.2.1, AASHTO RDG, GDOT Construction Standard 4000W	
Offset to barrier	4' min	2'	4.25'	AASHTO, 2011 Section 6.2.2, DPM, Figure 11.2	Bridge shoulder 3', 6' posts
Rumble Strips	Continuous Edge Line	none	Raised Pavement Marker, Detail T-15A, T-15C	DPM Table 6.1, Detail T-23A & T-25	Attach E of LIBP Manual
Safety Edge	Provide	unknown	Provide	DPM Section 6.5.2, GDOT Construction Detail P-7	
Median Usage	N/A	N/A	N/A	DPM Section 6.12.	No median
Roundabout Illumination Levels	N/A	N/A	N/A	IES DG 19-08	
Pedestrian, Bicycle, and Transit Warrants	N/A	N/A	N/A	GDOT DPM, Section 9.4	no warrants met
ADA requirement n PROWAG	N/A	N/A	N/A	GDOT DPM, Section 9.5.1	rural roadway, no pedestrian accommodations
GDOT Construction Standards					Attach E - LIBP Manual DPM - Figure 11.2
GDOT Drainage Manual	N/A	N/A	N/A		See below for spread
Elements of Design					
Gutter Spread on Bridge Deck	Retain minimum of 9' of travel lane outside of spread	unknown	3.093' at 2.5% cross slope	GDOT Drainage Manual, Chapter 13	3.5' spread available. 3.093' spread calculated with no scuppers and 2.5% x-slope, 3.003' spread calculated with no scuppers and 4.0% SE x-slope
Maximum Horizontal Alignment Deflection without use of a Curve	40' 00"	unknown	N/A	GDOT Design Policy Manual, Table 4.1	
Driveway Sight Distance	390'	unknown	390'	AASHTO, 2011, Section 9.5.1; Table 9-6	
Maximum change in grade without vertical curve (%)	0.90%	unknown	0.90%	GDOT Design Policy Manual, Table 4.7	
Minimum K Value for Crest Vertical Curve	19	unknown	29	AASHTO, 2011 Table 5-3	
Minimum K Value for Sag Vertical Curve	37	unknown	49(18.46)	AASHTO, 2011 Table 5-3	To match deficient existing vertical profile

Notes: