

November 5, 2020

**ADDENDUM 1 – JOB 1**

TO: All prospective bidders on Project SU-IM-8-984(153)156, Job No. 1 scheduled for the November 13, 2020 bid opening.

The following plans and request for proposal revision shall be made:

Plan Revisions:

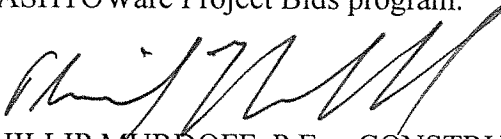
**See attached summaries from Paul Benning, P.E. dated November 5, 2020 for an explanation.**

Request for Proposal Revisions:

**Remove and replace pages 5 thru 15 of 17 of the Proposal pages located at the beginning of the Request for Proposal with pages revised 11/5/2020.**

**Bid Item Changes are summarized in the Plan Addendum Summary and Approval.**

This addendum is to be incorporated into the bidder's proposal for this project. AASHTOWare Project Bids files should be updated by downloading the addendum file from the Bid Express on-line bidding exchange at <http://www.bidx.com/> and load it into the AASHTOWare Project Bids program.



PHILLIP MURDOFF, P.E. – CONSTRUCTION SERVICES ENGINEER

80: dch

Enclosure

## PLAN ADDENDUM SUMMARY AND APPROVAL

PROJECT INFORMATION		
<b>Project:</b>	SU-IM-8-984(153)156	<b>PCN:</b> 21564
<b>Location:</b>	Fargo, ND	
<b>Date:</b>	11/03/2020	<b>Lead Designer:</b> Scott Middaugh
<b>Bid Opening Date:</b>	Nov 13, 2020	<b>JOB#:</b> 1 <b>Addendum#:</b> 1

PLAN SHEET CHANGES							
Section	Sheet	Description					
2	2	Added Standard Drawing D-704-35.					
6	1	Revised note 100-P01. Revised milestone date for Interim Completion Date 2. Added Interim Completion Date 4. Revised note 100-P02. Added NDSCS Career Complex to list of projects to coordinate with Remaining notes shifted due to formatting.					
6	2	Notes shifted due to formatting					
6	5	Revised note 704-P01. Removed statement prohibiting northbound and southbound I-29 closures, reduced allowable night closures, and added lane closures for the canopy installation/removal. Revised note 704-P03. Added Standard Drawing D-704-35.					
6	9	Revised note 770-P02. Added statement allowing only one wire per screw in connectors.					
6	10	Revised note 770-P08. Removed sole source of the 40FT Light Standard. Revised note 770-P13. Removed statement about pull box cover stamps.					
6	11	Revised note 772-P08. Added statement about pull box cover stamps.					
8	1-4	Revised the following quantities:					
		Spec	Code	Description	Unit	Previous Quantity	Addendum 1 Quantity
		612	0115	REINFORCING STEEL - GRADE 60	LBS	32,621	33,647
		622	0070	STEEL PILING HP 14X102	LF	1,540	1,955
		704	0100	FLAGGING	MHR	200	328
		704	1000	TRAFFIC CONTROL SIGNS	UNIT	3,417	3,467
		754	0206	STEEL GALV POSTS – TELESCOPING PERFORATED TUBE	LF	237	167
Added the following quantities:							

		<table><tr><td>Spec</td><td>Code</td><td>Description</td><td>Unit</td><td>Previous Quantity</td><td>Addendum 1 Quantity</td></tr><tr><td>704</td><td>1067</td><td>TUBULAR MARKERS</td><td>EA</td><td>0</td><td>14</td></tr><tr><td>704</td><td>1087</td><td>SEQUENCING ARROW PANEL – TYPE C</td><td>EA</td><td>0</td><td>1</td></tr></table>	Spec	Code	Description	Unit	Previous Quantity	Addendum 1 Quantity	704	1067	TUBULAR MARKERS	EA	0	14	704	1087	SEQUENCING ARROW PANEL – TYPE C	EA	0	1
Spec	Code	Description	Unit	Previous Quantity	Addendum 1 Quantity															
704	1067	TUBULAR MARKERS	EA	0	14															
704	1087	SEQUENCING ARROW PANEL – TYPE C	EA	0	1															
55	1	Removed incorrect property lines on the north side of 64 <sup>th</sup> Avenue.																		
55	2	Removed and revised incorrect water utility labels																		
55	3	Removed incorrect property lines on the north side of 64 <sup>th</sup> Avenue.																		
55	5	Removed incorrect property lines on the north side of 64 <sup>th</sup> Avenue.																		
55	6	Removed incorrect property lines on the north side of 64 <sup>th</sup> Avenue.																		
55	10	Removed incorrect property lines on the north side of 64 <sup>th</sup> Avenue.																		
55	11	Removed incorrect property lines on the north side of 64 <sup>th</sup> Avenue.																		
100	1	Revised the following quantities:																		
		<table><tr><td>Spec</td><td>Code</td><td>Description</td><td>Unit</td><td>Previous Quantity</td><td>Addendum 1 Quantity</td></tr><tr><td>704</td><td>0100</td><td>FLAGGING</td><td>MHR</td><td>200</td><td>328</td></tr><tr><td>704</td><td>1000</td><td>TRAFFIC CONTROL SIGNS</td><td>UNIT</td><td>3,417</td><td>3,467</td></tr></table>	Spec	Code	Description	Unit	Previous Quantity	Addendum 1 Quantity	704	0100	FLAGGING	MHR	200	328	704	1000	TRAFFIC CONTROL SIGNS	UNIT	3,417	3,467
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		704	1000	TRAFFIC CONTROL SIGNS	UNIT	3,417	3,467													
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704	1067	TUBULAR MARKERS	EA	0	14															
704	1087	SEQUENCING ARROW PANEL – TYPE C	EA	0	1															
110	1	Revised the quantities for Sign Support Length from 168.8 to 118.2 LF, the quantities for Anchors from 68.0 LF to 48.0 LF, and the quantities for Break-Away from 8 EA to 5 EA.																		
110	3	Revised the location of the sign R1-1-30 to be light pole mounted. Added note about installing signs on light poles.																		
110	4	Revised the location of sign W1-4L-36 to be light pole mounted. Added note about installing signs on light poles.																		
110	5	Revised the location of signs W6-2-36 and W1-4L-36 to be light pole mounted. Added note about installing signs on light poles.																		
110	6	Added note about installing signs on light poles.																		
110	7	Revised the location of sign R2-1-30 to be light pole mounted. Added note about installing signs on light poles.																		
140	1	Revised light offsets and “Lighting Cable & Conduit Schedule” tables.																		

140	2	Revised light offsets and “Lighting Cable & Conduit Schedule” tables.					
140	3	Revised light offsets and “Lighting Cable & Conduit Schedule” tables.					
140	4	Revised light offsets and “Lighting Cable & Conduit Schedule” tables.					
140	5	Revised light offsets and “Lighting Cable & Conduit Schedule” tables.					
140	10	Revised detail name to “Light Standard: With Leveling Nuts”. Revised quantities for Lighting System in the basis table.					
170	1	Abutment 1 North and South Wings were reversed.					
170	2	Note 602 Temporary Bracing was retitled to 616 Falsework and revised. Revised Note 616 Paint and Painting. Color changed to Brown. Revised Note 622 Pile Sleeves. Added statement clarifying what bid item the pile sleeves were paid for under					
170	4	<ul style="list-style-type: none"><li>Revised the following quantities:</li></ul>					
		Spec	Code	Description	Unit	Previous Quantity	Addendum 1 Quantity
		612	0115	REINFORCING STEEL - GRADE 60	LBS	32,621	33,647
		622	0070	STEEL PILING HP 14X102	LF	1,540	1,955
		<ul style="list-style-type: none"><li>Revised Screed Elevations.</li></ul>					
170	5	Added pier piling and revised spacing. Revised pile coordinates for Pier 2.					
170	10	Added pier piling and revised spacing. Pile embedment increased					
170	11	Changed 7A201 bars to 8A201 bars. Added pier piling. Pile cap reinforcing revised. Added 5C203 bar. Revised 5N201 bar. Quantity and spacing revised for 5N202 and 5C200 bars. Revised quantity for 4C202 bars. Pile embedment increased					
170	12	Added temporary bracing to Abutment 3 Revised camber diagram and deflection table.					
170	16	Revised detail callouts in Note 1.					
170	22	Revised table based on Sheet 11 revisions.					
170	30	Revised C-C to show formliner insets in the barrier.					
170	33	Revised deck edge on Pedestrian Wall detail. Revised deck edge on Edge Barrier detail.					



SPECIAL PROVISION CHANGES	
Special Provision	Description
SP 70(20) PAINTING OVER GALVANIZED STEEL	Revised "Red" to "Brown" to match plans.
SP 97(20) UTILITY COORDINATION	Revised Appendix A and Appendix B to show updated utility relocation status.

CHANGES MADE TO BID ITEMS FOR JOB					
Spec	Code	Description	Unit	Previous Quantity	Revised Quantity
612	0115	REINFORCING STEEL – GRADE 60	LBS	32,621	33,647
622	0070	STEEL PILING HP 14X102	LF	1,540	1,955
704	0100	FLAGGING	MHR	200	328
704	1000	TRAFFIC CONTROL SIGNS	UNIT	3,417	3,467
704	1067	TUBULAR MARKERS	EA	0	14
704	1087	SEQUENCING ARROW PANEL – TYPE C	EA	0	1
754	0206	STEEL GALV POSTS- TELESCOPING PERFORATED TUBE	LF	237	167

## APPROVAL

Should the revisions described above be processed as a plan addendum?

X  Yes                             No



Paul Benning, P.E. – Local Government Engineer

11/5/2020

Date

**BID ITEMS**

**Project: SU-IM-8-984(153)156 (PCN-21564)**

**Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.**

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
001	103	0100	CONTRACT BOND	L SUM	1.				
002	108	0001	CRITICAL PATH METHOD SCHEDULE	L SUM	1.				
003	201	0330	CLEARING & GRUBBING	L SUM	1.				
004	202	0105	REMOVAL OF STRUCTURE	L SUM	1.				
005	202	0170	REMOVAL OF CULVERTS-ALL TYPES & SIZES	LF	186.				
006	202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	10.				
007	202	0312	REMOVE EXISTING FENCE	LF	751.				
008	203	0101	COMMON EXCAVATION-TYPE A	CY	7,944.				
009	203	0109	TOPSOIL	CY	30,243.				
010	203	0115	CLAY EXCAVATION	CY	87,269.				
011	203	0116	TOPSOIL MANDATORY BORROW AREA	CY	3,993.				
012	203	0117	MANDATORY BORROW	CY	168,617.				
013	210	0050	BOX CULVERT EXCAVATION	EA	1.				
014	210	0099	CLASS 1 EXCAVATION	L SUM	1.				
015	210	0199	BACKFILL CLASS AA	LF	1,161.				
016	210	0201	FOUNDATION PREPARATION	EA	1.				

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
017	210	0210	FOUNDATION FILL	CY	2,028.				
018	210	0405	FOUNDATION PREPARATION-BOX CULVERT	EA	1.				
019	216	0100	WATER	M GAL	1,867.				
020	230	0165	SUBGRADE PREPARATION-TYPE A-12IN	STA	14.				
021	251	0300	SEEDING CLASS III	ACRE	21.380				
022	251	2000	TEMPORARY COVER CROP	ACRE	34.020				
023	253	0101	STRAW MULCH	ACRE	34.020				
024	253	0201	HYDRAULIC MULCH	ACRE	14.730				
025	255	0102	ECB TYPE 2	SY	32,175.				
026	255	0202	TRM TYPE 2	SY	118.				
027	258	0100	CONCRETE SLOPE PROTECTION	SY	709.				
028	260	0200	SILT FENCE SUPPORTED	LF	1,513.				
029	260	0201	REMOVE SILT FENCE SUPPORTED	LF	1,513.				
030	261	0112	FIBER ROLLS 12IN	LF	17,589.				
031	261	0113	REMOVE FIBER ROLLS 12IN	LF	17,589.				
032	265	0100	STABILIZED CONSTRUCTION ACCESS	EA	2.				

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
033	265	0101	REMOVE STABILIZED CONSTRUCTION ACCESS	EA	2.				
034	302	0101	SALVAGED BASE COURSE	CY	62.				
035	302	0121	AGGREGATE BASE COURSE CL 5	CY	7,109.				
036	302	9970	TYPE II PIPE BEDDING	CY	500.				
037	430	0500	COMMERCIAL GRADE HOT MIX ASPHALT	TON	648.				
038	550	0310	10IN NON REINF CONCRETE PVMT CL AE-DOWELED	SY	14,648.				
039	602	0130	CLASS AAE-3 CONCRETE	CY	746.700				
040	602	1130	CLASS AE-3 CONCRETE	CY	265.700				
041	602	1133	CONCRETE BRIDGE APPROACH SLAB	SY	230.				
042	602	1134	PILE SUPPORTED APPROACH SLAB	SY	230.				
043	602	1250	PENETRATING WATER REPELLENT TREATMENT	SY	3,250.				
044	606	1209	12FT X 9FT PRECAST RCB CULVERT	LF	92.				
045	606	5209	12FT X 9FT PRECAST RCB END SECTION	EA	2.				
046	612	0115	REINFORCING STEEL-GRADE 60	LBS	33,647.				
047	612	0116	REINFORCING STEEL-GRADE 60-EPOXY COATED	LBS	157,843.				
048	616	5890	STRUCTURAL STEEL	L SUM	1.				

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
049	622	0020	STEEL PILING HP 10 X 42	LF	1,250.				
050	622	0068	STEEL PILING HP 14 X 89	LF	1,750.				
051	622	0070	STEEL PILING HP 14 X 102	LF	1,955.				
052	624	0124	PEDESTRIAN FENCE	LF	465.300				
053	702	0100	MOBILIZATION	L SUM	1.				
054	704	0100	FLAGGING	MHR	328.				
055	704	1000	TRAFFIC CONTROL SIGNS	UNIT	3,467.				
056	704	1045	ATTENUATION DEVICE-TYPE B-75	EA	4.				
057	704	1052	TYPE III BARRICADE	EA	23.				
058	704	1060	DELINEATOR DRUMS	EA	144.				
059	704	1067	TUBULAR MARKERS	EA	14.				
060	704	1087	SEQUENCING ARROW PANEL-TYPE C	EA	1.				
061	704	3510	PRECAST CONCRETE MED BARRIER-STATE FURNISHED	EA	292.				
062	704	4011	PORTABLE CHANGEABLE MESSAGE SIGN	EA	3.				
063	706	0400	FIELD OFFICE	EA	1.				
064	708	1540	INLET PROTECTION-SPECIAL	EA	41.				

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
065	708	1541	REMOVE INLET PROTECTION-SPECIAL	EA	41.				
066	709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY	187.				
067	709	0151	GEOSYNTHETIC MATERIAL TYPE R1	SY	18,583.				
068	714	0215	PIPE CONC REINF 15IN CL V-STORM DRAIN	LF	224.				
069	714	0325	PIPE CONC REINF 18IN CL IV-STORM DRAIN	LF	22.				
070	714	0620	PIPE CONC REINF 24IN CL III-STORM DRAIN	LF	256.				
071	714	0825	PIPE CONC REINF 30IN CL III-STORM DRAIN	LF	47.				
072	714	0910	PIPE CONC REINF 36IN CL III-STORM DRAIN	LF	394.				
073	714	1002	PIPE CONC REINF 42IN CL II-STORM DRAIN	LF	101.				
074	714	4092	PIPE CONDUIT 12IN-STORM DRAIN	LF	216.				
075	714	4097	PIPE CONDUIT 15IN-STORM DRAIN	LF	1,185.				
076	714	4101	PIPE CONDUIT 18IN-STORM DRAIN	LF	887.				
077	714	4103	PIPE CONDUIT 21IN-STORM DRAIN	LF	152.				
078	714	4107	PIPE CONDUIT 24IN-STORM DRAIN	LF	546.				
079	714	4112	PIPE CONDUIT 30IN-STORM DRAIN	LF	293.				
080	714	4117	PIPE CONDUIT 36IN-STORM DRAIN	LF	157.				

**BID ITEMS**

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
081	714	4121	PIPE CONDUIT 42IN-STORM DRAIN	LF	536.				
082	714	7175	PIPE PVE 36IN SEWER	LF	998.				
083	714	8498	CASING PIPE 18IN	LF	256.				
084	714	9680	PLUG PIPE-ALL TYPES & SIZES	EA	4.				
085	714	9696	EDGEDRAIN NON PERMEABLE BASE	LF	2,853.				
086	722	0100	MANHOLE 48IN	EA	4.				
087	722	0110	MANHOLE 60IN	EA	2.				
088	722	0120	MANHOLE 72IN	EA	3.				
089	722	0130	MANHOLE 84IN	EA	5.				
090	722	0140	MANHOLE 96IN	EA	1.				
091	722	0200	MANHOLE 108IN	EA	1.				
092	722	0300	MANHOLE SANITARY	EA	3.				
093	722	1100	MANHOLE RISER 48IN	LF	18.850				
094	722	1110	MANHOLE RISER 60IN	LF	8.380				
095	722	1120	MANHOLE RISER 72IN	LF	14.140				
096	722	1130	MANHOLE RISER 84IN	LF	31.690				

**BID ITEMS**

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
097	722	1140	MANHOLE RISER 96IN	LF	6.070				
098	722	1200	MANHOLE RISER 108IN	LF	6.310				
099	722	3510	INLET-TYPE 2	EA	9.				
100	722	3520	INLET-TYPE 2 DOUBLE	EA	7.				
101	722	3740	INLET SPECIAL CATCH BASIN-TYPE A 48IN	EA	11.				
102	722	3800	INLET SPECIAL CATCH BASIN-TYPE A 60IN	EA	3.				
103	722	4025	INLET CATCH BASIN BEEHIVE	EA	8.				
104	724	0210	FITTINGS-DUCTILE IRON	LBS	1,938.				
105	724	0300	GATE VALVE & BOX 6IN	EA	5.				
106	724	0310	GATE VALVE & BOX 8IN	EA	3.				
107	724	0317	GATE VALVE & BOX 16IN	EA	1.				
108	724	0411	6IN HYDRANT	EA	5.				
109	724	0810	WATERMAIN 6IN PVC	LF	46.				
110	724	0830	WATERMAIN 8IN PVC	LF	896.				
111	724	0850	WATERMAIN 12IN PVC	LF	40.				
112	724	0852	WATERMAIN 16IN PVC	LF	1,303.				



## PROPOSAL FORM

North Dakota Department of Transportation

BID OPENING: November 13, 2020

Job 001

Page 12 of 17

Rev: 11/5/2020

## BID ITEMS

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
113	724	1117	12IN SANITARY SEWER PIPE	LF	220.				
114	724	1118	15IN SANITARY SEWER PIPE	LF	165.				
115	748	0190	CURB & GUTTER-TYPE I 30IN	LF	6,817.				
116	748	0210	CURB & GUTTER 42IN	LF	243.				
117	748	1020	VALLEY GUTTER 36IN	SY	30.				
118	750	0030	PIGMENTED IMPRINTED CONCRETE	SY	309.				
119	750	0120	SIDEWALK CONCRETE 5IN REINF	SY	5,720.				
120	750	0140	SIDEWALK CONCRETE 6IN	SY	277.				
121	750	0210	CONCRETE MEDIAN NOSE PAVING	SY	39.				
122	750	2115	DETECTABLE WARNING PANELS	SF	236.				
123	752	0600	FENCE CHAIN LINK	LF	813.				
124	752	0922	FENCE REMOVE & RESET	LF	813.				
125	752	2996	CORNER ASSEMBLY-STEEL POST	EA	8.				
126	754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	153.600				
127	754	0112	FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	18.				
128	754	0137	ROADWAY TERMINATION-TYPE A	EA	2.				

**BID ITEMS**

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						\$\$\$\$	000	\$\$\$\$	00
129	754	0170	FLEXIBLE DELINEATORS	EA	50.				
130	754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	167.				
131	754	0805	OBJECT MARKERS - CULVERTS	EA	12.				
132	754	8025	REVISE DYNAMIC MESSAGE SIGN	EA	1.				
133	762	0113	EPOXY PVT MK 4IN LINE	LF	9,634.				
134	762	0122	PREFORMED PATTERNED PVT MK-MESSAGE(GROOVED)	SF	128.				
135	762	1104	PVT MK PAINTED 4IN LINE	LF	132.				
136	762	1309	PREFORMED PATTERNED PVT MK 8IN LINE-GROOVED	LF	725.				
137	762	1317	PREFORMED PATTERNED PVT MK 16IN LINE-GROOVED	LF	68.				
138	762	1344	PREF PATT PVT MK 7IN LINE CONTRAST-GROOVED	LF	6,552.				
139	764	0131	W-BEAM GUARDRAIL	LF	195.100				
140	764	0145	W-BEAM GUARDRAIL END TERMINAL	EA	4.				
141	770	0003	LIGHTING SYSTEM A	EA	1.				
142	772	9200	IT SYSTEM	EA	1.				
143	900	0100	SETTLEMENT PLATE	EA	20.				
144	920	1000	GEOFOAM	CY	33,491.				

**BID ITEMS**

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						\$\$\$\$	000	\$\$\$\$	00
145	920	1050	GEOMEMBRANE	SY	16,095.				
146	920	1300	PREFABRICATED VERTICAL WICK DRAINS	LF	659,568.				
147	920	1318	VIBRATING WIRE PIEZOMETER	EA	4.				
148	920	1320	VIBRATING WIRE DATA LOGGER	EA	2.				
149	920	2130	SAND DRAIN	TON	37,489.				
150	930	3000	BRIDGE BENCH MARKS	SET	1.				
151	930	4215	INSTRUMENTATION-AUTOMATED GROUND MOVEMENT SEN	EA	2.				
152	930	7012	ROADWAY CANOPY	L SUM	1.				
153	930	9537	ABUTMENT UNDERDRAIN SYSTEM	EA	2.				
			SUBTOTAL						
			<b>OPTION 1</b>						
154	624	0151	RAILING	LF	465.300				
			SUBTOTAL OPTION 1						
			<b>OPTION 2</b>						

North Dakota Department of Transportation

## BID ITEMS

Rev: 11/5/2020

**Project: SU-IM-8-984(153)156 (PCN-21564)**

**Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.**

[illegible]

## NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

### SPECIAL PROVISION

#### PAINTING OVER GALVANIZED STEEL

#### PROJECT SU-8-984(153)156 – PCN 21564

##### GENERAL

This work consists of the surface preparation and painting of all galvanized steel pedestrian fence and steel railing components as shown in Section 170 of the plans.

##### MATERIALS

Use a shop applied two coat paint system consisting of a polyamide epoxy primer and an aliphatic polyurethane finish coat. Provide the system from a single manufacturer. Provide components that are recommended for use as part of a two-coat system.

Use a paint system formulated by the manufacturer for use over galvanized steel.

##### A. Epoxy Primer.

Use a chemically-curing polyamide epoxy primer that is a two component and chemically-curing.

Use primer capable of being spray applied to the manufacturer's recommended Dry Film Thickness in one coat without sagging or mud cracking. After mixing, the primer shall be smooth, uniform, and free of lumps or coarse particles.

Formulate the color of the primer to produce a distinct contrast with the galvanized surface and the finish coat.

Provide an epoxy primer that meets the material properties shown in Table 1.

**Table 1 Paint  
Properties**

Total Solids, percent by volume	54% min
Pot life at 77°F	4 hours min
VOC content	3.5 lbs/gal max
Curing Time for Recoating <sup>1</sup>	24 hours max
<sup>1</sup> When applied at the manufactures' recommended thickness at 77°F and 50% relative humidity.	

**B. Finish Coat.**

Use a compatible two-component, aliphatic polyurethane finish coat with a weather resistant finish and the gloss and color in accordance with AMS Standard No. 595A as specified herein:

Pedestrian Fence:	Color No. 10076 (Brown)
Railing:	Color No. 10076 (Brown)

Use paint with a finish coat that meets the material properties shown in Table 1.

**C. Certification and Acceptance.**

Before the use of the paint system, provide a Certificate of Compliance as specified in Section 106.01 C, "Certificate of Compliance" and the following:

1. Manufacturer Contact Information;
2. Product Data Sheets;
3. Manufacturer's Application Instructions;
4. Material Safety Data Sheets;
5. A 3" x 5" Color Chip card for the colors specified; and
6. Compatibility statement.

**D. Packaging and Labeling.**

Provide a label on each container that contains:

- The name of manufacturer;
- The brand name;
- The lot number of the paint;
- Complete instructions for the use of the paint;
- The shelf life of the components; and
- The post life of the mixture.

**CONSTRUCTION REQUIREMENTS**

**A. Surface Preparation.**

Prepare the surface according to ASTM D 6386. Do not quench the surface if the galvanized coating will be applied within 48 hours.

Do not use chromate conversion coatings.

**B. Coating Application.**

Apply paint when environmental conditions, such as temperature, humidity, and dew point, are within the manufacturer's recommended range.

Apply coating in a uniform, even coat and worked into all corners and crevices. Use a brush on surfaces inaccessible to spray applications.

The Dry Film Thickness of the coating system will be in accordance with the manufacturer's recommendations. Remove surface coating from areas outside the manufacturer's specified range in a manner that protects the underlying galvanized coating and also prepares the surface for recoating.

**C. Field Repair of Damaged Painted Coating.**

**1. Surface Preparation.**

Remove areas of damaged coating down to the galvanized surface. Take care not to damage the underlying galvanized coating. Feather edges of cleaned repair areas to ensure a smooth finish.

**2. Paint System Application.**

Do not allow paint materials to come in contact with surfaces not intended to be painted. Provide a means to protect traffic from spattering paint materials if necessary. Prevent deleterious material from adhering to freshly painted surfaces.

Paint may be applied using spray, brush, or roller. Apply paint only when environmental conditions, such as temperature, humidity, and dew point, are within the manufacturer's recommended range.

**D. Field Repair of Damaged Galvanized Coating.**

Repair damaged galvanized coatings according to Section 854.02, "Damaged Galvanized Coatings".

**METHOD OF MEASUREMENT AND BASIS OF PAYMENT**

Include the cost of work described in this Special Provision in the respective contract unit prices for "Pedestrian Fence" and "Railing".

## **NORTH DAKOTA DEPARTMENT OF TRANSPORTATION**

### **SPECIAL PROVISION**

### **UTILITY COORDINATION**

#### **PROJECT SU-8-984(153)156 – PCN 21564**

#### **DESCRIPTION**

This work consists of coordinating the construction schedule with third party utility companies owning facilities within the project limits, verifying the location of those facilities during construction, and resolving issues with those utilities.

The requirements in this Special Provision replace the requirements of Section 105.03, "Cooperation With Utility Owners".

#### **ATTACHMENTS**

Appendix A – Utility Coordination Table

Appendix B – Utility Exhibits

#### **DEFINITIONS**

**Conflict:** A utility in need of relocation or adjustment for the construction to proceed in that area.

**Protect in Place (PIP):** A utility that does not need relocation, but needs precautions to protect the utility during construction activities.

**Utility Encounter (UE):** A Conflict or Protect in Place situation involving an existing third party owned utility.

#### **CONTRACTOR RESPONSIBILITIES**

##### **A. Responsibilities.**

The responsibilities for utility coordination include the following:

- Conduct the preconstruction utility coordination meeting;
- Maintain a point of contact for all utility companies;
- Maintain a schedule for utility activities;
- Hold weekly utility meetings in addition to the weekly planning and reporting meeting and report on the utility meetings at the weekly planning and reporting meeting;
- Follow up with any utility companies that do not show up to construction meetings;
- Coordinate work efforts of the utility companies, revise work schedules and traffic control as necessary to ensure adequate cooperation between UE and construction work;
- Develop and update the utility coordination plan;
- Provide a weekly written summary for contacts and meetings to the Engineer; and



- Coordinate with all of the other parties to update the project schedule specified in Section 108.03, "Progress Schedule".

**B. Utility Coordination Plan.**

Develop a utility coordination plan with each utility company that includes the phasing and scheduling requirements for UE.

**C. Record of Utility Outage Notifications.**

Request a copy of notifications that utility companies provide to customers for service outages. Maintain copies of all notifications until the Contractor signs the final estimate.

**D. Utility Coordination Schedule.**

Create and maintain a construction schedule that includes timelines for the phasing of utility coordination work. Include information contained in the contract documents and information obtained during coordination discussions with utility owners. Written agreements between the Contractor and a utility company will govern over information contained in contract documents; however, the agreements must be signed by the NDDOT, Contractor, and Utility Company to be effective. Written agreements are considered contract revisions, however they are not eligible for additional compensation or additional time unless agreed to separately by the Engineer.

The Utility Coordination Table contains information related to the utility coordination requirements at each area designated as a UE. The timelines included on the Table may be longer than shown if the Contractor requests multiple resolutions simultaneously. Adjust work schedules as required to accommodate utility resolutions.

Revisions to the construction schedule due to a utility company or companies non-conformance with agreed upon schedules or failure to reasonably coordinate work efforts with the Contractor will be considered excusable, non-compensable delays as specified in Section 108.06, "Determination of and Extensions to the Contract Time".

Failure by the Contractor to reasonably coordinate schedules with a utility company or companies for UE identified in the contract, or failure to document coordination efforts will be considered non-excusable delays as specified in Section 108.06, "Determination of and Extensions to the Contract Time".

**CONSTRUCTION REQUIREMENTS**

**A. General.**

The vertical and horizontal utility locations shown in the plans are approximate. Plan locations should not be interpreted as exact for bidding or construction purposes. The locations of utility lines are available at the specific locations included in the Utility Exhibits.

Utility facilities shown on the plans, if any, are for reference purposes only and may not constitute an exhaustive representation of all utility facilities within the project. Notify the North Dakota One Call System (811) before starting the work, so they may locate and mark all utility facilities within the project. Receive utility locates for Department-owned, publicly-owned, and privately-owned utility facilities, whether on or off the One Call System.

Comply with Chapter 49-23 of the NDCC in determining the location of underground utilities.

**B. Utilities Identified in Plans.**

Coordinate UE work with the affected utility owners. Maintain continuous communication with the Engineer, affected subcontractors, and affected utility owners until UE will no longer affect or be affected by the Contractor.

Cooperate with utility owners in relocating and adjusting utility facilities to minimize interruption to service and duplication of work by utility owners.

The Contract documents show all known UE for the project.

If a UE identified as a Protect in Place is determined to be a Conflict during construction, the Engineer will make necessary revisions to the Contract as specified in Section 104.02, "Contract Revisions". These types of changes will be considered excusable, compensable delays as specified in Section 108.06, "Determination of and Extensions to the Contract Time".

**C. Utilities Encountered During Work.**

**1. General**

Neither of the cases discussed in this subsection relieve the Contractor of liability that may arise under provisions of the NDCC.

**2. Unidentified Utility Encounters**

The Department will bear costs associated with revisions to the work as specified in Section 104.02 B, "Differing Site Conditions" only if the Engineer determines that all of the following conditions exist:

- a UE exists that was not designated in the plans; and
- the UE is in a location that affects the prosecution of the work to construct the project as designed.

**3. Utility Encounters Created Due to Actions Performed by the Contractor**

If a new UE is created due to actions performed by the Contractor for the Contractor's convenience; the Contractor shall account for and protect the affected facilities. Before performing these actions, the Contractor shall coordinate with the utility owner. The Department will not make additional payments to the Contractor nor the utility owner for UE created in this manner and will not provide additional time to the Contractor for completing the work.

If utility companies incur costs, the Department will not participate in those costs and will not make payment to the Contractor for those costs.

**D. Utility Coordination Meetings.**

**1. Preconstruction Utility Meeting.**

Arrange the meeting with the utility owners, the Contractor and affected subcontractors, local agency representatives, and the Engineer to occur no later than two weeks after the preconstruction meeting. At the meeting, provide an agenda and a tentative construction schedule for planning UE work; after the meeting, publish minutes and distribute a copy to all meeting attendees within 48 hours of the conclusion of the meeting.

**2. Weekly Utility Coordination Meeting.**

Organize a weekly meeting to discuss utility coordination efforts with utility companies and affected subcontractors, local authorities, the Engineer and others who may have an interest in utility coordination efforts. Hold the weekly utility coordination meeting immediately before the weekly planning and reporting meeting. Publish minutes and distribute copies to all meeting attendees within 48 hours of the conclusion of the meeting.

The intent of this meeting is to disseminate information regarding ongoing and upcoming UE work and to ensure that all affected parties are collaborating and sharing information related to that work.

Provide a summary of the discussion at the weekly planning and reporting meeting.

**E. Fire Hydrants.**

Before starting work that affects a fire hydrant, coordinate with the local fire authority to determine if provisions need to be in place before starting the work. If provisions are necessary, obtain the approval of the local fire authority before beginning the work affecting the fire hydrant.

**F. Damage and Interruptions.**

If the Contractor causes damage to utility facilities, the Contractor is responsible for the costs of restoring or repairing the damaged utility facility to a condition equal to or better than the condition existing before the damage occurred. Immediately notify the utility owner of the damage or, if the owner is unknown, the One Call System. Do not conceal, attempt to conceal, or make repairs to the utility facilities until approved by the utility owner. If this damage causes interruption to utility service, continuously coordinate with the utility owner until the service is fully restored.

The Department will not pay the Contractor for the cost to restore utility facilities or repair damage to utility facilities and will consider any delays resulting from this damage to be non-excusable in accordance with Section 108.06, "Determination of and Extensions to the Contract Time."

**G. Utility Criteria.**

The Utility Coordination Table and Utility Exhibits contain specific information related to each UE location.

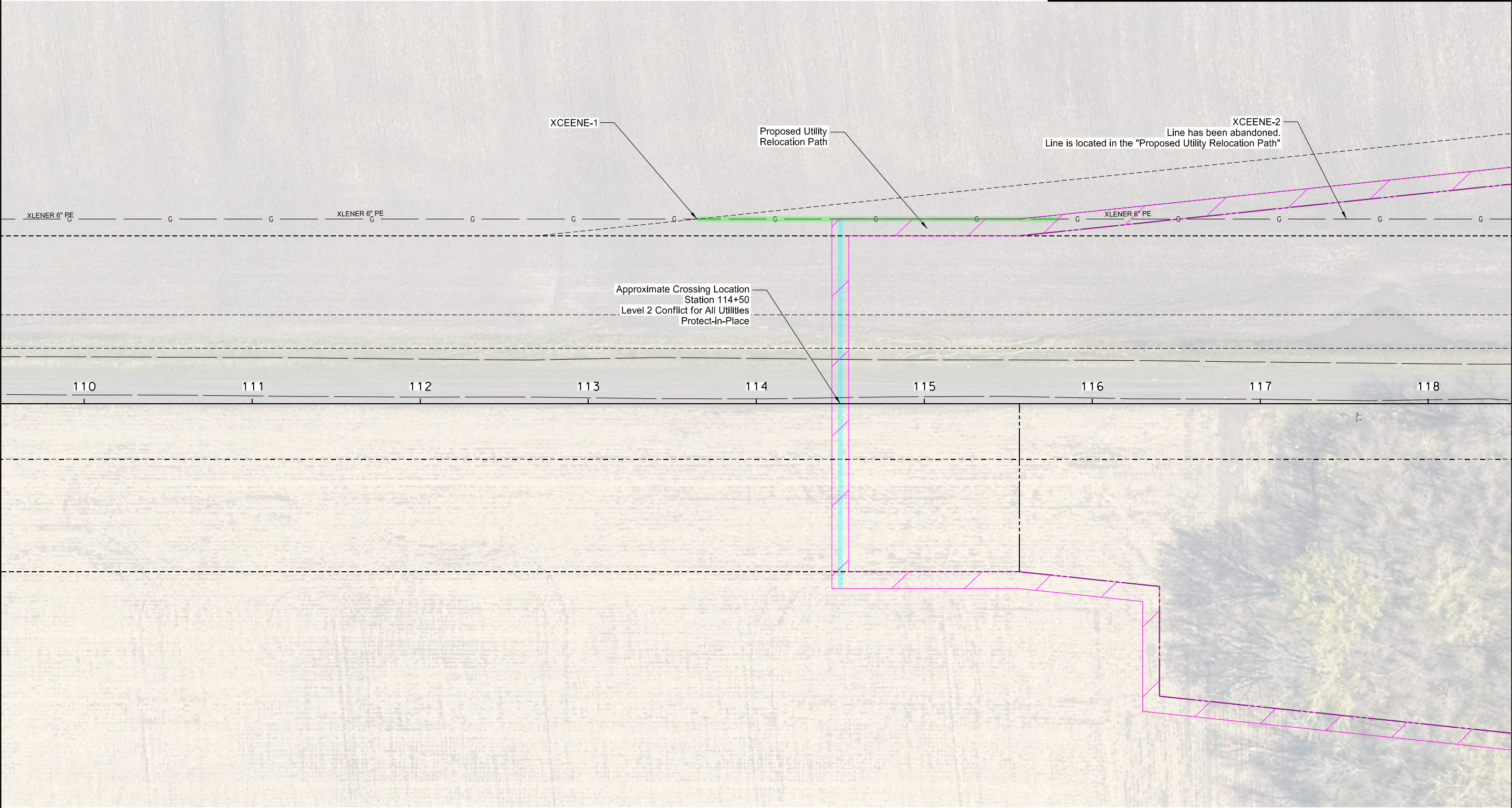
Utility Coordination Table Appendix A of SP 98(20) SU-8-984(153)156 PCN 21564 Sorted By Station																	
UE ID #	Utility Coordination Exhibits	Approx. Sta From		Approx. Sta To	LT/RT or Crossing or Point Location	Roadway (Alignment/Chain)	Approx. Qty	Unit	Max Excavation Cut (-) / Fill (+) Feet	Encounter Level	Resolution Criteria / Comments  (The following information for the Contractor is based on early coordination with utilities. Information is approximate. Details for the schedule and construction phasing will need to be finalized between the Contractor and Utility Companies. Comments also outline other items that Contractor will need to account for in potential phasing for the project).	Utility Company	Type of Facility	After Notification - Time For Utility to Mobilize (D = Working Day, W = Week)	Estimated Time to Complete Relocation (D = Working Day, W = Week)	UTILITY ENCOUNTER TYPE (UE)	
																Protect in Place	Conflict
XCEENE-1	1	113+65	to	115+80	LT	PR64	215	LF	0'	Level 1	Topsoll stockpile area will be over the line. No permanent impacts.	Xcel Energy	Gas Line	N/A	N/A		
XCEENE-2	1,2,3	115+80	to	126+70	LT	PR64	1090	LF	28' (+)	Level 2	Relocation is complete. Line is abandoned. Xcel Energy is crossing 64th Avenue at approximately Station 114+50. Line will be below the storm sewer and above the water main.	Xcel Energy	Gas Line	N/A	N/A	X	
CARWUI-1	2,3	125+98	to	-	Crossing	PR64	1	EA	25' (+)	Level 4	City of Fargo will be providing water service to the homeowner from 38th Street S and existing line will be abandoned in place. Estimated timeline for abandonment is June 1, 2021. Protect line in place until in place abandonment has been completed.	Cass Rural Water Users Incorporated	1.5" Water Service Line	N/A	N/A	X	X
CACOEC-1	2,3	126+01	to	-	Crossing	PR64	1	EA	25' (+)	Level 2	Relocation is complete. CCEC is crossing 64th Avenue at approximately Station 114+50. Line is below the storm sewer and above the water main. Poles will remain in place to service the DMS sign at the current location. Once DMS sign is relocated, coordinate with CCEC to remove the poles.	Cass County Electric Cooperative	Overhead Power Line	N/A	N/A	X	X
DACANE-1	3	126+66	to	-	Crossing	PR64	1	EA	28' (+)	Level 2	Relocation is complete. DCN is crossing 64th Avenue at approximately Station 114+50. Line is below the storm sewer and above the water main.	Dakota Carrier Network	Fiber Optic Line	N/A	N/A	X	
XCEENE-3	3	126+73	to	-	Crossing	PR64	1	EA	28' (+)	Level 2	Relocation is complete. Line is abandoned. Xcel Energy is crossing 64th Avenue at approximately Station 114+50. Line will be below the storm sewer and above the water main.	Xcel Energy	Gas Line	N/A	N/A	X	
																5	2

Utility Company Information			
Utility Company	Contact Name	Phone Number	Email
Cass County Electric	Phil Windjue	701-356-4481	<a href="mailto:pwindjue@kwh.com">pwindjue@kwh.com</a>
Cass Rural Water	Jerry Blomeke	701-428-3139	<a href="mailto:jerry.blomeke@cassruralwaterdistrict.com">jerry.blomeke@cassruralwaterdistrict.com</a>
Dakota Carrier Network	Mike Mack	701-364-1305	<a href="mailto:mmack@dakotacarrier.com">mmack@dakotacarrier.com</a>
Xcel Energy	Brennen Wilkens	701-795-5218	<a href="mailto:brennen.wilkens@xcelenergy.com">brennen.wilkens@xcelenergy.com</a>

Utility Conflict Level Designations	
(Disclaimer: the Following conflict levels were designated based on information provided by utility companies, surveyed located and limited pre-design potholing locations.)	
Level 1	Utility not exposed by proposed improvements, no impacts.
Level 2	Utility exposed by proposed improvements but no permanent impacts, contractor to protect in place and perform careful excavation.
Level 3	Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.
Level 4	Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.



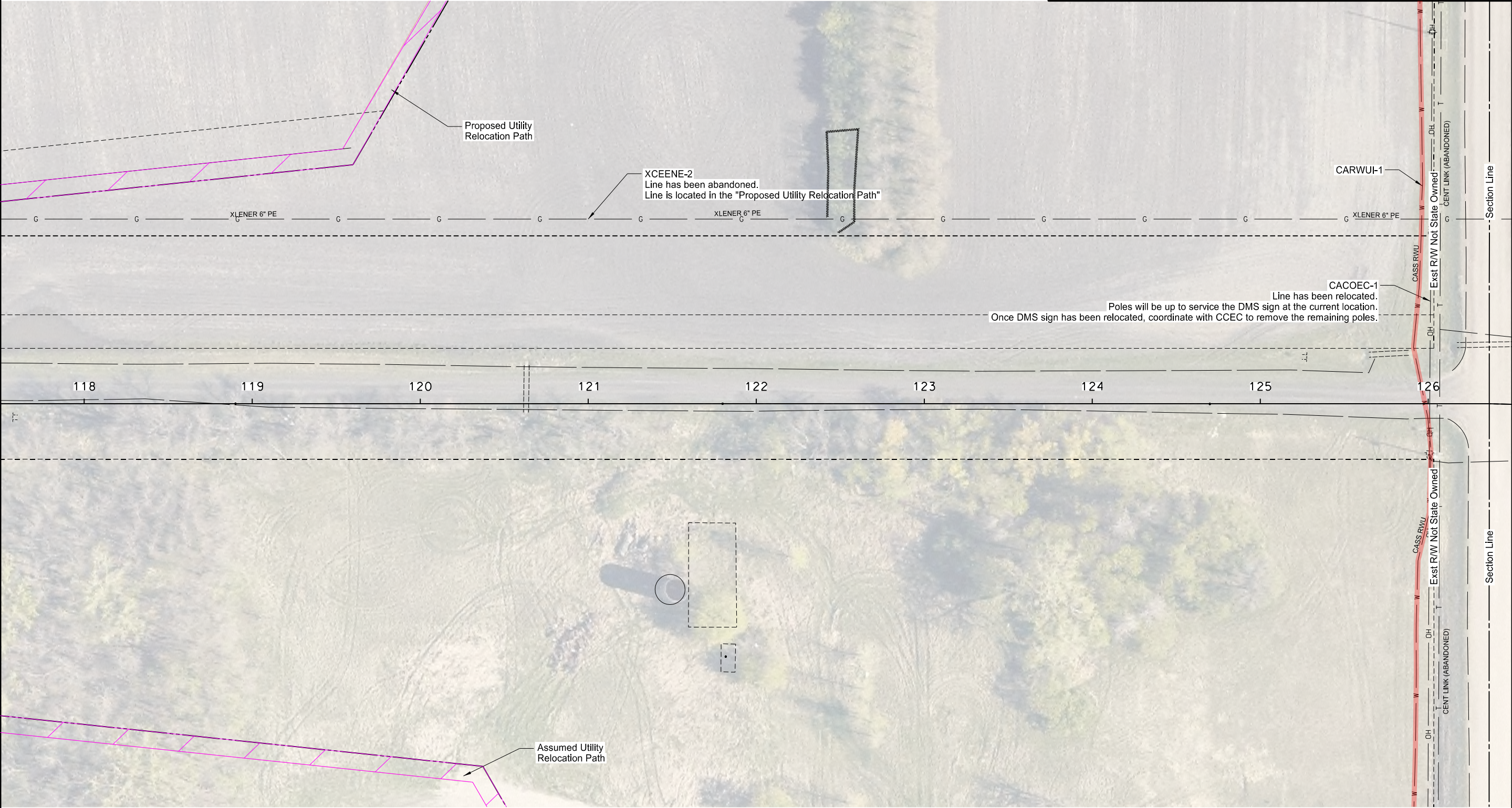
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LEGEND		64th Avenue South - 38th St S to 33rd St S  Utility Encounter Exhibit  64th Avenue South Sta 110+00 to 118+00
<span style="color: green;">—</span>	Level 1 Conflict	
<span style="color: cyan;">—</span>	Level 2 Conflict	
<span style="color: red;">—</span>	Level 4 Conflict	



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LEGEND	
<span style="color: green;">—</span>	Level 1 Conflict
<span style="color: cyan;">—</span>	Level 2 Conflict
<span style="color: red;">—</span>	Level 4 Conflict

64th Avenue South - 38th St S to 33rd St S

Utility Encounter Exhibit

64th Avenue South  
Sta 118+00 to 126+00







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LEGEND

- Level 1 Conflict
- Level 3 Conflict
- Level 4 Conflict

64th Avenue South - 38th St S to 33rd St S

Utility Encounter Exhibit

64th Avenue South  
Sta 134+00 to 140+00



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NumberDescription		NumberDescription							
D-101-1, 2,3		D-764-60							
D-101-10									
D-101-20, 21		D-764-61							
D-101-30, 31,32		D-770-1							
D-101-40		D-770-2							
D-255-1		D-770-3							
D-255-2		D-770-4							
D-258-1		D-770-5							
D-260-1		D-900-1							
D-261-1									
D-622-1									
D-704-1									
D-704-7									
D-704-9									
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D-704-13									
D-704-14									
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D-704-21									
D-704-35									
D-704-51									
D-704-52A									
D-704-58									
D-708-6									
D-714-1									
D-714-22									
D-748-1									
D-752-2									
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D-754-83									
D-754-86									
D-754-87									
D-762-1									
D-762-4									
D-764-38									
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D-764-48									
D-764-50									
D-764-51									

NOTES

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GENERAL NOTES

100-P01 COMPLETION DATES:

Interim Completion Date 1: Relocate the existing DMS sign and mirror from sta 3129+22 to 3102+80. Relocated DMS sign must function as previously prior to relocation. The DMS sign cannot be out of service for more than 2 calendar days. Permanently seed and mulch all disturbed areas at the new DMS sign location. Remove all traffic control on I-29.

Interim Completion Date 1 is May 29, 2021. Liquidated damages will be assessed at a rate of \$400 for each calendar day that expires after June 1, 2021 or for any day over 2 calendar days the DMS sign is out of service.

Interim Completion Date 2: Install watermain and associated valves and fittings and perform bacteriological testing for the following runs:

- 16" watermain from sta 103+90, 60' LT to 106+50, 60' LT (Alignment PR64)
- 12" and 8" watermain from sta 620+45, 42' RT to 622+40, 42' RT (Alignment PR38)
- 8" watermain from sta 105+51, 90' LT to 112+82, 90' LT (Alignment PR64)
- 8" watermain from sta 622+30, 42' RT to 622+40, 42' RT (Alignment PR37)

Ensure that sufficient cover is placed over the watermain to prevent freezing through the winter if the final grading is not completed. If the remaining watermain is not installed until the 2022 construction season, flush the watermain that was installed as part of Interim Completion 2 prior to connecting the two water systems. Interim Completion Date 2 is August 15, 2021. Liquidated damages will be assessed at a rate of \$1,000 for each calendar day that expires after August 15, 2021.

Interim Completion Date 3: All work to construct the surcharge to full height as shown in the plans along with all required geotechnical instrumentation.

Interim Completion Date 3 is October 2, 2021. Liquidated damages will be assessed at a rate of \$5,000 for each calendar day that expires after October 3, 2021.

Interim Completion Date 4: Complete all work from sta 104+00 to 106+00 with the exception of permanent signing, permanent pavement markings, and lighting.

Interim Completion Date 4 is July 1, 2022. Liquidated damages will be assessed at a rate of \$1,000 for each calendar day that expires after July 1, 2022.

Final Completion Date: All remaining work included in the contract must be completed.

Final Completion is October 15, 2022. Liquidated damages will be assessed per Section 108.07 B for each calendar day that expires after October 15, 2022.

Liquidated Damages: Liquidated damages for failing to timely attain any completion dates are not additive and will not be imposed concurrently.

100-P02 COORDINATION OF PROJECTS: Multiple projects will be occurring in the vicinity during the 2021-2022 construction seasons. Coordinate scheduling, work activities, and construction traffic control devices between projects. The following list summarizes the projects that may occur and are subject to change:

- City of Fargo Project BN-20-L1 - 38<sup>th</sup> Street Construction
- Pond Excavation project
- 45<sup>th</sup> Street – Cass County MS2101 & City of Fargo UN-20-B1
- I-29 Grade Raise – FMD-8-029(197)049
- I-29 Bypass
- Sanford Athletic Complex
- NDSCS Career Complex

100-P03 NOISE RESTRICTIONS: No construction activities or moving of equipment can occur between the hours of 10:00 PM and 7:00 AM except for sawing of new concrete. When sawing is planned to occur during these hours, distribute written notices to residents located with ½ block of the work by 7:30 PM.

100-P04 SITE ACCESS: The project corridor must be accessed via the 38<sup>th</sup> St frontage road on the west side of I-29 and 25<sup>th</sup> Street east of I-29. After approval from the Engineer, gain permission from local jurisdictions if additional access is needed.

Upon completion of City of Fargo Project BN-21-L1 the new 38<sup>th</sup> Street can be used to access the site west of I-29.

105-110 PAVEMENT SWEEPING: Sweep paved areas that are being used by construction traffic daily and before opening these areas to public traffic.

Sweep all newly constructed pavement no more than 24 hours before a scheduled final inspection.

Use a vacuum or pick-up type sweeper to perform this work.

105-P01 LOCATION OF EXISTING UTILITIES: Existing utilities have been shown to direct attention to their existence. Such utilities have been plotted from record drawings and topographic survey. The location of private utilities shown on the plans are approximate.

Be cautioned that all existing utilities may not be shown. The location of existing utilities is not guaranteed. Determining the exact location of, and protection of, the existing utilities.

Before commencing any excavation or construction determine the location and seek aid in locating all public and private utilities.

Contract and coordinate with utility owners to allow access to their own utilities to perform the relocations and/or inspections. Schedule work accordingly so as not to delay or prevent each utility from maintaining their relocation schedule.

Include all costs to perform such work in other bid items.

This document was originally issued and sealed by Scott Middaugh Registration Number PE- 7499, on 11/2/20 and the original document is stored at the North Dakota Department of Transportation

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105-P02

EXISTING CASS RURAL WATERLINE: Prior to installing wick drains that could potentially damage the existing Cass Rural Water 1.5” waterline crossing at 125+98 verify with the contractor for City of Fargo Project BN-20-L1 that the end user of the line has been disconnected. It is anticipated that the end user will be disconnected by June 1, 2021.

Plug the existing 1.5” PVC waterline at the locations shown in the plans. Install plugs on each end of the watermain at each location identified. Use a slip or mechanical plug manufactured for PVC pipe. Include all costs associated with plugging the pipe in the unit price bid for “Plug Pipe-All Types & Sizes”.

105-P03

PEDESTRIAN UNDERPASS: The precast box culvert pedestrian underpass at sta 119+80 cannot be installed until the surcharge is removed in the 2022 construction season.

105-P04

UNDERGROUND UTILITY CONSTRUCTION: Installation of storm sewer cannot begin prior to July 15, 2021.

If sanitary sewer and watermain are installed in the same calendar year as the paving above them, gravel backfill must be used under the roadway and 2-feet behind the back of curb and within 2’ of the proposed finished surface as stated in SP 98(20) City of Fargo Standard Specifications. Include all costs to upgrade the backfill for sanitary sewer and water main in the price bid for “Backfill Class AA”. If these items are installed during the previous construction season as the paving above them, gravel backfill will not be required.

107-300

CONSTRUCTION TRAFFIC ACCESS: Access areas within the right of way only at interchanges. The Engineer may allow temporary access at other locations.

To obtain temporary access, provide an access plan containing the following information:

- A traffic control plan;
- A traffic impact analysis;
- A safety analysis;
- A COA; and
- An environmental impact analysis.

To be considered for approval, the following minimum conditions must be met in the access plan:

- Construction traffic will not be allowed to cross the interstate median or lanes of traffic being used by the public at grade;
- The access plan must show that there will be methods in place, at all times, to prevent public traffic from using the access;
- A plan to restore the area disturbed by the access, including right of way fences, to pre-existing or better condition.

All work necessary to provide the access plan, comply with the plan, and to restore the area to its pre-existing condition must be completed at no additional cost to the owner.

108-100

WEEKLY PLANNING & REPORTING MEETING: A weekly planning and reporting meeting is required.

108-150

PUBLIC RELATIONS COORDINATOR: Provide a public relations and information coordinator. The coordinator cannot be the project superintendent or construction foreman. The coordinator

should be knowledgeable in construction operations, be able to develop effective media releases, possess written and verbal communication skills, and be able to organize productive meetings.

Provide the name, work address, and work phone number to the relevant project, community, and media personnel.

The public relations coordinator is responsible for providing the following:

- Organizing, scheduling, and conducting the meeting specified in Note 108-100, "Weekly Planning & Reporting Meeting".
- Advise the Engineer, City of Fargo, and NDDOT of upcoming construction activities in regard to street closures and traffic detour routes so that city police, emergency services, schools, and other pertinent city agencies may be notified.
- Provide news releases and necessary drawings to the media before and during construction. News releases should inform the public on construction activities, schedules, street closures, width or height restrictions to traffic, and traffic detour routes. Update news releases regarding construction activities every other week, at a minimum.
- Be available for media interviews.
- Work directly with property owners and businesses affected by construction activities. The coordinator must have sufficient knowledge and authority to resolve property owner and business concerns regarding scheduling, maintaining access, and construction operations.

108-P01

PROGRESS SCHEDULE: A Critical Path Method Schedule is required.

201-P01

CLEARING & GRUBBING: Remove existing brush, shrubbery, trees, and stumps/root systems within the limits as shown in the plans. Include all costs for the removals and disposals in the lump sum price bid for “Clearing & Grubbing”.

202-P01

REMOVAL OF STRUCTURE: Remove the existing silo, silo foundation, and the existing concrete foundations as shown in the plans. The concrete foundations must be removed a minimum of 4’ below the proposed finished grade.

An asbestos test has been completed and determined no asbestos containing materials are present. The report can be found in the Permits and Environmental Considerations Special Provision. Submit SFN 17987 “Asbestos Notification of Demolition and Renovation” to NDDEQ at least 10 working days before conducting any demolition. Include all costs to remove and dispose of the material in the lump sum price bid for “Removal of Structure”.

203-385

AVERAGE HAUL: No average haul has been computed for this project.

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Registration Number  
PE- 7499,  
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<div>NOTES</div> <div><ul style="list-style-type: none"><li>Average the IRI of the two wheel paths to calculate the Mean Ride Index (MRI); and</li><li>Use the MRI option in ProVal for evaluation.</li></ul><p>Download the current version of ProVal at <a href="http://www.roadprofile.com">http://www.roadprofile.com</a></p><p>Identify areas of localized roughness using the Smoothness Assurance Module (SAM) within the current version of ProVal.</p><p>Use the following settings in the SAM:</p><ul style="list-style-type: none"><li>Ride Quality Index set to MRI.</li><li>The base length:<ul style="list-style-type: none"><li>Short continuous - 25 feet</li><li>Long continuous - 528 feet</li><li>Fixed interval - 528 feet</li></ul></li><li>Ride Quality Threshold of 140 in/mile</li></ul><p>Apply a 250 mm filter to the file being analyzed.</p><p>Submit a detailed corrective action plan using the ProVal and SAM data, three working days in advance of grinding, Generate grinding simulations in ProVal with multiple grinding depths, varying equipment, and multiple pass patterns Include the grinding simulations with the corrective action plan. The Engineer will provide another profile PPF file. Submit a new corrective action plan after being provided the subsequent profile PPF File. The Engineer will determine if further corrective action will be completed based on the new corrective action plan.</p><p>Use diamond grinding equipment to correct high spots of more than 1/4 inch and less than 5/8 inch in 10 feet, meet a 100 in/mi or less MRI threshold, and ensure that no more than 10 percent of the MRI is above 140 in/mi and no more than 5 percent is above 155 in/mile. Ensure the deviation after grinding is less than 1/4 inch. If the deviation exceeds 5/8 inch high or low, submit a corrective action plan that includes either grinding or removal and replacement of the pavement. If the corrective action plans contains grinding, the pavement must be ground to within the 1/4 inch tolerance. The Engineer will determine if corrective action will be implemented based on the corrective action plan. If the corrective action plan is approved and consists of grinding, the Engineer will direct the Contractor to obtain cores in these areas, as specified in Section 550.04 N.1, "Contractor Coring", and will make a determination of the pavement thickness as specified in Section 550.04 N.2, "Determination of Pavement Thickness".</p><p>704-100 TRAFFIC CONTROL SUPERVISOR: Provide a Traffic Control Supervisor.</p><p>704-200 PRECAST CONCRETE MEDIAN BARRIERS – STATE FURNISHED: Obtain 40 barriers (10' x 2.5' units) in Year 2021 and 252 barriers (10' x 2.5' units) in Year 2022, from the NDDOT Maintenance Yard located in Casselton. Return the barriers to the same location upon completion of the project. The address for the Casselton Maintenance Yard is 15482 37th Street SE, Casselton, ND 58012.</p><p>Install any missing markers on the barriers before traffic use. Include the cost of the markers in the contract unit price for "Precast Concrete Median Barrier – State Furnished".</p></div>		<div>Some 4 inch x 4 inch boards are available at the return location. Provide any additional 4 inch x 4 inch boards necessary to stack barriers. The boards will become property of the Department. Include the cost for boards in the contract unit price for "Precast Concrete Median Barrier - State Furnished".</div> <div>704-P01 TRAFFIC CONTROL PHASING: Refer to Section 100 for traffic control layouts and layouts for the construction phasing. Utilize a 55 MPH speed limit within the workzone on I-29 when shoulder closures are in place.</div> <div>2021 Traffic Control<ul style="list-style-type: none"><li>Provide northbound I-29 shoulder closure for the grading and installation of the relocated digital message sign.</li></ul>2022 Traffic Control<ul style="list-style-type: none"><li>Provide northbound and southbound I-29 shoulder closures (inside and outside shoulders) for the construction of the bridge.</li><li>Interstate can be closed a maximum of 5 nights while setting beams for the overpass structure. Refer to the detour and traffic control layouts in Section 100 to be used during the closures. The closures can only take place between the hours of 9:00 PM and 5:00 AM. Notify the Engineer in writing 14 calendar days prior to implementing the closure.</li><li>Provide lane closures on northbound and southbound I-29 for installing and removing the roadway canopy. Refer to NDDOT Standard Drawing D-704-35 for the lane closures. Each lane cannot be closed for more than two consecutive days. Lane closure setups and revisions cannot be completed between the hours of 5:00 AM and 9:00 AM as well as 3:30 PM and 6:00 PM.</li></ul></div> <div>704-P02 PORTABLE CHANGEABLE MESSAGE SIGN: Install Portable Changeable Message Signs (PCMS) 7 calendar days before any traffic control installed on I-29. The Engineer will determine the locations for PCMS installation. Once the PCMS(s) are installed, they will remain in place for the duration of the construction season or when all traffic control has been removed, whichever is sooner. Relocate the PCMS as directed by the Engineer.</div> <div>Provide an operator trained in the use of the PCMS.</div> <div>The Engineer will determine the message to be displayed. The operator shall program the message within one hour of the Engineer's request to change the message. The PCMS will be measured for payment per device installed per construction season.</div> <div>704-P03 TRAFFIC CONTROL DEVICES: The traffic control devices list for the project has been developed using traffic control sign layouts (shown in Section 100) and Standard Drawings as listed below:<ul style="list-style-type: none"><li>D-704-24 Type HH – Shoulder Closure for DMS Sign in 2021</li><li>D-704-35 – Lane closures for installing/removing bridge canopy</li><li>D-704-58 – Shoulder Closures for Bridge Construction in 2022</li></ul>Traffic control devices will be measured for payment per device installed per construction season.</div>				
		<div>This document was originally issued and sealed by Scott Middaugh Registration Number PE- 7499, on 11/2/20 and the original document is stored at the North Dakota Department of Transportation</div>				

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<div>NOTES</div>						
SECTION 140						
770-P01	<div><div>RIGID CONDUIT: Provide 1.5” Schedule 40 HDPE conduit that is listed to meet NEC requirements, is integrally colored RED, has smooth controlled outside diameter at 1.900”, a minimum wall thickness of 0.145”, and has a minimum inside diameter of 1.579” and color RED</div><div>Innerduct will be required as shown on plans and will be connected to stubbed out 1.5” conduit at all concrete base and feed point locations. Boring is the required method of installation in all established areas that are to remain undisturbed by roadway construction. Install innerduct at a minimum depth of 24” below finished grade. Place innerduct/conduit in line with bases behind curb unless approved from the Engineer to adjust placement. Duct seal all innerduct/conduit entering or exiting foundations, feed points, and pull boxes.</div></div>					
770-P02	<div><div>CONDUCTOR: All conductors to be continuously color coded (black, red and green). The conductor between standards are to be triplex, 3-#6 USE. All wiring within standards between distribution conductors and luminaires to be #12 AWG standard copper, 600-VOLT, type RHW. All luminaires to be grounded.</div><div>Conductor connections in street light bases to be Panduit, clear insulated aluminum connector *PCSB4 or Burndy equal. In pull boxes, Tyco Electronics GelCap SL splice cover kit with connector. All other conductor splices to be, UL listed, with PowerGel sealant type connections meeting all codes for desired application. Only one (1) wire per screw is allowed in connectors. Multiple or larger connectors may be needed.</div></div>					
770-P03	<div>FUSE HOLDERS: Provide fuse holders with 3” of heat shrink at conductor connections. To be a type FNM 10 amp fuse with a Bussmann type HEB-AA or a Littlefuse type LEB-AAK, in line fuse holder. Heat Shrink to be: 3M ITCSN 0400 12-6AWG 600V or approved equal</div>					
770-P04	<div>ANTI-SEIZE: Provide Anti-seize material to all threaded bolts and screws.</div>					
770-P05	<div>CONCRETE FOUNDATION – FEED POINT: Install the top of concrete foundation level and at an elevation to prevent flood damage of cabinet. Duct seal conduits that contain wire. Provide two spare 1.5” conduit sweeps in the foundation. Cap spare conduits with an oil-tight plug with wing nut and label them as to which direction each spare sweep faces. Verify foundation and conduit sweeps do not conflict with underground utilities prior to installation.</div>					
770-P06	<div><div>FEED POINT: Furnish and install a new pad mounted feed point cabinet for Feed Point A shown on the plans. Refer to the plans for additional requirements.</div><div>Coordinate with the electric utility (Cass County Electric Cooperative – Phil Windjue 701-356-4481) for providing a new electrical service (1-phase, 120/240V) for the new feed point cabinet. Coordinate the installation of new service conductors and conduit between the feed point and utility transformer. Verify the feed point location and elevation with the Engineer and Cass County Electric before installation. The contractor is responsible for all coordination and costs involved with getting power to the feed point and the cost will be incidental to the price bid for the feed point. Contact utility for exact fee amounts.</div><div>Provide 2” PVC conduit for the service conductors between the isolated service compartment of the cabinet to the utility transformer. Utility will provide the service cable between the utility transformer and the metersocket. Contractor to provide continuous conduit, at 24” below grade, between the utility transformer and the metersocket. Install two ground rods that are spaced 6’ to 7’ apart.</div></div>					
	<div><div>Feed point cabinet assembly to be pad-mounted type, prefabricated UL 508 listed, stainless steel, service entrance rated, five contactor controlled 240V lighting circuits, with 1 metersocket, and meet the requirements shown in the detail. Cabinet will include a padlockable lift-off service panel along with a factory installed, interior mounted meter socket which meets the requirements of the local utility. Metersocket to have a lever bypass. Provide a viewing window for the meter. Meter to be provided by the utility company. Provide a separate compartment in the cabinet for the unfused service conductors that is isolated from other non-service equipment per NEC and authority having jurisdiction (AHJ).</div><div>Provide a feed point cabinet with non-corroding hardware. Provide cabinet with a 3-point latch pad-lockable handle. Cabinet to be weatherproof NEMA 3R rated and provided with a lock drip shield. Provide cabinet with steel back panel with 1/2” spacer behind the panel. This back panel to be factory painted white. Padlock for the non-utility part of the cabinet to be obtained from the City of Fargo Engineering Department. Ensure utility provides a lock for the utility service side of the cabinet or obtain a lock from the city, under no circumstances will the service side of the cabinet be unlocked when the service is energized. Prefabricated feed point enclosure to be assembled by States Electric, or approved equivalent.</div><div>Install a lightning protection device on the feed point incoming lines to prevent lightning surges entering through the wiring from damaging electrical wiring and electronic equipment. Provide a protector that is a sturdy, weatherproof, service-proven device that immediately drains lightning surges harmlessly to ground. Install the protector in the feed point that will discharge a surge in a fraction of a second. The protector will perform this protective function over and over again, without any maintenance required; possessing the same long-life, value-type characteristics obtained in higher voltage distribution arrestors. The protector is to be a two-pole device designed for single-phase 120/240 volt three-wire grounded neutral service. Capabilities of the protector to include:<div><div>i. Limiting the surge voltage to 3 kV peak, while;</div><div>ii. Conducting surge currents of at least 10 kA with an 8 by 20 microseconds (time to crest by time to second half-crest) waveform; and recovering to its former state after the surge is over with AC power supplied. The manufacturer of the AC suppressor is to certify that the suppressor meets ANSI C 621.1/IEEE, Standard 28, paragraphs 7.1 and 7.6. The suppressor peak voltage is not to exceed 3kV when tested according to paragraphs 7.3 and 7.5 of the ANSI/IEEE Specification. The AC line surge protector is to be installed on the load side of the circuit breaker. If the protector should fail and short the circuit, the circuit breaker will open up to give maximum protection. The AC neutral is to have the same protection as the AC load. The arrestor leads are to be kept as short as possible. Grounds are to be made directly to the cabinet ground bar. An acceptable arrangement is shown on the plans.</div></div></div><div>Provide permanent, typed, etched labeling for contactors, breakers, and control switch. Provide gasketed doors. Duct seal all conduit, provide caps over spare conduit. Face the photocell north. Exposed conduit is not permitted, install conduit within the concrete foundation.</div><div>Include in the price bid for Lighting System all materials, labor, and coordination required to install the service and to furnish and install the feed point. Also include the concrete foundation, grounding equipment, surge protector, service conduit, service equipment, and utility costs. The feed point will be measured as a complete unit installed and operational.</div></div>					
	<div>This document was originally issued and sealed by Traci K. Sletmoe, Registration Number PE- 28350, on 11/03/20 and the original document is stored at the North Dakota Department of Transportation</div>					

<div>NOTES</div>		Revised 11/3/20		STATE	PROJECT NO.	SECTION NO.	SHEET NO.				
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770-P07 CONCRETE FOUNDATION-HIGHWAY LIGHTING: Verify bolt circle and projection with the light standard manufacturer specifications.											
Once the concrete base is poured and set, maintain at all times a cover (such as a traffic barrel, cone or similar item) over the top of the base until the street light has been installed to protect the anchor bolts, ground rod, conduit, and exposed conductor. Include cost to provide these covers in the unit price for “Lighting System – A”											
Use Hydro-vac excavation for concrete bases where standard auger method is not possible. Verify base locations in the field after locates with the Engineer. Method of base excavation is incidental to bid.											
770-P08 LIGHT STANDARD 40FT MT HT (NO MAST ARM): Provide aluminum light standards that have a 40’ mounting height, no mast arm, frost finish, and breakaway transformer base. Provide 2” pipe tenon horizontal adapter with a frost finish and 12” arm. Include all costs associated with light standards in the bid price for “Lighting System A”.											
770-P09 ORNAMENTAL LIGHT STANDARD: Provide light standard that comes with the LED LUMINAIRE – TYPE B (140 WATT). The catalog number for the LED Luminaire – TYPE B contains the information for ordering the light standard.											
770-P10 LED LUMINAIRE – TYPE A (210 WATT): Provide the luminaire below: Leotek, GC2 G-Series, 209W LED, 700mA Drive Current, 26,700 Lumens, Multi-volt 120-277V, Type 3R distribution, 4000K, Grey, No Photocontrol Receptacle Catalog No: GC2-96G-MV-NW-3R-GY-700-FFA-SC.											
Or approved equal: AEL Autobahn ATBL or Phillips RoadFocus RFL Series (minimum of 26,500 Lumens). Equivalent manufacturers must submit an exact electronic “.ies” file for review.											
770-P11 LED LUMINAIRE – TYPE B (140 WATT): Provide the luminaire below: Lumec by Signify, Solecity, 138W LED, 350mA Drive Current, 17,690 Lumens, 240V, Type 3 distribution, 4000K, Color BKTx, No Photocontrol Receptacle Catalog No: ULM100-145W128LED4K-G2-LE3-240-CDMGP-PHB-UBM100-1A-UPM100-22-BXTx											
770-P12 UNDERPASS LIGHT UNIT CEILING MTD – 50 WATT: Furnish and install pedestrian underpass luminaires as shown in plan. Use the luminaire listed below or approved equal. Approved equal luminaires must be rated vandal resistant with a minimum polycarbonate lens thickness of 0.375”, and has the ability to be ceiling mounted with the power source coming in the side. The manufacturer of the product listed below has indicated they can modify the luminaire listed below to meet these requirements.											
<table><tr><td>Luminaire Manufacturer</td><td>Catalog Number</td></tr><tr><td>Kenall</td><td>SDA-4-0/0-1-45L40K-DCC-DV-2/9-1-WL</td></tr></table>		Luminaire Manufacturer	Catalog Number	Kenall	SDA-4-0/0-1-45L40K-DCC-DV-2/9-1-WL						
Luminaire Manufacturer	Catalog Number										
Kenall	SDA-4-0/0-1-45L40K-DCC-DV-2/9-1-WL										
770-P13 PULL BOX: Furnish and install a PVC Pull Box with metal frame and cover with dimensions of 24” dia x 36” deep. Install 24” of pea rock for drainage below the pull box and extend 6” beyond the outside edge of the pull box. Flush mount the top of the pull box in concrete areas and level with final grade and sloped to match in areas of topsoil. Provide enough slack to pull conductor and splices a minimum of 4 feet above finished grade.											
Include all costs associated with pull boxes in the bid price for “Lighting System A”.											
772-P01 2IN DIAMETER RIGID CONDUIT: Install the 2” future fiber conduit 24 inches below finished grade. Conduit is to be ORANGE HDPE conduit meeting the requirements of Section 896.01.B.2 of the Standard Specifications. Do not install HDPE conduit when either the conduit temperature or ambient temperature is below -10 F. Backfill all trenched or backhoed areas under sidewalks or roads with Class 3 gravel compacted to 90% of ND T 180. Include an ORANGE No. 12 Copper Clad Tracer Wire with HDPE insulation, rated at a minimum 250 pound breaking load, running the full length.											
SECTION 160											
754-P01 EMBANKMENT, SEEDING & MULCHING: Seed the entire area disturbed from trenching and embankment construction. Quantities for seeding and mulching for the DMS sign relocation have been included in the plans.											
754-P02 DYNAMIC MESSAGE SIGN STRUCTURE: Post mount on a butterfly support with a concrete foundation the existing sign and supporting structure.											
Install the supporting structure with the vertical and horizontal dimensions to the roadway as shown in the plans.											
The existing DMS sign weighs approximately 5200 pounds. The existing pole shaft weighs approximately 1726 pounds.											
754-P03 REVISE DYNAMIC MESSAGE SIGN COMMUNICATIONS: A single-mode fiber optic cable will be the communications link between the DMS Sign Controller and the DMS network connection located in the Fargo District office. The DMS Sign Controller will connect to the state network as an Ethernet device using a 19” rack mounted optical Ethernet transceiver located at the Fargo District. Move the existing IT Pullbox at Sta 3129+27 ~137’ Rt to Sta 3132+00 ~ 143’ Rt (Pullbox 4). Coil extra fiber in reset pull box. A 36 fiber optic cable shall be installed from the reset IT Pullbox at Sta 3132+00 –143’ Rt to proposed Pullbox 1 at Sta 3102+98 ~ 136’ Rt. Fusion splice the fibers as directed in notes on Section 160 Sheet 3. Fusion splice the 6 fiber breaked out cable t Pullbox 1 (Sta 3102+98 ~ 136’ Rt) with a splice enclosure. Terminate the 6 fiber breakout cable inside the DMS controller cabinet using a 6 count Fiber Distribution Panel using ST connectors. Label the terminals.. Include all costs to furnish fiber optic communications to the sign, including cable and conduit, 6 fiber breakout cable, splice connections, 6 fiber patch panel, fiber optic jumpers, and optical Ethernet transceivers as described above and as shown on the plans, in the bid price for “Revise Dynamic Message Sign”											
772-P01 DYNAMIC MESSAGE SIGN RODENT PROTECTION: Follow all provisions for rodent protection as found in Section 772.04 G.5 of the Standard Specifications.											
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- 772-P02 STEEL CONDUIT - DYNAMIC MESSAGE SIGN: Use steel conduit when the conduit is either above ground or installed less than 18” below proposed finished grade.
- 772-P03 DYNAMIC MESSAGE SIGN CONTROLLER FOUNDATION: Construct the controller cabinet foundations according to standard drawing D-770-1 “Controller Cabinet Foundation Pad Mount Detail.” Construct the working slab according to the D-770-1 “Working Area Slab” detail. Include all work necessary to construct cabinets, including concrete foundations and working slabs, in the bid price for “REVISE DYNAMIC MESSAGE SIGN”
- 772-P04 RESET EXISTING FEED POINT: Remove the existing pad-mounted Feed Point – Type 1 (NB I-94 Sta. 3129+27~137’ Rt) and reset it at Sta 3102+98 ~144’Rt.
- Include all work necessary to remove and reset the existing feed point, and connect the DMS to the reset feed point in the price bid for “REVISE DYNAMIC MESSAGE SIGN”
- 772-P05 RIGID CONDUIT AND CONDUCTOR: Cass County Electric has agreed to install the Mult 3 No 2 USE conductor and conduit from their overhead power line west of I-29 to the proposed feed point location. The contact person with Cass Country Electric is currently Phil Windjue, phone number (701) 356-4481, but this is subject to change prior to project construction. Coordinate with Cass County Electric to get power to the sign.
- 772-P06 DYNAMIC MESSAGE SIGN FEED POINT: Construct the concrete foundation for the feed point according to the “Pipe Stand Mounted Feed Point” detail found in Standard Drawing D-770-2. Provide and provide and bear all costs for the electrical service necessary to operate and maintain the DMS system until the site is accepted by the Engineer. Include all work necessary to construct the feed point cabinets, including concrete foundations, in the bid price for “REVISE DYNAMIC MESSAGE SIGN.”
- 772-P07 RESET SURVEILLANCE CAMERA SYSTEM: Existing camera will be reused on rest dynamic message sign. Include all costs for camera, illuminator, power supply, ethernet switch and other equipment installation in accordance with the manufacturers’ requirements in the price bid for “REVISE DYNAMIC MESSAGE SIGN”
- 772-P08 PULL BOXES: Provide polymer concrete type pull boxes. Determine appropriate size of pull box at each location. Clearly mark the cover as required. Duct seal all conduits entering and exiting pull boxes. Include pull boxes in the price bid for “Revise Dynamic Message Sign”. Include covers for pull boxes for fiber and future fiber with “Communications” or “Fiber Optic” logo stamped.
- 772-P09 MULTIPLE UNDERGROUND CABLE: Furnish and install Multiple Underground Cable or rigid conduit and single RHW conductors of the same size as shown in the plans for the Multiple Underground Cable. Size the conduit as specified in the National Electric Code. Include all materials, equipment, and labor required to install conduit and conductors in the price bid for “Revise Dynamic Message Sign.”

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Estimated Quantities

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SPEC	CODE	ITEM DESCRIPTION	UNIT	SU - Federal Eligible	100% City Funds	TOTAL
103	0100	CONTRACT BOND	L SUM	1		1
108	0001	CRITICAL PATH METHOD SCHEDULE	L SUM	1		1
201	0330	CLEARING & GRUBBING	L SUM	1		1
202	0105	REMOVAL OF STRUCTURE	L SUM	1		1
202	0170	REMOVAL OF CULVERTS-ALL TYPES & SIZES	LF	186		186
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	10		10
202	0312	REMOVE EXISTING FENCE	LF	751		751
203	0101	COMMON EXCAVATION-TYPE A	CY	7944		7944
203	0109	TOPSOIL	CY	30243		30243
203	0115	CLAY EXCAVATION	CY	87269		87269
203	0116	TOPSOIL MANDATORY BORROW AREA	CY	3993		3993
203	0117	MANDATORY BORROW	CY	168617		168617
210	0050	BOX CULVERT EXCAVATION	EA	1		1
210	0099	CLASS 1 EXCAVATION	L SUM	1		1
210	0199	BACKFILL CLASS AA	LF	609	552	1161
210	0201	FOUNDATION PREPARATION	EA	1		1
210	0210	FOUNDATION FILL	CY	2028		2028
210	0405	FOUNDATION PREPARATION-BOX CULVERT	EA	1		1
216	0100	WATER	M GAL	1867		1867
230	0165	SUBGRADE PREPARATION-TYPE A-12IN	STA	14		14
251	0300	SEEDING CLASS III	ACRE	21.38		21.38
251	2000	TEMPORARY COVER CROP	ACRE	34.02		34.02
253	0101	STRAW MULCH	ACRE	34.02		34.02
253	0201	HYDRAULIC MULCH	ACRE	14.73		14.73
255	0102	ECB TYPE 2	SY	32175		32175
255	0202	TRM TYPE 2	SY	118		118
258	0100	CONCRETE SLOPE PROTECTION	SY	709		709
260	0200	SILT FENCE SUPPORTED	LF	1513		1513
260	0201	REMOVE SILT FENCE SUPPORTED	LF	1513		1513
261	0112	FIBER ROLLS 12IN	LF	17589		17589
261	0113	REMOVE FIBER ROLLS 12IN	LF	17589		17589
265	0100	STABILIZED CONSTRUCTION ACCESS	EA	2		2
265	0101	REMOVE STABILIZED CONSTRUCTION ACCESS	EA	2		2
302	0101	SALVAGED BASE COURSE	CY	62		62
302	0121	AGGREGATE BASE COURSE CL 5	CY	7109		7109
302	9970	TYPE II PIPE BEDDING	CY	350	150	500
430	0500	COMMERCIAL GRADE HOT MIX ASPHALT	TON	648		648
550	0310	10IN NON REINF CONCRETE PVMT CL AE-DOWELED	SY	14648		14648
602	0130	CLASS AAE-3 CONCRETE	CY	746.7		746.7
602	1130	CLASS AE-3 CONCRETE	CY	265.7		265.7
602	1133	CONCRETE BRIDGE APPROACH SLAB	SY	230		230
602	1134	PILE SUPPORTED APPROACH SLAB	SY	230		230
602	1250	PENETRATING WATER REPELLENT TREATMENT	SY	3250		3250
606	1209	12FT X 9FT PRECAST RCB CULVERT	LF	92		92
606	5209	12FT X 9FT PRECAST RCB END SECTION	EA	2		2
612	0115	REINFORCING STEEL-GRADE 60	LBS	33647		33647
612	0116	REINFORCING STEEL-GRADE 60-EPOXY COATED	LBS	157843		157843



Estimated Quantities

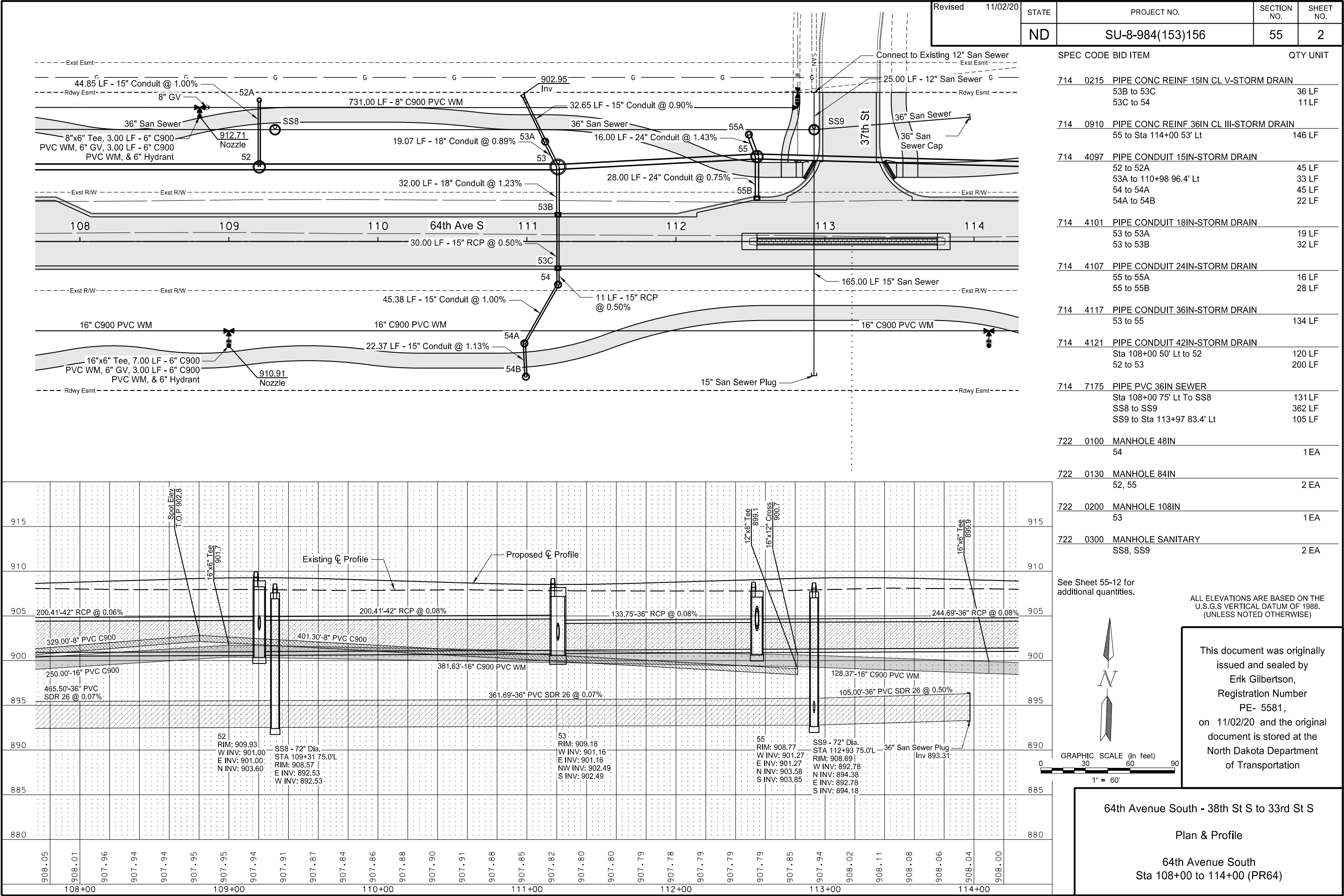
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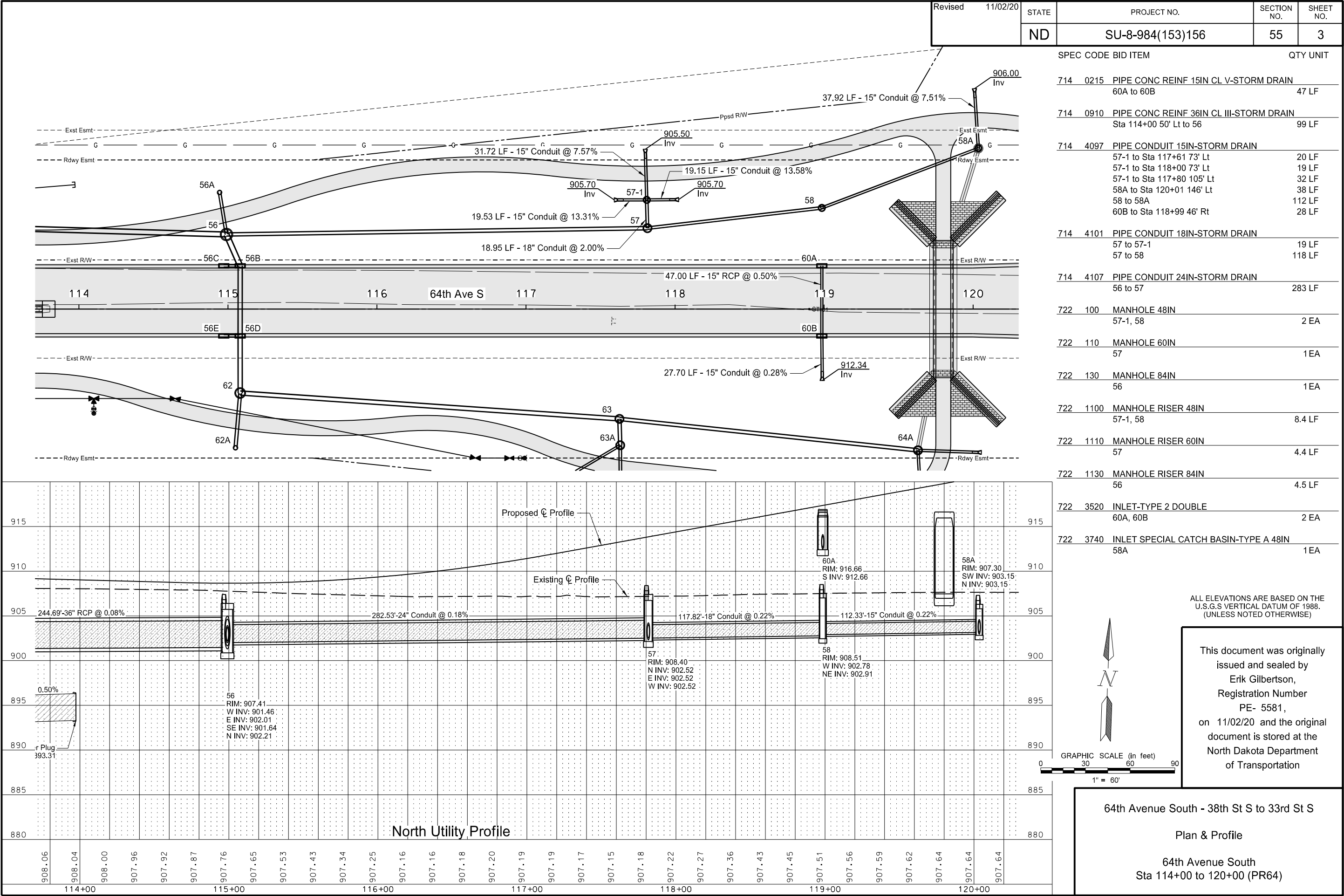
SPEC	CODE	ITEM DESCRIPTION	UNIT	SU - Federal Eligible	100% City Funds	TOTAL
616	5890	STRUCTURAL STEEL	L SUM	1		1
622	0020	STEEL PILING HP 10 X 42	LF	1250		1250
622	0068	STEEL PILING HP 14 X 89	LF	1750		1750
622	0070	STEEL PILING HP 14 X 102	LF	1955		1955
624	0124	PEDESTRIAN FENCE	LF	465.3		465.3
702	0100	MOBILIZATION	L SUM	1		1
704	0100	FLAGGING	MHR	328		328
704	1000	TRAFFIC CONTROL SIGNS	UNIT	3467		3467
704	1045	ATTENUATION DEVICE-TYPE B-75	EA	4		4
704	1052	TYPE III BARRICADE	EA	23		23
704	1060	DELINEATOR DRUMS	EA	144		144
704	1067	TUBULAR MARKERS	EA	14		14
704	1087	SEQUENCING ARROW PANEL-TYPE C	EA	1		1
704	3510	PRECAST CONCRETE MED BARRIER-STATE FURNISHED	EA	292		292
704	4011	PORTABLE CHANGEABLE MESSAGE SIGN	EA	3		3
706	0400	FIELD OFFICE	EA	1		1
708	1540	INLET PROTECTION-SPECIAL	EA	41		41
708	1541	REMOVE INLET PROTECTION-SPECIAL	EA	41		41
709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY	187		187
709	0151	GEOSYNTHETIC MATERIAL TYPE R1	SY	18583		18583
714	0215	PIPE CONC REINF 15IN CL V-STORM DRAIN	LF	224		224
714	0325	PIPE CONC REINF 18IN CL IV-STORM DRAIN	LF	22		22
714	0620	PIPE CONC REINF 24IN CL III-STORM DRAIN	LF	256		256
714	0825	PIPE CONC REINF 30IN CL III-STORM DRAIN	LF	47		47
714	0910	PIPE CONC REINF 36IN CL III-STORM DRAIN	LF	394		394
714	1002	PIPE CONC REINF 42IN CL II-STORM DRAIN	LF	101		101
714	4092	PIPE CONDUIT 12IN-STORM DRAIN	LF	216		216
714	4097	PIPE CONDUIT 15IN-STORM DRAIN	LF	1185		1185
714	4101	PIPE CONDUIT 18IN-STORM DRAIN	LF	887		887
714	4103	PIPE CONDUIT 21IN-STORM DRAIN	LF	152		152
714	4107	PIPE CONDUIT 24IN-STORM DRAIN	LF	546		546
714	4112	PIPE CONDUIT 30IN-STORM DRAIN	LF	293		293
714	4117	PIPE CONDUIT 36IN-STORM DRAIN	LF	157		157
714	4121	PIPE CONDUIT 42IN-STORM DRAIN	LF	536		536
714	7175	PIPE PVE 36IN SEWER	LF		998	998
714	8498	CASING PIPE 18IN	LF	256		256
714	9680	PLUG PIPE-ALL TYPES & SIZES	EA	4		4
714	9696	EDGEDRAIN NON PERMEABLE BASE	LF	2853		2853
722	0100	MANHOLE 48IN	EA	4		4
722	0110	MANHOLE 60IN	EA	2		2
722	0120	MANHOLE 72IN	EA	3		3
722	0130	MANHOLE 84IN	EA	5		5
722	0140	MANHOLE 96IN	EA	1		1
722	0200	MANHOLE 108IN	EA	1		1
722	0300	MANHOLE SANITARY	EA		3	3
722	1100	MANHOLE RISER 48IN	LF	18.85		18.85
722	1110	MANHOLE RISER 60IN	LF	8.38		8.38

Estimated Quantities						Revised	11/4/2020	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
								ND	SU-8-984(153)156	8	3
SPEC	CODE	ITEM DESCRIPTION	UNIT	SU - Federal Eligible	100% City Funds	TOTAL					
722	1120	MANHOLE RISER 72IN	LF	14.14		14.14					
722	1130	MANHOLE RISER 84IN	LF	31.69		31.69					
722	1140	MANHOLE RISER 96IN	LF	6.07		6.07					
722	1200	MANHOLE RISER 108IN	LF	6.31		6.31					
722	3510	INLET-TYPE 2	EA	9		9					
722	3520	INLET-TYPE 2 DOUBLE	EA	7		7					
722	3740	INLET SPECIAL CATCH BASIN-TYPE A 48IN	EA	11		11					
722	3800	INLET SPECIAL CATCH BASIN-TYPE A 60IN	EA	3		3					
722	4025	INLET CATCH BASIN BEEHIVE	EA	8		8					
724	0210	FITTINGS-DUCTILE IRON	LBS		1938	1938					
724	0300	GATE VALVE & BOX 6IN	EA		5	5					
724	0310	GATE VALVE & BOX 8IN	EA		3	3					
724	0317	GATE VALVE & BOX 16IN	EA		1	1					
724	0411	6IN HYDRANT	EA		5	5					
724	0810	WATERMAIN 6IN PVC	LF		46	46					
724	0830	WATERMAIN 8IN PVC	LF		896	896					
724	0850	WATERMAIN 12IN PVC	LF		40	40					
724	0852	WATERMAIN 16IN PVC	LF		1303	1303					
724	1117	12IN SANITARY SEWER PIPE	LF		220	220					
724	1118	15IN SANITARY SEWER PIPE	LF		165	165					
748	0190	CURB & GUTTER-TYPE I 30IN	LF	6817		6817					
748	0210	CURB & GUTTER 42IN	LF	243		243					
748	1020	VALLEY GUTTER 36IN	SY	30		30					
750	0030	PIGMENTED IMPRINTED CONCRETE	SY	309		309					
750	0120	SIDEWALK CONCRETE 5IN REINF	SY	5720		5720					
750	0140	SIDEWALK CONCRETE 6IN	SY	277		277					
750	0210	CONCRETE MEDIAN NOSE PAVING	SY	39		39					
750	2115	DETECTABLE WARNING PANELS	SF	236		236					
752	0600	FENCE CHAIN LINK	LF	813		813					
752	0922	FENCE REMOVE & RESET	LF	813		813					
752	2996	CORNER ASSEMBLY-STEEL POST	EA	8		8					
754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	153.6		153.6					
754	0112	FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	18		18					
754	0137	ROADWAY TERMINATION-TYPE A	EA	2		2					
754	0170	FLEXIBLE DELINEATORS	EA	50		50					
754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	167		167					
754	0805	OBJECT MARKERS - CULVERTS	EA	12		12					
754	8025	REVISE DYNAMIC MESSAGE SIGN	EA	1		1					
762	0113	EPOXY PVMT MK 4IN LINE	LF	9634		9634					
762	0122	PREFORMED PATTERNED PVMT MK-MESSAGE(GROOVED)	SF	128		128					
762	1104	PVMT MK PAINTED 4IN LINE	LF	132		132					
762	1309	PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED	LF	725		725					
762	1317	PREFORMED PATTERNED PVMT MK 16IN LINE-GROOVED	LF	68		68					
762	1344	PREF PATT PVMT MK 7IN LINE CONTRAST-GROOVED	LF	6552		6552					
764	0131	W-BEAM GUARDRAIL	LF	195.1		195.1					
764	0145	W-BEAM GUARDRAIL END TERMINAL	EA	4		4					
770	0003	LIGHTING SYSTEM A	EA	1		1					

Estimated Quantities					Revised	11/4/2020	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
							ND	SU-8-984(153)156	8	4
SPEC	CODE	ITEM DESCRIPTION		UNIT	SU - Federal Eligible	100% City Funds				TOTAL
772	9200	IT SYSTEM		EA	1					1
900	0100	SETTLEMENT PLATE		EA	20					20
920	1000	GEOFOAM		CY	33491					33491
920	1050	GEOMEMBRANE		SY	16095					16095
920	1300	PREFABRICATED VERTICAL WICK DRAINS		LF	659568					659568
920	1318	VIBRATING WIRE PIEZOMETER		EA	4					4
920	1320	VIBRATING WIRE DATA LOGGER		EA	2					2
920	2130	SAND DRAIN		TON	37489					37489
930	3000	BRIDGE BENCH MARKS		SET	1					1
930	4215	INSTRUMENTATION-AUTOMATED GROUND MOVEMENT SENSOR		EA	2					2
930	7012	ROADWAY CANOPY		L SUM	1					1
930	9537	ABUTMENT UNDERDRAIN SYSTEM		EA	2					2
624	0151	RAILING	Bid Option - 1	LF	465.3					465.3
602	7050	ARCHITECTURAL SURFACE FINISH	Bid Option - 2	SF	4169					4169







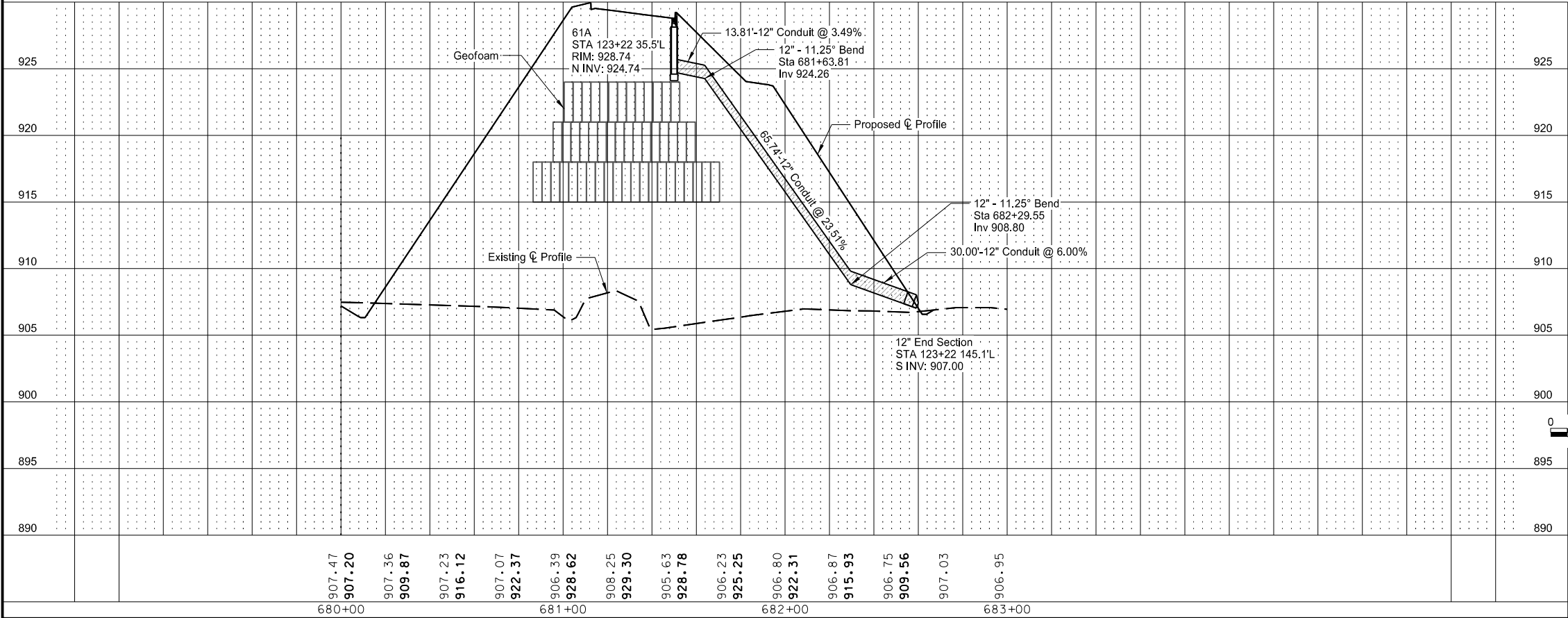
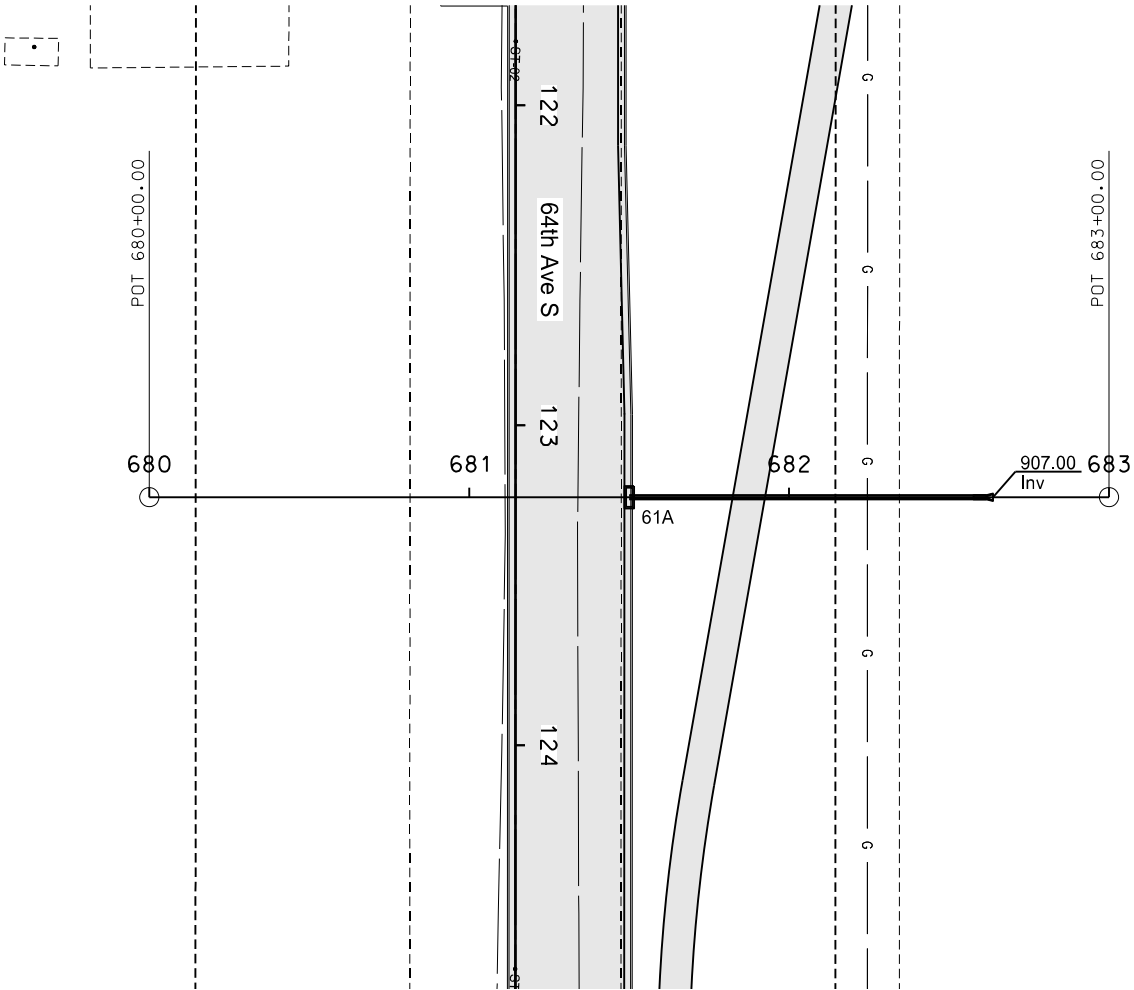


Revised	11/02/20	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-8-984(153)156	55	6

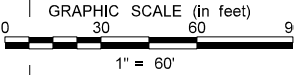
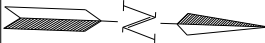
SPEC CODE BID ITEM QTY UNIT

714 4092 PIPE CONDUIT 12IN-STORM DRAIN  
61A to Sta 682+60 0.0 Rt 110 LF

722 3520 INLET-TYPE 2 DOUBLE  
61A 1 EA



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64th Avenue South - 38th St S to 33rd St S

Plan & Profile

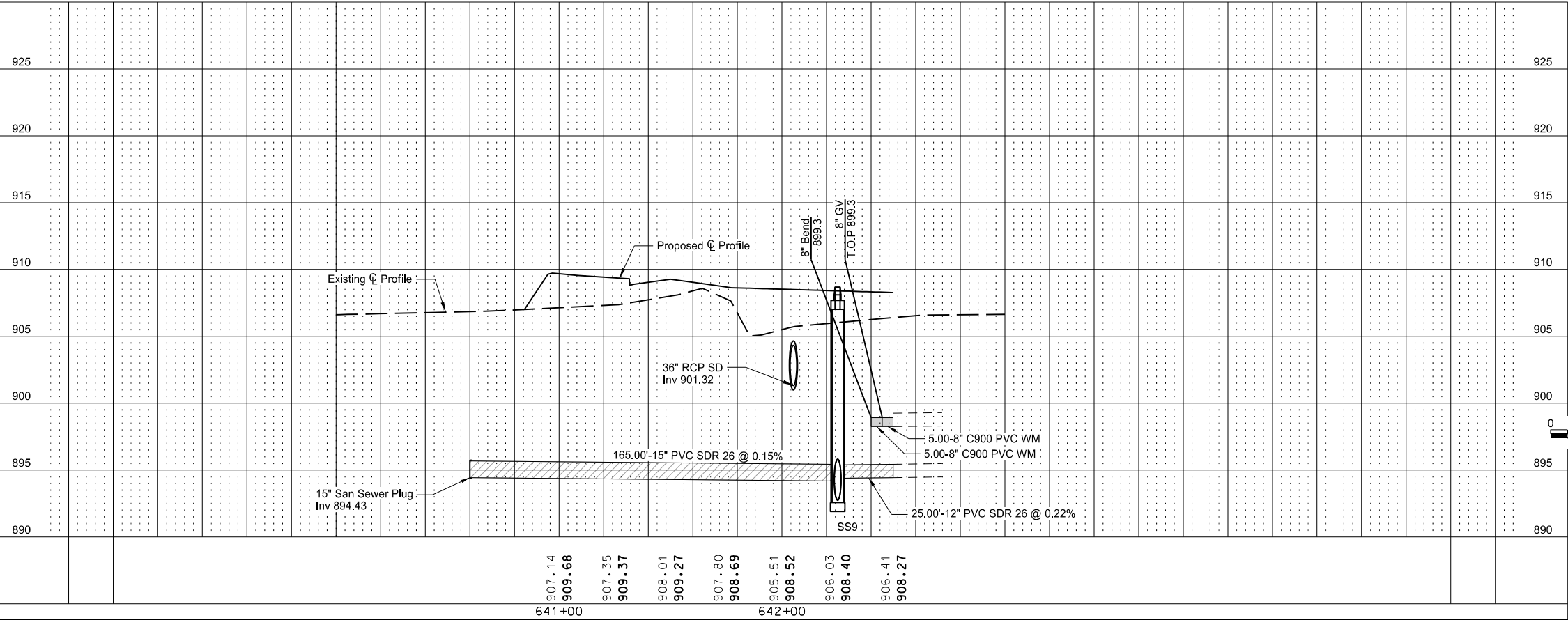
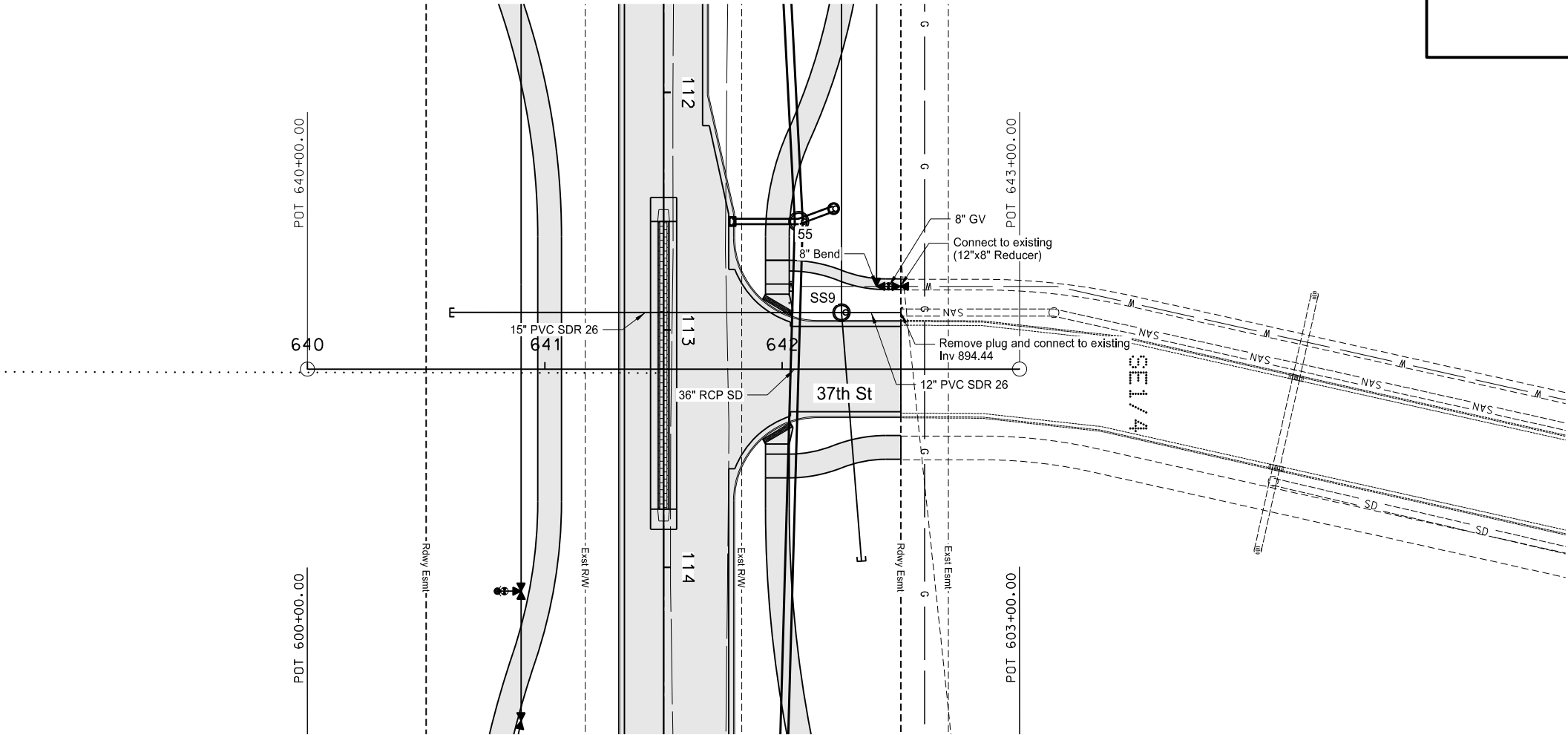
Storm Crossing Station 123  
Sta 680+00 to 683+00 (PRST123)



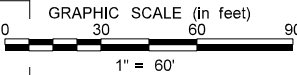
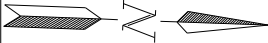
Revised	11/02/20	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-8-984(153)156	55	10

SPEC CODE BID ITEM QTY UNIT

724	210	FITTINGS-DUCTILE IRON	
		Sta 642+40 - 34.8' Lt (8" 90° Bend))	57 LBS
724	0310	GATE VALVE & BOX 8IN	
		Sta 642+87 34.8' Lt	1 EA
724	0830	WATERMAIN 8IN PVC	
		Sta 642+40 - 34.8' Lt to 642+50 - 34.8' Lt	10 LF
724	1117	12IN SANITARY SEWER PIPE	
		Sta 642+50 23.8' Lt To SS9	25 LF
724	1118	15IN SANITARY SEWER PIPE	
		SS9 to Sta 640+60 23.8' Lt	165 LF



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64th Avenue South - 38th St S to 33rd St S

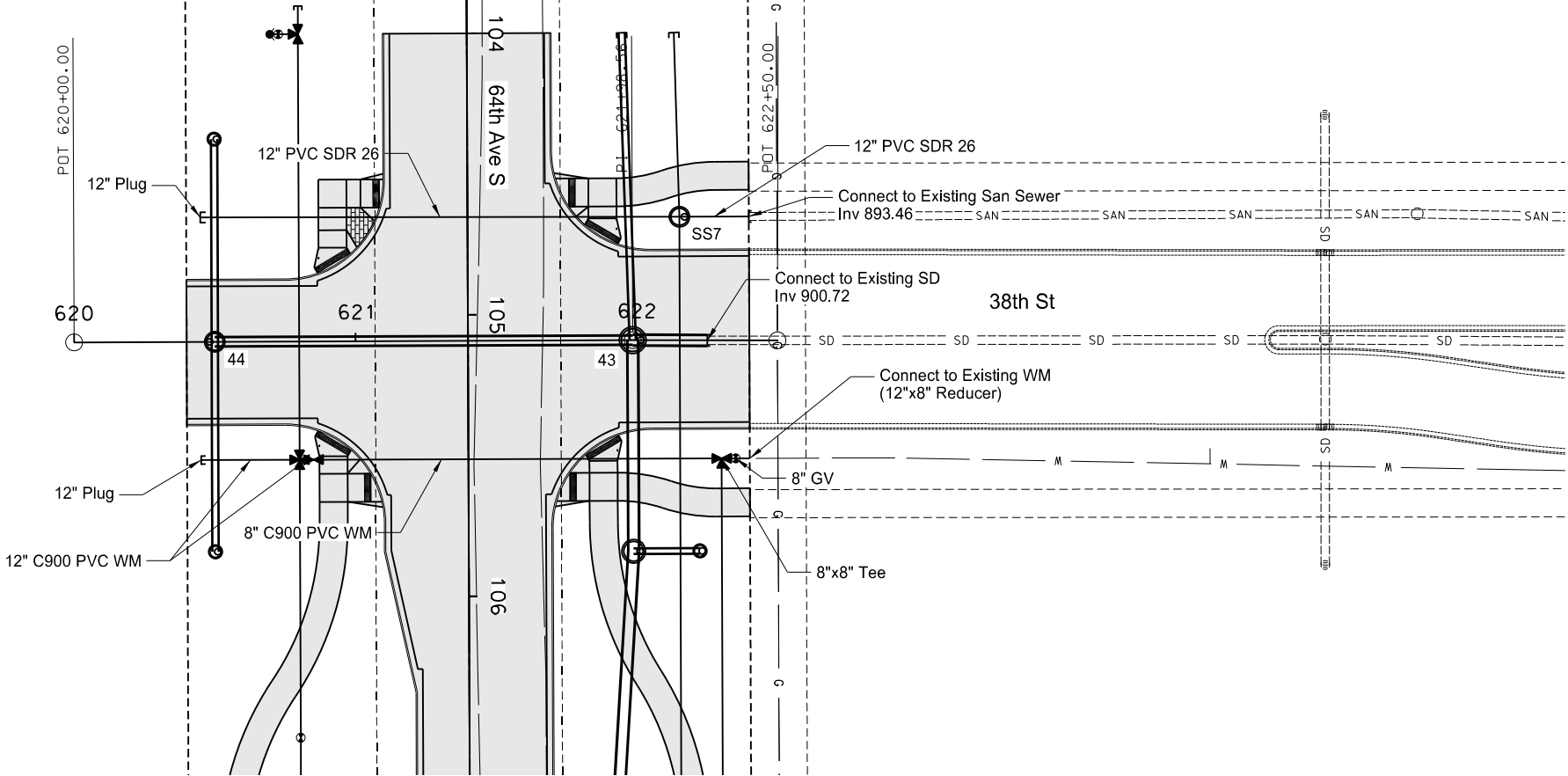
Plan & Profile

Storm Crossing 37th St Intersection  
Sta 640+00 to 643+00 (PRST37THINTSCN)

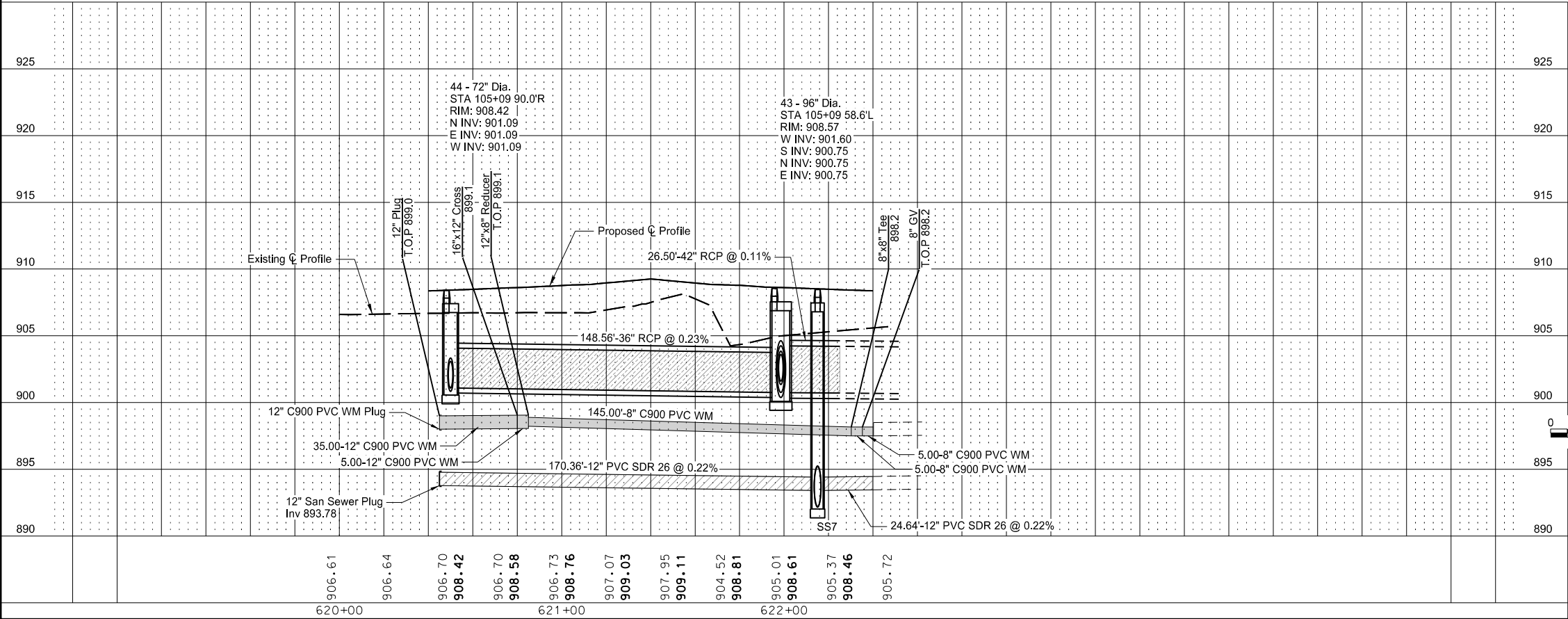
Revised	11/02/20	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-8-984(153)156	55	11

SPEC CODE BID ITEM QTY UNIT

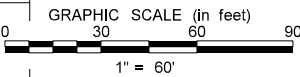
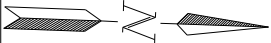
714	0910	PIPE CONC REINF 36IN CL III-STORM DRAIN	
		44 to 43	149 LF
714	1002	PIPE CONC REINF 42IN CL II-STORM DRAIN	
		43 to Sta 622+25 0.0' Lt	26 LF
722	120	MANHOLE 72IN	
		44	1 EA
722	1120	MANHOLE RISER 72IN	
		44	5.5 LF
724	0210	FITTINGS-DUCTILE IRON	
		Sta 622+40 42' Rt (12"x8" Reducer)	57 LBS
		Sta 622+30 42' Rt (8"x8" - Tee)	86 LBS
		Sta 620+85 42' Rt (12"x8" Reducer)	57 LBS
		Sta 620+45 42' Rt (12" - Plug)	46 LBS
724	0310	GATE VALVE & BOX 8IN	
		Sta 622+35 42' Rt	1 EA
724	0830	WATERMAIN 8IN PVC	
		620+85 42' Rt to 622+40 42' Rt	155 LF
724	0850	WATERMAIN 12IN PVC	
		Sta 620+45 42' Rt to 620+85 42' Rt	40 LF
724	1117	12IN SANITARY SEWER PIPE	
		Sta 620+45 44.2' Lt To SS7	170 LF
		SS7 To Sta 622+40 44' Lt	25 LF



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64th Avenue South - 38th St S to 33rd St S

Plan & Profile

Storm Crossing 38th St Intersection  
Sta 620+00 to 622+50 (PRST38THINTSCN)

[illegible][illegible]

704-1000	TRAFFIC CONTROL SIGNS	TOTAL UNITS	3467
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**NOTE:**  
If additional signs are required, units will be calculated using the formula from Section III-18.06 of the Design Manual.  
<http://www.dot.nd.gov/>

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11/2/2020 4:53 PM K:\Projects\City\ND\Fargo\14415104\CAD\80984156.153\ Addendum A\Design\Plans\100\100WZ\_001\_TCDL\_AD-A

																	Revised 11/2/20	STATE	PROJECT NO.			SECTION NO.	SHEET NO.		
																		N.D.	SU-8-984(153)156			110	1		
Station / RP	Sign No.	Assembly No.	Flat Sheet For Signs		Sign Support Length				Vert Clear- ance	Support Size	Max Post Len	Sleeve Length				Sleeve Size	Anchor EA	Anchor LF	Anchor Size	Reset Sign Panel EA	Reset Sign Support EA	Break-Away EA	Comments		
			IV SF	XI SF	1st LF	2nd LF	3rd LF	4th LF	FT		LF	LF	LF	LF											
104+05	R11-2-48 & W1-7-48			18.0																		Barricade Mounted			
104+45 Lt	SS1 & SS2		9.0		8.7				7.0	2.5 x 2.5 12 ga	10.0						1	4	3 x 3 7 ga						
104+70 Lt	R1-1-30	1		5.2					7.0													Mount on Light Standard			
105+15 Rt	W1-7-48	34		8.0																		Barricade Mounted			
105+47 Lt	R1-1-30	1		5.2	9.7				7.0	2 x 2 12 ga	10.5						1	4	2.25 x 2.25 12 ga						
109+00 Lt	R3-8b-48	37		10.0	9.2				7.0	2.5 x 2.5 10 ga	11.4						1	4	3 x 3 7 ga		1				
109+64 Rt	R2-1-30	9		5.0					7.0													Mount on Light Standard			
112+57	R4-7-30	9		5.0	9.7				7.0	2 x 2 12 ga	11.5						1	4	2.25 x 2.25 12 ga						
112+66 Lt	SS1 & SS3		9.0		8.7				7.0	2.5 x 2.5 12 ga	10.0						1	4	3 x 3 7 ga			Special Assembly 1E			
112+89 Lt	R6-1R-30 & R1-1-30	448		8.2	10.7				7.0	2.5 x 2.5 12 ga	12.5						1	4	3 x 3 7 ga						
113+18 Lt mdn	R6-1R-36 & R3-2-24			7.0	10.2				7.0	2.25 x 2.25 12 ga	10.7						1	4	2.5 x 2.5 12 ga			SA A			
113+73 Lt mdn	R4-7-30	9		5.0	9.7				7.0	2 x 2 12 ga	11.5						1	4	2.25 x 2.25 12 ga						
115+92 Rt	W1-4L-48	20		9.0					7.0													Mount on Light Standard			
118+07 Rt	W6-2-36	20		9.0	10.4				7.0	2.5 x 2.5 10 ga	12.9						1	4	3 x 3 7 ga		1				
122+43 Lt	W6-2-36	20		9.0					7.0													Mount on Light Standard			
124+85 Lt	W1-4L-36	20		9.0					7.0													Mount on Light Standard			
133+00 Rt	W1-4R-48	20		9.0	10.4				7.0	2.5 x 2.5 10 ga	12.9						1	4	3 x 3 7 ga		1				
134+50 Rt	W6-1-36	20		9.0	10.4				7.0	2.5 x 2.5 10 ga	12.9						1	4	3 x 3 7 ga		1				
137+23 Lt	W6-2-36	20		9.0					7.0													Mount on Light Standard			
138+73 Lt	W1-4R-36	20		9.0	10.4				7.0	2.5 x 2.5 10 ga	12.9						1	4	3 x 3 7 ga		1				
142+00 Lt	R2-1-30	9		5.0					7.0													Mount on Light Standard			
Sub Total			18.0	153.6	Total	118.2											Total	48.0		0	0	5			
Grand Total			18.0	153.6	Total	118.2											Total	48	0	0	0	5			
																	This document was originally issued and sealed by Scott Middaugh, Registration Number 7499, on 11/2/20 and is stored at the North Dakota Department of Transportation.			Sign Summary Perforated Tube  64th Avenue South - 38th St S to 33rd St S					
11/2/20 4:51:05PM Page 1 of 1																									

Revised	11/02/20	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-8-984(153)156	110	3

SPEC CODE BID ITEM QTY UNIT

754	0170	FLEXIBLE DELINEATORS	
		Sta 105+84.00 - 30.0' RT (White)	1 EA
		Sta 106+34.00 - 19.0' RT (White)	1 EA
		Sta 107+84.00 - 30.0' LT (White)	1 EA
		Sta 108+08.00 - 19.0' LT (White)	1 EA
762	0113	EPOXY PVMT MK 4IN LINE	
		Lane Line (White)	112 LF
762	0122	PREFORMED PATTERNED PVMT MK-MESSAGE(GROOVED)	
		2 Left Turn Arrow & 2 Right Turn Arrow	64 SF
762	1104	PVMT MK PAINTED 4IN LINE	
		Lane Taper (White)	132 LF
762	1309	PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED	
		White Channel Lines	425 LF
762	1317	PREFORMED PATTERNED PVMT MK 16IN LINE-GROOVED	
		Stop Bars	68 LF
762	1344	PREF PATT PVMT MK 7IN LINE CONTRAST-GROOVED	
		Double NPZ (Yellow)	1,250 LF
		10-30 Skips (White)	21 LF

Note: Mount signs to light standards using 1 plastic washer against the sign face then 1 flat and 1 lock washer on the back.



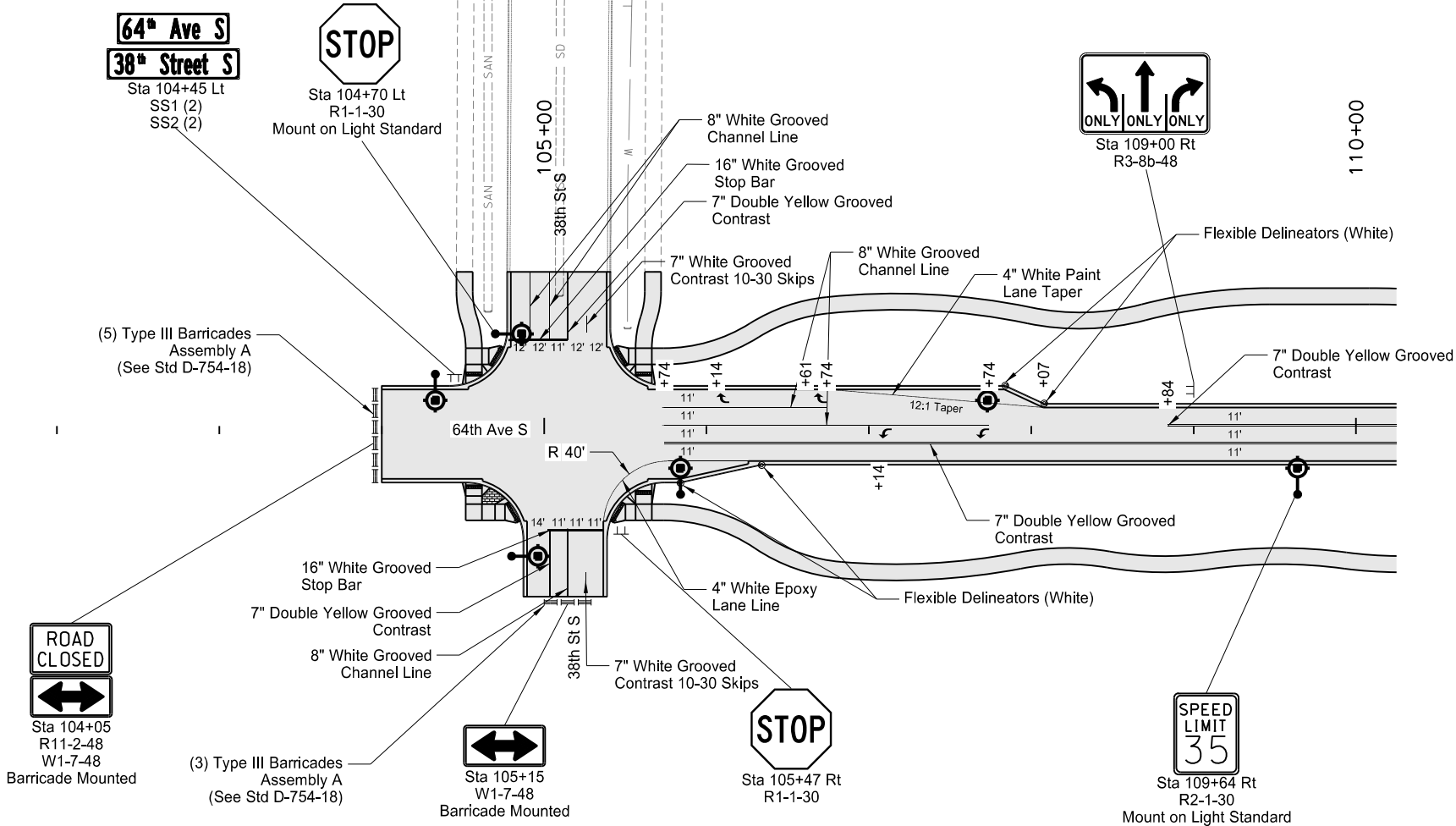
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64th Avenue South - 38th St S to 33rd St S

Signing & Pavement Marking

64th Avenue South  
Sta 100+00 to 110+00 (PR 64)

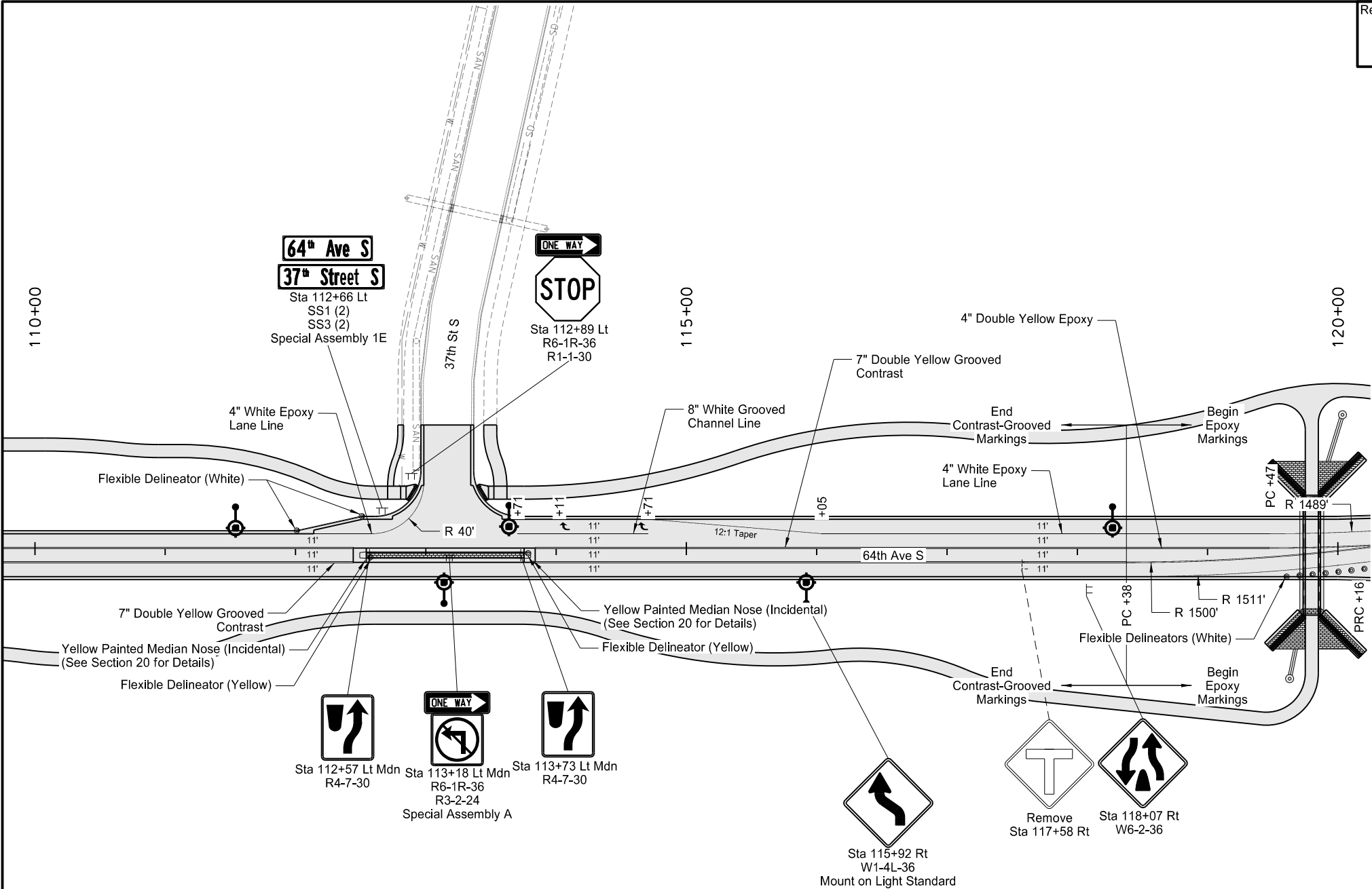
P.I. 099+99.99 100+00



Revised	11/02/20	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-8-984(153)156	110	4

SPEC CODE BID ITEM QTY UNIT

754	0170	FLEXIBLE DELINEATORS	
		Sta 112+01.00 - 19.0' LT (White)	1 EA
		Sta 112+51.00 - 30.0' LT (White)	1 EA
		Sta 112+57.05 - 2.5' RT (Yellow)	1 EA
		Sta 113+76.50 - 2.5' LT (Yellow)	1 EA
		Sta 119+60.68 - 16.5' RT (White)	1 EA
		Sta 119+70.63 - 15.7' RT (White)	1 EA
		Sta 119+80.58 - 14.7' RT (White)	1 EA
		Sta 119+90.52 - 13.8' RT (White)	1 EA
762	0113	EPOXY PVMT MK 4IN LINE	
		Lane Line (White)	798 LF
762	0122	PREFORMED PATTERNED PVMT MK-MESSAGE(GROOVED)	
		2 Right Turn Arrow	32 SF
762	1309	PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED	
		White Channel Line	100 LF
762	1344	PREF PATT PVMT MK 7IN LINE CONTRAST-GROOVED	
		Double NPZ (Yellow)	3,442 LF



Note: Mount signs to light standards using 1 plastic washer against the sign face then 1 flat and 1 lock washer on the back.



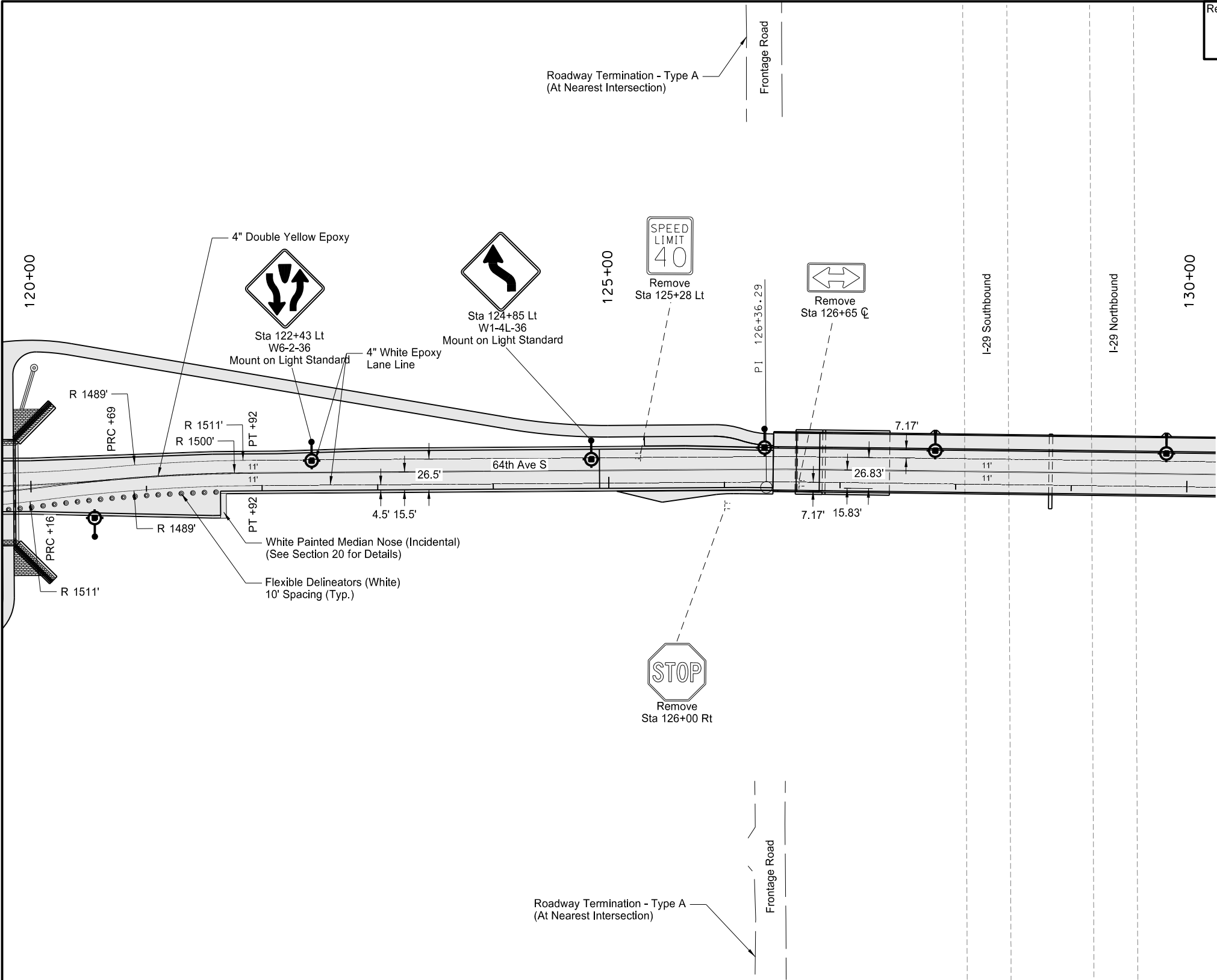
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64th Avenue South - 38th St S to 33rd St S  
  
Signing & Pavement Marking  
  
64th Avenue South  
Sta 110+00 to 120+00 (PR64)

Revised	11/03/20	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-8-984(153)156	110	5

SPEC CODE BID ITEM QTY UNIT

754	0170	FLEXIBLE DELINEATORS	
		Sta 120+00.45 - 12.7' RT (White)	1 EA
		Sta 120+10.37 - 11.6' RT (White)	1 EA
		Sta 120+20.30 - 10.5' RT (White)	1 EA
		Sta 120+30.25 - 9.3' RT (White)	1 EA
		Sta 120+40.21 - 8.3' RT (White)	1 EA
		Sta 120+50.17 - 7.3' RT (White)	1 EA
		Sta 120+60.15 - 6.4' RT (White)	1 EA
		Sta 120+70.12 - 5.5' RT (White)	1 EA
		Sta 120+80.11 - 4.7' RT (White)	1 EA
		Sta 120+90.09 - 4.0' RT (White)	1 EA
		Sta 121+00.09 - 3.4' RT (White)	1 EA
		Sta 121+10.08 - 2.8' RT (White)	1 EA
		Sta 121+20.08 - 2.2' RT (White)	1 EA
		Sta 121+30.09 - 1.8' RT (White)	1 EA
		Sta 121+40.09 - 1.4' RT (White)	1 EA
		Sta 121+50.10 - 1.1' RT (White)	1 EA
		Sta 121+60.11 - 0.8' RT (White)	1 EA
754	0137	ROADWAY TERMINATION-TYPE A	
		Frontage Road	2 EA
762	0113	EPOXY PVMT MK 4IN LINE	
		Lane Line (White)	2,002 LF
		Double NPZ (Yellow)	2,142 LF



Note: Mount signs to light standards using 1 plastic washer against the sign face then 1 flat and 1 lock washer on the back.



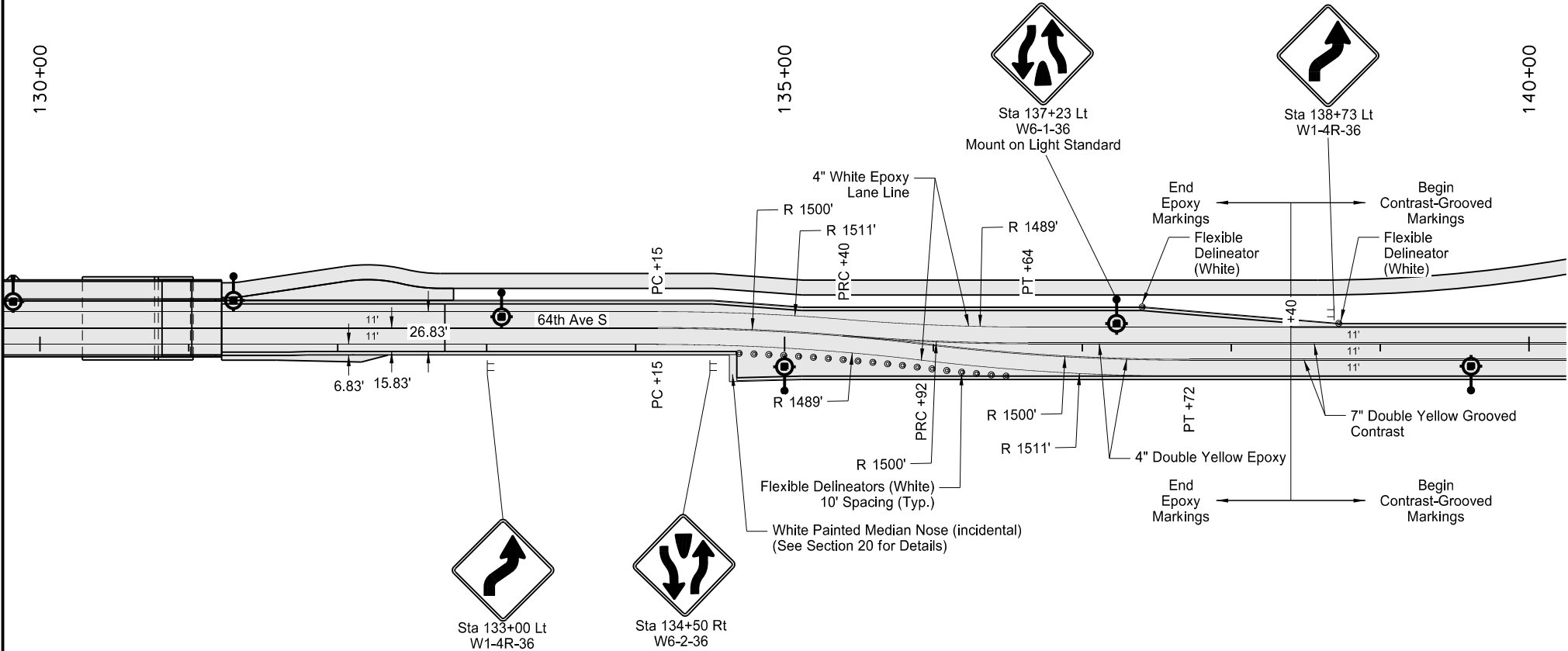
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64th Avenue South - 38th St S to 33rd St S  
  
Signing & Pavement Marking  
  
64th Avenue South  
Sta 120+00 to 130+00 (PR64)

Revised	11/02/20	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-8-984(153)156	110	6

SPEC CODE BID ITEM QTY UNIT

754	0170	FLEXIBLE DELINEATORS	
		Sta 134+69.52 - 1.2' RT (White)	1 EA
		Sta 134+79.51 - 1.6' RT (White)	1 EA
		Sta 134+89.50 - 2.1' RT (White)	1 EA
		Sta 134+99.49 - 2.6' RT (White)	1 EA
		Sta 135+09.47 - 3.2' RT (White)	1 EA
		Sta 135+19.45 - 3.9' RT (White)	1 EA
		Sta 135+29.42 - 4.6' RT (White)	1 EA
		Sta 135+39.39 - 5.4' RT (White)	1 EA
		Sta 135+49.35 - 6.3' RT (White)	1 EA
		Sta 135+59.31 - 7.2' RT (White)	1 EA
		Sta 135+69.25 - 8.2' RT (White)	1 EA
		Sta 135+79.20 - 9.3' RT (White)	1 EA
		Sta 135+89.13 - 10.5' RT (White)	1 EA
		Sta 135+99.06 - 11.6' RT (White)	1 EA
		Sta 136+09.00 - 12.7' RT (White)	1 EA
		Sta 136+18.95 - 13.8' RT (White)	1 EA
		Sta 136+28.90 - 14.7' RT (White)	1 EA
		Sta 136+38.86 - 15.7' RT (White)	1 EA
		Sta 136+48.82 - 16.5' RT (White)	1 EA
		Sta 137+40.21 - 30.0' LT (White)	1 EA
		Sta 138+72.21 - 19.0' LT (White)	1 EA
762	0113	EPOXY PVMT MK 4IN LINE	
		Lane Line (White)	1,646 LF
		Double NPZ (Yellow)	2,284 LF
762	1344	PREF PATT PVMT MK 7IN LINE CONTRAST-GROOVED	
		Double NPZ (Yellow)	640 LF



Note: Mount signs to light standards using 1 plastic washer against the sign face then 1 flat and 1 lock washer on the back.



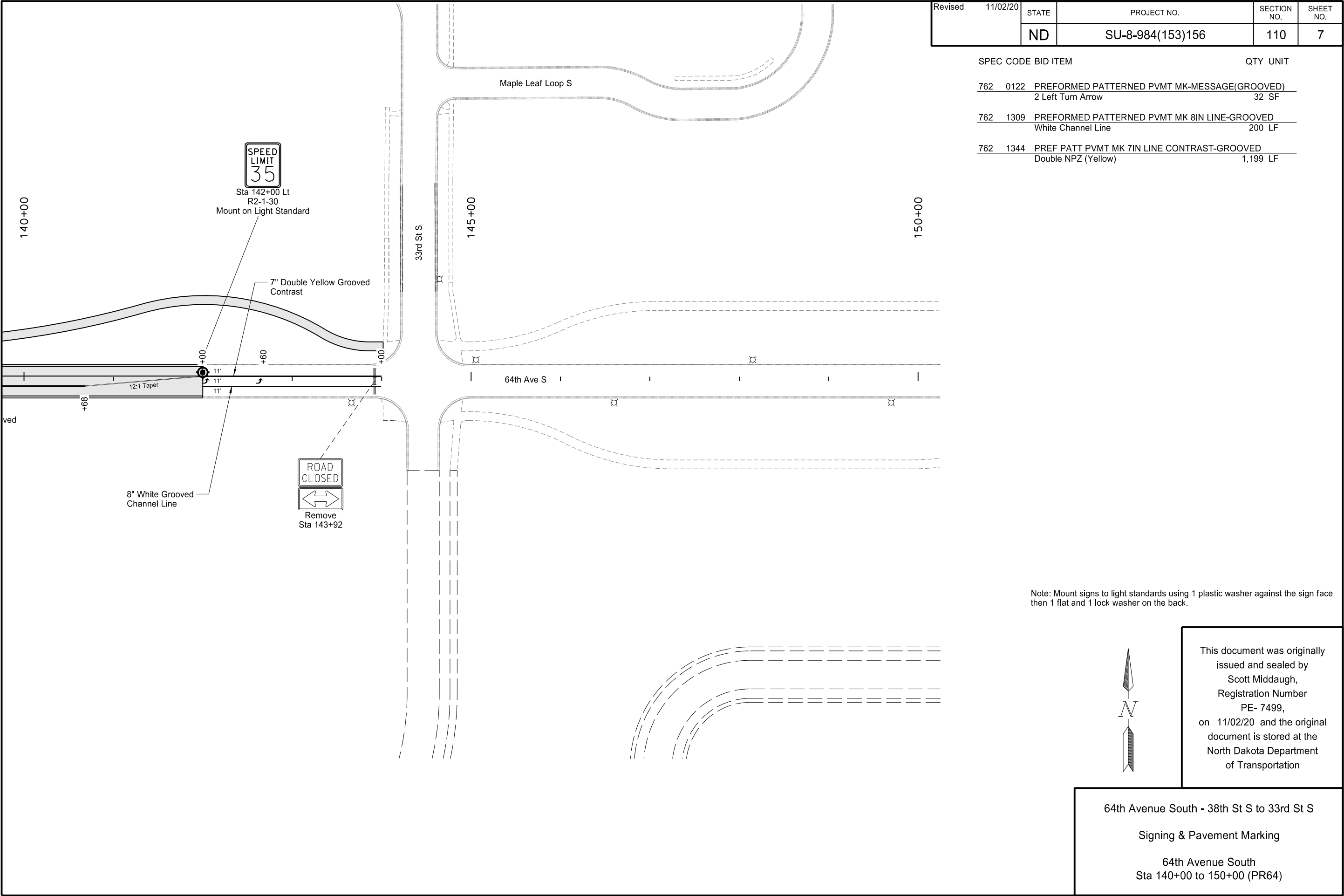
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64th Avenue South - 38th St S to 33rd St S

Signing & Pavement Marking

64th Avenue South  
Sta 130+00 to 140+00 (PR64)





Revised	11/02/20	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-8-984(153)156	110	7

SPEC CODE BID ITEM			QTY UNIT
762	0122	PREFORMED PATTERNED PVMT MK-MESSAGE(GROOVED) 2 Left Turn Arrow	32 SF
762	1309	PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED White Channel Line	200 LF
762	1344	PREF PATT PVMT MK 7IN LINE CONTRAST-GROOVED Double NPZ (Yellow)	1,199 LF

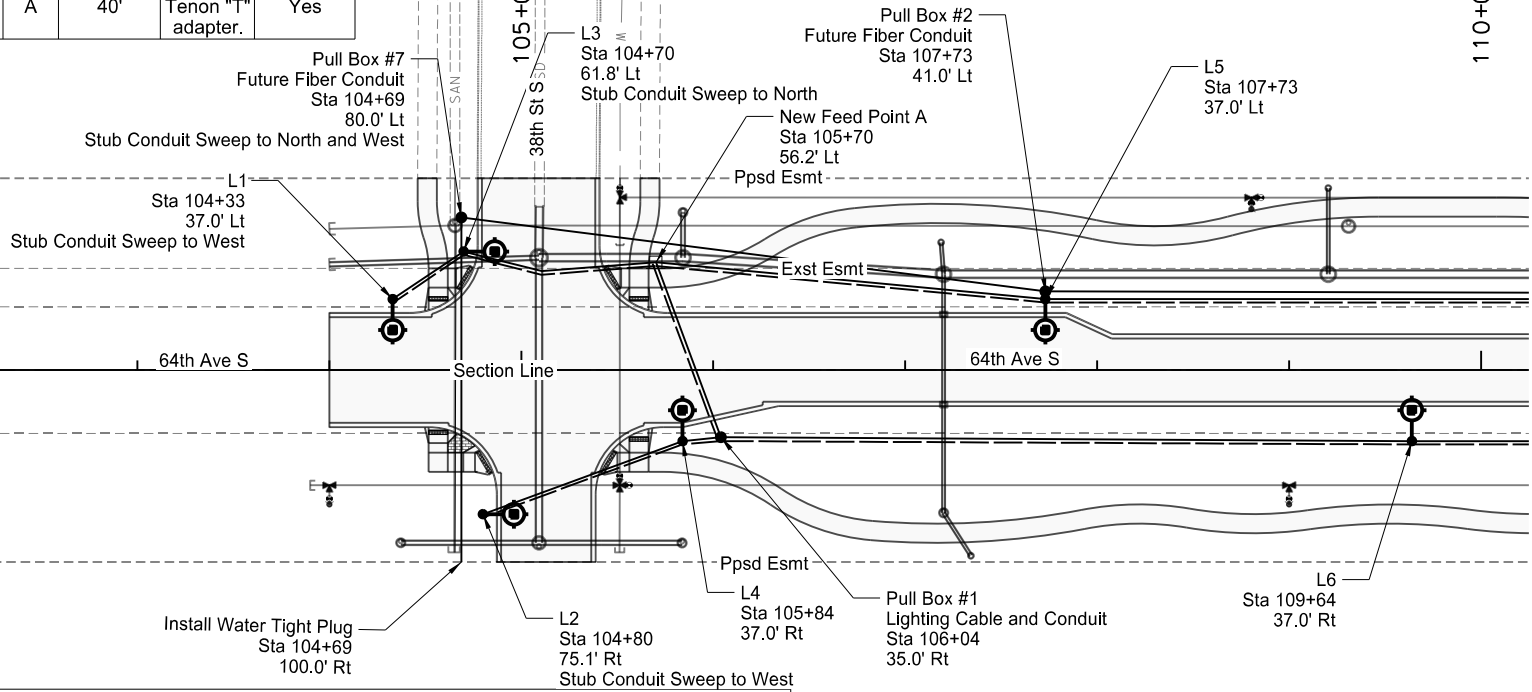
Note: Mount signs to light standards using 1 plastic washer against the sign face then 1 flat and 1 lock washer on the back.



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64th Avenue South - 38th St S to 33rd St S  
  
Signing & Pavement Marking  
  
64th Avenue South  
Sta 140+00 to 150+00 (PR64)

LIGHT STANDARD SCHEDULE						
LIGHT NUMBER	LUMINAIRE TYPE	Optics IES-Type	STANDARDS			
			TYPE	Pole Ht.	Mast Arm	Breakaway
L1	A	III	A	40'	0' with Tenon "T" adapter.	Yes
L2	A	III	A	40'	0' with Tenon "T" adapter.	Yes
L3	A	III	A	40'	0' with Tenon "T" adapter.	Yes
L4	A	III	A	40'	0' with Tenon "T" adapter.	Yes
L5	A	III	A	40'	0' with Tenon "T" adapter.	Yes
L6	A	III	A	40'	0' with Tenon "T" adapter.	Yes



LIGHTING CABLE & CONDUIT SCHEDULE						
ITEM	STATION OFFSET	CONDUIT RUN		UNDERGROUND CONDUCTOR RUN		CIRCUIT
		TOTAL	SIZE (IN)	TOTAL	SIZE/TYPE	
Feed Point A to Light L3	Sta 105+74, 56.2' Lt to Sta 104+70, 61.8' Lt	102	1.5"	232	(2) Underground Conductor No. 6 RHW/USE (1) Underground Conductor No.6 USE (Ground)	C1
Light L3 to Light L1	Sta 104+70, 61.8' Lt to Sta 104+33, 37.0' Lt	44	1.5"	104	(2) Underground Conductor No. 6 RHW/USE (1) Underground Conductor No.6 USE (Ground)	C1
Feed Point A to Pull Box #1	Sta 105+74, 56.2' Lt to Sta 106+04, 35.0' Rt	97	1.5"	226	(2) Underground Conductor No. 6 RHW/USE (1) Underground Conductor No.6 USE (Ground)	C2
Pull Box #1 to Light L4	Sta 106+04, 35.0' Rt to Sta 105+84, 37.0' Rt	20	1.5"	113	(2) Underground Conductor No. 6 RHW/USE (1) Underground Conductor No.6 USE (Ground)	C4
Light L4 to Light L2	Sta 105+84, 37.0' Rt to Sta 104+80, 75.1' Rt	111	1.5"	226	(2) Underground Conductor No. 6 RHW/USE (1) Underground Conductor No.6 USE (Ground)	C2
Pull Box #1 to Light L6	Sta 106+04, 35.0' Rt to Sta 109+64, 37.0' Rt	360	1.5"	119	(2) Underground Conductor No. 6 RHW/USE (1) Underground Conductor No.6 USE (Ground)	C4
Feed Point A to Light L5	Sta 105+74, 56.2' Lt to Sta 107+73, 37.0' Lt	204	2"	740	(2) Underground Conductor No. 6 RHW/USE (1) Underground Conductor No.6 USE (Ground)	C3
Light L5 to Light L7	Sta 107+73, 37.0' Lt to Sta 111+54, 37.0' Lt	381	2"	370	(2) Underground Conductor No. 6 RHW/USE (1) Underground Conductor No.6 USE (Ground)	C5
Light L6 to Light L8	Sta 109+64, 37.0' Rt to Sta 113+14, 37.0' Rt	350	1.5"	218	(2) Underground Conductor No. 6 RHW/USE (1) Underground Conductor No.6 USE (Ground)	C3

FUTURE FIBER CONDUIT SCHEDULE					
ITEM	STATION OFFSET	CONDUIT RUN		UNDERGROUND CONDUCTOR RUN	
		TOTAL	SIZE (IN)	SIZE/TYPE	
Begin Fiber Conduit to Pull Box #7	Sta 104+69, 100.0' Rt to Sta 104+69, 80.0' Lt	180	2"	Empty Conduit with Tracer Wire	
Pull Box #7 to Pull Box #2	Sta 104+69, 80.0' Lt to Sta 107+73, 41.0' Lt	307	2"	Empty Conduit with Tracer Wire	
Pull Box #2 to Pull Box #3	Sta 107+73, 41.0' Lt to Sta 116+52, 40.0' Lt	879	2"	Empty Conduit with Tracer Wire	



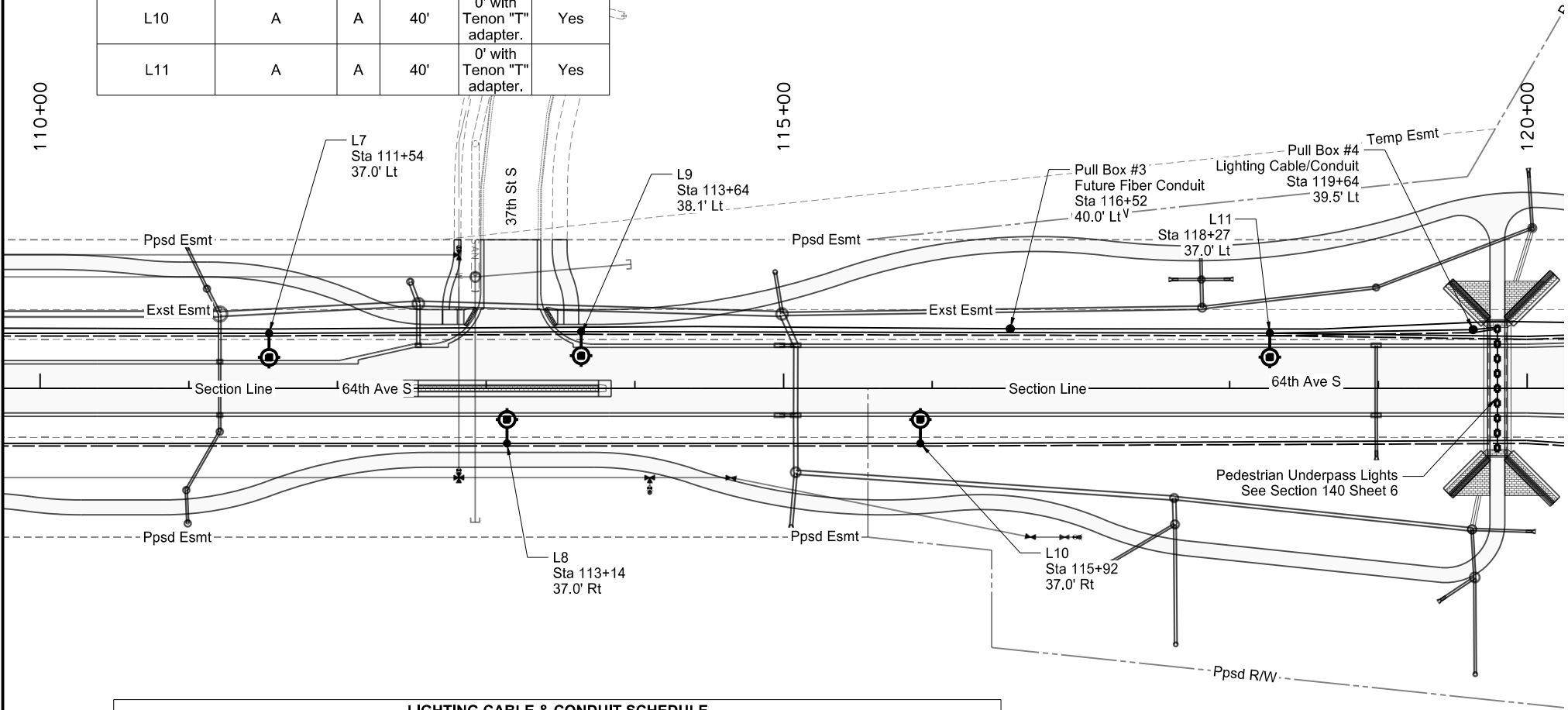
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64th Avenue South - 38th St S to 33rd St S

Lighting

64th Avenue South  
Sta 100+00 to Sta 110+00

LIGHT STANDARD SCHEDULE					
LIGHT NUMBER	LUMINAIRE TYPE	STANDARDS			
		TYPE	Pole Ht.	Mast Arm	Breakaway
L7	A	A	40'	0' with Tenon "T" adapter.	Yes
L8	A	A	40'	0' with Tenon "T" adapter.	Yes
L9	A	A	40'	0' with Tenon "T" adapter.	Yes
L10	A	A	40'	0' with Tenon "T" adapter.	Yes
L11	A	A	40'	0' with Tenon "T" adapter.	Yes



LIGHTING CABLE & CONDUIT SCHEDULE						
ITEM	STATION OFFSET	CONDUIT RUN		UNDERGROUND CONDUCTOR RUN		CIRCUIT
		TOTAL	SIZE (IN)	TOTAL	SIZE/TYPE	
Light L7 to	Sta 111+54, 37.0' Lt to	210	2"	436	(2) Underground Conductor No. 6 RHW/USE	C3
Light L9 to	Sta 113+64, 38.1' Lt to			218	Underground Conductor No.6 USE (Ground)	
Light L8 to	Sta 113+14, 37.0' Rt to	278	1.5"	572	(2) Underground Conductor No. 6 RHW/USE	C4
Light L10 to	Sta 115+92, 37.0' Rt to			286	Underground Conductor No.6 USE (Ground)	
Light L9 to	Sta 113+64, 38.1' Lt to	463	2"	942	(2) Underground Conductor No. 6 RHW/USE	C3
Light L11 to	Sta 118+27, 37.0' Lt to			471	Underground Conductor No.6 USE (Ground)	
Light L10 to	Sta 115+92, 37.0' Rt to	408	1.5"	942	(2) Underground Conductor No. 6 RHW/USE	C5
Light L12 to	Sta 120+55, 38.6' Rt to			471	Underground Conductor No.6 USE (Ground)	
Light L11 to	Sta 118+27, 37.0' Lt to	137	1.5"	832	(2) Underground Conductor No. 6 RHW/USE	C4
Pull Box #4 to	Sta 119+64, 39.5' Lt to			416	Underground Conductor No.6 USE (Ground)	
Pull Box #4 to	Sta 119+64, 39.5' Lt to	17	1"	294	(2) Underground Conductor No. 6 RHW/USE	C5
Pedestrian Underpass	See Section 140 Sheet 6			147	Underground Conductor No.6 USE (Ground)	
Light L11 to	Sta 118+27, 37.0' Lt to	416	1.5"	54	(2) Underground Conductor No. 10 RHW/USE	C5
Light L13 to	Sta 122+43, 42.0' Lt to			27	Underground Conductor No.10 USE (Ground)	
				848	(2) Underground Conductor No. 6 RHW/USE	C3
				424	Underground Conductor No.6 USE (Ground)	

FUTURE FIBER CONDUIT SCHEDULE					
ITEM	STATION OFFSET	CONDUIT RUN		UNDERGROUND CONDUCTOR RUN	
		TOTAL	SIZE (IN)		SIZE/TYPE
Pull Box #3 to	Sta 116+52, 40.0' Lt to	748	2"	Empty Conduit with Tracer Wire	
Pull Box #5	Sta 124+00, 43.5' Lt				



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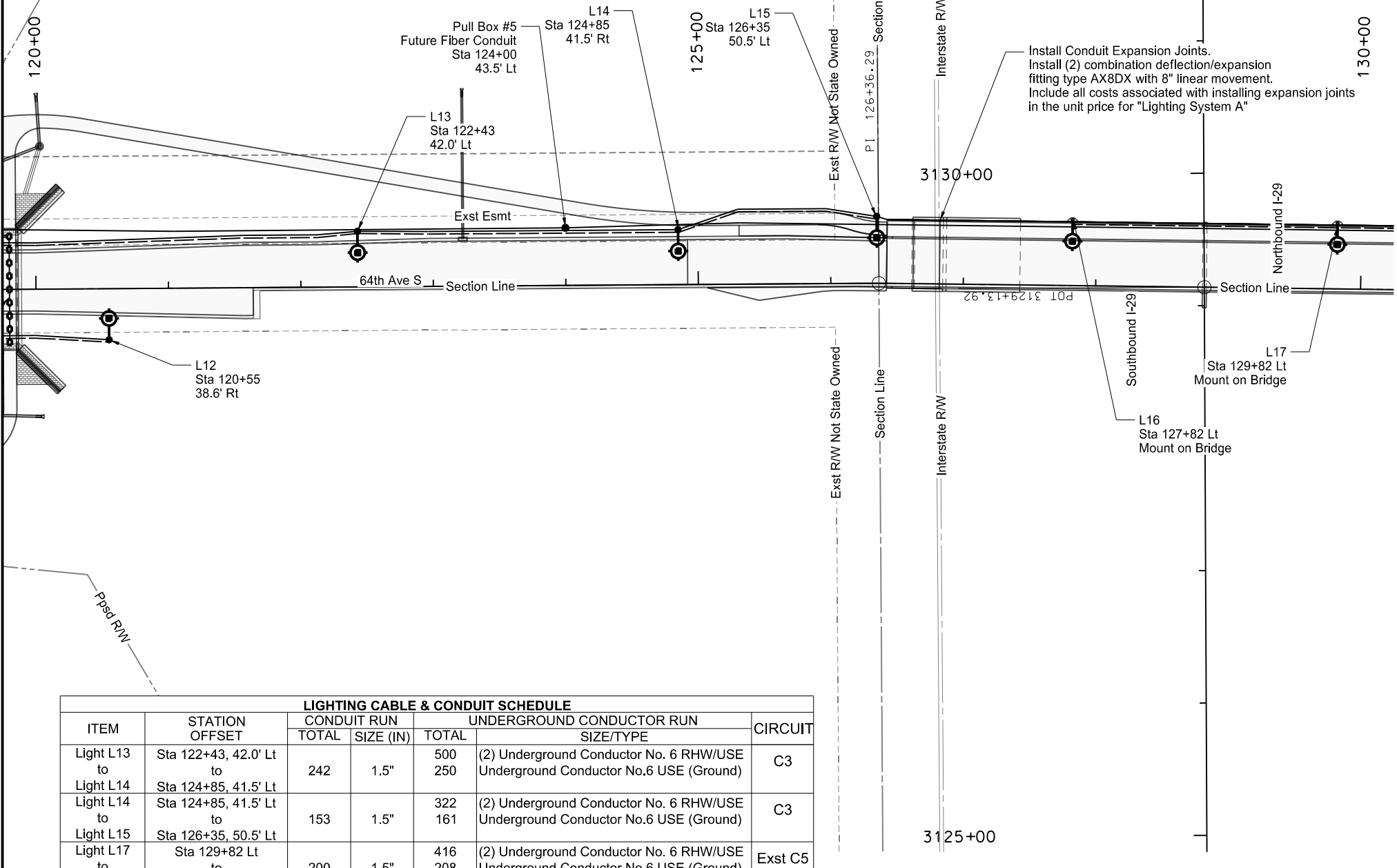
64th Avenue South - 38th St S to 33rd St S

Lighting

64th Avenue South  
Sta 110+00 to Sta 120+00

Revised	11/02/20	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-8-984(153)156	140	3

LIGHT STANDARD SCHEDULE					
LIGHT NUMBER	LUMINAIRE TYPE	STANDARDS			
		TYPE	Pole Ht.	Mast Arm	Breakaway
L12	A	A	40'	0' with Tenon "T" adapter.	Yes
L13	A	A	40'	0' with Tenon "T" adapter.	Yes
L14	A	A	40'	0' with Tenon "T" adapter.	Yes
L15	B	B	30'	8'	No
L16	B	B	30'	8'	No
L17	B	B	30'	8'	No



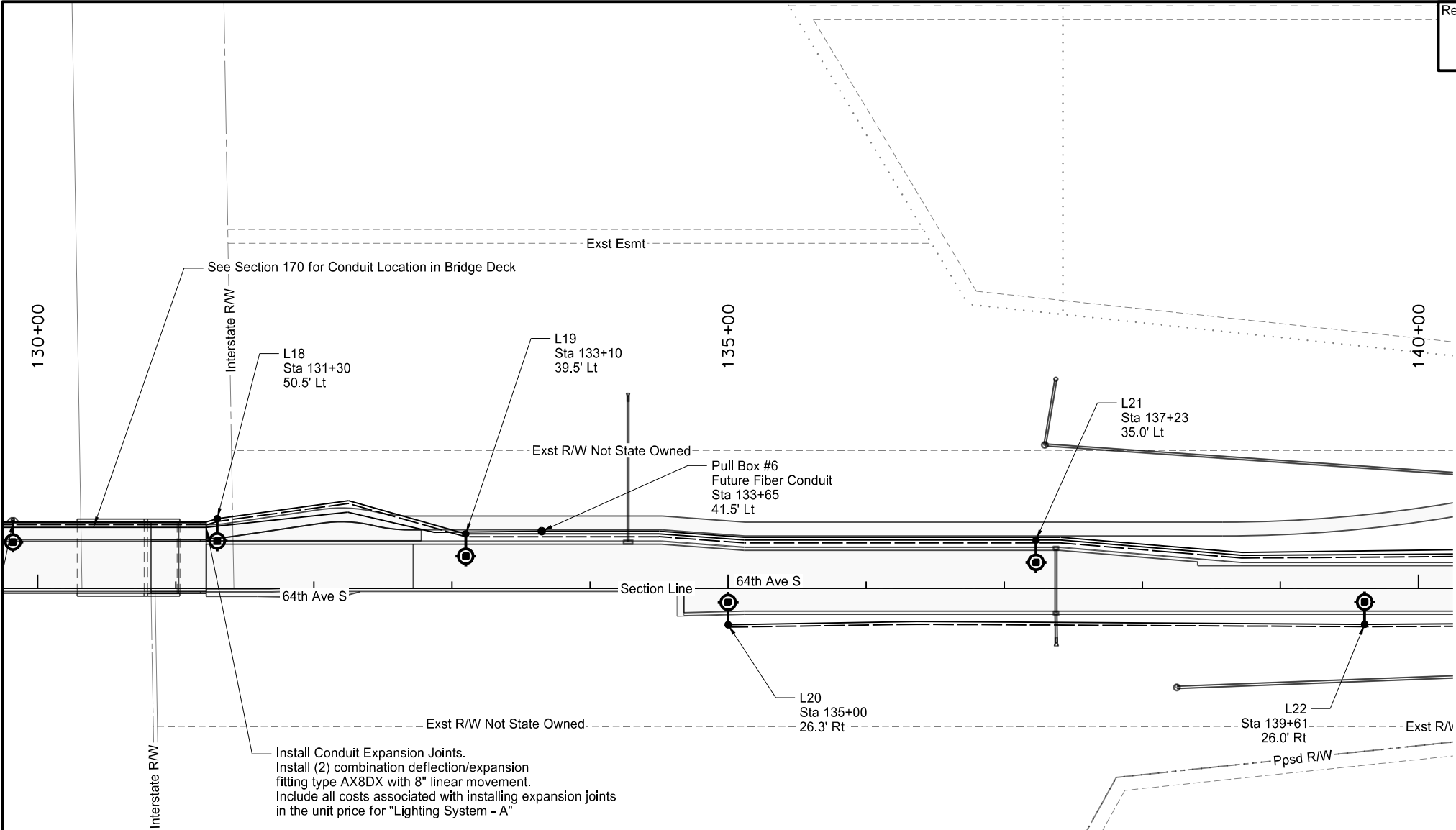
LIGHTING CABLE & CONDUIT SCHEDULE						
ITEM	STATION OFFSET	CONDUIT RUN		UNDERGROUND CONDUCTOR RUN		CIRCUIT
		TOTAL	SIZE (IN)	TOTAL	SIZE/TYPE	
Light L13 to Light L14	Sta 122+43, 42.0' Lt to Sta 124+85, 41.5' Lt	242	1.5"	500	(2) Underground Conductor No. 6 RHW/USE Underground Conductor No.6 USE (Ground)	C3
Light L14 to Light L15	Sta 124+85, 41.5' Lt to Sta 126+35, 50.5' Lt	153	1.5"	322	(2) Underground Conductor No. 6 RHW/USE Underground Conductor No.6 USE (Ground)	C3
Light L17 to Light L16	Sta 129+82 Lt to Sta 127+82 Lt	200	1.5"	416	(2) Underground Conductor No. 6 RHW/USE Underground Conductor No.6 USE (Ground)	Exst C5
Light L18 to Light L17	Sta 131+30, 50.5' Lt to Sta 129+82 Lt	173	1.5"	362	(2) Underground Conductor No. 6 RHW/USE Underground Conductor No.6 USE (Ground)	Exst C5
Light L15 to Light L16	Sta 126+35, 50.5' Lt to Sta 127+82 Lt	148	1.5"		Empty Conduit with Pull String	

FUTURE FIBER CONDUIT SCHEDULE				
ITEM	STATION OFFSET	CONDUIT RUN		UNDERGROUND CONDUCTOR RUN
		TOTAL	SIZE (IN)	SIZE/TYPE
Pull Box #5 to Pull Box #6	Sta 124+00, 43.5' Lt to Sta 135+65, 41.5' Lt	968	2"	Empty Conduit with Tracer Wire



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64th Avenue South - 38th St S to 33rd St S  
  
Lighting  
  
64th Avenue South  
Sta 120+00 to Sta 130+00



LIGHTING CABLE & CONDUIT SCHEDULE						
ITEM	STATION OFFSET	CONDUIT RUN		UNDERGROUND CONDUCTOR RUN		CIRCUIT
		TOTAL	SIZE (IN)	TOTAL	SIZE/TYPE	
Existing Light to Light L22	Sta 143+66, 24.0' Rt to Sta 139+61, 26.0' Rt	405	1.5"	826	(2) Underground Conductor No. 6 RHW/USE Underground Conductor No.6 USE (Ground)	Exst C4
Light L23 to Light L21	Sta 142+00, 24.0' Lt to Sta 137+23, 35.0' Lt	477	1.5"	970	(2) Underground Conductor No. 6 RHW/USE Underground Conductor No.6 USE (Ground)	Exst C5
Light L21 to Light L19	Sta 137+23, 35.0' Lt to Sta 133+10, 39.5' Lt	413	1.5"	842	(2) Underground Conductor No. 6 RHW/USE Underground Conductor No.6 USE (Ground)	Exst C5
Light L22 to Light L20	Sta 139+61, 26.0' Rt to Sta 135+00, 26.3' Rt	461	1.5"	938	(2) Underground Conductor No. 6 RHW/USE Underground Conductor No.6 USE (Ground)	Exst C4
Light L19 to Light L18	Sta 133+10, 39.5' Lt to Sta 131+30, 50.5' Lt	184	1.5"	384	(2) Underground Conductor No. 6 RHW/USE Underground Conductor No.6 USE (Ground)	Exst C5

LIGHT STANDARD SCHEDULE					
LIGHT NUMBER	LUMINAIRE TYPE	STANDARDS			
		TYPE	Pole Ht.	Mast Arm	Breakaway
L18	B	B	30'	8'	No
L19	A	A	40'	0' with Tenon "T" adapter.	Yes
L20	A	A	40'	0' with Tenon "T" adapter.	Yes
L21	A	A	40'	0' with Tenon "T" adapter.	Yes
L22	A	A	40'	0' with Tenon "T" adapter.	Yes

FUTURE FIBER CONDUIT SCHEDULE				
ITEM	STATION OFFSET	CONDUIT RUN		UNDERGROUND CONDUCTOR RUN
		TOTAL	SIZE (IN)	
Pull Box #6 to Existing Fiber Pull Box	Sta 135+65, 41.5' Lt to Sta 143+60, 30.0' Lt	996	2"	Empty Conduit with Tracer Wire



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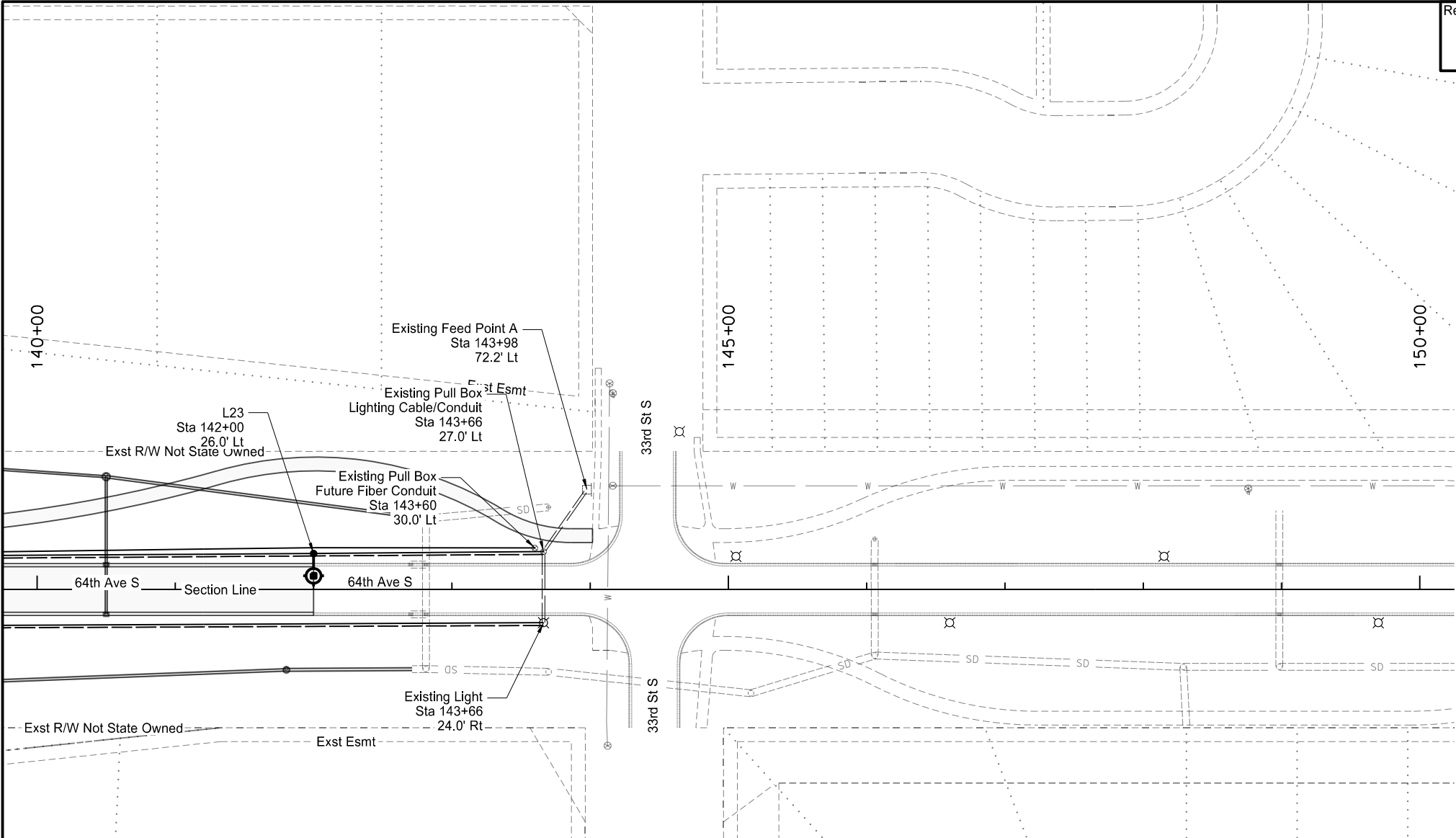
64th Avenue South - 38th St S to 33rd St S

Lighting

64th Avenue South  
Sta 130+00 to Sta 140+00

Revised	11/02/20	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-8-984(153)156	140	5

LIGHT STANDARD SCHEDULE					
LIGHT NUMBER	LUMINAIRE TYPE	STANDARDS			
		TYPE	Pole Ht.	Mast Arm	Breakaway
L23	A	A	40'	0' with Tenon "T" adapter.	Yes



LIGHTING CABLE & CONDUIT SCHEDULE						
ITEM	STATION OFFSET	CONDUIT RUN		UNDERGROUND CONDUCTOR RUN		CIRCUIT
		TOTAL	SIZE (IN)	TOTAL	SIZE/TYPE	
Existing Feed Point A to	Sta 143+98, 72.2' Lt to	Exst	2"	Exst	(2) Underground Conductor No. 6 RHW/USE	Exst C1
				Exst	Underground Conductor No.6 USE (Ground)	
				Exst	(2) Underground Conductor No. 6 RHW/USE	Exst C2
				Exst	Underground Conductor No.6 USE (Ground)	
				Exst	(2) Underground Conductor No. 6 RHW/USE	Exst C3
Existing Lighting Pull Box to	Sta 143+66, 27.0' Lt to	Exst	1.5"	Exst	Underground Conductor No.6 USE (Ground)	Exst C4
				Exst	(2) Underground Conductor No. 6 RHW/USE	
				Exst	Underground Conductor No.6 USE (Ground)	Exst C5
				Exst	(2) Underground Conductor No. 6 RHW/USE	
				Exst	Underground Conductor No.6 USE (Ground)	
Existing Light	Sta 143+66, 24.0' Rt			120	(2) Underground Conductor No. 6 RHW/USE	Exst C4
Existing Lighting Pull Box to Light L23	Sta 143+66, 27.0' Lt to Sta 142+00, 24.0' Lt	166	1.5"	60	Underground Conductor No.6 USE (Ground)	
				352	(2) Underground Conductor No. 6 RHW/USE	Exst C5
				176	Underground Conductor No.6 USE (Ground)	

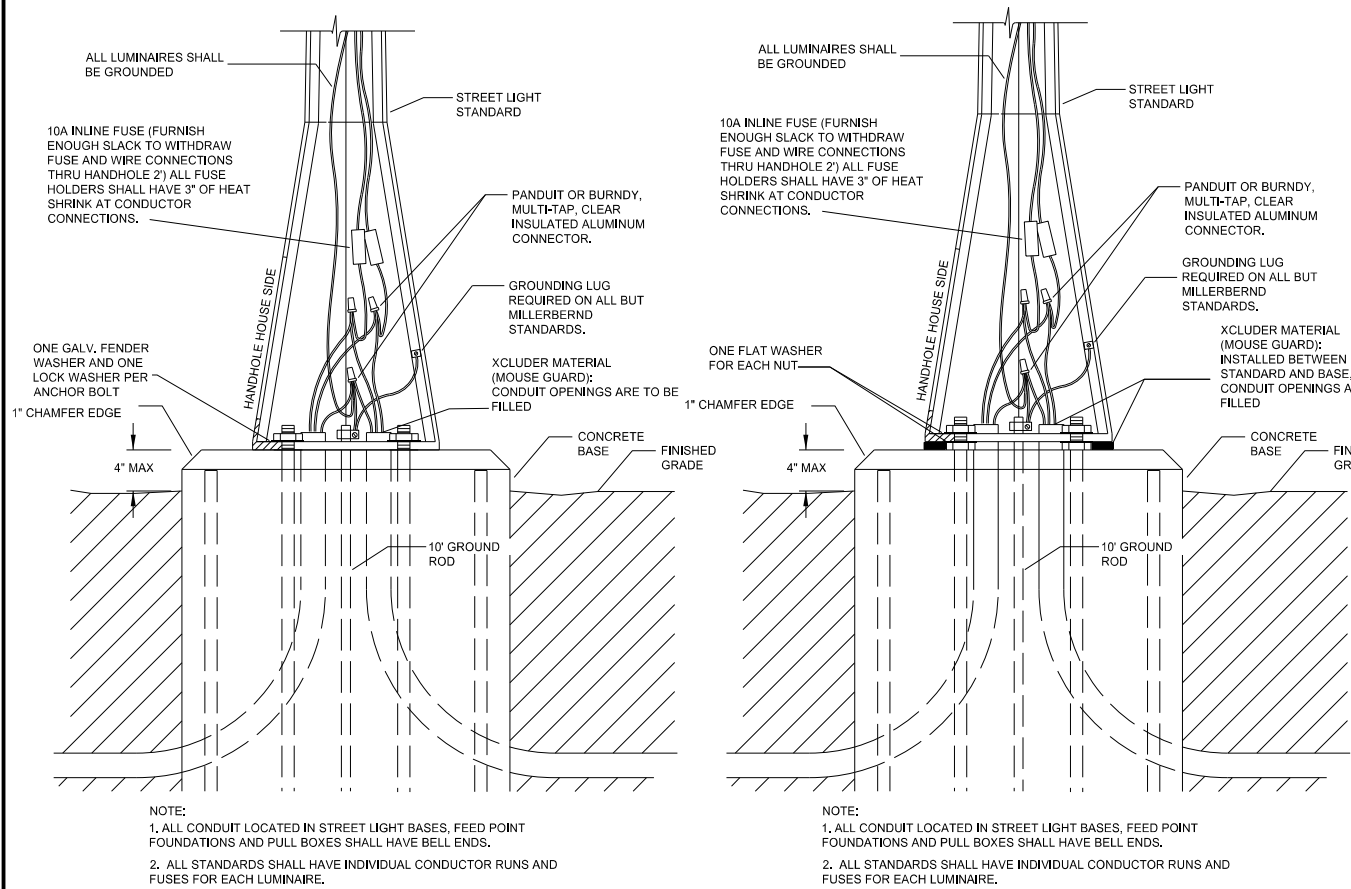


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64th Avenue South - 38th St S to 33rd St S

Lighting

64th Avenue South  
Sta 140+00 to Sta 150+00

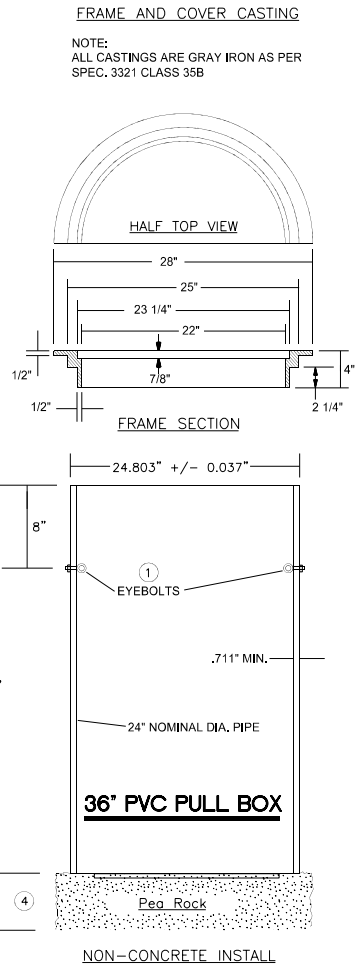


LIGHT STANDARD: NO LEVELING NUTS

NO SCALE

LIGHT STANDARD: WITH LEVELING NUTS

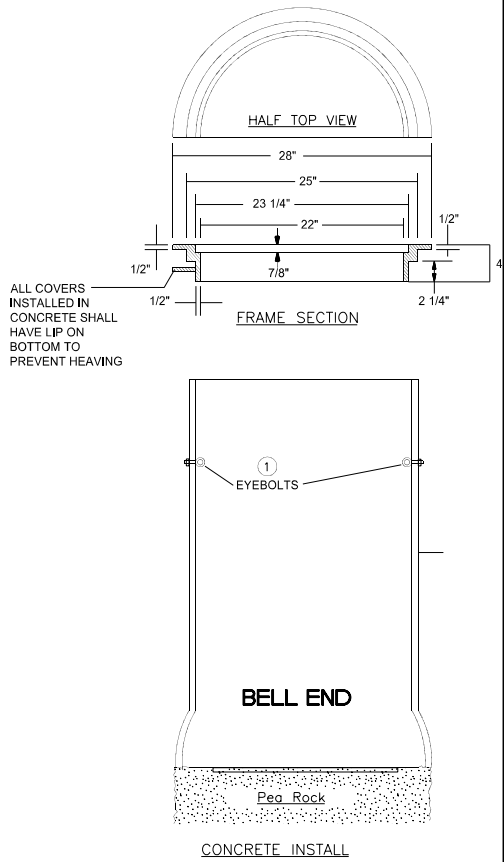
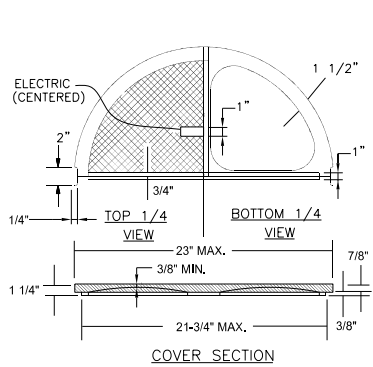
NO SCALE



- 1 DIA. X 1 1/4 \" SHANK LENGTH, WITH HEX. NUTS AT 180° APART (FOR LIFTING HANDHOLES AND SUPPORTING ELECTRICAL CABLES)
- 2 PLACE COMPACTED 2'-0\" AGGREGATE DRAIN BED (PEA ROCK) BELOW BOTTOM OF HANDHOLE TO THE SATISFACTION OF THE ENGINEER.
- 3 CONDUIT HOLES DIAMETER LOCATED IN THE BARREL SECTION ARE SIZED NO MORE THAN 1\" LARGER THAN THE CONDUIT OUTSIDE DIAMETER USED.
- 4 AFTER HANDHOLE AND CONDUIT INSTALLATION, SEAL ALL INSIDE WALLS WATER TIGHT TO THE SATISFACTION OF THE ENGINEER.
- 5 THE P.V.C. PIPE COMPLIES WITH ASTM F679T-1.
- 6 ALL CONDUITS SHALL HAVE BELL ENDS AND EXTEND A MAXIMUM OF 3\" INTO PULL BOX

PULL BOX, METAL FRAME AND COVER DETAIL

NO SCALE



SU-8-984(153)156				64th Avenue South	
Spec	Code	Item Description	Unit	Lighting System	IT System
770	0020	CONCRETE FOUNDATION-HIGHWAY LIGHTING	EA	20	-
770	0050	CONCRETE FOUNDATION-FEED POINT-TYPE A	EA	1	-
770	0100	PULL BOX	EA	2	5
770	0301	1IN DIA RIGID STEEL CONDUIT	LF	65	-
770	0320	1.5IN DIAMETER RIGID CONDUIT	LF	5,345	-
770	0330	2IN DIAMETER RIGID CONDUIT	LF	1,258	4,078
770	0505	UNDERGROUND CONDUCTOR NO6-TYPE RHW	LF	16,692	-
770	0507	UNDERGROUND CONDUCTOR NO10-TYPE RHW	LF	102	-
770	0605	UNDERGROUND CONDUCTOR NO6-TYPE THW	LF	8,346	-
770	0607	UNDERGROUND CONDUCTOR NO10-TYPE THW	LF	75	-
770	0745	FEED POINT-TYPE IV-PAD MOUNTED	EA	1	-
770	1003	ORNAMENTAL LIGHT STANDARD	EA	4	-
770	4210	LED LUMINAIRE - TYPE A (210 WATT)	EA	19	-
770	4211	LED LUMINAIRE - TYPE B (140 WATT)	EA	4	-
770	4300	UNDERPASS LIGHT UNIT CEILING MTD-50 WATT	EA	9	-
770	7010	LIGHT STANDARD 40FT MT HT (NO MAST ARM)	EA	19	-

Items shown are for informational purposes, contractor shall provide all labor and equipment required for the lighting system and future IT System to be fully operational as shown in the plans. Items shall be included in the corresponding price bids "LIGHTING SYSTEM A" AND "IT SYSTEM".

SPEC CODE BID ITEM			QTY	UNIT
770	0003	LIGHTING SYSTEM A 64th Avenue South	1	EA
772	9200	IT SYSTEM 64th Avenue South	1	EA

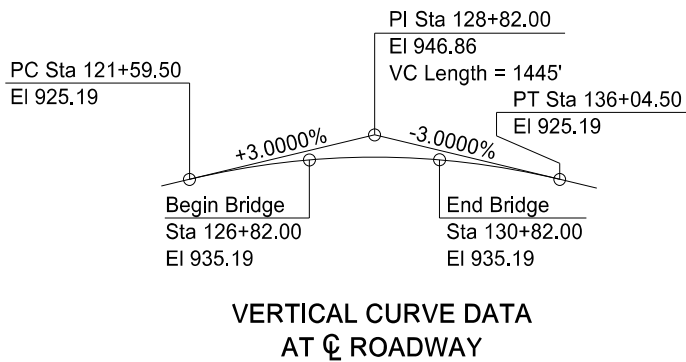
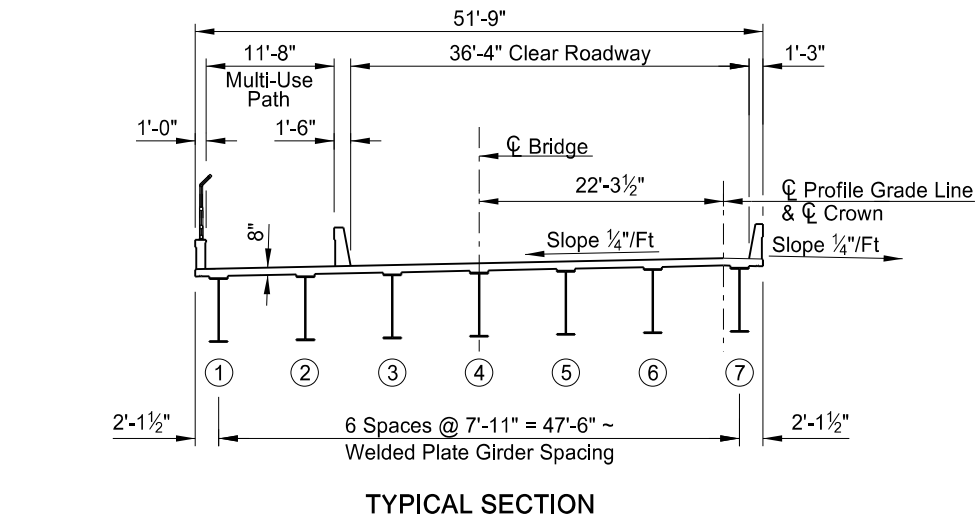
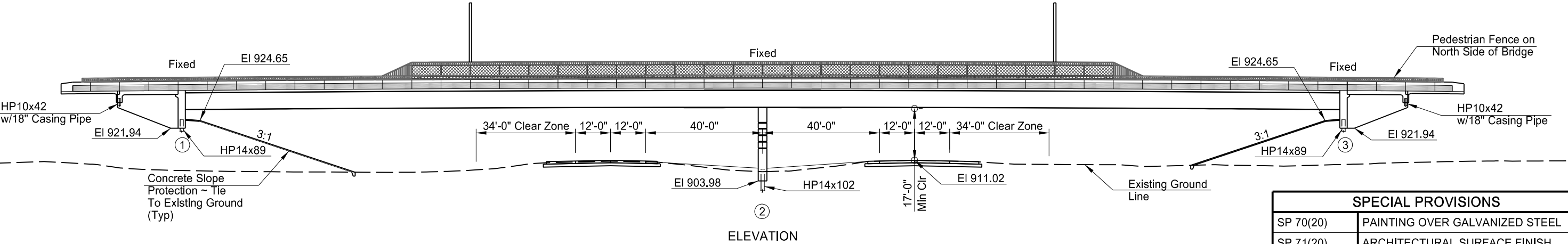
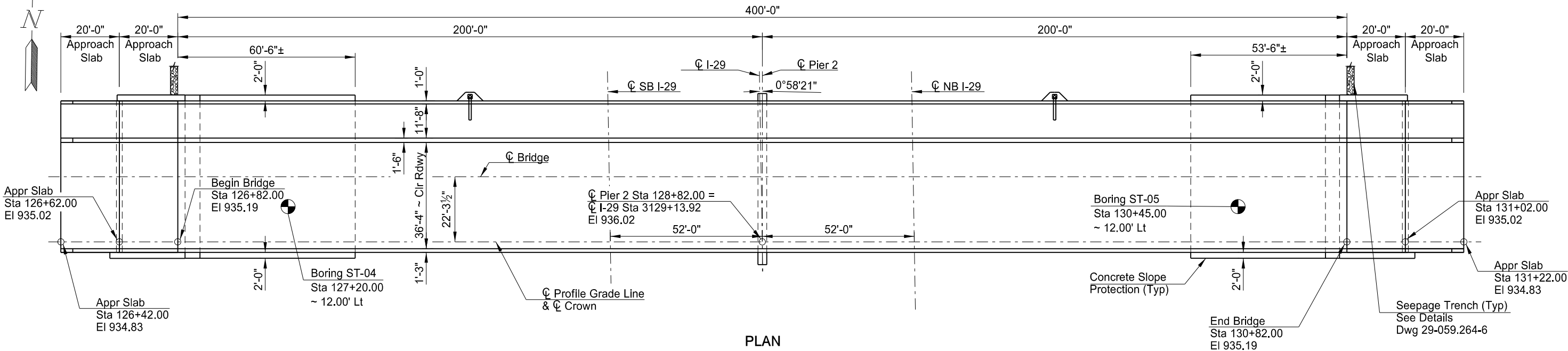
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64th Avenue South - 38th St S to 33rd St S

Lighting  
Details and Quantities

64th Avenue South

BRIDGE CODE	Revised 11/3/20	STATE	PROJECT NUMBER	SECTION NO.	SHEET NO.
X731		ND	SU-8-984(153)156	170	1



DESIGN STRENGTHS:

f'c = 3,000 psi ~ Class AE-3 Concrete  
f'c = 4,000 psi ~ Class AAE-3 Concrete  
fy = 50,000 psi ~ Structural Steel  
fy = 60,000 psi ~ Reinforcing Steel

Load & Resistance Factor Design

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SPECIAL PROVISIONS

SP 70(20)	PAINTING OVER GALVANIZED STEEL
SP 71(20)	ARCHITECTURAL SURFACE FINISH
SP 106(20)	CONDITIONS OF CONTRACT AWARD

STANDARD DRAWINGS

D-258-1, D-622-1, D-714-18, D-900-1

F.W.S. 15 PSF

HL-93 DESIGN LOADING

NORTH DAKOTA  
DEPARTMENT OF TRANSPORTATION  
64TH AVE SOUTH OVERPASS  
CITY OF FARGO, NORTH DAKOTA

BRIDGE LAYOUT

PROJECT: SU-8-984(153)156  
STATION: 3129+13.92  
CASS COUNTY

11/4/20 DATE  
Jon Ketterling /s/ BRIDGE ENGINEER

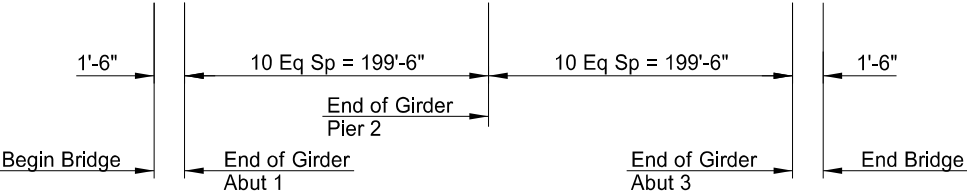


		23 U.S.C. 409 NDDOT Reserves All Objections	Revised 11/3/20	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
				ND	SU-8-984(153)156	170	2
<div>NOTES</div>							
100	SCOPE OF WORK: This project consists of building a new 2-span steel plate girder bridge with an overall bridge length of 400'-0" and a clear roadway width of 36'-4".						
100	GENERAL: Include the cost of furnishing and placing preformed expansion joint filler, concrete inserts, rebar couplers, silicone sealant, and other miscellaneous items in the price bid for Class AE-3 and AAE-3 concrete.						
105	WORK DRAWINGS: Submit work drawings for the following items to the Engineer to Review. <div><div>1. Structural Steel</div><div>2. Railing</div><div>3. Pedestrian Fence</div><div>4. Form Liner</div></div>						
210	EXCAVATION: Include the excavation costs at the abutments, as shown in the "Detail at Abutment", and the excavation costs at the pier in the lump sum bid item, "Class 1 Excavation."						
602	ENDWALLS: Place the endwall concrete at the same time as the deck.						
602	DECK PLACEMENT: Do not place deck concrete until the entire deck is formed. Place the deck concrete at a minimum rate of 45 CY per hour. See Dwg 29-059.264-18 for the deck pour sequence. A minimum of 72 hours is required between deck pours.						
602	BRIDGE APPROACH SLABS: Mechanically finish approach slabs as specified in Section 602.04 D, "Deck Finishing."						
602	SURFACE FINISH "D": Apply Surface Finish "D" on all exposed substructure surfaces except as noted in Architectural Surface Finish SP 71(20) and the exposed endwall areas outside of the exterior beams.						
602	BARRIERS: Construct V-grooves that are 3/4 inch wide and 3/4 inch deep in all faces, excluding form liner areas, of the barriers at the pier and at equal spaces between the piers and abutments at approximately 10-foot spacing.						
602	PENETRATING WATER REPELLENT TREATMENT: Apply penetrating water repellent to the driving surface of the bridge deck and approach slabs and the front and top faces of the barriers and wall, and the abutment and pier bearing surfaces a minimum of 21 days after placement of concrete and a minimum of 48 hours after completion of the final surface finish as required by Section 602.04 I "Surface Finish". Prior to applying penetrating water repellent, seal any cracks that form in the deck as directed by the Engineer. Include costs for crack sealing in the price bid for "Penetrating Water Repellent Treatment".						
616	FALSEWORK: Brace exterior girders to prevent rotation. Design the bracing assuming that the cross frames will not carry any of the load. The strength of the bracing will be dependent on the forces induced by the weight of the concrete, forms, equipment, and workers. <div>Brace the girders against rotation at the abutments until the endwall concrete has reached 70% of the final concrete strength.</div> <div>The contractor's bracing plan and design, stamped by a Professional Engineer licensed in North Dakota, will be submitted to the Engineer for review a minimum of 2 weeks prior to deck placement. Include all costs for this work in the lump sum bid for "Structural Steel."</div>						
616	STRUCTURAL STEEL: Structural steel will be AASHTO M 270 Grade 50T2, except the requirement for Charpy V-Notch test is waived for the bearing stiffeners, transverse stiffeners, connection plates and cross frames. The total weight of structural steel is approximately 1,009,700 pounds. <div>Install girder webs, girder ends and the pier cross frames to be vertical under steel dead load fit.</div> <div>Use stud shear connectors (Type B) that meet ASTM A108. Use pintles that meet ASTM A588. Use swedged anchor bolts that meet ASTM A449.</div> <div>Round all exposed corners and edges on all steel members to a 1/16" radius or ground to a 1/16" chamfer.</div>						
616	PAINT AND PAINTING: The structural steel will be painted brown, color number 10076 meeting AMS Standard 595A.						
622	PILE SLEEVES: Install 18-inch diameter pile sleeves at all approach slab pile (HP10x42) locations. The sleeves will be Type S Corrugated Polyethylene Culverts in accordance with AASHTO M-294. The piles sleeves will be embedded a minimum of 3 feet into the existing ground and will extend to the bottom of the approach slab grade beam. <div>Install the sleeves before any geofoam or piling has been placed. Backfill the sleeves with a polymer free sodium bentonite slurry, designed for sealing wells and bored holes. The bentonite slurry will be made by thoroughly mixing bentonite with water according to the manufacturer's recommendations for the product used. In no case will more than 100 gallons (500 L) of water be used per 80 pounds (50 kg) of bentonite. Include the cost for the pile sleeves in the price bid for "Casing Pipe 18IN".</div>						
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Revised	11/4/20	STATE	PROJECT NUMBER	SECTION NO.	SHEET NO.
		ND	SU-8-984(153)156	170	4

Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6	Girder 7
934.23	934.40	934.56	934.73	934.89	935.06	935.16
934.24	934.40	934.57	934.73	934.90	935.06	935.17
934.54	934.74	934.91	935.07	935.24	935.40	935.47
934.81	935.03	935.20	935.36	935.53	935.69	935.74
935.01	935.25	935.41	935.58	935.74	935.91	935.94
935.14	935.39	935.55	935.72	935.88	936.05	936.07
935.20	935.44	935.61	935.77	935.94	936.10	936.13
935.21	935.43	935.60	935.76	935.93	936.09	936.14
935.17	935.38	935.54	935.71	935.87	936.04	936.10
935.12	935.31	935.47	935.64	935.80	935.97	936.05
935.08	935.25	935.41	935.58	935.74	935.91	936.01
935.06	935.23	935.39	935.56	935.72	935.89	935.99
935.08	935.25	935.41	935.58	935.74	935.91	936.01
935.12	935.31	935.47	935.64	935.80	935.97	936.05
935.17	935.38	935.54	935.71	935.87	936.04	936.10
935.21	935.43	935.60	935.76	935.93	936.09	936.14
935.20	935.44	935.61	935.77	935.94	936.10	936.13
935.14	935.39	935.55	935.72	935.88	936.05	936.07
935.01	935.25	935.41	935.58	935.74	935.91	935.94
934.81	935.03	935.20	935.36	935.53	935.69	935.74
934.54	934.74	934.91	935.07	935.24	935.40	935.47
934.24	934.40	934.57	934.73	934.90	935.06	935.17
934.23	934.40	934.56	934.73	934.89	935.06	935.16

BRIDGE BID ITEMS						
SPEC	CODE	ITEM DESCRIPTION	UNIT	BASE BID	OPTION 1	OPTION 2
210	0099	CLASS 1 EXCAVATION	L SUM	1	0	0
210	0201	FOUNDATION PREPARATION	EA	1	0	0
258	0100	CONCRETE SLOPE PROTECTION	SY	709	0	0
602	0130	CLASS AAE-3 CONCRETE	CY	746.7	0	0
602	1130	CLASS AE-3 CONCRETE	CY	265.7	0	0
602	1133	CONCRETE BRIDGE APPROACH SLAB	SY	230	0	0
602	1134	PILE SUPPORTED APPROACH SLAB	SY	230	0	0
602	1250	PENETRATING WATER REPELLENT TREATMENT	SY	3,250	0	0
602	7050	ARCHITECTURAL SURFACE FINISH	SF	0	0	4,169
612	0115	REINFORCING STEEL-GRADE 60	LBS	33,647	0	0
612	0116	REINFORCING STEEL-GRADE 60-EPOXY COATED	LBS	157,843	0	0
616	5890	STRUCTURAL STEEL	L SUM	1	0	0
622	0020	STEEL PILING HP 10 X 42	LF	1,250	0	0
622	0068	STEEL PILING HP 14 X 89	LF	1,750	0	0
622	0070	STEEL PILING HP 14 X 102	LF	1,955	0	0
624	0124	PEDESTRIAN FENCE	LF	465.3	0	0
624	0151	RAILING	LF	0	465.3	0
714	8498	CASING PIPE 18 IN	LF	256	0	0
930	3000	BRIDGE BENCH MARKS	SET	1	0	0
930	7012	ROADWAY CANOPY	L SUM	1	0	0
930	9537	ABUTMENT UNDERDRAIN SYSTEM	EA	2	0	0

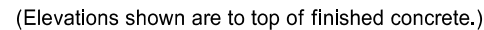


SCREED ELEVATIONS  
(Girder 1 is the north girder.)

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64TH AVE SOUTH OVERPASS  
CITY OF FARGO, NORTH DAKOTA

SCREED ELEVATIONS &  
BID ITEM QUANTITIES



**NOTE:**

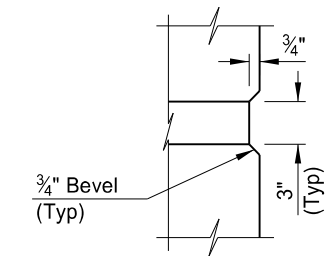
$$P = \frac{4.5E}{S + 0.2} \times \frac{W + 0.2M}{W + M}$$

P = Safe bearing value, in pounds.  
W = Weight of striking parts (ram), in pounds.  
M = Weight of parts being driven, in pounds. Includes pile weight, anvil (if any), driving cap, etc.  
E = Energy per blow, in foot-pounds.  
S = Average penetration of pile in inches per blow for last ten blows.

		PILE COORDINATES						
		PILE	NORTHING	EASTING		PILE	NORTHING	EASTING
WEST APPR SLAB		1	430,927.9209	2,885,318.7961	ABUT 3	1	430,936.8094	2,885,736.4563
		5	430,883.9269	2,885,319.5216		7	430,888.8159	2,885,737.2478
ABUT 1		1	430,930.2546	2,885,339.0103	EAST APPR SLAB	1	430,935.1436	2,885,756.7365
		7	430,882.2611	2,885,339.8019		5	430,891.1495	2,885,757.4621
PIER 2		1	430,936.4479	2,885,537.6852				
		17	430,877.7892	2,885,538.6526				

64TH AVE SOUTH OVERPASS  
CITY OF FARGO, NORTH DAKOTA

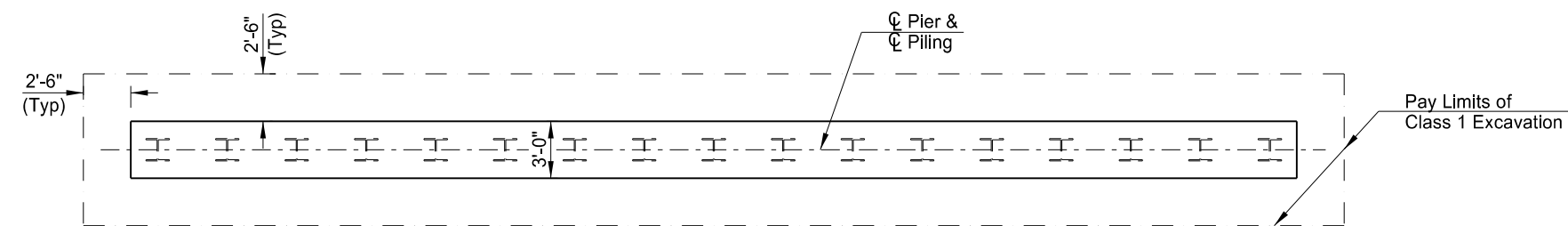
## PILE LAYOUT & BEARING ELEVATIONS



## PLAN



### ELEVATION



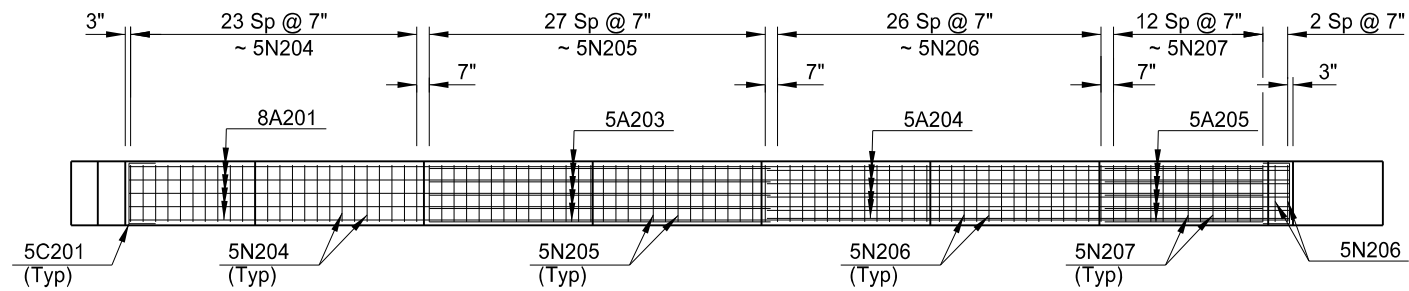
A-A

64TH AVE SOUTH OVERPASS  
CITY OF FARGO, NORTH DAKOTA

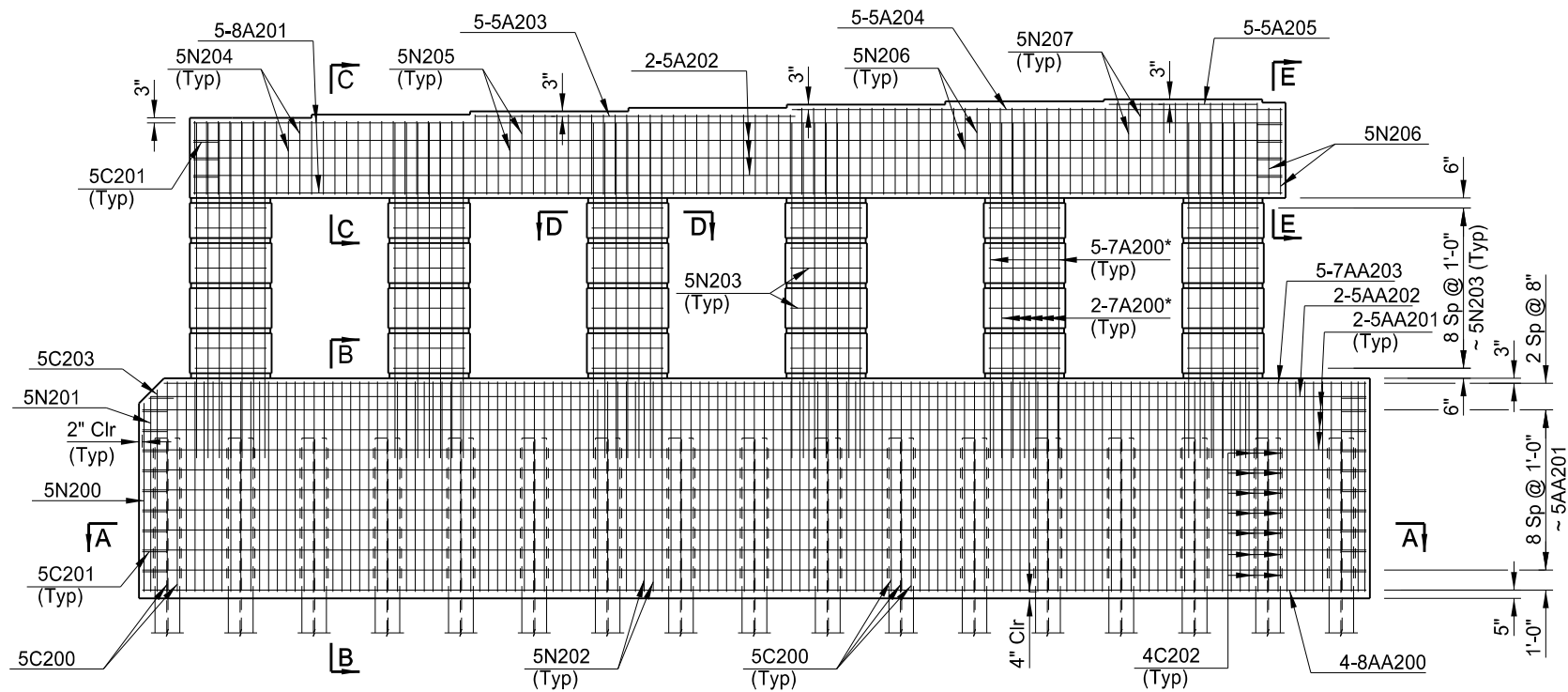
(SHOWING DIMENSIONS)

## PIER DETAILS

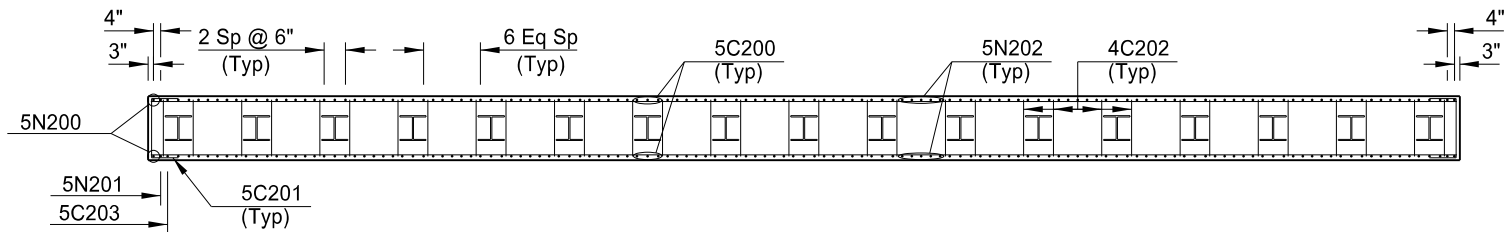
Revised	11/4/20	STATE	PROJECT NUMBER	SECTION NO.	SHEET NO.
		ND	SU-8-984(153)156	170	11



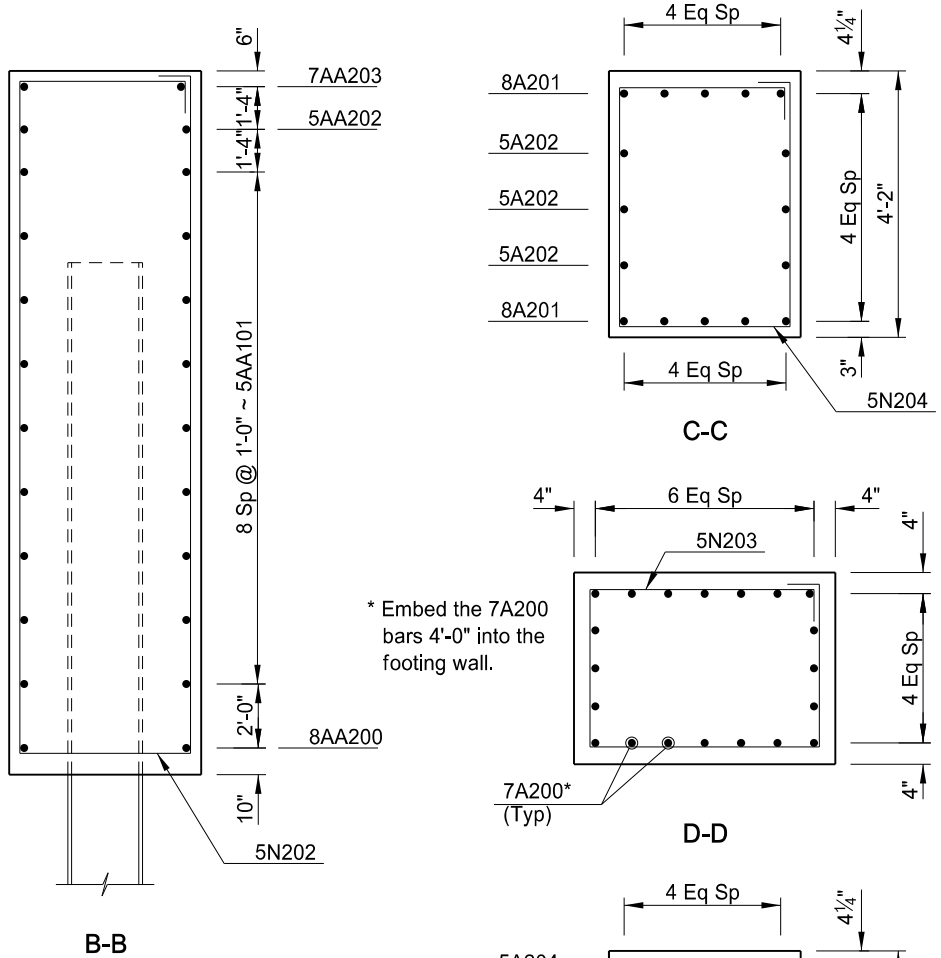
PLAN



ELEVATION



A-A

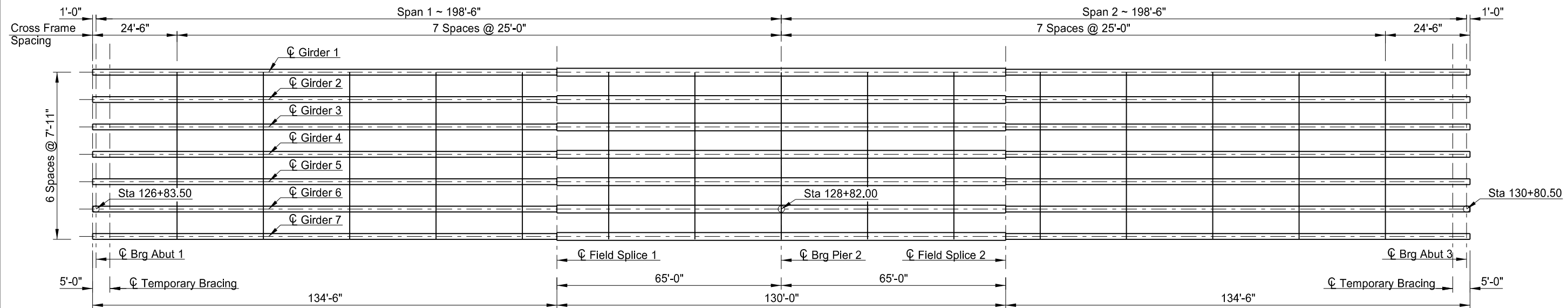


\*\* Terminate the marked bars with rebar couplers (south end only). Field cut the marked bars so that 2" clear cover remains from the end of any coupler. Cap the exposed side of all couplers to facilitate future use in bridge widening. Include couplers in the price bid for "Reinforcing Steel-Grade 60".

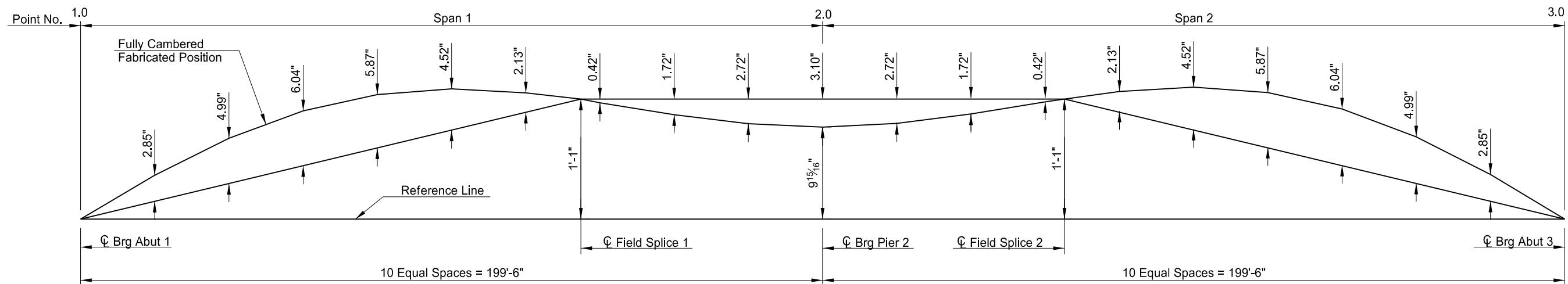
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QUANTITIES	
REINFORCING STEEL-GRADE 60	17,382 LBS
CLASS AE-3 CONCRETE	137.5 CY
64TH AVE SOUTH OVERPASS CITY OF FARGO, NORTH DAKOTA	
(SHOWING REINFORCING)	
PIER DETAILS	

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PLAN



SHOP CAMBER DIAGRAM

SHOP CAMBER DEAD LOAD DEFLECTION TABLE

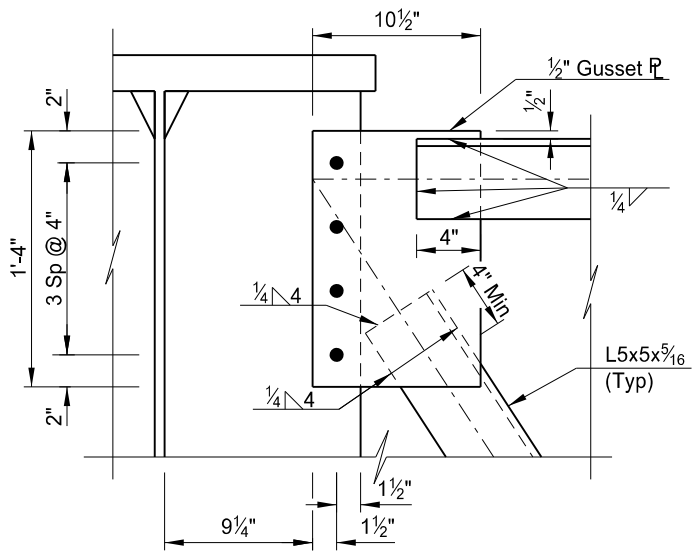
POINT NO.	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.67	1.70	1.80	1.90	2.00	2.10	2.20	2.30	2.33	2.40	2.50	2.60	2.70	2.80	2.90	3.00
GIRDERS 1-7 (INCHES)	0.00	2.90	5.28	6.77	7.24	6.73	5.38	4.15	3.57	1.77	0.48	0.00	0.48	1.77	3.57	4.15	5.38	6.73	7.24	6.77	5.28	2.90	0.00

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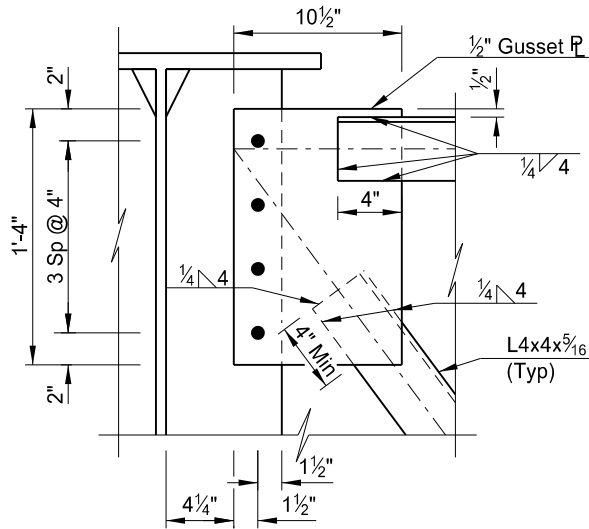
64TH AVE SOUTH OVERPASS  
CITY OF FARGO, NORTH DAKOTA

FRAMING PLAN &  
SHOP CAMBER DIAGRAM

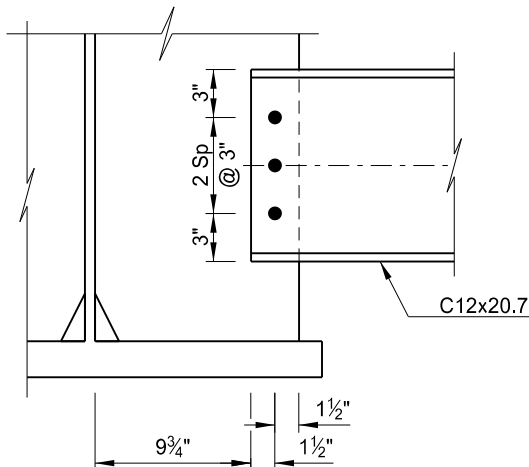
Revised	11/3/20	STATE	PROJECT NUMBER	SECTION NO.	SHEET NO.
		ND	SU-8-984(153)156	170	16



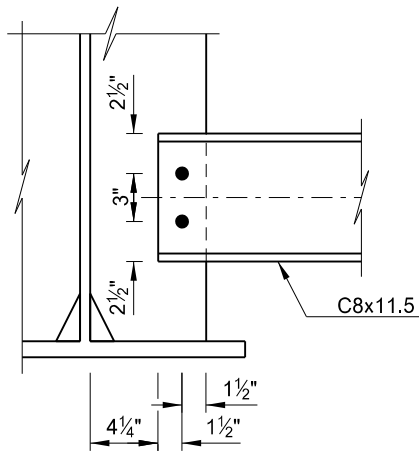
DETAIL A



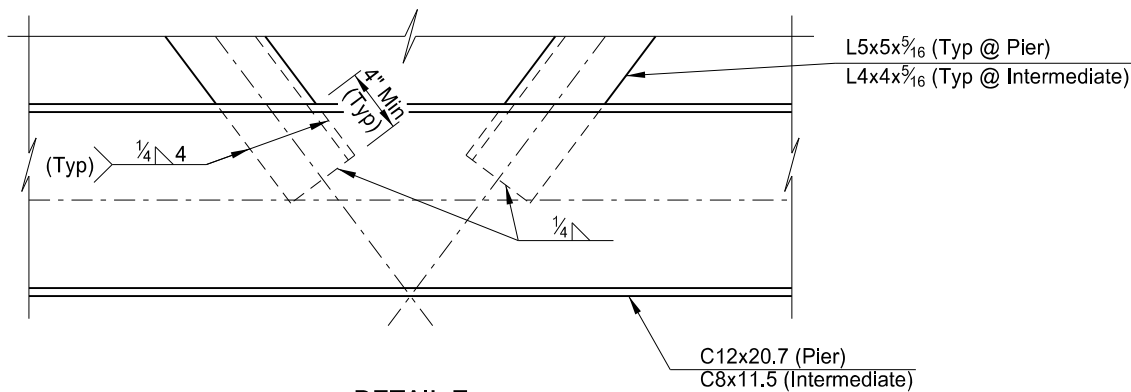
DETAIL B



DETAIL C



DETAIL D



DETAIL E

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Transportation

- NOTES:**
1. See Dwg 29-059.264-15 for location of Details A-E.
  2. The Contractor has the option to replace the gusset plate welds with bolts. Show the configuration of the connection in the structural steel shop drawing submittal. Submit calculations stamped by a licensed professional engineer for approval.

64TH AVE SOUTH OVERPASS  
CITY OF FARGO, NORTH DAKOTA

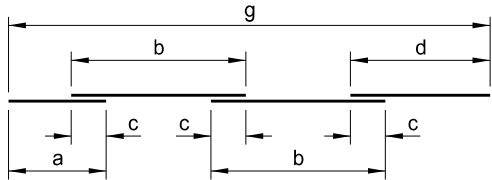
GIRDER DETAILS

Revised	11/4/20	STATE	PROJECT NUMBER	SECTION NO.	SHEET NO.
		ND	SU-8-984(153)156	170	22

BILL OF REINFORCING STEEL, GRADE 60													
LETTER PREFIX OF BAR MARK DENOTES SHAPE ~ SEE BAR DETAILS													
LOCA-TION	SIZE	MARK	NO. EACH /SET	NOMINAL LENGTH	DETAILING DIMENSIONS								
					a	b	c	d	e	f	g	h	k
PIER	8	AA200	4	65'-0"		40'-0"	3'-10"	25'-0"	1		61'-2"		
	5	AA201	18	64'-2"		40'-0"	3'-0"	24'-2"	1		61'-2"		
	5	AA202	2	63'-9"		40'-0"	3'-0"	23'-9"	1		60'-9"		
	7	AA203	5	64'-7"		40'-0"	4'-2"	24'-7"	1		60'-5"		
	7	A200	180	16'-9"		16'-9"							
	8	A201	10	54'-5"		54'-5"							
	5	A202	5	54'-5"		54'-5"							
	5	A203	5	15'-10"		15'-10"							
	5	A204	5	24'-7"		24'-7"							
	5	A205	5	7'-7"		7'-7"							
	5	C200	50	23'-8"		10'-6"	2'-8"	10'-6"					
	5	C201	27	5'-8"		1'-6"	2'-8"	1'-6"					
	4	C202	238	3'-8"		6"	2'-8"	6"					
	5	C203	1	22'-10"		10'-1"	2'-8"	10'-1"					
	5	N200	1	25'-2"	2'-8"	9'-5"	6"					0	12
	5	N201	1	25'-10"	2'-8"	9'-9"	6"					0	12
	5	N202	82	27'-4"	2'-8"	10'-6"	6"					0	12
	5	N203	54	13'-2"	2'-6"	3'-7"	6"					0	12
	5	N204	24	13'-8"	2'-8"	3'-8"	6"					0	12
	5	N205	28	14'-4"	2'-8"	4'-0"	6"					0	12
	5	N206	29	14'-8"	2'-8"	4'-2"	6"					0	12
	5	N207	13	15'-0"	2'-8"	4'-4"	6"					0	12

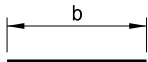
NOTES:

1. Verify the quantity, size, and shape of the bar reinforcement against the structure drawings and immediately notify the Engineer of any discrepancies. Discrepancies in the bar list will not be cause for adjustment of the contract unit price.
2. All dimensions are out to out of bars.
3. Nominal length of each bent bar or cut bar is the sum total of the detailing dimensions for that bar, unless otherwise noted.
4. The "f" dimension indicates the inside radius unless otherwise noted.

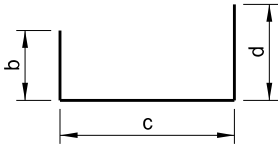


c = Lap Splice (typ)  
e = # of "b" Length Pieces in a Set  
Total Length per Set = e x b + a + d

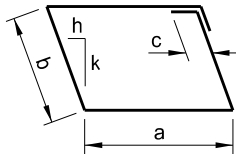
AA



A



C



N

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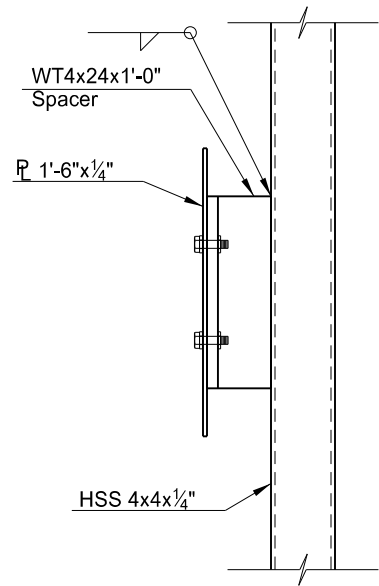
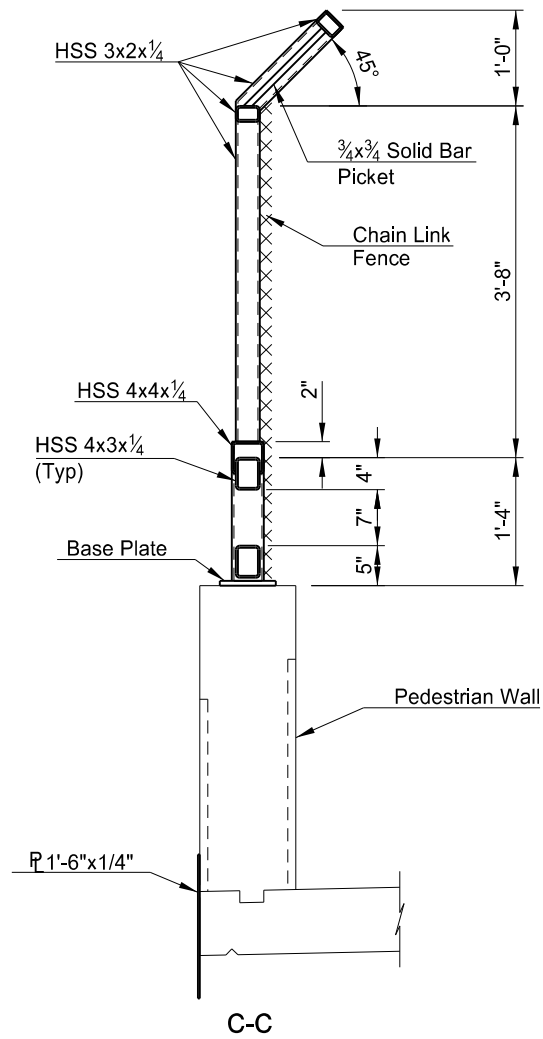
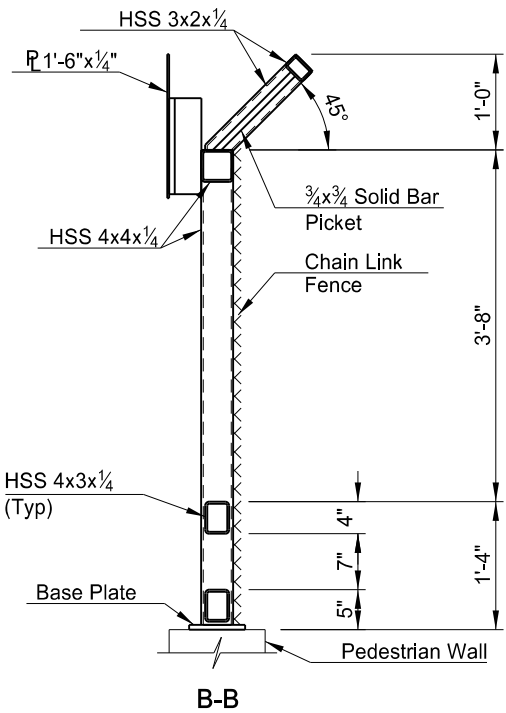
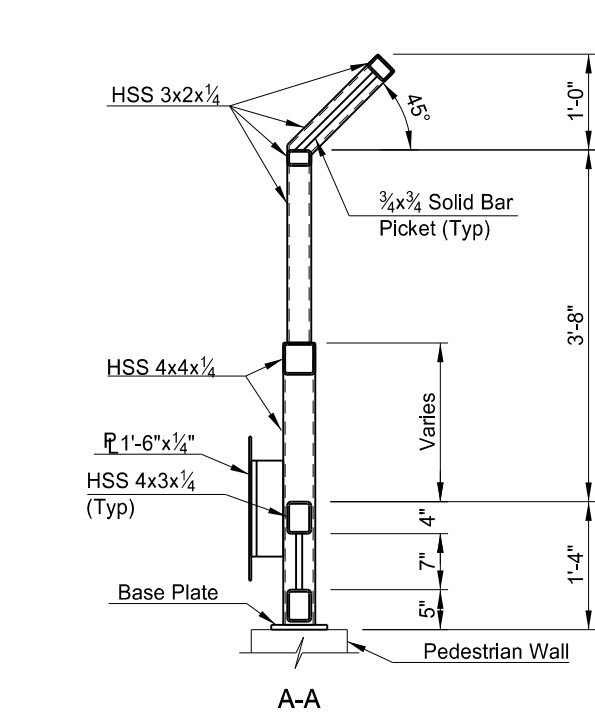
64TH AVE SOUTH OVERPASS  
CITY OF FARGO, NORTH DAKOTA

REINFORCING BAR LIST & DETAILS



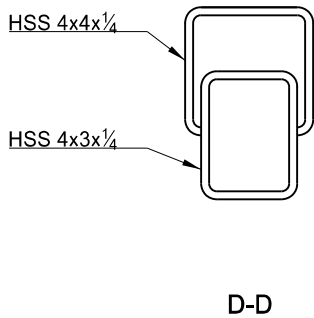
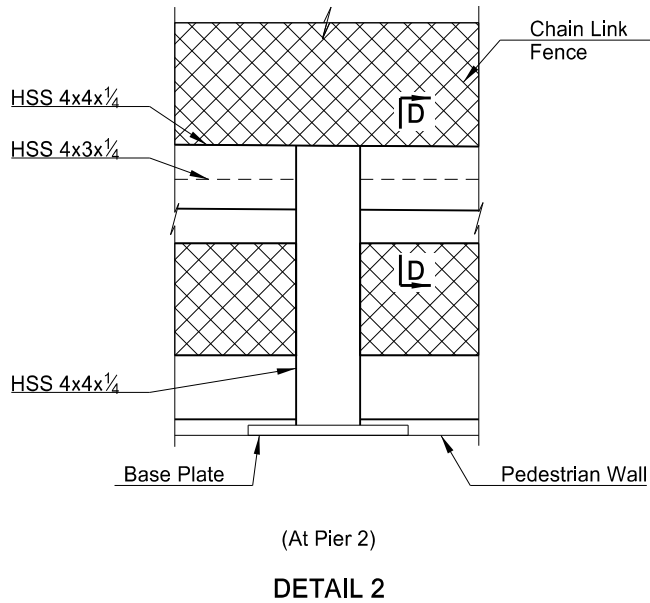
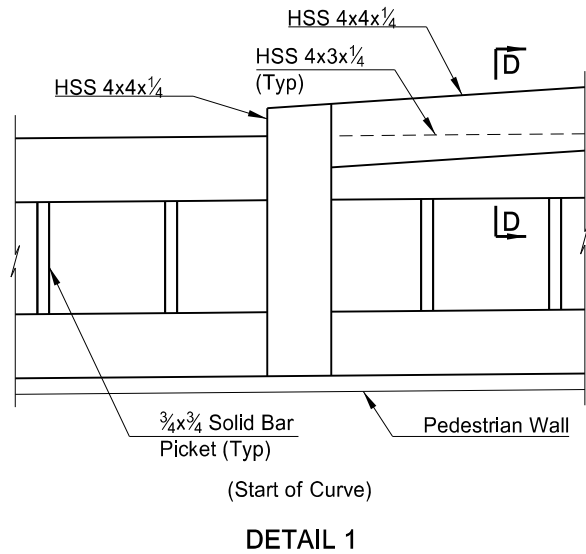
Revised	11/3/20	STATE	PROJECT NUMBER	SECTION NO.	SHEET NO.
		ND	SU-8-974(153)156	170	30

- NOTES:
- See Dwg. 29-059.264-29 for the locations of Cross Sections A-A through C-C and Details 1 and 2.
  - Attach the curved plate to every post with a minimum of four bolts. Connection design to be designed by Railing Fabricator. Use lock washers on all bolts.
  - Drill and epoxy the curved plate into the pedestrian wall near the abutments and pier at locations specified by Railing Fabricator. Include the epoxy and all connections in the work drawings for the Railing.



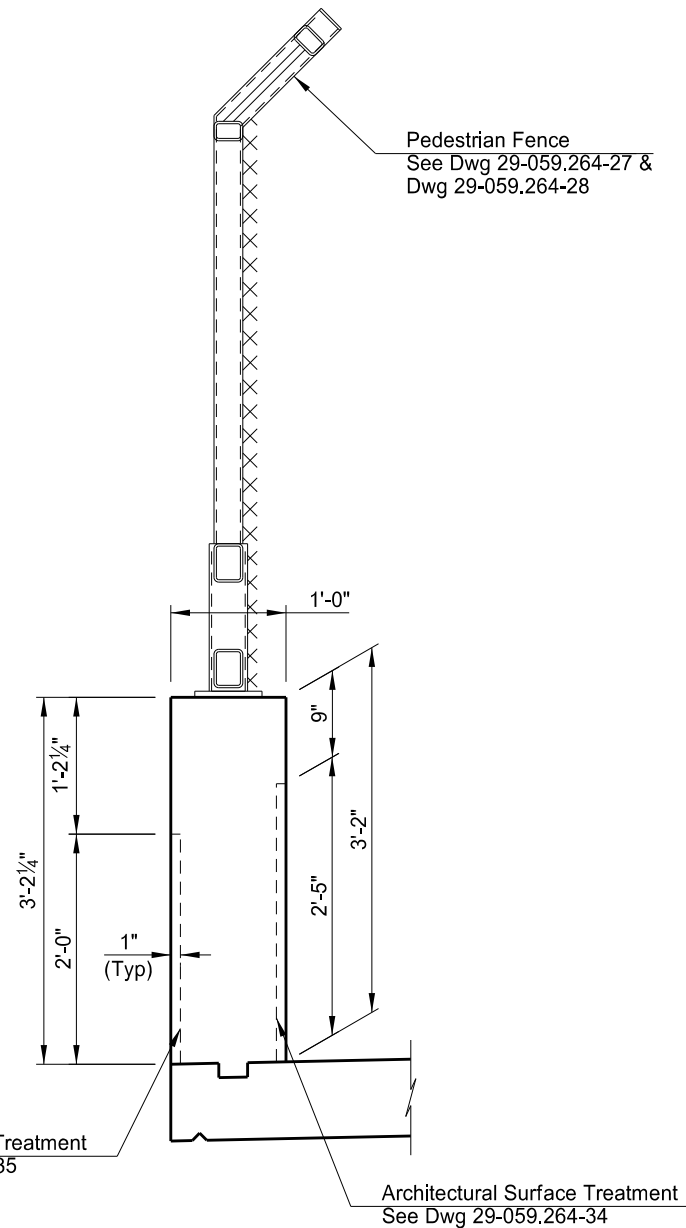
CURVED PLATE CONNECTION DETAIL

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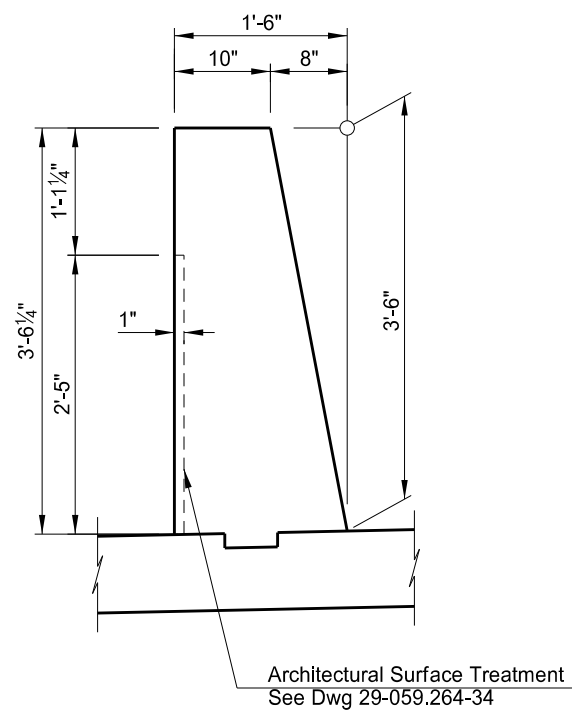


QUANTITIES
SEE DWG 29-059.264-29
64TH AVE SOUTH OVERPASS CITY OF FARGO, NORTH DAKOTA
RAILING TYPICAL SECTIONS OPTION 1

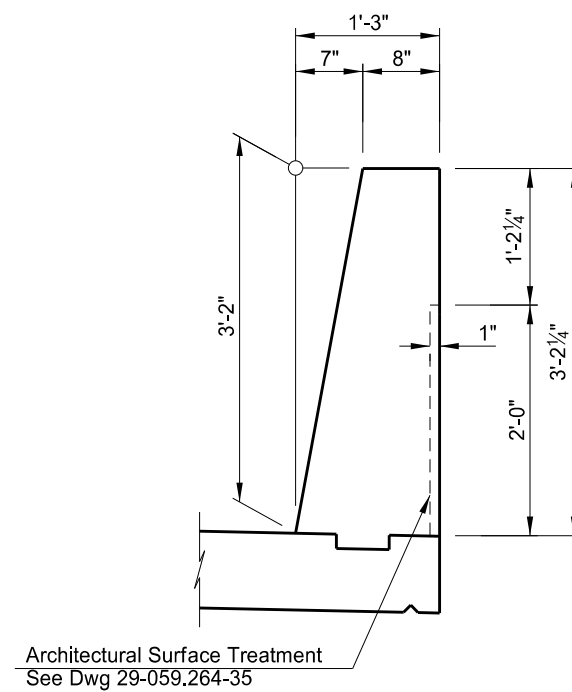
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		ND	SU-8-984(153)156	170	33



PEDESTRIAN WALL DETAIL



INTERIOR BARRIER DETAIL

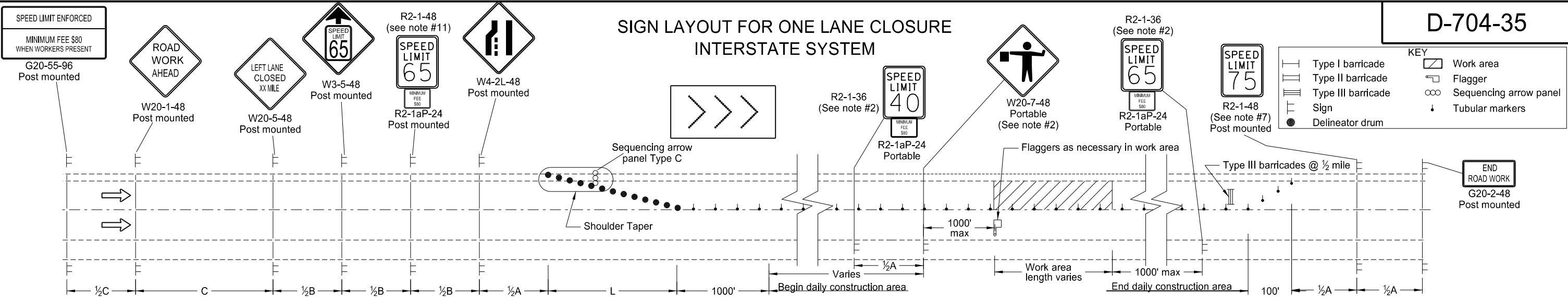


EDGE BARRIER DETAIL

This document  
was originally issued and  
sealed by Joshua R Schroeder,  
Registration Number PE 5824,  
on 11/3/20 and the original  
document is stored at the North  
Dakota Department of  
Transportation

64TH AVE SOUTH OVERPASS  
CITY OF FARGO, NORTH DAKOTA

ARCHITECTURAL SURFACE FINISH LIMITS  
OPTION 2



**LEFT LANE CLOSED WORKERS IN WORK AREA**

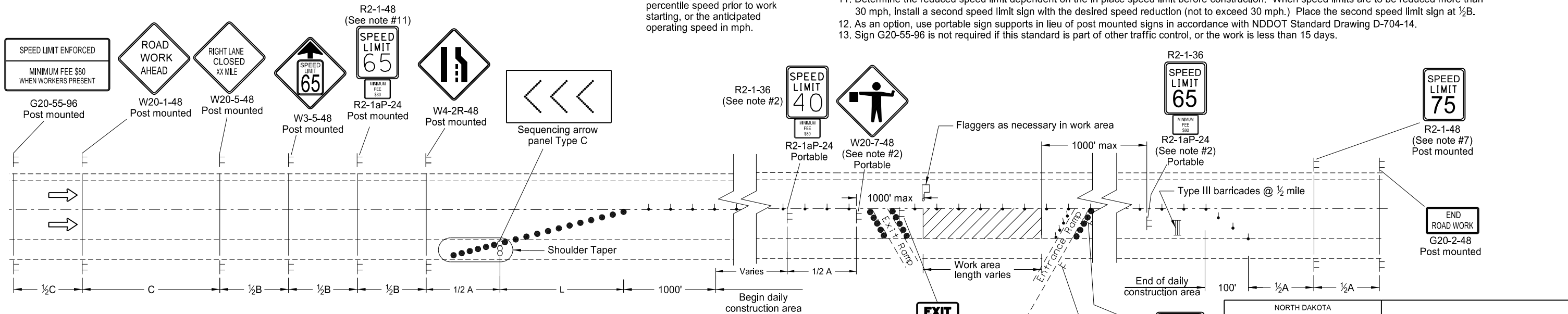
Longitudinal Buffer Space	
Speed (mph)*	Length Min (feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

\*Posted speed, off-peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.

**Notes:**

1. Install advance signs for flagging when flaggers are flagging.
2. Move the advanced flagger sign and the speed limit signs as the work area moves through the construction zone. When the work area is not visible from the flagger, move the flagger station so the work area is visible. Space the 40 mph speed limit sign at 1/2A in advance of the flagger sign and move the 65 mph speed limit sign. Cover or remove the 40 mph speed limit and Minimum Fee \$80 signs and the 65 mph speed limit sign upon completion of the work day or when workers are not present.
3. RAMPs: When the work area encompasses an entrance ramp, install a 40 mph speed limit sign on the ramp and cover any existing yield sign. Install new yield sign as necessary. Remove the ramp speed limit sign when the main line 40 mph speed zone is moved past the ramp.
4. Variables:
  - S=Numerical value of speed limit or 85th percentile
  - W=The width of taper.
  - L=Minimum length of taper, or SxW for freeways, expressways, and all other roads with speeds of 45 mph or greater, or WxSxS/60 for urban, residential, and other streets with speeds of 40 mph or less.
5. Space delineator drums for tapering traffic at the dimension "S".
6. Place sequencing arrow panels at the beginning of the taper when possible. Where shoulder width does not provide sufficient room, move the panel closer to the work area and place on the roadway surface.
- Use Type C on roadways with high traffic speeds and volumes (over 40 mph or 5000 ADT or greater).
7. Re-establish the speed limit. Determine the exact speed limit in the field, dependent on location and conditions.
8. Cover existing speed limit signs within a reduced speed zone.
9. Upon approval, the Engineer will measure obliterated or covered pavement marking as Obliteration of Pavement Marking.
10. Install flags on warning signs in urban areas when signs are not portable. Mount 24 inch square flags perpendicular to the edges of the diamond sign, and at such a distance above the edge that the flag does not touch the sign when limp.
11. Determine the reduced speed limit dependent on the in place speed limit before construction. When speed limits are to be reduced more than 30 mph, install a second speed limit sign with the desired speed reduction (not to exceed 30 mph.) Place the second speed limit sign at 1/2B.
12. As an option, use portable sign supports in lieu of post mounted signs in accordance with NDDOT Standard Drawing D-704-14.
13. Sign G20-55-96 is not required if this standard is part of other traffic control, or the work is less than 15 days.

ADVANCE WARNING SIGN SPACING			
Road Type	Distance Between Signs Min (ft)		
	A	B	C
Rural - High Speed (over 50 mph to 65 mph)	720	720	720
Urban Expressway and Freeway (55 mph to 60 mph)	850	1350	2200
Rural Expressway and Freeway (70 mph to 75 mph)	1000	1500	2640
Interstate/4-Lane Divided (Maintenance and Surveying)	750	1000	1500



**RIGHT LANE CLOSED WORKERS IN WORK AREA**

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
9-7-2012	
REVISIONS	
DATE	CHANGE
6/23/2014	Revised Note 12.
3/15/2016	Removed Do Not Pass signs and updated notes.
8/17/2017	Moved speed signs. Added note.
10/17/2017	Corrected spelling of "shoulder".
11/01/2019	Revised tubular Mkrs symbols.

This document was originally issued and sealed by  
Kirk J Hoff,  
Registration Number  
PE- 4683,  
on 11/1/19 and the original document is stored at the  
North Dakota Department  
of Transportation