

DESIGN DATA			
Traffic	Average Daily		
Current	Pass: 558	Trucks: 62	Total: 620
Forecast	Pass:	Trucks:	Total:
Clear Zone Distance:	Design Speed: 25		
Minimum Sight Dist. for Stopping:	Bridges: N/A		
Sight Dist. for No Passing Zone:	N/A		
Pavement Design Life (years)			
Design Accumulated One-way	ESALs:		

STATE	PROJECT NO.	PCN	SECTION NO.	SHEET NO.
ND	SS-2-013(055)298	20977	1	1

JOB # 2 NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

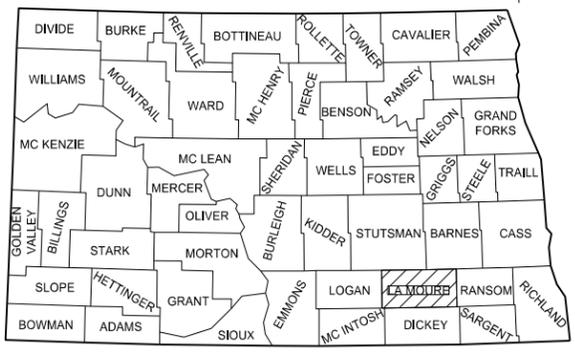
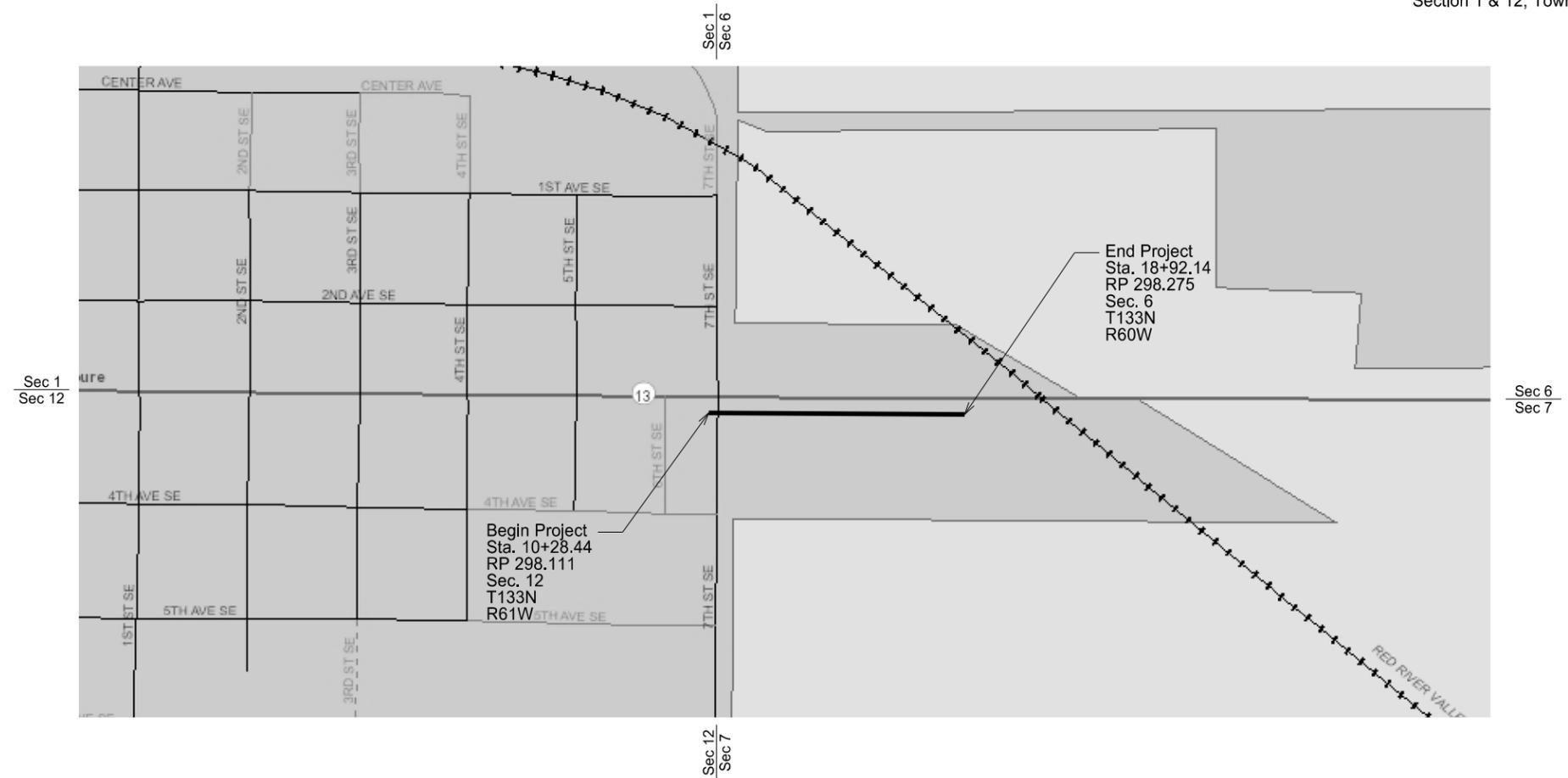
SS-2-013(055)298
LaMoure, ND

GOVERNING SPECIFICATIONS:
2014 Standard Specifications adopted by the North Dakota Department of Transportation and the Supplemental Specifications effective on the date the project is advertised.

LaMoure County
South Side of ND 13 from 7th Street SE to 900' East
Concrete Sidewalk, Aggregate Base, Grading, Pavement Marking,
Signing, Drainage and Incidentals

PROJECT NUMBER \ DESCRIPTION	NET MILES	GROSS MILES
SS-2-013(055)298	0.164	0.164

LEGAL DESCRIPTION
Section 6 & 7, Township 133N, Range 60W
Section 1 & 12, Township 133N, Range 61W



STATE COUNTY MAP

DESIGNERS
David A. Roedel, P.E.
Caleb B. Kjetland
David A. Zemaitis

APPROVED DATE 05/14/15

Robert Fode, P.E.
OFFICE OF PROJECT DEVELOPMENT
ND DEPARTMENT OF TRANSPORTATION

I hereby certify that the attached plans were prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of ND.

APPROVED DATE 05/11/15

David A. Roedel, P.E.
Moore Engineering, Inc.

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LIST OF STANDARD DRAWINGS

<u>Standard No.</u>	<u>Description</u>
D-101-1, 2, 3	NDDOT Abbreviations
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D-704-9	Construction Sign Details – Terminal and guide Signs
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D-704-14	Construction Sign Punching and Mounting Details
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D-748-1	Curb & Gutter and Valley Gutter
D-750-2	Sidewalk
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D-754-23	Perforated Tube Assembly Details
D-754-24	Mounting Details Perforated Tube
D-754-24A	Breakaway Coupler System for Perforated Tubes
D-754-25	Mounting Details Perforated Tube
D-754-28	Sign Punching, Stringer and Support Location Details Regulatory, Warning and Guide Signs
D-754-46	Bike Route Signs, Punching, Stringer & Support Location Details Regulatory, Warning and Guide Signs
D-754-87	Sign Punching, Stringer Location Details for Street name Signs and 911 Signs
D-762-1	Pavement Marking Message Details

NOTES

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GENERAL NOTES

100-P01 CONSTRUCTION TRAFFIC AND NOISE: The contractor's construction traffic shall not park or operate on any sidewalk or multi-use path either existing or that has been established. Parking shall be allowed per City ordinance and posted signing. All streets shall remain open to two-way traffic during construction. The contractor will also ensure that construction activities are conducted during daylight hours only Monday through Saturday. Work will not be permitted on Sunday.

107-500 PAVEMENT SWEEPING: Sweep the roadway adjacent to the construction area at the end of each day. Utilize a vacuum or pickup type sweeper.

107-700 HAUL ROADS: The Engineer will not designate paved roads off state system as haul roads.

107-710 HAUL ROADS: Before submitting a proposal, contact the appropriate State, County, Township, or City officials to determine if there are any roadways that will be designated as "no haul route".

202-P01 SAWING: The "Saw Concrete" item shall be payment for sawing existing sidewalks and curb & gutter to facilitate proper removal for connecting to existing hard surfaces. "Saw Bituminous Surfacing - Full Depth" item shall be payment for sawing existing asphaltic pavement. No payment shall be given for resawing areas that were previously sawed but damaged.

202-P02 REMOVAL OF CURB & GUTTER: All curb and gutter shall be sawcut at the nearest joint.

203-P01 COMMON EXCAVATION-WASTE: The "Common Excavation-Waste" item shall include any excavation required beyond the topsoil stripping to bring the subgrade to a depth of 10" below finish sidewalk grade. Approximately 4" of additional "Common Excavation-Waste" will be required beyond the topsoil removal and salvage. Payment for "Common Excavation-Waste" shall be by plan quantity.

203-P02 TOPSOIL: Payment for "Topsoil" shall be by plan quantity.

216-P01 WATER: Water for compaction, turf establishment, and for use as a dust palliative, is available from the city. Contractors must contact the Public Works Department to obtain a hydrant permit prior to using city water. Contact Del Kindelspire at (701)-709-0236.

251-P01 SEEDING CLASS III:

The seed mixture for permanent seeding shall be as follows:

Perennial Ryegrass-50 lb/acre
Park Kentucky Bluegrass-50 lb/acre
Durar hard Fescue-30 lb/acre

302-P01 SCARIFY & RECOMPACT: The area under the sidewalk as shown on the typical section on plan sheet 30-1 shall be scarified to a depth of 6 inches and recompact in accordance with NDDOT Standard Specification 203.04 E.2 Compaction Control, Type A, ND T 180. This work shall be included in the unit price for "Aggregate Base Course CL 5"

430-P01 COMMERCIAL GRADE HOT MIX ASPHALT: All costs associated with hot bituminous paving including asphalt cement and tack coat shall be included in the unit bid price "Commercial Grade Hot Mix Asphalt".

704-P01 FLAGGING: A quantity for flagging has been included in the plans for use at the direction of the engineer.

708-P01 INLET PROTECTION-SPECIAL: All devices that are installed shall remain in place until the turf has been established. If the turf has not been established by November 1st, all devices that are installed in a street section and are determined to have the potential to cause damage to snow removal equipment shall be removed on or after November 1st and prior to the first snow event. The inlet protection devices shall then be reinstalled as directed by the Engineer in the spring. The Engineer will not measure reinstalled inlet protection. Include the cost of removal and reinstallation in the contract unit price for "Inlet Protection - Special".

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ENVIRONMENTAL COMMITMENTS

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-2-013(055)298	6	2

ENVIRONMENTAL COMMITMENTS (EC): The North Dakota Department of Transportation and the Federal Highway Administration have made environmental commitments to secure approval of this project. The environmental commitments are as follows:

Based on the NEPA documentation, no additional permits or environmental commitments have been identified beyond what is covered by the NDDOT's Standard Specification of Road and Bridge Construction.

Wetland Number	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands	Impacts to Wetlands	
						Temp.	Perm.
NO WETLANDS PRESENT							
TOTALS:			0.00			0.00	0.00

*A Office Wetland Delineation Report was issued by Carlson McCain, Inc. on behalf of Moore Engineering, Inc. on April 2, 2015.

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ESTIMATED QUANTITIES

SPEC	CODE	ITEM DESCRIPTION	UNIT	QUANTITY
103	0100	CONTRACT BOND	L SUM	1
202	0112	REMOVAL OF CONCRETE	SY	14.8
202	0119	SAW CONCRETE	LF	17
202	0130	REMOVAL OF CURB & GUTTER	LF	62
202	0137	REMOVAL OF PAVEMENT	SY	15.2
202	0153	SAW BITUMINOUS SURFACING	LF	83
203	0113	COMMON EXCAVATION - WASTE	CY	98.8
203	0109	TOPSOIL	CY	290
216	0100	WATER	M GAL	3.7
251	0300	SEEDING CLASS III	SY	1738
253	0201	HYDRAULIC MULCH	SY	1738
260	0100	SILT FENCE UNSUPPORTED	LF	75
260	0101	REMOVE SILT FENCE UNSUPPORTED	LF	75
261	0106	FIBER ROLLS 6IN	LF	24
261	0107	REMOVE FIBER ROLLS 6IN	LF	24
261	0112	FIBER ROLLS 12IN	LF	36
261	0113	REMOVE FIBER ROLLS 12IN	LF	36
302	0100	AGGREGATE BASE COURSE CL 5	CY	98.8
430	0500	COMMERCIAL GRADE HOT MIX ASPHALT	TON	3.4
702	0100	MOBILIZATION	L SUM	1
704	0100	FLAGGING	MHR	10
704	1000	TRAFFIC CONTROL SIGNS	UNIT	244
704	1052	TYPE III BARRICADE	EA	2
704	1060	DELINEATOR DRUMS	EA	12
704	1067	TUBULAR MARKERS	EA	24
708	1540	INLET PROTECTION-SPECIAL	EA	3
708	1541	REMOVE INLET PROTECTION-SPECIAL	EA	3
714	7025	PIPE PVC 8IN	LF	20.5
722	6140	ADJUST GATE VALVE BOX	EA	1
748	0140	CURB & GUTTER-TYPE I	LF	62
750	0140	SIDEWALK CONCRETE 6IN	SY	889.3
750	2115	DETECTABLE WARNING PANELS	SF	100
754	0110	FLAT SHEET FOR SIGNS - TYPE XI REFLECTIVE SHEETING	SF	10
754	0206	STEEL GALV POSTS - TELESCOPING PERFORATED TUBE	LF	68
754	0592	RESET SIGN PANEL	EA	2
762	1104	PVMT MK PAINTED 4IN LINE	LF	147
762	1124	PVMT MK PAINTED 24IN LINE	LF	16

BASIS OF ESTIMATE

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COMMON EXCAVATION-WASTE

4" Depth x 889.3 SY = 98.8 CY

Topsoil

Estimated 5 ft beyond the sidewalk and 6-inch depth

1,738 SY X 6IN = 290 CY

See Section 77

Water

20 Gal/Ton for Aggregate Base Course CL 5

98.8 CY x 1.875 Ton/CY x 20 Gal/Ton = 3.7 MGal

Aggregate Base Course CL 5

4" Depth x 889.3 SY = 98.8 CY

Detectable Warning Panels

Warning panel size at 2' X 5' = 10 SF/EA @ sidewalks

At 2' X 10' = 20 SF/EA @ pedestrian trail

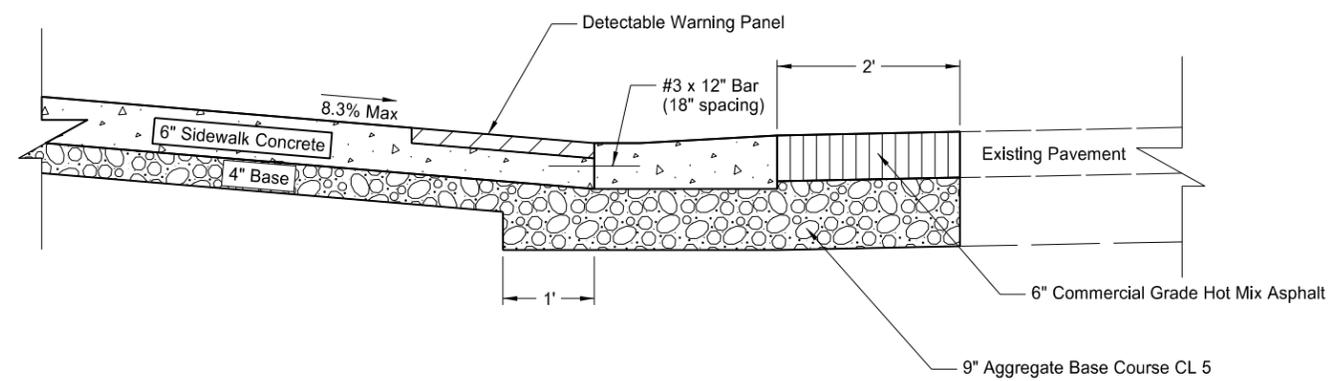
Sidewalks = 10 SF/EA X 2 EA = 20 SF

Pedestrian Trail = 20 SF/EA X 4 EA = 80 SF

20 SF + 80 SF = 100 SF

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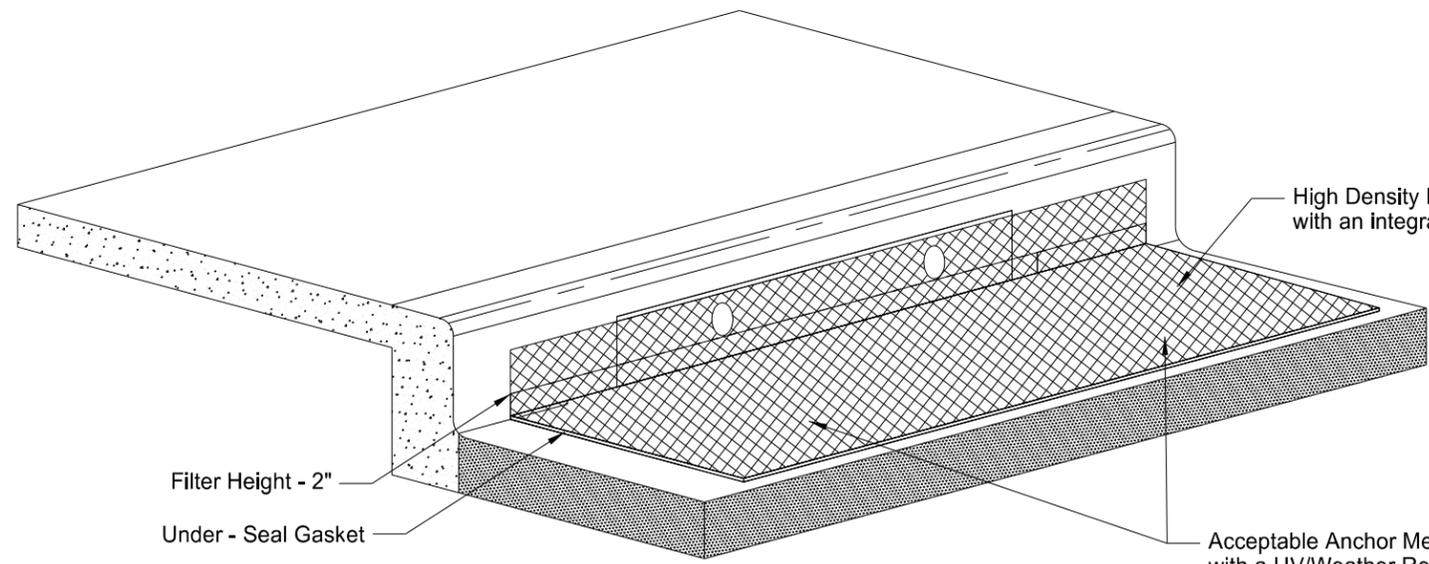
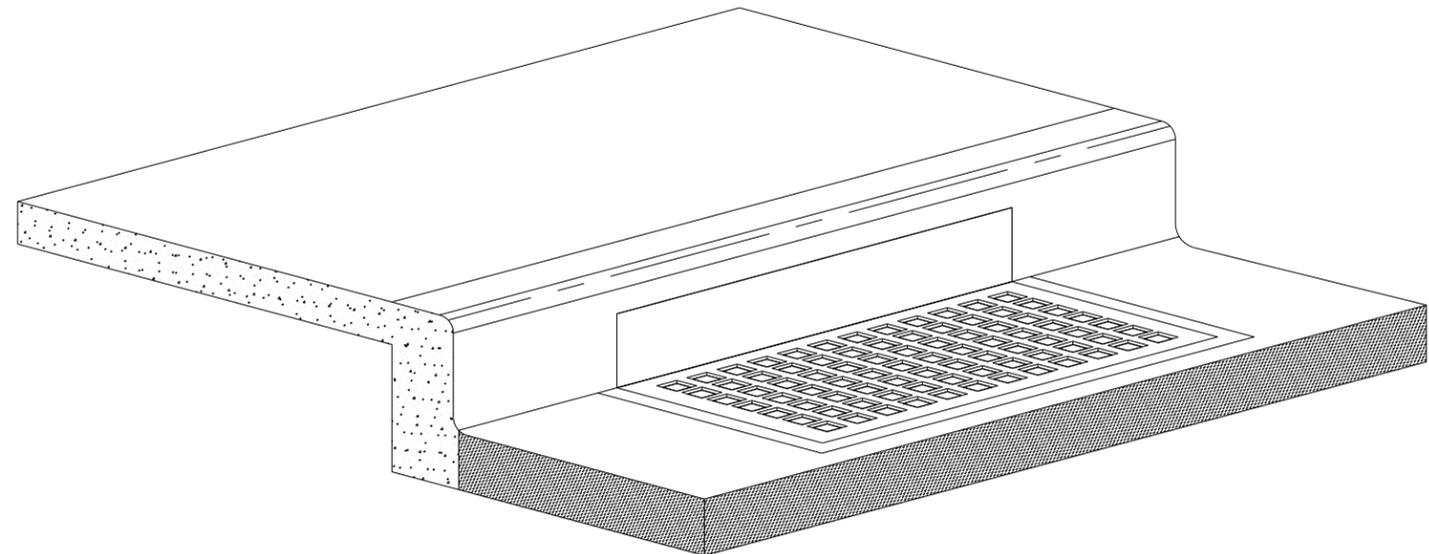
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Curb Ramp Section Detail

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Filter Height - 2"
Under - Seal Gasket

High Density Polyethylene (HDPE) high flow jacket filter (8,000 opening per SY) with an integrated 425 um (micron meter) fine filter particle mesh

Acceptable Anchor Method: Fasten to inlet casting grate with a UV/Weather Resistant Plastic Cable Zip Ties - 16 to 24 in. Install zip ties at each corner of the inlet near the perimeter and two additional zip ties near the middle of the casting. Punch hole through filter and run cable tie downward around grate and back up to fasten.

Inlet Protection Device

Installation Notes:

1. Place device tightly against drain opening and cover entire grate. The device should extend at least 2 inches past grate toward street.
2. Overlap the segments at longer openings.
3. Anchor the device so that water cannot flow behind it.

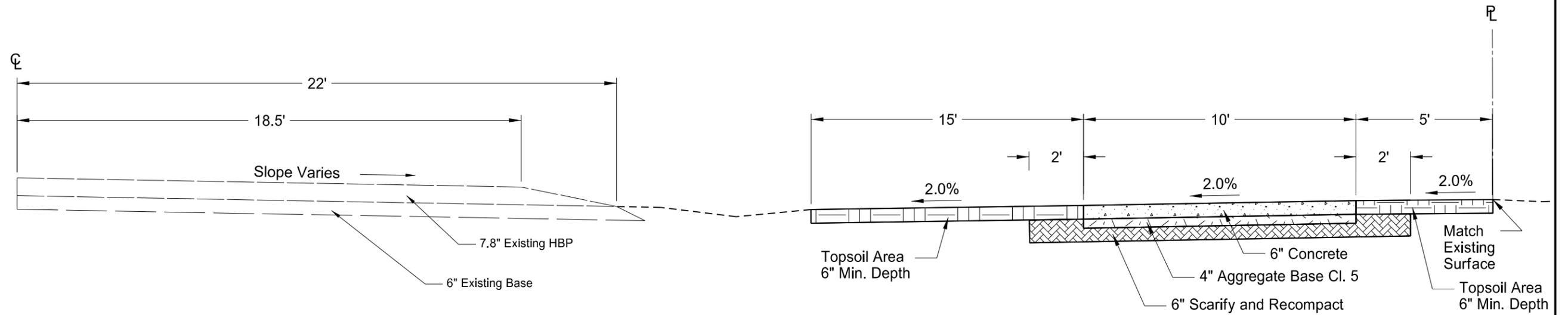
General Notes:

1. Inlet Protection shall be maintained or replaced at the direction of the engineer.
2. Manufactured alternatives may be substituted at the direction of the engineer.
3. When removing or maintaining inlet protection, care shall be taken so that fabric does not fall into the inlet. Any material falling into the inlet shall be removed immediately.
4. Inlet protection is to be used (and reused) as needed to prevent material from entering inlets as the work progresses through the project.

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Inlet Protection Device

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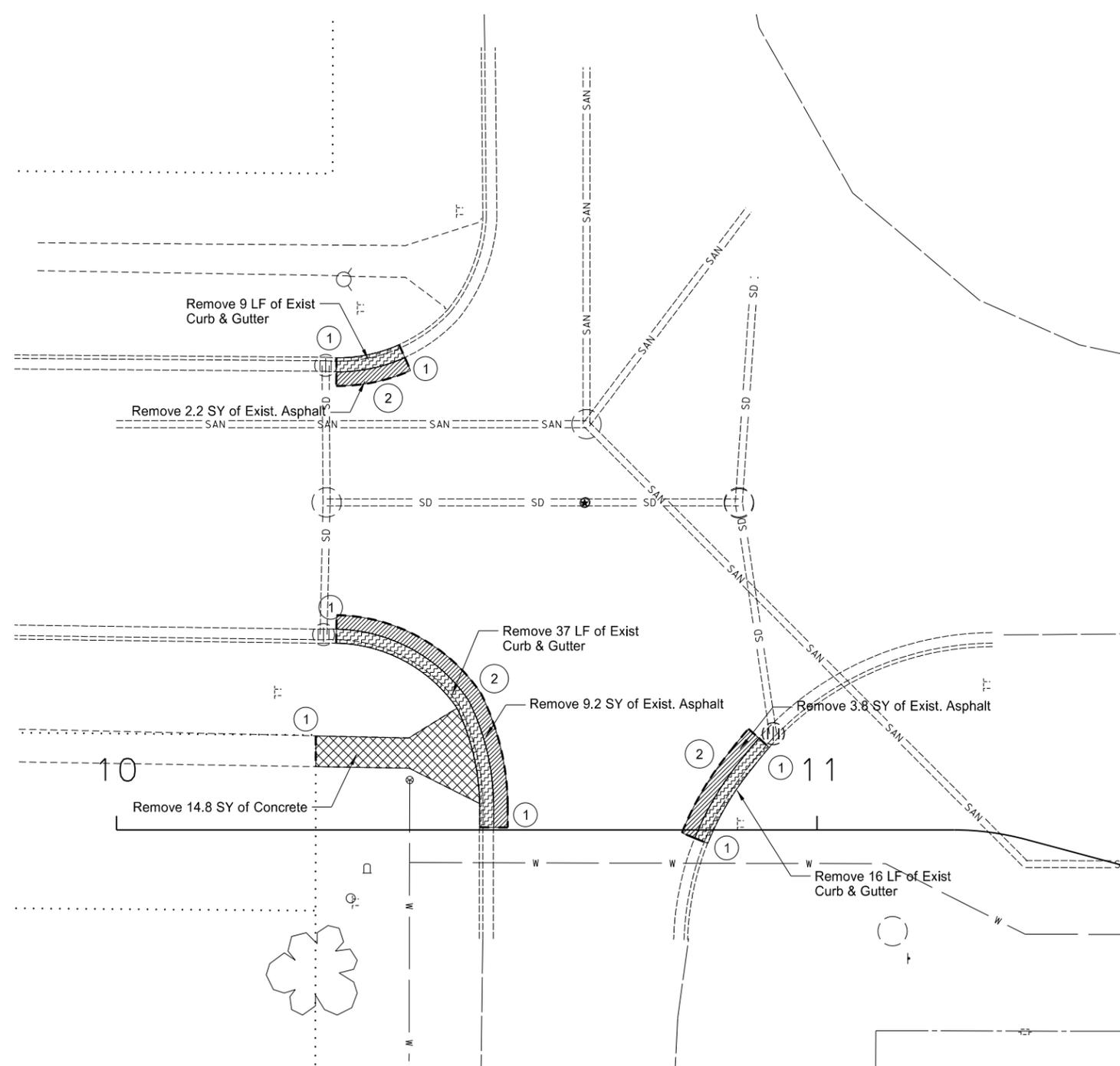


Typical Trail Section
 Sta 10+90.00 to Sta 18+97.00
 Not to Scale

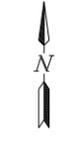
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Typical Section

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SPEC	CODE	BID ITEM	QUANTITY	UNIT
202	0112	REMOVAL OF CONCRETE	14.8	SY
202	0119	SAW CONCRETE	17	LF
202	0130	REMOVAL OF CURB & GUTTER	62	LF
202	0132	REMOVAL OF PAVEMENT	15.2	SY
202	0153	SAW BITUMINOUS SURFACING	83	LF



Note: Removal of existing aggregate base necessary for the placement of concrete forms shall be included in the contract unit price for "Removal of Pavement".

LEGEND

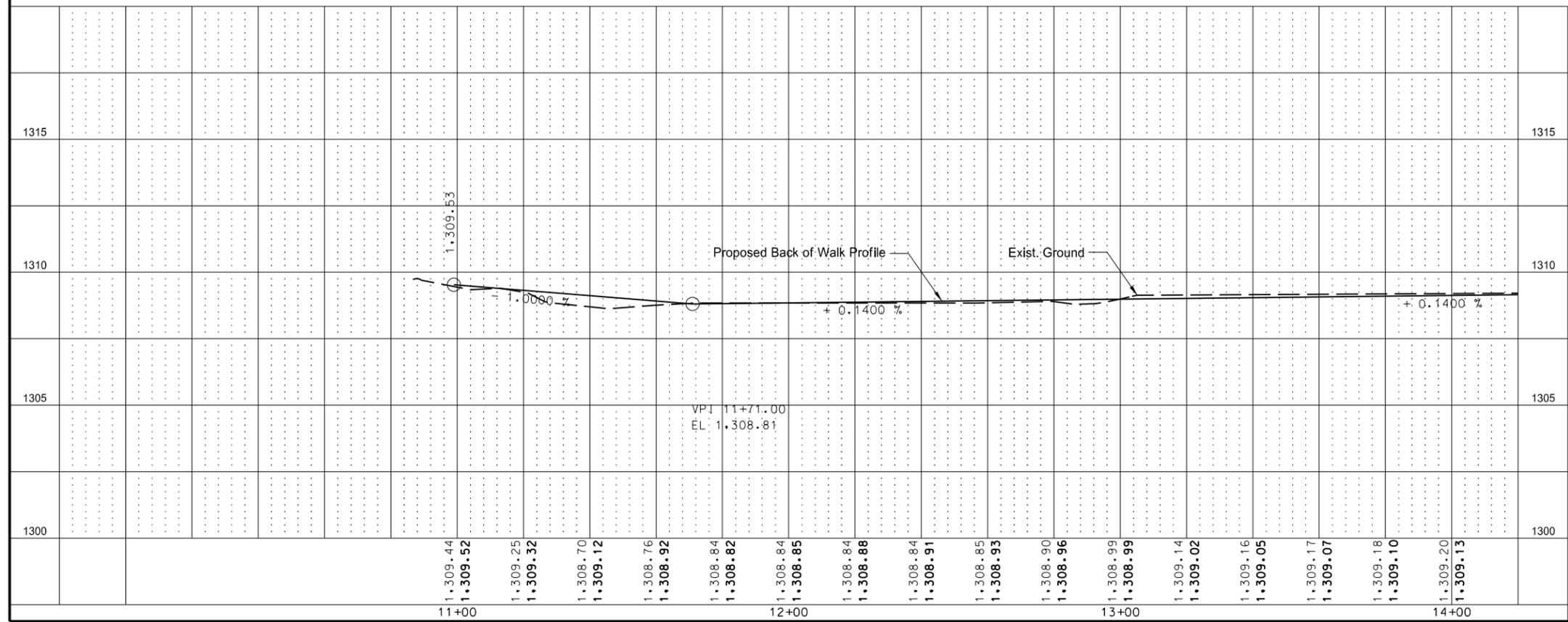
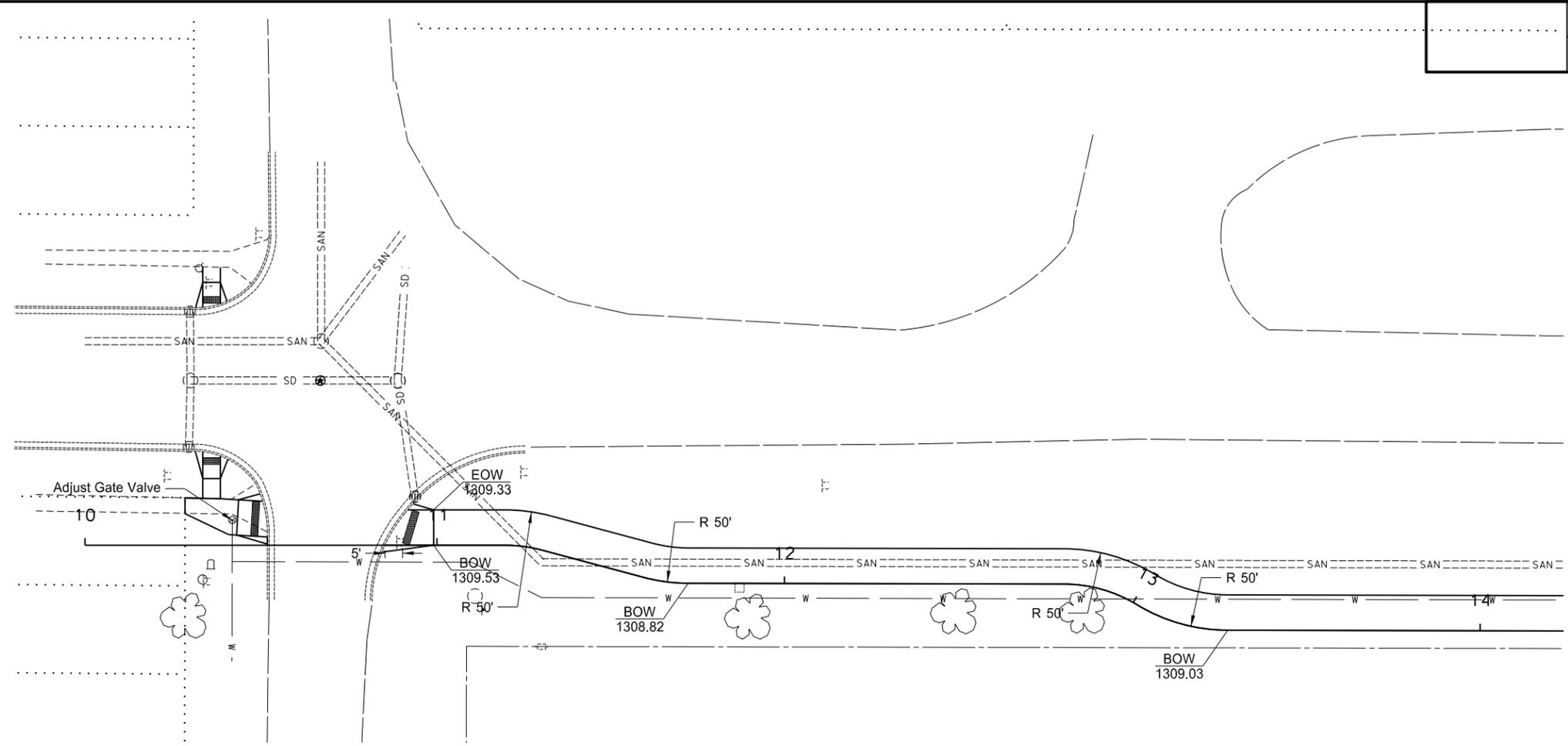
-  Removal of Pavement
-  Removal of Curb & Gutter
-  Removal of Concrete
- ① Sawcut Concrete
- ② Sawcut Bituminous Surfacing

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Removals

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SPEC	CODE	BID ITEM	QUANTITY	UNIT
203	0113	COMMON EXCAVATION - WASTE	37.2	CY
302	0100	AGGREGATE BASE COURSE CL 5	37.2	CY
430	0500	COMMERCIAL GRADE HOT MIX ASPHALT	3.4	TON
722	6140	ADJUST GATE VALVE BOX	1	EA
748	0140	CURB & GUTTER - TYPE 1	62	LF
750	0140	SIDEWALK CONCRETE 6IN	332.4	SY
750	2115	DETECTABLE WARNING PANELS	60	SF

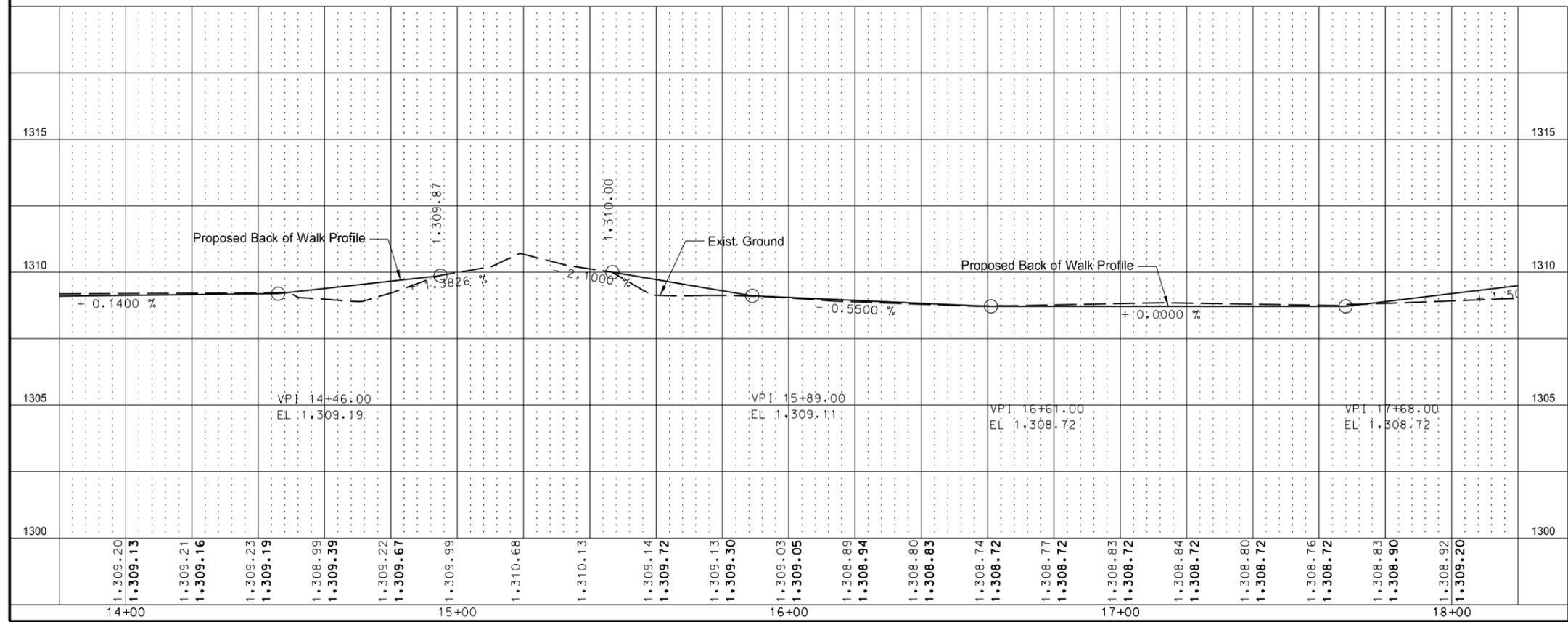
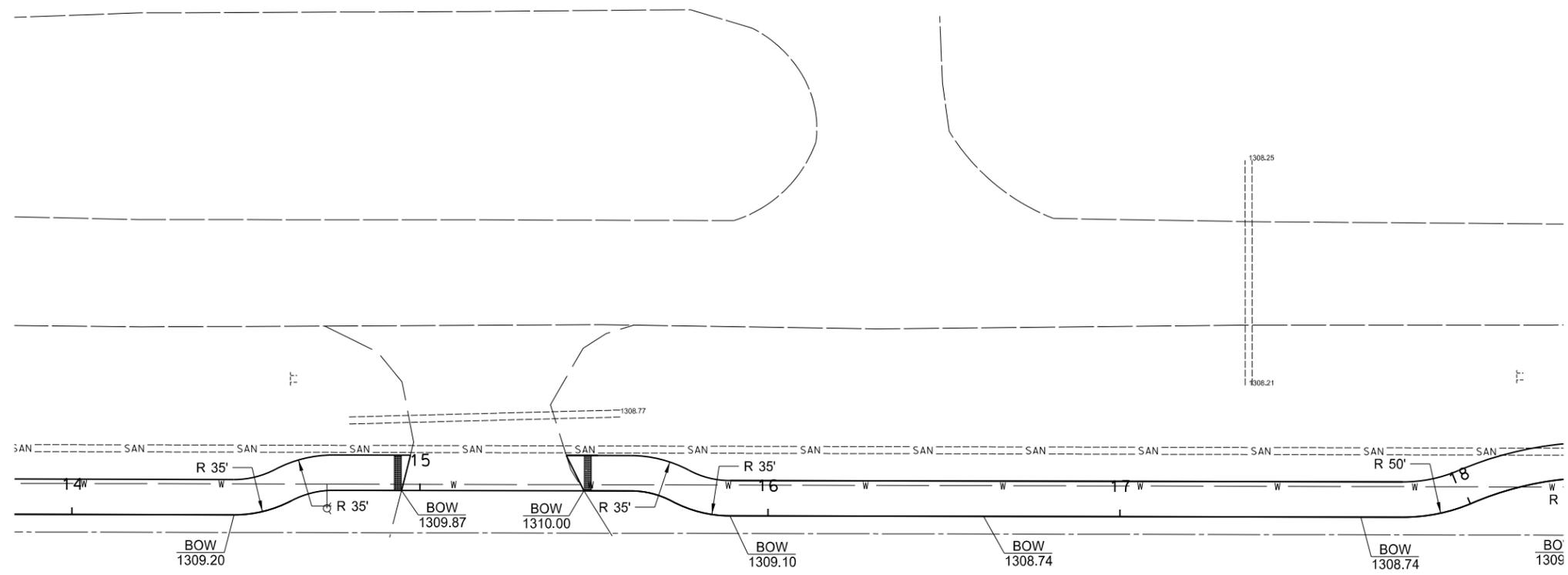


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Plan and Profile

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-2-013(055)298	60	2

SPEC	CODE	BID ITEM	QUANTITY	UNIT
203	0113	COMMON EXCAVATION - WASTE	43.6	CY
302	0100	AGGREGATE BASE COURSE CL 5	43.6	CY
750	0140	SIDEWALK CONCRETE 6IN	394.8	SY
750	2115	DETECTABLE WARNING PANELS	40	SF



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Plan and Profile

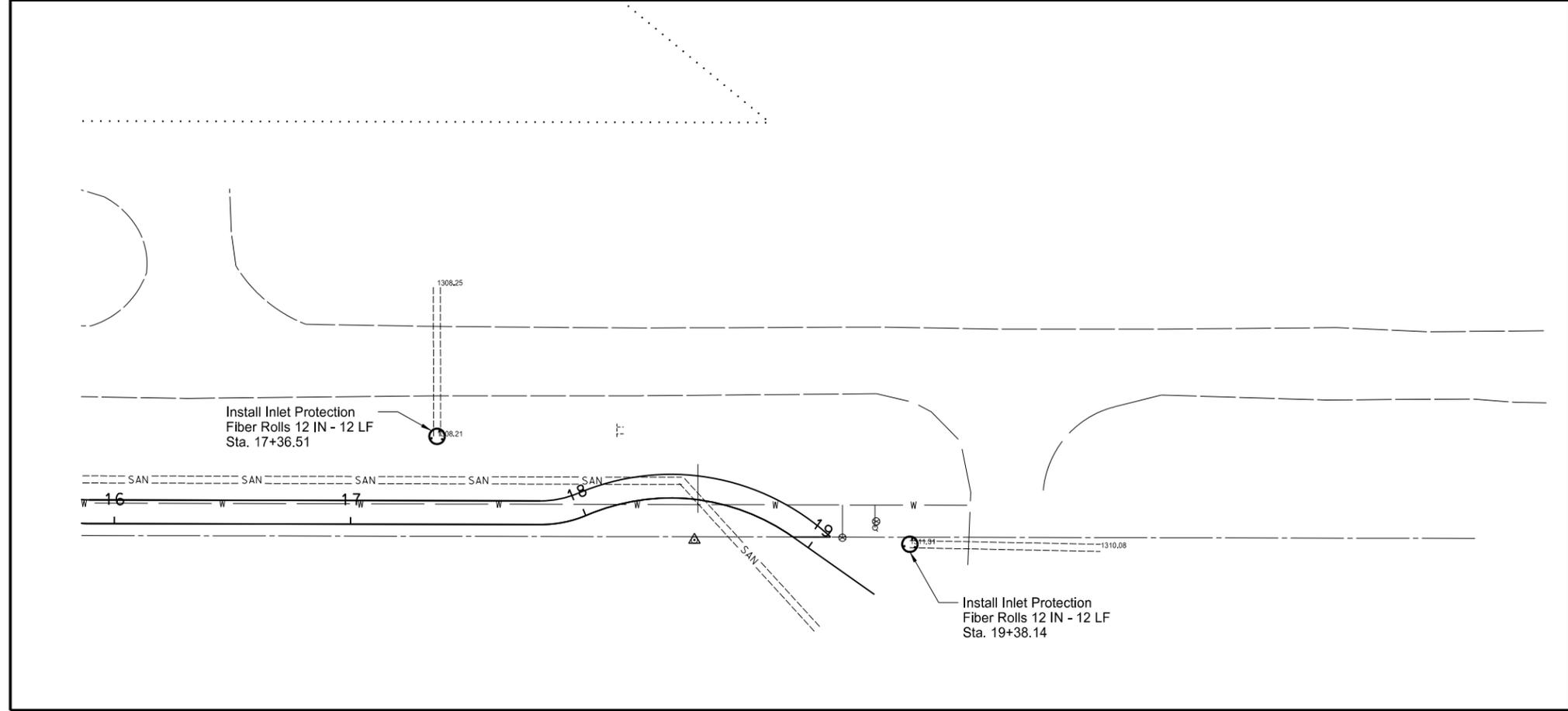
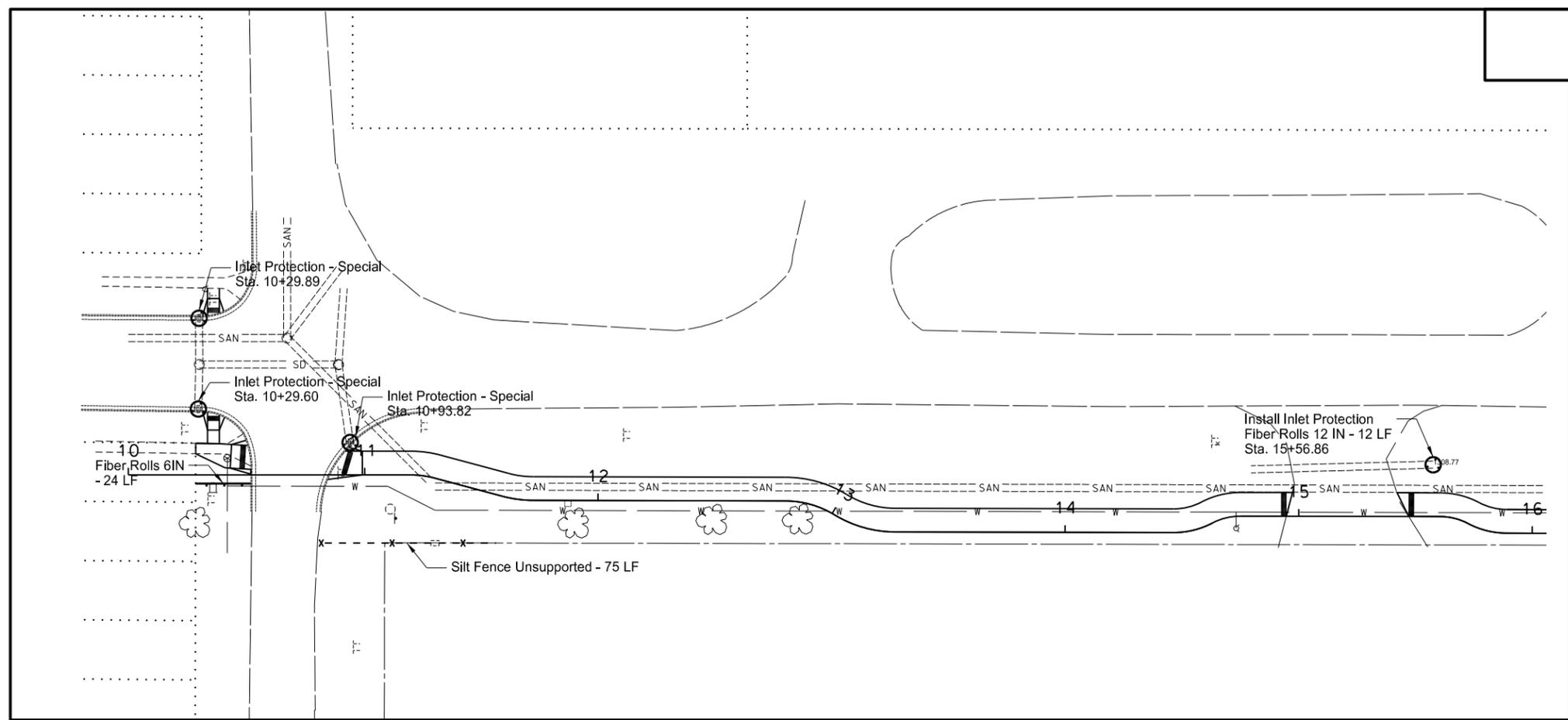
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SPEC	CODE	BID ITEM	QUANTITY	UNIT
260	0100	SILT FENCE UNSUPPORTED	75	LF
260	0101	REMOVE SILT FENCE UNSUPPORTED	75	LF
261	0106	FIBER ROLLS 6IN	24	LF
261	0107	REMOVE FIBER ROLLS 6IN	24	LF
261	0112	FIBER ROLLS 12IN	36	LF
261	0113	REMOVE FIBER ROLLS 12IN	36	LF
708	1540	INLET PROTECTION - SPECIAL	3	EA
708	1541	REMOVE INLET PROTECTION - SPECIAL	3	EA



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Temporary Sediment and Erosion Control



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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SPEC	CODE	BID ITEM	QUANTITY	UNIT
203	0109	TOPSOIL	290	CY
251	0300	SEEDING CLASS III	1738	SY
253	0201	HYDRAULIC MULCH	1738	SY

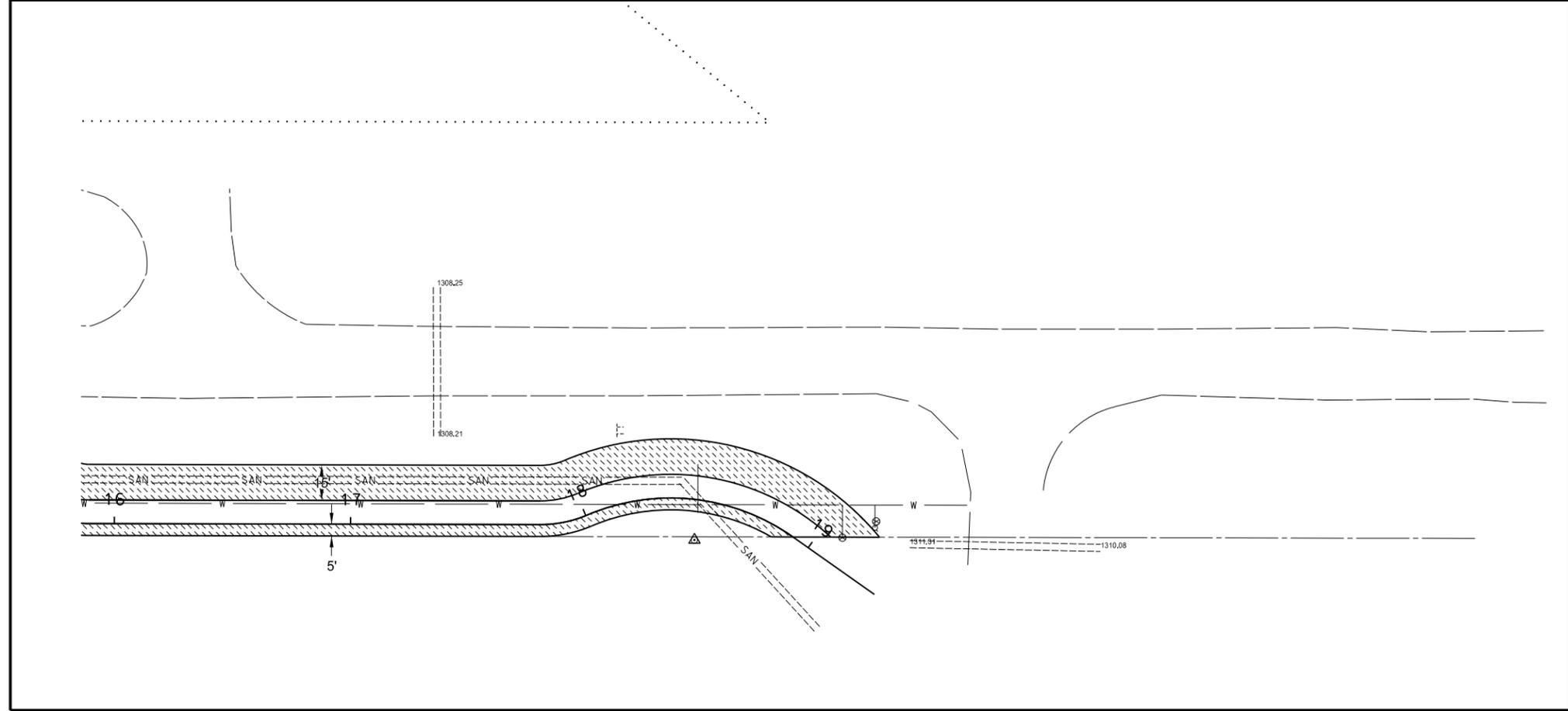
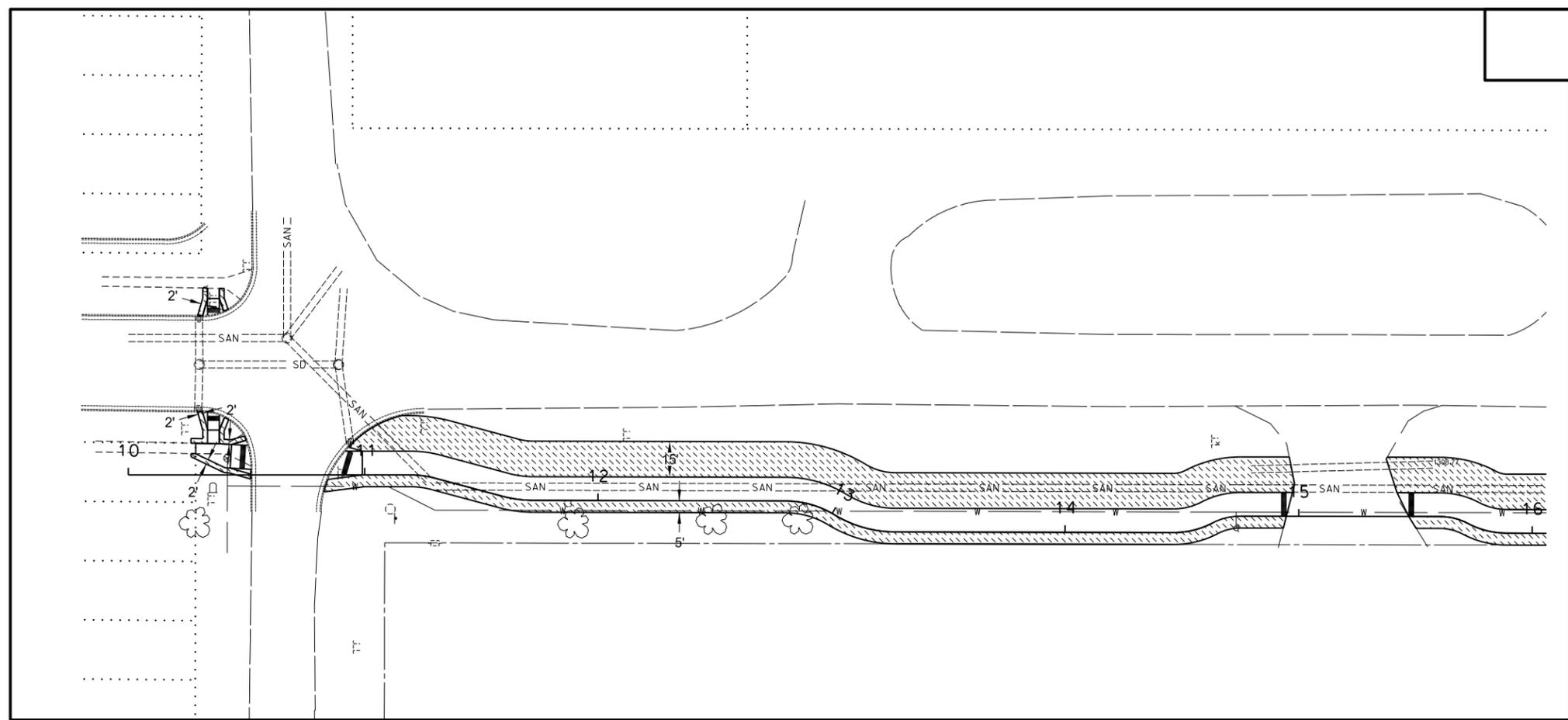


LEGEND

 Topsoil, Seeding and Hydro-Mulching

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Permanent Sediment and Erosion Control

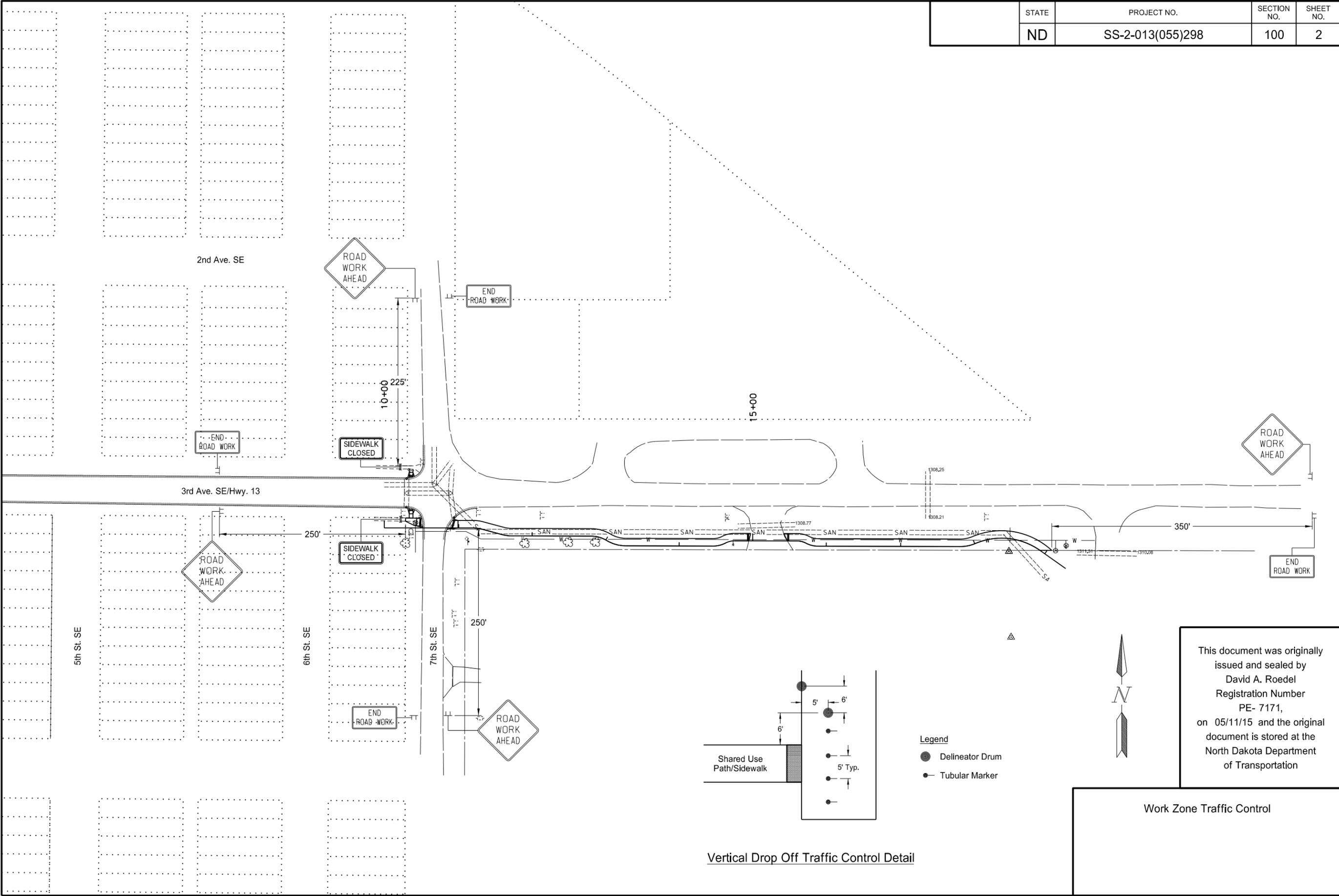


PRELIMINARY SURVEY COORDINATE AND CURVE DATA - LAMOURE SIDEWALK

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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HORIZONTAL ALIGNMENT				CURVE DATA		US PUBLIC LAND SURVEY DATA				SURVEY CONTROL POINTS					
PNT	STATION	NORTHING	EASTING	ARC DEFINITION		DESC.	SEC-TWP-RGE	NORTHING	EASTING	PNT	NORTHING	EASTING	ELEV	STATION	OFFSET
CONTROL POINT DESCRIPTION															
PT	10+00.00	99953.42	199933.11	Curve C1	Curve C5										
PC	11+19.58	99953.42	200052.68	PI STA = 11+24.80	PI STA = 14+54.76										
PI	11+24.80	99953.40	200057.90	Delta = 14° 52' 01.74" RT	Delta = 27° 57' 10.39" RT										
PT	11+29.96	99952.05	200062.94	D _a = 143° 14' 22.02"	D _a = 163° 42' 08.02"										
PC	11+59.64	99944.37	200091.62	R = 40.00'	R = 35.00'					CP 1	99806.87	200775.5	1309.03		
PI	11+66.17	99942.68	200097.92	T = 5.22'	T = 8.71'										
PT	11+72.63	99942.67	200102.45	L = 10.38'	L = 17.08'					CP 2	99921.85	200772.60	1309.09		
PC	12+79.33	99942.45	200211.15												
PI	12+90.49	99942.42	200222.31	Curve C2	Curve C6					BM 1	99999.97	199999.96	1309.49		
PT	13+01.09	99936.62	200231.85	PI STA = 11+66.17	PI STA = 14+69.35										
PC	13+01.09	99936.62	200231.85	Delta = 14° 52' 52.32" LT	Delta = 27° 57' 10.39" RT					CP NGS A27	108861.10	194392.14	1306.96		
PI	13+15.04	99929.38	200243.77	D _a = 114° 35' 29.61"	D _a = 229° 10' 59.22"										
PT	13+28.30	99929.35	200257.72	R = 50.00'	R = 25.00'										
PC	14+46.05	99929.10	200375.47	T = 6.53'	T = 6.22'										
PI	14+54.76	99929.09	200384.18	L = 12.99'	L = 12.20'										
PT	14+63.13	99933.15	200391.88												
PC	14+63.13	99933.15	200391.88	Curve C3	Curve C7										
PI	14+69.35	99936.06	200397.39	PI STA = 12+90.49	PI STA = 15+66.13										
PT	14+75.33	99936.05	200403.61	Delta = 31° 10' 43.81" RT	Delta = 27° 57' 10.39" RT										
PC	15+59.91	99935.87	200488.19	D _a = 143° 14' 22.02"	D _a = 229° 10' 59.22"										
PI	15+66.13	99935.86	200494.41	R = 40.00'	R = 25.00'										
PT	15+72.11	99932.93	200499.90	T = 11.16'	T = 6.22'										
PC	15+72.11	99932.93	200199.90	L = 21.77'	L = 12.20'										
PI	15+80.82	99928.83	200507.59												
PT	15+89.18	99928.81	200516.30	Curve C4	Curve C8										
PC	17+80.31	99928.42	200707.43	PI STA = 13+15.04	PI STA = 15+80.82										
PI	17+90.58	99928.39	200717.70	Delta = 31° 10' 43.81" LT	Delta = 27° 57' 10.39" RT										
PT	18+00.57	99932.43	200727.15	D _a = 114° 35' 29.61"	D _a = 163° 42' 08.02"										
PC	18+00.57	99932.43	200727.15	R = 50.00'	R = 35.00'										
PI	18+50.76	99952.12	200773.32	T = 13.95'	T = 8.71'										
PT	18+92.14	99923.19	200814.34	L = 27.21'	L = 17.08'										
PT	19+34.30	99898.90	200848.79												
NOTES:				Date Survey Completed 01/15/15		<input checked="" type="checkbox"/> Assumed Coordinates <input type="checkbox"/> All coordinates on this sheet are County ground coordinates. They are derived from the NAD83() reference frame; North Dakota Zone Combination Factor (cf) =				All coordinates and measurements on this document derived from the International Foot definition.			This document was originally issued and sealed by David A. Roedel Registration Number PE- 7171 , on 05/11/15 and the original document is stored at the North Dakota Department of Transportation		
										INITIALIZING BENCH MARK					
										<input checked="" type="checkbox"/> NAVD-88 <input type="checkbox"/> NGVD-29 <input type="checkbox"/> GEOID 09 <input type="checkbox"/> _____ <input type="checkbox"/> GEOID 12A					

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-2-013(055)298	100	2



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Work Zone Traffic Control

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
N.D.	SS-2-013(055)298	110	1

Sta/RP	Sign No.	Assembly No.	Flat Sheet For Signs		Sign Support Length				Support Size	Max Post Len LF	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			1st LF	2nd LF	3rd LF	4th LF								
10+41 Lt	SA 1E				7.9				2 x 2 12 ga	23.5					1	4	2.25 x 2.25 12 ga	1				
10+90 Rt	SA 2E				10.4				2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga	1				
11+05 Rt	1	100		1.9	6.3				2 x 2 12 ga	21.4					1	4	2.25 x 2.25 12 ga					
11+10 Rt	2	14		4.0	6.2				2 x 2 12 ga	13.0					1	4	2.25 x 2.25 12 ga					
14+86 Rt	3	100		1.9	6.3				2 x 2 12 ga	21.4					1	4	2.25 x 2.25 12 ga					
15+55 Rt	4	100		1.9	6.3				2 x 2 12 ga	21.4					1	4	2.25 x 2.25 12 ga					
Sub Total			0.0	9.7	Total	43.5								Total	24			2	0	0		
Grand Total			0.0	9.7	Total	43.5								Total	24			2	0	0		

Basis of Estimate
Sign Support Lengths

The sign support lengths have been calculated using the following vertical clearances:

Areas where parking and/or pedestrian movement will occur - 84"
Bike and pedestrian facility - 48"

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Sign Summary
Perforated Tube

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-2-013(055)298	110	2

SPEC	CODE	BID ITEM	QUANTITY	UNIT
754	0592	RESET SIGN PANEL	2	EA
762	1104	PVMT MK PAINTED 4IN LINE 6" Crosswalk - White	147	LF
762	1124	PVMT MK PAINTED 24IN LINE 24" Crosswalk - White	16	LF



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Signing & Marking

