

**CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS**

CONTRACT NO. 201951264 PROJECT NAME: 56TH AVE AND PENA BLVD INTERCHANGE ADDENDUM NO. 2 TO CONTRACT DOCUMENTS
--

Bidders are hereby instructed that the drawings, specifications, and other contract documents are modified, corrected, supplemented, and/or superseded for the above-mentioned project as hereinafter described in the following attachments:

I. POSTPONEMENT OF BID OPENING

**City and County of Denver
Department of Public Works
Bid Postponement Notice**

**Contract No. 201951264
56th Ave. and Pena Blvd. Interchange**

Notice is hereby given that the Sealed Bid Opening for Contract No. 201951264 – 56th Ave. and Pena Blvd. Interchange, is hereby postponed. Sealed bids will be received in Room 6.G.7., 201 W. Colfax Ave., Denver, CO 80202, no later than:

11:00am, local time

September 12, 2019

Published in the Daily Journal on August 27, 28 and 29, 2019.

II. QUESTIONS DEADLINE

The Questions Deadline for this Contract No 201951264, procurement shall be extended to **September 3, 2019, no later than 10:00 a.m. Local Time**. All questions must be submitted in written form to PW.Procurement@denvergov.org.

III. QUESTIONS AND ANSWERS

Q1: Who will be removing and replacing the existing fiber optic cable?

A1: The Contractor. Item and Specifications have been added to the SAQ.

Q2: What is the count and type of fiber that will be replaced?

**A2: Items and specifications have been added to the SAQ.
Fiber Optic Cable Denver Hybrid 12 Fiber (6 SM) (6 MM)
Fiber Optic Cable Denver Hybrid 96 Fiber (84 SM) (12 MM)**

Q3: There are 8 Type C pull boxes to be installed per the table on sheet 13. The notes also say they are to be included in the cost of the conduit, but there is a pay item amount of 4. Please clarify.

A3: These are the same pull boxes. The 613-0700C (Type C) pull box 4EA will be paid for 2 at each intersection as shown in the plans on sheets 128 and 129. Otherwise, anticipate that pull boxes for longer run fiber in the table on Sheet 13 are subsidiary to conduit.

Q4: There is not a pay item for the vacuumed caissons as indicated on sheet 42 of the specifications. Please clarify.
A4: The project used drilled caissons, the vacuumed caisson item is not used. This spec is the current CCD traffic special and offers the vacuumed caisson option if approved by the Engineer.

Q5: The specifications require a UPS for each intersection. Not a pay item.
A5: The previous version of the CCD traffic special included the UPS in the cost of the traffic signal controller and cabinet (install only). This item and quantity (2 EA) are added to the SAQ per the current spec.

Q6: Is the city going to apply MGPEC specs on concrete? The specs on air is different than CDOTs.
A6: Yes. Air will be 4.5-7.5%. Dave Potter will be the person at the City approving mix submittals.

Q7: Is DEN going to be involved in approval and acceptance of the pond and ramps?
A7: CCD Public Works will be providing inspection and approval of the Water Quality Pond and segments of ramps that fall within the construction limits shown within the contract documents. See A10 in this addendum #2 for additional ramp information.

Q8: Is CCD be the one approving storm drain systems including the pond features?
A8: Yes. General note 10. The pond will need to be certified as well.

Q9: Is the City going to require presence of CCD Storm personnel during construction of storm drain systems?
A9: The City will invite CCD wastewater to inspect facilities being constructed by the contractor. General note 10, construct facilities in accordance with wastewater standard details and specifications.

Q10: Is the contractor responsible for coordination with DEN? Will DEN be performing inspections?
A10: Coordination with DEN staff will be required as follows;
Contractor shall acquire an Access Permit through DEN for any non-intrusive work that occurs on DEN Property (i.e. On/Off Ramp Phasing Traffic Control or Signing on Pena Blvd.) The Contractor shall be required to provide insurance certificates and agreeance to the terms of this permit before any modifications, additions, or changes to DEN property occur. Once the Contract is awarded, DEN will coordinate with the CCD Public Works Project Manger to execute said permit.

Once the Access Permit is executed, DEN requires the following to occur for communication of lane closures, detours, lane shifts, etc...

- a. Attached or included within the addendum is a template System Shutdown Request and MHT Checklist that shall be submitted through CCD Public Work Project Manager a minimum of 5 days in advance of the intended impacted area of DEN Property.**
- b. The CCD Public Works Manager will then coordinate with DEN to obtain approval of the Shutdown Request, which approval will be granted within 5 days of the request.**
- c. Each Shutdown Request submitted shall include a Method of Handling Traffic (MHT) that complies with the latest version of the MUTCD and/or CDOT Standards. It shall include all items identified on the MHT Checklist before approval of the Shutdown Request maybe submitted.**
- d. Coordination with a DEN Inspector will be required for general communication with traffic control or impacts to DEN Property. The DEN Inspector will also act as the laisson for any emergency impacts to Pena Blvd. and 56th Avenue. They will also communicate with DEN Operations for any lane closures, traffic switches, or any other impacts to DEN Property. All communication will be through the City and**

County of Denver Public Works Project Manager, or his or her designated representative.

Q11: Is the city administering construction, or it's via consultant? Will CCD have someone on the project full time?

A11: CCD will be administering construction with some construction support from the consultant. CCD is anticipating having personnel as a daily presence onsite but may not be there full time.

Q12: Please clarify general conditions on payment schedule. Textura payment has not been expedient in getting timely pay app issued to Contractors.

A12: Payment schedule will be monthly. To expedite approvals, work with the City Inspectors for agreed upon quantities prior to textura submittals. If there is disagreement, submit what is agreed upon.

Q13: Are the 266's required to be done by the contractor or by the city?

A13: The City will fill out COOT form 266 if the contractor is able to promptly and regularly provide City daily production values. If we cannot get this promptly and regularly, we will ask the Contractor to fill out 266s.

Q14: There is no pay item for construction surveying. Please clarify.

A14: Construction Surveying (LS) has been added to the SAQ.

Q15: Is the City be requiring As-Builts? If so how is this going to be paid?

A15: As-builts are incidental to construction

Q16: Is the City going to require the pond to be certified? If so how is this going to be paid?

A16: Yes, the pond is required to be certified. See submittal requirements in the Storm Drainage Design & Technical Criteria Jan 2006. This certification is considered incidental to construction.

Q17: Please verify TCM and TCI quantities. There is more inspections than actual management.

A17: Traffic Control Management quantity is the estimated number of days where active traffic control occurs (such as flagging, uniformed traffic control, or setting up/changing/removing construction zones). Traffic control devices that are left in place are not considered active traffic control and will need Traffic Control Inspection on every calendar day that there is no other traffic control activities. This project assumes active traffic control (TCM) about 30% of the calendar days and inspections (TCI) only for 60% of the days. However, this quantity may vary based on the contractor's traffic control plan as approved by CCD Construction Engineering and Traffic Engineering departments.

Q18: System Shut Down may be required at Pena Blvd as this project ties into the existing ramps. Please confirm with DEN what constraints on peak time hours as far as traffic control requirements.

A18: Typical hours of operation on OB Pena Blvd. are from 11:00 p.m. to 7:00 a.m. and 8:00 p.m. to 4:00 a.m. on IB Pena. Working hours maybe subject to change based upon the operational needs of DEN and will be coordinated with the CCD Public Works Project Manager.

Q19: Does the City have a RR agreement with RTD that would preclude the Contractor having to abide by the RTD specs?

A19: The contractor will need to fill out the ROE permit and obtain access permit which is in the project specifications. The contractor will need to abide by PSPs and Denver/CDOT standard specifications.

Q20: The RTD Forms indicate requiring an Access Permit when working within 25 feet with OTO Safety training requirements for Contractors and subcontractors. Is the City going to reimburse any costs incurred by Contractor and subs to meet these RTD requirements?

A20: The city will not reimburse costs incurred by the contractor and these costs should be incorporated into mobilization, etc however the contractor sees fit.

Q21: Can you please confirm the measurement and payment for Bid Item 203-00050 Unsuitable Material? Specifically, are we required for disposal and hauling of unsuitable material offsite?

A21: The measurement of unsuitable material is all materials in the detention pond area. The Site Characterization memo (as part of addenda #1) describes material as follows:

“Although soil from the planned detention pond/former wastewater lagoon met residential standards, conditions may be variable and not encountered within the three, two-inch diameter soil borings. Pinyon recommends that an environmental professional be present during soil excavation to field screen and separate soil that is not suitable for reuse or, out of an abundance of caution, dispose the soil from this area at DADS.”

Out of an abundance of caution, the plans specify this material as unsuitable. However, the contractor may be able to reuse this material onsite if determined.

Q22: Per the Bid Documents Package the estimated construction cost for the project is between \$5,100,000 and \$5,700,000. Bid Item 700-70023 F/A On the Job Trainee is for only 640Hrs, however based on the OJT Goal table provided on BDP-77, the Minimum Total Training hours to be provided on the project is 1280Hrs for Contracts ranging from \$4M - \$6M. Please confirm the correct amount of On the Job training we will be required to provide.

A22: OJT goals in the table noted on BDP-77 is a recommendation and a variety of factors go into setting the final goal for a particular project. The OJT goals on this project are set at 640 hours as listed in the bid documents and this is correct.

Q23: Per the Bid Documents Package, the DBE goal for this project is 12%. However, the goals for Minority Participation is 13.8% and Female Participation is 6.9%. Don't these goals for Minority/Female Participation contradict with the project specific DBE goal of 12%? Please confirm/clarify the MBE/WBE/DBE requirements for this project.

A23: The minority and female participation percentages are associated with the Equal Employment Opportunity (EEO) title of the Civil Rights Act and are percentages set by the Department of Labor and apply to the contractor's aggregate workforce whether or not it is Federally involved construction. All subcontracts in excess of \$10,000 are also subject to these provisions. The contractor is subject to EEO provisions on all City and County of Denver contracts. For any additional questions, please contact the Denver Economic Development & Opportunity Office.

The DBE goals are set by CDOT and appropriate forms must be submitted to ensure DBE goals are met. All values are correct as listed in the contract.

Q24: I am coming up with a different quantity of Manholes on the project based on the plans compared to the bid form. Can you please confirm the MH#s associated with the following bid items:

- 604-30010: Manhole Slab Base (10 Foot) - 5 EACH
- 604-39005: Manhole Special (5 Foot) - 3 EACH
- 604-3900X: Manhole Special (9ft Dia)(10 Foot) 1 EACH

A24: These quantities are correct. See note 4 in structural quantity table (sheet 14) for 604-3900X item description.

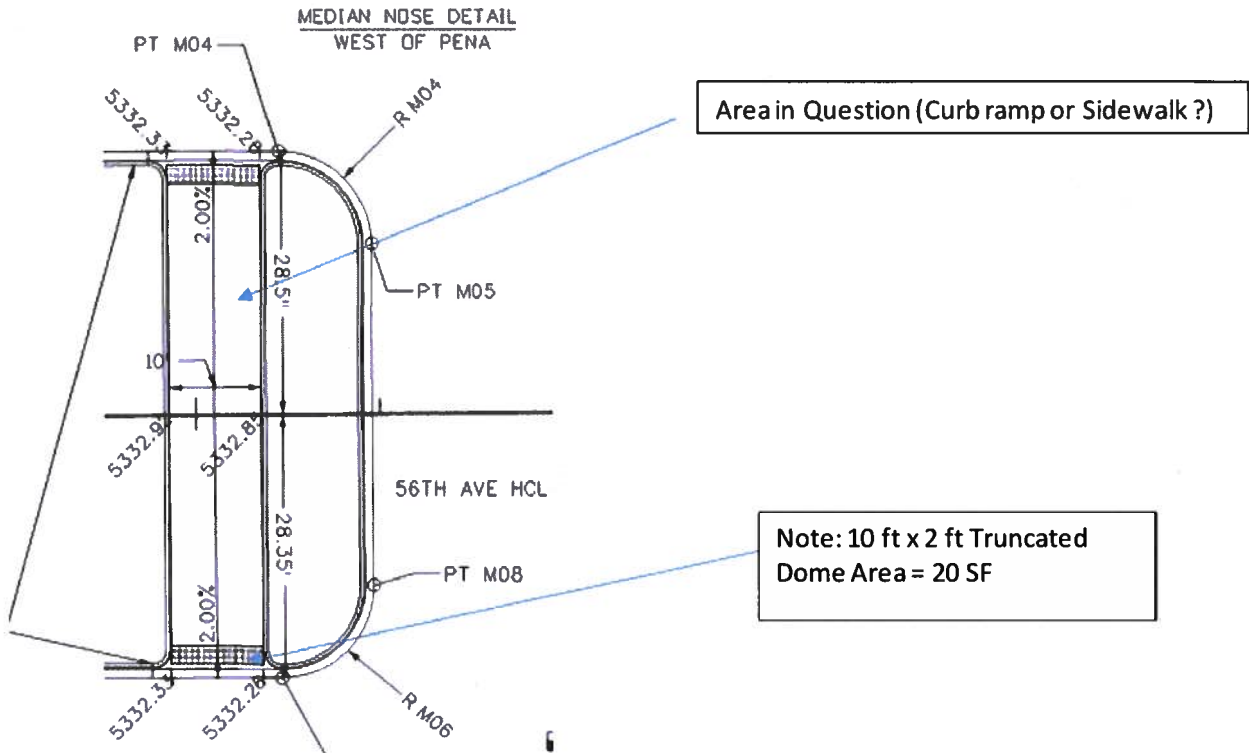
Q25: On sheet 13 inter the Tabulation of Concrete Items, at STA 344+72 to 350+36 , Remarks states, “ CURB TYPE 2 is 12” Tall “ but there is no curb type 2 listed at this location, is the Type 2 Section II-B to be a 12 Inch Curb Head?

A25: No. Disregard the remark in table.

Q26: Can you please confirm the detectable warning area, the 20 sf that is listed only seems covers one ramp location. Note sheet 13 , CONCRETE ITEM NOTE 4. Truncated Domes are included in the cost of the Concrete Curb Ramp. Curb Ramps Shall be Constructed Per CCD Transportation Standard Details 7.0-7.9 (Curb Ramps) Should this be a separate pay Item?

A26: In this location, the multi-use path ends at Buckley Rd without a curb ramp, so the domes should be installed in the concrete sidewalk and be paid for separately and installed 6" from the end of the path.

Q27: Is the area in the median islands between the ramps going to be paid as curb ramp or sidewalk. (see drawing below)



A27: Pay for the median pedestrian area as curb ramp.

Q28: What will be required for the Temporary seeding , no spec provided.

A28: The UDFCD Storm Drainage Criteria Manual Volume 3, Construction BMP EC-02 Temporary and Permanent Seeding lists annual grasses suitable for the Denver metropolitan area in Table TS/PS-1.

Q29: How Is the excavation and backfill for the slope and ditch paving item paid for? What is required for backfill and bedding material of the ditch lining.

A29: Excavation is included in the unclassified excavation quantity for the roadway. Per CDOT M-203-1, concrete-lined ditches (paid for as slope and ditch paving) do not require a bedding material.

Q30: Does the median terminal item include an impact attenuator.

A30: Yes, the median terminal is an impact attenuator per CDOT M-606-1, sheet 10 of 19.

Q31: 30 Inch RCP noted between MH 8 and MH 7 and no bid item for 30" RCP? See Sheet 61 Line B.

A31: Already answered in addenda 1. Items added.

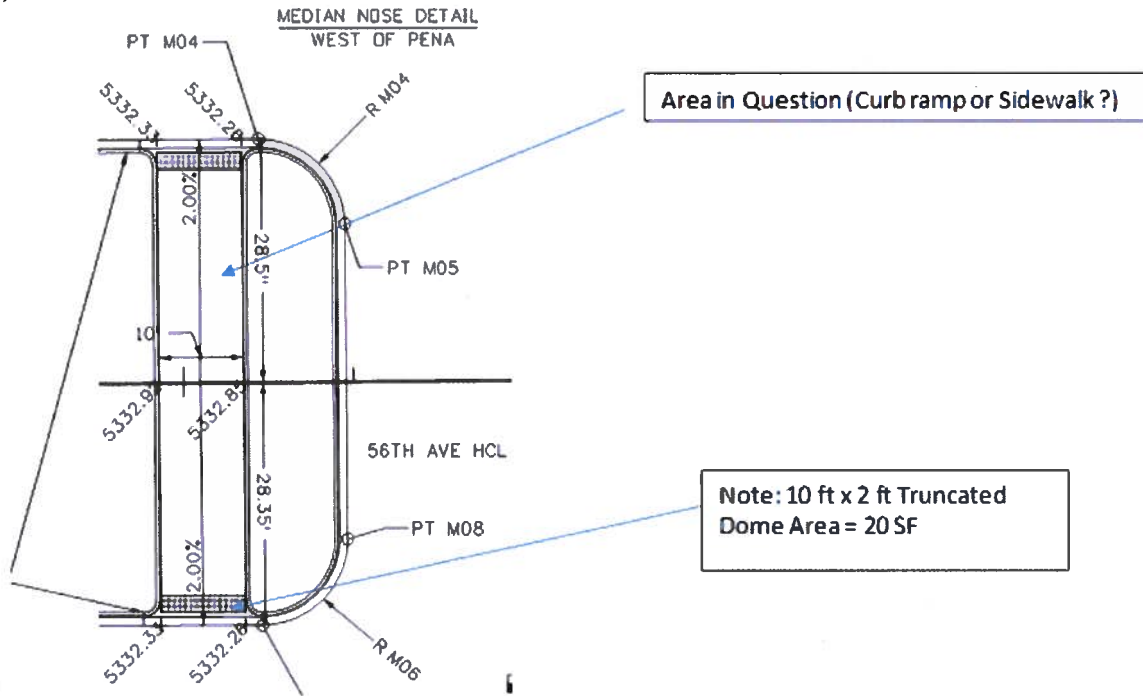
Q32: On sheet 13 inter the Tabulation of Concrete Items, at STA 344+72 to 350+36 , Remarks states, " CURB TYPE 2 is 12" Tall " but there is no curb type 2 listed at this location, is the Type 2 Section II-B to be a 12 Inch Curb Head?

A32: Duplicate. See Q25

Q33: Can you please confirm the detectable warning area, the 20 sf that is listed only seems covers one ramp location. Note sheet 13 , CONCRETE ITEM NOTE 4. Truncated Domes are included in the cost of the Concrete Curb Ramp. Curb Ramps Shall be Constructed Per CCD Transportation Standard Details 7.0-7.9 (Curb Ramps) Should this be a separate pay Item?

A33: Duplicate. See Q26

Q34: Is the area in the median islands between the ramps going to be paid as curb ramp or sidewalk. (see drawing below)



A34: Duplicate See Q27

Q35: What will be required for the Temporary seeding , no spec provided.

A35: Duplicate. See Q28

Q36: How Is the excavation and backfill for the slope and ditch paving item paid for? What is required for backfill and bedding material of the ditch lining.

A36: Duplicate. See Q29

Q37: Does the median terminal item include an impact attenuator.

A37: Duplicate. See Q30.

Q38: Does this project require RR insurance?

A38: Revision of response during Addenda #1. ROE permit for insurance requirements is listed in specifications (Appendix A)

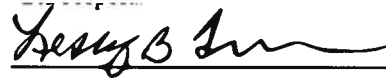
IV. REVISIONS AND/OR ADDED DOCUMENTS

- i. **BID FORM:**
Replace existing pages BF-6.1 through BF-6.15 with BF-6.1-ADD #2 through BF-6.15-ADD #2
- ii. **BID DOCUMENTS PACKAGE:**
Replace existing pages SQ-1 through SQ-9 with SQ-1-ADD #2 through SQ-9-ADD #2
- iii. **LANDSIDE MHT CHECKLIST**
- iv. **SHUTDOWN REQUEST FORM**
- v. **FORM SITE ACCESS PERMIT 2019**

V. TECHNICAL SPECIFICATIONS

- i. **The PROJECT TECHNICAL SPECIFICATIONS, shall hereby be modified to include the following:**
 - (1) REVISION OF SECTION REVISION OF SECTION 613 ELECTRICAL CONDUIT (PLASTIC)
 - (2) REVISION OF SECTION 614 – TRAFFIC CONTROL DEVICES FIBER OPTIC CABLE – GENERAL
 - (3) REVISION OF SECTION 625 CONSTRUCTION SURVEYING

This **ADDENDUM** shall be attached to, become a part of, and be returned with the Bid Proposal.



Lesley B. Thomas
City Engineer

8/27/19

Date

The undersigned bidder acknowledges receipt of this Addendum. The Proposal submitted herewith is in accordance with the stipulations set forth herein.

ADDENDUM NO. 2

Contractor

DATE: _____

REVISIONS AND/OR ADDED DOCUMENTS

Item No.	Description and Price	Estimated Quantity	Estimated Cost
201-00000	Clearing And Grubbing at the unit price of \$ _____ per Lump Sum	1 LS	\$ _____
202-00019	Removal Of Inlet at the unit price of \$ _____ per Each	1 EA	\$ _____
202-00021	Removal Of Manhole at the unit price of \$ _____ per Each	3 EA	\$ _____
202-00032	Removal of Valve at the unit price of \$ _____ per Each	4 EA	\$ _____
202-00035	Removal Of Pipe at the unit price of \$ _____ per Linear Foot	335 LF	\$ _____
202-00037	Removal Of End Section at the unit price of \$ _____ per Each	3 EA	\$ _____
202-00090	Removal of Delineator at the unit price of \$ _____ per Each	5 EA	\$ _____
202-00190	Removal Of Concrete Median Cover Material at the unit price of \$ _____ per Square Yard	165 SY	\$ _____
202-00203	Removal Of Curb And Gutter at the unit price of \$ _____ per Linear Foot	515 LF	\$ _____
202-00220	Removal Of Asphalt Mat at the unit price of \$ _____ per Square Yard	16,829 SY	\$ _____
202-00250	Removal Of Pavement Marking at the unit price of \$ _____ per Square Foot	2,133 SF	\$ _____
202-00750	Removal Of Luminaire at the unit price of \$ _____ per Each	11 EA	\$ _____

Item No.	Description and Price	Estimated Quantity	Estimated Cost
202-00810	Removal Of Ground Sign at the unit price of \$ _____ per Each	11 EA	\$ _____
202-00821	Removal Of Sign Panel at the unit price of \$ _____ per Each	5 EA	\$ _____
202-00828	Removal Of Traffic Signal Equipment at the unit price of \$ _____ per Lump Sum	2 LS	\$ _____
202-01000	Removal Of Fence at the unit price of \$ _____ per Linear Foot	574 LF	\$ _____
202-01130	Removal Of Guardrail Type 3 at the unit price of \$ _____ per Linear Foot	340 LF	\$ _____
202-01170	Removal Of Guardrail Type 7 at the unit price of \$ _____ per Linear Foot	74 LF	\$ _____
202-01300	Removal Of End Anchorage at the unit price of \$ _____ per Each	4 EA	\$ _____
202-04005	Clean Valve Box at the unit price of \$ _____ per Each	9 EA	\$ _____
203-00010	Unclassified Excavation (Complete In Place) at the unit price of \$ _____ per Cubic Yard	14,062 CY	\$ _____
203-00050	Unsuitable Material at the unit price of \$ _____ per Cubic Yard	8,327 CY	\$ _____
203-01597	Potholing at the unit price of \$ _____ per Hour	60 HR	\$ _____
206-00510	Filter Material (Class A) at the unit price of \$ _____ per Cubic Yard	84 CY	\$ _____

Item No.	Description and Price	Estimated Quantity	Estimated Cost
207-00205	Topsoil at the unit price of \$ _____ per Cubic Yard	783 CY	\$ _____
207-00210	Stockpile Topsoil at the unit price of \$ _____ per Cubic Yard	2,046 CY	\$ _____
208-00002	Erosion Log Type 1 (12 Inch) at the unit price of \$ _____ per Linear Foot	1,461 LF	\$ _____
208-00020	Silt Fence at the unit price of \$ _____ per Linear Foot	146 LF	\$ _____
208-00035	Aggregate Bag (Rock Sock) at the unit price of \$ _____ per Linear Foot	920 LF	\$ _____
208-00036	Aggregate Bag (Block and Rock Sock) at the unit price of \$ _____ per Linear Foot	315 LF	\$ _____
208-00037	Aggregate Bag (Rock Sock Area Inlet Protection) at the unit price of \$ _____ per Linear Foot	120 LF	\$ _____
208-00041	Rock Check Dam at the unit price of \$ _____ per Each	2 EA	\$ _____
208-00045X	Concrete Washout Structure at the unit price of \$ _____ per Lump Sum	1 L S	\$ _____
208-00070	Vehicle Tracking Pad at the unit price of \$ _____ per Each	1 EA	\$ _____
208-00521	Temporary Stream Crossing at the unit price of \$ _____ per Each	1 EA	\$ _____

Item No.	Description and Price	Estimated Quantity	Estimated Cost
210-00810	Reset Ground Sign at the unit price of \$ _____ per Each	5 EA	\$ _____
210-00827	Reset Pull Box at the unit price of \$ _____ per Each	1 EA	\$ _____
210-01720	Reset Air Vent at the unit price of \$ _____ per Each	4 EA	\$ _____
210-017XX	Reset Cathodic Test Pole at the unit price of \$ _____ per Each	4 EA	\$ _____
210-04010	Adjust Manhole at the unit price of \$ _____ per Each	10 EA	\$ _____
210-04015	Modify Manhole at the unit price of \$ _____ per Each	6 EA	\$ _____
210-04050	Adjust Valve Box at the unit price of \$ _____ per Each	9 EA	\$ _____
211-03005	Construction Dewatering at the unit price of \$ _____ per Lump Sum	1 LS	\$ _____
212-00006	Seeding (Native) at the unit price of \$ _____ per Acre	4.79 AC	\$ _____
212-00009	Seeding (Temporary) at the unit price of \$ _____ per Acre	0.40 AC	\$ _____
212-00022	Seeding (Riparian) at the unit price of \$ _____ per Acre	0.32 AC	\$ _____
212-00032	Soil Conditioning at the unit price of \$ _____ per Acre	5.11 AC	\$ _____

Item No.	Description and Price	Estimated Quantity	Estimated Cost
213-00003	Mulching (Weed Free) at the unit price of \$ _____ per Acre	5.11 AC	\$ _____
213-00061	Mulch Tackifier at the unit price of \$ _____ per Pound	1,020 LB	\$ _____
216-00111	Soil Retention Blanket (Excelsior)(Photodegradable Class 1) at the unit price of \$ _____ per Square Yard	1,655 SY	\$ _____
216-00301	Turf Reinforcement Mat (Class 1) at the unit price of \$ _____ per Square Yard	4,371 SY	\$ _____
240-00000	Wildlife Biologist at the unit price of \$ _____ per Hour	40 HR	\$ _____
240-00010	Removal Of Nests at the unit price of \$ _____ per Hour	40 HR	\$ _____
240-00020	Netting at the unit price of \$ _____ per Square Yard	2,834 SY	\$ _____
240-00100	Prairie Dog Management at the unit price of \$ _____ per Lump Sum	1 LS	\$ _____
250-00010	Environmental Health and Safety Management at the unit price of \$ _____ per Lump Sum	1 LS	\$ _____
304-06007	Aggregate Base Course (Class 6) at the unit price of \$ _____ per Cubic Yard	4,325 CY	\$ _____
403-33841	Hot Mix Asphalt (Grading S) (100) (PG 64-22) at the unit price of \$ _____ per Ton	9,063 TN	\$ _____

Item No.	Description and Price	Estimated Quantity	Estimated Cost
403-34871	Hot Mix Asphalt (Grading SX) (100) (PG 76-28) at the unit price of \$ _____ per Ton	2,592 TN	\$ _____
411-10255	Emulsified Asphalt (Slow-Setting) at the unit price of \$ _____ per Gallon	2,336 GAL	\$ _____
412-00800	Concrete Pavement (8 Inch) at the unit price of \$ _____ per Square Yard	66 SY	\$ _____
503-00036	Drilled Caisson (36 Inch) at the unit price of \$ _____ per Linear Foot	70 LF	\$ _____
503-00048	Drilled Caisson (48 Inch) at the unit price of \$ _____ per Linear Foot	85 LF	\$ _____
506-00212	Riprap (12 Inch) at the unit price of \$ _____ per Cubic Yard	142 CY	\$ _____
506-00218	Riprap (18 Inch) at the unit price of \$ _____ per Cubic Yard	17 CY	\$ _____
507-00100	Concrete Slope and Ditch Paving (Reinforced) at the unit price of \$ _____ per Cubic Yard	89 CY	\$ _____
514-00042	Pedestrian Railing (42 Inch) at the unit price of \$ _____ per Linear Foot	539 LF	\$ _____
601-01000	Concrete Class B at the unit price of \$ _____ per Cubic Yard	9.2 CY	\$ _____
603-01155	15 Inch Reinforced Concrete Pipe (Complete In Place) at the unit price of \$ _____ per Linear Foot	33 LF	\$ _____

Item No.	Description and Price	Estimated Quantity	Estimated Cost
603-01185	18 Inch Reinforced Concrete Pipe (Complete In Place) at the unit price of \$ _____ per Linear Foot	330 LF	\$ _____
603-01245	24 Inch Reinforced Concrete Pipe (Complete In Place) at the unit price of \$ _____ per Linear Foot	280 LF	\$ _____
603-01305	30 Inch Reinforced Concrete Pipe (Complete In Place) at the unit price of \$ _____ per Linear Foot	27 LF	\$ _____
603-01365	36 Inch Reinforced Concrete Pipe (Complete In Place) at the unit price of \$ _____ per Linear Foot	195 LF	\$ _____
603-01425	42 Inch Reinforced Concrete Pipe (Complete In Place) at the unit price of \$ _____ per Linear Foot	602 LF	\$ _____
603-01485	48 Inch Reinforced Concrete Pipe (Complete In Place) at the unit price of \$ _____ per Linear Foot	201 LF	\$ _____
603-02245	30x19 Inch Reinforced Concrete Pipe Elliptical (Complete In Place) at the unit price of \$ _____ per Linear Foot	374 LF	\$ _____
603-02300	38x24 Inch Reinforced Concrete Pipe Elliptical at the unit price of \$ _____ per Linear Foot	107 LF	\$ _____
603-05015	15 Inch Reinforced Concrete End Section at the unit price of \$ _____ per Each	2 EA	\$ _____
603-05018	18 Inch Reinforced Concrete End Section at the unit price of \$ _____ per Each	4 EA	\$ _____

Item No.	Description and Price	Estimated Quantity	Estimated Cost
603-05024	24 Inch Reinforced Concrete End Section at the unit price of \$ _____ per Each	2 EA	\$ _____
603-05036	36 Inch Reinforced Concrete End Section at the unit price of \$ _____ per Each	1 EA	\$ _____
603-05048	48 Inch Reinforced Concrete End Section at the unit price of \$ _____ per Each	1 EA	\$ _____
604-19005	Inlet Special (5 Foot) (6'W) at the unit price of \$ _____ per Each	8 EA	\$ _____
604-19006	Inlet Special (5-Foot) (12'W) at the unit price of \$ _____ per Each	2 EA	\$ _____
604-30010	Manhole Slab Base (10 Foot) at the unit price of \$ _____ per Each	5 EA	\$ _____
604-39005	Manhole Special (5 Foot) at the unit price of \$ _____ per Each	3 EA	\$ _____
604-3900X	Manhole Special (9 Ft Dia)(10 Foot) at the unit price of \$ _____ per Each	1 EA	\$ _____
606-00710	Guardrail Type 7 (Style CA) at the unit price of \$ _____ per Linear Foot	375 LF	\$ _____
606-00730	Guardrail Type 7 (Style CD) at the unit price of \$ _____ per Linear Foot	86 LF	\$ _____
606-01460	Median Terminal at the unit price of \$ _____ per Each	4 EA	\$ _____

Item No.	Description and Price	Estimated Quantity	Estimated Cost
607-11525	Fence (Plastic) at the unit price of \$ _____ per Linear Foot	143 LF	\$ _____
607-53160	Fence Chain Link (60 Inch) at the unit price of \$ _____ per Linear Foot	810 LF	\$ _____
608-00006	Concrete Sidewalk (6 Inch) at the unit price of \$ _____ per Square Yard	2,300 SY	\$ _____
608-00010	Concrete Curb Ramp at the unit price of \$ _____ per Square Yard	266 SY	\$ _____
608-00015	Detectable Warnings at the unit price of \$ _____ per Square Foot	20 SF	\$ _____
609-07000	Curb and Gutter-Trickle Channel at the unit price of \$ _____ per Cubic Yard	236 CY	\$ _____
609-07001	Pond Outlet Structure at the unit price of \$ _____ per Each	1 EA	\$ _____
609-07002	Forebay at the unit price of \$ _____ per Each	2 EA	\$ _____
609-20010	Curb Type 2 (Section B) at the unit price of \$ _____ per Linear Foot	532 LF	\$ _____
609-21010	Curb And Gutter Type 2 (Section I-B) at the unit price of \$ _____ per Linear Foot	2,849 LF	\$ _____
609-21020	Curb And Gutter Type 2 (Section II-B) at the unit price of \$ _____ per Linear Foot	3,735 LF	\$ _____

Item No.	Description and Price	Estimated Quantity	Estimated Cost
609-21021	Curb And Gutter Type 2 (Section II-M) at the unit price of \$ _____ per Linear Foot	32 LF	\$ _____
609-24008	Gutter Type 2 (8 Foot) at the unit price of \$ _____ per Linear Foot	236 LF	\$ _____
610-00024	Median Cover Material (4 inch Patterned Concrete) at the unit price of \$ _____ per Square Foot	1,039 SF	\$ _____
613-00206	2 Inch Electrical Conduit (Bored) at the unit price of \$ _____ per Linear Foot	4,586 LF	\$ _____
613-00306	3 Inch Electrical Conduit (Bored) at the unit price of \$ _____ per Linear Foot	2,093 LF	\$ _____
613-01100	1 Inch Electrical Conduit (Plastic) at the unit price of \$ _____ per Linear Foot	480 LF	\$ _____
613-01300	3 Inch Electrical Conduit (Plastic) at the unit price of \$ _____ per Linear Foot	2,934 LF	\$ _____
613-07001	Type One Pull Box at the unit price of \$ _____ per Each	23 EA	\$ _____
613-07002	Type Two Pull Box at the unit price of \$ _____ per Each	10 EA	\$ _____
613-0700C	Pull Box (Type C) at the unit price of \$ _____ per Each	4 EA	\$ _____
613-10000	Wiring at the unit price of \$ _____ per Lump Sum	1 LS	\$ _____

Item No.	Description and Price	Estimated Quantity	Estimated Cost
613-13016	Luminaire (LED) (16,000 LUMENS) at the unit price of \$ _____ per Each	27 EA	\$ _____
613-130XX	Luminaire (LED) (5,300 LUMENS) at the unit price of \$ _____ per Each	10 EA	\$ _____
613-32300	Light Standard Steel (30 Foot) at the unit price of \$ _____ per Each	27 EA	\$ _____
613-40000	Concrete Foundation Pad at the unit price of \$ _____ per Each	2 EA	\$ _____
613-40010	Light Standard Foundation at the unit price of \$ _____ per Each	27 EA	\$ _____
613-50150X	Electric Meter Pedestal at the unit price of \$ _____ per Each	2 EA	\$ _____
614-00011	Sign Panel (Class I) at the unit price of \$ _____ per Square Foot	242 SF	\$ _____
614-00012	Sign Panel (Class II) at the unit price of \$ _____ per Square Foot	219.5 SF	\$ _____
614-00035	Sign Panel (Special) at the unit price of \$ _____ per Square Foot	66 SF	\$ _____
614-00216	Steel Sign Post (2x2 Inch Tubing) at the unit price of \$ _____ per Linear Foot	377.5 LF	\$ _____
614-70150	Pedestrian Signal Face (16) (Countdown) at the unit price of \$ _____ per Each	16 EA	\$ _____

Item No.	Description and Price	Estimated Quantity	Estimated Cost
614-70336	Traffic Signal Face (12-12-12) at the unit price of \$ _____ per Each	24 EA	\$ _____
614-72860	Pedestrian Push Button at the unit price of \$ _____ per Each	16 EA	\$ _____
614-72866	Fire Preemption Unit And Timer at the unit price of \$ _____ per Each	6 EA	\$ _____
614-7288X	Intersection Detection System (3 Camera) at the unit price of \$ _____ per Each	2 EA	\$ _____
614-75848	Traffic Signal Controller and Cabinet at the unit price of \$ _____ per Each	2 EA	\$ _____
614-81000	Traffic Signal-Light Pole Steel at the unit price of \$ _____ per Each	4 EA	\$ _____
614-81155	Traffic Signal-Light Pole Steel (1-55 Foot Mast Arm) at the unit price of \$ _____ per Each	1 EA	\$ _____
614-81160	Traffic Signal Light Pole Steel (1-60 Foot Mast Arm) at the unit price of \$ _____ per Each	2 EA	\$ _____
614-81170	Traffic Signal Light Pole Steel (1-70 Foot Mast Arm) at the unit price of \$ _____ per Each	3 EA	\$ _____
614-84010	Traffic Signal Pedestal Pole Steel (10 Foot) at the unit price of \$ _____ per Each	2 EA	\$ _____
614-86105	Telemetry (Field) at the unit price of \$ _____ per Each	2 EA	\$ _____

Item No.	Description and Price	Estimated Quantity	Estimated Cost
614-87333	Closed Circuit Television Camera (Traffic Surveillance) at the unit price of \$ _____ per Each	2 EA	\$ _____
614-99001	Fiber Optic Cable Denver Hybrid 12 Fiber (6SM) (6MM) at the unit price of \$ _____ per Linear Foot	2,934 LF	\$ _____
614-99002	Fiber Optic Cable Denver Hybrid 96 Fiber (84SM) (12MM) at the unit price of \$ _____ per Linear Foot	2,706 LF	\$ _____
618-86800	Uninterrupted Power Supply at the unit price of \$ _____ per Each	2 EA	\$ _____
621-00450	Detour Pavement at the unit price of \$ _____ per Square Yard	712 SY	\$ _____
623-00602	2 Inch Plastic Pipe (Irrigation/Sleeve) at the unit price of \$ _____ per Linear Foot	320 LF	\$ _____
623-00604	4 Inch Plastic Pipe (Irrigation/Sleeve) at the unit price of \$ _____ per Linear Foot	320 LF	\$ _____
625-00000	Construction Surveying at the unit price of \$ _____ per Lump Sum	1 LS	\$ _____
626-00000	Mobilization at the unit price of \$ _____ per Lump Sum	1 LS	\$ _____
627-00005	Epoxy Pavement Marking at the unit price of \$ _____ per Gallon	73 GAL	\$ _____
627-00013	Pavement Marking Paint (High Build) at the unit price of \$ _____ per Gallon	90 GAL	\$ _____

Item No.	Description and Price	Estimated Quantity	Estimated Cost
627-02010	Preformed Plastic Pavement Marking (Type II) (Inlaid) at the unit price of \$ _____ per Square Foot	273 SF	\$ _____
627-30405	Preformed Thermoplastic Pavement Marking (Word-Symbol) at the unit price of \$ _____ per Square Foot	58 SF	\$ _____
627-30410	Preformed Thermoplastic Pavement Marking (Xwalk-Stop Line) at the unit price of \$ _____ per Square Foot	1,570 SF	\$ _____
630-00000	Flagging at the unit price of \$ _____ per Hour	40 HR	\$ _____
630-00003	Uniformed Traffic Control at the unit price of \$ _____ per Hour	20 HR	\$ _____
630-00007	Traffic Control Inspection at the unit price of \$ _____ per Day	180 DAY	\$ _____
630-00012	Traffic Control Management at the unit price of \$ _____ per Day	72 DAY	\$ _____
630-80335	Barricade (Type 3 M-A) (Temporary) at the unit price of \$ _____ per Each	4 EA	\$ _____
630-80341	Construction Traffic Sign (Panel Size A) at the unit price of \$ _____ per Each	24 EA	\$ _____
630-80342	Construction Traffic Sign (Panel Size B) at the unit price of \$ _____ per Each	4 EA	\$ _____

Item No.	Description and Price	Estimated Quantity	Estimated Cost
630-80355	Portable Message Sign Panel at the unit price of \$ _____ per Each	2 EA	\$ _____
630-80356	Advance Warning Flashing Or Sequencing Arrow Panel (A Type) at the unit price of \$ _____ per Each	2 EA	\$ _____
630-80360	Drum Channelizing Device at the unit price of \$ _____ per Each	145 EA	\$ _____
700-70023	F/A On the Job Trainee at the unit price of \$ _____ per Hour	640 HR	\$ _____
700-70589	F/A Environmental Health & Safety Management at the unit price of \$ _____ per Force Account	1 FA	\$ _____
700-90064	F/A Furnish And Install Electrical Service at the unit price of \$ _____ per Force Account	1 FA	\$ _____



DENVER
THE MILE HIGH CITY
CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS

STATEMENT OF QUANTITIES

Item No.	Description	Estimated	Quantity
201-00000	Clearing And Grubbing	1	LS
202-00019	Removal Of Inlet	1	EA
202-00021	Removal Of Manhole	3	EA
202-00032	Removal of Valve	4	EA
202-00035	Removal Of Pipe	335	LF
202-00037	Removal Of End Section	3	EA
202-00090	Removal of Delineator	5	EA
202-00190	Removal Of Concrete Median Cover Material	165	SY
202-00203	Removal Of Curb And Gutter	515	LF
202-00220	Removal Of Asphalt Mat	16,829	SY
202-00250	Removal Of Pavement Marking	2,133	SF
202-00750	Removal Of Luminaire	11	EA
202-00810	Removal Of Ground Sign	11	EA
202-00821	Removal Of Sign Panel	5	EA
202-00828	Removal Of Traffic Signal Equipment	2	LS
202-01000	Removal Of Fence	574	LF
202-01130	Removal Of Guardrail Type 3	340	LF
202-01170	Removal Of Guardrail Type 7	74	LF
202-01300	Removal Of End Anchorage	4	EA



DENVER
THE MILE HIGH CITY
CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS

STATEMENT OF QUANTITIES

Item No.	Description	Estimated	Quantity
202-04005	Clean Valve Box	9	EA
203-00010	Unclassified Excavation (Complete In Place)	14,062	CY
203-00050	Unsuitable Material	8,327	CY
203-01597	Potholing	60	HR
206-00510	Filter Material (Class A)	84	CY
207-00205	Topsoil	783	CY
207-00210	Stockpile Topsoil	2,046	CY
208-00002	Erosion Log Type 1 (12 Inch)	1,461	LF
208-00020	Silt Fence	146	LF
208-00035	Aggregate Bag (Rock Sock)	920	LF
208-00036	Aggregate Bag (Block and Rock Sock)	315	LF
208-00037	Aggregate Bag (Rock Sock Area Inlet Protection)	120	LF
208-00041	Rock Check Dam	2	EA
208-00045X	Concrete Washout Structure	1	LS
208-00070	Vehicle Tracking Pad	1	EA
208-00521	Temporary Stream Crossing	1	EA
210-00810	Reset Ground Sign	5	EA
210-00827	Reset Pull Box	1	EA
210-01720	Reset Air Vent	4	EA



DENVER
THE MILE HIGH CITY
CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS

STATEMENT OF QUANTITIES

Item No.	Description	Estimated	Quantity
210-017XX	Reset Cathodic Test Pole	4	EA
210-04010	Adjust Manhole	10	EA
210-04015	Modify Manhole	6	EA
210-04050	Adjust Valve Box	9	EA
211-03005	Construction Dewatering	1	LS
212-00006	Seeding (Native)	4.79	AC
212-00009	Seeding (Temporary)	0.4	AC
212-00022	Seeding (Riparian)	0.32	AC
212-00032	Soil Conditioning	5.11	AC
213-00003	Mulching (Weed Free)	5.11	AC
213-00061	Mulch Tackifier	1,020	LB
216-00111	Soil Retention Blanket (Excelsior)(Photodegradable Class 1)	1,655	SY
216-00301	Turf Reinforcement Mat (Class 1)	4,371	SY
240-00000	Wildlife Biologist	40	HR
240-00010	Removal Of Nests	40	HR
240-00020	Netting	2,834	SY
240-00100	Prairie Dog Management	1	LS
250-00010	Environmental Health and Safety Management	1	LS
304-06007	Aggregate Base Course (Class 6)	4,325	CY



DENVER
THE MILE HIGH CITY
CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS

STATEMENT OF QUANTITIES

Item No.	Description	Estimated	Quantity
403-33841	Hot Mix Asphalt (Grading S) (100) (PG 64-22)	9,063	TN
403-34871	Hot Mix Asphalt (Grading SX) (100) (PG 76-28)	2,592	TN
411-10255	Emulsified Asphalt (Slow-Setting)	2,336	GAL
412-00800	Concrete Pavement (8 Inch)	66	SY
503-00036	Drilled Caisson (36 Inch)	70	LF
503-00048	Drilled Caisson (48 Inch)	85	LF
506-00212	Riprap (12 Inch)	142	CY
506-00218	Riprap (18 Inch)	17	CY
507-00100	Concrete Slope and Ditch Paving (Reinforced)	89	CY
514-00042	Pedestrian Railing (42 Inch)	539	LF
601-01000	Concrete Class B	9.2	CY
603-01155	15 Inch Reinforced Concrete Pipe (Complete In Place)	33	LF
603-01185	18 Inch Reinforced Concrete Pipe (Complete In Place)	330	LF
603-01245	24 Inch Reinforced Concrete Pipe (Complete In Place)	280	LF
603-01305	30 Inch Reinforced Concrete Pipe (Complete In Place)	27	LF
603-01365	36 Inch Reinforced Concrete Pipe (Complete In Place)	195	LF
603-01425	42 Inch Reinforced Concrete Pipe (Complete In Place)	602	LF
603-01485	48 Inch Reinforced Concrete Pipe (Complete In Place)	201	LF



STATEMENT OF QUANTITIES

Item No.	Description	Estimated	Quantity
603-02245	30x19 Inch Reinforced Concrete Pipe Elliptical (Complete In Place)	374	LF
603-02300	38x24 Inch Reinforced Concrete Pipe Elliptical	107	LF
603-05015	15 Inch Reinforced Concrete End Section	2	EA
603-05018	18 Inch Reinforced Concrete End Section	4	EA
603-05024	24 Inch Reinforced Concrete End Section	2	EA
603-05036	36 Inch Reinforced Concrete End Section	1	EA
603-05048	48 Inch Reinforced Concrete End Section	1	EA
604-19005	Inlet Special (5 Foot) (6'W)	8	EA
604-19006	Inlet Special (5-Foot) (12'W)	2	EA
604-30010	Manhole Slab Base (10 Foot)	5	EA
604-39005	Manhole Special (5 Foot)	3	EA
604-3900X	Manhole Special (9 Ft Dia)(10 Foot)	1	EA
606-00710	Guardrail Type 7 (Style CA)	375	LF
606-00730	Guardrail Type 7 (Style CD)	86	LF
606-01460	Median Terminal	4	EA
607-11525	Fence (Plastic)	143	LF
607-53160	Fence Chain Link (60 Inch)	810	LF
608-00006	Concrete Sidewalk (6 Inch)	2,,300	SY
608-00010	Concrete Curb Ramp	266	SY



DENVER
THE MILE HIGH CITY
CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS

STATEMENT OF QUANTITIES


<u>Item No.</u>	<u>Description</u>	<u>Estimated</u>	<u>Quantity</u>
608-00015	Detectable Warnings	20	SF
609-07000	Curb and Gutter-Trickle Channel	236	CY
609-07001	Pond Outlet Structure	1	EA
609-07002	Forebay	2	EA
609-20010	Curb Type 2 (Section B)	532	LF
609-21010	Curb And Gutter Type 2 (Section I-B)	2,849	LF
609-21020	Curb And Gutter Type 2 (Section II-B)	3,735	LF
609-21021	Curb And Gutter Type 2 (Section II-M)	32	LF
609-24008	Gutter Type 2 (8 Foot)	236	LF
610-00024	Median Cover Material (4 inch Patterned Concrete)	1,039	SF
613-00206	2 Inch Electrical Conduit (Bored)	4,586	LF
613-00306	3 Inch Electrical Conduit (Bored)	2,093	LF
613-01100	1 Inch Electrical Conduit (Plastic)	480	LF
613-01300	3 Inch Electrical Conduit (Plastic)	2,934	LF
613-07001	Type One Pull Box	23	EA
613-07002	Type Two Pull Box	10	EA
613-0700C	Pull Box (Type C)	4	EA
613-10000	Wiring	1	LS
613-13016	Luminaire (LED) (16,000 LUMENS)	27	EA



DENVER
THE MILE HIGH CITY
CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS

STATEMENT OF QUANTITIES

Item No.	Description	Estimated	Quantity
613-130XX	Luminaire (LED) (5,300 LUMENS)	10	EA
613-32300	Light Standard Steel (30 Foot)	27	EA
613-40000	Concrete Foundation Pad	2	EA
613-40010	Light Standard Foundation	27	EA
613-50150X	Electric Meter Pedestal	2	EA
614-00011	Sign Panel (Class I)	242	SF
614-00012	Sign Panel (Class II)	219.5	SF
614-00035	Sign Panel (Special)	66	SF
614-00216	Steel Sign Post (2x2 Inch Tubing)	377.5	LF
614-70150	Pedestrian Signal Face (16) (Countdown)	16	EA
614-70336	Traffic Signal Face (12-12-12)	24	EA
614-72860	Pedestrian Push Button	16	EA
614-72866	Fire Preemption Unit And Timer	6	EA
614-7288X	Intersection Detection System (3 Camera)	2	EA
614-75848	Traffic Signal Controller and Cabinet	2	EA
614-81000	Traffic Signal-Light Pole Steel	4	EA
614-81155	Traffic Signal-Light Pole Steel (1-55 Foot Mast Arm)	1	EA
614-81160	Traffic Signal Light Pole Steel (1-60 Foot Mast Arm)	2	EA
614-81170	Traffic Signal Light Pole Steel (1-70 Foot Mast Arm)	3	EA



DENVER
THE MILE HIGH CITY
CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS

STATEMENT OF QUANTITIES

Item No.	Description	Estimated	Quantity
614-84010	Traffic Signal Pedestal Pole Steel (10 Foot)	2	EA
614-86105	Telemetry (Field)	2	EA
614-87333	Closed Circuit Television Camera (Traffic Surveillance)	2	EA
614-99001	Fiber Optic Cable Denver Hybrid 12 Fiber (6SM) (6MM)	2,934	LF
614-99002	Fiber Optic Cable Denver Hybrid 96 Fiber (84SM) (12MM)	2,706	LF
618-86800	Uninterrupted Power Supply	2	EA
621-00450	Detour Pavement	712	SY
623-00602	2 Inch Plastic Pipe (Irrigation/Sleeve)	320	LF
623-00604	4 Inch Plastic Pipe (Irrigation/Sleeve)	320	LF
625-00000	Construction Surveying	1	LS
626-00000	Mobilization	1	LS
627-00005	Epoxy Pavement Marking	73	GAL
627-00013	Pavement Marking Paint (High Build)	90	GAL
627-02010	Preformed Plastic Pavement Marking (Type II) (Inlaid)	273	SF
627-30405	Preformed Thermoplastic Pavement Marking (Word-Symbol)	58	SF
627-30410	Preformed Thermoplastic Pavement Marking (Xwalk-Stop Line)	1,570	SF
630-00000	Flagging	40	HR



DENVER
 THE MILE HIGH CITY
 CITY AND COUNTY OF DENVER
 DEPARTMENT OF PUBLIC WORKS

STATEMENT OF QUANTITIES

<u>Item No.</u>	<u>Description</u>	<u>Estimated</u>	<u>Quantity</u>
630-00003	Uniformed Traffic Control	20	HR
630-00007	Traffic Control Inspection	180	DAY
630-00012	Traffic Control Management	72	DAY
630-80335	Barricade (Type 3 M-A) (Temporary)	4	EA
630-80341	Construction Traffic Sign (Panel Size A)	24	EA
630-80342	Construction Traffic Sign (Panel Size B)	4	EA
630-80355	Portable Message Sign Panel	2	EA
630-80356	Advance Warning Flashing Or Sequencing Arrow Panel (A Type)	2	EA
630-80360	Drum Channelizing Device	145	EA
700-70023	F/A On the Job Trainee	640	HR
700-70589	F/A Environmental Health & Safety Management	1	FA
700-90064	F/A Furnish And Install Electrical Service	1	FA



Method of Handling Traffic (MHT) Checklist

Denver International Airport – Landside Engineering

Yes	No	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project Name
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Contract Number
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Traffic Control Company's Name
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prime Contractor's Name
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Signature Block including: Traffic Control Supervisor, Project Superintendent
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Detailed diagram showing the location of all traffic control devices
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All construction signs through Traffic Control Zone: e.g. all advanced warning signs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Speed Limit signs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location of flaggers
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tabulation of all traffic control devices
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MUTCD sign designation codes and sizes for all signs used
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Size, location, and spacing of all channelizing devices; cones and drums
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type and location of temporary barriers and barricades
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Temporary striping/re-striping clearly designated
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M&S Standard Case Number or MUTCD Typical Application Number the MHT follows; if the MHT does not follow any Standard Case or Typical Application, a Non-Standard statement shall be clearly placed on the document



Shutdown Request Form

The Shutdown Request form manages the submission and approval of requests to shut down facilities at Denver International Airport. Once submitted, the approval workflow requests approval from the required Approval Groups, tracks the Request Status, and notifies all parties of the progress.

Shutdown Request Details

Request ID	<input type="text" value="Request ID Pending"/>
Request Submitted By	<input type="text"/>
Status	<input type="text" value="Draft"/>
Request Name	<input type="text"/>
Shutdown Request Types	<input type="text" value="Roadway - Landside"/>
Filled out by DEN	
DEN Project Manager	<input type="text"/>
DEN Contact Person	<input type="text"/>
Additional Contact	<input type="text"/>
Contact Radio Channel	<input type="text"/>
Contact Radio Call Sign	<input type="text"/>
Contact Cell Number	<input type="text"/>

Requester Name	<input type="text"/>
Requester Company	<input type="text"/>
Requester Contact	<input type="text"/>
Requester Office Number	<input type="text"/>
Requester Cell Number	<input type="text"/>
Requester Home Number	<input type="text"/>



Shutdown Request Form

Begin Date & Time

Completion Date & Time

Shutdown Purpose

Shutdown Specific Locations

[Please describe the location and attach a map, if applicable]

Shutdown Equipment Affected

Vendors Affected

Filled out by DEN

Attachments?

Yes No

Comments

COMPLETE THIS FORM IN ITS ENTIRETY.

Completed Shutdown Request Forms must be received no later than five (5) working days (Monday - Friday) prior to requested shutdown time.

CITY AND COUNTY OF DENVER
DEPARTMENT OF AVIATION

Denver International Airport
Site Access Permit

THIS SITE ACCESS PERMIT is entered into this ___ day of _____, 2019 between the CITY AND COUNTY OF DENVER, by and through its Department of Aviation ("City") and _____, a _____ [corporation, etc.] [authorized to do business in Colorado] ("Permittee").

RECITALS

The City owns and operates Denver International Airport ("DEN"), and in connection therewith is the owner of certain land in the northeastern portion of Denver and in Adams County; and

Permittee needs temporary site access onto certain DEN property to perform tasks described in this Site Access Permit.

PERMIT

Section 1. Grant of Access; Scope of Work

The Chief Executive Officer of Denver International Airport ("CEO") grants to the Permittee and its employees and subcontractors a permit to enter onto the "Access Property" identified as DEN property depicted on the attached **Exhibit A**. The access granted is nonexclusive and completely revocable by DEN at any time in its sole discretion, and is solely for the purposes and on the terms and conditions set out in this Site Access Permit.

Permittee understands that this Permit is for access ONLY to DEN property, and that it does NOT include any property not managed by DEN, included private property within the area described above, nor does it allow access to designated right-of-way owned or maintained by any entity including the City and County of Denver. Permission to access any private land or right-of-way access procedures must be observed in addition to this Permit.

1.2 The purpose of this Site Access Permit is to grant Permittee non-exclusive access to the Access Property to perform the work described in the attached **Exhibit B, Scope of Work ("Permitted Activities")**. DEN reserves the right to request, review, and approve or deny Permittee's any amendments or modifications to the Permitted Activities.

a. Permittee shall furnish to copies of all data, results, drawings, permits, and construction/completion forms and drawings within five business days of receipt of same by Permittee. Permittee shall transmit copies of all documents to the following **DEN Contact Person**:

NEED CONTACT PERSON

Permittee shall coordinate the access and work performed hereunder with the DEN Contact Person, and access of people and equipment to the Access Property shall be in accordance with his or her instructions. The Permittee shall notify DIA in

writing (to email above) (voice mail message acceptable at 303-342-XXXX) at least 48 hours prior to the start of any work. DEN will provide any necessary instructions regarding access logistics within a reasonable time after Permittee gives such written notice.

- 1.3 Permittee agrees to assume all liability for, and legal title to, all waste materials generated by Permittee in the course of Permittee's work on City property under this Permit. Permittee shall use best efforts to minimize the volume of wastes generated during its work on City property, and shall properly handle, containerize, manage and dispose of all such wastes. Permittee shall not take any action with respect to such wastes that may cause any alteration in the chemical, physical, or biologic nature or characteristics of the wastes while the wastes are on City property. Permittee shall remove all wastes generated as a result of its work from the City's property on or before the expiration date of this Permit or any subsequent extension or renewal thereof.
- 1.4 Permittee shall not damage, destroy or harm the City's property or any improvements thereon, including utilities located upon the City's property, except as clearly stated in the Scope of Work. Permittee shall be solely responsible for locating all overhead, above ground, and underground utilities, including without limitation, electrical, sewer, water and other utilities. The City shall make information available to Permittee regarding any subsurface structures, pipelines or cables that the City has knowledge of, but the City is not under a duty to inspect for the presence of such structures, pipelines or cables. Permittee shall take all necessary precautions to avoid damage to, or injury from, such utilities, and agrees to be solely responsible for any such damage to, or injury from, any such utilities on the City's property which result from the activities conducted by Permittee as specified herein.
- 1.5 Permittee shall at its sole cost provide and **obtain all notices, permits, licenses, or approvals required by any governmental or quasi-governmental entity prior to commencing activities on the City's property.** Any required manifest, license, or permit shall be issued in Permittee's name. Any activity conducted by Permittee, its agents or contractors pursuant to the terms of this Access Permit shall be deemed to be taken only on Permittee's behalf and not as agent for any other party.
- 1.6 Permittee shall notify the City if, during the course of its activities conducted pursuant to this Permit, it discovers what it believes to be issues that must be reported to local, state and federal agencies. The notification to the City must detail Permittee's findings, the reasons why Permittee believes it has a duty to report to the subject agency, and information on when it plans to submit its report to the agency.
- 1.7 If Permittee's activities on City's property disturb in any way the condition of the City's property, Permittee shall, upon completion of the activities, restore the City's property to a condition similar to that which existed prior to the commencement of any activities by Permittee, its agents or contractors under this Permit.
- 1.8 The parties agree that this Site Access Permit is not a lease of the Access Property. Permittee specifically acknowledges and understands that this Site Access Permit is temporary. Improvements made on or to the Access Property by the Permittee shall not obligate DEN to enter into a lease or lease amendment to pay Permittee for such improvements or the removal of such improvements.

Section 2. City's Rights

- 2.1 DEN shall have the exclusive right to control, monitor and establish procedures applicable to Permittee's access to the Access Property. DEN shall have the right to revoke or modify this Site Access Permit at any time.

Section 3. Rights and Duties of Permittee

- 3.1 Non-exclusive. Permittee agrees that its use of the Access Property and any improvements thereon is not exclusive and may be shared and co-occupied by other users.
- 3.2 Compliance with laws. While on the Access Property, Permittee and all persons performing work by, through, or under the Permittee shall observe and comply with all applicable federal, state, and local rules, regulations, and laws, including the provisions of the charter, ordinances, and rules and regulations of the City, including rules and regulations governing DEN, as well as all Colorado and federal laws which in any manner limit, control or apply to the work performed by Permittee.
- 3.3 Costs. Permittee will be solely responsible for any and all claims, costs, and liabilities, including reasonable attorney/consultant fees and costs arising out of or in connection with Permittee's operations on the Access Property and including restoration or cleaning on the Access Property or any other property associated with Permittee's use of the Access Property.
- 3.4 Care of Property. This Site Access Permit is granted by DEN with the understanding that all work performed by the Permittee under this Site Access Permit shall be done with reasonable care and that any of the surface of the Access Property damaged or disturbed during the use of this Site Access Permit shall be restored in a reasonably similar manner to its condition immediately preceding the use of this license. Permittee will keep the Access Property in a neat, clean, safe, sanitary, and orderly condition at all times, and further agrees that it will keep such areas free at all times of all paper, rubbish and debris.
- 3.5 Insurance during Access. Permittee agrees to secure or require each contractor to secure and to keep in full force and effect during and until completion of the Permitted Activities the following insurance:
- (a) The Permittee shall obtain and keep in force during the entire term of this Site Access Permit, insurance policies as described in the City's form of insurance certificate which is attached to this Agreement as **Exhibit C** and incorporated herein. Upon execution of this Permit, the Permittee shall submit to the City a fully completed insurance certificate form which specifies the issuing company or companies, policy numbers and policy periods for each required coverage
 - (b) The City's acceptance of any submitted insurance certificate is subject to the approval of the Airport's Risk Management Administrator. All coverage requirements specified in the certificate shall be enforced unless waived or otherwise modified in writing by the Airport's Risk Management Administrator.

- (c) The Permittee shall comply with all conditions and requirements set forth in the insurance certificate for each required coverage during all periods in which coverage is in effect.
- (d) Unless specifically excepted in writing by the Airport's Risk Management Administrator, the Permittee shall include all subcontractors performing services hereunder as insureds under each required policy or shall furnish a separate certificate (on the form certificate provided). All coverages for subcontractors shall be subject to all of the same requirements as Permittee.
- (e) The parties hereto understand and agree that the City and County of Denver, its officers, officials and employees, are relying on, and do not waive or intend to waive by any provisions of this agreement, then monetary limitations or any other rights, immunities and protections provided by the Colorado Governmental Immunity Act, C.R.S. § 24-10-101 to 120, or otherwise available to the City and County of Denver, its officers, officials and employees.

3.6 Indemnification. Permittee hereby agrees to release and indemnify and save harmless the City, its officers, agents and employees from and against any and all loss of damage to property of third parties, or injuries to or death of any person or persons, including property and employees or agents of the City, and shall defend, indemnify and save harmless the City, its officers, agents and employees from any and all claims, damages, suits, costs, expense, liability, actions, penalties or proceedings of any kind or nature whatsoever, including worker's compensation claims, of or by any third parties, in any way resulting from, or arising directly out of Permittee's operations in connection herewith, its installation and construction of the cellular antenna telecommunications facility and related activities, or its use or occupancy of any portion of the Airport, and including acts and omissions of officers, employees, representative, suppliers, contractors, subcontractors and agents of the Permittee; provided, that the Permittee need not release, indemnify or save harmless the City, its officers, agents and employees from damages resulting from the negligence of the City's officers agents and employees. The minimum insurance requirements prescribed herein shall not be deemed to limit or define the obligations or Permittee hereunder.

3.7 Liens. Permittee agrees to promptly pay when due all bills, debts and obligations incurred by it in connection with its activities on the Access Property hereunder and not to permit the same to become delinquent and to suffer no lien, mortgage, judgment or execution to be filed against the Access Property or improvements thereon.

3.8 Compliance With Environmental Requirements. Permittee, in conducting any activity on the Access Property, shall comply with all applicable local, state, or federal environmental rules, regulations, statutes, laws or orders (collectively "Environmental Requirements"), including but not limited to Environmental Requirements regarding the storage, use, and disposal of Hazardous Materials and regarding releases or threatened releases of Hazardous Materials to the environment. For purposes of this Permit the terms "Hazardous Materials" shall mean asbestos, asbestos-containing materials, special wastes, polychlorinated biphenyls (PCBs), used oil or any petroleum products, natural gas, radioactive source material, pesticides, and any hazardous waste as defined at 42 U.S.C. § 6903(5) of the Solid Waste Disposal Act, any hazardous substance as defined at 42 U.S.C. § 9601(14) of the Comprehensive Environmental Response, Compensation and Liability Act, and chemical substance as defined at 15 U.S.C. § 2602(2) of the Toxic

Substances Control Act, and any rules or regulations promulgated pursuant to such statutes or any other applicable federal or state statute.

The Permittee agrees to notify the CEO, Airport Office Building, 8500 Pena Boulevard, Denver, Colorado 80249-6340, 303-342-2200, immediately if during the course of the work pursuant to this Permit it encounters any visible, odorous, or other contamination.

- 3.9 Permit Subordinate to Agreements With United States. This Permit is subject and subordinate to the terms, reservations, restrictions and conditions of any existing or future agreements between the City and the United States, the execution of which has been or may be required as a condition precedent to the transfer of federal rights or property to the City for airport purposes and the expenditure of federal funds for the development of the City's airport system.
- 3.10 Bond Ordinances. This Permit is in all respects subject and subordinate to any and all City applicable bond ordinances for the City's airport system and to any other bond ordinance which should amend, supplement or replace such bond ordinances.
- 3.11 Nondiscrimination. In connection with the performance of work under this Permit, Permittee agrees not to refuse to hire, discharge, promote or demote, or to discriminate in matters of compensation against any person otherwise qualified, solely because of race, color, religion, national origin, gender, age, military status, sexual orientation, marital status, or physical or mental disability; and Permittee further agree to insert the foregoing provision in all subcontracts hereunder.
- 3.12 Liens. Permittee agrees to promptly pay when due all bills, debts and obligations incurred by it in connection with its activities on the Access Property hereunder and not to permit the same to become delinquent and to suffer no lien, mortgage, judgment or execution to be filed against the Access Property or improvements thereon.

Section 4. Term

This Site Access Permit shall commence upon execution and terminate ----- days thereafter.

Section 5. Consideration

Amount of permit fee -----.

Section 6. Notices

All notices required to be given to the City or Permittee hereunder shall be in writing and sent by certified mail, return receipt requested, to:

To DEN: CEO of Aviation
Airport Office Building, 9th Floor
8500 Peña Boulevard,
Denver, CO 80249-6340

To Permittee: ADD

Either party may designate in writing from time to time the address of substitute or supplementary persons within the State of Colorado to receive such notices. The effective date of service of any such notice shall be the date such notice is mailed or delivered to Permittee.

Section 7. Authority to Execute

The person signing for Permittee warrants that he or she has complete authority to sign on behalf of and bind Permittee.

IN WITNESS WHEREOF, the parties have executed this Site Access Permit in the day and year first above written.

APPROVED AS TO FORM:

CITY AND COUNTY OF DENVER

City Attorney for the
City and County of Denver

By: _____
Assistant City Attorney

By: _____
CEO of Denver International Airport

PERMITEE:
NAME

By: _____

Title: _____

TECHNICAL SPECIFICATIONS

CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS
SPECIAL PROVISIONS
56th Avenue at Peña Boulevard
Operational and Safety Improvements

**44REVISION OF
SECTION REVISION
OF SECTION 613
ELECTRICAL
CONDUIT (PLASTIC)**

**Section 613 of the Standard Specifications is hereby revised for this
project as follows: Subsection 613.01 shall include the following:**

Conduit placed under existing roadway shall be by direct bore method.

SUBSECTION 614.13 SHALL INCLUDE THE FOLLOWING:

20% quantity has been added to plan view measurements to account for rises and falls, necessary jogs, etc in routing of conduit. Measurement and payment will be based on actual length installed.

CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS
SPECIAL PROVISIONS
56th Avenue at Peña Boulevard
Operational and Safety Improvements

**REVISION OF
SECTION 614 –
TRAFFIC CONTROL
DEVICES FIBER
OPTIC CABLE -
GENERAL**

Section 614 of the Standard Specifications is hereby revised for this project as follows: Subsection 614.01 shall include the following:

This work provides for the installation of fiber optic communications cable(s) to be installed in conduit or duct as specified in the plans. The Fiber Optic Cable shall meet the requirements of the Project Special Provision, 614 Loose Tube Fiber Optic Cable included in this specification package for all fiber optic cable furnished on this project.

Confirm with the City and the project manager prior to ordering any fiber optic cable to ensure compatibility.

All fiber-optic interconnect cable(s) shall be furnished and installed by the Contractor as shown on the plans and listed in bid documents. The number denoted prior to the “MM” designator identifies the number of multi-mode fibers (Strands) in the cable. The number denoted prior to the “SM” designator identifies the number of single-mode fibers (Strands) in the cable. The main cable(s) shall be installed in continuous runs except where maximum pull lengths govern. Manufacturer’s recommended limits for cable pull lengths shall not be exceeded.

Cable(s) ends shall be stored in pull boxes, manholes or splice closures at locations indicated in the plans or as directed by the Engineer. Fibers to be spliced and/or connected in any manner shall be limited to those identified in the plans, and only in designated controller cabinets or splice closures. All other fibers shall be left uncut or sealed as appropriate in a manner recommended by the cable manufacturer.

Fiber optic cable(s) shall be installed in a continuous run between all controller cabinets, pull boxes, and splice closures as shown in the plans. Lateral cables shall be spliced only in splice closures and routed to the controllers as shown in the plans. **Under no conditions shall the fiber cable(s) be cut out or spliced at intermediate points without the express written direction of the Engineer.**

Cable(s) shall be installed in new conduit or existing conduit as specified in the plans. The Contractor shall be required to leave a minimum of 10 feet of cable slack

CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS
SPECIAL PROVISIONS
56th Avenue at Peña Boulevard
Operational and Safety Improvements

in the equipment controller cabinet. The Contractor shall leave a minimum of 75 feet of cable slack in the communication pull box adjacent to the controller or shall leave a minimum of 75 feet of slack in all other communication pull boxes and manholes.

Fiber optic cable(s) shall be neatly coiled and clearly tagged and labeled at each communication pull box, manhole and at all locations where the fiber is exposed. Cable tags and Labels shall be as follows:

Materials: Metal or heavy plastic identification tags with cable type and number, copper pair or optic number assignments, and destination shall be provided on both ends of all cables (except station cables) and all splice cases. All cables shall be clearly labeled with cable number (City to determine scheme) and size at each end of the cable, when it enters or leaves a conduit and at 30-foot intervals when run in accessible areas such as tunnels, manholes, ceilings, etc.

Manufacturer: Tags shall be 3M, Panduit or an approved equivalent.

Controller cabinets to be connected under this project will connect directly to the appropriate controller as shown in the plans. This connection will be paid under Telemetry (Field).

-2-

General Requirements: The Contractor shall provide the Engineer or Engineer's designee with two copies of the cable manufacturer's cable specifications and installation instructions for fiber optic cable(s) in conduit. All installation shall be in accordance with these practices except as otherwise directed by the Engineer or Engineer's designee.

Additional cable costs due to damage caused by the Contractor's neglect of recommended procedures shall be Contractor's responsibility. The main cable shall be installed in continuous runs except where cable type changes or where maximum pull lengths govern. The manufacturer's recommended limits for cable pull tensions shall not be exceeded. Cable ends shall be stored in controller cabinets or pull boxes or manholes immediately adjacent to cabinets or as directed by the Engineer or Engineer's designee.

Lateral and Branch cables shall be installed using appropriate strain relief in the cabinet (through cable ties) at a minimum of three locations.

All fiber optic cables to be installed shall be checked with an OTDR before and after installation. Documentation of fiber performance shall be provided to the Engineer or Engineer's designee within 30 days of test. All optical fibers shall be within the manufacturer's recommended tolerances. In addition, any other acceptance testing recommended by the manufacturer shall be provided. Data shall be supplied to the Engineer or Engineer's designee prior to completion of the project.

CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS
SPECIAL PROVISIONS
56th Avenue at Peña Boulevard
Operational and Safety Improvements

Fiber optic cable shall be transported to site using cable reel trailers. Care shall be taken at all times to avoid scraping, denting, twisting, or otherwise damaging the cable before, during and after installation. Damaged cable shall be replaced by the Contractor without additional compensation.

Cable shall be installed in conduit or duct in the field in accordance with the contract drawings. The conduit and duct ends shall have all rough edges smoothed to prevent scraping the cable. All existing or suspected dirt and debris within the conduit shall be cleaned with compressed air before installing cable. A manufacturer recommended lubricant shall be applied to the cable to reduce friction between the cable and duct or conduit. Where fiber optic cables are to be installed in inner duct, the Contractor shall secure each section of the conduit to prevent it from being pulled without the cables.

A cable grip shall be attached to the cables so that no direct force is applied to the optical fiber. The cable grip shall have a ball-bearing swivel to prevent the cable from twisting during pulling. Cable rollers and feeders and winch cable blocks shall be used to guide the cable freely into the duct and at maintenance hole locations. Mechanical aids and pulling cable or ropes shall be used as required.

The maximum pulling tension as defined by the cable manufacturer shall not be exceeded. The cable shall be taken up at intermediate pulling points with an intermediate cable take-up device as approved by the Engineer or Engineer's designee to prevent over-tension on the cable. Cable pulls shall be continuous and steady between pull points and shall not be interrupted until the entire run of cable has been pulled. Personnel equipped with two-way radios shall be stationed at each maintenance hole, cabinet, pedestal, communications box, and junction box through which the cable is to be pulled to observe and lubricate the cable. Intermediate splices between pull boxes and manholes shall not be allowed. The cable shall be securely fastened in place within pull boxes, pedestals, manholes and cabinets.-3-

The contractor shall ensure cable length is sufficient to allow for connection between the communications equipment and the splice equipment and the splice enclosures including provision for slack, vertical runs, cable necessary for splicing, wastage and surplus cable to allow for the removal of the splice enclosure for any future splicing work.

Lateral and Branch Fiber Optic Cable: Lateral/Branch fiber optic cable shall be installed in new or existing conduit, or along existing span wire, as depicted in the plans. Cables shall be provided with appropriate strain relief in the cabinet, consisting of cable ties in at least three interior cabinet locations. Lateral and Branch fiber optic cable shall be clearly tagged and labeled as such at pull boxes, manholes and all other locations where it is exposed. At any location where the cable is brought into or out of a span wire pole, the Contractor shall install a new weather-head to accommodate the bending radius of the cable.

CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS
SPECIAL PROVISIONS
56th Avenue at Peña Boulevard
Operational and Safety Improvements

SUBSECTION 614.13 SHALL INCLUDE THE FOLLOWING:

Fiber Optic Cable will be measured by the linear feet for the main (backbone), lateral and branch cables, and shall include all labor and materials required to install the main, lateral, branch, and start cables through conduits to all pull boxes, manholes, cabinets and closures specified in the plans. Slack necessary in the handholds and at signal cabinets will not be paid for and is considered subsidiary to the work. Splices and work necessary along with testing to connect to the system is considered subsidiary to this work and will not be paid for. Removal of old fiber optic cable (not conduit) is considered subsidiary to this work.

After successful testing and acceptance of new fiber optic cable, old fiber line shall be pulled from old conduit. Old conduit can remain in place.

20% quantity has been added to plan view measurements to account for rises and falls, necessary jogs, etc in routing of fiber cable. Measurement and payment will be based on actual length installed minus slack.

SUBSECTION 614.14 SHALL INCLUDE THE FOLLOWING:

5% of cost of total installed conduit will be retained until old unused fiber optic cable is removed and disposed.

Payment will be made under:

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Fiber Optic Cable (Denver Hybrid 12x12 Strands)	Linear Feet
Fiber Optic Cable (Denver Hybrid 36x12 Strands)	Linear Feet
Fiber Optic Cable (Denver Hybrid 60x12 Strands)	Linear Feet
Fiber Optic Cable (Denver Hybrid 120x24 Strands)	Linear Feet
Fiber Optic Cable Denver Hybrid 12 Fiber (6SM) (6MM)	Linear Feet
Fiber Optic Cable Denver Hybrid 96 Fiber (84 SM) (12MM)	Linear Feet
Fiber Optic Cable (Single Mode)(24 Strands)	Linear Feet
Fiber Optic Cable (Multi Mode)(12 Strands)	Linear Feet
Fiber Optic Cable (Single Mode)(12 Strands)	Linear Feet
Fiber Optic Cable (Single Mode)(48 Strands)	Linear Feet
Fiber Optic Cable (Single Mode)(72 Strands)	Linear Feet
Fiber Optic Cable (Single Mode)(96 Strands)	Linear Feet
Fiber Optic Cable (Single Mode)(144 Strands)	Linear Feet

END OF REVISION OF SECTION 614

CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS
SPECIAL PROVISIONS
56th Avenue at Peña Boulevard
Operational and Safety Improvements

REVISION OF SECTION 625 CONSTRUCTION SURVEYING

Section 625 of the standard specifications is hereby revised as follows: Delete section 625 and replace with the following:

DESCRIPTION

625.01 This work consists of the construction surveying, calculating, and staking necessary for the construction of all elements of the project. The work shall be done under the supervision of a Professional Land Surveyor (PLS) who is licensed in the State of Colorado.

Locating, preserving, referencing, installing and restoring land monuments such as Primary Control monuments from which the Right of Way or any land boundary will be calculated, described or monumented, Public Land Survey System (PLSS) monuments, General Land Office (GLO) monuments, Bureau of Land Management (BLM) monuments, Mineral Survey (MS) monuments, Right of Way (ROW) monuments, property boundary monuments and offsets, range points, benchmarks, easement monuments, and other monuments that are required by law or regulation to be established by a PLS, and the determination of any land boundary, shall be done under the supervision of a Professional Land Surveyor (PLS) who is licensed in the State of Colorado.

MATERIALS AND EQUIPMENT

625.02 The Contractor shall furnish all personnel, survey equipment, safety equipment, materials, and traffic control necessary to perform the required construction surveying and staking. All surveying equipment, including Electronic Distance Meters (EDM), total stations, theodolites, levels, rods, tapes, tripods, tribrachs, and Global Positioning System (GPS) receivers and equipment.

If any survey equipment is found to be functioning outside the manufacturer's specified tolerance, certification from an approved repair facility showing that the instruments have been repaired, properly adjusted, or both if necessary shall be included in the survey records and submitted to the City Surveyor's Office before being used.

CONSTRUCTION REQUIREMENTS

625.03 A Construction Survey Conference shall be held with the City Surveyor's Office prior to performing any surveying work under this section. The Contractor's Surveyor (PLS) and Party Chief shall attend. A Construction Survey Checklist shall be completed and signed by the City Surveyor's Office and the contractor.

CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS
SPECIAL PROVISIONS
56th Avenue at Peña Boulevard
Operational and Safety Improvements

The Contractor shall check and verify all established Primary horizontal and vertical control points.

All survey records generated shall be the property of the City and shall be available to the City Surveyor's Office for inspection or reproduction at all times. All survey records shall be transmitted to the City Surveyor's Office for inclusion into the project records before final project acceptance.

Electronic formats may be acceptable, please coordinate with the City Surveyor's Office.

Copies of any new Monument Records filed by the PLS with the State Board of Registration shall be submitted to the City Surveyor prior to filing.

625.04 Contractor Surveying. The Contractor's PLS shall perform all construction surveying and staking that is necessary for construction of the project.

625.05 Staking. It is the responsibility of the Contractor's PLS to adhere to industry standards and acceptable practices in regards to staking. Any restaking will be the responsibility of the Contractor's PLS at no cost to the City.

625.06 Accuracy and Tolerances. It is the responsibility of the Contractor's PLS to adhere to industry standards and applicable standards with regard to horizontal and vertical accuracy tolerances.

625.07 Responsibility and Inspection. Supervision and coordination of construction surveying and staking is the Contractor's responsibility. The City Surveyor's Office or Engineer may inspect the Contractor's surveying; however such inspection will not relieve the Contractor of any responsibility for accuracy or completeness of work. All Contractor surveying inaccuracies, errors, or omissions shall be corrected at the Contractor's expense.

625.08 Reset Monuments and Stakes. Survey monuments, benchmarks, and other significant stakes that are damaged, destroyed, or made inaccessible by the progress of construction shall be replaced, transferred or reestablished at the Contractor's expense. Locating, preserving, referencing, installing and restoring land monuments as described in 625.01, shall be done in accordance with Section 629, under the supervision of a PLS who is experienced and competent in Right of Way and boundary surveying and licensed in the State of Colorado.

625.09 Changes. All changes in lines and grades required by field conditions and all discrepancies in grades, alignment, location or dimensions detected by the Contractor shall be immediately submitted to the Engineer in writing. No changes in given data or plans will be allowed unless approved by the Engineer in writing. All changes shall be documented by the contractor.

CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS
SPECIAL PROVISIONS
56th Avenue at Peña Boulevard
Operational and Safety Improvements

625.10 Pay Quantities Measurements. The Engineer will perform all interim and final measurements deemed necessary by the City to determine contract pay quantities. The Contractor shall establish and maintain Control points and stationing as required for these measurements.

625.11 Survey Records. Survey records shall be completed as the work is done. Field survey notes for construction surveying and checking by the Contractor shall be recorded in survey records in conformance with industry standards and acceptable practices.

All survey records generated shall be the property of the City and shall be available to the City Surveyor's Office or the Engineer for inspection or reproduction at all times. All survey records shall be transmitted to the City Surveyor's Office for inclusion into the project records before final project acceptance. All survey records shall be stamped with the seal of, and signed by, the responsible PLS.

Electronic submittal of survey records may be acceptable, please coordinate with the City Surveyor's Office.

METHOD OF MEASUREMENT

625.12 Construction surveying will not be measured but will be paid for on a lump sum basis.

BASIS OF PAYMENT

625.13 Payment for construction surveying will be the contract lump sum bid and will be full compensation for all surveying work necessary to complete the project to include all resetting of stakes, marks, monuments and preparing survey documentation as required.

Partial payment for construction surveying, as determined by the Engineer, will be made as the work progresses. Payment will be made under:

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Construction Surveying	Lump Sum

END OF REVISION OF SECTION 625