

Purchasing Division

ADDENDUM NO. 1

DATE: December 29, 2016

FROM: City of Grand Junction Purchasing Division

TO: All Offerors

RE: 1st Street Reconstruction (Ouray Ave to North Ave)

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

- 1. See attached plans/drawings to be added to this solicitation.
- 2. A bid line item for Quality Control Testing has been added to the solicitation Bid Schedule. Contractor shall utilize this Revised Bid Schedule when submitting their bid response to this solicitation process (see attached).

The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.

Respectfully,

Duane Hoff Jr.

City of Grand Junction, Colorado

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Pric	e Total Price
1	108.2	8" Storm Drain Pipe (RCP)	10.	LF	\$	β
2	108.2	12" Storm Drain Pipe (RCP)	358.	LF	\$	ß
3	108.2	30" Storm Drain Pipe (RCP)	5.	LF	\$	\$
4	108.2	42" Storm Drain Pipe (RCP)	406.	LF	ß	ß
5	108.5	Connect to Existing Manhole	4.	EA	\$	β
6	108.5	Adjust storm Manhole Rim to Finish Grade (Replace ring and cover with Watertight)	2.	EA	5	δ
7	108.6	Storm Sewer Basic Manhole (48" I.D.)	1.	EA	ß	. . .
8	108.6	Tee Manhole Special (42" X 48")	2.	EA	\$	β
9	108.6	Tee Manhole Special (48" X 60")	1.	EA	\$	β
10	108.6	Single Storm Drain Inlet (Large Area Inlet)	9.	EA	\$	δ
11	108.6	Single Storm Drain Inlet (Vertical	3.	EA	\$	β
12	202	Curb) Removal of Asphalt Mat (Milling)(1"- 8")	18,150.	SY	β	β
13	202	Removal of concrete. Remove concrete as shown* indicated by cross hatch pattern(includes but not limited to Saw Cutting, curb, gutter, sidewalks, driveways slabs v-pans, curb ramps, intersection corners and aprons)	2,711.	SY	\$	δ
14	202	Remove Tree	9.	EA	\$	β
15	202	Removal of Bush	43.	EA	\$	ß
16	202	Removal of Sod	4,900.	SF	\$	β
17	202	Removal of Manhole (Storm)	2.	EA	β	β
18	202	Removal of Inlet	8.	EA	\$	β
19	202	Removal of Ground Sign	1. (1 of 6)	EA	β	β

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	e Total Price
20	202	Removal of Pipe (12" and Smaller)	305.	LF	ß	β
21	202	Removal of Pipe (18" and Larger)	75.	LF	\$	\$
22	202	Abandon Pipe by plugging Open end	2.	EA	\$	β
23	202	Removal of wood boarder	171.	LF	\$	β
24	202	Removal of Parking Chalks	4.	EA	β	β
25	202	Removal of Fence	64.	LF	ß	ß
26	202	Remove post	7.	EA	β	β
27	202	Remove buisness sign base (901 and 935 N 1st St and 2582 HWY 6 & 50)	5.	EA	\$	β
28	202	Remove Pole Foundation	1.	EA	ß	\$
29	202	Remove Light Pole	2.	EA	ß	β
30	203	Potholing	Lump	sum		β
31	203	Unclassified Excavation	13,658.	CY	ß	ß
32	203	Sweeping with Pick-up Broom	70.	HR	ß	β
33	203	Disposal of Radioctive Materials	250.	CY	ß	β
34	206	Structural Backfill (Flowfill)(as Required)	100.	CY	\$	β
35	208	Storm Drain Inlet Protection	14.	EA	β	β
36	208	Concrete Washout Facility	4.	EA	ß	\$
37	208	Vehical track Pad	4.	EA	β	β
38	208	Erosion Control (Complete In Place)	Lump	sum		β
39	209	Dust Abatement	120.	Day	β	β
40	210	Reset Sprinkler System (Complete in Place)	6.	EA	\$	Ε
41	210	Reset Sign Panel	21.	EA	ß	ß
42	210	Adjust Water Valve to Finish Grade	20.	EA	ß	β
		DE 2 (2 of 6			

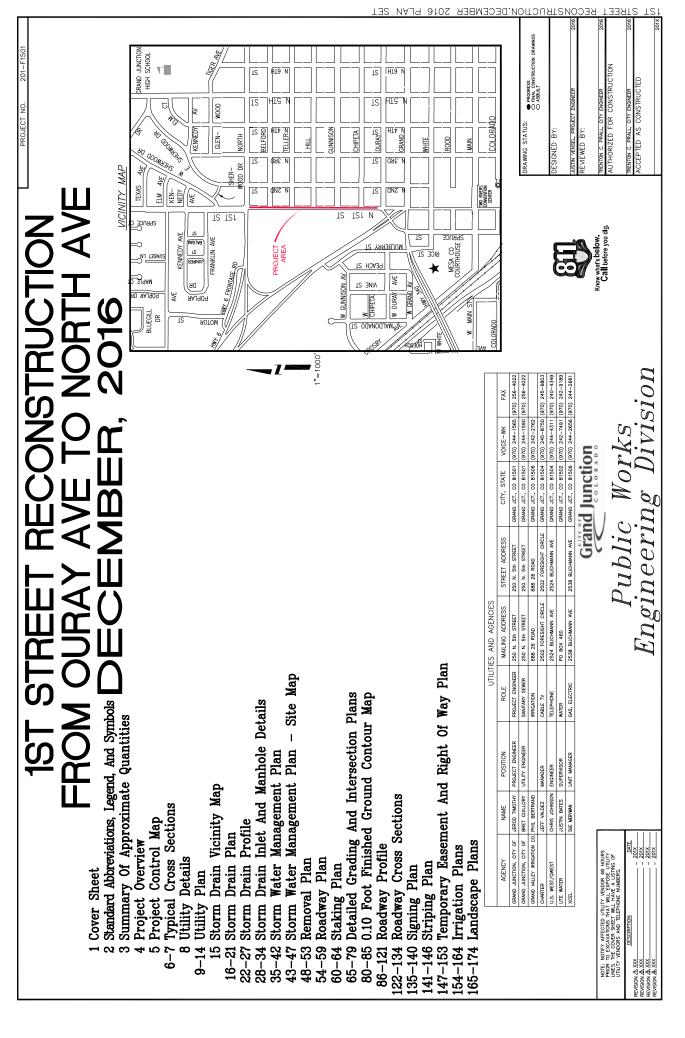
Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	e Total Price
43	210	Reset Fire Hydrant	1.	EA	ß	β
44	210	Adjust Water meter to Finished Grade	27.	EA	\$	β
45	210	Rest Backflow Preventor	3.	EA	\$	β
46	210	Temporary Sidewalk	100.	LF	\$	β
47	210	Adjust Manhole to Finished Grade	10.	EA	\$	β
48	210	Adjust SSCO to Finished Grade	23.	EA	\$	β
49	210	Reset Parking Blocks	6.	EA	\$	β
50	210	Reset Business (Sign) (Price to include new Base)	2.	EA	\$	ß
51	210	Reference and Reset Monitoring Well Covers(Protect Monitoring Well in Place)	9.	EA	δ	β
52	212	Sod (Behind BOW to restore sodded areas	2,205.	SF	β	ß
53	213	Inorganic mulch (behind BOW to restore Xericscape or gravel driveway)(4" Deep)	17.	CY	β	5
54	304	Subgrade Stabilization (Class 3 ABC)20" Thick(Road Prism)(1st	10,400.	SY	\$	β
55	304	Street) Aggregate Base Course (Class 6)(12" Thick)(1st St and North Ave)	10,700.	SY	δ	β
56	304	Aggregate Base Course (Class 6)(6" thick) (Paving behind BOW to Restore Driveways and parking)(FOR HMA ONLY)	1,150.	SY	β	β
57	304	Aggregate Base Course (Class 6)(12" Thick)(Connector Roads)	1,250.	SY	\$	ß
58	401	Hot Mix Asphalt (3" Thick)(Gradin SX-75)(Binder 64-22)(Bottom Mat Connector Roads)	1,250.	SY	δ	β

Item No.	CDOT, City Ref.	Description	Quantity	Units		Unit Price	Total Price
59	401	Hot Mix Asphalt (2" Thick)(Gradin SX-75)(Binder 76-28)(Top Mat Connector Roads)	1,250.	SY	\$	Б	
60	401	Hot Mix Asphalt (2" Thick) (Overlay Fuoco DWY)	800.	SY	\$	β	
61	401	Hot Mix Asphalt Grade Transition from Back of Curb to Existing Pavement Grade (Grading SX- 75)(Binder 64-22)(Fuoco Driveway)	35.	TON	\$		
62	401	Hot Mix Asphalt (4" Thick) (Grading SX-75)(Binder 64-22)(2ea 2"Lifts)(Paving Behind Back of Walk to restore Drives and Parking)	1,150.	SY	\$	B	
63	412	Colored Concrete Pavement (Parking)(Class D)(8" Thick) (Omaha Tan)(Davis Color 5084)(Price to Include 4" Class 6 Aggregate Base Course)	1,190.	SY	\$	B	
64	412	Concrete Pavement (Alley)(Class D)(8" Thick)(Price to Include 4" Class 6 Aggregate Base Course)	250.	SY	\$	Б	
65	412	Concrete Pavement (Paving Behind Back of Walk to restore Drives and Parking)(Class D)(6" Thick)(Price to Include 4" Class 6 Aggregate Base Course)	65.	SY	ß	Б	
66	420	Geogrid (TriAxial)	1,000.	SY	\$	\$	
67	608	Concrete Drainage Pan (1.5' Wide)	5.	LF	ß		
68	608	Concrete Drainage Pan (3' Wide)	35.	LF	ß	\$	
69	608	Concrete Drainage Pan (6' Wide)	180.	LF	ß		
70	608	Concrete Curb (6" wide)	2,090.	LF	ß	\$	
71	608	Concrete Curb with Spill Gutter (1.5' Wide)	510.	LF	\$	ß	
72	608	Concrete Curb and Gutter (2' Wide)	1,350.	LF	ß	\$	

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Prid	ce Total Price
73	608	Concrete Curb and Gutter (2.5' Wide)	25.	LF	ß	_
74	608	Concrete Drive Over Curb and Gutter (3' Wide)	470.	LF	β	_
75	608	Concrete Sidewalk (4" Thick)	2,710.	SY	\$. .
76	608	Monolithic Curb Gutter and Sidewalk (7' Wide)	25.	SY	δ	β
77	608	Monolithic Curb Gutter and Sidewalk (10' Wide)	300.	SY	δ	β
78	608	Concrete Curb Ramp (8" thick)	255.	SY	\$	ß
79	608	Concrete Driveway Section (8" Thick)	1,690.	SY	\$	\$
80	608	Concrete Intersection Corner	340.	SY	\$
81	608	Concrete Median Edgeing 1.5' Wide(Sunset Rose)(Davis Color 160)	410.	LF	\$	_ B
82	608	Detectable Warning (Wet Set) (2'X2")	65.	EA	\$
83	613	Large Splice Box (Quasite 24X36)(Labled "FIBER")	8.	EA	\$	_ B
84	613	Splice Box (Quasite 13X24X15)(Labled "Fiber")	8.	EA	δ	β
85	613	Large Splice Box (48" Manhole Cone Section on Blocks)(Price to include Manhole Ring and Cover labled "TRAFFIC")	7.	EA	\$	_ B
86	613	6" Diameter SCH 80 PVC Conduit Duct (With a standard 8KN pull rope pre installed and #10 tracing wire)(to be installed in common trench)	2,500.	LF	\$	_ B
87	613	2" Diameter SCH 80 PVC Conduit Duct (With a standard 8KN pull rope pre installed and #10 tracing wire)(to be installed in common trench)	4,300.	LF	\$	_ B
88	613	Electrical Utility Trech (24" Wide X 30" Deep) (Including Backfill Material Per Special Provisions)	2,500.	LF	\$	_

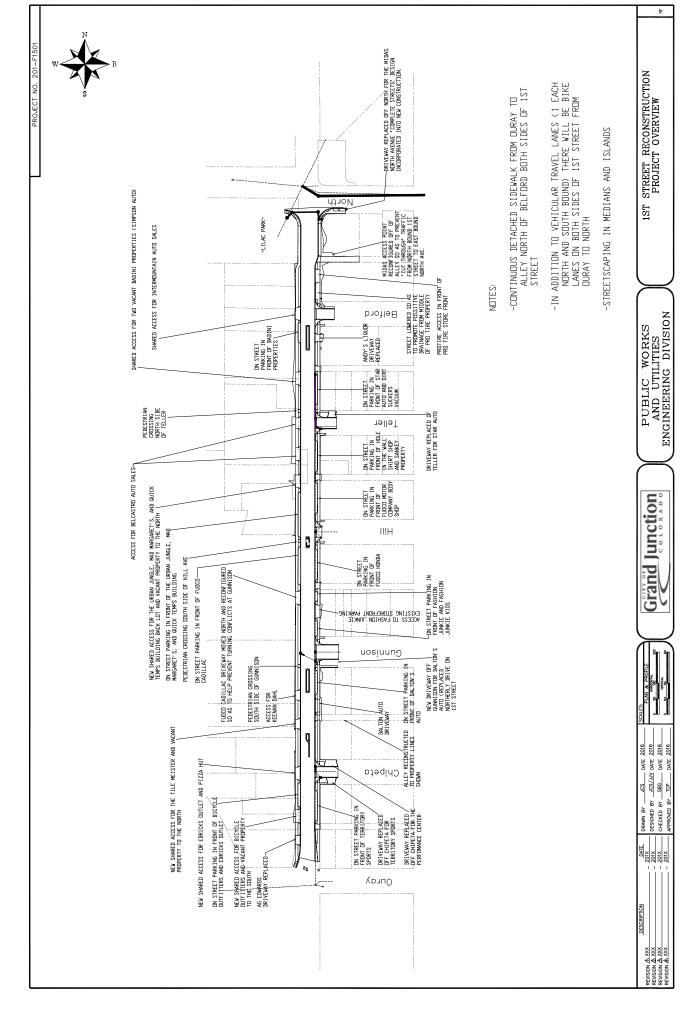
Item No.	CDOT, City Ref.	Description	Quantity	Units	l	Jnit Pric	ce	Total Price
89	620	Sanitary Facility	Lump	sum			ß	
90	625	Construction Surveying	Lump	sum			ß	
91	626	Mobilization	Lump	sum			ß	
92	627	Preformed Thermoplastic Pavement Markings (Word Symbol)	360.	SF	ß		_ \$	
93	627	Preformed Thermoplastic Pavement Markings (X-Walk/Stop Bar)	2,200.	SF	\$		_ \$	
94	629	Reference and Reset Survey Monuments	7.	EA	ß		_ \$	
95	629	Set Property Pin Per Legal Description	19.	EA	ß		_ \$	
96	630	Traffic Control Plan	Lump	Sum			ß	
97	630	Traffic Control (Complete In Place)	Lump	Sum			ß	
98	630	Flagging	1,000.	HR	\$		_ \$	
99		Landscaping (per Summary of Approximate Quantities in Drawing Package)	Lump	sum			\$	
100		Irrigation (per Summary of Approximate Quantities in Drawing Package)	Lump	sum			ß	
101	INC	Incentive (Maximum 30 Days @ \$2500/Day)			-		\$	75,000.00
102	QC	Quality Control Testing	Lump	Sum			ß	
MCR		Minor Contract Revisions			-		<u>\$</u>	100,000.00
			Bio	d Amount	:		\$	
	Did Am	ount.						

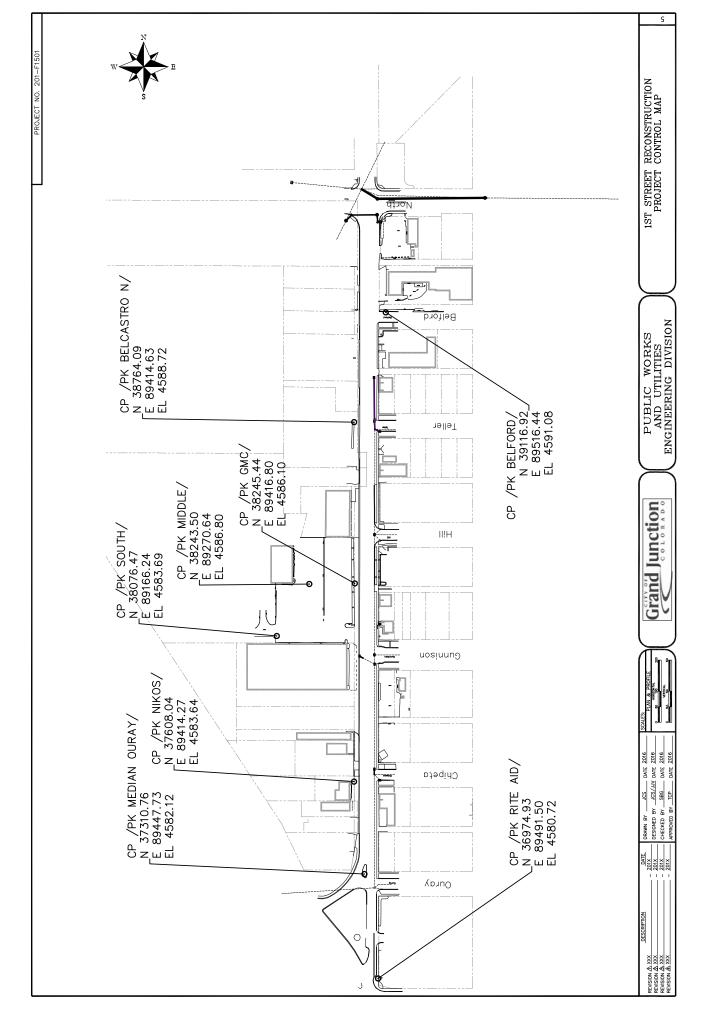
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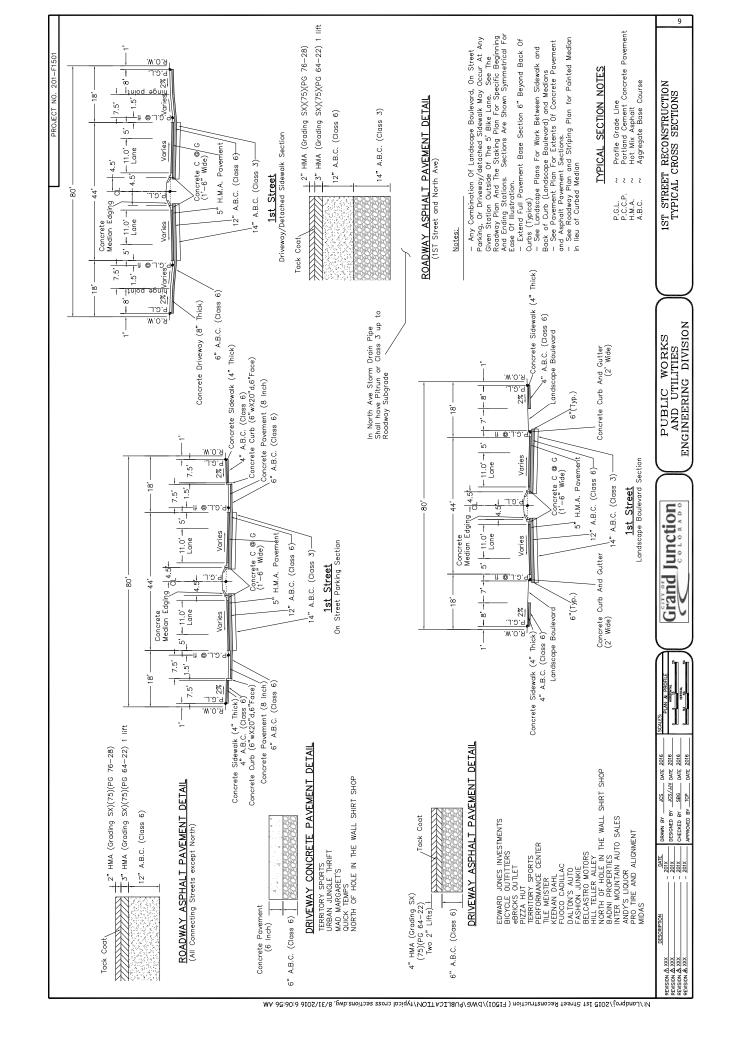


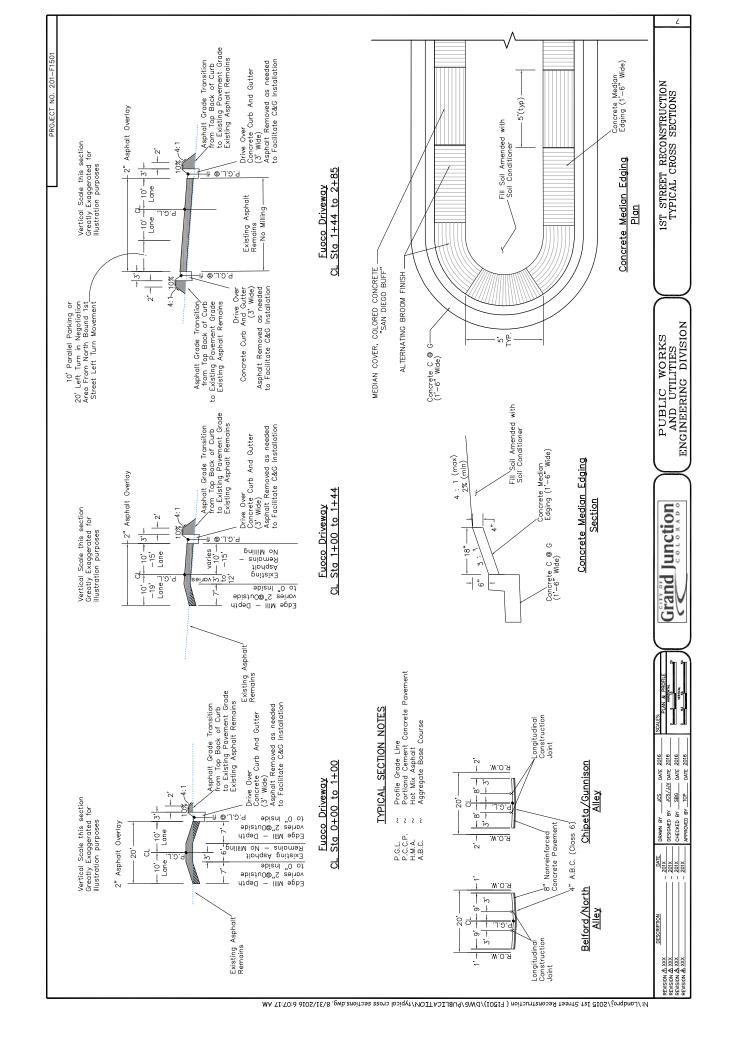
ABBREVIATIONS	LEGEND		SYMBOLS	PROJECT NO. Fxxxxx
AMERICAM ASSOLATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS AGGREGATE BASE COURSE ASBESTOS CEMENT	BSWMP DRAINAGE BASIN BOUNDARY	PROPOSED CONCRETE CURB AND GUTTER	BENCH MARK	•
ANGLE FORM BALES ANUMINED STEEL PIER ANUMINED STEEL PIER ANEMAS CONCERV FOR	BSWMP ANCHORED STRAW BALES · ASB ASB· ASB·	PROPOSED CONCRETE CURB, CUTTER, & SDEWALK	CATCH BASIN CLEAN OUT	■ ‰
AMERICAN WATER WORKS ASSOCIATION BUTTERLY VALVE BUTTERLY VALVE	BSWAP SLL FENCE . SF SF .	PROPOSED CONCRETE	CURB STOP	• -
BACK OF WALK BEGIN CARB RETURN BOTTOM FROM WATER MANAGEMENT DOACHINGS	BUILDING [[[[[[]]]]]]	SIDEWALK PROPOSED "WET" UTILITIES PROPOSED "WET" UTILITIES PROPOSED "WET" UTILITIES	FIRE HTDRANI GUY WRE ANCHOR	⊶ ↑
CHORD CATALINIUM REPRESENTATION COLORADO DEFARIMENT OF TRANSPORTATION	CONORETE CURB AND GUITER Z CARB AND GUITIN	(CONSTRUCTION NOTE WILL INDICATE THEE, SZE, AND MATERIAL ON NEW MAIN)	HEADGATE	₩ €
CAST ROW CIMB CUTTER & SIDEWALK CENTER LINE	CONORTE CURBAUTER, \$2.SIDEWALK	ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE	MAILBOX	3 5 10
CORRUGATED METAL PIPE COMPANY AND CANITARY SEWER) COLISINATION (AS IN STORM SEWER AND CANITARY SEWER)	CONCRETE DITCH	SHOWN THE SAME AS THEIR EXISTING COUNTERFART, BUT INDICATED BY BOLDER LINETYPE	MANHOLE (ELECTRIC)	⊚ €
S IN STORM SEMEN AND SAMETAN. SHOWEN T	CONCRETE SIDEWALK * sw	RAIL ROAD [[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[MANHOLE (5AS) MANHOLE (SANITARY/STORM)) 0
COPPER DUCTILE RON DRIVERAY	CULVERT (************************************	RETAINING WALL	MANHOLE (TELEPHONE)	⊚
ELECTRIC END CURB RETURN EDGE OF GUTTER	EARTH DITCH EARTH		MANHOLE (TV)	⊗ (€
ELEVATION EDGE OF PAVEMENT EXISTING EXISTING	EDGE OF GRAVEL		METER (GAS)	o) ≅o
FULL BUY FACE OF CURB FINISHED GRADE	EDGE OF PAVEMENT	STRIPING (DASHED WHITE)	METER (WATER)	0
FLOW LINE FLANCE FORCE MAIN	FENCE (BARBED WIRE) **	STRIFING (CONTINUOUS YELLOW)	PEDESTAL (TELEPHONE)	٩
FIBER OFTICS FAR SIDE FOOTING	FFNCF (NM NKT)	STRIPING (DASHED YELLOW) WILLOW	PEDESTAL (TV)	ΔN
GAS GRADE BREAK GAS METER	ביית ביית ביית ביית ביית ביית ביית ביית	70P OF SLOPE	PUCPERITY FIN	• 🛭
GATE VALVE HOT BITUMINOUS PAVENET HIGH DEUVITY POLYETHYLENE	(NOTE OF TAXABLE OF TA	CONTOUR LINES (SHOWN PETWEN TOP & TOE)	REDUCER FITTING	•
INVERT IRRIGATION LENGTH OF ARC	FENCE (PLASTIC)	TOE OF SLOPE	SIGN OR POST (SIGN TYPE NOTED)	+-
LONG CHORD LINGAR FEET LONG ARE	FENCE * * (TEMPORARY CONSTRUCTION)		SPRINKLER HEAD STREET LIGHT	» &
SHORT ARC LEFT MAILBOX	FENCE (WOOD) **	-	SURVEY MONUMENT (CITY)	NSO.
MESA COUNTY SURVEY MONUMENT MANUMENT IONIT MECHANICAL IONIT	FENCE (WOVEN WIRE)	(THIS CASE A WATER LINE) (MANDON)	SURVEY MONUMENT (TYPE NOTED)	⊕ McSM
MILL WASHED OUR! MILL WASHLOABLE NOT APPLICABLE NOT IN CONTRACT	GLIARD RAIL	UTILITY LINE (CABLE TV) TV	TEST HOLE TRAFFIC PAINT MARKING	\$ 1 1
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NOT TO SCALE OVERHEAD POWER OVERHEAD TELEPHONE	HATCHING: INDICATES ASPHALT REMOVAL	UTILITY LINE (FIBER OPTIC)	UTILITY POLE	φ &
POINT OF CHRVATURE POINT OF COMPOUND CURVATURE POLYETHYLENE		UTILITY LINE (GAS)	VALVE (GAS) VALVE (RRIGATION)	X <u>≋</u> X
PERFORATION POINT OF INTERSECTION PLASTIC IRRIGATION PIPE	HATCHING: INDICATES CONCRETE REMOVAL	UNLITY LINE (HIGH	VALVE (WATER)	X
POINT ON COUNT POINT ON TANGEN PROPOSED POINT OF EDITORS OF IDEANTING		UNITY LNE OPENITAL AND ADMINISTRATION OF THE ADMINISTRATION OF TH	VEGETATION (HEDGE OR BUSH)	<i>(</i>) ∈
POINT OF TAVENCE CURVALUATE POINT OF TAVENCE POINT OF TAVENCE RADIIS RADIIS	HATCHING:	UNLYPLANE POWER) UNDERTREAD FOWER) OUTPUT LINE	VEGETATION (TREE STUMP) VEGETATION (TREE) (CALIPER SIZE NOTED)	(a)
REINFORMATIONRCED CONCRETE PIPE RECOURED RECOURED RECOURED			WATER HYDRANT	
LOWG RADIUS LOWG RADIUS RIGHT OF WAY	LINE (CENTER OF IMPROVEMENTS	(SANITARY SEMER)	WEIR	Z
RAUI ROAD SHORT ROAD SHORT RADIUS	LINE (GITY LIMITS) GITY LIMITS	UTILITY LINE (SANTARY SENER FORCE MAIN)	YARD LIGHT	☆ NORTH ARROW:
RGHT SLOPE SANTARY SANTARY	LINE (CONTROL)	UTILITY LINE (SANITARY SEWER SERVICE)		
SHORT CHORD STANDARD CONTRACT DOCUMENTS SCHEDULE	LINE (EASEMENT)	UTILITY LINE (STORIA SEWER)		
SECTION LINE SECTION LINE STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF IMPRESSION LITTERS	UNE MOMMBH/ÆCTION UNE (MONUMENT/SECTION)	UTILITY LINE (STORM SEWER, PERFORATED)		— 1
STATION STEEL STORM	LINE (PROPERTY)	UTILITY LINE (STORM/SANITARY SEWER SEWER COMENTATION)		<u>,</u> =
TELEPHONE LENGTH OF TANGENT TOP OF CURB	LINE (RIGHT OF WAY)	UTILITY LINE (TELEPHONE) T	BAR SCALE:	
TELEVISION TPHICAL	MATCH LINE SEE SHEET NO ?	UTHITY INE (WATER)	GRAFIIC SCALE	7
UNDERGROUND UTLITIES VERTICAL CLIRVE VIRIEIED CLIRVE VIRIEIED CLIRVE VIRIEIED CLIRVE	PIPE (IRRIGATION)		2	32
VERTICAL POINT OF COMPOUND CURVATURE VERTICAL POINT OF COMPOUND CURVATURE VERTICAL POINT OF REVERSE CURVATURE	PIPE (SIPHON)			
VERTICAL POINT OF TANGENCY WATER ANGLE			(IN FEET) 1 inch = 40 ft.	
DESCRIPTION DATE DRAWN BY JOSS DATE 4-02 BESIGNED BY DATE CHECKED BY DATE	Souts PROFILE Grand Junction Clark of Junction	\geq	CITY OF GRAND STANDARD ABBREVIA'	OF GRAND JUNCTION ABBREVIATIONS, LEGEND,
		ENGINEERING DIVISION	AND STME	3015

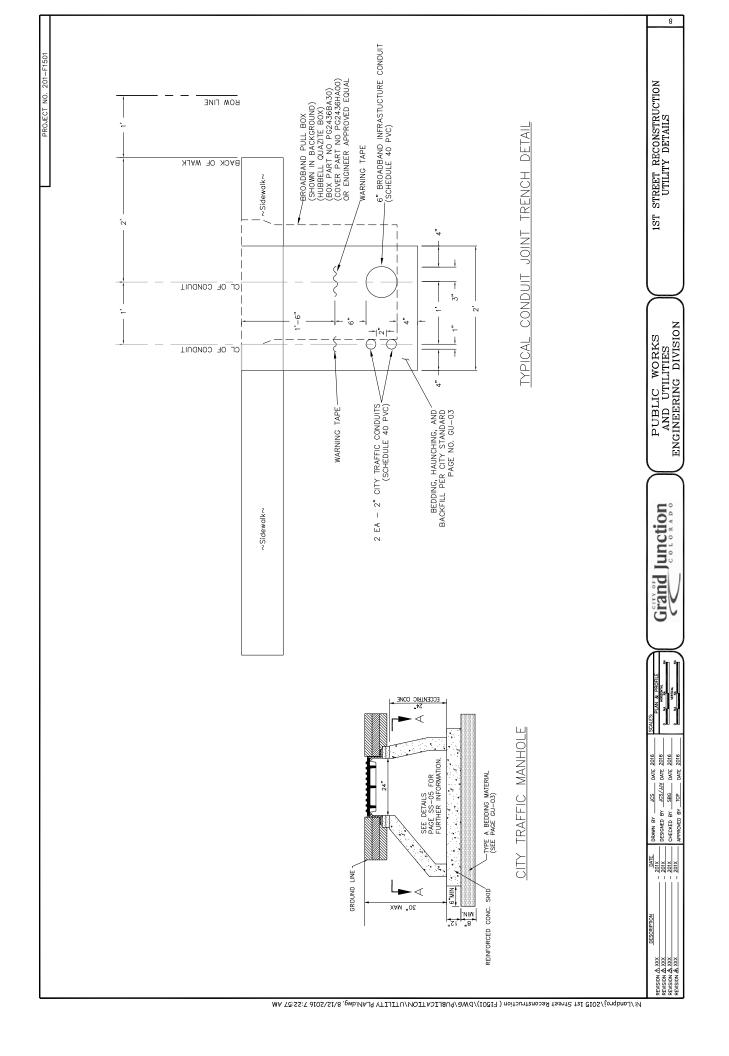
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	PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION
	Grand Junction
	SCALES. PLAN & PROPILE PLAN
	DRAWN BY JCS DATE 2016 DESIGNED BY JCS/JJW DATE 2016 CHECKED BY SBG DATE 2016 APPROVED BY TCP DATE 2016
	DESCRIPTION - 201X - 20
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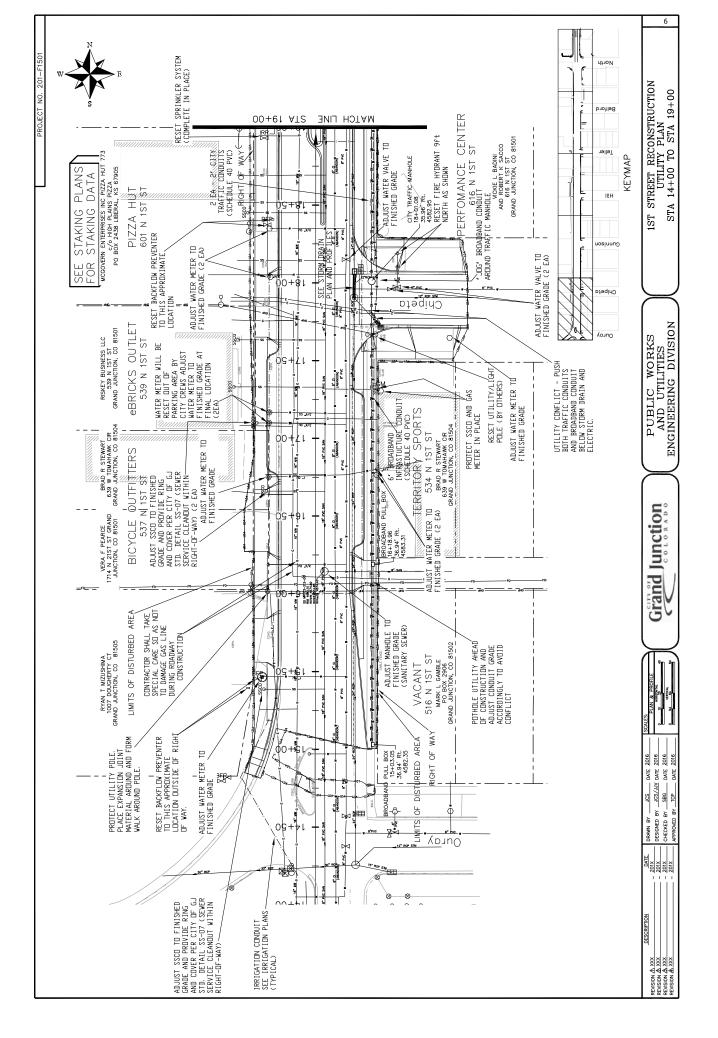


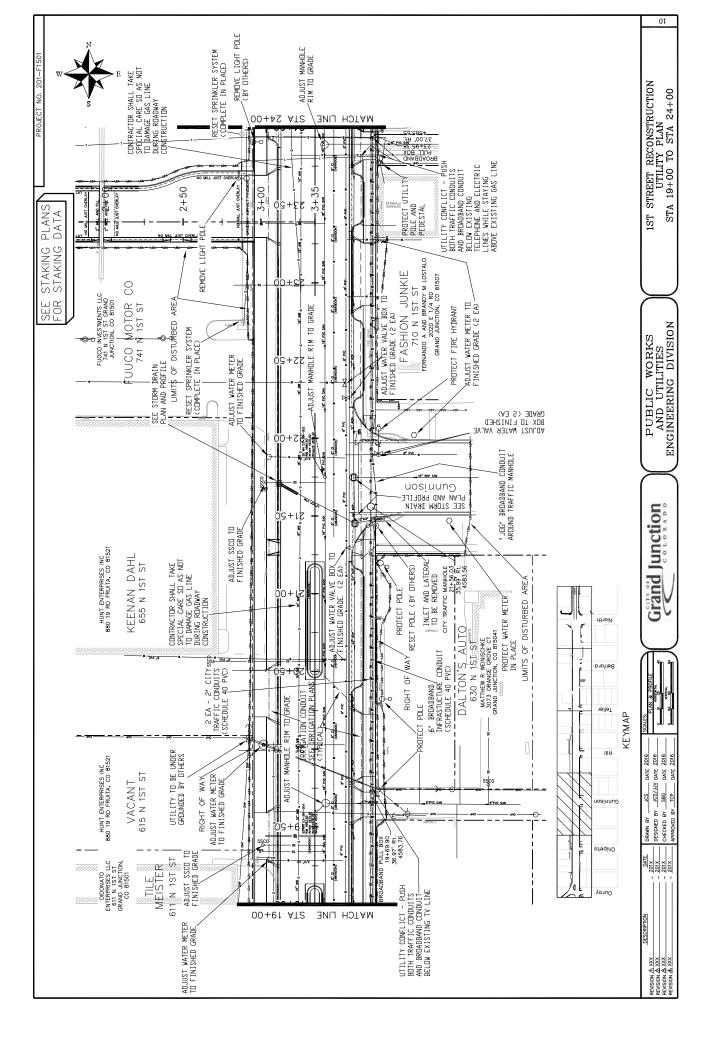




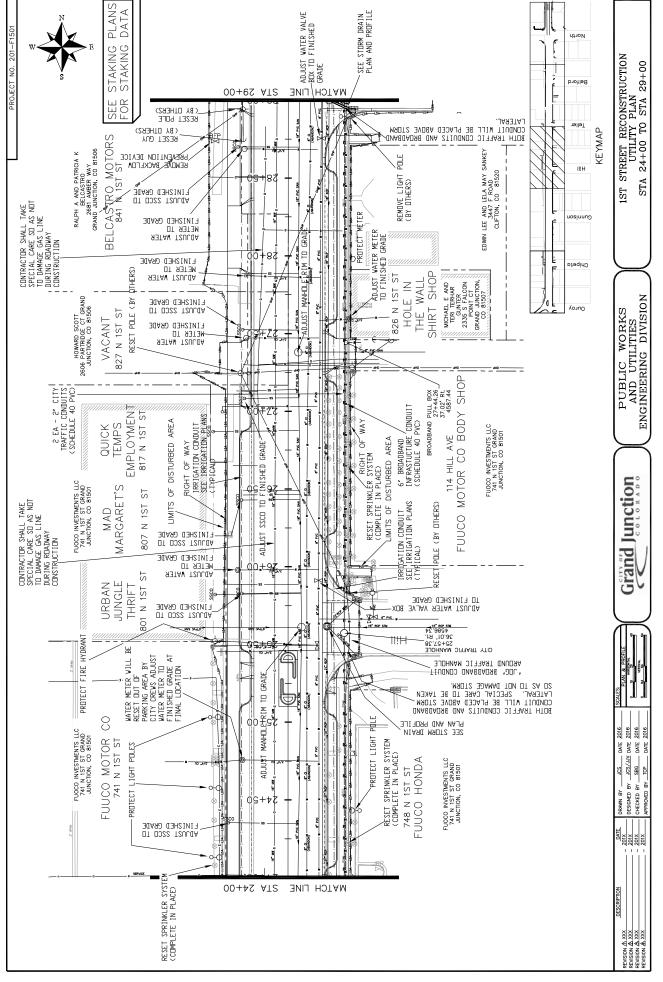




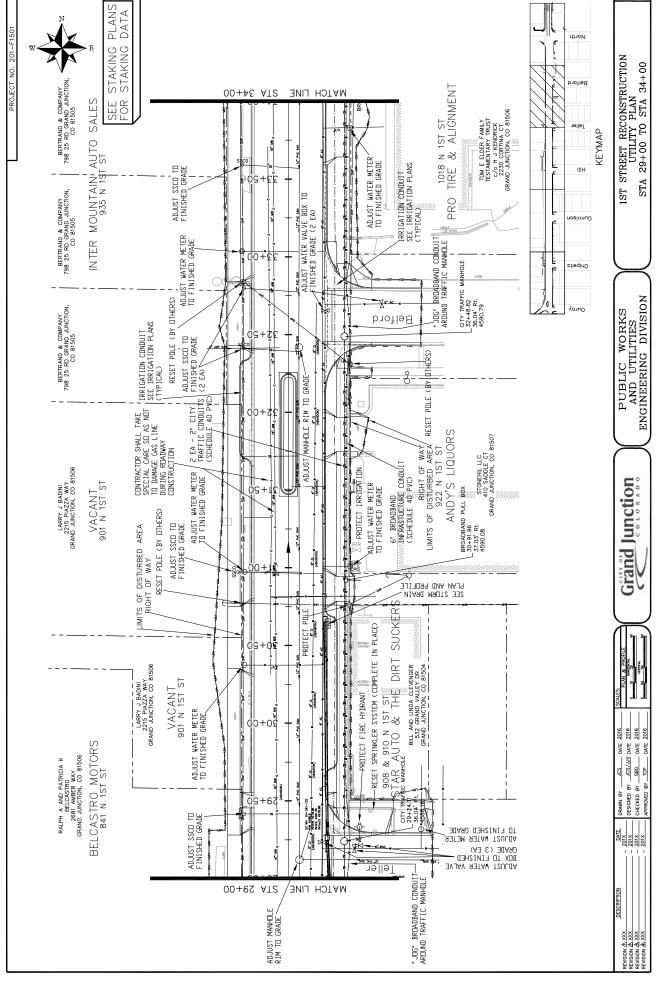


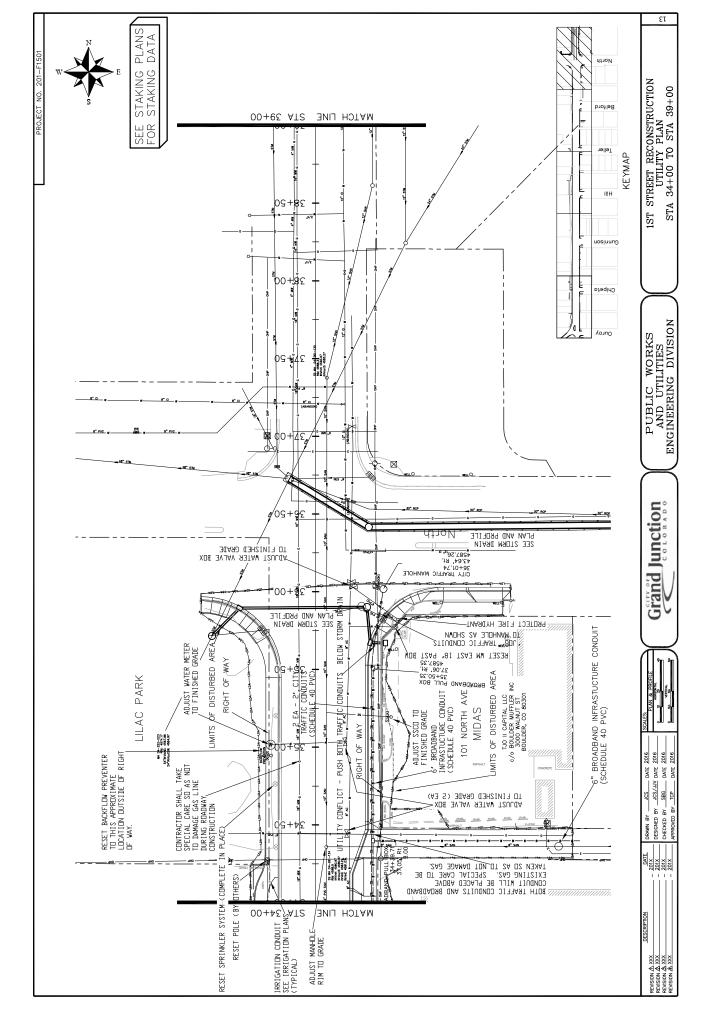


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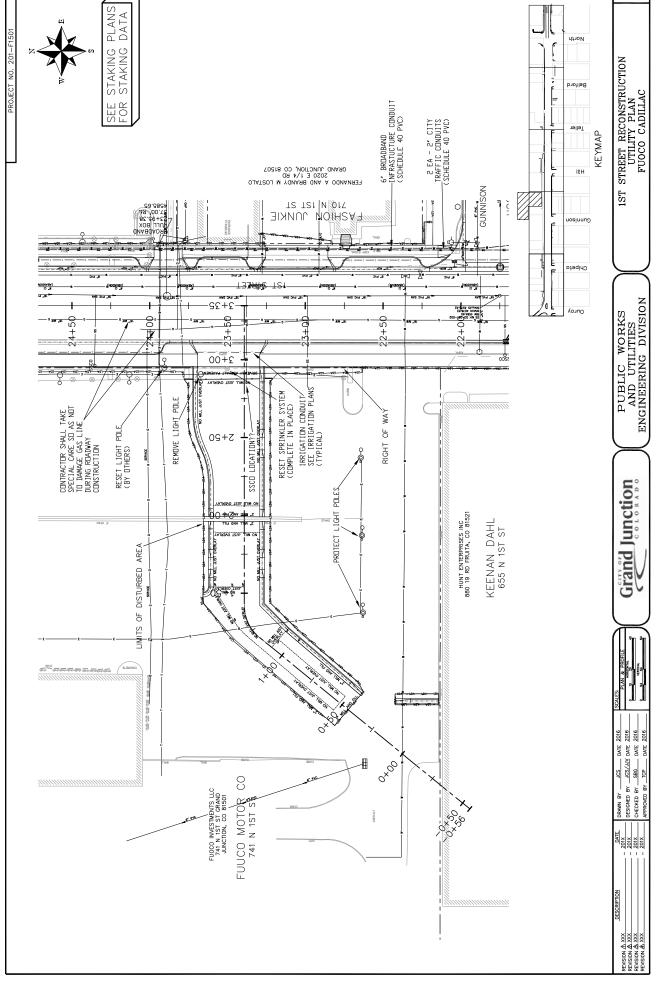


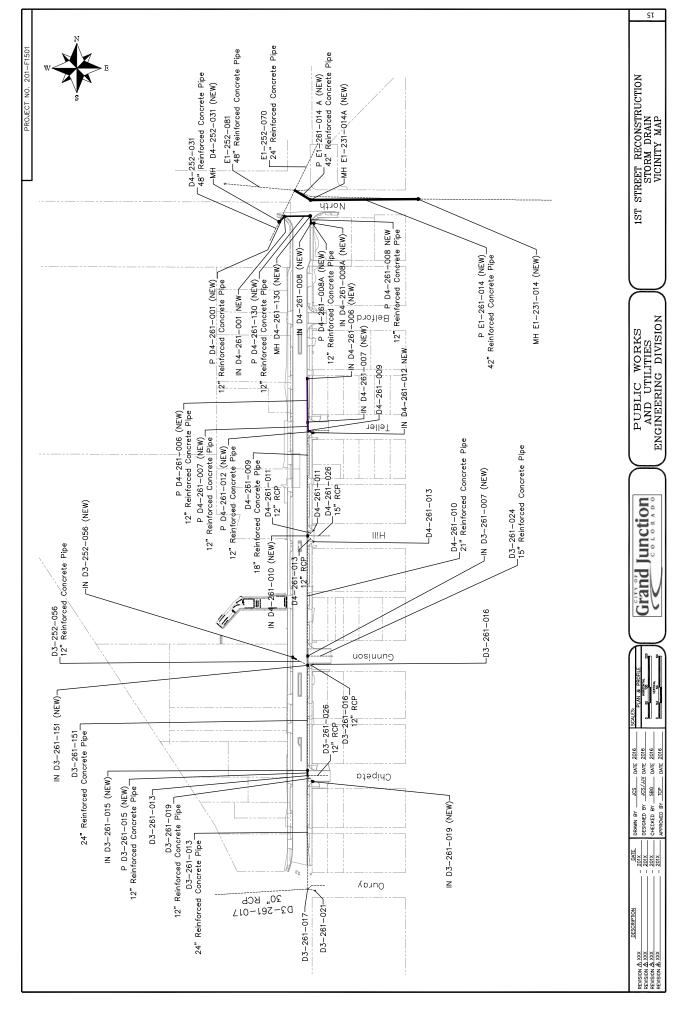
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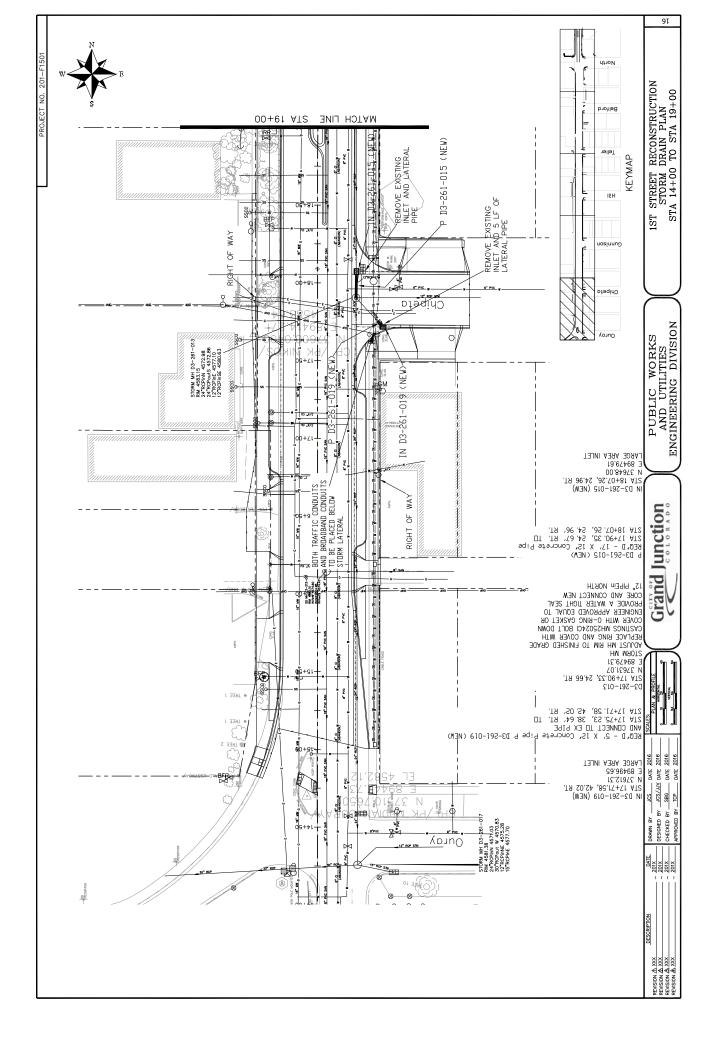


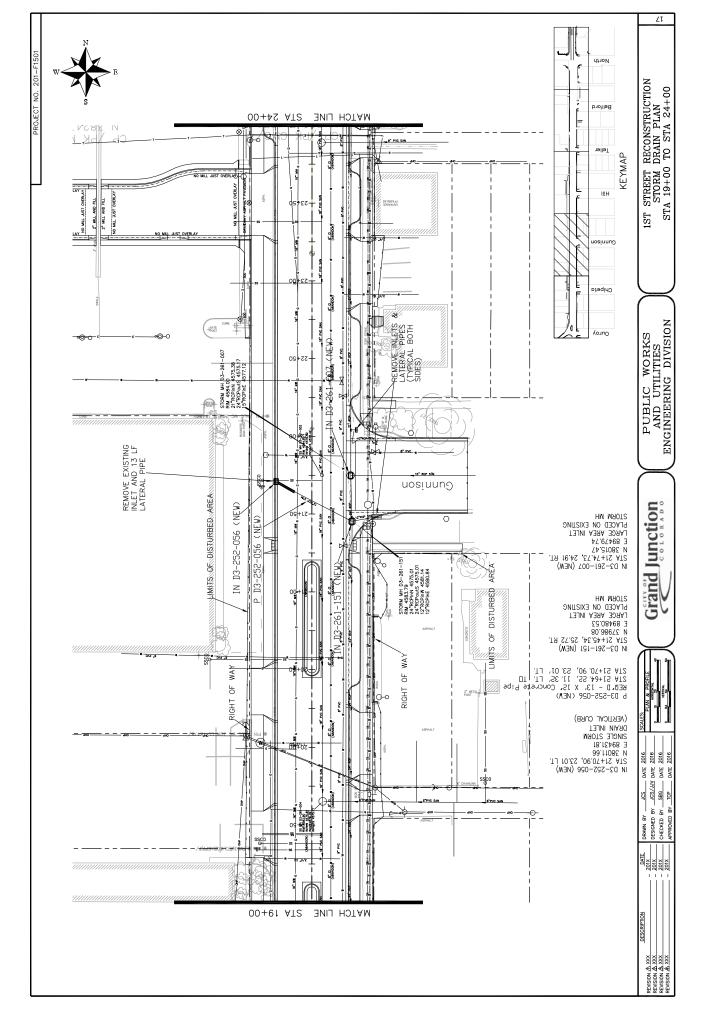


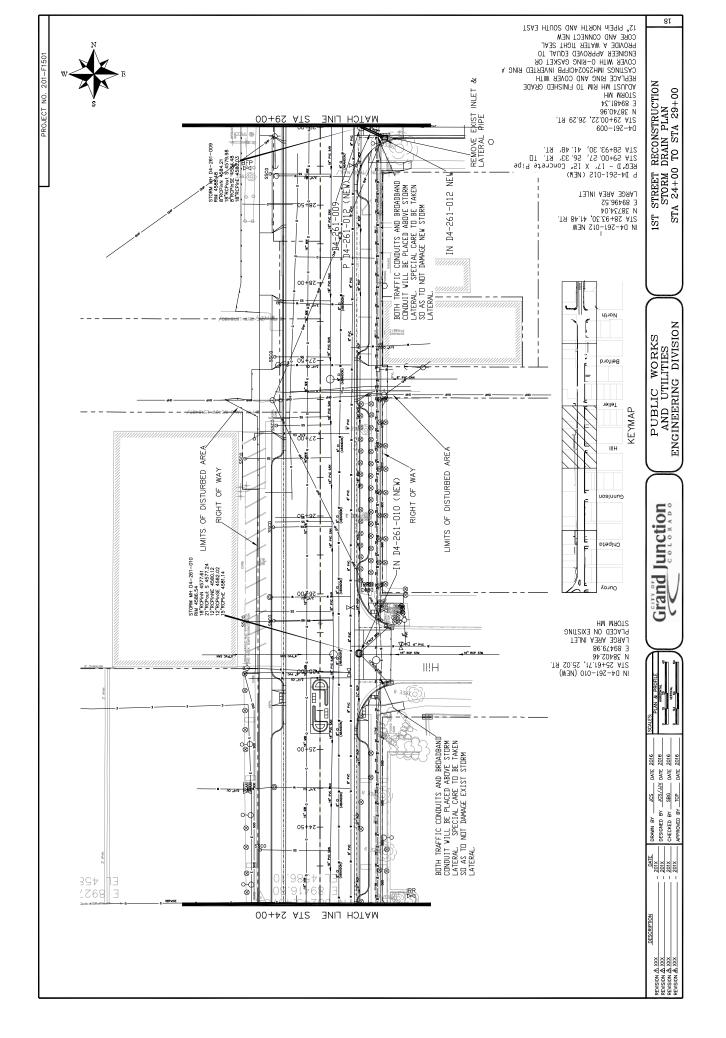
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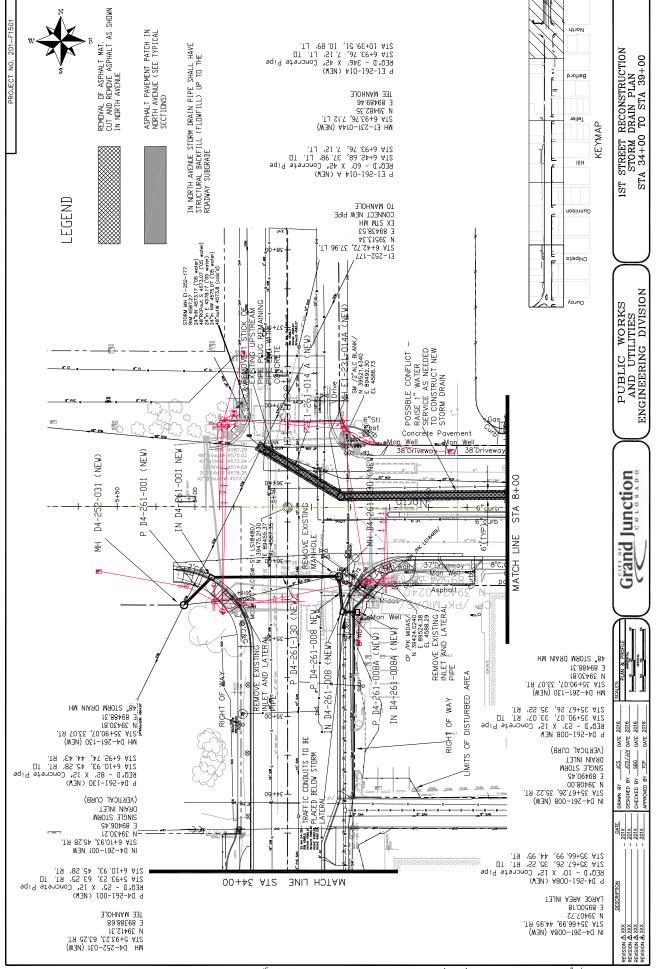




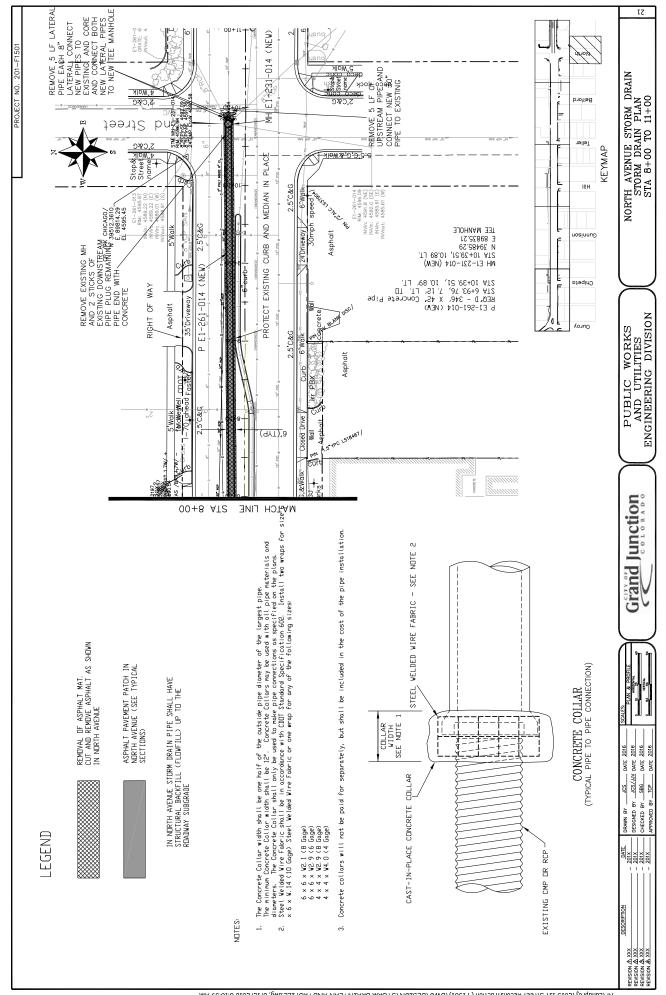


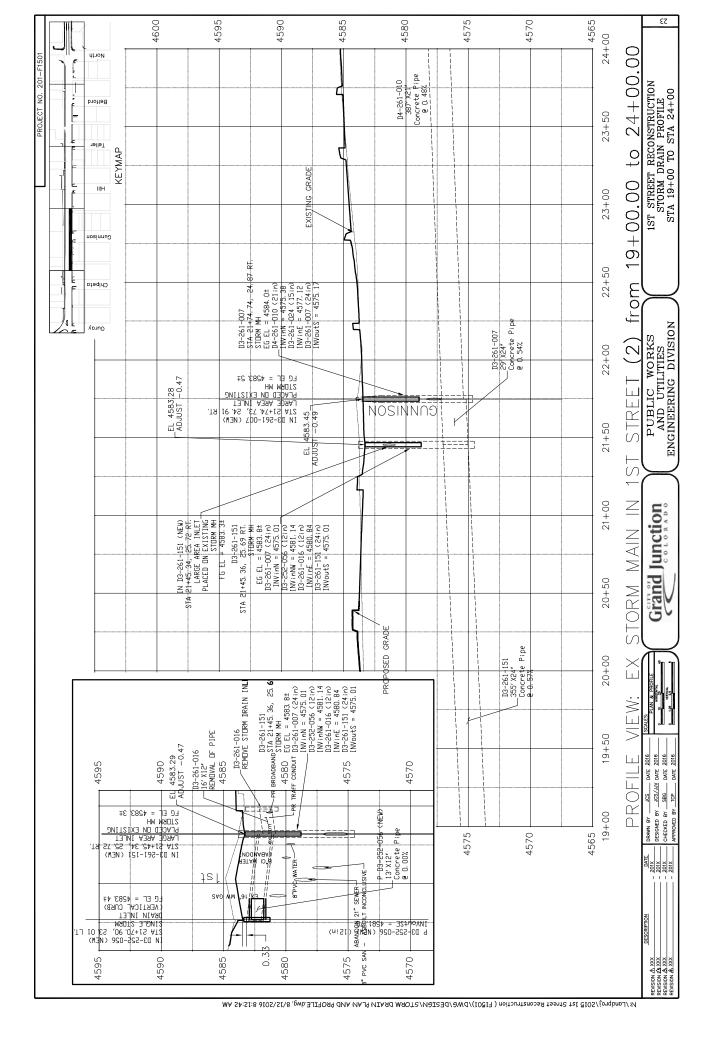


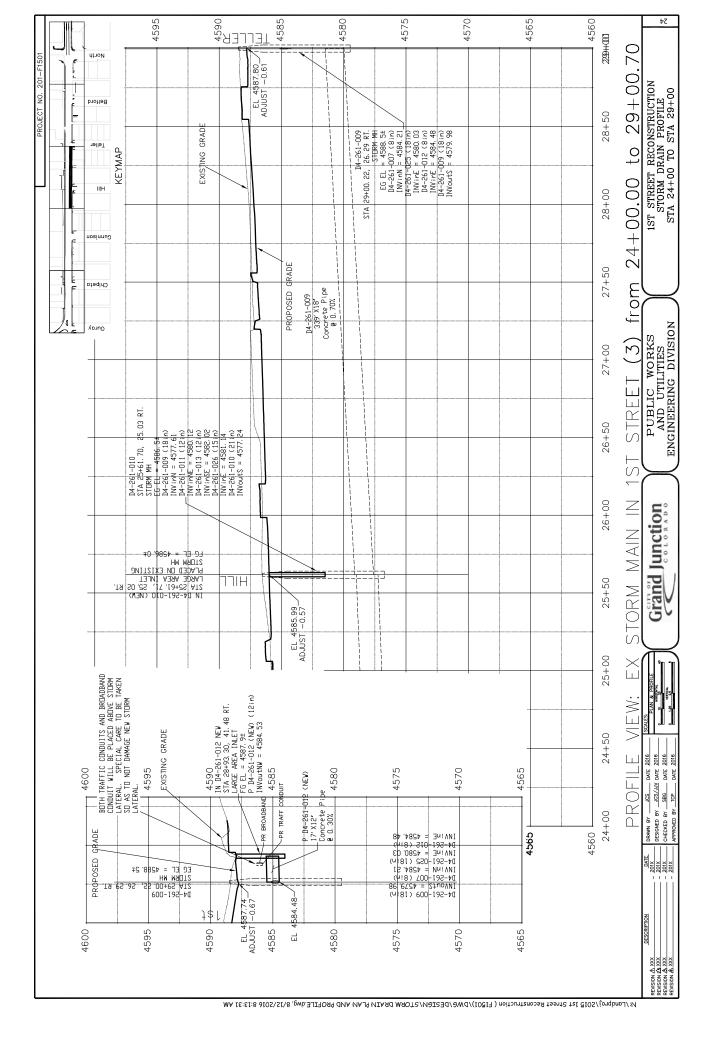


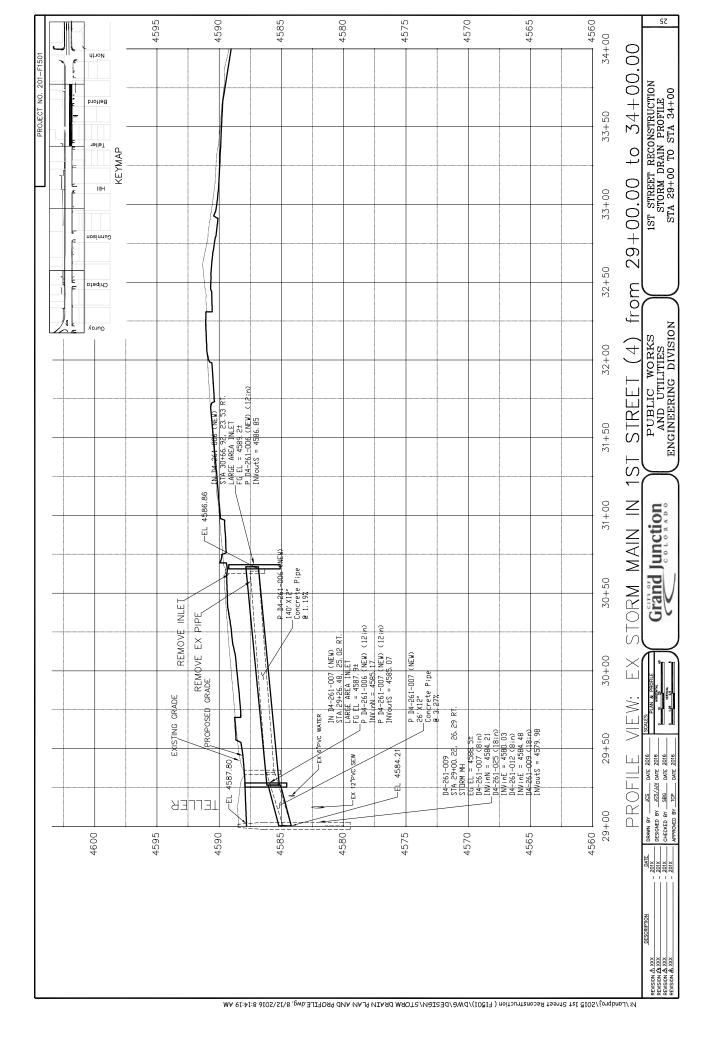


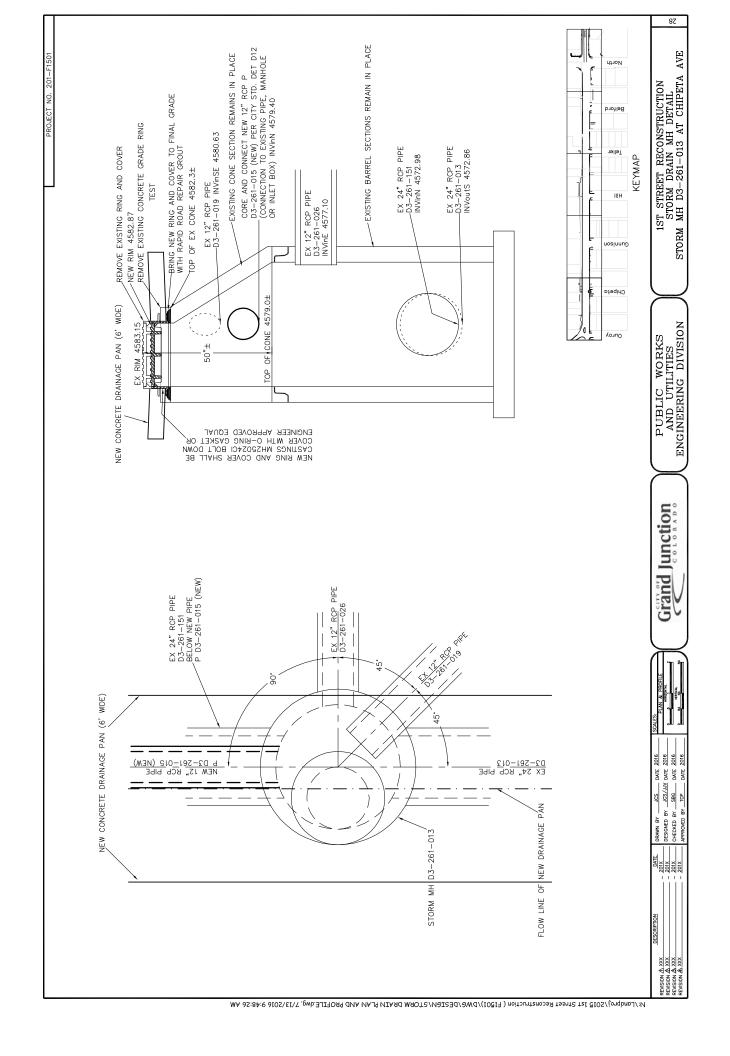
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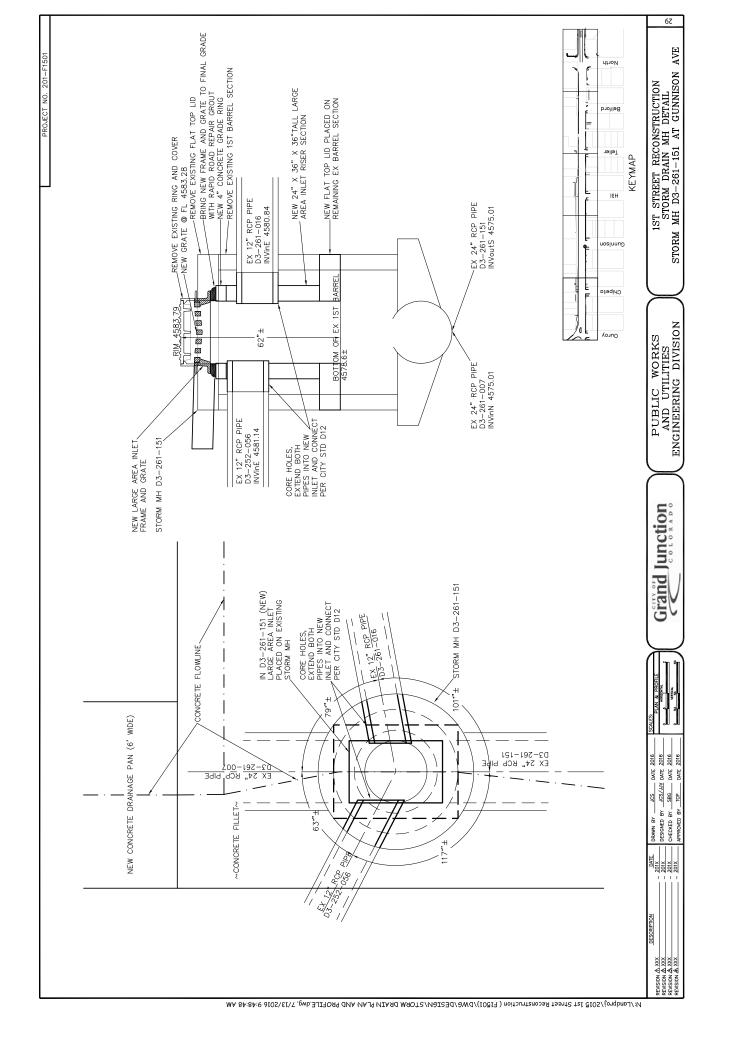


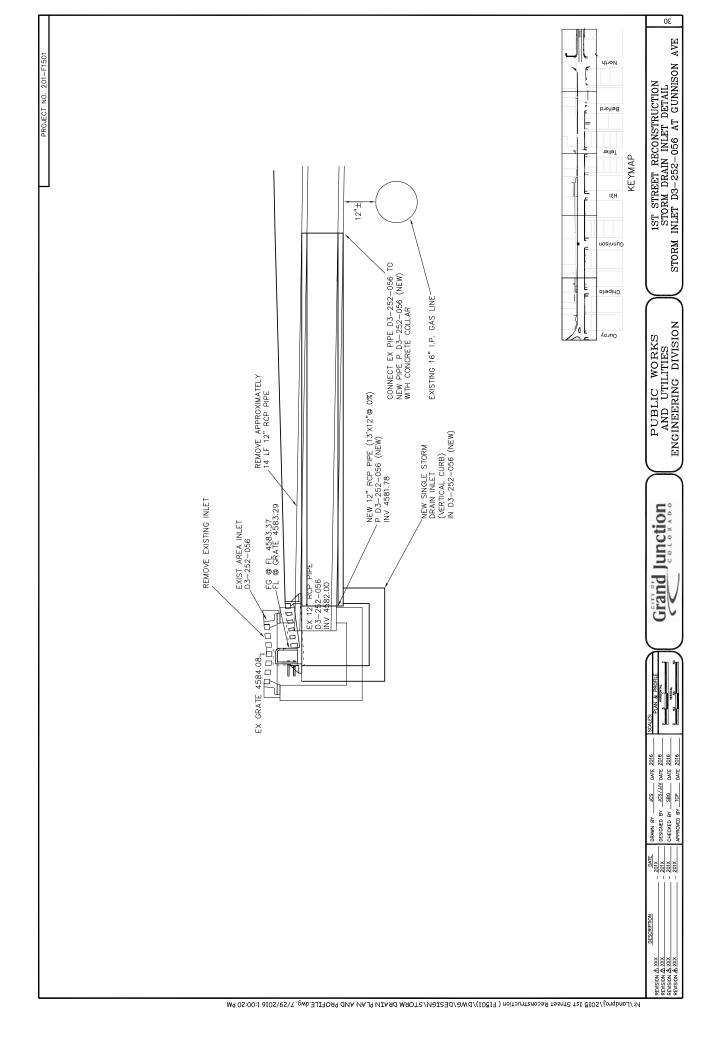


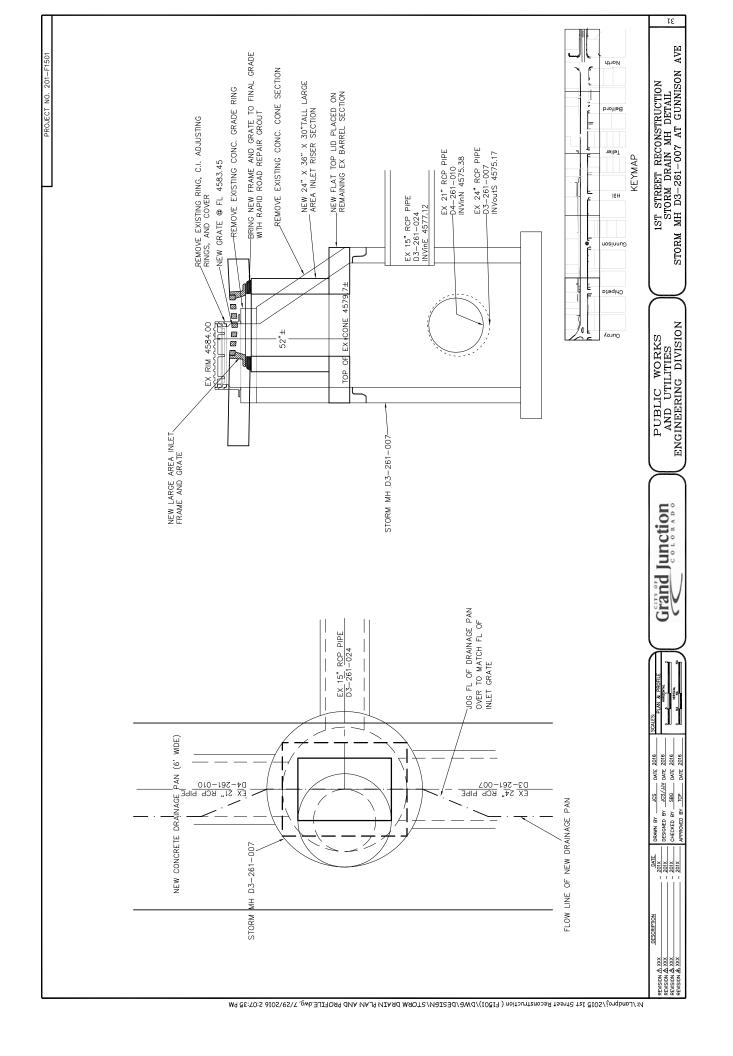


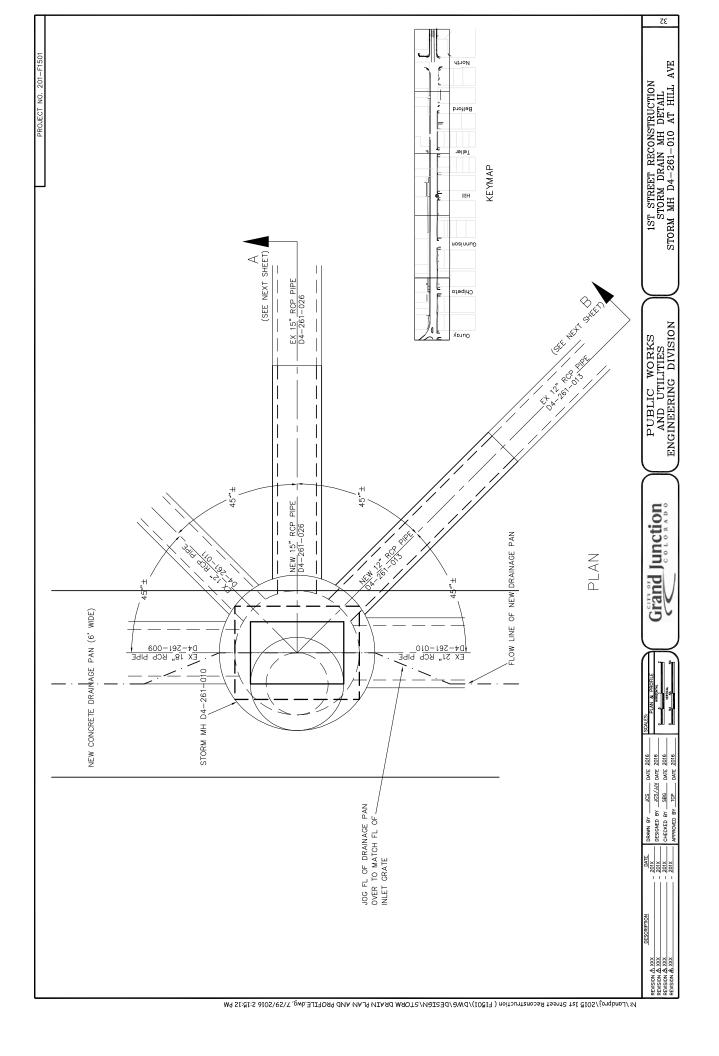


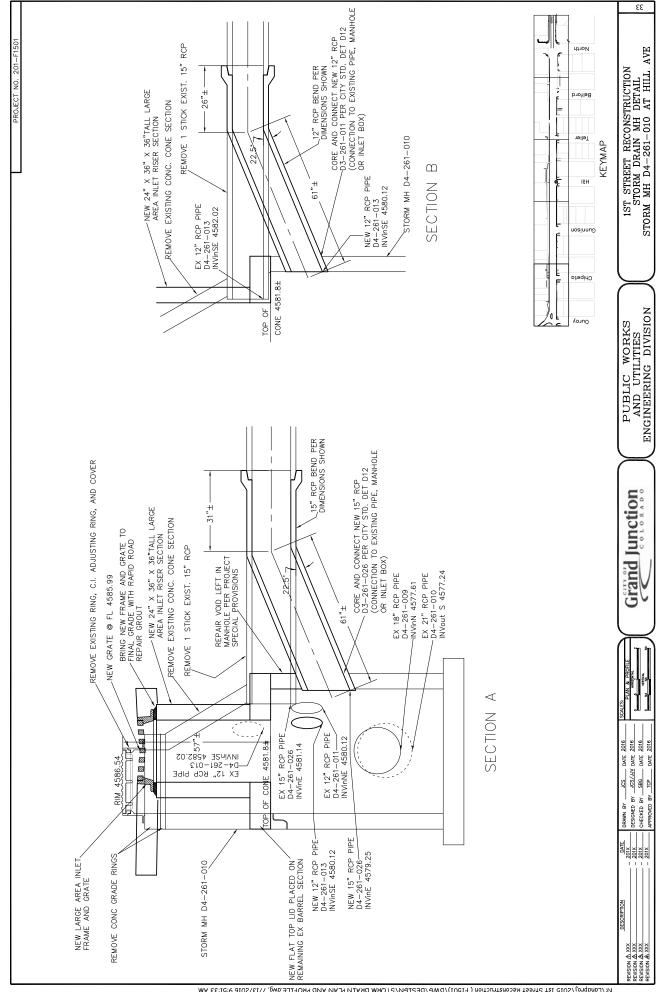


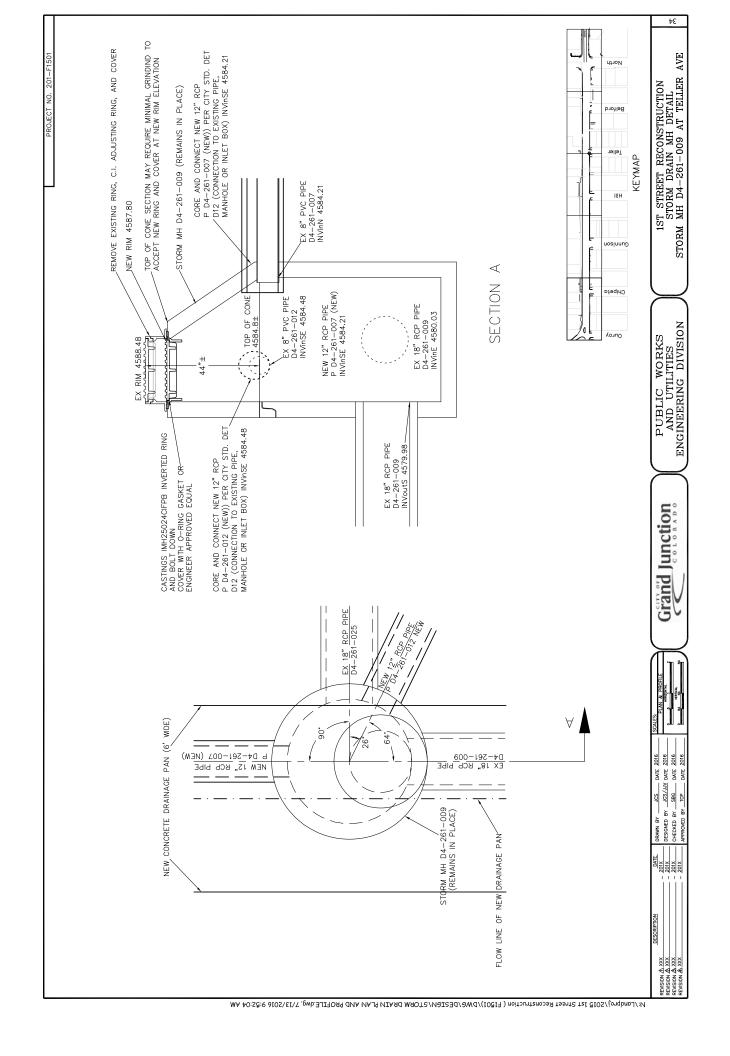












the CDPS-SCP (Colorado Discharge Permit System - Stormwater Construction Permit). The ECS shall update to reflect current project site conditions. 1. SITE DESCRIPTION
To fulfill the CDPS-SCP (C PROJECT SITE DESCRIPTION: Reconstruct 1street from Ouray Avenue to North Avenue. Project site is located in a fully developed section of Grand Junction, with businesses adjacent to 1street from Ouray Avenue to North Avenue. Project site is located in a fully developed section of Grand Junction, with businesses adjacent to 1street. The business properties currently have established landscaping that the reconstruction project will modify due to street reconfiguration of 1x Street and a few access driveways to businesses. Grading activities will be minor. The street reconstruction been designed There are a few dry utilities that will need relocating due to street reconstruction. This project will have both asphalt and concrete pavement installed. Excavation is limited to the construction of the new roadway sections and to match existing grades as closely as possible while still allowing for good drainage to the storm inlets. Proposed new utilities include some new storm piping and inlets will be installed within the construction boundaries as well. appurtenances. Landscaping is provided on this project in the form of sod, seeding, trees, shrubs and inorganic mulch; and inigation will be provided to all new trees, shrubs and perennials

PROPOSED SEQUENCING FOR MAJOR CONSTRUCTION ACTIVITIES

- Installation of initial erosion control items
- Removal and Stockpile of topsoil
- Utility installation and relocations (water, storm, dry utilities)
- Excavation for roadway construction
- Roadway grading and sub grade preparation
- Hot mix asphalt and concrete construction of proposed roadway Installation of interim erosion control items
 - Landscape and Irrigation installation
 - Signing and Striping
- Installation of final erosion control items (re-vegetation)

ACRES OF DISTURBANCE: Ö

- Total area of construction site: 4.795 acres
 - 2. Total area of disturbance: 4.795 acres
- EXISTING SOIL DATA; Killpack Silty Clay, 2 to 5 percent slopes, Parent Material: Residuum weathered from clayey shale. Runoff class is: Medium. Depth to water table: More than 80 inches. Hydrologic Soil Group; C. ◌

EXISTING VEGETATION, INCLUDING PERCENT COVER.

Existing vegetation consists of maintained landscaping by the local businesses adjacent to the project. Existing vegetation consists of sod, trees, shrubs, perennials, inorganic mulch and native grasses

A survey including general description of existing vegetation shall be conducted by TECS prior to any ground disturbance on project. The TECS shall photo-document existing vegetation where all work will be occurring. The TECS shall also perform the vegetation survey transect(s) including photo documentation as outlined in Chapter 4.11.2 of CDOT's Erosion Control and Stormwater Quality Guide

Description of existing vegetation: Map or table showing transect locations in tab 19: Date of survey:

F. POTENTIAL POLLUTANTS SOURCES: See First Construction Activities under Potential Pollutant Sources. The ECS shall prepare a list of all potential pollutants and their locations in accordance with subsection 107.25.

RECEIVING WATER Ġ

- 1. Outfall locations: The owner of the existing and new storm pipes installed as part of this project that are underneath and crossing 1st street will be owned and maintained by the City of Grand Junction. All storm drain piping that's part of this project conveys storm water to two separate centralized points and discharges the storm water into existing storm piping where the storm water is then conveyed and discharged into the Colorado River. This project increases the imperious area by 3%.

 2. Project is foceded within MS4 boundaries. The project increases the imperious area by 3%.

 3. Distance ultimate receiving water is from project: 0.75 Miles

ALLOWABLE NON-STORMWATER DISCHARGES: Concrete washout, saw cutting, and dewatering are anticipated on the project. The ECS shall prepare a list of allowable non-stormwater discharges

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- Groundwater and stormwater dewatering: Discharges to the ground of water from construction dewatering activities may be authorized provided that: a. the source is groundwater and/or groundwater combined with stormwater that does not contain pollutants
 - - the source and BMPs are identified in the SWMP
 - discharges do not leave the site as surface runoff or to surface waters συσ
- The confractor shall protect all work areas and facilities from water at all times. Areas and facilities subject to flooding, regardless of the source of water, shall be promptly dewatered and restored at no cost to the owner. This shall include removal of any debris caused by flooding. Any dewatering shall be done in accordance with Subsection 107.25
- If discharges do not meet the above criteria a separate CDPS permit shall be obtained by the Contractor from the CDPHE. See standard special provision 250 Hazardous Waste and Contaminated Water 6

ENVIRONMENTAL IMPACTS:

1. Wetland Impacts: YES NO

2. Stream Impacts: YES NO

3. Threatened and Endangered Species: N/A

2. SITE MAP COMPONENTS: Pre-construction

- A. <u>PROJECT CONSTRUCTION POTENTIAL SITE BOUNDARIES</u> Shown on the Storm Water Management Site Plans as the shaded area. The outer perimeter of the shaded area is the proposed limits of construction and/or the toe of fills or top of cuts. The existing right-of-way and temporary and permanent easement lines are shown on the Storm Water Management Site Plans.
- B. ALL AREAS OF GROUND SURFACE DISTURBANCE Shown on the Storm Water Management Site Plans. The shaded area represents all areas that are anticipated to have surface disturbance. This shaded area is what was used to calculate the acres of disturbance, Limits of disturbance are shown on the Storm Water Management Site Plans.
- C. AREAS OF CUT AND FILL Shown on the Roadway Plans, Grading and Drainage Plans and the Storm Water Management Site Plans. The areas of cut and fill are shown with their own specific line type
- D. LOCATION OF ALL STRUCTURAL BMPS. IDENTIFIED IN THE SWMP All proposed Structural BMP's are shown and labeled on the Storm Water Management Site Plans. The locations shown on the Storm Water Management Site Plans are approximate and can be changed by the Contractor and/or Project Engineer during construction to adapt with the construction phasing.
- E. LOCATION OF NON-STRUCTURAL BMPs AS APPLICABLE IN THE SWMP Location of the following to be located by the ECS: Material management, material usage, spill prevention and control, sanitary and septic waste management, hazardous waste management, vehicle and equipment management, and concrete washout structure.
- SPRINGS, STREAMS, WETLANDS AND OTHER SURFACE WATER N/A
- PROTECTION OF TREES, SHRUBS, CULTURAL RESOURCES AND MATURE VEGETATION Protection of trees and shrubs are shown on the Landscape Plans and the Removal Plans.
- H. AREAS USED FOR STORING AND STOCKPILING OF MATERIALS, STAGING AREAS (field trailer, fueling, etc.) and BATCH PLANTS

*ECS to revise site maps in accordance to 208.03

3. WMP ADMINISTRATORS

Name/Title: Justin Vensel/Project Engineer A. SWMP ADMINISTRATOR FOR DESIGN;

Contact information: 970-256-4017, justinv@gjcity.org

4. STORMWATER MANAGEMENT CONTROLS FIRST CONSTRUCTION ACTIVITIES

THE CONTRACTOR SHALL PERFORM THE FOLLOWING

A. POTENTIAL POLLUTANT SOURCES

Evaluate, identify and describe all potential sources of pollutants at the site in accordance with subsection 107.25 and place in the SWMP notebook. All BMPs related to potential pollutants shall be shown on the SWMP site map by

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RECONSTRUCTION MANGAGEMENT PLAN STREET WATER 1 1ST STORM

B. BEST MANAGEMENT PRACTICES (BMPs) FOR STORMWATER POLLUTION PREVENTION
PHASED BMP IMPLEMENTATION
During Design: "BMP as Designed" boxes are marked when used in the SWMP. During construction: the ECS shall update the "in use on site" boxes to match which BMPs are currently in use on site. Clearly describe the relationship between the phases of construction and the implementation of BMP controls.

STRUCTURAL BMPs that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to:

				BMP PHASING	9
APPLICATION, BMP	NARRATIVE	BMP AS DESIGNED	IN USE ON SITE	FIRST/INITIAL CONSTRUCTION INTERIM INTERIM	POTIVITES FINAL ALISTION TIMATS
PROTECTION OF EXISTING WEILANIDS Fence (plastic) and erosion logs	Fence (plastic) shall be placed in combination with erosion logs to prevent encroachment of construction fraffic and sediment into state waters prior to start of construction disturbances. Fence (plastic) shall be placed adjacent to the wetlands; erosion logs shall be placed between the plastic fence and disturbance area. Logs shall be placed to direct flows away from or filter water uning into wetlands from disturbance area.			×	
PROTECTION OF EXISTING IREES/LANDSCAPING Fence (plastic)	Fence (plastic) shall be used in areas indicated in the plans to protect mature trees and/or existing landscaping prior to start of construction disturbances.			×	
CHECK DAM/DITCH CHECK Erosion log, silt berm, silt dike, rock check dam	Placed in diches immediately upon completion of ditch grading to reduce velocity of runoff in dilch. For existing ditches, place to reduce velocity of runoff in dilch. For existing ditches, place			×	×
Storm drain inlet protection (type 1,2 and 3)	Placed prior to construction disturbances to protect existing inlets or immediately upon completion of new inlets to prevent sediment from entering the inlet throughout construction.			×	×
STOCKPILE PROTECTION Temporary berm, erosion logs, aggregate bags*	Placed within specified distance from toe to contain sediment around stockpile, "Aggregate bags are easily moved and replaced for access during the work day, Place prior to start of stock pile, increase control as stock pile increase size.			×	
TOE OF FILL PROTECTION Erosion logs, temporary berm, sill fence, topsoil windrow*	Place prior to slope/embankment work to capture sediment and protect and delineate undisturbed areas. "Can be used to stockpile topsoil for salvage.			×	
PERIMETER CONTROL Erosion logs, silt fence, temporary bern, topsoil windrow*	Placed prior to construction commencing to address potential run-on water from off site, and to divert around disturbed area			×	
SEDIMENT CONTROL/ SLOPE CONTROL Sill fence, erosion logs	Placed on the contour on a slope to contain and slow down construction runoff. Place prior to start of construction disturbances.			×	
TEMPORARY SEDIMENT TRAP (ECS shall add locations to SWMP site maps)	Used to capture sediment laden runoff from disturbed areas < 5 acres dufing construction. Place prior to start of construction disturbances.			×	
PERMANENT SEDIMENT BASIN Extended detention basin	Constructed early in project, prior to storm sewer/ditches to capture storm flow as a temporary sediment trap. Outlet structure shall be modified for construction runoff.			×	
EMBANKMENT PROTECTION OR TEMPORARY SLOPE DRAIN	Placed as a conduit or chute to drain runoff down slope and to prevent erosion of slope.			×	×
OUTLET PROTECTION Riprap, or approved other	Material placed as energy dissipater to prevent erosion at outlet structure.		\vdash	×	×

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1ST STREET RECONSTRUCTION STORM WATER MANGAGEMENT PLAN

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CONCRETE WASHOUT	Construction control, used for waste management of concrete			
In-ground or fabricated	and concrete equipment cleaning. Place prior to start of concrete activities.	×	×	
VEHICLE TRACKING PAD	Source control, placed to prevent tracking of sediment from			
	disturbed area to offsite surface. Place prior to start of construction	×	×	
	disturbances.			
SWEEPING	Source control, used to remove sediment tracked onto paved			
	surfaces and to prevent from entering drainage system. Sweep	>	>	
	daily and at the end of the construction shift as needed. Kick	<	<	
	brooms shall not be allowed.			
DEWATERING	Shall be done in such a manner to prevent potential pollutants			
(Contractor is responsible	from entering state waters.			
for obtaining a permit from		×	×	
Colorado Department of				
Health and Environment.)				
TEMPORARY STREAM	Constructed over stream or drainage to prevent discharge of	>	>	
CROSSING	pollutants from construction equipment into water	<	<	
CLEAN WATER DIVERSION	Placed to divert clean surface or ground water around	>	>	
	disturbance area to prevent it from mixing with construction runoff	<	<	
OTHER				

NON-STRUCTURAL BMPs that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to:

	JANI J NOITAZIJI8AT2	×						×
BMP PHASING	INTERIM CONSTRUCTION ACTIVITIES	×	×	×	×	×	×	×
BMP	FIRST/INITIAL CONSTRUCTION ACTIVITIES	×	×	×				
	IN USE ON SITE							
(BMP AS DESIGNED							
	NARRATIVE	Filter sediment laden runoff from disturbance area. Area to be identified for preservation prior to construction starting.	Existing landforms may be used as a BMP if they prevent sediment from entleting or leaving the distubance area. If a landform directs flow of water to a concentrated outfall point, the outfall point stall be protected to prevent erosion.	Prior to embankment work commencing, existing topsoil shall be scraped to a depth of 4 inches, and placed in stackpiles or windrows. Upon completion of slope work/final grading (less 4 chosts), topsoil shall be evenly distributed over embankment to a depth of 4 inches.	Temporary stabilization of disturbance and to minimize wind and erosion.	Temporary stabilization used for over wintering of disturbance or used to control erosion for areas scheduled for future construction.	To be used in combination with surface roughening for temporary stabilization of disturbed soils, when work is temporarily halted and as approved by the Engineer. May be used as surface cover for temporary topsoil stockpiles	Temporary or Final Stabilization placed as a surface cover for erosion control and or seeding establishment. To be installed as temporary surface cover when work is temporarily halted and as approved by the Engineer
	APPLICATION, BMP	VEGETATIVE BUFFER STRIP Fence (plastic)	LANDFORM (ECS shall add locations to SWMP site maps)	TOPSOIL MANAGEMENT STOCKPILE/SALVAGE Windrow or stockpile	SURFACE ROUGHENING / GRADING TECHNIQUES Blading, Backhoe, Dozing, Combination Loader	<u>SEEDING TEMPORARY</u>	BONDED FIBER MARRX/HYDRAULIC MULCH (Not to be used in areas of concentrated flows, i.e.	MULCH/MULCH TACKIFIER

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PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

1ST STREET RECONSTRUCTION STORM WATER MANGAGEMENT PLAN

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NON-STRUCTURAL BMPs that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to:

			BMP	BMP PHASING	
APPLICATION, BMP	NARRATIVE	BMP AS DESIGNED	FIRST/INITIAL CONSTRUCTION ACTIVITIES	INTERIM CONSTRUCTION ACTIVITIES	JANI 1 NOITAZIJI8AT2
VEGETATIVE BUFFER STRIP Fence (plastic)	Filter sediment laden runoff from disturbance area. Area to be identified for preservation prior to construction starting.		×	×	×
LANDFORM (FCS shall add locations to SWMP site maps)	Existing landforms may be used as a BMP if they prevent sediment from entering or leaving the disturbance area. If a landform directs flow of water to a concentrated outfall point, the outfall point shall be profected to prevent erosion.		×	×	
IOPSOL MANAGEMENI SIOCKPILESALVAGE Windrow or stockpile	Prior to embankment work commencing, existing topsoil shall be scaped to a depth of 4 inches, and placed in stockpiles or windrows. Upon completion of stope work/final grading (less 4 inches), topsoil shall be evenly distributed over embankment to a depth of 4 inches.		×	×	
SURFACE ROUGHENING / GRADING TECHNIQUES Blading, Backhoe, Dozing, Combination Loader	Temporary stabilization of disturbance and to minimize wind and erosion.			×	
SEEDING TEMPORARY	Temporary stabilization used for over wintering of disturbance or used to control erosion for areas scheduled for future construction.			×	
BONDED FIBER MATRIX/HYDRAULIC MULCH (Not to be used in areas of concentrated flows, i.e. ditch lines.)	To be used in combination with surface roughening for temporary stabilization of disturbed soils, when work is temporarily halted and as approved by the Engineer. May be used as surface cover for temporary topsoil stockpiles			×	
MULCH/MULCH TACKIHER	Temporary or final Stabilization placed as a surface cover for ensolar control and or seeding establishment. To be installed as removary surface cover when work is temporary surface cover when work is temporarily halted and as approved by the Engineer			×	×

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1ST STREET RECONSTRUCTION STORM WATER MANGAGEMENT PLAN

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Temporary or final Stabilization placed as a surface cover for erosion control and or seeding estabilishment. To be installed as temporary surface cover when work is temporarily halted and as approved by the Engineer	Final Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas.	Final Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas.	Final Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas. Placed in channels or on slopes for erosion control, channel liner and seeding establishment.	
SPRAY-ON MUICH BLANKEI (Not to be used in areas of concentrated flows, i.e. ditch lines.)	SEEDING PERMANENT	SOIL RETENTION BLANKET (SRB)	TURE REINFORCEMENT MAT	OTHER

Erosion control devices are used to limit the amount of soil loss on site

Sediment control devices are designed to capture sediment on the project site. Construction controls are BMPs related to construction access and staging.

BMP locations are indicated on the SWMP site map.

NARRATIVES

BMP details and narratives not covered by the SWMP or Standard Plan M-208-1 shall be added to the SWMP notebook by the ECS.

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- OFFSITE DRAINAGE [RUN ON WATER]

 1. Describe and record BMPs on the SWMP site map that has been implemented to address off site run-on water in accordance with subsection 208,03.
- VEHICLE TRACKING PAD/VEHICLE TRACKING CONTROL

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- BMPs shall be implemented in accordance with subsection 208.04
- PERIMETER CONTROL

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- 1. Perimeter control shall be established as the first item on the SWMP to prevent the potential for pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state waters.

 2. Perimeter 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.

DURING CONSTRUCTION

During construction, the following items shall be added, updated, or amended as needed by the SWMP RESPONSIBILITIES OF THE SWMP ADMINISTRATOR/TRANSPORTATION EROSION CONTROL SUPERVISOR DURING CONSTRUCTION

The SWMP should be considered a "living document" that is confinuously reviewed and modified. During construction, the following items shall be added, updated, or amended as needed by the stannistrator/facision Control Supervisor (ECS) in accordance with Section 208.

During construction, indicate how witers that have not been addressed during design are being handled in construction. If items are covered in the template or other sections of the SWMP notebook indicate how what section the discussion takes place.

- A. STOCKPILE MANAGEMENT shall be done in accordance with subsection 107.25 and 208.07
- B. CONCRETE WASHOUT Concrete wash out water or waste from field laboratories and paving equipment shall be contained in accordance with subsection 208.05.
- C. SAW CUTIING shall be done in accordance with subsection 107.25, 208.04, 208.05
- D. STREET CLEANING shall be done in accordance with subsection 208.04

INSPECTIONS

A. Inspections shall be in accordance with subsection 208.03 (c)

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7. BMP MAINTENANCE

A. Maintenance shall be in accordance with subsection 208.04 (f).

8. RECORD KEEPING

A. Records shall be kept in accordance with subsection 208.03 (c).

9. INTERIM AND FINAL STABILIZATON

A. SEEDING PLAN

Soli preparation, soil conditioning or topsoil, seeding (native), mulching (weed free) and mulch tackifier will be required for an estimated 2.67 acres of disturbed area within the right-of-way limits which are not surfaced. The following types and rates shall be used:

COMMON NAME	BOTANICAL NAME	% OF MIX
		ву оту.
GALLETA GRASS	HILARIA JAMESII	20%
HARD FESCUE	FESTUCA OVINA 'DURAR'	20%
INDIAN RICEGRASS	ORIZOPSIS HYMENOIDES ' PALOMA'	12%
NEEDLE & THREAD GRASS	STIPA COMATA	1%
SHEEP FESCUE	FESTUCA OVINA 'COVAR'	8%
WESTERN WHEATGRASS	AGROPYRON SMITHII 'ARRIBA'	30%
SAND DROPSEED	SPOROBOLUS CRYPTANDRUS	1%
BLUE GRAMMA	BOUTELOUA GRACILIS	2%
SIDE OATS GRAMMA	BOUTELOUA CURTIPENDULA	3%
SEED AT 5 LB/ACRE PLS		

B. SEEDING APPLICATION: Drill seed 0.25 inch to 0.5 inch into the soil. In small areas not accessible to a drill, hand broadcast or hydroseed at double the rate and rake 0.25 inch to 0.5 inch to 0.5 inch into the soil.

C. <u>MUCHING APPLCATION:</u> Apply a minimum of 2 tons of certified weed free straw or 2 tons of certified weed free straw per acre and in accordance with Section 213, and mechanically crimp it into the soil in combination with an organic mulch tackifier.

a. Prior to winter shutdown or the summer seeding window: Uncompleted slopes shall be mulched with 2 tons of mulching (weed free) per acre, mechanically crimped into the topsoil in combination with an organic mulch

tackifier per section 213.

D. <u>SPECIAL REQUIREMENTS:</u>
1. Due to high failure rates, hydroseeding will not be allowed.

E. SOIL CONDITIONING AND FERTILIZER REQUIREMENTS: [Minimum requirements for all disturbances to receive seeding (native). Compost is optional within areas above 8000 ft in elevation]

ng (Acre)	Compost (cy/acre) (1/2 inch depth)	261
Soil conditioner paid for as Item 212- Soil Conditioning (Acre)	Humate (lbs/acre)	200
Soil conditioner paid for	Biological nutrient organic based fertilizer (lbs/acre)*	009

Biological nutrient shall not exceed 8-8-8 (N-P-K). Humate based material and compost shall be in accordance to Section 212.

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RECONSTRUCTION MANGAGEMENT PLAN STREET WATER 1 STORM STORM On slopes and ditches requiring a blanket or turf reinforcement mat (trm), the blanket/trm shall be placed in lieu of mulch and mulch tackifier. See SWMP for blanket locations SOIL RETENTION COVERING:

G. RESEEDING OPERATIONS/CORRECTIVE STABILIZATION Prior to final acceptance:

1. Seeded areas shall be reviewed during the 14 day inspections by the Erosion Control Supervisor for bare soils caused by surface or wind erosion. Bare areas caused by surface or gully erosion, blown away mulch, etc. shall

be re-graded, seeded, and have the designated mulching applied as necessary, at no additional cost to the project. 2. The Contractor shall maintain seeding/mulch/tackifier, mow to control weeds or apply herbicide to control weeds in the seeded areas until Final Acceptance.

10. PRIOR TO FINAL ACCEPTANCE
A. Final Acceptance shall be in accordance with subsection 208.10 At the Partial Acceptance of the project, it shall be determined by the ECS and the Engineer which temporary BMP's shall remain until 70% reestablishment or which shall be removed.

At the end of the project, all ditch checks shall either consist of temporary erosion logs or permanent rip-rap

11. TABULATION OF STORMWATER QUANTITIES

Pay Item	Description	Pay Unit	*Quantity	As Const.
208-00035	Aggregate Bag	LF	112	
208-00045	Concrete Washout Structure	Each	4	
208-00052	Storm Drain Inlet Protection (Type2) (Option A)	Each	14	
208-00070	Vehicle Tracking Pad	Each	4	
208-00103	Removal and Disposal of Sediment (Labor)	Hour	30	
208-00105	Removal and Disposal of Sediment (Equipment)	Hour	30	
208-00106	Sweeping (Sediment Removal)	Hour	70	
208-00206	Erosion Control Supervisor	Day	150	
208-00300	Temporary Berms	LF	150	
209-00600	Dust Palliative (Magnesium Chloride)	Gallon	800	
212-00006	Seeding (Native)	Acre	0.1	
212-00032	Soil Conditioning**	Acre	0.1**	
213-00004	Mulching (Weed Free Straw)	Acre	0.1	
213-00061	Mulch Tackifier	LB	10	
607-11525	Fence (Plastic)	LF	200	
700-70380	Erosion Control	FA	1	

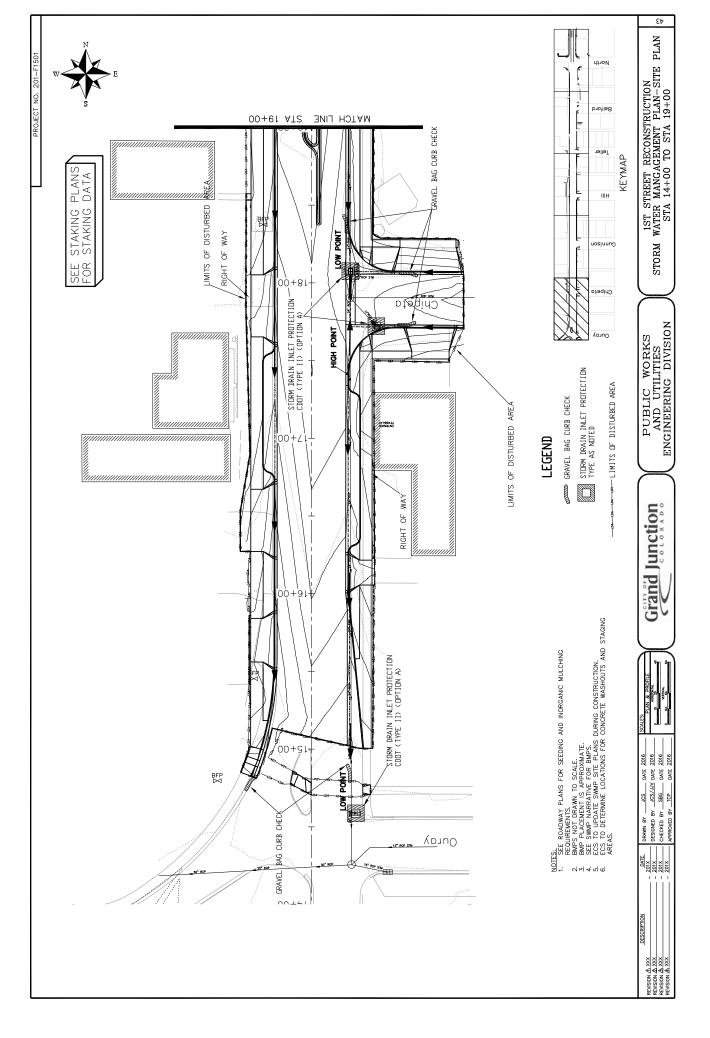
^{*} It is anticipated that additional BMPs and BMP quantities not shown on the SWMP Site Maps shall be required on the project for unforeseen conditions and replacement of items that are beyond their useful service life, see subsection 208.03 and 208.04 (e). Quantities for all BMPs shown above are estimated, and have been increased for unforeseen Project conditions. Quantities shall be adjusted according to the conditions encountered in the field as directed and approved by the Engineer. Payment shall be for the actual work completed and material used.

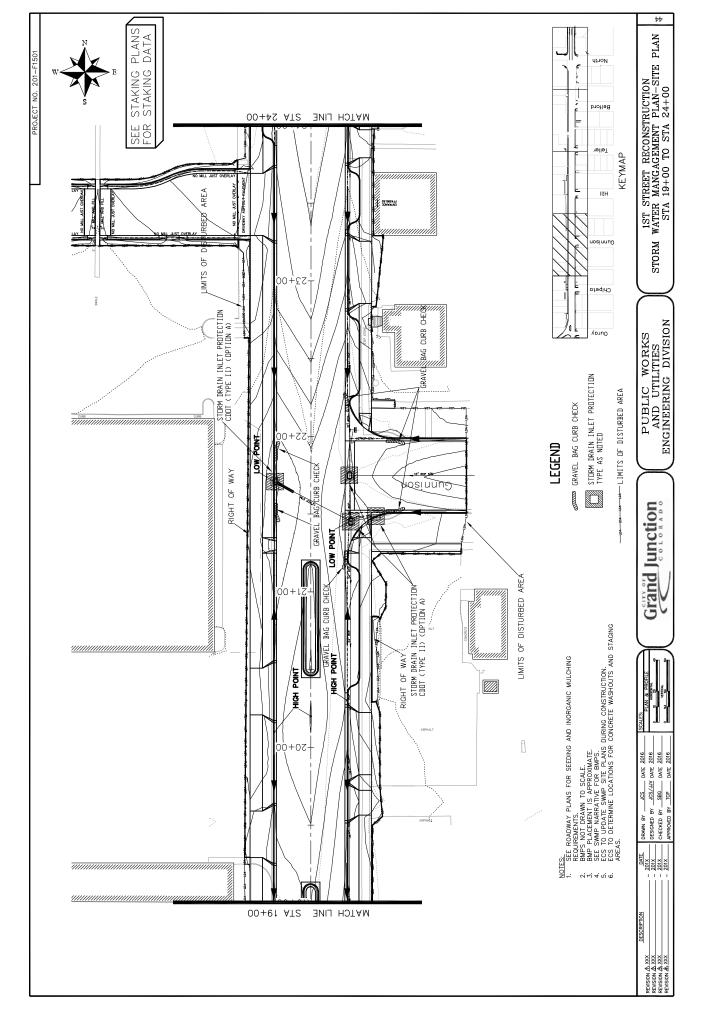
- BMP sediment removal and disposal shall be paid for as: 208 Removal and Disposal of Sediment (Equipment) and 208 Removal and Disposal of Sediment (Labor). All other BMP maintenance shall be included in the cost of the BMP Device. Ą.
- It is estimated that 100 hours of labor, blading (130 140 horsepower), 100 hours of Sweeping (With Pickup Broom) may be required for miscellaneous erosion control work as directed by the Engineer. Work shall be paid for as: Labor, 203 Blading, 203 Sweeping (With Pickup Broom). æ.
- Maintenance of seeded areas shall be paid for as: 212 Seeding (Native υ

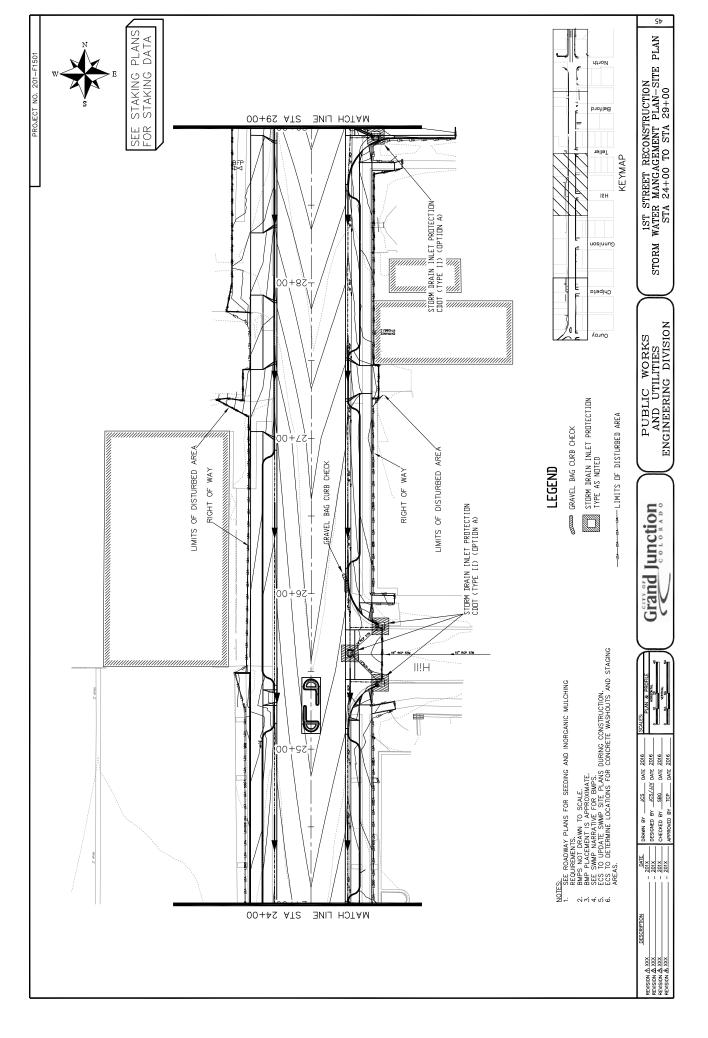
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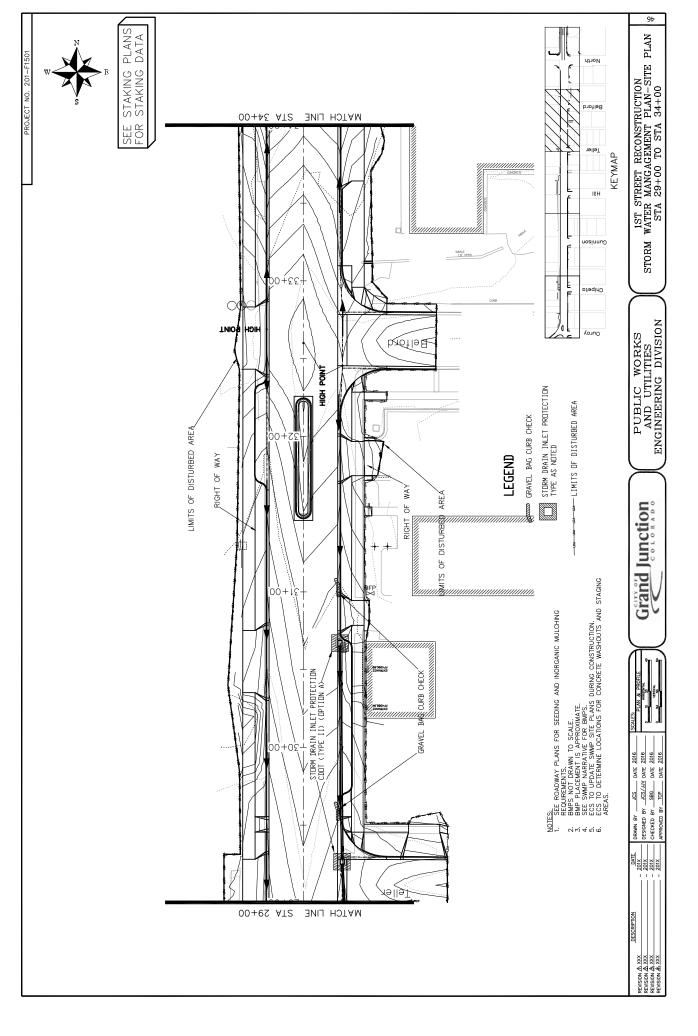
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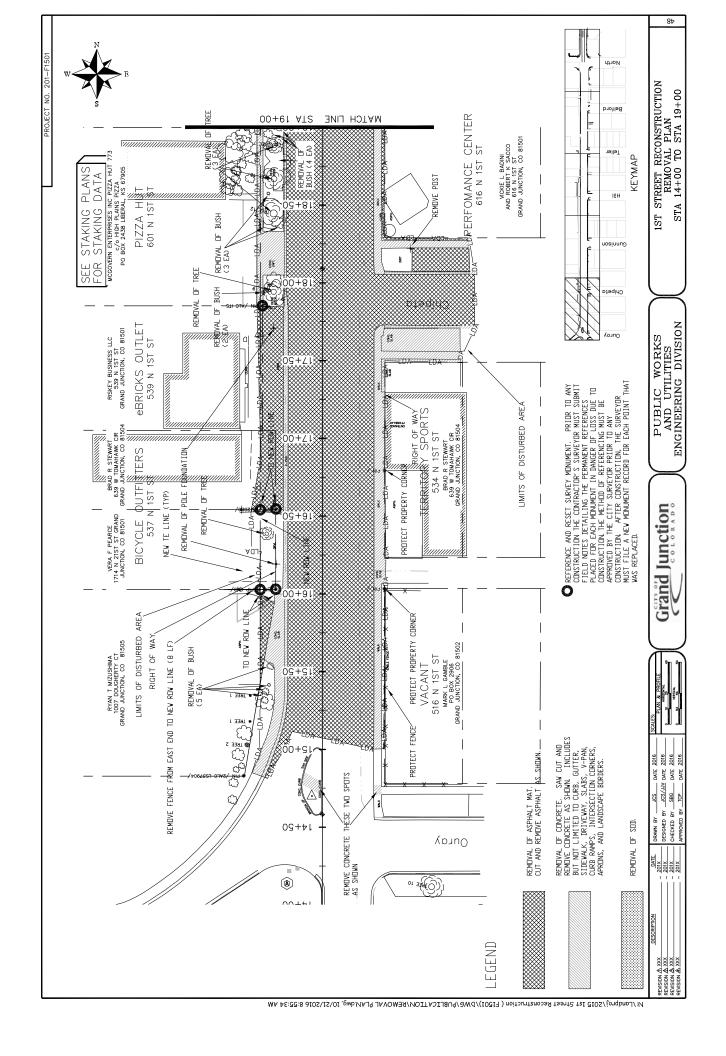
^{**} Quantity carried over to Tabulation of Landscape Quantities

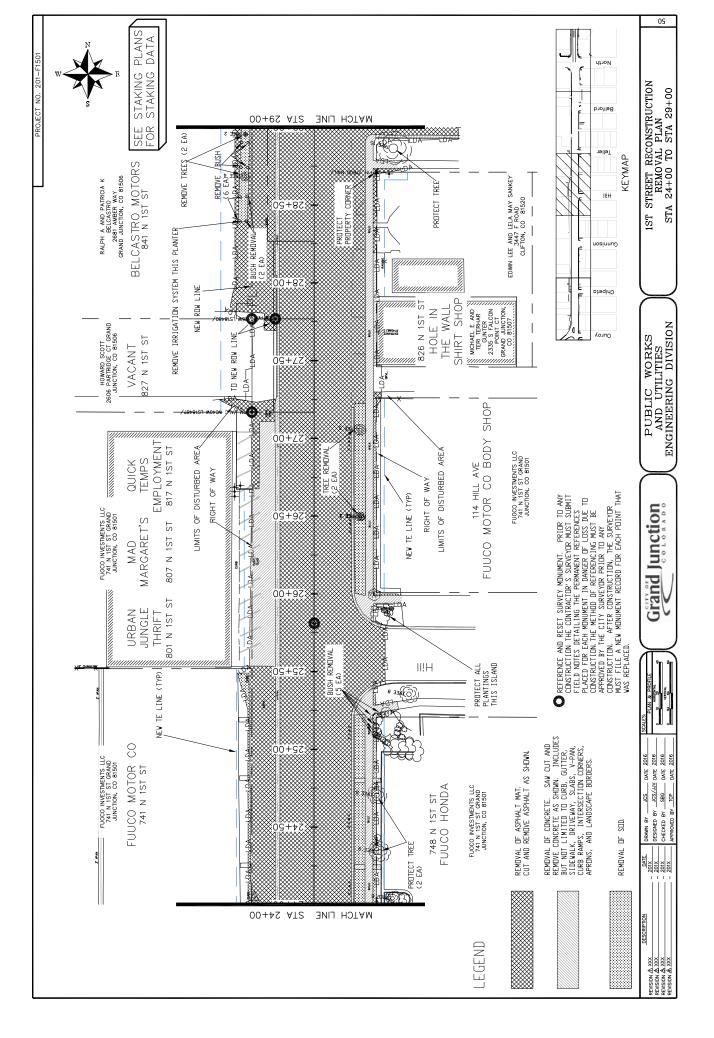


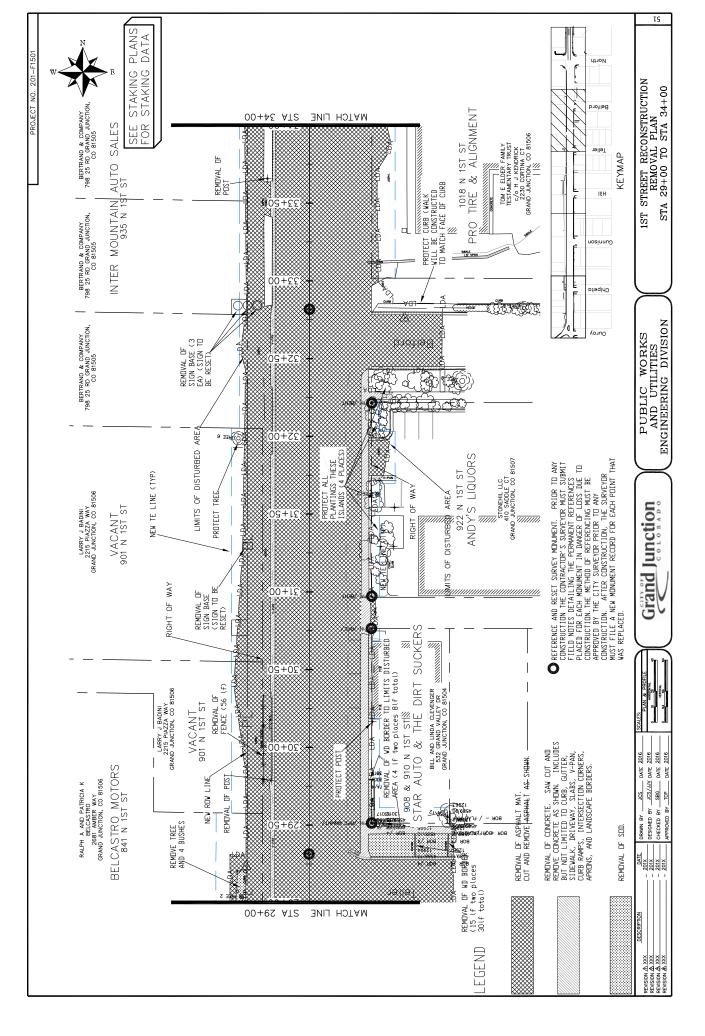


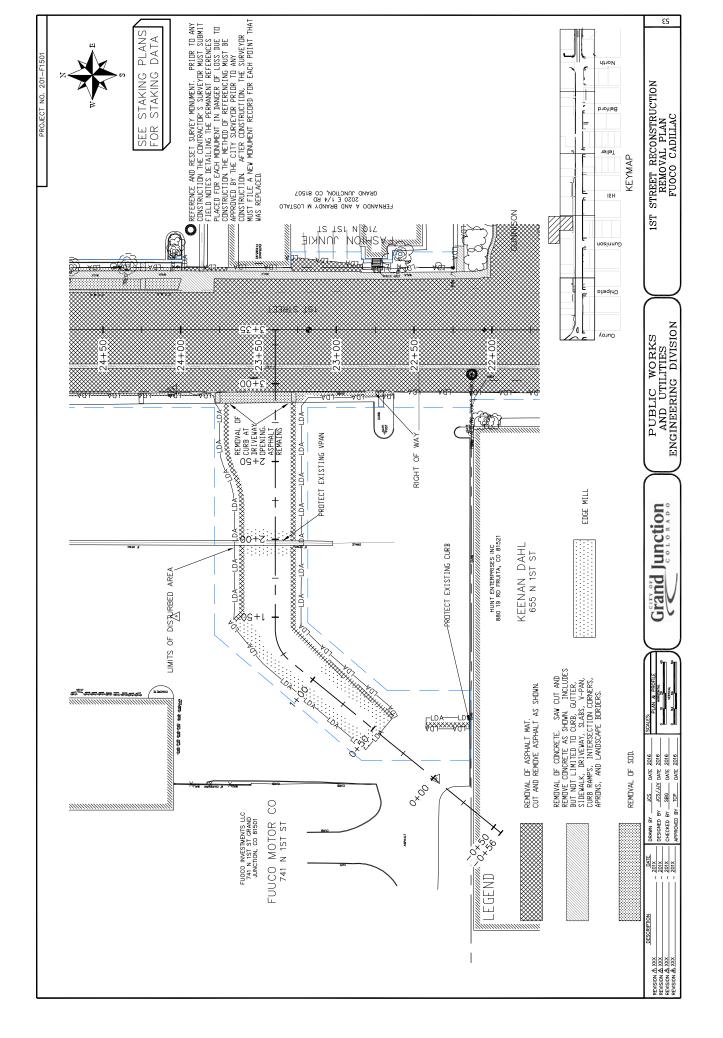


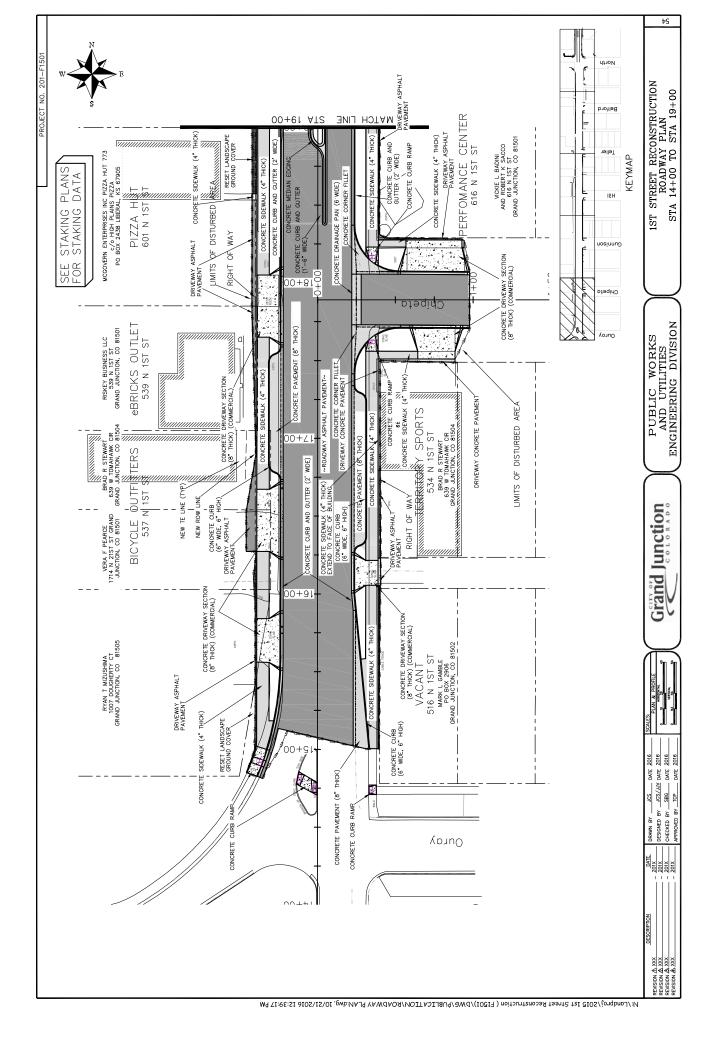


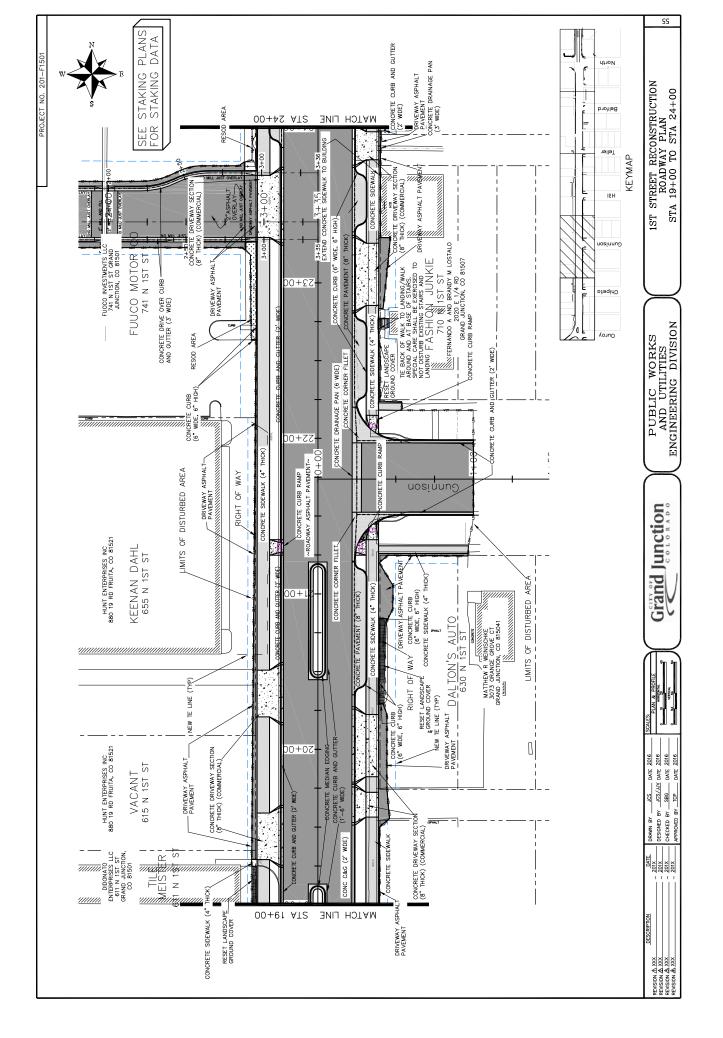


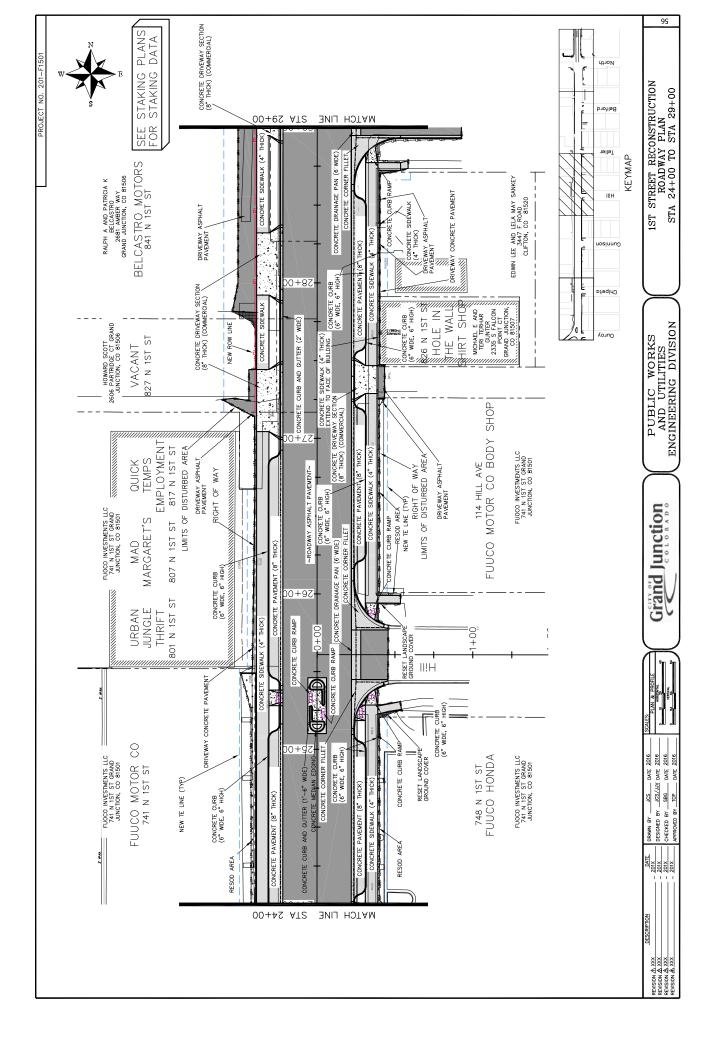


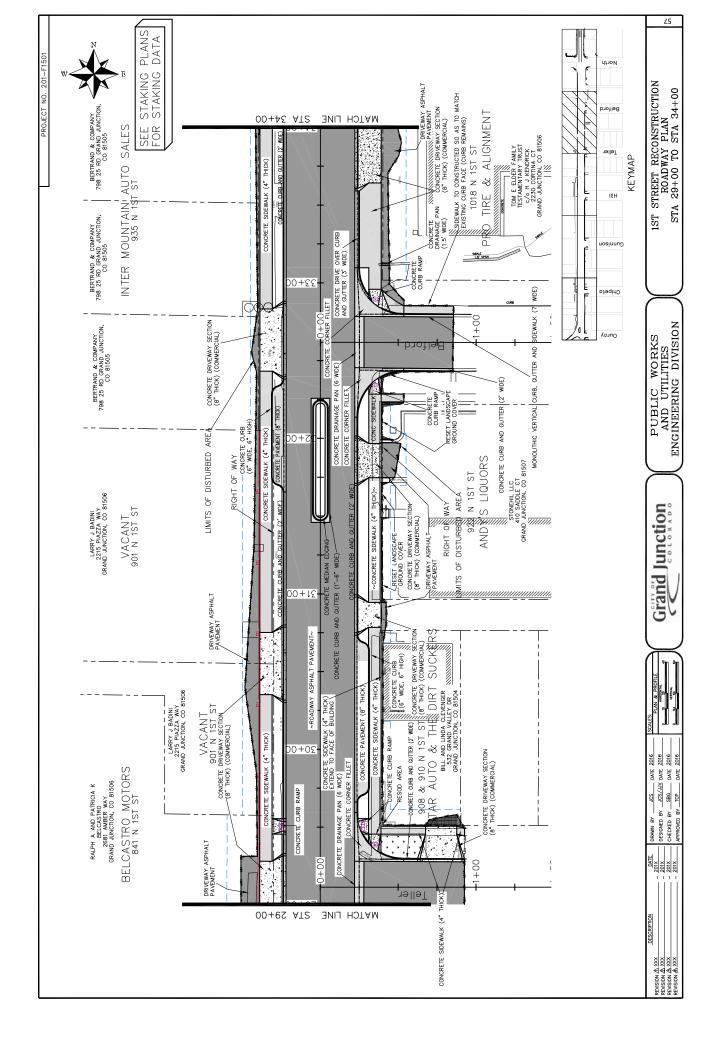


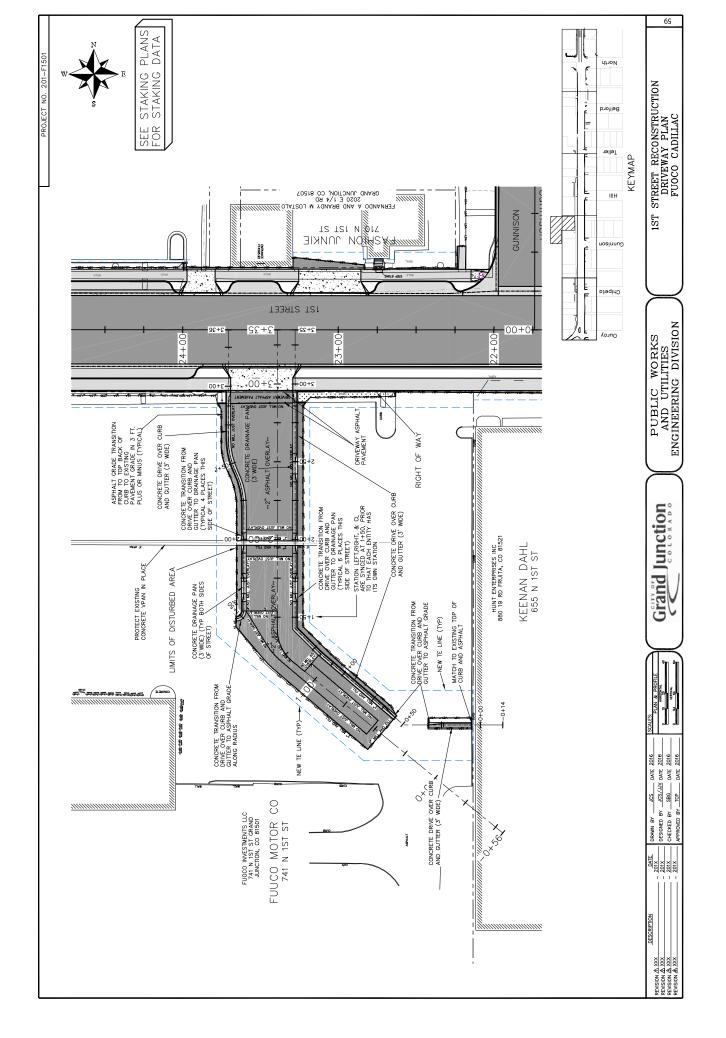


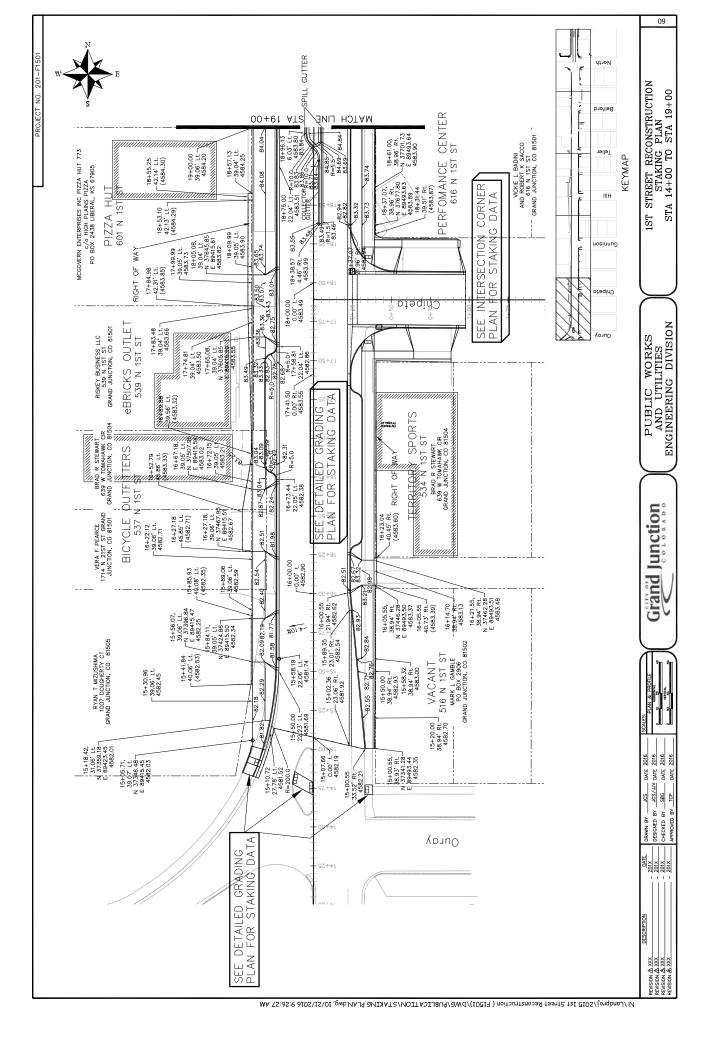


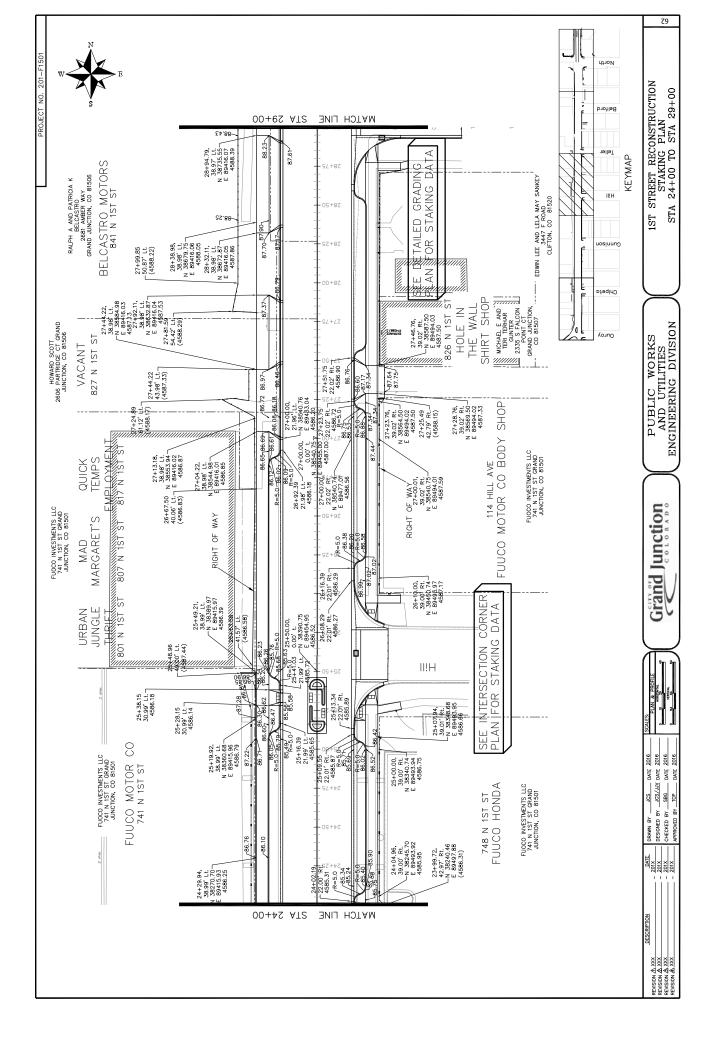


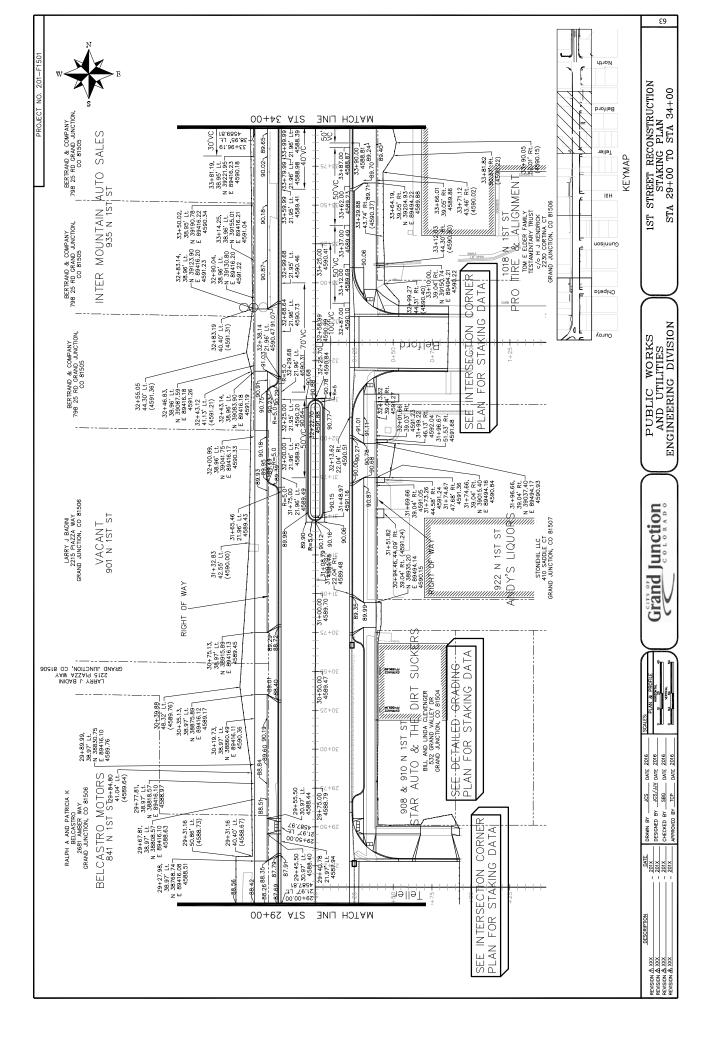




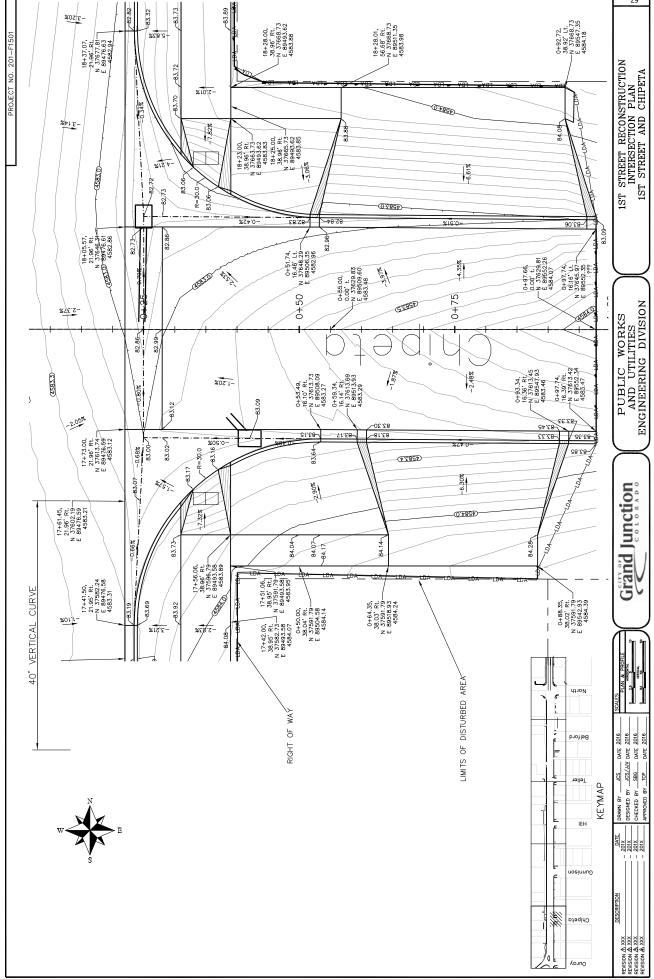


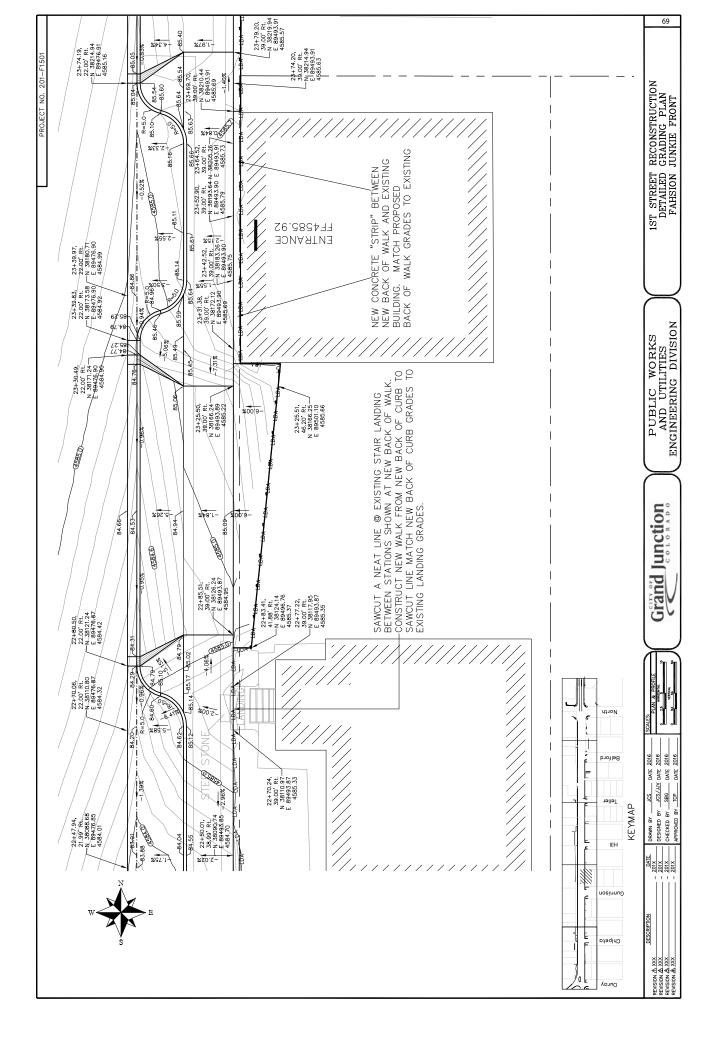


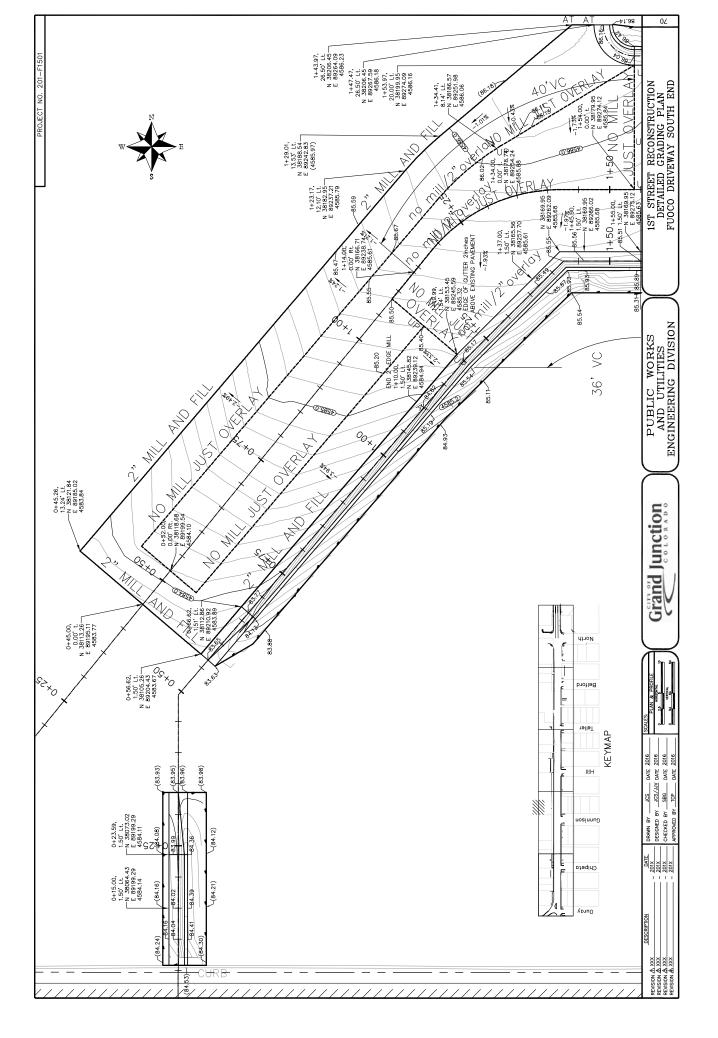


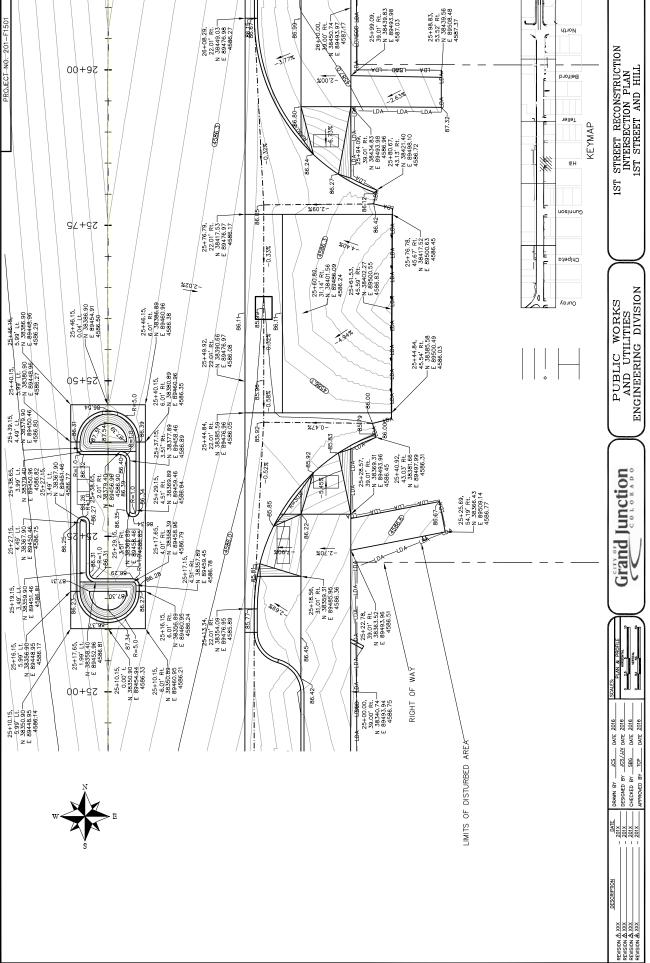


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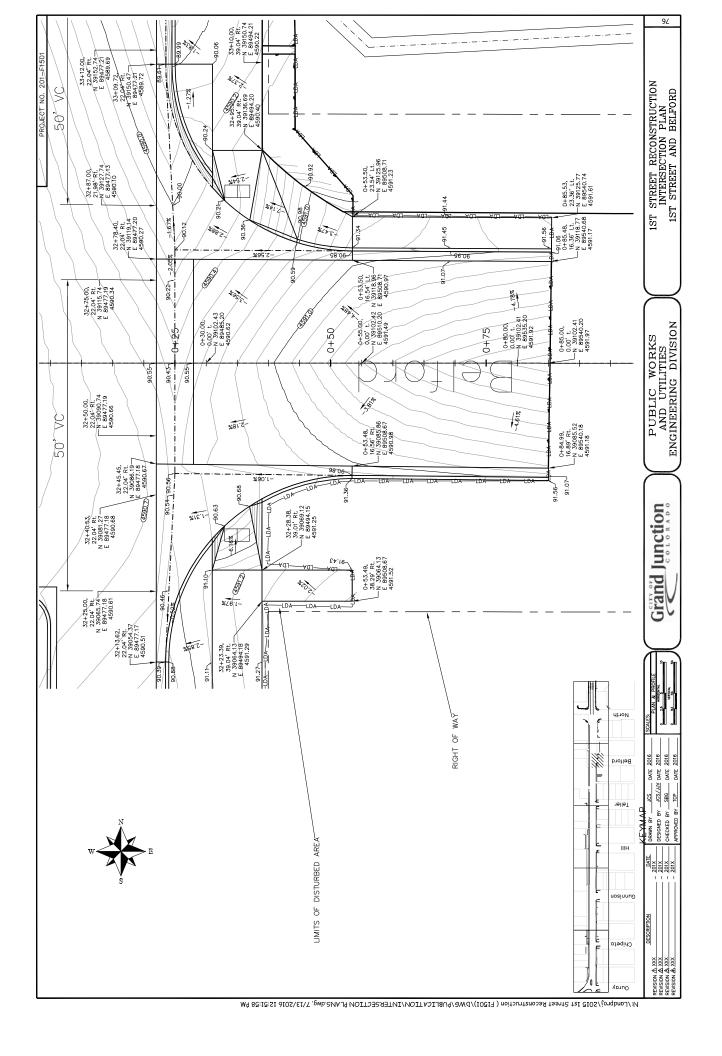


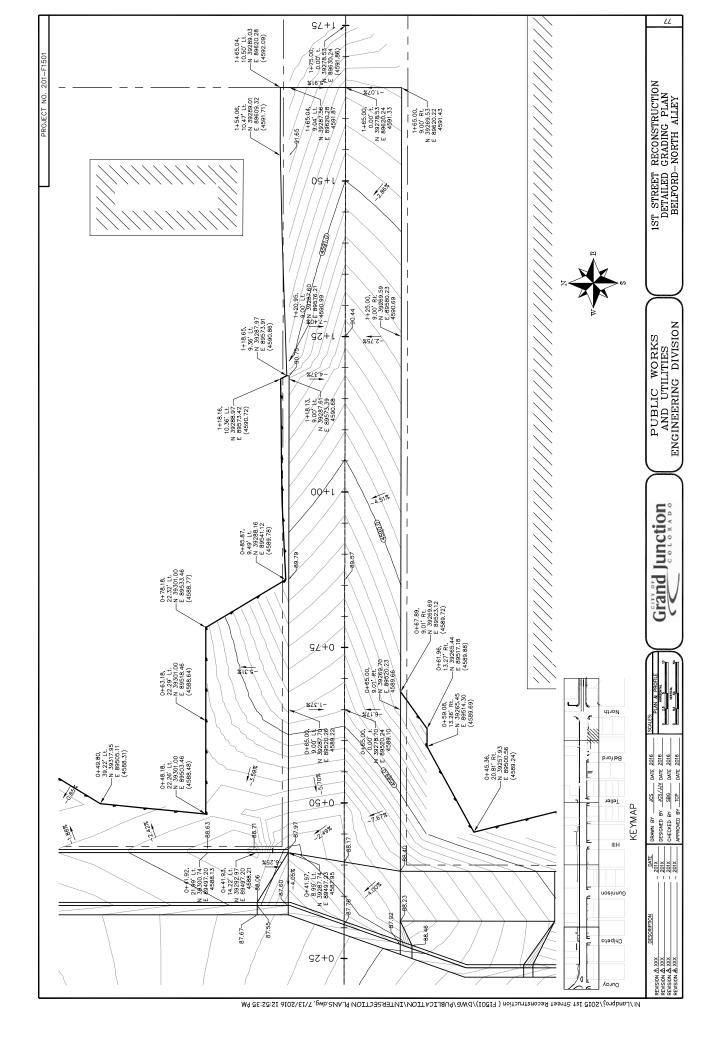


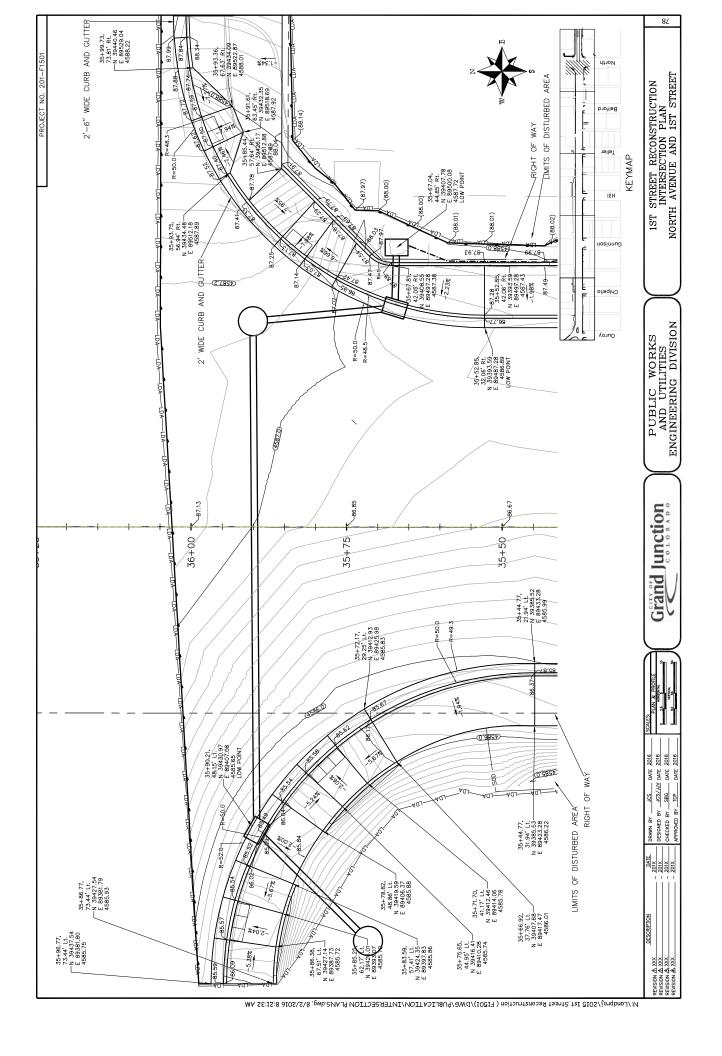


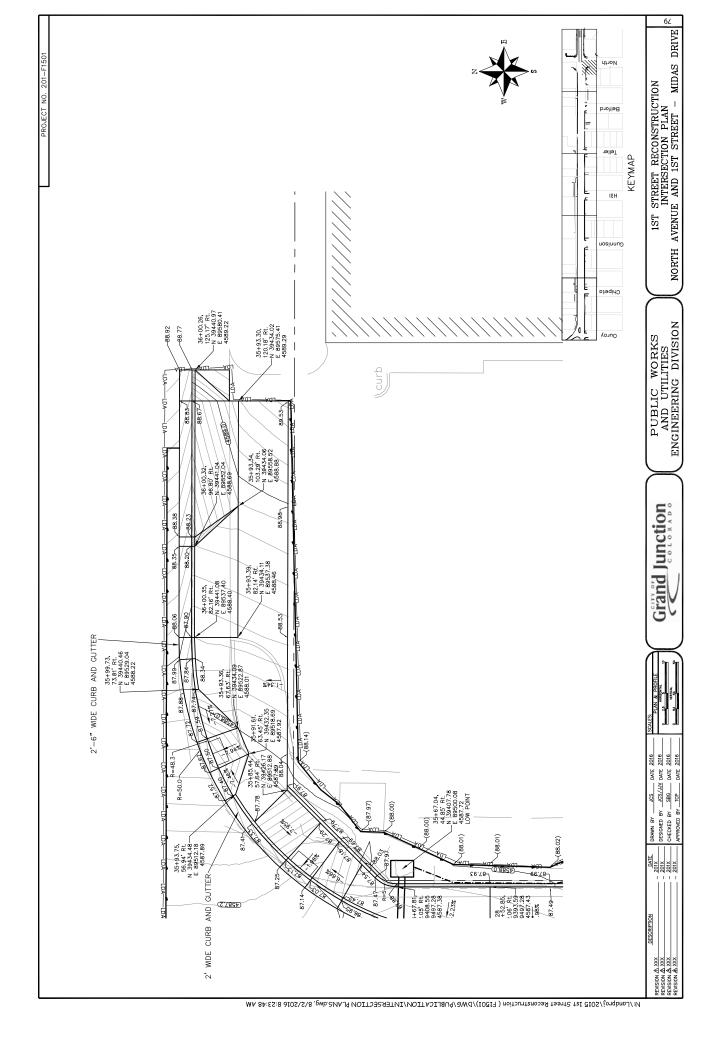


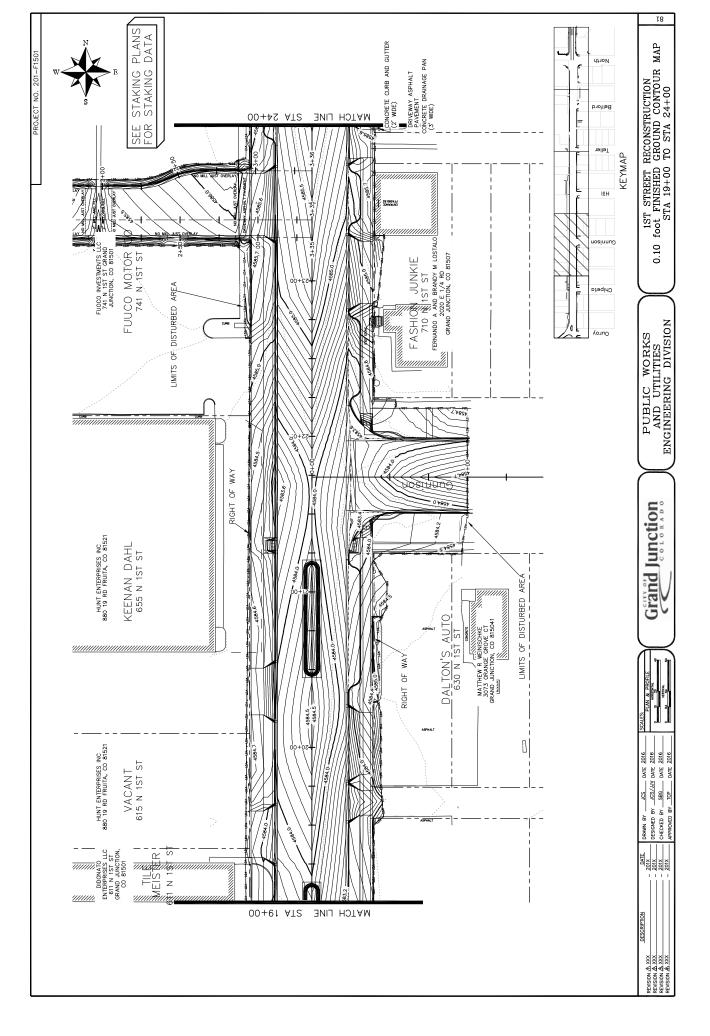
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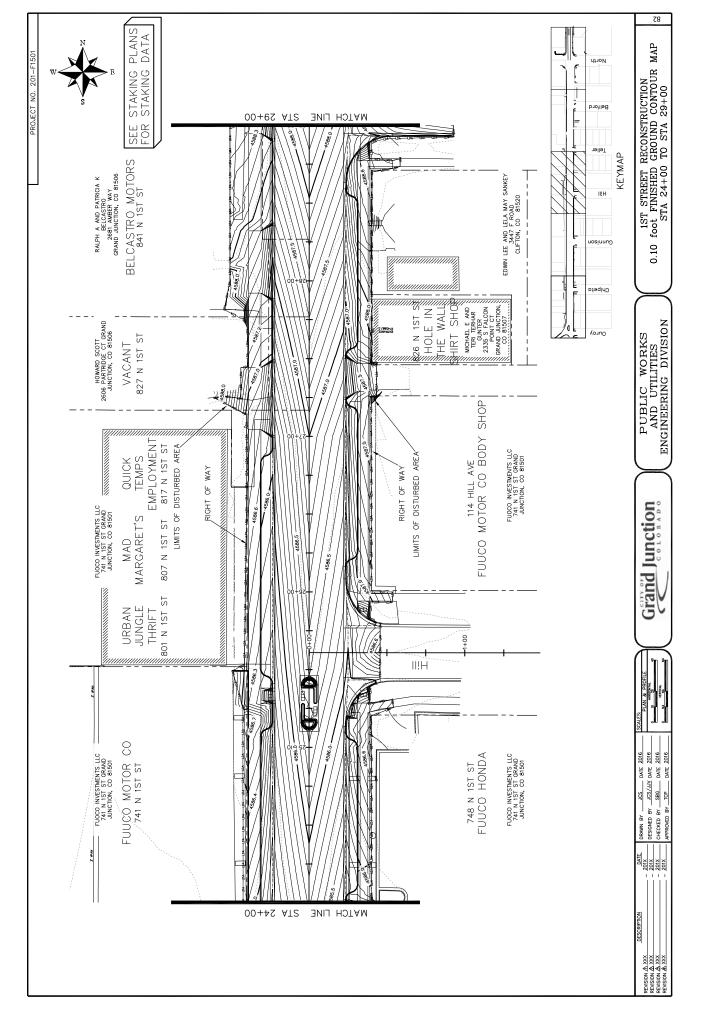


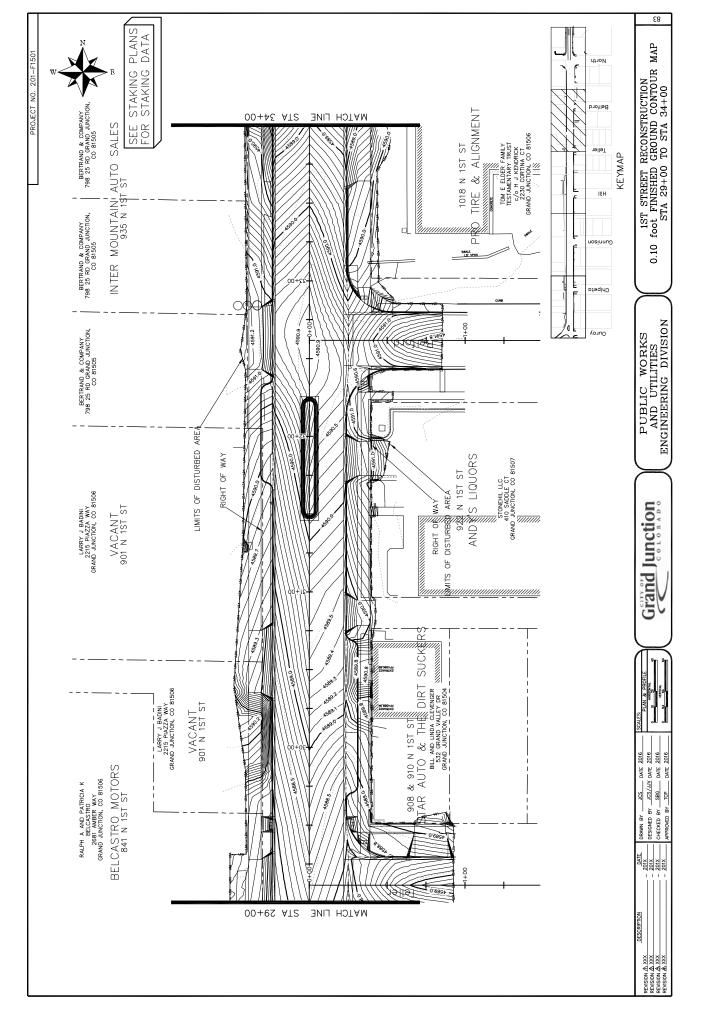


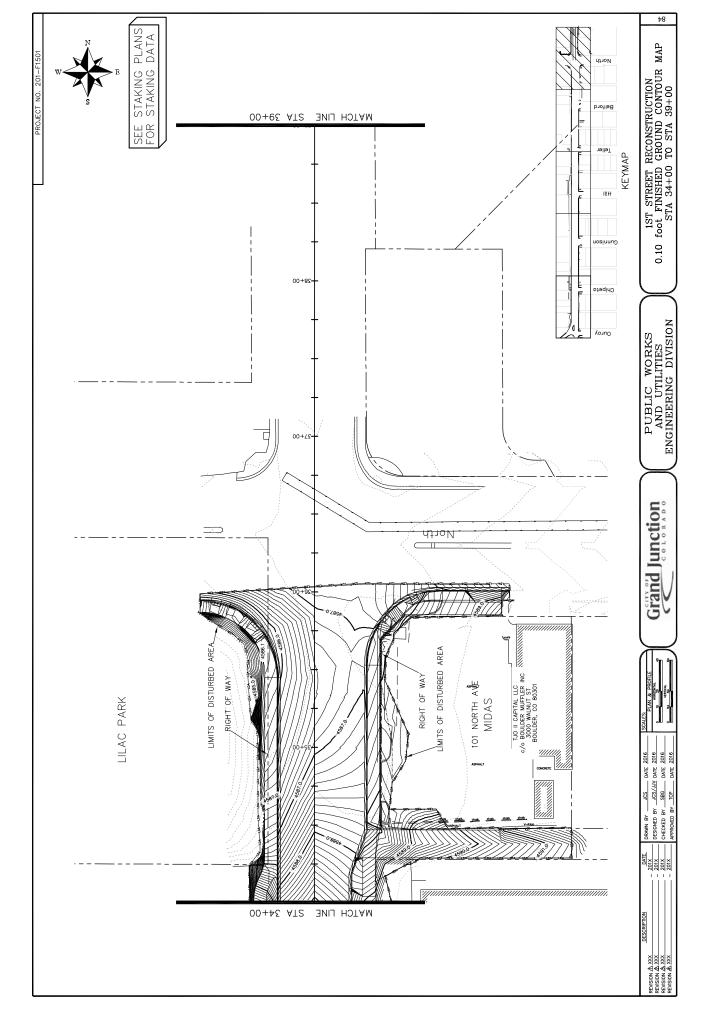


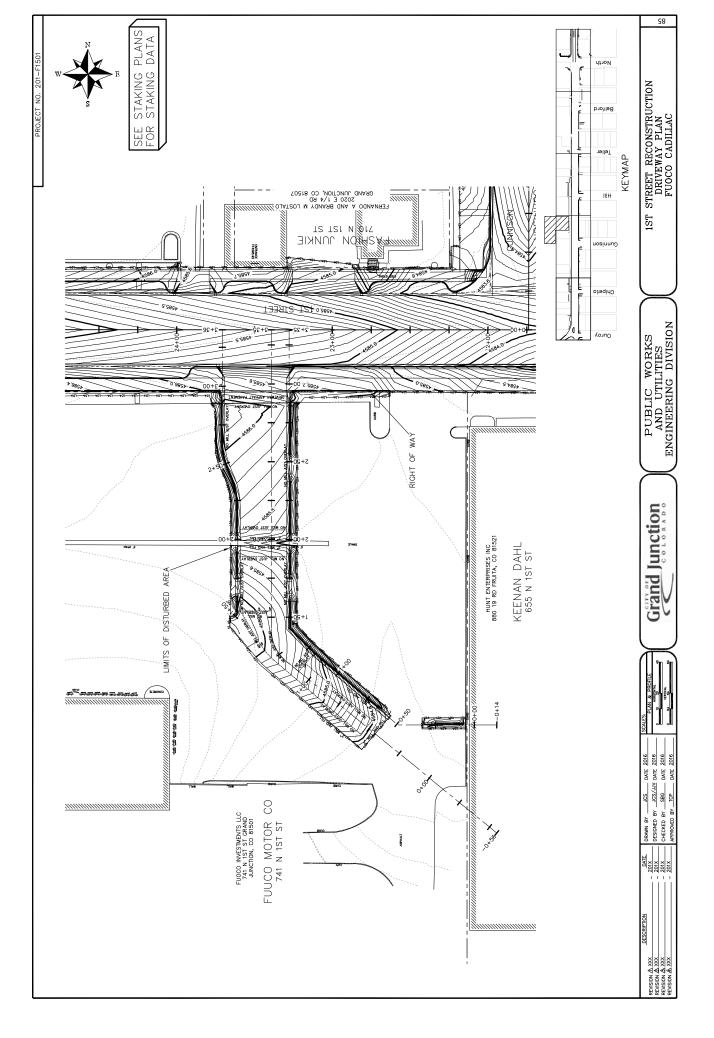


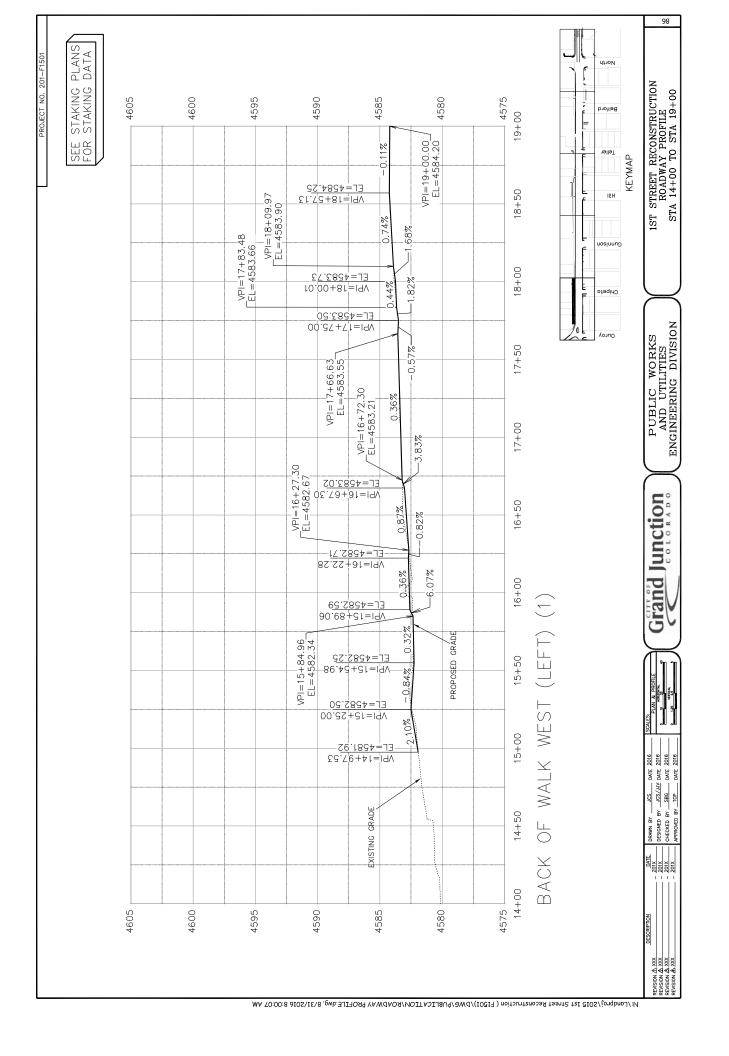


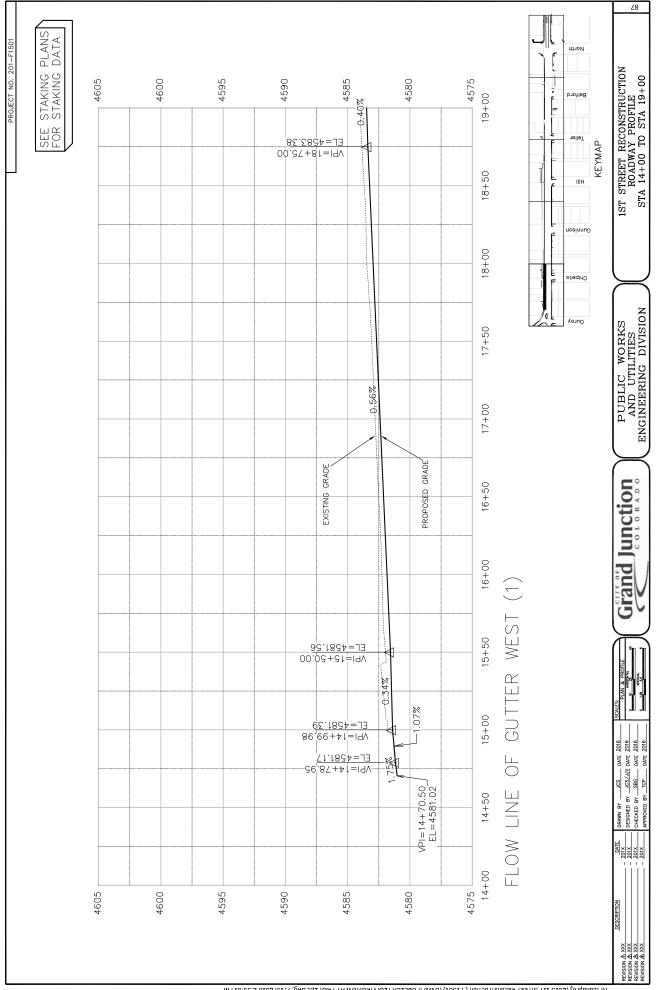


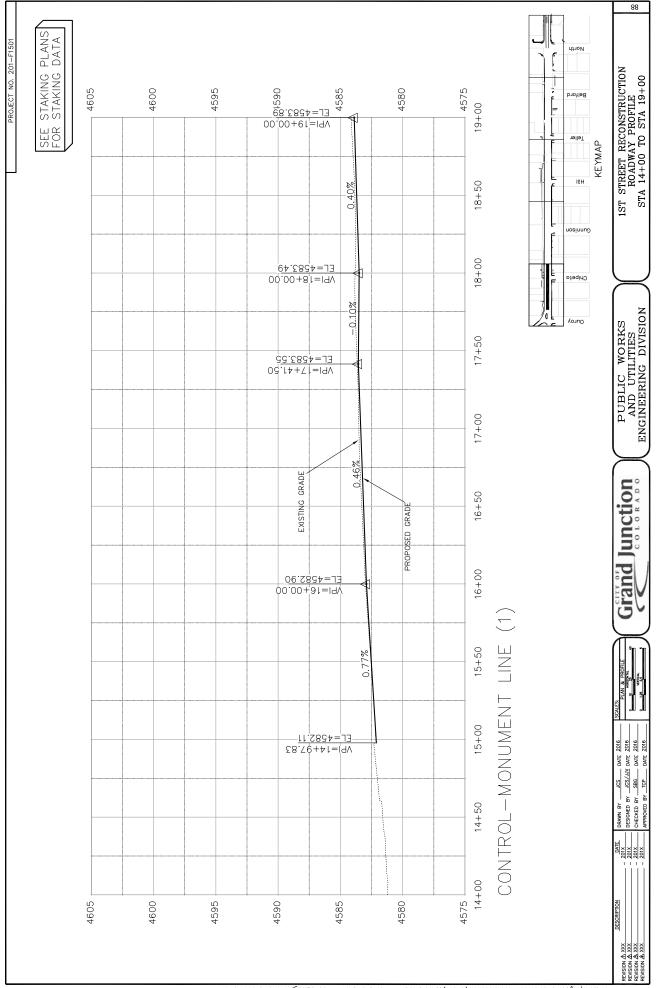


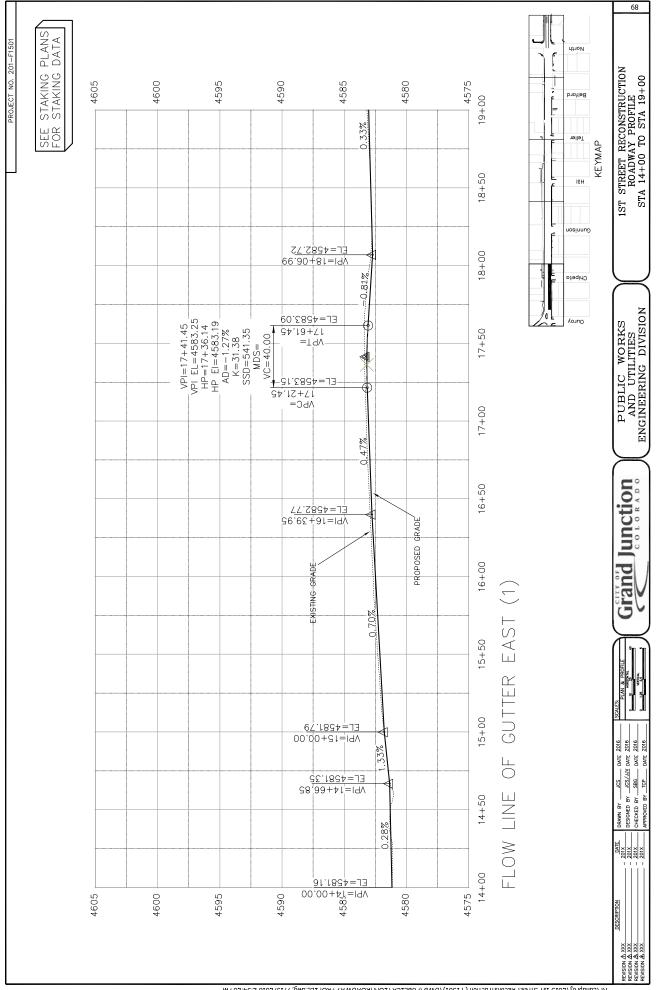


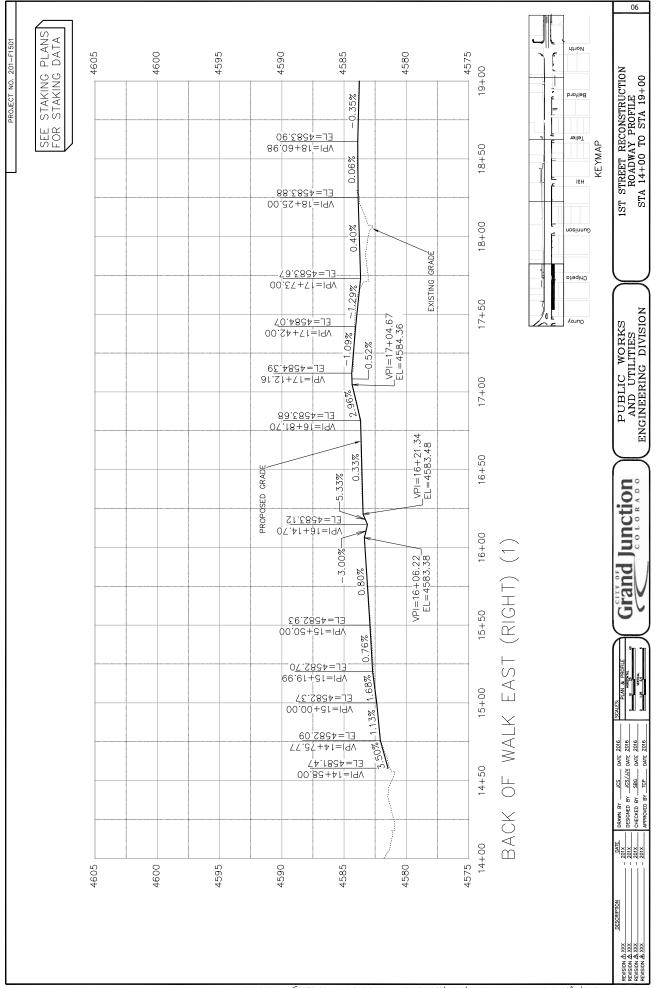


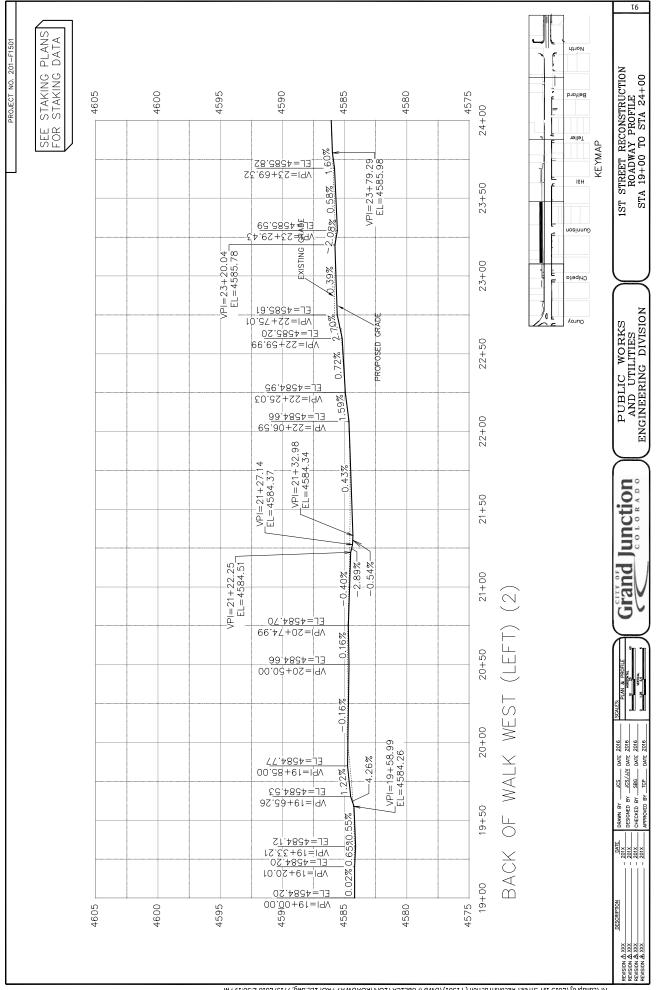


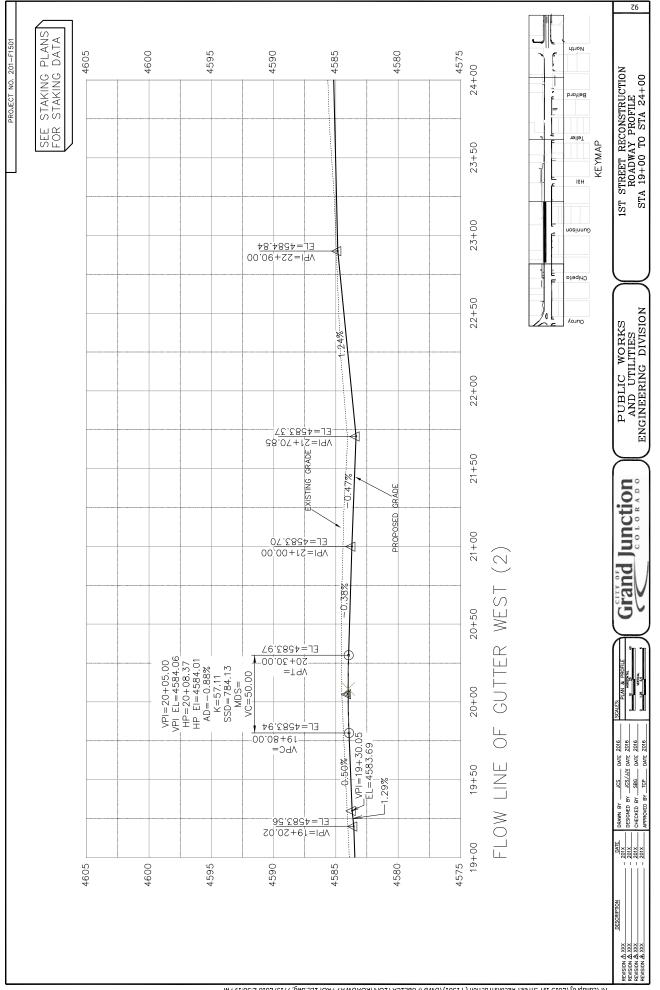


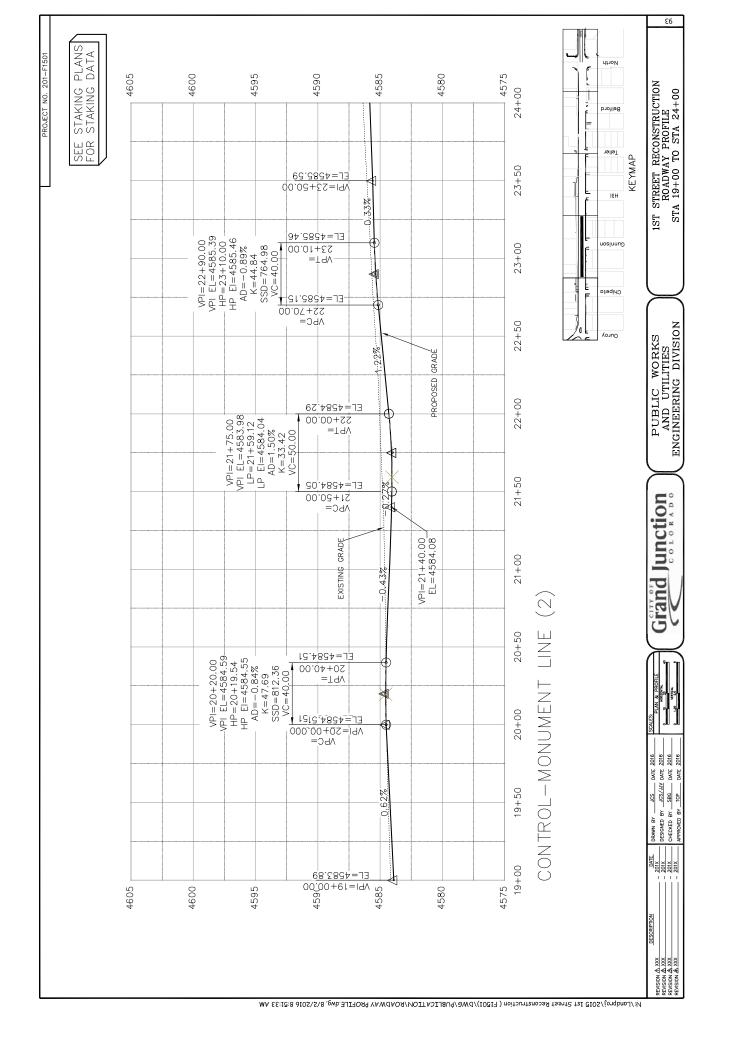


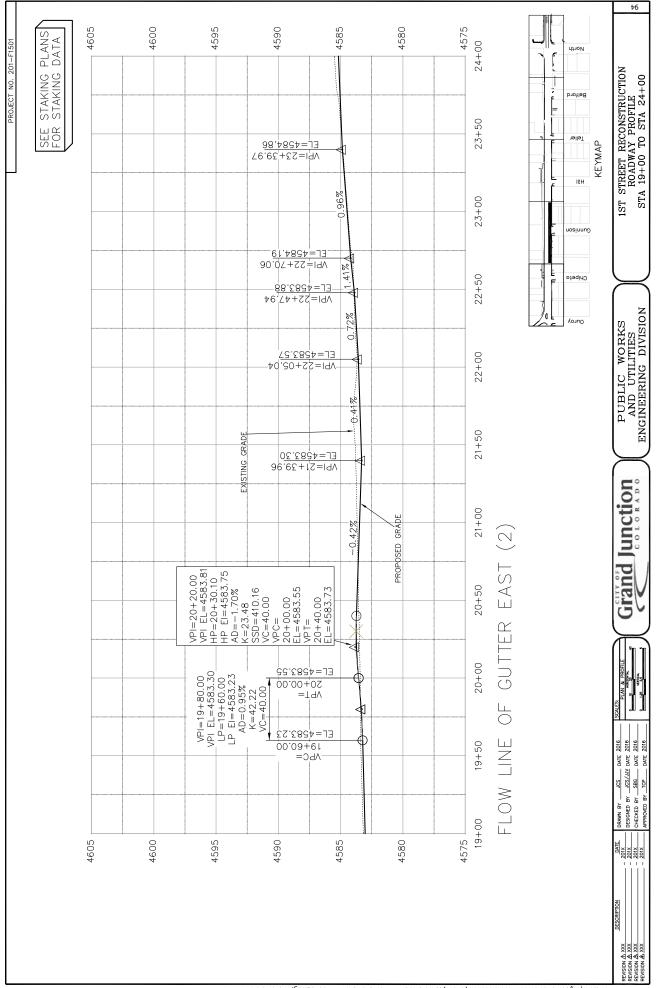


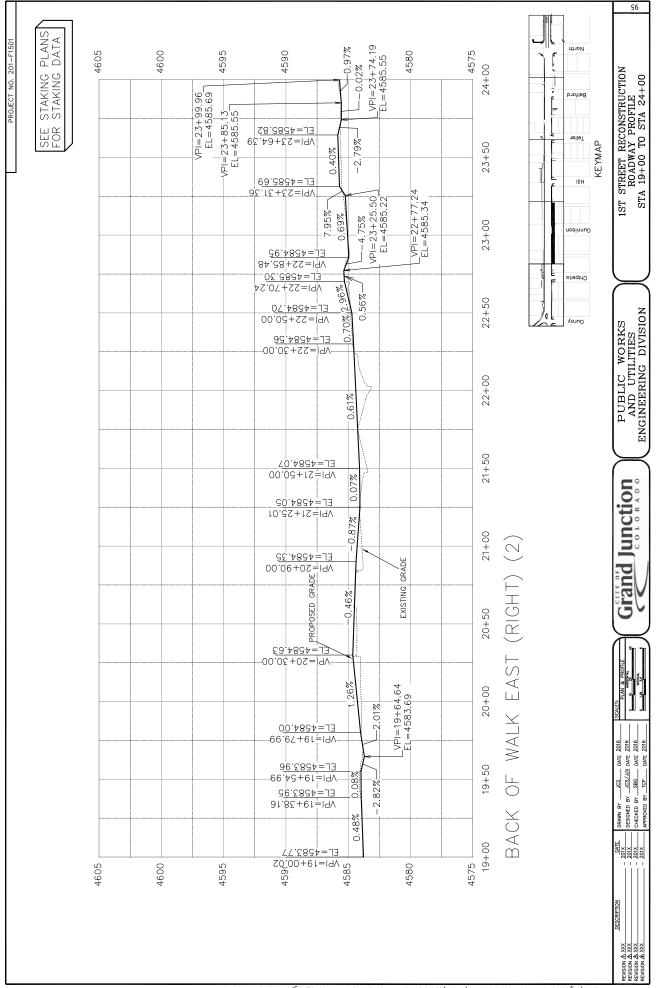


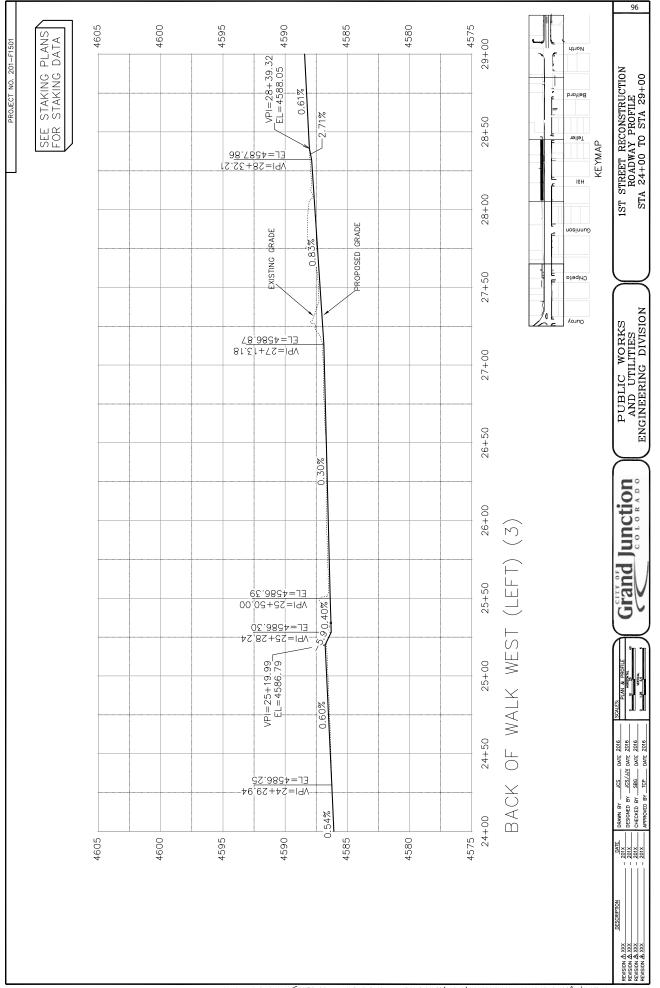


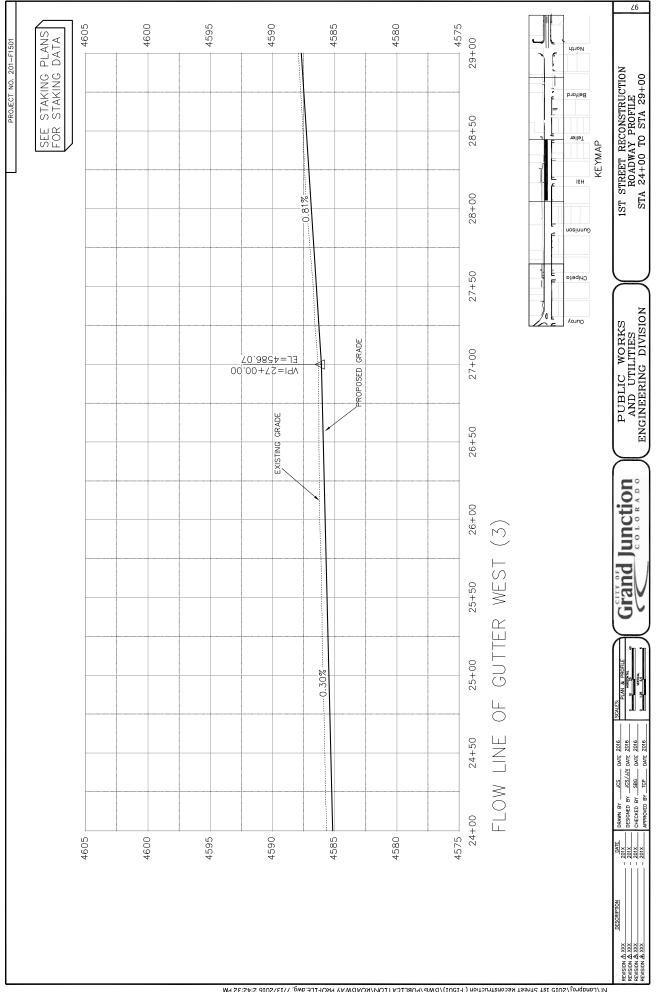


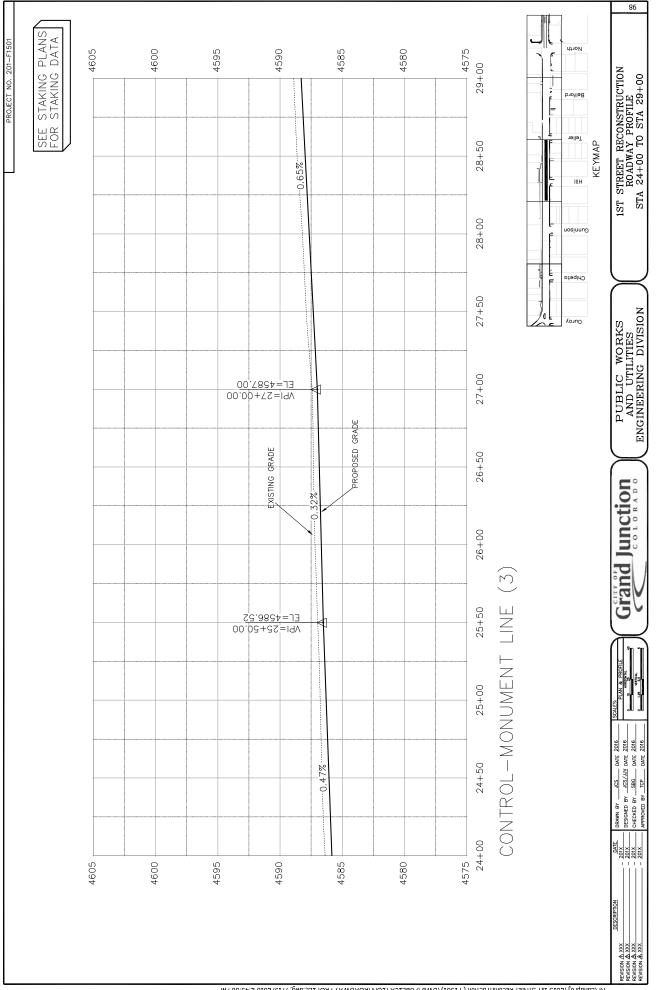


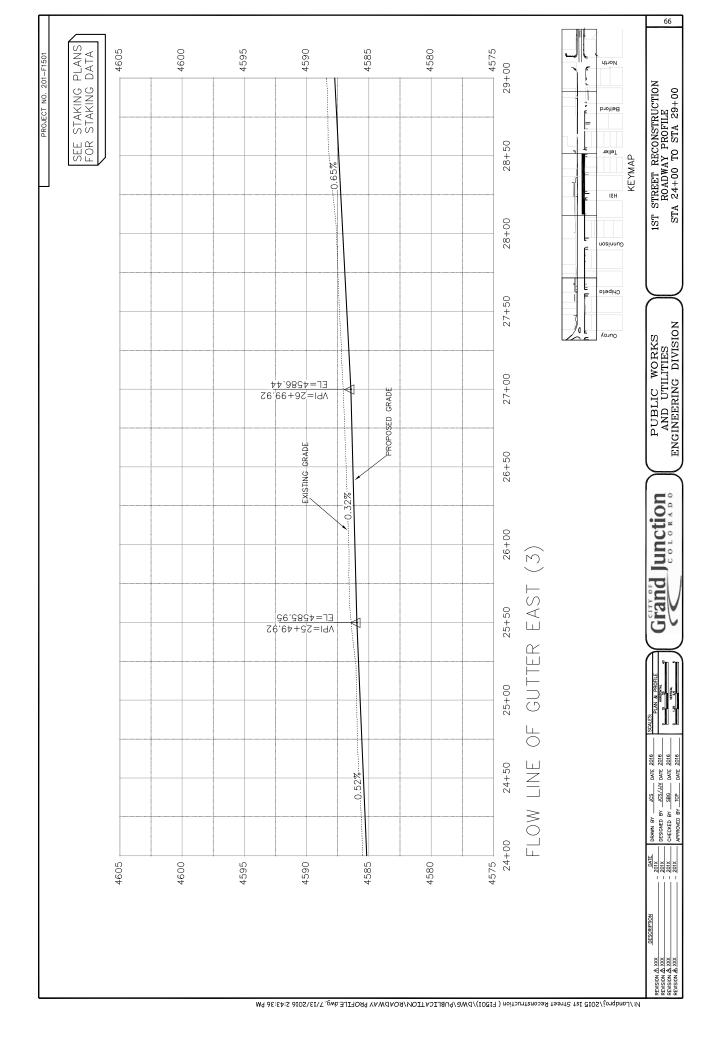


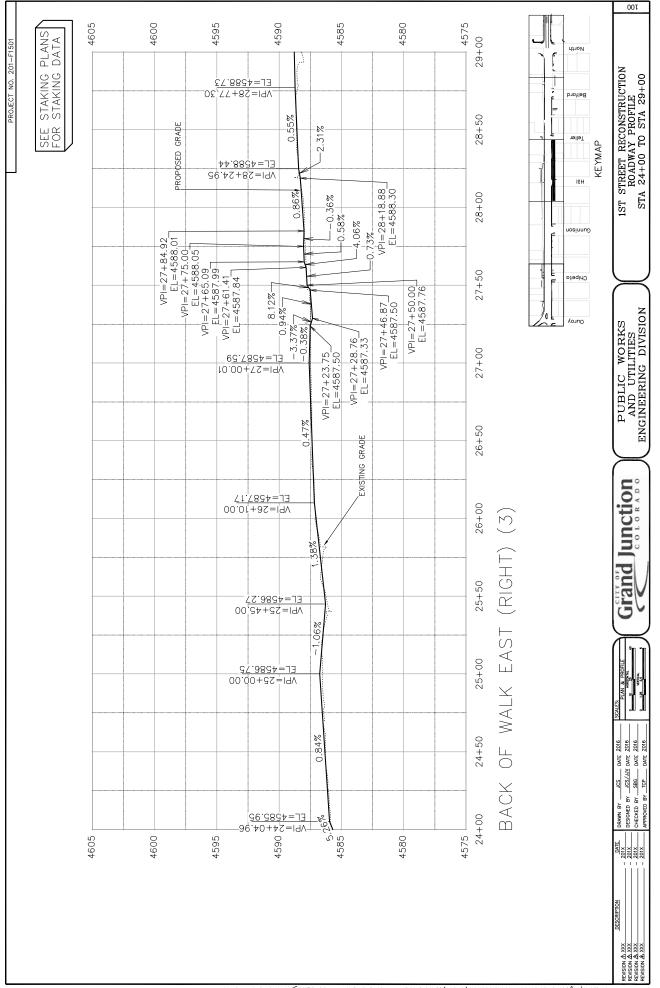


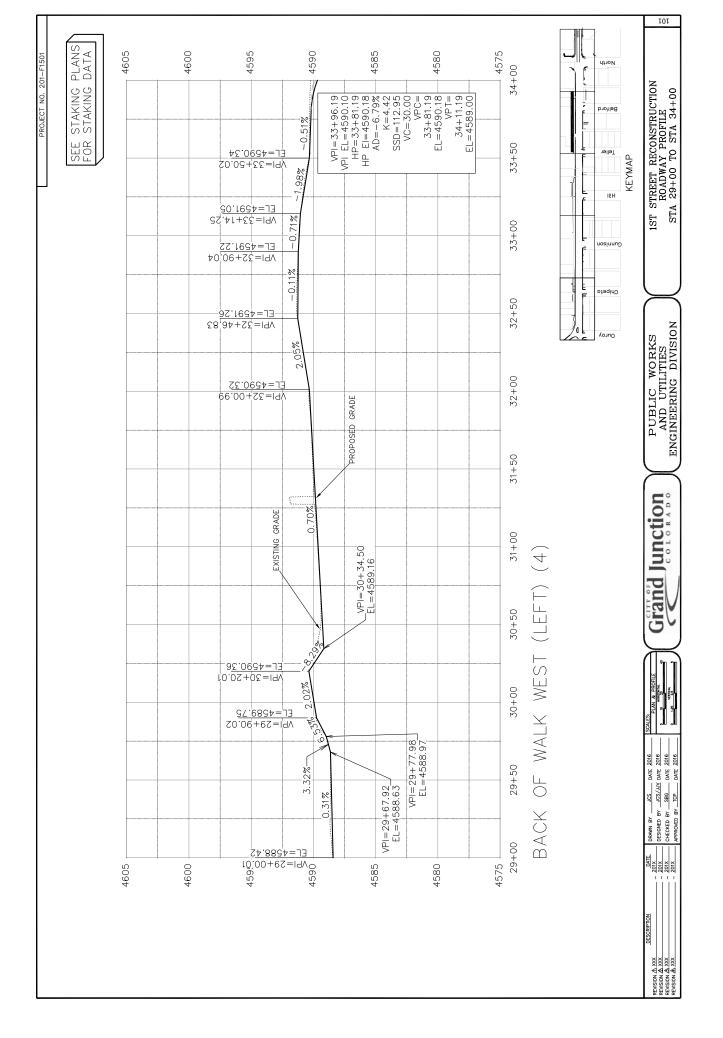


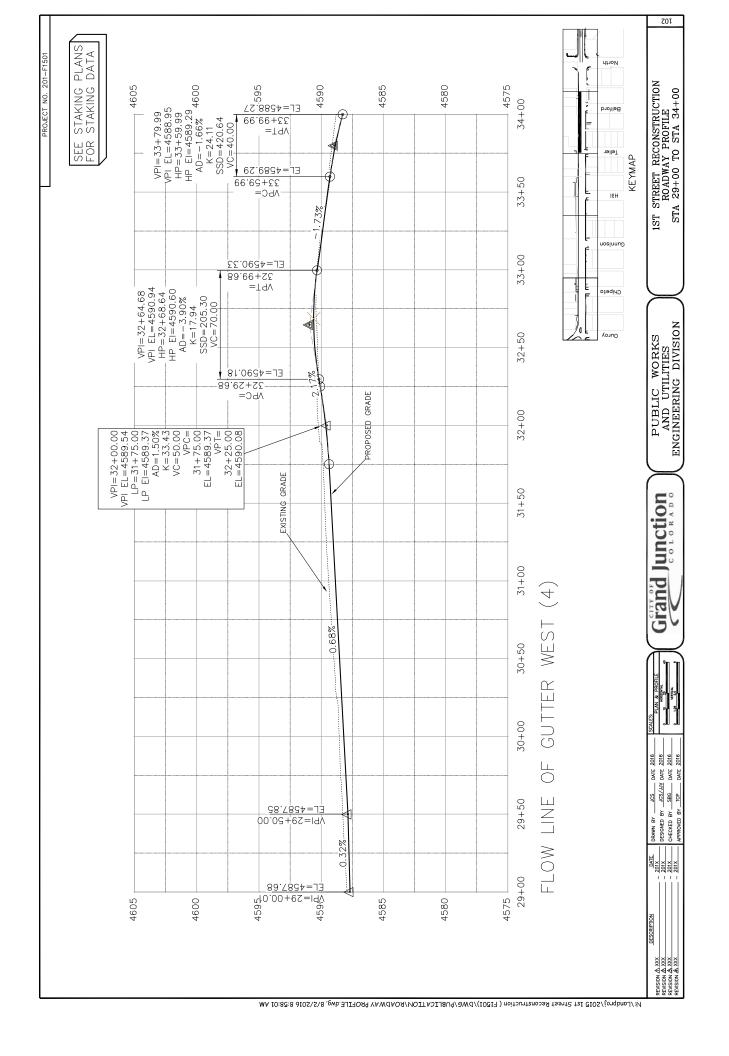


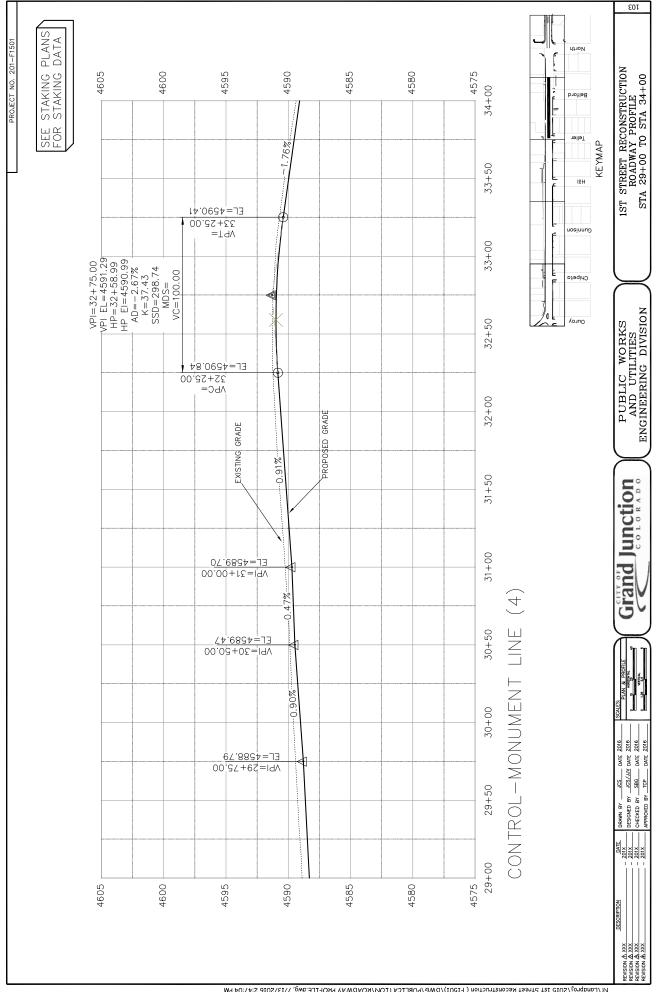


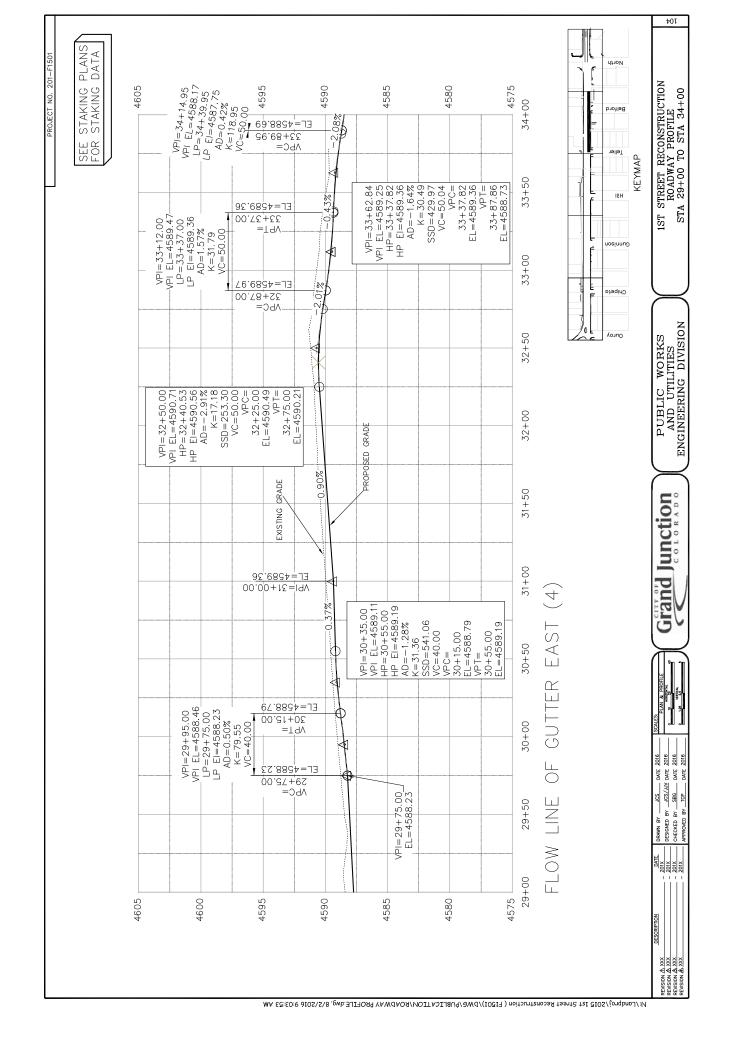


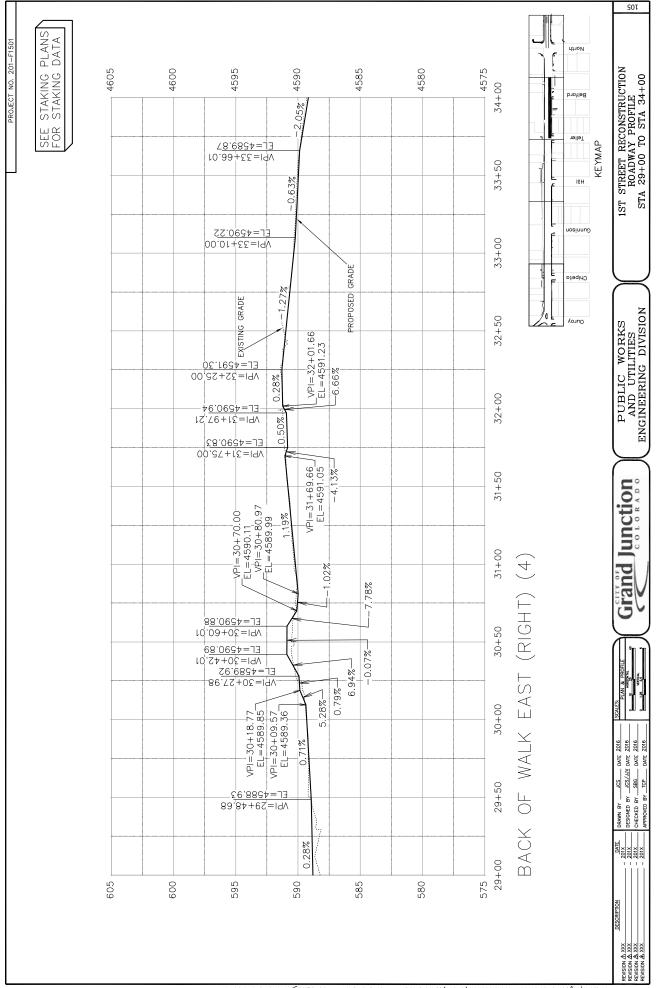


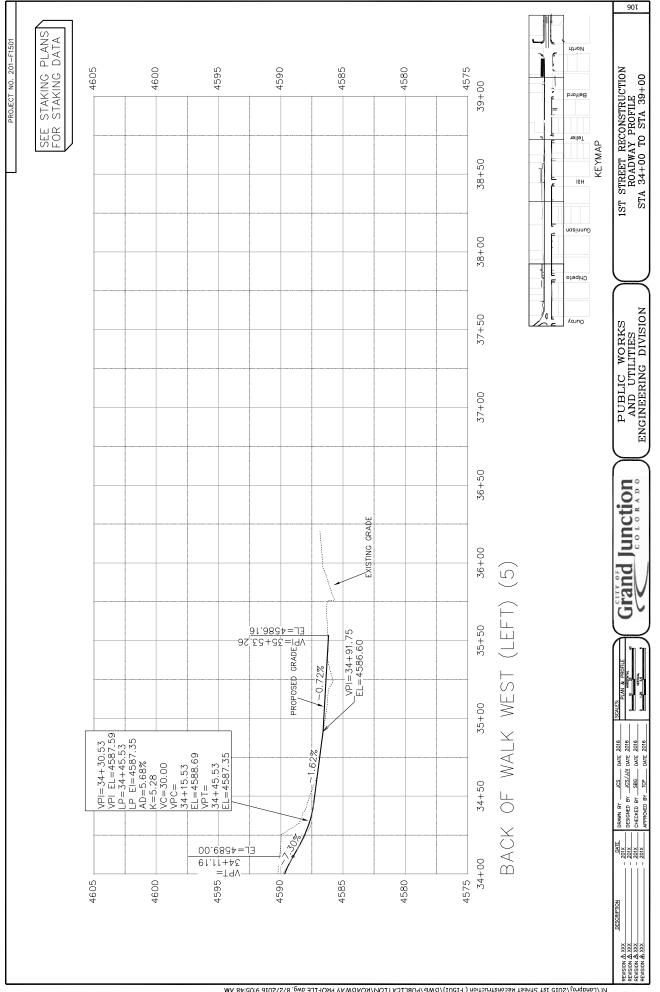


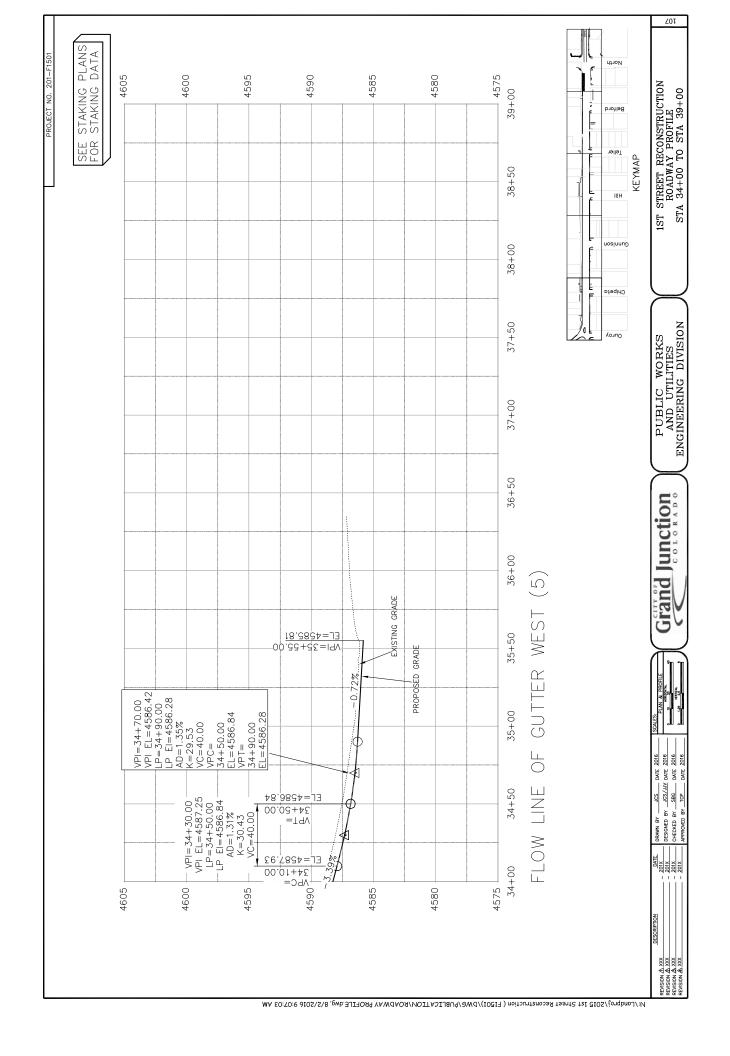


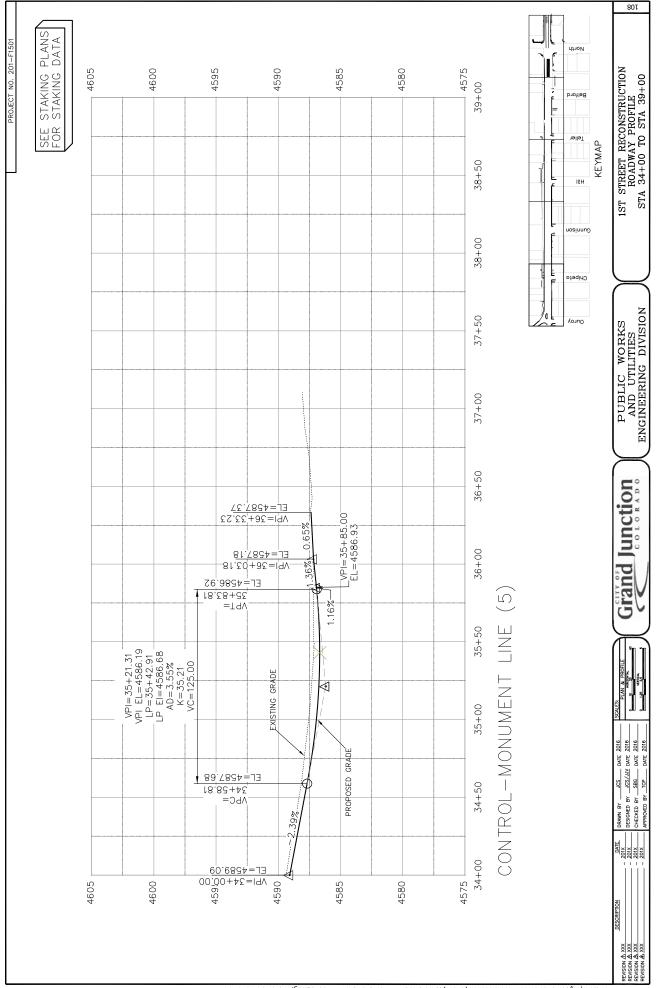


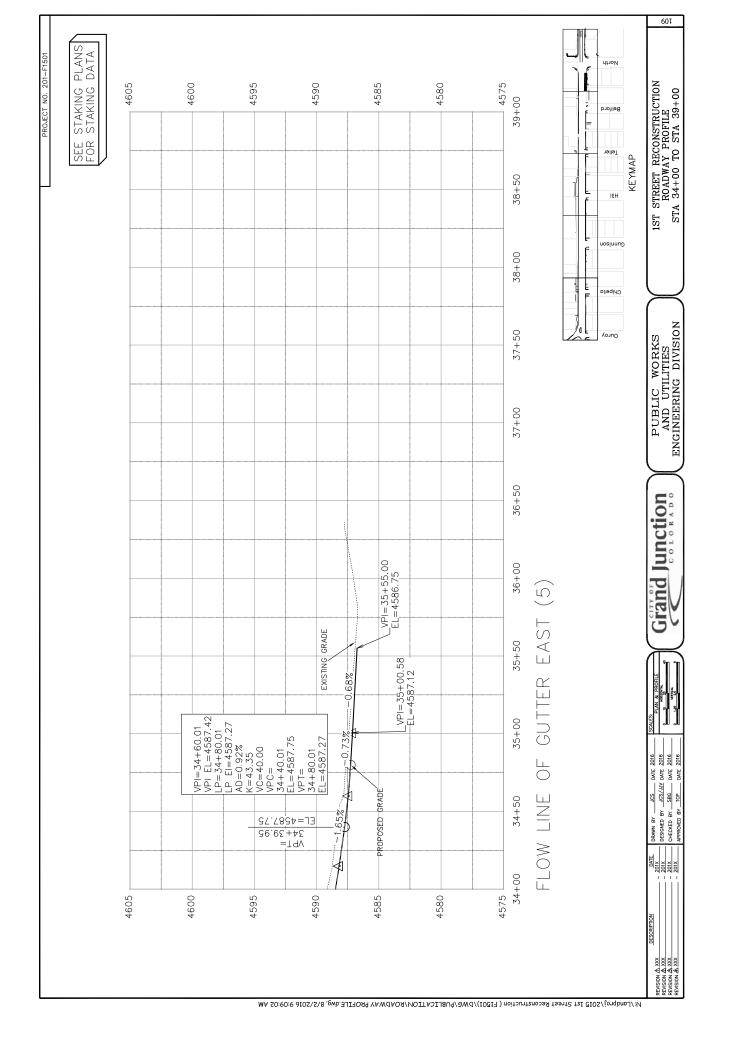


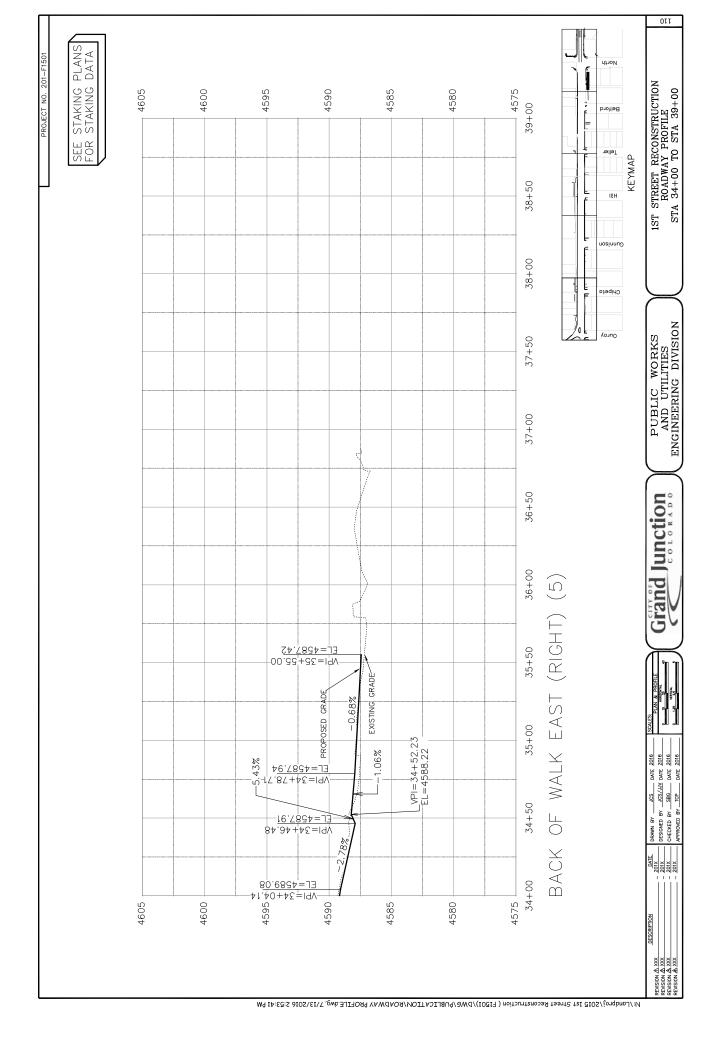


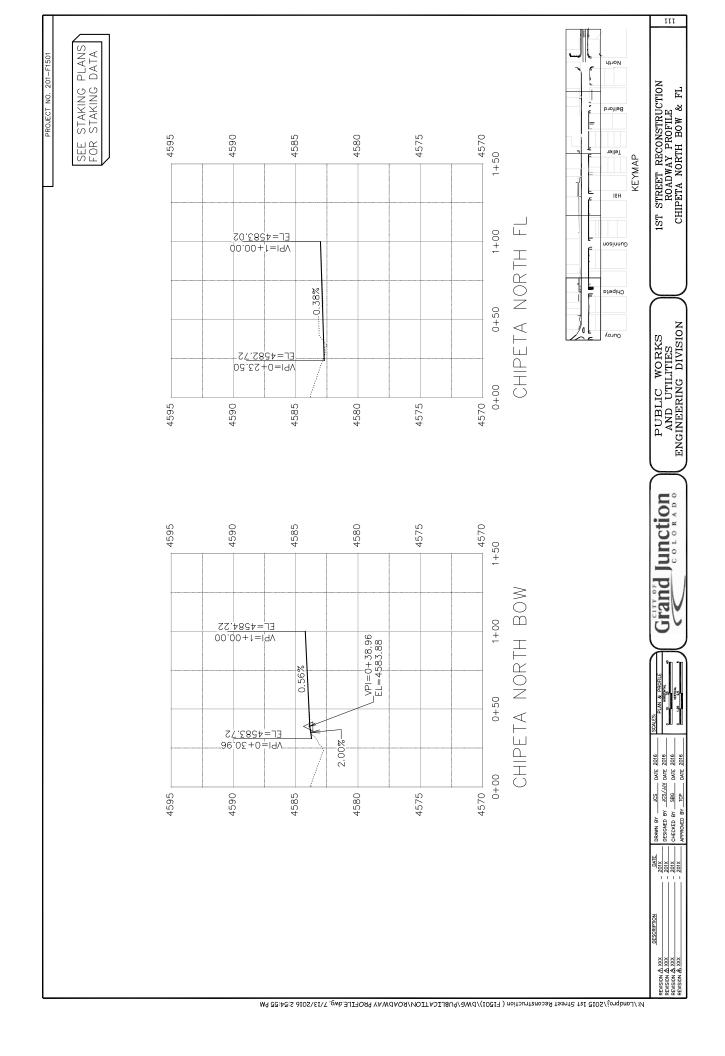


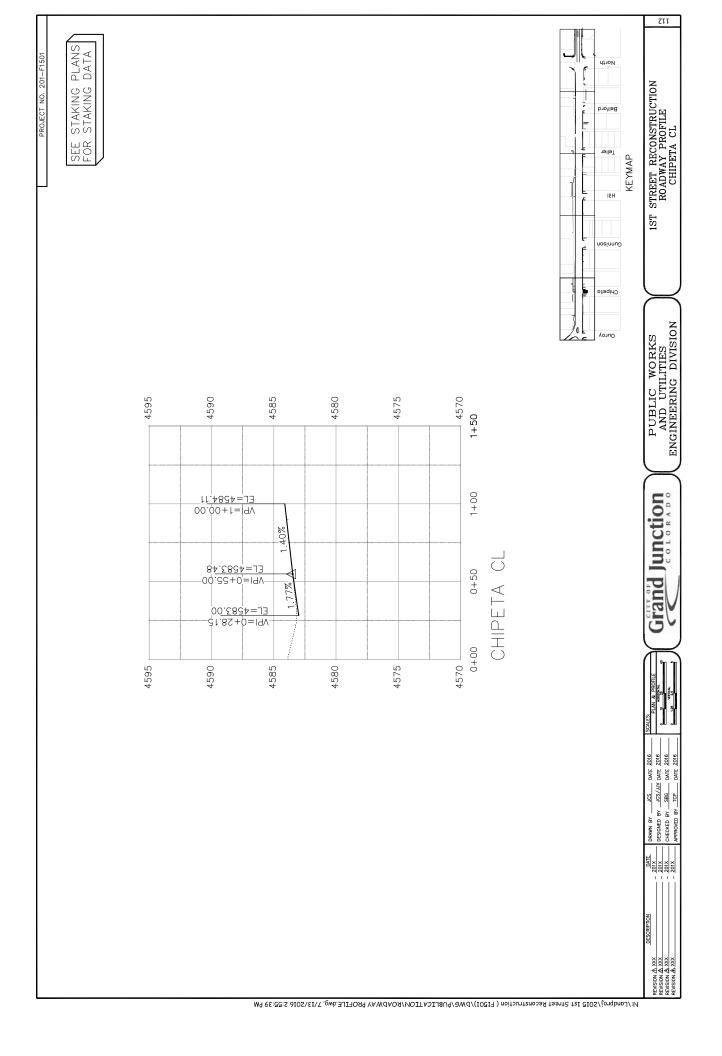


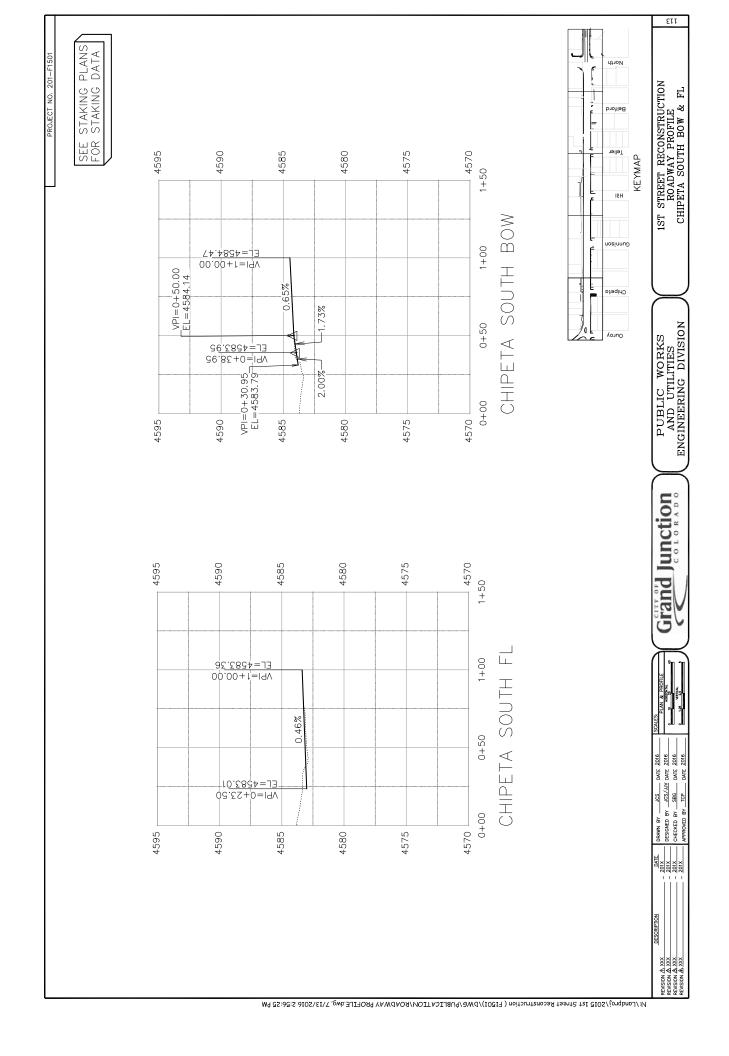


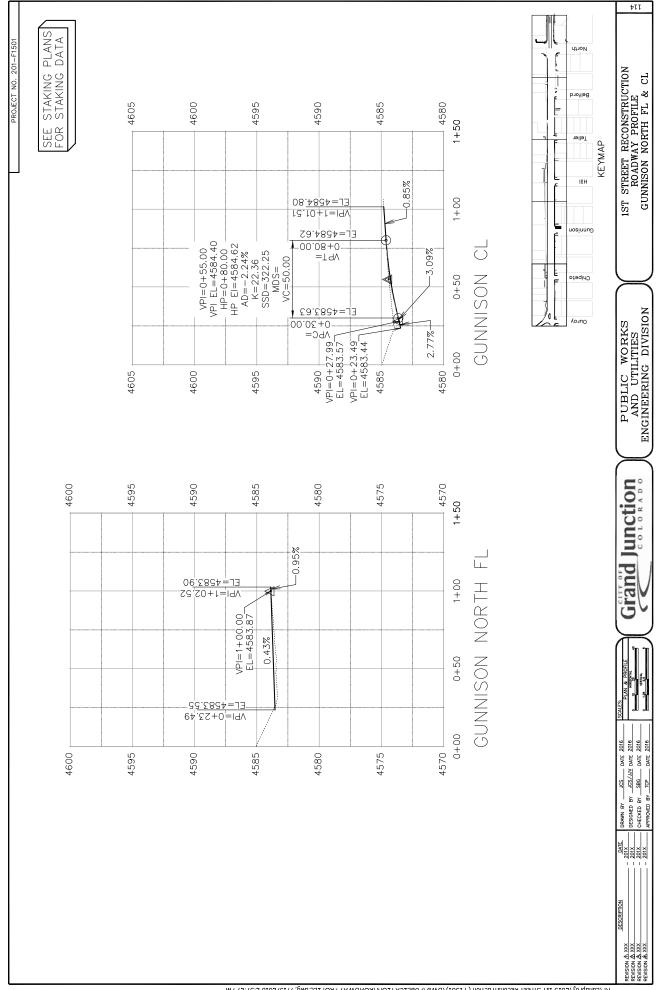


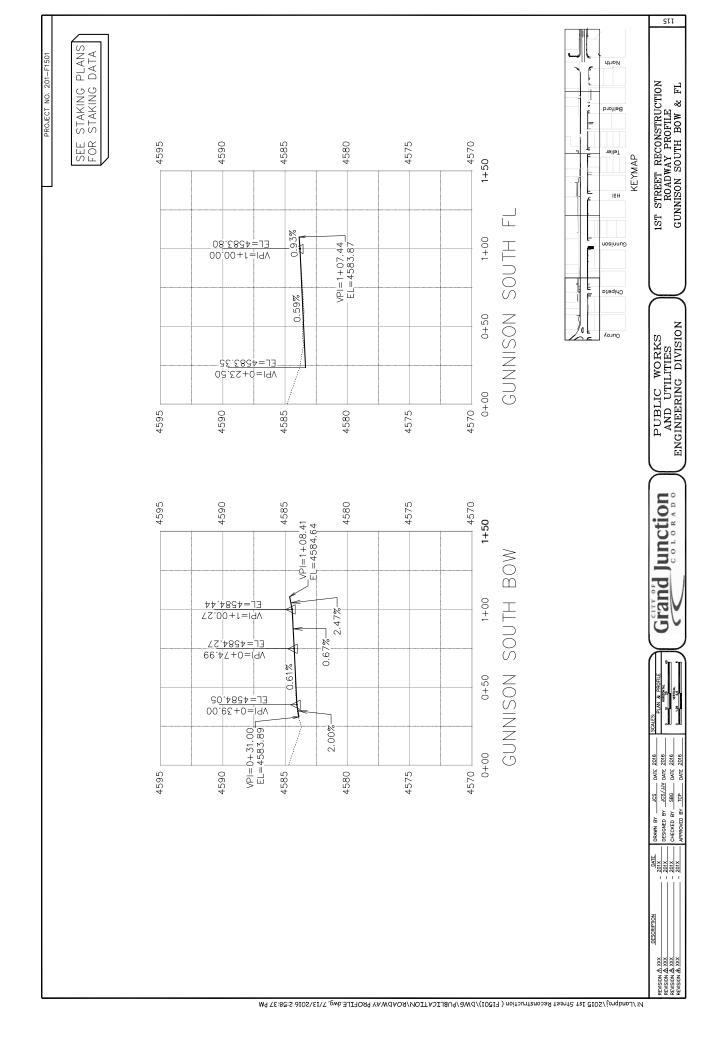


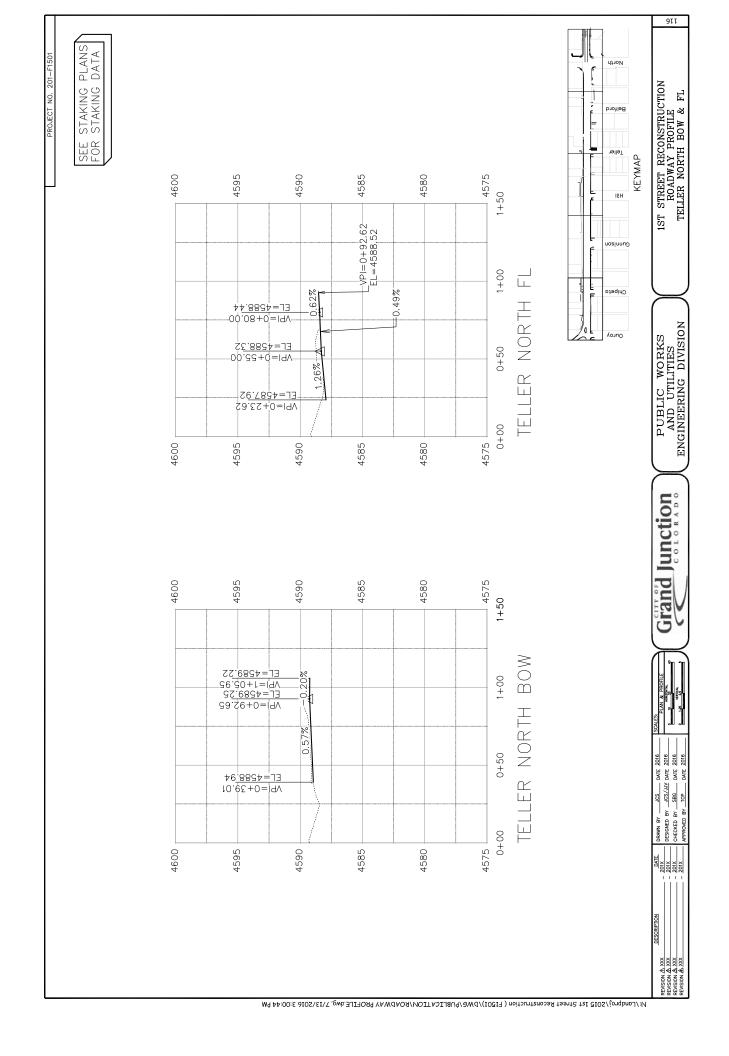


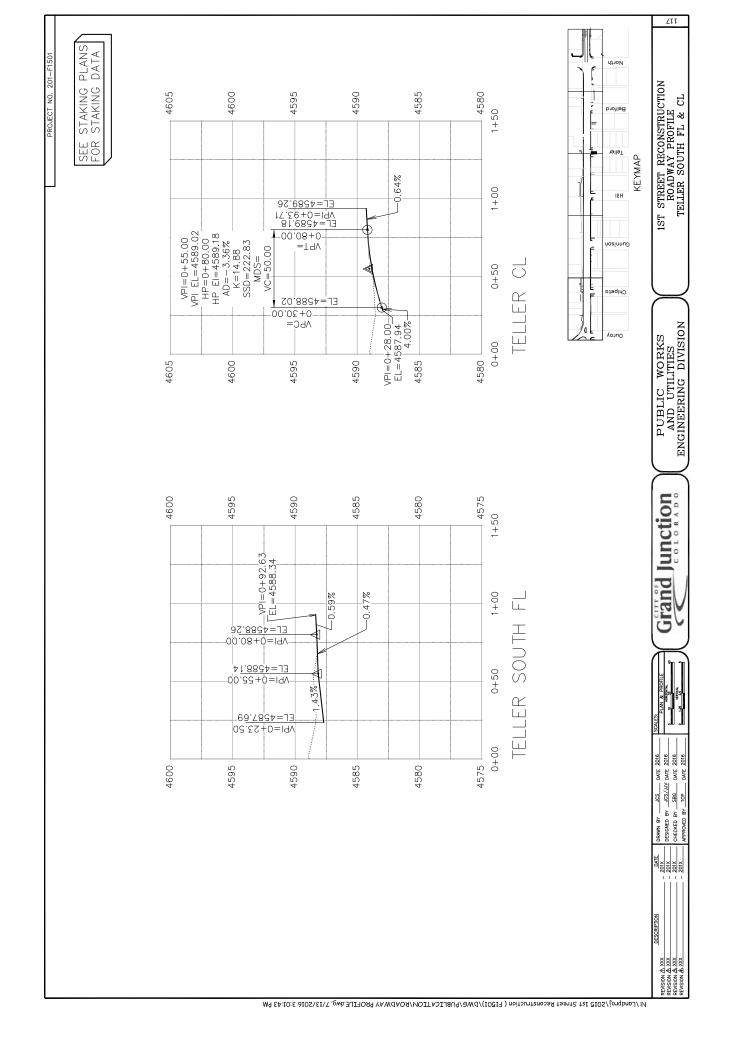


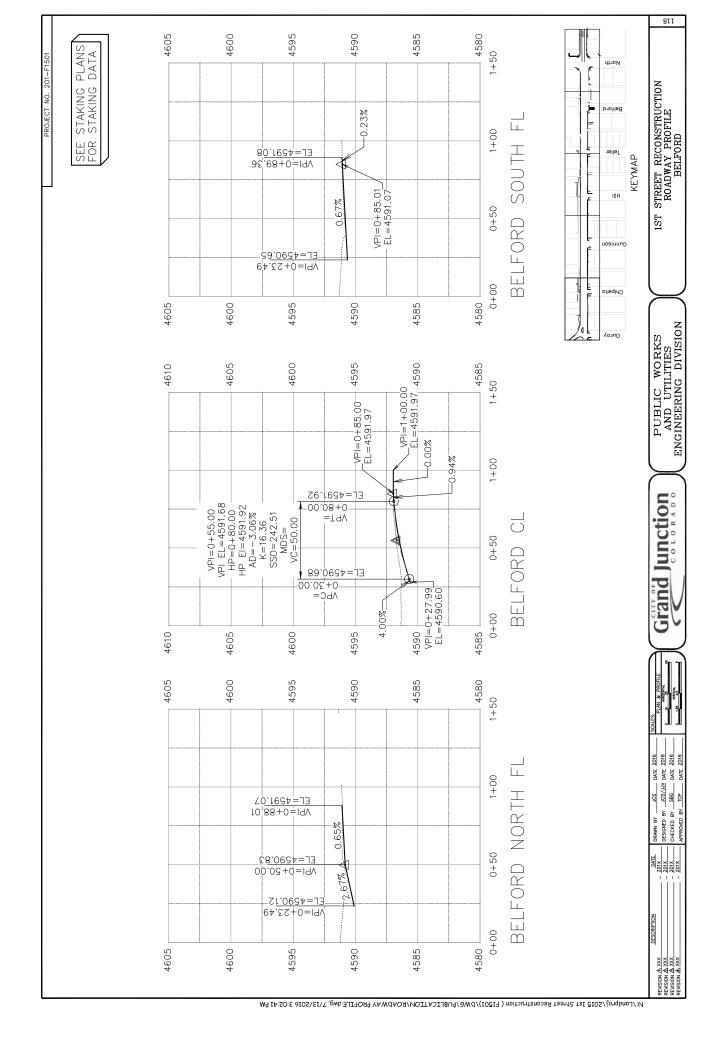


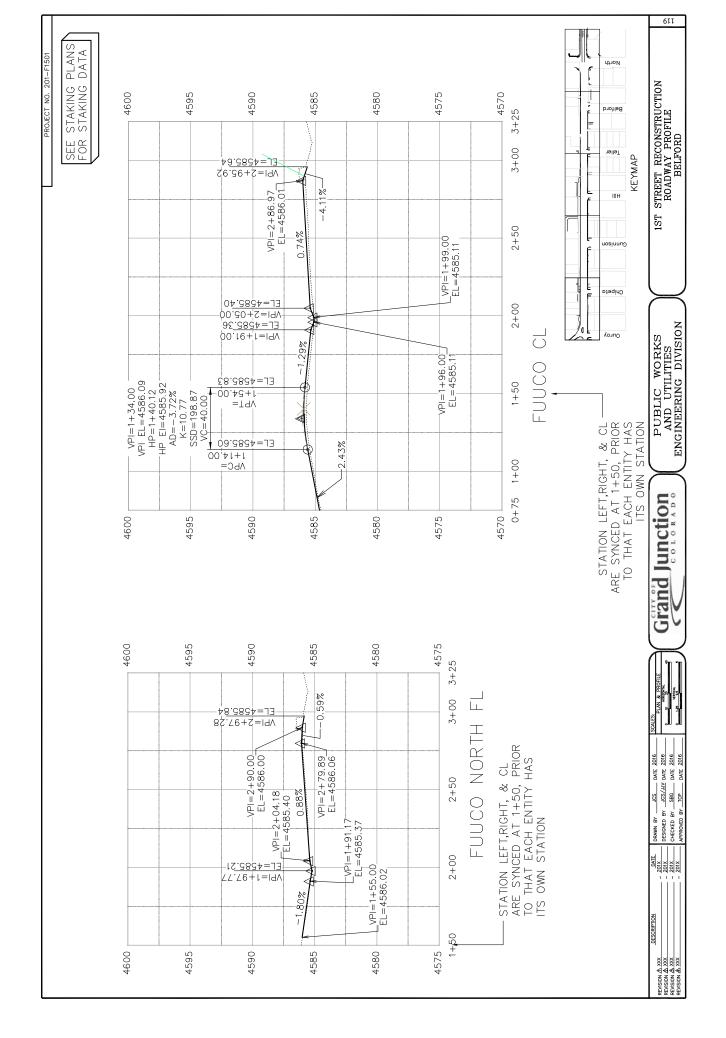


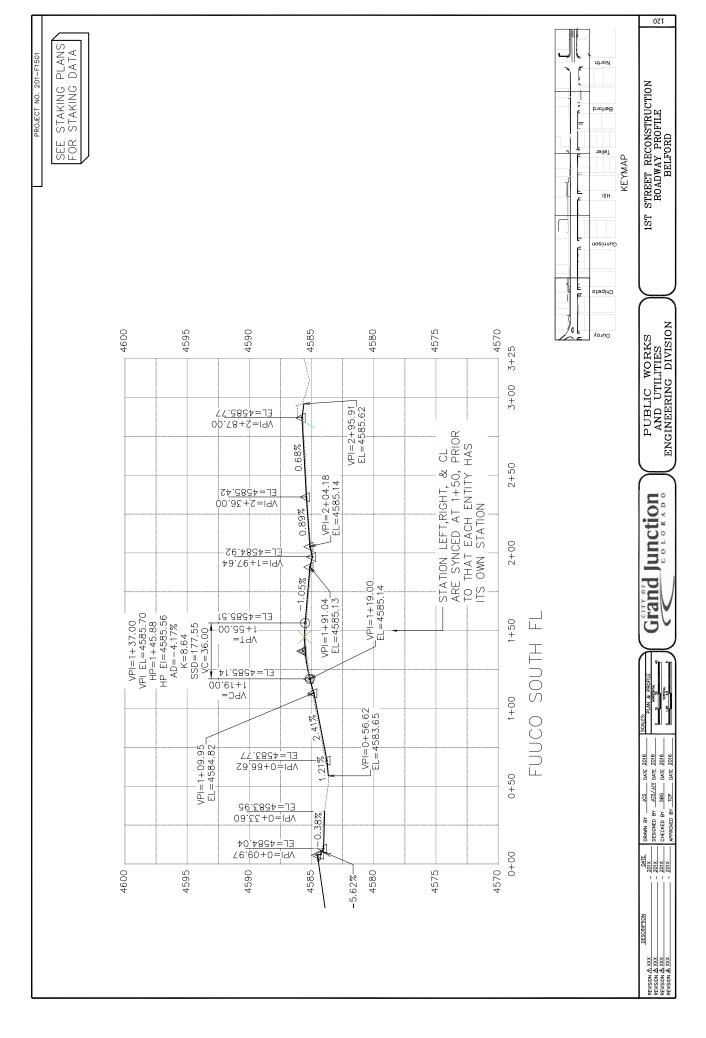


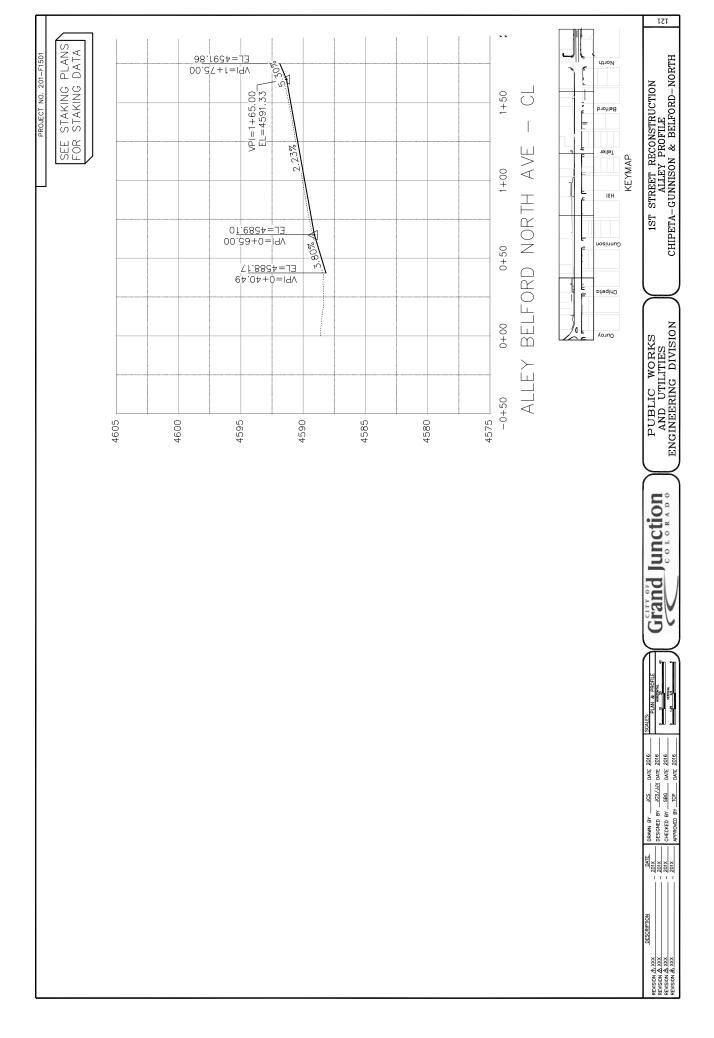


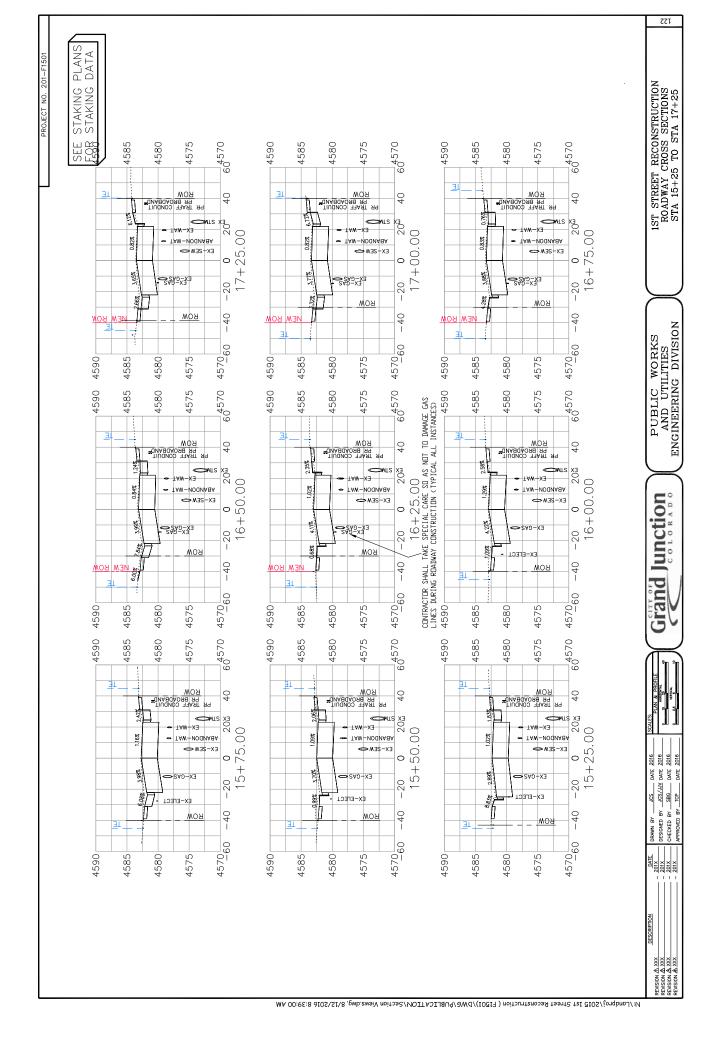


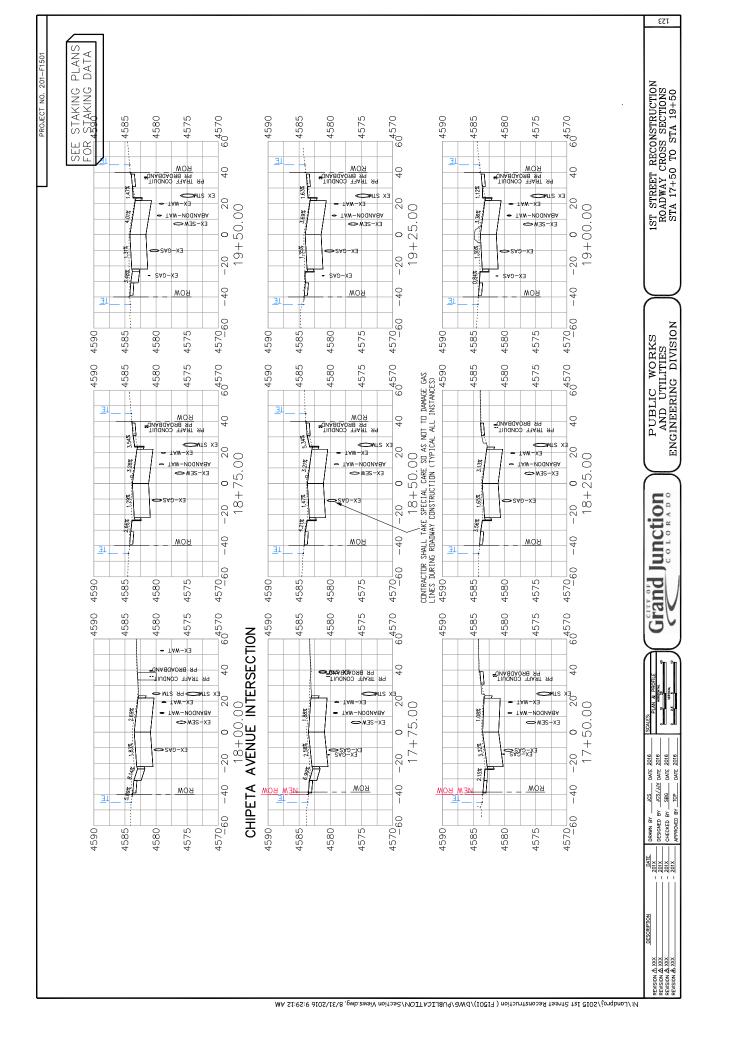


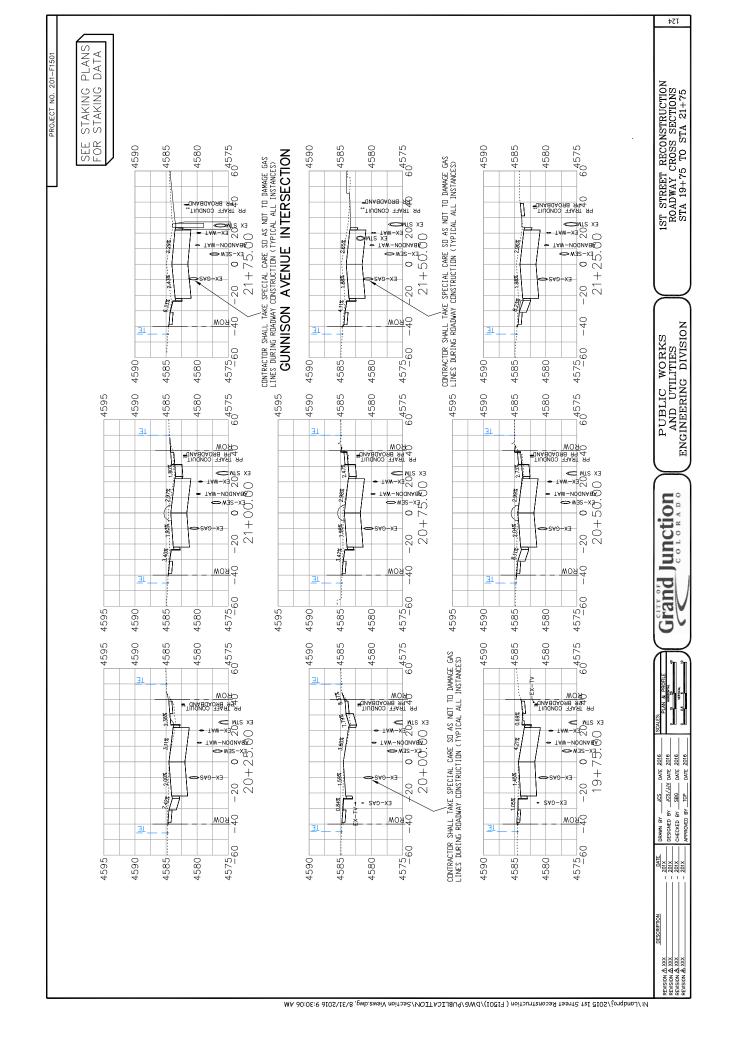


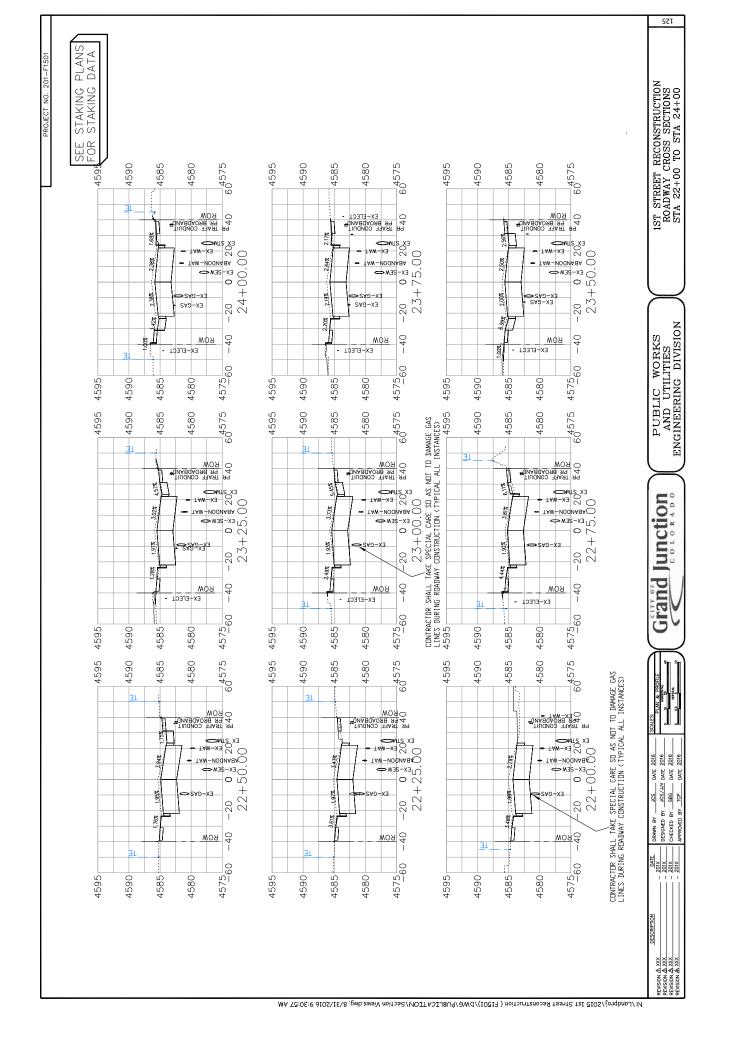


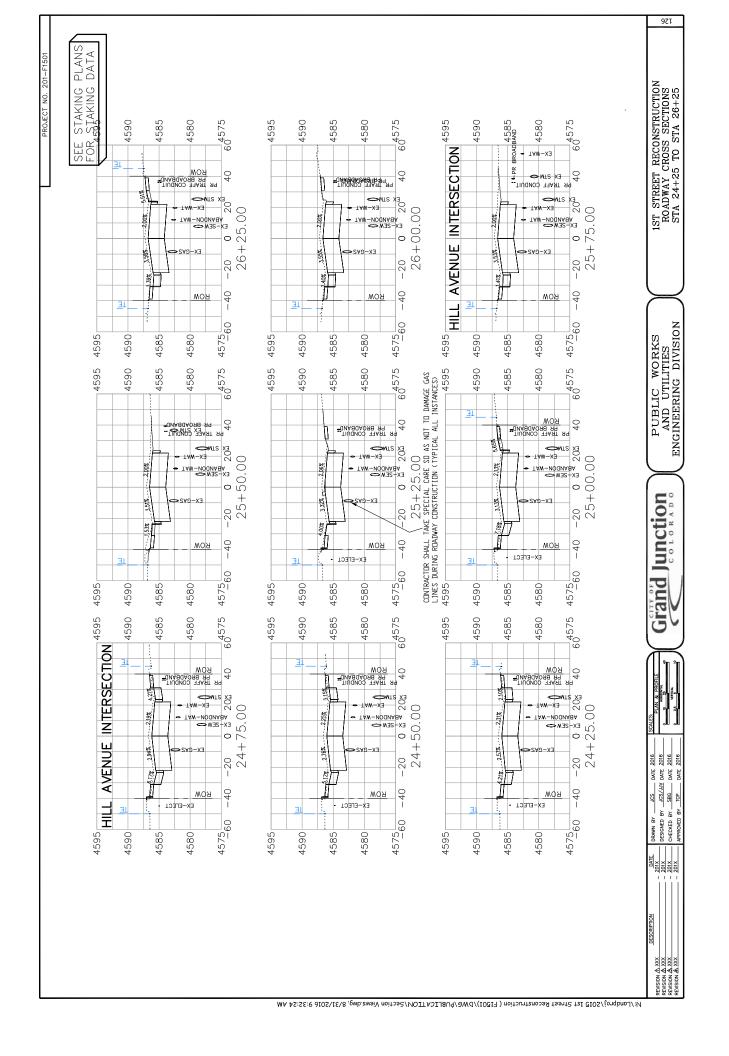


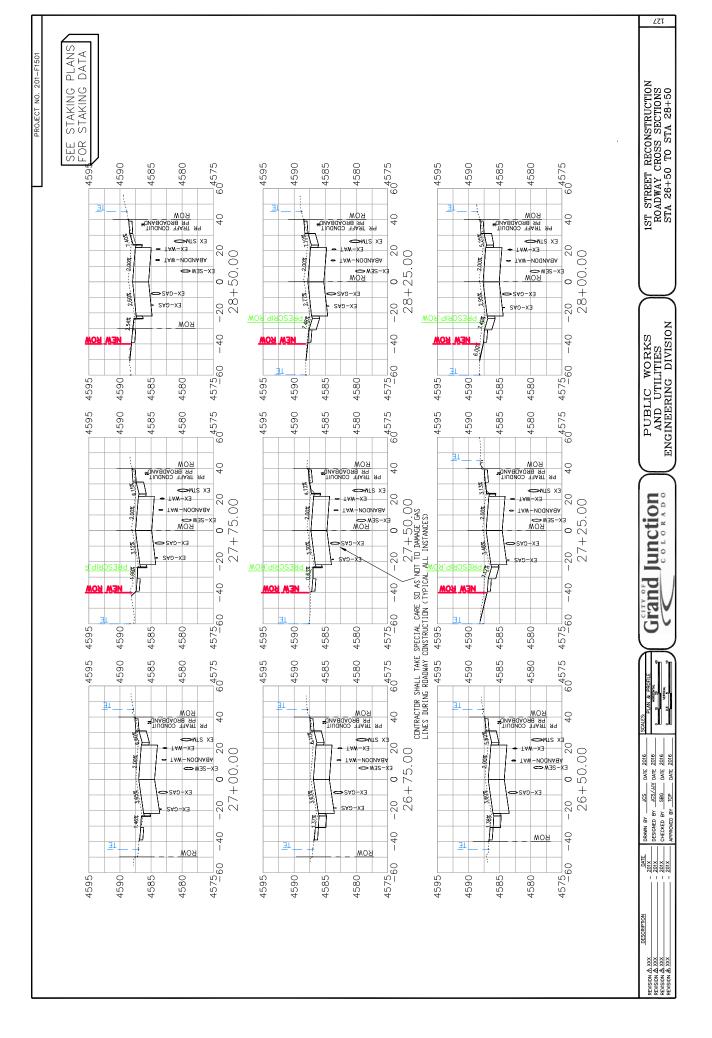


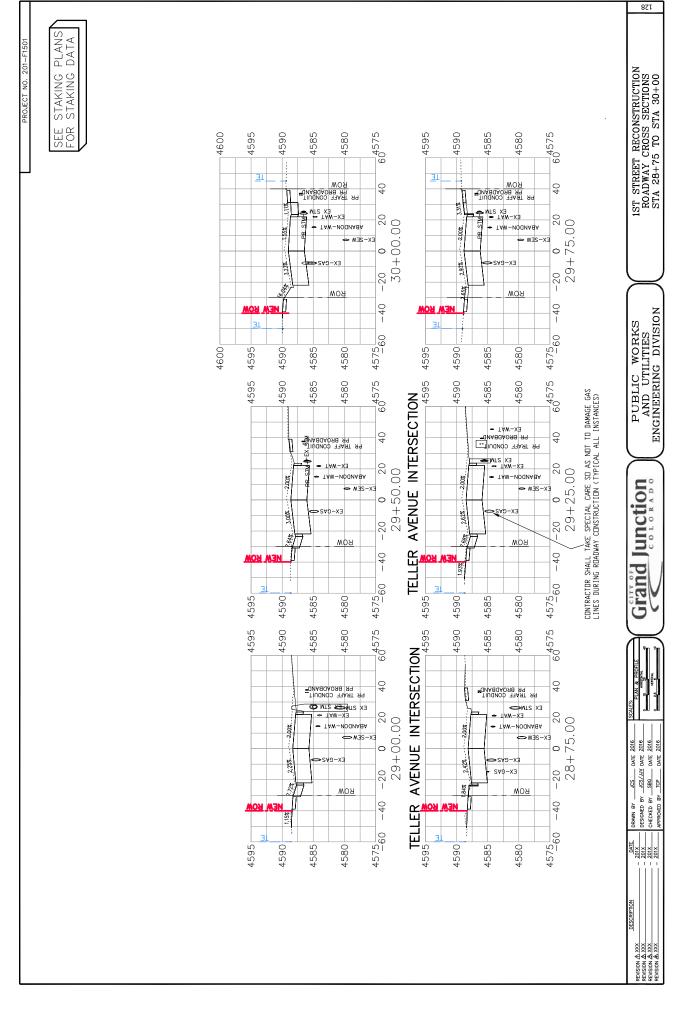


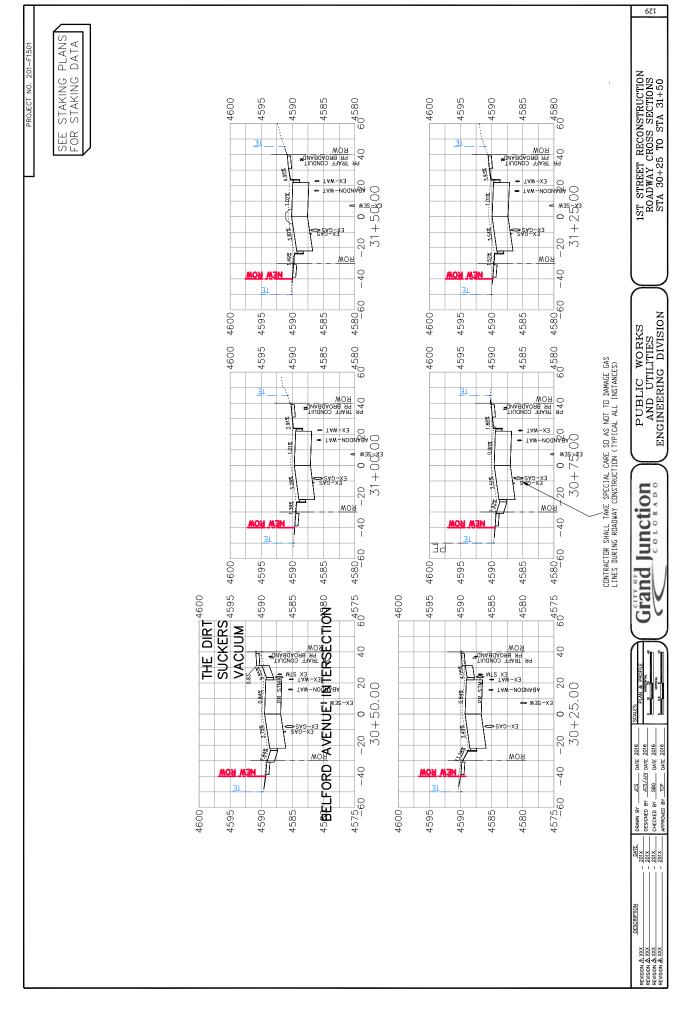


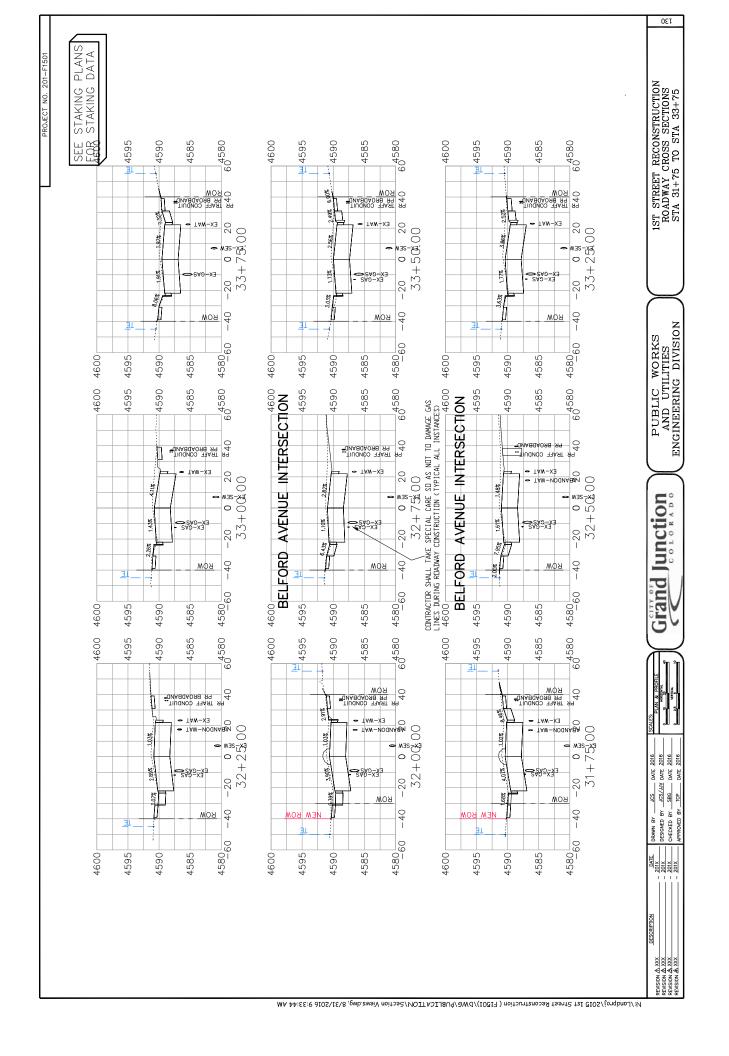


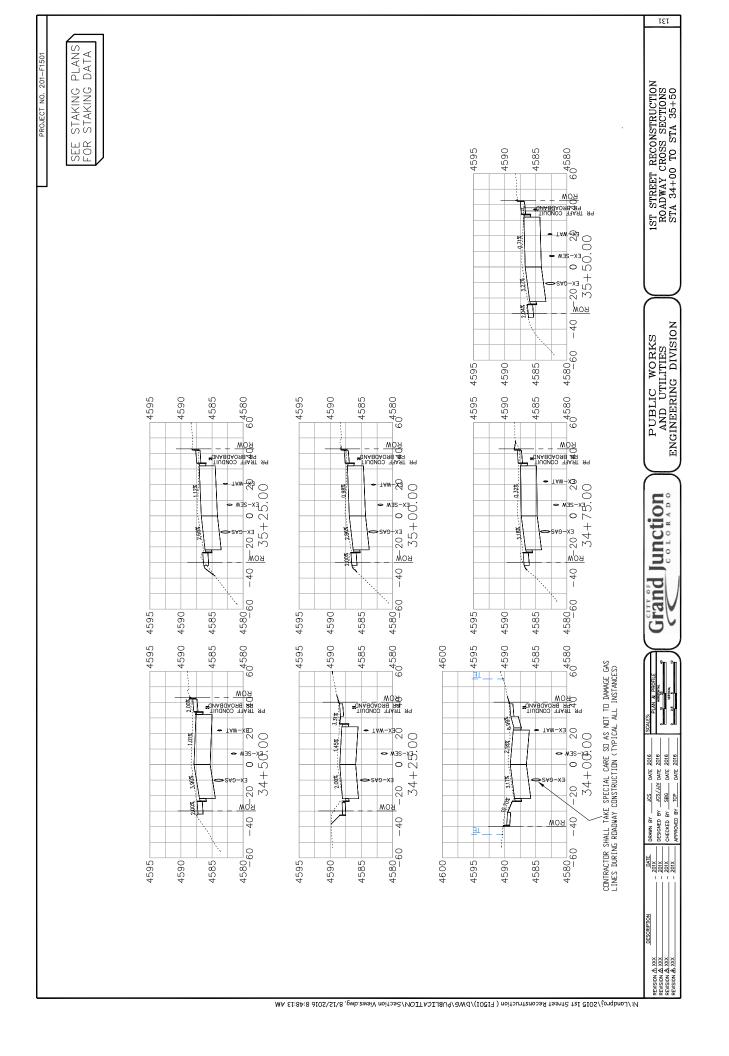


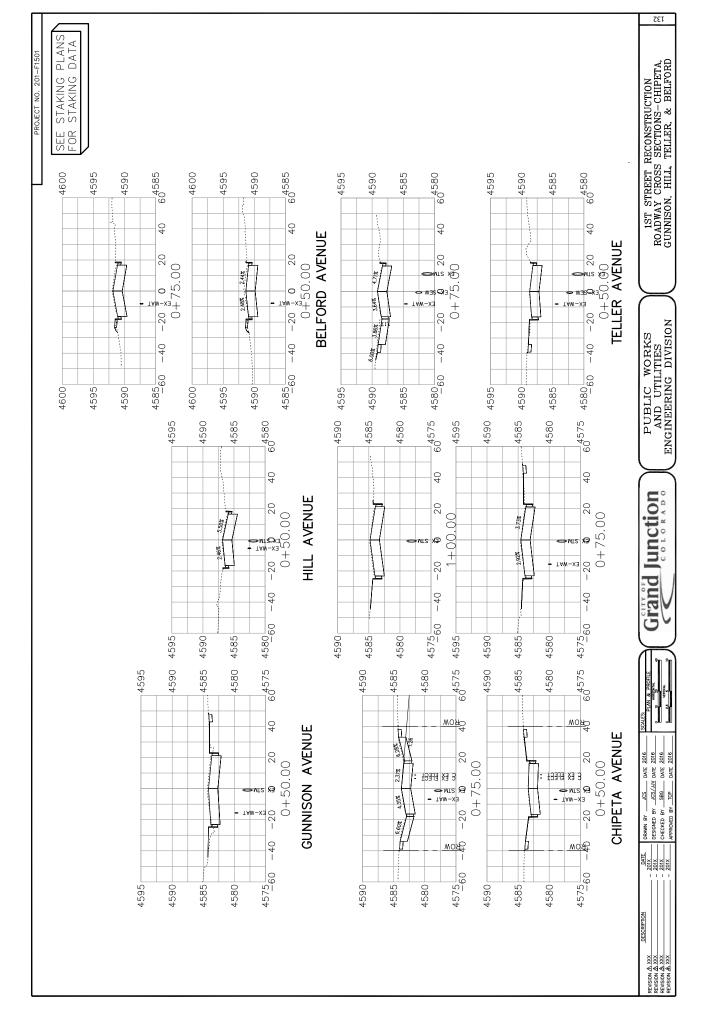


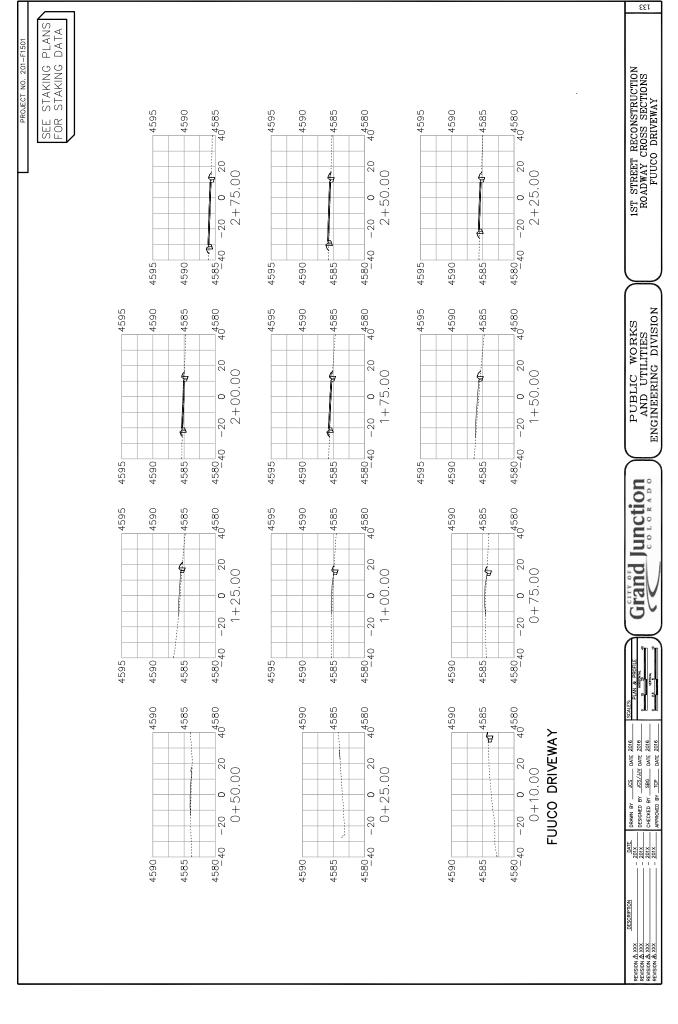


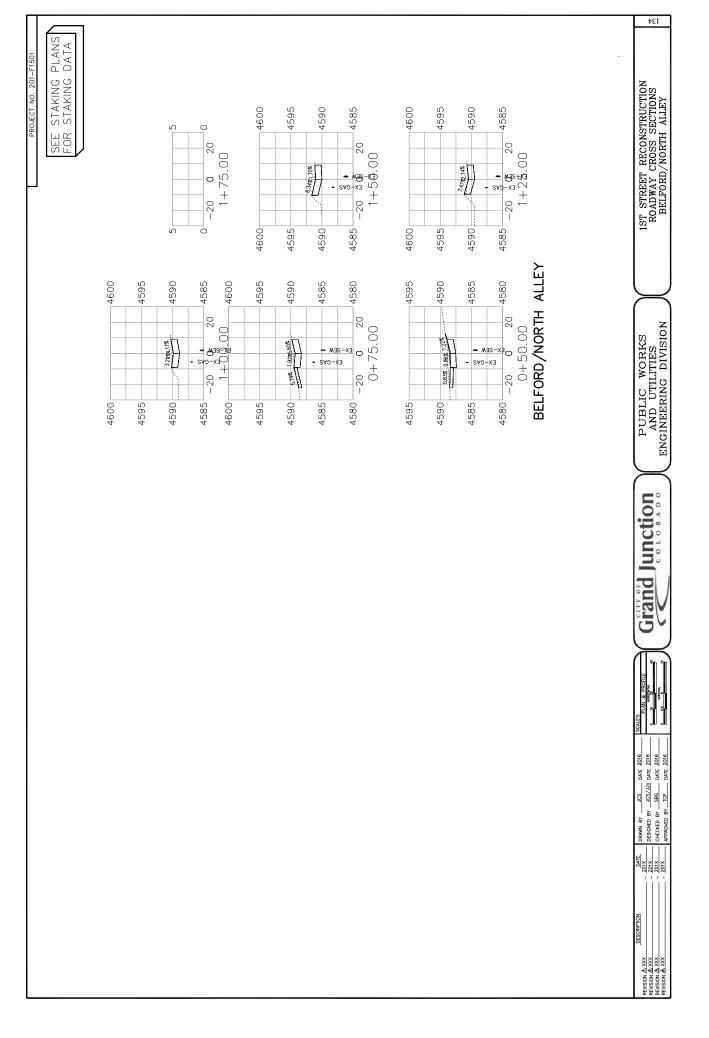


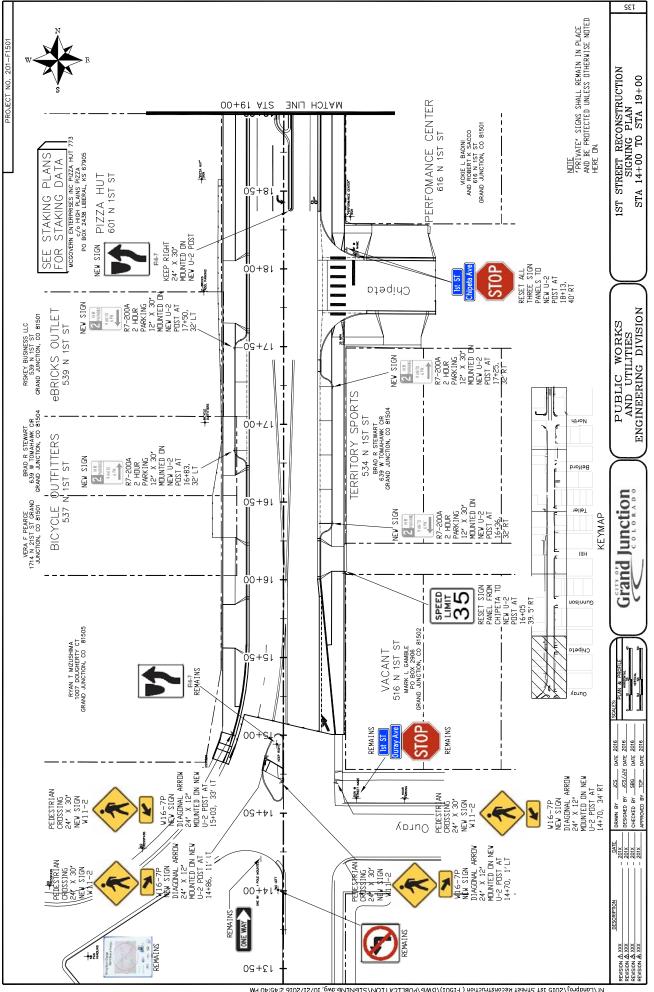


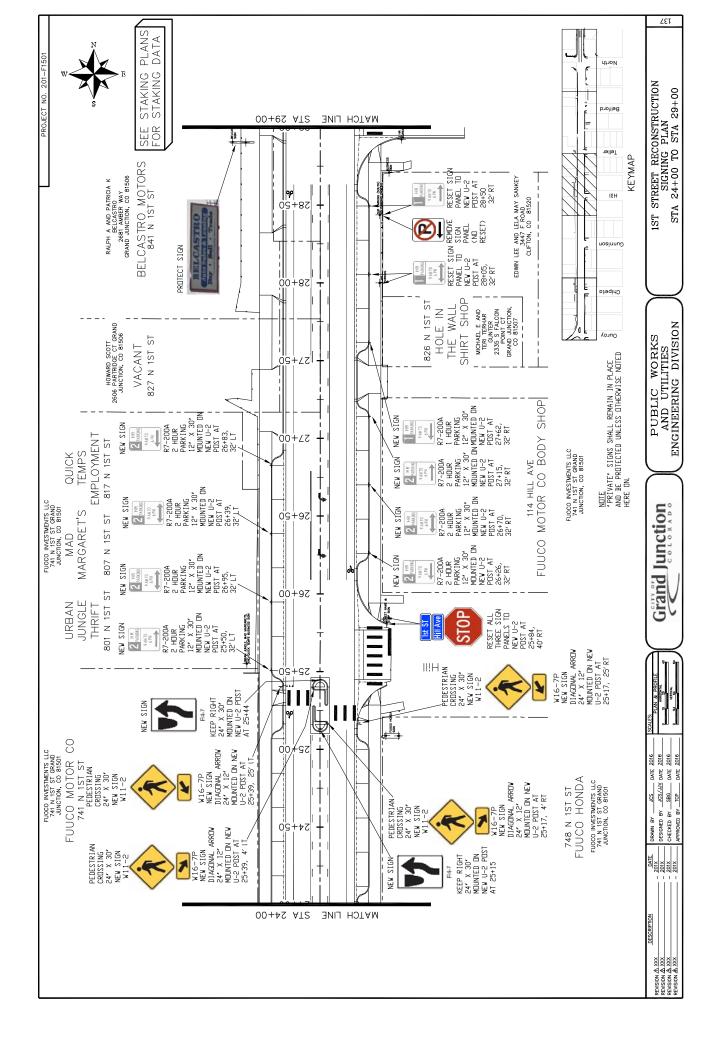


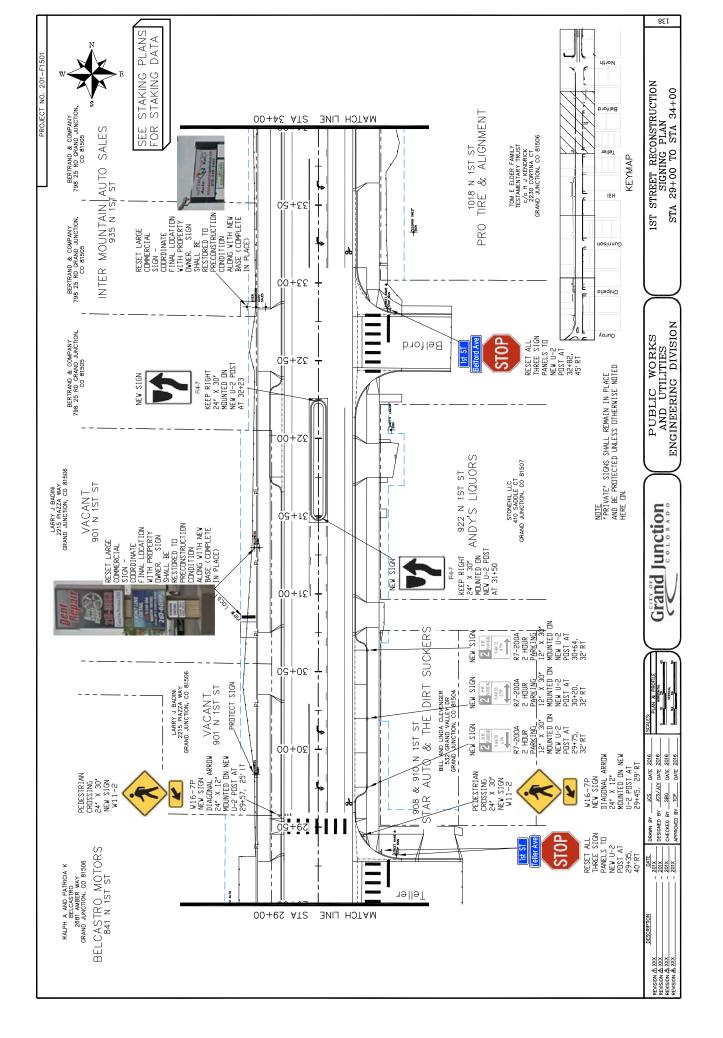




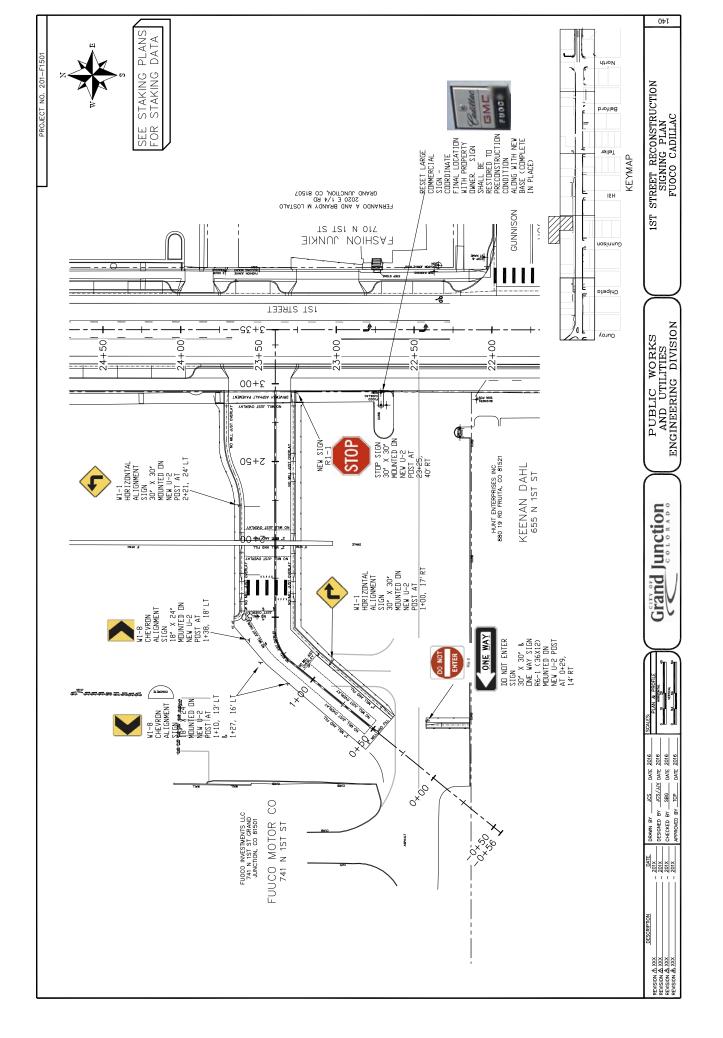


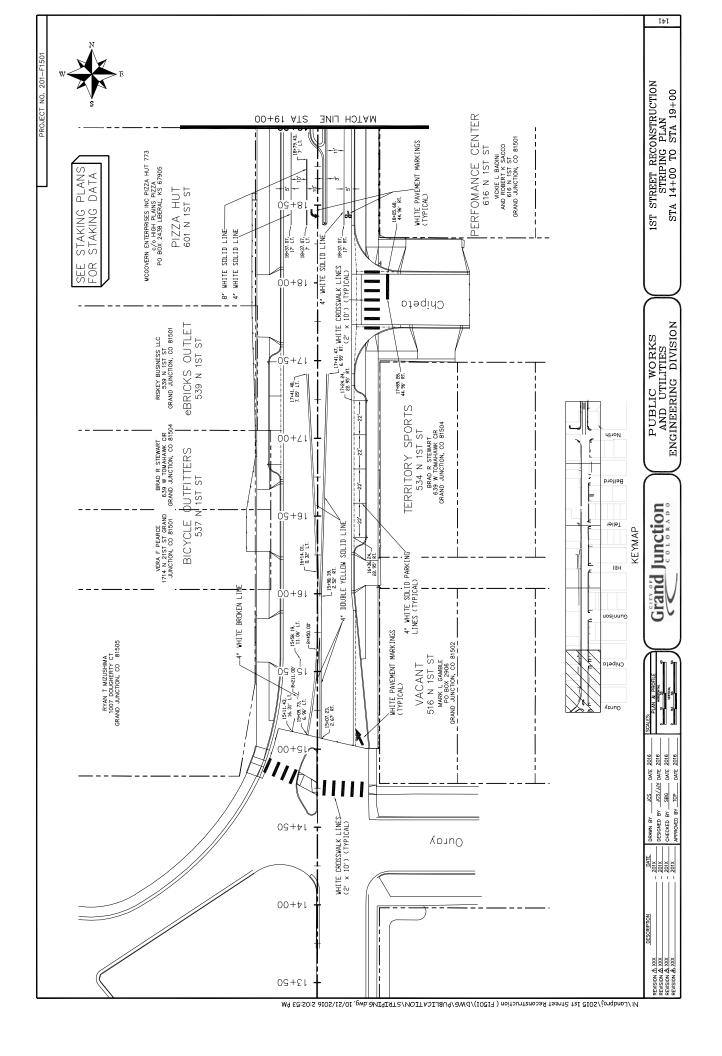


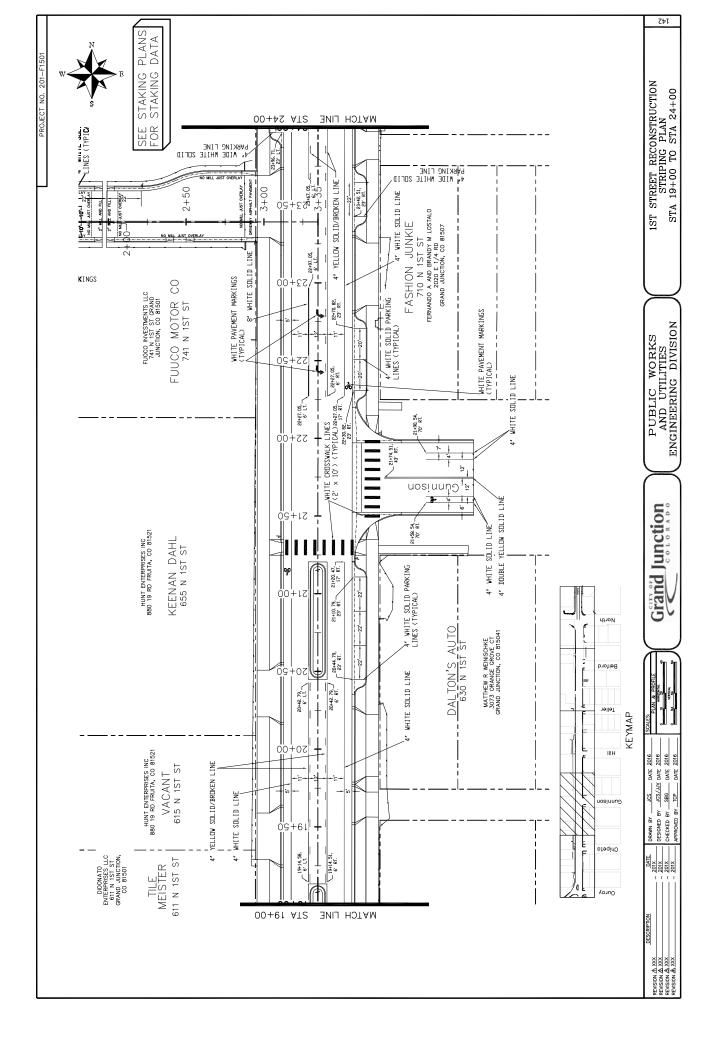


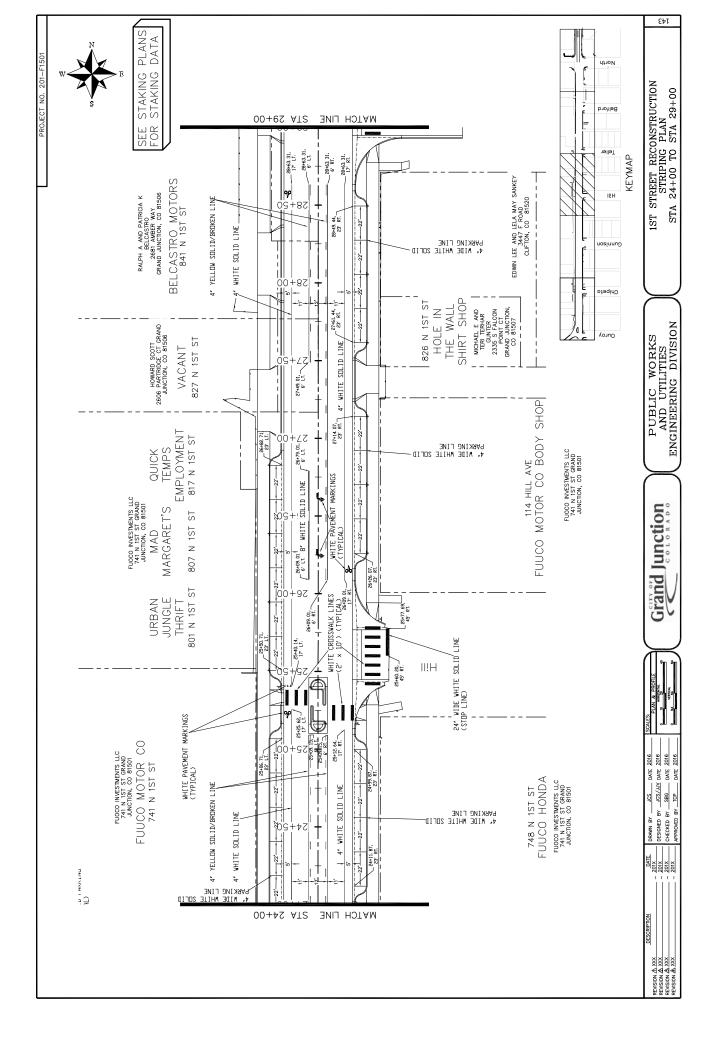


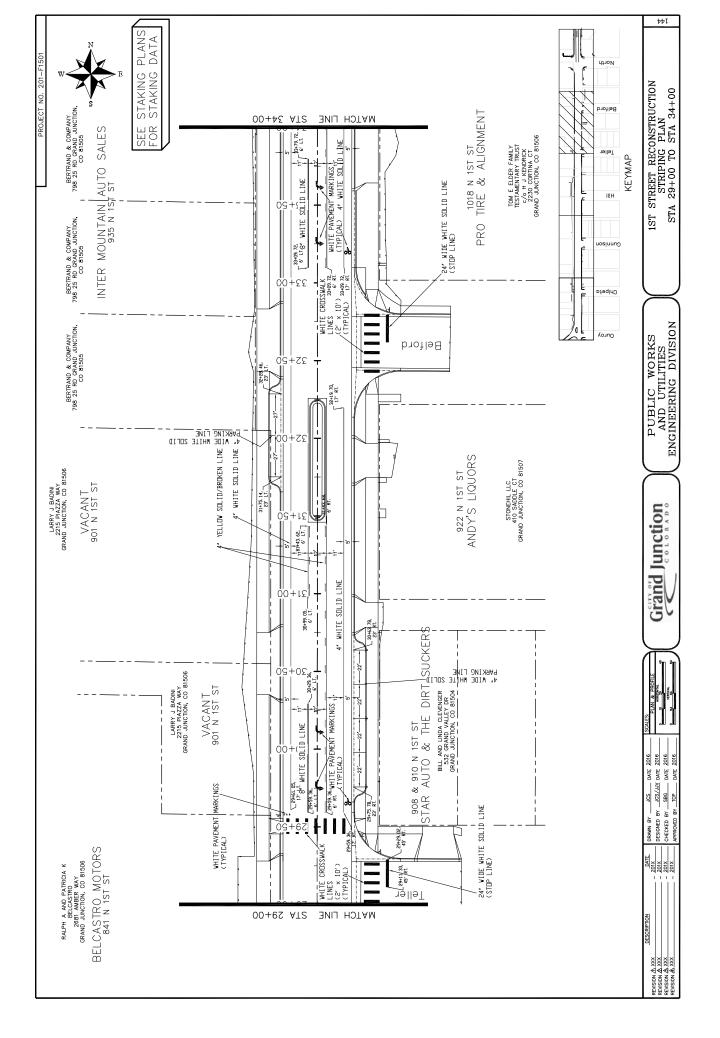
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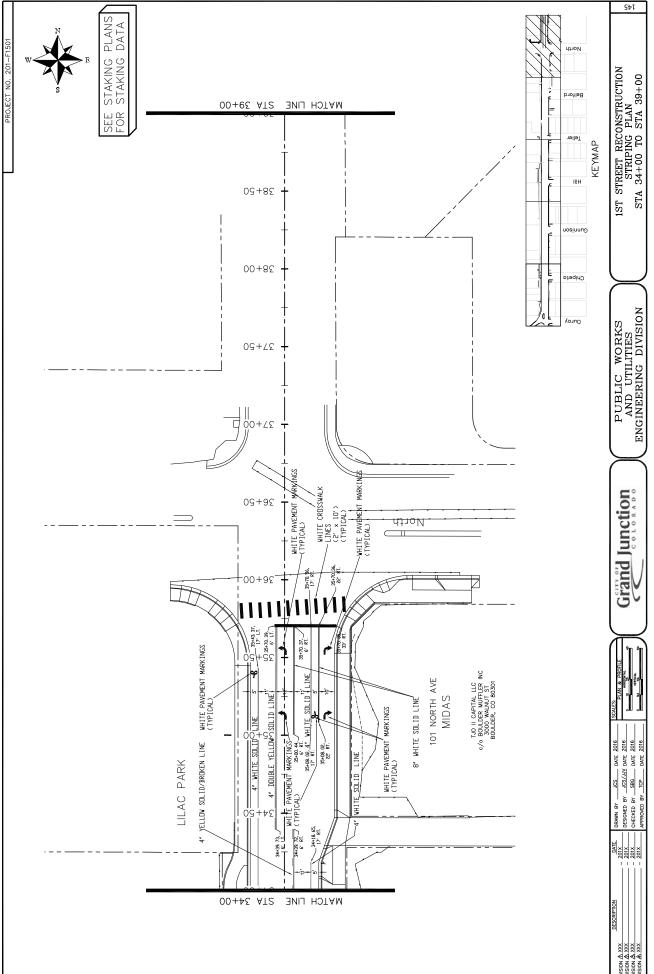


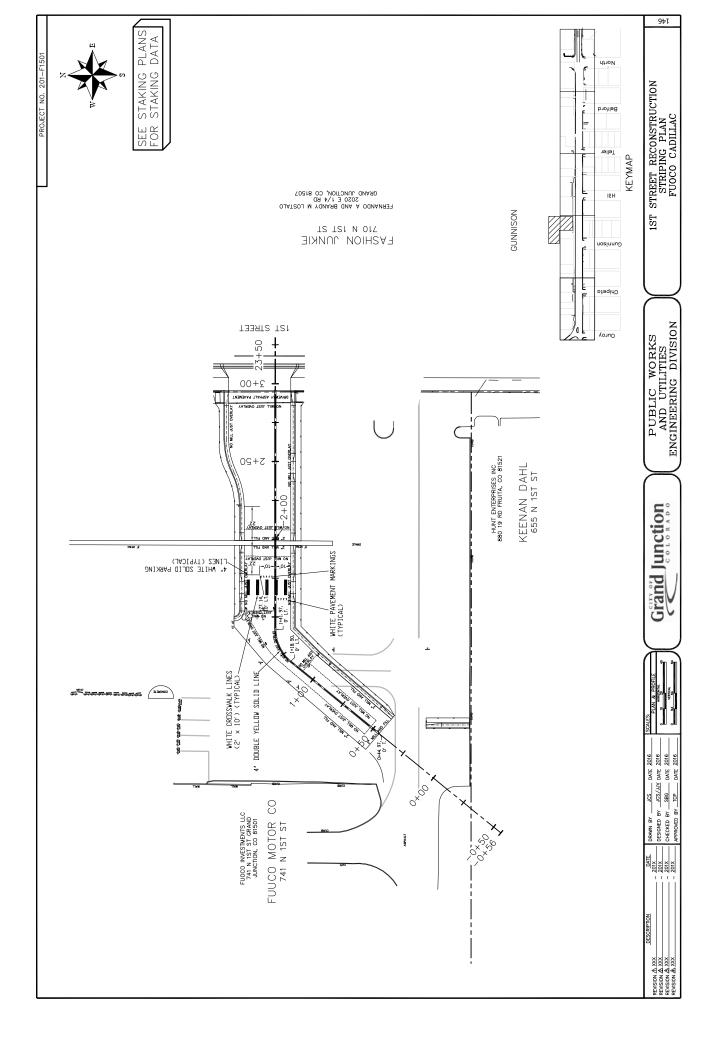


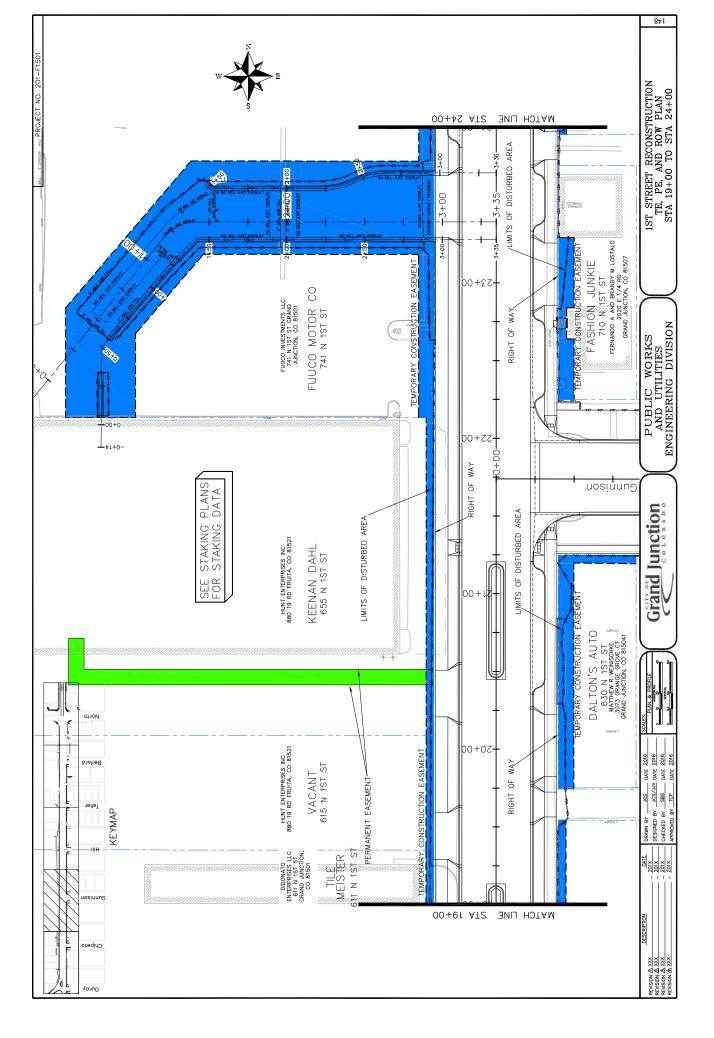


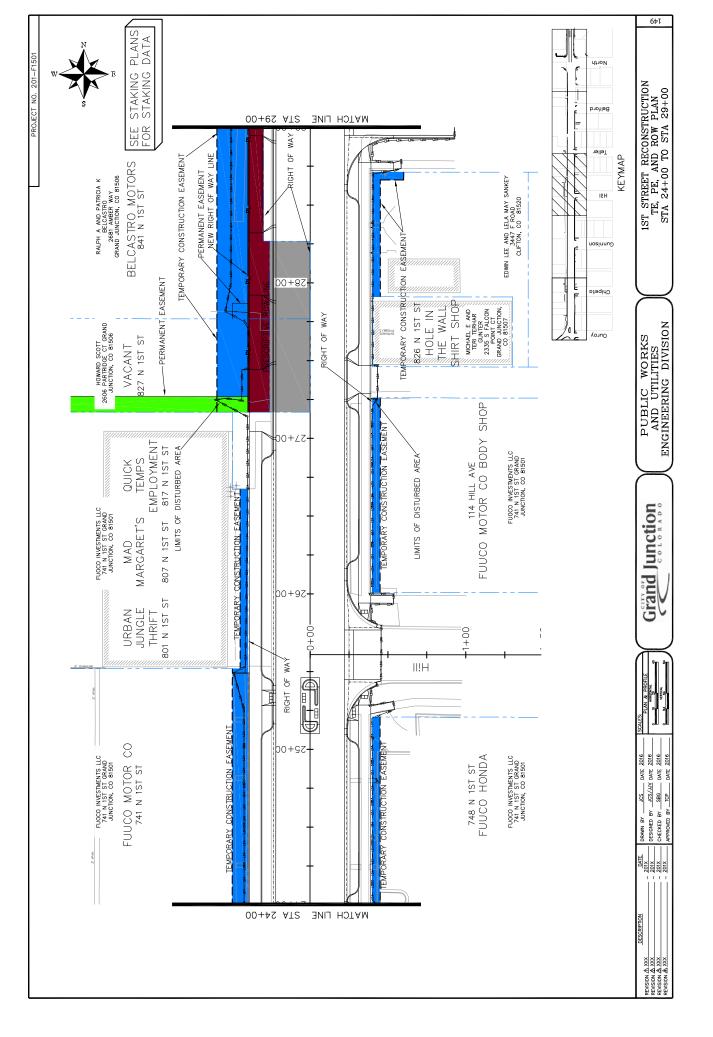


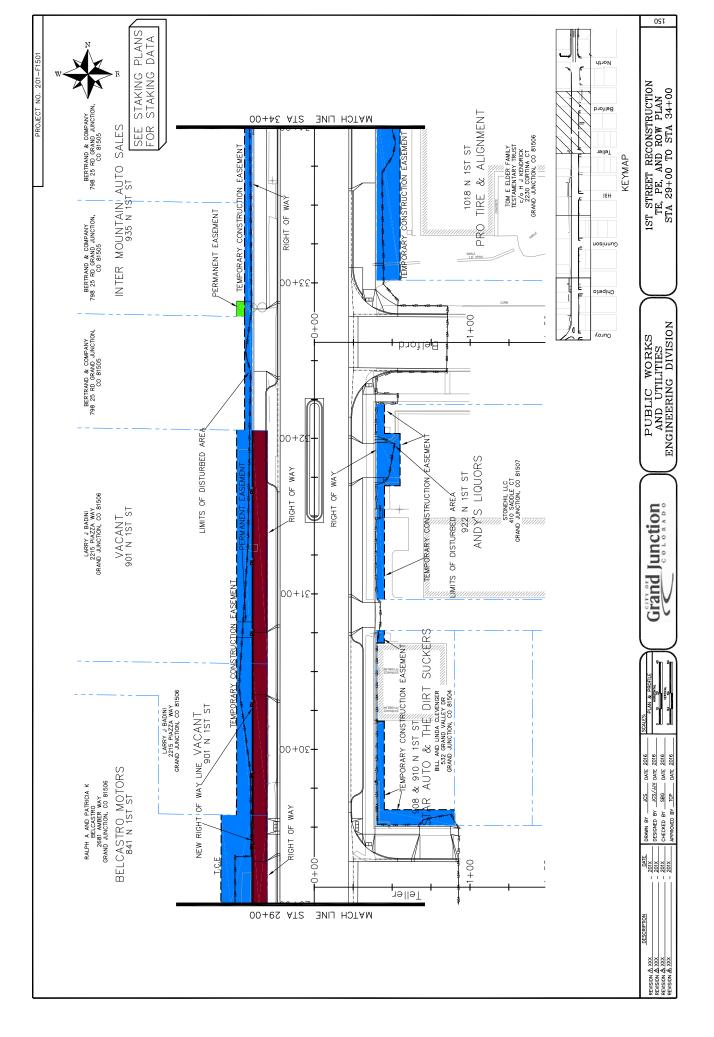


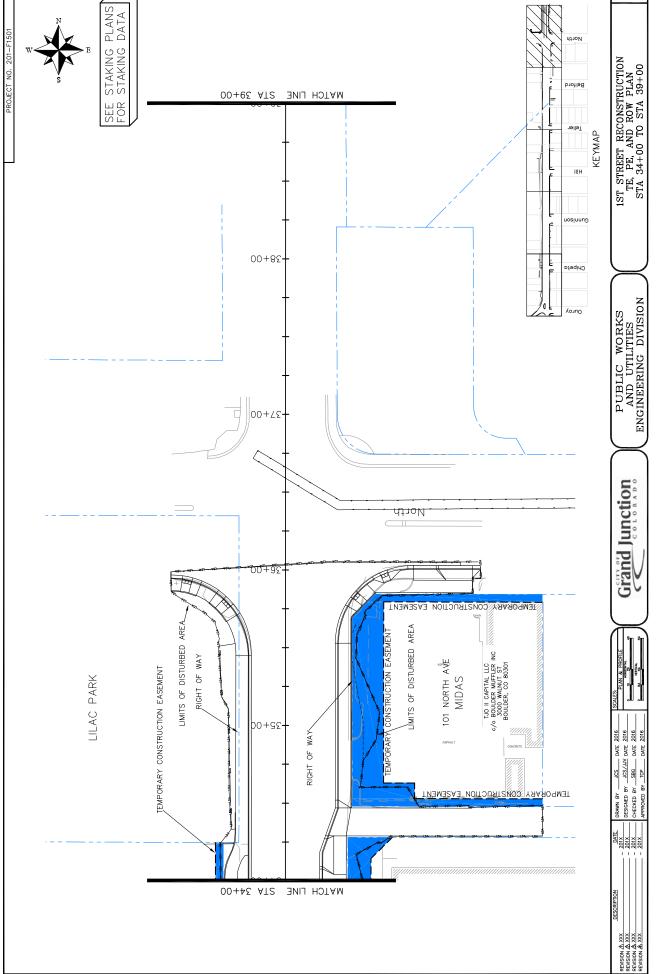




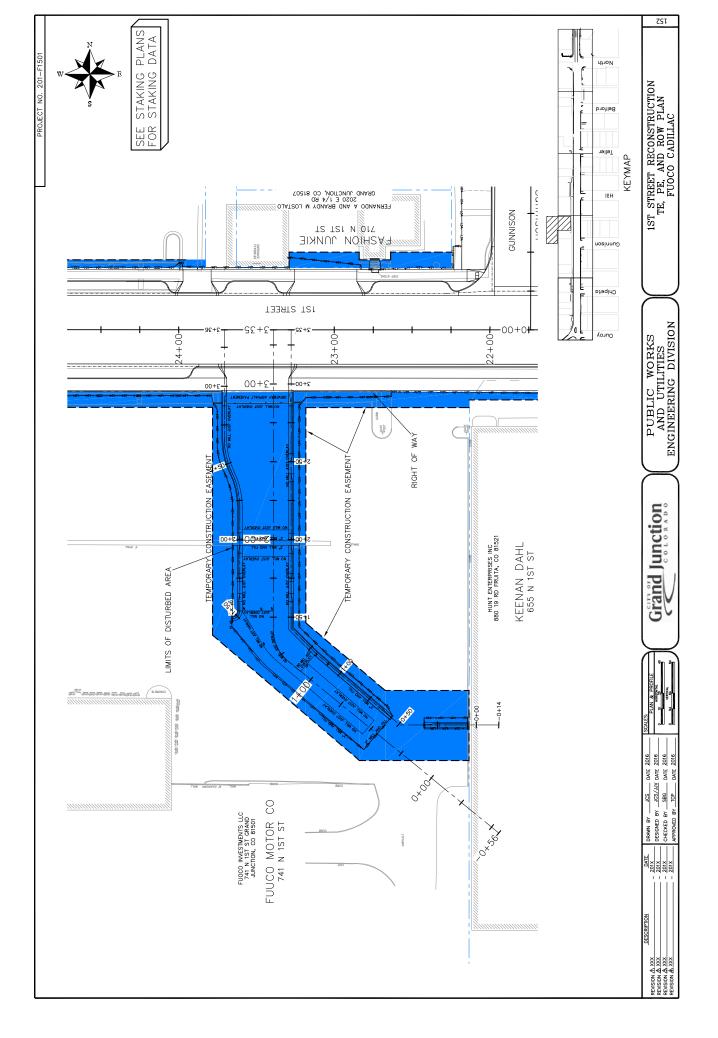




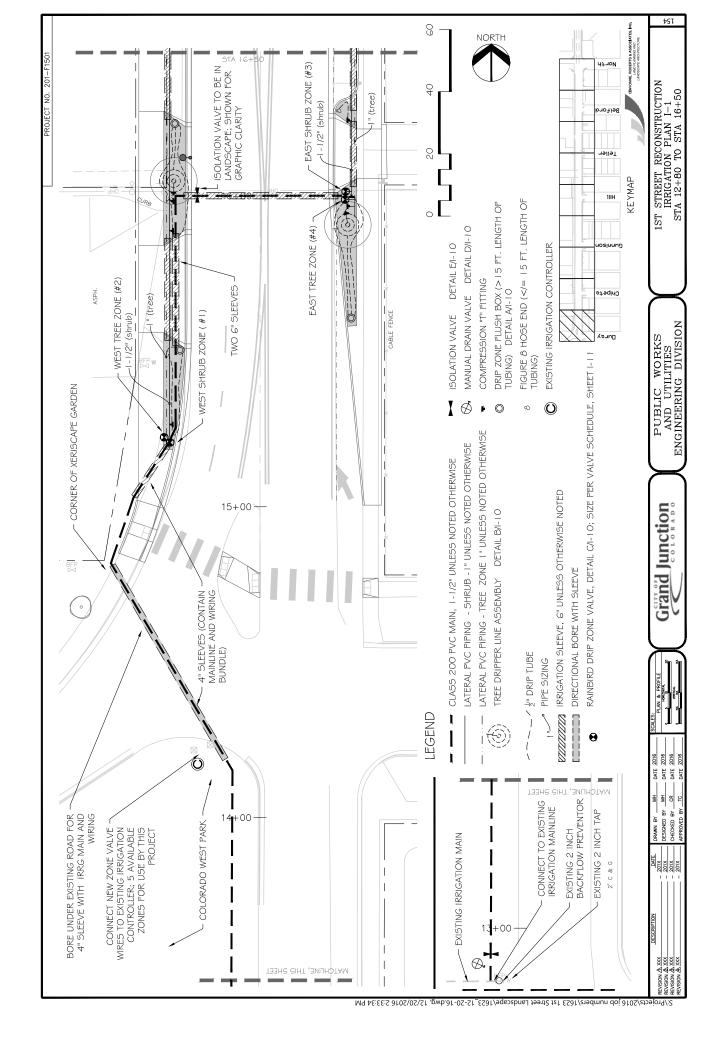


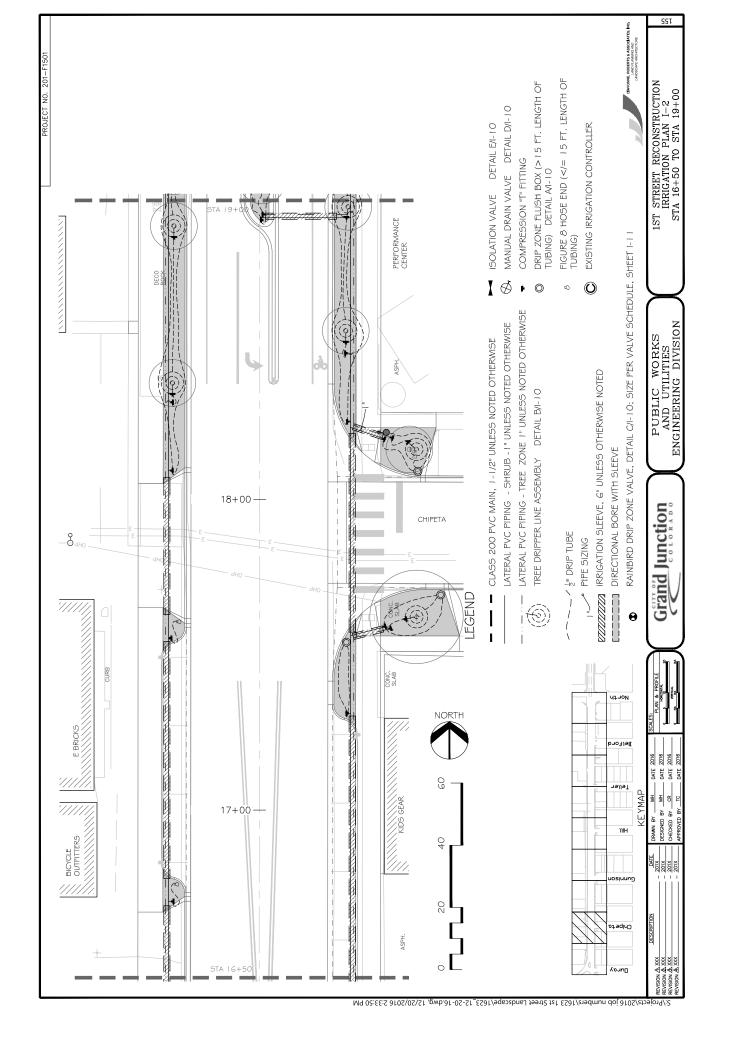


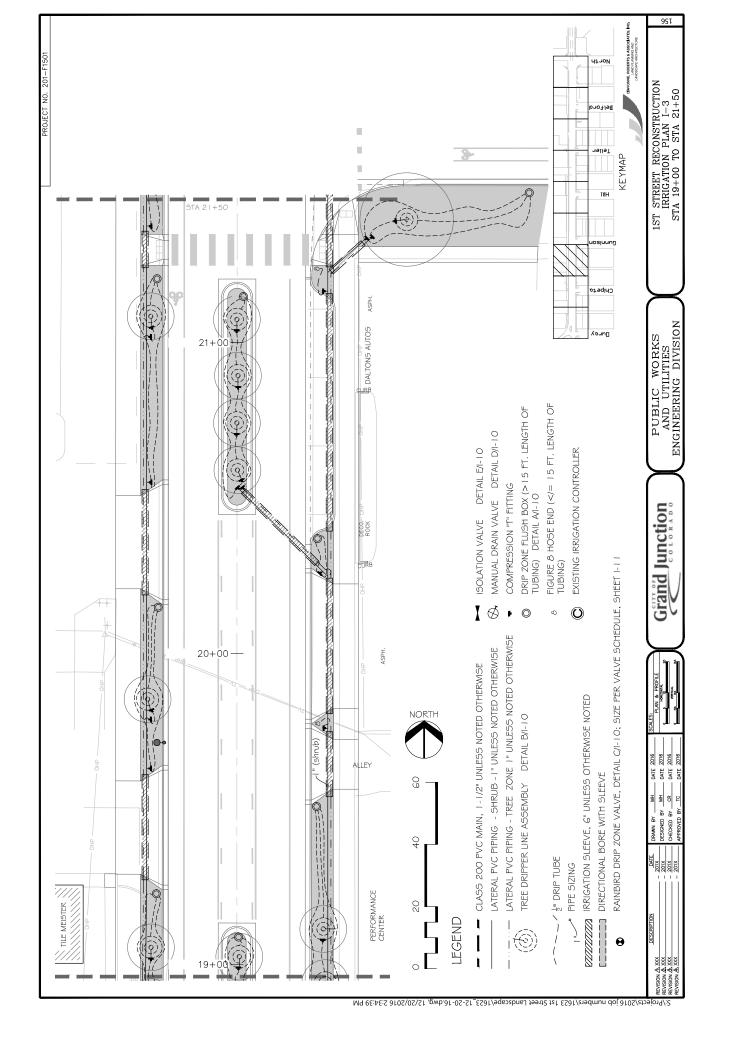
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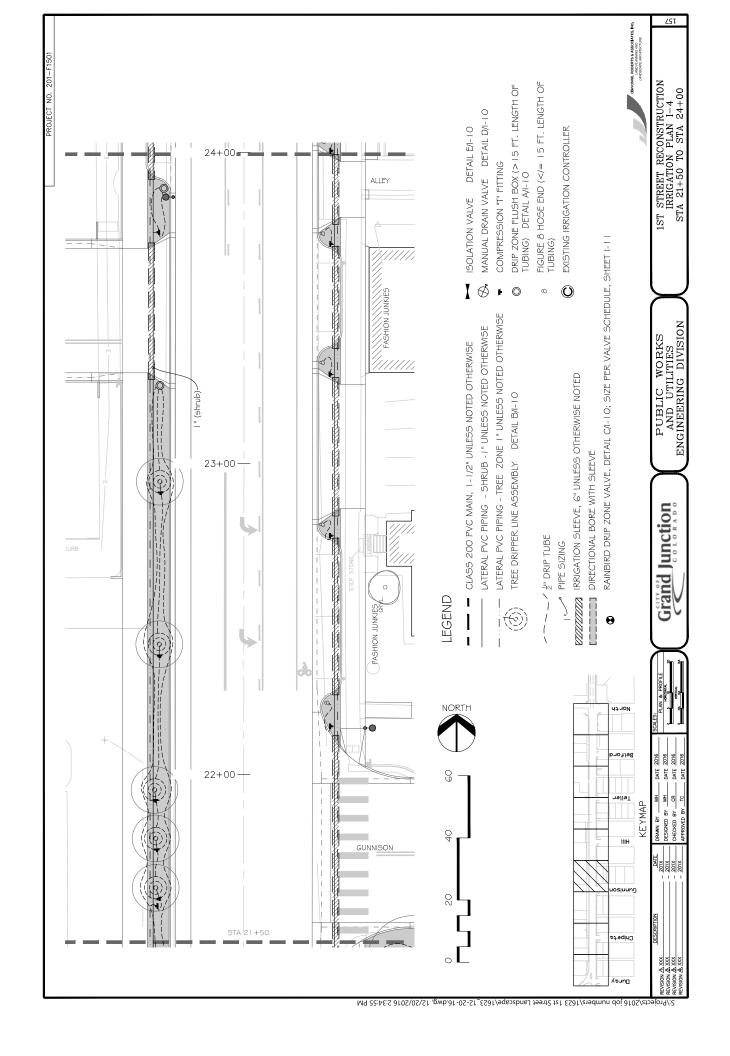


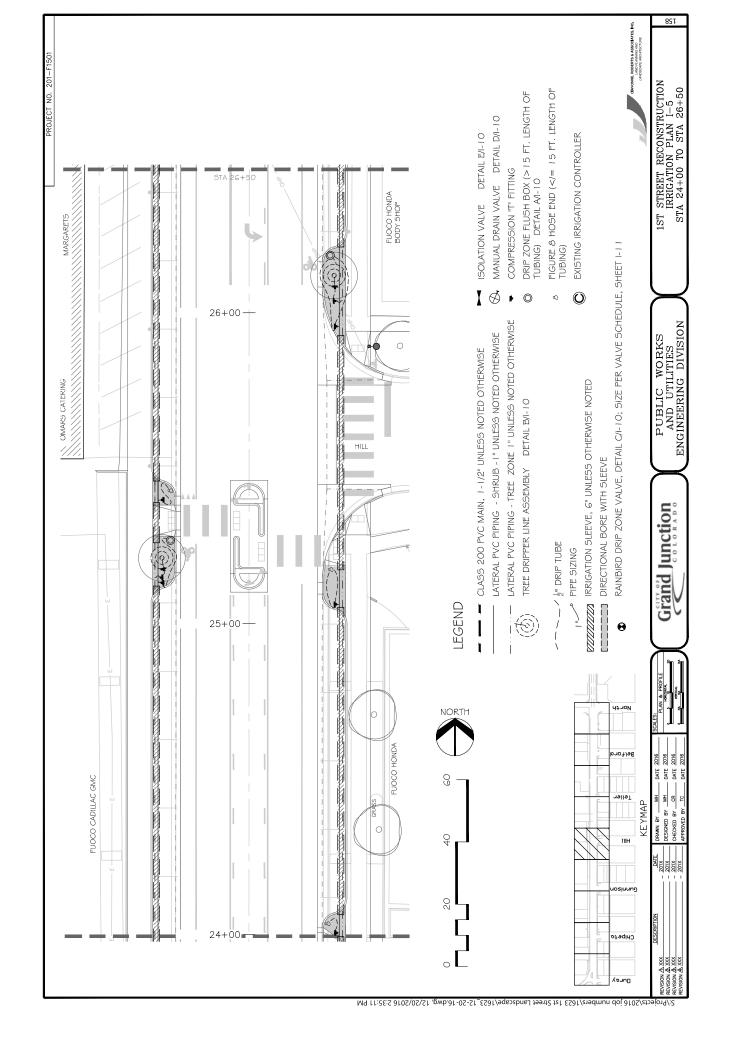
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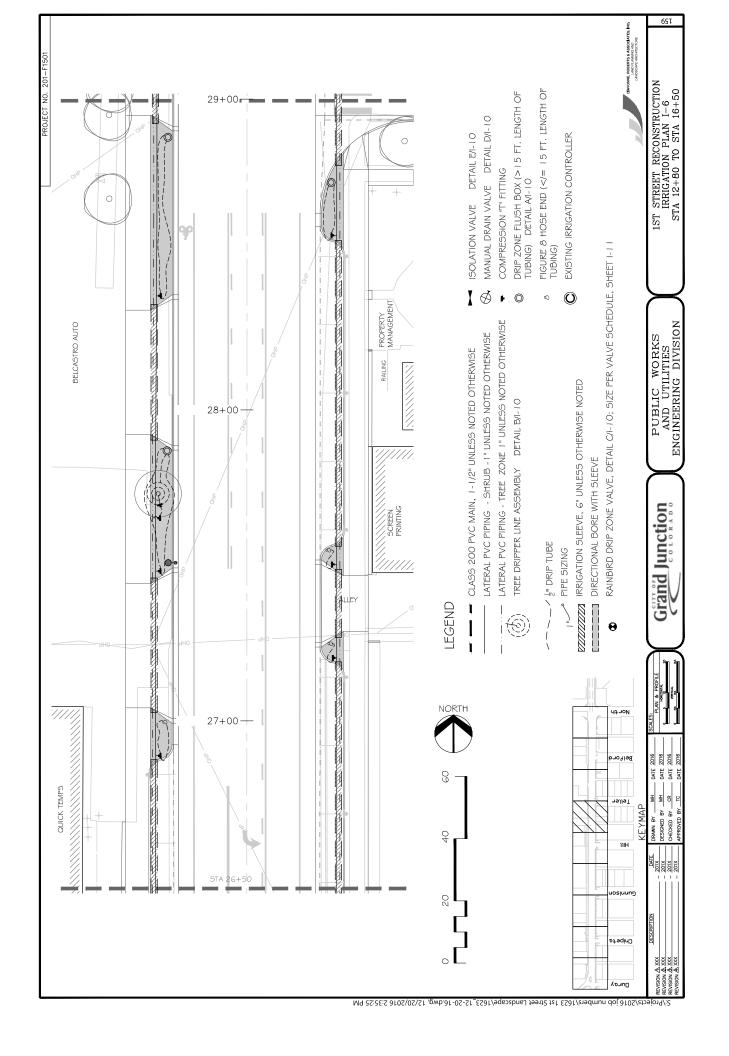


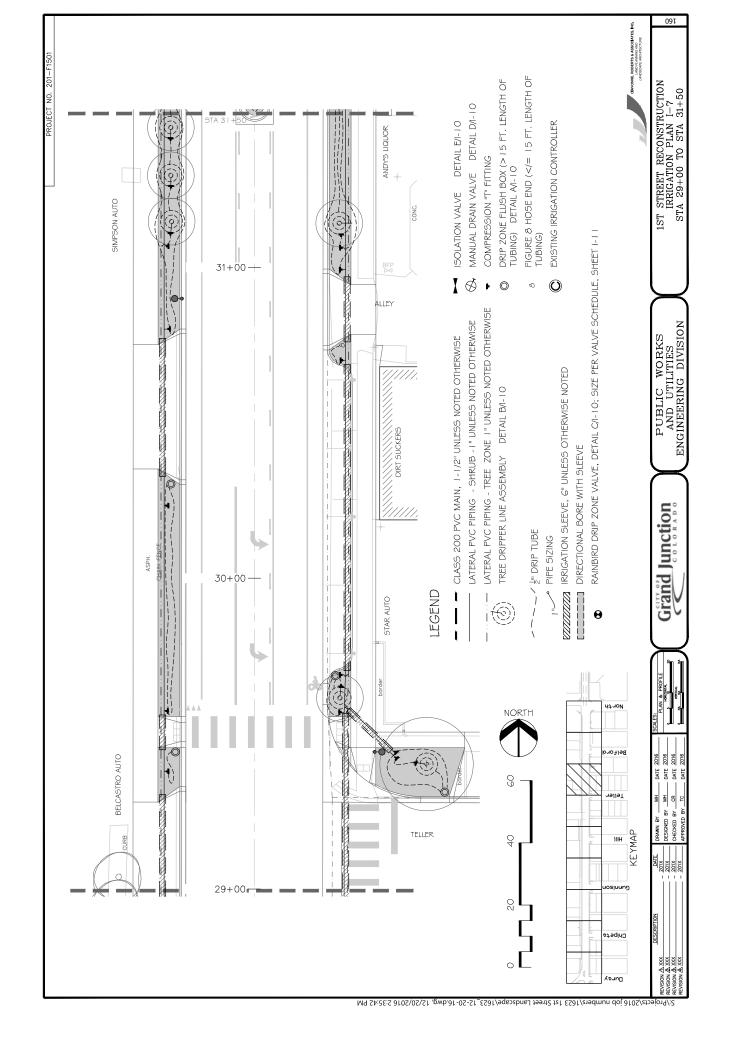


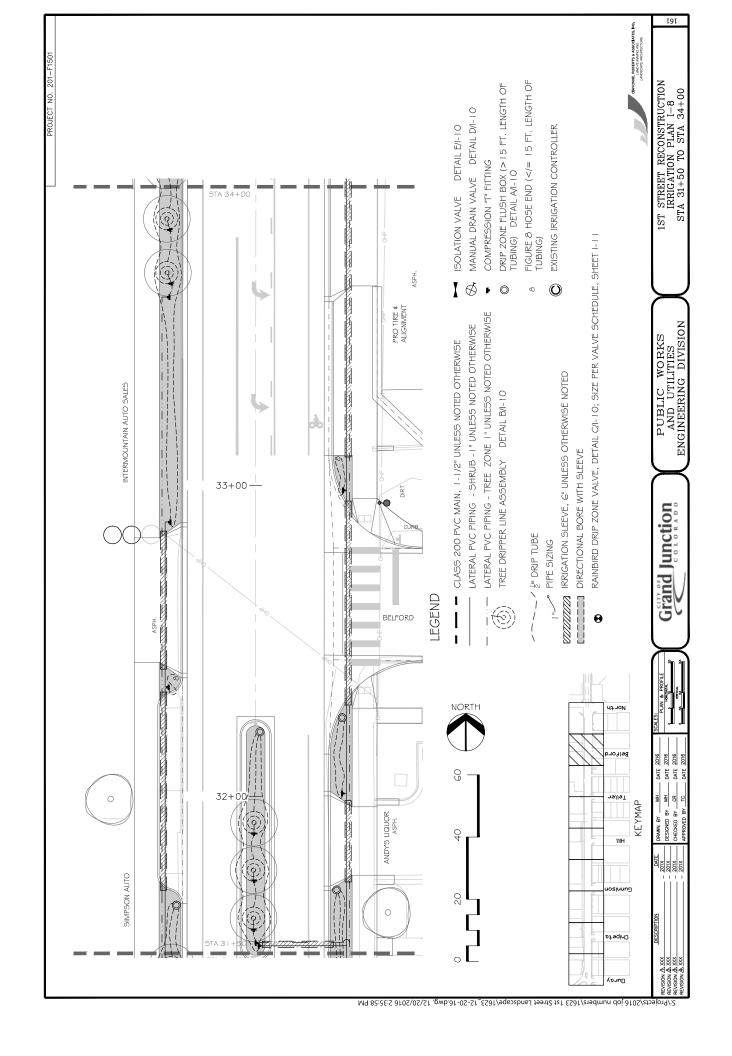


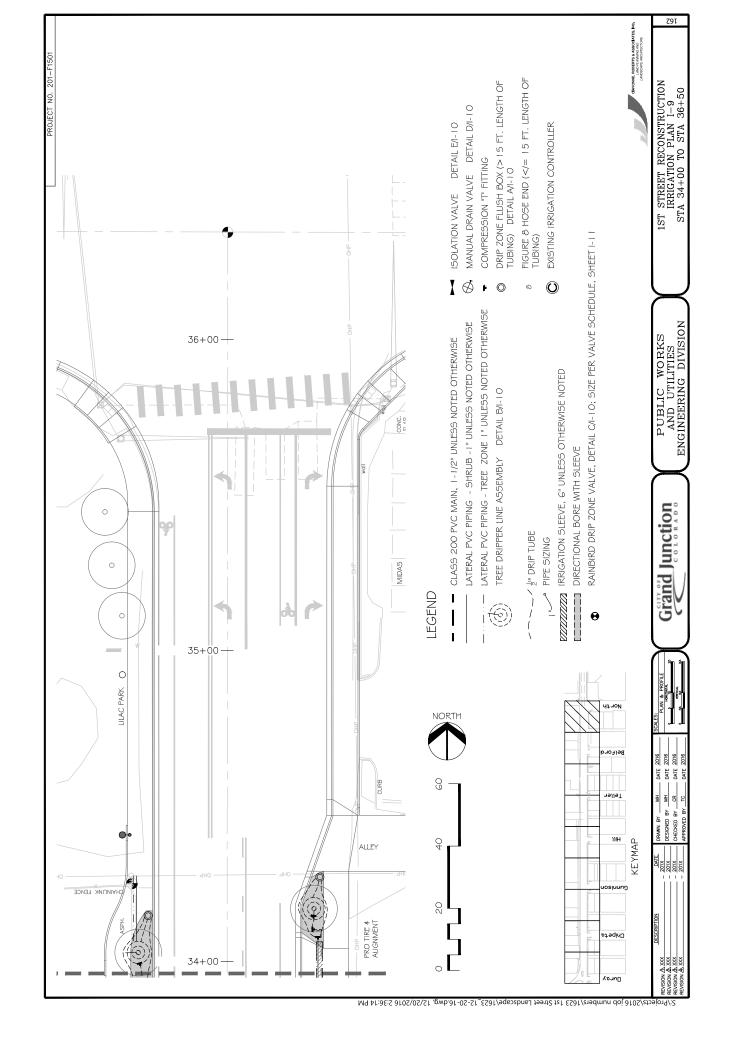


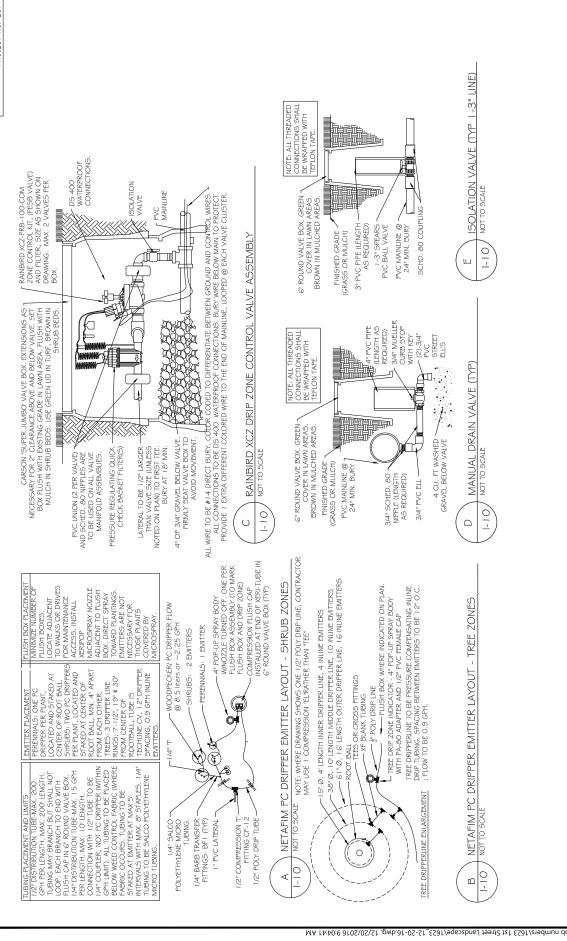












PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

STREET RECONSTRUCTION IRRIGATION PLAN I-10 CONSTRUCTION DETAILS IST

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CAVONNE, ROBERTS & ASSOCIATES, I LAND PLANING AND LANDSCAPE ARGHTECTURE

IRRIGATION VALVE SCHEDULE

- 1
DRIP - WEST SIDE SHRUB
DRIP - WEST SIDE TREES (19 TREES)
DRIP - EAST SIDE SHRUB
DRIP - EAST SIDE TREES (20 TREES)

NOTES:

- CONTRACTOR IS OBLIGATED TO MONITOR SOIL MOISTURE TO AVOID SATURATION OR DROUGHT AND ADJUST SCHEDLE ACCORDINGLY DURING ESTABLISHMENT PERIOD.

 SCHEDLE ACCORDINGLY DURING ESTABLISHMENT PERIOD.

 TURF ZONES ARE CALCULATED TO 80% EFFICIENCY, DRIP ZONES TO 95% EFFICIENCY.

 OPTIMUM PRESSURE FOR ZONES: 45 PSI THIS CHART PROVIDES WATERING SCHEDULE RECOMMENDATIONS FOR ESTABLISHED PLANTS AND TURF _. «i
 - w. 4.

IRRIGATION SUMMARY OF APPROXIMATE QUANTITIES

BID ITEM	TINO	QUANTITY
4 inch Conduit Sleeves, incl. trenching, backfill ¢ compaction	I.F	16
6 inch Conduit Sleeves, incl. trenching, backfill ¢ compaction	4	2,447
Zone Valve Wiring	ч	1,544
Tap into Existing Imigation System	EACH	_
Drip Emitter, incl 1/4" tubing, fittings, stakes	EACH	186
1/2 Inch Drip Tubing	<u>_</u>	5,687
Tree Ring Assembly	EACH	39
Riser Assembly to Compression T (not including into tree rings)	EACH	71
Flush Box Assembly	EACH	31
Figure 8 cap	EACH	18
Manual Dram Valve	EACH	_
I Inch PESB Drip Zone Valve Assembly	EACH	4
Quick Coupler Valve	EACH	-
Isolation Valve	EACH	2
I inch Class 160 PVC Lateral Piping, including trenching and filling	느	6,491
1-1/2 inch Class 160 PVC Lateral Piping, including trenching and filling	Ш	1,159
1-1/2 inch Class 200 PVC Mainline, including trenching and filling	ш	386

OCT 70%

SEPT 90%

JULY 160%

JUNE 130%

MAY 100%

APRIL 90%

WATER BUDGET SETTINGS

IRRIGATION NOTES:

- ALL WORK SHALL BE PER EXISTING COUNTY OR STATE CODE AND IS SUBJECT TO INSPECTION AND APPROVAL BY APPROPRARTE INSPECTIORS AND THE OWNERS REPRESENTATIVE.

 CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

 ALL LATERAL AND MAIN LINES IN SYSTEM WILL BE CONTAINED IN SLEEVES WHEREVER CONCRETE IS TO BE OVERLADD.

 - CONTRACTOR TO CONNECT ZONE VALVE WIRING TO EXISTING CLOCK AT NORTH END OF TRIANGLE PARK, WHERE 9.6.4
- ALL MAINS SHALL BE BURIED AT A MINIMUM DEPTH OF 24 IN. ALL LATERALS AT A DEPTH OF 18 IN. ALL VALVE WIRING SHALL BE BUNDLED BY TAPING AT 25 FT. INTERVALS AND PLACED BELOW IRRIGATION PIPING FOR PROTECTION. SHOWN ON DRAWINGS. 5
 - CONTRACTOR TO INSTALL MANUAL DRAIN VALVES AT LOW POINT ON ALL MAIN LINES.
 - SEE SHEET I 10 FOR DETAILS AND SHEET I 11 FOR SHEET NOTES AND VALVE SCHEDULE. SYSTEM IS DESIGNED TO OPERATE AT 45 PSI, PROVIDING MINIMUM I 5 PSI AT EMITTERS. WHERE IRRIGATION IS TO BE LOCATED ADJACENT TO SIDEWALKS, LATERALS SHALL BE LOCATED I 2 INCHES FROM BACK OF WALK. 9676

 - DRIP EMITTERS TO BE NETAFIM PC DRIPPER, 8 L/H (2.25 GPH)
 PIPE FROM CONTROL VALVE TO FIRST " TEE" TO USE 1/2" LARGER THAN VALVE UNLESS NOTED OTHERWISE
 PIPE SIZE NOTATION INDICATES MINIMUM PIPE SIZE DOWNSTREAM FROM THAT POINT. <u>0</u> – <u>6</u>

STREET RECONSTRUCTION IRRIGATION PLAN I-11 IRRIGATION NOTES 1ST

Grand Junction

PLAN & PROFILE HORIZONTAL

DATE 2016

DATE 2016

DATE 2016

DATE 2016

DRAWN BY MH
DESIGNED BY MH
CHECKED BY CR
APPROVED BY TC

PUBLIC WORKS
AND UTILITIES
ENGINEERING DIVISION

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CLAVONNE, ROBERTS & ASSOCIATES, INC. LAND PLANWIS AND LANGSCAPE ARCHITECTURE

