

## CONSTRUCTION CONTRACT AGREEMENT

THIS CONSTRUCTION CONTRACT AGREEMENT ("Agreement") is made and entered into effective this 8th day of May, 2020 ("Effective Date"), by and between the CITY OF COMMERCE CITY, a Colorado home rule municipality whose address is 7887 East 60th Avenue, Commerce City, Colorado 80022 ("City"), and RME Ltd., dba Elite Surface Infrastructure, a Colorado limited liability company whose principal business address is 1199 Atchison Court, Castle Rock, CO, 80109 ("Contractor").

WHEREAS, the City desires to retain the services of Contractor, and Contractor desires to provide services to the City.

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained in this Agreement, the sufficiency of which is hereby acknowledged, the parties agree as follows:

### I. Project.

A. Project. Contractor shall commence and complete the **2020 Asphalt Mill and Overlay Project, 2020-05-PW** ("Project"), in accordance with the Contract Documents, and shall execute the entire scope of Work set forth in the Contract Documents, as defined below. Contractor shall, at its own expense, do all Work in a professional and workmanlike manner and furnish all labor, materials, tools, supplies, machinery, utilities, permits, licenses, and other equipment that may be necessary for the completion of the Project, as outlined in the Contract Documents.

B. Commencement and Completion of the Project. Contractor understands and agrees that all Work required under this Contract shall be fully completed, as set forth in the Contract Documents, within **180** calendar days of the date of the Notice to Proceed. Contractor acknowledges and understands that it is an essential term of this Contract that Contractor maintain a rate of progress in the Work that will result in completion of the Project in accordance with the Contract Documents, and to that end, Contractor agrees to proceed with all due diligence to complete the Work in a timely manner in accordance with the Contract Documents.

C. Contract Documents; Priority. The term "Contract Documents" includes the following, each and all of which are a part thereof and have the same force and effect as if spread at length herein. The following documents are attached and incorporated into this Agreement by reference. In resolving inconsistencies among two or more of the Contract Documents, precedence will be given in the same order as enumerated here. Additional details and more stringent requirements contained in a lower priority document will control unless the requirements of the lower priority document present an actual conflict with the requirements of the higher level document (i.e., it is not possible to comply with both requirements). Unless specifically stated, lower priority documents affected by Addenda shall not take priority through the Addenda.

1. Change Orders (by date);
2. Notice to Proceed;
3. Construction Contract Agreement;
4. The following Addenda, if any:

Number	Date	Pages
Addendum #1	May 6, 2020	3

5. Special Conditions of the Contract;

6. General Conditions;
7. The following Specifications;

Section	Title
3.00	Roadway and Parking Engineering Criteria
4.00	Pavement Design

8. Notice of Intent to Award;
9. Request for Bids;
10. Instructions to Bidders;
11. Notice of Substantial Completion;
12. Notice of Construction Completion;
13. Submitted Bid Forms;
14. Performance and Labor and Material Payment Bonds; and
15. Insurance Certificates and Endorsements.

## II. COMPENSATION.

A. Contract Price. As compensation for performance of the Work described in the Contract Documents and any other obligations under this Agreement, the City will pay Contractor, for work actually performed, a sum not to exceed **\$1,992,178.40 (One Million, Nine Hundred Ninety Two One Hundred Seventy Eight Dollars and Forty Cents)**, subject to Change Orders executed in accordance with the Contract Documents. The City shall make payment(s) to Contractor in the manner and at such times as set forth in the General Conditions of such amounts as are required by the Contract Documents.

B. IRS Form W-9. If not on file with the City, Contractor will provide to the City a current, completed Internal Revenue Service Form W-9 with or before Contractor's first invoice. Failure to submit a W-9 may result in delay or cancellation of payment under this Agreement.

## III. NOTICES.

Except for routine communications and as provided in the General Conditions, written notices required under this Agreement and all other correspondence between the parties will be directed to the following and will be deemed received when hand-delivered or three (3) days after being sent by certified mail, return receipt requested, unless the parties agree to electronic delivery of correspondence:

### If to the City:

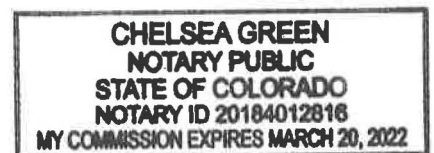
Brent Soderlin, City Engineer  
Public Works  
City of Commerce City  
8602 Rosemary Street  
Commerce City, CO 80022

### If to Contractor:

Brian D. Acuff, CEO  
RME Ltd., LLC dba Elite Surface Infrastructure  
1199 Atchison Court  
Castle Rock, CO 80109  
van.miranda@elitesi.com

## IV. GENERAL PROVISIONS.

A. Authority. The parties represent and warrant that they have taken all actions necessary to legally authorize the undersigned signatories to execute this Agreement for the parties and to bind the parties to its



**ADDENDUM NO. 1  
CITY OF COMMERCE CITY  
2020 MILL AND OVERLAY  
PROJECT 2020-05-PW**

1. If the bids are to be emailed and read outside of the building, how soon will the results be posted if we are not present?  
**The first RFB under this COVID-19 driven process was for concrete flatwork on April 30. The bid tab was emailed to all firms that submitted a bid about three hours after the bid opening. The plan is to meet that timeframe for informing bidders of results**
2. Has the City had any communication with the Railroad for the crossing? Railroad permits in the past are about 1 year to approve and process.  
**Commerce City has been in communication with the Union Pacific Railroad and their representatives, and most of the groundwork has been completed. The design plans in this bid packet have been reviewed by UPRR, and there are minor details to follow. We do not anticipate any issues with the UPRR on this project.**
3. Railroad Permit Fees – The contractor won't know what this might entail, can the force account bid item have a fixed amount in the bid schedule and work off of that?  
**As this is a pass-through account, we believe the vendor can either put an estimate from past experience in the response or leave it blank as a recognition it is beyond your control.**
4. Railroad Flagging – Same as the RR Fees, can this have a fixed amount in the bid schedule.  
**This line item can be responded similarly to Question 3. We broke this line out so the vendors are aware there are specific rules and pay required for flaggers at the railroad tracks on E. 64<sup>th</sup> Avenue.**
5. Vehicle Towing – Can you have an estimated number of vehicles that may be towed from historical data from the previous years? For an example, 5 each  
**Each year is different based on where the work is done. For example, some of the 2019 project was in an industrial area so the number of tows was higher. However, five is a good baseline to work off of.**
6. Speed Hump – How many are there? How is the asphalt for the speed hump being paid?  
**There are 11 speed humps and all are identified on the design plans. The asphalt is paid from the quantities used in the pay estimate and submitted to the City.**
7. Is there a quantity breakout for the streets shown?  
**On the design plans, there are quantities listed for each group of streets, but there are not quantities broken down by street.**



8. In Section 627.03 of the Project Technical Specifications, could you give more detail as to what kind of format are you looking for on these detailed drawings?  
**The detailed drawings are part of the design plans in the RFB. We request you follow these drawings but if you need an alternative, please submit it to the Project Manager before the work is started.**
9. Haven't you already provided us with existing striping plans?  
**The striping plan is part of the design plan that is in the RFB.**
10. Also are you looking for third party testing on materials and subgrade during the project hired by the contractor or by the city?  
**Materials testing will be performed by another firm contracted with the City.**
11. Survey – Can you clarify who is responsible for surveying on the full depth rehab streets? On page 19 of the General Conditions, Section 5.13, the City states it will. On page 20 of the Section Conditions, 5.14.1, the contractor is to do so.  
**There was no survey necessary for the Full Depth Reclamation in 2019. If it is deemed necessary, Commerce City will arrange and pay for the survey.**
12. Bid item #2 – Will the top 4” of removal go to the City yard?  
**Yes, as stated in Section 202.09 of the Project Technical Specifications.**
13. How does the installation of the speed humps get paid?  
**The asphalt will be part of the quantities for new asphalt laid.**
14. Under the Project Scope it states the work shall be completed within 180 days but in the Attachment A it states the work shall be completed within 90 Calendar days. Which one is correct?  
**Our apologies for the conflicting dates. The correct time frame is 180 days.**
15. Is there a sample application for the UPRR Contractor Right of Entry? Section 107 states there is one attached to the specifications. I was unable to locate it.  
**During the design and currently during the bidding process, City representatives are working with the Union Pacific RR on this process. At this point, there is still not a specific application that has been determined for use. For further information, go to this website to learn more about the potential processes:**  
[https://www.up.com/real\\_estate/roadxing/contacts/index.htm](https://www.up.com/real_estate/roadxing/contacts/index.htm).
16. There is a conflict on the amount of time required to complete the project. The advertisement (Page 2/16) states 180 days and Section I.B. of the Construction Contract Agreement states 90 calendar days. Would you please clarify.  
**Our apologies for the conflicting dates. The correct time frame is 180 days.**
17. When would a uniformed police officer be required for traffic control?  
**At this time, we do not believe we will need uniformed police officers for any traffic control.**

18. Will the City have someone at the Millings Stockpile location to stack the millings as they are being delivered?

**That will be arranged as needed.**

19. Are we allowed to close the streets that require the reclamation?

**Yes.**

20. Can the bid date be extended to give some extra time for our subcontractors to respond?

**We are on a tight deadline to have this contract for approval by City Council on May 18, so we cannot extend the contract deadline.**

21. Are re-installing the speed bumps incidental to the paving or will they be paid for in another item?

**The asphalt is paid from the quantities used in the pay estimate and submitted to the City.**

# **ATTACHMENT F.**

## **CITY OF COMMERCE CITY**

### **SPECIAL CONDITIONS**

**PROJECT NAME: 2020 Asphalt Mill and Overlay**

**PROJECT NO.: 2020-05-PW**

**1. Liquidated Damages.**

Liquidated damages assessed in accordance with the Contract Documents shall be at the rate of **\$450** per day.

**2. No Liability for Consequential Damages.**

The City shall not be liable to the Contractor, Surety or any subcontractor or supplier for consequential damages, including without limitation impairment of bonding capacity.

**3. Builder's Risk**

Builder's risk insurance will not be required.

**4. Measurement.**

Measurement of pay items subject to Unit Prices shall be as **shown on the Project Bid Schedule**

**5. Licenses.**

In addition to any licenses and permits required by law, the Contractor and any Subcontractor (if applicable to that Subcontractor's performance of Work) the following required licenses: **City of Commerce City Contractor's License**

**6. Holidays.**

Holidays recognized by the City of Commerce City are:

January 1, 2020	New Year's Day
January 20, 2020	Martin Luther King Day
February 17, 2020	President's Day
May 25, 2020	Memorial Day
July 4, 2020	Independence Day
September 7, 2020	Labor Day
November 11, 2020	Veteran's Day
November 26, 2020	Thanksgiving Day
November 27, 2020	Day After Thanksgiving
December 25, 2020	Christmas Day

When New Year's Day, Independence Day, or Christmas Day falls on a Sunday, the following Monday shall be considered a holiday. When one of these days falls on a Saturday, the preceding Friday shall be considered a holiday.

## 7. **Project Communications for Capital Improvement Program (CIP) Projects.**

- 7.1. Communications Support: The City is responsible for implementing project-related communications, outreach and engagement activities for this project. The Contractor will be required to provide support to the City's CIP communications coordinator, **Deanna Schenck**, unless otherwise designated by the City, to implement communications, outreach, engagement and information activities. The following is the contact information for the City's CIP communications coordinator:

Deanna Schenck  
City of Commerce City | 7887 E. 60th Avenue | Commerce City, CO 80022  
Mobile: 720-661-7115 | Office: 303-289-3782  
Email: [dschenck@c3gov.com](mailto:dschenck@c3gov.com)

- 7.2. Communications Contact: The Contractor will provide a communications contact that is available every day, accessible and on-call by cell phone at all times and available upon request at other than normal working hours and during emergencies. The Contractor will review information and presentation materials for technical accuracy, approving content within forty-eight (48) hours of receipt.

Resident notification, consisting of placement of door hangers at each affected residence shall be completed by the Contractor. The door hangers will be developed and printed by the City for distribution by the Contractor at least three (3) days prior to the start of work.

### 7.3. Closures and Construction Impacts:

- 7.3.1. Low-capacity road or facility closures will be communicated to the City's CIP communication coordinator, not less than eight (8) days prior to the expected closure, so that the City can provide the public at least seven (7) days prior notice of the expected closure.
- 7.3.2. The Contractor will communicate high-capacity road closures, highway closures, night work with noise and light implications, or construction impacts to the public to the City's CIP communication coordinator, not less than fifteen (15) days prior to the expected closure, so that the City can provide the public with at least fourteen (14) days prior notice of the closure. High-capacity road closures, highway closures, night work with noise and light implications will require advanced written approval from the City.
- 7.3.3. The Contractor will communicate utility or construction impacts to the City's communication coordinator, not less than three (3) days prior to the expected impacts, so that the City can provide the public with at least forty-eight (48) hours prior notice of the expected impact.

# ATTACHMENT E.

## CITY OF COMMERCE CITY

### GENERAL CONDITIONS

#### ARTICLE 1 DEFINITIONS, ABBREVIATIONS & REFERENCES

##### 1.1. Definitions.

Whenever used in the Contract Documents, the following terms shall have the following meanings, applicable to both the singular and plural, in addition to words otherwise defined in the Contract Documents:

- 1.1.1. **Addenda:** Written changes to the Bidding Documents issued before the opening of Bids that clarify, correct, or change the Contract or change the date set for the Opening of Bids.
- 1.1.2. **Bonds:** Bid Bonds, Performance Bonds, and Payment Bonds, any warranty bond, or other instruments of security furnished by the Contractor and its Surety according to the Contract.
- 1.1.3. **Change Order:** A written modification of the Contract, issued after award to the Contractor, authorizing an addition, deletion, or revision in the Work within the general scope of the Contract or authorizing an adjustment in the Contract Price or Contract Time mutually agreed upon between the City and the Contractor.
- 1.1.4. **City or Owner:** The City of Commerce City, Colorado. Any reference to the approval, decision, or discretion of the City, whether express or implied, is a reference to the approval, decision, or discretion of the City Manager, or to his or her designee unless otherwise stated or required by law.
- 1.1.5. **Completion Date:** The date the Contract specifies the Work is to be completed.
- 1.1.6. **Construction Schedule:** The schedule of Work approved by the City in accordance with the Contract Documents.
- 1.1.7. **Contract:** The construction contract for the completion of the Work consisting of the Construction Contract Agreement and all other Contract Documents.
- 1.1.8. **Contract Documents:** All the documents expressly incorporated into the Contract by and including the Construction Contract Agreement, including without limitation all Addenda, Bid Forms, Change Orders, Plans/Drawings, General Conditions, Request for Bids (including all attachments), insurance certificates, Notice of Intent to Award, Notice of Final Acceptance, Notice to Proceed, Notice of Substantial Completion, any Performance Bonds, any Payment Bonds, Special Conditions, accepted Shop Drawings, and Specifications.
- 1.1.9. **Contract Price:** The total monies payable to the Contractor under the terms and conditions of the Contract.
- 1.1.10. **Contract Time:** The number of days provided in the Contract for the completion of the Project from the date of the Notice to Proceed through and including the date of Final



Acceptance. The Contract Documents may require completion on or before a certain specified date.

- 1.1.11. **Contractor:** The person or entity identified in the Construction Contract Agreement contracting with the City to perform the Work required by the Contract.
- 1.1.12. **Drawings or Plans:** The part of the Contract prepared or approved by the Project Manager showing the characteristics and scope of the Work to be performed.
- 1.1.13. **Date of Contract:** The execution date in the Agreement for a Construction Contract unless otherwise specified.
- 1.1.14. **Day or day:** A calendar day of twenty-four hours each from midnight to midnight, unless otherwise specified.
- 1.1.15. **Field Order:** A written order issued by the Project Manager to the Contractor during construction that directs the Contractor to commence a change in the Work before complete agreement on or execution of a Change Order.
- 1.1.16. **Final Acceptance:** The City's final acceptance of the Work completed according to the Contract requirements with all parts of the Work in good condition and in working order, including completion of all punch list items, cleanup work, and delivery of all required guarantees, warranties, licenses, releases, and other deliverables.
- 1.1.17. **Final Payment:** The final and complete payment to the Contractor in accordance with the Contract Documents.
- 1.1.18. **Inspector:** The City's authorized representative assigned to make detailed inspection of the Work performed by the Contractor.
- 1.1.19. **Notice of Final Acceptance:** The written notice of the date, as certified by the City, of Final Acceptance.
- 1.1.20. **Notice to Proceed:** The written notice by the City to the Contractor authorizing the Contractor to proceed with the Work.
- 1.1.21. **Notice of Substantial Completion:** The written notice of the date, as certified by the City, of Substantial Completion.
- 1.1.22. **Parties:** The City and the Contractor.
- 1.1.23. **Project:** The total construction of which the Work to be provided under the Contract Documents may be the whole or a part as indicated elsewhere in the Contract Documents and may include construction by other contractors.
- 1.1.24. **Project Manager:** The City's designated, authorized representative assigned to the Project with day-to-day responsibility for managing the Contract.
- 1.1.25. **Reasonably Predictable Weather Days:** Estimated Weather Day(s) where critical path activities cannot be performed in any month, within contract weather or temperature limitations, or due to weather related soil conditions.
- 1.1.26. **Shop Drawings:** All drawings, diagrams, illustrations, brochures, schedules, and other data prepared by the Contractor, any Subcontractor, manufacturer, Supplier or distributor that illustrate how specific portions of the Work will be fabricated or installed.

- 1.1.27. **Special Conditions:** Additions to the General Conditions containing instructions and conditions peculiar to an individual Project.
- 1.1.28. **Specifications:** A part of the Contract Documents consisting of written technical description of materials, equipment, construction systems, standards, and workmanship.
- 1.1.29. **Subcontractor:** Any person or entity having a subcontract with the Contractor (or any Subcontractor, of any tier, whether or not authorized by the Contractor) to furnish and perform work at the Work site, including the provision of labor, materials, equipment, supplies, tools, services, or any combination of these. This definition shall not limit the Contractor's obligations, or alter any Subcontractor's rights, under any law or contract.
- 1.1.30. **Substantial Completion:** The date on which the Work has progressed to the point that the City can beneficially occupy or utilize the Work for the purpose for which it is intended, and the Work complies with all applicable codes and regulations, including, if required, issuance of a certificate of occupancy, or certificate of suitability for use from the appropriate governmental agencies, as determined by the City in its sole discretion.
- 1.1.31. **Superintendent:** The Contractor's authorized representative assigned to the Project with day-to-day responsibility for managing the Project.
- 1.1.32. **Supplier:** Any person or organization who supplies materials, supplies, tools, equipment, or other items for the Work, including those fabricated to a special design, but who does not perform labor at the site. This definition shall not limit the Contractor's obligations, or alter any Supplier's rights, under any law or contract.
- 1.1.33. **Surety:** Any entity that is bound with and for the Contractor for the performance of the Work and/or the payment for any labor and material through the performance bond and/or the payment bond.
- 1.1.34. **Unit Price:** An amount stated in the Bid as a price per unit of measurement for materials or services as described in the Contract. Unit Prices are intended to cover all items of work to be done and materials to be furnished to fully complete the Work in accordance with the Contract Documents (including without limitation the cost of appurtenant items of work, labor, materials, fees, bond costs, supplies, utilities, royalties, tools, forms and equipment, and all other costs (including without limitation sales and use tax, insurance, licenses, permits, profit, and other overhead) not listed separately, not shown on the Plans and Specifications, or not specified but necessary to complete the Work in accordance with the Contract Documents).
- 1.1.1. **Weather Day:** Any day on which Work is scheduled in the Construction Schedule but cannot be performed within contract weather or temperature limitations or due to weather related soil conditions, and where work on critical activities cannot be performed for more than fifty percent (50%) of the work day, including any day immediately following a Weather Day on which subsequent day Work was scheduled in the Construction Schedule but cannot be performed on scheduled critical path activities due to weather related site or soil conditions for more than fifty percent (50%) of the day (drying days).
- 1.1.2. **Work:** The construction and services required by the Contract Documents, whether completed or partially completed, including all other labor, materials, equipment, supplies, management, administration, supervision, manufactured components, and

services provided or to be provided by the Contractor to fulfill the Contractor's obligations under the Contract. The Work may be the whole or a part of the Project.

## **1.2. Words of Importance.**

When the Contract Documents use the phrases or words "as directed," "as required," "approved," "acceptable," "satisfactory," or other phrases or words of like meaning without further indication, the intended direction, requirement, approval, or satisfaction shall be that of the Project Manager.

## **1.3. References.**

Words describing materials or Work having a well-known technical or trade meaning in an industry, unless otherwise specifically defined, shall be construed in according to well-known meanings as recognized by engineers, architects, and the trades. All references to standard specifications, methods of testing materials, codes, practices, and requirements refer to the edition of each in effect on the date of the Request for Bids unless a specific edition or revision is referenced.

## **1.4. Computation of Time.**

Any period of time referred to in the Contract Documents will be computed to exclude the first and include the last day of the period. If the last day of the period falls on a Saturday, Sunday, or legal holiday for the City, such day will be omitted from the computation.

## **1.5. Abbreviations.**

When the following abbreviations appear in the documents, they are defined as follows:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
ACOE or COE	U.S. Army Corps of Engineers
AGC	Associated General Contractors of America, Inc.
AIA	American Institute of Architects
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
APHA	American Public Health Association
APWA	American Public Works Association
ASA	American Standards Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society
AWSC	American Welding Society Code
AWWA	American Water Works Association
CDOT	Colorado Department of Transportation
CPM	Critical Path Method
DHS	U.S. Department of Homeland Security
EPA	U.S. Environmental Protection Agency
GESC	Grading, Erosion and Sediment Control
IEEE	Institute of Electrical and Electronic Engineers

MUTCD	Manual on Uniform Traffic Control Devices
NBS	National Bureau of Standards
NCPI	National Clay Pipe Institute
NEC	National Electric Code
NEMA	National Electrical Manufacturer's Association
OSHA	Occupational Safety & Health Administration
RCRA	Resource Conservation and Recovery Act
SAME	Society of American Military Engineers
SACWSD	South Adams County Water & Sanitation District
SAVE	Systematic Alien Verification or Entitlement program
WW-P	Federal Specifications Prefix

## **ARTICLE 2 PRELIMINARY MATTERS**

### **2.1. Notice to Proceed.**

The City will give the Contractor written Notice to Proceed with the Work after execution of the Contract by the City. The Contractor shall begin the Work by the date stated in the Notice to Proceed and diligently pursue the Work regularly and without interruption (unless otherwise directed in writing by the Project Manager) with the force necessary to complete the Work and achieve Final Acceptance within the Contract Time. If any milestones are described in the Contract Documents or the approved Construction Schedule, the Work described by each milestone shall be accomplished on or before that milestone in accordance with the Contract Documents.

### **2.2. Construction Schedule.**

- 2.2.1. Within the time specified in the Request for Bids, the Contractor shall submit to the City a proposed Construction Schedule using Primavera, MS Project or other comparable Critical Path Method (CPM) scheduling software.
- 2.2.2. The Construction Schedule must include all Work activities to be performed under the Contract including any work to be performed by Subcontractors and must account for all Reasonably Predictable Weather Days. All activities should be logically tied with a critical path clearly identified. The schedule must have sufficient detail to adequately plan and manage the Work. Contractual and key milestones are to be identified.
- 2.2.3. The Construction Schedule must include a brief narrative including:
  - a) A Critical Path description;
  - b) Identification of non-work days such as weekends or holidays;
  - c) A table showing calculated Reasonably Predictable Weather Days (including drying days for each month); and
  - d) List of assumptions used while developing the Construction Schedule.
- 2.2.4. It will be presumed that the Contractor, at the time of bidding, took into account the number of days which might be unavailable for Work as a result of Reasonably Predictable Weather Days during the Contract Time.
- 2.2.5. The Contractor shall calculate Reasonably Predictable Weather Days by using the last ten (10) years of historical weather data from the nearest NOAA weather data collection station, or other approved weather station, to compute the average number

of Weather Days for each month of the Construction Schedule.

- 2.2.6. On a monthly basis with each pay application and as requested by the Project Manager, the Contractor shall update the Construction Schedule and provide a summary report of progress on the various parts of the Work, including the status, rate of progress, estimated completion date, and cause of delay, if any. This report shall not constitute a request or approval for any change in the Contract Time.
- 2.2.7. Work shall normally not be done on Saturdays, Sundays, City observed holidays, or outside of the daytime working hours (7:00 a.m. to 5:00 p.m.), except for such work as may be necessary for proper care, maintenance, and protection of Work already done, or in cases when the Work would be endangered or when hazard to life or property would result.
- 2.2.8. If the Contractor believes it may be necessary to work on Saturdays, Sundays, holidays, or at night, the Contractor shall make prior arrangements with the Project Manager and receive written approval at least twenty-four (24) hours before such work period so that proper inspection and engineering services can be provided. Such approval may be revoked by the Project Manager if the Contractor fails to maintain adequate equipment and lighting at night for the proper prosecution, control and inspection of the Work. If Work is done outside of approved working hours, and the Project Manager has not assigned Inspectors to the Work, the Work performed during those periods of time may be declared defective solely on the grounds that it was not properly inspected.

### **2.3. Pre-Construction Meeting.**

Before Work is commenced and materials are ordered, the Contractor shall meet and consult with the Project Manager relative to the materials, equipment, schedule, site, and other arrangements for the commencement of the Work.

### **2.4. Contractor's Understanding of Work.**

The Contractor agrees that, by careful examination, it is satisfied as to the nature and location of the Work, the conformation of the ground, the character, quality, and quantity of the materials to be encountered, the character of equipment and facilities needed before beginning and for the Work, the general and local conditions, and all other matters, which can in any way affect the Work under the Contract. No oral agreement with any officer, agent, or employee of the City either before or after the execution of the Contract shall affect or change any of the terms or obligations contained in the Contract.

### **2.5. Contractor's Representation.**

The Contractor represents and warrants that it has the knowledge, ability, experience, and expertise to perform the Work competently in accordance with the Contract Documents. The Contractor represents and warrants the capacity of the Contractor's construction plant, personnel, and its ability to complete the Work by the Completion Date.

### **2.6. Other Work.**

The City reserves the right to award other contracts in connection with the Project or other activities. The Contractor must be prepared to accept the presence, on or adjacent to the construction site, of work forces of other contractors, subcontractors, tenants, government



agencies and municipal, public service or utility systems. The Contractor shall cooperate with and afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their Work, and shall coordinate its Work with theirs. If it becomes impossible to proceed with the Work in a manner that permits all activities to progress at a reasonable pace, the Project Manager will select the course of action that appears to best serve the City.

## **2.7. Notices.**

Except for routine communications, written notices required under this Contract and all other correspondence between the Parties will be deemed received when hand-delivered or three (3) days after being sent by certified mail, return receipt requested (unless the Parties consent to electronic delivery). The address in the Bid will be the Contractor's address for the delivery of notices, unless modified by the Contractor by written notice at least three (3) business days prior to the change. Notices to the City shall be delivered to the Project Manager except as provided in the Contract Documents.

## **2.8. Contractor's Signs.**

No signs with Contractor's name, logo, telephone number, address or, (etc.), shall be placed on any pole, road, structure or other surface, unless approved in writing, and in advance of such placement, by the City.

## **2.9. Publicity and Advertising.**

- 2.9.1. Neither the Contractor nor its Subcontractors or Suppliers shall include any reference to the Contract or to Work performed hereunder in any advertising or public relations materials without first obtaining the written approval of the Project Manager. All information shall be factual, and shall in no way imply that the City endorses the Contractor or its services or product.
- 2.9.2. The City shall have the right to photograph, videotape, film or in any other manner record the progress of the Work at any time and to use such materials for any purpose.

# **ARTICLE 3 DRAWINGS AND SPECIFICATIONS**

## **3.1. Intent of Drawings and Specifications.**

- 3.1.1. In the Drawings and Specifications, the City intends that the Contractor furnish all superintendence, labor, materials, tools, equipment, supplies, machinery and transportation necessary for the proper execution of the Work unless specifically noted otherwise. The Contractor shall do all the Work shown on the Drawings and described in the Specifications and all incidental Work reasonably necessary to complete the Project in a substantial and acceptable manner, and to complete fully the Work, ready for use, by the City. The Contractor shall complete all Work according to the Specifications and Drawings.
- 3.1.2. The Contract Documents are intended to be complementary, and Work called for on any Drawing and not mentioned in the Specifications, or Work described in the Specifications and not shown on any Drawing, is included under the Contract as if set forth in both the Specifications and Drawings.
- 3.1.3. Material and workmanship specified by the number, symbol, or title of a referenced

standard shall comply with the latest edition or revision thereof and any amendments or supplements thereto in effect on the date the bid is received except where a particular issue or edition of a publication is indicated. In case of a conflict between the Drawings, Specifications and the referenced standard, the more stringent shall govern, as determined by the Project Manager.

- 3.1.4. If labor, materials or equipment, although not described by the Drawings or Specifications, is required to successfully complete the Work and can reasonably be inferred by competent contractors by virtue of common knowledge or customary practice in the construction industry from the Contract Documents as being necessary to produce the intended result, the Contractor shall perform that work or provide the materials or equipment as if they were specified.
- 3.1.5. Contractor shall carefully study the Contract Documents and, if Contractor identifies any discrepancies found between the Drawings and Specifications and site conditions and any adjacent work on which the Work is dependent and any errors or omissions in the Drawings or Specifications, shall promptly notify the Project Manager of such discrepancies, errors, or omissions in writing, and any necessary changes shall be accomplished by issuance of an appropriate Change Order or Field Order. Any Work done by the Contractor after discovery of such discrepancies, errors or omissions prior to the issuance of a Change Order or Field Order is done at the Contractor's risk. In all cases, the Project Manager shall decide the intent of the Drawings and Specifications.
- 3.1.6. If the Contractor or any of its Subcontractors or Suppliers, knows or reasonably should know by virtue of common knowledge or customary practice in the construction industry that any of the Contract Documents are at variance with applicable laws, statutes, ordinances, building codes, or rules or regulations, in any respect, the Contractor shall promptly notify the Project Manager in writing, and any necessary changes shall be accomplished by issuance of an appropriate Change Order or Field Order. The Contractor shall assume full responsibility for, and shall bear all costs attributable to work performed by the Contractor or any Subcontractor prior to the issuance of a Change Order or Field Order when any of them know or reasonably should know that it is contrary to such laws, statutes, ordinances, building codes, rules or regulations.
- 3.1.7. The Contractor, before commencing work, shall verify all governing dimensions, and shall examine, to the extent reasonable, all adjoining work on which its Work is in any way dependent. No disclaimer of responsibility for defective or non-conforming adjoining work will be considered unless written notice of the same has been filed by the Contractor and agreed to in writing by the Project Manager before the Contractor begins any part of the affected Work.
- 3.1.8. The Contractor shall perform no portion of the Work at any time without Contract Documents or, where required, approved Drawings, Specifications, instructions, Shop Drawings, product data, or samples for such portion of the Work.

### **3.2. Copies of Drawings and Specifications Furnished.**

The Project Manager will furnish to the Contractor copies of Drawings and Specifications of the Work at reproduction costs (including labor) or electronic copies of Drawings and Specifications in electronic form at no charge.

### **3.3. Utilities.**

- 3.3.1. Delays relating to relocation of utilities should be anticipated for Work on or involving City rights-of-way.
- 3.3.2. It is the Contractor's responsibility to verify all locations of existing structures and utilities shown on the Drawings and to ascertain whether any other structures and utilities exist. The Drawings show available information on the location of existing underground, surface and overhead structures and utilities. However, the City does not guarantee the results of the investigations are accurate or complete.

### **3.4. Requests for Clarifications and Information.**

- 3.4.1. The Contractor shall submit any requests for information or clarification of Drawings and Specifications to the Project Manager or to the person who has been designated by the Project Manager to receive such requests. When the City responds to such requests for information or clarification, it will issue a response which can consist of a written explanation with or without drawings or other information in the City's sole discretion. Such requests and responses to such requests shall neither authorize nor constitute changes in the Contract Time or Contract Price. If the Contractor believes that the response to any request for information or clarification requires a change in Contract Time or Contract Price, it shall submit a Contractor Change Request in accordance with the Contract Documents.
- 3.4.2. The Contractor shall review and attempt to answer requests for information or clarification from its Subcontractors and Suppliers. Such requests shall be encompassed within the Contractor's request for information or clarification by the Contractor to the Project Manager if the Contractor is unable to answer such requests.

### **3.5. Dimensions.**

Figured dimensions shall govern over scaled dimensions.

### **3.6. Shop Drawings.**

- 3.6.1. The Contractor shall provide Shop Drawings, settings, schedules, and such other Drawings as may be necessary for the prosecution of the Work in the shop and in the field as required by the Drawings, Specifications or Project Manager's instructions.
- 3.6.2. The Contractor shall submit for approval three (3) reproducible copies of all Shop Drawings and descriptive data as applicable showing all features not fully detailed on the Specifications but essential for a completely coordinated installation. An additional copy shall be provided for each railroad company affected by the Work. The Contractor will correct errors in Shop Drawings as directed by the City.
- 3.6.3. The City's approval of Shop Drawings indicates only that the type and kind of equipment and general method of construction or detailing are satisfactory and in general compliance with the Contract Documents and design concept of the Project. The Contractor has the responsibility for incorporating into the Work satisfactory materials and equipment meeting the requirements of the Contract Documents, the proper dimensions, and the detailing of connections.
- 3.6.4. The Contractor may not construe such approval as a complete check and approval

does not indicate the waiver of any Contract requirement. Changes in the Work are authorized only by separate written Change Order.

### **3.7. Record Documents.**

- 3.7.1. The Contractor shall keep one complete set of all Drawings and Specifications at the work site and available to the City and its representatives at all times.
- 3.7.2. The Contractor shall keep one record copy of all Amendments, Change Orders, Drawings, Field Orders, Shop Drawings and Specifications in good order.
- 3.7.3. The Contractor shall record any changes made during construction and any discrepancies between the Contract Documents and Work actually performed on the record copies (however minor or seemingly insignificant). The Contractor shall make a set of "Record Drawings" by marking this set of prints with all changes from the original Drawings as bid, including all Change Orders, alignment changes, depth changes of underground pipes and utilities, utility locations, and all other items that are not the same as originally drawn. The Contractor shall keep the Record Drawings up to date as the Project progresses. The Project Manager may require, as a condition of the approval of any progress payment, periodic inspection of the Record Drawings. The Contractor will deliver the Record Drawings to the Project Manager upon completion of the Project before Final Payment.
- 3.7.4. All Contract Documents are the property of the City and shall not be used by the Contractor for any purpose other than the Work to be performed under the Contract. At Final Acceptance, all Shop Drawings and Record Drawings, including all material in electronic format shall become the property of the City. The Contractor will be permitted to maintain a copy of the Drawings, Specifications and Shop Drawings as necessary to maintain a Contract record file.
- 3.7.5. The Contractor shall prepare and keep current a schedule of submittals that shall note all required submittals, submittal dates, required approval dates, and all required delivery dates.

### **3.8. Site Inspection & Differing Site Conditions.**

- 3.8.1. Drawings and specifications defining the Work were prepared on the basis of interpretation by design professionals of information derived from investigations of the Work site. Such information and data are subject to sampling errors, and the interpretation of the information and data depends to a degree on the judgment of the design professional. Information about the degree of difficulty of the Work to be done cannot totally be derived from either the Drawings or Specifications or from the Project Manager. The Contractor shall not be entitled to an adjustment to the Contract Time or Contract Price for any condition that was or would have been evident at the time of a pre-bid site inspection. By executing the Contract, the Contractor represents that it has visited the site if and to the extent it believed necessary, familiarized itself with the location and conditions under which the Work is to be performed, and correlated its observations with the requirements of the Contract Documents.
- 3.8.2. The Contractor shall promptly, before such conditions are further disturbed, notify the Project Manager in writing of:

e) Subsurface or latent physical conditions at the Work site differing materially from

those indicated in the Contract; or

- f) Unknown physical conditions at the Work site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.

3.8.3. Upon receipt of written notification from the Contractor of alleged differing site conditions, the City shall promptly investigate the conditions. If the City finds that the conditions materially differ and could not have been discovered, or reasonably inferred, from the Contract Documents or a thorough inspection of the Work site by the Contractor, and such conditions cause an increase or decrease in the Contractor's cost of or the time required for performance of any related part of the Work under the Contract, an adjustment to the Contract Time or Contract Price, or both, may be made through a Change Order.

3.8.4. If the Contractor has not fully complied with the notice and submittal requirements of this section or any part of the General Conditions pertaining to Change Orders, with particular attention to not disturbing the site prior to allowing the City to investigate the conditions, the Contractor shall be deemed to have waived its right to assert a claim for differing site conditions.

3.8.5. No claim will be allowed under this section if Final Payment has been made.

### **3.9. Geotechnical and Other Design Professional Reports, Investigations & Tests.**

3.9.1. The Contractor acknowledges that certain soils reports, borings, and other geotechnical data, more particularly described or referenced in the Specifications of the Contract, have been made available for inspection and review. The borings were made for the use of the City in the design of the Project and are not intended to be interpreted for use in temporary construction facilities designed by the Contractor.

3.9.2. The City in no way warrants the accuracy or reliability of said borings and other geotechnical data or of the data, information or interpretations contained in said soils reports, and is not responsible for any deduction, interpretation, or conclusion drawn therefrom by the Contractor. Said soil reports may contain interpretations by design professionals of borings and geotechnical data obtained at the Work site. Such borings and geotechnical data are subject to sampling errors, and any interpretations or conclusions based on such borings and data depend to a degree on the judgment of the design professionals.

3.9.3. The Contractor agrees that it will make no claims against the City if, in performing the Work, it finds that the actual conditions encountered do not conform to those indicated by said soil reports, borings and other geotechnical data, or those reasonably inferred therefrom or reasonably discoverable by a thorough inspection of the site by the Contractor.

## **ARTICLE 4 RIGHT-OF-WAY & ACCESS**

### **4.1. Acquisition of Right-of-Way.**

4.1.1. Before issuance of Notice to Proceed, the City shall obtain all land and right-of-way necessary for carrying out and completion of the Work to be performed pursuant to the Contract, unless otherwise mutually agreed.



- 4.1.2. The City shall provide to the Contractor information that delineates and describes the lands owned and rights-of-way acquired, when necessary. The Contractor shall confine its operations within the areas designated by the Project Manager.

#### **4.2. Access to Right-of-Way.**

- 4.2.1. The City will make best efforts to provide right of access to all places necessary for the performance of the Work in a timely manner. The City will not be liable to Contractor for any delay in providing access for reasons outside the City's control.
- 4.2.2. Nothing contained in the Contract shall give the Contractor exclusive occupancy of the area provided by the City. The City, other contractors of the City and utility companies may enter upon or occupy portions of the land furnished by the City for any purpose, but without unreasonably interfering with the completion of the Project. Joint occupancy or use of the territory shall not be the basis of any claim for delay or damages.

#### **4.3. State Highway Right-of-Way.**

If any part of the Project requires Work within the right-of-way of a roadway under the jurisdiction of the Colorado Department of Transportation (CDOT) the Contractor shall obtain the necessary permits from CDOT to perform such Work. The Contractor shall conform to all the requirements and restrictions indicated on the permit. The Contractor shall restore the area to its original condition, including reseeding if necessary, at the completion of the Project. The Contractor's equipment shall not be stored on any traveled highway.

### **ARTICLE 5 CONTRACTOR'S GENERAL RESPONSIBILITIES**

#### **5.1. Contractor Performance.**

- 5.1.1. The Contractor will perform the Work or cause the Work to be performed in a manner that is in compliance with the requirements of the Contract Documents. The Contractor shall perform the Work exactly as specified by the Contract Documents.
- 5.1.2. Unless otherwise provided in the Contract Documents, for the Unit Prices, the Contractor shall provide and pay for all labor, materials, equipment, tools, supplies, construction equipment and machinery, water, heat, electricity, energy, utilities, transportation, any temporary construction easements not provided by the City, apparatus, permits, superintendence, maintenance, dismantling, removal, and other facilities and services, necessary for the proper execution and completion of the Work, whether temporary or permanent, and whether or not incorporated or to be incorporated into the Work.
- 5.1.3. The Contractor shall supervise and direct the Work using the Contractor's best efforts, skill and attention.
- 5.1.4. The Contractor shall also supervise, direct and be responsible for all work performed by its Subcontractors, their agents and employees and other persons performing any of the Work under a contract with the Contractor, Subcontractors of any tier, or Suppliers of any tier.
- 5.1.5. The Contractor shall be solely responsible for all construction means, methods, safety, techniques, sequences and procedures unless otherwise specified in the Contract

Documents.

- 5.1.6. When the work includes adjusting valve boxes, meter pits, manholes, pavement markings and/or striping, etc., the Contractor shall complete this work within ten (10) days of placing the final lift of asphalt.

## **5.2. Contractor's Superintendent.**

- 5.2.1. The Contractor shall designate a Superintendent to be its representative and have immediate charge of the Project. The Superintendent or his or her representative shall have the Contractor's authority to act in its absence. The same person shall continue in the capacity of Superintendent until the Work has been completed unless the City requests that the Superintendent be replaced or the Superintendent ceases to be employed by the Contractor or becomes sick or disabled.
- 5.2.2. All directions and notice given to the Superintendent or his or her representative shall be considered given to the Contractor.
- 5.2.3. The Contractor shall keep the Project Manager informed, at all times, of the progress of the work and schedule of construction. The Superintendent or his or her representative shall have a radio, cell phone, or pager to be available to the Project Manager or any inspector as needed. The Project Manager may suspend operations at the Work site if the City cannot communicate with the Superintendent.
- 5.2.4. Any person employed on the Project who fails, refuses, or neglects to obey the Superintendent or his or her representative shall, upon the order of the Project Manager, be at once removed from the Project and not again employed on any part of the Project.

## **5.3. Subcontractors.**

- 5.3.1. The Contractor may use the services of specialty Subcontractors on those parts of the Work which, under normal contracting practices, are performed by specialty Subcontractors.
- 5.3.2. The Contractor shall not sublet or subcontract any portion of the Work to be done under the Contract to any Subcontractor or Supplier not identified in the Bid until approval of such action has been obtained from the City. The City may disapprove of a Subcontractor for any reason deemed appropriate by the Project Manager, including without limitation:
  - a) Default on a contract within the last five (5) years;
  - b) Default on a contract that required that a surety complete the contract under payment or performance bonds issued by the surety;
  - c) Debarment within the last five (5) years by a public entity or any organization that has formal debarment proceedings;
  - d) Significant or repeated violations of Federal Safety Regulations (OSHA);
  - e) Failure to have the specific qualifications listed in the Contract Documents for the work that the Subcontractor will perform;
  - f) Failure to have the required City or Colorado licenses to perform the work

described in the subcontract;

- g) Failure to pay workers the proper wage and benefits or to pay suppliers or subcontractors with reasonable promptness within the last five (5) years;
- h) Conviction, plea of nolo contendere, entry into a formal agreement admitting guilt or entry of a plea of guilty or otherwise admitting culpability to criminal offenses of bribery, kickbacks, collusive bidding, bid-rigging, anti-trust, fraud, undue influence, theft, racketeering, extortion or any offense of a similar nature in connection with Subcontractor's business, on the part of Subcontractor's principal owners, officers, or employees, within the last five (5) years;
- i) Failure to pay taxes or fees to the City;
- j) Evidence that the Subcontractor was selected by the Contractor through the process of bid shopping, dishonesty or buyout.

Rejection or acceptance of any Subcontractor shall not create in that Subcontractor a right to any subcontract or the right to perform any portion of the Work, nor shall acceptance or rejection relieve the Contractor its responsibilities for the work of any Subcontractor.

- 5.3.3. The Contractor is fully responsible to the City for the acts and omissions of its Subcontractors, and of persons either directly or indirectly employed by them.
- 5.3.4. The action or omission of any Subcontractor in violation of this Contract or any subcontract will not relieve the Contractor from any obligation under this Contract or at law.
- 5.3.5. Nothing contained in the Contract or any exercise of rights under this Contract creates any contractual relationship or privity of contract between any Subcontractor and the City.
- 5.3.6. The Contractor shall put appropriate provisions (including the indemnity and insurance provisions) in all Subcontracts relative to the Work to bind Subcontractors to the terms of the Contract insofar as applicable to the work of Subcontractors (even if not specifically required here), and to give the Contractor the same power to terminate any Subcontractor that the City may exercise over the Contractor.
- 5.3.7. The Contractor shall specifically stipulate in all Subcontractor or Supplier contracts and purchase order forms for all materials and systems that the guarantee period begins with the date of Substantial Completion. The Contractor shall, during the course of the Work, specifically instruct Subcontractors and Suppliers that all written guarantees, that are due to be submitted to the City, shall indicate the initiation of the guarantee period as being the date of Substantial Completion.
- 5.3.8. The Contractor shall make available to each proposed Subcontractor, before the execution of the subcontract, complete and accurate copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement which may be at variance with the Contract Documents. Subcontractors shall similarly make copies of applicable portions of such documents available to their respective proposed Subcontractors.

#### **5.4. Workforce.**

- 5.4.1. The Contractor shall assign an adequate number of qualified, competent workers to each task to complete the Work on schedule and in accordance with the Contract Documents.
- 5.4.2. If the City believes that the Work is not proceeding satisfactorily or may not be satisfactorily completed by the Completion Date, the Project Manager may, by letter to the Contractor, require the Contractor to submit a corrective action plan identifying steps to be taken, at no additional cost to the City, to raise the rate of progress to an acceptable level.
- 5.4.3. Competent personnel with experience and skills adequate for the assigned tasks are an absolute necessity for job safety and for the performance of quality work. The Contractor and any Subcontractor shall employ only foremen and workers skilled in the Work requiring special qualifications. The Contractor shall reassign or remove from the Project all personnel who are requested to be reassigned or removed by the Project Manager or who are incompetent, uncooperative, refuse to comply with safety requirements, or are otherwise unfit to perform the assigned task. No increase in Contract Time or Contract Price is authorized as a result of the City's exercise of this section.

#### **5.5. Work Performed Under Adverse Weather Conditions.**

- 5.5.1. Adverse weather conditions are those that can, depending on the Work to be performed, cause defective Work. High or low temperatures, excessive moisture, or unusual drying conditions are examples.
- 5.5.2. Construction methods and practices that have been or may be developed for Work performed under such circumstances may only be used after the Project Manager has approved the concept of such method or practice.
- 5.5.3. If the Contractor does attempt Work during periods of adverse weather conditions without the Project Manager's approval, that Work shall be at the Contractor's sole risk.

#### **5.6. Materials and Equipment Furnished by the Contractor.**

- 5.6.1. Unless otherwise provided for in the Specifications, all workmanship, equipment, materials, and articles incorporated in the Project are to be new, suitable for the purpose used, of good quality, free from faults and defects and in conformance with the Contract Documents.
- 5.6.2. The Contractor further warrants that it has full title to all parts, materials, components, equipment, and other items conveyed to the City under the terms of the Contract, that its transfer of such title to the City is rightful and that all such parts, materials, components, equipment, and other items shall be transferred free and clear from all security interests, liens, claims, or encumbrances whatsoever. Materials, supplies, and equipment to be incorporated into the Project shall not be purchased by the Contractor or any Subcontractor subject to chattel mortgage or under a conditional sales contract or other agreement by which an interest is retained by the seller. The Contractor agrees to warrant and defend such title against all persons claiming the whole or any part thereof, at no cost to the City.

- 5.6.3. The Contractor shall furnish the City, for the Project Manager's approval, the name of the manufacturer of machinery and other equipment for materials the Contractor contemplates incorporating in the Project. The Contractor shall also furnish information on capacities, efficiencies, sizes, etc., and other information as may be required by the Project Manager. All items shall be labeled to indicate the Contract and Project name, Contractor, source of supply, and manufacturer and shall be submitted in sufficient time to permit proper consideration by the Project Manager without impacting the Construction Schedule.
- 5.6.4. The Contractor shall have available for use when needed all necessary construction machinery and equipment. Such machinery and equipment shall comply with all applicable federal, state and local safety requirements and be in good working condition, adequate for the task, and in the numbers needed to maintain a rate of progress sufficient to complete the Work within the Contract Time and milestones. Whenever an operation is undertaken which must be accomplished without any slowdown or stoppage, or to avoid an inferior product, the Contractor shall provide standby equipment capability so that an equipment breakdown does not disrupt that activity.
- 5.6.5. The Contractor shall give the Project Manager three (3) copies of all shop manuals, operating manuals, parts lists, classifications, catalog cuts, specifications, warranties and guarantees for all equipment and machinery installed.
- 5.6.6. Consideration of a product as an "equal" by the Project Manager may require that the manufacturer of such product furnish guarantees that extend beyond the usual product warranty time. The refusal of a manufacturer to provide such guarantees is sufficient reason for rejecting the product.
- 5.6.7. The Contractor shall not incorporate any materials into the Project or cover any part of the Work until it has been inspected and approved according to the Contract Documents. Machinery, equipment, materials, and articles installed or used without the Project Manager's approval are at the risk of subsequent rejection.

## **5.7. Substitution of Materials & Equipment.**

- 5.7.1. After the award of the Contract, the Contractor may ask for substitution of specified material or equipment with equal or equivalent items only under the following circumstances: (i) The Contractor provides evidence to the Project Manager that, in the Project Manager's sole opinion, establishes that an item of specified material is not available; (ii) the Contractor provides evidence to the Project Manager that, in the Project Manager's sole opinion, establishes that the specified item will have an unreasonable delivery time due to no fault of the Contractor; or (iii) acceptance of such substitution would result in a significant saving to the City without materially impairing the quality or performance of the Work. If any of these circumstances exist, the Contractor shall request approval for a substitution at least thirty (30) days before the material or equipment must be ordered.
- 5.7.2. All requests for substitutions shall be made in writing as part of a submittal. The request shall describe all features of the requested substitution including any tie-in with other elements of the Work, including utilities and controls along with the size and capacity of substitute materials or equipment. The request must be submitted on a form provided by or otherwise acceptable to the Project Manager, and shall list all

differences from the product described in the Specifications, include the price of the specified item and the requested substitution, and describe any advantages or disadvantages of the proposed substitution. The Contractor shall be responsible for any effect upon related Work in the Project of any substitution and shall pay any additional cost resulting from or relating to any substitution.

- 5.7.3. If the “equal or equivalent” material or equipment costs less than that specified, the Contractor shall so state in its request for substitution and, if the City accepts the proposed substitution, it may issue a Change Order to reduce the Contract Price by the amount of the direct cost savings without markup to the Contractor.
- 5.7.4. If the equal or equivalent material or equipment is accepted for unavailability or unreasonable delivery time due to no fault of the Contractor, the City may, if appropriate, issue a Change Order to increase the Contract Price by the resulting actual, direct cost increase, if any, to the Contractor, without markup.

## **5.8. Defective Work and Materials.**

- 5.8.1. Material and workmanship not conforming to the requirements of the Contract are deemed defective. The Contractor shall bear all costs of investigating and correcting such defective Work and materials, which includes design efforts necessary to correct such Work.
- 5.8.2. Whether or not the Work is defective will be determined by comparing it to the Contract Drawings, Specifications, accepted Shop Drawings and manufacturer’s literature and further measuring it against the standard of quality implied by the Contractor’s warranty. Also, should the appearance and performance of any element of the Work fail to conform to standards of the trade for such Work, that Work may be declared defective.
- 5.8.3. Defects discovered by any inspection process or testing, or otherwise made apparent during the Work, shall be repaired, removed, or replaced by the Contractor, at no cost to the City, as identified. The City shall have the right to charge the Contractor for its costs of re-inspecting the Work after the defective Work is corrected and any costs of verifying or determining the existence of latent defects.
- 5.8.4. If the Contractor fails to replace rejected materials or Work within ten (10) days after receipt of written notice, the City may replace or correct them and charge the cost to the Contractor and may terminate the right of the Contractor to proceed.
- 5.8.5. Failure to detect previously installed defective materials or workmanship shall not impair the City’s right to receive a completed Work, which is free of defects and meets all of the requirements of the Contract Documents. Nothing in this section shall limit the City’s right to seek recovery for latent defects that are not observable until after any warranty or guaranty periods have run.

## **5.9. Cutting and Patching.**

- 5.9.1. The Contractor shall be responsible for all cutting, fitting, or patching that may be required to complete the Work, to make its several parts fit together properly or to tie the Work into other work that is shown in the Contract Documents.
- 5.9.2. The Contractor shall organize and plan the Work to reduce to a minimum the need for

cutting or otherwise modifying or removing load-bearing structural elements to accommodate the installation of other elements of the Work. If two or more contractors are doing work in the same place, the Contractor shall be responsible for the coordination effort needed to avoid or to reduce the amount of cutting, modifying or removing of structural elements to accomplish such work. However, if modification or removal of structural elements is required because the Work could not be organized and planned to avoid that need, the Contractor shall inform the Project Manager of the need so that the consequences of such modification or removal of structural elements can be assessed. No structural element shall be cut, drilled, bored or otherwise modified unless cutting, drilling, boring or other modification is indicated in the Contract Documents.

- 5.9.3. If the Contractor needs to modify a structural element from its original design, the Contractor must submit to the Project Manager a request to make the modification. The request must provide complete details including all necessary calculations performed by a professional engineer licensed in the State of Colorado to show that the structural elements can still function as originally designed. The request must be accepted by the Project Manager before any modification is made.
- 5.9.4. The Contractor shall be responsible for all repair, replacement, and patching that is necessary to restore the Work, other property, or work of others damaged by the Contractor.

#### **5.10. Samples and Testing.**

- 5.10.1. All materials and equipment used in the Project will be subject to sampling and testing by an independent testing company acceptable to the City according to generally accepted standards and as required in the Contract Documents. In the absence of direct references, the sampling and testing of materials will be done according to current specifications of the ASTM or the AWWA.
- 5.10.2. The Contractor shall furnish all samples without charge. The Contractor will cooperate with the Project Manager in collecting, handling, storing, and forwarding required samples including the furnishing of manpower and equipment when necessary.
- 5.10.3. The Contractor will pay the cost of the initial test except when the Contract states otherwise. The Contractor will pay the costs for repeated tests due to failure of the initial test. The costs of any testing and retesting may be deducted from any payment due to the Contractor under the Contract.
- 5.10.4. The Contractor will provide the Project Manager at least twenty-four (24) hours prior notice for any inspection involving testing or sampling.
- 5.10.5. The Contractor shall be responsible for testing of concrete and soils and, unless otherwise specified, the Contractor shall perform testing of all other materials and equipment. The Contractor shall provide the Project Manager with satisfactory proof of compliance with the requirements of the Contract Documents of any materials or equipment tested. Satisfactory proof of compliance shall be submitted in one or more of the following ways:
  - a) Manufacturer's Certificate of Compliance. For standard labeled stock products of standard manufacture that have a record of satisfactory performance in similar work over a period of not less than two (2) years, the Project Manager may accept

a notarized statement from the manufacturer certifying that the product conforms to the applicable specifications.

- b) Mill Certificates. For materials where such practice is the usual standard, the Project Manager may accept the manufacturer's certified mill and laboratory certificate.
- c) Testing Laboratory Certificates. The Project Manager may accept a certificate from an independent commercial testing laboratory satisfactory certifying that the product has been tested within a period acceptable to the Project Manager and that it conforms to the requirements of the Plans and Specifications.
- d) Report of Actual Laboratory Test. The Project Manager may require that Contractor make actual tests of any product and submit a report of the specified test. Such test shall be made by a commercial testing laboratory satisfactory to the Project Manager at the Contractor's sole expense.

#### **5.11. Substituted Performance.**

- 5.11.1. If the Contractor's failure of exact performance does not appear to the City to be deliberate or willful and if the City concludes that less than exact performance in some minor part of the Work will not result in a decrease in quality in the entire Work, the City may, at its sole option, accept substituted performance.
- 5.11.2. Should the City accept substituted performance, the cost of the Work shall be reduced by the sum of money that the City determines to be a reasonable consideration for less than exact performance and the City may, at its discretion, require separate warranties for any substituted performance.

#### **5.12. Project Signs.**

- 5.12.1. One or more project signs may be posted at each Work site. The City will prepare any signs at its expense. When the City notifies the Contractor that the signs are ready, the Contractor shall deliver the signs to the Work site and install them in locations designated by the Project Manager. As the Work progresses, the Project Manager may direct the Contractor to relocate the signs. The Project Manager will direct the Contractor as to final removal of the signs, either upon completion of the Work or at such other time as the Project Manager may determine.
- 5.12.2. All costs of transporting, installing, relocating and removing such signs shall be borne by the Contractor. The Contractor shall pay the costs of repairing any damage to the signs which occurs after the Contractor takes possession of the signs.

#### **5.13. Surveys.**

- 5.13.1. The City shall develop and arrange for all engineering surveys necessary, in the City's judgment, to establish reference points for the construction of the Work. The Contractor assumes full responsibility for construction according to the established lines and grades. If the Contractor proceeds with the Work without having lines and grades set, the Contractor will not be relieved of strict compliance with the Contract Documents.
- 5.13.2. The Contractor shall carefully protect all monuments and property markers from disturbance or damage. The Contractor, at its expense, will replace any monuments or benchmarks destroyed by the Contractor using a professional land surveyor licensed in the State of Colorado.



- 5.13.3. Unless otherwise stated in the Specifications or the Special Conditions, the City will provide all reference points shown on the Contract Drawings by coordinates and/or elevation. The Contractor must accurately transfer the survey control information to the points of application to ensure that all elements of the Work are correctly located.
- 5.13.4. Requests by the Contractor to relocate survey reference points must be made ninety- six (96) hours prior to the time when the point will be disturbed in order to permit the City to accomplish such surveys on normal working days.
- 5.13.5. Any Work that the Contractor begins before confirming the reference points provided may be rejected.
- 5.13.6. Should the original reference points that the City provided be obliterated or dislodged by operations that the Contractor controls, the City will replace them and charge the Contractor for the resurvey. The cost of these resurveys will be determined by multiplying the hourly equivalent of the salaries and fringe benefits paid to the survey personnel actually involved in the resurvey by the hours expended in doing that resurvey, plus material and equipment costs.

#### **5.14. Lines and Grades.**

- 5.14.1. The Contractor shall survey and stake and shall be responsible for laying out the work.
- 5.14.2. The Contractor shall preserve all stakes, bench marks, and any other survey points and shall pay for the replacement, in accordance with state law, of any stakes, benchmarks, or other survey points destroyed by the Contractor or any Subcontractor.

#### **5.15. Value Engineering.**

Value engineering includes changes in materials or methods used that will reduce the amount of the Contract and will preserve the integrity of the Work without reducing quantities completed. Proposed changes in materials or methods used must be approved by the Project Manager and any agency having jurisdiction over the affected work before such work is attempted. The Contractor shall be paid fifty percent (50%) of all identifiable cost savings resulting from said value engineering approved and accepted. A Change Order must be issued to effect such a value engineering task.

#### **5.16. Patents and Copyrights.**

- 5.16.1. The Contractor's bid price shall be considered to include a sufficient sum to cover all fees, royalties and claims for any material, artist rights, process, patent rights, machine, appliance, copyright, trademark, or any arrangement that may be used upon or in any manner connected with or appurtenant to the Work.
- 5.16.2. The Contractor shall provide a suitable legal agreement giving the Contractor the right to use any design, device, material, or process covered by letters patent or copyright, in the construction of the Project when the use has not been specified or required by the Drawings and Specifications. The Contractor shall file a copy of this agreement with the City, if requested. The Contractor and the Surety shall indemnify, defend and save harmless the City from all claims for infringements on patented design, devices, material, process or any trademark or copyright during the prosecution or after the completion of the Project.

- 5.16.3. If any design, device, material, process or product of a particular manufacturer covered by letters patent or copyright is specified for use by the Drawings and Specifications, the City is responsible for any claims for infringement by reason of the use of such design, device, material, process or product of a particular manufacturer; but the Contractor shall pay any royalties or license fees required.

#### **5.17. Utilities.**

- 5.17.1. The Contractor shall support, and protect from injury, until completion of the Work any existing power lines, telephone lines, water mains, gas mains, sewers, cables, conduits, ditches, curbs, walks, pavements, driveways, and other structures in the vicinity of the Work that are not authorized to be removed.
- 5.17.2. The Contractor shall schedule and coordinate all Work with any utilities. The Contractor shall cooperate with utility owners (including electrical, gas, communication, water, sewer and railroad) to mitigate damage (including relocation or removal) whenever the Contractor's work affects their utilities. The Contractor shall seek to expedite the progress of such work and minimize duplication of work and disruption of services.
- 5.17.3. The Contractor shall conduct its operations in such a manner as to minimize the inconvenience to the public due to disconnected utilities. The Contractor shall not disconnect any utility without prior approval of the affected utility and the Project Manager. Such utility shall then not be disconnected before 9:00 A.M. and service shall be restored by 4:00 P.M. of the same day. If the Contractor's operations require or cause utility service to be disconnected beyond the time limits stated above, the Contractor shall make arrangements suitable to the Project Manager to provide temporary utility service. Such temporary service shall be at Contractor's expense.
- 5.17.4. The City will not be responsible or liable for any delay or other impact to the Work caused by the acts or omissions of any utility or related agency.

#### **5.18. Coordination with SACWSD.**

The Contractor shall always coordinate its Work with SACWSD. If it becomes necessary to close portions of any water or sewer system due to construction operations, the Contractor will provide at least twenty-four (24) hours prior notice to SACWSD. SACWSD shall have authority to dictate requirements of the closure. It is the Contractor's responsibility to ensure continuity of the utilities.

#### **5.19. Notification of Affected Utility & Property Owners.**

- 5.19.1. The Contractor shall not excavate without first notifying all owners, operators, or association of owners and operators having underground facilities in the area of such excavation. Notice may be given in person, by telephone or in writing. Notice to an association is notice to each member of the association.
- 5.19.2. The Contractor shall contact the Utility Notification Center of Colorado at least forty- eight (48) hours before the start of any excavating.
- 5.19.3. The Contractor shall give such notice of the commencement, extent, and duration of the excavation work at least forty-eight (48) hours before beginning Work affecting the area.

- 5.19.4. If the Project affects fences, landscaping, mailboxes, driveways or other improvements, the Contractor shall notify the affected property owners or occupants IN WRITING at least forty-eight (48) hours before beginning Work. The Contractor shall cooperate with the owners or occupants to reduce inconvenience where reasonably possible.

## **5.20. Compliance with Laws; Licenses and Permits.**

- 5.20.1. The Contractor shall perform all obligations under the Contract in strict compliance with all applicable federal, state, and municipal laws, rules, statutes, charter provisions, ordinances, and regulations.
- 5.20.2. The Contractor and its employees, agents and Subcontractors, while performing the Work or while on City property for any reason during the Term, shall adhere to the City's policies applicable to City employees regarding drugs, alcohol and workplace violence.
- 5.20.3. The Contractor will obtain, at its cost, all licenses and permits required to do the Work by City, county, state, federal, or other applicable law or regulation. A Subcontractor shall also have the proper permits applicable to the Work to be performed by the Subcontractor.

## **5.21. Protection of Persons.**

- 5.21.1. The Contractor is responsible for the health and safety of all persons on or at the Work site and shall take all necessary and reasonable precautions and actions to protect all such persons from injury, death, or loss.
- 5.21.2. The Contractor and any Subcontractor shall not require any laborer, mechanic or other person employed in performance of the Work to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous to health or safety. The Contractor and all Subcontractors shall comply with all applicable safety rules and regulations adopted by the United States Department of Labor Occupational Safety and Health Administration (OSHA), the Industrial Commission of the State of Colorado or the City of Commerce City, whichever is most restrictive. The City assumes no duty to ensure that the Contractor follows the safety regulations issued by OSHA or the State of Colorado.
- 5.21.3. The Contractor shall provide all necessary protective devices and safety precautions. Such devices and precautions may include but are not limited to: posting of danger signs warning against hazards such as, but not limited to, hoists, well holes, elevator hatchways, scaffolding, openings, stairways, trip and fall hazards and falling materials; placement of warning flares; equipment back-up alarms; installation of barricades; promulgation and application of safety regulations and employment of safety personnel and guards. Signs will not be considered to be an adequate substitute for physical protective barriers. The costs of all protective devices and the planning and implementing of safety precautions are considered to be included in the Unit Prices, even if not specified.
- 5.21.4. If, in the opinion of the Project Manager, the Contractor has not supplied necessary and adequate barricades, warnings, or other safety devices, then the City may order additional devices and deduct the cost from the Contractor's payment. By taking such action, the City assumes no liability for the adequacy of such barricades, warnings or other safety devices.

- 5.21.5. For operations involving trenching, excavation or any other underground construction, the Contractor's attention is specially directed to and its work shall conform to the Construction Safety and Health Regulations, Part P Subparagraph 1926.6013-6016 by OSHA, latest revision.
- 5.21.6. The Contractor and all Subcontractors shall always, whether or not so specifically directed by the Project Manager, take necessary precautions to ensure the protection of the public. The Contractor shall furnish, erect, and maintain at its own expense all necessary precautions for the protection of the Work and safety of the public through and around its construction operations.
- 5.21.7. The Contractor shall make the provisions of this section a condition of each contract with any Subcontractor.

## **5.22. Protection of Property.**

- 5.22.1. The Contractor shall continuously take all reasonable precautions to protect from damage, injury or loss, all or any part of the Work and all or any part of materials or equipment to be incorporated in the Work, whether in storage on or off the Work site, under the care, custody, control of the Contractor or any Subcontractor or Supplier. The Contractor shall repair or replace at its expense any such damage, injury or loss, except such as may be directly due to error in the Contract or caused by agents or employees of the City.
- 5.22.2. The Contractor shall provide and maintain at its expense all passageways, barricades, guard fences, lights, and other protection facilities required by public authority or local conditions.
- 5.22.3. The Contractor is responsible for protection of all public and private property on and adjacent to any site of the Work. The Contractor shall use every precaution necessary to prevent damage to curbs, sidewalks, driveways, trees, shrubs, sod, mailboxes, fences, and other private and public improvements. The Contractor shall protect carefully from disturbance or damage all land monuments and property markers until an authorized agent has witnessed or otherwise referenced their locations, and shall not remove them until directed.

## **5.23. Protection of Historical Sites.**

When the Contractor's operations encounter remains of prehistoric peoples, dwelling sites or artifacts of historical or archeological significance, the Contractor shall temporarily discontinue such operations and immediately advise the Project Manager. The Project Manager will contact archeological authorities to determine the disposition of the items in question. When directed, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and remove them for delivery to the custody of the proper authorities. Such excavation is considered, and paid for, as extra Work.

## **5.24. Responsibility to Repair.**

- 5.24.1. When any direct or indirect damage or injury is done to any public or private property or utility by or on account of any act, omission, neglect or misconduct in the execution of the Work, the Contractor shall restore the damaged property at its own expense to a condition equal to or better than that existing before such damage or injury.

- 5.24.2. If any existing property is damaged in the Work as a result of Contractor's non-performance, the Contractor shall immediately notify the property owner. The Contractor shall not attempt to make repairs unless authorized in writing by the property owner or directed by the Project Manager. Written authorization from the owner to make repairs must be so worded as to save the City harmless from any responsibility whatsoever relative to the sufficiency of the repairs. The Contractor shall give the Project Manager a copy of the written authorization to make repairs.
- 5.24.3. The Contractor shall replace any materials and equipment lost, stolen, damaged or otherwise rendered useless during the performance of Work on the Project.
- 5.24.4. At the Contractor's cost, the City may undertake any such repair or replacement required by this section when the Contractor fails to do so within a reasonable time. The City may deduct any such cost from any payment due the Contract or may recover such costs from the Contractor or the Surety..

## **5.25. Hazardous & Explosive Materials & Substances.**

- 5.25.1. If the Contractor encounters or discovers any hazardous materials or substances during its performance of the Work, it shall immediately take reasonable precautions concerning such hazardous material or substances and notify the Project Manager verbally and in writing of the existence of such materials or substances immediately upon discovery.
- 5.25.2. The Contractor shall exercise the utmost care and caution if the storage or use of hazardous materials or substances or explosives are required for the performance of the Work. Activities related to the purchase, storage, handling, use, removal, treatment, or disposal of such hazardous materials or substances or explosives shall at all times be the sole responsibility of the Contractor and shall be supervised and carried out by personnel properly qualified to perform such activities. However, under no circumstances shall activities requiring the purchase, storage, handling, use, removal, treatment or disposal of hazardous materials or substances or explosives be initiated without first notifying the Project Manager in writing of the proposed activity and receiving the Project Manager's written approval of such activity. The use, handling and storage of explosives will not be allowed on site unless they are required or explicitly permitted by the Specifications

## **5.26. Cleaning Up and Restoration.**

- 5.26.1. The Contractor shall clean up and lawfully dispose of all refuse or scrap materials so the site presents a neat, orderly, and workmanlike appearance at all times. The Contractor shall follow all direction from the Project Manager as to the appearance of the site at all times.
- 5.26.2. The Contractor shall remove all mud or other materials tracked or otherwise deposited on any roadway daily or as directed by the Project Manager.
- 5.26.3. Upon completion of the Work, and before Final Inspection, the Contractor shall remove from the construction site and any occupied adjoining property all plants, buildings, refuse, unused materials, forming lumber, sanitary facilities, and any other materials and equipment that belong to the Contractor or any Subcontractors. The Contractor shall clean and replace any broken or scratched windows, clean and repair all surfaces, and clean and adjust all units of equipment that are part of the Work. Final

Payment will not be made until all cleanup is done to the Project Manager's satisfaction.

- 5.26.4. At the Contractor's cost, the City may clean up and restore the construction site satisfactorily when the Contractor fails to do so within two (2) days of the Project Manager's direction. The City may deduct any such cost from any payment due the Contract or may recover such costs from the Contractor or the Surety.

#### **5.27. Pest & Vector Control.**

The Contractor will be responsible for pest control and vector control at the Work site until Substantial Completion. All pest and vector control activities shall be conducted in compliance with applicable laws, including ordinances, statutes and regulations governing the handling, storage and application of pesticides or other hazardous materials and substances.

#### **5.28. Traffic Control.**

- 5.28.1. The Contractor shall arrange Work to disrupt traffic as little as possible. All traffic Control Devices used shall conform to the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD). Except as otherwise permitted, two way traffic shall be maintained at all times in public roadways.
- 5.28.2. At least seven (7) days before starting any Work in City right-of-way, the Contractor shall submit a detailed traffic control plan for review from the Public Works Department, with a copy to the Police Department. The approval shall establish the requirements for closures related to the number of lanes and time of day lanes or streets may be closed in accordance with the MUTCD and other applicable criteria or regulations. The Traffic Control Plan (TC Plan) shall include the name of the Contractor, the name and phone number of the person responsible for the traffic control, the date for beginning and ending construction activity and hours of operation expected. The TC Plan should show the widths of streets involved, traffic lanes, the size and location of the Work area with distances from the curb, distance to the nearest intersection, detours, parking areas, access to private property, and the type and location of traffic control devices. No changes to the TC Plan shall be permitted without prior approval by the Public Works Director.
- 5.28.3. The Contractor, at its cost, shall furnish and maintain all necessary signs, barricades, lights, and flaggers necessary to control traffic and provide for safety of the public, all in compliance with the MUTCD with subsequent revisions and additions, and to the satisfaction of the Public Works Director. No construction signs shall be placed on sidewalks unless construction is actually taking place on the sidewalk. During evening hours and when not in use, all signs shall be turned away from traffic and moved at least eight (8) feet away from the edge of the nearest traveled way.
- 5.28.4. Whenever a police officer is necessary for traffic control, the Contractor shall hire and pay a uniformed off-duty police officer with authority in the City to direct traffic. The police department will determine the rate of pay for the officers.
- 5.28.5. The Contractor shall make its Traffic Control plans in concurrence with any Traffic Control requirements that may be specifically stated in the Special Conditions.
- 5.28.6. The City may impose a price reduction charge for any recurrence of an incident under

the TC Plan, after notification by the Project Manager, according to the following schedule. The price reduction charge will not be considered a penalty, but will be a price reduction for failure to perform traffic control in compliance with the Contract. For purposes of this section, an "incident" is any violation of the TC Plan lasting up to thirty (30) minutes; each successive or cumulative 30-minute period in violation of the TC Plan will be deemed a separate incident, as determined by the Project Manager.

<b>Incident</b>	<b>Price Reduction Charge</b>
First	None – Notice from Project Manager
Second	\$150.00
Third	\$300.00
Fourth	\$600.00
Subsequent	\$1,200.00

#### **5.29. Sanitary Regulations.**

- 5.29.1. The Contractor is responsible for providing proper health and sanitation facilities for its employees, in compliance with any rules and regulations of the Colorado Department of Public Health and Environment or any other agencies having jurisdiction.
- 5.29.2. The Contractor shall always provide an abundant supply of safe drinking water for its employees and shall give orders against the drinking of any water known to be unsafe in the vicinity of the Project.
- 5.29.3. At convenient places, the Contractor shall provide fly-proof outside toilets which are to be maintained in a sanitary condition. Toilets shall not be permitted in any reservoir area and shall not be permitted where they may pollute a water supply.
- 5.29.4. The Contractor shall provide and empty daily a thirty (30) gallon or larger trash can near each toilet.

#### **5.30. Pollution Control.**

- 5.30.1. The Contractor shall comply with all applicable Federal and State laws, orders, and regulations concerning the control, prevention, and abatement of water pollution and air pollution in all operations pertaining to the Contract whether on right-of-way provided by the City or elsewhere.
- 5.30.2. The Contractor shall use construction methods that prevent release, entrance or accidental spillage of solid matter, contaminants, debris, and other objectionable pollutants and wastes including, but not restricted to refuse, garbage, cement, concrete, sewage effluent, industrial waste, radioactive substances, oil and other petroleum products, aggregate processing tailings, mineral salts, and thermal pollution. Non-regulated solid wastes shall be disposed of by methods approved under applicable laws and regulations, including, the Resource Conservation and Recovery Act (RCRA), Subtitle D, as administered by Colorado and local Health Departments and the EPA.
- 5.30.3. Contaminated and hazardous materials are regulated by RCRA, Subtitles C and D. The Contractor shall notify the Colorado Department of Public Health and Environment, local health departments, and local fire departments if suspect materials are encountered.

- 5.30.4. The Contractor shall utilize methods and devices that are reasonably available to control, prevent, and otherwise minimize atmospheric emissions or discharges of air contaminants including dust in its construction activities and operation of equipment.
- 5.30.5. The Contractor shall not emit dust into the atmosphere during any operations, including but not limited to: grading; excavating; manufacturing, handling or storing of aggregates; trenching; or cement or pozzolans. The Contractor shall use the necessary methods and equipment to collect, deposit, and prevent dust from its operations from damaging crops, orchards, fields or dwellings or causing a nuisance to persons. The Contractor is liable for any damage resulting from dust.
- 5.30.6. The Contractor may not operate equipment and vehicles with excessive emission of exhaust gases due to improper mechanical adjustments, or other inefficient operating conditions, until repairs or adjustments are made.
- 5.30.7. Burning trash, rubbish, trees, brush or other combustible construction materials is not permitted unless the Contractor has obtained a valid burning permit issued by the Tri-County District Health Department or successor agency. Any such burning shall be conducted in accordance with permit requirements.
- 5.30.8. De-watering for structure foundations or earthwork operations adjacent to or encroaching on lakes, streams or watercourses shall be done in a manner which prevents muddy water and eroded materials from entering the lakes, streams or watercourses, by construction of intercepting ditches, bypass channels, barriers, settling ponds or by other approved means. Excavated materials may not be deposited or stored in or alongside lakes or watercourses where they can be washed away by high water or storm runoff.
- 5.30.9. The Contractor will not allow wastewater from aggregate processing, concrete batching or other construction operations to enter lakes, streams, watercourses or other surface waters without turbidity control methods such as settling ponds, gravel-filter entrapment dikes, approved flocculation processes that are not harmful to fish, recirculation systems for washing of aggregates or other approved methods. Any wastewaters discharged into surface waters shall conform to applicable discharge standards of any agency having jurisdiction over the discharge, including the Colorado Department of Public Health and Environment and any federal agency.

### **5.31. Staging and Storage.**

- 5.31.1. With the Project Manager's approval, the Contractor may obtain sites of his/her choosing for equipment storage and/or materials stockpiling. The Contractor shall not occupy storage sites without prior written approval by the Project Manager. A list of such sites showing the proposed truck route for ingress and egress for each site shall be submitted to the Project Manager for approval at least five (5) days prior to intended use.
- 5.31.2. For all sites approved and used, Contractor shall be responsible for the following:
  - a) Obtaining prior written permission of the owner. A copy of this permission shall be provided to the City;
  - b) Keeping stockpiles and equipment confined within the approved area and in accordance with applicable erosion control requirements;



- c) Providing security for materials and equipment at the site;
- d) Providing for public safety at the site;
- e) Keeping access roads clean and in good condition and in accordance to the City's Erosion Control requirements; and
- f) At Contractor's sole cost expense, restoring the site to its original or better condition at the completion of the Work.

### **5.32. Salvage.**

Items removed by Contractor shall become the property of Contractor unless other disposition or repositioning is required by the Contract Documents or needed for the Work. The Contractor may reuse such items elsewhere or on other contracts, sell such items with proceeds of said sale becoming the property of Contractor or otherwise dispose of such items from the site. Items removed by the Contractor that do not have any salvage value are to be disposed of by Contractor at an approved dump at the Contractor's expense.

## **ARTICLE 6 CITY'S GENERAL RESPONSIBILITIES**

### **6.1. City Performance.**

- 6.1.1. The City will furnish the data, perform acts, and make payments as required by the Contract Documents.
- 6.1.2. The City shall not supervise, direct, or have authority or control over, nor be responsible for, the Contractor's means, methods, techniques, sequences, or procedures of construction or safety precautions, or any failure of the Contractor to comply with any laws or regulations applicable to the Work. The City will not be responsible for the Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.
- 6.1.3. The City's promise to pay for the Work that the Contractor promises to perform is limited by the City's Charter and its ordinances. A payment obligation of the City under this Contract, whether direct or contingent, shall extend only to funds appropriated by the City Council for the purpose of the Contract, encumbered for the purpose of the Contract and paid into the City or otherwise lawfully made available by the City. Unless authorized by law, (i) the City does not by this Contract irrevocably pledge present cash reserves for payments in future fiscal years, and (ii) this Contract is not intended to create a multiple-fiscal year direct or indirect debt or financial obligation of the City. Other limitations are found in the law that the Contractor is presumed to know. Three such limitations on payment are listed below:
  - a) Under no circumstances will the City be liable for any extra Work that has not been authorized by a properly executed Change Order or Field Order.
  - b) No Change Order, Field Order, or other form of directive to the Contractor shall be issued, and no such order or directive shall be binding if issued, if: (i) it would directly cause the aggregate amount payable under the Contract to exceed the amount appropriated or otherwise lawfully made available for the Contract, or (ii) it would require the Contractor to perform additional compensable work which would cause the aggregate amount payable to exceed such appropriated or provided amount.
  - c) It shall be the Contractor's responsibility to verify that the amounts already

appropriated or otherwise made available for the Contract are sufficient to cover the entire costs of the Work. Any work undertaken or performed in excess of the amount appropriated or otherwise made available is undertaken or performed in violation of the terms of the Contract, without the proper authorization, and at the Contractor's own risk.

- 6.1.4. Any limitations on the sources of funding for payments made under the Contract are stated in the Contract Documents.

## **6.2. Project Manager.**

- 6.2.1. The Project Manager is designated by the City to exercise all authority on its behalf under the Contract and to see that the Project is completed according to the Contract Documents. The Project Manager may be changed by written notice to the Contractor.
- 6.2.2. The Project Manager may assume exclusive control of the performance of the Contractor in the case of non-performance or if there is an imminent threat to life or safety of persons or property.
- 6.2.3. The Project Manager will furnish all explanations, directions, stakes or markers, and inspections necessary to carry out and complete the Project. No inspection, explanation or direction by the Project Manager shall be deemed authority for Contractor to deviate from the requirement that the Work be performed in accord with the Contract Documents.

## **6.3. Right to Bar Persons from the Work and Site.**

The City reserves the right to bar any person, including employees of the Contractor and Subcontractors, from the Work site by order of the Project Manager. This shall not be treated as a request for the employee's termination but a request that the employee not be assigned to work on the City Work site. No increase in contract time or price is authorized as a result of the City's exercise of this section.

## **6.4. Access to Work.**

- 6.4.1. The City, its representatives, and participating federal or state agencies and other public authorities having jurisdiction established by law shall have access to the Project and Work site at any time for any purposes, including without limitation inspection, sampling, and testing. The Contractor shall provide proper facilities for access to the Project.
- 6.4.2. Access means wherever and whenever the Work is in manufacture, preparation or progress and includes access to payrolls, records of personnel not protected from disclosure by law, invoices of materials, terms and conditions of sale of materials and equipment to be incorporated in the Project, files, records, books, correspondence, instructions, Drawings, receipts, subcontracts, purchase orders, vouchers, memoranda and any other relevant data and records relating to the Contract.
- 6.4.3. The City may, at reasonable times, inspect the part of the plant, place of business or worksite of the Contractor or Subcontractor at any tier that is pertinent to the performance of the Contract.

## **6.5. Inspection.**

- 6.5.1. The City shall appoint Inspectors to inspect the Project. Inspection may extend to all or any part of the Work. Inspectors are not authorized to alter any Contract Documents or to delay the fulfillment of the Contract by failure to inspect materials and Work with reasonable promptness. Inspectors are not authorized to act as foreman for the Contractor.
- 6.5.2. Inspectors may perform any tests and observe the Work to determine whether or not designs, materials used, manufacturing, and construction processes and methods applied, and equipment installed satisfy the requirements of the Contract Documents and the Contractor's warranties and guarantees.
- 6.5.3. Inspectors assigned to the Work by the City are authorized to reject any Work, any materials, or any component of the Work and to suspend any Work that is not being done as required or specified in the Contract Documents. Such rejection or suspension will be confirmed by the Project Manager in writing to the Contractor
- 6.5.4. The Contractor shall give the Project Manager due and timely notice of readiness when the Project is to be inspected, tested, or approved by someone other than the Inspector. The Contractor shall give the Project Manager required certificates of inspection, testing, or approval. Inspection, tests, or approvals by the Project Manager or others do not relieve the Contractor from its obligations to perform the Work according to the requirements of the Contract.
- 6.5.5. If the Project Manager considers it necessary or advisable that previously completed or covered Work be inspected or tested, the Contractor shall uncover, expose or otherwise make the Work available to the Project Manager at the Contractor's expense for inspection and testing. The Contractor shall furnish all tools, labor, material, and equipment necessary to make the Work available. If the Project Manager finds the Work defective, the Contractor shall pay for the cost of satisfactory reconstruction and making the Work available. However, if the Work is not found defective, the Contractor will be allowed an increase in the Contract Price and/or an extension of the Contract Time for costs and time directly attributable to making the Work available and for reconstruction unless covered by the Contractor before any required inspection hold point.
- 6.5.6. If the Contractor's operations require inspecting, testing or surveying to be done outside normal working hours (7 a.m. to 5 p.m.) or on weekends or City holidays, the cost of such overtime shall be at the Contractor's expense. The fee charged shall not exceed fifty dollars (\$50) and shall be charged "portal to portal" from the Inspector's workplace.
- 6.5.7. Inspections shall not be construed to relieve the Contractor of quality control responsibilities or full compliance with the Contract Documents.

## **ARTICLE 7   SUSPENSION OF WORK**

### **7.1.   General.**

- 7.1.1.   The City may suspend all or any part of the Work by written order signed by the Project Manager, without invalidating the Contract, for such period or periods as it may deem necessary due to:
  - a) Any reason for the convenience of the City, with or without cause, including but not limited to the availability of funding for the Project;
  - b) An order from a state or federal court or administrative agency; or
  - c) The Contractor's failure to perform any provision of the Contract Documents.
- 7.1.2.   Upon receipt from the Project Manager of an order to suspend the Work, the Contractor shall, within three (3) days, submit a suspension plan to the Project Manager for acceptance. The plan shall describe how the Contractor will store all materials in a manner so that the materials will not become an obstruction or become damaged in any way, what cost effective methods it will employ to prevent damage to or deterioration of the Work and otherwise protect the Work, how suitable drainage will be provided, what temporary structures will be necessary, and how the Contractor will prepare for resuming the Work for the least possible remobilization cost. After the plan is accepted, the Contractor shall implement it in accordance with instructions received from the Project Manager.
- 7.1.3.   Under no circumstance shall a suspension absolve the Contractor or the Contractor's sureties of the duties and responsibilities guaranteed under the Bonds.
- 7.1.4.   The Contractor shall again proceed with the Work when it is ordered to do so in writing by the Project Manager.
- 7.1.5.   Upon the resumption of the Work for all suspensions not involving the Contractor's failure to perform in accord with the Contract Documents, adjustment of Contract Time, if appropriate, will be made in accordance with these General Conditions. Adjustment of the Contract Price, if any, will be within the City's sole discretion and shall not in any event, exceed the cost of the extra work resulting from such suspension. Such cost, if any, shall be determined in accordance with these General Conditions.

### **7.2.   Suspension of Work for the City's Convenience.**

- 7.2.1.   Upon decision to suspend the Work or any part of the Work for the City's convenience, the order of suspension will extend the Contract Time for the number of days of such suspension if all Work is suspended. If the suspension applies to only a part of the Work, a time extension will not be authorized until the partial suspension has run and its effect on the entire Contract can be evaluated. In all cases of suspension for the City's convenience, the costs to the Contractor will be determined in accordance with these General Conditions.
- 7.2.2.   Upon order of such suspension, the Contractor shall immediately begin to perform in a manner designed to minimize the costs of protecting the Work and maintaining it in a condition which will permit its resumption for the least possible remobilization cost.

### **7.3.   Suspension of Work Due to Order of City, State, or Federal Court or Agency.**

The order of suspension will identify the court or agency order which caused the suspension and will extend the Contract by the amount of time specified by the court or agency order. If the order causes suspension for an indefinite period of time and as a

result a time extension cannot be established, the order of suspension will also be for an indefinite period of time. If the order is issued because of acts or omissions of the Contractor, the Contractor shall not be entitled to a time extension or payment for any additional costs it incurs.

#### **7.4. Suspension of Work Resulting from Contractor's Failure to Perform.**

If a suspension order results from the Contractor's failure to satisfactorily perform any of the provisions of the Contract, including but not limited to faulty workmanship, safety concerns, improper or inadequate manpower, equipment, supplies or supervision, or failure to perform the Work in a timely manner, the order will identify the reason, or reasons, for the order. In this circumstance, no time extension will be authorized for the Contractor and any costs to the Contractor resulting from such suspension order will not be reimbursed by the City. A suspension order issued under these circumstances will remain in effect until the Contractor has removed or corrected the grounds for the suspension, if applicable, or the order requiring such suspension expires by its terms

### **ARTICLE 8 WARRANTIES AND GUARANTEES**

- 8.1. The Contractor and its Surety are jointly responsible for maintenance and satisfactory operation of all Work performed under the Contract for a period of one (1) year following the later of Notice of Substantial Completion or until warranty work is fully satisfied. Neither the Contractor nor Surety is liable for any failure resulting from the City's neglect or improper operation of facilities or the act of a third party for whom the Contractor is not responsible.
- 8.2. The Contractor and its Surety are responsible for the prompt and satisfactory repair or replacement of any Work, materials or equipment which is found defective during this period (including design costs), provided any failure results directly or indirectly from faulty workmanship or negligence by the Contractor or any Subcontractor or from faulty manufacturing or from faulty erection or improper handling of materials or equipment furnished or installed by the Contractor or any Subcontractor. The Contractor and its Surety shall promptly replace any materials and re-perform any portion of the Work found to be defective within this period in accordance with the Contract and without expense to the City.
- 8.3. Nothing in this section shall limit the City's right to seek recovery for latent defects that are not observable until after the warranty or guarantee periods have run.
- 8.4. All Subcontractors', manufacturers', and Suppliers' warranties and guarantees, express or implied, for any part of the Work and any materials used in the Work shall be obtained and enforced by the Contractor for the benefit of the City whether or not these warranties and guarantees have been assigned or otherwise transferred to the City. The Contractor shall assign or transfer such warranties and guarantees (including those of any longer term) to the City if the City requests the Contractor to do so, but such transfer shall not affect the Contractor's obligation to enforce such warranties and guarantees.

#### **8.5. Performance During Warranty Period.**

- 8.5.1. The Project Manager will notify the Contractor of defective Work that is found to be defective and fails to satisfy the warranties and guarantees described in this article, or elsewhere in the Contract Documents, and the Contractor shall, within ten (10) days or such longer time as may be requested and set forth in the notice, commence the

repair, replacement, or correction of the defective Work. If the Contractor fails to complete such Work within a reasonable period, the City may make the repairs or replacements at the expense of the Contractor. If the City determines that immediate action to make repairs, replacements or other corrections is necessary because of emergency conditions or to prevent further loss or damage, the City may proceed without notice to the Contractor, but at the expense of the Contractor.

- 8.5.2. If the Contractor does not proceed with the correction of such defective Work within the time fixed by written notice from the Project Manager, or if an emergency condition exists, the City may remove and store any defective materials or equipment at the expense of the Contractor. If the Contractor does not pay the cost of the removal and storage within ten (10) days thereafter, the City may, upon ten (10) additional days' written notice, sell the stored Work at auction.
- 8.5.3. If the proceeds of sale do not cover all costs that the City has incurred and which the Contractor should have borne, the difference shall be charged to the Contractor and the Contractor and its surety shall be liable for and pay such difference to the City.
- 8.5.4. If the Contractor does not agree that the Work is defective or the defective Work is its responsibility and if no emergency condition exists, the Contractor may request review, in writing, of the Project Manager's decision in accordance with these General Conditions. If such review is not requested within ten (10) days of the notification of defective Work, the Contractor shall have waived the right to contest its responsibility for the correction of the defective Work. Under emergency conditions, the Contractor shall immediately correct the alleged defective Work, and the question of responsibility for the expense shall be determined by the Project Manager, subject to the right of the Contractor to seek review within ten (10) days of the City's notice allocating responsibility for the expense.
- 8.5.5. Should the City claim by written communication sent or mailed before the warranty or guarantee period expires that certain defective Work exists and that it requires repair or replacement, the warranty and guarantee period shall be automatically extended for as long as the defective Work exists.

## **ARTICLE 9 CHANGES**

### **9.1. General.**

- 9.1.1. The Contractor shall perform the Work, as changed by any Change Order, as if originally specified. All changes shall be accomplished by either a written Change Order or a written Field Order issued in accordance with these General Conditions. If a Field Order is used, a Change Order will be executed when the terms of the change are agreed upon.
- 9.1.2. Changes to the Contract Price and Contract Time are authorized only by Change Orders.
- 9.1.3. Any plan of action, method of work, or construction procedure suggested orally or in writing to the Contractor by any City employee, agent or representative, which is not set out in Change Orders or Field Orders issued in accordance with the Contract Documents, if adopted or followed by the Contractor in whole or in part, shall be performed at the Contractor's sole risk and responsibility.
- 9.1.4. The Contractor may not treat any order, statement or conduct of the Project Manager as a change under this article nor become entitled to an equitable adjustment in the

Contract Price or Contract Time except as provided in this article.

9.1.5. Claims for changes in the Contract Price or Contract Time of Performance will not be considered after the Final Payment has been made.

9.1.6. Change Orders involving an increase in the Contract Price must be authorized as follows:

- a) Up to \$5,000 – Division Manager or above (or other as delegated by Division Manager)
- b) Up to \$50,000.00 – Department Director or above (or other as delegated by Department Manager)
- c) Up to \$250,000.00 – City Manager
- d) Over \$250,000.00 – City Council

## **9.2. City Change Request.**

9.2.1. The City may, without notification to any Surety, require the Contractor to perform additive or deductive changes to the Work within the general scope of the Project without invalidating the Contract or any Bond.

9.2.2. When the City desires to initiate a change, the Project Manager will issue a change request informing the Contractor of the proposed change in the Work, and requesting the Contractor's detailed price proposal for such change. The Contractor, at no expense to the City and within the time period specified in the Change Request, shall provide the Project Manager with a complete and itemized proposal for the change in the Work, which shall include the estimated increase or decrease in the Contract Price or Contract Time. Such increase or decrease shall be based on the criteria and methods described in these General Conditions. The Contractor shall be responsible for any delays in the Work and any additional costs to the City caused by the Contractor's failure to submit a complete price proposal within the time provided. The Contractor shall participate with the City in prompt joint analysis and negotiations to finalize a Change Order. The issuance of a Change Request by the City is not a prerequisite to the issuance of a Field Order.

## **9.3. Field Orders.**

9.3.1. The Project Manager may make changes in the details of the Project at any time, by issuing a Field Order. Upon receipt of a Field Order, the Contractor shall promptly sign the Field Order and return it to the Project Manager, and shall promptly proceed with performing the change in the Work.

9.3.2. A Field Order may be used when:

- a) The City determines that the Contractor must proceed immediately to perform a change in the Work in order to avoid an adverse impact on the schedule or other work, or to avoid or correct a situation where the health or safety of persons may be affected, and sufficient time is not available to negotiate a Change Order; or
- b) The City and Contractor have not completed their negotiation and reached agreement on all of the terms of a Change Order, but the City requires the Contractor to proceed without such agreement.

9.3.3. If the Contractor believes that such Field Order entitles it to a change in Contract Price or Contract Time, or both, the Contractor shall give the Project Manager written notice within five (5) days after the receipt of the Field Order. Within twenty (20) days after receiving the Field Order, the Contractor shall provide the Project Manager with a complete and itemized proposal that includes the estimated increase or decrease in the Contract Price or Contract Time, or both, attributable to the changes based on the criteria and methods described in these General Conditions. The Contractor shall be responsible for delays to the Work and any additional costs incurred by the City caused by its failure to submit complete pricing information within the time provided above.

9.3.4. Time and Materials.

- a) If the maximum cost of the change in the Work to be performed under a Field Order has not been agreed upon and reduced to writing in the actual Field Order, or if such change is not fully described under a Unit Price set forth in the Contract Documents or the Field Order, the Contractor shall proceed with such Work on a time and materials basis.
- b) Whenever Work is performed on a time and materials basis, the Contractor shall fully document all costs associated with such Work. Beginning with the first day such Work is performed and on a daily basis thereafter, the Contractor shall submit to the Project Manager a daily itemization of all such costs in such form as the Project Manager may require.
- c) The final Contract adjustment for Field Order changes in the Work performed on a time and materials basis shall be calculated in accordance with these General Conditions.

9.3.5. When the City and the Contractor reach agreement on an adjustment to the Contract Price or Contract Time, or both as appropriate, such agreement shall be promptly executed as a Change Order. If the City requires Contractor to perform additional compensable work under a Field Order prior to executing a Change Order, the Contractor shall submit its costs to perform the work as periodically completed in its monthly application for payment, and City shall reimburse such costs, subject to retainage and any applicable withholding. In no instance shall the City be required to periodically reimburse Contractor for such additional compensable work prior to Contractor submitting to City an estimate of the cost of the additional compensable work to be performed.

**9.4. Contractor Change Requests.**

9.4.1. If the Contractor: (i) receives any instructions, interpretations or directives which it believes are at variance with the Contract Documents or would require the Contractor to accelerate or decelerate the Work; or (ii) identifies what it believes are errors or omissions of any kind, including design errors or omissions, in the Drawings or Specifications; or (iii) encounters a differing site condition; or (iv) is delayed in performing the Work; or (v) becomes aware of any other matter or circumstance that the Contractor believes might require a change in the Contract Documents, Contract Time, or Contract Price, the Contractor shall give the Project Manager prompt written notice of such matter and request a Change Order in a document identified as a "Contractor Change Request."

9.4.2. Following submission of a Contractor Change Request, the Contractor shall diligently continue performance of the Contract to the maximum extent possible.



9.4.3. All Contractor Change Requests shall be dated, numbered sequentially, and shall describe the action or event that the Contractor believes may require the issuance of a Change Order. The Contractor shall also provide a description of possible Contractor actions or solutions to minimize the cost of the Contractor Change Request and, when possible, provide an estimate of the adjustment in the Contract Time and Contract Price which the Contractor believes is appropriate.

9.4.4. Time Requirements.

- a) With respect to orders, instructions, directives, interpretations, determinations, or the discovery of any errors or omissions in the Contract Documents, a Contractor Change Request shall be submitted before the Contractor acts on them, but in no event more than five (5) days after they have been, or reasonably should have been, received or discovered.
- b) With respect to any differing site conditions, a Contractor Change Request shall be submitted before the conditions are disturbed, but in no event more than five (5) days after the conditions are first discovered or reasonably should have first been discovered.
- c) With respect to delays, as set out in these General Conditions, a Contractor Change Request shall be submitted as soon as the Contractor becomes aware, or reasonably should have become aware, of the delay, but in no event more than five (5) days therefrom.
- d) With respect to any other matter or circumstance that the Contractor believes would require a change, a Contractor Change Request shall be submitted as soon as the Contractor reasonably has knowledge of the matter or circumstance, but in no event more than five (5) days after the Contractor becomes aware, or reasonably should have become aware, of such circumstance or matter.

9.4.5. Submittal Requirements and Waiver of Claims.

- a) If the Contractor does not submit a Contractor Change Request within the time required by these General Conditions, any action by the Contractor related to such order, direction, instruction, interpretation, determination, design error or omission, or other matter, including delays or differing site conditions, will not be considered by the City as a change to the Work and the Contractor waives any claim for an adjustment on the Contract Price or the Contract Time.
- b) The Contractor shall, within ten (10) days after submitting a Contractor Change Request, provide the Project Manager with a complete and itemized proposal that sets out as specifically as practicable the requested adjustments to Contract Price, Contract Time, or other Contract provisions, and contains the other information described in these General Conditions.
- c) The proposal shall also contain a detailed explanation, citing all applicable provisions in the Contract Documents that support the Contractor Change Request. If the Contractor does not submit its itemized proposal for a Change Order within the time described above or within such extension that the Project Manager, in his or her discretion may have granted in writing, the Contractor waives any claim for an adjustment in the Contract Price or Contract Time arising out of the act or event giving rise to or necessitating a Contractor Change Request.
- d) The Contractor shall furnish, upon request, all additional information and data that the Project Manager determines is needed to assist the City in evaluating and

resolving the Contractor Change Request through negotiation. The Contractor shall give the City access to its books, correspondence, records, electronic data bases and files, and other materials relating to the work described in the Contractor Change Request, shall require its Subcontractors and Suppliers to provide the City with such access, and shall make its personnel and that of its Subcontractors and Suppliers available to discuss and answer cost, schedule, and other questions related to such request. Clear and legible copies of all necessary supporting records shall be provided to the City at no cost. Failure to submit requested information may be a basis for denial of the request.

9.4.6. Specific Provisions for Delay-Based Contractor Change Requests.

If the Contractor Change Request is based in whole or in part on a delay of any kind or nature, the complete itemized proposal shall include the following information in addition to all other required information:

- a) The date, nature, and circumstances of each event regarded as a cause of the delay;
- b) The names of all individuals acting on behalf of the City who are known or believed by the Contractor to have direct knowledge of the delay;
- c) If the Contractor claims acceleration costs of scheduled performance or delivery, the basis upon which acceleration arose;
- d) The identification of any documents and the substance of any oral communications known to the Contractor which substantiate, refute, or concern such delay;
- e) A Critical Path Method (CPM) schedule corrected to reflect actual performance, showing delay impacts as separate tasks and Contractor's mitigation of such impacts; and
- f) The specific elements of Contract performance for which the Contractor may seek an equitable adjustment, including:
  - 1) Identification of each Contract or schedule line item that has been or may be affected by such delay;
  - 2) To the extent practicable, identification of the delay and disruption in the manner and sequence of performance, and the effect on continued performance, that have been or may be caused by such delay;
  - 3) Identification of labor, materials, or both, or other cost items including overhead and Subcontractor costs, that have been or may be added, deleted, or wasted by such delay;
  - 4) A statement that the Contractor is maintaining records by some generally accepted accounting procedure that allows the separately identifiable direct costs due to the delay, and those not incurred as a result of the delay, to be readily identified and segregated; and
  - 5) Estimates of the necessary adjustments to Contract Price, Contract Time and any other Contract provisions affected by the delay.

9.4.7. Determination by Project Manager.

- a) The Project Manager shall respond in writing to any timely Contractor Change Request within ten (10) days of receipt of the complete and itemized proposal in support of the request. Failure of the Project Manager to respond within such time period shall be deemed a denial of the Contractor Change Request unless the

Project Manager notifies the Contractor that additional time is necessary to review the Contractor Change Request.

- b) If a Contractor Change Request is denied by the Project Manager, in whole or in part, any claim for an increase in the Contract Price or Contract Time arising out of the act or event described in the Contractor Change Request is waived unless the Contractor timely submits a protest or dispute in accordance with these General Conditions.

## **ARTICLE 10 ADJUSTMENT TO CONTRACT PRICE**

### **10.1. Contract Price Adjustments.**

All adjustments to the Contract Price shall be determined by using one or more of the following methods in descending order:

- 10.1.1. Unit Prices (as stated in the Contract Documents or subsequently agreed upon) multiplied by final verified quantities of work performed and subject to the requirements of paragraph 10.7 below;
- 10.1.2. A negotiated lump sum. If requested by the City, the Contractor shall promptly provide itemized and sufficient substantiating data, including calculations, measurements, cost records, production rates, equipment types and capacity, labor costs by craft and other information that the City may reasonably require the Contractor to produce in order to permit the City to evaluate any lump sum Contractor Change Request. In pricing such proposals, the Contractor shall include estimates of the type of costs described in this article
- 10.1.3. Costs as determined in a manner previously agreed upon by the Parties, which include markups that do not exceed those described in this article.
- 10.1.4. Time and Material costs as determined in the manner described in this article. These amounts may be reduced where necessary to take into account the cost of base Work, Work included in approved Change Orders, Work described in other Field Orders, idle time for workers and/or equipment when Work could have been performed in other locations or when the number of workers or amount of equipment provided exceeded the number or amount required to perform the Work, unsatisfactory Work, or Work that may be or was performed concurrently with the changed Work and which cannot be easily segregated from the changed Work.

### **10.2. Calculation of the Contract Adjustment.**

In no event shall the charge or credit to the City associated with any change exceed the sum of the following:

- 10.2.1. Direct Labor. The actual net, direct increase or decrease in the cost of the Contractor's labor. Such cost shall include only the cost associated with the workers who actually perform the changed Work. The cost of supervision, management and field or office overhead shall not be included or calculated as a direct labor cost. For shop work, the direct labor cost shall include only those workers who work directly on the item being manufactured or the actual operators of the equipment being used to handle the items being manufactured.
- 10.2.2. Labor Burden. Contractor's actual costs for worker's compensation and liability insurance, payroll taxes, social security and employees' fringe benefits (including employer paid health insurance) imposed on the basis of payrolls, and any other benefits provided to employees (including under any applicable collective bargaining

agreement). This burden must reflect the variability of some burdens, i.e., social security. The burden shall be itemized and include all small tools and miscellaneous supplies. The total labor burden for such small tools shall not exceed two percent (2%) of the Direct Labor cost.

10.2.3. Direct Material, Supplies, Installed Equipment. The actual net, direct cost of materials, supplies and equipment incorporated into or consumed by the Work. If actual costs are not available, this cost shall be the lowest commercially available price including all discounts, rebates, shipping and restocking charges, and applicable taxes. Such cost shall be based on buying the material, supplies and equipment in the largest practical quantity to receive quantity discounts.

10.2.4. Equipment Costs. Without markup or operator, the lesser of (i) the actual net cost to the Contractor of owned or rented equipment, other than small tools; or (ii) the rental rate for such equipment as determined by using the following method(s):

- a) Equipment rental rates listed in the appropriate rental rate book currently in use by CDOT. If an item of equipment does not appear in the rental rate book currently in use by CDOT, the rental rates published by the Associated Equipment Dealers may be used as a basis for negotiating a rental rate for a particular piece of equipment. The Contractor shall provide all information necessary to determine the appropriate rental rate at the time the equipment is brought on the job. This shall include, but not be limited to, type, description, make, year, model, series, serial number, fuel type, transmission, wheel combination, GVW, capacity and equipment owner.
- b) Rental equipment costs shall be determined using actual invoiced rates, less all discounts for basic equipment rental.
- c) Mobilization/demobilization costs will be paid if the equipment is mobilized for Work described in a Change Order and is not otherwise to be mobilized or demobilized for the Work at the time. If the equipment is also used on Base Contract Work, no mobilization or demobilization cost will be paid. Mobilization/demobilization costs will be based on using the least expensive means to mobilize or demobilize. Equipment shall be obtained from the nearest available source. When the least expensive methods are used, the costs shown in the actual invoice will be the basis for pricing.

10.2.5. Mark Up For Overhead And Profit.

The Contractor or Subcontractor of any tier who actually performs the Work shall be entitled to a reasonable markup of no more than ten percent (10%) on the actual costs for Direct Labor, Labor Burden, Direct Material, Supplies, Installed Equipment, and Equipment Costs, as described in this article. Bonds and insurance are compensated at direct cost without markup

10.2.6. Bonds, Insurance, Permits And Taxes.

The actual increases or decreases in the cost of premiums for bonds and insurance, permit fees, and sales, use or similar taxes related to the Work.

### **10.3. Totals as Equitable Adjustment.**

The Contractor agrees that the total of the above items constitute an equitable adjustment for any and all costs or damages resulting from a change.

### **10.4. No Equitable Adjustment for Obstruction by Contractor.**

No equitable adjustment shall be made as a result of costs resulting from any act, hindrance, obstacle, obstruction, interference, or omission of the Contractor, its Subcontractors, Suppliers, or Surety, or any other entity or individual acting on behalf of the Contractor, or any Subcontractor, Supplier, or Surety.

#### **10.5. Calculation of Certain Equitable Adjustments.**

- 10.5.1. In case of delay in completion of the entire Contract due to drawings, designs or specifications that are defective and for which the City is responsible, the equitable adjustment for delays or costs incurred prior to notification to the City of such defect shall only include the extra cost and time reasonably incurred by the Contractor in attempting to comply with the defective drawings, designs or specifications before the Contractor identified, or reasonably should have identified, such defect.
- 10.5.2. An equitable adjustment shall not include increased costs for delay resulting from the Contractor's failure to continue performance during determination of any Contractor Change Request or claim.

#### **10.6. Price Reductions for Defective Cost or Pricing Data.**

If it is later determined that pricing adjustments to the Contract were not correct due to incomplete or inaccurate pricing data by the Contractor or any Subcontractor or Supplier or that lower prices were reasonably available, the price shall be reduced accordingly and the Contract Price modified by an appropriate Change Order.

#### **10.7. Variations in Estimated Quantities.**

- 10.7.1. Where the quantity of a Unit Price pay item in the Contract is an estimated quantity and where the actual quantity of such pay item varies more than 25% below the estimated quantity stated in the Contract, the Contractor shall make an equitable adjustment in the Contract Price, upon demand of the City. The Contract Price adjustment will be based upon any decrease in costs due solely to the variation below 75% of the estimated quantity.
- 10.7.2. Where the quantity of a Unit Price pay item in the Contract is an estimated quantity and the actual quantity of such pay item is more than 25% above the estimated quantity in the Contract, the City may elect to terminate the Contract for convenience or issue a Change Order to adjust the Contract Price. The Contract Price adjustment will be based upon any increase in costs due solely to the variation above 125% of the estimated quantity.
- 10.7.3. If the quantity variation is such as to cause an increase in the time necessary for completing the Work, the Contractor may request, in writing, an extension of time in accordance with these General Conditions.

#### **10.8. Disposition of Excess or Obsolete Property.**

When the cost of materials, supplies, equipment or other personal property made obsolete or excess as a result of a delay is included in the equitable adjustment, the Project Manager shall have the right to prescribe the manner of disposition of such property.

### **ARTICLE 11 CONTRACT TIME**

#### **11.1. General.**

Work shall be fully completed in a satisfactory and acceptable manner by the Completion Date as modified by Change Orders providing for additional time due to excusable delays.

## **11.2. Delays.**

11.2.1. Delay claims fall into three categories: **non-excusable**; **excusable/non-compensable**; and **excusable/compensable**. Any payment for compensable delays or the granting of time extensions for excusable delays requires a properly executed Change Order. The Contractor agrees that time extensions shall constitute full compensation for, and the Contract shall make no claim for monetary damages relating to, any non-excusable delay or any excusable/non-compensable delay.

11.2.2. **Non-excusable delay** is caused by factors within the Contractor's reasonable control or by the Contractor's fault. No additional time or additional compensation is allowed for non-excusable delays. Typical non-excusable delays, without limitation, include:

- a) Late submittal of Shop Drawings;
- b) Late procurement of materials or equipment;
- c) Insufficient personnel;
- d) Unqualified personnel;
- e) Inadequate coordination of Subcontractors or other contractors;
- f) Subcontractor delays;
- g) Late response to City, Project Manager, or Inspector inquiries;
- h) Failure to comply with the requirements of the Contract Documents;
- i) Construction not conforming to contract requirements making repeated re-working necessary;
- j) Delays resulting from the Contractor's failure to take reasonable actions to mitigate or prevent further delays relating to any excusable delay;
- k) Failure to continue performance during the determination of any Contractor Change Request or claim; and
- l) Weather Days exceeding the Reasonably Predictable Weather Days identified on the approved Construction Schedule, unless approved as unusually severe weather days.

11.2.3. **Excusable/Non-compensable delay** is caused by factors beyond the Contractor's reasonable control, but is not the result of the City's actions or omissions. An excusable/non-compensable delay entitles the Contractor to an extension of time but no additional compensation for the cost of the delay. Typical excusable/non-compensable delays, without limitation, include strikes, lockouts, natural fires not caused by Contractor's acts or omissions, unusual delay in transportation, unavoidable casualties, legal or administrative proceedings affecting the Work or the Project, and other causes beyond the Contractor's control.

11.2.4. **Excusable/Compensable delay** is caused by the City's failure to meet an obligation within its control stated or implied in the Contract, but shall not include any action, omission, or exercise of any right under the Contract. If the Project Manager considers a delay as compensable, the City will grant a time extension or reimburse the Contractor for the increased total cost of performance caused by the delay, or both, as

appropriate. Typical excusable/compensable delays, without limitation, include:

- a) Late approval of Shop Drawings and samples;
- b) Delays in answers to field inquiries made by the Contractor;
- c) Interference with the Contractor during construction;
- d) City-caused schedule changes;
- e) Design changes; or
- f) Interference by another contractor's or the City's forces.

- 11.2.5. **Time Adjustments for Weather Delays.** The Project Manager, in his or her discretion, may deem weather-related delays as excusable/non-compensable if the net number of Weather Days in any month exceeds the number of Reasonably Predictable Weather Days for that month shown on the approved Construction Schedule. The Contractor must submit a weather time impact analysis supporting any request for time extensions due to unusually severe weather.

### **11.3. Failure to Complete Work on Time – Liquidated Damages.**

- 11.3.1. The City may permit the Contractor to proceed if the Contractor fails to advance the Work sufficiently to obtain a Notice of Substantial Completion on or before the Completion Date, as modified by Change Orders providing for additional time due to excusable delays. In such case, the Contractor will pay the sum of liquidated damages stipulated in the Special Conditions for each day that the Work remains uncompleted. This sum shall not be a penalty but is liquidated damages.
- 11.3.2. The Parties agree that time is of the essence in the performance of this Contract and that actual damages for delay are incapable of calculation. The Parties agree that, under all of the circumstances, the daily basis and the amount set forth as liquidated damages is reasonable and equitable. The City expends additional personnel effort in administering the Contract or portions of it that are not completed on time, and such efforts and the costs thereof are impossible to accurately compute. In addition, some, if not all, citizens of Commerce City incur personal inconvenience and lose confidence in their government as a result of public projects or parts of them not being completed on time, and the impact and damages, certainly serious in monetary as well as other terms, are impossible to measure.
- 11.3.3. Permitting the Contractor to continue and finish the Work, or any part of it, after the Completion Date shall not operate as a waiver on the part of the City of liquidated damages or any of its rights under the Contract.
- 11.3.4. The City may deduct any liquidated damages or any portion thereof due under this article from Final Payment and may sue for and recover such damages from the Contractor and the Surety.
- 11.3.5. Liquidated damages in the amounts stipulated do not include any sums of money to reimburse the City for extra costs which the City may become obligated to pay on other contracts which were delayed or extended because of the Contractor's failure to complete the Work within the Contract Time. The City reserves all of its rights to actual damages from the Contractor for injury or loss suffered by the City from actions or omissions of the Contractor, including but not limited to any other breach or default of the Contract, outside of the scope of this section.

## **ARTICLE 12 PAYMENTS TO CONTRACTOR AND COMPLETION**

### **12.1. General.**

Unless expressly provided otherwise, the Unit Prices shown in the Bid include the cost of all labor, materials, supplies, equipment, tools, forms, services, utilities, royalties, fees, taxes, profit, overhead, and any other thing or expense, whether temporary or permanent, necessary to complete the Project in accordance with the Contract Documents. Items not shown on the Contract Documents that are necessary to construct the Project will be considered a part of the Project whether specified or not and no separate payment will be made for these items.

### **12.2. Determination of Amounts and Quantities.**

- 12.2.1. The Project Manager or his or her designee shall verify determinations of amounts and quantities of Work performed.
- 12.2.2. The method of measurement of pay items subject to Unit Prices will be as specified in the Special Conditions.

### **12.3. Monthly Estimates & Progress Payments.**

- 12.3.1. The Contractor shall submit signed applications for progress payments on a monthly basis based on partial estimates for all Work completed to date. Applications shall be submitted no later than ten (10) days after the end of the month for Work subject to the application. Applications shall be submitted in a format reflecting the line items for which payment is requested according to the Unit Price Form in the Bid and any applicable Change Order, shall be dated as of the actual date of submittal (or revised submittal, as applicable), and shall reflect the Work completed and the date to which Work has been completed. The Contractor will provide support documentation for all applications, as requested.
- 12.3.2. The signature on each application is a representation by the Contractor to the City that the Work has progressed to the point indicated, that the Work covered by the application is in accordance with the Contract Documents, that the money received as a result of the application will be used to discharge the Contractor's obligations under the Contract, and that the Contractor is entitled to payment in the amount requested.
- 12.3.3. By submitting an application for payment, the Contractor warrants that: (i) the title to the Work covered by the estimate of Work completed will pass to the City by incorporation into the completed Work; (ii) the Work covered by previous estimates of Work completed is free and clear of liens, claims, security interests or encumbrances, except for any interest created by retainage; and (iii) no Work covered by the estimate of Work completed is subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or any other person or entity.
- 12.3.4. The Contractor shall not include in its application for payment any billing for defective Work or for work performed by Subcontractors or Suppliers if it does not intend to pay the Subcontractors or Suppliers for such work.
- 12.3.5. Applications may include the value of acceptable materials required in the construction which have been delivered on the site of the Work or to adjacent railway siding and for



which acceptable provisions have been made for preservation and storage, providing the Contractor submits with its monthly estimate paid invoices in duplicate for the material for which payment is being requested. Material paid for by the City becomes the property of the City and, in the event of the default on the part of the Contractor, the City may use or cause to be used such materials in construction of the Work provided for in the Contract.

- 12.3.6. The authorized City representative(s) must approve the applications and estimates before progress payments will be made. The City will make payments within thirty (30) days after that the receipt of a monthly estimate in proper form containing all required and requested information. Progress payments are payments on accounts and shall not be construed as acceptance by the City or any part of the Work.
- 12.3.7. All progress payments, except for the Final Payment, shall be subject to correction on subsequent applications after the discovery of any error. Approval of an application for payment of Work completed or actual payment by the City shall not foreclose the right of the City to examine the books and records of the Contractor to determine the correctness and accuracy of any item.
- 12.3.8. The Contractor shall make partial payments of the amount due and payable to each of its Subcontractors and Suppliers in the same manner as the City is required to pay the Contractor under this article. This provision shall not create any privity of contract between the City and any Subcontractor or Supplier, or make any Subcontractor or Supplier a third-party beneficiary of this Contract.

#### **12.4. Retainage & Withheld Amounts.**

- 12.4.1. The City will retain **five percent (5%)** of the total amount earned, including Change Orders, as indicated in each approved application until Final Payment. Securities are not acceptable to the City in lieu of retainage.
- 12.4.2. If the City finds that satisfactory progress is being made in all phases of the Contract, it may, upon written request by the Contractor, authorize payment from the withheld percentage. Before such payment is made, the City shall determine that satisfactory and substantial reasons exist for the payment and shall require written approval from any Surety furnishing the Payment Bond or Performance Bond.
- 12.4.3. The City may withhold, in addition to retained percentages from Contractor payments, such an amount or amounts from any progress payment or Final Payment as may be necessary to cover:
  - a) Claims for labor or materials furnished the Contractor or any Subcontractor or reasonable evidence indicating probable filing of such claims;
  - b) Failure of the Contractor to make proper payment to Subcontractors or Suppliers;
  - c) A reasonable doubt that the Contract can be completed for the balance then unpaid;
  - d) Evidence of damage to another contractor, utility, or private property;
  - e) Uncorrected defective Work or guarantees that have not been met;
  - f) Failure of the Contractor to submit cost breakdowns, schedules, reports and other information required under the Contract;

- g) Persistent failure to carry out the Work according to the Contract;
- h) Reasonable evidence that the Work will not be completed within the Contract Time and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- i) Any tax delinquency, unpaid fee, or other unpaid financial obligation of the Contractor owed to the City;
- j) Any request that the City pay additional compensation to another contractor as a result of delays in the performance of that contractor's work caused by the Contractor's acts or omissions; and
- k) Any other amounts that the City is authorized to withhold under the Contract Documents.

If the reason for withholding is removed, the City will make payment of the withheld sums with the next regular progress payment unless another basis for withholding exists

- 12.4.4. Execution of the Contract by the Contractor shall constitute a waiver by the Contractor to claim any right of payment of interest upon any funds retained or withheld by the City pursuant to these General Conditions or C.R.S. § 38-26-107.

## **12.5. Substantial Completion.**

- 12.5.1. When the Contractor considers the entire work ready for its intended use, the Contractor shall notify the Project Manager in writing that the entire Work is substantially complete, except for minor items specifically listed by Contractor as incomplete (the Contractor's punch list), and request that the Project Manager issue a Notice of Substantial Completion.
- 12.5.2. Within seven (7) days after the receipt of such notice, the Contractor, Project Manager and any other appropriate City representatives shall inspect the Work to determine the status of completion and the Contractor's punch list.
  - a) If the Project Manager does not consider the Work substantially complete, the inspection will cease and the Project Manager will notify the Contractor in writing giving the reasons for denial of the Notice of Substantial Completion and the Contractor will proceed with the Work. All costs associated with such premature inspection, including any compensation for additional design services and the City's additional costs, shall be deducted from any payment due to the Contractor.
  - b) If the Project Manager considers the Work substantially complete, the Project Manager will prepare and deliver to the contractor a Notice of Substantial Completion. The Project Manager shall attach to the notice a punch list of items to be completed or corrected before Final Acceptance. Failure to include any items on the punch list shall not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

## **12.6. Right of Early Occupancy or Use.**

- 12.6.1. The City shall have the right to take early beneficial possession of and to use any completed or partially completed portions of the Work, even if Substantial Completion of the Work has not occurred and even if the Work has not been finally accepted. Such beneficial possession and early occupancy shall not constitute Substantial Completion of such portions of the Work nor affect the City's right to assess liquidated damages.

- 12.6.2. If the City elects to take possession of and to use any completed or partially completed portions of the Work prior to Substantial Completion, an inspection shall be made by the Contractor and the Project Manager. Based upon such inspection, the Project Manager will attempt to list all incomplete Work items observed, and shall provide the Contractor with such list. However, the absence of an item from the list shall not relieve the Contractor of responsibility to perform all of the Work. Any and all areas so occupied will be subject to a final inspection prior to Final Acceptance.
- 12.6.3. At the time of such inspection, the Parties shall also negotiate the responsibilities of the City and the Contractor for security, maintenance, heat, utilities, property insurance premiums, and damage to the Work. These negotiations are subject to the final approval of the City.
- 12.6.4. If the Contractor believes there will be an additional cost or delay associated with completion of the Work while the City occupies the Work in whole or in part under this section, the Contractor shall advise the Project Manager by Contractor Change Request of all such costs at or before the time of such inspection. If the Contractor fails or refuses to furnish such cost information, or fails or refuses to comply with the Contractor Change Request procedure, the Contractor shall be deemed to have waived any and all rights to assert any claim for such additional cost or delay.
- 12.6.5. If the City's need to occupy the Work prior to such time as the Work is complete is caused by the Contractor's failure to complete the Work within the stipulated Period of Performance, the Contractor shall bear any and all additional costs associated with completing the Work.

## **12.7. Final Acceptance.**

- 12.7.1. When the Work specified in the Contract (including all punch list items) is completed and the final cleanup has been performed, the Contractor shall notify the Project Manager that all Work under the Contract has been completed and the Project Manager shall, within seven (7) days after such notice, make the final inspection.
- 12.7.2. If the Project Manager finds that the Project has been completed according to the Contract requirements and that all parts of the Work are in good condition and in working order, the City, upon the recommendation of the Project Manager, shall issue a Notice of Final Acceptance. Any Notice of Final Acceptance issued orally or without proper City authorization is void.
- 12.7.3. If the Project Manager finds that the Project has not been completed according to the Contract requirements and that not all parts of the Work are in good condition and in working order, the Project Manager shall compile a punch list of corrective or replacement Work to be completed by the Contractor and Contract obligations yet to be satisfied that the Contractor shall complete or fulfill to the Project Manager's satisfaction, at the Contractor's expense, as a condition precedent to the issuance of a Notice of Final Acceptance.

## **12.8. Final Settlement & Final Payment.**

- 12.8.1. After Final Acceptance, the Project Manager, Contractor, or other person designated by the City, as appropriate, will prepare a final estimate of the total value of all Work performed under the Contract. This will include all extra Work properly authorized and performed. All prior estimates and payments shall be subject to correction in the final

estimate and payment. In the absence of error or fraud, all estimates, when approved by the City, shall be conclusive evidence of the Work performed and materials furnished.

- 12.8.2. The City shall not authorize final payment until all items on the punch list have been completed, a Notice of Final Acceptance is issued, and the Notice of Final Settlement has been published. If the Work is substantially completed, but Final Acceptance is prevented by the unavailability of materials, or other causes beyond the control of the Contractor, and if consistent with any applicable bond ordinance, the City, in its sole discretion, may release to the Contractor all amounts due except for a retainage of two (2) times the cost of completing the unfinished Work as estimated by the City.
- 12.8.3. Before the City will advertise final settlement, the Contractor shall demonstrate to the operating personnel of the City the proper operation and maintenance of all equipment and systems, and deliver to the Project Manager:
- a) All guarantees and warranties;
  - b) Bound sets of required operations and maintenance manuals and instructions as required by the Contract Documents;
  - c) Record Documents as required by the Contract Documents;
  - d) Satisfactory evidence that all payroll, material bills, taxes, and other indebtedness connected with the Work have been paid or otherwise satisfied;
  - e) A complete and final, unconditional waiver or release of any and all lien and claim rights from each Subcontractor, materialman, Supplier, manufacturer, and dealer for all labor, equipment and material used or furnished by each on the Work;
  - f) Consent of the Surety to final payment;
  - g) All submittals required by the Contract Documents; and
  - h) Any other documents required to be furnished by the Contract Documents
- 12.8.4. The Work shall be advertised (Notice of Contractor's Settlement) in accordance with C.R.S. § 38-26-107. This statute governs the maintenance and enforcement of claims for payment against the Project by Subcontractors, Suppliers and certain others. Final payment and settlement shall be made only after the Contractor has completed the foregoing requirements, and the City is satisfied that no claims by Subcontractors or Suppliers have been filed or remain pending.
- 12.8.5. If any unpaid claim for labor, materials, rental machinery, tools, supplies, or equipment is filed prior to the date set for final settlement, the City shall withhold from payments to the Contractor sufficient funds to ensure the payment of such claim, until the same shall have been paid or withdrawn. Such payment or withdrawal shall be evidenced by filing with the Project Manager an unconditional receipt in full or an order for withdrawal signed by the claimant or its duly authorized agent or assignee. The City will withhold from payment any funds it may be required by law to withhold or that it may in the determination of the City be entitled to withhold, and final payment will not be made until, in the sole determination of the City, all conditions of the Contract and of law have been met.
- 12.8.6. If there are outstanding claims against the Contractor or its Subcontractors or for any other reason the Contractor is not able to fulfill one or more of the requirements of this section, the City may, at its sole discretion, waive the requirement, provided the Surety

agrees to the City making final settlement without in any way lessening or modifying the Surety's liability under such Bonds.

- 12.8.7. If any overpayment was made by the City at any time, the Contractor shall immediately return all overpaid amounts.
- 12.8.8. At the time of settlement, there shall be deducted from the final estimate (i) all previous payments made to the Contractor under the Contract, (ii) all amounts chargeable to the Contractor, (iii) all liquidated damages due the City; (iv) all unpaid taxes due and payable the City; and (v) all damages and all other costs, expenses and charges properly chargeable to the Contractor under the terms of the Contract.
- 12.8.9. Subject to delays allowed by Colorado law and these General Conditions, the City shall make Final Payment after Final Acceptance, including the release of all retainage and withheld amounts, except as authorized by the Contract Documents. Final Payment shall constitute complete payment for all Work, labor, materials, equipment, and miscellaneous items in the Project.
- 12.8.10. At the time of delivery to the Contractor of the final payment, the Contractor shall execute and give to the City a final receipt for the same.
- 12.8.11. The acceptance of final payment shall constitute a waiver of all Claims by the Contractor except those previously made in accordance with these General Conditions which have been separately identified by the Contractor as unsettled in the final payment application, and which the City agrees in writing may be set over for resolution after final payment.
- 12.8.12. All provisions of these Contract Documents, including without limitation those establishing obligations and procedures, shall remain in full force and effect notwithstanding the making or acceptance of final payment.

## **ARTICLE 13 DISPUTES & MEDIATION**

- 13.1. If the Contractor considers any ruling or decision of the Project Manager to be unfair, the Contractor shall immediately ask for a written instruction or decision but shall perform the Work in conformance with the Project Manager's ruling. If the Contractor considers such instructions or decision unsatisfactory, the Contractor shall file a written claim or protest with the Project Manager.

### **13.2. Notice of Intent to Claim.**

The Contractor shall submit a Notice of Intent to Claim for any claim, dispute, or protest ("Claim") of any decision or event arising out of or related to this Contract (other than those for which a specific procedure is set forth elsewhere in these General Conditions) in writing within ten (10) days of the later of the Contractor's receipt of the Project Manager's written instruction or decision (if applicable), deemed denial, or any other event giving rise to the claim, dispute, or other matter and shall include the basis for the Claim. The Notice of Intent to Claim shall be clearly titled as such, dated as of the actual date of submission, and numbered sequentially, and shall contain at a minimum:

- a) Project title and number;
- b) Date of the event giving rise to the claim, dispute, or protest;

- c) A description of the Claim and the events giving rise to the Claim, including any original request and the Project Manager's decision or denial; and
- d) The reasons why the Contractor believes additional compensation or time is due or charges were wrongly assessed;
- e) An accounting or estimate of all additional costs associated with the Claim;
- f) The Contractor's plan for mitigating costs or delays associated with the Claim.

### **13.3. Claim.**

Within twenty (20) days after submitting the Notice of Intent to Claim, the Contractor shall submit to the Project Manager a complete and itemized Claim that includes any claimed increase in Contract Time or Contract Price, or both. The Contractor may request an extension of time to submit the Claim, which extension may be granted by the Project Manager, provided that good cause is shown. The Claim must be described in sufficient detail to allow the City to evaluate the basis of and costs associated with the Claim.

- 13.3.1. A Claim for an increase in Contract Price shall be submitted based on actual costs whenever possible, rather than an estimate or opinion, shall be supported by invoices, time cards, and other business records commonly accepted in the industry, and shall comply with the requirements of these General Conditions concerning changes to the Contract Price.
- 13.3.2. Any Claim for changes to the Contract Time shall include the information required by these General Conditions concerning changes to the Contract Time. The Claim shall be accompanied by copies of all Contract provisions or other documents supporting the Claim and a summary of the legal and factual theories supporting the Claim. A Claim for time extension must be accompanied by a revised Construction Schedule reflecting the effects of the delay on the completion of critical activities and showing actions that the Contractor has taken or proposes to take to minimize the effects of the delay.
- 13.3.3. The Claim shall also identify any measures the City can take to minimize the Claim.
- 13.3.4. The Contractor shall submit with its Claim a notarized certificate, executed under penalties of perjury, that:
  - a) The Claim is made in good faith;
  - b) All supporting data are accurate and complete to the best of the Contractor's knowledge and belief;
  - c) The amount requested accurately reflects that Contract adjustment for which the Contractor believes the City is liable; and
  - d) The prices stated for material and equipment are the lowest reasonably available to the Contractor and include all available discounts.
- 13.3.5. If the Contractor is an individual, the certification shall be executed by that individual; if the Contractor is not an individual, the certification shall be executed by an officer or general partner of the Contractor or other person having written authority to sign the Claim.

### **13.4. Additional Information.**

The Contractor shall furnish, upon request, all additional information and data that the City

determines is needed to aid in resolving the Claim through negotiation or is required to complete an evaluation of the Claim. The Contractor shall give the City access to its books, correspondence, records, electronic files and data bases, and any other materials relating to the Claim, shall require its Subcontractors and Suppliers to provide the City with such access, and shall make its Personnel and that of its Subcontractors and Suppliers available to discuss and answer cost, schedule and other questions relating to the Claim. Clear copies of all necessary supporting records shall be provided to the City at no cost. Failure to submit requested information may be a basis for denial of the Claim.

### **13.5. Decision.**

- 13.5.1. The City shall investigate, review, and evaluate the Claim and make a determination in writing within sixty (60) days of receipt of a completed and fully documented claim, unless special circumstances exist or the Claim is unusually complex, in which case the Contractor will be notified of any longer review period. If no determination is made within sixty (60) days, or by the end of any announced extended period of time, the claim is automatically denied.
- 13.5.2. The Contractor shall proceed diligently with performance of the Contract, pending final resolution of any Claim made under this article. Failure to proceed with the Work shall be grounds for suspension or termination of the Contract.
- 13.5.3. If the Contractor agrees with any determination or resolution by the City, such determination or resolution shall be processed as a Change Order

### **13.6. Waiver.**

- 13.6.1. Failure to strictly meet any of the requirements of this article in a timely and complete manner shall constitute a waiver by the Contractor of any and all right to adjustments of Contract Time or Contract Price, either by administrative review or by any other action at law or equity.
- 13.6.2. Strict compliance with all provisions of this article shall be a condition precedent to the Contractor's ability to file any lawsuit in law or equity, or recover any damages, in connection any Claim.

### **13.7. Mediation.**

- 13.7.1. If the Contractor disagrees with the City's determination of the Claim, the Parties shall first submit the dispute to non-binding mediation before seeking any remedy in any other forum. The mediator shall be a trained mediator having experience related to municipal construction projects. The Parties shall jointly select the mediator from a list of mediators proposed by the Parties. If the Parties are unable to agree on a mediator, the Parties shall submit three mediator names each and the mediator shall be selected by random drawing at which the Project Manager and the Contractor are present. No discussions or statements of the mediator may be admitted as evidence in any subsequent litigation, nor may the mediator be called to testify in any litigation. The cost of the mediator shall be shared equally by the Parties.
- 13.7.2. Mediation in accordance with this section shall be a condition precedent to filing any lawsuit relating to any Claim.

13.8. If any dispute, mediation, or litigation arises out of this Contract, the Contractor shall

continue the Work in accordance with the terms and conditions of the Contract Documents during the time such dispute, mediation, or litigation is pending except as expressly provided in the Contract Documents.

## **ARTICLE 14 BONDS**

14.1. The Contractor shall, within the time specified in the Request for Bids, and before the commencement of any Work, provide the City with a separate:

14.1.1. Performance bond in an amount equal to 100% of the amount of the Contract Price as a guarantee of the Contractor's faithful performance and completion of all undertakings, covenants, terms, conditions, warranties, and agreements of the Contract; and

14.1.2. Payment bond in an amount equal to 100% of the amount of the Contract Price, which bond shall conform to the requirements of C.R.S. § 38-26-101, *et seq.*, as amended, as a guarantee of the Contractor's prompt payment to all persons supplying labor and materials in the prosecution of the Work provided by the Contract.

The Contractor shall use the Bond forms included with the Request for Bids. Other forms may be used if approved by the City Attorney before the submission of the bid.

14.2. The Contractor bears the expense of all Bonds.

14.3. The Contractor shall secure an increase in the bonds in an amount equal to the cost of any additional work authorized pursuant to a duly executed Change Order or Contract amendment that increases the Contract Price by ten percent (10%) or more, unless waived in writing by the Project Manager.

14.4. The Contractor and a Surety shall execute the Bonds. The Surety shall be corporate bonding company acceptable to the City, licensed to transact such business in the State of Colorado, and listed in the U.S. Department of the Treasury Circular 570 in effect on the date of the Request for Bids. Evidence of authority of an attorney-in-fact acting for the Surety shall be provided in the form of a certificate as to its power of attorney and to the effect that it is not terminated and remains in full force and effect on the rate of the Bonds.

14.5. If at any time a Surety on any Bond becomes irresponsible, is disqualified from doing business in the State of Colorado, or becomes insolvent or otherwise impaired, the Contractor shall furnish Bond(s) from an alternate Surety acceptable to the City.

14.6. The Bonds shall remain in effect until Final Acceptance.

## **ARTICLE 15 INSURANCE**

### **15.1. General Requirements.**

15.1.1. **Insurance Requirement.** The Contractor, at its own cost, shall procure and maintain, and shall cause each Subcontractor to procure and maintain, policies containing the minimum insurance coverage listed in this article for the duration of the Work. Such coverage shall be procured and maintained with forms and insurers acceptable to the City. All coverage shall be continuously maintained from the date of commencement of Work. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.



- 15.1.2. **No Modification of Liability.** The Contractor shall not be relieved of any liability, claims, demands or other obligations assumed pursuant to the Contract Documents by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types. The insurance requirements contained in the Contract shall not limit or redefine the obligations of the Contractor as provided elsewhere in the Contract. The limits of any insurance required by this Agreement will not limit Contractor's liability.
- 15.1.3. **Evidence of Coverage.** Before commencing Work, the Contractor will provide certificates of insurance policies and all necessary endorsements evidencing insurance coverage required by the Contract Documents and identifying the Project. The City will not be obligated under the Contract until Contractor provides acceptable such certificates of insurance and endorsements. If the Term extends beyond the period of coverage for any required insurance, the Contractor will, at least ten (10) days before the expiration of any such insurance coverage, provide the City with new certificates of insurance and endorsements evidencing either new or continuing coverage.
- 15.1.4. **Breach.** Failure on the part of the Contractor to procure or maintain policies providing the required coverage, conditions, and minimum limits shall constitute a material breach of contract upon which the City at its discretion may procure or renew any such policy or any extended connection therewith, and all monies so paid by the City shall be repaid by Contractor to the City upon demand, or the City may offset the cost of the premiums against any monies due to Contractor from the City.

## **15.2. Required Policies.**

- 15.2.1. **Commercial General Liability Insurance.** Comprehensive general liability insurance insuring against any liability for personal injury, bodily injury or death arising out of the performance of the Work with at least One Million Dollars (\$1,000,000) each occurrence and Two Million Dollars (\$2,000,000) general aggregate, including the following coverages: broad form property damage; operations premises liability; personal and advertising injury liability, independent contractors coverage, contractual liability, completed operations/products liability; coverage for construction, means, and methods; and explosion, collapse, and underground liability (if the Work requires blasting, explosive conditions, collapse hazards or underground operations, this coverage shall contain no exclusion relative to property in the care, custody, or control of the insured).
- 15.2.2. **Products and Completed Operations Insurance.** Products and completed operations insurance insuring against any liability for bodily injury or property damage caused by the completed Work, with a combined single limit of at least One Million Dollars (\$1,000,000) and Two Million Dollars (\$2,000,000) general aggregate.
- 15.2.3. **Builder's Risk.** A builder's risk or installation floater policy, at the City's discretion, in an amount equal to the value of the Project where the possibility exists of losses or damage to the Project. The Special Conditions of the Contract Documents will state if and when Builder's Risk is required.
- 15.2.4. **Comprehensive Automobile Liability Insurance.** Comprehensive automobile liability insurance insuring against any liability for personal injury, bodily injury or death arising out of the use of motor vehicles and covering operations on or off the site of all motor vehicles controlled by Contractor that are used in connection with performance of the

Work, whether the motor vehicles are owned, non-owned, hired, leased, or borrowed, with a combined single limit of at least Two Million Dollars (\$2,000,000) each accident and personal injury protection per Colorado law.

- 15.2.5. **Other Insurance.** Workers' compensation insurance (unless Contractor provides a completed Declaration of Independent Contractor Status Form) and other insurance required by applicable law.

### **15.3. Terms of Insurance.**

- 15.3.1. **Additional Insured.** Except for the workers' compensation policy, all required insurance policies shall name the City and any additional person or entity identified by the City as an additional insured and will provide that the City or other additional insured, although named as an additional insured, will nevertheless be entitled to recovery under said policies for any loss occasioned to the City or its officers, employees or agents or other additional insured by reason of the negligence of Contractor or its officers, employees, agents, subcontractors or business invitees. The insurance policies will be for the mutual and joint benefit and protection of the Contractor and the City and other additional insured, if any. Such policies will be written as primary policies not contributing to and not in excess of coverages the City or other additional insured may carry.
- 15.3.2. **Qualification; Deductible.** Insurance required by this Section will be with companies qualified to do business in the State of Colorado and having an AM Best Rating of not less than B+ and/or VII. Insurance may provide for deductible amounts as the Contractor deems reasonable for the Services, but in no event greater than Twenty Thousand Dollars (\$20,000.00) (unless waived by the City), and the Contractor will be responsible for the payment of any such deductible.
- 15.3.3. **Cancellation.** The policies shall not be cancelled, terminated or materially changed until at least 30 days prior written notice has been given to the City.
- 15.3.4. **Coverage Type.** Contractor will identify whether the type of coverage is "occurrence" or "claims made." If the type of coverage is "claims made," which at renewal Contractor changes to "occurrence," the Contractor will carry a twelve (12) month tail. The Contractor will not do or permit to be done anything that will invalidate the policies.
- 15.3.5. **No "Pollution Exclusion."** The required insurance will cover any and all damages, claims or suits arising out of the actual, alleged or threatened discharge, dispersal, seepage, migration, release or escape of pollutants, and will not exclude from coverage any liability or expense arising out of or related to any form of pollution, whether intentional or otherwise. If the Contractor is unable to procure a policy of insurance in compliance with these provisions, the Contractor will secure and maintain either a rider or a separate policy insuring against liability for pollution related damages, claims or suits, as described in subsection ii(a), with at least Two Million Dollars (\$2,000,000) each occurrence, subject to approval by the City.

## **ARTICLE 16 INDEMNIFICATION**

- 16.1. The Contractor shall indemnify, save harmless, and defend the City, its officers and employees, from and in all suits, actions or claims of any character brought because of: any injuries or damage received or sustained by any person, persons or property because of operations for the City under the Contract; the Contractor's failure to comply with the provisions of the Contract; the Contractor's neglect of materials while constructing the Work; because of any act or omission, neglect or misconduct of the Contractor; because of any claims or amounts recovered from any infringements of patent, trademark, or copyright, unless the design, device, materials or process involved are specifically required by Contract; from any claims or amount arising or recovered under the "Workers' Compensation Act," by reason of the Contractor's failure to comply with the act; pollution or environmental liability; or any failure of the Contractor to comply with any other law, ordinance, order or decree. Nothing in this article requires the Contractor to defend, indemnify, or hold harmless the City from the City's own negligence.
- 16.2. The Contractor will include this article in all Subcontracts.
- 16.3. The City may retain so much of the money due the Contractor under the Contract as the City considers necessary to offset any damages for which Contractor may be liable under this paragraph. If no money is due, the Contractor's Surety may be held until such suits, actions, claims for injuries or damages have been settled. Money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that it and the City are adequately protected by public liability and property damage insurance.
- 16.4. The Contractor will pay the City all expenses incurred to enforce this article. If the insurer of the Contractor fails to provide or pay for the defense of the City of Commerce City, its officers and employees, as additional insured, the Contractor agrees to pay for the cost of that defense.
- 16.5. This article will survive Final Acceptance and the termination of this Contract.

## **ARTICLE 17 CONTRACT TERMINATION**

### **17.1. Termination for Cause.**

- 17.1.1. The City may terminate the Contract for cause due to the actions or inactions of the Contractor. Cause includes, without limitation:
- a) If the Work to be performed under the Contract is assigned by the Contractor without written permission of the City;
  - b) If the Contractor shall file a voluntary petition in bankruptcy;
  - c) If a general assignment of the Contractor's assets is to be made for the benefit of its creditors;
  - d) If a receiver is appointed for the Contractor or any of its property;
  - e) If the Contractor has materially breached any of the conditions, provisions or covenants of the Contract;
  - f) If, at any time, the performance of the Work under the Contract is being unnecessarily delayed or if the Contractor is willfully or deliberately violating any of the conditions, provisions, or covenants of the Contract Documents, or if the Contractor is executing the same in bad faith or otherwise not in accordance with

terms of the Contract;

- g) If the Work or any part of the Work is not fully completed within the time or times named for its completion or within the time to which such completion date or dates have been extended;
- h) If the Contractor abandons the Work;
- i) If the Contractor fails to maintain the required Bonds, licenses, permits, or insurance;
- j) If the Contractor or any of its officers or employees are convicted, plead nolo contendere, enter into a formal agreement in which they admit guilt, enter a plea of guilty, or otherwise admit culpability to criminal offenses of bribery, kickbacks, collusive bidding, bid-rigging, antitrust, fraud, undue influence, theft, racketeering, extortion or any offense of a similar nature, in connection with Contractor's business; or
- k) If other just cause exists.

- 17.1.2. The City will send written notice to the Contractor and the Surety of the City's intent to terminate for cause and will give the Contractor and Surety ten (10) days from the date the notice was sent to cure the default or provide to the City in writing, a detailed plan of how it will remove the causes for termination, except that, if the Completion Date is less than ten (10) days away, the notice may specify less than ten (10) days. If the Contractor or Surety does not submit such plan within the time established, or if, in the judgment of the City, such plan will not ensure the satisfactory performance of the Work, the City may declare the Contract terminated on the effective date specified in the notice or any other date thereafter.
- 17.1.3. In the event of termination for cause, the City shall notify the Contractor to discontinue all Work under the Contract and the Contractor shall immediately respect such notice, stop all Work and cease to have any right to possession of the Work site.
- 17.1.4. In addition, the Contractor shall forfeit its Contract as of the specified effective date of termination.
- 17.1.5. Upon such termination for cause, the City may take possession of all materials, equipment, tools, and plant as may be on the site of the Work or necessary for completion of the Work and take over the Work and prosecute the same to completion, by Contract or otherwise, for the account and at the expense of the Contractor.
- 17.1.6. The Contractor and the Surety shall be liable to the City for any and all costs and expenses in excess of the Contract Price or prices sustained by the City by reason of such prosecution and completion, which costs shall include all administrative costs.

## **17.2. Termination for Convenience.**

- 17.2.1. The performance of Work under the Contract in whole or in part may be terminated without cause by the City whenever the City, in its sole discretion, shall determine that such termination is in the best interest and convenience of the City or whenever the City is prohibited from completing the Work for any reason. Such termination shall be effected by giving not less than three (3) days' written notice to the Contractor specifying the extent to which performance of the Work is terminated and the date upon which such termination becomes effective.
- 17.2.2. Upon receipt of such notice of termination, the Contractor shall:
  - a) Stop work as specified in the notice;

- b) Terminate all orders and subcontracts except as necessary to complete Work which is not terminated;
  - c) If directed in writing by the City to do so, assign all right, title, and interest in subcontracts and materials in progress, in which case the City will have the right, in its discretion, to settle or pay any or all Claims arising out of the termination of such subcontracts;
  - d) Settle outstanding liabilities and claims with the approval of the City;
  - e) Complete performance of such part of the Work not terminated; and
  - f) Take such other actions as may be necessary, or as may be directed by the City, for the protection and preservation of the property related to the Contract.
- 17.2.3. Except as provided herein, any inventory paid for by the City but remaining upon the termination of the Contract may, with written approval of the City, be sold or acquired by the Contractor under the conditions prescribed by and at prices approved by the City.
- 17.2.4. Upon receipt of notice of such termination, the Contractor shall submit to the Project Manager a request for final payment, in a form and with certification prescribed by the City. Such request shall be submitted promptly but in no event later than sixty (60) days from the effective date of termination, unless extended in writing by the Project Manager, upon the written request of the Contractor within such sixty (60) day period.
- 17.2.5. The final payment to the Contractor after a termination for convenience shall be calculated as follows:
- a) From the Contract Price, subtract the following:
    - 1) The total amount paid to the Contractor to date;
    - 2) The value of the Work completed since the last approved pay application;
    - 3) The total amount of retainage withheld by the City to date;
    - 4) The agreed price for, or the proceeds of sale of, any materials, supplies, or other things acquired or sold by the Contractor or sold pursuant to these General Conditions and not otherwise recovered by or credited to the City;
    - 5) The total of all claims the City may have against the Contractor; and
    - 6) Any outstanding claims pursuant to C.R.S. § 38-26-107, as amended or superseded.
  - b) Multiply the number resulting by 0.05. The number resulting is the full and complete compensation for anticipated profits
  - c) Add the following to the total resulting from the prior step:
    - 1) Any actual costs incurred by the Contractor for restocking charges;
    - 2) The agreed upon price of protecting the Work in the manner, if any, directed by the City;
    - 3) The amount of retainage withheld by the City to date; and
    - 4) The value of the Work completed since the last approved pay application.
- 17.3. The sum calculated under this article, when paid to the Contractor, shall constitute full and final settlement of the Contract Price.

- 17.4. The City may, from time to time, under such terms and conditions as the City may prescribe, authorize partial payments and payments against costs incurred by the Contractor for the terminated portion of the Contract, if it is estimated that the total of such payments will not exceed the amount to which the Contractor will be entitled. If the total of such payments is in excess of the amount to which the Contractor is entitled, the excess shall be payable by the Contractor to the City upon demand, together with interest computed pursuant to statute, for the period from the date the excess payment is received by the Contractor to the date the excess is repaid to the City.
- 17.5. The settlement for the Work performed shall not relieve the Contractor or its surety from responsibility for defective Work and/or materials on the completed portion of the Work nor for labor and materials or any other items as guaranteed by the Bonds.
- 17.6. The City shall be given full access to all books, correspondence, records, electronic files and data bases, and other materials of the Contractor relating to the Contract in order to determine the amounts to be paid on account of the termination of the Contract under this article. The Contractor shall furnish clear copies of any such materials as requested by the City.
- 17.7. If the Parties fail to agree in whole or in part on the amount or amounts to be paid to the Contractor in connection with the termination of work pursuant to this article, the Contractor may submit a claim as provided in these General Conditions, except that, if the Contractor has failed to submit its request for payment within the time provided above and has failed to request an extension of such time, it shall have no such right.

## **ARTICLE 18 AUDIT**

### **18.1. Records and Reports.**

- 18.1.1. The Contractor shall keep and maintain and shall cause its Subcontractors, Suppliers and outside consultants to keep and maintain books, records, accounts and other documents ("records") that are sufficient to accurately and completely reflect all costs incurred pursuant to the Contract that may be the basis of a Contractor Change Request or a claim by the Contractor. Such records may include the bid estimate, receipts, memoranda, vouchers, and accounts of every kind and nature pertaining to the performance of the Work including but not limited to job cost ledgers, invoices from and payments to Subcontractors, Suppliers and materialmen, and records of home and field office overhead, as well as complete summaries and reports setting forth all reimbursable man hours expended and payroll records.
- 18.1.2. All such records shall be maintained a period of three (3) years from the date of Final Payment under the Contract in which the Work is completed. All Subcontractors shall keep and preserve such records accounts for a period of three (3) years from the date of Final Payment under the subcontract.
- 18.2. **Access.** The Contractor shall permit the City and the its auditors to have access to such records and any information or areas as provided in these General Conditions for the purpose of making such financial audits, or verifications as the City deems necessary or appropriate concerning the Contractor's performance under the Contract. Access will be provided at the Contractor's regular place of business in Colorado at reasonable times and upon reasonable notice.

## **ARTICLE 19 SALES AND USE TAX**

Unless specifically exempt, all equipment used and all materials provided or consumed in or for construction and services performed within the City are taxable, including construction and services performed on behalf of an exempt institution or governmental, religious, charitable, private or any other type of owner, including the City.

- 19.1. **Contractor Responsible for Tax.** The Contractor is subject to the tax on all purchases, fabrication, manufacture or other production of tangible personal property used, stored or consumed on such construction and services, including parking lots, roads, bridges, highways, building construction and remodeling of both public and private facilities.
- 19.2. **Specific Industry Standard.** The Specific Industry Standard for Construction and Contractors (Regulation 20-S.I.15) can be provided upon request by contacting the City's Finance Department, Sales Tax Division, at 303-289-3628, and is available on the City's website at <http://www.c3gov.com/DocumentView.aspx?DID=115>.
- 19.3. **Equipment.** Prior to or on the date the Contractor locates equipment within the City to fulfill this Work, the Contractor shall file a declaration describing each anticipated piece of equipment the purchase price of which was two thousand five hundred dollars (\$2,500) or greater, stating the dates on which the Contractor anticipates the equipment to be located within and removed from the boundaries of the City and stating the actual or anticipated purchase price of each such anticipated piece of equipment along with any other information deemed necessary by the City. When such declared equipment is located within the City for a period of thirty (30) days or less, the Contractor may include sales and use tax calculated on one-twelfth (1/12) of the purchase price of such equipment in the contract amount, in compliance with Section 20-5-T of the Commerce City Sales & Use Tax Code. If the Contractor fails to declare the equipment to the City prior to or on the date the Contractor locates the equipment within the City, none of the sales and use tax due on the equipment shall be allowed as a contract expense.

## ARTICLE 20 PERSONNEL & CIVIL RIGHTS

- 20.1. **Colorado Labor (C.R.S. § 8-17-101).** At least eighty percent (80%) of each type or class of labor employed by the Contractor and any Subcontractors to perform the Work shall be persons who, at time of employment, are residents of the State of Colorado, without discrimination as to race, color, creed, gender or sex, age, religion, national origin, veteran's status or religion, except when minimum age is a bona fide occupational qualification. The Project Manager, if requested in writing by the Contractor and approved by the Project Manager in writing, may waive this requirement.
- 20.2. **Anti-Discrimination.** While engaged in the performance of the Work, Contractor shall maintain employment practices consistent with the Colorado Antidiscrimination Act, C.R.S. § 24-34-301 through § 24-34-804, as amended.
- 20.3. **Civil Rights.**

In compliance with the Civil Rights Act of 1964, coupled with the Colorado Governor's Executive Order dated July 6, 1972, Contractor, for itself and its assignees and successors in interest, agree as follows:

- 20.3.1. When applicable, the Contractor shall comply with the Regulations of the Department of Transportation relative to nondiscrimination in Federally assisted programs of the

Department of Transportation (Title 49, Code of Federal Regulations, Part 21, hereinafter referred to as the "Regulations"), which are herein incorporated by reference and made a part of this Contract. Contractor shall not participate either directly or indirectly in discrimination prohibited by Section 21.5 of the Regulations including employment practices when the Contract covers a program set forth in Appendix "C" of the Regulations.

- 20.3.2. The Contractor, with regard to the Work performed by it after award and prior to completion of the Work, shall not discriminate on the grounds of race, creed, color, gender or sex, age, religion, veteran status, national origin or ancestry in the selection and retention of Subcontractors, including procurements of materials and leases of equipment.
- 20.3.3. In all solicitations either by competitive bidding or negotiation made by Contractor for work to be performed under a subcontract, including procurements of materials or equipment, each potential Subcontractor or Supplier shall be notified by Contractor of Contractor's obligations under this Contract and the regulations related to nondiscrimination on the grounds of race, creed, color, gender or sex, age, religion, veteran status, national origin or ancestry.
- 20.3.4. The Contractor shall take all affirmative actions necessary and appropriate to implement, not only the letter but also the spirit, of the policy of equality of opportunity as enunciated in the Constitution and the laws of the State of Colorado and as construed by the courts to prevent discrimination because of race, creed, color, gender or sex, age, religion, handicap, veterans status, national origin or ancestry.
- 20.3.5. The Contractor shall include the provisions of these subsections 1 through 5 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, orders or instructions issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as the City may direct as a means of enforcing such provisions; provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or supplier as a result of such direction, the Contractor may request the City to enter into such litigation to protect the interest(s) of the City.

#### **20.4. Americans with Disabilities Act.**

The City makes every attempt to comply with the Americans with Disabilities Act and requires all contractors to be aware of this law and to report immediately to the Project Manager any requests or complaints based upon the Americans with Disabilities Act. This requirement applies to persons or groups who have identified themselves as disabled, or as someone with whom they associate as disabled, and who require a special accommodation.

#### **20.5. Illegal Aliens & Public Contracts (C.R.S. § 8-17.5-38).**

- 20.5.1. **Certification.** The Contractor certifies that, as of the Effective Date, it does not knowingly employ or contract with an illegal alien who will perform work under this Contract and that the Contractor will participate in the E-verify Program or Department Program as defined in C.R.S. § 8-17.5-37 in order to confirm the eligibility of all employees who are newly hired to perform work under this Contract.
- 20.5.2. **Pre-Employment Screening.** The Contractor is prohibited from using either the E-



verify Program or Department Program procedures to undertake pre-employment screening of job applicants while this Contract is being performed.

- 20.5.3. **Contractor Obligations.** The Contractor will not knowingly employ or contract with an illegal alien to perform work under this Contract or contract with a Subcontractor that fails to certify to the Contractor that the Subcontractor will not knowingly employ or contract with an illegal alien to perform work under this Contract. If the Contractor obtains actual knowledge that a Subcontractor performing work under this Contract knowingly employs or contracts with an illegal alien, the Contractor will:
- a) Notify the Subcontractor and the City within three (3) days that the Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and
  - b) Terminate the subcontract with the Subcontractor if within three (3) days of receiving the notice required pursuant to this subparagraph d the Subcontractor does not stop employing or contracting with the illegal alien; provided, however, that the Contractor will not terminate the contract with the Subcontractor if during such three (3) days the Subcontractor provides information to establish that the Subcontractor has not knowingly employed or contracted with an illegal alien.
- 20.5.4. **Compliance with Investigation.** The Contractor will comply with any reasonable request by the Colorado Department of Labor and Employment made in the course of an investigation undertaken pursuant to Article 17.5 of Title 8, C.R.S.
- 20.5.5. **Violation.** If the Contractor violates this Section, the City may terminate this Contract for breach of contract and the Contractor will be liable for actual and consequential damages to the City.

## **20.6. Verification of Lawful Presence (C.R.S. § 24-76.5-103).**

- 20.6.1. If the Contractor is a natural person, including a sole proprietor with or without employees (i.e., not a corporation, limited liability company, partnership or similar entity), and is 18 years of age or older, the Contractor must: (a) complete an affidavit containing the information required by C.R.S. § 24-76.5-103(4)(b); and (b) attach a photocopy of the front and back of a valid form of identification as required by C.R.S. § 24-76.5-103(4)(a).
- 20.6.2. If the Contractor executes the affidavit stating that he/she is an alien lawfully present in the United States, the City will verify his/her lawful presence through the federal systematic alien verification or entitlement program, known as the "SAVE Program," operated by the U.S. Department of Homeland Security ("DHS") or a successor program designated by DHS. If the City determines through the verification process that the Contractor is an alien not lawfully present in the United States, the City will terminate this Agreement without further obligation to Contractor.

## **ARTICLE 21 MISCELLANEOUS**

- 21.1 **Federal Aid Provisions.** When the United States of America, acting through any of its duly constituted departments or agencies, provides funds to pay for any portion of the costs of Work performed under the Contract, the provisions of the Constitution, Laws of the United States and the rules and regulations promulgated by the department or agency thereof, pertaining to the utilization of such funds, shall be incorporated by reference as a part of the terms and conditions of the Contract and shall be observed by the Contractor.

When the United States of America is involved as a result of providing funds to support the Work of the Contract, it may assign observers or inspectors as it deems necessary to ensure that purposes for which the funds were provided are achieved. However, such activity by the United States does not make it a party to the Contract and shall not interfere with the rights of either the City or the Contractor.

- 21.2 **Duties & Remedies.** The duties and obligations imposed by, and rights and remedies available under, the Contract Documents shall be in addition to, and shall not be in any way construed to be a limitation of, any duties, obligations, rights, and remedies imposed by or available by law or contract.
- 21.3 **Survival.** All representations, warranties, and guarantees made in the Contract Documents shall survive Final Payment, Final Acceptance, and termination of the Contract for any reason.
- 21.4 **Government Immunity.** The City is relying on, and does not waive or intend to waive by any provision of this Contract, the monetary limitations or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, §24-10-37, *et seq.*, 10 C.R.S., as from time to time amended, or otherwise available to City, its officers, or its employees.
- 21.5 **Colorado Open Records Act.** The City is a public entity subject to the Colorado Open Records Act, C.R.S. § 24-72-201, *et seq.*, and all Contract Documents and any documents or reports produced pursuant to this Contract, may be subject to public disclosure.
- 21.6 **Construction.** The provisions of the Contract shall be construed as to the ordinary meaning of the words used so as to fairly accomplish the purposes and intentions of all Parties, and not for or against any party based upon any attributes to such party of the source of the language in question. No term of this Agreement will be construed or resolved in favor of or against the City or Contractor on the basis of which party drafted the uncertain or ambiguous language. Where appropriate, the singular includes the plural and neutral words and words of any gender will include the neutral and other gender. All headings, captions and titles are for convenience and reference only and of no meaning in the interpretation or effect of the Contract.
- 21.7 **No Implied Representations.** No representations, agreements, covenant, warranties, or certifications, express or implied, exist as between the Parties, except as specifically set forth in the Contract.
- 21.8 **Financial Obligations of City.** All financial obligations of the City under the Contract are contingent upon appropriation, budgeting, and availability of specific funds to discharge such obligations. Nothing in the Contract shall be deemed a pledge of the City's credit, or a payment guarantee by the City to the Contractor.
- 21.9 **Assignment/Transference.** The Contractor may not assign or transfer any interest in the Contract, including any money due or to become due, without the express prior written consent of the City.
- 21.10 **Amendments.** The Parties shall only amend the Contract in writing with the proper official signatures and, if required elsewhere in this Contract, on the proper forms.
- 21.11 **Waiver.** The waiver of any breach of a term, provision or requirement of this Contract, including the failure to insist on strict compliance or to enforce any right or remedy, shall

not be construed or deemed as a waiver of: any subsequent breach of such term, provision or requirement or of any other term, provision or requirement; any right to insist on strict compliance with any term, provision or requirement; or any right to enforce any right or remedy with respect to that breach or any other prior, contemporaneous, or subsequent breach.

- 21.12 **No Third-Party Beneficiaries.** The enforcement of the terms and conditions of the Contract and all rights of action relating to such enforcement shall be strictly reserved to the Parties. The Parties expressly intend that any person other than the City and the Contractor shall be deemed to be only an incidental beneficiary under this Agreement.
- 21.13 **Independent Contractor – No Partnership or Agency.** Notwithstanding any language in the Contract Documents or any representation or warranty to the contrary, the relationship between the Contractor and the City shall be as independent contractors, and neither the City nor the Contractor shall be deemed or constitute an employee, servant, agent, partner or joint venturer of the other. The Contractor is obligated to pay federal and state income tax on any money earned pursuant to this Contract, and neither the Contractor nor its employees, agents, or representatives are entitled to workers' compensation benefits unemployment compensation benefits, sick and annual leave benefits, medical insurance, life insurance, or pension or retirement benefits from the City.
- 21.14 **Governing Law; Jurisdiction; Venue.** The Contract is governed and to be construed according to the laws of the State of Colorado without regard to its conflicts of laws provisions. For all claims arising out of or related to this Contract, the Contractor consents to the jurisdiction of and exclusive venue in the state courts in the County of Adams, State of Colorado. Contractor waives any exception to jurisdiction because of residence, including any right of removal based on diversity of citizenship.
- 21.15 **Attorney's Fees & Costs.** The prevailing party in any litigation to resolve a dispute between the Parties arising from this Contract will be entitled to recover court costs and reasonable attorney fees from the non-prevailing party.
- 21.16 **Binding Contract.** The Contract is binding upon the Parties and their respective heirs, executors, administrators, successors, and assigns.

## **3.00 ROADWAY AND PARKING ENGINEERING CRITERIA**

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3.12 UTILITY LOCATIONS

### 3.01 GENERAL

This section sets forth the minimum criteria to be met on all newly designed and constructed public and private streets and parking lots in the City of Commerce City.

### 3.02 DEFINITIONS

**Principal Arterial:** Roadways with up to six (6) through lanes designed to provide intra-city and inter-community connections, for moderate speeds and moderate traffic volumes. Access needs to be controlled in order to preserve the traffic carrying capacity of the roadway.

**Minor Arterial:** Roadways consisting of four (4) through lanes designed to provide intra-city and inter-community connections, for moderate speeds and moderate traffic volumes. Access needs to be controlled, but can be more frequent than principal arterials.

**Multimodal Arterial:** Roadways consisting of two (2) through lanes and two (2) bike lanes designed to provide intra-city and inter-community connections, for moderate speeds and moderate traffic volumes. Access is the same as minor arterials.

**Major Collector:** Roadways designed to handle traffic volumes generally greater than 7,000 vehicles per day. These streets collect and distribute traffic between arterials and local streets and serve as main connectors within communities.

**Minor Collector:** Roadways designed to handle traffic volumes generally less than 7,000 vehicles per day. These streets collect and distribute traffic between arterials and local streets and serve as main connectors within communities.

**Local Industrial:** Roadways that provide direct access to public right-of-way from abutting industrial developments. Traffic volumes are to be less than 2,500 vehicles per day. These developments create higher volumes of large trucks, which require larger turning radii and greater room to maneuver.

**Local Commercial:** Roadways that provide direct access to public right-of-way from abutting commercial and high-density residential developments. Traffic volumes are to be less than 2,500 vehicles per day.

**Local Residential:** Roadways that provide direct access to public right-of-way from abutting single-family residential lots. Traffic volumes are to be less than 2,500 vehicles per day, and are designed to accommodate pedestrians and bicyclists, as well as passenger cars, trucks, and emergency vehicles.

### 3.03 ACCESS

Every roadway in a transportation network serves two functions to differing degrees: mobility and access. Conflict between safe and efficient movement of traffic and access to abutting properties have long been recognized as a major limiting constraint in traffic operations and transportation systems management. To obtain maximum through traffic movement efficiency, direct access needs to be limited. The purpose of these regulations is to provide a balanced program that provides reasonable access, while maintaining safety and efficiency in traffic movement.

### 3.03.1      ACCESS POINTS

Whenever the use of any property subject to review and approval, denial, or revision of its access operation is changed, the City Engineer must approve the number of access points and location(s). In addition, the City Engineer must approve any proposed changes or modifications of existing driveways or accesses, and the necessary Public Way Permit must be obtained.

Access will not be approved for parking or loading areas that require backing maneuvers in a public street right-of-way, except for single-family or duplex residential uses on local streets.

If a property has frontage on more than one street, access will be permitted only on those street frontages where these standards can be met. If a property cannot be served by any access point meeting these standards, the City will designate a revocable access point based on traffic safety, operational needs, and conformance with these guidelines. Once an alternate access is provided to the parcel, the revocable access may be removed.

If a property has frontage on a State Highway, access must be approved and obtained from CDOT.

Where necessary for the safe and efficient movement of traffic, the City Engineer may require access points to provide only limited turning movements.

One access point per common property ownership will be permitted unless a site plan or traffic study proves that additional access points are required to adequately handle driveway volumes and will not be detrimental to traffic flow. Multiple accesses must also be approved by the City Engineer. Table 3-1 outlines the general guidelines to be followed when designing a site for access.

**TABLE 3-1 ACCESS GUIDELINES<sup>⊗</sup>**

Functional Classification	TYPES OF ACCESS			
	Major Signalized (Full Movement)	Unsignalized Full Movement	3/4 Movement	Right-in / Right-out Movement
<b>Principal Arterial</b>	1/2 Mile Spacing	1/4 Mile Spacing or Alternative Spacing if supported by a traffic study	± 660 feet* if supported by a traffic study	±660 feet* if supported by a traffic study
<b>Minor/ Multimodal Arterial</b>	1/4 Mile Spacing	Approximately 660 feet* from signalized intersection if supported by a traffic study	Approx. 660 feet* from signalized intersection if supported by a traffic study	±250 feet• if supported by traffic study
<b>Major Collector</b>	1/2 Mile Spacing	Approximately 450 feet• from signalized intersections, 300 feet• from major intersections, 150 feet◊ spacing otherwise	Generally not applicable	Approx. 200 feet• from signalized intersection, 150 feet◊ spacing otherwise
<b>Minor Collector</b>	1/2 Mile Spacing	Approximately 300 feet• from major intersections ♦, 150 feet◊ spacing otherwise	Generally not applicable	Generally not applicable
<b>Industrial Local</b>	Not Applicable	150 feet◊ spacing	Generally not applicable	Generally not applicable
<b>Commercial Local</b>	Not Applicable	150 feet◊ spacing	Generally not applicable	Generally not applicable
<b>Single Family Local</b>	Not Applicable	Streets shall be 150 feet* Driveways shall be 55 feet• from intersections, 25 feet◊ spacing otherwise	Generally not applicable	Generally not applicable

⊗ The above driveway spacing requirements are minimums, except at potential signalized intersections, where spacing requirements provide optimum signal progression and maintain the functional quality of the roadway.

\* Measured from centerline of intersection to centerline of drive access.

• Measured from near side flowline to centerline of drive access.

◊ Measured from centerline of drive access to centerline of drive access.

♦ Major intersections are any functional classification above a collector.

### 3.03.2 DRIVEWAY OFFSETS

Where lots on undivided roadways are not large enough to allow accesses on opposite sides of the street to be aligned, the center of driveways not in alignment will be offset by a minimum of 150 feet (as measured from centerline to centerline of accesses) on all collector and commercial local streets, and 300 feet on arterial roadways. Greater distances may be required if left-turn storage lengths require such. Accesses must intersect a public street at 90°; if physical constraints make this impractical, up to a 10° variance may be permitted with review and approval of the City Engineer.

### 3.03.3      CHANGE IN USE

A change in use is defined below:

1.      The use of the access increases in actual or proposed vehicular volume by 20% or more.
2.      A particular directional characteristic (such as left turns) increases by 20% or more.
3.      The change in use of the property or modifications to the property causes the flow of vehicles entering the property to be restricted, to queue or hesitate on the City Street, creating a hazard.
4.      The use of the access by vehicles exceeding 30,000 pounds gross vehicle weight increases by 20% or by 10 vehicles per day, whichever is less.
5.      If a parcel of land with direct access has been in a state of non-use for more than 4 years, resuming use of the access will be considered a change in use.

Change in property use may include but is not limited to: structural modifications, remodeling, change in type of business, expansion of an existing business, or a change in zoning or subdivision to create new parcels. It does not include modifications to advertising, landscaping, general maintenance, or aesthetic improvements that do not affect internal or external traffic safety or flow.

### 3.03.4      SPEED CHANGE LANES

The City may require speed change lanes as a condition of access approval on collector and arterial streets where it is necessary for public safety and traffic operations based on site-specific conditions.

### 3.03.5      ACCESS ALIGNMENT

When lots are not large enough to allow accesses on opposite sides of the street to be aligned, the center of driveways not in alignment will be offset by a minimum of 150 feet (as measured from centerline to centerline of accesses) on all collector and commercial local streets; 300 feet on arterial roadways. Greater distances may be required if left-turn storage lanes require such. Accesses must intersect a public street at 90°; if physical constraints make this impractical, up to a 10° deviation may be permitted with review and approval of the City Engineer.



**3.03.6      SITE ACCESS DESIGN****A. Vehicle Storage**

When a development is located adjacent to a public street, the parking features must have full, internal vehicular circulation and storage. Vehicular circulation must be located completely within the property, and vehicles within one portion of the development must have access to all other portions without using the adjacent street system.

If a proposed development includes a truck loading operation and has access to a public street, adequate space shall be provided such that all truck maneuvering is performed off City streets.

Parking stalls shall not be provided along the entrance aisles to parking lots of sites adjacent to roadways classified as Major Collector and higher.

Required distances from the right-of-way line of the street to the first parking stall or drive aisle shall be based upon peak hour exit trips from the development(s) within the site using Table 3-2.

**TABLE 3-2    SITE ACCESS VEHICLE STORAGE REQUIREMENTS<sup>⊗</sup>**

<b>Peak Hour Exit Trips</b>	<b>Local (Feet)</b>	<b>Collector (Feet)</b>	<b>Arterial (Feet)</b>
<b>Less than 30</b>	20	40	40
<b>Between 30 and 120</b>	40	40	80
<b>Between 120 and 240</b>	40	60	120
<b>Greater than 240</b>	60	80	180

<sup>⊗</sup> The recommended vehicle storage as needed for the entire site, may be spread over several accesses if more than one access serves the site. The distribution must be proportional to the traffic volumes at each access.

**B. Spacing**

Access spacing standards are shown in Table 3-1 Access Guidelines. If accesses are in closer proximity than the distances shown in Table 3-1, revocable access permits may be issued until joint access can be provided at the proper location, or median improvements are completed to make the access a right-in/right-out movement.

Vehicle storage area for drive-in/drive-through facilities should meet the requirements in Article 7 of the Land Development Code.

**C. Access Radii and Width Criteria**

Site access points shall be designed to meet the criteria summarized in Table 3-4.

**TABLE 3-4 ACCESS RADII AND WIDTH CRITERIA**

<b>Roadway Classification</b>	<b>Residential Single-Family</b>	<b>Residential Multi-Family</b>	<b>Service Commercial</b>	<b>Shopping Center</b>	<b>Industrial</b>
<b>Single-Family Local</b>	Curb Cut or Mountable Curb	Curb Cut <sup>①</sup> Radius Returns <sup>②</sup>	Curb Cut <sup>①</sup> Radius Returns <sup>②</sup>	Curb Cut <sup>①</sup> Radius Returns <sup>②</sup>	Radius Returns <sup>③</sup>
<b>Commercial Local</b>	Curb Cut	Curb Cut <sup>①</sup> Radius Returns <sup>②</sup>	Curb Cut <sup>①</sup> Radius Returns <sup>②</sup>	Curb Cut <sup>①</sup> Radius Returns <sup>②</sup>	Radius Returns <sup>③</sup>
<b>Industrial Local</b>	Curb Cut	Curb Cut <sup>①</sup> Radius Returns <sup>②</sup>	Curb Cut <sup>①</sup> Radius Returns <sup>②</sup>	Curb Cut <sup>①</sup> Radius Returns <sup>②</sup>	Radius Returns <sup>③</sup>
<b>Minor Collector</b>	Not Allowed	Not Allowed	Curb Cut <sup>①</sup> Radius Returns <sup>②</sup>	Radius Returns <sup>②</sup>	Radius Returns <sup>③</sup>
<b>Major Collector</b>	Not Allowed	Not Allowed	Curb Cut <sup>①</sup> Radius Returns <sup>②</sup>	Radius Returns <sup>②</sup>	Radius Returns <sup>③</sup>
<b>Arterial w/ Full Deceleration Lane</b>	Not Allowed	Not Allowed	Curb Cut <sup>①</sup> Radius Returns <sup>②</sup>	Radius Returns <sup>②</sup>	Radius Returns <sup>③</sup>
<b>Arterial with 3rd Travel Lane</b>	Not Allowed	Not Allowed	Radius Returns <sup>②</sup>	Radius Returns <sup>②</sup>	Radius Returns <sup>③</sup>
<b>Arterial with 1 or 2 Lanes and no Deceleration Lane</b>	Not Allowed	Not Allowed	Radius Returns <sup>②</sup>	Radius Returns <sup>②</sup>	Radius Returns <sup>③</sup>
<b>Minimum Width<sup>④</sup></b>	12 feet	24 feet	24 feet	24 feet	24 feet
<b>Maximum Width</b>	20 feet for 2-car garage; 24 feet for 3-car garage	36 feet	36 feet	45 feet	50 feet

- ① Standard curb cuts must be used if the anticipated ADT for access is less than 500 vpd. (Except as noted above)
- ② 20-foot radii if ADT for access is between 500 and 1,000 vpd. 25-foot radii if ADT for access is between 1,000 and 1,500 vpd. 30-foot radii if ADT for access is greater than 1,500 vpd.
- ③ 25-foot radii unless longer wheel combinations or single unit vehicles exceeding 30 feet in length are proposed, then a 40- to 50-foot radii should be provided.
- ④ One way accesses, or accesses with median divider, must be at least 14-feet wide.

### 3.04 MINIMUM DESIGN CRITERIA

Street design, construction, and ROW requirements shall conform to the provisions contained in these Standards and Specifications, as listed in the tables and illustrated in the design standards.

**TABLE 3-5 ROADWAY DESIGN CRITERIA**

Design Element	Principal Arterial	Minor / Multimodal Arterial	Major Collector	Minor Collector	Industrial Local	Commercial Local	Single-Family Local
Right-of-Way Width	150'	120'	80'	64'	80'	60'	54' or 58'
Design Speed (mph)	55	50	45	40	30	30	25
Posted Speed Limit (mph)	45	40	35	30	25	25	25
Min. Centerline Radius	1200'	950'	450'	300'	200'	200'	150'❶
Min. Reverse Curve Tangent	300'	300'	250'	100'	25'	25'	0'
Min. Approach Tangent @ Intersections	300'	300'	200'	200'	100'	100'	100'
Min. Tangent Between Vertical Curves	50'						
Min. Curb Return Radii❷	35'	35'	30'	30'	35'	30'	25'
Property Line Curb Return Radii	Case by Case Design	Case by Case Design	20	20	20	20	10
Maximum Superelevation	4%						
Maximum Longitudinal Grade	6%						
Minimum Longitudinal Grade	0.5%						
Min. Grade Around Curb Return	0.75%						
Min. Pavement Cross Slope❸	1.5% Optimal is 2%						
Max. Cross Slope❸	4%						

❶ Note: May be reduced to 72 feet on minor local streets with a minimum of through traffic and appropriate eyebrow treatment provided.

- ② Note: When two categories of streets intersect, the flowline radius shall be the greater radius. Curb return radii to be designed in accordance with Design Vehicle Type use in that area. Design to be approved in coordination with Public Works Department staff.

- ③ Note: Does not apply on super-elevated sections of roadway.

### 3.04.1 AUXILIARY LANES

Auxiliary lanes provide for the acceleration or deceleration of turning traffic onto or off of a major roadway. Auxiliary lanes improve the safety at intersections by reducing the accident potential between turning traffic and through traffic.

#### 3.04.1.1 DECELERATION LANES

Deceleration lanes provide vehicles a safe area in which to slow prior to turning into an intersection. Deceleration lengths are based off of calculations that provide for 20 mph speed differential between turning and through traffic and a deceleration rate of 6 ft/s<sup>2</sup>.

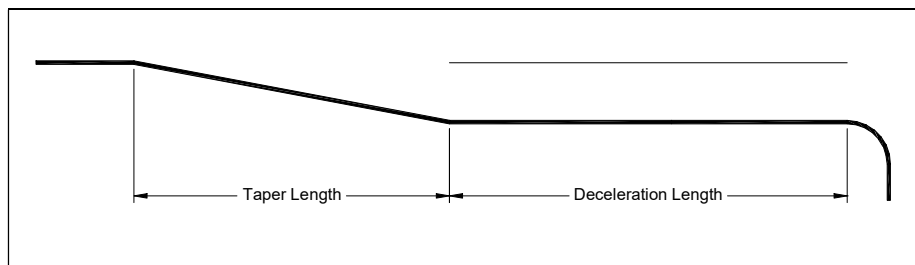
##### Right-Turn Deceleration Lanes

Right-turn deceleration lanes consist of two components: the deceleration length and the taper length. The criteria and the geometric requirements for right-turn deceleration lanes are shown in Table 3-6. For clarification, Figure 3-1 shows the geometric components of right-turn deceleration lanes.

**TABLE 3-6 RIGHT-TURN DECELERATION LANES**

	Minimum # of Major Street Right Turns to Require Right-Turn Deceleration Lane on Major Street (vph)	Deceleration Lane Length (ft)	Taper Rate	Taper Length (ft) for 12' Lane
Principal Arterial	15	185	18.5:1	222
Minor/Multimodal Arterial	20	135	15:1	180
Major Collector	25	90	13.5:1	162
Minor Collector	30	50	12:1	144

**FIGURE 3-1: GEOMETRIC COMPONENTS OF RIGHT-TURN DECELERATION LANES**



##### Left-Turn Deceleration Lanes

Left-turn deceleration lanes consist of three components:

- deceleration length
- taper length
- storage length

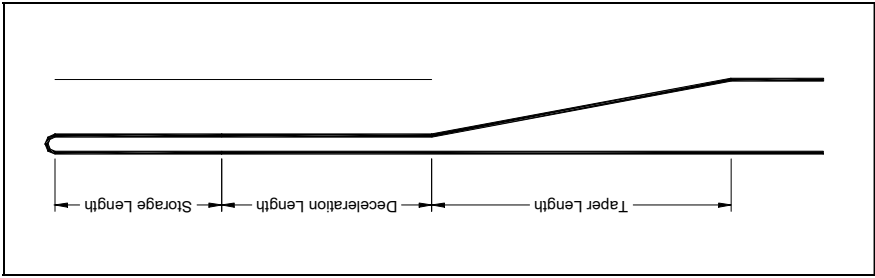
The criteria and the geometric requirements for left-turn deceleration lanes are shown in Table 3-7. Storage length criteria is discussed in Section 3.04.2. For clarification, Figure 3-2 shows the geometric components of left-turn deceleration lanes.

TABLE 3-7 LEFT-TURN DECELERATION LANES

Description	Minimum # of Major Street Left Turns to Require Left-Turn Decel Lane on Major Street (vph)	Deceleration Lane Length (ft)	Taper Rate	Taper Length (ft) for 12' Lane
Principal Arterial	Always	185	18.5:1	222
Minor/Multimodal Arterial	Always	135	15:1	180
Major Collector	Always	90	13.5:1	162
Minor Collector	**	50	12:1	144

\*\* The need for a left-turn deceleration lane on a minor collector shall be determined by the City Engineer on an individual basis.

FIGURE 3-2: GEOMETRIC COMPONENTS OF LEFT-TURN DECELERATION LANES

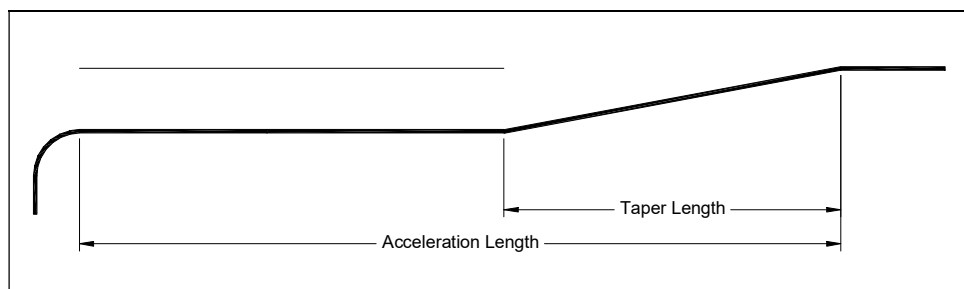


3.04.1.2 Acceleration Lanes

Acceleration lanes are required to provide distance for vehicles to accelerate up to reasonable speeds before merging into the flow of traffic on a major street when turning from minor roadways or private properties. Acceleration lengths are calculated based on speed differentials of 10 mph between turning and through traffic. Table 3-8 shows acceleration lane requirements. Figure 3-3 shows the geometric components of acceleration lanes.

TABLE 3-8 ACCELERATION LANE REQUIREMENTS

Description	Minimum # of Minor Street Right Turns to Require Accel Lane on Major Street	Acceleration Lane Length (ft) (including taper)	Taper Rate	Taper Length (ft) for 12' Lane
Principal Arterial	85	730	18.5:1	222
Minor/Multimodal Arterial	24	575	15:1	180
Major Collector	10	440	13.5:1	162
Minor Collector	35	325	12:1	144

**FIGURE 3-3: GEOMETRIC COMPONENTS OF ACCELERATION LANES**

### 3.04.2 STORAGE LENGTH

The auxiliary lane should be sufficiently long in order to store the number of vehicles that accumulate during a critical period. Sufficient storage length should be provided such that the queue length does not compromise the deceleration length provided. Additionally, the storage length shall be sufficiently long so that the entrance to the auxiliary lane is not blocked by vehicles queued in the through lanes at a signal.

Storage lengths for signalized intersections may be determined from capacity nomographs in the Highway Capacity Manual (HCM) or the traffic impact study. The minimum storage length for left-turn lanes at signalized intersections shall be 100 feet.

At unsignalized intersections, the storage length, exclusive of taper and deceleration length, may be based on the number of turning vehicles likely to arrive in an average 2-minute period within the peak hour. The 2-minute waiting time may need to be adjusted based on the volume of opposing traffic. The required storage length for an unsignalized intersection is presented in Table 3-9.

**TABLE 3-9 STORAGE LENGTHS FOR AUXILIARY LANES  
AT UNSIGNALIZED INTERSECTIONS**

Left-Turning Vehicles per Hour (peak hour)	0-30	31-60	61-100	101-200	201+
Required Storage Length (feet)	40*	50	100	175	250
*50 feet when trucks equal or exceed 10% of turning traffic					

### 3.04.3 TRANSITION TAPERS

Transition tapers are necessary to redirect traffic when the roadway is widened to accommodate auxiliary lanes (left- and right-turn lanes, lane drops, median transitions, etc.). Table 3-10 shows the required taper ratios by design speed.

**TABLE 3-10 REDIRECT TAPERS FOR THROUGH LANES**

Speed (mph)	Taper Ratio
25	10:1
30	15:1
35	20:1
40	30:1
45	45:1
50	50:1
55	55:1
60	60:1

**3.04.4 MEDIAN DESIGN**

Median lanes are necessary for the installation of left-turn lanes, providing a lane for deceleration and storage of vehicles making left turns from the roadway.

Acceleration lanes for vehicles turning left onto the roadway may utilize the median as well. The minimum width for a painted or raised median is 4 feet. The minimum width for left-turn lanes is shown in Table 3-11.

**TABLE 3-11 MINIMUM MEDIAN WIDTHS FOR LEFT-TURN LANES**

Single Left-Turn Lanes	16 feet
Dual Left-Turn Lanes	28 feet
Triple Left-Turn Lanes	40 feet
Two-Way Left-Turn Lanes	14 feet (max)

**A. Median Openings**

Median openings are necessary to accommodate left turning and cross traffic. A semicircular median may be used on medians of less than 10 feet in width. All medians that are 10 feet or wider in width must use a bullet nose median end for a median opening at a crossroad, or a parabolic curve at a "T" intersection.

Median openings should be designed in accordance with Chapter IX, Intersections, of the current edition of *A Policy on Geometric Design of Highways and Streets*. In addition, all median openings should be verified using the appropriate design vehicle and *Auto-turn* or equivalent software.

**3.05 VERTICAL ALIGNMENT**

All vertical curves shall be symmetrical. When the algebraic difference in grade exceeds 0.5%, a vertical curve shall be used. All vertical curves shall be labeled in the profile with length of curve (L) and (K) where  $K = L/A$  (A = algebraic grade difference).



Vertical curves that have flat sections near the high or low point should be evaluated for drainage where curbed roadways are proposed. Values of K=167 or greater should be checked for adequate drainage.

**TABLE 3-12 MINIMUM VERTICAL CURVE DESIGN CRITERIA**

<b>Design Speed MPH</b>	<b>Stopping Sight Distance Minimum in feet</b>	<b>Minimum K Values</b>
15	80	3
20	115	7
25	155	12
30	200	19
35	250	29
40	305	44
45	360	61
50	425	84
55	495	114

Length of curve = "K" Times Algebraic Difference In Grades

**TABLE 3-13 MAXIMUM GRADES AND LENGTHS OF GRADES AT INTERSECTION APPROACHES**

<b>Intersection of:</b>	<b>Local</b>	<b>Collector</b>	<b>Arterial</b>	<b>Maximum Grade</b>
<b>Non-residential Driveways with</b>	65'	65'	75'	4%
<b>Local with</b>	35'	100'	125'	3%
<b>Collector with</b>	100'	120'	200'	3%
<b>Arterial with</b>	125'	200'	200'	2%

### 3.06 SIGHT DISTANCE

The sight distances listed in Table 3-14 enable vehicles to turn right or left in order to accelerate to the operating speed of the street without causing approaching traffic to reduce speed by more than 10 mph.

The distance requirements are based upon a driver's eye height of 3.5 feet and an object height of 4.35 feet. Operating speed shall be based upon the design speed as listed in Table 3-14 for new roads.

When the sight distance criteria cannot be met, the City will prohibit turns by exiting vehicles, or require additional speed change lane lengths.

Within the sight distance triangle, no shrubs, groundcover, boulders, berms, fences, walls, or other materials constituting visual obstructions shall exceed a height of 36 inches from the gutter flowline. Trees planted within the sight

distance triangles, at sufficient maturity, shall be trimmed to a height of 8 feet above the gutter flowline. See Section 21-43 of the Commerce City Development Standards.

**TABLE 3-14 MINIMUM SIGHT DISTANCES<sup>⊕</sup>**

Speed (mph)	Passenger Cars Turning Left Out*	Passenger Cars Turning Right Out*	Semi Trailers Turning Left Out*	Semi Trailers Turning Right Out*	Passenger Cars Turning Left Into Access•	Semi Trailers Turning Left Into Access•
20	150	130	300	200	150	260
25	240	200	400	320	190	330
30	350	260	500	400	230	400
35	430	350	680	640	300	480
40	530	440	850	850	370	570
45	610	570	1160	1160	450	680
50	740	700	1600	1600	520	810
55	830	860	2000	2000	600	910
60	950	1050	2500	2500	700	1000

\* Measured from the driver's eye, 14.5 feet back of the flowline or pavement edge.

• Measured from the point where a left-turning vehicle stops to the vehicle approaching in the outside lane.

⊕ The sight distances in Table 3-14 apply when roadway grades are between 0% and 3%. Sight distances are based on traffic entering or crossing up to two-lane roadways. For roadways with more than two (2) lanes, follow current AASHTO requirements. Adjustments must be made to compensate for the acceleration and deceleration rates that are affected by roadway grades greater than 3% in Table 3-15.

**TABLE 3-15 FACTORS FOR GRADE EFFECT ON SIGHT DISTANCE**

Grade	Downgrade Factor*	Upgrade Factor•
0 to 3%	1.0	1.0
3.1 to 5%	0.6	1.4
Greater than 5%	0.5	1.7

\* Downgrade factors are used when a vehicle leaving the access is accelerating downhill.

• Upgrade factors are used when a vehicle leaving the access is accelerating uphill.

### 3.07 UNIQUE INTERSECTIONS AND CUL-DE-SACS

Intersections of unique interest and cul-de-sacs shall conform to these Standards and Specifications, and be approved by the City Engineer.

#### 3.07.1 TYPICAL STREET SECTION

Typical street sections shall be designed in accordance with Detail Drawings No. 307-01 through No. 307-09. Deviations from the typical street sections shall be approved by the City Engineer.

3.07.2      RIGHT IN-RIGHT OUT

The use of Right In-Right Out shall only be used to eliminate left-turn lanes at intersections where it is needed, at the discretion of the City Engineer. Right In-Right Outs shall conform to Detail Drawing No. 307-10.

3.07.3      EYEBROW TREATMENT

Eyebrow Treatments shall be used only at right angle intersections of local streets. If a valley pan is needed, the entire eyebrow shall be paved in concrete. Eyebrow Treatments shall conform to Detail Drawing No. 307-11 and be approved by the City Engineer.

3.07.4      CUL-DE-SAC

Cul-de-sacs shall conform to Detail Drawing No. 307-12. Loop-de-lanes shall conform to Detail Drawing No. 307-13. Hammerhead cul-de-sacs shall conform to Detail Drawing No. 307-14 and require the approval of the City Engineer. Cul-de-sacs in commercial and industrial developments will need to be specifically designed to meet the turning radius requirements for tractor/trailer units that are typically found in that type of development.

Lengths of cul-de-sacs are recommended to be no greater than 500 feet. Cul-de-sacs that are proposed greater than 500 feet must be fully justified, and the following considerations must be addressed:

1. The intersection traffic capacity.
2. Emergency vehicle response time.
3. Utility systems, drainage, and open space access.
4. The water supply system for fire protection must be approved by the fire protection district.

Surface drainage shall be directed toward the intersection. If this is not practical, drainage improvements and the necessary easements shall be provided at a collection point to convey these flows to the storm collection system.

3.07.5      ROUNDAABOUTS

Roundabouts located on local streets shall conform to Detail Drawing No. 307-15. If a roundabout is located on a collector or arterial roadway the roundabout shall be designed according to Roundabouts: An Informational Guide, Publication No. FHWA-RD-00-067.

3.07.6      TRAFFIC CALMING

Traffic calming should be considered on local streets which have the potential for speeding, cut-through traffic, or high pedestrian activity. Detail 307-16 gives an example of traffic calming using neckdowns and islands. Other traffic calming devices will be considered but must be approved by the City Engineer before implementation.

### 3.08 CONCRETE

Design of all concrete flatwork shall be in accordance with City Standards and Specifications, and shall be approved by the City Engineer. All concrete work in the public right of way shall be Class B 4500 psi, have 5-8% air entrainment, and a max slump of 4".

#### 3.08.1 DRIVE CURB CUT

Curb cuts in 6-inch vertical curbs will be provided at all driveway locations. Construction of curb cuts will be as shown on Detail Drawing No. 308-01.

Driveways with detached sidewalks shall have expansion joints at the following locations:

1. Between the back of curb and drive apron
2. Between the drive apron and sidewalk
3. Between the sidewalk and driveway

The apron and sidewalk must be a separate pour from the driveway. The drive apron and the sidewalk through the driveway must be 6" thick for residential and at least 8" thick for all others.

#### 3.08.2 VALLEY PAN

Valley pans, crosspans, and curb return fillets will be constructed at a minimum of 8-inches thick in residential, commercial, and industrial areas. A typical cross section of a valley pan is shown on Detail Drawing No. 308-02. A curb ramp with a crossspan is shown on Detail Drawing No. 308-03.

#### 3.08.3 CURB RAMPS

Curb ramps are required at all intersection curb returns and at mid-block locations associated with T-intersections. Curb ramps shall be constructed in accordance with Detail Drawing No. 308-04.

#### 3.08.4 CHASE DRAIN

Chase drains shall be placed as required per the approved drainage study, and at the discretion of the City Engineer. Chase drains shall be designed and constructed as shown on Detail Drawing No. 308-05.

#### 3.08.5 CURB, GUTTER AND SIDEWALK

Detail Drawing No. 308-06 shows typical mountable curb, gutter, and sidewalk design requirements.

Vertical curb design and construction is shown on Detail Drawing No. 308-07.

### 3.08.6      JOINTS

All cold joints shall be doweled with 18" long #4 epoxy coated rebar (green bar). Dowels should be placed 6-inches from the edge of concrete and shall be spaced at a minimum of 12".

Joint Materials shall conform to AASHTO Specifications according to type as follows:

Concrete joint sealer, hot-poured elastic	M 173
Preformed expansion joint filler (Bituminous Type)	M 33
Preformed sponge rubber and cork expansion joint fillers	M 153
Preformed expansion joint fillers non-extruding & resilient bitum	M 213

Non-bituminous joint types shall be placed in widths shown on the approved plans or at a width of 3/8 inch when not specified. Bituminous type joints shall be used for concrete paving and structural construction where joint sealers are not called for.

Expansion joint material shall be placed at the following locations and will be in place prior to the placing of concrete:

1. At each end of curb return
2. At both edges of driveway
3. Between back of sidewalk and driveway slab or service walk
4. Between new concrete and existing masonry buildings
5. As shown on approved drawings
6. As directed by the City Engineer
7. Between new and existing concrete
8. Intervals of not more than 500 feet

Expansion joint construction shall follow Detail Drawing No. 308-08.

Contraction or transverse joints will be placed at maximum intervals of 10 feet to control random cracking. Joints shall be formed, sawed, or tooled to a minimum depth of 1/3 the total depth with a minimum depth of 2 inches. If divider plates are used, the maximum depth of plates shall not be greater than half of the concrete depth at the finished surface and shall be no less than 15/16-inch thick. Contraction joint construction shall follow Detail Drawing No. 308-09.

### 3.09 MAJOR STRUCTURES

Major structures that are appurtenant to the proposed improvements such as retaining walls, box culverts, and bridges, shall conform to the structural and loading requirements of CDOT and geometry and drainage requirements of the City Engineer. Bridge and roadway guardrails shall be designed and constructed in accordance with current AASHTO Standards. Plans and supporting calculations for major structures shall be prepared and stamped by a registered Professional Engineer.

### 3.10 DRAINAGE

Drainage system design shall be in accordance with the City of Commerce City Storm Drainage Design and Technical Criteria Manual. A drainage report must be submitted for concurrent review with the roadway design, and shall be considered as a part of the roadway design. All public roadways shall be crowned according to Table 3-6. Private drives and streets may have an inverted crown, provided a concrete valley pan is provided to convey the nuisance flows.

Nuisance flows and minor storm event flows shall not be permitted to flow over sidewalks. With the use of sidewalk chase sections, flow shall be taken into the street curb and gutter. Sidewalk chase sections shall not be permitted at driveways or within the curb cut aprons. Direct connection to storm manholes is not permitted. Sidewalk chases, when permitted, are to be used to allow surface drainage to enter into the street gutter, and not to avoid the use of a standard inlet.

Crossspans will only be permitted across streets at intersections that will be controlled with a stop sign. Crossspans shall not be permitted at intersections that have the potential for being signalized when warrants are met. Crossspans may be installed at midblock locations on local residential streets if, and only if, the crossspan is desired to provide traffic calming in addition to drainage conveyance at the direction of the City Engineer.

### 3.11 SURVEY MONUMENTS

A permanent survey monument as shown in Detail No. 311-01 and No. 311-02 shall be installed at all section and quarter section corners. Survey monuments shall be set in accordance with the Colorado Revised Statutes, and as required by the Bylaws and Rules of Procedure of the Colorado State Board of Registration for Professional Engineers and Professional Land Surveyors.

All monuments shall be set within 60 days of completion of the streets. If the monuments are not installed, the City shall have the work performed by a registered land surveyor and make a claim against the collateral for all costs, including administration and legal fees.

### 3.12 UTILITY LOCATIONS

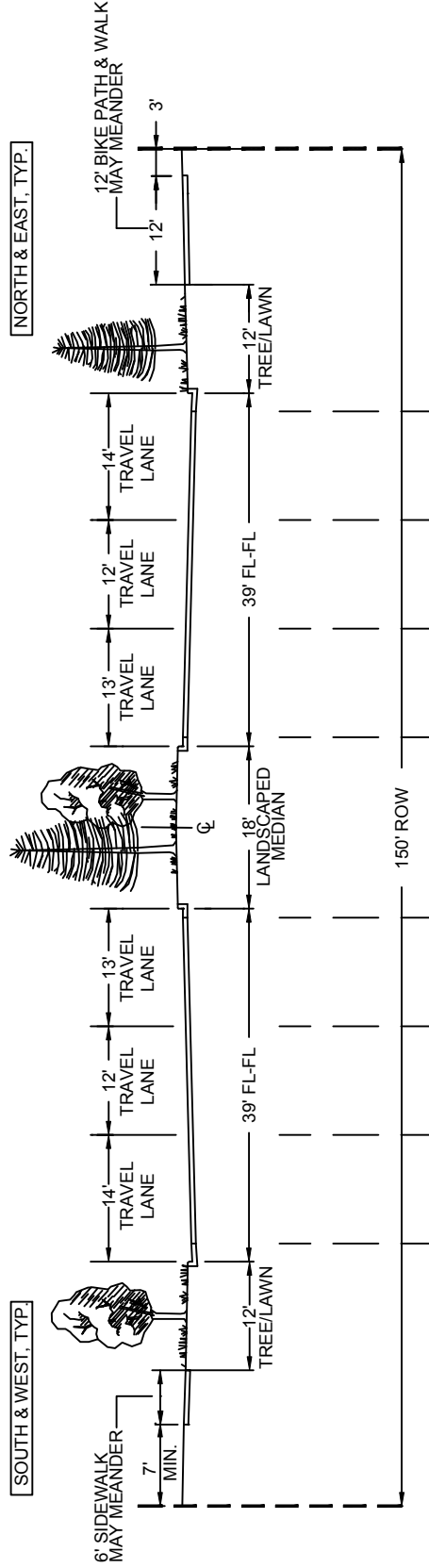
All new subdivisions in the northern range require a dual water system to be installed. The typical utility locations are shown on Detail 312-01. The locations and design of the sanitary sewer, potable, and non-potable water lines are to be reviewed and approved by South Adams County Water and Sanitation District.

<b>DETAIL DESCRIPTION</b>	<b>DETAIL NUMBER</b>
Principal Arterial	307-01
Intersection for Principal Arterial	307-02
Minor Arterial	307-03
Multimodal Arterial	307-04
Minor Collector, Major Collector/Local Industrial	307-05
Local Residential with Detached Walks	307-06
Optional Local Residential with Detached Walks	307-07
Local Residential with Attached Walks/Local Commercial	307-08
Residential and Commercial Alley, Local Rural	307-09
Right-In, Right-Out	307-10
Eyebrow Treatment	307-11
Cul-de-sac	307-12
Loop-de-lane	307-13
Hammerhead Cul-de-sac	307-14
Roundabout	307-15
Traffic Calming Island with Neckdown	307-16
Curb Cut	308-01
Valley Pan	308-02
Curb Ramps	308-03a
Curb Ramps	308-03b
Curb Ramps	308-03c
Curb Ramps	308-03d
Curb Ramp with Cross-pan	308-04
Chase Drain	308-05
Mountable Curb Sections	308-06
Vertical Curb Sections	308-07
Expansion Joint Details	308-08
Contraction Joint Details	308-09
Curb Detail with Sump Pipe Outlet	308-10
Survey Monuments	311-01
Survey Monument Box	311-02
Typical Utility Locations	312-01
Pipe Stabilization	312-02
Concrete Panel Replacement	399-01



NOTES:

1. AUXILIARY LANES SHALL BE 12' WIDE. INCLUDING GUTTER PANS
2. EASEMENTS MAY BE DEDICATED AS RIGHT-OF-WAY IF SETBACKS ARE NOT AN ISSUE
3. SIDEWALKS MAY MEANDER
4. DUAL LEFT TURNS SHALL BE PROVIDED WHERE TRAFFIC VOLUMES DICTATE
5. SEE PRINCIPAL & REGIONAL ARTERIAL INTERSECTION DETAILS FOR TURN LANE AND ROW CONFIGURATIONS.



PRINCIPAL ARTERIAL

NOT TO SCALE

COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL: *[Signature]* 12-15-17  
CITY ENGINEER DATE

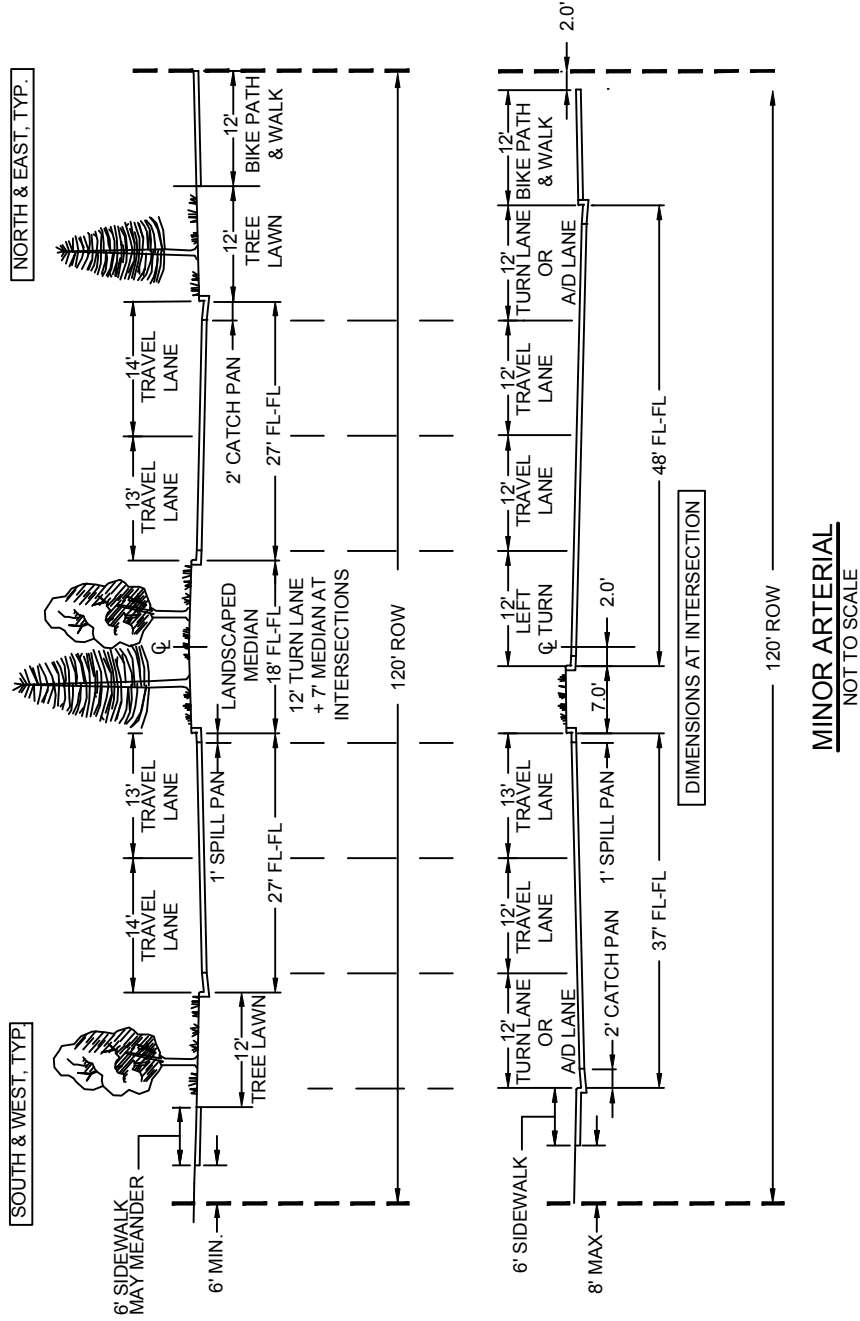
ROADWAY AND PARKING DETAILS  
TYPICAL STREET SECTIONS

DETAIL NO.  
307-01





- NOTES:  
 1. AUXILIARY LANES SHALL BE 12' WIDE, INCLUDING GUTTER PANS  
 2. EASEMENTS MAY BE DEDICATED AS ROW IF SETBACKS ARE NOT AN ISSUE

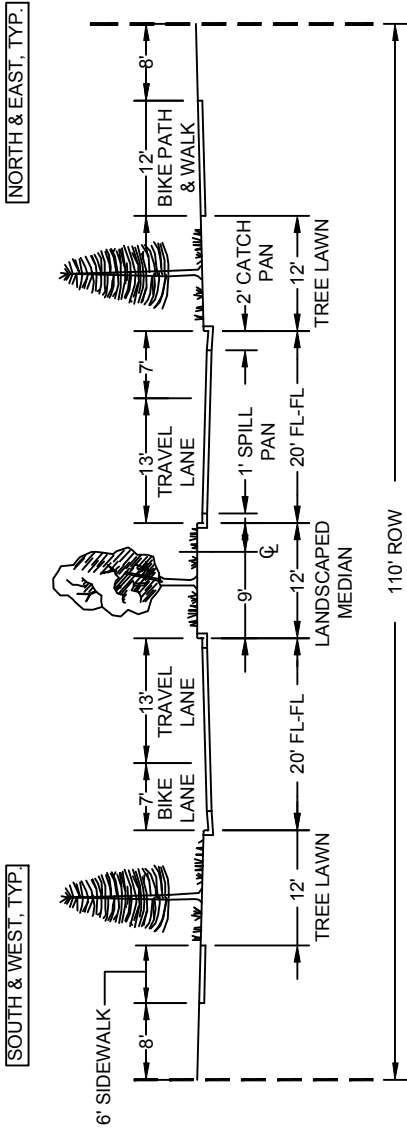


APPROVAL: *[Signature]* 12-15-17  
 CITY ENGINEER DATE

DETAIL NO.  
 307-03

COMMERCE CITY  
 DEPARTMENT OF PUBLIC WORKS  
 ENGINEERING CONSTRUCTION STANDARDS  
 ROADWAY AND PARKING DETAILS  
 TYPICAL STREET SECTIONS

- NOTES:
- 1. AUXILIARY LANES SHALL BE 12' WIDE, INCLUDING GUTTER PANS
  - 2. EASEMENTS MAY BE DEDICATED AS ROW IF SETBACKS ARE NOT AN ISSUE
  - 3. SIDEWALKS MAY MEANDER

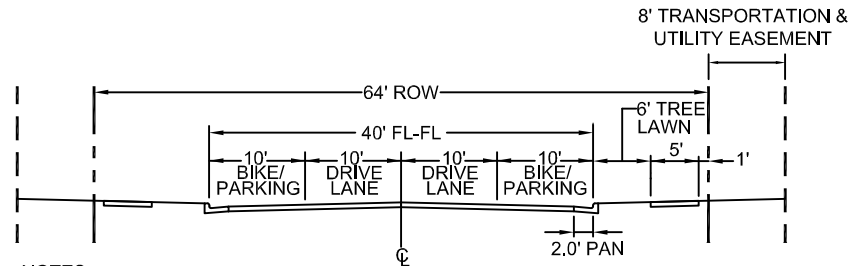


**MULTIMODAL ARTERIAL**  
NOT TO SCALE

COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS  
ROADWAY AND PARKING DETAILS  
TYPICAL STREET SECTIONS

APPROVAL: *[Signature]* 12-15-17  
CITY ENGINEER DATE  
DETAIL NO. 307-04

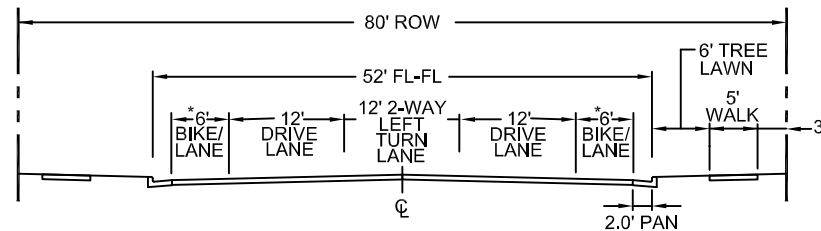




NOTES:

1. CENTER LINE STRIPE REQUIRED
2. THIS SECTION FOR STREETS WITH "BACK OUT" DRIVEWAYS IN RESIDENTIAL SUBDIVISIONS

**MINOR COLLECTOR**  
NOT TO SCALE



NOTES:

1. MAJOR COLLECTOR LANEAGE SHOWN
2. CITY ENGINEER TO DETERMINE STRIPING REQUIREMENTS FOR LOCAL INDUSTRIAL STREETS ON A CASE BY CASE BASIS
- \*3. OMIT BIKE PATHS ON INDUSTRIAL STREETS (STILL 52' FL-FL)
4. NO ON STREET PARKING

**MAJOR COLLECTOR / LOCAL INDUSTRIAL**  
NOT TO SCALE

COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

*Maria R. [Signature]*

05-27-16

CITY ENGINEER

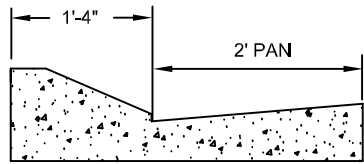
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ROADWAY AND PARKING DETAILS  
TYPICAL STREET SECTIONS

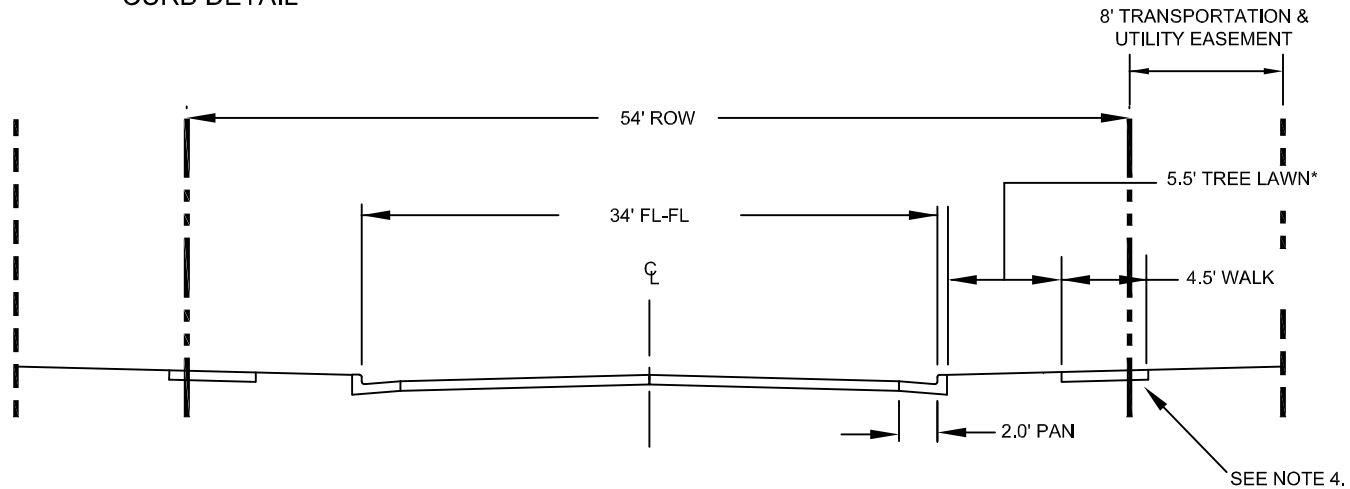
DETAIL NO.  
**307-05**



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MOUNTABLE  
CURB DETAIL



NOTE:

1. STRIPING NOT REQUIRED
2. ON STREET PARKING ALLOWED
- \*3. IRRIGATED & UNIFORMLY LANDSCAPED TREE LAWN TO BE INSTALLED BY DEVELOPER
4. IF MOUNTABLE CURB IS USED, SIDEWALK WILL ENCROACH 1'-4" INTO TRANSPORTATION EASEMENT

LOCAL RESIDENTIAL WITH DETACHED WALKS (NO ALLEY)

NOT TO SCALE

COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

*Maria R. Flores*

05-27-16

CITY ENGINEER

DATE

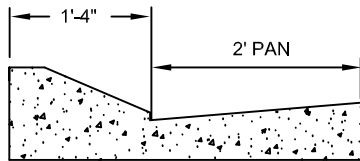
ROADWAY AND PARKING DETAILS  
TYPICAL STREET SECTIONS

DETAIL NO.

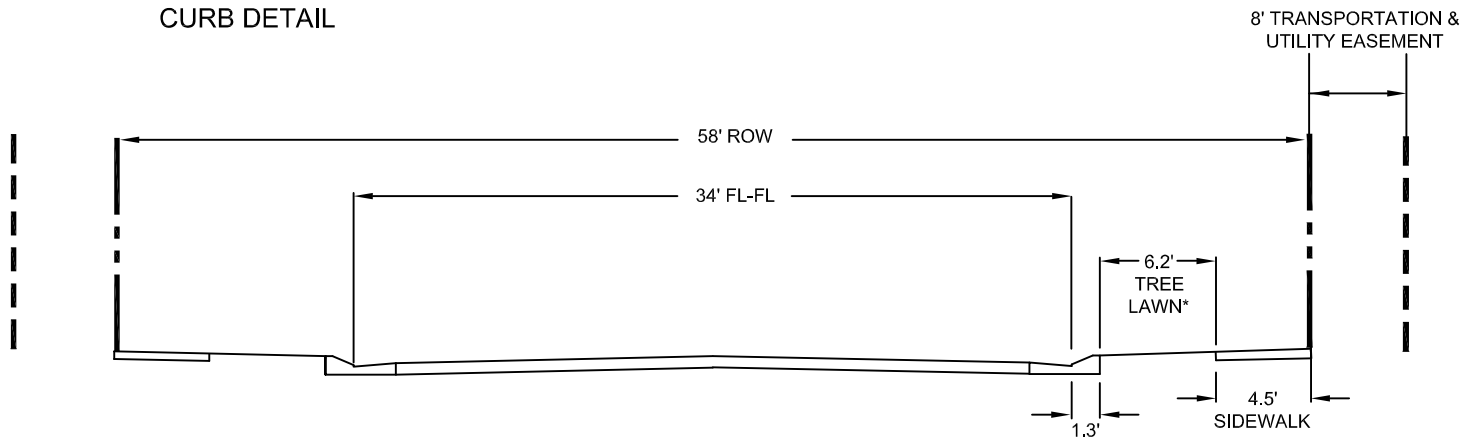
307-06



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MOUNTABLE  
CURB DETAIL



NOTE:

1. STRIPING NOT REQUIRED
2. ON STREET PARKING ALLOWED
- \*3. IRRIGATED & UNIFORMLY LANDSCAPED TREE LAWN TO BE INSTALLED BY DEVELOPER

LOCAL RESIDENTIAL WITH DETACHED WALKS (NO ALLEY)

NOT TO SCALE

COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

*Maria R. Flanagan*

05-27-16

CITY ENGINEER

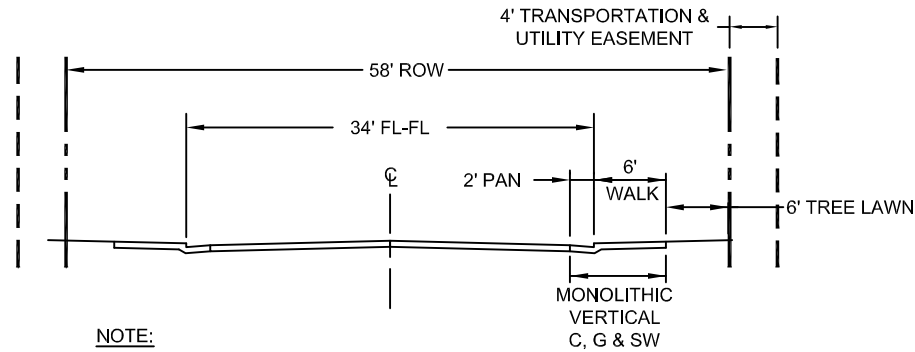
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ROADWAY AND PARKING DETAILS  
TYPICAL STREET SECTIONS

DETAIL NO.

307-07



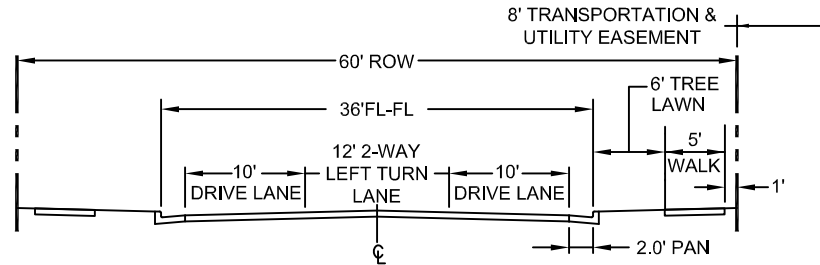


**NOTE:**

1. STRIPING NOT REQUIRED
2. ON STREET PARKING ALLOWED

**LOCAL RESIDENTIAL WITH ATTACHED WALKS (NO ALLEY)**

NOT TO SCALE



**NOTES:**

1. NO ON STREET PARKING
2. STRIPE 2-WAY LEFT TURN LANE
3. FOR COMMERCIAL OR HIGH DENSITY RESIDENTIAL STREETS

**LOCAL COMMERCIAL**

NOT TO SCALE

COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

*Marie A. Flaherty*

05-27-16

CITY ENGINEER

DATE

ROADWAY AND PARKING DETAILS  
TYPICAL STREET SECTIONS

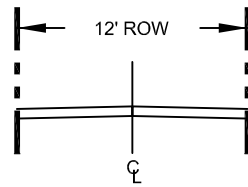
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307-08



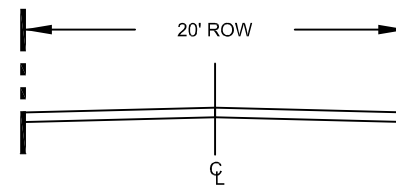


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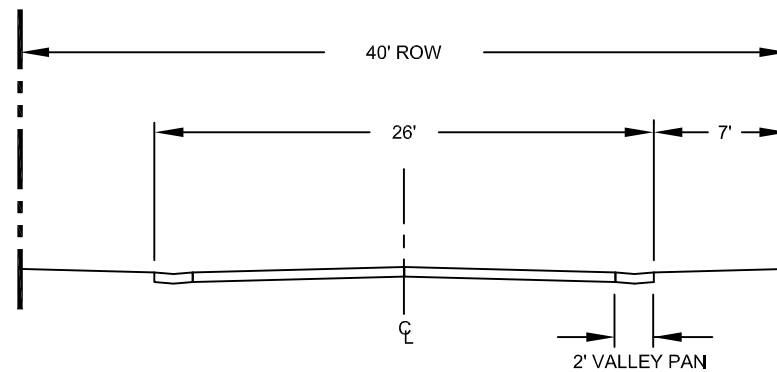
RESIDENTIAL ALLEY

1"=10'



COMMERCIAL ALLEY

1"=10'



NOTES:

1. NO ON STREET PARKING
2. STRIPING NOT REQUIRED
3. FOR ACCESS TO 1/2 ACRE OR LARGER LOTS

LOCAL RURAL

1"=10'

SEE THE PAVEMENT DESIGN SECTION OF THE ENGINEERING CONSTRUCTION STANDARDS AND SPECIFICATIONS FOR REQUIRED PAVEMENT SECTIONS.

COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

*Maria R. Flores*

05-27-16

CITY ENGINEER

DATE

ROADWAY AND PARKING DETAILS  
TYPICAL STREET SECTIONS

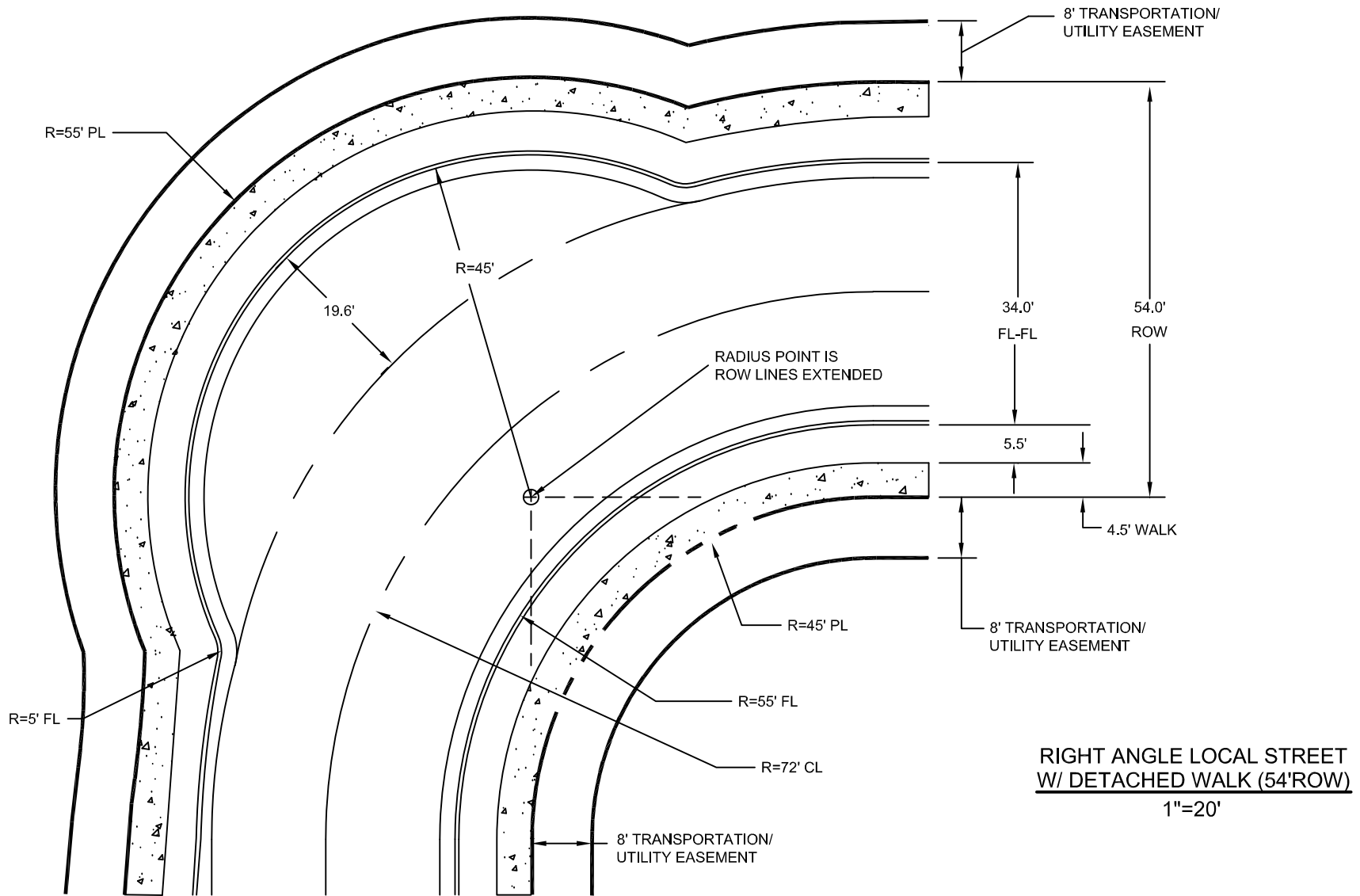
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307-09





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COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

*Maria R. Flanagan*

05-27-16

CITY ENGINEER

DATE

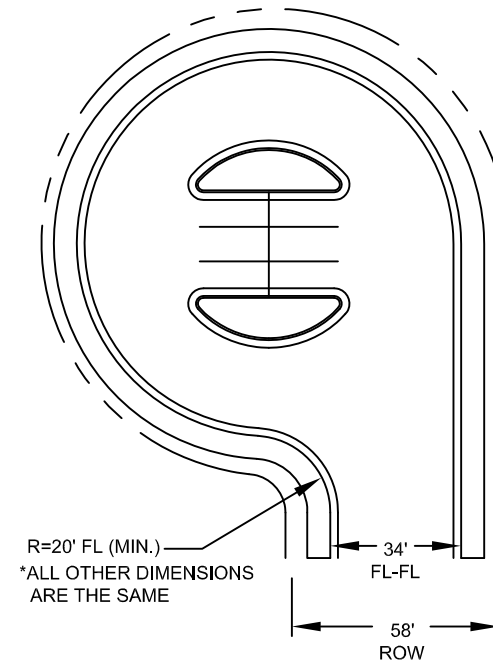
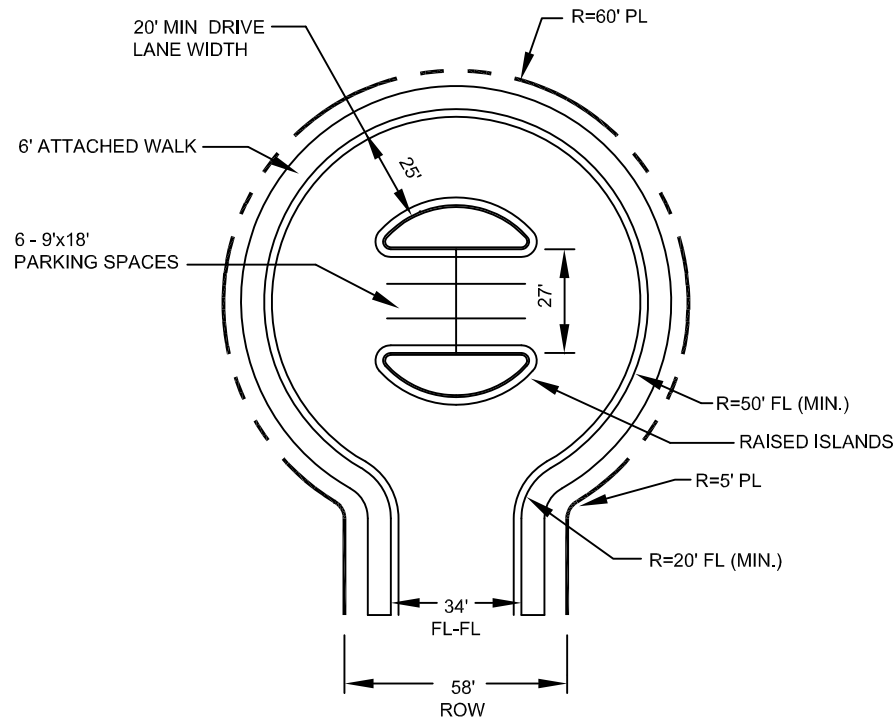
EYEBROW TREATMENT

DETAIL NO.

307-11



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**CUL-DE-SAC  
WITH ATTACHED SIDEWALK**  
NOT TO SCALE

COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

**CUL-DE-SAC W/ATTACHED  
SIDEWALK (1 OF 2)**

APPROVAL:

*Maria R. Fitch*

CITY ENGINEER

05-27-16

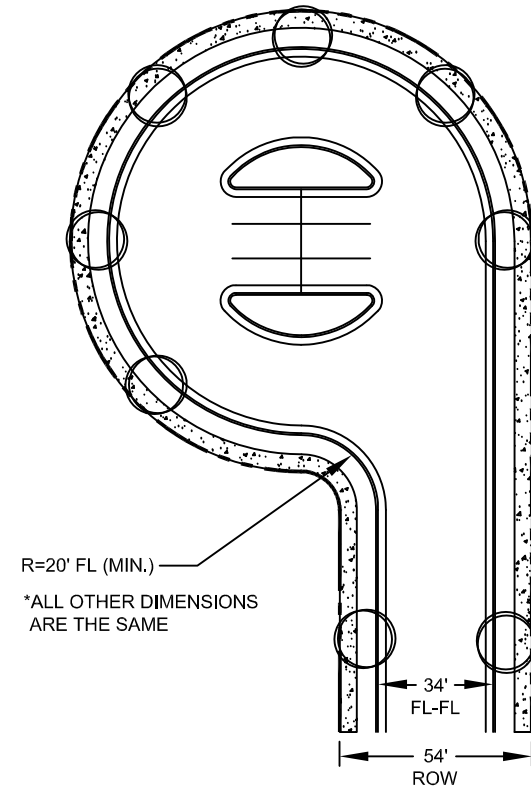
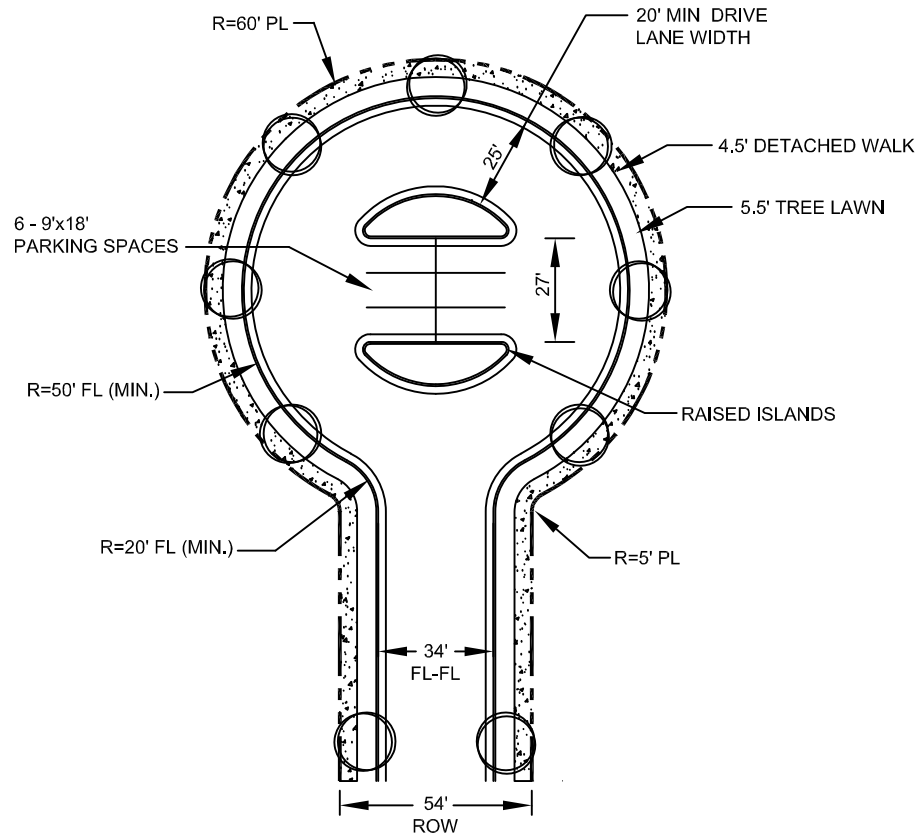
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DETAIL NO.

**307-12**



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**CUL-DE-SAC  
WITH DETACHED SIDEWALK**  
NOT TO SCALE

COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

**CUL-DE-SAC W/ATTACHED  
SIDEWALK (2 OF 2)**

APPROVAL:

*Maria R. Flaherty*

CITY ENGINEER

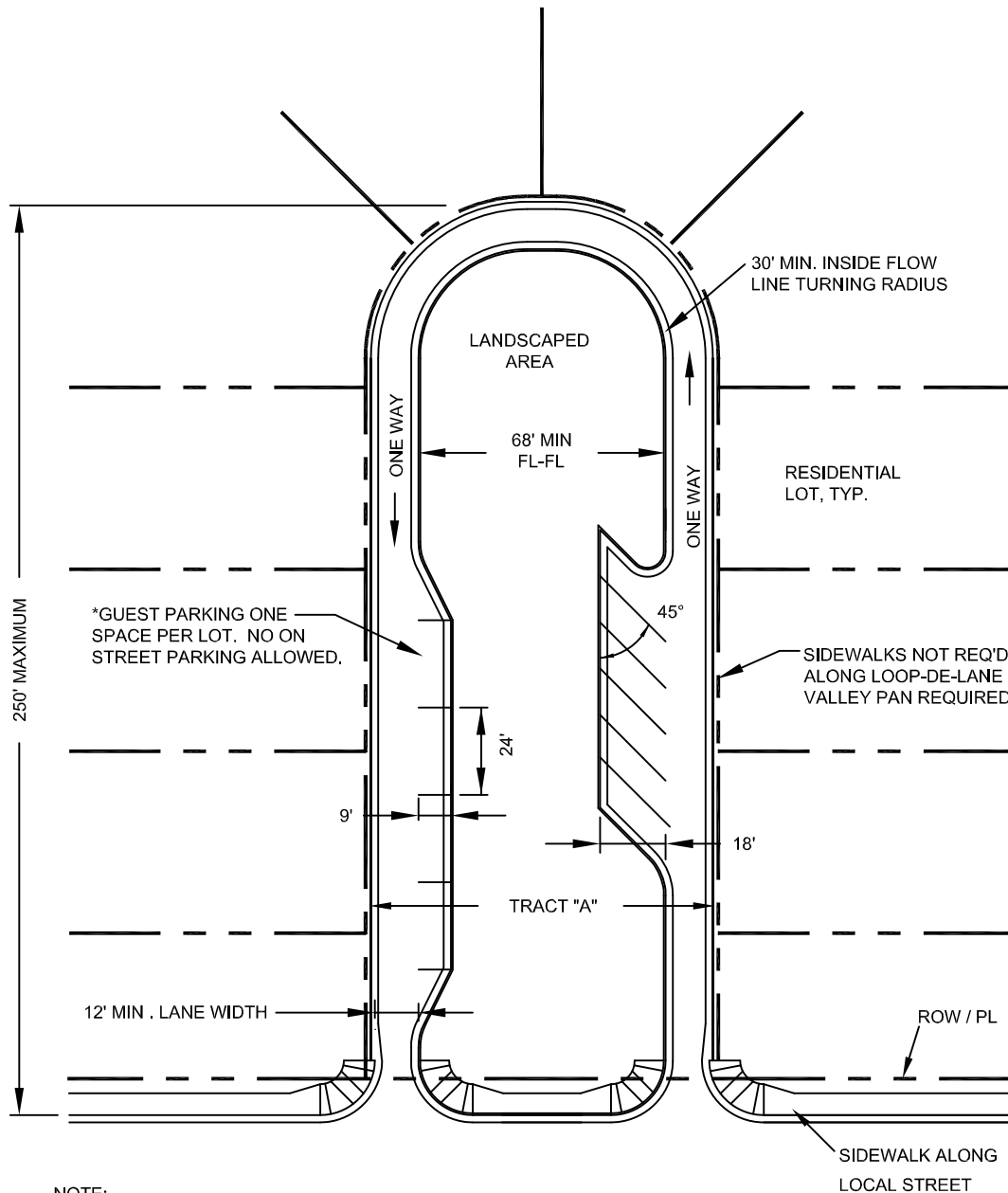
05-27-16

DATE

DETAIL NO.

**307-12**





**NOTE:**  
 \*1. EITHER ANGLED OR PARALLEL PARKING IS ALLOWED.  
 BOTH ARE SHOWN FOR ILLUSTRATION PURPOSES ONLY.

**LOOP-DE-LANE**  
 1"=50'

COMMERCE CITY  
 DEPARTMENT OF PUBLIC WORKS  
 ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

*Maria A. Flores*

05-27-16

CITY ENGINEER

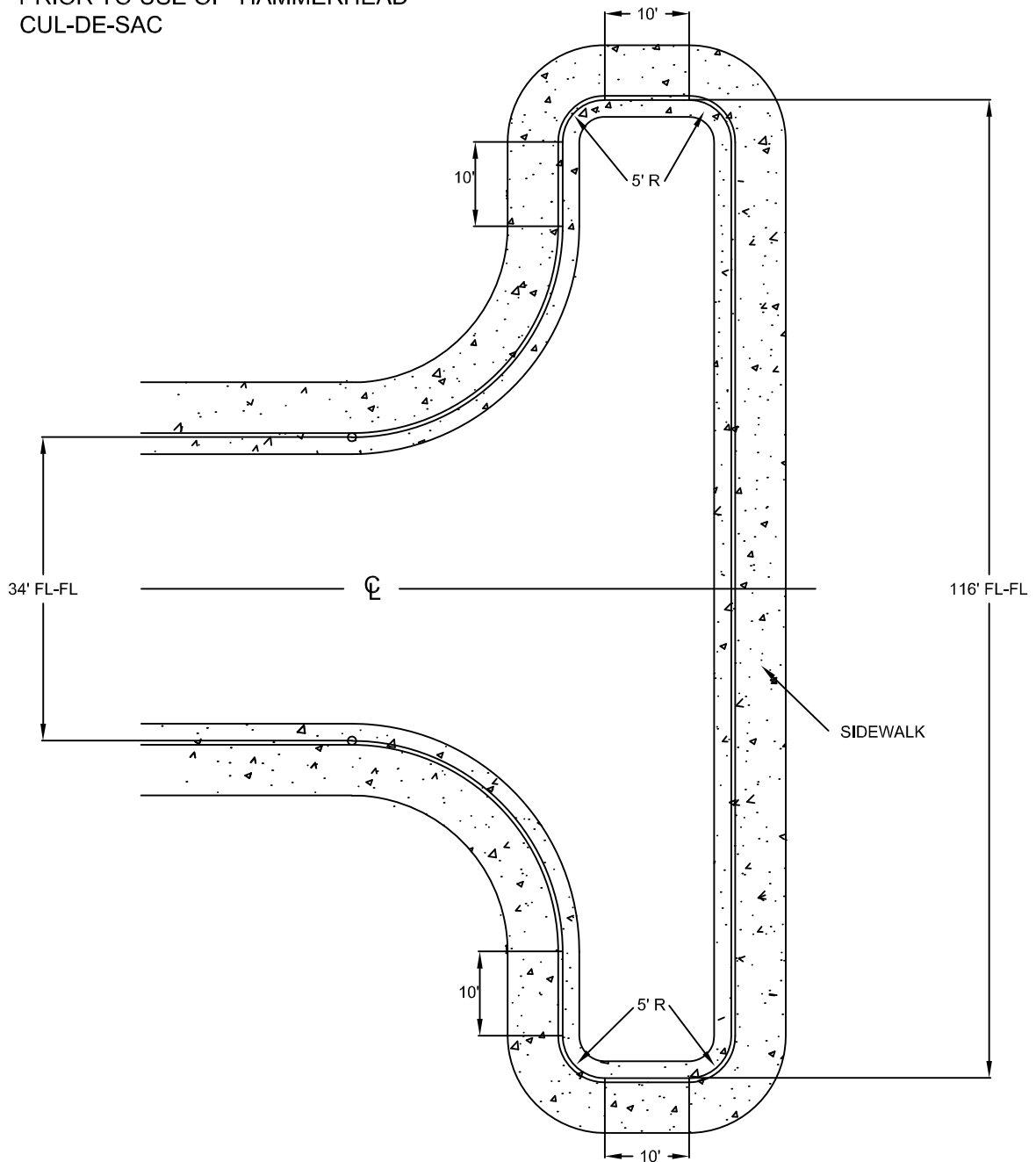
DATE

LOOP-DE-LANE

DETAIL NO.  
 307-13



CITY ENGINEER AND EMERGENCY  
ACCESS APPROVAL REQUIRED  
PRIOR TO USE OF HAMMERHEAD  
CUL-DE-SAC



COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

*Maria A. [Signature]*

05-27-16

CITY ENGINEER

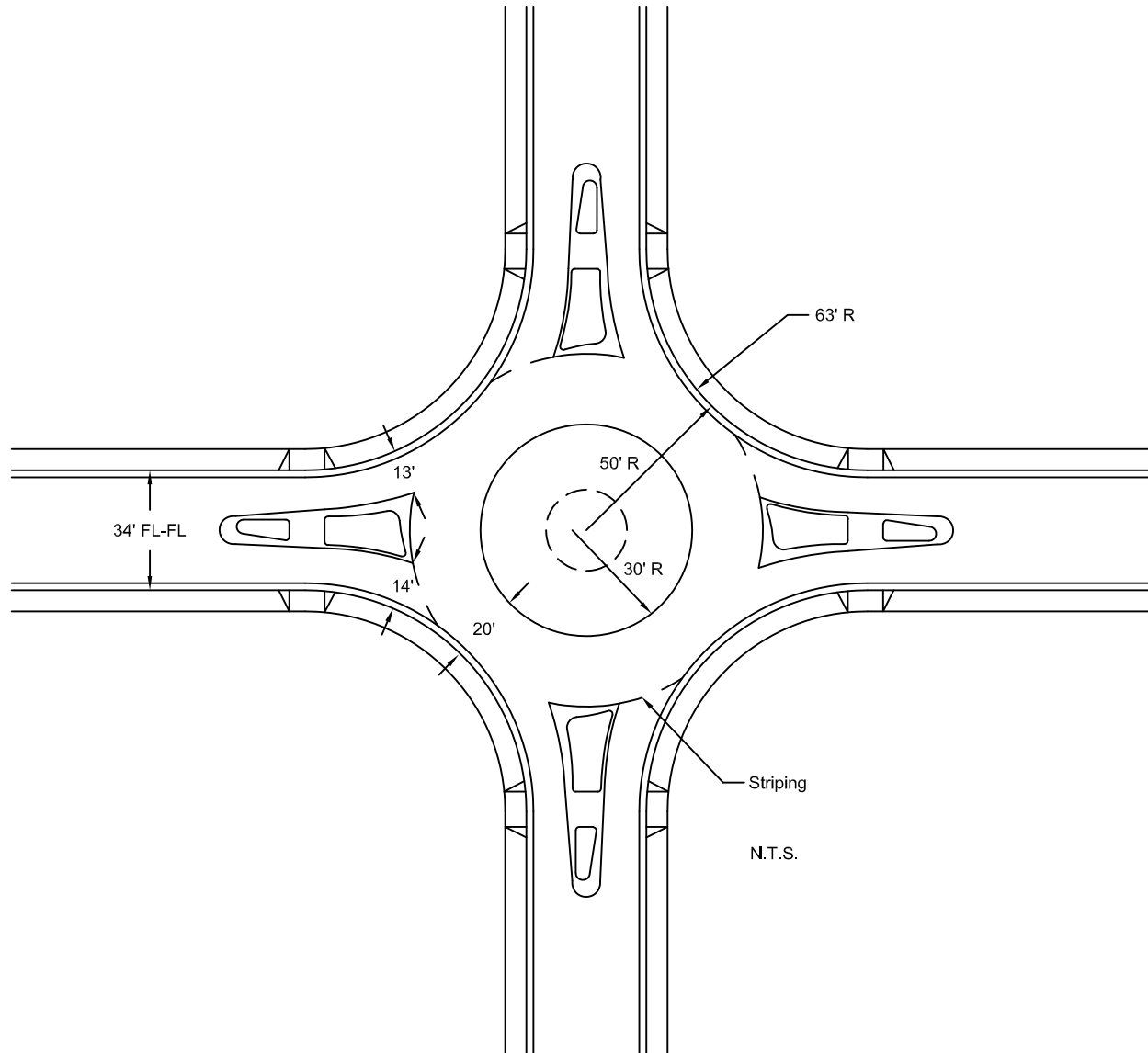
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TYPICAL HAMMERHEAD  
CUL-DE-SAC

DETAIL NO.  
307-14



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COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

*Marie R. Flanagan*

05-27-16

CITY ENGINEER

DATE

ROUNABOUT

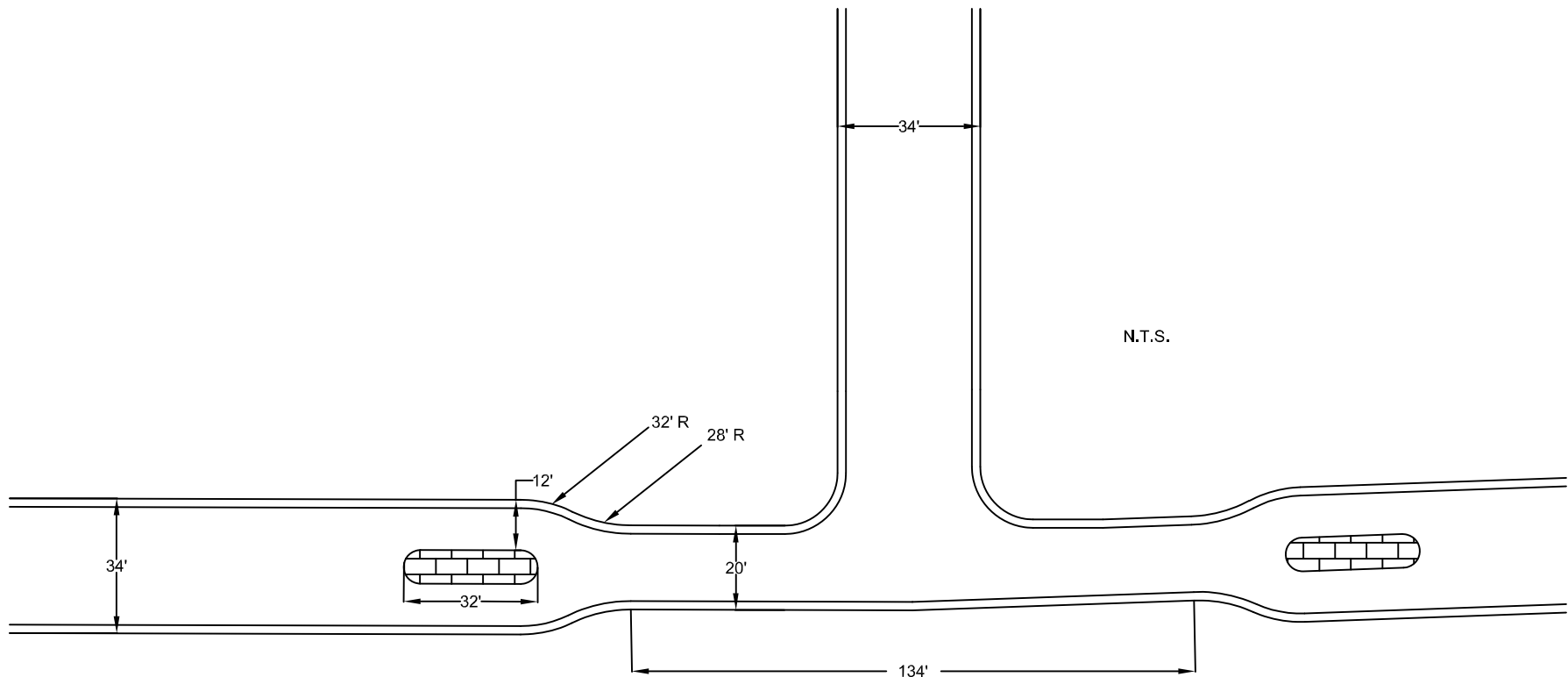
DETAIL NO.

307-15





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COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

*Marie A. Flaherty*

05-27-16

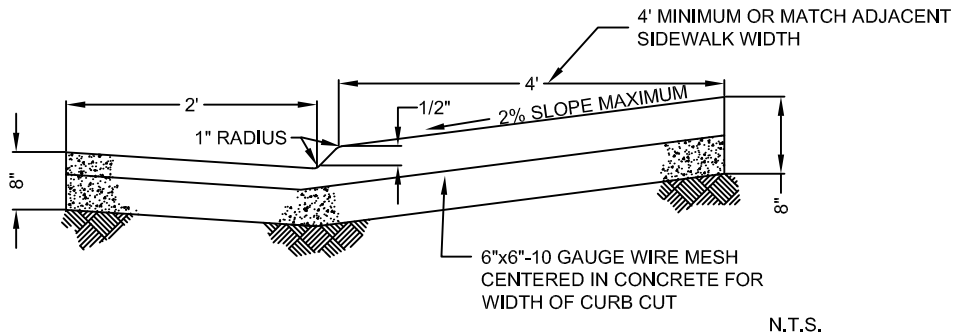
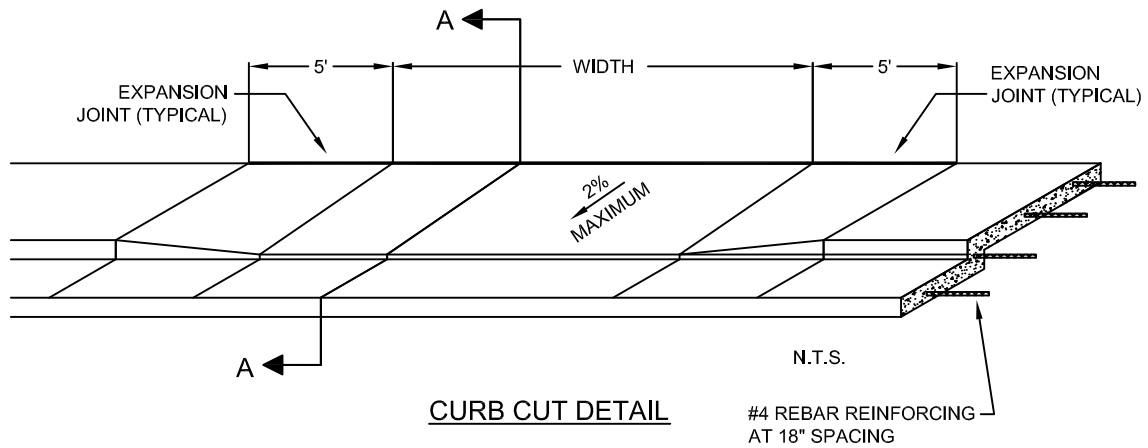
CITY ENGINEER

DATE

TRAFFIC CALMING ISLAND  
WITH NECKDOWN

DETAIL NO.  
307-16





NOTES:

1. REINFORCEMENT IS REQUIRED FOR INDUSTRIAL AND HEAVY COMMERCIAL DRIVE CUTS.
2. EXPANSION JOINTS SHALL BE INSTALLED WHEN ABUTTING EXISTING CONCRETE OR FIXED STRUCTURE. EXPANSION JOINT MATERIAL SHALL BE 1/2" THICK AND SHALL EXTEND THE FULL DEPTH OF THE CONTACT SURFACE.
3. CONCRETE THICKNESS SHALL BE 6" FOR RESIDENTIAL AREAS AND 8" FOR ALL OTHERS.
4. 18" LONG #4 EPOXY COATED REBAR REINFORCING SHALL BE USED TO PIN NEW CONCRETE TO EXISTING CONCRETE. SPACING SHALL BE 18-INCHES.
5. IF 2% MAXIMUM SLOPE CANNOT BE MET, A MOUNTABLE CURB WILL BE REQUIRED AND A 2% MAXIMUM SLOPE SHALL BE MAINTAINED. SEE DETAIL 308-06

COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

*Maria A. DeLeon*

CITY ENGINEER

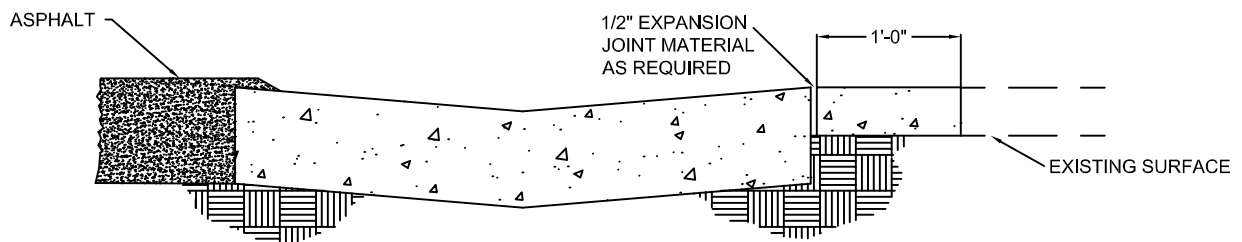
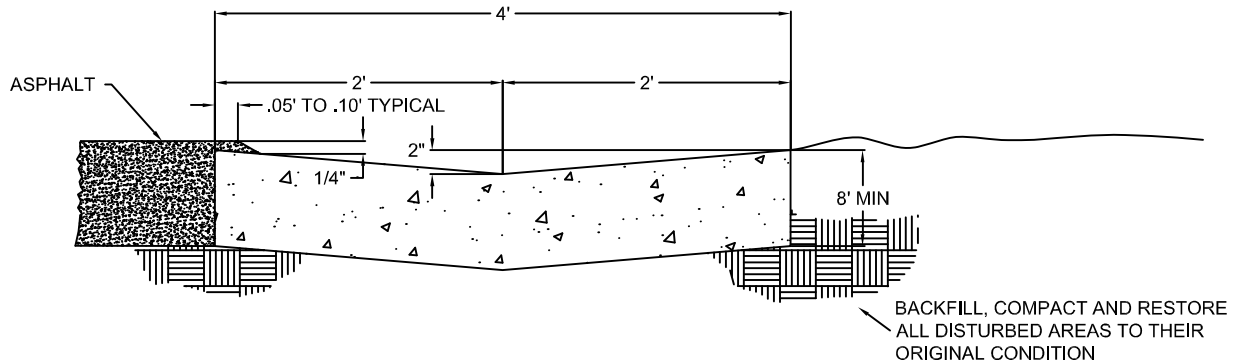
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DATE

CURB CUT DETAIL

DETAIL NO.  
308-01





COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

*Maria A. F. [Signature]*

CITY ENGINEER

05-27-16

DATE

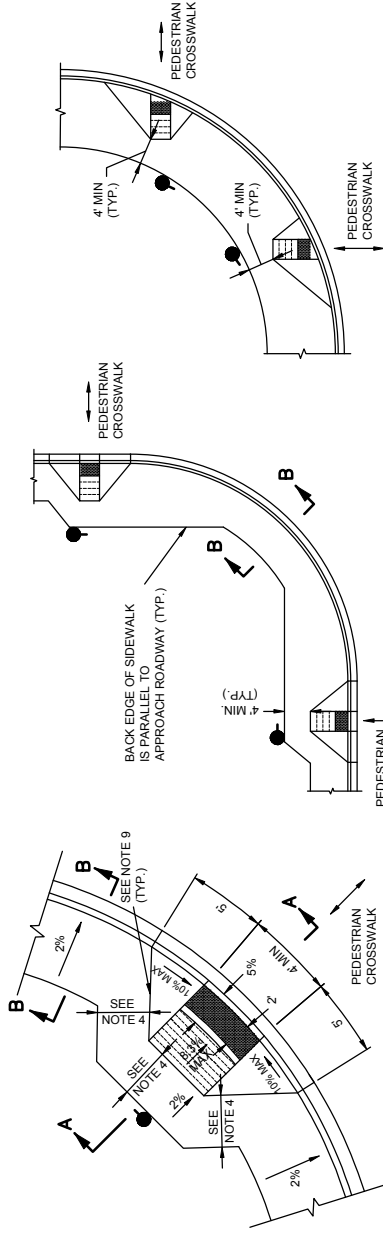
VALLEY PAN

DETAIL NO.  
308-02



# **GENERAL NOTES**

1. THE DETECTABLE WARNINGS SHALL BE INSTALLED AT SIDEWALK TO STREET TRANSITIONS. THEY SHALL HAVE A TRUNCATED DOME SURFACE. THE DOMES SHALL BE IN A SQUARE GRID PATTERN AND ALIGNED WITH PEDESTRIAN TRAFFIC.
2. ALL DETECTABLE WARNING AREAS SHALL START A MINIMUM OF 6 IN. FROM THE FLOW LINE OF THE CURB AND NOT BE MORE THAN A MAXIMUM OF 8 IN. (WITH EXCEPTION FOR THE TYPE 1B MODIFIED AND TYPE 3B MODIFIED AS THIS DIMENSION MAY BE GREATER THAN 8 INCHES ON ONE SIDE OF THE RADIUS) FROM ANY POINT ON THE FLOW LINE OF THE CURB. ALL DETECTABLE WARNING AREAS SHALL BE 2 FT. IN LENGTH AND COVER THE COMPLETE WIDTH OF THE RAMP AREA ONLY.
3. RAMP SLOPES SHALL BE 8.3% OR FLATTER. THE DETECTABLE WARNING SLOPES SHALL BE 5% OR FLATTER.
4. MINIMUM SIDEWALK WIDTH IS 4 FT.
5. DO NOT INSTALL DRAINAGE STRUCTURES, TRAFFIC SIGNAL EQUIPMENT, JUNCTION BOXES, AND OTHER OBSTRUCTIONS IN FRONT OF THE RAMP ACCESS AREAS.
6. CONSTRUCTION OF THE CONCRETE PEDESTRIAN CURB ADJACENT TO THE RAMP AREAS SHALL BE INCLUDED IN THE BID PRICE OF THE CONCRETE CURB RAMP.
7. DETECTABLE WARNINGS SHALL MEET SECTION 705 OF THE USDOT ADA STANDARDS FOR TRANSPORTATION FACILITIES.
8. IF THE PLACEMENT OF A PEDESTRIAN PUSH BUTTON ASSEMBLY ON A TRAFFIC SIGNAL MAST POLE WILL NOT BE WITHIN EASY REACH (10' OR LESS AND UNOBSTRUCTED) OF PEDESTRIANS (IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT), THEN A SEPARATE PEDESTRIAN PUSH BUTTON POST ASSEMBLY (PPBPA) SHALL BE INSTALLED WITHIN EASY REACH. THE PPBPA SHALL MEET THE PROVISIONS FOUND IN "SECTION 4E.08 THROUGH 4E.13 - PEDESTRIAN DETECTORS" OF THE 2009 MUTCD MANUAL WITH REVISIONS 1 AND 2.
9. WHERE SPACE IS LIMITED OR GRADE IS AN ISSUE, A 10% SLOPE MAY BE USED ON FLARED SIDES.
10. THE SLOPES CAN BE LOWER THAN WHAT IS SHOWN BUT THEY SHALL NOT EXCEED THESE VALUES.
11. CURB RAMP TYPE 1A DIAGONAL (ON THE APEX) IS UNACCEPTABLE IN NEW CONSTRUCTION. TYPICALLY, TWO CURB RAMPS AS IN TYPE 1B, MUST BE PROVIDED AT EACH STREET CORNER.
  - ADA TITLE II 28 C.F.R. SECTION 35.151(B) STATES:
    - ALTERATIONS HAVE TO BE MADE READILY ACCESSIBLE, WITHIN THE IMPACTING PROJECT, TO THE MAXIMUM EXTENT FEASIBLE (MEF).
  - THEREFORE, A SINGLE, DIAGONAL CURB RAMP TYPE 1A WILL ONLY BE PERMITTED ON ALTERATION PROJECTS WITH MEF JUSTIFICATION DOCUMENTATION.
12. THE CURB RAMP (EXCLUDING ANY FLARED SIDES) OR BLENDED TRANSITION SHALL BE CONTAINED WHOLLY WITHIN THE WIDTH OF THE CROSSWALK AND/OR PEDESTRIAN STREET CROSSING THE RAMP SERVES.
13. WING SURFACES SHALL BE TEXTURED WITH A COARSE BROOMED SURFACE ONLY.

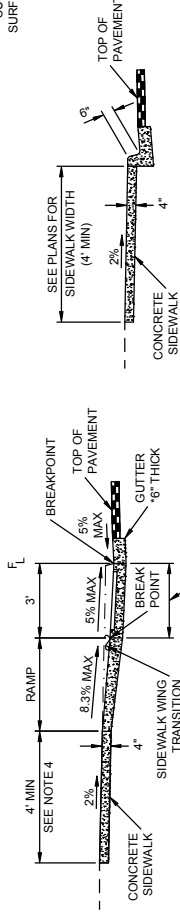


**CURB RAMP TYPE 1B MODIFIED**

USE ONLY IF EXISTING ROW DICTATES.  
GRADE BREAK SHALL NOT BE PERMITTED ON THE SURFACE OF THE RAMP RUNS AND TURNING SPACES. SURFACE THAT MEET AT GRADE BREAKS SHALL BE FLUSH. SEE NOTE 11.

**CURB RAMP TYPE 1B**

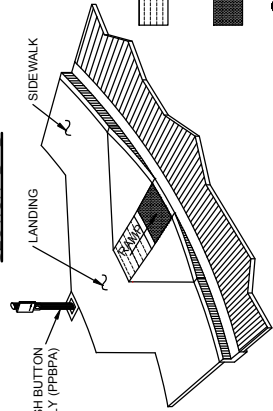
SEE NOTE 11



**SECTION B-B**

**SECTION A-A**

\* INCREASE TO 8" FOR BRICK PAVERS.




**ISOMETRIC VIEW**

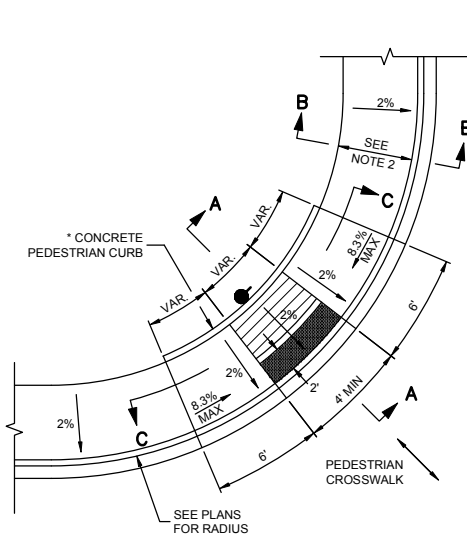
SHOWN WITH PEDESTRIAN PUSH BUTTON POST ASSEMBLY (PPBPA)

**RAMP PAY AREA**

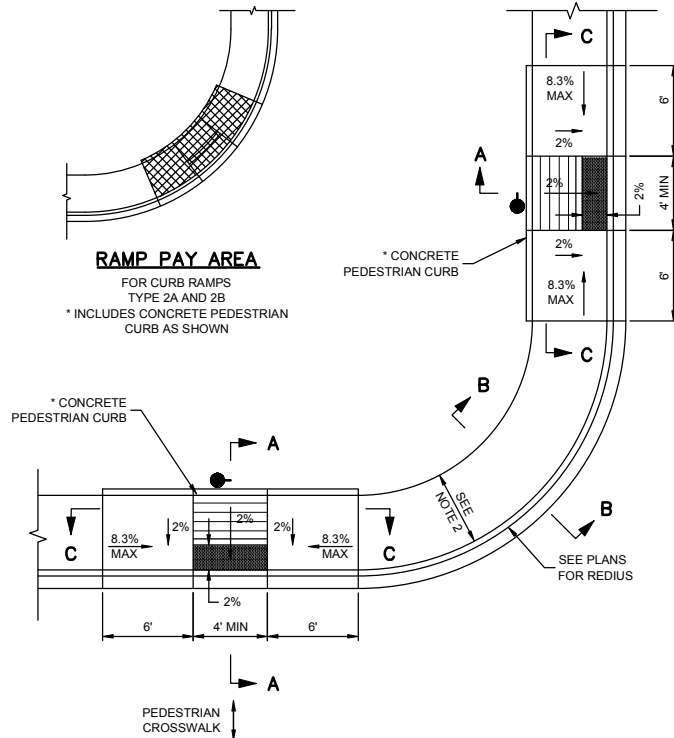
FOR CURB RAMPS TYPE 1A AND 1B

MFGS:  
EAST JORDAN IRON WORKS, INC. 1-800-874-4100  
NEENAH FOUNDRY CO. 1-800-694-4660

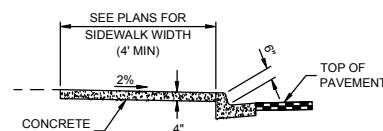
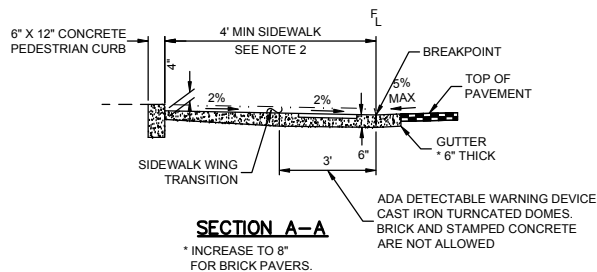
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Last Modification Date: 5/26/2016	Initials: C/C											
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Scale: \$SCALESHORT\$	Units: ENGLISH			DATE: 12-15-17								Sheet No. 1 of 4



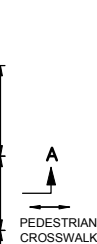
**CURB RAMP TYPE 2A**  
SEE NOTE 3



**CURB RAMP TYPE 2B**  
SEE NOTE 3

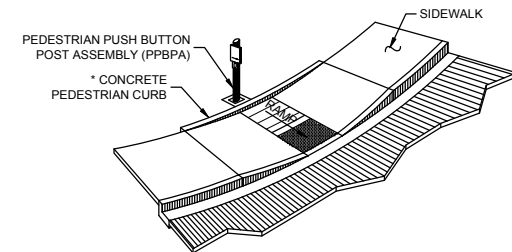


**SECTION B-B**

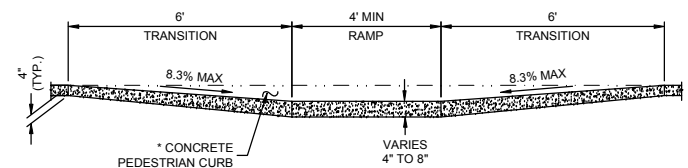


- GENERAL NOTES**
- CURB RAMP TYPE 2B MAY BE USED IN MID-BLOCK.
  - MINIMUM SIDEWALK WIDTH IS 4 FT.
  - CURB RAMP TYPE 2A DIAGONAL (ON THE APEX) IS UNACCEPTABLE IN NEW CONSTRUCTION. TYPICALLY, TWO CURB RAMPS AS IN TYPE 2B, MUST BE PROVIDED AT EACH STREET CORNER.  
ADA TITLE II 28 C.F.R. SECTION 35.151(B) STATES:  
ALTERATIONS HAVE TO BE MADE READILY ACCESSIBLE, WITHIN THE IMPACTING PROJECT, TO THE MAXIMUM EXTENT FEASIBLE (MEF).  
THEREFORE, A SINGLE, DIAGONAL CURB RAMP TYPE 2A WILL ONLY BE PERMITTED ON ALTERATION PROJECTS WITH MEF JUSTIFICATION DOCUMENTATION.

- RAMP SURFACE SHALL BE TEXTURED WITH A COARSE BROOMED FINISH AND SCORED WITH GROOVES (" BY ") SPACED 6" INCHES ON CENTER
- ADA DETECTABLE WARNING DEVICE  
CAST IRON TRUNCATED DOMES.  
BRICK AND STAMPED CONCRETE ARE NOT ALLOWED
- PEDESTRIAN PUSH BUTTON PUSH ASSEMBLY (PPBPA).  
SEE NOTE 8.  
SEE STANDARD PLAN S-614-9 FOR PPBPA DETAILS.  
THE SIGN FACE SHALL BE PARALLEL TO THE CROSSWALK.
- MFG'S:  
EAST JORDAN IRON WORKS, INC. 1-800-874-4100  
NEENAH FOUNDRY CO. 1-800-694-4660



**ISOMETRIC VIEW**  
SHOWN WITH PEDESTRIAN PUSH  
BUTTON POST ASSEMBLY (PPBPA)



**SECTION C-C**

**COMPUTER FILE INFORMATION**

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Last Modification Date: 5/26/2016 Initials: CJC  
Full Path: WWW.C3GOV.COM  
Drawing Name: \$FILESS  
Scale: \$SCALESHORT\$ Units: ENGLISH

**APPROVAL**

*[Signature]*  
CITY ENGINEER

12-15-17  
DATE



**CITY OF COMMERCE CITY**

Department of Public Works  
8602 Rosemary St.  
Commerce City, CO 80022  
Ph: 303-269-8150

**CURB RAMPS**

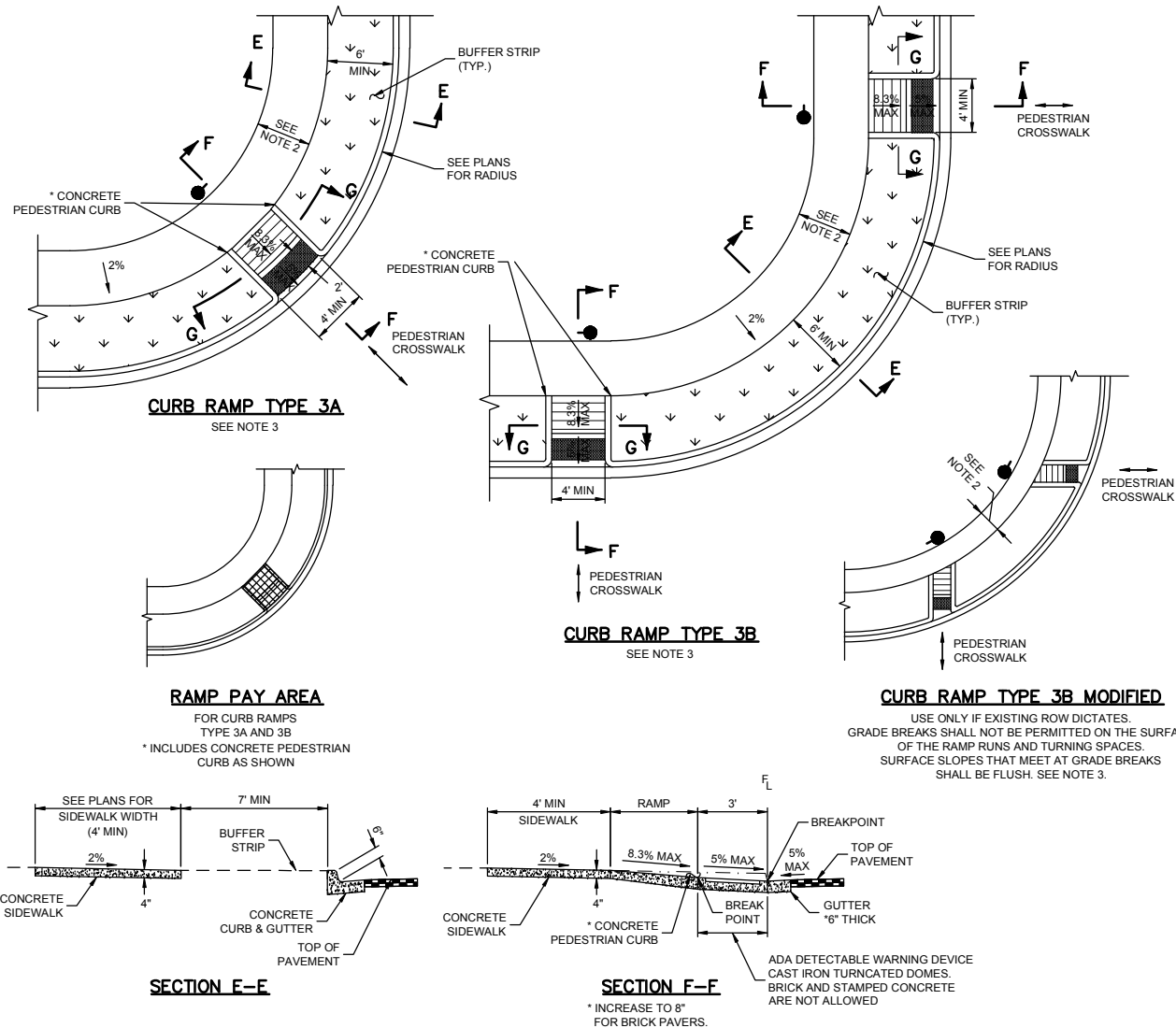
ENGINEERING CONSTRUCTION STANDARDS

**DETAIL NO.**

**308-03b**

Sheet No. 2 of 4

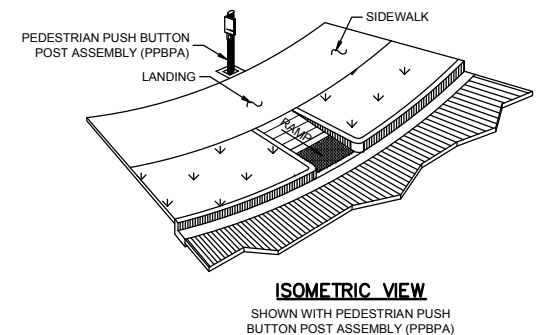
C:\Division Information\Engineering\Documents\Engineering and Construction\COMMERCE CITY\CAD Files\2016 Updated Files\308-03\_Curb Ramps.dwg



### GENERAL NOTES

- CURB RAMP TYPE 3B MAY BE USED IN MID-BLOCK.
- MINIMUM SIDEWALK WIDTH IS 4 FT.
- CURB RAMP TYPE 3A DIAGONAL (ON THE APEX) IS UNACCEPTABLE IN NEW CONSTRUCTION. TYPICALLY, TWO CURB RAMP AS IN TYPE 3B, MUST BE PROVIDED AT EACH STREET CORNER.  
ADA TITLE II 28 C.F.R. SECTION 35.151(B) STATES:  
ALTERATIONS HAVE TO BE MADE READILY ACCESSIBLE, WITHIN THE IMPACTING PROJECT, TO THE MAXIMUM EXTENT FEASIBLE (MEF).  
THEREFORE, A SINGLE, DIAGONAL CURB RAMP TYPE 3A WILL ONLY BE PERMITTED ON ALTERATION PROJECTS WITH MEF JUSTIFICATION DOCUMENTATION.

- RAMP SURFACE SHALL BE TEXTURED WITH A COARSE BROOMED FINISH AND SCORED WITH GROOVES (1/2" BY 1/2") SPACED 6" INCHES ON CENTER
- ADA DETECTABLE WARNING DEVICE  
CAST IRON TRUNCATED DOMES.  
BRICK AND STAMPED CONCRETE ARE NOT ALLOWED
- PEDESTRIAN PUSH BUTTON PUSH ASSEMBLY (PPBPA).  
SEE NOTE 8.  
SEE STANDARD PLAN S-614-9 FOR PPBPA DETAILS.  
SEE PLANS FOR LOCATIONS  
THE SIGN FACE SHALL BE PARALLEL TO THE CROSSWALK.
- MFG'S:  
EAST JORDAN IRON WORKS, INC. 1-800-874-4100  
NEENAH FOUNDRY CO. 1-800-694-4660



COMPUTER FILE INFORMATION	
Creation Date: 03/10/2016	Initials: CJC
Last Modification Date: 5/26/2016	Initials: CJC
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Scale: \$SCALESHORT\$	Units: ENGLISH

APPROVAL	
	12-15-17
CITY ENGINEER	DATE



**CITY OF COMMERCE CITY**  
Department of Public Works  
8602 Rosemary St.  
Commerce City, CO 80022  
Ph: 303-289-8150

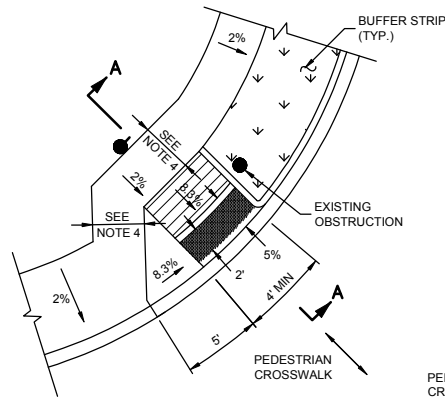
## CURB RAMPS

ENGINEERING CONSTRUCTION STANDARDS

DETAIL NO.  
**308-03c**

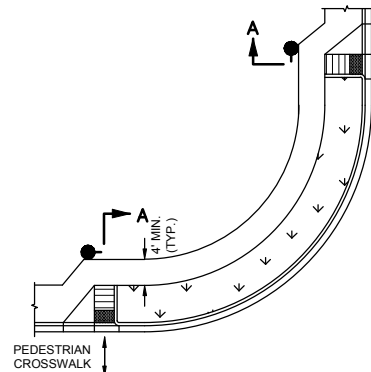
Sheet No. 3 of 4

C:\Division Information\Engineering\Documents\Engineering and Construction\COMMERCE CITY\CAD Files\2016 Update\Files\03-03 Curb Ramps.dwg



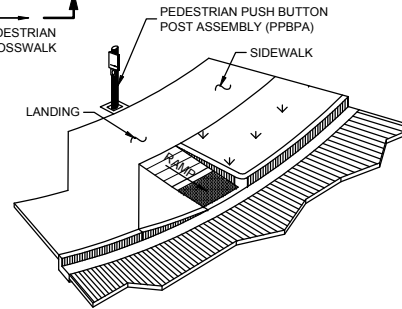
**CURB RAMP TYPE 4A**

SEE NOTE 2



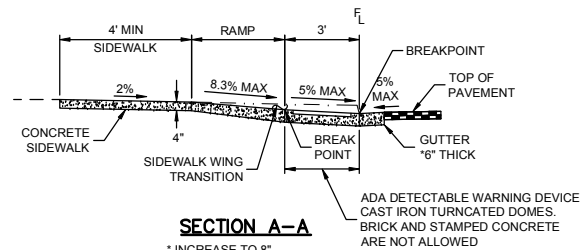
**CURB RAMP TYPE 4B**

SEE NOTE 2



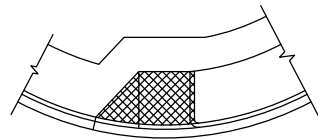
**ISOMETRIC VIEW**

SHOWN WITH PEDESTRIAN PUSH  
BUTTON POST ASSEMBLY (PPBPA)



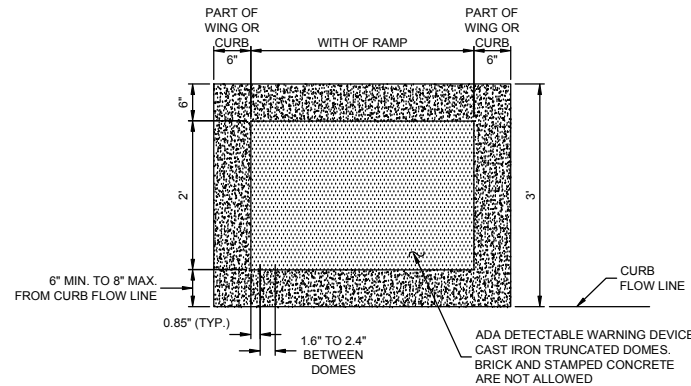
**SECTION A-A**

\* INCREASE TO 8"  
FOR BRICK PAVERS.



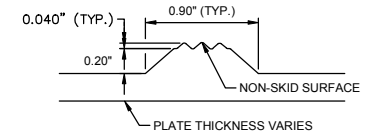
**RAMP PAY AREA**

FOR CURB RAMPS  
TYPE 4A AND 4B



**PLAN VIEW OF  
DETECTABLE WARNING PLATE**

FOR CURB RAMPS



**ELEVATION VIEW OF  
DETECTABLE WARNING PLATE**

FOR CURB RAMPS

**GENERAL NOTES**

1. MINIMUM SIDEWALK WIDTH IS 4 FT.
2. CURB RAMP TYPE 4A DIAGONAL (ON THE APEX) IS UNACCEPTABLE IN NEW CONSTRUCTION. TYPICALLY, TWO CURB RAMPS AS IN TYPE 4B, MUST BE PROVIDED AT EACH STREET CORNER.  
ADA TITLE II 28 C.F.R. SECTION 35.151(B) STATES:  
ALTERATIONS HAVE TO BE MADE READILY ACCESSIBLE, WITHIN THE IMPACTING PROJECT, TO THE MAXIMUM EXTENT FEASIBLE (MEF).  
THEREFORE, A SINGLE, DIAGONAL CURB RAMP TYPE 4A WILL ONLY BE PERMITTED ON ALTERATION PROJECTS WITH MEF JUSTIFICATION DOCUMENTATION.
3. WING SURFACES SHALL BE TEXTURED WITH A COARSE BROOMED SURFACE ONLY.

RAMP SURFACE SHALL BE TEXTURED WITH  
A COARSE BROOMED FINISH AND SCORED  
WITH GROOVES (" BY ")  
SPACED 6" INCHES ON CENTER

ADA DETECTABLE WARNING DEVICE  
CAST IRON TRUNCATED DOMES.  
BRICK AND STAMPED CONCRETE ARE NOT ALLOWED

PEDESTRIAN PUSH BUTTON PUSH ASSEMBLY (PPBPA).  
SEE NOTE 8.  
SEE STANDARD PLAN S-614-9 FOR PPBPA DETAILS.  
SEE PLANS FOR LOCATIONS  
THE SIGN FACE SHALL BE PARALLEL TO THE CROSSWALK.

MFG'S:  
EAST JORDAN IRON WORKS, INC. 1-800-874-4100  
NEENAH FOUNDRY CO. 1-800-694-4660

**COMPUTER FILE INFORMATION**

Creation Date: 03/10/2016 Initials: CJC  
Last Modification Date: 5/26/2016 Initials: CJC  
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Drawing Name: \$FILESS\$  
Scale: \$SCALESHORT\$ Units: ENGLISH

**APPROVAL**

*Andrew P. Lee*  
CITY ENGINEER

12-15-17  
DATE



**CITY OF COMMERCE CITY**

Department of Public Works  
8602 Rosemary St.  
Commerce City, CO 80022  
Ph: 303-289-8150

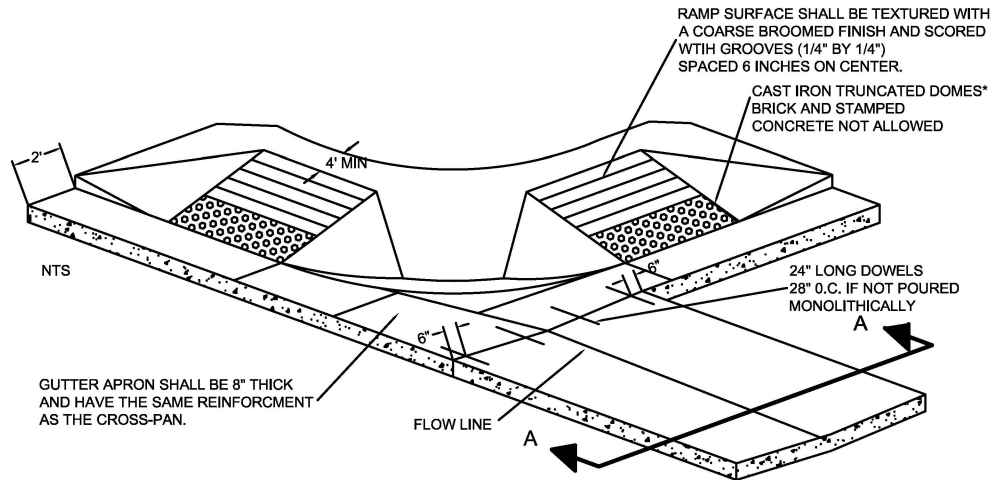
**CURB RAMPS**

ENGINEERING CONSTRUCTION STANDARDS

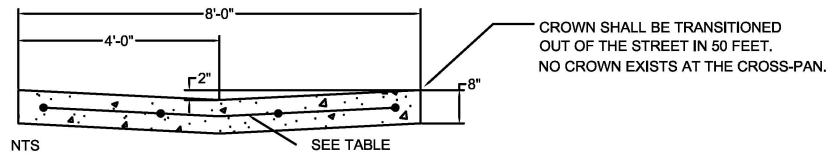
**DETAIL NO.**

**308-03d**

Sheet No. 4 of 4



\*MFG'S: EAST JORDAN IRON WORKS, INC. - 1-800-874-4100  
NEENAH FOUNDRY CO. - 1-800-694-4660



SECTION A-A

NOTE:  
THIS DETAIL IS GENERALIZED. ANY PARTICULAR  
INSTALLATION MAY INCLUDE ALL OR PART OF THE  
DETAIL ELEMENTS AS PART OF THE  
CONSTRUCTION. ANY GIVEN INSTALLATION MAY  
INCLUDE REQUIREMENTS OF OTHER DETAILS.  
EXISTING CONDITIONS AND CONFIGURATIONS OF  
LOCATION WILL AFFECT ACTUAL CONSTRUCTION  
OF RAMPS.

PAN LENGTH	WIRE MESH CALLED FOR	REPLACE WITH REBAR HAVING END AREA OF
36"	6x6 - 4,4	0.10 SQ IN PER FT
46"	6x6 - 2,2	0.13 SQ IN PER FT
64"	6x6 - 0,0	0.20 SQ IN PER FT
84"	Two 6x6 - 2,2	0.26 SQ IN PER FT

NOTE:  
SQUARE RETURNS AND PANS SHALL USE WIRE MESH AS  
SHOWN IN THE TABLE ABOVE. WHEN WIRE MESH IS NOT  
AVAILABLE, STEEL REINFORCING BAR MAY BE SUBSTITUTED.

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ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:  
 12-15-17  
CITY ENGINEER DATE

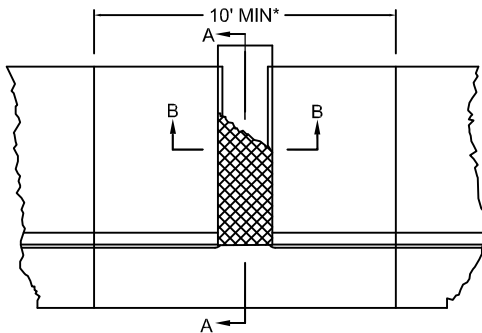
CURB RAMP WITH CROSSPAN

DETAIL NO.  
308-04



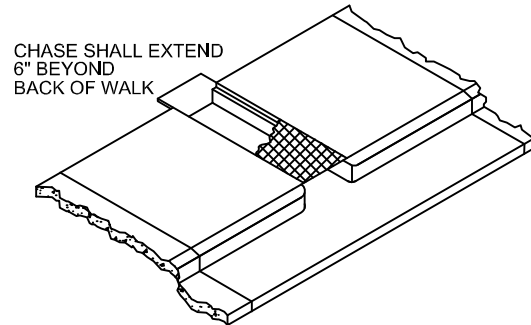


### ATTACHED SIDEWALK



PLAN VIEW

\*A MINIMUM OF 10 FEET OF NEW CONCRETE IS REQUIRED.

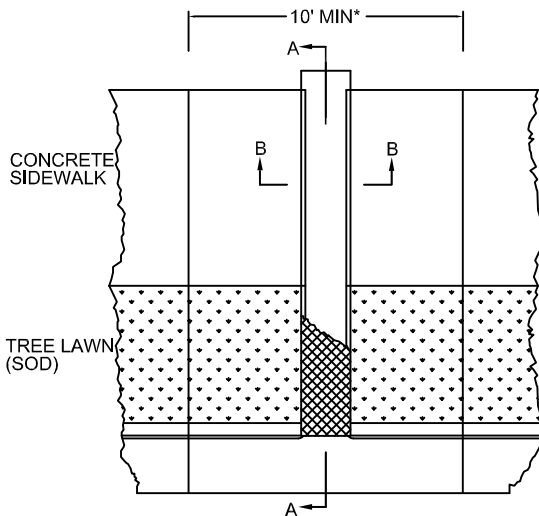


ISOMETRIC VIEW

NOTE: 1/2" EXPANSION JOINT MATERIAL REQUIRED ABUTTING EXISTING CONCRETE.

SECTION VIEWS ARE SHOWN  
ON DETAIL 300-19 (2)

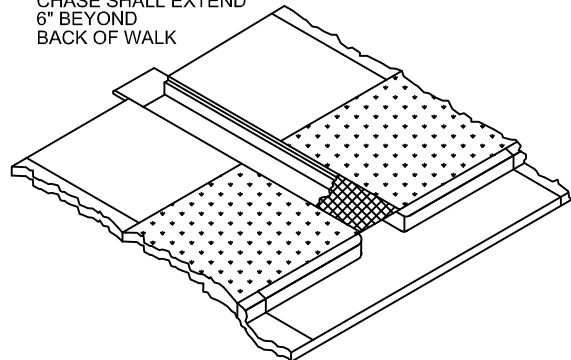
### DETACHED SIDEWALK



PLAN VIEW

\*A MINIMUM OF 10 FEET OF NEW CONCRETE IS REQUIRED.  
A CONCRETE CHANNEL IS REQUIRED TO BE EXTENDED THROUGH THE TREE LAWN TO THE FLOWLINE OF THE GUTTER.

CHASE SHALL EXTEND  
6" BEYOND  
BACK OF WALK



ISOMETRIC VIEW

NOTE: 1/2" EXPANSION JOINT MATERIAL REQUIRED ABUTTING EXISTING CONCRETE.

COMMERCE CITY  
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ENGINEERING CONSTRUCTION STANDARDS

CHASE DRAIN  
(1 OF 2)

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*Maria A. [Signature]*

CITY ENGINEER

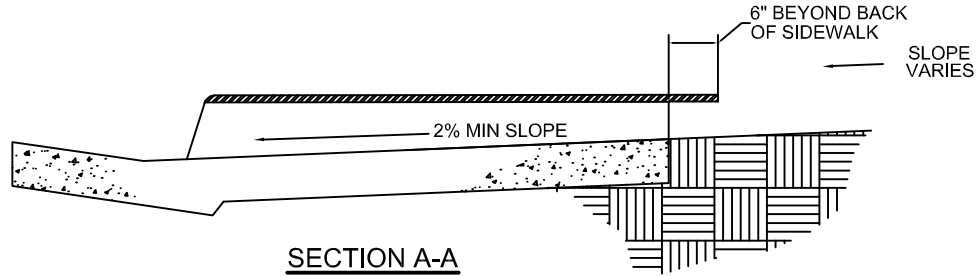
05-27-16

DATE

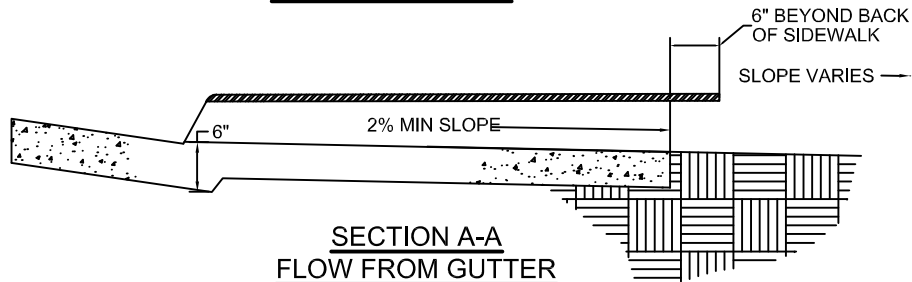
DETAIL NO.

308-05



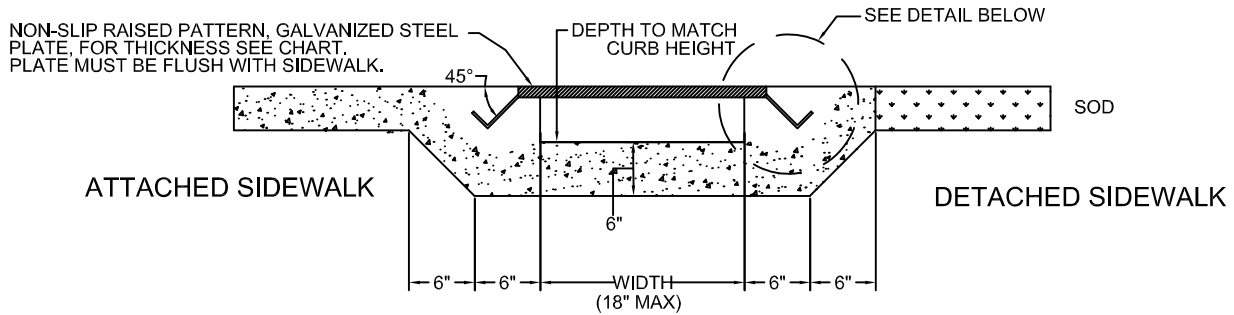


**SECTION A-A  
FLOW TO GUTTER**



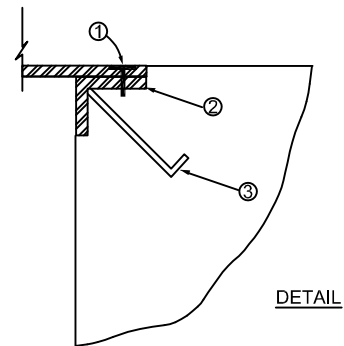
**SECTION A-A  
FLOW FROM GUTTER**

**SECTION B-B**



WIDTH OF OPENING	THICKNESS OF PLATE
6-12"	1/2"
12-18"	9/16"

- NOTES:**
1. 3/8" GALV. BOLT. LUBRICATE BOLT PRIOR TO SETTING PLATE.
  2. 2"x 1"x1/4" ANGLE IRON.
  3. 1/4" DIA x 3" STUDS AT 1'-0" O.C.



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CITY ENGINEER

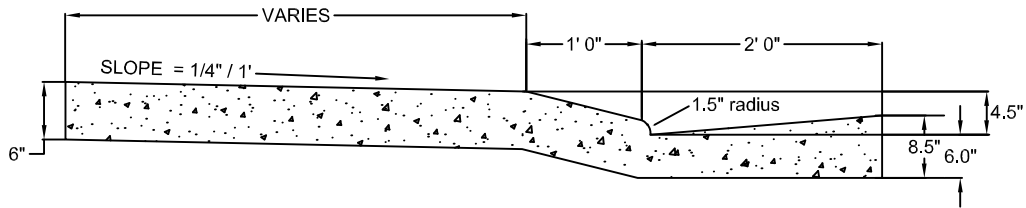
05-27-16

DATE

CHASE DRAIN  
(2 OF 2)

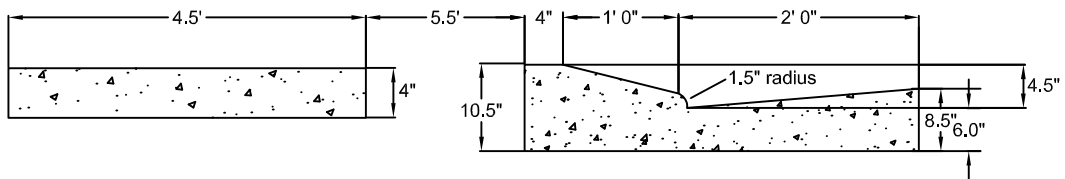
DETAIL NO.  
308-05





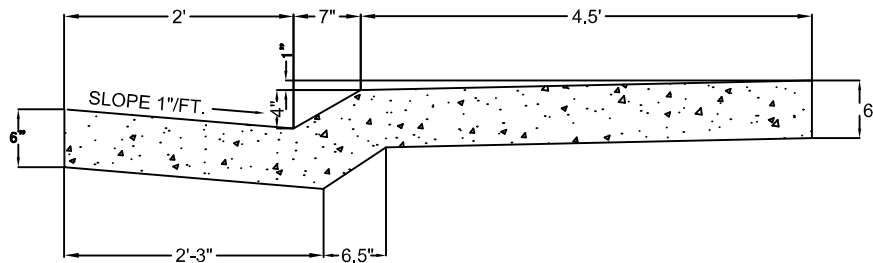
COMBINATION CURB, GUTTER AND SIDEWALK

NOT TO SCALE



DETACHED CURB, GUTTER AND SIDEWALK

NOT TO SCALE



COMBINATION CURB, GUTTER AND SIDEWALK

NOT TO SCALE

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ENGINEERING CONSTRUCTION STANDARDS

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CITY ENGINEER

05-27-16

DATE

MOUNTABLE CURB SECTIONS

DETAIL NO.

308-06




DRAWING NOT TO SCALE



1. GUTTER CROSS SLOPES SHALL BE 1/2" / FT WHEN DRAINING AWAY FROM CURB AND 1" / FT WHEN DRAINING TOWARD CURB

3. 3/4" Ø x 12" DEFORMED REINFORCING BARS AT 6 FT. SPACING.  
BARS TO BE GROUTED IN 1-1/2" Ø HOLES IN EXISTING CONCRETE.  
GROUT TO CONSIST OF 2 PARTS CLEAN SAND AND 1 PART CEMENT.

COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

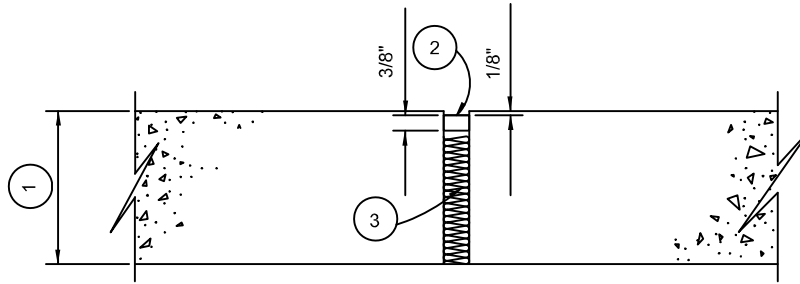
 05-27-16  
CITY ENGINEER DATE

## VERTICAL CURB SECTIONS



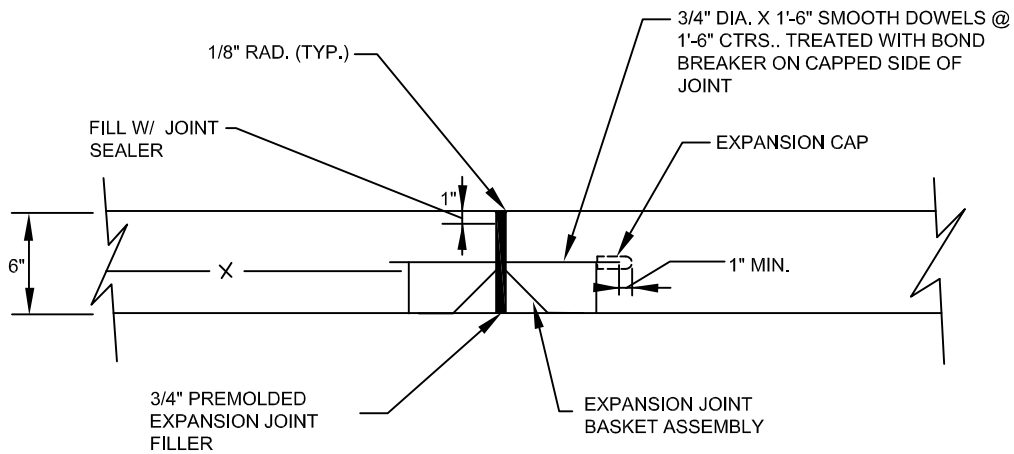
## EXPANSION JOINT

N.T.S.



**NOTES:**

1. (T) THICKNESS OF PAVEMENT, SEE TYPICAL PAVEMENT SECTION.
2. POURED JOINT MATERIAL.
3. 1/2" PREFORMED JOINT MATERIAL. INSTALL EXPANSION JOINT MATERIAL BETWEEN NEW SIDEWALK AND EXISTING CONCRETE SLABS, POLES, FIRE HYDRANTS, BUILDINGS, ETC. SET EXPANSION JOINT MATERIAL VERTICAL AND WITH THE TOP EDGE BELOW FINISHED SURFACE OF CONCRETE. PROVIDE EXPANSION JOINTS EVERY 100' TO 120'.



## SECTION

**NOTE:**

THIS DETAIL DOES NOT APPLY TO EXPANSION JOINT WHERE PAVEMENT ABUTS A STRUCTURE. USE ONLY JOINT FILLER AGAINST STRUCTURE.

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CITY ENGINEER

DATE

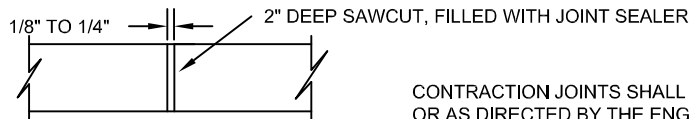
EXPANSION JOINT DETAILS

DETAIL NO.  
**308-08**



## CONTRACTION JOINT

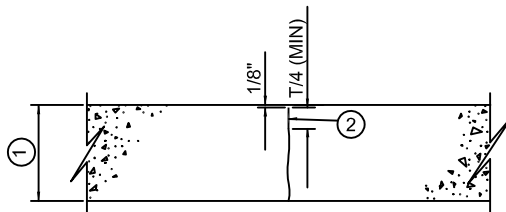
N.T.S.



CONTRACTION JOINTS SHALL BE PLACED EVERY 10 FEET OR AS DIRECTED BY THE ENGINEER.

## ALTERNATE TRANSVERSE CONTRACTION JOINT

N.T.S.

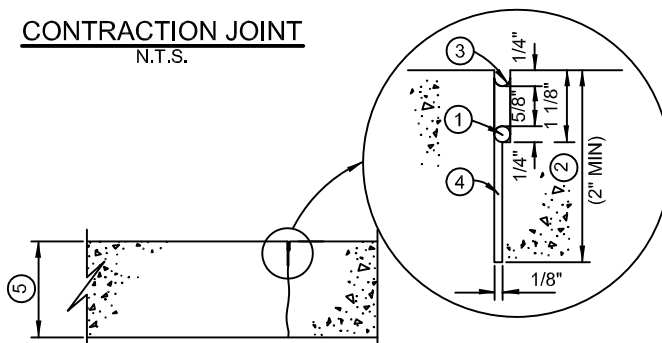


### NOTES:

1. (T) THICKNESS OF PAVEMENT, SEE TYPICAL PAVEMENT SECTION.
2. 20 MILL POLYURETHANE PLASTIC PARTING STRIP. SPLICE WITH ENDS BUTTED.

## CONTRACTION JOINT

N.T.S.



### NOTES:

1. BACKER ROD OF OPEN OR CLOSED CELL POLYURETHANE STRAND AS APPROVED.
2. T/4+1/2" LONGITUDINAL, T/4 TRANSVERSE.  
MAY BE 1/4" SAWCUT FOR ITS FULL DEPTH WITH JOINT MATERIAL AND BACKER ROD AT SAME DEPTH.
3. POURED JOINT MATERIAL.
4. AIR
5. (T) THICKNESS OF PAVEMENT, SEE TYPICAL PAVEMENT SECTION.

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ENGINEERING CONSTRUCTION STANDARDS

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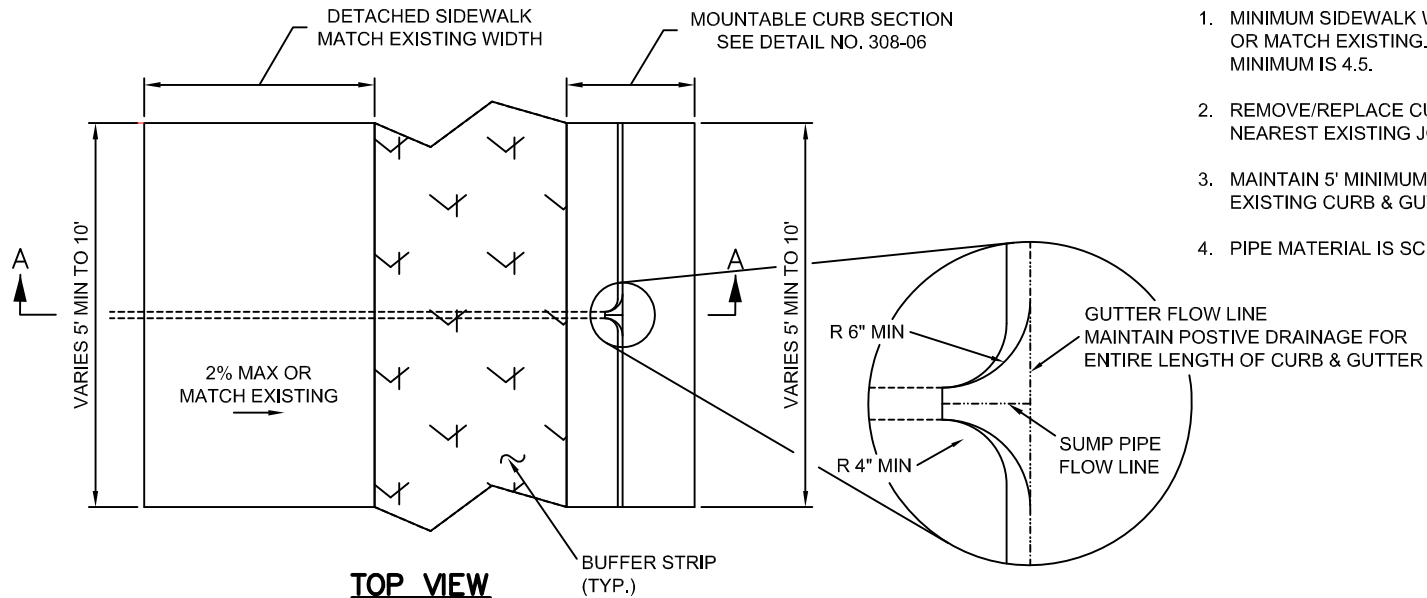
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CONTRACTION JOINT DETAILS

DETAIL NO.  
308-09

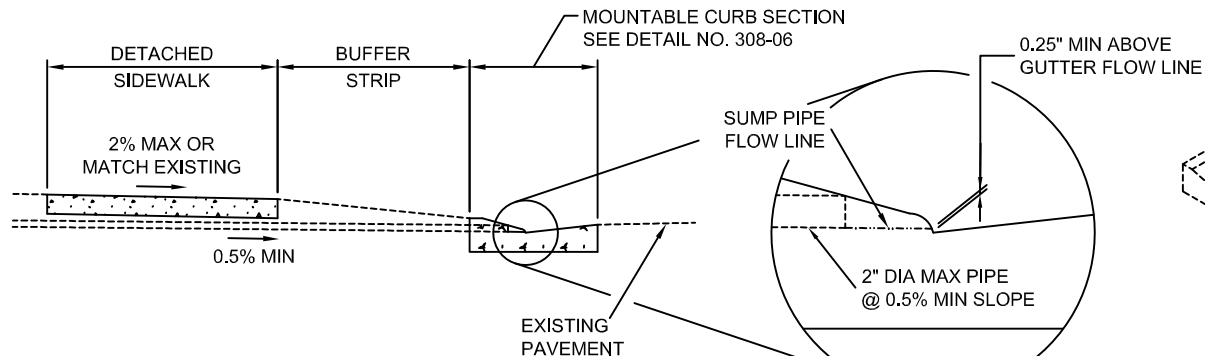


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### TOP VIEW

SHOWN WITH DETACHED SIDEWALK

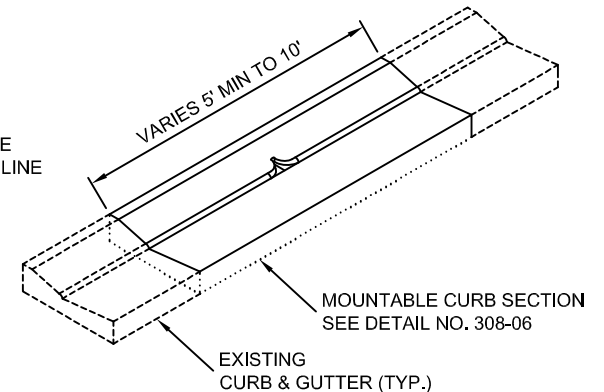


### SECTION A-A

SHOWN WITH DETACHED SIDEWALK

### GENERAL NOTES

1. MINIMUM SIDEWALK WIDTH IS 4.5 FT FOR DETACHED SIDEWALK, OR MATCH EXISTING. CORE CITY IS 3' AND 4' - NORTHERN RANGE MINIMUM IS 4.5.
2. REMOVE/REPLACE CURB AND GUTTER AND/OR SIDEWALK TO NEAREST EXISTING JOINT LINE.
3. MAINTAIN 5' MINIMUM OVERALL LENGTH WHEN REPLACING EXISTING CURB & GUTTER AND/OR SIDEWALK.
4. PIPE MATERIAL IS SCH 40 PVC.



### ISOMETRIC VIEW

SHOWN WITH MOUNTABLE CURB

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DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

*Maria R. Flaherty*

CITY ENGINEER

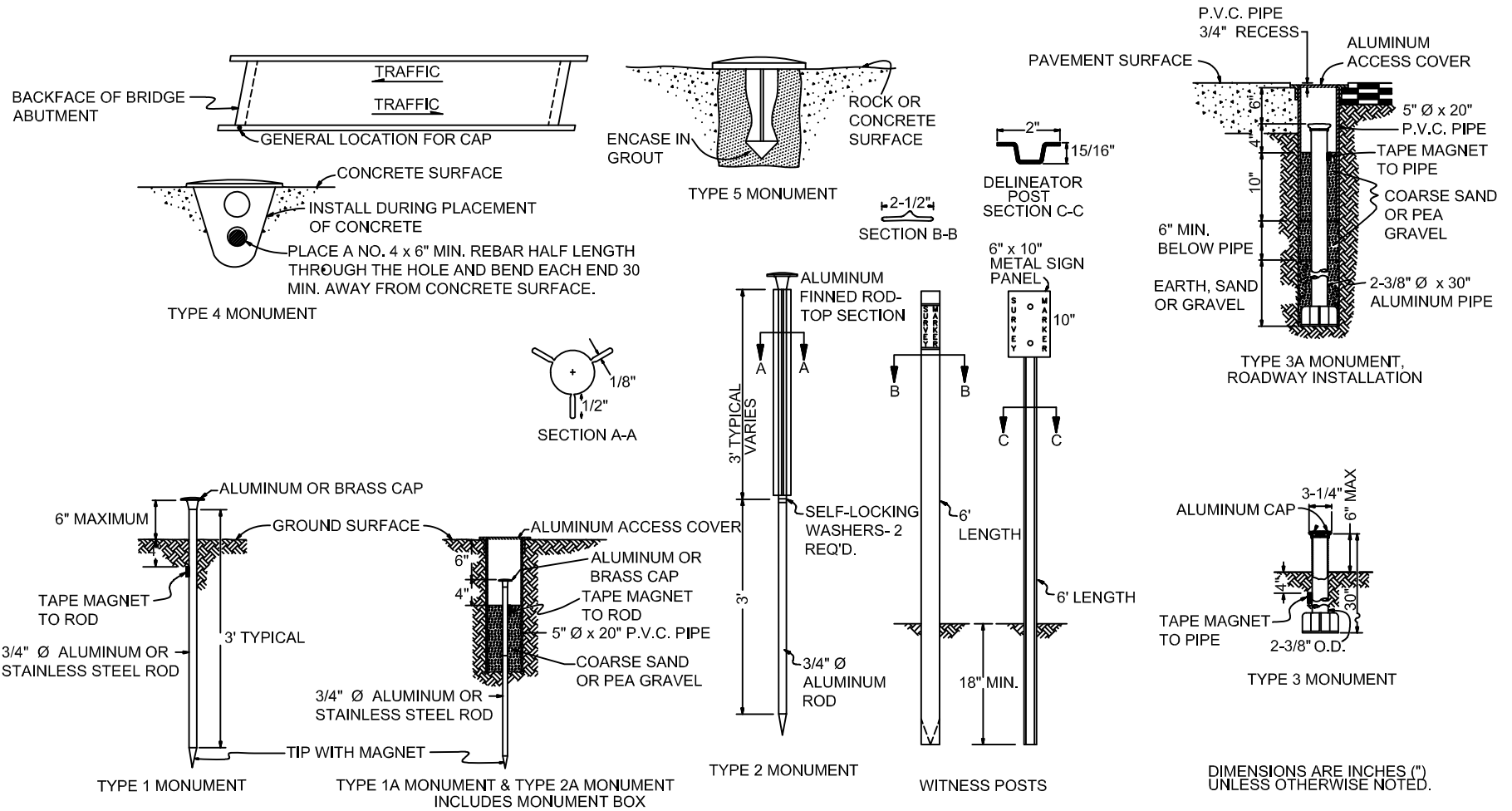
05-27-16

DATE

CURB DETAIL WITH SUMP PIPE

DETAIL NO.  
308-10





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 DEPARTMENT OF PUBLIC WORKS  
 ENGINEERING CONSTRUCTION STANDARDS

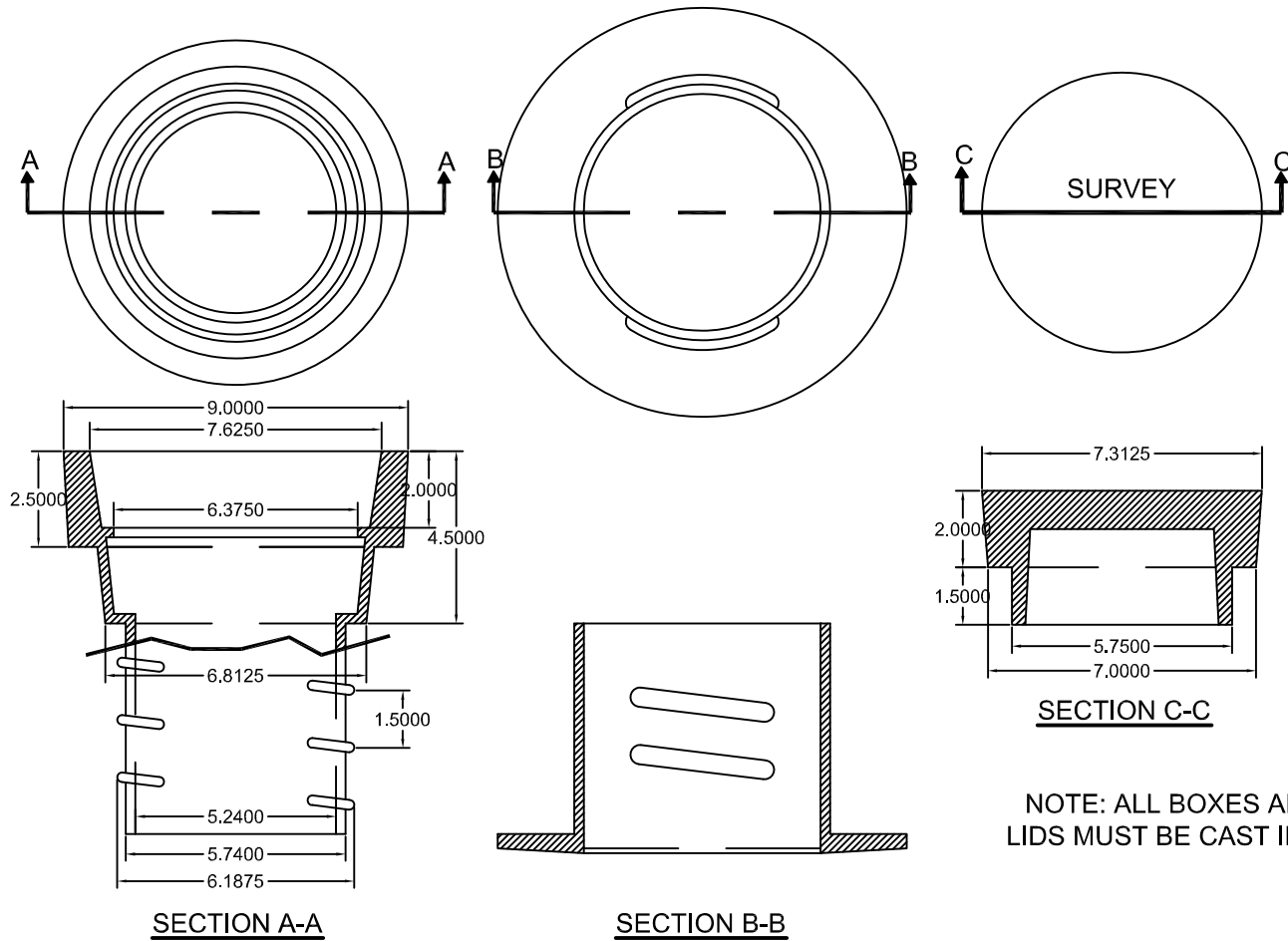
APPROVAL:  
*Maria R. Flanagan*  
 CITY ENGINEER  
 05-27-16  
 DATE

SURVEY MONUMENTS

DETAIL NO.  
 311-01







COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

SCREW TYPE ADJUSTABLE  
MONUMENT BOX

APPROVAL:

*Marie A. Flaherty*

05-27-16

CITY ENGINEER

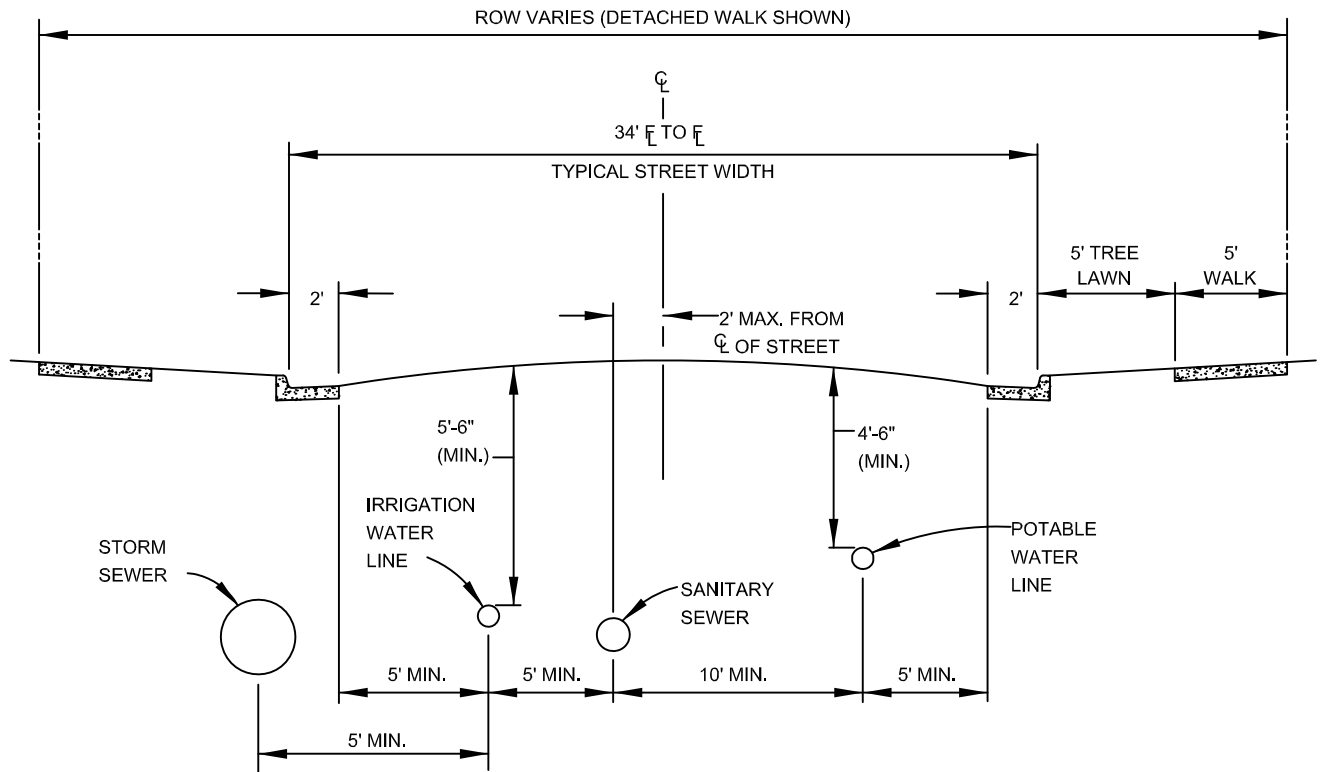
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DETAIL NO.

311-02



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COMMERCE CITY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

*Maria Q. Flores*

05-27-16

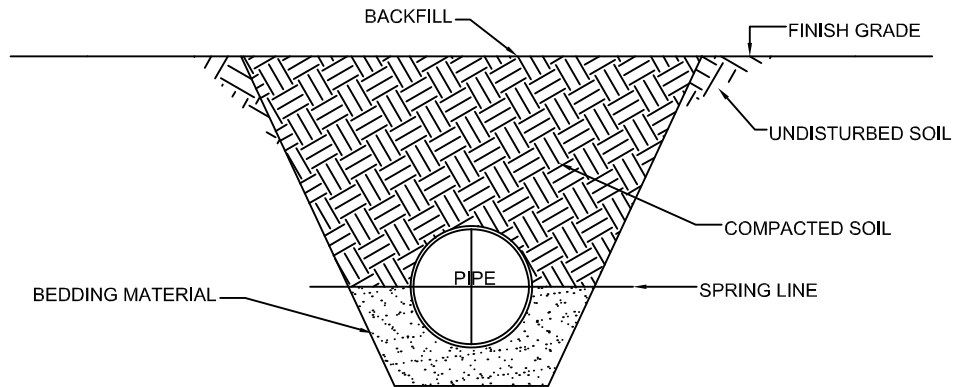
CITY ENGINEER

DATE

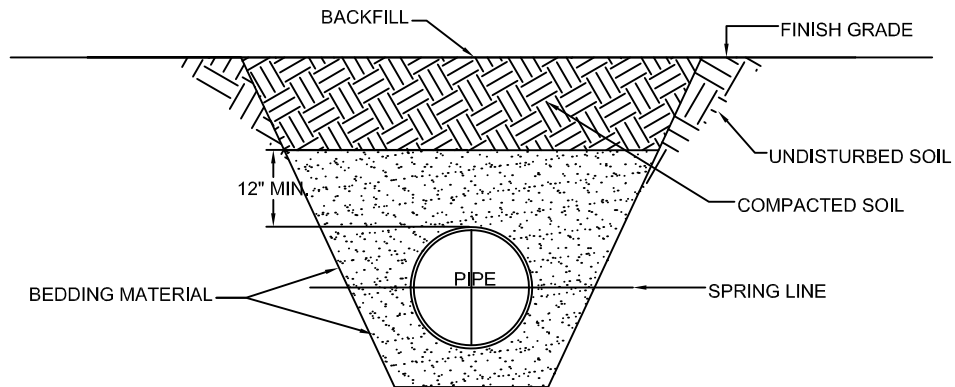
TYPICAL UTILITY LOCATIONS

DETAIL NO.  
312-01





REINFORCED CONCRETE PIPE



P.V.C PIPE & DUCTILE IRON PIPE

NOTE:

FOR SOILS WITH 50% OR MORE BY WEIGHT RETAINED ON THE #40 SIEVE  
 BEDDING SHALL BE CDOT CLASS A FILTER MATERIAL (ASTM C-33 NO. 67 AGGREGATE  
 GRADATION) OR EQUIVALENT  
 FOR SOILS WITH LESS THAN 50% BY WEIGHT RETAINED ON THE #40 SIEVE  
 BEDDING SHALL BE CDOT CONCRETE SAND, AASHTO M6 BEDDING, OR EQUIVALENT

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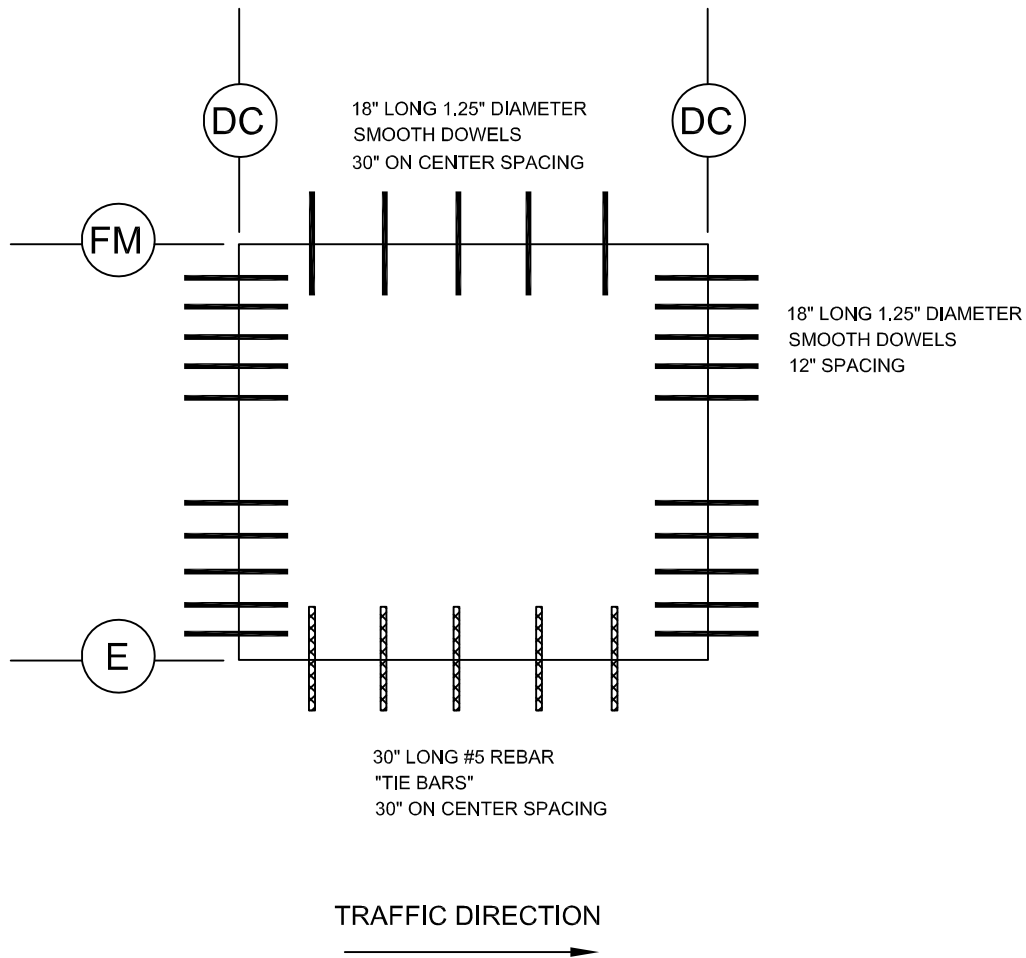
DATE

PIPE STABILIZATION

DETAIL NO.  
 312-02



- (FM) DOWELED LONGITUDINAL CONSTRUCTION JOINT
- (DC) DOWELED TRANSVERSE CONTRACTION JOINT  
CDOT DETAIL M-412-1
- (E) LONGITUDINAL CONTRACTION OR CONSTRUCTION JOINT  
CDOT DETAIL M-412-1



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DEPARTMENT OF PUBLIC WORKS  
ENGINEERING CONSTRUCTION STANDARDS

APPROVAL:

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CITY ENGINEER

05-27-16

DATE

CONCRETE PANEL  
REPLACEMENT

DETAIL NO.  
399-01



## **4.00 PAVEMENT DESIGN**

---

- 4.01        GENERAL
- 4.02        MIX DESIGN CRITERIA FOR FLEXIBLE PAVEMENTS
- 4.03        PAVEMENT DESIGN REPORT
  - 4.03.1        SUBGRADE INVESTIGATION
  - 4.03.2        PAVEMENT DESIGN REPORT REQUIREMENTS
  - 4.03.3        FLEXIBLE PAVEMENT DESIGN PROCEDURE
  - 4.03.4        EQUIVALENT DAILY LOAD APPLICATION
  - 4.03.5        FLEXIBLE PAVEMENT STRENGTH COEFFICIENTS
  - 4.03.6        MINIMUM PAVEMENT SECTIONS
- 4.04        MATERIALS SPECIFICATIONS
  - 4.04.1        BASE COURSE
  - 4.04.2        HOT BITUMINOUS PAVEMENT
  - 4.04.3        CONCRETE PAVEMENT
  - 4.04.4        TESTING
- 4.05        INITIAL STREET ACCEPTANCE
- 4.06        FINAL STREET ACCEPTANCE

#### 4.00 PAVEMENT DESIGN

##### 4.01 GENERAL

This Section contains minimum criteria to be met on all newly designed and constructed, resurfaced, or widened public and private (open to the general public) streets and parking lots in the City.

##### 4.02 MIX DESIGN CRITERIA FOR FLEXIBLE PAVEMENTS

All designs are to be based upon Colorado Department of Transportation, AASHTO, and Superpave methodology. The Contractor shall submit a proposed design job mix for each mixture required. The design shall be determined using Colorado Procedure CP-L 5115 for the Superpave Method of Mixture Design. Additional guidance is provided in Superpave Level 1 Mix Design SP-2 published by the Asphalt Institute. Some standardization of criteria has been made in the design procedures for Commerce City.

##### 4.03 PAVEMENT DESIGN REPORT

Flexible pavement design shall be based on a soils report signed and stamped by a Professional Engineer who is licensed in Colorado.

##### 4.03.1 SUBGRADE INVESTIGATION

###### A. Field Investigation

The geotechnical investigation shall consist of borings or other suitable methods of sampling subgrade soils to a depth of at least five (5) feet below proposed subgrade elevation, at spacings of no more than two hundred fifty (250) feet unless otherwise accepted by the City Engineer. Samples shall be taken after grading is completed and subgrade is rough cut.

###### B. Classification Testing

Subgrade samples shall be tested to determine liquid limit, plastic limit, plasticity index, and the percentage passing the US Standard No. 200 sieve. Samples of sands and gravels may require gradation analysis for classification determination. These data shall be determined using the following methods:

1. Liquid Limit - AASHTO T 89
2. Plastic Limit - AASHTO T 90
3. Percent Passing No. 200 - AASHTO T II

4. Gradation - AASHTO T 27
5. Swell/Consolidation Testing (Denver Swell Method) where appropriate, under a 200 psf surcharge

The results of these tests shall be used to calculate the AASHTO Classification and Group Index using AASHTO M 145.

#### C. Subgrade Support Testing

Soil samples shall be taken at the proposed subgrade elevation and shall represent the soil of the subgrade. Individual subgrade samples shall be tested to determine the subgrade support value (R-value) using Hveem Stabilometer testing. These values shall be used in the design of pavement sections in accordance with the procedures outlined below.

R-value Tests - Hveem Stabilometer tests shall be conducted in accordance with AASHTO T 190. The design R-value shall be a three hundred (300) psi exudation pressure. The reported data shall consist of:

1. Dry density and moisture content for each sample.
2. Expansion pressure for each sample.
3. Exudation Pressure - corrected R-value curve showing the 300 psi design R-value.

Resilient Modulus of subgrade soils should be determined by either direct measurement or by representative correlation to the R-value. Typically, the results of the R-value are correlated to a Resilient Modulus value. However, due to the variability in these correlations, subjecting representative samples of the subgrade to the actual Resilient Modulus testing is the most accurate way to determine soil support characteristics for use in pavement design. Therefore, the use of Resilient Modulus testing is both highly encouraged and preferred.

#### 4.03.2 PAVEMENT DESIGN REPORT REQUIREMENTS

- A. Sketch Plan with location and depth of test holes (minimum depth is 60 inches);
- B. Ground water elevations, if encountered;
- C. Grading analysis curves;
- D. Atterberg limits;
- E. AASHTO soil classification;
- F. Moisture-density curves (Proctor values);
- G. Depth of bore holes or test pits;
- H. Approximate location or limits of different soil types on the sketch plan;

- I. Pavement design recommendations with all supporting data and calculations.

In addition, the Geotechnical Engineer shall investigate and recommend solutions to the following problems, if encountered during the investigation:

1. Expansive clay soils including recommendations for any overexcavation and moisture-density replacement where deemed appropriate;
2. Frost heave in silty soils;
3. Potential ground water problems or instability;
4. Any other matters which may adversely affect the design life of the pavement.



**TABLE 4-1--PAVEMENT DESIGN REPORT CHECK LIST**

Subdivision				Date
Filing				Submittal Number
Consultant		Acceptable?		Reviewed By
		Yes	No	Comments
A.	PLAN SHEET FORMAT			
1	Vicinity Map			
2	Drawing(s) Showing:			
3	Location of Borings			
4	Depth of Borings			
5	Soil Type Locations and Limits			
6	EDLA Locations and Limits			
7	Potential Problem Locations			
B	PAVEMENT DESIGN REQUIREMENTS			
1	Atterberg Limits			
2	Percent Passing 200 Sieve			
3	Correct Soil Classifications			
4	Resilient Modulus Determination			
5	Swell/Consolidation Test (Denver Swell) Performed Under a 200 psf Surcharge			
6	Correct EDLA			
7	Design Calculations for Each Pavement Section			
8	Correct Design Coefficients			
9	Minimum Pavement Sections for Street Classifications			
10	Special Problems Addressed:			
11	Expansion			
12	Frost Heave			
13	Groundwater			
14	If Swell Test is greater than 2%, Are the Proposed Mitigation Measures Acceptable?			
C	CONSULTANT SIGN-OFF "I have reviewed the attached report with this checklist and all the required items have been included except as noted above."			<hr/> Professional Engineer

#### 4.03.3 FLEXIBLE PAVEMENT DESIGN PROCEDURE

Determine the Structural Number (SN) using the following procedure:

- A. Determine the roadway classification and the corresponding EDLA (Table 4-2)
- B. Determine the Serviceability Index (SI) of the roadway classification (Table 4-3)
- C. Determine the Reliability Index (RI) of the roadway classification (Table 4-3)
- D. For the case where the variance of projected future traffic is not considered, use the AASHTO Design Guide recommended value of 0.44. In situations where the variance of projected future traffic is considered, use 0.49.
- E. Use the AASHTO Design Equations to determine the SN, using the subgrade Resilient Modulus values from the laboratory test results. Indicate method or correlation used to determine Resilient Modulus ( $M_r$ ) value(s).
- F. Determine minimum pavement section using the strength coefficients from Table 4-4.
  - a. Total thickness selected cannot be less than the minimum specified in Table 4-5 for the roadway classification.
  - b. All pavement section calculations shall be rounded up to the nearest 0.5-inch increment.

#### 4.03.4 EQUIVALENT DAILY LOAD APPLICATION (EDLA)

The design traffic number (DTN) is defined as the equivalent daily load application (DTN = EDLA) for the design lane during a design period. The design period is a minimum of 20 years. A load application is a single axle load of 18,000 pounds. Minimum EDLA's are listed in Table 4-2. All subdivision, zoning, and other site developments shall provide a Traffic Impact Study using the ITE Information Manual and Report to determine the projected traffic volumes and truck traffic for the proposed streets within or adjacent to the proposed development.

When possible, the traffic impact study should identify the number of "Truck" types per day utilizing a listing similar to that as presented in the Metropolitan Government Pavement Engineers Council Design Standards(MGPEC).

**TABLE 4-2--MINIMUM EQUIVALENT DAILY LOAD APPLICATION**

<b>(EDLA VALUES)</b>				
<b>(18 KIP)</b>				
	Residential	Multi-Family Residential	Commercial & Business	Industrial
<u>Local Streets &amp; Alleys</u>				
(Cul-de-sacs)				
10 or less D.U.*	5	5		
11 to 80 D.U.*	10	10		
All Others	20	20	30	100
<u>Collectors</u>				
Minor	50	50	75	125
Major	130	130	130	130
<u>Arterials</u>				
Minor	225	225	225	225
Principal	250-300	250-300	250-300	250-300
Notes:				
1. The values for the local streets should be treated as base values and increased by 0.3 for each undeveloped lot as a New Construction Factor to account for the significant loading that occurs during new construction.				
2. Higher EDLA values may be increased if traffic conditions warrant such an increase upon traffic projections and truck traffic.				
3. When different land uses occur along a street, the higher category of use shall apply.				
4. EDLA values for major arterial roadways shall be set on a case-by-case basis; two hundred fifty (250) is the minimum for planning purposes.				
*D.U. = Dwelling Units				

Table 4-3 contains the standard values of the Serviceability Index (SI) and Reliability Index (RI) for various roadways. These values are required in the determination of the Structural Number (SN).

**TABLE 4-3--SERVICEABILITY INDEX (SI) AND RELIABILITY INDEX (RI)**

Roadway Designation	Serviceability Index (SI)	Reliability Index (RI)
Arterials – All Categories	2.5	90
Major Collector, Commercial, Business, and Industrial Locals	2.5	85
Minor Collector – Residential	2.0	85
Local – Residential and Alleys	2.0	75

#### 4.03.5 FLEXIBLE PAVEMENT STRENGTH COEFFICIENTS

Table 4-4 contains the standard design coefficients for various pavement materials. Non-standard design coefficients may only be used if approved by the City Engineer.

**TABLE 4-4--STRENGTH COEFFICIENTS**

Strength Coefficients	
Component	Coefficient
Hot Bituminous Pavement (HBP)	0.40
Existing Bituminous Pavement** (<9 years old)	0.30
Existing Bituminous Pavement** (9-15 years old)	0.25
Existing Bituminous Pavement** (>15 years old)	0.20
Plant Mix Bituminous Base	0.30
Aggregate Base Course (Class 6)	0.12
Existing Aggregate Base Course (R 75+)	0.10
Emulsified Asphalt Treated Base	0.15
Concrete (3500 psi minimum)	0.50
<u>Treated Materials</u>	
Cement Treated Aggregate Base (7 day 650-1000 psi)	0.23
Lime Treated Subgrade (5 day accelerated cure in moist oven, 100°F, 160 psi, PI <6)	0.11

\*\*The structural (strength or Resilient Modulus) coefficient of existing pavement shall be determined utilizing the Falling Weight Deflectometer (FWD) or an actual laboratory Resilient Modulus test results, in cases where overlay design is being considered.

#### 4.03.6 MINIMUM PAVEMENT SECTIONS

Table 4-5 provides the minimum acceptable pavement sections for each roadway classification. These pavement sections may be used for public improvements cost estimate requirements for developer agreements. Final pavement designs must be based on actual subgrade testing and geotechnical analysis.

**TABLE 4-5--MINIMUM PAVEMENT SECTIONS**

<b>Roadway Classification</b>	<b>Full Depth Asphalt (inches)</b>	<b>Asphalt + Base (inches)</b>	<b>Portland Cement Concrete (inches)</b>
Parking Lots	5.0	3.0 + 6.0	4.5
Local Streets, Alleys and Private Streets	6.0	Allowed*	5.5
Minor Collectors (Residential)	6.5	Allowed*	6.0
Minor Collectors (Commercial)	7.0	Allowed*	6.5
Major Collectors	7.0	Allowed*	6.5
Minor Arterials	7.5	Allowed*	7.0
Major Arterials	8.0	Allowed*	7.5

\*Per approved pavement design report

Using the strength coefficients from Table 4-4, calculate the thickness of the various pavement layers by the following formula for Structural Number (SN). Note that minimum pavement sections govern if lighter sections are calculated. (See 4.03.6 above, composite sections are not allowed except for private streets and parking lots)

$$SN = a_1(D_1) + a_2(D_2) = \dots$$

$a_1, a_2$  = strength coefficients (Table 4.4)

$D_1, D_2$  = thickness of pavement layers in inches

Example: For a trial calculation to meet or exceed the nomograph determined SN, try a three inch thickness of HBP placed on six inches of compacted Class 6 road base, the  $SN = (0.40)(3) + (0.12)(6)$ ;  $SN = 1.92$ . If, in the AASHTO equation determined solution for Structural Number, that number was greater than the 1.92 SN calculated, then other trial formula calculations must be performed.

Several types of computer software have been developed for use in solving the AASHTO pavement design equations. Utilization of this software is acceptable.

#### 4.04 MATERIALS SPECIFICATIONS

The intent of this section is to specify the materials to be used for construction, overlaying, seal coating, and pavement rejuvenating of streets, parking lots, walks, and other miscellaneous work requiring the use of aggregates. All materials and workmanship shall be in accordance with the requirements of these Standards and Specifications and in

conformance with the lines, grades, depths, and cross sections shown on the approved plans, or as directed by the City Engineer.

#### 4.04.1 BASE COURSE

This item consists of the foundation course composed of crushed gravel or crushed stone and filler, constructed on the prepared subgrade or subbase course. Materials and construction shall be in accordance with the requirements of the CDOT 1999 or current Standard Specifications for Road and Bridge Construction, or latest revisions, hereinafter referred to as CDOT Standard Specifications. Gradation shall be Class 5 (1-1/2" maximum) or Class 6 (3/4" maximum).

The base course material shall be placed on the previously prepared subgrade at the locations and in the proper quantities to conform to the typical cross sections as shown on the plans and as directed by the City Engineer. The material shall be placed without segregation. Any segregated areas shall be removed and replaced with uniformly graded material at the responsible party's expense.

The base material may be placed in lifts up to six (6) inches, providing that after compaction, uniform density is obtained throughout the entire depth of the lift. If the required depth exceeds six (6) inches, it shall be placed in two (2) or more lifts of approximate equal thickness.

Base material shall not be placed on a foundation that is soft, spongy, frozen, or one that is covered by ice or snow. Base material shall not be placed on a dry or dusty foundation where the existing conditions would cause rapid dissipation of moisture from the base material and hinder or preclude its proper compaction. Such dry foundations shall have water applied to them and shall be reworked and recompacted.

Rolling shall be continuous until the base material has been compacted thoroughly in accordance with Section 304 of the CDOT Standard Specifications. Water shall be uniformly applied as needed during compaction to obtain optimum moisture content and to aid in consolidation. The surface of each layer shall be maintained during the compaction operation in such a manner that a uniform texture is produced and the aggregates are firmly placed.

The finished base course surface shall be smooth and free of ruts and irregularities, and shall be true to grade and crown as shown on the plans, or as directed by the City Engineer. The base course shall be maintained in this condition by watering, drying, rolling, or blading, or as the City Engineer may direct until the surfacing is placed.

#### 4.04.2 HOT BITUMINOUS PAVEMENT

All pavement shall be hot bituminous pavement of the plant mix type unless otherwise approved in writing by the City Engineer. Materials and construction shall be in accordance with the CDOT Standard Specifications, Section 403, and the following requirements:

1. The asphalt cement shall have a performance grade (PG) of 76-28 or 58-28. The content of the asphalt cement shall be as determined by the mix design.
2. The gradation of the mineral aggregate shall be grading SG (1-1/2 inch maximum) for the lower lifts of construction for new street construction. The top lift shall be grading S (3/4-inch maximum).
3. The mix shall conform to the job mix formula specified by the City Engineer for the pit supplied materials, if a current job mix formula is available, and shall meet the requirements as shown in Tables 4-6, 4-6a, and 4-7. A copy of the mix formula shall be submitted to the City Engineer for review and approval at least seven (7) days prior to starting paving work.
4. The use of the automatic control system specified in the Standard Specifications, Section 401, Paragraph 401.10, "Bituminous Pavers", shall not be required. A "Box Paver" shall not be allowed without a written request, submitted and approved by the City Engineer. The request must stipulate all conditions and limitations.

**TABLE 4-6--SUPERPAVE MIXTURE PROPERTIES**

<b>Roadway Classification</b>	Residential (Parking Lot)	Minor Collector	Major Collector	Minor Arterial	Principal Arterial		Industrial	Commercial
<b>Traffic Level</b>	1	2	3	3	4	5	5	5
<b>Traffic Loading</b> Total 18 Kip ESALs Over Design Life (Usually 20 Years)	Less than 300,000	300,000 - 1,000,000	1,000,000 to 3,000,000	1,000,000 to 3,000,000	3.0 to 10.0 million	> 10.0 million	> 10.0 million	> 10.0 million
<b>Design Gyration</b> $N_{design}$ (Air Void: See Note 1, and Table 4.6a)	75	75	75	75	100	100	100	100
<b>Max Gyration</b> $N_{max}$ (Air Void > 2.0%)	104	117	134	134	152	174	174	174
<b>Hveem Stability</b> (100 mm Plugs) See Note 2 (minimums)	28	28	28	28	30	30	30	30
<b>Voids filled with Asphalt</b> , %, MS-2	65-80	65-80	65-80	65-80	65-75	65-75	65-75	65-75
<b>Lottman, Tensile Strength Ratio</b> , % Retained, CP-L 5109, Method B	80 Min.	80 Min.	80 Min.	80 Min.	80 Min.	80 Min.	80 Min.	80 Min.
<b>Lottman, CP-L 5109 Dry Tensile Strength</b> , Min. psi	30 Min.	30 Min.	30 Min.	30 Min.	30 Min.	30 Min.	30 Min.	30 Min.
<b>Asphalt Binder</b>	PG 58-28		PG 76-28					

Note 1: ->Air Void of production mixes to be within 1.0 percent of design mix Air Void at optimum Asphalt Content, Air Void determination for  $N_{design}$  should be made from samples compacted at  $N_{design}$ .

->Maximum Theoretical Specific Gravity of mix by CP-51.

Note 2: Further investigation or corrective action is required where production stability is below the mix design stability.

**TABLE 4-6a--MINIMUM VMA REQUIREMENTS**

	Design Air Voids <sup>2</sup>		
<b>Nominal Maximum Size</b> <sup>1</sup> mm (in)	<b>3.5%</b>	<b>4.0%</b>	<b>4.0 – 5.0%</b>
37.5 (1-1/2)	11.5	12.0	12.5
25.0 (1)	12.5	13.0	13.5
19.0 (3/4)	13.5	14.0	14.5
12.5 (1/2)	14.5	15.0	15.5
9.5 (3/8)	15.5	16.0	16.5
<sup>1</sup> The Nominal Maximum size is defined as one size larger than the first sieve to retain more than 10%.			
<sup>2</sup> Interpolate specified VMA values for design air voids between those listed.			



**TABLE 4-7--PROPERTIES OF SUPERPAVE PERFORMANCE GRADED BINDERS**

Property	PG 58-28	PG 76-28
Traffic Level	1 or 2	3 to 5
Flash Point Temperature, °C AASHTO T 48	230 Min.	230 Min.
Viscosity at 135 °C, Pas, ASTM D 4402	3 Max.	3 Max.
Dynamic Shear, Temperature °C, where $C/\sin \delta$ @ 10 rad/sec. $\geq 1.00$ Kpa, AASHTO TP 5	58	76
Rolling Thin Film Over Residue Properties, AASHTO T 240		
Mass Loss, %, AASHTO T 240	1.00 Max.	1.00 Max.
Dynamic Shear, Temperature °C, where $G/\sin \delta$ @ 10 rad/sec. $\geq 2.20$ Kpa, AASHTO TP 5	58	76
Elastic Recovery <sup>1</sup> , 25°C, % Min.	N/A	50 Min.
Pressure Aging Vessel Residue Properties, Aging Temperature 100° C AASHTO PP1		
Dynamic Shear, Temperature °C, where $G/\sin \delta$ @ 10 rad/sec. $\leq 5,000$ Kpa, AASHTO TP 5	28	28
Creep Stiffness, @60 sec. Test Temperature in °C, AASHTO TP 1	-12	-18
S, Mpa, AASHTO TP 1	300 Min.	300 Min.
m-value, AASHTO TP 1	0.300 Max.	0.300 Max.
Direct Tension Temperature in °C, @1.0 mm/min., Where Failure Strain > 1.0 %, AASHTO TP 3	-12	-18

#### 4.04.3 CONCRETE PAVEMENT

All concrete pavement materials and construction shall be in accordance with the current CDOT Standards Specifications for Road and Bridge Construction Manual. Concrete pavement is only allowed on arterial roadways.

#### 4.04.4 TESTING

##### A. Proof Rolling

Proof rolling shall be required to determine whether certain areas of subgrade meet compaction requirements. Proof rolling shall be carried out with a pneumatic-tired water truck/similar vehicle loaded to a minimum of 36,000 pounds within 8 to 10 hours prior to paving.

Areas of subgrade that are found to be weak and/or fail the proof roll shall be investigated, and a determination shall be made to solve the failure condition by the contractor or his consultant. The area of failure shall be brought up to the requirements for density and moisture prior to paving.

## B. Materials and Methods Testing

Determination of the effect of water on the cohesion of the bituminous mixture shall be made in accordance with AASHTO TO-165. Retained strength shall be a minimum of seventy-five (75). The use of “anti-stripping” admixture to improve the retained strength characteristics shall be permitted only by written permission of the City Engineer.

All commercial testing and laboratory work necessary to establish the job mix formula, and all testing necessary to assure conformance of materials and workmanship to the requirements of the specifications throughout the construction period, shall be performed at the responsible party’s expense. Two (2) copies of all test reports shall be submitted directly to the City Engineer.

### 4.05 INITIAL STREET ACCEPTANCE

A pavement evaluation shall be performed in accordance with good engineering practices prior to initial acceptance. The report shall evaluate the existing condition of the base and binder course by performance of deflection tests utilizing a Falling Weight Deflectometer at one hundred (100) foot spacing per traffic lane. The report shall determine whether or not the pavement section will develop a twenty (20) year design life or greater. (Deflection testing that is done between November 1 and April 1 will not be accepted).

If the pavement section is not projected to meet a design life of twenty (20) years or more based on the deflection test results, a detailed report outlining the deficiencies, and/or causes for the deficiencies shall be developed. In addition, the report shall outline the projected design life and remedial measures to develop a twenty (20) year design life. The City Engineer shall evaluate the results of the report and inform the responsible party of the required pavement operation of the section.

### 4.06 FINAL STREET ACCEPTANCE

Non-destructive deflection testing (NDT) shall be conducted at the end of the warranty period on all streets. The testing shall be at two hundred (200) foot spacings per traffic lane. A report on test findings shall then be supplied to the City Engineer. (Deflection testing that is done between November 1 and April 1 will not be accepted).



**Notice of Intent to Award  
City of Commerce City, Colorado  
Department of Public Works**

**Project: 2020 Mill and Overlay Project  
Project No.: 2020-05-PW**

**TO: Elite Surface Infrastructure  
1199 Atchison Court, Castle Rock, CO, 80109**

**DATE: May 7, 2020**

After evaluation of all responses according to the criteria stated in the Request for Proposals and applicable standards, the City of Commerce City ("City") has selected your firm to enter contract negotiations to perform the above-referenced Project. You will be contacted soon to negotiate a contract.

This Notice of Intent to Award is subject to execution of a written contract and approval by the City Manager. This notice does not constitute the formation of a contract between the City and your firm. Your firm shall not acquire any legal or equitable rights relative to the contract services until a contract containing terms and conditions acceptable to the City is executed. The City reserves all rights as stated in the Request for Proposals.

City of Commerce City

Project Manager



**Request for Bids  
City of Commerce City, Colorado  
Department of Public Works**

**Project: 2020 Asphalt Mill and Overlay Project  
Project No.: 2020-05-PW  
Bid Submission Date: May 6, 2020**

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**Attachments:**

- A. DRAFT CONSTRUCTION CONTRACT AGREEMENT
- B. PAYMENT BOND
- C. PERFORMANCE BOND
- D. EQUIPMENT DECLARATION
- E. GENERAL CONDITIONS
- F. SPECIAL CONDITIONS
- G. TECHNICAL SPECIFICATIONS
- H. PLANS AND SPECIFICATIONS

## ADVERTISEMENT AND REQUEST FOR BIDS

The City of Commerce City is seeking a qualified contractor to construct the **2020 Mill and Overlay Project**, Project No. **2020-05-PW**. All Work must be completed within **180 days** of the issuance of a Notice to Proceed.

The anticipated start date is 5/28/2019. The term is for a **one** year period, subject to annual appropriation, with the option for up to two (2) one-year annual renewals at the same or similar rates.

Bids are to be submitted electronically through the Rocky Mountain E-Purchasing System ([www.bidnetdirect.com/colorado](http://www.bidnetdirect.com/colorado)) until **2:00pm p.m. MT, Wednesday, May 06, 2020**. The bids will be opened live at the Commerce City Municipal Services Center. Due to COVID19, the bids will be opened in the front vestibule at the front door and read aloud outside the facility. Successful bidder need not be present.

Questions or comments regarding this RFB must be received in writing no later than **10:00 AM** on **Friday, May 01, 2020**, by **Pete Adler** at [padler@c3gov.com](mailto:padler@c3gov.com).

A copy of the Request for Bids and any related materials may be obtained from the City's website (<http://www.c3gov.com/bids.aspx>) or the Rocky Mountain E-Purchasing System (<http://www.rockymountainbidsystem.com>).

## **PROJECT SCOPE**

### **Description of the Work**

The Work to be performed under this contract includes removal of pavement markings, asphalt repair, mill and overlay of designated streets, and installation of pavement striping and markings as shown in the General Conditions, Special Conditions, Project Technical Specifications, and attached plans. The Contractor shall supply all labor, equipment, and materials necessary to complete the Work in accordance with these specifications. The Contractor will be required to coordinate construction activities with the City, Waste Management, South Adams County Water and Sewer District, School Districts, HOAs and Metro Districts, as applicable.

The Work shall be completed within 180 days from the date of issuance of a Notice to Proceed.

### **Location of the Work**

The location of the work to be completed under this contract includes:

- Collector and local streets in the Commerce City Core City area between E. 60<sup>th</sup> Avenue and E. 64<sup>th</sup> Avenue, Quebec Parkway and Kearney Street (E. 60<sup>th</sup> Place, E. 60<sup>th</sup> Way, E. 61<sup>st</sup> Avenue, E. 61<sup>st</sup> Place, E. 62<sup>nd</sup> Avenue, E. 62<sup>nd</sup> Place, E. 62<sup>nd</sup> Way, E. 63<sup>rd</sup> Avenue, Monaco Street, Niagara Street, Gifford Drive, Olive Street, Oneida Street, Pontiac Street, Porter Way and Poplar Place)
- Holly Street from E. 60<sup>th</sup> Avenue to E. 65<sup>th</sup> Way
- Collector and local streets in the Irondale area between E. 80<sup>th</sup> Avenue and E. 88<sup>th</sup> Avenue, Pontiac Street to Valentia Street (E. 81<sup>st</sup> Avenue, E. 83<sup>rd</sup> Avenue, E. 84<sup>th</sup> Avenue, and Pontiac Street)
- E. 96<sup>th</sup> Avenue from 750 feet west of Chambers Road to 215 feet east of Moline Street (beginning of concrete pavement)
- Colorado Boulevard between 72<sup>nd</sup> Avenue and 74<sup>th</sup> Avenue
- Sand Creek Drive North from Krameria Street to E. 52<sup>nd</sup> Place
- E. 64<sup>th</sup> Avenue between Colorado Boulevard and Brighton Boulevard
- E. 64<sup>th</sup> Avenue from Monroe Street west to the O'Brian Canal

All Work to be completed is shown on the maps as illustrated the attached plans subtitled on the sheets as However, the Project Manager shall establish the final location and quantities of Work. The Project Manager will provide the Contractor with the location, type, and quantity of Work to be performed on an authorized Work Identification Form.

## **INSTRUCTIONS TO BIDDERS**

All Bidders submitting Bids in response to this Request for Bids (including its attachments and any Addenda) (“RFB”) shall follow these instructions. Failure to follow these instructions may result in the rejection of a Bid. Capitalized terms not defined in these instructions have the meaning assigned to them in the General Conditions.

### **1. Review of Contract Documents, Questions, Addenda, and Site Visit.**

- a. Questions or comments regarding this RFB must be received in writing by the date and time and to the recipient identified in the RFB. Responses to questions will be posted on the City’s website and on the Rocky Mountain E-Purchasing System (“RMEPS”) as Addenda to the RFB.
- b. Modifications to this RFB shall be made solely through Addenda posted on the City’s website and on the RMEPS. Bidders are solely responsible for obtaining Addenda. The City will not be bound by or responsible for any explanations or interpretations of the Contract Documents other than those given through an Addendum to this RFB.
- c. Before submitting a Bid, each Bidder must carefully examine the RFB (including any Addenda), all Contract Documents (including the RFB and any Addenda), and the site of Work and fully acquaint itself with all conditions and any matters that could in any way impact the Work (including the cost of performance). Each Bidder must satisfy itself as to the accuracy of the estimated quantities in the Contract Documents. If there is any conflict or inconsistency between or within the Contract Documents, Bidders shall advise the City at least forty-eight (48) hours before the deadline for the submission of Bids identified in the RFB. The failure or omission of any Bidder to do any of the foregoing shall in no way relieve the Bidder from any obligation with respect to its Bid or any provisions of the Contract Documents. After the submission of a Bid, Bidders shall not assert any misunderstanding concerning the quantities or nature of Work to be performed.

### **2. Bid Forms.**

- a. Bids shall be submitted on the following forms (“Bid Forms”) provided in the RFB:
  - 1) BID PROPOSAL;
  - 2) UNIT PRICE FORM;
  - 3) LISTING OF MAJOR SUPPLIERS AND SUBCONTRACTORS; and
  - 4) BID SECURITY.

Bids shall also include a one-page preliminary schedule including the overall duration, key activities, and dates.

- b. Each Bidder is solely responsible for the accuracy of its Bid.
- c. Alternative, conditional, or qualified Bids will not be considered.
- d. Each Bidder is required to state in its Bid its full name, legal office address and mailing address (if different), and e-mail address to receive communications relating to this RFB, and shall state the names of all persons interested with it in the Bid, and if no other person be so interested, the Bidder shall distinctly state the fact.

- e. If Bidder is an individual, he or she must sign in his or her individual capacity. Bids by partnerships shall be signed with the partnership name followed by the signature and title of one partner or authorized representative. Bids by corporations shall be signed with the name of the corporation followed by the signature and title of the president or other person authorized to bind the corporation. Bids by limited liability companies shall be signed by the manager or member authorized to bind the entity or other authorized representative. Bids by joint ventures shall be signed by each participant or its authorized representative. If an authorized representative signs any Bid Form for a Bidder, a copy of a resolution or other signature authorization shall be required for submission of the Bid. Failure to include a copy of the appropriate signature authorization, if required, may result in the rejection of the Bid.
- f. Bidders shall fully complete all Bid Forms (including all blank spaces and additive Bid items) by legibly printing the entire prices for the Work. Prices and the name of signatory shall be printed in ink or by typewriter. All signature(s) shall be in blue ink. Bids completed in pencil may be rejected.
- g. Bidders shall acknowledge receipt of all Addenda. Failure to acknowledge receipt of all Addenda may result in the rejection of a Bid.
- h. Bids shall be made on each separate item of work shown in the Bid Forms, with reasonable relation to the probable cost of doing the work included in such item. The unit price items in the Bid Forms are intended to cover all items of work to be done and materials to be furnished to fully complete the Work in accordance with the Contract Documents. The cost of appurtenant items of work, labor, materials and equipment, and all other costs (including without limitation sales and use tax, insurance, licenses, permits, profit, and other overhead) not listed separately, not shown on the Plans and Specifications, or not specified but necessary to complete the Work in accordance with the Contract Documents shall be considered as included in the unit price Bid.
- i. The quantities listed in the Bid Forms are approximate and are given only for use in comparing Bids and to indicate approximately the total amount of the Contract. The City does not expressly or by implication represent that the actual amounts of Work will correspond with the estimated quantities. Work under certain items may be materially greater or less than those estimated in the Bid Forms as may be necessary, in the judgment of the City, to complete the Project.
- j. Wherever additive Bid items are called for, Bidders shall submit the amount to be added to the total Bid amount if the alternate is selected. If a Bidder does not wish to provide a Bid for an alternate item, Bidder should write "NO BID." Additive Bid items, if any, will be selected by the City at the time of award. The City reserves the right to accept additive Bid items in any order or combination.
- k. Unit prices and extensions, written as numbers, shall be entered in the spaces provided on the Bid Forms on the line pertaining to each Bid item. The unit price shall govern if there is an error or discrepancy in the extension of the price or in the total Bid amount.
- l. Alterations, interlineations, erasures, strikethroughs, and other marks on any Bid Form will be disregarded unless initialed in blue ink by the person signing the Bid.



- m. Bidders shall list on the Bid Form “Listing of Major Suppliers and Subcontractors” any proposed subcontractor or supplier (other than employees) that the Bidder plans to hire to perform more than five percent (5%) the total Bid.
- n. The materials, products, equipment or processes described in the Contract Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. The materials, products, equipment or process specified shall be considered as the basis for the Bid. Substitutions in Bids shall not be considered unless approved prior to the receipt of Bids through an Addendum; failure to obtain advance approval for substitutions may result in the rejection of a Bid. Each request for a substitution shall include: the name of the item for which it is to be substituted; a complete description of the proposed substitute (including trade names, drawings, specifications, cuts, performance and test data and any other information necessary for evaluation); and a statement setting forth any changes in other materials, equipment or Work that incorporation of the substitute would require. The burden of proof concerning the merit of the proposed substitute is upon the selected contractor. The City’s decision of approval or disapproval of a proposed substitute shall be final.

### **3. Bid Security.**

- a. Each Bid must be accompanied by a bid security of five percent (5%) of the total Bid (including all alternate bids, if any), in the form of a bid bond in the form provided with this RFB or a certified check or cashier’s check payable without condition to the City of Commerce City (“Bid Security”). The City may accept a bid bond written on the standard form of a recognized surety that includes the same terms and provides the same guaranty to the City and imposes no additional terms or conditions.
- b. Bid bonds shall be issued by a surety holding a license to act as a surety in the State of Colorado and having a rating not lower than A- in Best’s Insurance Guide, latest edition.
- c. Attorneys-in-fact who sign bid bonds must file with each bond a certified and effectively dated copy of their power of attorney.
- d. The Bid Security will be forfeited to the City as liquidated damages if the selected Bidder fails to enter a contract with the City or fails to sign the Notice of Intent to Award as provided in this RFB. The Bid Security of any Bidder involved in collusion or other illegal activities may be retained by the City as liquidated damages for the disruption of the bidding process. Bidders agree that the amount of the Bid Security is a reasonable estimate of damages and proportionate to the City’s anticipated loss or injury.
- e. The City will return the Bid Security to all Bidders except the three (3) lowest Bidders (based on the total Bid amount including any additive Bid items selected by the City) after Bid opening. The City will return the Bid Security to all remaining Bidders after the execution of the Construction Contract Agreement and delivery of acceptable payment and performance bonds and a proposed Construction Schedule by the selected Bidder, except for any Bid Security that has been forfeited.

### **4. Bid Submission, Withdrawal, and Modification.**

- a. Bids must be received by the City no later than the date and time and at the location stated in the RFB for the submission of Bids. It is the sole responsibility of each Bidder to ensure its Bid is received by the City at the proper location, date, and time. Bids not received at

the proper location by the designated date and time will be considered late and will be returned unopened.

- b. Bids may only be submitted online through the Rocky Mountain E-Purchasing System ([www.bidnetdirect.com/colorado](http://www.bidnetdirect.com/colorado)).
- c. Bids shall consist solely of the Bid Forms, the Bid Security, and a one-page preliminary schedule including the overall duration, key activities, and dates.
- d. Bids should be clearly marked with: (1) the Bidder's name; (2) the Bidder's address; (3) the Project name and number; and (4) the statement "SEALED BID ENCLOSED – TO ONLY BE OPENED BY DIRECTOR OR DESIGNEE."
- e. No individual or entity shall make or file more than one Bid for the same Work unless alternate bids are required. Bids shall be made without connection with any other person or entity submitting a Bid for the Work, shall be fair in all respects, and shall be made without collusion or fraud. Notwithstanding the foregoing, a person or entity that has quoted prices to any Bidder is not disqualified from quoting prices to other Bidders or from submitting a Bid.
- f. Bids cannot be altered after submission.
- g. A Bidder may withdraw its Bid only by notarized written request signed by the same person who signed the Bid. A request to withdraw a Bid must be received by the City prior to the date and time stated in the RFB for the submission of Bids. E-mail, faxed, or oral requests for withdrawal will not be considered.
- h. All Bids are valid and, after the date and time stated in the RFB for the submission of Bids, cannot be withdrawn until the earlier of ninety (90) days after the bid opening or the date of execution of the Construction Contract Agreement and delivery of acceptable payment and performance bonds and a proposed Construction Schedule by the selected Bidder.
- i. Neither the City, nor any of its officers, employees, or agents, will be liable for the premature opening of, or any failure to open, any Bid that is not properly addressed or identified.

## **5. Bid Opening.**

- a. The City will conduct a public bid opening at the date, time, and location identified in the RFB. Bids will be opened and read aloud but no selection or discussion will occur.

## **6. Contract Award.**

- a. The City will select the lowest responsive and responsible Bidder, as determined to be the best value by the City in its sole discretion. The City's determination of responsibility may include, without limitation, the Bidder's financial resources, ability to comply with all legal and regulatory requirements, ability to perform the Work and complete the Project on time, history of performance, reputation, ability to obtain necessary equipment, data, and facilities, and any other factor deemed important by the City.
- b. The City's decision is final and without recourse to any Bidder. The issuance of a Notice of Intent to Award will be conditioned on approval of the Construction Contract Agreement by the City Council of the City of Commerce City if Contract Price is greater than \$250,000.00.

- c. If a Bid received from a Bidder located within the City (“Local Bidder”) would provide the best value to the City but for the price and the Local Bidder’s price does not exceed, by more than the lesser of five percent (5%) or \$5,000, the price of the Bidder whose Bid would otherwise provide the best value, the City may select the Local Bidder. At the time of award, the Local Bidder must be licensed with the City and must be in compliance with the City’s sales and use tax code.
- d. The City may conduct any investigation it deems necessary to determine the responsibility of any Bidder, the ability of any Bidder to perform the Work, and the validity of the prices submitted by any Bidder. Bidders will furnish any information requested by the City for this purpose.
- e. By e-mail to the address on the Bid Proposal, the City will issue a Notice of Intent to Award to the selected Bidder and provide a Construction Agreement Contract to the selected Bidder.
- f. **Within ten (10) business days of the Notice of Intent to Award, the selected Bidder must:** (1) execute the Construction Contract Agreement; (2) provide payment and performance bonds of 100% of the total Bid price on the forms provided in this RFB or other forms acceptable to the City; (3) provide proof of insurance; and (4) provide a proposed Completion Schedule as directed in the General Conditions.
- g. If the selected Bidder fails to execute the Construction Contract Agreement and provide payment and performance bonds and a proposed Construction Schedule, the City may select another Bidder, in the City’s discretion.
- h. The Construction Contract Agreement will not be binding on the City until executed by the City.

**7. Miscellaneous.**

- a. This RFB and the Work shall be governed by C.R.S. 8-17-101 *et seq.* (relating to Colorado labor employed on public works) and C.R.S 8-19-101 *et seq.* (relating to bid preferences for resident bidders).
- b. The City reserves the right to modify this RFB or the selection process, to cancel this RFB, to accept or reject any Bid for any reason (including without limitation Bidder responsibility and inadequate, unreasonable, or imbalanced Bids), and to waive any informalities or irregularities in any Bid, without liability, at any time. Neither the issuance of this RFB or the receipt and evaluation of Bids obligates the City to select any Bidder or enter into any agreement. No Bid shall constitute business terms of any eventual agreement except as expressly agreed by the City.
- c. All Bids shall become the property of the City, will not be returned, and will become a public record. The total cost of Bid preparation and submission shall be borne by the Bidder.
- d. Bidders should not include as a part of the response to the invitation to bid any information which the bidder believes to be a trade secret or other privileged or confidential data. If a Bidder wishes to include such material with a bid, then the material should be supplied separately with “Confidential” clearly marked appropriate pages. The City will keep confidential only documents protected from disclosure under the Colorado Open Records

Act (“Act”) as determined by the City or any court. Under no circumstances may an entire Bid be marked or identified as proprietary. By submitting a Bid, each Bidder agrees to hold the City harmless from any claims arising from the release of proprietary information not clearly designated as such by the Bidder and from any claims arising from the release of documents not protected from disclosure under the Act.

- e. Respondents are cautioned not to undertake any activities or actions to promote or advertise their Bids, other than discussions with City staff as described in this RFB. After the release of this RFB, Bidders are not permitted to make any direct or indirect contact with City personnel involved in this RFB, the City Council, or media on the subject of this RFB, except in the course of City-sponsored presentations or as authorized by this RFB. Violation of these rules is grounds for disqualification of the Bidder.
- f. The selected Contractor will be required to provide a warranty bond of 5% of the total Contract Price as a condition to Final Acceptance.
- g. The City does not discriminate on the basis of race, creed, color, religion, gender or sex, age, handicap, veteran status, national origin, or ancestry, in connection with this RFB.
- h. Unless specifically exempt, all construction within the City is taxable, including construction performed on behalf of an exempt institution or governmental, religious, charitable, private or any other type of owner, including the City.

### **BID FORMS**

All Bids shall be submitted on the Bid Forms included in the RFB. All Bids shall be submitted in accordance with the Instructions to Bidders.

CORPORATE OFFICE  
1199 ATCHISON COURT  
CASTLE ROCK, CO 80109  
PHONE: 303-841-0292  
[www.elitesi.com](http://www.elitesi.com)



DIVISION OFFICE  
3313 MOLINE STREET  
AURORA, CO 80010  
PHONE: 303-287-0777

City of Commerce City

Project: 2020 Asphalt Mill & Overlay Project

Project No.: 2020-05-PW

Bid Submission Date: May 6, 2020





STATE OF Colorado  
COUNTY OF Adams } SS

On May 5, 2020 before me Laura J. Mitzner

PERSONALLY APPEARED Brian D. Azuff, CEO

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature Laura J. Mitzner

My Commission Expires: 1/28/2023

LAURA J. MITZNER  
NOTARY PUBLIC  
STATE OF COLORADO  
NOTARY ID: 20004032863  
MY COMMISSION EXPIRES: JANUARY 28, 2023

*This area for Official Notarial Seal*

### OPTIONAL

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

#### CAPACITY CLAIMED BY SIGNER

- ☐ INDIVIDUAL  
☐ CORPORATE OFFICER

TITLE(S)

- ☐ PARTNER(S) ☐ LIMITED  
☐ GENERAL

- ☐ ATTORNEY-IN-FACT  
☐ TRUSTEE(S)  
☐ GUARDIAN/CONSERVATOR  
☐ OTHER

**SIGNER IS REPRESENTING:**  
NAME OF PERSON(S) OR ENTITY(IES)

#### DESCRIPTION OF ATTACHED DOCUMENT

TITLE OF TYPE OF DOCUMENT

NUMBER OF PAGES

DATE OF DOCUMENT

SIGNER(S) OTHER THAN NAMED ABOVE

**ALL PURPOSE ACKNOWLEDGEMENT**



STATE OF Colorado  
COUNTY OF Denver } SS

On May 6, 2020 before me Jennifer L. Clampert  
PERSONALLY APPEARED Nicole L. McCollam

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature

JL Clampert

My Commission Expires: April 23, 2022

Jennifer L. Clampert  
Notary Public  
State of Colorado  
Notary ID 20144017062  
My Commission Expires April 23, 2022

*This area for Official Notarial Seal*

## OPTIONAL

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

### CAPACITY CLAIMED BY SIGNER

- ☐ INDIVIDUAL  
☐ CORPORATE OFFICER

TITLE(S)

- ☐ PARTNER(S) ☐ LIMITED  
☐ GENERAL

- ☒ ATTORNEY-IN-FACT  
☐ TRUSTEE(S)  
☐ GUARDIAN/CONSERVATOR  
☐ OTHER

### SIGNER IS REPRESENTING:

NAME OF PERSON(S) OR ENTITY(IES)

Federal Insurance Company

### DESCRIPTION OF ATTACHED DOCUMENT

TITLE OF TYPE OF DOCUMENT

NUMBER OF PAGES

DATE OF DOCUMENT

SIGNER(S) OTHER THAN NAMED ABOVE

ALL PURPOSE ACKNOWLEDGEMENT



**Power of Attorney**

**Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company  
Westchester Fire Insurance Company | ACE American Insurance Company**

Know All by These Presents, that FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY corporations of the Commonwealth of Pennsylvania, do each hereby constitute and appoint Jennifer L. Clampert, Amy Coonts, Sarah Finn, Michael Lischer, Jr., Nicole L. McCollam, Sheryll Shaw and Brandi J. Tetley of Denver, Colorado -----

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY have each executed and attested these presents and affixed their corporate seals on this 14th day of November, 2019.

*Dawn M. Chloros*

Dawn M. Chloros, Assistant Secretary

*Stephen M. Haney*

Stephen M. Haney, Vice President



STATE OF NEW JERSEY

County of Hunterdon

SS.

On this 14th day of November, 2019, before me, a Notary Public of New Jersey, personally came Dawn M. Chloros and Stephen M. Haney, to me known to be Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY, the companies which executed the foregoing Power of Attorney, and the said Dawn M. Chloros and Stephen M. Haney, being by me duly sworn, severally and each for herself and himself did depose and say that they are Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY and know the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of said Companies; and that their signatures as such officers were duly affixed and subscribed by like authority.

Notarial Seal



KATHERINE J. ADELAAR  
NOTARY PUBLIC OF NEW JERSEY  
No. 2316885  
Commission Expires July 18, 2024

*Katherine J. Adelaar*

Notary Public

**CERTIFICATION**

Resolutions adopted by the Boards of Directors of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY on August 30, 2016; WESTCHESTER FIRE INSURANCE COMPANY on December 11, 2006; and ACE AMERICAN INSURANCE COMPANY on March 20, 2009:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into in the ordinary course of business (each a "Written Commitment"):

- (1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.
- (2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such person's written appointment as such attorney-in-fact.
- (3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
- (4) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to delegate in writing to any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
- (5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested."

I, Dawn M. Chloros, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY (the "Companies") do hereby certify that

- (i) the foregoing Resolutions adopted by the Board of Directors of the Companies are true, correct and in full force and effect,
- (ii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Whitehouse Station, NJ, this **May 6, 2020**



*Dawn M. Chloros*

Dawn M. Chloros, Assistant Secretary

IN THE EVENT YOU WISH TO VERIFY THE AUTHENTICITY OF ANY OTHER MATTER, PLEASE CONTACT US AT:  
Telephone (908) 903-3493 Fax (908) 903-3494 e-mail: surety@chubb.com



## BID PROPOSAL

Project: 2020 Asphalt Mill and Overlay Project  
Project No.: 2020-05-PW

**Bidder Legal Name:** RME Ltd., LLC dba Elite Surface Infrastructure

**Bidder Full Principal Address:** 1199 Atchison Court, Castle Rock, CO 80109

**Bidder Phone Number:** 303-287-0777

**Bidder E-Mail Address:** van.miranda@elitesi.com

**Proposal:** The undersigned and above-named Bidder proposes to the City of Commerce City to enter a Construction Contract Agreement and to perform the Work to complete the Project in strict conformity with the Contract Documents for the unit prices listed in Unit Price Form(s) submitted with this Bid Proposal as payment in full. By submitting this Bid (consisting of the Bid Proposal, Unit Price Form, Listing of Major Suppliers and Subcontractors, Bid Security, and preliminary schedule), Bidder:

1. Certifies that it has examined the Request for Bids (including all Contract Documents and all Addenda) and is submitting the Bid in full compliance with the Contract Documents;
2. Certifies that the undersigned has checked carefully the figures and words in the Unit Price Form and understands that the City will not be responsible for any error or omissions on the part of the Bidder;
3. Certifies that this Bid is genuine, and not sham or collusive or made in the interest or behalf of any person not named in this Bid and that Bidder has not, directly or indirectly, induced, or solicited any other Bidder to submit a sham bid, or induced any other person, firm or corporation to refrain from bidding, and that Bidder has not in any manner sought by collusion to secure for itself any advantages over any other Bidder;
4. Agrees that this Bid shall be valid from the earlier of the date of opening to the date of an executed Construction Contract Agreement or ninety (90) calendar days after the date of bid opening;
5. Agrees to all terms and conditions of the Request for Bids and Contract Documents;
6. Agrees that the Contract Documents are not ambiguous or erroneous and are sufficient in scope and detail to indicate and convey understanding of all terms and requirements of the Work;
7. Waives all rights to claim extra payment or time extensions due to unexpected conditions that could have been determined by site inspection and review of the Contract Documents;
8. Is not relying on oral or written representations of the City except the RFB and any formal addenda to the RFB; and
9. Agrees that, if Bidder is selected to be awarded the Contract, Bidder will:
  - a. Execute a Construction Contract Agreement and, as provided in the Contract Documents, provide payment and performance bonds of 100% of the total Bid amount (including any accepted additive Bid items), proof of insurance, and a proposed Construction Schedule within ten (10) days of the issuance of a Notice of Intent to Award;
  - b. Forfeit the Bid Security submitted with this Bid to the City of Commerce City, as liquidated damages if Bidder fails to execute and deliver to the City the Construction Contract Agreement and payment and performance bonds of 100% of the total Bid amount (including any accepted additive Bid items) as provided in the Contract Documents, proof of insurance, and a proposed Construction

Schedule as provided in the Contract Documents within ten (10) days of the issuance of a Notice of Intent to Award;

- c. Commence Work within the time specified in the Notice to Proceed after the award date and complete the Work within the time specified in the Request for Bids;
- d. Accomplish the Work in accordance with the Contract Documents at the unit prices named in this Bid and within the time stated in the Contract Documents;
- e. Perform any increased or decreased quantities of Work at the unit prices stated in the Bid;
- f. Furnish all labor, machinery, equipment, materials, and supplies and pay all incidental costs necessary to accomplish the Work on the Project; and
- g. Perform all requirements stated in the Contract Documents.

**Addenda:** Bidder acknowledges receipt of the following Addenda:

Addendum No. 1 Addendum No. \_\_\_\_\_ Addendum No. \_\_\_\_\_ Addendum No. \_\_\_\_\_

**Surety:** The following surety company has indicated its willingness to bond Bidder for the Work.

Westchester Fire Insurance  
Name: Company Attorney-in-Fact: Jennifer Clampert

**Interested Principals:** The only persons or entities interested as principals in this Bid other than the undersigned Bidder are listed below (if there are none, state such fact): None.

Name: \_\_\_\_\_ Address: \_\_\_\_\_

Name: \_\_\_\_\_ Address: \_\_\_\_\_

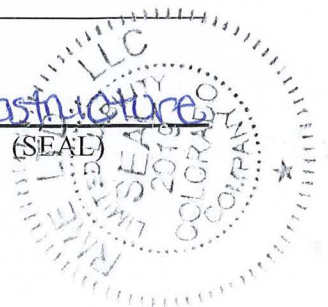
Respectfully submitted,

RME Ltd, LLC dba Elite Surface Restoration  
Bidder Legal Name

Signature

Brian D. Acuff, CEO

Printed Name & Title



a/an corporation/limited liability company/partnership/individual organized under the laws of the State of Colorado composed of the following members, managing members, officers, partners or owners:

Brian D. Acuff

President/CEO/COO of Corporation or Manager/Managing Member of LLC or Managing Partner of Partnership

John Frink

Vice President/CFO/Managing Member/Member/Partner

Kurt French

Secretary/Managing Member/Member/Partner

Kurt French

Treasurer/Managing Member/Member/Partner



**BASE BID UNIT PRICE FORM****Bidder Name:** Elite Surface Infrastructure**Project:** 2020 Asphalt Mill and Overlay Project**Base Bid:** \$ 1,992,178.40

CLIN	Item	Unit of Measure	Estimated Bid Qty.	UNIT PRICE BID	EXTENDED VALUE (Unit price times Estimated Bid Qty)
1	Removal of Asphalt Mat (Planing) (2")	SY	137,102	\$ 1.55	\$ 212,508.10
2	Removal of Asphalt Mat (Planing) (4")	SY	16,757	\$ 1.85	\$ 31,000.45
3	HMA (SG)(75)(PG58-28)	Ton	3,687	\$ 55.00	\$ 202,785.00
4	HMA (SX)(75)(PG58-28)	Ton	16,990	\$ 65.50	\$ 1,112,845.00
5	HMA (Patching)(Asphalt)	Ton	100	\$ 150.00	\$ 15,000.00
6	Reclamation of Pavement and Subgrade	SY	16,757	\$ 4.70	\$ 78,757.90
7	Aggregate Base Course (Crushed Reclaimed Concrete)	Ton	200	\$ 47.00	\$ 9,400.00
8	Blading and Bulldozing Material	HR	40	\$ 410.50	\$ 16,420.00
9	Adjust Manhole	EA	32	\$ 93.80	\$ 3,001.60
10	Adjust Valve Box	EA	31	\$ 37.50	\$ 1,162.50
11	Crack Sealant (Glasgrid)	SY	600	\$ 10.10	\$ 6,060.00
12	Curb Type 6 (Section M)	LF	3,897	\$ 5.05	\$ 19,679.85
13	White Solid (4" Epoxy)	GAL	60	\$ 105.00	\$ 6,300.00
14	White Broken (4" Epoxy)	GAL	1	\$ 105.00	\$ 105.00
15	Yellow Solid (4" Epoxy)	GAL	180	\$ 105.00	\$ 18,900.00
16	Yellow Broken (4" Epoxy)	GAL	4	\$ 105.00	\$ 420.00
17	White Channel (8" Epoxy)	GAL	32	\$ 105.00	\$ 3,360.00
18	White Dotted (4"x 3' Epoxy)	GAL	2	\$ 105.00	\$ 210.00
19	White Solid Crosswalk	SF	1,056	\$ 11.25	\$ 11,880.00
20	White Solid Stop Line	SF	980	\$ 11.25	\$ 11,025.00
21	Left Arrow (Word – Symbol)	SF	210	\$ 17.00	\$ 3,570.00
22	Right Arrow (Word – Symbol)	SF	194	\$ 17.00	\$ 3,298.00
23	Left/Right Arrow (Word - Symbol)	SF	65	\$ 17.00	\$ 1,105.00
24	Railroad Crossing Symbol (Narrow)	SF	138	\$ 17.00	\$ 2,346.00
25	Speed Hump (Word - Symbol)	SF	267	\$ 17.00	\$ 4,539.00
26	Mobilization	LS	1	\$ 70,000.00	\$ 70,000.00
27	Traffic Control	LS	1	\$ 146,500.00	\$ 146,500.00
28	Vehicle Towing	F/A	1	Pass Thru	\$ -
29	Railroad Permit Fees	F/A	1	Pass Thru	\$ -
30	Railroad Flagging	F/A	1	Pass Thru	\$ -
<b>TOTAL BASE BID</b> (Total of all Extended Values)					<b>\$ 1,992,178.40</b>

## LISTING OF MAJOR SUPPLIERS AND SUBCONTRACTORS

If none, write none: \_\_\_\_\_

Supplier Brannan Sand & Gravel  
Proposed Subcontractor: \_\_\_\_\_

Item(s): Asphalt

Address: 2500 E. Brannan Way, Denver

Percentage of Work: 9.6%

Proposed Subcontractor: AAA Barricade Company, Inc.

Item(s): Traffic Control

Address: 8215 Steete St., Denver

Percentage of Work: 6.67%

Proposed Subcontractor: Kolbe Striping, Inc.

Item(s): Striping

Address: 550 Tapeka Way, Castle Rock

Percentage of Work: 5.22%

Proposed Subcontractor: \_\_\_\_\_

Item(s): \_\_\_\_\_

Address: \_\_\_\_\_

Percentage of Work: \_\_\_\_\_

Bidder certifies that the names of the foregoing mentioned subcontractors or suppliers are submitted with full knowledge and consent of the respective parties. Additional sheets (with signatures) must be attached if additional space is needed.



















RME Ltd., LLC dba Elite Surface  
Bidder: Infrastructure  
(Name of Company)

By: [Signature]  
(Signature and Title)

Date: May 6, 2020

ID	Task Name	Duration	Start	Finish	Jul 19, '20	Jul 26, '20	Aug 2, '20	Aug 9, '20
					S M T W T F S	S M T W T F S	S M T W T F S	S M T W
1	2020 Mill & Overlay Project	180 days	Mon 7/20/20	Fri 3/26/21				
2								
3	2" Milling	25 days	Mon 7/20/20	Fri 8/21/20				
4								
5	2" Overlay	27 days	Thu 7/23/20	Fri 8/28/20				
6								
7	Reconstruction Streets	20 days	Mon 8/24/20	Fri 9/18/20				
8								
9	Final Striping	35 days	Mon 8/3/20	Fri 9/18/20				
10	AS AVAILABLE							
11								
12	Durations are correct.							

Project: Preliminary Schedule Su  
Date: Wed 5/6/20

Task		Project Summary		Manual Task		Start-only		Deadline	
Split		Inactive Task		Duration-only		Finish-only		Progress	
Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
Summary		Inactive Summary		Manual Summary		External Milestone	