

CITY OF THORNTON

REQUEST FOR PROPOSALS

FOR

CONSULTANT DESIGN SERVICES

**BIG DRY CREEK TRAIL DEVELOPMENT,
WASHINGTON STREET FROM 136TH AVENUE TO 144TH AVENUE**

PROJECT NO. 25-571

CDOT PROJECT NUMBER TAP M286-063

March 2025

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II. INDEX OF CONTENTS

- I. TITLE PAGE
- II. INDEX OF CONTENTS
- III. NOTICE REQUEST FOR PROPOSALS
- IV. PROPOSAL INSTRUCTIONS AND INFORMATION
- V. PROPOSAL PREPARATION
- VI. EXHIBIT 1 ACCEPTANCE OF CONDITIONS STATEMENT
- VII. EXHIBIT 2 PROFESSIONAL SERVICE AGREEMENT
 - EXHIBIT A CONSULTANT'S SCOPE OF SERVICES
 - EXHIBIT B CONSULTANT'S PERSONNEL AND SUBCONSULTANTS LISTING
 - EXHIBIT C SCHEDULE OF CHARGES
 - EXHIBIT D FEDERAL CONTRACT REQUIREMENTS
- VIII. EXHIBIT 3 REFERENCE AUTHORIZATION AND RELEASE FORM
- IX. APPENDIX
 - APPENDIX A - REFERENCE QUESTIONNAIRE PACKAGE INFORMATION AND FORMS
 - APPENDIX B - AFFIDAVIT OF SMALL BUSINESS PARTICIPATION

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III. NOTICE REQUEST FOR PROPOSALS

The City of Thornton, CO (“Thornton”) respectfully requests separate sealed Proposals for Traffic Engineering Services for **Big Dry Creek Trail Development, Washington Street from 136th Avenue to 144th Avenue, Project No. 25-571** (hereinafter referred to as “Project”). Proposals will be received until **3:00 p.m.**, local time **March 28, 2025**, in the Contract Administration Office, 9500 Civic Center Drive, 2nd Floor City Hall, Thornton, CO 80229-4326.

Approved Methods for Submission of Proposals:

Electronic proposals shall be submitted/ uploaded to BidnetDirect.com website in response to this solicitation;

Or Physical proposals may be submitted by mail or courier service;

Or Physical Proposals will be received in the Contract Administration Office, 9500 Civic Center Drive, 2nd Floor City Hall, Thornton, CO 80229-4326.

Late Proposals will not be accepted under any circumstances.

Project Description: Project consists of Design Services required for bidding and construction of a detached concrete multiuse path that will extend the Big Dry Creek (BDC) Regional Trail and connect it with the trail in Quail Valley subdivision located in Thornton, Colorado (Project). The current western termination point for the BDC Trail is located just east of Interstate 25 (I-25) north of East 136th Avenue. The regional trail picks up on the north side of East 144th Avenue and Washington Street intersection. Project is federally funded, plans and specifications will need to conform to Colorado Department of Transportation (CDOT) standards and format.

Disadvantaged Business Enterprises involvement has been set at ten percent (10%) for this Project.

Thornton utilizes the BidNet Direct System at www.BidNetDirect.com to distribute official copies of the Request for Proposals (“RFP”) for use in preparing Proposals. Proposing firms will be required to register with the website to download the RFP documents and addenda. There is no charge by BidNet Direct for this service. If you experience problems with the BidNet Direct website, please call 1-800-835-4603 for assistance. Proposing firms are required to acknowledge all addenda with their Proposal and are encouraged to either register with the website or to request to view the addenda posted on the Contract Administration bulletin board prior to submission of a Proposal. Proposing firms that do not acknowledge all addenda may be considered non-responsive. Upon request, the RFP documents, including addenda, are also available for viewing on the City of Thornton Website, <https://solicitations.thorntonco.gov/solicitations> or at the Contract Administration office located on the 2nd floor of City Hall at 9500 Civic Center Drive, Thornton, CO. Proposing firms that do not have download and/or printing capability in-house may contact a commercial reprographics company for assistance with downloading and printing the RFP.

Late Proposals will not be accepted under any circumstances. Any Proposal(s) received after the scheduled deadline for submitting Proposals will be returned to the proposing firm unopened. Sole responsibility rests with the proposing firm to see that their Proposal is received on or before the deadline.

Thornton reserves the right to reject any and all Proposals, in part or in whole, and to award the Project to the most responsive and responsible firm(s) as deemed in the best interest of Thornton; further, the right is reserved to waive any formalities or informalities contained in said Proposal(s).

An optional Pre-Bid Conference to discuss the Project will be conducted via web broadcast with Zoom video at 10:00 a.m., March 12, 2025. All prospective Bidders are encouraged to attend. Prospective Bidders wishing to take part in the Pre-Proposal Conference should e-mail Keith Griess at Keith.griess@ThorntonCo.gov to receive a URL link to access the Zoom Video Pre-Proposal Conference. If possible, please hold all questions concerning the RFP until that time.

Physical proposals shall be submitted in a sealed envelope plainly marked on the outside with the proposing firm's name and address and **"Request for Proposals, Big Dry Creek Trail Development, Washington Street from 136th Avenue to 144th Avenue, Project No. 25-571"**. Proposals delivered by mail or courier service shall be in the sealed envelope inserted into a separate mailing envelope. On the outside of the mailing envelope note **"Proposal Enclosed, Big Dry Creek Trail Development, Washington Street from 136th Avenue to 144th Avenue, Project No. 25-571"**.

Proposals submitted electronically shall be uploaded to the Vendor's portal through the BidnetDirect.com website and shall follow the process/guidelines identified on the website and this solicitation.

All questions shall be directed in writing to Keith Griess, Contract Administrator, 9500 Civic Center Drive, Thornton, CO 80229-4326, fax 303-538-7556, or e-mail - Keith.griess@ThorntonCo.gov, 8:00 a.m. to 5:00 p.m., local time, Monday through Friday, excluding holidays.

Published at: BidNet Direct, COT Website, and the Contracts & Purchasing Bulletin Board.

First Advertisement: March 6, 2025, Northglenn-Thornton Sentinel

Second Advertisement: March 13, 2025, Northglenn-Thornton Sentinel

Third Advertisement: March 20, 2025, Northglenn-Thornton Sentinel

BY: DocuSigned by:
Dennis Laurita 2/26/2025
AR39F4EFA8C24E5...
 Dennis Laurita Date
 Contracts Supervisor

IV. PROPOSAL INSTRUCTIONS AND INFORMATION

Thornton is soliciting written Proposals from qualified firms for Traffic Engineering Services for **Big Dry Creek Trail Development, Washington Street from 136th Avenue to 144th Avenue, Project No. 25-571**. To be eligible for consideration, the proposing firm must be capable of supplying the Services as described herein, and must meet all other criteria outlined in this RFP.

A. INQUIRIES AND CORRECTIONS

All inquiries relating to this RFP shall be addressed in writing to:

City of Thornton
Attention: Keith Griess, Contract Administrator
9500 Civic Center Drive
Thornton, CO 80229-4326
303-538-7643
E-mail: Keith.griess@ThorntonCo.gov

If a proposing firm, subsequent to the Pre-Proposal Conference, finds discrepancies in or omissions from the RFP, or requires additional clarification of any part thereof, a written request for interpretation shall be submitted to the Contract Administrator. Any interpretation of or change made to the RFP will be made by written addendum to each proposing firm, and will become part of the RFP and of any Agreement awarded. Thornton will not be responsible for the accuracy of any other ORAL EXPLANATIONS, INTERPRETATIONS, OR REPRESENTATIONS. All inquiries shall be made in writing and all responses will be provided in writing, with responses being made available to all proposing firms. To be given consideration, inquiries must be received no later than 5:00 p.m. on the tenth (10th) Calendar Day prior to the date established for the submission of the Proposal. It shall be the responsibility of each proposing firm to verify that every addendum has been received prior to submitting a Proposal.

B. SUBMITTAL DATE AND LOCATION

All Proposals must be received in the Contracts and Purchasing office located at Thornton City Hall, City of Thornton, 9500 Civic Center Drive, 2nd Floor City Hall, Thornton, CO 80229-4326 or submitted via the BidnetDirect.com vendor portal **prior to 3:00 p.m. local time on March 28, 2025**. Physical proposals must be submitted in a sealed envelope plainly marked on the outside with the proposing firm's name and address and "**Request for Proposals, Big Dry Creek Trail Development, Washington Street from 136th Avenue to 144th Avenue, Project No. 25-571**", and addressed to the Contracts Manager. Proposing firm's name and address shall also appear on the outside of the sealed envelope containing the Proposal. If the Proposal is sent by U.S. mail or courier service, the Proposal shall be contained in a sealed inner envelope or box, which is then inserted into the mailing envelope or box. Indicate "**Proposal Enclosed, Big Dry Creek Trail Development, Washington Street from 136th Avenue to 144th Avenue, Project No. 25-571**", on the outside of the mailing envelope or box.

C. LATE AND ELECTRONIC PROPOSALS

Late Proposals will not be accepted under any circumstance, and any Proposal so received shall be returned to the proposing firm unopened. In addition, proposals received via electronic devices other than the BidnetDirect.com website (i.e. e-mail) are not acceptable and will be rejected upon receipt. Proposing firms will be expected to allow adequate time for delivery of their Proposals either by airfreight, postal service, or other means.

D. CONFIDENTIAL AND PROPRIETARY INFORMATION

Prior to Award, any information contained within the Proposal may be held confidential and proprietary by Thornton as solely determined by Thornton. After Award, the information within the Proposal becomes public information with the exception of information that has been clearly marked as confidential and proprietary by the proposing firm. Any information marked confidential shall comply with Colorado's Open Records Act (CORA) and other applicable statutes. Thornton shall be held harmless from any claims arising from the release of confidential and proprietary information not clearly designated as such by the proposing firm or which does not comply with CORA. In general, it is not acceptable to Thornton to mark information other than financial statements, project financing data, litigation history, tax audit history, or client lists as confidential and proprietary. Further, it is not acceptable to mark price proposal information as confidential and proprietary. Failure to adhere to these restrictions may result in the entire Proposal being deemed non-responsive.

E. DEFINITION, CONTEXT, AND GENDER

Unless otherwise specified in this document, all words shall have a common meaning unless the context in which they are used clearly requires a different meaning. Words in the singular number include the plural, and in the plural include the singular. Additionally, words of the masculine gender include the feminine and the neuter, and when the sense so indicates, words of the neuter gender may refer to any gender.

F. CONDITIONS OF PROPOSAL SUBMITTAL

1. All proposing firms shall comply with all conditions, requirements, and specifications contained herein, and any departure from such conditions, requirements, or specifications may constitute sufficient cause for rejection of the entire Proposal.
2. The Proposal must be signed by a duly authorized official of the proposing firm submitting the Proposal.
3. No Proposal will be accepted from any person, firm, or corporation that is in arrears for any obligation to Thornton, or that otherwise may be deemed irresponsible, unresponsive, or untrustworthy by Thornton staff or Thornton City Council.

4. Only one (1) Proposal will be accepted from any person or corporation. If multiple options are requested or offered, each option must be submitted under a single Proposal and in a single envelope or box.
5. All terms and prices quoted must be firm for a period of ninety (90) Calendar Days from the Proposal submittal date or until Award, whichever is sooner.
6. Thornton reserves the right to reject any and all Proposals, or any part thereof. Thornton further reserves the right to waive any formalities, or informalities contained in any Proposal, and to award the Agreement to the most responsive, responsible, and trustworthy proposing firm as deemed in the best interest of Thornton.
7. All Proposals shall be prepared in a comprehensive manner as to content, but no necessity exists for expensive binders or promotional materials.
8. All costs, including travel and expenses incurred in the preparation of the Proposal, shall be borne solely by the proposing firm.
9. Section 7.4 of the Thornton City Charter prohibits Thornton from entering into any contracts involving an amount in excess of one hundred dollars (\$100) in which an elective or appointive officer or any member of the officer's family has any pecuniary interest, direct or indirect, in the proposing firm or this RFP. Certain other restrictions may also apply to contracts in which an employee, member of a board or commission, City Council member or member of their family has an existing or pending financial or personal interest. For the purposes of this Charter Section, a domestic partner shall be considered a family member. Therefore, the proposing firm shall submit with the Proposal the following declaration contained in Exhibit 1, Acceptance of Conditions Statement.

No City Council member, member of a board or commission, Municipal Judge, City Manager, City Attorney, or employee of the City of Thornton, or any such person's family member, domestic partner, or person assuming a relationship being the substantial equivalent of the above, has an existing or pending direct or indirect financial, pecuniary, or personal interest in the proposing firm or this RFP, except as follows (list, if any): _____

10. Thornton reserves the right to negotiate final terms with the selected firm, which terms may vary from those contained in this document.
11. Thornton reserves the right to request a client list from the proposing firm, for the purpose of determining potential conflicts of interest. Such list shall be considered proprietary.

12. Thornton will not return Proposals, or other information supplied to Thornton, to the proposing firms.

G. EVALUATION OF PROPOSALS

All Proposals will be evaluated by a Project Committee assigned by the City Manager, or his designee. Proposals shall be evaluated on the basis of the Evaluation Criteria set forth herein. In addition, any other pertinent information which becomes available during the evaluation, interview, or negotiations may be considered in the evaluation. The committee may make a recommendation for award on the basis of the Proposals received, or may choose to "short list" prospective firms for further consideration, which may include interviews and/or negotiations. The proposing firm selected for the award will be chosen on the basis of the apparent greatest benefit to Thornton, and not necessarily on the basis of lowest price. The City Manager, or his designee, shall make the final determination of the firm selected.

H. EVALUATION CRITERIA

Proposals shall be evaluated on the basis of the following criteria:

1. Responsiveness to the needs of Thornton and the degree to which the Proposal meets or exceeds the requirements of the RFP, including the time required to complete the Project, the proposed solutions offered, the means and methods of accomplishing the Services, and the Scope of Services offered.
2. Responsibility and trustworthiness of the proposing firm, including financial capability to perform the Project and claims and litigation history.
3. Past performance of the proposing firm for Thornton and other owners and results of reference checks.
4. Experience of the proposing firm in dealing with municipal or other governmental agencies in projects of similar size, scope, and nature.
5. The proposing firm's engagement team, including the experience and resumes of key personnel assigned to the Project.
6. Results of performance questionnaire ratings provided with proposal.

I. GENERAL REQUIREMENTS OF THE SUCCESSFUL PROPOSING FIRM

1. The successful proposing firm shall enter into a written Agreement with Thornton in the form attached hereto as Exhibit 2 and incorporated by reference herein.
2. The successful proposing firm shall be required to maintain insurance coverages as set forth in Exhibit 2.

3. The successful proposing firm shall be prohibited from assigning or subcontracting the whole, or any part of the Agreement, without the prior written consent of Thornton.
4. The successful proposing firm shall not hire, discharge, promote, demote, or otherwise discriminate in matters of compensation, terms, conditions, or privileges of employment against any person otherwise qualified solely because of race, color, creed, religion, national origin, ancestry, gender, physical or mental disability, or age.
5. The successful proposing firm and its employees will operate as an independent contractor and will not be considered employees of Thornton.

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V. PROPOSAL PREPARATION

- A. Proposals submitted shall contain all information as requested herein, and any additional information necessary to evaluate the overall benefit of the Proposal to Thornton.
1. If your firm is submitting a physical proposal submission and **not** through the Vendor portal of BidNet (if allowed), then the following items shall also be included:
 - a. One (1) original paper copy of the proposal submission with the proposal stamped as "Original".
 - b. One (1) electronic copy on a flash drive of the proposal submission. All envelopes containing these items shall be clearly marked.

Note: Vendors submitting confidential information shall only submit one (1) copy of such information. When submitting electronically through the BidNetDirect.com vendor portal, confidential information shall be submitted in a separate PDF format file and marked confidential in both the file name and on the individual pages. When submitting a physical proposal, confidential information shall be placed in a separate sealed envelope and inserted into the main proposal submittal envelope or box. Any information not marked as confidential will be considered public record.

- B. Proposals shall include the following:
1. A cover letter stating the name, address, and telephone number of the proposing firm, and bearing the signature of the person having the authority to make the Proposal for the proposing firm, and bind the firm in a formal Agreement with Thornton.
 2. An executed Exhibit 1, Acceptance of Conditions Statement, which:
 - a. Affirms the acceptance of all conditions and requirements contained in this RFP;
 - b. Contains acknowledgement of all addenda issued; and
 - c. Lists the names of any of the proposing firms' employees who are family members of Thornton employees, officers, board or Council members.
 3. The proposed Exhibit B, Consultant Personnel and Subconsultants Listing, which is in Exhibit 2, Agreement, showing all personnel and subconsultants proposed for assignment to the Project team. Also submit resumes with education and work experience for key personnel.
 4. A written narrative that defines the methods and means by which the proposing firm will perform the Services outlined in this RFP.

5. A Project timeline outlining the major tasks, phases, timeframes, and milestones necessary to complete the Project. Identify the specific employees and subconsultants that will be involved in each task.
6. An estimate of labor resources needed by task or phase broken down by man-hours for each individual assigned to the Project, including subconsultant personnel. In addition, indicate total estimated cost for each task or phase by multiplying the applicable billable hourly rates by the proposed labor hours, and adding in subconsultant fees, and other estimated reimbursable expenses. This item is not to be submitted with initial proposal. All cost/fees/rates are to be submitted in a separate sealed file/envelope, as will be requested by City, upon selection of apparent Awardee.
7. The proposed Exhibit C, Schedule of Charges, which is in Exhibit 2, Agreement, containing the billable hourly rate schedule of the proposing firm including the hourly rates for all personnel assigned to the Project team, subconsultant's fees, and rates for proposed reimbursable expenses such as mileage, equipment, printing, postage, courier service fees, etc. Reimbursable expense categories identified in the Reimbursable Expense Schedule must include all expenses for which the proposing firm will expect separate reimbursement. Expense categories not identified will not be reimbursed separately but are assumed to be included in the billable hourly rates or the fixed fee, whichever is applicable. Reimbursable expenses are reimbursed at cost. The proposed Schedule of Charges will be the sole basis of payment. All cost/fees/rates are to be submitted in a separate sealed file/envelope, as will be requested by City, upon selection of apparent Awardee.
8. A list of what portion of the Services, if any, will be subcontracted.
9. A list of at least three (3) references for which similar services have been provided. Include current contact names, addresses, and telephone numbers.
10. An executed Exhibit 3, Reference Authorization and Release Form.
11. A letter of reference from the proposing firm's primary bank or financial institution which indicates the bank's opinion on the proposing firm's financial capacity to perform their obligations under the Agreement. The letter shall be placed in a separate sealed envelope labeled with the firm name and the notation "CONFIDENTIAL FINANCIAL REFERENCE". The sealed confidential envelope shall be placed inside the envelope or box containing the firm's proposal.
12. Litigation and claims history over the past five (5) years in which the proposing firm or any of its principals were named in a claim or lawsuit related to the proposing firm's provision of goods or services. Include a list of any ongoing or settled claims, mediations, arbitrations, lawsuits, and judgments during the time period. List must contain a description of the type of claim or suit, the general nature of the dispute, whether it is ongoing or settled, and the general outcome if settled, but need not reveal the other parties' names if it is not in the public record. The history shall be placed in a separate sealed envelope labeled with

the firm name and the notation "CONFIDENTIAL LITIGATION AND CLAIM HISTORY". The sealed confidential envelope shall be placed inside the envelope or box containing the proposing firm's proposal.

13. Any other information deemed necessary by the proposing firm.
- C. Submittal of a Proposal shall be taken as prima facie evidence that the proposing firm has full knowledge of the scope, nature, quality, and quantity of the Services to be performed, and the detailed requirements and conditions under which the Services are to be performed.

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VI. EXHIBIT 1

ACCEPTANCE OF CONDITIONS STATEMENT

A. Proposing firm indicates acceptance of the following conditions:

1. City of Thornton Charter Section 7.4 prohibits Thornton from making Contracts with firms which employ certain relatives of Thornton employees unless the City Council determines that the making of such a Contract is in Thornton's best interest.

No City Council member, member of a board or commission, Municipal Judge, City Manager, City Attorney, or employee of the City of Thornton, or any such person's family member, domestic partner, or person assuming a relationship being the substantial equivalent of the above, has an existing or pending, direct or indirect, financial, pecuniary or personal interest in the proposing firm or this Request for Proposal, except as follows (list, if any, or if none so state): _____

2. I/we hereby agree to all instructions, terms and conditions, and specifications contained herein.

B. I/we acknowledge the following addenda (list, if any, or if none so state): _____

Proposing Firm Name: _____

Address: _____

Telephone Number: _____

Submitted By: _____

(Signature)

Title: _____

Date: _____

Attest (by officer if corporation) or Notary (if individual): _____

My Commission Expires (if notarized): _____

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VII. EXHIBIT 2

AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES

**Big Dry Creek Trail Development, Washington Street from 136th Avenue to 144th
Avenue, Project No. 25-571**

CDOT Project No. SPFF M286-063

This Professional Consulting Services Agreement for **Big Dry Creek Trail Development, Washington Street from 136th Avenue to 144th Avenue, Project No. 25-571, CDOT Project No. SPFF M286-063**, (hereinafter "Agreement") is made and entered into this _____ day of _____, 20____, by and between the **City of Thornton**, a Colorado home rule municipality, whose address is 9500 Civic Center Drive, Thornton, CO 80229 ("Thornton") and **Business Name** whose principal place of business is located at **Business Address** ("Consultant, or may be referred to as Service Provider") each may be referred to collectively as, the ("Parties") or individually as the ("Party").

I. RECITALS

- A. Thornton requires Professional Consulting Services in connection with Big Dry Creek Trail Development, Washington Street from 136th Avenue to 144th Avenue, Project No. 25-571 (the "Project").
- B. On or about **[Date]**, Thornton selected Consultant as the most qualified firm to provide the services described in this Agreement.
- C. Consultant selected by Thornton represents it has the requisite expertise and professional experience to perform the services this Project requires as described herein and Thornton needs during the term of this Agreement.

In consideration of the promises stated herein, the Parties agree as follows:

II. TERMS AND CONDITIONS

- A. **Definitions, Interpretation.** Capitalized terms not defined below shall have the meanings given them in the Contract Documents where they are defined. Further, otherwise consistent with the context, the singular shall include the plural and the plural shall include the singular. The titles of articles and sections used in this Agreement are primarily for the convenience but may be used as aids in interpreting any provision herein.
 - 1. **Agreement** means the Agreement between Thornton and Consultant, including Amendments, Change Orders, and exhibits made part of the Agreement upon or after its execution.

2. Contract Documents consist of those documents identified in the Agreement, and Change Orders and Amendments issued after execution of the Agreement.
3. Day in any Contract Document refers to a calendar day of twenty-four (24) hours measured from midnight to the next midnight.
4. Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, diagrams, and notes, also sometimes referred to as plans. The Drawings may contain Specifications, and the Specifications may contain Drawings.
5. Commencement Date is the designated date on which it becomes effective, but if no such date is designated, it is the date on which Thornton signs the Agreement.
6. Including shall, unless otherwise specifically stated, mean ***including, but not limited to*** and words such as ***hereby, herein, and hereunder*** and words of similar import shall be construed to refer to this Agreement in its entirety.
7. Specifications are that part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.
8. Subconsultant (“Subcontractor”) is a person or entity retained by Consultant as an independent contractor to provide labor, materials, equipment, and/or services necessary to complete a specific portion of the Work; or any other party supplying labor and material or only labor for Work under a separate contract or agreement with Consultant. Moreover, the terms “Subconsultant” and “Subcontractor” are interchangeable herein and will, at all times, have, express or convey the same meaning. The term does not include a Separate Consultant or a Separate Consultant’s subcontractors.
9. Work (“Services”) is the various elements identified and required by the Contract Documents and includes and is the result of performing or providing all labor, services, and documentation necessary to produce, furnish, install, and incorporate all materials and equipment necessary to complete the services in accordance with the Contract Documents. Moreover, the terms “Work” and “Services” are interchangeable herein and will, at all times, have, express or convey the same meaning.

B. Contract Documents.

1. The following documents, including all exhibits and attachments listed, contained, or referenced in this Agreement, by this reference are incorporated verbatim into this Agreement:
 - a. Thornton Approved Amendments to this Agreement.
 - b. This Agreement for Professional Consulting Services and Exhibits:
 - i. Exhibit A Consultant's General Scope of Services
 - ii. Exhibit B Personnel and Subconsultants Listing
 - iii. Exhibit C Schedule of Charges
 - iv. Exhibit D Federal Contract Requirements
 - c. Purchase Orders.
2. In the event there is a conflict between any of the above-listed documents, the provisions of the document listed first in order shall govern over those documents listed in descending order in subparagraph B.1 above after the first listed document.
3. Consultant may need additional documents to perform the required Work and Services, or to clarify certain aspects of the Work and Services, that are not listed in Section B.1 above. Such documents, unless specifically identified as such, are not Contract Documents. These documents, by way of example include, but are not limited to:
 - a. The Request for Proposals (including Addenda);
 - b. The Consultant's response to the Request for Proposals; and
 - c. Other Thornton policies and procedures as applicable.
4. Consultant shall perform the Services with the staff identified in the attached **Exhibit B**, unless otherwise authorized in writing by Thornton.

- C. Project Description.** This Project consists of the Design Services for bidding and construction of a detached concrete multiuse path that will extend the Big Dry Creek (BDC) Regional Trail and connect it with the trail in Quail Valley subdivision located in Thornton, Colorado (Project). The current western termination point for the BDC Trail is located just east of Interstate 25 (I-25) north of East 136th Avenue. The regional trail picks up on the north side of East 144th Avenue and Washington Street intersection. This Project is federally funded, so plans and specifications will need to conform to Colorado Department of Transportation (CDOT) standards and format.

- D. **Consultant's Scope of Services.** Upon recipient of a written Notice to Proceed from Thornton, Consultant acknowledges that its scope of services includes furnishing all of the technical, administrative, professional, and other labor; all supplies and materials, equipment, printing, vehicles, local travel, office space and facilities, testing and analyses, calculations, and any other facilities or resources required to perform and complete the Services described in the attached **Exhibit A**. ("Scope of Services" or "Services").
- E. **Term; Commencement and Termination Dates.** This Agreement shall commence on the date written above and shall terminate at such time when all of the Scope of Services in **Exhibit A** up to, and through the end of the Warranty Phase, if applicable, are complete, or upon Thornton providing Consultant with seven (7) Calendar Days advance written notice, whichever occurs first. In the event this Agreement is terminated by Thornton for convenience, Thornton shall issue a written Notice of Intent to Terminate and Thornton shall pay Consultant for all Services previously authorized and completed prior to the date of the Notice of Termination and Consultant shall not be entitled to profit or overhead on uncompleted Services. If, however, Consultant has substantially or materially breached the terms of this Agreement, Thornton shall have any remedy or right of set-off available at law and equity.
- F. **Compensation.**
1. **Remuneration.** Thornton agrees to pay Consultant's billable hourly rates and approved reimbursable expenses as set forth in the attached **Exhibit C, Schedule of Charges**, provided, however, the maximum amount Thornton will pay Consultant under this Agreement is not to exceed _____ dollars (\$) without a written amendment executed by the Parties.
 2. **Invoicing.**
 - a. Consultant shall prepare and send by electronic format a detailed monthly invoice to ap.invoices@ThorntonCo.gov.
 - b. Invoices become due and payable thirty (30) days after date of receipt by Thornton of a complete and correct invoice.
 - c. Invoices shall reference the Purchase Order Number assigned by Thornton, and be itemized showing hourly breakdowns for personnel, and other charges.
 - d. Each invoice will show the total amount from the date of the original Agreement, and any subsequently issued Purchase Orders and amendments that change the amount of the Agreement. In addition, invoices must include billing and payment summaries up to the date of

the submitted invoice. Thornton reserves the right to withhold final payment until the Services are complete. Consultant shall not perform any Services without receiving a Purchase Order issued by Thornton.

- e. Consultant shall break down invoices by the phases specified in the Scope of Services. Each phase shall be further itemized by cost for each completed task performed for that phase. Consultants will only invoice Thornton for work that is performed to Thornton's satisfaction, or the percentage of work satisfactorily performed for that phase, unless Consultant has Thornton's written approval in advance. Under no circumstances will Consultant submit an invoice for work for more than the total amount specified for any given phase. Furthermore, under no circumstances may Consultant bill or otherwise invoice for work not specifically authorized.

G. Changes to Consultant's Scope of Services.

1. A change in the Consultant's Scope of Services shall constitute any change or amendment of Services, which is different from or additional to Consultant's Scope of Services as defined in **Exhibit A** of this Agreement. No change to the General Scope of Services, including any requested changes to contractually established billable/unit rates, shall be effective or paid unless authorized by a written Amendment executed by Thornton's City Manager ("Manager") or Manager's designee(s) with the same formality as this agreement.
2. Except as expressly provided herein, no agent, employee, or representative of Thornton has the authority to change or modify - directly or by an implied course of action, the Scope of Services or the terms of this Agreement.
3. If Consultant proceeds without such written authorization, then Consultant shall be deemed to have waived any claim for additional compensation, including a claim based on a theory of promissory estoppel, unjust enrichment, quantum meruit, or implied Agreement.

H. Consultant's Personnel, Subcontracting.

1. Approval of Key Professionals. Consultant shall perform the Services with the persons, personnel, subconsultants and named entities identified in the attached **Exhibit B**, unless otherwise authorized in writing by Thornton. All of Consultant's key professional personnel identified in **Exhibit B** shall be assigned by Consultant or its subconsultant (including any subcontractors) to perform the Services under this Agreement. If Thornton requires Consultant to identify certain subcontractors, other entities, personnel or individuals ("Key Professionals") before the Agreement's commencement date for Thornton's review and acceptance, Consultant shall submit a list of Key Professionals, along with their résumés and information, describing each one's abilities to

perform their assigned tasks no later than thirty (30) days before this Agreement's commencement date. If Thornton does not respond within fifteen (15) days from receiving Consultant's list, all listed Key Professionals will be deemed approved by Thornton.

2. Replacement of Key Professionals. The Parties understand that Key Professionals will be engaged to perform their specialty Services required by this Agreement, and Consultant and its subconsultant shall retain Key Professionals for the term of this Agreement to the extent practicable and to the extent their specialties maximizes the quality of Services performed hereunder. If Consultant decides to replace a Key Professional, it shall notify Thornton in writing of the changes it desires to make. Thornton will respond to Consultant regarding replacement of a Key Professional within fifteen (15) days from the date Thornton receives Consultant's request. Consultant shall not replace any Key Professional without Thornton's written approval, which will not be withheld unreasonably.
3. Performance by Key Professionals. If, during the term of this Agreement, Thornton determines that a Key Professional's performance is unacceptable, they will notify Consultant and give Consultant the time that Thornton considers reasonable to correct such performance. Thereafter, if a Key Professional's performance is still unacceptable, Thornton will notify Consultant to reassign the Key Professional and Consultant shall use its best efforts to obtain an adequate substitute within ten (10) days from the date of the notice.
4. Consultant's Subconsultants.
 - a. Thornton's Approval Required. Consultant may retain and subcontract with subconsultants listed in **Exhibit B, Personnel and Subconsultants Listing**; however, Consultant shall not execute a final agreement with any other subconsultant without obtaining written approval from Thornton first. For Thornton's approval, Consultant must submit a written description of the nature and extent of the Services a subconsultant will provide, and the subconsultant's name, address, professional experience and qualifications and any other important information. Thornton's approval of the subconsultant shall not relieve Consultant of any obligations under this Agreement. Since Consultant's representations and professional qualifications is the consideration for Thornton to enter into this Agreement, Thornton, for any reason, has the right to reject any proposed subconsultant it deems unqualified or unsuitable to perform the proposed Services, and to limit the number of subconsultants retained by Consultant.

- b. Conflict of Interest Prohibited. No Consultant shall retain any subconsultant to perform any Services under this Agreement if Consultant, by making a reasonable inquiry, knows or should know is connected with the sale or promotion of equipment or material used to perform any Services that would be a conflict of interest. However, in unusual circumstances, Thornton may waive in writing a conflict of interest provided Consultant has fully disclosed the conflict of interest beforehand. If at any time, the Consultant becomes aware of a potential conflict of interest, it shall immediately notify Thornton in writing of the potential conflict. The notification shall contain all pertinent information to fully and accurately describe the conflict of interest. Thornton, in its sole discretion, shall determine the existence of a conflict of interest and may terminate this Agreement in the event such a conflict exists after it has given Consultant written notice describing the conflict.
5. Approval, Rejection of Consultant's Key Professionals, Personnel and Subconsultants. Thornton may, in its reasonable discretion, approve or reject any person or persons at any time working for Consultant. No acceptance by Thornton of any Key Professional, subcontractor, supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Thornton to reject defective Work.
6. Waiver. Consultant shall be fully responsible to Thornton for all acts and omissions of its subcontractors, Key Professionals and other persons performing or furnishing any Work or Services on behalf of Consultant just as Consultant is responsible for Consultant's own acts and omissions. Any agreement between Consultant and its approved subconsultant(s), Key Professionals and other persons must have a legally binding provision whereby they agree to waive all rights to make a claim of liability or payment against Thornton arising out of the performance of the Services under this Agreement. Nothing in the Contract Documents shall create any contractual relationship or obligation to pay any monies due to the same, except as the law may require.

I. **Compliance with All Laws and Regulations.**

1. All of the Services performed under this Agreement by Consultant shall comply with all applicable laws, rules, regulations, and codes of the United States and the State of Colorado and with the charter, ordinances, and rules and regulations of Thornton.
2. All applicable state and federal laws, county and city ordinances, licenses and regulations of all authorities having jurisdiction over this Agreement and the Services shall apply to this Agreement throughout and will be deemed to be included in this Agreement the same as though written out in full.

J. **Confidentiality of Thornton's Information.**

1. Thornton will provide Consultant with reports and such other data as may be available to Thornton ("Project Information") and reasonably required by Consultant to perform the Services.
2. No Project Information shall be disclosed by Consultant to third parties without prior written consent of Thornton or pursuant to a lawful Court Order directing such disclosure.
3. All Project Information provided by Thornton to Consultant shall be returned to Thornton at the end of the Project upon Thornton's request. Consultant is otherwise authorized by Thornton to retain copies of Project Information at Consultant's expense.

K. **Ownership, Use of Work Product.**

1. All Services, data, drawings, designs, plans, reports, studies, computer programs (nonproprietary), computer input and output, analyses, tests, maps, surveys, aerial photography or any other materials ("Work Product") developed for this Project by Consultant are and shall be the sole and exclusive property of Thornton. Aerial photography supplied by Thornton to Consultant shall not be utilized by Consultant for any purpose other than the Project.
2. Consultant hereby transfers any copyright, trademark, or other intellectual property rights of Work Product to Thornton. However, any reuse of Work Product by Thornton without prior written authorization by Consultant other than for the specific intended purpose of this Agreement will be at Thornton's risk.
3. Consultant shall provide Thornton with ten (10) days of advance written notice that it has Project Information and Work Product it intends to dispose of, during which time Thornton may take physical possession of such documents.

L. **Compliance With Patent, Trademark and Copyright Laws.**

1. Consultant warrants that all Services performed under this Agreement shall comply with all applicable patent, trademark, and copyright laws, rules, regulations, and codes of the United States. Consultant shall not utilize any protected patent, trademark, or copyright in performance of the Services unless Consultant has obtained proper permission and all releases and other necessary documents. If Consultant specifies or uses any material, equipment, process, or procedure, that is protected, Consultant shall disclose such patents, trademarks, and copyrights in Consultant's deliverables.

2. Consultant releases, indemnifies, and holds harmless Thornton, its officers, agents, and employees from any and all claims, damages, suits, costs, expenses, liabilities, actions, or proceedings of any kind or nature whatsoever, including attorneys' fees and costs, of or by anyone whomsoever, in any way resulting from, or arising out of, directly or indirectly, the performance of Services under this Agreement which infringes upon any patent, trademark, or copyright protected by law.

III. GENERAL CONDITIONS

A. **Indemnification.** To the fullest extent permitted by law, Consultant agrees to defend, indemnify and hold harmless Thornton, its officers, agents and employees, from and against all liability, judgments, damages or losses which arise out of, result from, or are in any manner connected with the Services to be performed under this Agreement, to the extent it is determined such liability, judgments, damages or losses were caused by the negligent acts, errors, or omissions of Consultant, any subconsultant of Consultant, or any officer, employee or agent of Consultant, or anyone else employed directly or indirectly by any of them or anyone for whose acts any of them may be liable and will pay to Thornton any expenses incurred by reason of such liability, judgments, damages or losses, including, but not limited to, court costs and reasonable attorneys' fees incurred in defending or investigating such claims. Such payments on behalf of Thornton shall be in addition to any and all other legal remedies available to Thornton and shall not be considered Thornton's exclusive remedy.

B. **Insurance.** Consultant agrees to procure and maintain in force during the term of this Agreement, at its own cost, the following coverages:

1. **Workers' Compensation Insurance.** Workers' Compensation Insurance as required by the Labor Code of the State of Colorado and Employer's Liability Insurance. Statutory limits are required. Evidence of qualified self-insured status may be substituted.

2. **Commercial General Liability Insurance** **MINIMUM LIMITS)**

- | | | |
|----|---|-------------|
| a. | Each Occurrence | \$2,000,000 |
| b. | Products/Completed Operations Aggregate | \$2,000,000 |
| c. | Personal and Advertising Injury | \$2,000,000 |
| d. | General Aggregate | \$4,000,000 |
| e. | Any one (1) fire | \$50,000 |

- f. This policy shall include coverage protecting against bodily injury, property damage, and personal injury claims arising from the exposures of:

- i. Premises-operations;

- ii. Products and completed operations including materials designed, furnished, and/or modified in any way by Consultant;
 - iii. Independent subcontractors or subconsultants;
 - iv. Contractual liability risk covering the indemnity obligations set forth in this Agreement; and
 - v. Where applicable, liability resulting from explosion, collapse, or underground exposures.
- g. If the above insurance is written on a claims-made form, it shall continue for three (3) years following termination of this Agreement. The insurance shall provide for a retroactive date of placement prior to or coinciding with the effective date of this Agreement.
- h. All commercial insurance policies secured or maintained in relation to this Agreement shall include clauses stating that each carrier shall waive all rights of recovery under subrogation or otherwise against Thornton, its agencies, institutions, organizations, officers, agents employees and volunteers.
- i. In the event of cancellation of any commercial general liability policy, the carrier shall provide at least ten (10) days prior written notice to the Colorado Department of Transportation.

3. Professional Liability Insurance **(MINIMUM LIMITS)**
- | | | |
|----|------------|-------------|
| a. | Each Claim | \$2,000,000 |
| b. | Aggregate | \$4,000,000 |
- c. If the above insurance is written on a claims-made form, it shall continue for three (3) years following termination of this Agreement. The insurance shall provide for a retroactive date of placement prior to or coinciding with the effective date of this Agreement.
4. Automobile Liability Insurance with minimum combined single limits for bodily injury and property damage of not less than one million dollars (\$1,000,000) for any one (1) occurrence. This insurance will insure against bodily injury and/or property damage arising out of Consultant's operation, maintenance, use, loading or unloading of any auto including owned, non-owned, hired, and employee autos.
5. Protected information insurance covering all loss of State Confidential Information, such as PII, PHI, PCI, Tax information, and CJI, and claims based on alleged violations of privacy rights through improper use or

disclosure of protected information with minimum limits of one million dollars (\$1,000,000) each occurrence and two million dollars (\$2,000,000) aggregate.

6. Crime insurance including employee dishonestly coverage with one million dollars (\$1,000,000) each occurrence and one million dollars (\$1,000,000) aggregate.
7. Cyber/Network Security and Privacy liability insurance coverage with one million (\$1,000,000) each occurrence and two million dollars (\$2,000,000) general aggregate.
8. Other insurance with varying limits which from time to time may reasonably be required by the mutual agreement of Thornton and Consultant against other insurable hazards relating to the Services.
9. Consultant shall procure and maintain and shall cause any subconsultants to procure and maintain the minimum insurance coverages listed herein. Such coverages shall be procured and maintained with forms and insurers acceptable to Thornton. All coverages shall be continuously maintained to cover all liability, claims, demands, and other obligations assumed by Consultant pursuant to this Agreement. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.
10. Consultant shall name Colorado Department of Transportation (CDOT) and Thornton, its officers, agents, and employees as additional insureds, with respect to the commercial general liability and auto liability coverages required herein. A Certificate of Insurance shall be completed and forwarded, along with the Additional Insured Endorsements, to Thornton by Consultant's Insurance Agent(s) as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect and shall be subject to review and approval by Thornton **prior to commencement of any Services under this Agreement**. The initial completed Certificates of Insurance and Additional Insured Endorsements shall include Consultant's e-mail address for future inquiries and updates, and shall be sent to:

City of Thornton
Keith Griess, Contract Administrator
9500 Civic Center Drive
Thornton, CO 80229-4326

Subsequent Certificates of Insurance, along with the renewal Additional Insured Endorsements, indicating renewal of coverage(s) shall be sent to Thornton's Risk Management office at certificatesofinsurance@ThorntonCo.gov no later than thirty (30) Calendar Days prior to the expiration date and shall indicate "Renewal COI" and the Project Number in the e-mail subject line.

11. Failure on the part of Consultant or a subconsultant to procure or maintain policies providing the required coverages, conditions, and minimum limits **shall constitute a material breach of Agreement upon which Thornton may immediately terminate this Agreement**, or at its discretion, Thornton may procure, or renew any such policy, or any extended reporting period, and may pay any and all premiums in connection therewith, and all monies so paid by Thornton shall be repaid by Consultant to Thornton upon demand, or Thornton may offset the cost of such premiums against any monies due or that become due to Consultant from Thornton.
 12. Thornton reserves the right to request and receive a certified copy of any policy and any endorsement. Consultant agrees to execute any and all documents necessary to allow Thornton access to any and all required insurance policies and endorsements.
 13. Every policy required above shall be primary insurance and any insurance carried by Thornton, its officers, or its employees shall be excess and not contributory insurance to that provided by Consultant. Consultant shall be solely responsible for any deductible losses under the policies required above.
 14. Consultant shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to this Agreement by reason of its failure to procure and maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.
 15. All policies shall include a provision that the coverages afforded under the policies shall not be canceled or materially changed prior to the natural termination date until at least thirty (30) Calendar Days prior written notice has been sent to Thornton. The Certificate(s) shall indicate the form used, if any, under which this provision is included.
- C. **Governmental Immunity.** The Parties understand and agree that Thornton, 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 from time to time may be amended, or otherwise available to Thornton, its agents, officers, or employees.

D. **Independent Contractor.**

1. It is understood and agreed by and between the Parties that the status of Consultant shall be that of an independent contractor and of a person retained on a contractual basis to perform professional and/or technical services for limited periods of time and it is not intended, nor shall it be construed, that Consultant is an employee or officer of Thornton under Chapter VII of the City Charter, or Chapter 54 of the City Code, or for any purpose whatsoever.

Without limiting the foregoing, the Parties hereby specifically acknowledge that **Consultant** or any employee, agent or subconsultant of Consultant **is not entitled to unemployment insurance benefits unless unemployment compensation coverage is provided by Consultant or some other entity besides Thornton, that Consultant is not entitled to Workers' Compensation benefits from Thornton and that Consultant is obligated to pay federal and state income tax on any monies earned pursuant to this Agreement.** The Parties further acknowledge that the provisions of this paragraph are consistent with Consultant's insurance obligations which are set forth in this Agreement.

E. **Termination.**

1. **Termination for Convenience.**
 - a. Thornton shall have the right to terminate this Agreement at any time upon seven (7) days advance written notice to Consultant ("Notice of Termination").
 - b. Should Thornton terminate this Agreement for convenience, in accordance with subsection E.1.a above, Thornton shall pay Consultant for all Services previously authorized and properly completed prior to the date of termination set forth in the Notice of Termination. Consultant shall not be entitled to profit or overhead on uncompleted Services.
 - c. In any event, the terms and conditions of this Agreement shall survive the termination date of the Agreement and continue until the Services are complete to Thornton's satisfaction.
2. **Termination for Cause.** Thornton shall have the right to terminate this Agreement immediately upon notice to Consultant if Consultant has materially breached the terms of this Agreement. In such event, Thornton shall pay Consultant for all Services previously authorized and completed prior to the date of termination in compliance with the terms of this Agreement and to Thornton's satisfaction, provided that there shall be no limitation of Thornton's right to exercise any and all available legal and equitable remedies.

3. Termination for Non-Appropriation. In the event that the Thornton City Council fails to appropriate funds for the continuation of this Agreement for any fiscal year beyond the initial fiscal year hereof, Thornton may terminate this Agreement without penalty as of the end of the fiscal year for which funding was appropriated and shall be released of further obligations.

F. Venue / Law / Statute Of Limitations. This Agreement shall be governed by the laws of the State of Colorado, notwithstanding its choice of law principles. Any legal action concerning the provisions hereof shall be brought in the District Court, County of Adams, State of Colorado. Any action arising out of or relating to this Agreement or the Services asserted by Consultant against Thornton shall be brought within two (2) years from when the action accrued, pursuant to C.R.S. § 13-80-102(h).

G. Notice. Any notice or communication between Consultant and Thornton which may be required, or which may be given, under the terms of this Agreement shall be in writing, and shall be deemed to have been sufficiently given when directly presented or sent pre-paid, first class United States Mail, addressed as follows:

THORNTON:

City of Thornton
Attention: Contracts and Purchasing Director
9500 Civic Center Drive
Thornton, CO 80229-4326

CONSULTANT:

Company Name
Attention:
Address

H. Exhibits. All documents marked and referred to as “Exhibits” in this Agreement are incorporated by this reference and are made a part of this Agreement.

I. Assignment of Agreement Not Permitted. Consultant shall not be entitled to assign, pledge, or transfer its duties and rights, in whole or in part, under this Agreement, or any Work, Services, or its rights to any payment from Thornton without the prior written consent of Thornton, which Thornton may withhold in its sole discretion. Any approved assignee of Consultant’s interest in this Agreement, any Work or Services shall execute a written acknowledgement in a form satisfactory to Thornton expressly agreeing to be bound by all of its terms. No assignment shall relieve Consultant of primary liability under this Agreement. In this regard, Consultant understands that the performance of the scope of services is considered personal services under this Agreement.

- J. **General Warranty.** Consultant will faithfully perform the services required under this Agreement in accordance with standards of care, skill, training, diligence, and judgment provided by competent professionals who perform services of a similar nature as described in this Agreement.
- K. **No Waiver of Rights.** No assent, expressed or implied, to any breach of any one (1) or more of the terms and conditions of this Agreement shall be deemed to be or taken to be by Thornton a waiver of any subsequent breach of any such terms and conditions.
- L. **Inspection of Records.** In connection with the Services performed hereunder, Thornton and any of its duly authorized representatives shall have access to all of Consultant's and subconsultant's books, documents, papers, and any other records of Consultant and subconsultants that relate to the Services. Consultant further agrees that such records shall contain information concerning the personnel who performed the Services, the specific tasks they performed and the hours they worked. Consultant shall retain these records for three (3) years after termination of this Agreement.
- M. **Conflict of Interest.** Consultant agrees that it and its subsidiaries, affiliates, subconsultants, principals, or employees shall not engage in any transaction, activity, or conduct which would result in a conflict of interest. Consultant represents that it has disclosed any and all current or potential conflicts of interest. A conflict of interest shall include transactions, activities, or conduct that would affect the judgment, actions, or Services of Consultant by placing Consultant's own interests, or the interest of any party with whom Consultant has a contractual arrangement, in conflict with those of Thornton. Thornton, in its sole discretion, will determine the existence of a conflict of interest and may terminate this Agreement in the event such a conflict exists after it has given Consultant written notice, which describes the conflict. Consultant shall have twenty (20) days after the notice is received to eliminate or cure the conflict of interest in a manner acceptable to Thornton.
- N. **Coordination of Services.** Consultant shall fully coordinate its Services with other consultants, contractors or other entities performing services on the Project that interfaces with or is affected in any way by Consultant's Services, and with any interested Thornton or other governmental agencies.
- O. **Non-Discrimination.** Consultant, its agents, employees, contractors, and subconsultants shall not discriminate on the basis of race, color, creed, national origin, ancestry, age, gender, religion, or mental or physical disability in any policy or practice.
- P. **Advertising and Public Disclosures.** Consultant shall not include any reference to this Agreement or to the Services performed hereunder in any of its advertising or public relations materials without first obtaining the written approval from Thornton. Any oral presentation or written materials related to Consultant's Services shall

include only presentation materials, Work product, designs, renderings, and technical data that have been accepted by Thornton. Thornton shall be notified in advance of the date and time of any such presentations. Nothing herein, however, shall preclude the transmittal of any information to officials of Thornton, including without limitation, the Mayor or member or members of City Council.

- Q. **Other Project Work.** Consultant and its subsidiaries and affiliates shall not bid upon or otherwise attempt to perform any other work associated with this Project. Consultant shall require in its contracts with its subconsultants that they and their subsidiaries or affiliates shall not bid upon or otherwise attempt to perform any work associated with this Project other than the Services described in their written agreements unless specifically approved in writing by Thornton.
- R. **Time is of the Essence.** The Parties agree that in the performance of the terms and requirements of this Agreement by Consultant that time is of the essence.
- S. **Inurement.** The rights and obligations of the Parties set forth herein shall inure to the benefit of and be binding upon the Parties and their respective successors and assigns permitted under this Agreement.
- T. **Headings.** The headings contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation of this Agreement.
- U. **Joint Venture.** If Consultant is a Joint Venture, participants shall be jointly and severally liable to Thornton for the performance of all duties and obligations of Consultant set forth in this Agreement.
- V. **Taxes and Licenses.** Consultant shall promptly pay, when they are due, all taxes, excises, license fees, and permit fees of whatever nature applicable to the Services, and shall take out and keep current all required municipal, county, state, or federal licenses required to perform the Services. Consultant shall furnish Thornton, upon request, duplicate receipts or other satisfactory evidence showing or certifying to the proper payment of all required licenses and taxes. Consultant shall promptly pay, when due, all bills, debts, and obligations it incurs performing the Services and to allow no lien, mortgage, judgment, or execution to be filed against land, facilities, or improvements owned by Thornton.
- W. **Severability.** In the event any of the provisions, or applications thereof, of this Agreement are held to be unenforceable or invalid by any court of competent jurisdiction, the validity and enforceability of the remaining provisions, or applications thereof, shall not be affected.
- X. **No Third Party Beneficiaries.** The enforcement of the terms and conditions of this Agreement and all rights of action relating to such enforcement, shall be strictly reserved to Thornton and Consultant and nothing contained in this Agreement shall give or allow any such claim or right of action by any other or third person on such

Agreement. It is the express intention of Thornton and Consultant that subconsultants and any other persons other than Thornton or Consultant receiving any benefits from this Agreement shall be deemed to be incidental, and not intended, beneficiaries only.

- Y. **Electronic Signatures and Electronic Records.** The Parties consent to the use of electronic signatures. The Agreement, and any other documents requiring a signature hereunder, may be signed electronically by the Parties in the manner specified by any applicable City regulation, rule, and/or ordinance. The Parties agree not to deny the legal effect or enforceability of the Agreement solely because it is in electronic form or because an electronic record was used in its formation. The Parties agree not to object to the admissibility of the Agreement in the form of an electronic record, or a paper copy of an electronic document, or a paper copy of a document bearing an electronic signature, on the ground that it is an electronic record or electronic signature or that it is not in its original form or is not an original.
- Z. **Federal and State Funded Projects.** If all or part of the funds appropriated for the Project come from federal or state sources, Thornton may waive, suspend or modify any term or condition which conflicts with any federal or state statute, rule, regulation or procedure, where such waiver, suspension or modification is essential to receipt by Thornton of such funds for the Project. In the case that any Project is wholly partially financed by federal or state funds, any standards required by the enabling statute, or any rules, regulations or procedures adopted pursuant thereto, shall be controlling. Required Contract Provisions for Federal-aid Contracts are attached as **Exhibit D** and incorporated by this reference.
- AA. **Entire Agreement.** The Parties acknowledge and agree that the provisions contained herein constitute the entire Agreement and that all representations made by any officer, agent, or employee of the respective Parties unless included herein are null and void and of no effect. No alterations, amendments, changes, or modifications to this Agreement, except those that are expressly reserved herein, shall be valid unless they are contained in an instrument, which is executed by the Parties with the same formality as this Agreement.

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This Agreement is expressly subject to and will not become effective or binding on Thornton until it is fully approved and executed by Thornton.

APPROVED AS TO LEGAL FORM:
Tami Yellico, City Attorney

CITY OF THORNTON, COLORADO:

By: _____
Erika Delaney Lew
Senior Assistant City Attorney

Kimberly Newhart
Finance Director

ATTEST:

CITY OF THORNTON, COLORADO:

Kristen N. Rosenbaum, City Clerk

Sean Saddler, PE
Support Services Director

ATTEST FOR FIRM SIGNATURE: (If corporation)	INSERT FIRM NAME (ALL CAPS):
_____ Signature	_____ Signature
_____ Print Name	_____ Print Name
_____ Title	_____ Title

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EXHIBIT "A"

CONSULTANT'S SCOPE OF WORK

**Big Dry Creek Trail Development,
Washington Street from 136th Avenue TO 144TH Avenue
Project No. 25-571, CDOT Project No. SPFF M286-063**

The complete Scope of Work for Consultant Services includes:

PART 1 - PROJECT SPECIFIC AND THE ATTACHMENTS

ATTACHMENTS:

- ATTACHMENT "A" – REFERENCES
- ATTACHMENT "B" – SPECIFIC DESIGN CRITERIA
- ATTACHMENT "C" – DEFINITIONS

PART 2 - PRECONSTRUCTION TASK DESCRIPTIONS

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PART 1
PROJECT SPECIFIC
TABLE OF CONTENTS

Description

SECTION 1 PROJECT SPECIFIC INFORMATION

SECTION 2 PROJECT MANAGEMENT AND COORDINATION

SECTION 3 PROJECT DESCRIPTION

SECTION 4 KNOWN EXISTING FEATURES

SECTION 5 ITEMS TO BE FURNISHED BY CITY OF THORNTON

SECTION 6 GENERAL INFORMATION

SECTION 7 WORK ACTIVITY ASSIGNMENTS

SECTION 8 SUBMITTALS

SECTION 9 AGREEMENT CONCLUSION

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SECTION 1

PROJECT SPECIFIC INFORMATION

PROJECT CONCEPT

The Scope includes the design required for bidding and construction of a detached concrete multiuse path that will extend the Big Dry Creek (BDC) Regional Trail and connect it with the trail in Quail Valley subdivision located in Thornton, Colorado (Project). The current western termination point for the BDC Trail is located just east of Interstate 25 (I-25) north of East 136th Avenue. The regional trail picks up on the north side of East 144th Avenue and Washington Street intersection. The preliminary alignment for the new trail is shown in **Figure 1**. It extends the existing BDC Trail from the 136th Avenue pedestrian underpass point traveling east along 136th Avenue to the east side of Washington Street and then crossing Washington Street to 144th Avenue. The Consultant will coordinate with the city on the 136th Avenue bridge widening project and will evaluate this preliminary trail alignment along with other alignment alternatives including through ADCO Open Space to determine a recommended trail alignment for the Project.



Figure 1 – Preliminary Trail Alignment

1.01 Planned Improvements. This Project consists of the design required for bidding and the construction of a multiuse path to extend BDC Trail from its current termination point to the Quail Valley Trail. The Project involves constructing a new detached eight-foot (8') wide concrete sidewalk approximately seven thousand feet (7,000') in length to connect the BDC Trail and Quail Valley Trail.

This Project is receiving federal funds. Plans and specifications are required to conform to Colorado Department of Transportation (CDOT) standards and plans and specifications format. Consultant shall initiate and complete the Subsurface Utility Engineering (SUE) utility process for the entire Project limits. CDOT standards will take precedence on federal funded projects.

The Consultant shall ensure that the location of all of the subsurface utilities have been properly investigated, located and depicted on the drawings, and that all utility locations and depictions are in compliance with Colorado Senate Bill 18-167. Consultant shall further attempt to achieve ASCE 38 utility quality level B (or its successor utility quality level) on all utilities within any proposed excavation areas unless a reasonable rationale by a licensed Professional Engineer is provided in writing for not doing so. Landscaping will be limited to restoration of existing native grass and sod, irrigation systems and seeding.

The Consultant shall be responsible for completing the environmental clearance process either through categorical exclusion or the National Environmental Policy Act (NEPA) process. All plans, reports and documents as required for the CDOT environmental clearance shall be included in the scope of the Project.

Thornton will need to acquire the necessary Right-of-Way (ROW) for this Project. Services for the ROW acquisition, including legal descriptions and preliminary ROW plans, will be required by the Consultant.

Additional Scope:

- Drainage improvements within the Project limits, as required.
- Evaluate the need for a water quality facility.
- Other appurtenances that are impacted by the Work, such as landscaping.
- Design coordination with existing utilities.
- Perform topographic survey.

1.02 Project Goal. This Project is intended to produce the following improvements:

- Improved pedestrian safety.
- Meet ADA requirements.
- Establish bicycle and pedestrian facilities.
- Reduce environmental impacts.
- Improve multimodal mobility.

1.03 Project Location. This Project is located in the vicinity of the Washington Street corridor between East 136th Avenue and East 144th Avenue.

- 1.04 Project Cost.** The estimated cost of the design, ROW, construction, and environmental work for the Project is estimated at six million dollars (\$6,000,000).
- 1.05 Work Duration.** The time for the Work described in this scope is: design, three hundred sixty-five (365) Calendar Days (2025); ROW acquisition, two hundred forty (240) Calendar Days in conjunction with design (2025); construction, three hundred sixty-five (365) Calendar Days (2026).
- 1.06 Consultant Responsibility.** The Consultant is responsible for:
- Project design, bidding and ROW assistance including all items noted in Section 7 and described in detail in Part 2.
 - Must comply with all Federal Design Standards.
- 1.07 Work Product.** Detailed Work product requirements are described in the following sections and in Part 2. The Consultant Work products are:
- Pre-Design Report, including three (3) different alignment alternatives and preliminary cost estimate for each alternative.
 - Field Inspection Review (FIR) Plans, Specifications, and Cost Estimate.
 - Final Office Review (FOR) Plans, Specifications, and Cost Estimate.
 - ROW Plans and Legal Descriptions.
 - Bid Plan Package including Specifications and Cost Estimate issued for advertisement for bids.
 - Consultant shall provide recommendations on required environmental studies, reports, and plans.
- 1.08 Work Product Completion.** All submittals must be accepted by Thornton's Project Manager or their designee.
- 1.09 Additional Project Information.** Additional information to be provided by Thornton is included in the following documents:
- GIS Maps depicting the general location of water and sewer pipelines.
 - City of Thornton Standards and Specifications.
 - DRCOG Transportation Improvement Plan (TIP) Grant Application.
- 1.10 Scope of Work Organization.** Project Scopes of Work are divided into two (2) parts; Part 1 Project Specific information and Part 2 Preconstruction Task Descriptions. For this Project, both Parts 1 and 2 are Project specific and are attached to the Agreement.

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SECTION 2

PROJECT MANAGEMENT AND COORDINATION

2.01 Contacts.

City of Thornton:

The Contract Administrator for this Project is:

Keith Griess
City of Thornton: Contract Administrator
9500 Civic Center Drive
Thornton, CO 80229-4326
Telephone 303-538-7643
Fax 303-538-7556

Active day-to-day administration of the Project will be delegated to:

Marshall Davis, Project Manager
City of Thornton
12450 Washington Street
Thornton, CO 80241
Telephone: 720-977-6254

2.02 Project Coordination. Coordination will be required with the following:

- City of Thornton (COT).
- Colorado Department of Transportation (CDOT).
- Denver Regional Council of Government (DRCOG).
- German Ditch.
- Xcel Energy.
- Xfinity/Comcast.
- CenturyLink (aka Lumen/DBA Quantum Fiber).
- Any other Agency(ies) not listed herein, which are affected by this Project.

The Consultant should anticipate that a design which affects an agency will have to be accepted by that agency prior to its acceptance by Thornton. Submittals to affected agencies shall be coordinated with Thornton.

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SECTION 3

PROJECT DESCRIPTION

3.01 Background. See section 1.01

3.02 Project Limits. See section 1.03

3.03 Work Elements. See section 1.01-1.10

3.04 The following studies will be required for this Project:

- Archaeological and Historic investigation.
- Paleontology records review.
- Hazmat Initial Study Assessment.
- Storm Water Management Plan.
- Prairie Dog Mitigation Plan – if prairie dogs are impacted.
- Wetland Mitigation Plan that includes grading for wetland mitigation.
- Prime Farmland Study in accordance with Part 2, section B.5.p.
- Migratory Bird Assessment.
- Noxious Weed Survey including Mapping of List A Species.
- Environmental Categorical Exclusion - *For purposes of the Scope of Work include all fees associated with an Environmental Clearance for the Project via a Categorical Exclusion (CDOT Form 128).*
- Environmental Assessment – *Include fees in addition to the reports required above for the Categorical Exclusion, for a NEPA environmental assessment.*
- Wetland Finding (jurisdictional or non-jurisdictional).
- 404 Permit (Nationwide Permit 14 assumed).
- Colorado Department Public Safety (CDPS) Stormwater Permit.
- Other environmental services listed in Part 2.

3.05 Stormwater Sediment and Erosion Control and Stormwater Management Plan

- The Colorado Department of Public Health and Environment (CDPHE), Water Quality Control Division (WQCD), through the Municipal Separate Storm Sewer System (MS4) permit issued to Thornton, requires Thornton to control and reduce the discharge of pollutants to protect stormwater quality and to satisfy the appropriate water quality requirements of the Colorado Water Quality Control Act and the Colorado Discharge Permit Regulations (Colorado Regulation 61). The MS4 permit requires the implementation of a program to reduce the discharge from public and private construction sites.
- Pursuant to Thornton's stormwater program, the Consultant shall develop designs and prepare drawings and specifications for stormwater quality control measures (CM) for sediment and erosion control to conform to the latest edition of Urban Drainage Criteria Manual Volume III or CDOT M-Standards.

- If the disturbance is one (1) acre or greater than one (1) acre, the Consultant shall develop a Stormwater Management Plan (SWMP) as required and defined in the CDPS General Permit for Stormwater Discharges Associated with Construction Activity (Permit No. COR-400000). The Consultant shall develop designs and prepare drawings and specifications for stormwater quality control measures for sediment and erosion control to conform to the latest editions of Urban Drainage Criteria Manual Volume III or CDOT M-Standards and in compliance with the CDPS General Permit for Stormwater Discharges Associated with Construction Activity (Permit No. COR-40000) from CDPHE. The Consultant shall develop a Stormwater Management plan (SWMP) as required and defined in the CDPS General Permit for Stormwater Discharges Associated with Construction Activity (Permit No. COR-40000).
- If the earth disturbance is less than one (1) acre, the Consultant shall develop temporary sediment and erosion control drawings and details to control construction stormwater runoff. There is no SWMP or CDPS permit required for disturbances under one (1) acre. Sediment and erosion controls are required for all construction in Thornton.
- The Consultant shall design permanent water quality CMs for new development, redevelopment, and Capital Improvement Projects that disturb one (1) or more acres, as well as for projects that disturb less than one (1) acre that are part of a larger common plan of development or sale. The requirement does not apply to excluded projects as defined in the MS4 permit.
- The design criteria for water quality CMs shall be as described in the latest edition of Urban Drainage and Flood Control District (UDFCD) Criteria Manual Volume III.

3.06 Utility Plans

- Consultant shall supply any utility plans required for the Project that comply with the new 811 law, ASCE 38 Standard and Senate Bill 18-167. ASCE quality level B shall be attempted to be achieved, and a Colorado Professional Engineer shall prepare and stamp plans.

Note: All Work necessary to complete this Scope of Work requires the use of Standard Units.

SECTION 4

KNOWN EXISTING FEATURES

- 4.01 Utilities contact U.N.C.C. at 1-800-922-1987.
- 4.02 Xcel Energy overhead and underground electric lines.
- 4.03 Xfinity/Comcast utilities.
- 4.04 CenturyLink/Lumen/Quantum Fiber utilities.
- 4.05 City of Thornton water, sewer, fiber optic, and stormwater utilities.
- 4.06 German Ditch Company

Note: The above is a list of the known features in the area. It should not be considered as complete. The Consultant should be alert to the existence of other possible conflicts.

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SECTION 5

ITEMS TO BE FURNISHED BY CITY OF THORNTON

5.01 As listed in Section 7 and Part 2.

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SECTION 6

GENERAL INFORMATION

6.01 Authorization to Proceed. Work will not commence until the written Notice to Proceed is issued by Thornton with certification from the Consultant that the Work will be completed within the allotted time. Work may be required night or day, on weekends, on holidays, or on split shifts. The time charged will be exclusive of time lost for:

- a. Reviews and Approvals.
- b. Delays in not receiving responses and direction.

Thornton must concur in time lost reports prior to the time lost delays being subtracted from time charges.

6.02 Project Coordination. The routine working Agreement will be between the Thornton Project Manager (Thornton/PM) and the Consultant Project Manager (C/PM) as defined in Attachment "C". Each Project Manager will provide the other with:

- a. Written synopses or copy of their respective contacts (both by telephone and in person) with others.
- b. Copies of pertinent written communications.

6.03 Routine Reporting and Billing. The Consultant will provide the following on a routine basis:

- a. Coordination of all Agreement activities by the C/PM.
- b. The periodic reports and billings required by Thornton. CDOT Form 1313 (to track overall Project DBE billing percentage) will also be included. The DBE goal for this project is **12.48%**. The proposer commits to the requirements for DBE participation. For additional information refer to <https://www.codot.gov/business/civilrights/smallbusiness/dbe>.
- c. Minutes of all Meetings: The minutes will be completed and will be provided to the Thornton/PM within five (5) Working Days after the meeting. When a definable task is discussed during a meeting, the minutes will identify the "Action Item", the agency responsible for accomplishing it, and the proposed completion date.
- d. Monthly Project schedule update broken out by phase, Work complete and Work to be completed with billings update.
- f. In general, all reports and submittals must be accepted by Thornton prior to their content being utilized in follow-up work effort.

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

6.05 COT Software Information. The type of software is:

Specifications-Microsoft Word.

Computer Data Compatibility

The data format used by the Consultant to submit surveying shall be AutoCAD 2010 or later.

The Consultant shall immediately notify Thornton's PM if the firm is unable to produce the desired format for any reason and cease Work until the problem(s) is/are resolved.

6.06 Project Design Data and Standards.

- a. General. Attachment "A" is a list of technical references applicable to Thornton Work. The Consultant is responsible for ensuring compliance with the listed references. Conflicts in criteria shall be resolved by Thornton's PM.
- b. Specific Criteria. Attachment "B" is a list of specific Project criteria. The list is comprehensive and may include items that are not required for tasks defined in this scope. The Consultant shall submit the pertinent criteria to Thornton's PM at one (1) of the periodic progress meetings prior to initiating design.
- c. Construction Materials and Methods. The materials specified for construction and any indicated construction methods will be selected to minimize the initial construction and long-term maintenance cost to Thornton. Non-typical construction materials and methods must be approved in writing by Thornton.

SECTION 7

WORK ACTIVITY ASSIGNMENTS

This list establishes the Consultant's individual task responsibility. The Consultant shall maintain the ability to perform all Work tasks which are indicated below by an "X" mark in the Consultant column, in accordance with the forms and conditions of Part 2, Part 3, and the applicable CDOT standards. Selected Work tasks shall be assigned only after coordination and consultation with Thornton. The Consultant is also responsible for coordinating the required Work schedule for those tasks accomplished by Thornton and other agencies.

PRECONSTRUCTION - See Part 2 for Task Descriptions.

	<u>Thornton</u>	<u>Consultant</u>
A. Project Initiation and Continuing Requirements:		
1. Design Scoping Review Meeting	<u> X </u>	<u> X </u>
2. Review Environmental Mitigation Requirements	<u> </u>	<u> X </u>
3. Independent Design Review	<u> </u>	<u> </u>
4. Project Schedule	<u> </u>	<u> X </u>
5. Develop Design Criteria	<u> </u>	<u> X </u>
6. Initiate Survey	<u> </u>	<u> X </u>
7. Right-of-Entry and Permits	<u> </u>	<u> X </u>
8. Traffic Control	<u> </u>	<u> X </u>
9. Initial Submittals	<u> </u>	<u> X </u>
10. Progress Meetings	<u> X </u>	<u> X </u>
11. Project Management	<u> X </u>	<u> X </u>
B. Project Development:		
1. Communication and Consensus Building	<u> X </u>	<u> X </u>
2. Public Notices/Advertisement		
a. Public Meetings	<u> X </u>	<u> X </u>
b. Communication Aids	<u> X </u>	<u> X </u>
3. Route Location Surveys (See Section C)		
4. Conceptual Design	<u> </u>	<u> X </u>
5. Data Gathering, Analysis, and Mitigation Development		
a. Traffic Related (See Section C)	<u> </u>	<u> X </u>
b. Archaeology/Paleontology	<u> </u>	<u> X </u>
c. Noxious Weeds	<u> </u>	<u> X </u>
d. Initial Geology Investigation (See Section C)	<u> </u>	<u> X </u>
e. Water Quality	<u> </u>	<u> X </u>
f. Ecological Assessment	<u> </u>	<u> X </u>
g. Historical	<u> </u>	<u> X </u>
h. Floodplain Assessment	<u> </u>	<u> X </u>

	<u>Thornton</u>	<u>Consultant</u>
i. Right-of-Way (See Section C)	<u> X </u>	<u> X </u>
j. 4(f)/6(f) Activity	<u> </u>	<u> X </u>
k. Threatened and/or Endangered Species	<u> </u>	<u> X </u>
l. Wetlands		
(1) Wetlands Determination	<u> </u>	<u> X </u>
(2) Wetlands Findings Report	<u> </u>	<u> X </u>
m. Hazardous Materials	<u> </u>	<u> X </u>
n. Existing Roadway and Major Structures	<u> </u>	<u> X </u>
o. Noise	<u> </u>	<u> </u>
p. Prime Farmlands	<u> </u>	<u> X </u>
q. Air Quality	<u> </u>	<u> </u>
6. Obtain Permits		
a. 404 Nationwide Permit	<u> </u>	<u> X </u>
b. SB40 Certification	<u> </u>	<u> </u>
c. Stormwater Construction Permit	<u> </u>	<u> X </u>
d. 401 Permit Process	<u> </u>	<u> </u>
e. 402 Permit Process	<u> </u>	<u> </u>
f. Ditch Crossing Agreements	<u> X </u>	<u> X </u>

C. Preliminary Design:

1. Design Field Surveys	<u> </u>	<u> X </u>
a. Presurvey Conference	<u> X </u>	<u> X </u>
b. Survey Data Research	<u> </u>	<u> X </u>
c. Secure Rights of Entry	<u> </u>	<u> X </u>
d. Project Control Survey		
(1) Locate or Establish HARN Stations	<u> </u>	<u> X </u>
(2) Monumentation	<u> </u>	<u> X </u>
(3) Local Project Control	<u> </u>	<u> X </u>
e. Land Survey/Boundary Survey	<u> </u>	<u> X </u>
f. Utility Survey	<u> </u>	<u> X </u>
g. Hydraulic Survey	<u> </u>	<u> X </u>
h. Supplemental Surveying	<u> </u>	<u> X </u>
i. Survey Report	<u> </u>	<u> X </u>
j. Equipment Calibration	<u> </u>	<u> X </u>
k. Review by Registered PLS	<u> </u>	<u> X </u>
2. Traffic Engineering	<u> </u>	<u> X </u>
3. Materials Engineering	<u> </u>	<u> X </u>
a. Preliminary Soil Investigation	<u> </u>	<u> X </u>
b. Pavement Rehabilitation	<u> </u>	<u> X </u>
c. New Pavement Structure	<u> </u>	<u> X </u>
d. Pavement Justification	<u> </u>	<u> X </u>
e. Box Culvert Recommendations	<u> </u>	<u> X </u>
f. Pavement Design Report	<u> </u>	<u> </u>

	<u>Thornton</u>	<u>Consultant</u>
4. Hydrology/Hydraulics Engineering		
a. Hydrology	_____	<u> X</u>
b. Hydraulics	_____	<u> X</u>
c. Preliminary Hydraulics Report	_____	<u> X</u>
5. Utility Coordination	_____	<u> X</u>
6. Roadway Design and Roadside Development		
a. Roadway Design	_____	<u> X</u>
b. Roadside Development	_____	<u> X</u>
c. Lighting Plan	_____	<u> X</u>
7. Right-of-Way		
a. ROW Research including Title work (Forty-six Parcels), and chain of Title to 1960 for each parcel	_____ X _____	<u> X</u>
b. Ownership Map	_____	<u> X</u>
8. Construction Phasing Plan	_____	<u> X</u>
9. Preparation for the FIR	_____	<u> X</u>
10. Field Inspection Review	<u> X</u>	<u> X</u>
11. Post FIR Revisions	_____	<u> X</u>

D. Final Design:

1. Project Review	<u> X</u>	<u> X</u>
2. Design Coordination	<u> X</u>	<u> X</u>
3. Utility Coordination	_____	<u> X</u>
4. Hydraulic Design		
a. Roadway Drainage System Design	_____	<u> X</u>
b. Storm Water Management Plan	_____	<u> X</u>
c. Permanent Stormwater Quality Facilities	_____	<u> X</u>
d. Final Hydraulics Report	_____	<u> X</u>
e. Irrigation Crossing Design	_____	<u> X</u>
5. Interim Plans		
a. Initiate ROW Authorization Plans	_____	<u> X</u>
b. Final Utility Plans	_____	<u> X</u>
6. Right-of-Way		
a. ROW Plans Content	_____	<u> X</u>
b. Authorization Plan	_____	<u> X</u>
c. Appraisal Staking	_____	<u> X</u>
d. ROW Plan Revisions	_____	<u> X</u>
7. Materials Engineering (See Section C.3.)	_____	<u> X</u>
8. Traffic Engineering		
a. Permanent Signing/Pavement Marking Plans	_____	<u> X</u>
b. Signalized Intersections	_____	<u> X</u>
c. Traffic Control Plan (See Section D.9.)	_____	<u> X</u>

	<u>Thornton</u>	<u>Consultant</u>
9. Roadside Planning		
a. Dryland Seeding	_____	<u> X </u>
b. Lighting Plans	_____	<u> X </u>
10. Roadway Design	_____	<u> X </u>
11. Construction Phasing and Traffic Control Plan	_____	<u> X </u>
12. Plan Preparation for the FOR	_____	<u> X </u>
13. Final Office Review	<u> X </u>	<u> X </u>
14. Bid Plan and Construction Plan Packages	<u> X </u>	<u> X </u>
 E. Corridor Management Support / Value Engineering	 <u> X </u>	 <u> X </u>
F. Bid Phase Services	<u> X </u>	<u> X </u>

SECTION 8

SUBMITTALS

	<u>Thornton</u>	<u>Consultant</u>
A. Project Initiation and Continuing Requirements:		
Part 1:		
6.02 Meeting Minutes	_____	<u> X </u>
6.03 Periodic Reports and Billings	_____	<u> X </u>
Part 2:		
A.4 Project Schedule	_____	<u> X </u>
A.5 Design Criteria (Attachment B)	_____	<u> X </u>
A.6 Survey Plan	_____	<u> X </u>
A.7 Permissions to Enter (Form 730)	_____	<u> X </u>
A.8 Traffic Control Plan	_____	<u> X </u>
A.9 Initial Submittal of an Original Plan Sheet	_____	<u> X </u>
B. Project Development:		
B.1.a. Public Communication Contact List	<u> X </u>	_____
B.4.a. Roadway Conceptual Design Memo	_____	<u> X </u>
B.5.b. Archaeology / Paleontology Survey Report	_____	<u> X </u>
B.5.c. Noxious Weed Plan	_____	<u> X </u>
B.5.g. Historical Resources Memo	_____	<u> X </u>
B.5.h.(5) Floodplain and Drainage Assessment Report	_____	<u> X </u>
B.5.h.(6) CLOMR	_____	<u> X </u>
B.5.j. 4(f)/6(f)	_____	<u> X </u>
B.5.k. Threatened and/or Endangered Species Assessment	_____	<u> X </u>
B.5.l. Wetlands Findings Report	_____	<u> X </u>
B.5.m. Phase I Environmental Site Assessment (M-ESA)	_____	<u> X </u>
B.5.o. Noise Study	_____	<u> X </u>
B.5.p. Prime Farmlands Report	_____	<u> X </u>
Permits:		
B.6.a. 404 Nationwide Permit	_____	<u> X </u>
B.6.b. SB40 Permit	_____	_____
B.6.c. CDPS Storm Water Permit	_____	<u> X </u>
B.6.d. Floodplain Permit (City of Thornton)	<u> X </u>	<u> X </u>
B.6.e. Ditch Crossing License Agreement	<u> X </u>	<u> X </u>

	<u>Thornton</u>	<u>Consultant</u>
C. Preliminary Design:		
C.1. Electronic Survey	_____	<u> X </u>
• Monument Records	_____	<u> X </u>
• Control and Monumentation	_____	<u> X </u>
• Plan Sheets	_____	<u> X </u>
C.2.j. Traffic Data and Recommendations	_____	<u> X </u>
C.3. Geotechnical Report (Including Soils Investigation and Pavement Design)	_____	<u> X </u>
C.4.c. Preliminary Hydraulics Report	_____	<u> X </u>
C.5.c. Preliminary Utility Conflict List	_____	<u> X </u>
C.7.a. Title Commitments	<u> X </u>	<u> X </u>
C.7.b. Preliminary Ownership Map	_____	<u> X </u>
C.9.c. Preliminary Cost Estimate	_____	<u> X </u>
C.9.d. FIR Plan Set	_____	<u> X </u>
C.10.e. List of Deviations from Standard Design Criteria	_____	<u> X </u>
C.11. Corrected FIR Plan Set	_____	<u> X </u>
D. Final Design:		
D.3. Utility Clearance Letters	_____	<u> X </u>
D.4.d. Final Hydraulics Report	_____	<u> X </u>
D.5.a. ROW Authorization Plans	_____	<u> X </u>
D.5.b. Final Utility Plan Set	_____	<u> X </u>
Right-of-Way:		
D.6. ROW Plans	_____	<u> X </u>
D.6.b. Five (5) Legal Descriptions (Five [5] Fee Acquisitions and Five [5] Temporary Easements)	_____	<u> X </u>
Traffic Engineering:		
D.8.a. Signing/Pavement Marking Plans	_____	<u> X </u>
D.11. Signalized Intersection Plans	_____	<u> X </u>
Roadside Planning:		
D.9.b. Lighting Plans	_____	<u> X </u>
D.11. Construction Phasing and Traffic Control Plan	_____	<u> X </u>
D.12. FOR Plan Sheets and Special Provisions	_____	<u> X </u>
D.12.e FOR Cost Estimate	_____	<u> X </u>

Thornton Consultant

Bid and Construction Plan Packages:

D.14.a Post FOR Revised Plans and Special Provisions	_____	<u> X </u>
D.14.b Final Review Revisions	_____	<u> X </u>
D.14.d. Bid Plan and Construction Plan Packages	_____	<u> X </u>
D.14.e. Roadway Design Data Submittal	_____	<u> X </u>
D.14.g. Record Plan Sets	_____	<u> X </u>

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SECTION 9

AGREEMENT CONCLUSION

9.01 Supplemental Work. It is anticipated that this Agreement will be supplemented for:

- Preliminary Design
- Final Design

9.02 Agreement Completion. This Agreement will be satisfied upon completion of review of Agreement submittals and acceptance of the following items if applicable:

- Project Schedule.
- Project Progress Meeting Minutes.
- Traffic Control Plan(s).
- All Documents Found In Research.
- All Permission to Enter Forms.
- Monumented and Surveyed Ground Control Diagram(s).
- Ownership Map.
- Original Field Notes.
- Survey Report (Including monument recovery forms).
- Legal Descriptions (Signed and Sealed) Five (5) Fee Acquisitions and Five (5) Temporary Easements.

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PART 1
ATTACHMENTS

ATTACHMENT "A" REFERENCES

ATTACHMENT "B" SPECIFIC DESIGN CRITERIA

ATTACHMENT "C" DEFINITIONS

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ATTACHMENT "A"

REFERENCES

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

1. A Policy on Design Standards-Interstate System
2. A Policy on Geometric Design of Highways and Streets
3. Guide for Design of Pavement Structures
4. Guide for the Design of High Occupancy Vehicle and Public Transfer Facilities
5. Standard Specifications for Transportation Materials and Methods of Sampling and Testing - Part I, Specifications and Part II, Tests
6. Highway Design and Operational Practices Related to Highway Safety
7. Roadside Design Guide

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

1. Action Plan
2. CDOT Design Guide (all volumes)
3. Project Development Manual
4. Wetlands and Water Quality
5. Field Log of Structures
6. Cost Data Book
7. Drainage Design Manual
8. CDOT Quality Manual (when updated)
9. Survey Manual
10. Field Materials Manual
11. CDOT Design Guide, Computer Aided Drafting (CAD)
12. Erosion Control and Stormwater Quality Guide
13. Standard Plans, M & S Standards (also available on the Internet)
14. Standard Specifications for Road and Bridge Construction and CDOT Supplemental Specifications
15. Item Description and Abbreviations (with code numbers) compiled by Cost Estimate Unit, CDOT (also available on the Internet)
16. Right-of-Way Manual, Chapter 2, Plans and Descriptions Procedures and General Information
17. The State Highway Access Code
18. Utility Manual
19. Interactive Graphics System Symbol Table

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

- No. 400.2 Monitoring Consultant Agreements
- No. 501.2 Cooperative Storm Drainage System
- No. 514.1 Field Inspection Review (FIR)
- No. 516.1 Final Office Review (FOR)
- No. 1304.1 Right-of-Way Plan Revisions
- No. 1305.1 Land Surveys
- No. 1700.3 Plans, Specifications, and Estimates (PS&E) and Authorization to Advertise for Bids under Certification Acceptance (CA)
- No. 1700.7 Plans and Specifications for Structure Plans under CA
- No. 1700.8 Plans and Specifications for Traffic Engineering Plans under Certifications Acceptance

D. FEDERAL PUBLICATIONS (using latest approved versions):

1. Manual on Uniform Traffic Control Devices
2. Highway Capacity Manual
3. Urban Transportation Operations Training - Design of Urban Streets, Student Workbook
4. FHWA Federal-Aid Policy Guide
5. Technical Advisory T6640.8A
6. U.S. Department of Transportation Order 5610.1E
7. Geometric Geodetic Accuracy Standards and Specifications for Using GPS Relative Positioning Techniques.

ATTACHMENT “B”

SPECIFIC DESIGN CRITERIA

Note: The following criteria will be developed by the Consultant and coordinated with the COT/PM prior to starting the design.

I. SIDEWALK

1. BASIC DESIGN

The basis for design will be the data in CDOT Form 463, Design Data. A copy of the latest applicable Design Data form will be furnished to the Consultant.

2. 2018 CDOT Roadway Design Guide.

3. AASHTO Guide for Development of Bicycle Facilities.

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ATTACHMENT "C"

DEFINITIONS

AASHTO-	American Association of State Highway & Transportation Officials
ADT-	Average two-way 24-hour Traffic in Number of Vehicles
AREA-	American Railway Engineering Association
ATSSA-	American Traffic Safety Services Association
AT&SF-	Atchison, Topeka & Santa Fe Railway Company
BAMS-	Bid Analysis and Management Systems
BLM-	Bureau of Land Management
BNRR-	Burlington Northern Railroad
CA-	Contract Administrator. The COT employee responsible for the satisfactory completion of the Agreement by the Consultant.
CAP-	CDOT's Action Plan
CBC-	Concrete Box Culvert
CDOT-	Colorado Department of Transportation
CDOT/PE-	Colorado Department of Transportation Project Manager - The CDOT Engineer responsible for the day to day direction and CDOT - Consultant coordination of the design effort
CDOT/STR-	Colorado Department of Transportation Structure Reviewer - The CDOT Engineer responsible for reviewing and coordinating major structural design.
CDPHE -	Colorado Department Public Health and Environmental.
CDPS-	Colorado Discharge Permit System
CEA-	Council on Environmental Quality
COG-	Council of Governments
COGO-	Coordinate Geometry Output

CONSULTANT- CONTRACT ADMINISTRATOR-	Consultant for this Project The COT employee directly responsible for the satisfactory completion of the Agreement by the Consultant.
C/PM-	Consultant Project Manager - The Consultant Engineer responsible for combining the various inputs in the process of completing the Project plans and managing the Consultant design effort.
COT/PM-	City of Thornton Project Manager
DEIS-	Draft Environmental Impact Statement
DHV-	Future Design Hourly Volume (two-way unless specified otherwise)
DOR-	Region Office Review
DRCOG-	Denver Regional Council of Governments
D&RGW-	Denver & Rio Grande Western Railroad
EA-	Environmental Assessment
EIS-	Environmental Impact Statement
ESAL-	Equivalent Single Axle Load
ESE-	Economic, Social, and Environmental
FEIS-	Final Environmental Impact Statement
FEMA-	Federal Emergency Management Agency
FHPM-	Federal-Aid Highway Policy Guide
FHWA-	Federal Highway Administration
FIR-	Field Inspection Review
FONSI-	Finding of No Significant Impact
FOR-	Final Office Review
GPS-	Global Positioning System

MAJOR STRUCTURES-	Bridges and culverts with a total length greater than one hundred feet (100') and maximum exposed height at any section of over five feet (5'). This length is measured along the centerline of roadway for bridges and culverts, and is the horizontal distance along the top of wall for retaining walls. Overhead structures (sign bridges, cantilevers, and butterflies extending over traffic) are also major structures.
MOSS-	Modeling of Surfaces and Strings computer program
MPO-	Metropolitan Planning Organization, Denver Regional Council of Governments, Pikes Peak Area Council of Governments, Grand Junction MPO, Pueblo MPO, North Front Range Council of Governments
NEPA-	National Environment Policy Act
NGS-	National Geodetic Survey
NICET-	National Institute for Certification in Engineering Technologies
NOAA-	National Oceanic and Atmospheric Administration
PAPER SIZES-	See Computer-Aided Drafting manual (CDOT); Table 6-13 and Table 8-1
PE-	Professional Engineer registered in Colorado
PM-	Program Manager
PLS-	Professional Land Surveyor registered in Colorado
PRT-	Project Review Team
PS & E-	Plans, Specifications and Estimate
PROJECT-	The Work defined by this scope
ROW-	Right-of-Way: A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to a highway.
ROWPR-	Right-of-Way Plan Review
RTD-	Regional Transportation Director
SH-	State Highway Numbers

T/E Threatened and/or Endangered Species

SH- State Highway Numbers

TMOSS- Terrain Modeling Survey System

TOPOGRAPHY- In the context of CDOT plans, topography normally refers to existing cultural or man-made details.

UDFCD- Urban Drainage and Flood Control District

Note: For other definitions and terms, refer to Section 101 of the CDOT Department of Transportation Standard Specifications for Road and Bridge Construction and the CDOT Design Guide 2018.

EXHIBIT "A"

CONSULTANT'S SCOPE OF WORK

PART 2 – PRECONSTRUCTION TASK DISCRPTIONS

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PART 2
PRECONSTRUCTION TASK DESCRIPTIONS
TABLE OF CONTENTS

Description

SECTION 1: PRECONSTRUCTION WORK TASK DESCRIPTIONS

- A. PROJECT INITIATION AND CONTINUING REQUIREMENTS
- B. PROJECT DEVELOPMENT
- C. PRELIMINARY DESIGN
- D. FINAL DESIGN
- E. CORRIDOR MANAGEMENT SUPPORT / VALUE ENGINEERING
- F. BID PHASE SERVICES
- G. POTENTIAL ADDITIONAL SERVICES

SECTION 2: SUBMITTALS

- A. REPORTS
- B. DATA
- C. PLANS
- D. ELECTRONIC DATA SUBMITTALS
- E. COMPUTER DATA CAPABILITY

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SECTION 1

PRECONSTRUCTION WORK TASK DESCRIPTIONS

The following includes Work descriptions for all tasks normally accomplished during this phase of the Work.

The tasks that are the responsibility of the Consultant are identified in Part 1 of "Consultant's Scope of Work" and described in detail in Part 2 below. Also noted below is the Consultant or Subconsultant firm that will perform each task.

A. Project Initiation and Continuing Requirements. (Consultant, except as noted)

1. Design Scoping Review (DSR) Meeting: Consultant and Thornton representatives shall attend the DSR meeting at CDOT. Meeting agenda will be prepared by Thornton with input from Consultant. At a minimum the agenda will include: identify scope elements, responsibilities and coordination necessary to complete the Work, and review applicable environmental documents and requirements.

For DSR meeting project orientation, Consultant will prepare a PowerPoint slide with the proposed project layout, and some project overview photos showing typical conditions / important features along the corridor.

2. Review environmental mitigation requirements and ensure that they are included in the plan for design.
3. An independent design review shall be performed on any design accomplished by others that will be used in this Project. (Not anticipated)
4. Develop a Project Schedule and assign tasks.
5. Identify design criteria: Submit a copy of Attachment "B" (or other relevant format) with the appropriate items completed. Review and comment on draft Form 463 prepared by CDOT.
6. Initiate survey: Arrange Preliminary Field Survey and/or Aerial Survey. CDOT Form 1217a is an outline of a complete survey request and may be used as a guide for completing the survey plan. The Survey Manual provides an agenda for the Pre-Survey Conference. See Section C.1, "Preliminary Design, Design Field Survey" for all surveying tasks.
7. Obtain necessary Right-of-Entry and permits.
 - a. Some activities which may require work on land are not controlled by Thornton. In such cases the Consultant shall obtain the necessary written

permission to enter the premises. Included in this written permission will be the names and telephone numbers of persons to contact should notification prior to entry be necessary. These written permissions apply to Thornton's personnel as well as Consultant personnel. CDOT Form 730 may be used for this purpose. Signed copies of the written permission will be submitted to Thornton's PM prior to entering private property for survey Work.

- b. Some activities such as materials testing on existing pavement and structures may require a permit. Permits will be obtained and copies submitted to Thornton's PM.

(Right of Entry and Permits will be obtained by Consultant as required for their respective scopes of work. Fees are included in those sections of the scope).

8. Traffic Control: Consultant field activities that interfere with traffic operation within existing roadways will require control of existing traffic. The Consultant will plan and provide any required traffic control for the survey, testing, or design process. Traffic control operations will be in accordance with the MUTCD. The Consultant will note that the proposed method for handling traffic must be acknowledged in writing by Thornton's PM. Also, certification of the Traffic Control Supervisor as a Worksite Traffic Supervisor by the American Traffic Safety Services Association (ATSSA) shall be required.
9. Initial Submittals: Submit the following samples to Thornton's PM for approval:
 - An original plan sheet that complies with Part 2, Section 2 of this Scope of Work.
 - Survey data and a drawing in accordance with the requirements specified in Part 2, Section 2 of this Scope of Work.
10. Progress Meetings
 - a. Thornton and C/PM will meet periodically. Meetings shall occur not less than monthly. The anticipated meetings include:
 - Two (2) meetings during the Project Initiation / Conceptual Design phase.
 - Two (2) meetings during the Preliminary Design phase.
 - Two (2) meetings during the Final Design phase.
 - One (1) additional meeting.

These Progress Meetings will be used to coordinate and track the Work effort and resolve problems. The meetings will review the following:

- (1) Activities required to be completed since the last meeting.

- (2) Problems encountered and effectiveness of previous problem resolutions.
- (3) Late activities.
- (4) Activities required to be completed by the next progress meeting.
- (5) Solutions proposed for unresolved and anticipated problems.
- (6) Information or items required from other agencies.

b. Other required meetings are described in subsequent sections.

11. 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 task also includes the routine working coordination between Thornton's PM and the Consultant's C/PM and the routine periodic reports and billing as defined in Part 1.

B. Project Development

1. Communication and Consensus Building: (Thornton)

Establish and maintain a computerized list of all appropriate receptors for the communication process. The contacts will be compiled from the general "contact list" below as supplemented by the Project Review Team and the attendees at public meetings.

The list will be used for notices regarding public meetings, mailing newsletters, or other communications as appropriate.

The information on the list shall include as a minimum:

Name
Firm (if any)
Mailing/E-Mail address
Phone/Fax number

- a. Contact List:

Public Agencies
Elected/Appointed Officials
Neighborhood Groups
Property Owners/Tenants
Business Interests
Special Interests
Media Contacts

Consultant will provide to Thornton's PM contact information for stakeholders such as utility company representatives, agency representatives, adjacent property owners, etc. obtained during the course of Work outlined in other portions of this Scope of Work.

2. Public Notices/Advertisement: (Consultant, except as noted)
 - a. Public Meetings: None
 - b. Communication Aids: None
3. Route Location Surveys. See Section C, "Preliminary Design".
4. Conceptual Design

Specific items to be studied during Conceptual Design include:

- a. Sidewalk
 - (1) Horizontal alignment options, with the following goals:
 - Avoid or minimize property impacts.
 - Tie into existing facilities.
 - Minimize right-of-way takes.
 - (2) Vertical alignment options, with the following goals:
 - Maximize use of existing sidewalk connections.
 - ADA accessible ramps for sidewalks.

Conceptual geometric design effort will be performed only to the level needed to settle on the best general alignment concept and answer the other issues above. Detailed horizontal and vertical geometric design of the chosen concept will be performed in task C.6. Preliminary Sidewalk Design.

Provide recommendations to Thornton's PM for concurrence via a technical memorandum.

5. Gathering Data, Analysis, and Mitigation Development.

For purposes of the Scope of Work listed below for this Base Agreement, it is assumed that Environmental Clearance for the Project will be obtained via a Categorical Exclusion (CDOT Form 128). Should CDOT or another jurisdiction require that an Environmental Assessment be performed, the Agreement will be supplemented for the additional Work required to perform the Environmental Assessment. That Work is described in a separate document.

These activities shall include the following:

a. Archaeology / Paleontology: (Consultant)

Consultant will perform records searches and field surveys for archaeological and paleontological remains in the study area. This scope assumes that no resources will be located in the study area and that no update will be needed prior to Project construction.

c. Noxious Weeds: (Consultant)

A qualified ecologist will assess the project site for the presence of noxious weeds on the Colorado Noxious Weed A and B lists, the Adams County list, and the CDOT Maintenance list. Weed populations present will be mapped according to CDOT guidelines and shown on the plans.

If noxious weeds are present, Consultant will prepare a brief a weed management plan according to CDOT guidelines. Consultant will work with the city to ensure that weed locations and weed management measures are included in the Project plans as appropriate. This task includes a review of weed mapping and an update of the weed management plan (if needed) no earlier than six (6) months prior to advertising the Project.

d. Initial Geology Investigation. See Section C3, "Preliminary Design, Materials Engineering" for all Geology/Geotechnical Work.

e. Water Quality. Addressed in "Preliminary Design" and "Final Design".

f. Ecological Assessment: A separate ecological assessment task is not anticipated for this Project. All anticipated ecological Work is described above and below in the relevant individual environmental resource task descriptions.

g. Historical: (Consultant)

Consultant will perform records searches and field surveys for historic structures including bridges, buildings, irrigation ditches, railroads, mines, trails and wagon roads, roadway features, and landscapes to determine if significant resources are present. If historic resources are present in the study area, Consultant will prepare an additional services scope for fully documenting and mitigating the resources. This task assumes that no update will be needed prior to Project construction.

h. Floodplain Assessment: (N/A)

- i. Right-of-Way (ROW). See Sections C.7 and D.6.
- j. 4(f)/6(f) Activity Support 4f determination as required for the Project. (Consultant)
- k. Threatened and/or Endangered Species: (Consultant)

Consultant will prepare a brief report on the potential of threatened, endangered, or sensitive (TES) species being present in the study area. The report will also include recommendations on measures to comply with the Endangered Species Act, Migratory Bird Treaty Act, and CDOT's black-tailed prairie dog guidelines. Black-tailed prairie dogs are known to be present in the vicinity of the project area and this scope assumes the Project will be required to implement CDOT's prairie dog guidelines. The Project area is located within the block clearance area for Preble's meadow jumping mouse.

If necessary, Thornton will perform presence/absence surveys for Ute ladies'-tresses orchid and Colorado butterfly plant. Because surveys for burrowing owls and other migratory birds are valid for just one (1) year, surveys will be done no more than six (6) months prior to the start of the Project.

This task includes an update of TES species clearances (as needed) no earlier than six (6) months prior to Project advertisement. Surveys for burrowing owl and other migratory birds would be done at this time.

This task assumes that no federally-listed species are present.

- l. Wetland Determination and Wetland Finding: (Consultant)

Consultant will delineate all wetlands and open water in the study area (Part 1 Section 1 hereinafter Project Concept) using US Army Corps of Engineers delineation methods. Consultant will include the delineation in the Wetland Finding prepared and submitted according to CDOT guidelines. The Wetland Finding will document existing conditions, describe any proposed, unavoidable impacts to wetlands, and describe mitigation proposed for wetland impacts.

This task includes a review of wetland mapping and an update of the finding (if needed) no earlier than six (6) months prior to advertising the Project. If wetland boundaries and Project plans have not changed between the original wetland finding and Project advertisement, no updates will be required.

m. Hazardous Materials: (Consultant)

Consultant will conduct a Phase I Environmental Site Assessment (ESA) for the subject property. The ESA will be modified to comply with CDOT's June 10, 2003 Modified Environmental Assessment (M-ESA) Guidance and CDOT's requirements for signal interconnect projects. The M-ESA will consist of a visual inspection of the subject property, interviews with the property owner, and/or key site manager, if applicable, and a compilation of publicly available information from a variety of sources about current environmental conditions at the subject property. Consultant will provide the Client with a written report, including a detailed presentation of findings.

Site Inspection. Consultant will conduct a visual site inspection of the subject property. The purpose of the inspection is to document recognized environmental conditions. Photographs will be taken as appropriate. Consultant will not take any samples during the site inspection. The following issues are specifically excluded from this ESA asbestos-containing materials, radon, lead-based paint, and lead in drinking water.

Consultant will document the general site setting, such as current use(s) of the subject property and adjoining properties, and general hydrogeologic and topographic features. A general description of structures and other improvements on the subject property will be provided.

Consultant will identify the following site conditions, if they are visually or physically observed, during the site inspection:

- The quantity, type, and storage system for hazardous substances and petroleum products in connection with identified uses.
- Tanks, containers, drums, barrels, and other systems used for storing hazardous substance and petroleum products not connected to identified uses.
- Aboveground and underground storage tanks.
- Pits, ponds, lagoons and other features potentially used for storage and/or disposal of hazardous substances and petroleum product.
- Odors, pools of liquids, stained soils and pavement, and stressed vegetation.
- Presence of electrical equipment potentially containing PCBs.
- A cursory investigation for potential asbestos containing building materials and painted surfaces containing lead-based paints.

Interviews. Consultant will conduct interviews with the ESA user, property owner, site manager and/or other persons with knowledge of the subject property.

File search and regulatory agency review. Consultant will conduct a search of records and files from a variety of sources and compile existing information pertaining to current and past environmental conditions. This search may include the following information, as Consultant deems appropriate:

- County and city records.
- State and federal databases.

Reports and recommendations. Based on the information gathered during the above tasks, Consultant will compile the information and findings in a written report for the subject property. The report will contain a detailed presentation of findings, including the site description, records review, site reconnaissance, and conclusions.

M-ESA Assumptions and Conditions. It is important to emphasize that considerable uncertainty is inherent in conducting this type of investigation. The ESA will be completed by qualified environmental professionals using that degree of care and skill ordinarily exercised under similar circumstances by other environmental professionals practicing in this field. Unforeseen conditions may significantly affect the ability to make conclusions and recommendations based solely on the proposed investigations, which may ultimately affect the level of risk for a given level of investigative effort and cost. The following assumptions and conditions describe some of the possible limitations under this Scope of Work.

1. Consultant assumes the subject property will not present conditions that may be hazardous to the health and safety of Consultant personnel. The presence of visible hazards or contamination may be sufficient cause for Consultant to halt work immediately and request a meeting with Thornton to discuss the problem.
2. All Work will be conducted according to the provisions given in this Scope of Work and in the accompanying Terms and Conditions. No other specifications or guidelines have been agreed to, nor will any such specifications or guidelines be addressed except as will otherwise be according to this Scope of Work.
3. As necessary, Consultant will obtain right of entry to properties.
4. Any conditions, known or suspected to Thornton that may have bearing on these investigations, or to the findings or recommendations made pursuant to this Work scope, will be disclosed to Consultant before initiation of the Scope of Work. Thornton will make available to Consultant any appraisal reports,

title histories, engineering reports, or other technical reports or information that may pertain to this investigation.

5. All references, statements, or recommendations in the Scope of Work or in any subsequent written reports to substances being either hazardous or not hazardous are made solely in accordance with or in reference to such official designations made by government agencies or other authorities under applicable laws, regulations, or guidelines. Consultant itself makes no claim, warranty, or implication as to whether any substance may or may not be hazardous.
6. This Scope of Work does not include an assessment of the potential for any particular condition adversely to affect public health.
7. Any laboratory analytical Work, beyond testing associated with the asbestos screening, conducted in conjunction with this project will be conducted by a laboratory or laboratories under separate contract or subcontract. While the Consultant will endeavor to select qualified laboratories for sample analysis, the Consultant will accept no responsibility or liability for laboratory results, quality control, or analytical turnaround time.
8. Deviations from these assumptions may result in cost increases or changes in schedule.
9. All site boundaries shown or discussed in the report are approximations based on information supplied by the Client. Consultant will accept no responsibility or liability for the accuracy of the site boundaries.

Thornton will be responsible for completing the user questionnaire, obtaining a map of the subject property, determining property size, and forwarding these items to the Consultant at least five (5) days before the date of Project completion.

Assumptions: Phase II hazardous materials work is not included in this Scope of Work.

- n. Existing trails, roadway and major structures: (Consultant)

Compile a photolog of existing conditions throughout the Project area.

6. Obtain Permits: This activity is concurrent with final design and must be completed prior to the advertisement for construction.
 - a. 404 Nationwide Permit: (Consultant)

Consultant will prepare a pre-construction notification as part of the request for authorization under one (1) or more Nationwide Permits. Consultant assumes the project will be authorized under Nationwide Permit 14 Transportation Crossings. If the Project requires an Individual Permit, Consultant will provide a revised scope. The request for authorization will include a summary of the wetland delineation, threatened and endangered species information, and information on grading and structures (provided by Consultant). Consultant will coordinate with others on what other information the Consultant requires for the request. Typical information includes plans views, cross sections, background information on other approval requirements (e.g., those of FEMA), and a discussion of the purpose of, and need for, the Project. It is assumed that any wetland mitigation required will be accomplished by Thornton purchasing credits in a wetland bank. Thus, wetland mitigation plans will not be prepared.

This task includes reviewing the Nationwide Permit authorization no earlier than six (6) months prior to project advertisement. If necessary, Consultant will request that the Corps extend its authorization to accommodate the actual start date of the project.

b. SB40 Certification:

An SB40 Certification is not anticipated for this project, since the Project is not anticipated to impact a stream under SB40 jurisdiction. If it turns out to be needed, SB40 work can be provided as an additional service.

c. CDPS Stormwater Construction Permit: (Consultant)

- (1) Prepare CDPS permit application and provide to Thornton's PM for signature and submittal to CDPHE.
- (2) When permit is received by Thornton's PM, Thornton's PM will submit copy of the permit to the CDOT Environmental Manager and Consultant.

d. 401 Permit Process:

A 401 permit is not anticipated for this Project, since a Nationwide 404 permit rather than an individual 404 permit is anticipated.

e. 402 Permit Process (Dewatering Point Source Discharge):

Typically, this application is prepared by the Consultant since specific information regarding means and methods is requested. If dewatering is anticipated to be needed for this Project, the Contract Documents will require the Consultant to obtain this permit.

C. Preliminary Design

1. Design Field Survey (Consultant): This Work shall be done in accordance with the CDOT Survey Manual and applicable state statutes.

The limits of survey are illustrated in Project Concept. Topographic survey will be performed using a combination of aerial survey supplemented with ground survey. Aerial survey limits will encompass all areas shown on that Exhibit. Aerial mapping contour interval will be one foot (1'). Within the "Limits of Detailed Roadway, Tree, and Utility Design Survey", the following three-dimensional survey data will be collected via ground survey methods using TMOSS:

- i. Edges of walkway.
- ii. All walkway striping.
- iii. Break lines within the sidewalk.
- iv. Utility information listed in "Utility Survey" below.
- v. Hydraulic information listed in "Hydraulic Survey" below.
- vi. Trees, including location, type (coniferous vs. deciduous), and trunk diameter.

Consultant will merge the sidewalk break line/striping/pavement edge data from the TMOSS ground survey into the aerial survey model to improve accuracy for matching existing pavement elevations during design.

Consultant will provide the following deliverables for the topographic survey (AutoCAD Land Development Desktop-format deliverables will not be allowed):

- i. Drawing file (in both paper and AutoCAD electronic format) of merged aerial / ground survey suitable for use as background for Project design drawings, but also including full three-dimensional triangulated irregular network (TIN) of the merged model.
- ii. Electronic AutoCAD drawing file of unmerged TMOSS data.
- iii. Electronic AutoCAD drawing file of unmerged aerial survey.
- iv. TMOSS .SDF file.
- v. ASCII text file of all point shots.

Consultant will supply all traffic control required to accomplish the survey Work.

- a. Pre-survey Conference: (See CDOT Form 1217a). Prior to commencing survey work, a pre-survey conference shall be held as per the CDOT Survey Manual. Attendees from the Consultant team.

- b. Survey Data Research: Research shall be done as per CDOT Survey Manual, Chapter 5, Section 3, as amended, also the CDOT Right-of-Way Manual, Chapter 2 (as revised).
- c. Secure Rights of Entry (Thornton): Some activities may require work on land are not controlled by COT. In such cases Thornton shall obtain the necessary written permission to enter the premises. Included in this written permission will be the names and telephone numbers of persons to contact should notification prior to entry be necessary. These written permissions apply to Thornton's personnel as well as other Consultant team personnel. CDOT Form 730 (as revised) may be used for this purpose, following procedures in the CDOT Survey Manual. Signed copies of the written permission will be submitted to Thornton's PM prior to entering private property for survey work.
- d. Project Control Survey: (Consultant)
 - (1) Project control shall be tied to the nearest Colorado High Accuracy Reference Network Station (HARN). In the event there are no HARN stations within 3.107 miles of the Project (Order B, 1:1,000,000 accuracy), or HARN Densification (Order B-2, 1:500,000 accuracy), additional HARN Densification stations shall be set. NGS Blue Book procedures shall be followed for all HARN Densification stations. This will include proper spacing using proper monumentation, equipment, observation procedures, coordination through the Colorado State Geodetic Advisor and submission to NGS for inclusion in the National Database.
 - (2) Monumentation: Materials will be supplied by Consultant and care is to be taken to install said monumentation in locations that are readily usable for the Project and in as safe a location so that they can be utilized throughout construction (No monumentation shall be set on or near the centerline of the proposed roadway).
 - (3) Local Project Control: Survey the required Project control (centerline/baselines and elevation reference) as required. Prepare a Control Survey Diagram showing graphical representation of all monuments used for control. Tabulate the coordinates and physical description of all found monuments and other physical evidence.
- e. Land Survey/Boundary Survey (Consultant): Tie aliquot, property and other land monuments to the control survey. Prepare a Control Survey Diagram showing graphical representation of all found aliquot, property and land monuments. Tabulate the coordinates and physical description of all found monuments and other physical evidence.
- f. Utility Survey (Consultant): Within the "Limits of Detailed Roadway, Tree, and Utility Design Survey", the following three-dimensional survey data

will be collected via ground survey methods using TMOSS: utility poles, manholes, valves, pedestals, guy wires, other surface evidence of underground and above-ground utility facilities, and paint marks denoting the location of underground utilities as marked by (Consultant) under "Section C.5. – Preliminary Design, Utility Coordination" of this Agreement. Determine invert elevations and sizes of manholes and vaults. Survey the locations of utilities exposed by "potholing" done by Consultant in accordance with Section C.5.

The Consultant shall ensure that the location of all of the subsurface utilities have been properly investigated, located and depicted on the drawings, and that all utility locations and depictions are in compliance with Colorado Senate Bill 18-167. Consultant shall further attempt to achieve ASCE 38 utility quality level B (or its successor utility quality level) on all utilities within any proposed excavation areas unless a reasonable rationale by a licensed Professional Engineer is provided in writing for not doing so.

- g. Hydraulic Survey: Within the "Limits of Detailed Roadway, Tree, and Utility Design Survey" on Project Concept, locate culvert and storm sewer pipes and determine sizes and invert elevations. Locate inlets and determine invert elevation of pipes. Accomplish drainage situation surveys for culverts and bridges within those limits and otherwise noted on the Exhibit. Adequate topographic mapping shall be acquired to complete a floodplain assessment of existing conditions and evaluate impacts caused by the project.
- h. Supplemental surveying (Consultant): The following supplemental survey work will be performed:
 - i. Survey the location of geotechnical test holes.
 - ii. Up to two (2) days of supplemental field surveying by a two (2) person crew, and associated office processing Work, for miscellaneous additional information Consultant and/or Thornton determine to be needed during design. Up to three (3) separate mobilizations are anticipated for this task.
- i. Survey Report (Consultant): Prepare a Survey Report as required in the CDOT Survey Manual.
- j. Equipment Calibration (Consultant): Tests are to be performed on a regular basis throughout the Project by the Consultant.
- k. Review by Professional Surveyor (Consultant): The accuracy tests are to be reviewed by the PLS in Responsible charge for the Project and submitted to the Consultant engineer and made part of the Project records. Further review of all aspects of the field and office work shall also be the responsibility of the PLS in Responsible charge.

Note: The completed survey shall be reviewed by the region survey unit. Two (2) weeks should be provided in the schedule to complete the review and sufficient time should be provided to address all comments provided by this review.

Design shall not proceed until all comments resulting from this review have been satisfactorily addressed.

2. Materials Engineering: (Consultant)
 - a. Preliminary Soil Investigation.
 - (1) Determine test hole locations (horizontal and vertical) and coordinate with the COT/PM. Contact UNCC to clear utilities for boring locations. Obtain permits from CDOT for drilling test holes. Drill three (3) test holes. Traffic control will be provided by the Consultant.
 - (2) Collect soil samples and test for:
 - (a) Classification
 - (b) Moisture - Density Relationship
 - (c) Resistance Value
 - (d) Gradation
 - (e) Liquid and Plastic Limits
 - (f) Unconfined compressive strength
 - (g) Water soluble sulfates
 - (3) Analyze the test data to determine the soil structural capability.
 - (4) Prepare and submit a soils investigation report with recommendations to Thornton's PM for review.
 - b. Geotechnical Design Report: Include all the above tests, investigations, analyses, and calculations performed as a result of this section. Submit to Thornton's PM for acceptance.
3. Hydrology/Hydraulic Engineering: (Consultant)
 - a. Hydrology
 - (1) Establish drainage basin data: delineate, determine size, waterway geometric, vegetal cover, land use.
 - (2) Collect historical data; research flood history and previous designs in the proximity; and obtain data from other sources (e.g., Urban Drainage and Flood Control District, Colorado Water Conservation, CDOT Maintenance, and local residents).

- (3) Select a storm frequency based on the CDOT Design Guide criteria. If it is not possible to use the CDOT Design Guide storm frequency criteria for a storm sewer or culvert design, the COT/PM should be notified. A risk analysis may be required but will not be accomplished without prior written approval from Thornton.
- (4) Perform a hydrological analysis using existing studies or approved methods (see CDOT Design Guide.) For example: Compile precipitation and stream gauge data, select runoff parameters, analyze gauge data, and predict peak flows. Calculate run-off and design flow rates. Create runoff hydrograph as if storm routing is necessary.

b. Hydraulics

- (1) Design of additional drainage structures is not anticipated but may be required. The existing culvert is anticipated to be adequate.
- (2) Accomplish the preliminary design of drainage structures:
 - (a) Determine location and crossing alignment. Identify channel centerline by highway station or coordinates, as appropriate.
 - (b) Determine the allowable headwater.
 - (c) Assess the degree of sediment and debris problems to be encountered.
 - (d) Determine and identify on the plans the type, size, length, and shape of the inlets, manholes, pipes, and open channels.
 - (e) Complete the design computations and documentations in accordance with the CDOT Drainage Design Guide.
 - (f) Determine high water level.
- (3) Off-alignment detours are not anticipated for this Project. Therefore, recommendations for culvert pipe sizes for proposed detours are not anticipated.
- (4) Identify locations and footprints of permanent stormwater quality (MS4) BMPs to a level that will allow determination of required ROW limits. It is not anticipated that permanent water quality facilities will be included.
- (5) Develop designs and prepare drawings and specifications for stormwater quality control measures for sediment and erosion control to conform to the latest edition of Urban Drainage Criteria Manual Volume III or CDOT M-Standards and in compliance with the new CDPS General Permit for Stormwater Discharges Associated with Construction Activity (Permit No. COR-400000) from CDPHE. The Consultant shall develop a Stormwater

Management Plan (SWMP) as required and defined in the CDPS General Permit for Stormwater Discharges Associated with Construction Activity (Permit No. COR-40000).

c. Preliminary Hydraulics Report. Include the following:

- (1) Hydrology analysis
- (2) Minor structure hydraulic designs
- (3) Discussion of required permanent stormwater quality (MS4) facilities
- (4) Appendix:
 - Drainage basin maps
 - Hydrology/hydraulic worksheets

4. Utility Coordination

In accordance with C.R.S. 9-1.5.103, engineers or other persons designing excavation shall obtain general information as to the description, nature, and location of underground facilities in the area of such proposed excavation and include such general information in the plans or specifications to inform an excavation contractor of the existence of such facilities and of the need to obtain information thereon.

The Consultant shall ensure that the location of all of the subsurface utilities have been properly investigated, located and depicted on the drawings, and that all utility locations and depictions are in compliance with Colorado Senate Bill 18-167. Consultant shall further attempt to achieve ASCE 38 utility quality level B (or its successor utility quality level) on all utilities within any proposed excavation areas unless a reasonable rationale by a licensed Professional Engineer is provided in writing for not doing so.

To comply with this statute, the following specific tasks will be accomplished for this Project:

a. Location Maps (Consultant):

- Contact the Utility Notification Center of Colorado (UNCC) and request a list of utility owners registered with UNCC within the Project limits.
- Contact utility owners provided by UNCC and irrigation companies and inquire whether these entities have utility/ irrigation facilities within the Project corridor.
- Obtain available utility key maps from utility owners that reply that they indeed have facilities in the Project limits.

- b. Utility locating (Consultant): Throughout the “Limits of Detailed Roadway, Tree, and Utility Design Survey” in Project Concept, identify and paint the location of existing underground utilities (with the exception of service lines and utilities owned by private property owners). This Work will be performed prior to initiation of the field survey work.
- c. Utility plotting (Consultant): To the extent possible, correlate the information from the utility key maps with the visible utility features surveyed and plot approximate location of existing utility lines in color on project roadway plans. Service lines to individual residences, places of business, and utilities owned by private property owners are normally not shown on the drawings and will not be shown as part of this Scope of Work. Should Thornton desire that such service and private lines be researched further and shown on the drawings, this Work can be provided as Additional Services. Underground utility lines for which no surface evidence exists and for which reliable map information is unavailable will not be shown unless identified by the utility owners during the coordination process.
- d. Prepare a “Memorandum of Design – Utilities” (Consultant): The memorandum will contain the names of known utilities in the Project area and contacts at the utility companies. The memo will include a summary of the known utilities (based on field observation, UNCC contact, and available utility key maps).
- e. Preliminary Utility Conflict List (Consultant): Compile a list of potential conflicts between the project and existing utility facilities. Determine locations where utility potholing shall be performed. Utility potholing will be performed soon after the FIR. See Section D.3, “Final Design, Utility Coordination”.
- f. Preliminary Utility Coordination (Consultant): Send copies of FIR plans and potential conflicts to utility companies to request verification of existing utility locations shown on the plans.

5. Sidewalk Design: (Consultant)

a. Sidewalk Design:

The Project limits and anticipated roadway improvements to be designed are illustrated in Project Concept.

- (1) Coordinate efforts with other design activities as required.
- (2) Check and plot survey data.
- (3) Draw a geometric layout. Determine (or verify) horizontal and vertical alignment. A project-specific coordinate system approved by CDOT shall be used to identify the horizontal locations of key points. The coordinate systems used for roadway design and ROW

shall be compatible. Check horizontal and vertical clearances against design criteria.

- (4) Provide alignments and required ROW (Preliminary Design Plans) to the manager responsible for producing the ROW ownership map.
- (5) Plot/develop all required information on the plans in accordance with CDOT Procedural Directive 514.1.

b. Roadside Development:

The Project limits and anticipated path improvements to be designed are illustrated in Project Concept.

- (1) Accomplish the following for landscaping and sprinkler systems:

- (a) Landscaping within the Project area is planned to be native seeding. Sprinkler system work will be limited to notes requiring the Contractor to restore/modify existing sprinklers disturbed by the project to operating condition.

- (b) Provide estimates of quantities of native seeding and mulching for the FIR plans.

- (2) Submit plans to Thornton's PM for inclusion in the FIR plans.

c. Lighting Plan: Consultant will provide lighting plan for new city of Thornton, United Power and Xcel owned LED Streetlights within the Project limits. Lighting plans are required in accordance with the city of Thornton Standard and Specification for the Design and Construction of Public and Private Improvements.

7. Right-of-Way (Consultant): The following Work shall be done by or under the immediate supervision of a Professional Land Surveyor (PLS).

a. Research

- (1) Identify affected ownership from preliminary design plans.
- (2) Obtain assessor's maps, locating Project limits.
- (3) Locate documents which transfer title. Provide title work – five (5) parcels. Include five (5) updates for title work.
- (4) Provide chain of title to 1960 in accordance with Thornton requirements, as directed by Thornton PM.
- (5) Look for encumbrances, releases, etc.
- (6) Make physical inspection of property. Note any physical evidence of apparent easements, wells, ditches, ingress, and egress.
- (7) Check with County Road Department, County Engineer, or Thornton as appropriate for location of existing roads.

- (8) Check for and obtain latest subdivision plats and vacations of streets.

b. Ownership Map (Included with Right of Way plans)

For additional detail on required drafting software, COGO, and Project coordinate system see SECTION 2 - SUBMITTALS.

Ownership map shall be submitted along with a "Project Narrative" see SUBMITTALS - B.3.

- (1) Review preliminary design and survey report.
- (2) Review Project coordinate system and basis of bearing from Control Survey prior to calculations.
- (3) Compute alignment of ROW centerline and store coordinates of all found monuments within the first tier of properties left and right of Centerline.
- (4) Review ownership documents (Memoranda of Ownership and/or title commitments, deeds and supporting plats).
- (5) Calculate coordinates of lost or obliterated aliquot corners using guidelines established by the Bureau of Land Management. (To be used in resetting corners according to Colorado Revised Statutes).
- (6) Establish subdivisions of sections using Bureau of Land Management Guidelines. Show all section lines and $\frac{1}{4}$ section lines on the ownership map and ROW plans.
- (7) Determine existing ROW limits from deeds of record, available plans and found ROW markers.
- (8) Determine ownerships and their property boundary locations. Locate the intersection of these property boundary lines with the existing public ROW. Determine location and ownership of existing easements of record.
- (9) Secure additional property ties and additional topography where the highway improvement may affect improvements adjacent to the ROW. This additional topography should include:
 - (a) Proximate buildings, sheds, etc.
 - (b) Underground cables and conduits
 - (c) Wells
 - (d) Irrigation ditches and systems
 - (e) Septic tanks, cesspools, and leaching fields
- (10) Reconcile overlaps and gaps in ownerships as required by Thornton, documenting method used (may require additional fieldwork). Include reasons for decisions in the "Project Narrative".
- (11) Ownership Maps are required with Project plan sets.
- (12) Label all monuments found with description of monument and Project coordinates (from Control Survey Diagram).

- (13) Show improvements and topography within the ownerships and existing access to the street/county road system.
- (14) Number ownerships alternately as they occur along the centerline from south to north or west to east in the same direction as the stationing. Show current names of owners and lessees.
- (15) Calculate the total area of all ownerships affected, including coordinates of all property corners. Deduct areas for existing road Rights-of-Way. Bearings and distances do not need to be shown on Ownership Maps.
- (16) Different land uses within a property should be cross-hatched or shaded.
- (17) In the lower right corner of the Ownership Map, show seal, number, and name of Professional Land Surveyor supervising the Work.
- (18) Transmit finished reproducible Ownership Map, electronic drawing files, and Memoranda of Ownership to Thornton along with all calculations, field notes, and supporting data. The Ownership Maps will include a copy of the control and monumentation sheet. (Note that only the Project control data needs to be completed at this time).

8. Construction Phasing Plan: (Consultant)

A Construction Phasing Plan will be developed, which integrates the construction of all the Project Work elements into a practical and feasible sequence. This plan shall accommodate the existing traffic movements during construction (detours), which will be schematically illustrated for the FIR submittal on the Phasing Plan or via Construction Phasing Typical Sections.

9. Preparation for the FIR: (Consultant)

- a. Coordinate, complete, and compile the plan inputs from other activities such as materials, hydraulics, traffic, and ROW.
- b. If a major structure is included in the Project (none currently included in this Scope of Work), a general layout (which has been accepted by COT) will be included in the FIR plans.
- c. Prepare the preliminary cost estimate for the Work described in the FIR plans based on estimated quantities.
- d. The FIR plans shall comply with the requirements of the CDOT Procedural Directive 514.1 and 1905.1 and will include: title sheet, standard plans list, typical sections, general notes, roadway geometry sheets, roadway plan sheets at 1"=40' scale (at 11" x 17"), separate roadway profile sheets (1"=40' horizontal scale at 11" x 17" and suitable vertical scale), and roadway cross sections (50' intervals). These scales

are such that separate intersection layout sheets are not necessary. The plan/profile sheets will include the following: all existing topography, survey alignments, projected alignments, profile grades, ground line, existing ROW, rough structure notes (preliminary drainage design notes), and existing utility locations.

The following items which are listed as "desired items" in the Procedural Directives will be mandatory for the FIR plans:

- Preliminary earthwork (plotted cross sections at critical points with roadway template and existing utility lines at known or estimated depths)
 - Catch points
 - Proposed ROW
 - Stabilization data
- e. The ROW Ownership Map shall be included in the FIR plan set.
- f. The plans shall be submitted to the COT/PM for a preliminary review prior to the FIR.
- g. The plans (up to twenty-eight (28) sets – fifteen (15) CDOT, three (3) Thornton, seven (7) Utilities, and three (3) Consultant) will be reproduced by Consultant Reproduction. All FIR plan sets will be produced at 11" x 17" sheet size. Provide PDF for FIR plans.
- h. The plans shall be submitted along with a CDOT comment matrix filled out by consultant to be used by CDOT reviewer during the review process for both preliminary and final plan and spec reviews.
- i. The Construction Phasing Plan described above will be included in the FIR plan set.
- j. For federally funded local agency projects, CDOT Form 1048 is typically completed by the CDOT Local Agency Project Manager. Consultant will assist the city in providing answers to questions CDOT has when completing this form.
10. Field Inspection Review (FIR): (Consultant)
- a. Attend the FIR.
- b. The FIR meeting minutes shall be prepared by the C/PM, approved by Thornton's PM, and distributed as directed.

- c. Since Final Design is included in this Project, no formal post-FIR revisions submittal will be necessary. FIR comments will be incorporated into the plans during Final Design prior to the ROWPR and FOR.
 - d. Design decisions concerning questions raised by the FIR will be resolved in cooperation with Thornton's PM. Thornton's PM shall document the decision and transmit the documentation to the COT/PM for approval.
 - e. A list of all deviations from standard design criteria along with the written justification for each one (1) shall be submitted to Thornton's PM.
11. Post-FIR Revisions: Since Final Design is included in this Project, no formal post-FIR revisions submittal will be necessary. FIR comments will be incorporated into the plans during Final Design prior to the ROWPR and FOR.

D. Final Design

1. Project Review
 - a. Update Project schedule
 - b. Coordinate activities
 - c. Initiate design decisions, variances, and justification process.
2. Design Coordination: The design for each aspect of the Project shall be reviewed during periodic meetings and approved by the COT/PM prior to inclusion in the final plans. Specifically, the designs for each of the following must be coordinated:
 - Sidewalk Geometry
 - Hydraulics
 - Permanent Signing & Striping
 - Construction Phasing
3. Utility Coordination
 - a. Utility potholing (Consultant): Use non-destructive excavation techniques, pothole to determine the exact location of underground utilities critical for design. Potholing of up to ten (10) utilities is included. Pothole locations will be determined by the Consultant at the end of preliminary design. Potholing includes traffic control and permits.
 - b. Utility plotting (Consultant): To the level of accuracy allowed by the information gathered during preliminary design and the utility pothole data, portray the horizontal and vertical locations of existing utilities on the FOR plans and cross sections.

- c. Final Utility Conflict List (Consultant): Based on the utility pothole date, update the preliminary conflict list.
- d. Coordination Meeting (Consultant): Conduct a Utility Coordination Meeting. All affected utility companies will be invited to the meeting. The purpose of the meeting will be to:
 - Review conflicts.
 - Confirm how the conflicts should be resolved.
 - Confirm who is financially responsible for work required to resolve the conflict.
 - Confirm which portions of the work will be performed by Utility Company versus Contractor forces.
 - Confirm the duration or expected completion date of the utility work and the advance notification time requirements.
- e. Conduct field reviews with individual utility owners as required. Up to four (4) Field Meetings are included in the Scope of Work.
- f. Revise plans to reflect input from utility owners at the Utility Coordination Meeting and field reviews.
- g. Prepare Utility Clearance Letters for each utility owner impacted by the project listing specific utility work elements that the contractor shall perform, specific utility work elements that the utility owner shall perform, the duration or expected completion date of the utility work, and advance notification time requirements.
- h. Submit the Utility Clearance Letters to the utility companies requesting their signature and return of the letters.
- i. Prepare a utility specification listing all utility owners adjacent to the project and the provisions of the Utility Clearance Letters.

Design of water lines, sanitary sewer lines, or other utility facilities (except culverts/storm sewers) is not included in the Scope of Work.

4. Hydraulic Design: (Consultant)

- a. Sidewalk Drainage System Design: Review data and information developed under the Preliminary Hydraulic Investigation and update in accordance with decisions made at the FIR. Complete hydraulic gradeline calculations and prepare storm sewer/culvert profile drawings (if necessary).

b. Storm Water Management Plan (SWMP): Prepare a Storm Water Management Plan in accordance with:

- CDOT Design Bulletin 2007-2, "Revision to Stormwater Management Plan", Issued June 29, 2007.
- CDOT's Erosion Control and Stormwater Quality Guide.
- CDOT's Standard Specifications, Water Quality Control, Section 107.25.
- Colorado's Revised Standard Plans, Standard M-107-1.
- Urban Drainage Volume 3 that include post construction stormwater quality.

In the Storm Water Management Plan, include the following:

- CDOT-format Stormwater Management Plan sheets (Four (4) sheets)
- Erosion Control Plans, showing the required erosion and sediment Control Measures (BMPs) to reduce pollutants in storm water discharges during construction operations. Consider:
 - Vegetative practices.
 - Structural practices.
 - Other practices.
 - Construction waste disposal (including excess excavation).
 - Compliance with applicable state or local sanitary sewer or septic systems regulations.
 - Maintenance practices for sediment and erosion control features during construction.
- Prepare SWMP notebook per CDOT Design Bulletin 2007-2, "Revision to Stormwater Management Plan", Issued June 29, 2007.
- To assist with the development of the SWMP complete the SWMP Checklist and submit to the City of Thornton (See Appendix A).
- Pursuant to Thornton's stormwater program, the Consultant shall develop designs and prepare drawings and specifications for stormwater quality CMs for sediment and erosion control to conform to the latest edition of Urban Drainage Criteria Manual Volume III or CDOT M-Standards.
- If the disturbance is one (1) acre or greater than one (1) acre, the Consultant shall develop a Stormwater Management Plan (SWMP) as required and defined in the CDPS General Permit for Stormwater Discharges Associated with Construction Activity (Permit No. COR-40000). The Consultant shall develop designs and prepare drawings and specifications for stormwater quality control measures for sediment and erosion control to conform to the latest edition of Urban Drainage Criteria Manual Volume III or CDOT M-Standards and in

compliance with the CDPS General Permit for Stormwater Discharges Associated with Construction Activity (Permit No. COR-40000) from CDPHE.

- If the earth disturbance is less than one (1) acre, the Consultant shall develop temporary sediment and erosion control drawings and details to control construction stormwater runoff. There is no SWMP or CDPS permit required for disturbances under one (1) acre. Sediment and erosion controls are required for all construction in Thornton. Procedure for obtaining SWMP and discharge permit can be found at the following link:
<https://www.cityofthornton.net/government/infrastructure/stormwater/Pages/construction.aspx>
 - The Consultant shall design permanent water quality CMs for new development, redevelopment, and Capital Improvement Projects that disturb one (1) or more acres, as well as for projects that disturb less than one (1) acre that are part of a larger common plan of development or sale. The requirement does not apply to excluded projects as defined in the MS4 permit.
 - The design criteria for water quality CMs shall be as described in the latest edition of Urban Drainage and Flood Control District (UDFCD) Criteria Manual Volume III.
 - The SWMP shall be shown in a minimum of two (2) phases. Phase I shall show the existing conditions of the site with the initial BMPs required for construction. Phase II shall show the proposed conditions of the site with the BMPs required for stabilization.
- c. Permanent Stormwater Quality Facilities (MS4): Prepare final design details for the permanent stormwater quality facilities identified during preliminary design, including the water quality pond.
- d. Final Hydraulics Report will consist of the following:
- (1) A Final Hydraulics Report will be produced to summarize all the calculations required to complete the design.
 - (2) Bridge hydraulic information will not be required. No bridges are included in the Project.

The format of the report will be in accordance with the CDOT Design Guide.

5. Interim Plans: (Consultant)

- a. Initiate ROW authorization process. Coordinate with Thornton's PM to initiate the ROW authorization process. Typically, the corrected FIR plans (with final hydraulic design inputs) will be used as the design basis for the ROW authorization plans and ROWPR.

b. Final Utility Plans: (Consultant)

Based on the results of the Utility Coordination work outlined in section D.3., prepare separate utility plan sheets to illustrate the locations of existing utility facilities and the relocation/adjustment work outlined in the Utility Clearance Letters and Utility Specification. Appropriate pay items will be added to the appropriate quantity tabulations and appropriate specifications will be added.

6. Right-of-Way: (Consultant)

a. ROW plans will be prepared in accordance with the current version of the CDOT Right-of-Way Manual.

The Agreement fee is based on the assumption that the ROW documents will include five (5) access easements and five (5) temporary easements. ROW work for additional parcels can be provided as Additional Services.

Plan contents will include:

- Sheet No. 1 TITLE SHEET
- Sheet No. 2 TABULATION OF PROPERTIES. If more than one sheet is required, the following sheets will be numbered 2A, 2B, etc.
- Sheet No. 3 CONTROL SURVEY DIAGRAM. Tabulate the coordinates and physical description of all found monuments and other physical evidence. It will also be depicted in a diagram form per the CDOT Survey and Right-of-Way Manuals. As above, additional sheets after the first will be numbered 3A, 3B, etc.
- Sheet No. 4 MONUMENTATION SHEET. Tabulate the coordinates and type of all monuments to be set. Same numbering as above.
- Sheet No. 5 TABULATION OF ROAD APPROACHES. Same numbering as above.
- Sheet No. 6 PLAN SHEET. If more than one (1) sheet is required, the sheets will be numbered sequentially 6, 7, 8, etc.
- As appropriate: OWNERSHIP MAPS. These sheets will be the following number after the last "plan sheets".

b. Authorization Plan: (Consultant)

- (1) Integrate toes of slopes and other design details such as lane lines, culverts, road approaches, etc. into ownership map (base map for ROW plans).

- (2) Determine new ROW requirements, access control, and easements from design plans following the FIR and plot on ownership/base maps. Normal scale, 1"=20' Full size (22" x 34" plan sheets), 1"=40' half size (11" x 17" plan sheets). Revise numbering of ownerships to correspond to ROW acquisitions.
 - (3) Calculate areas of parcels, easements, and remainders in accordance with CDOT Right-of-Way Manual.
 - (4) Prepare ROW plan sheets on CDOT form 126-R, or equivalent AutoCAD format, as outlined in CDOT Right-of-Way Manual.
 - (5) Prepare legal descriptions of parcels, easements, and access control as directed by the CDOT Right-of-Way Manual.
 - (6) Prepare tabulation of properties sheet as directed by the CDOT Right-of-Way Manual.
 - (7) Prepare ROW Title Sheet as directed by CDOT Right-of-Way Manual.
 - (8) Incorporate the Control Survey and Monumentation Sheets into the plans. (See Survey Manual for a sample.)
 - (9) On the Monumentation Sheet, list the ROW, Easement, Control, etc. points to be set and the aliquot corners to be reset per CDOT Right-of-Way Manual.
 - (10) Prepare ROW Tabulation of Road Approaches, if applicable. Show owner, milepost/station, right or left of centerline width of approach, skew angle, and any remarks as directed by the CDOT Right-of-Way Manual.
 - (11) Hold ROW Plan Review (ROWPR), as directed by the CDOT Right-of-Way Manual, with Design, ROW, and Construction to determine if ROW plans are sufficient to proceed with appraisal of property to be acquired for the Project. Consultant team attendees will include all required Consultant personnel, and Subconsultants.
 - (12) Transmit originals of the plan sheets, title sheet, tabulation of properties sheet, and revised ownership (memoranda of ownership and title commitments as directed by Thornton's PM), calculations and supporting data (i.e., parcel diaries), and final electronic data for all work products.
- c. Appraisal Staking (Consultant): Stake the Proposed ROW line, Easements, and Existing ROW line, if required by Thornton's PM (five parcels required for staking). Set lathes or wooden stakes at all angle points and on line as necessary to have at least three (3) stakes and color code per CDOT Survey Manual. The Appraisal Stakes only need to be set at an accuracy of +/- 1.0 foot, unless the point falls near improvements, then +/- 0.25 foot is necessary.

d. Right-of-Way Plan Revisions: (Consultant)

Upon incorporation of comments from the ROWPR into the ROW plans, and CDOT's approval of the ROW plans via authorization to Thornton to proceed with ROW acquisition, the ROW plans will be considered "Approved". Any subsequent charges required to the "Approved" plans will be handled as follows:

- (1) Changes requested by Thornton as a result of the appraisal and negotiation process or other non-Consultant-initiated changes to the project design will be considered Additional Services and are not included in the base Agreement.
- (2) ROW plan revisions caused by Consultant-initiated design changes or corrections shall be made at the expense of the Consultant.

e. ROW Acquisition: Appraisals, negation, and all other work required for acquisition of necessary ROW parcels will be performed by Thornton.

7. Materials Engineering (Consultant): All Materials Engineering tasks are listed in Section C3 – "Preliminary Design, Materials Engineering" above.

8. Traffic Engineering: (Consultant)

a. Permanent Signing/Pavement Marking Plans:

- (1) Inventory existing traffic controls.
- (2) Prepare plan sheet with existing roadway, edge-of-travel way (ETW) shoulder, signs, structures, and topography.
- (3) Locate and place on the plans the required traffic controls (pavement markings, signs, etc.).
- (4) Prepare the "Tabulation of Signing Quantities".
- (5) Prepare the "Tabulation of Pavement Markings" and pavement marking quantities.
- (6) Prepare Traffic Specifications/Special Provisions.
- (7) Submit plans and specifications to Thornton's PM for acceptance.
- (8) Include approved Traffic plans in the Project plans.

It is anticipated that traffic signal plans will consist of 1"=20' scale plan sheets (1 for each intersection), a Traffic Signal Notes and Quantities sheet.

Specifications for traffic signal equipment will be provided by Thornton.

b. Traffic Control Plan: See "Construction Phasing and Traffic Control Plan" below.

9. Roadside Planning: (Consultant)

- a. Drill and Seeding (N/A)
- b. Lighting Plans

10. Sidewalk Design: (Consultant)

Complete the sidewalk design based on the input from all applicable entities and agencies. The plans shall comply with the aforementioned design standards and shall be prepared in accordance with the applicable manuals listed in Attachment A.

11. Construction Phasing and Traffic Control Plan: (Consultant)

A final "Suggested Construction Phasing and Traffic Control Plan" will be developed which integrates the construction of all Project Work elements into a practical and feasible sequence and accommodates the existing traffic movements during construction. The plan will include criteria by which the Contractor must abide when proposing changes to the plan. Anticipated traffic control pay item quantities will be approximated and tabulated. Sheets are anticipated to include:

- Suggested Phasing and Traffic Control Notes & Tabulations
- Suggested Construction Phasing Typical Sections
- Suggested Construction Phasing & Traffic Control Plans (Phase I)
- Suggested Construction Phasing & Traffic Control Plans (Phase II)

12. Plan Preparation for the FOR: (Consultant)

- a. Coordinate the Packaging of the Plans
 - (1) Collect plans from all design elements and collate the plan package.
 - (2) The construction phasing and traffic control plan described above shall be included.
 - (3) Calculate plan quantities and prepare the tabulations and Summary of Quantities.
 - (4) Plan sheet scales will be as listed in Section C8 "Preliminary Design, Preparation for the FIR".
- b. New or revised utility locations shall be added to the plan topography. Conflicts shall be resolved, and appropriate pay items/specifications added, to adjust utilities.
- c. The Final Office Review (FOR) plans are anticipated to include the following sheets:
 - Title Sheet
 - Standard Plans List

- Typical Sections
- General Notes
- Summary of Approximate Quantities
- Appropriate Individual Quantity Tabulations
- Miscellaneous Special Details
- Sidewalk Geometry Plans
- Sidewalk Plans
- Sidewalk Profiles
- Storm Sewer / Culvert Profiles
- Drainage Details
- Permanent Water Quality Details
- Utility Plans (as listed in Section D.5.b.)
- Storm Water Management Plan
- Erosion Control Plans
- Signing and Striping Plans
- Construction Phasing & Traffic Control Plans (as listed in Section D11)

Note: This list may not include all the necessary sheets and may include some subjects not applicable to this particular Project. The content of the plans will be as approved by Thornton.

- d. In addition to the plan sheets, the Special Provisions shall be provided. This will consist of those unique Project Special Provisions, which have to be written specifically for items, details and procedures not adequately covered by CDOT's Standard Specifications and Standard Special Provisions. Also, a list of the Standard Special Provisions which are applicable to the Project shall be prepared. The Project Special Provisions shall be provided in the CDOT format and submitted with the Project plans.
- e. Prepare the FOR-level Opinion of Probable Construction Costs. Item numbers, descriptions, units and quantities shall be listed as per CDOT's Item Code Book and submitted to the COT/PM.
- f. Submit the FOR plans and specifications (originals) to the COT/PM for a preliminary review prior to the FOR.
- g. The FOR plans and specifications (up to twenty-eight (28) sets – fifteen (15) CDOT, three (3) Thornton, seven (7) Utilities, and three (3) Consultant) will be reproduced by Consultant Reproduction. All FOR plan sets will be produced at 11" x 17" sheet size. Provide PDF for FOR plans.
- h. The Construction Phasing Plan described above will be included in the FOR plan set.

13. Final Office Review (FOR): (Consultant)

- a. Attend the FOR.
- b. The FOR meeting minutes shall be prepared by the C/PM, approved by Thornton's PM, and distributed as directed.
- d. Design decisions concerning questions raised by the FOR will be resolved in cooperation with Thornton's PM. Thornton's PM shall document the decision and transmit the documentation to the COT/PM for approval.
- e. A list of all deviations from standard design criteria along with the written justification for each one (1) shall be submitted to Thornton's PM.

13. Final Office Review (FOR): (Consultant)

- a. Attend the FOR.
- b. The FOR meeting minutes shall be prepared by the C/PM, approved by Thornton's PM, and distributed as directed.
- c. Design decisions concerning questions raised by the FOR will be resolved in cooperation with Thornton's PM. Thornton's PM shall document the decision and transmit the documentation to the COT/PM for approval.
- d. A list of all deviations from standard design criteria along with the written justification for each one (1) shall be submitted to Thornton's PM.

14. Bid and Construction Plan Packages: (Consultant)

- a. The FOR original plan sheets and the specifications shall be revised in accordance with the FOR meeting comments and submitted to the COT/PM within two (2) weeks after the FOR. Six (6) sets will be provided to CDOT and three (3) to COT to verify the revisions.
- b. The final review of the plans by COT and CDOT may require final revision of the plans and specifications which shall be done by the Consultant. One (1) set each will be provided to COT and CDOT to verify the final revisions.
- c. The bid plan package (Bid Plan Package issued for advertising) shall consist of the revised FOR plans and will completely describe the Work required to build the Project including Project dated special provision and detailed quantities.

- d. Once CDOT issues "Concurrence to Advertise" to COT, the Consultant will change the issue block to say "Issued for Bidding" and date, then prepare PDF files of the entire Bid Plan Package issued for bidding (one (1) file of the plans and another of the specifications) and submit PDFs to COT. PDF files will be posted on BidNet by COT staff for use by bidders. Paper copies of the Bid Plan Package issued for bidding will not be produced for sale to bidders.

The Consultant will submit five (5) paper sets of the Bid Plan Packages issued for bidding, three (3) sets for COT and two (2) sets for CDOT. No full-size mylar sets will be required.

- e. After bidding is complete, the Consultant shall incorporate any changes to the Bid Plan Package that were made by addenda. After a contractor is selected for award and once the date of the Notice to Proceed is established, the Consultant shall change the issue block to say, "Issued for Construction" and date. This package shall be the Construction Plan Package. The Consultant shall prepare PDF files of the Construction Plan Package and submit to COT.
- f. The Consultant shall submit an electronic and hard copy of the following:
- (1) Sidewalk
 - Staking
 - Earthwork Quantities
- g. Construction Engineer's Action Package: The Consultant shall submit two (2) copies, in three-ring binders of the following:
- (1) All Project calculations or worksheets.
 - (2) All final reports and their approvals; traffic, hydraulics, lighting, pavement design, etc. All reports will have the latest revisions included.
 - (3) Copies of variances, design decisions, and variance approvals.
 - (4) The FIR and FOR Meeting minutes.
 - (5) Utility clearance package, utility agreements and information regarding the utility location and clearance conditions.
 - (6) Environmental clearances, 404, wetlands, endangered species, etc.
 - (7) Any other information unique to this Project and deemed important to the effectiveness of construction.
- h. Record Plan Sets: Three (3) 8 ½" x 14" record plan sets for final design of roadways and structures will be produced which shall bear the seal and signature of the responsible Consultant Engineer on each sheet. One (1) set shall be retained by the Consultant for seven (7) years

following completion of the construction. Two (2) sets shall be submitted to CDOT and one (1) set to COT per current Colorado law.

- i. The Consultant's complete submittals shall comply with Part 2, Section 2.

E. Sidewalk Management Support / Value Engineering

1. Budget Planning Support

- a. Maintain a current file of Project cost estimates. The date and type of each estimate will be identified.
 - b. COT will maintain a current file of existing and proposed funding for the project. Types of funding sources will be identified. COT will share this information with the Consultant for use in item (d) above.
 - c. Develop a proposed schedule for advertisement for bids (Ad Schedule) based on the estimated costs and the existing and anticipated future funding. The proposed Ad Schedule will be compared to the design schedule. Adjustments to the design and Ad Schedule may be made with COT concurrence.
 - d. A periodic (at major milestones and other key decision points) evaluation of cash flow requirements for administrative, preliminary engineering, ROW, utility, and construction costs will be accomplished. The funding requirements will be compared with the budget, on the same periodic basis, COT will be notified immediately of changes in funding requirements.
2. Value Engineering: A formal value engineering process will not be required for this project.

F. Bid Phase Services

1. Attend Pre-Bid Meeting: One (1) representative from the Consultant will attend. Minutes will be prepared by the Consultant.
2. Assist COT in answering questions from bidders and preparing design information needed for addenda. Final addenda documents will be prepared and distributed by the Consultant. Up to eight (8) hours of Consultant staff time is included to support COT staff in these efforts.
3. All other bidding-related services (advertisements, bid tabulations, recommendation of award, etc.) will be performed by COT staff.

G. Potential Additional Services

Potential Additional Services are tasks that may be required to be completed as a part of the design Work, or during construction, but the need and extent of the additional Work is unknown at the time the Scope of Work is being prepared (prior to initiating the Work). The following Scope of Work are "best estimates" or are "in anticipation" of the Work that may be required.

None of these Additional Services work tasks are included in the base Agreement Scope of Work and schedule of charges, unless agreed to in writing by Consultant and Thornton. During execution of the Project, none of these tasks will be completed without the written authorization of Thornton's Authorized Representative. At the time the need for the Additional Service is determined, the anticipated Scope of Work written herein will be reviewed for adequacy and the Consultant will advise Thornton whether more or less effort is needed. The adequacy of the established budget will also be reviewed. Should additional Work to that anticipated herein be requested or determined necessary, Thornton may authorize additional budget amounts. Should Thornton choose not to authorize the additional Work and budget amounts, the Consultant is not obligated to complete additional Work beyond the amount previously authorized and approved.

Hourly billing rates current for the period when the Work is performed will be the basis for establishing Consultant cost for Additional Services items.

SECTION 2

SUBMITTALS

A. Reports

1. All required reports and studies shall be submitted for review to Thornton's PM. Final submittals shall incorporate the corrections and/or revisions resulting from the review.

Note: The Consultant is responsible for ensuring that the recommended alternative complies with applicable standards and criteria. Where appropriate, required variances will be identified.

2. Survey Plats: The Professional Land Surveyor Consultant who sets a monument shall prepare and file a plat in accordance with Section 1, 38-51-107 Colorado Revised Statutes, as amended. A copy of the plat and filing shall also be submitted to Thornton's PM.
3. Design: Submit the review plan set and hydraulic report covering all drainage items requiring Project plan work. Items discussed at each plan review will be covered in meeting minutes.

B. Data

The following field survey data must be submitted if produced during the Work. Three (3) copies of the Survey Report as described in the CDOT Survey Manual. (Sealed and signed by PLS.) The following will be included in the report or as attachments:

1. Handwritten field notes: This shall be the original notes that have been sealed and signed by the supervising Professional Land Surveyor registered with the Colorado State Board for Professional Engineers and Land Surveyors. Legible sealed and signed copies of the original field notes may be submitted in lieu of the original field notes only if approved by Thornton's PM.
2. Electronic field data: Prior to collecting data by electronic means the Consultant shall submit a sample and receive approval to continue the Work. A sealed and signed hard copy shall be submitted with all electronic data. Electronic data shall comply with the requirements outlined below.
 - One (1) three-ring binder containing GPS Bluebook and one bound copy for submission to NGS.
3. ROW Plans: A "Project Narrative" of the plans development shall be submitted. Items to be included in this narrative are:

- a. Method and points used as basis for establishing existing alignment and ROW limits.
- b. Procedures, property pins/points used to resolve ownership and property boundary locations.
- c. Procedures, property pins/points used to resolve or identify any gaps or overlaps discovered.
- d. Date, details and reasoning for any requests for additional survey data or ties.

C. Plans

Plan and map sheets shall comply with the following requirements:

1. All Review plans shall be provided in half-size (11"x17") format Scale 1 inch = 40 feet, unless otherwise specified by Thornton's PM.
2. The sheet size and number of complete Plans Sets for the final submittal shall be as specified by in Section C14 "Final Design, Construction Plan Package" above.
3. For ROW plans, CDOT Form 126RA, Title Sheet, and Tabulation Sheets shall be provided as pre-setup ROW AutoCAD drawings. All plan sheets shall utilize this drawing format. See "Electronic Data Submittals" below.

D. Electronic Data Submittals

All material must be submitted to Thornton's PM. Acceptance of submitted material is the sole responsibility of the Thornton's PM.

ROW plans shall be submitted as a *.dwg electronic drawing prepared using AutoCAD in a Model Space/Paper Space format. Copies of a usable prototype complete with the required CDOT borders will be supplied. The Model Space/Paper Space format may be forgone with Thornton's PM approval. AutoCAD will still be the required drafting package.

If the Model Space/Paper Space format is used, a "Master" drawing of the entire ROW plan from beginning to end shall be included as part of the electronic and hard copy submittals. The ROW Plan Sheets shall be created in "World Coordinates" (to be the same as Project coordinates used in the survey).

Electronic Plot Files (HPGL2 format) full size (22"x34") and (HPGL format) half-size (11"x17") shall also be provided. All material must be submitted to Thornton's PM. Acceptance of submitted material is the sole responsibility of Thornton's PM.

All Electronic drawing files and plot files shall be submitted as directed by Thornton's PM.

It is suggested that the Thornton's PM be contacted prior to creation of magnetic media to verify the current submission requirements or to discuss any questions concerning the ability to satisfy the current submission requirements.

E. Computer Data Compatibility

1. Design/drafting information: Two (2) options are available to the Consultant:

- a. The original and design models shall be provided in an acceptable electronic format.

Submit cross-section strings from beginning to ending termini at fifty-foot (50') intervals. Cross-section intervals may be modified as necessary to properly show features of the Project area. A cross-section string consists of a string generated perpendicular to an alignment. In addition, cross-section strings will be required at all cross-culvert locations, pavement width angle points and other locations as determined by the Project manager.

- b. The design information shall be submitted in AutoCAD.dwg format. The consultant shall use AutoCAD Version 2010 or later.

The cross-section string shall include all points necessary to satisfactorily define the ground features of the area. As a minimum, this includes all break points and template information sufficient to define the roadway.

The electronic file shall be organized so that all cross-section strings proceed up-station from beginning to end. The points in the cross-section shall be organized from left to right. Each point shall be defined by northing, easting, and elevations in that order.

2. Storage media submittals: COT can accept media of the following types and format:

5 ¼" CD / DVD ROM Disks

3. Required documentation: Thornton requires that each unit of the magnetic media submitted be identified with adhesive labels affixed to the media containing the following MINIMUM information as applicable, depending on the media, format, etc. used to create the storage media being submitted:

- Computer make, model, and operating system.
- Recording method, format, and density.
- Blocking factor and record lengths.
- Thornton Project Number and Thornton's PM name.
- Files name(s) and type(s) {ex. AutoCAD DWG}.
- Date created.

- Contact Person and telephone number.

A letter MUST accompany the magnetic media which contains the same information as required on the media AND:

Either contains a description of the operating system commands used to create the magnetic media or an attached computer generated listing of the actual process which created the magnetic media (preferred).

4. When Thornton determines that the Final Contract documents are acceptable, the Consultant shall submit the following to Thornton:
 - a. Drawings as listed in section D.14.d. and g. Issue block shall say, "Issued for Bidding" and date.
 - The specifications shall be single sided 8.5 inches x 11 inches and in a format compatible for inclusion into Thornton's standard construction Contract Documents.
 - b. Electronic files on CD of technical specifications and recommended revisions to COT's standard front end documents in Word format, Arial font, size 11 or 12, sided printing, 1.5" left margin, and 1" right margin. Electronic files on CD of drawings in AutoCAD format compatible with Thornton's system. Electronic PDF file containing the Bid drawings.
 - c. A Final Engineer's Estimate of Probable Construction Cost. Thornton requires that ten percent (10%) of the engineer's estimate be available in the overall budget for Minor Contract Revisions (MCR) for unforeseen changes during the construction of the Project.

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EXHIBIT C
SCHEDULE OF CHARGES

NOTE:

TBD

THE FINAL PRICE AND COMPENSATION OF THE CONSULTANT SHALL NOT BE DETERMINED DURING THE INITIAL REQUEST FOR PROPOSAL. EXHIBIT C RELATING TO PRICE, HOURLY RATES, COSTS, ETC. SHOULD NOT BE SUBMITTED IN THE INITIAL REQUEST FOR PROPOSAL PHASE.

Cost and fees will be negotiated after the most qualified consultant is selected. Qualification based selection is required.

REIMBURSABLE EXPENSES:

Reimbursable expenses include, but are not necessarily limited to, copying, printing, postage, local mileage, out of town travel and travel related expenses, courier expenses, owned or rented equipment costs, subconsultant costs, and subcontractor costs, if any.

All categories of reimbursable expenses for which Consultant will expect compensation are listed below. Categories of expenses not listed shall not be reimbursed separately and shall be considered to be included in Consultant’s personnel billable hourly rates, or if a NTE amount was converted to a lump sum fee, to be included in the lump sum fee.

Listed expenses incurred by Consultant from outside vendors such as printers, courier services, rental equipment, subconsultants, or subcontractors will be reimbursed at cost without further mark up. Consultant’s management of outside subconsultants and or subcontractors will be reimbursed at the Billable Hourly Rates for Consultant’s personnel involved in the management and not through a percent fee mark up. Detailed documentation (vendor invoices) must be supplied for an outside expense to be eligible for reimbursement.

Expenses incurred by Consultant from in-house operations, such as in-house printing, copying, Consultant owned equipment, etc., will be reimbursed at the rates indicated below. Detailed unit prices for all in-house expenses for which Consultant will expect compensation are listed below. Vehicle mileage in connection with the performance of the Services will be reimbursed at the rate currently allowable under Colorado State Travel Rule 5-1 for passenger vehicles, and at rates herein defined for specialty vehicles, such as survey trucks.

REIMBURSABLE EXPENSE CATEGORIES AND RATES:

In-house Expense Category	UOM	Rate		Outside Expense Category	UOM	Rate
Passenger Vehicle	Mile	90% of IRS		Postage	LS	Cost
Copying ___" x ___" BW				Courier	LS	Cost
Copying ___" x ___" Color				Subconsultants	LS	Cost
Printing ___" x ___" BW				Subcontractors	LS	Cost
Printing ___" x ___" Color				Rental Equipment	LS	Cost
_____ Equipment						

Use additional sheet if necessary

EXHIBIT D

FEDERAL CONTRACT REQUIREMENTS (Provided under separate cover)

CERTIFICATION FOR FEDERAL-AID CONTRACTS (EXHIBIT F)

LOCAL AGENCY PROCEDURES FOR CONSULTANT SERVICES (EXHIBIT H)

FEDERAL-AID CONTRACT PROVISIONS FOR CONSTRUCTION CONTRACTS (EXHIBIT I)

ADDITIONAL FEDERAL REQUIREMENTS (EXHIBIT J)

FFATA SUPPLEMENTAL FEDERAL PROVISIONS (EXHIBIT K)

OMB UNIFORM GUIDANCE FOR FEDERAL AWARDS (EXHIBIT M)

FEDERAL TREASURY PROVISIONS (EXHIBIT N)

AGREEMENT WITH SUBRECIPIENT OF FEDERAL RECOVERY FUNDS (EXHIBIT O)

Exhibit D is a combined pdf of Exhibits referenced and required for inclusion by the related funding source IGA.

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VIII. EXHIBIT 3

REFERENCE AUTHORIZATION AND RELEASE FORM

By: _____, A Corporation
 _____, A Partnership whose address is:
 _____, An Individual
 (Proposing firm)

Proposing Firm has submitted a sealed proposal to the City of Thornton (Thornton) for Big Dry Creek Trail Development, Washington Street from 136th Avenue to 144th Avenue, Project No. 25-571. CDOT Project Number SPFF M286-063 (Project) .

Proposing Firm hereby authorizes Thornton to perform such investigation of proposing firm as it deems necessary to verify the qualifications, responsibility, trustworthiness and financial ability of Proposing Firm. By its signature hereon, the proposing firm authorizes Thornton to obtain reference information concerning the proposing firm. Proposing Firm further agrees to release and hold Thornton and the firm or agency providing reference information harmless from all liability resulting from providing the requested reference information to Thornton about the Proposing Firm.

Proposing Firm further authorizes Thornton to discuss and release reference information regarding Proposing Firm's performance as it will relate to this upcoming Project upon receiving a request for such information. Proposing Firm agrees to release and hold Thornton harmless from all liability associated with releasing such information about Proposing Firm.

Proposing Firm further waives its right to receive copies of reference information provided to Thornton. By signing below, Proposing Firm agrees with the terms of this Reference Authorization and Release and authorizes Thornton to obtain reference information concerning Proposing Firm.

A copy or facsimile of this executed Reference Authorization and Release Form may be used with the same effectiveness as an original.

 Signature Date

 Print Name

 Title

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IX. APPENDIX

APPENDIX A REFERENCE QUESTIONNAIRE PACKAGE INFORMATION AND FORMS

APPENDIX B AFFIDAVIT OF SMALL BUSINESS PARTICIPATION

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APPENDIX A

REFERENCE QUESTIONNAIRE PACKAGE INFORMATION AND FORMS

Instructions to proposing firms for sending Reference Questionnaire Forms:

PROPOSING FIRMS: Prepare and send a reference questionnaire package for each project listed on your past performance list.

PROPOSING FIRMS: Prepare and send a reference questionnaire package for three (3) to five (5) relevant projects completed in the past five (5) years. It is the responsibility of the proposing firms to follow-up, and include all signed originals of the Reference Questionnaire packages with their proposal submittal. Your questionnaire package should contain the following.

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Proposing Firms Letterhead

Date: _____
 To: _____

We have listed you as a reference for work we have performed for your agency as noted on the attached questionnaire. Our firm intends to submit a proposal under a project advertised by the City of Thornton for Design Services, Project No. 25-571 Please complete this form in full (all areas shaded in light yellow, below). Once completed, please send the form to the Contract Specialist via postal mail or email, directly to:

Proposing Firms Name
 ATTN: _____
 Proposing Firms Address
 Proposing Firms Address
 Email Address: _____@_____

Please return the completed form no later than _____, 2025. If you have any questions, please contact _____ via email, or call _____.
 Thank you for your assistance in this matter.

GENERAL INFORMATION [completed by Proposing Firms]

Agency Name		Agency Street Address	
Agency Point of Contact Name		City	
Agency Phone Number		State	
Reference Project Title		Zip Code	
Period of Performance (start to finish):		Email	
Contract Number		Contract Dollar Value	
Description of Work			
Role of Consultant on This Project (check appropriate box)	<input type="checkbox"/> Consultant <input type="checkbox"/> Sub-consultant <input type="checkbox"/> Key Personnel		

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REFERENCE QUESTIONNAIRE PACKAGE

INSTRUCTIONS TO REFERENCE CONTACT

The Proposing Firms named below is submitting a Proposal for the City of Thornton's Request for Proposals requirements, and has sent this form to you, in your role as a past performance reference contact. Please complete this form in full (all areas shaded in light yellow, below). Once completed, please send the signed form to the Proposing Firms address stated below via postal mail or email, directly to:

ATTN: _____

_____ Email Address: _____@_____.

Please return the completed form no later than _____. If you have any questions, please contact Mr. _____ via email, or call _____. Thank you for your assistance in this matter.

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RESPONDENT INFORMATION

PERFORMANCE INFORMATION: The following performance questionnaire is completed by reference contact. Choose the number on the scale of 1 to 6 that most accurately describes the consultant’s performance or situation. ***PLEASE PROVIDE A NARRATIVE EXPLANATION FOR ANY RATINGS OF 1 OR 2*** in the Remarks section, below (text box will expand to whatever extent is necessary).

1	2	3	4	5	6
UNSATISFACTORY	MARGINAL	SATISFACTORY	VERY GOOD	EXCEPTIONAL	NEUTRAL
Performance did not meet most contractual requirements. There were serious problems and the consultant’s corrective actions were ineffective.	Performance did not meet some contractual requirements. There were problems, some of a serious nature, for which corrective action was only marginally effective.	Performance met contractual requirements. There were some minor problems and corrective actions taken by the consultant were satisfactory.	Performance met all contract requirements and exceeded some to the government’s benefit. There were a few minor problems, which the consultant resolved in a timely, effective manner.	Performance met all contract requirements and exceeded many to the government’s benefit. Problems, if any, were negligible and were resolved in a timely, highly effective manner.	No record of past performance or the record is inconclusive. ¹

The Consultant ...		1	2	3	4	5	6
1.	The relationship between the proposing firms and client’s/customer’s contract team	<input type="checkbox"/>					
2.	The proposing firms management and coordination of personnel, and subconsultants	<input type="checkbox"/>					
3.	Quality of Work	<input type="checkbox"/>					
4.	Quality of Assurance and Control	<input type="checkbox"/>					
5.	Ability to meet agreed upon delivery schedule	<input type="checkbox"/>					
6.	Ability /actions to resolve design issues and or schedule issues.	<input type="checkbox"/>					
7.	Ability to control design cost and provide a reasonable engineers estimate.	<input type="checkbox"/>					

	The Consultant ...	1	2	3	4	5	6
8.	Have any show cause letters, letter of reprimand, suspension of work, or termination been issued? If yes please explain below;	<input type="checkbox"/>					
9.	Identified problems as they occurred.	<input type="checkbox"/>					
10.	Suggested alternative approaches to problems.	<input type="checkbox"/>					
11.	Displayed initiative to solve problems.	<input type="checkbox"/>					
12.	Would you award another Contract to the party being evaluated? If no, please explain below.	<input type="checkbox"/>					
13.	Was the customer satisfied with the end product? If no, please explain below.	<input type="checkbox"/>					
14.	Has the firm being evaluated been provided an opportunity to discuss or respond to any negative comments or performance ratings? If so, what were the results?	<input type="checkbox"/>					

REMARKS (Please use as much space as is needed – the box will expand as you type).

APPENDIX B

Colorado Department of Transportation AFFIDAVIT OF SMALL BUSINESS PARTICIPATION

Project Description		Contract NTE \$	
		DBE Contract Goal %	
		%	
SECTION 1. CONSULTANT INFORMATION			
Prime Consultant		Consultant is an ESB <input type="checkbox"/>	
Compliance Contact Name		Consultant is a DBE <input type="checkbox"/>	
Email	Address	Phone	B2GNow Vendor #
SECTION 2. DBE PARTICIPATION PLAN			
Fill in All Lines:			
<ul style="list-style-type: none"> * The consultant is committing to _____ # of DBE firm(s) not teamed with in the past 2 years (as of ad date of RFP, firms with unsuccessful bids allowed, each firm must be listed in this section). * The consultant is committing to approximately \$ _____ of DBE participation based on NTE \$. * The consultant is committing to approximately _____ % DBE goal based on the NTE \$. 			
The Prime Consultant shall submit a Professional Services Commercially Useful Function Questionnaire for every DBE on this contract that provides work or provides supplies whose participation counts toward the DBE contract goal for this contract.			
All DBE firms (Subconsultants, Supplier/Vendors, Prime if self performing)	Work Descriptor (i.e. survey, testing)	NEW DBE Teaming Partner?	ONLY for Project/Program Specific RFP/SOIs Approximate % of Participation
<input type="checkbox"/> Vendor		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Vendor		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Vendor		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Vendor		<input type="checkbox"/> Yes <input type="checkbox"/> No	
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<input type="checkbox"/> Vendor		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Vendor		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Vendor		<input type="checkbox"/> Yes <input type="checkbox"/> No	
If more DBE subs/suppliers vendors, add additional sheet			