

**WESTGATE COMMUNITY SIDEWALKS
SAR M266-046 22552**

**CITY OF THORNTON
SPECIAL PROVISIONS
WESTGATE COMMUNITY SIDEWALKS**

The specifications for this project shall be the Colorado Department of Transportation’s “Standard Specifications for Road and Bridge Construction,” (SSRBC) 2022 Edition. Reference to “Division”, “Department”, or “CDOT” in the SSRBC shall be considered to mean the Owner, the City of Thornton. References to “Engineer”, “Project Engineer” or “Inspector” shall be considered to mean the owner’s field representative, a City of Thornton Construction Coordinator. References to Sections 100 through 109 of the SSRBC in Sections 200 through 700 shall be deleted in instances where such references are not otherwise addressed, as determined by the Owner, in the Special Condition and General Conditions sections of the Contract. The following modified Project Technical Specifications take precedence over the SSRBC.

The Contractor must have a copy of all applicable specifications, as identified in this section, titled “Technical Specifications”, and these project specifications on the job site at all times.

PROJECT SPECIAL PROVISIONS

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STANDARD SPECIAL PROVISIONS

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Revision of Section 105 – Control of Work	(October 1, 2022)	1
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Revision of Section 109 – Asphalt Cement Cost Adjustment (Asphalt Cement Included in the Work)	(October 1, 2022)	3
Revision of Section 109 – Measurement and Payment	(December 9, 2022)	1
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Minimum Wages, Colorado, CDOT_DB_Min_Wages_CO20230008_MOD_2, Highway Construction for Adams, Arapahoe, Broomfield, Clear Creek, Elbert, Gilpin, Jefferson, and Park counties.	(June 2, 2023)	11
On the Job Training	(October 1, 2022)	4
Required Contract Provisions – Federal-Aid Construction Contracts	(October 1, 2022)	1

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NOTICE TO BIDDERS

The proposal guaranty shall be a certified check, cashier's check, or bid bond in the amount of 5 percent of the Contractor's total bid.

Pursuant to subsections 102.04 and 102.05, it is recommended that bidders on this project review the work site and plan details with an authorized City representative. Prospective bidders shall contact the listed authorized City representative at least 12 hours in advance of the time they wish to go over the project.

Contract Administrator	Keith Griess Management Services keith.griess@thorntonCO.gov Phone: (303) 538-7643
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The above referenced individual is the only representative of the City with authority to provide any information, clarification, or interpretation regarding the plans, specifications, and any other contract documents or requirements.

Questions received from bidders along with Thornton responses will be posted on the Thornton web site listed below as they become available.

<https://solicitations.thorntonco.gov/solicitations>

If the bidder has a question or requests clarification that involves the bidder's innovative or proprietary means and methods, phasing, scheduling, or other aspects of construction of the project, the Project Engineer will direct the bidder to contact the Resident Engineer directly to address the question or clarification. The Resident Engineer will keep the bidder's innovation confidential and will not share this information with other bidders.

The Project Manager will determine whether questions are innovative or proprietary in nature. If the Project Manager determines that a question does not warrant confidentiality, the bidder may withdraw the question. If the bidder withdraws the question, the Project Manager will not answer the question and the question will not be documented on the Thornton web site. If the bidder does not withdraw the question, the question will be answered, and both the question and Thornton answer will be posted on the web site. If the Project Manager agrees that a question warrants confidentiality, the Project Manager will answer the question, and keep both question and answer confidential. Thornton will keep a record of both question and answer in their confidential file.

All questions shall be directed to the Thornton contacts listed above no later than 7:00 A.M. Monday of the week of bid opening. Final questions and answers will be posted no later than Tuesday morning of bid opening week.

Questions and answers shall be used for reference only and shall not be considered part of the Contract.

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DISADVANTAGED BUSINESS ENTERPRISE (DBE) CONTRACT GOAL

This is a federally-assisted construction project. As described in the CDOT DBE Standard Special Provision, the Bidder shall make good faith efforts to meet the following contract goal:

11% Percent DBE participation.

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**COMMENCEMENT AND COMPLETION OF WORK
(WORKING DAY)**

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 Contract Manager in the "Notice to Proceed." The Contractor shall complete all work within 42 working days in accordance with the "Notice to Proceed."

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**REVISION OF SECTION 102
PROJECT PLANS AND OTHER DATA**

Section 102 of the Standard Specifications is hereby revised for this project as follows:

Subsection 102.05 shall include the following:

The following information will be available for review at the Project Manager's office (12450 Washington Street Thornton, Colorado 80241-2405):

1. Survey information
2. Drainage Memo
3. MS4 Letter

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**REVISION OF SECTION 105
CONTROL OF WORK**

Section 105 of the Standard Specifications is hereby revised for this project as follows:

Subsection 105.02 shall include the following:

In addition to the items listed in Table 105-1, the Contractor shall submit for review and approval the following list of equipment and materials as required by the plans, prior to the Contractor ordering such materials. Additional documentation may be requested at the discretion of the Traffic Engineer.

Section No.	Description	Type	Contractor PE Seal Required?	Specialty Unit Review	Review Time (working days)
614	Flashing Beacon (Solar Powered)	Working Drawing	No	Traffic	10
614	Rectangular Rapid Flashing Beacon	Working Drawing	No	Traffic	10
614	Steel Sign Post	Shop Drawing	No	Traffic	10
627	Preformed Thermoplastic Pavement Marking	Materials	No	Traffic	10

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**REVISION OF SECTION 202
REMOVAL OF ASPHALT MAT**

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

Subsection 202.01 shall include the following:

This work includes removal and disposal of existing asphalt mat within the project limits as shown on the plans or at locations directed by the Engineer.

In subsection 202.02 delete the seventh paragraph and replace with the following:

The existing asphalt mat shall be removed in a manner that minimizes contamination of the removed mat with underlying material. The removed mat shall become the property of the Contractor and shall be either disposed of outside the project site, or used in one or more of the following ways:

1. Used in embankment construction in accordance with subsection 203.07(c).
2. Placed in bottom of fills as approved by the Engineer.
3. Recycled into the hot mix asphalt.
4. Placed in the subgrade soft spots as directed by the Engineer.

Subsection 202.11 shall include the following:

The removal of the existing asphalt mat will be measured by the square yard of mat removed to the required depth and accepted.

Subsection 202.12 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Removal of Asphalt Mat	Square Yard

Unless otherwise specified in the Contract, the disposal of the asphalt mat or its use in other locations on the project will not be measured and paid for separately, but shall be included in the work.

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**REVISION OF SECTIONS 202 AND 412
REMOVAL AND REPLACEMENT OF CONCRETE PAVEMENT**

Sections 202 and 412 of the Standard Specifications are hereby revised for this project as follows:

In Subsection 202.02 delete the sixth paragraph and replace with the following:

The areas of concrete pavement to be removed shall be isolated in both the longitudinal and transverse directions by the double saw cut method of sawing in accordance with FHWA’s publication entitled “Guide for Full-Depth Repairs”. Sawing shall be accomplished with the use of a diamond blade saw or approved equivalent. Sawing of the concrete pavement shall be done to a true line, with a vertical face, unless otherwise specified. Sawing shall be full depth and shall go through the existing tie-bars and dowel bars, leaving free vertical edges at the limits of the removal.

After sawing has been completed, the deteriorated concrete shall be lifted vertically from its position unless otherwise approved by the Engineer. Pavement breakers or jackhammers shall be used in the removal process where lifting is not possible. All loose materials shall be removed from the repair area. Removed concrete slabs and excavated soils shall become the property of the Contractor and shall be disposed of in accordance with subsection 202.07.

After concrete pavement is removed, the underlying material will be evaluated by the Engineer. Unsuitable material shall be removed in accordance with subsection 206.03 and replaced with aggregate base course of the class and depth specified in the Contract.

The subsequent aggregate base course shall be placed with moisture and density control in accordance with Section 304.

Subsection 202.11 shall include the following:

Removal of concrete pavement will be measured by the square yard, completed to the required depth, and accepted.

Subsection 202.12 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Removal of Concrete Pavement	Square Yard

Payment for Removal of Concrete Pavement will be full compensation for all work and materials required to complete the item, including sawing, removing, and disposal of the concrete pavement.

Structure excavation for removal of unsuitable material will be measured and paid for in accordance with subsection 206.07.

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

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**REVISION OF SECTIONS 202 AND 412
REMOVAL AND REPLACEMENT OF CONCRETE PAVEMENT**

Subsection 412.13 shall include the following:

Dowel bars and tie bars for replaced concrete pavement shall be placed in accordance with Standard Plan M-412-1 unless otherwise directed by the Engineer. To anchor dowel bars and tie bars, holes shall be drilled into the sawed face of the existing slab, perpendicular to the joints. All alignments shall be measured and verified prior to the placement of concrete. Dowel baskets shall be used for joints in repair areas that exceed more than one panel replacement.

Compressed air shall be used to remove dirt and debris from all drilled holes. After cleaning and prior to bar insertion, epoxy grout shall be discharged to the back of the hole to force the grout forward. Sufficient epoxy grout shall be injected into the back of the hole in order to cover the bar over the entire length of embedment. Each bar shall be twisted a minimum of one full turn during insertion.

Subsection 412.17 shall include the following:

The smoothness of the replaced concrete shall be tested in accordance with subsection 105.07(a).

In subsection 412.23, first paragraph, delete the first sentence and replace it with the following:

The quantities of Concrete Pavement, Concrete Pavement (Patching), and Placed Concrete Pavement to be paid for under these items will be the number of square yards completed and accepted.

Subsection 412.24 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Concrete Pavement (Patching)	Square Yard

Payment for Concrete Pavement (Patching) will be full compensation for all work and material required to place and finish the replacement concrete pavement in accordance with the Contract.

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**REVISION OF SECTION 209
WATERING AND DUST PALLIATIVES**

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

Subsection 209.05 shall include the following:

The Contractor shall be responsible for controlling vehicle and equipment speeds within the project site to keep dust to a minimum. If excessive dust is being generated by construction traffic, the Contractor shall immediately take corrective measures.

In Subsection 209.08, delete paragraphs one, two, and three and replace with the following:

Water required for all work covered under the Contract will not be measured and paid for separately but shall be included in the work. The source of this water is the Contractor's responsibility. Water may not be taken from on-site ditches, creeks, or their tributaries.

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**REVISION OF SECTION 212
LANDSCAPE RESTORATION**

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

Subsection 212.08 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Landscape Restoration	Lump Sum

Landscape Restoration includes all work necessary to restore landscape areas such as adjusting and resetting irrigation, reset or replacing mulching.

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**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 on structures.

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) *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. 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.

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

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.

- (B) *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 $\frac{3}{4}$ inch by $\frac{3}{4}$ 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.

The 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. 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.

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**REVISED 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.

Netting will be measured by the square yard of material placed to keep birds from nesting on the structure. Square yards will be calculated using the length of netting measured where it is attached to the ground and the average height of the netting where it is attached to the structure.

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.

Pay Item	Pay Unit
Wildlife Biologist	Hour

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PRAIRIE DOG MANAGEMENT**

Section 240 of the Standard Specification is hereby added for this project as follows:

DESCRIPTION

240.01 This work may require the passive relocation, active trapping, transporting, donating, and/or euthanizing Black Tailed Prairie Dogs (BTPD). If BTPD trapping and euthanasia is required, then the Contractor shall comply with the CDOT BTPD policy at all times. This policy can be accessed at:

<http://www.coloradodot.info/programs/environmental/wildlife/guidelines/pdpolicy0109.pdf/view>

MATERIALS

240.02 The Contractor shall furnish all material and equipment of sufficient type and size to complete the BTPD management.

CONSTRUCTION REQUIREMENTS

240.03 The Contractor shall be responsible for ensuring that construction activity is conducted consistent with the 2009 CDOT Impacted Black Tailed Prairie Dog Policy. The Contractor shall have two options available for compliance with that policy (a) passive relocation and (b) live trapping and euthanasia, each of which is described below.

A biological clearance was prepared for the project. The clearance indicates that passive relocation may be feasible to mitigate potential impacts to black-tailed prairie dogs. Non-lethal control is the preferred management approach. In the event that Passive Relocation is selected:

(a) Passive Relocation

1. This method of Passive Relocation can be used between July 1 and March 15 after the affected area has been determined to be devoid of other state and federally listed species. Employing this technique between August 15 and November 30 is preferred. If these dates conflict with other environmental constraints applied within the prairie dog colony, the other constraints will take precedence, otherwise, CDOT's prairie dog policy shall be followed:
 - a) No more than 7 days prior to construction, black silt fencing will be installed delineating the construction zone near active prairie dog burrows. All active prairie dog burrows outside this zone shall be avoided. The silt fence will be opaque and a minimum height of 24 inches above ground to create a visual barrier for prairie dogs. The silt fence will be buried a minimum of 12 inches into the soil, or the bottom 12 inches buried within a clean soil berm or anchored with aggregate bags to preclude prairie dogs from going under the fence per M-208-1. Prairie dogs respond to holes where light can pass through the visual barrier by clawing and chewing at the fabric. Therefore, no light passage can be allowed along the bottom edge, along the seams, or as a result of holes in the fabric. Proper installation and subsequent maintenance shall prevent this.
 - b) Within the passive relocation zone, blading, disking, manual collapsing with shovel or a similar approach will be used to disturb burrow entrances at a depth of **no greater** than 6 inches, but not bury any animals within burrows. During burrow filling activities, a 2'-3' gap in the silt fence will be left open at a seam and facing away from pavement to allow the animals to leave the construction area. Note: If the construction zone abuts the right-of-way, the gap should then face the asphalt to avoid moving prairie dogs onto adjacent landowner's property.
 - c) Biodegradable, nontoxic, organic rodent deterrents can be applied to encourage borrow abandonment, although such application is not required.

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**REVISION OF SECTION 240
PRAIRIE DOG MANAGEMENT**

- d) Twenty-four to forty-eight hours after the soil has been disturbed within the passive relocation zone the area will be monitored once by a qualified biologist (Subject to the approval of the Regional Biologist based on review of the Contractor's biologist's qualifications. A resume of the biologist will be submitted to the Engineer at least 10 days prior to the work for approval by the Engineer) for active burrows to ensure the area has been vacated. If any burrows are discovered to have been re-opened they will be filled with enough soil to close the burrow opening by repeating Step B or by hand/shovel, yet still allow any prairie dogs within the burrow to dig their way out. Placing a wad of newspaper in the burrow entrance acts as a temporary plug and holds the fill dirt in place. Active burrows will be determined by a visual inspection of all burrows. Fresh scat, diggings, or burrow repairs indicate active burrows. Any burrows not clearly inactive will be treated as active. Approximately two gallons of dirt is sufficient to close the opening. Dirt in the holes shall remain loose and shall not be tamped or compacted.
 - e) Repeat this inspection for a minimum of three rounds, or until no burrows within the passive relocation zone shows sign of activity. At which time the gap in the silt fence shall be closed so no light will penetrate the barrier at the seams or at the bottom of the fence.
 - f) If there are no active burrows within the passive relocation zone, monitoring shall continue daily until construction activities destroy all inactive burrows.
 - g) If burrows within the passive relocation zone remain, or become, active after the initial three rounds of monitoring, efforts shall be made as soon as practicable to trap the animals and remove them from the passive relocation zone (active relocation).
 - i. Prior to trapping, the proper permits from city, state, and county agencies shall be obtained.
 - ii. Trapping shall utilize live traps baited with sweetened rolled oats and placed next to active burrows within the enclosure.
 - iii. Traps shall be opened from 0600 to 1400 hours.
 - iv. Traps shall be checked every 4 hours if the temperature is between 32° and 75 °F. If the temperature is below 32° or above 75°, the traps shall be checked every 2 hours.
 - v. Upon capture, the prairie dogs shall be immediately released outside of the construction work zone but within suitable habitat.
 - vi. Trapping shall continue for 2 consecutive days.
 - h) After 2 consecutive days of trapping humane, lethal control may be used to exterminate the remaining prairie dogs within the enclosure. Only those lethal techniques and methods approved by Colorado Parks and Wildlife shall be utilized.
 - i) (Optional) Biodegradable, non-toxic, organic rodent deterrents can be applied within the passive relocation zone to encourage burrow abandonment, although such application is not required.
2. If this passive relocation technique has begun prior to March 15, it may continue until completion.
 3. Active relocation techniques, per CDOT's prairie dog policy, shall be followed if construction is scheduled between March 16 and June 30.
 4. Variations on the above technique must be approved by the Regional Biologist and the Engineer prior to implementation. The Contractor and BTPD removal specialist shall provide a "BTPD Management Plan" for review to the Engineer at least 7 days prior to passive relocation activities.

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**REVISION OF SECTION 240
PRAIRIE DOG MANAGEMENT**

In the event that Live Trapping and Euthanasia is selected:

(b) Live Trapping and Euthanizing

1. The Contractor shall hire a state licensed BTPD Removal Specialist to remove the BTPD from the locations disturbed by transportation construction activities.
2. The Contractor and BTPD removal specialist shall provide a “BTPD Management Plan” for review at least 7 days prior to relocation or trapping activities. The plan should include the credentials of the removal specialist, copies of all permits required to complete the work, an outline for how the multiple steps in the CDOT Prairie Dog Policy have been and will be followed, and a detailed plan for the methods and processes to be used in implementing the appropriate management activity.
3. Prior to trapping, the Contractor shall perform all activities required by Colorado Parks and Wildlife (CPW), Colorado Department of Public Health and Environment (CDPHE), US Fish and Wildlife Service (USFWS), and any entity with legal authority.
 - a. No more than ten days of consecutive trapping will be permitted.
 - b. The Contractor shall obtain and submit all respective permits from Colorado Parks and Wildlife and any other entity with jurisdiction over prairie dog relocation and/or removal.
 - c. The Contractor shall contact the following programs one month prior to trapping to determine final acceptance of the BTPD:
 - i. USFWS Black Footed Ferret (BFF) Recovery Program in Wellington, Colorado
 - ii. Birds of Prey Foundation in Broomfield, Colorado
 - iii. Rocky Mountain Raptor Program in Fort Collins, Colorado
4. If possible, trapping shall not occur between April 1 and June 15 to allow newborn BTPD pups time to wean from their mothers.
5. Trapping shall be limited to construction limits within silt fence.
6. If trapping cannot occur between June 16 and March 31, euthanasia of the remaining colony should occur immediately following the trapping efforts (10 day maximum) to minimize undue suffering of unweaned pups.
7. The Contractor shall trap and remove as many BTPD as possible during the 10 day period.
8. Following the 10 day trapping effort, the remaining BTPD will be euthanized onsite prior to ground disturbance by a licensed operator.

Burrowing Owls

- (a) A Burrowing Owl (*Athene cunicularia*) survey will be conducted by a qualified wildlife biologist at all black-tailed prairie dog colonies if construction or prairie dog management activities begins between March 1 and October 31. Surveys shall follow the recommended survey protocol by Colorado Parks and Wildlife (CPW 2008).
- (b) If Burrowing Owls are confirmed to be present in the colony one of two options may be utilized after coordination with CPW:
 1. No disturbance will be allowed until it can be confirmed that owls have left the area, or
 2. The owl activities within the colony will be carefully monitored and holes/burrows utilized by owls will be marked. When all burrowing owl holes/burrows have been marked, no disturbance will be allowed within 75 yards of the holes/burrows.

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**REVISION OF SECTION 240
PRAIRIE DOG MANAGEMENT**

240.04 Measurement and Payment

Applying for and obtaining permits, hiring licensed specialists, trapping, transporting, euthanizing, parasite and disease management (including pesticides and other chemicals), surveying and monitoring of burrowing owls, and all other activities necessary to properly passively relocate or remove the BTPD in accordance with all of the requirements of the CDOT BTPD policy will not be measured and paid for separately, but shall be included in the work.

Partial payments for BTPD management will be made according to the following schedule:

- 50% of the bid amount will be paid on the first pay request that work associated with BTPD management is required for construction;
- After 50% of the original contract amount is earned, 75 percent of the bid amount will be paid;
- 100 % of the bid amount will be paid on the final pay request upon completion of the management effort.

Payment will be made under:

Pay Item	Pay Unit
Prairie Dog Management	Lump Sum

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**REVISION OF SECTION 304
AGGREGATE BASE COURSE**

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

Subsection 304.02 shall include the following:

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

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.

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**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					
				SX (75)			Patching
Air Voids, percent at: N (design)	CPL 5115			3.5 – 4.5			3.5 – 4.5
Lab Compaction (Revolutions): N (design)	CPL 5115			75			75
Stability, minimum	CPL 5106			30			30
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 two Mechanically Induced fractured faces, % minimum*	CP 45			65			65
Accelerated Moisture Susceptibility Tensile Strength Ratio (Lottman), minimum	CPL 5109 Method B			80			80
Minimum Dry Split Tensile Strength, kPa (psi)	CPL 5109 Method B			205 (30)			205 (30)
Grade of Asphalt Cement, Top Layer				PG 76-28			PG 76-28
Grade of Asphalt Cement, Layers below Top				PG 76-28			PG 76-28
Voids in the Mineral Aggregate (VMA) % minimum	CP 48			See Table 403-2			See Table 403-2
Voids Filled with Asphalt (VFA), %	AI MS-2			65-75			65-75
Dust to Asphalt Ratio Fine Gradation Coarse Gradation	CP 50			0.6 – 1.2 0.8 – 1.6			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.							

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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. The City of Thornton (the City) 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. The City may select a different AC content other than the one shown at optimum on the Contractors mix design in order to establish the production targets. Historically, Air Voids adjustments typically result in asphalt cement increases from 0.1 to 0.5 percent. Contractor’s bidding the project should anticipate this change and factor it into their unit price bid.

Table 403-2

Nominal Maximum Size*, mm (inches)	Minimum Voids in the Mineral Aggregate (VMA)			
	***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.

The City approved Warm Mix Asphalt (WMA) may be allowed on this project in accordance with CP 59. WMA mixes shall utilize additives from CDOT Approved Products List (APL). Unique requirements for WMA design, production and acceptance testing as documented during they City’s WMA approval shall be submitted and approved before any WMA production on the project. Delays to the project due to WMA submittal and review will be considered within the Contractor’s control and will be non-excusable.

Hot mix asphalt for patching shall conform to the gradation requirements for Hot Mix Asphalt (Grading SX).

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

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**REVISION OF SECTION 403
HOT MIX ASPHALT**

Acceptance samples shall be taken at the location specified in either Method B or C of CP 41.

Subsection 403.03 shall include the following:

If liquid anti-stripping additive is added at the plant, an approved in-line blender must be used. The blender shall be in the line from the storage tank to the drier drum or pugmill. The blender shall apply sufficient mixing action to thoroughly mix the asphalt cement and anti-stripping additive.

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)	Square Yards

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 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 are from 0.1 to 0.5 percent. However, the Contractor's bidding should anticipate the AC increases typical of his mixes. Contractor's 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.

**WESTGATE COMMUNITY SIDEWALKS
SAR M266-046 22552****REVISION OF SECTION 614
SIGN PANELS**

Section 614 of the Standard Specifications is hereby revised for this project as follows:

Subsection 614.04 shall be deleted and replaced with the following:

Sign panels shall conform to City requirements for material composition and reflective sheeting. Items used in the fabrication, manufacturing, and installation of traffic control signing in the City shall be manufactured in the United States with domestic materials and parts. Domestic Materials and parts are those which are melted, cast, formed, shaped, drawn, extruded, forged, fabricated, or otherwise processed in the United States using raw materials produced in the United States.

Sign sizes shall conform to the MUTCD sizes for conventional roads unless otherwise approved in writing by the Project Manager.

Sign Fabrication

- (a) Standard control and street name signs shall be fabricated on .080/50-52 H 38 anodized aluminum blanks with standard radius corners.
- (b) Traffic control signs and street name signs shall be fabricated using 3M Company diamond grade retroreflective sheeting or approved equivalent. Sign facings shall be covered with 3M #1160 protective overlay or approved equivalent.
- (c) Traffic control sign faces shall be screened in conformance with methods prescribed by 3M Company using 3M inks or approved equivalent. No substitutions shall be allowed unless approved by the Project Manager prior to fabrication in writing.
- (d) Standard signs, except street name signs, shall be fabricated to conform exactly to the detailed drawings of standard highway signs as shown and detailed in the latest Standard Highway Signs Manual as published by the U.S. Department of Transportation/Federal Highway Administration.
- (e) School, bicycle crossing, and pedestrian crossing signs shall be strong fluorescent yellow green. All warning signs shall be fluorescent yellow.
- (f) Yellow for all school zone signs shall be fluorescent yellow-green.
- (g) Street name signs shall be fabricated in accordance with these Standards and Specifications. The City shall furnish a sample of the City logo decals to be installed on street name signs.
- (h) Capitalization of letters shall be in compliance with the MUTCD, latest revision.
- (i) Signs shall be fabricated with new materials. No used or reconditioned sign blanks or outdated sheeting and/or precut letters or numbers shall be used.

Subsection 614.09 shall include the following:

Sign Installation

- (a) Signs shall be installed in conformance with the latest edition of the MUTCD and Revisions. Signs shall be mounted on either the approved City breakaway supports, or banded to street light poles.
- (b) Signs mounted to street light poles shall have the sign support banded to pole with two (2) one-half (1/2) inch stainless steel "band-it" straps.
- (c) The Responsible Party shall, prior to installing sign support bases, contact utility agencies providing services, to locate buried services and to avoid damage when the base is installed. This shall include contacting the Utility Notification Center of Colorado.

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**REVISION OF SECTION 614
SIGN PANELS**

Sign Maintenance

It is the responsibility of the Responsible Party to maintain required signs after installation until the City has officially granted the initial acceptance of the adjacent ROW improvements. Signs installed under this standard shall be maintained during the development construction period in two manners.

- (a) Signs damaged which do not constitute an immediate hazard to the public shall be repaired by the Responsible Party within a reasonable time, not to exceed 10 working days after Responsible Party has been notified.
- (b) Signs damaged, which constitute an immediate hazard to the public, shall be repaired or replaced by the Contractor. The Contractor shall be responsible for the cost of repairs and/or replacement.

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**REVISION OF SECTION 614
FLASHING BEACON (SOLAR POWERED)**

Section 614 of the Standard Specifications is hereby revised for this project as follows:

Subsection 614.06 shall include the following:

Flashing Beacons (Solar Powered) are to be used as school zone flashing lights (SZFL) and shall be installed on new 15 foot pedestrian poles, 4.5” diameter, meeting Thornton Specifications. Each SZFL assembly shall consist of:

- A. Three (3) black 12 inch polycarbonate signal heads with tunnel visors and yellow LED faces
- B. Three (3) Pelco upper and lower arm assemblies model number SE-3215 or approved equal. All mounting hardware to be black in color.
- C. One (1) S5-1 School Speed sign. Sign to be 24 inches by 48 inches with diamond grade sheeting and 3M #1160 protective overlay. The sign shall be black lettering on a white background. The background for the word “SCHOOL” shall be fluorescent yellow.
- D. One (1) R2-6 Fines Higher sign. Sign to be 24 inches by 10 inches with diamond grade sheeting and 3M #1160 protective overlay. The sign shall be black lettering and border on a white background.

Each solar-powered SZFL assembly shall also include Applied Information (AI) Solar Powered School Zone Flashing Lights with AI-500-070 timer and cell modem and a 10-year plan. The cabinet and all internal components and solar panel are all AI. Mounting hardware for the solar panel and battery cabinet shall be compatible with a four and a half (4.5) inch diameter pedestrian pole.

Subsection 614.09 shall include the following:

All work shall be done in accordance with these specifications, the latest revision of the MUTCD published by the Federal Highway Administration and the latest Colorado supplement thereto, the SSRBC. The actual location for the SZFL assembly will be determined by the Development Engineering Manager at the time of construction.

Devices shall be covered until final activation.

Existing speed limit signs shall not be removed until final activation.

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REVISION OF SECTION 614 RECTANGULAR RAPID FLASH BEACON

Section 614 of the Standard Specifications shall include the following:

DESCRIPTION

This work consists of procurement and installation of the Rectangular Rapid Flash Beacons (RRFB) in accordance with the project plans, specifications, and 2009 MUTCD Interim Approval 21.

The beacons shall be powered by solar.

MATERIALS AND EQUIPMENT

The RRFB shall be Traffic & Parking Control Co., Inc. (TAPCO) Rectangular Rapid Flashing Beacon RRFB-XL2, solar powered, double-sided on 2.5" square posts. See manufacturer's materials and installation guide, and latest drawing no. 2TE-236.

The following shall be included in the installation of Rectangular Rapid Flash Beacon systems:

1. RRFB LED Signs
 - a. Rectangular Rapid Flash Beacon LED
 - i. Pedestrian Indication- Pole mount single RRFB below warning sign facing pedestrian movement to indicate sign actuation to pedestrians.
 - ii. Vehicular Indication- Warning Sign with rectangular box having 2 RRFB's facing traffic and 1 RRFB facing pedestrians mounted below sign
2. Controls (Mounted within enclosure cabinet)
 - a. One each Enclosure Cabinet– NEMA 3R Aluminum w/Traffic Key (pole mount).
 - b. One each 12V DC 15 amp Programmable Timer. Timer shall be capable of timing crossing upon actuation and retiming crossing upon new actuation in the event that crossing cycle has not completed.
 - c. One each 12V, 10 Amp DC Relay
 - d. Two each Insulated Terminal Block (10 position each)
 - e. One each 20 amp circuit breaker (must be provided as disconnect for system)
3. Pedestrian Push Buttons
 - a. Push buttons shall be black Polara Bulldog push buttons.

SUBMITTAL AND CONSTRUCTION REQUIREMENTS

Contractor is required to submit shop drawings of RRFB system to the engineer for review and approval two weeks prior to purchasing equipment. RRFB system shall meet all American with Disability Act (ADA) requirements. All wiring, electrical connections, and controls shall conform to manufacturer recommendations.

METHOD OF MEASUREMENT

The RRFB enclosure cabinet, all associated controls, pedestrian indication RRFB's, sign panels, poles, and all other components necessary for a fully functional RRFB system, will not be paid for separately, but shall be included in the cost of the work.

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**REVISION OF SECTION 614
RECTANGULAR RAPID FLASH BEACON**

BASIS OF PAYMENT

Payment will be made under:

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Rectangular Rapid Flashing Beacon	Each

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**REVISION OF SECTION 627
PREFORMED THERMOPLASTIC PAVEMENT MARKING**

Section 627 of the Standard Specifications is hereby revised for this project as follows:

Subsection 627.09. Delete the fourth paragraph and replace with the following:

(a) Application

1. The pavement marking shall be applied to the pavement either to the right or left of the application unit, dependent upon roadway lane being used. The unit shall not occupy more than one lane of roadway while operating.
2. The finished lines shall have well defined edges and be free of waviness. Tolerance shall be one (1) inch longitudinally and one fourth (1/4) inch transversely. The minimum thickness of thermoplastic line shall be three thirty-secondths (3/32) inch at the edges, not less than one eighth (1/8) inch at the center. Measurements shall be taken as an average throughout any 10 foot section of the line. The material, when formed into traffic stripes, must be readily renewable by placing an overlay of new material directly over an old line of compatible material. Such new material shall bond itself to the old line in such a manner that no splitting or separation takes place. All of the equipment necessary to the preheating an application of the material shall be so designed that the temperature of the material can be controlled within the limits necessary to its pourability for good application.
3. The marking material as specified shall be installed at the manufacturer's recommended temperature.
4. At the time of installation of thermoplastic materials, the pavement shall be clean, dry, and free of laitance, oil, dirt, grease, paint, or other foreign contaminants. Pavement and ambient temperatures shall be at least 50° F.
5. An epoxy resin primer shall be applied to concrete surfaces prior to the application of the thermoplastic pavement marking. The epoxy resin primer shall be installed per the thermoplastic manufacturer recommendations.
6. The marking material shall not be applied until the epoxy resin primer reaches the tacky stage. An infrared heating device may be employed to shorten the curing time of the epoxy.
7. If the Development Engineering Manager determines that a new asphalt surface has become soiled, prior to placement of the pavement markings, a pavement primer will be required and preformed plastic pavement markings shall be applied as approved.
8. The epoxy resin primer material may be accepted at the job site on the basis of a manufacturer's certification, or a sample may be sent to the laboratory for testing, in which case three (3) weeks shall be allowed between sampling and intended use.

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REVISION OF SECTION 630 CONSTRUCTION ZONE TRAFFIC CONTROL

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

Subsection 630.09. Delete the first, second and third paragraph as well as item #3 of the fourth paragraph and add the following:

The Contractor shall develop an individual Traffic Control Plan (TCP) and supporting Method of Handling Traffic (MHT) for each of the locations included in the Contract to be approved by the Owner prior to starting construction. Individual Traffic Control Permits will be issued for each respective location included in the Contract. The Contractor shall submit all TCP's and MHT's to the Owner for approval within 10 Days after formal Award of the Contract. Failure of the Contractor to submit detailed, comprehensive and clearly legible TCP's and MHT's will constitute grounds for rejection of TCP's and MHT's without extensive elaboration or comment from the Owner. The Owner will return approved or "redlined" TCP's and MHT's to the Contractor within 5 Days from receipt of the submittal. The Contractor shall then present final corrected TCP's and MHT's to the Owner for final approval and issuance of a Traffic Control Permit.

Pedestrian movements shall also be fully addressed in the TCP and MHT submittals. No plan will be approved that unreasonably impedes or restricts pedestrian movements. No devices required for the implementation of the Contract requirements will be permitted to be installed on or above sidewalk surface areas unless otherwise approved by the Owner in the respective MHT.

The Contractor shall also obtain traffic control permits as required by other municipal, county or state agencies when the Work requires traffic control devices to be installed within the limits of their respective jurisdictions. The Contractor shall contact other appropriate municipalities at least seventy-two (72) hours before starting work in any areas that will affect or change traffic flow within other jurisdiction(s). The Contractor shall obtain approval from the respective responsible representative of other jurisdictions for any lane or street closure, or any change or interruption of the flow of traffic within that respective City. If the Contractor desires to revise the approved TCP or MHT as a result of comments received from other jurisdictions, the Contractor shall submit such revisions to the Owner and allow one (1) week for review and comment. The Owner will approve a plan that, in his judgment, provides adequately for the safety and convenience of the public and provides the same or greater service as the previously approved plan.

The Contractor shall work only between the hours of 8:30 a.m. and 3:30 p.m. on Arterial and Collector streets, with the stipulation that only one direction of travel be interrupted at any given time unless working in median areas. Active traffic control devices shall be installed and removed between the hours of 8:30 a.m. and 3:45 p.m. The Contractor must maintain at least one (1) lane of traffic in each direction as well as a median lane for left turn movements on all Collector and Arterial Streets unless otherwise approved by the Owner and incorporated into an approved MHT. Business access closures may only occur on Monday through Thursday for duration not to exceed 2 hours before reopening each access. Businesses must have at least one access point open during construction. Requests for other hours, special conditions or time allowances will be subject to approval by the Owner. Separate turn lanes will be required at all signalized intersections during the course of construction at intersections.

The Contractor shall notify the project construction coordinator at least two weeks in advance of the need for a uniformed police officer for traffic control during paving or excavation at any signalized intersection when his operations require either his equipment or the public to operate contrary to the signals. The uniformed police officer will be supplied at the City's expense. The contract coordinator shall notify the Thornton Police Department of the need for a uniformed police office for traffic control. The Contractor shall coordinate the electrical "shut-down" of the respective signal operation by the Owner. Contractor's personnel shall **NOT** direct traffic through a signalized intersection. All Contractor personnel on site, including superintendents and principals, are required to wear a visible safety vest in conformance with the MUTCD.

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**REVISION OF SECTION 630
CONSTRUCTION ZONE TRAFFIC CONTROL**

Drums shall be placed at a maximum spacing of thirty (30) feet. Each barricade shall be furnished with two steady-burn beacons. Other construction traffic control devices shall be used where applicable.

The Contractor will not be permitted to have construction equipment, personal vehicles, or materials in the lanes open to traffic unless permitted by the Owner. The Contractor is cautioned that all personal vehicle and construction equipment parking will be prohibited where it conflicts with safety, access, or flow of traffic at any time. Personal vehicle and construction equipment parking will be prohibited on all private lots without the respective property owner's permission.

Traffic lanes through construction areas shall be maintained as shown on the approved traffic control plans or with a clear width of at least eleven (11) feet per lane. When directed by the Owner, the Contractor shall provide and maintain an acceptable temporary asphalt surface for temporary roads or driveways. Temporary surfacing shall conform to the applicable portions of Section 400 of the SSRBC.

In the event there is a violation of the working hours limitations or any other Traffic Control requirement, the Contractor will automatically be subject to a "Stop Work Order" immediately. **Work shall not resume until the Contractor assures the Owner, in writing, that there will not be a reoccurrence of the violation.** In the event more violations take place, there will be an Incident Credit issued to the Owner for each incident.

"No Parking" signs shall be placed not less than forty-eight (48) hours in advance of any temporary on-street parking restrictions and shall conform to the requirements listed under the section titles Legal Relations and Responsibilities to the Public. During non-construction periods (evenings, weekends, holidays, etc.), all Work shall be adequately protected to ensure the safety of vehicular and pedestrian traffic. Open trenches during non-construction periods are not permitted. The Contractor must periodically check on the condition of traffic control devices that may be utilized during the course of the Project on weekends or holidays as may be warranted to ensure that devices that are damaged or moved during non-work hours are restored in an expedient fashion.

Three days prior to mobilization the Contractor shall erect at Project end points automated variable message signs for Arterial streets or orange reflective sign panels of adequate size utilizing black 4" lettering for Collector streets. The signs will advertise the anticipated start date, Project duration and description. The signs will be required to be updated should information expressed be changed during the course of the project. These signs will not be paid for separately but be included in the cost for Traffic Control. An automated variable message sign will be considered as an acceptable substitution for the aforementioned described signage for Collector streets.

**WESTGATE COMMUNITY SIDEWALKS
SAR M266-046 22552****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 specifications.
- (2) Standard Plan S-630-1, Traffic Controls for Highway Construction, and Standard Plan S-630-2.
- (3) Manual on Uniform Traffic Control Devices (MUTCD) 2009, Typical Applications TA-8, TA-10, and TA-29.
- (4) Construction Phasing 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.

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.

The Responsible Party shall provide flaggers as determined by the City of Thornton Project Manager for the protection of the public, as well as workers on the job site.

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TRAFFIC CONTROL PLAN - GENERAL

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.

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.

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. When any inspector is required to work outside the hours of 7 a.m. to 4 p.m. on regular City business days, overtime shall be charged to the Responsible Party. However, such Inspectors shall remain employees of the City for all purposes. Requests for overtime shall be made to Infrastructure Engineering at least 48 hours in advance. Payment for such overtime work shall be made to the City prior to final acceptance.

All costs incidental to the foregoing requirements shall be included in the original contract prices for the project.

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UTILITIES

Known utilities within the limits of this project are:

UTILITY	CONTACT/EMAIL	PHONE
CenturyLink Fiber and Telephone	Justin Chelko Justin.Chelko1@lumen.com Justin Metzler jmetzler@terratechllc.net	303-525-7086 (cell)
Comcast Fiber and Cable	Marco Povis Marco_Povisr@comcast.com	720-495-7506 (cell)
Xcel Energy Gas & Electric	Branda Sloan Branda.L.Sloan@Xcelenergy.com	720-354-2000 (cell) 720-628-2276
City of Thornton Water	Steve Crow Steve.crow@thorntonco.gov	720-977-6554
City of Thornton Traffic	Damien Durnen damien.durnen@thorntonco.gov	720-977-6483
City of Thornton Sanitary and Storm Sewer	Joe Romero Joe.romero@thorntonco.gov	720-977-6392
Adams 12 Five Star Schools Fiber	Perry Movick Mov024573@adams12.org Ken Dixon kdixon@henkels.com	720-933-9982 (cell) 303-514-2913 (cell)

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, so the utility work can be completed with minimum delay to all parties concerned. Also, in accordance with the plans and specifications, and as directed by the Engineer, the Contractor shall keep each utility owner advised of any work being done to its facility, so that each utility owner can coordinate its inspections for final acceptance of the work with the Engineer.

PART 1 CONTRACTOR SHALL PERFORM THE WORK LISTED BELOW:

The Contractor shall coordinate the work with the owners of the utilities impacted by the work. Coordination with utility owners includes, but is not limited to, staking construction features, providing and periodically updating an accurate construction schedule which includes all utility work elements, providing written notification of upcoming required utility work elements as the construction schedule indicates, allowing the expected number of working days for utilities to complete necessary relocation work, conducting necessary utility coordination meetings, applying for and obtaining power or communication services in City of Thornton’s name.

**WESTGATE COMMUNITY SIDEWALKS
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UTILITIES**

and all other necessary accommodations as directed by the Project Engineer. Surveying and/or staking of utility relocations to be performed by the owner shall be the responsibility of the utility owner.

Prior to excavating or performing any earthwork operations, the Contractor shall positively locate all potential conflicts with existing underground utilities and proposed construction, as determined by the Contractor according to proposed methods and schedule of construction. The Contractor shall modify construction plans to avoid existing underground facilities as needed, and as approved by the Engineer. Please note that UNCC marks only its member's facilities – Other facilities, such as ditches and drainage pipes and City of Thornton's fiber optic system may exist, and it is the Contractor's responsibility to investigate, locate and avoid such facilities. The Contractor shall pothole all of the listed potential conflicts prior to starting any underground or earthwork well in advance of the work so that the utility companies can be given the required notification and to avoid delays to the contractor's work.

The Contractor shall provide traffic control for any utility work expected to be coordinated with construction, as directed by the Engineer.

THE WORK LISTED BELOW SHALL BE PERFORMED BY THE CONTRACTOR:

For any utility work by the Contractor or by a utility company necessary during the construction of the project, the following shall apply:

The Contractor shall be responsible for coordinating the adjustment of all utilities on this project. The Contractor shall keep each utility company advised of any work being performed on or around their facilities, so that each utility company can coordinate any needed inspections, including inspections with the Engineer.

The Contractor shall provide written notice to each utility company, with a copy to the Engineer, prior to any work by a utility company that is to be coordinated with project construction. A minimum of two (2) calendar weeks of prior notice is required.

If appropriate, the Contractor shall provide traffic control for any utility work to be coordinated with the project's construction, in accordance with an approved Method of Handling Traffic (MHT). Payment to be made via contract bid item(s).

The work listed below shall be performed by the Contractor in accordance with the plans and specifications, and as directed by the Owner. The Contractor shall keep the City and utility company/companies advised of any work being done to their facility, so that the utility company/companies can coordinate their inspections for final acceptance of the work with the Owner.

City of Thornton – Storm Sewer

- Adjust Manhole STA 1010+28 RT

PART 2 - UTILITY OWNERS SHALL PERFORM THE WORK LISTED BELOW:

Traffic control for utility work 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 or outside of project limits. 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 or outside of project limits.

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UTILITIES

This work will be performed by the utility owners as necessary to avoid conflicts with construction activities. All work is anticipated to be completed prior to project construction start. New locations shall be as indicated in the plans. Utility owners shall comply with schedule requirements of the Contractor and make every effort not to impact the overall construction schedule. Unless otherwise approved by the Engineer, abandoned aboveground appurtenances such as pedestals shall be removed.

Utility owners are responsible for coordinating all work with the Contractor.

Utility owners are responsible for obtaining all necessary permits from the City of Thornton as required.

Comcast – Fiber and Cable

- Reset pull box and associated utility marker behind new sidewalk and curb ramp STA 2008+92 LT

Exact limits and offset of relocation will be determined by Comcast based on project design requirements. Work will be performed prior to start of construction project.

CenturyLink – Fiber and Telephone

- Remove utility pedestal and bury line STA 2008+85 LT
- Remove utility pedestal and bury line STA 2008+91 RT

Work will be performed prior to start of construction project.

Adams 12 Five Start Schools – Fiber

- Lower lateral line along 126th Avenue

Work will be performed prior to start of construction project.

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 Utility Notification Center of Colorado (UNCC) at phone no. **811 or 1-800-922-1987**, to have locations of UNCC 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.

Utilities are depicted on these plans in accordance with their achieved "Quality Levels" 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." The Contractor's attention is directed to subsection 105.11 of the Standard Specifications concerning utilities.

The location of utility facilities as shown on the plan and profile sheets, and herein described, were obtained from the best available information.

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

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FORCE ACCOUNT ITEMS

DESCRIPTION

This special provision contains the Department'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.

<u>Force Account Item</u>	<u>Estimated Quantity</u>	<u>Amount</u>
F/A Minor Contract Revisions	F.A.	\$ 39,700*
F/A Asphalt Cement Cost Adjustment	F.A.	\$ 1,180
F/A Fuel Cost Adjustment	F.A.	\$ 1,680

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 Asphalt Cement Cost Adjustment - Adjustment will be made in accordance with the subsection 109.06(j).

F/A Fuel Cost Adjustment - Adjustment will be made in accordance with subsection 109.06(i).