



COLORADO
Department of Transportation
Region 1

West Engineering Program
425A Corporate Circle
Golden, CO 80401

PROJECT NUMBER: C510-030
PROJECT CODE: 22734
CONTRACT TYPE: Project Specific, Specific Rate of Pay
CONTRACT SUBJECT: CR 314 Reconstruction Project Construction Management Services

The Contract Administrator for this Contract will be:

Kevin Brown, PE
Resident Engineer – Region 1 West Program
425B Corporate Circle
Golden, CO 80401
Office: 720-497-6954, Mobile: 303-883-3524
Email: kevin.brown@state.co.us

Active Day to Day administration and monitoring of this contract will be delegated to the following CDOT employee:

Mike Doyle
Project Engineer – Region 1 West Program
425B Corporate Circle
Golden, CO 80401
Mobile: 720-257-9843
Email: michael.doyle@state.co.us

General Requirements

This Scope of Work (SOW) has been carefully reviewed by the Department and reflects a plan of approach based on the known goals. The Consultant's analysis of the project goals, its evaluation of the work elements, and its formulation of the work plan, coupled with its understanding of and sensitivity to the key issues may produce new approaches or modifications to the project's work elements. Therefore, the Final Scope of Work for the project may change in some details to incorporate the Consultant's input. This work is located on CR 314 MP 0.00 to MP 1.26 in Clear Creek County, Region 1 of the Colorado Department of Transportation. The major work elements of the project include roadway widening, installation of guardrail, pedestrian path construction adjacent to CR 314, installation of a pedestrian bridge over Clear Creek, major earthwork for the construction of MSE and soil nail walls, drainage improvements, erosion and traffic control signing and striping.



Definitions

The positions described herein are anticipated needs. The Department reserves the right to not utilize any of the positions listed if at the time of construction the Department has available resources to staff the project from within. Consultant will support the residency at all work sites as requested by the Resident Engineer.

CDOT Resident Engineer – Please refer to the “2011 Colorado Department of Transportation Standard Specifications for Road and bridge Construction”, Section 101.10.

CDOT Project Engineer – Please refer to the “2011 Colorado Department of Transportation Standard Specifications for Road and bridge Construction”, Section 101.51.

Consultant - The individual, firm, or corporation under contract by this agreement to perform construction services as outlined below.

Consultant Professional Engineer – The Consultant’s Professional Engineer in responsible charge of Consultant services performed as described in this Contract. The Consultant’s Professional Engineer must be licensed in the State of Colorado.

Consultant Construction Inspector - The Consultant’s employee who administers the Consultant contract with CDOT. The Consultant Inspector works under the responsible charge of the Consultant’s Professional Engineer. The Consultant Inspector, if a Professional Engineer licensed in the State of Colorado, may be the same person as the Consultant Professional Engineer.

Consultant Materials Testing Technician (MTT) - Consultant employee who performs construction materials-testing services, construction inspection, and other project-related services under the responsible charge of the Consultant Project Engineer, and at the direction of the CDOT Resident Engineer.

CDOT Region Materials Engineer - The CDOT Region Materials Engineer (RME) assists the Resident Engineer and Project Engineer on this project with materials related issues including concrete, asphalt, soils, and steel.

Contractor - Please refer to the “2011 Colorado Department of Transportation Standard Specifications for Road and bridge Construction”, Section 101.23.

Initial Project Meeting

The Consultant shall meet with current CDOT project personnel to coordinate and review construction activities to date.

Work Duration

The time for the work described in this scope of work covers the period from August 1, 2021 through October 31, 2022. For portions of the project, night work may be required. Work may also be required during the day, on weekends, and/or on a split-shift basis. Workweeks may be in excess of or less than the standard 40-hour week. The number and types of personnel may be adjusted up or down to meet project workload. The Consultant shall meet with the CDOT Project Engineer if it is anticipated that Consultant services may not be required for a period exceeding one week. A procedure shall be agreed upon at the



Initial Project meeting to resolve this issue. During construction, CDOT anticipates utilizing approximately: 1 Consultant Professional Engineer, 1 Consultant Asst. Project Engineer, 3 Consultant Construction Inspector/Materials Testing Technician (MTT).

Conditions Applicable to all Consultant Personnel: Overtime / Travel Pay / Commute Miles

Overtime pay rates are not allowable per State Fiscal Rules. Labor Hours will be billed to CDOT at the same rate as regular, non-overtime hours. A maximum 1 hour to travel time per day will be paid for each employee for travel to and from the project. Commuting mileage will be paid for travel to and from the project, either to or from each Consultant personnel's place of residence, or to and from the Consultants home office, whichever is less. Mileage for travel while on the project will be paid for at the applicable State rate.

Authorization to Proceed

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

Routine Billing & Reporting

The consultant shall provide the following on a regular basis:

- Monthly billing reports in formats suitable to the Engineer for all contract activities performed by Consultant personnel authorized to perform work on the project.
- Periodic reports and billings required by CDOT Procedural Directive 400.2.

Status of Contract

The consultant shall monitor the fiscal status of the contract, and advise the CDOT Project Engineer of any potential need to supplement their contract. Failure to monitor contract status and provide timely notification may result in discontinuation of the Consultant's services. The invoice shall include monthly status reports per the consultant guidelines and shall include budget information.

Project Standards

Personnel qualifications, staffing level, and number and types of vehicles shall be subject to the approval of the Project Engineer. The Consultant shall assign personnel for the duration of the Contract unless otherwise approved by the Project Engineer. All consultant personnel assigned to the project shall be required to adhere to CDOT's and the project's safety requirements. Employees required to operate vehicles must possess and maintain a valid State of Colorado driver's license. The Consultant Assistant Project Engineer, and Construction Inspector/Materials Testing Technician assigned to a project shall be competent in road and bridge construction and be thoroughly familiar with CDOT specifications, manuals, forms, and documentation requirements including SiteManager and LIMS. The level of qualification provided shall be as requested and approved by the CDOT Resident Engineer. The qualifications for the level(s) shall be commensurate to experience, and are as follows:

All documentation and work 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, the Supplemental Specifications, applicable M & S standards, CDOT Policy and Procedural Directives, and the construction contract currently in use when the construction project is advertised, revised under advertisement, and as modified by change order.

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 where applicable.

References to "the specifications" shall include all applicable CDOT Standard Specifications for Road and Bridge Construction including Supplemental Specifications, Standard Special Provisions, Project Special Provisions and project plans and specifications.

Proposed work procedures shall be coordinated with the CDOT Project Engineer prior to the start of work.

Consultant Assistant Project Engineer Requirements:

The Consultant's employee who supports the CDOT Project Engineer. The Consultant Assistant Project Engineer, if a Professional Engineer licensed in the State of Colorado, may be the same person as the Consultant Professional Engineer.

The Consultant's Assistant Project Engineer shall have experience in highway construction project management and supervision of consultant staff. It is desirable that the Inspector has at least three years working on projects on the Interstate system.

The Consultant's Assistant Project Engineer shall be licensed as a Professional Engineer in the State of Colorado, or shall have the required CDOT Inspection qualifications, unless otherwise approved by CDOT. A copy of work experience and proof of License shall be provided to the CDOT Project Engineer before work begins. 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 Project Engineer.

General Work Description

The Consultant Assistant Project Engineer shall provide support to the CDOT project staff through assistance with inspection responsibilities. Responsibilities include but are not limited to:

Assist the CDOT Project Engineer and Construction Engineering Staff in the following Construction activities:

- Coordination of all construction activities;
- Timely coordination, review, submittal and notification of all construction activities. ;
- Review, give comments, and acknowledge completeness of required submittals resulting from but not limited to:
 - CDOT 205 Permit to Sublet
 - Method of Handling Traffic
 - Progress Schedule
 - Method Statements
 - All EEO Requirements
- Initial, follow up, and final inspections of work in progress including interim and final measurements and coordination with Tester to ensure materials testing requirements are met.



- Promptly notifying contractors and Project Engineer of non-compliance with the contract plans and specifications.
- Prepare inspection documentation for development of progress payments for the contractor in accordance with prescribed procedures;
- Maintaining of project files, project diaries and time counts;
- Prepare periodic reports and billings required by CDOT Procedural Directive 400.2;
- Monitor contractor payroll compliance;
- Participate in weekly progress meetings with contractor, subcontractors, utilities and other interested parties;
- Secure project documentation from the contractor;
- Anticipate project problems and propose solutions to CDOT Project Engineer;
- Review drawings and data submitted by the construction contractor and suppliers for conformance with the intent of the specifications;
- Obtain concurrence as needed from the CDOT Project Engineer and keep relative documentation for project records;
- Communicate with adjacent landowners as required to resolve issues that arise due to construction;
- Monitor compliance with and take appropriate action to preserve safety on the project for all workers and traveling public in accordance with Method of Handling Traffic (MHT);
- Notify contractors and CDOT Project Engineer of non-compliance with the contract plans and specifications;
- Prepare punch lists of uncompleted work, non-conformance reports, and deficiency notices;
- Prepare responses to contractors' and suppliers' requests for information, submittals, change notices, claims, and correspondence;
- Prepare and transmit updates of construction activities to the CDOT Public Information Office;
- Perform miscellaneous project-related duties as requested by the CDOT Project Engineer.

Consultant Construction Inspector/Materials Testing Technician (MTT) Requirements

The Consultant Construction Inspector/MTT personnel qualifications shall be in conformance with the requirements of the applicable CP-10.

Copies of the MTT's required certifications and a resume, with references, including his/her materials testing experience shall be provided to the CDOT Project Engineer.

The MTT shall be thoroughly familiar with CDOT testing procedures, forms and documentation requirements.

The MTT shall have successfully completed LIMS training and maintain project documentation using LIMS in SiteManager and other CDOT software as needed. Paperwork for access to LIMS shall be submitted no later than 2 weeks prior to construction NTP.

- Prepare the field samples and obtain necessary certification from the Regional Materials Engineer
- Sample, test, inspect and document all materials generated and produced on the project as directed by the Project Engineer or Assistant Project Engineer.
- Document and transport samples of any and all materials to the CDOT Central Laboratory that are required to be tested by CDOT.



- Review project quantities on a monthly basis to ensure that sufficient tests have been performed for the material placed to date, and report any deficiencies to the Project Engineer.
- Prepare CDOT Form 211 to notify the Project Engineer of outstanding documentation.
- Coordinate the schedule for Independent Assurance Tests for the project in accordance with CDOT Form 379, with the Region Head Tester, or directly with the Region IAT Staff.

The MTT shall maintain a field lab copy of the CDOT Form 379 that shall be updated after each Independent Assurance Test.

The MTT shall utilize the CDOT Field Materials Manual stipulated on the Project Form 250. The final materials documentation file, including the 474 draft, 1199, and the completed Form 250 shall be submitted to the Project Engineer within 30 Calendar days after the date of project acceptance.

The Form 1199 (Project Closure) is required to be completed, signed and submitted by the Consultant, unless otherwise approved.

Labor, Materials, Vehicles & Equipment

The Consultant shall provide the Consultant Assistant Project Engineer, Consultant Construction Inspector/Materials Testing Technician with the following:

- A suitable vehicle equipped with at least one (1) flashing, oscillating, or rotating amber beacon that shall be visible a minimum of five hundred (500) feet in normal sunlight.
- A cellular phone.
- A state-of-the-art computer with networking capability sufficient for accessing internet email through a project-supplied internet-service provider. Each computer shall be loaded with MS Office software (2010 version or later), including MS Word and MS Excel at a minimum. Computers shall be capable of running current CDOT software, including LIMS, Asphalt '03, Voids '03, Site Manager, etc.
- Miscellaneous equipment (calculator, office supplies, safety equipment, etc.) required to perform the work (ASTM Certified Work Boots, ANSI Certified Hardhat (Z89.1 stamp and shall be High Visibility), Safety Glasses (Z87 stamp on the glasses/goggles) and Approved Safety Vest (meeting or exceeding ISEA for Class 3), including all applicable manuals.
- CDOT will provide a field-office space and a field laboratory.

Unless otherwise approved by the Project Engineer, the following equipment and supplies shall be furnished by the consultant for each project in sufficient quantity to ensure performance of all work required in a timely manner. Such equipment and supplies shall remain the property of the consultant.

- A.C. content gauge and/or extraction equipment and solvents
- Nuclear Moisture/Density gauge
- Concrete air meter, slump cone, and other concrete testing equipment
- Sieves for aggregates and soil gradations
- Scales
- Sample containers and small tools
- Proctor equipment for soil curves and 1 point tests
- Atterberg equipment
- Sample drying equipment
- Miscellaneous equipment for performing the required soils, concrete and asphalt field tests



- Concrete cylinder molds, which conform to AASHTO requirements, except that PAPER MOLDS SHALL NOT BE USED, AND PLASTIC MOLDS SHALL NOT BE REUSED

Personnel qualifications, staffing level, and number and types of vehicles shall be subject to the approval of the Project Engineer. The Consultant shall assign personnel for the duration of the Contract unless otherwise approved by the Project Engineer. All consultant personnel assigned to the project shall be required to adhere to CDOT's and the project's safety requirements. Employees required to operate vehicles must possess and maintain a valid State of Colorado driver's license. The Consultant Assistant Project Engineer, Consultant Construction Inspector/Materials Testing Technician assigned to a project shall be competent in road and bridge construction and be thoroughly familiar with CDOT specifications, manuals, forms, and documentation requirements including SiteManager and LIMS. The level of qualification provided shall be as requested and approved by the CDOT Resident Engineer.

Documentation

Each of the Consultant's personnel shall maintain a daily diary for each day they perform work on the project. They shall use CDOT's automated Form 103a - Project Diary unless otherwise directed by the Engineer. The contents of the diary shall be brief and accurate statements of progress and conditions encountered during the prosecution of the work, and sketches as needed for clarification and documentation. 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 be available to the CDOT Project Engineer at the end of each workday and a copy shall be filed in the project records within one working day of its date.

Additional Construction Inspection and Materials Testing Requirements

In addition to the qualifications and requirements set forth above, the following certifications will also be required:

Class/Certification	Consultant Inspector	Consultant On Call Materials Testing Technician
Basic Highway Math	X *	X
Basic Construction Surveying	X *	X
Basic Highway Plan Reading	X *	X
Transportation Erosion Control Supervisor	X	
CCA Traffic Control Supervisor	X	
Specialty Certifications		
LabCAT Level A&B		X
Asphalt Paving Inspection LabCAT Level I		X
WAQTC		X
ACI Field Testing Tech I		X

* Not required if the Consultant Inspector is a licensed Professional Engineer.

