November 2024

GENERIC SCOPE OF WORK BASIC CONTRACT

CONTRACT TYPE

XX Specific Rate of Pay (Design-Build Contract Administration) or

XX Cost Plus Fixed Fee (Procurement),

or as determined in the Task Order

❑ Other

SOW DATE: _____

PROJECT NUMBER: NHPP 1602-157

PROJECT LOCATION: US160 Elmore's Corner to Dry Creek

PROJECT CODE: 20980

THE COMPLETE SCOPE OF WORK INCLUDES THIS DOCUMENT (ATTACHED TO THE CONTRACT FOR Consultant SERVICES)

Comments regarding this scope may be directed to:

CONTRACTS AND MARKET ANALYSIS BRANCH
Engineering Contracts Unit
Marci Gray, Engineering Contracts Program Manager
303-757-9297

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SECTION 1
PROJECT SPECIFIC INFORMATION

1. PROJECT BACKGROUND

The Colorado Department of Transportation (CDOT) seeks to improve safety and travel time reliability along the US 160 corridor. The purpose of the Project is to correct significant operational and safety issues identified along US 160 from the intersection of US 160 and CO 172 to the intersection of US 160 and LPCR 225 (referred to as the Elmore's Segment), as well as improve safety and mobility from LPCR 225 to Dry Creek (Approx LPCR 223). The need for the Project is based on the expected increase in travel demands on highway capacity and efficiency, to mitigate the extremely high incidence of wildlife vehicle collisions on the corridor, and to address critical safety concerns at the US 160 and LPCR 225 intersection. Impacts to be mitigated include poor sight distance, a functionally obsolete and structurally deficient bridge, steep roadway grades, lack of shoulders, insufficient recovery zones, steep embankments, lack of turn lanes, and lack of wildlife crossings. The project intent aligns with the purpose and need of the US160 EIS but is being executed as an interim approach with a less impactful smaller footprint to that of the full build out of the EIS plan.

The first segment of the project includes widening from two to four lanes, adding a continuous two-way left-turn lane through the top of the mesa (from CO 172 to LPCR 223 west intersection), and adding left turn lanes for access to the well pads in the lower section approaching the river. Shoulders will be widened, and auxiliary lanes will be lengthened to meet current design standards throughout the segment. Wildlife exclusion fencing and two wildlife underpasses will be installed. One wildlife underpass will be located on top of the mesa and the second will be created by raising the Florida River bridge. The second Segment proposes to reconfigure the LPCR 225 intersection from the existing two-way stop-controlled intersection to reduce the frequency and severity of accidents occurring. The current proposed design to accomplish this is a high-speed dual-lane roundabout. This segment will transition from the four-lane typical section to a two-lane section with alternating passing lanes, which comprises the third segment. The third segment will also include widened shoulders, wildlife exclusion fencing and a wildlife underpass.

The US 160 Elmore's Corner to Dry Creek Project has been determined to be most appropriate for a Design-Build Delivery Method. [https://www.codot.gov/projects/us160elmoreseast] This scope seeks to define the owner's representation for the Procurement of the Design-Build Contractor and, subsequently for the Contract administration of the Design-Build Contract. Contract Administration will include Owner Verification Testing (OVT) of Independent Contractor Quality Control (ICQC)

This Scope includes updating the existing plans, as necessary, for inclusion in the Design-Build reference documents for US 160 as well as preparing Procurement documents and providing Procurement assistance culminating in the selection of a Design-Build Proposer in accordance with the CDOT Design-Build Manual (2016 and as amended) and accepted best practice. This Scope of work also includes services after selection of a successful Design-Build Proposer as part of the Design-Build Contract Administration.

2. PROJECT GOALS

This project is intended to produce the following improvements:

- Increased capacity
- Improved Safety
- Higher level-of-service
- Improved riding surface (smoother or stronger pavement)
- Bridge Replacement
- Reconstruction
- Mobility & Efficiency
- Improve Wildlife Connectivity

In addition, specific Project goals will be developed and consolidated as part of the Procurement Process to establish selection criteria, additionally requested elements and the prioritization of improvements to be made to provide best value under the Design-Build process.

3. PROJECT LIMITS

This project is located on US160A, between approx. milepost 91.5 and approx. milepost 98.0 in La Plata County. [Approx. US16/SH172 to US160/CR223 East intersection]

4. PROJECT COSTS

The construction cost of this project is estimated between $75M and $99M (incl D-B Contract Admin.).

The intent of this Scope is to maximize the budget and the amount of construction that can be completed within the Project Limits. Depending on the available budget and funding the Team will develop reference documents to be included as basic configuration and cost estimates to determine the limits of what can be constructed within the allowable Design-Build Budget. The Consultant Team will assist CDOT in developing a strategy and plan for constructing as much as possible along the US 160 corridor.

5. WORK DURATION

The time for the work described in this scope is approximately **54 months** with an estimated **18 months** for Procurement /Pre-construction and approximately **36 months** days for Design-Build Contract Administration.

The anticipated Schedule is Owner's Rep Contract NTP in early 2025. To support the execution of the Procurement Task Order, a Procurement Schedule will be developed with a successful Consultant assessing ROW acquisition and Procurement Document production schedules.

6. CONSULTANT RESPONSIBILITY AND DUTIES

The Consultant Team responsibilities include:

- Professional services and deliverables required for Design-Build Procurement process. Developing, refining, implementing and supporting the US160 Corridor Project, hereby called the "Project," utilizing a Design-Build Procurement process.

- Supporting the development of a Request for Qualifications that selects a short list of qualified and capable Design-Build teams that will provide the innovation necessary to find the best value for the Project through complete and committed proposals.

- Updating the design plans for inclusion in the reference documents for the Design-Build project for the project segments including US160/SH172 to CR225, CR225 roundabout intersection and CR225 to Dry Creek (CR223) to prepare the project for Design-Build process, these plans will be completed to an appropriate level status to allow it to be used as reference documents in the Request for Proposals (RFP). Current plans are developed to approximately 60%, 90% and 5% complete, respectively. The engineering level required will be determined by an assessment of Risk to allow for appropriate cost estimation and incorporation into the basic configuration Book 2 Section 1 of the RFP.

- Supporting the development of the Request for Proposals / Technical Criteria and Instructions to Proposers that will allow for innovation, quality, safety and the best value for the US 160 corridor meeting the Project Goals.

- Professional Services and Deliverables required for the Design-Build Contract Administration.

The development of an efficient schedule to complete the Procurement that aligns with the relevant associated actions and sets a stage for success and control of risk.

- Analyzing risk throughout the development of the Technical Criteria and assignment of said risk to ensure a cost-effective approach to ensure best value while reducing the likelihood of disputes and necessary contract modifications.

- Providing subject matter experts (SME) for the purpose of the development of the Technical Criteria and Procurement Documents. Said subject matter experts will also be responsible for the assurance of Technical Criteria within the Design-Build Contract Administration. This includes over the shoulder reviews, task force meetings, and Acceptance plan reviews. Consultant will provide written comments or conformance reports, accordingly, throughout the Project.

- Creation of an audit database (Likely in MS Excel) to define these auditable actions from the Proposal, ITP, & RFP from which the SME and project staff can create Audit Reports and define comments on deliverables.

- The following sections of the RFP / Technical Criteria and ITP will require a SME to support both the Development and assurance of the Criteria/Design-Build Contract Administration, unless otherwise noted. This includes serving as Lead Author, providing input and/or documentation as required by the Scope of as requested by CDOT. In some cases, SMEs may lead multiple sections. In some cases, multiple SMEs will be required to support the development of Criteria or Contract Administration. In all cases, a single Lead Author/SME will represent the assigned Section and will serve as lead and point of contact for the subject during Design-Build Contract Administration. As denoted, Consultant SME will Lead Author the section of the RFP and coordinate with CDOT SME for areas of concern, live and learns, and project specific needs, as well as section review and collaboration. Anticipated sections of Procurement Documents are as follows:

00. Instruction to proposers
01. General (includes the Basic Configuration)
02. Project Management
    a. Includes scheduling SMEs that will support development of section and Design-Build Contract Administration.
03. Civil Rights Project Coordinator (CRPC)
    a. Final review of Civil Rights section only and SME for Design-Build Contract Administration, in which Civil Right Manager shall serve as contract compliance officer for the civil rights section, the civil rights plans, and Construction. CRPC shall not be assigned any other duties or responsibilities on the Project.
    b. The Civil Rights Project Coordinator (CRPC) shall assist CDOT staff by leading the enforcement and auditing of the Contractor's compliance with Davis-Bacon and Related Acts, certified payroll review, Equal Employment Opportunity, Compliance with FHWA 1273, DBE Program, ESB Program, Prompt Payment, Title VI of the Civil Rights Act, and the OJT Program (herein referred to as Civil Rights Requirements) in the Contract documents and with all applicable federal, state, and local regulations. The CRPC shall have demonstrable knowledge of B2GNow, LCPtracker, Civil Rights Requirements, all applicable federal, state, and local regulations and CDOT civil rights compliance procedures. The CRPC shall serve as the primary contact to the Contractor and ensure conformance with all Civil Rights Requirements within the Contract. The Civil Rights Project Coordinator may be a qualified sub-Consultant.
04. Quality Management
05. Public Information.

   a. Public Information Manager (PIM) shall serve as the Project's Public Information Manager for the life of the project. No Contractor PIM is anticipated. PIM shall not be assigned any other duties or responsibilities on the Project, unless Approved.
   b. See attached PIM Scope.
06. Environmental
   a. Final review of Criteria only. No anticipated Design-Build Contract Administration.
   b. Other Environmental support as requested.
07. Third-Party Agreements
   a. Final review of Criteria only. No anticipated Design-Build Contract Administration.
08. Utilities
   a. Final review of Criteria only. No anticipated Design-Build Contract Administration.
09. Right-of-Way
   a. Lead Author/Technical Expert for development of Procurement Documents only.
10. Survey
   a. SME not required.
11. Geotechnical and Pavements
12. Earthwork
13. Drainage (Hydrology and Hydraulic Engineering)
14. Roadway (Design and Development)
15. Signing, Pavement Marking, Signalization, and Lighting
16. Structures
17. Transportation Management Plan
18. Landscaping
19. Maintenance during Construction
20. Intelligent Transportation System
21. Modification of Standard Specifications
22. Book 2, Section 3
23. Book 2, Section 4
24. Book 2, Section 5

Consultant will further support the Project by providing the following staff

1. Project Manager
   a. Support and coordinate the Project team by defining and assigning resources required and as requested by CDOT. Project Manager will serve as overall lead of the Consultant Team's development of the Procurement Documents, coordination of/with the CDOT Project Team and acts in support of the CDOT Project Director. Project Manager will ensure performance during Design-Build Contract Administration. The Project Manager may also serve as Technical Expert/Lead Author for other sections as determined to be most efficient to the execution of the work given that sections may require greater coordination with other Subject Matter Experts.
   b. As needed for the duration of the Project.
2. Technical Editor
   a. As needed through the Procurement phase of the Project
3. Accessibility Editor
   a. As needed for the duration of the Project.
4. Office Engineer
   a. Full Time for the Design-Build Contract Administration
5. Project Controller
   a. As needed for the Design-Build Contract Administration
   b. As needed for the review and support of the applicable section of the RFP.
   c. Support and Development of Administration Deliverables Management, software and Tracking
   d. CDOT seeks to hire staff to fill this role, but may not be able due to timing or resources
6. Project Engineer

   a. Shall be a Licensed Professional Engineer in the State of Colorado.
   b. Full time for the Design-Build Contract Administration
7. Lead Inspector
   a. Full time for the Design-Build Contract Administration
8. Scheduler
   a. As needed for the Design-Build Contract Administration
   b. As needed for the Development of the RFP
9. Lead Tester
   a. Full time for the Design-Build Contract Administration
10. Inspectors
   a. As needed by Project Scope and execution as approved by CDOT
11. Testers
   a. As needed by Project Scope and execution as approved by CDOT

The Resident Engineer may modify actual staff required during the project.
The Consultant staff shall be composed of appropriately experienced personnel and licensed or certified accordingly. Construction Management personnel shall also be certified in the areas of inspection to be performed on the project by the CDOT Construction Inspector Qualification Program as described below. Personnel provided by the Consultant who do not meet all 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 Resident Engineer. The Consultant shall replace personnel removed from the project within two business days. Costs related to the replacement of personnel shall be the sole responsibility of the Consultant.

Consultant personnel shall remain assigned to the project for its entire duration unless otherwise determined by the CDOT Resident Engineer. CDOT reserves the right to replace Consultant personnel with available CDOT personnel as CDOT staffing allows or with other qualified Consultant personnel. CDOT must approve changes to Consultant personnel.

The Consultant shall also provide any other services as requested by the Project Engineer.
Back-up Consultant resources shall be available in case of loss of staff, sickness, vacations, or as required for the project. A system shall be put in place to ensure consistency and flexibility for staff. System shall include designation of outside support staff, defined workflows, hand-off meeting agendas, or cross training as necessary to ensure consistent Project coverage.

Work, particularly in terms of Construction Management, Construction Inspection, and Construction Testing may be required night and/or day, on weekends, holidays and/or on a split shift basis. Work weeks may be in excess of, or less than, the standard 40-hour week but shall be kept to a minimum necessary to adequately manage the construction of the project.

Descriptions of the Consultant responsibilities and duties are further described in this document.

7. WORK PRODUCT

The Consultant work products include but may not be limited to the following. Work products will be the documents necessary to facilitate the selection of a Design-Build Team as detailed in the 2016 Design-Build Manual (as revised), the RFP, the Construction Manual, the Field Materials Manual, and CDOT Policies and Procedures. Documents will be hard copy and/or digital, as required by CDOT. Work Products, as required or directed for publication shall be made Accessible pursuant to Web Content Accessibility Guidelines (WCAG):

A. Construction Daily Diaries
B. Reports
C. Written submittal Reviews
D. Reference Design ~~Plan Documents~~
E. Cost Estimates
F. OpenRoads Designer V 10.12 Files used in the production of Reference Plan Documents
G. Design-Build Procurement Documents
    a. Letter of Interest (LOI)
    b. Request for Qualifications (RFQ)
    c. Draft and Final Request for Proposals (RFP)
    d. Instructions to Proposers (ITP)
    e. Statement of Qualifications (SOQ) evaluation criteria
    f. Proposals evaluation criteria
H. Schedules
    a. Procurement
    b. Construction duration analysis
    c. As-Constructed
I. Working As-Built (As-Constructed) Plans
    a. For verification of Contractor's submittal
J. Meeting Minutes
    a. The minutes will be provided to the CDOT/PM within five (5) working days after the meeting. When a definable task is discussed during a meeting, the minutes will identify the "Action Item", the party responsible for accomplishing it, and the proposed completion date. Action Items will be tracked through execution on a cumulative action item list.
K. Risk Assessments
L. Confidentiality Agreements
M. Geotechnical Investigations
N. Subsurface Utility Engineering (SUE)
O. Design Support During Construction (See Design-Build Contract Administration)

Requirements are further described in the sections that follow. All work required to complete this Scope of Work requires the use of English Units.

8. WORK PRODUCT COMPLETION

All submittals must be accepted by the CDOT Contract Administrator or designee.

9. ADDITIONAL PROJECT INFORMATION

Additional information regarding this project is included in the following documents

A. US 160 Final Environmental Impact Statement (EIS) for US Highway 160 from Durango to Bayfield, Lat Plata County, CO
B. US 160 Record of Decision (ROD) from Durango to Bayfield, La Plata County, CO

C. US 160 ReEvaluations Form 1399 to the FEIS Durango to Bayfield, La Plata County, CO

D. US 160 Elmore's Corner East Modified Ultimate Design Considerations

E. US 160 Elmore's Corner Traffic Analysis Memo October 2017

F. US 160 and CR 225 Intersection Concept Study Summary Memorandum with Attachments A - E

G. CDOT Region 5 Critical Location Safety Study December 2018

H. CDOT US 160 Safety Assessment Report MP 62.0-81.35 February 2012

I. US 160 Elmore's Corner East CDOT Operations Evaluation Mile Post 91.4 to 98.4 when available

J. Farnsworth Group, Inc. Draft Pre-ROWPR Plan Rollplot in the most up to date version available and the Final ROWPR Plans upon Right of Way authorization expected in mid 2025.

K. Woolpert Survey Topo (SS2) dgn files December 2016 and March 2017 as requested and after award

L. Farnsworth Group Inc. Combined Woolpert with expanded Farnsworth Survey Topo ORD 2022 R3 10.

M. Latest Design Plans and Specifications available for the US 160 Elmore's Corner East Improvements, US 160 and LPCR225 Intersection Roundabout Design and Conceptual Design East Valley Segment of LPCR225 Intersection to Dry Creek (Pre-ROWPR Plan and Profile Roll Plot), and the US 160 Dry Creek Passing Lanes

N. All available Bentley microstation, Inroads SS2 and ORD dgn design files for US 160 Elmore's Corner East, US 160 and CR 225 RAB and the East Valley concept design as requested upon award

O. US 160 Elmore's Corner East Draft Geotechnical Report, US 160 Dry Creek Passing Lanes Final Geotechnical Report and Final Settlement Evaluation Memorandum

P. US 160 Elmore's Corner East and US 160 Dry Creek Passing Lanes Structure Selection and Pipe Justification Reports

Q. US 160 and LPCR 225 Intersection Roundabout and US 160 Dry Creek Passing Lanes Materials Recommendation Report By CDOT R5

R. US 160 MPDG Final Submittal Package (INFRA Grant Application) and the signed FHWA Grant Terms Agreement (when available)

S. 22420 – US550-US160 Connection South Design-Build Procurement Documents (RFQ, ITP, RFP) as requested and after award

T. US 160 Elmore's Corner East Preliminary Drainage Report (Draft) 30 Percent, Final Hydraulic Design Report at US 160 and LPCR225-A and US 160 Dry Creek Passing Lanes Final Drainage Report

U. US 160 Florida Bridge HEC model files (Preliminary) from years 2017-2018

V. Any available As-constructed roadway, structure, and existing ROW plans as requested and after award

Copies of these documents will be made available to the proposer teams during the RFP period unless stated otherwise in the list. Documents not available during the RFP will be made available to the successful proposer after the Award. All requests and inquiries about applicable additional project information documents shall be addressed to Krisinda Rapiejko, CDOT at 970-385-1446 or krisinda.rapiejko@state.co.us

SECTION 2
PROJECT MANAGEMENT AND COORDINATION

1. CDOT CONTACT

The Contract Administrator for this project is Julie Constan, Region 5 Transportation Director.

Active day-to-day administration of the contract will be delegated to the CDOT/PM:

A.	Name:	Krisinda Rapiejko
B.	Title:	Major Projects Design Lead
C.	Address:	3803 N Main Ave, Durango, CO 81301
D.	Office phone:	970-385-1446
E.	Cell phone:	N/A
F.	Fax:	970.385.3635

2. PROJECT COORDINATION

Coordination will be required with the following:

A. Counties
B. Irrigation Ditch Companies
C. U.S. Army Corps of Engineers (USACE)
D. Federal Emergency Management Agency (FEMA)
E. U.S. Forest Service (USFS)
F. U.S. Fish and Wildlife Service (USFWS)
G. Federal Highway Administration (FHWA)
H. Utilities
I. Colorado Department of Public Health and Environment (CDPHE)
J. Other:_Property Owners

The Consultant should anticipate that a design that affects another agency has to be accepted by that agency prior to its acceptance by CDOT. Submittals to affected agencies will be coordinated with, or through, CDOT, as directed.

SECTION 3
EXISTING FEATURES

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.

1. STRUCTURES

160A 93.774 P-05-B
160A 97.405 P-06-AN
160A 97.406 P-06-AM
160A091380BL
160A091480BL
160A092450BL
160A093980BL
160A094310BL
160A094360BL
160A094460BL
160A094630BL
160A095380BL
160A096040BL
160A096080BL
160A097510BR
160A097510BR1
160A097620BR
160A097730BL
160A097750BL
160A098320BL

2. UTILITIES

LA PLATA ARCHULETA WATER DISTRICT (LAPAWD)
CDOT TELEPHONE/FIBER OPTIC/ELECTRIC (SH172 West)
CENTURY LINK/LUMEN TELEPHONE/FIBER OPTIC
CHARTER/SPECTRUM DURANGO CABLE/FIBER OPTIC
COMCAST TELEPHONE/FIBER OPTIC
EL RANCHO FLORIDA WATER
LOMA LINDA SANITATION DISTRICT
LA PLATA ELECTRIC ASSOCIATION ELECTRIC DISTRIBUTION
ATMOS ENERGY GAS (SH172 West)
ENDURING RESOURCES IV LLC GAS
IKAV ENERGY/HILLCORP/SOMCO/AMOCO/BP AMERICA
WILLIAMS HP GAS TRANSMISSION

Contact Utility Notification Center of Colorado (U.N.C.C.) at 1-800-922-1987 or 811

Utilities requiring relocation or in possible conflict shall be identified during Design and coordinated with the Region Utility Engineer.

3. IRRIGATION DITCHES

Florida Canal - Florida Consolidated Ditch Company (FCDC)
Griffith Ditch - FCDC
Pioneer Ditch Company
Highline Ditch - private
McClure Murray Ditch - private
Jim Ellis ditch siphon - private
Gary Robison ditch siphon - private
Other Impacted private ditch systems as discovered during the property owner meetings

4. RAILROADS

N/A

5. PERMANENT WATER QUALITY (PWQ) CONTROL MEASURES

N/A

6. OTHER

N/A

SECTION 4
GENERAL INFORMATION

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

2. PROJECT COORDINATION

A. Routine Working Contact: Routine working contact shall be between the CDOT/PM and the Consultant Project Manager (C/PM) as defined in Appendix C.

B. Project Manager Requirements: Each Project Manager shall provide the others with the following:

1. A written synopsis or copy of their respective contacts by telephone and in person with others
2. Copies of pertinent written communications
3. Each Subconsultant will have a designated point of contact and will provide the above information to the CDOT/PM and the C/PM
4. Distribution to Project Team may be by C/PM at the request of CDOT
5. A list of staff working on the project will be provided with assurance that confidentiality agreement has been signed and filed with Project records

3. ROUTINE REPORTING AND BILLING

The Consultant shall provide the following on a routine basis. Each Consultant partner will provide the C/PM with documentation required in this section for inclusion in project reporting:

A. Coordination: Coordination of all contract activities by the Consultant Team

B. Periodic Reports and Billings: The Periods Reports and billings required by CDOT Procedural Directive 400.2 (Monitoring Consultant Contracts). This will include progress reports and monthly invoicing from subconsultants team members. Reporting will indicate the percent complete as compared to % time and budget available as well as hours estimated compared to hours used per individual. Reporting will indicate Expiration date, Contract schedule (work completed/ work remaining), Work completed to date/ work remaining (descriptive summary), Task Order balance relative to expenditures and an Assessment of task order status/ condition.

C. 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.

D. During Design-Build Construction Contract Administration, The Consultant personnel shall submit a completed Form 10 or other tracking form as approved by the CDOT Resident Engineer, or designee, on a weekly basis for approval. Billings shall accurately reflect the hours, per diem, and mileage on the approved Form 10's. The Consultant Project Engineer shall approve the Form 10's prior to submitting.

4. PERSONNEL QUALIFICATIONS

The C/PM must be approved by the CDOT Contract Administrator. Certain tasks must be done by Licensed Professional Engineers (PE) or Professional Land Surveyors (PLS) who are registered with the Colorado State Board of Registration for Professional Engineers and Land Surveyors. National Institute for Certification in Engineering Technology (NICET) certification or other certifications may be required for project inspectors and testers.

All tasks assigned to the Consultant must be conducted by a person on the Consultant Team that is qualified and has specific expertise in that task. 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. Design of any special project features must be directed, completed, and overseen by a professional engineer with significant experience in design of those special project features.

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.

(BR) Bridge Design, (CE) Civil Engineering, (GE) Geotechnical Engineering, (HD) Highways & Street Design, (HY) Hydraulics,(LA) Landscape Architecture, (MA) Engineering Management (Contract Administration), (SE) Structural Engineering, (TP) Transportation Engineering Construction Management (MC) and Material Testing (MT).

5. CDOT COMPUTER/SOFTWARE INFORMATION

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

A.	Earthwork	OpenRoads Designer Version 2022 R3 10.12
B.	Traffic	CDOT Statewide Travel Demand Model
C.	Drafting/CADD	OpenRoads Designer Version 2022 R3 10.12 w/CDOT's formatting, configurations & standards
D.	Survey/photogram.	CDOT TMOSS, OpenRoads Designer Version 2022 R3 10.12
E.	Bridge check	CDOT Staff Bridge software shall be used in either design or design
F.	Estimating	Transport (an AASHTO sponsored software) as used by CDOT
G.	Specifications	Microsoft Word
H.	Scheduling	Microsoft Project or Primavera P6
I.	Water Quality Data	ArcGIS and OpenRoads Designer Version 2022 R3 10.12
J.	Geographic Information System (GIS)	ArcGIS w/CDOT's geodatabase, formatting config. & standards
K.	Document Mgmt.	Bentley ProjectWise Explorer Connect Edition Version 10.00.03.453 Commercial Release
L.	Deliverables Mgmt.	Bentley ProjectWise Deliverables Management

6. COMPUTER DATA COMPATIBILITY

The data format for submitting design 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. Refer to Section 8, Table 1 - Submittals, for additional information regarding current formats and the acceptable transmittal media.

7. PROJECT DESIGN DATA AND STANDARDS

A. General:
Appendix A provides a comprehensive list of state and federal reference material. However, Appendix A does not contain local agency reference material that may be pertinent to some projects. The Consultant is responsible for obtaining and ensuring compliance with the most recent CDOT-adopted version of the listed references including standards and specifications, manuals, and software, or as directed by the CDOT/PM. Conflicts in criteria shall be resolved by the CDOT/PM.

B. Specific Design Criteria:
The Consultant will develop a list of design Criteria through coordination with CDOT SMEs for incorporation into the RFP.

C. Construction Materials/Methods:
The materials and methods specified for construction will be selected to minimize the initial construction and long-term maintenance cost to the State of Colorado. Non-typical construction materials and methods must be approved in writing by CDOT.

The Consultant Team will make recommendations for materials and methods but ultimately this may be left up to the Design-Build Proposer as defined in the Design-Build RFP and Technical Criteria. The Consultant Team will make appropriate accommodations for this flexibility in the RFP.

SECTION 5
PROJECT INITIATION AND CONTINUING REQUIREMENTS

Note: This list establishes the Consultant task responsibility.

A. PROJECT MEETINGS

The types and numbers of meetings shall be flexible and determined by an interactive process as approved by the CDOT/PM.

1. **Initial Project Kick-Off Meeting -** Schedule and facilitate initial project kick-off meeting. All appropriate disciplines should be included in the scoping meeting. Create an invitation list, send notices with a draft agenda prior to the meeting, and provide meeting minutes to all those invited. Whenever possible, the kick-off meeting will include an on-site inspection to familiarize the entire project team with the character and conditions of the area. Kick-off meeting will include a presentation on the Design-Build Procurement Process by CDOT.
2. **Initial Project Scoping Meetings** - Anticipated in addition to Initial Project Kick-off to identify scope elements, initial project goals, risk elements, responsibilities and coordination necessary for the work.
3. **Progress Meetings** - CDOT and Consultant Team will meet periodically as required (typically every two weeks). The meetings will review activities required to be completed since the last meeting, problems encountered/anticipated and potential solutions, project schedule update, action items, and coordination required with other agencies. Progress meetings will be a combination of in person and telephone/video conferences. The format will be selected to maximize efficiency and effectiveness. These progress meetings will be used to coordinate and track the work effort and resolve problems. The meetings will review the following:
    1. Project goals – Initial and updates
    2. Risk Register
    3. Activities required to be complete since the last meeting
    4. Problems encountered/anticipated and potential solutions
    5. Project Schedule Update
    6. Action Items
    7. Decision Log
    8. Coordination required with other agencies
    9. The Consultant will provide meeting agendas and minutes.
4. **Public Information** (including Contractor Events) -See PIM SOW.
5. **CDOT and Consultant Project Managers (Project Leadership Team (PLT)) -** The managers will meet as required, but at a <u>minimum of two-week intervals</u>, with meetings becoming more frequent as work nears critical milestones. It is assumed meetings in Durango will occur once every other month.
6. **Project Technical Team (PTT) -** <u>Meetings shall occur as needed</u> to review the work as necessary to validate understanding, collaboration and concurrence. These meetings may be in addition to, or in conjunction with, the Project Progress Meetings. The complexity of the design/Technical Criteria shall be considered by the CDOT Technical Reviewer to determine the frequency of review meetings
7. Executive Oversight Committee (EOC) and Project Management Teams (PMT) - It is anticipated that other meetings may be required to provide updates to the Executive Oversight Committee (EOC) and Project Management Team (PMT)/Project Leadership Team(PLT). These meetings will, whenever possible, be in conjunction with the Project Progress Meetings.

B. PROJECT MANAGEMENT

The Consultant Project Manager will coordinate and manage the work tasks being accomplished by the Project Team to verify project work completion stages are on schedule and done accurately and completely.

C. ACCESSIBILITY

Ensure the Work Product provided, or assigned, is in compliance with all applicable provisions of §§24-85-101, et seq., C.R.S., and the Accessibility Standards for Individuals with a Disability. Ensure compliance with all State of Colorado technology standards related to technology accessibility and with Level AA of the most current version of the Web Content Accessibility Guidelines (WCAG), incorporated in the State of Colorado technology standards. The State may require Consultant's compliance to the State's Accessibility Standards to be determined by a third party selected by the State to attest to Consultant's Work Product and software is in compliance with §§24-85-101, et seq., C.R.S., and the Accessibility Standards for Individuals with a Disability as established by the Office of Information Technology pursuant to Section §24-85-103 (2.5), C.R.S.

D. DEVELOP A PROJECT SCHEDULE AND ASSIGN TASKS

The Consultant is responsible for coordinating the required work schedule, including tasks accomplished by CDOT and other agencies. Prepare the initial project schedule for review by the CDOT/PM and Consultant Team and refine to provide detail as requested. Modifications will be made as necessary in collaboration with CDOT and appropriate justification.

E. TECHNICAL EDITING

The Consultant will provide technical editing of Procurement Documents, and as assigned, for formatting, consistency of terminology, understanding and readability. Consultant staff is responsible for ensuring documents are cohesive, well read, and meets CDOT and industry standards.

SECTION 6
ENVIRONMENTAL WORK TASK DESCRIPTIONS

CDOT and its partners completed the FEIS US 160 Corridor from Durango to Bayfield in 2006. Based upon these completion dates and the proposed changes, a Re-Evaluation of these documents is being executed by CDOT independently. The Re-evaluation will include environmental clearance assessments, updated required documentation and obtaining necessary clearances required based on the preliminary design. The entire process occurs concurrently with the RFP Development process. The Consultant shall assist CDOT to implement the environmental obligations, commitments, and responsibilities that are not able to be delegated to CDOT staff prior to issuance of an RFP or to ensure that the obligations, commitments, and responsibilities are adequately addressed in the RFP. These are not limited to but will include assistance incorporating the following into the RFP development:

A. ENVIRONMENTAL ASSESSMENT ELEMENTS

a. Aesthetics

The Consultant will coordinate with CDOT to determine the aesthetic treatments required for the project, as further described below, and incorporate into the RFP and related Technical Criteria

This work effort includes the following items.

1. Review of existing commitments from previously prepared environmental documents
    a. Review existing aesthetics and design information related to design standards and provide a brief summary of the findings.
2. Identify key elements of the concern
    a. Bridge structure
        i. Materials, and finish
        ii. Architectural treatments for bridge piers and abutments
        iii. Railings, guardrails and barriers (including along the Roadway)
    b. Walls
        i. Materials and finish
        ii. Aesthetic treatments
    c. Lighting will adhere to City and County specifications if applicable.
    d. Grading and slope treatments/Slope paving.
    e. Median treatments.

b. Potential Environmental

The scope of this effort provides for additional assistance as requested. This potentially includes:

- Re-Evaluation of the US 160 EIS if additional ROW is found to be required during RFP Development
- Impact assessment/comparison quantification and mapping
- Other actions as requested.

c. Request For Proposals

Support Environmental section of RFP through documents review, editing, assigned supplemental writing and coordination of the Re-Evaluation commitments, as requested by the CDOT Environmental Lead Author.

SECTION 7
PRE-DESIGN-BUILD CONTRACTOR SELECTION WORK TASK DESCRIPTIONS

Intent is to support development and execution of an RFQ, as well as the development and execution of an RFP through the selection of a Design-Build Contractor. This includes, and may not be limited to, updating the plans, as required, and defining the Basic Configuration. The following activities of communication, consensus building, project team reviews, data gathering, documentation, and public outreach should be planned by the Consultant and coordinated with the CDOT/PM. Updating the design plans for this project will, as necessary, build on the existing designs completed to date. Current designs vary in completeness, Some of these designs are beyond the FIR stage, whereas some are in preliminary stages. The intent of this effort will be to define a project that will allow design innovation in the Design-Build Procurement process and to allow maximized scope to be completed for the GMP, therefore some elements previously completed may need to be revisited. The accomplishment of the activities necessary to complete the Design-Build Procurement process will overlap and take parallel paths of activity and will be planned to finish the Procurement phase documents and Procurement Phase concurrently. The type and number of meetings, documents, etc., will depend on the category and characteristics of the project work. A project plan shall be developed by the Consultant which satisfies the requirements of the project development. Consultant shall utilize existing CDOT templates (RFP, ITP, RFQ, etc.) wherever possible, to maximize the efficiency of the process.

1. Project Management

A. Review applicable environmental documents and requirements
Verify that mitigation or commitments are addressed see Section 6.

B. Review grant application and agreement for possible scope needs.

C. Review and evaluate existing reference documents relative to Project Scope/Limits.
A report identifying the results of these reviews shall be submitted to the CDOT/PM within one week of the review. The purpose of this review is to verify the reference being established is to the appropriate level for the Design-Build reference (book 5) or contractual (Book 3 or 4) documents.

D. Independent design review
An independent design review shall be performed on the design accomplished by others that will be used in this project. A report identifying the results of these reviews shall be submitted to the CDOT/PM within one week of the review. The purpose of this review is to verify the design being established is to the appropriate level for the Design-Build reference documents.

E. Review and update Design Criteria already established for the US 160 Corridors and provide a list of proposed changes for approval. The purpose of this review is to verify the appropriate design criteria is established for the Design-Build RFP

F. Initial Submittals (For CDOT approval)
An original reference document plan set that complies with this scope of work

2 RFP Technical Criteria and Reference Design (RFP)

A. Materials Engineering
The Consultant Team will coordinate and incorporate the findings of the Materials Engineering that was completed under a separate Task Order, and supplemental investigation to fill voids in unassessed areas as part of this Scope and investigations made through the Region Material Engineer; findings will be incorporated into the RFP.

a Consultant Materials and Geotechnical SME(s) will Lead Author the Geotechnical and Pavements, and Earthwork sections of the RFP and coordinate with CDOT for review and collaboration.
b Consultant Materials and Geotechnical SME will serve as the Design-Build Contract Administration lead.
c A preliminary geotechnical investigation should be conducted.
d Determine test hole locations (horizontal and vertical) and coordinate with the CDOT/PM.
e Collect soil samples and test for:
    i Classification
    ii Moisture – Density Relationship
    iii Resistance Value
    iv Corrosiveness – Note locations of high corrosiveness with recommendations; see CDOT pipe material selection policy.
    v Bearing Capacity
f Prepare and submit a geotechnical investigation report.
g Prepare and submit pipe material selection report.
h Pavement
    i Pavement design and coordination is being done under a separate design. The team will incorporate the recommendations from the pavement design in the design.
i Structure Foundations
    i Consultant will coordinate with CDOT Staff to ensure that expectations are met and that analysis is acceptable.
    ii Review and perform preliminary foundation analysis for the support of structures. This may be a computer analysis which will consider the group effect and selection of the soil parameters. This analysis will be preliminary for use in cost estimating and for completing the technical requirements for the RFP.
    iii Prepare a Foundation Investigation Request showing requested test hole locations.
    iv Formulate drilling pattern, perform the necessary subsurface investigation and collect samples as required.
    v Perform the appropriate laboratory tests and analyze the data. Determine strength, allowable bearing capacity and corrosiveness of foundation material, as well as other relevant testing as determined by the Geotechnical SME as concurred with by CDOT.
    vi Perform lateral analyses (deformation, moment, and shear) for the caissons and/or piles which are subjected to lateral loadings. This may be a computer analysis which will consider the group effect and selection of the soil parameters. Other analyses may be required as determined by the Structures SME, as concurred with by CDOT.
    vii If appropriate, a pile driving analysis using a wave equation will be accomplished.
    viii Submit the Foundation Investigation Report to the CDOT/PM for approval.
    ix Prepare engineering geology plan sheet(s) and copies of the Foundation Investigation Report foundation report with recommendations for type, size, and tip (bottom) elevation of the required foundation. Specify if pre-drilling, pile tip, casing, dewatering, etc., are needed for foundation construction.
    x If requested, perform a gradation analysis of the streambed/waterway native material using a sieve analysis, Wolman Count, or other acceptable method as directed by the Region Hydraulic Engineer or his/her designee.
j. Settlement of Fills
    i Review and perform preliminary foundation and internal analysis for deep fills.
    ii Coordinate investigation and material investigation with the Region Materials Engineer.

B. Hydrology/Hydraulic Engineering

a Consultant Hydraulics SME will Lead Author the Drainage section of the RFP and coordinate with CDOT Hydraulics for areas of concern, live and learns, and project specific needs, as well as section review and collaboration.

b Consultant Hydraulics SME will serve as lead and point of contact for Hydraulics and Hydrology during Design-Build Contract Administration

c Hydrology

i Review existing hydrology and hydraulics Reports.

A Provide feedback on the accuracy and completeness for inclusion of the RFP

B Provide list of potential supplements with priority based upon risk with estimate of cost to complete.

ii As necessary, review unassessed drainage basin data: delineate, determine size, waterway geometrics, vegetation cover, land use.

iii Review historical data; research flood history and previous designs in the project proximity; and obtain data from other sources (e.g., Colorado Water Conservation, CDOT Maintenance, and local residents).

iv Validate a storm frequency based on the CDOT Hydraulic (Drainage) Design Guide criteria.

v Validate hydrological analysis using existing studies or approved methods (see CDOT Drainage Design Manual).

vi Perform a risk analysis.

d Hydraulics

i Verify the design of minor drainage structures:

A Determine location and crossing alignment. Identify channel centerline by highway station or coordinates, as appropriate

B Determine the allowable headwater.

C Assess the degree of sediment and debris problems to be encountered, including abrasion and corrosion.

D Type, size, shape and material of the structures.

E Prepare preliminary structure cross-sections to determine the elevations, flow lines, slopes and lengths of the structures. Show the flow quantity on the sections. Perform the design computations and documentation in accordance with the CDOT Drainage Design Manual.

F Determine high water level.

ii If required a water surface profile and hydraulic analysis is required for major structures. Determine the following:

A Water surface profile and hydraulic analysis

B Required hydraulic size and skew of the bridge

C Minimum low girder elevation using CDOT Drainage Design Manual criteria

D The design year frequency

E The design year and 500 year high water elevations

F Predicted total scour profile for design year and 500 year scour

G The channel erosion protection for structures

e Water Quality

i Determine the water quality requirements and possible locations for water quality features (ponds) coordination with ROW.

f StormWater Management Plan

i The RFP design will not include stormwater management plans, but shall be accounted for in the construction estimate.

g Preliminary Hydraulics and Hydrology Report (for inclusion in Procurement documentation) Include the following:

A Hydrology analysis

B Minor structure hydraulic designs

C Major structure hydraulic designs

D Preliminary Structure cross-sections

E Water quality Requirements
F Appendix:
a Drainage basin maps
b Hydrology/hydraulic worksheets

h Data Collection and Hydrology
i Establish drainage basin data: delineate and determine size, waterway geometrics, vegetation cover, and land use.
ii Collect historical data: research flood history and previous designs in the project proximity; obtain data from other sources (e.g., MHFD, CWCB, CDOT Maintenance, and local residents).
iii Complete a project site visit to evaluate channel/overbank roughness coefficients, channel stability, vegetation, condition/adequacy of existing structures, Ordinary High Water, allowable high water, etc. Document the site visit with photos.
iv Select a design storm frequency based on the established criteria.
v Complete a hydrological analysis using existing studies or approved methods.
vi Perform a risk analysis.

i Hydraulics
i Complete preliminary design of minor drainage structures:
ii Determine locations, sizes, and alignment based on preliminary hydraulic design. Identify locations by highway station or coordinates, as appropriate.
iii Determine the allowable headwater.
iv Assess the degree of sediment and debris problems to be encountered
v Assess abrasion and corrosion levels based on CDOT Pipe Material Selection Policy.
vi Prepare preliminary structure cross-sections and determine elevations, flow lines, slopes and lengths of the structures.
vii Present initial designs of any necessary deck drainage or other drainage off the structure.
viii Complete preliminary design of major drainage structures:
ix Complete hydraulic analysis and water surface profiles.
x Determine required hydraulic size/skew of major structures/channels
xi Determine minimum low chord elevation per CDOT criteria
xii Determine design storm and 500-year water surface elevations.
xiii Determine scour for design storm, the 500-year event, incipient overtopping condition, and maximum scour-inducing storm (if applicable).
xiv Assess channel erosion protection for structures.
xv Present initial designs of any necessary deck drainage or other drainage off the structure.
xvi Complete preliminary design for Permanent Water Quality Control Measures (PWQ CMs) and outlet structures with details as needed. Adequate detail should be included in the FIR construction plan set if FIR-level decisions are required with respect to right-of-way, easements, maintenance, etc. to move to final design.

j Prepare preliminary construction plans that include:
i Drainage Plan Sheets
ii Drainage Detail Sheets as needed
iii Hydraulic Information Sheets as needed
iv Prepare a Preliminary Hydraulics Report or Preliminary Drainage Report in accordance with the CDOT Drainage Design Manual
v Introduction, Hydrology, Existing Structures and Design Discussion sections should be close to final at this level. Design Discussion should include CDOT and local criteria the project intends to meet.
vi Recommended design should be preliminary at this level and progress through final design.
vii All design assumptions and related design decisions shall be documented.
viii The Appendix shall contain:

ix Drainage basin maps
x Hydrology/hydraulic worksheets
xi Drainage construction plan sheets.
xii CDOT pipe material selection documentation
xiii Water Quality report and PWQ worksheets
xiv Perform internal QA/QC prior to submission to CDOT.

k Floodplain Assessment
i Identify location of regulatory floodplains and floodways published by FEMA and local agencies, and assess impacts of planned changes to those boundaries from CDOT activities or planned map revisions by others.
ii Add information to environmental resource mapping of existing conditions
iii Determine the adverse impacts of each alternative with respect to the base flood elevation (BFE), floodway boundary, and local drainage. This must include the impacts of construction and other "temporary" activities.
iv Analyze impacts and develop possible actions to mitigate for the adverse impacts, then coordinate with roadway and structural designers.
v Analyze the impacts and mitigation. Included in the analysis will be a determination of significant impacts due to:
vi Single community access routes.
vii Risk for social or economic losses due to flooding
viii Alteration of beneficial floodplain values.
ix Recommend preparation of a local floodplain development permit for all work in floodplains and floodways, as required by state and federal law.
x Show all ground survey point elevations in the same vertical datum identified on the current effective FIRM.
xi Add notes to indicate the waterway name, jurisdiction and community number, panel number, date of current effective information, a sentence describing which local code requires permits, a sentence for permitting and no rise compliance, and a note recognizing that flooding may occur outside the mapped Special Flood Hazard Area (SFHA).
xii Prepare a Floodplain Information Sheet for the final approved plan set.
xiii Show and clearly label the current effective 100-yr floodplain and floodway boundaries, and the 500-year floodplain (as applicable).
xiv Show and clearly label all cross sections and BFE lines published on the current effective FIRM (note; all elevations must be reported in the same vertical datum identified on the current effective FIRM).
xv Show and clearly label any fluvial hazards, buffer zones or erosion management zones.
xvi Show the limits of disturbance for all permanent and temporary activities, and label as such.
xvii Show all ground survey point elevations in the same vertical datum identified on the current effective FIRM.
xviii Add notes to indicate the waterway name, jurisdiction and community number, panel number, date of current effective information, a sentence describing which local code requires permits, a sentence for permitting and no rise compliance, and a note recognizing that flooding may occur outside the SFHA.
xix Add all conditions of approval from the local agency to the notes, especially for as-built survey and P.L.S. & P.E. re-certification requirements.
xx Add a note identifying any 625 Survey specials.

l Prepare a Preliminary Floodplain Report or Memo as outlined in the CDOT DDM or as directed by the Region Hydraulic Engineer or his/her designee.

C. Utility Coordination

a Coordinate with the Region Utility Engineer on existing utility information and confirm existing data for inclusion in the reference documents. The Region Utility engineer will process the required agreements.
b Ditch Company Coordination. Consultant will support drafting of agreements and provide exhibits required for the execution of the agreements.
c CDOT Utility Engineer will Lead Author the utility and 3rd party agreements section of the RFP. Consultant will provide utility technical expert to review language
d Consultant will perform supplementary SUE investigation and incorporate new and existing information into RFP.
    i LAPLAWD water line was installed after survey was complete.
    ii Potential portions of the Lumen fiber optic line was installed after the survey was complete.
    iii Confirm presence and size of high pressure gas mains within and adjacent to US 160
    iv Quality level of preliminary SUE investigation was limited to a Quality Level D but RFP quality level shall be determined by the RFP development team depending on the risk analysis and project cost/benefit analysis
e Location Maps
f Obtain utility location maps from the Utility Companies which identify utility features in the project area. Requests and receipt of maps will be coordinated with the Region Utility Engineer via copies of request and transmittal letters.
g Reviews and Investigations
h Conduct field reviews and utility investigations with the Region Utility Engineer and Utility companies, as required, to ensure correct horizontal and vertical utility data. When possible this will be done utilizing non-destructive investigative techniques. The horizontal and vertical locations will be shown in the FIR plans and cross sections. When "potholing" is required, the Consultant shall be responsible for all necessary excavations.
i Incorporate utility locations in plans from utility survey
j Relocation Recommendations
k Submit necessary information for the relocation or adjustments of affected utilities to the Region Utility Engineer. The Region Utility Engineer will process the required agreements.
l Ditch Company Coordination
m Contact ditch companies through the Region Utility Engineer to coordinate ditch requirements and restrictions. Develop the plans for the necessary irrigation structures and submit to the Region Utility Engineer for Ditch Company review.

D. Roadway Design and Roadside Development

Coordinate design activities with required CDOT specialty units and other outside entities.

a Roadway Design
    i Consultant SME(s) will Lead Author the appropriate section(s) of the RFP and coordinate with CDOT Staff for areas of concern, live and learns, and project specific needs, as well as section review and collaboration.
    ii Consultant SME(s) will serve as lead and point of contact during Design-Build Contract Administration
    iii Check and plot survey data, which includes:
    2017 WOOLPERT, INC
    "ON THE GROUND" TMOSS
    Start: U.S. Highway 160, milepoint 91.00 (west of Elmores).
    End: U.S. Highway 160, milepoint 97.25 (beginning of 20430-underpass).
    Width: ROW fence to ROW fence:
    Supplemental:
    1000' north on County Road 234, ROW fence to ROW fence.
    1200' south on State Highway 172, ROW fence to ROW fence.

North on County Road 225A to intersection with County Road 222, ROW fence to ROW fence.
South on County Road 225A to intersection with County Road 510, ROW fence to ROW fence.

"AERIAL TMOSS"
Start: U.S. Highway 160, milepoint 91.00.
End: U.S. Highway 160, milepoint 97.25.
Width: 250 feet north of the physical centerline of U.S. Highway 160.
250 feet south of the physical centerline of U.S. Highway 160.
Supplemental:
1000' north on County Road 234, 250 feet east and west of the physical centerline.
1200' south on State Highway 172, 250 feet east and west of the physical centerline.
North on County Road 225A to intersection with County Road 222, 250 feet east of physical centerline and physical centerline west to 100 feet west of Florida River.
South on County Road 225A to intersection with County Road 510, 250 feet east of physical centerline and physical centerline west to 100 feet west of Florida River.

2021 FARNSWORTH GROUP
"ON THE GROUND" TMOSS
Properties OUTSIDE of ROW fence
Start: U.S. Highway 160, milepoint 91.5 (east of Elmore's intersection).
End: U.S. Highway 160, milepoint 93.8 (Florida River).
Files merged with 2017 Woolpert TMOSS in ORD format (v. 10.10).

Known issues to be aware of regarding the topography:

- LAPLAWD water line was installed after survey was complete.
- There may be portions of Lumen fiber optic line that was installed after the survey was complete.
- A resurfacing project (22010) was completed after the survey was complete.
- Possible high pressure gas mains present within and adjacent to US 160

Additional survey required for completion of the RFP should be denoted and discussed with CDOT. If any is required, through risk analysis, may be placed on the Design-Build Contractor or acquired through a separate task order.

iv Verify that a project specific coordinate system approved by CDOT is used to identify the horizontal locations of key points. The coordinate systems used for roadway design and ROW shall be compatible.

v Input and check horizontal and vertical alignments against design criteria. Necessary variances and/or design decisions will be identified with justification and concurrence by CDOT & FHWA.

vi Provide alignments, toes of slope and pertinent design features, including permanent and temporary impacts to the ROW, Utility and Environmental Managers.

vii Plot/develop required information on the plans in accordance with applicable CDOT policies and procedures.

viii Using current approved CDOT software, generate a 3-dimensional design model and produce preliminary quantities

b Roadside Development:

For roadside items including but not limited to, guardrails, delineators, landscaping, sprinkler systems, sound barriers, bike paths, sidewalks, lighting, curb ramps, truck escape ramps, and rest areas provide the following:

i Layouts in the plans

ii Critical locations in the plans for irrigation sleeves and other utility conduits underneath the proposed roadways.

E. Right-of-Way.

This scope of work includes limited Right-of-Way assistance and guidance related to project limits and Right-of-Way needs. The Right-of-Way acquisition efforts are being done by CDOT under a separate contract, however, Consultant will provide ROW acquisition support as requested by the CDOT Project

A. Consultant ROW SME will lead author the ROW section of the RFP and coordinate with CDOT ROW for review, property owner negotiated terms and collaboration.

B. Consultant ROW SME will participate in the Design-Build Contract administration as requested by CDOT ROW who will serve as the Design-Build Contract administration lead.

F. Preliminary Design of Major Structural Elements:

Major structures are bridges and culverts with a total length greater than twenty feet or retaining walls with a total length greater than one hundred feet and a maximum exposed height at any section of over five feet. This length is measured along the centerline of the roadway for bridges and culverts, and along the top of the wall for retaining walls. Overhead sign structures (sign bridges, cantilevers, and butterflies extending over traffic) are also major structures, but are exempt from the structure preliminary design activity defined here. Preliminary design has been finished for the replacement of P-05-B, as well as for one large mammal crossing. Current designs will be reviewed for accuracy and completeness for the purpose of risk analysis and cost estimation. Preliminary design will be required for a second large mammal crossing located in the Valley Segment.

Major structures shall be designed in accordance with the AASHTO Load Resistance Factor Design (LRFD) Specifications and the CDOT Bridge Design Manual. The CDOT Structure Reviewer will participate in coordinating this activity. The structure Selection and layout will not be considered final and will be for inclusion in the reference documents as a starting point for the Design-Build Proposers.

a Consultant SME will lead author the Structures section of the RFP and coordinate with CDOT Staff for areas of concern, live and learns, and project specific needs, as well as section review and collaboration.

b Consultant SME will serve as lead and point of contact during Design-Build Contract Administration

c Structure Selection and Layout (For inclusion in the Reference Documents)

i Review existing structure selection and Layout information.

ii Obtain and review the structure site data to determine the requirements that will control the structure size, layout, type, and rehabilitation alternatives. On a continuing basis, provide support data and recommendations as necessary to finalize the structure site data.

iii Determine the structure layout alternatives. For bridges, determine the structure length, width, and span configurations that satisfy horizontal and vertical clearance criteria. For walls, determine the approximate top and bottom of wall profiles.

iv Determine the structure type alternatives. For bridges, consider precast and cast-in-place concrete and steel superstructures and determine the spans and depths for each. For walls, determine the feasible wall types in accordance with the CDOT Manual. Final selection of wall type is not required by the design team.

v Determine the feasible foundations. Consider piles, drilled caissons, spread footings, and mechanically stabilized earth foundations based on geology information from existing structures and early estimates from the project geologist.

A. Initiate the foundation investigation as early in the preliminary design phase as is practical. On plan sheets showing the project control line, its stations and coordinates, utilities, identify the test holes needed and submit them to the project geologist. The available general layout information for the new structure shall be included in the investigation request.

i Compute preliminary quantities and preliminary cost estimates as necessary to evaluate and compare the structure layout, type, and rehabilitation alternatives.

ii Prepare preliminary general layout for the recommended structure. Prepare structure layouts in accordance with the CDOT Bridge Detailing Manual. Special detail drawings and a detailed preliminary cost estimate shall accompany the general layout. If required, the special detail drawings shall include the architectural treatment.

a. Structure Selection Report
For the preliminary design no specific structure selection report will be required. Rather a preliminary design and draft Structure Selection Report that will allow the team to develop a preliminary cost for the structure to be included in the project budget.

G. Environmental

a Ensure that any mitigation commitments within the NEPA documentation are incorporated into the project.

H. Preparation for the Technical Criteria and Reference Documentation for Design-Build Procurement

a Identify Design Criteria - The Consultant will develop a list of design Criteria through coordination with CDOT SMEs for incorporation into the RFP

b The Consultant shall develop the CDOT Form 463 and submit a copy upon completion.

c Unless otherwise denoted, Lead Author Procurement Documents, including RFP Technical Criteria. Coordinate and compile the plan inputs from CDOT specialties: materials, hydraulics, traffic, right-of-way, and Staff Bridge, etc. to be included in the Reference Documents and or Book 2 Technical Requirements.

d If a major structure is included in the project, a general layout (which has been accepted by CDOT) will be included in the plans to be included in the Reference Documents.

e Prepare the preliminary cost estimate for the work described in the plans based on estimated quantities.

f The plans shall comply with CDOT requirements and shall include title sheet, typical sections, general notes, plan/profile sheets, and preliminary layouts of interchanges/intersections.

g The plan/profile sheets will include the following: existing topography, survey alignments, projected alignments, profile grades, ground line, existing ROW, rough structure notes (preliminary drainage design notes, including pipes, inlets, ditches and channels), and existing utility locations.

i The following items will be mandatory for the plans:

a Preliminary earthwork (plotted cross sections at critical points with roadway template and existing utility lines at known or estimated depths)

b Catch points

c Proposed Right-of-Way

d Pit data (if required)

e Soil profile and stabilization data

f Structure general layouts (if applicable)

ii Typical plan sheet scales will be as follows:

a Plan and Profile 1 inch = 50 Feet (Urban)
1 inch = 100 Feet (Rural)

b Intersections 1 inch = 20 feet

h The ROW Plans ownership map shall be included in the Preliminary FIR plan set.

i There will be no construction phasing and preliminary traffic control plan included this will be left to the Design-Build proposers.

j CDOT form 1048 – project scoping procedures completion checklist

I. Review of plans, reports, technical memos to be included in Design-Build documents

a Facilitate a review meeting to verify the plans and reports are ready for inclusion in the Design-Build Reference Documents

b The design meeting minutes shall be prepared by the C/PM, approved by the CDOT/PM, and distributed as directed.

c The original documents will be revised/corrected in accordance with the preliminary design meeting comments within thirty (30) working days.

d Design decisions concerning questions raised by the Preliminary Design will be resolved in cooperation with the CDOT/PM. The C/PM shall document the decision and transmit the documentation to the CDOT/PM for approval.

e A list of deviations from standard design criteria along with the written justification for each one shall be submitted to the CDOT/PM.

J. Design revisions

The Consultant shall perform the revisions required by the Preliminary FIR before this phase of work is considered to be complete for inclusion in the reference documents.

K. Coordination and support of Design-Build Procurement Process

L. Traffic Control

Consultant field activities that interfere with traffic operations within existing roadways will require control of traffic. The Consultant shall plan and provide any required traffic control for the survey, testing, or the design process. Traffic control operations will be in accordance with the MUTCD. The proposed Method for Handling Traffic (MHT) must be submitted to the CDOT/PM. Also, certification of the Traffic Control Supervisor as a Worksite Traffic Supervisor by the American Traffic Safety Services Association (ATSSA) or as a TCS (Traffic Control Supervisor) by the Colorado Contractors Association (CCA) shall be required.

2. FINAL DESIGN

No Final Design will be included with this scope of work.

SECTION 8 –
PROCUREMENT WORK TASK DESCRIPTIONS

This section establishes the Consultant's individual task responsibility. The Consultant shall maintain the ability to perform work tasks listed below, in accordance with the forms and conditions contained herein, and the applicable CDOT standards and procedures. Selected work tasks shall be assigned only after coordination and consultation with CDOT. The Consultant is also responsible for coordinating the required work schedule for those tasks accomplished by CDOT and other agencies. The Consultant should review this entire section to identify applicable material. Contact the Colorado Department of Transportation/Project Manager (CDOT/PM) if clarification is required (see Section 2.01).

The following activities of communication, consensus building, project team reviews, conceptual design, data gathering, documentation, and formal public notice should be planned by the Consultant and coordinated with the CDOT/PM. The time of their accomplishment will overlap and parallel paths of activity should be planned to finish the development phase in accordance with the shortest possible schedule. The type and number of meetings, documents, etc., will depend on the category and characteristics of the project work. A project plan shall be developed by the Consultant which satisfies the requirements of the project development.
Generally, this scope entails the following actions: Leading the preparation of Design-Build Procurement processes generally up to selection of the Design-Build Contractor for the Project including.

- Determining the project risks and developing a risk management strategy.
- Determining the project goals.
- Determining "best value" elements and additionally requested elements (ARE).
- Determining and helping to promote Industry interest in the preparation and issuance of the Letters of Interests (LOI).
- Scheduling, attending and participating in Industry informational meetings.
- Preparation and issuance of a Request for Qualifications (RFQ).
- Determining and preparing the evaluation criteria to be used to evaluate received Statements of Qualifications (SOQ).
- Preparation and issuance of a Draft Request for Proposal (DRFP) to short listed teams.
- Scheduling, attending and participating in the Industry Review process.
- Refining the draft request for proposal resulting from Industry Reviews.
- Reviewing Technical Approaches and Technical Concepts.
- Preparing and issuing a Final Request for Proposals (FRFP).
- Preparing of Contract
- Preparing Books One, Two, Three and Four and Compilation of the Reference Documents for the Final Request for Proposals.
- Assisting and reviewing prepared by CDOT Book Four – ROW plans
- Determining and preparing the evaluation criteria to be used to evaluate responses to the Final RFP.
- Preparing an independent quantity and cost estimate based on the Final RFP.

This Scope is separated into two phases:

PHASE 1
General support activities and work activities leading to selection of a Design-Build contractor. This phase of the work is generally occurring concurrently with the Design and completion of Phase 1 is reached with the selection of the Design-Build Proposer generally at the time when issuance of Notice to Proceed 1 is provided to the successful proposer.

PHASE 2
Design-Build Contract Administration. Work activities performed to support CDOT after Award of, a Design-Build contractor From NTP 1 through construction acceptance.

A. SCOPE OF WORK- PHASE 1

1.0 PROJECT MANAGEMENT AND ADMINISTRATION SUPPORT

The Consultant will perform and assist in the necessary Project Management tasks for timely completion of the Project in compliance with applicable standards. These tasks are specific for preparation, review, and approval of activity cost invoices.

2.0 GENERAL SUPPORT

This task includes providing support by attending regularly scheduled meetings, reporting on activities, and preparing and providing meeting minutes and agendas; preparing presentation material as requested; supporting the development of a public involvement program; identifying project policy elements and solutions; preparing project process schedules; preparing independent cost estimates; and completing quality control assurance reviews. It is anticipated many of these meetings will be virtual with attendance in person Durango every other month

2.1 Meeting Attendance and Preparation

- 2.1.1 CDOT/ Management meetings -assume 18 meetings
- 2.1.2 Coordination/Progress meetings -assume bi-weekly for 36 Meetings
- 2.1.3 Contract Development meetings -assume weekly for 60 Meeting
- 2.1.4 Policy elements, schedules, estimates, and quality control

2.2 Document Management and Control System

The Consultant will utilize ProjectWise, and/or the like as Document Management and Document Control Systems (DMDC). Bentley Deliverables Management will likely be used for Communication as part of the Design-Build Contract Administration. Other systems may be considered and implemented, as approved, to enhance effectiveness and efficiency. CDOT Contracts will dictate the Advertisement methods.
The DMDC systems will maintain and control project related information including project drawings, specifications, correspondence, and reports. The DMDC will also contain incoming and outgoing data, allowing the Project Manager and Project Team to easily track project related documents through a searchable database as well as a routing and notification process. The DMDC system will be web-based and accessible via the internet with an assigned username and password. User permissions can be assigned to allow control of users and their access to information. The DMDC system is not the same system utilized for Public Information.

Only users having signed a confidentiality agreement will be allowed to access the files and the DMDC.

2.3 N/A

2.4 Unforeseen Services As Requested

As the Consultant's role is broad, there will be additional services requested by CDOT that are not specifically defined within this scope of services. A specific line item will be included in the workhour estimate to cover such services which will be performed upon written direction and approval from CDOT Project Manager.

3.0 DESIGN-BUILD PROCUREMENT MANAGEMENT SERVICES

3.1 Policy Decisions.

It will be necessary, as the Design-Build contract is being developed, for CDOT to make decisions on Project policy issues. The Consultant will recommend processes that allow for this to be completed timely and effectively. Issues that will be considered include:

- Identifying the Project Executive Oversight Committee (EOC), and its Roles and Responsibilities
- Identifying the Project Management Team (PMT), and its Roles and Responsibilities
- Assigning and allocating Project Risks
- Supporting the Development of Qualification Evaluation Criteria

- Developing Proposal Evaluation Criteria

3.2 Assist/Support Project Goals Development.
The Consultant will assist in the effort to develop the project goals with CDOT Region 5, and other CDOT identified stakeholders. The Consultant will support development by attending the project goals workshop and provide input as appropriate.

3.2.1 Best Value.
The Consultant will assist in the identification and definition of Best Value elements based on project goals, priorities, budget and schedule. The identification of Best Value will assist in development of the project approach, and overall contract document.

3.3 Risk Assessment and Design-Build Deliverables determination.
Risk assessment for this Design-Build project will identify areas of project risk that, by action of CDOT prior to the Design-Build Team selection, will mitigate, reduce, assign, or eliminate risks. The goals of the Risk Assessment are to provide a higher probability of project success and reduced project costs. The risk assessment analyzes the degree of impact to the project goals, the probability of the risk occurring, and the effort needed to mitigate or eliminate the risk. The result is a updating the risk matrix that identifies the level of effort needed to manage/mitigate risk in areas such as:

i Percent design required for each discipline
ii Determining the need for design studies/investigations
iii Determining the need for pre-selection ROW acquisition
iv Determining the need for utility agreements
v Determining the need for hazardous materials identification
vi Determining the need for additional geotechnical investigations, and the completion of additional geotechnical investigations
vii Determining the need for third party agreements
viii Determine and Define "Quality"

3.4 Risk Allocation and Design-Build Contract Development.
A systematic approach to risk allocation will be facilitated continuously throughout the project by the Consultant while involving CDOT Region 5, and other Stakeholders identified by CDOT. This effort will identify the party best able to manage/mitigate the project risks, while considering if risk sharing is more advantageous to the project goals. A risk allocation/decision matrix will be developed as part of this process. The matrix will assist in the development of the entire Design-Build Contract document.

3.4.1 Conduct Risk Allocation
Conduct Risk Allocation with CDOT, legal counsel, financial advisors, and others to develop a policy and methodology to divide and assign the risks associated with the design and construction elements of the Project. A Risk Allocation matrix will be updated which will divide and assign potential risks associated with the development and implementation of the project, including:

- Design Process: design defect (damages, third party injury); design defect (Nonconforming Work); other cost increases and delays; accuracy of schematics and reference documents; alignment change creating need for additional right-of-way.
- Right of Way: right-of-way acquisition costs; acquisition delays.
- Utility Relocation: delay due to Utility Adjustments, including unidentified utilities; cost of unidentified utilities; failure of Utility Owners to comply with Adjustment Agreements.
- Governmental Approvals: governmental approvals; new environmental approvals and changes due to changes in Final Design; governmental approvals required due to Force Majeure or Owner-directed Change After NTP.
- Force Majeure Events: actions of the elements; acts of war; strikes and labor disputes; archaeological, paleontological or cultural resource; threatened or endangered species; changes in law; injunctions against the Project; temporary no-work restrictions resulting from the discovery within the Site of any hazardous materials (third party spills after proposal date); hazardous materials (existing).

- Construction, Supply and Installation: cost increase due to Owner Directed Change or Caused Delay; differing site conditions; delay in completion (other than Owner caused Delay, Force Majeure and certain uncooperative utility delays); delay in completion due to Owner caused delay, Force Majeure and certain uncooperative utility delays; construction defect (damages, third party injury); construction defect (Nonconforming Work).
- Quality: The risk assessment activity of the project must consider and address project quality, expectations, measures and approaches. The Consultant will assist CDOT in the actions required to identify and define requirements for a Quality Management Plan to be undertaken by, and at the cost of, the Design-Builder. The QMP shall address the elements of Quality Control, Quality Assurance and Project Management.

3.4.2 Independent Cost Estimate
In order for the Contract Structure (Guaranteed Maximum Price, Additional Requested Elements, or other) options to be determined, the Consultant will utilize existing electronic copies of design files, hard copies of as-built drawings and other pertinent data necessary to develop an independent construction cost estimate. The cost estimate will include allowances for contingencies as established by the CDOT. This effort will include a cost analysis of major bid items. An escalation factor will be applied to account for the Design-Build contractor's risk. The deliverable to the CDOT will be a cost range based on assessments of the Design-Build contractor's risk, and supporting degree of detail provided in plan sheets.

3.5 REQUESTS FOR QUALIFICATIONS (RFQ) SERVICES
This work will be performed consistent with CDOT's Design-Build Policy and Procedures Manual, and current Federal Highways Administration rules for Design-Build.

3.5.1 Letter of Interest Working jointly with the CDOT, and identified stakeholders, the Consultant will assist CDOT to develop the "Letter of Interest" to "Advertise" the project and determine Industry interest. The Consultant will assist in the scheduling and presentation of Industry informational meetings as determined by Industry response.

3.5.2 Development of the RFQ
Working jointly with the CDOT and identified stakeholders, the Consultant will assist CDOT in the preparation of the RFQ. CDOT will post the RFQ as required by CDOT Policy, the Consultant will assist CDOT in providing responses to questions/modifications as may be required during the process. RFQ provisions shall include at a minimum:

- General Understanding of the Project
- Scope of Services to be requested
- Design-Build Team and Personnel requirements
- Financial statements and requirements
- Bonding and Insurance information
- General Disclosures
-

3.5.3 Qualification Evaluation Criteria
Working jointly with the CDOT, and identified stakeholders, the Consultant will participate with CDOT in developing the Qualification Evaluation Criteria to be used in the Short-Listing process. To verify the integrity and reduce challenge to the process, it is vital that these actions be completed and presented to the Alternative Delivery Program and Executive Oversight Committee (EOC) for authorization in advance of the RFQ release.

3.5.4 Responses to the RFQ
Working with the CDOT the Consultant will assist with:

- Support in the compiling of responses to the RFQ for the Project into qualifying, measurable components as presented in the RFQ;

3.5.5 Presentations/briefings/discussions to the EOC
Working with the CDOT the Consultant will:

- assist with the preparation of questions to be asked by the EOC at requested presentations.
- assist and advise the EOC in planning the presentations/discussions.
- assist the EOC in answering questions at the presentations/discussions.
- Prepare written answers to respondent questions posed at the orals for consideration by the EOC.

3.5.6 Participation with the EOC - discussions and reviews
The Consultant will:

- participate with the EOC in discussions and reviews of the respondents' comments and answers to EOC questions post orals.
- assist in the preparation of final written synopses of those responses in a style and format appropriate for review and evaluation by the Qualification Evaluation Team (the Team may be composed of CDOT staff members and non-voting representatives of Stakeholders identified by CDOT).
- assist in preparing the documentation for the record the review and short list selection procedure followed.

3.5.7 Preparing for and presenting the recommendations
The Consultant will:

- assist the CDOT in preparing for and presenting the recommendations of the Qualification Evaluation Team to the Qualification Selection Board.
- Prepare and organize documents, exhibits, and visual aids helpful to the comprehension and support of the presentation to the Board.

3.5.8 Document classification and identification system
The Consultant will assist the CDOT in the preparation and implementation of the CDOT document classification and identification system, a document distribution policy with recorded verification of receipt, and a permanent document filing system, both hard copy and computerized.

3.5.9 Preparation of correspondence
The Consultant will assist in the preparation of correspondence for consideration, authorization and execution by CDOT.

3.6 DRAFT REQUEST FOR PROPOSALS (DRFP)

3.6.1 Development of a management plan for the Procurement
Develop a management plan for the Procurement of a Design-Build contractor for the Project. This will entail working closely with CDOT in the preparation of a Procurement process/protocol and reasonable time schedule to define progress achievement milestones between the issuance of the DRFP and the issuance of Notice(s) to Proceed to the selected Design-Build team for the Project. This schedule will allow time for elements of the Procurement process, including:

- development of the DRFP by CDOT and the Consultant.
- preparation of Detailed Proposals by the short-listed proposers.
- assessment of the Detailed Proposals by the CDOT Selection team.
- selection of the "Best Value" proposal; negotiations if necessary; and
- Award and Execution of the Contract.

3.6.2 Development of the draft versions of the main sections of the DRFP.
These main sections will include:

- Instructions to Proposers (ITP) -This document will contain relevant information to the short-listed proposers regarding the project and their associated submittals,

including: an introduction and summary of the project; a Procurement schedule defining the major milestone dates to be adhered to during the Procurement process; detailed description of the Procurement process which CDOT will utilize during the review and evaluation of the responses to the DRFP;

- Detailed information pertaining to the Proposal delivery, content and format;
- Proposal evaluation criteria and weighting;
- Contract award and approval process; and
- Stipend information and amounts (if applicable).
- Prepare Book one through the reference documents (See Attached Matrix for Firm Roles and responsibilities of Book Assignments)
- Draft Design-Build Agreement -This document will contain the actual Agreement to be executed between CDOT and the successful proposer. This section of the DRFP will be led and prepared by CDOT contracting office.
- Draft Scope of Work -This document will contain detailed information, specifications and associated guidance intended to apply specifically to the development and implementation of the Project.
- Draft Technical Provisions -This document will contain detailed information, specifications, and associated guidance intended to apply to the development and implementation of the Project.
- Prepare a Revised Draft RFP by incorporating the Risk Allocation assignments agreed to by the CDOT under section 3.4 into the Draft RFP prepared under section.
- Consultant internal review of Draft RFP must be performed by senior level staff having experience in Design-Build processes to verify completeness.
- Consultant will provide a dedicated Technical Editor to review documents

3.6.3 Organize Reference Documents, prepared by the Consultant, or provided by the CDOT for inclusion into the Draft RFP as attachments. These documents may include:

A. Reference Documents
B. Utility Memorandums of Agreement (to be prepared by Region Utility Engineer)
C. Cooperative Agreements
D. Environmental Permits
E. Right-of-way Acquisition Documentation

3.6.4 Develop an Industry Review

Develop an Industry Review utilizing documents and information prepared under section 3.6.2 and 3.6.3 for transmittal to the short-listed proposers for their review and comment.

- Written review comments and responses will be formally requested from the short-listed proposers.
- Individual meetings with each short-listed proposer will be conducted to discuss the DRFP and solicit feedback; Consultant will perform documentation of these meetings and provide a memo summarizing the comments and responses will be prepared for submission to CDOT. Comments identified during this Industry Review process will be discussed with the CDOT staff, legal, and project advisers to obtain approval prior to modifying the DRFP.

3.6.5 Assist CDOT in obtaining Federal Highway Administration (FHWA) approval of the Draft RFP (updated per the Industry Review process described in section 3.6.4).

3.6.6 Verify a construction cost estimate.

3.7 FINAL REQUEST FOR PROPOSALS (FRFP)

3.7.1 Compiling the Final RFP

Based upon the completion of sections 3.6.1 through 3.6.6:

- compile the Final RFP

- Preparation of correspondence for execution by CDOT distributing the Final RFP to short listed proposers.

3.7.2 Final RFP - handling, distributing, and tracking Following established CDOT protocols from previous Design-Build projects, the Consultant shall assist CDOT to:

- Store documents and correspondence received and created on and after the date of receipt of the Final RFP.
- Create and maintain a list of parties who have been authorized access to the secured data.
- Create and maintain a controlled system in which the evaluators must check out, check in, and be recorded as possessing the secured data.

3.7.3 Industry Review and Proposer one on one meetings
Planning, organizing, and administering workshops for Industry Review Meetings to be attended by CDOT Region 5 staff, the CDOT Contracting Office, and short-listed respondents. These workshops will be held to allow short listed proposers the opportunity to ask questions / request clarifications on the Final RFP; it will also provide the short-listed proposers the opportunity to solicit preliminary feedback regarding potential Alternative Technical Concepts they intend to include in their Technical Proposals.

- The Consultant will assist in soliciting information from the short-listed proposers such that agendas and related documents or exhibits can be prepared and distributed prior to the workshops;
- The Consultant will assist with evaluation of questions (oral and written) posed at the workshops (and submitted later in writing) and draft answers for consideration by CDOT.
- Upon receipt of CDOT approval, the Consultant will assemble and distribute CDOT answers to questions.
- It is assumed the Industry Review will consist of the following
    - Meeting 1 Industry Review focused on Book 1 Only the prime Consultant Project Manager will attend this meeting
    - Four additional meetings to meet with the Proposers individually where individual members of the PTT team will attend as needed.

3.7.4 Assess status of Reference Documents prepared or provided by the Consultant, or the CDOT. These documents may include:

A. Reference Drawings
B. Utility Memorandums of Agreement
C. Cooperative Agreements
D. Environmental Permits Agreements
E. Right-of-way Acquisition Documentation
F. Documentation describing the status of the Reference Documents will be prepared for submission to the short-listed proposers by way of ADDENDA to the Final RFP such that the short listed proposers can include additional efforts in their Proposals for the completion of these items, if required.

It is critical that the technical elements of the Design-Build contract (Books 2 through 4 and the Reference Documents) are consistent with the Design-Build contract (Book One). The most efficient way to accomplish this task is through continuous coordination and communication with the teams developing the technical elements. In addition, a "Legal Review" of the entire Contract (Books One through the reference documents) will be undertaken to verify consistent terminology, non-conflict statements and intent.

3.7.5 Assist with the preparation and issuance of addenda to the Final RFP, if required, suggested by meetings, discussions, workshops, questions posed by potential respondents, and

clarifications suggested and or approved by the CDOT; addenda will also include status updates on Reference Documents originally included in the RFP, if required.

3.7.6 Perform detailed reviews of Alternative Technical Concepts (ATCs) & Alternative Configuration Concepts (ACCs)

Perform detailed reviews of ATCs and ACCs submitted by the short listed proposers. These ATC/ACCs will include proposed changes to the minimum project requirements set forth in the Final RFP.

- The Consultant will assist in establishing an ATC/ACC Review Team composed of senior level staff to lead the review of these Concepts.
- Upon completion of the reviews, recommendations will be made to the EOC regarding which ATCs should be accepted, conditionally approved, or rejected.
- Upon acceptance of the recommendations by the EOC, the Consultant will assist in obtaining necessary agency approvals, including CDOT and FHWA, if required.
- The Consultant will attend meetings with the CDOT to present and discuss the selected ATCs with CDOT and FHWA; written comments will be formally requested from both agencies.

3.7.7 Prepare correspondence for execution by the CDOT transmitting the findings of the evaluation of the Initial Proposals (as defined in sections 3.7.7 and 3.7.8). This correspondence will be utilized by the short-listed proposers during their preparation of their Technical Proposals.

3.7.8 Final deliberations pertaining to the Proposals.

Prepare and distribute agenda for meetings called at the option of CDOT for final deliberations pertaining to the Proposals. These meetings will allow the CDOT the opportunity to discuss any remaining questions or issues related to the Proposals prior to the identification of the "Best Value" Proposal. The Consultant will assist and or prepare documentation of these meetings.

3.7.9 Serve as a technical advisor

Serve as a technical advisor with the evaluators and CDOT staff in delivering final reports and recommendations for best value selections and designations to the Proposal Evaluation Team and to the Proposal Selection Board.

- CDOT will prepare final reports summarizing the deliberations, actions, and recommendations of the Team and the Board relative to the review and consideration of the Proposals, and their final selection and designation of the project's "Best Value" evaluations.

3.8 POST FINAL RFP

3.8.2 Evaluation report

Assist and or prepare:

- a benchmarking evaluation report to capture lessons learned throughout the process and
- identify alternative or refined strategies that CDOT should consider for future Procurements.
- The report shall be based upon a series of interviews to be held with CDOT, proposers, CDOT legal Consultant, and other appropriate parties. Issues to be addressed include; risk shifting, potential for contract change orders, quality, time savings, life cycle cost, design and construction management changes, total project cost, etc.

3.9 Unforeseen Tasks as Required by the CDOT/PM

DELIVERABLES FOR PHASE 1

- Assist and recommend hardware/software configurations for development and implementation of a DMDC system compatible with CDOT's computer system
- Forecast encompassing staffing for the CDOT floor space, office equipment, and computer hardware and software to support post award project implementation.

- Workshop documentation
- Management plan and schedule for the Procurement process of the Project.
- Independent Cost Estimate at strategic process points
- Letter of Interest
- Request for Qualifications
- Draft Request for Proposals (DRFP) document
- Final Request for Proposals (FRFP) document
- Book One through Book Four and Reference Documents (Book 5).
- Transmittal correspondence
- Question & answer documentation
- Addenda documents, if required
- Detailed Proposal Evaluation Criteria
- Log of telephone conversations relevant to the Procurement process
- Unforeseen Services as directed and approved by the Project Manager

SCOPE OF WORK ASSUMPTIONS PHASE 1

The following lists assumptions, clarifications, and exclusions for the accompanying work hour estimate:

1. The duration of PHASE 1 is 12-18 months after a Notice to Proceed has been issued to the Consultant.
2. Section 1.0 -Project Management, Section 2.0 -General Support and Section 3.0 -Design- Build Procurement Management Services shall be performed under PHASE 1.
3. The extent of additional services that may be requested by CDOT for Unforeseen Services exclusive of services and estimated hours identified for work in PHASE 1 is estimated to be 120 work hours for ROW Acquisition Assistance, and 320 work hours for all other services and shall be at the direction and approval of the CDOT Project Manager.
4. PHASE 2 - services, work and costs are not included in PHASE 1.
5. This scope assumes CDOT will lead the efforts for Agency Coordination efforts, Permits and Approvals. Extensive coordination with public agencies is required to obtain necessary permits and approvals to proceed with the Design-Build process. The Consultant will assist in these efforts as directed by the CDOT Project Manager.
6. This scope assumes CDOT will lead the development and execution of all Intergovernmental Agreements and Third-party agreements. The Consultant will assist in these efforts as directed by the CDOT Project Manager.

SECTION 9
SERVICES AFTER PROCUREMENT

This Section represents Phase 2 of the Scope.

This section establishes the Consultant's individual task responsibility. The Consultant shall maintain the ability to perform work tasks listed below, in accordance with the forms and conditions contained herein, and the applicable CDOT standards and procedures. Selected work tasks shall be assigned only after coordination and consultation with CDOT. The Consultant is also responsible for coordinating the required work schedule for those tasks accomplished by CDOT and other agencies. The Consultant should review this entire section to identify applicable material. Contact the Colorado Department of Transportation/Project Manager (CDOT/PM) if clarification is required (see Section 2.01).

The following activities of communication, consensus building, project team reviews, contract conformance assurance, owner verification, data gathering, documentation, and formal public notice should be planned by the Consultant and coordinated with the CDOT/PM. The time of their accomplishment will overlap and parallel paths of activity should be planned to the Acceptance of the Project in accordance with the Contractor's schedule. The type and number of meetings, documents, etc., will depend on the category and characteristics of the project work. A project plan shall be developed by the Consultant which satisfies the requirements of the Owner Acceptance of the Contract. Generally, this scope entails the following actions: Leading the Design-Build Contract Administration processes generally up to the Acceptance of the Project including, but not limited to:

- Determining and monitoring the project risks and developing a risk management strategy
- Monitoring of Costs, cost loaded schedule distribution (planned) and payment requests
- Assessment and implementation of Changes
- Review, monitoring and tracking of Contractor's Schedule
- Monitor and scheduling of staffing required to support execution of Scope.
- Design-Build Contract Administration
    - Construction Administration
        - Plan development and implementation
        - Submittal fulfillment
        - Contract Compliance
        - Technical Criteria Assurance/Auditing
        - Owner Verification Actions
        - Documentation & Reporting
        - Quantity Tracking
    - Design Contract Administration
        - Submittal fulfillment
        - Plan development and implementation
        - Contract Compliance
        - Technical Criteria Assurance
        - Documentation and reporting
- Public Information - See PIM SOW
- Civil Rights Compliance

SCOPE OF WORK- PHASE 2

1.0 - PROJECT MANAGEMENT AND ADMINISTRATION SUPPORT

The Consultant will perform and assist in the necessary Project Management tasks for timely completion of the Project in compliance with applicable standards. These tasks are specific for preparation, review and approval of activity cost invoices.

2.0 -GENERAL SUPPORT

This task includes providing support by attending regularly scheduled meetings, reporting on activities, and preparing and providing meeting minutes and agendas; preparing presentation material as

requested; supporting the public involvement program; identifying project policy elements and solutions; preparing project process schedules; preparing independent cost estimates; and completing quality control assurance reviews. It is anticipated many of these meetings may occur via CDOT Zoom meetings with attendance in person driven by need and effectiveness as determined by CDOT. Construction Staff are anticipated to participate in person.

2.1 Meeting Attendance and Preparation -

- As required by the Contractor's Schedule ad as requested by CDOT
- Provide staff required to support meeting Agenda
- Participate and provide appropriate feedback to support efficient and effective contract execution while supporting the quality of the product.

2.2 Document Management and Control System

- Utilize Bentley Deliverables Management, or approved equivalent.
- Receive, track, ensure timeliness of Contractor Deliverables and responses.
- Assign appropriate lead to review of submittal while ensuring appropriate SMEs receive submittal for comment
- Ensure and support comment Technical Criteria justification
- Support comment log coordination to limit redundant or unsupported comments.
- Issue, track, ensure timeliness of CDOT Deliverables and responses.
- Ensure effective file naming and filing of submittals, documentation and communications.

2.3 N/A

2.4 Unforeseen Services As Requested

3.0 DESIGN-BUILD CONTRACT ADMINISTRATION MANAGEMENT SERVICES

3.1 Design-Build Design Contract Administration

Design-Build Design Contract Administration (Design Administration) is the assurance of the Contract Criteria during the design process of the Contract. Design Administration must ensure not only the meeting of Technical Criteria, Design Standards, and Quality, it should seek to challenge the Design-Build Contractor to achieve the highest quality. Quality is not only in the design and design packages, but in the approach, intent and ultimate construction execution, as directed by the plans and specifications. This Design Administration includes, but is not limited to:

- Documented Contract compliance Assurance
- Develop and maintain a database of Contract Criteria (Excel or approved other)
- Assess and document compliance of all aspects ofContract Criteria (Conforming and non-conforming audits)
- Active and Proactive SME to SME communications
- Active Task Force Participation seeking the best possible solutions
- Detailed, thorough and documented Reviews of Contractor submittals, including designs.
- Tracking of completed and outstanding Actions
- Creation of process workflows and documented practices
- Deliverable Management

3.2 Construction Contract Administration

Construction Contract Administration (Construction Administration) is the assurance of the Contract Criteria during the Construction process of the Contract. Construction Administration must ensure not only the meeting of Technical Criteria, Construction Standards, and Quality, it should seek to challenge the Design-Build Contractor to achieve the highest quality. Construction Administration includes, but is not limited to:

- Active and Proactive Communication, conflict resolution and risk/issue mitigation
- Documented Contract compliance Assurance

- Develop and maintain a database Technical Criteria (Excel or approved other)
- Assess and document compliance of all aspects of Contract Criteria (Conforming and non-conforming audits), and tracking
- Perform Required Owner Verification of ICQC
- Documented progress and communication, and tracking
- Active Task Force Participation
- Detailed, thorough and documented Reviews of Contractor submittals
- Tracking of completed and outstanding Actions
- Budget Monitoring
- Scheduling Tracking
- Ensuring sufficient staff to accommodate project needs while maintaining succession and overlap to account for a prolonged project duration.
- Creation of process workflows and documented practices
- Deliverables management

3.3 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), cell phone, computers, scanner/color printers, digital cameras, calculators, manuals, office supplies, and personal protective equipment (PPE) required to perform the work. PPE shall be in accordance with CDOT Procedural Directive PD 80.1.

Each Consultant staff shall be supplied with a state-of-the-art computer with internet connectivity. Consultant computers shall be able to operate CDOT's web based Trns*Port/ SiteManager/LIMS (or most current application used by CDOT) and/or other QA/QC applications, ProjectWise, Google Drive, and have the most current version of Microsoft Office including Microsoft Word, Excel, and Project or P6 software.

The Consultant shall have a digital camera available to staff at all times, and document the project accordingly submitting flash drives with relevant photos to the Resident Engineer on a regular basis.

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 personnel for the duration of the project unless otherwise approved by the Resident Engineer.

One field office and one field laboratory will be provided by construction contract pay items per associated standard plans and specifications. All other field equipment required for testing, inspection, and project management duties shall be the responsibility of the Consultant.

3.4 Unforeseen Tasks as Required by the CDOT/PM

DELIVERABLES FOR PHASE 2

Phase 2 - Design-Build Contract Administration Deliverables includes but is not limited to the following. Contract Administration deliverables include all documentation, reporting, correspondence required by the Design-Build Contract, CDOT policies and procedures, CDOT manuals, and best practices for the successful, documented administration of the Project.

Consultant construction management shall be in accordance with the Colorado Department of Transportation's guidelines and procedures to include the Project Awarded Construction Plans, CDOT M&S Standard Plans, Special Provisions, Standard Special Provisions, as well as current versions of CDOT Standard Specifications for Road and Bridge Construction, CDOT Construction Manual, and CDOT Field Materials Manual. If the required sampling or testing 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). If no AASHTO procedures exists, the ASTM Standards and Specifications shall be used. The Consultant's personnel shall be thoroughly familiar with CDOT forms and documentation requirements.

Documentation shall meet the requirements of Procedural Directive 21.1. The Project Engineer shall be responsible for verifying access to the specific project folder in ProjectWise and for placement of documents in the correct folder as indicated in the CDOT Construction Engineering Record File Plan. The Project Engineer shall ensure that As-Constructed/ As-Built Plans are completed and archived in ProjectWise in the correct project folder. The Project Engineer shall be required to archive all documents in PDF format listed in the Construction Record File Plan in which the Project Engineer is listed as Record Owner. Except as otherwise noted in the Construction Record File Plan, electronic files will be stored in CDOT ProjectWise. These documents/files shall be named according to the Record Title listed in the Construction Engineering Record Filed Plan and shall be placed in the location of Electronic Record. The Project Engineer shall also be responsible for verifying that the Construction Record Files are page aligned, searchable (OCR), compressed, and conform to the ISO PDF/a-1b standard (unless CDOT requires a different ISO compliant standard for a specific type of document) before they are placed in ProjectWise.

The Consultant is responsible for the management and work product of all Consultant and Subconsultant personnel. The Consultant is responsible for complete and error free construction and materials documentation on the project. Failure to submit acceptable final documentation as required may result in withholding any, and all, Consultant payments. Further, no payment shall be made for the correction of any finals documentation for noted deficiencies. The final materials documentation file shall include, at a minimum, a draft Form 474 exceptions, a completed and signed Form 1199 (Region 5 variant Project Closure), and up-to-date Owner Acceptance Sampling Checklist shall be sealed and signed by a Colorado Registered Professional Engineer. The materials testing and certification documentation file shall be submitted to the Region Finals Administrator or the Region Finals Materials Documentation Coordinator within 20 working days of the Project Acceptance Date.

The Consultant's proposed work procedures shall be coordinated with and approved by the CDOT Resident Engineer prior to the start of work.

- Conformance Reports
- Verification Testing Reports
- Verification Inspection Reports
- Daily Diaries - Consolidate per staff member, broken by no more than quarters based upon file size
- Accepted quantity & percent complete tracking to support contractor payments
- Documented process workflows
- Submittal tracking
- Correspondence tracking
- Change orders and Change Order Tracking
- As-Constructed plans
- As-Constructed Schedule
- Staffing plan
- Comment Log
- Pre-construction, daily progress and project completion photographs and videos
- CDOT Form 250, or approved equivalent. The Consultant Testing Firm will review, provide a PE stamp, and sign the CDOT Form 250 as it relates to the testing and acceptance of materials.

4.0 CONTRACT COMPLETION

This Contract will be satisfied upon Acceptance of the Project and upon acceptance of the following items, if applicable:

A. Accepted Project Deliverables
B. Design-Build Contract Project Completion and Acceptance
C. Completed file management of all Project Documentation

APPENDIX A
REFERENCES

1. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) PUBLICATIONS (using latest approved versions):

    A. A Policy on Design Standards-Interstate System
    B. A Policy on Geometric Design of Highways and Streets
    C. Guide for Design of Pavement Structures
    D. Standard Specifications for Highway Bridges
    E. Guide for the Design of High Occupancy Vehicle and Public Transfer Facilities
    F. Guide for the Development of Bicycle Facilities
    G. Standard Specifications for Transportation Materials and Methods of Sampling and Testing – Part 1, Specifications and Part II, Tests
    H. Highway Design and Operational Practices Related to Highway Safety
    I. Roadside Design Guide
    J. Load Resistance Factor Design (LRFD) Specifications

2. COLORADO DEPARTMENT OF TRANSPORTATION PUBLICATIONS (using latest approved versions):

    A. Design Guide (all volumes)
    B. Bridge Design Guide
    C. Bridge Detailing Manual
    D. Bridge Rating Manual
    E. Project Development Manual
    F. Erosion Control and Stormwater Quality Guide
    G. Field Log of Structures
    H. Cost Data Book
    I. CDOT Traffic Analysis and Forecasting Guidelines
    J. Drainage Design Manual
    K. Landscape Architecture Manual
    L. NEPA Manual
    M. Environmental Stewardship Guide
    N. Various CDOT Environmental Resource Guidance (i.e. Air Quality, Hazardous Materials, Noise, Visual)
    O. Quality Manual
    P. Survey Manual
    Q. Field Materials Manual
    R. Standard Plans, M & S Standards
    S. Standard Specifications for Road and Bridge Construction and Supplemental Specifications
    T. Item Description and Abbreviations (with code number) compiled by Engineering Estimates and Market Analysis Unit (“Item Book”)
    U. Right-of-Way Manual
    V. The State Highway Access Code
    W. Utility Manual
    X. TMOSS Generic Format
    Y. Field TMOSS Topography Coding
    Z. Topography Modeling Survey System User Manual
    AA. Interactive Graphics System Symbol Table
    BB. CDOT Design-Build Manual
    CC. CDOT Construction Manual
    DD. CDOT Geotechnical Design Manual

3. CDOT PROCEDURAL DIRECTIVES (using latest approved versions):

   No. 27.1 Social Marketing – Use of Web 2.0 and Similar Applications

   No. 31.1 Web Site Development

   No. 501.1 Requirements for Storm Drainage Facilities and Municipal Separate Storm Sewer System Facilities

   No. 503.1 Landscaping with CO Native Plant Species and Managing the CO Pollinator Highway

   No. 1050.1 Contracts with Local Agencies for Maintenance of State Highways

   No. 1601 Interchange Approval Process

4. FEDERAL PUBLICATIONS (using latest approved versions):

   A. Manual on Uniform Traffic Control Devices

   B. Highway Capacity Manual

   C. Urban Transportation Operations Training – Design of Urban Streets, Student Workbook

   D. Reference Guide Outline – Specifications for Aerial Surveys and Mapping by Photogrammetric Methods for Highways

   E. Executive Order 12898

   F. Executive Order 11988 & 13690 FHWA Federal-Aid Policy Guide

   G. FHWA NHI Hydraulic Circular (HEC) and Hydraulic Design Series (HDS) Reports

   H. Technical Advisory T6640.8A

   I. U.S. Department of Transportation Order 5610.1E

   J. Geometric Geodetic Accuracy Standards and Specifications for Using GPS Relative Positioning Techniques

   K. ADAAG Americans With Disabilities Act Accessibility Guidelines

   L. 23 CFR 771, the FHWA Technical Advisory T6640.8A

   M. 44 CFR 59-72, standards of the National Flood Insurance Program (NFIP)

   N. U.S. Army Corps of Engineers Wetlands Delineation Manual of 1987 and appropriate regional supplements

5. AREA:

   A. Urban Storm Drainage Criteria Manual (MHFD, formerly UDFCD)

   B. Any appropriate local agencies or Utilities/Irrigation references as appropriate

APPENDIX B
TRAVEL AND LODGING

Per Diem

Staff considered being "Traveling away from home" as defined per Fiscal Rule 5-1, Section 2.38 will be reimbursed at the applicable per diem rate per the Fiscal Rule 5-1, Section 7.3 to cover costs of meals and incidental expenses while traveling. For this project per diem will be $80.00 per day (10/1/24 effective date) and paid as follows:

- Breakfast $20.00/day
- Lunch $22.00/day
- Dinner $33.00/day
- Incidental $5.00/overnight stay

Travel and Lodging

A. Travel

Travel reimbursement shall follow the guidelines set forth in the Travel Reimbursement guidance for CDOT Consultant Contracts and Task Orders, dated 2/4/2013, as revised, except that project related travel from or within the Project site will be actual mileage vs. estimated. All costs anticipated for reimbursement must be approved by the CDOT Project Manager and CDOT Resident Engineer prior to commencement. All time and mileage shall be approved by the CDOT Resident Engineer on the Form 10 for the same period in which the travel occurred.

All travel and per diem expenses shall be in accordance with CDOT procedures and policies and state fiscal rules.

CDOT will reimburse the Consultant for time and mileage of personnel "Traveling away from home" who are full or part time on-site personnel for one roundtrip per week at a maximum of four hours and two hundred miles per roundtrip.

CDOT will reimburse Consultant for actual daily travel time (minus one hour), and mileage of personnel "Traveling away from home" who are not assigned to the project. Consultant staff that resides locally shall commence time and mileage upon entering Project Limits.

All mileage for all staff will be paid at the 2WD rate.

B. Lodging

Staff assigned full or part-time to the project and considered "Traveling away from home" per Fiscal Rule 5-1, Section 2.24 will be reimbursed for actual lodging costs per Fiscal Rule 5-1, Section 6.11. Reimbursement of lodging costs will follow Fiscal Rule 5-1, Section 9.

Should the Consultant personnel choose to procure a short-term home rental for the duration of the project, CDOT shall be notified of this intent prior to securing a lease.

APPENDIX C
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.

Acronym	Name
AASHTO	American Association of State Highway & Transportation Officials
ADT	Average two-way 24-hour Traffic in Number of Vehicles
AREA	American Railway Engineering Association
ATSSA	American Traffic Safety Services Association
AT&SF	Atchison, Topeka & Santa Fe Railway Company
ADAAG	Americans with Disabilities Accessibility Act Guidelines
BAMS	Bid Analysis and Management Systems
BFE	Base Flood Elevation
BLM	Bureau of Land Management
BNRR	Burlington Northern Railroad
CA	Contract Administrator – The CDOT Manager responsible for the satisfactory completion of the contract by the Consultant
CAP	CDOT's Action Plan
CBC	Concrete Box Culvert
CDOT	Colorado Department of Transportation
CDOT/PM	Colorado Department of Transportation Project Manager – The CDOT Engineer responsible for the day to day direction and CDOT Consultant coordination of the design effort (as defined in Section 2 of this document)
CDOT/STR	Colorado Department of Transportation Structure Reviewer – The CDOT Engineer responsible for reviewing and coordinating major structural design
CDPHE	Colorado Department of Public Health and Environment
CEQ	Council on Environmental Quality
COG	Council of Governments
COGO	Coordinate Geometry Output
Consultant	Consultant for the project
CONTRACT ADMINISTRATOR	Typically, a Region Engineer or Branch Head. The CDOT employee that is directly responsible for the satisfactory completion of the contract by the Consultant. The contract administration is usually delegated to a CDOT Project Manager (as defined in Section 2 of this document).
C/PM	Consultant Project Manager – The Consultant Engineer responsible for combining the various inputs in the process of completing the project plans and managing the Consultant design effort.
CWCB	Colorado Water Conservation Board
DDM	Drainage Design Manual
DEIS	Draft Environmental Impact Statement
DHV	Future Design Hourly Volume (two-way unless specified otherwise)
DRCOG	Denver Regional Council of Governments
D&RGW	Denver & Rio Grande Western Railroad
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESAL	Equivalent Single Axle Load
ESE	Economic, Social and Environmental

Acronym	Name
AASHTO	American Association of State Highway & Transportation Officials
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHPG	Federal Aid Highway Policy Guide
FHWA	Federal Highway Administration
FIPI	Finding In Public Interest
FIR	Field Inspection Review
FONSI	Finding of No Significant Impact
FOR	Final Office Review
GIS	Geographic Information Systems
GPS	Global Positioning System
LA	Professional Landscape Architect registered in Colorado
MAJOR STRUCTURES	Bridges and culverts with a total clear span length greater than twenty feet. This length is measured along the centerline of roadway for bridges and culverts, from abutment face to abutment face. Retaining structures are measured along the horizontal distance along the top of the wall. Structures with exposed heights at any section over five feet and total lengths greater than a hundred feet as well as overhead structures including (bridge signs, cantilevers and butterflies extending over traffic) are also considered major structures.
MHFD	Mile High Flood District (formerly UDFCD)
MPO	Metropolitan Planning Organization (i.e. Denver Regional Council of Governments, Pikes Peak Area Council of Governments, Grand Junction MPO, Pueblo MPO, and North Front Range Council of Governments).
MS4	Municipal Separate Storm Sewer System
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NGS	National Geodetic Survey
NICET	National Institute for Certification in Technology
NOAA	National Oceanic and Atmospheric Administration
PAPER SIZES	See Computer-Aided Drafting Manual(CDOT); Table 6-13 and Table 8-1
PE	Professional Engineer registered in Colorado
PM	Program Manager
PLS	Professional Land Surveyor registered in Colorado
PRT	Project Review Team
PS&E	Plans, Specifications and Estimate
PROJECT	The work defined by this scope
PWQ CM	Permanent Water Quality Control Measure
ROR	Region Office Review
ROW	Right-of-Way: A general term denoting land, property, or interest therein, usually in a strip acquired for or devoted to a highway
ROWPR	Right-of-Way Plan Review
RTD	Regional Transportation Director
T/E	Threatened and/or Endangered Species
SFHA	Special Flood Hazard Area
SH	State Highway Numbers
TMOSS	Terrain Modeling Survey System

Acronym	Name
AASHTO	American Association of State Highway & Transportation Officials
TOPOGRAPHY	In the context of CDOT plans, topography normally refers to existing cultural or manmade details.
USACE	United States Army Corp of Engineers

Accessibility Editor – Consultant staff responsible for ensuring documents meet accessibility guidelines under CDOT Procedural Directive 31.1, ADA, WCAG 2.2. This role can be performed with other roles.

Design-Build Contract Administration - The necessary actions required through review, meetings, comment logging, conformance reporting and inspection to ensure compliance with the Design-Build Contract.

Construction Management, Construction Inspection, and Construction Testing – The activities associated with the roles assigned for the monitoring, testing, documentation, and other project-related services under the responsible charge of the Consultant or CDOT Professional Engineer, and at the direction of the Project Engineer to ensure conformance with the project construction contract.

CDOT Resident Engineer / Project Director – The CDOT Resident Engineer is responsible to the Region Program Engineer for the quality and successful completion of a transportation project. The Resident Engineer authorizes interim and final payments and all changes to Contracts for all Consultants and Contractors.

CDOT Project Engineer (PE) – The CDOT Project Engineer shall work in cooperation with the CPE and the Construction Management team as the Chief Engineer's duly authorized representative administering the contract, is in direct charge of the work, and is responsible for the administration and satisfactory completion of the construction project under contract.

Consultant Project Engineer (CPE) – The Consultant Project Engineer shall work in cooperation with the Construction Management team as the Chief Engineer's duly authorized representative administering the contract, is in direct charge of the work, and is responsible for the administration and satisfactory completion of the construction project under contract. The CPE shall be a licensed Professional Engineer in the State of Colorado, unless otherwise approved by the CDOT Resident Engineer, and is in responsible charge of construction. If the CPE is not a PE, then the CPE shall be under the responsible charge of a Consultant Professional Engineer, and at the direction of the CDOT Resident Engineer.

Consultant Assistant Project Engineer (CAPE) – The Consultant Project Engineer is the Chief Engineer's duly authorized representative administering the contract, is in direct charge of the work in the absence of the Project Engineer and is responsible for the administration and satisfactory completion of the construction project under contract. The CAPE shall be a licensed Professional Engineer in the State of Colorado, unless otherwise approved by the CDOT Resident Engineer, and is in responsible charge of construction. If the CAPE is not a PE, then the CPE shall be under the responsible charge of a Consultant Professional Engineer, and at the direction of the CDOT Resident Engineer.

Consultant Office Engineer (COE) – The Consultant Office Engineer supports the Project Engineer with the administration and satisfactory completion of the construction project under contract. The Consultant employee will coordinate, develop, and review change orders, support for project first documentation, and overall review of conformance of critical and complex project documentation on a regular basis as well as other duties as assigned to support the Administration of the Project.

Consultant Technical or Subject Matter Expert (C-SME) – Consultant staff that has technical proficiency in one or multiple areas (as allowed) to which they write and compile Technical Criteria with coordination with CDOT Technical Expert. The C-SME shall be a licensed Professional Engineer in the State of Colorado, unless otherwise approved by the CDOT Resident Engineer or defined elsewhere in the contract.

CDOT Region Materials Engineer (RME) – The CDOT Region Materials Engineer (RME) assists the Resident Engineer on this project with materials related issues including concrete, asphalt, soils, and steel. The CDOT RME provides project support in areas relating to construction materials issues. The RME is in responsible charge of the region laboratory units and is required to review the Form 1324 (Consultant Tester Evaluation).

CDOT Technical Expert – CDOT staff with technical expertise in areas relevant for the development of the Procurement documents (RFQ, RFP, etc.) and Technical Criteria and serve as "as needed" support for

the Design-Build Contract Administration of said documents during the Design-Build design and construction phases.

Project Manager – The CDOT or Consultant employee that has active day-to-day administration and monitoring of this contract.

Consultant - The individual, firm, or corporation contracting with CDOT to perform services as described in this contract.

Consultant Team - The individuals, firms, or corporations contracting with CDOT to perform services as described in this contract, limited to those necessary for the efficient and effective prosecution of the Scope.

Consultant Public Information Manager (PIM) – The Consultant or sub-Consultant employee in responsible charge for all activities associated with public information services for this project.

Consultant Professional Engineer - The Consultant employee in responsible charge of Consultant services performed as described in this Contract. The Consultant Professional Engineer administers the Consultant contract and must be a licensed Professional Engineer in the State of Colorado. The Consultant Project Engineer may be the Consultant Professional Engineer at the direction or approval of the CDOT Resident Engineer.

Consultant Engineer in Responsible Charge (EIRC) – The licensed individual with degree of control and is required to maintain through engineering decisions personally or by others over which the engineer exercises supervisory direction and control authority. The EIRC shall at all times recognize that their primary obligation is to protect the safety, health, property, and welfare of the public.

Consultant Inspector (CI) – The on-site Consultant employee whose primary function is to perform construction inspection and associated documentation of work items. The CI performs work under the responsible charge of the Construction Project Engineer and at the direction of the CDOT Resident Engineer. This position may be assigned to verification of an Independent Contractor Quality Control (ICQC) program as determined by the Resident Engineer during the development of the RFP.

Consultant Material Tester (CT) – The on-site Consultant employee whose primary function is to perform inspection, testing of materials, and maintain the associated documentation for materials certifications and field and laboratory testing. The CT performs work under the responsible charge of the Construction Project Engineer and at the direction of the CDOT Resident Engineer. This position may be assigned to verification of an Independent Contractor Quality Control (ICQC) program as determined by the Resident Engineer during the development of the RFP.

Consultant Materials Testing Supervisor (CMTS) – The Consultant employee responsible for the satisfactory performance of work by the CT relating to materials testing and documentation. Also, reference the additional requirements in Colorado Procedure 10 in the Field Materials Manual.

Consultant Schedule Technical Expert (SCHED) – The Consultant employee primary function is to be a resource for review of contractor critical path schedule and to serve as the SME for subsections of the Technical Criteria and to provide input into Book 1,

Contractor - The individual, firm, or corporation contracting with CDOT to design and construct a transportation project under the Design-Build Delivery Method.

Independent Contractor Quality Control (ICQC)- Formal QC activities performed by a separate Construction QC team that is independent from the production staff. This involves formal QC sampling, testing, and inspection to provide timely data to monitor and guide each production and placement process and to ensure the product conforms with the Contract requirements. Secondarily, this QC data may be included in CDOT's Acceptance determination.

Lead Author - SME that will lead the writing of the Technical Criteria, performing the majority of the writing, coordinating with co-authors and CDOT SMEs as necessary to ensure the completeness and correctness of the writing. Lead Authors will collaborate and coordinate with each other to ensure a consistency of terms, correct use of defined terms, and completeness of the combined writing.

Owner Verification Testing (OVT) - OVT is the Acceptance testing performed by CDOT on projects where ICQC testing data is included in CDOT's Final Acceptance determination. OVT is typically performed at a lower frequency than full Acceptance testing.

Project Controller – CDOT or Consultant staff in charge of document control for the project. Ensures accurate naming, document sharing, timely reviews and responses, as well as filing. Controller will track contract deliverables to ensure contract conformance. This role can be performed with other roles. Controller will lead or assign lead in reviews and ensure comments are internally reviewed and consolidated prior to return to the Contractor.

Region Head Tester – The CDOT employee that is assigned to assist the Project Engineer with oversight of project testing, and documentation of testing and materials.

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.

Subject Matter Expert (SME) – See Technical Expert.

Technical Editor - Consultant staff responsible for ensuring documents are cohesive, well read, and meets CDOT and industry standards.

Technical Expert (aka Subject Matter Expert, SME) – Consultant staff with technical expertise in areas relevant for the development of the Procurement documents (RFQ, RFP, etc.) and Technical Criteria as well as for the Design-Build Contract Administration of said documents during the Design-Build design and construction phases. Staff should hold commensurate licensure or certification for the subject, as approved by CDOT. A single SME will serve as the lead author and point of contact for each section of the RFP, but this role can be performed with other roles. [e.g. one SME may lead multiple sections]. SME will consult with CDOT Technical Experts during the development of the Procurement Documents and coordinate as necessary during the Design-Build Contract Administration.

Technical Criteria - Any portion of the Procurement documents required to select a Design-Build Contractor and/or support the Design-Build Contract Administration. Documents include, but are not limited to, the RFQ, RFP, ITP, Proposal, manuals, specifications, or contractually required performance plans, as required and relevant to the use of the term as used.

APPENDIX D
PUBLIC INFORMATION MANAGEMENT SCOPE OF WORK

Consultant Public Information Management

The Consultant shall provide a Public Information Manager (PIM) who will be the responsible charge for all activities associated with public information services. The PIM shall have five years of professional experience in Public/Media Relations, Marketing or other related field and good verbal and written communications skills (note: administrative/business office skills are NOT considered a related field.) PIM may be a qualified sub-consultant and shall not have any other duties on the project. The Engineer will coordinate, with the Regional Communications Manager (RCM), all aspects of the PIM's work, including all required submittals.

This Project (20980) will take place in La Plata County on US 160 from the junction of CO 172 (locally known as Elmore's Corner) to the junction of CR 223 approximately seven miles from MP 91.4 to 98. Major components of the project include:

- Construction and widening of 2.5 miles of roadway to a four-lane highway with a continuous dedicated two way center turn lane and shoulder widening.
- Construction of 1 mile (min) passing lanes and shoulder widening between CR 225 and Dry Creek
- Improved intersection infrastructure proposed as a roundabout at US 160 and CR 225
- Construction of 2 large mammal underpasses, additional small mammal crossings and installation of wildlife exclusion fencing and earthen jumpouts
- Replacement of the Florida River Bridge

Anticipated communications issues on this project include:

- This is a multi-year, three-season project that will involve communication needs for both procurement and construction activities.
- Development of Technical Criteria that ensures the accountability, timely communication, accurate information from the Contractor.
- Conformance Auditing of Contractor PIM Criteria.
- This project will take place on a highly traveled segment US 160 between Durango and Bayfield with heavy commuter traffic and many impacted property owners and adjacent residents.
- Frequent, consistent, and timely communication is imperative with the local town governments, county government, emergency departments, community development organizations and local stakeholders potentially impacted by the project.
- Frequent, in-person communication with residents and property owners along the corridor is imperative.
- Awareness of and communication with impacted user groups is important.
- This project will require notification of mailbox removal/replacement for property owners.
- This project will include some night work.
- This project will require the planning and coordination of a special event near project completion.
- Contractor events and RFP Public Event during Procurement]

(a) *Activities and Duties of the PIM*:

(1) *Public Information Plan.* The PIM shall submit a Public Information Plan (PIP) to the Engineer and RCM within two weeks of the signed contract agreement. The PIM shall update PIP before each working season and present the updated plan for review to the Engineer and RCM two weeks before work begins. The PIP shall be specific to the project. The PIP shall include public information strategies for affected road users using the Public Information Collateral; proactive public education; expected work zone impacts and closure details; commuter alternatives; community, government and business relations; media relations; identification of public information issues; proposed outreach strategies; approach to crisis communications; the Stakeholder List; and the Project Management Team Emergency Contact Sheet.

(2) *Project Onboarding/Offboarding Request Form.* The PIM shall complete and update the Project Onboarding/Offboarding Request Form (https://form.jotform.com/71167524405150) two weeks before the project begins.

(3) *On-Call.* The PIM shall be available or on-call each day there is work on the project and shall be available upon the Engineer's request outside of normal working hours.

(4) *Public Information Office.* The PIM shall establish a public information office equipped with a telephone with voicemail (which becomes the Project Hotline) and an email address. The Project Hotline telephone number shall be printed on the Project's traffic control signs. The PIM shall update the Project Hotline telephone message greeting weekly at a minimum and include the project's anticipated completion date and forthcoming activities for the upcoming week. The PIM shall answer calls, listen to voicemails, and check email throughout each day that construction operations are in effect. The PIM, and when necessary, the Engineer, shall respond to all inquiries with a phone call, a voicemail message, or an email within one day. The PIM shall collect the contact's name, contact phone number or email address, and details about the action taken within two days of receiving the message. The customer inquiries and follow-up action shall be documented and entered into Dialog, a web-based contact and issue tracking database provided by CDOT.

(5) *Procurement Support*

(i) The PIM shall assist with planning and will attend contractor events to garner project interest and information sharing.

(ii) The PIM shall support and coordinate the scheduling of Contractor meetings requested during the non-confidential period of the Procurement phase.

(6) *Public and Community Meetings.* The PIM shall host an in person public meeting prior to the start of construction, and a minimum of once per year of construction, as well as once during the Development of the Design-Build RFP to present the Basic Configuration and Project Schedule. Participants shall include the Colorado Department of Transportation, local elected officials, city/county staff, surrounding local agencies and businesses, residents and the traveling public. The in-person meeting shall be held locally at a convenient location that shall accommodate the above attendees. The PIM shall publicize the meeting through multiple means including local media, email, and inserts in local newsletters, flyers, mailers and others. The focus shall be to inform attendees of project plans and schedules and to provide information on how those

interested can receive updates on the project. At the meeting, the PIM shall create and print project displays that will provide information on work, phasing, traffic impacts, etc. Minutes will be distributed within five working days following each meeting. The PIM shall work closely with CDOT to craft accurate responses to questions and comments received at these meetings if necessary. The PIM shall document how responses are sent back to the public. Any action items or issues reported at the Public Information Meetings will be entered into the project database. Subsequent project meetings may be necessary.

The PIM shall attend and may be asked to present project information at non-CDOT meetings that are hosted by other government entities or community organizations, when CDOT is invited to participate.

(7) *Project Meetings.* Once the project has begun, the PIM shall participate in the weekly construction project meetings, discuss communication issues, and provide a status on the items and deliverables in this agreement. The PIM shall participate with CDOT on all other meetings requested by the Engineer. The PIM shall coordinate meetings to ensure the development of appropriate Technical Criteria for the Design-Build Contractor through coordination with the RCM and Region 5 Communications Office.

(8) *Site Visits*. At least five days prior to the start of work activity, the PIM shall visit, in-person, businesses that are directly impacted by project work and provide printed Project Fliers and Project Team/PIM contact information. Once the project has started, the PIM shall visit, in-person, at least monthly, the businesses that are directly impacted by the project as construction activity moves along the work zone corridor.

(9) *Media Relations.* CDOT will address all media inquiries and media requests. The PIM shall immediately notify the Engineer and RCM of any project and on-site situations involving the media. When the media contacts the PIM, the PIM shall provide the media the RCM's contact information.

(10) *Lane Closure Reporting.*

(i) *Electronic Reporting System.* Before the Pre-construction Conference and at least 14 days before the project start, the PIM shall submit a request for access to the electronic reporting system through the Project Onboarding/Offboarding Request Form.

(ii) *Weekly Lane Closures.* The PIM shall enter the planned weekly lane closures and updates into the electronic reporting system for the upcoming work period, Sunday through Saturday, by Thursday at 12:00 P.M. The Engineer will approve the Lane Closure and Updates by Friday at 3:00 P.M. Each Monday by 12:00 P.M., the PIM shall review www.cotrip.org and verify that the lane closure and update information is accurate. If corrections are necessary, the PIM shall coordinate with the Engineer to make necessary corrections to www.cotrip.org.

(iii) *Real-Time Lane Closure Changes.* The Engineer shall notify the PIM at least 24 hours in advance on approved Lane Closure changes. After completing the changes, the PIM shall notify the Engineer that the changes are ready for review and approval.

(11) *Public Information Collateral.* The PIM shall develop a variety of Public Information Collateral to share project information for project milestones such as long-term closures

or impactful construction activities, and coping information.The PIM shall ensure all public-facing deliverables are accessible to individuals with disabilities and to ensure nondiscrimination against persons with disabilities. For more information go to the CDOT Accessibility webpage: https://www.codot.gov/topcontent/accessibility. Collateral includes the following:

(i) *Stakeholder List.* The PIM shall submit a Stakeholder List as a component of the Public Information Plan with each stakeholder's name, telephone number, email address, and notes on communication needs for the project. Stakeholders shall include (but are not limited to) municipalities, counties, tribes, emergency services, schools, community groups, interest groups, transit services, motor carrier associations, ports of entry.

(ii) *Photographs and Video Recordings.* The PIM shall take digital photographs and video recordings at regular intervals and submit them to the Engineer and RCM. The PIM may use a cell phone camera. Photographs and video recordings shall capture various work activities and other areas of work as identified by the Engineer. The PIM shall submit a minimum of two digital photographs or video recordings of the project activities and progress each month. Each photograph and video recording shall include the project number, project code, date, time, location and station or milepost, and name of the person taking the photograph or video recording.

(iii) *Maps and Graphics.* The PIM shall develop map(s) and graphic(s) of the highway project area for use in the Public Information Collateral.

(iv) *Webpage Updates.* The PIM shall develop project information for the internet webpage content. The PIM shall supply information for the webpage using the CDOT webpage template in the Project Onboarding/Offboarding Request Form PIM resources. When applicable, the updates shall contain all appropriate webpage links to and from other sites. The PIM shall provide updated information for significant milestones or changes in the project scope. CDOT will update the webpage.

(v) *Project Management Team Emergency Contact Sheet.* The PIM shall prepare and update a Project Management Team Emergency Contact Sheet with the names and contact information of the individuals pertinent to the project's public information. At a minimum, the Contact Sheet shall include the Resident Engineer, Project Engineer, RCM, CDOT website administrator, the electronic reporting system administrator, PIM, Backup PIM, Contractor Superintendent, and Traffic Control Supervisor. The contact sheet shall include the applicable Traffic Management Operations Centers. (This project lies within the management and operations of Hanging Lake Tunnels.) The Public Information Management Contact Sheet shall be included in the PIP.

(vi) *Project Fliers.* The PIM shall develop project fliers using the CDOT project flier template available in the Project Onboarding/Offboarding Request Form PIM resources. The PIM shall submit the draft project flier to the Engineer and RCM for review 10 days before the planned distribution or use. Additional flyers may be

needed for site visits, meetings with stakeholders, and may be distributed digitally. This project requires at least one Project Flier at the following milestones:

1. Pre-RFP / Base Configuration Project Update
2. Project start - Initial Project Flier
   The Initial Project Flier shall provide the project start and end dates, project location, description of work, traffic impacts, scheduled work hours and work days, the Project Hotline, email address, web address, project map, and a construction safety message as defined by CDOT.
3. Annual Project update - At a minimum an Annual Project Flier

(vii) *Traffic Advisories.* The PIM shall compose weekly traffic advisories developed from the weekly Lane Closure Report. The traffic advisory will include pertinent information about the upcoming week's project activity including traffic impacts, restrictions such as width or height, speed limit reductions, etc. CDOT traffic advisory templates are available in the Project Onboarding/Offboarding Request Form PIM resources. The Engineer and RCM will approve traffic advisories before distribution. The PIM shall email the traffic advisories to stakeholders by Friday of each week through CDOT's automated distribution platform, Mailchimp. A Mailchimp account is available through CDOT.

(viii) *Project Updates*. The PIM shall compose monthly project updates developed from information gathered at weekly meetings from the project team.

(i) The project updates will include information and photos about the project's progress and accomplished milestones.
(ii) CDOT project update templates are available in the Project Onboarding/Offboarding Request Form PIM resources.
(iii) The Engineer and RCM will approve project updates before distribution.
(iv) The PIM shall email the project updates to stakeholders through CDOT's automated distribution platform, Mailchimp. A Mailchimp account is available through CDOT.
(v) Project updates may also be necessary when the project has new traffic impacts, begins a new phase, or needs to convey timely information outside of the monthly timeframe such as disruptions with mail, garbage or utility services to property owners.

(ix) *Press Releases.* The PIM shall prepare media releases submitted via a Google doc. The media releases shall be prepared at least 14 days prior to send dates, to be agreed upon by the Engineer and RCM. Media releases shall explain the project, summarize the project scope, construction phasing, construction activities that affect traffic, the project end date, and a summary of project benefits. The releases shall also include updated/current photos, maps or other graphics. The PIM shall allow the Engineer and RCM at least three days to review and approve the media release before distribution. CDOT will distribute media releases. Media releases shall include:

(i) project start,
(ii) project winter shutdowns (2),
(iii) project re-starts (2),
(iv) project completion,
(v) public outreach/special event announcement,

(vi) additional releases may be required to communicate significant changes in work activity, construction milestones, traffic control or lane shifts, or closures as directed by CDOT

(x) *Mailbox Replacement Letter.* The PIM shall prepare and distribute a letter to property owners within the CDOT right-of-way of the project limits. The letter shall explain and describe the removal and replacement of mailboxes, approximate timing, and contact information for the PIM and Project Engineer. A letter template is available from CDOT/RCM. The letter shall be mailed at least ten days prior to the project start date. This project will require notification of mailbox removal/replacement for approximately XX property owners.

(xi) *Special Events*. The PIM shall assist with the planning and coordination of a special event (ribbon cutting) upon near completion of the project. Coordination activities shall include:

(i) coordinating with the RCM and project team
(ii) identifying and securing an event site
(iii) drafting of collateral such as media release, invitation, flier or display boards
(iv) Printing of meeting materials (i.e. fliers and display boards)
(v) development of an invitation list to include stakeholders; local, state, and federal elected officials; other agency officials; CDOT staff; and project team
(vi) assisting with site prep and event support on the day of the event