THE CITY OF THORNTON
9500 CIVIC CENTER DRIVE
THORNTON, CO 80229-4326

PROJECT SPECIAL PROVISIONS

FOR CONSTRUCTION OF

100TH AVENUE MULTIMODAL PATH PROJECT

THORNTON PROJECT NO.: 23-105
CDOT SUB ACCOUNT NO.: 25467

JUNE 2026

COLORADO DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISIONS
100TH AVENUE MULTIMODAL PATH PROJECT

The 2025 Standard Specifications for Road and Bridge Construction controls construction of this project. The following special provisions supplement or modify the Standard Specifications and take precedence over the Standard Specifications and plans.

PROJECT SPECIAL PROVISIONS

STANDARD SPECIAL PROVISIONS

Name	Date	No. of Pages
Revision of Section 101 – General Provisions	(March 19, 2026)	1
Revision of Section 105 – Dispute Resolution, Dispute Review Board and Claims for Unresolved Disputes	(June 11, 2025)	24
Revision of Section 106 – Buy America and Build America, Buy America and Build America Buy America Requirements Projects with $500,000 or more in Federal-Aid Highway Funding	(September 11, 2025)	1
Revision of Section 107 – Water Quality Control (Under One Acre of Disturbance)	(July 1, 2025)	8
Revision of Section 108 – Liquidated Damages	(July 1, 2025)	1
Revision of Section 203 – Excavation and Embankment	(March 19, 2026)	1
Revision of Section 207 – Topsoil	(April 1, 2026)	7
Revision of Section 208 – Erosion Control (Under One Acre of Disturbance)	(July 1, 2025)	36
Revision of Section 212 – Soil Amendments, Seeding, and Sodding	(July 1, 2025)	25
Revision of Section 401 – Plant Mix Pavements-General (Subsection 401.17)	(July 1, 2025)	4
Revision of Section 601 – Low Strength Evaluation	(March 19, 2026)	2
Revision of Section 630 – TCS Trainee	(March 19, 2026)	2
Affirmative Action Requirements Equal Employment Opportunity	(July 1, 2025)	13
Certified Payroll Requirements for Construction Contracts	(July 1, 2025)	1
Minimum Wages, Colorado, U.S. Department of Labor General Decision Number CO20250006, Mod 1, Highway Construction for Adams, Arapahoe, Broomfield, Clear Creek, Elbert, Gilpin, Jefferson, and Park counties.	(January 9, 2026)	10
On the Job Training	(July 1, 2025)	6
Required Contract Provisions – Federal-Aid Construction Contracts	(July 1, 2025)	15
Required Contracts Statements Federal American Rescue Plan ACT/STATE and Local Fiscal Recovery Funds (ARPA/SLFRF) Construction Contracts	(July 1, 2025)	1

COMMENCEMENT AND COMPLETION OF WORK

The Contractor shall commence work under the Contract on or before the 15th day following Contract execution or the 30th day following the date of award, whichever comes later, unless such time for beginning the work is changed by the Chief Engineer in the "Notice to Proceed." The Contractor shall complete all work within **120** calendar days per the "Notice to Proceed."

ON THE JOB TRAINING CONTRACT GOAL

The City has determined that On the Job Training shall be provided to trainees with the goal of developing full journey workers in the types of trade or classification involved. The contract goal for On the Job Trainees working in an approved training plan in this Contract has been established as follows:

Minimum number of total On the Job Training required **0** hours

1
REVISION OF SECTION 201
CLEARING AND GRUBBING

Section 201 of the Standard Specifications is hereby revised for this project as follows:

Subsection 201.01 shall include the following:

Any clearing, grubbing, and tree trimming/removal activities that occur between 1 April and 31 August requires a migratory bird nest check by a qualified biologist to make sure no occupied nests are affected by these activities. Work outside of this nesting season can occur without this check. The Contractor shall coordinate this work through the City.

All trees and shrubs adjacent to and within the project limits shall be protected with the exception of those specified within the Plans to be removed.

Removal of small brush and trees with trunk diameter (caliper) less than 6-inches will not be measured and paid for separately but shall be included in the work.

Temporary easement areas shall not be cleared and grubbed unless absolutely necessary for construction purposes. Limits of clearing and grubbing shall be field verified by the Owner after field staking has been completed and prior to clearing and grubbing.

Subsection 201.02 shall include the following:

The Contractor shall make necessary arrangements for obtaining suitable disposal locations. If disposal will be at other than established dump sites, the City may require the Contractor to furnish written permission from the property owner on whose property the materials and debris will be placed.

In subsection 201.02 delete the 3rd, 4th, and 5th paragraphs and replace them with the following:

Surface objects and trees, stumps, roots, and other protruding obstructions not designated to remain shall be cleared and/or grubbed as required, to ensure complete removal; however, nonperishable, non-toxic objects which shall be a minimum of two (2) feet below subgrade may remain when such objects will not impede other subsurface operations.

Except in areas to be excavated, stump holes, and other holes from which obstructions are removed shall be backfilled with suitable material and compacted in accordance with subsection 203.06. Materials and debris shall be disposed of in a manner acceptable to the City.

Burning of any materials shall not be permitted without prior written approval of the City, the County Health Department, and Fire Department. If permitted, perishable material shall be burned under the constant care of the Contractor, at times and in a manner that will not endanger the surrounding vegetation, adjacent property, or objects designated to remain. Burning shall be done in accordance with applicable laws and ordinances.

2
REVISION OF SECTION 201
CLEARING AND GRUBBING

In subsection 201.02 delete the 7th paragraph and replace it with the following:

Branches of trees or shrubs shall be removed as directed by the City. Branches of trees extending over the road bed shall be trimmed to give a clear height of 16 feet above the road bed surface. Trimming shall be done by skilled workmen and in accordance with good tree pruning practices. Hedges shall be pulled or grubbed in such a manner as to assure complete and permanent removal.

Subsection 201.04 shall include the following:

Trimming of tree and shrub branches is considered incidental to Clearing and Grubbing.

Removal of gravel is considered incidental to Clearing and Grubbing.

Payment will be made under:

Pay Item	Pay Unit
Clearing and Grubbing	Lump Sum

END OF SECTION REVISION

1
REVISION OF SECTION 202
REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Section 202 of the Standard Specifications is hereby revised for this project as follows:

Subsection 202.02 shall include the following:

Where portions of structures are to be removed, the remaining portions shall be prepared to fit new construction. The work shall be done in accordance with plan details and in such a manner that materials to be left in place shall be protected from damage. Damage to portions of structures which are to remain in place shall be repaired at the expense of the Responsible Party. Reinforcing steel, projecting from the remaining structure, shall be cleaned and aligned to provide bond with new extension. Dowels shall be securely grouted with City-approved grout. Remaining structures are to be delineated in the as-built drawings.

Storm sewers, culverts, waterlines, and other conduits that are to be removed shall be saw-cut, completely removed, and disposed of off-site. Storm sewers, culverts, waterlines, and other conduits that are to be abandoned in place shall be saw-cut, and completely filled with flash or flow fill. All of the Contractor's costs, for removing and disposing of conduits or abandoning conduit pipes in place shall be included in the bid price for the particular item that requires removal and/or abandonment of structures and obstructions.

Removal of Pipe - This work includes the removal and disposal of culverts, storm sewer pipes, and any pipes designated on the drawings. All types and sizes of pipes are included in the work for this pay item.

Removal of Fence - This work includes the removal and disposal of all fences that are in conflict with the work as designated on the drawings. All types of fences are included in the work for this pay item.

Removal of Tree - This work includes the removal trees, tree stumps and roots by pre-approved methods by the City. Remove stumps and roots of removed plants to depths needed for installation of new plants and/or improvements. Fill voids left by stump/root removal with suitable material and compacted in accordance with subsection 203.06. The Contractor shall visit the site to view all trees that are designated to be removed and adjust bid price appropriately to account for all required work. Several trees have multiple trunks. Removal of trees with multiple trunks shall be considered removal of one tree.

2
REVISION OF SECTION 202
REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Subsection 202.04 shall include the following:

The Contractor shall contact the City for designation of salvable equipment. All salvable material shall be removed, without unnecessary damage and delivered to the location provided by the City. The Contractor shall be held responsible for the safekeeping of all salvable materials during the period of the Contract until they are delivered to the City's location. The Contractor shall make good or replace at his own expense any such materials damaged, stolen, or otherwise lost prior to receipt by the City.

Removal of Pedestrian Push Button – Removal of Pedestrian Push Button shall include removal and salvage of existing push buttons, signs, and attachment hardware, and removing and/or capping wires, and patching the resulting hole in the traffic signal pole in a manner acceptable to the City.

Removal of Asphalt Mat – Contractor shall sawcut existing asphalt pavement along the limits of removal. The Removal of Asphalt Mat shall include the removal of all aggregate base course material below the asphalt to subgrade soil, and removal of existing asphalt curb. The removal of aggregate base course under existing asphalt, and removal of existing asphalt curb shall be considered incidental to Removal of Asphalt Mat. There will be no measurement and payment for saw cutting required for the removal of asphalt and concrete. Saw cutting shall be considered incidental to bid items which require saw cutting.

Subsection 202.12 shall include the following:

Payment includes all labor, equipment, saw cutting, and materials necessary to complete the work. All costs associated with stockpiling, safekeeping, and delivering salvaged materials to the City of Thornton shall be included in the work.

No material or debris shall be disposed of within the project limits without the written permission of the City. The Contractor shall advise the City in writing of the intended disposal site before the disposal site is used; and provide documentation confirming the property owner's acceptance of such materials.

There will be no separate measurement or payment of removal of different types of fencing and gates. All types of fencing and gates shall be measured and paid for under pay item Removal of Fence.

There will be no measurement and payment for saw cutting required for the removal of asphalt and concrete. Saw cutting shall be considered incidental to bid items which require saw cutting.

3
REVISION OF SECTION 202
REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Payment will be made under:

Pay Item	Pay Unit
Removal of Tree	Each
Removal of Inlet	Each
Removal of Pipe	Linear Foot
Removal of Bollard	Each
Removal of Curb and Gutter	Linear Foot
Removal of Concrete	Square Yard
Removal of Asphalt Mat	Square Yard
Removal of Pull Box	Each
Removal of Pedestrian Push Button	Each
Removal of Fence	Linear Foot

Payment includes all labor, equipment, materials and coordination efforts required to complete the work above, and is considered included in the cost of the work. Payment shall also include site protection of all existing site features, facilities or amenities to the extent practicable. All costs associated with stockpiling, safekeeping, and delivering salvaged materials to the City of Thornton shall be included in the work.

END OF SECTION REVISION

1
SECTION 203
EXCAVATION AND EMBANKMENT

Section 203 of the Standard Specifications is hereby revised for this project as follows:

Subsection 203.02 (c) shall include the following:

It shall be the Contractor's responsibility to satisfy the moisture condition specified in the Contract Documents for embankment and subgrade material. Materials that can be dried or moisture conditioned and compacted to the required density shall not be considered Unsuitable Material. The removal of unsuitable material shall only be completed as directed by the City. The replacement material for unsuitable subgrade material shall meet the requirements of Aggregate Base Course (Class 6).

Subsection 203.03, first paragraph, shall include the following:

Embankment material delivered from off site shall meet the following requirements for Atterberg limits and gradation:

(1) Maximum liquid limit of 30
(2) Maximum plasticity index of 15
(3) A maximum of 60 percentage of material by dry weight passing the No. 200 sieve.

Subsection 203.03 shall include the following:

Fill placed for general site grading or beneath pavements that is not sensitive to settlement should consist of on-site overburden soils or imported materials if required.

Any fill material below structures should be a low-swelling material free of vegetation, brush, sod, trash and debris, and other deleterious substances, and should not contain rocks or lumps having a diameter of more than 3 inches. If required, fill imported to the site should consist of a non-expansive or low-swelling material, and should contain less than 50 percent passing the No. 200 sieve, have a maximum liquid limit of 30 and a maximum plasticity index of 15. Import material not meeting this criteria may be acceptable if the swell potential when remolded to 95% of the standard Proctor (ASTM D698) maximum dry density at optimum moisture content does not exceed 0.5% when wetted under a 200 psf surcharge pressure.

If required, fill imported to the site should consist of a non-expansive or low-swelling material, and should contain less than 50 percent passing the No. 200 sieve, have a maximum liquid limit of 30 and a maximum plasticity index of 15. Import material not meeting this criteria may be acceptable if the swell potential when remolded to 95% of the standard Proctor (ASTM D698) maximum dry density at optimum moisture content does not exceed 0.5% when wetted under a 200 psf surcharge pressure.

In subsection 203.05 (b) delete the 1st paragraph and replace it with the following:

Excess or unsuitable excavated material, including rock and boulders, that cannot be used in embankments and as designated by the Engineer shall become the Contractor's property and shall be appropriately disposed of offsite. The cost of placing or offsite disposal of excess or unsuitable excavated material is to be included in the cost of the work being performed.

Subsection 203.05 (c) shall include the following:

The bid item for Unsuitable Material shall not be used without prior approval from the City.

Subsection 203.05 (e) shall include the following:

Clearing and Grubbing shall not be completed outside of the limits of construction or limits of disturbance.

Subsection 203.06, 2nd paragraph shall include the following:

Excavated or removed asphalt mat shall not be used in embankments.

2
SECTION 203
EXCAVATION AND EMBANKMENT

Subsection 203.11 shall include the following:

Earthwork requiring more than one handling will not be measured and paid for separately but shall be considered incidental to the Excavation and Embankment quantities listed in the bid schedule.

In Subsection 203.11 delete subsection (f) and replace with the following:

Proof Rolling will not be measured and paid for separately, it shall be included in the cost of the project.

Subsection 203.12 shall include the following:

Disposal of unsuitable material and importing suitable material will not be paid for and shall be considered incidental to the bid item for Muck Excavation. The bid item for Muck Excavation shall include but is not limited to excavation, haul, disposal of unsuitable material, importing suitable material, moisture conditioning, compaction, water, and all labor, materials, and equipment required to removal and replace unsuitable material.

Payment for Unclassified Excavation (Complete in Place) and Embankment Material (Complete in Place) shall be considered full compensation for all work necessary to complete the earthwork to the lines and grades shown on the Plans. No measurement for payment will be made for this work. This work shall include but is not limited to scarification, wetting and drying of soils to obtain optimum moisture content, compaction, testing, hauling, disposal of excess materials off the jobsite including dump fees. Directed changes will be estimated by the City and agreed to by the Contractor to be paid (or deducted) at the bid unit price.

Payment will be made under:

Pay Item	Pay Unit
Embankment Material (Complete In Place)	Cubic Yard
Potholing	Hour

END OF SECTION REVISION

1
REVISION OF SECTION 206
EXCAVATION AND BACKFILL FOR STRUCTURES

Section 206 of the Standard Specifications is hereby revised for this project as follows:

Subsection 206.01 shall include the following:

Excavation and backfill for all structures including but not limited to storm sewers, inlets, manholes, headwalls, toe walls and cut-off walls is also included in this section.

In subsection 206.03 add the following:

If soft, saturated, and unstable subgrade conditions are encountered at structure bearing elevations, the subgrade should be stabilized with geogrid and a minimum 18-inch-thick layer of crushed gravel. The geogrid should meet Type 2 requirements in accordance with applicable MGPEC Specifications.

Structural fill placed beneath structures and Settlement-Sensitive Flatwork shall consist of on-site overburden fill and/or natural soils, or a low plasticity fill material imported to the site. Any structural fill placed below structures should be a low-swelling material free of vegetation, brush, sod, trash and debris, and other deleterious substances, and should not contain rocks or lumps having a diameter of more than 3 inches.

Subsections 206.06 and 206.07 are hereby deleted and replaced with the following:

Structural excavation and backfill will not be measured and paid for separately but shall be included in the work.

END OF SECTION REVISION

1
REVISION OF SECTION 209
WATERING AND DUST PALLIATIVES

Section 209 of the Standard Specifications is hereby revised for this project as follows:

Subsection 209.02 shall include the following:

The Contractor is responsible for obtaining a legal source for water to complete the work as specified in the Contract Documents, including any necessary permits or fees.

END OF SECTION REVISION

1
REVISION OF SECTION 210
RESET STRUCTURES

Section 210 of the Standard Specifications is hereby revised for this project as follows:

Subsection 210.06 shall include the following:

There are existing mailbox structures within the project limits to be reset. The Contractor shall include a new mailbox and new mailbox support structure in their bid for "Reset Mailbox Structure (Type 1)" should the existing mailbox and support structure be deemed insufficient to be reused by the City or U.S.P.S.

The Contractor shall coordinate with the property owner and the U.S.P.S. to establish a temporary and final location for the mailbox. The mailbox structure shall be constructed in accordance with CDOT Standard Plan M-210-1.

Delete subsection 210.07 and replace it with the following:

Signs and posts designated to be reset shall be removed, cleaned and reset at the designated locations. The work for Reset Ground Sign shall include all work necessary to provide the existing posts with break-away devices, where required, and shall include a new anchor and hardware and attaching the existing sign to a salvaged or new post. Sign panels, anchors and posts shall meet the City's current standards. Should existing posts or panels be damaged or not meet the City's current standards, new posts or panels shall be used. New posts, anchors, panels and hardware will not be measured or paid separately, the cost shall be included in the Reset Ground Sign pay item. The Reset Ground Sign pay item will also be used for entirely new ground signs proposed on the project. New Ground Signs and poses shall meet the City's current standards.

Subsection 210.10 shall include the following:

When the project includes planing prior to resurfacing, the Contractor shall first lower all valve boxes and manholes below the surface to be planed and then adjust them up to final grade after the paving operation is complete. This work will not be measured and paid for separately but shall be included in the work.

Prior to the final inspection, the Contractor shall thoroughly clean all valve boxes within the project limits. This work will not be measured and paid for separately but shall be included in the work.

The Contractor shall coordinate and conduct, with the Engineer and each Owner, a final inspection upon completion of construction. This inspection shall assure that all valve boxes and manholes are in compliance with these requirements. The Contractor shall obtain the Owner's written approval before accepting the work.

Subsection 210.12 shall include the following:

Reset Mailbox Structure (Type 1) will be measured and paid for each new permanent mailbox that is reset and accepted by the City, which includes installing a temporary mailbox for mail service during construction.

Subsection 210.13 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Reset Mailbox Structure (Type 1)	Each

END OF SECTION REVISION

1
REVISION OF SECTION 212
SEEDING, FERTILIZER, SOIL CONDITIONER, AND SODDING

Section 212 of the Standard Specifications is hereby revised for this project as follows:

Subsection 212.08 shall include the following:

The accepted quantities of Seeding (Native) will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule. Rejected seed that has been stored longer than 30 days shall be re-ordered at the expense of the Contractor.

Payment will be made under:

Pay Item	Pay Unit
Seeding (Native) Hydraulic	Acre
Sod	Square Foot

Topsoil preparation including incorporating and applying amendments, seedbed preparation, water, and seed mix (LBS PLS / Acre) will not be measured and paid for separately but shall be included in the cost for Seeding (Native).

Calibrating, adjusting, or readjusting seeding or fertilizing equipment will not be measured and paid for separately but shall be included in the cost for Seeding (Native).

No additional cost will be accepted for approved substitution of specified seed mix.

No payment will be made for areas seeded using one of the seeding methods without receiving signed Seed and Amendment Quantities Worksheet from the Engineer.

Additional seedbed preparation prior to seeding to correct compaction or erosion from storm events will not be measured and paid for separately but shall be included in the cost for Seeding (Native).

Additional mobilizations as needed to complete seeding within allowed seeding seasons will not be measured and paid for separately but shall be included in the cost for Seeding (Native).

Removal of all competitive, non-native vegetation prior to spreading amendments will not be measured and paid for separately but shall be included in the cost for Seeding (Native).

Vegetation Transects will not be measured and paid for separately but shall be included in the cost for Seeding (Native).

END OF SECTION REVISION

1
REVISION OF SECTION 213
MULCHING

Section 213 of the Standard Specifications is hereby revised for this project as follows:

Subsection 213.05 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Mulching (Hydraulic)	Acre

END OF SECTION REVISION

1
REVISION OF SECTION 216
SOIL RETENTION COVERING

Section 216 of the Standard Specifications is hereby revised for this project as follows:

In Subsection 216.07, 1st paragraph, delete the last sentence and replace with the following:

Earth anchors will not be measured and paid for separately, but shall be included in the work for Soil Retention Blanket (Straw-Coconut)(Biodegradable Class 1).

In Subsection 216.08, 1st paragraph, delete the last sentence and replace with the following:

Payment for Soil Retention Blanket (Straw-Coconut)(Biodegradable Class 1) shall include, but not be limited to, earth anchors and all labor, materials, and equipment to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Soil Retention Blanket (Straw-Coconut)(Biodegradable Class 1)	Square Yard

END OF SECTION REVISION

1
REVISION OF SECTION 217
NOXIOUS WEED MANAGEMENT

Section 217 of the Standard Specifications is hereby deleted and replaced with the following:

DESCRIPTION

217.01 This work consists of the prevention, control, and monitoring of noxious weeds through an Integrated Weed Management Plan using all methods that are available for the targeted weed species. Noxious weed management shall include the prevention and control of noxious weeds identified in the project area. Effective noxious weed management procedures shall use a combination of four basic methods: chemical, mechanical, cultural, or biological techniques, including prevention and monitoring.

This work includes controlling and preventing the spread of noxious weeds throughout construction to comply with Title CRS 35-5.5, Colorado Weed Management Act. The Colorado Noxious Weed Act (CNWA) is administered by the Colorado Department of Agriculture (CDA). The Commissioner of the CDA makes Rules regarding the CNWA based upon recommendations from the State Weed Coordinator and the state Noxious Weed Advisory Committee. The Rules prioritize management of noxious weed species at a state and county level by species designation (List A, List B or List C noxious weeds), and creating management plans for List A and List B species. Per the Integrated Weed Management Plan, Contractors shall treat List A and List B species as listed by the CDA.

MATERIALS

217.02 Chemical Treatment, Mechanical Control, Cultural Control and Biological Control. The materials shall conform to the following:

(a) Chemical Control. All herbicide labels shall be currently registered with the Colorado Department of Agriculture and the U.S. Environmental Protection Agency. All herbicides shall be supplied to the project in labeled containers. The labels shall show the product name, chemical composition, expiration date, and directions for use.

(b) Mechanical Control. Mechanical control shall consist of mowing and brush cutting, hand pulling, blading, grubbing, and the use of hand operated tools, such as power weeders, string trimmers, chain saws, brushhooks, or heavy equipment.

(c) Cultural Control. Cultural control to enhance the vigor of desirable plants shall consist of native seeding and plantings using the appropriate project seed mix(es), mulching, and fertilizing, as appropriate in accordance with Sections 212, 213, 214, and 216, and as shown on the plans.

(d) Biological Control. Biological control shall consist of the use of approved living organisms (insects, animals, or pathogens) with assistance provided by the Colorado Department of Agriculture’s Division of Plant Industry or Colorado State University Cooperative Extension.

2
REVISION OF SECTION 217
NOXIOUS WEED MANAGEMENT

CONSTRUCTION REQUIREMENTS

217.03 Integrated Noxious Weed Management Plan.

Noxious weed treatments shall target observed species and species listed in the Project Integrated Noxious Weed Management Plan Table below and shown in the figure below the table. Additional recommended treatments for noxious weeds including those not listed in the table below, can be found on the Colorado Department of Agriculture's website at https://www.colorado.gov/pacific/agconservation/noxious-weed-species

Once work has started, and during the active construction period, the Contractor shall update the schedule for noxious weed management work on a monthly basis and submit the updated schedule to the Project Engineer.

The contractor shall update the Integrated Noxious Weed Management Plan with the following elements:

(a) Identification/Mapping of CDA's List A and List B noxious weed species.

(b) Schedule of controls prior to topsoil salvage or earthwork operations.

(c) Noxious weed management practices in sensitive areas, and for on-site wetlands and riparian habitat.

(d) Schedule of onsite monitoring for the CDA's List A and List B noxious weed species.

The Contractor shall submit pre and post construction mapping of those weeds listed in the CDA's List A and List B noxious weed species that are present onsite at the time of project acceptance by the Engineer, and at other times as directed by the Engineer. This mapping shall be completed by the Noxious Weed Management Supervisor.

Noxious weed treatments shall target observed species and species listed in the Integrated Noxious Weed Management Plan Table 217.04. Additional recommended treatments for noxious weeds including those not listed in the table below, can be found on the Colorado Department of Agriculture's website at https://www.colorado.gov/pacific/agconservation/noxious-weed-species

3
REVISION OF SECTION 217
NOXIOUS WEED MANAGEMENT

Integrated Noxious Weed Management Plan Table 217.03

Noxious Weed	Plant Growth Characteristics	State List[1]	Recommended Treatments
Canada thistle (*Cirsium arvens*e)	Aggressive rhizomatous perennial of moist/wet sites; seeds and plant parts easily transported by construction equipment.	B	**Mechanical Control:** Due to the species' extensive root system, hand-pulling and tilling stimulate the growth of new plants and are not recommended. Mowing every 10 to 21 days during the growing season can be effective. **Herbicide Control:** Aminopyralid (Milestone), Clopyralid + Triclopyr, Amiocyclopyracholor + chlorosulfur, or Picloram applied in spring before flowering and/or during fall regrowth. **Cultural Control:** Reseed with native seed mix and prevent bare ground.
Cheatgrass (*Bromus tectorum*)	Prolific seed producing winter annual; becomes a fire hazard upon maturity. Seeds easily transported by construction equipment.	C	**Mechanical Control:** Mowing and chopping is not recommended. **Herbicide Control:** Fall application of Plateau, prior to hard freeze is optimum. Can also make application during early spring growth. Or, apply Panoramic 2 SL pre-or post-emergent in later summer or early fall. **Cultural Control:** Reseed with native seed mix. Check seed mix for cheatgrass contaminant.
Field bindweed (*Convolvulus arvensis*)	Long-lived perennial; Construction could increase the plants abundance due to its ability to spread rapidly on disturbed sites and to grow from root fragments.	C	**Mechanical Control:** Cutting, mowing, or pulling is generally not effective. **Herbicide Control:** Clarity + 2,4-D Amine or Roundup Ultra applied at full-bloom and/or fall. **Cultural Control:** Reseed with native seed mix.
Hoary Cress (*Cardaria draba*)	Creeping perennial of the mustard family. Plants emerge in early spring and flowers appear May to June. Seed is set by mid-summer.	B	**Mechanical Control:** Repeated mowing during summer, combined with herbicides, can be effective. **Herbicide Control:** Chlorsulfuron (Telar) or Metsulfuron (Escort XP) applied at flowering (early pring to early summer). Imazapic (Plateau, Panoramic) can be applied at late flower to post-flower growth state (late spring to mid-summer). **Cultural Control:** Minimize soil disturbance and seed with native seed mix.
Spotted knapweed (*Cenaurea stoebe*)	Short-lived perennial forb that reproduces mainly by seed. A prolific seed producer. Grows to about 3 feet tall on ridged stems. Flowers from June to October and sets seed by mid-August. Invades disturbed areas including roadsides.	B	**Mechanical Control:** Dig when soil is moist; remove the root crown, 2-4 inches of taproot, and lateral roots. This may take several years. If flowers are present, bag specimens carefully so as not to scatter seeds. Mowing after seed-set is not recommended and can spread seeds. **Herbicide Control:** Aminocyclopyrachlor + chlorsulfuron: pre=emergence or from seedling to mid-rosette state. Aminopyralid: Spring at rosette to early bolt state and/or in fall to rosettes. Clopyralid: Apply to spring/fall rosettes before flowering stalk lengthens. **Cultural Control:** Reseed with native seed mix and prevent bare ground.
Siberian elm (*Ulmus pumila*)	Fast growing tree distinguished by small toothed leaves about 1-2 ½ in long and pointed at the tip. Mature trees may reach a height of 50-70 feet. Spread primarily via seed; roots resprout when top growth is damage. Quickly outcompetes natives.	C	**Mechanical Control:** Can be effective when combined with herbicide treatment. Seedlings can be grubbed with a shovel or other tool. **Herbicide Control:** Mid- to late summer foliar application of glyphosate or triclopyr are the most effective on Siberian elms less than 6 feet in height or on resprouts, but shall not be used where injury to nearby plantings may occur or within 30 days of planting nearby shrubs and trees. Cut-stump treatment with glyphosate is effective for larger individuals. Basal bark treatment using triclopyr can be highly effective for controlling smaller trees less than 8 ft tall with stems that are 2 to 3 inches in diameters.

[1]**List A** Species in Colorado that are designated by the Commissioner for eradication.

List B Species are species for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, develops and implements state noxious weed management plans designed to stop the continued spread of these species.

List C Species are species for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, will develop and implement state noxious weed management plans designed to support the efforts of local governing bodies to facilitate more effective integrated weed management on private and public lands.

4
REVISION OF SECTION 217
NOXIOUS WEED MANAGEMENT

217.04 Noxious Weed Management.

(a) Certifications. All methods of seeding shall be in accordance with Section 212. All methods of mulching shall be in accordance with Section 213.

(b) Procedures to Minimize Spread of Noxious Weeds. The Contractor shall treat the weeds in accordance with the Integrated Noxious Weed Management Plan. Noxious weed plants and plant parts, including seed heads, that have been mechanically removed shall be placed in appropriate bags or other suitable containers that can be tightly closed or sealed and shall be disposed of at a solid waste disposal facility. Topsoil infested with the CDA's List A and List B noxious weed species shall be disposed of at a solid waste disposal facility.

Noxious weed management, after earthwork operations and stabilizing has been completed, shall not result in non-target injury. Any non-target injury shall be reseeded and re-mulched in accordance with Sections 212 and 213 at no cost to the project.

Weed management practices for staging areas are to be approved by the Engineer prior to their construction. Project stage areas shall be cleared of noxious weeds prior to mobilizing construction equipment. Weed infested staging areas shall be mowed and cleared of noxious weeds as described in
Section 201, and sprayed with the appropriate herbicide as described in the Integrated Noxious Weed Management Plan.

If borrow material is used for any part of the project, the borrow material shall be weed-free and shall be obtained from a site preapproved by the Engineer. If the borrow material is stockpiled, it shall be stabilized and remain weed free for the duration of the project.

If imported topsoil is used for any part of the project, the topsoil shall be inspected by the Noxious Weed Management Supervisor and certified noxious weed free by the Noxious Weed Management Supervisor. If the CDA's List A or List B noxious weed species are found in the topsoil, the material shall not be used on the project.

Clean all construction-related equipment thoroughly before off-loading at the project site and after working with weed-contaminated soils.

Noxious weeds observed in or near the construction area will be mechanically removed or treated with herbicides. After seeding and near the end of the project, if noxious weed species persist, seeded areas shall receive additional noxious weed treatments. There shall be not Colorado Department of Agriculture List-A noxious weeds within the project area upon completion of the project.

All herbicides shall be applied by a qualified applicator who is commercial pesticide applicators licensed by the Colorado Department of Agriculture as a qualified applicator. The Contractor shall furnish documentation of such licensing prior to herbicide application to the Engineer. Herbicide mixing and application shall be done in accordance with instructions on the registered product label. The Contractor shall furnish the Engineer such label information prior to mixing or application.

The Contractor shall notify the Engineer at least 24 hours prior to each herbicide application and shall indicate the time and location application will begin. Application will not be allowed on Saturdays, Sundays, or holidays unless otherwise approved by the Engineer.

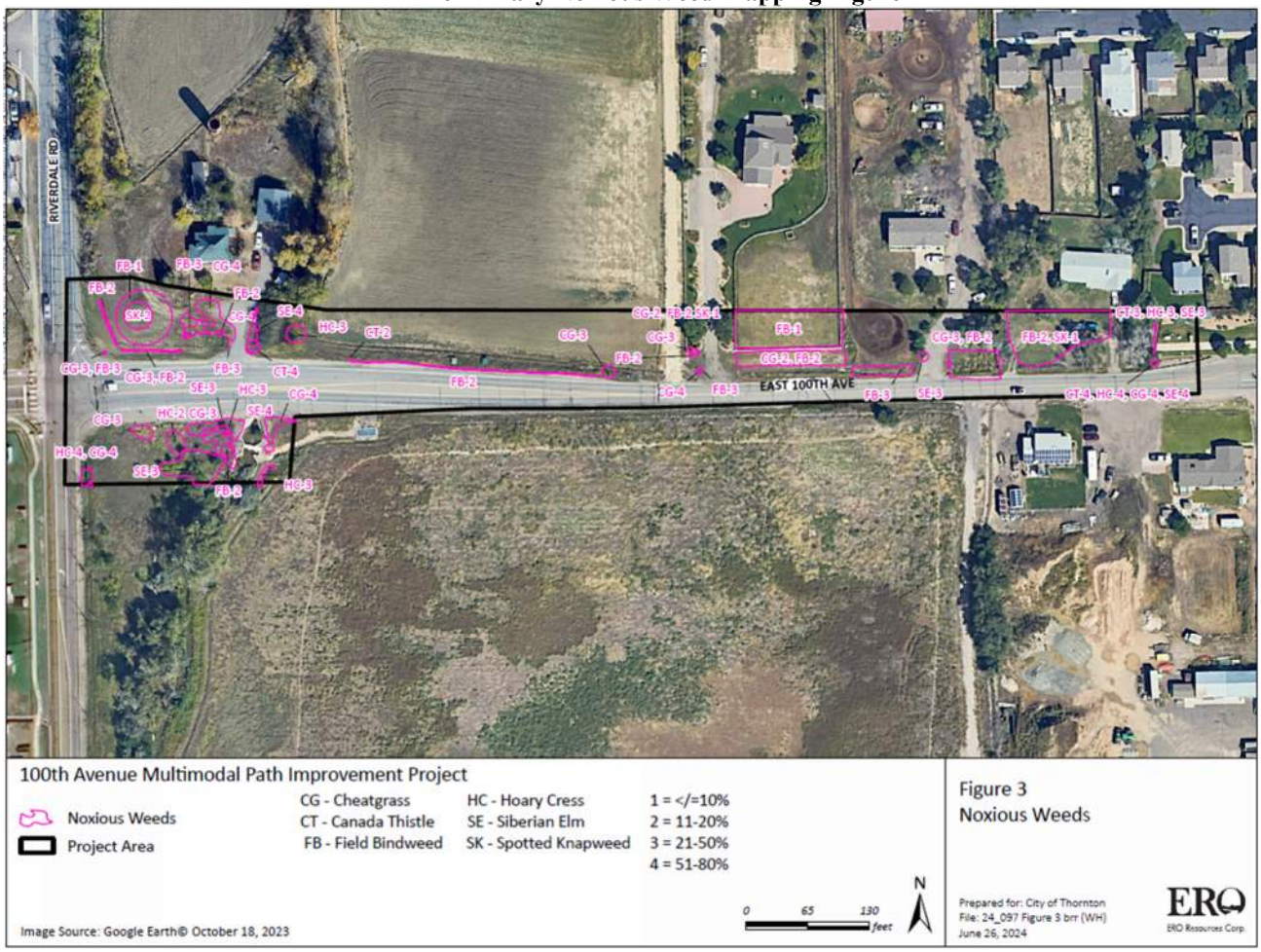
Herbicides shall not be applied when weather conditions, including wind conditions, are unsuitable for such work. Herbicides shall not be applied when soil is extremely dry.

Herbicide treatments shall avoid native flowering plants to minimize impacts to pollinators.

Herbicides can be used immediately adjacent to wetlands, riparian areas, and/or water bodies only if the label indicates its use is appropriate for such areas.

5
REVISION OF SECTION 217
NOXIOUS WEED MANAGEMENT

Preliminary Noxious Weed Mapping Figure



Note: Contractor shall only perform Noxious Weed Management within the Limits of Construction shown on the Construction Plans.

6
REVISION OF SECTION 217
NOXIOUS WEED MANAGEMENT

METHOD OF MEASUREMENT

217.05 Noxious Weed Management will not be measured separately but will be paid for on a square yard basis. Noxious weed management includes the cost of herbicides.

Reapplication of herbicide required due to inappropriate timing of the original application will not be measured or paid for.

BASIS OF PAYMENT

217.06 The accepted quantities of noxious weed management will be paid for at the contract unit price per square yard.

Payment will be made under:

Pay Item	Pay Unit
Noxious Weed Management	Square Yard

Payment for Noxious Weed Management will be full compensation for all work, materials (including herbicides), and personnel required to complete the item.

The Contractor shall provide the Noxious Weed Management Supervisor.

Stripping of topsoil infested with noxious weeds will be paid for in accordance with Section 207.

Mechanical removal of noxious weeds will not be measured, but shall be included in the work. Solid waste disposal shall be paid for in accordance with Section 250.

Water will not be measured and paid for separately but shall be included in the work.

Seeding shall be paid for according to 212 Seeding.

END OF SECTION REVISION

1
REVISION OF SECTION 240
PROTECTION OF MIGRATORY BIRDS
BIOLOGICAL WORK PERFORMED BY THE CONTRACTOR'S BIOLOGIST

Section 240 is hereby added to the Standard Specifications for this project as follows:

DESCRIPTION

240.01 This work consists of protecting migratory birds during construction work.

MATERIALS AND CONSTRUCTION REQUIREMENTS

240.02 The Contractor shall schedule construction activity, including clearing and grubbing operations and work on structures, to avoid taking (pursue, hunt, take, capture, or kill; attempt to take, capture, kill or possess) migratory birds or their nests protected by the Migratory Bird Treaty Act (MBTA). If construction activity is to occur between February 15 and August 31, then the following specifications must be followed and the Contractor shall retain a qualified wildlife biologist to determine where nest removal may occur or will be required during construction. The wildlife biologist shall have a minimum of three years' experience conducting migratory bird surveys and implementing the requirements of the MBTA. The Contractor shall submit documentation of the biologists' education and experience to the Engineer for acceptance. A biologist with less experience may be used by the Contractor subject to the approval of the Engineer based on review of the biologist's qualifications. If all construction activities occur after August 31 and before February 15, then the requirements set forth in this specification are not required. In Colorado, most nesting and rearing activities occur between April 1 and August 31, but raptors may nest as early as February 15.

The wildlife biologist shall record the location of each protected nest, bird species, the protection method used, and the date installed. A copy of these records will be submitted to the Engineer.

(A) Raptor Nest Survey. A wildlife biologist shall conduct raptor nest surveys within 0.5 mile of the construction site prior to the start of construction and prior to each construction phase. This survey can be done with binoculars or other optics. If construction activities are located within Colorado Parks and Wildlife (CPW) recommended buffer zone for specific raptors, "NO WORK" zones shall be established around active sites during construction according to the CPW standards or as recommended by the wildlife biologist in consultation with CPW. The "NO WORK" zone shall be marked with either fencing or signing. Work shall not proceed within a "NO WORK" zone until the wildlife biologist has determined that the young have fledged or the nest is unoccupied.

(B) Vegetation Removal. When possible, vegetation shall be cleared prior to the time when active nests are present. Vegetation removal activities shall be timed to avoid the migratory bird breeding season which begins on April 1 and runs to August 31 (raptors may nest as early as February 15). All areas scheduled for clearing and grubbing between February 15 and August 31 shall first be surveyed by the wildlife biologist within 50 feet of the work limits for active migratory bird nests, including raptors. Contractor personnel shall enter areas to perform surveys only if a written, signed document granting permission to enter the property has been obtained from the property owner. The Contractor shall document all denials of permission to enter property. The Contractor shall avoid all migratory bird nests. The Contractor shall avoid the area within 50 feet of the active nests or the area within the distance recommended by the biologist until all nests within that area have become inactive. Inactive nest removal and other necessary measures shall be incorporated into the work as follows.

1. Tree and Shrub Removal or Trimming. Tree and shrub removal or trimming shall occur before February 15 or after August 31 if possible. If tree and shrub removal or trimming will occur between February 15 and August 31, a survey for active nests shall be conducted by the wildlife biologist within the seven days immediately prior to the beginning of work in each area of tree and shrub removal or trimming. The survey shall be conducted for each phase of any tree or shrub removal or trimming.

2
REVISION OF SECTION 240
PROTECTION OF MIGRATORY BIRDS
BIOLOGICAL WORK PERFORMED BY THE CONTRACTOR'S BIOLOGIST

If an active nest containing eggs or young birds is found, the tree or shrub containing the active nest shall remain undisturbed and protected until the nest becomes inactive. The nest shall be protected by placing fence (plastic) a minimum distance of 50 feet from each nest to be undisturbed. This buffer dimension may be changed if determined appropriate by the wildlife biologist and approved by the Engineer. Work shall not proceed within the fenced buffer area until the young have fledged or the nests have become inactive. If the fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is satisfactorily repaired at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

2. Grasses and Other Vegetation Management. Due to the potential for encountering ground nesting birds' habitat, if work occurs between April 1 and August 31, the area shall be surveyed by a wildlife biologist within the seven days immediately prior to ground disturbing activities.

The undisturbed ground cover to 50 feet beyond the planned disturbance, or to the right-of-way line, whichever is less, shall be maintained at a height of 6 inches or less beginning April 1 and continuing until August 31 or until the end of ground disturbance work, whichever comes first.

If birds establish a nest within the survey area, an appropriate buffer of 50 feet will be established around the nest by the wildlife biologist. This buffer dimension may be changed if determined appropriate by the wildlife biologist and approved by the Engineer. The Contractor shall install fence (plastic) at the perimeter of the buffer. Work shall not proceed within the buffer until the young have fledged or the nests have become inactive.

If the fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is satisfactorily repaired at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

(C) Work on Structures. The Contractor shall conduct work on structures in a manner that does not result in a taking of migratory birds protected by the Migratory Bird Treaty Act (MBTA). The Contractor shall not conduct the work on structures during the primary birding season, April 1 through August 31, unless the Contractor takes the following actions:

1. The Contractor shall remove existing inactive nests prior to April 1.

2. During the time that the birds are trying to build or occupy their nests, between April 1 and August 31, the Contractor shall monitor the structures at least once every three days for any nesting activity.

3. If the birds have started to build any nests, the nests shall be removed before they are completed. Water shall not be used to remove the nests if nests are located within 50 feet of any surface waters.

4. Installation of netting may be used to prevent nest building. The netting shall be monitored and repaired or replaced as needed. Netting shall consist of a mesh with openings that are ¾ inch by ¾ inch or less.

If an active nest becomes established, i.e., there are eggs or young in the nest, all work that could result in abandonment or destruction of the nest shall be avoided until the young have fledged or the nest is unoccupied as determined by the Contractor's biologist and approved by the Engineer. The Contractor shall prevent construction activity from displacing birds after they have laid their eggs and before the young have fledged. If the project continues into the following spring, this cycle shall be repeated. When work on the structure is complete, the Contractor shall remove and properly dispose of netting used on the structure. The taking of a migratory bird shall be reported to the Engineer. The Contractor shall be responsible for all penalties levied by the U. S. Fish and Wildlife Service (USFWS) for the taking of a migratory bird.

3
REVISION OF SECTION 240
PROTECTION OF MIGRATORY BIRDS
BIOLOGICAL WORK PERFORMED BY THE CONTRACTOR'S BIOLOGIST

METHOD OF MEASUREMENT

240.03 Wildlife Biologist will be full compensation for all work and materials required to complete the item, including wildlife biologist, wildlife survey, and documentation (record of nest location and protection method).

Clearing and grubbing will be measured and paid for in accordance with Section 201. Mowing will not be measured and paid for separately, but shall be included in the work. Removal and trimming of trees will be measured and paid for in accordance with Section 202.

Fence needed to protect migratory birds and nests will be measured and paid for in accordance with Section 607.

BASIS OF PAYMENT

240.04 The accepted quantities measured as provided above will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule.
Payment will be made under:

Pay Item	Pay Unit
Wildlife Biologist	Hour

1
REVISION OF SECTION 304
AGGREGATE BASE COURSE

Section 304 of the Standard Specifications is hereby revised for this project as follows:

Delete Subsection 304.02 and replace it with the following:

Aggregate base course materials shall be from a source approved by the City. The Contract shall provide a submittal including all material properties for review and approval prior to construction.

Materials for the base course shall be Aggregate Base Course (Class 6) as shown in subsection 703.03 – Aggregate for Bases.

The Aggregate Base Course (Class 6) shall meet the gradation requirements and have a resistance value of at least 78 when tested by the Hveem Stabilometer method.

Acceptance will be based on random samples taken from each lift.

Reclaimed asphalt pavement (RAP), asphalt millings, or asphalt in any form whatsoever shall not be substituted for ABC Class 6.

Subsection 304.04 shall include the following:

Prior to placing aggregate base course, the subgrade shall be reconditioned and prepared in accordance with Section 306 of the Project Specifications.

Materials shall be placed on an approved subgrade which has been proof-rolled within the past 24 hours and found to be stable and non-yielding. Should weather conditions change, such as freezing, precipitation, etc., aggregate base materials shall not be placed until the subgrade is reapproved.

Delete Subsection 304.07 and replace it with the following:

Measurement shall be based on tons taken from the weight tickets provided to the City at time of delivery to the site.

Delete Subsection 304.08 and replace it with the following:

The accepted quantities of aggregate base course, of the class specified, will be paid for at the contract price bid per ton placed and compacted in accordance with the Plans and Specifications.

Payment will be made under:

Pay Item	Pay Unit
Aggregate Base Course (Class 6)	Ton

Water will not be measured and paid for separately but shall be included in the work.

Commercial mineral fillers, when used, shall be considered incidental to the bid item for Aggregate Base Course.

END OF SECTION REVISION

1
REVISION OF SECTION 306
RECONDITIONING

Section 306 of the Standard Specifications is hereby revised for this project as follows:

In subsection 306.02 delete the 1st sentence and replace it with the following:

The top 12-inches of existing subgrade for concrete sidewalk, curb ramps, and concrete sidewalk (colored) shall be reconditioned by blading and rolling. The top 12 inches of existing subgrade for concrete and asphalt pavement shall be reconditioned by blading and rolling.

Subsection 306.02 shall include the following:

Prior to paving or placing aggregate base course or geogrid, the subgrade shall be uniformly scarified, moisture conditioned, and compacted as specified in project Geotechnical Report. The upper 12-inches of subgrade for concrete sidewalk, curb ramps and stamped concrete shall be reconditioned. The upper 12-inches for concrete and asphalt pavement shall be reconditioned. The pavement subgrade shall be thoroughly proof-rolled with a heavily loaded pneumatic tired vehicle. Areas that deform (rut or deflect) excessively under the wheel loads shall be removed and replaced prior to paving. Proof-rolled areas shall be paved within 48 hours or less. If precipitation occurs after the proof-roll and prior to paving, then the area shall be dried and again be proof-rolled as necessary.

The Contractor shall notify the City a minimum of 24 hours in advance of placing any concrete so that both parties may observe field testing. The City reserves the right to reject any payment for materials placed with less than 24 hours notice to the City.

The acceptance at any time of the materials by or on behalf of the City shall not bar the City from future rejection if they are subsequently found to be defective or inferior in quality or uniformity to the material specified.

Whenever the City rejects any material, such material shall be removed at once from the line of work at the Contractor's expense, and shall not be brought back. Work rejected by the City shall be replaced with approved work at the expense of the Contractor.

Subsection 306.04 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Reconditioning	Square Yard

Water used for reconditioning will not be measured and paid for separately but shall be included in the work.

Costs for quality control (QC) field testing and laboratory testing shall be borne by the Contractor and shall be included in the pay item Reconditioning.

END OF SECTION REVISION

1
REVISION OF SECTION 403
HOT MIX ASPHALT

Section 403 of the Standard Specifications is hereby revised for this project as follows:

Subsection 403.02 shall include the following:

The design mix for hot mix asphalt shall conform to the following:

Table 403-1

Property	Test Method	Value For Grading	
			Patching
Air Voids, percent at: N (design)	CPL 5115		3.5 – 4.5
Lab Compaction (Revolutions): N (design)	CPL 5115		75
Stability, minimum	CPL 5106		28
Aggregate Retained on the 4.75 mm (No. 4) Sieve for S, SX and SG, and on the 2.36mm (No. 8) Sieve for ST and SF with at least 2 Mechanically Induced fractured faces, % minimum*	CP 45		60
Accelerated Moisture Susceptibility Tensile Strength Ratio (Lottman), minimum	CPL 5109 Method B		80
Minimum Dry Split Tensile Strength, kPa (psi)	CPL 5109 Method B		205 (30)
Grade of Asphalt Cement, Top Layer			PG 76-28
Grade of Asphalt Cement, Layers below Top			PG 64-22
Voids in the Mineral Aggregate (VMA) % minimum	CP 48		See Table 403-2
Voids Filled with Asphalt (VFA), %	AI MS-2		65-80
Dust to Asphalt Ratio Fine Gradation Coarse Gradation	CP 50		 0.6 - 1.2 0.8 – 1.6

Note: AI MS-2 = Asphalt Institute Manual Series 2
Note: Mixes with gradations having less than 40% passing the 4.75 mm (No. 4) sieve shall be approached with caution because of constructability problems.
Note: Gradations for mixes with a nominal maximum aggregate size of one-inch or larger are considered a coarse gradation if they pass below the maximum density line at the #4 screen.
Gradations for mixes with a nominal maximum aggregate size of 3/4" to 3/8" are considered a coarse gradation if they pass below the maximum density line at the #8 screen.
Gradations for mixes with a nominal maximum aggregate size of #4 or smaller are considered a coarse gradation if they pass below the maximum density line at the #16 screen.
*Fractured face requirements for SF may be waived by RME depending on project conditions.

2
REVISION OF SECTION 403
HOT MIX ASPHALT

All mix designs shall be run with a gyratory compaction angle of 1.25 degrees and properties must satisfy Table 403-1. Form 43 will establish construction targets for Asphalt Cement and all mix properties at Air Voids up to 1.0 percent below the mix design optimum. CDOT will establish the production asphalt cement and volumetric targets based on the Contractor's mix design and the relationships shown between the hot mix asphalt mixture volumetric properties and asphalt cement contents on the Form 429. CDOT may select a different AC content other than the one shown at optimum on the Contractor's mix design in order to establish the production targets as contained on the Form 43. Historically, Air Voids adjustments typically result in asphalt cement increases from 0.1 to 0.5 percent. Contractors bidding the project should anticipate this change and factor it into their unit price bid.

Table 403-2

	Minimum Voids in the Mineral Aggregate (VMA)			
Nominal Maximum Size*, mm (inches)	***Design Air Voids **			
	3.5%	**4.0%**	**4.5%**	**5.0%**
37.5 (1½)	11.6	11.7	11.8	N/A
25.0 (1)	12.6	12.7	12.8	
19.0 (¾)	13.6	13.7	13.8	
12.5 (½)	14.6	14.7	14.8	
9.5 (⅜)	15.6	15.7	15.8	
4.75 (No. 4)	16.6	16.7	16.8	16.9
	* The Nominal Maximum Size is defined as one sieve larger than the first sieve to retain more than 10%. ** Interpolate specified VMA values for design air voids between those listed. *** Extrapolate specified VMA values for production air voids beyond those listed.			

The Contractor shall prepare a quality control plan outlining the steps taken to minimize segregation of HMA. This plan shall be submitted to the Engineer and approved prior to beginning the paving operations. When the Engineer determines that segregation is unacceptable, the paving shall stop and the cause of segregation shall be corrected before paving operations will be allowed to resume.

3
REVISION OF SECTION 403
HOT MIX ASPHALT

Hot mix asphalt for lower lifts of patching or paving shall conform to the gradation requirements for Hot Mix Asphalt (Grading S)(75)(PG 64-22). Hot mix asphalt for the top lift of patching or paving shall conform to the gradation requirements for Hot Mix Asphalt (Grading SX)(75)(PG 76-28).

A minimum of 1 percent hydrated lime by weight of the combined aggregate shall be added to the aggregate for all hot mix asphalt.

Subsection 403.03 shall include the following:

The Contractor shall construct the work such that all roadway pavement placed prior to the time paving operations end for the year, shall be completed to the full thickness required by the plans. The Contractor's Progress Schedule shall show the methods to be used to comply with this requirement.

Delete subsection 403.05 and replace with the following:

403.05 The accepted quantities of hot mix asphalt will be paid for in accordance with subsection 401.22, at the contract unit price per ton for the bituminous mixture.

Payment will be made under:

Pay Item	Pay Unit
Hot Mix Asphalt (Patching) (Asphalt)	Ton

Aggregate, asphalt recycling agent, asphalt cement, additives, hydrated lime, and all other work and materials necessary to complete each hot mix asphalt item will not be paid for separately, but shall be included in the unit price bid. When the pay item includes the PG binder grade, any change to the submitted mix design optimum asphalt cement content to establish production targets on the Form 43 will not be measured and paid for separately, but shall be included in the work. No additional compensation will be considered or paid for any additional asphalt cement, plant modifications and additional personnel required to produce the HMA as a result in a change to the mix design asphalt cement content.

Historically, typical asphalt cement increases reflected on the Form 43 are from 0.1 to 0.5 percent. However, the Contractor should anticipate the AC increases typical of his mixes. Contractors bidding the project should anticipate this change and factor it into their unit price bid.

When the pay item does not include the PG binder grade, asphalt cement will be measured and paid for in accordance with Section 411. Asphalt cement used in Hot Mix Asphalt (Patching) will not be measured and paid for separately, but shall be included in the work.

Excavation, preparation, and tack coat of areas to be patched will not be measured and paid for separately, but shall be included in the work.

END OF SECTION REVISION

1
REVISION OF SECTION 412
PORTLAND CEMENT CONCRETE PAVEMENT

Section 412 of the Standard Specifications is hereby revised for this project as follows:

Subsection 412.03 is revised to include the following:

Concrete pavement shall include fibrous reinforcing in accordance with the following requirements.

Fibrous Reinforcing:

A. Fibrous reinforcing shall be used in Portland cement concrete used for curb, gutter, sidewalks, curb turn fillets, cross pans.

B. The following shall be submitted to the Engineer.

1. One copy of manufacturer's printed product data, clearly marked, indicating proposed fibrous concrete reinforcement materials. Printed data should state 1.5 lbs. of fiber to be added to each cubic yard of each type of concrete.

2. One copy of manufacturer's printed batching and mixing instructions.

3. One copy of a certificate prepared by the concrete supplier stating that the approved fibrous concrete reinforcement materials at the rate of 1.5 pounds per cubic yard were added to each batch of concrete delivered to the project site. Each certificate shall be accompanied by one (1) copy of each batch delivery ticket indicating amount of fibrous concrete reinforcement material added to each batch of concrete.

C. Fibrous concrete reinforcement shall consist of:

1. One hundred (100) percent virgin polypropylene fibrillated fibers specifically manufactured for use as concrete reinforcement, containing no reprocessed olefin materials. Fibrous concrete reinforcement shall be as manufactured by Fibermesh Company, 4019 Industry Drive, Chattanooga, Tennessee 37416, or approved equivalent. Substitutions may be considered at the discretion of the Engineer.

Subsection 412.24 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Concrete Pavement (8 Inch)	Square Yard

The price per square yard of Concrete Pavement shall be full compensation for furnishing and placing all materials, including concrete, fibrous reinforcing, joints, dowels, tie bars, joint materials, texturing, sawing, finishing, and rumble strips.

END OF SECTION REVISION

1
REVISION OF SECTION 506
RIPRAP

Section 506 of the Standard Specifications is hereby revised for this project as follows:

Delete Subsection 506.05 and replace it with the following:

Water control and dewatering required to install riprap shall be considered incidental to the applicable bid items being installed. All work shall be completed in dry conditions.

Excavation for the installation of Riprap (6 Inch) will not be measured or paid separately as it is included in the cost of the pay item.

Filter fabric, and compaction of subgrade for installation of Riprap (6 Inch) will not be measured or paid separately as it is included in the cost of the pay item.

Payment will be made under:

Pay Item	Pay Unit
Riprap (6 inch)	Cubic Yard

END OF SECTION REVISION

1
REVISION OF SECTION 514
PEDESTRIAN AND BIKEWAY RAILING

Section 514 of the Standard Specifications is hereby revised for this project as follows:

Subsection 514.06 shall include the following:

Hand railing shall be constructed in accordance with the details and specifications shown on the Construction Plans.

Subsection 514.08 shall include the following:

Hand Railing shall include all of the Contractor's costs of whatsoever nature to complete the pay item in accordance with the Plans and Specifications and to a condition accepted and approved by the City, including but not limited to excavating and installing post foundations, concrete, reinforcement, hardware, furnishing, transporting, and placing all materials per the Plans and Specifications and providing all other related and necessary labor, equipment, and materials required to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Hand Rail	Linear Foot

END OF SECTION REVISION

1
REVISION OF SECTION 602
REINFORCING STEEL

Section 602 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 602.07 and replace it with the following:

Reinforcing steel will not be measured and paid for separately.

Delete subsection 602.08 and replace it with the following:

Reinforcing Steel for concrete structures will not be measured and paid for separately but shall be considered incidental to the individual concrete work listed on the bid schedule.

END OF SECTION REVISION

1
REVISION OF SECTION 603
CULVERTS AND SEWERS

Section 603 of the Standard Specifications is hereby revised for this project as follows:

Subsection 603.02 shall include the following:

Materials furnished shall be new and undamaged. Everything necessary to complete installations shall be furnished and installed whether shown on approved drawings or not and installations shall be completed and fully operational.

Acceptance of materials or the waiving of inspection thereof shall in no way relieve the Contractor of the responsibility for furnishing materials meeting the requirements of the specifications.

Materials delivered to the job site shall be adequately housed and protected so as to ensure the preservation of their quality and fitness for the work.

Subsection 603.03 shall include the following:

The Contractor shall install protection around the work site where pipe is being installed to secure excavation for culverts and sewers. Protection shall be adequate to keep the traffic, pedestrians, and cyclists from accidentally entering trenches.

During construction, care must be taken to avoid any ground water, storm water, construction debris, soil, or any other foreign materials from entering any active City of Thornton storm sewer. The use of sanitary sewer or storm sewer systems for the purposes of dewatering is strictly prohibited.

Delete subsection 603.12 and replace it with the following:

Water control and dewatering required to install storm sewer pipe, ditch culverts, inlets, and manholes shall be considered incidental to the applicable bid items being installed. All work shall be completed in dry conditions.

Conduit used for culverts storm drains of the different types and sizes will not be measured but will be the net length of pipe called for on the Plans, except when field changes are ordered or when there are errors on the Plans. In case of exceptions, the quantity to be measured shall be the actual net length of conduit measured along the bottom centerline. Extra length of conduit due to joint creep will not be measured and paid for.

2
REVISION OF SECTION 603
CULVERTS AND SEWERS

Delete subsection 603.13 and replace it with the following:

The accepted quantities will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule. Except as otherwise indicated on the Plans or in the special provisions, all joints, elbows, connecting bands and other connecting devices will not be paid for separately but shall be included in the work.

Trench protection will not be paid for separately but shall be considered incidental to the unit price bid for culverts and sewers.

Payment will be made under:

Pay Item	Pay Unit
12 Inch Plastic Pipe	Linear Foot
15 Inch Reinforced Concrete Pipe (Complete In Place)	Linear Foot
24 Inch Reinforced Concrete Pipe (Complete In Place)	Linear Foot
30 Inch Reinforced Concrete Pipe (Complete In Place)	Linear Foot

Payment for Reinforced Concrete Pipe shall be full compensation for all work necessary to complete the bid item including, but not limited to structure excavation, structure backfill, bedding, stabilization material, formwork, joints, elbows, reinforcement, reinforced concrete caps, connecting bands, other connecting devices, and disposal of excess excavated material. Excavation and backfill will not be measured and paid for separately, but shall be included in the work.

Temporary asphalt installation and removal required for sanitary sewer, waterline, and storm sewer patches will not be paid for separately but shall be considered incidental to the project.

Water control and dewatering required to install Reinforced Concrete Pipe shall be considered incidental to the applicable bid items being installed. All work shall be completed in dry conditions.

END OF SECTION REVISION

1
REVISION OF SECTION 604
MANHOLES, INLETS, AND METER VAULTS

Section 604 of the Standard Specifications is hereby revised for this project as follows:

Subsection 604.02 shall include the following:

Connections of storm sewer pipes to existing and proposed inlets, manholes, and all other structures shall be made with flexible watertight connections conforming to ASTM C443. This includes joints in barrel and cone sections of manholes. Watertight gaskets shall conform to ASTM C923. The Contractor shall submit working drawings for all joints prior to the start of construction.

Manhole rims shall be set to a tolerance of ¼ inch below final grade.

Subsection 604.04(a) shall include the following:

During construction, care must be taken to avoid any ground water, storm water, construction debris, soil, or any other foreign materials from entering any active storm sewer. The use of sanitary sewer or storm sewer systems for the purposes of dewatering is strictly prohibited.

Subsection 604.04(b) shall include the following:

Manhole frame and covers shall be rotated to be outside of vehicle wheel paths.

In subsection 604.06 delete the 1st, 2nd, and 3rd paragraphs and replace with the following:

Water control and dewatering required to install inlets and manholes shall be considered incidental to the applicable bid items being installed. All work shall be completed in dry conditions.

Manholes and inlets shall be measured by each complete unit including, but not limited to, ring and cover or grating frames, reinforcing steel, structure excavation & backfill, vertical shoring, labor, and equipment.

The manhole riser diameter is labeled within the plans.

Manhole ring and cover will not be measured or paid separately and will be included in the work.

Manhole riser and cone will not be measured or paid separately and will be included in the work.

Inlet grating and frame will not be measured or paid separately and will be included in the work.

Re-excavation of trench as a result of cave-in will not be measured or paid, it shall be considered incidental to bid items requiring excavation and backfill.

Subsection 604.07 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Inlet Type C (5 Foot)	Each
Inlet Type C (10 Foot)	Each
Inlet Type R L 5 (15 Foot)	Each
Inlet Type R L 10 (10 Foot)	Each
Manhole Slab Base (5 Foot)	Each
Manhole Slab Base (10 Foot)	Each

END OF SECTION REVISION

1
REVISION OF SECTION 607
FENCES

Section 607 of the Standard Specifications is hereby revised for this project as follows:

Subsection 607.02 shall include the following:

Fence (Plastic) shall be orange plastic with metal posts and shall be installed to protect existing vegetation, along the perimeter of staging areas, and to delineate work limits and separate construction from the public where necessary.

Subsection 607.04 shall include the following:

End posts, corner posts, and line brace posts required to complete the work for Fence Wire With Treated Wooden Posts will not be measured separately but shall be included in the work for Fence Wire With Treated Wooden Posts. There shall be no barbed wire used on the project.

Subsection 607.05 shall include the following:

Payment for Fence (Plastic) shall include, but not be limited to, all labor, materials, and equipment required to complete the work.

Payment for Fence Wire With Treated Wooden Posts shall include, but not be limited to, all labor, materials, and equipment required to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Fence (Plastic)	Linear Foot
Fence Wire With Treated Wooden Posts	Linear Foot

END OF SECTION REVISION

1
REVISION OF SECTION 608
SIDEWALKS AND BIKEWAYS

Section 608 of the Standard Specifications is hereby revised for this project as follows:

Subsection 608.01 shall include the following:

This work consists of the construction of Concrete Sidewalk (Colored) in accordance with these specifications and in conformity with the lines and grades shown on the Plans or established.

Subsection 608.02 shall include the following:

Concrete for sidewalks and curb ramps shall be CDOT Class B or D, include fibrous reinforcing strands (or approved equal). Concrete shall be mixed with approved fibrous reinforcing strands (or approved equal), at the rate of 1.5 pounds per cubic yard. Mixing, placing and finishing shall be performed according to manufacturer's recommendations. Fibrous reinforcing shall consist of one hundred percent (100%) virgin polypropylene fibrillated fibers specifically manufactured for use as concrete reinforcement, containing no reprocessed olefin materials. The Contractor shall provide a certificate for each batch of concrete delivered to the site prepared by the concrete supplier stating that the approved fibrous reinforcement materials were applied to the concrete at a rate of 1.5 pounds per cubic yard. Each certificate shall be accompanied by one (1) copy of each batch delivery ticket indicating amount of fibrous concrete reinforcement material added to each batch of concrete.

Subsection 608.05 shall include the following:

Fibrous reinforcing strands will not be measured and paid for separately but shall be included in the work.

Coloring and pattern used in the Concrete Sidewalk (Colored) will not be measured and paid for separately but shall be included in the work.

Detectable warnings used in construction of Concrete Curb Ramps will not be measured and paid for separately but shall be included in the work. Materials and work required for detectable warnings will not be measured and paid for separately but shall be included in the work.

Sawing concrete will not be measured and paid for separately but will be considered incidental to the work.

2
REVISION OF SECTION 608
SIDEWALKS AND BIKEWAYS

Delete subsection 608.06 and replace it with the following:

The accepted quantities will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule.

Payment will be made under:

Pay Item	Pay Unit
Concrete Sidewalk (6 Inch)	Square Yard
Concrete Curb Ramp	Square Yard
Concrete Sidewalk (Colored)	Square Yard

Structural excavation and backfill will not be measured and paid separately but shall be included in the work.

Reinforcing steel will not be measured separately but shall be included in the work.

Joints of all types will not be measured and paid for separately but shall be included in the work.

Fibrous reinforcing strands will not be measured and paid for separately but shall be included in the work.

All materials, equipment, labor, and work required for detectable warnings used in construction of Concrete Curb Ramps will not be measured and paid for separately but shall be included in the work.

END OF SECTION REVISION

1
REVISION OF SECTION 609
CURB AND GUTTER

Section 609 of the Standard Specifications is hereby revised for this project as follows:

Subsection 609.02 shall include the following:

Concrete for curbs and gutters shall be CDOT Class B or D, include fibrous reinforcing strands (or approved equal). Concrete shall be mixed with approved fibrous reinforcing strands (or approved equal), at the rate of 1.5 pounds per cubic yard. Mixing, placing and finishing shall be performed according to manufacturer's recommendations. Fibrous reinforcing shall consist of one hundred percent (100%) virgin polypropylene fibrillated fibers specifically manufactured for use as concrete reinforcement, containing no reprocessed olefin materials. The Contractor shall provide a certificate for each batch of concrete delivered to the site prepared by the concrete supplier stating that the approved fibrous reinforcement materials were applied to the concrete at a rate of 1.5 pounds per cubic yard. Each certificate shall be accompanied by one (1) copy of each batch delivery ticket indicating amount of fibrous concrete reinforcement material added to each batch of concrete.

Subsection 609.06 shall include the following:

Fibrous reinforcing strands will not be measured and paid for separately but shall be included in the work.

Sawing concrete will not be measured and paid for separately but will be considered incidental to the work.

Subsection 609.07 shall include the following:

Pay Item	Pay Unit
Curb and Gutter Type 2 (Section II-B)	Linear Foot

Structural excavation and backfill will not be measured and paid separately but shall be included in the work.

Reinforcing steel will not be measured separately but shall be included in the work.

Joints of all types will not be measured and paid for separately but shall be included in the work.

Aggregate base course will be measured and paid for in accordance with Section 304.

Fibrous reinforcing strands will not be measured and paid for separately but shall be included in the work.

END OF SECTION REVISION

1
REVISION OF SECTION 613
TRAFFIC SIGNAL, LIGHTING, AND COMMUNICATION CONDUIT

Section 613 of the Standard Specifications is hereby revised for this project to include the following:

GENERAL REQUIREMENTS

Underground utility information shown on the plans is for information only. The Contractor is responsible for field locating and verifying utility information before starting installation of underground conduit runs and traffic signal pole foundations.

The Contractor shall cooperate with any other Contractor under contract with the Owner and with utility companies providing services to the City of Thornton while installing underground conduit runs.

Electrical conduit shall be installed in accordance with the applicable requirements described in the latest revision of the Colorado Department of Transportation Utility Manual, as amended.

All buried wiring included in this project shall be placed in a conduit. It will be the option of the Contractor, at his own expense, to use larger size conduit if desired. Where larger size conduit is used, it shall be for the entire length of the run from outlet to pull box or from pull box to pull box. No reducing coupling will be permitted in any conduit run. The Owner must approve increased sizes prior to installation.

Conduits shall be installed under existing pavement through use of directional boring operations. Conduits under pavement may be installed through use of open trench operations only where approved by the Owner.

Conduits shall be rigid plastic (PVC) type conforming to the plans and these specifications. Conduit runs shown on the plans are tentative as to routing and may be changed as directed by the Owner to avoid underground obstructions. In the event of any change from the location shown on the plans, accurate records shall be incorporated into the as-built drawings, and all necessary details and as-built drawings submitted to the Owner before final payment is made.

Conduit installation shall include the installation of marking tape laid in the backfilled trench at a depth not more than 8 inches or less than 4 inches below finished grade. Heavy gauge polyethylene film (0.004 inch tape, with legend "Caution Buried Electric Line Below"), shall be used. Where tape length ends and conduit run continues, lapping of not less than 6 inches will be provided. No glue or adhesive will be allowed to join separate tape sections.

Nonmetallic Conduit (PVC)

Rigid PVC conduit shall be Schedule 80, Type 2 and shall be manufactured of high-impact PVC, and shall conform to industry and commercial standards No. CS-207-60. Each length of PVC conduit and the various PVC fittings (coupling, adapter, etc.) shall bear the label of Underwriter's Laboratories, Inc., or be approved by the Owner. The conduit shall be of the size or sizes shown on the plans or as indicated in these specifications.

Rigid PVC conduit ends shall be squared and trimmed after cutting to remove rough edges. All connections shall be of solvent weld type except where PVC is to be connected to a steel conduit, in which case the coupling or adapter shall be threaded on the steel conduit side.

Solvent weld joints shall be made in accordance with the PVC manufacturer's recommendations. Rigid PVC conduit shall only be used for underground installations; conduit used above ground shall be galvanized rigid steel.

2
REVISION OF SECTION 613
TRAFFIC SIGNAL, LIGHTING, AND COMMUNICATION CONDUIT

INSTALLATION METHODS

Conduit sizes and locations shall be as shown on the plans. Conduit shall be stubbed and capped for future uses where shown on the plans or where specified.

Existing empty underground conduit to be incorporated into a new system shall be cleaned with a mandrel or cylindrical wire brush and blown out with compressed air. The Contractor shall search for such conduit in the general vicinity shown on the plans, and shall notify the Owner in advance as to when this operation will take place. The Owner may, at his option, be present to monitor the activity. The cost of such activity shall be incidental to the project. In the event that such conduit has been rendered inoperative prior to the signal installation, the Contractor shall notify the Owner and payment for new conduit shall be made as per the unit costs provided in the bid.

Conduits terminating in poles, cabinets, and pedestal bases shall extend a maximum of 3 inches and a minimum of 2 inches above the foundation vertically, and shall be sloped toward hand holes in poles or base opening where transformer bases are used. Conduit entering pull boxes shall terminate a minimum of 2 inches and a maximum of 3 inches above the bottom of the box.

Conduit ends shall be accomplished by a ninety (90) degree elbow with a minimum radius of forty-eight (48) degrees. Where two (2) or more conduits meet, all ninety (90) degree elbows shall be brought together in the center of the pull box or cabinet foundation. Conduit shall only enter through the bottom of a pull box. Galvanized rigid conduit terminations within pull boxes shall be fitted with an end coupling as well as insulating bushings to prevent chafing the wire.

Conduits required to be terminated, stubbed, and plugged shall be as shown on the plans and as directed by the Owner. Conduit ends shall be capped with standard conduit caps. The location of ends of conduit for future electrical circuits under curbs, gutters, sidewalks, or structures shall be marked by a "Y" at least 3 inches high, cut into the face of the curb, gutter, or structure directly above the conduit.

Ends of unused metal type conduit shall be threaded and shall be capped with standard pipe caps until conductors are in place. When caps are removed, the threaded ends shall be provided with conduit bushings. Ends of unused non-metallic type conduit shall be capped with a standard PVC cap until conductors are in place. Ends of conduit populated with wire shall be plugged with duct seal putty to prevent water infiltration and rodent infestation of the conduit.

Conduit installed outside of the traveled portion of the roadway and out of future roadway areas shall be laid as follows: maximum depth of 30 inches and a minimum depth of 24 inches.

Concrete replacement within intersection islands created by installation of conduit will not be paid for separately, but included in the unit price for conduit. Replacement of roadway, sidewalk, or native growth areas created by installation of conduit will not be paid for separately, but included in the unit price for conduit.

All conduits, including conduits from the home run pull box to the controller cabinet, shall include 14-gauge copper stranded tracer wire for future locating of conduits. The sheathing for the tracer wire shall be purple in color. A minimum of two feet of slack tracer wire shall be left in each pull box and in the controller cabinet. At the end of each conduit run, the tracer wire shall be grounded at each traffic signal pole grounding lug.

3
REVISION OF SECTION 613
TRAFFIC SIGNAL, LIGHTING, AND COMMUNICATION CONDUIT

EXCAVATION AND BACKFILLING

The excavations required for the installation of conduit shall be performed in such a manner as to avoid unnecessary damage to streets, sidewalks, landscaping and other improvements. Trenches shall not be excavated wider than necessary for the installation of the electrical appurtenances. Concrete removal limits shall be to the nearest pavement, sidewalk or curb and gutter control joint. Excavation shall not be performed until immediately before installation of conduits. The material from the excavation shall be placed in a position not to cause damage or obstruction to vehicular or pedestrian traffic or interfere with surface drainage.

Trenches outside the traveled portion of the roadway shall be backfilled with granular material as approved by the Owner, in six-inch lifts and each lift compacted. Off-street trenches in native soil areas shall be backfilled with native soil and shall be compacted and shaped to match the surrounding surface. Surface materials in native soil areas disturbed by excavation and backfilling operations shall be replaced in kind equal to or exceeding original conditions. This shall include replacement of sod in lawn areas or reseeding in native soil areas at no additional cost to the project as directed by the Owner.

Trenches within islands, under sidewalks, in parking lots or other trenches in paved areas outside the traveled portion of the roadway shall be backfilled with Class 6 granular aggregate base course material as approved by the Owner. The backfill shall be in 6-inch lifts and each lift compacted up to a point within 3 inches of existing grade.

Trenches within or across the roadway, bike paths, trails and sidewalks shall be backfilled with CDOT-approved structural backfill (flow-fill) within 3 inches of existing grade, except on concrete surfaces which shall be removed to the nearest control joint and replaced in kind to match existing thickness, grade and finish. The top 3 inches of all trenches in asphalt roadways or asphalt off-roadway areas shall be filled to match existing grade and surfacing materials with hot asphalt mix. All roadways shall be repaired within forty-eight hours of cutting the surface.

Excavations in the street or highway shall be performed in such a manner that not more than one traffic lane is restricted in either direction at any time, unless otherwise permitted by the Owner. A minimum of one lane of traffic in each direction shall be kept open for each direction.

Excavations at intersections being reconstructed or improved shall be performed and backfilled before other improvements are completed so as to not require the repair or replacement of newly installed sidewalks, curbs and gutters, pavement, or landscaping.

Prior to backfilling, the Owner shall have the opportunity to inspect the trench, conduit and tape placement.

4
REVISION OF SECTION 613
TRAFFIC SIGNAL, LIGHTING, AND COMMUNICATION CONDUIT

GLOBAL POSITIONING SYSTEM

General

North American Datum 83 (NAD83) Colorado State Plane Central Zone coordinate system (grid) units in feet shall be provided for all roadway devices within the project limits. This shall include traffic signal controller cabinets, sign posts, pull boxes, water valve type pull boxes, traffic signal poles, pedestal poles, and street light poles. The elevation datum shall be based upon the North American Vertical Datum 1988 (NAVD 88).

Data Format

The GPS data collected shall be provided to the City in an AutoCAD drawing format using model space or using the GPS Device Installation form available upon request from the City. The use of AutoCAD drawings or the GPS Device Installation Location form shall be at the discretion of the Traffic Engineer. If AutoCAD drawings are required, the drawings shall include a note describing how the coordinates were established along with the primary control points that were used. The AutoCAD information shall also be incorporated into the asbuilts for the project.

The horizontal and vertical positional accuracy of the data collected shall be within a tolerance of + 0.3 feet.

Payment

GPS information gathering will not be measured or paid for separately, but shall be considered subsidiary to the pay item being installed. This work shall include all labor, materials, and equipment required to complete the work.

5
REVISION OF SECTION 613
TRAFFIC SIGNAL, LIGHTING, AND COMMUNICATION CONDUIT

STREET LIGHTING

General

This work shall consist of the furnishing and installation of street light poles, luminaires, and foundations in conformance with the plans. All work shall be done in accordance with these specifications, the National Electrical Code, and in conformity with the details as shown in the plans.

Luminaires

Luminaires will be provided by the City of Thornton Traffic Engineering. No submittals are required. Luminaires shall be EOI Compass Roadway Lighting Small with an A24 LED engine, 12000 lumen package, UD driver Type III medium optics 3000K color temperature, gray paint, 10V surge protection 7 pin PCR controls, and 4 bolt mounting. Photocells shall be Ribley 6390 LL-BK Long Life LED Photocells.

Luminaire Warranty

A minimum five (5) year warranty (at no additional cost) shall be provided for each luminaire, covering maintained integrity and functionality of:

- Luminaire housing, wiring, and connections
- LED light source(s)
    - Negligible light output from more than 10 percent of the LED packages constitutes luminaire failure.
- LED driver(s)
- Warranty period shall begin 90 days after date of invoice.

Luminaire Photo-electric Control

The photo-electric control (photocell) shall be a standard NEMA three (3) pole locking type. The photo-electric control shall meet the following general requirements:

- Photo-electric controls shall be rated for a nominal input voltage of 120 – 277V.
- Photo-electric controls shall have built-in metal oxide varistor (MOV) surge protection.
- Photo-electric controls shall be time delayed for a minimum of fifteen (15) seconds.
- Photo-electric controls shall be UL tested for a minimum of five thousand (5,000) cycles (approximately 13.7 years) at one thousand (1,000) watt minimum tungsten and one thousand eight hundred (1,800) volt-amp minimum ballast loads.
- Photo-electric controls shall meet UL Standard 773 requirements
- Photo-electric controls shall be in compliance with ANSI C136.10.
- Photo-electric controls shall have a minimum five (5) year warranty.

Photo-electric controls for LED drivers specified as dimmable shall have DALI control wires connected to the receptacle pads as specified by ANSI C136.41. Connection of the two remaining pads shall be by supplier, as directed by Owner

6
REVISION OF SECTION 613
TRAFFIC SIGNAL, LIGHTING, AND COMMUNICATION CONDUIT

MEASUREMENT AND PAYMENT

Payment of conduit shall be by linear foot of conduit measured horizontally from centerline of pull box to centerline of pull box and/or centerline of pull box to centerline of controller cabinet. Elbow, vertical, and slack quantities shall be incidental to the horizontal dimension. The cost for conduit installations will include costs for all necessary items including but not limited to backfill, jacking, drilling pits, and other incidentals necessary to complete the conduit installation in place for acceptance.

Measurement and payment for Wiring shall be a lump sum for approved, complete in place wiring required for the project. Material, equipment, potholing, and labor required to conduct the wiring, approved and complete in place, will not be measured separately, but shall be included in the work.

Measurement and payment for Meter Power Pedestal shall be for each approved, complete in place unit. Material, equipment, potholing, and labor required to construct the Meter Power Pedestal, approved and complete in place, will not be measured separately, but shall be included in the work.

Subsection 613.11 shall include the following:

Conduit for intersection wiring will be measured and paid for separately.

Subsection 613.12 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
2 Inch Electrical Conduit (Bored)	Linear Foot
Wiring	Lump Sum
Luminaire (LED)(11,400 Lumens)	Each
Meter Power Pedestal	Each
Light Standard Steel (30 Foot)	Each
Light Standard Foundation	Each

END OF SECTION REVISION

1
REVISION OF SECTION 613
PULL BOXES

Section 613 of the Standard Specifications is hereby revised for this project to include the following:

GENERAL

Pull box locations shown on the plans are approximate. The Contractor shall locate the exact location in the field and the Contractor shall have the Owner agree to the location prior to installation. Pull boxes for traffic signal conduit runs shall not be spaced more than 150 feet apart from each other unless approved by the Owner. It shall be the option of the Contractor, at his expense, to install additional pull boxes that he may desire to facilitate his work as approved by the Owner.

Pull boxes shall be constructed of an aggregate material consisting of sand and gravel bound together with a polymer and reinforced with continuous woven glass strands. The material shall have the following mechanical properties.

Compressive Strength	-	11,000	psi
Tensile Strength	-	1,700	psi
Flexural Strength	-	7,500	psi

Pull boxes used for loop detectors on sampling stations shall be a minimum of twelve (12) inches wide by sixteen (16) inches long by twelve (12) inches deep. Pull boxes used at junctions of roadway conduit crossing shall be a minimum of twenty (20) inches long by thirty-three (33) inches wide by fifteen (15) inches deep. Pull boxes used for traffic signal communication interconnect shall be a minimum of twenty-four (24) inches long by thirty-six (36) inches wide by twenty-four (24) inches deep. Pull boxes at the controller cabinet shall be a minimum of thirty (30) inches long by forty-eight (48) inches wide by twenty-four (24) inches deep. Use of two (2) pull boxes in place of the larger one shall not be permitted. Other sizes may be approved by the Owner.

Pull box lids shall have a non-skid surface with a minimum coefficient of friction of 0.5. Covers shall hold a minimum vertical test load of 8,000 pounds over a 10-inch x 10-inch surface with no physical damage or excess deflection. Covers shall have the words Traffic Signal embossed on them and be concrete gray color.

Lids for pull boxes sized thirty (30) inches long by forty-eight (48) inches wide by twenty-four (24) inches deep or larger shall consist of two pieces capable of being removed from the pull box independently. The configuration of the two-piece lid shall be such that access to the pull box is unobstructed when both pieces are removed.

INSTALLATION

Pull boxes shown in the vicinity of curbs and gutters shall be placed adjacent to the back of the curb. Pull boxes adjacent to standards shall be placed along the side of foundations as shown on the plans.

2
REVISION OF SECTION 613
PULL BOXES

The cover of the pull box shall be installed level with the finish grade. The cover of pull boxes located in sidewalks shall be installed level with the sidewalk. The bottom of all pull boxes shall rest on firm ground with 12 inches of three-quarters (3/4) inch to two (2) inch river run rock below the pull box for drainage. Pull boxes installed in a sidewalk must be tied into the sidewalk to prevent the boxes from being pushed down below the top of the sidewalk.

Pull boxes installed in dirt or landscaped areas shall have a twelve (12) inch wide by six (6) inch thick concrete collar placed around the top, level with the cover of the pull box and finish grade. All concrete collars shall be Portland cement concrete conforming to the applicable requirements for Class B as referenced in CDOTs Standard Specifications for Road and Bridge Construction (SSRBC).

Subsection 613.11 shall include the following:

New pull boxes will be measured and paid for per each complete pull box installed and approved by the City.

Subsection 613.12 shall include the following:

Payment for pull boxes will be for each box installed as outlined above. Payment for installation of pull boxes shall include all labor, materials, and equipment required to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Type One Pull Box	Each

Concrete will not be measured and paid for separately, but shall be included in the work.

END OF SECTION REVISION

1
REVISION OF SECTION 614
PUSH BUTTON STATIONS

Section 614 of the Standard Specifications is hereby revised for this project to include the following:

GENERAL

Pedestrian detection is accomplished by the push button stations.

Pedestrian push buttons shall be of the direct push button contact type and shall be black Polara Bulldog BDL3-B or approved equal. The push buttons shall operate on a voltage not to exceed 18V AC. The assembly shall be of tamper-proof design and equipped with a push button instruction sign. Button frames shall be painted black and ADA approved.

The assembly shall be weatherproof and constructed so it shall be impossible to receive any electrical shock under any weather conditions.

The pedestrian push button instruction sign shall include informational text as shown in the detail sheets in the plans.

Sign dimensions shall conform to mounting frames as shown in the detail sheets in the plans.

MEASUREMENT AND PAYMENT

Measurement and payment will be for each complete Pedestrian Push Button Post Assembly installed and accepted by the City, and shall include all materials, sign, push button station, reinforced concrete footing, labor, equipment, wiring and installation for proper operation.

Payment will be made under:

Pay Item	Pay Unit
Pedestrian Push Button Post Assembly	Each

END OF SECTION REVISION

1

REVISION OF SECTION 625
CONSTRUCTION SURVEYING

Section 625 of the Standard Specifications is hereby revised for this project as follows:

Subsection 625.11 shall include the following:

All survey records generated shall be the property of the City of Thornton.

Subsection 625.13 shall include the following:

Before granting Initial Acceptance, the following items shall be completed, reviewed and approved by the Engineer:

1. Verification that all Monuments and Stakes have been reset in accordance with sub-section 625.08
2. All Survey Records in accordance with sub-section 625.11

Payment will be made under:

Pay Item	Pay Unit
Construction Surveying	Lump Sum

END OF SECTION REVISION

1

REVISION OF SECTION 626
MOBILIZATION

Section 626 of the Standard Specifications is hereby revised for this project as follows:

Subsection 626.01 shall include the following:

The Contractor shall take responsibility to find adequate staging area(s) for the project. Staging areas may be permitted on City property with prior permission of the Project Manager. Any agreements made for staging on private property shall be made in writing and copies of the written agreements shall be provided to the City prior to Construction. All staging areas shall be secured with temporary fencing and restored to original conditions after construction. The Contractor shall provide erosion and sediment control for all staging areas and shall modify the Erosion and Sediment Control Plans to include staging areas.

The Contractor shall limit construction activities to those areas within the limits of disturbance as shown on the Plans to the maximum extent practical. All costs, whatsoever the nature, required for staging and temporary construction easements including temporary fencing and erosion and sediment control shall be considered incidental to the project.

Any disturbance beyond the limits presented on the drawings shall be restored to the original condition at Contractor's expense. Construction activities, in addition to normal construction procedures, shall include parking of vehicles or equipment, consolidation of construction debris or materials, and disposing of litter and any other action which alters existing conditions. All disturbances outside the Project Limits shall be pre-approved by the City and secured by the Contractor, at Contractor's expense.

Subsection 626.02 shall include the following:

The Pay Item price for mobilization shall also include any "startup" or incidental costs necessary to begin the Work, including any necessary Construction Equipment, offices, buildings, Materials or Equipment, personnel that are to be located at the Project site in preparation for the Work, Bonds, Insurance, permits, and any other incidental expenses that cannot otherwise be attributed directly to the other Bid Proposal Pay Items.

The overall Pay Item price for mobilization should not exceed ten percent (10%) of the original Contract Price. If the overall Pay Item price for mobilization exceeds ten percent (10%), and if Thornton does not reject the Bid, Thornton shall have the option of withholding payment of the amount exceeding ten percent (10%) of the Contract Price until the date of Final Payment.

Payment will be made under:

Pay Item	Pay Unit
Mobilization	Lump Sum

END OF SECTION REVISION

1
REVISION OF SECTION 630
PORTABLE MESSAGE SIGN PANEL

Section 630 of the Standard Specifications is hereby revised for this project as follows:

Subsection 630.01 shall include the following:

This work includes furnishing, operating, and maintaining a portable message sign panel.

Add subsection 630.031 immediately following subsection 630.03 as follows:

630.031 Portable Message Sign Panel. Portable message sign panel shall be furnished as a device fully self-contained on a portable trailer, capable of being licensed for normal highway travel, and shall include leveling and stabilization jacks. The panel shall display a minimum of three - eight character lines. The panel shall be a dot-matrix type with an LED legend on a flat black background. LED signs shall have a pre-default message that activates before a power failure. The sign shall be solar powered with independent back-up battery power. The sign shall be capable of 360 degrees rotation and shall be able to be elevated to a height of at least five feet above the ground measured at the bottom of the sign. The sign shall be visible from one-half mile under both day and night conditions. The message shall be legible from a minimum of 750 feet. The sign shall automatically adjust its light source to meet the legibility requirements during the hours of darkness. The sign enclosure shall be weather tight and provide a clear polycarbonate front cover.
Solar powered message signs shall be capable of operating continuously for 10 days without any sun. All instrumentation and controls shall be contained in a lockable enclosure. The sign shall be capable of changing and displaying sign messages and other sign features such as flash rates, moving arrows, etc.
Each sign shall also conform to the following:

(1) In addition to the onboard solar power operation with battery back-up, each sign shall be capable of operating on a hard wire, 100-110 VAC, external power source.
(2) All electrical wiring, including connectors and switch controls necessary to enable all required sign functions shall be provided with each sign.
(3) Each sign shall be furnished with an operating and parts manual, wiring diagrams, and trouble-shooting guide.
(4) The portable message sign shall be capable of maintaining all required operations under Colorado mountain-winter weather conditions.
(5) Each sign shall be furnished with an attached license plate and mounting bracket.
(6) Each sign shall be wired with a 7-prong male electric plug for the brake light wiring system.

Subsection 630.13 shall include the following:

The portable message sign panel shall be on the project site at least 14 calendar days before the start of active roadway construction. Maintenance, storage, operation, relocation to different sites during the project, and all repairs of portable message sign panels shall be the responsibility of the Contractor.

Subsection 630.18 shall include the following:

Portable message sign panels will be measured one of the two following ways:

(1) By the actual number of days each portable message sign is used on the project as approved by the Engineer.
(2) By the maximum number of approved units in use on the project at any one time.

Payment shall be made under:

Pay Item	Pay Unit
Portable Message Sign Panel	Each

END OF SECTION REVISION

FORCE ACCOUNT

DESCRIPTION

This special provision contains the City's estimate for force account items included in the Contract. The estimated amounts marked with an asterisk will be added to the total bid to determine the amount of the performance and payment bonds. Force Account work shall be performed as directed by the Engineer.

BASIS OF PAYMENT

Payment will be made in accordance with subsection 109.04. Payment will constitute full compensation for all work necessary to complete the item.

Force account work valued at $5,000 or less, that must be performed by a licensed journeyman in order to comply with federal, state, or local codes, may be paid for after receipt of an itemized statement endorsed by the Contractor.

Estimated

Force Account Item	Estimated Quantity	Amount
F/A Minor Contract Revisions	F.A.	$ 25,000.00
F/A On-The-Job Trainee	F.A.	$ 2,000.00
F/A Obtain Power From Xcel Energy	F.A.	$ 10,000.00
F/A Erosion Control	F.A.	$ 5,000.00
F/A Irrigation Restoration	F.A.	$3,000.00

F/A Minor Contract Revisions – Consists of minor work authorized and approved by the Engineer, which is not included in the contract plans or specifications, and is necessary to accomplish the scope of work of this contract.

F/A On-the-Job Trainee – Payment for job trainees used on this project to achieve the On-the-Job Trainee contract goal.

F/A Obtain Power From Xcel Energy – Payment for obtaining power from Xcel Energy for the proposed street lights.

F/A Erosion Control – This work consists of Stormwater BMPs authorized and approved by the Engineer. This Force Account is to pay for all necessary work and materials for erosion control items not identified in the plans and at the City’s direction. Payment will be made based on time and materials used to perform the work. All items shall be pre-approved by the Engineer prior to installation, or they will be at no cost to the project.

F/A Irrigation Restoration – This work consists of restoring the existing irrigation system to the existing working condition or better in the opinion of the City. This Force Account is to pay for all necessary work and materials for irrigation items not identified in the plans and at the City’s direction. Payment will be made based on time and materials used to perform the work. All items shall be pre-approved by the City prior to installation, or they will be at no cost to the project.

END OF SECTION REVISION

1
TRAFFIC CONTROL PLAN – GENERAL

The key elements of the Contractor's method of handling traffic (MHT) are outlined in subsection 630.10(a). The components of the TCP for this project are included in the following:

(1) Subsection 104.04 and Section 630 of the Standard Specifications.

(2) Standard Plan S-630-1, Traffic Controls for Highway Construction, and Standard Plan S-630-2.

(3) Signing Plans

The Contractor shall provide, erect and maintain proper traffic control devices until the site is open to traffic. The Contractor shall submit a traffic control plan to the City of Thornton for approval prior to construction. Traffic control shall also include safety and control of pedestrians and bicyclists on the sidewalks and trails in and around the project site.

Unless otherwise approved by the Engineer, the Contractor’s equipment shall follow normal and legal traffic movements. The Contractor’s ingress and egress of the work area shall be accomplished with as little disruption to traffic as possible. Traffic control devices shall be removed by picking up the devices in a reverse sequence to that used for installation. This may require moving backwards through the work zone. When located behind barrier or at other locations shown on approved traffic control plans, equipment may operate in a direction opposite to adjacent traffic.

The responsibility under the Contract for all traffic control resides with the Contractor and any participation by law enforcement personnel in Contractor traffic control activities will be referenced in either the Special Provisions or General Notes of the Plans. Nothing in this Contract is intended to create an entitlement, on the part of the Contractor, to the services or participation of the law enforcement organization.

The flow of vehicular, pedestrian, and bicycle traffic on public streets and roadways shall be maintained at all times during construction in accordance with the rules, regulations, and conditions as set forth in the traffic control permit issued by the City of Thornton Project Manager. Signs, barricades, lights, and warning devices shall be constructed and used in accordance with the MUTCD and the Colorado supplement. The ATSSA Guide shall be strictly followed by the Responsible Party during the progress of the work.

The Responsible Party shall be responsible for the provision of a safe travel way on all streets, roadways sidewalks, and trails on and adjacent to the job site. The Responsible Party shall erect or cause erection of proper traffic control warning devices around all excavations, embankments, and obstructions and shall be responsible for the proper maintenance of said erected devices, in accordance with the traffic control permit and the MUTCD.

2
TRAFFIC CONTROL PLAN – GENERAL

The Responsible Party shall cause suitable warning lights to be provided and kept lighted at night or other times when visibility is limited. The Responsible Party shall provide flaggers and/or off-duty police protection as may be determined by the City of Thornton Project Manager for the protection of the public, as well as workers on the job site.

The Responsible Party shall coordinate with the Traffic Engineer so that arrangements may be made by the Responsible Party for detours, parking, and access to property adjacent to work, etc., 48 hours prior to their need. A minimum notification of one (1) week is required when detouring a street.

The Responsible Party shall not work within any portion of a street without receiving a Traffic Control Permit from the Traffic Engineer prior to such work. Full roadway closures will be reviewed on a case by case basis. The City reserves the right to refuse to allow full road closures. Requirements for such closures will be determined at the time of issuance of permit. The responsible party will be responsible for all public notices, public meetings, and requirements as outlined in the Traffic Control Permit.

No work shall be allowed at signalized intersections or on arterial roadways which impedes normal traffic flow from 5:00 a.m. to 8:30 a.m., and 3:30 p.m. to 7:00 p.m., except during emergencies or with prior approval of the Traffic Engineer. Failure to complete work within the traffic control permit may result in a “stop work” order.

The Responsible Party shall be responsible for all damages to the work due to failure to place barricades, signs, lights, flaggers, and other workers to protect it. Whenever evidence of such damage is found prior to acceptance, the Traffic Engineer may order the damaged portion immediately removed and replaced by the Responsible Party.

During the construction of this project, traffic shall use the present traveled roadway unless otherwise approved by the Traffic Engineer.

The Contractor shall not have construction equipment or materials in the lanes open to traffic at any time, unless approved by the Traffic Engineer.

During the resurfacing work, only one lane may be closed to traffic at any time unless approved by the Engineer. Traffic shall not be delayed for more than 5 minutes or as directed by the Traffic Engineer.

Except in cases of emergency, maintenance, or protection of work already completed, no work shall be allowed between the hours of 7 p.m. and 7 a.m.; nor on Saturday, Sunday, or legal holidays unless approved by Infrastructure Engineering in each case.

3
TRAFFIC CONTROL PLAN – GENERAL

Due to lane closure and working time restrictions, the Contractor may utilize steel plates during utility relocation work and during storm sewer, sanitary sewer, and waterline system installations. Steel plates shall be temporarily placed over the open trench prior to opening the work area to traffic. The Contractor is responsible for designing the steel plates, including thickness, width, and secure connection to the existing pavement. The design must meet Load and Resistance Factor Design (LRFD) specifications, and shall include a PE stamp on the design.

When steel plates are used, the pavement area to be overlapped by the plate shall be planed to the depth of the plate to eliminate a vertical edge for traffic. The use of steel plates and detour pavement requires a Methods Statement, including an emergency action plan in the case of any material failures. In the case of failures, any lane closures taken outside of the Traffic Control Plan – General specification shall be treated as a working time violation.

All work associated with the usage of steel plates will not be measured and paid for separately but shall be included in the work.

All costs incidental to the foregoing requirements shall be included in the original contract price for Traffic control.

Unless otherwise authorized by the Engineer, one lane in each direction must be maintained on all affected roadways. No turn movement restrictions will be permitted.

END OF SECTION REVISION

1
UTILITY SPECIFICATION
DESCRIPTION

Known utilities within the limits of this project are:

UTILITY / ADDRESS	CONTACT / EMAIL	PHONE
Xcel Energy 5460 W. 60th Avenue Arvada, CO 80003	Christopher Major Christopher.A.Major@xcelenergy.com	(720) 527-3241
Lower Clear Creek Ditch Company PO Box 701 Eastlake, CO 80614	Pia Gerstle office@lowerclearcreekditch.com	(720) 556-5842
CenturyLink / Level 3 / Lumen 5325 Zuni Street Denver, CO 80221	Luke Thompson Luke.thompson@lumen.com Lewis Farrar Lewis.Farrar@lumen.com Gary Crispe gcrispe@terratechllc.net	(720) 093-9853 (719) 955-2230
Comcast Cable 8000 E. Iliff Avenue Denver, CO 80231	Butch Buster Butch_Buster@comcast.com	(720) 531-2577
City of Thornton Traffic Operations 12450 Washington Street Thornton, CO 80241	Earl Waters Earl.waters@thorntonco.gov	(303) 886-3238
City of Thornton Infrastructure Engineering 12450 Washington Street Thornton, CO 80241	Dan Schiltz daniel.schiltz@thorntonco.gov	(720) 977-6226

The work described in these plans and specifications requires full cooperation between the Contractor and the utility owners in accordance with Subsection 105.11 in conducting their respective operations, to complete the utility work with minimum delay to the project.

Part 1 CONTRACTOR SHALL PERFORM THE WORK LISTED BELOW:

Coordinate project construction with the performance by the utility owner of each utility work element listed in Part 2 below. Perform preparatory work specified in Part 2 for each utility work element. Provide an accurate construction schedule that includes all utility work elements to the owner of each impacted utility.

Provide each utility owner with weekly updates to the schedule. Conduct detailed utility coordination meetings prior to each construction phase to coordinate all requirements and schedules, and provide other necessary accommodations as directed by the Engineer. Notify each utility owner in writing, with a copy to the Engineer, prior to the time each utility work element is to be performed by the utility owner. Provide the notice with the number of days specified in Part 2 immediately prior to the time the utility work must be begun to meet the project schedule.

Provide traffic control, as directed by the Engineer, for any utility work by the utility owner expected to be coordinated with construction. However, traffic control for utility work outside of typical project work hours shall be the responsibility of the utility owner.

Perform each utility work element for every utility owner listed here in Part 1. Notify each utility owner in advance of any work being done by the Contractor to its facility, so that the utility owner can coordinate its inspections for final acceptance of the work with the Engineer.

2
UTILITY SPECIFICATION DESCRIPTION

Project Limits – All Utility Owners
Prior to excavating, the Contractor shall positively locate (through potholing if necessary) all potential conflicts with existing underground utilities and proposed construction, as determined by the Contractor according to proposed methods and schedule for construction. The Contractor shall modify construction methods to avoid existing underground facilities as needed, and as approved by the City. The Contractor shall contact the Colorado 811 (formerly Utility Notification Center of Colorado (UNCC)) at phone no. 811, to have locations of Colorado 811 registered lines marked by member companies. Other facilities, such as ditches and drainage pipes may exist, and it is Contractor's responsibility to investigate, locate and protect such facilities. Additional coordination with individual utilities may be necessary.

AT&T

The Contractor shall give AT&T 30 days notice prior to any work near AT&T's facilities and shall protect the facilities at all times throughout construction. Construction is anticipated to begin in August of 2026.

CenturyLink / Level 3 / Lumen

The Contractor shall give CenturyLink 30 days notice prior to any work near CenturyLink's facilities and shall protect the facilities at all times throughout construction. Construction is anticipated to begin in August of 2026.

Lower Clear Creek Ditch Company (LCCDC)

The Contractor shall give LCCDC 30 days notice prior to any work near LCCDC's facilities and shall protect the facilities at all times throughout construction. Construction is anticipated to begin in August of 2026.

Xcel

The Contractor shall give Xcel 30 days notice prior to any work near Xcel's facilities and shall protect the facilities at all times throughout construction. Construction is anticipated to begin in August of 2026.

Xcel Energy Power Source

After the Contractor has completed the installation of the proposed new meter cabinet pedestal for roadway lighting, including conduit and wiring to the power sources as shown on the plans, Xcel forces shall connect the metered power sources. **This work is expected to be coordinated with construction and take up to 20 working days to complete.**

The Contractor shall be responsible for the coordination of power source work to be performed by Xcel Energy. The Contractor shall submit a Builders Call Line (BCL) Application for electrical services for Xcel Energy work element that is to be coordinated with this project. A separate application is required for each electrical service. The request is to be processed through Xcel Energy Builder's Call Line at 1-800-628-2121 or BCLCO@Xcelenergy.com. The name of the owner for each meter or flat-rated service shall be the owner's name and billing address responsible for paying the utility bill and shall be listed on the BCL application. The Contractor shall perform the required coordination to establish the power source for the street lighting and traffic signals, as shown on the traffic signals plans. The Contractor shall perform all work necessary to maintain existing or establish new power sources to the devices called for in the plans and per the standard for any metered or flat-rated services. All cost charges from the power service provider, and all necessary materials and labor shall be reimbursed from the **F/A Furnish and Install Electrical Service**.

3
UTILITY SPECIFICATION
DESCRIPTION

PART 2 UTILITY OWNERS SHALL PERFORM THE WORK LISTED BELOW:

Although the Contractor shall provide traffic control for utility work expected to be coordinated with construction, traffic control for utility work outside of typical project work hours shall be the responsibility of the utility owner. The utility owner shall prepare and submit to the Engineer a Method of Handling Traffic for utility work to be performed outside typical project work hours. The utility owner shall obtain acceptance of the Method of Handling Traffic from the Engineer prior to beginning the utility work to be performed outside typical project work hours.

AT&T

AT&T shall:

- Verify the existence and location of AT&T's facilities along the project corridor.
- Coordinate with the project team, providing information as needed.
- Notify the project team if there are any changes to the locations or functions of facilities that might impact the project..

Construction of the City's project is scheduled to start in August of 2026. To the best of our knowledge, there is no work on the project that requires changes in location or function of AT&T facilities. If there are any changes to this during design or construction, the team will make every effort to accommodate these facilities, and work with AT&T to minimize impacts.

CenturyLink / Level 3 / Lumen

CenturyLink shall:

- Verify the existence and location of CenturyLink's facilities along the project corridor.
- Coordinate with the project team, providing information as needed.
- Notify the project team if there are any changes to the locations or functions of facilities that might impact the project..
- Relocate and adjust the telephone pedestal just west of the drive for 4993 E 100th Avenue.
- Relocate and adjust the telephone pedestal just east of the drive for 5015 E 100th Avenue.
- Relocate and adjust the telephone pedestal just east of the eastern drive for 5115 E 100th Avenue.
- Make every effort to complete the work in a timely matter so not to impact the overall construction schedule.

Relocation of CenturyLink/Level 3/Lumen's existing facilities is anticipated to be completed at the beginning of construction of the City's project, which is scheduled to start in August of 2026. Relocations are expected to take no more than two weeks and will be at CenturyLink/Level 3/Lumen's cost, per the franchise agreement with the City. The Contractor shall notify CenturyLink/Level 3/Lumen 30 days in advance of initiating work in the vicinity of CenturyLink/Level 3/Lumen's facilities.

The Contractor shall provide traffic control for CenturyLink/Level 3/Lumen's utility work that is expected to occur during typical project work hours. Utility work that occurs outside of the typical work hours, or outside of project limits, shall be the responsibility of CenturyLink/Level 3/Lumen. In those cases, CenturyLink/Level 3/Lumen shall prepare a Method of Handling Traffic for utility work and obtain acceptance from the City through normal permitting processes prior to beginning the utility work.

The Contractor shall work with CenturyLink/Level 3/Lumen to provide clearing & grubbing, and/or demolition to clear room for construction of new CenturyLink/Level 3/Lumen facilities. The Contractor shall work with CenturyLink/Level 3/Lumen to provide construction staking including, but not limited to, the final location of proposed improvements, right-of-way, and/or easements.

4
UTILITY SPECIFICATION DESCRIPTION

Lower Clear Creek Ditch Company (LCCDC)

LCCDC shall:

- Verify the existence and location of LCCDC's facilities along the project corridor.
- Coordinate with the project team, providing information as needed.
- Notify the project team if there are any changes to the locations or functions of facilities that might impact the project..

Construction of the City's project is scheduled to start in August of 2026. To the best of our knowledge, there is no work on the project that requires changes in location or function of LCCDC facilities. If there are any changes to this during design or construction, the team will make every effort to accommodate these facilities, and work with LCCDC to minimize impacts.

Xcel

Xcel shall:

- Verify the existence and location of Xcel's facilities along the project corridor.
- Coordinate with the project team, providing information as needed.
- Notify the project team if there are any changes to the locations or functions of facilities that might impact the project..
- Relocate and/or adjust the transformer/switching cabinet located near Station 5+35 along the north side of 100th Avenue.
- Relocate and/or adjust the transformer/switching cabinet located near Station 5+70 along the north side of 100th Avenue.
- Relocate and/or adjust the existing underground electric lines near Station 11+00 along the north side of 100th Avenue to avoid conflict with proposed storm drain facilities.
- Make every effort to complete the work in a timely matter so not to impact the overall construction schedule.

Relocation of Xcel's existing facilities is anticipated to be completed at the beginning of construction of the City's project, which is scheduled to start in August of 2026. Relocations are expected to take no more than two weeks and will be at Xcel's cost, per the franchise agreement with the City. The Contractor shall notify Xcel 30 days in advance of initiating work in the vicinity of Xcel's facilities.

Xcel Energy Power Source

- Xcel forces shall provide/install power sources for the roadway lighting as shown on the plans and coordinated with the Contractor.

The Contractor shall provide traffic control for Xcel's utility work that is expected to occur during typical project work hours. Utility work that occurs outside of the typical work hours, or outside of project limits, shall be the responsibility of Xcel. In those cases, Xcel shall prepare a Method of Handling Traffic for utility work and obtain acceptance from the City through normal permitting processes prior to beginning the utility work.

The Contractor shall work with Xcel to provide clearing & grubbing, and/or demolition to clear room for construction of new Xcel facilities. The Contractor shall work with Xcel to provide construction staking including, but not limited to, the final location of proposed improvements, right-of-way, and/or easements.

5
UTILITY SPECIFICATION DESCRIPTION

GENERAL:

The Contractor shall comply with Article 1.5 of Title 9, CRS ("Excavation Requirements") when excavating or grading is planned in the area of underground utility facilities. The Contractor shall notify all affected utilities at least two (2) business days, not including the actual day of notice, prior to commencing such operations. The Contractor shall contact the Colorado 811 (formerly Utility Notification Center of Colorado (UNCC)) at phone no. 811, to have locations of Colorado 811 registered lines marked by member companies. All other underground facilities shall be located by contacting the respective owner. Utility service laterals shall also be located prior to beginning excavation or grading.

The location of utility facilities as shown on the plan and profile sheets, and herein described, are depicted in accordance with their achieved Quality Level as defined in the American Society of Civil Engineer's document ASCE 38, "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data.

All costs incidental to the foregoing requirements will not be paid for separately but shall be included in the work.

END OF SECTION