DESIGN DATA				
Traffic (US 52 and ND 3)	Average Daily			
Current 2021	Pass: 1,340	Trucks: 650	Total: 1,990	
Forecast 2041	Pass: 1,730	Trucks: 970	Total: 2,700	
Clear Zone Distance: 30' (4:1)		Design Speed: 55 mph		
Minimum Sight Dist. for Stopping: 495'		Bridges: NA		
Sight Dist. for No Passing Zone: 900'				
Clear Zone Distance: 16' (4:1)		Design Speed: 25 mph		
Minimum Sight Dist. for Stopping: 155'		Bridges: NA		
Sight Dist. for No Passing Zone: 450'				
Pavement Design Life 20 (years)				
Design Accumulated One-way flexible ESALs: 168,803				

	STATE	PROJECT NO.	PCN	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	23153	1	1

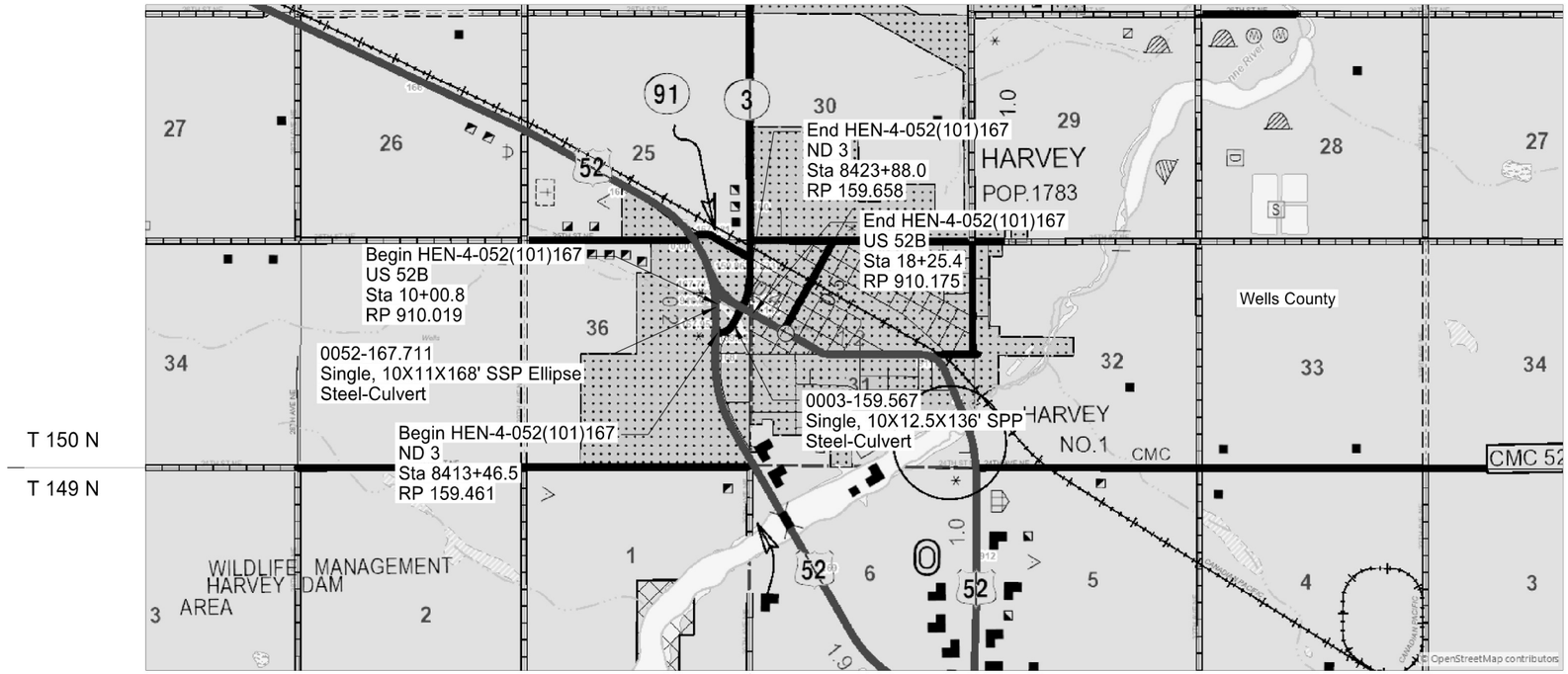
NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION

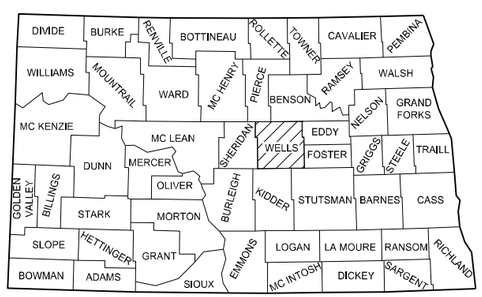
HEN-4-052(101)167

Wells County
US 52 and ND 3
US 52 / ND 3 Intersection
Embankment, Aggregate Base, HMA, Culverts, Riprap & Incidentals

GOVERNING SPECIFICATIONS	Date Published and Adopted by the North Dakota Department of Transportation
Standard Specifications	1/1/2022
Supplemental Specifications	NONE

PROJECT NUMBER \ DESCRIPTION	NET MILES	GROSS MILES
US 52B	0.156	0.156
ND 3	0.197	0.197





STATE COUNTY MAP

DESIGNER
Dan Kieffer, PE
DESIGNER
Jay Forthun, EI
DESIGNER

ND DEPARTMENT OF TRANSPORTATION
OFFICE OF PROJECT DEVELOPMENT
Hoff, Kirk J.
11/28/22

WSB

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-23-2022
NORTH DAKOTA

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	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	2	1

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PLAN SECTIONS

SPECIAL PROVISIONS

LIST OF STANDARD DRAWINGS

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	4	1

N

8855+00

8430+00

Remove roadways

8425+00

10+00

8860+00

15+00

End Project
Existing ND 3
Sta 8423+88.0
RP 159.658
<EX03>

Wetland 1c

Start Project
Proposed US 52B
Sta 10+00.8
RP 910.019
<PR52B>

Construct roadway

Wetland 1b

8420+00

End Project
Proposed US 52B
Sta 18+25.4
RP 910.175
<PR52B>

20+00

City of Harvey

Sec. 36
T 150 N
R 73 W

US 52 ℄
<EX52>

8865+00

Remove roadway

Grading limits

Staging
Area

8415+00

Wetland 1a

Start Project
Existing ND 3
Sta 8413+46.5
RP 159.461
<EX03>

8870+00

Mill and overlay roadway

Sec. 31
T 150 N
R 72 W

8th St W
Park Ave
Cedar Ave
Elm Ave
Birch Ave
9th St W
Alder Ave
10th St W
11th St W
Elm Ave

LEGEND

Construct/Reconstruct Roadway

Remove Roadway

Mill, HMA Overlay & Sliver Widening

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Scope of Work

US 52 and ND 3 Intersection Improvements

Harvey, ND

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	6	1

NOTES

100-P01 COORDINATION OF PROJECTS: Other projects will be occurring in the vicinity of this project during the 2023 construction season. Coordinate scheduling, work activities and traffic control devices to minimize confusion and delay to the public.

- PCN 23149: US 52 Minot to East of Balfour - Passing Lanes & Turn Lanes
- PCN 23150: US 52 East of Balfour to Fessenden – Passing Lanes & Turn Lanes
- PCN 23641: US 52 near Jct 53 to near Fessenden

105-P01 UTILITY ADJUSTMENT: Maintain power to the existing roadway lighting system during the normal operation hours. Coordinate the grading and lighting cable work to complete the cable adjustment in one day or provide temporary power at no additional cost to the Department.

107-P01 MAINTAINING TRAFFIC–DROP-OFFS: If, at the end of the work-day, drop-offs greater than 2 inches and less than 18 inches or slopes steeper than 4:1 exist between the edge of a traffic lane and the outside edge of the proposed roadway, perform one of the following actions:
• Construct a traversable wedge in the area of the drop-off or steep slope; or
• Close the lane adjacent to the drop-off or steep slope and provide 24-hour flagging or pilot car operations.

When constructing a wedge, construct a wedge composed of aggregate or earthen materials with a 4:1 or flatter slope along the entire length of the area. Compact materials using Type C compaction, as specified in 203.04 G.4, "Compaction Control Type C".

Install stackable vertical panels that meet the requirements of Section 704.03 H, "Stackable Vertical Panels", along the edge of the driving lane closest to the wedge.

The Engineer will measure stackable vertical panels as specified in Section 704.05, "Method of Measurement" and will pay for panels as specified in Section 704.06, "Basis of Payment".

The Engineer will not measure material used to construct the wedge. Include the cost of materials, equipment, labor, and incidentals required for this operation in the price bid for “Borrow-Excavation”.

If a 4:1 or flatter wedge is not installed, provide 24 hour flagging and pilot car operations and associated traffic control at no additional cost to the Department.

The requirements of Section 704.04 O, "Traffic Control for Uneven Pavement" apply to drop-offs created by milling or the placement of hot mix asphalt.

107-P02 HAUL ROAD RESTRICTION: Use Class 13 Aggregate for haul road restoration.

108-P01 BIWEEKLY PLANNING & REPORTING MEETING: A biweekly planning (every other week) and reporting meeting is required. Provide a schedule update and notice of any new types of work or traffic control planned in the next week.

202-P01 REMOVAL OF BITUMINOUS SURFACING: Removal of Bituminous Surfacing includes the removal of bituminous pavement. Pavement and base thicknesses shown in the existing typical section are based on previous construction plans. Actual thicknesses may vary. Payment is based on the top width of pavement plus the pavement slough.

203-010 SHRINKAGE: 25 percent additional volume is included for shrinkage in earth embankment placed.

203-385 AVERAGE HAUL: No average haul has been computed for this project.

203-P01 COMMON EXCAVATION-TYPE A: Common Excavation will not be measured but paid for as Plan Quantity. The costs associated with removing the existing aggregate base will be included in the bid item “Common Excavation-Type A”.

203-P02 TOPSOIL: Strip, stockpile, and replace existing topsoil located within the areas of construction. Include the cost for stripping, stockpiling, replacing existing topsoil in the price bid for “Topsoil”. Topsoil will not be measured but paid for as Plan Quantity.

261-P01 PERMANENT FIBER ROLLS: For fiber rolls remaining on the project, use fiber rolls that are composed of netting that meets either of the following:

- Bio- or photo-degradable plastic netting that has a life expectancy between 6 and 24 months.
- 100 percent biodegradable natural netting that has a life expectancy between 6 and 24 months.

302-110 BASE COURSE: Trim base course as specified in Section 302.04 C.2, "Surface Tolerance Type B."

401-P01 PRIME COAT: Apply prime at a rate of 0.25 gal/SY. In areas open to traffic apply a second application of prime at a rate of 0.15 gal/SY, assumed US 52 B / ND 3 intersection will require second application. Include all costs of material and placement of the blotter material in the contract unit price for “Prime Coat”

401-P02 FOG SEAL: Apply fog coat after the final rolling with a minimum mat temperature of 125°F.

411-P01 TEMPORARY ASPHALT WEDGES: Construct and maintain temporary asphalt wedges at milled locations. Place wedges at these milled locations prior to traffic being allowed on the milled roadway section. Include all costs associated with installing, removing, and maintaining wedges in the price bid for “Milling Pavement Surface”.

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	6	2

NOTES

704-P01 TRAFFIC CONTROL PHASING: The roadway is proposed to be built under three phases utilizing detours for the first two phases.

Phase 1: US 52B will be closed to traffic to remove the existing US 52B slip lanes and build to new US 52 / US 52B T-intersection. A detour onto ND 3 will be utilized for phase 1.

Phase 2: ND 3 will be closed to thru traffic to remove the ND 3 slip lane and construct the overlay and shoulders. A detour on the newly constructed US 52B will be utilized for phase 2.

Phase 3: ND 3 north of the US 52B / ND 3 intersection will be closed to remove and install the centerline culvert. A detour on the newly constructed US 52B will be utilized for phase 3.

See section 100 for phasing work areas and detour layouts.

704-P02 PIPE INSTALLATION: Always maintain a minimum of one lane of traffic during the ND 3 centerline pipe culvert installation north of the intersection of US 52B and ND 3. Work may be completed under traffic. Complete all centerline pipe culvert installations by the end of the day to allow for two lanes of traffic during non-working hours. If the installation is not completed by sunset on that day, provide 24-hour flagging and pilot car operations during non-working hours at no additional cost to the Department.

714-P01 PIPE EXTENSIONS: Remove silted-in material from pipes before extending them. Reshape the ditch bottom and around the pipe to maintain positive drainage from the end of the extended pipe. Provide dewatering if necessary, according to site conditions. Include the costs of silt removal and dewatering in the price bid for pipe installation.

754-P01 REMOVE SIGNS: Remove the existing sign panels at the locations shown in the plans.

Deliver the sign panels to the NDDOT Maintenance Storage Yard in Minot ND, and neatly stack them at a location designated by the Engineer. The address of the NDDOT Maintenance Storage Yard is:

MINOT DISTRICT OFFICE NDDOT
1305 Highway 2 Bypass East
Minot, ND 58701

Include all cost for removal and delivery of existing sign panels in the contract unit price for “Flat Sheet for Signs-Type IV Reflective Sheeting.”

762-050 PAVEMENT MARKING: If the Engineer and Contractor agree, plan quantity will be used as the measurement for payment for pavement marking items.

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	8	1

Estimated Quantities

SPEC	CODE	ITEM DESCRIPTION	UNIT	Mainline: Funding A	TOTAL
103	0100	CONTRACT BOND	L SUM	1	1
202	0132	REMOVAL OF BITUMINOUS SURFACING	SY	6858	6858
202	0170	REMOVAL OF CULVERTS-ALL TYPES & SIZES	LF	190	190
203	0101	COMMON EXCAVATION-TYPE A	CY	11610	11610
203	0109	TOPSOIL	CY	4191	4191
203	0119	TOPSOIL-IMPORTED	CY	1103	1103
203	0140	BORROW-EXCAVATION	CY	1052	1052
216	0100	WATER	M GAL	208	208
230	0165	SUBGRADE PREPARATION-TYPE A-12IN	STA	6	6
251	0200	SEEDING CLASS II	ACRE	6.5	6.5
251	2000	TEMPORARY COVER CROP	ACRE	6.5	6.5
253	0101	STRAW MULCH	ACRE	13	13
255	0103	ECB TYPE 3	SY	107	107
256	0200	RIPRAP GRADE II	CY	48	48
260	0100	SILT FENCE UNSUPPORTED	LF	2151	2151
260	0101	REMOVE SILT FENCE UNSUPPORTED	LF	2151	2151
261	0112	FIBER ROLLS 12IN	LF	2623	2623
261	0113	REMOVE FIBER ROLLS 12IN	LF	142	142
302	0120	AGGREGATE BASE COURSE CL 5	TON	3560	3560
401	0050	TACK COAT	GAL	1330	1330
401	0060	PRIME COAT	GAL	6891	6891
401	0070	FOG SEAL	GAL	1299	1299
411	0112	MILLING PAVEMENT SURFACE - 1 INCH	SY	3410	3410
430	0045	SUPERPAVE FAA 45	TON	1526	1526
430	1000	CORED SAMPLE	EA	13	13
430	5818	PG 58H-34 ASPHALT CEMENT	TON	93	93
702	0100	MOBILIZATION	L SUM	1	1
704	0100	FLAGGING	MHR	120	120
704	1000	TRAFFIC CONTROL SIGNS	UNIT	1589	1589
704	1052	TYPE III BARRICADE	EA	14	14
704	1060	DELINEATOR DRUMS	EA	28	28
704	1080	STACKABLE VERTICAL PANELS	EA	30	30
704	1500	OBLITERATION OF PAVEMENT MARKING	SF	210	210
706	0500	AGGREGATE LABORATORY	EA	1	1
706	0550	BITUMINOUS LABORATORY	EA	1	1
706	0600	CONTRACTOR'S LABORATORY	EA	1	1
709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY	98	98
709	0155	GEOSYNTHETIC MATERIAL TYPE RR	SY	129	129
714	0615	PIPE CONC REINF 24IN CL III	LF	12	12
714	4105	PIPE CONDUIT 24IN	LF	71	71
714	4115	PIPE CONDUIT 36IN	LF	76	76
714	9660	REMOVE & RELAY END SECTION-ALL TYPE & SIZES	EA	2	2
754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	96	96
754	0112	FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	145	145
754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	392	392
754	0592	RESET SIGN PANEL	EA	2	2
754	0805	OBJECT MARKERS - CULVERTS	EA	6	6

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	8	2

Estimated Quantities

SPEC	CODE	ITEM DESCRIPTION	UNIT	Mainline: Funding A	TOTAL
762	0113	EPOXY PVMT MK 4IN LINE	LF	8007	8007
762	0115	EPOXY PVMT MK 8IN LINE	LF	212	212
762	0117	EPOXY PVMT MK 24IN LINE	LF	48	48
770	0220	CABLE TRENCH-TYPE II	LF	1085	1085
770	0445	MULTIPLE UNDERGROUND CABLE 3NO6 STYLE USE	LF	1125	1125
920	1216	GEOGRID	SY	580	580

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	10	1

BASIS OF ESTIMATE

Earthwork Summary

		Pay Items	
A	B	(=A)	(A-B)
Total Excavation (CY)	Embankment Required* (CY)	Common Excavation – Type A (CY)	Borrow Excavation (CY)
11610	12662	11610	1052

*25% additional quantity is included in Embankment Required to account for shrinkage

.

Topsoil

A	B	(B-A)
Topsoil Excavation (CY)	Topsoil Required (CY)	Topsoil-Import (CY)
4191	5294	1103

Water
25 MGal/Mile for Dust Palliative
20 Gal/Ton for Aggregates
10 Gal/CY for Embankment

Materials
Aggregate Base Course CL 5 @ 1.875 Ton/CY
Prime Coat (First Application) @ 0.25 Gal/SY
Prime Coat (Second Application) @ 0.15 Gal/SY
Blotter Material Cl 44 @ 15 lbs/SY (include in price for Prime Coat)
Tack Coat @ 0.05 Gal/SY
Superpave FAA 45 @ 2 Ton/CY
PG 58H-34 Asphalt Cement @ 6.0%
Fog Seal @ 0.05 Gal/SY
Riprap @ 1.7 Ton/CY

HMA Cored Samples							
	A	B		C			
Specification Section	Distance (Ft)÷1000	Lanes	Joints	Lifts	Quantity (A x B x C)	Quantity (1 per mile)	Unit
430.04 I.2.b(1), "General"	1866.1/1000 = 2	2	N/A	2	8	N/A	EA
SSP 4 Longitudinal Joint Density in HMA Pavements (Centerline)	1866.1/1000 = 2	N/A	1	2	4	N/A	EA
430.04 I.2.b(2),"Pavement Thickness Determination Cores"					N/A	1	EA
				Total	12	1	EA

Obliteration of Pavement Marking

US 52 <EX52>
Sta 8859+46.9 to 8861+30.3 - Dbl Yellow Median 6' Rt
183.4*8/12 = 123 SF
Sta 8860+00.0 to 8861+30.3 - Dbl Yellow Median 6' Lt
130.3' * 8/12 = 87 SF

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	10	2

BASIS OF ESTIMATE

Item	Begin Station	End Station	HMA Thickness (IN)	HMA Plan View Area (SF)	HMA Slough Area (SF)	HMA Volume (CY)	HMA Superpave FAA 45 (Tons)	HMA PG 58H-34 Asphalt Cement (Tons)	Prime Area (SY)	Prime Coat (Gallons)	Tack Area (SY)	Tack Coat (Gallons)	Fog Area (SY)	Fog Coat (Gallons)
US 52B														
Bottom Lift	10+00.80	18+25.40	2	35399.3	1083.0	221.9	444	27	15,046	3,762	-	-	-	-
Top Lift	10+00.80	18+25.40	2	45138.7	1085.3	282.0	564	34	-	-	15,408	771	15,046	753
Mainline Subtotal:							1,008	61		6,019		771		753
ND 3														
Bottom Lift	8413+46.50	8423+88.00	2	8395.9	788.3	54.3	109	7	10,905	2,727	-	-	-	-
Top Lift	8413+46.50	8423+88.00	2	32716.4	790.4	204.4	409	25	-	402 -	11,169	559	10,905	546
Mainline Subtotal:							518	32		3,129		559		546
Mainline Total:							1,526	93		6,891		1,330		1,299

Item	Begin Station	End Station	Aggregate Thickness (IN)	Aggregate Plan View Area (SF)	Aggregate Slough Area (SF)	Aggregate Volume (CY)	Aggregate Base Course CL 5 (Tons)
US 52B							
Top Lift	10+00.80	18+25.40	12	36482.3	6467.4	1471.0	2759
Mainline Subtotal:							2,759
ND 3							
Top Lift	8413+46.50	8423+88.00	12	9184.3	4686.6	426.9	801
Mainline Subtotal:							801
Mainline Total:							3,560

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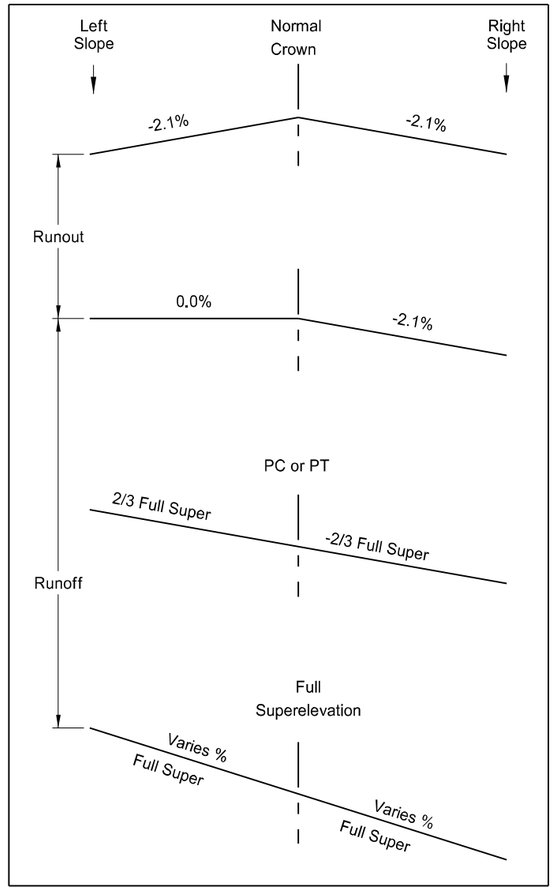
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	20	1

P.C. Station 10+75.53
P.I. Station 12+82.45
Delta = 32° 56' 11.52" (RT)
Degree = 8° 11' 06.40"
Tangent = 206.9278
Length = 402.3957
Radius = 700.0000
External = 29.9446
P.T. Station 14+77.92

Station	Left Slope	Right Slope
10+00	1.91	-1.42
PC - 24'	1.91	-1.42
PC - 12'	1.91	-1.91
PC	2.40	-2.40
PC + 29'	3.60	-3.60
PT - 29'	3.60	-3.60
PT	2.40	-2.40
PT + 7'	2.10	-2.10
PT + 58'	0.00	-2.10
PT + 109'	-2.10	-2.10



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DATE 11-22-2022
NORTH DAKOTA

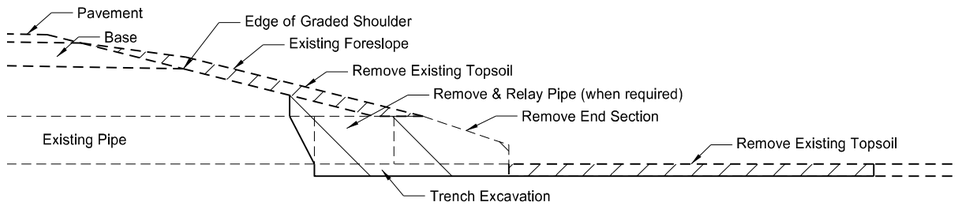
Note: Calculations based on AASHTO method five. A design speed of 25 mph and maximum superelevation of 6% were used. A gradient of 1:200 was used for the superelevation transition.

Superelevation Table

US 52 and ND 3 Intersection Improvements

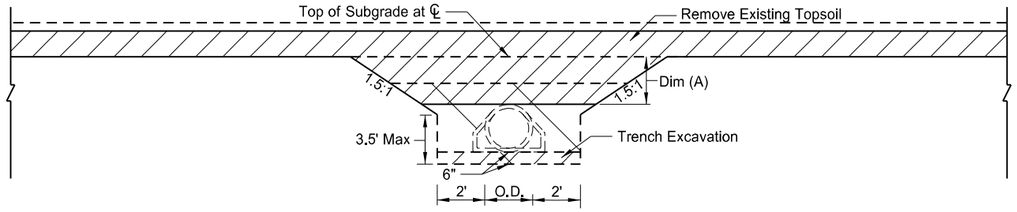
Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	20	2



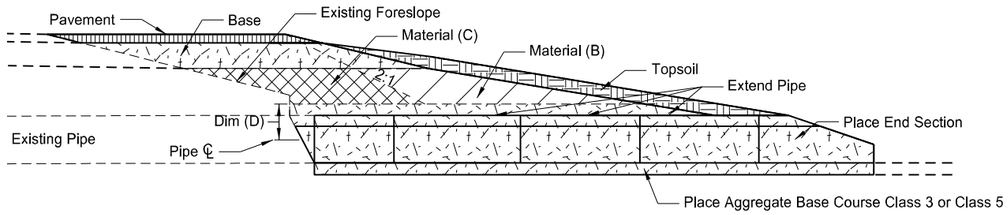
Removal Section

Cross Section View



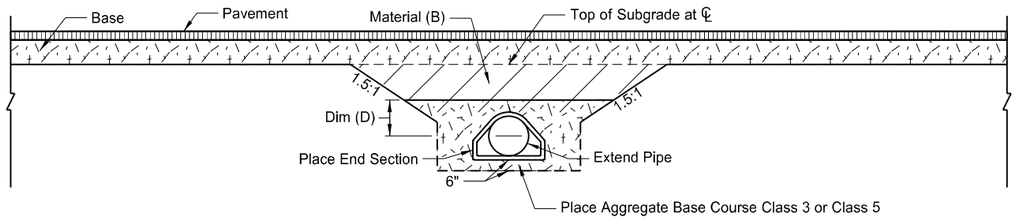
Removal Detail

Side View



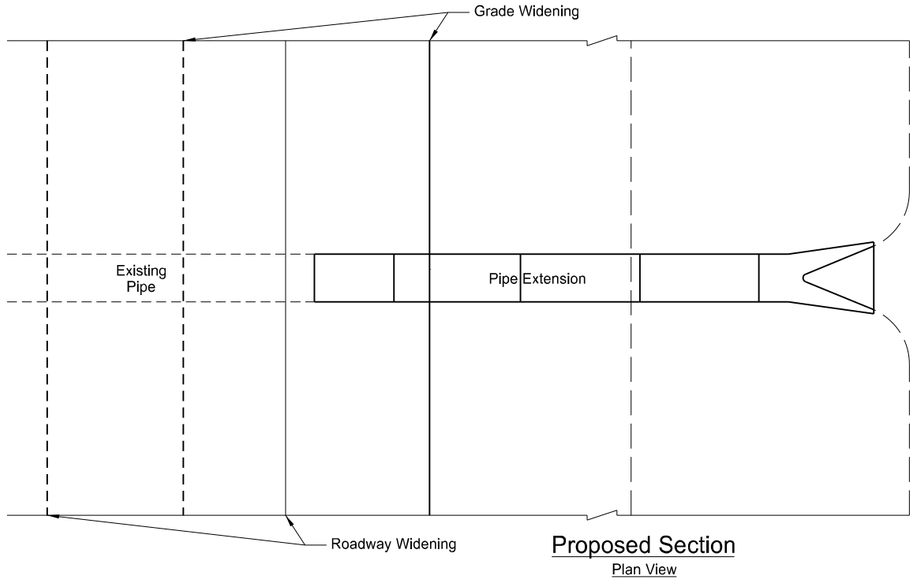
Proposed Section

Cross Section View



Backfill Detail

Side View (Topsoil not shown)



Proposed Section

Plan View

Pay Items
1) Pipe*
2) Remove & Relay Pipe - All Types & Sizes (when required)
3) Remove & Reset End Section or
   Remove End Section and Place New End Section
4) Borrow Excavation or Common Excavation
5) Topsoil
6) Seeding
7) Mulching

*Included in Pipe Pay Item
1) Pipe
2) Trench excavation
3) Aggregate Base Course Class 3 or Class 5

Pipe Materials	Dim (A)<=4 Feet		Backfill Dimension
	Material (B)	Material (C)	Dim (D)
Concrete	Embank or Aggr	Aggregate	0.5 O.D.
Metal	Embank or Aggr	Aggregate	0.5 O.D.+1 Foot

Pipe Materials	Dim (A)>4 Feet		Backfill Dimension
	Material (B)	Material (C)	Dim (D)
Concrete	Embankment	Embankment	0.5 O.D.
Metal	Embankment	Embankment	0.5 O.D.+1 Foot

NOTES:
1. Embankment may be either Borrow Excavation or Common Excavation

2. Aggregate may be either Class 3 or Class 5 Aggregate Base Course.

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PE-10782
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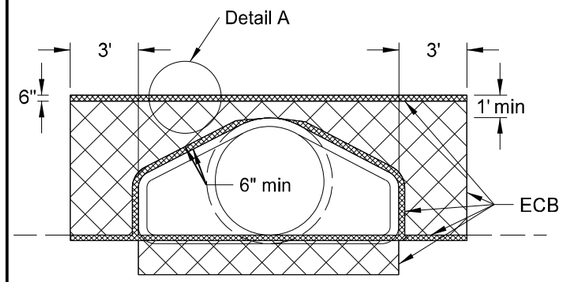
Mainline Widening CL Pipe Extension Detail

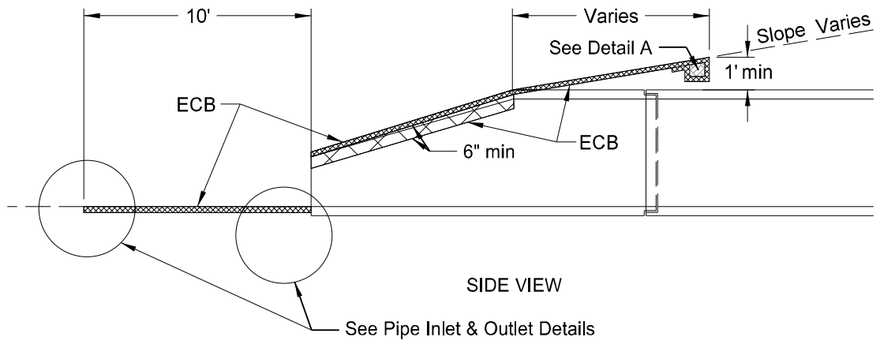
US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	20	3

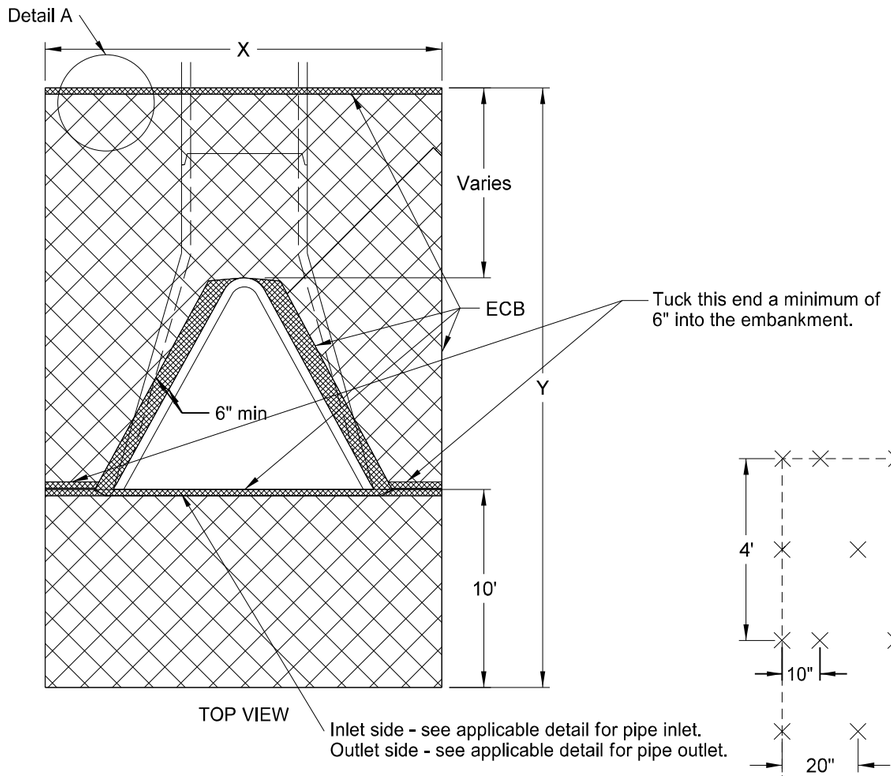


FRONT VIEW



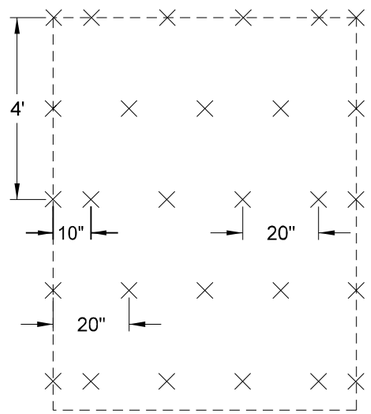
SIDE VIEW

Erosion Control Blanket (ECB)								
Location to be Protected Station	Culvert Type Appr/CL	Pipe Diam (Inch)	No	Unit Quantity (SY)	Total Quantity Type 1 (SY)	Type 2 (SY)	Type 3 (SY)	Type 4 (SY)
10+68 Lt	CL	36	1	27			27	
15+44 Lt	CL	24	1	20			20	
15+46 Rt	CL	24	1	20			20	
8423+16 Lt	CL	24	1	20			20	
8423+16 Rt	CL	24	1	20			20	
Total (SYs)							107	



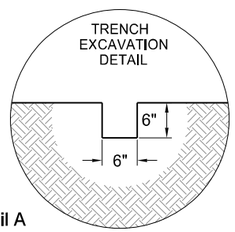
TOP VIEW

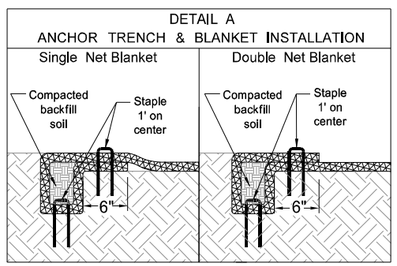
NOTE: Tuck the ECB a minimum of 6" into the embankment (against the flared end section) around the opening of the flared end section.

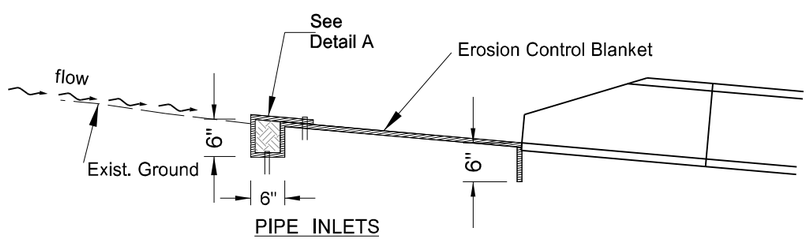


STAPLE PATTERN

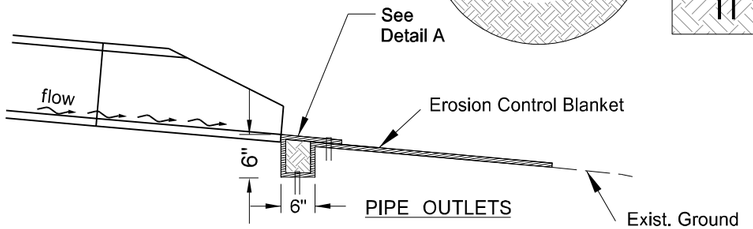
CENTERLINE CULVERTS									
DIA	X	Y	Surface area to be protected	ECB	DIA	X	Y	Surface area to be protected	ECB
In	Ft	Ft	SF	SY	In	Ft	Ft	SF	SY
36	12.7	21.2	242.1	27	24	10.5	17.6	172.1	20
Note: Quantities based on 6:1 slope.					Note: Quantities based on 4:1 slope.				







PIPE INLETS



PIPE OUTLETS

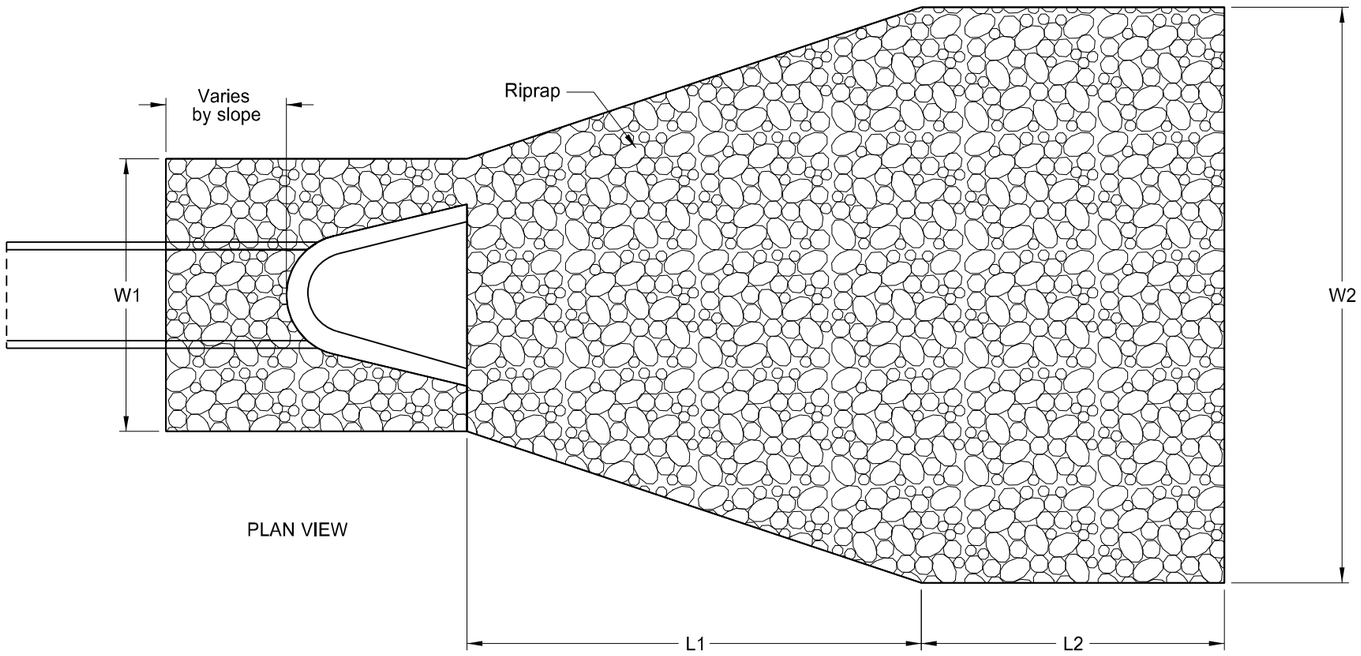
REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Erosion Control at Culvert Flared End Sections

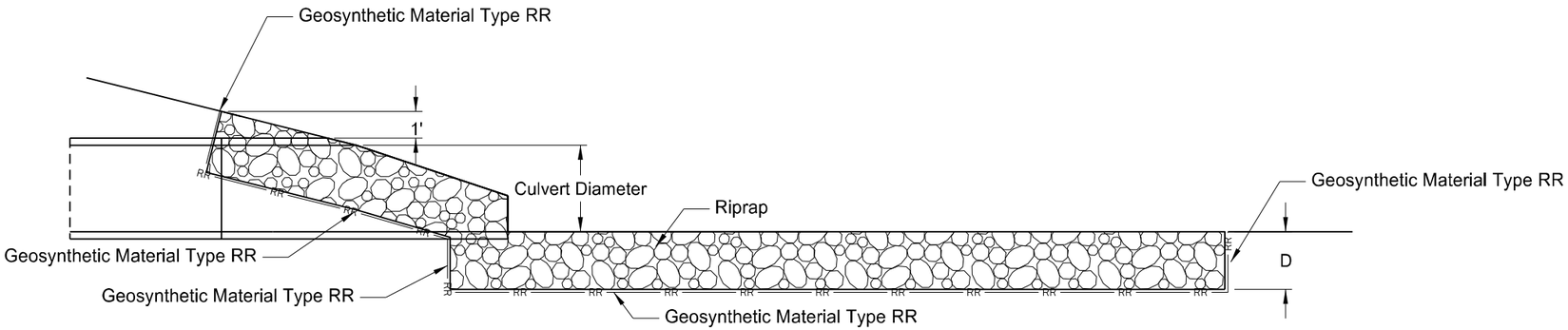
US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	20	4



PLAN VIEW



PROFILE VIEW

Location	Dimensions: Culvert Diameter (inches)	L1 (feet)	L2 (feet)	W1 (feet)	W2 (feet)	Riprap Depth, D (inches)	Riprap Grade	Quantities: Geosynthetic Material Type RR (SY)	Riprap Grade II (CY)
Sta 10+68	36	10	60	9	12	18	1:4	129	48
TOTAL								129	48

REGISTERED PROFESSIONAL ENGINEER
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PE-10782
DATE 11-22-2022
NORTH DAKOTA

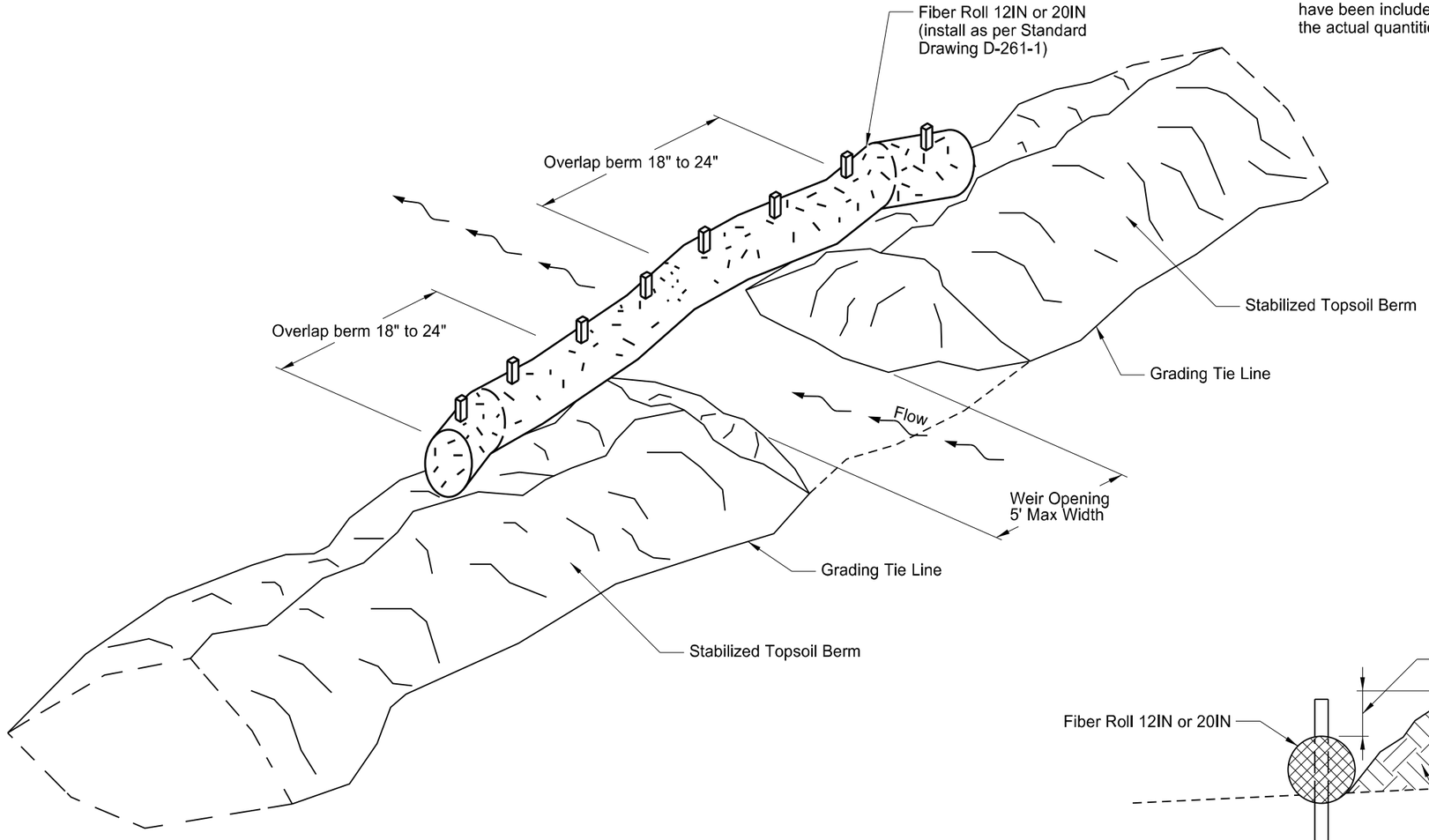
Riprap at Pipe Outlets

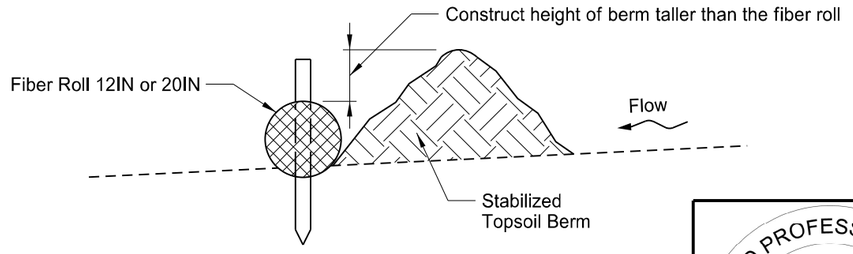
US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	20	5

Quantities of 30 LF of Fiber Roll 12IN and 30 LF of Remove Fiber Roll 12IN have been included in the quantities for use at weirs. The Engineer will measure the actual quantities required in the field.





Topsoil Berm Detail

Notes:

1. Windrow the existing topsoil from the foreslope to create a berm at the grading tie line.
2. Stabilize berms in accordance with the Construction General Permit.
3. Place weirs intermittently throughout the length of the berm to allow stormwater to drain through the berm.
4. Avoid placing weirs adjacent to waterbodies.
5. Install fiber rolls as the weirs are created in the topsoil berm.
6. Include costs to create, stabilize, maintain, and dismantle the berm in the unit price bid for "Topsoil".
7. Include costs for fiber rolls in the unit price bid for "Fiber Rolls 12IN" or "Fiber Rolls 20IN".
8. Include costs to remove fiber rolls in the unit price bid for "Remove Fiber Rolls 12IN" or "Remove Fiber Rolls 20IN."

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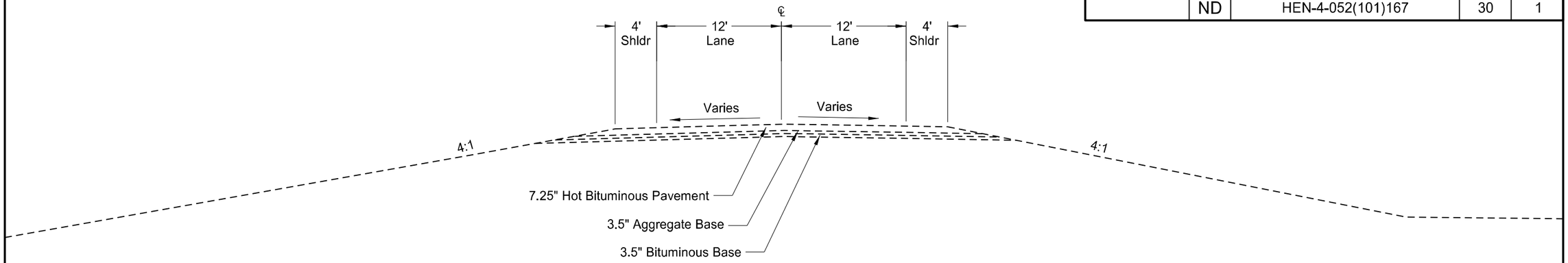
NORTH DAKOTA

Temporary Topsoil Berm and Weir Detail

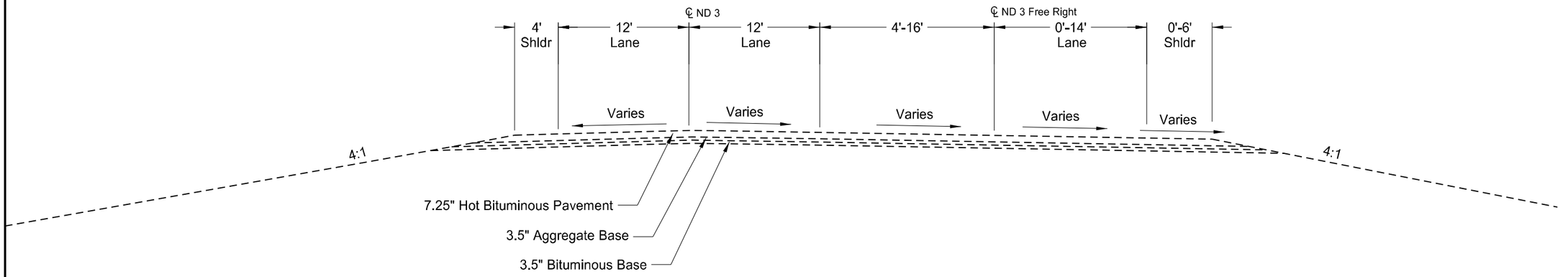
US 52 and ND 3 Intersection Improvements

Harvey, ND

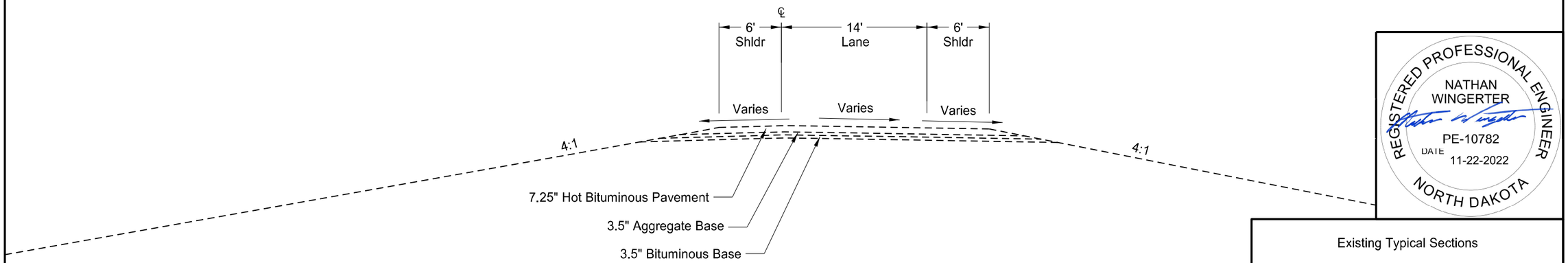
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	30	1



ND 3 <EX03>
Sta 8413+46.5 to Sta 8416+72.2
Sta 8420+64.1 to Sta 8423+88.0



ND 3 <EX03>
Sta 8416+72.2 to Sta 8420+64.1



ND 3 Free Right <EX03R>
Sta 204+81.0 to Sta 207+20.4

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NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Existing Typical Sections

US 52 and ND 3 Intersection Improvements

Harvey, ND

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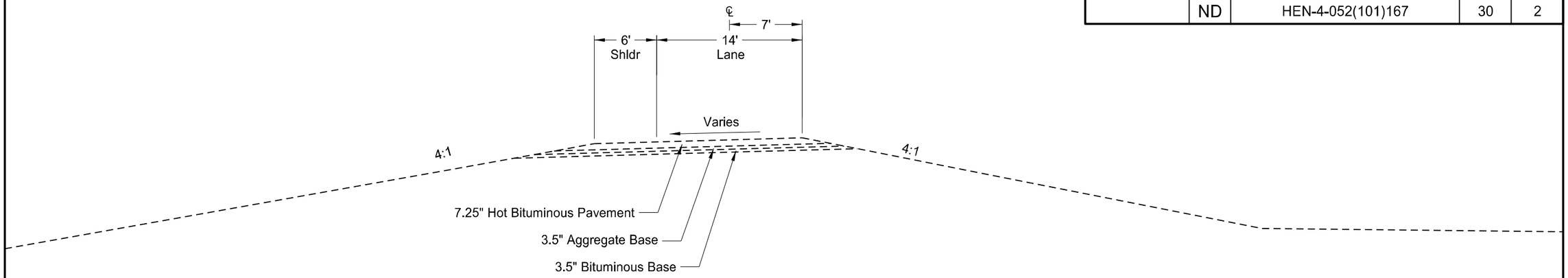
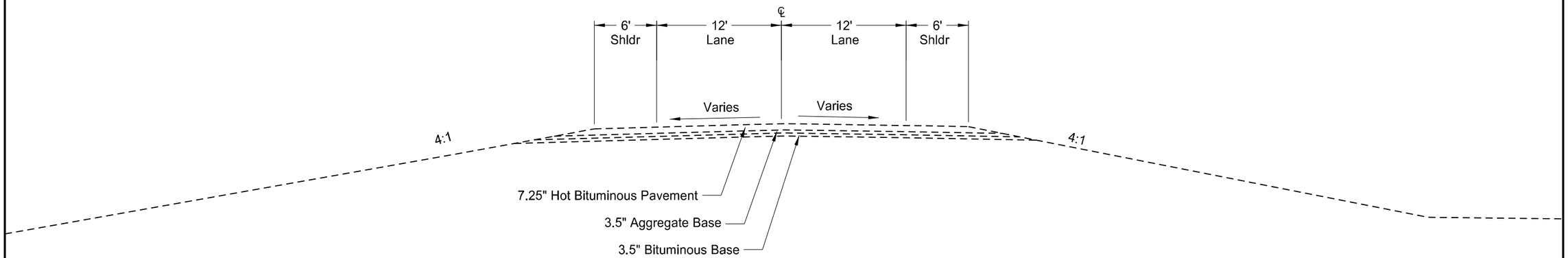
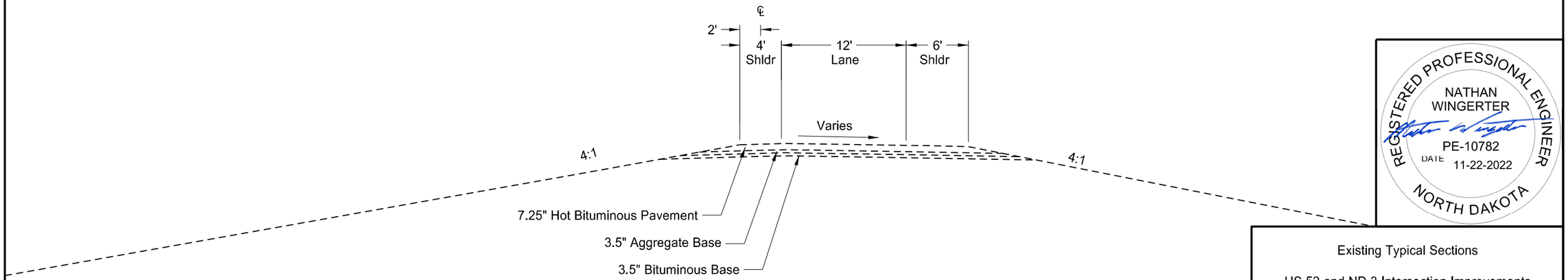
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	30	2



US 52B <EX52B_1>
Sta 10+00.0 to Sta 17+92.8



US 52B <EX52B_1>
Sta 17+92.8 to Sta 22+18.2



US 52B <EX52B_2>
Sta 100+00.0 to Sta 104+62.4

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NATHAN WINGERTER
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DATE 11-22-2022
NORTH DAKOTA

Existing Typical Sections

US 52 and ND 3 Intersection Improvements

Harvey, ND

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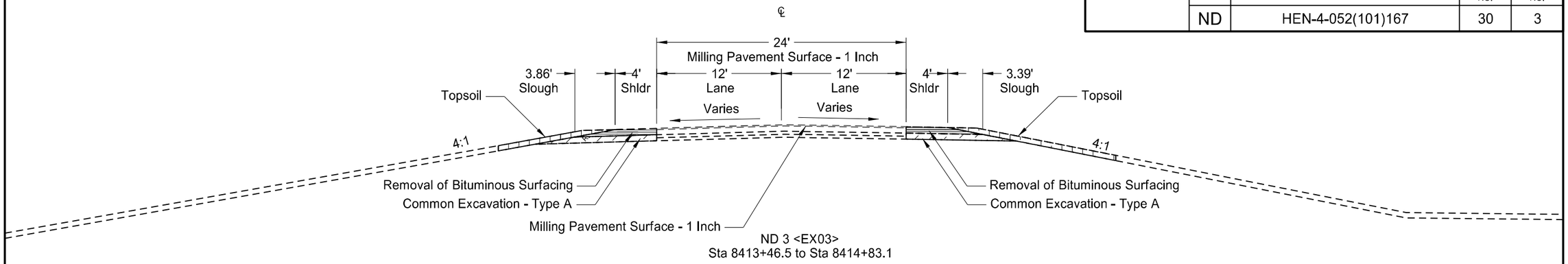
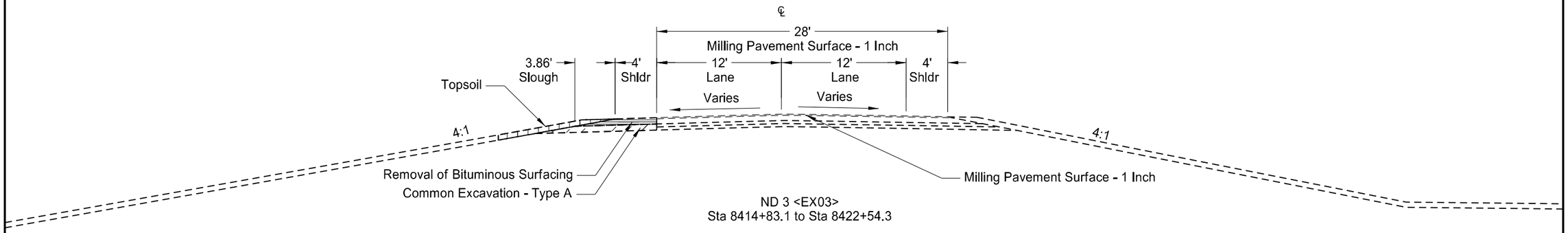
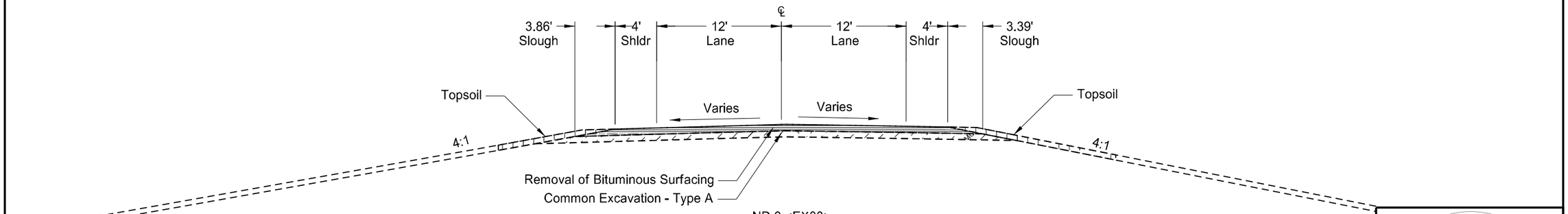
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	30	3



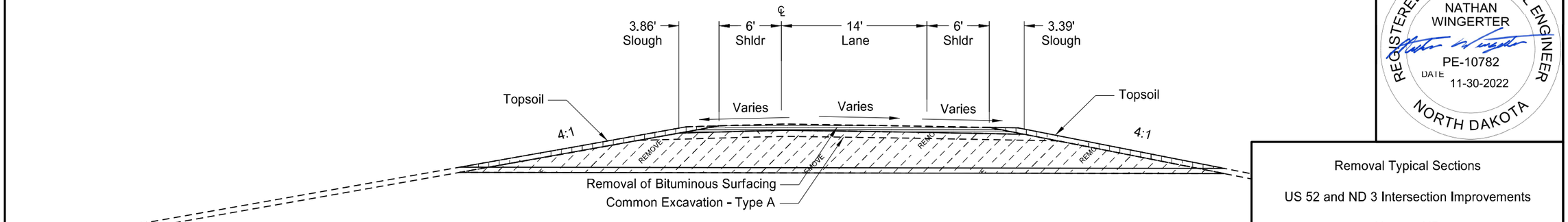
ND 3 <EX03>
Sta 8413+46.5 to Sta 8414+83.1



ND 3 <EX03>
Sta 8414+83.1 to Sta 8422+54.3



ND 3 <EX03>
Sta 8422+54.3 to Sta 8423+88.0



ND 3 Free Right <EX03R>
Sta 204+81.0 to Sta 207+20.4

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NATHAN WINGERTER
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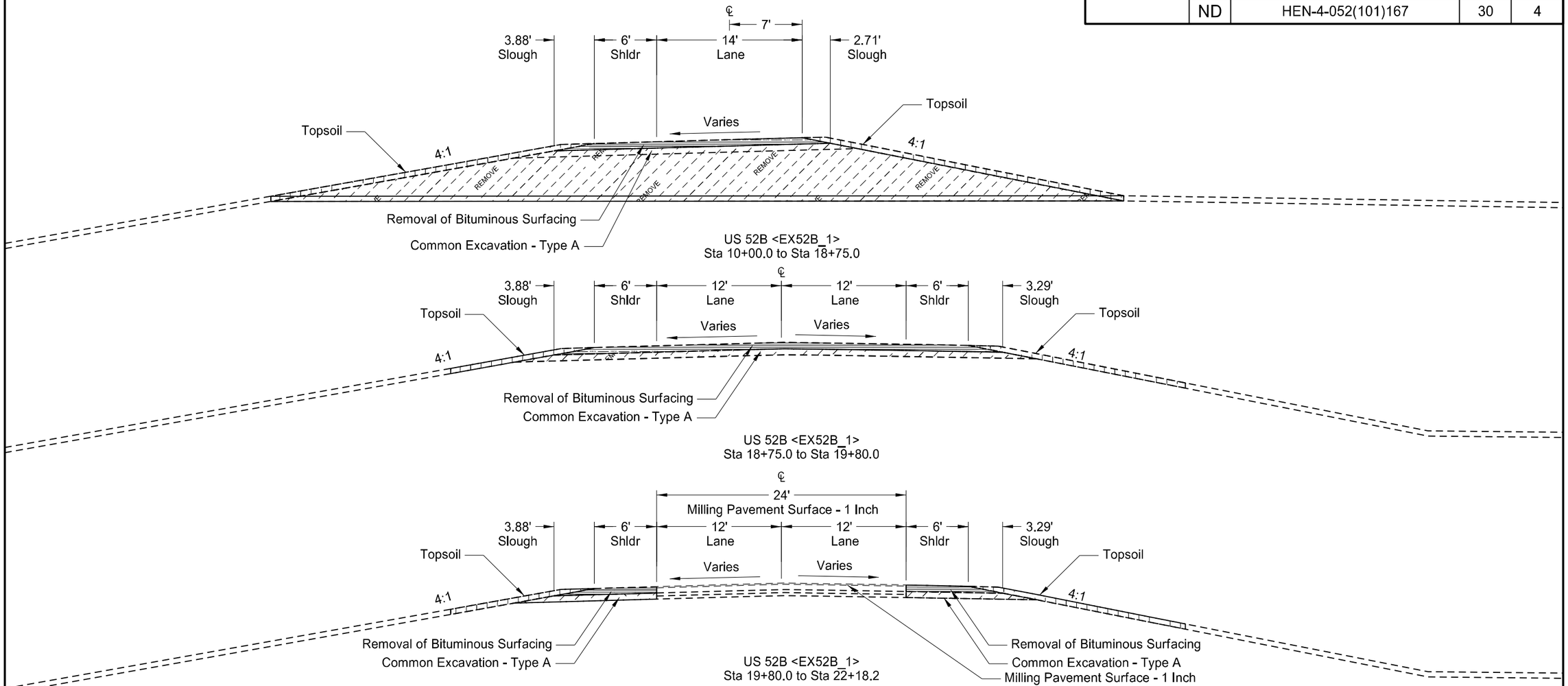
DATE 11-30-2022
NORTH DAKOTA

Removal Typical Sections

US 52 and ND 3 Intersection Improvements

Harvey, ND

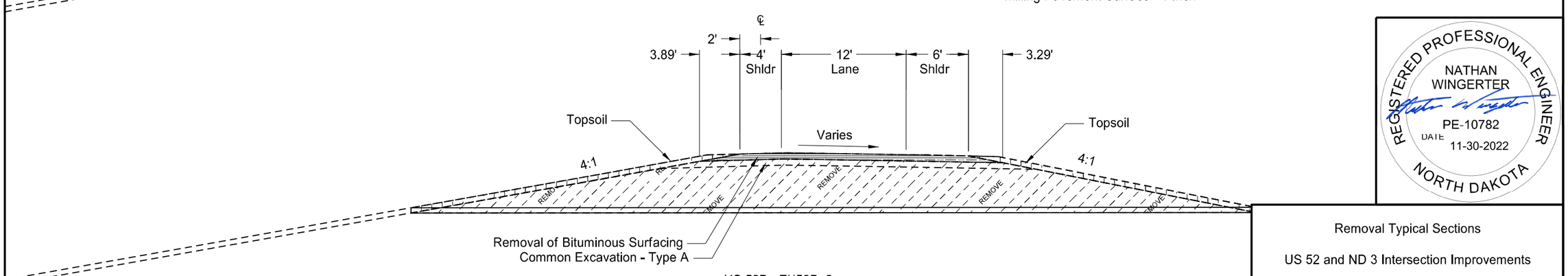
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	30	4



US 52B <EX52B_1>
Sta 10+00.0 to Sta 18+75.0

US 52B <EX52B_1>
Sta 18+75.0 to Sta 19+80.0

US 52B <EX52B_1>
Sta 19+80.0 to Sta 22+18.2



US 52B <EX52B_2>
Sta 100+00.0 to Sta 104+62.4

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NATHAN WINGERTER
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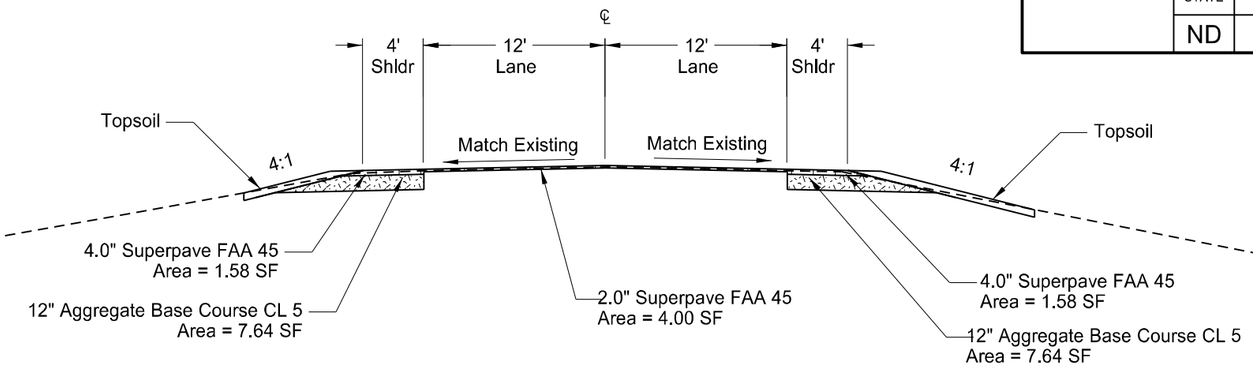
DATE 11-30-2022
NORTH DAKOTA

Removal Typical Sections

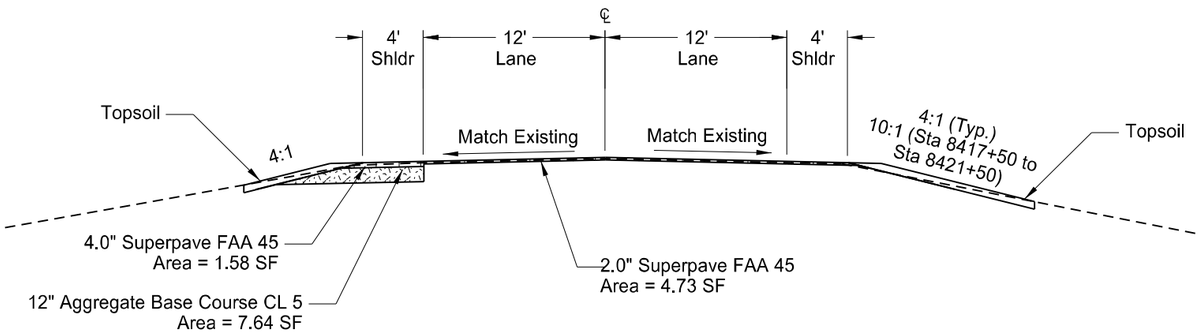
US 52 and ND 3 Intersection Improvements

Harvey, ND

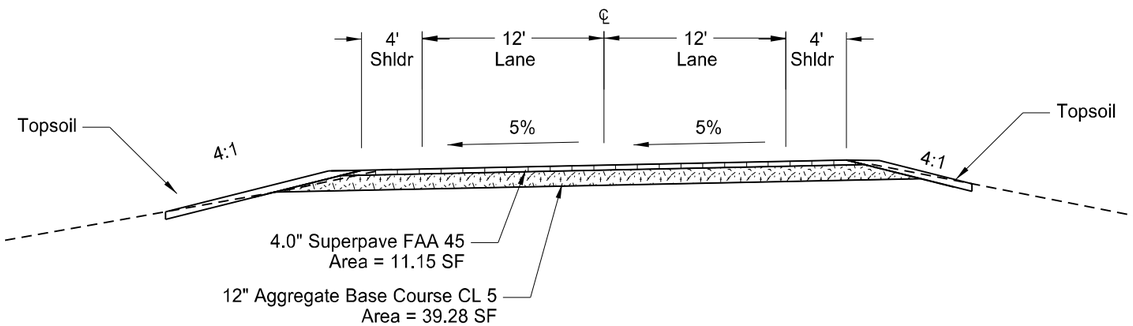
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	30	5



ND 3 <EX03>
Sta 8413+46.5 to Sta 8414+83.1



ND 3 <EX03>
Sta 8414+83.1 to Sta 8422+54.3



ND 3 <EX03>
Sta 8422+54.3 to Sta 8423+88.0

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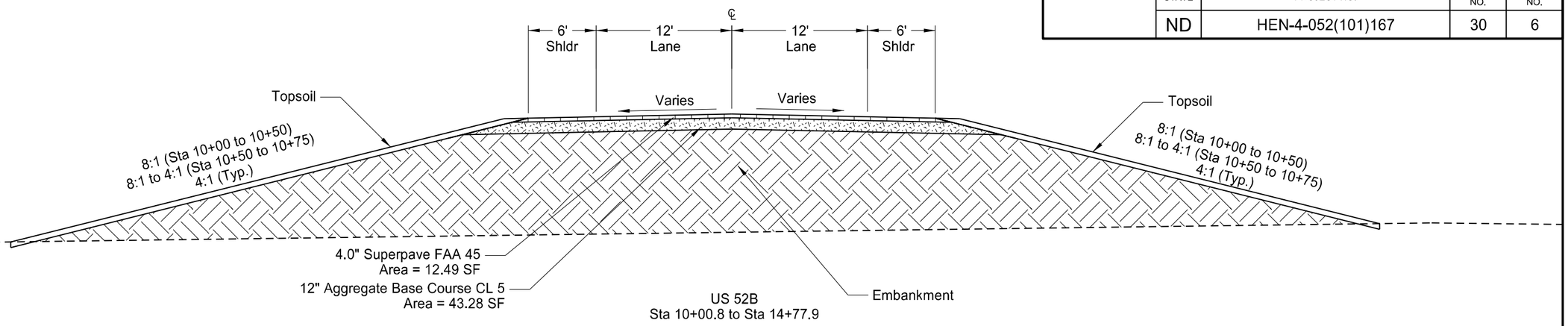
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Proposed Typical Sections

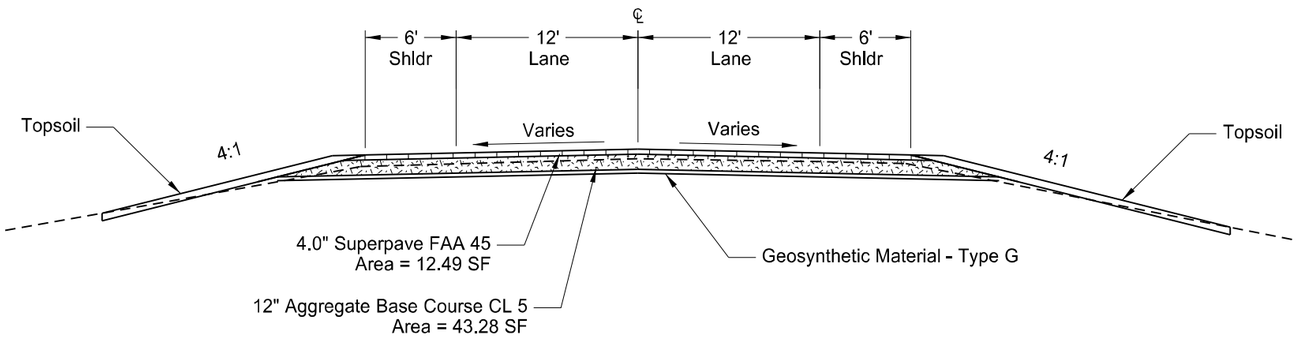
US 52 and ND 3 Intersection Improvements

Harvey, ND

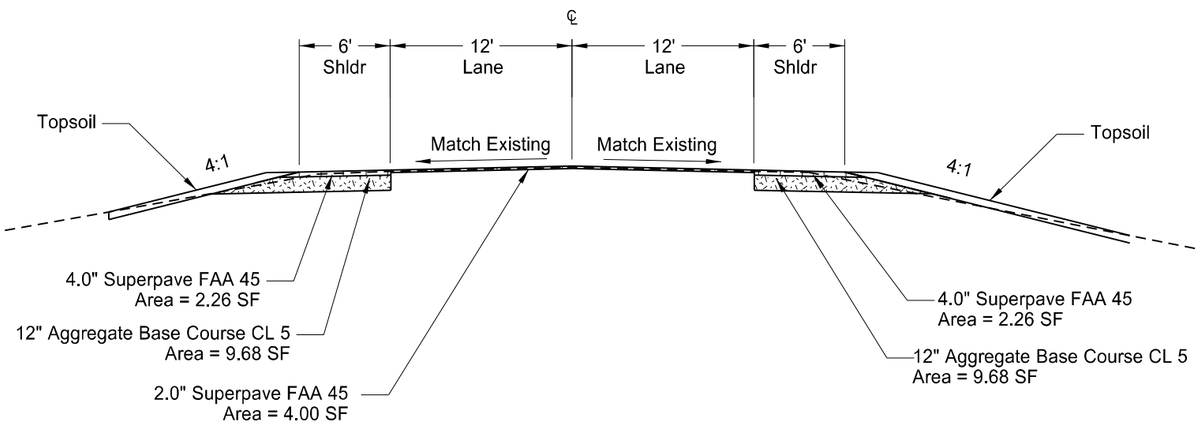
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	30	6



US 52B
Sta 10+00.8 to Sta 14+77.9



US 52B <PR52B>
Sta 14+77.9 to Sta 15+87.0



US 52B <PR52B>
Sta 15+87.0 to Sta 18+25.4

Notes:
See Section 20 Sheet 1 for superelevation details.

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
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DATE 11-30-2022
NORTH DAKOTA

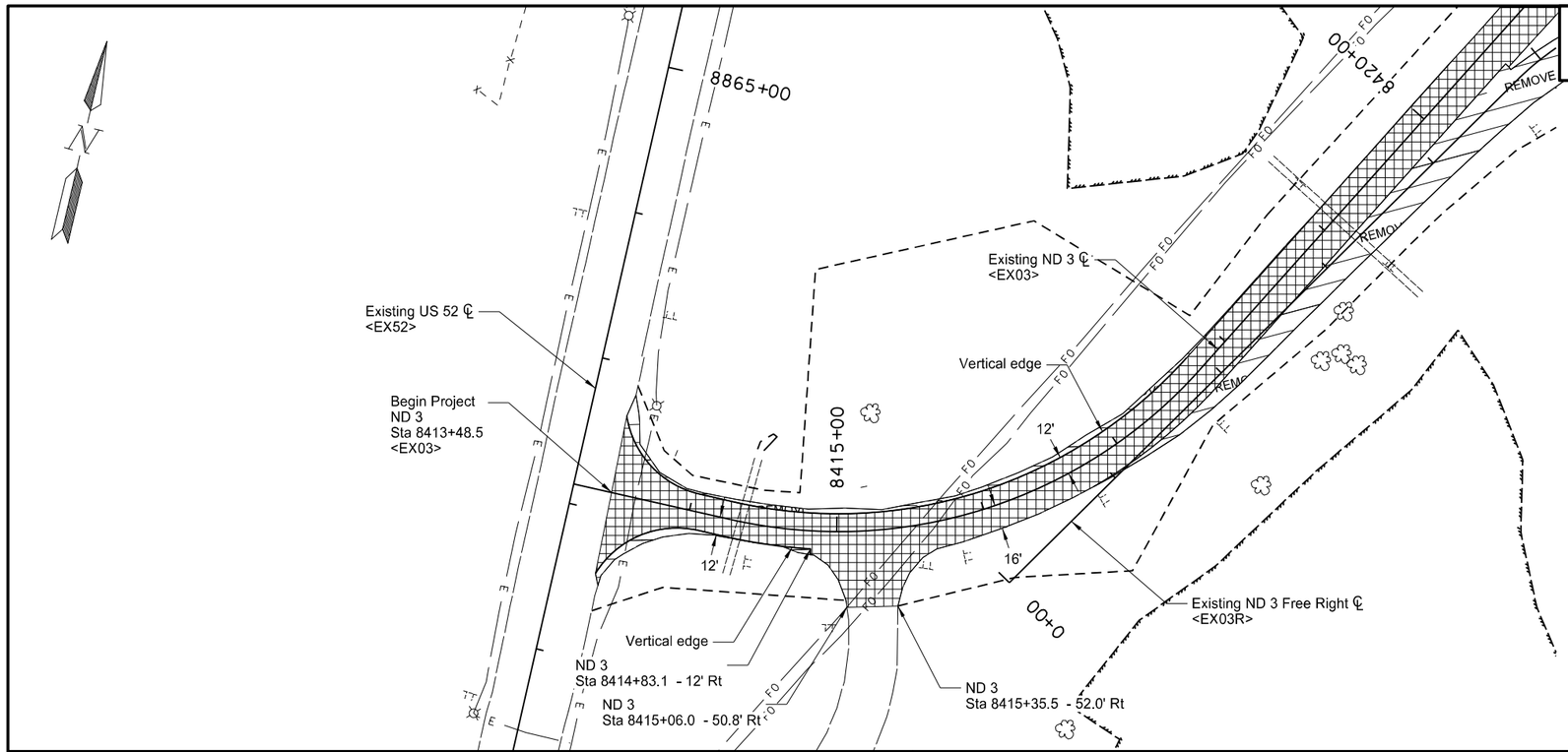
Proposed Typical Sections

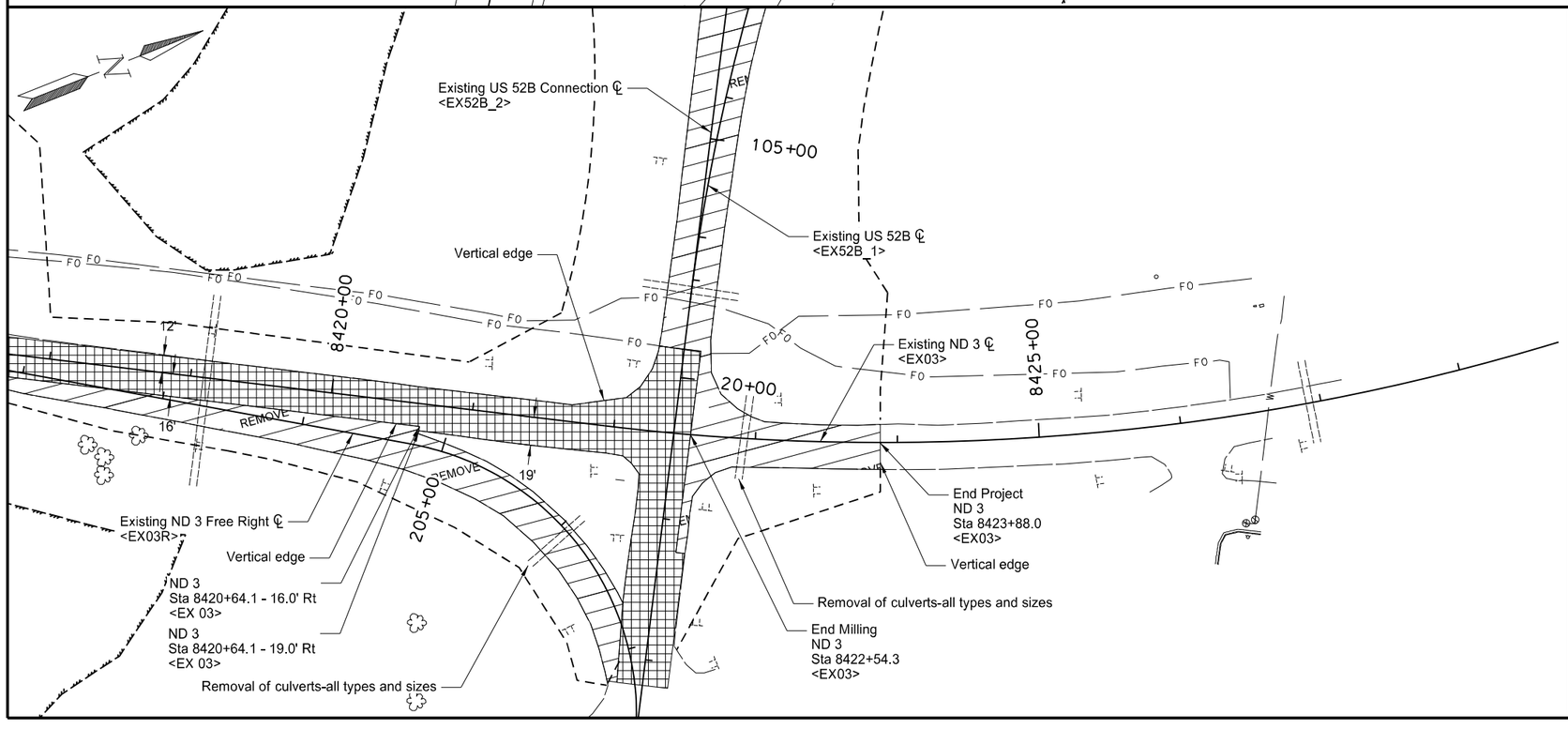
US 52 and ND 3 Intersection Improvements

Harvey, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	40	1

SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		Sta 8413+46.5 to 8422+22.7	1901	SY
		Sta 8422+60.7 to 8423+88.0	539	SY
202	0170	REMOVAL OF CULVERTS-ALL TYPES AND SIZES		
		Sta 8421+69.5 - 84.4' Rt	60	LF
		Sta 8422+92.2	60	LF
411	0105	MILLING PAVEMENT SURFACE		
		Sta 8413+46.5 to 8422+22.7	3147	SY





LEGEND

Removal of Bituminous Pavement

Milling Pavement Surface

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Removals
ND 3
US 52 and ND 3 Intersection Improvements

Harvey, ND

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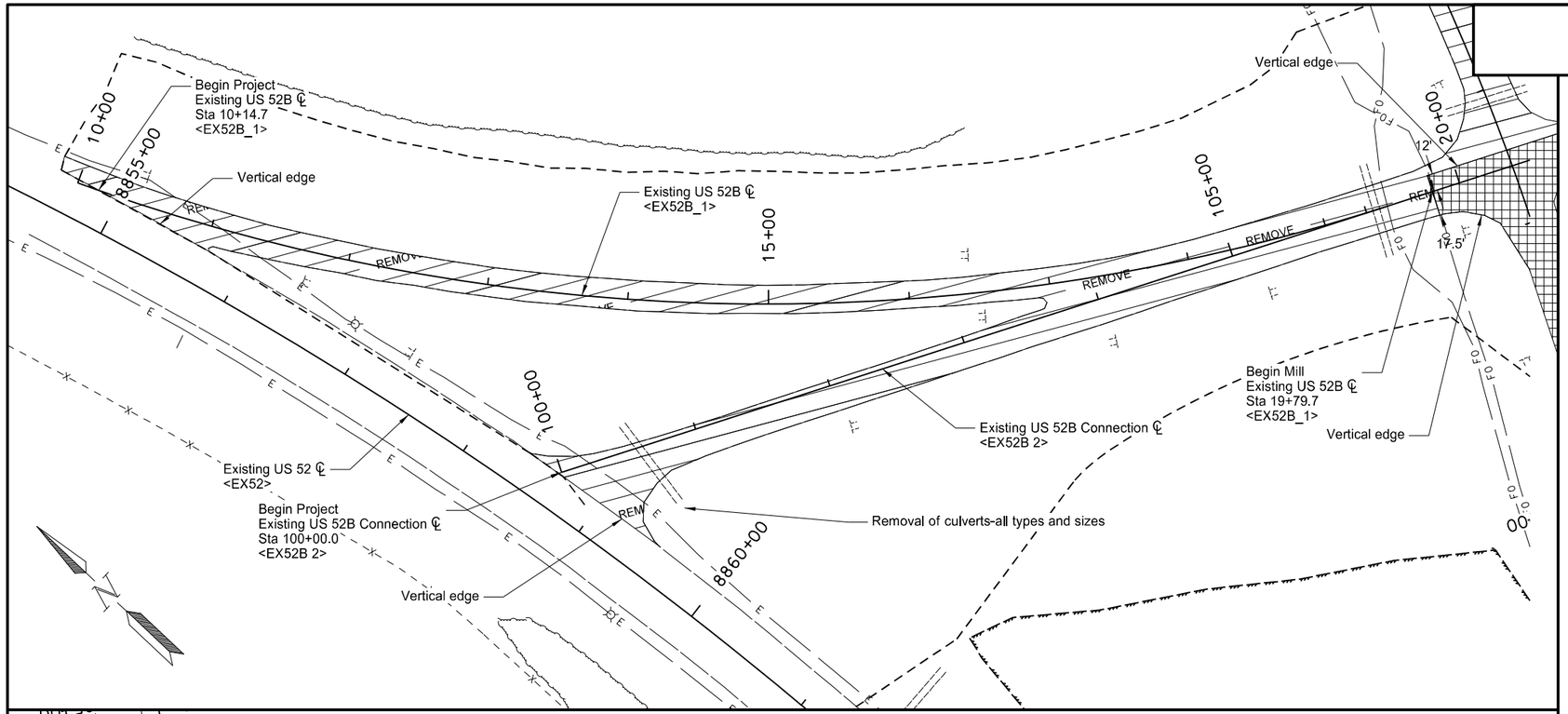
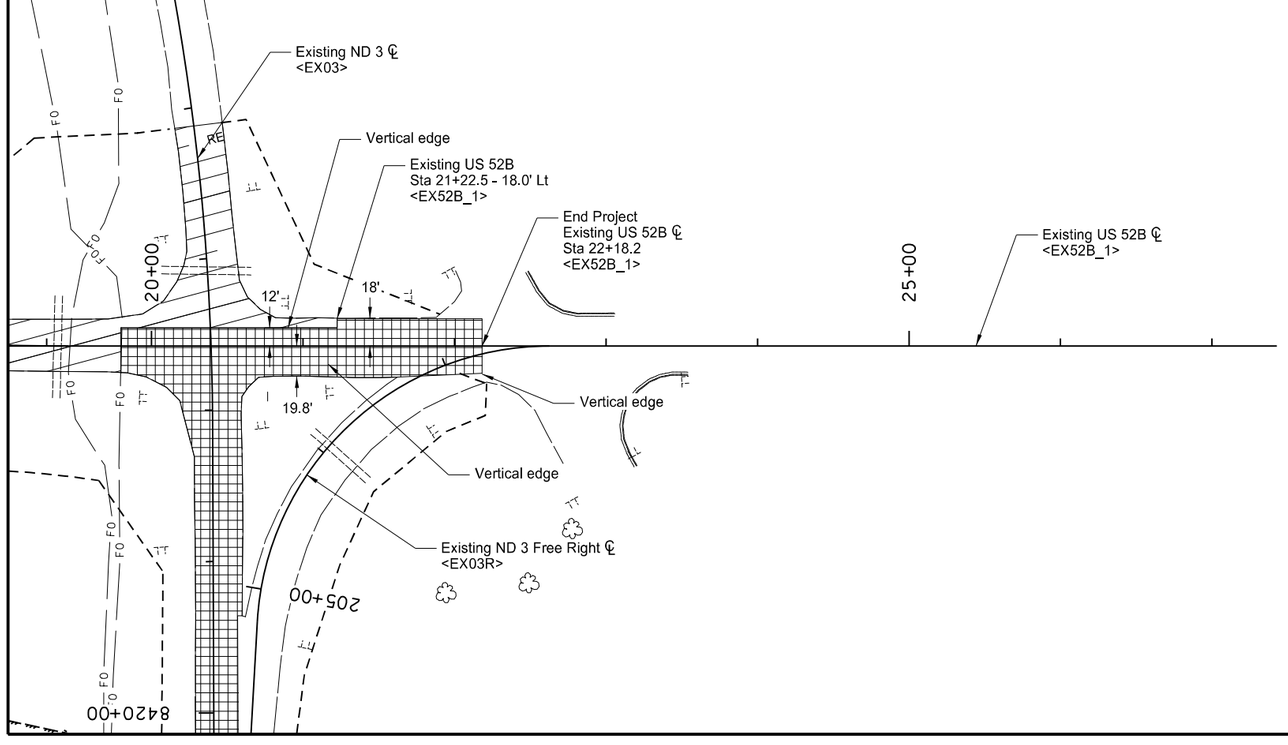
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	40	2

SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING Sta 10+00.0 to 22+18.2	4218	SY
202	0170	REMOVAL OF CULVERTS-ALL TYPES AND SIZES Sta 14+22.1 - 114.5' Rt	70	LF
411	0105	MILLING PAVEMENT SURFACE Sta 10+00.0 to 22+18.2	902	SY





LEGEND

Removal of Bituminous Pavement

Milling Pavement Surface

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Removals
US 52B
US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	50	1

HYDRAULIC DATA FOR *HEN-4-052(101)167* (A)

STATION	EXISTING PIPE	PROPOSED PIPE SIZE	DRAINAGE AREA (ACRES)	*25*-YEAR DATA				100-YEAR DATA	
				DESIGN DISCHARGE (CFS)	DESIGN HEADWATER (FT)	DESIGN VELOCITY (FPS)	DESIGN STAGE (NAVD 88)	100-YEAR DISCHARGE (CFS)	100-YEAR STAGE (NAVD 88)
10+68	24" RCP	36"	52.2	53.1	4.24	9.94	1587.24	75.6	1589.52
8423+16	24" RCP	24" (B)	1.0	2.5	0.74	6.95	1594.04	3.4	1594.17

(A) Hydraulic data provided is for smooth-walled (Manning's n=0.012) type conduits.
(B) Culvert diameter given at this location is the NDDOT Policy minimum diameter and exceeds hydraulic requirements.

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DATE 11-22-2022
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Culvert Hydraulic Data

US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	51	1

Begin Station / Location *	Begin Offset *	End Station / Location *	End Offset *	Pipe Installation (Pay Item)			Allowable Material	Required Diameter	Steel Pipe Coatings	Steel Pipe Corrugations or Spiral Ribs	Steel Pipe Minimum Thickness	Geosythetic Material - Type G (Pay Item)	End Sections **		Applicable Backfill
				In	Bid Item	LF		In	Type		In	SY	Begin EA	End EA	
10+68 (US 52B)	33' Lt	10+68 (US 52B)	43' Rt	36	Pipe Conduit	76	Reinforced Concrete Pipe - Class III **(barrel length = 70 LF)**	36				55	FES	FES	Std Dwg D-714-28
							Corrugated Steel Pipe	42	A	2	0.138				
							Corrugated Steel Pipe	42	P	2	0.064				
							Spiral Rib Steel Pipe	36	P	3/4, 1	0.064				
15+44 (US 52B)	35' Rt	15+44 (US 52B)	41' Rt	24	Pipe Conc. Reinf. CL III (Extension)	4	Reinforced Concrete Pipe - Class III **(barrel length = 4 LF)**	24						Remove & Relay FES	Section 20 Sheet 2
15+46 (US 52B)	33' Lt	15+46 (US 52B)	44' Rt	24	Pipe Conc. Reinf. CL III (Extension)	8	Reinforced Concrete Pipe - Class III **(barrel length = 8 LF)**	24						Remove & Relay FES	Section 20 Sheet 2
8423+16 (ND 3)	33' Lt	8423+16 (ND 3)	38' Rt	24	Pipe Conduit	71	Reinforced Concrete Pipe - Class III **(barrel length = 66 LF)**	24				43	FES	FES	Std Dwg D-714-28
							Corrugated Steel Pipe	30	P	2	0.064				
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.064				
							Polypropylene Pipe (AASHTO M330, Type S)	24							

Corrugations: **2** = 2-2/3"x1/2"
3 = 3"x1"
5 = 5"x1"

Coatings: **Z** = Zi
A = Aluminum
P = Polymeric (over Zinc or Aluminum)

Spiral Ribs: **3/4** = 3/4"x3/4"@7-1/2"
1 = 3/4"x1"@11-1/2"

(*) Stations and offsets are given to opening of end section and proposed to existing pipe barrel connection.
(**) End sections are measured and paid for separately for pipe extensions.
FES = Flared End Section

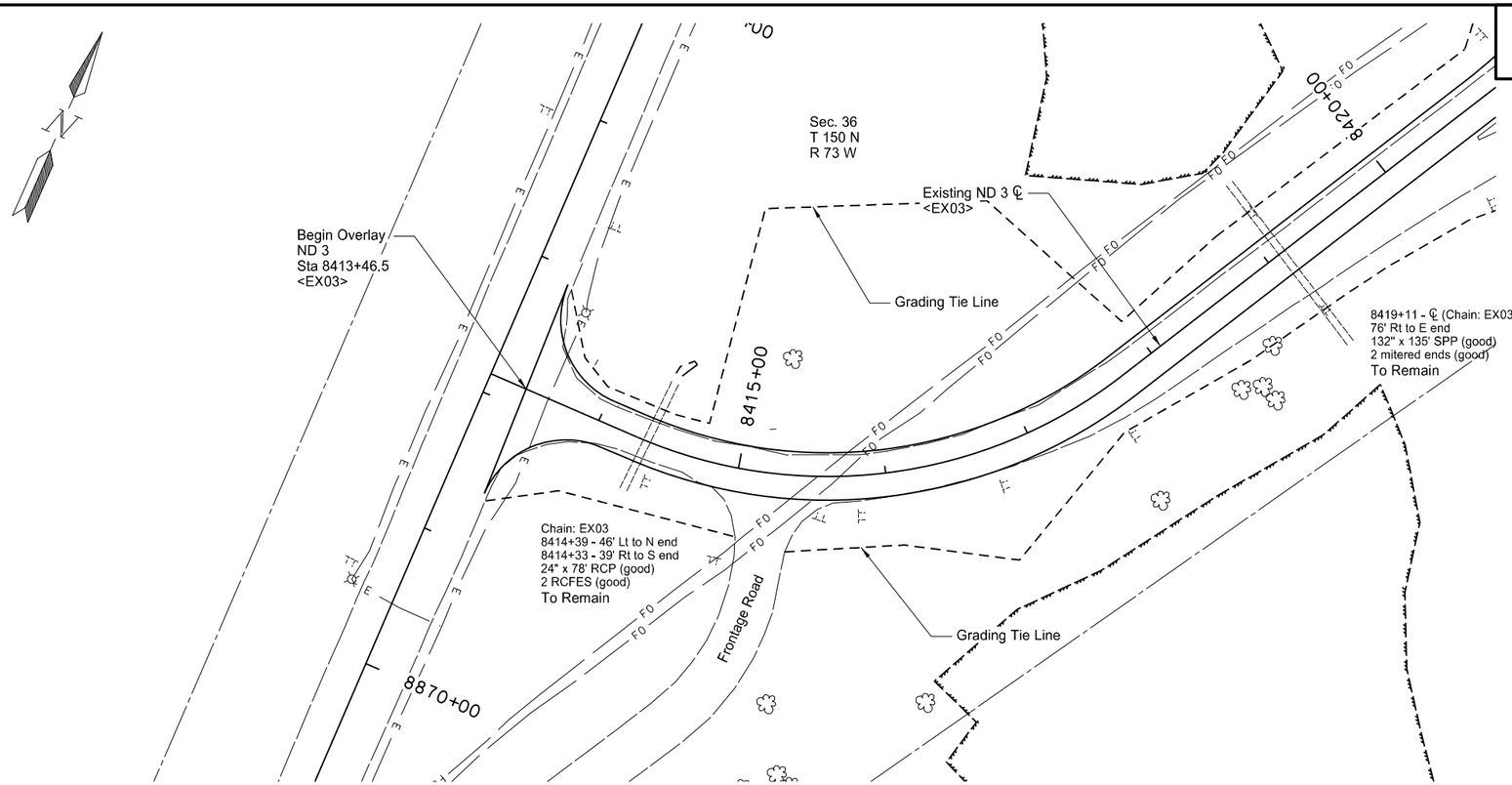
REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

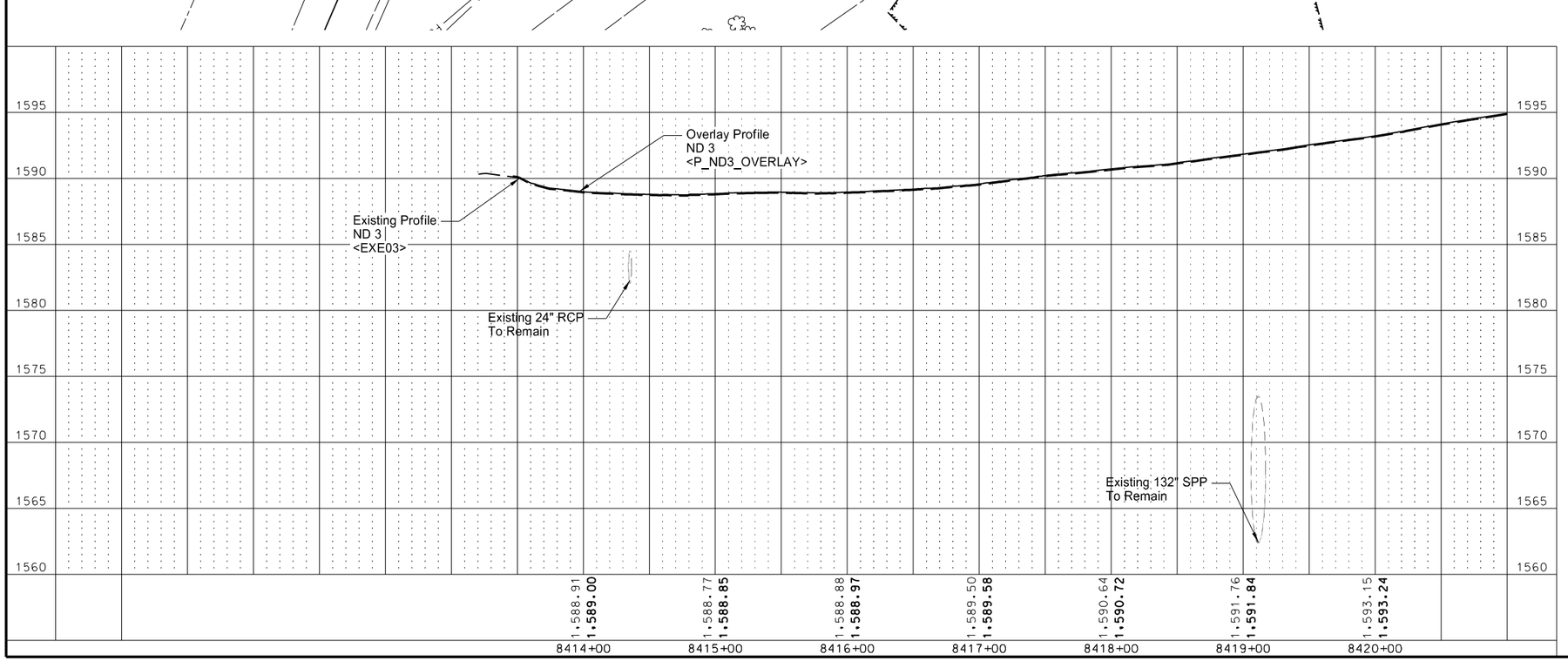
Allowable Pipe List

US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	60	1





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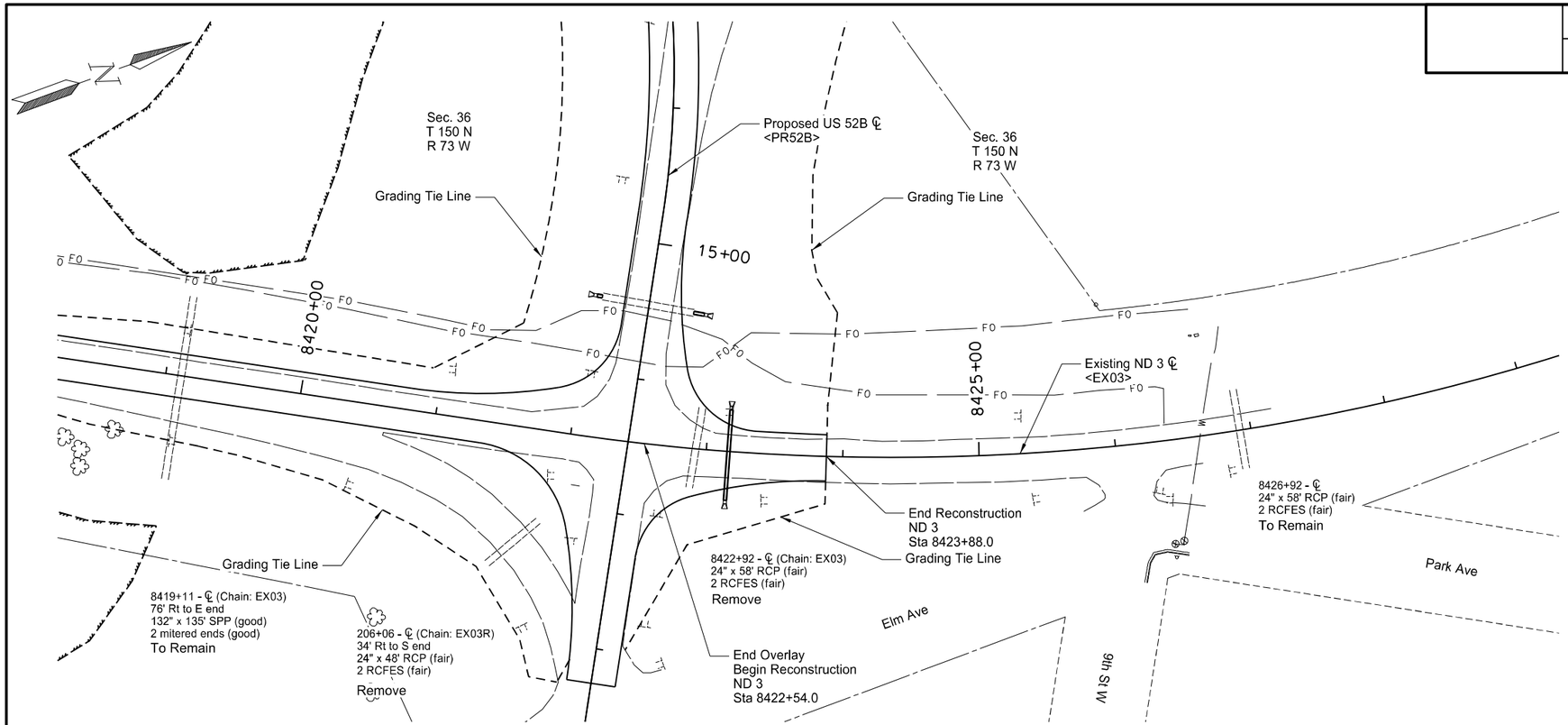
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

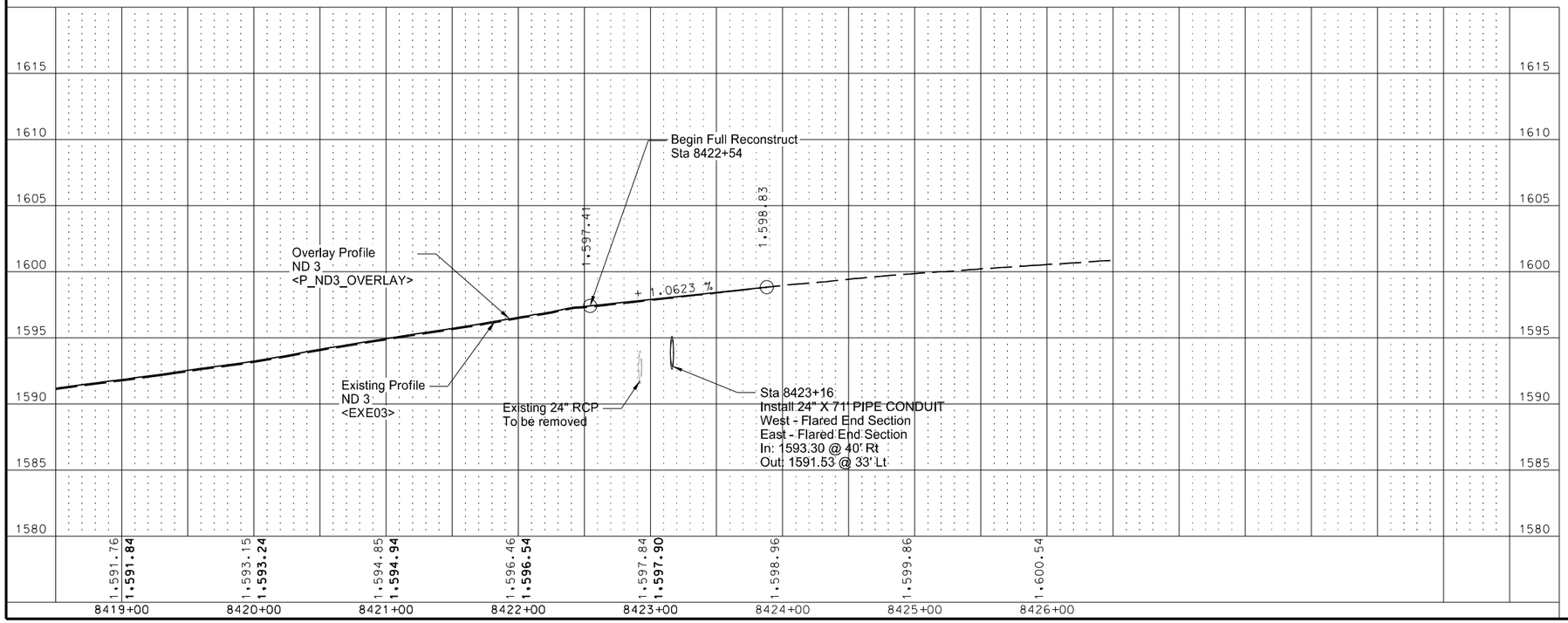
Plan and Profile
ND 3
US 52 and ND 3 Intersection Improvements

Harvey, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	60	2

SPEC	CODE	BID ITEM	QTY	UNIT
709	0100	GEOSYNTHETIC MATERIAL TYPE G		
		Sta 8423+16 - CL Pipe	43	SY
714	4105	PIPE CONDUIT 24IN		
		Sta 8423+16 - CL Pipe	71	LF





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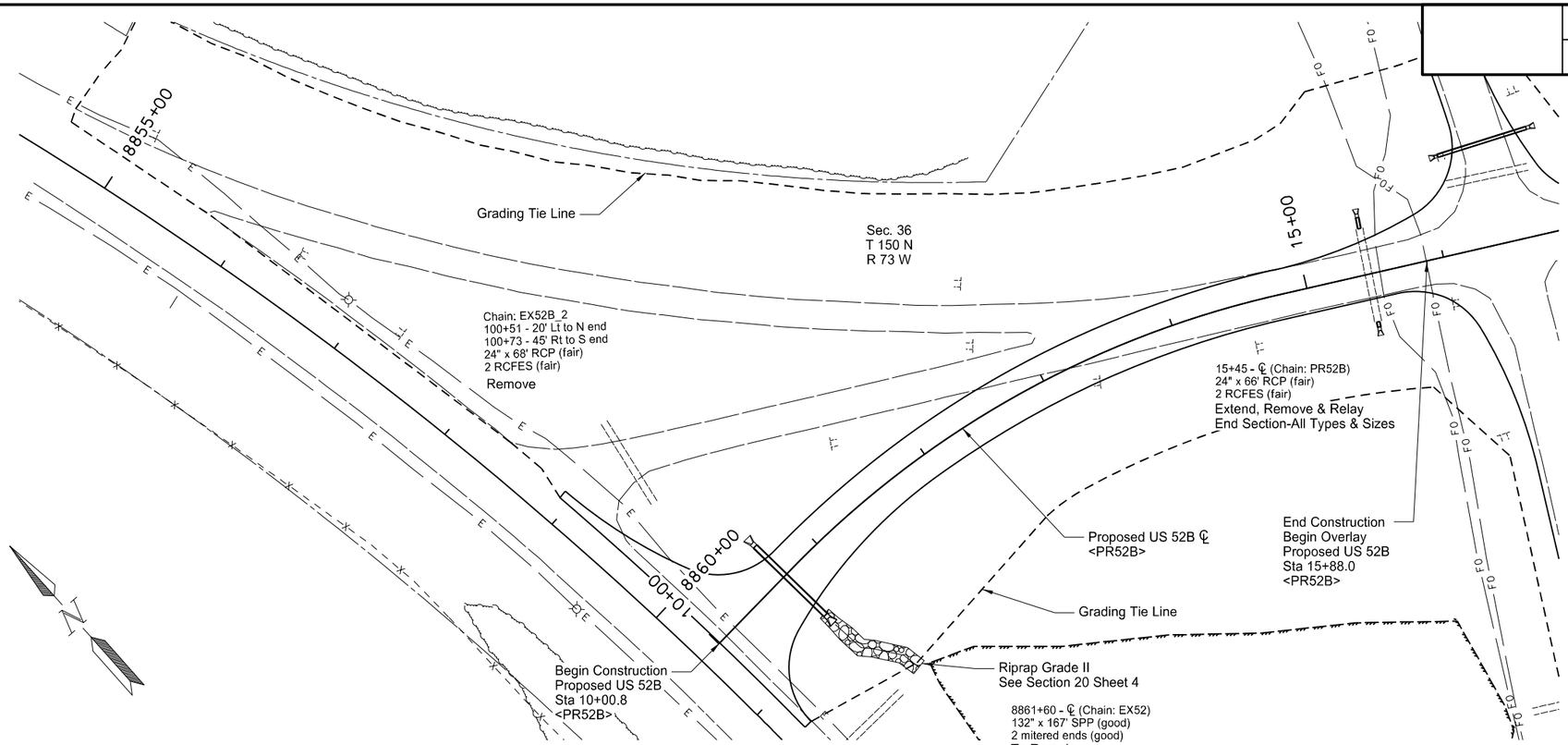
NORTH DAKOTA

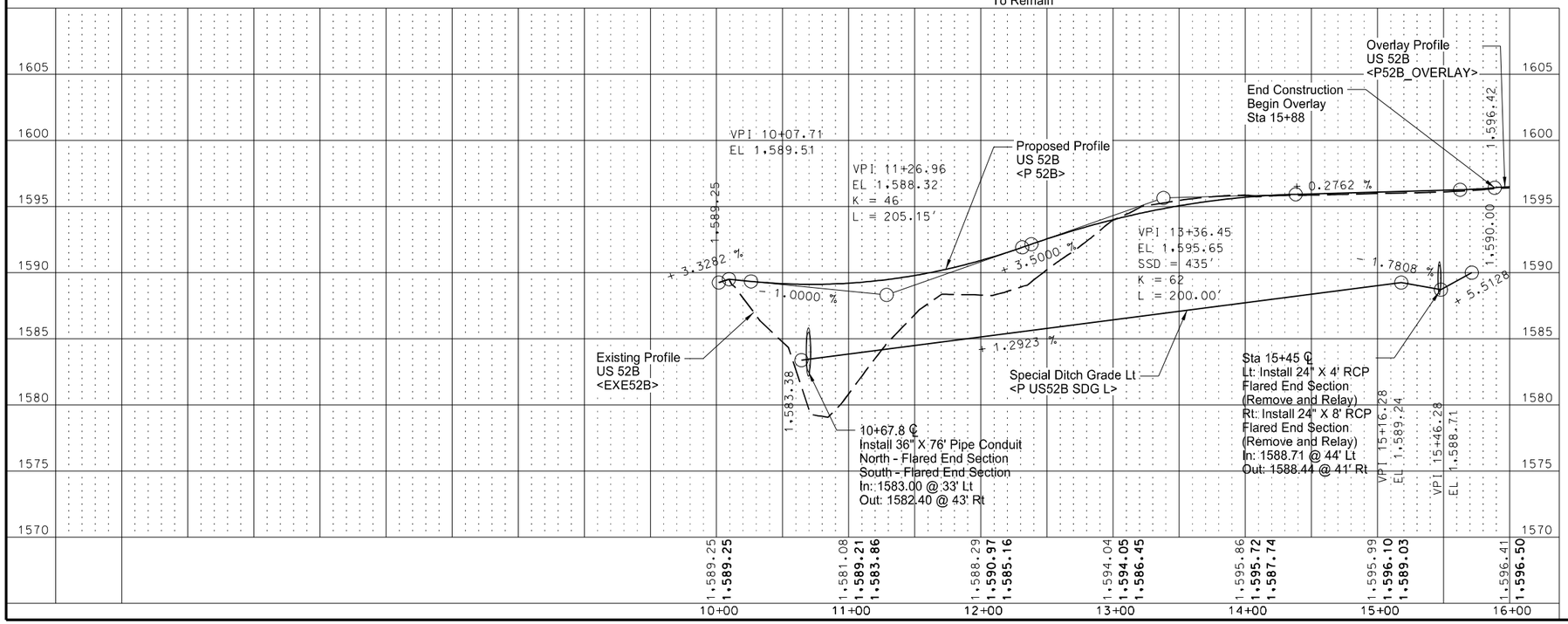
Plan and Profile
ND 3
US 52 and ND 3 Intersection Improvements

Harvey, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	60	3

SPEC	CODE	BID ITEM	QTY	UNIT
230	0165	SUBGRADE PREPARATION-TYPE A-12IN		
		Sta 10+00 to 15+91	6.0	STA
709	0100	GEOSYNTHETIC MATERIAL TYPE G		
		Sta 10+68 - CL Pipe	55	SY
714	0615	PIPE CONC REINF 24IN CL III		
		Sta 15+44 - Lt Extension	4	LF
		Sta 15+46 - Rt Extenstion	8	LF
714	4105	PIPE CONDUIT 36IN		
		Sta 10+68 - CL Pipe	76	LF
714	9660	REMOVE & RELAY END SECTION-ALL TYPES & SIZES		
		Sta 15+44 - Lt Extension	1	EA
		Sta 15+46 - Rt Extenstion	1	EA





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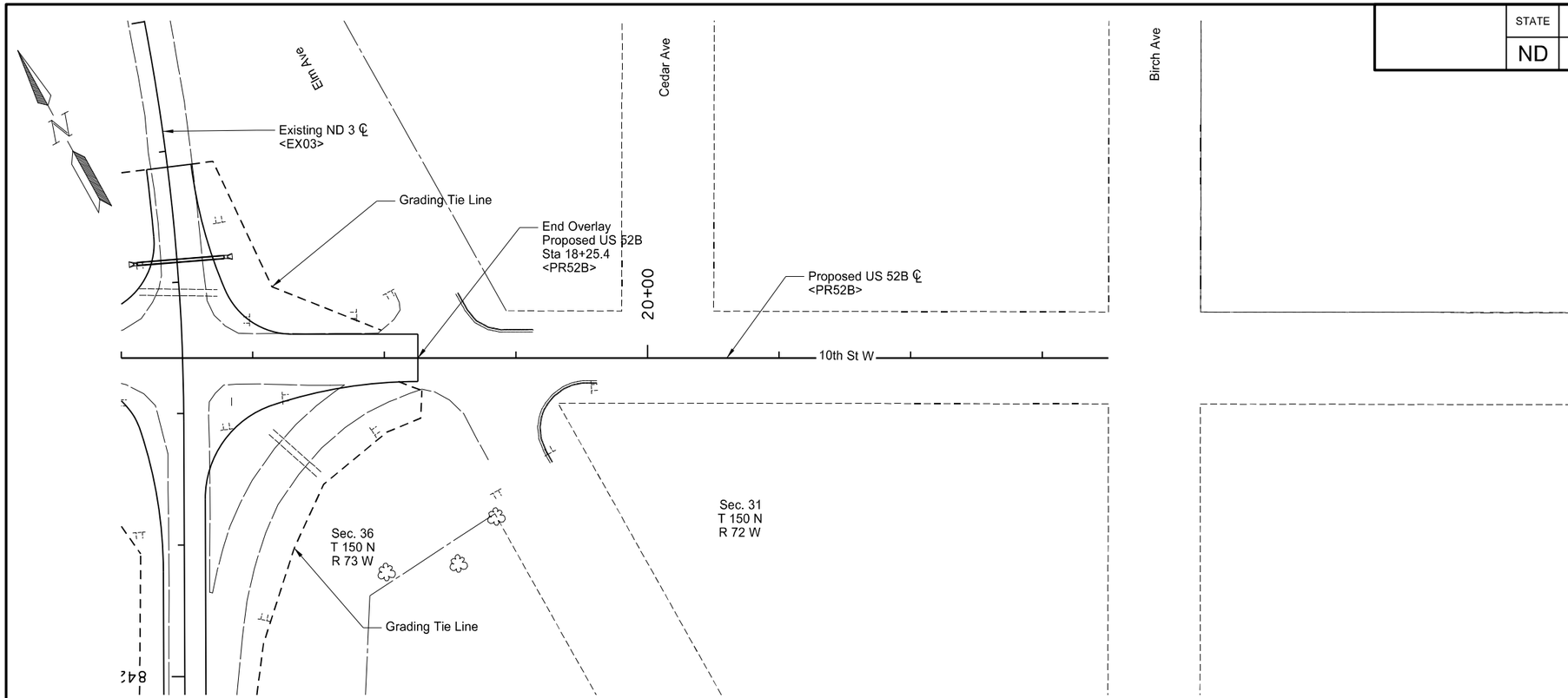
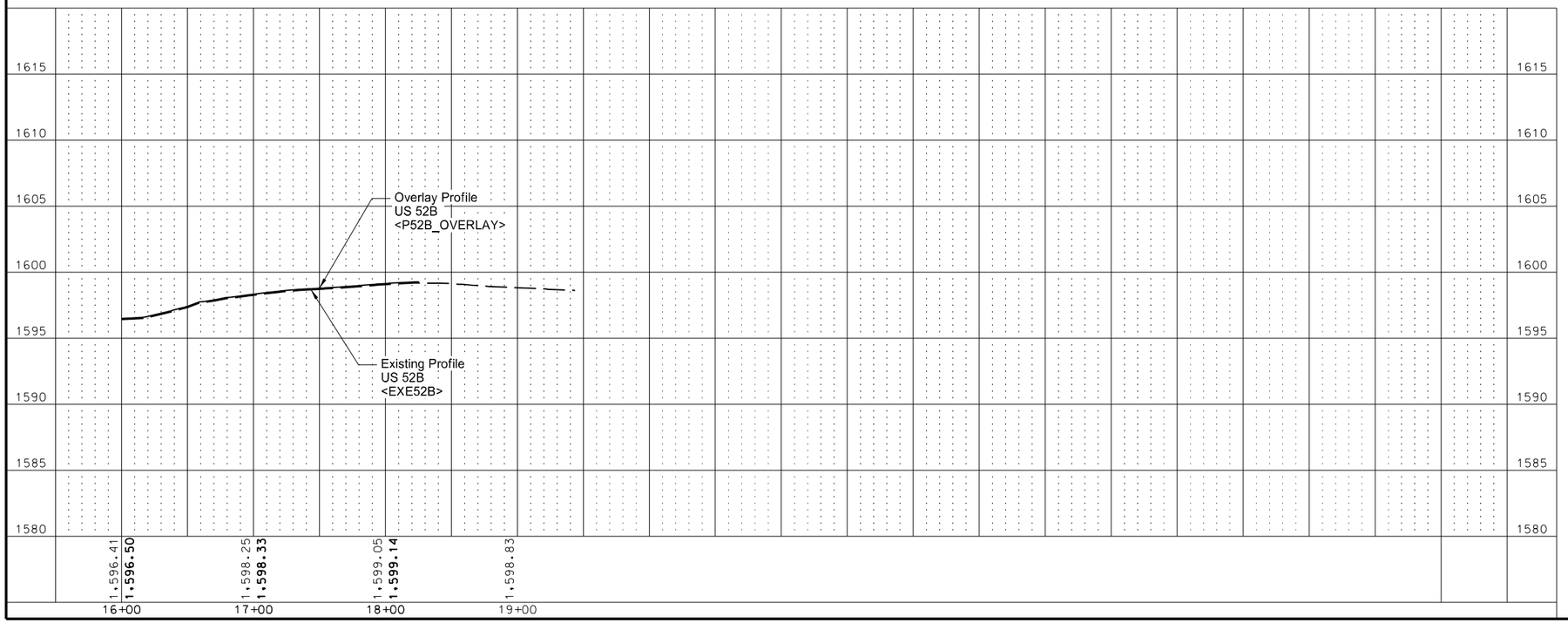
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Plan and Profile
US 52B
US 52 and ND 3 Intersection Improvements

Harvey, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	60	4





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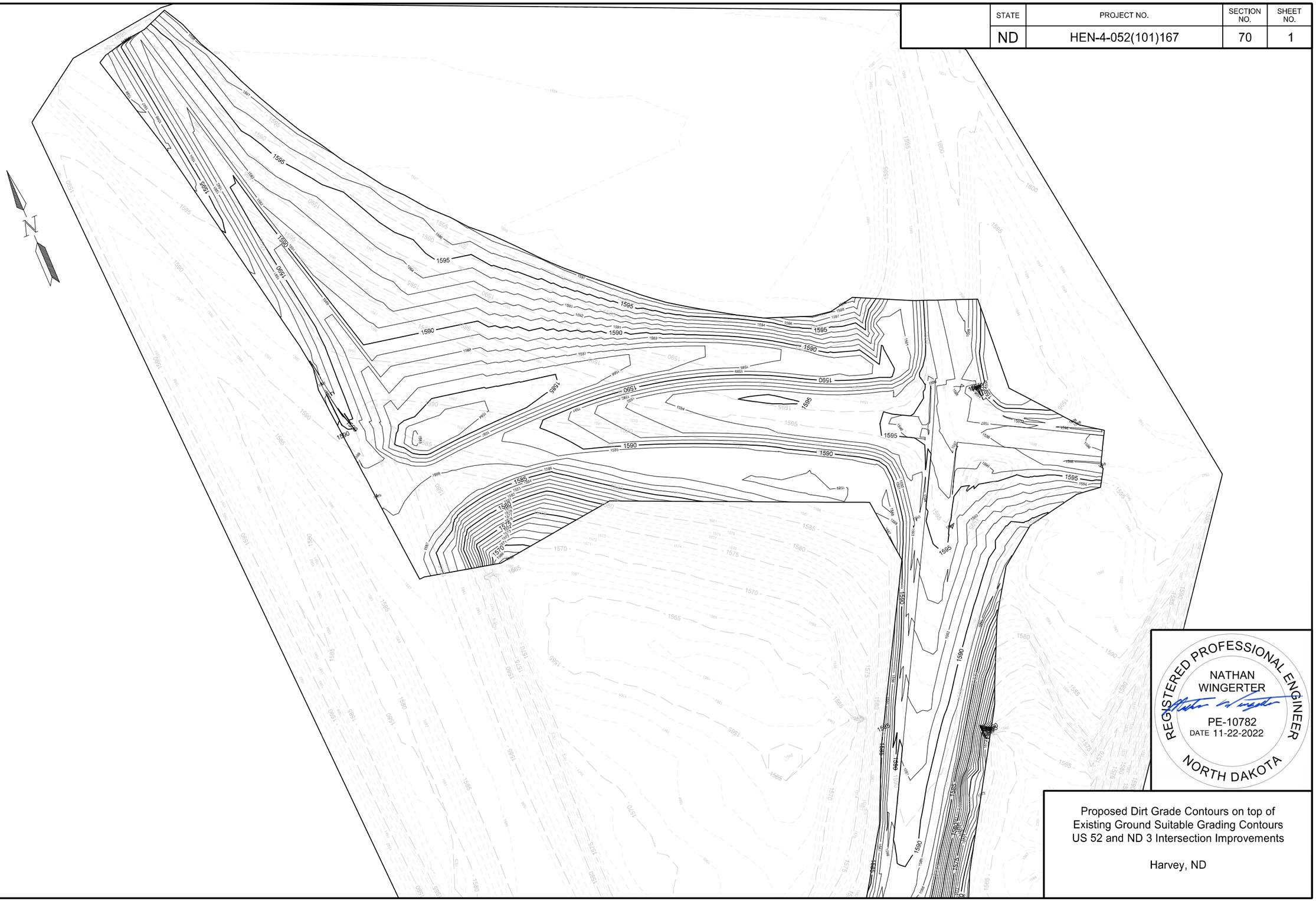
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Plan and Profile
US 52B
US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	70	1



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NATHAN WINGERTER
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DATE 11-22-2022
NORTH DAKOTA

Proposed Dirt Grade Contours on top of
Existing Ground Suitable Grading Contours
US 52 and ND 3 Intersection Improvements

Harvey, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	75	1

Wetland Impact Table

Wetland Number	Location	Wetland Feature	USACE Jurisdictional Wetlands[1]	Wetland Impacts Acre(s)		USFWS Easement Impacts Acre(s)		Wetland Mitigation											
								Mitigation Required			USACE/11990 Bank		11990 Bank		USFWS Bank		Onsite			
				Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acre(s)	Location	Acre(s)	Location	Acre(s)	Mitigation Location; Ratio	Acre(s)	Constructed Site #	Constructed Size Acre(s)
1a	Sec. 36 T150N, R73W	Basin	Natural																	
1b	Sec. 36 T150N, R73W	Basin	Natural																	
1c	Sec. 36 T150N, R73W	Basin	Natural																	
				0	**0**	**0**	**0**					**0**		**0**		**0**		**0**		0

[1] A wetland Jurisdictional Determination was issued by the USACE on 02/04/2022; NWO-2016-02143-BIS.

Impact Summary Table

Permanent Impact Summary		Temporary Impacts and additional information	
Wetland Type	Total (Acres)	Wetland Type	Total (Acres/Lf)
Natural/JD	0.000	Temporary JD	
Natural/Non-JD	0.000	Non-JD Temporary	
Artificial/JD	0.000	Permanent JD > 0.10	
Artificial /Non-JD	0.000	Permanent OW	
Total	**0.000**	Temporary OW	

Mitigation Summary Table

	Location	Onsite Acre(s)	11990 Bank Acre(s)	USACE/11990 Bank Acre(s)	USFWS Bank Acre(s)
USACE Only					
EO 11990 Only					
USACE/11990					
USFWS					
	Total				

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PE-10782
DATE 11-22-2022
NORTH DAKOTA

Wetlands Mitigation and Environmental

US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	75	2

N

8855+00

8430+00

8425+00

10+00

8860+00

15+00

Start construction
Proposed US 52B
Sta 10+00.8
<PR52B>

End construction
Existing ND 3
Sta 8423+88.0
<EX03>

End construction
Proposed US 52B
Sta 18+25.4
<PR52B>

Wetland 1c

Wetland 1b

18420+00

20+00

City of Harvey

US 52 ℄
<EX52>

8865+00

Grading limits

8415+00

Wetland 1a

Start construction
Existing ND 3
Sta 8413+46.5
<EX03>

8870+00

REGISTERED PROFESSIONAL ENGINEER
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DATE 11-22-2022
NORTH DAKOTA

Wetland Impacts

US 52 and ND 3 Intersection Improvements

Harvey, ND

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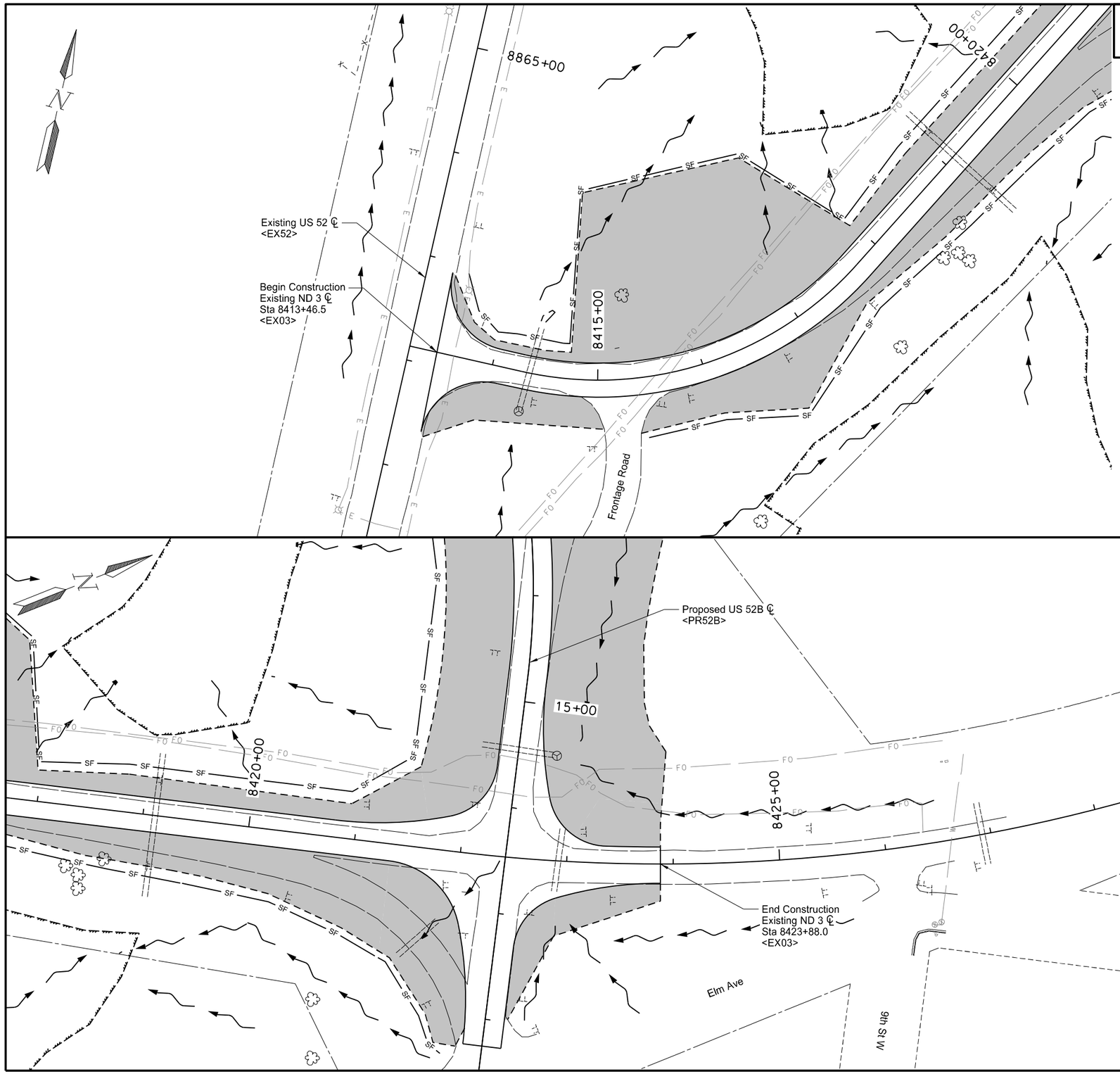
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	76	1

SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP		
		Sta 8413+46.5 to 8422+22.7	1.70	ACRE
		Sta 8422+60.7 to 8423+88.0	0.14	ACRE
253	0101	STRAW MULCH		
		Sta 8413+46.5 to 8422+22.7	1.70	ACRE
		Sta 8422+60.7 to 8423+88.0	0.14	ACRE
260	0100	SILT FENCE UNSUPPORTED		
		Sta 8413+46.5 to 8422+22.7	1569	LF
260	0101	REMOVE SILT FENCE UNSUPPORTED		
		Sta 8413+46.5 to 8422+22.7	1569	LF
261	0112	FIBER ROLLS 12IN		
		Sta 8414+33 Rt (Inlet Protection)	15	LF
261	0113	REMOVE FIBER ROLLS 12IN		
		Sta 8414+33 Rt (Inlet Protection)	15	LF



LEGEND

- Temporary Cover Crop Straw Mulch
- Fiber Rolls (Inlet Protection) See Std Dwg D-708-06
- Fiber Rolls 12IN
- SF — Silt Fence Unsupported
- Flow Line

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Temporary Erosion Control
ND 3
US 52 and ND 3 Intersection Improvements

Harvey, ND

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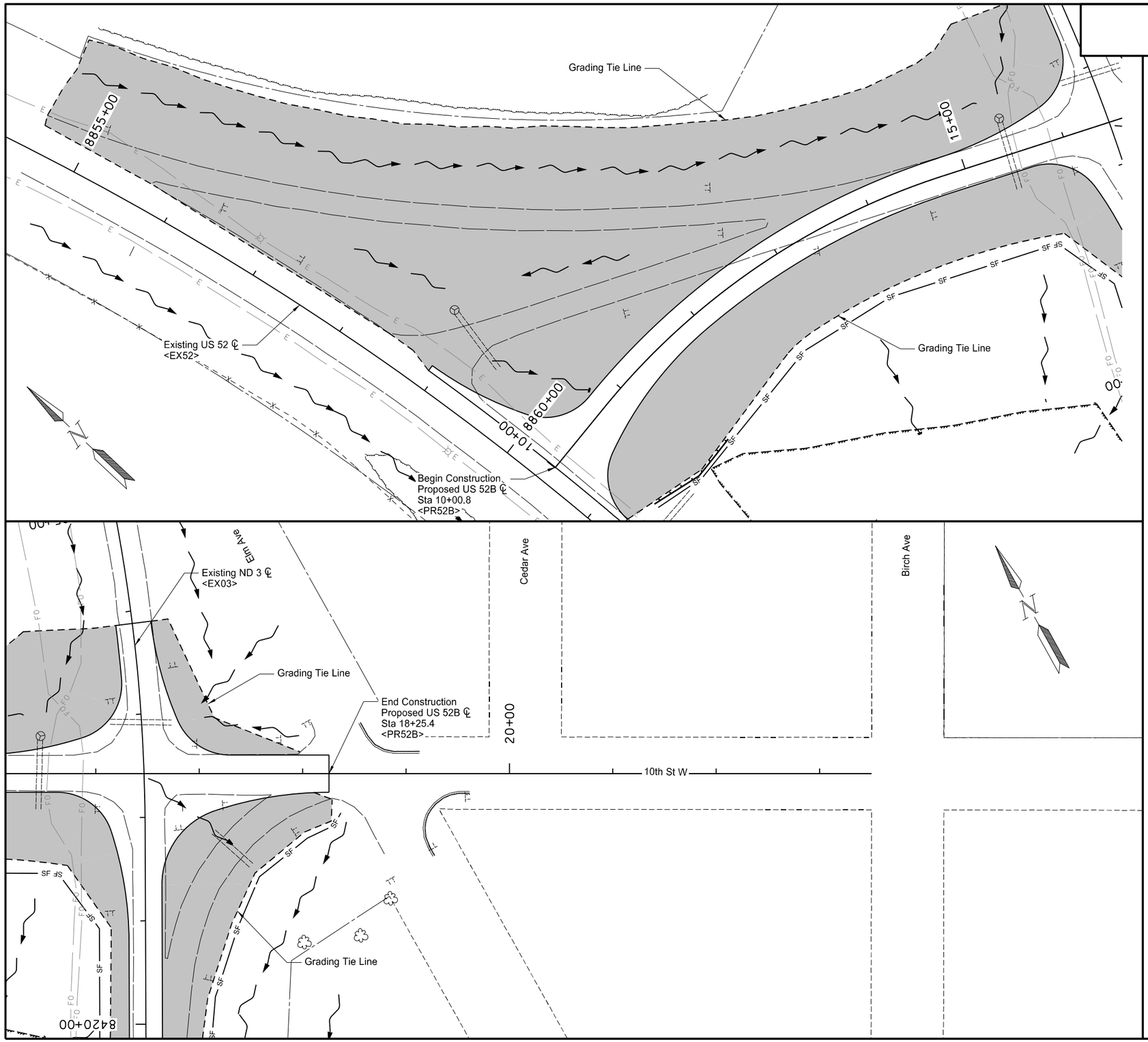
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	76	2

SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP		
		Sta 10+00.0 to 22+18.2	4.67	ACRE
253	0101	STRAW MULCH		
		Sta 10+00.0 to 22+18.2	4.67	ACRE
260	0100	SILT FENCE SUPPORTED		
		Sta 10+00.0 to 22+18.2	582	LF
260	0101	REMOVE SILT FENCE SUPPORTED		
		Sta 10+00.0 to 22+18.2	582	LF
261	0112	FIBER ROLLS 12IN		
		Sta 10+00.0 to 22+18.2	97	LF
		Sta 10+57 Lt (Inlet Protection)	15	LF
		Sta 15+46 Lt (Inlet Protection)	15	LF
261	0113	REMOVE FIBER ROLLS 12IN		
		Sta 10+00.0 to 22+18.2	97	LF
		Sta 10+57 Lt (Inlet Protection)	15	LF
		Sta 15+46 Lt (Inlet Protection)	15	LF



LEGEND

- Temporary Cover Crop Straw Mulch
- Fiber Rolls (Inlet Protection) See Std Dwg D-708-06
- Fiber Rolls 12IN
- SF — Silt Fence Unsupported
- Flow Line

REGISTERED PROFESSIONAL ENGINEER
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PE-10782
DATE 11-22-2022
NORTH DAKOTA

Temporary Erosion Control
US 52B
US 52 and ND 3 Intersection Improvements

Harvey, ND

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	77	1

SPEC	CODE	BID ITEM	QTY	UNIT
203	0100	TOPSOIL		
		Sta 8413+46.5 to 8422+22.7	1368	CY
		Sta 8422+60.7 to 8423+88.0	108	CY
251	0200	SEEDING CLASS II		
		Sta 8413+46.5 to 8422+22.7	1.70	ACRE
		Sta 8422+60.7 to 8423+88.0	0.14	ACRE
253	0101	STRAW MULCH		
		Sta 8413+46.5 to 8422+22.7	1.70	ACRE
		Sta 8422+60.7 to 8423+88.0	0.14	ACRE
261	0112	FIBER ROLLS 12IN		
		Sta 8413+46.5 to 8422+22.7	1582	LF
		Sta 8414+33 Rt (Inlet Protection)	15	LF
		Sta 8423+16 Rt (Inlet Protection)	15	LF

LEGEND

- Topsoil
  Seeding Class II
  Straw Mulch
- Fiber Rolls (Inlet Protection)
  See Std Dwg D-708-06
- Fiber Rolls 12IN
- Flow Line

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Permanent Erosion Control
ND 3
US 52 and ND 3 Intersection Improvements

Harvey, ND

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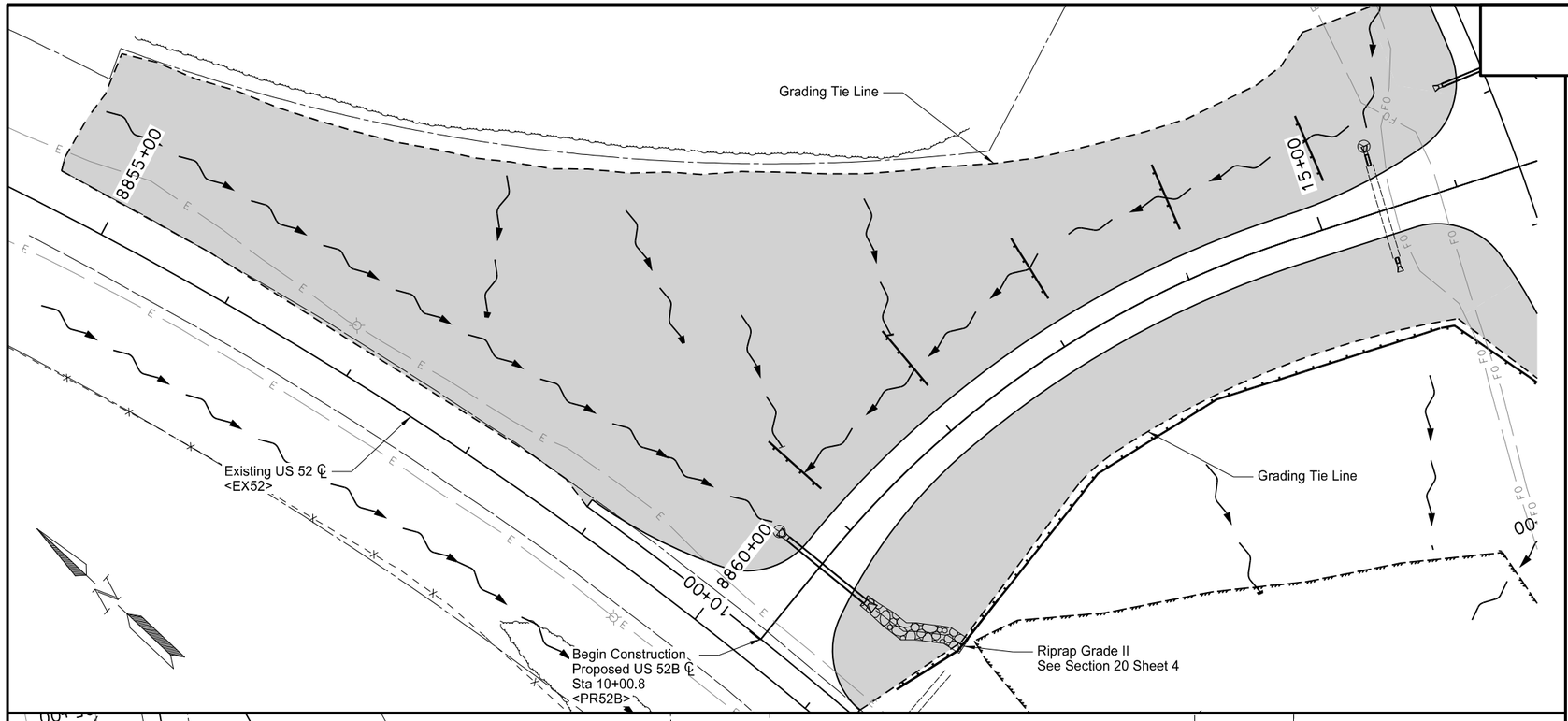
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	77	2

SPEC	CODE	BID ITEM	QTY	UNIT
203	0100	TOPSOIL		
		Sta 10+00.0 to 22+18.2	3763	CY
251	0200	SEEDING CLASS II		
		Sta 10+00.0 to 22+18.2	4.67	ACRE
253	0101	STRAW MULCH		
		Sta 10+00.0 to 22+18.2	4.67	ACRE
261	0112	FIBER ROLLS 12IN		
		Sta 10+00.0 to 22+18.2	839	LF
		Sta 10+68 Lt (Inlet Protection)	15	LF
		Sta 15+45 Lt (Inlet Protection)	15	LF



LEGEND

- Topsoil
  Seeding Class II
  Straw Mulch
- Fiber Rolls (Inlet Protection)
  See Std Dwg D-708-06
- Fiber Rolls 12IN
- Flow Line

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Permanent Erosion Control
US 52B
US 52 and ND 3 Intersection Improvements

Harvey, ND

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PRELIMINARY SURVEY COORDINATE AND CURVE DATA - Intersection of US 52 & ND 3 - Harvey

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	81	1

HORIZONTAL ALIGNMENT

PNT	STATION	NORTHING	EASTING
US 52 (Chain: EX52)			
BEG	8804+93.67	285401.18	2101574.18
TS	8830+65.52	284156.94	2103825.02
SC	8833+65.52	284007.26	2104084.97
PI SCS1	8848+91.95	283273.33	2105423.48
CS	8860+97.95	281746.82	2105429.39
ST	8863+97.95	281446.95	2105436.81
Station equation US 52(EX52) at ND 3(EX03)			
US 52	8867+86.56	281058.35	2105439.65
ND 3	8413+20.48	281058.35	2105439.65
¼ line Xing	8872+86.50	280558.42	2105443.29
TS	8874+35.65	280409.28	2105444.38
SC	8877+35.65	280109.40	2105451.80
PI SCS2	8883+59.13	279485.82	2105451.12
CS	8889+45.96	278951.88	2105773.26
ST	8892+45.96	278691.13	2105921.52
Twp line Xing	8899+10.93	278118.89	2106260.25
END Twp line Xing	8901+41.49	277920.49	2106377.69
ND 3 (Chain:EX03)			
BEG	8413+20.48	281058.35	2105439.65
Station equation ND 3(EX03) at US 52(EX52)			
ND 3	8413+20.48	281058.35	2105439.65
US 52	8867+86.56	281058.35	2105439.65
PC	8414+28.35	281059.13	2105547.52
PI C1	8416+19.81	281060.53	2105738.97
PT	8417+74.39	281228.66	2105830.55
Station equation ND 3(EX03) at US 52B(EX52B_1)			
ND 3	8422+42.32	281639.92	2106053.74
US 52B	20+39.35	281639.92	2106053.74
PC	8421+93.48	281596.69	2106031.02
PI C2	8426+16.81	281968.45	2106233.52
PT	8430+22.00	282391.77	2106230.45
END Rec Sec Cor	8438+35.71	283205.47	2106224.54

CURVE DATA

ARC DEFINITION

	SCS1		SCS2
PI STA	= 8848+91.95	PI STA	= 8883+59.13
Delta	= 60° 38' 55" Rt	Delta	= 30° 12' 17" Lt
Da	= 2° 00' 00"	Da	= 2° 00' 00"
R	= 2864.79	R	= 2864.93
Ls	= 300.00	Ls	= 300.00
Sc	= 3° 00' 00"	Sc	= 3° 00' 00"
Ts	= 1826.43	Ts	= 923.48
L	= 2732.43	L	= 1210.31

	C1		C2
PI STA	= 8416+19.81	PI STA	= 8426+16.81
Delta	= 61° 00' 18" Lt	Delta	= 28° 59' 37" Lt
Da	= 17° 37' 46"	Da	= 3° 29' 58"
R	= 325.00	R	= 1637.28
T	= 191.46	T	= 423.33
L	= 346.04	L	= 828.52

US PUBLIC LAND SURVEY DATA

CORNER	IRN	NORTHING	EASTING
T-149-N R-73-W			
NE Cor Sec 2	11-A	277879.65	2100972.84
N ¼ Cor Sec 1	12-A	277899.75	2103617.11
NE Cor Sec 1	13-A	277919.83	2106261.59
T-150-N R-72-W			
SW Cor Sec 30	1-L	283205.47	2106224.54
N ¼ Cor Sec 31	2-L	283210.03	2108778.41
C ¼ Cor Sec 31	2-M	280569.04	2108811.09
NE Cor Sec 31	3-L	283216.11	2111420.50
E ¼ Cor Sec 31	3-M	280569.67	2111453.93
SE Cor Sec 31	3-N	277949.65	2111489.33
T-150-N R-73-W			
NE Cor Sec 35	11-L	283177.16	2100942.56
E ¼ Cor Sec 35	11-M	280528.04	2100958.12
N ¼ Cor Sec 36	12-L	283191.53	2103584.16
E ¼ Cor Sec 36	13-M	280563.84	2106243.72

SURVEY CONTROL POINTS

PNT	NORTHING	EASTING	ELEV	STATION	OFFSET
MONUMENT DESCRIPTION					
PRIMARY CONTROL					
GPS 10	280625.56	2105346.38	1595.48		
#5 x 30" Rebar w/Alum cap stamped "CP-10"					
GPS 11	282954.38	2106126.34	1603.86		
#5 x 30" Rebar w/Alum cap stamped "CP-11"					

REFERENCE MARKERS

R Mkr #	NORTHING	EASTING	STATION	O/S	ALIGNMENT
167	284483.88	2103168.37	8823+33	32' Rt	EX52
168	280276.13	2105405.66	8875+68	40' Rt	EX52

NOTES: Sheet 1 of 2
Alignments based on 1960 and 1999 Right of Way Plats.

Date Survey Completed 10/26/21

☐ Assumed Coordinates

☒ All coordinates on this sheet are Wells County ground coordinates. They are derived from the NAD83(2011) reference frame; North Dakota North Zone Combination Factor (cf) = 0.9998895

All coordinates and measurements on this document derived from the International Foot definition.

INITIALIZING BENCH MARK
NDGPS Stations (OPUS)

☒ NAVD-88
☐ _____
☐ GEOID12B ☐ _____
☒ GEOID18

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

PRELIMINARY SURVEY COORDINATE AND CURVE DATA - Intersection of US 52 & ND 3 - Harvey

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	81	2

HORIZONTAL ALIGNMENT

PNT	STATION	NORTHING	EASTING
US 52B (Chain: EX52B_1)			
BEG PC	10+00.00	282372.08	2105346.90
PI C3	14+90.52	281921.82	2105541.51
PT	19+45.19	281685.32	2105971.25
Twp line Xing	22+48.11	281539.27	2106236.64
END	27+42.96	281300.69	2106670.17
US 52B (Chain: EX52B_2)			
BEG	100+00.00	281981.58	2105432.91
END	106+14.48	281685.32	2105971.25
ND 3 Ramp (Chain: EX03R)			
BEG	200+00.00	281060.53	2105738.97
PC	204+77.80	281465.50	2105992.53
PI C4	206+60.42	281620.28	2106089.44
PT	207+70.40	281532.23	2106249.43
US 52B (Chain: PR52B)			
BEG	10+00.00	281800.77	2105442.94
PC	10+75.53	281806.19	2105518.27
PI C5	12+82.45	281821.02	2105724.67
PT	14+77.92	281721.26	2105905.95
Twp line Xing	18+55.37	281539.27	2106236.64
END	23+50.22	281300.69	2106670.17

CURVE DATA

ARC DEFINITION

	C3	C4	C5
PI STA	= 14+90.52	= 206+60.42	= 12+82.45
Delta	= 37° 48' 00" Lt	= 86° 46' 25" Rt	= 32° 56' 11.52" Rt
Da	= 3° 59' 57"	= 29° 39' 22"	= 8° 11' 06.40"
R	= 1432.69	= 193.20	= 700.00
T	= 490.52	= 182.62	= 206.93
L	= 945.19	= 292.60	= 402.40

US PUBLIC LAND SURVEY DATA

CORNER	IRN	NORTHING	EASTING

SURVEY CONTROL POINTS

PNT	NORTHING	EASTING	ELEV	STATION	OFFSET	MONUMENT DESCRIPTION

NOTES: Sheet 2 of 2

Date Survey Completed 10/26/21

☐ Assumed Coordinates

☒ All coordinates on this sheet are Wells County ground coordinates. They are derived from the NAD83(2011) reference frame; North Dakota North Zone Combination Factor (cf) = 0.9998895

All coordinates and measurements on this document derived from the International Foot definition.

INITIALIZING BENCH MARK
NDGPS Stations (OPUS)

☒ NAVD-88

☐ _____

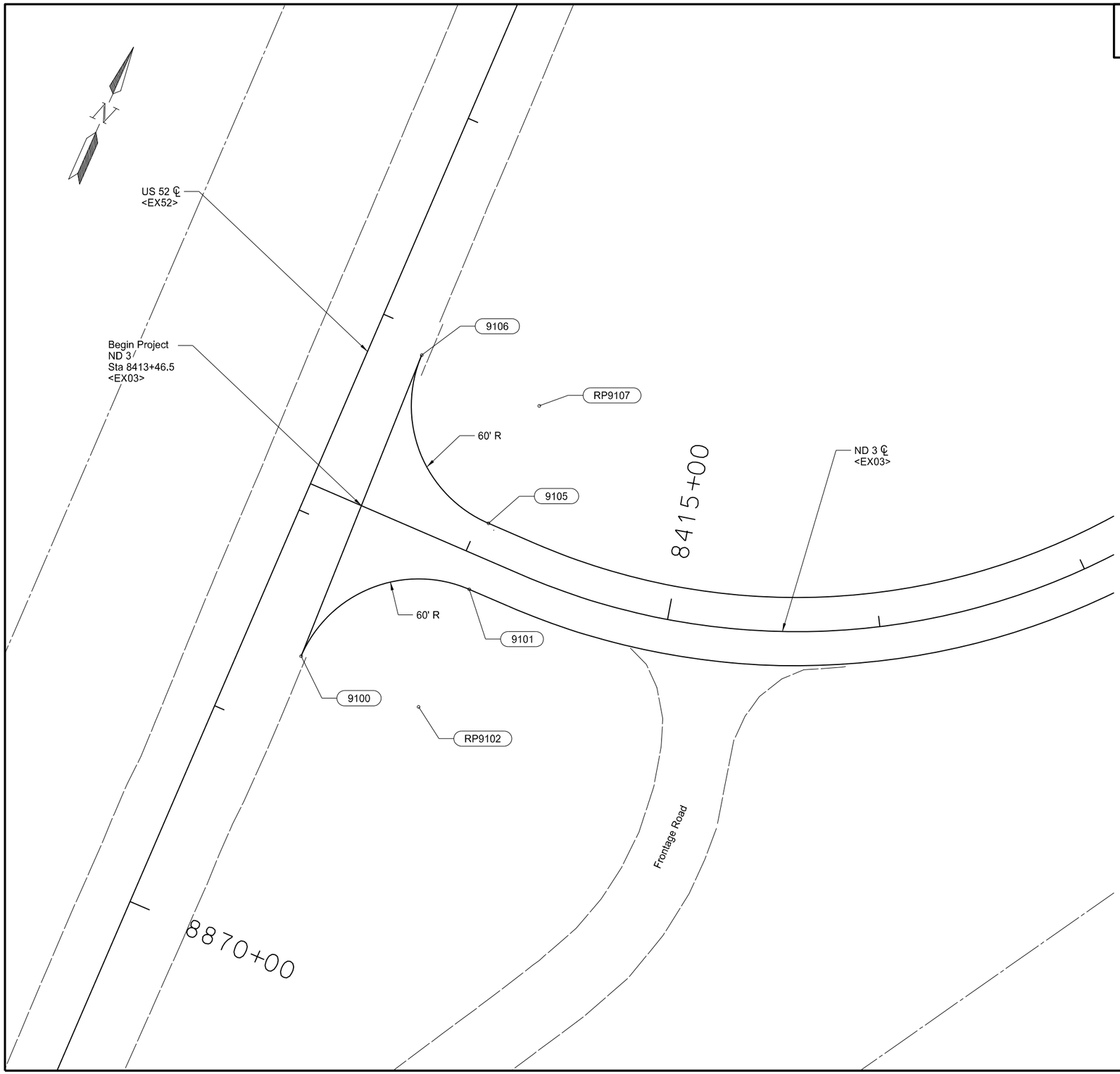
☐ GEOID12B ☐ _____

☒ GEOID18

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	82	1

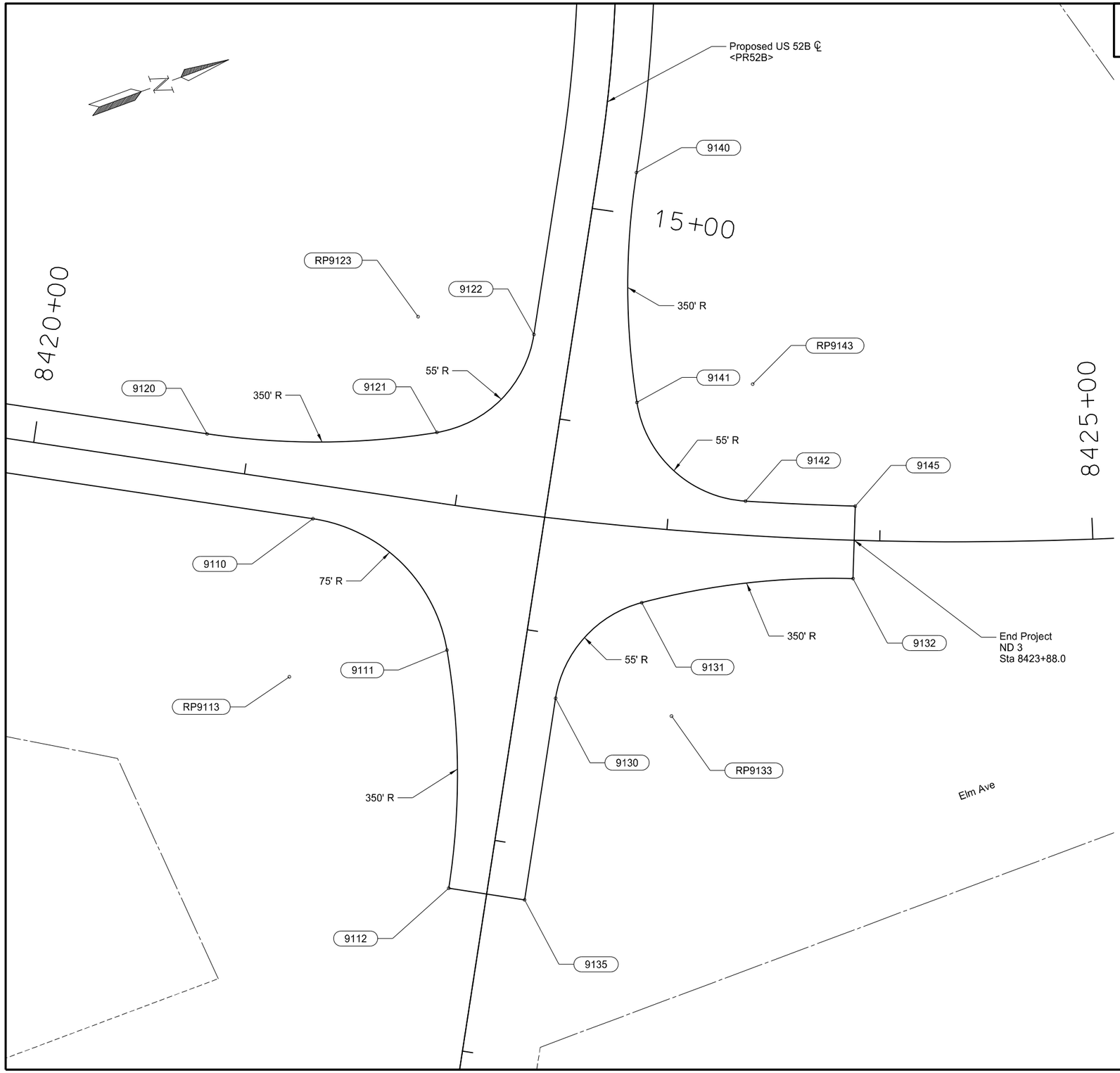
Point	North (Y)	East (X)	Station	Offset
9100	280982.5507	2105468.1976	8413+48.5	76.0
9101	281042.9868	2105527.7587	8414+08.5	16.0
9102	280982.9884	2105528.1960	8414+08.5	76.0
9105	281074.9569	2105523.5302	8414+04.5	-16.0
9106	281134.5180	2105463.0945	8413+44.5	-76.0
9107	281134.9553	2105523.0929	8414+04.5	-76.0



REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Survey Data
Intersection Details
US 52 and ND 3 Intersection Improvements

Harvey, ND



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	82	2

Point	North (Y)	East (X)	Station	Offset
9110	281543.0970	2106017.0582	8421+34.9	16.0
9111	281575.4863	2106096.5425	17+15.2	35.8
9112	281537.9408	2106201.7236	18+25.4	18.0
9113	281501.7336	2106082.9211	8421+34.9	91.0
9114	281231.3071	2106032.9760	18+25.4	368.0
9120	281504.5830	2105962.6292	8420+79.9	-16.0
9121	281606.0907	2105999.0064	8421+86.4	-32.6
9122	281664.6338	2105971.5080	15+62.7	18.0
9123	281616.4485	2105944.9905	15+62.7	73.0
9124	281672.0037	2105655.2689	8420+79.9	-366.0
9130	281615.6148	2106135.2488	17+29.7	-18.0
9131	281668.9564	2106107.0085	8422+91.2	35.1
9132	281765.9546	2106130.4299	8423+88.0	18.0
9133	281663.8001	2106161.7663	17+29.7	-73.0
9134	281636.1437	2106455.4670	8423+88.0	368.0
9135	281778.5648	2106098.8549	8423+88.0	-16.0
9140	281735.9113	2105916.6562	14+80.2	-18.0
9141	281699.0957	2106018.0057	15+86.8	-34.6
9142	281731.0557	2106079.0006	8423+36.0	-16.0
9143	281753.0663	2106028.5969	8423+36.0	-71.0
9144	282042.5451	2106085.4038	14+80.2	-368.0
9145	281572.1400	2106214.248	18+25.4	-18.0

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Harvey, ND

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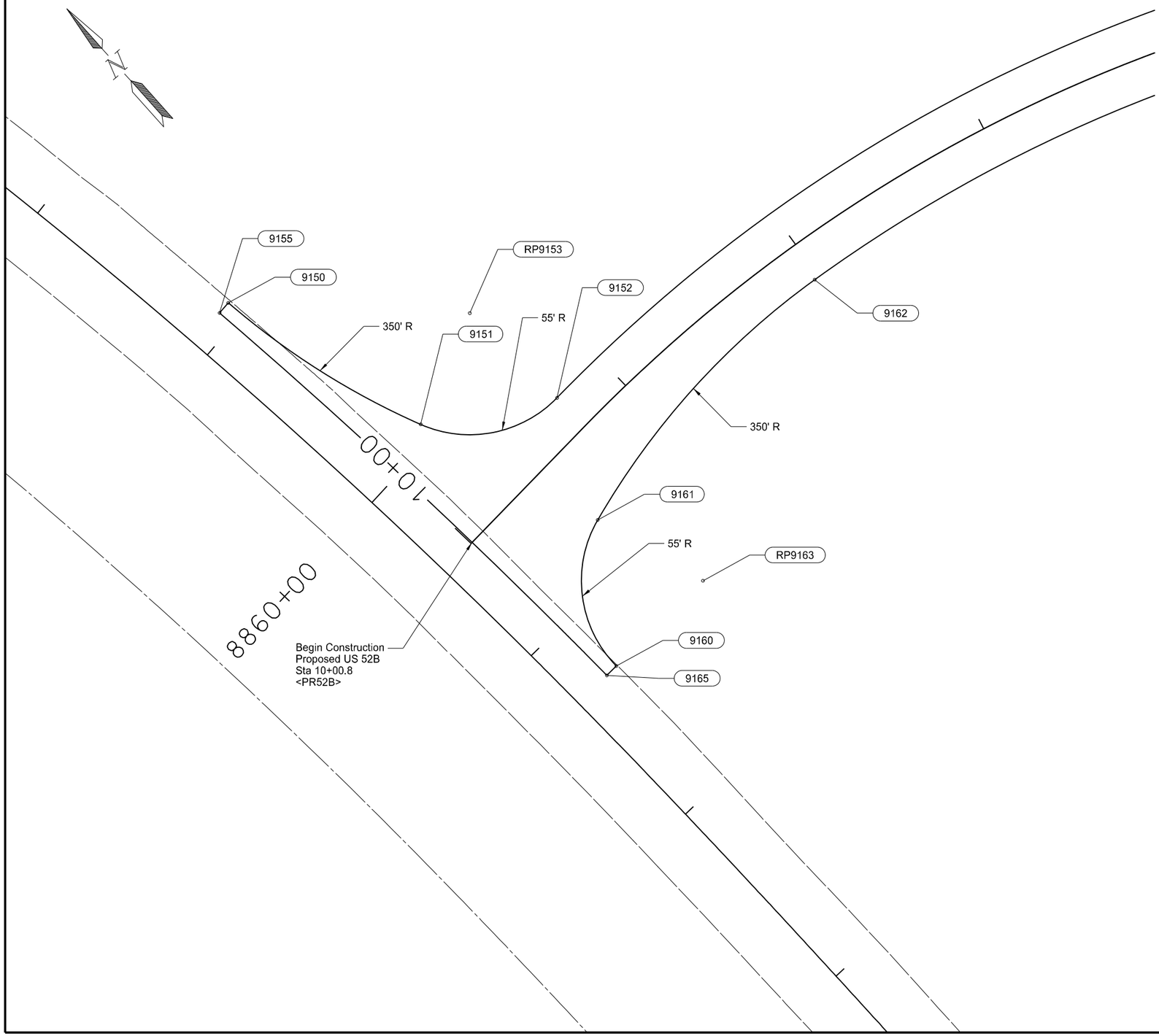
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	82	3

Point	North (Y)	East (X)	Station	Offset
9150	281955.0928	2105433.5021	8858+91.8	-24.0
9151	281856.1542	2105461.8634	8859+92.2	-40.9
9152	281824.0605	2105515.8744	10+74.4	-18.0
9153	281878.9189	2105511.9310	10+74.4	-73.0
9154	282001.0206	2105780.4756	8858+91.8	-374.0
9155	281954.3055	2105427.5539	10+00.0	-154.2
9160	281715.6786	2105455.1102	8861+30.3	-24.0
9161	281770.5988	2105492.8046	10+47.6	33.7
9162	281786.3910	2105638.4099	11+97.7	18.0
9163	281717.2624	2105492.4564	8861+30.3	-79.0
9164	281438.2368	2105602.5113	11+97.7	368.0
9165	281715.3849	2105449.1174	10+00.0	85.6



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NORTH DAKOTA

Survey Data
Intersection Details
US 52 and ND 3 Intersection Improvements

Harvey, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	100	1

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED BY PHASE NO. 1	2	3		TOTAL AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
E5-1-48	48"x48"	EXIT GORE						35	
G20-1-60	**60"x24"**	**ROAD WORK NEXT __ MILES**	**4**	**4**	**4**		**4**	**28**	**112**
G20-1b-60	60"x24"	NO WORK IN PROGRESS (Sign and installation only)						18	
G20-2-48	**48"x24"**	**END ROAD WORK**	**4**	**4**	**4**		**4**	**26**	**104**
G20-4-36	36"x18"	PILOT CAR FOLLOW ME (Mounted to back of pilot car)						18	
G20-10-108	108"x48"	CONTRACTOR SIGN						70	
G20-50a-72	**72"x36"**	**ROAD WORK NEXT __ MILES RT & LT ARROWS**	**1**	**1**	**1**		**1**	**43**	**43**
G20-52a-72	**72"x24"**	**ROAD WORK NEXT __ MILES RT or LT ARROW**	**2**	**2**	**2**		**2**	**36**	**72**
G20-55-96	**96"x48"**	**SPEED LIMIT ENFORCED - MINIMUM FEE $80 WHEN WORKERS PRESENT**	**4**	**4**	**4**		**4**	**59**	**236**
I2-5-96	**96"x48"**	**YOUR HIGHWAY DOLLARS AT WORK**	**3**	**3**	**3**		**3**	**59**	**177**
M1-1-36	36"x36"	INTERSTATE ROUTE MARKER (Post and installation only)						10	
M1-4-24	**24"x24"**	**U.S. ROUTE MARKER (Post and installation only)**	**6**				**6**	**10**	**60**
M1-5-24	**24"x24"**	**STATE ROUTE MARKER (Post and installation only)**		**9**	**12**		**12**	**10**	**120**
M3-1-24	**24"x12"**	**NORTH (Mounted on route marker post)**		**6**	**10**		**10**	**7**	**70**
M3-2-24	24"x12"	EAST (Mounted on route marker post)						7	
M3-3-24	**24"x12"**	**SOUTH (Mounted on route marker post)**		**3**	**2**		**3**	**7**	**21**
M3-4-24	24"x12"	WEST (Mounted on route marker post)						7	
M4-8-24	**24"x12"**	**DETOUR (Mounted on route marker post)**	**6**	**9**	**12**		**12**	**7**	**84**
M4-9-30	30"x24"	DETOUR ARROW RIGHT or LEFT/AHD AND RT or LT						15	
M4-10-48	**48"x18"**	**DETOUR (INSIDE ARROW) RIGHT or LEFT (Mounted on barricade)**	**2**	**2**	**2**		**2**	**7**	**14**
M5-1-21	**21"x15"**	**ADVANCE TURN ARROW RT or LT(Mounted on route marker post)**	**1**	**2**	**3**		**3**	**7**	**21**
M5-1-30	30"x21"	ADVANCE TURN ARROW RT or LT(Mounted on route marker post)						9	
M6-1-21	**21"x15"**	**DIRECTIONAL ARROW RT or LT (Mounted on route marker post)**	**3**	**5**	**6**		**6**	**7**	**42**
M6-1-30	30"x21"	DIRECTIONAL ARROW RT or LT (Mounted on route marker post)						9	
M6-3-21	**21"x15"**	**DIRECTIONAL ARROW UP (Mounted on route marker post)**	**2**	**2**	**3**		**3**	**7**	**21**
R1-1-48	48"x48"	STOP						32	
R1-2-60	60"x60"	YIELD						29	
R2-1-36	36"x48"	SPEED LIMIT __ (Portable only)						30	
R2-1-48	48"x60"	SPEED LIMIT __						39	
R2-1aP-24	24"x18"	MINIMUM FEE $80 (Mounted on Speed Limit post)						10	
R3-2-48	48"x48"	NO LEFT TURN						35	
R4-1-48	48"x60"	DO NOT PASS						39	
R4-7-48	48"x60"	KEEP RIGHT						39	
R5-1-48	48"x48"	DO NOT ENTER						35	
R6-1-54	54"x18"	ONE WAY RIGHT or LEFT (Mounted on STOP or DO NOT ENTER post)						14	
R7-1-12	12"x18"	NO PARKING ANY TIME						11	
R10-6-24	24"x36"	STOP HERE ON RED						16	
R11-2-48	**48"x30"**	**ROAD CLOSED (Mounted on barricade)**	**2**	**2**	**2**		**2**	**12**	**24**
R11-2a-48	48"x30"	STREET CLOSED (Mounted on barricade)						12	
R11-3a-60	60"x30"	ROAD CLOSED __ MILES AHEAD LOCAL TRAFFIC ONLY (Mtd on barricade)						15	
R11-3c-60	60"x30"	STREET CLOSED __ MILES AHEAD LOCAL TRAFFIC ONLY (Mtd on barricade)						15	
R11-4a-60	**60"x30"**	**STREET CLOSED TO THRU TRAFFIC (Mounted on barricade)**		**1**	**1**		**1**	**15**	**15**
W1-3-48	48"x48"	REVERSE TURN RIGHT or LEFT						35	
W1-4-48	48"x48"	REVERSE CURVE RIGHT or LEFT						35	
W1-4b-48	48"x48"	TWO LANE REVERSE CURVE RIGHT or LEFT						35	
W1-6-48	48"x24"	ONE DIRECTION LARGE ARROW						26	
W3-1-48	48"x48"	STOP AHEAD						35	
W3-3-48	48"x48"	SIGNAL AHEAD						35	
W3-4-48	48"x48"	BE PREPARED TO STOP						35	
W3-5-48	48"x48"	SPEED REDUCTION AHEAD						35	
W4-2-48	48"x48"	LANE ENDS RIGHT or LEFT						35	
W5-1-48	48"x48"	ROAD NARROWS						35	
W5-8-48	48"x48"	THRU TRAFFIC RIGHT LANE						35	
W5-9-48	48"x48"	ROAD WORK TRAFFIC ONLY DOWN & LT or RT ARROW						35	
W6-3-48	48"x48"	TWO WAY TRAFFIC						35	
W8-1-48	48"x48"	BUMP						35	
W8-3-48	48"x48"	PAVEMENT ENDS						35	
W8-7-48	48"x48"	LOOSE GRAVEL						35	
W8-11-48	48"x48"	UNEVEN LANES						35	
W8-12-48	48"x48"	NO CENTER LINE						35	
W8-17-48	48"x48"	SHOULDER DROP-OFF SYMBOL						35	
W8-53-48	48"x48"	TRUCKS ENTERING HIGHWAY						35	
W8-54-48	48"x48"	TRUCKS ENTERING AHEAD or __ FT or _ MILE						35	
W8-55-48	48"x48"	TRUCKS CROSSING AHEAD or __ FT or _ MILE						35	
W8-56-48	48"x48"	TRUCKS EXITING HIGHWAY						35	
W9-3a-48	48"x48"	CENTER LANE CLOSED SYMBOL						35	
W13-1P-30	30"x30"	__ MPH ADVISORY SPEED PLAQUE (Mounted on warning sign post)						14	
W14-3-64	64"x48"	NO PASSING ZONE						28	
W16-2P-30	30"x24"	__ FEET PLAQUE (Mounted on warning sign post)						10	
W20-1-48	48"x48"	ROAD WORK AHEAD or _FT or _ MILE						35	
W20-2-48	**48"x48"**	**DETOUR AHEAD or __ FT or _ MILE**	**4**	**6**	**6**		**6**	**35**	**210**
W20-3-48	**48"x48"**	**ROAD or STREET CLOSED AHEAD or __ FT or _ MILE**	**1**	**1**	**1**		**1**	**35**	**35**
W20-4-48	48"x48"	ONE LANE ROAD AHEAD or __ FT or _ MILE						35	
W20-5-48	48"x48"	RIGHT or CENTER or LEFT LANE CLOSED AHEAD or __ FT or _ MILE						35	
W20-7-48	**48"x48"**	**FLAGGER**	**2**	**2**	**2**		**2**	**35**	**70**
W20-8-18	**18"x18"**	**STOP - SLOW PADDLE Back to Back**	**2**	**2**	**2**		**2**	**5**	**10**
W20-52P-54	54"x12"	NEXT __ MILES (Mounted on warning sign post)						12	
W21-1-48	48"x48"	WORKERS						35	
W21-2-48	48"x48"	FRESH OIL						35	
W21-3-48	48"x48"	ROAD MACHINERY AHEAD or __ FT or _ MILE						35	
W21-5-48	48"x48"	SHOULDER WORK						35	
W21-5a-48	48"x48"	RIGHT or LEFT SHOULDER CLOSED						35	
W21-5b-48	48"x48"	RIGHT or LEFT SHOULDER CLOSED AHEAD or __ FT or _ MILE						35	
W21-6-48	48"x48"	SURVEY CREW						35	
W21-50-48	48"x48"	BRIDGE PAINTING AHEAD or __ FT						35	
W21-51-48	48"x48"	MATERIAL ON ROADWAY						35	
W21-52-48	48"x48"	PAVEMENT BREAKS						35	
W21-53-48	48"x48"	RUMBLE STRIPS AHEAD						35	
W22-8-48	48"x48"	FRESH OIL LOOSE ROCK						35	

SPECIAL SIGNS

M4-3-24	**24"x12"**	**BUSINESS (Mounted on route maker post)**	**4**				**4**	**7**	**28**

SPEC & CODE

704-1000	**TRAFFIC CONTROL SIGNS**	**TOTAL UNITS 1589**

SPEC & CODE	DESCRIPTION	UNIT	QUANTITY BY PHASE NO. 1	2	3		TOTAL QUANTITY
704-0100	**FLAGGING**	MHR	**40**	**40**	**40**		**120**
704-1048	PORTABLE RUMBLE STRIPS	EACH					
704-1050	TYPE I BARRICADES	EACH					
704-1052	**TYPE III BARRICADES**	EACH	**14**	**14**	**14**		**14**
704-1060	**DELINEATOR DRUMS**	EACH	**28**	**5**	**5**		**28**
704-1065	TRAFFIC CONES	EACH					
704-1067	TUBULAR MARKERS	EACH					
704-1070	DELINEATOR	EACH					
704-1072	FLEXIBLE DELINEATORS	EACH					
704-1080	**STACKABLE VERTICAL PANELS**	EACH	**30**				**30**
704-1081	VERTICAL PANELS - BACK TO BACK	EACH					
704-1085	SEQUENCING ARROW PANEL - TYPE A	EACH					
704-1086	SEQUENCING ARROW PANEL - TYPE B	EACH					
704-1087	SEQUENCING ARROW PANEL - TYPE C	EACH					
704-1500	OBLITERATION OF PVMT MK	SF					
704-3501	PORTABLE PRECAST CONCRETE MED BARRIER	LF					
704-3510	PRECAST CONCRETE MED BARRIER - STATE FURNISHED	EACH					
762-0200	RAISED PAVEMENT MARKERS	EACH					
762-0420	SHORT TERM 4IN LINE - TYPE R	LF					
762-0430	SHORT TERM 4IN LINE - TYPE NR	LF					

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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NORTH DAKOTA

Traffic Control Devices List

US 52 and ND 3
Intersection Improvements
Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	100	2

END ROAD WORK
G20-2-48
(All phases)

ROAD WORK NEXT 01 MILES
G20-1-60
(All phases)

YOUR HIGHWAY DOLLARS AT WORK FUNDED BY
I2-5-96
(All phases)

SPEED LIMIT ENFORCED
MINIMUM FEE $80 WHEN WORKERS PRESENT
G20-55-96
(All phases)

DETOUR 1500 FT
W20-2-48

DETOUR 1000 FT
W20-2-48

W4-8-24 DETOUR
M4-3-24 BUSINESS
M1-4-24 52
M6-3-21

W4-8-24 DETOUR
M4-3-24 BUSINESS
M1-4-24 52
M5-1L-21

W4-8-24 DETOUR
M4-3-24 BUSINESS
M1-4-24 52
M6-1L-21

Work zone

ROAD WORK NEXT 01 MILES
G20-52aL-72

ROAD WORK NEXT 01 MILES
G20-1-60
(All phases)

END ROAD WORK
G20-2-48
(All phases)

YOUR HIGHWAY DOLLARS AT WORK FUNDED BY
I2-5-96
(All phases)

SPEED LIMIT ENFORCED
MINIMUM FEE $80 WHEN WORKERS PRESENT
G20-55-96
(All phases)

DETOUR 500 FT
W20-2-48

DETOUR
52
W4-8-24
M1-4-24
M6-3-21

DETOUR
BUSINESS
52
W4-8-24
M4-3-24
M1-4-24
M6-1L-21

DETOUR 500 FT
W20-2-48

ROAD CLOSED AHEAD
W20-3-48

SPEED LIMIT ENFORCED
MINIMUM FEE $80 WHEN WORKERS PRESENT
G20-55-96
(All phases)

ROAD WORK NEXT 01 MILES
G20-1-60
(All phases)

ROAD WORK NEXT 01 MILES NEXT 01 MILES
G20-50a-72

W4-8-24 DETOUR
M4-3-24 BUSINESS
M1-4-24 52
M6-1R-21

ROAD WORK NEXT 01 MILES
G20-52aL-72

END ROAD WORK
G20-2-48
(All phases)

See Sheet 3 for terminal layout signs south of the work zone

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Work Zone Phase 1

US 52 and ND 3 Intersection Improvements

Harvey, ND

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	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	100	3

See sheet 2 for terminal layout signs north of the work zone

M4-8-24 DETOUR
M3-1-24 NORTH
M1-5-24 NORTH DAKOTA 3
M5-1L-21

DETOUR 1000 FT
W20-2-48

ROAD WORK NEXT 01 MILES
G20-1-60 (All phases)

YOUR HIGHWAY DOLLARS AT WORK FUNDED BY
I2-5-96 (All phases)

ROAD WORK ⇦ NEXT 01 MILES
G20-52aL-72

M4-8-24 DETOUR
M3-3-24 SOUTH
M1-5-24 NORTH DAKOTA 3
M6-1L-21

M4-8-24 DETOUR
M3-1-24 NORTH
M1-5-24 NORTH DAKOTA 3
M6-1L-21

M4-8-24 DETOUR
M3-1-24 NORTH
M1-5-24 NORTH DAKOTA 3
M6-1R-21

M4-8-24 DETOUR
M3-1-24 NORTH
M1-5-24 NORTH DAKOTA 3
M5-1R-21

M4-8-24 DETOUR
M3-1-24 NORTH
M1-5-24 NORTH DAKOTA 3
M6-3-21

DETOUR 1000 FT
W20-2-48

DETOUR 1500 FT
W20-2-48

SPEED LIMIT ENFORCED
MINIMUM FEE $80 WHEN WORKERS PRESENT
G20-55-96 (All phases)

YOUR HIGHWAY DOLLARS AT WORK FUNDED BY
I2-5-96 (All phases)

ROAD WORK NEXT 01 MILES
G20-1-60 (All phases)

END ROAD WORK
G20-2-48 (All phases)

Work zone

ROAD WORK NEXT 01 MILES ⇨
G20-52aR-72

ROAD WORK ⇦ NEXT 01 MILES
G20-52aL-72

END ROAD WORK
G20-2-48 (All phases)

ROAD WORK NEXT 01 MILES
G20-1-60 (All phases)

END ROAD WORK
G20-2-48 (All phases)

SPEED LIMIT ENFORCED
MINIMUM FEE $80 WHEN WORKERS PRESENT
G20-55-96 (All phases)

ROAD CLOSED AHEAD
W20-3-48

DETOUR 500 FT
W20-2-48

M4-8-24 DETOUR
M3-3-24 SOUTH
M1-5-24 NORTH DAKOTA 3
M6-1R-21

DETOUR 500 FT
W20-2-48

M4-8-24 DETOUR
M3-3-24 SOUTH
M1-5-24 NORTH DAKOTA 3
M6-3-21

N

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NORTH DAKOTA

Work Zone Phase 2

US 52 and ND 3 Intersection Improvements

Harvey, ND

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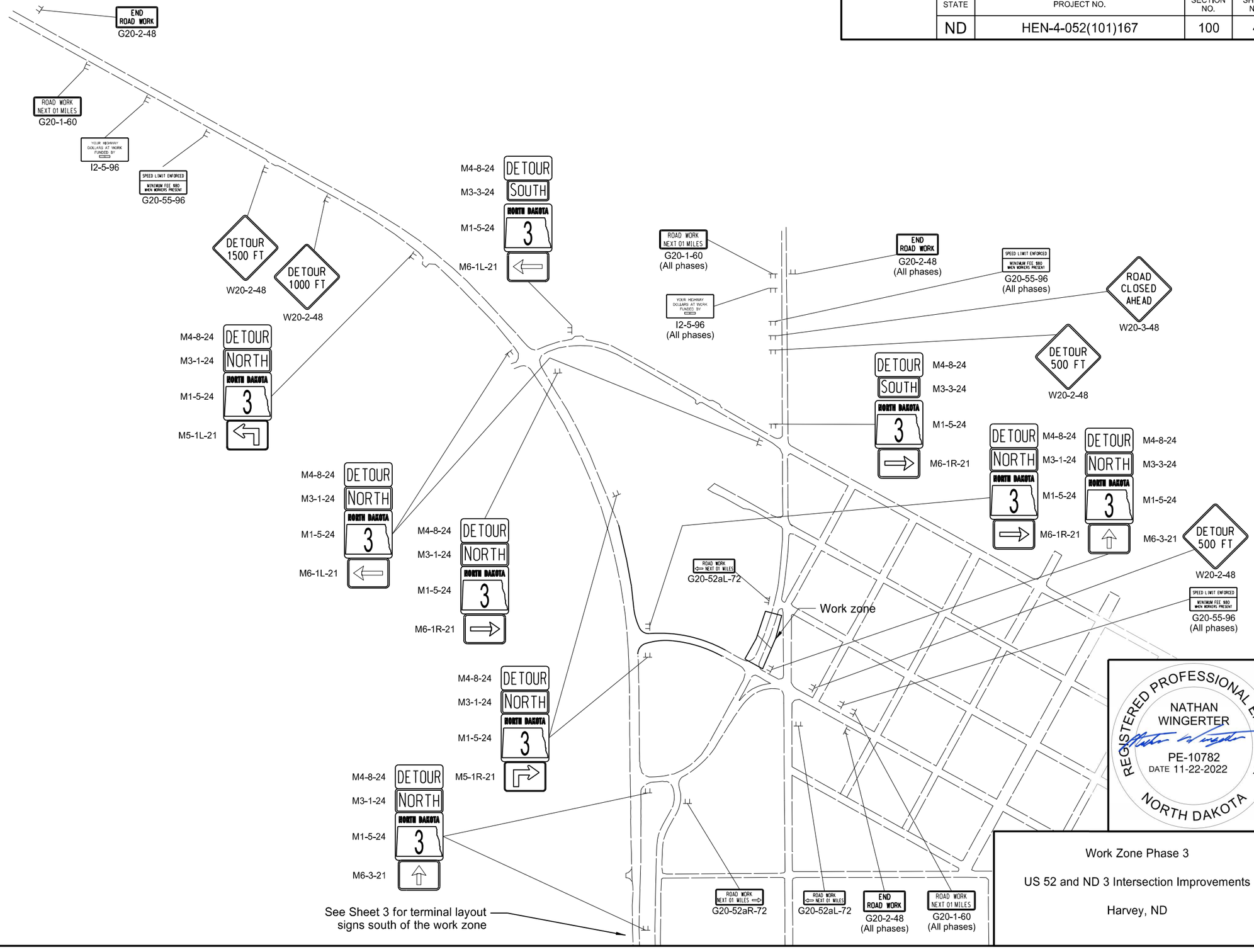
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	100	4



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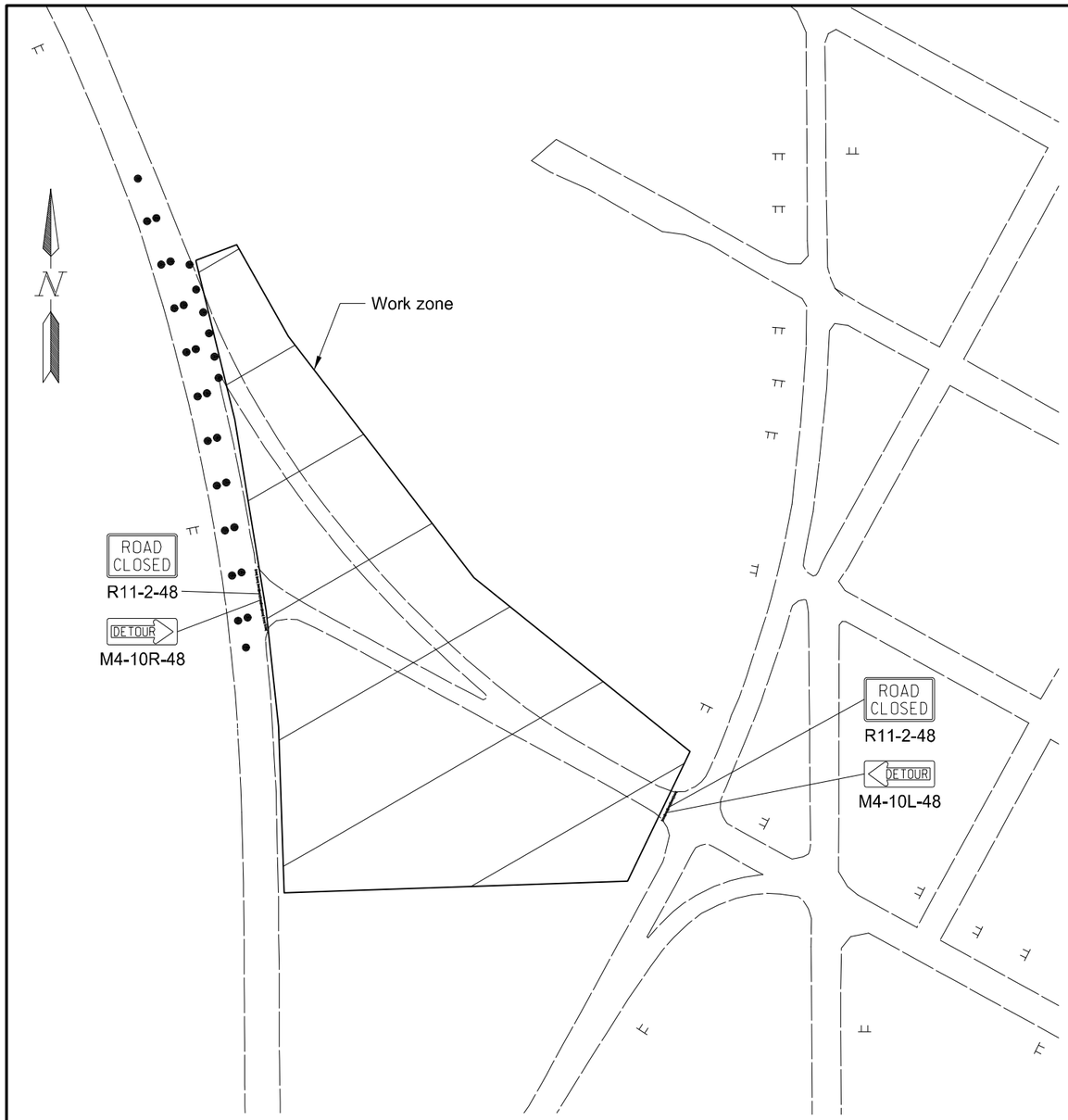
Work Zone Phase 3

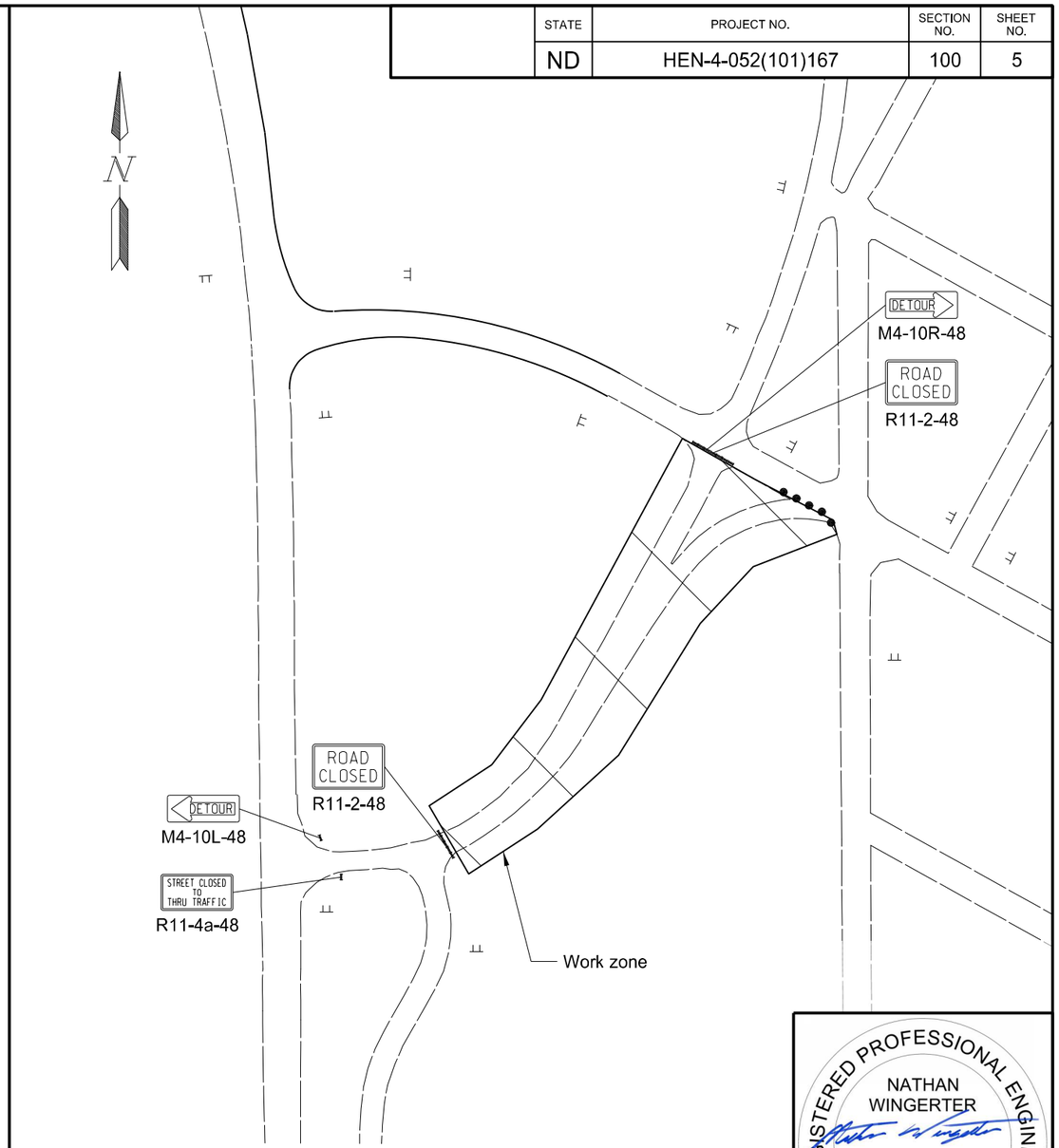
US 52 and ND 3 Intersection Improvements

Harvey, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	100	5



Work Zone Phase 1



Work Zone Phase 2

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PE-10782
DATE 11-22-2022
NORTH DAKOTA

KEY
- Type III barricade
- Delineator drum
- Sign

KEY
- Type III barricade
- Delineator drum
- Sign

Work Zone Phase Details

US 52 and ND 3 Intersection Improvements

Harvey, ND

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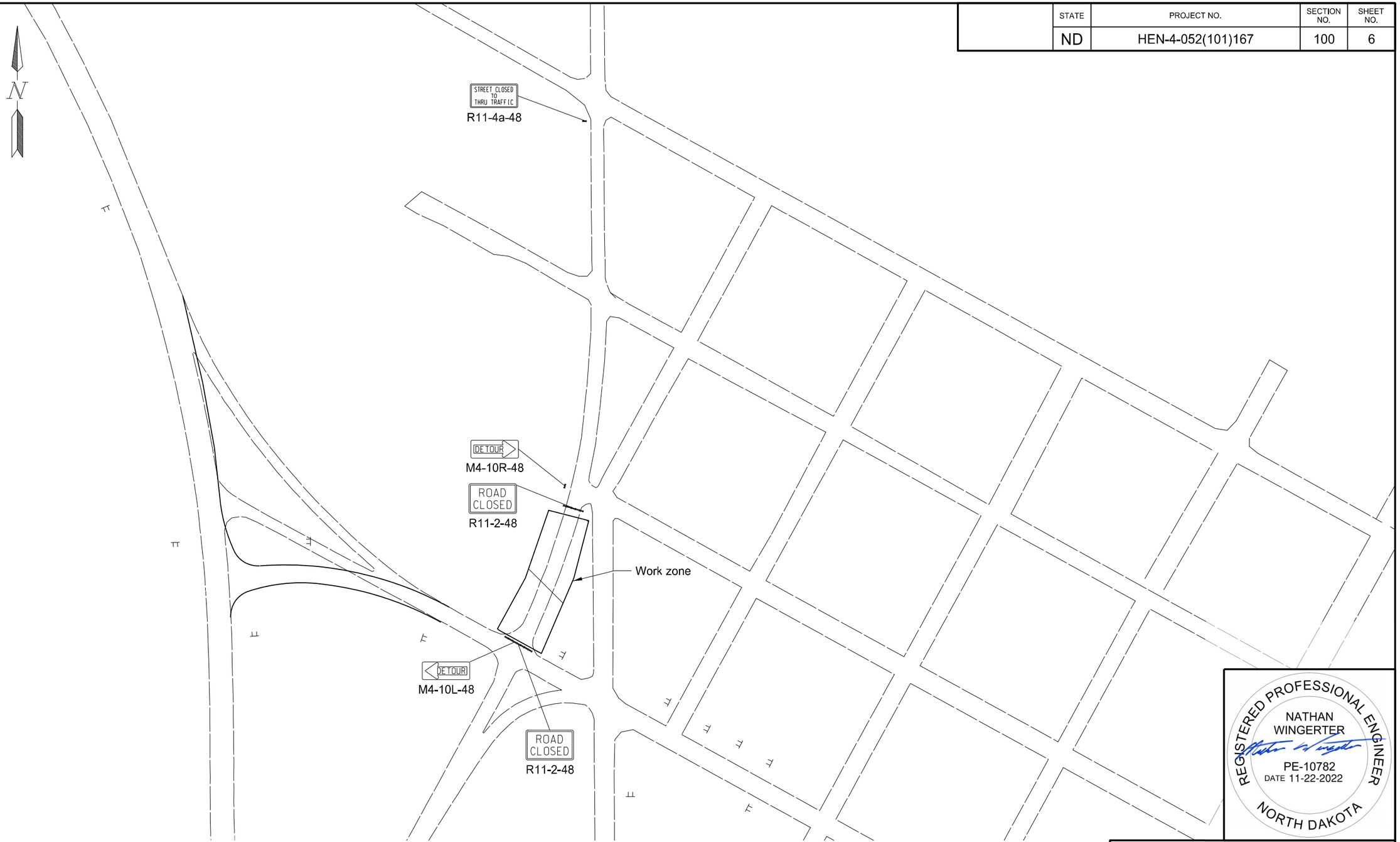
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	100	6



KEY

- Type III barricade
- Delineator drum
- Sign

Work Zone Phase 3

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Work Zone Phase Details

US 52 and ND 3 Intersection Improvements

Harvey, ND

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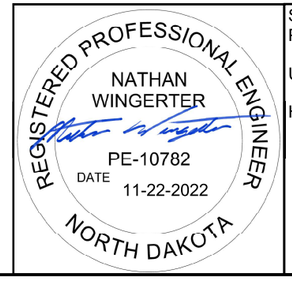
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
N.D.	HEN-4-052(101)167	110	1

Station / RP	Sign No.	Assembly No.	Flat Sheet For Signs IV SF	Flat Sheet For Signs XI SF	Sign Support Length 1st LF	2nd LF	3rd LF	4th LF	Vert Clear-ance FT	Support Size	Max Post Len LF	Sleeve Length 1st LF	2nd LF	3rd LF	4th LF	Sleeve Size	Anchor EA	Anchor LF	Anchor Size	Reset Sign Panel EA	Reset Sign Support EA	Break-Away EA	Comments
10+48 Lt	R1-1	2		7.5	8.6				5.0	2.25 x 2.25 12 ga	9.6						1	4	2.5 x 2.5 12 ga				
11+53 Rt	SA-2				9.1				5.0	2 x 2 12 ga	12.9						1	4	2.25 x 2.25 12 ga	1			
12+00 Lt	M1	399	6.2		9.4				5.0	2 x 2 12 ga	9.9						1	4	2.25 x 2.25 12 ga				
14+00 Lt	W2-4	19		6.3	9.2				5.0	2.25 x 2.25 12 ga	11.6						1	4	2.5 x 2.5 12 ga				
14+54 Rt	M1	399	6.2		9.4				5.0	2 x 2 12 ga	9.9						1	4	2.25 x 2.25 12 ga				
15+99 Rt	R1-1	1		5.2	8.6				5.0	2 x 2 12 ga	10.5						1	4	2.25 x 2.25 12 ga				
16+84 Rt	SA-1		24.0		11.6	11.7			5.0	2.25 x 2.25 12 ga	16.1	1.2	1.3			2.5 x 2.5 12 ga	2	4	3 x 3 7 ga			2	
16+98 Lt	R1-1	1		5.2	8.6				5.0	2 x 2 12 ga	10.5						1	4	2.25 x 2.25 12 ga				
17+79 Lt	M1	405	12.4		8.9				5.0	2.5 x 2.5 10 ga	9.8						1	4	3 x 3 7 ga			1	
8413+83 Lt	R1-1	2		7.5	8.6				5.0	2.25 x 2.25 12 ga	9.6						1	4	2.5 x 2.5 12 ga				
8414+42 Rt	M3-1 / M1-5	371	6.0		9.1				5.0	2 x 2 12 ga	10.0						1	4	2.25 x 2.25 12 ga				
8414+63 Lt	M1-5 / M1-4	430	14.4		10.0				5.0	2.25 x 2.25 12 ga	13.0	1.7					1	4	3 x 3 7 ga			1	
8415+20 Lt	W1-7	34		8.0	8.1				5.0	2.25 x 2.25 12 ga	8.9						1	4	2.5 x 2.5 12 ga				
8415+55 Rt	R1-1	1		5.2	8.6				5.0	2 x 2 12 ga	10.5						1	4	2.25 x 2.25 12 ga				
8415+80 Rt	W1-8	8		3.0	8.1				5.0	2 x 2 12 ga	14.6						1	4	2.25 x 2.25 12 ga				
8416+72 Rt	W1-8	8		3.0	8.1				5.0	2 x 2 12 ga	14.6						1	4	2.25 x 2.25 12 ga				
8417+00 Lt	W2-4	19		6.3					5.0														
8417+57 Rt	Adopt-A-Highway	399			9.4				5.0	2 x 2 12 ga	9.9						1	4	2.25 x 2.25 12 ga	1			
8419+10 Rt	R2-1	9		5.0	8.6				5.0	2 x 2 12 ga	11.5						1	4	2.25 x 2.25 12 ga				
8419+13 Lt	R2-1	9		5.0	8.6				5.0	2 x 2 12 ga	11.5						1	4	2.25 x 2.25 12 ga				
8420+43 Rt	D1-3K	40		12.0	8.4				5.0	2.5 x 2.5 10 ga	9.7						1	4	3 x 3 7 ga			1	
8421+10 Lt	M3-3 / M1-5	371	6.0		9.1				5.0	2 x 2 12 ga	10.0						1	4	2.25 x 2.25 12 ga				
8421+48 Rt	M1	387	16.4		10.0				5.0	2.25 x 2.25 12 ga	11.7	2.4				2.5 x 2.5 12 ga	1	4	3 x 3 7 ga			1	
8423+17 Lt	M1	387	16.4		10.0				5.0	2.25 x 2.25 12 ga	11.7	2.4				2.5 x 2.5 12 ga	1	4	3 x 3 7 ga			1	
8423+42 Rt	M3-1 / M1-5	371	6.0		9.1				5.0	2 x 2 12 ga	10.0						1	4	2.25 x 2.25 12 ga				
8860+45 Rt	W1-7	34		8.0	8.1				5.0	2.25 x 2.25 12 ga	8.9						1	4	2.5 x 2.5 12 ga				
8864+06 Rt	M2-1 / M1-5	371	6.0		9.1				5.0	2 x 2 12 ga	10.0						1	4	2.25 x 2.25 12 ga				
8866+06 Rt	M1 / M6	405	12.4		8.9				5.0	2.5 x 2.5 10 ga	9.8						1	4	3 x 3 7 ga			1	
8867+87 Rt	W1-7	34		8.0	8.1				5.0	2.25 x 2.25 12 ga	8.9						1	4	2.5 x 2.5 12 ga				
8869+39 Rt	M3 / M1	375	12.0		8.7				5.0	2.5 x 2.5 10 ga	9.9						1	4	3 x 3 7 ga			1	



Sign Summary
Perforated Tube

US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	N.D.	HEN-4-052(101)167	110	2

Station / RP	Sign No.	Assembly No.	Flat Sheet For Signs IV SF	Flat Sheet For Signs XI SF	Sign Support Length 1st LF	2nd LF	3rd LF	4th LF	Vert Clear-ance FT	Support Size	Max Post Len LF	Sleeve Length 1st LF	2nd LF	3rd LF	4th LF	Sleeve Size	Anchor EA	Anchor LF	Anchor Size	Reset Sign Panel EA	Reset Sign Support EA	Break-Away EA	Comments
Sub Total			144.4	95.2		**Total**	271.8										**Total**	120.0		2	0	9	
Grand Total			**144.4**	**95.2**		**Total**	**271.8**										**Total**	**120**	**0**	**2**	**0**	**9**	

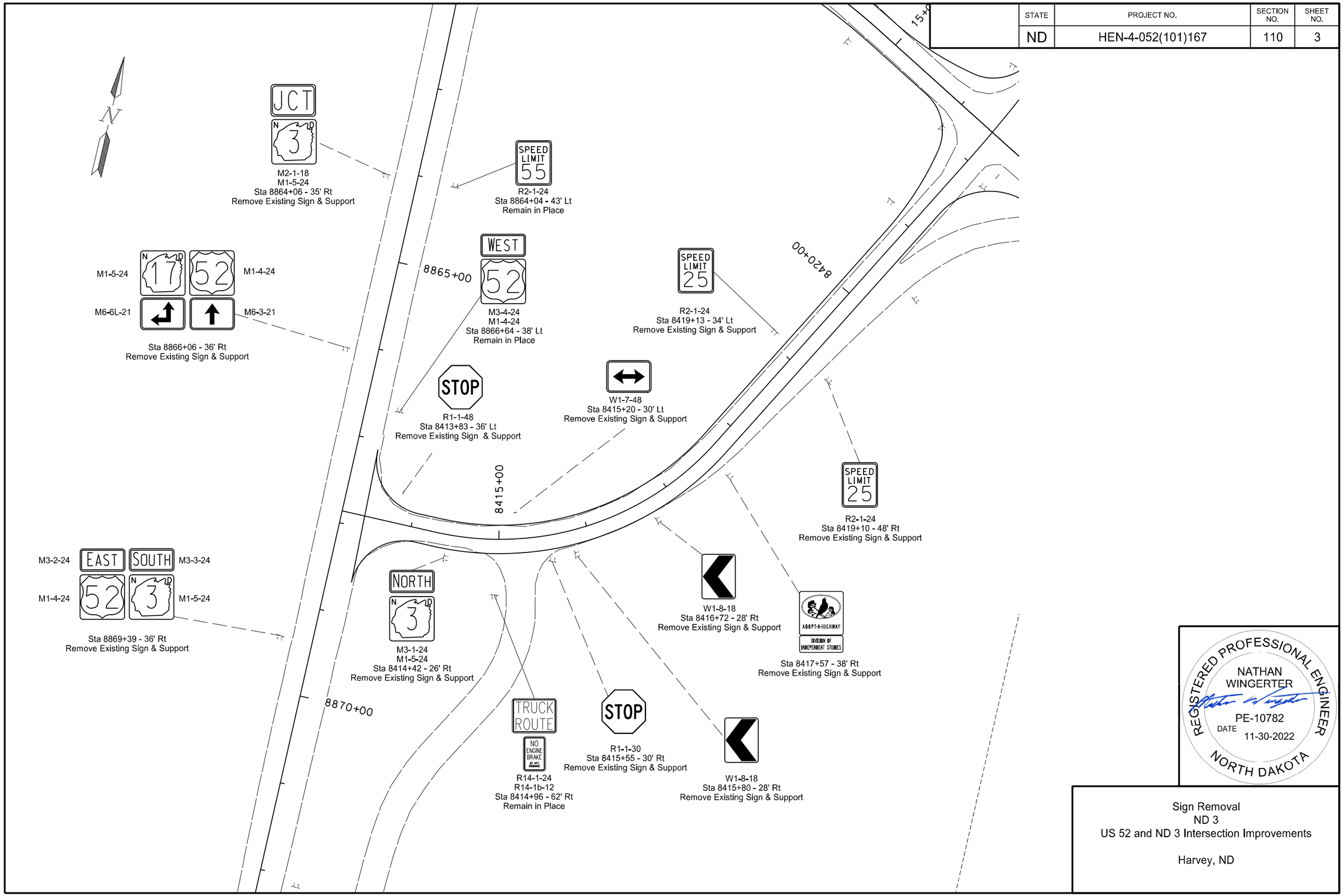
REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Sign Summary
Perforated Tube

US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	110	3



REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-30-2022
NORTH DAKOTA

Sign Removal
ND 3
US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	110	4

N

SOUTH
N D
3

M3-3-24
M1-5-24
Sta 8421+10 - 34' Lt
Remove Existing Signs & Support

STOP

R1-1-30
Sta 15+99 - 34' Rt
Remove Existing Sign & Support

8420+00

M4-3-24
BUSINESS
52
M1-4-24
M6-4-21
M1-5-24
N D
3
52
M1-4-24
15+00
M6-1-21
M6-6R-21

Sta 8423+17 - 29' Lt
Remove Existing Signs & Supports

8425+00

H

D9-2-24
M6-1L-24
Sta 8425+32 - 28' Lt
Remain in Place

M1-4-24
52
NORTH DAKOTA
3
M1-5-24
M6-4-21
M6-1-21

Sta 8421+88 - 32' Rt
Remove Existing Signs & Supports

BUSINESS
DISTRICT

D1-3-48
Sta 8420+43 - 59' Rt
Remove Existing Sign & Supports

W4-1-48
Sta 17+23 - 31' Rt
Remove Existing
Sign & Support

TRUCK
ROUTE

R14-1-24
Sta 18+85 - 102' Rt
Remain in Place

BUSINESS
DISTRICT

H

D1-3-66
D9-3-24, D9-2-24
M6-1L-24, M6-3-24
Sta 16+84 - 33' Rt
Remove Existing Sign & Supports
Sta 17+17 - 49' Rt

YIELD
DO NOT
ENTER

R1-2-36, R5-1-36
Back to back
Sta 206+69 - 35' Rt
Remove Existing Signs & Support

STOP

R1-1-30
Sta 19+26 - 72' Lt
Remain in Place

TRUCK
ROUTE

R14-1-24
Sta 19+57 - 23' Rt
Remain in Place

20+00

STOP

R1-1-30
Sta 16+98 - 29' Lt
Remove Existing Sign & Support

NORTH
N D
3

M3-1-24
M1-5-24
Sta 8423+42 - 35' Rt
Remove Existing Sign & Support

M1-4-24
52
N D
3
M1-5-24
M6-6L-21
M6-4-21

Sta 17+79 - 32' Lt
Remove Existing Sign & Support

STOP

R1-1-30
Sta 18+03 - 50' Lt
Remain in Place

SPEED
LIMIT
25

R2-1-24
Sta 8425+37 - 34' Rt
Remain in Place

AHEAD

S1-1-36
W16-9P-24
Sta 8426+80 - 29' Rt
Remain in Place

STOP

R1-1-30
Sta 8426+28 - 38' Rt
Remain in Place

YIELD

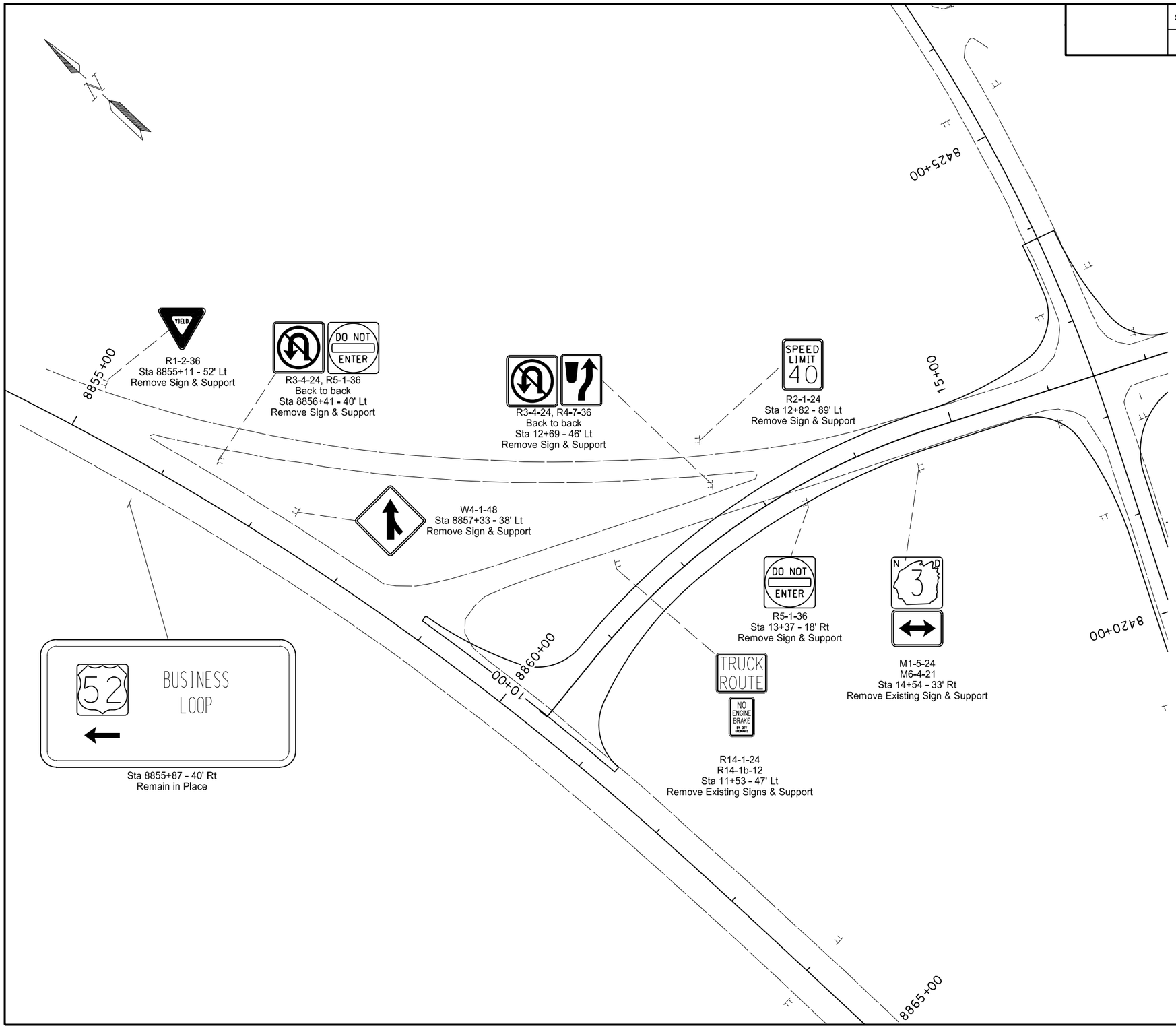
R1-2-36
8426+37 - 44' Rt
Remain in Place

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-30-2022
NORTH DAKOTA

Sign Removal
ND 3
US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	110	5



REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-30-2022
NORTH DAKOTA

Sign Removal
US 52B
US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	110	6

N

JCT
NORTH DAKOTA 3
M2-1-18
M1-5-24
Sta 8864+06 - 35' Rt
Install New Sign & Support
Assembly No. 371

M1-5-24 NORTH DAKOTA 3 52 M1-4-24
M6-6L-21 M6-3-21
Sta 8866+06 - 36' Rt
Install New Sign & Support
Assembly No. 405

8865+00

M3-3-24 SOUTH
M1-5-24 NORTH DAKOTA 3 52 M1-4-24
M6-1L-21 M6-4-21
Sta 8414+63 - 30' Lt
Install New Sign & Support
Assembly No. 430

STOP
R1-1-48
Sta 8413+83 - 36' Lt
Install New Sign & Support
Assembly No. 2

W1-7-48
Sta 8415+20 - 30' Lt
Install New Sign & Support
Assembly No. 34

8415+00

SPEED LIMIT 25
R2-1-24
Sta 8419+13 - 34' Lt
Install New Sign & Support
Assembly No. 9

W2-4-30
Sta 8417+00 - 30' Lt
Install New Sign & Support
Assembly No. 19

8420+00

W1-7-48
8867+87 - 36' Rt
New Sign & Support
Assembly No. 34

SPEED LIMIT 25
R2-1-24
Sta 8419+10 - 36' Rt
Install New Sign and Support
Assembly No. 9

M3-2-24 EAST SOUTH M3-3-24
M1-4-24 52 NORTH DAKOTA 3 M1-5-24
Sta 8869+39 - 36' Rt
Install New Sign & Support
Assembly No. 375

NORTH
NORTH DAKOTA 3
M3-1-24
M1-5-24
Sta 8414+42 - 26' Rt
Install New Sign & Support
Assembly No. 371

W1-8-18
Sta 8416+72 - 28' Rt
Install New Sign & Support
Assembly No. 8

ADOPT-A-HIGHWAY
DIVISION OF INDEPENDENT STUDIES
Sta 8417+57 - 38' Rt
Reset Sign on New Support
Assembly No. 399

8870+00

STOP
R1-1-30
Sta 8415+55 - 30' Rt
Install New Sign & Support
Assembly No. 1

W1-8-18
Sta 8415+80 - 28' Rt
Install New Sign & Support
Assembly No. 8

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Signing
ND 3
US 52 and ND 3 Intersection Improvements

Harvey, ND

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	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	110	7

N

SOUTH
NORTH DAKOTA
3

M3-3-24
M1-5-24
Sta 8421+10 - 34' Lt
Install New Signs & Support
Assembly No. 371

STOP

R1-1-30
Sta 15+99 - 47' Rt
Install New Sign & Support
Assembly No. 1

8420+00

M4-3-24 BUSINESS
M3-3-24 SOUTH
M1-4-24 52
NORTH DAKOTA 3
M6-4-21
M6-1-21

15+00

Sta 8423+17 - 36' Lt
Install New Signs & Supports
Assembly No. 387

8425+00

M4-3-24 BUSINESS NORTH
M3-1-24
M1-4-24 52
NORTH DAKOTA 3
M1-5-24
M6-4-21
M6-1-21

Sta 8421+48 - 32' Rt
Install New Signs & Supports
Assembly No. 387

STOP

R1-1-30
Sta 16+98 - 39' Lt
Install New Sign & Support
Assembly No. 1

NORTH
NORTH DAKOTA
3

M3-1-24
M1-5-24
Sta 8423+42 - 35' Rt
Install New Sign & Support
Assembly No. 371

M1-4-24 52
NORTH DAKOTA 3
M1-5-24
M6-1-21
M6-4-21

Sta 17+79 - 32' Lt
Install New Sign & Support
Assembly No. 405

BUSINESS DISTRICT

D1-3-48
Sta 8420+43 - 36' Rt
Install New Sign & Supports
Assembly No. 40

20+00

BUSINESS DISTRICT
H

D1-3-48
D9-3-24, D9-2-24
M6-1L-24, M6-3-24
Sta 16+84 - 33' Rt
Install New Signs on New Supports
Assembly No. SA-1

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Signing
ND 3
US 52 and ND 3 Intersection Improvements

Harvey, ND

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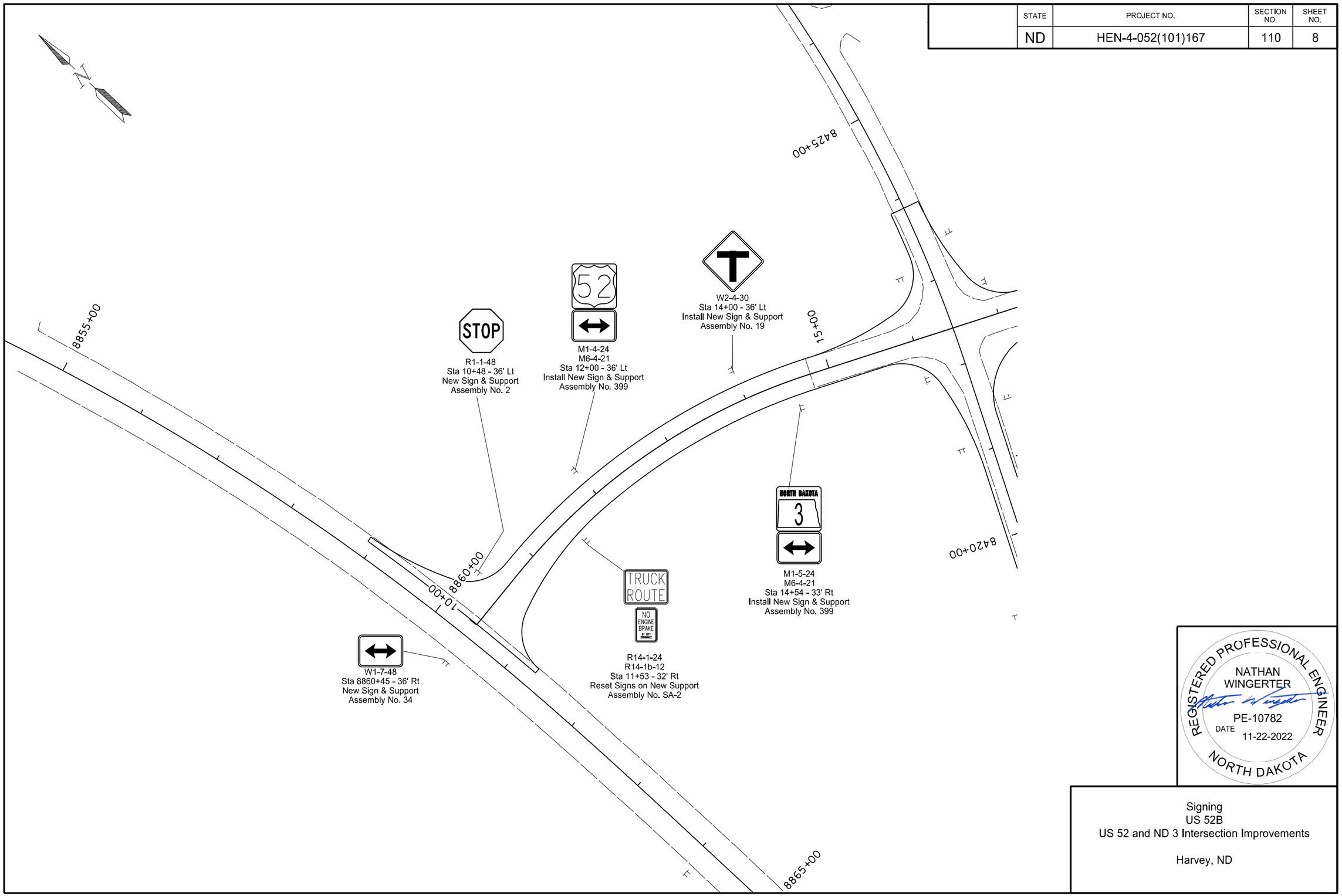
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	110	8

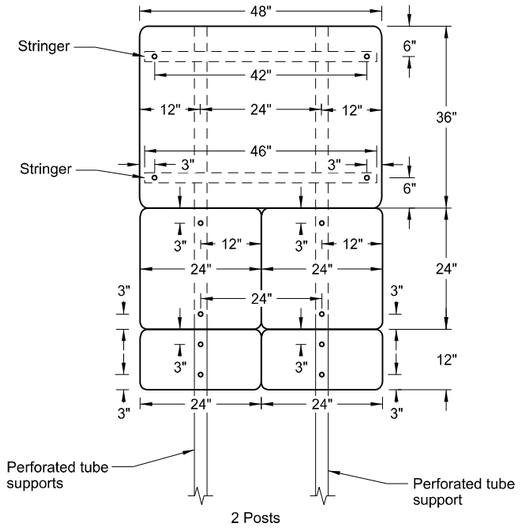


REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

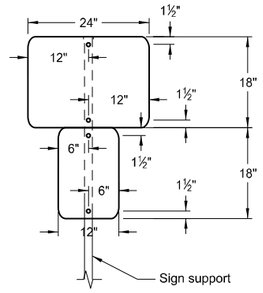
Signing
US 52B
US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	110	9



Special Assembly 1



Special Assembly 2

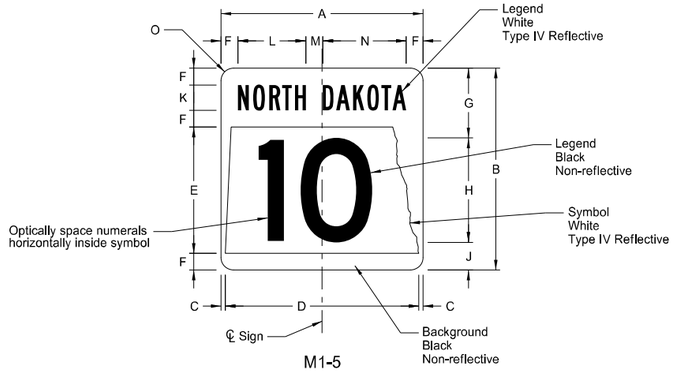
REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Special Sign Assemblies

US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	110	10

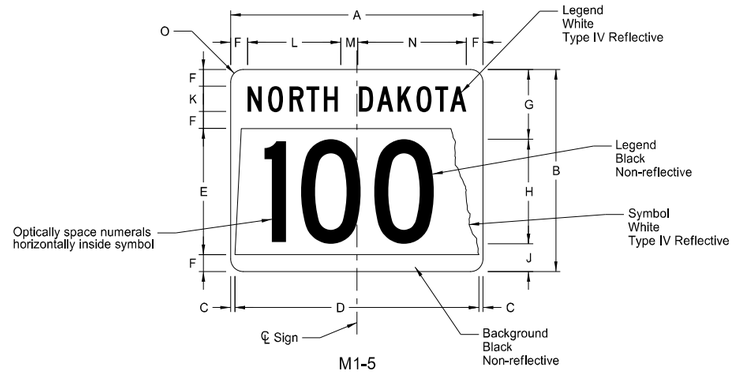


M1-5

STATE ROUTE MARKER

SIGN	DIMENSION (INCHES)													
	A	B	C	D	E	F	G	H	J	K	L	M	N	O
1, 2 digits	18*	18*	0.38	17.25	11.25	1.5	6.38	9 D**	2.63	2.25 B	6.1	1.5	7.4	1.5
1, 2 digits	24	24	0.5	23	15	2	8.5	12 D**	3.5	3 B	8.1	2	9.9	1.5
1, 2 digits	36	36	0.75	34.5	22.5	3	12.75	18 D**	5.25	4.5 B	12.1	3	14.9	2.25
1, 2 digits	48*	48*	1	46	30	4	17	24 D**	7	6 B	16.2	4	19.8	3

* Size not for independent use (only for use within a guide sign)
** Reduce numeral spacing by 25%

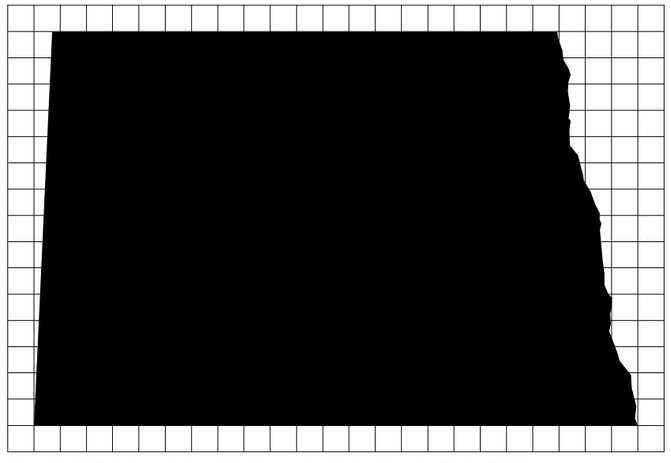


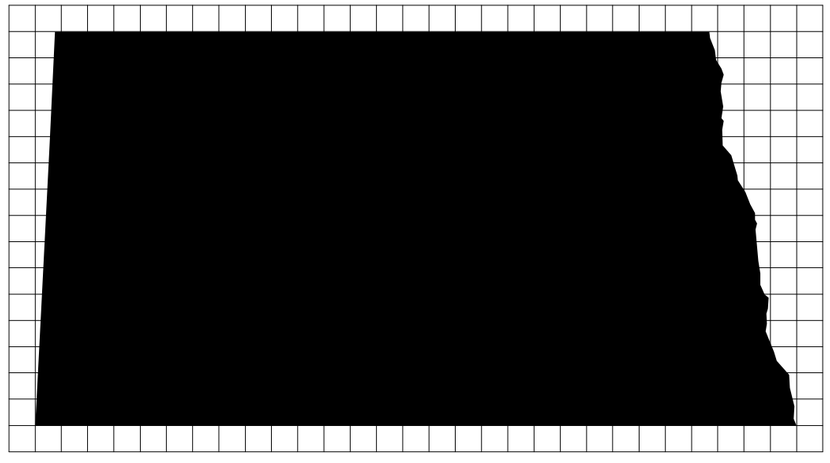
M1-5

STATE ROUTE MARKER

SIGN	DIMENSION (INCHES)													
	A	B	C	D	E	F	G	H	J	K	L	M	N	O
3 digits	24*	18*	1.13	21.75	11.25	1.5	6.38	9 C**	2.63	2.25 C	8.8	2	10.2	1.5
3 digits	30	24	0.5	29	15	2	8.5	12 C**	3.5	3 C	10.7	2.5	12.8	1.5
3 digits	45	36	0.75	43.5	22.5	3	12.75	18 C**	5.25	4.5 C	16.1	3.8	19.1	2.25
3 digits	60*	48*	1	58	30	4	17	24 C**	7	6 C	21.5	5	25.5	3
4 digits	24*	18*	1.13	21.75	11.25	1.5	6.38	9 B***	2.63	2.25 C	8.8	2	10.2	1.5
4 digits	30	24	0.5	29	15	2	8.5	12 B***	3.5	3 C	10.7	2.5	12.8	1.5
4 digits	45	36	0.75	43.5	22.5	3	12.75	18 B***	5.25	4.5 C	16.1	3.8	19.1	2.25
4 digits	60*	48*	1	58	30	4	17	24 B***	7	6 C	21.5	5	25.5	3

* Size not for independent use (only for use within a guide sign)
** Reduce numeral spacing by 25%
*** Reduce numeral spacing by 50%



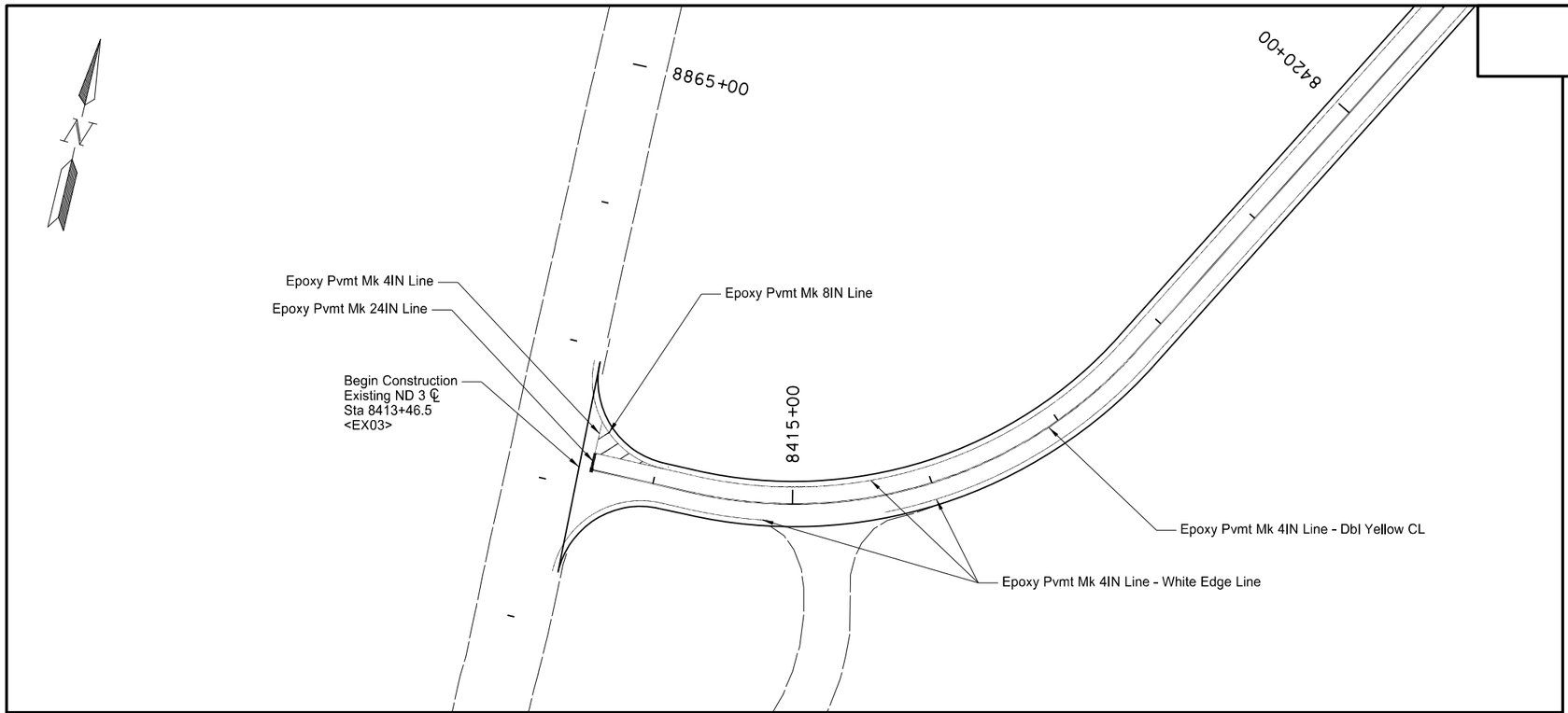


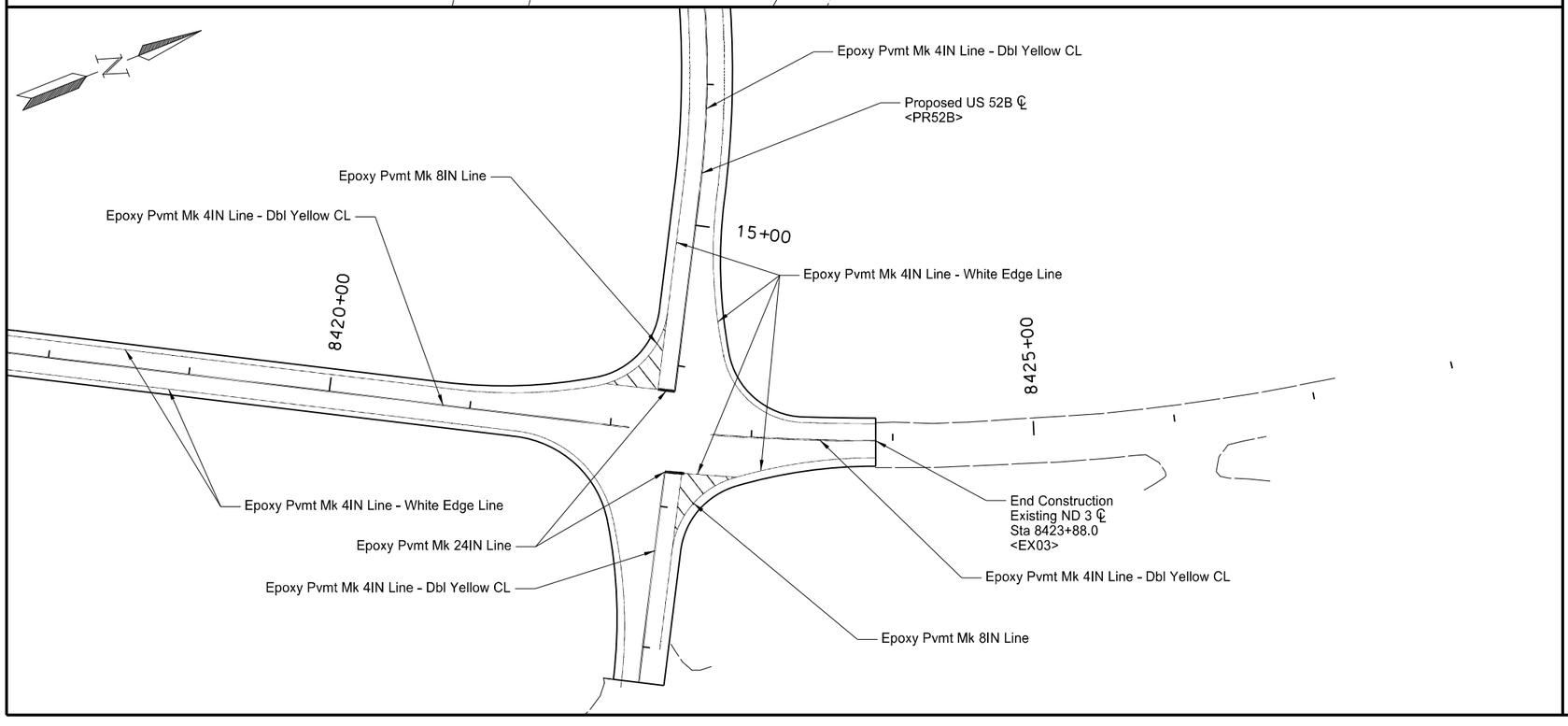
Note: North Dakota symbol graphics file can be obtained from the Design Division of North Dakota Department of Transportation.

REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

ND Highway Shield Details for
Route Markers and Guide Signs
US 52 and ND 3 Intersection Improvements

Harvey, ND





STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	120	1

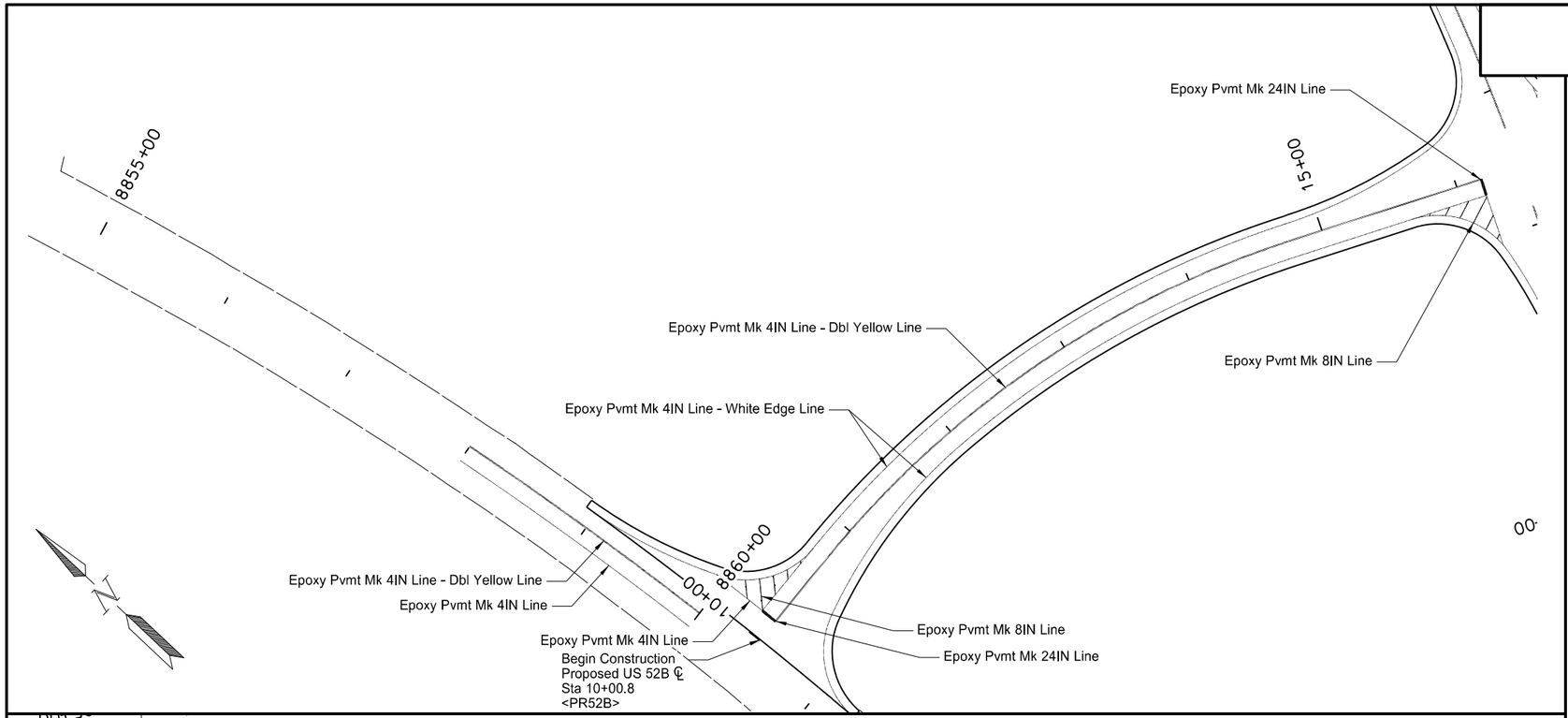
SPEC	CODE	BID ITEM	QTY	UNIT
762	0113	EPOXY PVMT MK 4IN LINE		
		Sta 8413+55.5 to 8422+13.5 - Dbl Yellow CL	1718	LF
		Sta 8413+55.5 to 8422+13.5 - White Edge Line Lt	944	LF
		Sta 8413+55.5 to 8422+13.5 - White Edge Line Rt	855	LF
		Sta 8422+71.2 to 8423+88.0 - Dbl Yellow CL	234	LF
		Sta 8422+71.2 to 8423+88.0 - White Edge Line Lt	132	LF
		Sta 8422+71.2 to 8423+88.0 - White Edge Line Rt	102	LF
762	0115	EPOXY PVMT MK 8IN LINE		
		ND 3 / US 52 Intersection	34	LF
762	0117	EPOXY PVMT MK 24IN LINE		
		ND 3 / US 52 Stop Bar	12	LF

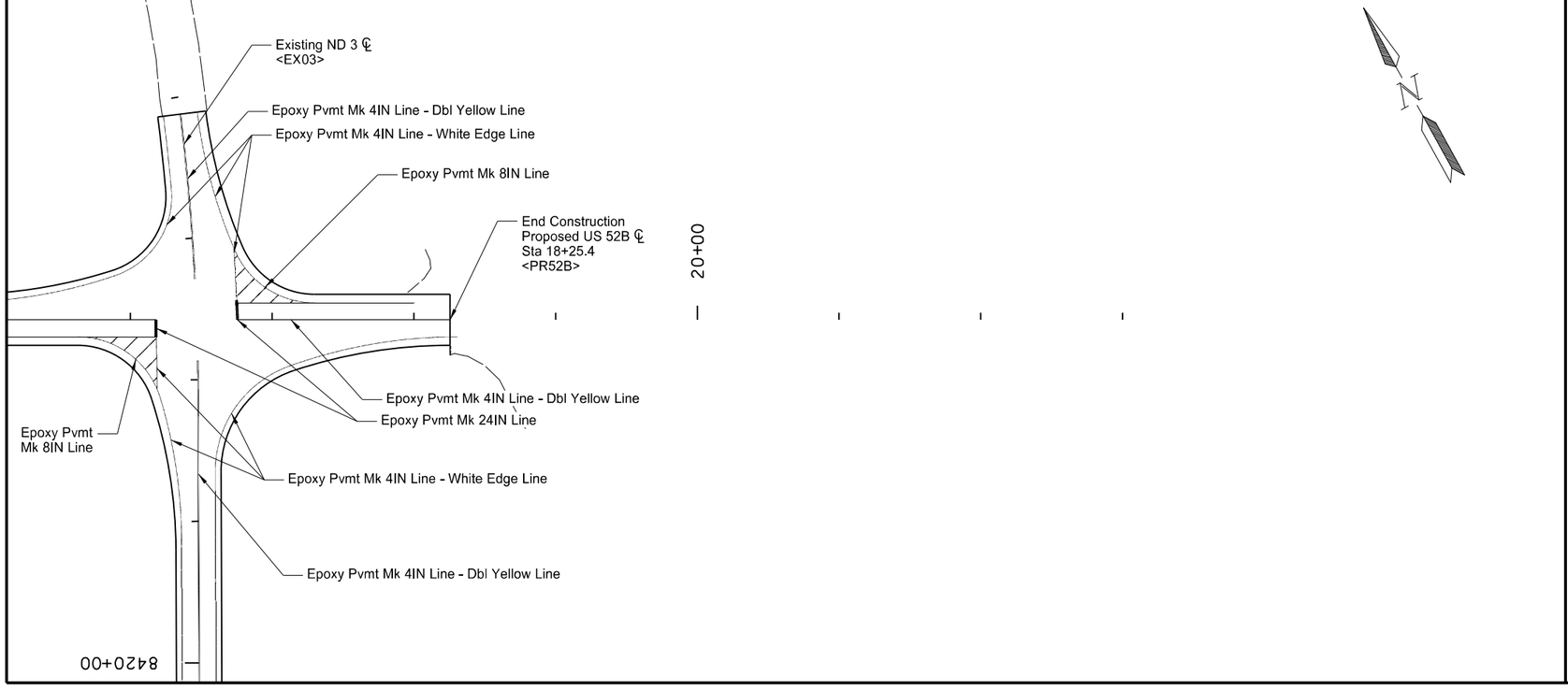
REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Pavement Marking
ND 3
US 52 and ND 3 Intersection Improvements

Harvey, ND

11/21/2022 2:27:36 PM dkieffer K:\018509-000\Cad\4052167.101\Design\Sheets\120MK\120MK_1.dgn





STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-4-052(101)167	120	2

SPEC	CODE	BID ITEM	QTY	UNIT
762	0113	EPOXY PVMT MK 4IN LINE		
		Sta 10+17.5 to 16+18.2 - Dbl Yellow CL	1202	LF
		Sta 10+17.5 to 16+18.2 - White Edge Line Lt	802	LF
		Sta 10+17.5 to 16+18.2 - White Edge Line Rt	760	LF
		Sta 16+75.4 to 18+25.4 - Dbl Yellow CL	302	LF
		Sta 16+75.4 to 18+25.4 - White Edge Line Lt	235	LF
		Sta 16+75.4 to 18+25.4 - White Edge Line Rt	121	LF
		Sta 8858+00.0 to 8860+00.0 - Dbl Yellow CL	400	LF
		Sta 8858+00.0 to 8860+00.0 - White Lane Line	200	LF
762	0115	EPOXY PVMT MK 8IN LINE		
		US 52B / US 52 Intersection	64	LF
		US 52B / ND 3 EB Intersection	57	LF
		US 52B / ND 3 WB Intersection	57	LF
762	0117	EPOXY PVMT MK 24IN LINE		
		US 52B / US 52 Stop Bar	12	LF
		US 52B / ND 3 EB - Stop Bar	12	LF
		US 52B / ND 3 WB - Stop Bar	12	LF

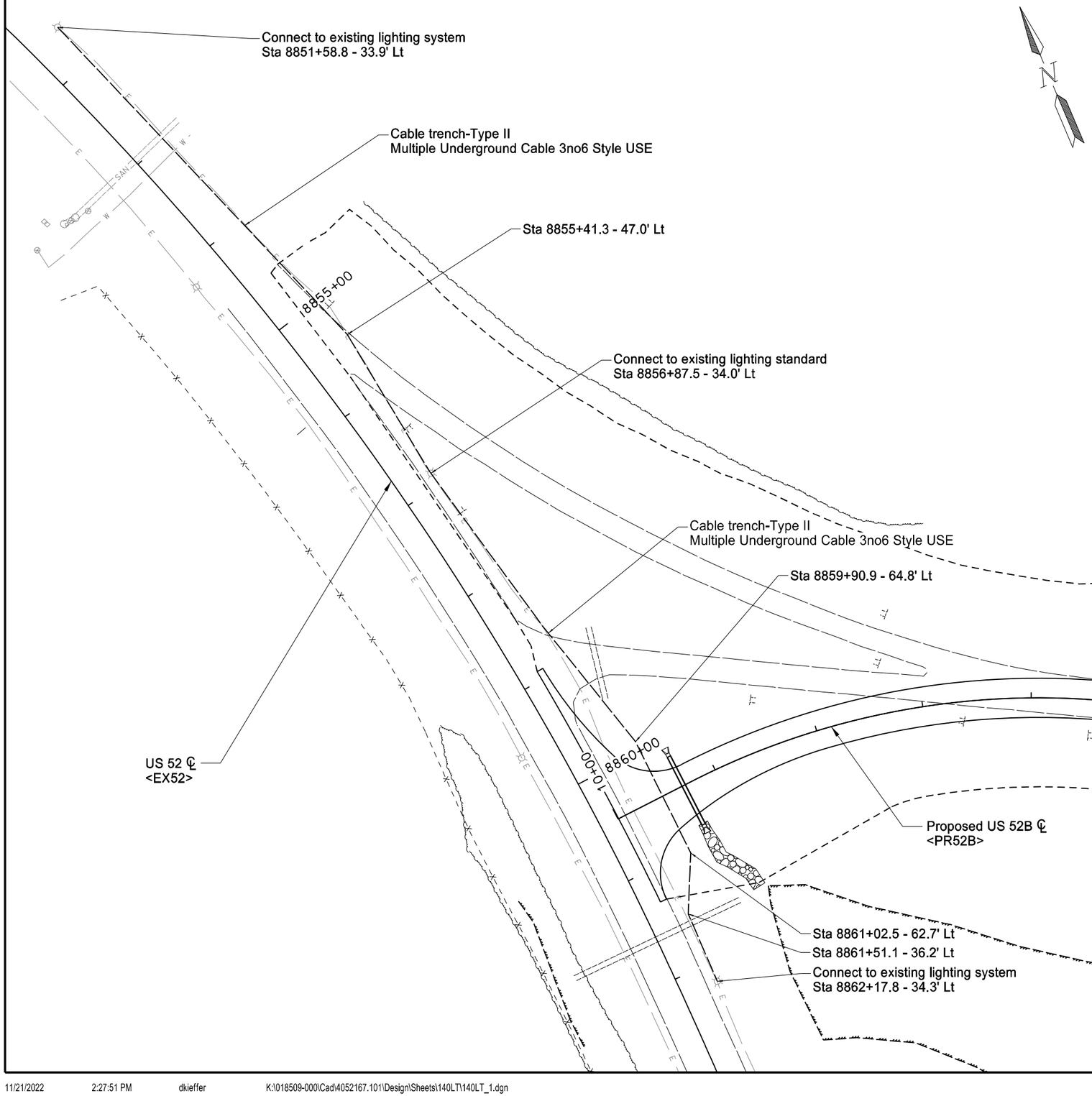
REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

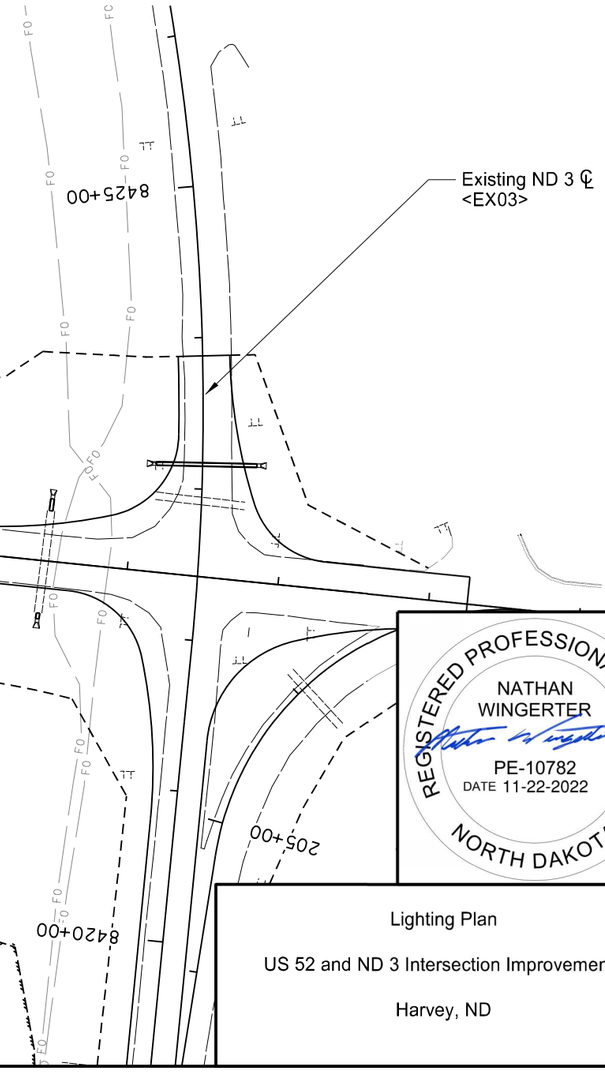
Pavement Marking
US 52B
US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	HEN-4-052(101)167	140	1

SPEC	CODE	BID ITEM	QTY	UNIT
770	0220	CABLE TRENCH-TYPE II		
		Sta 8851+59.1 to Sta 8856+87.5	535	LF
		Sta 8856+87.5 to Sta 8862+17.8	550	LF
770	0445	MULTIPLE UNDERGROUND CABLE 3NO6 STYLE USE		
		Sta 8851+59.1 to Sta 8856+87.5	555	LF
		Sta 8856+87.5 to Sta 8862+17.8	570	LF





REGISTERED PROFESSIONAL ENGINEER
NATHAN WINGERTER
PE-10782
DATE 11-22-2022
NORTH DAKOTA

Lighting Plan

US 52 and ND 3 Intersection Improvements

Harvey, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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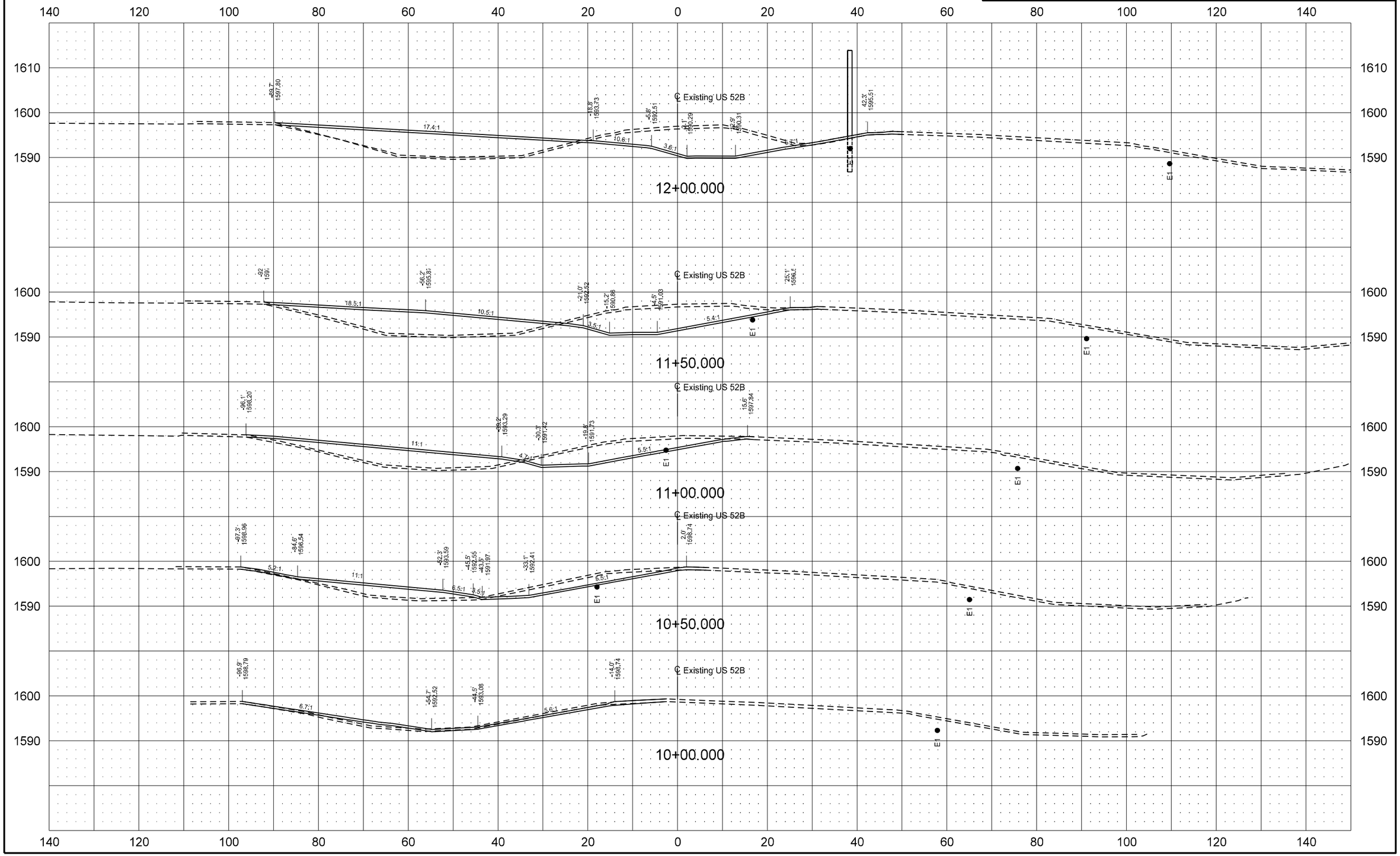

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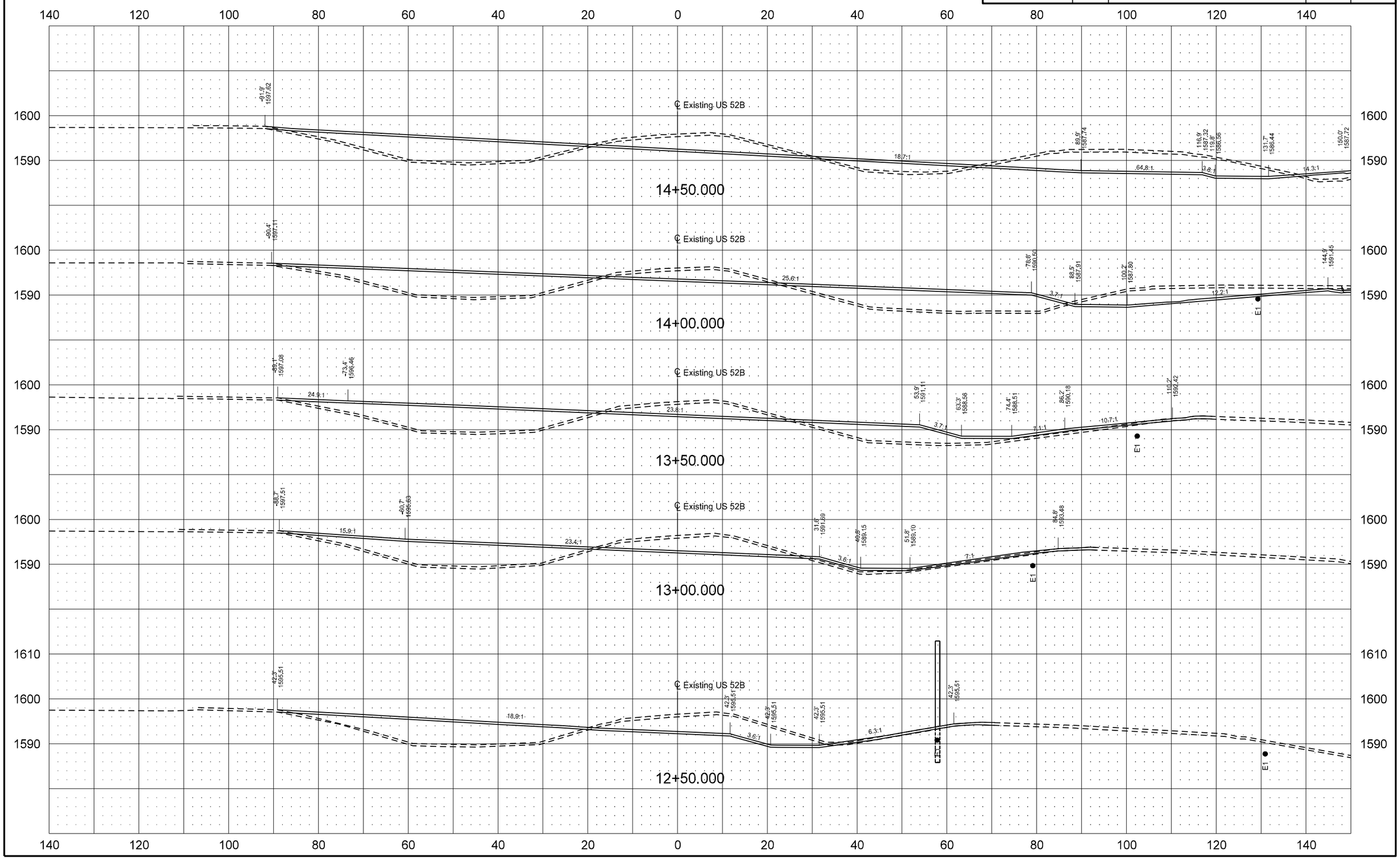

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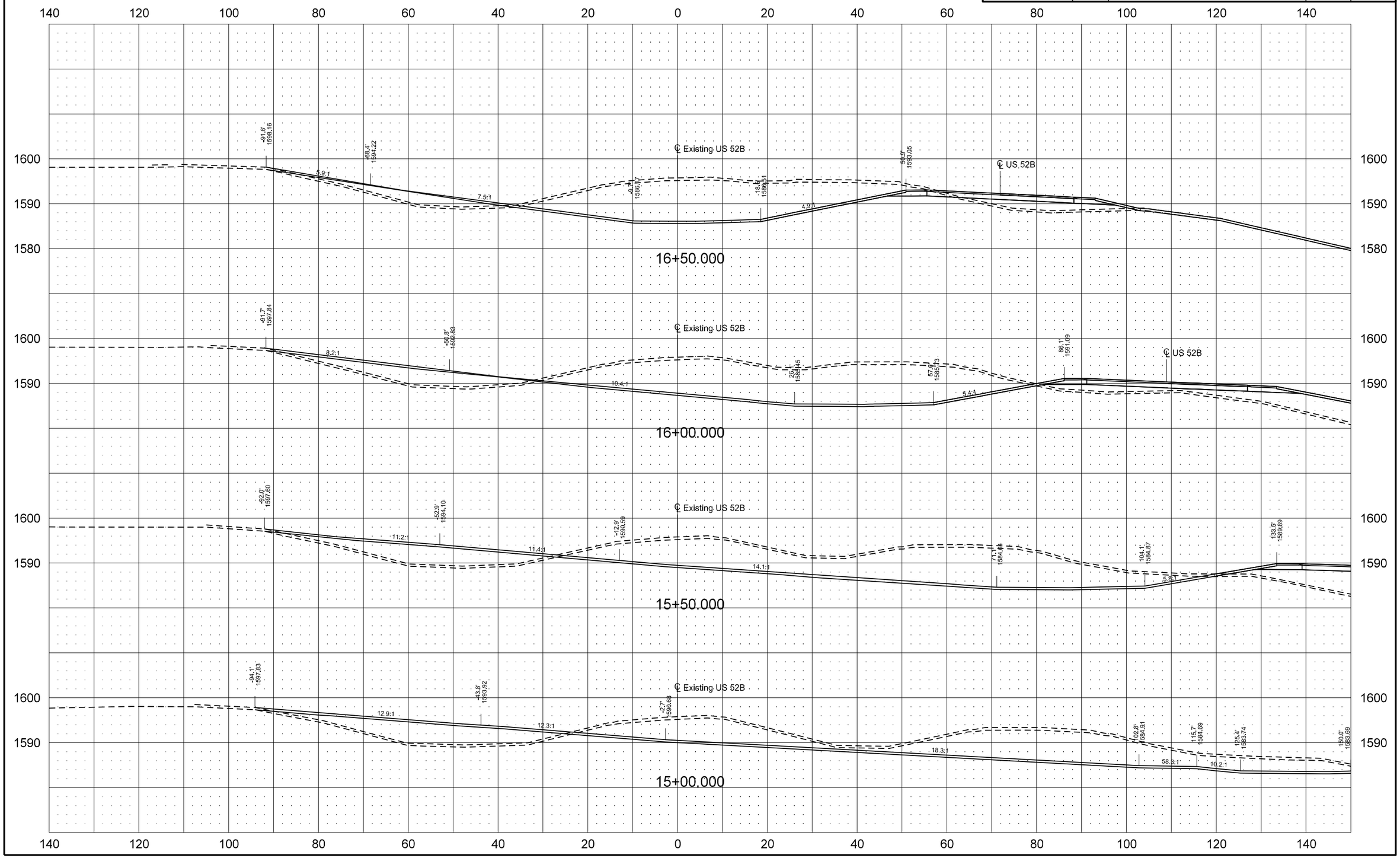

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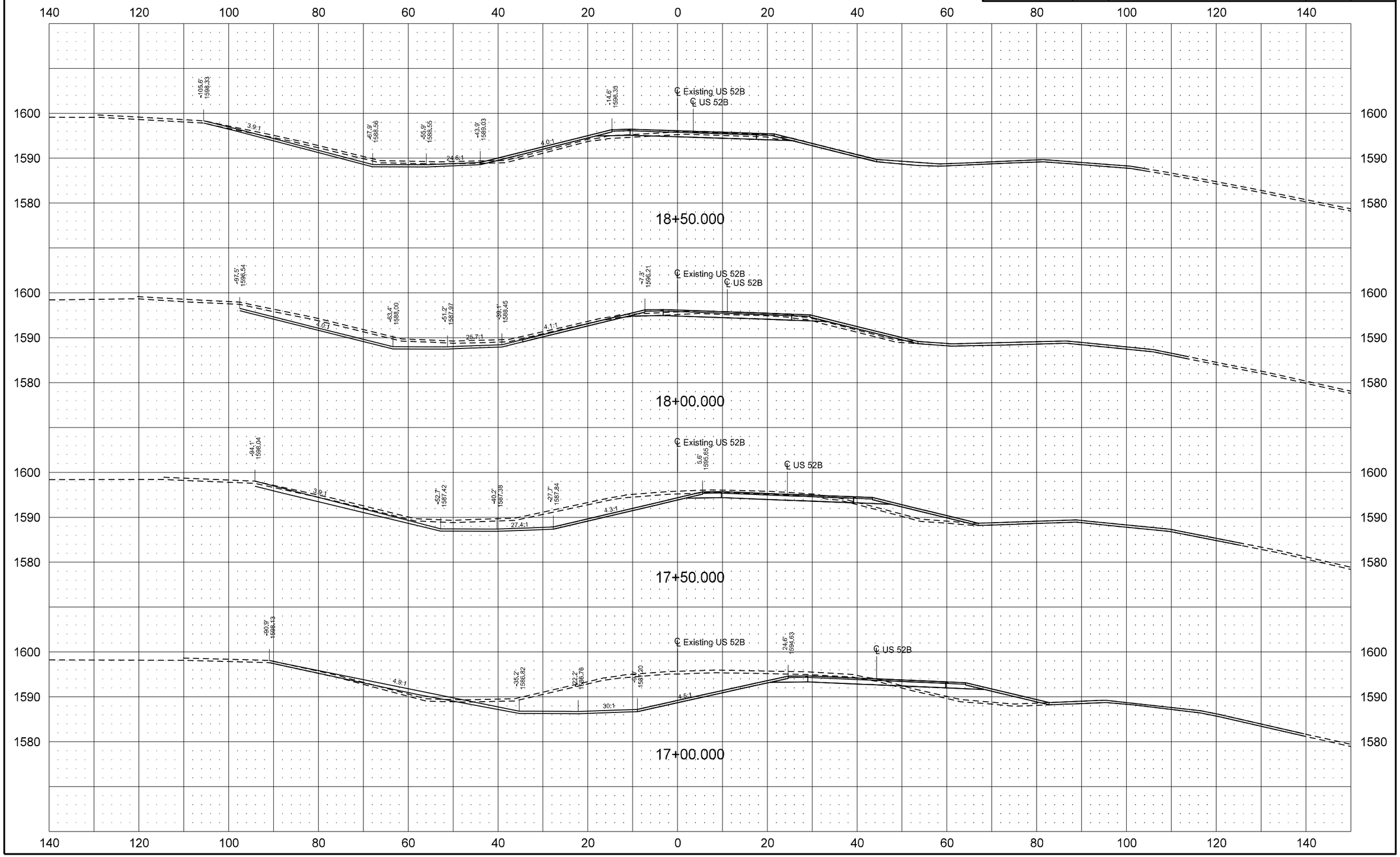

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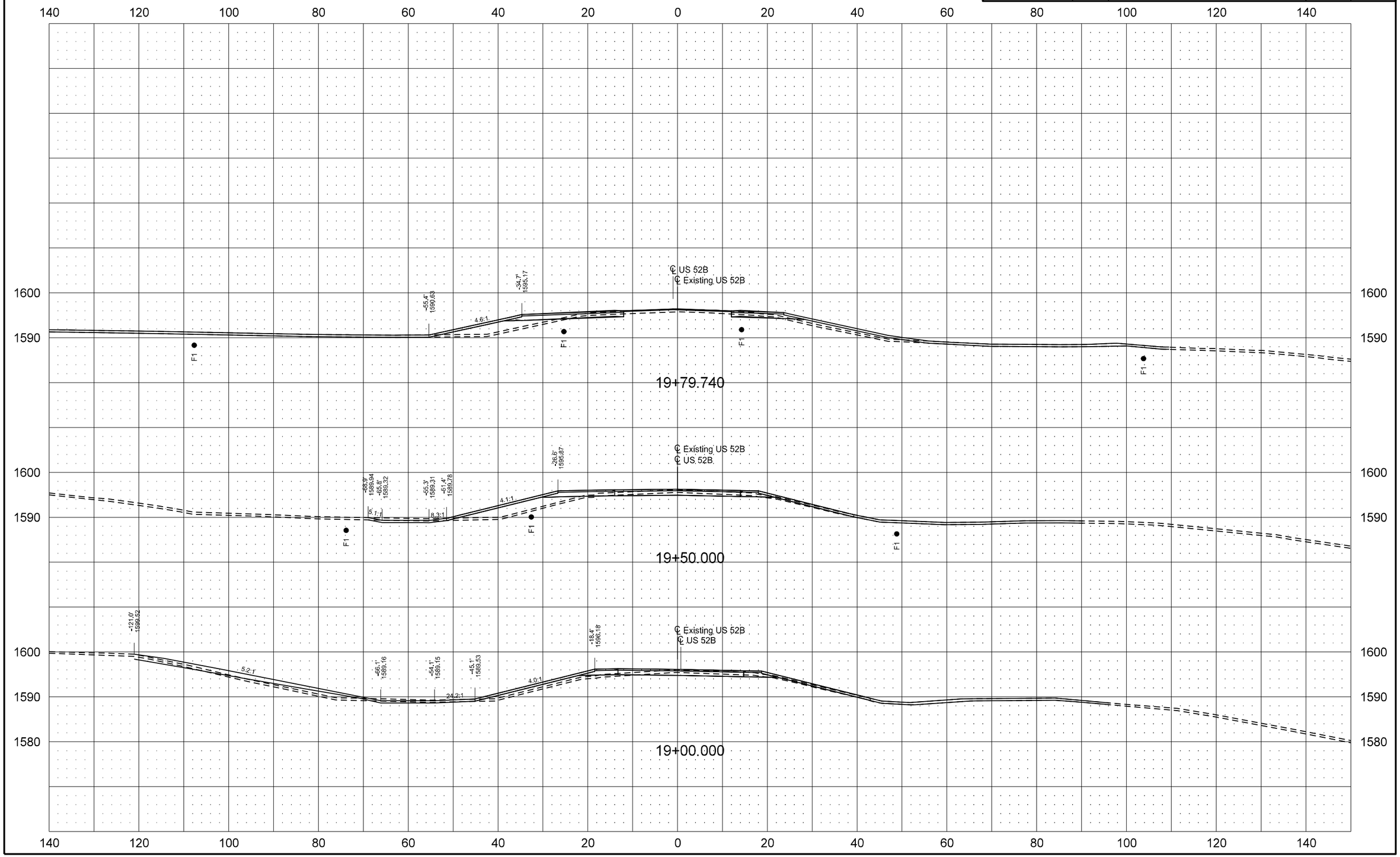

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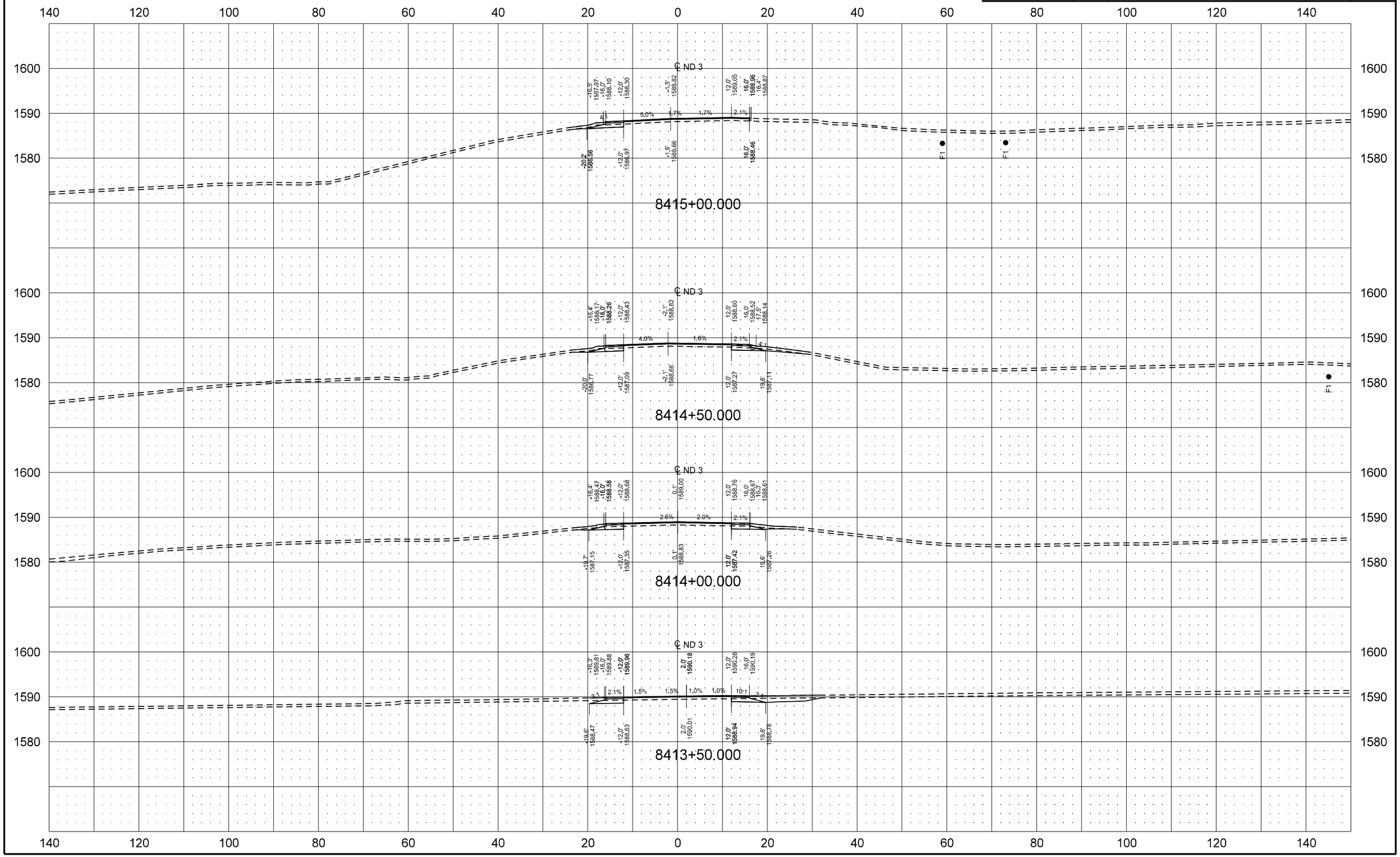

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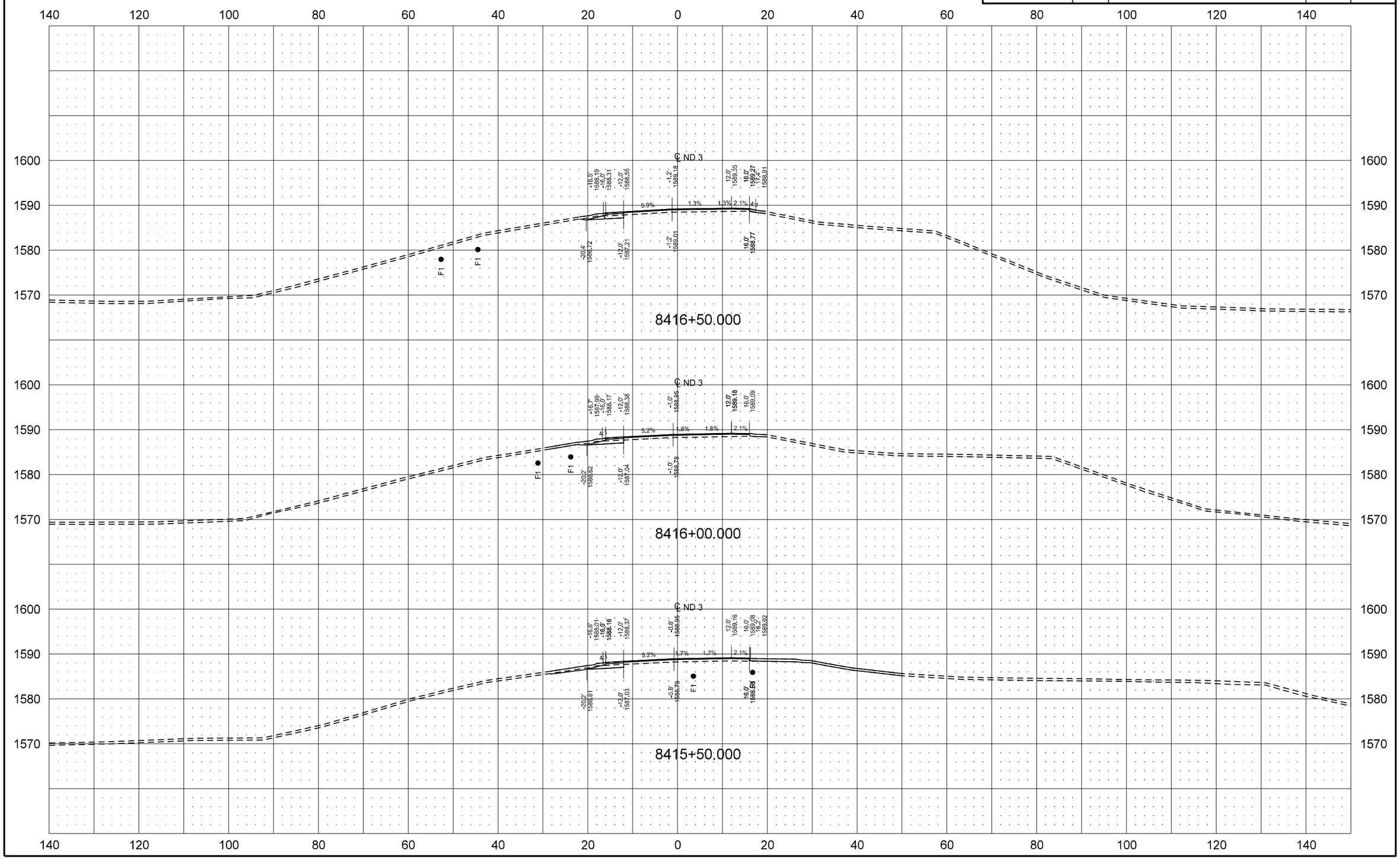

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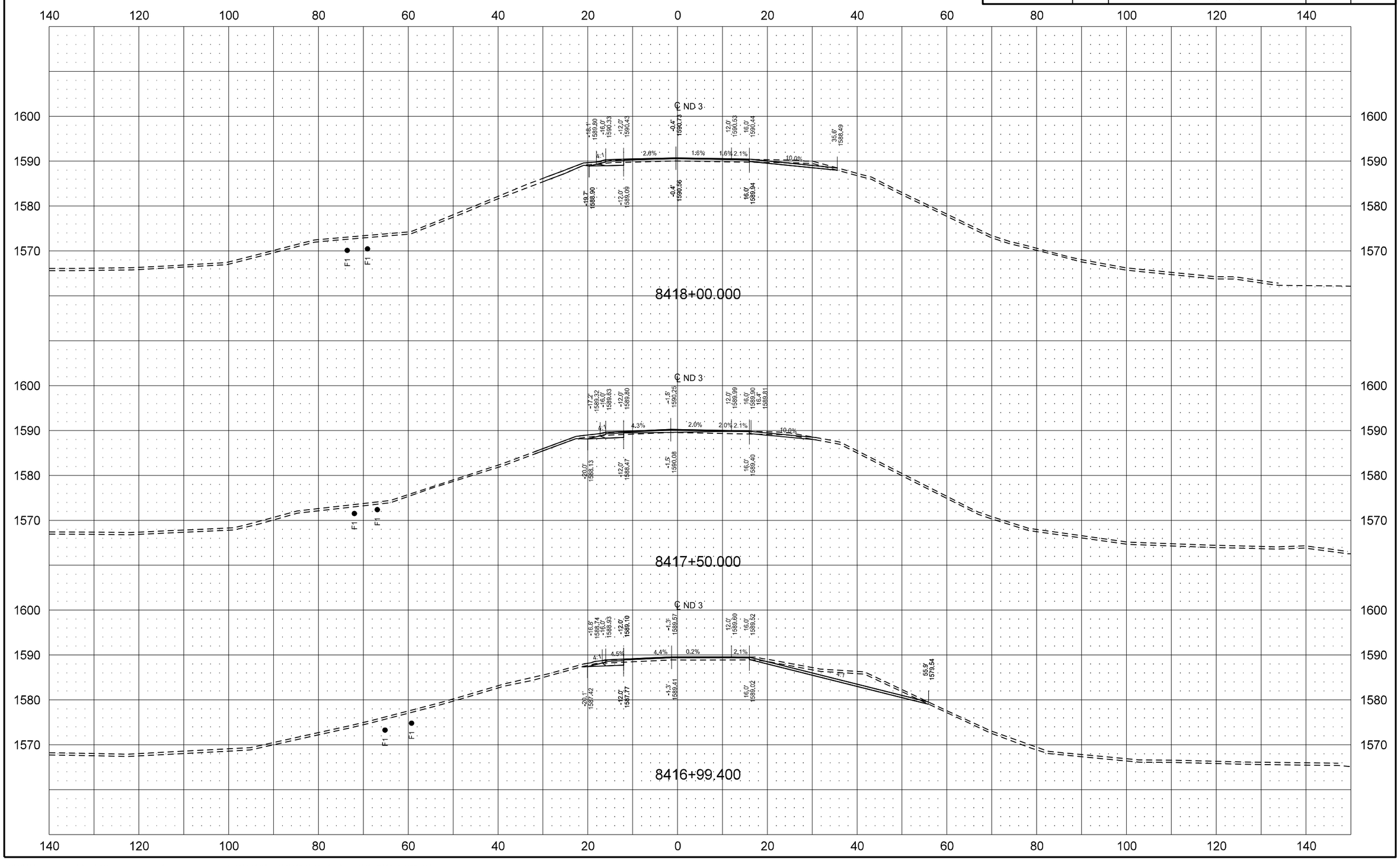

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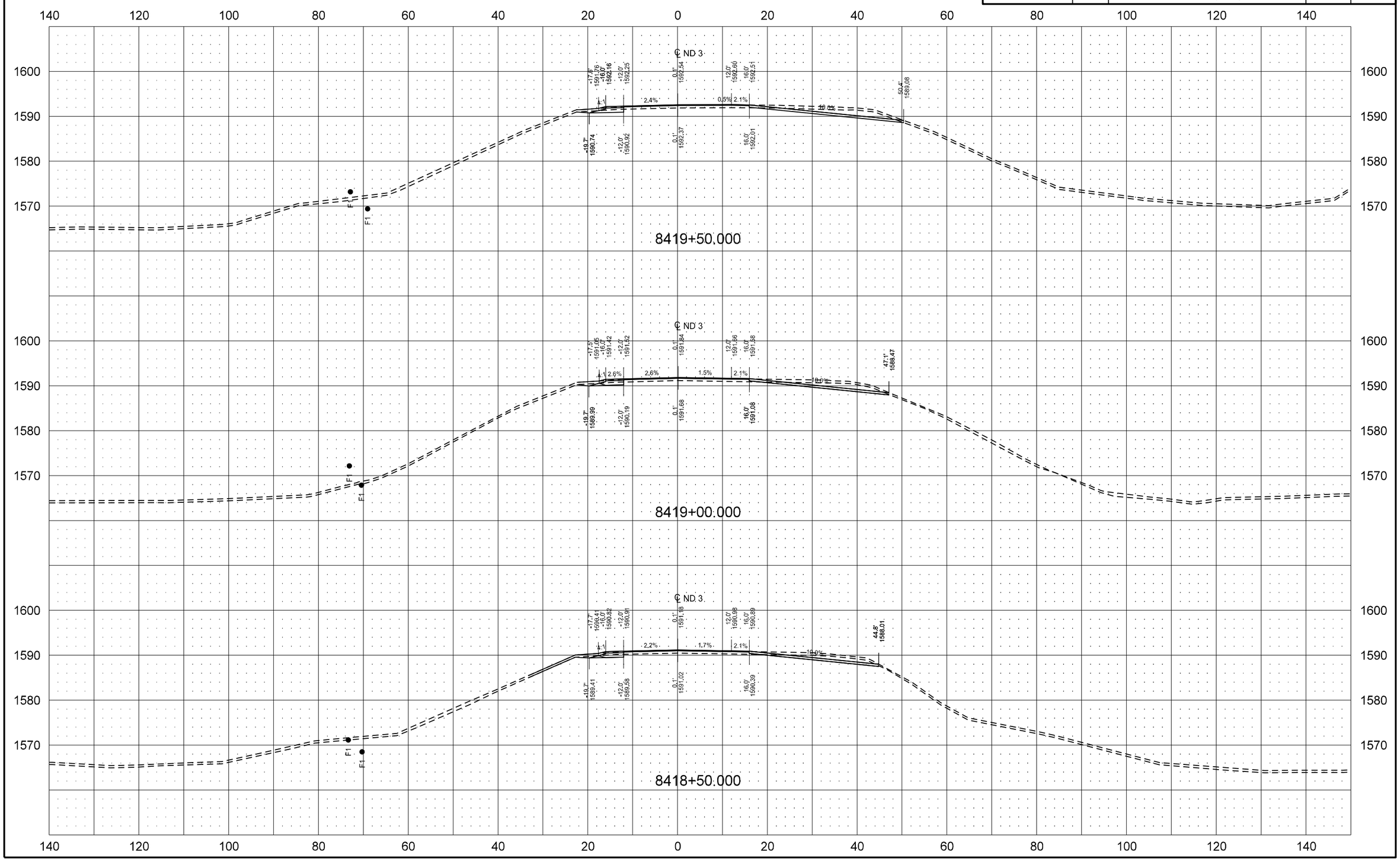

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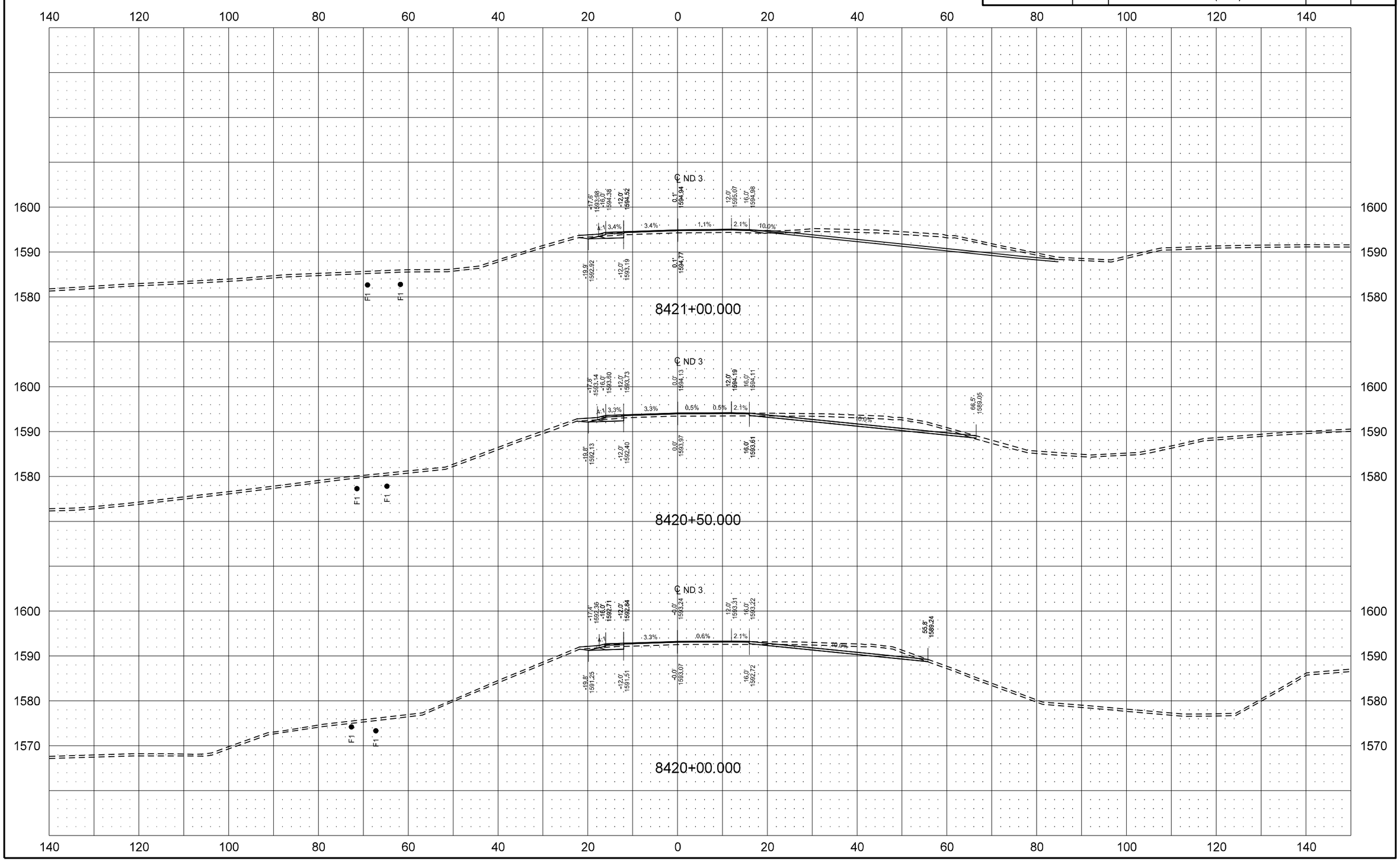

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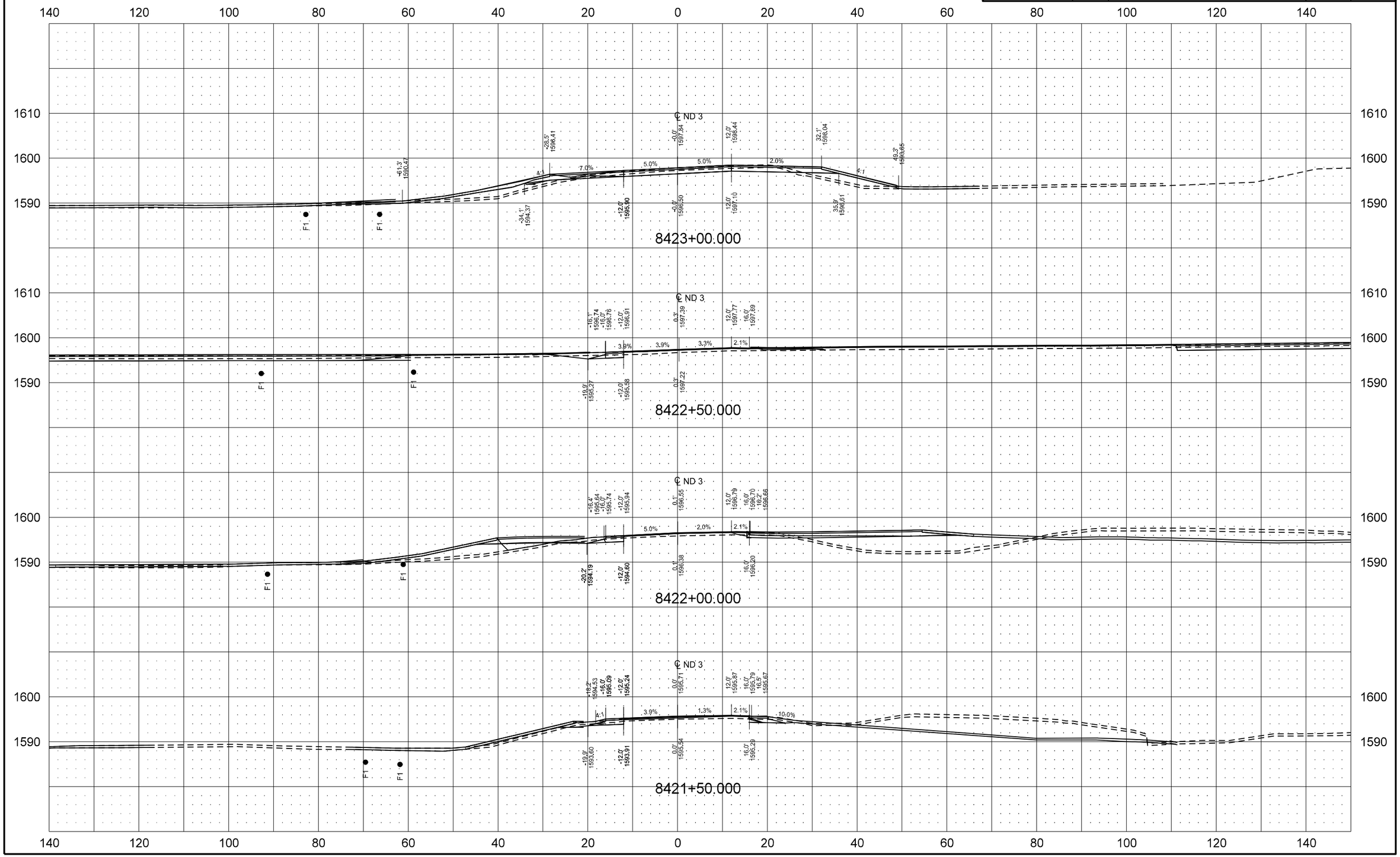

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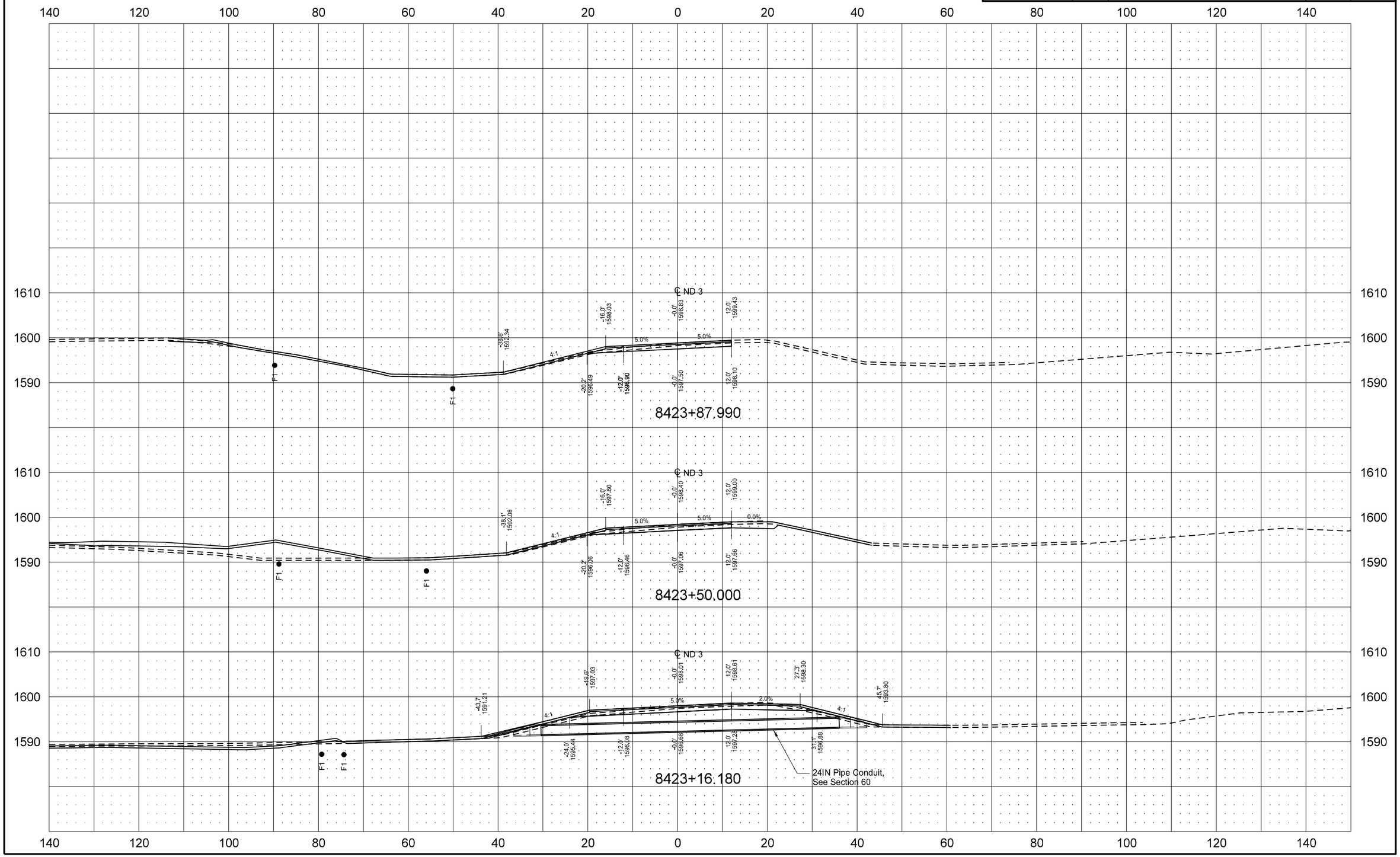

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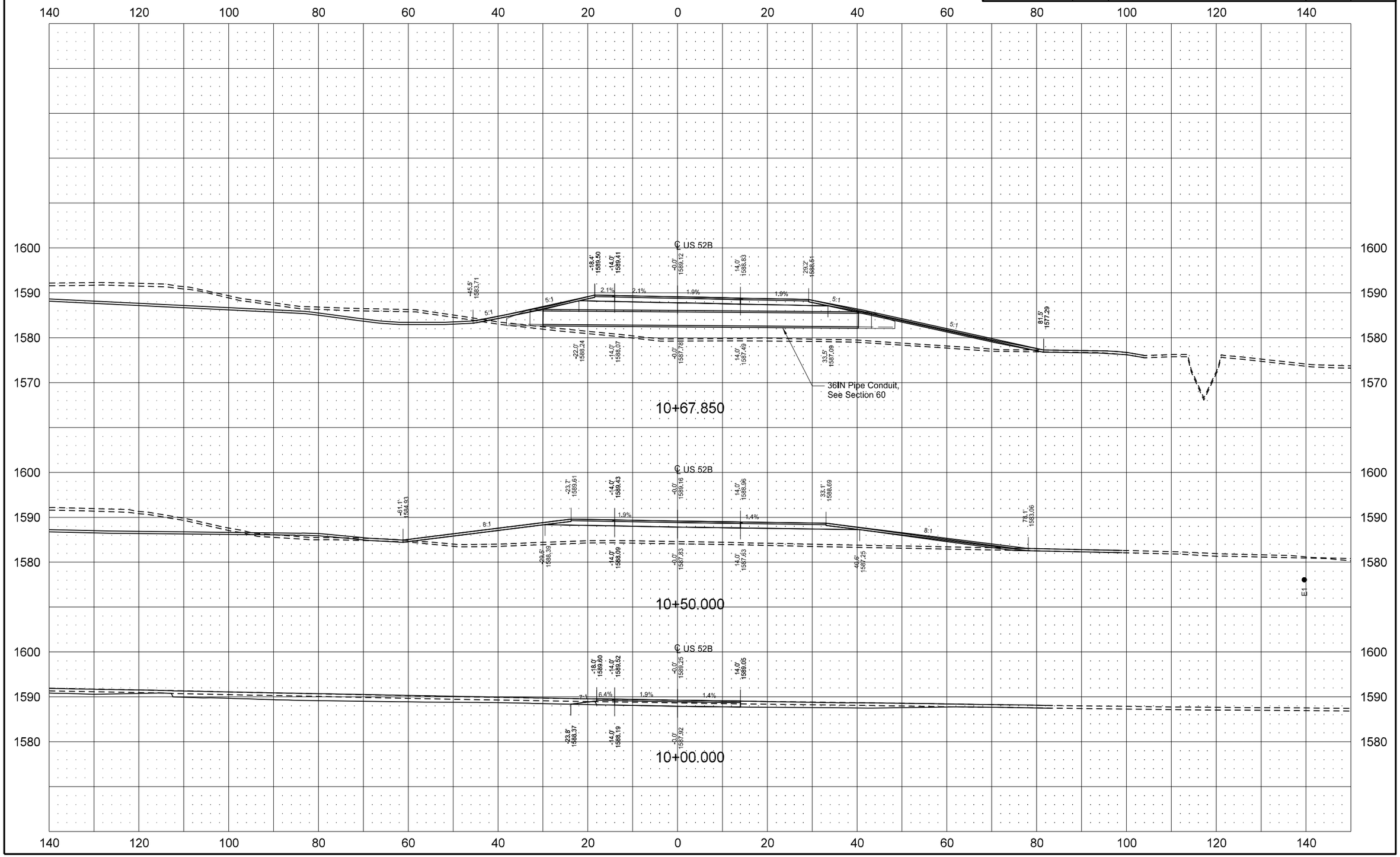

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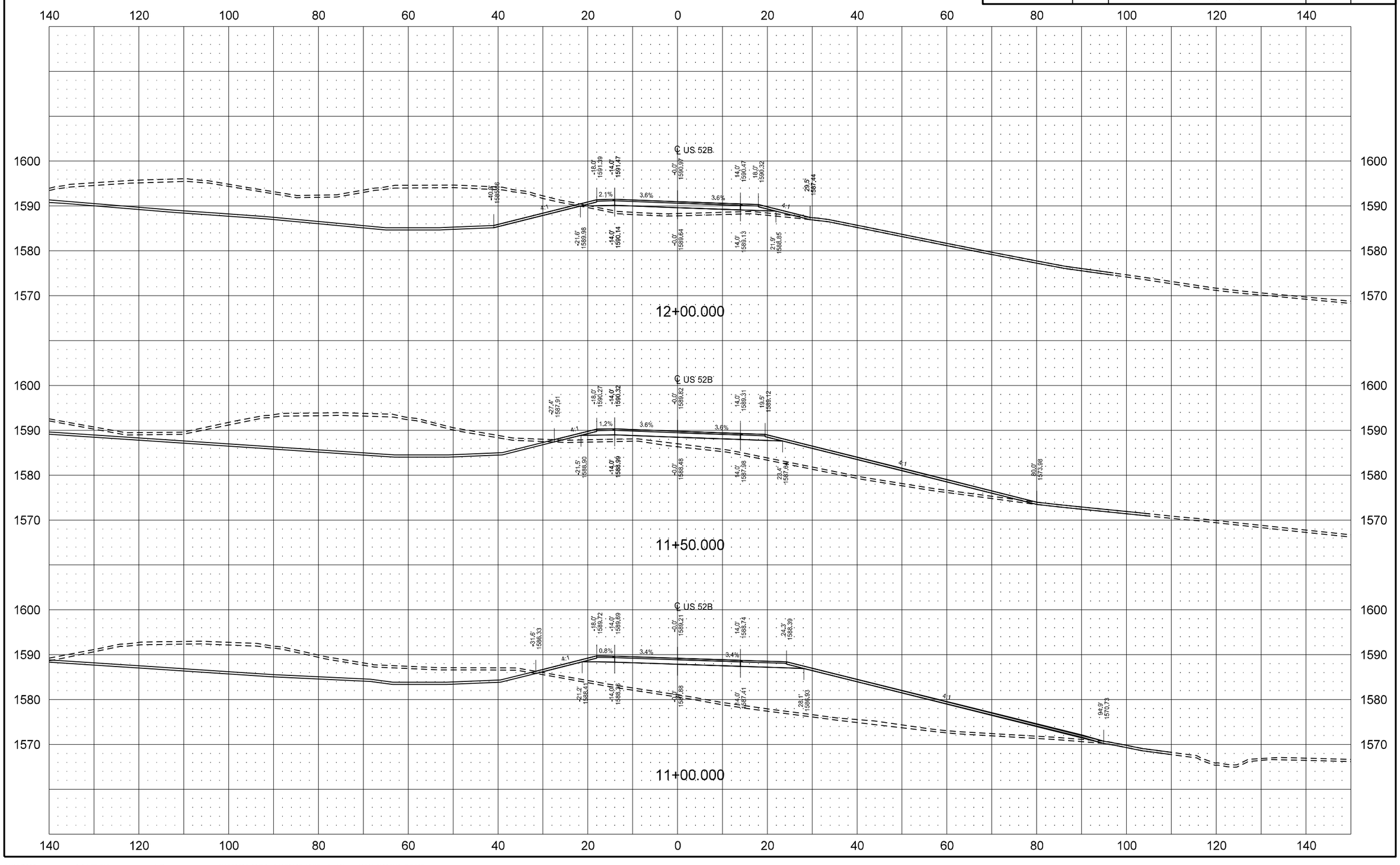

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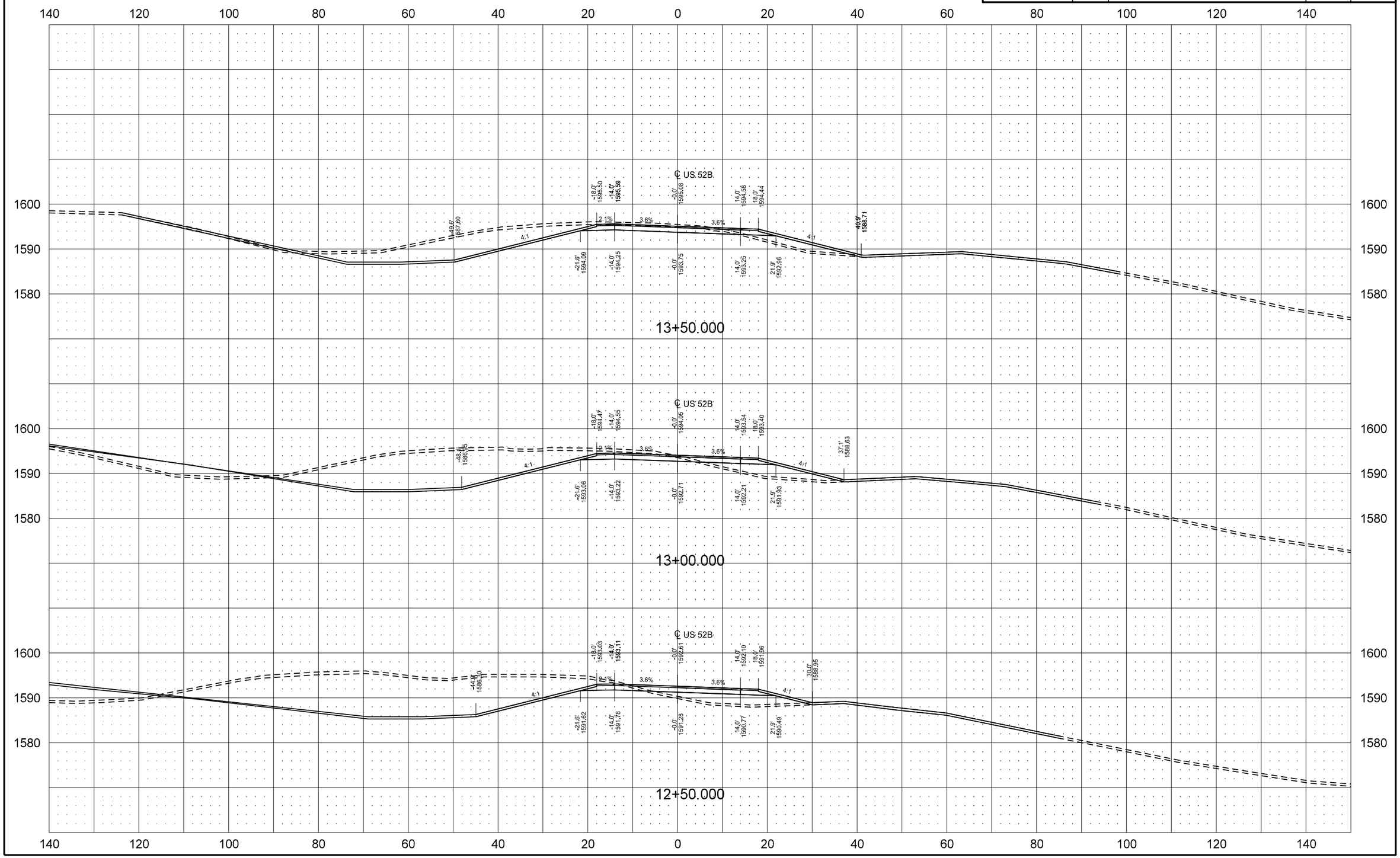

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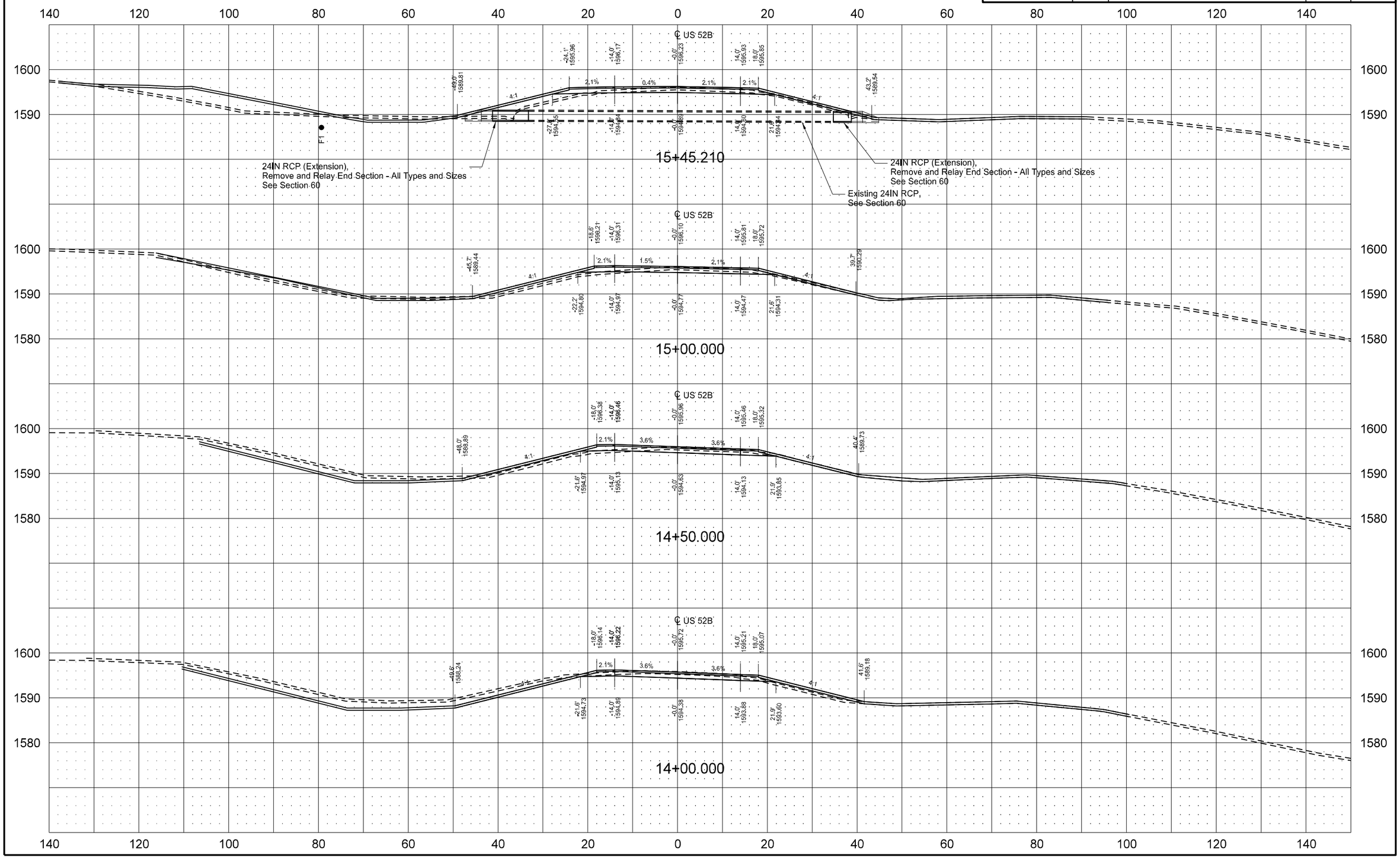

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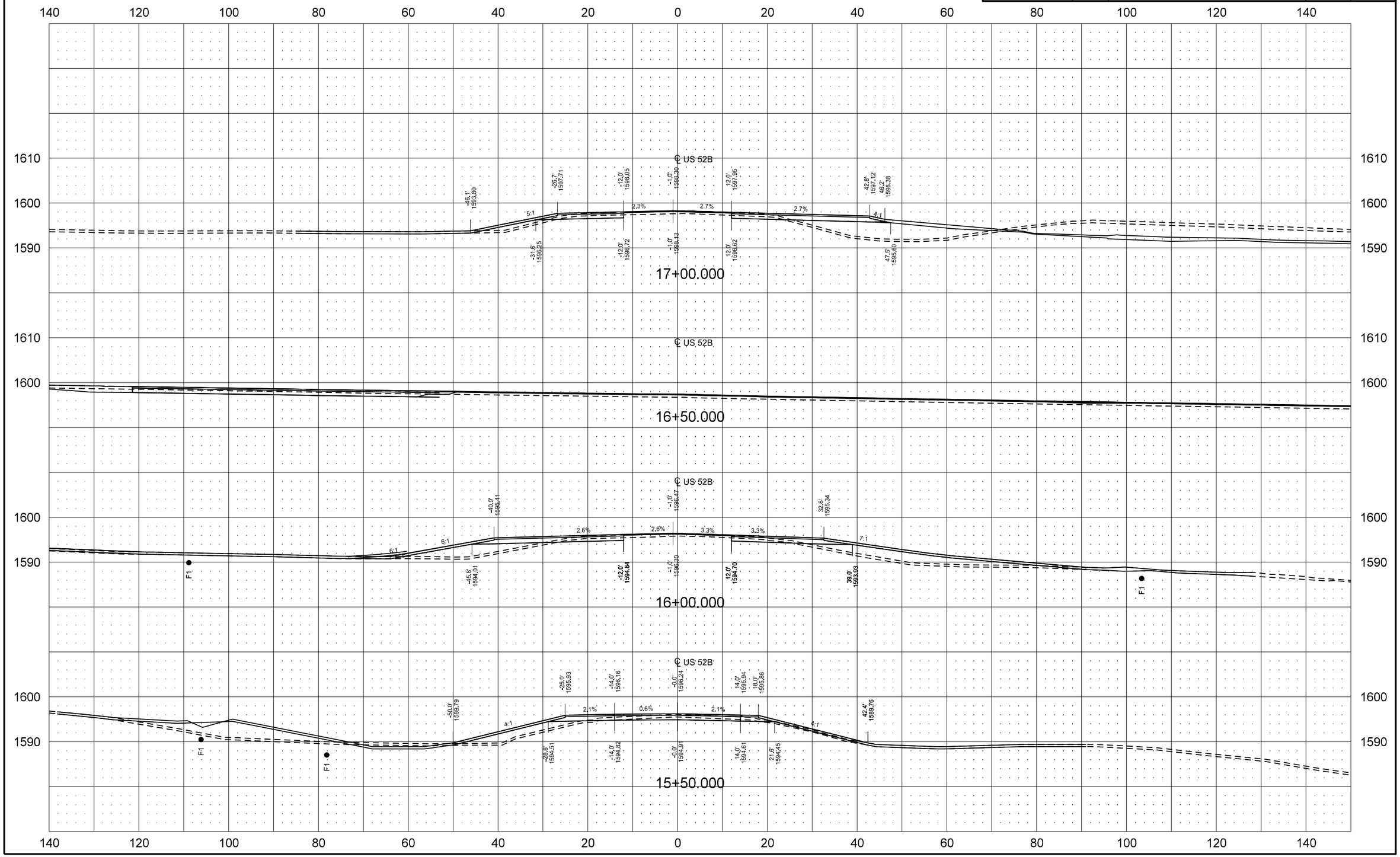

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