



TECHNICAL PROPOSAL REPORT

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|---|-------------------------|---|
| Agreement: E01193 | Project Specific | Active |
| Name: Improvements of Chestnut St and Morton Ave | | Selection Process: Modified Initiating Org: Engineering District 6-0 |
| Supplement: 2 | Normal | Executed |
| Description: increase the amount for the Roadway Boring Contract | | |

Part 4 - Part 4 - Preliminary Engineering Morton Avenue

Description

Preliminary Engineering Services ...

Task 1 - Project Management/Administration

Objective:

2.1.1

This task consists of the administrative effort required by principals, project manager, and involved personnel to complete the project on time and within budget, and to provide a quality product.

2.1.1.1

This task includes meeting preparation, attendance and documentation in the form of minutes. This includes Project Status, Design Review and Special Purpose Meetings.

2.1.1.2

This task consists of the effort needed to coordinate the design value engineering review procedures.

2.1.1.3

This task consists of the effort to administer the QC/QA policies and procedures.

2.1.1.4

This task involves the preparation of preliminary cost estimates for the project and all steps necessary to obtain PMC approval.

2.1.1.5

This task is the preparation of the project design schedule, identification of major milestones, and the critical path. Includes updating the schedule on a regular basis.

2.1.1.6

This task is the selection and management of the project team. This team may consist of in-house personnel and/or consultants.

2.1.1.7

This task consists of periodically reporting project schedule and budget progress.

2.1.1.8

This task is the preparation, negotiation and administration of all agreements with state and federal agencies, municipalities, consultants, etc.

2.1.1.8.2

This task is the preparation, negotiation and administration of all municipal agreements. Refer to Publication 16M, Design Manual Part 5, where applicable.

2.1.1.8.3

This task is the preparation, negotiation, and administration of all reimbursement agreements. Refer to Publication 16M, Design Manual Part 5, where applicable.

Scope:

2.1.1

Project Management involves the planning, scheduling, organizing and controlling of resources to achieve specific objectives within established schedule, budget and quality standards. The Project Manager is responsible for the tasks outlined in the Department Detail.

2.1.1.1

Attend all project meetings as necessary, including meeting preparation and minutes. Meetings will include but will not be limited to:

Project Status Meetings

Design Review Meetings

Special Purpose Meetings (e.g., Kick-off Meeting, Design Field View, etc.)

Public Meetings

Preparation for the meetings will include an agenda and any visuals necessary to conduct the meeting.

Meeting minutes will be prepared in a timely and accurate manner.

2.1.1.2

The procedures for Value Engineering are found in Design Manual 1A.

The following items require coordination:

1. Selection of 5 man Value Engineering Team
2. Conducting the review
3. Preparation of the formal Value Engineering Report
4. Implementation of Value Engineering Review recommendation

2.1.1.3

Quality Control and Quality Assurance practices and procedures need to be incorporated and administered.

PennDOT has implemented procedures to place additional responsibilities on consultants for quality of work. The consultants will be required to submit a corporate quality plan and submit job specific Quality Development plans for PennDOT approval. As part of quality reviews, process reviews, and IAPs, these plans and the consultants' conformance to them will be monitored, evaluated and documented.

Design Manual Part 1A can be used as a source of information to develop QC/QA policies and procedures.

2.1.1.4

Develop a preliminary cost estimate based on the best available information. The cost estimate should include all anticipated costs including design, right-of-way acquisition, utilities, construction, etc.

2.1.1.5

Develop the project design schedule using the WELCOM Open Plan software. The schedule should include all major milestones throughout the entire Design Phase from Preliminary Design to Contract Award and Execution. The project schedule should be updated on a regular basis and after major milestones have been completed.

2.1.1.6

Initial task of the Project Manager is to assemble the Design Team with staff from across the organization and from supplemental-consultant resources as necessary. The individuals are selected for their expertise in various engineering disciplines required by the project. A typical highway project may include individuals from the following design disciplines: environmental, roadway, right-of-way, construction, geotechnical, traffic, contract management, structures, utilities, and maintenance.

It is the Project Manager's responsibility to effectively communicate the project objectives and motivate the Design Team. The Project Manager is also responsible for defining the team members' roles and responsibilities and delegating decision-making authority to the various technical experts.

2.1.1.7

On a regular basis (i.e., monthly or as necessary) prepare a project status report of which should address the current status of the project schedule and budget. Note any areas of concern such as delays in the project schedule or potential cost overruns.

2.1.1.8

2.1.1.8.2

Conduct scope clarification and/or negotiation meetings, if necessary.

Prepare the final agreement for execution.

Administer the agreement throughout the duration of the project of which includes the review and approval of municipal invoices.

This includes all supplements to agreements.

2.1.1.8.3

Conduct scope clarification and/or negotiation meetings, if necessary.

Prepare the final agreement for execution.

Administer the agreement throughout the duration of the project of which includes the review and approval of invoices.

This includes all supplements to agreements.

Detail Task 1 - Project Management/Administration

Department Details:

Additional management effort associated with the sole bid coming in over the estimated cost for the roadway boring contract.

Approach:

Approach: Lochner Team

Lochner will be responsible for scheduling and coordinating project status, design review and special purpose meetings. Meeting preparation will

include visuals and an agenda. Following these meetings, timely and accurate minutes will be prepared and provided to the District.

Lochner will attend the following meetings as identified in the Scope of Work;

- a. One (1) Safety Review Meeting
- b. One (1) Design Field View Meeting

Coordination efforts will include discussions with the FHWA, regulatory/resource agencies and all consultants.

Lochner will keep open lines of communication between the local Municipality, Emergency Services and School Districts during final design to keep them informed of the project, anticipated construction duration and any impacts detours will have on their service to the community. Pamphlets and or plan sheets illustrating the preliminary design concepts will be made available at the Municipality if requested.

Lochner will be responsible for coordinating the QA/QC project specific plan that will be part of this project. This plan will include quality reviews and process reviews. All QA/QC efforts will be documented.

The Lochner team has not included Value Engineering as part of this proposal based on discussions with PennDOT's project manager.

Administrative Effort - Invoice preparation, accounting, general supervision, secretarial work and administrative functions are also included in this task.

The Project Schedule was completed during the Part 1 therefore Lochner shall only update the design schedule on a monthly basis through the WELCOMHOME Web based Project Management Portal and address any "negative float" issues by generating a recovery plan in the Open Plan Schedule when directed to do so by the District.

The Lochner team will assume monthly project review conference calls including project scope, progress, schedule, and budget.

Supplemental 2 Scope Additions:

This task includes an increase in the project management and administration of direct labor hours associated with coordinating the awarding of the boring contract.

Task 21 - Roadway Borings

Objective:

2.5.1

This task is the performance of roadway test borings by an approved test boring contractor in accordance with Publication 10A, Design Manual Part 1A, Publication 293, and Publication 222M.

2.5.1.1

This task is the preparation and administration of a geotechnical subsurface exploration program in accordance with Publication 10A, Design Manual Part 1A, Publication 293, and Publication 222M.

Scope:

2.5.1

The following work elements are required for completion of this task:

1. Coordinate the effort with the District Geotechnical Engineer (DGE) and the other engineering disciplines involved. Perform QA/QC on work processes and products.
2. Advertise and receive bids on a contract for performance of the test borings in accordance with Publication 222M, based on the approved PSDEP for preliminary (pre-final) design.
3. Submit a summary of the bids to the District for approval to award the contract and proceed with the work.
4. Upon notice to proceed, notify the affected public, and award and administer the test boring contract in accordance with Publication 222M.
5. Provide PennDOT-certified inspectors to oversee the field operations and log the borings as they are drilled.
6. Upon completion of the field work, verify contract terms have been met, close out the subcontract, and prepare and submit the subcontractor evaluation form.
7. Prepare a record copy of the engineer's logs for the borings for submission with the GER for Pre-Final Design.

2.5.1.1

The following work elements are required for the successful completion of this task:

1. Coordinate the effort with the District Geotechnical Engineer (DGE) and the other engineering disciplines involved. Perform QA/QC on work processes and products.
2. Perform an office investigation. Review background geological information and maps, boring logs, project files and reports, environmental documents, and right-of-way plans to describe the soil/rock/hydrologic setting. Contact Federal and State agencies with access to soils and geologic data.
3. Visit the site, interviewing local residents and engineers. Perform a detailed field reconnaissance and refine the soil/rock/hydrologic setting description.
4. Prepare a Problem Statement and Draft Exploration Plan (PSDEP) for the project in accordance with Publication 293. Determine the field and laboratory investigation needs. Assemble a soil/rock boring and testing plan. As warranted by the project, assemble a water/soil/sediment sampling and testing plan, a field instrumentation plan and a geophysical investigation plan. Submit the PSDEP for approval.
5. Upon approval of the PSDEP, coordinate with the driller performing the soil/rock drilling. Perform the water/soil/sediment sampling and testing.
6. Collect readings and present reduced data from the field instruments. Perform the geophysical investigation and document findings and conclusions.

7. Assemble soil/rock/water data generated from this investigation into a set of tables for use in the GER for Pre-Final Design.

Detail Task 1 - Roadway Borings

Department Details:

Comply with the Standard SOW; additional funding required due to the sole bid for the roadway boring contract

Approach:

Approach: Navarro & Wright

The original technical proposal for this task stated that thirty (30) roadway borings at 10 LF each would be drilled. Instead, there will be a total of twenty (20) borings at 10 LF each. Some of the borings will be drilled for environmental and geotechnical purposes (designated as EB borings, from which soil samples will be obtained for environmental testing and possibly CBR testing), and some will be drilled strictly for geotechnical purposes (designated R borings, from which bulk samples may be obtained for CBR testing). In order to assess the current pavement section, 8" diameter pavement cores will be obtained from each boring. These borings will also provide several bulk soil samples for CBR analysis. A preliminary "Plan and Location of Borings" is included with this supplement.

N&W has compiled the Engineer's Estimate, which is more than \$20,000. Therefore, a statewide contract will be necessary. N&W will email Letters-of-Interest (LOI) to all state approved PennDOT drilling contractors that have the capability to perform hazardous waste drilling. The LOI will include the number and lineal footage of borings, a location map of the project, and any other pertinent information. Publication 222 Draft Contract Documents will be prepared and submitted to Lochner and the District for review. Interested bidders will receive two (2) copies of the final version of the Contract Documents from N&W once the documents are approved by Lochner and the District Geotechnical Engineer. This project will involve hazardous waste drilling for petroleum and various unidentified contaminants along the entire project.

N&W will prepare a Health and Safety Plan (HASP) for the geo-environmental drilling program. (In the original proposal, N&W was to prepare the HASP.) However, N&W will also need to compile the Field Sampling Plan for the subsurface investigation. (Refer to Task 104.0 in this supplement.) Special sampling and drilling procedures will be addressed in the Field Sampling Plan.

Testing equipment, such as a PID, will be needed. N&W will provide an environmental technician on site during the drilling program to supervise the hazardous waste procedures, to calibrate/operate the PID, and to perform the hazardous waste sampling. For this project, it is assumed that thirteen (13) geo-environmental (EB) borings and seven (7) geotechnical (R) borings will be drilled.

N&W will obtain bag samples for CBR analyses and pavement cores from each boring for pavement design from the roadway borings. These samples will be taken during the drilling program. The CBR samples will then be delivered to our AMRL-Certified Testing Laboratory. Results of the laboratory testing will be submitted to separately to Lochner.

N&W will stake the borings with white flagging or white paint, and obtain surface elevations for all the borings. (In the original proposal, N&W was to stake the borings and obtain surface elevations.) A pre-bid field meeting will be held and meeting minutes will be composed and distributed to the attendees. Due to traffic considerations, overhead lines, drainage facilities, utilities in the area and access issues, some boring locations may need to be offset. (In the original proposal, a pre-drill meeting was to be held.)

Since maintenance and protection of traffic will be a major concern, the N&W Inspector will vigilantly check that traffic patterns conform to PennDOT Publication 213 PATA figures, and that the flow of traffic continues at a practical rate. Additional traffic controls may be needed if the flow

of traffic is impeded. A formal traffic control plan, submitted and approved by the District's Traffic Unit, is anticipated. However, drilling date and time restrictions will apply from 9 AM to 3 PM. The public and/or police will be notified before drilling commences, if directed by the District.

The drilling contractor will be responsible for notifying the PA One Call System with three (3) days notice prior to commencing the drilling operations as required by law. The Driller will be responsible for locating all utilities including sewer lines prior to drilling.

The bid opening will be held at the District 6-0 Office. After the bid opening, N&W will compile the tabulation sheet, the itemized cost tabulation sheet, the notifications, and related driller paperwork, and verify the bid results. After receiving approval from the District, N&W will award the contract to the lowest bidder. Utility information, property maps and copies of Notice of Intent-to-Enter letters for property owners will be provided to the Driller and the inspector(s) prior to commencing drilling operations. Upon submission of the driller's bonds, Certificates of Insurance, PA One Call information, and related paperwork, N&W will obtain approval from the District, and issue a Notice-to-Proceed to the drilling contractor. The Form of Proposal section will be submitted to Central Office directly and to the DGE.

N&W will provide one (1) full-time PennDOT Level 2 Inspector who has the OSHA Hazardous Waste Certification. The inspector will ensure that the contract requirements and specifications are met. The District Geotechnical Engineer (DGE) will be notified with the date and time that the driller will commence operations and the name of the inspector who will be at the site. The DGE will be invited to evaluate the Inspector on-site during the course of the drilling program. It is understood that the DGE may accept or reject any Drilling Inspector prior to commencing drilling operations.

Utilizing PennDOT Engineer's Logs, the Inspector will document soil and rock types and descriptions, blow counts, recoveries, moisture content, compressive strength, and RQDs, when applicable. Field logs will be faxed to Lochner (and the DGE) each Monday from the previous week, or as directed. The Inspector will be directed to call the N&W office on a daily basis, and immediately if conditions warrant. The Daily Drilling Sheets will be submitted to the District upon completion of the project. The core boxes will be photographed at the completion of the project. One set of photographs will be submitted to Lochner.

The N&W Project Engineer will coordinate the drilling specifications required to obtain the necessary geotechnical parameters, moving, adding or deleting borings as deemed necessary with GPI's Project Engineer and the DGE. The N&W Project Engineer or Geologist will visit the site during drilling operations. (According to the original scope, one visit by the PE/PG was included.) Upon completion of the drilling, the drilling contract terms will be verified as met, and the subcontract will be closed out. The Driller's Performance Evaluation will be reviewed and submitted to Central Office, the DGE, and the Drilling Contractor. The Inspectors' Evaluation sheets, the field logs, and the Dailies will also be submitted for the DGE to review each Inspector's performance.

Soils classifications will be in accordance with Publication 293, BC-795, and the procedures of ASTM D 2488-96. Rock descriptions will be made in accordance with Publication 293 and the BC-795. Core boxes will be delivered to the designated District maintenance facility at the end of the project and hazardous waste samples will be delivered to a NELAC accredited laboratory. N&W personnel will accompany the drilling contractor to the facility to verify delivery and to sign Form TR-440. All soil and rock samples will be verified with the field logs by the N&W Project Geologist. A core box review will occur prior to the delivery of the core boxes to the District Maintenance facility. (According to the original scope, the PG core box review was included.)

(According to the original scope, N&W was to prepare typed Engineer's Logs and boring profiles, in accordance with Design Manual Part 4 and Publication 222 guidelines. N&W was to specify which soil and rock samples will be tested with the DGE. N&W will retrieve the soil and rock samples to be tested prior to delivery of the core boxes to the District Maintenance facility.)

Please note that the CBR laboratory testing will only be completed after the results are obtained from the hazardous waste testing.

Supplemental 2 Scope Additions:

This task includes the effort for Lochner and Navarro & Wright to coordinate and execute the low bid contract to be awarded to TRC Engineers, Inc. TRC was the sole bid for the roadway boring contract.

Consultant Hierarchy

Business Partner

DBE Type

Supervising BP

| | | |
|---------------------|----|--|
| H. W. Lochner, Inc. | No | |
|---------------------|----|--|

Attachments

No records found.

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Release: 19.1
Session size: 0.1k

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