



COLORADO

Department of Transportation

Region 3
Grand Junction Residency
606 South 9th Street
Grand Junction, CO 81501

**CDOT Region 3
Consultant
Scope of Work
October 9, 2023**

**Project: I70B South of Rood
Project #: NHPP 070A-037
Subaccount: 23583**

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General Scope of Work:

The scope of work is requesting the Consultant provide the following personnel for construction activities for the following R3 Grand Junction Residency Construction Project:

- Need 1 full time Project Engineer
- Need 1 full time Project Inspector
- Need 1 part time Project Tester

Description and Overview

Services requested are to provide construction project management assistance for:

Project Number: NHPP 070A-037
Project Code: 23583
Location: I70B South of Rood
Description: Reconstruction of I70B south of Rood Avenue to 3rd Street in Grand Junction, CO. Work includes utility relocations, realignment of I70B, installation of storm sewer, lighting, and traffic signals, signing, and striping, and installation of multimodal paths and landscaping throughout the corridor.
Duration: The project goes to Ad on November 16, 2023. Construction is anticipated to begin on March 25, 2024 and end in mid-August 2025. Approximately 245 working days is assumed for the construction contract. The Project Engineer is anticipated to start two months prior to the beginning of construction with pre-construction activities (4-8 hrs/day) and an assumed duration of approximately 265 working days of project support will be required. One month of additional support (4 hrs/day) post-construction activities is also assumed for final documentation. The Inspector and Tester efforts are anticipated to start two weeks prior to the beginning of construction with pre-construction activities and an assumed duration of approximately 265 working days of project support will be required. One week of additional support post-construction activities is also assumed for final documentation.

CDOT will provide an Assistant Project Engineer/Inspector, two additional Inspectors, and a Tester.

The Project Engineer shall be responsible for day-to-day project management, and documentation activities, and other duties assigned by the Resident Engineer. Other work consists of construction schedule reviews of initial baseline schedule and progress schedules.

The Project Inspector shall be responsible for day-to-day inspecting and documentation activities as assigned by the Project Engineer.

The part-time Project Tester shall be responsible for assisting the CDOT Project Tester complete day-to-day testing and documentation activities as assigned by the CDOT Project Tester and/or Project Engineer.

The following number of hours of work are estimated for this project:

| | |
|-------------------|-------------|
| Project Engineer | 2,801 hours |
| Project Inspector | 2,633 hours |
| Project Tester | 1,317 hours |

Consultant personnel shall be on the project when the Contractor is working or as directed by the Project Engineer. Work may be required for day and/or night, on weekends, on holidays, and/or on a split shift basis. Work weeks may be in excess of, or less than, the standard 40-hour work week. Work hours are calculated based on a 9-hour day, (4-8 hours a day for pre- and post-construction work) but the expectation is that the staff will generally only work 1 hour more per day than the contractor, and the PE will manage the staff to cover these hours.

Authorization to Proceed

Work shall not commence until written Notice to Proceed is received by the Consultant, and shall be completed in the time specified.

Routine Billing and Reporting

The Consultant shall provide the following on a regular basis:

1. Monthly billing formats, suitable to the CDOT Resident Engineer, for all contract activities performed by the inspection Consultant.
2. Monthly billing that include the contract status.
3. Weekly timecards for Consultant personnel. The CDOT Project Engineer prior to billing, must sign these time cards.
4. Supporting documentation for all direct costs.

Status of Contract

The Consultant shall monitor the fiscal status of the contract, and advise the CDOT Resident Engineer of any potential for supplementing their contract or negotiating an additional task order. Failure to monitor contract status and provide timely notification may result in discontinuation of the Consultant's services on the project until a supplement agreement can be effected.

Project Standards

All inspection and documentation shall be in accordance with the latest versions of the Colorado Department of Transportation's Construction Manual, Field Materials Manual, CDOT Laboratory Manual of Test Procedures, Colorado Department of Transportation Inspector's Checklist, Standard Specifications for Road and Bridge Construction, Supplemental Specifications, Standard and Project Special provisions, applicable M&S Standards, and the plans, permits and other documents governing the construction of the project.

All Consultant personnel shall comply with CDOT's Safety, Sexual Harassment, Discrimination and Workplace Violence Policies and Procedures.

Proposed work procedures shall be coordinated with and authorized by the CDOT Resident Engineer prior to the start of the work.

Labor, Materials, Vehicles and Equipment

The Consultant shall furnish all personnel, materials, equipment and transportation required to perform the work. Consultant personnel shall have appropriate vehicles (equipped with flashing amber beacon), cellular phones, computer and miscellaneous equipment and supplies (inspecting and testing tools/equipment, printers, calculators, manuals, office supplies, safety equipment, etc.) required to perform the work. Personal protective equipment shall be in accordance with CDOT PD 80.1. The Consultant's staff shall include personnel experienced at effectively monitoring and managing progress schedules and construction delays. A Field Office and Field Laboratory shall be provided by construction Contract pay items.

Personnel qualifications, staffing level, and number and types of vehicles shall be subject to the approval of the CDOT Resident Engineer. The Consultant shall assign the same personnel for the duration of the Construction Contract unless otherwise approved by the CDOT Resident Engineer.

The Consultant staff must be thoroughly familiar with CDOT specifications, annuals, forms and documentation requirements. This project will use the SiteManager Materials and Laboratory Information Management System (SMM/LIMS) software. Materials personnel will be required to document the materials testing and procedures using the software. Personnel provided by the Consultant who do not meet all of the specified requirements, or who fail to perform their work in an acceptable manner, shall be removed from the project when determined and directed by the CDOT Resident Engineer.

Computer Equipment & Software

Consultant computers shall include necessary communications hardware and software to perform the work. The Consultant computers shall be capable of running current versions of the following software:

- PMWeb/Aster (pending software transition from LIMS)
- Sitemanager/LIMS
- Adobe Acrobat DC or Bluebeam Revu
- CDOT QA/QC software
- Microsoft Office Suite: Word, Excel, Project
- ProjectWise Cloud
- Google Drive or other cloud sharing applications
- LCP Tracker for approval of certified payrolls
- B2GNow System for DBE/ESB tracking and prompt payment
- Survey123 phone/tablet app

Engineer's Certification

The CDOT Resident Engineer shall be the final authority regarding the acceptance of work performed by the Consultant and work not conforming to the plans and specifications. The CDOT Resident Engineer will be the "Engineer in Responsible Charge" for the project included in this Scope of Work.

The Consultant shall review and sign the Form 250 as it relates to the testing and acceptance of materials.

Diaries and Documentation

Each of the Consultant's field staff shall maintain a daily diary for each day the Consultant performs work on the project. They shall use CDOT's Form 103 or automated 103a - Project Diary, or other form approved by the CDOT Resident Engineer. The contents of the diary shall be brief and accurate statements of progress and conditions encountered during the prosecution of the work. Editorial comments are not to be incorporated in the diaries or on any written correspondence applicable to the project. A copy of the daily diary shall become a part of the permanent project record and shall be given to the Project Engineer, or placed on CDOT's Projectwise or other file location as directed, within one working day of its date.

The Consultant shall provide all correspondence and applicable CDOT forms to the CDOT Resident Engineer or his/her authorized representative for review and signature.

Requirements for Project Engineer

Personnel will be required to work at the Project Engineer level. He or she shall be either a Colorado Registered Professional Engineer or a non-licensed individual with demonstrable construction administrative experience.

The Project Engineer shall have CDOT construction experience with an emphasis on highway reconstruction work, concrete pavement, hot mix asphalt, drainage structures (pipes, inlets, and manholes), storm water management, utility conflict resolution, traffic signals, and traffic control management. The Project Engineer shall be available to review work, resolve problems, and help make decisions in a timely manner as requested by CDOT. He or she shall be knowledgeable of the engineering details of the construction project with at least five years acceptable experience in construction management to ensure successful administration and completion of the project.

Specific responsibilities include construction of the project in accordance with the plans, enforcement of governing specifications and special provisions, control of inspection and testing, and proper documentation. By law, Consultant, or entity Consultant, Project Engineers cannot obligate funds or authorize payment on behalf of CDOT. The Project Engineer has frequent personal contacts with the contractor, property owners, municipal officials, utilities and the traveling public; thus, personal conduct should be a credit to both the individual and CDOT.

The Project Engineer is the first level of authority concerned with unusual circumstances (e.g., non-specification work, work outside the scope of the Contract, disputes, change orders). As practicable, problems concerning contract interpretation should be referred to higher levels of authority until the problem is acceptably resolved. Immediate decisions can be made and orders written, as necessary, to expedite construction.

The Project Engineer responsibilities may include but are not limited to the following:

(All section references (e.g., §108.03) are to the CDOT Standard Specifications for Road and Bridge Construction.)

1. Schedule, conduct and prepare minutes for weekly project, pre-work conferences (e.g.: construction, paving, survey, environmental/SWMP, etc.) other meetings as needed to complete the work.
2. Public relations, notices and/or coordination with media, property owners and other stakeholders.
3. Completion of project submittals and forms, whether by the Contractor or CDOT staff, as required by the specifications, Field Materials Manual and other contract documents, including but not limited to: Form 65, Form 105, Form 205, MHTs, Form 250, method

statements, shop drawings, working drawings, EEO/labor compliance, payment calculations/ Form 266, payment documents, Buy American certification, force account, material certifications, SWMP notebook, phasing plans, Form 473, etc.

4. EEO/DBE/OJT compliance in accordance with the contract documents.
5. Certification of materials placed prior to installation in accordance with §106.
6. Materials documentation and acceptance in accordance with contract documents (e.g., FMM, Form 250).
7. Coordinate utility work in and around the project.
8. Maintain project time count and schedule in accordance with §108.03.
9. Prepare monthly progress estimates of work performed in accordance with §109.06.
10. Prepare Contract Modification Orders, Minor Contract Revisions, letter of explanation and cost estimates in accordance with the CDOT Construction Manual and relevant specifications.
11. Prepare appropriate responses to Contractor, Subcontractor or supplier requests for information, submittals or other correspondence.
12. Review of drawings and data submitted by the construction contractor and suppliers for general conformance with the intent of the specifications. Inform and obtain concurrence as needed from the CDOT Resident Engineer and keep relative documentation for project records.
13. Verify project compliance with CDPHE and other environmental permits issued for the project.
14. Shall have successfully completed Traffic Control Supervisor training and has current Traffic Control Supervisor certification for the duration of this Contract.
15. Shall have successfully completed a TECS training program authorized by CDOT and be currently certified as a TECS for the duration of this Contract.
16. Prepare documentation in the event of disputes or claims. Give oral or written presentation for claim review or arbitration.
17. Prepare as constructed plans for final submittal, based on information provided by the contractor.
18. Provide CDOT employee mentorship related to the day-to-day project management duties and documentation activities as assigned by Resident Engineer.

Requirements for Project Inspector

Inspection work shall conform to the CDOT Construction Manual, Inspector Checklist, and SiteManager. The Consultant will provide support to the project staff through assignment of personnel to inspection activities. The Project Inspector shall be trained and qualified in accordance with CDOT's Construction Inspection Qualification Plan. Inspectors shall have relevant construction inspection experience on at least one recent CDOT project.

Inspection responsibilities may include but are not limited to the following:

1. Participating in weekly progress meetings with contractor, subcontractors, utilities, and other interested parties.
2. Securing project documentation from the contractor.
3. Maintaining accurate notes reflecting actual construction details to be used in preparation of as-constructed plans.
4. Initial, follow up, and final inspections of work in progress, including interim and final measurements.
5. Notifying contractors and the Project Engineer of non-compliance and constructability issues with the contract plans and specifications.

6. Performing daily inspections, special tests, and investigations or monitoring which are required to fulfill the intent of the CDOT inspection program.
7. Preparing inspection documentation for development of progress payments for the contractor in accordance with prescribed procedures.
8. Submitting standard documentation reports (such as Daily Work Report) no later than the following working day to the Project Engineer.
9. Aiding in the preparation of routine correspondence to the contractor, CDOT staff, local agencies, etc.
10. Providing liaison and communication to contractor field crews.
11. Maintaining accurate notes for preparation of final "As Constructed" plans upon project completion.
12. Monitoring compliance with and taking appropriate action to preserve safety on the project for all workers and traveling public in accordance with the MHT and the Manual of Uniform Traffic Control Devices (MUTCD).

Requirements for Project Testers

All inspection, sampling, testing and documentation shall be in accordance with the CDOT Field Materials and Construction Manuals. Sampling and testing shall be completed in accordance with CDOT's Minimum Sampling, Testing, and Inspection Schedule, the Special Notice to Contractors, and the Procedures, all contained in CDOT's Field Materials Manual. When the method is not cited, the order of precedence for all sampling and testing is Colorado Procedures, AASHTO Procedures, and then ASTM Procedures. Unless otherwise designated, when CDOT's Construction Manual, Materials Manual, AASHTO, ASTM, or other specifications, standards, or policies are cited, the reference shall be to the latest edition as revised or updated by approved supplements or interim editions published and issued prior to the date of advertising a specific construction project for bids.

The Consultant shall furnish all personnel, materials, and equipment required to perform the work. CDOT's contractor will provide a field laboratory. The testers shall be certified to perform the project sampling and testing in accordance with CDOT requirements. These requirements typically include the following certifications: CAPA levels A&B, ACI, WAQTC, and nuclear gauge operation. The testers shall be certified as defined by the requirements set forth in the current Colorado Procedure CP-10. Minimum requirements for certification are dependent on the item to be sampled and tested. Each tester responsible for sampling and testing on this project shall have all required certifications based on the project's specific materials testing schedule. The testers shall be thoroughly familiar with CDOT forms and documentation requirements.

The testers shall be experienced and competent in all aspects of highway construction testing within the scope of this project. The testers shall sample, test, inspect, and document all materials incorporated into the project. This includes materials delivered to the project that are listed in the Summary of Approximate Quantities in accordance with the SCHEDULE in the CDOT Field Materials Manual, materials that may be added to the project through contract modification, and altered material quantities whether increased or decreased. The tester shall review project quantities on a regular basis to ensure that sufficient tests have been performed for the material placed to date. The testers shall also provide any other services as requested by the CDOT Resident Engineer and/or Consultant Project Engineer.

The Consultant's work shall be under the direction of, and shall be reviewed, stamped and signed by a Professional Engineer registered in the state of Colorado. The work to be stamped will be the summary sheet including, but not limited to, Forms 6, 9, 58, 69, 212, 250, and 554. The CDOT Resident Engineer may

request that additional forms be stamped. The Professional Engineer shall be available to review work, resolve problems, and make decisions in a timely manner as requested by the CDOT Resident Engineer and/or Consultant Project Engineer, and must be experienced and competent in road and bridge construction and construction materials testing and inspections.

Testing of materials that are specifically designated to be pre-inspected or pre-tested by this or any other Department of Transportation shall remain the responsibility of CDOT. The testers shall document and ship samples of all materials to the CDOT Central Laboratory that are required to be tested by CDOT regardless of pre-inspection or pre-testing responsibilities. The items and test frequencies of CDOT-tested materials shall be in accordance with the column titled "Central Laboratory" in the SCHEDULE. Test results, sample submittals, and inspection documentation transmitted to CDOT's Region or Central Laboratory shall be recorded on appropriate CDOT Forms. The Consultant may use CDOT worksheets or worksheets approved by the CDOT Resident Engineer. CDOT Forms and worksheets are available through the Region Materials Engineering/Physical Technician at no cost to the Consultant.

The testers shall furnish the Consultant Project Engineer with the original copies of all worksheets on a daily basis. The testers shall also keep the CDOT Form 626 up to date at all times and provide copies of this form to the Consultant Project Engineer by the end of the shift for any material found to be non-specification. At the discretion of the Consultant Project Engineer, the testers may be required to provide the Form 626 to the contractor prior to the end of the shift for any material found to be non-compliant with the specification.

The testers shall coordinate the schedule for Independent Assurance Tests (IAT) for the project in accordance with CDOT Form 379 with the Region Materials Engineering/Physical Science Technician. The testers shall notify the Consultant Project Engineer, CDOT Resident Engineer, and CDOT Region Materials Engineering/Physical Science Technician when project quantities are expected to over-run the quantities represented on CDOT Forms 250 or 379.

All proposed work procedures shall be coordinated with the Consultant Project Engineer prior to the start of work. Other services may be requested in writing by the CDOT Resident Engineer. Test results shall be documented by the testers and approved by the Consultant Project Engineer. The testers shall be responsible for materials sampling, testing, and documentation.

The testers shall:

1. Be fully competent in the use of CDOT's Aster Software (pending software transition from LIMS).
2. Have a minimum of one year experience in each specialty field (soils, aggregates, asphalt paving, concrete, etc.) that requires testing.
3. Be certified by the American Concrete Institute (ACI) if testing concrete.
4. Be certified Level A/B by the Colorado Asphalt Technician Certification Program (LabCAT) if testing HMA.
5. Be certified through the WAQTC Qualification Program if testing soils and aggregates.
6. Have successfully completed the CDOT Materials Technician Training Course.
7. Provide CDOT employee mentorship related to the testing documentation activities as assigned by Project Engineer.

I70B South of Rood - NHPP 070A-037 - 23583

Copies of Certifications shall be provided to the CDOT Resident Engineer prior to the start of work on the project.

References of testing experience shall be available for all testers and may be requested at any time during the contract.

Final Documentation

Final documentation shall be submitted to the CDOT Resident Engineer within 10 working days after project acceptance. Failure to submit final documentation as required may result in withholding Consultant payment for work subsequent to project acceptance until this material is received.