PUBLIC CONTRACT FOR SERVICES

THIS PUBLIC CONTRACT FOR SERVICES (the "Contract") is made and entered into this _____ day of _____, 20___, by and between the **BOARD OF COUNTY COMMISSIONERS OF THE COUNTY OF DOUGLAS, STATE OF COLORADO** (the "County"), and **RS&H, Inc.**, a Florida corporation authorized to do business in Colorado (the "Consultant").

RECITALS

WHEREAS, the County is undertaking certain activities related to the **Titan Road & US 85 Interchange Design Project, Douglas County Project Number CI 2026-012**; and

WHEREAS, the County desires to engage the Consultant to render certain professional services and assistance in connection with such undertakings of the County; and

WHEREAS, the Consultant has the ability to assist the County through its professional expertise, knowledge, and experience and is ready, willing and able to provide such services, subject to the conditions hereinafter set forth.

NOW, THEREFORE, for and in consideration of the premises and other good and valuable consideration, the parties agree as follows:

1. LINE OF AUTHORITY: Benjamin Pierce, P.E., Project Manager, (the "Authorized Representative"), is designated as Authorized Representative of the County for the purpose of administering, coordinating and approving the work performed by the Consultant under this Contract.

2. SCOPE OF SERVICES: All services described in Exhibit A, attached hereto and incorporated herein, shall be performed by Consultant.

The County may, from time to time, request changes to the scope of services to be performed hereunder. Such changes, including any increase or decrease in the amount of the Consultant's compensation, which are mutually agreed upon between the County and Consultant, shall be in writing and shall become part of this Contract upon execution.

The Consultant agrees to diligently and professionally perform all the services described herein in a manner satisfactory to the Authorized Representative. It is also understood and agreed that the Consultant shall not, in performing services hereunder, undertake any action or activity prohibited by the terms of any lease, permit, license or other agreement in effect during the term hereof between the Consultant and the County for the use and occupancy by the Consultant of any County facilities or space.

3. COMPENSATION: Subject to the maximum contract liability and all other provisions of this Contract, the County agrees to pay to the Consultant, and the Consultant agrees to accept payment as described in Exhibit B, attached hereto and incorporated herein, during the term hereof, in accordance with the terms set forth herein.

4. MAXIMUM CONTRACT EXPENDITURE: Any other provision of this Contract notwithstanding and pursuant to Section 29-1-110, C.R.S., the amount of funds appropriated for this Contract is **Four Million Four Hundred Ninety-Nine Thousand Nine Hundred Sixty-One Dollars and Twenty-Five Cents ($4,499,961.25)** for fiscal year **2026**. In no event shall the County be liable for payment under this Contract for any amount in excess thereof. The County is not under obligation to make any future apportionment or allocation to this Contract nor is anything set forth herein a limitation of liability for Consultant. Any potential expenditure for this Contract outside the current fiscal year is subject to future annual appropriation of funds for any such proposed expenditure.

5. TERM: It is mutually agreed by the parties that the term of this Contract shall commence as of 12:01 a.m. on **July 15, 2026**, and terminate at 12:00 a.m. on **December 31, 2028**. This Contract and/or any extension of its original term shall be contingent upon annual funding being appropriated, budgeted and otherwise made available for such purposes and subject to the County's satisfaction with all products and services received during the preceding term.

6. INVOICING PROCEDURES: Payments shall be made to the Consultant based upon invoices submitted by the Consultant, provided such invoices have been approved by the Authorized Representative. Payments will be made to the Consultant within thirty (30) days, or within a mutually agreed upon period after County has received complete invoices from the Consultant. The County reserves the right to require such additional documentation, including monthly activity reports detailing the Consultant's activities and services rendered, as the County deems appropriate to support the payments to the Consultant. The signature of an officer of the Consultant shall appear on all invoices certifying that the invoice has been examined and found to be correct.

7. CONFLICT OF INTEREST: The Consultant agrees that no official, officer or employee of the County shall have any personal or beneficial interest whatsoever in the services or property described herein, and the Consultant further agrees not to hire, pay, or contract for services of any official, officer or employee of the County. A conflict of interest shall include transactions, activities or conduct that would affect the judgment, actions or work of the Consultant by placing the Consultant's own interests, or the interest of any party with whom the Consultant has a contractual arrangement, in conflict with those of County.

8a. INDEMNIFICATION-GENERAL: The County cannot and by this Contract does not agree to indemnify, hold harmless, exonerate or assume the defense of the Consultant or any other person or entity whatsoever, for any purpose whatsoever. Provided that the claims, demands, suits, actions or proceedings of any kind are not the result of professional negligence, the Consultant shall defend, indemnify and hold harmless the County, its commissioners, officials, officers, directors, agents and employees from any and all claims, demands, suits, actions or proceedings of any kind or nature whatsoever, including Workers' Compensation claims, in any way resulting from or arising from the services rendered under this Contract; provided, however, that the Consultant need not indemnify or save harmless the County, its officers, agents and employees from damages resulting from the sole negligence of the County's commissioners, officials, officers, directors, agents and employees. Further, this indemnification

is intended to comply with and be subject to C.R.S. 13-50.5-102 (8), as amended from time to time.

8b. INDEMNIFICATION FOR PROFESSIONAL NEGLIGENCE: The Consultant shall indemnify and hold harmless the County and any of its commissioners, officials, officers, directors, agents and employees from and against damages, liability, losses, costs and expenses, including reasonable attorney's fees, but only to the extent caused by the negligent acts, errors or omissions of the Consultant, its employees, agents or subcontractors, or others for whom the Consultant is legally liable, in the performance of professional services under this Contract. The Consultant is not obligated under this sub-section 8b to indemnify the County for the negligent acts of the County or any of its commissioners, officials, officers, directors, agents and employees.

9. INDEPENDENT CONTRACTOR: The Consultant is an independent contractor and is free to perform services for other clients. Notwithstanding any provision of this Contract, all personnel assigned by the Consultant to perform work under this Contract shall be and remain at all times, employees of the Consultant for all purposes. THE INDEPENDENT CONTRACTOR IS NOT ENTITLED TO WORKERS' COMPENSATION OR UNEMPLOYMENT BENEFITS THROUGH THE COUNTY AND IS OBLIGATED TO PAY FEDERAL AND STATE INCOME TAX ON ANY MONIES EARNED PURSUANT TO THE CONTRACT RELATIONSHIP.

10. NO WAIVER OF GOVERNMENTAL IMMUNITY ACT: The parties hereto understand and agree that the County, its commissioners, officials, officers, directors, agents and employees, are relying on, and do not waive or intend to waive by any provisions of this Contract, the monetary limitations or any other rights, immunities and protections provided by the Colorado Governmental Immunity Act, §§ 24-10-101 to 120, C.R.S., or otherwise available to the County.

11. ASSIGNMENT: The Consultant covenants and agrees that it will not assign or transfer its rights hereunder, or subcontract any work hereunder, either in whole or in part without the prior written approval of the Authorized Representative. Any attempt by the Consultant to assign or transfer its rights hereunder shall, at the option of the Authorized Representative, void the assignment or automatically terminate this Contract and all rights of the Consultant hereunder.

12. COUNTY REVIEW OF RECORDS: The Consultant agrees that, upon request of the Authorized Representative, at any time during the term of this Contract, or three (3) years thereafter, it will make full disclosure to the County and make available for inspection and audit upon request by the Authorized Representative, the County Director of Finance, or any of their authorized representatives, all of its records associated with work performed under this Contract for the purpose of making an audit, examination or excerpts. The Consultant shall maintain such records until the expiration of three (3) years following the end of the term of this Contract.

13. OWNERSHIP OF DOCUMENTS: Drawings, specifications, guidelines and any other documents prepared by the Consultant in connection with this Contract shall be the property of the County.

14. ASSIGNMENT OF COPYRIGHTS: The Consultant assigns to the County the copyrights to all works prepared, developed, or created pursuant to this Contract, including the right to: 1) reproduce the work; 2) prepare derivative works; 3) distribute copies to the public by sale, rental, lease, or lending; 4) perform the works publicly; and 5) to display the work publicly. The Consultant waives its rights to claim authorship of the works, to prevent its name from being used wrongly in connection with the works, and to prevent distortion of the works.

15. TERMINATION: The County shall have the right to terminate this Contract, with or without cause, by giving written notice to the Consultant of such termination and specifying the effective date thereof, which notice shall be given at least ten (10) days before the effective date of such termination. In such event, all finished or unfinished documents, data, studies and reports prepared by the Consultant pursuant to this Contract shall become the County's property. The Consultant shall be entitled to receive compensation in accordance with this Contract for any satisfactory work completed pursuant to the terms of this Contract prior to the date of notice of termination. Notwithstanding the above, the Consultant shall not be relieved of liability to the County for damages sustained by the County by virtue of any breach of the Contract by the Consultant.

16. NOTICES: Notices concerning termination of this Contract, notices of alleged or actual violations of the terms or provisions of this Contract, and all other notices shall be made as follows:

by the Consultant to:
Benjamin Pierce, P.E., Capital Improvement Projects Supervisor
Douglas County Department of Public Works
100 Third Street, Suite 220
Castle Rock, CO 80104
Phone: (303) 660-7490
E-mail: bpierce@douglas.co.us

with a copy to:
Douglas County Attorney's Office
100 Third Street
Castle Rock, CO 80104
(303) 660-7414
E-mail: attorney@douglas.co.us

and by the County to:
Randy Wampler, Senior Project Manager
RS&H, Inc.
4582 S. Ulster St., Suite 1100
Denver CO 80237
Phone: (303) 368-5452
E-mail: Randy.Wampler@rsandh.com

Said notices shall be delivered personally during normal business hours to the appropriate office above, or by prepaid first-class U.S. mail, via facsimile, or other method authorized in writing by the Authorized Representative. Mailed notices shall be deemed effective upon receipt or three (3) days after the date of mailing, whichever is earlier. The parties may from time to time

designate substitute addresses or persons where and to whom such notices are to be mailed or delivered, but such substitutions shall not be effective until actual receipt of written notification.

17. NONDISCRIMINATION: In connection with the performance of work under this Contract, the Consultant agrees not to refuse to hire, discharge, promote or demote, or to discriminate in matters of compensation against any person otherwise qualified, solely because of race, color, religion, national origin, gender, age, military status, sexual orientation, marital status, or physical or mental disability.

18. GOVERNING LAW; VENUE: This Contract shall be deemed to have been made in and construed in accordance with the laws of the State of Colorado. Venue for any action hereunder shall be in the District Court, County of Douglas, State of Colorado. The Consultant expressly waives the right to bring any action in or to remove any action to any other jurisdiction, whether state or federal.

19. COMPLIANCE WITH ALL LAWS AND REGULATIONS: All of the work performed under this Contract by the Consultant shall comply with all applicable laws, rules, regulations and codes of the United States and the State of Colorado. The Consultant shall also comply with all applicable ordinances, regulations, and resolutions of the County and shall commit no trespass on any public or private property in the performance of any of the work embraced by this Contract.

20. SEVERABILITY: In the event any of the provisions of this Contract are held to be unenforceable or invalid by any court of competent jurisdiction, the validity of the remaining provisions shall not be affected. Should either party fail to enforce a specific term of this Contract it shall not be a waiver of a subsequent right of enforcement, nor shall it be deemed a modification or alteration of the terms and conditions contained herein.

21. NO THIRD-PARTY BENEFICIARIES: The enforcement of the terms and conditions of this Contract and all rights of action relating to such enforcement, shall be strictly reserved to the County and the Consultant, and nothing contained in this Contract shall give or allow any such claim or right of action by any other or third person under such Contract.

22. ADVERTISING AND PUBLIC DISCLOSURE: The Consultant shall not include any reference to this Contract or services performed pursuant to this Contract in any of Consultant's advertising or public relations materials without first obtaining the written approval of the Douglas County Public Affairs Director. Nothing herein, however, shall preclude the transmittal of any information to officials of the County, including without limitation, the County Manager, Assistant County Manager, and the Board of County Commissioners. Notwithstanding the foregoing, upon completion of the project, Consultant shall have the right to accurately represent their role, contractual relationship, and work performed under this Contract in client proposals for the purposes of establishing work experience.

23. PRIORITY OF PROVISIONS: In the event that any terms of this Contract and any Exhibit, attachment, or other referenced document are inconsistent, the following order of priority shall control:

1st This Contract, Sections 1 through 28
2nd Request for Proposal (if applicable)
3rd Exhibit C- Insurance Requirements
4th Exhibit A- Scope of Services
5th Exhibit B- Method of Payment
6th Response to Request for Proposal (if applicable).

24. HEADINGS; RECITALS: The headings contained in this Contract are for reference purposes only and shall not in any way affect the meaning or interpretation of this Contract. The Recitals to this Contract are incorporated herein.

25. ENTIRE AGREEMENT: The parties acknowledge and agree that the provisions contained herein constitute the entire agreement and that all representations made by any commissioner, official, officer, director, agent or employee of the respective parties unless included herein are null and void and of no effect. No alterations, amendments, changes or modifications to this Contract, except those which are expressly reserved herein to the Authorized Representative, shall be valid unless they are contained in writing and executed by all the parties with the same formality as this Contract.

26. INSURANCE: The Consultant shall be required to maintain the insurance requirements provided in Exhibit C, attached hereto and incorporated herein by reference. The Consultant shall provide evidence that such requirements have been met and shall provide updated information to the County in the event any changes are made to the Consultant's insurance coverage during the term of this Contract.

27. COUNTY EXECUTION OF AGREEMENT: This Contract is expressly subject to, and shall not be or become effective or binding on the County, until execution by all signatories of the County.

28. FORCE MAJEURE: No party shall be liable for failure to perform hereunder if such failure is the result of *force majeure*. Any time limit shall be extended for the period of any delay resulting from any *force majeure*, or this Contract may be terminated if such delay makes performance of the Contract impossible or impracticable. *Force majeure* shall mean causes beyond the reasonable control of a party against which it would have been unreasonable for the affected party to take precautions and which the affected party cannot avoid even by using its best efforts, such as, but not limited to, natural disasters of overwhelming proportions, exceptional adverse weather conditions, acts of God, acts of war, strikes, work stoppages, fire or other catastrophic casualty or action of non-party government authorities.

IN WITNESS WHEREOF, the County and the Consultant have executed this Contract as of the above date.

RS&H, Inc.

BY: _____ **ATTEST: (if a corporation)**

Printed Name: George N. Tsiouvaras

Title: Senior Vice President **Title:** Vice President

DATE: June 29, 2026

Signature of Notary Public Required:

PAULA McMARTIN
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20114011679
MY COMMISSION EXPIRES 02/24/2027

STATE OF Colorado)
) **ss.**
COUNTY OF Douglas)

The foregoing instrument was acknowledged before me this 29th **day of** June **, 20**26**, by** George N. Tsiouvaras.

Witness my hand and official seal

Paula McMartin
Notary Public

My commission expires: 02/24/2027

BOARD OF COUNTY COMMISSIONERS OF THE COUNTY OF DOUGLAS

_____
, CHAIR **Date**

APPROVED AS TO CONTENT:

_____
DOUGLAS J. DEBORD **Date**
COUNTY MANAGER

ATTEST

_____
Deputy Clerk **Date**

DEPARTMENT OF PUBLIC WORKS ENGINEERING:

_____
JANET HERMAN, P. E. **Date**
Director of Public Works

APPROVED AS TO FISCAL CONTENT:

_____
Christie Guthrie **Date**
Director of Finance

APPROVED AS TO LEGAL FORM:

_____
Chris Pratt **Date**
Senior Assistant County Attorney

EXHIBIT A
TITAN ROAD & US 85
INTERCHANGE DESIGN

PROJECT NUMBER: CI 2026-012

Project Background

The primary objective of the project is to reconfigure the existing Titan Road & US 85 (Santa Fe Drive) interchange to accommodate the substantial traffic demands generated by ongoing development in the Chatfield Basin region. While the interchange reconfiguration is the central focus of this project, the project is also anticipated to include the widening of US 85 from Highlands Ranch Parkway south to the Titan Road interchange.

This project represents the implementation phase of recommendations established in the 2014 Northwest Douglas County Feasibility Study and the 2016 Planning and Environmental Linkages (PEL) Report. These studies concluded that the existing interchange configuration is insufficient to handle the long-term regional mobility needs of the corridor. While the PEL provided a general framework for certain design concepts, the surrounding land use and traffic demands have changed considerably since that study was conducted. As part of this project, the County desires a renewed evaluation of interchange concepts and configurations to meet the current and future needs.

To determine the most effective solutions for the interchange, the project team will need to conduct a new regional traffic study that will consider multiple land use considerations including ongoing development in Sterling Ranch, the County's Zebulon Sports Complex, and other regional growth that will affect traffic through the interchange.

Billing

RS&H will invoice Douglas County for hourly consultant support using the established category rates shown in Exhibit B. RS&H can request updates to the category rates on a yearly basis, at the discretion of the Douglas County Project Manager.

Task Order 01
Data Collection and Concept Development Phase

1. Project Management

The Consultant will be responsible for submitting invoices to the Douglas County PM as well as providing other project administration services throughout the project. The Consultant shall include a monthly summary report of the work completed in that pay period with the monthly invoices. The Consultant will be responsible for the day-to-day management and coordination of the tasks in the detailed Scope of Services and associated fee.

2. Meetings

Throughout the project, meetings will take place to coordinate work and design elements. Unless specified otherwise, these project meetings will generally include participants from the Consultant and Douglas County ("Project Team"). All project meetings shall be scheduled by the Consultant, and the Consultant shall be responsible for determining appropriate attendance from their team for the cost effectiveness of meetings.

Meeting agendas shall be prepared by the Consultant for all project meetings listed and shall be approved by the Douglas County PM prior to the meeting. The consultant shall be responsible for creating meeting minutes to detail the discussions, decisions, and resulting action items from each meeting. The Consultant shall distribute the meeting minutes to all attendees for review and input prior to issuing the final meeting minutes. It is anticipated that the meetings will take place at the Consultant's office (in the greater Denver area), Douglas County offices, at a CDOT facility, or through a virtual meeting software utilizing Microsoft Teams or other software approved by Douglas County.

Notice to Proceed Meeting

Upon receiving notice to proceed from Douglas County, the Consultant shall schedule a brief meeting to confirm the scope of work, discuss project schedule, request additional data, and confirm design-related issues and requirements.

Design Scoping Review (DSR) Meeting

Per the CDOT Local Agency Manual, a Design Scoping Review (DSR) Meeting shall be held with the Project Team and the assigned CDOT staff representatives. The Consultant shall schedule the Scoping Meeting within 3 weeks after Notice to Proceed has been given.

Project Meetings

The Consultant shall schedule project meetings every two weeks through FOR, and monthly thereafter to coordinate and discuss project status, project schedule, design decisions, and other coordination topics.

3. Survey & ROW Plans

This project and subsequent interim improvement projects require design survey and ROW plans. This scope includes survey for the Ultimate alternative development and interim widening of US 85 and Improvements to the ramps on the north side of the Titan Interchange, which are planned to be broken out as separate projects.

Project Control

The coordinate system will be Colorado State Plane - Central modified to ground utilizing the NAVD 88 Datum. HKS will recover NGS point designated as M 393 located just south of Titan Road and west of US Highway 85. This will be utilized as the project benchmark for the survey. HKS will utilize both Conventional and GPS methods for data collection.

Up to thirty (30) control points will be set up at five hundred (500) foot intervals on both the east and west sides of Hwy 85. Each control point will be a No.5 rebar with a cap. Control points will be set out of the proposed construction areas and will be inter-visible. HKS will run differential levels between these points to place differential elevations on the control points.

Topographic Survey

HKS will conduct a topographic survey suitable for design purposes for the project limits as defined above. HKS will also expand the limits to include the requested drainage areas along with nine (9) identified parcels that the ROW. Please see below for the limits provided.

HKS is proposing to use aerial mapping (Unmanned Aerial Vehicle) to acquire aerial photography along with Lidar data and supplementing this data with ground based scanning and conventional survey methods. This data will be processed, extracted, and compiled for use in an AutoCAD base drawing for the design team.

Traditional survey methods will be used to assist with both topographic features and the creation of the surface. Topographic features will include but not limited to fences, trees, concrete pads, sidewalks, buildings, miscellaneous structures, power poles, utilities, traffic striping, and telephone poles. Through both the Lidar data and the conventional surveys, HKS will locate any grade breaks, swales or topographic features that impact the drainage of the survey area.

HKS will perform the following task using conventional survey methods:

- Survey cross sections of the existing twelve (12) feet shoulder of both northbound and southbound of Hwy 85. The cross section will include the existing concrete edge of Hwy 85, the white stripe location of the adjacent travel lane and at the centerline of the existing shoulder. The cross sections will be at twenty-five (25) foot intervals.
- Scans of the Titan Road bridge over Hwy 85 and the Titan Road bridge over the existing BNSF & UP tracks, including the columns, bridge abutments, and the bottom of the girders.
- In depth survey of the intersection of the southbound off ramp at the east bridge abutment for the Titan Road bridge. This area has a settlement issue, and the survey will include the asphalt and the expansion joint to make a detailed surface to show the existing conditions of this area.
- HKS has included a limited budgeted for miscellaneous survey that the design team will require to support the proposed drainage areas and the proposed acquisition areas.
- Underground Utility Locates: Once HKS Utility Services designates the underground Utilities through the project area, HKS will survey in the marks and incorporate this data into the base drawing.

Utilizing the extracted topographic features from the Lidar data (both the aerial and ground based scans) along with the conventional survey data, HKS will process this data and a base

drawing in AutoCAD will be generated with the topographic features and a surface with one-foot contours.

At this stage, quality is controlled through our survey control network checks and by utilizing both our survey control and ground control for aerial operations. Quality is assured through review of our survey procedures and review of data sets for anomalous or irregular data points.

Traffic Control

HKS has assumed fifteen (15) days of traffic control along with five (5) traffic control plans for the required survey work on Hwy 85 that places the survey field crew near traffic on the highway. The survey of the existing Hwy 85 shoulder and the scanning of the bridge are two of the tasks identified that will require traffic control.

It is assumed that Douglas County will assist as needed with the permitting process with CDOT and that the cost of the permits will be waived. It is assumed that all survey work can be done during regular business hours and that all survey can be gathered without entering Railroad or other private property.

ROW Determination

HKS will review the public records for the project to determine the number and location of the monumentation that defines the ROW. These records include ROW plans, Subdivision Plats, Land Survey Plats, and deeds. After this research, HKS will draft the associated parcels both in the project limits and those that adjoin the defined limits for the generation of search coordinates for the recovery of existing monumentation. This monumentation includes section corners, reference monuments, and property corners. Once existing monumentation has been recovered, the data will be analyzed, and the right-of-way will be determined by one of HKS' Professional Land Surveyors. This linework will be inserted into the AutoCAD base drawing.

Producing any Land Survey Plats is not included in this scope of work.

Right-of-Way Plans

Once the ROW has been determined, HKS will prepare a set of Right-of-Way plans per the Colorado Department of Transportation (CDOT) specifications for the project. These plans will be signed and stamped by one of HKS's Professional Land Surveyors. It is assumed that required controlling section and property corners exist and can be recovered with minimal effort in order to determine the ROW.

Easements

HKS understands that the project will require easements – both temporary construction and permanent for acquisition. Once the design team has determined the limits of these easements, HKS will prepare a description and illustration for each easement to CDOT specifications. A total of eighteen (18) – nine (9) Temporary Construction and nine (9) Permanent easements are anticipated.

Title Commitments
HKS will acquire title commitments for the proposed nine (9) parcels that have been identified for ROW acquisition by the design team. The anticipated drainage ponds are located on the west side of the highway.

Geotechnical Boring Support
HKS will support Yeh with locating up to 50 potholes required for pavement design.

SUE Survey Support
Potholes: HKS survey will support HKS Utility Services for the pothole task for the SUE Investigation. Fifty (50) potholes are anticipated for the project. HKS has budgeted a total of four days – two to set the pothole locations and two to record the pothole locations once the utility has been exposed. This data will be provided to HKS Utility Services for the SUE Investigation.

Appraisal Staking
It is assumed that two (2) parcels will need to be staked. Once the ROW acquisitions have been determined, HKS will return when requested to stake the areas of acquisition for the stakeholders to see proposed acquisition in the field.

4. Subsurface Utility Engineering

The Consultant shall be responsible for producing subsurface utility engineering (SUE) plans in accordance with Colorado Senate Bill 18-167. All utilities present within the project limits shall be located at ASCE quality level B at a minimum. After initial data collection to obtain quality level B SUE data, the Consultant shall propose which, if any, utilities should be investigated to ASCE quality level A via test holes.

Currently, based on what is known, fifty (50) total standard test holes are estimated and included in the project, primarily for determining potential conflicts with updated drainage features. If Douglas County desires additional test holes to be performed, a contract amendment will be negotiated with the Consultant.

The Consultant is responsible for collecting SUE data and assembling plans with ample time to make critical design decisions relating to utility conflicts. The SUE utility plans shall consist of a tabulation of utility sheets, utility matrix sheets, and utility plan sheets.

The Consultant shall perform utility coordination activities with assistance from Douglas County PM.

5. Traffic Data Collection

The CDOT DSR meeting will confirm the scope of traffic data collection necessary to support the 1601 Process, locations of counts described below. RS&H will conduct field visits to better understand existing operations by collecting information like vehicle saturation flow, lane utilization, and other operational characteristics that are not captured though standard traffic counts.

Peak hour and daily traffic data collection will be conducted throughout and surrounding the study area. This effort will include 6 intersection peak hour count locations (two of which will

have 4-hour PM counts) done to capture school-related traffic patterns. Two of the six count locations will be re-counted during the summer (June-July) to help estimate/calibrate the share of trips associated with schools. In addition, there will be 16 locations with 24-hour hourly traffic counts. Intersection locations are listed below:

- All four sides of the US 85 & Titan interchange, including on and off ramps, and ramp intersections
- Moore Rd. And Titan Road
- Titan Road and Titan Circle
- Wadsworth and Waterton Rd
- US 85 and Highlands Ranch Parkway (to confirm potential capacity on north side)

Field traffic data will be taken by video to include sample "saturation flow rate" counts and calculations for key locations to calibrate Vistro and VISSIM models.

Crash data collection will be done with 5 years of crash data to be requested from CDOT for US 85 from Highlands Ranch Parkway south to ½ mile south of the Titan interchange. Crash data from the County will be reviewed for the Titan Road corridor. Crash data evaluation will be for concentrations or types of crashes that might indicate an unforeseen safety issue that can be corrected with the alternatives being developed.

6. Travel Demand Model and Concept Development

RS&H will customize a Travel Demand Model (TDM) that meets CDOT's and DRCOG's requirements for 2050 traffic forecasting in support of 1601 process. The model will also provide flexibility to test County-specific considerations, including sensitivity of traffic to land use assumptions.

Travel Demand Model

- Obtain the most current DRCOG Focus Model (Transcad) for the base year (2020 or 2025) and the Horizon year (2050).
- Obtain the travel demand model used for the Douglas County Transportation Plan Update and compare and compare the land use and network changes in our study area versus the DRCOG model.
- Verify the 2050 roadway network and land uses assumptions within the study area and confirm the 2050 conditions are acceptable with the stakeholders and for use in the official 1601 analysis and supporting documentation.
- Anticipated model revisions include modifying the facility type and capacity limits of the US 85 corridor north of the interchange to better reflect the operations and capacity limits of the recently completed widening and CFI project on US 85 from Highlands Ranch Parkway to C-470.
- Determine sensitivity inputs in coordination with stakeholders. Up to 3 sensitivity land use or roadway network changes scenarios will be modelled in addition to the official 1601 forecasts. Examples of sensitivity work may include: Widening of Titan Road to the west,

addition of a middle and high School in Sterling Ranch area, maximum residential buildout in Sterling Ranch area, etc.

- Land Use input data will be modified for the base-case model (2050 forecasts) to better reflect the forecasted development in the Sterling Ranch area. RS&H will coordinate with Douglas County Planning office to incorporate the County's land use information into the model. This may include a review of the recently completed Douglas County Transportation Plan model and confirmation of the land use inputs with the County staff.
- Vistro will be utilized to model trip generation in the Sterling Ranch area so that the land use can be revised and calibrated. This trip generation work will be manually transferred to the adjusted DRCOG Transcad model.
- Calibration and Post-Processing of the travel demand model runs to obtain 2050 peak hour traffic for analysis of the improvements needed at the interchange and on the Titan and US 85 corridors in 2050.
- "Model Runs" are defined for this scope as running the model, post-processing the outputs and utilizing the model run to create 2050 peak hour traffic for analysis. There may be multiple other runs of the model where the results and outputs are reviewed for reasonableness, then refinements adjustments made prior to making final model runs.
- Vistro will be used as the primary software to analyze intersections for the full range of interchange and intersection alternatives with the 2050 peak hour turning movements.
- Traffic analysis is described further in the 1601 section of the scope.

7. 1601 Process

The level of 1601 work is defined by Policy Directive, but can be refined in coordination with CDOT staff prior to initiating the work effort. By collaborating with CDOT early to confirm critical issues, it is anticipated that Titan Rd. would be classified as a Type 2a interchange modification which avoids the need for System Level Study and could be approved by the Regional Transportation Director. Type 2a includes minor interchange improvements, not on Interstate/Freeway System.

The primary steps we would use to obtain 1601 and NEPA clearances are:

Stakeholder Coordination: Early and ongoing engagement with CDOT, local agencies, and stakeholders, which is consistent with the team's approach to collaborative solution development for Titan Road.

2016 PEL: Determine relevant information from the 2016 PEL and clearances from prior US 85 corridor work that are still applicable, update as needed for use in this study

Alternatives Development, Evaluation, and Screening: The 1601 process requires an analysis of reasonable interchange alternatives that address the Goals and the Purpose and Need. The interchange layouts will be developed to an approximate 10% design level using aerial survey information. The design level will allow comparison of alternatives

against the evaluation criteria such as impact limits, cost estimating, assessment of environmental criteria, and visually clear to be understood by the stakeholders and the public.

The Consultant shall develop up to five (5) conceptual alternative designs based on future traffic needs and the goals set forth by the County. The current assumptions for 5 alternatives are listed below:

1. DDI using existing bridges (both inverted SB off ramp lanes or standard)
2. SPUI with existing or new bridges
3. Existing Tight Diamond with widened bridges as needed
4. Flyover to the south using old Titan alignment
5. Loop ramp in the southeast quadrant of the interchange, other associated improvements such as widening of bridges, revisions to ramps.

Common to all interchange alternatives would be widening of US 85 to 6 through lanes by the addition of a shoulder on each side of the highway, converting the existing 12' concrete shoulder to become lanes 5 and 6. This widening is anticipated to be a standalone construction project that may be combined with other near term interchange construction elements depending on schedule alignment.

Titan Road Alternatives: Develop up to 3 alternatives for the Titan Road corridor west of the interchange, including the Moore Rd intersection. The following intersection types will be considered:

1. Standard widening with 3-lanes each way using existing bridges and most of existing pavement
2. "Florida T" with WB traffic continuous through signal
3. CFI with WB lefts and NB rights using CFI lanes, maintain existing Plum Creek bridge .

The alternatives screening process will screen the range of alternatives described above down to the preferred alternative(s) for the interchange, for Titan Road west, and for US 85 widening. The process will be:

- Guide the stakeholders through an alternatives screening process based on comparing alternatives against project specific evaluation criteria:
- Project and location specific evaluation criteria to be developed during the stakeholder meetings
- The screening process will be guided by the Consultant with decisions on screening made by the stakeholders based on technical information provided by the Consultant. The information will be presented in an evaluation matrix that allows a comparison of alternatives against each other for each evaluation criteria.
- As the number of potential alternatives is reduced during the progression towards a Preferred Alternative, Alternatives will be refined, modified, combined, or other adjusted as necessary to respond to technical challenges or stakeholder concerns.

Traffic and Operational Analysis: For the comparative analysis of the 5 interchange alternatives and 3 Moore Road alternatives, Vistro will be utilized for the comparative analysis of the multiple alternatives. As lesser alternatives are screened out and a preferred alternative is defined, VISSIM will be utilized for detailed traffic analysis depending on what critical issues need evaluation. VISSIM will be used if there are issues such as queuing at ramp metering, queuing between signals, or on and off ramp merge / diverge / weaving on US 85 need additional analysis.

Phased Implementation and Cost Efficiency: The 1601 process allows for phased implementation and cost-effective alternatives, to prioritize immediate needs at Titan Road and remain flexible to easily modify roadways if warranted in the future. Opportunities for phased implementation for the primary interchange will be included as part of the screening criteria. Utilize traffic model sensitivity analysis to determine when triggers would be met to implement incremental pieces of the Preferred Alternative.

Documentation and Approval: All concepts for the interchange and US 85 components of the project, including innovative or value-engineered solutions, will be clearly documented and justified within the 1601 submittal, providing transparency and regulatory compliance. Improvements at Titan Circle and at Moore Rd and other non-CDOT locations will be included in the documentation but are not subject to CDOT approval.

Minor Interchange Modification Report (MIMR): Based on recent projects with CDOT, it is anticipated that a MIMR document for FHWA will need to be prepared for the preferred alternative for this interchange. This document would be a brief 2-3 page cover letter supplemented by the traffic analysis done as part of the 1601 work.

8. NEPA

The concepts for interim and ultimate interchanges by RS&H are anticipated to fall within the Documented Categorical Exclusion category of NEPA. The first step in this process would be to set up a scoping meeting with CDOT to confirm the approach. Key resources anticipated to be impacted by the project include:

- historic resources (including Section 4(f)) our team expects to make an initial eligibility determination for the railroad that would be formally consulted later as part of agency-to-agency consultation
- noise; non-historic Section 4(f) resources (e.g., parks/trails); identify sensitive noise receptors within the prescribed noise analysis zone, and noise modeling would be completed once the design is stable regarding the edge of travel
- hazardous materials there may be polluted ground water and or materials from prior property uses in the area. Borings done for geotechnical investigation will include monitoring pollutants
- Transportation resources will be extensively evaluated as part of the travel demand model and traffic analysis for alternatives in the 1601 process.

9. Public Involvement

Public Involvement for the NEPA/1601 process and two improvement projects are included in this scope of work. These projects include widening on US 85 from Highlands Ranch Parkway to Titan Road and Titan Road interchange improvements.

RS&H' team will develop a comprehensive strategic public involvement plan (PIP) that increases awareness of the benefits of the project and allows input on the preliminary and final designs. This will comprise of:

- Developing PIP
- Developing and updating project key messages as needed
- Maintaining a contact/outreach tracker spreadsheet

Anticipated meetings:

- Project kickoff meeting - once
- Two week CIG/Douglas County comms meetings (24 meetings)
- County/CDOT PM Meetings (Monthly, Conference call) (12 meetings)
- Internal coordination meetings –weekly (32 meetings)
- Weekly owners meeting – weekly (includes preparation) (24 meetings)
- Stakeholder work group meetings – quarterly (includes preparation and facilitation) (7 meetings)

Collateral and Graphics will include the following:

- Develop PIO, stakeholder and elected official updates as needed
- Develop mailers, contact cards, project maps/renderings and other collateral items
- Draft social media posts, press releases and other updates as needed
- Advertise for two virtual open houses/ public meetings
- Prepare materials for virtual open houses and public meetings
- Ensure all digital collateral is ADA compliant

Outreach to the general public, affected businesses and residents, major stakeholder and elected officials will comprise of:

- Establish a project hotline and email and monitor it each business day
- Draft monthly website updates
- Prepare for and facilitate two virtual open houses/ public meetings
- Send monthly email updates

Additional costs other than labor that are included in the fee:

- Establish a project hotline and email and monitor it each business day
- Draft monthly website updates
- Prepare for and facilitate two virtual open houses/ public meetings
- Send monthly email updates

10. Design 30% of Ultimate Solution

The preferred alternative for the Ultimate Solution at the Titan Road Interchange will be taken to 30% design level for Roadway, Structures, and Drainage to establish geometry and profiles, girder design (vertical clearance), and preliminary drainage design. This design is intended to be used to confirm that interim improvements can be tied into the ultimate solution to minimize waste. It is assumed that widening of the Railroad bridges (Structure Numbers DOU007-05.55 and DOU007-05.95) will not be required and not included in this scope.

Traffic

Design will include preliminary signal design layouts, major signing and striping and MOT phasing roll plots.

Drainage

A preliminary drainage design (approximate 30 percent level) of the ultimate interchange is included in this scope. A drainage plan set with quantity tabulations will be produced based on the preliminary ultimate roadway design and grading. The ultimate layout will be schematic. Assumptions will be made for storm sewer system size, depth, and capacity. The ultimate preliminary design will make conservative assumptions, when necessary, with the best available information to identify compatibility and fatal flaws with the Titan Road interchange improvements proposed in this scope. Preliminary calculations for the ultimate Water Quality pond are included in this scope. Development of a SUDA or StormCAD model is not included in this scope. Drainage profiles, drainage details, ditch design, and calculations are not included in this scope. Detailed grading or design of pond structures for the ultimate condition is not included in this scope. If retaining walls or additional infrastructure is needed to obtain required storage volumes they will be discussed in the preliminary drainage memo for the ultimate condition but not designed as part of this scope.

Roadway

Design will include preliminary Title sheet, geometric control, roadway plans and profiles, typical sections, grading, and cross sections.

Major Structure Design

A preliminary design of the ultimate interchange structure is included in this scope. The following scope elements are included:

- Develop 10% design of up to 5 alternatives for traffic evaluation and cost development
- Develop preliminary design and Structure Selection Report of one preferred alternative
- Develop preliminary quantities and cost estimates for 5 alternatives.

The Structure Selection Report (SSR) will be developed in accordance with the CDOT Bridge Manual. The initial draft SSR will be submitted just to Douglas County. After the County's initial review, the SSR will be submitted to CDOT Staff Bridge for review and approval prior to

the FIR meeting.

Two virtual meetings with the Consultant, Staff Bridge and the local agencies are anticipated and included in the scope of work.

Geotechnical

A geotechnical subsurface investigation is not included in this scope for the 30%-level design of the ultimate interchange reconfiguration. It is assumed that the existing geotechnical information is adequate to provide geotechnical recommendations.

Schedule

The schedule is estimated to be 12 months from notice to proceed.

Deliverables

Project Control Diagram
Topo Survey
Ownership Map
Right of Way Plans
Title Commitments
Travel Demand Model
Preferred alternative based on 1601 and NEPA process development, evaluation, and screening.
Public Involvement Plan
Design (30% level) of Ultimate Solution

Task Order 02
US 85 Widening
Preliminary and Final Design Phase

1. Project Management

The Consultant will be responsible for submitting invoices to the Douglas County PM as well as providing other project administration services throughout the project. The Consultant shall include a monthly summary report of the work completed in that pay period with the monthly invoices. The Consultant will be responsible for the day-to-day management and coordination of the tasks in the detailed Scope of Services and associated fee.

2. Project Meetings

Throughout the project, meetings will take place to coordinate work and design elements. Unless specified otherwise, these project meetings will generally include participants from the Consultant and Douglas County (Project Team). All project meetings shall be scheduled by the Consultant, and the Consultant shall be responsible for determining appropriate attendance from their team for the cost effectiveness of meetings.

Meeting agendas shall be prepared by the Consultant for all project meetings listed and shall be approved by the Douglas County PM prior to the meeting. The consultant shall be responsible for creating meeting minutes to detail the discussions, decisions, and resulting action items from each meeting. The Consultant shall distribute the meeting minutes to all attendees for review and input prior to issuing the final meeting minutes.

It is anticipated that the meetings will take place at the Consultant's office (in the greater Denver area), Douglas County offices, at a CDOT facility, or through a virtual meeting software utilizing Microsoft Teams or other software approved by Douglas County.

Project Meetings
The Consultant shall schedule project meetings every two weeks through FOR, and monthly thereafter to coordinate and discuss project status, project schedule, design decisions, and other coordination topics.

Environmental Clearance Kickoff Meeting
Per the CDOT Local Agency Manual, environmental clearance shall be obtained from CDOT prior to the plans being approved for construction. The Consultant shall attend a meeting with Douglas County staff and the assigned CDOT representatives to review the environmental clearance requirements which is anticipated to occur before the FIR meeting.

ROWPR Meeting
The CDOT Local Agency Manual requires a formal Right-of-Way Plan Review (ROWPR) meeting to obtain the ROW clearance needed for plans to be approved for construction. The Consultant shall plan on attending one ROWPR meeting with Douglas County staff and the assigned CDOT representatives to discuss the ROW

clearance sometime between the FIR and FOR meetings.

FIR Meeting
Per the CDOT Local Agency Manual, a Field Inspection Review (FIR) meeting shall be held with the Project Team and the assigned CDOT staff representatives. Following the FIR meeting, the Consultant shall use a comment resolution form to track and resolve outstanding project design issues and hold a virtual comment resolution meeting approximately four to six weeks after FIR.

The Consultant shall submit electronic PDF drawings of the FIR plans and cost estimate to the County a minimum of 30 working days in advance of the meeting to allow for review. The primary purpose of the FIR meeting is to finalize the project limits for ROW and Environmental review purposes; and confirm/discuss the primary design elements of the plans and discuss the FIR-level engineer's opinion of probable cost (OPC). Bluebeam session for comments resolution.

Public Meeting
Per the CDOT Local Agency Manual, a public meeting shall be held to communicate details of the project.

FOR Meeting

Per the CDOT Local Agency Manual, a Final Office Review (FOR) meeting shall be held with the Project Team and the assigned CDOT staff representatives. Following the FOR meeting, the Consultant shall use a comment resolution form to track and resolve outstanding project design issues; and hold a virtual comment resolution meeting approximately four to six weeks after FOR. These comments shall be reflected on the plans and memorialized in project meeting minutes. Bluebeam session for comments resolution.

Based on the level of design completed for the FIR plans, the FOR plans are expected to be advanced to a 90% design level. The Consultant shall submit electronic PDF drawings of the FOR plan, specification, and estimate (PS&E) documents to Douglas County for a minimum of 30 working days in advance of the meeting to allow for review. The primary objective of the FOR meeting will be to discuss any proposed changes or concerns with the PS&E documents prior to advertising the project for construction bids.

3. Environmental Clearance

Public Involvement Meeting Support

Pinyon will provide GIS mapping and language pertaining to the Purpose and Need as well as screening for incorporation into public meeting materials that will be created by RS&H and CIG. One Pinyon team member will attend two meetings.

Air Quality

Based on project review, a conformity analysis will be required as the project location is in the Denver/Front Range ozone nonattainment area. Pinyon will document the conformity findings in an air quality technical report that complies with CDOT's Air Quality Project-Level Analysis Guidance. This scope does not include a quantitative analysis for greenhouse gas (GHG) emissions as we assume that the project is exempt. Pinyon assumes a single meeting with CDOT to confirm quantitative analysis for GHG is not required. If required, a change order can be submitted to complete the GHG task.

Noise

Based on review of the project, it is likely that the criteria will be met that would classify the proposed action as a Type I project. Therefore, a detailed noise analysis, to include the collection of noise measurements and noise modeling, will be required. Pinyon will coordinate with the appropriate entities to agree upon noise measurement and receiver locations prior to performing measurements and modeling.

Pinyon will perform the noise analysis in accordance with all applicable highway traffic noise regulations, requirements, and guidelines. All findings will be documented and presented in a technical report that meets Noise Analysis and Abatement Guidelines (NAAG). This scope includes two rounds of review of draft reports by appropriate entities after which Pinyon will revise the report and submit the final noise technical report.

Based on review of the project, there is the possibility for impacted noise receptors. This scope includes the analysis of up to 3 barriers, including a feasibility assessment, and final noise barrier dimensions for inclusion with the design. The analysis does not include a benefit receptor survey.

So that Pinyon can properly perform the Type I noise analysis, the following information needs to be provided to Pinyon by the RS&H before Pinyon can begin the analysis:

Traffic volumes for existing conditions, the no-action alternative (if applicable), and future conditions action alternative(s).

1. The traffic volumes needed should be broken down to numbers of automobiles and light duty vehicles, medium trucks (all vehicles with two axles and six tires), and heavy trucks (three axles or greater). If classification data wasn't collected, a general assumption is needed at least on percent truck traffic.
2. A comprehensive traffic study if completed will provide most traffic information needed and could be provided instead of above.

Hazardous Materials

Pinyon will complete a Form 881, which will include an agency database (i.e., ERIS) review. The database will be secured by Pinyon. The Study Area will be the project's limits of disturbance. Ideally, the design team will have identified the horizontal and vertical limits of disturbance, including all right of way (ROW) and easement requirements. No soil or water testing is anticipated at this time (if determined necessary, a change order

would be required).

Biological Resources

Field Work:
The field survey will be completed by one Pinyon biologist in a one-day period. Field surveys for biological resources will be completed concurrently, as noted in the following subsections. Geographic Information System (GIS) data will be post-processed by a GIS specialist, and provided for incorporation into the project plans, and for impact analysis during advanced design, as applicable. GIS data will be projected in the local State Plane coordinate system. RS&H will calculate impacts using the provided GIS data.

Wetlands/ Waters of the US:
Pinyon will complete a wetlands/waters of the U.S. delineation, if any, in accordance with US Army Corps of Engineers (USACE) and CDOT protocols, where disturbances are expected (e.g., within the project footprint, and along presumed access/haul roads and staging areas). RS&H will provide these study areas prior to field surveys. Fees for the survey equipment (e.g., GPS receivers, waders, forms, camara's) are included with the field work task.

Pinyon will document the existing conditions regarding waters of the U.S., including wetlands, in the Biological Technical Memorandum (BTM). Impacts to wetlands/waters of the US, are presumed to be minimal. Therefore, it is assumed that impacts will be permitted under a USACE Nationwide Permit (NWP) (likely NWP 14 for Linear Transportation Project). Pinyon will draft a Pre-construction Notification (PCN) for submittal to the USACE.

CDOT mitigates permanent wetland impacts regardless of USACE jurisdiction on a 1:1 basis. It is assumed that mitigation (if required) would occur via wetland banking, purchased by the County. The cost for banking in not included in our fee. If mitigation on-site is desirable, Pinyon does offer full- service wetland mitigation design services; however, additional fee would be required for mitigation design support.

To provide the USACE with a complete submission package, Pinyon may require information from CDOT regarding compliance with the Endangered Species Act and/or Section 106 of the National Historic Preservation Act.

An Individual Permit is assumed not required.

It is assumed that impacts to wetlands will be minimal and a Wetland Finding will not be required for this project. If permanent wetland impacts are greater than 500 square feet (SF) (or combined temporary and permanent impacts greater than 1,000 SF), then a

Wetland Finding will be required and additional scope and fee will be required.

Vegetation and Noxious Weeds

List A and B noxious weeds will be mapped, as applicable (i.e., if located in discrete locations); however, if the density of weeds is significant, detailed mapping will be stopped and recommendations regarding weed controls will be presented in the BTM as well as applicable specifications. It is assumed that an Integrated Noxious Weed Management Plan (INWMP) will not be required for this project. If an INWMP is needed, additional scope and fee would be required.

SB 40 Resources (SB 40):

Pinyon will evaluate SB 40 resources within the study area and will map SB 40 resources (riparian trees and shrubs) concurrently with the wetland field survey. GIS shapefiles will be provided to RS&H for impact analysis during advanced design. Pinyon assumes that the client will calculate SB 40 impacts using the provided GIS data.

Because the magnitude of impacts to SB 40 resources is anticipated to be minor, it is assumed that a Programmatic SB 40 Certification will be required. Pinyon will prepare the Programmatic Certification documents for CDOT to submit to Colorado Parks and Wildlife (CPW). If onsite mitigation is required, it is assumed that RS&H will develop the Landscape Plans and Pinyon will provide support in the form of recommendations for plant species and spacing. If the level of impacts is greater than anticipated and a Formal SB 40 Certification is required, additional scope and fee would be necessary.

Threatened and Endangered Species/ Fish and Wildlife

Pinyon will conduct a survey for raptors and other migratory birds within the study area per Colorado Parks and Wildlife (CPW) guidelines. The results of the survey will be documented in the BTM. Pinyon will evaluate habitat within the study area for federally and state-listed species, and document within the BTM. Only a habitat assessment will be conducted; a species-specific survey is not included in this scope. If a species-specific survey is required, additional scope and fee would be necessary. Given the anticipated limited disturbance that will result from the project, Pinyon assumes that the impact assessment will reveal a No Effect to federally listed species. Therefore, coordination with the US Fish and Wildlife Service (USFWS) is not anticipated to be required. If the effects determination is May Affect, But Not Likely to Adversely Affect, coordination with USFWS in the form of a letter would be required, and additional scope and fee would be necessary.

Historic Resources

Pinyon will develop an Area of Potential Effects (APE), in coordination with CDOT. It is assumed that the APE will surround the estimated limits of disturbance, as well as all properties that will be impacted by the project (i.e., new ROW acquisitions or easements). Once the APE is established, Pinyon will research the Office of Archeology and Historic Preservation (OAHP) COMPASS database, the CDOT Historic Bridge Inventory,

topographic maps, and local assessor data for the presence of potential historic resources within the APE.

Preliminary review of the corridor indicates substantial development has occurred in the last 20 years. There are 2 linear resources that will need to be surveyed for compliance with Section 106 of the National Historic Preservation Act (NHPA). US 85 itself will also need to be evaluated as a linear resource.

Additionally, Pinyon estimates up to five potential historic architectural resources (properties with structures older than 50 years) may be identified for evaluation. If more than five potential historic properties will be impacted (including temporary and permanent easements), this scope and fee should be revised.

Pinyon will coordinate level of effort for evaluation with the CDOT Historian and provide documentation for compliance with Section 106 and historic Section 4(f), including historic site evaluation forms; eligibility and effects letter; APE map; and historic Section 4(f) de minimis form(s).

Assumptions:

- Up to 5 Architectural Inventory Forms
- Up to 2 Management Data/Linear Component Forms
- Eligibility and Effects Letter
- Up to 2 Section 4(f) De Minimis Forms
- Any Right of Entry will be coordinated and provided by the RS&H or the County.
- This scope assumes a Section 106 determination of no adverse effect; should the project result in a determination of adverse effect, this scope will need to be revisited and additional fee will be required.
- Should more than 8 resources for historic survey be identified, this scope will need to be revisited.

<u>Archaeology Resources</u>

Pinyon will conduct a Class III cultural resources inventory within the established Area of Potential Effects (APE or inventory area). Prior to conducting fieldwork, a file search will be conducted of the inventory area and a surrounding one-half-mile buffer area for previously documented historic and archaeological resources. The file search will include, at a minimum, a search of the OAHP COMPASS database, the National Register of Historic Places, general land office plats, historic USGS topographic maps, and aerial and topographic maps.

A permitted archaeologist will complete a Class III pedestrian survey of the inventory area to identify and document cultural resources. No archaeology resources are anticipated within the project APE that will require documentation. The results of the Class III inventory

will be documented to agency and Colorado OAHP reporting standards and guidelines using appropriate reports and forms as necessary.

Assumptions:

- Any Right of Entry will be coordinated and provided by the RS&H or the County.
- Agency oversite will be limited to CDOT and Colorado OAHP.
- Ground surface visibility requiring snow-free conditions.
- No archaeology resources requiring documentation will be identified. If archaeology resources are identified, they will require documentation, and this scope will need to be revisited, and additional fee will be required.

Non-historic Section 4(f) Resources

The Department of Transportation Act Section 4(f) regulation governs the use of land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public or private historic sites. As this project has a DOT nexus, Section 4(f) will apply.

Temporary use of the Chatfield State Park, Highline Canal Trail, and the Chatfield East Park, all of which are Section 4(f) resources, could be required during project construction. Pinyon assumes this use of the 4(f) resources can be cleared by applying a Temporary Occupancy Exception as defined under Section 4(f) of the Department of Transportation Act. Approval of this Exception must be granted by the Official with Jurisdiction (OWJ). Further, a plan must be prepared that keeps the resources open at all typical times that they operate (temporary detour) during construction.

Pinyon will prepare a draft Temporary Occupancy OWJ letter with information provided by RS&H regarding design and temporary impacts. Any use of Section 4(f) resource requiring evaluation other than an exception would require additional scope and fee.

Environmental Summary Memorandum

Pinyon will prepare an Environmental Summary Memorandum denoting the clearance actions, existing conditions, and impacts by resource, for submittal to CDOT's Environmental Project Manager. The technical studies (and CDOT's internal clearances) will support this memorandum and the overall CE clearance of this project.

Resources CDOT will complete or that are not anticipated to be required include:

- Section 6(f)
- Paleontology
- Visual Impact Analysis
- Community Impact Assessment

4. Survey & ROW Plans

Survey and ROW for this project is included in TO1.

5. Right-of-Way Acquisition

Title: Review Title reports to verify ownership entity and identify any defects in title, liens, encumbrances or deeds of trust that may need to be addressed prior to closing the acquisition.

Valuation: WSLS has included a cost to subcontract with an independent third-party eminent domain appraiser for our two initial offers if necessary. If valuations are under $15k, an in-house waiver valuation can be utilized at a rate provided in the fee estimate.

Preparation of Documentation: Western States will work with the County to prepare the necessary notices, offers or final offers. We anticipate using standard County conveyance documents. All documents shall be reviewed and approved by the County before we use them. Our staff will use the templates approved by the County to prepare landowner specific packets. We assume we will use a statutory acquisition process and will ensure that our acquisition efforts meet all of the requirements for good faith negotiations.

Negotiations: Once Notices/Offers have been issued, Western States will attempt to meet with each property owner and/or their representatives in an effort to establish "good faith" negotiations and resolve the acquisition by voluntary settlement. Typically, federal and CDOT policies require that the negotiations remain open for at least 30-days in order to allow a reasonable opportunity for the property owner to consider and negotiate the County's Offer. During these negotiations, we will maintain current communication with the County regarding the status of the negotiations and any issues that may arise. At the conclusion of the 30-day negotiation period, in the event any right of way remains to be acquired, we will review with the County the status of the negotiations and the potential to obtain same through continued voluntary negotiations. A Final Offer may be issued at this time. If we believe that the negotiations are reaching a point of impasse with any particular property owner, we will review the specific circumstances with the County and request guidance as to whether or not the County wishes to pursue the acquisition of the right of way and/or easements through condemnation or consider alternatives. When appropriate, we can request that a property owner consider an interim Possession Agreement that will provide the County with the rights to occupy the area necessary for the project construction while negotiations continue.

Closings: Upon obtaining executed Agreements, the documentation will be forwarded for final review and approval by the County. Executed IRS W-9 forms will accompany signed Agreements from the property owners in order to facilitate payment requests. Upon acceptance of executed Agreements with property owners by the County we can act as the County's Agent for final closings or; if the County prefers to obtain title insurance, we can coordinate the closings with the title company. All closing fees will

be paid directly by the County.

Condemnation: If it is determined that the County must seek acquisition of any of the right of way and/or easements through condemnation, Western States will be available to provide support to the County's legal counsel and testimony in District Court relative to our negotiations, to provide for immediate possession of necessary property interests.

It is assumed that the County will provide legal assistance and advice relating to matters that may be raised during the negotiations, including contracts, contractual terms, etc.

6. Public Involvement

Public Involvement for this project is included in TO1

7. Railroad Coordination

The Railroads will be notified of the project, but no additional Railroad Coordination is anticipated for the US 85 Shoulder widening project.

8. Subsurface Utility Engineering and Utility Plans and ITS

SUE for this project is included in TO1

SUE Utility plans shall be included in FIR, FOR, and the final construction plans.

The Consultant shall perform utility coordination activities with assistance from Douglas County PM.

The Consultant shall coordinate with both CDOT and Douglas County regarding integration with their respective Intelligent Transportation Systems (ITS).

Along US 85, the Consultant shall coordinate directly with CDOT and complete the required System Engineering Analysis (SEA) documentation to ensure the project is consistent with applicable ITS architectures and incorporates all planned or potential ITS devices identified in the applicable master plans.

Street lighting exists at the north and southern ends of the project, but no street light design or modifications are anticipated.

9. Traffic Design

Traffic Control plans shall be developed to accommodate the phasing and traffic control needs during construction. The phasing approach to constructing the project will emphasize maintaining existing traffic capacity, safe speeds and intersections, and maximizing the work area behind concrete barriers.

Traffic control will be implemented on US 85 between Titan Parkway and Highlands Ranch Parkway to support construction activities associated with the addition of an

auxiliary travel lane and potential modifications to the existing drainage system. The work is anticipated to be completed primarily through lane shifts and overnight lane closures. Full closures of US 85 are not anticipated as part of this project.

10. Roadway Design

Roadway design will be conducted by, or under the direct supervision of a Colorado licensed registered professional engineer, in accordance with AASHTO methodologies, CDOT standards, CDOT's Access Code, the MUTCD, AASHTO's Roadside Design Guide, and CDOT's Region 1 Lane Closure Strategy. Design Criteria will be submitted to Douglas County and CDOT for US 85 for concurrence prior to commencing design work.

11. Drainage, Permanent Water Quality, and Stormwater Management Plan (SWMP)

Drainage design for the US 85 Widening project will be conducted by, or under the direct supervision of a Colorado licensed registered professional engineer, in accordance with the current CDOT Drainage Design Manual dated 2019, CDOT standards, and relevant FHWA (Federal Highway Administration) applicable Hydraulics Engineering Circulars. Water Quality will follow CDOT MS4 guidance and current MHFD (Mile High Flood District) design criteria. Design criteria will be submitted to Douglas County and CDOT for Titan Road concurrence during the FIR design phase.

A. Existing Analysis

Initiate and review the drainage survey and SUE for completeness. The consultant may require additional survey for drainage design that is not included in this scope. Evaluate existing hydrology limited to one basin delineation per existing outfall for up to three outfalls. Preliminary coordination with the High Line Canal irrigation company and floodplain review. The scope assumes no railroad impacts or associated coordination.

This scope assumes no impact to FEMA floodplains. A brief summary of no impact will be included in the drainage report. Obtaining a Floodplain Development Permit (FDP) is excluded from the scope.

B. Proposed Design

Proposed hydrology and hydraulics modeling for proposed storm sewer roadway networks along the US 85 Widening area. Drainage design will be modeled and evaluated utilizing Bentley OpenRoads. Design includes hydraulic analysis of structures, channels and outfalls to meet the governing standards and criteria.

C. Drainage Plans

The drainage plan package includes a maximum of one general notes sheet, two tabulations, nine drainage plan sheets, nine drainage profile sheets, six ditch table sheets, two ditch detail sheets, four typical drainage detail sheets, three special drainage detail sheets, and two grading detail sheets. At preliminary design the FIR

Drainage Plan package will only include general notes, tabulations, and drainage plan sheets. Drainage Plan deliverable milestones include client comment/review periods at FIR, FOR and the 100% design phases. An analysis of four outfall for the proposed storm system runoff conveyance for the US 85 Widening project is included in this scope.

D. Stormwater Management Plans

The SWMP will be required for environmental clearance at the FOR plan submittal. It is anticipated that all disturbed soil will be stabilized with a native seed mix. It is assumed that native seeding will be used to revegetate disturbed areas; and except for other typical slope stabilization items, no other landscaping or irrigation materials are anticipated.

The SWMP plan package includes the Stormwater Narrative Text for an area greater than one acre disturbance, nine initial phasing plans, nine interim phasing plans, nine final phasing plans and four detail sheet.

E. Water Quality

Coordination with CDOT is anticipated as they have jurisdiction over areas of the proposed construction. The need for water quality mitigation to treat the stormwater runoff shall be evaluated as part of this task. The findings and recommendations of the drainage investigation shall be summarized in the drainage report. This scope assumes the MS4 requirements for water quality will be triggered, pre/post analysis to evaluate downstream impacts and need for attenuation at a maximum of three outfalls, and design for a maximum of three Permanent Water Quality (PWQ) Structure.

Water quality design includes WQCV (Water Quality Capture Volume) volume and detail calculations, pond structure sizing and design, pond grading, pre/post analysis for two attenuation/detention structures and a PWQ plan package that includes a pond grading sheet, pond profile, and pond structure details for each PWQ Structure. PWQ structure details will not be provided until the FOR submittal.

F. Drainage Report

A drainage report is required for this project and shall identify additional impervious areas associated with the proposed improvements. The drainage report will contain the following:

- Soil Survey This scope assumes that soil tests were completed during the previous design project and will not be completed again for this project. Information about soils will be obtained utilizing the USDA's NRCS Web Soil Survey.
- Existing Hydrology – This scope assumes that existing hydrology previously completed will be reviewed to determine existing flow patterns and release rates for the project. The existing hydrology evaluation and calculations will be limited to one basin delineation per existing outfall.

- Proposed Hydrology – Rational Method will be utilized for onsite basins that are under 100 acres in size. Basins will be updated as design progresses.
- Existing Hydraulics – This scope includes analysis of no more than two culvert crossings as part of the pre/post conditions analysis.
- Proposed Hydraulics – Storm networks for roadway drainage will be modeled and evaluated utilizing Bentley OpenRoads. Design will include hydraulic analysis of structure elevations, flowlines, water surface profiles, velocity, capacity, spread, and Hydraulics Grade Lines (HGLs).
- A pipe selection memo to meet CDOT's pipe material selection policy.

G. Cost Estimate

A cost estimate will be provided at each deliverable milestone including FIR, FOR, 100% and AD design phases.

H. Operation and Maintenance Plans

Operation and Maintenance Plans are a CDOT requirement for PWQ structures and will be developed during the late phases of design after the PWQ designs have been finalized.

I. Exclusions

This scope of work assumes the drainage infrastructure is gravity driven and can be designed and implemented without special consideration for significant groundwater exfiltration. If high groundwater is encountered that requires specialized design or drainage infrastructure (e.g. pump stations, permanent dewatering system, impermeable channel liners, etc.), additional scope and fee will need to be negotiated.

12. Geotechnical and Materials Engineering

It is assumed that no new retaining walls or modifications will be required to widen US 85.

It is assumed that the pavement design and pipe selection reports for both the US 85 Widening project and the interchange are combined and that separate reports will not be required.

<u>Pavement and Pipe Selection Geotechnical Subsurface Investigation</u>

The pavement field investigation will support pavement design for the addition of 10-foot shoulders along US 85 from Highlands Ranch Parkway to Titan Road ramps (approximately 2 miles in length). The pavement investigation will also acquire subsurface information required for pipe selection.

1. Coordinate with the design team on roadway widening areas and proposed pipe locations.
2. Perform a geotechnical site reconnaissance, including a site visit to evaluate existing conditions, confirm access for drilling operations, identify surface features, and pre-mark proposed boring locations.

3. Obtain all necessary right-of-entry agreements, permits, and clearances required to perform the work, including utility locates and applicable CDOT permits (e.g., Special Use Permit).
4. Conduct a geotechnical subsurface investigation in general accordance with the current CDOT Pavement Design Manual and CDOT Field Materials Manual.
    A. Borings will be spaced to characterize subsurface conditions and define representative pavement design segments based on observed variability.
    B. For estimating purposes, we assume approximately 50 borings along the 2-mile corridor (nominal spacing of approximately 500 feet), with adjustments made in the field based on subsurface conditions.
    C. Borings will extend to an average depth of approximately 10 feet below existing ground surface or deeper as needed to adequately evaluate subgrade support conditions.
    D. Obtain approximately 10 pavement cores to determine existing pavement thickness and section composition.
    E. All boring and core locations are assumed to be accessible using a truck-mounted drill rig within CDOT right-of-way. All borings will be reclaimed to a condition acceptable to CDOT per the Special Use Permit
    F. Traffic control will be required within the travel lanes and shoulders as acceptable to CDOT and in conformance with the MUTCD. We assume nighttime closures will be required.
    G. Perform soil sampling and logging in accordance with CDOT protocols.
    H. Classify subsurface materials and document groundwater conditions, if encountered.
    I. Measure and record existing pavement and base course thicknesses at core locations.
5. Collect representative soil samples for laboratory testing to evaluate engineering properties relevant to pavement design and pipe selection reporting. Laboratory testing will be assigned in accordance with the CDOT Pavement Design Manual and Field Materials Manual.

PAVEMENT DESIGN AND RECOMMENDATIONS

1. Design feasible alternatives for the pavement section utilizing the previously collected subsurface investigation and laboratory test results. Design will utilize the current version of the ME Design for CDOT. Existing pavement rehabilitation and preferred pavement designs will be considered.
2. Prepare and submit a draft Preliminary Pavement Design Report that summarizes the data gathered from the subsurface investigation and laboratory testing.
3. Following comments received from CDOT and project stakeholders, including comment resolution, prepare and issue the final Preliminary Pavement Design Report.
4. Report review and quality assurance checks to ensure reports are in accordance with Yeh’s Quality Plan and the standard of care.

BRIDGE FOUNDATION RECOMMENDATIONS

1. Review existing geotechnical information for the proposed Titan Road bridge widening or new bridge structure. We assume the geotechnical information is available and will be provided to Yeh.
2. Perform geotechnical analysis for the bridge foundations and associated wingwalls required for the Titan Road bridge. This includes geotechnical design and construction recommendations for the proposed structure including recommendations for deep foundations based on the results of the existing geotechnical investigation. Design standards will follow the AASHTO LRFD Bridge Design Specifications (10th Edition) and the CDOT Bridge Design Manual.
3. Prepare and submit a draft Geotechnical Recommendations Report that summarizes the existing subsurface investigation. The report will provide geotechnical recommendations for the bridge foundation and associates wingwalls.
4. Following comments received from CDOT and comment resolution, prepare and issue the final Geotechnical Recommendations Report.
5. Perform review and quality assurance checks to ensure memorandums are in accordance with project Quality Plan and the standard of care.

PLANS, SPECIFICATIONS, AND QUANTITY ESTIMATES

1. Prepare plans, project special provisions, and quantity estimates of geotechnical and pavement engineering items for the FIR submittal. Participate and respond to internal QC comments. Review and respond to FIR submittal comments from CDOT and other stakeholders.
2. Prepare plans and project special provisions of pavement engineering items for the FOR submittal. Participate and respond to internal QC comments. Review and respond to FOR submittal comments from CDOT and other stakeholders.
3. Prepare plans and project special provisions of pavement engineering items for the Final submittal. Participate and respond to internal QC comments.

ASSUMPTIONS AND EXCLUSIONS

This Scope of Work and associated fees are based on the following assumptions and exclusions:

1. No work is anticipated outside CDOT ROW. Any additional permits and associated fees, including right-of-entry and traffic control permits for areas outside of CDOT ROW, are excluded from this scope.
2. Environmental sampling and testing are excluded. If potentially hazardous materials are encountered, drilling operations will be stopped and the project team will be notified.
3. Life Cycle Cost Analysis (LCCA) is not included in this scope. In accordance with CDOT Pavement Design Manual Section 13.2.7, minor roadway widening projects should utilize the same pavement type as the existing lanes. Since the proposed improvements consist of shoulder widening along US 85, the pavement type selection is predetermined, and an LCCA is therefore not applicable.

2. Structural Engineering

A sound wall northeast of the Titan interchange may be required, but will not be known until additional investigation is done. The design is not included in this scope. The following assumptions are made in this scope.

- It is assumed that no new retaining walls or modifications will be required to widen US 85
- Drainage Structures
    - Develop preliminary and final design plans for two Water Quality ponds

3. Specifications

The Consultant will develop construction specifications for the FOR and AD review packages. A comment resolution form will track all comments and final dispositions. Construction specifications consist of the CDOT Standard Specification for Road and Bridge Construction, the Standard Special Provisions, and the Project Special Provisions.

4. Post Design Support

Post Design Services and Certification of PWQ structures and are not included in this scope.

5. Project Submittals

The following sections are anticipated for the milestone submittals. Formal submittals shall be subject to review and comment periods by Douglas County and CDOT staff prior to acceptance.

Reports, Memorandums, Clearances, Forms, and Permits

- Public Outreach Plan
- Roadway Design Criteria Table
- Pavement Design Report (Preliminary and Final)
- Drainage Report (Preliminary and Final including SWMP plans)
- CDOT Forms 859 and 463 and Preliminary Construction Schedule
  Assumes no IGA's (Prepare Exhibit(s) for CDOT/Douglas County Maintenance IGA)

FIR Plan Submittal

- Plan Package
    - Title Sheet
    - Standards Plans List
    - General Notes
    - Typical Sections
    - Summary of Approximate Quantities
    - Tabulation of Quantities

    - Survey Tabulation and Control Diagram
    - Geometric Control Layout
    - Removal Plans
    - Roadway Plan and Profiles
    - Drainage Grading Plans
    - Drainage Plans and Profiles
    - Water Quality Plans/ details
    - Signing and Striping Plans
    - Subsurface Utility Engineering Plans
    - ITS Plans (CDOT & Douglas County)
    - Utility Plans
    - Maintenance of Traffic Plans
    - Roadway Cross Sections (100')
    - Ownership map
- Engineer's Opinion of Probable Cost

Schedule assumes 18 months from Notice to Proceed to Advertisement submittal. An additional 6 months is assumed from Ad submittal to the Advertisement date for Utility agreements and RR Acquisition. No formal meetings are planned after the Ad submittal, however bi-weekly email status updates will be provided.

FOR Plan Submittal

- Plan Package
    - Title Sheet
    - Standards Plans List
    - General Notes
    - Typical Sections
    - Summary of Approximate Quantities
    - Tabulation of Quantities
    - Survey Tabulation and Control Diagram
    - Geometric Control Layout
    - Removal Plans
    - Roadway Plan and Profiles
    - Drainage Grading Plans
    - Drainage Plans and Profiles
    - Water Quality Plans/ details
    - Stormwater Management Plans (SWMP)
    - Signing and Striping Plans
    - Subsurface Utility Engineering Plans
    - Utility Plans
    - ITS Plans (CDOT & Douglas County)
    - Water Quality Pond Plans
    - Maintenance of Traffic Plans
    - Roadway Cross Sections *(100')*
    - Ownership map/Right of Way plans

- Specification Package
- Engineer's Opinion of Probable Cost

EXHIBIT B
TITAN ROAD US 85 INTERCHANGE DESIGN
PROJECT NUMBER: CI 2026-012

Douglas County Titan Road & US 85	RS&H																							Traffic	
Task Order 1 1601 & 30% Ultimate Deisgn	PM			Bridge					Traffic-Planning-1601				Traffic Design		Roadway		Drainage			Utilities/ITS		Admin		Counts	
	Proj Officer	PM	Deputy PM	Eng II	Eng II	Eng III		Bridge Eng Ass IV	Eng IV	Eng III	Eng I		Eng III	Eng Assoc I	Eng III	Eng Assoc I	Eng III	Eng III	Eng Assoc I	Eng III	Eng Assoc I	Proj Coordinator			
Task	Randal	Randy Wampler PM	Steven	Chad Bridge Task Lead	Roshan Prasain Bridge Eng.	Mike Burke Bridge Eng.	Treena Fulton Bridge Eng.	Mike Welch	David W. Trans. Modelling, Alts Concepts	TJ Scarberry - model to analysis	James McMackin - model, Vistro, analysis	Naresh Katori - Transcad program	TJ Scarberry design oversight, QC	Erin Chau - Traffic Design	Steven Roadway Task Lead	Roadway Eng	Mary Duke Drainage Lead	Drainage Eng	EIT I	TJ Engineer	Engineer	Admin. Paula McMartin	Ridgeview	TOTAL HOURS	
1-2 Project Management and Meetings																								0	
Project Meetings (12 Months)				2	2																			4	
Initial project kick-off meeting	2	8	8	5					5				5				5				5			43	
Progress Meetings																								0	
County PM Meetings (2 week , Conference call) 24 mtgs		32	32										14			14	14				14			120	
County/CDOT PM Meetings (Monthly, Conference call) 12 mtgs		24	20	8					8				8			8	8				8			92	
Team Meetings																								0	
i Internal Team Meetings (Weekly, 32 mtgs)		16	16	16	16	16			16	16	16		16	16		16	16	16		16	16			240	
Internal Discipline Specific Meetings																								0	
i Structures		16	12	16	16	16																		76	
ii Roadway		16	12													16								44	
iii Major and Minor Drainage		8	8													8	8	8						40	
iv Utilities		8	4																	8	8			28	
v Traffic		8	4						8	8	8		8	8										52	
Public Involvement Meetings																								0	
ins)		24																						24	
Attend internal coordination meetings (assumes 30 minutes check-ins)																								0	
Attend weekly owners meetings (assumes 1 hour) (24 meetings)		24																						24	
Attend quarterly stakeholder group meetings (assumes 7 meetings - 2 hours of prep; 1 hour meeting)		14																						14	
Project Administration																								0	
Develop PIP and update yearly																								0	
Develop and update key messages as needed										8														8	
Maintain outreach tracker																								0	
Project Administration																								0	
Collateral and Graphics		32	32																					64	
Develop PIO, stakeholder and elected official updates (Assumes bi-monthly)																								0	
Develop mailers for open houses/public meetings (Assumes 2)										4														4	
Develop project contact cards																								0	
Develop graphics, maps, renderings																								0	
Draft social media posts (assumes two posts a month)																								0	
Draft press releases (assumes four press releases + reviews)																								0	
Advertise for open houses/public meetings																								0	
Prepare materials/boards for open houses/public meetings																								0	
Remediate digital collateral for ADA compliance																								0	
Outreach																								0	
Manage project hotline and email																								0	
Draft monthly website updates																								0	
Prepare for and facilitate two open houses																								0	
Prepare for and facilitate two public meetings																								0	
Send monthly email updates to general public																								0	
Project Management																								0	
a. Budget/Billing/Contracting	8	40																				24		72	
b. Communication and Coordination	12	160	60																					232	
c. Decision and Action Items monitoring and tracking.		60	20																					80	
Develop Project Schedule and Updates																								0	
a. Project Design Schedule		60																						60	
Quality Assurance/Quality Control (QA/QC)		40																						40	
	22	590	228	47	34	32	0	0	37	36	24	0	51	24	0	62	51	24	0	24	51	24	0	1361	1361
3 Survey and ROW Plans (See HKS Estimate)																									
Coordination and Review by Roadway Staff															40									40	
4 SUE (See HKS Estimate)																								0	
SUE and Utility Coordination																								0	
Utility Records Research																								0	
Utility Designation																								0	
Utility Designation Permits* and Traffic Control.																								0	
Existing Utility Plan																								0	
Utility Locates (Test Holes)																								0	
Utility Locates Permits* and Traffic Control																								0	
Meetings and Coordination		40																						40	
SUE and Utility Coordination																								0	
a.) Location Maps																				16	36			52	
b. i SUE QL B																				8	8			16	
c. Draft SUE Plan and report, Incorporate 40 test holes into plans																		8	16	12	30			66	
d. Utility Company Coordination - inform affected utility companies about project, schedule and request information on existing facilities/easements, planned facilities, and design criteria.																		4	8	24	58			94	
e.) Relocation Recommendations - Utility Conflict Matrix																	16	16		16	16			64	
f.) Develop FIR 30% Utility relocation plans and specifications																				16	32			48	

EXHIBIT B
TITAN ROAD US 85 INTERCHANGE DESIGN
PROJECT NUMBER: CI 2026-012

Douglas County Titan Road & US 85	RS&H																							
Task Order 1 1601 & 30% Ultimate Deisgn	PM			Bridge					Traffic-Planning-1601				Traffic Design		Roadway		Drainage			Utilities/ITS		Admin	Traffic Counts	
	Proj Officer	PM	Deputy PM	Eng II	Eng II	Eng III		Bridge Eng Ass IV	Eng IV	Eng III	Eng I		Eng III	Eng Assoc I	Eng III	Eng Assoc I	Eng III	Eng III	Eng Assoc I	Eng III	Eng Assoc I	Proj Coordinator		
Task	Randal	Randy Wampler PM	Steven	Chad Bridge Task Lead	Roshan Prasain Bridge Eng.	Mike Burke Bridge Eng.	Treena Fulton Bridge Eng.	Mike Welch	David W. Trans. Modelling, Alts Concepts	TJ Scarberry - model to analysis	James McMackin - model, Vistro, analysis	Naresh Katori - Transcad program	TJ Scarberry - design oversight, QC	Erin Chau - Traffic Design	Steven Roadway Task Lead	Roadway Eng	Mary Duke Drainage Lead	Drainage Eng	EIT I	TJ Engineer	Engineer	Admin. Paula McMartin	Ridgeview	TOTAL HOURS
g.) Ditch Company Coordination																								0
5 Traffic Data Collection (RS&H coordination with Ridgeview)																								0
6-8 TDM and Concept Development (1601 & NEPA process)																								0
Note - Traffic Model and 1601 tasks included, row labels amended																								0
Consultant Disclosure Statement																								0
Project Initiation																								0
Environmental Scoping																								0
Review Applicable Existing Documents - PEL, SR traffic studies									4	4	8													16
Extent of Study Required Resources																								0
Preparation and Coordination of Requirements																								0
Extent of Narrative Required																								0
Project Study Area Limits/Logical Termini																								0
Administrative Record																								0
Environmental Analysis and Review																								0
Purpose and Need		8							8															16
Alternatives Analysis-2050 Traffic Model development to quantify needs									20	8	80	100												208
Evaluate Alternatives Impacts - Traffic analysis-comparative level for alts									8	24	80													112
Alternatives Screening Process - evaluation matrix-all criteria, 2 levels screening									24	24	40													88
Preliminary Design Alternatives - Conceptual 5 alternatives, refine to 2, then 1				40					120	8	8		8	16	50	40	40							330
Cost Estimates and Financial Analysis																								0
Develop Cost Estimates and Financial Analyses (NEPA)																								0
Incorporate Into NEPA Document																								0
Preliminary Construction Cost Estimates (NEPA)																								0
Data Collection, Field Investigation, Mitigation Measures																								0
Existing Roadway and Major Structures																								0
Geospatial Data																								0
Air Quality																								0
Geologic Resources and Soil																								0
Water Quality (RS&H)																	30	50						80
Floodplain Assessment (RS&H)																	8							8
Wetlands (Pinyon)																								0
Vegetation and Noxious Weeds																								0
Fish and Wildlife (Pinyon)																								0
Threatened and Endangered (T&E) Species																								0
Historic Properties																								0
Properties																								0
Historic Clearance																								0
Historic Bridge Clearance																								0
Area of Potential Effect																								0
Search for Recorded Resources																								0
Intensive Architectural Field Survey and NRHP Eligibility																								0
Identify and coordinate with consulting parties																								0
Historic Resources Survey Report																								0
Potential Impacts and Recommend Mitigation Strategies																								0
Correspondence for CDOT Region and SHPO																								0
Memorandum of Agreement																								0
Section 4(f) Documents																								0
Work with CDOT or EPB Staff Historian to Obtain Approvals																								0
Archaeology																								0
Paleontological Resources																								0
Land Use																								0
Social and Economic Resources																								0
Environmental Justice																								0
Bicycle and Pedestrian Facilities																								0
Residential/Business/Right-of-Way (ROW) Relocation																								0
Transportation Resources																								0
Utilities																				16	24			40
Section 4(f) and Section 6(f) Evaluation																								0
Farmlands																								0
Noise																								0
Visual Resources																								0
Energy																								0
Hazardous Materials																								0
Cumulative Impacts																								0
Public and Agency Involvement																								0
Develop an Agency Coordination Plan																								0
Stakeholder Involvement Plan																								0
Identify methods for public notification																								0
NEPA Documentation Process																								0
Preliminary Data Submission																								0
Report for Data Collection, Field Investigation, and Analysis																								0

EXHIBIT B
TITAN ROAD US 85 INTERCHANGE DESIGN
PROJECT NUMBER: CI 2026-012

Douglas County Titan Road & US 85	RS&H																							
Task Order 1 1601 & 30% Ultimate Deisgn	PM			Bridge					Traffic-Planning-1601				Traffic Design		Roadway		Drainage			Utilities/ITS		Admin	Traffic Counts	
	Proj Officer	PM	Deputy PM	Eng II	Eng II	Eng III		Bridge Eng Ass IV	Eng IV	Eng III	Eng I		Eng III	Eng Assoc I	Eng III	Eng Assoc I	Eng III	Eng III	Eng Assoc I	Eng III	Eng Assoc I	Proj Coordinator		
Task	Randal	Randy Wampler PM	Steven	Chad Bridge Task Lead	Roshan Prasain Bridge Eng.	Mike Burke Bridge Eng.	Treena Fulton Bridge Eng.	Mike Welch	David W. Trans. Modelling, Alts Concepts	TJ Scarberry - model to analysis	James McMackin - model, Vistro, analysis	Naresh Katori - Transcad program	TJ Scarberry - design oversight, QC	Erin Chau - Traffic Design	Steven Roadway Task Lead	Roadway Eng	Mary Duke Drainage Lead	Drainage Eng	EIT I	TJ Engineer	Engineer	Admin. Paula McMartin	Ridgeview	TOTAL HOURS
Draft and Final NEPA Documentation Preparation									8	8	8		8	4										36
Public Hearing																								0
Decision Document(FONSI/ROD) Preparation																	8	8						16
																								0
9 Public Involvement (See CIG Estimate)																								0
																								0
	0	48	0	40	0	0	0	0	192	76	224	100	16	20	90	40	102	86	24	108	204	0	0	1370
																								0
10 Design 30% of Ultimate Solution																								0
Traffic Engineering																								0
a.) Review locations for Accident history - Crash data, county and City									2	8	40													50
b.) Analyze project design with traffic projection data																								0
c.) Recommend the appropriate geometry																								0
d.) Review design for compatibility with existing signing																								0
e.) Use traffic data to develop detour alternatives																								0
f.) Develop the total ESAL for design life																								0
g.) Submit traffic data to CDOT -1601 Documentation & MIMR									48	40	88													176
h.) Safety Improvements Review																								0
i.) Traffic Data Collection - summarizing- field data - calibrate to land use									8	8	64													80
j.) 2050 Traffic Analysis - base design, phased implementation, VISSIM									24	48	160													232
k.) Recommended Traffic Design									8	8	16													32
l.) QAQC																								0
Traffic																								0
a.) Signal design layouts													4	16										20
b.) Major Signing and Striping Plans													10	25										35
c.) ITS Design Considerations													10	20										30
d) MOT Phasing Roll Plots													30	70										100
Drainage																								0
a) Existing Analysis																								0
Revise basins for Ultimate Tributary Areas																	8	4	4					16
Revised existing basin flow rate evaluation for the ultimate condition																	4	6	10					20
Revised Stormwater Site Plan for the ultimate condition (Existing Conditions analysis)																	16	16						32
b) Proposed Design																								0
Schematic Drainage Layout																	26	32	40					98
Hydrology																	8	44	22					74
Outfall Design																	1	5	4					10
c) Drainage Plans																	40	68	112					220
d) Water Quality																								0
Preliminary Permanent Water Quality (PWQ)																	20	20	40					80
Determine PWQ requirements																	12	12						24
Develop PWQ alternatives																	20	20						40
Identify right-of-way requirements and utility impacts for alternatives																		8						8
e) Preliminarly Design Ultimate Configuration Drainage Memo																								0
Text																	18	24	18					60
Appendices																	12	17	28					57
Basin Maps																	50	80	130					260
f) Cost Estimate																	12	16	12					40
g) QA/QC Review																	8							8
Roadway																								0
Coordinate all design activities with required CDOT specialty units and other outside entities.															24									24
a. Roadway Design																								0
i) Input, check, and plot survey data															16									16
463															4	6								10
iii) Input and check horizontal and vertical alignments against all design criteria. No variances or significant design decisions are anticipated.															12									12
iv) Provide alignments, toes of slope and pertinent design features, including permanent and temporary impacts, to the ROW, Utility and Environmental Managers.															16									16
v) Plot/develop all required information on the plans in accordance with all applicable CDOT policies and procedures.																								0
FIR Plan Sheet Development (30% of Full Effort)																								0
Title Sheet															4									4
Standard Plans List															0									0
Abbreviations and Symbols															0									0
General Notes															0									0
Typical Sections															8									8
Summary of Approximate Quantities - plan production - Create Sheet															54									54
Geometric Control Sheets															2	24								26
Removal and Reset Plans															0									0
Roadway Plan - 100 scale															40	120								160

EXHIBIT B
TITAN ROAD US 85 INTERCHANGE DESIGN
PROJECT NUMBER: CI 2026-012

Douglas County Titan Road & US 85	RS&H																							Traffic	
Task Order 1 1601 & 30% Ultimate Deisgn	PM			Bridge					Traffic-Planning-1601				Traffic Design		Roadway		Drainage			Utilities/ITS		Admin		Counts	
	Proj Officer	PM	Deputy PM	Eng II	Eng II	Eng III		Bridge Eng Ass IV	Eng IV	Eng III	Eng I		Eng III	Eng Assoc I	Eng III	Eng Assoc I	Eng III	Eng III	Eng Assoc I	Eng III	Eng Assoc I	Proj Coordinator			
Task	Randal	Randy Wampler PM	Steven	Chad Bridge Task Lead	Roshan Prasain Bridge Eng.	Mike Burke Bridge Eng.	Treena Fulton Bridge Eng.	Mike Welch	David W. Trans. Modelling, Alts Concepts	TJ Scarberry - model to analysis	James McMackin - model, Vistro, analysis	Naresh Katori - Transcad program	TJ Scarberry design oversight, QC	Erin Chau - Traffic Design	Steven Roadway Task Lead	Roadway Eng	Mary Duke Drainage Lead	Drainage Eng	EIT I	TJ Engineer	Engineer	Admin. Paula McMartin	Ridgeview	TOTAL HOURS	
Profile															18	40								58	
Jointing Plans															0									0	
Roadway Details															0									0	
Gore Details															0									0	
Intersection Plans															0									0	
Property Details															0									0	
Grading Plans including 3D Modeling															80	140								220	
Profile Ret Wall Len = 1200 ft															0									0	
Cross Sections															18									18	
b. Roadside Development:																								0	
Roadside Design: Evaluate clear zone and existing guardrail layouts to identify new guardrail needs															24									24	
Major Structure Design																								0	
Interchange Alternative - Prelim Plans and SSR		60	12	8	400		170	140																790	
30% Design	0	60	12	8	400	0	170	140	90	112	368	0	54	131	320	330	255	372	420	0	0	0	0	3242	3242
Total	22	698	240	95	434	32	170	140	319	224	616	100	121	175	410	432	408	482	444	132	255	24	0	5973	5973
2026 Rates	370.00	283.00	232.00	234.00	255.00	233.00	201.00	179.00	347.00	262.00	160.00	267.00	262.00	124.00	232.00	124.00	235.00	179.00	133.00	262.00	125.00	169.00			
Subtotal Labor:	8,140.00	197,534.00	55,680.00	22,230.00	110,670.00	7,456.00	34,170.00	25,060.00	110,693.00	58,688.00	98,560.00	26,700.00	31,702.00	21,700.00	95,120.00	53,568.00	95,880.00	86,278.00	59,052.00	34,584.00	31,875.00	4,056.00	$15,000			

RS&H	$	1,269,396.00
Traffic Counts	$	15,000.00
PI CIG		$186,174.00
Survey (HKS) for all projects		
Project Management:	$	8,640.00
Control:	$	21,840.00
Topographic Survey:	$	138,660.00
Traffic Control:	$	20,150.00
NEPA (Pinyon)	$	74,573.75
SUE (HKS) for all projects		
Utility Records Research	$	4,800.00
Utility Designation	$	42,400.00
Utility Designation Permits* and Traffic Control.	$	40,740.00
Existing Utility Plan	$	38,000.00
Utility Locates (Test Holes)	$	46,340.00
Utility Locates Permits* and Traffic Control	$	18,400.00
Meetings and Coordination	$	3,040.00
1500 Miles at $0.65	$	975.00
Task Order 1 Total	**$**	**1,929,128.75**

EXHIBIT B
TITAN ROAD US 85 INTERCHANGE DESIGN
PROJECT NUMBER: CI 2026-012

Douglas County Titan Road & US 85	RS&H																			
Task Order 2: US 85 Widening	**PM**			**Bridge**					**Traffic Design**		**Roadway**			**Drainage**			**Utilities/ITS**		**Admin**	
Task	**Randal**	**Randy Wampler PM**	**Steven Assist PM**	**Chad Bridge Task Lead**	**Roshan Prasain Bridge Eng.**	**Mike Burke Bridge Eng.**	**Treena Fulton Bridge Eng.**	**Bridge Detailer**	**TJ Scarberry - design oversight, QC**	**Erin Chau - Traffic Design**	**Steven Roadway Task Lead**	**Roadway Eng**	**Roadway Detailer**	**Mary Duke Drainage Lead**	**Jake Drainage Eng**	**Josh EIT II**	**TJ Engineer**	**Engineer**	**Admin. Paula McMartin**	**TOTAL HOURS**
1-2 Project Management and Meetings																				
Project Meetings (16 Months)																				0
Initial project kick-off meeting		5	5	5	5				5					5	5			5		40
Progress Meetings																				0
County PM Meetings (Biweekly, Conference call) 32 mtgs		56	56	28					28			28		28				28		252
County/CDOT PM Meetings (Monthly, Conference call) 16 mtgs		32	32	16					16	8		16		16				16		152
Special Discipline Coordination mtgs																				0
i Structures		16	16	16																48
ii Roadway		16									16	16								48
iii Drainage		16	16											16	16					64
iv Utilities		8	8														8	8		32
v Traffic		8	8						8	8										32
vi Environmental		8	8											8						24
vii Geotechnical/Pavement		12	12	4																28
vii Communications (ITS)		16	16														16	16		64
Team Meetings																				0
Internal Team Meetings (Weekly, 52 mtgs)		26	26	16	16	16			26	16				26	16	10		26		220
CDOT Discipline coordination mtgs		40	40	16	16	16			16	16	16	16		16	16		16	16		256
Meeting Minutes																				0
Site Visit		8	8	8					8			8		8	8		8	8		72
Project Management																				0
a. Budget/Billing/Contracting	8	40	40																40	128
b. Communication and Coordination		80	80																	160
c. Decision and Action Items monitoring and tracking.		16	32																	48
Develop Project Schedule and Updates																				0
a. Project Design Schedule		24	32																	56
b. Construction Schedule Draft																				0
c. Construction Schedule Review and Final																				0
Quality Assurance/Quality Control (QA/QC)		24	24																	48
	8	451	459	109	37	32	0	0	107	48	32	84	0	123	61	10	48	123	40	1772
																				0
3 Environmental Clearance																				0
Note - Traffic Model and 1601 tasks included, row labels ammended																				0
Consultant Disclosure Statement																				0
Project Initiation																				0
Environmental Scoping																				0
Review Applicable Existing Documents - PEL, SR traffic studies																				0
Extent of Study Required Resources																				0
Preparation and Coordination of Requirements																				0
Extent of Narrative Required																				0
Project Study Area Limits/Logical Termini																				0
Administrative Record																				0
Environmental Analysis and Review																				0
Purpose and Need																				0
Alternatives Analysis-2050 Traffic Model development to quantify needs																				0
Evaluate Alternatives Impacts - Traffic analysis-comparative level for alts																				0
Alternatives Screening Process - evaluation matrix-all criteria, 2 levels screening																				0
Preliminary Design Alternatives - Conceptual 5 alternatives, refine to 2, then 1																				0
Cost Estimates and Financial Analysis																				0
Develop Cost Estimates and Financial Analyses (NEPA)																				0
Incorporate Into NEPA Document																				0
Preliminary Construction Cost Estimates (NEPA)																				0
Data Collection, Field Investigation, Mitigation Measures																				0
Existing Roadway and Major Structures																				0
Geospatial Data																				0
Air Quality																				0
Geologic Resources and Soil																				0
Water Quality (Pinyon)														16						16
Floodplain Assessment																				0
Wetlands (Pinyon)														24						24
Vegetation and Noxious Weeds																				0
Fish and Wildlife (Pinyon)																				0
Threatened and Endangered (T&E) Species																				0
Historic Properties																				0
Properties																				0
Historic Clearance																				0
Historic Bridge Clearance																				0
Area of Potential Effect																				0
Search for Recorded Resources																				0
Intensive Architectural Field Survey and NRHP Eligibility																				0
Identify and coordinate with consulting parties																				0
Historic Resources Survey Report																				0
Potential Impacts and Recommend Mitigation Strategies																				0
Correspondence for CDOT Region and SHPO																				0

1772

EXHIBIT B
TITAN ROAD US 85 INTERCHANGE DESIGN
PROJECT NUMBER: CI 2026-012

Douglas County Titan Road & US 85	RS&H																				
Task Order 2: US 85 Widening	**PM**			**Bridge**					**Traffic Design**		**Roadway**			**Drainage**			**Utilities/ITS**		**Admin**		
Task	**Randal**	**Randy Wampler PM**	**Steven Assist PM**	**Chad Bridge Task Lead**	**Roshan Prasain Bridge Eng.**	**Mike Burke Bridge Eng.**	**Treena Fulton Bridge Eng.**	**Bridge Detailer**	**TJ Scarberry - design oversight, QC**	**Erin Chau - Traffic Design**	**Steven Roadway Task Lead**	**Roadway Eng**	**Roadway Detailer**	**Mary Duke Drainage Lead**	**Jake Drainage Eng**	**Josh EIT II**	**TJ Engineer**	**Engineer**	**Admin. Paula McMartin**	**TOTAL HOURS**	
Memorandum of Agreement																				0	
Section 4(f) Documents																				0	
Work with CDOT or EPB Staff Historian to Obtain Approvals																				0	
Archaeology																				0	
Paleontological Resources																				0	
Land Use																				0	
Social and Economic Resources																				0	
Environmental Justice																				0	
Bicycle and Pedestrian Facilities																				0	
Residential/Business/Right-of-Way (ROW) Relocation																				0	
Transportation Resources																				0	
Utilities																	16	24		40	
Section 4(f) and Section 6(f) Evaluation																				0	
Farmlands																				0	
Noise																				0	
Visual Resources																				0	
Energy																				0	
Hazardous Materials																				0	
Cumulative Impacts																				0	
Public and Agency Involvement																				0	
Develop an Agency Coordination Plan																				0	
Stakeholder Involvement Plan																				0	
Identify methods for public notification																				0	
NEPA Documentation Process																				0	
Preliminary Data Submission																				0	
Report for Data Collection, Field Investigation, and Analysis																				0	
Draft and Final NEPA Documentation Preparation																				0	
Public Hearing																				0	
Decision Document(FONSI/ROD) Preparation																				0	
																				0	
																				0	
																				0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	16	24	0	80	80
																				0	
4 Survey & ROW Plans (See HKS Estimate)																				0	
Project Management:																				0	
ROW Determination:																				0	
ROW Plan Set:																				0	
ROW & Easements:																				0	
Title Commitments:																				0	
Geotech Boring Support														4			16	8		28	
Appraisal Staking:																				0	
Hydraulics Survey Support														8	8					16	
																				0	
5 Right of Way Acquisition (See Western States Estimate)																				0	
ROW Title Review, Valuation, Documentation, Negotiations, and Closing (2 properties)																				0	
Third-Party Appraisal 2 x $6,500/each																				0	
Direct Expense																				0	
ROW Exhibits and Matrix and Coordination		12									40									52	
6 Public Involvemnent (Included in TO1)																				0	
																				0	
7 Railroad Coordinaiton (Not Anticipated)																				0	
																				0	
	0	12	0	0	0	0	0	0	0	0	40	0	0	12	8	0	16	8	0	96	96
																				0	
FIR 30% Design																				0	
8 FIR SUE Utility Plans and ITS																				0	
SUE (included in TO1)																					
Utility Plans																					
a. Location Maps																	30	70		100	
b. i SUE QL B																	8	8		16	
c. Draft SUE Plan and report, Incorporate up to 25 testholes into plans																	20	45		65	
d. Utility Company Coordination - inform affected utility companies about project, schedule and request information on existing facilities/easements, planned facilities, and design criteria.																	20	45		65	
e.) Relocation Recommendations - Utility Conflict Matrix																	16	16		32	
f.) Develop FIR 30% Utility relocation plans and specifications																	16	32		48	
g.) Ditch Company Coordination																				0	
ITS Systems Engineering Analysis (SEA)																				0	
a. SEA Assessment Form																	20	45		65	
b. Alternative Analysis																	16	32		48	
c. ConOps																	32	32		64	
d. System Functional Requirements																	8	16		24	
e. High Level System Design																	15	34		49	

EXHIBIT B
TITAN ROAD US 85 INTERCHANGE DESIGN
PROJECT NUMBER: CI 2026-012

Douglas County Titan Road & US 85	RS&H																			
Task Order 2: US 85 Widening	**PM**			**Bridge**					**Traffic Design**		**Roadway**			**Drainage**			**Utilities/ITS**		**Admin**	
Task	**Randal**	**Randy Wampler PM**	**Steven Assist PM**	**Chad Bridge Task Lead**	**Roshan Prasain Bridge Eng.**	**Mike Burke Bridge Eng.**	**Treena Fulton Bridge Eng.**	**Bridge Detailer**	**TJ Scarberry - design oversight, QC**	**Erin Chau - Traffic Design**	**Steven Roadway Task Lead**	**Roadway Eng**	**Roadway Detailer**	**Mary Duke Drainage Lead**	**Jake Drainage Eng**	**Josh EIT II**	**TJ Engineer**	**Engineer**	**Admin. Paula McMartin**	**TOTAL HOURS**
9 FIR Traffic Design																				0
a.) Signal design modificaitons (Higlands Ranch Parkway) - if needed									5	12										17
b.) Signing and Striping Plans									20	45										65
d) MOT Phasing Roll Plots - assume 3 phases									30	80										110
10 FIR Roadway Design																				0
Coordinate all design activities with required CDOT specialty units and other outside entities.		16																		16
a. Roadway Design																				0
i) Input, check, and plot survey data											16									16
ii) Develop Design Criteria, submit for review, update, and draft Form 463		1									2	6								9
iii) Input and check horizontal and vertical alignments against all design criteria. No variances or singnificant design decions are anticipated.											12									12
iv) Provide alignments, toes of slope and pertinent design features, including permanent and temporary impacts, to the ROW, Utility and Environmental Managers.											16									16
v) Plot/develop all required information on the plans in accordance with all applicable CDOT policies and procedures.																				0
Preliminary Plan Sheet Development (30% of Full Effort)																				0
Title Sheet											2	3								5
Standard Plans List											3									3
Abbreviations and Symbols											2									2
General Notes											6									6
Typical Sections											4	20								24
Summary of Approximate Quantities - plan production - Create Sheet											34									34
Project Quantity Tabulation sheets											54									54
Geometric Control Sheets											4	18								22
Removal and Reset Plans											20	40								60
Roadway Plan - 100 scale											30	60								90
Profile											10	20								30
Jointing Plans											6	24								30
Roadway Details											40	68								108
Gore Details																				0
Intersection Plans											11	20								31
Property Details											7									7
Grading Plans including 3D Modeling											30	60								90
Profile US85 Sound Wall Length = 2700 ft																				0
Cross Sections											6	24								30
b. Roadside Development:																				0
Roadside Design: Evaluate clearzone and existing guardrail layouts to identify new guardrail needs											8									8
b. ii) Coordinate the roadside items with Drainage design and the Storm Water Management Plan (SWMP).		8									20									28
b. iv) Dynamic Message Sign																				0
11 FIR Drainage, PWQ, and SWMP																				0
a) Existing Analysis																				0
Initiate and Review Drainage Survey														12	12					24
Existing Basin Flow rate evaluation														8	48	24				80
Stormwater Site Plan														20	40	20				80
High Line Canal Coordination														80	80					160
b) Proposed Design																				0
SUDA Model Design														24	52	32				108
Hydrology														16	32	40				88
Outfall Design														4	20	12				36
c) Drainage Plans						100								16	44	80				240
d) Stormwater Management Plans																				0
Stormwater Narrative Text (Greater than 1 acre disturbance) includes quantities														0	0	0				0
Initial Plans														0	0	0				0
Interim Plans														0	0	0				0
Final Plans														0	0	0				0
Details														0	0	0				0
e) Water Quality																				0
Determine PWQ requirements														8	24	0				32
PWQ preliminary design														40	52	0				92
Preliminary Permanent Water Quality (PWQ) plans (no pond structure sheets at FIR)														24	40	72				136
Impacts analysis: ROW/Stakeholders/Utilities/Environmental														20	20	0				40
PWQ meetings														12	6	0				18
f) Drainage Report																				0
Text														12	32	0				44
Appendicies														12	24	32				68
Basin Maps														36	60	60				156
g) Cost Estimate														12	24	16				52
																				0
12 FIR Geotechnical and Materials Engineering (See Yeh Estimate)																				
Pavement and Pipe Geotechnical Investigation (For US 85 and Titan Ramps)																				0
Coordinate with design team																				0

EXHIBIT B
TITAN ROAD US 85 INTERCHANGE DESIGN
PROJECT NUMBER: CI 2026-012

Douglas County Titan Road & US 85	RS&H																			
Task Order 2: US 85 Widening	**PM**			**Bridge**					**Traffic Design**		**Roadway**			**Drainage**			**Utilities/ITS**		**Admin**	
Task	**Randal**	**Randy Wampler PM**	**Steven Assist PM**	**Chad Bridge Task Lead**	**Roshan Prasain Bridge Eng.**	**Mike Burke Bridge Eng.**	**Treena Fulton Bridge Eng.**	**Bridge Detailer**	**TJ Scarberry - design oversight, QC**	**Erin Chau - Traffic Design**	**Steven Roadway Task Lead**	**Roadway Eng**	**Roadway Detailer**	**Mary Duke Drainage Lead**	**Jake Drainage Eng**	**Josh EIT II**	**TJ Engineer**	**Engineer**	**Admin. Paula McMartin**	**TOTAL HOURS**
Site reconnaissance																				0
Permits and utility clearances																				0
Conduct a subsurface exploration program																				0
Assign and perform soil tests																				0
Pavement Design and Recommendations																				0
Pavement design																				0
Prepare and issue Draft Preliminary Pavement Report																				0
Prepare and issue Final Preliminary Pavement Report																				0
QC for draft and final																				0
																				0
16 FIR Submittal and preparation for the FIR																				0
a.) Coordinate plan Inputs		6	6								24		20							56
b.) Preliminary Cost Estimates		24									40			12	16	12				104
c.) FIR Plan packaging for each Discipline											24		32							56
f.) Preliminary FIR Plan Review submittal																				0
																				0
FIR Meeting																				0
a) Attend FIR		8		4	4				4	4	8			8	8					48
b) Meeting Minutes		2									2			2						6
c) Comment Resolution		16		4	4				4	16	20	12	20	8	16					120
d) Design Decision Resolution and Log		12							4		18									34
Post-FIR Revisions		6	12								12	20								50
Update Project Schedule		8																		8
Coordinate activities		12																		12
	0	119	18	8	8	100	0	0	67	157	491	395	72	386	650	400	201	375	0	3447
FIR Sumbittal	8	582	477	117	45	132	0	0	174	205	563	479	72	561	719	410	281	530	40	5395
FINAL DESIGN																				0
8 Final SUE Utility Plans and ITS																				0
a. SUE QL-A test holes																	4	8		12
i) Develop a test hole approach (locations) in coordination with design team.																	16	16		32
ii) The Consultant shall complete Quality Level A Test Holes, at locations specified by CDOT after recommendations from Engineer and task designers following the examination of QL-B data on utility crossings, for verification of utilities in conflict with the proposed design. It is assumed that up to 60 test holes will be excavated, documented, and surveyed in.																	4	4		8
iii) Permit, manage, and document test holes. Provide test hole table and CAD for plan deliverables																	8	32		40
b. Final sealed SUE plan, report, DGN, and PointMan upload.																	32	40		72
c. Develop 3D utility surface																		25		25
d. Meet with affected utility companies to confirm timing, location, and cost with potential relocations. Assume two rounds of one-on-one meetings.																	60	60		120
e. Support design team to leverage SUE deliverables																	25	25		50
f. Prepare and provide utility relocation plans for 90% deliverable.																	8	32		40
i) Revise utility conflict matrix based on 90% plans.																	8	32		40
ii) Develop utility PSPs																	4	9		13
iii) Xcel Work Request and design coordination. Assume 4 coordination meetings																	12	12		24
iv) Prepare and provide agreement letters, and up to 4 additional coordination meetings																	25	40		65
Communication Systems																				0
a. Intelligent Transportation Systems (ITS)																	90	210		300
b. Dynamic Message Sign/CCTV's - Assume we are adding these																	15	34		49
c. Ramp Metering/Automatic Traffic Recorder																	10	26		36
d. Communications Electrical Design																				0
9 Final Traffic Engineering																				0
a. Prepare and provide permanent signing/pavement marking plans									39	90										129
a Sign-stripe-signcad-cross sections									15	34										49
b Prepare and provide the construction traffic control plans and quantities									90	120										210
10 Final Roadway Design																				0
i) Roadway design. Prepare and provide final roadway design plans incorporating all input from applicable CDOT specialties and outside entities.																				0
Final Plan Sheet Development (70% of Full Effort)																				0
Title Sheet											3	3	4							10
Standard Plans List											3	3	3							9
Abbreviations and Symbols											1	1	2							4
General Notes											4	4	6							14
Typical Sections											12	22	22							56
Summary of Approximate Quantities - plan production - Create Sheet											24	24	32							80
Project Quantity Tabulation sheets											20	56	51							127
Geometric Control Sheets											16	16	21							53
Removal and Reset Plans											32	52	56							140
Roadway Plan - 100 scale											40	86	84							210
Profile											21	21	28							70
Jointing Plans											21	21	28							70

3447
5395

EXHIBIT B
TITAN ROAD US 85 INTERCHANGE DESIGN
PROJECT NUMBER: CI 2026-012

Douglas County Titan Road & US 85	RS&H																			
Task Order 2: US 85 Widening	**PM**			**Bridge**					**Traffic Design**		**Roadway**			**Drainage**			**Utilities/ITS**		**Admin**	
Task	**Randal**	**Randy Wampler PM**	**Steven Assist PM**	**Chad Bridge Task Lead**	**Roshan Prasain Bridge Eng.**	**Mike Burke Bridge Eng.**	**Treena Fulton Bridge Eng.**	**Bridge Detailer**	**TJ Scarberry - design oversight, QC**	**Erin Chau - Traffic Design**	**Steven Roadway Task Lead**	**Roadway Eng**	**Roadway Detailer**	**Mary Duke Drainage Lead**	**Jake Drainage Eng**	**Josh EIT II**	**TJ Engineer**	**Engineer**	**Admin. Paula McMartin**	**TOTAL HOURS**
Roadway Details											80	122	51							253
Gore Details											0	0	0							0
Intersection Plans											22	22	29							73
Property Details											5	5	7							17
Grading Plans including 3D Modeling											60	108	42							210
Profile US85 Sound Wall Length = 2700 ft											6	6	8							20
Cross Sections											10	32	28							70
ii) Roadside Design: Guardrail length of need calculations and design layouts:																				0
iii) Clear Zone: Verify that an acceptable safe recovery distance exists between traveled way and obstructions including trees to be planted.											4									4
11 Final Drainage, PWQ, and SWMP																				0
a) Coordination																				0
Floodplain Documentation														12	20	8				40
Utilities Coordination														8	32	24				64
90% Design Coordination Meetings														8	2					10
b) Proposed Design																				0
SUDA Model Design Updates														16	32	32				80
Hydrology Updates														8	12	32				52
Outfall Design Updates														3	4	8				15
c) Drainage Plans																				0
30% Plan Review and Comment Incorporation														12	12	16				40
General Notes														1	5	3				9
Tabulations														18	36	12				66
Drainage Plan Sheets														22	80	72				174
Drainage Profiles														28	120	72				220
Ditch Tables														8	44	22				74
Ditch Details														3	15	8				26
Typical Drainage Details														4	20	10				34
Special Drainage Details														5	29	15				49
Grading Details														13	77	39				129
d) Stormwater Management Plans																				0
Stormwater Narrative Text (Greater than 1 acre disturbance) includes quantities														3	15	8				26
Initial Plans														9	27	54				90
Interim Plans														9	27	54				90
Final Plans														9	27	54				90
Details														4	12	24				40
e) Permanent Water Quality																				0
WQ Pond Plans														40	120	90				250
WQ Pond Calculations														32	52	24				108
WQ Pond Details (Structures)														60	120	72				252
IDR Review															12					12
f) Drainage Report														20	20	20				60
Outfall Protection Calcs and Details														4	6	8				18
g) Cost Estimate														2	4	2				8
h) Operation and Maintenance Plans														60	60	100				220
12 Final Geotechnical and Materials Engineering (See Yeh Estimate)																				0
a. Finalize design and provide Final Geotechnical Structures Report for bridges and walls																				0
b. Finalize design and provide Final Pavement Design Report																				0
c. Provide details.notes for foundations, walls, pavements, and earthwork to RS&H for incorporation into final plans and specs																				0
Permits																				0
This activity is concurrent with final design and must be completed prior to the advertisement for construction. Coordinate between the agencies, the Region Environmental Manager and the CDOT/PM and prepare and submit application and design information to the Region Environmental Manager for the following permits:																				0
a. 401 Permit Process (Water Quality Certification)																				0
b. 402 Permit Process (Point Source Discharge)																				0
c. 404 Permit Process (Individual Dredge and Fill)																				0
i) Determine impacts																				0
ii) Coordinate with the U.S. Army Corps of Engineers, Region and Staff Design																				0
iii) Incorporate permit stipulations into the final plans																				0
d. Wildlife Certification																				0
e. CDPS or NPDES Storm Water Permit for Construction Activities																				0
13 Final Structural Engineering																				0
Water Quality Ponds (2)		12		12		100	84	200												408
14 Project Special Provisions																				
b. Project Special Provisions shall be provided in the CDOT format and submitted with the project plans.		28			12															40
16 FOR Submittal and preparation for the Final Office Review (FOR)																				0

EXHIBIT B
TITAN ROAD US 85 INTERCHANGE DESIGN
PROJECT NUMBER: CI 2026-012

Douglas County Titan Road & US 85	RS&H																				
Task Order 2: US 85 Widening	**PM**			**Bridge**					**Traffic Design**		**Roadway**			**Drainage**			**Utilities/ITS**		**Admin**		
Task	**Randal**	**Randy Wampler PM**	**Steven Assist PM**	**Chad Bridge Task Lead**	**Roshan Prasain Bridge Eng.**	**Mike Burke Bridge Eng.**	**Treena Fulton Bridge Eng.**	**Bridge Detailer**	**TJ Scarberry - design oversight, QC**	**Erin Chau - Traffic Design**	**Steven Roadway Task Lead**	**Roadway Eng**	**Roadway Detailer**	**Mary Duke Drainage Lead**	**Jake Drainage Eng**	**Josh EIT II**	**TJ Engineer**	**Engineer**	**Admin. Paula McMartin**	**TOTAL HOURS**
Packaging of the plans and submittal: Collect plans from all design elements and collate the plan package. Include all items listed in the Project Development Manual.		6	12								8		32							58
Prepare FOR Estimate.											40									40
Final Office Review																				0
Attend the FOR		8		4	4						8			4	4					32
FOR comment resolution		30									40	20	40	24	24	32				210
Incorporate FOR comments											20	20	32							72
16 AD Submittal																				0
a. Final Plans											20	20	40	38	103	200				421
b. Cost Estimate											8			2	3	2				15
c. Specifications		8									8			24	16	0				56
d. Reports														24	24	12				60
e. Coordination mtgs		8	8								8			5	3	3				35
f. Quality Control Review		16									16			22	11	4				69
g. 100% Submittal											8		32	5	7	5				57
h. 100% Design Review mtg		4		4							4			4	4					20
PRIOR TO AD																				0
Construction Plan Package		12																		12
The bid plan construction contract package shall consist of the revised FOR plans and will completely describe the work required to build the project including project special provisions and detailed quantities.																				0
a. Electroniccopies of the following:		4	4																	8
i) Roadway			2																	2
a) Horizontal and vertical data											2									2
b) Earthwork quantities		4									2									6
ii) Major structures																				0
An independent set of the following shall be submitted to the CDOT Structural Reviewer for each major structure.																				0
a) Structure grades																				0
b) *Structure geometry*																				0
c) Final engineering package. The consultant shall submit copies, in electronically and in 3-ring binders (if requested) of the following:																				0
d) All project calculations or worksheets																				0
iii) All final reports and their approvals:		2																		2
Traffic, hydraulics, lighting, pavement design and economic analysis, geology foundation report, etc. All reports will have the latest revisions included.																				0
a) Copies of variances, design decisions, and variance approvals																				0
iv) Project meeting minutes																				0
v) Utility clearance package																	20	40		60
vi) Utility agreements and information regarding the utility location and clearance conditions (It is assumed no more than 8 agreement letters will be developed)																	35	50		85
vii) Maintain an environmental mitigation tracking tool for all environmental document commitments.																				0
viii) Bridge construction packet																				0
Includes bridge grades, geometry, and quantity calculations or worksheets																				0
ix) Any other information unique to this project and deemed important to the effectiveness of construction.																				0
b. Record plans sets		2									4									6
c. Ad and Bidding Assistance																				0
i) Respond to questions from potential bidders during the advertisement phase of the project. Provide addendum(s) to the bid		16		8					8		20			8						60
																				0
SUBTOTAL (HRS)	0	160	26	28	16	100	84	200	152	244	600	664	678	581	1241	1141	376	695	0	6986	6986
																				0	
Total Engineering	8	742	503	145	61	232	84	200	326	449	1163	1143	750	1142	1960	1551	657	1225	40	12381	12381
2026 Rates	370.00	283.00	232.00	234.00	255.00	233.00	201.00	179.00	262.00	124.00	232.00	124.00	124.00	235.00	179.00	133.00	262.00	125.00	169.00		
Subtotal Labor:	2,960.00	209,986.00	116,696.00	33,930.00	15,555.00	54,056.00	16,884.00	35,800.00	85,412.00	55,676.00	269,816.00	141,732.00	93,000.00	268,370.00	350,840.00	206,283.00	172,134.00	153,125.00	6,760.00		

RS&H	$	2,289,015
PI (In TO 1)	$	-
Survey (In TO 1)	$	-
ROW Survey(HKS)	$	41,000.00
SUE investigation (In TO 1)	$	-
ENV (Pinyon)	$	129,717.50
Materials & Geotech (Yeh)		$78,650.00
ROW Support	$	31,150.00
2000 Miles at $0.65	$	1,300.00
Task Order 2 Total	**$**	**2,570,832.50**

Total Contract Value (Task Order 1 + Task Order 2) Not To Exceed $ 4,499,961.25

Exhibit C

INSURANCE REQUIREMENTS

CONSULTANT or CONTRACTOR shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Consultant, Contractor, its agents, representatives, or employees.

MINIMUM SCOPE AND LIMIT OF INSURANCE

Coverage shall be at least as broad as:

1. **Commercial General Liability** (CGL): Covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal & advertising injury (including coverage for contractual and employee acts) with limits no less than **$1,000,000** per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (ISO CG 25 03 or 25 04) or the general aggregate limit shall be twice the required occurrence limit. $2,000,000.
2. **Automobile Liability:** Insurance Services Office Form covering, Code 1 (any auto), or if CONSULTANT or CONTRACTOR has no owned autos, Code 8 (hired) and 9 (non-owned), with limit no less than **$1,000,000** per accident for bodily injury and property damage.
3. **Workers' Compensation** insurance as required by the State of Colorado, with Statutory Limits, and Employer's Liability Insurance with limit of no less than **$1,000,000** per accident for bodily injury or disease
4. **Professional Liability** (Errors and Omissions) Insurance appropriate to the CONSULTANT or CONTRACTOR's profession, with limit no less than **$1,000,000** per occurrence or claim, $2,000,000 aggregate.

The Insurance obligations under this agreement shall be the minimum Insurance coverage requirements and/or limits shown in this agreement; whichever is greater. Any insurance proceeds in excess of or broader than the minimum required coverage and/or minimum required limits, which are applicable to a given loss, shall be available to the COUNTY. No representation is made that the minimum Insurance requirements of this agreement are sufficient to cover the obligations of the CONSULTANT or CONTRACTOR under this agreement.

OTHER INSURANCE PROVISIONS:

The insurance policies are to contain, or be endorsed to contain, the following provisions:

Additional Insured Status. Douglas County, its officers, officials, employees, and volunteers are to be covered as additional insureds on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of the CONSULTANT or CONTRACTOR including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the CONSULTANT or CONTRACTOR's insurance (at least as broad as ISO Form CG 20 10 11 85 or **both** CG 20 10, CG 20 26, CG 20 33, or CG 20 38; **and** CG 20 37 forms if later revisions used).

Primary Coverage. For any claims related to this contract, the **CONSULTANT or CONTRACTOR's insurance coverage shall be primary** insurance. Any insurance or self-insurance maintained by Douglas County, its officers, officials, employees, or volunteers shall be excess and non- contributory to the CONSULTANT or CONTRACTOR's insurance.

Notice of Cancellation. Each insurance policy required above shall state that **coverage shall not be canceled, except with notice to Douglas County**.

Waiver of Subrogation. CONSULTANT or CONTRACTOR hereby grants to Douglas County a waiver of any right to subrogation which any insurer of said CONSULTANT or CONTRACTOR may acquire against Douglas County by virtue of the payment of any loss under such insurance. CONSULTANT or CONTRACTOR agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not Douglas County has received a waiver of subrogation endorsement from the insurer.

Self-Insured Retentions, Deductibles and Coinsurance. The CONSULTANT or CONTRACTOR agrees to be fully and solely responsible for any costs or expenses as a result of a coverage deductible, coinsurance penalty, or self-insured retention. Douglas County may require the CONSULTANT or CONTRACTOR to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or Douglas County. The CONSULTANT or CONTRACTOR will indemnify Douglas County, in full, for any amounts related to the above.

Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII, unless otherwise acceptable to Douglas County.

Claims Made Policies. If any of the required policies provide coverage on a claims-made basis:

1. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.
2. Insurance must be maintained, and evidence of insurance must be provided ***for at least three (3) years after completion of the contract of work.***
3. If coverage is canceled or non-renewed, and not ***replaced with another claims-made policy form with a Retroactive Dat***e prior to the contract effective date, the Consultant must purchase "extended reporting" coverage for a minimum of ***three (3)*** years after completion of contract work.

Verification of Coverage. CONSULTANT or CONTRACTOR shall furnish Douglas County with original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All certificates and endorsements are to be received and approved by Douglas County before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the CONSULTANT or CONTRACTOR's obligation to provide them. Douglas County reserves the right, but not the obligation, to review and revise any insurance requirement, not limited to limits, coverage, and endorsements. Additionally, Douglas County reserves the right, but

not the obligation, to review and reject any insurance policies failing to meet the criteria stated herein. Failure on the part of the CONSULTANT or CONTRACTOR to provide insurance policies within ten (10) working days of receipt of the written request will constitute a material breach of contract upon which Douglas County may immediately terminate this contract.

The completed certificates of insurance with additional insured endorsements and waivers of subrogation and any notices, within 20 days of cancellation or termination will be sent via mail or e-mail to:

Douglas County Government
Attn: Risk Management
100 Third Street
Castle Rock, Colorado 80104
risk@douglas.co.us

Subcontractors. Consultant shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and CONSULTANT or CONTRACTOR shall ensure Douglas County is an additional insured on insurance required from subcontractors. Any subcontractors will not be required to maintain professional liability insurance if their scope of work does not include any: (a) engineering or design; (b) construction inspection; or (c) survey work.

Failure to Procure or Maintain Insurance. The CONTRACTOR will not be relieved of any liability, claims, demands, or other obligations assumed by its failure to procure or maintain insurance, or its failure to procure or maintain insurance in sufficient amounts, durations, or types. Failure on the part of the CONTRACTOR to procure or maintain policies providing the required coverage, conditions and minimum limits will constitute a material breach of contract upon which Douglas County may immediately terminate this contract.

Governmental Immunity. The parties hereto understand and agree that Douglas County is relying on, and does not waive or intend to waive by any provision of this Agreement, the monetary limitations or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, C.R.S. §§ 24-10-101 *et seq.* as from time to time amended, or otherwise available to Douglas County, its officers, or its employees

Special Risks or Circumstances
Douglas County reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

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Megan Datwyler, Risk Manager Date