

CITY AND COUNTY OF DENVER

STATE OF COLORADO



DENVER
THE MILE HIGH CITY

DEPARTMENT OF PUBLIC WORKS

Contract Documents

Contract Number: 201845552



CCD FY 2018 HSIP Package 3,
Josephine/York and 7th Avenue

November 7, 2018



NOTICE OF APPARENT LOW BIDDER

Sturgeon Electric Company, Inc.
12150 East 112th Avenue
Henderson, CO 80640

The EXECUTIVE DIRECTOR OF PUBLIC WORKS has considered the Bids submitted on **December 6, 2018**, for work to be done and materials to be furnished in and for:

CONTRACT 201845552 CCD FY 2018 HSIP Package 3, Josephine/York and 7th Ave.

as set forth in detail in the Contract Documents for the City and County of Denver, Colorado. It appears that your Bid is fair, equitable, and to the best interest of the City and County; therefore, said Bid is hereby accepted at the bid price contained herein, subject to the approval and execution of the Contract Documents by the City in accordance with the Charter of the City and County of Denver, and to your furnishing the items specified below. The award is based on the total bid items: **Sixty Eight (68) bid items (201-00000 through 700-70589)** the total estimated cost thereof being: **One Million Fifty Six Thousand Eight Hundred Eighty Seven Dollars and No Cents (\$1,056,887.00)**.

It will be necessary for you to appear forthwith at the office of the Department of Public Works, Contract Administration, 201 W. Colfax Ave., Dept 614, Denver, Colorado 80202, to receive the said Contract Documents, execute the same and return them to the Department of Public Works, Contract Administration within the time limit set forth in the Bid Package Documents.

In accordance with the requirements set forth in the Contract Documents, you are required to furnish the following documents:

- a. Insurance Certificates: General Liability and Automotive Liability, Workman's Compensation and Employer Liability;
- b. Payment and Performance Bond along with One original Power of Attorney relative to Performance and/or Payment Bond; and,

All construction Contracts made and entered into by the City and County of Denver are subject to Affirmative Action and Equal Opportunity Rules and Regulations, as adopted by the Manager of Public Works, and each contract requiring payment by the City of one-half million dollars (\$500,000.00) or more shall first be approved by the City Council acting by ordinance and in accordance with Section 3.2.6 of the Charter of the City and County of Denver.

Prior to issuance of Notice to Proceed, all Equal Opportunity requirements must be completed. Additional information may be obtained by contacting the Director of Contract Compliance at (720-913-1700).

Denver Public Works/Office of the Executive Director
201 West Colfax Avenue, Dept 608 | Denver, CO 80202
www.denvergov.org/dpw
p. 720.865.8630 | f. 720.865.8795



NOTICE OF APPARENT LOW BIDDER

CONTRACT NO. 201845552

Page 2

The Bid Security submitted with your Bid, will be returned upon execution of the Contract and furnishing of the Performance Bond. In the event you should fail to execute the Contract and to furnish the performance Bond within the time limit specified, said Bid Security will be retained by the City and County of Denver as liquidated damages, and not as a penalty for the delay and extra work caused thereby.

Dated at Denver, Colorado this 27 day of December 2018.

CITY AND COUNTY OF DENVER

By


Eulois Cleckley

Executive Director of Public Works

cc: Kristen Moore (CAO), Treasury (taxaudadmin@denvergov.org), (DSBO), (PM), Prevailing Wage(prevalingwage@denvergov.org), File.

Denver Public Works/Office of the Executive Director
201 West Colfax Avenue, Dept 608 | Denver, CO 80202

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p. 720.865.8630 | f. 720.865.8795

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CITY AND COUNTY OF DENVER

STATE OF COLORADO



DENVER
THE MILE HIGH CITY

DEPARTMENT OF PUBLIC WORKS

Bid Form Package

Contract Number: 201845552



**CCD FY 2018 HSIP Package 3,
Josephine/York and 7th Avenue**

November 7, 2018

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

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BID FORM AND SUBMITTAL PACKAGE**

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This Checklist is provided solely for the assistance of the bidders and need not be returned by bidders with the BID FORM PACKAGE.

BIDDER'S CHECKLIST

These forms comprise the Bid Form and Submittal Package. Designated forms must be completed and turned in at the time of Bid Opening. Bidders should refer to the Contract Documents, particularly the Instructions to Bidders, accompanying this package when completing these forms.

FORM/ PAGE NO.	COMMENTS	COMPLETE
BF-4 – BF-5	a.) Legal name, address, acknowledgment signature, and attestation (if required)	<input checked="" type="checkbox"/>
BF-6+	a.) Fill in individual bid item dollars and totals in numerical figures only b.) Complete all blanks c.) Legal name required	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
BF-7	a.) Write out bid total or bid totals in words and figures in the blank form space(s) provided b.) Calculate Textura® Construction Payment Management System Fee from chart on pg. BF-3 and write % and fee in the space provided	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
BF-8	a.) Fill in all Bid Bond blanks b.) Signatures required c.) Corporate Seal if required d.) Dated e.) Attach Surety Agent's Power of Attorney or Certified/Cashier's check made out to the Manager of Revenue referencing bidder's company and Contract Number	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
BF-9- BF-12	a.) Each bidder, as a condition of responsiveness to this solicitation, shall <u>complete and return</u> the "Diversity and Inclusiveness in City Solicitations Information Request Form" with their Bid.	<input checked="" type="checkbox"/>
BF-13 - BF-21	Complete all CDOT forms, including: a.) Form 1413: Bidder's List b.) Form 1414: Anticipated DBE Participation Plan c.) Form 1415: Commitment Confirmation d.) Form 1416: Good Faith Effort Report (if applicable, submit to CDOT within 5 calendar days of bid opening). e.) Form 605: Contractors Performance Capability Statement f.) Form 606: Anti-Collusion Affidavit g.) Form 621: Assignment of Anti-Trust Claims	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

Textura @ Construction Payment Management System (CPM System)

Bidder recognizes and agrees that it shall be required to use the Textura® Construction Payment Management System (Textura) for this Project to request payment from the City and to pay subcontractors. All certified subcontractors or supplier who are listed for participation towards any assigned program goal must be paid via Textura®. All fees associated with Textura are to be paid by the bidder for billings for work performed. Bidders are required, when preparing a bid, to enter the price of Textura on the line provided for the service. The fee is all inclusive of all subcontractor, project and subscription fees associated with Textura. The bidder will calculate the fee based on a percentage of their total bid, and then include it on the line item provided in the bid form labeled “Textura® Construction Payment Management System Fee”. This expense becomes part of the contract and billable to the City. All costs including, but not limited to, costs associated with training, entering data, and/or utilizing Textura other than the Textura Construction Payment Management System Fee are overhead and shall not be reimbursed by the City. Bidder will be responsible for any tax on the Textura fee. As with other taxes, the City will not reimburse bidder for this cost and therefore this cost should be included in bidder’s bid. Textura will invoice the awarded bidder directly.

Project Value	Project Fee (GC + Sub Usage)
\$250,000 - \$499,999.99	\$1,625
\$500,000 - \$999,999.99	\$3,250
\$1,000,000 - \$2,999,999.99	\$5,850
\$3,000,000 - \$4,999,999.99	\$9,100
\$5,000,000 - \$9,999,999.99	\$12,220
\$10,000,000 - \$19,999,999.99	\$20,345
\$20,000,000 - \$49,999,999.99	\$32,500
\$50,000,000 - \$99,999,999.99	\$48,750
\$100,000,000 - \$199,999,999.99	\$69,095
\$200,000,000 - \$299,999,999.99	\$85,345
\$300,000,000 - \$399,999,999.99	\$109,720
\$400,000,000 - \$499,999,999.99	\$142,220
\$500,000,000 - \$999,999,999.99	\$162,500
\$1,000,000,000 - \$1,999,999,999.99	\$345,345
\$2,000,000,000 - \$4,999,999,999.99	\$650,000
\$5,000,000,000 - \$9,999,999,999.99	\$1,015,625
\$10,000,000,000 or greater	\$1,503,125

For more information:

<http://www.denvergov.org/content/denvergov/en/contract-administration/bidding-process.html>

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

BID FORM AND SUBMITTAL PACKAGE ACKNOWLEDGMENT

**CONTRACT NO.: 201845552
FEDERAL AID PROJECT NO.: SHE M320-116**

BIDDER: Sturgeon Electric Company, Inc.
(Legal Name per Colorado Secretary of State)

ADDRESS: 12150 East 112th Ave
Henderson, CO 80640

The undersigned bidder states the undersigned bidder received and had an opportunity to fully and thoroughly examine a complete set of the Contract Documents for **CONTRACT NO. 201845552**, made available to the undersigned bidder pursuant to Notice of Invitation for Bids dated November 7, 2018.

The undersigned bidder acknowledges a complete and final set of the Contract Documents for the referenced Project, the components of which are identified below, are bound and maintained as the Record Set of Contract Documents by the Contract Administration Division of the Department of Public Works and that this Record Set is available for examination by the undersigned bidder.

The undersigned bidder, having thoroughly examined each of the components identified below and contained in Contract Documents, **HEREBY SUBMITS THIS BID FORM AND SUBMITTAL PACKAGE**, fully understanding the Contract Documents as defined in Paragraph 1 of the contract and including this executed Bid Form and Submittal Package, constitute all of the terms, conditions, and requirements upon which this submission is based. The undersigned bidder further understands that, by submission of this Bid Form and Submittal Package, the City shall rely on the representations and commitments of the undersigned bidder contained herein.

The following completed documents comprising this Bid Form and Submittal Package will be included with and, by this reference, are expressly incorporated into the Contract Documents specified at Paragraph 1 of the Contract:

- Bid Form and Submittal Package Acknowledgment Form
- Bid Form
- Bid Bond
- Bidder / Contractor / Vendor / Proposer Disclosure Form
- Applicable FHWA Contract Forms

The following designated documents constitute that portion of the Contract Documents made available by the Notice of Invitation for Bids but not included in the Bid Form and Submittal Package:

- Notice of Invitation for Bids
- Instructions to Bidders
- Addenda (as applicable)
- Equal Employment Opportunity Provisions (Appendix A and Appendix F)
- Contract Form
- General Contract Conditions
- Special Contract Conditions
- Performance and Payment Bond
- Notice to Apparent Low Bidder
- Notice to Proceed
- Contractor's Certification of Payment Form
- Final/Partial Lien Release Form
- Final Receipt
- Change Orders (as applicable)
- Federal Requirements (as applicable)
- Prevailing Wage Rate Schedule(s)
- Technical Specifications
- Contract Drawings
- Accepted Shop Drawings
- Insurance Provision

The undersigned bidder expressly assumes responsibility for the complete contents of these designated documents as bound together with the Bid Form and Submittal Package submitted herewith and designated the Contract Documents.

IN WITNESS WHEREOF, the undersigned bidder has signed personally or by duly authorized officer or agent and duly attested.

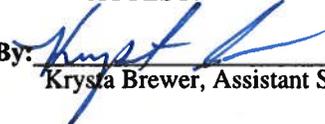
BIDDER:

Name: Sturgeon Electric Company, Inc.

By: 
Jim Bushnell

Title: Vice President, Colorado Traffic

ATTEST:

By: 
Krysta Brewer, Assistant Secretary

[SEAL]



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

BID FORM

**CONTRACT NO.: 201845552
FEDERAL AID PROJECT NO.: SHE M320-116**

TO: The Executive Director of Public Works
City and County of Denver
c/o Contract Administration
201 West Colfax, Dept. 614
Denver, Colorado 80202

BIDDER Sturgeon Electric Company, Inc.

The undersigned bidder, having examined the plans, technical specifications, and remainder of the proposed Contract Documents as designated and enumerated in the General and Special Contract Conditions and any and all addenda thereto; having investigated the location of and conditions affecting the proposed Work; and being acquainted with and fully understanding the extent and character of the Work covered by this bid and all factors and conditions affecting or which may be affected by Work, **HEREBY SUBMITS THIS BID**, pursuant to an advertisement of a Notice of Invitation for Bids as published on **November 7, 2018**, to furnish all required materials, tools, appliances, equipment and plant; to perform all necessary labor and to undertake and complete: **CCD FY 2018 HSIP Package 3, Josephine/York and 7th Avenue, FEDERAL AID PROJECT NO. SHE M320-116, CITY OF DENVER CONTRACT NO. 201845552**, in Denver, Colorado, in full accordance with, and conformity to, the Plans, Technical Specifications, and Contract Documents hereto attached or by reference made a part hereof, at and for the following price(s) set forth on this Bid Form.

The following documents, which taken as a whole constitute the Contract Documents for this Project and which are incorporated herein by reference, were made available to the bidder as provided in the Advertisement of Notice of Invitation for Bids, were received by the bidder, and form the basis for this bid:

Advertisement of Notice of Invitation for Bids
Instructions to Bidders
Bid Bond
Addenda (as applicable)
CDOT DBE Documents
Equal Employment Opportunity Provisions
(Appendices A, B, E and F)
Bid Form
Prevailing Wage Rate Schedule(s)
Technical Specifications
General Contract Conditions
Special Contract Conditions
Performance and Payment Bond
Notice to Apparent Low Bidder
Notice to Proceed
Contractor's Certification of Payment Form
Final/Partial Lien Release Form
Final Receipt
Change Orders (as applicable)

Federal Requirements
Contractors Performance Capability Statement
Anti-Collusion Affidavit
Assignment of Anti-Trust Claims
On-the-Job Training (where applicable)
Required Contract Provisions Federal Aid
Construction Contracts
Contract Form
Contract Drawings
Accepted Shop Drawings
Certificate of Insurance

Item No.	Description and Price	Estimated Quantity	Estimated Cost
201-00000	CLEARING AND GRUBBING at the unit price of <u>\$ 8,000.00</u> per LUMP SUM.	1 LS	\$ <u>8,000.00</u>
202-00200	REMOVAL OF SIDEWALK at the unit price of <u>\$ 35.00</u> per SQUARE YARD.	160 SY	\$ <u>5,600.00</u>
202-00203	REMOVAL OF CURB AND GUTTER at the unit price of <u>\$ 12.00</u> per LINEAR FOOT.	477 LF	\$ <u>5,724.00</u>
202-00206	REMOVAL OF CONCRETE CURB RAMP at the unit price of <u>\$ 35.00</u> per SQUARE YARD.	200 SY	\$ <u>7,000.00</u>
202-00220	REMOVAL OF ASPHALT MAT at the unit price of <u>\$ 30.00</u> per SQUARE YARD.	390 SY	\$ <u>11,700.00</u>
202-00828	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT at the unit price of <u>\$ 9,000.00</u> per EACH.	2 EA	\$ <u>18,000.00</u>
203-00100	MUCK EXCAVATION at the unit price of <u>\$ 85.00</u> per CUBIC YARD.	251 CY	\$ <u>21,335.00</u>
203-01597	POTHOLING at the unit price of <u>\$ 455.00</u> per HOUR.	40 HR	\$ <u>18,200.00</u>
208-00035	AGGREGATE BAG at the unit price of <u>\$ 16.00</u> per LINEAR FOOT.	100 LF	\$ <u>1,600.00</u>
208-00045	CONCRETE WASHOUT STRUCTURE at the unit price of <u>\$ 2,445.00</u> per EACH.	1 EA	\$ <u>2,445.00</u>

Item No.	Description and Price	Estimated Quantity	Estimated Cost
208-00050	STORM DRAIN INLET PROTECTION at the unit price of \$ 470.00 per EACH.	8 EA	\$ <u>3,760.00</u>
208-00070	VEHICLE TRACKING PAD at the unit price of \$ 2,200.00 per EACH.	2 EA	\$ <u>4,400.00</u>
208-00103	REMOVAL AND DISPOSAL OF SEDIMENT (LABOR) at the unit price of \$ 110.00 per HOUR.	50 HR	\$ <u>5,500.00</u>
208-00105	REMOVAL AND DISPOSAL OF SEDIMENT (EQUIPMENT) at the unit price of \$ 145.00 per HOUR.	25 HR	\$ <u>3,625.00</u>
208-00106	SWEEPING (SEDIMENT REMOVAL) at the unit price of \$ 225.00 per HOUR.	25 HR	\$ <u>5,625.00</u>
208-00205	EROSION CONTROL SUPERVISOR at the unit price of \$ 215.00 per HOUR.	50 HR	\$ <u>10,750.00</u>
210-04050	ADJUST VALVE BOX at the unit price of \$ 1,200.00 per EACH.	6 EA	\$ <u>7,200.00</u>
212-00050	SODDING at the unit price of \$ 2.00 per SQUARE FOOT.	6,452 SF	\$ <u>12,904.00</u>
212-00101	TREE PROTECTION at the unit price of \$ 600.00 per EACH.	19 EA	\$ <u>11,400.00</u>
403-00720	HOT MIX ASPHALT (PATCHING) (ASPHALT) at the unit price of \$ 210.00 per TON.	162 TON	\$ <u>34,020.00</u>

Item No.	Description and Price	Estimated Quantity	Estimated Cost
608-00006	CONCRETE SIDEWALK (6 INCH) at the unit price of \$ 63.00 per SQUARE YARD.	63 SY	\$ <u>3,969.00</u>
608-00010	CONCRETE CURB RAMP at the unit price of \$ 145.00 per SQUARE YARD.	323 SY	\$ <u>46,835.00</u>
609-21011	CURB TYPE 2 (SECTION M) at the unit price of \$ 35.00 per LINEAR FOOT.	183 LF	\$ <u>6,405.00</u>
609-21020	CURB AND GUTTER TYPE 2 (SECTION II-B) at the unit price of \$ 33.00 per LINEAR FOOT.	451 LF	\$ <u>14,883.00</u>
503-00036	DRILLED CAISSON (36 INCH) at the unit price of \$ 415.00 per LINEAR FOOT.	104 LF	\$ <u>43,160.00</u>
503-00037	VACUUMED CAISSON (36 INCH) at the unit price of \$ 480.00 per LINEAR FOOT.	104 LF	\$ <u>49,920.00</u>
613-00000	WIRING at the unit price of \$ 26,000.00 per LINEAR FOOT.	1 LS	\$ <u>26,000.00</u>
613-00206	2 INCH ELECTRICAL CONDUIT (BORED) at the unit price of \$ 31.00 per LINEAR FOOT.	965 LF	\$ <u>29,915.00</u>
613-00300	3 INCH ELECTRICAL CONDUIT at the unit price of \$ 20.00 per LINEAR FOOT.	20 LF	\$ <u>400.00</u>

Item No.	Description and Price	Estimated Quantity	Estimated Cost
613-00306	3 INCH ELECTRICAL CONDUIT (BORED) at the unit price of <u>\$ 32.00</u> per LINEAR FOOT.	1,670 LF	\$ <u>53,440.00</u>
613-06000	ELECTRIC METER PEDESTAL CABINET AND BASE at the unit price of <u>\$ 5,900.00</u> per EACH.	2 EA	\$ <u>11,800.00</u>
613-07000	PULL BOX (SPECIAL) at the unit price of <u>\$ 2,000.00</u> per EACH.	2 EA	\$ <u>4,000.00</u>
613-70250	LUMINAIRE (LED)(5300 LUMENS)(55 WATT) at the unit price of <u>\$ 850.00</u> per EACH.	16 EA	\$ <u>13,600.00</u>
613-50150	SECONDARY SERVICE PEDESTAL at the unit price of <u>\$ 5,900.00</u> per EACH.	2 EA	\$ <u>11,800.00</u>
614-00011	SIGN PANEL (CLASS I) at the unit price of <u>\$ 40.00</u> per SQUARE FOOT.	170.25 SF	\$ <u>6,810.00</u>
614-70150	PEDESTRIAN SIGNAL FACE (16")(COUNT DOWN) at the unit price of <u>\$ 515.00</u> per EACH.	24 EA	\$ <u>12,360.00</u>
614-70336	TRAFFIC SIGNAL FACE (12-12-12) at the unit price of <u>\$ 885.00</u> per EACH.	24 EA	\$ <u>21,240.00</u>
614-72860	PEDESTRIAN PUSH BUTTON at the unit price of <u>\$ 410.00</u> per EACH.	24 EA	\$ <u>9,840.00</u>
614-72866	EMERGENCY VEHICLE TRAFFIC SIGNAL PRIORITY CONTROL SYSTEM at the unit price of <u>\$ 3,200.00</u> per EACH.	6 EA	\$ <u>19,200.00</u>

Item No.	Description and Price	Estimated Quantity	Estimated Cost
614-72855	TRAFFIC SIGNAL CABINET AND CONTROLLER at the unit price of <u>\$ 32,000.00</u> per EACH.	2 EA	\$ <u>64,000.00</u>
614-72886	VEHICLE DETECTION SYSTEM (SINGLE CAMERA) at the unit price of <u>\$ 6,700.00</u> per EACH.	6 EA	\$ <u>40,200.00</u>
614-81000	TRAFFIC SIGNAL-LIGHT POLE STEEL at the unit price of <u>\$ 3,900.00</u> per EACH.	10 EA	\$ <u>39,000.00</u>
614-81125	TRAFFIC SIGNAL-LIGHT POLE STEEL (1-25 FT MAST ARM) at the unit price of <u>\$ 13,000.00</u> per EACH.	2 EA	\$ <u>26,000.00</u>
614-81140	TRAFFIC SIGNAL-LIGHT POLE STEEL (1-40 FT MAST ARM) at the unit price of <u>\$ 13,200.00</u> per EACH.	2 EA	\$ <u>26,400.00</u>
614-81540	TRAFFIC SIGNAL-LIGHT POLE STEEL (2-25&40 FOOT MAST ARM) at the unit price of <u>\$ 13,800.00</u> per EACH.	2 EA	\$ <u>27,600.00</u>
614-84100	TRAFFIC SIGNAL PEDESTAL POLE ALUMINUM at the unit price of <u>\$ 1,900.00</u> per EACH.	4 EA	\$ <u>7,600.00</u>
614-86105	TELEMETRY (FIELD) at the unit price of <u>\$ 5,100.00</u> per EACH.	2 EA	\$ <u>10,200.00</u>
630-00000	FLAGGING at the unit price of <u>\$ 26.00</u> per HOUR.	640 HR	\$ <u>16,640.00</u>
630-00007	TRAFFIC CONTROL INSPECTION at the unit price of <u>\$ 190.00</u> per DAY.	24 DAY	\$ <u>4,560.00</u>

Item No.	Description and Price	Estimated Quantity	Estimated Cost
630-00012	TRAFFIC CONTROL MANAGEMENT at the unit price of <u>\$ 690.00</u> per DAY.	80 DAY	\$ <u>55,200.00</u>
630-80335	BARRICADE (TYPE 3 M-A)(TEMPORARY) at the unit price of <u>\$ 145.00</u> per EACH.	4 EA	\$ <u>580.00</u>
630-80341	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A) at the unit price of <u>\$ 35.00</u> per EACH.	40 EA	\$ <u>1,400.00</u>
630-80342	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE B) at the unit price of <u>\$ 41.00</u> per EACH.	16 EA	\$ <u>656.00</u>
630-80344	CONSTRUCTION TRAFFIC SIGN (SPECIAL) at the unit price of <u>\$ 30.00</u> per SQUARE FOOT.	30 SF	\$ <u>900.00</u>
630-80355	PORTABLE MESSAGE SIGN PANEL at the unit price of <u>\$ 2,470.00</u> per EACH.	6 EA	\$ <u>14,820.00</u>
630-80356	ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL (A TYPE) at the unit price of <u>\$ 615.00</u> per EACH.	4 EA	\$ <u>2,460.00</u>
630-80360	DRUM CHANNELIZING DEVICE at the unit price of <u>\$ 12.00</u> per EACH.	120 EA	\$ <u>1,440.00</u>
630-80363	DRUM CHANNELIZING DEVICE (WITH LIGHT)(FLASHING) at the unit price of <u>\$ 25.00</u> per EACH.	20 EA	\$ <u>500.00</u>
630-80380	TRAFFIC CONE at the unit price of <u>\$ 5.10</u> per EACH.	160 EA	\$ <u>816.00</u>

Item No.	Description and Price	Estimated Quantity	Estimated Cost
625-00000	CONSTRUCTION SURVEYING at the unit price of \$ <u>7,200.00</u> per LUMP SUM.	1 LS	\$ <u>7,200.00</u>
626-00000	MOBILIZATION at the unit price of \$ <u>34,000.00</u> per LUMP SUM.	1 LS	\$ <u>34,000.00</u>
700-70010	F/A 01 - MINOR CONTRACT REVISIONS at the unit price of \$ _____ per FORCE ACCOUNT.	1 FA	\$ <u>50,000.00</u>
700-70023	F/A 02 - ON-THE-JOB TRAINEE at the unit price of \$ _____ per FORCE ACCOUNT.	1 FA	\$ <u>5,000.00</u> <input type="checkbox"/>
700-70082	F/A 03 - FURNISH & INSTALL ELECTRICAL SERVICE at the unit price of \$ _____ per FORCE ACCOUNT.	1 FA	\$ <u>10,000.00</u>
700-70310	F/A 04 - LANDSCAPING at the unit price of \$ _____ per FORCE ACCOUNT.	1 FA	\$ <u>5,000.00</u>
700-70380	F/A 05 - EROSION CONTROL at the unit price of \$ _____ per FORCE ACCOUNT.	1 FA	\$ <u>2,500.00</u>
700-70592	F/A 06 - SURVEY MONUMENTATION at the unit price of \$ _____ per FORCE ACCOUNT.	1 FA	\$ <u>10,000.00</u>
700-70589	F/A 07 - ENVIRONMENTAL HEALTH & SAFETY MANAGEMENT at the unit price of \$ _____ per FORCE ACCOUNT.	1 FA	\$ <u>2,000.00</u>

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated. Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees. To confirm the validity of this Power of Attorney call 610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Michael M. Bill, Michael H. Bill, Edward L. Mourmighan, Cynthia L. Jenkins, Ginger J. Krahn, Brenda Johnston, Cindy Stellhom, Sheree Hsieh, Rebecca A. Virt, Kimberly E. Kinkead, Michael J. Marsella of the city of Indianapolis, state of Indiana its true and lawful attorney-in-fact, with full power and authority hereby conferred to sign, execute and acknowledge the following surety bond:

Principal Name: Sturgeon Electric Company, Inc.
Obligee Name: City and County of Denver
Surety Bond Number: N/A Bond Amount: Five percent of the accompanying bid (5%)

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 7th day of December, 2017.



The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: David M. Carey
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 7th day of December, 2017, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

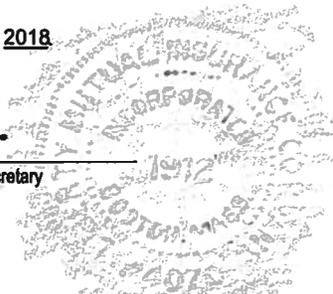
Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 6th day of December, 2018



By: Renee C. Llewellyn
Renee C. Llewellyn, Assistant Secretary





Office of Economic Development
 Division of Small Business Opportunity
 201 W. Colfax Ave, Dept. 907
 Denver, CO 80202
 p: 720.913.1999
 f: 720.913.1808
www.denvergov.org/dsbo

Diversity and Inclusiveness * in City Solicitations Information Request Form

Type in your response, print out, sign and date; or print out and complete manually. Please print legibly.

Denver Executive Order No. 101 establishes strategies between the City and private industry to use diversity and inclusiveness to promote economic development in the City and County of Denver and to encourage more businesses to compete for City contracts and procurements. The Executive Order requires, among other things, the collection of certain information regarding the practices of the City's contractors and consultants toward diversity and inclusiveness and encourages/requires City agencies to include diversity and inclusiveness policies in selection criteria where legally permitted in solicitations for City services or goods.

Answer each question below. Missing or incomplete responses will be recorded as "no", "not applicable", or "none". A proposal or response to a solicitation by a contractor/consultant that does not include this completed form shall be deemed non-responsive and rejected.

Business Email Address: tmcginn@myrgroup.com

Please include the Email address of the contact person facilitating this solicitation for the City and County of Denver: tmcginn@myrgroup.com

Agency Name:

- | | | |
|---|--|--|
| <input type="checkbox"/> Arts and Venue | <input type="checkbox"/> Purchasing Division | <input type="checkbox"/> Sheriff Department |
| <input type="checkbox"/> Auditor Office | <input type="checkbox"/> Human Services | <input type="checkbox"/> Technology Services |
| <input type="checkbox"/> Community Planning | <input type="checkbox"/> Economic Development | <input type="checkbox"/> Other |
| <input type="checkbox"/> Denver International Airport | <input type="checkbox"/> Parks and Recreation | |
| <input type="checkbox"/> Environmental Health | <input type="checkbox"/> Police Department | |
| <input type="checkbox"/> Fire Department | <input checked="" type="checkbox"/> Public Works | |

Project Name: CCD FY 2018 HSIP Package 3, Josephine/York and 7th Ave

BID / RFP No.: 201845552

Name of Contractor/Consultant: Sturgeon Electric Company, Inc.

What industry is your business? Electrical Contractor

Address: 12150 East 112th Ave

Henderson, CO 80640

Business Phone No.: 303-286-8000

Business Facsimile No.: 303-286-1811

OED - Executive Order No. 101
 Diversity and Inclusiveness in City Solicitations Information Request Form
 Rev. 12/29/2015

1. How many employees does your company employ?

- 1-10 51-100
 11-50 over 100

1.1. How many of your company's employees are:

Full-time 100% Part-Time _____

2. Do you have a Diversity and Inclusiveness Program? Yes No

If No, and your company size is less than 10 employees continue to question 11. Complete and sign the form.

If Yes, does it address:

- 2.1 Employment and retention? Yes No
2.2 Procurement and supply chain activities? Yes No
2.3 Customer service? Yes No

3. Provide a detailed narrative of your company's diversity and inclusiveness principles and programs. This may include, for example, (i) diversity and inclusiveness employee training programs, equal opportunity policies, and the budget amount spent on an annual basis for workplace diversity; or (ii) diversity and inclusiveness training and information to improve customer service.

See attached Supplier Diversity Program & Equal Opportunity Employment Policy

4. Does your company regularly communicate its diversity and inclusiveness policies to employees?

If Yes, how does your company regularly communicate its diversity and inclusiveness policies to employees? (select all that apply)

- Employee Training
 Pamphlets
 Public EEO postings
 Other
 Not Applicable

5. If you responded that you do not have a diversity and inclusiveness program, describe any plans your company may have to adopt such a program.

N/A

6. How often do you provide training in diversity and inclusiveness principles?

- Monthly Annually
 Quarterly Not Applicable Other As Needed

6.1 What percentage of the total number of employees generally participate?

- 0 - 25% 51 - 75%
 26 - 50% 76 - 100% Not Applicable

7. State how you achieve diversity and inclusiveness in supply and procurement activities. This may include, for example, narratives of training programs, equal opportunity policies, diversity or inclusiveness partnership programs, mentoring and outreach programs, and the amount and description of budget spent on an annual basis for procurement and supplier diversity and inclusiveness.

See attached Supplier Diversity Program and Equal Opportunity Employment Policy

8. Do you have a diversity and inclusiveness committee? Yes No

8.1 If Yes, how often does it meet?

- Monthly Annually No Committee
 Quarterly Other _____

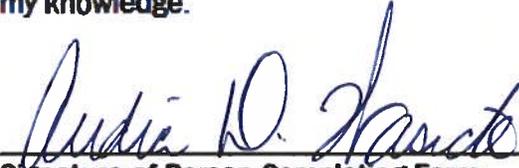
8.2 If you responded that you do not have a diversity and inclusiveness committee, describe any plans your company may have to establish such a committee.

None

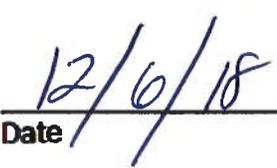
9. Do you have a budget for diversity and inclusiveness efforts? Yes No
10. Does your company integrate diversity and inclusion competencies into executive/manager performance evaluation plans? Yes No
11. Would you like information detailing how to implement a Diversity and Inclusiveness program? Yes No

If yes, please email X0101@denvergov.org.

I attest that the information represented herein is true, correct and complete, to the best of my knowledge.



Signature of Person Completing Form



Date

Audia Wasick, Administrative Assistant

Printed Name of Person Completing Form

NOTE: Attach additional sheets or documentation as necessary for a complete response.

*"Diversity and inclusiveness program" means a program that invites values, perspectives and contributions of people from diverse backgrounds, and integrates diversity into its hiring and retention policies, training opportunities, and business development methods to provide an equal opportunity for each person to participate, contribute, and succeed within the organization's workplace. "Diversity" encompasses a wide variety of human differences, including differences such as race, age, gender, gender identity, sexual orientation, ethnicity, physical disabilities, appearance, historically underutilized and disadvantaged persons, as well as social identities such as religion, marital status, socio-economic status, lifestyle, education, parental status, geographic background, language ability, and veteran status."

COLORADO DEPARTMENT OF TRANSPORTATION
COMMITMENT CONFIRMATION

SECTION 1. This section must be completed by the Contractor.

Project:	SHE M320-116	Project Code:	22218
Bidder/Contractor:	Sturgeon Electric Company, Inc.	Phone:	303-286-8000
Contact:	Timothy McGinn	Email:	tmcginn@myrgroup.com
DBE Firm Name:	Chato's Concrete, LLC.	DBE Phone:	720-252-7959
DBE Address:	0020 Quivis Way Denver, CO 80246	DBE Email:	marlene@chatosconcrete.com

Commitment Details

Category	Work to be Performed	DBE Work Code(s)	Commitment Amount	Eligible Participation
Construction	Concrete/Asphalt installation	237310, 238990	\$105,688.70	\$105,688.70
Trucking				
Supplies				
Services				
Total			\$105,688.70	\$105,688.70

This section must be signed by an individual with the power to contractually bind the Bidder/Contractor. You declare under penalty of perjury in the second degree and any other applicable state or federal laws that the statements made in this document are complete, true and accurate to the best of your knowledge.

Jim Bushnell	Vice Pres Traffic		12-6-18
Bidder/Contractor Representative	Title	Signature	Date

SECTION 2. This section must be completed by the DBE. (Attach additional pages if necessary).

This document is not a contract with the Bidder/Contractor; it is an acknowledgement of the obligation that the Bidder/Contractor is making to CDOT. The amounts listed above may be less than the subcontractor or purchase order amount, but can never be more, and shall not reflect any mark up by the Bidder/Contractor. All questions must be answered.

Are you contracting directly with the Bidder/Contractor or with one of its subcontractors? If with a subcontractor, provide the firm name.	Yes
Will you be purchasing supplies or materials or leasing or renting equipment from the Bidder/Contractor or its subcontractors? If so, explain.	NO
Do you intend to subcontract any portion of the work listed above? If yes, state to which firms, what work and the approximate amount. Include trucking subcontractors and owner-operators.	NO
Will you be providing trucking services on this project? If so, state how many of your own trucks and employees you will have on this project.	Yes - for our own scope
Who within your firm will be supervising and responsible for your firm's work on this project?	Eleazar Villalobos
Will you be acting as a broker on this project? If so, state what you will be brokering and your approximate brokerage fee.	NO
Will you be acting as a supplier on this project? If so, please state what you will be supplying and whether you will manufacture the items.	NO

This section must be signed by an individual with the power to contractually bind the DBE. You declare under penalty of perjury in the second degree and any other applicable state or federal laws that the statements made in this document are complete, true and to the best of your knowledge. You attest that you are eligible to participate as a DBE on this contract for the work listed above and have the capacity to perform the work as stated.

<i>Martene Andrade</i>	<i>Owner/Partner</i>		<i>12.5.18</i>
DBE Representative	Title	Signature	Date

See the DBE Standard Special provision for additional information on completing and submitting this form.

Pre-award CDOT projects: Submit this form to the CDOT Civil Rights and Business Resource Center via fax to (303)757-9019. All originals must be sent to: CDOT Civil Rights and Business Resource Center, 4201 E. Arkansas Ave. Room 150, Denver, CO 80222.

Pre-award local agency projects: Submit this form to the local agency. All originals must be sent to: CDOT Civil Rights and Business Resource Center, 4201 E. Arkansas Ave. Room 150, Denver, CO 80222.

N/A

COLORADO DEPARTMENT OF TRANSPORTATION			
GOOD FAITH EFFORT REPORT			
Section 1. Contractor and Project Information			
Bidder:		Project:	
Address:		Project Code:	
Contact Name:		Proposal Amount:	
Contact Phone:		Contract Goal Percentage:	
Contact Email:		Contract Goal Dollar Value:	
Section 2. Efforts to Achieve DBE Participation. Attach a narrative that answers the questions below and complete Page 2 (Subcontractor Quote Summary). Provide any supporting documentation which demonstrates your good faith efforts.			
a. Describe your overall plan or approach to meeting the contract goal. Include how much and what work you intend to self-perform; how much and what work you intend to subcontract; what work areas were identified as subcontracting opportunities for DBEs; and the approximate number of DBEs per area.			
b. Describe your efforts to obtain DBE participation (i.e. how you attempted to execute your plan or approach to meeting the contract goal). Include direct outreach (state the DBE solicited, date(s) and method of phone, email or fax); indirect outreach such as events, publications, and/or communication with minority and other organizations that you conducted to reach DBEs (state date(s), location and audience); other efforts you made to assist DBEs in competing for or obtaining contracts (accepting quotes from DBEs that may be higher than other subcontractors, modifications to contract scopes, unbundling, mentoring, etc.); and obstacles you encountered in assisting or contracting with DBEs. Cost alone shall not be a reason to reject a DBE and will be considered in the evaluation of Page 2.			
c. If the eligible participation submitted on the Form 1414 was miscalculated, determined to be invalid, or otherwise did not meet the contract goal, provide your justification for such deficiencies and the remedies you have taken or intend to take to avoid the issue in the future. If you have obtained any additional commitments since submission of the bid, attach the Form 1415(s) and the reason why such commitments were not obtained prior to the proposal due date.			
Section 3. Affidavit of Good Faith Efforts. The Bidder must show that it took all necessary and reasonable steps to achieve the DBE contract goal which by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if not fully successful. 49 CFR Part 26, Appendix A sets forth examples and guidance for good faith efforts. The contractor is not limited to the examples provided in 49 CFR Part 26, Appendix A and may provide any documentation that demonstrates good faith efforts to obtain DBE participation on this contract.			
If, at any time, CDOT has reason to believe that any person or firm has willfully and knowingly provided incorrect information or made false statements, CDOT may initiate suspension or debarment proceedings against the person or firm under 49 CFR Part 29, take enforcement action under 49 CFR Part 31, Program Fraud and Civil Remedies, and/or refer the matter to the Department of Justice or Office of the Inspector General for criminal prosecution under 18 U.S.C. 1001, which prohibits false statements in Federal program.			
By signing below, the Bidder hereby affirms that it has made good faith efforts and has documented all such efforts in this form and the attached supporting documentation.			
I, _____, am the _____ of _____.			
Representative Name		Title	Company
I have the authority to make this affidavit for and on behalf of my company. All information provided herein and attached as evidence of my company's good faith efforts is true and accurate to the best of my belief.			
_____		_____	
Signature		Date	
Notarization: Must be completed by a licensed notary.			
County of _____		State of _____	
Subscribed and sworn before me this _____ day of _____			SEAL
Notary Signature _____			
Notary Address _____			

CDOT projects: Submit this form and all supporting documentation to the CDOT Civil Rights and Business Resource Center via fax to (303)757-9019. All originals must be sent to: CDOT Civil Rights and Business Resource Center, 4201 E. Arkansas Ave. Room 150, Denver, CO 80222.			
Local agency projects: Submit this form and all supporting documentation to the local agency. All originals must be sent to: CDOT Civil Rights and Business Resource Center, 4201 E. Arkansas Ave. Room 150, Denver, CO 80222.			

COLORADO DEPARTMENT OF TRANSPORTATION – Form 605
**CONTRACTORS PERFORMANCE CAPABILITY
STATEMENT**

Project #
SHE M320-116
22218

1. List names of partnerships or joint ventures none

List decreases in the contractors fiscal or workmanship qualifications compared to the last prequalification statement submitted to CDOT. (Attach additional sheets if necessary)

a. Key personnel changes none

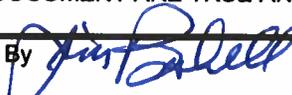
b. Key equipment changes none

c. Fiscal capability changes (legal actions, etc.) none

d. Other changes that may affect the contractors ability to perform work none

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE

Contractor's firm or company name
Sturgeon Electric Company, Inc.

By 
Title Vice President Traffic

Date 12-6-18

2nd Contractor's firm or company name (if joint venture)

By

Date

Title

Form 605

**COLORADO DEPARTMENT OF TRANSPORTATION
ANTI-COLLUSION AFFIDAVIT**

Project No.: SHE M320-116

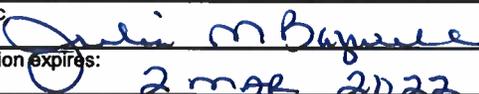
Location: Region 1

I hereby attest that I am the person responsible within my firm for the final decision as to the price(s) and amount of this bid or, if not, that I have written authorization, enclosed herewith, from that person to make the statements set out below on his or her behalf and on behalf of my firm.

I further attest that:

1. The price(s) and amount of this bid have been arrived at independently, without consultation, communication or agreement for the purpose or with the effect of restricting competition with any other firm or person who is a bidder or potential prime bidder.
- 2A. Neither the price(s) nor the amount of this bid have been disclosed to any other firm or person who is a bidder or potential prime bidder on this project, and will not be so disclosed prior to bid opening.
- 2B. Neither the prices nor the amount of the bid of any other firm or person who is a bidder or potential prime bidder on this project have been disclosed to me or my firm.
- 3A. No attempt has been made to solicit, cause or induce any firm or person who is a bidder or potential prime bidder to refrain from bidding on this project, or to submit a bid higher than the bid of this firm, or any intentionally high or non-competitive bid or other form of complementary bid.
- 3B. No agreement has been promised or solicited for any other firm or person who is a bidder or potential prime bidder on this project to submit an intentionally high, noncompetitive or other form of complementary bid on this project.
4. The bid of my firm is made in good faith and not pursuant to any consultation, communication, agreement or discussion with, or inducement or solicitation by or from any firm or person to submit any intentionally high, noncompetitive or other form of complimentary bid.
5. My firm has not offered or entered into a subcontract or agreement regarding the purchase or sale of materials or services from any firm or person, or offered, promised or paid cash or anything of value to any firm or person, whether in connection with this or any other project, in consideration for an agreement or promise by any firm or person to refrain from bidding or to submit any intentionally high, noncompetitive or other form of complementary bid or agreeing or promising to do so on this project.
6. My firm has not accepted or been promised any subcontract or agreement regarding the sale of materials or services to any firm or person, and has not been promised or paid cash or anything of value by any firm or person whether in connection with this or any other project, in consideration for my firm's submitting any intentionally high, noncompetitive or other form of complementary bid, or agreeing or promising to do so, on this project.
7. I have made a diligent inquiry of all members, officers, employees, and agents of my firm with responsibilities relating to the preparation, approval or submission of my firm's bid on this project and have been advised by each of them that he or she has not participated in any communication, consultation, discussion, agreement, collusion, or other conduct inconsistent with any of the statements and representations made in this affidavit.
8. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as a fraudulent concealment from the Colorado Department of Transportation, of the true facts relating to the submission of bids for this contract.

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

Contractors firm or company name: Sturgeon Electric Company, Inc.	By: 	Date: 12-6-18
2 nd Contractors firm or company name:	By:	Date:
	Title:	
Sworn to before me this <u>6th</u> day of <u>December</u> 20 <u>18</u>		
Notary Public 	JULIA M BAGWELL NOTARY PUBLIC	
My commission expires: 2 MAR 2022	STATE OF COLORADO NOTARY ID 20104006193	
NOTE: THIS DOCUMENT MUST BE SIGNED IN INK.	MY COMMISSION EXPIRES MARCH 02, 2022	

Form 606

**COLORADO DEPARTMENT OF TRANSPORTATION
ASSIGNMENT OF ANTITRUST CLAIMS**

Project No.:
SHE M320-116

Contractor and Colorado Department of Transportation (CDOT) recognize that in actual economic practice antitrust violations ultimately impact CDOT. Therefore, for good cause and as consideration for executing this contract and for receiving payments hereunder:

1. Contractor hereby irrevocably assigns to CDOT any and all claims it may now have or which may hereafter accrues to it under federal or state antitrust laws in connection with the particular project, goods or services purchased or acquired by CDOT pursuant to this contract.
2. Contractor hereby expressly agrees:
 - a. That, upon becoming aware that a third party has commenced a civil action asserting on Contractor's behalf an antitrust claim which has been assigned to CDOT hereunder, Contractor shall immediately advise in writing:
 - (1) Such third party that the antitrust claim has been assigned to CDOT, and
 - (2) CDOT that such civil action is pending and the date on which, in accordance with subparagraph a.(1) above, Contractor notified such third party that the antitrust claim had been assigned to CDOT.
 - b. To take no action which will in any way diminish the value of the claims or rights assigned or dedicated to CDOT hereunder; and
 - c. Promptly to pay over to CDOT its proper share of any payment under an antitrust claim brought on Contractor's behalf by any third party and which claim has been assigned to CDOT hereunder.
3. Further, Contractor agrees that in the event it hires one or more subcontractors to perform any of its duties under the contract, Contractor shall require that each such subcontractor:
 - a. Irrevocably assign to CDOT (as a third party beneficiary) any and all claims that such subcontractor may have or which may thereafter accrue to the subcontractor under federal or state antitrust laws in connection with any goods or services provided by the subcontractor in carrying out the subcontractor's obligations to Contractor;
 - b. Upon becoming aware that a third party has commenced a civil action on the subcontractor's behalf asserting an antitrust claim which has been assigned to CDOT hereunder, shall immediately advise in writing:
 - (1) Such third party that the antitrust claim has been assigned to CDOT, and
 - (2) Contractor and CDOT that such civil action is pending and the date on which, in accordance with subparagraph b.(1) above, the subcontractor notified such third party that the antitrust claim had been assigned to CDOT;
 - c. Take no action which will in any way diminish the value of the claims or rights assigned or dedicated to CDOT hereunder; and
 - d. Promptly pay over to CDOT its proper share of any payment under an antitrust claim brought on the subcontractor's behalf by any third party and which claim has been assigned or dedicated to CDOT pursuant hereto.

I, acting in my capacity as officer of a bidder (bidders if a joint venture) do agree to the above assignment of antitrust claims.

Contractors firm or company name: Sturgeon Electric Company, Inc.	By: 	Date: 12-6-18
	Title: Vice President Traffic	
2 ND Contractors firm or company name:	By:	Date:
	Title:	

Form 621

CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS

CONTRACT NO. 201845552
PROJECT NAME: CCD FY 2018 HSIP Package 3 Josephine/York and 7th Avenue

ADDENDUM NO. 1 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:

BID DOCUMENTS

1. Prevailing Wage Rates

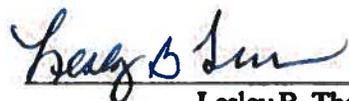
Replace Highway Construction CO180023 rates dated August 31, 2018 with Highway Construction CO180019 rates dated July 13, 2018

TECHNICAL DOCUMENTS

1. Technical Specifications

Please Omit pages 51-52 of the technical specifications "Revision of Section 614: Ethernet Managed Switch" and replace with the attached document for section "Revision of Section 614: Ethernet Managed Switch".

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



Lesley B. Thomas
City Engineer
11.28.18

Date

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



Sturgeon Electric
Company, Inc.
Contractor

ADDENDUM NO. 1

DATE: 12/3/2018



SUPPLIER DIVERSITY PROGRAM

Commitment and Participation

MYR Group Inc. (MYR Group) is dedicated to the fair consideration of all suppliers in its day to day procurement of materials, equipment, and services as required for any project. We understand the importance of supplier diversity and want to provide opportunities for Disadvantaged Business Enterprise (DBE) firms. DBE firms when referred to herein will include Minority Business Enterprises, Women Business Enterprises, Veteran Business Enterprises, Historically Underutilized Businesses, and Small, Women and Minority disadvantaged suppliers that have been certified by a federal/state/or local government. We have experience in working with a wide range of diverse suppliers to provide a competitive edge in producing high-quality, low-cost innovative products and services. All of MYR Group's employees with purchasing responsibility and/or involved in procurement decisions for equipment, material, and services are expected to notify and give every consideration to using qualified DBE firms in a manner that is consistent with state and federal laws and regulations. We have exceeded the "expected levels" of on-site DBE participation on a number of projects and will continue to strive to exceed such levels while conducting business in the highest professional manner.

Goods and/or Services to be Subcontracted

To demonstrate MYR Group's commitment, MYR has developed a firm mentoring agreement to subcontract a mutually agreed upon scope of work, as well as agreements with our subcontractors' that rates will not exceed MYR's proposed rates.

MYR Group will solicit by Invitation for Bids, Requests for Proposals, telephone calls or any other document issued by the state to obtain bids, or proposals for the purpose of entering into a contract with DBE firms for equipment, material, and services. We have done this on several projects and achieved up to 41% DBE participation on projects through equipment, material, and service purchases.

We will demonstrate our dedication by providing supplier diversity training, workshops, technical assistance, executive level roundtables, and educational support to each of these firms and MYR Group's procurement staff. We will continue to look for opportunities to utilize DBE firms throughout the entire process of our projects.

Method to Identify

MYR Group has worked with numerous DBE firms in the past. We currently have an established network of firms from whom we can solicit bids. These companies are certified with the States, Cities, Counties, and other Municipalities. We will maintain current lists of all government entities to identify new sources of certified DBE firms. Our efforts to solicit DBE participation will include Request for Proposals and negotiations with all participants to ensure a full commitment to supplier diversity on all our projects. In this process we will communicate opportunities and establish qualifications of subcontractors and suppliers.

Fair Competition

MYR Group is committed to supplier diversity and securing the best pricing through fair competition. In order to accomplish both objectives, our intention is to include a substantial number of DBE's on each bid solicitation. We have a standard procedure for soliciting bids, which includes advertising, direct mail, and phone contact. We consistently review our process to ensure we are maximizing opportunities. Through this method we will enhance the DBE process plus secure the best pricing.

MYR Group employees responsible for the procurement of equipment, materials, and services, will dedicate their efforts to seek qualified DBE firms. Those DBE firms who have shown the capability to complete the work being procured will be given the opportunity to compete for the contract. MYR Group employees will be aware of and accountable for the project goals for subcontracting to DBE firms. They will make every reasonable effort to obtain such goals, and will continuously review said goals for possible improvement. To implement this supplier diversity program effort on behalf of DBE firms, the following steps shall be taken:

- 1) Solicit DBE firms with the maximum possible advance notice to allow preparation of qualifications, utilizing DBE lists, notification to DBE contact groups, telephone solicitation, and other means necessary to ensure that appraising of contracting opportunities are communicated to qualified DBE firms.
- 2) Certify the status of DBE firms through documentation from government agencies. MYR Group must receive documentation from the appropriate state approved agency before bid solicitation begins. Our process of prequalifying includes examination of Dun & Bradstreet reports, satisfactorily completed AIA 305 forms, and prior knowledge or experience with the subcontractor(s).
- 3) Assist interested and qualified DBE firms in the preparation of their quotations by allowing time for preparation of the quotation and making the scope and delivery schedules available.
- 4) MYR Group accepts full responsibility for the performance of our subcontractors/suppliers, and will work with them as "partners" to achieve the project goals. Subcontractors will work according to our schedule and standards. MYR Group will mentor all subcontractors/suppliers. The DBE firms will be instructed as to MYR Group's work practices, safety programs; as well as, estimating, accounting, and purchasing methods.
- 5) MYR Group will collect statistics and other documentation to prepare and provide a quarterly written report that details the actual results of our supplier diversity program. This report will include the total value of work performed by MYR Group for the quarter; total value of work performed by DBE subcontractors during the quarter; names and work subcontracted to each DBE firm(s) during the quarter; and each DBE firm's respective contribution to MYR's total participation. We will also identify the breakdown of women and/or specific ethnic origin of each company.



SUPPLEMENT TO SUPPLIER DIVERSITY PROGRAM FOR PROCUREMENT STAFF

MYR GROUP Inc. (MYR Group) has stepped up its effort to achieve its business goals and objectives to (increase profitability, improve processes and quality, achieve cost reductions/containment, etc.) through the continued use and implementation of supplier diversity programs. Supplier diversity is a process that seeks to identify diverse supply partners and systemically integrate inclusive practices for Disadvantaged Business Enterprises (DBE) firms. DBE when referred to herein will include Minority Business Enterprises, Women Business Enterprises, Veteran Business Enterprises, Historically Underutilized Businesses, and Small, Women and Minority (SWAM) diversity suppliers that have been certified by a federal/state/or local government. Our world is changing and technology has created a globally connected market with rapid diversification of the major cities of the world including ours in the U.S.A. This diversity change has economic, political, and social implications for all businesses today including MYR Group. DBE firms are a recognized emerging market, and a key source for wealth building and community contribution through job creation opportunities. MYR recognizes the social corporate responsibilities which includes the openness or transparency of companies as well as taking into account the will and expectations of their stakeholders. MYR Group firmly believes that companies function best when they merge their business interest with the interest of their stakeholders' on all levels including supplier diversity.

Supplier diversity can make a meaningful contribution to the company's costs while at the same time making a tremendous contribution to the company's impact on issues of socially responsible behavior. MYR Group's supplier selection alone can create paying jobs that can infuse a community with newfound wealth. Other reasons why supplier diversity should be embraced include increased profitability, increased sales, decreased costs, more quality and creation of improved efficiencies, and other factors that can positively impact the bottom line. MYR Group also recognizes that developing stronger supplier inclusion practices will lead to a more competitive advantage including heightening brand, image and reputation. Companies who identify suppliers who can provide a higher quality product/service that serve to drive the entire business process forward and faster with greater reliability and/or new processes will benefit the most and be best prepared for the future demands in the ever changing workforce going forward. MYR Group recognizes that its ability to articulate and implement these strategies, as well as demonstrate a desire to embrace diversity at all levels (marketing, supplier, and workforce) will be the driving force to succeed and operate with impunity in a diverse working environment.

MYR Group will use the supplier diversity program to better able DBE firms to contribute to the overall procurement delivery process for equipment, material and services. The procurement decisions based on competitive price alone are no longer applicable and should be replaced with a strategy of total cost/total best value with DBE firms always considered. The goal will be to

make the inclusion of DBE firms in all solicitations as well as a basic part of their daily activities for both transactional and strategic tasks. Again, with the overall goal to make this as smooth and simple as possible to assure inclusive integration of DBE firms.

MYR Group will look to the procurement staff to implement and carry out the new supplier diversity program by requiring DBE firms to be considered at all levels from initial bid requests to final contract award and execution. It is currently understood that supplier diversity is and/or may be taking place but without verification and tracking on a full scale. Thus, it is hard to quantify to what extent MYR Group's supplier diversity is being carried out. So, what we would like to do first is create a master list of all suppliers currently being used for equipment, material, and services and break out those suppliers that are DBE firms and those that are not. If in not sure on status send a letter to supplier to declare if they are DBE certified. Second, from the master supplier list where no DBE firms exist, it should be noted and action should be taken to search for DBE firms in that sector/category to include in future solicitations for projects. MYR Group understands that in some cases there may just not be any opportunities or even DBE firms to complete our contracts and in such situations an explanation stating the reason will be required, and all efforts made to seek supplier diversity when applicable will be documented. Once projects are awarded, the DBE spend should be tracked and broken out separately for each separate DBE in order for MYR Group to track. This will be MYR Group's goal and mission for the supplier diversity program as well as MYR Group's expectation from those involved at all levels of the procurement process.

CITY AND COUNTY OF DENVER

STATE OF COLORADO



DENVER
THE MILE HIGH CITY

DEPARTMENT OF PUBLIC WORKS

Bid Documents Package

Contract Number: 201845552



**CCD FY 2018 HSIP Package 3,
Josephine/York and 7th Avenue**

November 7, 2018

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

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DENVER
THE MILE HIGH CITY

CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS

**CCD FY 2018 HSIP Package 3, Josephine/York and 7th Avenue
20184552**

STATEMENT OF QUANTITIES

Item No.	Description	Estimated	Quantity
201-00000	CLEARING AND GRUBBING	1	LS
202-00200	REMOVAL OF SIDEWALK	160	SY
202-00203	REMOVAL OF CURB AND GUTTER	477	LF
202-00206	REMOVAL OF CONCRETE CURB RAMP	200	SY
202-00220	REMOVAL OF ASPHALT MAT	390	SY
202-00828	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	2	EA
203-00100	MUCK EXCAVATION	251	CY
203-01597	POTHOLING	40	HR
208-00035	AGGREGATE BAG	100	LF
208-00045	CONCRETE WASHOUT STRUCTURE	1	EA
208-00050	STORM DRAIN INLET PROTECTION	8	EA
208-00070	VEHICLE TRACKING PAD	2	EA
208-00103	REMOVAL AND DISPOSAL OF SEDIMENT (LABOR)	50	HR
208-00105	REMOVAL AND DISPOSAL OF SEDIMENT (EQUIPMENT)	25	HR
208-00106	SWEEPING (SEDIMENT REMOVAL)	25	HR
208-00205	EROSION CONTROL SUPERVISOR	50	HR
210-04050	ADJUST VALVE BOX	6	EA
212-00050	SODDING	6,452	SF



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CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS

**CCD FY 2018 HSIP Package 3, Josephine/York and 7th Avenue
20184552**

STATEMENT OF QUANTITIES

Item No.	Description	Estimated	Quantity
212-00101	TREE PROTECTION	19	EA
403-00720	HOT MIX ASPHALT (PATCHING) (ASPHALT)	162	TON
608-00006	CONCRETE SIDEWALK (6 INCH)	63	SY
608-00010	CONCRETE CURB RAMP	323	SY
609-21011	CURB TYPE 2 (SECTION M)	183	LF
609-21020	CURB AND GUTTER TYPE 2 (SECTION II-B)	451	LF
503-00036	DRILLED CAISSON (36 INCH)	104	LF
503-00037	VACUUMED CAISSON (36 INCH)	104	LF
613-00000	WIRING	1	LS
613-00206	2 INCH ELECTRICAL CONDUIT (BORED)	965	LF
613-00300	3 INCH ELECTRICAL CONDUIT	20	LF
613-00306	3 INCH ELECTRICAL CONDUIT (BORED)	1,670	LF
613-06000	ELECTRIC METER PEDESTAL CABINET AND BASE	2	EA
613-07000	PULL BOX (SPECIAL)	2	EA
613-70250	LUMINAIRE (LED)(5300 LUMENS)(55 WATT)	16	EA
613-50150	SECONDARY SERVICE PEDESTAL	2	EA
614-00011	SIGN PANEL (CLASS I)	170.25	SF



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CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS

**CCD FY 2018 HSIP Package 3, Josephine/York and 7th Avenue
20184552**

STATEMENT OF QUANTITIES

Item No.	Description	Estimated	Quantity
614-70150	PEDESTRIAN SIGNAL FACE (16")(COUNT DOWN)	24	EA
614-70336	TRAFFIC SIGNAL FACE (12-12-12)	24	EA
614-72860	PEDESTRIAN PUSH BUTTON	24	EA
614-72866	EMERGENCY VEHICLE TRAFFIC SIGNAL PRIORITY CONTROL SYSTEM	6	EA
614-72855	TRAFFIC SIGNAL CABINET AND CONTROLLER	2	EA
614-72886	VEHICLE DETECTION SYSTEM (SINGLE CAMERA)	6	EA
614-81000	TRAFFIC SIGNAL-LIGHT POLE STEEL	10	EA
614-81125	TRAFFIC SIGNAL-LIGHT POLE STEEL (1-25 FT MAST ARM)	2	EA
614-81140	TRAFFIC SIGNAL-LIGHT POLE STEEL (1-40 FT MAST ARM)	2	EA
614-81540	TRAFFIC SIGNAL-LIGHT POLE STEEL (2-25&40 FOOT MAST ARM)	2	EA
614-84100	TRAFFIC SIGNAL PEDESTAL POLE ALUMINUM	4	EA
614-86105	TELEMETRY (FIELD)	2	EA
630-00000	FLAGGING	640	HR
630-00007	TRAFFIC CONTROL INSPECTION	24	DAY
630-00012	TRAFFIC CONTROL MANAGEMENT	80	DAY
630-80335	BARRICADE (TYPE 3 M-A)(TEMPORARY)	4	EA



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CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS

**CCD FY 2018 HSIP Package 3, Josephine/York and 7th Avenue
20184552**

STATEMENT OF QUANTITIES

Item No.	Description	Estimated	Quantity
630-80341	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A)	40	EA
630-80342	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE B)	16	EA
630-80344	CONSTRUCTION TRAFFIC SIGN (SPECIAL)	30	SF
630-80355	PORTABLE MESSAGE SIGN PANEL	6	EA
630-80356	ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL (A TYPE)	4	EA
630-80360	DRUM CHANNELIZING DEVICE	120	EA
630-80363	DRUM CHANNELIZING DEVICE (WITH LIGHT)(FLASHING)	20	EA
630-80380	TRAFFIC CONE	160	EA
625-00000	CONSTRUCTION SURVEYING	1	LS
626-00000	MOBILIZATION	1	LS
700-70010	F/A 01 - MINOR CONTRACT REVISIONS	1	FA
700-70023	F/A 02 - ON-THE-JOB TRAINEE	1	FA
700-70082	F/A 03 - FURNISH & INSTALL ELECTRICAL SERVICE	1	FA
700-70310	F/A 04 - LANDSCAPING	1	FA
700-70380	F/A 05 - EROSION CONTROL	1	FA
700-70592	F/A 06 - SURVEY MONUMENTATION	1	FA
700-70589	F/A 07 - ENVIRONMENTAL HEALTH & SAFETY MANAGEMENT	1	FA

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

**NOTICE OF INVITATION FOR BIDS
FEDERAL AID PROJECT NO.: SHE M320-116
CITY OF DENVER CONTRACT NO.: 201845552**

CCD FY 2018 HSIP Package 3, Josephine/York and 7th Avenue

**BID SCHEDULE:
11:00 a.m., Local Time
DECEMBER 6, 2018**

Sealed bids will be received on bid opening day beginning at 10:30 a.m. local time and ending at 11:00 a.m. local time in the Webb Building, 201 W. Colfax Ave., 6th floor, Room 6G7, Denver, CO 80202. All properly delivered bids will then be publicly opened and read aloud.

Prior to bid opening day at 10:30 a.m. local time, bids will be received the Webb Building to the attention of: Public Works Contract Administration, 201 W. Colfax Ave. 6th floor, Dept. 614, Denver, CO 80202.

Prior to submitting a bid, the bidder shall consult the Contractor's Bulletin Board located at the Webb Building, 201 W. Colfax Ave., 2nd Floor, Denver, CO 80202 and/or www.work4denver.com.

GENERAL STATEMENT OF WORK:

This project will remove and replace existing traffic signal equipment at two intersecitons (York Street/7th Avenue and Josephine Street/7th Avenue). Civil improvements will also be constructed including upgrading curb ramps in all eight quadrants of both one-way couplet intersections and removal and replacement of sidewalk and curb and gutter as shown in the design plans.

ESTIMATED CONSTRUCTION COST:

The estimated cost of construction for this project is between \$1,085,000 and \$1,326,000.

TEXTURA CONSTRUCTION PAYMENT MANAGEMENT:

Bidders are required, when preparing a bid, to agree it shall use the Textura® Construction Payment Management System ("Textura") for all payments, including those to subcontractors, inclusive of this Project. All fees associated with Textura are to be paid by the awarded Contractor. Bidders shall use the pricing scale provided in Instructions to Bidders to price the Textura service appropriately. For details on the company and service, contact the Textura® Corporation at 866-TEXTURA or www.texturacorp.com.

DOCUMENTS AND BID INFORMATION AVAILABLE:

Contract Documents complete with Technical Specifications and, if applicable construction drawings will be available on the first day of publication at: www.work4denver.com. To download digital Contract Documents at a cost of \$15.00 per download, reference eBid Document Number #6005249. Contact QuestCDN at 952-233-1632 or info@questcdn.com for assistance.

PRE-BID CONFERENCE:

A pre-bid conference will be held for this Project at 10:00 a.m., local time, on November 14, 2018. This meeting will take place at: 201 W. Colfax Ave., Room 4.I.5, Denver, CO 80202.

DEADLINE TO SUBMIT QUESTIONS: November 21, 2018 at 2:00 p.m. local time.

PREQUALIFICATION REQUIREMENTS:

Each bidder must be prequalified as a 1D(1) Traffic Signals in the \$1.5M monetary level in accordance with the City's Rules and Regulations Governing Prequalification of Contractors. Each bidder must have submitted a prequalification application a minimum of ten (10) calendar days prior to the bid opening date. Applications must be submitted to the Department of Public Works, Prequalification Section, 201 W. Colfax Ave., Department 614, Denver, CO 80202. To view the Rules and Regulations and to obtain a prequalification application, please visit www.denvergov.org/prequalification or call 720-865-2539.

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION:

Federally-funded construction, reconstruction, remodeling, and professional design services contracts made and entered into by the City and County of Denver are subject to Federal Statutes and Regulations regarding Disadvantaged Business Enterprise participation and all Disadvantaged Business Enterprises Utilization.

The U.S. Department of Transportation (DOT) is authorized to establish project goals for expenditures on construction, reconstruction and remodeling and professional design services work funded by FHWA and let by the City and County of Denver. The specific goal for this project is:

10% Disadvantaged Business Enterprise (DBE)

The project goal must be met with certified participants as set forth in 49 CFR Part 26. For compliance with good faith effort requirements, refer to 49 CFR 26.53.

MISCELLANEOUS:

Contracts for construction, reconstruction, and remodeling are subject to the United States Department of Labor Wage determinations requirements.

As its best interest may appear, the City and County of Denver reserves the right to reject any or all bids and to waive informalities in bids.

Publication Dates: November 7, 8, 9, 2018
Published In: The Daily Journal

If applicable, a shortened version of this Notice of Invitation for Bids and the Statement of Quantities can be viewed on the City and County of Denver's website at: www.work4denver.com

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

INSTRUCTIONS TO BIDDERS

IB-1 INSTRUCTION TO BIDDERS

These Instructions to Bidders are a part of the Contract Documents and are intended to serve as a guide to bidders. They are general in nature and may be amended or supplemented as needed to support any one specific invitation to bid. Each bidder shall prepare a bid in strict compliance with all requirements of the Contract Documents and by careful application of these instructions.

IB-2 BIDDING

The Contract Documents contain the Bid Form and Submittal Package for this Project which must be used to submit a bid hereunder. The bidder must fully complete, execute, and submit this Bid Form and Submittal Package, along with any other specified components of the Contract Documents, as its bid for the referenced Project.

A bidder is not required to submit as part of its bid the entire set of Contract Documents distributed by the City pursuant to the Notice of Invitation for Bids if the bidder executes and submits the Bidder Acknowledgment Form included with the Bid Form and Submittal Package as part of its bid. However, each bidder, by submitting its bid, shall be conclusively presumed to have received and reviewed all the information contained in the Contract Documents as defined herein.

Each bid must be enclosed in a sealed envelope, addressed to the Executive Director, and show on the face of the envelope the full name of the bidder, the City Project number, and the descriptive title of the Project for which the bid is made. The advertisement for Notice of Invitation for Bids will identify where and when the bid must be delivered.

For the purpose of this Agreement, the term ‘Executive Director’ and ‘Manager’ shall have the same meaning.

IB-3 CONTRACT DOCUMENTS AS PUBLISHED BY CITY

Each bidder is responsible for, and shall be deemed to have received, all information contained in the Contract Documents as distributed by the City pursuant to the Notice of Invitation for Bids, including addenda, whether or not such bidder has reviewed all or part of the Contract Documents in either its hard copy form or in any other format. If organizations or companies other than the City or its design professional distribute the City's Contract Documents for review by prospective bidders, whether in hard copy or via electronic or other media, neither the City nor its design professional shall be responsible for the content, completeness, or accuracy of any information distributed or transmitted by any such organization or company.

IB-4 COMPLETING AND SIGNING THE BID FORMS

The bidder must complete the Bid Form by legibly typing or printing in ink, in words and figures as required, all the bidder's prices offered for the Work to be performed. All blank spaces which require a response of the bidder must be fully and properly completed. If a submitted bid has words and figures as written on the Bid Form by the bidder that do not agree, the written words will govern.

On Bid Forms requiring unit price bids, the bidder shall write in the provided Bid Form spaces a unit price for each item for which a quantity is given and shall also write the product of each unit price and the quantity specified in the “Amount” or “Total” space provided.

Each bidder must sign the Bid Form and give the bidder's current business address. If an individual, the signature must be of the individual offering the bid; if a partnership, the signature must be that of a general partner; and if a corporation, both the president and the secretary must sign and the seal of the corporation must be affixed. Signatures of other persons may be acceptable if the bid contains sufficient evidence, satisfactory to the City in its sole discretion, to indicate the other persons have agency to bind the bidder.

IB-5 UNACCEPTABLE BIDS

The City will not accept bids from bidders not prequalified with the Department of Public Works (if prequalification is required for this project), in arrears to the City upon debt or contract, or which are defaulters (as surety or otherwise) upon any obligation to the City.

IB-6 INFORMAL AND UNBALANCED BIDS

Any alteration, interlineation, erasure, omission, deletion, or addition by the bidder to the Bid Form and Submittal Package or other parts of the Contract Documents submitted with the Bid Form and Submittal Package, as originally issued to the bidder, shall render the accompanying bid informal and may constitute cause for rejection.

Any unauthorized addition, conditional or alternate bids, failure to provide a unit price, lump sum amount or authorized alternate item specified, or other irregularities of any kind which tend to render the bid incomplete, indefinite, or ambiguous shall render the bid informal and may constitute cause for rejection.

Bids so unbalanced that each item does not reasonably carry its own proportion of cost or that contain inadequate or unreasonable prices for any item may be rejected. Bids that have not acknowledged all addenda to the Contract Documents issued for this bid may also be rejected.

The City reserves the right to reject any or all bids and to waive any informalities where it is deemed by the City to be in the best interests of the City to do so.

IB-7 ONLY ONE BID ACCEPTED

The City will accept only one bid for the same work from any one bidder. This includes bids that may be submitted under different names by one business enterprise.

IB-8 BID GUARANTEE

As a guarantee of good faith on the part of the bidder, each bid must be accompanied by a bid guarantee consisting of either 1) a certified or cashier's check made payable without condition to the order of the City and County of Denver or 2) a bid bond in a form acceptable to the City and signed by an approved corporate surety in favor of the City and County of Denver. Upon acceptance of the bid and notification by the Executive Director the bidder is considered to be the Apparent Low Bidder, bidder must execute a contract in the form prescribed, furnish a performance and payment bond with a legally responsible and approved surety, furnish the required evidence of insurance, and otherwise satisfy all conditions precedent to contract execution within five (5) days after such notice is made by the City. Should a bidder fail to complete these requirements within the time allotted, said bid guarantee shall be forfeited to the City as liquidated damages and not as a penalty.

The bid guarantee shall be in the amount of **five percent (5%)** of the total bid unless otherwise specified in the Notice of Invitation for Bids and on the form appearing in the Contract Documents in the Bid Form and Submittal Package. Failure to submit a properly executed bid guarantee on the form provided herein may, in the City's sole discretion, constitute cause for rejection.

Following award and execution of the Contract by the Apparent Low Bidder, or earlier in the sole discretion of the City, bid guarantees of all but the Apparent Low Bidder will be returned. The bid guarantee of the Apparent Low Bidder shall be returned after the following conditions have been met: the Apparent Low Bidder delivers to the City satisfactory performance and payment bonds and required insurance documentation, the Apparent Low Bidder has satisfied all conditions precedent to contract execution by the City, the Apparent Low Bidder fully and faithfully executes the Contract, and, if required, the Council of the City approves the Contract. Such return shall be made within one hundred twenty (120) days from date bids are opened unless otherwise specified in the Special Contract Conditions.

IB-9 SITE INSPECTION AND INVESTIGATIONS

Prior to submitting a bid, the bidder is invited to inspect the work site and its surroundings. Although the bidder is not required to make such an inspection before bidding, for purposes of the Contract it shall be conclusively presumed that, by failing to make such an inspection, the bidder has waived the right to later claim additional compensation or time extensions for conditions which would have been evident had the site been inspected.

Drawings and Technical Specifications defining the Work to be done were prepared based on interpretation by the design professionals from 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. In view of this, the bidder is invited to make such additional investigations as the bidder's judgment dictates the need for such investigations. Information about the degree of difficulty of the Work to be done cannot totally be derived from either the Drawings or Technical Specifications or from the Executive Director or his/her representatives.

Since the bid information cannot be guaranteed, the bidder shall have assumed the risks attendant to successful performance of the Work and shall never make claim for additional compensation or time extensions on the grounds the nature or amount of work to be done was not understood by the bidder at the time of the bidding.

IB-10 INCONSISTENCIES

Any inconsistencies or ambiguities between different provisions of the Contract Documents, or any issue the bidder believes requires a decision or interpretation by the City, must be addressed in a formal written communication to the Executive Director of Public Works by delivering, with confirmed receipt of same, said formal written communication to the Executive Director of the Division of Public Works, at least forty-eight (48) hours, excluding Saturdays, Sundays, and holidays, before the time set for the opening of bids.

Information about the decision or interpretation made in response to any inquiry will be posted on the Contractor's Bulletin Board (refer to IB-12 CONTRACTOR'S BULLETIN BOARD, for the location of the Contractor's Bulletin Board). If the matter raised requires, in the sole discretion of the Executive Director, the issuance of an addendum to the bid documents, such addendum will be published, and each bidder shall be required to acknowledge the addendum by signing and identifying it in the Bid Form when submitting their bid.

After bids are opened, all bidders must abide by the formal response of the Executive Director as to any interpretation. The City shall not be bound by, and the bidder shall not rely on, any oral communication, interpretation clarification, or determination of the Contract Documents prior to bid opening.

IB-11 WITHDRAWAL OF BID

A bidder may withdraw its bid at any time prior to the time for receipt of bids set forth in the Notice of Invitation for Bids by making written request to the Executive Director of Public Works. After such time, no bid may be withdrawn or modified.

Withdrawal requests must be signed by the persons authorized to bind the bidder as defined in IB-4, COMPLETING AND SIGNING BID FORMS.

IB-12 CONTRACTOR'S BULLETIN BOARD

It shall be conclusively presumed the bidder has, before submitting any bid, read and shall take full responsibility for all addenda, posted decisions, and other information relevant to the bid posted by the City on the Contractor's Bulletin Board. The Contractor's Bulletin Board is located on the 2nd floor at 201 W. Colfax Avenue, Denver, CO 80202.

IB-13 PRE-BID MEETING

Bidders are urged to attend the pre-bid meeting(s) scheduled for this Project. Attendance is not mandatory; however, bidders will be held responsible for all information presented at such meeting(s).

IB-14 ADDENDA

As its best interests may require, the City may issue addenda to the Contract Documents. Such addenda shall be posted on the Contractor's Bulletin Board and made available to all persons having purchased a set of Contract Documents as set forth in the Notice of Invitation for Bids contained herein. All bidders must acknowledge receipt of all addenda on the Bid Form at the time of submission of the bid.

IB-15 BID OPENING

Bidders are invited to be present at the bid opening. Unless otherwise suspended, delayed, or canceled by posted notice from the Executive Director, bid opening will occur at the time and place designated in the Notice of Invitation for Bid.

IB-16 EVALUATION OF BIDS AND BASIS OF BID SELECTION

Bids will be evaluated after reading in the open meeting at the place designated for such bid opening. All low bidders' bids will be reviewed for responsiveness per the requirements of the Contract Documents as well as whether the bids contain irregularities that could give any bidder an unfair advantage.

Selection will be made based on the lowest, total, responsible, responsive, qualified bid that includes the total base bid set forth on the Bid Form plus the total of any alternates set forth on the Bid Form and selected by the City during evaluation. Alternates, if any are included in the bid, will be selected in the priority shown on the Bid Form subject to the limits of available funds. Bid selection will be subject to all requirements and special bidder qualifications contained herein and subject to approval of such resulting Contract in accordance with the Charter and Revised Municipal Code of the City and County of Denver. In addition to all other specified requirements, the City will correct arithmetical errors in all bids. Only corrected totals will be considered as the basis of selection.

Upon concluding the bid is, in fact, the lowest, total, responsive bid to the bidding conditions and is that of a responsible qualified bidder, the City will notify the Apparent Low Bidder.

As its best interests may appear, the City and County of Denver reserves the right to waive informalities in bids, to reject any and all bids, and to re-bid the Project.

IB-17 NOTICE TO APPARENT LOW BIDDER

The Notice to Apparent Low Bidder, a form included in the Contract Special Conditions Section of the Contract Documents, is issued by the City directly to the selected bidder and informs the bidder the Executive Director intends to seek approval of the execution of the Contract by the City in accordance with the Charter and Revised Municipal Code of the City and County of Denver. Specifically, it informs the bidder of its obligations with respect to execution of the Contract and instructs the bidder on how to proceed toward execution of the Contract. The City reserves the right to notify the Apparent Low Bidder, at any time within one hundred twenty (120) days from the date of the opening of the bids, that approval to contract with the Apparent Low Bidder shall be sought in accordance with the Charter and Revised Municipal Code of the City and County of Denver.

In accordance with the terms and conditions contained in the Bid Form and Submittal Package and any additional requirements set forth in the Notice to Apparent Low Bidder or elsewhere in the Contract Documents, the Apparent Low Bidder shall execute the Contract Form contained in the Contract Documents made available by the City for execution in the appropriate number of counterparts. The Apparent Low Bidder shall return the fully executed Contract Document sets, along with any supplemental documents required herein, to the City and shall comply with all other conditions precedent to Contract execution within five (5) days of the date of issuance of the Notice to Apparent Low Bidder by the City. Failure to comply with each of these requirements within five (5) days of the date of issuance of the Notice to Apparent Low Bidder by the City shall render the bid non-responsive and may constitute cause for rejection.

Issuance of such Notice shall not constitute a commitment on the part of the City or create any rights in the Apparent Low Bidder to any contract with the City.

IB-18 EXECUTION OF CONTRACT

The process of executing a contract requires action by both the Apparent Low Bidder and the City. After it notifies the Apparent Low Bidder, the City will prepare the Contract Documents by incorporating all the documents submitted by the Apparent Low Bidder into one or more executable copies. Upon notification that contract documents are ready for execution, the Apparent Low Bidder shall execute the contract documents. At this time, the successful bidder shall also provide certain supplemental documents for incorporation into the Contract Documents. These supplemental documents shall include: the properly executed Certificate of Insurance Forms evidencing the Apparent Low Bidder's satisfactory compliance with the insurance requirements set forth in the Contract Documents; a properly executed Payment and Performance Bond Form and appropriate Power of Attorney evidencing the Apparent Low Bidder's satisfactory compliance with the bonding requirements set forth in the Contract Documents; and documentation of compliance with any other conditions precedent to execution of the Contract by the City set forth in the Contract Documents. The insurance and bond forms contained in the Contract Special Conditions Section of the Contract Documents must be used in satisfying these supplemental document requirements.

These documents will be examined by the City to determine whether or not the Apparent Low Bidder has correctly executed the Contract and has correctly provided and satisfactorily and properly completed the required supplemental documents. Once confirmed, all of the documents are forwarded to the City Attorney who will, if the insurance and bonding offered is acceptable and if all other elements of the Contract Documents are in order, recommend that the Executive Director and the Mayor approve the documents and, when required by the City Charter, prepare an ordinance for submittal to City Council authorizing the execution of the Contract. The City Attorney shall, in all applicable instances, submit the proposed contract and ordinance to City Council. After City Council approval, the Contract shall be reviewed by the City Attorney and routed for execution by the Mayor, attestation by the Clerk, and countersignature and registration by the Auditor. When the total process of contract execution is complete, a Notice to Proceed will be issued and a single executed copy of the Contract will be delivered to the Apparent Low Bidder. Any work performed, or materials purchased, prior to the issuance of the Notice to Proceed is at the Apparent Low Bidder's risk.

IB-19 BONDING REQUIREMENTS

In accordance with the provisions of General Contract Conditions, Title 15, PERFORMANCE AND PAYMENT BONDS, the minimum bonding requirements for this Contract are set forth in the form **CITY AND COUNTY OF DENVER PERFORMANCE AND PAYMENT BOND** contained in the Special Conditions Section of the Contract Documents. Upon receipt of Notice to Apparent Low Bidder, the Apparent Low Bidder must cause this form bond to be purchased, executed, and furnished along with appropriate Powers of Attorney and a surety authorization letter (in a form similar to the one attached) to the City.

IB-20 INSURANCE REQUIREMENTS

The minimum insurance requirements for this Contract are set forth in the Special Conditions Section of the Contract Documents. Bidders are urged to consider, in preparing a bid hereunder, that each condition, requirement, or specification set forth in the form certificate must be complied with by the bidder and all subcontractors performing Work on the Project, unless such requirements are specifically accepted in writing by the City's Risk Management Office. The bidder must either include all subcontractors performing work hereunder as insureds under each required policy or furnish a separate certificate for each subcontractor. In either case, the bidder shall ensure that each subcontractor complies with all the coverage requirements.

IB-21 PERMITS AND LICENSES

All permits, licenses, and approvals required in the prosecution of the Work shall be obtained and paid for by the bidder.

IB-22 WAGE RATE REQUIREMENTS

In preparing any bid hereunder, the bidder must comply with, and should carefully consider, all requirements and conditions of the United States Department of Labor's Payment of Prevailing Wages.

At the time of the preparation of the Contract Documents, the then-current prevailing wage rates applicable to this Project shall be bound within the Contract Documents made available to potential bidders for the Project. If, prior to the date of the bid publication, it is determined that prevailing wages rates different from those bound in the Contract Documents are applicable to one or more of the various classes of laborers, mechanics and workers encompassed by this Project, such different prevailing wage rates shall be provided in an addendum. In any event, the bidder will be held, at the actual date of bid opening, to those prevailing wage rates incorporated into the Contract Documents and as modified by any such addenda.

These prevailing wage rates shall be considered the **minimum** prevailing wage rates to be paid by all contractors or subcontractors for the life of the contract.

IB-23 TAX REQUIREMENTS

General. Bidders are referred to the General Contract Condition 323, TAXES, as to taxes to which they may be subject in performing the Work under this Contract; including, but not limited to, sales and use taxes and the Denver Occupational Privilege Tax. The following instructions are to be considered along with the General Contract Conditions and not in lieu of them:

Sales and Use Tax. Construction and building materials sold to contractors and subcontractors for use on structures, roads, streets, highways, and other public works owned by the City and County of Denver are exempt

from state, RTD, and Cultural Facilities District sales and use taxes. However, such materials will be subject to sales and use taxes imposed by the City and County of Denver.

It is the responsibility of the contractor and its subcontractors to apply to the Colorado Department of Revenue (“CDOR”) for a certificate or certificates of exemption indicating their purchase of construction or building materials is for a public project. The contractor must deliver copies of such applications as soon as possible after approval by the CDOR to the City. Bidders shall not include in their bid amounts the exempt state, RTD, and Cultural Facilities District Sales and Use Taxes.

Denver Occupational Privilege Tax. Any employee working for a contractor, or a subcontractor, who earns over \$500 working in Denver during a calendar month, is subject to the payment of the Employee Occupational Privilege Tax. Contractors and any subcontractor must pay the Business Occupational Privilege Tax for each employee subject to such tax.

IB-24 DIVERSITY AND INCLUSIVENESS IN CITY SOLICITATIONS

Each bidder shall, as a condition of responsiveness to this solicitation, complete and return the “Diversity and Inclusiveness in City Solicitations Information Request Form” with their Bid.

Using the “Diversity and Inclusiveness in City Solicitations Information Request Form” provided, please state whether you have a diversity and inclusiveness program for employment and retention, procurement and supply chain activities, or customer service. Provide any additional information requested on the form. The information supplied on the “Diversity and Inclusiveness in City Solicitations Information Request Form” will provide an opportunity for City contractors to describe their own diversity and inclusiveness practices. Bidders are not expected to conduct intrusive examinations of its employees, managers, or business partners to describe diversity and inclusiveness measures. Rather, the City simply seeks a description of the bidder’s current practices, if any.

Diversity and Inclusiveness information provided by City bidders in response to City solicitations for services or goods will be collated, analyzed, and made available in reports consistent with City Executive Order No. 101. However, no personally identifiable information provided by or obtained from bidders will be in such reports

IB-25 DISADVANTAGED BUSINESS ENTERPRISE (DBE) REQUIREMENTS

The Disadvantaged Business Enterprise (DBE) Program is a federally-mandated program that seeks to ensure non-discrimination in the award of U.S. Department of Transportation (DOT) assisted contracts and to create a level playing field on which DBEs can compete fairly for DOT assisted contracts. **Local Public Agencies (LPAs) that are subrecipients of FHWA funding from the Colorado Department of Transportation (CDOT) must comply with CDOT’s FHWA-approved DBE Program.** To such end, CDOT sets a contract goal for DBE participation for each DOT assisted LPA Contract.

In order to be awarded the Contract, the Apparent Low Bidder shall show it has committed to DBE participation sufficient to meet the goal or has otherwise made good faith efforts to do so. CDOT will amend the goal prior to award if the Apparent Low Bidder demonstrates good faith efforts were made, but sufficient commitments to meet the goal could not be obtained.

CDOT and the LPA will monitor the progress of the Awarded Contractor (Contractor) throughout the project to ensure that the Contractor’s DBE commitments are being fulfilled. Modifications to the commitments must be approved by the CDOT Regional Civil Rights Office (RCRO). The LPA may withhold payment or seek other contractual remedies if the Contractor is not complying with the requirements of this special provision. Upon completion of the Contract, CDOT may require the LPA to reduce the final payment to the Contractor if the Contractor has failed to fulfill the commitments or made good faith efforts to meet the contract goal.

The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

For general assistance regarding the DBE program and compliance, contact CDOT's Civil Rights and Business Resource Center (CRBRC) at (303)757-9234. For project specific issues, contact the LPA Engineer or RCRO.

All forms referenced herein can be found on the CDOT website in the forms library. Remainder of the Disadvantaged Business enterprise (DBE) Requirements (Local Agency) may be found attached herein.

IB-26 DISCLOSURE OF INFORMATION

All submissions and other materials provided or produced pursuant to this Invitation for Bids may be subject to the Colorado Open Records Law, C.R.S. 24-72-201, et seq. As such, bidders are urged to review these disclosure requirements and any exceptions to disclosure of information furnished by another party and, prior to submission of a bid to the City, appropriately identify materials that are not subject to disclosure. In the event of a request to the City for disclosure of such information, the City shall advise the bidder of such request to give the bidder an opportunity to object to the disclosure of designated confidential materials furnished to the City. In the event of the filing of a lawsuit to compel such disclosure, the City will tender all such material to the court for judicial determination of the issue of disclosure and each bidder agrees to intervene in such lawsuit to protect and assert its claims of privilege against disclosure of such material. Each bidder further agrees to defend, indemnify, and save and hold harmless the City, its officers, agents, and employees from any claim, damages, expense, loss, or costs arising out of the bidder's intervention to protect and assert its claims of privilege against disclosure under the Open Records Law including, but not limited to, prompt reimbursement to the City of all reasonable attorney fees and costs and damages the City may incur directly or may be ordered to pay by such court.

IB-27 GENERAL BIDDING INFORMATION

Bidders are instructed to contact the Contract Administrator designated below for this Project for pre-bid, post-bid, and general City bidding information. Bidders may also visit www.work4denver.com for information, both general and project specific. The Contract Administrator assigned to this project is Debby Gibson who may be reached via email at pw.procurement@denvergov.org.

IB-28 FEDERAL REQUIREMENTS

This project is funded, in whole or in part, by federal funding made available through the Federal Highway Administration ("FHWA") and administered by the Colorado Department of Transportation ("CDOT"). As such, each bidder must review and comply with certain bid requirements (the "Federal Forms") in formulating and submitting its bid for the Project, and, if awarded a contract pursuant to this bid, must comply with certain "Federal Requirements." The required Federal Forms are included in the Bid Package at pages BF-13 through BF-21. The Federal Requirements are attached to the Bid Document Package, pages at BDP-73 through BDP-84. The bidder shall be presumed to have considered and completed all Federal Requirements and Forms as part of its bid and shall be presumed to have carefully considered and accounted for all costs of complying with the Federal Requirements in formulating and submitting a bid hereunder.

IB-29 PAYMENT PROCEDURE REQUIREMENTS

Bidder recognizes and agrees it shall be required to use the Textura® Construction Payment Management System (Textura) for all payments, including those to subcontractors, inclusive of this Project. All fees associated with Textura are to be paid by the bidder. Bidders are required, when preparing a bid, to enter the price of Textura on the line provided for the service. The fee is all inclusive of all subcontractor, project, and subscription fees associated with Textura. The bidder will calculate the fee based on a percentage of their total bid, and then should include it on the line item provided in the bid form labeled "**Textura® Construction Payment Management System Fee**". This expense becomes part of the Contract and billable to the City. Textura will invoice the awarded Contractor directly. All costs, including but not limited to, costs associated with training, entering data or utilizing Textura other than the Textura Construction Payment Management System Fee are overhead and shall not be reimbursed by the City. Bidder is responsible for the tax on Textura fee. As with other taxes, the City will not reimburse bidder for this cost and therefore this cost should be included in the bid. Textura will invoice the awarded Contractor directly.

Project Value	Project Fee (GC + Sub Usage)
\$250,000 - \$499,999.99	\$1,625
\$500,000 - \$999,999.99	\$3,250
\$1,000,000 - \$2,999,999.99	\$5,850
\$3,000,000 - \$4,999,999.99	\$9,100
\$5,000,000 - \$9,999,999.99	\$12,220
\$10,000,000 - \$19,999,999.99	\$20,345
\$20,000,000 - \$49,999,999.99	\$32,500
\$50,000,000 - \$99,999,999.99	\$48,750
\$100,000,000 - \$199,999,999.99	\$69,095
\$200,000,000 - \$299,999,999.99	\$85,345
\$300,000,000 - \$399,999,999.99	\$109,720
\$400,000,000 - \$499,999,999.99	\$142,220
\$500,000,000 - \$999,999,999.99	\$162,500
\$1,000,000,000 - \$1,999,999,999.99	\$345,345
\$2,000,000,000 - \$4,999,999,999.99	\$650,000
\$5,000,000,000 - \$9,999,999,999.99	\$1,015,625
\$10,000,000,000 or greater	\$1,503,125

For more information:

<http://www.denvergov.org/constructioncontracts/ContractAdministration/BiddingProcess/TexturaPaymentSystem/tabid/443165/Default.aspx>

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**RULES AND REGULATIONS
REGARDING
EQUAL EMPLOYMENT OPPORTUNITY**

Promulgated and adopted by the Executive Director of Public Works pursuant to and by authority of Article III, Division 2, Chapter 28 of the Revised Municipal Code of the City and County of Denver, and for the purpose of ensuring contractors, subcontractors and suppliers soliciting and receiving compensation for contract work from or through the City and County of Denver provide equal opportunity in employment without regard to race, color, creed, sex, national origin, age, religion, marital status, political opinion or affiliation or mental or physical handicap and meet certain requirements for the hiring, training, promotion, and treatment during employment of members of ethnic groups subject to differential treatment, including persons of African descent (Black), Spanish-surnamed (Hispanic), Asian-American and American Indian Groups.

RULE I - DEFINITIONS

- A. "City" means the City and County of Denver.
- B. "Executive Director" shall mean the Executive Director of Public Works for the City and County of Denver.
- C. "Manager," as referenced in the Department of Public Works Standard Specifications for Construction General Contract Conditions 2011 Edition, refers to the Executive Director of Public Works for the City and County of Denver.
- D. "Contract" means a contract entered into with the City and County of Denver financed in whole or in part by local resources or funds of the City and County of Denver for the construction of any public building or prosecution or completion of any public work.
- E. "Contractor" means the original party to a contract with the City and County of Denver, also referred to as the "general" or "prime" contractor.
- F. "Director" means the Director of the Division of Small Business Opportunity.
- G. "Subcontractor" means any person, company, association, partnership, corporation, or other entity which assumes by subordinate agreement some or all of the obligations of the general or prime contractor.
- H. The phrase "Bidding Specifications" as used in Article III, Division 2 of Chapter 28 of the Revised Municipal Code shall include BID CONDITION, INVITATION TO BID, and NOTICE OF PROPOSAL.
- I. "Affirmative Action Program" means a set of specific and result-oriented procedures or steps to which a contractor commits himself to apply every good faith effort to employ members of ethnic minority groups, to include persons of African descent (Black), Spanish surnamed (Hispanic), Asian-American, American Indians, and persons with mental or physical handicap.
- J. "Division of Small Business Opportunity" means the City agency established pursuant to Article III, Division 1 of Chapter 28 of the Denver Revised Municipal Code.

RULE II - NOTICE OF HEARING

When results of conciliation efforts are unsatisfactory to the Executive Director and he/she is informed in accordance with Article III, Division 2 of Chapter 28 of the Revised Municipal code that a contractor or subcontractor has apparently failed to meet affirmative action and equal employment opportunity requirements after a reasonable period of notice to correct deficiencies, the Executive Director will , prior to imposition of any sanctions, afford the contractor a hearing in order to determine whether the contractor or his subcontractors have failed to comply with the affirmative action and equal employment opportunity requirements of Article III, Division 2 of Chapter 28 of the Revised Municipal Code or of the

contract. Written notice of such hearing shall be delivered personally or sent by certified mail, return receipt requested, to the contractor and to any subcontractor involved, at least ten (10) days prior to the date scheduled for the hearing.

RULE III - HEARING

- A. Contractors will appear at hearings and may be represented by counsel and may present testimony orally and other evidence.
- B. Hearings shall be conducted by one or more hearing examiners designated as such by the Executive Director.
- C. The Director of the Division of Small Business Opportunity may participate in hearings as a witness.
- D. Hearings shall be held at the place specified in the notice of hearing.
- E. All oral testimony shall be given under oath or affirmation and a record of such proceedings shall be made.
- F. All hearings shall be open to the public.
- G. The hearing officer shall make recommendations to the Executive Director who shall make a final decision.

REGULATIONS

REGULATION NO. 1 - ORDINANCE:

The Rules and Regulations of the Executive Director shall be inserted in the bidding specifications for every contract for which bidding is required.

REGULATION NO. 2 - EXEMPTIONS:

Each Contract and subcontract, regardless of the dollar amount, shall be subject to affirmative action requirements unless specifically exempted in writing individually by the Executive Director. Exemptions apply only to "affirmative action" in equal employment opportunity, and are not to be construed as condonation in any manner of "discrimination" or "discriminatory practices" in employment because of race, color, creed, sex, age, national origin, religion, marital status, political opinion or mental or physical handicap.

REGULATION NO. 3 - DIRECTOR OF CONTRACT COMPLIANCE:

The Director of the Division of Small Business Opportunity shall perform the duties assigned to such official by Article III, Division 2 Chapter 28 of the Revised Municipal Code and by the Manager. (1) The Director of the Division of Small Business Opportunity or designated representatives shall inform bidders and contractors of affirmative action procedures, programs, and goals in accordance with the Ordinance at pre-bid and pre-construction conference; (2) make regular on-site inspections; (3) supply contractors and subcontractors with report forms to be completed by them when requested, and furnished to the Director of the Division of Small Business Opportunity; and (4) review payroll records, employment records and practices of general contractors and their subcontractors and suppliers during the performance of any contract. The Director of the Division of Small Business Opportunity shall promptly report apparent affirmative action deficiencies to the Executive Director.

REGULATION NO. 4 - GOALS AND TIMETABLES:

In general, goals and timetables should take into account anticipated vacancies and the availability of skills in the market place from which employees should be drawn. In addition, where discrimination in employment by a contractor or any of his subcontractors is indicated, a corrective action program will take into account the need by the contractor and his subcontractors to correct past discriminatory practices and reach goals of minority manpower utilization on a timely basis through such recruiting and advertising efforts as are necessary and appropriate.

REGULATION NO. 5 - AWARD OF CONTRACTS:

It shall be the responsibility of the Director of the Division of Small Business Opportunity to determine the affirmative action capability of bidders, contractors and subcontractors and to recommend to the Executive Director the award of contracts to those bidders, contractors and subcontractors and suppliers who demonstrate the ability and willingness to comply with the terms of their contract.

REGULATION NO. 6 - PUBLICATION AND DUPLICATION:

Copies of these Rules and Regulations as amended by the Executive Director from time to time, shall as soon as practicable and after Notice being published will be made a part of all City Contracts.

REGULATION NO. 7 - NOTICE TO PROCEED:

Prior to issuance of the Notice to Proceed a sign-off will be required of the Director of the Division of Small Business Opportunity or his/her designee.

REGULATION NO. 8 - CONTRACTS WITH SUBCONTRACTORS:

To the greatest extent possible, the contractor shall make a good faith effort to contract with minority contractors, subcontractors and suppliers for services and supplies by taking affirmative actions which include but are not limited to the following:

- Advertise invitations for subcontractor bids in minority community news media.
- Contact minority contractor organizations for referral of prospective subcontractors.
- Purchase materials and supplies from minority material suppliers.

REGULATION NO. 9 - AGENCY REFERRALS:

It shall be no excuse that the union with which the contractor or subcontractor has an agreement providing for referral, exclusive or otherwise, failed to refer minority employees.

REGULATION NO. 10 - CLAUSES:

The Executive Director shall include the appropriate clauses in every contract and the contractor shall cause to be inserted in every subcontract the appropriate clauses:

- APPENDIX A: City and County of Denver Equal Opportunity Clause - ALL CONTRACTS funded only with City and County of Denver monies.
- APPENDIX B: Equal Opportunity Clause (11246) - ALL FEDERAL ASSISTED.
- APPENDIX C: Section 3 - Assurance of Compliance - HUD ASSISTED PROJECTS.
- APPENDIX D: Section 3 - Clause - HUD ASSISTED PROJECTS.

All amendments to the appendices shall be included by reference.

REGULATION NO. 11 - SHOW CAUSE NOTICES:

When the Executive Director has reasonable cause to believe that a contractor has violated Article III, Division 2 of Chapter 28 of the Denver Revised Municipal Code, he/she may issue a notice requiring the contractor to show cause, within fifteen (15) days why enforcement procedures, or other appropriate action to ensure compliance, should not be instituted.

REGULATION NO. 12 - BID CONDITIONS - AFFIRMATIVE ACTION REQUIREMENTS - EQUAL EMPLOYMENT OPPORTUNITY:

APPENDIX E: The Bid Conditions - Affirmative Action Requirements - Equal Employment Opportunity as amended and published by the U.S. Department of Labor Employment Standards Administration, Office of Federal Contract Compliance, shall be inserted verbatim for bidding specification for every non-exempt contract involving the use of Federal funds.

APPENDIX F: The Bid Conditions - Affirmative Action Requirements - Equal Employment Opportunity as published by the Department of Public Works, City and County of Denver, shall be inserted verbatim as bidding specifications for every non-exempt contract using City funds.

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

APPENDIX A

**CITY AND COUNTY OF DENVER EQUAL OPPORTUNITY CLAUSE -
ALL CONTRACTS**

1. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, age, national origin, religion, marital status, political opinion or affiliation, or mental or physical handicap. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, sex, age, national origin, religion, marital status, political opinion or affiliation, or mental or physical handicap. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor state that all qualified applicants will receive consideration for employment without regard to race, creed, color, sex, age, national origin, religion, marital status, political opinion or affiliation, or mental or physical handicap.
3. The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information
4. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided, advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
5. Each Contractor will comply with all provisions of Article III, Division 2 of Chapter 28 of the Revised Municipal Code, and the rules, regulations, and relevant orders of the Executive Director and the Director.
6. The Contractor will furnish all information and reports required by Article III, Division 2 of Chapter 28 of the Revised Municipal Code, and by rules, regulations and orders of the Executive Director and Director or pursuant thereto, and will permit access to his books, records, and accounts by the Executive Director, Director, or their designee for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
7. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further City contracts in accordance with procedures authorized in Article III, Division 2, Chapter 28 of the Revised Municipal Code, or by rules, regulations, or order of the Manager.
8. The Contractor will include Regulation 12, Paragraph 2 and the provisions of paragraphs (1) through (6) in every subcontract of purchase order unless exempted by rules, regulations, or orders of the Executive Director

issued pursuant to Article III, Division 2, Chapter 28 of the Revised Municipal Code, so that such provisions will be binding on each subcontractor or supplier. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

The applicant further agrees to be bound by the above equal opportunity clauses with respect to its own employment practices when it participates in City contracts. The Contractor agrees to assist and cooperate actively with the Manager and the Director in obtaining compliance of subcontractors and suppliers with the equal opportunity clause and the rules, regulations and relevant orders of the Manager, and will furnish the Manager and the Director such information as they may require for the supervision of compliance and will otherwise assist the Manager and Director in the discharge of the City's primary responsibility for securing compliance. The Contractor further agrees to refrain from entering into any contract or contract modification subject to Article III, Division 2 of Chapter 28 of the Revised Municipal Code with a contractor debarred from, or who has not demonstrated eligibility for, City contracts.

The Contractor will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the Executive Director and Director. In addition, the Contractor agrees that failure or refusal to comply with these undertakings the Manager may take any or all of the following actions:

- A. Cancellation, termination, or suspension in whole or in part of this contract.
- B. Refrain from extending any further assistance to the applicant under the program with respect to which the failure occurred until satisfactory assurance of future compliance has been received from such applicant.
- C. Refer the case to the City Attorney for appropriate legal proceedings.

SUBCONTRACTS: Each prime Contractor or Subcontractor shall include the equal opportunity clause in each of its subcontracts.

APPENDIX B
EQUAL EMPLOYMENT OPPORTUNITY CLAUSE

During the performance of this contract, the Contractor agrees as follows:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following:
Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.
3. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.
5. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
6. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedure authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
7. The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provision, including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

NOTICES TO BE POSTED PER PARAGRAPH (1) AND (3) OF THE EEO CLAUSE

EQUAL EMPLOYMENT OPPORTUNITY IS THE LAW

**Discrimination is Prohibited by
the Civil Rights Act of 1964
and by Executive Order No. 11246**

Title VII of the Civil Rights Act of 1964

Administered by: The Equal Employment Opportunity Commission

Prohibits discrimination because of Race, Color, Religion, sex, or National Origin by Employers with 25 or more employees, by Labor Organizations with a hiring hall of 25 or more members, by Employment Agencies, and b Joint Labor-Management Committees for Apprenticeship or Training.

ANY PERSON who believes that he or she has been discriminated against SHOULD CONTACT:

The Equal Employment Opportunity Commission (EEOC)
2401 E Street, NW
Washington, D.C. 20506

Executive Order No. 11256

Administered by: The Office of Federal Contract Compliance Programs

Prohibits discrimination because of Race, Color, Religion, Sex, or National Origin, and requires affirmative action to ensure equality of opportunity in all aspects of employment, by all Federal Government Contractors and Subcontractors, and by Contractors Performing Work Under a Federal Assisted Construction Contract, regardless of the number of employees in either case.

ANY PERSON who believes that he or she has been discriminated against SHOULD CONTACT:

The Office of Federal Contract Compliance Programs
U. S. Department of Labor
Washington, D.C. 20210

APPENDIX E

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246, as amended)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area are as follows:

Timetables: Until Further Notice

Goals:

Minority Participation in Each Trade:	<u>13.8</u> percent
Female Participation in Each Trade:	<u>6.9</u> percent

These goals are applicable to all the contractor's construction work (whether or not it is Federal or Federally-assisted) performed in the covered area. If the contractor performs construction work in a geographic area located outside of the covered area, it shall apply the goal established for such geographic area where the work is actually performed. With regard to this second area, the contractor also is subject to the goal for both its Federally involved and non-Federally involved construction.

The contractor's compliance with the executive order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goal. The hours of minority employment and training must be substantially uniform throughout the length of the contract, and in each grade, and the contract shall make a good faith effort to employ minorities evenly on each of its projects. The transfer of minority employees or trainees from contractor to contractor or from project to project, for the sole purpose of meeting the contractor's goal, shall be a violation of the contract, the executive order, and the regulations in 41 CFR Part 60-4. Compliance with the goal will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director, OFCCP, within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employee identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographic area in which the contract is performed.
4. As used in this notice and in the contract resulting from this solicitation, the "covered area" is the City and County of Denver, Colorado.

STANDARD FEDERAL ASSURANCES

NOTE: As used below the term "contractor" shall mean and include the "Party of the Second Part," and the term "sponsor" shall mean the "City".

During the term of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. Compliance with Regulations. The contractor shall comply with the Regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation (hereinafter "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
2. Nondiscrimination. The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, sex, creed or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
3. Solicitations for Subcontractors, Including Procurements of Materials and Equipment. In all solicitations either by competitive bidding or negotiations made by the contractor for work to be performed under a subcontract, including procurements or materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
4. Information and Reports. The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the sponsor, as appropriate, and shall set forth what efforts it has made to obtain the information.
5. Sanctions for Noncompliance. In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the sponsor shall impose such contract sanctions as it may determine to be appropriate, including, but not limited to:
 - a. Withholding of payments to the contractor under the contract until the contractor complies, and/or
 - b. Cancellation, termination, or suspension of the contract, in whole or in part.
 - c.
6. Incorporation of Provisions. The contractor shall include the provisions of paragraphs 1 through 5 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the sponsor or may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event a 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 sponsor to enter into such litigation to protect the interests of the sponsor and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

**STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION
CONTRACT SPECIFICATIONS (41 CFR 60-4.3)
(VERSION 2, 4/23/90)**

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
 - d. "Minority" includes:
 - i. Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - ii. Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);
 - iii. Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - iv. American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the contractor has a collective bargaining agreement to refer either minorities or women shall excuse the contractor's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the contractor during the training period and the contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the contractor has a collective bargaining agreement has not referred to the contractor a minority person or female sent by the contractor, or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources compiled under 7b above.
 - f. Disseminate the contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such as superintendent, general foremen, etc., prior to the initiation of

construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

- h. Disseminate the contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the contractor's EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.
 - i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
 - j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are non-segregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the

particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally,) the contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.

10. The contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

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

APPENDIX F

AFFIRMATIVE ACTION REQUIREMENTS

EQUAL EMPLOYMENT OPPORTUNITY

For All Non-Exempt Construction Contracts to Be Awarded by the
City and County of Denver, Department of Public Works.

NOTICE

EACH BIDDER, CONTRACTOR OR SUBCONTRACTOR (HEREINAFTER THE CONTRACTOR) MUST FULLY COMPLY WITH THE REQUIREMENTS OF THESE BID CONDITIONS AS TO EACH CONSTRUCTION TRADE IT INTENDS TO USE ON THIS CONSTRUCTION CONTRACT, AND ALL OTHER CONSTRUCTION WORK (BOTH CITY AND NON-CITY) IN THE DENVER AREA DURING THE PERFORMANCE OF THIS CONTRACT OR SUBCONTRACT. THE CONTRACTOR COMMITS ITSELF TO THE GOALS FOR MINORITY MANPOWER UTILIZATION, AS APPLICABLE, AND ALL OTHER REQUIREMENTS, TERMS AND CONDITION OF THESE BID CONDITIONS BY SUBMITTING A PROPERLY SIGNED BID.

THE CONTRACTOR SHALL APPOINT A COMPANY EXECUTIVE TO ASSUME THE RESPONSIBILITY FOR THE IMPLEMENTATION OF THE REQUIREMENTS, TERMS AND CONDITIONS OF THESE BID CONDITIONS.

/s/

Executive Director of Public Works
City and County of Denver

EQUAL OPPORTUNITY PROVISIONS (Cont'd)

1. REQUIREMENTS - AN AFFIRMATIVE ACTION PLAN:

Contractors shall be subject to the provisions and requirements of these bid conditions including the goals and timetables for minority* and female utilization, and specific affirmative action steps set forth by the Office of Contract Compliance. The contractor's commitment to the goals for minority, and female utilization as required constitutes a commitment that it will make every good faith effort to meet such goals.

a. GOALS AND TIMETABLES:

The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade are as follows:

GOALS FOR MINORITY PARTICIPATION FOR EACH TRADE	GOALS FOR FEMALE PARTICIPATION FOR EACH TRADE
From January 1, 1982 to Until Further Notice	From January 1, 1982 to Until Further Notice
21.7% - 23.5%	6.9%

The goals for minority and female utilization above are expressed in terms of hours of training and employment as a proportion of the total number of hours to be worked by the contractor's aggregate workforce, which includes all supervisory personnel, in each trade, on all projects for the City and County of Denver during the performance of its contract (i.e., The period beginning with the first day of work on the City and County of Denver funded construction contract and ending with the last day of work).

The hours of minority and female employment and training must be substantially uniform throughout the length of the contract in each trade and minorities and females must be employed evenly on each of a contractor's projects. Therefore, the transfer of minority or female employees from contractor to contractor or from project to project for the purpose of meeting the contractor's goals shall be a violation of these Bid Conditions.

If the Contractor counts the nonworking hours of apprentices, they must be employed by the Contractor during the training period; the Contractor must have made a commitment to employ apprentices at the completion of their training subject to the availability of employment opportunities; and the apprentices must be trained pursuant to training programs approved by the Bureau of Apprenticeship and Training.

* "Minority" is defined as including, Blacks, Spanish Surname Americans, Asian-Americans, and American Indians, and includes both men and minority women.

b. SPECIFIC AFFIRMATIVE ACTION STEPS:

No contractor shall be found to be in noncompliance solely on account of its failure to meet its goals, but will be given an opportunity to demonstrate that the contractor has instituted all the specific affirmative action steps specified and has made every good faith effort to make these steps work toward the attainment of its goals within the timetables, all to the purpose of expanding minority and female utilization in its aggregate workforce. A contractor, who fails to comply with its obligation under the Equal Opportunity Clause of its contract and fails to achieve its commitments to the goals for minority and female utilization has the burden of proving that it has engaged in an Affirmative Action Program directed at increasing minority and female utilization and that such efforts were at least as extensive and as specific as the following:

- i. The Contractor should have notified minority and female organizations when employment opportunities were available and should have maintained records of the organization's response.
- ii. The Contractor should have maintained a file of the names and addresses of each minority

and female referred to it by any individual or organization and what action was taken with respect to each such referred individual, and if the individual was not employed by the Contractor, the reasons. If such individual was sent to the union hiring hall for referral and not referred back by the union or if referred, not employed by the Contractor, the file should have documented this and their reasons.

- iii. The Contractor should have promptly notified the Department of Public Works, and the Division of Small Business Opportunity when the union or unions with which the Contractor has collective bargaining agreements did not refer to the contractor a minority or female sent by the contractor, or when the Contractor has other information that the union referral process has impeded efforts to meet its goals.
- iv. The Contractor should have disseminated its EEO policy within its organization by including it in any employee handbook or policy manual; by publicizing it in company newspapers and annual reports and by advertising such policy at reasonable intervals in union publications. The EEO policy should be further disseminated by conducting staff meetings to explain and discuss the policy; by posting of the policy; and by review of the policy with minority and female employees.
- v. The Contractor should have disseminated its EEO policy externally by informing and discussing it with all recruitment sources; by advertising in news media, specifically including minority and female news media; and by notifying and discussing it with all subcontractors.
- vi. The Contractor should have made both specific and reasonably recurrent written and oral recruitment efforts. Such efforts should have been directed at minority and female organizations, schools with substantial minority and female enrollment, and minority and female recruitment and training organizations within the Contractor's recruitment area.
- vii. The Contractor should have evidence available for inspection that all tests and other selection techniques used to select from among candidates for hire, transfer, promotion, training, or retention are being used in a manner that does not violate the OFCCP Testing Guidelines in 41 CFR Part 60-3.
- viii. The Contractor should have made sure that seniority practices and job classifications do not have a discriminatory effect.
- ix. The Contractor should have made certain that all facilities are not segregated by race.
- x. The Contractor should have continually monitored all personnel activities to ensure that its EEO policy was being carried out including the evaluation of minority and female employees for promotional opportunities on a quarterly basis and the encouragement of such employees to seek those opportunities.
- xi. The Contractor should have solicited bids for subcontracts from available minority and female subcontractors engaged in the trades covered by these Bid Conditions, including circulation of minority and female contractor associations.

NOTE: The Director and the Division of Small Business Opportunity will provide technical assistance on questions pertaining to minority and female recruitment sources, minority and female community organizations, and minority and female news media upon receipt of a request for assistance from a contractor.

c. NON - DISCRIMINATION:

In no event may a contractor utilize the goals and affirmative action steps required in such a manner as to cause or result in discrimination against any person on account of race, color, religion, sex, marital status, national origin, age, mental or physical handicap, political opinion or affiliation.

d. **COMPLIANCE AND ENFORCEMENT:**

In all cases, the compliance of a contractor will be determined in accordance with its obligations under the terms of these Bid Conditions. All contractors performing or to perform work on projects subject to these Bid Conditions hereby agree to inform their subcontractors in writing of their respective obligations under the terms and requirements of these Bid Conditions, including the provisions relating to goals of minority and female employment and training.

e. **CONTRACTORS SUBJECT TO THESE BID CONDITIONS:**

In regard to these Bid Conditions, if the Contractor meets the goals set forth therein or can demonstrate that it has made every good faith effort to meet these goals, the Contractor shall be presumed to be in compliance with Article III, Division 2 of Chapter 28 of the Revised Municipal Code, the implementing regulations and its obligations under these Bid Conditions. In the event, no formal sanctions or proceedings leading toward sanctions shall be instituted unless the contracting or administering agency otherwise determines that the contractor is violating the Equal Opportunity Clause.

- a. Where the Division of Small Business Opportunity finds that a contractor failed to comply with the requirements of Article III, Division 2 of Chapter 28 of the Revised Municipal Code or the implementing regulations and the obligations under these Bid Conditions, and so informs the Manager, the Manager shall take such action and impose such sanctions, which include suspension, termination, cancellation, and debarment, as may be appropriate under the Ordinance and its regulations. When the Manager proceeds with such formal action it has the burden of proving that the Contractor has not met the goals contained in these Bid Conditions. The Contractor's failure to meet its goals shall shift to it the requirement to come forward with evidence to show that it has met the good faith requirements of these Bid Conditions.
- b. The pendency of such proceedings shall be taken into consideration by the Department of Public Works in determining whether such contractor can comply with the requirements of Article III, Division 2 of Chapter 28 of the Revised Municipal Code, and is therefore a "responsible prospective contractor".
- c. The Division of Small Business Opportunity shall review the Contractor's employment practices during the performance of the contract, if the Division of Small Business Opportunity determines that the Contractor's Affirmative Action Plan is no longer an acceptable program, the Director shall notify the Manager.

2. **OBLIGATIONS APPLICABLE TO CONTRACTORS:**

It shall be no excuse that the union with which the Contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority or female employees. Discrimination in referral for employment, even if pursuant to provisions of a collective bargaining agreement, is prohibited by the National Labor Relations Act, as amended, Title VI of the Civil Rights Act of 1964, as amended, and Article III, Division 2 of Chapter 28 of the Revised Municipal Code. It is the policy of the Department of Public Works that contractors have a responsibility to provide equal employment opportunity, if they wish to participate in City and County of Denver contracts. To the extent they have delegated the responsibility for some of their employment practices to a labor organization and, as a result, are prevented from meeting their obligations pursuant to Article III, Division 2, Chapter 28 of the Revised Municipal Code, such Contractors cannot be considered to be in compliance with Article III, Division 2, Chapter 28 of the Revised Municipal Code, or its implementing rules and regulations.

3. **GENERAL REQUIREMENTS:**

Contractors are responsible for informing their subcontractors in writing regardless of tier, as to their respective obligations. Whenever a Contractor subcontracts a portion of work in any trade covered by these Bid Conditions, it shall include these Bid Conditions in such subcontracts and each subcontractor shall be bound by these Bid Conditions to the full extent as if it were the prime contractor. The Contractor shall not, however, be held accountable for the failure of its subcontractors to fulfill their obligations under these Bid Conditions. However, the prime contractor shall give notice to the Director of any refusal or failure of any

subcontractor to fulfill the obligations under these Bid Conditions. A subcontractor's failure to comply will be treated in the same manner as such failure by a prime contractor.

- a. Contractors hereby agree to refrain from entering into any contract or contract modification subject to Article III, Division 2, Chapter 28 of the Revised Municipal Code with a contractor debarred from, or who is determined not to be a "responsive" bidder for the City and County of Denver contracts pursuant to the Ordinance.
- b. The Contractor shall carry out such sanctions and penalties for violation of these Bid Conditions and the Equal Opportunity Clause including suspension, termination and cancellation of existing subcontracts and debarment from future contracts as may be ordered by the Manager pursuant to Article III, Division 2, Chapter 28 of the Revised Municipal Code and its implementing regulations.
- c. Nothing herein is intended to relieve any contractor during the term of its contract from compliance with Article III, Division 2, Chapter 28 of the Revised Municipal Code, and the Equal Opportunity Clause of its contract with respect to matters not covered in these Bid Conditions.
- d. Contractors must keep such records and file such reports relating to the provisions of these Bid Conditions as shall be required by the Office of Contract Compliance.
- e. Requests for exemptions from these Bid Conditions must be made in writing, with justification, to the Executive Director of Public Works, 201 W. Colfax, Dept. 608, Denver, Colorado 80202, and shall be forwarded through and with the endorsement of the Director.

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

**FEDERAL AID PROJECT NO.: SHE M320-116
CITY OF DENVER CONTRACT NO.: 201845552**

CCD FY 2018 HSIP Package 3, Josephine/York and 7th Avenue

CONTRACT

THIS CONTRACT AND AGREEMENT, made and entered into, by and between the City and County of Denver, a municipal corporation of the State of Colorado, hereinafter referred to as the "City," party of the first part, and

**STURGEON ELECTRIC COMPANY, INC.
12150 East 112th Avenue
Henderson, CO 80640**

hereinafter referred to as the "Contractor," party of the second part,

WITNESSETH, Commencing on **November 7, 2018**, and for at least three (3) days the City advertised that sealed bids would be received for furnishing all labor, tools, supplies, equipment, materials, and everything necessary and required for the following:

<p>FEDERAL AID PROJECT NO.: SHE M320-116 CITY OF DENVER CONTRACT NO.: 201845552 CCD FY HSIP Package 3 Josephine/York and 7th Avenue</p>

WHEREAS, bids pursuant to said advertisement have been received by the Executive Director of Public Works, who has recommended that a Contract for said work be made and entered into with the above named Contractor who was the lowest, responsive, qualified bidder therefore, and

WHEREAS, said Contractor is now willing and able to perform all of said work in accordance with said advertisement and its bid.

NOW THEREFORE, in consideration of the compensation to be paid the Contractor, the mutual agreements hereinafter contained, and subject to the terms hereinafter stated, it is mutually agreed as follows:

1. CONTRACT DOCUMENTS

It is agreed by the parties hereto that the following list of documents, instruments, technical specifications, plans, drawings and other materials which are attached hereto and bound herewith, incorporated herein by reference or otherwise referenced in these documents constitute and shall be referred to either as the "Contract Documents" or the "Contract," and all of said documents, instruments, technical specifications, Plans, Drawings and other materials taken together as a whole constitute the Contract between the parties hereto, and they are as fully a part of this agreement as if they were set out verbatim and in full herein:

*Advertisement of Notice of Invitation for Bids
Instructions to Bidders
Bid Bond
Addenda (as applicable)
DBE Documents
Equal Employment Opportunity Provisions (Appendices A, B, E and F)
Bid Form
Commitment to DBE Participation
Contract Form
General Contract Conditions
Special Contract Conditions*

Performance and Payment Bond
Notice to Apparent Low Bidder
Notice to Proceed
Contractor's Certification of Payment Form
Final/Partial Lien Release Form
Certificate of Contract Release
Change Orders (as applicable)
Federal Requirements (as applicable)
Prevailing Wage Rate Schedule(s)
Technical Specifications
Contract Drawings
Accepted Shop Drawings

2. SCOPE OF WORK

The Contractor agrees to and shall furnish all labor, tools, supplies, equipment, materials and everything necessary for and required to do, perform and complete all of the Work described, drawn, set forth, shown and included in said Contract Documents.

3. TERMS OF PERFORMANCE

The Contractor agrees to undertake the performance of the Work under this Contract within ten (10) days after being notified to commence work by issuance of a Notice to Proceed in substantially the form contained herein from the Manager and agrees to fully complete said Work within **240 (Two Hundred Forty Days)** consecutive calendar days from the effective date of said Notice, plus such extension or extensions of time as may be granted in accordance with the provisions of the General Contract Conditions and any applicable Special Contract Conditions.

4. TERMS OF PAYMENT

The City agrees to pay the Contractor for the performance of all of the Work required under this Contract, and the Contractor agrees to accept as the Contractor's full and only compensation therefore, such sum or sums of money as may be proper in accordance with the price or prices set forth in the Contractor's Bid Form hereto attached and made a part hereof for **bid item numbers (201-00000 through 700-70589) 68 total bid items**, the total estimated cost thereof being **One Million Fifty Six Thousand Eight Hundred Eighty Seven Dollars and zero cents (\$1,056,887.00)**. Adjustments to said Contract Amount and payment of amounts due hereunder shall be made in accordance with the provisions of the General Contract Conditions and any applicable Special Contract Conditions.

5. NO DISCRIMINATION IN EMPLOYMENT

In connection with the performance of work under this contract, the Contractor may not refuse to hire, discharge, promote or demote, or discriminate in matters of compensation against any person otherwise qualified, solely because of race, color, religion, national origin, gender, age, military status, sexual orientation, gender identity or gender expression, marital status, or physical or mental disability. The Contractor shall insert the foregoing provision in all subcontracts.

6. DBE AND EQUAL OPPORTUNITY REQUIREMENTS

The Contractor agrees to comply with all requirements of the City's Equal Employment Opportunity program and the Federal Disadvantaged Business Enterprise Participation program as set out in Article III, Division 2, Chapter 28 of the Denver Revised Municipal Code, and any rules, regulations and guidelines set forth thereunder for such programs. This compliance shall include the obligation to maintain throughout the term of the contract that level of DBE participation upon which the Contract was initially awarded, unless otherwise authorized by the law or any rules, regulations or guidelines.

7. WAGE RATE REQUIREMENTS

In performance of all Work hereunder, the Contractor agrees to comply with and be bound by all requirements and conditions of the United States Department of Labor Prevailing Wages rates and requirements.

8. APPLICABILITY OF LAWS

The Agreement between the Contractor and the City shall be deemed to have been made in the City and County of Denver, State of Colorado and shall be subject to, governed by, and interpreted and construed by

or in accordance with the laws of the State of Colorado and the Charter, Revised Municipal Code, Rules, Regulations, Executive Orders and fiscal rules of the City. As such, the Contractor shall at all times comply with the provisions of the Charter, Revised Municipal Code, Rules, Regulations, Executive Orders and fiscal rules of the City, and those State of Colorado and Federal Laws, Rules and Regulations, which in any manner limit, control or apply to the actions or operations of the Contractor, any subcontractors, employees, agents or servants of the Contractor engaged in the Work or affecting the materials and equipment used in the performance of the Work, as the same may be, from time to time, promulgated, revised or amended. The Charter and Revised Municipal Code of the City and County of Denver, as the same may be amended from time to time, are hereby expressly incorporated into this Agreement as if fully set out herein by this reference.

9. APPROPRIATION

The amount of money which has been appropriated and encumbered for the purpose of this contract, to date, is equal to or in excess of the Contract Amount. The Manager, upon reasonable written request, will advise the Contractor in writing of the total amount of appropriated and encumbered funds which remain available for payment for all Work under the Contract.

The issuance of any change order or other form or order or directive by the City which would cause the aggregate payable under the contract to exceed the amount appropriated for the contract is expressly prohibited. In no event shall the issuance of any change order or other form of order or directive by the City be considered valid or binding if it requires additional compensable work to be performed, which work will cause the aggregate amount available under the Contract to exceed the amount appropriated and encumbered for this Contract, unless and until such time as the Contractor has been advised in writing by the Manager that a lawful appropriation, sufficient to cover the entire cost of such additional work, has been made.

It shall be the responsibility of the Contractor to verify that the amounts already appropriated for this Contract are sufficient to cover the entire cost of such work, and any work undertaken or performed in excess of the amount appropriated is undertaken or performed in violation of the terms of this contract, without the proper authorization for such work, and at the Contractor's own risk.

10. APPROVALS

In the event this Contract calls for the payment by the City of five hundred thousand dollars (\$500,000.00) or more, approval by the Board of Councilmen of the City and County of Denver, acting by ordinance, in accordance with Section 3.2.6 of the Charter of the City and County of Denver, is and shall be an express condition precedent to the lawful and binding execution and effect and performance of this contract.

11. ASSIGNMENT

The Contractor shall not assign any of its rights, benefits, obligations or duties under this Contract except upon the prior written consent and approval of the Manager City to such assignment.

12. DISPUTES RESOLUTION PROCESS

It is the express intention of the parties to this Contract that all disputes of any nature whatsoever regarding the Contract including, but not limited to, any claims for compensation or damages arising out of breach or default under this Contract, shall be resolved by administrative hearing pursuant to the provisions of Section 56-106, D.R.M.C. The Contractor expressly agrees that this dispute resolution process is the only dispute resolution mechanism that will be recognized by the parties for any claims put forward by the Contractor, notwithstanding any other claimed theory of entitlement on the part of the Contractor or its subcontractors or suppliers.

13. CONTRACT BINDING

It is agreed that this Contract shall be binding on and inure to the benefit of the parties hereto, their heirs, executors, administrators, assigns and successors.

14. PARAGRAPH HEADINGS

The captions and headings set forth herein are for convenience of reference only and shall not be construed so as to define or limit the terms and provisions hereof.

15. SEVERABILITY

It is understood and agreed by the parties hereto that, if any part, term, or provision of this Contract, except for the provisions of this Contract requiring prior appropriation and limiting the total amount to be paid by the City, is by the courts held to be illegal or in conflict with any law of the State of Colorado, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular part, term or provision held to be invalid.

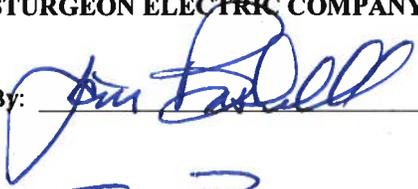
16. ELECTRONIC SIGNATURES AND ELECTRONIC RECORDS:

Contractor consents to the use of electronic signatures by the City. The Agreement, and any other documents requiring a signature hereunder, may be signed electronically by the City in the manner specified by the City. The Parties agree not to deny the legal effect or enforceability of the Agreement solely because it is in electronic form or because an electronic record was used in its formation. The Parties agree not to object to the admissibility of the Agreement in the form of an electronic record, or a paper copy of an electronic document, or a paper copy of a document bearing an electronic signature, on the ground that it is an electronic record or electronic signature or that it is not in its original form or is not an original.

IN WITNESS WHEREOF, the parties have executed this agreement and affixed their seals at Denver, Colorado as of the day first above written.

Contract Control Number: 201845552

Vendor Name: STURGEON ELECTRIC COMPANY, INC.

By: 

Name: Jim Bushnell
(please print)

Title: VICE PRESIDENT CO TRANS
(please print)

ATTEST: [if required]

By: _____

Name: _____
(please print)

Title: _____
(please print)



Contract Control Number:

IN WITNESS WHEREOF, the parties have set their hands and affixed their seals at Denver, Colorado as of

SEAL

CITY AND COUNTY OF DENVER

ATTEST:

By _____

APPROVED AS TO FORM:

REGISTERED AND COUNTERSIGNED:

By _____

By _____

By _____



**CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS
Construction Contract General Conditions**

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

SPECIAL CONTRACT CONDITIONS

SC-1 CONSTRUCTION SPECIFICATIONS

Except as amended herein or in the attached Technical Specifications, all Work performed under the terms of this Contract shall be governed by the applicable provisions of the following latest editions:

City and County of Denver:

Standard Specifications for Construction, GENERAL CONTRACT CONDITIONS,
(2011 Edition) ****General Contract Conditions 1801 and 1802 concerning warranties and guarantees are hereby deleted in their entirety****
Transportation Standards and Details for the Engineering Division

City and County of Denver Traffic Standard Drawings

Wastewater Management Division

– *Standard Detail Drawings*

– *Public Works Wastewater Capital Projects Management Standard Construction Specifications*

Colorado Department of Transportation:

Standard Specifications for Road and Bridge Construction
(Sections 200 through 700 of the 2017 Edition)

Federal Highway Administration:

Manual on Uniform Traffic Control Devices for Streets & Highways (MUTCD)

Building & Fire Codes:

Building Code of the City and County of Denver

(International Building Code 2015 Series, City and County of Denver Amendments 2016)

National Fire Protection Association Standards

(As referenced in the Building Code of the City and County of Denver)

The aforementioned City and County of Denver documents are available for review at the Capital Projects Management Office, 201 W. Colfax Ave., Dept. 506, (5th floor), Denver, CO 80202. The *Standard Specifications for Construction, GENERAL CONTRACT CONDITIONS* is available at: http://www.denvergov.org/dpw_contract_admin/ContractAdministration/ContractorReferenceDocuments/tabid/440535/Default.aspx. *Transportation Standards and Details for the Engineering Division* and the Wastewater Management Division – *Standard Detail Drawings*, are available at <http://www.denvergov.org>.

The “*Colorado Department of Transportation Standard Specifications for Road and Bridge Construction*” is available for review on CDOT’s website at <http://www.coloradodot.info/> and can be purchased from the Colorado Department of Transportation.

The *Manual on Uniform Traffic Control Devices for Streets & Highways* is available for review at the Federal Highway Administration Website at: www.fhwa.dot.gov. The FHWA website also contains purchasing information.

SC-2 ENGINEERING DIVISION / CITY ENGINEER

The Engineering Division is a unit of the Department of Public Works and is supervised by the City Engineer, who is subordinate to the Executive Director of Public Works. For the purpose of this Agreement, the term ‘Executive Director’ and ‘Manager’ shall have the same meaning.

This Division is responsible for the planning, design, construction, operation and maintenance of all of the City’s transportation facilities and the planning, design and construction of all of the City’s wastewater facilities, except for the City’s Municipal Airport System. All references to the Transportation Division or

the Deputy Manager of Public Works for Transportation are deleted and replaced with references to the Engineering Division and City Engineer, respectively.

SC-3 CITY DELEGATION OF AUTHORITY

With reference to General Contract Condition 109, DEPUTY MANAGER and General Contract Condition 212, CITY’S CONTRACT ADMINISTRATION LINE OF AUTHORITY, the Manager hereby designates the City Engineer (the “Director”) as the City official responsible for those certain actions and decisions designated as the responsibility of the Deputy Manager under the General Conditions and delegates to the Director the authority necessary to undertake those responsibilities under this Contract. The Director shall have supervisory responsibility over the Project Manager. Additionally, Contractor questions concerning the Plans and Technical Specifications shall be directed to:

Denver Department of Public Works /Engineering Division,

<u>Project Manager</u>	<u>Name</u>	<u>Telephone</u>
City Project Manager	Chris Krook	720 865-3117
Consultant Project Manager	Ben Waldman	303 285 4511
<u>Consultant</u>	<u>Name</u>	<u>Telephone</u>
Design Consultant	Consultant Contact	
Wilson and Associates, Inc.	Scott Waterman	303 297-2976

SC-4 LIQUIDATED DAMAGES

Should the Contractor fail to complete all Work within the Contract Time allocated under the Contract Form at Paragraph 3, TERMS OF PERFORMANCE, the Contractor shall become liable to the City and County of Denver for liquidated damages, and not as a penalty, at the rate of **\$1,000** for each Day that the Contractor exceeds the time limits herein specified, all in accordance with provisions of General Contract Condition 602, LIQUIDATED DAMAGES; ADMINISTRATIVE COSTS; ACTUAL DAMAGES.

Representative hourly rates for the City administrative costs described in General Contract Condition 602.2 shall be as follows for this Project:

Project Manager	\$69 per hour
Project Engineer	\$63 per hour
Inspector	\$49 per hour
Surveying, if necessary	\$100 per hour

SC-5 SUBCONTRACTS

In accordance with General Contract Condition 501, SUBCONTRACTS no limit shall apply to that percentage of the Work which may be sublet providing that the subcontractors receive prior approval in accordance with General Contract Condition 502, SUBCONTRACTOR ACCEPTANCE.

SC-6 PREVAILING WAGE RATES

General Contract Condition 1001 Wages is replaced in its entirety with the United States Department of Labor wages and requirements and compliance therewith.

SC-7 PAYMENTS TO CONTRACTORS

The application for payment shall be submitted through Textura® Corporations Construction Management Website. Contractor recognizes and agrees that it shall be required to use the Textura Construction Payment Management System for this Project to request payment from the City and to pay subcontractors. All certified subcontractors or suppliers who are listed for participation towards any assigned program goal must be paid via Textura®. Contractor further agrees that, to the fullest extent possible within the CPM System, the City shall be entitled to all non-Confidential records, reports, data and other information related to the project that are available to Contractor through the CPM System, including, but not limited to, information related to Contractor and subcontractor billings. To that end, Contractor agrees that it will activate any available settings within the CPM System that are necessary to grant the City access to such non-Confidential information related to the contract and the project. Applications for payment shall be based on the Contract Unit Prices or the approved Schedule of Values described in GC 903.1

In accordance with General Contract Condition 902, PAYMENT PROCEDURE, the party(ies) responsible for review of all Pay Applications shall be:

<u>Agency/Firm</u>	<u>Name</u>	<u>Telephone</u>
Public Works/Engineering Division	Chris Krook	720 865 3117

In accordance with General Contract Condition 906, APPLICATIONS FOR PAYMENT, each Application submitted shall include the following:

1. The estimate of Work completed shall be based on the approved schedule of values or unit prices, as applicable, and the percent of the Work complete.
2. Each Application for Payment shall include each and every independent subcontractor's payroll information including pay dates and pay amounts.
3. The Contractor shall also submit to the Auditor and other appropriate officials of the City in a timely fashion, information required by General Contract Condition 1004, REPORTING WAGES PAID.
4. Applications for Payment must be accompanied by completed Partial or Final Claim Release Form, as appropriate, from EACH subcontractor and supplier, **AND** the Contractors' Certification of Payment Form (CCP), unless an exception is approved pursuant to General contract condition 907.

The forms, Final/Partial Release and Certificate of Payment (Subcontractor/Supplier) and the Contractor's Certification of Payment (CCP), both of which must be used are attached below. If subcontractor or supplier payments are disbursed via Textura® CPM, those systems generated Release and CCP forms are acceptable.

SC-8 CONSTRUCTION INSPECTION BY THE CITY

General Condition 1701, AUTHORITY OF INSPECTORS, is modified as follows:

1701.1 Persons who are employees of the City or who are under contract to the City or the City as lessee will be assigned to inspect and test the Work. These persons 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 drawings and specifications, accepted Shop Drawings, Product Data and Samples, and the General Contractor's warranties and guarantees. The General Contractor shall permit these inspectors unlimited access to the Work and provide means of safe access to the Work, which cost shall be included as a Cost of the Work without any increase to the Guaranteed Maximum Price. In addition, General Contractor shall provide whatever access and means of access are needed to off-site facilities used to store or manufacture materials and equipment to be incorporated into the Work and shall respond to any other reasonable request to further the inspector's ability to observe or complete any tests. Such inspections shall not relieve the General Contractor of any of its quality control responsibilities or any other obligations under the Contract. All inspections and all tests conducted by the City are for the convenience and benefit of the City. These inspections and tests do not constitute acceptance of the materials or Work tested or inspected, and the City may reject or accept any Work or materials at any time prior to the inspections pursuant to G.C. 2002, whether or not previous inspections or tests were conducted by the inspector or a City representative.

.2 Building Inspection will perform building code compliance inspections for structures designed for human occupancy. It is the General Contractor's responsibility to schedule and obtain these inspections. If a code compliance inspection results in identification of a condition which will be at variance to the Contract Documents, the General Contractor shall immediately notify the Project Manager and confirm such notification with formal correspondence no later than forty-eight (48) hours after the occurrence.

.3 When any unit of government or political subdivision, utility or railroad corporation is to pay a portion of the cost of the Work, its respective representatives shall have the right to inspect the Work. This inspection shall not make any unit of government or political subdivision, utility or railroad corporation a party to the Contract, and shall not interfere with the rights of either party.

SC-9 DISPOSAL OF NON-HAZARDOUS WASTE AT DADS

In accordance with the Landfill Agreement made between the City and Waste Management of Colorado, Inc., bidders will be required to haul dedicated loads (non-hazardous entire loads of waste) to the Denver-Arapahoe Disposal Site (“DADS”) for disposal. DADS is located at Highway 30 and Hampden Avenue in Arapahoe County, Colorado. The City will pay all fees associated with such disposal but the bidder shall be responsible for the costs of transporting the loads. Non-hazardous waste is defined as those substances and materials not defined or classified as hazardous by the Colorado Hazardous Waste Commission pursuant to C.R.S. §25-15-101(6), as amended from time to time, and includes construction debris, soil and asbestos. Bidders shall not use Gun Club Road between I-70 and Mississippi Avenue as a means of access to DADS.

SC-10 PROHIBITION ON USE OF CCA-TREATED WOOD PRODUCTS

The use of any wood products pressure-treated with chromated copper arsenate (CCA) is prohibited. Examples of CCA-treated wood products include wood used in play structures, decks, picnic tables, landscaping timbers, fencing, patios, walkways and boardwalks.

SC-11 TERMINOLOGY

Terminology used in Colorado Department of Transportation (CDOT) Standards and Specifications and City and County of Denver (CCD) Standards and Specifications may differ but shall be considered interchangeable where appropriate. Examples are Department of Public Works (CCD) and Department (CDOT), Project Manager (CCD) and Engineer (CDOT), Traffic Maintenance Plan (CCD) and Traffic Control Plan (CDOT).

SC-12 TECHNICAL SPECIFICATIONS

Section 106 of the CDOT Standard Specifications is hereby incorporated into this contract except where conflicts exist between Section 106 and the General Contract Conditions or Special Contract Conditions. Where conflicts exist, the General Contract Conditions or Special Contract Conditions shall govern.

SC-13 MODIFICATION TO GENERAL CONTRACT CONDITION 405

General Contract Condition 405 is hereby revised for this project as follows:

G.C. 405.2 shall include the following:

Shop Drawings shall be submitted in accordance with Section 105.02 of the CDOT Standard Specifications. Any work performed by the Contractor prior to receipt of approved shop drawings is at the sole risk of the Contractor.

SC-14 MODIFICATION TO GENERAL CONTRACT CONDITION 809

General Contract Condition 809 is hereby revised for this project as follows:

Add G.C. 809.3 as follows:

.3 Fossils may be uncovered during excavation for the project. The Colorado Department of Transportation will furnish a paleontologist to monitor project excavations. The Contractor shall notify the Engineer at least five working days prior to the start of excavation operations to allow for scheduling of the monitor. The paleontologist, Mr. Steve Wallace, can be contacted at (303) 757-9632.

If fossils are encountered, they will be evaluated and, if deemed important, removed prior to further excavation. When directed, the Contractor shall excavate the site in such manner as to preserve the fossils uncovered and shall remove them as directed by the Engineer.

SC-15 FEDERAL REQUIREMENTS

This Project is funded, in whole or in part, by federal funding made available through the Federal Highway Administration (“FHWA”) and administered by the Colorado Department of Transportation (“CDOT”). As such, performance under this contract is subject to certain “Federal Requirements” contained or referenced in Attachment A to this contract, attached hereto and incorporated herein by this reference. The Contractor shall thoroughly review and shall strictly comply with all Federal Requirements in performing its Work under this contract.

SC-16 ATTORNEY’S FEES

Colorado Revised Statute 38-26-107 requires that in the event any person or company files a verified statement of amounts due and unpaid in connection with a claim for labor and materials supplied on this project, the City shall withhold from payments to the Contractor sufficient funds to insure the payment of any such claims. Should the City and County of Denver be made a party to any lawsuit to enforce such unpaid claims or any lawsuit arising out of or relating to such withheld funds, the Contractor agrees to pay to the City its costs and a reasonable attorney's fee which cost shall be included as a Cost of the Work.

Because the City Attorney Staff does not bill the City for legal services on an hourly basis, the Contractor agrees a reasonable fee shall be computed at the rate of one hundred dollars per hour of City Attorney time.

SC-17 CONTRACT FORMS

In accordance with the terms and conditions of the Contract Documents, the City requires the use of certain form documents in complying with or satisfying various obligations, notifications and conditions in contracting with the City or performing Work hereunder. These form documents are referenced by title throughout the Contract Documents for mandatory use as directed. The following are the forms that shall be detached and utilized in accordance with the Contract Documents:

1. Performance and Payment Bond
2. Performance and Payment Bond Surety Authorization Letter (Sample)

The following are forms that will be issued by the City during construction:

1. Notice to Apparent Low Bidder (Sample)
2. Notice to Proceed (Sample)
3. Certificate of Contract Release (Sample)

SC 18: INSURANCE

General Condition 1601 is hereby deleted in its entirety and replaced with the following:

(1) **General Conditions:** Contractor agrees to secure, at or before the time of execution of this Agreement, the following insurance covering all operations, goods or services provided pursuant to this Agreement. Contractor shall keep the required insurance coverage in force at all times during the term of the Agreement, or any extension thereof, during any warranty period, and for eight (8) years after termination of the Agreement. The required insurance shall be underwritten by an insurer licensed or authorized to do business in Colorado and rated by A.M. Best Company as "A-"VIII or better. Each policy shall contain a valid provision or endorsement requiring notification to the City in the event any of the required policies be canceled or non-renewed before the expiration date thereof. Such written notice shall be sent to the parties identified in the Notices section of this Agreement. Such notice shall reference the City contract number listed on the signature page of this Agreement. Said notice shall be sent thirty (30) days prior to such cancellation or non-renewal unless due to non-payment of premiums for which notice shall be sent ten (10) days prior. If such written notice is unavailable from the insurer, contractor shall provide written notice of cancellation, non-renewal and any reduction in coverage to the parties identified in the Notices section by certified mail, return receipt requested within three (3) business days of such notice by its insurer(s) and referencing the City's contract number. If any policy is in excess of a deductible or self-insured retention, the City must be notified by the Contractor. Contractor shall be responsible for the payment of any deductible or self-insured retention. The insurance coverages specified in this Agreement are the minimum requirements, and these requirements do not lessen or limit the liability of the Contractor. The Contractor shall maintain, at its own expense, any additional kinds or amounts of insurance that it may deem necessary to cover its obligations and liabilities under this Agreement.

(2) **Proof of Insurance:** Contractor shall provide a copy of this Agreement to its insurance agent or broker. Contractor may not commence services or work relating to the Agreement prior to placement of coverage. Contractor certifies that the certificate of insurance attached as part of the Contract Documents, preferably an ACORD certificate, complies with all insurance requirements of this Agreement. The City requests that the City's contract number be referenced on the Certificate. The City's acceptance of a certificate of insurance or other proof of insurance that does not comply with all insurance requirements set forth in this Agreement shall not act as a waiver of Contractor's breach of this Agreement or of any of the

City's rights or remedies under this Agreement. The City's Risk Management Office may require additional proof of insurance, including but not limited to policies and endorsements.

(3) **Additional Insureds:** For Commercial General Liability and Auto Liability, Contractor and subcontractor's insurer(s) shall name the City and County of Denver, its elected and appointed officials, employees and volunteers as additional insured.

(4) **Waiver of Subrogation:** For all coverages, Contractor's insurer shall waive subrogation rights against the City.

(5) **Subcontractors and Subconsultants:** All subcontractors and subconsultants (including independent contractors, suppliers or other entities providing goods or services required by this Agreement) shall be subject to all of the requirements herein and shall procure and maintain the same coverages required of the Contractor. Contractor shall include all such subcontractors as additional insured under its policies (with the exception of Workers' Compensation) or shall ensure that all such subcontractors and subconsultants maintain the required coverages. Contractor agrees to provide proof of insurance for all such subcontractors and subconsultants upon request by the City.

(6) **Workers' Compensation/Employer's Liability Insurance:** Contractor shall maintain the coverage as required by statute for each work location and shall maintain Employer's Liability insurance with limits of \$100,000 per occurrence for each bodily injury claim, \$100,000 per occurrence for each bodily injury caused by disease claim, and \$500,000 aggregate for all bodily injuries caused by disease claims. Contractor expressly represents to the City, as a material representation upon which the City is relying in entering into this Agreement, that none of the Contractor's officers or employees who may be eligible under any statute or law to reject Workers' Compensation Insurance shall effect such rejection during any part of the term of this Agreement, and that any such rejections previously effected, have been revoked as of the date Contractor executes this Agreement.

(7) **Commercial General Liability:** Contractor shall maintain a Commercial General Liability insurance policy with limits of \$1,000,000 for each occurrence, \$1,000,000 for each personal and advertising injury claim, \$2,000,000 products and completed operations aggregate, and \$2,000,000 policy aggregate.

(8) **Business Automobile Liability:** Contractor shall maintain Business Automobile Liability with limits of \$1,000,000 combined single limit applicable to all owned, hired and non-owned vehicles used in performing services under this Agreement

(9) **Additional Provisions:**

- (a) For Commercial General Liability, the policies must provide the following:
 - (i) That this Agreement is an Insured Contract under the policy;
 - (ii) Defense costs in excess of policy limits;
 - (iii) A severability of interests or separation of insureds provision (no insured vs. insured exclusion); and
 - (iv) A provision that coverage is primary and non-contributory with other coverage or self-insurance maintained by the City.
- (b) For claims-made coverage:
 - (i) The retroactive date must be on or before the contract date or the first date when any goods or services were provided to the City, whichever is earlier
- (c) Contractor shall advise the City in the event any general aggregate or other aggregate limits are reduced below the required per occurrence limits. At their own expense, and where such general aggregate or other aggregate limits have been reduced below the required per occurrence limit, the Contractor will procure such per occurrence limits and furnish a new certificate of insurance showing such coverage is in force.

SC-19 GREENPRINT DENVER REQUIREMENTS

In accordance with the City and County of Denver Executive Order 123: Greenprint Denver Office and Sustainability Policy, as amended, Contractor shall adhere to sections of Executive Order 123 pertinent to the construction of the built environment. This includes but is not limited to: all construction and renovation of buildings shall follow instructions and memorandum for high performance buildings; horizontal projects shall include the use of fly ash concrete and recycled aggregate where possible; and, all projects shall recycle construction and demolition waste, and install materials that contain recycled content whenever possible using the U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) as guidance. Non-hazardous solid waste that is eligible for reuse or recycling is not subject to the DADS disposal requirement defined in SC-12.

A completed “Greenprint Denver Closeout Form for Construction Projects” shall be delivered to the Project Manager as a submittal requirement of Final Acceptance.

<https://www.denvergov.org/content/denvergov/en/contract-administration/contractor-resources.html>

SC-20 EXECUTIVE DIRECTOR

General Condition 112 Manager is hereby deleted in its entirety and replaced with the following:

“Executive Director” means the Executive Director of Aviation, if the Contract is entered into under the authority of the Department of Aviation; or it means the Executive Director of Public Works, if the Contract is entered into under the authority of the Department of Public Works. The department is identified in the Contract Documents. Whenever the term “Executive Director” is used in the Contract Documents, such term refers only to the Executive Director of Aviation or Public Works, as appropriate, and not to any individual to whom the Executive Director has delegated authority.

REMAINDER OF PAGE LEFT INTENTIONALLY BLANK

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

PERFORMANCE AND PAYMENT BOND Bond No. 014212118

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned **STURGEON ELECTRIC COMPANY, INC.**, a corporation organized and existing under and by virtue of the laws of the State of **MICHIGAN**, hereafter referred to as the "Contractor", and **LIBERTY MUTUAL INSURANCE COMPANY**, a corporation organized and existing under and by virtue of the laws of the State of **MASSACHUSETTS**, and authorized to transact business in the State of Colorado, as Surety, are held and firmly bound unto the **CITY AND COUNTY OF DENVER**, a municipal corporation of the State of Colorado, hereinafter referred to as the "City", in the penal sum of **One Million Fifty Six Thousand Eight Hundred Eighty Seven Dollars and zero cents (\$1,056,887.00)**, lawful money of the United States of America, for the payment of which sum, well and truly to be made, we bind ourselves and our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents;

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH THAT:

WHEREAS, the above bounden Contractor has entered into a written contract with the aforesaid City for furnishing all labor and tools, supplies, equipment, superintendence, materials and everything necessary for and required to do, perform and complete the construction of **CONTRACT NO. 201845552, FEDERAL PROJECT NO: SHE M320-116, CCD FY 2018 HSIP PACKAGE 3, JOSEPHINE/YORK AND 7TH AVENUE**, Denver, Colorado, and has bound itself to complete the project within the time or times specified or pay liquidated damages, all as designated, defined and described in the said Contract and Conditions thereof, and in accordance with the Plans and Technical Specifications therefore, a copy of said Contract being made a part hereof;

NOW, THEREFORE, if the said Contractor shall and will, in all particulars well and truly and faithfully observe, perform and abide by each and every Covenant, Condition and part of said Contract, and the Conditions, Technical Specifications, Plans, and other Contract Documents thereto attached, or by reference made a part thereof and any alterations in and additions thereto, according to the true intent and meaning in such case, then this obligation shall be and become null and void; otherwise, it shall remain in full force and effect;

PROVIDED FURTHER, that if the said Contractor shall satisfy all claims and demands incurred by the Contractor in the performance of said Contract, and shall fully indemnify and save harmless the City from all damages, claims, demands, expense and charge of every kind (including claims of patent infringement) arising from any act, omission, or neglect of said Contractor, its agents, or employees with relation to said work; and shall fully reimburse and repay to the City all costs, damages, and expenses which it may incur in making good any default based upon the failure of the Contractor to fulfill its obligation to furnish maintenance, repairs or replacements for the full guarantee period provided in the Contract Documents, then this obligation shall be null and void; otherwise it shall remain in full force and effect;

PROVIDED FURTHER, that if said Contractor shall at all times promptly make payments of all amounts lawfully due to all persons supplying or furnishing it or its subcontractors with labor and materials, rental machinery, tools or equipment used or performed in the prosecution of work provided for in the above Contract and that if the Contractor will indemnify and save harmless the City for the extent of any and all payments in connection with the carrying out of such Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect;

PROVIDED FURTHER, that if the said Contractor fails to duly pay for any labor, materials, team hire, sustenance, provisions, provender, gasoline, lubricating oils, fuel oils, grease, coal, or any other supplies or materials used or consumed by said Contractor or its subcontractors in performance of the work contracted to be done, or fails to pay any person who supplies rental machinery, tools or equipment, all amounts due as the result of the use of such machinery, tools or equipment in the prosecution of the work, the Surety will pay the same in any amount not exceeding the amount of this obligation, together with interest as provided by law:

PROVIDED FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to contracts with others in connection with this project, or the work to be performed thereunder, or the Technical Specifications and Plans accompanying the same, shall in any way affect its obligation on this bond and it does hereby waive notice of any change, extension of time, alteration or addition to the terms of the Contract, or contracts, or to the work, or to the Technical Specifications and Plans.

IN WITNESS WHEREOF, said Contractor and said Surety have executed these presents as of this
27th day of December, 2018

Attest:


Secretary

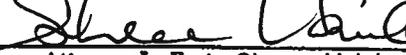


Sturgeon Electric Company, Inc.

Contractor

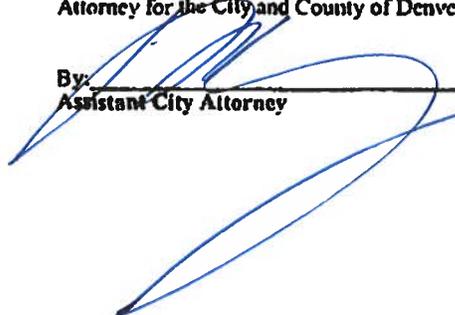
By: 
President Scott Greenhalge
Liberty Mutual Insurance Company

Surety

By: 
Attorney-In-Fact Sheree Hsieh

(Accompany this bond with Attorney-in-Fact's authority from the Surety to execute bond, certified to include the date of the bond).

APPROVED AS TO FORM:
Attorney for the City and County of Denver

By: 
Assistant City Attorney

APPROVED FOR THE CITY AND COUNTY OF
DENVER

By: 
MAYOR

By: 
EXEC. DIR. OF PUBLIC WORKS

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated. Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees. To confirm the validity of this Power of Attorney call 610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Michael M. Bill, Michael H. Bill, Edward L. Mounighan, Cynthia L. Jenkins, Ginger J. Krahn, Brenda Johnston, Cindy Stellhom, Sheree Hsieh, Rebecca A. Virt, Kimberly E. Kinkead, Michael J. Marsella of the city of Indianapolis, state of Indiana its true and lawful attorney-in-fact, with full power and authority hereby conferred to sign, execute and acknowledge the following surety bond:

Principal Name: Sturgeon Electric Company, Inc.
Obligee Name: City and County of Denver
Surety Bond Number: 014212118 Bond Amount: \$1,056,887.00

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 7th day of December, 2017.



The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: *David M. Carey*
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 7th day of December, 2017, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: *Teresa Pastella*
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 27th day of December, 2018.



By: *Renee C. Llewellyn*
Renee C. Llewellyn, Assistant Secretary



O 317 805 7500 F 317 805 7515
A 571 MONON BLVD., SUITE 400, CARMEL, IN 46032
W MJINSURANCE.COM

PERFORMANCE AND PAYMENT BOND

Surety Authorization

December 27, 2018

Assistant City Attorney
201 W Colfax Ave. Dept 1207
Denver, Colorado 80202

RE: Sturgeon Electric Company, Inc.
Contract No. 201845552
Federal Project No. SHE M320-116
Project Name: CCD FY 2018 HSIP Package 3, Josephine/York and 7th Avenue
Contract Amount: \$1,056,887.00
Performance and Payment Bond No.: 014212118

Dear Assistant City Attorney,

The Performance and Payment Bonds covering the above captioned project were executed by this agency, through the authorization of Liberty Mutual Insurance Company on December 27, 2018.

We hereby authorize the City and County of Denver, Department of Public Works, to date all bonds and powers of attorney to coincide with the date of the contract.

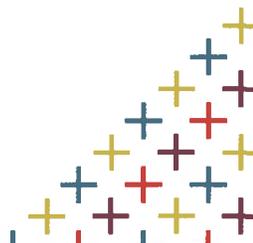
If you should have any additional questions or concerns, please don't hesitate to give me a call at 317 805-7500.

Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sheree Hsieh'.

Sheree Hsieh,
Attorney-in-Fact to Liberty Mutual Insurance Company





CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

1/9/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Arthur J. Gallagher Risk Management Services, Inc. 2850 Golf Road Rolling Meadows IL 60008	CONTACT NAME: Shannon Lentz PHONE (A/C, No, Ext): 630-285-4418 E-MAIL ADDRESS: shannon_lentz@ajg.com	FAX (A/C, No): 630-285-3922
	INSURER(S) AFFORDING COVERAGE	
INSURED MYRGROU-01 Sturgeon Electric Company, Inc. 12150 E. 112th Avenue Henderson, CO 80640	INSURER A: Zurich American Insurance Company	NAIC# 16535
	INSURER B: AGCS Marine Insurance Company	NAIC# 22837
	INSURER C: American Zurich Insurance Company	NAIC# 40142
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES

CERTIFICATE NUMBER: 532891497

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	Y Y	GLO837415424	9/30/2018	9/30/2019	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$	
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY	Y Y	BAP837415522	9/30/2018	9/30/2019	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$	
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$					EACH OCCURRENCE \$ AGGREGATE \$ \$	
C A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	Y N/A	WC837415222(A/O/S) WC837415322(MA/WI)	9/30/2018 9/30/2018	9/30/2019 9/30/2019	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
B	Property Floater		MXI93069373	9/30/2018	9/30/2019	See Below \$3,500,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 Policy #MXI93069373 - Property Floater - Covered Property - Materials of Others in the Care, Custody and Control of Named Insured
 Description of Job : 841623 Josephine/York & 7th Ave HSIP Package 3 Denver Project #201845552
 Additional Insured, Waiver of Subrogation and Primary/Non-Contributory for the following where required by written contract :
 City & County of Denver, its elected and appointed officials, employees and volunteers
 A severability of interest/cross suits liability clause is included under the General Liability coverage as evidenced herein as required by written contract.

CERTIFICATE HOLDER**CANCELLATION**

1556 City & County of Denver
 ATTN : Debby Gibson
 201 W Colfax Ave Dept 614
 Denver CO 80202

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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**PERFORMANCE AND PAYMENT BOND
SURETY AUTHORIZATION
(SAMPLE)**

FAX NUMBER: 720-913-3183
TELEPHONE NUMBER: 720-913-3267

Assistant City Attorney
201 W. Colfax Avenue, Dept. 1207
Denver, Colorado 80202

RE: (Company name)

Contract No: **201845552**
Federal Project No. **SHE M320-116**
Project Name: **CCD FY 2018 HSIP Package 3, Josephine/York and 7th Avenue**
Contract Amount:
Performance and Payment Bond No.:

Dear Assistant City Attorney,

The Performance and Payment Bonds covering the above captioned project were executed by this agency, through _____ insurance company, on _____, 20__.

We hereby authorize the City and County of Denver, Department of Public Works, to date all bonds and powers of attorney to coincide with the date of the contract.

If you should have any additional questions or concerns, please don't hesitate to give me a call at _____.

Thank you.

Sincerely,

Denver Public Works/Office of the Executive Director
201 West Colfax Avenue, Dept 608 | Denver, CO 80202
www.denvergov.org/dpw
p. 720.865.8630 | f. 720.865.8795

311 | POCKETGOV.COM | DENVERGOV.ORG | DENVER 8 TV



NOTICE OF APPARENT LOW BIDDER
(SAMPLE)

Date

To:

Gentlemen:

The EXECUTIVE DIRECTOR OF PUBLIC WORKS has considered the Bids submitted on December 6, 2018 for work to be done and materials to be furnished in and for:

CONTRACT No. 201845552 CCD FY 2018 HSIP Package 3, Josephine/York and 7th Avenue

as set forth in detail in the Contract Documents for the City and County of Denver, Colorado. It appears that your Bid is fair, equitable, and to the best interest of the City and County; therefore, said Bid is hereby accepted at the bid price contained herein, subject to execution of the Contract Documents and your furnishing the items specified below, the total cost thereof «Contract Amount Written», («Contract Amount Numeric»).

It will be necessary for you to appear forthwith at the office of the Department of Public Works, Finance and Administration, 201 W. Colfax Ave., Dept 614, Denver, Colorado 80202, to receive the said Contract Documents, execute the same and return them to the Department of Public Works, Project Management Office within the time limit set forth in the Bid Proposal.

In accordance with the requirements set forth in the Contract Documents, you are required to furnish the following documents:

- a. One original, plus four copies, of the Power of Attorney relative to Performance and/or Payment Bond; and,
- b. ACORD Insurance Certificates: General Liability and Automotive Liability, Workers' Compensation, Employer Liability; or any other coverage required by contract.

All construction Contracts made and entered into by the City and County of Denver are subject to Affirmative Action and Equal Opportunity Rules and Regulations, as adopted by the Executive Director of Public Works, and each contract requiring payment by the City of one-half million dollars (\$500,000.00) or more shall first be approved by the City Council acting by ordinance and in accordance with Section 3.2.6 of the Charter of the City and County of Denver.

Prior to issuance of Notice to Proceed, all Equal Opportunity requirements must be completed. Additional information may be obtained by contacting the Director of Contract Compliance at (720-913-1700).

NOTICE OF APPARENT LOW BIDDER
(*SAMPLE*)

CONTRACT NO. 201845552

Page 2

The Bid Security submitted with your Bid, will be returned upon execution of the Contract and furnishing of the Performance Bond. In the event you should fail to execute the Contract and to furnish the performance Bond within the time limit specified, said Bid Security will be retained by the City and County of Denver as liquidated damages, and not as a penalty for the delay and extra work caused thereby.

Dated at Denver, Colorado this _____ day of _____ 20_____.

CITY AND COUNTY OF DENVER

By

Executive Director of Public Works

Denver Public Works/Office of the Executive Director
201 West Colfax Avenue, Dept 608 | Denver, CO 80202
www.denvergov.org/dpw
p. 720.865.8630 | f. 720.865.8795

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Current Date

(S A M P L E)

Name
Company
Street
City/State/Zip

**FEDERAL AID PROJECT NO. SHE M320-116
CITY OF DENVER CONTRACT NO. 201845552, CCD FY 2018 HSIP Package 3, Josephine/York
and 7th Avenue**

NOTICE TO PROCEED

In accordance with General Contract Condition 302 of the Standard Specifications for Construction, General Contract Conditions, 2011 Edition, you are hereby authorized and directed to proceed on **201845552 CCD FY 2018 HSIP Package 3, Josephine/York and 7th Avenue** with the work of constructing contract number, as set forth in detail in the contract documents for the City and County of Denver.

With a contract time of 240 (Two Hundred Forty Days) calendar days, the project must be complete on or before «Project_Completion_Date».

If you have not already done so, you must submit your construction schedule, in accordance with General Contract Condition 306.2.B, to the Project Manager within 10 days. Additionally, you must submit your tax exempt certificate, and copies of your subcontractors' certificates, in accordance with General Contract Condition 323.5, to the Project Manager as soon as possible. Failure to submit these certificates will delay processing of payment applications.

Very truly yours,

Lesley B. Thomas
City Engineer

By:

Denver Public Works/Office of the Executive Director
201 West Colfax Avenue, Dept 608 | Denver, CO 80202
www.denvergov.org/dpw
p. 720.865.8630 | f. 720.865.8795

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DEPARTMENT OF PUBLIC WORKS

FINAL/PARTIAL RELEASE AND CERTIFICATE OF PAYMENT
(SUBCONTRACTOR/SUPPLIER)

(CITY PROJECT NAME AND NUMBER)	Date: _____, 20
(NAME OF CONTRACTOR)	Subcontract #:
(NAME OF SUBCONTRACTOR/SUPPLIER)	Subcontract Value: \$
	Last Progress Payment: \$
	Date:
Check Applicable Box:	Total Paid to Date: \$
<input type="checkbox"/> DBE	Date of Last Work:

The Undersigned hereby certifies that all costs, charges or expenses incurred by the undersigned or on behalf of the undersigned for any work, labor or services performed and for any materials, supplies or equipment provided on the above referenced Project or used in connection with the above referenced Subcontract (the "Work Effort") have been duly paid in full.

The Undersigned further certifies that each of the undersigned's subcontractors and suppliers that incurred or caused to be incurred, on their behalf, costs, charges or expenses in connection with the undersigned's Work Effort on the above referenced Project have been duly paid in full.

In consideration of \$_____ representing the Last Progress Payment referenced above and in further consideration of the Total Paid to Date, also referenced above, and other good and valuable consideration received and accepted by the undersigned this _____ day of _____, 20__, the Undersigned hereby releases and discharges the City and County of Denver (the "City"), the above referenced City Project, the City's premises and property and the above referenced Contractor from all claims, liens, rights, liabilities, demands and obligations, whether known or unknown, of every nature arising out of or in connection with the performance of the work effort.

As additional consideration for the payments referenced above, the undersigned agrees to defend, indemnify and hold harmless the City, its officers, employees, agents and assigns and the above-referenced Contractor from and against all costs, losses, damages, causes of action, judgments under the subcontract and expenses arising out of or in connection with any claim or claims against the City or the Contractor which arise out of the Undersigned's performance of the Work Effort and which may be asserted by the Undersigned or any of its suppliers or subcontractors of any tier or any of their representatives, officers, agents, or employees.

It is acknowledged that this release is for the benefit of and may be relied upon by the City and the referenced Contractor.

The foregoing shall not relieve the undersigned of any obligation under the provisions of the Undersigned's subcontract, as the subcontract may have been amended, which by their nature survive completion of the Undersigned's work effort including, without limitation, warranties, guarantees, insurance requirements and indemnities.

STATE OF COLORADO) s.
CITY OF _____)

(Name of Subcontractor)

Signed and sworn before me this
day of _____,
20__.

By: _____

Notary Public/Commissioner of
Oaths
My Commission Expires

Title: _____



Date

Name
Company
Street
City/State/Zip

(SAMPLE)
RE: Certificate of Contract Release for
FEDERAL AID PROJECT NO. SHE M320-116
CITY OF DENVER CONTRACT NO. 201845552, CCD FY 2018 HSIP Package 3, Josephine/York and
7th Avenue

Certificate of Contract Release

Received this date of the City and County of Denver, as full and final payment of the cost of the improvements provided for in the foregoing contract, _____ dollars and _____ cents (\$_____), in cash, being the remainder of the full amount accruing to the undersigned by virtue of said contract; said cash also covering and including full payment for the cost of all extra work and material furnished by the undersigned in the construction of said improvements, and all incidentals thereto, and the undersigned hereby releases said City and County of Denver from any and all claims or demands whatsoever, regardless of how denominated, growing out of said contract.

And these presents are to certify that all persons performing work upon or furnishing materials for said improvements under the foregoing contract have been paid in full and this payment to be made is the last or final payment.

Contractor's Signature

Date Signed

If there are any questions, please contact me by telephone at (720) 913-XXXX. Please return this document via facsimile at (720) 913-1805 and mail to original to the above address.

Denver Public Works/Office of the Executive Director
201 West Colfax Avenue, Dept 608 | Denver, CO 80202
www.denvergov.org/dpw
p. 720.865.8630 | f. 720.865.8795

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**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

ON THE JOB TRAINING

NOTICE

This is a standard special provision that revises or modifies CDOT's *Standard Specifications for Road and Bridge Construction*. It has gone through a formal review and approval process and has been issued by CDOT's Project Development Branch with formal instructions regarding its use on CDOT construction projects. It is to be used as written without change. Do not use modified versions of this special provision on CDOT construction projects, and do not use this special provision on CDOT projects in a manner other than that specified in the instructions unless such use is first approved by the Standards and Specifications Unit of the Project Development Branch. The instructions for use on CDOT construction projects appear below.

Other agencies that use the *Standard Specifications for Road and Bridge Construction* to administer construction projects may use this special provision as appropriate and at their own risk.

INSTRUCTIONS FOR USE ON CDOT CONSTRUCTION PROJECTS:

Use this standard special provision in all Federal-aid projects.

This training special provision is an implementation of 23 U.S.C. 140 (a). The Contractor shall meet the requirements of the FHWA 1273 for all apprentices and trainees.

As part of the Contractor's Equal Employment Opportunity Affirmative Action Program, training shall be provided on projects as follows:

1. The Contractor shall provide on the job training aimed at developing full journey workers in the skilled craft identified in the approved training plan. The Contractor shall provide at a minimum, required training hours listed in the Project Special Provisions for each project.
1. The primary objective of this specification is to train and upgrade women and minority candidates to full journey worker status. The Contractor shall make every reasonable effort to enroll and train minority and women workers. This training commitment shall not be used to discriminate against any applicant for training whether or not the applicant is a woman or minority.
2. The Contractor may employ temporary workers from CDOT supportive services providers to meet OJT requirements. Information pertaining to supportive services providers may be obtained by calling the CDOT OJT Coordinator at the number shown on the link <http://www.coloradodot.info/business/equal-opportunity/training.html>
3. An employee shall not be employed or utilized as a trainee in a skilled craft in which the employee has achieved journey status.
4. The minimum length and type of training for each skilled craft shall be as established in the training program selected by the Contractor and approved by the Department and the Colorado Division of the Federal Highway Administration (FHWA), or the U. S Department of Labor (DOL), Office of Apprenticeship or recognized state apprenticeship agency. To obtain assistance or program approval contact:

CDOT Center for Equal Opportunity
4201 East Arkansas Avenue
Denver, CO 80222
eo@dot.state.co.us
1-800-925-3427

5. The Contractor shall pay the training program wage rates and the correct fringe benefits to each approved trainee employed on the project and enrolled in an approved program. The minimum trainee wage shall be no less than the wage for the Guardrail Laborer classification as indicated in the wage decision for the project.
6. The CDOT Regional Civil Rights Manager must approve all proposed apprentices and trainees for the participation to be counted toward the project goal and reimbursement. Approval must occur before training begins. Approval for the apprentice or trainee to begin work on a CDOT project will be based on:
 - A. Evidence of the registration of the trainee or apprentice into the approved training program.
 - A. The completed Form 838 for each trainee or apprentice as submitted to the Engineer.
7. Before training begins, the Contractor shall provide each trainee with a copy of the approved training program, pay scale, pension and retirement benefits, health and disability benefits, promotional opportunities, and company policies and complaint procedures.
8. Before training begins, the Contractor shall submit a copy of the approved training program and CDOT Form 1337 to the Engineer. Progress payments may be withheld until this is submitted and approved and may be withheld if the approved program is not followed.

9. On a monthly basis, the Contractor shall provide to the Engineer a completed On the Job Training Progress Report (Form 832) for each approved trainee or apprentice on the project. The Form 832 will be reviewed and approved by the Engineer before reimbursement will be made. The Contractor will be reimbursed for no more than the OJT Force Account budget. At the discretion of the Engineer and if funds are available, the Engineer may increase the force account budget and the number of reimbursable training hours through a Change Order. The request to increase the force account must be approved by the Engineer prior to the training.
10. Upon completion of training, transfer to another project, termination of the trainee or notification of final acceptance of the project, the Contractor shall submit to the Engineer a "final" completed Form 832 for each approved apprentice or trainee.
11. All forms are available from the CDOT Center for Equal Opportunity, through the CDOT Regional Civil Rights Manager, or on CDOT's website at <http://www.coloradodot.info/business/bidding/Bidding%20Forms/Bid%20Winner%20Forms>
12. Forms 838 and 832 shall be completed in full by the Contractor. Reimbursement for training is based on the number of hours of on the job training documented on the Form 832 and approved by the Engineer. The Contractor shall explain discrepancies between the hours documented on Form 832 and the corresponding certified payrolls.
13. The OJT goal (# of training hours required) for the project will be included in the Project Special Provisions and will be determined by the Regional Civil Rights Manager after considering:
 - A. Availability of minorities, women, and disadvantaged for training;
 - A. The potential for effective training;
 - B. Duration of the Contract;
 - C. Dollar value of the Contract;
 - D. Total normal work force that the average bidder could be expected to use;
 - E. Geographic location;
 - F. Type of work; and
 - G. The need for additional journey workers in the area
 - H. The general guidelines for minimum total training hours are as follows:

Contract dollar value	Minimum total training hours to be provided on the project
Up to 1 million	0
>1 - 2 million	320
>2 - 4 million	640
>4 - 6 million	1280
>6 - 8 million	1600
>8 - 12 million	1920
>12 - 16 million	2240
>16 - 20 million	2560
For each increment of \$5 million, over \$20 million	1280

15. The number of training hours for the trainees to be employed on the project shall be as shown in the Contract. The trainees or apprentices employed under the Contract shall be registered with the Department using Form 838, and must be approved by the Regional Civil Rights Manager before training begins for the participation to be counted toward the OJT project goal. The goal will be met by an approved trainee or apprentice working on that project; or, if a Contractor's apprentice is enrolled in a DOL approved apprenticeship program and registered with CDOT using Form 838 and working for the Contractor on a non-CDOT project. The hours worked on the non-CDOT project may be counted toward the project goal with approved documentation on Form 832. Training hours will be counted toward one project goal.
15. Subcontractor trainees who are enrolled in an approved Program may be used by the Contractor to satisfy the requirements of this specification.
16. The Contractor will be reimbursed \$2.00 per hour worked for each apprentice or trainee working on a CDOT project and whose participation toward the OJT project goal has been approved
17. The Contractor shall have fulfilled its responsibilities under this specification if the CDOT Regional Civil Rights Manager has determined that it has provided acceptable number of training hours.
18. Failure to provide the required training will result in the following disincentives: A sum representing the number of training hours specified in the Contract, minus the number of training hours worked as certified on Form 832, multiplied by the journey worker hourly wages plus fringe benefits [(A hours – B hours worked) x (C dollar per hour + D fringe benefits)] = Disincentives Assessed. Wage rate will be determined by averaging the wages for the crafts listed on Form 1337. The Engineer will provide the Contractor with a written notice at Final Acceptance of the project informing the Contractor of the noncompliance with this specification which will include a calculation of the disincentives to be assessed.

January 20, 2017

DISADVANTAGED BUSINESS ENTERPRISE (DBE) REQUIREMENTS
(LOCAL AGENCY)

NOTICE

This is a standard special provision that revises or modifies CDOT's *Standard Specifications for Road and Bridge Construction*. It has gone through a formal review and approval process and has been issued by CDOT's Project Development Branch with formal instructions for its use on CDOT Local Public Agency construction projects. It is to be used as written without change. Do not use modified versions of this special provision on CDOT Local Public Agency construction projects, and do not use this special provision on projects in a manner other than that specified in the instructions unless such use is first approved by the Standards and Specifications Unit of the Project Development Branch. The instructions for use on CDOT Local Public Agency construction projects appear below.

Instructions for use on Local Public Agency construction projects:

Use this Standard Special Provision on Local Agency administered Federal-Aid Design-Bid-Build Projects. For purposes of this Standard Special Provision, Federal Aid Design Bid Build Projects only include those projects for which the construction portion is funded in whole or in part with federal funds.

Use in conjunction with the Project Special Provision Worksheet, Disadvantaged Business Enterprise (DBE) Contract Goal.

The Local Public Agency should consult with the Regional Civil Rights Office (RCRO) to determine the use of this standard special and to obtain the contract goal. A contract goal of zero still requires the use of this standard special and the worksheet. Local Public Agencies shall not set their own contract goal.

This standard special provision should not be used for CM/GC services, design-build or other innovative projects. For DBE provisions for these projects, contact the Civil Rights and Business Resource Center (CRBRC) at (303)757-9234.

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DISADVANTAGED BUSINESS ENTERPRISE (DBE)
REQUIREMENTS (LOCAL AGENCY)

1. Overview

The Disadvantaged Business Enterprise (DBE) Program is a federally-mandated program that seeks to ensure non-discrimination in the award of U.S. Department of Transportation (DOT)-assisted contracts and to create a level playing field on which DBEs can compete fairly for DOT-assisted contracts. Local Public Agencies (LPAs) that receive federal funds, must comply with CDOT's DBE program. To such end, CDOT sets a contract goal for DBE participation for each DOT-assisted LPA Contract.

In order to be awarded the Contract, the bidder shall show that it has committed to DBE participation sufficient to meet the goal or has otherwise made good faith efforts to do so. CDOT will amend the goal prior to award if the lowest apparent bidder demonstrates that good faith efforts were made but sufficient commitments to meet the goal could not be obtained.

CDOT and the LPA will monitor the progress of the Contractor throughout the project to ensure that the Contractor's DBE commitments are being fulfilled. Modifications to the commitments must be approved by the CDOT Regional Civil Rights Office (RCRO). CDOT may withhold payment or seek other contractual remedies if the Contractor is not complying with the requirements of this special provision. Upon completion of the Contract, CDOT may require the LPA to reduce the final payment to the Contractor if the Contractor has failed to fulfill the commitments or made good faith efforts to meet the contract goal.

For general assistance regarding the DBE program and compliance, contact CDOT's Civil Rights and Business Resource Center (CRBRC) at (303)757-9234. For project specific issues, contact the LPA Engineer or RCRO.

All forms referenced herein can be found on the CDOT website in the forms library.

2. Contract Assurance

By submitting a proposal for this Contract, the bidder agrees to the following assurance and shall include it verbatim in all (including non-DBE) subcontracts:

The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to: (1) Withholding monthly progress payments; (2) Assessing sanctions; (3) Liquidated damages; and/or (4) Disqualifying the contractor from future bidding as non-responsible.

3. Definitions

Terms not defined herein shall have the meaning provided in the CDOT Standard Specifications for Road and Bridge Construction.

- A. *Commitment.* A commitment is a portion of the Contract, identified by dollar amount and work area, designated by the bidder or Contractor for participation by a particular DBE. Commitments are submitted to CDOT via Form 1414, Anticipated DBE Participation Plan, or via Form 1420, DBE Plan Modification Request. Once approved, commitments are enforceable obligations of the Contract.
- B. *Commercially Useful Function (CUF).* Responsibility for the execution of the work and carrying out such responsibilities by actually performing, managing and supervising the work as further described in Section 8 below.
- C. *Contract Goal.* The percentage of the contract designated by CDOT for DBE participation. The contract goal for this contract is provided in the Project Special Provision Disadvantaged Business Enterprise Contract Goal.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
REQUIREMENTS (LOCAL AGENCY)

- (1) The bidder/Contractor shall make good faith efforts to fulfill the contract goal with eligible DBE participation. For determining whether the contract goal was met prior to award, the contract goal shall be based upon the proposal amount excluding force account items. For determining whether the contract goal was met during and upon completion of the project, the contract goal shall be based upon the total earnings amount.
 - (2) If the lowest apparent bidder demonstrates that it was unable to meet the contract goal but made good faith efforts to do so, the contract goal will be amended and the revised contract goal will be provided on Form 1417, Approved DBE Participation Plan.
- D. *Disadvantaged Business Enterprise (DBE)*. A Colorado-certified Disadvantaged Business Enterprise listed on the Colorado Unified Certification Program (UCP) DBE Directory at www.coloradodbe.org.
 - E. *DBE Program Manual*. The manual maintained by the CRBRC which details CDOT's policies and procedures for administering the DBE program. A copy of the DBE Program Manual is available on the CRBRC webpage.
 - F. *Eligible Participation*. Work by a DBE that counts toward fulfillment of the contract goal as described in Section 4 below.
 - G. *Good Faith Efforts*. All necessary and reasonable steps to achieve the contract goal which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if not fully successful. Good faith efforts are evaluated prior to award and throughout performance of the Contract. For guidance on good faith efforts, see 49 CFR Part 26, Appendix A.
 - H. *Joint Check*. A check issued by the Contractor or one of its subcontractors to a DBE firm and a material supplier or other third party for materials or services to be incorporated into the work.
 - I. *Reduction*. A reduction occurs when the Contractor reduces a commitment to a DBE. A reduction constitutes a partial termination.
 - J. *Subcontractor*. An individual, firm, corporation or other legal entity to whom the Contractor sublets part of the Contract. For purposes of this special provision, the term subcontractor includes suppliers.
 - K. *Substitution*. Substitution occurs when a Contractor seeks to find another DBE to perform work on the contract as a result of a reduction or termination.
 - L. *Termination*. A termination occurs when a Contractor no longer intends to use a DBE for fulfillment of a commitment.
 - M. *Total Earnings Amount*: Amount of the Contract earned by the Contractor, including approved changes and approved force account work performed, but not including any deductions for liquidated damages, price reduced material, work time violations, overweight loads or liens. The amount of the Contract earned does not include plan force account items (i.e. OJT, pavement incentives, etc).
 - N. *Work Code*. A code to identify the work that a DBE is certified to perform. A work code includes a six digit North American Industry Classifications System code plus a descriptor. Work codes are listed on a firm's profile on the UCP DBE Directory. The Contractor may contact the CRBRC to receive guidance on whether a work code covers the work to be performed.

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DISADVANTAGED BUSINESS ENTERPRISE (DBE)
REQUIREMENTS (LOCAL AGENCY)

4. Eligible Participation

The following rules will be used to determine whether work performed by a DBE qualifies as eligible participation on the Contract:

- A. *Work Must be Identified in Commitment.* The work performed by the DBE must be reasonably construed to be included in the work area and work code identified by the Contractor in the approved commitment.
- (1) If the Contractor intends to use a DBE for work that was not listed in the commitment, the Contractor shall submit Form 1420, DBE Participation Plan Modification for approval of the modification. Unapproved work will not count toward the contract goal.
 - (2) A DBE commitment cannot be modified to include work for which the DBE was not certified at the time of the approval of the original commitment.
- B. *DBE Must be Certified to Perform the Work.* The DBE must be certified to perform the work upon submission of the commitment and upon execution of the DBE's subcontract.
- (1) When a commitment has been made, but upon review of Form 205, Sublet Permit, CDOT determines that the DBE is no longer certified in the work code which covers the work to be performed, the Contractor may not use the DBE's participation toward the contract goal. The Contractor shall terminate the DBE commitment and seek substitute DBE participation in accordance with Section 9 below.
 - (2) A DBE's work will continue to count as eligible participation if the DBE was certified upon approval of Form 205, Sublet Permit and the certification status changes during the performance of the work.
 - (3) Suppliers must be certified upon execution of the purchase order.
- C. *DBE Performs the Work.* Eligible participation will only include work actually performed by the DBE with its own forces.
- (1) Work performed by the DBE includes the cost of supplies and materials obtained by the DBE for its work on the Contract, including any equipment leased by the DBE, provided that such supplies or equipment are not purchased or leased from the Contractor or a subcontractor that is subletting to the DBE.
 - (2) The term "work actually performed by the DBE with its own forces" includes work by temporary employees, provided such employees are under the control of the DBE.
 - (3) If CDOT or the LPA determines that a DBE has not performed a CUF on the project, no participation by such DBE shall count toward the contract goal.
- D. *DBE Subcontracts to Another Firm.* When a DBE subcontracts part of the work, the value of the subcontracted work may only be counted toward the goal if the subcontractor is a DBE. Performance by non-DBE subcontractors, including non-DBE trucking firms and owner-operators, shall be deducted from the DBE's participation.
- E. *DBE Received Payment for the Work.* Eligible participation only includes work for which the DBE has received payment, including the release of its retainage.
- F. *Special Calculations for Suppliers.* When a DBE supplies goods on a project, the DBE may be classified as a manufacturer, dealer or broker. The DBE's status as a manufacturer, dealer or broker is determined

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DISADVANTAGED BUSINESS ENTERPRISE (DBE)
REQUIREMENTS (LOCAL AGENCY)

on a contract-by-contract basis and is based upon the actual work performed.

- (1) When a DBE is deemed to be acting as a manufacturer, one hundred percent of the commitment will count as eligible participation.
- (2) When a DBE is deemed to be acting as a regular dealer (i.e. non-manufacturer supplier), only sixty percent of the commitment will count as eligible participation.
- (3) When a DBE is deemed to be acting as a broker, only the reasonable brokerage fee will count as eligible participation.

G. *Reasonable Fee for Contract-Specific Services.* Services shall count toward the contract goal only if they are specifically required for the performance of the Contract. Non-contract specific expenses may not be counted toward the contract goal. Fees for services must be reasonable. Services include but are not limited to professional services, public involvement, etc. In the case of temporary employment placement agencies, only the placement fee for an individual to be specifically and exclusively used for work on the contract shall count as eligible participation.

H. *Pre-Approval for Joint Venture Participation.* When a DBE is a participant in a joint venture, the DBE must apply to CDOT to determine how much of the work performed by the joint venture will count toward the contract goal. The DBE shall complete Form 893, Information for Determining DBE Participation when a Joint Venture Includes a DBE. Form 893 shall be submitted to CDOT CRBRC no less than ten days before the submission of the Proposal or to the RCRO no less than ten days before submission of the Form 205 to ensure sufficient time for review.

5. Proposal Requirements

In order to be eligible for award, the following shall be submitted with the proposal to the LPA:

- A. *Form 1413, Bidders List.* The bidder shall list each subcontractor (including both DBE and non-DBE subcontractors) that submitted a quote for participation on the project. Failure to submit a signed Form 1413 will result in rejection of the proposal.
- B. *Form 1414, Anticipated DBE Participation Plan.* If the Contract Goal is greater than zero, the bidder shall submit Form 1414 to document anticipated DBE participation.
 - (1) If the Bidder has not obtained any DBE commitments, it shall still submit Form 1414 documenting zero anticipated participation. If the Contract Goal is greater than zero, failure to submit a signed Form 1414 shall result in rejection of the proposal.
 - (2) The bidder shall list the DBE, work area(s), commitment amount and estimated eligible participation for each commitment. Once Form 1414 is submitted, a commitment may only be terminated or reduced in accordance with Section 9 below. The bidder is responsible for ensuring that commitments, and the estimated eligible participation resulting therefrom, have been properly calculated prior to submitting its proposal.
 - (3) If the bidder is a DBE, the bidder must include itself in Form 1414 and list the work area(s) and amount that it intends to self-perform and count as eligible participation on the contract.
 - (4) Commitments may be made to second tier or lower DBE subcontractors; however, the Contractor is ultimately responsible for the fulfillment of the commitment and shall sign the Form 1415, Commitment Confirmation.

6. Additional Forms Due Prior to Award.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
REQUIREMENTS (LOCAL AGENCY)

If the contract goal is greater than zero, or if the bidder has voluntarily made commitments, the Bidder shall submit the following forms to the LPA within five calendar days of selection as the lowest apparent bidder. These forms must be submitted to the CDOT CRBRC concurrent with the request for concurrence to award.

- A. *Form 1415, Commitment Confirmation.* A Form 1415, Commitment Confirmation shall be obtained from each DBE listed on Form 1414. The bidder shall complete Section 1 and the DBE shall complete Section 2 of Form 1415. Form 1415s shall be consistent with the commitments listed on Form 1414. The bidder shall not modify commitments listed on Form 1414 without good cause and approval from CDOT. The bidder shall contact CDOT if any issues arise which may require the bidder to alter or terminate a commitment.
- B. *Form 1416, Good Faith Effort Report.* If the total eligible participation listed on Form 1414 does not meet the contract goal, the lowest apparent bidder shall also submit Form 1416, Good Faith Effort Report and any supporting documentation that the bidder would like considered by CDOT as evidence of good faith efforts.

7. Commitment and Good Faith Effort Review

- A. *Commitment Review.* CDOT will evaluate the Form 1414 and each Form 1415 to ensure that the commitment is valid and has been properly calculated. CDOT may investigate or request additional information in order to confirm the accuracy of a commitment. If CDOT determines that the total estimated eligible participation of the commitments does not meet the contract goal, within two business days of notice from CDOT, the bidder shall submit Form 1416 to CDOT.
- B. *Good Faith Effort Review.* If the total eligible participation of Form 1414 and all supporting Form 1415s does not meet the contract goal, CDOT will review Form 1416 and all supporting documentation submitted by the bidder in order to determine whether the bidder has demonstrated good faith efforts to obtain DBE participation. CDOT will use 49 CFR Part 26, Appendix A as a guide for determining whether the bidder made good faith efforts to meet the contract goal. A bidder will be deemed to not have made good faith efforts if the bidder lists a DBE for a work area for which the DBE is not certified and the bidder cannot establish a reasonable basis for its determination. CDOT may consider and approve commitments made after submission of the bid if the Bidder demonstrates that (1) good faith efforts were made prior to submission of the bid and (2) there is a reasonable justification for not obtaining the commitments prior to submission of the bid.
- C. *Administrative Reconsideration.* If CDOT determines that the bidder did not demonstrate good faith efforts to meet the contract goal, it will provide the bidder and LPA with written notice of its determination. The bidder will be provided an opportunity to request administrative reconsideration of the decision. The process for reconsideration is set forth in the *Good Faith Effort Appeal Process*, which is an Appendix I to the DBE Program Manual. A copy of the *Good Faith Effort Appeal Process* will be included in the written notice from CDOT.
- D. *Form 1417, Approved DBE Participation Plan.* If CDOT determines that the bidder has met the contract goal or made good faith efforts to do so, CDOT will issue to the bidder, with a copy to the LPA, Form 1417, Approved DBE Participation Plan, documenting the approved commitments. If CDOT determines that the bidder did not meet the contract goal but made good faith efforts to do so, via the Form 1417 CDOT will amend the contract goal in accordance with the commitments that were obtained and attach an explanation of its determination.

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DISADVANTAGED BUSINESS ENTERPRISE (DBE)
REQUIREMENTS (LOCAL AGENCY)

8. Ongoing Oversight of DBE Participation

- A. *Consistency Review.* CDOT will review Form 205, Sublet Permit Application to determine whether the work being sublet is consistent with the DBE commitments. CDOT may withhold approval of the sublet or direct the LPA to stop performance of the work if the Contractor has reduced, terminated, or otherwise modified the type or amount of work to be performed by a DBE without seeking prior approval.
- B. *Business to Government, (B2G).* The Contractor shall track project and participation towards the Goal via the LPA's B2G system. Contractors and subcontractors must continuously update and certify payments and participation within the system. The LPA may withhold progress payments if B2G is not updated and certification is not obtained at least quarterly. The LPA will not provide final payment on the Contract until all B2G information has been reviewed and approved by the CDOT RCRO.
- C. *Joint Checks.* All joint checks must be approved by the CDOT RCRO before they are used in payment to a DBE. Joint checks used in payments to DBEs will be monitored closely to ensure (1) the DBE is performing a CUF and (2) the joint checks are not being used in a discriminatory manner. The Contractor shall request approval for the use of a joint check in a written letter signed by the DBE and the Contractor, stating the reason for the joint checks and the approximate number of checks that will be needed.
- D. *Commercially Useful Function.* CDOT will monitor performance during the Contract to ensure each DBE is performing a CUF. If CDOT or the LPA determines that a DBE is not performing a CUF, no work performed by such DBE shall count as eligible participation. The DBE, Contractor, and any other involved third parties may also be subject to additional enforcement actions.
- (1) When determining whether a DBE is performing a CUF, CDOT and the LPA will consider the amount of work subcontracted, industry practices, the amount the firm is to be paid compared to the work performed and eligible participation claimed, and any other relevant factors.
 - (2) With respect to material and supplies used on the Contract, in order to perform a CUF the DBE must be responsible for negotiating price, determining quality and quantity, ordering the material, installing the material, if applicable, and paying for the material itself.
 - (3) With respect to trucking, in order to perform a CUF, the DBE trucking firm must own and operate at least one fully licensed, insured and operational truck used on the Contract. Additionally, the DBE trucking firm must be responsible for the management and supervision of the entire trucking operation for which it is responsible on the Contract.
 - (4) A DBE does not perform a CUF when its role is limited to that of an extra participant in a transaction, contract or project through which funds are passed in order to obtain the appearance of DBE participation. CDOT will evaluate similar transactions involving non-DBEs in order to determine whether a DBE is an extra participant.
 - (5) If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or the DBE subcontracts a greater portion of the work than would be expected on the basis of normal industry practice for the type of work involved, CDOT and the LPA will presume that the DBE is not performing a CUF. The DBE may present evidence to rebut this presumption.

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DISADVANTAGED BUSINESS ENTERPRISE (DBE)
REQUIREMENTS (LOCAL AGENCY)

8. Ongoing Oversight of DBE Participation

- A. *Consistency Review.* CDOT will review Form 205, Sublet Permit Application to determine whether the work being sublet is consistent with the DBE commitments. CDOT may withhold approval of the sublet or direct the LPA to stop performance of the work if the Contractor has reduced, terminated, or otherwise modified the type or amount of work to be performed by a DBE without seeking prior approval.
- B. *Form 1419, DBE Participation Report.* The Contractor shall submit Form 1419, DBE Participation Report to the LPA Engineer on a quarterly basis (January 15, April 15, July 15, and October 15) and upon completion of the Contract. The LPA may withhold progress payments if the quarterly Form 1419 is not received on time. The LPA will not provide final payment on the Contract until the final Form 1419 has been reviewed and approved by the CDOT RCRO.
- C. *Joint Checks.* All joint checks must be approved by the CDOT RCRO before they are used in payment to a DBE. Joint checks used in payments to DBEs will be monitored closely to ensure (1) the DBE is performing a CUF and (2) the joint checks are not being used in a discriminatory manner. The Contractor shall request approval for the use of a joint check in a written letter signed by the DBE and the Contractor, stating the reason for the joint checks and the approximate number of checks that will be needed.
- D. *Commercially Useful Function.* CDOT will monitor performance during the Contract to ensure each DBE is performing a CUF. If CDOT or the LPA determines that a DBE is not performing a CUF, no work performed by such DBE shall count as eligible participation. The DBE, Contractor, and any other involved third parties may also be subject to additional enforcement actions.
- (1) When determining whether a DBE is performing a CUF, CDOT and the LPA will consider the amount of work subcontracted, industry practices, the amount the firm is to be paid compared to the work performed and eligible participation claimed, and any other relevant factors.
 - (2) With respect to material and supplies used on the Contract, in order to perform a CUF the DBE must be responsible for negotiating price, determining quality and quantity, ordering the material, installing the material, if applicable, and paying for the material itself.
 - (3) With respect to trucking, in order to perform a CUF, the DBE trucking firm must own and operate at least one fully licensed, insured and operational truck used on the Contract. Additionally, the DBE trucking firm must be responsible for the management and supervision of the entire trucking operation for which it is responsible on the Contract.
 - (4) A DBE does not perform a CUF when its role is limited to that of an extra participant in a transaction, contract or project through which funds are passed in order to obtain the appearance of DBE participation. CDOT will evaluate similar transactions involving non-DBEs in order to determine whether a DBE is an extra participant.
 - (5) If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or the DBE subcontracts a greater portion of the work than would be expected on the basis of normal industry practice for the type of work involved, CDOT and the LPA will presume that the DBE is not performing a CUF. The DBE may present evidence to rebut this presumption.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
REQUIREMENTS (LOCAL AGENCY)

9. DBE Participation Plan Modifications

- A. *Contractor must Use DBEs Listed in Approved Plan.* The Contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which it is listed unless the Contractor obtains the CDOT RCRO's written consent to terminate, reduce or modify the commitment. Unless CDOT grants such consent, the Contractor will not be entitled to payment for the work or materials. Failure to carry out the requirements of this section is a material breach of the Contract and may result in the termination of the Contract or other remedies established by CDOT or the LPA.
- B. *Form 1420, DBE Participation Plan Modification Request.* During the performance of the Contract, the Contractor shall use Form 1420, DBE Participation Plan Modification Request to communicate all requests for termination, reduction, substitution, and waivers to the CDOT RCRO. One Form 1420 may include multiple requests and must be submitted at the time of the occurrence or, if that is not possible, within a reasonable time of the occurrence requiring termination, reduction, substitution or waiver.
- C. *Commitment Terminations and Reductions.* No commitment shall be terminated or reduced without CDOT's approval. Terminations and reductions include, but are not limited to, instances in which a Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces, those of an affiliate, a non-DBE firm or with another DBE firm. In order to receive approval, the Contractor shall:
- (1) Have good cause for termination or reduction. Good cause may include:
 - (i) the DBE fails or refuses to execute a written contract;
 - (ii) the DBE fails or refuses to perform the work of its subcontract consistent with normal industry standards, provided that such failure is not the result of bad faith or discriminatory actions of the Contractor or one of its subcontractors;
 - (iii) the DBE fails to meet reasonable, nondiscriminatory bond requirements;
 - (iv) the DBE becomes bankrupt, insolvent, or exhibits credit unworthiness;
 - (v) the DBE is ineligible to work because of suspension or debarment proceedings or other state law;
 - (vi) the DBE is not a responsible contractor;
 - (vii) the DBE voluntarily withdraws from the project and provides written notice to CDOT;
 - (viii) the DBE is ineligible to receive DBE credit for the work required;
 - (ix) the DBE owner dies or becomes disabled and is unable to complete the work;
 - (x) the DBE ceases business operations or otherwise dissolves;
 - (xi) or other documented good cause that compels termination. Good cause does not exist if the Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE was engaged or so that the Contractor can substitute another DBE or non-DBE contractor after contract award.
 - (2) Provide the DBE notice of the Contractor's intent to terminate or reduce the commitment and the reason for such termination or reduction, with a copy to the CDOT RCRO and LPA;

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
REQUIREMENTS (LOCAL AGENCY)

- (3) In the notice of intent, provide the DBE at least five calendar days to respond to the notice and inform CDOT and the Contractor of the reasons, if any, why it objects to the proposed termination or reduction and any reasons that it shall not be approved. The Contractor is not required to provide the five calendar days written notice in cases where the DBE in question has provided written notice that it is withdrawing from the subcontract or purchase order. The notice period may be reduced by the CDOT RCRO if required by public necessity.
 - (4) Following the notice period, if the Contractor decides to proceed, submit Form 1420 requesting approval of the termination or reduction.
 - (5) When a commitment is terminated or reduced (including when a DBE withdraws), make good faith efforts to find another DBE to substitute. These good faith efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the participation that was terminated or reduced up to the contract goal.
- D. *Contract Changes.* In the event of a contract change:
- (1) If the LPA eliminates or reduces work committed to a DBE, such change shall be considered good cause for termination or reduction in accordance with Section 9.B above. The Contractor shall follow the processes outlined in Section 9.B.
 - (2) If the LPA issues a change which increases or adds new work items, the Contractor shall ensure that it has obtained sufficient DBE participation to meet the Contract Goal, or has made good faith efforts to do so.
- E. *Process for Substitution or Increase in Participation to Meet the Contract Goal.* When the Contractor must obtain additional DBE participation to meet the Contract Goal, whether resulting from an approved termination or reduction or a change to the Contract, the Contractor shall:
- (1) Increase the participation of a DBE for any work items previously identified in an approved commitment without seeking CDOT approval; provided, however, that at its discretion, the CDOT RCRO may request a Form 1420 documenting such additional participation; or
 - (2) If the Contractor needs to add new work to a commitment or obtain additional participation from a DBE that is not already participating on the contract pursuant to an approved commitment, submit a Form 1420 and Form 1415 to the RCRO requesting approval of the additional participation; or
 - (3) If the Contractor determines that additional DBE participation cannot be obtained, submit a Form 1420 to the RCRO requesting waiver of the participation. The Contractor shall include its justification for not obtaining additional participation and, at its discretion, CDOT may require additional information regarding the efforts of the Contractor. If the Contractor has not obtained substitute participation, the RCRO may require the Contractor to submit evidence of good faith efforts to substitute. The contractor shall have seven days to submit such information. This period may be extended at the discretion of the RCRO.

9
DISADVANTAGED BUSINESS ENTERPRISE (DBE)
REQUIREMENTS (LOCAL AGENCY)

10. Payment Reduction

The Contractor's retainage will not be released until the CDOT RCRO has determined whether the Contractor will be subject to a payment reduction. Payment reductions will be calculated as follows:

- A. *Failure to Fulfill Commitments.* If the Contractor terminated or reduced a commitment, the Contractor will be subject to a payment reduction for any termination or reduction which was not approved via a Form 1420.
- B. *Failure to Meet Contract Goal.* If the Contractor failed to meet the contract goal, the Contractor will be subject to a payment reduction for the portion of the contract goal that was not met and was not waived via an approved Form 1420.
- C. *Duplication.* The contractor will not be subject to duplicate reduction for the same offense.
- D. *Adjustments.* CDOT may adjust the payment reduction wherein the Contractor demonstrates that its failure to obtain DBE participation was due to circumstances outside of its control.

11. Other Enforcement

- A. *Investigations.* As it determines necessary, CDOT or the LPA may conduct reviews or investigations of participants. All participants, including, but not limited to, DBE firms and applicants for DBE certification, complainants, and contractors using DBE firms to meet contract goals, are required to cooperate fully and promptly with compliance reviews, certification reviews, investigations, and other requests for information.
- B. *Intimidation and retaliation.* Participants shall not intimidate, threaten, coerce, or discriminate against any individual or firm for the purpose of interfering with any right or privilege secured by the DBE program or because the individual or firm has made a complaint, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing under the DBE program.
- C. *Consequences of Non-Compliance.* Failure to comply with subsections 11 A. or 11 B. shall be a ground for appropriate action against the party involved (e.g., with respect to recipients, a finding of noncompliance; with respect to DBE firms, denial of certification or removal of eligibility and/or suspension and debarment; with respect to a complainant or appellant, dismissal of the complaint or appeal; with respect to a contractor which uses DBE firms to meet goals, findings of non-responsibility for future contracts and/or suspension and debarment).
- D. *Fraud and Misrepresentation.* If CDOT or the LPA determines that a Contractor or subcontractor was a knowing and willing participant in any intended or actual subcontracting arrangement contrived to artificially inflate DBE participation or any other business arrangement determined by CDOT or the LPA to be unallowable, or if the Contractor engages in repeated violations, falsification or misrepresentation, CDOT may:
 - (1) refuse to count any fraudulent or misrepresented DBE participation;
 - (2) withhold progress payments to the Contractor commensurate with the violation;
 - (3) suspend or reduce the Contractor's prequalification status;
 - (4) refer the matter to the Office of Inspector General of the US Department of Transportation for investigation; or
 - (5) seek any other available contractual remedy.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
REQUIREMENTS (LOCAL AGENCY)

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- C. *Consequences of Non-Compliance.* Failure to comply with subsections 11 A. or 11 B. shall be a ground for appropriate action against the party involved (e.g., with respect to recipients, a finding of noncompliance; with respect to DBE firms, denial of certification or removal of eligibility and/or suspension and debarment; with respect to a complainant or appellant, dismissal of the complaint or appeal; with respect to a contractor which uses DBE firms to meet goals, findings of non-responsibility for future contracts and/or suspension and debarment).
- D. *Fraud and Misrepresentation.* If CDOT or the LPA determines that a Contractor or subcontractor was a knowing and willing participant in any intended or actual subcontracting arrangement contrived to artificially inflate DBE participation or any other business arrangement determined by CDOT or the LPA to be unallowable, or if the Contractor engages in repeated violations, falsification or misrepresentation, CDOT may:
 - (1) refuse to count any fraudulent or misrepresented DBE participation;
 - (2) withhold progress payments to the Contractor commensurate with the violation;
 - (3) suspend or reduce the Contractor's prequalification status;
 - (4) refer the matter to the Office of Inspector General of the US Department of Transportation for investigation; or
 - (5) seek any other available contractual remedy.

CITY AND COUNTY OF DENVER

STATE OF COLORADO



DENVER
THE MILE HIGH CITY

DEPARTMENT OF PUBLIC WORKS

Addendum

Contract Number: 201845552



**CCD FY 2018 HSIP Package 3,
Josephine/York and 7th Avenue**

November 7, 2018

CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS

CONTRACT NO. 201845552
PROJECT NAME: CCD FY 2018 HSIP Package 3 Josephine/York and 7th Avenue

ADDENDUM NO. 1 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:

BID DOCUMENTS

1. Prevailing Wage Rates

Replace Highway Construction CO180023 rates dated August 31, 2018 with Highway Construction CO180019 rates dated July 13, 2018

TECHNICAL DOCUMENTS

1. Technical Specifications

Please Omit pages 51-52 of the technical specifications "Revision of Section 614: Ethernet Managed Switch" and replace with the attached document for section "Revision of Section 614: Ethernet Managed Switch".

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



Lesley B. Thomas
City Engineer
11.28.18

Date

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

Contractor

ADDENDUM NO. 1

DATE: _____

July 13, 2018

**U.S. DEPT. OF LABOR DAVIS BACON MINIMUM WAGES
COLORADO HIGHWAY CONSTRUCTION
GENERAL DECISION NUMBER - CO180019**

NOTICE

This is a standard special provision that revises or modifies CDOT's *Standard Specifications for Road and Bridge Construction*. It has gone through a formal review and approval process and has been issued by CDOT's Project Development Branch with formal instructions for its use on CDOT construction projects. It is to be used as written without change. Do not use modified versions of this special provision on CDOT construction projects, and do not use this special provision on CDOT projects in a manner other than that specified in the instructions, unless such use is first approved by the Standards and Specification Unit of the Project Development Branch. The instructions for use on CDOT construction projects appear below.

Other agencies which use the *Standard Specifications for Road and Bridge Construction* to administer construction projects may use this special provision as appropriate and at their own risk.

Instructions for use on CDOT construction projects:

Use this standard special provision on all federal-aid projects with contracts exceeding \$2000, except for non-ARRA projects on roadways classified as local roads or rural minor collectors, which are exempt. Projects on local roads, rural minor collectors, and enhancement projects funded with ARRA funds are not exempt.

Decision Nos. CO180019 dated January 05, 2018 supersedes Decision Nos. CO170019 dated January 06, 2017.		Modifications			ID
		MOD Number	Date	Page Number(s)	
When work within a project is located in two or more counties and the minimum wages and fringe benefits are different for one or more job classifications, the higher minimum wages and fringe benefits shall apply throughout the project.		1	07-13-18	1	1
General Decision No. CO180019 applies to the following counties: Denver and Douglas counties.					
General Decision No. CO180019 The wage and fringe benefits listed below reflect collectively bargained rates.					
Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod	
1279	CARPENTER (Form Work Only)	25.50	9.47	1	
	TRAFFIC SIGNALIZATION:				
	Traffic Signal Installation				
1280	Zone 1	26.42	4.75% + 8.68		
1281	Zone 2	29.42	4.75% + 8.68		
	<u>Traffic Installer Zone Definitions</u> Zone 1 – Within a 35 mile radius measured from the addresses of the following cities: Colorado Springs - Nevada & Bijou Denver - Ellsworth Avenue & Broadway Ft. Collins - Prospect & College Grand Junction - 12th & North Avenue Pueblo - I-25 & Highway 50 Zone 2 - All work outside these areas.				
	POWER EQUIPMENT OPERATOR:				
	Hydraulic Backhoe				
1282	Wheel Mounted, under ¾ yds.	27.60	10.10		
1283	Backhoe/Loader combination	27.60	10.10		
	Drill Rig Caisson				
1284	Smaller than Watson 2500 and similar	27.60	10.10		
1285	Watson 2500 similar or larger	27.92	10.10		
	Loader				
1286	Up to and including 6 cubic yards	27.60	10.10		
1287	Denver County - Under 6 cubic yards	27.60	10.10		
1288	Denver County - Over 6 cubic yards	27.75	10.10		

General Decision No. CO180019				
The wage and fringe benefits listed below reflect collectively bargained rates.				
Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	POWER EQUIPMENT OPERATOR (con't.):			
	Motor Grader			
1289	Douglas county - Blade Rough	27.60	10.10	
1290	Douglas county - Blade Finish	27.92	10.10	
	Crane			
1291	50 tons and under	27.75	10.10	
1292	51 to 90 tons	27.92	10.10	
1293	91 to 140 tons	28.55	10.10	
	Scraper			
1294	Single bowl under 40 cubic yards	27.75	10.10	
1295	40 cubic yards and over	27.92	10.10	
General Decision No. CO180019				
The wage and fringe benefits listed below do not reflect collectively bargained rates.				
1296	CARPENTER (Excludes Form Work)	19.27	5.08	
	CEMENT MASON/CONCRETE FINISHER:			
1297	Denver	20.18	5.75	
1298	Douglas	18.75	3.00	
1299	ELECTRICIAN (Excludes Traffic Signal Installation)	35.13	6.83	
1300	FENCE ERECTOR (Excludes Link/Cyclone Fence Erection)	13.02	3.20	
1301	GUARDRAIL INSTALLER	12.89	3.20	
	HIGHWAY/PARKING LOT STRIPING:			
	Painter			
1302	Denver	12.62	3.21	
1303	Douglas	13.89	3.21	
	IRONWORKERS:			
1304	Reinforcing (Excludes Guardrail Installation)	16.69	5.45	
1305	Structural (Includes Link/Cyclone Fence Erection), (Excludes Guardrail Installation)	18.22	6.01	

General Decision No. CO180019				
The wage and fringe benefits listed below do not reflect collectively bargained rates.				
Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	LABORERS:			
1306	Asphalt Raker	16.29	4.25	
1307	Asphalt Shoveler	21.21	4.25	
1308	Asphalt Spreader	18.58	4.65	
	Common or General			
1309	Denver	16.76	6.77	
1310	Douglas	16.29	4.25	
1311	Concrete Saw (Hand Held)	16.29	6.14	
1312	Landscape and Irrigation	12.26	3.16	
	Mason Tender - Cement/Concrete			
1313	Denver	16.96	4.04	
1314	Douglas	16.29	4.25	
	Pipelayer			
1315	Denver	13.55	2.41	
1316	Douglas	16.30	2.18	
	Traffic Control			
1317	Flagger	9.55	3.05	
1318	Sets Up/Moves Barrels, Cones, Install Signs, Arrow Boards and Place Stationary Flags, (Excludes Flaggers)	12.43	3.22	
	PAINTER:			
1319	Spray Only	16.99	2.87	
	POWER EQUIPMENT OPERATOR:			
	Asphalt Laydown			
1320	Denver	22.67	8.72	
1321	Douglas	23.67	8.47	
	Asphalt Paver			
1322	Denver	24.97	6.13	
1323	Douglas	25.44	3.50	

General Decision No. CO180019				
The wage and fringe benefits listed below do not reflect collectively bargained rates.				
Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	POWER EQUIPMENT OPERATOR (con't.):			
	Asphalt Roller			
1324	Denver	23.13	7.55	
1325	Douglas	23.63	6.43	
1326	Asphalt Spreader	22.67	8.72	
	Backhoe/Trackhoe			
1327	Douglas	23.82	6.00	
1328	Bobcat/Skid Loader	15.37	4.28	
1329	Boom	22.67	8.72	
	Broom/Sweeper			
1330	Denver	22.47	8.72	
1331	Douglas	22.96	8.22	
1332	Bulldozer	26.90	5.59	
1333	Concrete Pump	21.60	5.21	
	Drill			
1334	Denver	20.48	4.71	
1335	Douglas	20.71	2.66	
1336	Forklift	15.91	4.68	
	Grader/Blade			
1337	Denver	22.67	8.72	
1338	Guardrail/Post Driver	16.07	4.41	
	Loader (Front End)			
1339	Douglas	21.67	8.22	
	Mechanic			
1340	Denver	22.89	8.72	
1341	Douglas	23.88	8.22	

General Decision No. CO180019				
The wage and fringe benefits listed below do not reflect collectively bargained rates.				
Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	POWER EQUIPMENT OPERATOR (con't.):			
	Oiler			
1342	Denver	23.73	8.41	
1343	Douglas	24.90	7.67	
	Roller/Compactor (Dirt and Grade Compaction)			
1344	Denver	20.30	5.51	
1345	Douglas	22.78	4.86	
1346	Rotomill	16.22	4.41	
	Screed			
1347	Denver	22.67	8.38	
1348	Douglas	29.99	1.40	
1349	Tractor	13.13	2.95	
	TRAFFIC SIGNALIZATION:			
	Groundsman			
1350	Denver	17.90	3.41	
1351	Douglas	18.67	7.17	
	TRUCK DRIVER:			
	Distributor			
1352	Denver	17.81	5.82	
1353	Douglas	16.98	5.27	
	Dump Truck			
1354	Denver	15.27	5.27	
1355	Douglas	16.39	5.27	
1356	Lowboy Truck	17.25	5.27	
1357	Mechanic	26.48	3.50	
	Multi-Purpose Specialty & Hoisting Truck			
1358	Denver	17.49	3.17	
1359	Douglas	20.05	2.88	

General Decision No. CO180019				
The wage and fringe benefits listed below do not reflect collectively bargained rates.				
Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	TRUCK DRIVER (con't.):			
	Pickup and Pilot Car			
1360	Denver County	14.24	3.77	
1361	Douglas County	16.43	3.68	
1362	Semi/Trailer Truck	18.39	4.13	
1363	Truck Mounted Attenuator	12.43	3.22	
	Water Truck			
1364	Denver County	26.27	5.27	
1365	Douglas County	19.46	2.58	

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program.

If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7).

Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION NO. CO180019

**REVISION OF SECTION 614
ETHERNET MANAGED SWITCH**

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

Subsection 614.01 shall include the following:

This work consists of the installation of an Ethernet Managed Field Switch in the CCD controller cabinets. The Contractor shall furnish and install the switch within the Traffic Signal Cabinet as an integral part of the Traffic Signal Controller and Cabinet Assembly.

Subsection 614.08 shall include the following:

The Ethernet Managed Field Switch installation is hereby added to the Special Provision and the Ethernet Switch shall comply with the following specifications:

General System Requirements –The Ethernet Managed Field Switch shall be one that is currently stock by the City and County of Denver or approved equal. The current Ethernet Managed Field Switch that is stocked by the City and County of Denver is the Hirschmann Managed Fast/Gigabit Industrial Ethernet Switch and comprises of the following parts:

- (1) Quantity 1- “OpenRAIL Switch Power - Managed Fast/Gigabit Industrial Ethernet Switch, Fanless Design, Power over Ethernet (PoE+) Support with up to 24 Ports and 120 Watt, 24x 10/100 Mbit/s Ethernet Ports, 4x 10/100/1000 Mbit/s Ethernet Ports, 4x FE/GE Combo Ports”
The OpenRAIL Switch Power currently stock by the City and County of Denver is the HIRSCHMANN RSPE32-24044O7T99-TPPZ999HHSE2AXX.X.XX
- (2) Quantity 4 - “SFP Fiberoptic Gigabit Ethernet Transceiver, Extended Temperature Range, 1 x 1000BASE-LX with LC Connector, SFP-GIG-LX/LC EEC”
The Gigabit Ethernet Transceiver currently stock by the City and County of Denver is the HIRSCHMANN 942 196-002
- (3) Quantity 2 - “Empty Module Slot Cover, RSPM”
The Empty Module Slot Cover currently stock by the City and County of Denver to be used for the HIRSCHMANN RSPE32-24044O7T99-TPPZ999HHSE2AXX.X.XX OpenRAIL Switch Power is the HIRSCHMANN 942131001 RSPM-COVER
- (4) Quantity 1 - 48VDC Rail Power Supply”
The 48VDC Rail Power Supply currently stock by the City and County of Denver to be used with the HIRSCHMANN RSPE32-24044O7T99-TPPZ999HHSE2AXX.X. OpenRail Switch Power is the BELDEN 942 200-001, “RPS 260/PoE EEC.

Test Requirements - Contractor shall supply one unit of Ethernet Managed Field Switch to the Engineer for specification compliance testing and approval. If the product passes the compliance test and evaluation, the Contractor will be notified to complete the order. If the product does not pass the specification compliance testing and approval evaluation by CCD-PW Transportation and Mobility, the unit will be returned to the Contractor. The Contractor shall supply other units until satisfactory test results are achieved

**REVISION OF SECTION 614
ETHERNET MANAGED SWITCH**

Subsection 614.13 shall include the following:

The Ethernet Managed Switch will be not be measured and paid separately but shall be considered included in the unit cost for the controller and cabinet. Furnish, installation and testing of the units are considered included in the work, as are labor and materials required for completion and acceptance of the item. Each individual package shall contain one Ethernet Managed Field Switch, set of mounting bracket(s), Installation and User guides, and Product Registration Card.

**End Section 614
Ethernet Managed Switch**

CITY AND COUNTY OF DENVER

STATE OF COLORADO



DENVER
THE MILE HIGH CITY

DEPARTMENT OF PUBLIC WORKS

Prevailing Wage

Contract Number: 201845552



**CCD FY 2018 HSIP Package 3,
Josephine/York and 7th Avenue**

November 7, 2018

August 31, 2018

**U.S. DEPT. OF LABOR DAVIS BACON MINIMUM WAGES
COLORADO HIGHWAY CONSTRUCTION
GENERAL DECISION NUMBER - CO180023**

NOTICE

This is a standard special provision that revises or modifies CDOT's *Standard Specifications for Road and Bridge Construction*. It has gone through a formal review and approval process and has been issued by CDOT's Project Development Branch with formal instructions for its use on CDOT construction projects. It is to be used as written without change. Do not use modified versions of this special provision on CDOT construction projects, and do not use this special provision on CDOT projects in a manner other than that specified in the instructions, unless such use is first approved by the Standards and Specification Unit of the Project Development Branch. The instructions for use on CDOT construction projects appear below.

Other agencies which use the *Standard Specifications for Road and Bridge Construction* to administer construction projects may use this special provision as appropriate and at their own risk.

Instructions for use on CDOT construction projects:

Use this standard special provision on all federal-aid projects with contracts exceeding \$2000, except for non-ARRA projects on roadways classified as local roads or rural minor collectors, which are exempt. Projects on local roads, rural minor collectors, and enhancement projects funded with ARRA funds are not exempt.

Decision Nos. CO180023 dated January 05, 2018 supersedes Decision Nos. CO170023 dated January 06, 2017.		Modifications			ID
		MOD Number	Date	Page Number(s)	
When work within a project is located in two or more counties and the minimum wages and fringe benefits are different for one or more job classifications, the higher minimum wages and fringe benefits shall apply throughout the project.		1	02/09/18 (Non-Wages & Benefits change)	-	-
		2	03/02/18	1	2
		3	07/13/18	1	3
		4	08/31/18	1	4
General Decision No. CO180023 applies to the following counties: Eagle, Garfield, Grand, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt, and Summit counties.					
General Decision No. CO180023 The wage and fringe benefits listed below reflect collectively bargained rates.					
Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod	
1598	CARPENTER (Excludes Form Work)	25.50	9.47	3	
	TRAFFIC SIGNALIZATION:				
	SUMMIT COUNTY				
	Traffic Signal Installation				
1599	Zone 1	26.42	4.75% + 8.68		
1600	Zone 2	29.42	4.75% + 8.68		
	<u>Traffic Installer Zone Definitions</u> Zone 1 – Within a 35 mile radius measured from the addresses of the following cities: Colorado Springs - Nevada & Bijou Denver - Ellsworth Avenue & Broadway Ft. Collins - Prospect & College Grand Junction - 12th & North Avenue Pueblo - I-25 & Highway 50 Zone 2 - All work outside these areas.				
1824	ELECTRICIAN (Boom Truck Operator)	21.71	8.66		
	POWER EQUIPMENT OPERATOR:				
	Drill Rig Caisson				
1601	Smaller than Watson 2500 and similar	27.60	10.10		
1602	Watson 2500 similar or larger	27.92	10.10		
	IRONWORKER:				
	Structural				
1603	Garfield	27.45	22.11	4	

General Decision No. CO180023				
The wage and fringe benefits listed below do not reflect collectively bargained rates.				
	CARPENTER (Form Work Only):			
1604	Eagle, Grand, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt, Summit	15.92	5.38	
1605	Garfield	19.55	4.09	
	CEMENT MASON/CONCRETE FINISHER:			
1606	Eagle	17.59	2.85	
1607	Garfield	17.27	2.16	
1608	Grand, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt	18.23	2.85	
1609	Summit	15.55	2.85	
	ELECTRICIAN:			
1610	Excludes Traffic Signalization	28.06	8.76	
	Traffic Signalization Electrician			
1611	Eagle, Garfield, Grand, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt, Summit	28.24	8.52	
	Traffic Signalization Groundsman			
1612	Eagle, Garfield, Grand, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt	15.93	4.01	
1613	Summit	16.75	4.10	
	GUARDRAIL INSTALLER:			
1614	Eagle	12.78	3.46	
1615	Garfield, Grand, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt, Summit	12.78	3.31	
	HIGHWAY/PARKING LOT STRIPING:			
1616	Truck Driver (Line Striping Truck)	14.60	3.49	
	Painter			
1617	Eagle,	13.85	3.07	
1618	Garfield, Grand, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt, Summit	13.97	3.07	
	IRONWORKER:			
	Excludes Guardrail Installation			
1619	Reinforcing	16.94	6.77	
1620	Structural	22.22	6.01	

General Decision No. CO180023				
The wage and fringe benefits listed below do not reflect collectively bargained rates.				
Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	LABORER:			
	Asphalt Raker			
1621	Eagle	16.36	3.26	
1622	Garfield	18.66	3.53	
1623	Grand	17.90	3.02	
1624	Jackson, Lake, Moffatt, Routt	17.75	3.75	
1625	Pitkin	17.50	3.75	
1626	Rio Blanco	18.97	3.75	
1627	Summit	16.77	3.26	
	Common or General			
1628	Eagle, Garfield, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt, Summit	12.44	3.53	
1629	Grand	19.14	3.53	
1630	Concrete Saw (Hand Held)	16.00	6.14	
	Landscape and Irrigation			
1631	Eagle	14.84	3.16	
1632	Garfield, Grand, Jackson, Lake, Moffatt, Rio Blanco, Routt	13.54	3.16	
1633	Pitkin	14.16	3.16	
1634	Summit	13.09	3.16	
	Mason Tender - Cement/Concrete			
1635	Eagle, Grand, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt, Summit	12.44	3.10	
1636	Garfield	14.87	3.10	
	Traffic Control			
1637	Flagger	9.42	3.21	
	Sets Up/Moves Barrels, Cones, Installs signs, Arrow Boards and Place Stationary Flags, (Excludes Flaggers)			
1638	Eagle, Garfield, Grand, Lake, Moffat, Pitkin, Rio Blanco, Routt, Summit	12.39	3.20	
1639	Jackson	12.93	3.22	

General Decision No. CO180023				
The wage and fringe benefits listed below do not reflect collectively bargained rates.				
Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	PAINTER: (Spray Only)			
1640	Eagle	17.49	3.52	
1641	Garfield, Grand, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt	17.54	3.52	
1642	Summit	19.96	3.52	
	POWER EQUIPMENT OPERATOR:			
	Asphalt Laydown			
1643	Eagle, Summit	22.67	8.72	
1644	Garfield, Grand, Jackson, Lake, Moffat, Pitkin, Routt	24.09	7.93	
1645	Rio Blanco	23.67	9.22	
1646	Asphalt Paver	22.67	8.72	
1647	Asphalt Plant	19.27	4.47	
	Asphalt Roller			
1648	Eagle	23.01	8.72	
1649	Garfield, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt, Summit	23.15	8.07	
1650	Grand	22.67	8.72	
1651	Asphalt Spreader	25.61	6.96	
	Backhoe/Trackhoe			
1652	Eagle	22.56	7.02	
1653	Garfield	19.40	4.42	
1654	Grand, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt	22.92	6.15	
1655	Summit	24.30	5.75	
	Bobcat/Skid Loader			
1656	Eagle	18.25	4.32	
1657	Garfield	24.63	0.00	
1658	Grand, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt	21.04	5.18	
1659	Summit	19.77	4.28	

General Decision No. CO180023				
The wage and fringe benefits listed below do not reflect collectively bargained rates.				
Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	POWER EQUIPMENT OPERATOR (con't.):			
	Broom/Sweeper			
1660	Eagle	23.35	7.78	
1661	Garfield, Jackson, Lake, Moffat, Pitkin, Routt	21.92	7.66	
1662	Grand	21.67	8.22	
1663	Rio Blanco	21.66	0.00	
1664	Summit	22.67	8.72	
1665	Bulldozer	26.78	7.05	
1666	Chipper	22.04	8.26	
1667	Crane	23.82	9.22	
1668	Drill	20.84	2.66	
1669	Forklift	18.30	5.01	
1670	Grade Checker	23.82	9.22	
1671	Grader/Blade	23.05	6.45	
1672	Guardrail/Post Driver	16.07	4.41	
	Loader (Front End)			
1673	Eagle	24.98	7.55	
1674	Garfield	21.93	9.22	
1675	Grand, Pitkin,	22.67	8.72	
1676	Jackson, Lake, Moffatt, Routt	24.07	7.92	
1677	Rio Blanco	23.67	9.22	
1678	Summit	25.88	7.01	
	Mechanic			
1679	Eagle, Grand, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt, Summit	23.31	3.93	
1680	Garfield	19.80	4.20	
	Oiler			
1681	Eagle	23.82	7.62	
1682	Garfield, Grand, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt, Summit	24.04	7.77	

General Decision No. CO180023				
The wage and fringe benefits listed below do not reflect collectively bargained rates.				
Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	POWER EQUIPMENT OPERATOR (con't.):			
	Roller/Compactor (Dirt and Grade Compaction)			
1683	Eagle, Garfield, Grand, Jackson, Lake, Moffat, Pitkin, Routt	22.72	5.98	
1684	Rio Blanco	23.67	9.22	
1685	Summit	24.38	6.11	
	Rotomill			
1686	Eagle	18.86	4.41	
1687	Garfield, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt	20.70	4.41	
1688	Grand	23.48	4.41	
1689	Summit	16.28	4.41	
1690	Scraper	20.60	7.99	
	Screed			
1691	Eagle	17.04	3.98	
1692	Garfield, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt, Summit	23.76	5.05	
1693	Grand	23.29	4.05	
1694	Tractor	15.08	2.95	

General Decision No. CO180023				
The wage and fringe benefits listed below do not reflect collectively bargained rates.				
Code	Classification	Basic Hourly Rate	Fringe Benefits	Last Mod
	TRUCK DRIVER:			
	Distributor			
1695	Eagle, Garfield, Grand, Jackson, Lake, Moffat, Pitkin, Routt, Summit	19.07	4.35	
1696	Rio Blanco	15.80	5.27	
	Dump Truck			
1697	Eagle	16.17	3.83	
1698	Garfield	16.29	3.83	
1699	Grand, Jackson, Lake, Moffat, Routt	17.79	4.02	
1700	Pitkin	20.13	4.15	
1701	Rio Blanco	17.26	4.63	
1702	Summit	15.27	5.27	
	Lowboy Truck			
1703	Eagle	18.89	4.56	
1704	Garfield, Grand, Jackson, Lake, Moffat, Pitkin, Rio Blanco, Routt, Summit	18.43	4.56	
1705	Mechanic	17.79	3.51	
1706	Multi-Purpose Specialty & Hoisting Truck	14.60	3.49	
1707	Pickup and Pilot Car	14.04	3.49	
1708	Semi-Truck	20.72	0.00	
	Water Truck			
1709	Eagle	23.05	2.90	
1710	Garfield	21.00	5.88	
1711	Grand	21.19	3.01	
1712	Jackson, Lake, Moffatt, Pitkin, Routt, Summit	20.39	3.43	
1713	Rio Blanco	17.25	3.75	

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program.

If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7).

Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION NO. CO180023

CITY AND COUNTY OF DENVER

STATE OF COLORADO



DENVER
THE MILE HIGH CITY

DEPARTMENT OF PUBLIC WORKS

Technical Specifications

Contract Number: 201845552



**CCD FY 2018 HSIP Package 3,
Josephine/York and 7th Avenue**

November 7, 2018

**CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS – TRANSPORTATION AND MOBILITY
SPECIAL PROVISIONS
TRAFFIC SIGNAL REBUILD – 7TH AVE AT YORK AND JOSEPHINE STREETS
CITY MASTER PROJECT NO. 2016-PROJMSTR-0000658**

General Contract Conditions shall be the City and County of Denver, Department of Public Works, “Standard Specifications for Construction General Contract Conditions”, 2011 edition and hereinafter modified shall be used for this project.

STANDARD CONSTRUCTION SPECIFICATIONS

The Standard Specifications for Construction for this Project shall consist of the applicable sections and subsections, numbered Section 200 through Section 700, of the 2017 "Colorado Department of Transportation Standard Specifications for Road and Bridge Construction."

The Colorado Department of Transportation General Provisions consists of Sections 100 through 109 of the above mentioned specifications. With the exception of General Provision Section 101, all other General Provisions are not applicable to this Project and are hereby deleted. In place of the deleted sections, the City and County of Denver, Department of Public Works, “Standard Specifications for Construction General Contract Conditions”, 2011 edition, shall apply to this contract. Supplements or amendments to the Standard Specifications for Construction, General Contract Conditions are listed in the Special Contract Conditions.

DETAILED CONSTRUCTION SPECIFICATIONS

The Detailed Specifications for this project are defined in the City of Denver Contract Requirements and Contract Documents.

STANDARD CONSTRUCTION DETAILS

It is the intent of the City to use applicable details from the Colorado Department of Transportation M&S Standards, the City of Denver’s Wastewater Management Division Standard Details, the Denver Water Department’s Standard Drawings, and the Denver Traffic Signal and Sign & Markings Standards, most recent editions. Drainage related appurtenances shall be constructed as shown in the City and County of Denver (CCD), Department of Public Works document titled “Storm Drainage Design and Technical Criteria”. This document can be found at the following web address: www.denvergov.org

The Colorado Department of Transportation (CDOT) Special Provisions, Standard Special Provisions are to be used for the project. Use CDOT Project Special Provisions that revise the above described documents, and prevail over above described documents.

PROJECT SPECIAL PROVISIONS

The following Project Special Provisions take precedence over Specifications or Plans and supplement or amend the referenced City and County of Denver, Department of Public Works, “Standard Specifications for Construction General Contract Conditions”, 2011 edition and the “Standard Specifications for Road and Bridge Construction” adopted in 2017 by the Colorado Department of Transportation, which is to be used to control construction of this Project.

**CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS – TRANSPORTATION AND MOBILITY
SPECIAL PROVISIONS
TRAFFIC SIGNAL REBUILD – 7TH AVE AT YORK AND JOSEPHINE STREETS
CITY MASTER PROJECT NO. 2016-PROJMSTR-0000658**

General Contract Conditions shall be the City and County of Denver, Department of Public Works, “Standard Specifications for Construction General Contract Conditions”, 2011 edition and hereinafter modified shall be used for this project.

PROJECT SPECIAL PROVISIONS

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COLORADO
DEPARTMENT OF TRANSPORTATION
STANDARD SPECIAL PROVISIONS
04/25/18

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WORKING HOURS

Section 306 of the City and County of Denver, Department of Public Works, “Standard Specifications for Construction General Contract Conditions” is hereby revised for this project as follows:

Subsection 306.1.A shall include the following:

Contractors shall comply with the CCD Noise Control Ordinance for all construction activities scheduled to occur between the hours of 9:00 p.m. to 7:00 a.m. Monday – Friday and 5:00 p.m. and 8:00 a.m. Saturday through Sunday if noise levels are expected to exceed 50 dBA in residential areas or 60 dBA in commercial areas. Nighttime construction activities exceeding noise levels during these restricted hours may not be initiated without first obtaining this permit variance from CCD.

Under any circumstances where nighttime construction activities will take place between the restrictive hours listed above where noise levels will exceed the noise impact thresholds, the contractor is required to apply for a construction noise variance no less than one month before the startup date for construction. Note: the CCD board only meets the 2nd Thursday of every month.

Applications shall be submitted through the Denver Department of Environmental Health (DEH) at a cost of \$25.00 for application processing.

The contractor is responsible for fulfilling the requirements set forth by the CCD and is responsible for obtaining the permit variance prior to the construction startup date. All exemption requests and permitting requirements will not be paid for separately, but will be included in the work. Copies of the final application approval shall be provided to CDOT R1 Noise Specialist for recording and documentation purposes demonstrating compliance with the local agencies regulations.

If the Contractor is ordered to cease operations due to violations of a noise ordinance as a result of equipment back up alarms, the Contractor shall take whatever actions are necessary to comply with the ordinance and continue work on the project. This includes the option of using an observer in lieu of using the equipment’s back up alarms as allowed by 29 CFR 1926.601(b) (4) (II) of the OSHA Safety and Health Standards. Should the Contractor fail to mitigate the noise ordinance violation, the Contractor shall be deemed to have waived any right to a claim as a result of work suspension or being required to perform the work at times not specified in the Contract.

Subsection 306.1.B shall include the following:

If nighttime construction activities are required, the contractor shall comply with CCD requirements.

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

END OF SECTION

COMMENCEMENT AND COMPLETION OF WORK

Section 302 of the City and County of Denver, Department of Public Works, “Standard Specifications for Construction General Contract Conditions” is hereby revised for this project as follows:

Section 302.3 shall include the following:

The Work shall be completed within 240 calendar days.

Section 306 of the City and County of Denver, Department of Public Works, “Standard Specifications for Construction General Contract Conditions” is hereby revised for this project as follows:

Subsection 306.2.C shall include the following:

The Contractor’s progress schedule may be a Bar Chart Schedule.

Salient features to be shown on the Contractor’s Progress Schedule are:

1. Notice to Proceed
2. Mobilization(s)
3. Erosion Control
4. Removals
5. Curb and Gutter, Median Cover Material, Curb Ramps
6. Sidewalk
7. Hot Mix Asphalt
8. Traffic Signal
9. Signing and Striping
10. Utilities
11. Construction Traffic Control
12. Landscape Restoration

END OF SECTION

**TRAFFIC SIGNAL INSTALLATION
PERSONNEL REQUIREMENT**

Section 310 of the City and County of Denver, Department of Public Works, “Standard Specifications for Construction General Contract Conditions” is hereby revised for this project as follows:

Section 310 shall include the following:

The Contractor shall adhere to the following requirements regarding Traffic Signal construction and maintenance personnel. Current Certificates showing qualifications shall be submitted at the preconstruction meeting.

(1) For any work inside the traffic signal cabinet, Signal and Signal Bench Technician shall be minimum IMSA Level II certified. This includes the completion of training in construction, corrective maintenance, and signal turn-on.

(2) For all work external to the signal cabinet, a minimum IMSA Level I Traffic Signal Field Technician/Electrician or Traffic Signal Bench Technician/Signal Technician is required. An IMSA Level II Traffic Signal Electrician shall be on the job site at all times that signalization work is taking place to ensure proper construction. A maximum ratio of four IMSA Level I to one IMSA Level II will be allowed for work external to the signal cabinet.

The United States Department of Labor – Bureau of Apprenticeship and Training may be substituted for the IMSA Level I Traffic Signal Electrician requirement.

END OF SECTION

COOPERATION BETWEEN CONTRACTORS

Section 701 of the City and County of Denver, Department of Public Works, “Standard Specifications for Construction General Contract Conditions” is hereby revised for this project as follows:

Subsection 701.1 shall include the following:

Other construction agencies may be working in the vicinity of the project. The Contractor shall conduct the work so as not to interfere with or hinder the progress or completion of the work being performed by other agencies or contractors. All traffic control conflicts that arise between the needs of the various construction contractors and other agencies shall be brought to the attention of the Engineer. The Engineer will decide the method of resolution.

END OF SECTION

WORKER SAFETY

Section 802 of the City and County of Denver, Department of Public Works, “Standard Specifications for Construction General Contract Conditions” is hereby revised for this project as follows:

Subsection 802.1 shall include the following:

If the Contractor uses an observer in lieu of back up alarms, the Contractor shall follow all of the OSHA requirements regarding the use of observers.

END OF SECTION

PERFORMANCE OF SAFETY CRITICAL WORK

Title 8 of the City and County of Denver, Department of Public Works, “Standard Specifications for Construction General Contract Conditions” is hereby revised as follows:

Add subsection 810 as follows:

810 Performance of Safety Critical Work. The following work elements are considered safety critical work for this project:

1. Overhead structure construction or repair
2. Temporary works: shoring that exceeds 5 feet in height, if necessary
3. Work requiring the use of cranes or other lifting equipment

The Contractor shall submit, for record purposes only, an initial detailed construction plan that addresses safe construction of each of the safety critical elements. An erection plan shall be included as a part of this plan. The detailed construction plan shall be submitted two weeks prior to the safety critical element conference described below. The construction plan shall be stamped “Approved for Construction” and signed by the Contractor. The construction plan will not be approved by the Engineer.

The Construction Plan shall include the following:

1. Safety Critical Element for which the plan is being prepared and submitted.
2. Contractor or subcontractor responsible for the plan preparation and the work.
3. Schedule, procedures, equipment, and sequence of operations, that comply with the working hour limitations
4. Temporary works required: shoring, etc.
5. Additional actions that will be taken to ensure that the work will be performed safely.
6. Names and qualifications of workers who will be in responsible charge of the work:
 - a. Years of experience performing similar work
 - b. Training taken in performing similar work
 - c. Certifications earned in performing similar work
7. Names and qualifications of workers operating cranes or other lifting equipment
 - a. Years of experience performing similar work
 - b. Training taken in performing similar work
 - c. Certifications earned in performing similar work
8. The construction plan shall address how the Contractor will handle contingencies such as:
 - a. Unplanned events (storms, traffic accidents, etc.)
 - b. Structural elements that don't fit or line up
 - c. Work that cannot be completed in time for the roadway to be reopened to traffic
 - d. Replacement of workers who don't perform the work safely
 - e. Equipment failure
 - f. Other potential difficulties inherent in the type of work being performed
9. Name and qualifications of Contractor's person designated to determine and notify the Engineer in writing when it is safe to open a route to traffic after it has been closed for safety critical work.

A safety critical element conference shall be held two weeks prior to beginning construction on each safety critical element. The Engineer, the Contractor, the safety critical element subcontractors, and the Contractor's Engineer shall attend the conference. Required pre-erection conferences may be included as a part of this conference.

PERFORMANCE OF SAFETY CRITICAL WORK

After the safety critical element conference, and prior to beginning work on the safety critical element, the Contractor shall submit a final construction plan to the Engineer for record purposes only. The Contractor's Engineer shall sign and seal temporary works related to construction plans for the safety critical elements, and Temporary Works. The final construction plan shall be stamped "Approved for Construction" and signed by the Contractor.

The Contractor shall perform safety critical work only when the Engineer is on the project site. The Contractor's Engineer shall be on site to inspect and provide written approval of safety critical work for which he provided stamped construction details. Unless otherwise directed or approved, the Contractor's Engineer need not be on site during the actual performance of safety critical work, but shall be present to conduct inspection for written approval of the safety critical work.

When ordered by the Engineer, the Contractor shall immediately stop safety critical work that is being performed in an unsafe manner or will result in an unsafe situation for the traveling public. Prior to stopping work, the Contractor shall make the situation safe for work stoppage. The Contractor shall submit an acceptable plan to correct the unsafe process before the Engineer will authorize resumption of the work.

When ordered by the Engineer, the Contractor shall remove workers from the project that are performing the safety critical work in a manner that creates an unsafe situation for the public in accordance with subsection 805.

Should an unplanned event occur or the safety critical operation deviate from the submitted plan, the Contractor shall immediately cease operations on the safety critical element, except for performing any work necessary to ensure worksite safety, and provide proper protection of the work and the traveling public. If the Contractor intends to modify the submitted plan, he shall submit a revised plan to the Engineer prior to resuming operations.

All costs associated with the preparation and implementation of each safety critical element construction plan will not be measured and paid for separately, but shall be included in the work.

Nothing in the section shall be construed to relieve the Contractor from ultimate liability for unsafe or negligent acts or to be a waiver of the Colorado Governmental Immunity Act on behalf of the City and County of Denver.

END OF SECTION

PROTECTION OF EXISTING VEGETATION

Section 810 of the City and County of Denver, Department of Public Works, “Standard Specifications for Construction General Contract Conditions” is hereby revised for this project as follows:

Add subsection 810.5 as follows:

The contractor shall protect all existing vegetation (including trees, shrubs, ground cover, grasses, wetland, and riparian vegetation) in this area, except for vegetation which must be removed to accommodate construction of the project. Specific areas of vegetation to be protected shall be as directed by the Engineer and shall be delineated with orange construction fencing, wire fencing with metal posts, or silt fence. Fencing shall be installed at the drip lines of trees or as designated by the Engineer. Equipment shall not be installed or material stockpiled within 15 feet of existing trees designated to remain.

The contractor shall perform all work in a manner that minimizes environmental damage. Questions about specific areas or vegetation shall be directed to the Engineer for resolution prior to any removal or activity damaging the vegetation in question.

The Contractor shall promptly report any vegetation within protected areas that is damaged by construction activities to the Engineer for assessment of damages. If vegetation within the fenced areas is damaged or destroyed, it shall be replaced at the Contractor’s expense. Vegetation of replaceable size shall be replaced. The determination as to whether a plant is of replaceable size will be made by the Department’s Landscape Architect. If trees or shrubs larger than the replaceable size are damaged or destroyed, the Contractor shall be liable for the appraised value, based upon the current official publication of the International Society of Arboriculture, Guide for Plant Appraisals. A consulting Arborist retained by the Department will determine the value of the trees and shrubs. This value will be deducted from any money due to the Contractor. The value of such trees or shrubs will be based upon tree size, species, location, and condition.

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

END OF SECTION

Disadvantaged Business Enterprise (DBE) Contract Goal

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

10 Percent DBE participation.

ON THE JOB TRAINING CONTRACT GOAL

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

Minimum number of total On the Job Training required 0 hours

**REVISION OF SECTION 101
DEFINITION AND TERMS**

Section 101 of the Standard Specifications is hereby revised for this project as follows:

Technical Specifications related to construction materials and methods for the Work under this Contract shall consist of the *State Department of Highways, Division of Highways, State of Colorado, Standard Specifications for Road and Bridge Construction* dated 2017.

Certain terms utilized in the Specifications referred to in the paragraph above shall be interpreted to have different meaning within the scope of this Contract. A summary of redefinitions follows:

- Subsection 101.28** **“Department”** shall mean the City and County of Denver, Colorado.
- Subsection 101.29** **“Engineer”** shall mean the Director of Public Works, Denver, Colorado, or designated representative.
- Subsection 101.39** **“Laboratory”** shall mean City and County of Denver, Colorado or their designated representative.
- Subsection 101.51** **“Project Engineer”** shall mean the Director of Public Works, Denver, Colorado, or designated representative.
- Subsection 101.76** **“State”** shall mean City and County of Denver, Colorado (where applicable).

END OF SECTION

**REVISION OF SECTION 201
CLEARING AND GRUBBING**

Section 201 of the Standard Specifications is hereby revised to include:

Subsection 201.02 shall include the following:

Clearing and grubbing shall include removal of trees less than 3-inches in diameter (when measured 24 inches or less above the existing grade) not designated to be protected, miscellaneous landscaping materials (including all rock mulch, organic mulch) sod, shrubs, plant materials, trees and other materials within the work area not otherwise listed as a pay item.

No removals shall take place until marked by Contractor and approved by the Engineer.

All trees designated to remain shall be protected in accordance with Denver's Standard Detail for Tree Protection Area, included in the plans.

Subsection 201.02, paragraph 2, shall be deleted and replaced with the following:

Removals shall be completed to the required subgrade elevation for the work, or as directed by the Project Manager.

Subsection 201.02, paragraph 8 shall be deleted and replaced with the following:

All tree trimming will be done by the City and County of Denver through the City Forester's Office. Contact Jim Myers two (2) days prior.

END OF SECTION

**REVISION OF SECTION 202
REMOVAL OF TRAFFIC SIGNAL EQUIPMENT**

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

Subsection 202.03 shall include the following:

The Contractor shall safeguard any salvageable materials designated by Denver Public Works – Transportation (Denver Traffic), and shall be responsible for the expense of repairing or replacing damaged or missing material until it is delivered to the City and County of Denver Traffic Maintenance Yard at 5440 Roslyn Street.

Designation of salvageable equipment and times for delivery of such items shall be coordinated with Denver Traffic (contact Chris Lillie at 720-865-4066).

Signal operations shall be maintained at each of the project intersections throughout construction.

Subsection 202.04 shall include the following:

Removal of the traffic signal equipment shall include pedestal poles, footings, span wire cable, traffic signal controller and cabinet, pedestrian push button, cabinet footings, all attachment hardware, and all incidental equipment, except as noted on plans. All existing foundations and pull boxes shall be removed and back-filled. All wiring shall be removed from existing conduit and the conduit shall be abandoned in place.

CCD shall remove all signal poles, mast arms and attached luminaires, and the Contractor shall remove the remainder of the traffic signal equipment, as noted in the plans.

All “Light Emitting Diode” (LED) signal lenses in existing signal faces shall be removed prior to the removal of the signal face. These LED lenses shall be protected from damage and delivered to 5440 Roslyn Street, Denver. This work shall be included in the cost of Removal of Traffic Signal Equipment and will not be paid for separately.

Times for delivery to the maintenance yard shall be coordinated with Denver Traffic at (720) 865-4000.

Subsection 202.11 shall include the following:

Removal of Traffic Signal Equipment will be measured per intersection.

Subsection 202.12 shall include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Removal of Traffic Signal Equipment	Each (EA)

Payment includes all labor, equipment, and materials necessary to complete the work.

END OF SECTION

**REVISION OF SECTION 202
REMOVAL OF SIDEWALK**

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

Subsection 202.01 shall include the following:

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

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

The existing sidewalk (assumed 4-6 inches thick) shall be removed in a manner that minimizes contamination of the removed sidewalk with underlying material. Removal limits shall be to the nearest existing joint. The removed sidewalk shall become the property of the Contractor and shall be disposed of outside the project site legally.

Subsection 202.11 shall include the following:

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

Sawcutting will not be paid separately and shall be included in the cost for removal of sidewalk.

Subsection 202.12 shall include the following:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Removal of Sidewalk	Square Yard (SY)

Work shall include all material, equipment, labor, and disposal of materials, including hauling, to complete the work.

END OF SECTION

**REVISION OF SECTION 202
REMOVAL OF CURB AND GUTTER**

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

Subsection 202.01 shall include the following:

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

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

The removed curb and gutter shall become the property of the Contractor and shall be disposed of outside the project site legally.

Subsection 202.11 shall include the following:

The removal of the existing curb and gutter will be measured by the linear foot of curb and gutter removed, and accepted.

Sawcutting will not be paid separately and shall be included in the cost for removal of curb and gutter.

Subsection 202.12 shall include the following:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Removal of Curb and Gutter	Linear Foot (LF)

Work shall include all material, equipment, labor, and disposal of materials, including hauling, to complete the work.

END OF SECTION

**REVISION OF SECTION 203
POTHOLING**

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

Delete Subsection 203.11(e) and replace with the following:

(e) Potholing. All related work, including removal of existing pavement, backfilling, shoring and labor will not be measured and paid for separately, but shall be included in the work. All surface material disturbed by potholing shall be restored in kind in accordance with the provisions of the Standards and Details for the City and County of Denver (Latest Revision).

Subsection 203.12 of the Standard Specifications shall be modified as follows:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Potholing	Hour

END OF SECTION

**REVISION OF SECTION 208
EROSION CONTROL**

Section 208 of the Standard Construction Specifications is hereby removed in its entirety and replaced with the following:

PART I: DEFINITIONS

Definitions used for this Section shall consist of those listed in Title 1 of the City and County of Denver “Standard Specifications for Construction, General Contract Conditions”, 2011 edition.

Definitions used for this Section hereby incorporate those identified within the City and County of Denver Construction Activities Stormwater Manual (CASM).

Additional Definitions applicable to this Section are listed heretofore:

Basis of Payment: The terms under which “Work” is paid, as a designated “Pay Item” in accordance with the quantity measured and the “Pay Unit.”

Best Management Practices (BMPs): Schedules of activities, prohibitions of practices, installation of devices, maintenance procedures, and other management practices deployed to stabilize the construction site to prevent or reduce the pollution of State Waters (see definition below). Stormwater BMPs can be classified as "structural" (i.e., devices installed or constructed on a site) or "non-structural" (procedures, such as modified landscaping practices).

Colorado Department of Health and Environment (CDPHE): State of Colorado, Water Quality Control Division responsible for issuance of State Construction Stormwater Permit.

Construction Activities Stormwater Discharge Permit (CASDP): Permit issued by the City for compliance with City & County of Denver Revised Municipal Code and Department of Public Works Rules & Regulations concerning the discharge of pollutants in storm generated runoff from construction sites to Municipal Separate Storm Sewer System (MS4, see definition below) or State Waters, via the Municipal Separate Storm Sewer System (MS4).

Construction Activities Stormwater Manual (CASM): City and County of Denver Construction Activities Stormwater Manual (CASM), 2010 edition.

Colorado Department of Transportation (CDOT): State agency that has published standards for Erosion Control with accompanying Erosion Control Supervisor certification courses.

Erosion Control Supervisor (ECS): The Erosion Control Supervisor is assigned by the Contractor to perform duties as described in this Section. The ECS shall be properly trained in BMPs per requirements of Part V below, and shall be under the direction of a Professional Engineer licensed in the State of Colorado when performing any modifications to the Project Stormwater Management Plan (SWMP).

Final Stabilization: Point of construction when all ground surface disturbing activities at the site have been completed and uniform vegetative cover has reached 70% of pre-disturbance vegetative cover, or equivalent permanent features have been employed. At this point, all temporary BMPs can be removed, all construction and equipment maintenance wastes have been disposed of properly; and all elements of the Stormwater Management Plan have been completed.

**REVISION OF SECTION 208
EROSION CONTROL**

Major SWMP Modification: Changes to the original SWMP that removes or adds additional area to the Project, or modifies the final hydrology or drainage of the Project. A Major SWMP Modification requires the submission of revised Stormwater Management Plan (SWMP) elements to the Permit Authority for review and approval. Any adjustments to a SWMP must be performed either by or under the direction of a Professional Engineer licensed in the State of Colorado.

Municipal Separate Storm Sewer System (MS4): A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- a) owned or operated by a State, city, town, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of stormwater or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under Section 208 of the Federal Clean Water Act that discharges to State Waters;
- b) Designed or used for collecting or conveying stormwater;
- c) Which is not a combined sewer; and
- d) Which is not part of a Publicly Owned Treatment Works (POTW).

Permit Authority: The Department authorized by the City to review and process CASDP Applications for Capital and/or governmental sponsored Projects. The responsible City department serving as the Permit Authority is the Public Works Project Controls Office. As a clarification, the Development Services Department of the City serves as the point of intake and permit processing center.

Permit Enforcement Authority: The Department authorized by the City to inspect and enforce CASDP Rules and Conditions for all construction Projects within the City's MS4 Boundary. The responsible City department serving as the Permit Enforcement Authority is the Wastewater Management Division of the Department of Public Works.

State Construction Stormwater Permit: Colorado Revised Statutes require that all construction sites/development Projects, which, by definition, disturb one or more acres in area, shall be covered by a State issued general permit for construction activities. Information on the application requirements for the State permit can be obtained by phone at 303-692-3500; or by visiting their offices located at 4300 Cherry Creek Drive South, Denver, CO 80246-1530; or on the Web at:

<https://www.colorado.gov/pacific/cdphe/news/water-quality-permits>

State Waters: Any and all surface waters which are contained in or flow in or through this State, not to include waters in sewage systems, waters in treatment works of disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed.

Examples of State Waters include, but are not limited to, perennial streams, intermittent or ephemeral gulches and arroyos, ponds, lakes, reservoirs, irrigation canals or ditches, wetlands, stormwater conveyances (when they discharge to a surface water), and groundwater.

**REVISION OF SECTION 208
EROSION CONTROL**

Stormwater Management Plan (SWMP): The Stormwater Management Plan contains the requirements necessary to accomplish all of the following:

The SWMP establishes a minimum standard to construct, install, maintain, and remove required BMPs during the life of the Contract to prevent or minimize pollution of stormwater due to erosion, sediment transport, and construction related pollutant generated during all phases of the Project. A SWMP consists of the following elements:

- (i) CASDP Narrative Worksheet with Narrative Report. The Narrative Report and supporting documents should fully address the methods to be used to prevent sediment, debris, and other pollutants from entering the MS4 and/or State Waters in and around the Project area. Proposed structural and non-structural BMPs should be described with sufficient implementation detail to insure that the logical phases of the proposed construction Project meet the performance standards listed in the CASM.
- (ii) Proposed site drawings and Best Management Practice (BMP) installation details as they apply to the site conforming to the Urban Storm Drainage Criteria Manual, Vol. 3, "Best Management Practices", most current version as issued by the Urban Drainage and Flood Control District (UDFCD), or those established by the City's Department of Public Works. If erosion control drawings were included within the bid documents for the Project, they shall be used for bid purposes and initial planning/deployment of BMPs on the Project. If provided drawings are signed/ sealed by a Professional Engineer, they have been pre-approved by the Permit Authority and may be used without revision for purposes of submitting for CASDP. If provided drawings do not have signature/seal of a Professional Engineer licensed by the State of Colorado, they will require revision by the Contractor with Professional Engineer signature/seal prior to submission to the City and County of Denver for CASDP.
- (iii) Supporting documentation related to proposed BMPs that are not currently identified in UDFCD Vol. 3 or as otherwise published by the City. SWMP elements submitted to the City shall also meet currently established criteria of the CDPHE as the SWMP must meet all local, State and Federal requirements.

Substantial Completion of Erosion Control: Point of construction when permanent BMPs have been installed, initial growth is in place, and the site is waiting for vegetative cover to reach 70% of predisturbance vegetative cover.

**REVISION OF SECTION 208
EROSION CONTROL**

PART II: DESCRIPTION

This Work shall consist of constructing, installing, maintaining, and removing when required, BMPs during the life of the Contract until Final Stabilization to prevent or minimize erosion, sedimentation, and pollution of any waters including storm, drainageways, MS4, State Waters, and/or wetlands. Work under this Section includes the Contractor obtaining required Permits, utilizing SWMP elements provided in the Contract, and/or SWMP elements specifically prepared by the Contractor as defined herein. The work shall also consist of providing on-going maintenance and monitoring of the SWMP as may be necessary due to the specific and/or dynamic needs of the Project as well as meet all requirements set forth within the CASM.

The Contractor shall coordinate the construction of temporary BMPs with the construction of permanent BMPs to assure economical, effective, and continuous erosion and sediment control and water pollution prevention throughout the construction period until Final Stabilization is achieved

When a provision of this Section or an order by the Permit Enforcement Authority requires that an action be immediate or taken immediately, it shall be understood that the Contractor shall at once begin effecting completion of the action and pursue it to completion in a manner acceptable to the Permit Enforcement Authority, and in accordance with applicable Permitting requirements.

PART III: MATERIALS

Materials to be used for BMPs shall conform to each specific detail as set forth within the Project SWMP or as noted on the Contract Drawings.

PART IV: EROSION CONTROL PERMIT STATUS

The current SWMP status for the Project is as follows:

A CDPS-SCP is currently not required for this project as the proposed disturbed area and/or proximity to stream does not meet the minimum criteria for requiring a CASDP. All provisions of the following Parts V-VIII of this Section are hereby deleted and shall not be made part of the Project. However, the responsibilities for minimizing sediment pollution from the Project have not been waived, and as such, the City hereby requires the Contractor to perform as specified in the following notes.

“A CASDP Permit will not be required for this project, however, the Contractor and/or their authorized agents shall ensure that all potential pollutants generated during demolition, excavation, trenching, boring, grading, or other construction Work associated with this permit, be prevented from discharge to stormwater conveyance systems in the vicinity of the Project.

The Contractor and/or their authorized agents shall remove all sediment, mud, construction debris, or other potential pollutants that may have been discharged to or, accumulate in the flow lines of storm drainage appurtenances and public rights of ways of the City and County of Denver, City of Glendale, City of Edgewater, and CDOT as a result of construction activities associated with this Project. All removals shall be conducted in a timely manner.

**REVISION OF SECTION 208
EROSION CONTROL**

The Contractor shall be held responsible for remediation of any adverse impacts to the CCD or CDOT MS4, State Waters, waterways, wetlands, and or other public or private properties, resulting from work done as part of this Project.

The Contractor and/or their authorized agents shall insure that all loads of cut and fill material imported to or exported from the Project shall be properly covered to prevent loss of the material during transport on public rights of way.” (Sec.49-552; Revised Municipal Code)

Approved erosion and sediment control ‘Best Management Practices’ shall be maintained and kept in good repair for the duration of the Project. All necessary maintenance and repair shall be completed immediately upon discovery of any deficiency or defect.

The Contractor and/or their authorized agents shall implement the following Best Management Practices (BMPs) on site during construction:

1. VEHICLE TRACKING CONTROL: This BMP is required at all access points for ingress/egress from off-site impervious surfaces to construction site pervious areas that are used by vehicular traffic or construction equipment.
2. STORM DRAIN INLET PROTECTION: This BMP is required on all existing or proposed storm sewer inlets in the vicinity of the construction site that may receive site runoff. The BMP must be appropriate to the type of storm inlet and appropriate for the ground surface at the inlet.
3. INTERIM SITE STABILIZATION: This BMP is required to provide a measure for preventing the discharge of sediment from construction sites where overlot grading or other site disturbance has occurred. This BMP is particularly necessary on sites where construction activities/disturbance will be limited to small areas of the Project site. Acceptable BMPs include:
 - a) Preserving existing vegetation
 - b) Seeding and planting
 - c) Mulching
 - d) Mulching and seeding
 - e) Temporary/Permanent re-vegetation operations
 - f) Chemical soil stabilizer application (requires WMD approval)
 - g) Sodding
4. WASTE MANAGEMENT/CONTAINMENT: This BMP requires that all construction wastes, fuels, lubricants, chemical wastes, trash, sanitary wastes, contaminated soils or debris shall be contained on site, protected from contact with precipitation or surface runoff, periodically removed from the construction site, and properly disposed of.
5. SPILL PREVENTION/CONTAINMENT: This BMP defines the measures proposed for preventing, controlling, or containing spills of fuel, lubricants, or other pollutants; and protecting potential pollutants from contact with precipitation or runoff.

**REVISION OF SECTION 208
EROSION CONTROL**

6. CHUTE WASHOUT CONTAINMENT: Water used in the cleaning of cement truck delivery chutes shall be discharged into a predefined, bermed containment area on the job site. The required containment area is to be bermed so that wash water is totally contained. Wash water discharged into the containment area shall be allowed to infiltrate or evaporate. Dried cement waste is removed from the containment area and properly disposed of.
 - a) The direct or indirect discharge of water containing waste cement to the storm sewer system is prohibited (Sec.56-102a, c; Revised Municipal Code, City and County of Denver).
7. SWEEPING: This BMP requires that impervious surfaces which are adjacent to or contained within construction sites be swept on a daily basis or as needed during the day when sediment and other materials are tracked or discharged on to them. Either sweeping by hand or use of Street Sweepers is acceptable. Street sweepers using water while sweeping is preferred in order to minimize dust. Flushing off paved surfaces with water is prohibited.
8. PERIMETER CONTROL: This BMP requires that a construction site install a perimeter control measure along the edge of the construction Site, to prevent, or filter the discharge of surface runoff from the construction site. The type of perimeter control used shall be determined based on site conditions and location. Maintenance and repair of the control measure shall occur as needed, in a timely manner.
9. STOCK PILES: Soils that will be stockpiled for more than thirty (30) days shall be protected from wind and water erosion within fourteen (14) days of stockpile construction. Stabilization of stockpiles located within 100 feet of receiving waters, or with slopes 3 to 1 or greater shall be completed within seven (7) days following stockpile construction. Stabilization and protection of the stockpile may be accomplished by any of the following: Mulching, Temporary/Permanent Revegetation Operations, Chemical Soil Stabilizer Application (requires Denver Public Works approval), or erosion control matting/Geotextiles. If stockpiles are located within 100 feet of receiving waters, a drainageway or the site perimeter, additional sediment controls shall be required.
10. SAW CUTTING OPERATIONS: The Contractor shall protect all storm sewer facilities adjacent to any location where pavement cutting operations involving wheel cutting, saw cutting, or abrasive water jet cutting are to take place. The Contractor shall remove and properly dispose of all waste products generated by said cutting operations on a daily basis or as needed throughout the work day. The discharge of any water contaminated by waste products from cutting operations to the storm sewer system is prohibited. (Sec.56-102a, c; Revised Municipal Code, City and County of Denver)
11. STRUCTURAL CONTROLS: Development sites that are required to provide detention and water quality enhancement facilities for storm runoff need to install the detention facilities early in the construction build-out of the site. Projects that are using underground detention are required to install a pretreatment structure(s) or sedimentation basin(s) as a means of treating potentially polluted storm water prior to entering the detention structure. Use of these structures is required for entrapping sediment and construction debris during the active construction phase of the project. A narrative section of a Management Plan should address operation and maintenance of the structural controls being used as an active construction BMP.

**REVISION OF SECTION 208
EROSION CONTROL**

PART V: BASIS OF PAYMENT

Erosion Control items as specified in Part V shall be paid in accordance with Section 208.

Work to furnish, install, maintain, replace (if not due to contractor negligence), remove, and dispose of BMPs specified in the Contract will be paid for at the contract unit price.

<u>Pay Item</u>	<u>Pay Unit</u>
Aggregate Bag	Linear Foot (LF)
Concrete Washout Structure	Each (EA)
Storm Drain Inlet Protection	Each (EA)
Vehicle Tracking Pad	Each (EA)
Removal and Disposal of Sediment (Labor)	Hour (HR)
Sweeping (Sediment Removal)	Hour (HR)
Removal of Trash	Hour (HR)
Erosion Control Supervisor	Hour (HR)

Temporary BMPs will be measured and paid for by the BMPs used, except that surface roughening, removal and disposal of sediment, and removal of trash will not be measured and paid for separately. Payment for each BMP item will be full compensation for all work, materials and equipment required to furnish, install, maintain, remove, and dispose of it. BMPs as deployed per the SWMP requiring replacement due to Contractor negligence and or carelessness shall be provided at the Contractor's expense.

Temporary BMPs required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or for the Contractor's convenience, shall be performed at the Contractor's expense.

If the Contractor fails to complete construction within the approved contract time, payment will not be made for Section 208 pay items for the period of time after expiration of the approved contract time. These items shall be provided at the Contractor's expense.

The cost for any corrective actions required by the State or City due to contractor's failure to obtain or comply with applicable Permits will be borne by the Contractor, including fines and penalties. In the case of failures on the part of the Contractor in controlling erosion, sedimentation, and/or water pollution, the City may provide the necessary corrective actions. All corrective action costs, including Project engineering costs, will be charged to the Contractor, and appropriate deduction will be made from the Contractor's monthly pay estimate.

The sole remedy for additional costs associated with installation of BMPs as required by regulatory agencies to ensure compliance with local and State requirements shall be per unit BMP as provided in the Bid Schedule of this Contract. The Contractor however may submit a separate itemized Change Order for any required Major SWMP Modification proposed by the City during the course of the Project.

**REVISION OF SECTION 208
EROSION CONTROL**

Pay Units for ECS will be full compensation for the Erosion Control Supervisor including all materials, labor and equipment necessary for the ECS to perform the work. Commute time will not be measured and paid for separately, but shall be included in the work. The ECS pay item shall include all labor, Professional Engineering (includes supervisory Professional Engineer licensed in the State of Colorado), and/ or design fees to prepare modifications to Stormwater Management Plan(s), revise or amend Permits, coordinate with State and Local agencies, design special erosion control plans for emergency situations that develop during construction or unexpected weather conditions.

Additional stabilized construction/ staging area proposed by the Contractor beyond the area included in the Bid shall be installed per requirements of the Permit Authority and Permit Enforcement Authority without any additional compensation.

Payment for concrete washout structure, whether constructed or prefabricated, will be full compensation for all work and materials required to install, maintain, and remove the item. This includes, but is not limited to: excavation, embankment, liner, erosion bales, fencing, signing, and containment and disposal of concrete washout and all other associated waste material.

Payment for storm drain inlet protection will be full compensation for all work, materials, and equipment required to complete the item, including surface preparation, maintenance throughout the Project, and removal upon completion of the work. Aggregate will not be measured and paid for separately, but shall be included in the work.

Sweeping, when used as a BMP as shown in the Contract, will be measured by the number of hours that a pickup broom or motorized equipment capable of collecting sediment, authorized by the Project Manager, is used to remove sediment from the roadway or other paved surfaces. Operator will not be measured and paid for separately, but shall be included in the work.

Payment for vehicle tracking pad will be full compensation for all work, materials and equipment required to construct, maintain, and remove the entrance upon completion of the work. Aggregate and geotextile will not be measured and paid for separately, but shall be included in the work.

Surveying of permanent BMPs will not be measured and paid for separately, but shall be included in the work.

END OF SECTION

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

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

Subsection 212.01 shall include the following:

Work performed in areas under the jurisdiction of Denver Parks and Recreation Department shall conform to the standards of the Department.

Subsection 212.04 shall include the following:

At the direction of the Engineer seeding will be accepted in lieu of sodding.

Subsection 212.07 shall include the following:

Topsoil shall not be paid for separately but shall be included in the work. Sodding beyond limits outlined in the plans and/or marked in the field by the Engineer will not be paid for.

Subsection 212.08 shall include the following:

Payment will be made under:

Pay Item
Sodding

Pay Unit
Square Foot (SF)

END OF SECTION

**REVISION OF SECTION 212
TREE PROTECTION**

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

Subsection 212.01 shall include the following:

The work consists of the protection of trees within and adjacent to the project work in accordance with City and County of Denver Tree Retention and Protection detail in the plans.

Subsection 212.07 shall include the following:

Tree Protection will be measured by the actual number of trees protected in place.

Subsection 212.08 shall include the following:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Tree Protection	Each (EA)

END OF SECTION

**REVISION OF SECTION 250
ENVIRONMENTAL, HEALTH AND SAFETY MANAGEMENT**

Section 250 of the Standard Specifications is hereby revised for this project as follows:

Subsection 250.01 shall include the following:

Excavation and drilling activities associated with the proposed project have the potential to encounter soil and groundwater that may have been impacted by petroleum products or previous releases of hazardous substances. Workers shall be alert during excavations for any visual or olfactory signs of contamination. If soil and/or groundwater contamination is encountered, work will stop immediately and the procedures outlined in the project's material management plan and Section 250 of Standard Specifications for Road and Bridge Construction shall be followed. The Contractor shall be responsible for the required workers' health and safety.

Subsection 250.03 shall include the following:

The Contractor will prepare a material management plan (MMP) to ensure hazardous materials and contaminated groundwater is handled properly. The MMP will be submitted either prior to, or at the Pre-Construction Conference for review and approval by CDOT Environmental and Denver EQ. The cost of the MMP will be paid by the Environmental Health and Safety Management Force Account.

The Contractor shall be responsible for the required worker health and safety and the public in accordance with all applicable local, state and federal regulations. The Contractor Health and Safety Officer and/or Monitoring Technician shall be on site as necessary during subsurface activities to ensure the safety of workers, as detailed in the CDOT Standard Specification 250 -Environmental, Health and Safety Management and this 250 Standard Specification revision. Denver EQ will also be contacted.

For proper handling of asbestos-contaminated soil, if any, the Contractor will follow all applicable Solid and Hazardous Waste Regulations and the procedures listed in the project's material management plan (MMP). Asbestos contaminated soil removal must be performed by a Certified Asbestos Inspector (CABI) to determine what, if any, controls must be instituted to allow future activity in the excavation area.

If petroleum contaminated soils are encountered, the contractor must follow standard materials management for such soils. It is likely petroleum impacted groundwater will be encountered. A hydrovac truck or some other method of containerization must be used to collect the water until it is tested for contaminants prior to discharge and proper disposal.

If construction debris is encountered, the contractor must stop work in the immediate area until a determination is made that no asbestos or hazardous materials are present. If asbestos containing material is encountered in building debris, they must be managed as per Solid Waste Regulation 5.5, Management of Asbestos Contaminated Soil.

As always, if unanticipated soil staining, odors, landfill gas or petroleum/solvent contaminated groundwater are discovered during construction activities, work should stop until an EQ environmental professional makes a determination on how best to proceed. Additionally, CDOT Spec. 250 must be followed at all times.

Subsection 250.09 shall include the following:

All work including monitoring, sampling, handling, material disposal and analytical costs (if necessary) will be paid using Environmental Health and Safety Management Force Account.

END OF SECTION

**REVISION OF SECTION 403
HOT MIX ASPHALT (PATCHING)**

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

Subsection 403.02 shall include the following:

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

Table 403-1				
Property	Test Method	Value For Grading		
		SX(100)	S(100)	Patching
Air Voids, percent at: N (design)	CPL 5115	3.5 – 4.5	3.5 – 4.5	3.5 – 4.5
Lab Compaction (Revolutions): N (design)	CPL 5115	8 100	8 100	8 100
Stability, minimum	CPL 5106	30	30	30
Aggregate Retained on the 4.75 mm (No. 4) Sieve for S, SX and SG, and on the 2.36mm (No. 8) Sieve for ST and SF with at least 2 Mechanically Induced fractured faces, % minimum*	CP 45	60	60	60
Accelerated Moisture Susceptibility Tensile Strength Ratio (Lottman), minimum	CPL 5109 Method B	80	80	80
Minimum Dry Split Tensile Strength, kPa (psi)	CPL 5109 Method B	205 (30)	205 (30)	205 (30)
Grade of Asphalt Cement, Top Layer		PG (64-22)	PG (64-22)	PG (64-22)
Grade of Asphalt Cement, Layers below Top		PG (64-22)	PG (64-22)	PG (64-22)
Voids in the Mineral Aggregate (VMA) % minimum	CP 48	See Table 403-2	See Table 403-2	See Table 403-2
Voids Filled with Asphalt (VFA), %	AI MS-2	65-75	65-75	65-75
Dust to Asphalt Ratio Fine Gradation	CP 50	0.6 – 1.2	0.6 – 1.2	0.9 – 2.0
Coarse Gradation		0.8 – 1.6	0.8 – 1.6	1.1 – 2.2

Note: AI MS-2 = Asphalt Institute Manual Series 2

Note: Mixes with gradations having less than 40% passing the 4.75 mm (No. 4) sieve shall be approached with caution because of constructability problems.

Note: Gradations for mixes with a nominal maximum aggregate size of one-inch or larger are considered a coarse gradation if they pass below the maximum density line at the #4 screen. Gradations for mixes with a nominal maximum aggregate size of 3/4" to 3/8" are considered a coarse gradation if they pass below the maximum density line at the #8 screen. Gradations for mixes with a nominal maximum aggregate size of #4 or smaller are considered a coarse gradation if they pass below the maximum density line at the #16 screen.

*Fractured face requirements for SF may be waived by RME depending on project conditions.

**REVISION OF SECTION 403
HOT MIX ASPHALT (PATCHING)**

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

Table 403-2

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

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

The hot mix asphalt shall not contain any reclaimed asphalt pavement.

Hot mix asphalt for patching shall conform to the gradation requirements for Hot Mix Asphalt (Grading SX)(100)(PG 64-22) or Hot Mix Asphalt (Grading S)(100)(PG 64-22).

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

**REVISION OF SECTION 403
HOT MIX ASPHALT (PATCHING)**

Subsection 403.03 shall include the following:

The Contractor shall use an approved anti-stripping additive. The amount of additive used shall be a minimum of 0.5 percent by weight of the asphalt cement. The additive shall be added at the refinery or at the hot plant. If liquid anti-stripping additive is added at the plant, an approved in-line blender must be used. The blender shall be in the line from the storage tank to the drier drum or pugmill. The blender shall apply sufficient mixing action to thoroughly mix the asphalt cement and anti-stripping additive.

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

Delete subsection 403.05 and replace with the following:

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

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Hot Mix Asphalt (Patching) (Asphalt)	Ton

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

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

Asphalt cement used in Hot Mix Asphalt (Patching) (Asphalt) will not be measured and paid for separately, but shall be included in the work.

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

END OF SECTION

**REVISION OF SECTION 503
DRILLED AND VACUUMED CAISSON**

Section 503 of the Standard Specifications is hereby revised for this project as follows:

Section 503.01 is hereby revised to include the following:

This work consists of drilling or vacuuming holes and placing concrete and reinforcing steel therein to form foundations for traffic signal poles in conformance with the plans and as directed by the Engineer.

The traffic signal pole foundations shall conform to the requirements of the City and County of Denver's Standard Details for Signal Pole Foundations (Detail 16.1.8).

Section 503.03, delete the first paragraph and replace with the following:

Class BZ concrete shall be used for the traffic signal pole foundation. Class BZ concrete in the top three feet of the foundation shall be placed with a 5% to 8% air content. Class BZ concrete shall be placed without air-entrainment below the three foot depth.

Caisson excavations performed with a vacuum pothole machine will be to prevent drilling through existing utilities. The locations where vacuum method is employed shall be at the discretion of the Construction Project Manager.

Section 503.07 include the following:

Foundation work shall include raking and/or plumbing of the poles after loading, and grouting by the Contractor after pole rake is approved by the Engineer.

Section 503.08 is hereby revised to include the following:

Caisson (36 Inch) will be measured by the linear foot from the top of caisson to the bottom of the hole excavated. The pedestal pole caisson (18 Inch) will not be measured and paid for separately, but shall be included in the cost of the Pedestal Pole installation.

Furnish of base plate(s), anchor bolts, nuts and nut covers that are required components of the traffic signal pole foundation are incidental to the Contractor's unit cost for traffic signal poles; installation of same shall be considered incidental to the Contractor's unit cost for Drilled and Vacuumed Caissons.

Section 503.09 is hereby revised to include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Drilled Caisson (36 Inch)	Linear Foot (LF)
Vacuumed Caisson (36 Inch)	Linear Foot (LF)

The unit price of drilled caisson (36 Inch) and vacuumed caisson (36 Inch) shall be full compensation for making all excavations; hauling and disposal of excavated material; performing all necessary drilling/pumping; furnishing and placing required concrete and reinforcement steel, including the reinforcement projecting above the tops of the caissons necessary for splicing; all backfilling; removing casings; and for furnishing all tools, labor, equipment, and incidentals necessary to complete the work. No extra payment will be made for casing left in place. Caissons vacuumed in lieu of drilling will be paid as Vacuumed Caisson.

END OF SECTION

**REVISION OF SECTION 608
SIDEWALKS AND CONCRETE CURB RAMPS**

Section 608 of the Standard Specifications is hereby revised to include:

Subsection 608.01 shall include the following:

Concrete Curb Ramp construction shall conform to the requirements of the City and County of Denver's Standard Details for Curb Ramps (Detail 7.4). Construction of concrete curb ramps to include the installation of detectable warnings.

Subsection 608.02, delete in its entirety and replace as follows:

Materials shall meet the requirements specified in the following subsections:

Joint Fillers 705.01

Concrete for sidewalks and curb ramps shall be Class "P", broom finish with natural color as specified in subsections 601.02 and 601.03, except that No. 67 coarse aggregate shall be used.

The preferred product for detectable warnings on curb ramps is Armor-Tile Tactile Systems, but an equal product may be submitted by the Contractor for approval.

Alternate materials may be used, if pre-approved by the Engineer. The Contractor shall submit a sample of the product, the name of the selected supplier, and documentation that the product meets all contrast requirements and will be fully compatible with the curb ramp surface to the Engineer for approval prior to the start of work

Concrete shall be cured with a non-pigmented "clear" curing compound.

All concrete used for sidewalks and curb ramps shall be reinforced with polypropylene fibers. The preferred product for polypropylene fibers is FIBERMESH or FORTA FIBRE, but an equal product may be submitted by the Contractor for approval. Length of fibers shall be as recommended by the manufacturer. Add 1.5 pounds FIBERMESH or FORTA FIBRE per cubic yard of concrete, or as recommended by the manufacturer for an approved equal product. The contractor shall submit five (5) copies of fibrous concrete reinforcement product data for use by the Engineer.

Concrete will be subject to inspection and tests as required to assure compliance with quality requirements.

Subsection 608.03 shall include the following:

Detectable warnings on curb ramps shall be installed in strict accordance with the manufacturer's recommendations.

**REVISION OF SECTION 608
SIDEWALKS AND CONCRETE CURB RAMPS**

Subsection 608.03(d) is hereby revised to include:

Finishing shall occur only after the disappearance of bleed water and the second paragraph of section 412.12 shall be adhered to. Sprinkling of pigment onto the fresh surface is not permitted.

Subsection 608.03(f) is hereby revised to include:

The Contractor shall insure that new concrete items built under this contract drain properly and, as such, there are no areas of standing water on new concrete items. Any low spots in the new concrete items in excess of ¼” will require removal and replacement of such items at the Contractor’s expense.

The Contractor shall protect all new concrete items built under this Contract against defacement, or other injury, from any cause. If said damage cannot be adequately repaired to the satisfaction of the Engineer, the Contractor shall remove and replace the unacceptable items at the Contractor’s expense.

Subsection 608.05 shall include the following:

Detectable warnings on curb ramps, including all work and materials necessary for fabrication, transport and installation will not be measured and paid for separately, but shall be included in the work.

Subsection 608.06 is hereby revised to include:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Concrete Sidewalk (6 Inch)	Square Yard (SY)
Concrete Curb Ramp	Square Yard (SY)

Excavation to proposed subgrade elevation will not be paid for separately but shall be included in the work.

All work necessary and incidental to the construction of Concrete Curb Ramp, including bed course material, will not be measured and paid for separately but shall be included in the work. Payment shall be full compensation for prep work, furnishing, and placing all materials, including detectable warnings, necessary to complete the work to the dimensions shown on plans. Reconditioning, forms, finishing, jointing, backfill and curing, will be in accordance with the plans and specifications and will not be paid for separately.

END OF SECTION

**REVISION OF SECTION 609
CURB AND GUTTER**

Section 609 of the Standard Specifications is hereby revised to include:

Subsection 609.02 is hereby revised to include:

In the first paragraph, reference to Section 703.07, Bed Course Material, shall be deleted.

Paragraph 2 shall be deleted and replaced with the following:

Concrete for Curb and Gutter shall conform to the requirements for Class "P" concrete as specified in subsections 601.02 and 601.03. When curb machines are used, the Contractor will be permitted to use AASHTO M 43 Size 57 or 67 aggregate in lieu of the coarse aggregate specified in Table 601-1, and a lesser slump will be permitted.

Subsection 609.03(a) is revised to include:

Excavation shall conform to the requirements of Subsection 608.03(a) - Sidewalk and Bikeways.

Subsection 609.03(b) is revised to include:

The Contractor shall construct the work in strict conformity to line and grade stakes. Deviations in excess of 1/2" Horizontal and/or 1/4" Vertical shall be grounds for the Engineer to reject the work. Rejected work will be replaced or corrected by the Contractor at no expense to the City. The Engineer will have complete authority in determining whether the work is to be corrected or replaced. If the Contractor cannot adequately correct any rejected work, the City shall replace the work the expense of the Contractor.

Subsection 609.03(c) shall be revised to include the following:

The Contractor shall protect all new concrete items built under this Contract against defacement, or other injury, from any cause. If said damage cannot be adequately repaired to the satisfaction of the Engineer, the Contractor shall remove and replace the unacceptable items at Contractor's expense.

Subsection 609.03(d) is hereby revised to include:

For construction of curb and gutter adjacent to existing concrete pavement, the joint pattern shall match that of the concrete pavement. The joint pattern shall be approved by the Engineer prior to construction.

Subsection 609.03(i) is hereby revised to include:

The Contractor shall insure that new concrete items built under this contract drain properly and, as such, there are no areas of standing water on new concrete items. Any low spots in the new concrete items in excess of 1/4" will require removal and replacement of such items at the Contractor's expense.

Subsection 609.07 is hereby revised to include:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Curb and Gutter Type 2 (Section M)	Linear Foot (LF)
Curb and Gutter Type 2 (Section II-B)	Linear Foot (LF)

Excavation to proposed subgrade elevation will not be paid for separately but shall be included in the work.

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**REVISION OF SECTION 609
CURB AND GUTTER**

Payment shall be full compensation for labor and materials to construct to the dimensions shown on plans. Reconditioning, reinforcing steel, forms, finishing, jointing, backfill and curing, will be in accordance with these plans and specifications and will not be paid for separately.

END OF SECTION

**REVISION OF SECTION 613
ELECTRICAL CONDUIT – GENERAL**

Section 613 of the Standard Specifications is hereby revised for this project as follows:

Add the following to subsection 613.07:

Directional boring is the preferred method of conduit installation.

All conduit bends, including factory-installed bends, shall not have a bend radius less than six times the inside diameter of the conduit.

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

Trenches shall be made with a rock-wheel or other machine capable of cutting a narrow trench (4") so as to allow traffic to pass over prior to back filling. The machine shall be equipped with shields to direct the spoil downward and away from passing vehicles, workmen and pedestrians.

Off-street trenches shall be back-filled with the same material that was removed and shall be compacted and shaped to match the surrounding surface. On-street trenches within ALL roadway areas shall be back-filled with CDOT approved Structure Backfill (Flow-Fill) and capped with 9" minimum of Hot Mix Asphalt Pavement (Patching) in accordance with Section 403 and City and County of Denver Street Cut Regulations if applicable. If surrounding pavement depth is greater than 9 inches, the HMA (Patching) depth shall match the existing pavement.

All surface materials including sprinkler systems, landscaping, shrubs, sod grass, and native growth vegetation which is disturbed by trenching and back-filling operation shall be restored in kind equal to or exceeding the original conditions.

All conduit runs that will not have a copper conductor installed shall have a #12 AWG stranded copper conductor placed inside for locating purposes. Locating conductor and tape will not be measured and paid separately, but shall be included in the unit price for conduit.

Conduit shall always enter a pull box, hand-hole, or any other type structure from the direction of the run only.

All conduits shall be fully compatible with fiber optic cable. Plastic conduit shall be Schedule 80 in the diameters shown on the plans and shall be compliant with Bellcore TW-NWT-000356 requirements. Each conduit shall be equipped with a pull tape and each bore shall have a copper tracer wire of at least 12 gauge.

Each conduit shall be equipped with either a pull rope or pull tape, depending on the length of conduit between pull boxes.

**REVISION OF SECTION 613
ELECTRICAL CONDUIT – GENERAL**

Each conduit with a length greater than 400' between pull boxes shall be equipped with a pull tape. The pull tape shall have a minimum tensile strength of 1250 lbs. and be of a design and manufacture that prevents cutting or burning into the conduit during cable installation.

Each conduit with a length of 400' or less between pull boxes shall be equipped with a pull rope or pull tape. The pull rope shall have a minimum tensile strength of 1250 lbs.

Plastic PVC conduit shall be certified by the manufacturer as meeting ANSI/UL 6 and 651. The manufacturer shall be ISO 9000 compliant.

If the contractor is unable to jack or bore the conduit at the lengths shown on the plans from pull box to pull box, all splice couplings and associated work to splice the conduit shall be included in the cost of this item. This shall include excavation down to the required depth of conduit at the splice location. Also included in the cost of this item are all landscape repairs, which will be required after excavation of conduit at all splice locations. All splice couplings shall be water and air tight and installed at a depth to match the remaining run of conduit. No elevation difference will be allowed. Splices shall be kept to a minimum and all locations shall be approved by the City. Additional pull boxes shall not be substituted for splices.

All conduit bends, including factory-installed bends, shall not have a bend radius less than six times the inside diameter of the conduit.

Conduit plugs for sealing conduit shall also be supplied and installed in all open conduit ends as soon as the conduit is installed. Plugs shall be durable, fabricated from no metallic parts, be of the split design to allow removal and reinstallation around in-place cables and be easily removable and reusable. Plugs shall be capable of being installed by hand without any tools and shall provide a water and air tight seal of at least 100 psi and shall cause no damage to the cable when installed.

At some locations (as illustrated on the Plans or in these specifications, or as directed by the Engineer), new conduits shall be installed in an existing pull box. At these locations, the Contractor shall carefully excavate around the pull box and install the new conduit in the pull box in a manner that meets the requirements of this Special Provision. The Contractor shall not damage the existing pull box. If the existing pull boxes or concrete collars are cracked or damaged during conduit installation, the Contractor shall be required to replace either or both conforming to the requirements of the contract at no additional cost.

Subsection 613.11 shall include the following:

Electrical Conduit will be measured by the linear feet of conduit and installed in accordance with these Special Provisions, the Project Standards or as directed by the City. Electrical Conduit will include groundwork, sweeps, pull cord, copper tracer wire, adapters, fittings, splice couplings, conduit plugs (for conduits both with and without fiber optic cable), equipment, labor, and all other items necessary to complete the work.

Subsection 613.12 shall include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
2 Inch Electrical Conduit (Bored)	Linear Foot (LF)
3 Inch Electrical Conduit	Linear Foot (LF)
3 Inch Electrical Conduit (Bored)	Linear Foot (LF)

END OF SECTION

**REVISION OF SECTION 613
ELECTRIC METER PEDESTAL CABINET AND BASE**

Section 613 of the Standard Specifications is hereby revised for this project as follows:

Subsection 613.07 shall include the following:

New lighting and traffic signal installations require an Electric Meter Pedestal Cabinet and Base. Xcel Energy will furnish only the electric meter. The Contractor shall furnish the electric meter pedestal cabinet, and shall install the pedestal cabinet and base, by a licensed electrician (journeyman), at the locations shown on the plans and in accordance with the City and County of Denver's standard – sheets 16.1.19 and 16.1.20.

Subsection 613.11 shall include the following:

Electric Meter Pedestal Cabinet and Base will be measured and installed in accordance with these Special Provisions, the Project Specifications or as directed by the City. The Electric Meter Pedestal Cabinet and Base installation will include groundwork, sweeps, pull cord, copper tracer wire, adapters, fittings, splice couplings, conduit plugs, equipment, labor, and all other items necessary to complete the work.

Contractor shall submit material specifications to the Engineer for prior approval.

Subsection 613.12 shall include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Electric Meter Pedestal Cabinet and Base	Each (EA)

END OF SECTION

**REVISION OF SECTION 613
PULL BOXES – GENERAL**

Section 613 of the Standard Specifications is hereby revised for this project as follows:

Subsection 613.07 shall include the following:

Electrical pull box shall be the type A pull box. The covers of the type A pull box shall have the word “ELECTRIC” physically impressed (not painted) on top. Traffic signal pull box shall be the type B pull box. The covers of the type B pull box shall have the word “TRAFFIC” physically impressed (not painted) on top. Communication pull box shall be the type C pull box. The covers of the type C pull box shall have the words “TRAFFIC COMM” physically impressed (not painted) on top. The covers shall be attached to the pull box body by screw-in bolts and shall have two lift slots to aid in the removal of the lid.

All concrete collars, footings, and location marker supports shall be Portland Cement Concrete Class B and shall be in accordance with Section 601.

Pull boxes that are to be in traveled ways shall be outfitted with traffic bearing lids rated for HS 20-44 loads. The pull boxes shall have a special concrete footing extending 8 inches around the outside and 6 inches around the inside of the pull box bottom, as shown in the plans. Pull boxes installed in dirt or landscape areas shall have a 12 inch wide by 6 inch thick concrete collar placed around the top in lieu of the concrete footing, as shown in the plans.

When the plans call for a fiber optic cable location marker to be installed at the pull box location, the concrete foundation support for the location marker shall be placed monolithically with the concrete collar.

Pull Box (Surface Mounted) shall be metal type with a hinged front door and have at least a NEMA 3R rating. The hinged door shall be provided with both a weather tight seal and a key lock mechanism. Surface mounted pull boxes shall be of the dimensions shown in the plans, and shall be mounted on or embedded into hard surfaces such as bridge decks, concrete barriers, retaining walls, or buildings, as shown in the plans. Surface mounted pull boxes shall be attached using 3/8-inch epoxy anchors or other methods, as approved by the Engineer. Surface mounted pull boxes shall not be used for ground installations.

Subsection 613.12 shall include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Pull Box (Special)	Each

Pull Box (Special) shall include the removal of any existing pull box, installation of the new pull box, modification of conduit ends, restoration of disturbed surface materials, and all other work necessary to complete the installation. All work necessary for the removal and installation of Pull Box (Special) will not be measured and paid for separately but shall be included in Pull Box (Special).

Pull Box (Special) will be paid for on the basis of the number of pull boxes installed.

All other pull boxes required to complete the work will not be measured and paid separately but shall be included in the work of the conduit installation.

**REVISION OF SECTION 613
ELECTRICAL CONDUCTOR IDENTIFICATION**

Section 613 of the Standard Specifications is hereby revised for this project as follows:

Subsection 613.08 shall include the following:

All electrical conductors shall be tagged as follows:

Electrical conductor cable tags shall be located below the termination in the base of the streetlight, in the pull box, in the pedestal, and at the point of termination to existing facilities of the Local Utility Company supplying electrical service. The tags shall be attached with a cable tie. The information written on the tag shall include the direction and approximate length of cable, feeds running from where and to, etc.

Each incoming conductor shall be individually color coded with one (1) tape mark, while outgoing conductors shall have two (2) tape marks.

Example:

FEEDS TO PULL BOX FEEDS FROM XFMR
50' NORTH & 75' WEST
THEN TO HIGHWAY SIGN 200' WEST

FEEDS FROM XFMR
250' SOUTH AND EAST
200' WEST

Uniform tags are available in a Tag Kit. The Tag Kit consists of: 100 tags, 3-part yellow with 1 hole, 100 black nylon ties and 1 black permanent marker/pen.

Size 2.5 in x 5.0 in

Standard Package Kit*

Weight, Kit, Approx. 1.5 lb

Color Yellow

Stock Unit of Measure Kit

Subsection 613.11 shall include the following:

Electrical conductor tagging will not be paid for separately, but shall be included in the cost of Wiring.

END OF SECTION

**REVISION OF SECTION 613
LIGHTING (LUMINAIRE) (LED 5300 LUMENS)**

Section 613 of the Standard Specifications is hereby revised for this project as follows:

Subsection 613.02 shall include the following:

The Contractor shall furnish and install LED Street Light Luminaire at locations as shown in the plans. The LED Street Light Luminaire shall be compatible or interchangeable with standard LED Street Light Luminaire as stocked by the City and County of Denver.

The current LED Street Light Luminaire that are compatible with that stocked by the City and County of Denver is as follows:

<u>Manufacturer</u>	<u>Catalog Numbers</u>
E-Lite Star	ESU-CA012M03042S-525CCD1-1

This shall be considered the preferred product, but an equal product may be submitted by the Contractor for review and approval.

The luminaire shall also include a photo cell (S-T P124-1.5-PTW or equal) and the luminaire finish shall be in Federal Green.

The luminaire shall have a maximum BUG rating of B1-U0-G1.

The Contractor shall submit a lighting materials list to the City and Denver for approval prior to ordering. Contact Chris Lillie at 720-865-4066.

Subsection 613.08 shall include the following:

At least one grounding electrode shall be installed adjacent to each light standard. Wiring shall be a 120/240 volt or 120/208 volt, 3-wire system with individual luminaire wired for 120 volts.

Subsection 613.11 shall include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Luminaire (LED)(5300 Lumens)	Each

Luminaire shall be measured and paid by the number of luminaire installed. The item shall include all labor, materials, and ancillary hardware required to provide a fully-functional system to the satisfaction of the Engineer.

END OF SECTION

**REVISION OF SECTION 614
CONCRETE FOOTING (TRAFFIC SIGNAL POLE)**

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

Subsection 614.01 shall include the following:

This work consists of installing concrete footing (foundations) for traffic signal pedestal pole; traffic signal imbedded steel poles (span wire poles); and traffic signal street light poles (no mast arms). Locations of the concrete footing (foundations) are shown on the plans or as directed by the Engineer.

Subsection 614.08 (g) shall include the following:

Concrete Footing (Pedestal Pole) shall conform to the requirements of the City and County of Denver's Traffic Signal Standard Detail sheet no. 16.1.13 and detail nos. 4 and 5.

Concrete Footing (Imbedded Steel Pole) for span wire traffic signal poles shall conform to the requirements of the City and County of Denver's Traffic Signal Standard Detail sheet no. 16.1.14 and detail no. 6.

Concrete Footing (Traffic Signal – Light Pole Steel) shall conform to the requirements of the City and County of Denver's Traffic Signal Standard Detail sheet no. 16.1.15, Foundations for XCEL Facilities, and detail no. 9.

Subsection 614.13 shall include the following:

Concrete Footings for Pedestal Poles, Imbedded Steel Poles, and Traffic Street Light Poles will not be measured and paid for separately but shall be included in the cost of Pedestal Poles, Imbedded Steel Poles, and Traffic Signal Light Poles installation.

END OF SECTION

**REVISION OF SECTION 614
LED PEDESTRIAN SIGNAL HEADS (16) (COUNT DOWN)**

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

Subsection 614.01 shall include the following:

This work includes the installation of LED Pedestrian Signal Faces with countdown timers as shown in the Contract.

Subsection 614.08 (h) shall include the following:

Pedestrian signal faces with count down timers shall meet the following requirements:

- i. The dimensions of the signal housing and the LED symbols, as well as moisture and dust resistance requirements shall be in accordance with the current ITE PTCSI Standards.
- ii. Signal housing shall be aluminum, painted in Federal Green and “clam-shell” mounted.
- iii. The signal shall have user-selectable modes for countdown for walk cycle only, pedestrian cycle only, or both walk and pedestrian clearance.
- iv. The countdown module shall have an internal conflict monitor to prevent any possible conflicts between the Hand/Person signal indications and the time display. The display shall not countdown during a Solid Hand indication.
- v. LED symbols shall be solid icons and shall provide uniform light dispersion such that the “pixel” effect is minimized. Lettered or outline symbol styles will not be permitted.
- vi. The Man/Hand configuration shall provide clear and distinct lamination where either symbol is in use.
- vii. The LED module shall be rated for use in an ambient operating temperature range of -40° F to 165° F.
- viii. The signal shall meet NEMA Standard TS2 for voltage surge protection, and shall have an automatic reset in case of a power outage.

Subsection 614.13 shall include the following:

LED Pedestrian Signal Face (16) (Count Down) will be measured by the actual number of units that are installed and accepted.

Subsection 614.14 shall include the following:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Pedestrian Signal Face (16) (Count Down)	Each (EA)

END OF SECTION

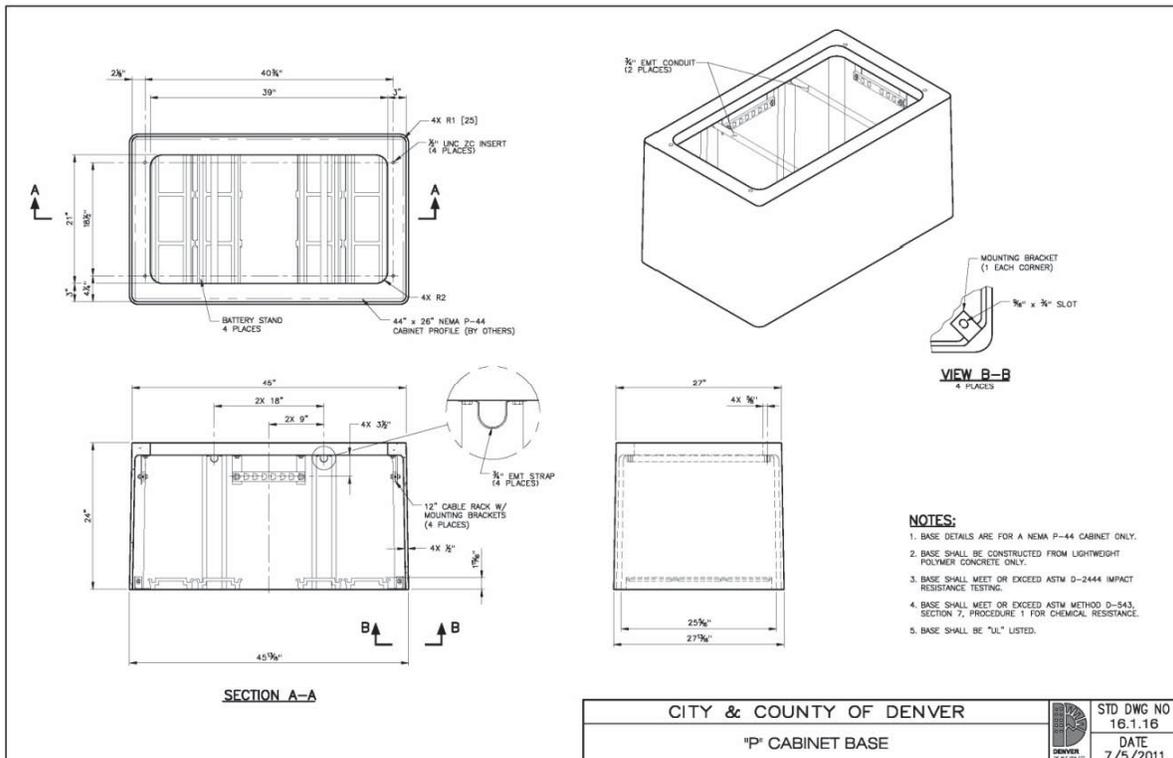
**REVISION OF SECTION 614
TRAFFIC SIGNAL CABINET BASE**

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

Subsection 614.01 shall include the following:

This work is for the furnishing and installation of a composite Traffic Signal Controller Cabinet Base in accordance with City & County of Denver standards.

Dimensions of the cabinet base are as shown in the following drawing:



Subsection 614.10 shall include the following:

Prior to starting cabinet base installation, Contractor shall obtain field verification of the location of the cabinet from the Engineer.

Cabinet base installation shall include all labor and materials to completely install a new P-size cabinet base as directed in the plans. The item shall include all excavation, conduit installation and modification work, backfill and restoration of adjacent surface area.

Subsection 614.13 shall include the following:

Installation of the traffic signal cabinet base shall not be measured and paid for separately, but shall be included in the cost of the Traffic Signal Controller and Cabinet.

END OF SECTION

**REVISION OF SECTION 614
TRAFFIC SIGNAL CONTROLLER AND CABINET**

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

Subsection 614.01 shall include the following:

This work shall consist of the furnishing, assembling, programming, and installing a completed Traffic Signal Controller and Cabinet assembly. The Cabinet assembly shall be assembled in accordance with the City and County of Standards and Specifications, and the completed Traffic Signal Controller and Cabinet shall include but not limited to the traffic signal controller, malfunction management units (MMU), vehicle detector amplifiers, other ancillary hardware, and traffic signal cabinet base as per City and County of Denver standards. The Contractor shall install the completed Traffic Signal Controller and Cabinet assembly at the locations as shown in the plans.

Delete Subsection 614.08 (b), and replace with the following:

Traffic Signal Controllers – General

This specification sets forth the minimum requirements for a shelf-mountable, two through twelve phases, fully-actuated, digital, solid-state traffic controller. The controller shall meet, as a minimum, all applicable sections of the NEMA Standards Publication No. TS2-1998. Where differences occur, this specification shall govern. Controller versions shall be capable to comply with NEMA TS2 Types 1 and 2. Type 2 versions of the controller shall be capable of operating as a Type 1. The controller shall meet or exceed the specifications of the Econolite model Cobalt ATE fully actuated controller (<https://www.econolite.com/wp-content/uploads/sites/9/2016/10/controllers-cobalt-datasheet.pdf>), or an equivalent approved by the City and County of Denver Transportation & Mobility.

Delete Subsection 614.08 (c) and replace with the following:

All new cabinets are the P-type cabinets as per the City & County of Denver Traffic Standards. Each cabinet shall be installed on a newly installed traffic signal controller cabinet base unless otherwise specified in the plans. Contact Chris Lillie at 720-865-0466 for cabinet assembly requirements and all other necessary auxiliary hardware.

Controller cabinet assemblies shall include an integrated uninterrupted power supply (UPS) units and an Ethernet Field Switch that comply with the City and County of Denver standards (see UPS and Ethernet Field Switch specifications).

Subsection 614.09 shall include the following:

The Contractor shall assemble the traffic signal controller, cabinet and other auxiliary hardware to the City and County of Denver standards and specifications. The Contractor shall coordinate with Traffic Operations Center for instructions prior to assembling of the Traffic Signal Controller and Cabinet assembly and the programming of the traffic signal timing. The Contractor shall bench test the completed Controller and Cabinet assembly to ensure operations in accordance with the desire program, timing and operation as per City and County of Denver's criteria.

The controller shall be installed in accordance with the details shown in the plans and in accordance with manufacturer's recommendations.

**REVISION OF SECTION 614
TRAFFIC SIGNAL CONTROLLER AND CABINET**

Subsection 614.10 shall include the following:

The Contractor shall demonstrate successful traffic signal operations at all new controller and cabinet locations to the satisfaction of the Engineer or Engineer’s designee prior to acceptance of this item. The Contractor shall contact the Engineer or Engineer’s designee 3 days before turning on signal. Work shall include all required programming of controllers and establishing or re-establishing all required wiring connections. Phasing and timing information at each location shall be furnished to the Contractor by the City & County of Denver.

All new wiring shall conform to City & County of Denver and International Municipal Signal Association (IMSA) specifications.

Subsection 614.13 shall include the following:

The unit price for furnishing, assembling, and installing the Traffic Signal Controllers and Cabinet assembly shall include all labor, materials, ancillary hardware, traffic signal cabinet base, wiring and wiring re-connection (including Xcel Energy power feed) required to provide and install a complete system and successful operation of the item. Connection of the controller to the fiber optic interconnect system shall be paid for separately under item 614 "Telemetry (Field)".

Removal and disposal of existing cabinets shall be in accordance with the Project Special Provision for the referenced item.

Subsection 614.14 shall include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Traffic Signal Controller and Cabinet	Each

END OF SECTION

**REVISION OF SECTION 614
ETHERNET MANAGED SWITCH**

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

Subsection 614.01 shall include the following:

This work consists of the furnishing and installation of an Ethernet Managed Field Switch in the CCD controller cabinets. The switch will be furnish by the Contractor as part of the Traffic Signal Controller Cabinet at the locations as shown in the plans.

Subsection 614.08 shall include the following:

The Ethernet Managed Field Switch installation is hereby added to the Standard Specifications and Ethernet Switch complies with the following specifications:

General System Requirements –The Ethernet Managed Field Switch, or equivalent with the Industrial Ethernet Managed Field Switch, will be a Garrettcom Magnum Ethernet Managed Field Switch comprising of the following four (4) parts:

- 1) 6KQ-24VDC base unit with four 10/100 copper ports in slot A (without 24VDC power supply).
- 2) 6KQ-RJ45 module with four 10/100 copper ports in slot B.
- 3) 6KQ4-MLC module with four 100Mb 2km multi-mode LC fiber ports in slot C.
- 4) 6KQ-BLNK blank cover for 1 unused module in slot C.

The field switch also meets the following requirements:

- May be configured with a variety of 10/100/1000 Mb fiber and copper port connector types -16 total ports maximum.
- Heavy duty and environmentally hardened fully enclosed metal case with advanced thermal design used as a heat sink (no fan).
- Dual LEDs for all-around status viewing.
- Wire speed filtering and forwarding across all ports - 802.3x flow control, 802.1p priority packet processing, self learning 4K-node address table, large 240KB packet buffers for 10/100 and 120KB for 1000Mb.

The unit is configured as a minimum:

Filtering/Forwarding Rate Performance:

- Ethernet (10Mb):14,880 pps
- Fast Ethernet (100Mb): 148,800 pps
- Gigabit Ethernet (1000Mb): 1, 488,000 pps
- Switching Processing Type: Store and Forward with IEEE 802.3x full duplex flow control, non-blocking
- Data Rate: 10Mbps, 100Mbps and 1000Mbps
- Address Table Capacity: 4K node, self-learning with address aging
- Packet buffer size: 240KB for 10/100 and 120KB for 1000Mb
- Latency: 5 μ s + packet time (100 to 100Mbps); 15 μ s + packet time (10 to 10 Mbps, and 10 to 100Mbps)
- Throughput with 12 10/100 and 2Glink max.- 4.76M pps (Transmit)
- Back plane- 2.66 GB/s per slot LEDs:
- Per Port (one set at the port, one set on swivel top on right side)

**REVISION OF SECTION 614
ETHERNET MANAGED SWITCH**

- LK: Steady ON when media link is operational
- ACT: ON with receiver port activity
- FDX/HDX: ON = Full-Duplex Mode; OFF = Half-Duplex Mode
- 100/10: ON = 100Mbps speed; OFF = 10 Mbps

Network cable connectors:

- 1000Mb fiber ports: all standard Gb SFP Transceiver types supported
- 1000Mb copper ports: 10/100/1000Mb auto-negotiating, Cat5e & 6 UTP/STP
- 100Mb Copper and PoE: Category 5 UTP/STP; 10 Mb: Cat. 3, 4, 5 UTP/STP
- 100 Mb Fiber ports connector options: multi-mode FX-MTRJ, LC, ST, SC; Single-mode 15Km LC, 20Km SC and ST, and 40 Km “long reach” single-modes SC.

Operating Environment:

- Ambient Temperature: -40° to 140° F (-40° to 60°C)

Alarm Relay Contacts:

- One NC indicating internal power, one NC software controllable

DC Power Supply:

- 24VDC Power Input nominal (range 18 to 36VDC)
- Power Consumption: 35 watts worst case (for a fully loaded fiber model); 12 watts typical (for a small 4 port copper-only model)

Vertical mounting normal:

- Suitable for wall or DIN-Rail mounting

Subsection 614.10 shall include the following:

The Ethernet Managed Switch installation will be tested in accordance with this specification or as directed by the Engineer. Installation shall include all wiring for hook-up, related labor, material, and all necessary documentation of testing.

Subsection 614.13 shall include the following:

Installation of the Ethernet Managed Field Switch will not be measured and paid for separately, but shall be included in the cost of Traffic Signal Controller and Cabinet.

END OF SECTION

**REVISION OF SECTION 614
UNINTERRUPTED POWER SUPPLY SYSTEM**

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

Subsection 614.08 shall include the following:

The double conversion uninterruptible power supply system (UPS) is a fully integrated system within the new controller cabinet and shall provide emergency battery power to the traffic signal controller. The UPS shall conform to the following specifications:

Operation:

The UPS system shall be capable of producing a fully regenerated, conditioned, pure sine wave AC. The online operational mode shall be continuous to all loads. It shall incorporate a high frequency Pulse-Width Modulated technology and shall use an input rectifier, charger, battery and inverter in a single board configuration. The UPS double conversion UPS shall provide a clean, pure AC sinewave output at all times with a voltage input variation of 85VAC to 145VAC while providing 120VAC to the connected load at all times. The UPS shall be capable of operating in the voltage range of 85VAC to 135VAC without using the batteries and always provide a regulated output to the protected loads.

The Input rectifier shall be rated at 2.5 times the output rating of the inverter.

The Inverter circuit shall be in continuous operation at all times (constant duty). The inverter shall be rated for 100% duty cycle and simultaneously fed from the rectifier and battery to eliminate any switching to battery or transitions during power fluctuations or power interruption. The inverter's output shall be pure clean sine wave with an efficiency of up to 85%.

The constant duty operation shall be rated in total watts. This will enable the traffic UPS to support any combination of signal heads whether Incandescent, LED or Neon, by any manufacturer, regardless of power-factor.

The UPS shall be capable of operating from a generator source without the need for over-sizing the UPS system. During operation from a generator source, the UPS shall operate in a normal fashion and provide filtered and regulated power with or without automatic input/output frequency synchronization. Upon excessive generator frequency drift, the UPS shall compensate through regeneration and supplying both continuous frequency and voltage regulation to the protected load.

The UPS shall be capable of glitch ride through capabilities and provide a seamless output to the connected load during this anomaly without the use of the batteries.

The UPS shall be capable of providing an overload output rating of 120% for 60 seconds, 150% for 10 seconds to any combinations of signal types whether Incandescent, LED or Neon during inrush or overload conditions.

The UPS shall have an internal static bypass that will transfer to line power if over load exceeds 150% for more than 5 sec. This bypass will maintain the load until this overload has cleared.

The UPS shall have a separate Neutral detecting circuit that shall monitor loss of utility neutral and completely disconnect any input source to the UPS system.

**REVISION OF SECTION 614
UNINTERRUPTED POWER SUPPLY SYSTEM**

The UPS shall have an input back feed relay operating in series with the Neutral monitoring circuit.

Upon loss of utility power, the UPS inverter shall continue to provide seamless pure sine-wave AC from the batteries without switching, transfer or changing its' operating status. The UPS will use the battery mode in '0' ms. This will insure that the UPS provides pure sine wave power under all conditions, at all times without interruption.

The UPS will continue to provide generated AC from the inverter until the batteries are depleted.

When the batteries have been depleted, the UPS will ensure upon the return of Utility Power that the UPS will restart automatically and provide regenerated AC to the protected equipment and allow the equipment to resume normal operation.

The UPS shall be capable of operating in a full regenerated, power-conditioning mode with depleted batteries or failed batteries. The regenerative power conditioning will ensure that there will be regulated and conditioned pure AC power to the equipment. This regenerative mode will provide extended brown-output protection with wide input line regulation, noise filtering and surge protection.

The UPS shall operate in an uninterruptible regenerative on-line mode during flash or normal signal operation.

The UPS shall be rated at Unity Power Factor. The output VA and Watts rating shall be equal on the output at all times.

The UPS shall be capable of COLD starting without AC present and provide AC power to the load.

The UPS shall be capable of self diagnostics during start up or with the use of the front panel TEST button.

The UPS input and output connections shall be Anderson Power Pole quick lock connector to eliminate exposed terminals or connections.

The UPS to bypass interconnect harness shall be reversible with matching Anderson Power connectors that will prevent risk of shock, or damage to the connected equipment.

The UPS shall be capable of Hot-Swapping the batteries or battery bank, without shutting down the UPS.

The UPS shall be capable of being Hot-Swapped during normal operation when used with the external Hot Swap Bypass. The UPS may also be shut-off with the Hot Swap Bypass in place without loss of AC to the loads. The UPS may be used with redundancy in mind with the use of the Dual Hot Swap Option that will provide a secondary UPS source in less than 20ms. The Secondary UPS may be connected to the alternate input of the Hot Swap Bypass. The Hot Swap Bypass shall allow the UPS to be removed or installed at any time during normal load operation.

The UPS shall be capable of providing a replaceable relay card with relay output contacts for AC fail, Inverter ON, Low Battery, Battery Fail, Bypass and Alarms.

The UPS relay card may be replaced with an SNMP card for SNMP communications and information.

**REVISION OF SECTION 614
UNINTERRUPTED POWER SUPPLY SYSTEM**

The UPS shall provide a programmable Dry Relay output for flash.

The contacts shall be provided in N/O and N/C positions. The delay timer shall be a maximum of 10 hours.

The timer shall:

- be front panel mounted
- have a dial that is 4.7 inches in circumference
- have a scale in increments of 1 to 10 seconds, that can be changed to indicate 1 to 10 minutes, or a maximum scale of 1 to 10 hours
- have a scale that can be controlled by two (2) separate dip switches on the timer face
- indicate that the timing function is operating using a flashing RED LED
- indicate that the timing is now completed using a steady RED LED
- count in a down mode to '0' from the preset time indicated on the scale

The LED indicators shall provide status for AC line, UPS Battery Mode, Charging, Low Battery, Fault, Bypass, Percentage of Load and Battery Charge.

The Event counter and Hour meter may be reset to '0' using separated buttons.

The UPS shall have a battery charger rated at 200 watts @ 36VDC with an optional of 400 watts. This charger shall be completely separate from the rectifier/inverter included with the main UPS board. The UPS chargers may be used in a parallel configuration for increased charger ratings. The UPS shall use a redundant internal 1 amp charger that will continue to charge the batteries if the separate board charger fails.

The Flash programming shall be a simple and field programmable without the use of an external connected device such as a laptop or computer.

The UPS shall include standard graphical real time software and connection cable and be capable of sending programmable system alarms to the Econolite "icons" Traffic Management System.

Physical Description:

The UPS shall meet the following physical dimensions:

For 700 W UPS:

Size:	6.00" H x 10.5" D x 15.15" W
Weight:	18 lbs

The enclosure shall be constructed of 0.064 Carbon steel and aluminum. The enclosure shall be painted with powder coat paint with a minimum of 1.5 mil thickness.

The UPS shall consist of 3 major components - the Main board Rectifier/Inverter, charger and control board.

**REVISION OF SECTION 614
UNINTERRUPTED POWER SUPPLY SYSTEM**

The Main Board shall consist of a True-Sine-Wave constant duty high frequency inverter utilizing High-Frequency Pulse-Width Modulated technology.

The Input Rectifier shall be rated for the total wattage output rating of the UPS including the 150% overload and the charger rating. The inverter shall be a high efficiency constant duty design with an efficiency of 83%. The inverter shall include its' own static bypass which provides an alternate AC path during overload and or Inverter alarm conditions.

The heat-sink shall be a continuous aluminum extrusion design with plenum directed airflow cooling. The 12VDC dual stage cooling fans shall be variable speed controlled by the logic board.

The charger portion shall be a 3 stage Hysterisis .5 amp, 36 or 72VDC charger with temperature compensation. The supplementary charger is a parallel design rated for 200, 500 and 1000 watts.

The Electronic Control board shall monitor the Rectifier and Inverter functions. It shall also provide the overall control of all the UPS functions and or operational capabilities.

Mounting Configuration:

The UPS shall be shelf mounted or rack mounted per the documents. Shelves and cabinets shall be supplied by others. Where rack mounting is required, the 170 style mounting method shall be 19" rack mount. Rack mounting ears shall be removable.

A separate stand alone NEMA Traffic cabinet may be supplied if required in the plans and specifications. Four (4) rubber feet shall be installed on the bottom of the unit for shelf mounting.

Battery System:

The batteries shall be comprised of a quantity of three (3), high temperature, deep cycle (45AH) batteries which have been proven under extreme temperature conditions. The battery system or configuration shall consist of one string. Each string shall be 36 VDC. The batteries shall be provided with the appropriate interconnect cables. The battery cables shall have a minimum conductor size rating of #10.

The battery cable shall consist of a quick release Anderson connector rated at 25 amps. For the purpose of safety, the connector shall have recessed pins and keyed interlock to prevent reversal of connection or separation.

Battery construction shall be of a polycarbonate high temperature design combined with high, pure lead content with internal resistance of .0028 ohms and a high impact poly case construction, to withstand high vibration and shock. The connections shall be of stainless steel 3/8 stud, with 3/8 stainless nut and locking washer. Removable lifting handle shall be standard.

**REVISION OF SECTION 614
UNINTERRUPTED POWER SUPPLY SYSTEM**

The batteries shall also meet the following characteristics:

Nominal voltage:	12VDC
Capacity@ 25C:	45AH
Approx weight:	13.5Kg
Internal Resistance:	9.5 mOhms
Dimensions:	197mm x 165mm x 170mm (7.76 x 6.50 x 6.69)
Capacity (10hr rate):	75c-112% 65c-108% 55c-105% 25c-100% 0c- 85% -15c- 65%
Self Discharge:	3 months 91% capacity remaining 6 months 82% capacity remaining 12 months 65% capacity remaining
Operating Temperature:	-15c to +75C
Float Voltage:	13.5 to 13.80
Cyclic charging voltage:	14.5 to 14.90
Maximum charge current:	12A
Terminal material:	Copper
Maximum discharge current:	400A (5 sec)

The system must be 36 volt DC maximum (no exception).

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REVISION OF SECTION 614
UNINTERRUPTED POWER SUPPLY SYSTEM

Electrical Specifications:

The unit shall meet the following electrical specifications:

Design:	Double Conversion true on line.
Nominal input:	110, 115 & 120v AC single phase dip switch selectable.
Input Voltage Range:	80v to 140v AC
Input frequency:	50/60hz (47 to 63)
Efficiency:	83 %
Input configuration:	3 wire with ground
Input Protection:	15 amp re-settable breaker (on UPS 700)
Input Current:	10.4 amps (includes charger) (on UPS 700)
Power Rating Continuous:	700 watts, 1400watts, 2100 watts
Output Current:	@ 700 watts 5.8 amps / 11.6 @1400/ 17.7@2100
Output regulation:	+/- 3% with 100% resistive load
Output regulation w/low battery:	+/- 3% with 100% resistive load
Output Voltage:	120v AC
Output Wave Form:	Pure sine wave
Harmonic Distortion:	3% Linear Load; 5% Non Linear Load
Dynamic Response:	+/- 5% RMS for 100% step load change 1 ms recovery time
Overload Capability:	120% for 60 sec 150% watts for 10 sec
Charger:	200 watt 36VDC UPS 700, 72VDC on UPS 1400 Parallel 400, 1000 and 2000 watt.
Surge:	ANSI-C62.41
Fault Clearing:	Current Limit and automatic to bypass
Short Circuit protection:	Output Breaker / Fuse, then shut down
Load Power Factor:	6 leading to .6 lagging
Output Connection:	Anderson Power Pole Connector 6 pin keyed.
DC Connection:	Anderson 50 amp Keyed Recessed connector
Recognition:	UL Recognized & IEE 587 / C62.41 on main UPS board

**REVISION OF SECTION 614
UNINTERRUPTED POWER SUPPLY SYSTEM**

Environmental:

The UPS shall meet or exceed NEMA temperature standards from -40c to + 74c.

Communications, Control & Diagnostics:

LED indicators shall be provided for line monitoring, battery mode, charging, low battery, fault / bypass load level, battery level and ground fault. Manual test functions shall be available for alarm function, low battery, battery fail, bypass and overload. An RS 232 port with communication software shall be provided for real time UPS operational status in place of a relay status card when required.

The relay status card shall have the following I/O via contact closure:

1. Bypass ON
2. AC fail or out of tolerance.
3. AC normal or in tolerance.
4. Inverter is operating (ON)
5. Battery low
6. Battery failed or bad
7. UPS general alarm
8. Ground (logic)
9. Apply 6 to +25VDC
10. between pin 9 and 10, will shut the UPS down

Options:

The UPS must be able to accept the following future options

- SNMP/WEB monitoring.
- 24/7 Adjustable perpetual timer.
- Generator input option for hot swap bypass switch.
- Rack mount hot swap bypass switch.

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UNINTERRUPTED POWER SUPPLY SYSTEM**

In place of the relay card, an SNMP card can be installed that shall support TCP/IP, UDP, SNMP, and HTTP protocols and shall provide the SNMP MIB for UPS monitoring and UPS status. Remote access to UPS real time information including unit identification, data logging and UPS status in real time shall also be provided on a by unit basis. It shall be possible to use Microsoft Internet Explorer for remote viewing of the following:

1. UPS load
2. Battery Charger status
3. UPS operation Normal/Alarm
4. Input Voltage
5. Output Voltage
6. Battery Voltage
7. UPS Temperature
8. UPS information logging
9. Remote UPS battery testing.
10. Send output email if UPS status has changed
11. Built in reset with panel mounted led indicators for SNMP status.

The SNMP card shall have the following status LEDs:

LED(1)	Green LED: Status receiving
Yellow:	Data Transmitting
LED(2)	Green: SNMP connecting
Yellow:	SNM P functioning

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UNINTERRUPTED POWER SUPPLY SYSTEM**

The optional 24/7 timer shall be integral to the UPS. It shall include a DB9 connector to provide the connection and programming to the timer. This timer shall be programmable for any number of flash delays related to the time of day. It allows the complete flexibility of flash delay or skipping the flash during that particular event related to traffic flow and even holidays. The time shall have the follow features:

1. 7 days, 24 hrs Flash delay timing.
2. Perpetual Clock.
3. Maximum of 31 setting per day.
4. Timing resolution to the minute.
5. 4 Possible commands per event.
6. Real-time operation, editing functions will not interrupt the unit's functions.
7. J-Tag port for instant preload of complete 7-day schedule file.
8. SPDT 10 amp 240VAC /24VDC ratings.
9. Input Voltage 110 to 240VAC or 24VDC unregulated supply.
10. Capable of scheduling for holidays or specific year/dates.
11. Capable of operating at 2400 baud micro-modem for direct phone connection
12. Capable of operating at 1200 to 230,000 baud rate on a serial port.
13. Capable of log retention

An optional generator input shall be available for the UPS.

Reliability:

Calculated MTBF shall be 120,000 hours based on component ratings. When bypass switch is installed, system MTBF shall increase to 160,000 hours.

Hot Swap Bypass Switch:

A hot bypass switch shall be provided and wired to function within the UPS system. The bypass switch shall have the following characteristics:

Bypass Rating:	30 amps maximum
Bypass Transfer:	Automatically to line in 20ms, '0' crossing at full load
Control:	Rocker On/Off switch indicating 'Auto' and Bypass
Relays:	AC internal Load relay at 'Zero Crossing' with parallel function DC relay for interlocking and protection failsafe mode to N/C for AC power direct to load when failure occurs or in Bypass position.
Protection:	Internal Snubber circuit for spike attenuation during transfer at 'Zero' crossing. Internal fuse required.
Connections:	Flush mounted Anderson Power connector. With locked and keyed.
Indicators:	LED for Line Available, Bypass, Ups On Line, UPS Available.
Dimensions:	7.5 x 5 x 2.5
Weight:	1.4 lbs

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UNINTERRUPTED POWER SUPPLY SYSTEM

Warranty:

A standard (2) two year manufacturer warranty shall be provided for all electronic components. All batteries shall carry a one year warranty.

Subsection 614.13 shall include the following:

Emergency Vehicle Traffic Signal Priority Control System units shall include a four-channel card and the number of detectors as shown on the plans. Emergency Vehicle Traffic Signal Priority Control System shall be measured and paid by the number of intersections at which the system is installed. The item shall include all labor, materials, and ancillary hardware required to provide a fully functioning system to the satisfaction of the Engineer.

Subsection 614.14 shall include the following:

Traffic signal uninterrupted power supply system installation will not be paid for separately, but shall be included in the cost of the Traffic Signal Controller and Cabinet.

END OF SECTION

**REVISION OF SECTION OF 614
PEDESTRIAN PUSH BUTTON AND INSTRUCTION SIGN**

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

Subsection 614.08 (f) shall include the following:

1-1: Push button assemblies shall be of the direct push button solid state contact type and shall not have any levers, handles or toggle switches externally or internally. The pushbutton shall be of tamperproof and all weather construction. The pushbutton shall have a protective shroud that is an integral part of the cover and it shall encircle the pushbutton actuator to deter vandalism. The assembly shall be made weatherproof and shockproof by means of synthetic rubber gaskets between the cover and the enclosure and between the plunger and the cover so that it shall be impossible to receive an electrical shock under any weather conditions. The front cover plate shall be secured with stainless steel vandal resistant screws. The push button shall operate on logic ground.

1-2: The solid state switch shall be entirely insulated from the housing and operating button. The pushbutton shall consist of a 2 inch 303 stainless steel metal plunger and an oil and gasoline resistant Piezo driven solid state switch, all encased in a high impact thermoplastic enclosure with four (4) stainless steel mounting screws. The solid state switch shall be normally open and shall be closed with a minimum of pressure on the button (3lb ± 1lb), restoring immediately to the normally open position when the pressure is released.

The aluminum housing shall be the flat back frame type with adjustable mounting staves that will readily enable it to be mounted on any size traffic signal pole or push button standard. The housing shall have a ½ inch access hole in the rear for wiring. The housing shall have a bottom threaded conduit entrance hole and shall be provided with a threaded plug so that access is only possible from the rear of the housing. The plug shall not be removable with ordinary tools. The housing shall be painted Dark Olive/Federal Green baked enamel matching to Federal Standard 595A color #14056.

The frame shall have a cast aluminum attachment to allow the mounting of a 9" X 12" pedestrian instruction sign. By removal of 4 screws the frame shall convert to allow the mounting of a 5" X 7 ¾" pedestrian instruction sign.

Pedestrian Instruction Sign:

2-1: Pedestrian instruction signs shall conform to the latest version of the M.U.T.C.D., published by the U.S. Department of Transportation Federal Highway Administration.

2-2: Pedestrian instruction signs shall be Type R10-3a, Type R10-3b, Type R10-3c, R10-3d, and R10-3e as specified in the contract documents (or bid documents).

Pedestrian instruction signs shall be constructed in accordance with the applicable provisions of the current CCD Standard Specifications. Pedestrian instruction sign need not be reflectorized. The sign shall be fabricated with 0.063 aluminum. The signs shall be mounted using four 5/16" mounting holes 4" X 6 ¾" for the 5" X 7 ¾" sign and 7" X 10" for the 9" x 12" sign. The pedestrian instruction signs shall have rounded corners ¾" radius for the 5" X 7 ¾" sign and 1 ½" radius for the 9" X 12" sign.

**REVISION OF SECTION OF 614
PEDESTRIAN PUSH BUTTON AND INSTRUCTION SIGN**

Subsection 614.13 shall include the following:

Pedestrian Push Button and Instruction Sign shall be measured by the number of units installed and accepted. The sign shall be incidental to the Pedestrian Push Button item.

Subsection 614.14 shall include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Pedestrian Push Button	Each (EA)

END OF SECTION

**REVISION OF SECTION 614
EMERGENCY VEHICLE TRAFFIC SIGNAL PRIORITY CONTROL SYSTEM**

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

Subsection 614.08 shall include the following:

System Description:

The emergency vehicle traffic signal priority control system shall enable designated vehicles to remotely cause the traffic signal controller to advance to and/or hold a desired traffic signal display by using existing controller functions. The control shall be activated at a minimum distance of 548.6M (1,800 feet) along an unobstructed "line of sight" path. The control shall not terminate until the vehicle is within 12.2M (40 feet) of the detector or at the intersection.

The system shall consist of the following components:

- A. Vehicle Emitter which shall be mounted on the emergency vehicle and shall transmit optical energy signals only in the forward direction. If the municipality presently uses optical preemption, the emitters shall be of the same manufacture currently used by the City and County of Denver Fire Department.
- B. Phase Selector (minimum 2 channels) which shall cause the signal controller to advance to and/or hold the desired traffic signal display for the emergency vehicle. A pre-emption system chassis shall house two phase selectors.
- C. Optical Detector which shall be mounted on or near a traffic signal and shall receive the optical energy signals generated by the Vehicle Emitter.
 - a. Detector (Type A), 1 Direction, 1 Channel
 - b. Detector (Type B), 2 Direction, 1 Channel
 - c. Detector (Type C), 2 Direction, 2 Channel
- D. Detector Cable (Optical).

System Operations:

- A. The operating sequence shall be initiated when the optical detector receives the required optical energy signal from the Emitter.
- B. The phase selector shall cause the traffic signal controller to advance to and/or hold the desired traffic signal display for the emergency vehicle.
- C. The phase selector shall cause the controller to advance to and/or hold the desired traffic signal display even if the optical energy signals cease before the desired display is obtained.

**REVISION OF SECTION 614
EMERGENCY VEHICLE TRAFFIC SIGNAL PRIORITY CONTROL SYSTEM**

- D. The phase selector shall allow the traffic signal controller to resume normal operation within ten seconds after optical energy signals cease if the optical energy signals cease after the desired traffic signal display is obtained.
- E. The phase selector shall not respond to optical energy signals from an emergency vehicle if it is already processing optical energy signals from another emergency vehicle.

System Components:

A. Vehicle Emitter:

The emitter assembly consists of an emitter and power supply and an emitter control switch assembly. The emitter assembly is mounted on a vehicle and produces a flashing optical signal when in operation. The following shall apply to the vehicle emitter:

1. Shall operate on ten to fifteen volts DC input voltage, but shall not be damaged by input voltage surges up to twenty-five volts DC.
2. Shall be controlled by a single on/off switch that requires no other adjustments by the operator. The on/off condition shall be indicated by a light located adjacent to the switch.
3. Shall be automatically disabled or de-activated by one or a combination of the following: seat switch, emergency brake switch, door switch, and transmission safety switch.
4. Shall operate over an ambient temperature range of minus 34O C to plus 60O C (minus 30O F. to plus 140O F.)
5. Shall operate in 0 to 95 % humidity.
6. Shall be a pulsed optical energy source with a controlled repetition rate.
7. Shall not generate voltage transients on the battery input line which exceed battery voltage by more than four volts.
8. Shall produce optical energy in a cone of not more than 90 degrees horizontal and not more than 30 degrees vertical. The detectors and/or phase selector shall not sense a pre-emption signal from an emitter outside this cone.

B. Optical Detector:

The optical detector receives the high intensity optical pulses produced by the emitter.

These optical energy pulses are transformed by the detector into appropriate electrical signals which are transmitted to the phase selector. The optical detector is mounted at or near the intersection in a location which permits an unobstructed line of sight to vehicular approaches. The units may be mounted on signal span wires, mast arms or other appropriate structures. The following shall apply to the optical detector:

**REVISION OF SECTION 614
EMERGENCY VEHICLE TRAFFIC SIGNAL PRIORITY CONTROL SYSTEM**

1. Shall produce optical energy in a cone of not more than 90 degrees horizontal and not more than 30 degrees vertical. The detectors and/or phase selector shall not sense a pre-emption signal from an emitter outside this cone.
2. Shall be of solid state construction.
3. Shall operate over an ambient temperature range of minus 34O C to plus 60O C. (minus 300 F. to plus 140O F.)
4. Shall have internal circuitry potted in a semi-flexible compound to ensure moisture resistance.
5. Shall operate in 0 to 95 % humidity.
6. Shall have a cone of detection of not more than 13 degrees. The detector and/or phase selector shall not sense a pre-emption signal from an emitter outside this cone.

C. Phase Selector:

The phase selector supplies power to and receives electrical signals from the optical detector. When detector signals are recognized as a valid call, the phase selector causes the signal controller to advance to and/or hold the desired traffic signal display. This is accomplished by activating the pre-empt input to the controller.

The phase selector is capable of assigning priority traffic movement to one of two channels on a first-come, first-serve basis. Each channel is connected to select a particular traffic movement from those normally available within the controller. Once a call is recognized, "commit to green" circuitry in the phase selector functions so that the desired green indication will be obtained even if optical communication is lost. After serving a priority traffic demand, the phase selector will release the controller to follow normal sequence operation. The following shall apply to the phase selector:

1. Shall include an internal power supply to supply power to the optical detectors.
2. Shall have minimum two-channel operation with the capability of interfacing with an additional phase selector for expansion of channels of operation.
3. Shall have adjustable detector range controls for each channel of operation, from 12M (40 feet) to 548M (1800 feet).
4. Shall have solid state indicator lights for power on and channel called.
5. Shall operate over an ambient temperature range of minus 34O C to plus 60O C (minus 300 F. to plus 140O F.)
6. Shall operate in 0 to 95 % humidity.

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EMERGENCY VEHICLE TRAFFIC SIGNAL PRIORITY CONTROL SYSTEM**

D. Detector Cable (Optical):

The following shall apply to the detector cable:

1. 3-Conductor cable with shield and ground wire.
2. AWG #20 (7x28) stranded.
3. Individually tinned copper strands.
4. Conductor insulation: 600 volt, 75 deg. C (167O F.).
5. 1 Conductor-yellow; 1 Conductor-blue; 1 Conductor-orange.
6. Aluminized Mylar shield tape or equivalent.
7. AWG #20 (7x28) stranded uninsulated drain wire
8. DC resistance not to exceed 11.0 ohms per 305M (1000 feet).
9. Capacitance from one conductor to other two conductors and shield not to exceed 157pf/M (48pf /ft.).
10. Jacket: 600 volts, 80 deg. C (176O F.), minimum average wall thickness - 1.14mm (.045").
11. Finished O.D.: 7.62mm (0.3") max.

System Interface:

System shall be capable of operating in a computerized traffic management system when appropriate interfacing is provided by the computer supplier.

General:

The Contractor shall furnish the manufacturer the phasing diagrams indicating controller sequence and timing.

The Contractor shall secure from the manufacturer a guarantee for the equipment for a period of sixty (60) months, which time shall commence from the date of delivery. Manufacturer shall certify upon request that all materials furnished will conform to this specification. The manufacturer or his designated representative shall be responsible for determining and setting all required range and emitter intensity for the emergency vehicle operation.

Construction Methods:

All equipment except the vehicle emitter assembly shall be installed and wired in a neat and orderly manner in conformance with the manufacturers' instructions. The vehicle emitter assembly shall be delivered to a designated City representative.

Installation of the vehicle emitter assembly shall be the responsibility of the City and County of Denver Fire Department.

**REVISION OF SECTION 614
EMERGENCY VEHICLE TRAFFIC SIGNAL PRIORITY CONTROL SYSTEM**

Traffic signals owned and maintained by the State that have optical pre-emption equipment owned and maintained by the town shall have an Auxiliary Equipment Cabinet (AEC) attached to the controller cabinet. The optical pre-emption equipment shall be housed in the AEC. Traffic signals owned and maintained by the town do not require an AEC to house the pre-emption equipment.

Detector cables shall be continuous with no splices between the optical detector and the AEC.

Detector locations shown on the plan are for illustration purposes only. Exact location shall be determined by the contractor or the designated representative for the best possible line of sight.

- Controller “D” harness and adapter.
- Pre-emption termination panel with terminal block and relay bases.
- Pre-emption disconnect switch, mounted on the emergency switch panel (on inside of cabinet door).
- Pre-emption test buttons, mounted on the pre-emption termination panel.

All connections from the phase selector to the “D” harness and to the cabinet wiring shall be made at the termination panel. The termination panel shall have AC+ Lights, AC-, and a switched logic ground. The switched logic ground feeds all the pre-empt inputs to the phase selector. When switched off by the pre-emption disconnect switch, the traffic controller shall not be affected by preempt calls from the optical pre-emption system. A minimum of two test buttons shall be provided. If there are more than two pre-empt runs, a button for each shall be installed. A chart or print out indicating the program steps and settings shall be provided along with the revised cabinet wiring diagrams.

Test the Pre-emption System According to the following Guidelines:

1. Notify the system owner/user, such as the Municipal Fire Chief or City Traffic Engineer, of the scheduled inspection
2. Request a fire department representative and an emergency vehicle, which has an emitter to conduct the test. If not available, the contractor shall provide an emitter.
3. In the presence of the Engineer and the municipal representative, test each preempted approach with the emergency vehicle. Test the following items of the system:
 - a. Confirm that the emitter activates the phase selector and the phase selector activates the correct pre-emption input to the controller.
 - b. Confirm adequate range. The traffic signal must be pre-empted to green sufficiently in advance of the emergency vehicle arrival. The vehicle emitter shall initiate pre-emption at a minimum distance of 548.6M (1800 feet).
 - c. Confirm there are no false calls. Keep the emitter active as the emergency vehicle passes through the intersection. No other optical detectors shall sense the strobe.
4. Document the test. Provide the Engineer and, upon request, the municipality copies of the test results.

**REVISION OF SECTION 614
EMERGENCY VEHICLE TRAFFIC SIGNAL PRIORITY CONTROL SYSTEM**

If a malfunction is found or the system needs adjustment (such as range, emitter intensity, or detector location), schedule a follow-up test. Repeat the above steps for all approaches that did not pass.

All adjustments such as emitter intensity, phase selector range, sensitivity, detector placement, shall be made at the intersection by the contractor so that the optical pre-emption operates correctly with other major manufacturers' equipment currently owned by the town.

Subsection 614.13 shall include the following:

Emergency Vehicle Traffic Signal Priority Control System units shall include a four-channel card and the number of detectors as shown on the plans. Emergency Vehicle Traffic Signal Priority Control System shall be measured and paid by the number of intersections at which the system is installed. The item shall include all labor, materials, and ancillary hardware required to provide a fully functioning system to the satisfaction of the Engineer.

Subsection 614.14 shall include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Emergency Vehicle Traffic Signal Priority Control System	Each (EA)

END OF SECTION

**REVISION OF SECTION 614
INTERSECTION DETECTION SYSTEM (CAMERA)**

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

Subsection 614.01 shall include the following:

The work consists of furnishing and installing a fully-functional FLIR vehicle detection camera system or approved equal (video detection system), at the specified locations identified in the plans.

Subsection 614.08 shall include the following:

Detection Camera:

The detection camera shall consist of a thermal camera, thermal lens, and enclosure; and shall meet the following specifications:

- ***Thermal Camera & Lens***
The detection camera shall be a 320 x 240 (minimum) and 10 frames per second (minimum) thermal camera that fits into the camera enclosure specified herein. The lens shall be a fixed thermal lens. Digital zooming is allowed.
- ***Camera Enclosure***
The camera enclosure shall consist of a dustproof and waterproof outdoor camera housing designed specifically to fit the thermal camera and thermal lens specified herein. The enclosure shall have a sun shield to prevent direct and indirect sunlight entering the lens. A thermostatically controlled heater for window defogging and defrosting is allowed.
- ***Power***
The detection camera shall be powered by a 120/240VAC, 50/60Hz power source or by a 24VDC (±10%) power source.
- ***Reliability***
The interface card shall be designed and manufactured to have a MTBF (Mean Time Between Failure) prediction figure of greater than or equal to 10 years continuous operation.
- ***Certifications & Environmental***
The detection camera shall meet the following Certifications and Environmental specifications:

<i>Certifications</i>	Comply with Electromagnetic Compatibility – 2004/108/EG Comply with FCC Part 15, Class A
<i>Weatherproof</i>	IP66 ingress protection standards (minimum)
<i>Operating Temperature</i>	-34°C to +74°C (-29°F to +165°F) (minimum)
<i>Relative Humidity</i>	Up to 100% non-condensing
<i>Shock & vibration</i>	NEMA II

**REVISION OF SECTION 614
INTERSECTION DETECTION SYSTEM (CAMERA)**

- ***Mounting Brackets***

A versatile mounting bracket shall be supplied to mount the camera enclosure, specified herein, to a horizontal luminaire or vertical traffic signal pole.

All mounts shall be secured with stainless steel mounting straps or bolts. The mounts, including the mass and size of the detection camera, shall be designed to withstand a wind load of 120km/h (or 75mph) with a 30-second gust factor.

- ***Camera to Controller Cabinet Cable***

Cable needed to power the detection camera specified herein, transmit thermal video and data information to the controller cabinet shall be provided and meet the specifications of the thermal video imaging detection system manufacturer.

Thermal Video Processor:

A thermal video processor shall be included in the detection camera, specified herein, or in the interface card, specified herein; and shall meet the following specifications:

- ***Functionality***

The thermal video processor shall provide the following functionality:

<i>Detector Display</i>	Capable of displaying bike detection regions on the thermal video image with associated outputs with output status shown on the screen.
<i>Detector Placement</i>	By using a portable PC with graphical user interface software or web server.
<i>Detector Function</i>	Capable of detecting within the view of the connected detection camera the presence of bicycles in user defined bicycle detection regions.
<i>Detector Type</i>	Configurable as presence, count, delay, extension, or pulse mode of either arrival or departure of bicycles. The detector shall be capable of detecting pedestrians and small motorcycles too.
<i>Detector Modification</i>	All detectors and parameters shall be able to be changed without interrupting detection. When one detector is modified, all existing detectors shall continue to operate, including the one that is being modified. When the new detector position is confirmed, the new detector shall have no learning phase and shall be operating while the one being modified ceases to operate.

**REVISION OF SECTION 614
INTERSECTION DETECTION SYSTEM (CAMERA)**

<i>Detector Failure State</i>	Provide a constant call on each active detection channel, in the event of unacceptable interference or loss of the thermal video signal.
<i>Regions per Video Output</i>	Up to 4 (minimum)
<i>Detector Delay & Extension</i>	Defined between 0.1–99 seconds and pulse mode between 0–500ms in 10ms increments.
<i>Direction Sensitivity</i>	Able to make a detector directional sensitive.

Camera Interface/Surge Suppression Panel:

When the thermal video processor is in the detection camera, a UV resistant signal cable with 3 wires (maximum) of wire diameter AWG18 (minimum) shall be provided to power the detection camera, transmits detection information to the interface card specified herein, and provides remote communication specified herein. The cable distance between detection camera and interface card is 300m or 1,000ft (maximum).

When the thermal video processor is in the interface card with coax thermal video cables being used between the detection camera and the interface card, a surge suppression panel shall be provided that powers the detection camera with high-voltage transient protection and power isolation, and suppresses electrical spikes on the thermal video coax cable.

The camera interface/surge suppression panel shall meet the following specifications:

- ***Certifications and Environmental***

The interface card shall meet the following Certifications and Environmental specifications:

<i>Certifications</i>	Comply with Electromagnetic Compatibility – 2004f108fEG Comply with FCC Part 15, Class A
<i>Weatherproof</i>	IP66 ingress protection standards (minimum)
<i>Operating Temperature</i>	–34°C to +74°C (–29°F to +165°F) (minimum)
<i>Relative Humidity</i>	0–95% non-condensing (minimum)
<i>Shock & vibration</i>	NEMA II

**REVISION OF SECTION 614
INTERSECTION DETECTION SYSTEM (CAMERA)**

Interface Card:

Input/output main and expansion cards shall be supplied that are designed to convert real-time detection signals from the video processor, specified herein, into contact closure signals to the traffic light controller; and to relay traffic signal phase status to the video processor, specified herein. The interface card shall meet the following specifications:

- ***Functionality***

The interface card shall provide the following functionality:

<i>Cabinet/Controller Compatibility</i>	US: EDGE card for TS-1 cabinet and 2070 TS-1 and TS- 2 controllers Rest of World: EURO card for various standard controllers
<i>Status Indicators</i>	Visual for state of each detection output, visual state of power status (ON/OFF), visual state of camera status (operational/not operational)
<i>Identification</i>	Individually addressable with serial number, MAC address, IP- address, subnet mask and default gateway
<i>Program Retention</i>	Continue to operate in accordance with previous program after recovering from communication system or power failure
<i>Time Synchronization</i>	Manually or NTP time source
<i>Detector Failure State</i>	Provide a constant call on each active detection channel, in the event of unacceptable interference or loss of the thermal video signal
<i>Regions per Video Output</i>	Up to 4 (minimum)
<i>Detector Delay & Extension</i>	Defined between 0.1-99 seconds and pulse mode between 0-500ms in 10ms increments.
<i>Direction Sensitivity</i>	Able to make a detector directional sensitive

- ***Communication***

The interface card shall meet the following specifications:

<i>Controller Interface Output</i>	Contact closure via interface backplane, providing up to four channels of vehicle detection with no front panel connectors being used
<i>ETHERNET</i>	RJ45 port for hard-wired system set-up and monitoring
<i>USB</i>	USB 2.0 (minimum) on front panel for connecting a USB dongle to allow wireless set-up and monitoring via portable PC, tablet and/or smart phone 4°C to +74°C (- 29°F to +165°F) (minimum)

**REVISION OF SECTION 614
INTERSECTION DETECTION SYSTEM (CAMERA)**

- **Remote Communications**

Remote communications to allow remote management specified herein shall be provided via the interface card and shall meet the following specifications:

- a) **Functionality**

Remote communications shall provide the following functionality:

Cabinet/Controller Compatibility	US: TS-1 cabinet and 2070 TS-1 and TS-2 controllers Rest of World: EURO card for various standard controllers
Thermal Video Compression	MJPEG, MPEG-4 (ISO 14496-2) and for H.264 (ISO/IEC MPEG-4 AVC)
Thermal Video Frame Rate	Constant and variable 10 frames per second (minimum)
Thermal Video Bandwidth	Between 32 kbps and 4 Mbps (minimum)
Status Indicators	Ethernet link activity
Identification	Individually addressable with serial number, MAC address, IP- address, subnet mask and default gateway
Program Retention	Continue to operate in accordance with previous program after recovering from communication system or power failure

- b) **Communication**

The remote communications shall meet the following specifications:

Ethernet Port	One 10/100Base-T front-panel RJ45 port (minimum)
Thermal Video Input	Via front panel connector

- c) **Power**

The interface card shall meet the following power specifications:

Input Voltage	24VDC \pm 10% (via cabinet detector rack backplane)
Power Consumption	10W (maximum)

- **Physical Properties**

The interface card shall meet the following physical properties specifications:

Size	US: Fits directly into NEMA TS-1 cabinet detector rack or fits on DIN-rail Rest of world: Fits directly in EURO half/full 19" rack or fits on DIN-rail
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**REVISION OF SECTION 614
INTERSECTION DETECTION SYSTEM (CAMERA)**

- **Reliability**
The interface card shall be designed and manufactured to have a MTBF (Mean Time Between Failure) prediction figure of greater than or equal to 10 years continuous operation
- **Certifications and Environmental**
The input/output main and expansion cards shall meet the following Certifications and Environmental specifications:

<i>Certifications</i>	Comply with FCC Part; 15 NEMA TS 2–2003 v02.06
<i>Operating Temperature</i>	–37°C to 74°C (–35°F to 165°F) (minimum)
<i>Humidity</i>	0 – 95% non–condensing

Remote Management System:

Remote management system shall be provided to monitor, control, and troubleshoot the thermal video imaging detection devices remotely via the Ethernet communication system. The vendor shall provide all software that will be loaded and configured by staff on furnished server hardware that is connected to the thermal video imaging detection devices via the Ethernet communication system. Remote management shall meet the following minimum requirements:

- **Diagnostic & Health Monitoring**

<i>Management Status</i>	Provide real–time status display of services required to access, troubleshoot, and archive data from the thermal video imaging detection system network connected devices
<i>Network Device View</i>	Provide view of all thermal video imaging detection system network connected devices
<i>Operation Log</i>	Support retrieving, displaying, and saving operational messages, warnings, and errors

**REVISION OF SECTION 614
INTERSECTION DETECTION SYSTEM (CAMERA)**

- ***Remote Management & Maintenance***

<i>Video Viewing/Recording</i>	Support viewing and recording streaming video including detector overlay
<i>Device Management</i>	Support creating, editing, downloading, and uploading detector configurations
<i>Remote Firmware Updates</i>	Support updating firmware of any device from a remote location
<i>Remote Backup/Restore</i>	Support backup/restore device configuration from remote location
<i>Access Permissions</i>	Support password implementation
<i>Clock Synchronization</i>	Support the Network Time Protocol (NTP) to synchronize the internal clocks of the thermal video imaging detection system network connected devices a minimum of once a day

Subsection 614.13 shall include the following:

FLIR Intersection Detection System (Camera) shall be measured and paid by the number of cameras to be installed. The item shall include all labor, materials, and ancillary hardware required to provide a fully-functional camera system to the satisfaction of the Project Manager.

Subsection 614.14 shall include the following:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Vehicle Detection System (Single Camera)	Each (EA)

END OF SECTION

**REVISION OF SECTION 614
TRAFFIC SIGNAL POLES – GENERAL**

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

Subsection 614.08 (g) shall include the following:

This work is for the installation of the mast arm traffic signal poles, traffic signal light poles (no mast arm), pedestal poles, and traffic signal span wire poles (imbedded steel poles). The Contractor shall furnish and install the signal poles at the locations as shown in the plans or as directed by the Engineer.

The mast arm traffic signal poles and traffic signal light poles with no mast arms shall be the type manufactured by Valmont and in accordance with the City and County of Denver's standards and specifications. General specifications of the signal poles are as follows:

TRAFFIC SIGNAL POLES:

All signal poles (mast arm traffic signal poles, traffic signal light poles with no mast arms, and traffic signal span wire poles) shall conform to City and County of Denver's Traffic Standard Details 16.1.9 and 16.1.12 to 16.1.13.

Traffic signal pedestal poles shall conform to the requirements of the City and County of Denver's Traffic Signal Standard Detail 16.1.13.

FINISH:

All mast arm traffic signal poles and traffic signal light poles with no mast arm shall be finish in accordance with Valmont finish process F540 or equal – galvanized, epoxy primer and powder coated in accordance with the following specifications:

PAINTING:

All traffic signal mast arm poles shall be powder coated in accordance with the following specifications:

General:

Super Durable Powder Coating: The super durable powder coating shall consist of a Urethane or Triglycidylisocyanurate (TGIC) Polyester Powder, and provide a minimum of 3 times the gloss retention, color retention and ultraviolet light (UV) resistance as standard powder coatings. Color shall be dark olive green, in conformance with Federal Specification No. 14056.

Surface Preparation:

The exterior steel surface shall be blast cleaned to Steel Structures Painting Council Surface Preparation Specification No. 6 (SSPC-SP6) requirements utilizing cast steel abrasives conforming to the Society of Automotive Engineers (SAE) Recommended Practice J827. The blast method is a recirculating, closed cycle centrifugal wheel system with abrasive conforming to SAE Shot Number S280.

Interior Color:

Interior surfaces (pole shafts only) at the base end for a length of approximately 2.0' shall be mechanically cleaned and coated with a zinc rich epoxy powder. The coating shall be electrostatically applied and cured in a gas fired convection oven by heating the steel substrate to a minimum of 350 degrees Fahrenheit and a maximum of 400 degrees Fahrenheit.

**REVISION OF SECTION 614
TRAFFIC SIGNAL POLES – GENERAL**

Exterior Coating:

All exterior surfaces shall be coated with Urethane or Triglycidylisocyanurate (TGIC) Polyester Powder to a minimum film thickness of 2.0 mils (0.002”). The coating shall be electrostatically applied and cured in a gas fired convection oven by heating the steel substrate to a minimum of 350 degrees Fahrenheit and a maximum of 400 degrees Fahrenheit. The thermosetting powder resin shall provide both intercoat as well as substrate fusion adhesion that meets 5A or 5B classifications of ASTM D3359.

The traffic signal span wire poles shall be painted dark olive green in conformance with Federal Specification No. 14056.

Packaging:

Prior to shipment, small poles shall be wrapped in 0.188” thick Ultraviolet inhibiting plastic backed foam. Larger poles shall be cradled in a 1.0” rubberized foam base.

Handling and Shipment:

Poles shall be handled in a manner that will preserve the overall appearance and prevent damage to the coating. The use of chains or cables for loading, unloading, or installing is prohibited. Only ¾ inch diameter or larger nonabrasive nylon rope or equivalent nylon belting will be used. Adequate hold-downs and appropriate blocking shall be utilized for shipping to prevent load movement and damage to the outer coating in transit. No handling should be allowed until “dry through” condition has been achieved with the coating.

Extra care will be taken not to damage the coating. Upon arrival of the poles at the delivery point, neither chains nor cables will be used to either unloading or installation of poles.

Procedure for Field Touch-Up:

The pole manufacturer will furnish extra paint, both primer and color coat, to satisfy the needs of field touch-up requirements, in the event of minor physical damage to the coating from handling or transit. Damaged area must be clean and dry before repair application. Field touch-up will be at the direction of the pole manufacturer or their authorized representative.

Subsection 614.14 shall include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Traffic Signal-Light Pole Steel	Each (EA)
Traffic Signal-Light Pole Steel (1-25 Foot Mast Arm)	Each (EA)
Traffic Signal-Light Pole Steel (1-40 Foot Mast Arm)	Each (EA)
Traffic Signal-Light Pole Steel (2 Mast Arms) (25 & 40 Foot)	Each (EA)
Traffic Signal Pedestal Pole Aluminum	Each (EA)

END OF SECTION

REVISION OF SECTION 614 TELEMETRY (FIELD)

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

Subsection 614.01 shall include the following:

This work consists of fan-out and termination of fiber optic (interconnect) cable at each controller cabinet locations as identified in the plans. This work also includes providing and installing all necessary fiber optic lateral cables and telemetry equipment including but not limited to optical splice closures, field patch panels, splice organizers, cables, pigtails/jumpers and labels.

Color-coded fibers and buffer tubes shall be used throughout the entire project. At the terminal points the jackets shall be stripped and the ends taped. Gel filled compound shall be removed using filled cable cleaner.

At every cabinet or optical closure, only the fibers identified in the plans to be spliced and/or connected to a patch panel or other internal device are required to be landed. All cut and unconnected fibers shall be sealed in a manner recommended by the fiber optic cable manufacturer and coiled neatly in a splice organizer.

The same color-coded pairs of fibers and/or wires shall be used throughout the entire project unless shown as otherwise in the plans. Gel filling compound shall be removed using filled cable cleaner.

Subsection 614.08 shall include the following:

Fiber Optic Patch Pigtail:

The fiber optic pigtail cables shall consist of MM fibers housed individually in protective jackets. Both ends of the cable shall be connected. Fiber optic patch cord cable shall be suitable for operation over a temperature range of -30 degrees to +60 degrees Celsius. Fiber optic patch cord cables shall be of length suitably long to be connected between the interconnect panel and the communications equipment (i.e. fiber optic transceivers). Patch cord couplings shall be compatible with termination points. Appropriate strain relief in the cabinet (through cable ties) shall be installed at a minimum of three locations. Sufficient slack shall be left to allow relocation of the equipment anywhere in the cabinet. The attenuation of a fiber optic patch cord cable after installation, not including the connector loss, shall not exceed 0.1 dB measured at 850 nm and 1300 nm.

Connectors:

The connector shall have a ceramic ferrule with a nickel-plated nut and body. The connector shall be an AT&T ST style compatible field mounted connector. The connector shall be compatible with a physical contact (PC) finish. All connectors shall be polished to a PC finish such that the return loss per mated pair of connectors is less than -25 dB. The return loss when the connector is mated with previously installed connectors shall be less than -18 dB.

The connector insertion loss shall not be greater than 0.20 dB (typical). The connector loss shall not vary more than 0.20 dB after 1000 repeated matings. Tensile strength shall withstand an axial load of 20 lb. with less than 0.20 dB change.

**REVISION OF SECTION 614
TELEMETRY (FIELD)**

Index matching fluids or gels shall not be used. The connectors shall be compatible with the optical fiber surrounding jacket and shall be installed on one end of the optical fiber in accordance with the manufacturer's recommended materials, equipment and practices. The connector shall be suitable for the intended environment and shall meet the following environmental conditions:

Operating Temperature: -40° to +80° C
Storage Temperature: -40° to +85° C

The connector loss shall not vary more than 0.20 dB over the operating temperature range. Connectors shall be protected by a suitably installed waterproof protection cap.

Miscellaneous Cabling:

Fiber optic patch cords shall be fiber optic jumper cable, duplex, ceramic ferrule, MM 62.5 nm, adaptable to AT&T ST style connectors, 2 meters in length, ITT Canon Model 161001-4020 or approved equal. Cable from fiber optic modem to Port 3 controller harness shall be 25-pin cable Model 44982G4 or approved equal. The Contractor shall deliver transceivers to the City's Traffic Signal Shop. Contact Joe Strauss (720) 865-4062 for coordination.

Optical Splice Closures:

Coyote Runt or Coyote Pup Type closures shall be provided for splicing lateral fiber optic cables to the main (backbone) fiber cable in all pull box locations that are identified in the plans. All closures shall include 1-Inch future port kit (part no. 8003408, Pre-Formed Line Products). The Coyote Runt Closure shall be used at locations with 3 fiber optic cables. In locations requiring more than 3 cables, a Coyote Pup Closure shall be installed.

Subsection 614.13 shall include the following:

Telemetry (Field) shall be measured by the total number of cabinets at which the interconnect cable is fanned out, terminated, connected, patch panels and fiber-optic interfaces installed. All labor and materials required to perform panel installations, provide in-cabinet strain relief, fan-out, cable termination and connection to the controller is considered included in the unit price for this item.

**REVISION OF SECTION 614
TELEMETRY (FIELD)**

This item, therefore, includes the following:

1. All required in-cabinet cable ties and strain relief (including ancillary hardware and labor to complete);
2. All required fan-out kits, kit tools, ancillary hardware and labor to accomplish the fan-out at the cabinet;
3. All required pigtails and harness cables;
4. All required interconnect centers and fiber optic interface panels in individual controller cabinets as shown in the plans;
 - o All required termination enclosures (including specified features), connectors, adapters, jumpers, pigtails, patch cord cables, ancillary hardware and labor required to accomplish the cabinet termination;
 - o All required optical splice closures;
 - o All other labor and material necessary to complete the item

All labor and materials necessary to complete this item shall be considered included in the unit price and will not be paid separately.

Subsection 614.14 shall include the following:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Telemetry (Field)	Each (EA)

END OF SECTION

**REVISION OF SECTION OF 614
TRAFFIC CONTROL DEVICES**

Section 614 of the Standard Specification is hereby revised as follows:

Subsection 614.08 (h) shall include the following:

“Light Emitting Diode” (LED) signal lenses shall be installed in all Red, Yellow, Green, Walk and Don’t Walk, and Countdown signal displays. This work shall be included in the cost of the item for Traffic Signal Face and will not be paid for separately.

END OF SECTION

**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.

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.

**REVISION OF SECTION 625
CONSTRUCTION SURVEYING**

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.

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.

**REVISION OF SECTION 625
CONSTRUCTION SURVEYING**

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 (LS)

Traffic control for construction surveying will be measured and paid for in accordance with Section 630.

END OF SECTION

**REVISION OF SECTION 626
MOBILIZATION**

Section 626 of the Standard Specifications is hereby revised to include:

Subsection 626.01 is hereby revised to include:

This item also includes demobilization of equipment and supplies from this project site.

Subsection 626.02 is hereby deleted and replaced by the following:

Two payments will be made for the mobilization item. 50% of the amount bid for mobilization will be paid at the completion of mobilization. The remaining 50% of the amount bid for mobilization will be paid at the completion of the project when the equipment has been demobilized.

Pay Item

Mobilization

Pay Unit

Lump Sum (LS)

END OF SECTION

**REVISION OF SECTION 629
SURVEY MONUMENTATION**

Section 629 of the Standard Specifications is hereby deleted and replaced with the following:

DESCRIPTION

629.01 This work consists of locating, preserving, referencing, installing and restoring the following types of land monuments by a Colorado-licensed Professional Land Surveyor (PLS). The following types of monuments, if required, shall be considered included: Primary Control monuments from which Right of Way (ROW) 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; ROW monuments; property boundary monuments; and offsets, City of Denver range points, benchmarks, easement monuments, and other monuments that are required by law or regulation to be established by a PLS, along with installing or adjusting Monument Boxes. The monuments include, but are not limited to, those monuments identified on the Survey Control Perpetuation Diagram.

The production of additional documentation may be required by the City Surveyor's Office. All such work included in this section shall be performed under the supervision of a Colorado licensed PLS.

MATERIALS AND EQUIPMENT

629.02 The Contractor shall furnish all personnel, survey equipment, safety equipment, materials and traffic control necessary to perform the required Monumentation and related surveying.

CONSTRUCTION REQUIREMENTS

629.03 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.

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 & County of Denver 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.

629.04 Locating Monuments – This work consists of field locating all survey Monumentation as discussed in 629.01 which are in place within the project limits or as identified on the Survey Control Perpetuation Diagram. A diligent search of construction zones and project limits shall be performed by the PLS.

**REVISION OF SECTION 629
SURVEY MONUMENTATION**

629.05 Preserving and Referencing Monuments – All monuments as described in 629.01 shall be preserved, referenced and reset by a PLS within the project limits or as identified on the Survey Control Perpetuation Diagram.

629.06 Installing Monuments – All monuments described in 629.01 shall be preserved throughout construction. If any monuments as described in 629.01 are to be disturbed or removed during construction, it will be the responsibility of the Contractor's PLS to reset all monuments to current City & County of Denver standards. Appropriate documentation will be required for all reset monuments.

629.07 Monument Box – If required, this work shall consist of installing or adjusting monument boxes to current City or CDOT requirements.

METHOD OF MEASUREMENT

Survey monuments, monument boxes and adjustment of monument boxes will be measured by the actual number of the various types installed and accepted by the Engineer.

Measurement for locating survey monuments, preserving and referencing monuments will not be measured and paid for separately.

BASIS OF PAYMENT

The accepted items and quantities will be paid by Force Account. Approval of the Engineer is required prior to undertaking any work identified as part of this Section.

Prior to payment, all survey records and documentation must be submitted and accepted by the City Surveyor's Office.

The construction survey checklist, equipment calibrations and survey records will not be paid for separately but shall be included in the work. The locating of monuments, and preserving and referencing monuments will not be paid for separately but shall be included in the work.

END OF SECTION

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

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

Subsection 630.01 shall be revised to include the following:

The Contractor shall submit, in writing to the Engineer, the proposed Method of Handling Traffic (MHT) for review and approval. The MHT shall be developed according to this section and the construction plans.

Subsection 630.05 Traffic Cones shall include the following:

Steel drum channelizing devices shall not be used for traffic control

Subsection 630.06 Channelizing Device (fixed) shall include the following:

Non-metallic drums or tubular markers may be substituted for vertical panel channelizing devices.

Subsection 630.09 General shall include the following:

The flagger's STOP/SLOW sign paddle shall be 18 inches with letters six inches high.

Subsection 630.10(a), shall include the following:

When a different MHT is required for a subsequent construction phase, it must be submitted at least two weeks prior to starting that phase. All proposed methods of handling traffic shall be approved, in writing, by the Project Engineer following approval of the Traffic Engineering Services Department.

Approval of the proposed MHT does not relieve the Contractor of liability specifically assigned to him under the contract. The Contractor shall erect and maintain warning lights, signs, barricades, and sufficient safeguards around all excavations, embankments, and obstructions.

The contractor shall notify the Project Engineer by Thursday at 3:00 P.M. which streets they intend to work on the following week. This notification will be made for all phases of construction.

Subsection 630.10(a)(1) shall be added as follows:

The key elements of the Contractor's method of handling traffic (MHT) are outlined in subsection 630.10(a).

The components of the Traffic Control Plan (TCP) for this project are included in the following:

- Subsection 104.04 and Section 630 of the Standard Specifications.
- Tabulation of Traffic Engineering Items included in the plans for this project.
- Latest revised Standard Plan S-630-1, Traffic Controls for Highway Construction and Standard Plan S-630-2.

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

Special Traffic Control Plan requirements for this project are as follows:

1. During the construction of this project, traffic shall use the present traveled roadway.
2. Work that interferes with traffic on will only be permitted during the following hours:
 - The Contractor shall perform all the work on the roadway between the hours of 8:30 AM and 3:30 PM or as approved by the Project Engineer. Weekend and nighttime work will be allowed with the prior written approval of the Project Engineer. During this time, only one lane can closed on each approach.
 - Work will not be permitted that directly or indirectly interferes with the flow of traffic between the hours of 5:30 AM and 8:30 AM Monday through Friday; between the hours of 3:30 PM to 6:30 PM Monday through Thursday; and after 2:00 PM on Fridays unless otherwise authorized by the Project Engineer.
 - No work on Holidays
 - Contractor shall not close lanes during special events.
 - Contractor shall coordinate lane closures with adjacent projects.
 - Contractor shall maintain business access during business hours.
 - The Contractor shall coordinate all of the work on the roadway during any special event with the City and County of Denver.
3. The Contractor shall install construction traffic control devices where they do not block or impede other existing traffic control devices or sidewalks for pedestrians, disabled persons or bicyclists. The Contractor is restricted from storing any materials, construction traffic control devices, signs, etc. in any median area or park area.
4. Vertical cuts or fills greater than 1 inch resulting from construction operations adjacent to traffic lanes, or within the clear zone shall be temporarily sloped at a 6:1 or flatter slope, and delineated at 35 foot intervals immediately after removal operations to safeguard the traveling public.
5. Construction equipment used on this project shall meet the same minimum exhaust requirements as those specified by the manufacturer of the equipment.
6. The Contractor and subcontractors shall equip their construction vehicles with flashing amber lights. Equipment to be used at night shall also be equipped with flashing amber lights. Flashing amber lights on vehicles and equipment shall be visible from all directions.

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

7. The Contractor shall maintain access to all roadways, side streets, walkways, alleyways, driveways, and hike/bike paths at all times unless otherwise directed by the Engineer. Parking areas temporarily disturbed by construction activities shall be restored to a useable condition during non-working hours. Such temporary parking shall utilize an all-weather surface. The Contractor shall develop an Access Maintenance Plan in coordination with, and based on the requirements of, the affected property owners and tenants, and submit it to the Engineer for approval prior to commencement of work. This plan shall detail all barricades, ramps, signs, and temporary means of access required by the property owners or tenants. Prior to commencing any work which affects access to a property, the Access Maintenance Plan for that property must be submitted and approved by the Engineer.
8. The Access Maintenance Plan shall be coordinated with all affected owners and tenants. The Access Maintenance Plan shall include documentation of this coordination, including the approval signature of each affected owner or tenant. Should the Contractor be unable to obtain approval and signatures, documentation of the efforts made to obtain said approval and signatures must be submitted. All access shall be maintained on surfaces equal to or better than those existing at the time the access is first disturbed. For short periods of time only as allowed by the Engineer, access may be maintained on an aggregate base course surfaces.
9. The Contractor shall maintain continuous access throughout the project for pedestrians, bicyclists, and disabled persons. When the existing access route is disturbed by construction, a temporary all-weather access shall be provided. All temporary access shall be a minimum of 5 feet wide and meet Americans with Disabilities Act (ADA) requirements. Acceptable all weather surfacing shall be concrete or asphalt surface, or as approved by the Engineer. Delineation of pedestrian access through the work area shall be accomplished using temporary plastic fencing.
10. The costs of maintaining access will not be paid for separately, unless otherwise provided, but shall be included in the work. Utilization of materials to be incorporated into the work may be permitted. However, any degradation or other contamination or destruction shall be corrected at the Contractor's expense prior to acceptance.
11. During non-construction periods (evenings, weekends, holidays, etc.) all work shall be adequately protected to insure the safety of vehicular and pedestrian traffic, as detailed in the Contractor's MHT. Excavations or holes shall be filled in or fenced when unattended.
12. Whenever the Contractor removes, obliterates, or overlays any pavement markings, he /she shall replace them on a daily basis prior to opening the affected areas to traffic. All temporary pavement markings shall fully comply with the Standard Specifications and Special Provisions.
13. The Contractor shall not have construction equipment or materials in the lanes open to traffic any time unless directed by the Engineer.

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

14. All personal vehicle and construction equipment parking is prohibited where it conflicts with safety, access, or the flow of traffic. Landscaped areas, public park areas, and roadway shoulders shall be kept clear of parking and storage of all personal and construction equipment except where approved by the Engineer.
15. The Contractor shall not place tack coat on any surface to be paved where traffic will be forced to travel upon fresh bituminous materials.
16. The Contractor shall be required to make arrangements with the Regional Transportation district (RTD) prior to closing any existing bus stops within the project limits. Temporary stops will be required as directed by the Engineer and as required by RTD. For bus stop/route conflicts Regional Transportation District, RTD / 1560 Broadway, Suite 700, Denver, CO 80202 shall be contacted two business days prior to start of construction.
17. The Contractor shall be required to maintain temporary drives at any existing establishment that has singular access off of the roadways, unless otherwise approved in writing by the property owner.
18. No work that interferes with traffic will be allowed on holidays or any day of a three-day or four-day weekend that includes a holiday. Holidays on which this restriction applies consist of those holidays recognized by the State of Colorado as listed in subsection 101.36
19. All lane closures shall be subject to the approval of the Engineer. Request for each closure shall be made at least 24 hours in advance of the time the lane closure is to be implemented. Lane closures will not be allowed to remain unless being utilized in continuum for the intended purpose for which they were set up.
20. During no-working hours, the roadways shall be restored to a safe travel conditions for the free flow of traffic. Any maintenance required restoring the roadways to this condition, including the pavement patching and grading, shall be done prior to opening the areas to traffic or completing work for the day.
21. The Contractor shall clean the roadway of all construction debris before opening it to traffic.
22. All flagging stations used at night shall be illuminated with floodlights. Street, highway lights and “high mast lighting” may be used for flagging station illumination when approved by the Engineer. Floodlights shall be located and directed so as not to interfere with the sight of any motorists, and the cost to be included in the work.
23. Prior to removal and resetting of any sign the Contractor and Engineer shall prepare an inventory. Any signs damaged due to the Contractor’s operations shall be replaced in kind or repaired by the Contractor at no additional cost to the project.
24. Unless noted otherwise, all costs incidental to the foregoing requirements shall be included in the original contract prices for the project, including any additional traffic control items required for haul routes into the project.

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

Subsection 630.10 (10) shall be added as follows:

Number of hours for uniformed traffic control shall be tabulated for submittal.

Subsection 630.10 (11) shall be added as follows:

Contractor shall obtain all required access and construction permits from the City & County of Denver prior to initiating work along City right of way.

All lane closures require an arrow board to be installed.

All streets that will be reduced in the number of travel lanes should have variable message boards installed for a minimum of 3 days after the striping change to inform drivers of the lane reduction.

Subsection 630.14 shall include the following:

The flagger's STOP/SLOW sign paddle shall be 18 inches with letters six inches high.

Subsection 630.15 is hereby deleted and replaced with the following:

Temporary pavement markings for traffic control will not be measured and paid for separately, but shall be included in the work.

Subsection 630.16 is hereby deleted and replaced with the following:

All costs incidental to maintenance of access will not be paid for separately, unless otherwise provided, but shall be included in the work.

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

END OF SECTION

FORCE ACCOUNT ITEMS

DESCRIPTION

This Special Provision contains the City and County of Denver’s estimate for Force Account Items included in the Contract. The estimated amounts will be added to the total bid to determine the amount of the performance and payment bonds. Force Account work shall be performed as directed by the Engineer.

BASIS OF PAYMENT

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

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

<u>Item No.</u>	<u>Force Account Items</u>	<u>Quantity</u>	<u>Estimated Amount</u>
F/A 01	Minor Contract Revisions	F/A	\$50,000
F/A 02	On the Job Trainee	F/A	\$5,000
F/A 03	Furnish & Install Electrical Service	F/A	\$10,000
F/A 04	Landscaping	F/A	\$5,000
F/A 05	Erosion Control	F/A	\$2,500
F/A 06	Survey Monumentation	F/A	\$10,000
F/A 07	Environmental Health & Safety Management	F/A	\$2,000

Force Account descriptions include:

- F/A 01 Minor Contract Revisions – This work consists of minor work authorized and approved by the Engineer, which is not included in the contract plans or specifications and is necessary to accomplish the scope of work of this contract.
- F/A 02 On the Job Trainee – This work will be carried out in accordance with the Standard Special Provision- On the Job Training
- F/A 03 Furnish & Install Electrical Service – This force account is for all cost charges from the power service provider, and all necessary materials, labor and coordination required to maintain existing or establish new power sources required for permanent operation of equipment as shown in the plans.
- F/A 04 Landscaping– This work is for restoring existing landscape, including topsoil sod, and irrigation systems back to preconstruction condition.
- F/A 05 Erosion Control – This work consists of stormwater BMPs authorized and approved by the Engineer. This Force Account is to pay for all necessary work and materials for erosion control items not identified in the plans and at the Engineer’s direction. Payment will be made based on time and materials used to perform the work. All items shall be pre-approved by the engineer prior to installation or they will be at no cost to the project.
- F/A 06 Survey Monumentation – This work is for the installation of survey monuments, monument boxes, and adjustment of monument boxes.
- F/A 07 Environmental Health & Safety Management – This work is described in Section 250 - Environmental, Health, and Safety Management of the Standard Specifications.

END OF SECTION

**DENVER (ONLY) NOISE ORDINANCE – PERMIT
VARIANCE APPLICATION TEMPLATE**

Date

Subject: **Request for Variance to Noise Ordinance**
 [location where work is to be performed]

Dear Ms. VanDerLoop,

- Name of company/organization seeking the variance
- What is being proposed, where it will occur, expected duration of project
- Brief history regarding proposed project
- Description of the community in the vicinity of the proposed project area

6 (a) Type and Timing of Claim:

- Specific description of proposed project (figures are helpful)
- Why does work need to be conducted at night? (CDOT can provide details to contractor)
- Are there limiting factors preventing this work from being conducted during the day? (CDOT can provide details to contractor)
- Requested variance duration; start and end dates
- Proposed work hours
- Types/categories of equipment being used for the project (if known, a detailed list should be provided as an appendix)
- Is this variance request contingent on other regulatory approvals/permits? (construction, demo, remediation)

6 (b) Date of Payment:

- [The Company's] date of payment is the date shown of this letter/request.

6 (c) Objections to Manager's Determinations:

- Specific items applicant may be in disagreement with concerning Department's recommendations or requirements

6 (d) (1) Hardship if Variance is Not Granted:

- Public safety concerns (CDOT can provide details to contractor)
- Logistical concerns
- Time constraints with a detailed explanation as to why they are necessary
- Cost considerations (specifics desirable)
- Document and evaluate possible alternatives

6 (d) (2) No Adverse Affects to Public Health:

- List expected noise levels to be generated (1) at the site where work is being performed, and (2) at the nearest sensitive receptor (CDOT can provide details to contractor from Roadway Construction Noise Model)

**DENVER (ONLY) NOISE ORDINANCE – PERMIT
VARIANCE APPLICATION TEMPLATE**

- Detail existing ambient sound levels (L90, Leq, Lmax) for the same areas (at least 1 night of pre-work monitoring; 9 p.m. to 7 a.m.; two nights (one weekday, one weekend) if work will occur on weekdays and weekends)
- How do the proposed levels compare with existing EPA or other guidance? (CDOT can provide details to contractor)
- Are there adverse health effects other than noise to be concerned with as a result of the proposed work? (CDOT can provide details to contractor)

6(d) (3) Maintain Harmony with the Spirit and Purpose of the Ordinance:

(CDOT can provide details to contractor for sec 6(d) (3))

- Is the scope of work considerate of present and future community concerns?
- How does the scope of work seek to minimize impacts to the community?
- Have noise mitigation techniques been included and/or considered?
- Has a noise monitoring plan been considered or proposed?
- How will community outreach be conducted prior to the start of work?
- Has a community response plan been developed to deal with any future complaints?
(contact name and number of on-site representative)

6 (e) Project Location and Haul Routes:

- Figures are preferable (CDOT can provide details to contractor)

6 (f) Petitioner Information

[Company Name and Address]

[Contact Person/Project Manager info]

6 (g) Petitioner's Signature

Sincerely,

[Name and Title]

Note: In addition to this template, CDOT can provide an example of a previously written (City and County of Denver) variance application at the contractor's request.

The following field work summary of requirements will be the sole responsibility of the contractor for maintaining compliance with the Denver (only) Permit Variance agreements once granted by the Department of Environmental Health.

- 1) **Construction Activity Allowable Noise Levels:** Unless the accommodations described in below are provided, construction noise levels shall not exceed:
 - a. an hourly Leq of 75 dBA, or 5 dBA greater than an ambient hourly Leq measuring more than 75 dBA, or
 - b. an Lmax of 86 dBA during the hours of 9:00 p.m. to 7:00 a.m. (Nighttime Hours)

**DENVER (ONLY) NOISE ORDINANCE – PERMIT
VARIANCE APPLICATION TEMPLATE**

- 2) **Hotel accommodations within eligibility zones:** (Contractor) shall make hotel accommodations available for persons residing within eligibility zones where Nighttime construction noise levels exceed allowable noise levels. The eligibility zone shall be determined by a sound study conducted by the (contractor) and approved by DEH prior to a seven-day notification period. During nighttime construction, (contractor) shall conduct noise monitoring to verify the sound study results and shall expand and may restrict the eligibility zone to the areas where the actual noise levels exceed an hourly Leq of 75 dB(A) or an Lmax of 86 dB(A). (Contractor) shall consider any special circumstances brought to their attention regarding individuals in the eligibility zone who cannot utilize hotel vouchers and who may be at risk during this period of time, e.g., residents of 24-hour health care facilities. (Contractor) shall make their best effort to accommodate the needs of such individuals during Construction Activity.

- 3) **Notifications:** Not less than seven days prior to commencement of construction during Nighttime Hours, (contractor) shall notify individual households located within a 1000 foot radius of the construction, as well as representatives of each affected Registered Neighborhood Organizations. Notice shall be in writing or by direct personal contact from (contractor) representative, and shall include the expected start time, expected duration, character of work activity planned, names and telephone numbers of available contact persons (for additional information or questions), contact numbers for complaints, and any other relevant parameters or programs. Households within the eligibility zone shall receive notice regarding their eligibility for hotel vouchers at the same time or earlier.

- 4) **Mitigation Requirements/Activity Restraints:** When construction is conducted during Nighttime Hours and such activity emits noise levels that exceed ambient noise levels at residential properties, (contractor) shall utilize best reasonable management practices to mitigate construction noise impacts to the adjacent property owners. Best reasonable management practices include the following:
 - a. Using reasonable best efforts to complete the construction as quickly as possible.
 - b. Minimizing nighttime construction duration near residential areas whenever possible.
 - c. Re-routing of truck traffic away from residential streets when possible.
 - d. Conducting truck loading, unloading and hauling operations so that noise levels are kept to a minimum
 - e. Configuring equipment on the site to minimize back-up alarm noise, where practical and feasible (for example, by using circular movement of trucks).
 - f. Shielding jackhammers, saws, and pavement breakers through use of an existing sound barrier wall or temporary barrier where practicable
 - g. Maintaining all equipment to meet manufacturer's specifications.
 - h. Informing employees, contractors and subcontractors performing construction of the general requirements of this variance and exercising best efforts to ensure that such employees, contractors and subcontractors follow best management practices in mitigating construction noise.

**DENVER (ONLY) NOISE ORDINANCE – PERMIT
VARIANCE APPLICATION TEMPLATE**

- 5) **Monitoring:** (Contractor) shall perform monitoring sufficient to demonstrate compliance with the requirements of the noise variance and to demonstrate to the community the noise levels that are present.
- a. Noise measurements shall be collected using ANSI guidelines for community noise monitoring
 - i. Manufacturer’s specifications for appropriate meter use shall be followed.
 - ii. All noise measurements shall be made using the A-weighted scale (dB(A)) and a slow response. Fast response measurements may be used to measure impact noise levels.
 - iii. Noise measurements shall be made at the nearest residential property line, unless physically impractical.
 - b. All nighttime construction activity shall be initially monitored. Monitoring shall include spot measurements, as appropriate and hourly Leq. Monitoring shall be required for the following activity groups, but not be limited to:
 - i. Joint Repair
 - ii. Milling Operations
 - iii. Rubble load-out
 - iv. Paving operations
 - c. Monitoring shall meet the following requirements:
 - i. Each construction activity shall be monitored a minimum of two days for L_{max} and hourly Leq levels to establish an activity baseline for each activity when initially undertaken, and to establish the expected worst case situation (outside lane).
 - ii. Noise monitoring shall be provided in response to all noise complaints.
 - iii. All noise monitoring data and documentation shall be provided to DEH at least weekly when applicable, and such data shall be available to the public from DEH. DEH and their designated representatives may inspect collected data more frequently.
 - d. The following documentation, in a manner and form mutually agreed upon by CDOT, (contractor) and DEH, shall be provided for noise monitoring that is conducted:
 - i. Manufacturer names, model numbers, and serial numbers of each SLM and acoustical calibrator used.
 - ii. Software manufacturer, program and version.
 - iii. Dates of annual certified calibration of SLM, microphone and acoustical calibrator.
 - iv. Pre- and post- monitoring calibration data for the Sound Level Meter.
 - v. Date and specific location (address if appropriate) of monitoring.
 - vi. Start time and end time of monitoring
 - vii. Ambient weather conditions including temperature, relative humidity, wind speed and cloud cover.
 - viii. Signature of technician collecting the data
 - ix. List of each hourly Leq for the monitoring period, with associated L_{max} levels.

**DENVER (ONLY) NOISE ORDINANCE – PERMIT
VARIANCE APPLICATION TEMPLATE**

x. All measurements associated with any unusual noise events that occurred, cause of such event if known, correction of such event (if any), and adjusted and unadjusted measurements.

6) Complaint Notification and Response: (Contractor) shall ensure that methods are available to receive, address, and respond to concerns raised by people in the community, through:

- a. Assuring that a field representative is available to respond to complaints regarding construction noise levels and provide monitoring. The field representative shall be empowered to shut down construction activity, authorize correction or remediation of sources of excess noise, and authorize resumption of construction activity as necessary to maintain compliance with allowable noise levels.
- b. Providing telephone access to a field representative during hours of project activities to receive complaints or comments from the public for the duration of the project. All complaints immediately shall be recorded, investigated and addressed as appropriate by the field representative and reported to DEH in a manner mutually agreed by DEH, CDOT and (contractor). A response, in a reasonable form requested by the caller, summarizing the investigation and any corrective actions taken by CDOT and (contractor) shall be provided to the caller. Written copies of complaints received and responses by (contractor) shall be provided weekly to DEH and CDOT.

All application requirements and chapter 36 ordinance requirements regarding night time construction noise activities must be coordinated by the contractor with the City/County Denver. The contractor is fully responsible for the timely submittal of the variance application and fulfilling the requirements set forth by the City/County of Denver to allow construction activities during p.m. hours under the granted variance.

END OF SECTION

UTILITIES

Known utilities within the limits of this project are:

UTILITY COMPANY ADDRESS	CONTACT NAME EMAIL	TELEPHONE
CenturyLink 6510 S. Quebec Street Englewood, CO 80111	Maureen Klick Maureen.Klick@centurylink.com	720-578-3720
Comcast 6850 S. Tucson Way Englewood, CO 80112	Butch Buster Butch_Buster@cable.comcast.com	303-603-5682
Denver Traffic Engineering Operations 5440 Roslyn Street, Building E Denver, CO 80216	Amy Rens Amy.Rens@denvergov.org	720-865-4046
Denver Wastewater Management Division 2000 W. 3 rd Ave, 3 rd Floor Denver, CO 80223	Richard Abeyta Richard.Abeyta@denvergov.org	303-446-3529
Denver Water Department 1600 W. 12 th Street Denver, CO 80204	Ray Batts Raphael.Batts@denverwater.org	720-345-1069
Xcel Energy 1123 W. 3 rd Ave. Denver, CO 80223	Marisa Montoya Marisa.L.Montoya@xcelenergy.com	303-571-3720
Xcel Energy – Builder Call Line Application for Gas and Electric Service	bclco@xcelenergy.com	1-800-628-2121
Zayo 400 Centennial Parkway, Suite 200 Louisville, CO 80023	James R. Black JamesR.Black@zayo.com	719-216-8508

The work described in these plans and specifications requires coordination between the Contractor and the utility companies in accordance with subsection 105.11 in conducting their respective operations as necessary to complete the utility work with minimum delay to the project.

PART 1 - CONTRACTOR SHALL PERFORM THE WORK LISTED BELOW:

Coordinate project construction with performance by the utility owner of each utility work element listed in Part 2 below. Perform preparatory work specified in Part 2 for each utility work element. Provide an accurate construction schedule that includes all utility work elements to the owner of each impacted utility. Provide each utility owner with periodic updates to the schedule. Conduct necessary utility coordination meetings, and provide other necessary accommodations as directed by the Engineer. Notify each utility owner in writing, with a copy to the Engineer, prior to the time each utility work element is to be performed by the utility owner. Provide notice, as specified in Part 2, immediately prior to the time the utility work must begin to meet the project schedule.

-2-
UTILITIES

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

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

All Utility Companies

The Contractor will contact each utility company a minimum of 2 business days, unless otherwise noted, prior to working in the utility company's area so that the utility company can provide an inspector and/or complete any necessary adjustments or relocations.

If a need for utility work by either the Contractor or a Utility Company arises, the following shall apply:

The Contractor shall be responsible for coordinating the adjustment of utilities on this project.

The Contractor shall keep each utility company advised of any work being performed in the vicinity of their facilities, so that each utility company can coordinate any needed locates, adjustments or inspections.

The Contractor shall provide the appropriate utility company ample notice, but not less than two (2) working days, prior to commencing activities in the vicinity of their facilities. Any additional work performed by the Contractor on behalf of the impacted utility company shall not be paid for by the City and County of Denver, but shall be paid by the utility company requiring the work.

Project Limits - All Utility Owners

Prior to excavating, the Contractor shall positively locate (through potholing if necessary) all potential conflicts with existing underground utilities and proposed construction, as determined by the Contractor according to proposed methods and schedule of construction. The Contractor shall modify construction plans to avoid existing underground facilities as needed, and as approved by the Engineer. Please note that UNCC marks only its members' facilities - Other facilities, such as ditches and drainage pipes may exist, and it is the Contractor's responsibility to investigate, locate and avoid such facilities.

CenturyLink

The Contractor shall notify CenturyLink one week in advance of construction operations commencing near CenturyLink facilities.

The Contractor shall protect in place any CenturyLink facilities in the vicinity of the signal pole construction, and shall coordinate with CenturyLink if any facility is found to be in conflict. No relocation is anticipated, but if a relocation or adjustment is necessary, the Contractor shall coordinate with CenturyLink to schedule and facilitate the work by CenturyLink forces.

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UTILITIES

Comcast

The Contractor shall notify Comcast one week in advance of construction operations commencing near Comcast facilities.

The Contractor shall protect in place any Comcast facilities in the vicinity of the signal pole construction, and shall coordinate with Comcast if any facility is found to be in conflict. No relocation is anticipated, but if a relocation or adjustment is necessary, the Contractor shall coordinate with Comcast to schedule and facilitate the work by Comcast forces.

Denver Wastewater Management Division (DWMD)

The Contractor shall notify DWMD one week in advance of construction operations commencing near DWMD facilities.

Prior to commencement of construction, the Contractor shall clear all storm drains, inlets, laterals, mains and other storm runoff appurtenances within the project limits of sediment and debris in accordance with Denver Wastewater Management Department Standards. After construction, the Contractor shall remove any sediment or debris from the storm sewer system. This work will not be paid for separately, but shall be included in the cost of the work.

Denver Water

City and County of Denver (CCD) Contractor shall adjust all valve boxes down when existing pavement is removed and up to 1/4" to 1/2" below final grade of the paved surface as shown on the plans. CCD Contractor shall clean all valve boxes after final adjustment are completed.

CCD Contractor shall coordinate all required inspections with Denver Water forces.

CCD Contractor shall notify the utility owner 5 days immediately prior to required inspections of utility work performed by the Contractor.

Xcel Energy – Electric Distribution

The Contractor shall call the Builder's Call Line 90 days prior to construction at 1-800-628-2121.

The Contractor shall notify Xcel Energy one week in advance of construction operations commencing near Xcel Energy electric facilities.

The Contractor shall coordinate with Xcel Energy regarding the relocation of the overhead electric facilities, parallel to 7th Avenue, to the new signal infrastructure at York Street and Josephine Street as shown in the plans. The Contractor shall coordinate with Xcel Energy to schedule and facilitate the work by Xcel Energy forces.

When the CCD Contractor is working near or under the high voltage distribution line, it shall be assumed the distribution line is energized and the CCD Contractor shall not be closer than ten feet (10') in any direction from the energized conductors. If work will be within ten feet (10') of energized conductors, CCD Contractor shall call Xcel Energy's Builders Call Line Colorado ("BCLCO") 1-800-628-2121 a minimum of thirty (30) days in advance to arrange for an outage. An outage will be arranged if it is

UTILITIES

determined to be necessary. The outage will be a day-by-day situation. Typically, there is a fee charged when an electrical outage is required. However, this fee shall be waived for this project since the electric facilities are in public right-of-way. Xcel shall not charge a fee for this work.

Xcel Energy – Gas Distribution

The Contractor shall notify Xcel Energy one week in advance of construction operations commencing near Xcel Energy gas facilities.

The Contractor shall protect in place the Xcel Energy gas service lines near the signal pole caisson work and conduit boring, and shall coordinate with Xcel Energy if any facility is found to be in conflict. No relocation is anticipated, but if a relocation or adjustment is necessary, the Contractor shall coordinate with Xcel Energy to schedule and facilitate the work by Xcel Energy forces.

Xcel Energy – Lighting/Traffic

The Contractor shall be responsible for the coordination of **power source work** to be performed by Xcel Energy. The Contractor shall complete and submit a Builder's Call Line (BCL) Application for electrical services for every Xcel Energy work element that is to be coordinated with the project. A separate application is required for each electrical connection. The request is to be processed through Xcel Energy's Builder's Call Line at 1-800-628-2121 or BCLCO@Xcelenergy.com. The name of the owner for each meter service shall be the owner's name and billing address responsible for paying the utility bill and shall be listed on the BCL application. The Contractor shall be listed as the Builder and the contact during construction on the BCL application. The Contractor shall perform the required coordination to establish the power sources for street lighting, traffic signals and various other equipment that requires electrical service as shown on the plans. The Contractor shall perform all work necessary to maintain existing or establish new power sources to the devices called for in the plans and per the standard for any services. The Xcel Energy portion of this work shall be completed within the time frames set forth in the franchise agreement in a manner that does not interfere with the project construction activities of the City and County of Denver.

The Contractor shall coordinate the removal of existing luminaires and poles to be removed by Xcel Energy as shown in the plans. The Contractor shall provide a minimum of 30 days notice to Xcel Energy for this work.

The Contractor shall submit the materials list, with locations, for the proposed light standards and traffic signal-light poles for review and approval by Xcel Energy forces.

The Contractor shall coordinate the transformer installation and metered power source connections, including any removals, with Xcel Energy forces.

Zayo

The Contractor shall notify Zayo one week in advance of construction operations commencing near Zayo facilities. The Contractor shall protect in place any Zayo facilities in the vicinity of the signal pole construction, and shall coordinate with Zayo if any facility is found to be in conflict. No relocation is anticipated, but if a relocation or adjustment is necessary, the Contractor shall coordinate with Zayo to schedule and facilitate the work by Zayo forces.

UTILITIES

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

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

This work will be performed by the utility owners as necessary to avoid conflicts with construction activities. New locations shall be as indicated in the plans. Utility owners shall comply with schedule requirements of the Contractor and make every effort not to impact the overall construction schedule. Unless otherwise approved by the Engineer, abandoned aboveground appurtenances such as pedestals shall be removed and abandoned underground utilities and manholes/handholds shall be abandoned in place.

Utility owners are responsible for obtaining all necessary permits from the City and County of Denver, as required.

CenturyLink

The Contractor shall notify CenturyLink one week in advance of construction operations commencing near CenturyLink facilities.

The Contractor shall protect in place any CenturyLink facilities in the vicinity of the signal pole construction, and shall coordinate with CenturyLink if any facility is found to be in conflict. No relocation is anticipated, but if a relocation or adjustment is necessary, the Contractor shall coordinate with CenturyLink to schedule and facilitate the work by CenturyLink forces.

Comcast

The Contractor shall notify Comcast one week in advance of construction operations commencing near Comcast facilities.

The Contractor shall protect in place any Comcast facilities in the vicinity of the signal pole construction, and shall coordinate with Comcast if any facility is found to be in conflict. No relocation is anticipated, but if a relocation or adjustment is necessary, the Contractor shall coordinate with Comcast to schedule and facilitate the work by Comcast forces.

Denver Wastewater Management Division (DWMD)

DWMD shall inspect utility work performed by the Contractor listed in Part 1 above.

Denver Water

Denver Water shall inspect utility work performed by the Contractor listed in Part 1 above.

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UTILITIES

Xcel Energy – Electric Distribution

Xcel Energy shall coordinate with the Contractor regarding the relocation of its overhead electric guy wires parallel to 7th Avenue. This work is covered under the Xcel Franchise agreement with the City and County of Denver. It is expected to take three months for design and construction of the relocation by Xcel forces.

Xcel Energy – Gas Distribution

Xcel Energy shall coordinate with the Contractor about the Xcel Energy facilities to be relocated or adjusted, if needed.

Xcel Energy – Lighting/Traffic

Xcel Energy forces shall install a new power pedestal and meter in the York Street intersection, as shown on the plans, after coordination with the Contractor. The cost of the work described will be reimbursed from a Project Force Account Furnish and Install Electrical Service.

Xcel Energy forces shall remove luminaires and poles as shown in the plans.

Once the proposed signal, including luminaires, conduits and wiring to the proposed meters/disconnects, has been installed as shown on the plans, Xcel Energy forces shall make the final connections to the metered power sources. The cost of the work described will be reimbursed from Project Force Account Furnish and Install Electrical Service. This work is expected to take 5 working days to complete.

The above work items are expected to be coordinated with construction.

Zayo

The Contractor shall notify Zayo one week in advance of construction operations commencing near Zayo facilities. The Contractor shall protect in place any Zayo facilities in the vicinity of the signal pole construction, and shall coordinate with Zayo if any facility is found to be in conflict. No relocation is anticipated, but if a relocation or adjustment is necessary, the Contractor shall coordinate with Zayo to schedule and facilitate the work by Zayo forces.

GENERAL:

The Contractor shall comply with Article 1.5 of Title 9, CRS ("Excavation Requirements") when excavating or grading is planned in the area of underground utility facilities. The Contractor shall notify all affected utilities at least two (2) business days, not including the actual day of notice, prior to commencing such operations. The Contractor shall contact the Utility Notification Center of Colorado (UNCC) at phone no. **811 or 1-800-922-1987**, to have locations of UNCC registered lines marked by member companies. All other underground facilities shall be located by contacting the respective owner. Utility service laterals shall also be located prior to beginning excavation or grading.

UTILITIES

The locations of utility facilities as shown on the plan and profile sheets were obtained from the best available information. No warranty is made for the adequacy or accuracy of subsurface information provided. The Contractor shall cooperate with the utility owners in their relocation operations as provided in subsection 105.11 of the Standard Specifications for Road and Bridge Construction. No guarantee is made that utility conflicts will be resolved prior to construction activities and any delays resulting from utility relocation work shall be dealt with in accordance with subsection 108.08 of the Standard Specifications for Road and Bridge Construction as amended.

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

END OF SECTION

CITY AND COUNTY OF DENVER
STATE OF COLORADO



DEPARTMENT OF PUBLIC WORKS

Plans/Drawings

Contract Number: 201845552



**CCD FY 2018 HSIP Package 3,
Josephine/York and 7th Avenue**

November 7, 2018

Oversight / NHS

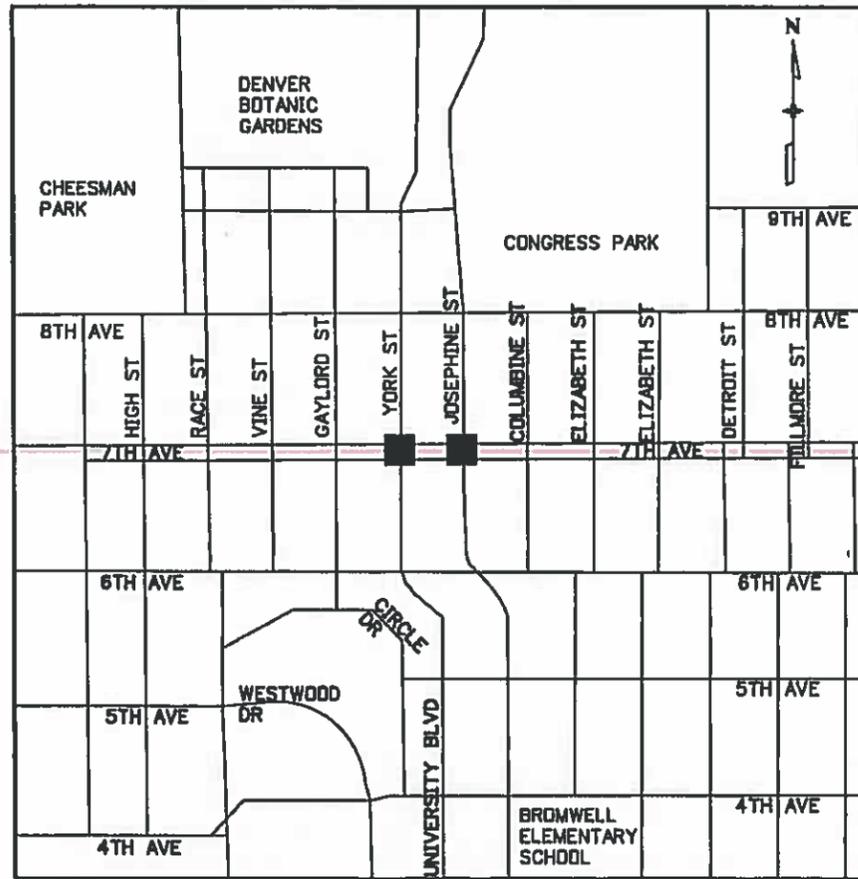
FHWA PROJECTS OF DIVISION INTEREST (PoDI) OVERSIGHT? NO YES
 NATIONAL HIGHWAY SYSTEM? NO YES

CITY AND COUNTY OF DENVER DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION/ CITY ENGINEER'S OFFICE STATE OF COLORADO

100% CONSTRUCTION PLANS OF PROPOSED
 7TH AVENUE AND YORK STREET/JOSEPHINE STREET
 DENVER COUNTY
 T4S, R68W

CITY AND COUNTY OF DENVER PROJECT NO. 2016-PROJMSTR-0000658
 CDOT PROJECT NO. 22218

Related Projects:
 P. E. UNDER PROJECT: PZ03798-425
 Project Number: 34993
 Project Code:
 R.O.W. Projects:



SHEET NO.	INDEX OF SHEETS
1	TITLE SHEET
2	CDOT STANDARD PLANS LIST
3	CCD STANDARD PLANS LIST
4-6	GENERAL NOTES
7	SOAQ
8-9	REMOVAL PLAN SHEETS
10-11	ROADWAY PLAN SHEETS
12-15	GEOMETRIC DETAILS
16-21	FLOWLINE PROFILES
22-25	CURB RAMP DETAIL SHEETS
26	TRAFFIC GENERAL NOTES
27	CCD LEGEND
28-29	SIGNAL SHEETS
30-31	SIGNING AND STRIPING SHEETS
32	TREE PROTECTION DETAILS
33-39	EROSION CONTROL
40	CONTROL SURVEY DIAGRAM

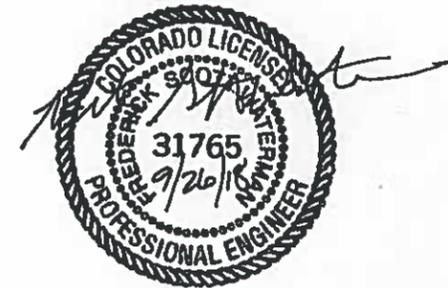
CITY AND COUNTY OF DENVER
 DEPARTMENT OF PUBLIC WORKS

APPROVED:  DATE: 10/12/18
 EXECUTIVE DIRECTOR OF PUBLIC WORKS

 DATE: 10.11.18
 CITY ENGINEER

 DATE: 10/10/18
 DIRECTOR OF ENGINEERING CAPITAL PROJECTS

 DATE: 10.03.2018
 CITY TRAFFIC ENGINEER



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Print Date: 9/25/2018	<table border="1"> <thead> <tr> <th colspan="3">Sheet Revisions</th> </tr> <tr> <th>Date:</th> <th>Comments</th> <th>Init.</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Sheet Revisions			Date:	Comments	Init.										DEPARTMENT OF PUBLIC WORKS 201 WEST COLFAX AVENUE DENVER, CO 80202 PHONE: (720) 913-4501 FAX: (720) 913-4544	As Constructed No Revisions: Revised: Void:	Contract Information		Project No./Code SHE M320-116 22218 Sheet Number 1
Sheet Revisions																					
Date:	Comments	Init.																			
File Name: 000000DES_TitleSheet101	Contractor: Resident Engineer: Project Engineer: PROJECT STARTED: / / ACCEPTED: / / Comments:																				
Horiz. Scale: 1:1	Vert. Scale: As Noted	 1476 Broadway, Suite 100 Denver, CO 80202 (303) 297-3978 main (303) 297-2803 fax www.wilsonandcompany.com		Unit Information Unit Leader Initials																	

TRANSPORTATION ENGINEERING STANDARD DRAWINGS

TRAFFIC STANDARD DRAWINGS

NO.	DESCRIPTION
<input checked="" type="checkbox"/> 1.0	INDEX OF STANDARD DRAWINGS
<input type="checkbox"/> 1.1	LEGEND
<input type="checkbox"/> 2.0	LOCAL STREET CROSS-SECTION AND STANDARD UTILITY PLACEMENT DETAIL
<input type="checkbox"/> 3.0	COLLECTOR - 2 OR 3 LANE CROSS-SECTION
<input type="checkbox"/> 4.0	ARTERIAL - 4 LANE WITH MEDIAN AND NO PARKING CROSS-SECTION
<input type="checkbox"/> 4.1	ARTERIAL - 4 LANE WITH MEDIAN AND PARKING CROSS-SECTION
<input type="checkbox"/> 4.2	ARTERIAL - 6 LANE CROSS-SECTION
<input checked="" type="checkbox"/> 5.0	CURB & GUTTER AND DETACHED SIDEWALK
<input checked="" type="checkbox"/> 5.1	CURB & GUTTER AND ATTACHED SIDEWALK
<input checked="" type="checkbox"/> 5.2	TYPICAL CURB & GUTTER SECTIONS
<input type="checkbox"/> 5.3	SPECIAL USE CURB & GUTTER SECTIONS
<input type="checkbox"/> 5.4	CONCRETE GUTTER OVERLAY
<input type="checkbox"/> 5.5	CURB BULB EXTENSION
<input type="checkbox"/> 5.6	MONOLITHIC MEDIAN CURB NOSE
<input type="checkbox"/> 6.0	STANDARD RESIDENTIAL CURB CUT
<input type="checkbox"/> 6.1	STANDARD COMMERCIAL AND MULTI-FAMILY CURB CUT
<input type="checkbox"/> 6.2	CURB CUT CROSS-SECTIONS
<input type="checkbox"/> 6.3	CORNER CLEARANCES & MINIMUM DISTANCES BETWEEN CURB CUTS
<input type="checkbox"/> 7.0a,b	GENERAL NOTES FOR CURB RAMPS
<input checked="" type="checkbox"/> 7.1	CURB RAMP TYPE 1
<input type="checkbox"/> 7.2a	CURB RAMP TYPE 2
<input type="checkbox"/> 7.2b	CURB RAMP TYPE 2 MODIFIED (FOR COMINATION CURB, GUTTER AND SIDEWALK)
<input checked="" type="checkbox"/> 7.3	CURB RAMP TYPE 3
<input type="checkbox"/> 7.4	CURB RAMP TYPE 4
<input type="checkbox"/> 7.5	DOWNTOWN SIGNALIZED CORNER BLENDED TRANSITION
<input checked="" type="checkbox"/> 7.6a,b	CURB RAMP TRUNCATED DOME PLACEMENT OPTIONS
<input checked="" type="checkbox"/> 7.7	CURB RAMP TYPICAL SECTION
<input checked="" type="checkbox"/> 7.8	TYPICAL SIDEWALK TRANSITIONS TO CURB RAMP LANDING
<input type="checkbox"/> 7.9	SIGNAL EQUIPMENT CLEAR ZONE
<input type="checkbox"/> 8.0	INTERSECTION VALLEY GUTTER
<input type="checkbox"/> 8.1	SIDEWALK CHASE DRAIN AND TREAD PLATE
<input type="checkbox"/> 9.0	TYPICAL CONCRETE BUS PULLOUT
<input type="checkbox"/> 9.1	TYPICAL CONCRETE BUS PAD IN ASPHALT ROADWAY
<input type="checkbox"/> 10.0	TYPICAL ALLEY LAYOUT
<input type="checkbox"/> 10.1	ALLEY CUT
<input type="checkbox"/> 10.2	ALLEY CUT (HISTORIC DISTRICT)
<input type="checkbox"/> 10.3	TYPICAL ALLEY CROSS-SECTION
<input type="checkbox"/> 10.4	ALLEY CURB HEAD
<input type="checkbox"/> 10.5	"L" TYPE ALLEY CONFIGURATIONS
<input type="checkbox"/> 11.0a,b,c	GENERAL NOTES FOR CONCRETE PAVEMENT AND JOINTS
<input type="checkbox"/> 11.1	CONCRETE NON-ROADWAY JOINTS H & Z
<input type="checkbox"/> 11.2	CONCRETE ROADWAY JOINTS AND TRANSITIONS A-DA
<input type="checkbox"/> 11.3	CONCRETE ROADWAY JOINTS AND TRANSITIONS DC-L
<input type="checkbox"/> 11.4	CONCRETE ROADWAY JOINTS AND TRANSITIONS SA-X
<input type="checkbox"/> 11.5	CONCRETE JOINT SEALANTS
<input type="checkbox"/> 11.6	CONCRETE ROADWAY JOINTING AT NEW MANHOLES AND ALL INLETS
<input type="checkbox"/> 11.7	CONCRETE ROADWAY JOINTING AT EXISTING MANHOLES
<input type="checkbox"/> 11.8	CONCRETE ROADWAY TYPICAL JOINT LAYOUT

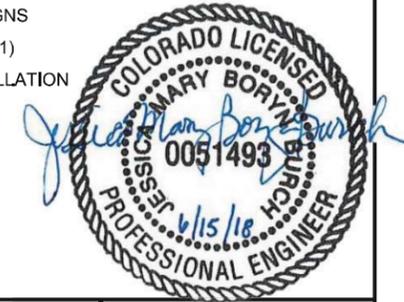
NO.	DESCRIPTION
<input type="checkbox"/> 11.9	CONCRETE ROADWAY PANEL REPLACEMENT
<input type="checkbox"/> 11.10	CONCRETE STREET EXPLORATORY HOLES (POTHoles) TYPICAL REPAIR
<input checked="" type="checkbox"/> 12.0	ASPHALT PATCH
<input type="checkbox"/> 12.1	TRENCH PATCH THROUGH EXISTING GRAVEL OR LANDSCAPE MATERIALS
<input checked="" type="checkbox"/> 12.2	TRENCH VERTICAL PATCH (ASPHALT) IN MORATORIUM STREET
<input type="checkbox"/> 12.3	TRENCH ("T") PATCH (CONCRETE)
<input type="checkbox"/> 12.4	TRENCH BACKFILL MATERIAL REQUIREMENTS
<input checked="" type="checkbox"/> 12.5	TYPICAL ASPHALT PAVEMENT DETAIL
<input checked="" type="checkbox"/> 12.6	TYPICAL ASPHALT PAVEMENT DETAIL LIFT THICKNESS CRITERIA
<input checked="" type="checkbox"/> 12.7	TYPICAL ASPHALT MIX DETAILS BY TRAFFIC USE OR LIFT POSITION
<input type="checkbox"/> 13.0	TREE PLANTER
<input type="checkbox"/> 13.1	TREE PLANTER (GRATES)
<input type="checkbox"/> 13.2	SIDEWALK CLEAR ZONE
<input type="checkbox"/> 13.3	AMENITY ZONE PERMEABLE PAVERS
<input type="checkbox"/> 14.0	STANDARD CUL-DE-SAC
<input type="checkbox"/> 15.0	RIGHT-OF-WAY SURVEY CONTROL **RANGE POINTS**

WASTEWATER MANAGEMENT DIVISION STANDARD DRAWINGS

NO.	DESCRIPTION
<input type="checkbox"/> S-301.1	TRENCHING AND BEDDING PART 1
<input type="checkbox"/> S-301.2	TRENCHING AND BEDDING PART 2
<input type="checkbox"/> S-350	ENCASEMENT OF SANITARY SEWERS
<input type="checkbox"/> S-401	SHIPLAP JOINGS/TYP R JOINTS
<input type="checkbox"/> S-450	INLET CONNECTIONS AND PIPELINE CLOSURES
<input type="checkbox"/> S-501.1	PRECAST MANHOLE BARRELS AND TOP SECTIONS
<input type="checkbox"/> S-502	MANHOLE BASE CONSTRUCTION TYPE A/C
<input type="checkbox"/> S-503	TYPE B MANHOLE
<input type="checkbox"/> S-504.1	TYPE P MANHOLE
<input type="checkbox"/> S-504.2	TYPE B MANHOLE BASE SECTIONS
<input type="checkbox"/> S-520	TYPICAL MANHOLE BASE CHANNELIZATION
<input type="checkbox"/> S-530	MANHOLE OUTSIDE DROP
<input type="checkbox"/> S-550	WATER STOP GASKET
<input type="checkbox"/> S-616.1	SINGLE NO. 16 INLET
<input type="checkbox"/> S-616.2	DOUBLE NO. 16 INLET
<input type="checkbox"/> S-616.3	TRIPLE NO. 16 INLET
<input type="checkbox"/> S-616V	SINGLE, DOUBLE, TRIPLE VALLEY INLET
<input type="checkbox"/> S-620.1	NO. 14 INLET (SHEET 1)
<input type="checkbox"/> S-620.2	NO. 14 INLET (SHEET 2)
<input type="checkbox"/> S-701	24" DIAMETER RING AND COVER
<input type="checkbox"/> S-716	GRATE AND FRAME, ADJUSTABLE CURB BOX

NO.	DESCRIPTION
<input checked="" type="checkbox"/> 16.1.0	2011 TRAFFIC ENGINEERING SERVICES
<input checked="" type="checkbox"/> 16.1.1	TRAFFIC SIGNAL NOTES
<input checked="" type="checkbox"/> 16.1.2	LEGEND/KEY NOTES
<input type="checkbox"/> 16.1.3	SPAN WIRE SIGNAL DESIGN
<input checked="" type="checkbox"/> 16.1.4	MOUNTING HARDWARE
<input checked="" type="checkbox"/> 16.1.5	LOOP DETECTION
<input checked="" type="checkbox"/> 16.1.6	CONDUIT DETAILS
<input checked="" type="checkbox"/> 16.1.7	PULL BOXES
<input checked="" type="checkbox"/> 16.1.8	SIGNAL POLE FOUNDATION
<input checked="" type="checkbox"/> 16.1.9	MAST ARM POLE LOADS
<input checked="" type="checkbox"/> 16.1.10	MOUNTING DETAILS
<input checked="" type="checkbox"/> 16.1.11	TABLE DATA
<input checked="" type="checkbox"/> 16.1.12	LUMINAIRE DETAILS
<input checked="" type="checkbox"/> 16.1.13	PEDESTAL POLE DETAILS
<input checked="" type="checkbox"/> 16.1.14	POLE FOUNDATION DETAILS
<input checked="" type="checkbox"/> 16.1.15	FOUNDATIONS FOR XCEL FACILITIES
<input type="checkbox"/> 16.1.16	"P" CABINET BASE
<input checked="" type="checkbox"/> 16.1.17	"P" CABINET & BASE
<input checked="" type="checkbox"/> 16.1.18	"M" CABINET BASE
<input checked="" type="checkbox"/> 16.1.19	METER PEDESTAL CABINET DETAILS
<input checked="" type="checkbox"/> 16.1.20	METER PEDESTAL CABINET FOUNDATION AND BASE
<input type="checkbox"/> 16.1.21	FLASHING BEACON DETAILS
<input type="checkbox"/> 16.1.22	DRIVER'S FEEDBACK SIGN DETAILS
<input type="checkbox"/> 16.1.23	FLASHING BEACON & SIGN SHEET 1
<input type="checkbox"/> 16.1.24	FLASHING BEACON & SIGN SHEET 2
<input type="checkbox"/> 16.2.1	CROSSWALK LAYOUT DETAILS
<input type="checkbox"/> 16.2.2	PAVEMENT MARKING DETAILS SHEET 1
<input type="checkbox"/> 16.2.3	PAVEMENT MARKING DETAILS SHEET 2
<input type="checkbox"/> 16.2.4	BIKE LANE TYPICAL MARKING DETAILS
<input type="checkbox"/> 16.2.5	CENTRAL BUSINESS DISTRICT PAVEMENT MARKING DETAILS
<input checked="" type="checkbox"/> 16.2.6	SINGLE SIGN POST MOUNTING DETAILS
<input checked="" type="checkbox"/> 16.2.7	MULTIPLE SIGN POST MOUNTING DETAILS
<input checked="" type="checkbox"/> 16.2.8	ONE-WAY SIGN PLACEMENT DETAILS
<input checked="" type="checkbox"/> 16.2.9	TRAFFIC SIGN UTILITY POLE MOUNTING DETAIL
<input checked="" type="checkbox"/> 16.2.10	GROUND MOUNT STREET NAME SIGN INSTALLATION DETAIL
<input checked="" type="checkbox"/> 16.2.11	GROUND MOUNT STREET NAME SIGN DETAIL
<input type="checkbox"/> 16.2.12	OVERHEAD STREET NAME SIGNS (INSTALLED PRIOR TO APRIL, 2011)
<input checked="" type="checkbox"/> 16.2.13	OVERHEAD STREET NAME SIGNS (INSTALLED AFTER APRIL, 2011)
<input type="checkbox"/> 16.2.14	PARKING METER POST INSTALLATION
<input checked="" type="checkbox"/> 16.2.15	BARRICADE DETAILS

CITY AND COUNTY OF DENVER
STANDARD DRAWINGS LIST



Print Date: 4/25/2018	Sheet Revisions			<p>DEPARTMENT OF PUBLIC WORKS 201 WEST COLFAX AVENUE DENVER, CO 80202 PHONE: (720) 913-4501 FAX: (720) 913-4544</p>	As Constructed	CCD STANDARD PLANS LIST			Project No./Code
File Name: 34993DES_StdPlanList_CCD	Date:	Comments	Init.		No Revisions:				SHE M320-116
Horiz. Scale: 1:1 Vert. Scale: As Noted					Revised:	Designer: DMZ	Structure		22218
Unit Information Unit Leader Initials					Void:	Detailer: MLM	Numbers		
<p>1675 Broadway, Suite 200 Denver, CO 80202 (303) 297-2976 main (303) 297-2693 fax www.wilsonco.com</p>						Sheet Subset: STDPLAN	Subset Sheets: 1 of 1		Sheet Number 3

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GENERAL NOTES:

1. a. When any sidewalk, bike lane or street lane closures are needed; The Contractor must submit request for an PW Permit-RSOP (Revocable Street Occupancy Permit). Send request form and temporary traffic control plans to Public Works Permit intake (Send to PWPPermits@denvergov.org) at least 5 business days, prefer longer, prior to needing any PW Street Occupancy Permit (including sidewalk closure); so that Construction Engineering can review and issue permit. Permits are no fee issued for city funded projects.
- b. The use of typical traffic control plans (TCP) is limited to use on local or residential streets. Site Specific MHTs (Method of Handling Traffic) are required for lane or sidewalk closures on collector or arterial streets.
- c. Call 303-446-3469 to be directed to the proper PW ROWS District Inspector or Engineer for questions, and to invite the PW ROWS District Inspector to your preconstruction meeting.
2. RTD requires a three day notification for all bus stop closures. All requests need to be sent to Pete Muniz at 303-299-6561 or pete.muniz@rtd-denver.com. Any emergency closures should be sent to Pete Muniz immediately.
3. a. Contractor must contact PARKS.LOCATORS@DENVERGOV.ORG ; 720-865-6976; when any work is occurring Adjacent to Parks and Parkways.
- b. Contractor will need Denver Parks Permit if intend to touch any Denver Parks [Parks or Parkways or Parks Easements] Contact PARKS.LOCATORS@DENVERGOV.ORG ; 720-865-6976.
4. The Contractor shall be responsible for taking and keeping minutes of all construction meetings. The Contractor shall distribute the meeting minutes to all relevant parties within four working days of the meetings. All of the Contractor's costs to satisfy this requirement shall not be paid for separately but shall be included in the work.
5. The Contractor shall remove materials and equipment from the roadway right of way at the close of daily operations. The MHT shall indicate protective measures where materials and equipment may be stored in the right of way, but ensure five feet of pedestrian clearance on sidewalks. The Contractor shall not stockpile material in the clear zone of the traveled way. Any off road staging areas must be pre-approved by the Engineer. If a staging area is approved by the Engineer, it must be returned to its existing condition after it is finished being used at no additional cost to the project.
6. No clefted or tracked equipment may work in or move over paved surfaces without mats on the Denver street system.
7. All dimensions and radii are to flowline unless noted otherwise.
8. Use Curb Ramp Detail Sheets for grading information.
9. Stations, elevations, and dimensions contained in these plans are calculated from a recent field survey. The Contractor shall verify all dependent dimensions prior to start of work.
10. All areas disturbed outside the project limits shown on the plans shall be reclaimed at the Contractor's expense.
11. To coordinate reset/removal of transit items and locations of bus stops, contact the following:
Bus Benches: Big Sky Outdoor Advertising Frances Comeau 877-412-3624 or 720-333-9551
RTD Bus stops and signs: Lorraine Taylor 303-299-6440 or 303-359-7571
12. The Contractor shall contact property owners prior to start of work to establish accessibility during construction. The Contractor shall provide access to businesses and residents at all times, unless prior arrangements have been made and are approved by the Project Engineer. The Contractor is responsible for providing turning radius to accommodate minimum wheel base 67 (WB 67) and pavement grades to accommodate "low boy" type vehicles during construction.
13. The Contractor shall maintain pedestrian movements during construction using ADA guidelines.
14. All work in the city ROW shall meet CCD Transportation Standards and Details for the Engineering Division, latest edition.
15. All built features shall comply with CCD Transportation Standards and Details for the Engineering Division, latest edition.
16. The total limit of disturbance area is less than 0.15 acre, so Construction Activities Stormwater Discharge Permit (CASDP) is not required.
17. Contractor shall take reasonable measures to prevent particulate matter from becoming airborne and to prevent the visible discharge of fugitive particulate emissions originate. The measures taken must be effective in the control of fugitive particulate emissions at all times on the site, including periods of inactivity such as evenings, weekends, and holidays as well as any other period of inactivity.
18. During any soil disturbing activities, if unknown/identified underground storage tanks, drums, odorous soil, stained soil, abestos-cement pipe (transite), building debris or waste materials are encountered in the soil or in groundwater, contractor shall immediately stop work in the area of the discovery until Denver Environmental Health (DEH) makes a determination of how to proceed. Contractor shall immediately notify DEH of the discovery via the phone number 720-460-1706. Groundwater is not expected to be encountered based on best available information.
19. Any fill material or soil to be moved to and placed on CCD-owned property or placed on real property to be transferred to the CCD must be free of known contamination (observed and documented or previously documented) and be acceptable for unrestricted residential use. Contact Dave Erickson, DEH (720-865-5433) for clarification, if needed, regarding this CCD requirement.
20. PW T&M Project Manager will notify PW Street Maintenance of asphalt patch slope exceeding 4% slope. This project does not change inlet flowline elevations, therefore these conditions are existing, and all options have been explored to attempt to reasonably address these slope issues, but have been deemed outside of the scope of this project.

MATERIALS

1. HMA (Patching) (Asphalt) shall be to the depth of the surrounding existing pavement as directed by the Project Engineer. Lower lifts may utilize HMA (S)(100)(PG 64-22). The top lift should match the surrounding pavement, be it HMA (S)(100)(PG 64-22) or HMA (SX)(100)(PG 64-22). The minimum and maximum lift thicknesses shall be per Denver Transportation Standards and Details section 12. HMA (Patching) (Asphalt) shall be performed after milling and prior to placement of the final lift.
2. Excavation and base compaction required for soft or broken pavement areas shall not be paid for separately but will be included in bid item 403-00721 HMA (Patching) (Asphalt) and shall be placed as directed by the Project Engineer.
3. Where it is required to cut existing pavement, the cutting shall be done to a neat work line full depth with a pavement cutting saw or other method as approved by the Project Engineer.

UTILITIES

1. Utility lines as shown on the plan sheets are plotted from the best available information. The Contractor's attention is directed to subsection 105.11 of the Standard Specifications concerning utilities.
2. The Contractor shall furnish as-built drawings to CCD and the utility operators within 30 days after the utility work has been completed.
3. The Contractor shall comply with Article 1.5 of Title 9, CRS ("Excavation Requirements") when excavating or grading is planned in the area of underground utility facilities. The Contractor shall notify all affected utilities at least two (2) business days, not including the actual day of notice, prior to commencing such operations. The Contractor shall contact the Utility Notification Center of Colorado (UNCC) at 811 or 1-800-922-1987, to have locations of UNCC registered lines marked by member companies. All other underground facilities shall be located by contacting the respective owner. Utility service laterals shall also be located prior to beginning excavation or grading.
4. It is suggested that the Contractor initiate a request to the Xcel Energy for any construction related temporary electrical power sources as soon as possible. The request is to be processed through Xcel Energy-Builder's Call Line at 1-800-628-2121.
5. Xcel Energy will make final connections to electric meters for service after all improvements are installed. This work shall be reimbursed through the project Force Account Furnish and Install Electrical Service.
6. Potholing will be required on this project and is paid for separately as pay item 203-01597. It is estimated that 40 hours of potholing will be required for this project. The Contractor shall locate and pothole all potential conflicts with existing buried utility facilities within the proposed construction limits, as shown by field location markings. If a conflict exists, modify proposed construction plans to avoid all existing buried utility facilities. Potholing in concrete shall be at the direction of the project engineer.

TRAFFIC/ LIGHTING

1. The Contractor shall coordinate placement of conduit for pedestrian traffic signals, fiber connections and all lighting.
2. If work is to be done by Xcel prior to construction, then an Xcel Work Request needs to be submitted for removal, relocation, replacement, addition of a power source, addition of a power source meter, etc.
3. Traffic Control (1 LS) is required for this project.



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Print Date: 5/29/2018	Sheet Revisions			<p>DEPARTMENT OF PUBLIC WORKS 201 WEST COLFAX AVENUE DENVER, CO 80202 PHONE: (720) 913-4501 FAX: (720) 913-4544</p>	As Constructed		GENERAL NOTES		Project No./Code	
File Name: 00000DES_GeneralNote01	Date:	Comments	Init.		No Revisions:				SHE M320-116	
Horiz. Scale: 1:1 Vert. Scale: As Noted					Revised:	Designer: DMZ	Structure		22218	
Unit Information Unit Leader Initials					Void:	Detailer: MLM	Numbers		Sheet Number 4	
<p>WILSON & COMPANY 1675 Broadway, Suite 200 Denver, CO 80202 (303) 297-2976 main (303) 297-2693 fax www.wilsonco.com</p>				Sheet Subset: NOTES		Subset Sheets: 1 of 3				

GENERAL NOTES (CONTINUED):

ENVIRONMENTAL /LANDSCAPING

1. The Contractor shall limit construction activities to those areas within the limits of disturbance and/ or toes of slope as shown on the plans and cross sections. Any disturbance beyond these limits shall be restored to original conditions by the Contractor at the Contractor's own expense. Construction activities, in addition to normal construction procedures, shall include the parking of vehicles or equipment, disposal of litter and any other action which would alter existing conditions. Any off road staging areas must be pre-approved by the Project Engineer. The Contractor shall store construction equipment and materials in designated staging areas only.
2. In accordance with the City and County of Denver's Noise Control Ordinance, Chapter 36 "Noise Control", Denver Revised Municipal Code (DRMC), all Contractors shall comply with the City and County of Denver noise restrictions for construction work during p.m. hours. No person shall operate any construction equipment nor conduct any construction activities between the hours of 9:00 p.m. to 7:00 a.m. Monday thru Friday and 5:00 p.m. to 8:00 a.m. Saturday thru Sunday if noise levels are expected to exceed 50 dba in residential areas or 60 dba in commercial areas. If there is anticipated need to work outside of the exempted hours for construction: 1)The Contractor will need to make a request for a nighttime noise variance as allowed for in section 36-7.(5)C. of the DRMC and 2) The variance process needs to be started a minimum of three months prior to the desired start date of any work needing to occur outside of exempted hours. Any noise variance questions should be directed to Paul Riedesel, Department of Environmental Health, Denver Community Noise Program, (Phone 720-865-5410; Fax 720-865-5532) a minimum of three months prior to start of the project.
3. In cases where nighttime construction activities will take place between the hours listed above, the Contractor is required to apply for a construction noise variance (approximately two months prior to construction) through the Denver Department of Environmental Health (DEH) at a cost of \$25.00 for application processing.
4. All application requirements and chapter 36 ordinance requirements regarding night time construction noise activities must be coordinated by the Contractor with the City and County of Denver for review. The Contractor is fully responsible for the timely submittal of the variance application and fulfilling the requirements set forth by the City and County of Denver which allows construction activities during p.m. hours under the granted variance:
 - Equip engines with mufflers, silencers and engine enclosures (use OSHA-approved sound-level sensing backup alarms)
 - Turn off equipment during prolonged periods of non-use
 - Stage stationary equipment away from receiving properties
 - If determined to be effective for noise reduction, the Contractor shall construct a solid temporary barrier as needed to address extreme noise levels to residential properties
 - This work shall not be paid for separately but shall be included in the cost of the work.
5. Prior to the commencement of construction, all storm drain inlets, laterals, mains and other storm runoff appurtenances within the project limits shall be cleared of sediment and debris in accordance with Denver Wastewater Management Department Standards. After construction, the Contractor shall remove any sediment or debris from the storm sewer system. This work will not be paid for separately but shall be included in the cost of the work.
6. If the items Clearing and Grubbing, Tree Removal, and/or Tree Trimming are to occur between April 1 and August 30, prior to removing any vegetation, the area shall be checked by a qualified biologist for active bird nests. If active nests are found, construction could be restricted in that area until the nesting is complete.
7. Vehicles hauling soil and other materials shall be covered prior to entering/leaving the construction site.
8. Erosion control measures must be implemented before construction and grading operations begin.
9. All erosion control measures shall be placed continually as drainage features are being constructed. These measures shall remain in place and maintained until all construction is complete. Construction and final erosion control features may be adjusted by the Project Engineer to reduce the environmental impact. The cost of this adjustment shall be included in the work.
10. All landscaping not specified for removal within the project area that are damaged, shall be replaced at the Contractor's expense.
11. Disposal of excess material off-site or the improving of materials on site, regardless of property ownership, must be done in accordance with all federal, state, and local environmental regulations and the CDOT Prairie Dog Policy. If the contractor has questions about compliance, contact the Region 1 Environmental Manager at 303-757-9397 prior to removal and disposal or improvement of the material.
12. During all subsurface activities, workers shall be alert for visual and olfactory signs of contamination. If contamination is encountered, work shall stop and procedures established in CDOT 250 spec shall be followed. Any contaminated soils or landfill material shall be properly handled and sampled prior to disposal.
13.
 - a. Per City Code, all tree removals in Denver limits must be performed by property owner or a tree contractor licensed by Denver Forestry (including trees in ROW's and on private property). For a current list of licensed tree contractors, visit www.denvergov.org/Forestry.
 - b. For Forestry-approved tree removals in public right(s) of way: A tree removal permit issued by the Office of the City Forester is required prior to removal. In order to obtain free removal permit, contact Forestry (Forestry@denvergov.org) with name of licensed contractor or property owner performing removal. Include D-Log number (2016-PROJMSTR-0000658) when requesting removal permit.
 - c. For trees on private property: A Forestry-issued tree removal permit is not required prior to removal. However, per City Code, all tree removals in Denver must be performed by property owner or a tree contractor licensed by the Office of the City Forester.
14. A Forestry-issued tree planting permit is required for all trees to be planted in public rights of way. Contact Forestry (Forestry@denvergov.org) with name of contractor or property owner performing planting. Include D-Log number (2016-PROJMSTR-0000658) when requesting permit. Planting permits must be obtained prior to installation.

16. Existing trees to be preserved in public right of way shall be protected per Forestry standards & practices. Tree protection shall be installed prior to issue of demolition permit, approved by Forestry, and shall remain in place throughout construction. No construction activities or storage of materials shall take place within tree protection zones without prior written authorization from the Office of the City Forester.
17. All existing ROW trees potentially affected are located outside Forestry ROW Inspections jurisdiction. However, existing ROW trees are maintained by Forestry Operations. Contact Rob Davis, Steve Traylor, and/or Mike Swanson in Operations to coordinate review and approval. (Robert.Davis@denvergov.org, Steven.Traylor@denvergov.org, Michael.Swanson@denvergov.org)

SURVEY

1. Prior to beginning work on the project, the Contractor's surveyor shall perform a survey to verify all survey control points, City of Denver range points, section corners, and benchmarks as shown on the survey control diagram. The Contractor shall be responsible for replacing all land survey monuments disrupted by construction activities or by negligence on the part of the Contractor. The Contractor is required to follow Colorado State Law regarding survey monuments, the contractor shall retain a Colorado licensed Professional Land Surveyor to reset any affected survey monuments. This will not be paid separately, but shall be included in the work unless specified otherwise in Section 629. For further information contact:

Public Works - Survey Department
Attn: City Supervisor
201 W. Colfax Ave.
Denver, CO 80202
720-865-3121
2. After completion of the paving operations, the Contractor shall upgrade temporary range points with permanent range point monuments at the locations as indicated on the land survey control diagram. Monuments shall meet current City and County of Denver standards. See Section 629 of the Special Provisions for more information.
3. A survey shall be deposited with the City and County of Denver per state statute. City monument tie out sheets shall be prepared for all range points within the project and deposited with the City surveyor.
4. Any person who knowingly removes, alters, or defaces any public land survey monument and/or boundary monument or accessory, commits a class two (2) misdemeanor pursuant to statute C.R.S. Section 18-4-508.
5. All stations and offsets shown on the plans are to the control lines unless otherwise noted. The use of control monuments for construction staking other than those shown on the plans or approved by the PW Dept is prohibited, and use of such monuments is at the Contractor's sole risk.
6. Proposed finished ground elevations for items to be adjusted reset or modified shall be field verified by the Contractor.
7. Benchmark 179B located in the center of the sidewalk at the SE corner of 7th Ave. and York street must be reset. See Section 629 of Special Provisions for more information.

MISCELLANEOUS

1. Any curb and gutter, asphalt or concrete pavement, which is indicated to remain and is damaged as a result of the Contractor's operation, shall be replaced at the Contractor's expense.
2. Areas adjacent to sidewalk placement on private property shall not be disturbed. Contractor shall replace or repair any damaged areas at no cost to the project.
3. After completion of construction, the contractor shall re-establish all survey control monumentation per Section 629 of the 2011 CDOT Standard Specifications for Roadway and Bridge Construction. All range points, section corners, and benchmarks shall be set in range point boxes and the Contractor shall adjust these boxes to the final grade. Refer to Revision of Section 629.
4. Prior to the solicitation of bids or proposals from general contractors, the developer of this project is strongly encouraged to schedule an office meeting with the Right-of-Way Services Construction Inspections team (PWpermits@DenverGOV.org or (303)446-3469) to discuss the project's impact to city traffic, streets, roads, alleys and sidewalks, and the associated ROW permit fees that will need to be paid by the selected general contractor.
5. It is assumed that Mobilization (1 LS) and Construction Surveying (1 LS) will be required for this project.
6. The Contractor is notified that green-painted poles are anticipated to have lead-based paint, based on their age. The Contractor will be required to handle and dispose of those poles in accordance with Section 250.



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Print Date: 5/29/2018		Sheet Revisions		As Constructed	GENERAL NOTES			Project No./Code
File Name: 00000DES_GeneralNote01		Date: Comments Init.	DEPARTMENT OF PUBLIC WORKS	No Revisions:				SHE M320-116
Horiz. Scale: 1:1 Vert. Scale: As Noted			201 WEST COLFAX AVENUE DENVER, CO 80202 PHONE: (720) 913-4501 FAX: (720) 913-4544	Revised:	Designer: DMZ	Structure		22218
Unit Information Unit Leader Initials			DENVER THE MILE HIGH CITY	Void:	Detailer: CEF	Numbers		Sheet Number 5
	1675 Broadway, Suite 200 Denver, CO 80202 (303) 297-2976 main (303) 297-2693 fax www.wilsonco.com				Sheet Subset: NOTES	Subset Sheets: 2 of 3		

CCD STANDARD NOTES

1. "THE PERMITTEE AND/OR CONTRACTOR SHALL REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO OR, ACCUMULATE IN, THE FLOWLINES, STORM DRAINAGE APPURTENANCES, AND PUBLIC RIGHTS OF WAYS OF THE CITY AND COUNTY OF DENVER AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SAID REMOVAL SHALL BE CONDUCTED IN A TIMELY MANNER."
2. "THE CONTRACTOR SHALL PREVENT SEDIMENT, DEBRIS AND ALL OTHER POLLUTANTS FROM ENTERING THE STORM SEWER SYSTEM DURING ALL DEMOLITION, EXCAVATION, TRENCHING, BORING, GRADING, OR OTHER CONSTRUCTION OPERATIONS THAT ARE PART OF THIS PROJECT.
THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO THE MUNICIPAL SEPARATE STORM SEWER SYSTEM, RECEIVING WATERS, WATERWAYS, WETLANDS, AND OR OTHER PUBLIC OR PRIVATE PROPERTIES, RESULTING FROM WORK DONE AS PART OF THIS PROJECT."
3. "SOIL STABILIZATION MEASURES SHALL BE IMPLEMENTED WITHIN FOURTEEN (14) DAYS FOLLOWING COMPLETION OF GRADING ACTIVITIES. STABILIZATION OF DISTURBED AREAS ADJACENT TO RECEIVING WATERS OR WITH SLOPES 3 TO 1 OR GREATER SHALL BE COMPLETED WITHIN SEVEN (7) DAYS FOLLOWING COMPLETION OF GRADING ACTIVITIES. NOTE: FEDERAL AND STATE REGULATIONS MAY SOON REQUIRE STABILIZATION WITHIN SEVEN (7) DAYS OF COMPLETION OF GRADING ACTIVITIES. IN SUCH CASES, THE SHORTER TIMEFRAME SHALL APPLY TO PROJECTS WITHIN DENVER AS WELL."
4. "THE DEVELOPER, GENERAL CONTRACTOR, GRADING CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL INSURE THAT ALL LOADS OF CUT AND FILL MATERIAL IMPORTED TO OR EXPORTED FROM THIS SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT ON PUBLIC RIGHTS OF WAY."(SEC.49-552; REVISED MUNICIPAL CODE)
5. "THE USE OF REBAR TO ANCHOR BEST MANAGEMENT PRACTICES IS PROHIBITED."STEEL FENCE POSTS MAY BE USED ON A CASE BY CASE BASIS AND REQUIRES APPROVAL FROM THE CITY AND COUNTY OF DENVER SWMP REVIEWER OR THE STORMWATER ENFORCEMENT INVESTIGATOR PRIOR TO INSTALLATION."
6. "SOILS THAT WILL BE STOCKPILED FOR MORE THAN THIRTY (30) DAYS SHALL BE PROTECTED FROM WIND AND WATER EROSION WITHIN FOURTEEN (14) DAYS OF STOCKPILE CONSTRUCTION. STABILIZATION OF STOCKPILES LOCATED WITHIN 100 FEET OF RECEIVING WATERS, OR WITH SLOPES 3 TO 1 OR GREATER SHALL BE COMPLETED WITHIN SEVEN (7) DAYS FOLLOWING STOCKPILE CONSTRUCTION. STABILIZATION AND PROTECTION OF THE STOCKPILE MAY BE ACCOMPLISHED BY ANY OF THE FOLLOWING: MULCHING, TEMPORARY/PERMANENT REVEGETATION OPERATIONS, CHEMICAL SOIL STABILIZER APPLICATION (REQUIRES DENVER PUBLIC WORKS APPROVAL), OR EROSION CONTROL MATTING/GEOTEXTILES. IF STOCKPILES ARE LOCATED WITHIN 100 FEET OF RECEIVING WATERS, A DRAINAGEWAY OR THE SITE PERIMETER, ADDITIONAL SEDIMENT CONTROLS SUCH SHALL BE REQUIRED."
7. "APPROVED EROSION AND SEDIMENT CONTROL 'BEST MANAGEMENT PRACTICES' SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. AT A MINIMUM, THE PERMITTEE OR CONTRACTOR SHALL PRODUCE AND RETAIN WEEKLY WRITTEN INSPECTION RECORDS FOR ALL BMPs AND AFTER SIGNIFICANT PRECIPITATION EVENTS. ALL NECESSARY MAINTENANCE AND REPAIR SHALL BE COMPLETED IMMEDIATELY. ADDITIONALLY, STREET SWEEPING IS TO BE COMPLETED BY THE CLOSE OF THE BUSINESS DAY OR (AND) ON AN AS NEEDED BASIS THROUGHOUT THE DAY."
8. "WATER USED IN THE CLEANING OF CEMENT TRUCK DELIVERY CHUTES SHALL BE DISCHARGED INTO A PREDEFINED, CONCRETE WASHOUT AREA ON THE JOB SITE. BERMED CONTAINMENT OR COMMERCIALY AVAILABLE CONCRETE WASHOUT DEVICES THAT FULLY CONTAIN ALL WASH WATER ARE ACCEPTABLE. WASH WATER DISCHARGED INTO THE CONTAINMENT AREA OR DEVICE SHALL BE ALLOWED TO INFILTRATE, EVAPORATE, AND OR BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. DRIED CEMENT WASTE IS TO BE REMOVED FROM THE CONTAINMENT AREA AND PROPERLY DISPOSED."

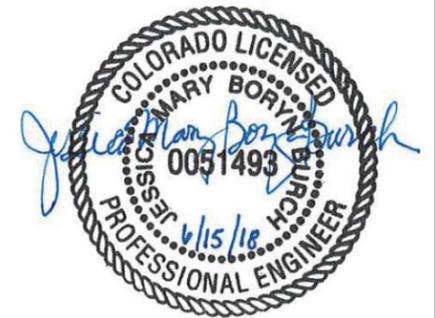
SHOULD THE USE OF A PREDEFINED BERMED CONTAINMENT AREA OR APPROVED WASHOUT DEVICE BE TECHNICALLY INFEASIBLE DUE TO THE PROJECT SIZE, OR LACK OF AN AREA WITH A SUITABLE GROUND SURFACE FOR ESTABLISHING CONTAINMENT, PROPER DISPOSAL OF CONCRETE WASHOUT AND WASH WATER AT THE JOB SITE SHALL CONFORM TO THE APPROVED TECHNIQUES AND PRACTICES IDENTIFIED IN THE COLORADO DEPARTMENT OF PUBLIC HEALTH & ENVIRONMENT'S TRAINING VIDEO ENTITLED 'BUILDING FOR A CLEANER ENVIRONMENT, READY MIX WASHOUT TRAINING' AND ITS ACCOMPANYING MANUAL ENTITLED, 'READY MIX WASHOUT GUIDEBOOK, VEHICLE AND EQUIPMENT WASHOUT AT CONSTRUCTION SITES.'

THE DIRECT OR INDIRECT DISCHARGE OF WATER CONTAINING WASTE CEMENT TO THE STORM SEWER SYSTEM IS PROHIBITED."(SEC.56-102A, C; REVISED MUNICIPAL CODE, CITY AND COUNTY OF DENVER).

9. "THE CONTRACTOR SHALL PROTECT ALL STORM SEWER FACILITIES ADJACENT TO ANY LOCATION WHERE PAVEMENT CUTTING OPERATIONS INVOLVING WHEEL CUTTING, SAW CUTTING, OR ABRASIVE WATER JET CUTTING ARE TO TAKE PLACE.

THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL WASTE PRODUCTS GENERATED BY SAID CUTTING OPERATIONS ON A DAILY BASIS OR AS NEEDED THROUGHOUT THE WORK DAY."

THE DISCHARGE OF ANY WATER CONTAMINATED BY WASTE PRODUCTS FROM CUTTING OPERATIONS TO THE STORM SEWER SYSTEM IS PROHIBITED."(SEC.56-102A, C; REVISED MUNICIPAL CODE, CITY AND COUNTY OF DENVER)
10. "PAVED AND IMPERVIOUS SURFACES WHICH ARE ADJACENT TO CONSTRUCTION SITES MUST BE SWEEPED ON A DAILY BASIS AND AS NEEDED DURING THE DAY WHEN SEDIMENT AND OTHER MATERIALS ARE TRACKED OR DISCHARGED ONTO THEM. EITHER SWEEPING BY HAND OR USE OF STREET SWEEPERS IS ACCEPTABLE. STREET SWEEPERS USING WATER WHILE SWEEPING IS PREFERRED IN ORDER TO MINIMIZE DUST. FLUSHING OFF PAVED SURFACES WITH WATER IS PROHIBITED."(SEC.56-102A, C; REVISED MUNICIPAL CODE, CITY AND COUNTY OF DENVER)
11. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, ALL STORM DRAIN INLETS, LATERALS, MAINS AND OTHER STORM RUNOFF APPURTENANCES WITHIN THE PROJECT LIMITS SHALL BE CLEARED OF SEDIMENT AND DEBRIS IN ACCORDANCE WITH DENVER WASTEWATER MANAGEMENT DIVISION STANDARDS. AFTER CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ANY SEDIMENT OR DEBRIS FROM THE STORM SEWER SYSTEM AT NO COST TO THE CITY.



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Print Date: 5/29/2018		Sheet Revisions				As Constructed		GENERAL NOTES			Project No./Code	
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Horiz. Scale: 1:1 Vert. Scale: As Noted					Revised:		Designer: DMZ		Structure Numbers		22218	
Unit Information Unit Leader Initials					Void:		Detailer: CEF		Sheet Subset: NOTES		Subset Sheets: 3 of 3	
					DENVER THE MILE HIGH CITY						Sheet Number 6	

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ENGINEERS & ARCHITECTS
1675 Broadway, Suite 200
Denver, CO 80202
(303) 297-2976 main
(303) 297-2693 fax
www.wilsonco.com

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ITEM NO.	ITEM DESCRIPTION	UNIT	7th Ave & York St	7th Ave & Josephine St	PROJECT TOTAL
201-00000	CLEARING AND GRUBBING	LS	0.50	0.50	1
(2) 202-00010	TREE TRIMMING	EA	3	7	10
202-00200	REMOVAL OF SIDEWALK	SY	84	76	160
202-00203	REMOVAL OF CURB AND GUTTER	LF	257	220	477
202-00206	REMOVAL OF CONCRETE CURB RAMP	SY	96	104	200
202-00220	REMOVAL OF ASPHALT MAT	SY	197	193	390
202-00828	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	EA	1	1	2
202-04005	CLEAN VALVE BOX	EA	2	1	3
203-00100	MUCK EXCAVATION	CY	126	125	251
203-01597	POTHOLING	HR	20	20	40
208-00035	AGGREGATE BAG	LF	50	50	100
208-00045	CONCRETE WASHOUT STRUCTURE	EA	1	1	1
208-00050	STORM DRAIN INLET PROTECTION	EA	4	4	8
208-00070	VEHICLE TRACKING PAD	EA	1	1	2
208-00103	REMOVAL AND DISPOSAL OF SEDIMENT (LABOR)	HR	25	25	50
208-00105	REMOVAL AND DISPOSAL OF SEDIMENT (EQUIPMENT)	HR	12.5	12.5	25
208-00106	SWEEPING (SEDIMENT REMOVAL)	HR	12.5	12.5	25
208-00107	REMOVAL OF TRASH	HR	20.0	20.0	40
208-00205	EROSION CONTROL SUPERVISOR	HR	25	25	50
210-04050	ADJUST VALVE BOX	EA	4	2	6
212-00050	SODDING	SF	3,226	3,226	6,452
212-00101	TREE PROTECTION	EA	9	10	19
403-00720	HOT MIX ASPHALT (PACTHING) (ASPHALT)	TON	83	79	162
608-00006	CONCRETE SIDEWALK (6 INCH)	SY	34	29	63
608-00010	CONCRETE CURB RAMP	SY	161	162	323
609-21011	CURB TYPE 2 (SECTION M)	LF	98	85	183
609-21020	CURB AND GUTTER TYPE 2 (SECTION II-B)	LF	223	228	451
503-00036	DRILLED CAISSON (36 INCH)	LF	52	52	104
503-00037	VACUUMED CAISSON (36 INCH)	LF	52	52	104
613-00000	WIRING	LS	0.5	0.5	1
613-00206	2 INCH ELECTRICAL CONDUIT (BORED)	LF	475	490	965
613-00300	3 INCH ELECTRICAL CONDUIT	LF	10	10	20
613-00306	3 INCH ELECTRICAL CONDUIT (BORED)	LF	845	825	1,670
613-06000	ELECTRIC METER PEDESTAL CABINET AND BASE	EA	1	1	2
613-07000	PULL BOX (SPECIAL)	EA	1	1	2
613-70250	LUMINAIRE (LED)(5300 LUMENS)(55 WATT)	EA	8	8	16
613-50150	SECONDARY SERVICE PEDESTAL	EA	1	1	2
614-00011	SIGN PANEL (CLASS I)	SF	90.00	80.25	170.25
614-70150	PEDESTRIAN SIGNAL FACE (16") (COUNT DOWN)	EA	12	12	24
614-70336	TRAFFIC SIGNAL FACE (12-12-12)	EA	12	12	24
614-72860	PEDESTRIAN PUSH BUTTON	EA	12	12	24
614-72866	EMERGENCY VEHICLE TRAFFIC SIGNAL PRIORITY CONTROL SYSTEM	EA	3	3	6
614-72855	TRAFFIC SIGNAL CABINET AND CONTROLLER	EA	1	1	2
614-72886	VEHICLE DETECTION SYSTEM (SINGLE CAMERA)	EA	3	3	6
614-81000	TRAFFIC SIGNAL-LIGHT POLE STEEL	EA	5	5	10
614-81125	TRAFFIC SIGNAL-LIGHT POLE STEEL (1-25 FT MAST ARM)	EA	1	1	2
614-81140	TRAFFIC SIGNAL-LIGHT POLE STEEL (1-40 FT MAST ARM)	EA	1	1	2
614-81540	TRAFFIC SIGNAL-LIGHT POLE STEEL (2-25&40 FOOT MAST ARM)	EA	1	1	2
614-84100	TRAFFIC SIGNAL PEDESTAL POLE ALUMINUM	EA	4	0	4
614-86105	TELEMETRY (FIELD)	EA	1	1	2

ITEM NO.	ITEM DESCRIPTION	UNIT	7th Ave & York St	7th Ave & Josephine St	PROJECT TOTAL
625-00000	CONSTRUCTION SURVEYING	LS	0.50	0.50	1
626-00000	MOBILIZATION	LS	0.50	0.50	1
(1) 630-10005	TRAFFIC CONTROL	LS	0.50	0.50	1
700-70010	F/A 01 - MINOR CONTRACT REVISIONS	FA	0.50	0.50	1
700-70023	F/A 02 - ON-THE-JOB TRAINEE	FA	0.00	0.00	0
700-70082	F/A 03 - FURNISH & INSTALL ELECTRICAL SERVICE	FA	0.50	0.50	1
700-70310	F/A 04 - LANDSCAPING	FA	0.50	0.50	1
700-70380	F/A 05 - EROSION CONTROL	FA	0.50	0.50	1
700-70592	F/A 06 - SURVEY MONUMENTATION	FA	0.50	0.50	1
700-70589	F/A 07 - ENVIRONMENTAL HEALTH & SAFETY MANAGEMENT	FA	0.50	0.50	1

1. THE FOLLOWING ITEMS ARE ASSUMED FOR 630-10005 TRAFFIC CONTROL

ITEM NO.	ITEM DESCRIPTION	UNIT	7th Ave & York St	7th Ave & Josephine St	PROJECT TOTAL
630-00000	FLAGGING	HR	320	320	640
630-00007	TRAFFIC CONTROL INSPECTION	DAY	12	12	24
630-00012	TRAFFIC CONTROL MANAGEMENT	DAY	40	40	80
630-80335	BARRICADE (TYPE 3 M-A)(TEMPORARY)	EA	2	2	4
630-80431	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A)	EA	20	20	40
630-80342	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE B)	EA	8	8	16
630-80344	CONSTRUCTION TRAFFIC SIGN (SPECIAL)	SF	15	15	30
630-80355	PORTABLE MESSAGE SIGN PANEL	EA	3	3	6
630-80356	ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL (A TYPE)	EA	2	2	4
630-80360	DRUM CHANNELIZING DEVICE	EA	60	60	120
630-80363	DRUM CHANNELIZING DEVICE (WITH LIGHT)(FLASHING)	EA	10	10	20
630-80380	TRAFFIC CONE	EA	80	80	160

2. TREE TRIMMING SHOWN FOR INFORMATION ONLY, TO BE COMPLETED BY CITY FORESTER. REFER TO REVISION OF SECTION 201.



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Sheet Revisions		
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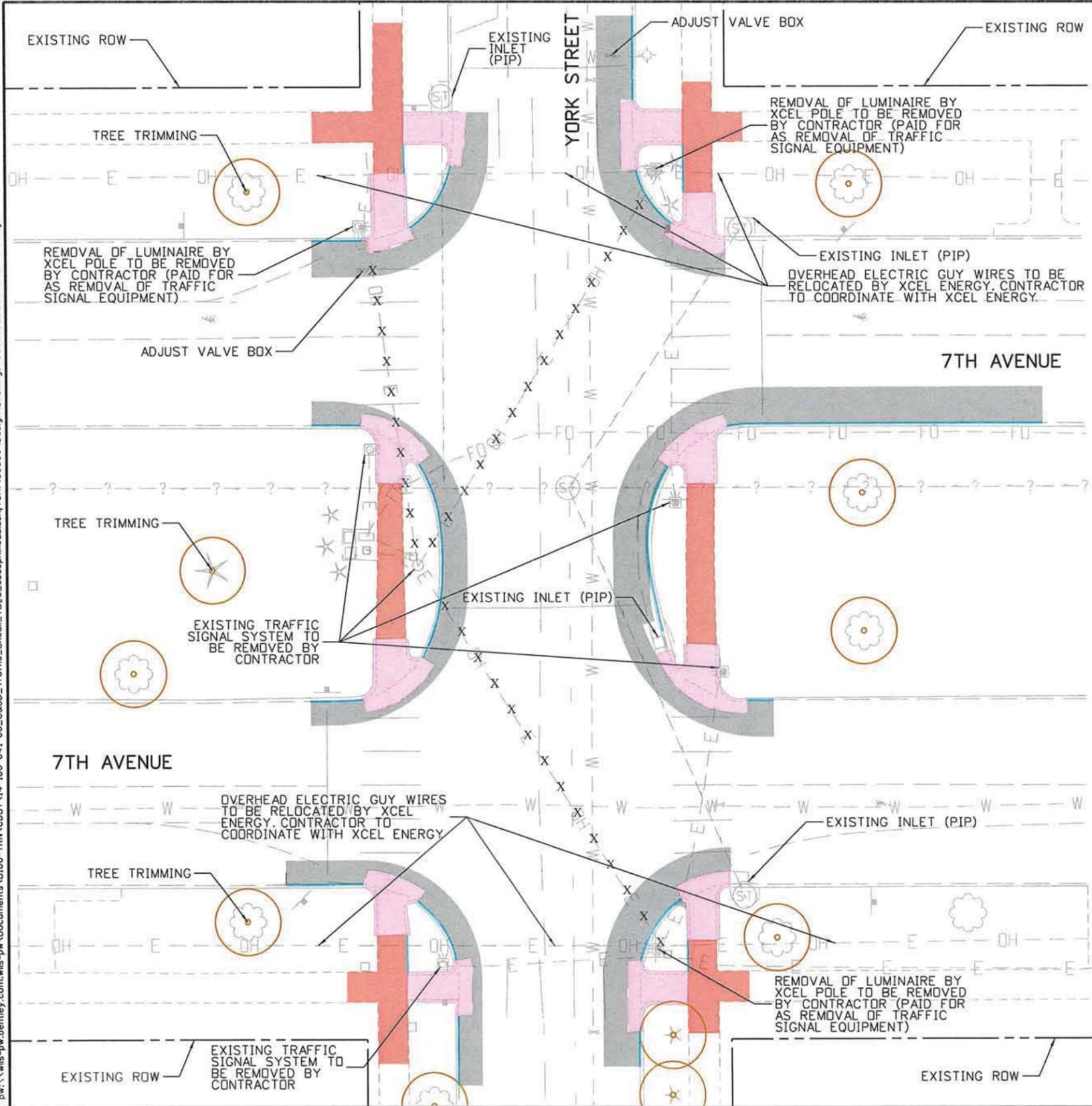
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SUMMARY OF APPROXIMATE QUANTITIES	
Designer: JMB	Structure Numbers
Detailer: JMB	
Sheet Subset: SOAQ	Subset Sheets: 1 of 1

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 Sheet Number 7

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TABULATION OF REMOVALS

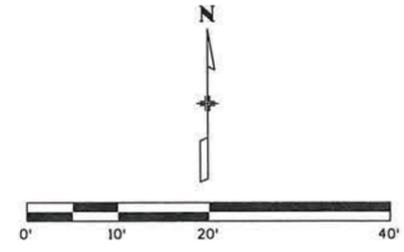
ITEM NO.	ITEM DESCRIPTION	UNIT	QTY
201	CLEARING AND GRUBBING	LS	0.50
202	TREE TRIMMING	EA	3
202	REMOVAL OF SIDEWALK	SY	84
202	REMOVAL OF CURB AND GUTTER	LF	257
202	REMOVAL OF CONCRETE CURB RAMP	SY	96
202	REMOVAL OF ASPHALT MAT	SY	197
202	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	EA	1
203	MUCK EXCAVATION	CY	126
(3) 210	ADJUST VALVE BOX	EA	2

NOTES

- EXISTING TREES TO BE PRESERVED IN PUBLIC RIGHT OF WAY SHALL BE PROTECTED PER FORESTRY STANDARDS AND PRACTICES. TREE PROTECTION SHALL BE INSTALLED PRIOR TO ISSUE OF DEMOLITION PERMIT, APPROVED BY FORESTRY, AND SHALL REMAIN IN PLACE THROUGHOUT CONSTRUCTION. NO CONSTRUCTION ACTIVITIES OR STORAGE OF MATERIALS (INCLUDING SOIL) SHALL TAKE PLACE WITHIN TREE PROTECTION ZONES WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OFFICE OF THE CITY FORESTER.
- DUE TO LEVEL OF CONSTRUCTION ADJACENT TO PUBLIC ROW TREES, CHAIN LINK FENCING OR TEMPORARY CONSTRUCTION FENCE SHALL BE USED TO ESTABLISH TREE PROTECTION ZONE BOUNDARIES. ONCE INSTALLED AND APPROVED BY FORESTRY STAFF, TREE PROTECTION ZONE SHALL NOT BE RESIZED OR REMOVED WITHOUT PRIOR APPROVAL FROM OFFICE OF THE CITY FORESTER.
- ADJUST VALVE BOX QUANTITY IS TO LOWER THE VALVE BOX WHEN EXISTING PAVEMENT IS REMOVED. SURFACING TABULATION ON ROADWAY PLAN INCLUDES A SEPARATE QUANTITY TO ADJUST THE VALVE BOX TO PROPOSED GRADE.

LEGEND

- REMOVAL OF ASPHALT PAVEMENT
- REMOVAL OF CONCRETE SIDEWALK
- REMOVAL OF CONCRETE CURB RAMP
- REMOVAL OF CURB AND GUTTER
- PROTECT EXISTING ROW TREES PER FORESTRY STANDARDS AND SPECIFICATIONS



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Print Date: 9/7/2018
 File Name: 000000DES_RemovalPlan01.dgn
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 Unit Information Unit Leader Initials

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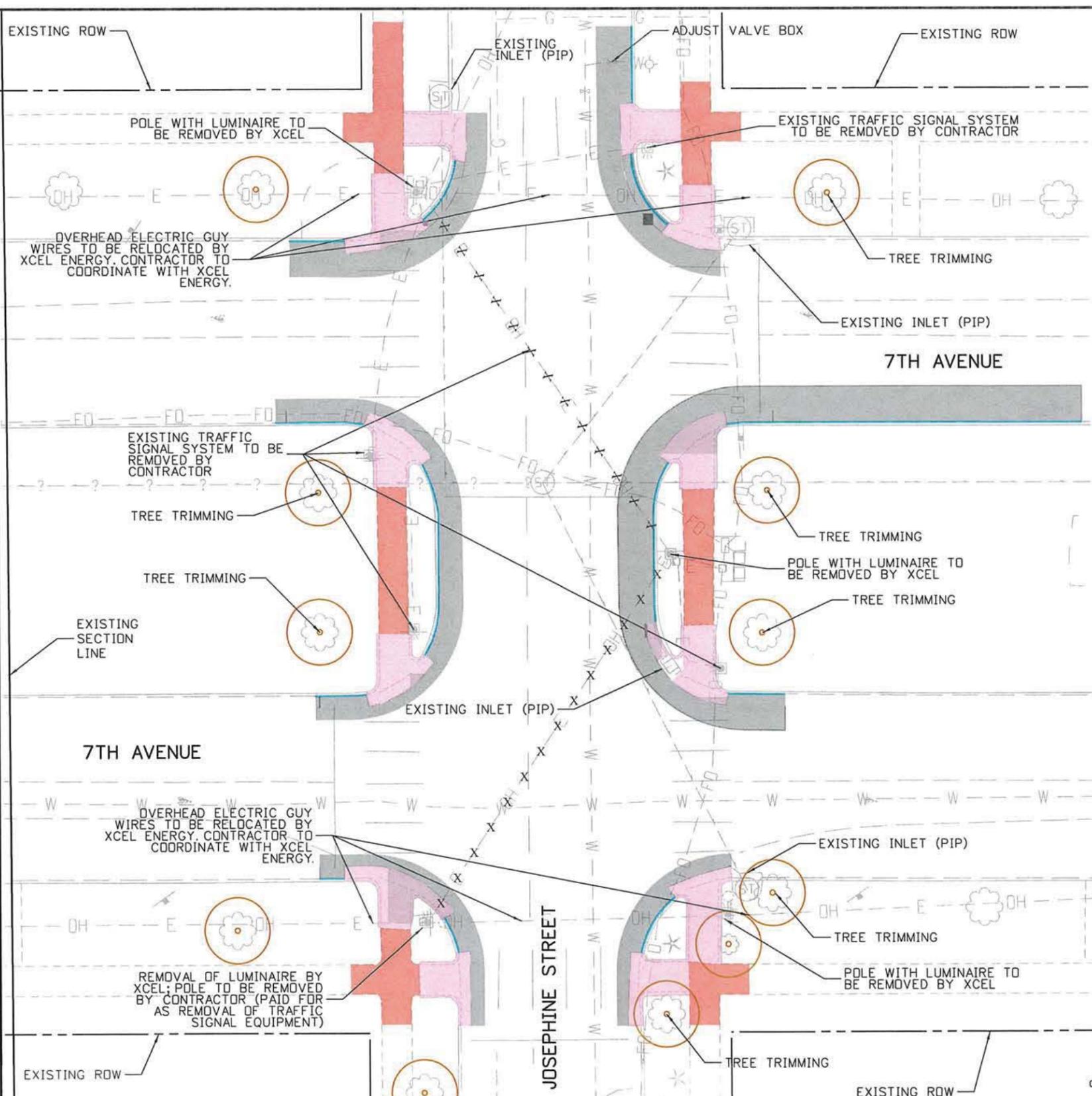
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7TH AVENUE & YORK STREET REMOVAL PLAN			
Designer:	DMZ	Structure Numbers	
Detailer:	DMZ		
Sheet Subset:	REMOVAL	Subset Sheets:	1 of 2

Project No./Code
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22218
Sheet Number 8

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TABULATION OF REMOVALS

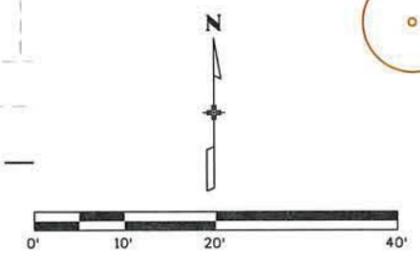
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202	TREE TRIMMING	EA	7
202	REMOVAL OF SIDEWALK	SY	76
202	REMOVAL OF CURB AND GUTTER	LF	220
202	REMOVAL OF CONCRETE CURB RAMP	SY	104
202	REMOVAL OF ASPHALT MAT	SY	193
202	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	EA	1
203	MUCK EXCAVATION	CY	125
(3) 210	ADJUST VALVE BOX	EA	1

NOTES

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- ADJUST VALVE BOX QUANTITY IS TO LOWER THE VALVE BOX WHEN EXISTING PAVEMENT IS REMOVED. SURFACING TABULATION ON ROADWAY PLAN INCLUDES A SEPARATE QUANTITY TO ADJUST THE VALVE BOX TO PROPOSED GRADE.

LEGEND

- REMOVAL OF ASPHALT PAVEMENT
- REMOVAL OF CONCRETE SIDEWALK
- REMOVAL OF CONCRETE CURB RAMP
- REMOVAL OF CURB AND GUTTER
- PROTECT EXISTING ROW TREES PER FORESTRY STANDARDS AND SPECIFICATIONS



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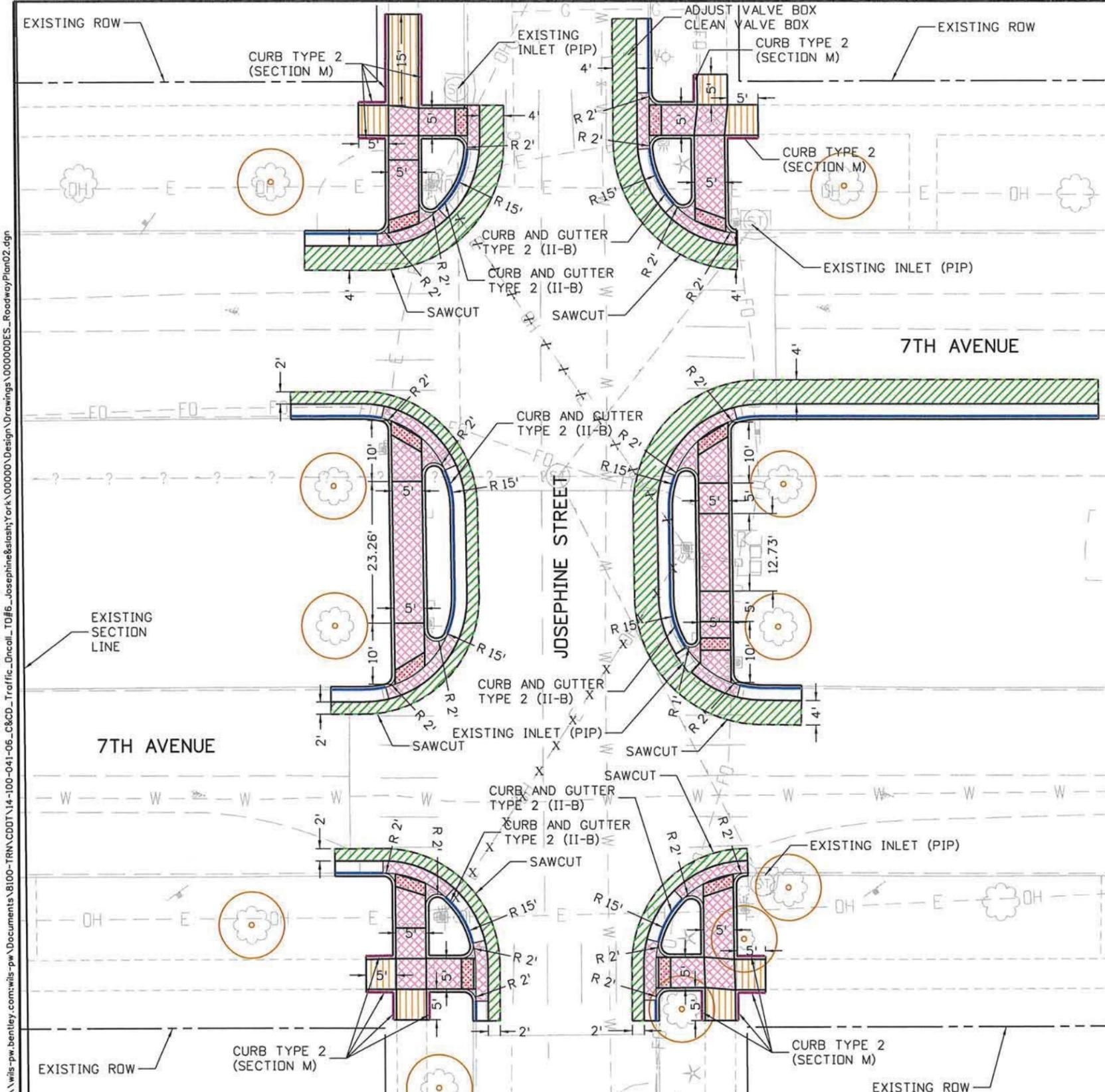
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7TH AVENUE & JOSEPHINE STREET REMOVAL PLAN			
Designer:	DMZ	Structure	
Detailer:	DMZ	Numbers	
Sheet Subset:	REMOVAL	Subset Sheets:	2 of 2

Project No./Code
SHE M320-116
22218
Sheet Number 9



TABULATION OF SURFACING

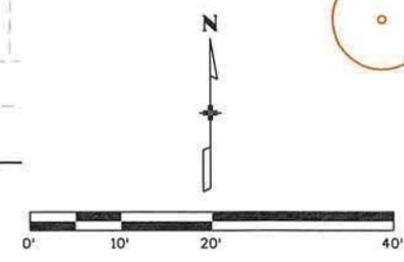
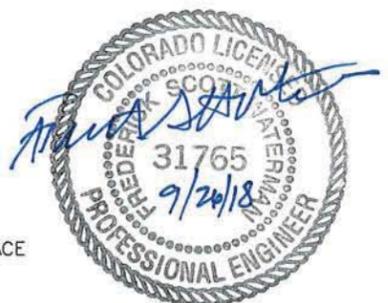
ITEM NO.	ITEM DESCRIPTION	UNIT	QTY
202	CLEAN VALVE BOX	EA	1
(4) 210	ADJUST VALVE BOX	EA	1
403	HOT MIX ASPHALT (PATCHING)(ASPHALT)	TON	79
608	CONCRETE SIDEWALK (6 INCH)	SY	29
608	CONCRETE CURB RAMP	SY	162
609	CURB TYPE 2 (SECTION M)	LF	85
609	CURB AND GUTTER TYPE 2 (SECTION II-B)	LF	228

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- DUE TO LEVEL OF CONSTRUCTION ADJACENT TO PUBLIC ROW TREES, CHAIN LINK FENCING OR TEMPORARY CONSTRUCTION FENCE SHALL BE USED TO ESTABLISH TREE PROTECTION ZONE BOUNDARIES. ONCE INSTALLED AND APPROVED BY FORESTRY STAFF, TREE PROTECTION ZONE SHALL NOT BE RESIZED OR REMOVED WITHOUT PRIOR APPROVAL FROM OFFICE OF THE CITY FORESTER.
- HOT MIX ASPHALT ASSUMES 10 INCH DEPTH AND SHALL MATCH EXISTING ADJACENT PAVEMENT.
- ADJUST VALVE BOX QUANTITY IS TO ADJUST THE VALVE BOX TO PROPOSED GRADE. REMOVAL TABULATION ON REMOVAL PLAN INCLUDES A SEPARATE QUANTITY TO LOWER THE VALVE BOX WHEN EXISTING PAVEMENT IS REMOVED.

LEGEND

- HOT MIX ASPHALT (PATCHING)(ASPHALT)
- CONCRETE SIDEWALK
- CONCRETE CURB RAMP
- DETECTABLE WARNING SURFACE (INCLUDED IN CURB RAMP)
- CURB AND GUTTER TYPE 2 (SECTION II-B)
- CURB TYPE 2 (SECTION M)
- PROTECT EXISTING ROW TREES PER FORESTRY STANDARDS AND SPECIFICATIONS



Print Date: 8/16/2018
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**7TH AVENUE & JOSEPHINE STREET
 ROADWAY PLAN**

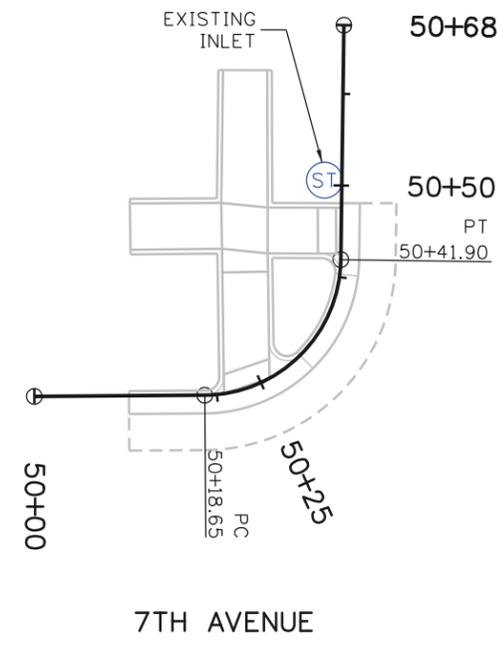
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Project No./Code
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 Sheet Number 11



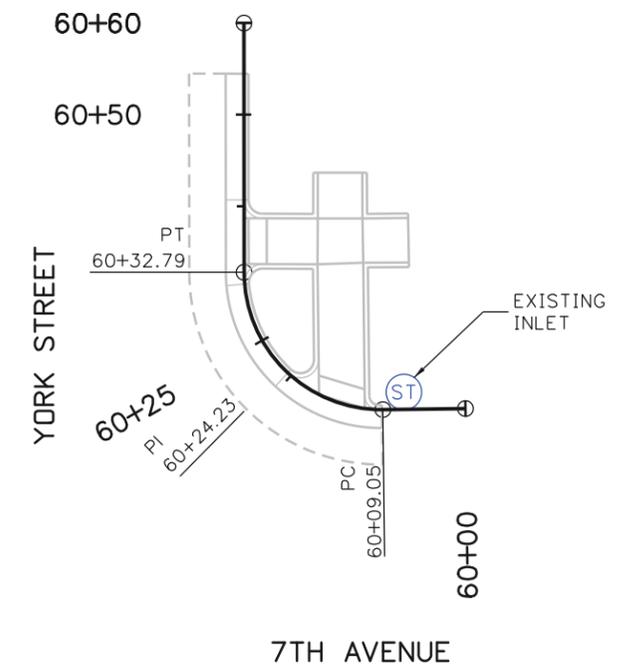
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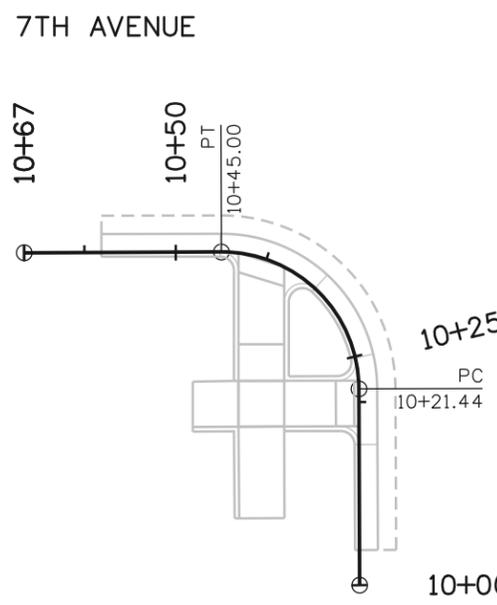
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7TH AVENUE



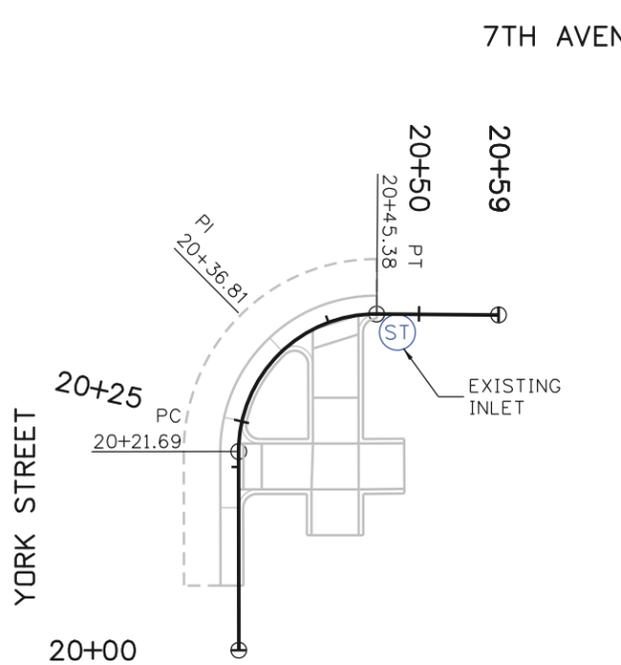
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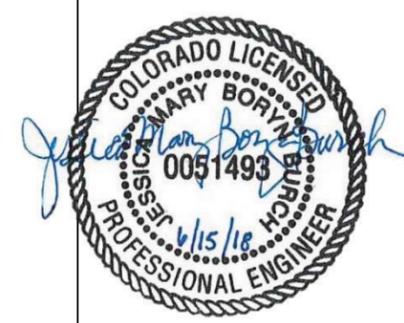
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7TH AVENUE



YORK STREET

7TH AVENUE

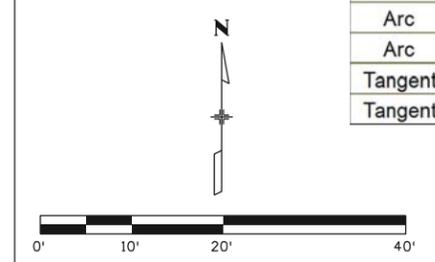


YORK NE FL								
ELEMENT	POINT TYPE	STATION	NORTHING	EASTING	RADIUS	LENGTH	DELTA / THETA	ROTATION DIRECTION
Tangent	POB	60+00.00	389834.00	582559.62				
Tangent	PC	60+09.05	389833.89	582550.57				
Arc	PC	60+09.05	389833.89	582550.57				
Arc	PI	60+24.23	389833.70	582535.39	15.00	23.74	90°41'35"	Right
Arc	CC		389848.89	582550.39				
Arc	PT	60+32.79	389848.89	582535.39				
Tangent	PT	60+32.79	389848.89	582535.39				
Tangent	POE	60+59.99	389876.09	582535.38				

YORK NW FL								
ELEMENT	POINT TYPE	STATION	NORTHING	EASTING	RADIUS	LENGTH	DELTA / THETA	ROTATION DIRECTION
Tangent	POB	50+00.00	389833.71	582471.95				
Tangent	PC	50+18.65	389833.85	582490.60				
Arc	PC	50+18.65	389833.85	582490.60				
Arc	PI	50+33.35	389833.95	582505.30	15.00	23.25	88°49'14"	Left
Arc	CC		389848.85	582490.50				
Arc	PT	50+41.90	389848.64	582505.50				
Tangent	PT	50+41.90	389848.64	582505.50				
Tangent	POE	50+67.51	389874.25	582505.84				

YORK SE FL								
ELEMENT	POINT TYPE	STATION	NORTHING	EASTING	RADIUS	LENGTH	DELTA / THETA	ROTATION DIRECTION
Tangent	POB	20+00.00	389692.36	582535.79				
Tangent	PC	20+21.69	389714.05	582535.78				
Arc	PC	20+21.69	389714.05	582535.78				
Arc	PI	20+36.81	389729.17	582535.77	15.00	23.68	90°27'09"	Right
Arc	CC		389714.06	582550.78				
Arc	PT	20+45.38	389729.06	582550.89				
Tangent	PT	20+45.38	389729.06	582550.89				
Tangent	POE	20+58.72	389728.97	582564.23				

YORK SW FL								
ELEMENT	POINT TYPE	STATION	NORTHING	EASTING	RADIUS	LENGTH	DELTA / THETA	ROTATION DIRECTION
Tangent	POB	10+00.00	389692.53	582505.92				
Tangent	PC	10+21.44	389713.97	582505.85				
Arc	PC	10+21.44	389713.97	582505.85				
Arc	PI	10+36.44	389728.98	582505.79	15.00	23.57	90°01'25"	Left
Arc	CC		389713.92	582490.85				
Arc	PT	10+45.00	389728.92	582490.79				
Tangent	PT	10+45.00	389728.92	582490.79				
Tangent	POE	10+66.58	389728.83	582469.21				



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**7TH AVENUE & YORK STREET
GEOMETRIC DETAILS**

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 Detailer: DMZ
 Sheet Subset: GEDM

Project No./Code

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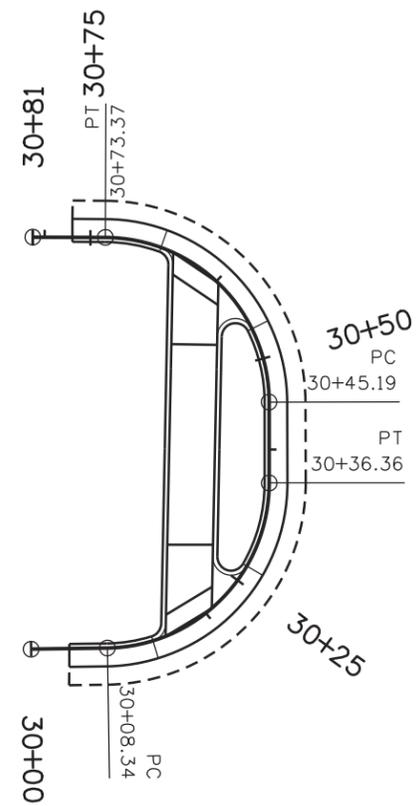
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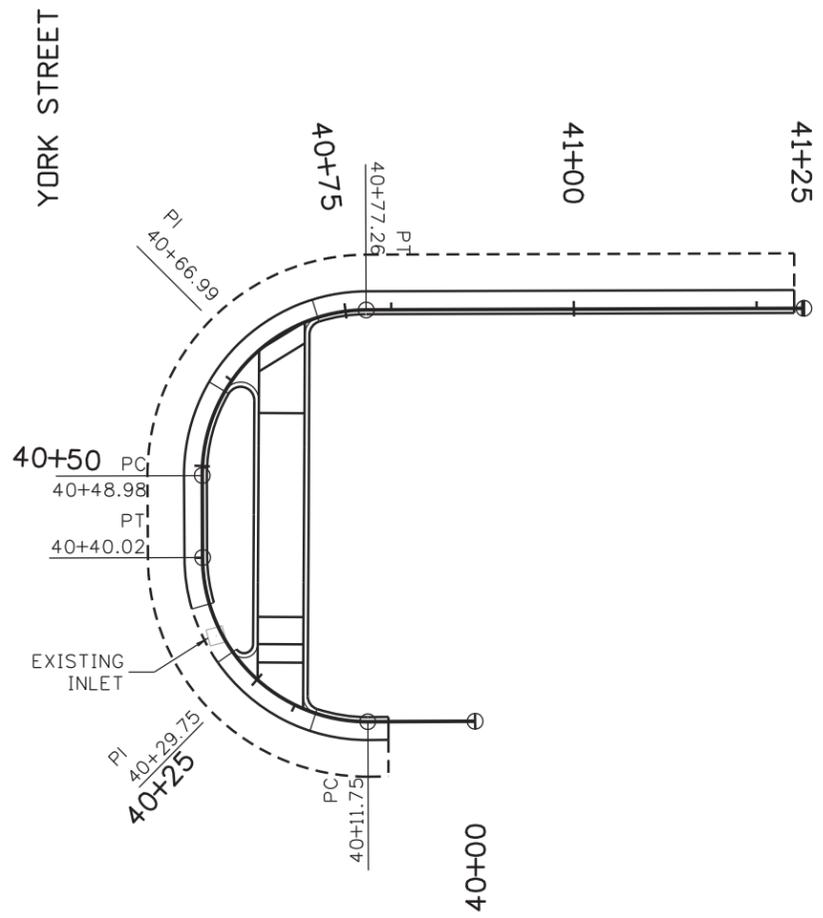


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7TH AVENUE

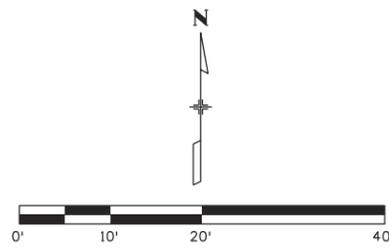


7TH AVENUE



7TH AVENUE

7TH AVENUE



YORK MID E FL								
ELEMENT	POINT TYPE	STATION	NORTHING	EASTING	RADIUS	LENGTH	DELTA / THETA	ROTATION DIRECTION
Tangent	POB	40+00.00	389759.01	582567.59				
Tangent	PC	40+11.75	389758.97	582555.84				
Arc	PC	40+11.75	389758.97	582555.84				
Arc	PI	40+29.75	389758.89	582537.85	18.00	28.27	89°59'22"	Right
Arc	CC		389776.97	582555.77				
Arc	PT	40+40.02	389776.89	582537.77				
Tangent	PT	40+40.02	389776.89	582537.77				
Tangent	PC	40+48.98	389785.85	582537.73				
Arc	PC	40+48.98	389785.85	582537.73				
Arc	PI	40+66.99	389803.86	582537.66	18.00	28.28	90°01'41"	Right
Arc	CC		389785.92	582555.73				
Arc	PT	40+77.26	389803.92	582555.67				
Tangent	PT	40+77.26	389803.92	582555.67				
Tangent	POE	41+25.18	389804.10	582603.59				

YORK MID W FL								
ELEMENT	POINT TYPE	STATION	NORTHING	EASTING	RADIUS	LENGTH	DELTA / THETA	ROTATION DIRECTION
Tangent	POB	30+00.00	389758.68	582477.71				
Tangent	PC	30+08.34	389758.81	582486.05				
Arc	PC	30+08.34	389758.81	582486.05				
Arc	PI	30+26.09	389759.08	582503.79	18.00	28.01	89°10'18"	Left
Arc	CC		389776.80	582485.77				
Arc	PT	30+36.36	389776.83	582503.77				
Tangent	PT	30+36.36	389776.83	582503.77				
Tangent	PC	30+45.19	389785.66	582503.76				
Arc	PC	30+45.19	389785.66	582503.76				
Arc	PI	30+63.09	389803.56	582503.74	18.00	28.18	89°41'33"	Left
Arc	CC		389785.64	582485.76				
Arc	PT	30+73.37	389803.64	582485.84				
Tangent	PT	30+73.37	389803.64	582485.84				
Tangent	POE	30+81.31	389803.67	582477.90				

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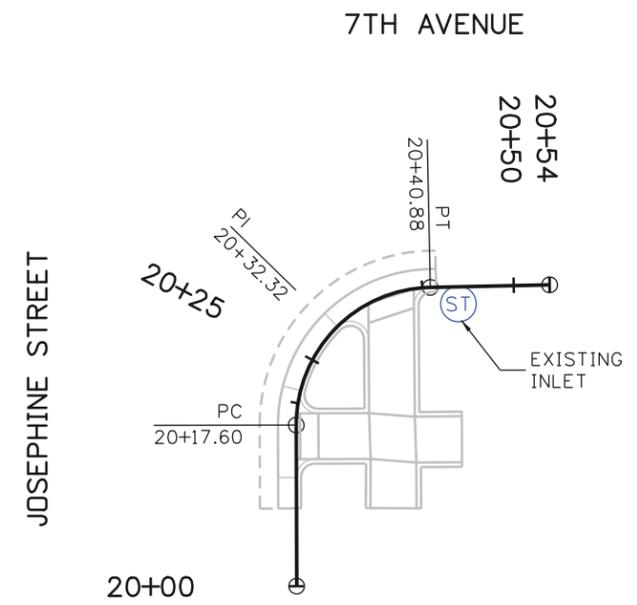
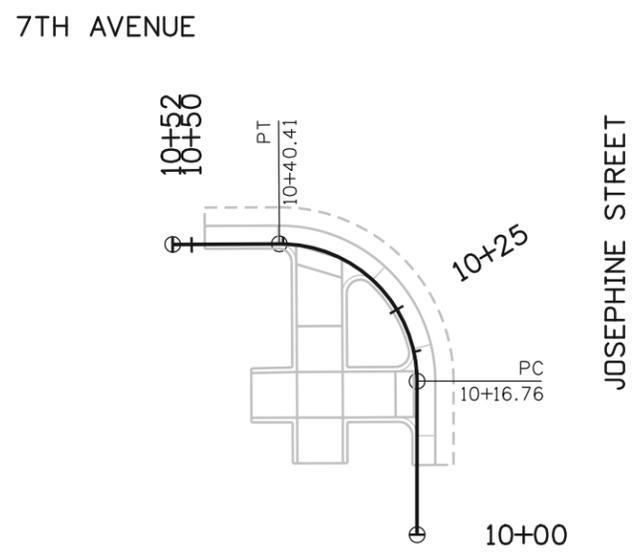
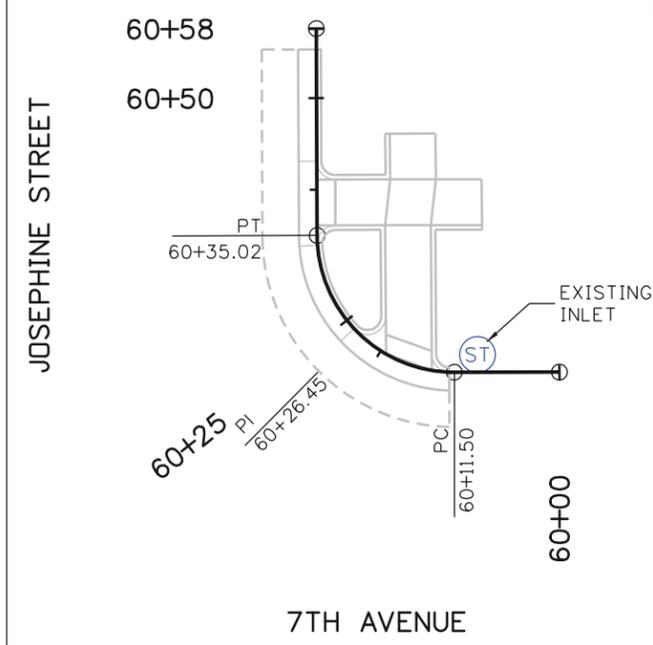
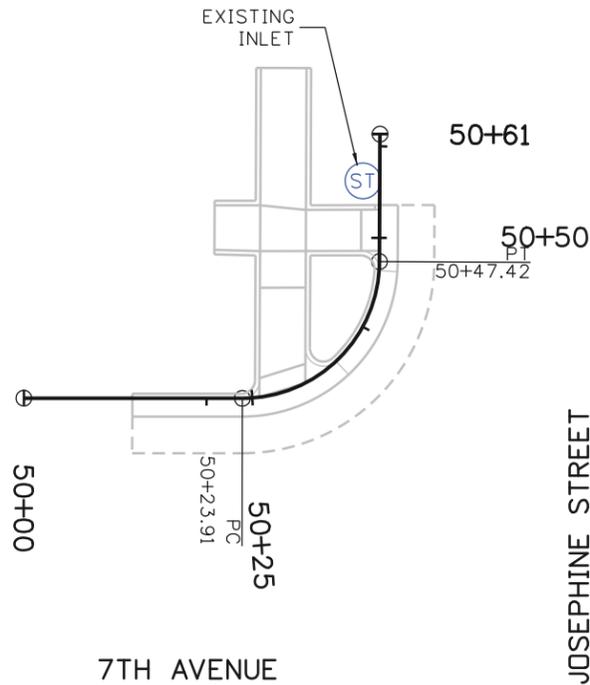
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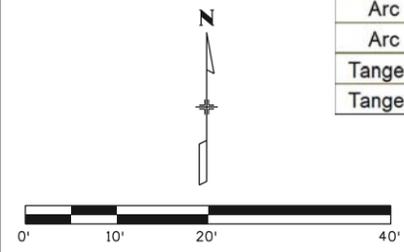


JOSEPHINE NE FL								
ELEMENT	POINT TYPE	STATION	NORTHING	EASTING	RADIUS	LENGTH	DELTA / THETA	ROTATION DIRECTION
Tangent	POB	60+00.00	389834.71	582887.74				
Tangent	PC	60+11.50	389834.69	582876.23				
Arc	PC	60+11.50	389834.69	582876.23				
Arc	PI	60+26.45	389834.68	582861.28	15.00	23.52	89°49'16"	Right
Arc	CC		389849.69	582876.22				
Arc	PT	60+35.02	389849.63	582861.22				
Tangent	PT	60+35.02	389849.63	582861.22				
Tangent	POE	60+57.60	389872.21	582861.13				

JOSEPHINE NW FL								
ELEMENT	POINT TYPE	STATION	NORTHING	EASTING	RADIUS	LENGTH	DELTA / THETA	ROTATION DIRECTION
Tangent	POB	50+00.00	389834.61	582792.14				
Arc	PC	50+23.91	389834.59	582816.05				
Arc	PI	50+38.86	389834.58	582831.00	15.00	23.51	89°47'47"	Left
Arc	CC		389849.59	582816.07				
Tangent	PT	50+47.42	389849.53	582831.07				
Tangent	POE	50+61.34	389863.44	582831.13				

JOSEPHINE SE FL								
ELEMENT	POINT TYPE	STATION	NORTHING	EASTING	RADIUS	LENGTH	DELTA / THETA	ROTATION DIRECTION
Tangent	POB	20+00.00	389697.16	582861.70				
Tangent	PC	20+17.60	389714.76	582861.66				
Arc	PC	20+17.60	389714.76	582861.66				
Arc	PI	20+32.32	389729.48	582861.62	15.00	23.28	88°55'31"	Right
Arc	CC		389714.80	582876.66				
Arc	PT	20+40.88	389729.79	582876.34				
Tangent	PT	20+40.88	389729.79	582876.34				
Tangent	POE	20+53.93	389730.07	582889.39				

JOSEPHINE SW FL								
ELEMENT	POINT TYPE	STATION	NORTHING	EASTING	RADIUS	LENGTH	DELTA / THETA	ROTATION DIRECTION
Tangent	POB	10+00.00	389698.04	582831.79				
Tangent	PC	10+16.76	389714.81	582831.79				
Arc	PC	10+16.76	389714.81	582831.79				
Arc	PI	10+31.84	389729.89	582831.79	15.00	23.64	90°18'10"	Left
Arc	CC		389714.81	582816.79				
Arc	PT	10+40.41	389729.81	582816.71				
Tangent	PT	10+40.41	389729.81	582816.71				
Tangent	POE	10+52.07	389729.74	582805.04				



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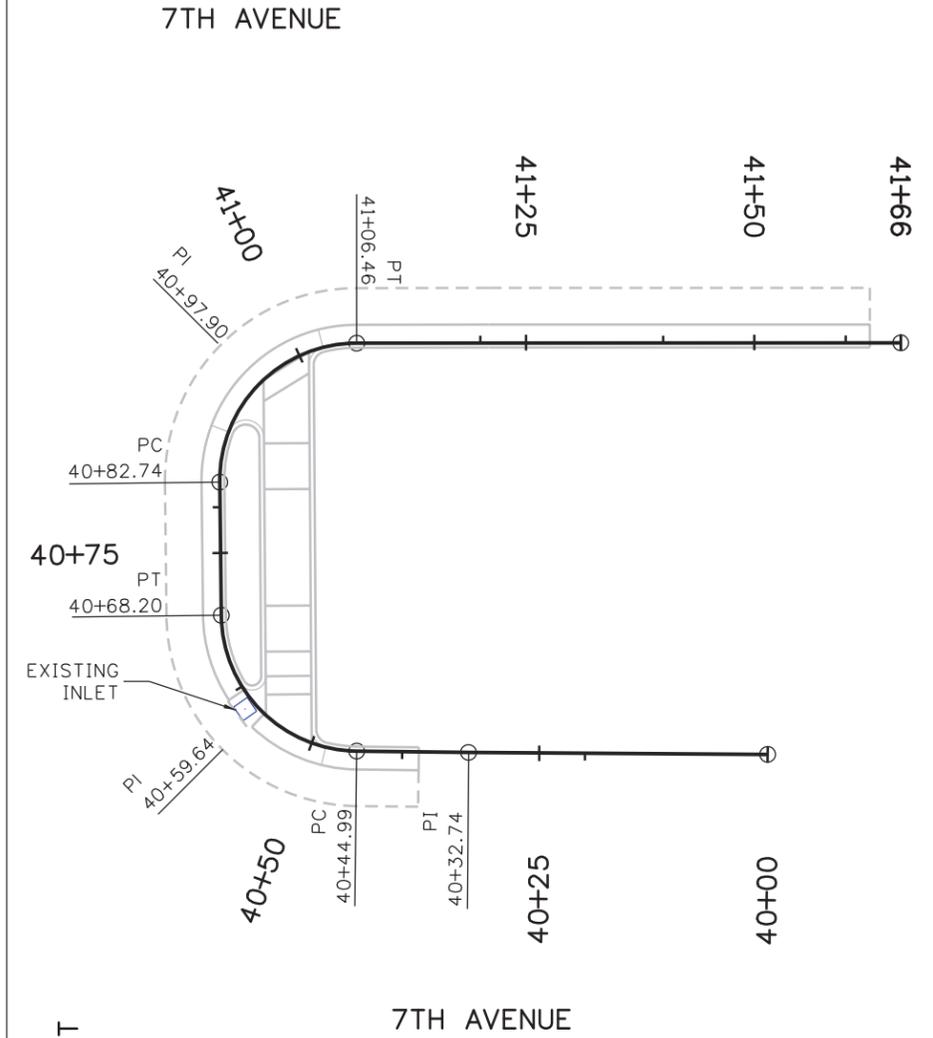
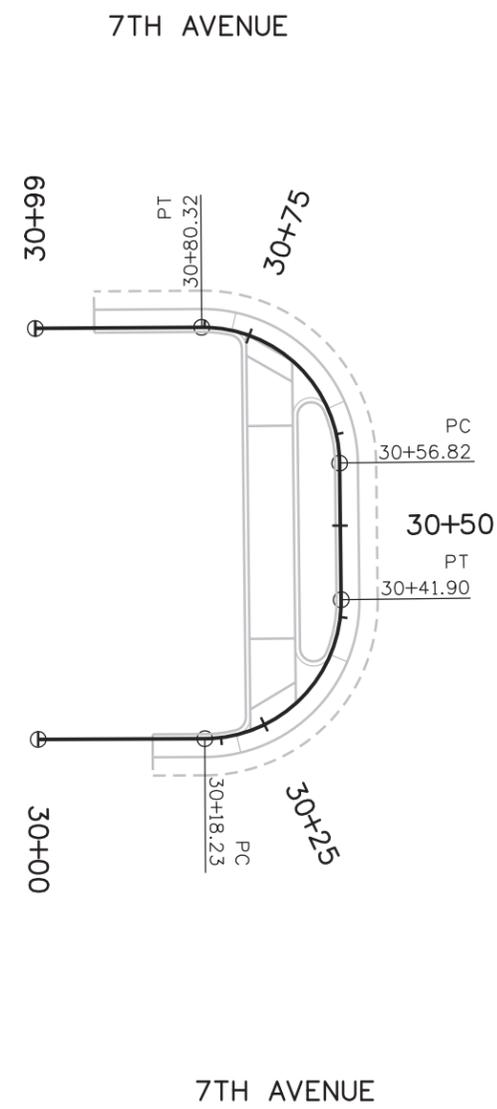
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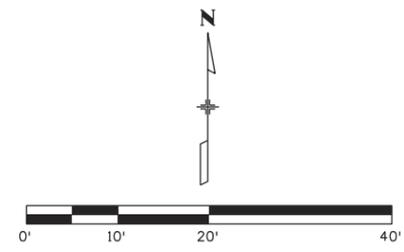
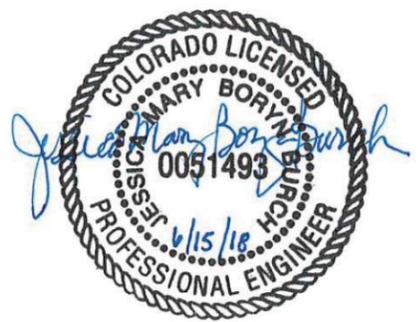
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JOSEPHINE MID E FL								
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Tangent	POB	40+00.00	389759.70	582924.20				
Tangent	PI	40+32.74	389759.91	582891.46				
Tangent	PI	40+32.74	389759.91	582891.46				
Tangent	PC	40+44.99	389760.06	582879.21				
Arc	PC	40+44.99	389760.06	582879.21				
Arc	PI	40+59.64	389760.24	582864.56	15.00	23.21	88°38'51"	Right
Arc	CC		389775.06	582879.39				
Arc	PT	40+68.20	389774.89	582864.39				
Tangent	PT	40+68.20	389774.89	582864.39				
Tangent	PC	40+82.74	389789.43	582864.23				
Arc	PC	40+82.74	389789.43	582864.23				
Arc	PI	40+97.90	389804.59	582864.05	15.00	23.73	90°37'26"	Right
Arc	CC		389789.60	582879.23				
Arc	PT	41+06.46	389804.60	582879.22				
Tangent	PT	41+06.46	389804.60	582879.22				
Tangent	POE	41+66.02	389804.64	582938.78				

JOSEPHINE MID W FL								
ELEMENT	POINT TYPE	STATION	NORTHING	EASTING	RADIUS	LENGTH	DELTA / THETA	ROTATION DIRECTION
Tangent	POB	30+00.00	389759.71	582795.44				
Tangent	PC	30+18.23	389759.79	582813.67				
Arc	PC	30+18.23	389759.79	582813.67				
Arc	PI	30+33.34	389759.86	582828.78	15.00	23.67	90°23'55"	Left
Arc	CC		389774.79	582813.61				
Arc	PT	30+41.90	389774.96	582828.61				
Tangent	PT	30+41.90	389774.96	582828.61				
Tangent	PC	30+56.82	389789.89	582828.44				
Arc	PC	30+56.82	389789.89	582828.44				
Arc	PI	30+71.76	389804.82	582828.26	15.00	23.50	89°44'48"	Left
Arc	CC		389789.72	582813.44				
Arc	PT	30+80.32	389804.72	582813.33				
Tangent	PT	30+80.32	389804.72	582813.33				
Tangent	POE	30+98.52	389804.59	582795.13				



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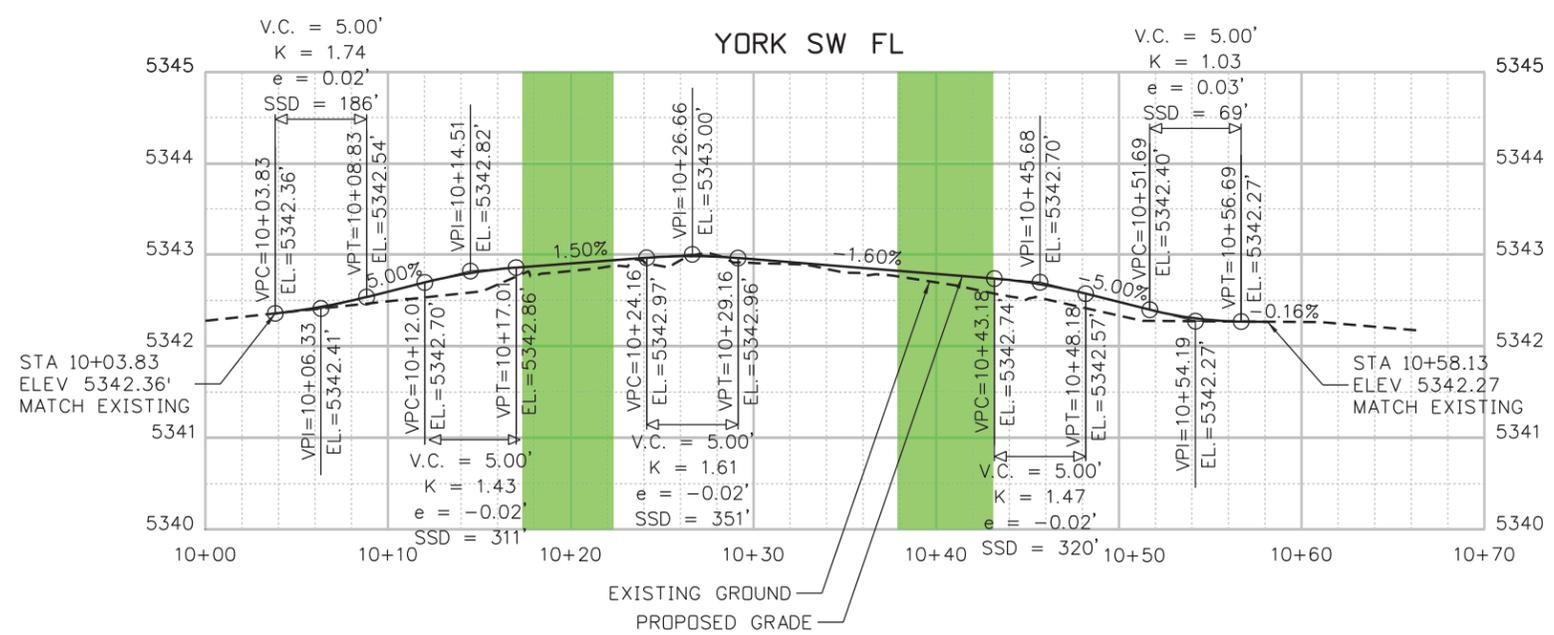
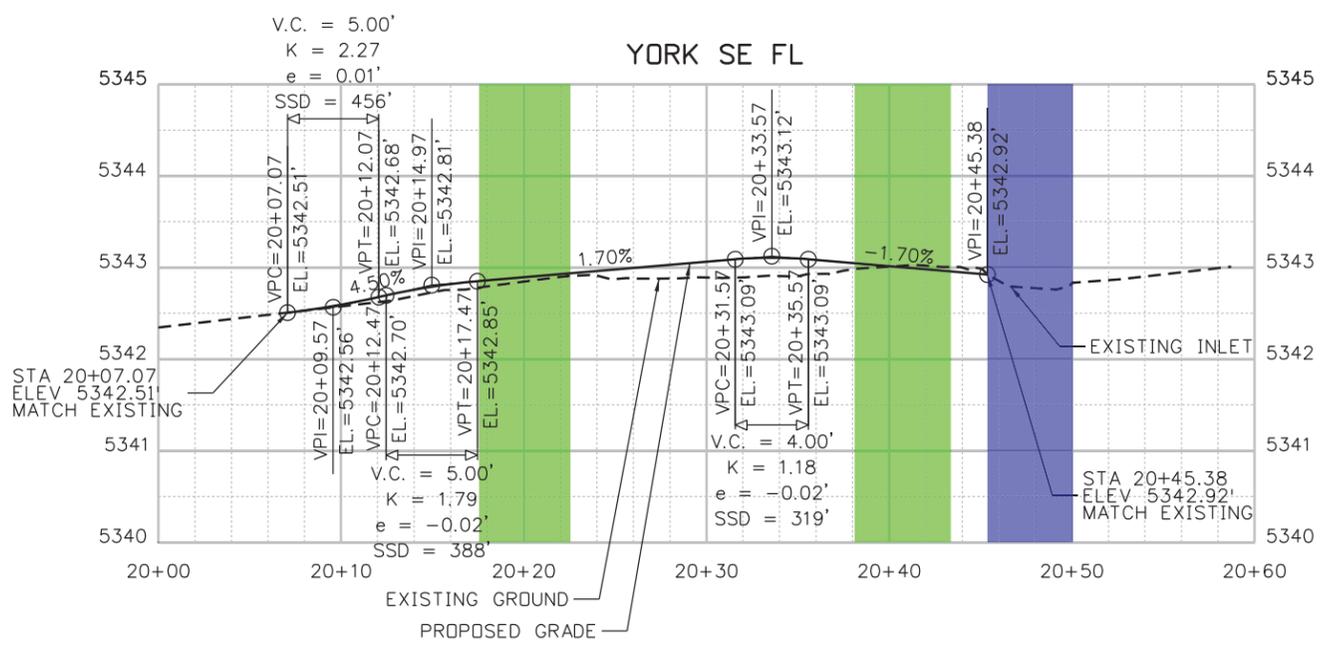
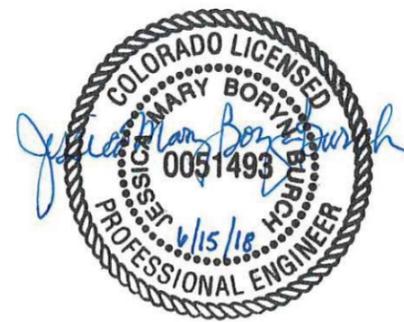
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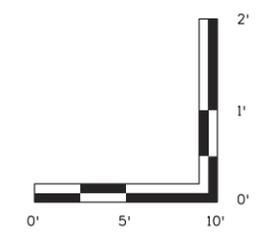
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Detailer:	DMZ		
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LEGEND

- CURB RAMP LIMITS
- EXISTING INLET LIMITS



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Unit Information	Unit Leader Initials

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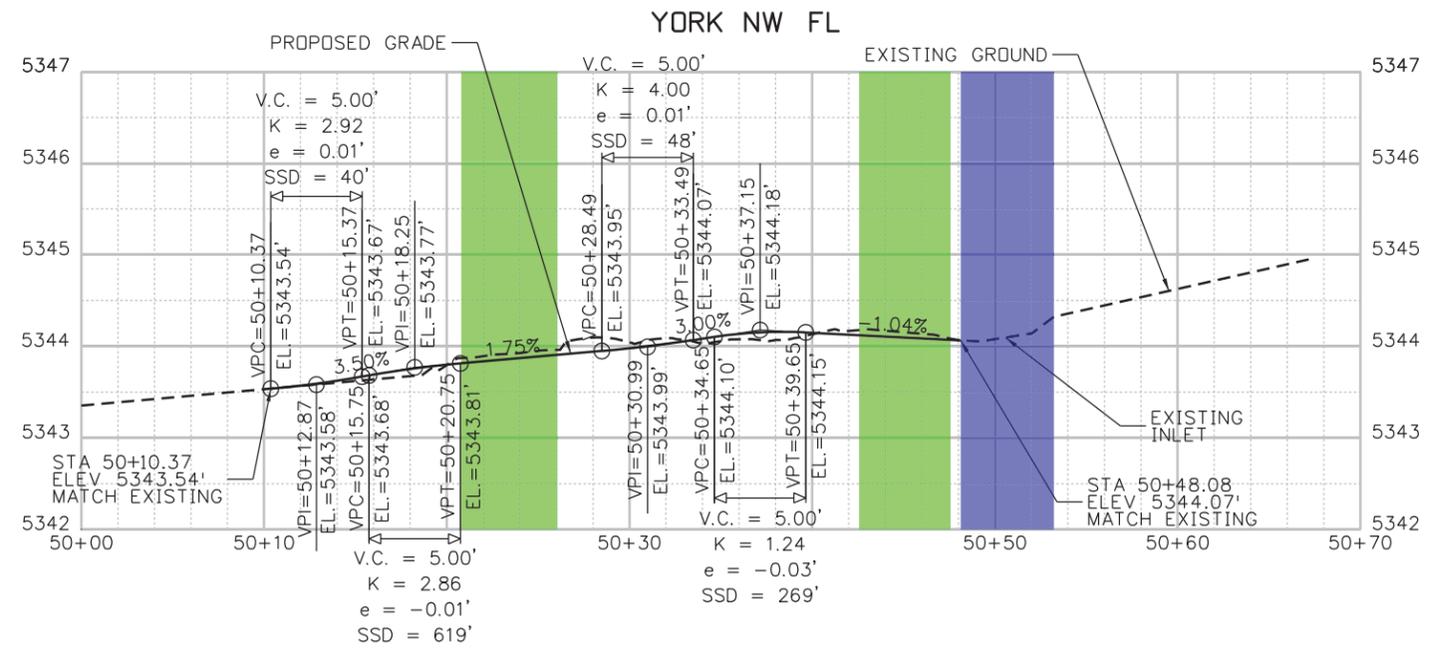
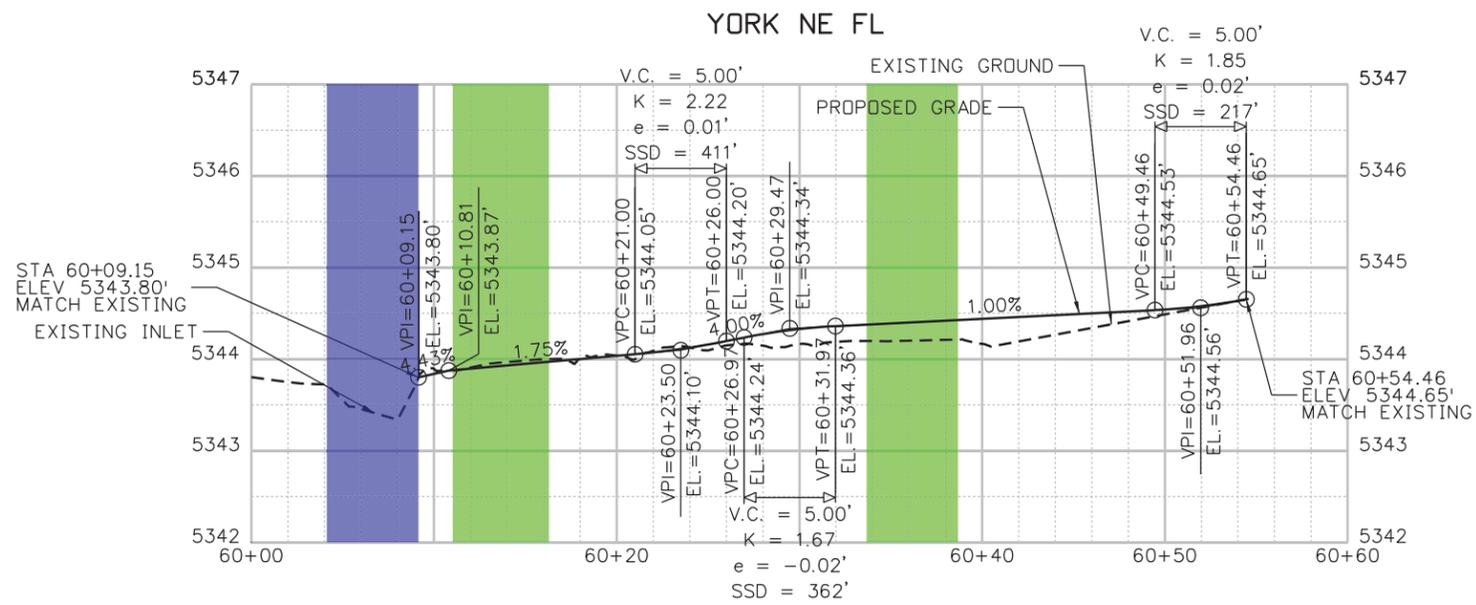
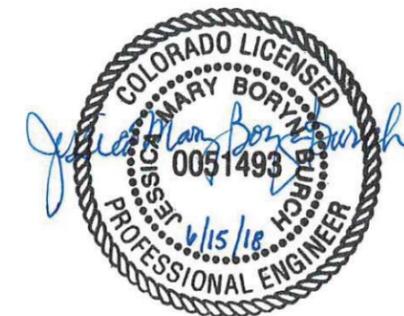
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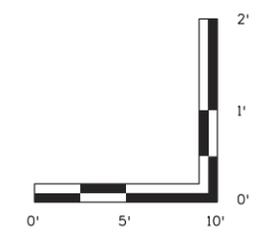
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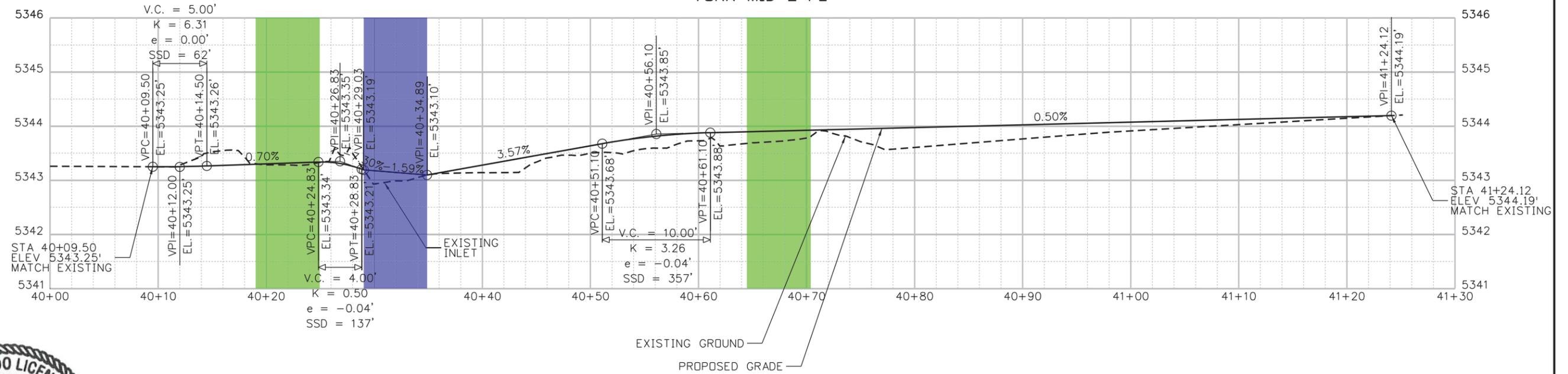
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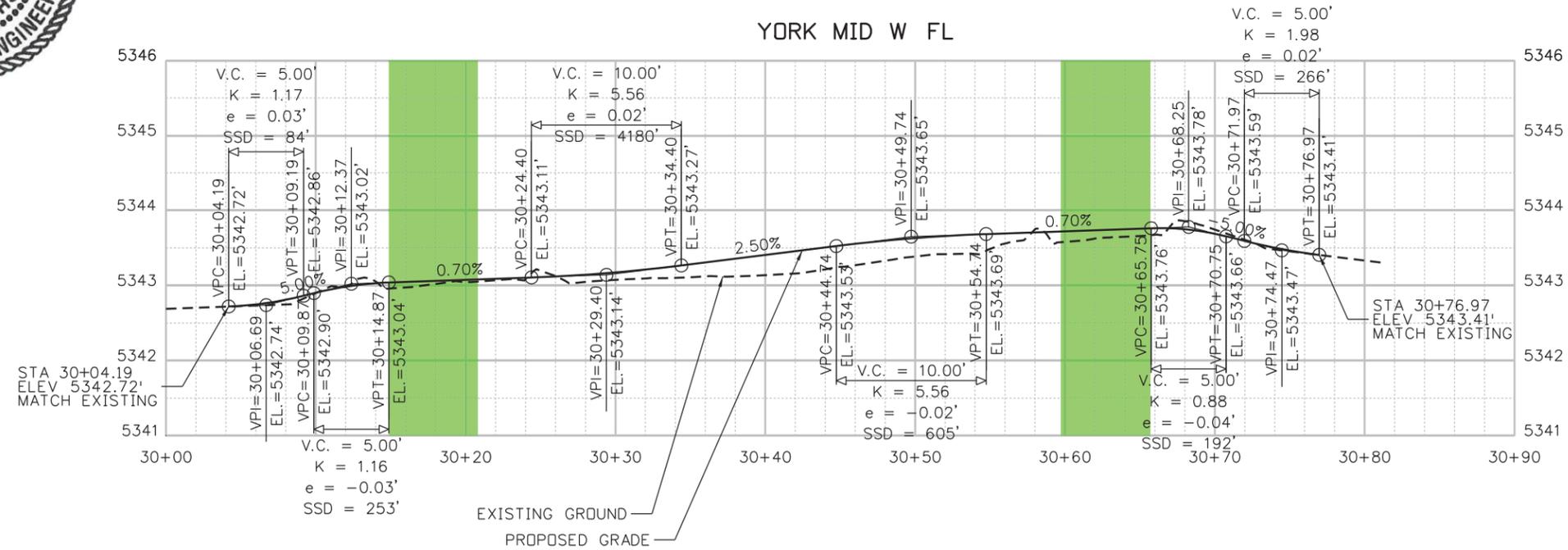
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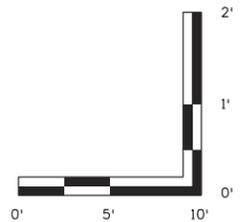


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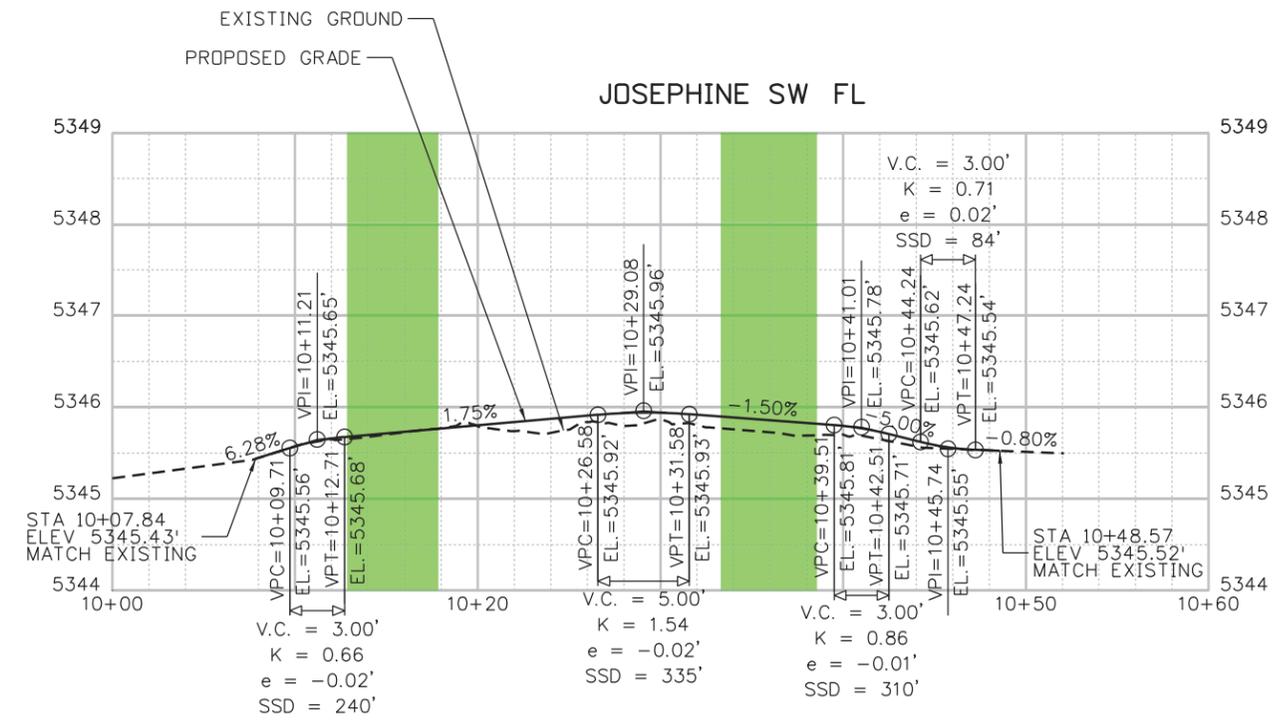
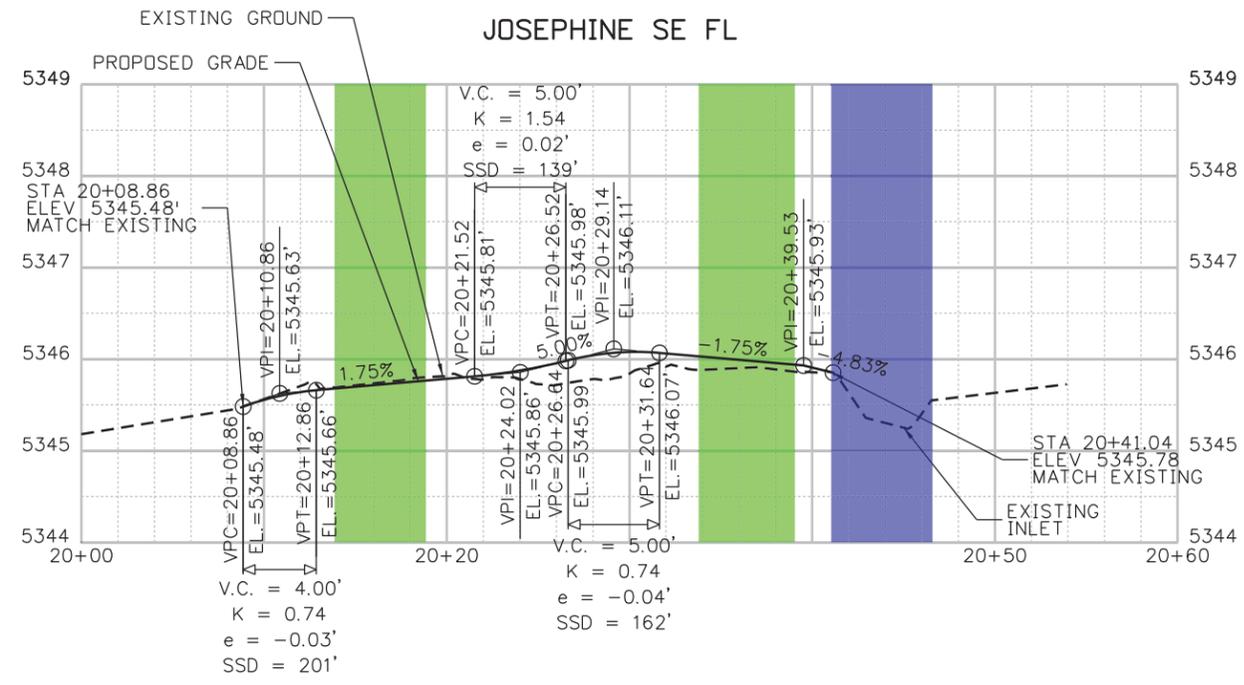
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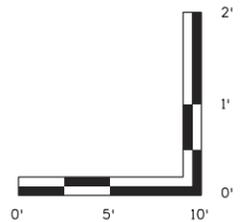
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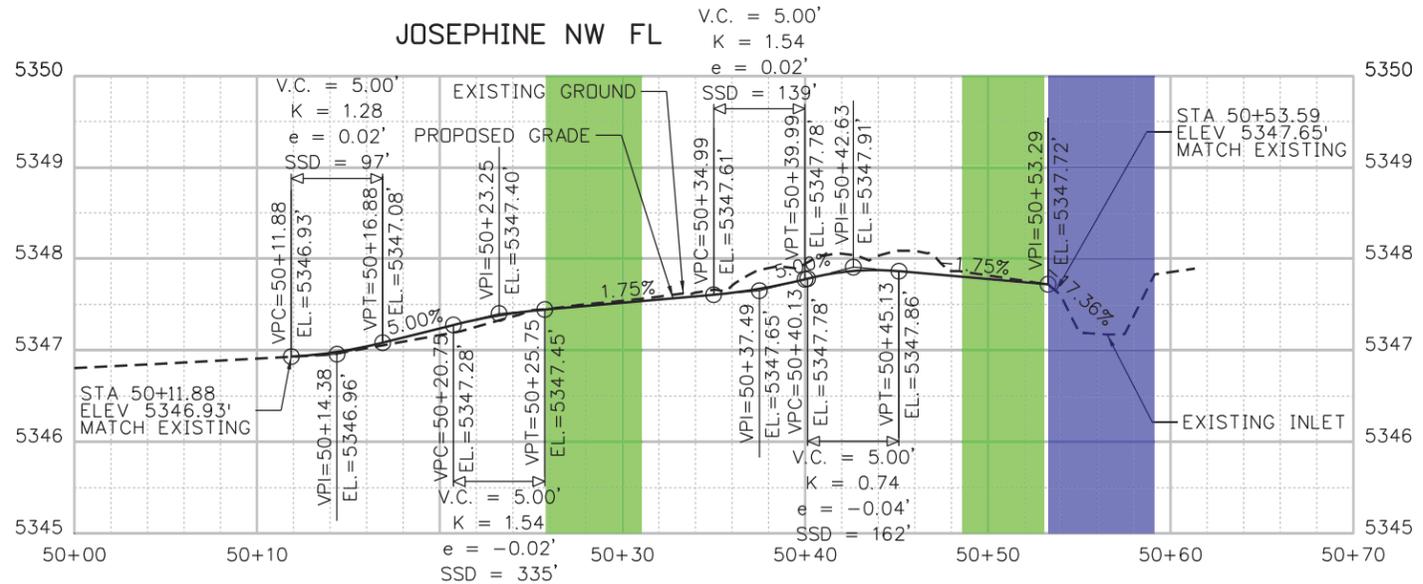
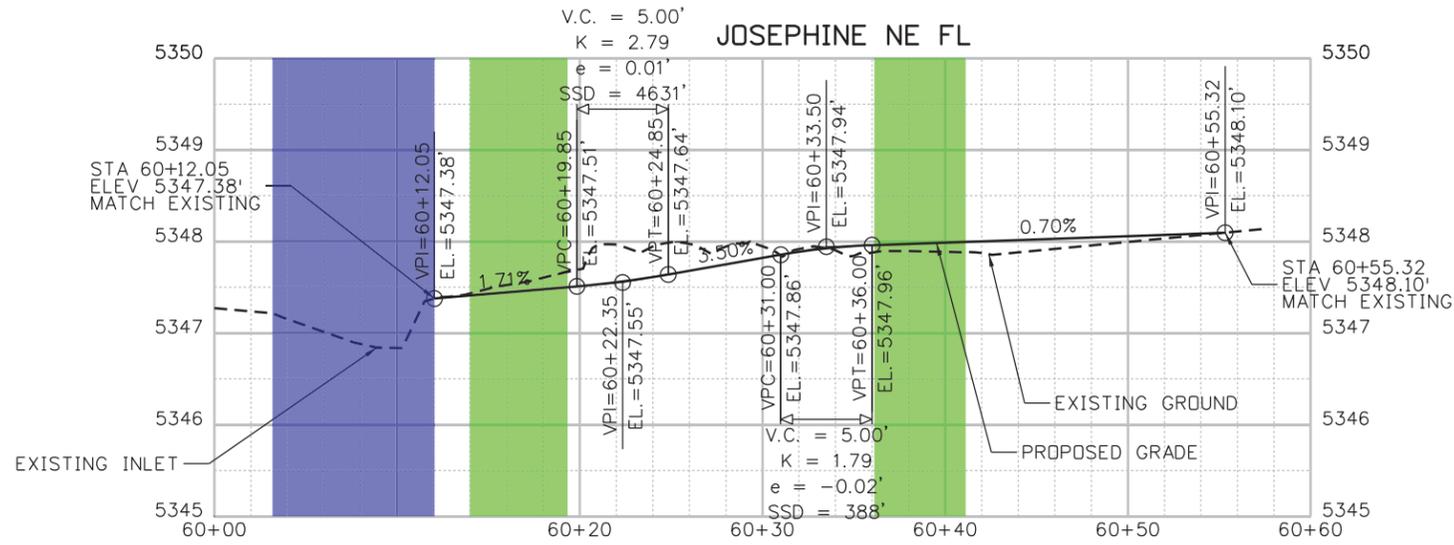
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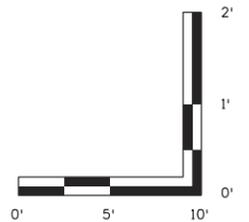
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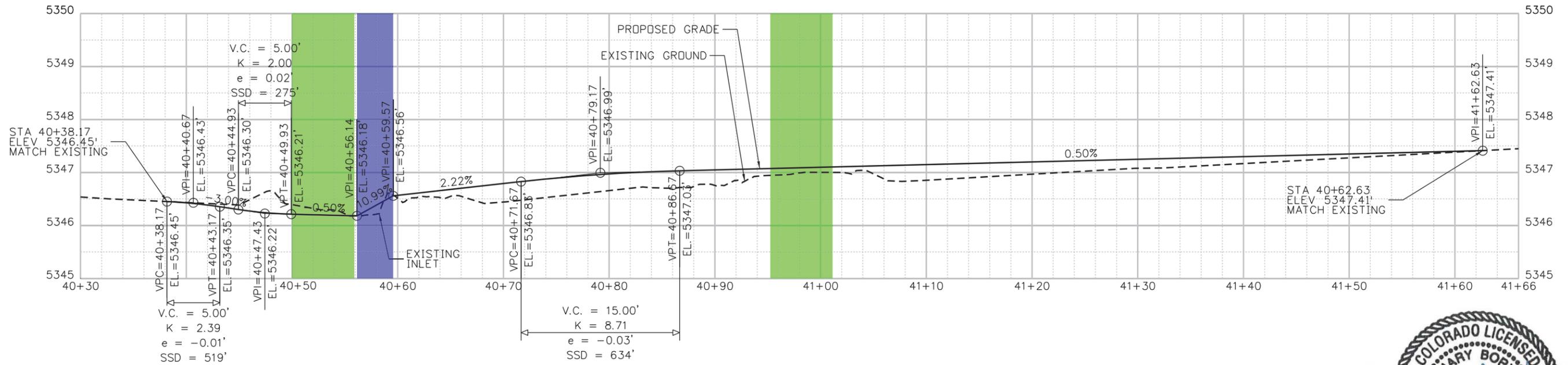


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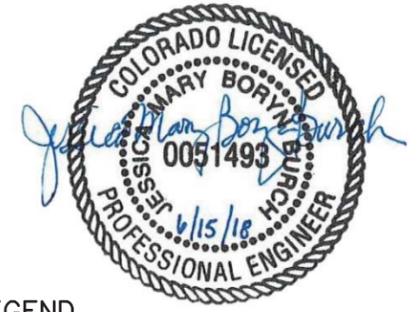
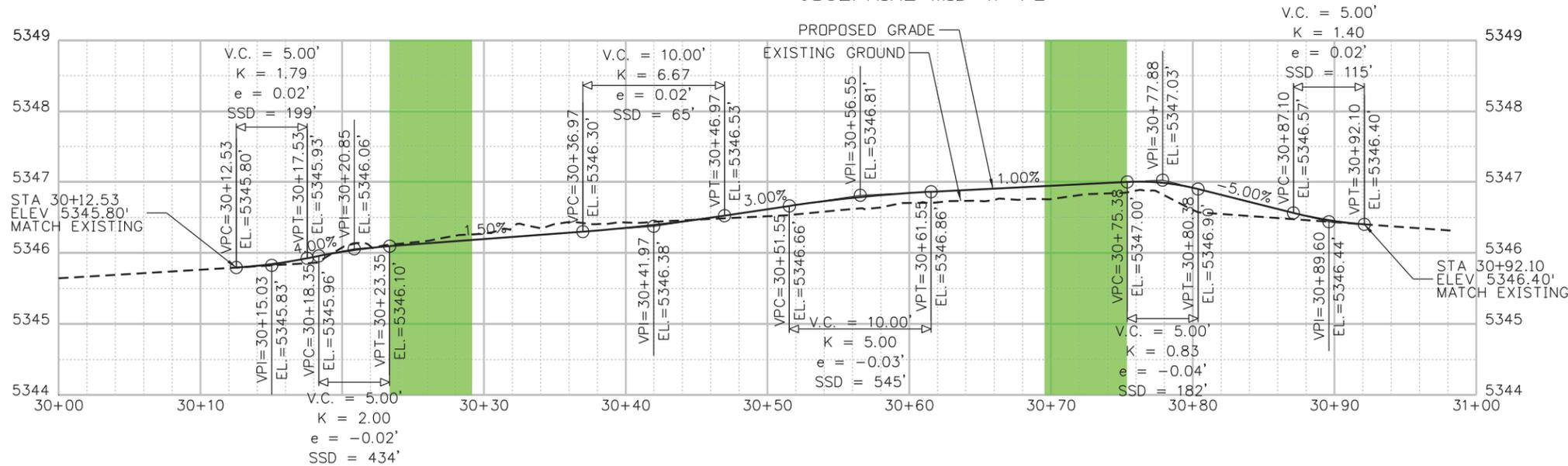
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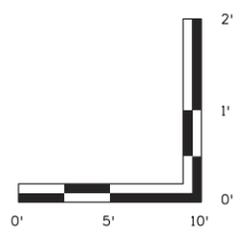


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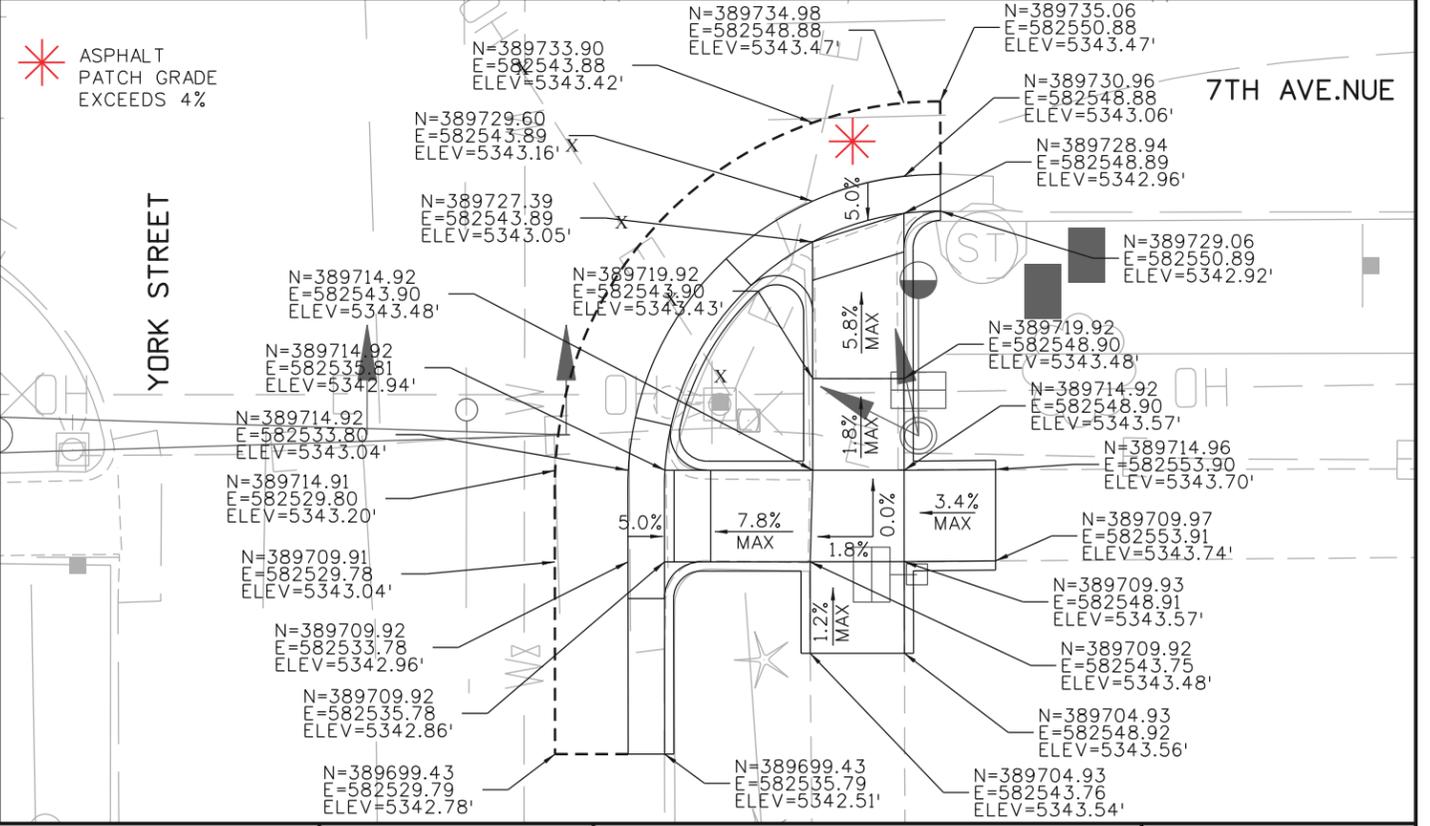
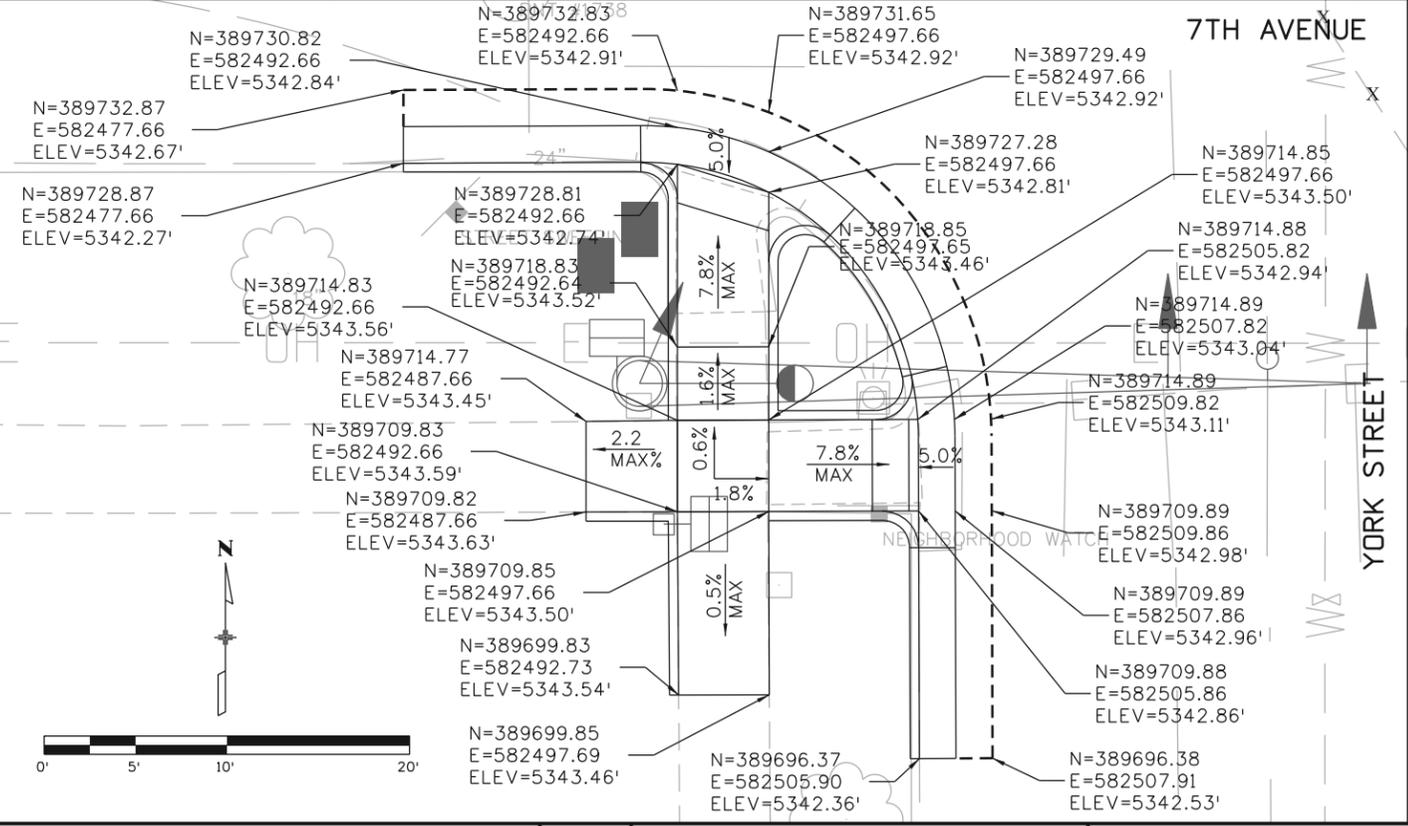
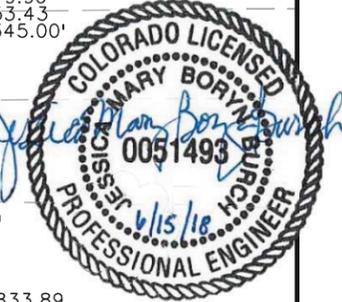
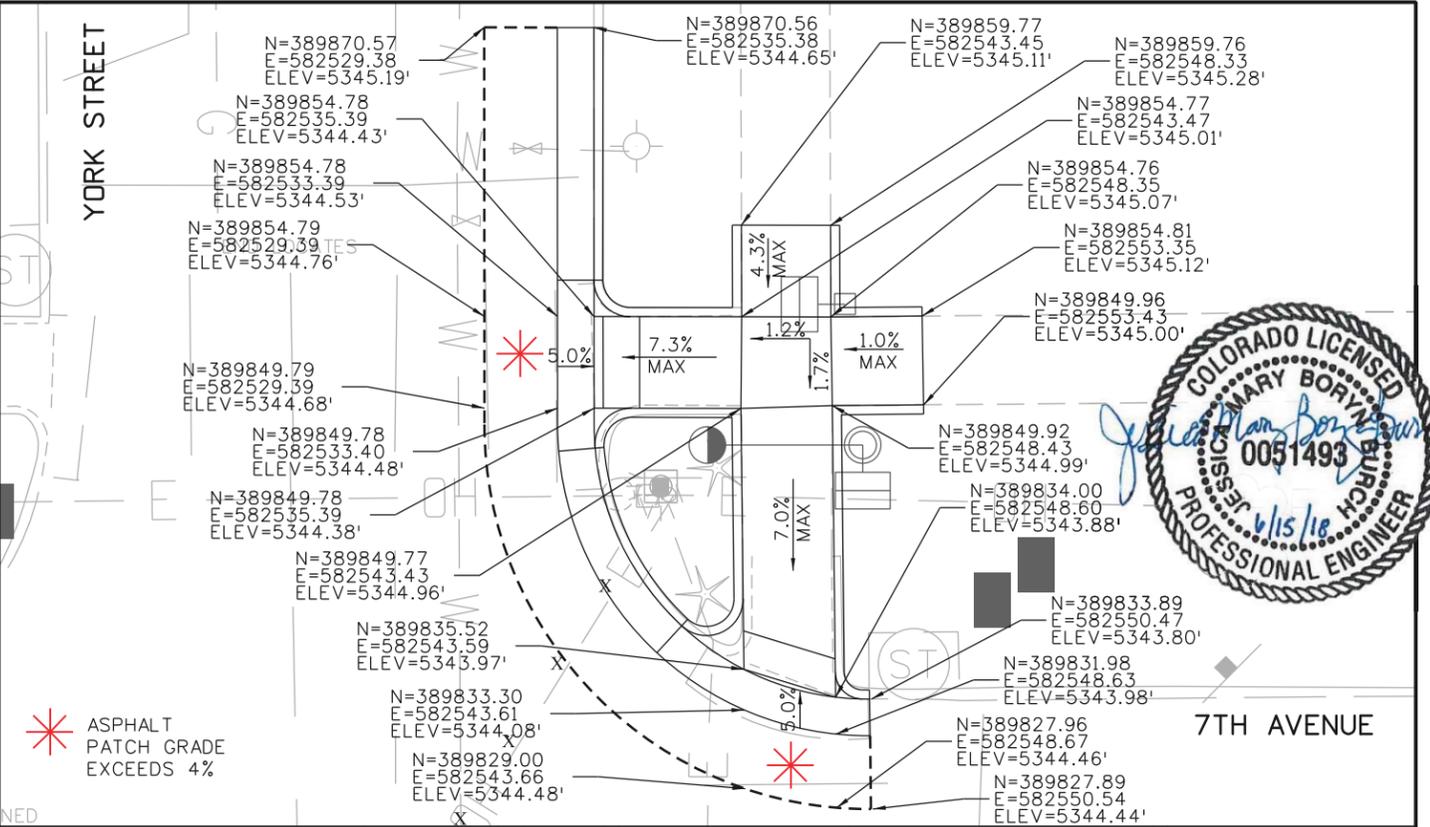
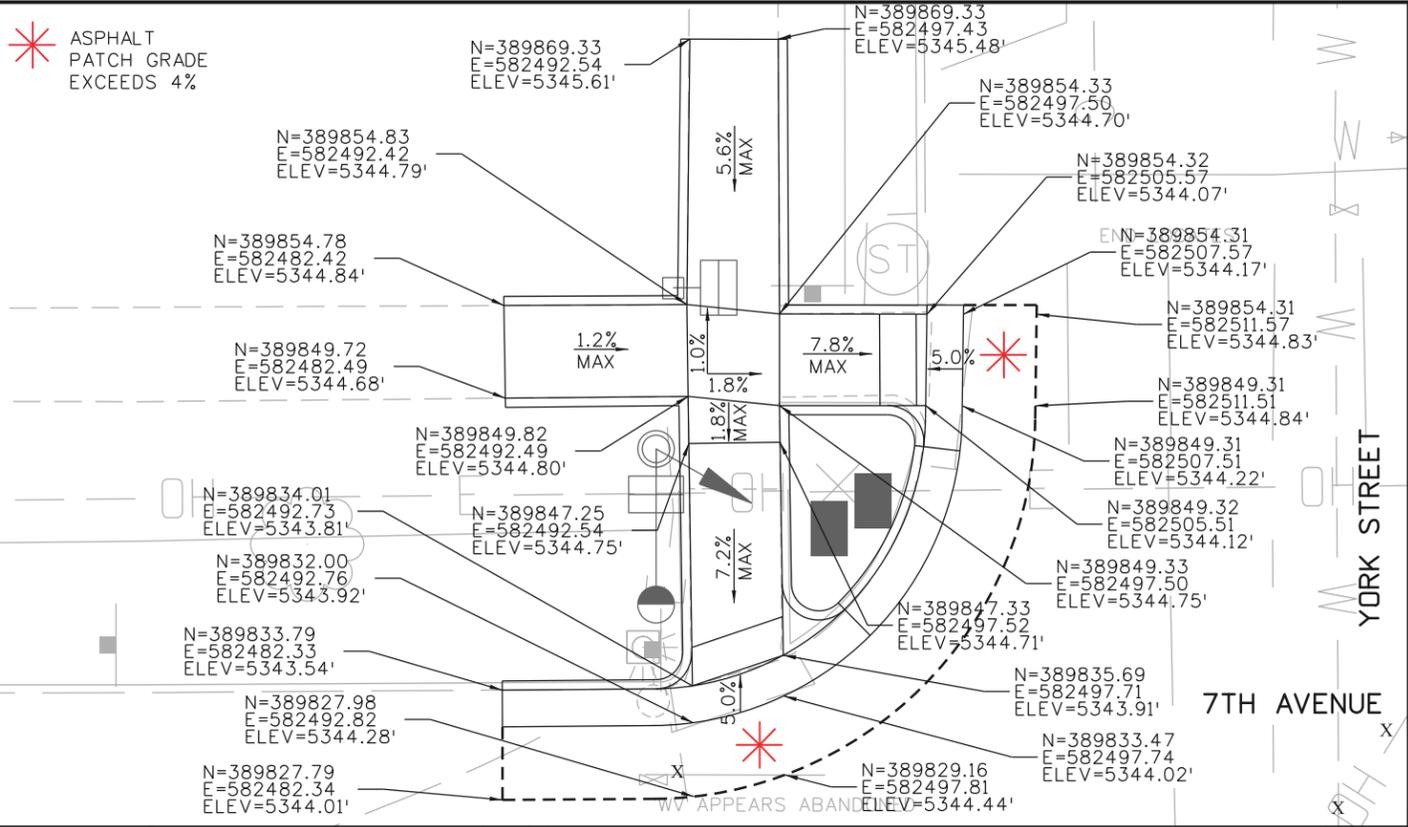


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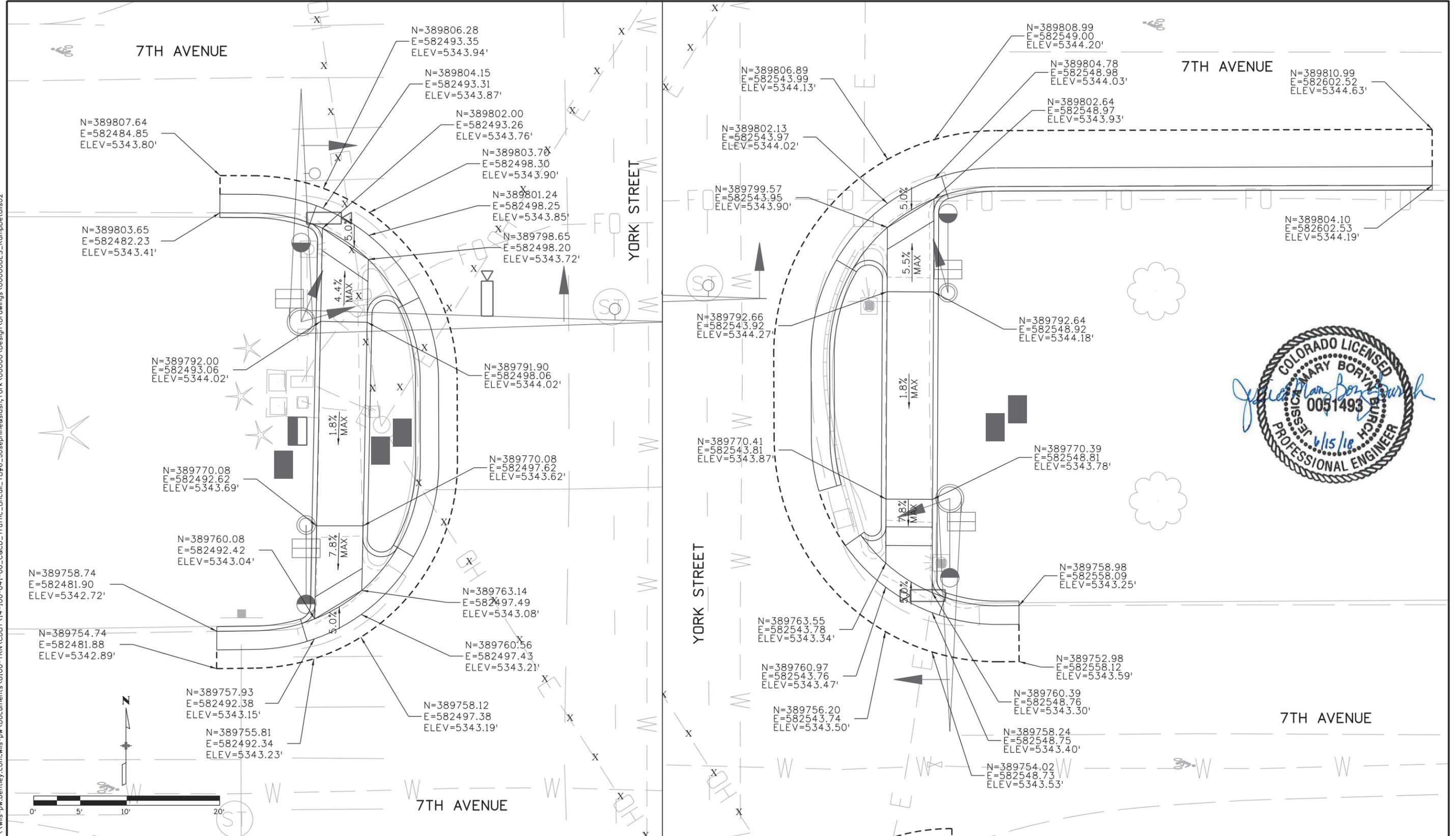
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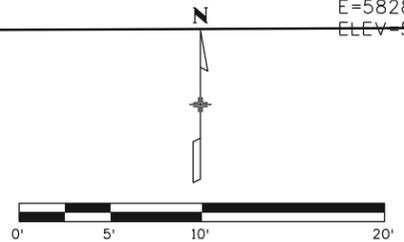
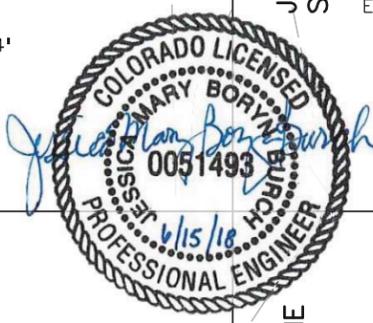
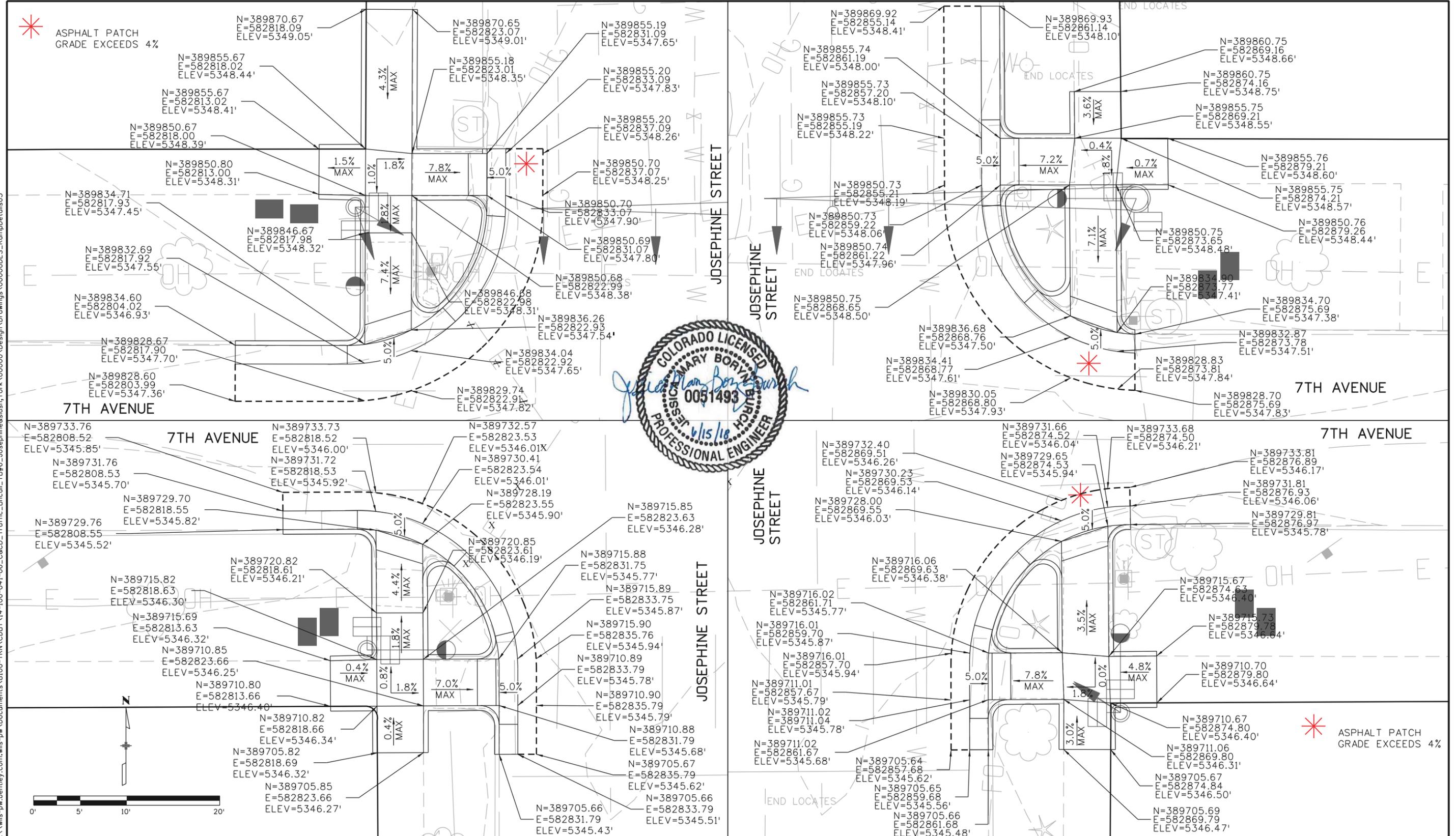
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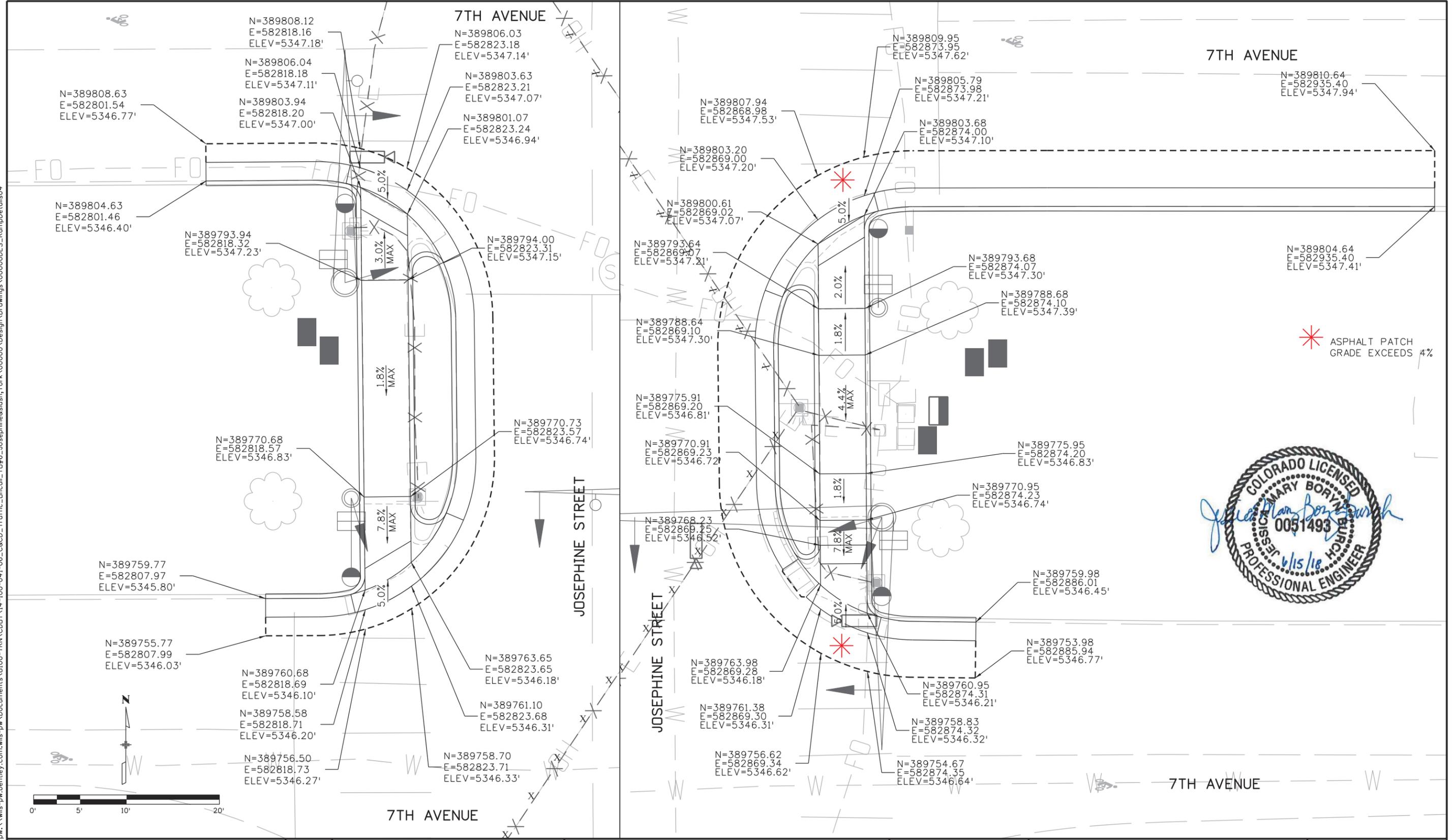
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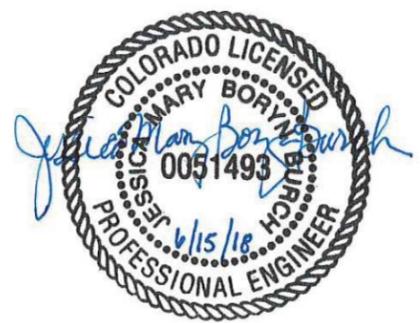
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TRAFFIC SIGNAL GENERAL NOTES

1. REFER TO CITY AND COUNTY OF DENVER (CCD) TRAFFIC STANDARD DRAWINGS FOR LEGEND AND KEY NOTES. TRAFFIC SIGNALS SHALL BE INSTALLED ACCORDING TO CCD TRAFFIC STANDARD DRAWINGS.
2. UTILITY INFORMATION SHOWN IS PLOTTED FROM THE BEST AVAILABLE DATA. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. CONTACT UTILITY NOTIFICATION CENTER OF COLORADO AT 811 FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO EXCAVATING.
3. PER CCD TRAFFIC STANDARD DRAWING 16.1.1, THE NEW SIGNAL POLES WITH LUMINAIRES ARE OWNED AND MAINTAINED BY XCEL ENERGY. THESE POLES AND LUMINAIRES SHALL BE REMOVED BY XCEL ENERGY. POLES WITHOUT LUMINAIRES AND ALL EQUIPMENT ATTACHED TO XCEL POLES (INCLUDING MAST ARMS) SHALL BE REMOVED BY THE CITY AND COUNTY OF DENVER.
4. PER CCD TRAFFIC STANDARD DRAWING 16.1.1, THE NEW SIGNAL POLES WITH LUMINAIRES SHALL BE OWNED AND MAINTAINED BY XCEL ENERGY. NO TRAFFIC SIGNAL POLES OR STREET LIGHT POLES SHALL BE ORDERED UNTIL A SUBMITTAL HAS BEEN ACCEPTED FROM XCEL ENERGY AND CCD TRAFFIC ENGINEERING SERVICES.
5. ALL HARDWARE INCLUDING SIGNAL HEADS, SPACERS, ELBOWS, POLE PLATES AND PLUMBIZERS SHALL BE PAINTED DARK OLIVE GREEN IN CONFORMANCE WITH FEDERAL SPECIFICATION 14056.
6. POLE-MOUNTED SIGNAL HEADS MAY HAVE A SKEWED ORIENTATION FOR PLAN PURPOSES ONLY AND DO NOT SHOW EXACT ORIENTATION. FIELD INSTALLATION SHALL ORIENT SIGNAL HEADS TO FACE THE INTENDED ONCOMING VEHICULAR TRAFFIC.
7. TRAFFIC SIGNAL CONDUIT RUNS SHALL BE ONE 2" (SCH 80 PVC) FOR ELECTRIC UTILITY AND TWO 3" (SCH 80 PVC) FOR TRAFFIC SIGNAL CABLE PER CCD STANDARDS.
8. ELECTRIC UTILITY CONDUIT SHALL TERMINATE IN PULL BOXES MARKED "ELECTRIC" AND TRAFFIC SIGNAL CONDUIT SHALL TERMINATE IN PULL BOXES MARKED "TRAFFIC".
9. TRAFFIC SIGNAL INTERCONNECT CONDUIT SHALL BE ONE 3" (SCH 80 PVC) AS SHOWN IN SIGNAL PLANS.
10. TRAFFIC SIGNAL INTERCONNECT CONDUIT SHALL TERMINATE IN PULL BOXES MARKED "TRAFFIC COMM".
11. ELECTRIC, TRAFFIC, AND COMMUNICATIONS PULL BOXES ARE TYPE A, B, OR C, RESPECTIVELY, UNLESS OTHERWISE NOTED IN THE PLANS.
12. LOCATIONS OF SIGNAL POLES, CONTROLLER CABINET, CONDUIT AND PULL BOXES ARE APPROXIMATE. EXACT PLACEMENT SHALL BE DETERMINED BY CCD IN THE FIELD.
13. CALL CHRIS LILLIE AT (720) 865-4066 AT CCD TRAFFIC OPERATIONS 14 DAYS PRIOR TO CONSTRUCTION TO ARRANGE CONSTRUCTION INSPECTION.
14. CALL AMY RENS AT (720) 913-0802 AT CCD TRAFFIC ENGINEERING 30 CALENDAR DAYS PRIOR TO CONTROLLED INSTALLATION TO REQUEST TRAFFIC SIGNAL TIMING WORK ORDER.
15. TRAFFIC SIGNAL CONTROLLER CABINETS WILL BE P TYPE WITH A COBALT CONTROLLER.
16. CONTACT DENVER TRAFFIC OPERATIONS PRIOR TO VIDEO DETECTION INSTALLATION. DELIVER CCTV CAMERAS TO DENVER TRAFFIC OPERATIONS.
17. PEDESTRIAN CROSSING SIGNS, R10-3e SHALL BE INCLUDED WITH THE ASSOCIATED PUSH BUTTON STATION. REFER TO CITY STANDARD DETAIL 16.3.
18. REFER TO THE STANDARD SPECIFICATIONS AND PROJECT SPECIAL PROVISIONS FOR SIZE, TYPE AND OTHER REQUIREMENTS FOR THE TRAFFIC SIGNAL EQUIPMENT INCLUDING CABINET, FOUNDATION, CONTROLLER, AND MISCELLANEOUS ITEMS.
19. FOR POWER FEED, CONTACT THE XCEL ENERGY BUILDERS CALL LINE AT 1-800-628-2121 AND FOLLOW THE PROMPTS FOR COLORADO. ASK THE REPRESENTATIVE FOR AN APPLICATION TO REQUEST A NEW SERVICE OR THE TYPE OF WORK BEING REQUESTED.
20. A MINIMUM OF 50% OF ALL EXISTING STREET LIGHTING SHALL BE MAINTAINED DURING CONSTRUCTION AT EACH INTERSECTION. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION LIGHTING PLAN TO THE ENGINEER, FOR APPROVAL, 10 DAYS PRIOR TO ANY CHANGE IN THE INTERSECTION LIGHTING.
21. EXISTING SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
22. ALL SIGNAL EQUIPMENT TO BE REMOVED SHALL BE DELIVERED TO DENVER TRAFFIC OPERATIONS DEPARTMENT.

TRAFFIC STRIPING GENERAL NOTES

1. ALL PAVEMENT MARKINGS MUST BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

TRAFFIC SIGNING GENERAL NOTES

1. STREET NAME SIGN LAYOUTS AND WIDTHS SHALL BE PER DENVER TRAFFIC STANDARD DRAWINGS.

TRAFFIC CONTROL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING ADEQUATE TRAFFIC CONTROL THROUGHOUT THE PROJECT, INCLUDING PROPER TRAFFIC CONTROL DEVICES AND PERSONNEL.
2. A TRAFFIC CONTROL PLAN (TCP) IS SUBJECT TO CITY APPROVAL PRIOR TO COMMENCING WORK ON ROADWAY ROW.
3. A COPY OF APPROVED TCPS MUST BE AVAILABLE ON SITE DURING WORK.
4. TRAFFIC CONTROL IS TO BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

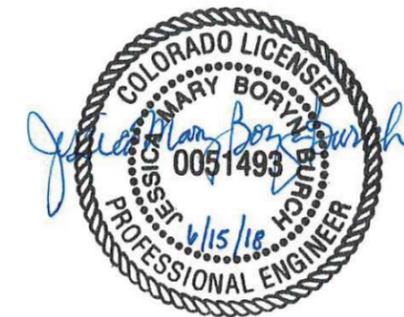
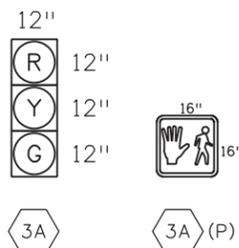


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Print Date: 4/30/2018		Sheet Revisions				As Constructed		7TH AVENUE AND JOSEPHINE/YORK TRAFFIC GENERAL NOTES		Project No./Code	
File Name: 00000TRAF_GeneralNote01		Date:	Comments	Init.		No Revisions:			SHE M320-116		
Horiz. Scale: 1:20 Vert. Scale: As Noted						Revised:	Designer: JMB	Structure Numbers	22218		
Unit Information Unit Leader Initials				Void:	Detailer: CEF	Sheet Subset: TRAF NOTE		Subset Sheets: 1 of 1		Sheet Number	26
 1675 Broadway, Suite 200 Denver, CO 80202 (303) 297-2976 main (303) 297-2693 fax www.wilsonco.com		DEPARTMENT OF PUBLIC WORKS 201 WEST COLFAX AVENUE DENVER, CO 80202 PHONE: (720) 913-4501 FAX: (720) 913-4544									

CCD LEGEND

- CONTROLLER CABINET-EXISTING
- CONTROLLER CABINET-NEW (DARKENED PORTION INDICATES DOOR SIDE OF CABINET)
- PULL BOX-EXISTING
- PULL BOX-NEW
- ⊗ WATER VALVE PULL BDX
- ▭ LOOP DETECTOR (LENGTH AS SPECIFIED)
- POLE-EXISTING
- POLE OR PEDESTAL-NEW
- OPTICOM
- UNDERGROUND CONDUIT-NEW
- LUMINAIRE
- PBW-L or R PEDESTRIAN PUSH BUTTON, LEFT OR RIGHT ARROW. "WAIT FOR WALK SIGNAL"
- └ MAST ARM (LENGTH AS SPECIFIED, SHOWING SIGNAL WITH BACKPLATE)
- ↔ SPAN-WIRE MOUNTED (SHOWING SIGNAL WITH BACKPLATE)
- └ PEDESTAL OR SIDE BRACKET MOUNTED (SHOWING SIGNAL WITHOUT BACKPLATE)
- VDK VIDEO DETECTION CAMERA
- POLE MOUNTED SIGN
- └ SPAN WIRE MOUNTED SIGN
- └ MAST ARM MOUNTED SIGN
- CCTVK CLOSED CIRCUIT TELEVISION CAMERA
- ^{EM} ELECTRIC METER



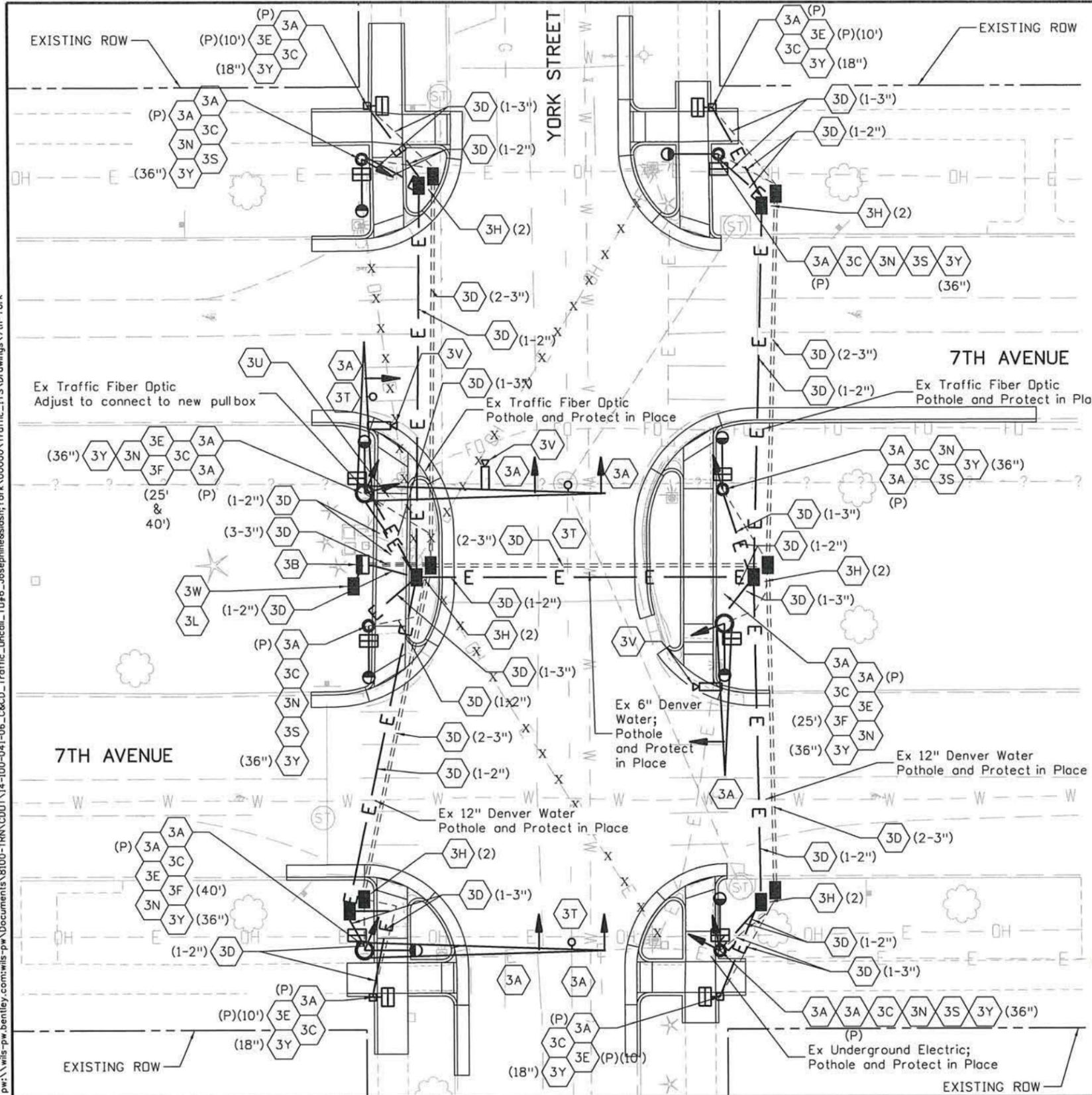
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Date:	Comments	Init.															

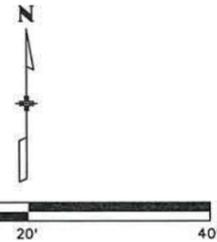
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LIST OF MATERIALS

#X	CCD KEY	ITEM DESCRIPTION	CDOT ITEM NO.	CDOT ITEM DESCRIPTION	UNIT	QTY
	3A	INSTALL SIGNAL HEAD(S)	614-70336	TRAFFIC SIGNAL FACE (12-12-12)	EA	12
	3A (P)	INSTALL PEDESTRIAN SIGNAL HEAD(S) (COUNTDOWN)	614-70150	PEDESTRIAN SIGNAL FACE (16") (COUNTDOWN)	EA	12
	3B	INSTALL SIGNAL CABINET, CONTROLLER AND ASSOCIATED EQUIPMENT	614-75855	TRAFFIC SIGNAL CABINET AND CONTROLLER	EA	1
	3C	INSTALL PUSH BUTTON	614-72860	PEDESTRIAN PUSH BUTTON	EA	12
	3D (X-X")	INSTALL CONDUIT (NUMBER AND SIZE OF CONDUIT(S))	613-00206	2 INCH ELECTRICAL CONDUIT (BORED)	LF	475
	3D (X-X")	INSTALL CONDUIT (NUMBER AND SIZE OF CONDUIT(S))	613-00306	3 INCH ELECTRICAL CONDUIT (BORED)	LF	845
	3E & 3F	INSTALL SIGNAL POLE INSTALL MAST ARM (LENGTH OF MASTARM) (INSTALLED BY CONTRACTOR, OWNED AND MAINTAINED BY CCD)	614-81125 614-81140 614-81540	TRAFFIC SIGNAL-LIGHT POLE STEEL (1-25 FOOT MAST ARM) TRAFFIC SIGNAL-LIGHT POLE STEEL (1-40 FOOT MAST ARM) TRAFFIC SIGNAL-LIGHT POLE STEEL (2-25&40 FOOT MAST ARM)	EA	1 1 1
	3E (P)	INSTALL TRAFFIC SIGNAL PEDESTAL POLE (SIZE OF POLE) (INSTALLED BY CONTRACTOR, OWNED AND MAINTAINED BY CCD)	614-84100	TRAFFIC SIGNAL PEDESTAL POLE ALUMINUM	EA	4
	3H (2)	INSTALL TWO PULL BOXES (1 MARKED "TRAFFIC" (19.25" x 32.25" x 12"), 1 MARKED "ELECTRIC" (15.5" x 25" x 12"))	--	INCLUDED IN 613 ELECTRICAL CONDUIT	EA	6
	3H (SPECIAL)	INSTALL PULL BOX MARKED "TRAFFIC COM" (24" x 36" x 24")	613-07000	PULL BOX (SPECIAL)	EA	1
	3L	ELECTRIC UTILITY COMPANY TO INSTALL POWER FEED, CONTRACTOR TO EXTEND TO CONTROLLER	--	SEE FORCE ACCOUNT	--	--
	3N	INSTALL LUMINEER (LED)(5300 LUMENS)(55 WATT)	613-70250	LUMINEER (LED)(5300 LUMENS)(55 WATT)	EA	8
	3S	STREET LIGHT STANDARD (INSTALLED BY CONTRACTOR, OWNED AND MAINTAINED BY CCD)	614-81000	TRAFFIC SIGNAL-LIGHT POLE STEEL	EA	5
	3T	INSTALL OPTICOM (PRE-EMPTION SYSTEM)	614-72866	EMERGENCY VEHICLE TRAFFIC SIGNAL PRIORITY CONTROL SYSTEM	EA	3
	3U	INSTALL INTERCONNECT (1-3" CONDUIT)	613-00300	3 INCH ELECTRICAL CONDUIT	LF	10
	3V	INSTALL VIDEO DETECTION CAMERA	614-72886	VEHICLE DETECTION SYSTEM (SINGLE CAMERA)	EA	3
	3W	INSTALL ELECTRIC METER PEDESTAL CABINET AND BASE	613-50150	SECONDARY SERVICE PEDESTAL	EA	1
	3Y (XX")	DRILLED CAISSON (SIZE OF CAISSON)	--	DRILLED CAISSON (18 INCH) (INCLUDED IN 614 TRAFFIC SIGNAL PEDESTAL POLE ALUMINUM)	EA	4
			503-00036	DRILLED CAISSON (36 INCH)	LF	104
		TELEMETRY (FIELD)	614-86105	TELEMETRY (FIELD)	EA	1
		ETHERNET MANAGE SWITCH	--	ETHERNET SWITCH (INCLUDED IN TRAFFIC SIGNAL CONTROLLER AND CABINET)	--	--
		WIRING	613-00000	WIRING	LS	0.5
			203-01597	POTHOLING	HR	20



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Sheet Revisions		
Date:	Comments	Init.

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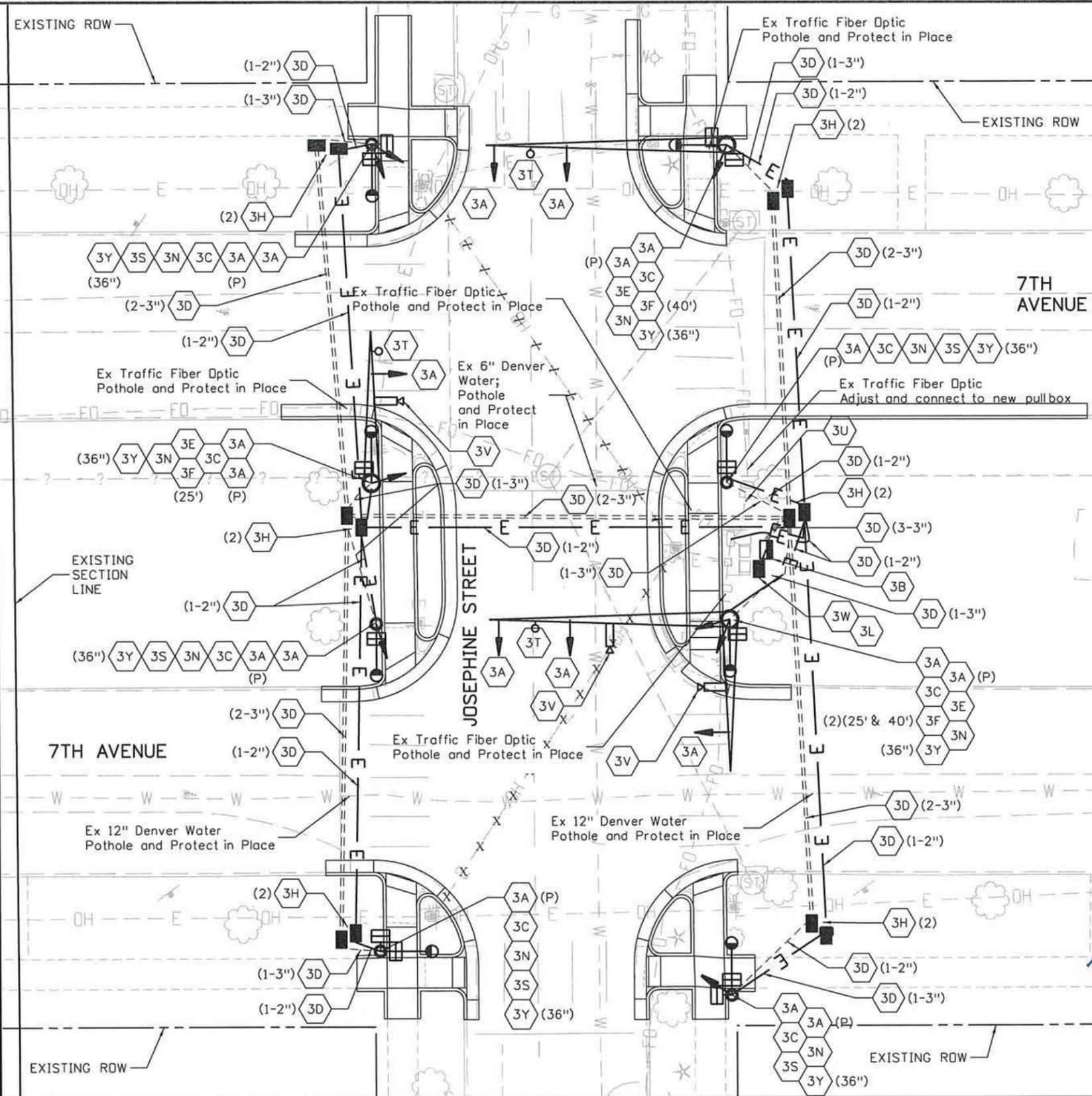
**7TH AVENUE & YORK STREET
 SIGNAL PLAN**

Designer:	JMB	Structure	
Detailer:	JMB	Numbers	
Sheet Subset:	SIGNAL	Subset Sheets:	1 of 2

Project No./Code
 SHE M320-116
 22218
 Sheet Number 28

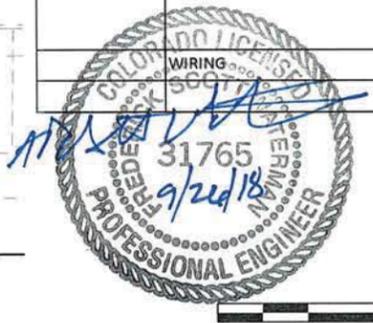
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LIST OF MATERIALS

#X	CCD KEY	CCD ITEM DESCRIPTION	CDOT ITEM NO.	CDOT ITEM DESCRIPTION	UNIT	QTY
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	3A (P)	INSTALL PEDESTRIAN SIGNAL HEAD(S) (COUNTDOWN)	614-70150	PEDESTRIAN SIGNAL FACE (16") (COUNTDOWN)	EA	12
	3B	INSTALL SIGNAL CABINET, CONTROLLER AND ASSOCIATED EQUIPMENT	614-75855	TRAFFIC SIGNAL CABINET AND CONTROLLER	EA	1
	3C	INSTALL PUSH BUTTON	614-72860	PEDESTRIAN PUSH BUTTON	EA	12
	3D (X-X")	INSTALL CONDUIT (NUMBER AND SIZE OF CONDUIT(S))	613-00206	2 INCH ELECTRICAL CONDUIT (BORED)	LF	490
	3D (X-X")	INSTALL CONDUIT (NUMBER AND SIZE OF CONDUIT(S))	613-00306	3 INCH ELECTRICAL CONDUIT (BORED)	LF	825
	3E & 3F	INSTALL SIGNAL POLE INSTALL MAST ARM (LENGTH OF MASTARM)	614-81125	TRAFFIC SIGNAL-LIGHT POLE STEEL (1-25 FOOT MAST ARM)	EA	1
			614-81140	TRAFFIC SIGNAL-LIGHT POLE STEEL (1-40 FOOT MAST ARM)	EA	1
			614-81540	TRAFFIC SIGNAL-LIGHT POLE STEEL (2-25&40 FOOT MAST ARM)	EA	1
	3E (P)	INSTALL TRAFFIC SIGNAL PEDESTAL POLE (SIZE OF POLE) (INSTALLED BY CONTRACTOR, OWNED AND MAINTAINED BY CCD)	614-84100	TRAFFIC SIGNAL PEDESTAL POLE ALUMINUM	EA	0
	3H (2)	INSTALL TWO PULL BOXES (1 MARKED "TRAFFIC" (19.25" x 32.25" x 12"), 1 MARKED "ELECTRIC" (15.5" x 25" x 12"))	--	INCLUDED IN 613 ELECTRICAL CONDUIT	EA	6
	3H (SPECIAL)	INSTALL PULL BOX MARKED "TRAFFIC COM" (24" x 36" x 24")	613-07000	PULL BOX (SPECIAL)	EA	1
	3L	ELECTRIC UTILITY COMPANY TO INSTALL POWER FEED, CONTRACTOR TO EXTEND TO CONTROLLER	--	SEE FORCE ACCOUNT	--	--
	3N	INSTALL LUMINEER (LED)(5300 LUMENS)(55 WATT)	613-70250	LUMINEER (LED)(5300 LUMENS)(55 WATT)	EA	8
	3S	STREET LIGHT STANDARD (INSTALLED BY CONTRACTOR, OWNED AND MAINTAINED BY CCD)	614-81000	TRAFFIC SIGNAL-LIGHT POLE STEEL	EA	5
	3T	INSTALL OPTICOM (PRE-EMPTION SYSTEM)	614-72866	EMERGENCY VEHICLE TRAFFIC SIGNAL PRIORITY CONTROL SYSTEM	EA	3
	3U	INSTALL INTERCONNECT (1-3" CONDUIT)	613-00300	3 INCH ELECTRICAL CONDUIT	LF	10
	3V	INSTALL VIDEO DETECTION CAMERA	614-72886	VEHICLE DETECTION SYSTEM (SINGLE CAMERA)	EA	3
	3W	INSTALL ELECTRIC METER PEDESTAL CABINET AND BASE	613-50150	SECONDARY SERVICE PEDESTAL	EA	1
	3Y (XX")	DRILLED CAISSON (SIZE OF CAISSON)	--	DRILLED CAISSON (18 INCH) (INCLUDED IN 614 TRAFFIC SIGNAL PEDESTAL POLE ALUMINUM)	EA	4
			503-00036	DRILLED CAISSON (36 INCH)	LF	104
		TELEMETRY (FIELD)	614-86105	TELEMETRY (FIELD)	EA	1
		ETHERNET MANAGE SWITCH	--	ETHERNET SWITCH (INCLUDED IN TRAFFIC SIGNAL CONTROLLER AND CABINET)	--	--
		WIRING	613-00000	WIRING	LS	0.5
			203-01597	POTHOLING	HR	20



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Date:	Comments	Init.

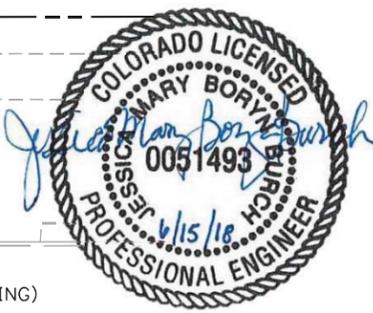
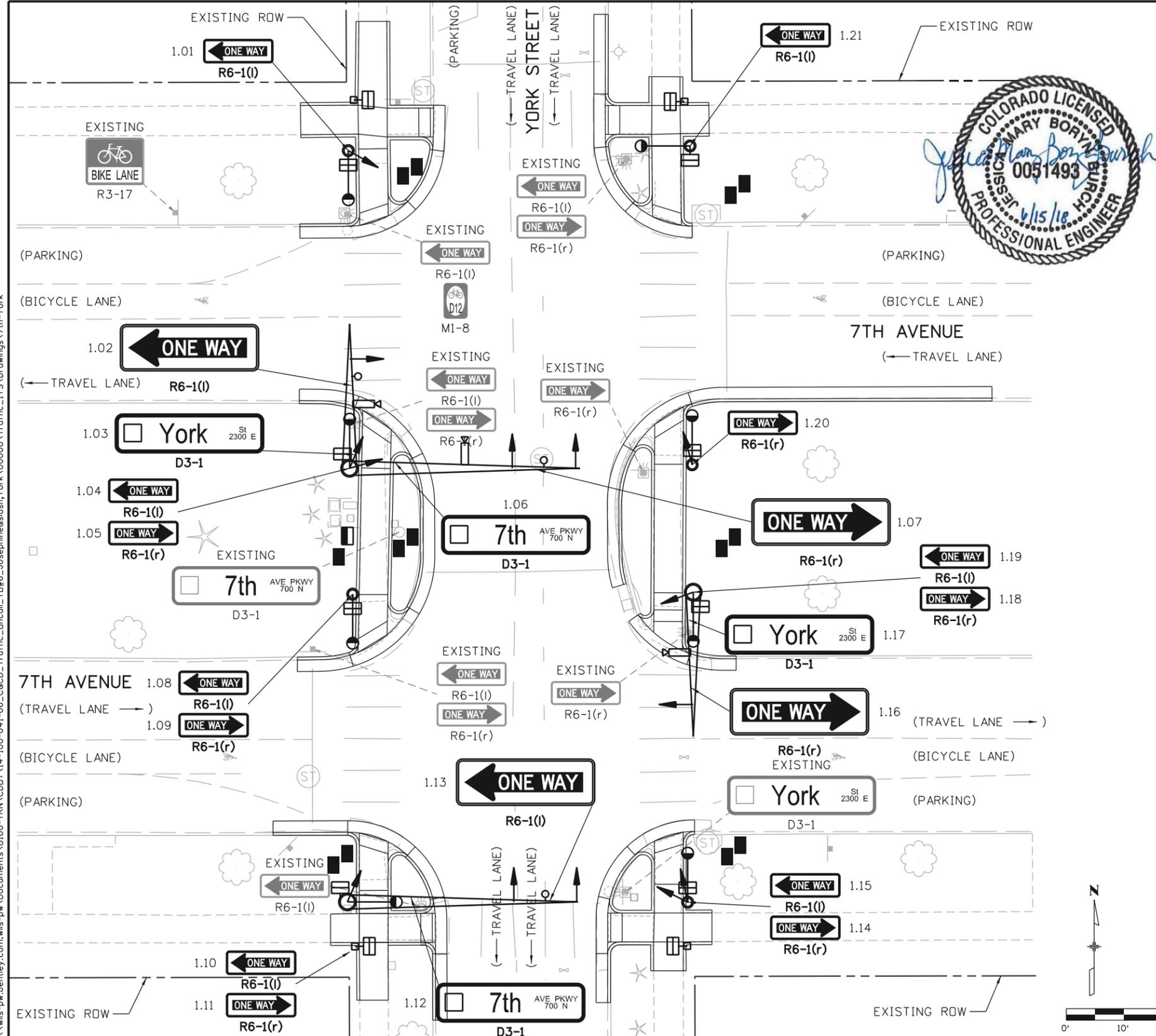
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7TH AVENUE & JOSEPHINE STREET
SIGNAL PLAN
 Designer: JMB
 Detailer: JMB
 Sheet Subset: SIGNAL
 Structure Numbers:
 Subset Sheets: 2 of 2

Project No./Code
 SHE M320-116
 22218
 Sheet Number 29

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TABULATION OF TRAFFIC SIGNS

Sign No.	Direction (Looking)	Sign Code	Sign Panel			Background Color	Legend	Class I	Remarks
			W"	x	H"				
1.01	WB	R6-1 (L)	36	x	12	White	Black	3.00	On Light Pole
1.02	WB	R6-1 (L)	54	x	18	White	Black	6.75	On Mast Arm
1.03	WB	D3-1	72	x	12	Green	White	6.00	York St - On Mast Arm
1.04	WB	R6-1 (L)	36	x	12	White	Black	3.00	On Signal Pole
1.05	SB	R6-1 (R)	36	x	12	White	Black	3.00	On Signal Pole
1.06	SB	D3-1	72	x	12	Green	White	6.00	7th Ave Pkwy - On Mast
1.07	SB	R6-1 (R)	54	x	18	White	Black	6.75	On Mast Arm
1.08	SB	R6-1 (L)	36	x	12	White	Black	3.00	On Light Pole
1.09	EB	R6-1 (R)	36	x	12	White	Black	3.00	On Light Pole
1.10	SB	R6-1 (L)	36	x	12	White	Black	3.00	On Signal Pole
1.11	EB	R6-1 (R)	36	x	12	White	Black	3.00	On Signal Pole
1.12	SB	D3-1	72	x	12	Green	White	6.00	7th Ave Pkwy - On Mast
1.13	SB	R6-1 (L)	54	x	18	White	Black	6.75	On Mast Arm
1.14	EB	R6-1 (R)	36	x	12	White	Black	3.00	On Light Pole
1.15	SB	R6-1 (L)	36	x	12	White	Black	3.00	On Light Pole
1.16	EB	R6-1 (R)	54	x	18	White	Black	6.75	On Mast Arm
1.17	EB	D3-1	72	x	12	Green	White	6.00	York St - On Mast Arm
1.18	EB	R6-1 (R)	36	x	12	White	Black	3.00	On Signal Pole
1.19	SB	R6-1 (L)	36	x	12	White	Black	3.00	On Signal Pole
1.20	SB	R6-1 (R)	36	x	12	White	Black	3.00	On Light Pole
1.21	WB	R6-1 (L)	36	x	12	White	Black	3.00	On Light Pole
7th & York Totals								90.00	

Print Date: 4/26/2018
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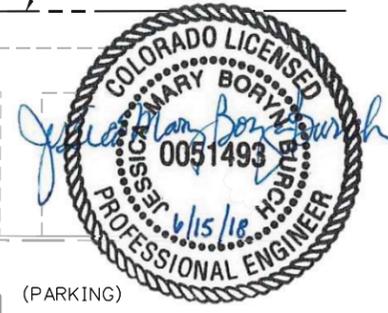
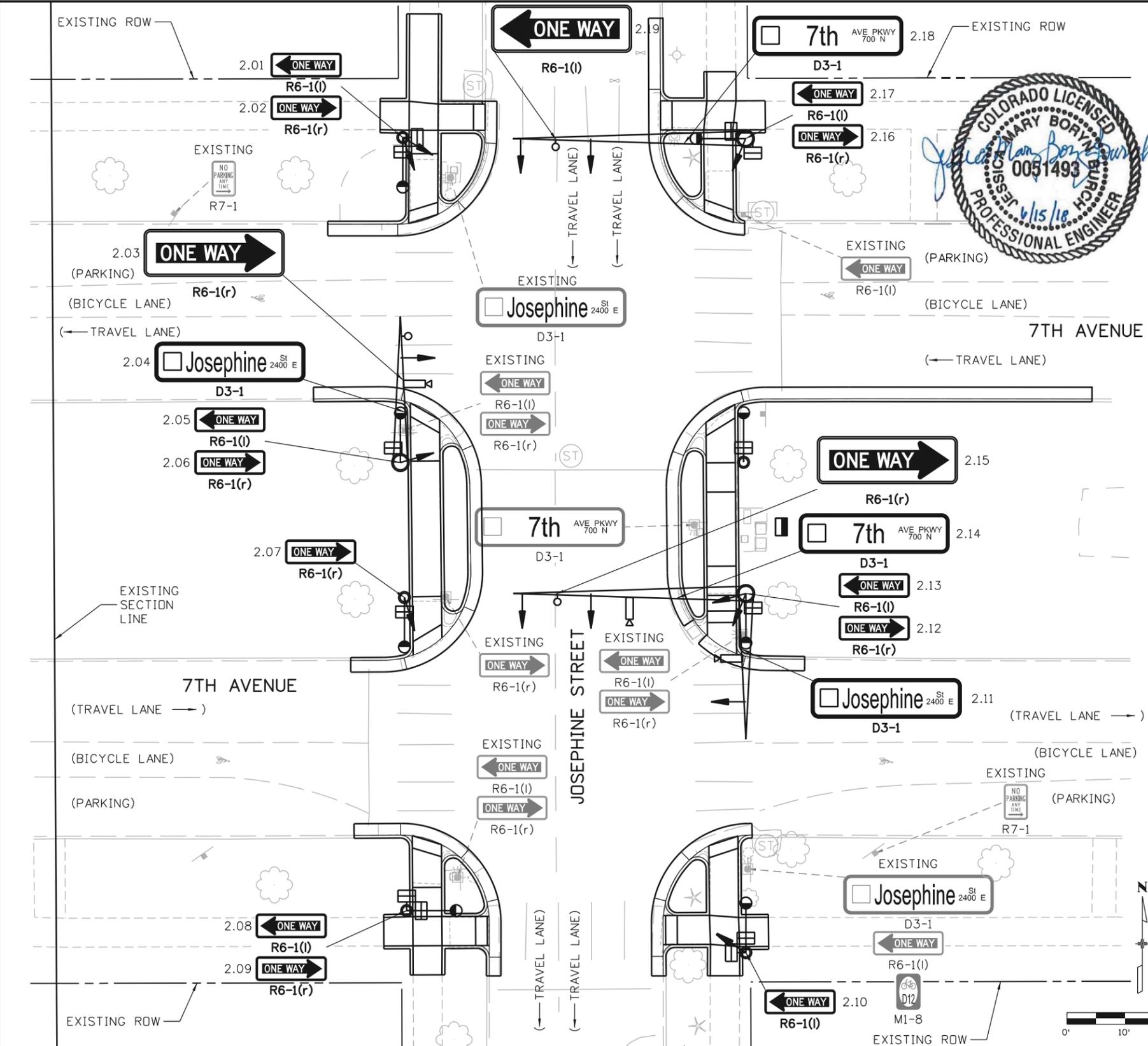
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7TH AVENUE & YORK STREET SIGNING AND STRIPING PLAN
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 Detailer: JMB
 Sheet Subset: S&S Subset Sheets: 1 of 2

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 SHE M320-116
 22218
 Sheet Number 30



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TABULATION OF TRAFFIC SIGNS

Sign No.	Direction (Looking)	Sign Code	Sign Panel			Background Color	Legend	Class I	Remarks
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2.02	WB	R6-1 (R)	36	x	12	White	Black	3.00	On Light Pole
2.03	WB	R6-1 (R)	54	x	18	White	Black	6.75	On Mast Arm
2.04	WB	D3-1	72	x	12	Green	White	6.00	Josephine St - On Mast Arm
2.05	NB	R6-1 (L)	36	x	12	White	Black	3.00	On Signal Pole
2.06	WB	R6-1 (R)	36	x	12	White	Black	3.00	On Signal Pole
2.07	NB	R6-1 (R)	36	x	12	White	Black	3.00	On Light Pole
2.08	EB	R6-1 (L)	36	x	12	White	Black	3.00	On Light Pole
2.09	NB	R6-1 (R)	36	x	12	White	Black	3.00	On Light Pole
2.10	EB	R6-1 (L)	36	x	12	White	Black	3.00	On Light Pole
2.11	EB	D3-1	72	x	12	Green	White	6.00	Josephine St - On Mast Arm
2.12	NB	R6-1 (R)	36	x	12	White	Black	3.00	On Signal Pole
2.13	EB	R6-1 (L)	36	x	12	White	Black	3.00	On Signal Pole
2.14	NB	D3-1	72	x	12	Green	White	6.00	7th Ave Pkwy - On Mast
2.15	NB	R6-1 (R)	54	x	18	White	Black	6.75	On Mast Arm
2.16	WB	R6-1 (R)	36	x	12	White	Black	3.00	On Signal Pole
2.17	NB	R6-1 (L)	36	x	12	White	Black	3.00	On Signal Pole
2.18	NB	D3-1	72	x	12	Green	White	6.00	7th Ave Pkwy - On Mast
2.19	NB	R6-1 (L)	54	x	18	White	Black	6.75	On Mast Arm
7th & Josephine Totals								80.25	

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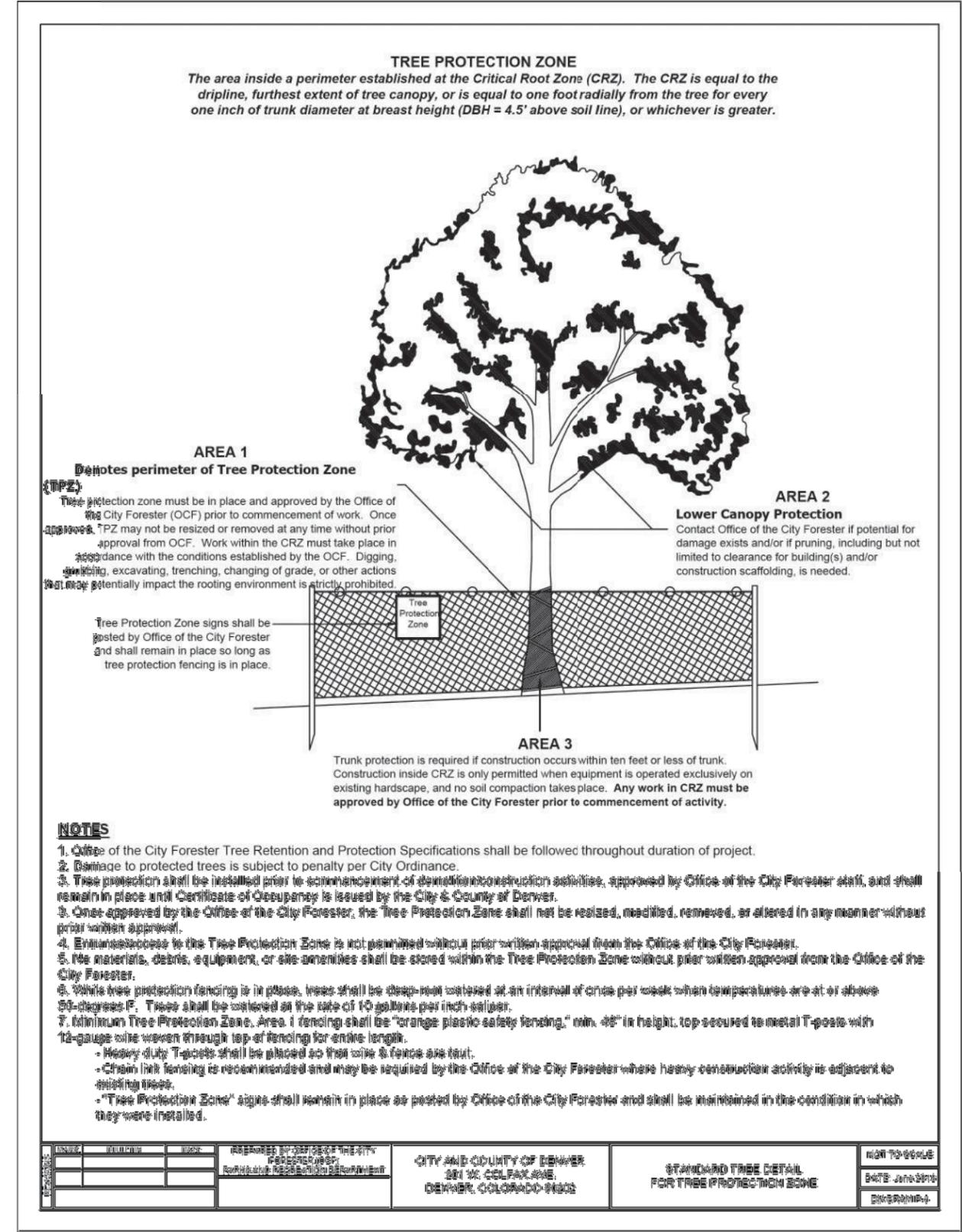
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No Revisions:	Designer: JMB Structure:
Revised:	Detailer: JMB Numbers:
Void:	Sheet Subset: S&S Subset Sheets: 2 of 2

Project No./Code	
SHE M320-116	
22218	
Sheet Number	31

NOTES:

- TREES THAT ARE SPECIFIED TO BE RELOCATED NEED TO BE MOVED BEFORE THE LEAVES BREAK.
- TPZ IS EQUAL TO 18" RADIUS PER 1" DIAMETER DBH OR 1.5-2 TIMES THE DISTANCE FROM THE TRUNK TO THE DRIP LINE. ANY CONSTRUCTION (SOIL DISTURBANCE) THAT MIGHT OCCUR WITHIN THIS ZONE WILL NEED TO BE APPROVED AND MONITORED BY FORESTRY.
- CRITICAL ROOT ZONE IS THE SPACE EQUAL TO 1 FOOT RADIUS FROM THE BASE OF THE TREE TRUNK FOR EACH 1 INCH DIAMETER AT BREAST HEIGHT. CRITICAL ROOT ZONE IS REQUIRED ON ALL TREES. ANY CONSTRUCTION (SOIL DISTURBANCE) THAT MIGHT OCCUR WITHIN THIS ZONE CANNOT AFFECT MORE THAN 10% AND NOT EXTEND INTO THE STRUCTURAL ROOT ZONE (SRZ). THIS WORK WILL ONLY BE HAND WORK AND NEED TO BE APPROVED AND MONITORED BY FORESTRY.
- STRUCTURAL ROOT ZONE IS EQUAL TO 0.9" FOR EVERY 1" DBH. NO SOIL DISTURBANCE IN THAT AREA AT ALL.
- TREE PROTECTION MUST BE IN PLACE DURING THE ENTIRE WORKING PROCESS.
- ANY ROOTS OVER 2' WILL NEED TO BE INSPECTED BY A FORESTRY OPERATIONS REPRESENTATIVE ONCE ADA RAMP INSTALLATION BEGINS.



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Print Date: 4/25/2018
File Name: 00000DES_Tree DetailSheet.dgn
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Sheet Revisions		
Date:	Comments	Init.

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No Revisions:	Designer: DMZ	Structure Numbers
Revised:	Detailer: CEF	
Void:	Sheet Subset: TREE	Subset Sheets: 1 of 1

Project No./Code
SHE M320-116
22218
Sheet Number 32

1. STORMWATER MANAGEMENT CONTROLS FIRST CONSTRUCTION ACTIVITIES

THE CONTRACTOR SHALL PERFORM THE FOLLOWING:

- A. POTENTIAL POLLUTANT SOURCES
 - 1. POSSIBLE POLLUTANT SOURCES IN THE PROJECT AREA ARE AS FOLLOWS: ANY RUNOFF FROM PRIVATE RESIDENTIAL PROPERTIES IN THE AREA; PARKING LOT OF CHURCH AND SCHOOL LOCATED SE OF PROJECT AT 7TH AVE AND ELIZABETH ST.
- B. BEST MANAGEMENT PRACTICES (BMPs) FOR STORMWATER POLLUTION PREVENTION NARRATIVES
 - BMP DETAILS AND NARRATIVES NOT COVERED BY THE SWMP OR STANDARD PLAN M-208 SHALL BE ADDED TO THE SWMP NOTEBOOK BY THE ECS.
- C. OFFSITE DRAINAGE (RUN ON WATER)
 - 1. PLACE BMPs TO ADDRESS RUN-ON WATER ACCORFANCE WITH SUBSECTION 208.03.
- D. VEHICLE TRACKING PAD
 - 1. BMPs SHALL BE IMPLEMENTED IN ACCORDANCE WITH SUBSECTION 208.04.
- E. PERIMETER CONTROL
 - 1. PEREMITER CONTROL SHALL BE ESTABLISHED AS THE FIRST ITEM ON THE SWMP TO PREVENT THE POTENTIAL FOR POLLUTANTS LEAVING THE CONSTRUCTION SITE BOUNDRIES, ENTERING THE STORMWATER DRAINAGE SYSTEM, OR DISCHARGING TO STATE WATERS.
 - 2. PEREMITER CONTROL MAY CONSIST OF VEGETATION BUFFERS, BERMS, SILT FENCE, EROSION LOGS, EXISTING LANDFORMS, OR OTHER BMPs AS APPROVED.
 - 3. PERIMETER CONTROL SHALL BE IN ACCORDANCE WITH SUBSECTION 208.04.

2. DURING CONSTRUCTION

THE SWMP SHOULD BE CONSIDERED A "LIVING DOCUMENT" THAT IS CONTINUOUSLY REVIEWED AND MODIFIED. DURING CONSTRUCTION, THE FOLLOWING ITEMS SHALL BE ADDED, UPDATED, OR AMMENDED AS NEEDED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 208.

- A. MATERIALS HANDLING SPILL PREVENTION - PRIOR TO CONSTRUCTION COMMENCING THE CONTRACTOR SHALL SUBMIT A SPILL PREVENTION, CONTROL COUNTERMEASURE PLAN, SEE SUBSECTION 208.06. MATERIALS HANDLING SHALL BE IN ACCORDANCE WITH SUBSECTION 208.06.
- B. STOCKPILE MANAGEMENT - SHALL BE DONE IN ACCORDANCE WITH SUBSECTION 107.25 AND 208.07.
- C. CONCRETE WASHOUT - CONCRETE WASH OUT WATER OR WASTE FROM FIELD LABRATORIES AND PAVING EQUIPMENT SHALL BE CONTAINED IN ACCORDANCE WITH SUBSECTION 208.05.
- D. SAW CUTTING - SHALL BE DONE IN ACCORDANCE WITH SUBSECTION 107.25, 208.04, 208.05.
- E. STREET CLEANING - SHAL BE DONE IN ACCORDANCE WITH SUBSECTION 208.04.

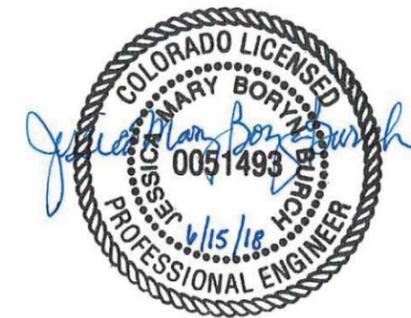
3. TABULATION OF EROSION CONTROL ITEMS

TABULATION OF EROSION CONTROL ITEMS			
ITEM NJMBER	DESCRIPTION	UNIT	QUANTITY
208-0035	AGGREGATE BAG	LF	100
208-0045	CONCRETE WASHOUT STRUCTURE	EA	1
208-0050	STORM DRAIN INLET PROTECTION	EA	8
208-0070	VEHICLE TRACKING PAD	EA	2
208-0103	REMOVAL AND DISPOSAL OF SEDIMENT (LABOR)	HR	90
208-0105	REMOVAL AND DISPOSAL OF SEDIMENT (EQUIPMENT)	HR	90
208-0106	SWEEPING (SEDIMENT REMOVAL)	HR	90
208-0107	REMOVAL OF TRASH	HR	40
208-0205	EROSION CONTROL SUPERVISOR	HR	50
212-0050	SODDING	SF	6,452
212-0101	TREE PROTECTION	EA	19
	F/A 04 - EROSION CONTROL	FA	1

*IT IS ANTICIPATED THAT ADDITIONAL BMPs AND BMP QUANTITIES NOT SHOWN ON THE SWMP SITE MAPS SHALL BE REQUIRED ON THE PROJECT FOR UNFORSEEN CONDITIONS AND REPLACEMENT OF ITEMS THAT ARE BEYOND THEIR USEFUL SERVICE LIFE, SEE SUBSECTION 208.03 AND 208.04 (E). QUANTITIES FOR ALL BMPs SHOWN ABOVE ESTIMATED, AND HAVE BEEN INCREASED FOR UNFORSEEN PROJECT CONDITIONS.

A. BMP SEDIMENT REMOVAL AND DISPOSAL SHALL BE PAID AS: 208 REMOVAL AND DISPOSAL SEDIMENT (LABOR). ALL OTHER BMP MAINTENANCE IS INCLUDED IN BMP DEVICE.

THE TOTAL LIMIT OF DISTURBANCE AREA IS LESS THAN 0.15 ACRE, SO CONTRUCTION ACTIVITIES STORMWATER DISCHARGE PERMIT (CASDP) IS NOT REQUIRED.



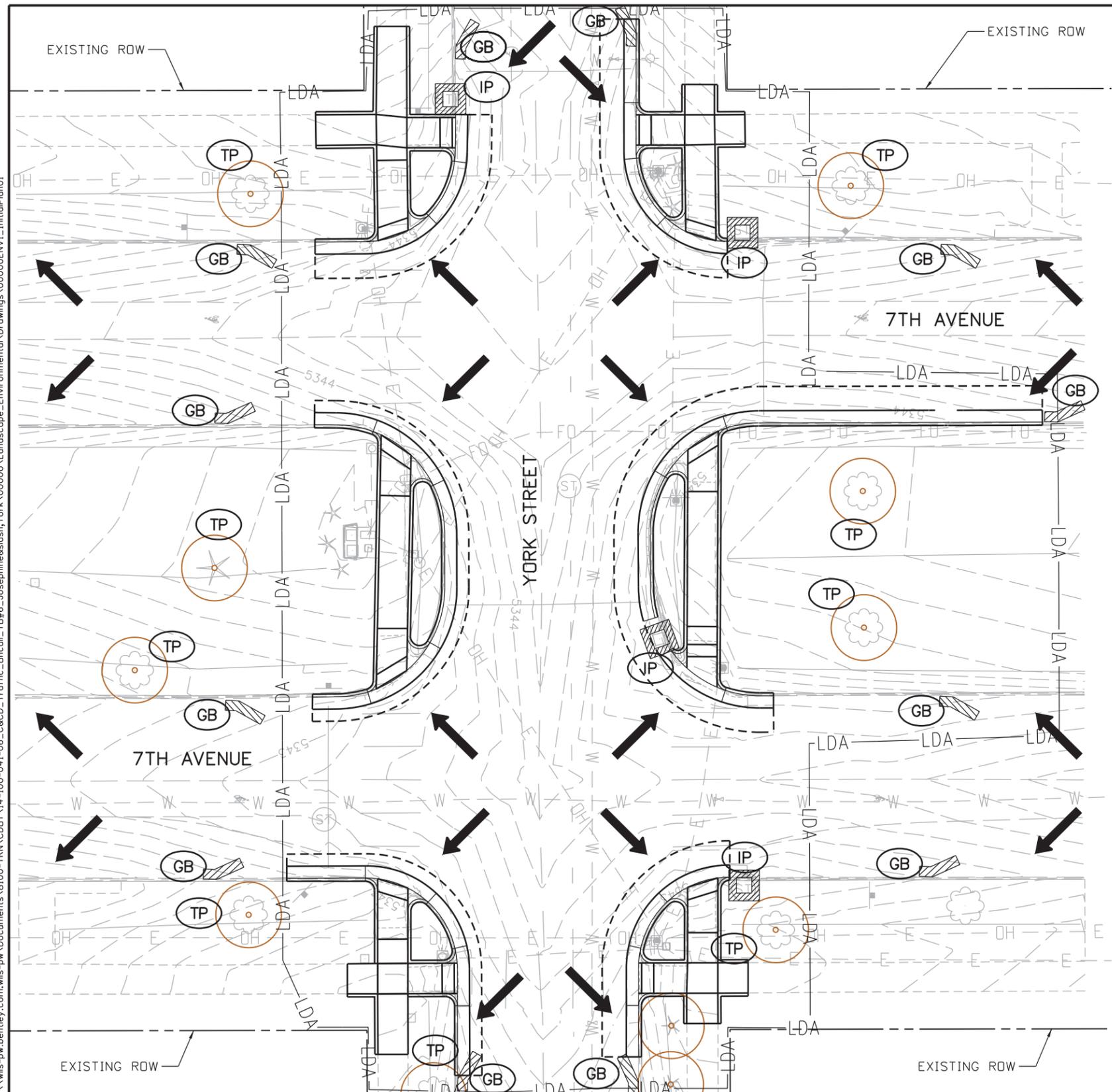
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Print Date: 5/29/2018	0000	Sheet Revisions			 DENVER THE MILE HIGH CITY	As Constructed	EROSION CONTROL PLAN NOTES			Project No./Code
File Name: 00000ENVI_CCD_Notes		Date:	Comments	Init.		No Revisions:				SHE M320-116
Horiz. Scale: 1:20 Vert. Scale: As Noted						Revised:	Designer: JMB	Structure Numbers		22218
Unit Information Unit Leader Initials				Void:	Detailer: CEF					
1675 Broadway, Suite 200 Denver, CO 80202 (303) 297-2976 main (303) 297-2693 fax www.wilsonco.com					Sheet Subset: EROSION	Subset Sheets: 1 of 7		Sheet Number 33		

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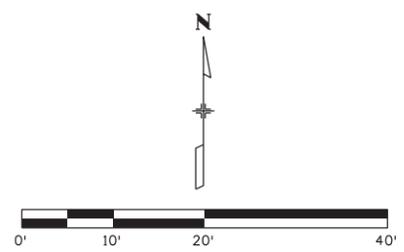


NOTES

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(SEE NOTES 1 & 2)
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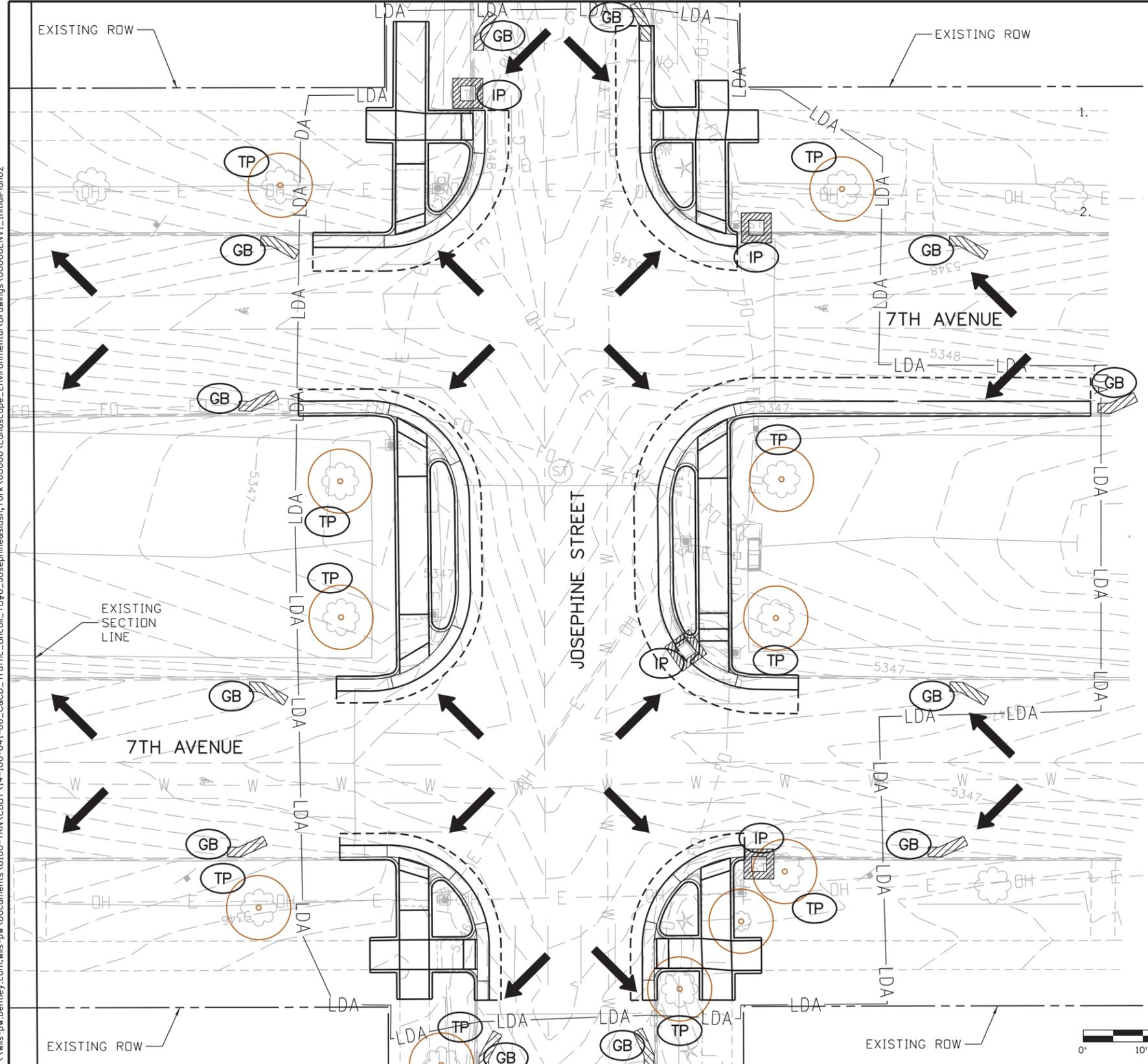
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7TH AVENUE & YORK STREET INITIAL EROSION CONTROL PLAN			
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Detailer:	CEF	Numbers	
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22218
Sheet Number 34

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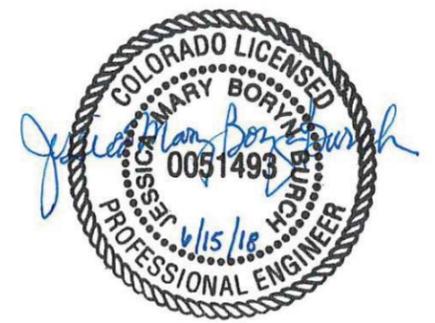
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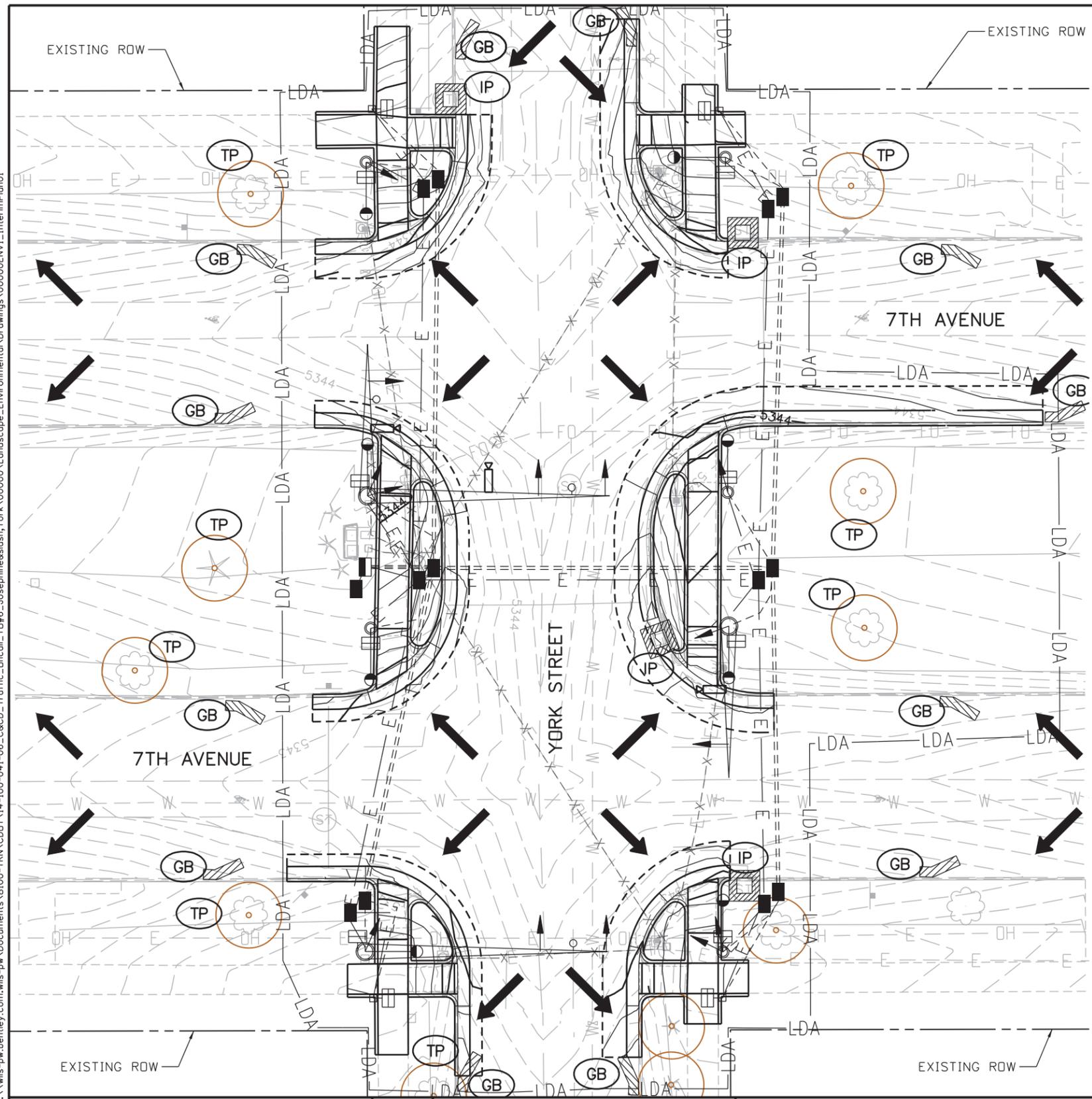
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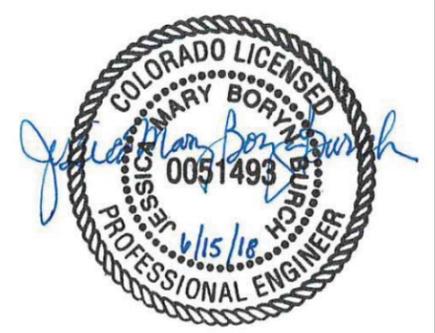
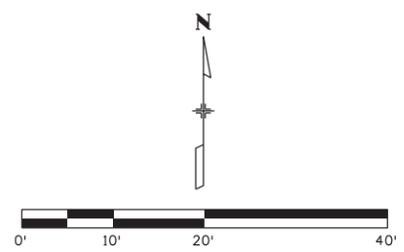


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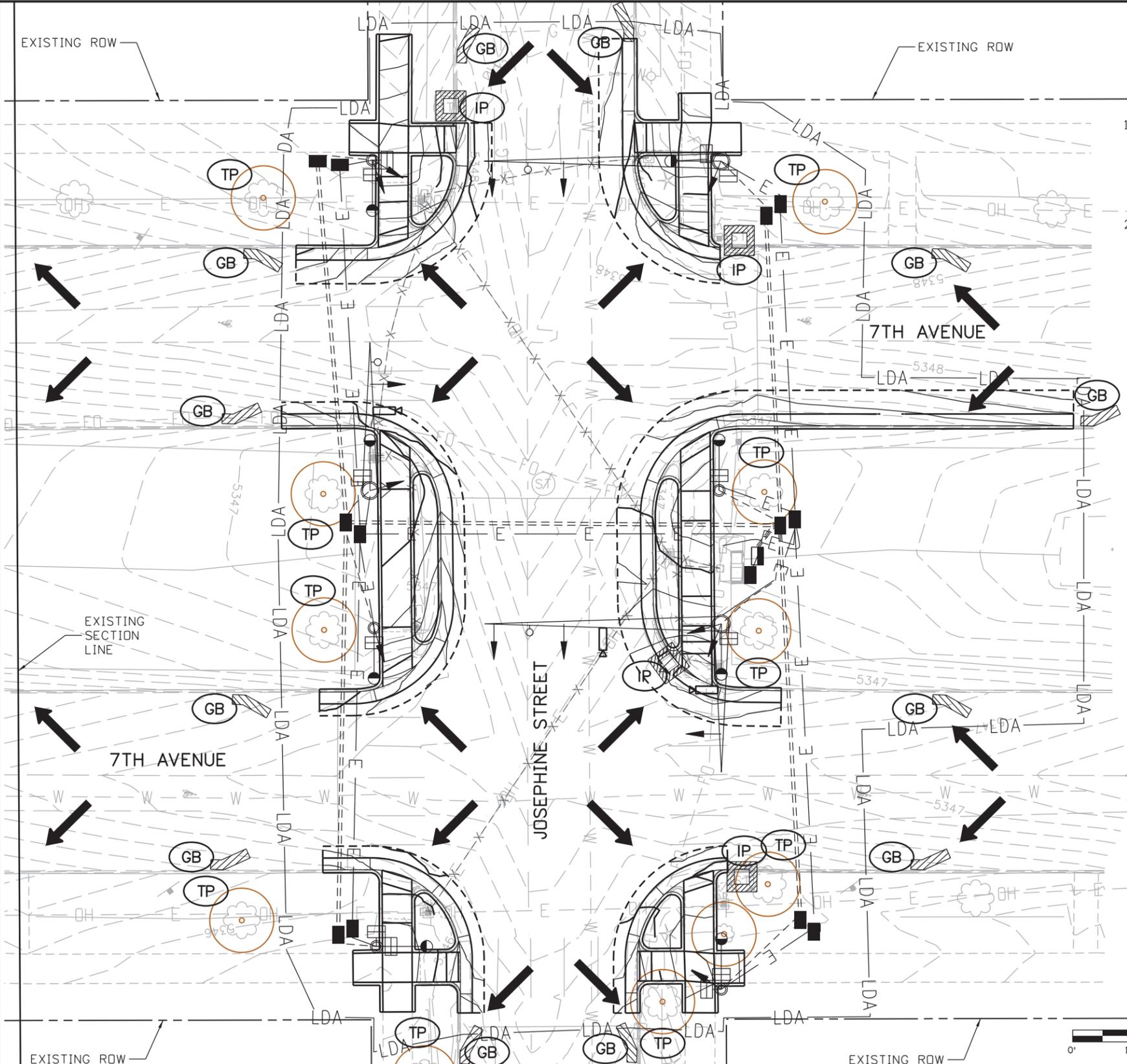
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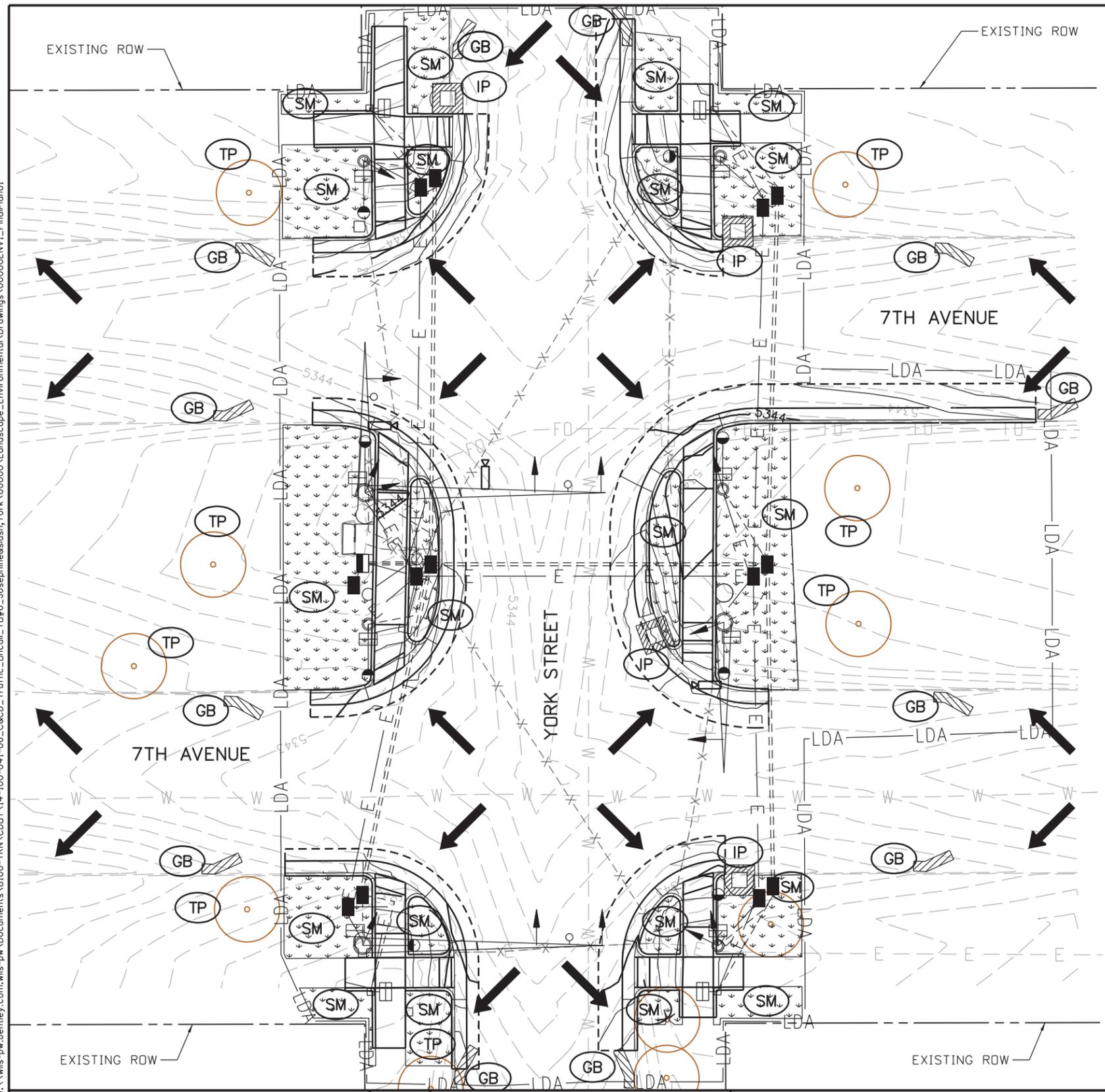
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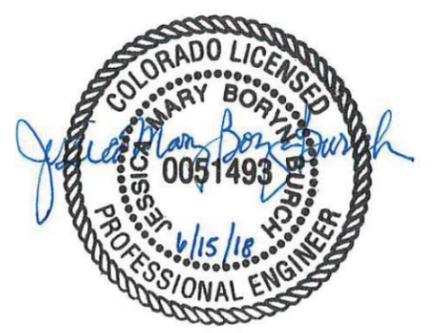
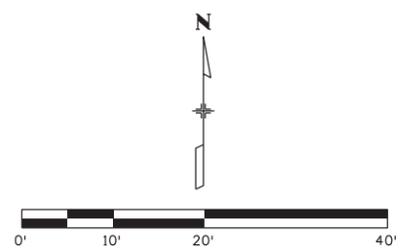


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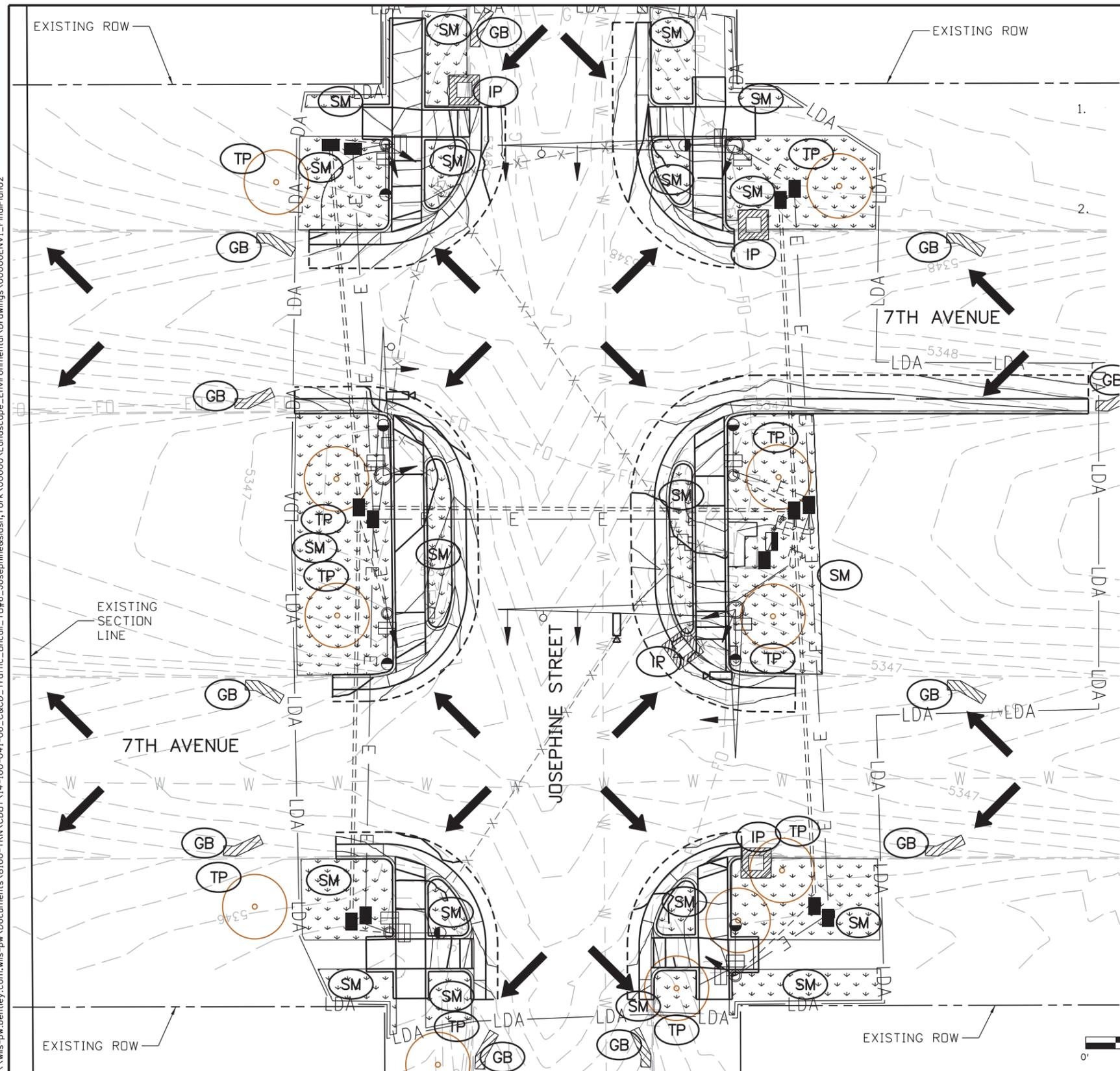
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22218
Sheet Number 39



General Notes:

1. This survey does not constitute a title search by 105 West, Inc., nor is it intended to be construed as a boundary survey.

2. The purpose of this ControlMap is to show the location of Survey Control and Boundary Monuments prior to construction of the W. 7th Ave. at York St. and Josephine St. Project. It is not a boundary survey and is not to be construed as a Land Survey.

3. Date of Field Survey: July 2016. 105 West, Inc. has been asked by the client to sign and stamp this ControlMap as part of the CivilPlan Set for the 7th Ave. Signals Project. As of the date of the Field Survey, stated above, 105 West, Inc. has performed no action in the field and cannot guarantee that all information depicted in the ControlMap currently exist as it did in July of 2016. This ControlMap was signed and stamped on June 15, 2018.

4. Any Person who knowingly removes, alters, or defaces any Public Land Survey Monument or Land Boundary Monument or Accessory commits a Class Two (2) Misdemeanor Pursuant to C.R.S. 18-4-508 (2).

COORDINATE DATUM: Project coordinates are based on the following City and County of Denver Mapping Projection:

Project Mapping Projection
 Projection: User-Defined Transverse Mercator
 Zone: CCD_Local
 CentralPoint False Northing = 400,000.00
 CentralPoint False Easting = 600,000.00
 Latitude of Origin = N39° 45'19.00000"
 CentralMeridian = W104° 53'53.00000"
 Zone Width = 6° 0'00.0"
 Scale Factor at Origin = 1.00025403000
 Units are US Survey Feet

PROJECT BENCHMARK: Elevations are based on CCD benchmark "179B" a CCD brass cap located in the center of a concrete walk at the SE corner of W. 7th Ave. and York St.
 NAVD '88 Elevation = 5,343.57'

I, Richard D. Muntean, a Licensed Professional Surveyor in the State of Colorado do hereby state that the survey represented by this map was made under my supervision and that this map and the notes shown hereon accurately represent said survey to the best of my knowledge, information and belief.



RICHARD D. MUNTEAN, PLS No. 38189
 For and on behalf of 105 West, Inc.

CITY AND COUNTY OF DENVER STATE OF COLORADO

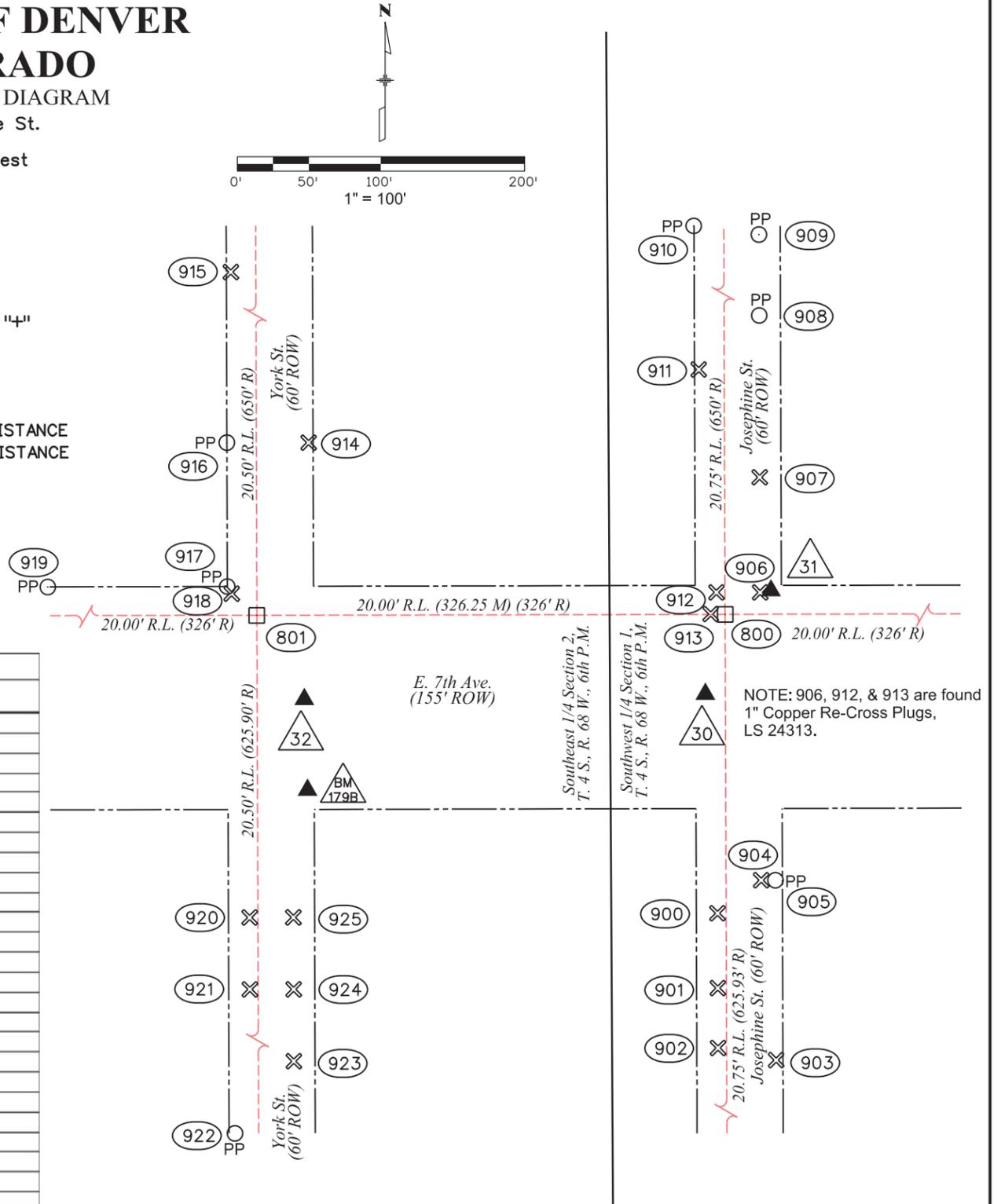
SURVEY CONTROL PERPETUATION DIAGRAM

E. 7th Ave. at York St./Josephine St.
 Sections 1 & 2
 Township 4 South, Range 68 West
 of the 6th Principal Meridian

- (XXX) □ RANGE POINT MONUMENT
- (XXX) ○ PP PROPERTY/ROW EVIDENCE
- (XXX) ✕ MALTESE CROSS/CHISELED "+" UNLESS OTHERWISE NOTED
- ▲ SET CONTROL POINT
- XX (R) = RECORDED DISTANCE
 (M) = MEASURED DISTANCE

Point No.	Project Coordinates		Elev(ft) (NAVD88)	Description
	Northing(ft)	Easting(ft)		
179B	389,717.39	582,546.23	5,343.57	Fnd. CCD BM 179B Brass Cap
30	389,784.09	582,823.30	5,347.10	Set 1" Copper Plug in Conc.
31	389,855.97	582,869.01	5,348.43	Set 1" Copper Plug in Conc.
32	389,780.49	582,544.01	5,344.22	Set 1" Copper Plug in Conc.

Point No.	Northing(ft)	Easting(ft)	Description
800	389,839.46	582,837.15	Fnd. Magnail
801	389,838.79	582,510.90	Fnd. 2" Aluminum Cap in Range Box, Illegible
900	389,631.71	582,831.74	Fnd. Chiseled "+" in Conc. Curb
901	389,579.75	582,831.91	Fnd. Chiseled "+" in Conc. Curb
902	389,538.12	582,832.09	Fnd. Chiseled "+" in Conc. Curb
903	389,529.70	582,872.53	Fnd. Chiseled "+" in Conc. Sidewalk
904	389,654.73	582,862.12	Fnd. Maltese Cross
905	389,654.71	582,872.07	Fnd. 3/4" Brass Tag, PLS 24867
906	389,854.68	582,861.39	Fnd. 1" Copper Re-Cross Plug, LS 24313
907	389,934.72	582,861.09	Fnd. Chiseled "+" in Conc. Curb
908	390,047.20	582,860.77	Fnd. 1" Brass Tag, R.E. Port LS 15321
909	390,103.41	582,860.58	Fnd. 1" Brass Tag, R.E. Port LS 15321
910	390,109.46	582,815.18	Fnd. 1-1/4" Orange Plastic Cap "PE&LS 9489"
911	390,009.60	582,818.62	Fnd. Chiseled "+" in Conc. Sidewalk
912	389,854.77	582,830.97	Fnd. 1" Copper Re-Cross Plug, LS 24313
913	389,839.71	582,827.00	Fnd. 1" Copper Re-Cross Plug, LS 24313
914	389,958.82	582,546.99	Fnd. Chiseled "+" in Conc. Sidewalk
915	390,077.36	582,492.79	Fnd. Chiseled "+" in Conc. Sidewalk
916	389,958.82	582,490.06	Fnd. 1-1/2" Aluminum Tag "PE&LS 9489"
917	389,858.83	582,490.36	Fnd. 1-1/2" Aluminum Tag "PE&LS 9489"
918	389,853.83	582,493.38	Fnd. Chiseled "+" in Conc. Sidewalk
919	389,858.46	582,365.35	Fnd. 1-1/2" Aluminum Tag "PE&LS 9489"
920	389,628.80	582,505.96	Fnd. Chiseled "+" in Conc. Curb
921	389,578.83	582,506.11	Fnd. Chiseled "+" in Conc. Curb
922	389,478.80	582,495.71	Fnd. 1" Brass Tag, PLS 12346
923	389,528.91	582,536.69	Fnd. Chiseled "+" in Conc. Curb
924	389,578.89	582,536.58	Fnd. Chiseled "+" in Conc. Curb
925	389,628.88	582,536.38	Fnd. Chiseled "+" in Conc. Curb



NOTICE: According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

Print Date: 10/5/2016	<table border="1"> <thead> <tr> <th colspan="3">Sheet Revisions</th> </tr> <tr> <th>Date:</th> <th>Comments</th> <th>Init.</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Sheet Revisions			Date:	Comments	Init.										<p>DEPARTMENT OF PUBLIC WORKS 201 WEST COLFAX AVENUE DENVER, CO 80202 PHONE: (720) 913-4501 FAX: (720) 913-4544</p>	<table border="1"> <thead> <tr> <th colspan="2">As Constructed</th> </tr> </thead> <tbody> <tr> <td>No Revisions:</td> <td> </td> </tr> <tr> <td>Revised:</td> <td> </td> </tr> <tr> <td>Void:</td> <td> </td> </tr> </tbody> </table>	As Constructed		No Revisions:		Revised:		Void:		<table border="1"> <thead> <tr> <th colspan="2">Public Infrastructure (E. 7th Ave. at York St./Josephine St.) Survey Control Perpetuation Diagram</th> </tr> </thead> <tbody> <tr> <td>Designer:</td> <td> </td> </tr> <tr> <td>Detailer:</td> <td> </td> </tr> <tr> <td>Sheet Subset: Survey</td> <td>Subset Sheets: 1 of 1</td> </tr> </tbody> </table>	Public Infrastructure (E. 7th Ave. at York St./Josephine St.) Survey Control Perpetuation Diagram		Designer:		Detailer:		Sheet Subset: Survey	Subset Sheets: 1 of 1	<table border="1"> <thead> <tr> <th>Project No./Code</th> </tr> </thead> <tbody> <tr> <td> </td> </tr> <tr> <td>Sheet Number 40</td> </tr> </tbody> </table>	Project No./Code		Sheet Number 40
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