

**REQUEST FOR QUALIFICATIONS
TO PROVIDE
ENGINEERING DESIGN SERVICES
(B1-2015)**

RFQ-484-031315

PHASE II RESPONSE

Contract #5

**Project Numbers: STP00-0074-02(021) &
BHF00-0074-02(022)**

PI Numbers: 721290 & 721295

County: Clayton, Fayette

**SR 85 from SR 279/Fayette to
CR 820/Roberts Dr/Clayton**

&

**SR 85 @ Camp Creek @
Clayton/Fayette County Line**



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SUBMITTAL

#2

April 29, 2015



VII.A.1 – Technical Approach to Managing the Project

VII.A.1.a – Unique Technical Approaches

Collaboration, Communication, and Coordination

Our approach to this project is one of **collaboration, communication, and coordination** between all design team members and the many stakeholders that include GDOT, local jurisdictions, the Georgia DNR, FEMA, and USACE. A detailed schedule created by the Department in P6 and confirmed by our team will be the primary document that guides us. We maintain the tasks and baseline dates established in P6 and expand the schedule with more detailed tasks of the environmental effort and other critical efforts. With this schedule, we will ensure the environmental document and 404 Permit are completed and updated as necessary and when appropriate.

Design to a Budget and Constructability

We believe in determining a realistic project cost as a combination of design, right-of-way, utility relocation, and construction early in the project development. We then manage our work with the goal of achieving the budget number. Our staff is always thinking of construction and constructability. When inherent construction problems are solved by the contractor, there are often claims and cost overrun. Our philosophy is to design for construction throughout the design development effort by anticipating a realistic construction method, approach, and schedule. Our engineering includes consideration of costs from all sources in order to identify and develop the most cost effective solutions.

Approach to Successful Roadway Design

This project will widen the existing 4 lanes to 6 lanes separated by a raised concrete median with urban shoulders, curb and gutter, and sidewalk. The concept plan establishes the general plan to widen to the inside and reconstruct the rural shoulders to urban shoulders. Our preliminary engineering will expand on the concept design by detailing the side road construction in order to add side road turn lanes, some of which require significant length to address intersection capacity issues. We will detail driveway construction tie-ins that enable ease of ingress and egress and we will detail stormwater design, signing and marking, erosion control, utility relocation plans, and maintenance of traffic plans. Much of the roadway geometric design and roadway cross sections were designed during our concept development, but evaluation, value engineering, and cost estimating of the design will continue in order to deliver quality, cost effective construction plans. H&L understands the issues and challenges to widening this section of SR 85.

Approach to Successful Bridge Design

This project will replace the existing bridges that carry SR 85 over Camp Creek. The bridge superstructure depth, profile, and length will be set based on the required bridge opening obtained from the hydraulic studies. A bridge type study will result in an optimum span length and configuration that considers substructure options established through coordination with the geotechnical engineer. Preliminary plans and cost estimate will be subject to our internal constructability and peer reviews, value engineering, and QA/QC process. Final construction plans will follow the approved preliminary plans and layout.

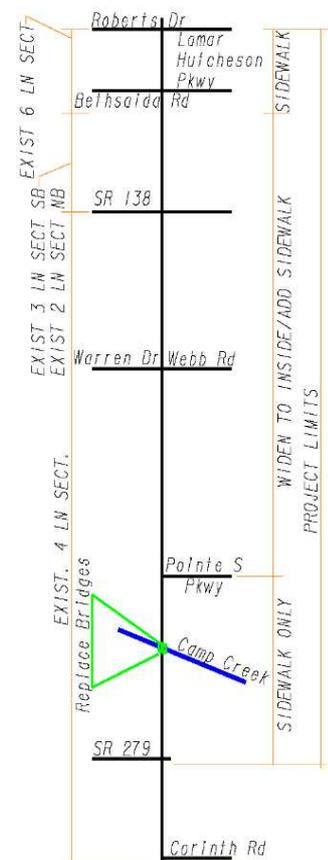
Our design emphasis will be to identify a cost effective solution that focuses on maintenance of traffic during construction of the bridges. One option is to stage traffic through either a temporary or a permanent bridge located between the existing bridges in the median. The traffic from one of the existing bridges would be shifted to this bridge to allow removal and replacement of the existing bridge while maintaining two lanes of traffic each way at all times. The staging process and bridge replacement can be repeated for the other existing bridge. A permanent bridge placed in the median would provide for future roadway widening to six lanes, similar to the widened roadway immediately north at Pointe South Parkway.

VII.A.1.b – Unique Challenges

The unique challenges for this project involve the critical decisions that were made during concept development. Our team studied the traffic, environmental resources, design, utilities, and right of way challenges with the GDOT Project Manager, Planning Office staff, and local County staff and we developed concept solutions that we will validate, since the concept is two years old.

Project Limits

The programmed project description defined the project beginning at SR 279 in Fayette County and ending at Roberts Drive in Clayton County shown on the sketch to the right. After reviewing traffic volumes, analysis, and LOS, the GDOT Office of Planning recommended that the project limits begin at Pointe South Parkway and end at Lamar Hutcheson Parkway. A critical decision point involved discussion with Fayette County regarding their planned East Fayetteville Bypass that intersected SR 85 at Corinth Road, utilized a short section of SR 85 going north, and continued west on SR 279. We resolved





that only 4 lanes were necessary in this section. H&L recommended, and the decision was made, to maintain the original programmed project limits in order to connect sidewalks on the north and south ends of the project. H&L has remained in contact with Phil Mallon, Fayette County Public Works Director, to stay informed on the Fayetteville Bypass. This decision will be validated and confirmed with FHWA as our first step on this project.

Typical Section and Widening in the Existing Median

The typical widening for the additional third lane in each direction is to the inside, using the existing grassed median. A majority of SR 85 contains a continuous right turn lane for ingress and egress to commercial and retail properties. Although it would appear simple to convert the continuous right turn lane into the additional third lane, after we evaluated with a value engineering approach, we recommended and the critical decision was made to widen to the inside into the existing median since commercial property impacts were significantly less.

Utility Impacts and Minimizing Relocations

With numerous aerial and underground utilities throughout the SR 85 corridor, widening to the inside results in the least impact to utilities. At some locations along the project length, there will be widening to the outside to accommodate intersection turn lanes and upgraded traffic signal poles. Our SUE sub-consultant firm, CARDNO, will support our design efforts with SUE Level C, B, and A, where appropriate. Transcontinental Gas Pipeline has a major gas transmission pipeline that crosses SR 85 just south of Pointe South Parkway. Roadway construction involves shoulder, curb and gutter, sidewalk, and storm drain systems. SR 85 drains south towards Camp Creek. Our storm drain system drainage design will avoid the gas transmission line by ensuring minimal depth structures, minimum pipe sizes, and possibly shallow catch basin/spillways in the area.

Access Management, Access Control and Accident Reduction

Numerous commercial driveways along the project contribute to congestion and accidents. Median breaks exist throughout the project limits and at many of the intersections, increasing the vehicular accident risk. In concept, H&L evaluated the median opening spacing and recommended eliminating two existing median openings because of minimum spacing requirements. This critical decision during concept development considered a design variance for median opening spacing compared to the available access points in the area. This decision to improve access control in an effort to reduce accidents along the corridor may be challenged by property owners. H&L will utilize previous coordination efforts and documentation to consult with GDOT and local County staff to validate the decision early during preliminary design.

NEPA Approval and Compliance

Based on preliminary design plans, we will prepare an Environmental Assessment (EA) for GDOT and FHWA approval. One re-evaluation prior to the project let is anticipated. The project team will involve the GDOT Subject Matter Experts (SMEs), the Federal Highway Administration (FHWA), Georgia Department of Natural Resources (GADNR), local residents and businesses, and other project stakeholders early in the project development process to address any critical issues, which will help to keep the project on schedule and within budget. The project is scheduled to hold Preliminary Field Plan Review (PFPR) in June 2016. An approved Draft EA is required to hold PFPR and could be completed prior to this milestone. Environmental certification is scheduled to occur by July 2017. This is a sufficient amount of time to prepare the approved Final EA.

Monthly meetings between GDOT, the designers, and the environmental team are proposed to aid in coordination. These meetings will result in consideration of the environmental and constructability challenges and provide a clear and early understanding of project-area constraints and opportunities. Successful NEPA documentation is vital to this project. We will maintain a critical path schedule for all special studies, based on the known resources and the project's baseline schedule. We will work closely with our environmental subconsultant, Edwards-Pitman Environmental, and GDOT offices to avoid resources and provide cost effective, readily constructible roadway and bridges.

The following describes our previous environmental efforts when we completed the concept study and provides insight to the next steps:

- **Historic Resources**

- A survey for historic resources was conducted in 2012
- Approved by the State Historic Preservation Officer (SHPO) on July 11, 2012
- No properties were recommended for inclusion in the National Register for Historic Places (NRHP)

Due to the age of the survey and the anticipated ROW approval date (2017), an update to the survey report is recommended.

- **Archaeological Resources**

- No previous survey for the projects was complete.

A Phase I survey for archaeological resources will be required for the entirety of the APE and Extended Survey Corridor (ESC) for the project and will proceed once ROW limits for the approved concept are validated.

- **Ecological Resources and Permitting**

- An Ecology Resource Survey Report was previously approved in December 2013.



- A No-Effect determination for protected species was made, with Special Provisions for migratory birds to be implemented for the bridges over Camp Creek.

The survey for waters of the US and state waters will require update to reflect current standards and the current design. The findings will be documented in an Ecology Resources Assessment of Effects report. In order to streamline the ecology review, EPEI will schedule a meeting with US Army Corps of Engineers (USACE) and the Georgia Environmental Protection Division (GAEPD) early in the project schedule to verify federal jurisdictional and state water determinations.

- Coordination with US Fish and Wildlife Service (USFWS) and GADNR regarding threatened and endangered species will be conducted immediately following the project's kickoff. Seasonal surveys for protected species are not anticipated.

EPEI will work closely with the project engineers to avoid impacts to ecological resources as much as possible. This will help maintain the project schedule and reduce costs. Impacts to waters of the US will require a Section 404 Permit through the USACE and non-exempt encroachments into the state mandated vegetative buffers would require a Stream Buffer Variance (SBV) from the GAEPD.

MS4 Analysis and Infeasibility

Our recent experience with MS4 design on SR 92, the latest GDOT Drainage Manual guidance, and infeasibility reports provides our team the knowledge and skills to study and determine MS4 feasibility/infeasibility on SR 85. In our experience, MS4 will be infeasible at most, if not all, of the outfalls.

Quality Control/Quality Assurance

"Quality, it stands behind everything we do." The company motto of Heath & Lineback Engineers, Inc. is more than just a quote to put on the wall. Our continuous focus on quality drives every decision we make as engineers, managers, and business leaders. Our commitment to quality is demonstrated by creating a Quality Management Plan (QMP) for each project, large or small. This Plan defines our procedures for Quality Control and Quality Assurance Reviews, identifies members of the Quality Management Team (QMT) and outlines their responsibilities, and establishes the level and frequency of review for the specific project.

Tom Barwick, as Project Manager, will be responsible for ensuring the quality of this project. He will prepare the QMP, initiate QMT meetings, and ensure that each deliverable passes through our QC/QA process, which includes multi-level, independent reviews. Tom is PDP Certified and has over 25 years of experience delivering projects for GDOT. He is committed to working in partnership with GDOT to ensure an on-time, on-budget project that meets the Department's needs. He is fully responsible for maintaining the schedule, monitoring the scope, and meeting the budget. Tom will keep our subconsultants and the GDOT PM up to date with weekly status reports, allowing the team to identify any areas requiring attention and ensuring all parties are aware of the next schedule milestone.

VII.A.2 – Specific Qualifications, Skills, and Knowledge

Relevant Experience

Since we recently completed the conceptual design for this SR 85 widening project, we propose the same team that developed the Concept Study and Report. Tom Barwick as Project Manager, Paola Rojas as Lead Road Engineer, Ted Sparks as Lead Bridge Engineer, and Susan Thomas as Lead NEPA Planner have prior and specific knowledge that will ensure this project remains on schedule and is completed within budget.

As our traffic subconsultant for the concept design, Kimley-Horn and Associates completed the Traffic Engineering Study which included data collection for 11 signalized intersection and 14 unsignalized intersections along the corridor. Traffic flow diagrams and traffic modeling for 25 intersections and a traffic study provided the recommended improvements to serve the projected traffic conditions. Additionally, the TE study report included accident data as well as roundabout planning level analyses for 18 intersections along the corridor. Our SUE subconsultant firm, Cardno, Inc., performed the Level D SUE analysis during our concept development. Kimley-Horn and Cardno remain part of our team for this new project and will provide the continuity of staff and knowledge needed to assure successful completion.

In addition to our completion of the concept for SR 85 widening, we have recent project experience that will directly benefit this project. One relevant project, the South Calhoun Bypass/SR 53 Bypass, was completed under many similar constraints including widening an existing two lane rural roadway to a four lane urban roadway through numerous commercial and industrial properties. Maintenance of traffic, access control, driveway reconstruction, stormwater design, and right of way impacts were all challenges that required coordination with property owners and local County staff. This is one of many projects where our long term working relationship with Edwards-Pitman Environmental and Kimley-Horn and Associates, who also have great working relationships with GDOT staff, has resulted in a quality engineering product for GDOT.

This proposal shows our depth of recent knowledge and our strong local stakeholder coordination and working relationships developed. Using our team to continue into final design assumes that our experience is best suited for completion of the design work.

The H&L Team is the most qualified, with the most knowledge, to complete this project for the Department. We ask that you award this project to us.