

DESIGN DATA			
Traffic	Average Daily		
Current 2017	Pass: 3,305	Trucks: 435	Total: 3,740
Preventative Maintenance		Bridges: Str #22-076.287	

STATE	PROJECT NO.	PCN	SECTION NO.	SHEET NO.
ND	SS-5-022(146)075	23878	1	1

# NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

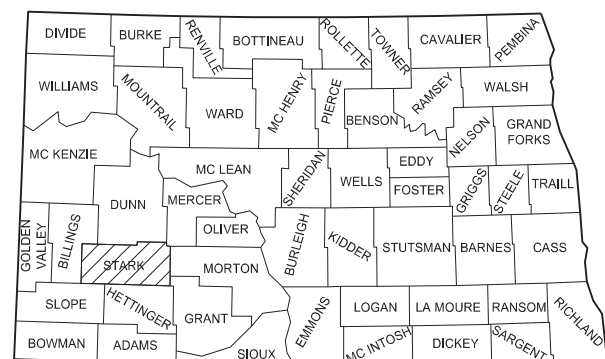
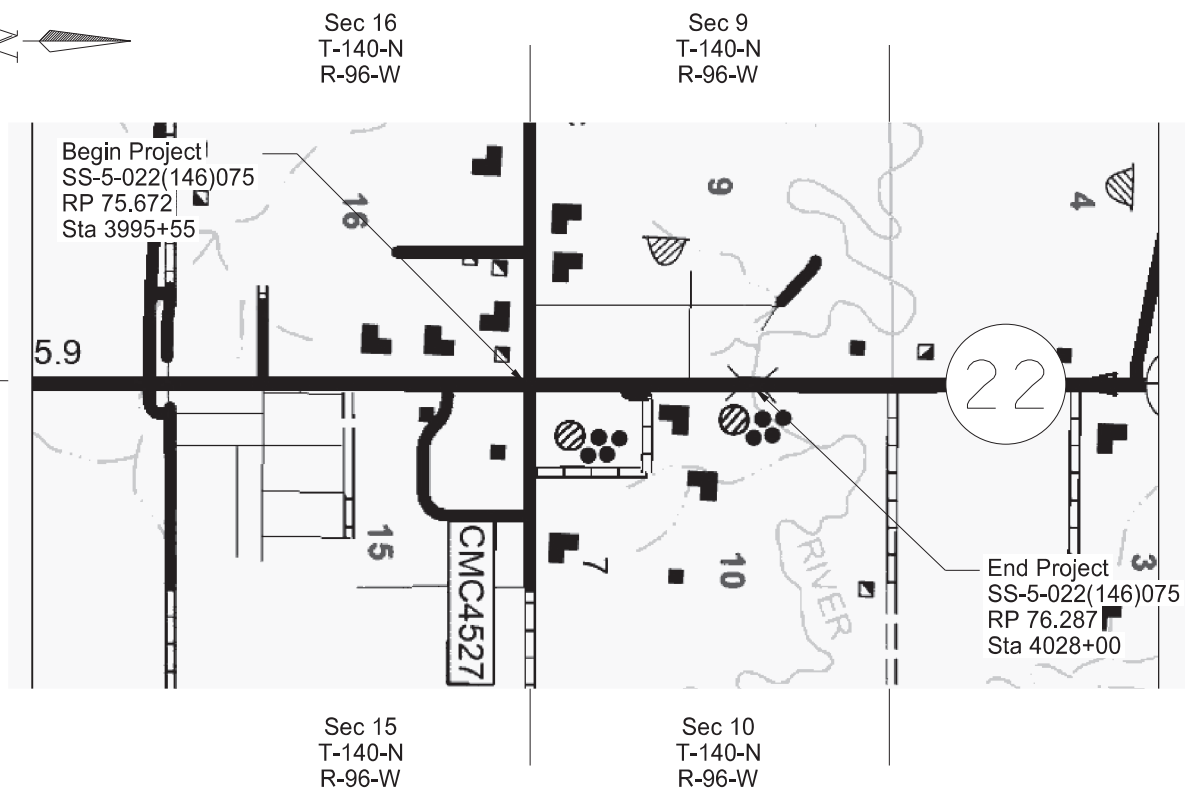
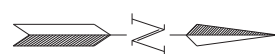
SS-5-022(146)075

Stark County

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements

GOVERNING SPECIFICATIONS	Date Published and Adopted by the North Dakota Department of Transportation
Standard Specifications	4/1/2024
Supplemental Specifications	NONE

PROJECT NUMBER \ DESCRIPTION	NET MILES	GROSS MILES
SS-5-022(146)075	0.615	0.615



STATE COUNTY MAP

DESIGNER Brady Haussler P.E.
DESIGNER Jennifer Kern P.E.
DESIGNER Sadie Peterson
DESIGNER Ethan Mann
DESIGNER Owen Kellems

ND DEPARTMENT OF TRANSPORTATION  
OFFICE OF PROJECT DEVELOPMENT

*Kirk Hoff*      Kirk Hoff  
07/30/24

DESIGN DIVISION

DATE  
07/29/24

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77	1 - 3	Permanent Erosion Control
81	1	Survey Coordinate and Curve Data
100	1	Work Zone Traffic Control
200	1 - 17	Cross Sections

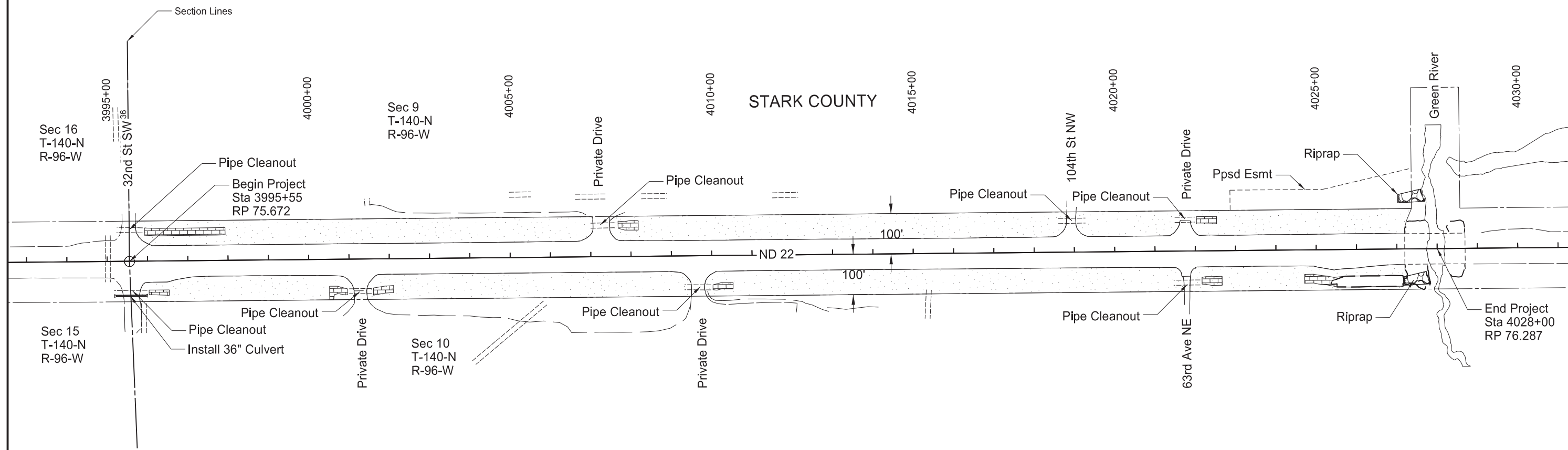
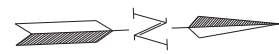
**LIST OF STANDARD DRAWINGS**

Number	Description
D-101-1, 2, 3, 4	NDDOT Abbreviations
D-101-10	NDDOT Utility Company and Organization Abbreviations
D-101-20, 21	Line Styles
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D-101-40	Cross Section Legend
D-255-2	Erosion And Siltation Control - Erosion Control Blanket Installation
D-256-1	Erosion And Siltation Controls
D-261-1	Erosion Control - Fiber Roll Placement Details
D-704-7	Breakaway Systems For Construction Zone Signs - Perforated Tube
D-704-8	Breakaway Systems For Construction Zone Signs - U-Channel Post
D-704-9	Construction Sign Details - Terminal And Guide Signs
D-704-10	Construction Sign Details - Regulatory Signs
D-704-11, 11A	Construction Sign Details - Warning Signs
D-704-12	Shoulder Closure Tapers
D-704-13	Barricade And Channelizing Device Details
D-704-14	Construction Sign Punching And Mounting Details
D-704-20	Terminal And Seal Coat Sign Layouts
D-704-22	Construction Truck And Temporary Detour Layouts
D-704-24	Shoulder Closures And Bridge Painting Layouts
D-704-25	Lane Closures On Urban Streets Layouts
D-704-26	Miscellaneous Sign Layouts
D-704-33	Two-Lane Roadway Portable Rumble Strips
D-704-50	Portable Sign Support Assembly
D-708-6	Erosion And Siltation Controls - Median Or Ditch Inlet Protection
D-714-1	Reinforced Concrete Pipe Culverts And End Sections (Round Pipe)
D-714-4	Round Corrugated Steel Pipe Culverts And End Sections
D-714-22	Concrete Pipe, Cattle Pass, or Precast Concrete Box Culvert Ties
D-714-26	Transverse Mainline Pipe Installation Detail - Pipes 4 Feet or Less Below Top of Subgrade
D-754-83	Object Markers - Culverts

**SPECIAL PROVISIONS**

Number	Description
SSP 1	Temporary Erosion and Sediment Best Management Practices
SP 1(24)	Utility Coordination
SP 2(24)	Rolled Concrete Erosion Control Blanket
SP 3(24)	Soil Stabilization
SP 4 (24)	Non-QC/QA Hot Mix Asphalt
PSP 1(24)	Permits and Environmental Considerations

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LEGEND	
	RESHAPING DITCH, CLEARING & GRUBBING
	CONCRETE EROSION CONTROL BLANKET
	RIPRAP GRADE II & III

Scope of Work

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements

REGISTERED PROFESSIONAL ENGINEER

**BRADY L HAUSSLER**

PE-27171

*Brady L Haussler*

DATE 07/24/24

NORTH DAKOTA

**NOTES**

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202-P01 REMOVAL OF BITUMINOUS SURFACING: Include the cost of pavement removal and aggregate removal in the price bid for "REMOVAL OF BITUMINOUS SURFACING".

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

230-P01 RESHAPING DITCH: Repair erosion to the backslopes and ditch bottoms as follows:

1. Strip, remove, and stockpile topsoil. Reshape topsoil to cross sections shown in the plans. Include topsoil stripping, stockpiling, and replacing in the contract unit price for "RESHAPING DITCH."
2. Reshape the erosion repair areas by constructing the ditches to the profile and dimensions shown in the plans. Compact embankment material as specified in Section 203.04 G.3, "Compaction Control, Type B".
3. Approximate earthwork quantities are shown in the Earthwork Summary. Include water for earthwork in the contract unit price for "RESHAPING DITCH."
4. Excess excavation to be paid for as "COMMON EXCAVATION-WASTE" is designated in the Earthwork Summary and paid for separately.
5. Seeding, mulching and other erosion control items will be paid for separately.

256-P01 RIPRAP REPAIR: 10 CY of RIPRAP GRADE II has been provided for to repair the cavities in existing riprap along the southeast bank of the Green River. 100 CY of RIPRAP GRADE III has been provided for to repair a larger cavity in existing riprap along the southwest bank of the Green River. Fill cavities to match the surrounding terrain. Do not disturb existing trees holding riprap together.

704-P01 TRAFFIC CONTROL: The traffic control devices list has been developed using the following standard drawings:

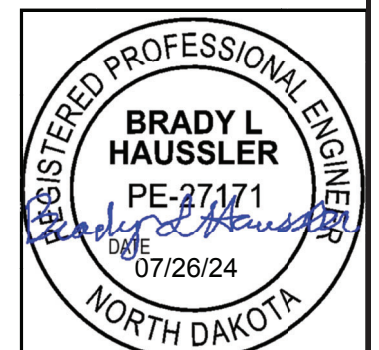
1. D-704-22, Layouts K and L: For construction trucks hauling material.
2. D-704-24, Shoulder Closures
3. D-704-25, Type X: Lane Closure near Intersection on Urban Street
4. D-704-26

Traffic control quantities have been developed based on one shoulder closure for the ND 22 east ditch work, one shoulder closure for the ND 22 west ditch work, and one lane closure for pipe installation on 32<sup>nd</sup> St. Ditch work may take place in any order but only close only 1 shoulder at a time. Construct 32<sup>nd</sup> St half at a time for pipe installation. Flagging is anticipated to be needed for a maximum of one side at a time. The traffic control devices have been based on the speed being reduced from 55 mph to 40 mph.

Leave the work areas free of all hazards during nonworking hours. Remove traffic control devices at the end of each day and reset when work commences.

754-P01 OBJECT MARKERS - CULVERTS: Culvert markers disturbed or removed to accommodate the ditch reshaping work shall be reset in their original location. Cost to remove and reset the culvert markers will be included in the price bid for "OBJECT MARKERS – CULVERTS".

990-P01 PIPE CLEANOUT: Remove sediment from all pipes within project limits. Reshape the ditch bottom and around the pipe to maintain positive drainage. Provide dewatering if necessary, according to site conditions.

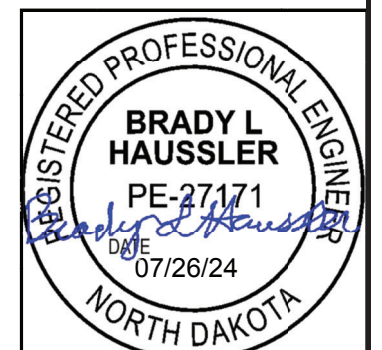


### ENVIRONMENTAL NOTES

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ENVIRONMENTAL NOTES (EN): The North Dakota Department of Transportation has made environmental commitments to secure approval of this project. The following environmental notes are requirements to comply with these commitments:

EN-1 TEMPORARY WETLAND IMPACT: Temporary impact areas within wetlands and or other waters are incorporated into the plans for this project. Remove temporary fill placed and sedimentation in wetlands or other waters. Restore these wetlands to preconstruction contours.



# ESTIMATE OF QUANTITIES

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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SPEC CODE	ITEM DESCRIPTION	UNIT	MAINLINE	TOTAL
-----	-----	-----	-----	-----
103	0100 CONTRACT BOND	L SUM	1	1
201	0330 CLEARING & GRUBBING	L SUM	1	1
202	0132 REMOVAL OF BITUMINOUS SURFACING	SY	58	58
203	0113 COMMON EXCAVATION-WASTE	CY	458	458
230	0107 RESHAPING DITCH	MILE	1.2	1.2
251	0200 SEEDING CLASS II	ACRE	4.5	4.5
251	2000 TEMPORARY COVER CROP	ACRE	4.5	4.5
253	0061 SOIL STABILIZATION	ACRE	9	9
255	0102 ECB TYPE 2	SY	298	298
255	0300 CONCRETE EROSION CONTROL BLANKET	SY	1,982	1,982
256	0200 RIPRAP GRADE II	CY	10	10
256	0300 RIPRAP GRADE III	CY	100	100
256	1500 ROCK CHECK	EA	1	1
261	0112 FIBER ROLLS 12IN	LF	4,616	4,616
261	0113 REMOVE FIBER ROLLS 12IN	LF	2,616	2,616
302	0120 AGGREGATE BASE COURSE CL 5	TON	49	49
430	0500 COMMERCIAL GRADE HOT MIX ASPHALT	TON	19	19
702	0100 MOBILIZATION	L SUM	1	1
704	0100 FLAGGING	MHR	300	300
704	1000 TRAFFIC CONTROL SIGNS	UNIT	1,030	1,030
704	1048 PORTABLE RUMBLE STRIPS	EA	2	2
704	1060 DELINEATOR DRUMS	EA	22	22
704	1067 TUBULAR MARKERS	EA	48	48
709	0100 GEOSYNTHETIC MATERIAL TYPE G	SY	47	47
714	4115 PIPE CONDUIT 36IN	LF	72	72
754	0805 OBJECT MARKERS - CULVERTS	EA	2	2
990	0400 PIPE CLEANOUT	EA	8	8

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SPEC	CODE	BID ITEM
Use or Location		Rate or Station
201	0330	CLEARING & GRUBBING 1 L SUM
202	0132	REMOVAL OF BITUMINOUS SURFACING
Aggregate Base Removal		1.5 Tons/CY
Pavement Removal		2 Tons/CY
230	0107	RESHAPING DITCH
West Ditch		Sta 3995+55.00 to Sta 4021+85 Lt
East Ditch		Sta 3995+55.00 to Sta 4025+44 Rt
302	0120	AGGREGATE BASE COURSE CL 5 1.875 Tons/CY
430	0500	COMMERCIAL GRADE HOT MIX ASPHALT
HMA		2 Tons/CY
PG Binder 58S-28		6% of HMA

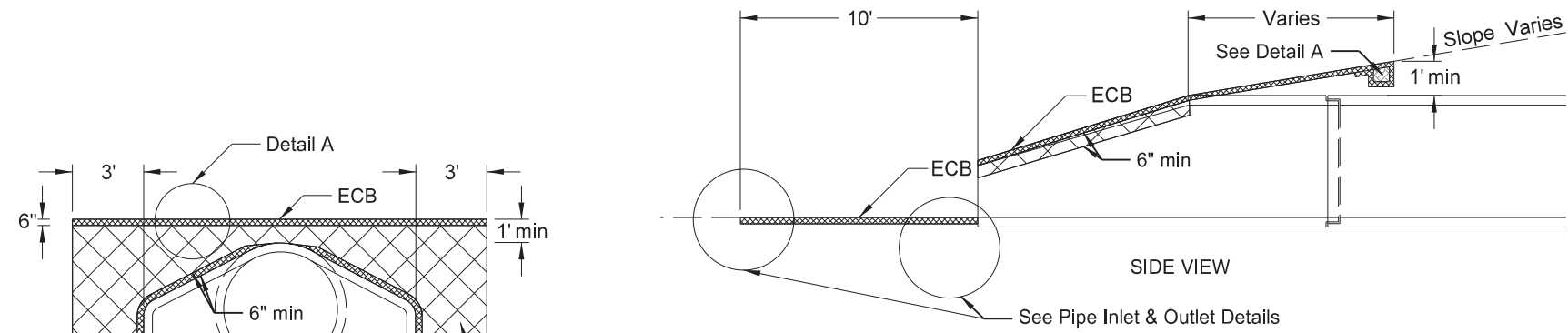
Earthwork Summary				
Location	**Common Excavation -Type B	*,**Embankment	COMMON EXCAVATION-WASTE (Pay Item)	**Topsoil
	CY	CY	CY	CY
	I	J	K=I-J	L
3995+55 to 4025+44 Lt & Rt	1023	565	458	2446
Total	1023	565	458	2446

\*25% added to embankment to account for shrinkage

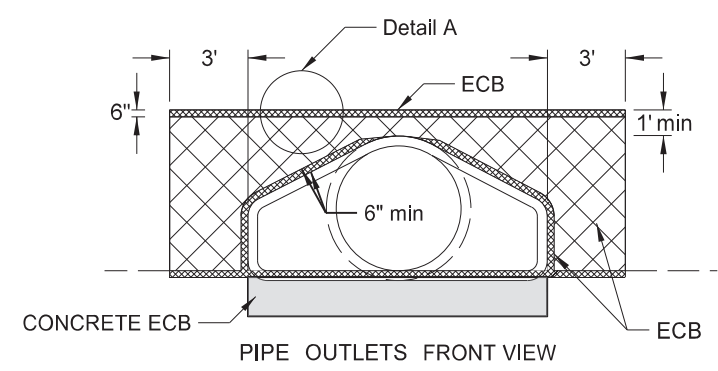
\*\* Topsoil, Common Excavation, Embankment, & Water included in "RESHAPING DITCH."

Data Tables	
ND 22 - N of 32nd St to Green River Bridge Drainage improvements	

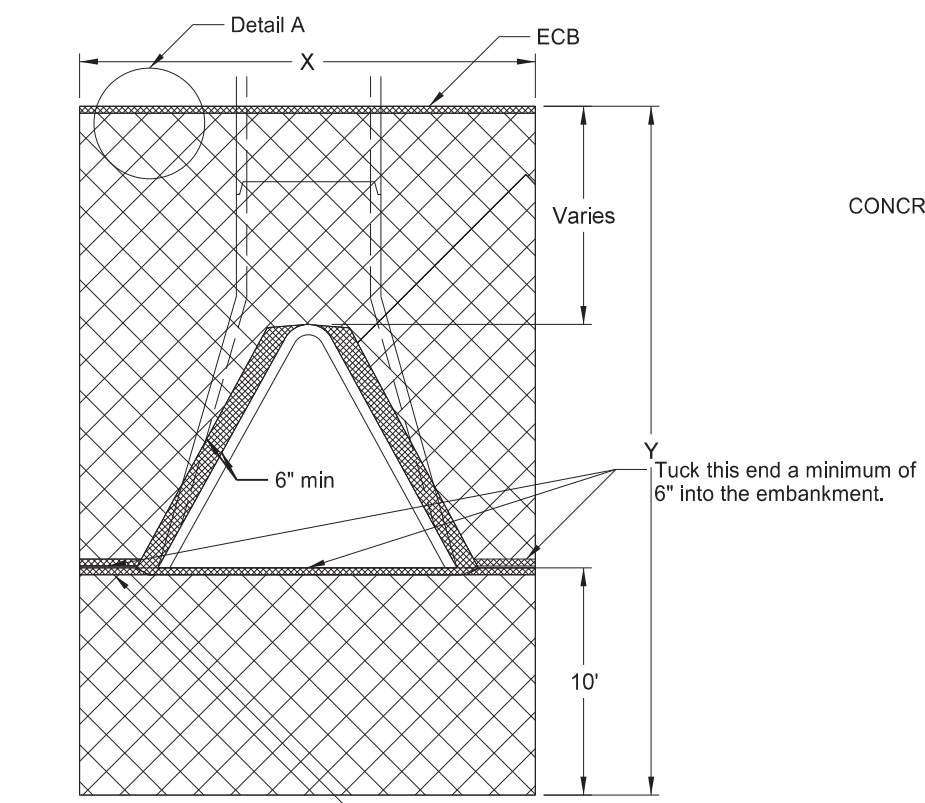
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PIPE INLETS FRONT VIEW

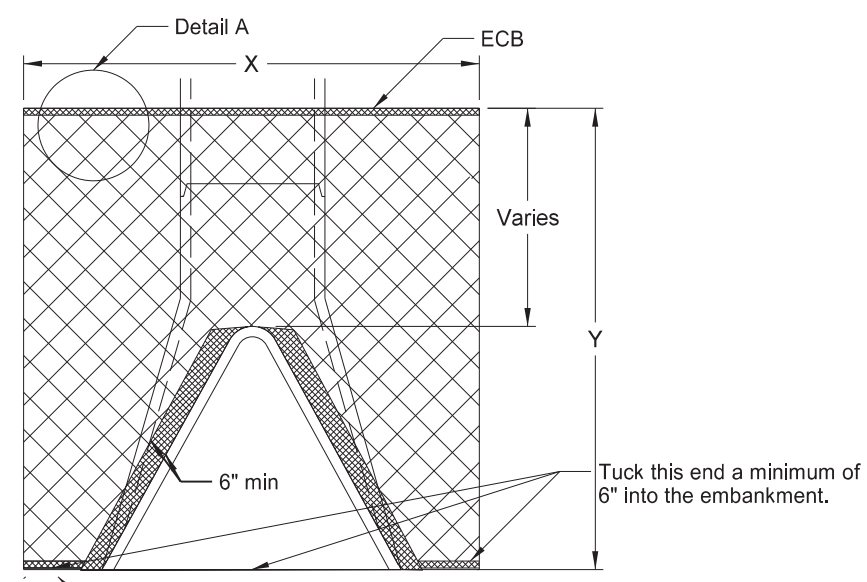


PIPE OUTLETS FRONT VIEW



PIPE INLETS TOP VIEW

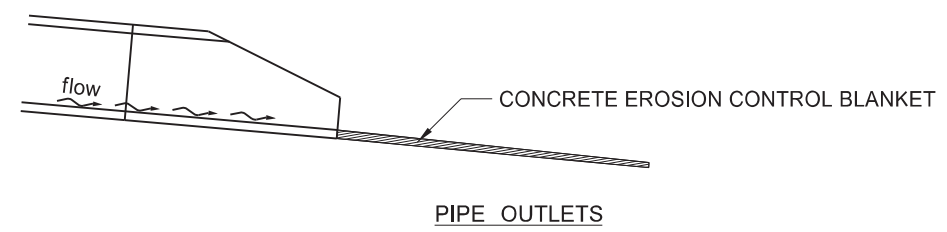
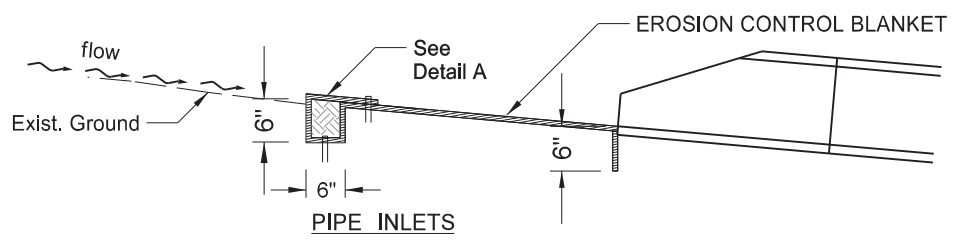
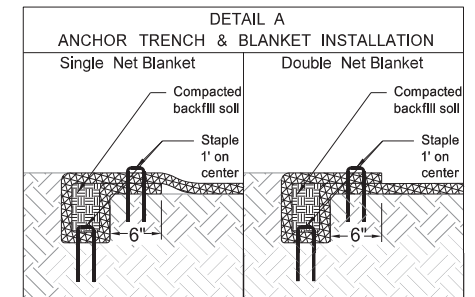
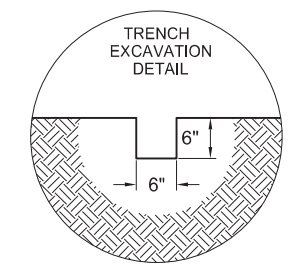
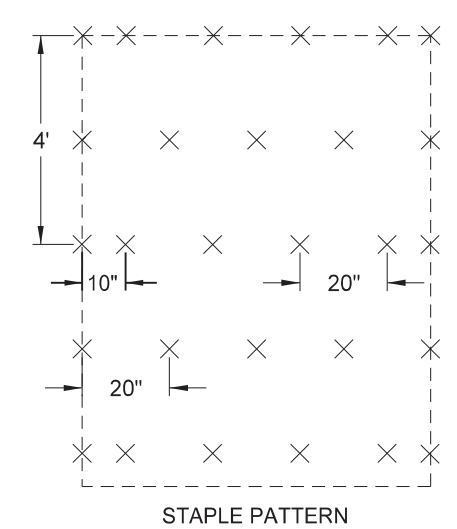
NOTE: Tuck the ECB a minimum of 6" into the embankment (against the flared end section) around the opening of the flared end section.



PIPE OUTLETS TOP VIEW

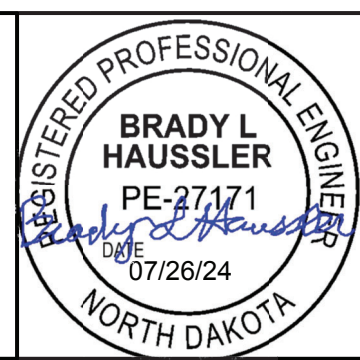
NOTE: Tuck the ECB a minimum of 6" into the embankment (against the flared end section) around the opening of the flared end section.

Location	Culvert Type Appr/CL	Pipe Diam (In)	Ends	ECB TYPE 2			Quantity	
				X ft	Y ft	Area SF	SY	
3995+92 Lt	Appr	30	1	11.6	12.5	125.5	14	
3995+23 Rt	Appr	36	1	12.7	13.3	141.8	16	
3995+95 Rt	Appr	36	1	12.7	13.3	141.8	16	
3996+02 Rt	Appr	30	1	11.6	22.5	241.5	24	
4000+97 Rt	Appr	30	1	11.6	22.5	241.5	24	
4001+58 Rt	Appr	30	1	11.6	12.5	125.5	14	
4006+97 Lt	Appr	30	1	11.6	22.5	241.5	24	
4007+67 Lt	Appr	30	1	11.6	12.5	125.5	14	
4009+29 Rt	Appr	30	1	11.6	22.5	241.5	24	
4010+01 Rt	Appr	30	1	11.6	12.5	125.5	14	
4018+57 Lt	Appr	30	1	11.6	22.5	241.5	24	
4019+31 Lt	Appr	30	1	11.6	12.5	125.5	14	
4021+42 Rt	Appr	30	1	11.6	22.5	241.5	24	
4021+46 Lt	Appr	30	1	11.6	22.5	241.5	24	
4022+02 Lt	Appr	30	1	11.6	12.5	125.5	14	
4022+14 Rt	Appr	30	1	11.6	12.5	125.5	14	
Total				16	187.8	271.6	2852.6	298



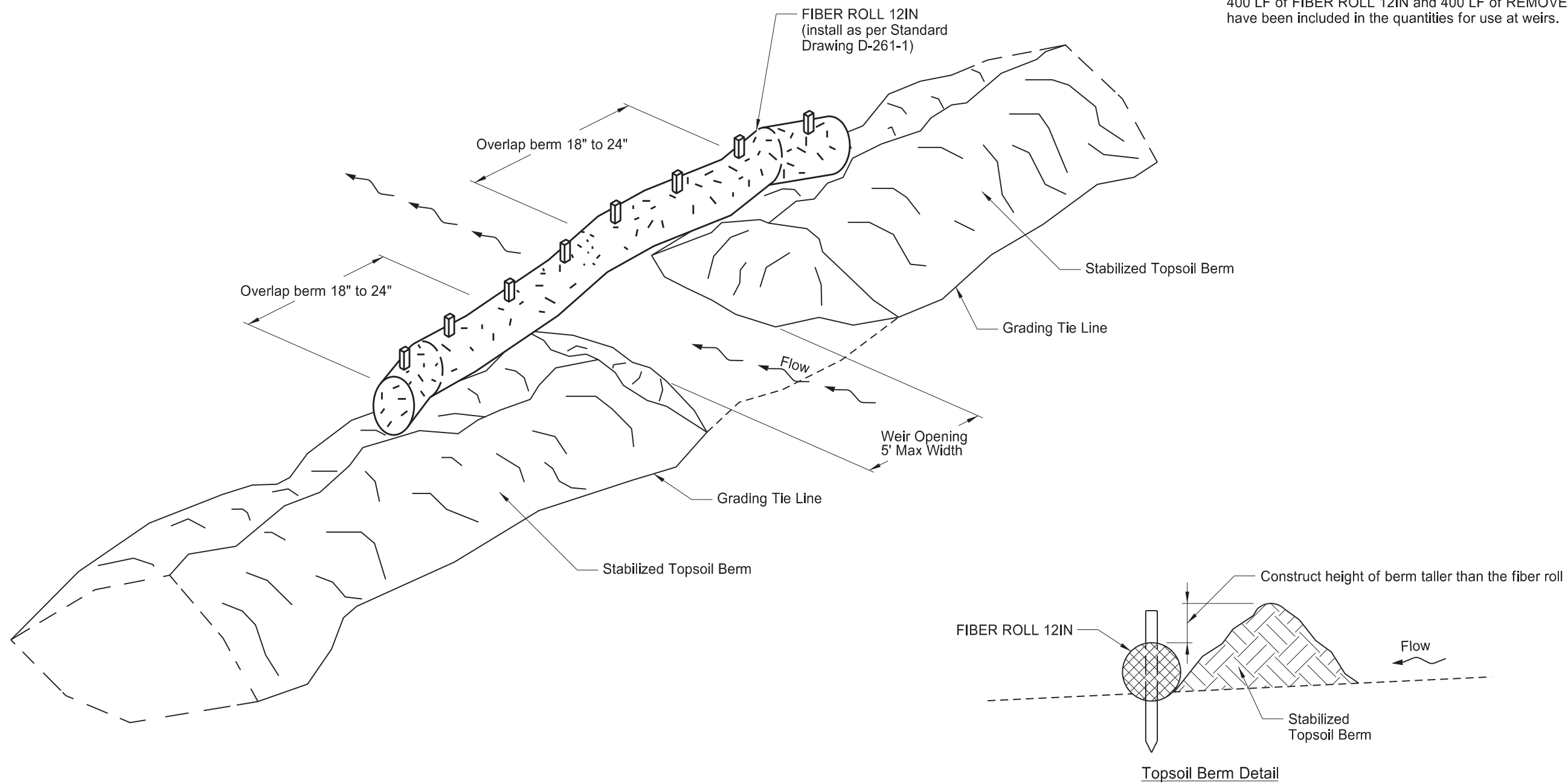
Erosion Control at Culvert Flared End Sections

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements



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400 LF of FIBER ROLL 12IN and 400 LF of REMOVE FIBER ROLL 12IN have been included in the quantities for use at weirs.

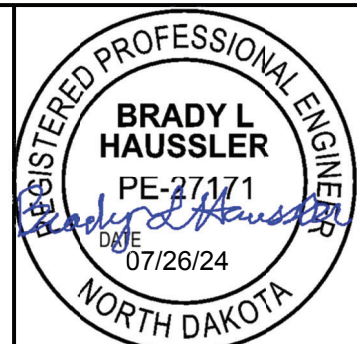


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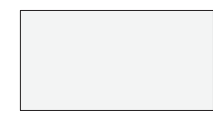
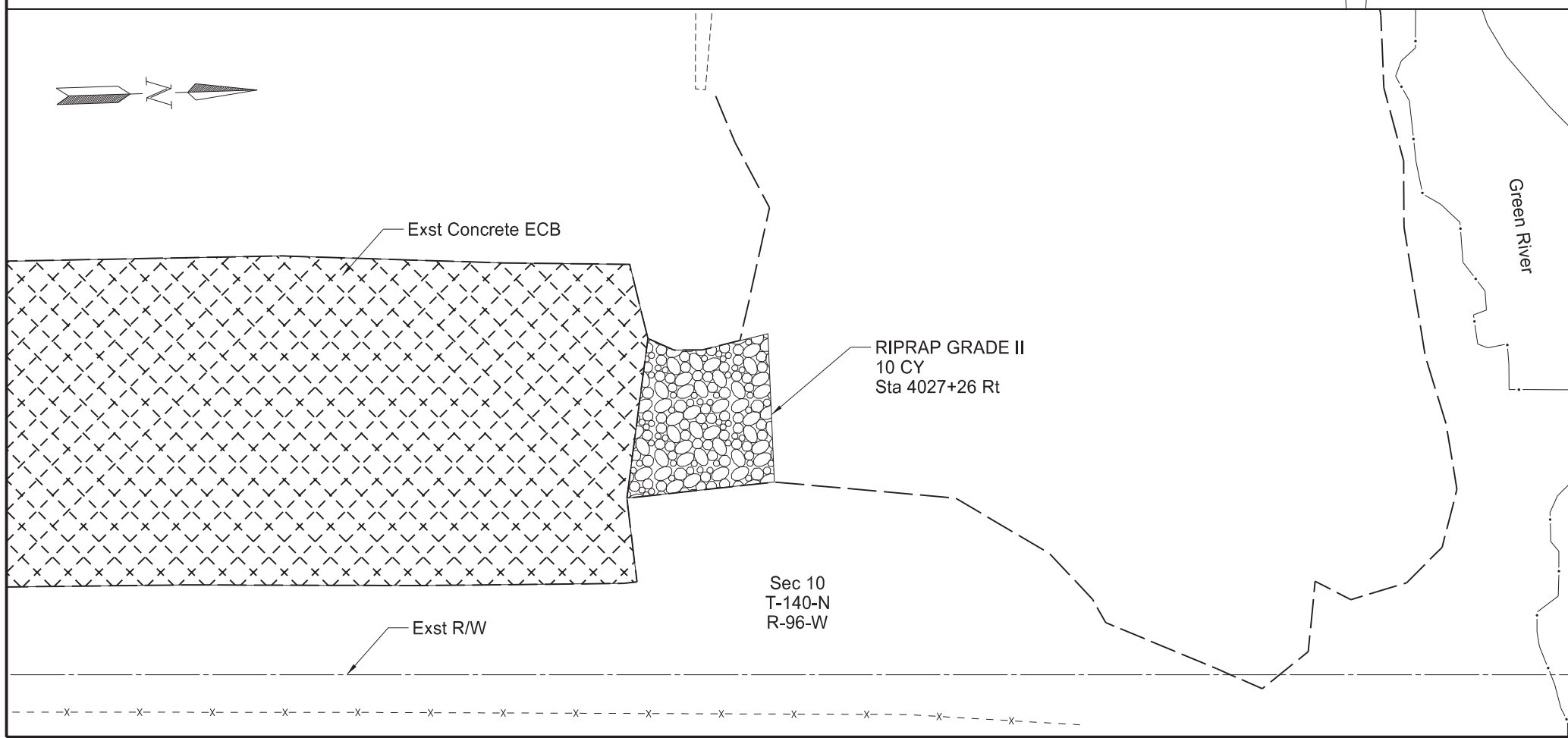
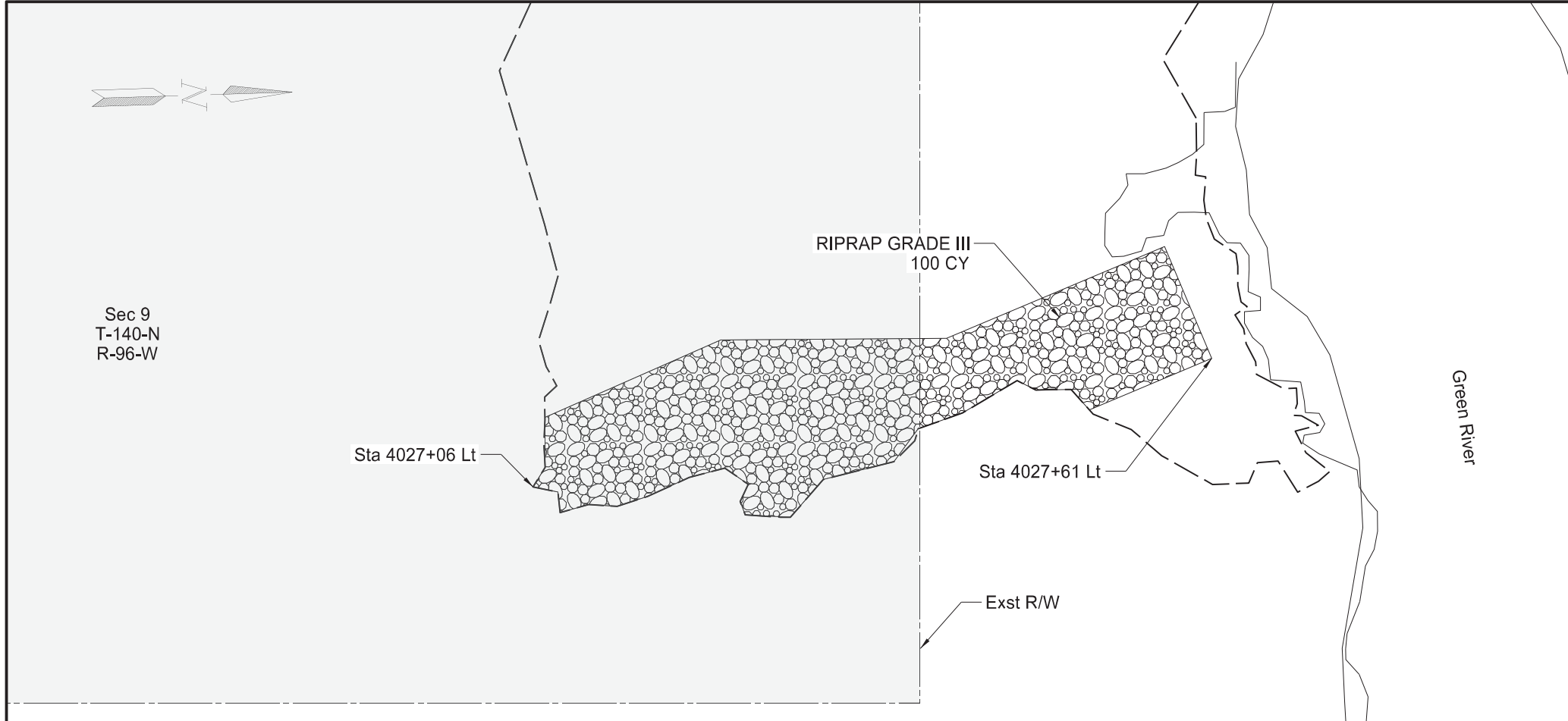
1. Windrow the existing topsoil from the foreslope to create a berm at the grading tie line.
2. Stabilize berms in accordance with the Construction General Permit.
3. Place weirs intermittently throughout the length of the berm to allow stormwater to drain through the berm.
4. Avoid placing weirs adjacent to waterbodies.
5. Install fiber rolls as the weirs are created in the topsoil berm.
6. The Engineer will measure and pay for fiber rolls separately.
7. The Engineer will measure and pay for removal of fiber rolls separately when required by the specifications.
8. The Engineer will measure and pay for soil stabilization and temporary cover crop separately.
9. Include the costs to create, maintain, and dismantle the berm in the unit price bid for "RESHAPING DITCH".

Temporary Topsoil Berm and Weir Detail

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements



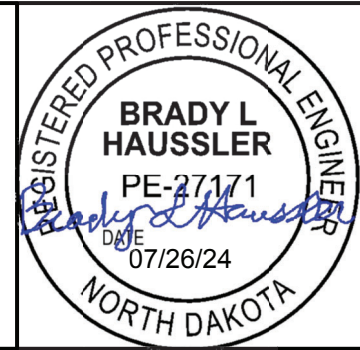
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Ppsd Permanent Esmt

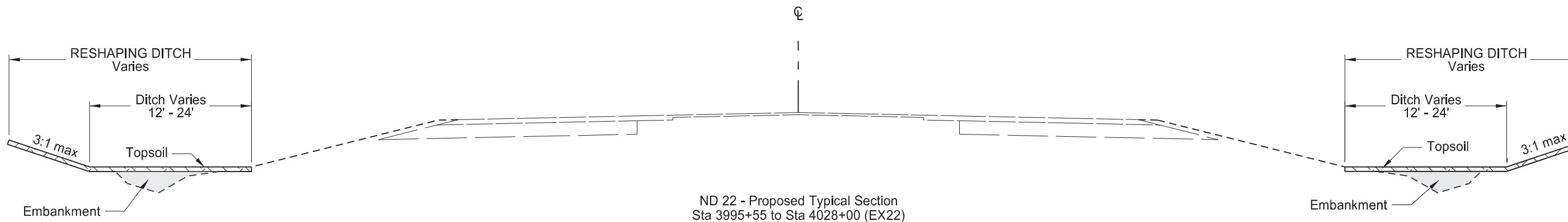
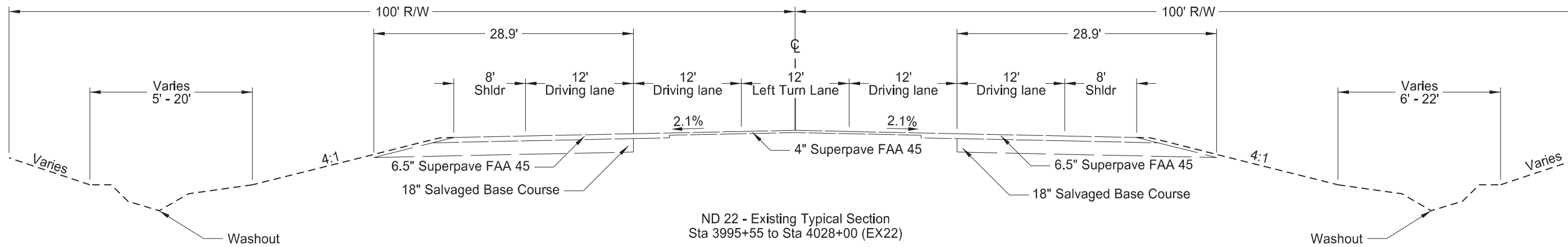
Riprap Placement Detail

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements





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Typical Sections	
ND 22 - N of 32nd St to Green River Bridge Drainage Improvements	

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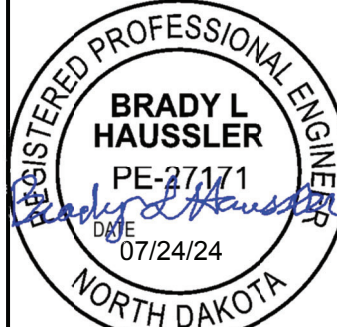
Begin Station / Location	Begin Offset	End Station / Location	End Offset	Pipe Installation (Pay Item)			Allowable Material	Required Diameter	Steel Pipe Coatings	Steel Pipe Corrugations or Spiral Ribs	Steel Pipe Minimum Thickness	Geosynthetic Material - Type G (Pay Item)	(*) End Sections		Applicable Backfill
				In	Bid Item	LF							Begin	End	
				In			In	Type		In	SY	EA	EA		
3995+23	85.4' Rt	3995+95	85.3' Rt	36	PIPE CONDUIT 36IN	72	Reinforced Concrete Pipe - Class II (barrel length = 72 LF)					47	FES	FES	Standard D-714-26
							Corrugated Steel Pipe	36	P	2	0.064				
							Spiral Rib Steel Pipe	36	P	3/4, 1	0.064				

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

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

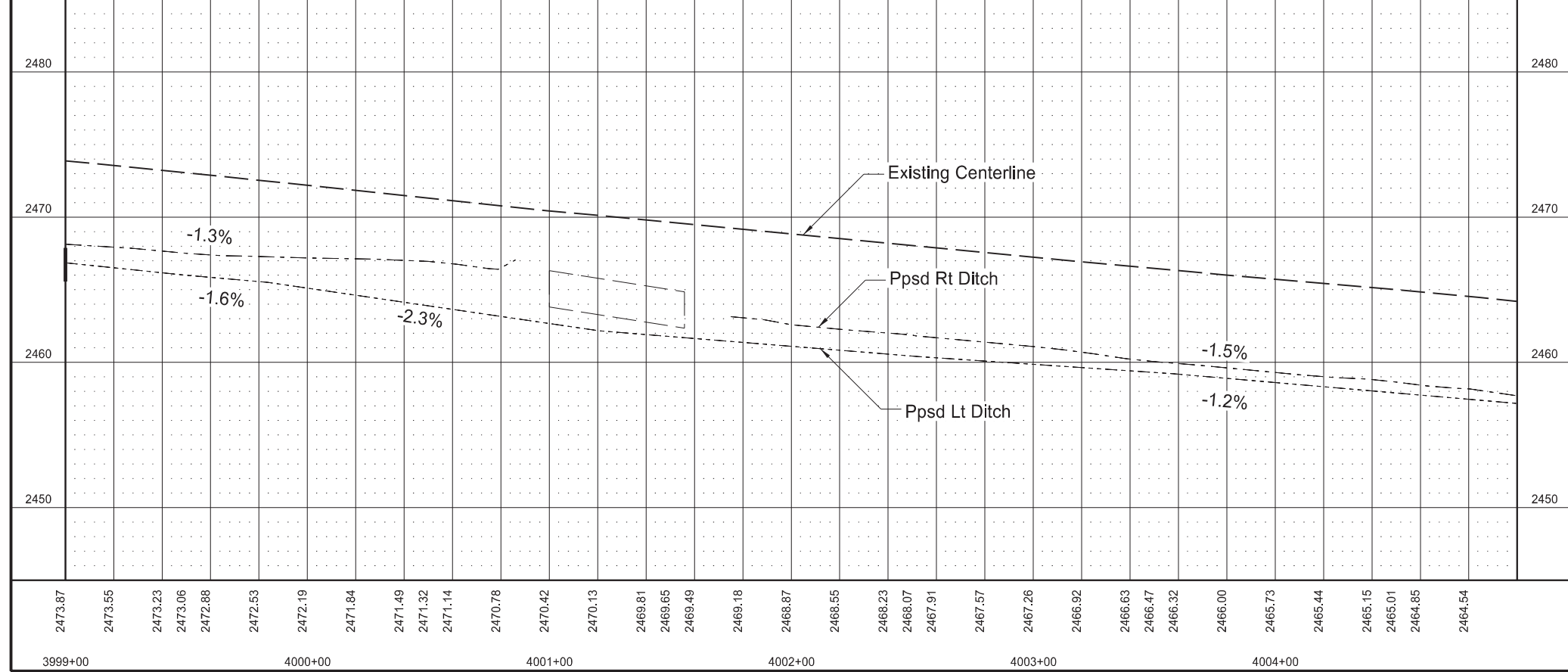
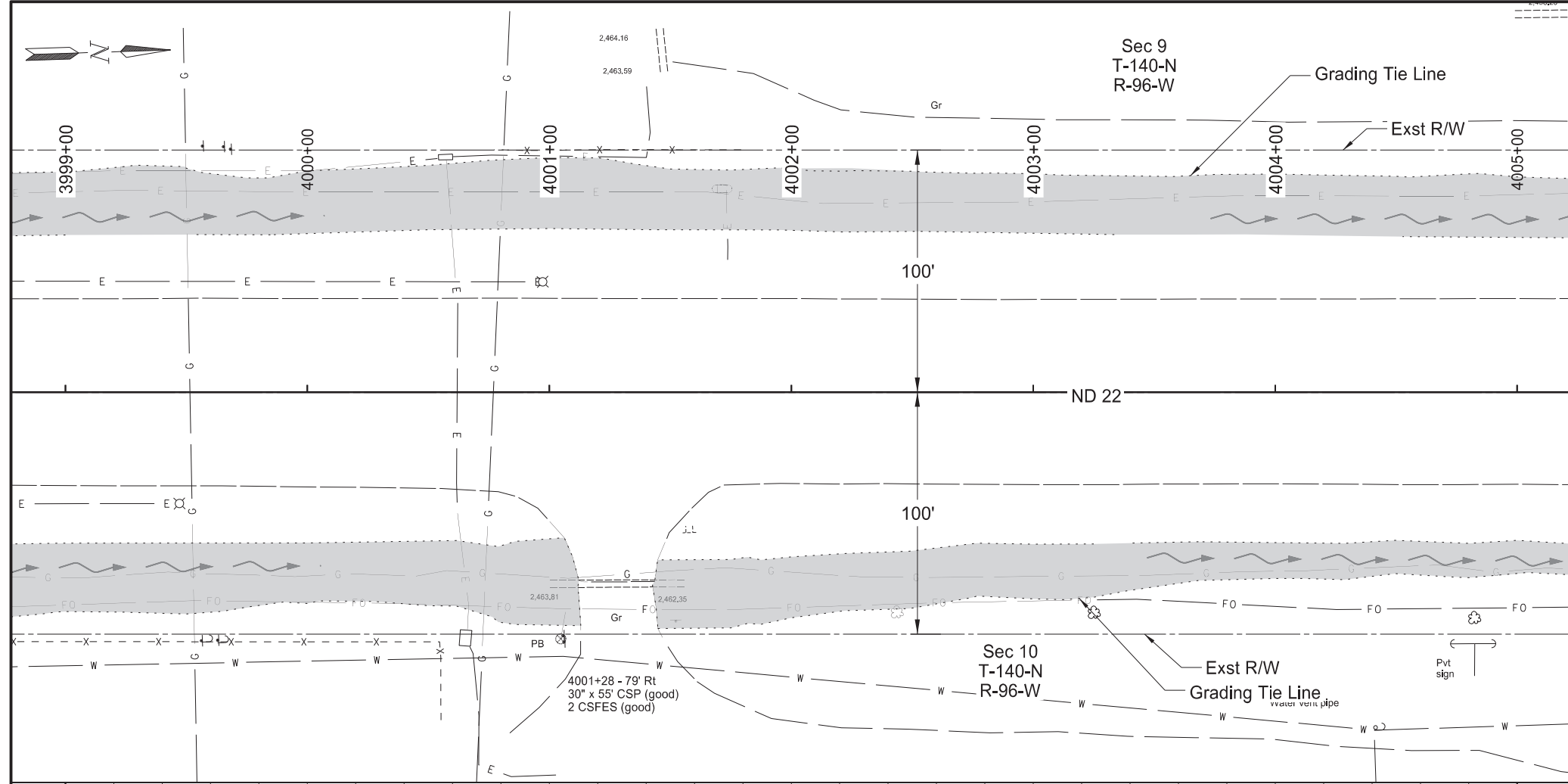
Spiral Ribs: 3/4 = 3/4"x3/4"@7-1/2"  
 1 = 3/4"x1"@11-1/2"

(\*) End sections are measured and paid for separately for pipe extensions.  
 FES = Flared End Section  
 TES = Traversable End Section

Allowable Pipe List  ND 22 - N of 32nd St to Green River Bridge Drainage Improvements	
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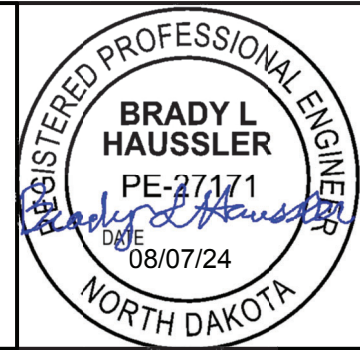


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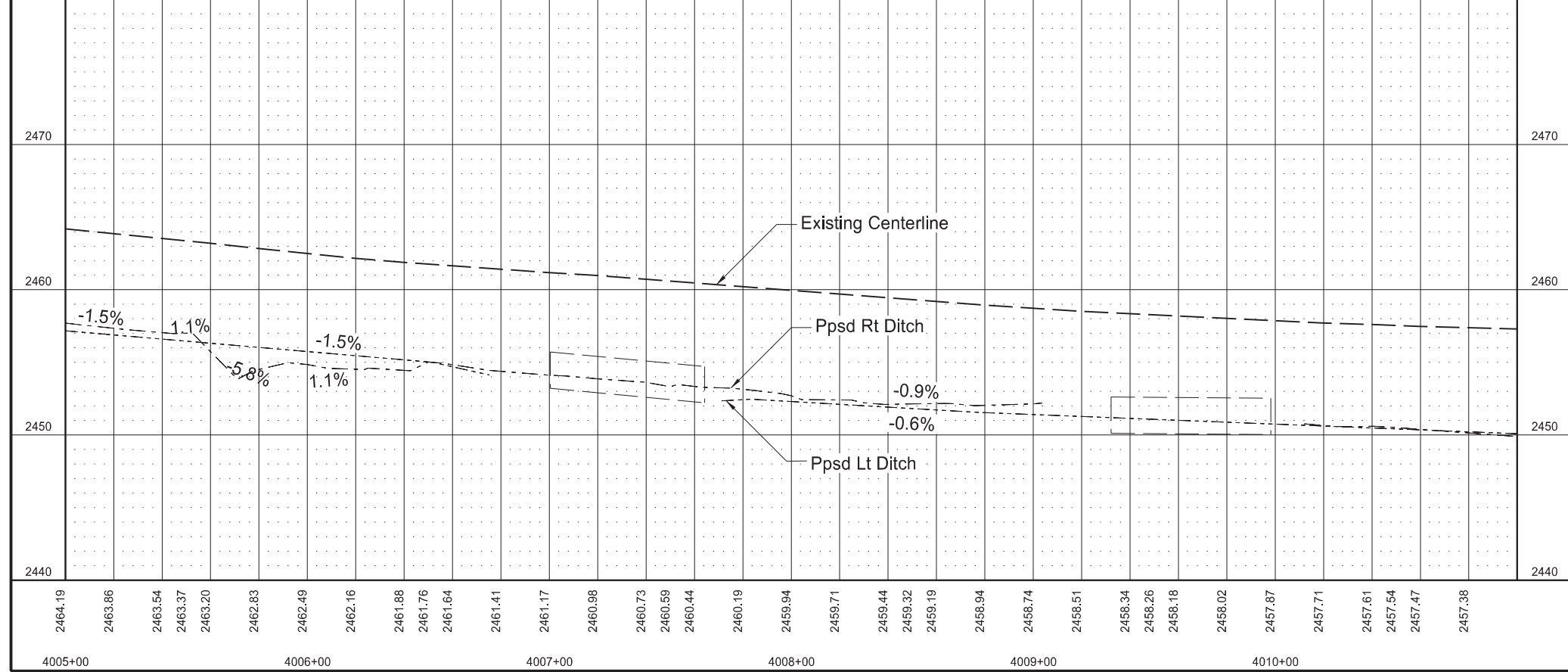
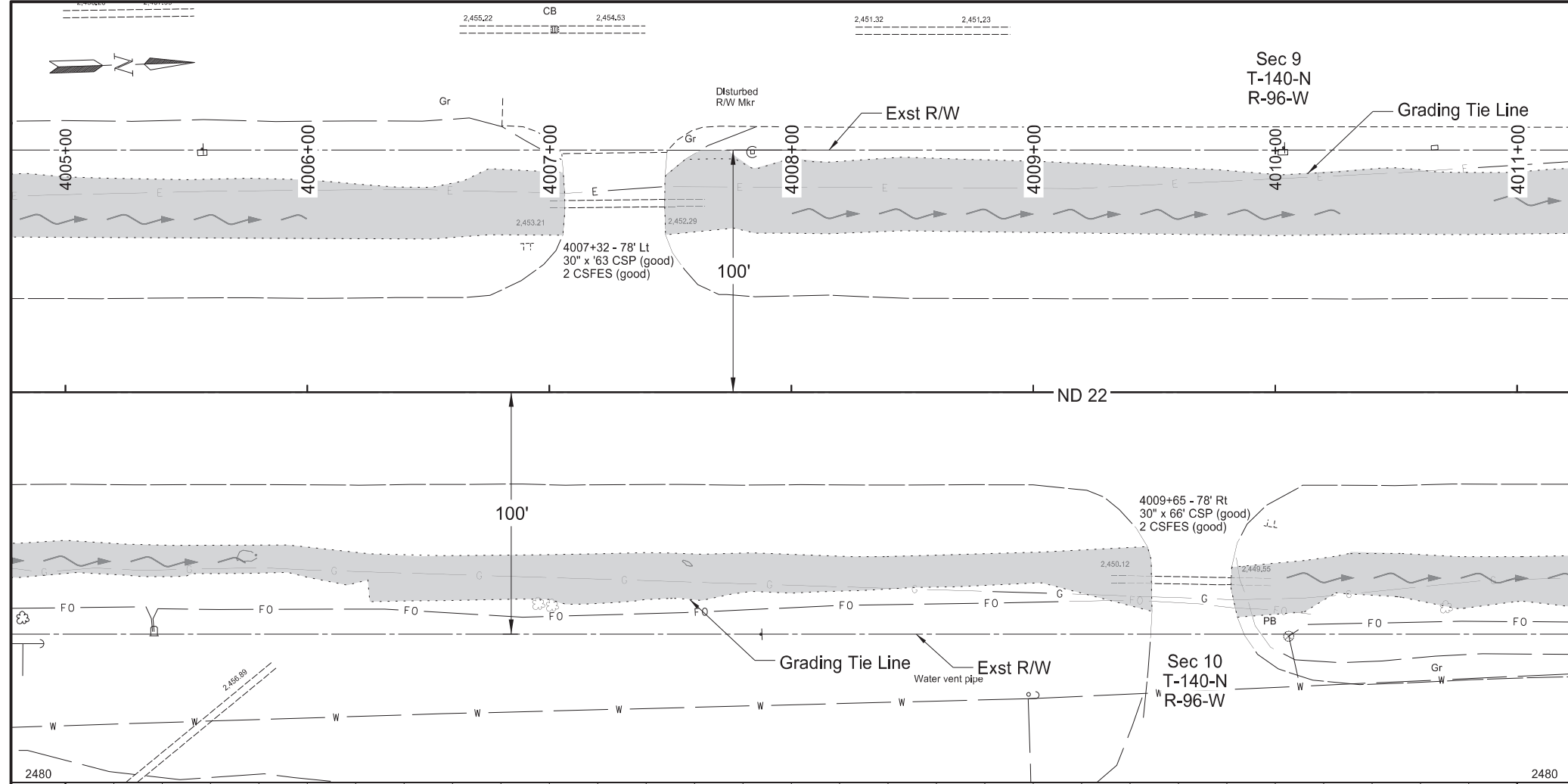


Plan and Profile

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements

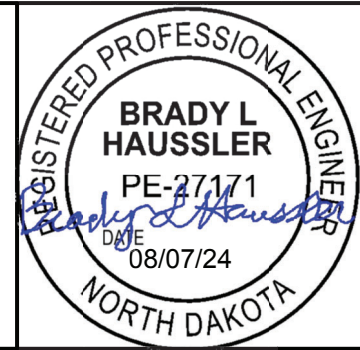


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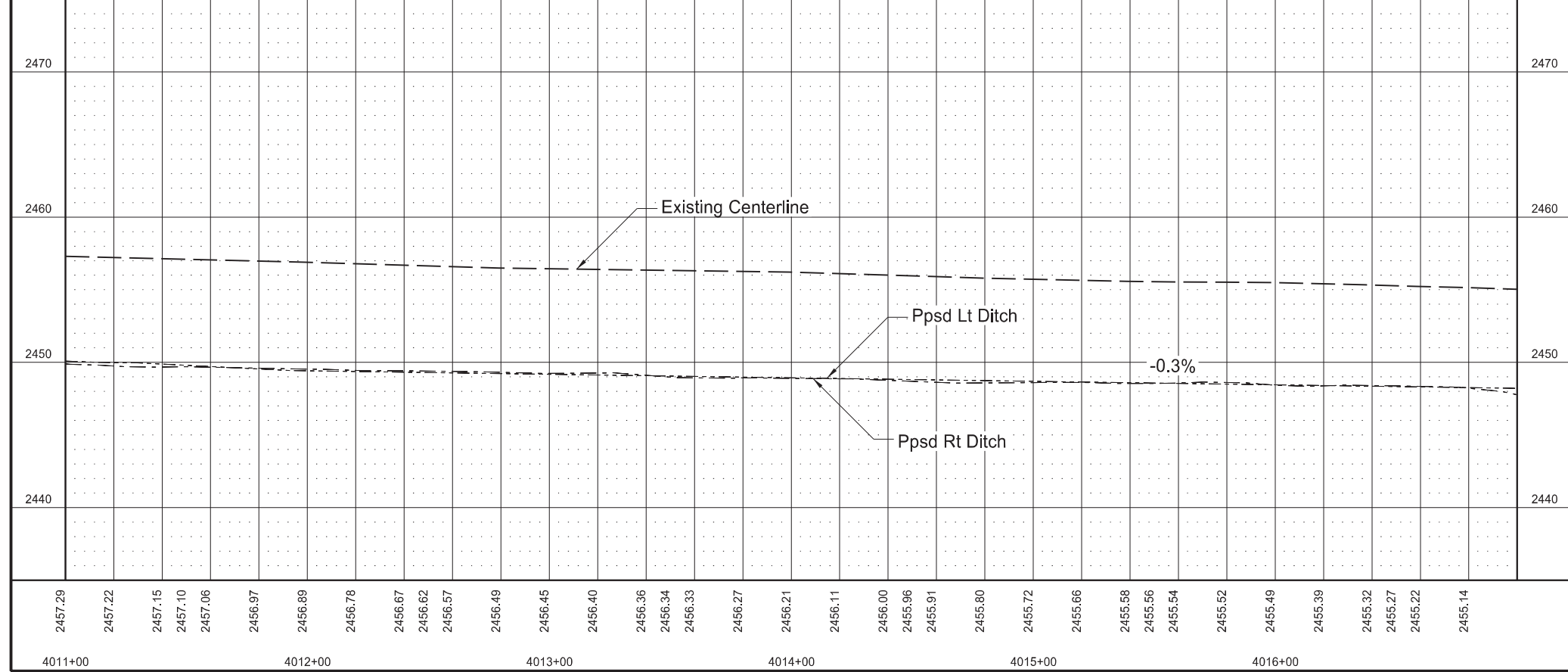
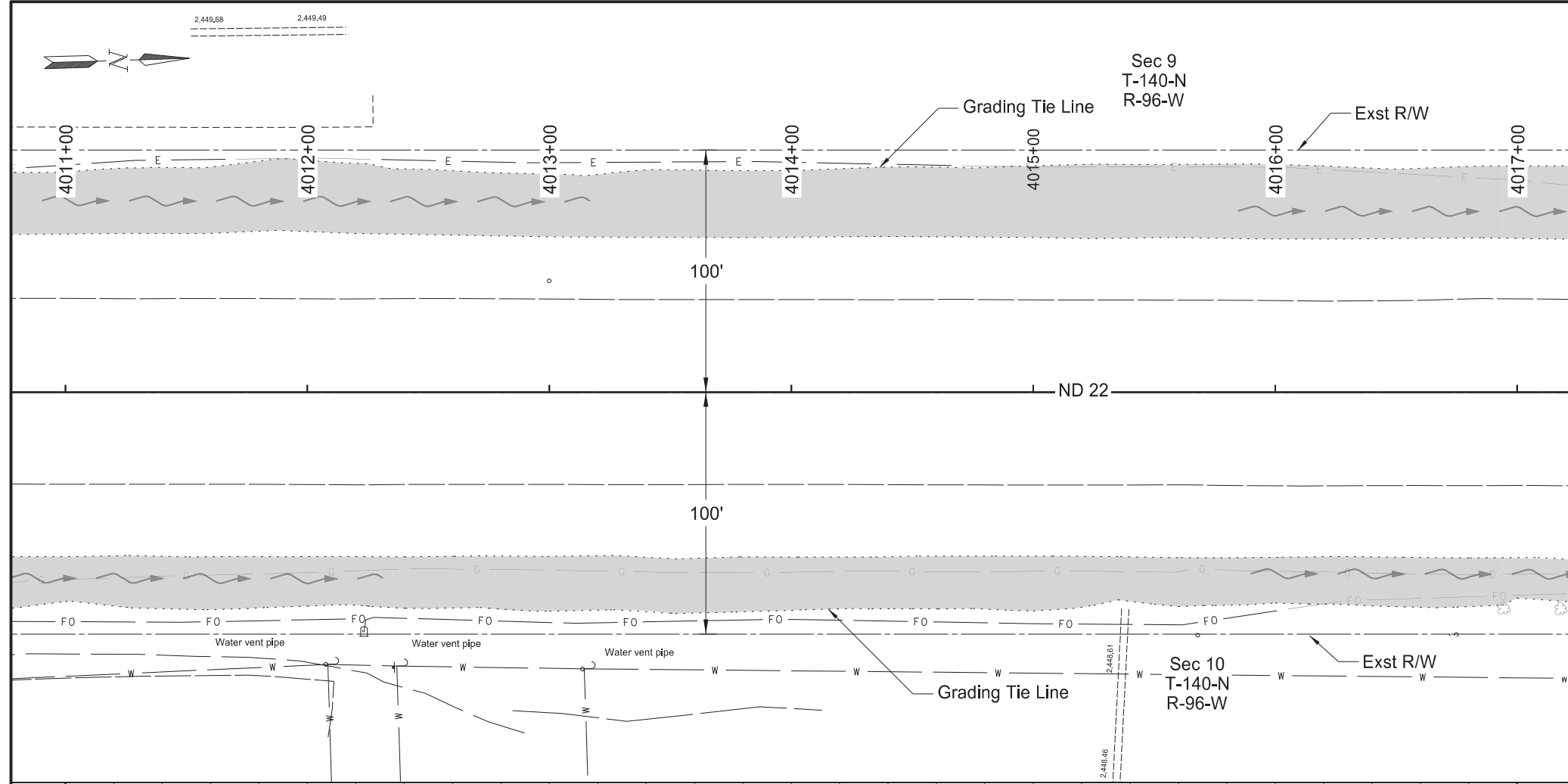


Plan and Profile

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements

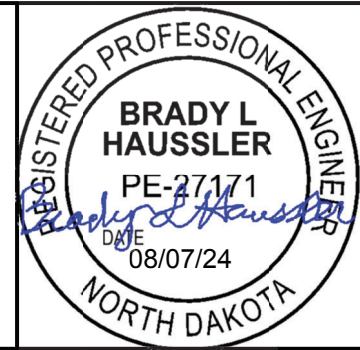


STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-5-022(146)075	60	4

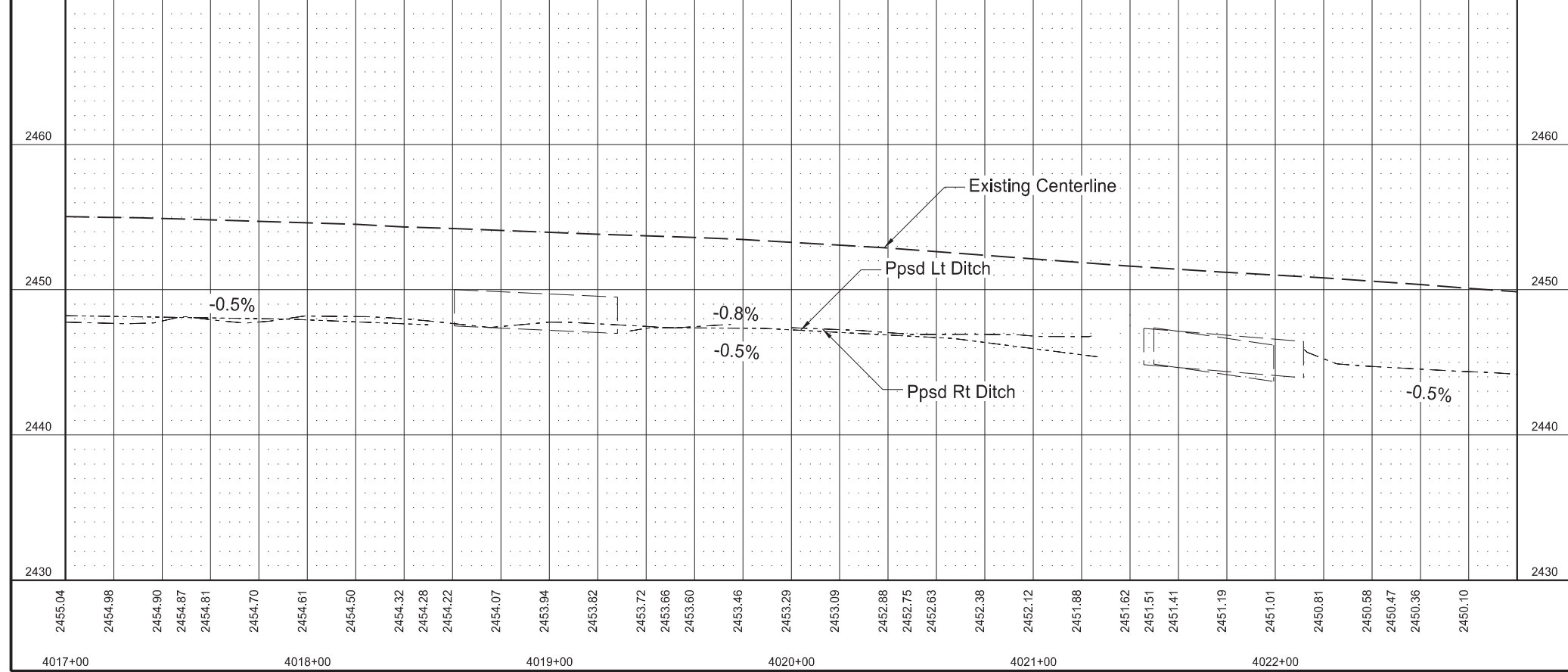
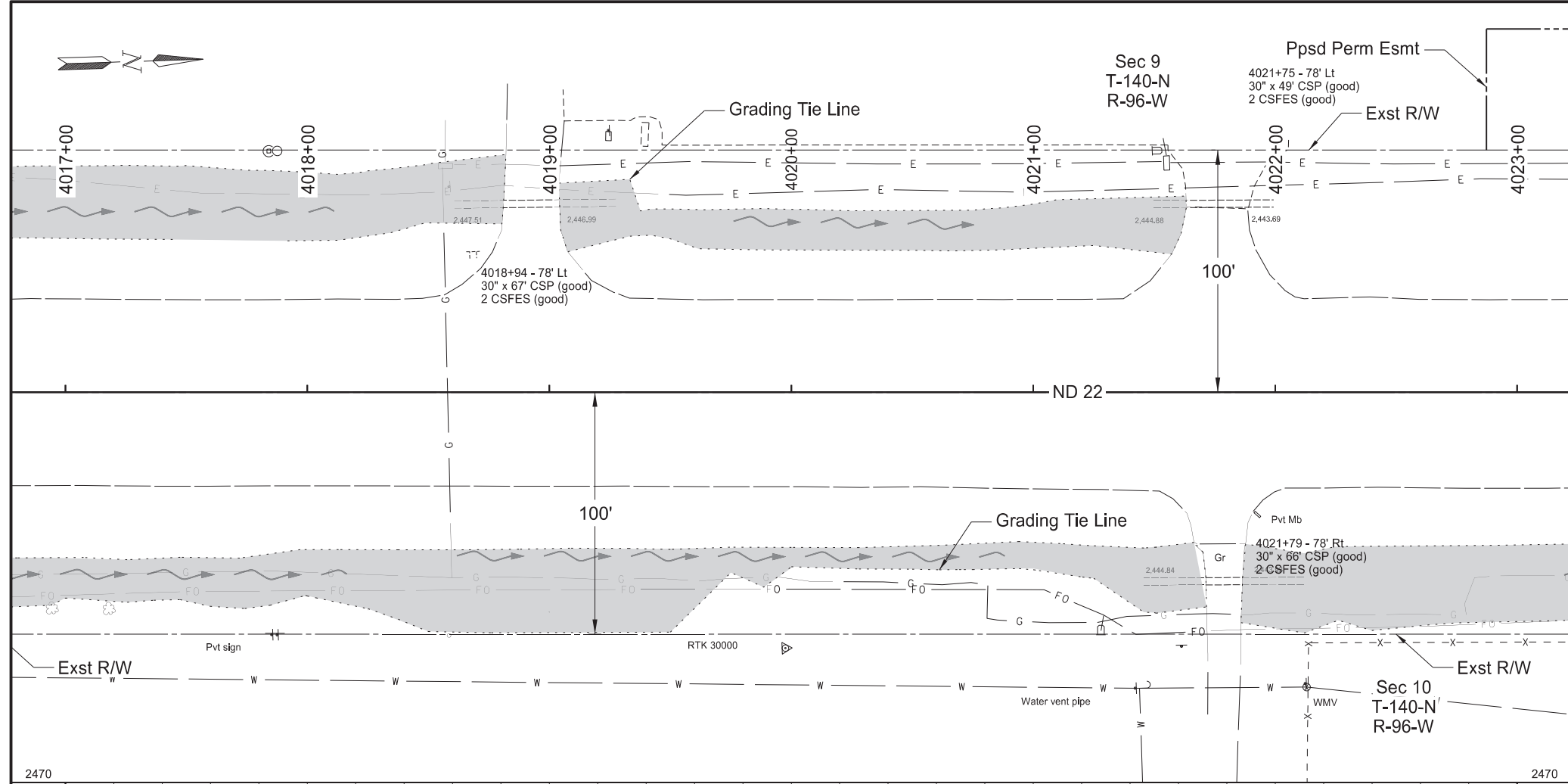


Plan and Profile

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements

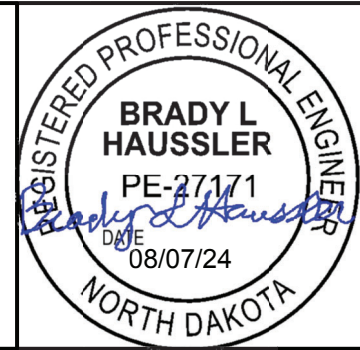


STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-5-022(146)075	60	5

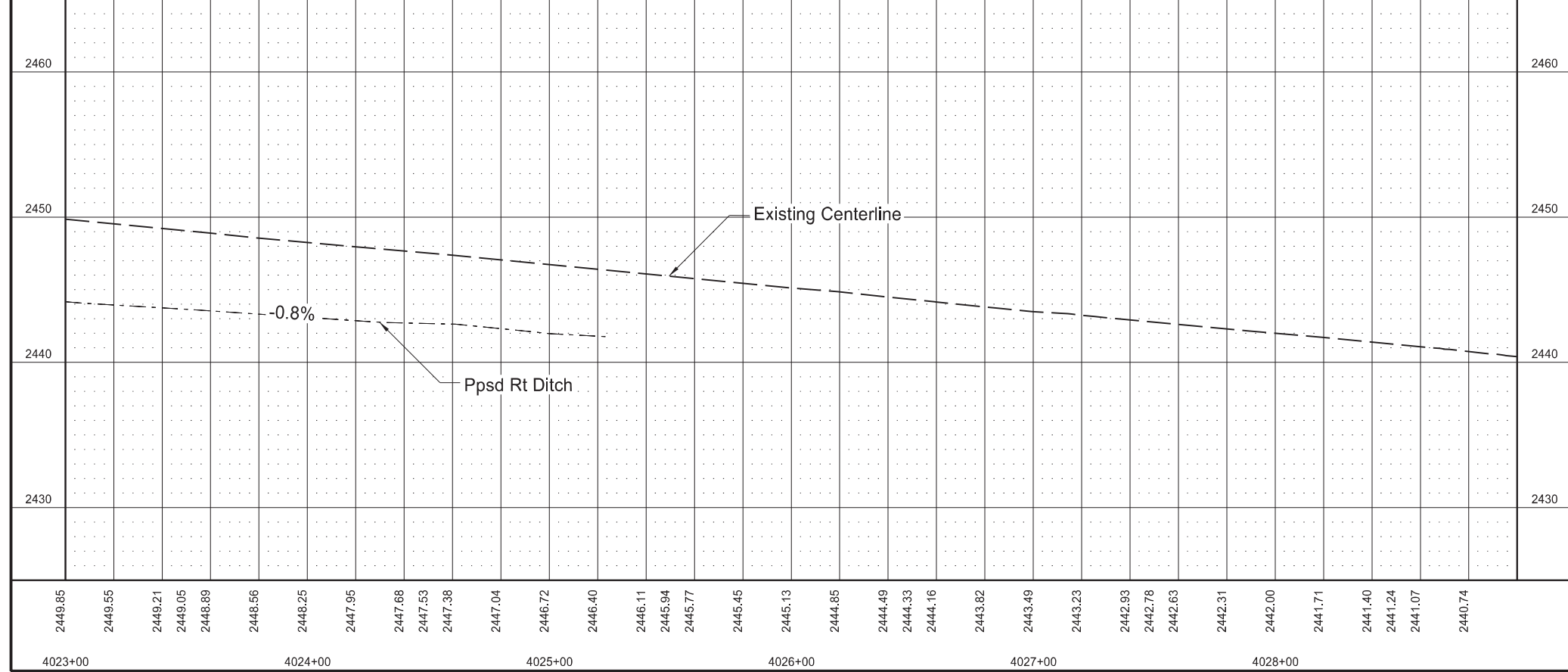
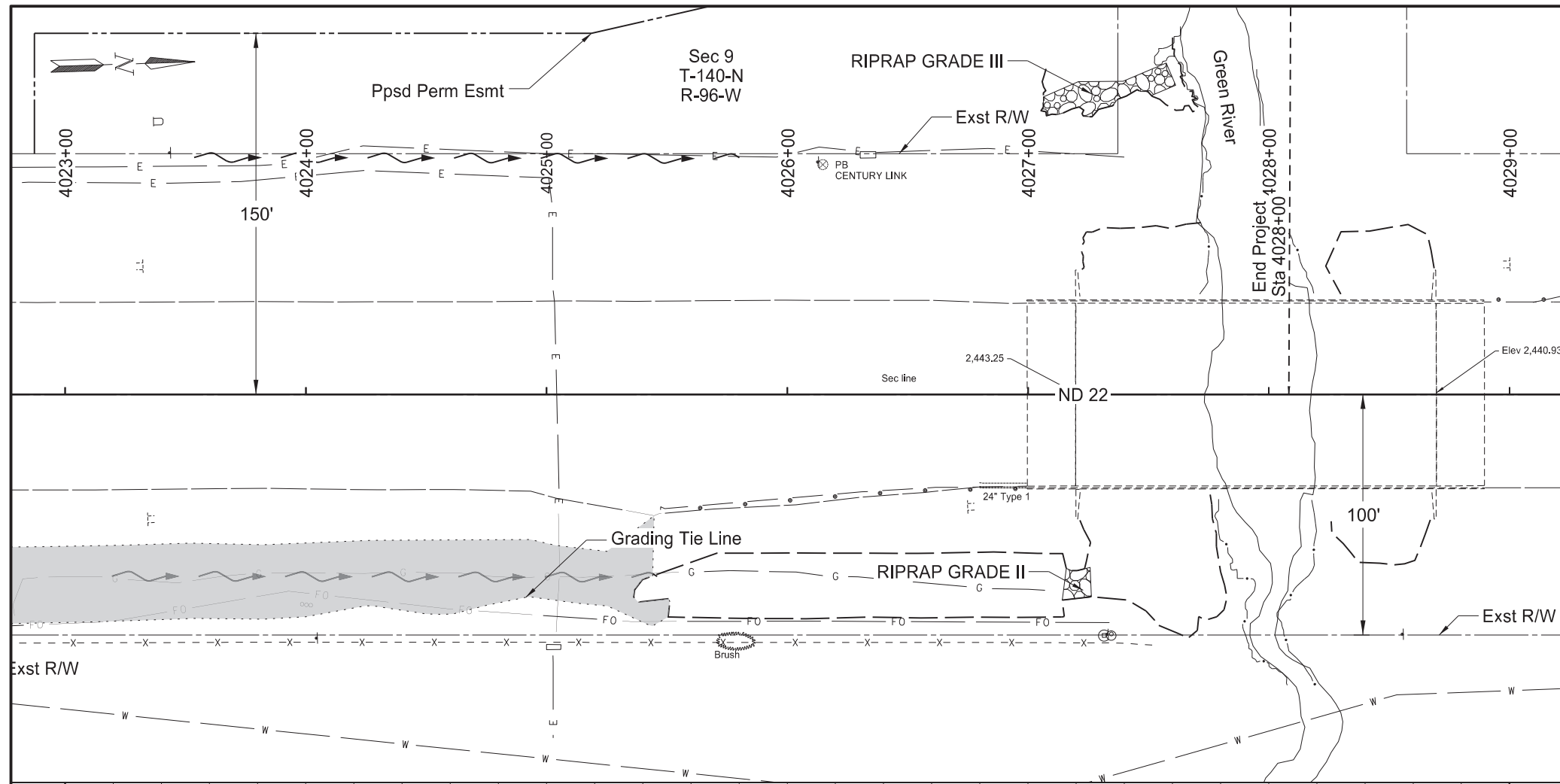


Plan and Profile

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements

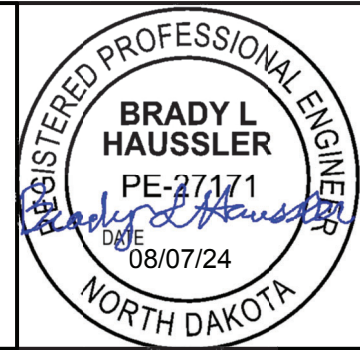


STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-5-022(146)075	60	6



Plan and Profile

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements




	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	75	1

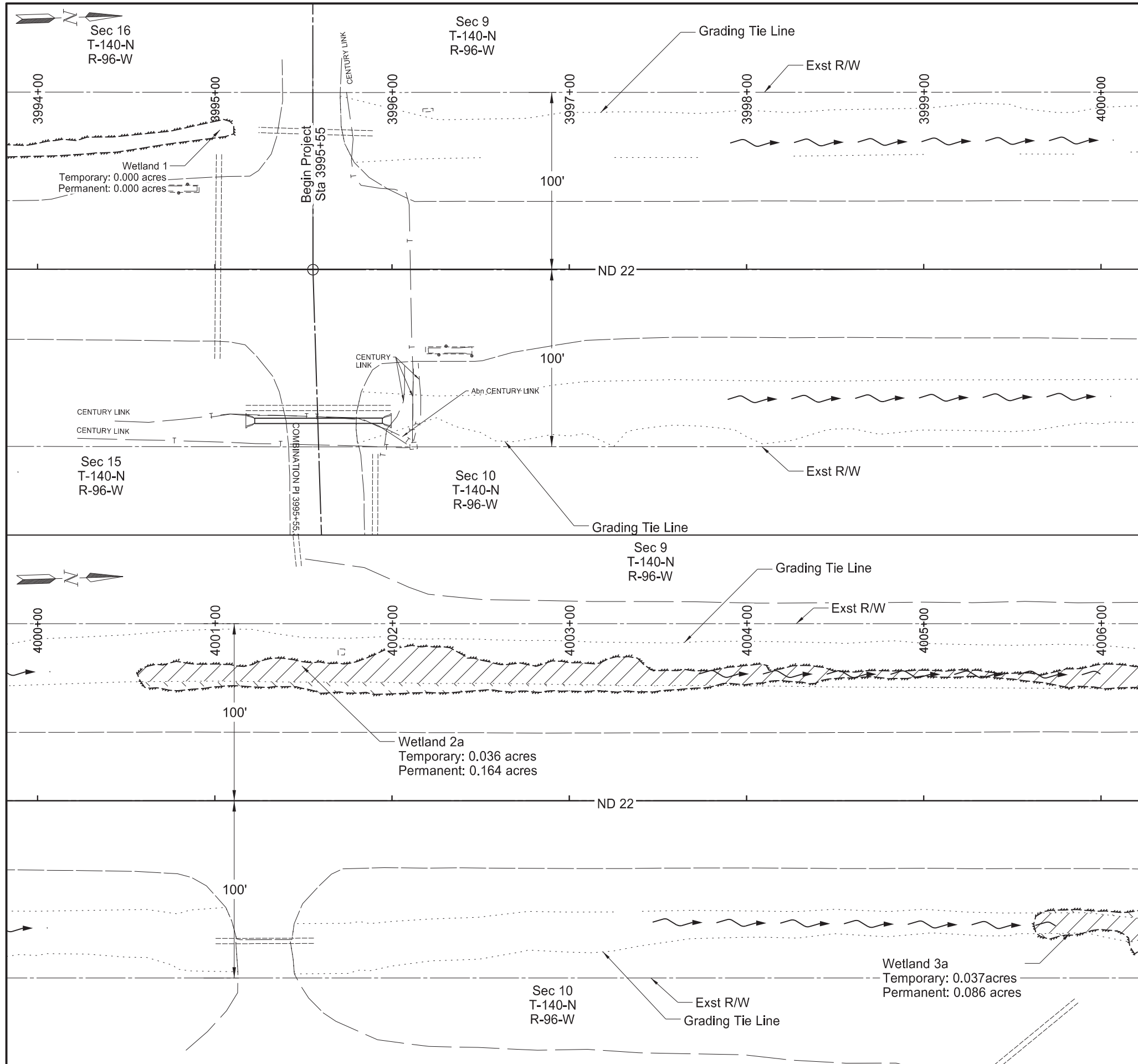
Wetland Impact Table									
Wetland Number	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands*	Wetland Impact				
					Wetland Impacts Acre(s)			USFWS Easement Impacts Acre(s)	
					Temp.	Perm. (Fill/Drain)	Perm. (Cut)	Temp.	Perm.
1	Sec 16, T-140-N, R-96-W	Ditch	Created	N	-	-	-	-	-
2a	Sec 9, T-140-N, R-96-W	Ditch	Created	N	0.036	0.164	-	-	-
2b	Sec 9, T-140-N, R-96-W	Ditch	Created	N	0.014	0.387	-	-	-
2c	Sec 9, T-140-N, R-96-W	Ditch	Created	N	0.005	0.034	-	-	-
3a	Sec 10, T-140-N, R-96-W	Ditch	Created	N	0.037	0.086	-	-	-
3b	Sec 10, T-140-N, R-96-W	Ditch	Created	N	0.010	0.212	-	-	-
4a	Sec 9, T-140-N, R-96-W	Riverine	Natural	Y	-	-	-	-	-
4c	Sec 9, T-140-N, R-96-W	Riverine	Natural	Y	-	-	-	-	-
4d	Sec 10, T-140-N, R-96-W	Riverine	Natural	Y	-	-	-	-	-
4e	Sec 10, T-140-N, R-96-W	Riverine	Natural	Y	-	-	-	-	-
6	Sec 10, T-140-N, R-96-W	Basin	Natural	Y	-	-	-	-	-
Totals					0.102	0.883	0.000	0.000	0.000

\*A wetland Jurisdictional Determination was issued by the USACE on 11/08/2023; NWO-2011-00086-BIS.

Other Waters and Streams Impact Table									
Number	Location	Type	Feature	USACE Jurisdictional	Impacts to Other Waters				
					Acres			Linear Feet	
					Temp.	Perm. (Fill/Drain)	Perm. (Cut)	Temp.	Perm. (Fill/Drain)
OW-4b	Sec 9 & 10, T-140-N, R-96-W	River	Natural	Y	-	-	-	-	-
OW-5	Sec 9, T-140-N, R-96-W	Perennial Stream	Natural	Y	-	-	-	-	-
Totals					0.000	0.000			

Impact Summary Table			
Permanent Impact Summary		Temporary Impacts and additional Information	
Wetland Type	Total Acre(s)	WaterType	Total Acre(s)
Natural/JD (Fill/Drain)	0.000	Temporary Wetland JD	0.000
Natural/Non-JD (Fill/Drain)	0.000	Non-JD Wetland Temporary	0.102
Artificial/JD (Fill/Drain)	0.000		
Artificial /Non-JD	0.883	Permanent OW	0.000
Total	0.883	Temporary OW	0.000
JD Natural (Cut)	0.000	Permanent OW-d	0.000
JD Artificial (Cut)	0.000	Temporary OW-d	0.000
Non-JD Natural (Cut)	0.000		
Non-JD Artificial (Cut)	0.000		
Total	0.000		

Wetland Impacts  ND 22 - N of 32nd St to Green River Bridge Drainage Improvements	
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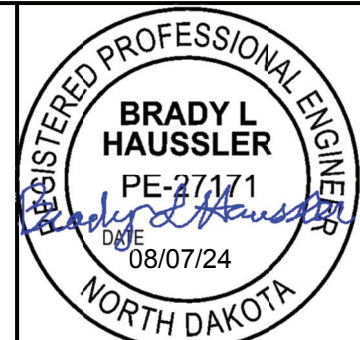
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ND	SS-5-022(146)075	75	2

Legend

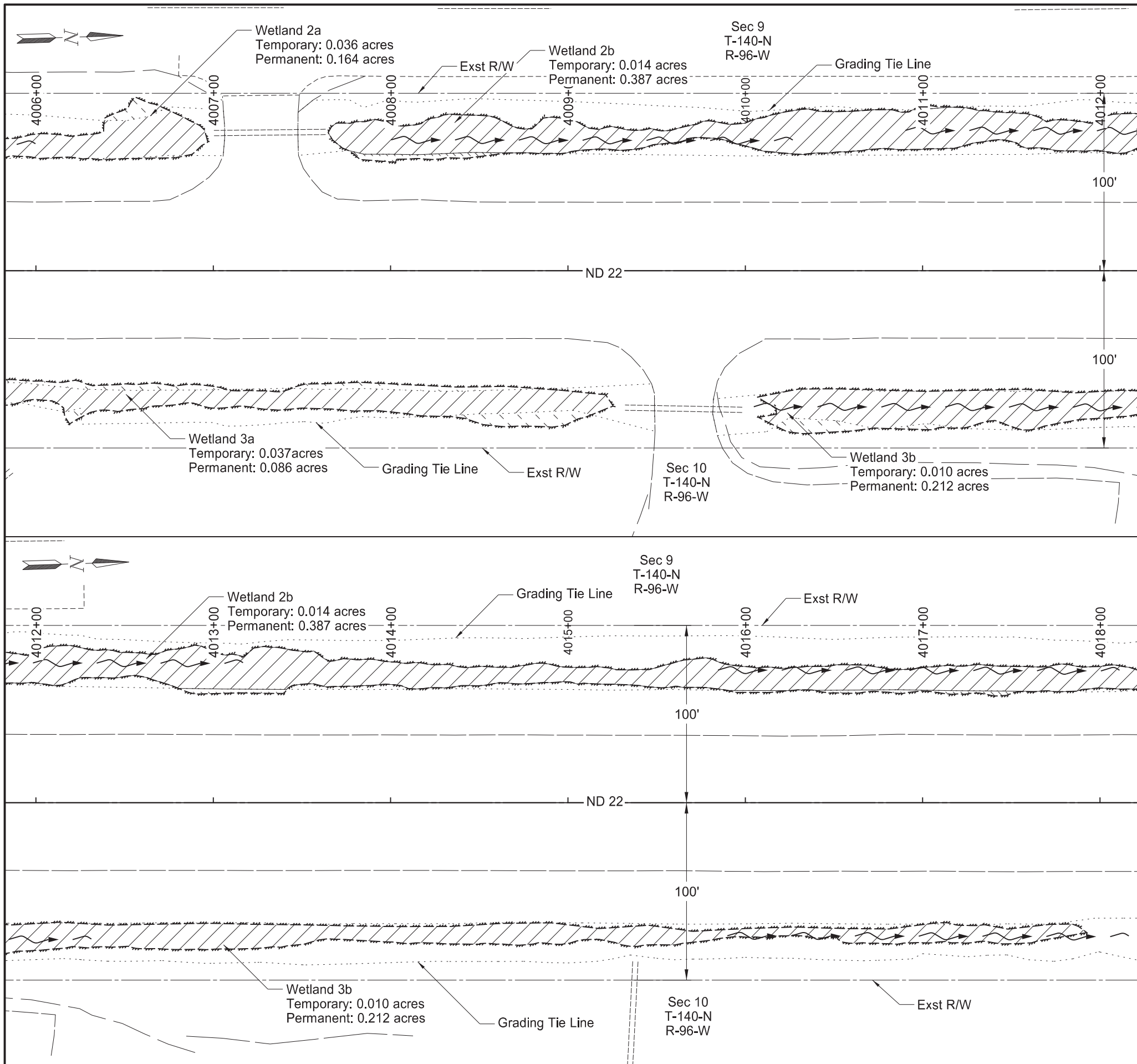
- Permanent Wetland Impact
- Temporary Wetland Impact

Wetland Impacts

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-5-022(146)075	75	3



**Legend**

- Permanent Wetland Impact
- Temporary Wetland Impact

Wetland Impacts

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements

**REGISTERED PROFESSIONAL ENGINEER**

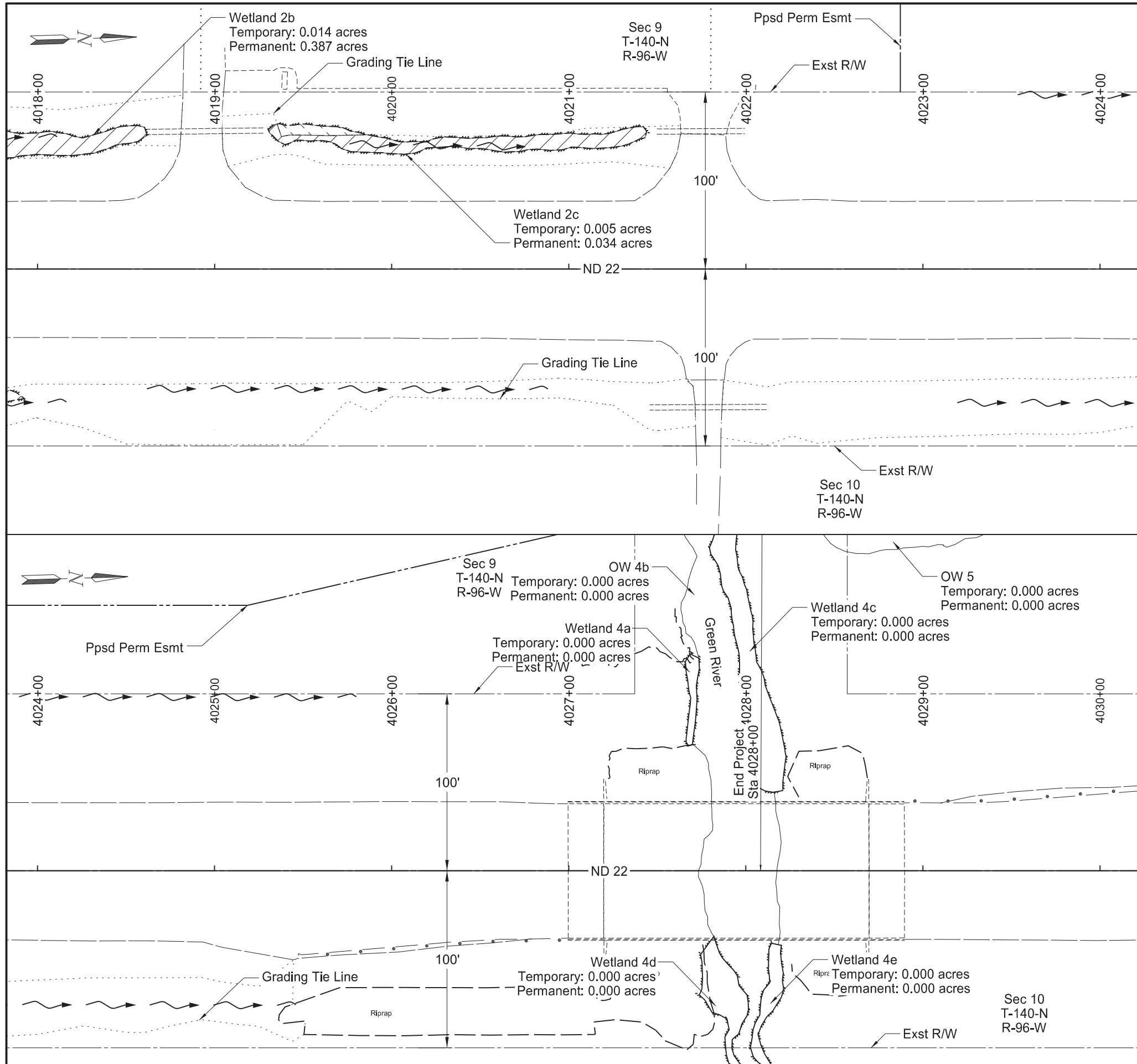
**BRADY L HAUSSLER**

PE-27171

*Brady L Haussler*

DATE 08/07/24

**NORTH DAKOTA**



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-5-022(146)075	75	4

**Legend**

- Permanent Wetland Impact
- Temporary Wetland Impact

Wetland Impacts

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements

REGISTERED PROFESSIONAL ENGINEER

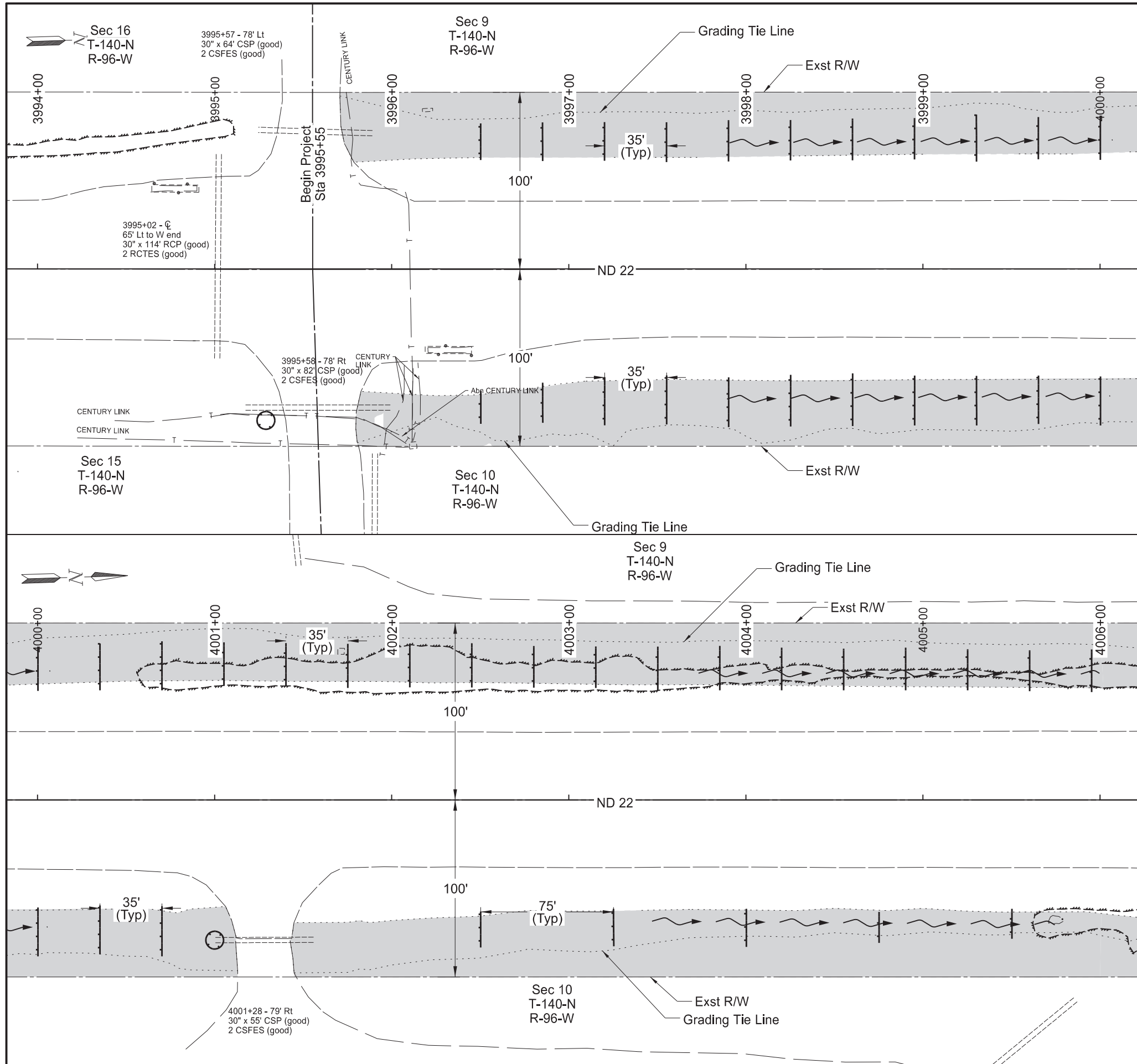
**BRADY L HAUSSLER**

PE-27171

*Brady L Haussler*

DATE 08/07/24

NORTH DAKOTA



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-5-022(146)075	76	1

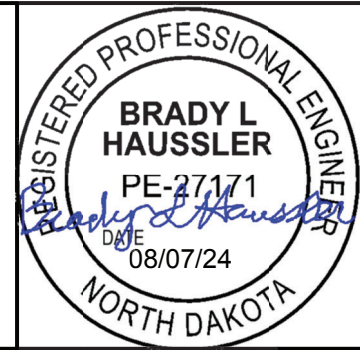
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251 2000	TEMPORARY COVER CROP		
	3994+00 to 4006+00 Lt	0.9	ACRE
	3994+00 to 4006+00 Rt	0.8	ACRE
253 0061	SOIL STABILIZATION		
	3994+00 to 4006+00 Lt	0.9	ACRE
	3994+00 to 4006+00 Rt	0.8	ACRE
261 0112	FIBER ROLLS 12IN		
	3994+00 to 4006+00 Lt	674	LF
	3994+00 to 4006+00 Rt	509	LF
261 0113	REMOVE FIBER ROLLS 12IN		
	3994+00 to 4006+00 Lt	674	LF
	3994+00 to 4006+00 Rt	509	LF

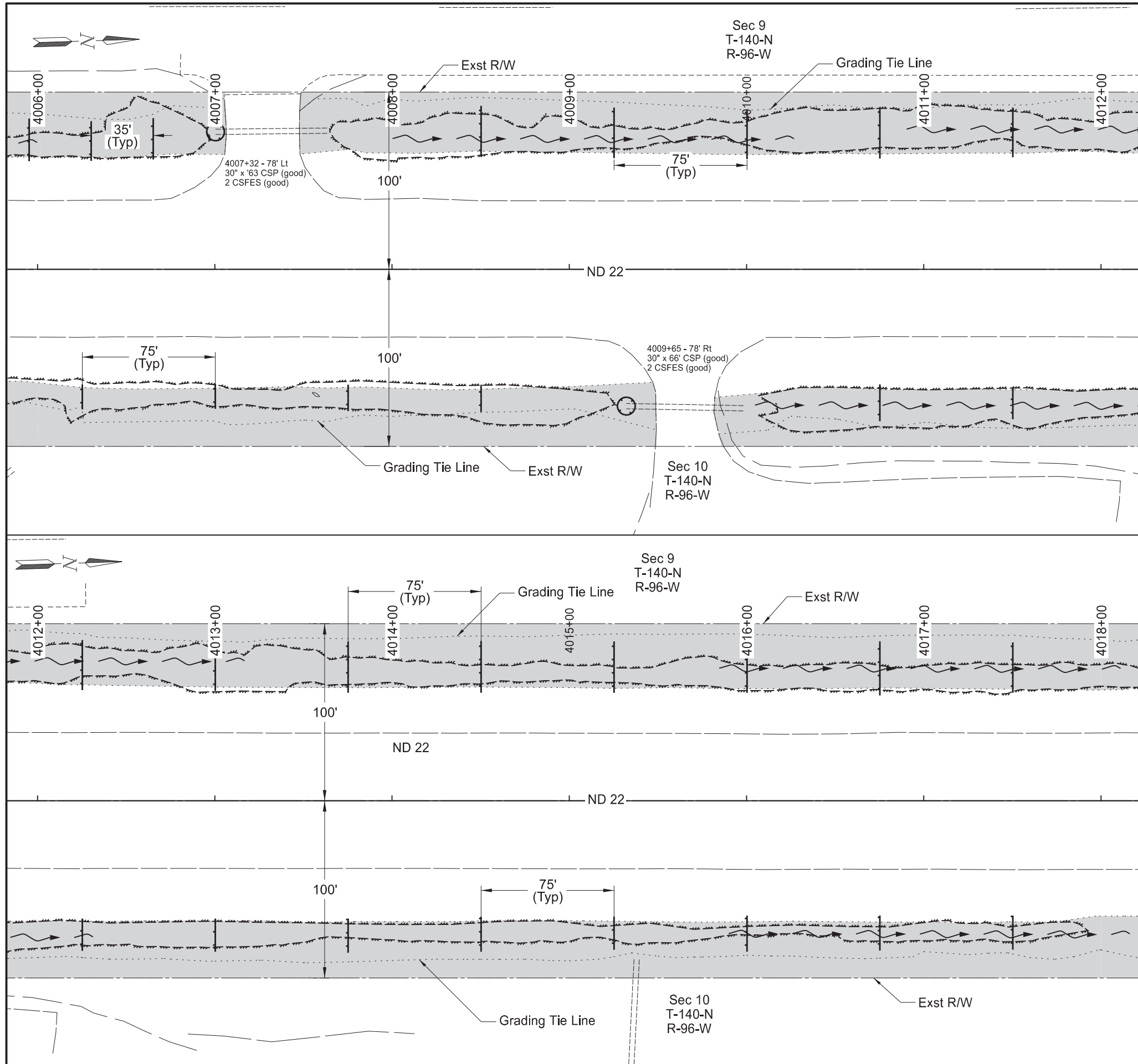
**Legend**

- TEMPORARY COVER CROP & SOIL STABILIZATION
- FIBER ROLL 12IN

Temporary Erosion Control

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements





STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-5-022(146)075	76	2

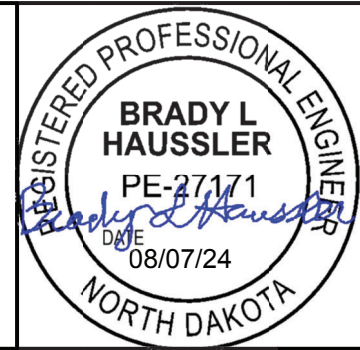
SPEC CODE	BID ITEM	QTY	UNIT
251 2000	TEMPORARY COVER CROP		
	4006+00 to 4018+00 Lt	1.0	ACRE
	4006+00 to 4018+00 Rt	0.9	ACRE
253 0061	SOIL STABILIZATION		
	3994+00 to 4006+00 Lt	1.0	ACRE
	3994+00 to 4006+00 Rt	0.9	ACRE
261 0112	FIBER ROLLS 12IN		
	3994+00 to 4006+00 Lt	450	LF
	3994+00 to 4006+00 Rt	283	LF
261 0113	REMOVE FIBER ROLLS 12IN		
	3994+00 to 4006+00 Lt	450	LF
	3994+00 to 4006+00 Rt	283	LF

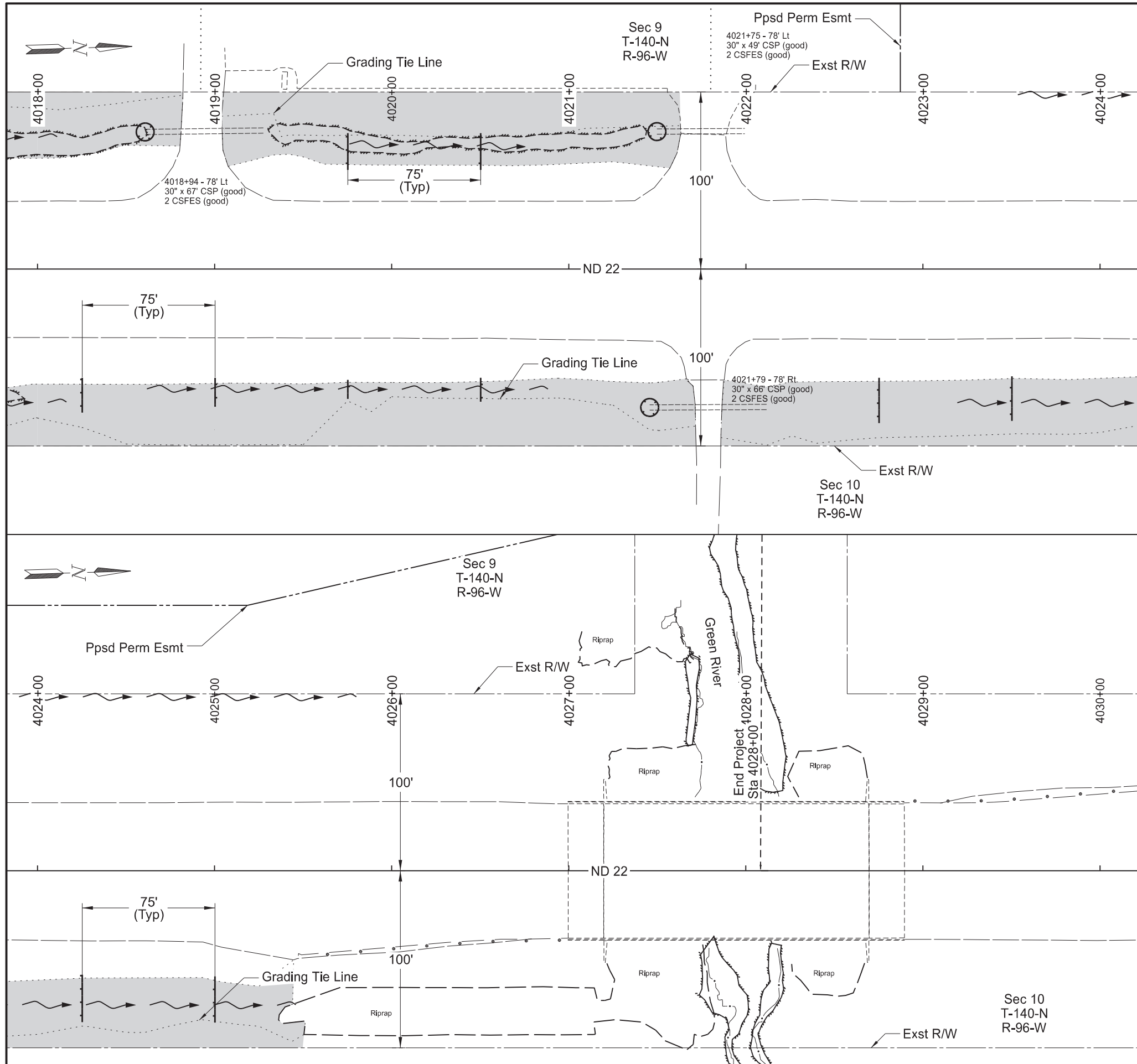
**Legend**

- TEMPORARY COVER CROP & SOIL STABILIZATION
- FIBER ROLL 12IN

Temporary Erosion Control

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements





STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-5-022(146)075	76	3

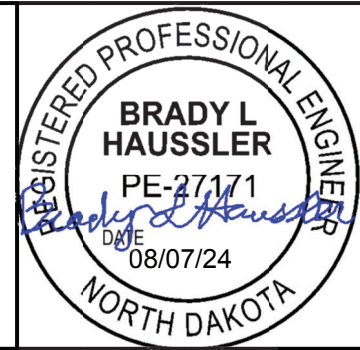
SPEC CODE	BID ITEM	QTY	UNIT
251 2000	TEMPORARY COVER CROP		
	4018+00 to 4030+00 Lt	0.3	ACRE
	4018+00 to 4030+00 Rt	0.6	ACRE
253 0061	SOIL STABILIZATION		
	4018+00 to 4030+00 Lt	0.3	ACRE
	4018+00 to 4030+00 Rt	0.6	ACRE
261 0112	FIBER ROLLS 12IN		
	4018+00 to 4030+00 Lt	105	LF
	4018+00 to 4030+00 Rt	195	LF
261 0113	REMOVE FIBER ROLLS 12IN		
	4018+00 to 4030+00 Lt	105	LF
	4018+00 to 4030+00 Rt	195	LF

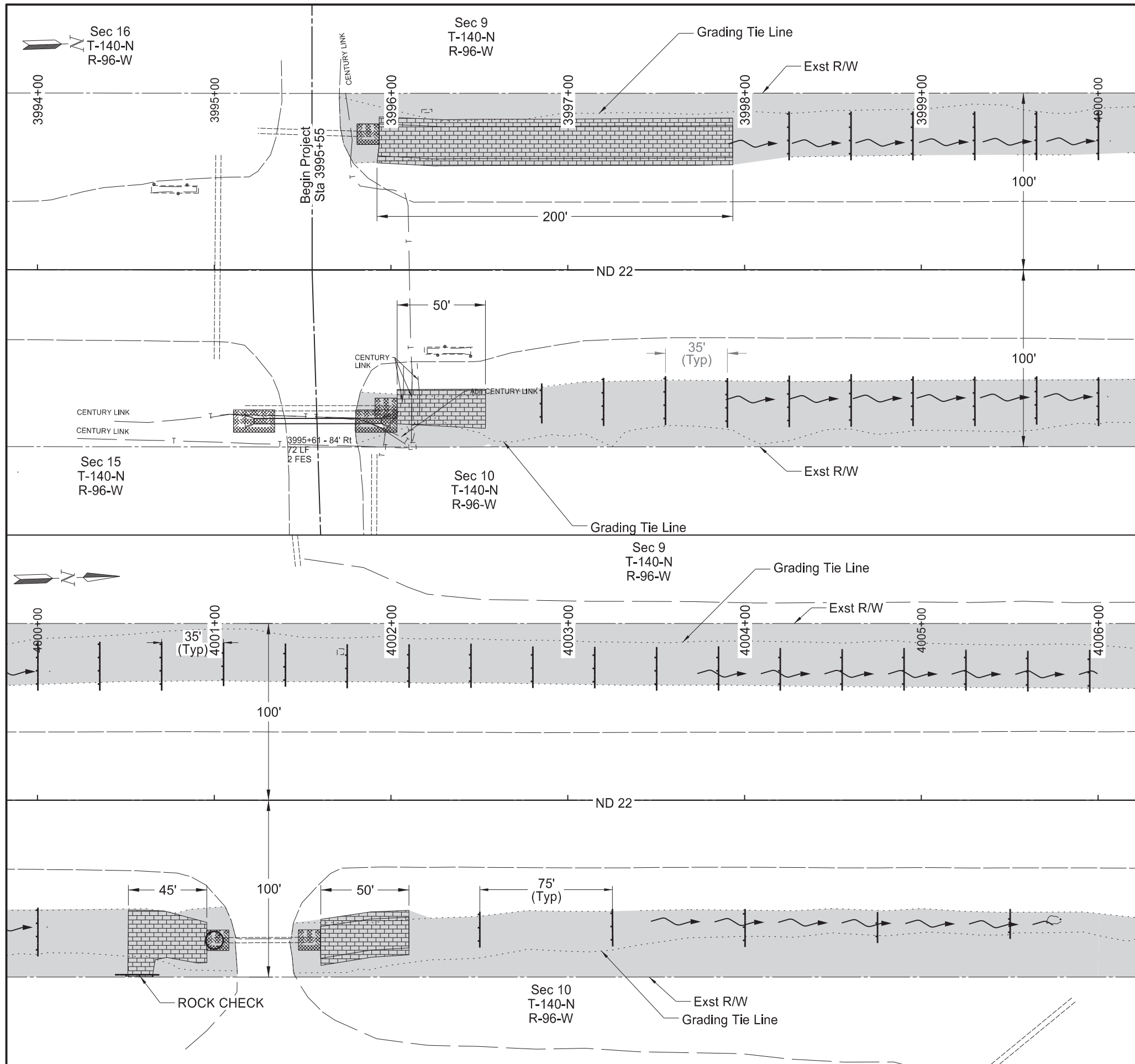
**Legend**

- TEMPORARY COVER CROP & SOIL STABILIZATION
- FIBER ROLL 12IN

Temporary Erosion Control

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements





STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-5-022(146)075	77	1

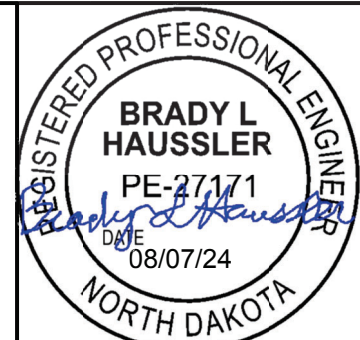
SPEC CODE	BID ITEM	QTY	UNIT
251 0200	SEEDING CLASS II		
	3994+00 to 4006+00 Lt	0.9	ACRE
	3994+00 to 4006+00 Rt	0.8	ACRE
253 0061	SOIL STABILIZATION		
	3994+00 to 4006+00 Lt	0.9	ACRE
	3994+00 to 4006+00 Rt	0.8	ACRE
255 0102	ECB TYPE 2		
	3994+00 to 4006+00 Lt	14	SY
	3994+00 to 4006+00 Rt	94	SY
255 0300	CONCRETE EROSION CONTROL BLANKET		
	3994+00 to 4006+00 Lt	585	SY
	3994+00 to 4006+00 Rt	404	SY
256 1500	ROCK CHECK		
	4000+57 Rt	1	EA
261 0112	FIBER ROLLS 12IN		
	3994+00 to 4006+00 Lt	584	LF
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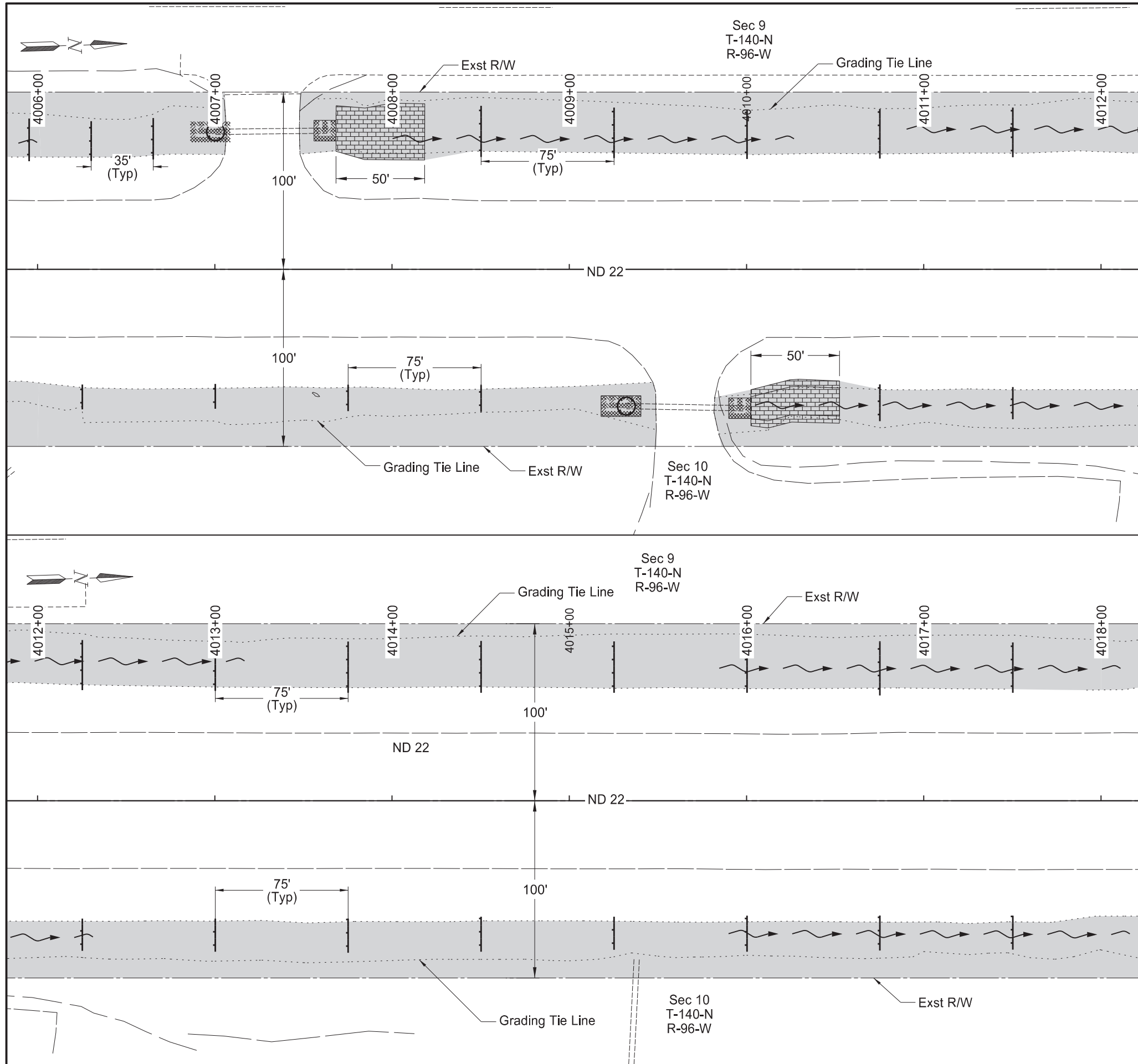
**Legend**

- SEEDING CLASS II & SOIL STABILIZATION
- ECB TYPE 2
- FIBER ROLLS 12IN
- CONCRETE EROSION CONTROL BLANKET
- RIPRAP GRADE

Permanent Erosion Control

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements










STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-5-022(146)075	77	2

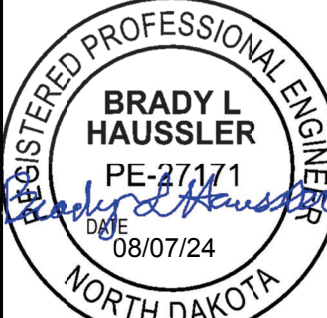
SPEC CODE	BID ITEM	QTY	UNIT
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	4006+00 to 4018+00 Lt	1.0	ACRE
	4006+00 to 4018+00 Rt	0.9	ACRE
253 0061	SOIL STABILIZATION		
	4006+00 to 4018+00 Lt	1.0	ACRE
	4006+00 to 4018+00 Rt	0.9	ACRE
255 0102	ECB TYPE 2		
	4006+00 to 4018+00 Lt	38	SY
	4006+00 to 4018+00 Rt	38	SY
255 0300	CONCRETE EROSION CONTROL BLANKET		
	4006+00 to 4018+00 Lt	167	SY
	4006+00 to 4018+00 Rt	133	SY
261 0112	FIBER ROLLS 12IN		
	4006+00 to 4018+00 Lt	450	LF
	4006+00 to 4018+00 Rt	283	LF

**Legend**

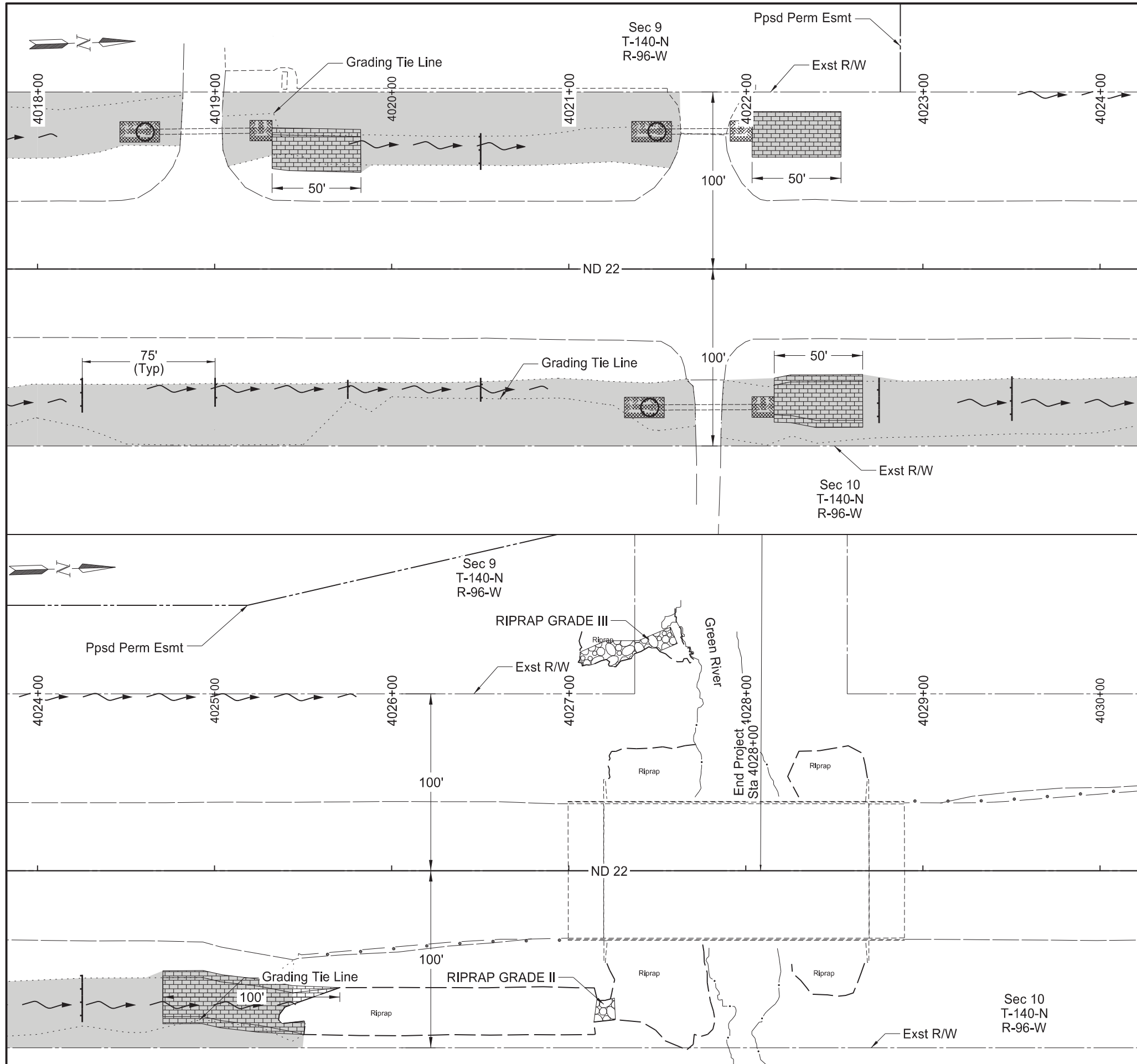
-  SEEDING CLASS II & SOIL STABILIZATION
-  ECB TYPE 2
-  FIBER ROLLS 12IN
-  CONCRETE EROSION CONTROL BLANKET
-  RIPRAP GRADE \_\_

Permanent Erosion Control

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements



REGISTERED PROFESSIONAL ENGINEER  
**BRADY L. HAUSSLER**  
 PE-27171  
 DATE 08/07/24  
 NORTH DAKOTA



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-5-022(146)075	77	3

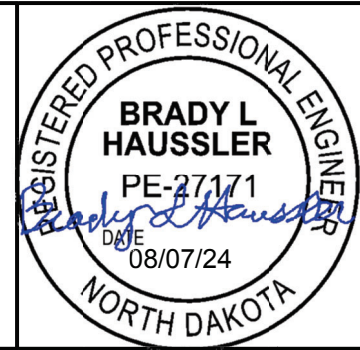
SPEC CODE	BID ITEM	QTY	UNIT
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	4018+00 to 4030+00 Lt	0.3	ACRE
	4018+00 to 4030+00 Rt	0.6	ACRE
253 0061	SOIL STABILIZATION		
	4018+00 to 4030+00 Lt	0.3	ACRE
	4018+00 to 4030+00 Rt	0.6	ACRE
255 0102	ECB TYPE 2		
	4018+00 to 4030+00 Lt	76	SY
	4018+00 to 4030+00 Rt	38	SY
255 0300	CONCRETE EROSION CONTROL BLANKET		
	4018+00 to 4030+00 Lt	278	SY
	4018+00 to 4030+00 Rt	415	SY
256 0200	RIPRAP GRADE II		
	4027+26 Rt	10	CY
256 0300	RIPRAP GRADE III		
	4027+06 to 4027+61 Lt	100	CY
261 0112	FIBER ROLLS 12IN		
	4018+00 to 4030+00 Lt	84	LF
	4018+00 to 4030+00 Rt	169	LF

**Legend**

- SEEDING CLASS II & SOIL STABILIZATION
- ECB TYPE 2
- FIBER ROLLS 12IN
- CONCRETE EROSION CONTROL BLANKET
- RIPRAP GRADE \_\_

Permanent Erosion Control

ND 22 - N of 32nd St to Green River Bridge  
Drainage Improvements



PRELIMINARY SURVEY COORDINATE AND CURVE DATA - 32nd St - GREEN RIVER BRIDGE; DICKINSON

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-5-022(146)075	81	1

HORIZONTAL ALIGNMENT				CURVE DATA		US PUBLIC LAND SURVEY DATA				SURVEY CONTROL POINTS							
PNT	STATION	NORTHING	EASTING	ARC DEFINITION		CORNER	IRN	NORTHING	EASTING	PNT	NORTHING	EASTING	ELEV	STATION	OFFSET	ALIGNMENT	MONUMENT
ND HWY 22 (Align: EX22)						T-140-N R-96-W				PRIMARY CONTROL							
Begin / Rec Qtr Cor	3969+18.77	473,220.43	1,396,888.80			SE Cor Sec 4	7-C	481,159.76	1,397,144.98	GPS 76	480,489.99	1,397,219.33	2,431.57	4041+95	95' Rt	EX22	#5 Rebar 1.5" Alum cap
Rec Sec Cor	3995+55.36	475,855.52	1,396,977.58			SE Cor Sec 9	7-E	475,855.52	1,396,977.58								
End / Rec Sec Cor	4048+62.24	481,159.76	1,397,144.98			E Qtr Cor Sec 16	7-F	473,220.43	1,396,888.80	SECONDARY CONTROL							
										RTK 30000	478,293.18	1,397,160.32	2,457.30	4019+98	106' Rt	EX22	#6 Rebar
										REFERENCE MARKERS							
										#	NORTHING	EASTING	STATION	O/S	ALIGNMENT		
										76	477,600.66	1,396,986.67	4013+00	46' Lt	EX22		

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

INITIALIZING BENCH MARK NDGPS Stations (OPUS)  NAVD-88  GEOID12B    GEOID18

Date Survey Completed 08/14/2023

- Assumed Coordinates
- All coordinates on this sheet are Stark County ground coordinates. They are derived from the NAD83(2011) reference frame; North Dakota South Zone Combination Factor (cf) = 0.9998175

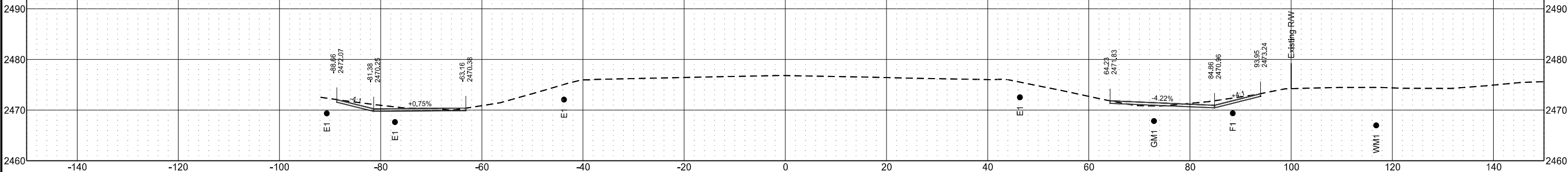


NOTES: Alignment per NDDOT ROW Plat 1986 Project # 5-022(024)073 and NDDOT Project # 5-022(095)074

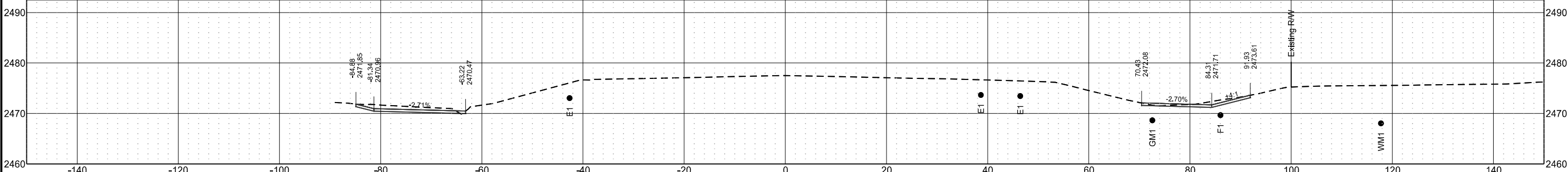


	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	1

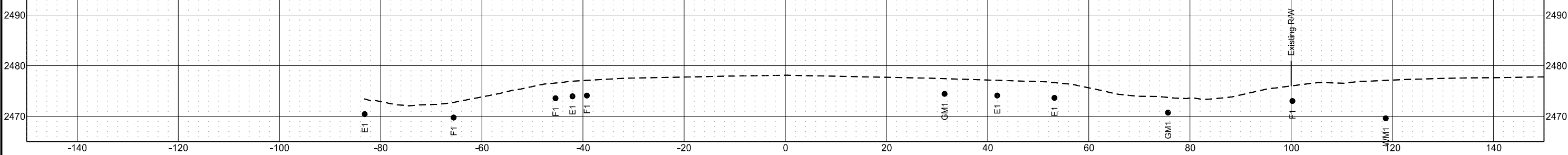
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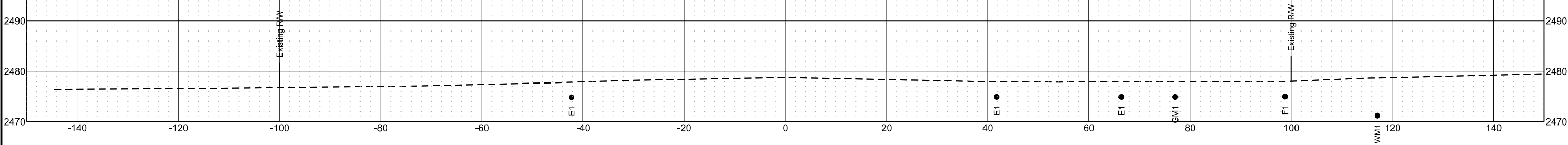
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Sta 3996+00.00

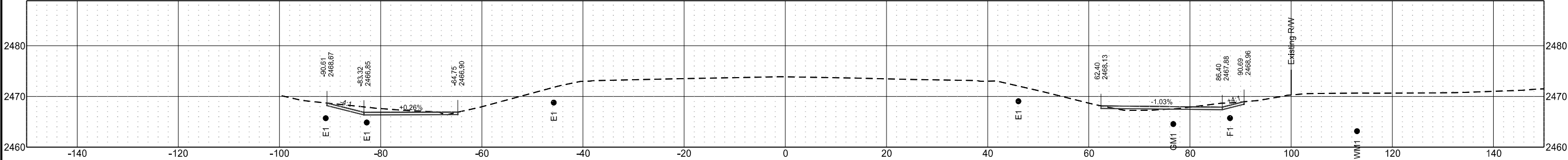


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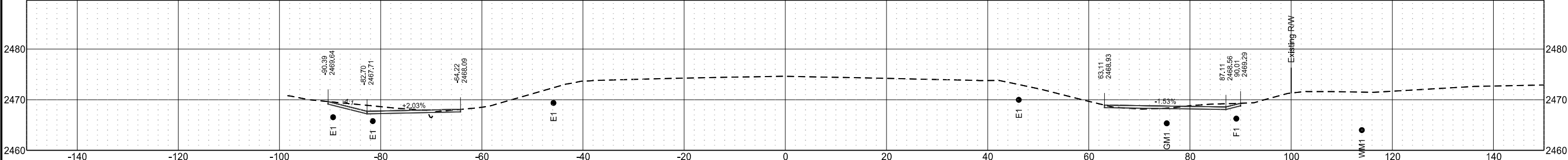


	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	2

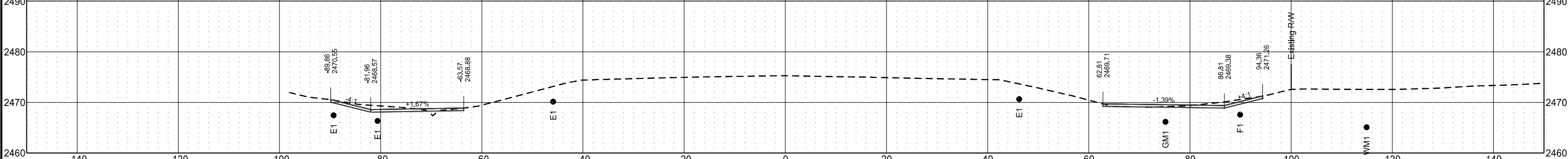
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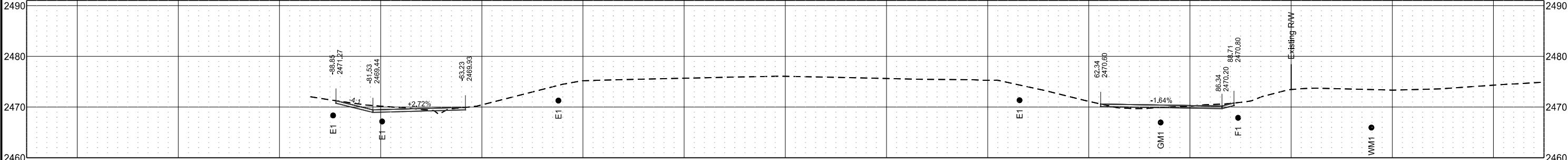
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Sta 3998+00.00

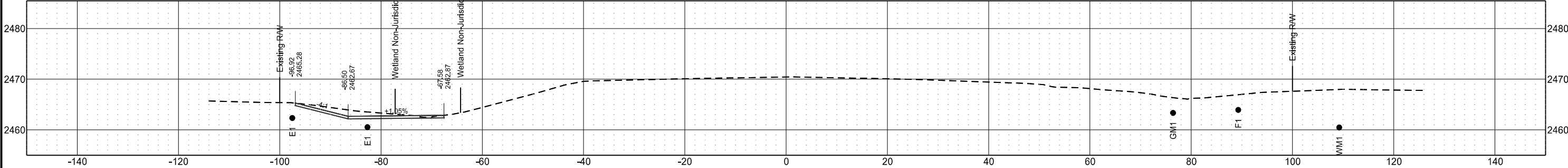


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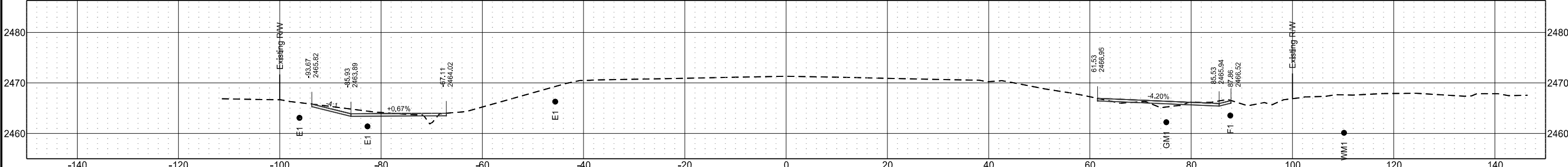


	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	3

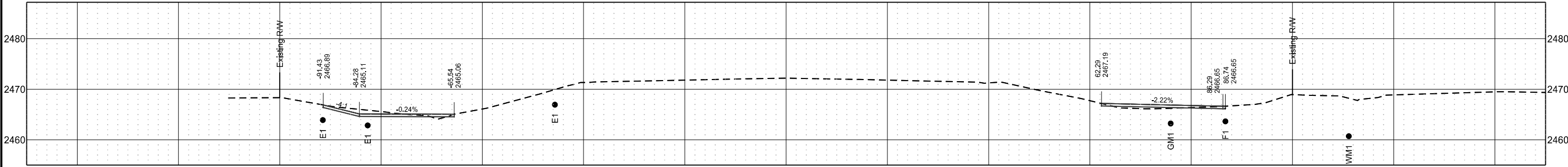
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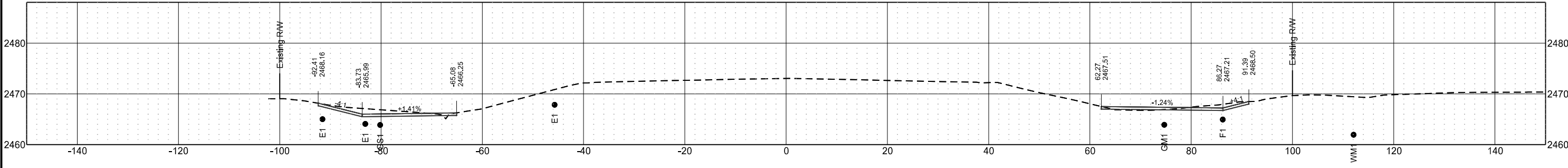
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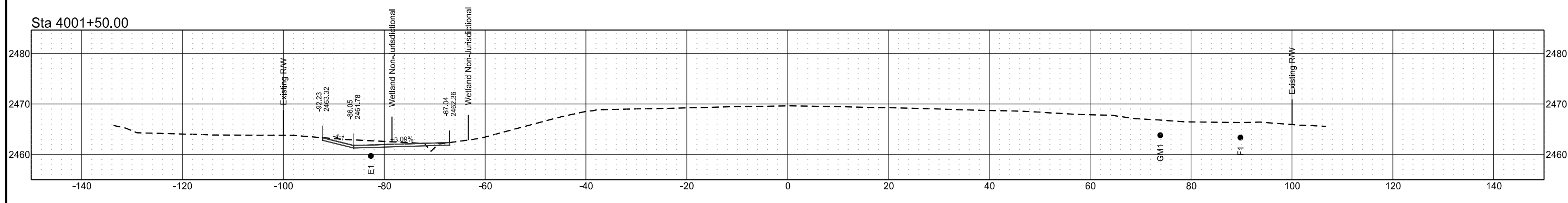
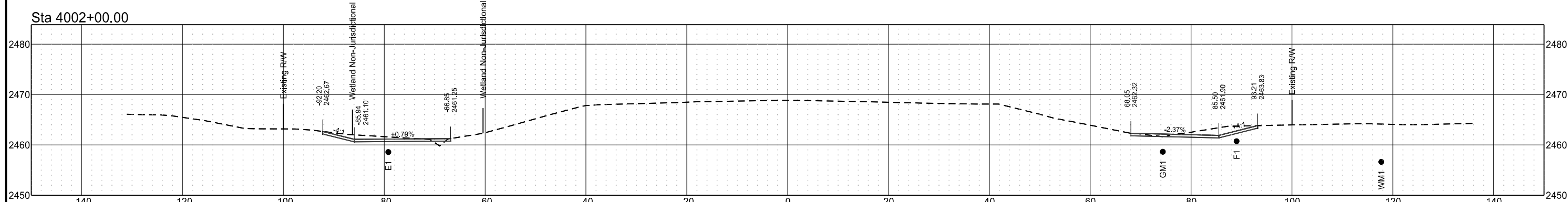
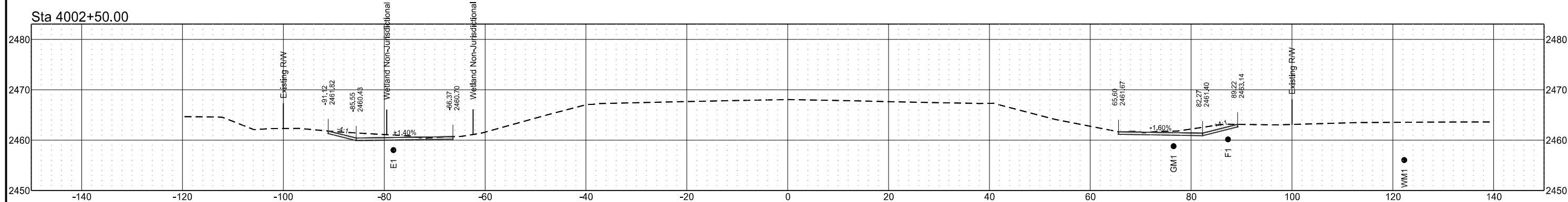
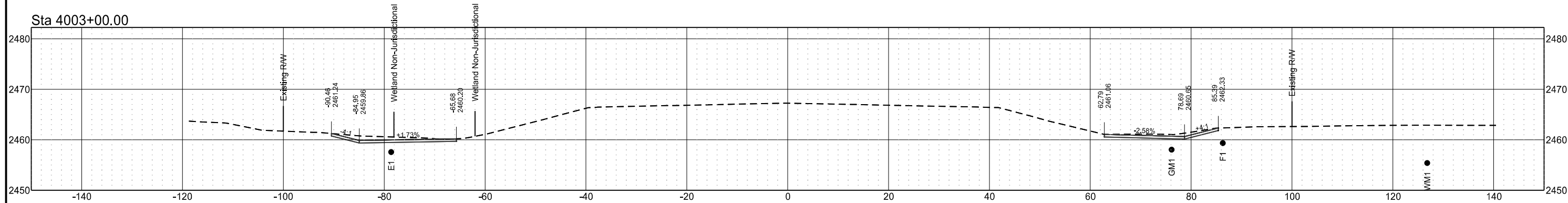
Sta 4000+00.00



Sta 3999+50.00

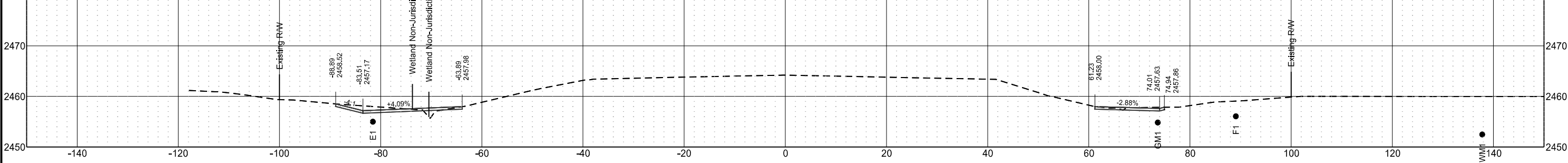


	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	4

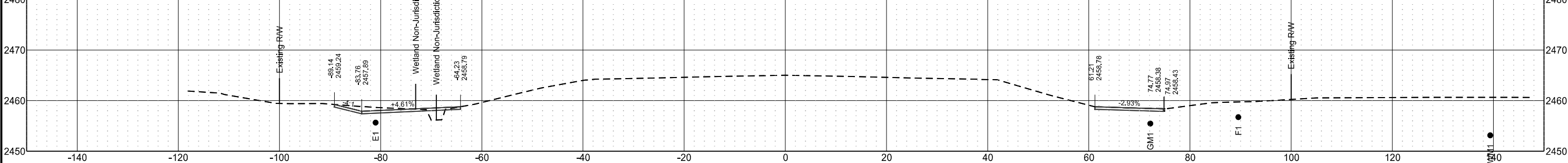


	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	5

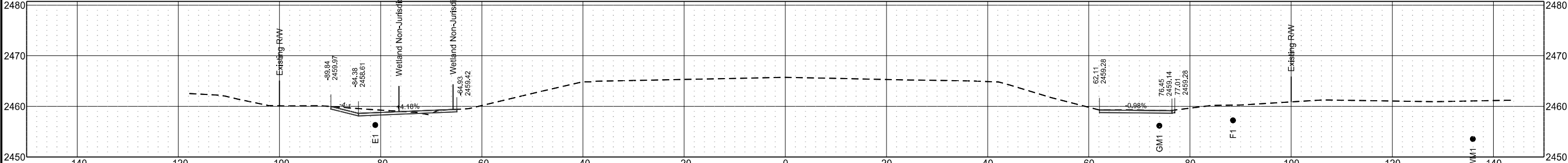
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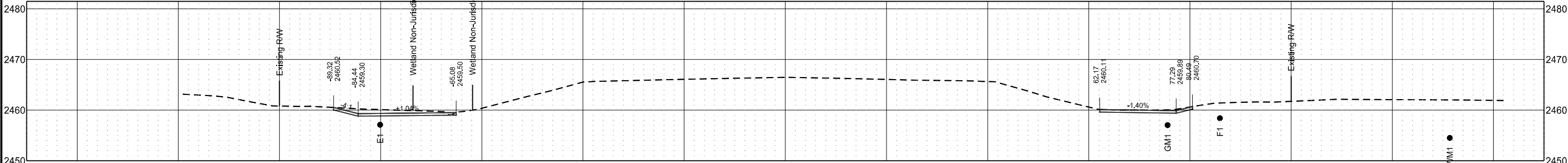
Sta 4004+50.00



Sta 4004+00.00

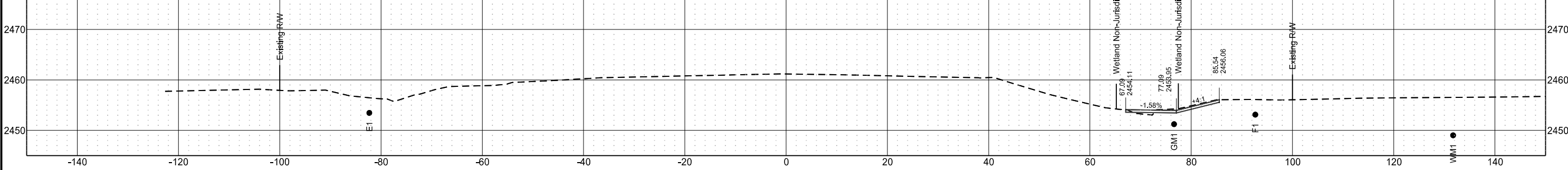


Sta 4003+50.00

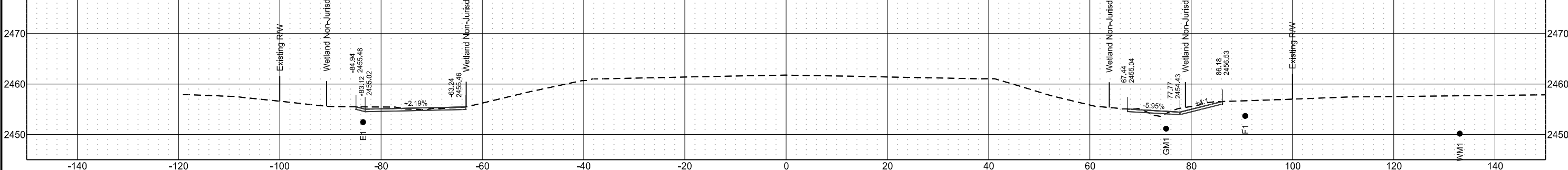


	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	6

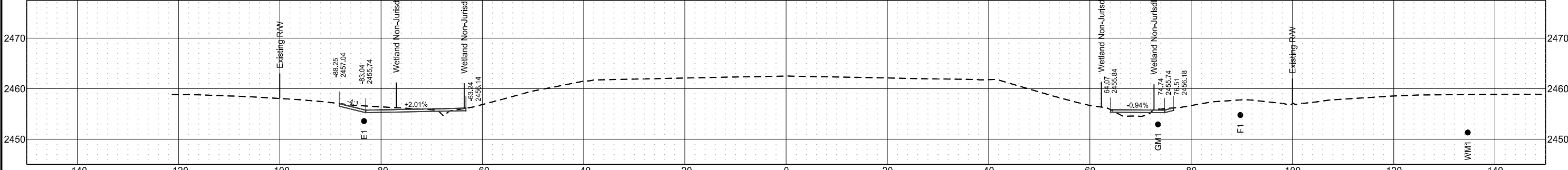
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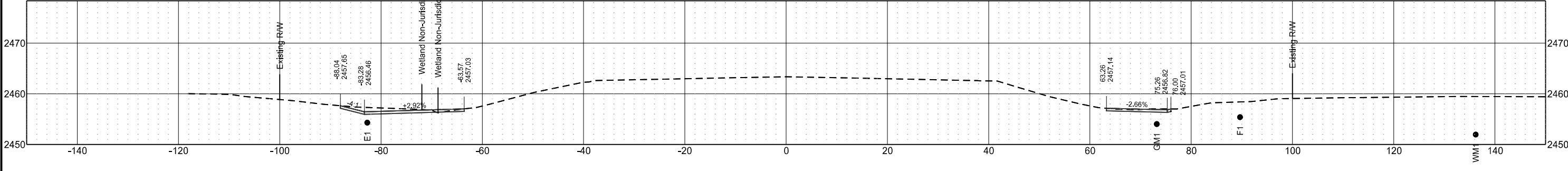
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Sta 4006+00.00

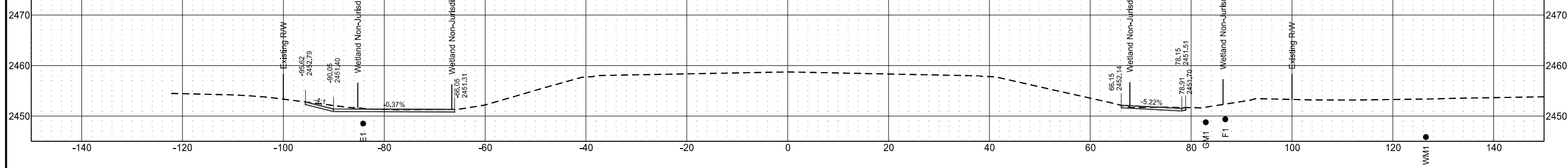


Sta 4005+50.00

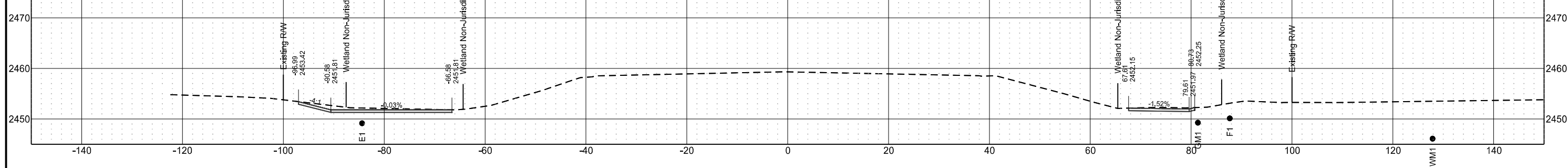


	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	7

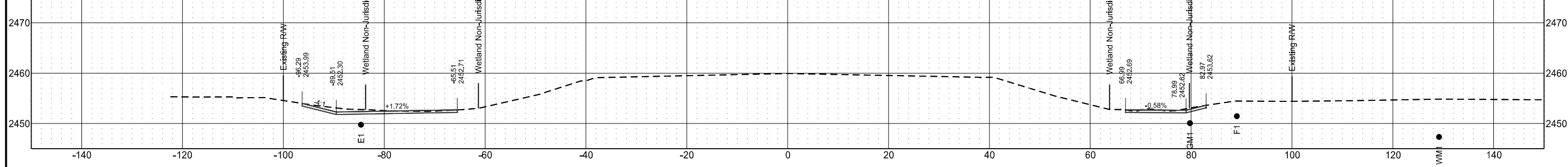
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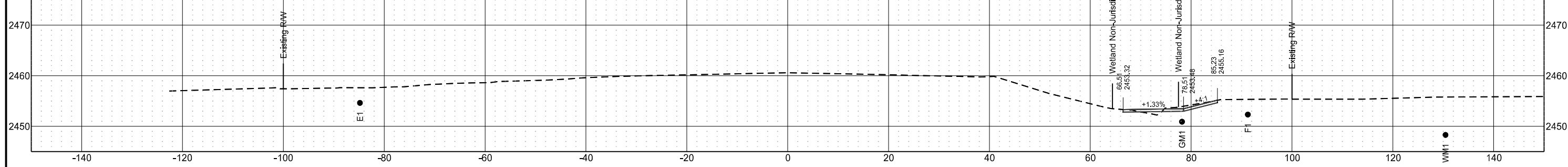
Sta 4008+50.00



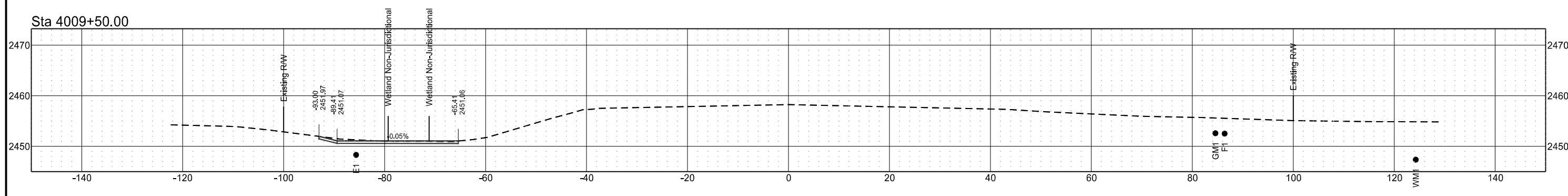
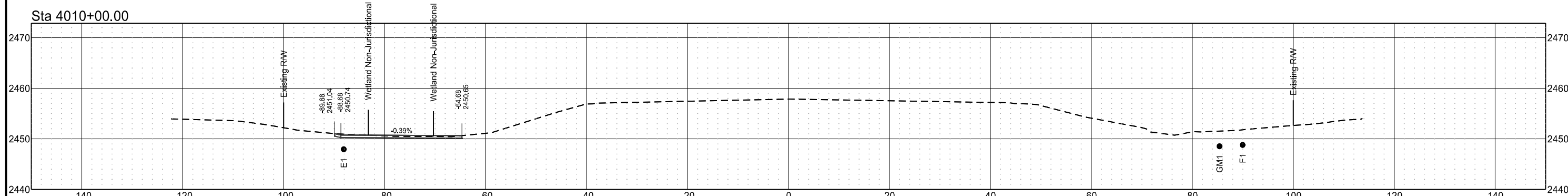
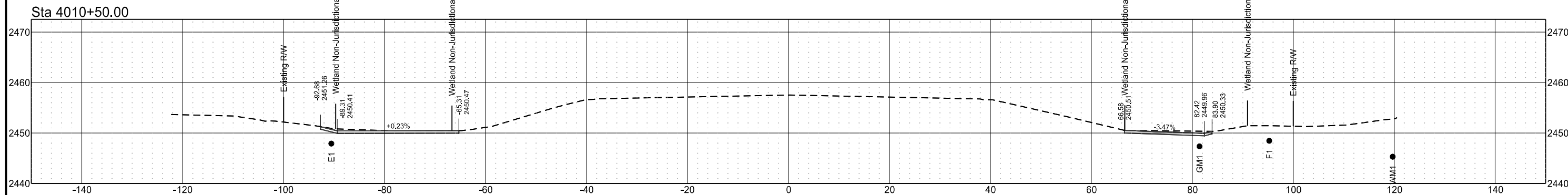
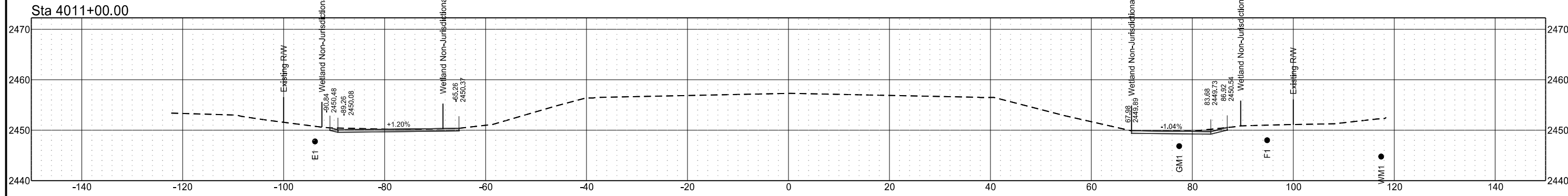
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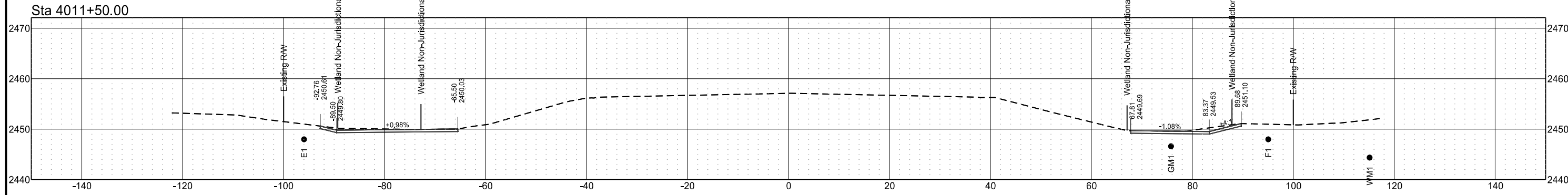
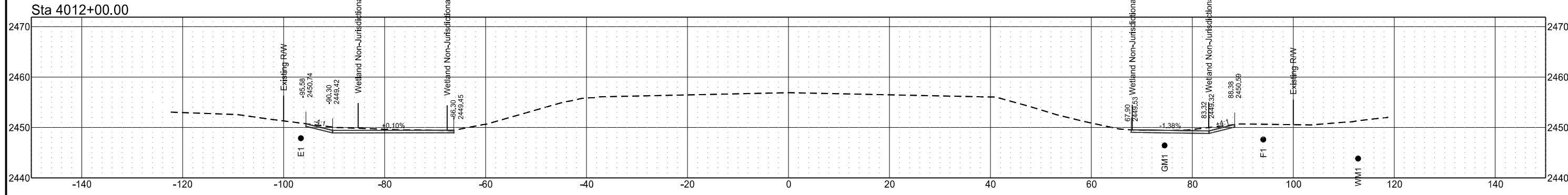
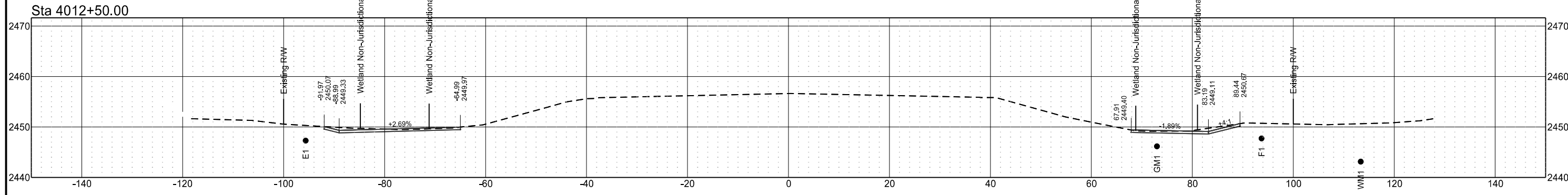
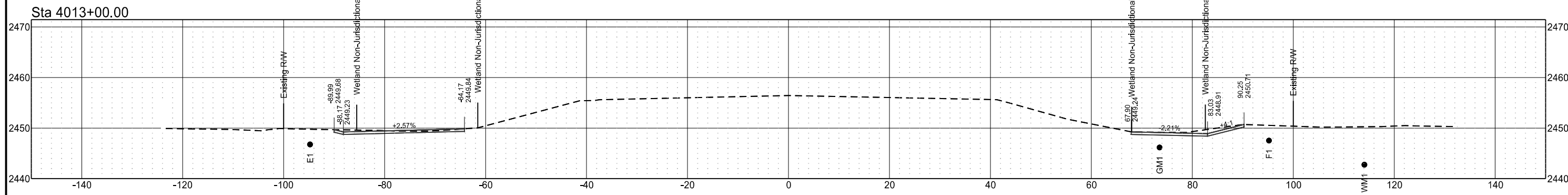
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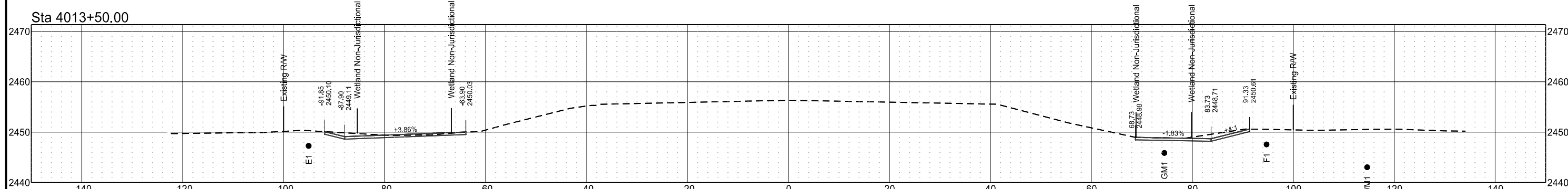
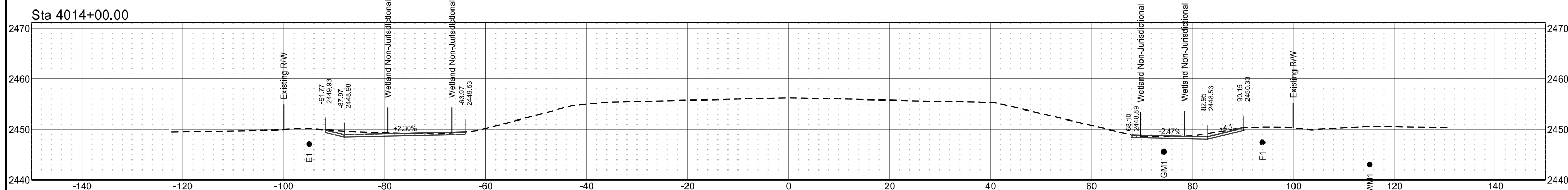
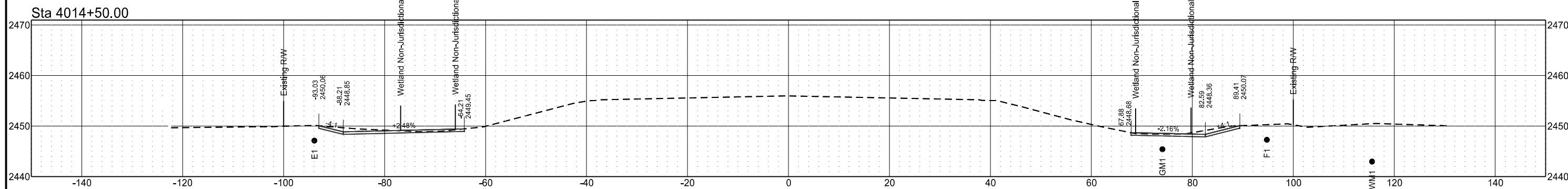
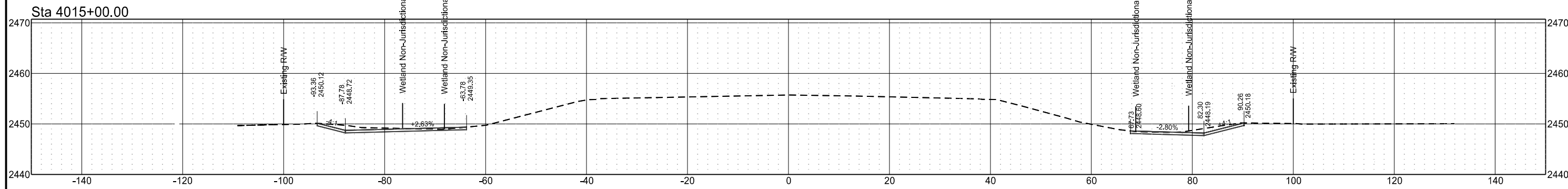
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	8



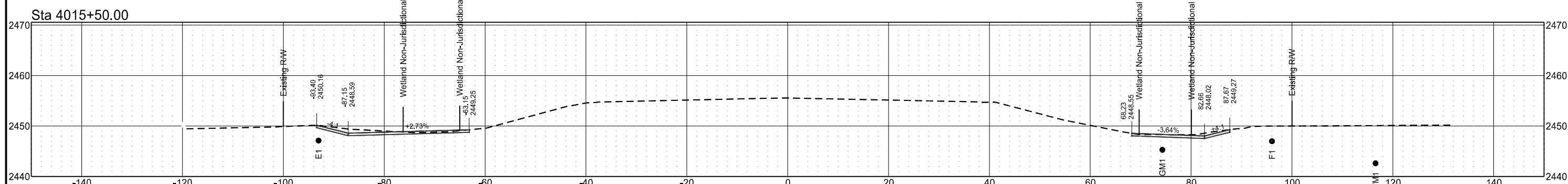
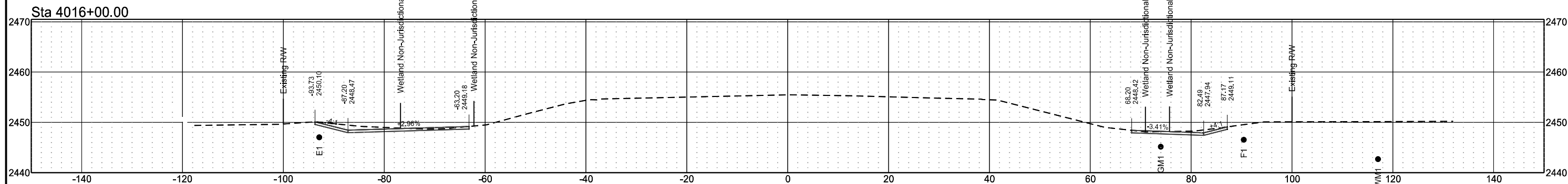
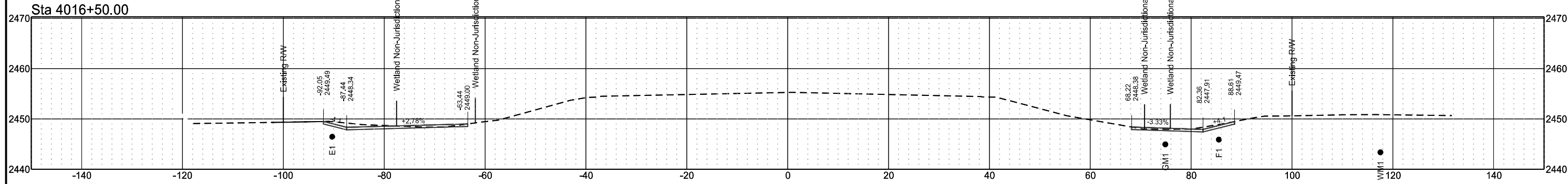
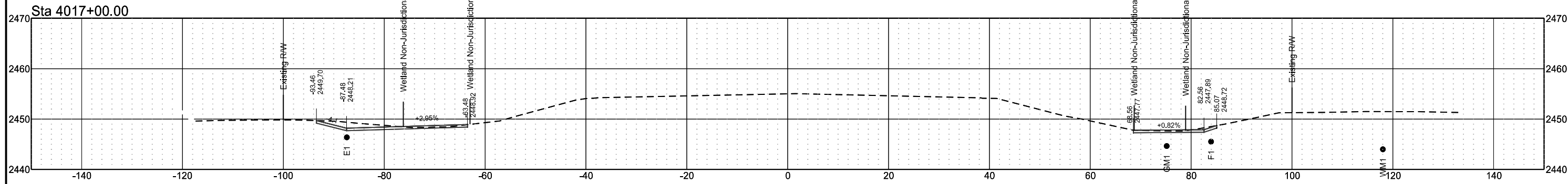
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	9



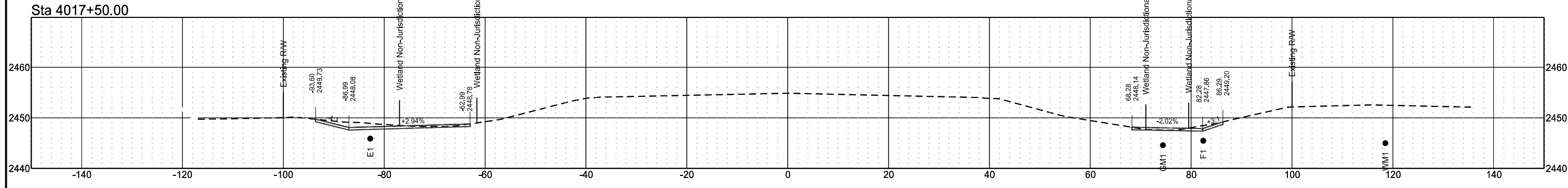
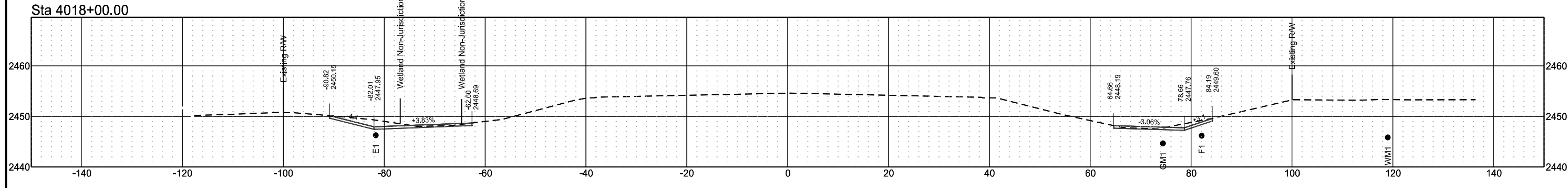
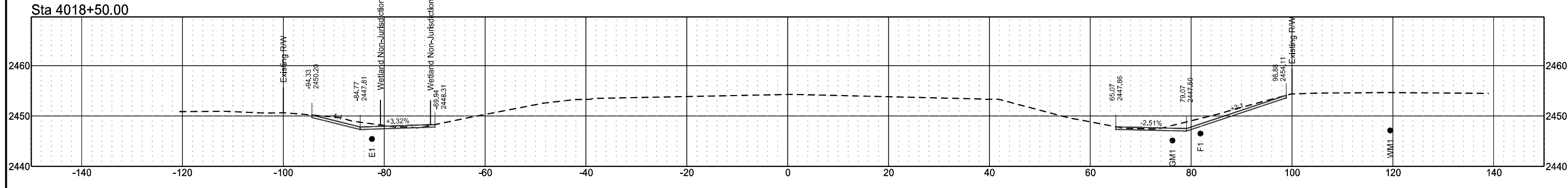
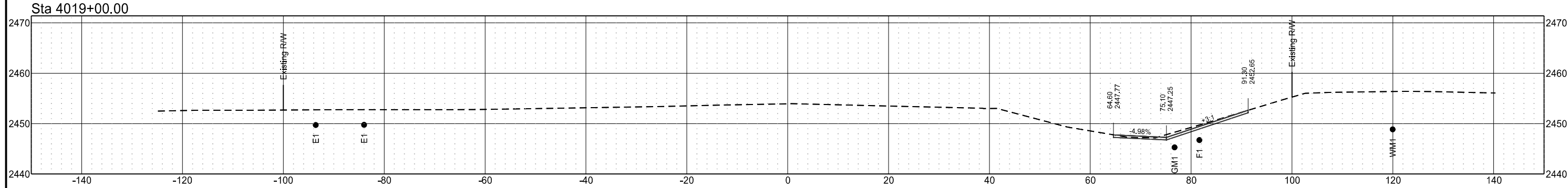
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	10



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	11

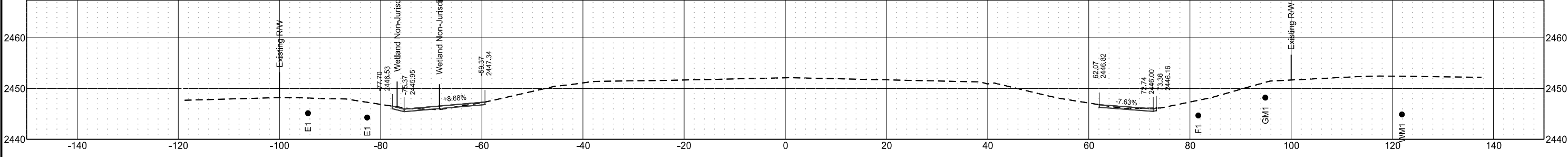


	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	12

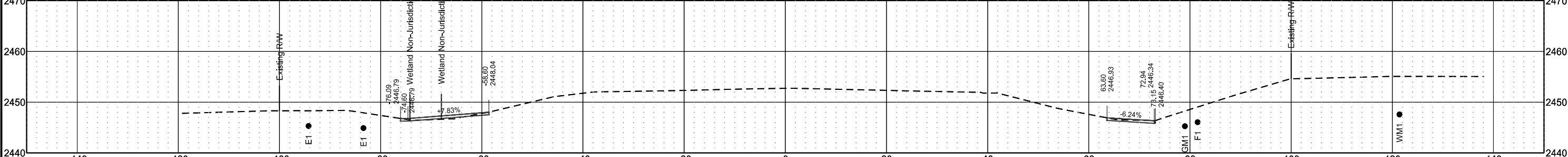


	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	13

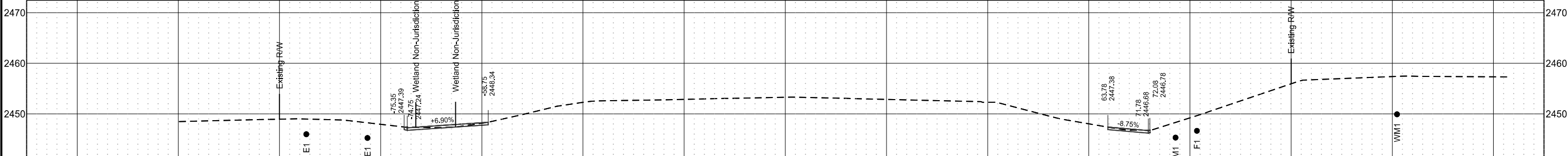
Sta 4021+00.00



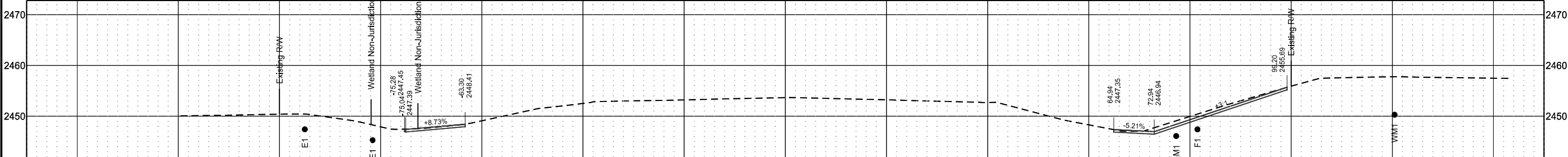
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Sta 4020+00.00

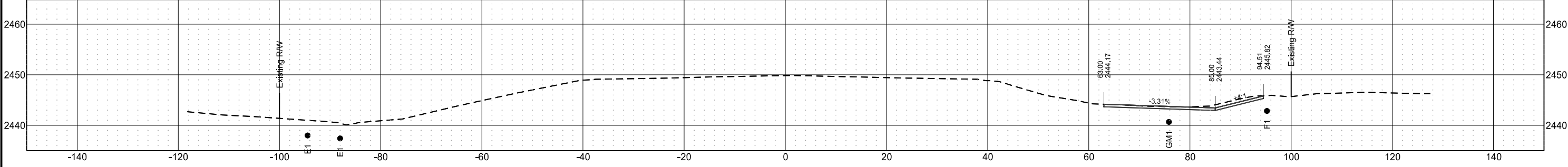


Sta 4019+50.00

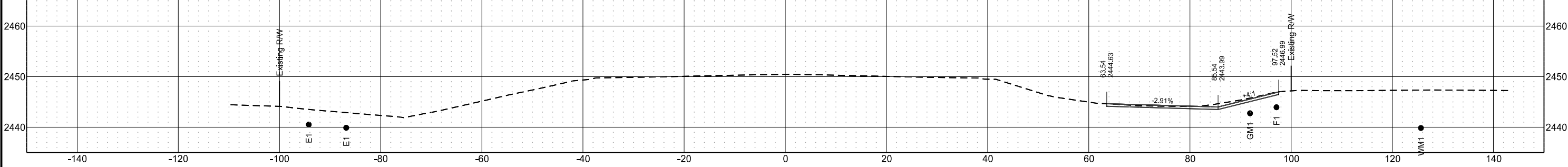


	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	14

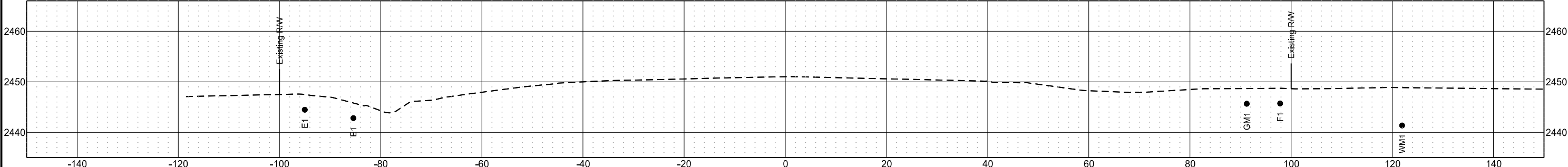
Sta 4023+00.00



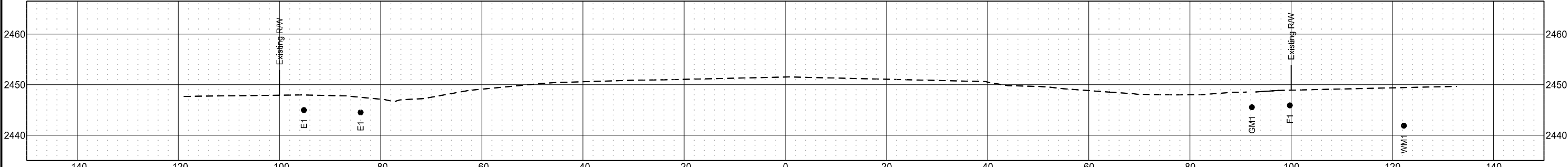
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Sta 4022+00.00

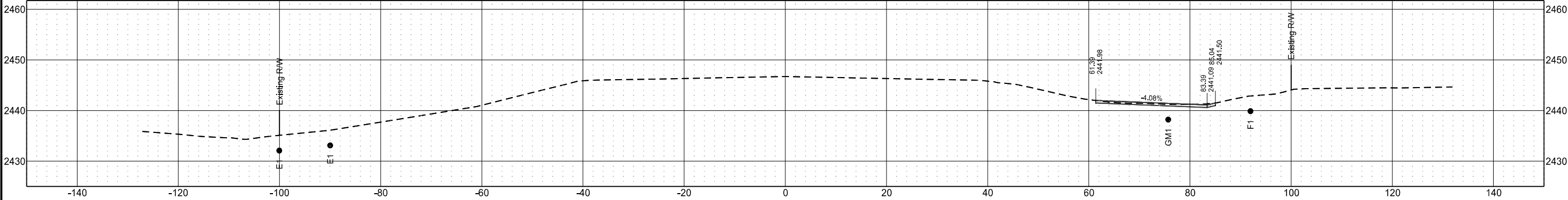


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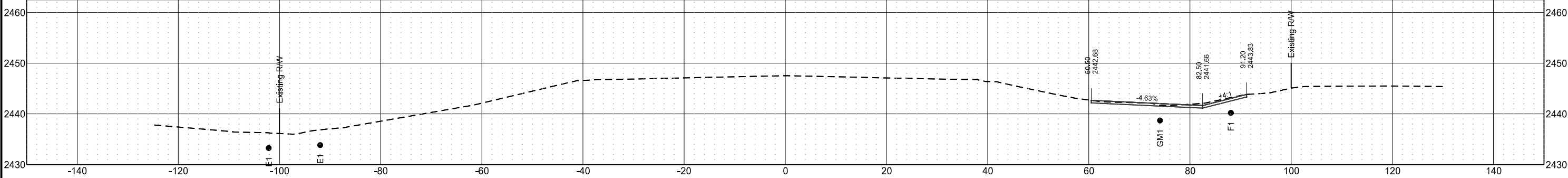


	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	15

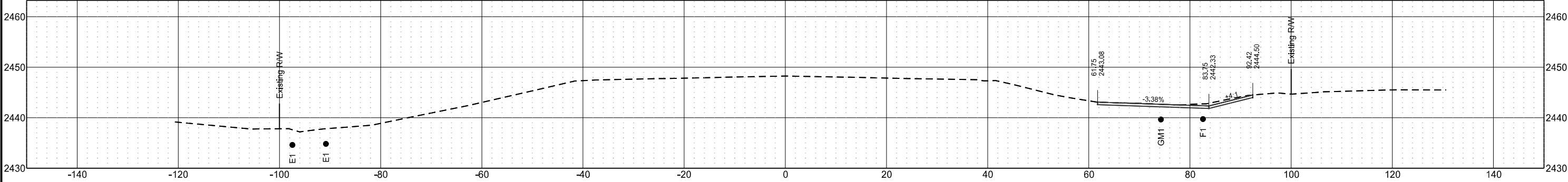
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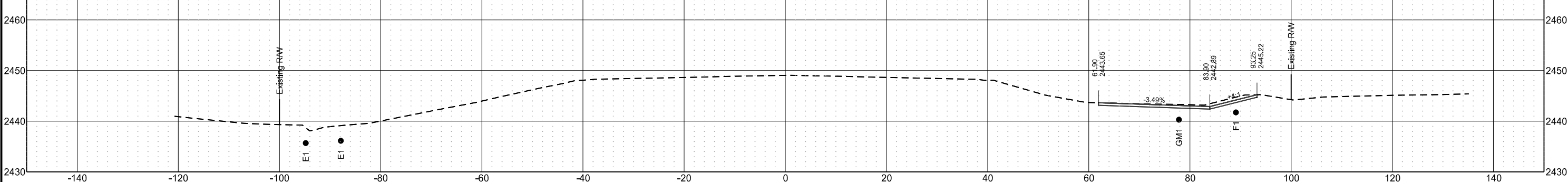
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Sta 4024+00.00

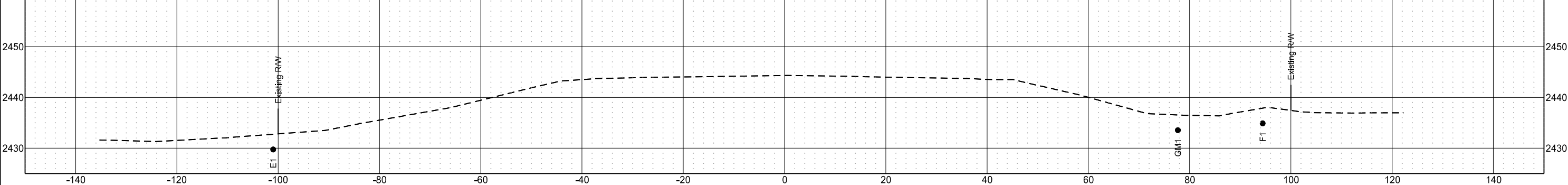


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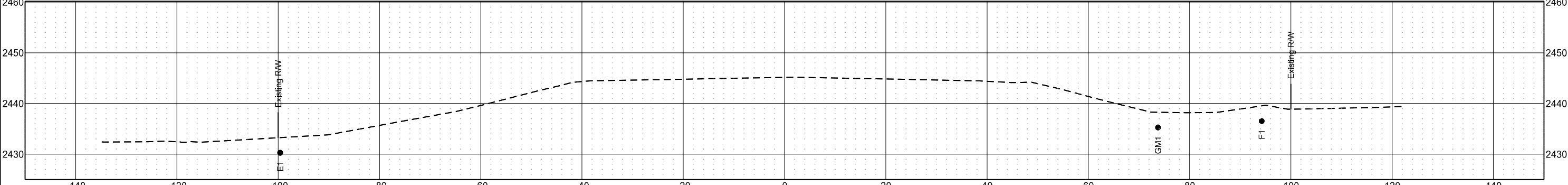


	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	16

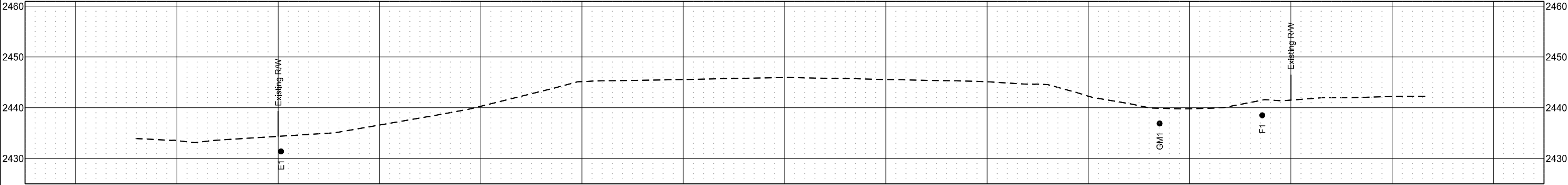
Sta 4026+50.00



Sta 4026+00.00



Sta 4025+50.00



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-5-022(146)075	200	17

