

Request for Proposals (RFP)

Owner's Representative – Professional Services Scope of Work

**I-270 Critical Bridge Replacements Project
Mile Point (MP) 0 to MP 5**



**PROJECT NUMBERS: FBR 2706-044/C R100-364
PROJECT LOCATION: I-270 near Commerce City, CO
PROJECT CODE: 24947/24527**

January 18, 2024

Colorado Department of Transportation
2829 West Howard Place
Denver, CO 80204



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INSTRUCTIONS

This Scope of Work is to serve as a template for Colorado Department of Transportation (CDOT) to develop and negotiate solid contracts with Consultant teams on projects and tasks. The Consultant shall coordinate all activities, tasks, meetings, communications, and deliverables with the CDOT/Project Manager (PM) (or his or her designee) for this Project. All submittals will be through the CDOT/PM or a designee, who will make appropriate distribution. Upon notice to proceed (NTP), the Consultant shall be responsible and will account for all effort contained in the Final Scope of Work.

This Draft Scope of Work has been reviewed by the Department and reflects a plan of approach based on the known goals. One factor determining the selection of a Consultant is the ability of that Consultant to analyze the project goals, evaluate the work elements, and formulate a work plan. This process may produce new approaches or modification to the Project work elements. Because of that, all Consultants should be aware that the Final Scope of Work for a project will be produced with input from the selected Consultant. The Final Scope of Work submitted will be generated by CDOT personnel and be on CDOT letterhead.



SECTION 1 – PROJECT SPECIFIC INFORMATION

1.1. PROJECT BACKGROUND

The I-270 corridor provides a vital connection from I-70 to I-25. Over 100,000 vehicles per day utilize this corridor to bypass the friction of downtown Denver to move goods, services, information, and people between northern and eastern parts of the city.

Within the I-270 corridor there are eight (8) bridge structures within a one mile stretch between York Street and Vasquez Boulevard that have been the source of many challenges to the mission of this corridor. These structures have been in service for over 50 years and have been requiring frequent emergency repairs. Over 300 emergency repairs have been performed to the bridges along this corridor since 2006. These deck repairs always require significant lane closures affecting travel times in this corridor. This corridor lacks redundancy, and any detours during these emergency repairs require use of local roads or significant out-of-direction movements. Bridge inspections have rated 6 of the 8 bridges in this one-mile segment as 'poor', which made them eligible for Bridge & Tunnel Enterprise (BTE) funding for full replacement.

1.2. PROJECT LIMITS

The Project is located within Adams County and Commerce City on I-270 and extends from approximate mile marker (MM) 0.0 to MM 5.0, between I-25 and I-70. The bridges to be replaced are located from approximate MM 1 to MM 2. See Section 1.5 for specific bridges to be replaced.

1.3. PROJECT GOALS

The CDOT Project Goals reflect the values that this Project holds and expects. An exceptional proposal will demonstrate how each of the Project Goals will be pursued by the Proposer.

1. Traffic Control and phasing concepts shall seek to limit impacts to the traveling public by minimizing lane closure variances, formal detours, and additional traffic to other roadways.
2. Replace and decommission all deteriorating structures as efficiently as possible.
3. Anticipate and accommodate environmental requirements for design and construction.

Additional goals have been identified by the project team as listed below:

4. Collaboration and Support of EIS
5. Collective team success
6. Responsible use of taxpayer funds
7. Exceptional public communication during construction
8. Superior Quality, leading to extended life
9. Zero fatalities or major injuries on the project

1.4. PROJECT FUNDING

Funding for the I-270 Corridor Improvements Project is currently available from state sources including BTE and SB-1. Additional federal discretionary funding may become available through the FHWA Bridge Improvement Program.

1.5. PROJECT INFORMATION AND DEFINITION

Project Scope Elements include but are not limited to:

- Replacement of 8 existing I-270 mainline structures:
 - E-17-ID WB over South Platte River
 - E-17-IE EB over South Platte River
 - E-17-IF WB over Burlington Canal (FRICO)
 - E-17-IG EB over Burlington Canal (FRICO)
 - E-17-IH WB over Brighton Blvd, UPRR & BNSF
 - *E-17-II EB over Brighton Blvd, UPRR & BNSF
 - E-17-IJ WB over E. 60th, BNSF Railroad
 - *E-17-IK EB over E. 60th, BNSF Railroad
- * (NOT eligible for Bridge & Tunnel Enterprise (BTE) funds)
- Pavement reconstruction at bridge approaches where required for roadway profile changes
- Retaining walls as needed to reduce toe-of-slope impacts
- ROW/Easements for permanent features and temporary construction access
- Floodplain Management Coordination (MHFD/Adams County)

The Project Scope Elements may be modified based on available funding, packaging, Construction Manager input, Stakeholder input, and final design refinements. If it is determined to be in the interest of the Department, or to meet funding constraints, portions of the design scope may be procured separately.

1.6. PROJECT ROLES

Lead and Supporting Agencies: CDOT is the lead agency and Owner of the Project. Oversight is provided by FHWA.

Stakeholders: Primary Project stakeholders and their role or involvement in the Project are listed in the following table:



Stakeholders

Agency/Stakeholder	Role or Involvement
Federal Highway Administration (“FHWA”)	<ul style="list-style-type: none"> ● Project oversight ● Member of the Project Leadership Team (PLT) and Technical Team (TT)
Adams County	<ul style="list-style-type: none"> ● Member of the Project Leadership Team (PLT) and Technical Team (TT)
City of Commerce City	<ul style="list-style-type: none"> ● All bridges fall within City limits ● Member of the Project Leadership Team (PLT) and Technical Team (TT)
Colorado Motor Carriers Association	<ul style="list-style-type: none"> ● Input on freight consideration, HazMat route maintenance and temporary detour decisions ● Member of the Technical Team (TT)
UPRR	<ul style="list-style-type: none"> ● Reviews and agreements required for proposed I-270 overpass reconstruction
BNSF	<ul style="list-style-type: none"> ● Reviews and agreements required for proposed I-270 overpass reconstruction
The Farmers Reservoir and Irrigation Company (FRICO)	<ul style="list-style-type: none"> ● Reviews and agreements for proposed E-17-IF/IG crossing over Burlington Ditch



Additional Coordination Contacts

Other Stakeholders	Role or Involvement
Private Property Owners	<ul style="list-style-type: none"> ● ROW/Easement impacts ● Will want to know travel impacts/delays/detours
RTD and Traveling Public	<ul style="list-style-type: none"> ● Roadway safety/trip reliability input ● Will want to know travel impacts/delay/detours
Recreational users	<ul style="list-style-type: none"> ● Colorado Front Range Trail temporary detours ● Sand Creek Greenway temporary detours
Emergency Responders/Incident Command	<ul style="list-style-type: none"> ● Emergency response/access input ● Will want to know travel impacts/delay/detours ● Members of local emergency responders are on the Project’s Technical Team ● Incident Management and Planning for all potential impacts ● CDOT Executive Leadership ● CDOT Traffic Operations Center (CDOT TOC)
Utilities	<ul style="list-style-type: none"> ● See Section 3.2 for anticipated utility coordination/relocations

Anticipated Utility Coordination/Relocations

Utility Identification	Facility type	Relocation Required?
Electric (Xcel Energy)	Overhead and buried lines	TBD
Telecommunications (CDOT, Zayo, Sprint, CenturyLink, Level 3)	CDOT continuous fiber optic conduit runs along I-270 and services CDOT’s variable message signs	Yes
Gas (Xcel, Suncor, Magellan)	Low and High Pressure lines within the project area	TBD
Sanitary Sewers (MWRD, Adams CO, Water and Sanitation)	Location and potential conflicts to be further investigated	TBD
Water (Adams CO Water and Sanitation)	Location and potential conflicts to be further investigated	TBD
Storm Sewer (CDOT)	CDOT has a storm sewer collection system within the corridor	Yes

1.7. WORK DURATION

The time period for this work described in this scope is estimated to begin June 1, 2024 and end December 31, 2028. It is estimated that the project can be constructed in three years from



commencement on construction. It is CDOT's goal to start construction of the the I-270 Critical Bridge Replacements Phase in 2025. The Consultant should expect to have design and construction overlap should the team proceed with concurrent packages.

1.8. COLLABORATION

This project will be delivered via Construction Management/General Contractor (CM/GC) procurement. The Consultant will need to work with CDOT in conjunction with the Construction Manager (CM) and Designer to collaborate on innovation and constructability throughout the duration of the design of the project. Throughout construction, the Consultant will need to work with CDOT in conjunction with the CM and Designer to ensure the work is completed per the completed plans and specifications.

1.9. CONSULTANT RESPONSIBILITY AND DUTIES

All work shall be in accordance with CDOT's latest manuals, directives, and generally accepted practices. The Consultant shall work closely with CDOT I-270 Team's Program Director, Resident Engineer, CDOT Construction Manager, CDOT Design Manager, CDOT Utilities Manager, CDOT Quality Manager, ICE, Construction Manager, and Designer.

The Consultant shall develop an all-encompassing scope and prepare a written recommendation of activities that coincide with the Project costs, goals, and planned improvements for each Task Order developed to complete the Project.

The Consultant shall provide construction administration support, project engineering services (construction management), inspection, and materials-testing services required for construction of the Project. The Consultant must work in conjunction with the CM/GC and Designer to collaborate on innovation, constructability, schedule, and risk throughout the duration of the project.

The Consultant shall be prepared for the following duties:

- Provide one full time Project Manager, two full time Segment Leads/Assistant Project Engineers, and Project Team capable of assisting CDOT in providing a complete project deliverables on time for each construction package
- Program management
- Attend project meetings
- Monitor and evaluate project CPM schedules for design and construction
- Develop concepts and quantities for cost estimates
- Participate in public outreach meetings
- Provide environmental support to complete the Project.
- Attend site meetings and site visits, documenting critical decisions.
- Review FIR, DOR, FOR, and final project design, specifications, and quantities for constructability and estimate review
- Track project action items and deliverables
- Provide inspection and testing services throughout construction
- Closeout all final documentation as required per CDOT specifications

1.10. PERSONNEL QUALIFICATIONS

- The Consultant PM must be approved by the CDOT Contract Administrator.



- Certain tasks must be done by Licensed Professional Engineers (PE) who are registered with the Colorado State Board of Registration for Professional Engineers and Land Surveyors. National Institute for Certification in Engineering Technology (NICET) or other certifications may be required for project inspectors and testers.
- All tasks assigned to the Consultant must be conducted by a qualified person on the Consultant team. The qualified person is a professional with the necessary education, certifications (including registrations and licenses), skills, experience, qualities, or attributes to complete a particular task.
- This contract requires that the prime firm or any member of its team, be pre-qualified in the following disciplines for the entire length of the contract:
 - BI - Bridge Inspection
 - CE – Civil Engineering
 - GE – Geotechnical Engineering
 - MA – Engineering Management (Contract Admin)
 - MC – Engineering Management (Construction)
 - MT - Materials Testing
 - SE – Structural Engineering
 - VE – Value Engineering
- Key Personnel in the Statement of Interest section of the Proposal, see **Section 6** of the Owner's Representation RFP, constitutes an agreement by the Proposer to make the Key Personnel available to complete the services of the contract at the level the Project requires. CDOT requires that all Key Personnel be engaged to perform their specialty for all services required by this contract, and the Key Personnel shall be retained for the life of this contract to the extent practicable and to the extent that such services maximize the quality of work hereunder.

If the Consultant or a subconsultant decides to replace any of its Key Personnel, the Consultant shall notify the Resident Engineer in writing of the desired change. No such changes shall be made until at least two qualified replacement candidates are recommended by the Consultant and a replacement is approved in writing by the Resident Engineer or its designated representative. The approval shall not be unreasonably withheld. Failure of the Consultant to comply with the requirements of this provision may be the cause for CDOT's termination of the contract.

The Resident Engineer or its designated representative will respond to the Consultant's written notice regarding replacement of Key Personnel within fifteen working days after receipt of the list of proposed changes. If the Resident Engineer or its designated representative does not respond within that time, the listed changes shall be deemed to be approved.

If, during the term of the contract, the Resident Engineer or its designated representative determines that the performance of approved Key Personnel is not acceptable, a notification shall be sent to the Consultant. The notification shall include a reasonable timeframe to correct such performance. Thereafter the Consultant may be required to reassign or replace such Key Personnel. If the Resident Engineer or its designated representative notifies the Consultant that certain Key Personnel of a subconsultant should be replaced, the Consultant shall use its best efforts to replace such Key Personnel within a reasonable time, but not to exceed fifteen working days from the date of the notice.

1.11. COMPUTER SOFTWARE INFORMATION

The Consultant shall utilize the most recent CDOT adopted software (if applicable). The primary software used by CDOT is as follows:



- SiteManager/LIMS
- ProjectWise (a/k/a ProjectWise Explorer or ProjectWise Cloud)
- Microsoft Word/Excel/PowerPoint/One Note
- Scheduling - Microsoft Project or Primavera
- LCP Tracker for Project Payroll tracking
- B2GNow System for DBE/ESB tracking and prompt payment
- Adobe Acrobat/BlueBeam Revu
- Sharepoint
- Google Suite

The data format for submitting computer files shall be compatible with the latest version of the adopted CDOT software as of Notice to Proceed for the contract. The Consultant shall immediately notify the CDOT/PM if the firm is unable to produce the desired format for any reason and cease work until the problem is resolved.

1.12. PROJECT COORDINATION AND MEETINGS

The Consultant will be required to coordinate with the CDOT Construction Manager and specialty units as approved. There is an extensive list of stakeholders for this project for each PLT, TT and ITF as well as local agencies that are interested in the project. This list is included in **Section 1.6 Project Roles** in this SOW.

Meetings and frequencies will be established as design progresses and the construction portion begins. The Consultant shall be prepared to participate as requested by CDOT with the essential personnel requested.

1.13. SUPPLEMENTAL WORK

The consultant shall not perform work out of scope without prior written approval from the PM. Per the contract, subconsultants and vendors may not go over task order or contract budget.

1.14. ADDITIONAL PROJECT INFORMATION

Additional information regarding this project is included downloadable documentation found under the Project Delivery tab at the following link: <https://www.codot.gov/projects/studies/i270study>



SECTION 2 – PROJECT MANAGEMENT AND COORDINATION

2.1. CDOT CONTACT

The Consultant shall utilize the following project administration contacts for the Project:

- A. The Contract Administrator for this project is:
Chris Cameron, PE
Resident Engineer of I-270 Corridor Improvements Project
4670 Holly Street
Denver, CO, 80216
W: 720-505-6226
Chris.cameron@state.co.us

- B. Active day-to-day administration of the contract will be delegated to the CDOT/PM:
Matt Brahler, PE
Construction Manager of I-270 Corridor Improvements Project
4670 Holly Street
Denver, CO, 80216
W: 720-347-5646
matthew.brahler@state.co.us

2.2. GENERAL SCOPE OF WORK

Consultant services are requested to provide construction administration support, project engineering services (construction management), inspection, and materials-testing services required for construction of the I-270 Corridor Improvements Project located in Adams County, approximately milepost 0 to 5.

The major Work components of this project are outlined in **Section 1.5 Project Information and Definition** in this SOW.

CDOT is seeking supplemental construction administration support staff from the Consultant to augment the CDOT staff as required for the I-270 Corridor Improvements Project. CDOT staffing on this project will vary as conditions change through the duration of construction work. It is expected that 10 or more consultant staff may be required full time to meet the project's QA requirements, depending on project needs. It is anticipated that the project will have multiple shift work, 24 hours a day, 7 days a week. Working nights, weekends and holidays will be required. The exact personnel requirements will be based upon the approved construction schedule.

The Owner's Representative staff, composed of CDOT and Consultant team members, will be responsible for completing all construction contract administration tasks. They will fulfill all inspection, materials testing, and documentation responsibilities including project final and as-built requirements. Several Discipline Specific Inspectors will be needed to ensure conformance to the Contract, documentation construction progress, and generate payment documents. The team will require a Materials Specialist who will oversee multiple materials testing technicians tasked with fulfilling all Owner's Acceptance materials testing and documentation requirements outlined in the CDOT Field Materials Manual. CDOT anticipates that an extremely large amount of data will need to be generated, managed, and controlled as part of the project.

Construction Traffic Control and Maintenance of Traffic (MOT) will be a major part of this project and



will require a dedicated team member for each shift to review Method-of-Handling-Traffic (MHTs) and coordinate traffic control inspections with the Contractor to ensure conformance to the MUTCD. The project team will need to monitor the daily traffic demands and help to resolve issues that may arise in the project corridor. Construction of bridge structures will require an experienced safety critical specialist to review and comment on safety critical work elements and submittals.

This Project will be delivered using the Construction Manager/General Contractor (CM/GC) process in multiple construction packages. The first package is expected to begin construction by Spring 2025 with project completion anticipated for December 2027. The selected Construction Manager is Kiewit Infrastructure Company. It will be expected that the selected Owner's Representative Consultant will also be involved in the design review process including innovation, risk, cost estimating, and specification development meetings.

This Scope of Work (SOW) has been carefully reviewed by the Department and reflects a plan of approach based on the project goals. The Consultant's analysis of the project, 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.

2.3. GENERAL WORK DESCRIPTION

The construction administration of the project will require Consultant personnel to have specific experience in the following activities:

- Bridge replacement
- Reinforced concrete construction
- Embankment construction
- Aggregate base course placement
- PCCP and HMA pavement construction
- Permanent traffic control device installation
- Retaining wall construction
- Drilled caisson and drive pile deep foundation construction
- Environmental impact mediation
- Erosion control inspection
- Temporary traffic control MHT review and inspection
- Construction traffic phasing plan review and implementation
- Ground stabilization/geotechnical revetment

The Consultant personnel shall be prepared to work in adverse weather conditions. Additional experience in the CM/GC project delivery method will be beneficial.

A separate consultant will be providing Design Support for the project before and during construction, but Consultant Owner's Representative staff will be required to provide details of any encountered project issue to them for evaluation and proposed changes to the design plans and specifications.

The Consultant shall provide support to the CDOT Construction Manager through assignment of personnel to construction administration and inspection responsibilities. The Consultant will be expected to provide support for the following activities:



Pre-Construction Activities include but are not limited to:

- Review and provide comments on design plans and specifications
- Attend and participate in the design review meetings
- Assist CDOT with other duties/tasks as requested
- Generation of meeting minutes to memorialize discussions and decisions
- Risk management/cost estimating

Construction Activities include but are not limited to:

- Progress Reports: Prepare weekly progress reports for the CDOT Construction Manager/Project Engineer and documenting project progress in accordance with the Basic Contract. Project Status Report shall include all activities that transpired during the previous week, a forecast of the upcoming week, project budget and schedule updates, outstanding RFI's and CMO's, known and/or possible claim or dispute issues, and any other issues of possible concern
- Preparing and transmitting updates of construction activities to the CDOT Construction Manager for CDOT's Public Information Office
- Monitoring contractor payroll compliance requirements as they relate to B2G and LCP Tracker.
- Weekly Progress Meeting agenda and minutes
- Daily Work Diaries by all staff members
- Securing project documentation from the contractor
- Anticipating project problems, then formulating and implementing solutions
- Reviewing drawings and data submitted by the construction contractor and suppliers for conformance with the specifications. Inform and obtain concurrence as needed from the CDOT Construction Manager and keep relative documentation for project records
- Maintaining accurate notes reflecting actual construction details to be used in preparation of as-constructed plans
- Communicating with adjacent landowners as required to resolve issues that arise due to construction
- Monitoring compliance with and taking appropriate action to preserve safety on the project for all workers and traveling public in accordance with Methods of Handling Traffic (MHT)
- Initial, follow up, and final inspections of work in progress including interim and final measurements
- Notifying contractors and CDOT Construction Manager of non-compliance with the contract plans and specifications
- Performance of special tests, investigations, or monitoring which are required to fulfill the intent of the CDOT inspection program
- Ensure compliance with permits such as 404 and NPDES
- Inspection of erosion control, review of SWMP notebook, and participation in Erosion Control Compliance Reviews
- Preparation of inspection documentation for development of progress payments for the contractor in accordance with prescribed procedures
- Submittal of standard documentation reports no later than the following working day
- Aiding in the preparation of correspondence to the contractor, CDOT Staff, local agencies, etc.
- Providing communication to contractor field crews
- Preparation of final "As Constructed" plans upon project completion
- Perform miscellaneous project related duties as requested by the CDOT Construction Manager and CDOT Resident Engineer
- Assist in preparing punch lists of uncompleted work, non-conformance reports, and deficiency notices
- Assist in preparing responses to contractors' and suppliers' requests for information, submittals,



- change notices, claims, and correspondence
- Evaluate the project schedule
- Assist CDOT Project Engineer with coordination of all construction contract activities, assist in the supervision of other project staff and assignment of duties and responsibilities
- Review, give comments, and acknowledge completeness of required submittals
- Maintaining of project files, project diaries and time counts
- Prepare periodic reports and billings required by CDOT Procedural Directive 400.2
- Participate in and ability to facilitate (as necessary) weekly progress meetings with contractor, subcontractors, utilities and other interested parties
- Change Orders/MCR – discussions with: Contractor, Area Engineer, Project Director, Specialties as necessary. Also write CMO and justification letter, prepare package with attachments, price justification/negotiation, form 90, etc.
- Review/Monitor Schedule (baseline, updates and narrative reviews)
- Weekly meetings (agendas, minutes, preparation, facilitation, etc...)
- Pre-con meetings (agendas, minutes, distribution, preparation, facilitation, etc...)
- Review inspectors work (diaries, 266's, DWR's, calculations, spreadsheets, etc...)
- Participate in Traffic Control Reviews, MHT review and approval, traffic phasing plan review and implementation
- Erosion control management and oversight, bi-weekly reviews, post-storm event reviews, MAR
- Submittal review and approve and forward to specialties as appropriate for review/approval
- Manage the receipt, filing, storage, cataloging and review of all project Contractor Submittals
- Preparation and/or review of payment documentation
- Conduct drone flights to photograph the project and provide imaging to be included on the project website and in public information updates

Post Construction Activities include but are not limited to:

- As-Constructed Drawings: Complete 11"x 17" as-constructed drawings of work completed by the Contractor, including final pay quantities.
- Preparation of Final Pay Estimate: Assist in determining final pay quantities with appropriate supporting documentation and checks.
- Preparation of Materials Final: Prepare the final materials documentation for closing the project.

Management of Consultant Project Construction Inspection

The consultant, CDOT Construction Manager, and CDOT Resident Engineer shall meet, coordinate and schedule the required work. The consultant shall complete all work in accordance with their approved schedule.

Project Standards

All inspection and documentation shall be in accordance with the Colorado Department of Transportation (CDOT) Field Materials Manual, Construction Manual, CDOT M&S Standards, CDOT Inspector's Checklist and applicable Project and Standard Special Provisions in the construction project contract and the applicable CDOT Standard Specifications for Road and Bridge Construction. The applicable CDOT Field Materials Manual, including Colorado Procedures and Colorado Procedure-Laboratory, shall be the one currently in use when the construction project is advertised. If the required method is not described in the CDOT Field Materials Manual, the required work shall be completed in accordance with the current AASHTO Standard Specifications for Transportation Materials and Methods of Sampling and Testing (as revised and supplemented) or the ASTM Standards and Tentatives. Proposed work procedures shall be

coordinated with the CDOT Construction Manager prior to the start of work.

Labor, Vehicles, Materials, and Equipment

Personnel qualifications, staffing level, and number and types of vehicles shall be subject to the approval of the CDOT Construction Manager. The Consultant shall assign personnel for the duration of the Contract unless otherwise approved by the CDOT Construction Manager. Employees required to operate vehicles must possess and maintain a valid driver's license. The Consultant Inspectors permanently 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. The level of qualification provided shall be as requested and approved by the CDOT Construction Manager.

A short summary bio of work experience and list of Certifications and/or Licenses of each proposed consultant staff member shall be provided to the CDOT Construction Manager. 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 Construction Manager.

The Consultant shall furnish all personnel with all equipment and transportation required to perform the work. Consultant personnel shall have appropriate vehicles equipped with programmable LED light bars (Large flashing amber beacon arrays), newer cell phone, computers, and other miscellaneous equipment (calculator, office and lab supplies, safety equipment, etc.) required for performing the work.

Each consultant staff shall be supplied with a computer running Windows 10 or later Windows operating systems capable of wired and wireless network connections and loaded with the most current version of MS Office software (Microsoft Project & Site Manager or QA/QC program if applicable), and Adobe Pro/DC for editing and mastering PDF files.

The Consultant shall have a phone with a digital camera with GPS cache ability that can be downloaded to a central location and available for staff to review at all times. Written and photo documentation of the project shall be made available to the CDOT Construction Manager on a regular basis.

2.4. KEY PERSONNEL DESCRIPTIONS

Figure 1 is the anticipated organizational chart showing CDOT's management team assigned to the Project. The boxes shown in yellow are Tier I, Tier II, and Construction Management Team roles anticipated to be filled by the Consultant Project Team based on skills and experience described below.

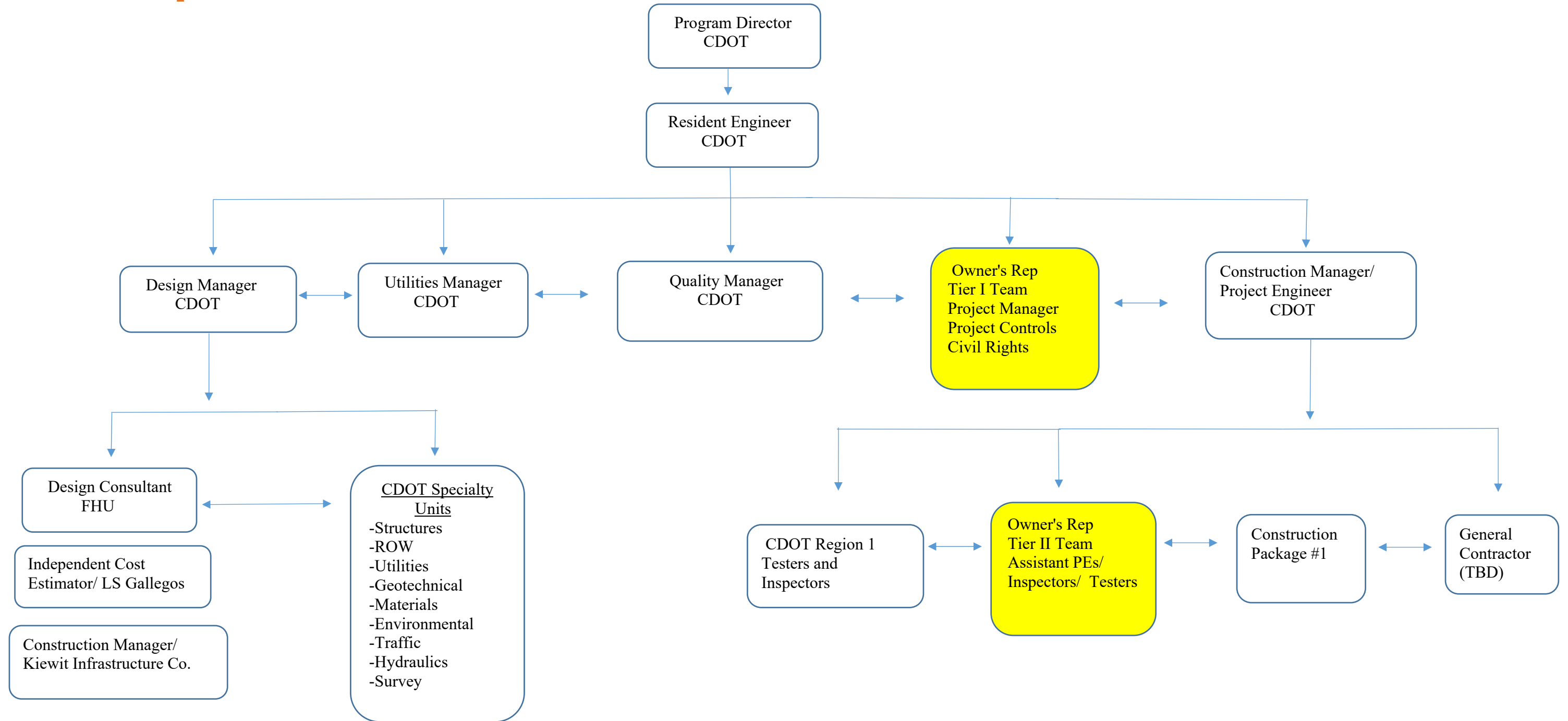


Figure 1 Organization Chart

Below is the CDOT Project Team's role for the I-270 Corridor Improvements Project:

CDOT Program Director – The Program Director for the I-270 Corridor Improvements project will serve as CDOT's senior point of contact through all project phases. This position builds and maintains strong partnerships with all Project Stakeholders. This position oversees the entire project to assess and manage technical, stakeholder, and personnel issues. The Program Director ensures the overall health of the I-270 Corridor Improvements Project Program. This position updates the EOC on Project progress. Overall responsibility to ensure NEPA (EIS), Design, and Construction of the Project is done safely, with high quality, on time and on budget.

CDOT Resident Engineer – The CDOT Resident Engineer is directly responsible for the overall administration, the quality and successful completion of the I-270 Corridor Improvements Project. The CDOT Resident Engineer authorizes interim and final payments and all changes to Contracts for all Consultants and Contractors. The CDOT Resident Engineer will also be responsible for all CDOT personnel management on the Project. The Resident Engineer shall be licensed in the State of Colorado.

CDOT Construction Manager/Project Engineer – The CDOT Construction Manager shall be assigned full time on the project site and shall be the CDOT Project Engineer. The CDOT Project Engineer is the CDOT employee, assigned by the Resident Engineer, who is the Chief Engineer's duly authorized representative. The CDOT Project Engineer is in direct charge of the work and responsible for the administration and satisfactory completion of the I-270 Corridor Improvements Project. The CDOT Construction Manager is responsible for the quality and successful completion of the I-270 Corridor Improvements Project. The Construction Manager shall be licensed in the State of Colorado, and is in responsible charge of construction.

CDOT Utilities Manager – The CDOT Utilities Manager is responsible for all utility management and coordination in the design and construction phases of the I-270 Corridor Improvements Project.

CDOT Design Manager – The CDOT Design Manager is responsible for all design management and coordination in the design and construction phases of the I-270 Corridor Improvements Project.

CDOT Quality Manager – The CDOT Quality Manager is CDOT's lead quality assurance representative and is responsible to ensure that all project design and construction phases are designed with quality and unique sensitivity to the community.

Below is a list of key skills that are needed to support CDOT staff. These skills are detailed for both preconstruction and construction services. Key Personnel should be scalable and flexible based on various funding scenarios and maintain consistency between packages and through preconstruction and construction phases. Multiple Tier II skills can be covered by one person or multiple people can be identified to cover Tier I and Tier II skills as long as one person is identified as the person in charge for that skill. The Construction Management Team should be involved in key pre-construction meetings related to their package to ensure consistency between pre-construction and construction phases.

Tier 1: CDOT anticipates that five staff members should comprise the following Tier I Team skills, experience, and knowledge:



a. Project Manager (1 person)

- In direct charge of all Owner's Representative consultant staff on the project.
- Licensed Professional Engineer in State of Colorado.
- Assist the CDOT Project Team with Pre-Construction Services support as needed.
- Assist in coordinating with Consultant Designer, Construction Manager, CDOT specialty groups, and third party entities such as UPRR, BNSF, FRICO, as needed.
- Perform completeness and constructability reviews at each stage of the preconstruction process (DSR, FIR, DOR, FOR)
- Help ensure that each construction package is complete, stand alone, and severable prior to it's CAP Negotiation.
- Serves as support to the CDOT Construction Manager.
- Well versed in Transportation Construction and understand Risk Management, CDOT Construction Specifications and Schedule.
- Manages consultant staff credentials and certifications.
- Manage consultant equipment needs and calibrations.
- Manages consultant staff job performance and acts as main point of contact for addressing any potential concerns related to performance or in the event that a conflict develops between staff members.
- Manages consultant billing to ensure the proper number of hours are billed to the appropriate Contract.
- Other duties as assigned.
- Anticipated time commitment: 100% in Pre-Construction Phase, and 100% in Construction Phase of the project.

b. Project Controls Engineer Duties (1 person)

- Responsible for all document control on the project.
- Have experience with:
 - CM/GC contracting methods
 - Drafting and processing CDOT Change Orders
 - Monitoring and Tracking documents and submittals though an electronic database (see "Technology" Section below for more details).
 - Technology set-up, including mobile device management and electronic application management.
 - Management of Project documentation – includes



- preparing and managing construction documentation, construction pay estimates, force account billing, etc.
 - Reviewing and commenting on Safety Critical Plans
 - Reviewing and responding to project change order requests and Request-For-Information (RFI)
 - Responsible for the initial review of project submittals and RFIs and then either responding or routing the submittal/request to the appropriate Assistant Project Engineer in a timely manner
 - Responsible for drafting and managing Form 105s
 - Provide a written report of each work item in the Safety Critical Plan to the Consultant Project Engineer, with comments and a recommendation to approve, reject/revise/resubmit, or accept with comments.
 - Anticipated time commitment: 0% during Pre-Construction and 100% during Construction.
- c. Project Controls Assistant – One (1) - Responsible for all office operations and document control as developed by the Project Controls Engineer. This person will need to have strong organizational and computer skills to assist the Project Controls Engineer in document management. Recording meeting minutes and other various office tasks as requested by the Project Controls Engineer, Project Engineer and Assistant Project Engineers will be required.
- This person/people needs to have strong management and organization skills.
 - Generate meeting minutes.
 - Upload construction documentation to document control database.
 - Anticipated time commitment: 0% during Pre-Construction and part-time throughout Construction.
- d. Civil Rights- Civil Rights Specialist (1 person) will ensure conformance with all Civil Rights/EEO/DBE/Labor Compliance policies and procedures throughout the project. This person will work closely with the Region 1 Civil Rights Office to ensure compliance with all applicable laws and regulations.
- Review all certified payroll documentations as provided by the Contractor for conformance to the specifications and functional uses, conduct random interviews of Contractor employees to determine if the Contractor is in conformance with CDOT's DBE, EEO/Labor Compliance policies,
 - Assist FHWA with all requested documentation
 - Manage the OJT requirements of the contract and write reports for progress estimates when approved.



- Perform monitoring of monthly payments by the Contractor to subcontractors.
 - Also monitor confirmations/discrepancies of payments noted by subcontractors and vendors.
 - Anticipated time commitment: 0% during Pre-Construction and part-time throughout Construction.
- e. Schedule- The Consultant Schedule Specialist (1 person) will be a key member of the management team providing reviews of CPM schedules and providing feedback on the technical aspects of the schedules as well as monitoring critical and near critical activities and communicating any potential issues with the Project team.
- Regular attendance at Weekly Meetings will also be required to maintain a working knowledge of the progress of the project.
 - Review the Contractor's initial and base-line schedule and method statement submittals and submit written comments to the Project Engineer on acceptability.
 - Review the Contractor's accepted as-planned schedule, schedule updates, and method statements for compliance with contract requirements.
 - Perform a schedule delay analysis and determine the amount of Contractor and/or CDOT excusable delays.
 - Prepare schedule reports and exhibits to assist in evaluation of schedule delays and remaining as-planned work.
 - Presentations and attend meetings, as requested on schedule related items.
 - Provide ongoing schedule review and evaluation support through project completion.
 - If needed, assist the project team and assemble the data needed to create an as-built schedule.
 - Anticipated time commitment: 0% during Pre-Construction and Part-time throughout Construction.

Tier II: CDOT anticipates needing Segment Leads/Assistant Project Engineers, Discipline Specific Inspectors, and Materials Testers for the following Tier II skills, experience, and knowledge:

B. Segment Leads/Consultant Assistant Project Engineer (2) Duties

- The Consultant Assistant Project Engineers (CAPE) will be responsible for day-to-day management of the field staff by ensuring all work activities for all work shifts are appropriately staffed. The CAPEs will meet regularly with the Discipline Specific Inspectors to determine staffing needs and will assign inspectors and testers as needed. They will also work with the Discipline Specific Inspectors to track the progress of field items and report to the Consultant Schedule Specialist to accurately reflect schedule progress. Each CAPE will review the



Contractor's submittals as assigned by the CDOT Construction Manager.

- There will be one Segment Lead for the "Railroad Bridges", responsible overseeing construction of Structures E-17-IH, E-17-II, E-17-IJ, E-17- IK.
- There will be one Segment Lead for the "Water Bridges", responsible overseeing construction of Structures E-17-ID, E-17-IE, E-17-IF, E-17- IG.
- The CAPEs will be expected to participate in on-site inspection activities to ensure inspectors/testers are appropriately documenting and covering all job-site activities.
- In addition to the tasks listed above, the CAPE – Safety Critical/Field will review the Contractor's approved safety critical work plans, method statements, procedures, working drawings, shop drawings, PE engineered plans and drawings, demo plans, erection plans, etc. for compliance with contract requirements. Participate in pre-construction meetings for all safety critical work items. Participate in on-site inspection activities associated with safety critical work items. Maintain documentation of all safety critical work, analysis, comments, reviews, documentation, meetings, etc.
- Serves as support to the CDOT Construction Manager.
- Well versed in Transportation Construction and understand Risk Management, CDOT Construction Specifications and Schedule.
- Anticipated time commitment: Minimal support during Pre-Construction and 100% during Construction.

2.5. Discipline Specific Inspectors

Each identified discipline will have a Discipline Specific Inspector responsible for the overall completion of construction management and quality assurance. Discipline Specific Inspectors will oversee the work of other inspectors within their assigned discipline and will be responsible for all project quality assurance documentation and its timely submittal to the CAPEs for inclusion into progress estimates. Discipline Specific Inspectors will be responsible for all project deliverables such as project diaries, inspection reports, photos, quantity records, and other documentation. The documentation shall be prepared and submitted throughout the duration of construction in accordance with CDOT requirements. Discipline Specific Inspectors personnel will be required to prepare weekly progress reports for the CDOT Construction Manager documenting project progress in accordance with the Contract. The Discipline Specific Inspectors will also meet with the CDOT Construction Manager, Project Controls Engineer, and Schedule Specialist to update the current schedule with accurate information and properly forecast upcoming work for staffing needs on the project.



The following Discipline Specific Inspector and Discipline Specialist Descriptions are identified as critical to the success of the Key Personnel. Each of these Roles shall be identified in the Project Team section of the proposal per **Section 6D** of the RFP.

- Structures/Walls - The Structures Discipline Specific Inspector (1 person) will oversee the day-to-day construction of bridges, structures, and walls on the project. This will include ensuring inspection coverage of all structures operations and assisting the CAPE - Safety Critical/Field in timely reviews of relevant submittals. This person will have to work closely with inspection staff to ensure all critical inspection points are understood and properly evaluated and documented prior to continuation of construction operations. Anticipated time commitment: 0% during Pre-Construction, 100% during Construction.
- Traffic Control/Environmental - The Traffic Control/Environmental Discipline Specific Inspector (1 person) will be responsible for monitoring the Contractor's day-to-day traffic operation for compliance to all CDOT and Federal standards. Duties will include review and commenting of MHT's, enforcement of MHT's, tracking and documenting all traffic devices and operations. All required CDOT documentation will be required to be kept current daily and not limited to TCS diaries, form 7's, and daily traffic inspection logs. Video and photo logs may be required. The Traffic Control Discipline Specific Inspector will review, monitor and manage all aspects of the Smart Work Zone items integrated into the project during construction. This will require coordination with Region 1 Traffic, CDOT ITS, and CDOT Emergency Operations Center personnel. The Traffic Control/Environmental Specialist shall review, monitor, and manage all environmental requirements of the contract including but not limited to, managing of all erosion control documentation, Hazmat compliance, noise compliance, issuance of 105's for non-compliance, and attendance of all inspections required by the permit. The Environmental Specialist will ensure compliance of mitigation of all biological and endangered species issues on the project as well as overall re-establishment and landscaping. This person is expected to be qualified in all aspects of Environmental concerns related to the project with the ability to support the CPE to maintain full environmental compliance on the project. Approval of this person shall be required by CDOT Environmental. Anticipated time commitment: 0% during Pre-Construction, 100% during Construction.
- Roadway/Drainage/Utilities - The Roadway Discipline Specific Inspector (1 person) will monitor and manage all subgrade, paving, drainage, guardrail, utility relocation, and general roadway operations. This person will ensure inspection coverage of these operations and coordinate with other Discipline Specific Inspectors to monitor progress and schedule impacts throughout the Project. Anticipated time commitment: 0% during Pre-Construction, 100% during Construction.
- Materials - The Head Tester (2 persons) shall manage the sampling, testing, and documentation of specified materials incorporated into the project. This includes materials delivered to the project that are listed in the Summary of Approximate Quantities or referred to in the Plans and Specifications. Additional quantities may be added by Contract Modification Order, or plan approximate quantities may be increased or decreased. The Head Testers and Materials Testing Technicians shall review project quantities on a weekly basis to ensure that sufficient tests have been performed for all material placed to date. The Head Testers shall be competent in LIMS and will be required to complete all CDOT required documentation for submittal of the Final Materials Documentation books. Anticipated time commitment: 0% during Pre-Construction, 100% during Construction.

2.6. ADDITIONAL STAFF REQUIREMENTS

In addition to the staff identified above, the Project will require additional support staff and materials testers. The staff shall be available to the project and report to the project site as requested by the CDOT Construction Manager. The following descriptions include the anticipated number of staff needed for each description.

- **Materials Testing Technicians – Up to Two (2) -** The Materials Testing Technicians (MTT or Testers) shall have experience in cast in place concrete, asphalt, earthwork, as well as the requisite certifications. The MTTs shall review project plans, specifications, and the current version of the CDOT Field Materials Manual and the project specific CDOT Form 250 to assist the Materials Manager in completing the project with the number and type of tests that will need to be performed on the project. The MTTs, Materials Specialist, the Consultant Assistant Project Engineer, and the CDOT Construction Manager shall meet on a regular basis to address any questions or issues involving testing procedures, frequency, or documentation. Additional testing may be required if requested by the Consultant Assistant Project Engineer or the CDOT Construction Manager. The MTTs shall be thoroughly familiar with CDOT forms and documentation requirements. Anticipated time commitment: 0% during Pre-Construction, part-time during Construction.

2.7. GENERAL WORK DESCRIPTION FOR PROJECT MATERIALS TESTING

The consultant shall sample, test and inspect those specified materials utilized in construction. Test results and inspection observations shall be documented and approved by the CDOT Project Engineer in accordance with the references cited below under **Project Standards**. Project specific work will be defined by task order, prior to work commencing.

Management of Consultant Project Materials Testing

The Consultant, CDOT Construction Manager, and Head Tester shall follow the requirements of CP-16 to meet, coordinate and schedule the required work. The Consultant shall complete all work in accordance with their approved schedule. The consultant materials testing evaluation form shall be completed by the CDOT Construction Manager, CAPE, and Head Tester, and distributed as described in CP-16. The CDOT Project Engineer shall forward a copy of the completed Pre-Testing Meeting Agenda for Consultant Materials Testing to the Region Materials Engineer.

Project Staffing Authority

The CDOT Project Engineer is in direct charge of the work and is responsible for administration of the project contract as defined in the CDOT Standard Specifications. This includes approving and setting work hours for both project construction and the materials testing.

Project Standards

All sampling, testing, and documentation shall be in accordance with the Colorado Department of



Transportation (CDOT) Field Materials Manual, Construction Manual, CDOT M&S Standards and applicable Project and Standard Special Provisions in the construction project contract and the applicable CDOT Standard Specifications for Road and Bridge Construction. The applicable CDOT Field Materials Manual, including Colorado Procedures and Colorado Procedure-Laboratory, shall be the one currently in use when the construction project is advertised. If the required method is not described in the CDOT Field Materials Manual, the required work shall be completed in accordance with the current AASHTO Standard Specifications for Transportation Materials and Methods of Sampling and Testing (as revised and supplemented) or the ASTM Standards and Specifications. Proposed work procedures shall be coordinated with the CDOT Construction Manager prior to the start of work.

Field Laboratory

CDOT will provide a field laboratory and the required traffic control for the Project. The CDOT Construction Manager will advise the Head Testers on the availability of the field laboratory.

The following equipment and supplies shall be furnished by the Consultant 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. All equipment shall have current calibration and be maintained in satisfactory condition.

1. A.C. content gauge and/or extraction equipment and solvents
2. Nuclear Moisture/Density gauge
3. Concrete air meter, slump cone, and other concrete testing equipment
4. Sieves for aggregates and soil gradations
5. Scales
6. Sample containers and small tools
7. Proctor equipment for soil curves and 1 point tests
8. Atterberg equipment
9. Sample drying equipment
10. Miscellaneous equipment for performing the required soils, concrete and asphalt field tests
11. Concrete cylinder molds, which conform to AASHTO requirements, except that PAPER MOLDS SHALL NOT BE USED, AND PLASTIC MOLDS SHALL NOT BE REUSED
12. Cell Phone for each MTT
13. Computer and printer for each test lab (CDOT or Consultant). This equipment needs to have capability to operate all current CDOT project software as defined in the current migration plan. This includes Site Manager.

Personnel staffing level and qualifications of testing personnel and laboratories for the project shall be subject to the approval of the CDOT Construction Manager. The CDOT Construction Manager shall receive and review the testing personnel and consultant laboratory qualifications prior to commencement of testing on the project.

Sampling and testing personnel qualifications shall be in conformance with the requirements of the applicable CP-10. Additionally, each MTT must possess a current and valid driver's license.

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. Prior to acceptance, the Professional Engineer shall be responsible for sealing each contract's Form 473/474 materials certification. The CDOT Construction Manager 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 Construction Manager, and must be experienced and competent in road and bridge construction materials testing.

Copies of the MTTs required certifications and a resume, with references, including their materials testing experience shall be provided to the CDOT Construction Manager.

The MTTs shall be thoroughly familiar with CDOT testing procedures, forms and documentation requirements. If oversight is necessary, the Consultant shall provide the supervision and guidance needed for completion of the work. Oversight required by the Consultant will not be paid for by CDOT.

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 Construction Manager. Failure to perform the testing and documentation processes may result in termination of the task order as determined by the CDOT Construction Manager.

Specific Testing Requirements

The Consultant shall sample, test, inspect, and document all materials generated and produced on the project. This includes: materials delivered to the project that are listed in the Summary of Approximate Quantities in accordance with the SCHEDULE (Owner Acceptance) in the Field Materials Manual; materials that may be added to the project through contract modification; and altered material quantities whether increased or decreased. The Head Testers, MTTs, and the CAPEs shall be required to review project quantities on a monthly basis to ensure that sufficient tests have been performed for the material placed to date. The Consultant shall also provide any other services as requested by the CDOT Construction Manager.

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 Consultant shall document and transport samples of any and 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 Department tested materials shall be in accordance with the column titled “Central Laboratory” in the SCHEDULE.

Documentation

Each of the MTTs shall maintain a daily diary for each day they perform work on the project. They may use CDOT's Form 103, Project Diary, or a form as approved by the CDOT Construction Manager. The contents of the diary shall be a brief and accurate statement 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 be given to the CAPE - Office within three working days of its date. Test results, sample submittals and inspection documentation transmitted to CDOT's Region or Central Laboratory shall be recorded on appropriate CDOT Forms.

The Head Testers and MTTs will be required to review project quantities on a weekly basis to ensure that sufficient tests have been performed for the material placed to date. The Consultant may use CDOT worksheets or worksheets approved by the CAPE. CDOT Forms and worksheets are available online at CDOT's website.

The Head Testers shall furnish the CAPE - Office with copies of all worksheets on a daily basis. The Head Testers shall also keep the CDOT Form 626 up to date at all times and provide copies of this form to the CAPE and the Contractor within 12 hours for any material found to be out of compliance with the specifications.

The Head Testers shall coordinate the schedule for Independent Assurance Tests for the project in accordance with CDOT Form 379, with the Head Tester, or directly with the Region IAT person.

Submittal of Final Documentation

Final documentation shall be submitted to the CAPE within 20 working days after Project Acceptance. A completed CDOT Form 250 shall be submitted to the CAPE 10 days after the Head Testers has been notified of final quantities. Failure to submit final documentation as required may result in withholding any and all Consultant payments.

2.8. PROJECT COORDINATION

In addition to the stakeholders listed in **Section 1.6.**, the Consultant shall partner and coordinate with the groups below. The CDOT Project Management Team (defined below) shall be included in all coordination.

- Executive Oversight Committee
- CDOT Project Management Team
 - I-270 Program Director – David Merenich, PE
 - I-270 Resident Engineer – Chris Cameron, PE
 - I-270 Utilities Manager – Donna Haight
 - I-270 Construction Manager – Matt Brahler, PE
 - I-270 Design Manager- TBD
 - I-270 Quality Manager- TBD
- CDOT Specialty Groups
 - Region 1 Materials
 - Region 1 Traffic
 - Region 1 Hydrology and Hydraulics
 - Region 1 Survey
 - Region 1 Environmental
 - Region 1 Right-of-Way
 - Region 1 Utilities
 - CDOT Staff Bridge
 - CDOT Staff Geotech
 - CDOT Public Information Office



- CDOT Operations Center
- Design Consultant and Subconsultants
- CM/GC Contractor and any subcontractors
- ICE
- CDOT Engineering Estimates and Market Analysis (EEMA) Group
- CDOT Maintenance Forces
- Headquarters and Regional Civil Rights Manager
- CTIO
- Bridge & Tunnel Enterprise

2.9. PROJECT CO-LOCATION

CDOT anticipates that the Project Manager will co-locate with the CDOT Project Team during the Pre-Construction Design Phase.

Plans to co-locate with the General Contractor throughout construction will be determined after selection. The location and timeframe for co-location is to be determined but is anticipated to be in the Denver Metro or within the Project vicinity. Co-location is at the discretion of CDOT.

2.10. STAKEHOLDER EFFORTS

The Consultant shall collaborate with CDOT and the Contractor to prepare for distribution of public information and stakeholder outreach.

SECTION 3 – EXISTING FEATURES

3.1. NOTICE TO PROCEED

Note: This Section lists known features in the area. It should not be considered as complete, and should include, as appropriate, information from Section 2 Project Management and Coordination. The Consultant should be alert to the existence of other possible conflicts.

- E-17-ID
- E-17-IE
- E-17-IF
- E-17-IG
- E-17-IH
- E-17-II
- E-17-IJ
- E-17-IK
- Sign E-17-RO
- Sign E-17-XO
- Sign E-17-ADT
- Sign E-17-XM
- Sign E-17-VQ
- Sign E-17-ADV
- Sign E-17-LC

Potential Conflicts:

- E-17-WP
- COMC-4A-01-RR
- COMC-4A-02-RR
- COMC-5A-03-RR

3.2. UTILITIES

Anticipated Utility Coordination/Relocations

Utility Identification	Facility type	Relocation Required?
Electric (Xcel Energy)	Overhead and buried lines	TBD
Telecommunications (CDOT, Zayo, Sprint, CenturyLink, Level 3)	CDOT continuous fiber optic conduit runs along I-270 and services CDOT's variable message signs	Yes
Gas (Xcel, Suncor, Magellan)	Low and High Pressure lines within the project area	TBD
Sanitary Sewers (MWRD, Adams CO, Water and Sanitation)	Location and potential conflicts to be further investigated	TBD
Water (Adams CO Water and Sanitation)	Location and potential conflicts to be further investigated	TBD
Storm Sewer (CDOT)	CDOT has a storm sewer collection system within the corridor	Yes

3.3. IRRIGATION DITCHES

- Burlington Irrigation Ditch owned by Farmers Reservoir and Irrigation Company (FRICO)

3.4. RAILROADS

- UPRR
- BNSF

3.5. PERMANENT WATER QUALITY CONTROL MEASURES

- Burlington Irrigation Ditch owned by Farmers Reservoir and Irrigation Company (FRICO)

3.6. WATER FEATURES

- Sand Creek
- South Platte River

SECTION 4 – GENERAL INFORMATION

4.1. NOTICE TO PROCEED

Work shall not commence until the written Notice-to-Proceed is issued by CDOT. Work may be required, night or day, and/or weekends, and/or holidays, and/or split shifts. CDOT must concur in time lost reports prior to the time lost delays being subtracted from time charges. Subject to CDOT prior approval, the time charged may exclude time lost for:

- Reviews and Approvals
- Response and Direction

4.2. PROJECT COORDINATION

See Section 2 – Project Management and Coordination

4.3. ROUTINE REPORTING AND BILLING

The Consultant shall provide the following on a routine basis:

- Coordination:
 - Coordination of all contract activities by the Consultant's Project Manager
- Periodic Reports and Billings:
 - The periodic reports and billings required by CDOT Procedural Directive 400.2 (Monitoring Consultant Contracts), including monthly drawdown schedules.
 - Consultant Invoicing Guidelines. Please provide the following seven sections and information in each invoice in the following order:
 1. Form 1313
 2. Invoice
 - a) Provide invoice in a similar format to the original PCW
 - Noting each employee, time worked, multiplier, Fee
 - Sum total hours worked and labor, subtotal fixed fees, subtotal sub-consultants, subtotal vendor under prime (sub consultants should note their own vendors on their invoices), provide invoice total, total billed to date and total amount left on TO for Prime, Sub and Vendor for ease of tracking
 - b) Provide columns next to employees ensuring Consultant has reviewed for:
 - Employee on original TO
 - Employee on MPA and date
 - Employee added to TO by letter and date
 - Employee added to MPA Date and documentation
 - c) Provide a header for the invoice noting:
 - SAP OL#, SAP PO#, Invoice Date, Invoice #, Project # and subaccount #, current billing period, TO# and any other pertinent information
 3. Progress Report shall be submitted per the contract documents. The progress report shall also summarize all the work performed by the Prime, Sub Consultants and Vendors. Provide header as noted in 2c. Each item below requires a section in the Progress Report.
 - Report on Progress of each work activity or milestone identified in the contract, to show the amount of work accomplished during the current month and the amount of work accomplished overall.



- A report on the time scheduled for each work activity or milestone identified in the contract to show planned time completion and actual times used to do the work.
- A description of the cause for delays beyond the planned completion of time of work activities or milestones contained in the project.
- A report on the cost incurred to date on each work activity or milestone contained in the contract and a comparison to the cost estimates for such activity or milestone. Monthly billings will include a monthly budget forecast sheet showing invoicing from start estimated through completion tracking the project budget. In other words, verify the burn rate of prime, subs, and vendors to ensure they are on track and on task.
- A description of possible remedies to get activities or milestones that are behind schedule, back on schedule, and to get activities or milestones that are exceeding cost estimates, back within planned costs.
- Documentation of meetings that were held during the subject time period.
- A report on the participation of DBE sub-consultants.
- 4. Letter(s) adding employee(s) to task order with all required information (should have been approved by CDOT PM prior to any work done by employee per HQ Contract/Agreement Unit-see Add Employee Process document)
- 5. Labor backup – timesheets
 - The Prime, Sub-consultants and Vendors shall submit detailed hourly back up of effort noting time/date of activities and number of hours or costs. Lodging backup shall be submitted through ODC backup.
- 6. ODC backup – Only Submit documentation pertaining to the project and the invoice
 - Provide a summary of ODC Cover sheet
 - Purpose of trip, Date of Trip, Who went
 - mileage logs, per diem and/or meals documents (listing of days and rates or receipts for actuals), lodging receipts, receipt or documentation of other ODC items including vendor receipts/invoices.
- 7. Sub-consultant billings and Vendors - should have the same documentation as prime, except Form 1313, which is optional.
- General Reports and Submittals:
 - In general, all reports and submittals must be approved by CDOT prior to their content being utilized in follow-up work effort.

APPENDIX A: DEFINITIONS

Note: For other definitions and terms, refer to Section 101 of the CDOT Standard Specifications for Road and Bridge Construction and the CDOT Design Guide.

CDOT Program Director – The Program Director for the I-270 Corridor Improvements project will serve as CDOT's senior point of contact through all project phases. This position builds and maintains strong partnerships with all Project Stakeholders. This position oversees the entire project to assess and manage technical, stakeholder, and personnel issues. The Program Director ensures the overall health of the I-270 Corridor Improvements Project Program. This position updates the EOC on Project progress. Overall responsibility to ensure NEPA (EIS), Design, and Construction of the Project is done safely, with high quality, on time and on budget.

CDOT Resident Engineer – The CDOT Resident Engineer is directly responsible for the overall administration, the quality and successful completion of the I-270 Critical Bridges Project. The CDOT Resident Engineer authorizes interim and final payments and all changes to Contracts for all Consultants and Contractors. The CDOT Resident Engineer will also be responsible for all CDOT personnel management on the Project. The Resident Engineer shall be licensed in the State of Colorado.

CDOT Construction Manager/Project Engineer – The CDOT Construction Manager shall be assigned full time on the project site and shall be the CDOT Project Engineer. The CDOT Project Engineer is the CDOT employee, assigned by the Resident Engineer, who is the Chief Engineer's duly authorized representative. The CDOT Project Engineer is in direct charge of the work and responsible for the administration and satisfactory completion of the I-270 Critical Bridges Project. The CDOT Construction Manager is responsible for the quality and successful completion of the I-270 Critical Bridges Project. The Construction Manager shall be licensed in the State of Colorado, and is in responsible charge of construction.

CDOT Utilities Manager – The CDOT Utilities Manager is responsible for all utility management and coordination in the design and construction phases of the I-270 Critical Bridges Project.

CDOT Design Manager – The CDOT Design Manager is responsible for all design management and coordination in the design and construction phases of the I-270 Corridor Improvements Project.

CDOT Quality Manager – The CDOT Quality Manager is CDOT's lead quality assurance representative and is responsible to ensure that all project design and construction phases are designed with quality and unique sensitivity to the community.

Construction Management, Construction Inspection, and Construction Testing (CM, CI, CT) - The activities associated with the roles assigned for the monitoring, testing, documentation and other administrative project-related services under the responsible charge of the Consultant Project Engineer, and at the direction of the CDOT Construction Manager to ensure conformance with the Project Standards.

Consultant - The firm or corporation providing personnel under this agreement to perform construction services as outlined herein.

Consultant Assistant Project Engineer (CAPE) – The CAPE(s) shall be assigned full time on the project site. The Consultant Assistant Project Engineer works directly for the CPE. The duties of the CAPE are limited to those duties in the scope of work and as delegated by the CDOT Construction Manager. The CAPE shall be licensed in the State of

Colorado, unless otherwise approved by the CDOT Construction Manager.

Consultant Inspector - The Consultant's employee(s) who perform(s) inspection services under the responsible charge of the CPE and at the direction of the CDOT Construction Manager.

Consultant Tester - The Consultant's employee(s) who perform(s) materials testing and inspection services under the responsible charge of the CPE and at the direction of the CDOT Construction Manager.

Contractor - The individual, firm, or corporation contracting with CDOT to construct a transportation project.

Region I.A.T. Staff – Individual assigned by the State to be responsible for administering the Independent Assurance Program and the Independent Assurance Sampling-Testing and Witnessing of Testing Sampling as defined in Appendix D of the Field Materials Manual.

CDOT Region Materials Engineer – The CDOT Region Materials Engineer (RME) assists the CDOT Construction Manager and CPE on this project with materials related issues including earthwork, concrete, asphalt and steel. The RME is in responsible charge of the region laboratory units and is required to review the Form 1324 (Consultant Tester Evaluation).

Work – The engineering and materials testing services that are the subject of this contract.