

**RESOLUTION NO. 24-38**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CASTLE PINES,  
COLORADO, APPROVING A PROFESSIONAL SERVICES AGREEMENT WITH  
JACOBS ENGINEERING GROUP INC. FOR DESIGN SERVICES RELATED TO THE  
I-25 & HAPPY CANYON INTERCHANGE**

WHEREAS, the City of Castle Pines, Colorado (“City”) is authorized to enter into contracts for the performance of general municipal governance and services; and

WHEREAS, the City of Castle Pines (“City”) solicited proposals (“RFP”) on March 5, 2024 for design services related to the I-25 & Happy Canyon Interchange, Project No. 2024-PW-003, renamed to Project No. 2024-PW-005 (the “Project”); and

WHEREAS, the City received five (5) proposals in response to the RFP within the time period that the Project was advertised; and

WHEREAS, the City Council, after consideration of the proposals submitted and the recommendations of City Staff, finds that Jacobs Engineering Group Inc. (“Contractor”), submitted the lowest responsible bid for the Project; and

WHEREAS, it is in the best interests of the City to award the design services for the Project to the Contractor in the not-to-exceed amount of Four Million Two Hundred Four Thousand Two Hundred Dollars (\$4,204,200.00); and

WHEREAS, the City desires to enter into a professional services agreement with Contractor in substantially the same form as attached to this Resolution as **Exhibit 1** (the “PSA”); and

WHEREAS, the City Council desires to approve the PSA and further desires to authorize the City Manager to execute the PSA on behalf of the City when in final form.

**THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CASTLE PINES, COLORADO, THAT:**

**Section 1.** The City Council hereby: (a) approves a PSA with Contractor in substantially the same form as attached to this Resolution as **Exhibit 1** in the not-to-exceed amount of Four Million Two Hundred Four Thousand Two Hundred Dollars (\$4,204,200.00); (b) authorizes the City Attorney, in consultation with City Staff, to make or negotiate such changes as may be needed to the PSA so long as any changes do not substantially increase the obligations of the City; and (c) authorizes the City Manager to execute the PSA on behalf of the City when in final form.

**Section 2.** If any section, paragraph, clause, or provision of this Resolution is held to be invalid or unenforceable by a court of competent jurisdiction, the invalidity or unenforceability

of such section, paragraph, clause, or provision shall not affect any of the remaining sections, paragraphs, clauses, or provisions of this Resolution.

**Section 3. Effective Date.** This Resolution shall take effect upon its approval by the City Council.

**INTRODUCED, READ AND ADOPTED AT A REGULAR MEETING OF THE CITY COUNCIL OF THE CITY OF CASTLE PINES BY A VOTE OF 4 IN FAVOR, 0 AGAINST, AND 3 ABSENT ON THIS 11<sup>TH</sup> DAY OF JUNE, 2024.**



ATTEST:

*Tobi Duffey*

\_\_\_\_\_  
Tobi Duffey, MMC, City Clerk

*Tracy Engerman*  
Tracy Engerman (Jun 26, 2024 20:45 MDT)

\_\_\_\_\_  
Tracy Engerman, Mayor

APPROVED AS TO FORM:

*Linda C Michow*

\_\_\_\_\_  
Linda C. Michow, City Attorney

**Exhibit 1**  
**Professional Services Agreement**

**City of Castle Pines, Colorado**  
**AGREEMENT FOR PROFESSIONAL SERVICES**

**Project/Services Name: I-25 and Happy Canyon Interchange Design**

THIS AGREEMENT FOR PROFESSIONAL SERVICES (“Agreement”) is made and entered into by and between the City of Castle Pines, a home rule municipality of the State of Colorado, with offices at 7437 Village Square Drive, Suite 200, Castle Pines, Colorado 80108 (the “City”), and Jacobs Engineering Group Inc., a Delaware Foreign Corporation with offices at 1999 Bryan Street, Suite 3500, Dallas, TX 75201 (“Contractor”) (each individually a “Party” and collectively the “Parties”).

**RECITALS**

WHEREAS, the City requires certain professional services as more fully described in **Exhibit A**; and

WHEREAS, Contractor represents that it has the requisite expertise and experience to perform the professional services; and

WHEREAS, the City desires to contract with the Contractor subject to the terms of this Agreement.

NOW, THEREFORE, for the consideration hereinafter set forth, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

**I. SCOPE OF SERVICES**

A. Services. Contractor shall furnish all labor and materials required for the complete and prompt execution and performance of all duties, obligations, and responsibilities which are described or reasonably implied from the Scope of Services set forth in **Exhibit A**, attached hereto and incorporated herein by this reference (the “Services” or “Scope of Services”). The Parties recognize and acknowledge that, although the City has requested certain general services to be performed or certain work product to be produced, the Contractor has offered to the City the process, procedures, terms, and conditions under which the Contractor plans and proposes to achieve or produce the services and/or work product(s) and the City, through this Agreement, has accepted such process, procedures, terms, and conditions as binding on the Parties.

B. Changes to Services. A change in the Scope of Services shall not be effective unless authorized through a written amendment to this Agreement signed by both Parties. If Contractor proceeds without such written authorization, Contractor shall be deemed to have waived any claim for additional compensation, including a claim based on the theory of unjust enrichment, quantum meruit or implied contract. Except as expressly provided herein or as otherwise provided in writing by the City, no agent, employee, or representative of the City is authorized to modify any term of this Agreement.

C. Duty to Inform. The Contractor shall perform the Services in accordance with this Agreement and shall promptly inform the City concerning ambiguities and uncertainties related to the Contractor's performance that are not addressed by the Agreement.

D. Time of Performance. The Contractor shall perform all Services in accordance with this Agreement commencing on the Effective Date, as set forth in Section II of this Agreement, until such Services are terminated or suspended in accordance with this Agreement. The Contractor shall not temporarily delay, postpone, or suspend the performance of the Services without the written consent of the City Council, City Manager, or a person expressly authorized in writing to direct the Contractor's services. Contractor agrees that failure to complete any of the Services during the term of this Agreement may be deemed a breach of this Agreement.

## II. TERM AND TERMINATION

A. Term. This Agreement shall commence on the date of mutual execution of the Parties (the "Effective Date") and shall continue until November 30, 2026 or until terminated as provided herein ("Termination Date"). The Parties may mutually agree in writing to extend the term of this Agreement, subject to annual appropriation.

B. City Unilateral Termination. This Agreement may be terminated by the City for any or no reason upon written notice delivered to the Contractor at least ten (10) days prior to termination. In the event the City exercises its right of unilateral termination as provided by this paragraph:

1. Unless otherwise provided in any notice of termination, the Contractor shall provide no further services in connection with this Agreement after Contractor's receipt of a notice of termination; and

2. The Contractor shall deliver all finished or unfinished materials, documents, data, studies and reports prepared by the Contractor pursuant to this Agreement to the City and such materials, documents, data, studies, and reports shall become the property of the City; and

3. The Contractor shall submit to the City a final accounting and final invoice of charges for all outstanding and unpaid Services performed and reimbursable expenses incurred prior to the Contractor's receipt of notice of termination and for any services authorized to be performed by the notice of termination as provided by Section II.B of this Agreement. The Contractor shall deliver such final accounting and final invoice to the City within thirty (30) days of the date of termination; thereafter, the City shall not accept and Contractor shall not submit any other invoice, bill, or other form of statement of charges owing to the Contractor.

C. Termination for Non-Performance. Should a party to this Agreement fail to materially perform in accordance with the terms and conditions of this Agreement, this Agreement may be terminated by the performing party if the performing party first provides written notice to the non-performing party. Such notice shall specify the non-performance, provide a demand to cure the non-performance, state a reasonable time to cure the non-performance, and set a date upon which the Agreement shall be terminated if there is a failure to timely cure the non-performance. For purpose of this Section II.C, "reasonable time" shall not be less than five (5) business days. In

the event of a failure to timely cure a non-performance and upon the date of the resulting termination for non-performance, the Contractor shall prepare a final accounting and final invoice of charges for all performed but unpaid Services and any reimbursable expenses authorized by this Agreement. Such final accounting and final invoice shall be delivered to the City within fifteen (15) days of the Termination Date contained in the written notice. Thereafter, the City shall not accept and Contractor shall not submit any other invoice, bill, or other form of statement of charges owing to the Contractor. If the notice of non-performance is provided in accordance with this Section II.C, nothing in this Section II.C shall prevent, preclude, or limit any claim or action for default or breach of contract resulting from non-performance by a Party.

D. Suspension of Services. The City may suspend the Contractor's performance of the Services at the City's discretion and for any reason by delivery of written notice of suspension to the Contractor, which notice shall state a specific date of suspension. Upon Contractor's receipt of such notice of suspension from the City, the Contractor shall immediately cease performance of the Services on the date of suspension except: (1) as may be specifically authorized by the notice of suspension (e.g., to secure the work area from damage due to weather or to complete a specific report or study); or (2) for the submission of an invoice for Services performed in accordance with this Agreement prior to the date of suspension. Contractor shall not re-commence performance of the Services until it receives written notice of re-commencement from the City.

E. Delivery of Notices. Any notice required or permitted by this Section II and its subsections shall be addressed to the City Representative or the Contractor Representative at the address set forth in Section XII.D of this Agreement, or such other address as either Party may notify the other of, and shall be deemed given upon delivery if personally delivered, or forty-eight (48) hours after deposited in the United States mail, postage prepaid, registered or certified mail, return receipt requested.

### **III. REPRESENTATIVES AND SUPERVISION**

A. City Representative. The City representative responsible for oversight of this Agreement and the Contractor's performance of Services hereunder shall be the City Manager or the City Manager's designee ("City Representative"). The City Representative shall act as the City's primary point of contact with the Contractor.

B. Contractor Representative. The Contractor representative under this Agreement shall be Michelle Pinkerton, Project Manager ("Contractor Representative"). The Contractor Representative shall act as the Contractor's primary point of contact with the City. The Contractor shall not designate another person to be the Contractor Representative without prior written notice to the City.

C. City Supervision. The Contractor shall provide all Services with little or no daily supervision by City staff or other contractors. Inability or failure of the Contractor to perform the Services with little or no daily supervision which results in the City's need to allocate resources in time or expense for daily supervision shall constitute a material breach of this Agreement and be subject to cure or remedy, including possible termination of the Agreement, as provided in this Agreement. Notwithstanding the foregoing, the City reserves the right to monitor and evaluate the progress and performance of the Contractor to ensure the terms of this Agreement are being

satisfactorily met in accordance with the City's criteria and standards. Contractor shall cooperate with the City relating to such monitoring and evaluation.

#### IV. COMPENSATION

A. Not-to-Exceed Amount. Following execution of this Agreement by the Parties, the Contractor shall be authorized to and shall commence performance of the Services as described in **Exhibit A**, subject to the requirements and limitations on compensation as provided by this Section IV and its subsections. Compensation to be paid hereunder shall not exceed Four Million Two Hundred and Four Thousand and Two Hundred Dollars and no cents. (\$4,204,200.00) ("Not-to-Exceed Amount") unless a different amount is agreed to by and between the Parties in accordance with the amendment requirements of this Agreement. Notwithstanding the amount specified in this Section, Contractor shall be paid only for work performed. Contractor shall not be paid until tasks identified in the Scope of Services are performed to the satisfaction of the City. In consideration for the completion of the Scope of Services by Contractor, the City shall pay Contractor as follows:

- If this box is checked, the City shall pay Contractor on a time and materials basis in accordance with the rate schedule shown in **Exhibit A**. This amount shall include all fees, costs and expenses incurred by Contractor, and no additional amounts shall be paid by the City for such fees, costs and expenses. Final payment may be requested by the Contractor upon completion and the City's acceptance of all work or Services as set forth in **Exhibit A**.
- If this box is checked, the City shall pay the Contractor the Not-to-Exceed Amount in a single lump sum payment on  [insert date here] .

B. Invoicing. The City shall make payments to Contractor in accordance with subsection A of this Section IV within thirty (30) days after receipt and approval of invoices submitted by Contractor. If payment is on a time and materials basis, Contractor shall submit invoices to the City no more frequently than monthly and shall identify the specific Services performed for which payment is requested.

C. Receipts. The City, before making any payment, may require the Contractor to furnish at no additional charge releases or receipts from any or all persons performing work under this Agreement and/or supplying material or services to the Contractor, or any subcontractor if this is deemed necessary to protect the City's interest. The City, however, may in its discretion make payment in part or full to the Contractor without requiring the furnishing of such releases or receipts.

D. Reimbursable Expenses.

1. If this Agreement is for lump sum compensation, there shall be no reimbursable expenses.

2. If the Agreement is for compensation based on a time and materials basis, the following shall be considered "reimbursable expenses" for purposes of this Agreement and may be billed to the City without administrative mark-up, which must be accounted for by the

Contractor, and proof of payment shall be provided by the Contractor with the Contractor's monthly invoices:

- None
- Vehicle Mileage (billed at not more than the prevailing per mile charge permitted by the IRS as a tax deductible business expense)
- Printing and Photocopying Related to the Services (billed at actual cost)
- Long Distance Telephone Charges Related to the Services
- Postage and Delivery Services
- Lodging and Meals (but only with prior written approval of the City as to dates and maximum amount)

3. Other Expenses. Any fee, cost, charge, or expense incurred by the Contractor not otherwise specifically authorized by this Agreement shall be deemed a non-reimbursable cost that shall be borne by the Contractor, shall not be billed or invoiced to the City, and shall not be paid by the City.

E. No Waiver. The City's review, approval or acceptance of, or payment for any services shall not be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement.

## V. PROFESSIONAL RESPONSIBILITY

A. General. Contractor hereby warrants that it is qualified to assume the responsibilities and render the services described herein and has all requisite corporate authority and professional licenses in good standing required by law.

B. Standard of Performance. The work performed by Contractor shall be in accordance with generally accepted professional practices and the level of competency presently maintained by other practicing professional firms in the same or similar type of work in the applicable community. The work and services to be performed by Contractor hereunder shall be done in compliance with applicable laws, ordinances, rules and regulations.

C. Subcontractors. The Parties recognize and agree that subcontractors may be utilized by the Contractor for the performance of certain Services if and as described more particularly in **Exhibit A**; however, the engagement or use of subcontractors will not relieve or excuse the Contractor from performance of any obligations imposed in accordance with this Agreement and Contractor shall remain solely responsible for ensuring that any subcontractors engaged to perform Services hereunder shall perform such Services in accordance with all terms and conditions of this Agreement. If Contractor engages subcontractors to perform any part of the Services, Contractor shall require and confirm that the requirements of Section VII (Insurance) and Section VIII (Indemnification) of this Agreement are included in any such subcontract. Contractor shall be responsible and liable to the City for indemnification of the City on behalf of a subcontractor if Contractor fails to confirm that the requirements of Section VIII are included in any subcontract between Contractor and a subcontractor related to this Agreement.

## VI. INDEPENDENT CONTRACTOR



A. General. Contractor is an independent contractor. Notwithstanding any other provision of this Agreement, all personnel assigned by Contractor to perform work under the terms of this Agreement shall be, and remain at all times, employees or agents of Contractor for all purposes and shall not be considered employees or agents of the City. Contractor shall make no representation that it is a City employee for any purposes.

B. Liability for Employment-Related Rights and Compensation. The Contractor shall be solely responsible for all compensation, benefits, insurance and employment-related rights of any person providing Services hereunder during the course of or arising or accruing as a result of any employment, whether past or present, with the Contractor, as well as all legal costs including attorney's fees incurred in the defense of any conflict or legal action resulting from such employment or related to the corporate amenities of such employment. The Contractor will comply with all laws, regulations, municipal codes, ordinances, and other requirements and standards applicable to the Contractor's employees, including, without limitation, federal and state laws governing wages and overtime, equal employment, safety and health, employees' citizenship, withholdings, reports and record keeping. Accordingly, the City shall not be called upon to assume any liability for or direct payment of any salaries, wages, contribution to pension funds, insurance premiums or payments, workers' compensation benefits, or any other amenities of employment to any of the Contractor's employees or any other liabilities whatsoever, unless otherwise specifically provided herein.

C. Insurance Coverage and Employment Benefits. The City will not include the Contractor as an insured under any policy the City has for itself. The City shall not be obligated to secure nor provide any insurance coverage or employment benefits of any kind or type to or for the Contractor or the Contractor's employees, sub-consultants, subcontractors, agents, or representatives, including but not limited to coverage or benefits related to: local, state, or federal income or other tax contributions, FICA, workers' compensation, unemployment compensation, medical insurance, life insurance, paid vacations, paid holidays, pension or retirement account contributions, profit sharing, professional liability insurance, or errors and omissions insurance. The following disclosure is provided in accordance with Colorado law:

**CONTRACTOR ACKNOWLEDGES THAT NEITHER IT NOR ITS AGENTS OR EMPLOYEES ARE ENTITLED TO UNEMPLOYMENT INSURANCE BENEFITS UNLESS CONTRACTOR OR SOME ENTITY OTHER THAN THE CITY PROVIDES SUCH BENEFITS. CONTRACTOR FURTHER ACKNOWLEDGES THAT NEITHER IT NOR ITS AGENTS OR EMPLOYEES ARE ENTITLED TO WORKERS' COMPENSATION BENEFITS. CONTRACTOR ALSO ACKNOWLEDGES THAT IT IS OBLIGATED TO PAY FEDERAL AND STATE INCOME TAX ON ANY MONEYS EARNED OR PAID PURSUANT TO THIS AGREEMENT.**

D. Employee Benefits Claims. To the maximum extent permitted by law, the Contractor waives all claims against the City for any Employee Benefits; the Contractor will defend the City from any claim and will indemnify the City against any liability for any Employee Benefits for the Contractor imposed on the City; and the Contractor will reimburse the City for any award, judgment, or fine against the City based on the position the Contractor was ever the

City's employee, and all attorneys' fees and costs the City reasonably incurs defending itself against any such liability.

## VII. INSURANCE

A. General. During the term of this Agreement, the Contractor shall obtain and shall continuously maintain, at the Contractor's expense, insurance of the kind and in the minimum amounts specified as follows by checking the appropriate boxes:

- The Contractor shall obtain and maintain the types, forms, and coverage(s) of insurance deemed by the Contractor to be sufficient to meet or exceed the Contractor's minimum statutory and legal obligations arising under this Agreement ("Contractor Insurance"); OR
- The Contractor shall secure and maintain the following ("Required Insurance"):
  - Worker's Compensation insurance in the minimum amount required by applicable law for all employees and other persons as may be required by law.
  - Comprehensive General Liability insurance with minimum combined single limits of One Million Dollars (\$1,000,000.00) each occurrence and of Two Million Dollars (\$2,000,000.00) aggregate. The policy shall be applicable to all premises and all operations of the Contractor. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, independent contractors, products, and completed operations. The policy shall contain a severability of interests provision. Coverage shall be provided on an "occurrence" basis as opposed to a "claims made" basis. Such insurance shall be endorsed to name the City as Certificate Holder and name the City, and its elected officials, officers, employees and agents as additional insured parties.
  - Comprehensive Automobile Liability insurance with minimum combined single limits for bodily injury and property damage of not less than One Million Dollars (\$1,000,000.00) each occurrence with respect to each of the Contractor's owned, hired and non-owned vehicles assigned to or used in performance of the Services. The policy shall contain a severability of interests provision. Such insurance coverage must extend to all levels of subcontractors. Such coverage must include all automotive equipment used in the performance of the Services, both on the work site and off the work site, and such coverage shall include non-ownership and hired cars coverage. Such insurance shall be endorsed to name the City as Certificate Holder and name the City, and its elected officials, officers, employees and agents as additional insured parties.

- Professional Liability (errors and omissions) insurance with a minimum limit of coverage of One Million Dollars (\$1,000,000.00) per claim and annual aggregate. Such policy of insurance shall be obtained and maintained for one (1) year following completion of all Services under this Agreement. Such policy of insurance shall be endorsed to include the City as a Certificate Holder.

B. Additional Requirements. Such insurance shall be in addition to any other insurance requirements imposed by law. The coverages afforded under the policies shall not be canceled, terminated or materially changed without at least thirty (30) days prior written notice to the City. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage. Any insurance carried by the City, its officers, its employees, or its contractors shall be excess and not contributory insurance to that provided by Contractor. Contractor shall be solely responsible for any deductible losses under any policy. For any and all insurance policies required hereunder, Contractor shall waive subrogation rights against the City.

C. Insurance Certificates. Contractor shall provide to the City a certificate of insurance and all endorsements required hereunder as evidence that the required policies are in full force and effect prior to the commencement of the Services. The certificate shall identify the Project/Services Name as set forth on the first page of this Agreement.

D. Failure to Obtain or Maintain Insurance. The Contractor's failure to obtain and continuously maintain policies of insurance shall not limit, prevent, preclude, excuse, or modify any liability, claims, demands, or other obligations of the Contractor arising from performance or non-performance of this Agreement. Failure on the part of the Contractor to obtain and to continuously maintain policies providing the required coverage, conditions, restrictions, notices, and minimum limits shall constitute a material breach of this Agreement upon which the City may immediately terminate this Agreement, or, at its discretion, the City may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith. All monies so paid by the City, together with an additional five percent (5%) administrative fee, shall be repaid by the Contractor to the City immediately upon demand by the City. At the City's sole discretion, the City may offset the cost of the premiums against any monies due to the Contractor from the City pursuant to this Agreement.

## **VIII. INDEMNIFICATION**

A. Contractor agrees to indemnify and hold harmless the City and its officers, insurers, volunteers, representatives, agents, employees, and assigns from and against all claims, liability, damages, losses, expenses and demands, including attorney fees, on account of injury, loss, or damage, including without limitation claims arising from bodily injury, personal injury, sickness, disease, death, property loss or damage, or any other loss of any kind whatsoever, which arise out of or are in any manner connected with this Agreement if such injury, loss, or damage is caused in whole or in part by, the act, omission, error, professional error, mistake, negligence, or other fault of Contractor, any subcontractor of Contractor, or any officer, employee, representative, or agent of Contractor, or which arise out of a worker's compensation claim of any employee of Contractor

or of any employee of any subcontractor of Contractor. Contractor's liability under this indemnification provision shall be to the fullest extent of, but shall not exceed, that amount represented by the degree or percentage of negligence or fault attributable to Contractor, any subcontractor of Contractor, or any officer, employee, representative, or agent of Contractor or of any subcontractor of Contractor.

B. If Contractor is providing architectural, engineering, surveying or other design services under this Agreement, the extent of Contractor's obligation to indemnify and hold harmless the City may be determined only after Contractor's liability or fault has been determined by adjudication, alternative dispute resolution or otherwise resolved by mutual agreement between the Parties, as provided by C.R.S. § 13-50.5-102(8)(c).

## **IX. RESERVED**

## **X. REMEDIES**

A. In addition to any other remedies provided for in this Agreement, and without limiting its remedies available at law, the City may exercise the following remedial actions if the Contractor substantially fails to perform the duties and obligations of this Agreement. Substantial failure to perform the duties and obligations of this Agreement shall mean a significant, insufficient, incorrect, or improper performance, activities or inactions by the Contractor. The remedial actions the City may take include:

1. Suspend the Contractor's performance pending necessary corrective action as specified by the City without the Contractor's entitlement to an adjustment in any charge, fee, rate, price, cost, or schedule; and/or

2. Withhold payment to the Contractor until the necessary services or corrections in performance are satisfactorily completed; and/or

3. Deny payment for those services which have not been satisfactorily performed, and which, due to circumstances caused by the Contractor, cannot be performed, or if performed would be of no value to the City; and/or

4. Terminate this Agreement in accordance with this Agreement.

B. The foregoing remedies are cumulative and the City, in its sole discretion, may exercise any or all of the remedies individually or simultaneously.

## **XI. RECORDS AND OWNERSHIP**

A. Retention and Open Records Act Compliance. Contractor hereby acknowledges that the City is a public entity subject to the Colorado Open Records Act, C.R.S. § 24-72-101 *et seq.* ("CORA"). As such, this Agreement may be subject to public disclosure under CORA. Furthermore, all records of the Contractor related to the provision of Services hereunder, including public records as defined in the CORA, and records produced or maintained in accordance with this Agreement, are to be retained and stored in accordance with the City's records retention and

disposal policies. Those records which constitute “public records” under CORA are to be at the City offices or accessible and opened for public inspection in accordance with CORA and City policies. Public records requests for such records shall be processed in accordance with City policies. Contractor agrees to allow access by the City and the public to all documents subject to disclosure under applicable law. Contractor’s willful failure or refusal to comply with the provisions of this Section shall result in the immediate termination of this Agreement by the City. For purposes of CORA, the City Clerk is the custodian of all records produced or created as a result of this Agreement. Nothing contained herein shall limit the Contractor’s right to defend against disclosure of records alleged to be public.

B. City’s Right of Inspection. The City shall have the right to request that the Contractor provide to the City a list of all records of the Contractor related to the provision of Services hereunder retained by the Contractor in accordance with this subsection and the location and method of storage of such records. Contractor agrees to allow inspection at reasonable times by the City of all documents and records produced or maintained in accordance with this Agreement.

C. Ownership. Any work product, materials, and documents produced by the Contractor pursuant to this Agreement shall become property of the City of Castle Pines upon delivery and shall not be made subject to any copyright by the Contractor unless authorized by the City. Other materials, statistical data derived from other clients and other client projects, software, methodology and proprietary work used or provided by the Contractor to the City not specifically created and delivered pursuant to the Services outlined in this Agreement shall not be owned by the City and may be protected by a copyright held by the Contractor and the Contractor reserves all rights granted to it by any copyright. The City shall not reproduce, sell, or otherwise make copies of any copyrighted material, subject to the following exceptions: (1) for exclusive use internally by City staff and/or employees; or (2) pursuant to a request under the CORA to the extent that such statute applies; or (3) pursuant to law, regulation, or court order. The Contractor waives any right to prevent its name from being used in connection with the Services. The Contractor may publicly state that it performs the Services for the City.

D. Return of Records to City. At the City’s request, upon expiration or termination of this Agreement, all records of the Contractor related to the provision of Services hereunder, including public records as defined in the CORA, and records produced or maintained in accordance with this Agreement, are to be returned to the City in a reasonable format and with an index as determined and requested by the City.

## **XII. MISCELLANEOUS**

A. Governing Law and Venue. This Agreement shall be governed by the laws of the State of Colorado, and any legal action concerning the provisions hereof shall be brought in Douglas County, Colorado.

B. No Waiver. Delays in enforcement or the waiver of any one or more defaults or breaches of this Agreement by the City shall not constitute a waiver of any of the other terms or obligations of this Agreement.

C. Integration. This Agreement constitutes the entire agreement between the Parties, superseding all prior oral or written communications.

D. Notice. Unless otherwise provided in this Agreement, any notice under this Agreement shall be in writing, and shall be deemed sufficient when directly presented or sent via pre-paid, first class United States Mail, to the party at the address set forth below.

**If to the City:**

**If to Contractor:**

City of Castle Pines Attn: City Manager 7437 Village Square Drive, Suite 200 Castle Pines, CO 80108	Jacobs Engineering Group, Inc Attn: Michelle Pinkerton 6312 S. Fiddlers Green Circle, Suite 300 Greenwood Village, CO 80111
With Copy to: Castle Pines City Attorney Michow Guckenberger & McAskin LLP 5299 DTC Boulevard, Suite 300 Greenwood Village, Colorado 80111	With Copy to:

E. Severability. If any provision of this Agreement is found by a court of competent jurisdiction to be unlawful or unenforceable for any reason, the remaining provisions hereof shall remain in full force and effect.

F. Modification. This Agreement may only be modified upon written agreement signed by the Parties.

G. Assignment. Neither this Agreement nor any of the rights or obligations of the Parties hereto, shall be assigned by either Party without the written consent of the other.

H. Affirmative Action. The Contractor warrants that it will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The Contractor warrants that it will take affirmative action to ensure applicants are employed, and employees are treated during employment without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

I. Governmental Immunity. The City, its officers, and its employees, are relying on, and do 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 amended (“CGIA”), or otherwise available to the City and its officers or employees.

J. Rights and Remedies. In the event of a breach of this Agreement by Contractor, the City shall have the right, but not the obligation, to obtain specific performance of the Services. In addition, if the City terminates this Agreement, in whole or in part, due to a breach by Contractor, Contractor shall be liable for actual and consequential damages to the City. The rights and remedies of the City under this Agreement are in addition to any other rights and remedies provided by law. The expiration of this Agreement shall in no way limit the City's legal or equitable remedies, or the period in which such remedies may be asserted.

K. Annual Appropriation. Consistent with Article X, § 20 of the Colorado Constitution, any financial obligation of the City not performed during the current fiscal year is subject to annual appropriation, and thus any obligations of the City hereunder shall extend only to monies currently appropriated and shall not constitute a mandatory charge, requirement, debt or liability beyond the current fiscal year.

L. Binding Effect. The Parties agree that this Agreement, by its terms, shall be binding upon the successors, heirs, legal representatives, and assigns; provided that this Section XII shall not authorize assignment.

M. No Third-Party Beneficiaries. Nothing contained in this Agreement is intended to or shall create a contractual relationship with, cause of action in favor of, or claim for relief for, any third party, including any agent, sub-consultant or subcontractor of Contractor. Absolutely no third-party beneficiaries are intended by this Agreement. Any third party receiving a benefit from this Agreement is an incidental and unintended beneficiary only.

N. Release of Information. The Contractor shall not, without the prior written approval of the City, release any privileged or confidential information obtained in connection with the Services or this Agreement.

O. Attorneys' Fees. If the Contractor breaches this Agreement, then it shall pay the City's reasonable costs and attorney's fees incurred in the enforcement of the terms, conditions, and obligations of this Agreement.

P. Survival. The provisions of Sections VI (Independent Contractor), VII (Insurance), VIII (Indemnification) and XII (A) (Governing Law and Venue), (J) (Rights and Remedies), (K) Annual Appropriation), (N) (Release of Information) and (O) Attorneys' Fees, shall survive the expiration or termination of this Agreement. Any additional terms and conditions of the Agreement that require continued performance, compliance, or effect beyond the termination date of the Agreement shall survive such termination date and shall be enforceable in the event of a failure to perform or comply.

Q. Agreement Controls. In the event a conflict exists between this Agreement and any term or provisions in any exhibit attached or incorporated into this Agreement, the terms and provisions in this Agreement shall supersede and control over the terms and provisions in such exhibit.

R. Force Majeure. Neither the Contractor nor the City shall be liable for any delay in, or failure of performance of, any covenant or promise contained in this Agreement, nor shall any delay or failure constitute default or give rise to any liability for damages if, and only to extent that, such delay or failure is caused by “force majeure.” As used in this Agreement, “force majeure” means acts of God, acts of the public enemy, acts of terrorism, unusually severe weather, fires, floods, epidemics, quarantines, strikes, labor disputes and freight embargoes, to the extent such events were not the result of, or were not aggravated by, the acts or omissions of the non-performing or delayed party.

S. Protection of Personal Identifying Information. In the event the Services include or require the City to disclose to Contractor any personal identifying information as defined in C.R.S. § 24-73-101, Contractor shall comply with the applicable requirements of C.R.S. §§ 24-73-101, et seq., relating to third-party services providers.

T. Authority. The individuals executing this Agreement represent that they are expressly authorized to enter into this Agreement on behalf of the City of Castle Pines and the Contractor and to bind their respective entities.

U. Counterparts and Electronic Signatures. This Agreement may be executed in one or more counterparts, each of which shall constitute an original and all of which shall constitute one and the same document. In addition, the Parties specifically acknowledge and agree that electronic signatures shall be effective for all purposes, in accordance with the provisions of the Uniform Electronic Transactions Act, Title 24, Article 71.3 of the Colorado Revised Statutes.

*REMAINDER OF PAGE INTENTIONALLY LEFT BLANK*

*SIGNATURE PAGES FOLLOW*



**THIS AGREEMENT is executed and made effective as provided herein.**

**CITY OF CASTLE PINES, COLORADO:**

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date of execution: \_\_\_\_\_

ATTEST:

\_\_\_\_\_  
Tobi Duffey, MMC, City Clerk

APPROVED AS TO FORM (*excluding exhibits*):

\_\_\_\_\_  
Linda Michow, City Attorney

**CONTRACTOR:**

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date of execution: \_\_\_\_\_

STATE OF COLORADO )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

The foregoing Agreement for Professional Services was subscribed, sworn to and acknowledged before me this \_\_\_ day of \_\_\_\_\_, 20\_\_\_, by \_\_\_\_\_ (printed name) as \_\_\_\_\_ (title) of \_\_\_\_\_, a \_\_\_\_\_.

My commission expires: \_\_\_\_\_

(S E A L)

\_\_\_\_\_  
Notary Public  
(Required for all contracts (C.R.S. § 8-40-202(2)(b)(IV)))

**EXHIBIT A**  
**SCOPE OF SERVICES & COMPENSATION**

## Additional SOW Added to the RFP SOW May 15, 2024

Additional Scope of Work to include additional scope from our presentation, subsequent conversations, and additional effort from the CDOT scoping meeting:

1. Phased Construction (Interim and Ultimate): The RFP SOW assumes the ultimate with an existing bridge minor rehab. We assume that if it is decided to move forward with the interim and ultimate phases, then we would need to provide the final design and construction drawings for both. The construction plans for the ultimate would be shelved until the capacity is met for the interim. The RFP SOW reflects the ultimate, so the additional effort would be the additional design work for the interim to minimize throw away elements in the ultimate condition. Activities for this work includes the following:
  - a. Traffic analysis to determine what year the interim phase is at capacity.
  - b. Additional effort to design and provide construction plans, specs, and cost estimate for the interim phase (as a tight diamond). This is in addition to the construction plans, specs, and cost estimate for the DDI (ultimate phase) which is included in the RFP SOW. This impacts the following disciplines: roadway, traffic, lighting, drainage, landscaping, bikes/peds design, and minor existing bridge modifications (like adding fence, etc.) to accommodate bicyclists and peds on existing bridge.
2. 1601 Process – Steps 3 – 5 – Senior Advisory role to help facilitate these steps through final approvals.
3. LCCA – not sure if we will need it and don't know at this point, so we are adding it to our SOW just in case. If we don't need it, then we won't use it.
4. Extending the survey limits 1000' east of where Happy Canyon Road improvements end from Exhibit A of the RFP to ensure we tie in properly to the Canyon's development.
5. Traffic modeling sensitivity analysis
6. MIMR
7. Coordination with developers on a shared WQ facility
8. Includes support to the City on CDOT's Project Delivery Selection Matrix workshop to determine the delivery of the project.
9. Includes higher level of effort (Regionally Significant Region) for Air Quality

### Major Assumptions

1. Does not include design of a replacement bridge for the existing bridge, should CDOT come through for bridge replacement funds. Our scope of work assumes the existing bridge will be rehabilitated.
2. Does not include a VE study. Federal guidelines indicate that VE studies are required for total project costs of over \$50M.
3. Assumes aesthetics for lighting is minimal and will follow the esthetic lighting guidelines already used for other projects in Castle Pines.
4. Assumes landscaping is minimal. Assuming we will not be providing any landscaping that needs irrigation and all landscaping in medians and buffer areas between sidewalk

and street will be hardscaped and native seeding will be provided on the slopes and any open ditches.

5. Assumes SPUI will not be included in the validation of alternatives.
6. Assumes the validation of alternatives only includes validating the VISSIM models from Wilson on three conceptual alternatives. No new VISSIM modeling will be performed for the three conceptual alternatives.
7. Assumes the selection criteria matrix to validate the preferred alternative will include validation of the traffic modeling only. Since the selection criteria matrix was already performed during pre-NEPA, there is no reason to revisit other elements of the criteria matrix, such as cost since that has already recently been done. We will just update the selection criteria matrix results with the validated traffic information to validate the preferred alternative.

## **SECTION IV - SCOPE OF SERVICES - RFP**

The consultant's scope of services for the fee proposal shall follow the work breakdown structure (WBS) below. The included scope of services is intended to provide a minimum level of scope requirements and assumptions for purposes of developing the fee proposal. It's expected that the selected consultant will further detail out the scope of services during contract negotiations and after the CDOT scoping meeting, as needed.

<b>Task 1</b>	<b>Project Management</b>
<b>Task 2</b>	<b>Surveying &amp; Mapping</b>
<b>Task 3</b>	<b>Subsurface Utility Engineering &amp; Utility Coordination</b>
<b>Task 4</b>	<b>Geotechnical Investigation</b>
<b>Task 5</b>	<b>Traffic Analysis/Alternatives Analysis</b>
<b>Task 6</b>	<b>Environmental Coordination</b>
<b>Task 7</b>	<b>Public Outreach &amp; Stakeholder Coordination</b>
<b>Task 8</b>	<b>Preliminary Design</b>
<b>Task 9</b>	<b>Final Design</b>

### **Task 1 - Project Management**

#### ***Task 1.1 Project Management***

The consultant will coordinate all the work tasks being accomplished by all parties to ensure project work completion stages are on schedule. This effort includes project invoicing and review of sub-consultant invoices for incorporation into the monthly invoices. The consultant will also assist the City PM with project organizational and administrative duties assigned throughout the project duration. This will include assisting or leading the coordination and setup of all meetings described herein or as necessary, developing and issuing meeting minutes and comment tracking and resolution spreadsheets, project filing, correspondence organization, contact list organization, and other general project administration as requested.

The consultant will, at a minimum, regularly schedule meetings and coordinate with Castle Pines staff, project team, and all appropriate entities outside of the City; identify and facilitate milestone meetings, and submit monthly schedule, budget, and project status reports. Status reports shall be submitted electronically. Schedules shall be prepared and submitted in PDF format.

#### ***Task 1.2 Project Management Plan***

The consultant will prepare and submit for approval a Project Management Plan (PMP) to include, at a minimum, the following elements:

- Scope of Work
- Schedule – tasks, meetings, milestones, critical path, delivery dates, workshops, and public meetings tied directly to the scope of work tasks. Updates to the schedule are to be included in the monthly progress reports.

- List of Submittals and associated submittal dates
- Budget
- Environmental mitigation approach
- Utility coordination
- Plan, Review, and Permitting requirements.
- Outside agency coordination including CDOT and Douglas County
- Regular monthly progress, submittal, and milestones meetings (FIR (30%) design review and FOR (90%) design review)
- Monthly project management status report
- Prepare and submit a Quality Assurance/Quality Control (QA/QC) plan which shall also include comment and resolution documentation strategy including tracking, response, and resolution meetings and spreadsheet examples.

***Task 1.3 Project Coordination and Progress Meetings***

The consultant project manager will coordinate with Castle Pines staff, the consultant’s team, and outside entities regarding the project. The first step in project coordination will be to engage the Project Management Team (PMT) that shall be formed during this contract and develop a list of stakeholders. Formation of other groups and teams, such as Technical Working Groups (TWG), may also be used and coordinated as necessary.

At a minimum, monthly meetings will be conducted with the PMT. At this meeting, the team will review the tasks completed, the tasks planned, discuss the schedule, and make critical decisions. At a minimum, the PMT is expected to include City decision-making staff, consultant discipline leads as needed, and subconsultants as needed. Action items will be tracked, and a list will be kept with each agenda. This list will denote who is responsible, when action is needed, and whether the action item is completed. Conference calls will also be used to provide project management updates. These progress meetings will be used to coordinate and track the work effort and resolve problems.

***Task 1.4 – Agency & Stakeholder Coordination Meetings***

Agency and stakeholder coordination meetings will occur after the monthly PMT meetings, as needed, to obtain input from stakeholders on project elements. Stakeholders will also be invited to attend the review meetings for milestone submittals. Action items will be tracked, and a list will be kept with each agenda. This list will denote who is responsible, when action is needed, and whether the action item is completed. At a minimum, these meetings are to include City staff, stakeholders, consultant PM, discipline leads, and sub-consultants as needed.

**Task 2 – Surveying & Mapping**

The consultant and/or their qualified surveyor shall establish project survey control, perform a design level survey, and develop the necessary CDOT right-of-way (ROW) plans.

### ***Task 2.1 – Topographic and Control Surveys***

Field survey information shall meet the requirements of the City’s Roadway Design and Construction Specifications as well as CDOT’s survey requirements.

It is anticipated that the following will apply to the topographic and control surveys:

- Secure Right of Entry
- Underground Utility Locates
- Survey Data Research
- Establish Ground Control
- Property/Boundary Survey (as needed)
- TMOSS Topographic Survey
- Project Control Diagram and/or Preliminary/Final Land Survey Control Diagram
- Map Compilation
- Right-of-Way Plan/Map Preparation
- Right-of-Way Research including ad joiners vesting deeds, title commitments, or memorandums of ownership.
- Right of Way Mapping (Mapping of existing right of way only)
- Right-of-Way Staking (Existing ROW, new ROW, TE’s, and PE’s delineated for Appraisal)
- Right-of-Way Monumentation (CDOT Monument)
- Property Monumented Survey (As required per Colorado Revised Statutes)

### ***Task 2.2 – Right-of-Way Plans and Legal Descriptions***

The selected consultant will be required to prepare legal descriptions (with exhibits) and CDOT Right-of-Way (ROW) plans for permanent ROW, permanent easements, utility easements, and temporary easements, as needed. The ROW plans will be required to meet the CDOT ROW Plan criteria. The CDOT ROW Plan Review (ROWPR) meeting cannot be held until the Top Part 128 environmental form has been approved by CDOT.

### ***Task 2.3 – Right-of-Way and Easement Acquisition Support Services***

The project ROW/easement acquisitions are anticipated to be led by Douglas County and the City of Castle Pines staff; however, acquisition support services will be required for ROW plans to get authorization to acquire. These support services shall include coordination, ROW plan development, CDOT clearances, property owner meeting attendance, exhibit development, legal descriptions, and technical support.

## **Task 3 – Subsurface Utility Engineering & Utility Coordination**

### ***3.1 Subsurface Utility Engineering (SUE)***

Utility coordination and locations of existing utilities will be obtained as part of the site investigations. Subsurface Utility Engineering (SUE) and investigation activities will be performed by the consultant in accordance with Senate Bill 18-167 and the American Society of Civil Engineers Construction Institute Standard 38-02 (ASCE/CI 38-02) as referenced. All existing underground utilities within the proposed survey area shall be clearly marked. The consultant shall provide a SUE plan that outlines the process for locating (both horizontally and vertically) ALL below-ground utilities.

- Conduct utility survey and potholing and coordinate into the project design (final number of pothole locations to be determined with a selected consultant during contract



negotiation phase).

- **For purposes of the fee proposal, assume 75 pothole locations.**

### **3.2 Utility Coordination & CDOT Utility Clearance**

The consultant will coordinate with utility companies to identify and coordinate the required utility relocations. All utility clearance letters and/or agreements will be prepared by the consultant, reviewed, and approved by the City and CDOT, as necessary, and executed with the individual utility company entities. Utility coordination shall occur as soon as possible. Upon completion of the preliminary design, affected utilities shall be notified, and coordination kickoff meetings scheduled to discuss protection and/or relocation efforts. Impacts of considerable cost and duration shall be pursued as soon as reasonably possible and prior to construction (if reasonably possible prior to construction activities) to minimize impact to the contractor. Risks associated with any early relocation activities pursued prior to the approved final design shall first be discussed and approved with the project team and City management. The consultant shall coordinate with utility companies regarding future plans they may have for additional utilities within the corridor.

Additionally, utility investigation and coordination may require the following tasks:

- Identify all utilities within the area on the plans. Determine the existing and future utilities needs based upon the proposed improvements.
- The consultant shall conduct field reviews and utility test holes to obtain / determine horizontal and vertical utility information; and coordinate this effort with CDOT's Region Utility Engineer for the portion of the project to be constructed within CDOT's ROW and coordinating with City and County representatives regardless of if the portion of the project to be constructed inside or outside of CDOT ROW.
- Relocation Recommendations
  - Anticipated major utility relocations will be provided and summarized in a "utility assessment" technical memo. Utility relocations will need to be documented and an opinion of probable cost will be developed.
- Communications and meetings with utility owners and coordinating their utility comments and/or relocations into the designs.
  - **For purposes of the fee proposal, assume 10 utility coordination meetings.**
- Utility coordination relative to the construction phasing.
- Provide utility relocation coordination relative to project design.
- Acquiring all necessary permits relating to utility relocations.

CDOT Utility Clearance will require the following tasks:

- Prepare Utility Relocation Agreements with all impacted utilities.
- Prepare a Utility Clearance Certification package in accordance with CDOT policies and procedures to obtain Utility Clearance for the project prior to the final Advertisement submittal.

## **Task 4 – Geotechnical Investigation**

### ***4.1 Geotechnical Investigation***

The consultant shall perform all soil sampling and analysis. This work will include, but is not limited to:

- Bore or drill logs for all bridge and retaining wall work. Subsurface investigation shall be conducted in accordance with the required CDOT interval frequency.
- Water table
- Soil classification
- Structure foundation recommendation
- Retaining wall recommendations including global stability analysis
- Pavement recommendation
- Soil resistivity tests
- Soil corrosiveness
- Embankment recommendations, including consolidation, and moisture/density recommendations.
- Sub-excavation recommendations

The geotechnical investigation shall comply with all City and CDOT requirements. A draft Geotechnical Report shall be delivered with the FIR (30%) submittal design prior to commencing the final design. A final Geotechnical Report shall be completed prior to the FOR (90%) submittal. The report shall be completed under the direction of, and recommendations to a level able to be certified by, a professional engineer registered in the State of Colorado.

## **Task 5 – Traffic Analysis / Alternatives Analysis**

### ***5.1 Traffic Analysis/Alternatives Analysis***

The Consultant will be provided with all TDM and VISSIM modeling, traffic counts, CAD files, and other pertinent information from the 1601 analysis. The consultant shall review the provided information and make recommendations for additional traffic modeling and/or interchange concept refinements. While a DDI is currently the recommended alternative, approval of the System Level Study from the 1601 process does not pre-determine a preferred alternative. The Consultant will need to validate the DDI and other alternatives to satisfy the NEPA requirements (including presenting them to the public for comment) with justification of the preferred alternative. The preferred alternative shall provide a good balance of traffic operations, constructability, and cost while minimizing environmental and rights-of-way impacts.

The Consultant shall document the traffic analysis, alternatives analysis, and identification and justification of a preferred alternative in a Traffic Analysis Report.

## **Task 6 – Environmental Coordination**

### ***6.1 Environmental Coordination***

The consultant shall obtain National Environmental Policy Act (NEPA) clearances and associated permits and mitigation requirements as necessary for federally funded projects. The consultant's environmental tasks shall include performing all necessary environmental research, coordination, and documentation to obtain such clearances, permits, and mitigation requirements.

The consultant will be responsible for preparing documents in accordance with the requirements of the current federal and state environmental regulations, including NEPA. For NEPA documentation, the consultant should assume an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) will be required. The environmental clearance shall be executed and completed at distinct milestones in the project as defined by CDOT's Local Agency project process.

It should be noted that it is the intent of the City to streamline the environmental clearance process to the maximum extent possible. The consultant shall also coordinate with the project team, Douglas County, CDOT, and FHWA, as necessary, to help characterize applicable environmental processes and documents needed for the project.

Environmental clearance tasks shall include, but not be limited to, compiling, and organizing baseline data from new and/or previous environmental documents, recent agency consultation, and coordination efforts associated with past and ongoing projects in the area applicable to the project location. The consultant will apply this information to help in identifying additional potential impacts, issues, permitting, and mitigation requirements for obtaining environmental clearances.

As necessary, the consultant shall determine all impacts and perform all processes and documentation associated with obtaining applicable environmental clearances, permits, and mitigation requirements, which may include, but not be limited to, visual impacts, air quality, noise, hazardous materials, biological and cultural resources, archaeology, environmental justice, non-historic 4(f) and 6(f), socio economic impacts, land use impacts, water quality impacts, noxious weeds, and paleontology. Any additional work required for the clearances shall be completed and outlined in memos and, if required, on the final plan set.

All documents shall be in CDOT's required format and presented to CDOT for review for all applicable clearances, permits, and mitigation requirements.

## **Task 7 – Public Outreach & Stakeholder Coordination**

### ***7.1 Public Outreach & Stakeholder Coordination***

In coordination with the PMT and the City's communication department, the consultant shall provide presentation material and support staff and assist in conducting public meetings and additional stakeholder coordination as follows:

- Develop and update stakeholder contact lists and communication tracking spreadsheets.
- Conduct small group meetings with property owners, homeowner associations, agencies, and business owners affected by the project, as needed.
- Conduct two (2) in-person public meetings intended to disseminate project progress information to the public and representatives of local agencies.
  - The consultant shall coordinate logistics of meetings, including location, format, communication aids and equipment, beverages, staging, and documenting and summarizing any input, concerns, and feedback gathered at such meetings.
- The Consultant shall ensure that the public outreach and stakeholder coordination meets all requirements of the NEPA process.

### ***7.2 Communication Aids***

The consultant shall provide graphic support using displays, exhibits, and write-ups for public meetings and for updating project information on the City's web and social media pages. The consultant shall work with the City's communication department to develop a web-based public comment tool as part of the City's web page that will assist in meeting the NEPA requirements. The information presented will be reviewed and approved by the project management staff and communication department prior to posting on the project web page.

## **Task 8 – Preliminary Design**

The selected consultant shall prepare all preliminary design documentation, including plans, details, quantities, and reports necessary to be consistent with the CDOT FIR submittal requirements.

### ***8.1 Preliminary Roadway Design***

As part of this phase, the consultant shall gather, review, and document the applicable design criteria to be used on this project. The City of Castle Pines, CDOT, Douglas County, and AASHTO design criteria may be used, as applicable. All drawings, designs, and specifications shall be in accordance with the most applicable and current versions. The consultant shall perform roadway design that will include:

- Prepare horizontal and vertical geometry and 3D modeling for all proposed elements of the selected interchange configuration.
- Prepare draft versions of CDOT Forms 463 and 859 for review.
- Prepare a list of all design variances from standard design criteria, along with written justification for each, shall also be submitted for review and approval prior to the FIR submittal.

## **8.2 Preliminary Drainage Design**

The consultant shall prepare a preliminary drainage report for the project. The I-25 and Happy Canyon Road interchange shall be designed with an urban drainage system that interfaces with existing and proposed roadside ditches where applicable. The urban drainage system, roadside ditches, and culverts shall be designed in accordance with the City of Castle Pines / Douglas County Storm Drainage Design and Technical Criteria Manual or CDOT Drainage Design Manual as applicable based on jurisdiction.

Stormwater quality shall be evaluated and mitigated during design as described in the City/Douglas County Grading, Erosion and Sediment Control (GESC) Manual and the City/Douglas County Storm Drainage Design and Technical Criteria Manual or CDOT Drainage Design Manual as applicable by jurisdiction.

The consultant selected shall complete a Preliminary Drainage Report, which will include, but is not limited to:

- Summary of existing drainage facilities
- Major structure hydraulic designs requirements
- Hydrology - Collect historical data related to previous construction projects adjacent to the project area from local partnering agencies and CDOT. Establish major drainage basins based on the historic existing data: delineate, determine size, waterway geometrics, vegetation cover, land use.
- Hydraulics - Develop a conceptual outfall plan. Define major drainage requirements including detention, water quality and outfall.
- Storm Water Management Plan - Perform field observations to consider project roadway alignment and MS4 related drainage mitigation requirements. Ascertain number of parcels, affected improvements, and possible problem areas (i.e., functional replacements, etc.). Initiate a conceptual Storm Water Management Plan in accordance with:
  - Municipal Separate Storm Sewer Systems (MS4) for the applicable jurisdiction
  - CDOT's Erosion Control and Storm Water Quality Guide
  - CDOT's Standard Specifications
  - CDOT Standard Plans

## **8.3 Preliminary Structural Design**

The consultant shall perform structural design for the interchange according to CDOT criteria and applicable standards (CDOT Bridge Design Manual, AASHTO's LRFD Bridge Design Specifications, and Design Criteria as applicable). Upon approval by the City management team, the consultant will prepare a Structure Selection Report per CDOT requirements. The consultant shall perform due-diligence investigation and analysis in the structure selection process. Further coordination with the project team, City staff, and structural reviewer(s) will be accomplished to completely define the structure type and configuration requirements. Structural concepts will be developed in accordance with the AASHTO Load Resistance Factor Design (LRFD) Specifications and the

### Structural Data Collection

As part of the Site Investigation and Field Survey phase, the consultant will collect and evaluate the following project information as required to complete Interchange design and shall include but not be limited to roadway section(s) along I-25, roadway and bridge plan and profile sheets showing all alignment data, topography, utilities, design plan, right-of-way restrictions, preliminary hydraulics and geology information, environmental constraints, lighting requirements, guardrail types, recommendations for structure type, and aesthetic recommendations.

### Structure Selection Report

Prepare a structure selection report to document, and obtain approval for, the structure preliminary design. Review the structure site data to determine the requirements that will control the interchange size, layout, type, and rehabilitation alternatives. By means of the structure's general layout, with supporting drawings, tables, and discussion, provide for the following:

- Summarize the structure site data used to select and layout the Interchange. Include the following:
  - Project site plan
  - Construction phasing
  - Utilities on, below, and adjacent to the structure
  - Hydraulics/drainage
  - Aesthetics
  - Ped/Bike trail vertical and horizontal alignments at the approach locations.
- Review the structure site data to determine the requirements that will control the structure size, layout, type, and rehabilitation alternatives. Provide support data and recommendations for the structure site data. Determine the structure layout alternatives. For bridges, determine the preliminary structure length, width, and span configurations addressing horizontal and vertical clearance criteria. Prepare a preliminary general layout for the recommended structure. Prepare layouts in accordance with current standards. The special detail drawings shall include the architectural treatment. Perform a design review and detail check of the general layout.
- Summarize the structure site data used to select and layout the structures, including existing structure data (including sufficiency rating and whether or not the structure is on the "select list" for replacement), project site plan, roadway vertical and horizontal alignments and cross sections at the structure, construction phasing, located utilities on, below, and adjacent to the structure, hydraulics, preliminary geology information for structure foundation, and architectural requirements (if required).
- Determine the rehabilitation alternatives. Continued use of all or parts of existing structures will be considered as applicable. The condition of existing structures will be documented. Determine potential modifications and rehabilitation to use all or parts of existing structures and the preliminary cost.

- Report on the structure selection and layout process. The Report shall include a discussion of structure layout, type, and rehabilitation alternatives considered. Criteria used to evaluate the structure alternatives and how the recommended structure was selected will be defined. A detailed conceptual cost estimate and general layout of the recommended structure will be provided.
- Review and confirm bike and pedestrian requirements.
- Develop the staged construction-phasing plan for the structure, as necessary for traffic control and detours; in conjunction with the parties performing the roadway design and traffic control plan. The impact of staged construction on the structure alternatives shall be considered and reported on
- Compute preliminary quantities and preliminary cost estimates as necessary to evaluate and compare the structure layout, alignment, and foundation-type alternatives. Prepare preliminary general layout for the recommended structure(s). Prepare structure layouts in accordance with the CDOT Bridge Detailing Manual. Special detailed drawings and an opinion of probable construction cost will accompany the general layout.
- Obtain City and CDOT acceptance on the structure selection report and structure layout. Allow approximately three weeks for the review of the structure selection report. The associated general layout, with the revisions required by the City reviews, will be included in the plans. The structure selection report, with the associated general layout, must be accepted in writing by the City prior to the commencement of further design activities.

#### **8.4 Preliminary Traffic Engineering**

The consultant will be required to provide the following traffic engineering scope items:

- Prepare signing and striping plans for the proposed improvements and tabulate these items. The latest edition of the Manual on Uniform Traffic Control devices (MUTCD) will be used to develop these plans.
- Prepare construction phasing and traffic control plans.
- Prepare traffic signal plans and details for the southbound and north ramp terminal intersections.
- Prepare all applicable CDOT Systems Engineering Analysis (SEA) as coordinated with CDOT ITS staff.

#### **8.5 Preliminary Lighting and Electrical Design**

The preliminary electrical and lighting design and associated plans will be prepared by the consultant, as needed. Lighting design shall consider both safety and aesthetics for the Interchange areas, including under bridge lighting. Preliminary electrical and lighting design shall also include all necessary coordination with the electrical supply utility for obtaining required power, including the source and location of required additional power infrastructure as needed. The lighting design shall conform to City and/or Douglas County and CDOT standards and criteria as appropriate. The consultant shall review Douglas County's Dark Skies lighting guidelines against CDOT's Lighting Design Guidelines (2020) and provide recommendations for project lighting elements that are able to be Dark Skies compliant.

### **8.6 Preliminary Landscape Architecture & Aesthetic Design**

The consultant shall provide aesthetics and landscape architecture design. The consultant's landscape architect shall consider the users and neighbors/community and views of the interchange (from and of) to generate a sense of place, security, and context (through the incorporation of Context Sensitive Solutions).

The consultant's landscape architect shall coordinate and work with the project team (and/or aesthetic committees comprised of the project team and/or stakeholder members) to develop the process and evaluation for best results. As part of the aesthetic design, the consultant shall consider and perform the following:

- Align access from adjacent trails to maximize pedestrian and bicycle ease of use.
- Develop an approach consistent with the neighborhood context that is cost-effective and meets the goals of the project and stakeholders.
- Prepare details, sketches, sections, plans, profiles, and 3D illustrations for discussion and presentation to the project team and stakeholders. Illustrations shall include Interchange and connecting roadways.
- Coordinate with the City's staff to help communicate and align the overall theme and context.
- The aesthetics proposed for this project should also consider incorporating design elements related to the Castle Pines Wayfinding plan.

### **8.7 Preliminary Design Quantities and Cost Estimates**

A detailed engineer's opinion of probable construction cost shall be provided at each milestone. The consultant shall also estimate the appropriate construction timing and schedule.

The consultant shall calculate all plan quantities as part of the cost estimate (with an appropriate level of detail to progress). Consistent with the cost estimate breakout, the consultant will also prepare quantity tabulations and a Summary of Approximate Quantities (SOAQ) to be included in the construction plan set. Pay item numbers shall be consistent with CDOT standard pay items and units of measure. The consultant shall not combine work items to minimize the number of pay items other than what is acceptable to industry standards. Pay items proposed as a lump sum unit of measure shall be discussed with the City project manager prior to submittal for review.

### **8.8 Preliminary Design Plan Production**

As part of the FIR (30%) design development, the consultant shall attend any necessary meetings with CDOT, the County, and the City and address design concerns prior to plan review submittals.



The FIR plans shall adhere to CDOT and City standards and at a minimum shall include the following sheets in CDOT format:

- Title Sheet
- Standard Plans List
- Typical Sections
- General Notes
- Summary of Approximate Quantities
- Quantity Tabulations
- Survey Control Diagram
- Survey Tabulation
- Geometric Plans
- Roadway Plans, Profiles, and Details (details at FOR & AD)
- Structural Plans and Details (details at FOR & AD)
- Drainage Plans, Profiles, and Details (including water quality) (details at FOR & AD)
- Landscaping Plans
- SWMP Plans (including CDOT SWMP Template sheets)
- Utility Plans
- Lighting and Electrical Plans
- Traffic Signal Plans
- Signing and Striping Plans
- Construction Phasing & Traffic Control Plans
- Roadway Cross Sections with Quantities

#### **8.9 FIR Review Meeting**

After the plans are fully reviewed and comments provided to the consultant, the consultant shall help coordinate, prepare for, and attend the FIR review meeting with CDOT staff. The consultant shall prepare meeting minutes for distribution. Comments, questions, and concerns raised during the submittal review (or at the meeting as appropriate) are to be documented and summarized in a comment resolution matrix and shall be resolved prior to the Final Office Review (FOR) submittal.

#### **Task 9 – Final Design**

The consultant shall finalize all design activities and tasks initiated in the preliminary design phase and produce 90% (FOR) and 100% (AD) designs that adhere to all applicable codes, regulations, standards, and criteria previously described herein, including providing final, for construction, plans, specifications, and associated estimate within project budget, that is able to be constructed and ready for bid. This shall include obtaining final CDOT clearances and permits necessary prior to bidding. The consultant shall ensure the design follows all Federal, state, local, and City requirements as well as findings and mitigation from the environmental clearance. The consultant shall assume a 4-week review time for all project submittals through the City and CDOT review process.

### **9.1 Final Roadway Design**

The consultant shall complete the final roadway design based on comments, decisions, and project design progression, including finalizing standard CDOT quantities for removal, resets, earthwork, pavement, curb quantities, and all other roadway design items.

### **9.2 Final Drainage Design**

Complete the final drainage design activities required for the project. The work may include, but is not limited to:

- Finalized Hydraulics Report. Complete the hydraulic design for the storm drainage system within the project limits. Update hydrology/hydraulics in accordance with DDI/roadway geometric revisions.
- Review data and information developed under the Preliminary Hydraulic Investigation and update and refine design and plans in accordance with decisions, comments, and project design progression, including any necessary updates to hydrologic basins, hydraulic designs of structure locations, flow rates, and geometric revisions to storm sewer pipes, inlets, and manholes.
- Finalize the SWMP and erosion control sheets in accordance with comments, decisions, and project design progression and as necessary to accommodate final roadway/DDI geometry revisions.

### **9.3 Final Structural Design**

The consultant shall finalize the structure design and analysis based on comments, decisions, and project design progression, including revising layouts as necessary, and shall be in accordance with the AASHTO's LRFD Bridge Design Specifications, City Design Criteria, and the CDOT Bridge Design Manual and applicable City building codes.

Final structure design activities may include, but are not limited to:

- Superstructure and substructure design.
- Complete the computer runs/calculations. Document with the design notes, detail notes, and computer output. All structural calculations shall be independently reviewed and package for City and CDOT review.
- Structure final design for all other associated structure elements (e.g., foundation, bearing details, stair, platform, and substructure components)
- Preparation of Structural Plans and Specifications:

The design and design review analysis shall be in accordance with the design criteria and standards previously mentioned in this scope of services section. This work includes the final development of design calculations, plan sheets, and construction specifications necessary to construct approved bridge approaches and accesses.

#### **9.4 Final Traffic Engineering**

The consultant shall complete the final traffic engineering design based on comments, decisions, and project design progression. Finalizing traffic engineering design may include, but is not limited to, the following engineering activities:

- Finalize the traffic signal plans and details for the southbound and north ramp terminal intersections.
- Finalize the Construction Phasing and Traffic Control Plans which integrate the construction of the structure work elements into a practical and feasible sequence. This plan shall accommodate the existing traffic movements during construction.
- Finalize the signing and striping plans for the proposed improvements and tabulate these items.
- Finalized any outstanding CDOT SEA required items.

#### **9.5 Final Lighting and Electrical Design**

The consultant will prepare the final plans for the lighting and electrical design. After approval of the locations of the lights, the lighting design will be completed with the following information shown on the plan sheets:

- Circuit type and voltage of power source
- Location of power source (coordinated with the utility company)
- Luminaire type and lumens
- Light standard type and mounting height
- Bracket arm type and length
- Foundation Details
- Size and location of electrical conduit
- Locations of power source(s)/lighting control center(s) (if appropriate)
- Location of direct burial cable
- Size of wiring and/or direct burial cable

#### **9.6 Final Landscape Architecture & Aesthetic Design**

The consultant shall provide the final landscape architecture and aesthetics design. The consultant work shall include incorporating comments, decisions, and design progressions toward finalizing plans, specifications, quantities, and estimates necessary for the construction of the aesthetic components of the project. Plans shall include preparing details, sections, plans, profiles, and 3D illustrations, as necessary, to convey approved aesthetic components and lighting integration. The final design shall also include any necessary engineering/analysis for the incorporation of aesthetic components into the approved construction plans.

#### **9.7 Final Design Quantities and Cost Estimates**

The consultant shall update the design quantities and engineer's opinion of probable construction cost. The Consultant shall also update the construction schedule.

### **9.8 Project Special Provisions**

The consultant shall prepare project specifications in accordance with City, County, and CDOT standards. This includes the use of the CDOT standard specifications, CDOT standard special provisions, project special provisions, and City of Castle Pines Roadway Design and Construction Specifications. As the project is federally funded, the latest editions of the CDOT Standard Specification, standard special provisions, and M&S Standard Plans shall be used.

### **9.9 Final Design Plan Production**

As part of the FOR-design process, the consultant shall attend any necessary meetings with CDOT and the City and address concerns prior to full plan review submittals. The consultant shall coordinate, complete, and compile the plan inputs from other activities (e.g., materials and geotechnical, structure, etc.). An updated list of all requested variances from standard design criteria, along with written justification for each, shall also be submitted.

### **9.10 FOR Review Meeting**

After the plans are fully reviewed and comments provided to the consultant, the consultant shall help coordinate, prepare for, and attend the FOR-review meeting with CDOT staff. The consultant shall prepare meeting minutes for distribution. Comments, questions, and concerns raised during the submittal review (or at the meeting as appropriate) are to be documented and summarized in a comment resolution matrix and shall be resolved prior to the Final AD submittal.

### **9.11 Advertisement Submittal**

The consultant shall make corrections to the plans, special provisions, estimate, and technical reports after the FOR-Review Meeting and prepare the Final 100% Advertisement (AD) submittal package.

For Major Structures, the consultant shall submit to the City PM, or staff representative Structural Reviewer, in both electronic (pdf and CAD, in City required format) and hard copy formats, or as directed by the City PM, the following:

- A letter to the City certifying that the Structural Plans and Specifications have been prepared in accordance with the most current standards and regulations that meet all applicable City, State, and Federal requirements.
- The complete and final set of structure design notes and independent checks
- Field Packages, including the final quantity calculations as described in the CDOT Bridge Detailing Manual, a copy of the geotechnical report, and as-constructed plans for existing structures on the project, where applicable.
- Copies, including at least 2 hard copies of complete signed and sealed "For Construction" packages (approved Plans and Project Manual), including appropriate incorporation of any approved revisions and addendums issued during the bid process.
- For Record Plan Sets, the consultant shall follow the City's review process and building department's process, as applicable, for record submittals, but at minimum two (2)

record plan sets for construction will be produced which shall bear the seal and signature of the responsible consultant Engineer on each sheet.

- Final CAD files shall be submitted in a format compatible with the City's "CAD to GIS" submittal standards.
- A complete archive of all documents as required by CDOT.

### **9.12 Permits & Clearances**

The consultant shall obtain the necessary permits and clearances prior to the advertisement for construction. The consultant shall coordinate, prepare, and submit applications, analyze, and develop any necessary design information for the appropriate agencies to obtain all applicable permits and clearances. Such permits and clearances may include, but not be limited to, the following:

- CDOT Environmental Clearances (Form 128 and all supporting documentation)
- CDOT Utility Clearances
- CDOT Right-of-Way Clearances
- NPDES Storm Water Permit for Construction Activities, if necessary
- Special permits as required, including CDOT and City permits

The Consultant shall compile, summarize, and tabulate all notes and associated permit and clearance requirements and incorporate any such information in the final plans and/or construction contract documents necessary to meet associated compliance and mitigation requirements.

The Consultant shall ensure all FHWA requirements of CDOT Procedural Directive 1601.1 have been met.

### **9.13 Bidding Assistance**

Once final City and CDOT approvals are received, the consultant shall complete and submit to the City a construction bid package that completely describes the work required to build the project, including final approved plans and specifications to be added to the Project Manual (completed in coordination with the City PM and the City's Purchasing department consisting of the City's standard Notices of Invitation and Instructions For Bidders, Construction Agreement, Insurance/Bond Requirements, Special Conditions and Provision, and Standard Special Provisions, as necessary), prior to advertising.

Preparation of bid documents - The consultant will support the city in preparing the bid documents including, but not limited to, the following:

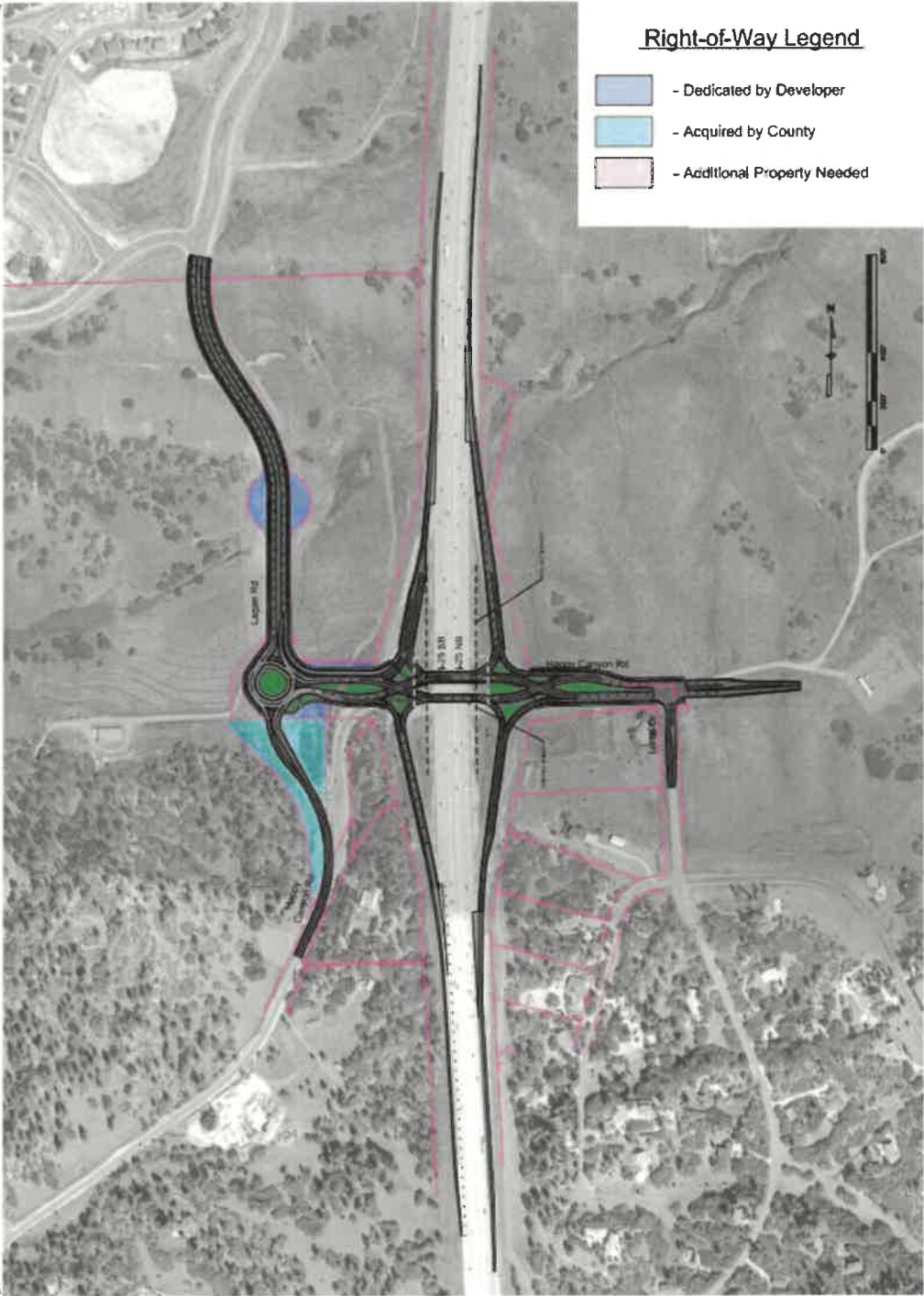
- Table of contents for contract documents
- Statement of Quantities and Bid Tabulations
- Notice of invitation for bids
- Instructions to bidders

- Formatting of various contract documents, rules, and regulations
- Formatting of the project special provisions
- Permits

As authorized in writing by the City of Castle Pines, the consultant shall coordinate, support, and perform any further services or assignments as needed and requested by the City for the project, contingent upon additional fees, contract budget reallocations, and/or project funding negotiations. These services could include unforeseen and currently unidentified scope of services, including but not limited to additional agency coordination meetings, environmental clearance and permitting efforts, post-design services, and RFI efforts beyond what is stipulated in the current scope of services.

**Appendix A- Approximate Location of I-25 and Happy Canyon Road Interchange**

# Happy Canyon Road Interchange (I-25 Exit 187) Project Location







## COST ESTIMATION WORKSHEET (CEW) Combined Geotechnical and Pavement Design

FIRM NAME: Yeh and Associates, Inc.      PREPARED BY: Masoud/I-Ping/Pete      DATE: 05/08/24

PROPOSAL NUMBER: 224-113      PROJECT NAME: I-25/Happy Canyon Interchange      CONTRACT/TASK ORDER NUMBER:

WORK ACTIVITY	Principal	Sr. Project Manager	Project Manager	Project Engineer	Staff Engineer	Lab Supervisor	Technician 1	CAD Designer	TOTAL HOURS	TOTAL COST
<b>1.0 Project Management</b>										
1.1 Contract Administration	2		2						4	
1.2 Prepare and submit invoices for payment			12						12	
<b>SUBTOTALS</b>	<b>2</b>	<b>4</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>\$4,240.00</b>
<b>2.0 Geotechnical and Pavement Investigation</b>										
2.1 Field locate of borings, UNCC utility locates				1	24				25	
2.2 Obtain traffic control plans and permits				1	10				10	
2.3 Health & Safety Plan (HASP)			6	4	1				2	
2.4 Conduct a subsurface exploration program			4		142				152	
2.5 Perform soil tests			4		4				8	
<b>SUBTOTALS</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>6</b>	<b>181</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>197</b>	<b>\$27,385.00</b>
<b>3.0 Geotechnical and Pavement Design</b>										
3.1 Develop recommendations for foundations			6	16					22	
3.2 Develop site grading recommendations			2	16					18	
3.3 Geotechnical analysis			6	16					22	
3.4 Pavement design analysis		60							60	
3.5 Life Cycle Cost Analysis (LCCA)		120							120	
3.6 Recommend surface and subsurface drainage			14	8					8	
<b>SUBTOTALS</b>	<b>0</b>	<b>180</b>	<b>14</b>	<b>56</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>250</b>	<b>\$51,770.00</b>
<b>4.0 Geotechnical Report</b>										
4.1 Provide recommendations			4	16					20	
4.2 Compile boring logs, test result			4	8	10				22	
4.3 Prepare and issue <i>Draft Geotechnical Investigation Report</i>		8	8	20				20	56	
4.4 Prepare and issue <i>Final Geotechnical Investigation Report</i>		5	4	20				16	45	
<b>SUBTOTALS</b>	<b>0</b>	<b>13</b>	<b>20</b>	<b>64</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>143</b>	<b>\$23,555.00</b>
<b>SUBTOTALS - HOURS</b>	<b>2</b>	<b>197</b>	<b>58</b>	<b>126</b>	<b>191</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>610</b>	
<b>SALARY RATE, \$ PER HOUR</b>	<b>\$235.00</b>	<b>\$225.00</b>	<b>\$205.00</b>	<b>\$150.00</b>	<b>\$135.00</b>	<b>\$150.00</b>	<b>\$100.00</b>	<b>\$155.00</b>		
<b>SUBTOTALS - LABOR COSTS</b>	<b>\$ 470.00</b>	<b>\$ 44,325.00</b>	<b>\$ 11,890.00</b>	<b>\$ 18,900.00</b>	<b>\$ 25,785.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 5,580.00</b>		<b>\$ 106,950.00</b>
<b>TOTAL LABOR COST</b>	<b>\$</b>	<b>\$ 106,950.00</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>		<b>\$</b>

TRAVEL & PER DIEM COST	Estimated Units	Unit Rate	Units	TOTAL COST
Vehicle Mileage	1,340	\$ 0.670	mile	\$ 897.80
Lodging			night	\$ -
Per Diem			day	\$ -
Airfare			each	\$ -
<b>TOTAL TRAVEL AND PER DIEM COST</b>				<b>\$ 897.80</b>

60 miles \* (15 +3) days\* 1.2

DRILLING & OTHER SUBSURFACE INVESTIGATION COST	Estimated Units	Unit Rate	Units	TOTAL COST
Support Truck	15	\$ 305.00	day	\$ 4,575.00
Compressor (For powerwashing utility marks)	0	\$ 600.00	day	\$ -
Mobilization	30	\$ 300.00	day	\$ 9,000.00
Core Boxes		\$ 15.00	each	\$ -
Exploration (CME 75, Auger)	120	\$ 275.00	hour	\$ 33,000.00
Traffic Control - DAY WORK	0	\$ 375.00	hour	\$ -
Traffic Control - NIGHT WORK	120	\$ 625.00	hour	\$ 75,000.00
Instrumentation			each	\$ -
Geophysics		\$ 6,000.00	day	\$ -
Other -			hour	\$ -
<b>TOTAL DRILLING &amp; OTHER INVESTIGATION COST</b>		<b>\$ 121,575.00</b>		

Assume 6 bridge borings (70')(2 /bent)+ 6 wall borings (50') (3 /abut), 6 embk borings (40' @500' spacing), plus 16 pavement boring and 8 pavement cores along ramps and local roads

LABORATORY & FIELD TEST COST	Estimated Units	Unit Rate	Units	TOTAL COST
Atterberg Limits	16	\$ 120.00	each	\$ 1,920.00
Classification	70	\$ 180.00	each	\$ 12,600.00
Hydrometer Analysis		\$ 150.00	each	\$ -
Moisture Content	66	\$ 20.00	each	\$ 1,320.00
Dry Density (CA liner)	50	\$ 45.00	each	\$ 2,250.00
pH	15	\$ 50.00	each	\$ 750.00
Sulfate Content	15	\$ 50.00	each	\$ 750.00
Chloride Content	15	\$ 80.00	each	\$ 1,200.00
Resistivity (laboratory)	2	\$ 220.00	each	\$ 440.00
Standard Proctor		\$ 250.00	each	\$ -
Modified Proctor		\$ 250.00	each	\$ -
Swell-Consolidation (Method A)	10	\$ 220.00	each	\$ 2,200.00
R-Value (outside lab = \$) (internal hours = \$)	5	\$ 400.00	each	\$ 2,000.00
UC Rock Testing (outside lab)			each	\$ -
Other			each	\$ -
<b>TOTAL LABORATORY &amp; FIELD TEST COST</b>		<b>\$ 26,180.00</b>		

reminder: list outside lab as vendor on CDOT PCWs (\$???)  
reminder: list outside lab as vendor on CDOT PCWs

**TOTAL PROJECT COST \$ 255,602.80**

May 9, 2024

Michelle Pinkerton

**Jacobs**

6312 S. Fiddler's Green Circle, Ste 300N  
Greenwood Village, CO 80111  
303-619-1601 | Michelle.Pinkerton@jacobs.com

Re: I-25 & Happy Canyon Road  
Lighting and Electrical Design Consulting Proposal  
Clanton Project #24025

Clanton and Associates proposes to undertake the lighting and electrical consulting for the Happy Canyon Bridge improvements in Castle Pines, CO.

Estimated labor:	\$ 120,475
Estimated expenses:	\$ 200
<b>Total Fee (labor and expenses):</b>	<b>\$ 120,675</b>

The scope of work includes:

1. Lighting design for Happy Canyon Road bridge improvements
  - a. Bridge lighting
  - b. Underdeck lighting
  - c. Continuous streetlighting
    - i. Lagae Road
    - ii. Happy Canyon Road
  - d. Ramp lighting
  - e. Aesthetic lighting for landscape architectural elements
2. Electrical service for up to three (3) traffic signals

#### Assumptions

- All lighting equipment installed on the bridge will be owned and maintained by CDOT.
- All lighting equipment installed on the ramps and ramp intersections will be metered and owned by CDOT
- Other streetlighting not associated with the ramps and bridges will be owned and maintained by CORE Electric.
- Aesthetic lighting will be metered and owned and maintained by the Town of Castle Pines

Fees are billed hourly not to exceed the contract amount without prior approval. Invoicing will occur monthly based on hours worked.

Project deliverables will be issued on agreed upon dates between Clanton & Associates, Inc and the Client. Any model or background update will be provided no fewer than five business days prior to any indicated deliverable.

Design services shall include the following:

**30% Preliminary Design (FIR)**

- Kickoff meeting
- Site visit to observe existing lighting conditions
- Establish basis of design
- Lighting design
  - Lighting layout
  - Luminaire selection
  - Lighting calculations
  - Aesthetic lighting concepts
- Identify potential power source locations
- Coordinate power source locations and capacity with electric utility
- Tabulation of approximate quantities
- Opinion of Probable Cost
- Up to one (1) submittal (30% set)
  - Quality Control
  - Submittal IDR
- Attendance at 30% Review meeting by teleconference

**90% Design (FOR)**

- Incorporate comments from 90% Review, up to one (1) comment response
- Lighting design
  - Final lighting layout
  - Lighting details
  - Luminaire schedule
  - Lighting control narrative
  - Lighting control design
- Electrical design
  - Panel schedules
  - One-line diagrams
  - Lighting Control Centers, including short circuit calculations and feeder sizing
  - Circuiting and conduit, including voltage drop calculations and conduit sizing
  - Electrical details
- Coordinate power source locations and capacity with electric utility
- Specifications
- Tabulation of Approximate Quantities
- Opinion of Probable Cost
- Up to one (1) submittal (90% set)
  - Quality Control
  - Submittal IDR
- Attendance at 90% Review meeting by teleconference

**100% Design (Bid Set)**

- Incorporate comments from 90% review, up to one (1) comment response
- Lighting Design
- Electrical design
- Specification revisions

- Tabulation of Approximate Quantities
- Opinion of Probable Cost
- Up to two (2) submittals (Bid Set & stamped plans)
  - Quality Control
  - Submittal IDR

#### **Interim Phase Final Design (90% & 100%)**

- Electrical design for (2) interim traffic signals
- Evaluate interim lighting & electrical to avoid or minimize re-work for ultimate design
- Tabulation of Approximate Quantities
- Opinion of Probable Cost
- Attend up to four (4) Design Coordination Meetings
- Up to two (2) submittal (90% & 100% sets)
  - Quality Control
  - Submittal IDR

#### **Project Management**

- Team coordination, up to twenty-four (24) meetings
- Monthly invoices with progress reports

This scope of work is based upon normal project progress and within the time schedule agreed upon, without major redesign or change order work. Additional fees will be required if project timing is extended or project is put on hold and restarted at later date. If the project timing exceeds one year, additional services rates may increase.

The scope is based on the RFP.

Not included in this scope of work but is available for extra services:

- Additional site visits or meetings
- Construction observation and/or services during construction
- Development or issuing of electric utility work order forms, applications, and/or meter address applications
- Temporary Lighting
- Electrical engineering for non-lighting electrical infrastructure or traffic signal electrical service(e.g. ITS equipment, electrical vehicle (EV) infrastructure, electrical receptacles, smart city and/or small cell infrastructure).
- Significant lighting and/or electrical redesign five (5) weeks prior to issuing the 90% (FOR) submittal based on client changes such as: changes in streetlight ownership, addition of new electrical service(s), or a change from resetting existing streetlights to new streetlight installation.
- Location or load changes to electrical infrastructure after the 90% (FOR) submittal. This shall include, but is not limited to, shifting of ITS equipment, traffic cabinets, power sources, or changes to the electrical load require recalculation of voltage drop and short circuit calculations.
- Any development, design, or detailing of custom luminaires
- Drafting on non-digital backgrounds such as \*.pdf or \*.jpg files
- Value engineering
- Coordination during bid phase
- Client presentations
- Renderings

- Mock-ups
- Art lighting or development of light art

Specific exclusions from this scope are as follows:

- Structural engineering
- Equipment procurement
- Commissioning
- Survey control map or Right-of-Way plans
- Subsurface Utility Engineering
- Communication wiring to Traffic Signals

Client will supply Clanton and Associates with review materials and backgrounds in AutoCAD or Micro Station format. Reimbursable expenses shall include printing costs, overnight delivery and travel expenses associated with the project and shall be charged in addition to the compensation for professional services. Payment for services is expected within 30 days of invoice unless other arrangements are made in writing.

Additional services shall be charged per the rates in the attached Clanton & Associates Rates Table.

Work shall commence upon receipt of a signed copy of this agreement. This agreement is valid for 60 days.



CLANTON & ASSOCIATES

5/9/2024

DATE

JACOBS

DATE



Clanton & Associates 2024 Update Titles & Rates*	
<b>Title</b>	<b>Hourly Rates</b>
Senior Lighting Expert	\$400
Chief Executive Officer	\$365
President	\$350
Principal	\$260
Associate	\$245
Business Development Manager	\$240
Senior Engineer II	\$240
Senior Engineer I	\$200
Engineer II	\$170
Engineer I	\$150
Senior Designer II	\$235
Senior Designer I	\$175
Designer II	\$155
Designer I	\$145
Intern	\$115
Production Manager	\$225
Senior CADD Technician	\$145
CADD Technician	\$120
Marketing Manager	\$110
Office Manager	\$110
Administration	\$110

\*Rates are subject to change at the discretion of Clanton & Associates, Inc.





Corporate Headquarters  
3222 South Vance Street, Suite 200, Lakewood, CO 80227  
T. 303.980.5200 F. 303.980.0089  
www.pinyon-env.com

May 3, 2024 revised May 8, 2024

Michelle Pinkerton, PE  
Jacobs  
6312 S. Fiddler's Green Circle Ste. 300N  
Greenwood Village, CO 80111

Via email: michelle.pinkerton@jacobs.com

Subject: Proposal to Provide Environmental Support, I-25 and Happy Canyon Road Interchange Design,  
City of Castle Pines, Colorado

Dear Ms. Pinkerton:

Pinyon Environmental, Inc. (Pinyon), is pleased to present this proposal for environmental services in support of the I-25 and Happy Canyon Road Interchange Design Project (Project). Pinyon understands that the City of Castle Pines (City) is planning to complete the design for reconstructing the existing interchange at I-25 and Happy Canyon Road to modernize it. As this project is located on a Federal Highway Administration (FHWA)-regulated facility (I-25), a National Environmental Policy Act (NEPA) study is required. The Colorado Department of Transportation (CDOT) will be providing oversight of the NEPA process with support from FHWA. For this project, Pinyon will support the project by completing technical studies as outlined in Attachment A.

Details regarding Pinyon's estimated scope of work, assumptions, and deliverables are presented in the following pages. The estimated cost to complete this project, in accordance with the outlined services, will be approximately **\$154,970.58**. Pinyon will invoice on a time and materials basis, in accordance with our rates provided for this proposal for the duration of the project through June 2026. The authorized amount will not be exceeded without prior approval.

The project duration is assumed to be July 2024 through December 2025; if the project duration is extended, a change order may be required. Should the project be delayed for six months or more, this scope will need to be reexamined in light of changing practices and the fee will need to be revised if Pinyon's rates have changed in that time period. Should you have any questions or require additional information, please do not hesitate to call. Thank you for considering Pinyon for your environmental consulting needs.

Sincerely,

**PINYON ENVIRONMENTAL, INC.**

A handwritten signature in black ink that reads "Amy Kennedy". The signature is written in a cursive, flowing style.

Amy Kennedy  
Senior Project Manager  
Kennedy@pinyon-env.com

**Assumptions:** The design team will provide up to a scoping level of plans (e.g., 15% that encompasses the maximum project disturbance footprint) as well as a geospatially referenced file (i.e., Google Earth, shapefile, AutoCAD) of the study area so that Pinyon, the City, and CDOT can agree on the study area boundaries prior to any field work being completed. It is assumed that Pinyon will follow CDOT processes unless otherwise noted. Some deliverables are design dependent as an impact evaluation is required and may not be available until or after design plans have been significantly advanced, unless otherwise noted in the table below. And that the NEPA document deliverable will have an initial round of review by Castle Pines; one round of review/revision/comment by CDOT with a back check; one round of review by CDOT's Environmental Programs Branch with a back check; and one round of review by FHWA with a back check.

The schedule assumes that all biological resources fieldwork would occur when vegetation is growing and can be speciated. Pinyon may be able to do off-season field surveys; however, if not all indicators are present, the survey is likely more conservative than it would be during the growing season. Should the surveys proceed outside the growing season to accommodate the implementation schedule and a regulatory agency requires revisitation during the growing season additional scope and fee will be required.

The following tasks and assumptions were developed using Pinyon's professional judgement, given the information presented in the RFP, and Pinyon's knowledge of the corridor and environmental context. This scope, and associated fee, should be considered preliminary and subject to final scoping with CDOT and the City. Further, additional revision and/or refinement may be necessary as design advancement and design decisions are made, particularly if design changes result in required revisions of deliverables or additional field studies.

Task	Scope of Work Summary	Deliverables
General Task Management	<p>General project management, contract administration, invoicing, etc. The kick-off meeting and Site Visit will be attended in person; all other meetings will be attended virtually. Project duration is assumed to be 24 months.</p> <p>Kick-off meeting (1)            CDOT Environmental Scoping Meeting (1)            FIR Meeting (1)            FOR Meeting (1)</p>	<p>Monthly invoices            Progress reports</p>
Air Quality/Greenhouse Gases (GHG)	<p>Pinyon will complete a technical report and EA sections for Air Quality in accordance with requirements in CDOT's Air Quality Project-level Analysis Guidance (AQ-PLAG) and the latest NEPA Manual. Due to the project area being in the ozone nonattainment area, air quality is required to include a conformity analysis, but is not expected to require quantitative criteria emissions nor hot spot modeling analysis due to the project area no longer being in maintenance status for particulate matter or carbon monoxide. Findings will be documented the Air Quality and GHG Technical Report and EA subsections.</p> <p>Additionally, Pinyon will complete an analysis that will be documented in the Air Quality and GHG Technical Report and EA sections in accordance with requirements in CDOT's 2023 NEPA Manual. GHG analysis is expected to include a quantification of direct and indirect emissions from operational, construction, and maintenance phases, along with identification of mitigation, if needed. Indirect emissions analysis must also include a disclosure of embodied carbon for the upstream materials needed for the project. Lastly, analysis on the social cost of carbon for the project will also be conducted.</p> <p>Additionally, CDOT is expected to release a project-level GHG guidance document that specifies technical report content and analysis requirements similar to what is available currently for air quality and noise. This guidance document is expected imminently, and would be referenced and followed for this project, assuming it has been released.</p>	<p>Air Quality and GHG Technical Report            EA Subsections</p>

Task		Scope of Work Summary	Deliverables
Hazardous Materials		<p>Pinyon will complete an Initial Site Assessment (ISA) Technical Report which will include obtaining an agency database (i.e., ERIS). Pinyon will also draft the EA subsection for this resource.</p> <p>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 ROW and easement requirements.</p> <p>No soil or water testing is anticipated at this time (if determined necessary, a change order would be required).</p> <p>It may be necessary for the extant bridge structure to be surveyed for regulated building materials (e.g., asbestos). Often, CDOT's Property Management group conducts these surveys, and a survey may already be available. Pinyon will work to secure prior surveys, if available. Should a new survey of the bridge be required, a change order would be needed.</p> <p>Note, the agency database and the ISA Technical Report may need to be updated as the project schedule advances, particularly if 6 months or more passes between when the report is submitted and when the decision document is released. Additional updates of the ISA Technical Report will require additional costs.</p>	<p>ISA Technical Report EA Subsection</p>
Biological Resources	Field Work	<p>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. Pinyon assumes that the design team will calculate impacts using the provided GIS data. Pinyon assumes that the design team or the City will provide Permission to Enter forms.</p>	<p>GIS Shapefiles</p>

Task	Scope of Work Summary	Deliverables
Wetlands/ Waters of the U.S. (WOTUS)	<p>Pinyon will complete a WOTUS delineation 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) if there are areas of potential WOTUS. The design team will provide these study areas prior to field surveys. Fees for the survey equipment (e.g., GPS receivers, waders, forms, cameras) are included with the fieldwork task.</p> <p>Pinyon will document the existing conditions regarding WOTUS, in the Biological Resource Technical Memorandum (BRTM). Pinyon will also draft the EA subsection for this resource.</p> <p>Impacts to wetlands/waters of the U.S., are presumed to be minimal. Therefore, it is assumed that if there are impacts, they will be authorized under a USACE Nationwide Permit (NWP) (likely NWP 14 for Linear Transportation Projects). Should impacts be less than 0.10 acre to open waters and there are no impacts to wetlands, the project would likely be programmatically authorized under a non-notifying NWP. Pinyon assumes that neither a Pre-construction Notification nor an Individual Permit is required.</p> <p>If there are wetlands, 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 City. 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.</p> <p>With use of a non-notifying NWP, it is still required that we provide documentation that the project has complied with the Endangered Species Act (ESA) and Section 106 of the National Historic Preservation Act (NHPA). This means that CDOT and/or U.S. Fish and Wildlife Service (USFWS) need to issue clearance for the ESA and CDOT and/or SHPO would provide documentation that the NHPA has been complied with.</p> <p>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 will be 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.</p>	Documented in BRTM EA Subsection
Colorado Stream Quantification Tool (CSQT)	The USACE requires mitigation for streambed losses that exceed 3/100 of an acre when a PCN is required. As the project is not expected to impact greater than 3/100 of an acre of WOTUS nor require a PCN, Pinyon assumes that the Colorado Stream Quantification Tool (CSQT) does not need to be completed.	NA
Vegetation and Noxious Weeds	<p>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 BRTM as well as applicable specifications. Pinyon will also draft the EA subsection for this resource.</p> <p>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.</p>	Documented in BRTM EA Subsection

Task		Scope of Work Summary	Deliverables
	SB 40 Resources (SB 40)	Based on knowledge of the study area and review of aerial imagery, SB 40 resources are not present within the area of potential impact. This lack of presence will be documented in the BRTM and the EA subsection.	Documented in BRTM EA Subsection
	Threatened and Endangered Species/Migratory Birds and Raptors/Fish and Wildlife	<p>Pinyon will evaluate habitat within the study area for federally and state-listed species and document the findings within the BRTM. 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.</p> <p>Based on knowledge of the study area and after review of the USFWS Information for Planning and Consultation database, and given the anticipated disturbance that will result from the project and the developed nature of the study area, Pinyon assumes that the impact assessment will reveal a conclusion of <i>No Effect</i> to federally listed species. Therefore, coordination with the USFWS is not anticipated to be required. If the effects determination is <i>May Affect, But Not Likely to Adversely Affect</i>, coordination with USFWS in the form of a letter would be required, and additional scope and fee would be necessary.</p> <p>Pinyon will conduct a survey for raptors and other migratory birds within the prescribed buffer area/study area per Colorado Parks and Wildlife (CPW) guidelines. The results of the survey will be documented in the BRTM. Pinyon will also draft the EA subsection for this resource.</p> <p>General habitat conditions for fish and wildlife and consideration of depletions to the South Platte River will be documented in the BRTM.</p>	Documented in BRTM EA Subsection
Historic Resources		<p>Pinyon will develop an Area of Potential Effect (APE) for historic resources in coordination with CDOT. It is assumed that the APE will include properties that will be directly and indirectly impacted by the project (i.e., the easement as well as potential noise or visual impacts). Once the APE is established, Pinyon will evaluate historic resources within the APE. Pinyon will complete a historic file search, including a review of the OAHF Compass database, for known and potentially historic properties in the APE. The cost for the database is not yet known, the cost shown in Table 1 is an estimate; Pinyon will charge project for the actual cost of the database.</p> <p>Pinyon understands project design is assumed to be primarily within existing transportation ROW that is owned by CDOT and/or the City; therefore, limited direct effects to historic and potentially eligible resources may be incurred by the project. Pinyon assumes that up to two (2) resources (to be determined based on research) will need to be evaluated for NRHP eligibility using the appropriate OAHF inventory form.</p> <p>Pinyon will complete a site visit, prepare up to two OAHF inventory forms, and draft an Eligibility and Effects Letter (Letter) containing recommendations of NRHP eligibility and Section 106 effects to historic properties in the APE. The letter will include the applicable Section 4(f) notifications for submission to CDOT for their use in facilitating Section 106 consultation with State Historic Preservation Office (SHPO). Pinyon assumes the proposed project will result in a Section 106 finding of No Adverse Effect and <i>de minimis</i> finding with regard to Section 4(f). Pinyon will also draft the EA subsection for this resource.</p> <p>This task includes two (2) virtual coordination meetings with CDOT and the City. Assumes two (2) rounds of review by CDOT on the Letter and two (2) rounds of review on the forms.</p>	<p>APE Map</p> <p>Two (2) OAHF Forms</p> <p>Eligibility and Effect Letter including Section 4(f) Finding</p> <p>EA Subsection</p>

Task	Scope of Work Summary	Deliverables
Archaeology Resources	<p>Pinyon will develop an APE for archaeological resources in coordination with CDOT. It is assumed that the APE will include areas that will be directly impacted by the project. Once the APE is established, Pinyon will evaluate archaeological resources within the APE using the OAHP database and by conducting a pedestrian survey. Findings will be documented in a Class III Inventory Report (or Limited Results Report, if appropriate). Pinyon assumes no archaeological resources will be found and that CDOT will consult with SHPO using the Class III Inventory Report. Assumes two (2) rounds of review by CDOT on the Report. Pinyon will also draft the EA subsection for this resource.</p> <p>Assumptions:</p> <ul style="list-style-type: none"> <li>• Any Permission to Enter will be coordinated and provided by the design team or the City.</li> <li>• Class III inventory of no more than 1 acre.</li> <li>• Agency oversight will be limited to CDOT and Colorado OAHP.</li> <li>• Fieldwork requires snow-free conditions.</li> <li>• No archaeological resources requiring documentation will be identified. If cultural resources are identified, they will require documentation, and this scope will need to be revisited and additional fee will be required.</li> </ul>	Class III Inventory Report OR Limited Resources Report EA Subsection
Environmental Justice and Equity	<p>Under Executive Order 12898, each Federal agency must identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations as well as Limited English Proficient (LEP) populations. For this task, Pinyon will utilize the ACS data or the 2020 census data. The percentage of low-income, minority, and LEP populations in the tracts and blocks adjacent to the corridor with those of both the City. It is assumed that impacts, both beneficial and negative, will be borne by all populations equally, meaning that it is assumed that there will be no disproportionately high and adverse effects to low-income and/or minority populations. Findings will be documented in a memorandum.</p> <p>The project is anticipated to be found a Regionally Significant Transportation Capacity project, triggering the need to complete an equity assessment.</p>	Environmental Justice and Equity Memorandum EA Subsection
NEPA Support and QA/QC	<p>Pinyon will support Jacobs in scoping, conducting, and documenting the NEPA Study. Specifically, Pinyon will collaborate with Jacobs, the City, and CDOT in the development of the purpose and need; alternative screening process; and streamlining the study and associated documentation. Additionally, Pinyon will provide support in agency coordination on these tasks and during the review of NEPA documentation. This role will largely be advisory and Quality Assurance/Quality Control. Attendance (virtual) at up to 12 coordination meetings with the team are included in this scope and fee.</p>	NEPA Compliance

**Table I. Estimated Costs**

<i>General Project Management</i>				
Description	Quantity	Unit	Rate	Extension
<b>Labor Rates</b>				
Project Controller	2.0	hours	\$134.00	\$268.00
Field Specialist / Project Assistant	24.0	hours	\$118.00	\$2,832.00
Task Manager	50.0	hours	\$182.00	\$9,100.00
<b>Equipment/Material Unit Rates</b>				
Truck/Van Mileage	140.0		\$0.66	\$91.70
<b>Task Subtotal</b>				<b>\$12,291.70</b>
<i>Air Quality</i>				
Description	Quantity	Unit	Rate	Extension
<b>Labor Rates</b>				
Engineer / Scientist V	10.0	hours	\$294.00	\$2,940.00
Engineer / Scientist	144.0	hours	\$161.00	\$23,184.00
Engineer / Scientist IV	25.0	hours	\$278.00	\$6,950.00
Engineer / Scientist II	174.0	hours	\$203.00	\$35,322.00
<b>Task Subtotal</b>				<b>\$68,396.00</b>
<i>Hazardous Materials</i>				
Description	Quantity	Unit	Rate	Extension
<b>Labor Rates</b>				
Task Manager	10.0	hours	\$182.00	\$1,820.00
Engineer / Scientist V	4.0	hours	\$294.00	\$1,176.00
Field Engineer/ Scientist II	30.0	hours	\$139.00	\$4,170.00
CAD/GIS Specialist I	2.0	hours	\$150.00	\$300.00
<b>Equipment/Material Unit Rates</b>				
ERIS - REC Report	1.0	each	\$175.00	\$175.00
Truck/Van Mileage	65.0	miles	\$0.66	\$42.58
<b>Task Subtotal</b>				<b>\$7,683.58</b>
<i>Biological Resources</i>				
Description	Quantity	Unit	Rate	Extension
<b>Labor Rates</b>				
Task Manager	20.0	hours	\$182.00	\$3,640.00
Field Engineer/ Scientist I	24.0	hours	\$134.00	\$3,216.00
Scientist II	2.0	hours	\$203.00	\$406.00
Engineer / Scientist V	4.0	hours	\$294.00	\$1,176.00
CAD/GIS Specialist I	6.0	hours	\$150.00	\$900.00
<b>Equipment/Material Unit Rates</b>				
Biological Field Visit	1.0	day	\$250.00	\$250.00
Truck/Van Mileage	65.0	miles	\$0.66	\$42.58
<b>Task Subtotal</b>				<b>\$9,630.58</b>

<i>Historic Resources</i>				
Description	Quantity	Unit	Rate	Extension
<b>Labor Rates</b>				
Task Manager	16.0	hours	\$182.00	\$2,912.00
Engineer / Scientist V	4.0	hours	\$294.00	\$1,176.00
Cultural Resource Specialist	40.0	hours	\$128.00	\$5,120.00
CAD/GIS Specialist I	12.0	hours	\$150.00	\$1,800.00
<b>Equipment/Material Unit Rates</b>				
OAHP COMPASS Database	1.0	each	\$250.00	\$250.00
Truck/Van Mileage	65.0	miles	\$0.66	\$42.58
<b>Task Subtotal</b>				<b>\$11,300.58</b>
<i>Archaeological Resources</i>				
Description	Quantity	Unit	Rate	Extension
<b>Labor Rates</b>				
Cultural Field Specialist I	30.0	hours	\$118.00	\$3,540.00
Engineer / Scientist V	2.0	hours	\$294.00	\$588.00
Cultural Resource Specialist III	4.0	hours	\$193.00	\$772.00
CAD/GIS Specialist I	4.0	hours	\$150.00	\$600.00
<b>Equipment/Material Unit Rates</b>				
Truck/Van Mileage	65.0	miles	\$0.66	\$42.58
GPS (high-accuracy/sub-meter)	1.0	day	\$200.00	\$200.00
<b>Task Subtotal</b>				<b>\$5,742.58</b>
<i>Environmental Justice and Equity</i>				
Description	Quantity	Unit	Rate	Extension
<b>Labor Rates</b>				
Project Manager I	5.0	hours	\$214.00	\$1,070.00
Engineer / Scientist V	2.0	hours	\$294.00	\$588.00
CAD/GIS Specialist I	5.0	hours	\$150.00	\$750.00
Field Engineer/ Scientist	30.0	hours	\$128.00	\$3,840.00
<b>Task Subtotal</b>				<b>\$6,248.00</b>
<i>NEPA Support and QA/QC</i>				
Description	Quantity	Unit	Rate	Extension
<b>Labor Rates</b>				
Engineer / Scientist	30.0	hours	\$161.00	\$4,830.00
Engineer / Scientist II	55.0	hours	\$203.00	\$11,165.00
Engineer / Scientist V	60.0	hours	\$294.00	\$17,640.00
<b>Equipment/Material Unit Rates</b>				
Truck/Van Mileage	65.0	miles	\$0.66	\$42.58
<b>Task Subtotal</b>				<b>\$33,677.58</b>
<b>Project Total</b>				<b>\$154,970.58</b>



**Happy Canyon Rd Interchange Design: Structural Support Services**

**Scope of Work (SOW)**

**Canyon Engineering Group**

**5/08/2024**

Canyon's SOW was discussed verbally with Jacobs on 3/12/24, 3/13/24, and 3/14/24. Canyon's SOW will consist of performing professional engineering services for the following:

**1.0 Bridge Independent Design Check**

Structural scope for the bridge independent design check (IDC), for one bridge, includes the following:

**Tasks**

- IDC coordination with Jacobs
- Bridge plan review, geotechnical report review
- Geometry check: vertical clearance check, deck elevations, bearing seat elevs
- Calculate loads onto superstructure, IDC of deck and overhang
- IDC of girders, haunch, camber
- IDC of bearing pads
- Horizontal movement check and/or IDC of expansion joints
- IDC of abutment caps and pier cap
- IDC of deep foundation @ abut and pier: driven piles or drilled shafts assumed
- IDC of pier columns, collision load
- IDC of wingwalls and approach slabs
- Summarize results from the IDC

**Products**

- Pdf format of IDC calculations and software output signed and sealed by a CO PE
- Pdf summary of IDC results including itemized list of components checked, load combinations checked, limit states checked, and status of IDC finding indicating component adequacy or inadequacy

**Limitations / assumptions**

- Assumes latest version of AASHTO LRFD Bridge Design Specification and latest version of the CDOT Bridge Design Manual
- Assumes bridges are in a spread DDI configuration, (2) bridges two-span each, Canyon performing IDC on one of the two bridges
- Assumes simple span made continuous and composite bridges, reinforced concrete deck on partial depth precast concrete deck panels, spread precast prestressed primary members, shallow integral abutments on deep foundation of driven piles or drilled shafts, pier cap and pier column(s) on similar foundation
- Does not apply to accelerated bridge construction bridges
- Does not include detail check or QC plan review of bridge plans
- Does not include check of bridge project special provisions
- Does not include constructability review or phasing review

## **2.0 Bridge Load Rating**

Includes the following bridge evaluation services for one bridge

### **Tasks**

- Bridge plan review
- AASHTOWare BrR modeling: framing plan, typical section, girders
- Supplemental calcs: loads, live load distribution factors
- Complete LRFR summary sheet
- QC checking, incorporating checker comments
- CDOT Load Rating unit coordination, incorporating CDOT QA review comments

### **Products**

- Pdf format of load rating packages, one for each bridge, signed and sealed by a CO PE
- Pdf format of LRFR summary sheets, one for each bridge signed and sealed by a CO PE
- AASHTOWare BrR model files, .xml format, one for each bridge

### **Limitations / assumptions**

- Software used is the current CDOT accepted version of AASHTOWare BrR which may be different from the latest version of the software
- Assumes latest version of CDOT Bridge Rating Manual and AASHTO Manual for Bridge Evaluation is used for the evaluation
- Canyon performs load rating and load rating check performed on one of the two bridges. Bridge is assumed to be Concrete Prestressed Girder Continuous (CPGC) bridges or similar type and configuration such that it can be modeled sufficiently in AASHTOWare BrR

## **3.0 Retaining Wall Design**

Includes structural design services for two different loading configurations of retaining walls near the abutments of the bridges

### **3.1 Design Tasks**

Includes internal stability, external stability, and global stability design, composing project special provisions, and IDC of retaining walls near the bridge abutments

### **3.2 Drafting Tasks**

Includes preparation of plan sheet deliverables and QC from start to final level of completeness.

### **3.3 Submittals: FIR, DOR, FOR, Final**

Includes submittal preparation, QC, and design review meetings for the standard CDOT submittals FIR, DOR, FOR, and Final, however, assumes no additional effort from the retaining wall standpoint for the DOR submittal.

### **Tasks**

- Participate in design coordination meetings, assumed to be bi-weekly
- Complete internal, external, and global stability design using computations and software
- Compose retaining wall project special provisions
- Complete drafting and internal QC for an assumed 17 retaining wall plan sheets.
- Computing quantity calculations and check set of quantities, resolving differences in quantities sets within CDOT BDM tolerances
- Computing engineer's cost estimate
- Compiling deliverables for submittals
- Internal QC of deliverables
- Participating in design review meetings (FIR, DOR, FOR, Final)

- Incorporating Castle Pines and CDOT review comments

**Products**

- Pdf format of retaining wall plans
- Pdf format of design and independent design calculations, signed and sealed by a CO PE
- Word doc and pdf format of retaining wall project special provisions
- Excel and pdf format of quantities and cost estimates
- Final PS&E deliverables signed and sealed by a CO PE
- Native CAD files as requested

**Limitations / assumptions**

- Assumes MSE type of retaining wall
- Assumes two loading configuration of walls: walls in front of abutments with loads from bridge fill and live load surcharge, walls parallel to I-25 with no live load surcharge
- Assumes 17 plan sheets are needed to sufficiently define the retaining wall work
- Assumes CDOT accepted version of OpenRoads Designer is used for the plan sheet deliverable preparation

**4.0 Exclusions**

The following are not included in this scope. Inclusion of these items is subject to a change in scope, schedule, and fee.

- IDC and load rating of a second bridge
- Design of retaining walls or sound walls at other locations not at the site of the bridges
- Assumes all necessary geotechnical information is provided by the geotechnical consultant to adequately complete the retaining wall global stability design. Additional effort to obtain geotechnical parameters to perform the global stability design is not assumed.

**End of SOW**

Submitted by  
*Canyon Engineering Group*



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Steven Lykens, PE  
Vice President

Canyon's SOW was discussed verbally with Jacobs on 3/12/24, 3/13/24, and 3/14/24.

SOW Section	SOW Item	Task	Structures Principal / QC (hours)	Structures Lead / PM / CAD (hours)	Structures Engineer (hours)	Total (hours)	
1.0	Bridge Independent Design Check (IDC) 1 bridge	IDC coordination with Jacobs		1		3	
		Bridge plan review, geotechnical report review			3	3	
		Geometry check: vertical clearance check, deck elevations, bearing seat elevs		20		20	
		Calculate loads onto superstructure, IDC of deck and overhang			8	8	
		IDC of girders, haunch, camber		2	24	26	
		IDC of bearing pads			6	6	
		Horizontal movement check and/or IDC of expansion joints			6	6	
		IDC of abutment caps and pier cap		2	24	26	
		IDC of deep foundation @ abut and pier: driven piles or drilled shafts assumed		2	24	26	
		IDC of pier columns, collision load		2	16	18	
IDC of wingwalls and approach slabs			12	12			
Summarize results from the IDC			2	2			
2.0	Bridge Load Rating 1 bridge	Bridge plan review			1	1	
		AASHTOWare BrR modeling: framing plan, typical section, girders			12	12	
		Supplemental calcs: loads, live load distribution factors			12	12	
		LRFR Summary sheet			1	1	
		QC checking, incorporating checker comments		6	4	10	
CDOT rating unit coordination, incorporating CDOT QA review comments			4	4			
3.0	Retaining Wall Design	Design Tasks	Design coordination meetings assumed (1 hr / meet)(2 meet / mo) for 12 mo		24	24	
			Internal and External stability for 2 wall loading configurations			72	72
			Global stability for 2 wall loading configurations		20		20
			Composing Project Special Provisions		8		8
			Retaining wall IDC	32			
		Drafting Tasks	W01 - General Information		8		8
			W02 - Summary of Quantities		3	3	6
			W03 - Retaining Wall General Layouts, assumed 4 sheets, 2 for east, 2 for west		72		72
			W07 - Retaining Wall Typical Sections		10	10	20
			W08 - Wall Configuration Details, assumed 2 configurations @ 2 sheets		40	40	80
		W12 - Wall Details, assumed MSE walls, assumed 6 sheets		54	54	108	
		FIR	Retaining Wall Structure Selection Report		2	24	26
			FIR level quantities			8	8
			FIR level cost estimate			6	6
			Compile FIR level deliverables		2		2
			Internal QC, incorporating internal QC comments	13	2		15
		DOR	FIR design review meeting		1.5		1.5
			Incorporate FIR review comments		2		2
		FOR	No additional effort assumed for DOR submittal	--	--	--	0
			FOR level quantities			8	8
FOR level cost estimate				6	6		
Compile FOR level deliverables			2		2		
Internal QC, incorporating internal QC comments	18				18		
Final	FOR design review meeting		1.5		1.5		
	Incorporate FOR review comments		2		2		
	Compile Final level deliverables		2		2		
		Internal QC, incorporating internal QC comments	2	1	3		
<b>Total hours</b>			65	292	390	747	
<b>Hourly billing rate \$ / hour</b>			\$ 190.00	\$ 165.00	\$ 135.00	--	
<b>Labor Cost</b>			\$ 12,350.00	\$ 48,180.00	\$ 52,650.00	\$ 113,180.00	
<b>Total Cost</b>						\$ 113,180.00	



May 9, 2023

Jacobs  
Michelle Pinkerton, P.E.  
Senior Project Manager/Infrastructure  
6312 S. Fiddler’s Green Circle, Suite 300N  
Greenwood Village, CO 80111

**RE: I-25 & Happy Canyon Road Interchange Design - Drainage, Water Quality, SWMP**

Dear Michelle,

Attached is Shrewsberry & Associates, LLC (Shrewsberry) scope of work and fee as requested for the I-25 Happy Canyon Road Interchange Design project. The following scope of work outlines our approach and tasks for the design of the drainage, water quality and SWMP for the project.

A fee break-down based on the Scope of Services is as follows:

**BREAK-DOWN OF COST:**

Task 1 – Meetings/Project Management.....	\$15,860.20
Task 2 – Data Gathering .....	\$ 9,862.44
Task 3 – EA Analysis/30% (FIR) Design.....	\$220,072.88
Task 4 – 90% (FOR) Design.....	\$191,669.77
Task 5 – 100% (AD) Design.....	<u>\$13,072.80</u>

**Total Proposal Amount .....\$450,538.09**

Should you have any questions or comments, please do not hesitate to contact us. Thank you for the opportunity to submit this scope and fee proposal, and we look forward to working with you on this project.

Sincerely,

**Harry Strasser, PE, CFM**  
Director-Drainage Engineering  
Shrewsberry & Associates, LLC



## **I-25 & Happy Canyon Road Interchange Design - Drainage, Water Quality, SWMP**

### **Scope of Work**

#### **1.0 Meetings/Project Management**

##### **1.1 Meeting**

Shrewsberry will attend a kick-off meeting with Jacobs and stakeholders. Also:

- Attend up to 16 meetings with Stakeholders.
- Attend 30% FIR meeting
- Attend 90% FOR meeting
- All meetings are assumed to be virtual

##### **1.2 Project Management**

Shrewsberry shall provide task management services pertaining to the Shrewsberry scope of work outlined in this task order. This effort will include project administration, task order budget setup, monthly budget reviews and invoicing, and weekly internal design meetings.

#### **2.0 Data Gathering**

- Research and gather existing information.
- Review existing plans and reports.
- Incorporate needed information into CAD.

#### **3.0 EA Analysis and 30% (FIR) Design**

##### **3.1 Water Quality Technical Memorandum**

A water quality technical memorandum will be prepared, to be incorporated into the NEPA document, and the analysis will include the following items:

- The water quality condition within the project limits will be described.
- Water quality impacts of the project during and following construction will be determined by considering the project location and design concepts in relation to existing water resources including aquifers, drainage ditches and other Waters of the U.S.
- Requirements (e.g. MS4, permitting, design) that may impact the project.
- A plan for mitigation of impacts from the project.

### 3.2 Floodplain and Drainage Assessment Technical Memorandum

The following activities will be completed and documented in the floodplain and drainage assessment technical memorandum.

- The probable impacts of each alternative with respect to floodplains and drainage.
- Adverse effects on the project area with respect to floodplains and drainage for each alternative (including during construction and relative to actual operating conditions).
- Develop possible mitigating actions for the adverse impacts.
- Existing conditions will be documented including culverts and flowpaths.

### 3.3 Local Drainage

The drainage design criteria for the project will be developed and sent to the City for approval.

#### Minor Basin Hydrology

- Establish drainage basin data: delineate, determine size, waterway geometrics, vegetation cover, land use.
- Collect historical data; research flood history and previous designs in the project proximity; and obtain data from other sources (e.g., Urban Drainage & Flood Control District, Colorado Water Conservation, CDOT Maintenance, and local residents).
- Select storm frequencies based on the established criteria.
- Complete a hydrological analysis using existing studies or approved methods.
- The hydrology for the deck drainage will be analyzed including determining the flowrate over expansion joints and the spreadwidth for the design storm.

#### Minor Drainage Hydraulics

- The layout of the storm sewer system and inlets will be based on the hydrologic and hydraulic calculations along with the drainage criteria. The storm sewer system will be modeled by Civ3D, Storm and Sanitary or a similar program.
- Hydraulically design and layout ditches for the interchange where no storm sewer is needed or where needed for water quality pond(s).
- Design horizontal and vertical alignments of cross-culverts based on preliminary hydrologic and hydraulic calculations.
- Analyze the existing Newlin Gulch culvert crossing of I-25 using HY-8.
- Prepare preliminary construction plans that include plan view only of the storm sewer system and detail sheets.
- Quantities of proposed storm sewer.

#### Stormwater Quality Facility Design

Runoff to the south is assumed to need its own project specific water quality facilities. Runoff to the north is proposed to be a joint design with adjacent development.

- Site water quality facilities needed along the interchange and determine water quality capture volume in compliance with MS4 requirements.

- Determine if water quality facility will be sized for only water quality from roadway due to separate system or if mixes with upstream runoff. Size facility appropriately.
- Design a shared Water Quality Pond with Adjacent Developer to MHFD/City/County standards.
- Quantities and Cost Estimate for 30% design
- QA/QC for reports, plans, calculations. Cross review with other disciplines.

#### **4.0 90% (FOR) Design**

- Data review – Review pothole information when supplied as well as updated survey information for utility conflicts with proposed drainage features. Review post FIR plans from disciplines for conflicts.
- Update Hydrology based off of changes to roadway plan and profile and other refinements to the design.
- Revise inlet sizing, bypass flow calculation, spreadwidth calculations based on utility pothole, Roadway and Bridge modifications.
- Storm sewer plan and profile – Finalize the plan and profile from preliminary design, update with utility information. Include details for outfalls to ponds and the Colorado River Outfall. Outfall structure and energy dissipation will be hydraulically designed and coordinated with structural design. Establish and label on plans hydraulic grade line, pipe capacity, velocity, pipe size, invert elevations and pertinent pipe information. Modify utilities in profile as necessary.
- Coordinate with Structures for bridge drains, pipe.
- Coordinate with Structures on Special Structures development including special inlet, outlet structure for water quality pond, forebay, trickle channel and overflow weir. .
- Finalize grading design, forebay design, trickle channel, outlet structure and outfall system to receiving waters for extended detention basin water quality pond. Outlet structure will be designed for water quality release and 100 year overflow and coordinated with structural design.
- Coordinate Pedestrian Bridge Drainage
- Develop Storm Sewer Details
- Hydraulic design for the outfall pipe is included. Outfall structure and energy dissipation/erosion protection will be hydraulically designed and coordinated with structural design. Establish and label on plans hydraulic grade line, pipe capacity, velocity, pipe size, invert elevations and pertinent pipe information. Modify utilities in profile as necessary.
- QA/QC for reports, plans, calculations. Cross review with other disciplines.
- Final Tabulations
- Final Hydraulics Report



## 5.0 100% (AD) Design

Update the construction drawings and SWMP from comments received during the FOR meeting.

- QA/QC for reports, plans, calculations. Cross review with other disciplines.

### Deliverables

- Floodplain/Drainage Technical Memorandum
- Water Quality Technical Memorandum
- Drainage Reports, Preliminary and Final
- Water Quality facility design plans
- Storm Sewer Design Plans, Project Special Provisions and Cost Estimates.
- FIR/FOR Comment Responses

### Assumptions:

- The SWMP will be provided for the ultimate or interim project design, not both.
- Exhibits for Technical Memorandums will be prepared by Jacobs with input from Shrewsberry.
- Developer reports will be available for use in establishing hydrology for combined Water Quality Pond. If there are no reports planned imperviousness and areas will be used. If none of this information exists, basins and assumed imperviousness will be submitted to the City. The City will provide one review of basins to provide input on imperviousness and basin boundaries for development of the Water Quality pond.
- Water Quality facilities to the south will not be able to be combined with private development. It will need to be provided near the project improvements and will take predominantly runoff from the proposed improvements.
- There will be no impact to floodplains for this project. The pond footprint and grading will be out of any 100-year floodplains and Newlin Gulch will not be impacted.
- Bridge options during EA alternatives analysis will not significantly affect drainage quantity or quality.
- The existing culvert for Newlin Gulch under I-25 will not need to be extended due to this project.
- The flowrate of Newlin Gulch is known and published and available for Shrewsberry to use for the culvert analysis.
- Drainage report and plans from adjacent roundabout project will be provided, including CAD files for drainage improvements.
- Water quality ponds/facilities capturing and treating runoff predominantly from the improvements related to this project will not adhere to MHFD design standards.
- The interim stage of this project will have less impervious area than the ultimate buildout. Water Quality treatment requirements for ultimate buildout will be analyzed and designed. No changes to the water quality facilities for the interim stage will be required.
- Survey information including all relevant elevations, types and sizes for existing drainage infrastructure will be provided.

**Exclusions:**

The following items are not included in this scope of work:

- Design/reconstruction of irrigation structures.
- Analysis of existing hydrology
- Analysis of existing storm sewer systems
- Maintenance access road to water quality pond.
- Bid Phase Support
- Construction Phase Support
- Structural Design, utility design, irrigation design
- Public meetings
- SWMP, CDPHE, Floodplain, etc. Permit Fee's
- FEMA coordination, LOMR, CLOMR etc.

