

DESIGN DATA						STATE	PROJECT NO.	PCN	SECTION NO.	SHEET NO.
Traffic	Average Daily					ND	NH-4-083(141)237	21988	1	1
Current 2017	Pass: 775	Trucks: 265	Total: 1,040							
Forecast 2037	Pass: 1,155	Trucks: 330	Total: 1,515							
Clear Zone Distance: N/A		Design Speed: 65 MPH								
Minimum Sight Dist. for Stopping: 645		Bridges: N/A								
Sight Dist. for No Passing Zone: 1100										
Pavement Design Life N/A										
Design Accumulated One-way Flexible ESALs: N/A										

JOB # 24

NORTH DAKOTA

DEPARTMENT OF TRANSPORTATION

NH-4-083(141)237

GOVERNING SPECIFICATIONS:

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

JOB # 24

NORTH DAKOTA

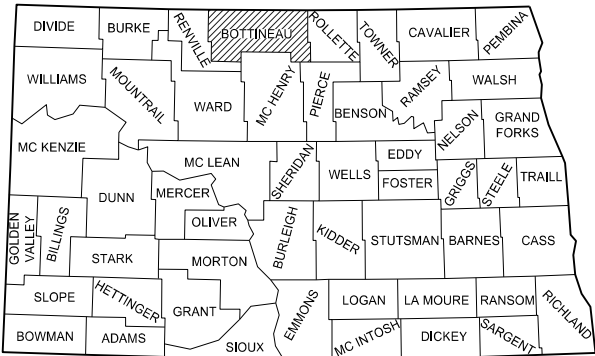
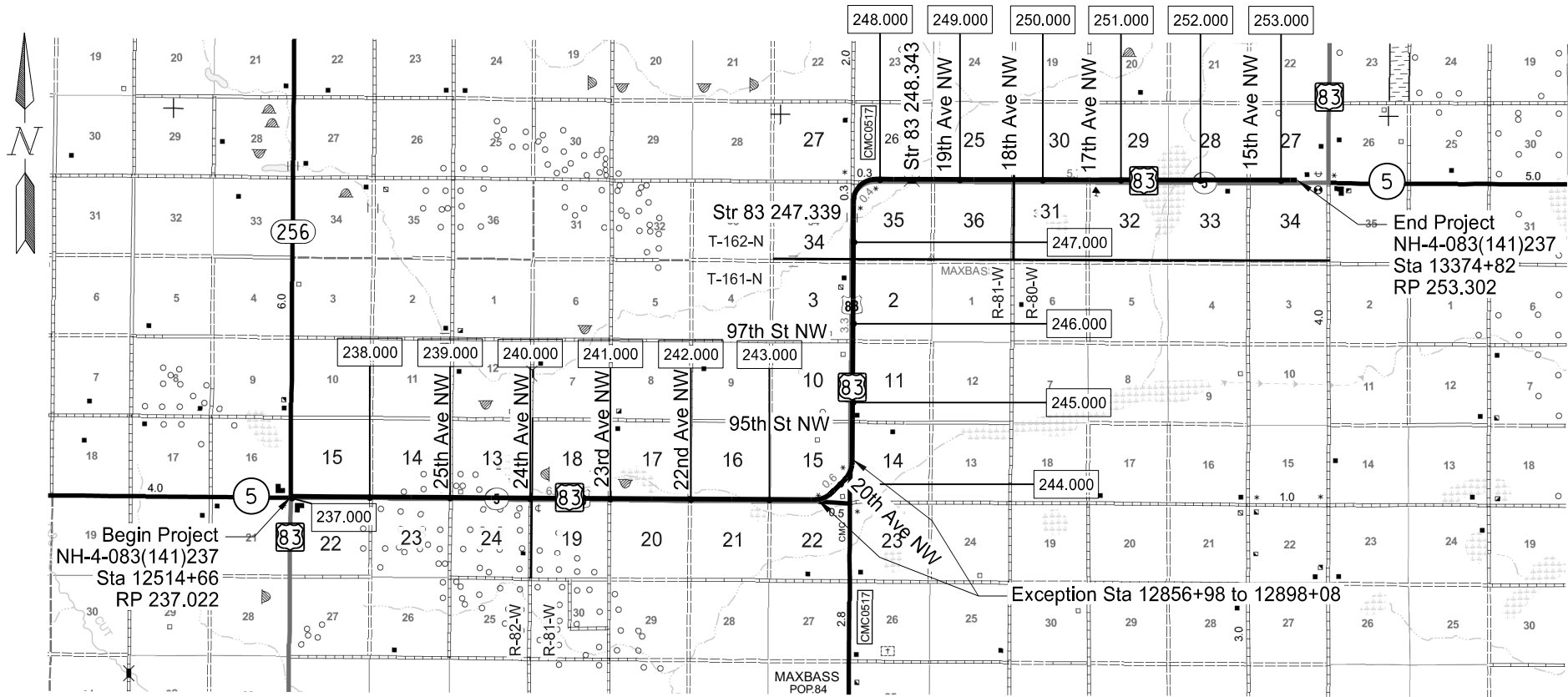
DEPARTMENT OF TRANSPORTATION

NH-4-083(141)237

Bottineau County
W Jct ND 5 E to E Jct ND 5 - Westhope

Sliver Grading, Milling, RAP HMA
Pipe Extensions, Box Culvert Extensions

GOVERNING SPECIFICATIONS:			
2014 Standard Specifications adopted by the North Dakota			
Department of Transportation and the Supplemental Specifications			
effective on the date the project is advertised.			
PROJECT NUMBER \ DESCRIPTION	NET MILES	GROSS MILES	
NH-4-083(141)237	15.512	16.280	



STATE COUNTY MAP

DESIGNERS	
Derek Anderson, PE	Jennifer Malloy, PE
Dawn Michel, PE	Yang Liu, PE
Sarah Mohl	Matt Raab

APPROVED DATE 12/3/2019

Kirk J. Hoff /s/

OFFICE OF PROJECT DEVELOPMENT
ND DEPARTMENT OF TRANSPORTATION

I hereby certify that the attached plans were prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of ND.	This document was originally issued and sealed by Derek Anderson, Registration Number PE- 7107 , on 10/23/19 and the original document is stored at the North Dakota Department of Transportation
APPROVED DATE 10/23/19	
Derek Anderson	
APEX ENGINEERING GROUP	

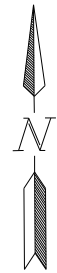
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2	1 - 2	Table of Contents	SP 004(14)	Federal Migratory Bird Treaty Act			
4	1	Scope of Work	SP 0841(14)	Flexible Pavement Surface Tolerance			
6	1 - 2	Notes	SP 0842(14)	Temporary Water Diversion			
6	1	Environmental Notes	SP 0963(14)	Intelligent Compaction (IC) of HMA			
8	1 - 2	Quantities	SP 0964(14)	Paver Mounted Thermal Profiler (PMTP)			
10	1 - 2	Basis of Estimate	SP 0968(14)	Longitudinal Joint Density in HMA Pavements			
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20	1 - 10	General Details					
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60	1 - 44	Plan & Profile					
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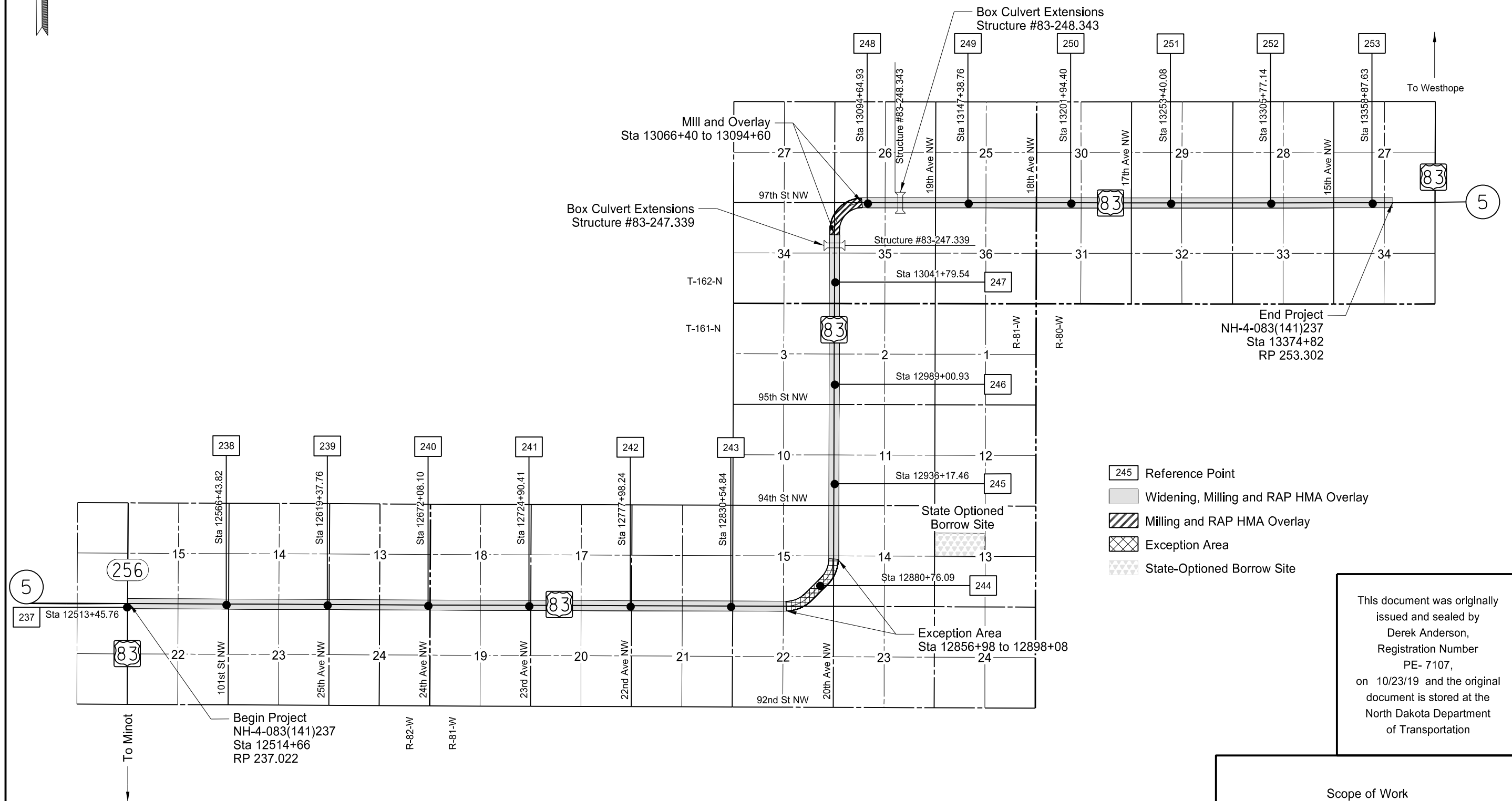
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D-101-10	NDDOT Utility Company and Organization Abbreviations
D-101-20, 21	Line Styles
D-101-30, 31,32	Symbols
D-203-5	Standard 90 Degree Flared Intersection - (No Center Left Turn Lane on Major Road)
D-203-7	Recovery Approaches At T-Intersections
D-203-8	Standard Rural Approaches
D-255-2	Erosion And Siltation Control - Erosion Control Blanket Installation
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D-261-1	Erosion Control - Fiber Roll Placement Details
D-704-2	Traffic Control For Coring Of Hot Bituminous Pavement
D-704-5	Construction Sign Detail
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
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D-720-1	Standard Monuments And Right Of Way Markers
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Number	Description
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Scope of Work

US 83

W Jct 5 E to E Jct 5

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NOTES

- 105-P01 UTILITIES: The vertical and horizontal utility locations shown in the plans are approximate. Plan locations should not be interpreted as exact for bidding or construction purposes.
- 105-P02 UTILITIES: No utility relocations or adjustments are planned. All utilities on the project need to be protected and remain in existing location.
- 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 E.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 "Aggregate Base Course CI 5."
- If a 4:1 or flatter wedge is not installed, provide 24 hour flagging or 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.
- 108-100 WEEKLY PLANNING & REPORTING MEETING: A weekly planning and reporting meeting is required.
- 203-010 SHRINKAGE: 25 percent additional volume is included for shrinkage in earth embankment.
- 203-380 AVERAGE HAUL: The average haul shown on the plans does not include the dead haul from the borrow areas to the point of entry into the mass.
- 203-P01 COMPACTION AND DENSITY CONTROL: Compact material for sliver grading as specified in Section 203.04 E.4, Compaction Control, Type C.

- 261-P01 TEMPORARY EROSION CONTROL WITHIN WETLANDS: Silt Fence have been provided for placement at the back-side of the earthen berm at the perimeter of the work area at wetlands. If there is no standing water within the adjacent wetland, immediate seeding and mulching of the earthen berm may replace the silt fence. If seed/mulch is not immediately applied, silt fence is required. Temporary seed mix and mulch for this use will be paid for as "Temporary Cover Crop" and "Straw Mulch."
- 261-P02 PERMANENT FIBER ROLLS: If fiber rolls are to remain on the project, use fiber rolls that are composed of netting that meets either of the following:
- Plastic or natural fiber photodegradable netting that has a life expectancy between 12 to 24 months.
 - 100 percent biodegradable jute netting that has a life expectancy between 6 to 12 months.
- 401-P01 FOG SEAL: Fog seal after final rolling with a minimum mat temperature of 125 degrees F. Apply SS1-h or CSS1-h at a rate of 0.05 Gal/SY. Use a dilution rate between 50/50 and 70/30 for the emulsion. Allow fog seal to penetrate and dry before opening roadway to traffic.
- 430-P01 RAP SUPERPAVE: Incorporate RAP at a rate between 10 and 20 percent of the mix, by weight.
- 704-100 TRAFFIC CONTROL SUPERVISOR: Provide a Traffic Control Supervisor.
- 704-255 TRAFFIC CONTROL FOR SHOULDER DROP-OFF: If the shoulder and adjacent driving lane are not even at the end of the day, the following criteria will apply:
- Place the following sign assembly at the locations listed below.
- Sign Assembly: Sign No. W8-9a-48 "Shoulder Drop Off" and supplemental plate Sign No. W20-52-54 to identify the distance.
- Locations:
- In advance of the drop off;
 - Spaced at each mile from the advance sign; and
 - At major intersections (CMC routes, state and US highways, and Interstate Ramps).
- If the difference in elevation between the shoulder and the driving lane is 2" or greater, construct a slough on the driving lane that is 4:1 or flatter.
- If the difference in elevation between the shoulder and driving lane is less than 2", no slough is required.
- Sign assemblies will be measured and paid for according to Section 704 "Temporary Traffic Control."

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NOTES

704-500 PORTABLE RUMBLE STRIPS (PRS): Use PRS made of rubber or engineered polymers.

Install PRS that meet the following criteria:

- Have no adhesives or fasteners required for placement;
- Have a manufacture’s speed rating that meets or exceeds the posted speed limit; and
- Each strip in the array must weigh a minimum of 100 pounds.

Use individual PRS constructed in one of the following manners:

- A single piece;
- Inter locking segments; or
- Two pieces hinged at the midpoint.

An installed array of PRS consists of a minimum of 3 individual strips. Move rumble strips with the flagging operation. Do not place rumble strips on horizontal curves.

The Engineer will count and measure each array as one unit. Include the cost of providing, installing, maintaining, and relocating PRS in the unit price bid for “Portable Rumble Strips”.

704-P01 TRAFFIC CONTROL FOR BITUMINOUS PAVEMENT: Provide traffic control consisting of a temporary road closure, flagging, and a pilot car.

Traffic control device quantities are based on a 6 mile limitation and the list below. Provide additional devices at no additional cost to the Department.

1. Standard D-704-2
2. Standard D-704-15, layout A
3. Standard D-704-17
4. Standard D-704-20, layout G
5. Standard D-704-22, layouts K and L
6. Standard D-704-24, layouts R and S
7. Standard D-704-26, layouts BB, EE, GG, JJ and KK
8. Standard D-704-27
9. Standard D-704-56

When installing layout G from Standard D-704-20, move sign W3-5-48 and the sign assembly containing signs R2-1-48 and R2-1a-24 with the work area as it progresses through the construction zone. Place the R2-1-48 assembly a minimum of 500 feet in advance of flagging signs.

754-P01 STOP SIGNS - REFLECTIVE STRIPS: Install 2 inch wide red reflective strips along the full length of the post on the side of the support that faces the same direction as the stop sign.

Use reflective material that meets the requirements of Section 894.02 E, “Type XI Retroreflective Sheeting”.

Install the strips along the full length of the exposed post on STOP signs at the following locations.

- Sta 12513+82 Lt
- Sta 12515+03 Lt

Include the cost of furnishing and installing retroreflective strips in the contract unit price for “Steel Galvanized Posts – Telescoping Perforated Tube.”

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ENVIRONMENTAL NOTES

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

EN-1 AQUATIC NUISANCE SPECIES (ANS): Equipment that was last used outside of North Dakota or within a Class I infested waterbody (identified on the North Dakota Game and Fish Department (NDGFD) website) requires an inspection by NDGFD. Notify the NDGFD at least 10 business days prior to pumps, watercraft, or any equipment entering a public water to allow the NDGFD sufficient time to inspect any and all such equipment for ANS. Contact the NDGFD ANS Coordinator, Jessica Howell by e-mail jmhowell@nd.gov for equipment inspections. Supply one of the following to the engineer as proof of compliance prior to work taking place in the water: (1) the NDGFD inspection report, (2) documented NDGFD correspondence (email or signed letter). If an inspection is not required, no follow up documentation is required.

EN-2 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.

EN-3 WETLAND MITIGATION: Wetland mitigation is required for unavoidable permanent wetland impacts. The wetland mitigation plan is incorporated into the plans for this project. After completion of the mitigation area, the Engineer will complete the Onsite Mitigation Certification Form SFN 61042. Any sedimentation occurring within the mitigation area will be removed.

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Estimated Quantities

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SPEC	CODE	ITEM DESCRIPTION	UNIT	NH-4-083(141)237	TOTAL
103	100	CONTRACT BOND	L SUM	1	1
202	101	REMOVAL OF CONCRETE	EA	2	2
202	169	REMOVAL OF END SECTION-ALL TYPES & SIZES	EA	37	37
203	103	COMMON EXCAVATION-TYPE C	CY	39808	39808
203	109	TOPSOIL	CY	99694	99694
203	122	TOPSOIL-DEPT OPTION BORROW AREA	CY	40333	40333
203	140	BORROW-EXCAVATION	CY	85316	85316
210	50	BOX CULVERT EXCAVATION	EA	2	2
210	210	FOUNDATION FILL	CY	150	150
210	405	FOUNDATION PREPARATION-BOX CULVERT	EA	2	2
216	100	WATER	M GAL	2756	2756
230	125	SHOULDER PREPARATION	MILE	1.06	1.06
251	200	SEEDING CLASS II	ACRE	161.7	161.7
251	1000	WETLAND SEED	ACRE	2.39	2.39
251	2000	TEMPORARY COVER CROP	ACRE	161.7	161.7
253	101	STRAW MULCH	ACRE	375.79	375.79
255	103	ECB TYPE 3	SY	4484	4484
256	200	RIPRAP GRADE II	CY	115	115
260	200	SILT FENCE SUPPORTED	LF	62070	62070
260	201	REMOVE SILT FENCE SUPPORTED	LF	62070	62070
261	112	FIBER ROLLS 12IN	LF	58994	58994
261	113	REMOVE FIBER ROLLS 12IN	LF	3824	3824
262	100	FLOTATION SILT CURTAIN	LF	280	280
262	101	REMOVE FLOTATION SILT CURTAIN	LF	280	280
265	100	STABILIZED CONSTRUCTION ACCESS	EA	1	1
265	101	REMOVE STABILIZED CONSTRUCTION ACCESS	EA	1	1
302	120	AGGREGATE BASE COURSE CL 5	TON	42751	42751
401	50	TACK COAT	GAL	45669	45669
401	60	PRIME COAT	GAL	13184	13184
401	70	FOG SEAL	GAL	14790	14790
411	105	MILLING PAVEMENT SURFACE	SY	243036	243036
430	145	RAP - SUPERPAVE FAA 45	TON	51832	51832
430	400	HMA INTELLIGENT COMPACTION	L SUM	1	1
430	425	PAVER MOUNTED THERMAL PROFILER	LSUM	1	1
430	1000	CORED SAMPLE	EA	703	703
430	5806	PG 58H-28 ASPHALT CEMENT	TON	2423	2423
602	1131	CLASS AE-3 CONCRETE-BOX CULVERT	CY	183.4	183.4
612	114	REINFORCING STEEL-GRADE 60-BOX CULVERT	LBS	28540	28540
702	100	MOBILIZATION	L SUM	1	1
704	100	FLAGGING	MHR	3200	3200
704	1000	TRAFFIC CONTROL SIGNS	UNIT	4577	4577
704	1048	PORTABLE RUMBLE STRIPS	EA	2	2
704	1052	TYPE III BARRICADE	EA	6	6
704	1060	DELINEATOR DRUMS	EA	75	75
704	1067	TUBULAR MARKERS	EA	400	400
704	1080	STACKABLE VERTICAL PANELS	EA	40	40
704	1185	PILOT CAR	HR	1600	1600

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SPEC	CODE	ITEM DESCRIPTION	UNIT	NH-4-083(141)237	TOTAL				
706	500	AGGREGATE LABORATORY	EA	1	1				
706	550	BITUMINOUS LABORATORY	EA	1	1				
706	600	CONTRACTOR'S LABORATORY	EA	1	1				
709	155	GEOSYNTHETIC MATERIAL TYPE RR	SY	230	230				
714	615	PIPE CONC REINF 24IN CL III	LF	326	326				
714	820	PIPE CONC REINF 30IN CL III	LF	116	116				
714	1105	PIPE CONC REINF 48IN CL III	LF	32	32				
714	3023	END SECT-TRAVERSABLE REINF. CONC.24IN	EA	4	4				
714	3033	END SECT-TRAVERSABLE REINF. CONC.30IN	EA	4	4				
714	5015	PIPE CORR STEEL .064IN 18IN	LF	2701	2701				
714	5035	PIPE CORR STEEL .064IN 24IN	LF	25	25				
714	5210	PIPE CORR STEEL .079IN 30IN	LF	77	77				
714	5810	END SECT CORR STEEL .064IN 18IN	EA	131	131				
714	5820	END SECT CORR STEEL .064IN 24IN	EA	4	4				
714	5825	END SECT CORR STEEL .079IN 30IN	EA	6	6				
714	9660	REMOVE & RELAY END SECTION-ALL TYPE & SIZES	EA	60	60				
720	110	RIGHT OF WAY MARKERS	EA	44	44				
720	135	IRON PIN REFERENCE MONUMENTS	EA	47	47				
754	110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	91	91				
754	112	FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	82.6	82.6				
754	206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	543	543				
754	563	REFERENCE MARKER-TYPE C	EA	15	15				
754	592	RESET SIGN PANEL	EA	15	15				
754	805	OBJECT MARKERS - CULVERTS	EA	208	208				
760	5	RUMBLE STRIPS - ASPHALT SHOULDER	MILE	31.024	31.024				
760	7	RUMBLE STRIPS - ASPHALT CENTERLINE	MILE	16.512	16.512				
762	103	PVMT MK PAINTED-MESSAGE	SF	32	32				
762	430	SHORT TERM 4IN LINE-TYPE NR	LF	100204	100204				
762	1104	PVMT MK PAINTED 4IN LINE	LF	199931	199931				
762	1108	PVMT MK PAINTED 8IN LINE	LF	218	218				
762	1124	PVMT MK PAINTED 24IN LINE	LF	67	67				
764	2080	REMOVE BOX BEAM GUARDRAIL	LF	734.6	734.6				
764	2081	REMOVE END TREATMENT & TRANSITION	EA	8	8				
766	100	MAILBOX-ALL TYPES	EA	6	6				
900	1000	TEMPORARY STREAM DIVERSION	EA	2	2				
930	9671	BOX CULVERT JOINT REPAIR	EA	6	6				

MATERIALS

Aggregate Base Course CL 5 @ 1.875 Ton/CY
RAP-Superpave FAA 45 @ 2.0 Ton/CY
PG 58H-28 Asphalt Cement @ 4.7%
Tack Coat @ 0.05 Gal/SY
Tack Coat @ 0.10 Gal/SY Milled Areas
Fog Coat @ 0.05 Gal/SY

MILLING PAVEMENT SURFACE

Bituminous Pavement @ 2.0 Ton/CY

Water

216 0100 WATER			
Material	Basis	Basis Quantity	Quantity (MGAL)
Dust Palliative	25 MGal/Mile	16 Mile	400
Dust Palliative Haul Road	-	-	250
Embankment	10 Gal/CY	125,124 CY	1,251
Aggregates	20 Gal/Ton	42,751 Ton	855
Total:			2,756 MGal

Borrow Site

Borrow Summary				
Locations	203 0122 TOPSOIL-DEPT OPTION BORROW AREA (CY)	253 0101 STRAW MULCH (Acres)	708 1325 SILT FENCE SUPPORTED (LF)	708 1335 REMOVAL SILT FENCE SUPPORTED (LF)
Borrow Site B-1	40,333	50.0	6,900	6,900
Totals:	40,333	50.0	6,900	6,900

Area is tilled farmland-stabilize with straw mulch only

Seeding Summary Tables

Seeding Summary			
Locations	251 2000 TEMPORARY CROP COVER (Acres)	251 0200 SEEDING- CLASS II (Acres)	253 0101 STRAW MULCH (Acres)
12515+52-12600+00	16.7	16.7	33.4
12600+00-12700+00	19.6	19.6	39.2
12700+00-12800+00	19.0	19.0	38.0
12800+00-12856+98	11.1	11.1	22.2
12898+08-13000+00	20.2	20.2	40.4
13000+00-13066+40	15.7	15.7	31.4
13094+60-13200+00	25.4	25.4	50.8
13200+00-13374+82	34.0	34.0	68.0
Totals:	161.7	161.7	323.4

Wetland Summary		
Locations	251 1000 WETLAND SEEDING (Acres)	251 0101 STRAW MULCH (Acres)
Mitigation Site #1	0.26	0.26
Mitigation Site #2	0.31	0.31
Mitigation Site #3	0.46	0.46
Mitigation Site #4	0.15	0.15
Mitigation Site #5	0.48	0.48
Mitigation Site #6	0.92	0.92
Mitigation Site #7	0.38	0.38
Totals:	2.39	2.39

Object Markers - Culverts

754 0803 OBJECT MARKERS - TYPE III			
Location	No of Pipes	Markers per Pipe	Total
Centerline Pipes	36	2	72
Approach Pipes	68	2	136
			208 EA

Note: Refer to Standard Drawing D-754-83

Rumble Strips-Shoulder

760 0005 RUMBLE STRIPS - ASPHALT SHOULDER			
Begin Station	End Station	Basis	Quantity (Mile)
12514+66	12856+98	10,560 LF/Mile	12.966
12898+08	13374+82	10,560 LF/Mile	18.058
			31.024 Mile

Rumble Strips-Centerline

760 0007 RUMBLE STRIPS - ASPHALT CENTERLINE			
Begin Station	End Station	Basis	Quantity (Mile)
12514+66	12856+98	5,280 LF/Mile	6.483
12898+08	13374+82	5,280 LF/Mile	9.029
			15.512 Mile

Mailboxes

766 0100 MAILBOX-ALL TYPES				
Station	Location	Type	Mailboxes	Quantity (EA)
12725+70	Lt	Single	1	1
12924+98	Rt	Single	1	1
12969+21	Lt	Single	1	1
13016+52	Lt	Double	1	1
13182+86	Lt	Single	2	1
13324+94	Rt	Single	1	1
				6 EA

Note: Refer to Standard Drawing D-766-01

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Basis of Estimate

US 83

Earthwork Summary

Location	203 0103 COMMON EXCAVATION- TYPE C (CY)	Embankment (CY)	203 0140 BORROW- EXCAVATION	203 0109 TOPSOIL (CY)
	A	B	C = B - A	D
US 83 Sta 12515+52-12856+98	6,888	39,383	32,495	38,284
US 83 Sta 12898+08-13066+40	5,660	20,429	14,769	21,991
US 83 Sta 13094+60-13374+82	27,260	35,012	7,752	39,417
101 approaches (300 CY per each)		30,300	30,300	
TOTAL	39,808	125,124	85,316	99,692

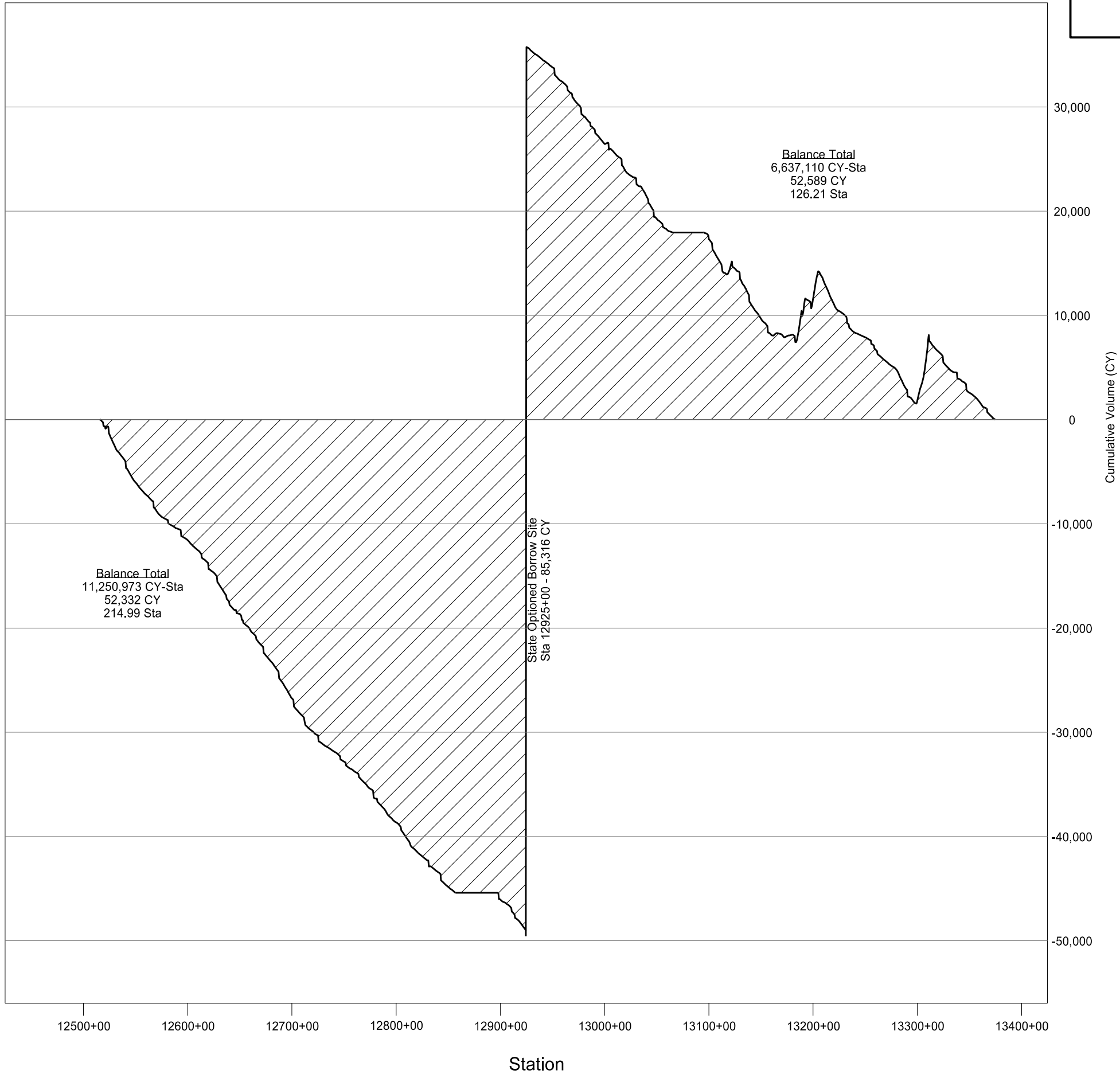
Notes:

1. This computation report is not a balance sheet. The Contractor shall calculate their own balance of materials.
2. An additional volume of 25% to allow for shrinkage is included in all embankment volumes.
3. Topsoil quantities for approaches included in US 83 topsoil quantities.
4. Use excess topsoil on inslopes and backslopes throughout the project. Do not use in critical drainage and wetland areas.
5. Subcut ditch 6 inches and replace with clay material within wetland mitigation site #5, station 13198+50 to 13205+00.

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Data Tables
US 83

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-4-083(141)237	11	2

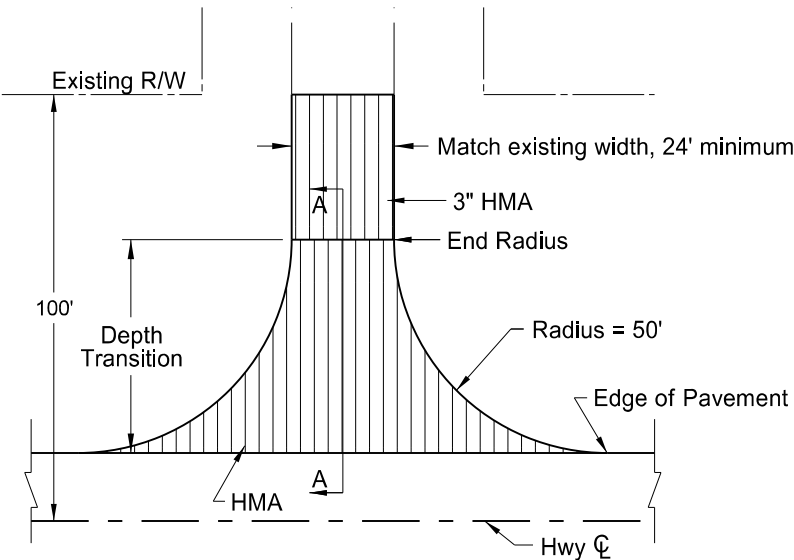


Project Totals
17,888,083 CY-Sta
104,921 CY
170.49 Sta

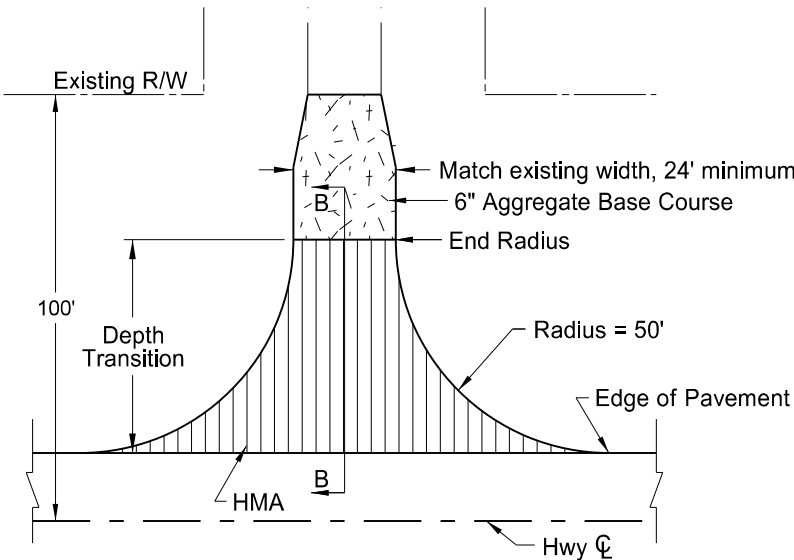
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Mass Diagram
US 83

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	20	1

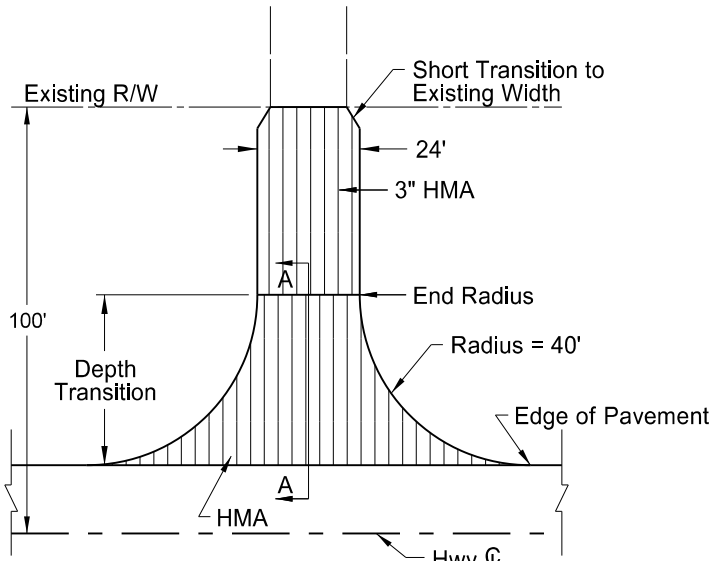
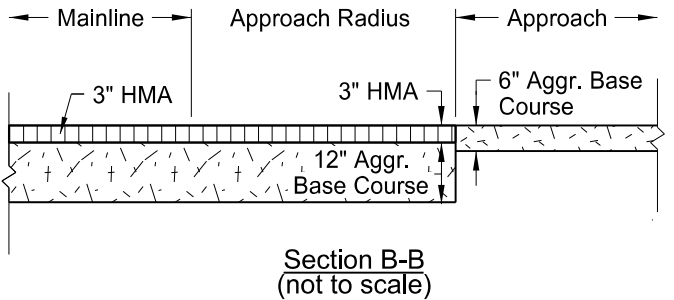
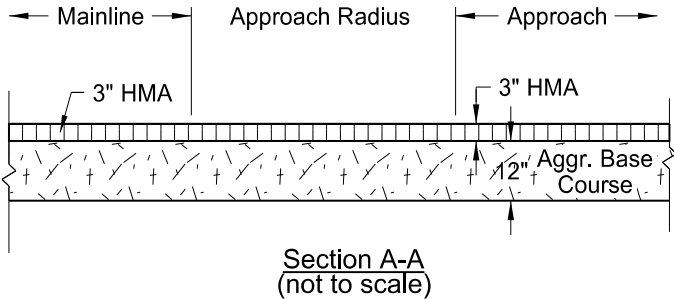


(1) Paved Section Line, County Road, or Street Approach

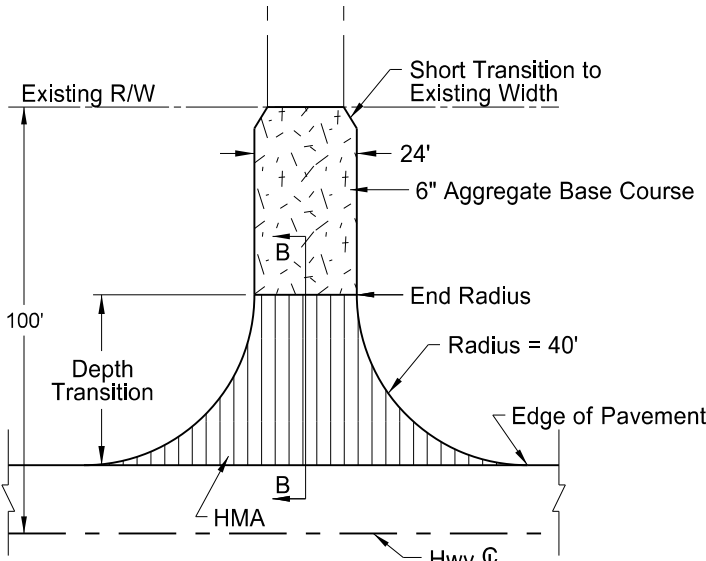


(2) Gravel Section Line, County Road, or Street Approach

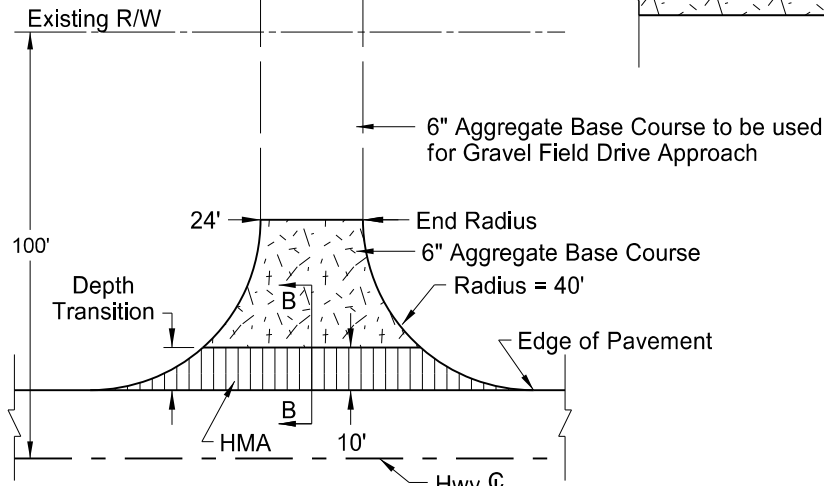
- Notes:
- Actual HMA paving and aggregate base course locations may vary in the field, as approved by the Engineer.
 - Quantity totals have been included in the bid items of the "Estimate of Quantities" of the plans.



(3) Paved Private Drive Approach



(4) Gravel Private Drive Approach



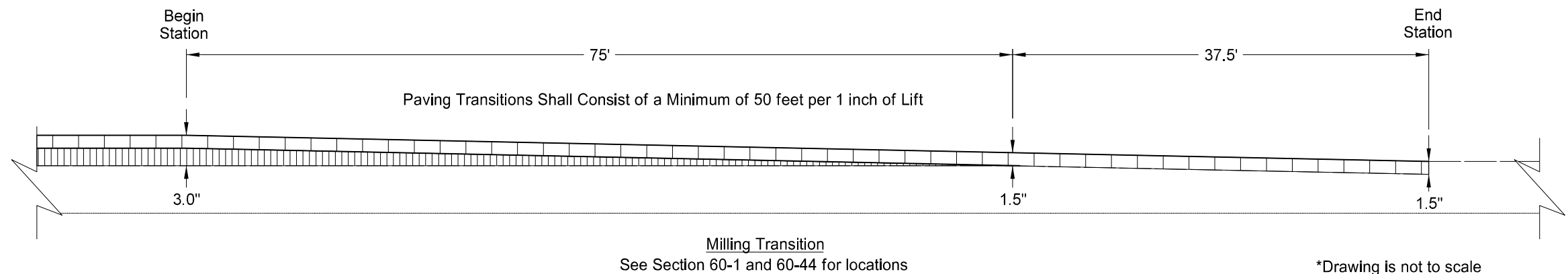
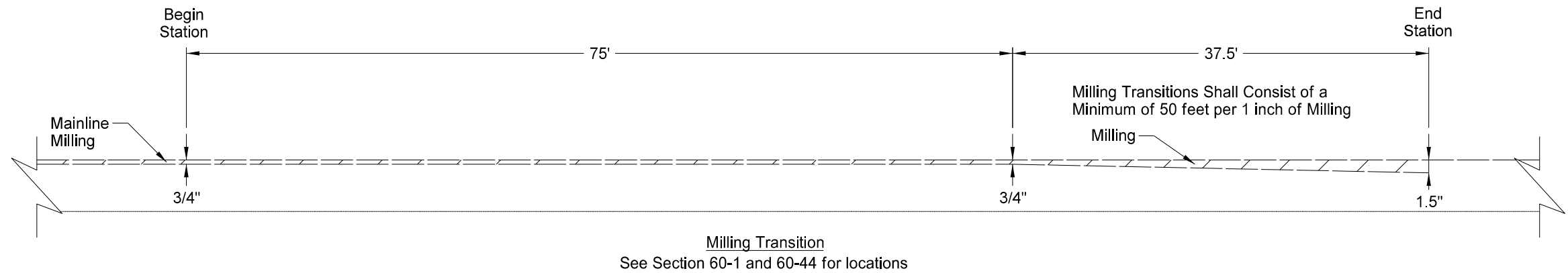
(5) Field Drive Approach

BASIS OF ESTIMATE		(1)	(2)	(3)	(4)	(5)		
ITEM	UNIT	Paved Section Line	Gravel Section Line	Paved Private Drive	Gravel Private Drive	Topsoil Field Drive	Gravel Field Drive	TOTALS
Number of Locations	#	0	15	0	11	71	4	101
Aggregate Base Course CL 5	TON	-	230	-	191	119	157	14,628
Tack Coat	GAL	-	27	-	20	9	9	1,300
RAP Superpave FAA 45	TON	-	85	-	62	26	26	3,907
PG 58H-28 Asphalt Cement	TON	-	4.3	-	2.7	1.1	1.1	168.0

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Approach Paving Details
US 83

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-4-083(141)237	20	2



Top Lift
Bottom Lift

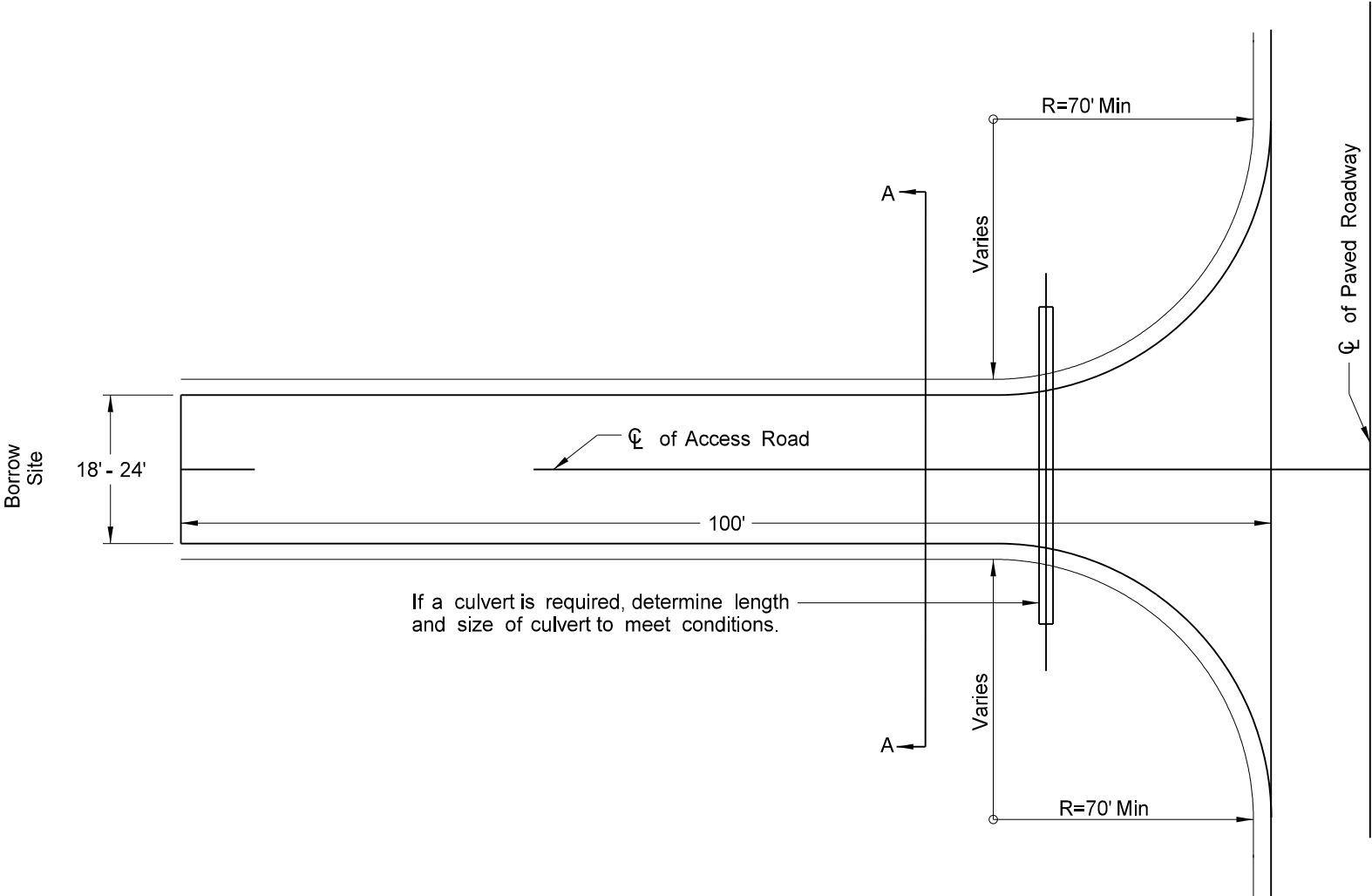
*Drawing is not to scale

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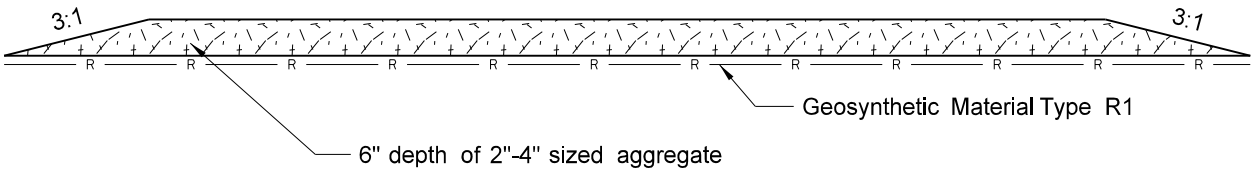
Milling and Paving Transitions
US 83

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-4-083(141)237	20	3

SPEC CODE	BID ITEM	QTY	UNIT
265 0100	STABILIZED CONSTRUCTION ACCESS Borrow Site Entrance / Exit	1	EA
265 0101	REMOVE STABILIZED CONSTRUCTION Borrow Site Entrance / Exit	1	EA



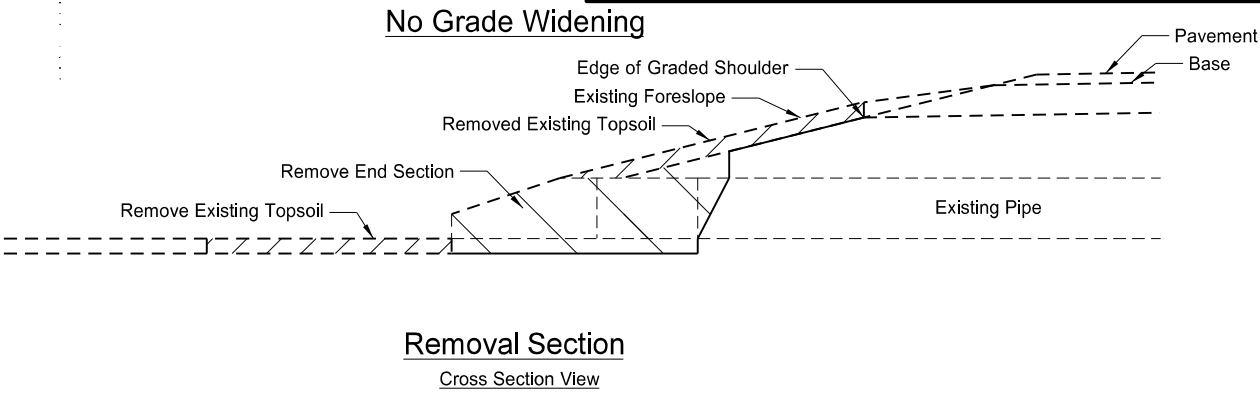
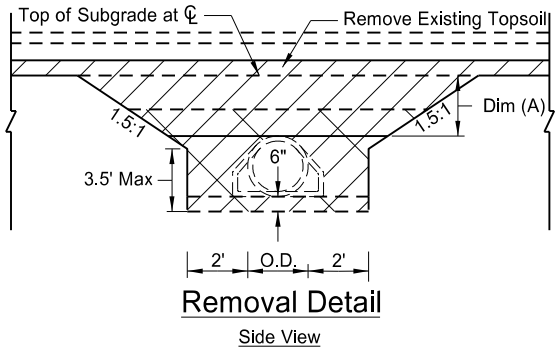
PLAN VIEW



A - A Cross Section

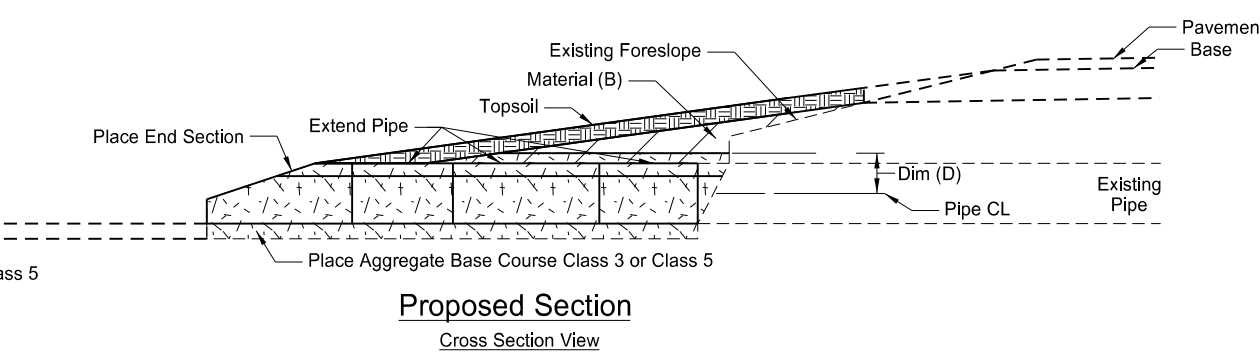
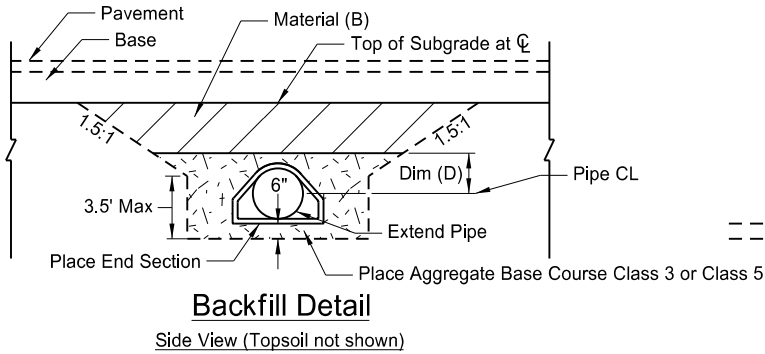
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Stabilized Construction Access
US 83



- Pay Items
1) Pipe*
2) Remove & Reset End Section or
Remove End Section and Place New End Section

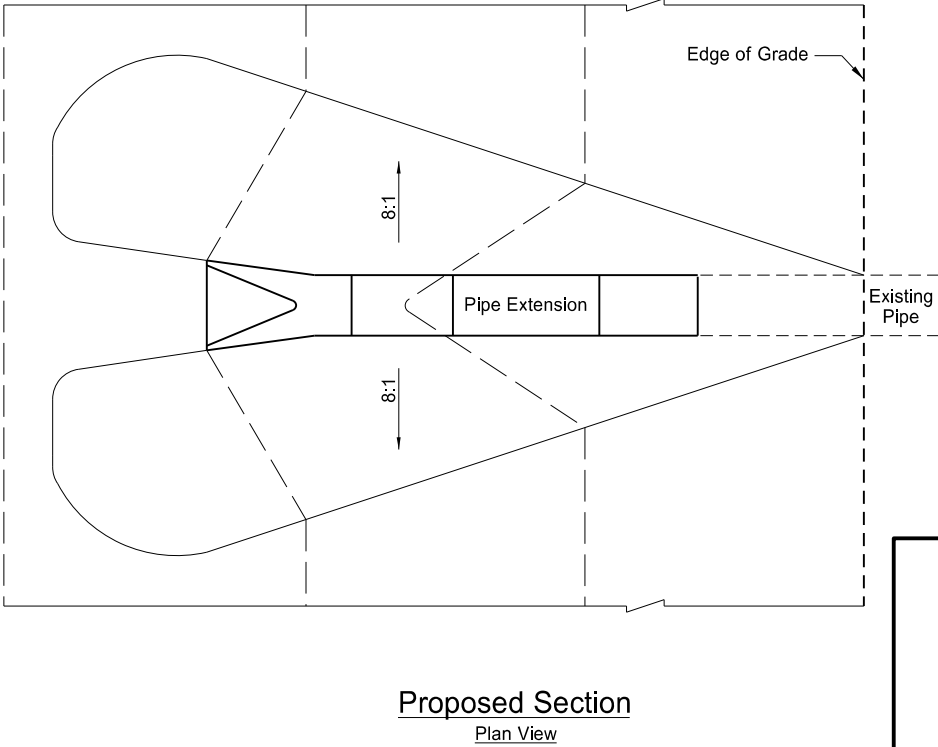
- *Included in Pipe Pay Item
1) Pipe
2) Aggregate Base Course Class 3 or Class 5
3) Embankment
4) Topsoil
5) Seeding
6) Mulch



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

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

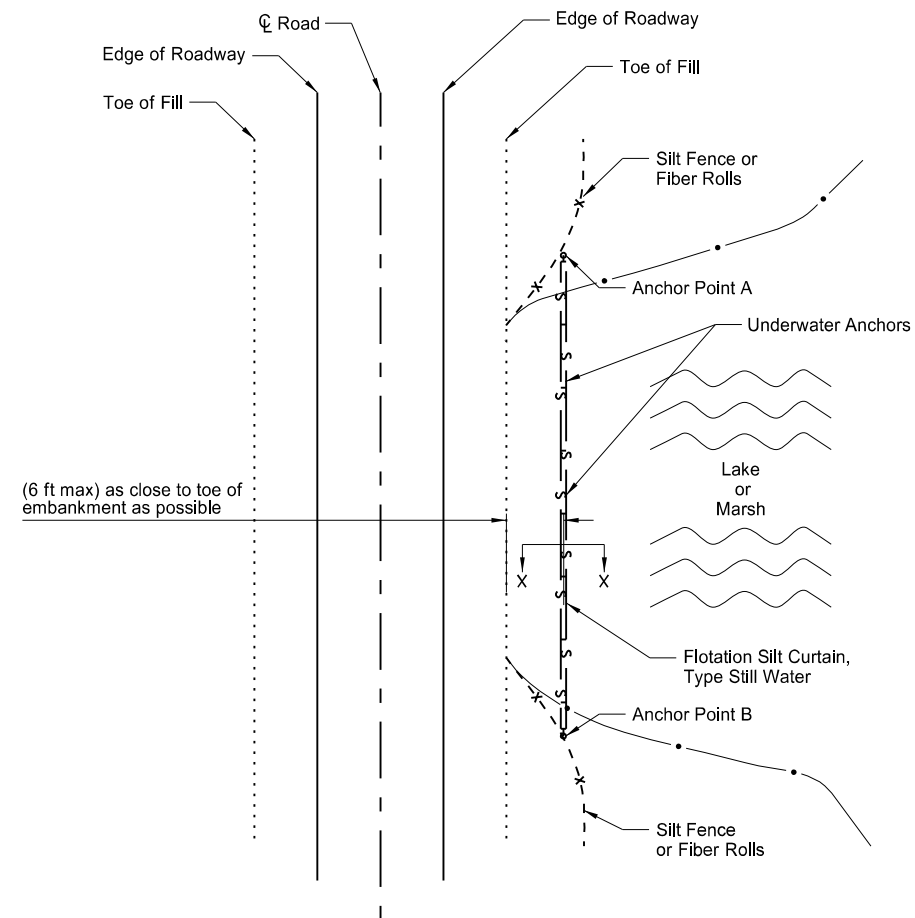
- NOTES:
1. Embankment may be either Borrow Excavation or Common Excavation.
2. Aggregate may be either Class 3 or Class 5 Aggregate Base Course.



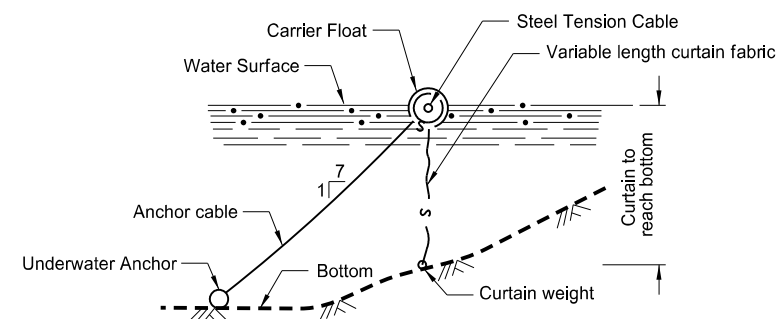
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Mainline Centerline Pipe Extension Detail
US 83

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-4-083(141)237	20	5



PLAN VIEW
FLOTATION SILT CURTAIN - TYPE STILL WATER
Extend silt curtain onto shore and anchor there also.

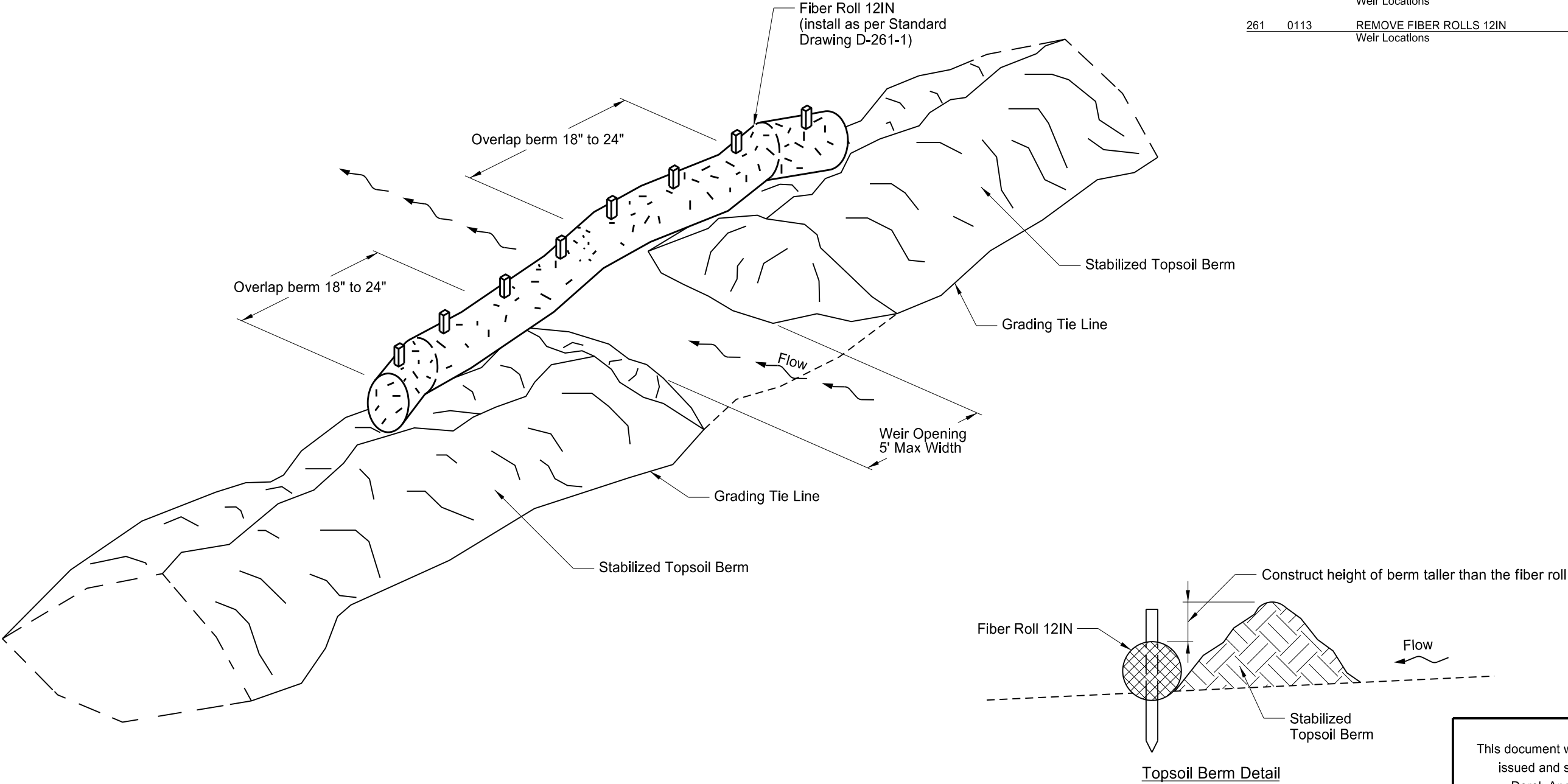


SECTION X-X
FLOTATION SILT CURTAINS

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Temporary Erosion Control - Flotation Silt Curtain
US 83

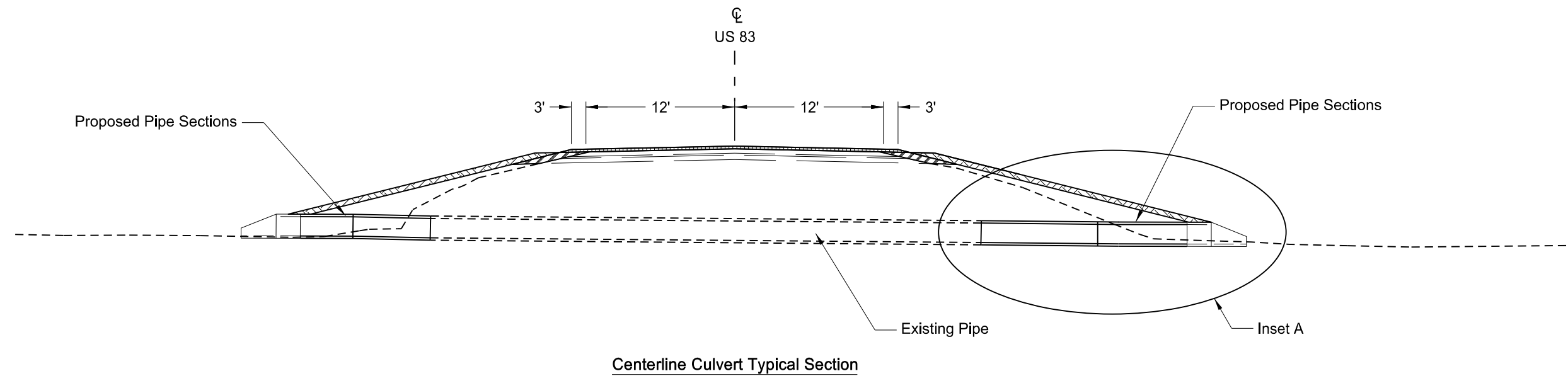
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	20	6
SPEC CODE	BID ITEM	QTY	UNIT
261 0112	FIBER ROLLS 12IN Weir Locations	400	LF
261 0113	REMOVE FIBER ROLLS 12IN Weir Locations	400	LF



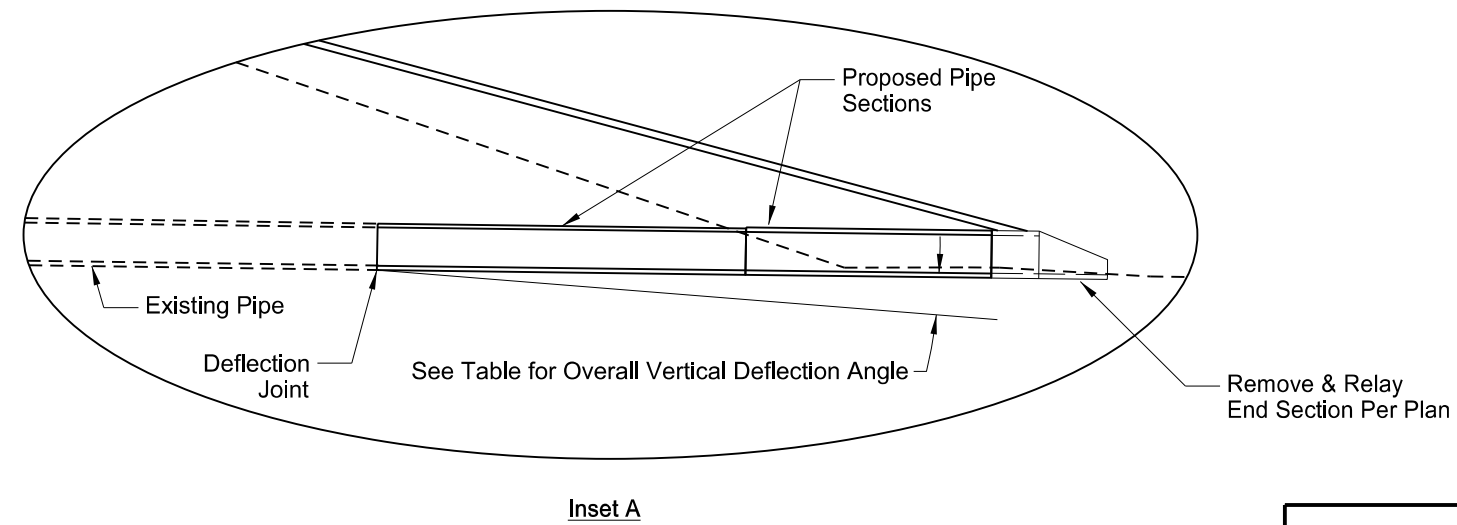
- Notes:
1. Windrow the existing topsoil from the foreslope to create a berm at the grading tie line.
 2. Stabilize berms in accordance with the Construction General Permit.
 3. Place weirs intermittently throughout the length of the berm to allow stormwater to drain through the berm.
 4. Avoid placing 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".

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Temporary Topsoil Berm and Weir Detail
US 83



Station	Offset	Pipe Diameter (inches)	Number of Deflected Joints	Overall Vertical Deflection Angle
12560+37	Lt	24	1	01°00'00"
12560+37	Rt	24	1	00°43'00"
12560+57	Rt	24	1	00°49'00"
12638+86	Lt	24	1	01°00'00"
12638+86	Rt	24	1	01°00'00"
12650+96	Rt	24	1	00°42'00"
12725+19	Lt	24	1	00°55'00"

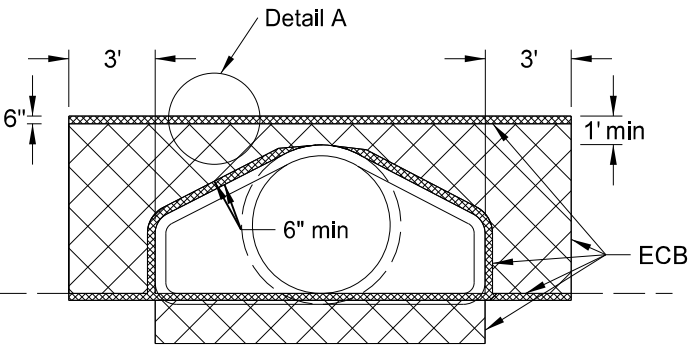


Notes:

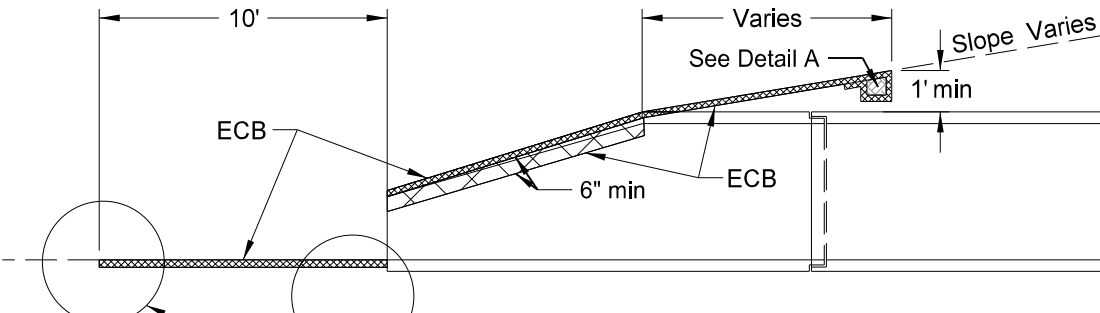
1. Remove or Relay End Section. (See Section 60)
2. Drawing Not to Scale.

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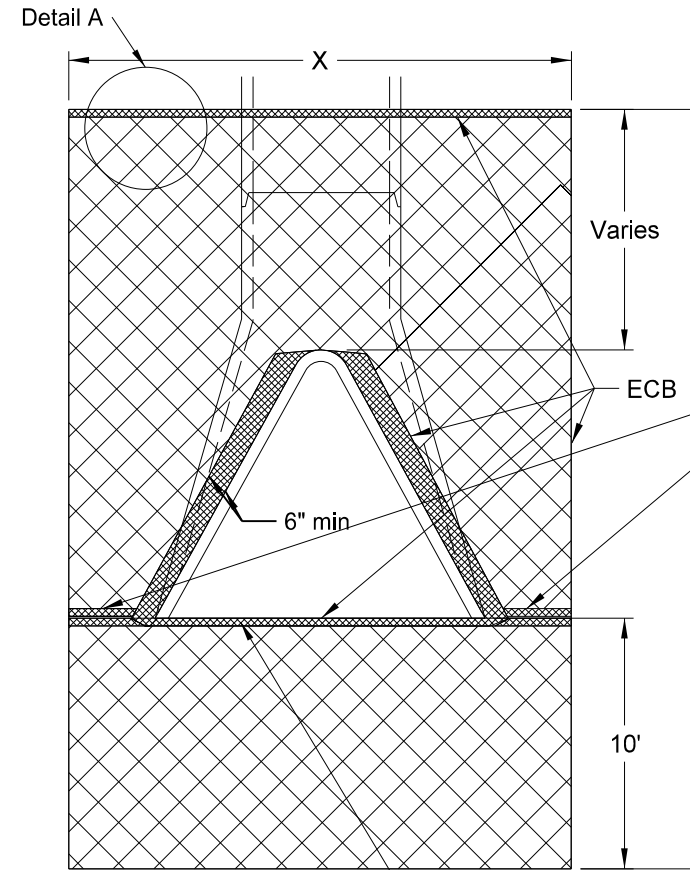
Centerline Culvert Detail
US 83



FRONT VIEW



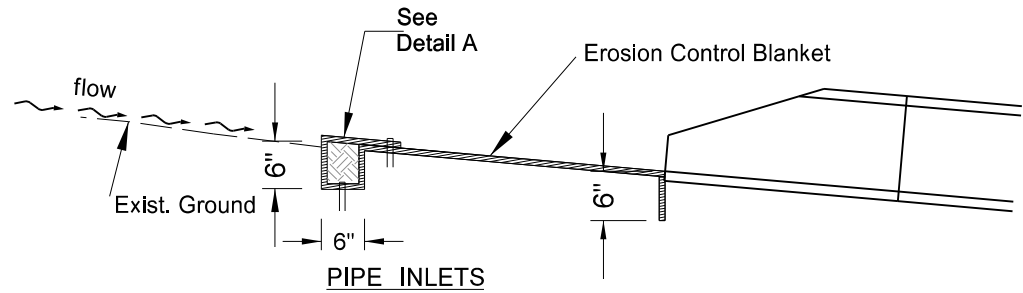
SIDE VIEW



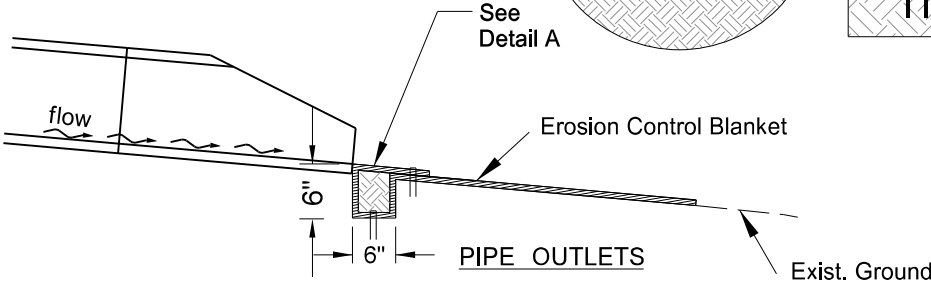
TOP VIEW

Inlet side - see applicable detail for pipe inlet.
Outlet side - see applicable detail for pipe outlet.

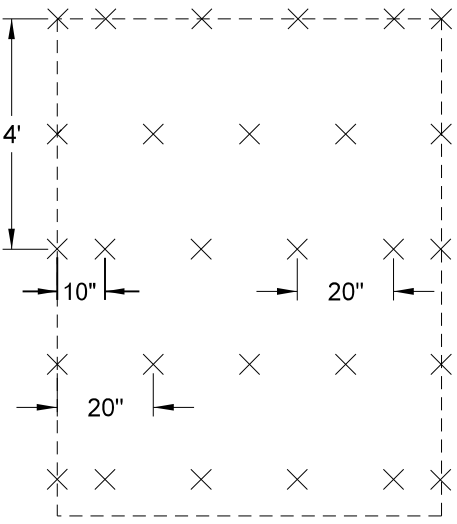
NOTE: Tuck the ECB a minimum of 6" into the embankment (against the flared end section) around the opening of the flared end section.



PIPE INLETS



PIPE OUTLETS



STAPLE PATTERN

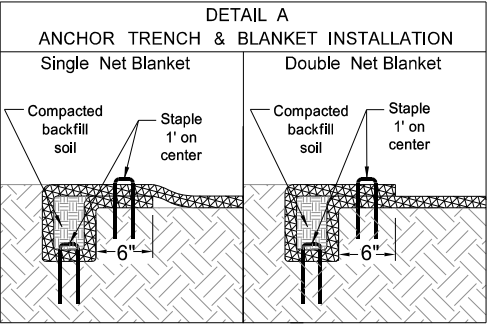
APPROACH CULVERTS				
DIA	X	Y	Surface area to be protected	ECB
In	Ft	Ft	SF	SY
15	9.0	20.0	176.0	20
18	9.5	20.7	190.7	22
21	9.5	21.0	190.9	22
24	10.5	21.6	214.1	24
27	11.0	22.0	226.3	25
30	11.6	22.5	241.5	27
36	12.7	23.3	268.8	30
42	13.3	23.3	279.7	31
48	13.8	24.0	293.2	33
54	14.5	23.4	300.6	34
60	15.0	23.0	307.5	35
66	15.6	24.0	325.6	37
72	16.2	24.5	340.6	38

Note: Quantities based on 8:1 slope.

CENTERLINE CULVERTS				
DIA	X	Y	Surface area to be protected	ECB
In	Ft	Ft	SF	SY
24	10.5	17.6	172.1	20
27	11.0	18.0	182.3	21
30	11.6	18.5	195.1	22
36	12.7	19.2	216.7	24
42	13.3	19.2	225.2	25
48	13.8	20.0	238.0	27
54	14.5	19.5	244.7	28
60	15.0	19.0	248.3	28
66	15.6	20.0	264.5	30
72	16.2	20.5	276.8	31

Note: Quantities based on 4:1 slope.

Note: See Section 20 Sheet 9 for tabulation of ECB locations and quantities.



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Erosion Control at Culvert Flared End Sections

US 83

255 0103 ECB TYPE 3						
Location of Surface Area to be Protected			Pipe Diameter	Unit Quantity	Total Quantity	
Station	Offset	No	In	SY	SY	
12521+15	Lt	Bk & Ahd	2	18	22	44
12524+44	Lt	Bk & Ahd	2	18	22	44
12524+44	Rt	Bk & Ahd	2	18	22	44
12540+85	Lt	Bk & Ahd	2	18	22	44
12540+85	Rt	Bk & Ahd	2	18	22	44
12560+37	CL	Lt & Rt	2	24	20	40
12560+57	CL	Lt & Rt	2	24	20	40
12568+22	CL	Lt & Rt	2	24	20	40
12581+45	Lt	Bk & Ahd	2	18	22	44
12592+09	CL	Lt & Rt	2	30	22	44
12593+83	Lt	Bk & Ahd	2	18	22	44
12593+83	Rt	Bk	1	18	22	22
12613+56	Rt	Bk & Ahd	2	18	22	44
12620+14	Lt	Bk & Ahd	2	18	22	44
12620+14	Rt	Bk & Ahd	2	18	22	44
12628+44	Lt	Bk & Ahd	2	18	22	44
12628+44	Rt	Bk & Ahd	2	18	22	44
12637+45	Lt	Bk & Ahd	2	18	22	44
12638+86	CL	Lt & Rt	2	24	20	40
12640+19	Rt	Bk & Ahd	2	18	22	44
12646+95	Lt	Bk & Ahd	2	18	22	44
12650+96	CL	Lt & Rt	2	24	20	40
12653+44	Lt	Bk & Ahd	2	18	22	44
12672+41	CL	Lt & Rt	2	24	20	40
12673+46	CL	Lt & Rt	2	24	20	40
12687+78	Lt	Bk & Ahd	2	18	22	44
12687+78	Rt	Bk & Ahd	2	18	22	44
12698+97	CL	Lt & Rt	2	30	22	44
12701+95	Lt	Bk & Ahd	2	18	22	44
12701+95	Rt	Bk & Ahd	2	18	22	44
12712+08	Rt	Bk & Ahd	2	18	22	44
12712+82	Lt	Bk & Ahd	2	18	22	44
12725+19	CL	Lt & Rt	2	24	20	40
12728+91	CL	Lt & Rt	2	24	20	40
12752+03	Rt	Bk & Ahd	2	18	22	44
12764+33	Rt	Bk & Ahd	2	18	22	44
12777+91	CL	Lt & Rt	2	30	22	44
12778+89	CL	Lt & Rt	2	24	20	40
12804+93	Rt	Bk & Ahd	2	18	22	44
12812+72	CL	Lt & Rt	2	48	27	54
12813+02	CL	Lt & Rt	2	48	27	54
12828+56	CL	Lt & Rt	2	24	20	40
12831+39	Lt	Ahd	1	18	22	22
12831+39	Rt	Bk & Ahd	2	18	22	44
12856+40	CL	Lt & Rt	2	24	20	40

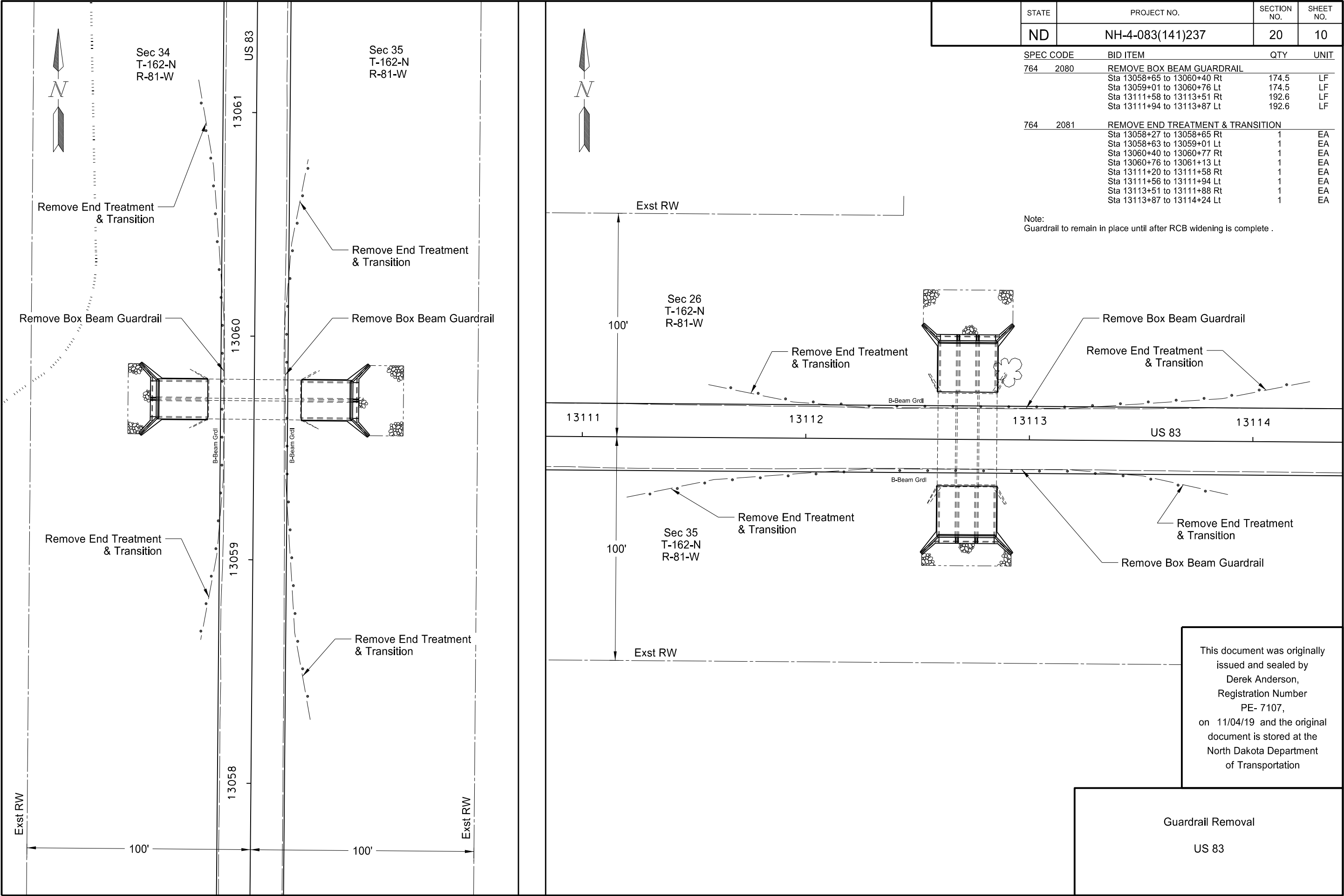
255 0103 ECB TYPE 3						
Location of Surface Area to be Protected			Pipe Diameter	Unit Quantity	Total Quantity	
Station	Offset	No	In	SY	SY	
12882+03	CL	Lt & Rt	2	24	20	40
12897+37	CL	Lt & Rt	2	24	20	40
12898+60	Lt	Bk & Ahd	2	18	22	44
12898+60	Rt	Bk & Ahd	2	18	22	44
12905+80	CL	Lt & Rt	2	24	20	40
12910+96	Lt	Bk & Ahd	2	18	22	44
12923+90	CL	Lt & Rt	2	24	20	40
12924+98	Lt	Bk & Ahd	2	18	22	44
12924+98	Rt	Bk & Ahd	2	18	22	44
12942+64	CL	Lt & Rt	2	24	20	40
12960+63	CL	Lt & Rt	2	24	20	40
12964+57	Rt	Bk & Ahd	2	18	22	44
12969+21	Lt	Bk & Ahd	2	18	22	44
12977+15	CL	Lt & Rt	2	30	22	44
12977+86	Rt	Bk & Ahd	2	30	22	44
12979+07	CL	Lt & Rt	2	24	20	40
12991+10	Rt	Bk & Ahd	2	18	22	44
13004+10	Lt	Bk & Ahd	2	18	22	44
13004+10	Rt	Bk & Ahd	2	18	22	44
13007+66	CL	Lt & Rt	2	24	20	40
13030+71	Lt	Bk & Ahd	2	18	22	44
13030+71	Rt	Bk & Ahd	2	18	22	44
13036+78	CL	Lt & Rt	2	30	22	44
13047+42	Lt	Bk & Ahd	2	18	22	44
13047+42	Rt	Bk & Ahd	2	18	22	44
13100+11	Rt	Bk & Ahd	2	18	22	44
13103+50	Lt	Bk & Ahd	2	30	22	44
13103+50	Rt	Bk & Ahd	2	30	22	44
13122+58	Lt	Bk & Ahd	2	24	20	40
13130+03	Lt	Bk & Ahd	2	18	22	44
13130+03	Rt	Bk & Ahd	2	18	22	44
13138+53	CL	Lt & Rt	2	24	20	40
13149+41	CL	Lt & Rt	2	24	20	40
13156+69	Lt	Bk & Ahd	2	18	22	44
13156+69	Rt	Bk & Ahd	2	18	22	44
13177+43	CL	Lt & Rt	2	24	20	40
13182+86	Lt	Bk & Ahd	2	18	22	44
13182+86	Rt	Bk & Ahd	2	18	22	44
13189+48	Lt	Bk & Ahd	2	18	22	44
13189+48	Rt	Bk & Ahd	2	18	22	44
13208+75	CL	Lt & Rt	2	24	20	40
13219+77	CL	Lt & Rt	2	24	20	40
13232+53	Lt	Bk & Ahd	2	18	22	44
13253+76	CL	Lt & Rt	2	24	20	40
13258+89	Rt	Bk & Ahd	2	18	22	44

255 0103 ECB TYPE 3						
Location of Surface Area to be Protected			Pipe Diameter	Unit Quantity	Total Quantity	
Station	Offset	No	In	SY	SY	
13261+80	Lt	Bk & Ahd	2	18	22	44
13281+28	CL	Lt & Rt	2	30	22	44
13290+75	Lt	Bk & Ahd	2	18	22	44
13290+75	Rt	Bk & Ahd	2	18	22	44
13311+60	Lt	Bk & Ahd	2	18	22	44
13311+60	Rt	Bk & Ahd	2	18	22	44
13324+94	Lt	Bk & Ahd	2	18	22	44
13324+94	Rt	Bk & Ahd	2	18	22	44
13334+74	CL	Lt & Rt	2	24	20	40
13338+47	Lt	Bk & Ahd	2	18	22	44
13338+47	Rt	Bk & Ahd	2	18	22	44
13347+24	Lt	Bk & Ahd	2	18	22	44
13347+24	Rt	Bk & Ahd	2	18	22	44
13362+21	CL	Lt & Rt	2	30	22	44
13367+25	Rt	Bk & Ahd	2	18	22	44
Total					4484	

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Erosion Control at Culvert Flared End Sections Tables

US 83



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	20	10

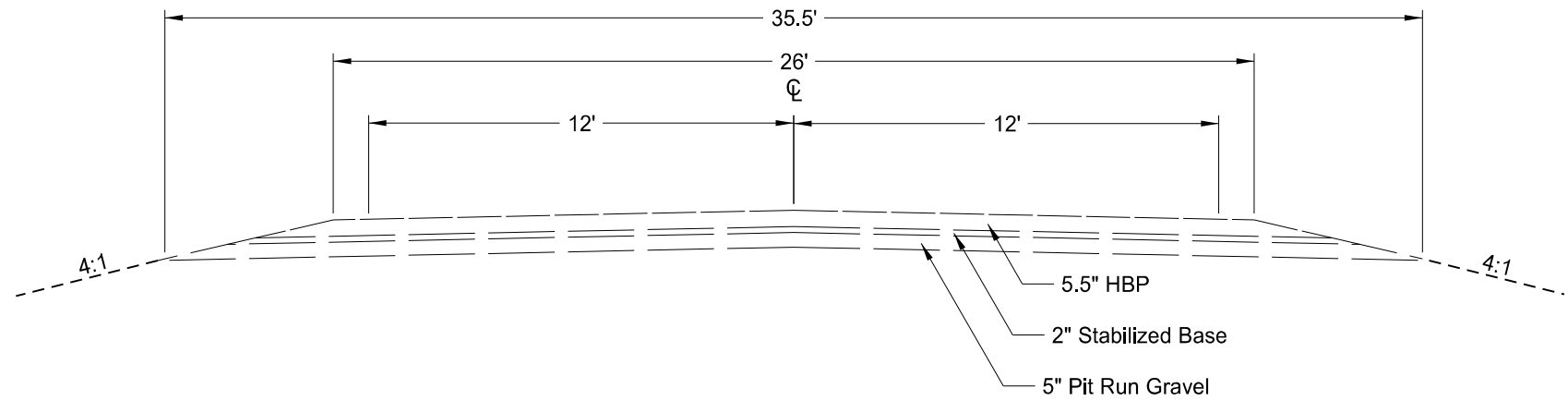
SPEC CODE	BID ITEM	QTY	UNIT
764	2080	REMOVE BOX BEAM GUARDRAIL	
	Sta 13058+65 to 13060+40 Rt	174.5	LF
	Sta 13059+01 to 13060+76 Lt	174.5	LF
	Sta 13111+58 to 13113+51 Rt	192.6	LF
	Sta 13111+94 to 13113+87 Lt	192.6	LF
764	2081	REMOVE END TREATMENT & TRANSITION	
	Sta 13058+27 to 13058+65 Rt	1	EA
	Sta 13058+63 to 13059+01 Lt	1	EA
	Sta 13060+40 to 13060+77 Rt	1	EA
	Sta 13060+76 to 13061+13 Lt	1	EA
	Sta 13111+20 to 13111+58 Rt	1	EA
	Sta 13111+56 to 13111+94 Lt	1	EA
	Sta 13113+51 to 13111+88 Rt	1	EA
	Sta 13113+87 to 13114+24 Lt	1	EA

Note:
Guardrail to remain in place until after RCB widening is complete .

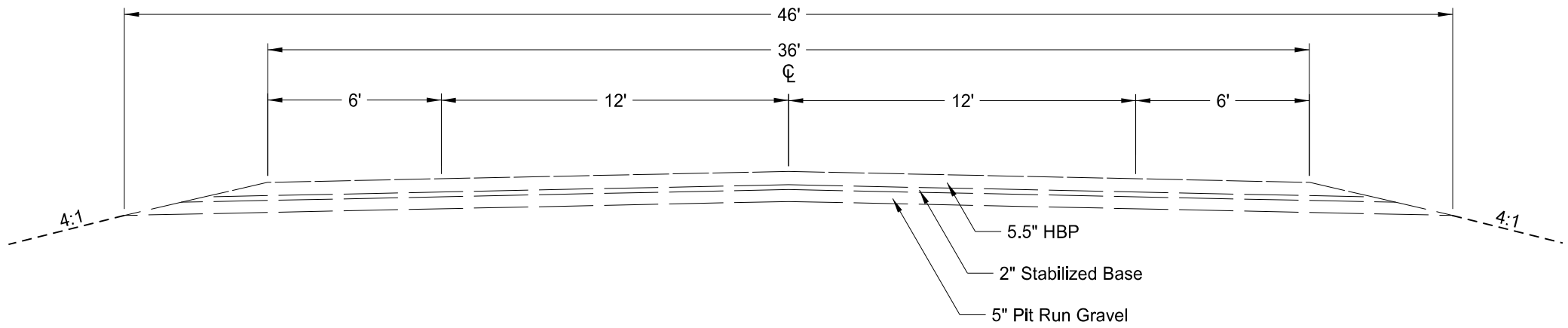
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Guardrail Removal
US 83

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-4-083(141)237	30	1



Existing Typical Section - US 83
Sta 12514+66 to 12856+98
Sta 12898+08 to 13066+40
Sta 13094+60 to 13374+82

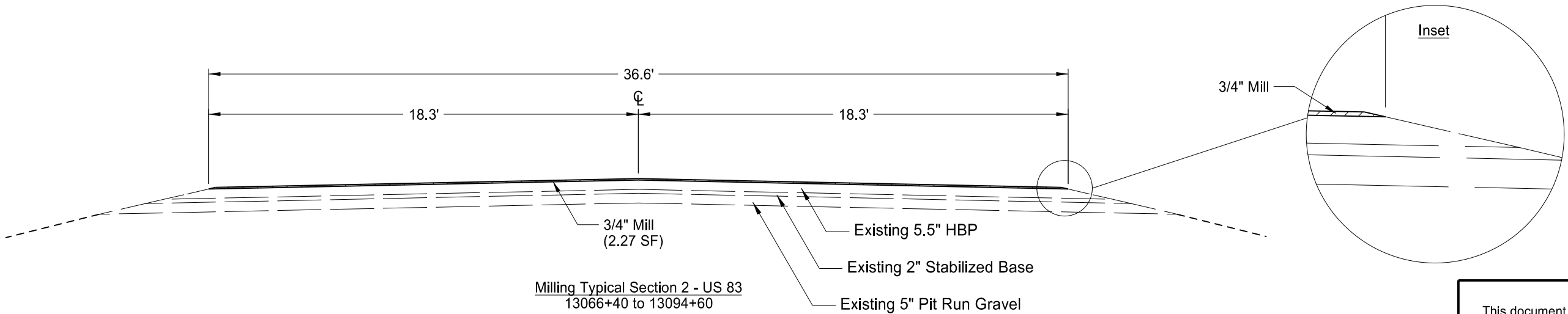
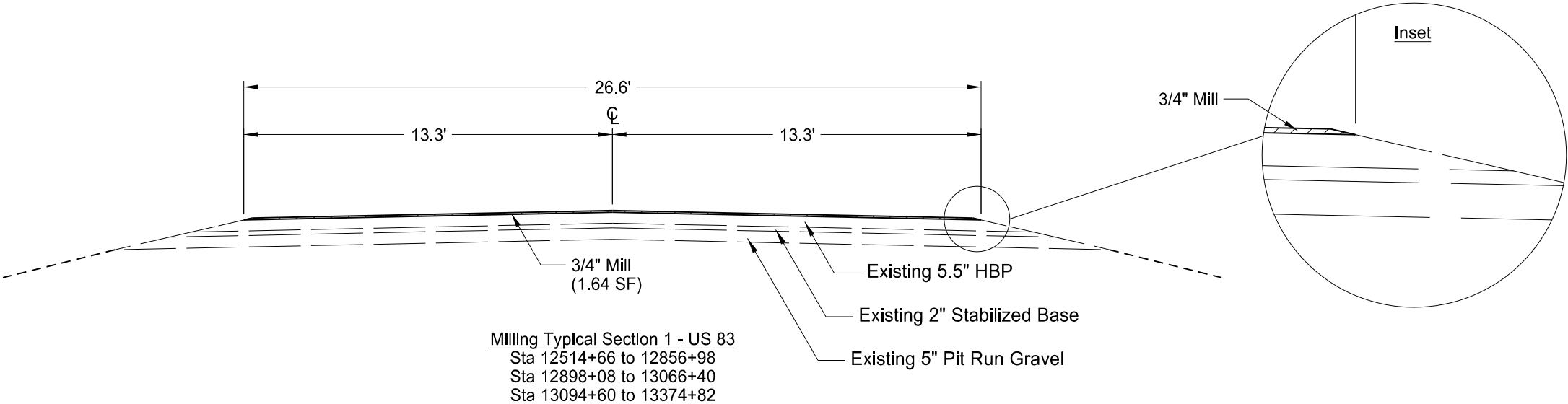


Existing Typical Section - US 83
13066+40 to 13094+60

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Existing Typical Sections
US 83

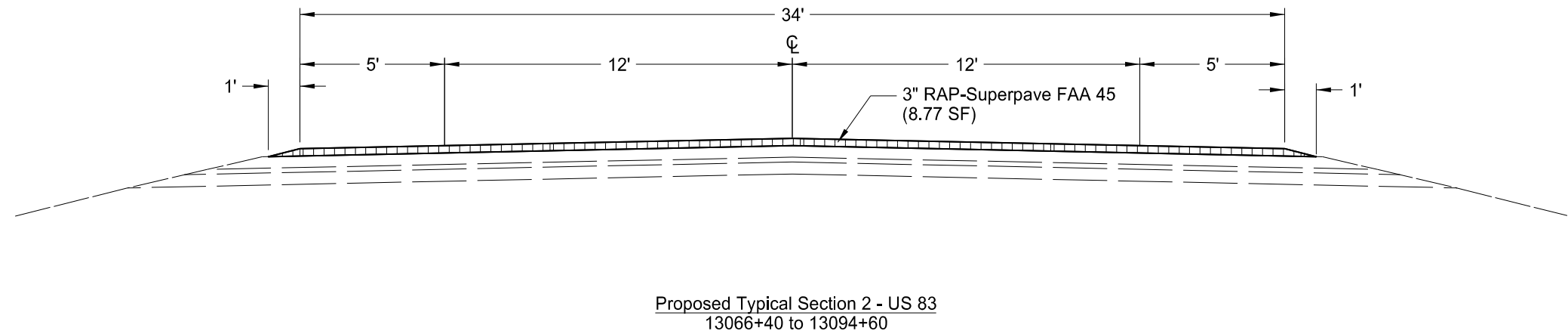
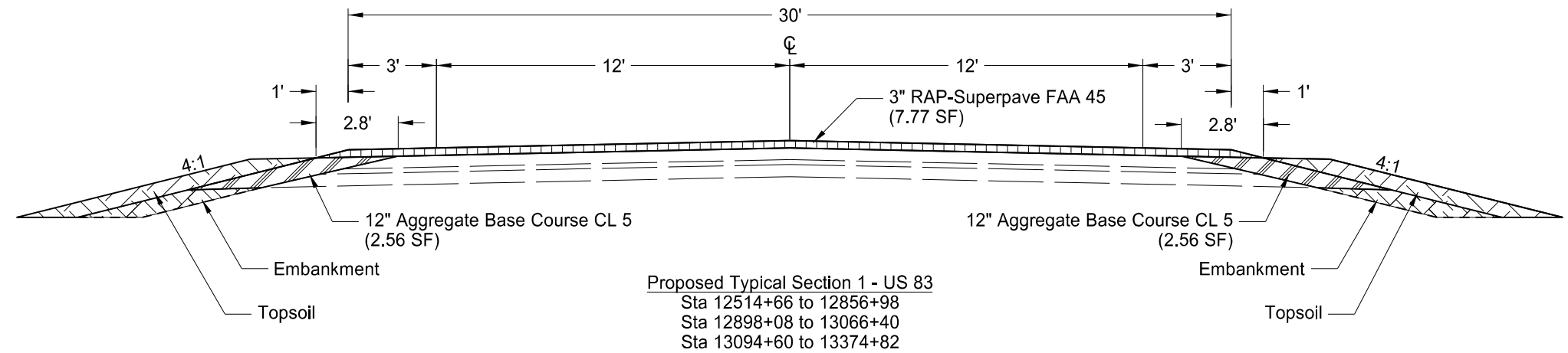
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-4-083(141)237	30	2



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Milling Typical Sections
US 83

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-4-083(141)237	30	3



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Proposed Typical Sections
US 83

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	R1 Fabric (Pay Item)	(*) End Sections		Applicable Backfill
				In	Bid Item	LF							Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
12518+80	46' Rt			18	End Section Corr. Steel			18			0.064		FES		Specification 714.04 A
12519+51	47' Rt	12519+63	48' Rt	18	Pipe Corr. Steel (Extension)	12'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12520+69	52' Lt	12520+94	52' Lt	18	Pipe Corr. Steel (Extension)	25'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12521+37	51' Lt	12521+63	50' Lt	18	Pipe Corr. Steel (Extension)	26'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12524+00	55' Lt	12524+22	56' Lt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12524+62	59' Lt	12524+84	60' Lt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12524+01	56' Rt	12524+24	56' Rt	18	Pipe Corr. Steel (Extension)	23'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12524+65	57' Rt	12524+93	57' Rt	18	Pipe Corr. Steel (Extension)	28'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12540+47	47' Lt	12540+64	47' Lt	18	Pipe Corr. Steel (Extension)	17'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12540+99	47' Lt	12541+25	47' Lt	18	Pipe Corr. Steel (Extension)	26'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12540+43	47' Rt	12540+64	47' Rt	18	Pipe Corr. Steel (Extension)	21'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12540+98	47' Rt	12541+33	47' Rt	18	Pipe Corr. Steel (Extension)	35'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12560+37	34' Lt	12560+37	26' Lt	24	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	24					Remove & Relay		Section 20 Sheet 4
12560+37	29' Rt	12560+37	39' Rt	24	Pipe Conc. Reinf. CL III (Extension)	10'	Reinforced Concrete Pipe - Class III (barrel length = 10 LF)	24						Remove & Relay	Section 20 Sheet 4
12560+57	32' Lt	12560+57	26' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		Section 20 Sheet 4
12560+58	29' Rt	12560+58	37' Rt	24	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	24						Remove & Relay	Section 20 Sheet 4
12568+22	31' Lt	12568+22	25' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		Section 20 Sheet 4

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

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

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

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Allowable Pipe List

US 83

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	R1 Fabric (Pay Item)	(*) End Sections		Applicable Backfill
				In	Bid Item	LF							Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
12568+22	26' Rt	12568+22	32' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4
12581+06	49' Lt	12581+26	48' Lt	18	Pipe Corr. Steel (Extension)	20'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12581+65	48' Lt	12581+89	47' Lt	18	Pipe Corr. Steel (Extension)	24'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12592+09	29' Lt	12592+09	21' Lt	30	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	30					TES		Section 20 Sheet 4
12592+09	25' Rt	12592+09	29' Rt	30	Pipe Conc. Reinf. CL III (Extension)	4'	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	30						TES	Section 20 Sheet 4
12593+44	52' Lt	12593+73	52' Lt	18	Pipe Corr. Steel (Extension)	29'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12594+07	52' Lt	12594+21	52' Lt	18	Pipe Corr. Steel (Extension)	14'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12593+42	45' Rt	12593+73	45' Rt	18	Pipe Corr. Steel (Extension)	31'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
		12594+14	46' Rt	18	End Section Corr. Steel			18			0.064			FES	Specification 714.04 A
12613+09	45' Rt	12613+36	45' Rt	18	Pipe Corr. Steel (Extension)	27'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12613+78	45' Rt	12614+02	45' Rt	18	Pipe Corr. Steel (Extension)	24'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12619+71	47' Lt	12619+92	47' Lt	18	Pipe Corr. Steel (Extension)	21'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12620+36	46' Lt	12620+57	45' Lt	18	Pipe Corr. Steel (Extension)	21'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12619+70	45' Rt	12619+92	44' Rt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12620+39	44' Rt	12620+59	44' Rt	18	Pipe Corr. Steel (Extension)	20'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12628+05	45' Lt	12628+31	46' Lt	18	Pipe Corr. Steel (Extension)	26'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12628+68	46' Lt	12628+86	47' Lt	18	Pipe Corr. Steel (Extension)	18'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A

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

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TES = Traversable End Section

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Allowable Pipe List
US 83

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	R1 Fabric (Pay Item)	(*) End Sections		Applicable Backfill
				In	Bid Item	LF							Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
12628+03	43' Rt	12628+30	45' Rt	18	Pipe Corr. Steel (Extension)	27'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12628+73	48' Rt	12628+89	50' Rt	18	Pipe Corr. Steel (Extension)	16'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12637+06	50' Lt	12637+20	51' Lt	18	Pipe Corr. Steel (Extension)	14'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12637+75	52' Lt	12637+83	52' Lt	18	Pipe Corr. Steel (Extension)	8'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12638+86	39' Lt	12638+86	31' Lt	24	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	24					Remove & Relay		Section 20 Sheet 4
12638+86	25' Rt	12638+86	31' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4
12639+79	56' Rt	12639+99	56' Rt	18	Pipe Corr. Steel (Extension)	20'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12640+40	57' Rt	12640+58	57' Rt	18	Pipe Corr. Steel (Extension)	18'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12646+73	67' Lt	12646+76	67' Lt	18	Pipe Corr. Steel (Extension)	3'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12647+10	67' Lt	12647+18	67' Lt	18	Pipe Corr. Steel (Extension)	8'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12650+96	31' Lt	12650+96	27' Lt	24	Pipe Conc. Reinf. CL III (Extension)	4'	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	24					Remove & Relay		Section 20 Sheet 4
12650+96	25' Rt	12650+96	31' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4
12653+11	58' Lt	12653+23	58' Lt	18	Pipe Corr. Steel (Extension)	12'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12653+62	57' Lt	12653+78	57' Lt	18	Pipe Corr. Steel (Extension)	16'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12665+57	77' Rt			24	End Section Corr. Steel			24					FES		Specification 714.04 A
		12666+15	76' Rt	24	End Section Corr. Steel			24						FES	Specification 714.04 A
12672+42	31' Lt	12672+42	27' Lt	24	Pipe Conc. Reinf. CL III (Extension)	4'	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	24					Remove & Relay		Section 20 Sheet 4
12672+41	24' Rt	12672+41	30' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4

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Allowable Pipe List

US 83

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	R1 Fabric (Pay Item)	(*) End Sections		Applicable Backfill
				In	Bid Item	LF							Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
12673+46	34' Lt	12673+46	26' Lt	24	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	24					Remove & Relay		Section 20 Sheet 4
12673+46	25' Rt	12673+47	41' Rt	24	Pipe Conc. Reinf. CL III (Extension)	16'	Reinforced Concrete Pipe - Class III (barrel length = 16 LF)	24						Remove & Relay	Section 20 Sheet 4
12687+36	46' Lt	12687+58	46' Lt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12687+99	47' Lt	12688+19	47' Lt	18	Pipe Corr. Steel (Extension)	20'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12687+38	46' Rt	12687+58	46' Rt	18	Pipe Corr. Steel (Extension)	20'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12687+99	47' Rt	12688+21	47' Rt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12698+97	30' Lt	12698+97	22' Lt	30	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	30					Remove & Relay		Section 20 Sheet 4
12698+97	23' Rt	12698+97	31' Rt	30	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	30						TES	Section 20 Sheet 4
12701+58	49' Lt	12701+80	49' Lt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12702+12	50' Lt	12702+29	50' Lt	18	Pipe Corr. Steel (Extension)	17'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12701+50	47' Rt	12701+78	47' Rt	18	Pipe Corr. Steel (Extension)	28'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12702+18	46' Rt	12702+37	46' Rt	18	Pipe Corr. Steel (Extension)	19'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12711+73	43' Rt	12711+89	43' Rt	18	Pipe Corr. Steel (Extension)	16'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12712+23	43' Rt	12712+50	43' Rt	18	Pipe Corr. Steel (Extension)	27'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12712+43	57' Lt	12712+65	57' Lt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12712+99	58' Lt	12713+22	59' Lt	18	Pipe Corr. Steel (Extension)	23'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A

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

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5 = 5"x1"

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

1 = 3/4"x1"@11-1/2"

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Allowable Pipe List
US 83

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	R1 Fabric (Pay Item)	(*) End Sections		Applicable Backfill
				In	Bid Item	LF							Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
12725+19	31' Lt	12725+19	25' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		Section 20 Sheet 4
12725+19	26' Rt	12725+19	30' Rt	24	Pipe Conc. Reinf. CL III (Extension)	4'	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	24						TES	Section 20 Sheet 4
12728+91	31' Lt	12728+91	25' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		Section 20 Sheet 4
12728+91	25' Rt	12728+91	31' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4
12751+72	63' Rt	12751+80	63' Rt	18	Pipe Corr. Steel (Extension)	8'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12752+15	61' Rt	12752+40	61' Rt	18	Pipe Corr. Steel (Extension)	25'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12764+07	68' Rt	12764+09	68' Rt	18	Pipe Corr. Steel (Extension)	4'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12764+48	66' Rt	12764+65	66' Rt	18	Pipe Corr. Steel (Extension)	17'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12777+90	32' Lt	12777+90	22' Lt	30	Pipe Conc. Reinf. CL III (Extension)	10'	Reinforced Concrete Pipe - Class III (barrel length = 10 LF)	30					Remove & Relay		Section 20 Sheet 4
12777+91	22' Rt	12777+91	32' Rt	30	Pipe Conc. Reinf. CL III (Extension)	10'	Reinforced Concrete Pipe - Class III (barrel length = 10 LF)	30						Remove & Relay	Section 20 Sheet 4
12778+90	35' Lt	12778+89	25' Lt	24	Pipe Conc. Reinf. CL III (Extension)	10'	Reinforced Concrete Pipe - Class III (barrel length = 10 LF)	24					Remove & Relay		Section 20 Sheet 4
12778+89	26' Rt	12778+89	30' Rt	24	Pipe Conc. Reinf. CL III (Extension)	4'	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	24						Remove & Relay	Section 20 Sheet 4
12804+55	58' Rt	12804+75	59' Rt	18	Pipe Corr. Steel (Extension)	20'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12805+09	60' Rt	12805+32	60' Rt	18	Pipe Corr. Steel (Extension)	23'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12812+72	30' Lt	12812+72	22' Lt	48	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	48					Remove & Relay		Section 20 Sheet 4
12812+72	23' Rt	12812+72	31' Rt	48	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	48						Remove & Relay	Section 20 Sheet 4

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

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5 = 5"x1"

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

1 = 3/4"x1"@11-1/2"

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FES = Flared End Section

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Allowable Pipe List
US 83

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	R1 Fabric (Pay Item)	(*) End Sections		Applicable Backfill
				In	Bid Item	LF							Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
12813+02	30' Lt	12813+02	22' Lt	48	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	48					Remove & Relay		Section 20 Sheet 4
12813+02	23' Rt	12813+02	31' Rt	48	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	48						Remove & Relay	Section 20 Sheet 4
12828+56	31' Lt	12828+56	25' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		Section 20 Sheet 4
12828+56	26' Rt	12828+56	32' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4
12831+10	56' Lt			18	End Section Corr. Steel			18					FES		Specification 714.04 A
12831+57	54' Lt	12831+80	53' Lt	18	Pipe Corr. Steel (Extension)	23'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12830+94	59' Rt	12831+13	59' Rt	18	Pipe Corr. Steel (Extension)	19'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12831+59	58' Rt	12831+78	57' Rt	18	Pipe Corr. Steel (Extension)	19'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12856+40	31' Lt	12856+40	25' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					TES		Section 20 Sheet 4
12856+39	25' Rt	12856+39	31' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4
12898+16	55' Lt	12898+35	55' Lt	18	Pipe Corr. Steel (Extension)	19'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12898+69	55' Lt	12898+95	56' Lt	18	Pipe Corr. Steel (Extension)	26'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12898+16	54' Rt	12898+38	55' Rt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12898+70	57' Rt	12899+02	59' Rt	18	Pipe Corr. Steel (Extension)	32'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12905+80	35' Lt	12905+80	31' Lt	24	Pipe Conc. Reinf. CL III (Extension)	4'	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	24					Remove & Relay		Section 20 Sheet 4
12905+79	26' Rt	12905+79	32' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4
12910+50	47' Lt	12910+72	47' Lt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A

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Allowable Pipe List

US 83

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				In	Bid Item	LF							Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
12911+15	46' Lt	12911+35	46' Lt	18	Pipe Corr. Steel (Extension)	20'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12923+90	35' Lt	12923+90	29' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		Section 20 Sheet 4
12923+90	28' Rt	12923+90	36' Rt	24	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	24						Remove & Relay	Section 20 Sheet 4
12924+46	52' Lt	12924+75	52' Lt	18	Pipe Corr. Steel (Extension)	29'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12925+19	51' Lt	12925+43	51' Lt	18	Pipe Corr. Steel (Extension)	24'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12924+53	52' Rt	12924+74	53' Rt	18	Pipe Corr. Steel (Extension)	21'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12925+18	54' Rt	12925+47	55' Rt	18	Pipe Corr. Steel (Extension)	29'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12942+64	30' Lt	12942+64	24' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					TES		Section 20 Sheet 4
12942+65	24' Rt	12942+65	30' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4
12960+63	31' Lt	12960+63	25' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		Section 20 Sheet 4
12960+64	25' Rt	12960+64	31' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4
12964+13	47' Rt	12964+35	47' Rt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12964+77	47' Rt	12964+98	47' Rt	18	Pipe Corr. Steel (Extension)	21'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12968+83	64' Lt	12969+00	63' Lt	18	Pipe Corr. Steel (Extension)	17'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A

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				In	Bid Item	LF							Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
12969+41	63' Lt	12969+64	63' Lt	18	Pipe Corr. Steel (Extension)	23'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
12977+15	31' Lt	12977+15	21' Lt	30	Pipe Conc. Reinf. CL III (Extension)	10'	Reinforced Concrete Pipe - Class III (barrel length = 10 LF)	30					Remove & Relay		Section 20 Sheet 4
12977+15	25' Rt	12977+15	33' Rt	30	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	30						Remove & Relay	Section 20 Sheet 4
12977+53	60' Rt	12977+64	60' Rt	30	Pipe Corr. Steel (Extension)	11'	Corrugated Steel Pipe	30	Z, A, P	2	0.079		FES		Specification 714.04 A
12978+09	60' Rt	12978+24	59' Rt	30	Pipe Corr. Steel (Extension)	15'	Corrugated Steel Pipe	30	Z, A, P	2	0.079			FES	Specification 714.04 A
12979+07	34' Lt	12979+07	28' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		Section 20 Sheet 4
12979+06	30' Rt	12979+06	36' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4
12986+21	87' Rt			18	End Section Corr. Steel			18					FES		Specification 714.04 A
		12986+84	86' Rt	18	End Section Corr. Steel			18						FES	Specification 714.04 A
12990+69	46' Rt	12990+89	46' Rt	18	Pipe Corr. Steel (Extension)	20'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
12991+27	46' Rt	12991+52	47' Rt	18	Pipe Corr. Steel (Extension)	25'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13003+66	46' Lt	13003+90	45' Lt	18	Pipe Corr. Steel (Extension)	24'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13004+32	44' Lt	13004+53	43' Lt	18	Pipe Corr. Steel (Extension)	21'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13003+67	46' Rt	13003+90	46' Rt	18	Pipe Corr. Steel (Extension)	23'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13004+32	45' Rt	13004+58	45' Rt	18	Pipe Corr. Steel (Extension)	26'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13007+66	31' Lt	13007+66	25' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		Section 20 Sheet 4
13007+67	26' Rt	13007+67	32' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4
13030+28	56' Lt	13030+50	56' Lt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A

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US 83

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				In	Bid Item	LF							Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
13030+94	55' Lt	13031+16	55' Lt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13030+23	47' Rt	13030+49	47' Rt	18	Pipe Corr. Steel (Extension)	26'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13030+95	46' Rt	13031+17	46' Rt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13036+78	32' Lt	13036+78	24' Lt	30	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	30					Remove & Relay		Section 20 Sheet 4
13036+78	23' Rt	13036+78	31' Rt	30	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	30						TES	Section 20 Sheet 4
13046+98	44' Lt	13047+23	44' Lt	18	Pipe Corr. Steel (Extension)	25'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13047+63	45' Lt	13047+87	46' Lt	18	Pipe Corr. Steel (Extension)	24'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13047+02	45' Rt	13047+20	45' Rt	18	Pipe Corr. Steel (Extension)	18'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13047+60	46' Rt	13047+85	47' Rt	18	Pipe Corr. Steel (Extension)	25'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13099+72	59' Rt	13099+92	59' Rt	18	Pipe Corr. Steel (Extension)	20'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13100+22	60' Rt	13100+49	60' Rt	18	Pipe Corr. Steel (Extension)	27'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13103+17	46' Lt	13103+34	46' Lt	30	Pipe Corr. Steel (Extension)	17'	Corrugated Steel Pipe	30	Z, A, P	2	0.079		FES		Specification 714.04 A
13103+71	46' Lt	13103+82	46' Lt	30	Pipe Corr. Steel (Extension)	11'	Corrugated Steel Pipe	30	Z, A, P	2	0.079			FES	Specification 714.04 A
13103+21	60' Rt	13103+30	60' Rt	30	Pipe Corr. Steel (Extension)	9'	Corrugated Steel Pipe	30	Z, A, P	2	0.079		FES		Specification 714.04 A
13103+68	60' Rt	13103+82	60' Rt	30	Pipe Corr. Steel (Extension)	14'	Corrugated Steel Pipe	30	Z, A, P	2	0.079			FES	Specification 714.04 A

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				In	Bid Item	LF							Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
13122+26	63' Lt	13122+37	63' Lt	24	Pipe Corr. Steel (Extension)	11'	Corrugated Steel Pipe	24	Z, A, P	2	0.064		FES		Specification 714.04 A
13122+78	63' Lt	13122+92	63' Lt	24	Pipe Corr. Steel (Extension)	14'	Corrugated Steel Pipe	24	Z, A, P	2	0.064			FES	Specification 714.04 A
13129+57	56' Lt	13129+80	56' Lt	18	Pipe Corr. Steel (Extension)	23'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13130+27	56' Lt	13130+47	56' Lt	18	Pipe Corr. Steel (Extension)	20'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13129+63	56' Rt	13129+79	56' Rt	18	Pipe Corr. Steel (Extension)	16'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13130+24	56' Rt	13130+49	56' Rt	18	Pipe Corr. Steel (Extension)	25'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13138+53	34' Lt	13138+53	26' Lt	24	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	24					Remove & Relay		Section 20 Sheet 4
13138+53	25' Rt	13138+53	37' Rt	24	Pipe Conc. Reinf. CL III (Extension)	12'	Reinforced Concrete Pipe - Class III (barrel length = 12 LF)	24						Remove & Relay	Section 20 Sheet 4
13149+41	32' Lt	13149+41	26' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		Section 20 Sheet 4
13149+41	28' Rt	13149+41	34' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4
13156+26	46' Lt	13156+46	46' Lt	18	Pipe Corr. Steel (Extension)	20'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13156+87	46' Lt	13157+11	46' Lt	18	Pipe Corr. Steel (Extension)	24'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13156+30	46' Rt	13156+46	46' Rt	18	Pipe Corr. Steel (Extension)	16'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13156+87	47' Rt	13157+09	48' Rt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13177+43	34' Lt	13177+43	28' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		Section 20 Sheet 4
13177+43	26' Rt	13177+44	32' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4

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				In	Bid Item	LF							Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
13182+46	56' Lt	13182+63	56' Lt	18	Pipe Corr. Steel (Extension)	17'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13183+08	56' Lt	13183+27	56' Lt	18	Pipe Corr. Steel (Extension)	19'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13182+38	57' Rt	13182+64	56' Rt	18	Pipe Corr. Steel (Extension)	26'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13183+07	55' Rt	13183+30	54' Rt	18	Pipe Corr. Steel (Extension)	23'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13189+04	47' Lt	13189+26	47' Lt	18	Pipe Corr. Steel (Extension)	22'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13189+70	47' Lt	13189+90	47' Lt	18	Pipe Corr. Steel (Extension)	20'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13189+03	44' Rt	13189+24	44' Rt	18	Pipe Corr. Steel (Extension)	21'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13189+68	45' Rt	13189+92	45' Rt	18	Pipe Corr. Steel (Extension)	24'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13208+76	32' Lt	13208+76	26' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		Section 20 Sheet 4
13208+75	25' Rt	13208+75	31' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4
13219+77	34' Lt	13219+77	26' Lt	24	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	24					Remove & Relay		Section 20 Sheet 4
13219+77	26' Rt	13219+77	34' Rt	24	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	24						Remove & Relay	Section 20 Sheet 4
13232+08	47' Lt	13232+33	47' Lt	18	Pipe Corr. Steel (Extension)	25'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13232+80	47' Lt	13233+03	46' Lt	18	Pipe Corr. Steel (Extension)	23'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13253+76	31' Lt	13253+76	25' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					TES		Section 20 Sheet 4
13253+76	26' Rt	13253+76	30' Rt	24	Pipe Conc. Reinf. CL III (Extension)	4'	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	24						Remove & Relay	Section 20 Sheet 4

Coatings: Z = Zinc

A = Aluminum

P = Polymeric (over Zinc or Aluminum)

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

3 = 3"x1"

5 = 5"x1"

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

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Allowable Pipe List
US 83

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	R1 Fabric (Pay Item)	(*) End Sections		Applicable Backfill
				In	Bid Item	LF							Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
13258+45	46' Rt	13258+68	46' Rt	18	Pipe Corr. Steel (Extension)	23'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13259+08	46' Rt	13259+31	46' Rt	18	Pipe Corr. Steel (Extension)	23'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13261+37	46' Lt	13261+55	46' Lt	18	Pipe Corr. Steel (Extension)	18'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13261+98	46' Lt	13262+23	46' Lt	18	Pipe Corr. Steel (Extension)	25'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13281+27	37' Lt	13281+27	29' Lt	30	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	30					Remove & Relay		Section 20 Sheet 4
13281+28	30' Rt	13281+28	38' Rt	30	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	30						Remove & Relay	Section 20 Sheet 4
13290+32	56' Lt	13290+41	56' Lt	18	Pipe Corr. Steel (Extension)	9'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13290+31	56' Rt	13290+40	56' Rt	18	Pipe Corr. Steel (Extension)	9'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13311+15	46' Lt	13311+57	46' Lt	18	Pipe Corr. Steel (Extension)	42'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
		13311+99	46' Lt	18	End Section Corr. Steel			18			0.064			FES	Specification 714.04 A
13311+21	46' Rt	13311+58	46' Rt	18	Pipe Corr. Steel (Extension)	37'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13324+53	47' Lt	13324+74	46' Lt	18	Pipe Corr. Steel (Extension)	21'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13325+16	46' Lt	13325+39	57' Lt	18	Pipe Corr. Steel (Extension)	23'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13324+53	45' Rt	13324+74	45' Rt	18	Pipe Corr. Steel (Extension)	21'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13325+15	46' Rt	13325+39	46' Rt	18	Pipe Corr. Steel (Extension)	24'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13334+74	31' Lt	13334+74	27' Lt	24	Pipe Conc. Reinf. CL III (Extension)	4'	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	24					Remove & Relay		Section 20 Sheet 4
13334+74	25' Rt	13334+74	31' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6'	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	Section 20 Sheet 4

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A = Aluminum
P = Polymeric (over Zinc or Aluminum)

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

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

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Allowable Pipe List
US 83

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	R1 Fabric (Pay Item)	(*) End Sections		Applicable Backfill
				In	Bid Item	LF							Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
13338+01	55' Lt	13338+25	54' Lt	18	Pipe Corr. Steel (Extension)	24'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13338+71	54' Lt	13338+94	54' Lt	18	Pipe Corr. Steel (Extension)	23'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13337+94	55' Rt	13338+23	55' Rt	18	Pipe Corr. Steel (Extension)	29'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13338+69	55' Rt	13338+97	56' Rt	18	Pipe Corr. Steel (Extension)	28'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13346+79	47' Lt	13347+02	47' Lt	18	Pipe Corr. Steel (Extension)	23'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13347+45	47' Lt	13347+66	47' Lt	18	Pipe Corr. Steel (Extension)	21'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13346+85	45' Rt	13347+04	45' Rt	18	Pipe Corr. Steel (Extension)	19'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13347+46	45' Rt	13347+67	45' Rt	18	Pipe Corr. Steel (Extension)	21'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A
13362+22	31' Lt	13362+22	23' Lt	30	Pipe Conc. Reinf. CL III (Extension)	8'	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	30					Remove & Relay		Section 20 Sheet 4
13362+21	22' Rt	13362+21	32' Rt	30	Pipe Conc. Reinf. CL III (Extension)	10'	Reinforced Concrete Pipe - Class III (barrel length = 10 LF)	30						Remove & Relay	Section 20 Sheet 4
13366+84	48' Rt	13367+10	48' Rt	18	Pipe Corr. Steel (Extension)	26'	Corrugated Steel Pipe	18	Z, A, P	2	0.064		FES		Specification 714.04 A
13367+48	48' Rt	13367+65	48' Rt	18	Pipe Corr. Steel (Extension)	17'	Corrugated Steel Pipe	18	Z, A, P	2	0.064			FES	Specification 714.04 A

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P = Polymeric (over Zinc or Aluminum)

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5 = 5"x1"

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

1 = 3/4"x1"@11-1/2"

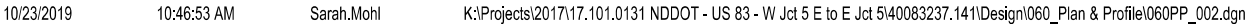
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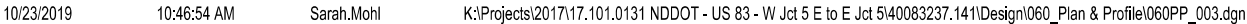
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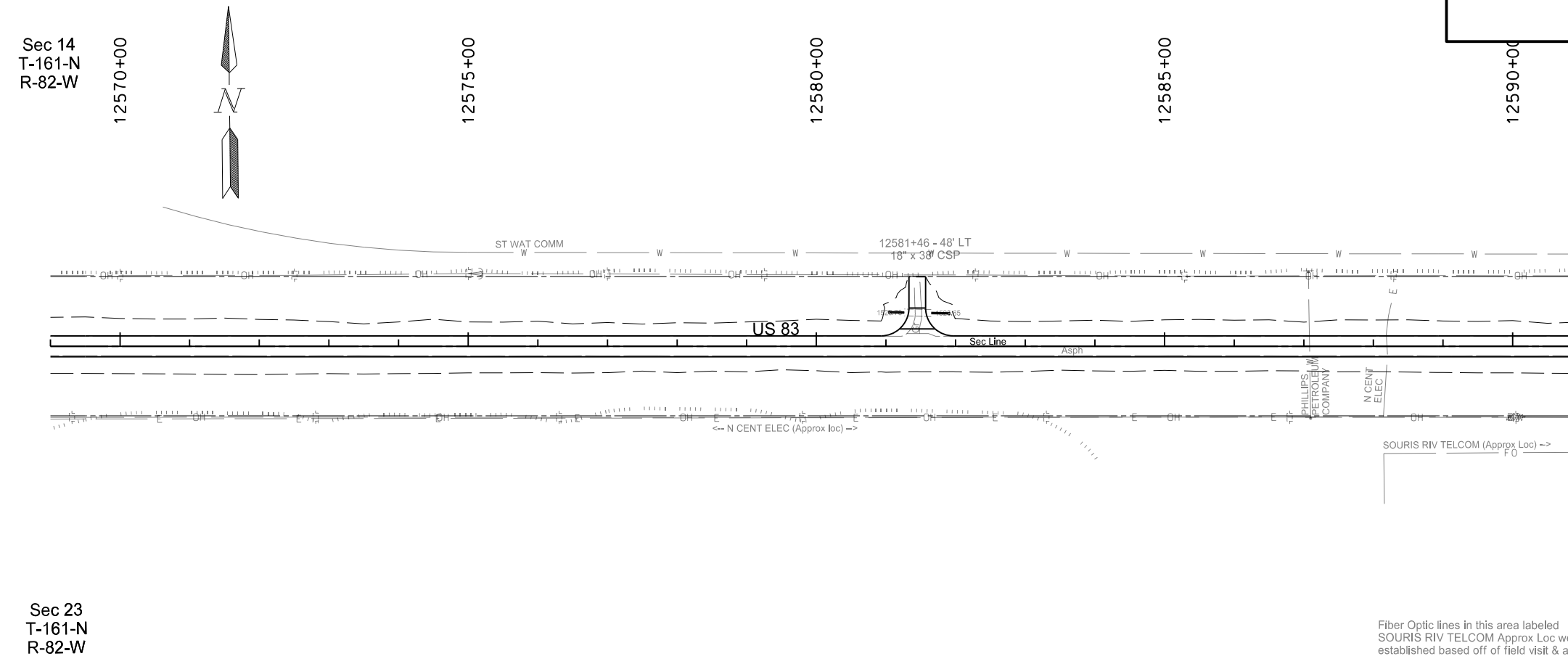
Allowable Pipe List
US 83





Sta 12550+00 to 12570+00

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-4-083(141)237	60	4
12590+00	SPEC CODE	BID ITEM	QTY	UNIT
	714 5015	PIPE CORR STEEL .064IN 18IN		
		Sta 12581+45 Lt Bk	20	LF
		Sta 12581+45 Lt Ahd	24	LF
	714 5810	END SECT CORR STEEL .064IN 18IN		
		Sta 12581+45 Lt Bk	1	EA
		Sta 12581+45 Lt Ahd	1	EA

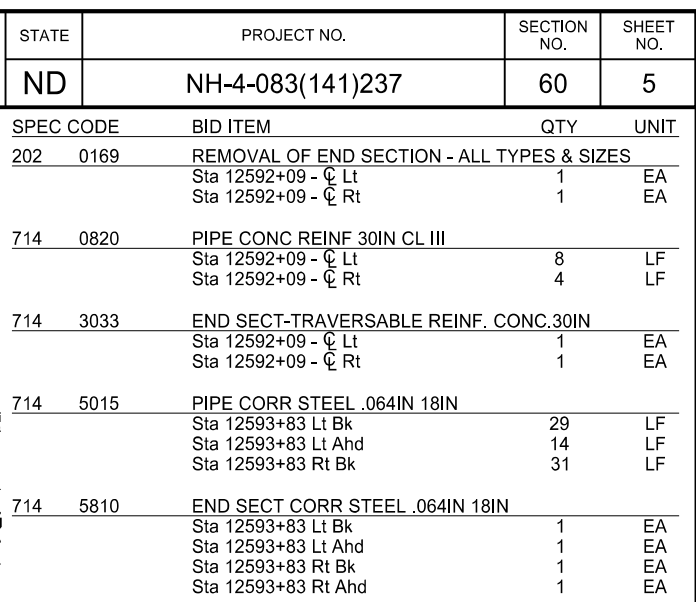
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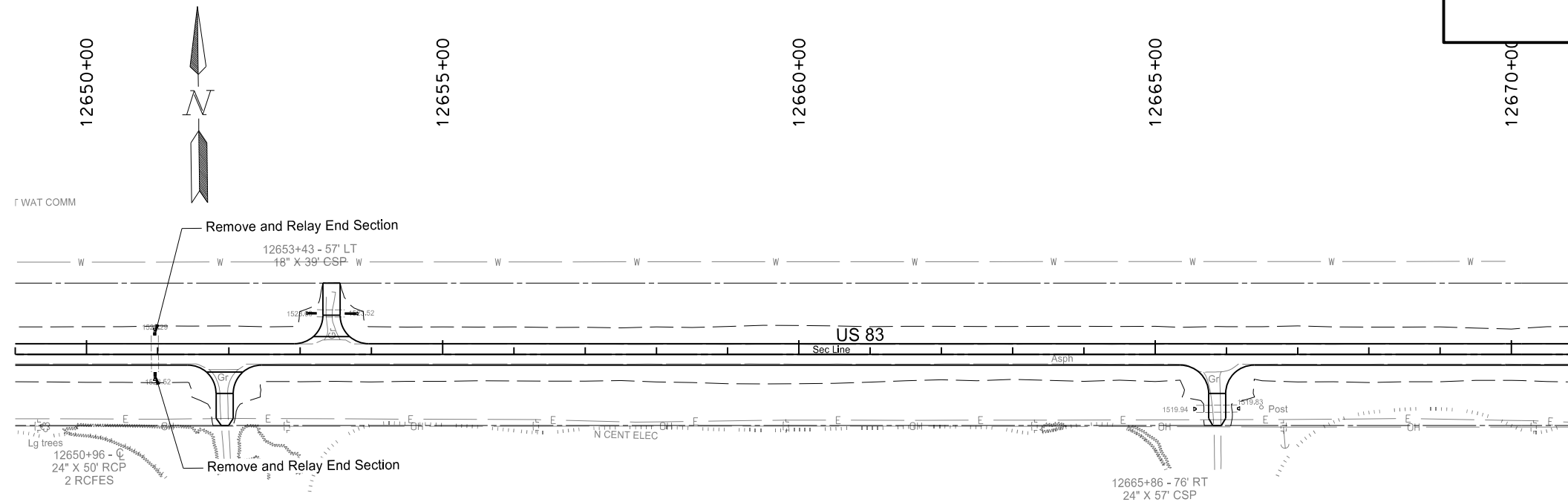
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US 83

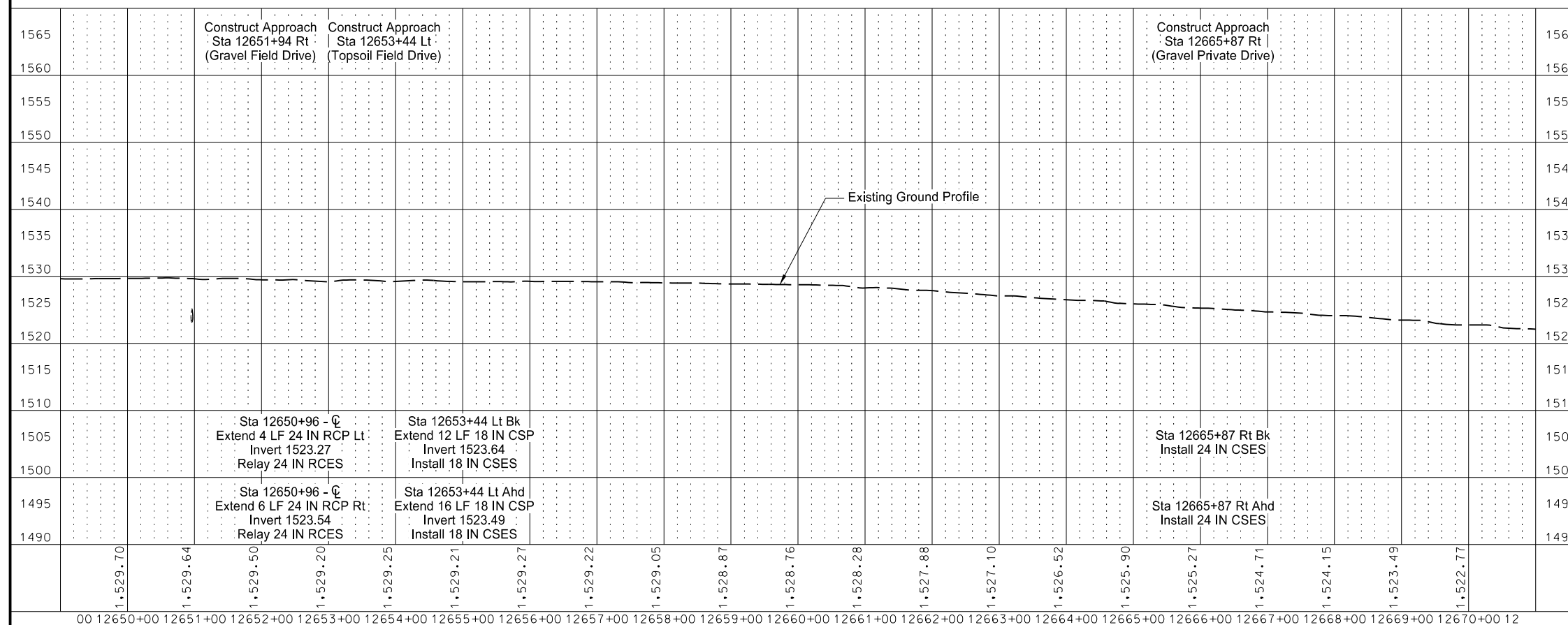
Sta 12570+00 to 12590+00



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Plan & Profile US 83 Sta 12590+00 to 12610+00	



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	60	8
SPEC CODE	BID ITEM	QTY	UNIT
714 0615	PIPE CONC REINF 24IN CL III Sta 12650+96 - C Lt Sta 12650+96 - C Rt	4 6	LF LF
714 5015	PIPE CORR STEEL .064IN 18IN Sta 12653+44 Lt Bk Sta 12653+44 Lt Ahd	12 16	LF LF
714 5810	END SECT CORR STEEL .064IN 18IN Sta 12653+44 Lt Bk Sta 12653+44 Lt Ahd	1 1	EA EA
714 5820	END SECT CORR STEEL .064IN 24IN Sta 12665+87 Rt Bk Sta 12665+87 Rt Ahd	1 1	EA EA
714 9660	REMOVE & RELAY END SECTION-ALL TYPES & SIZES Sta 12650+96 - C Lt Sta 12650+96 - C Rt	1 1	EA EA

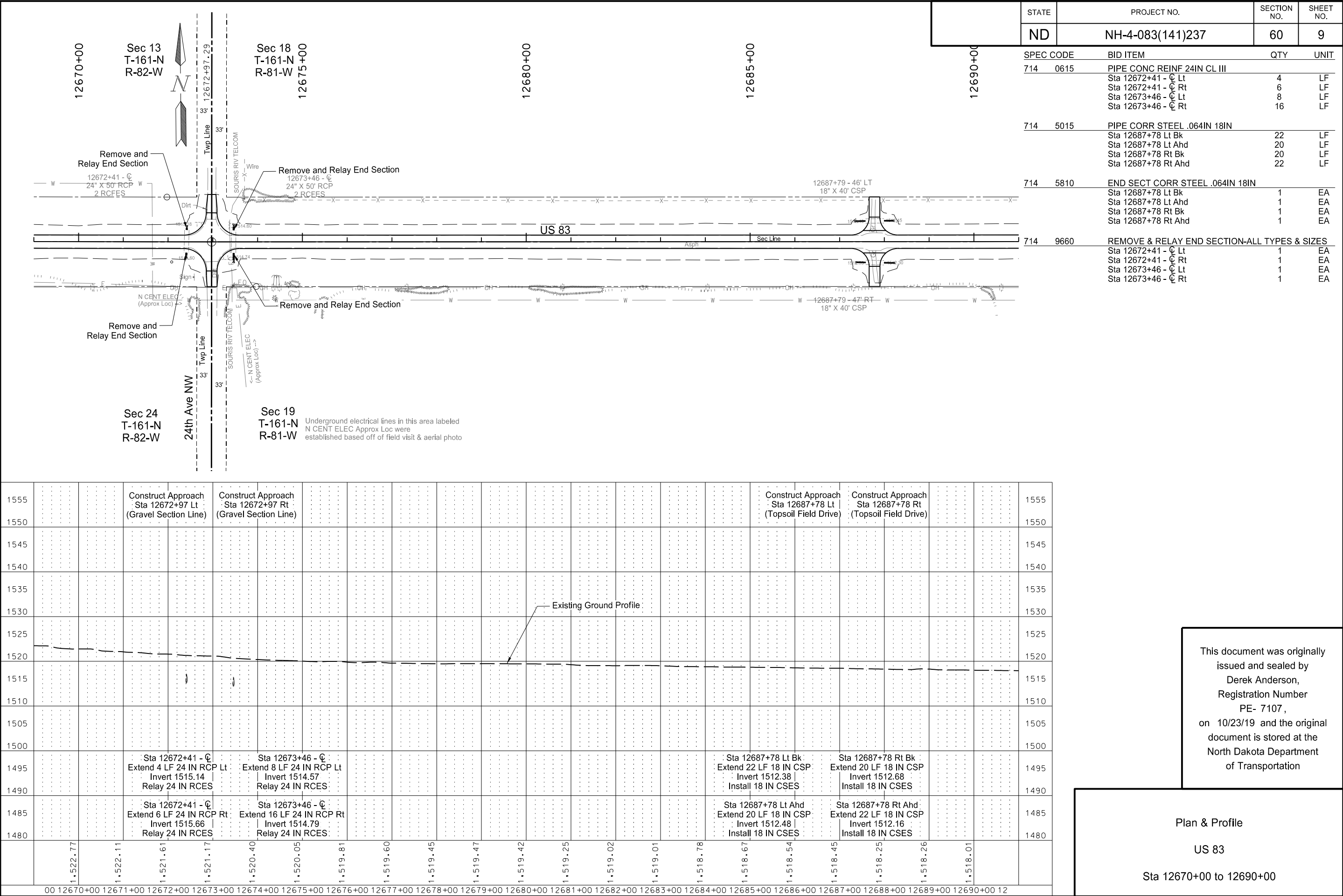


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Sta 12650+00 to 12670+00



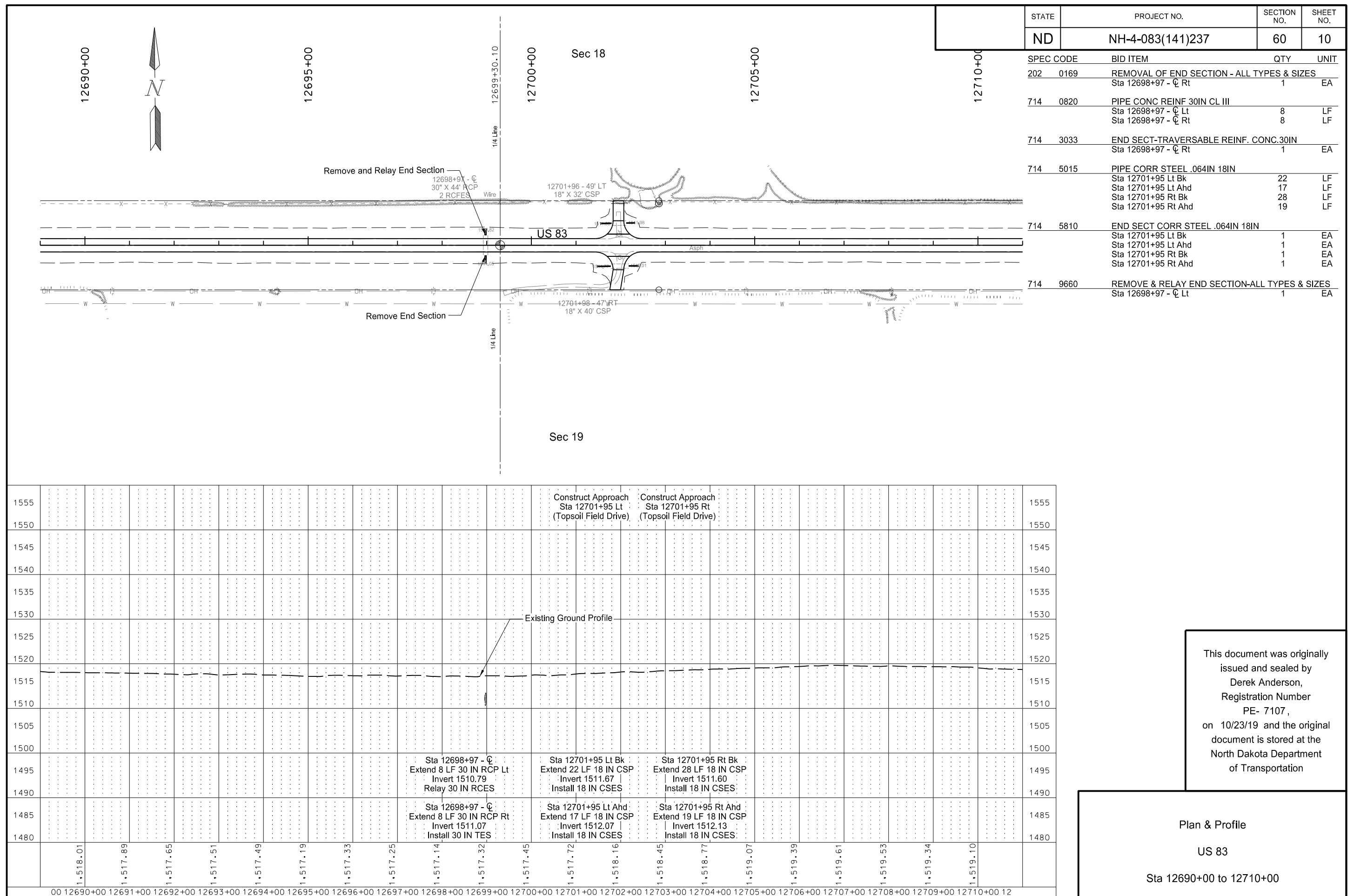
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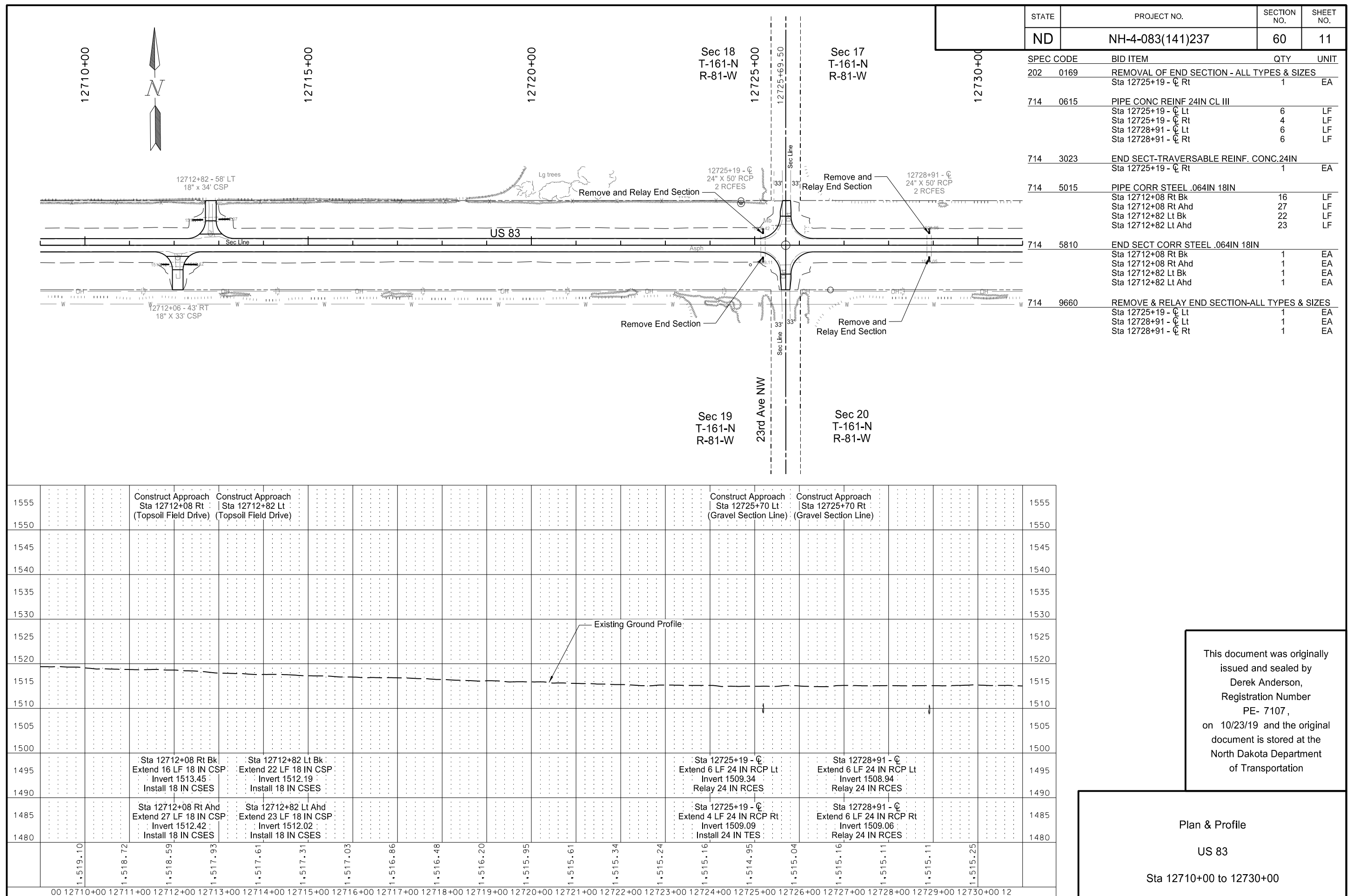
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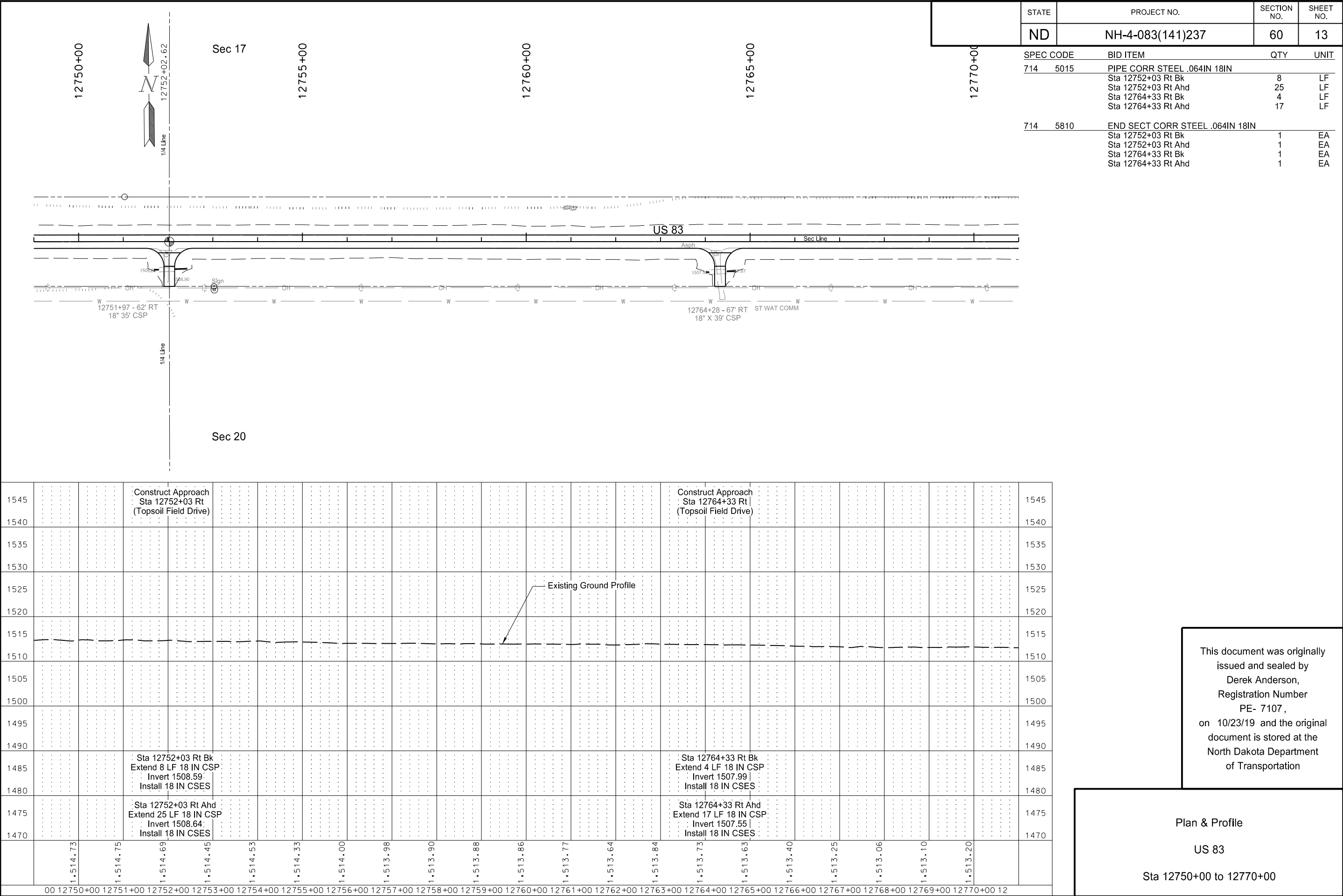
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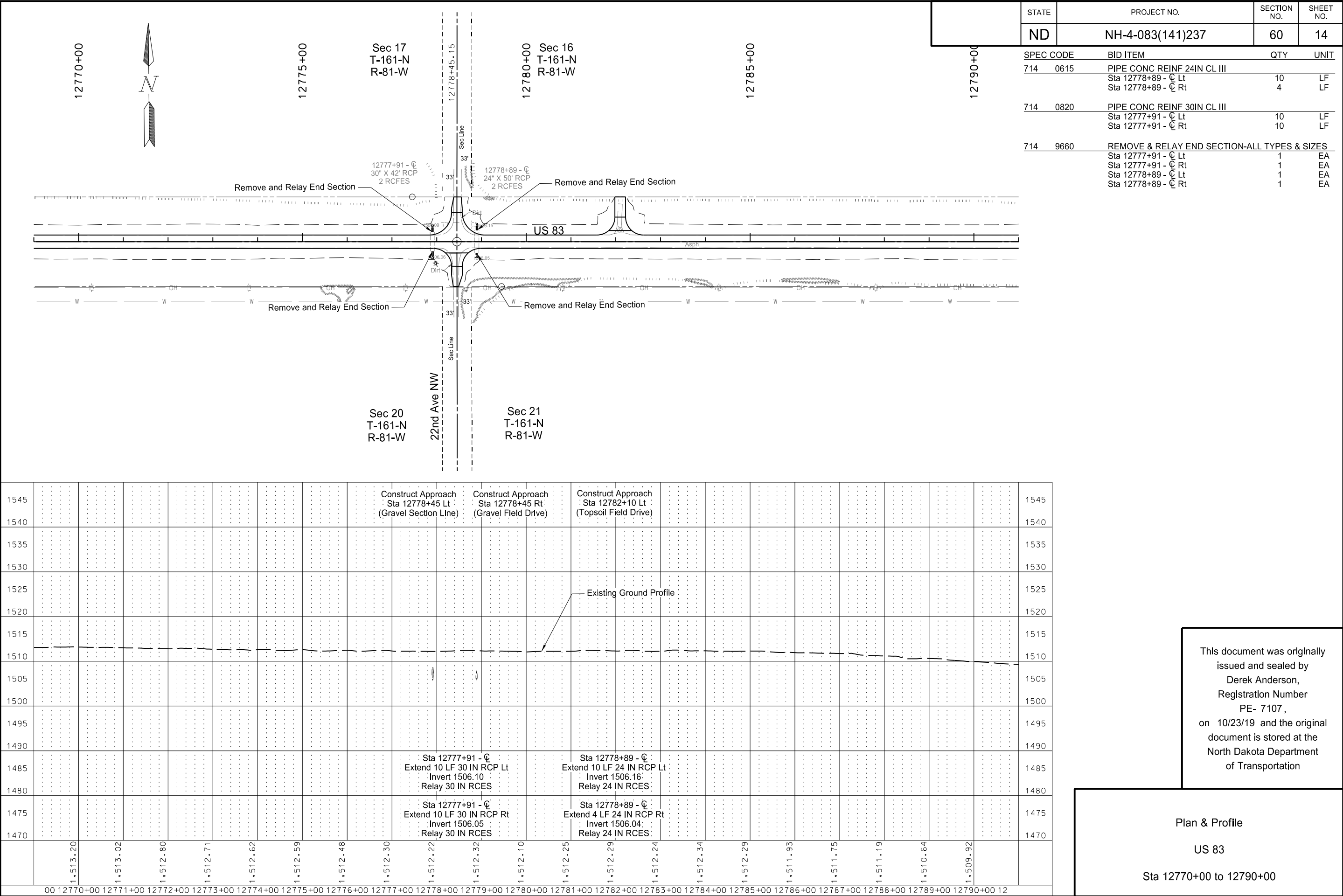
US 83

Sta 12670+00 to 12690+00

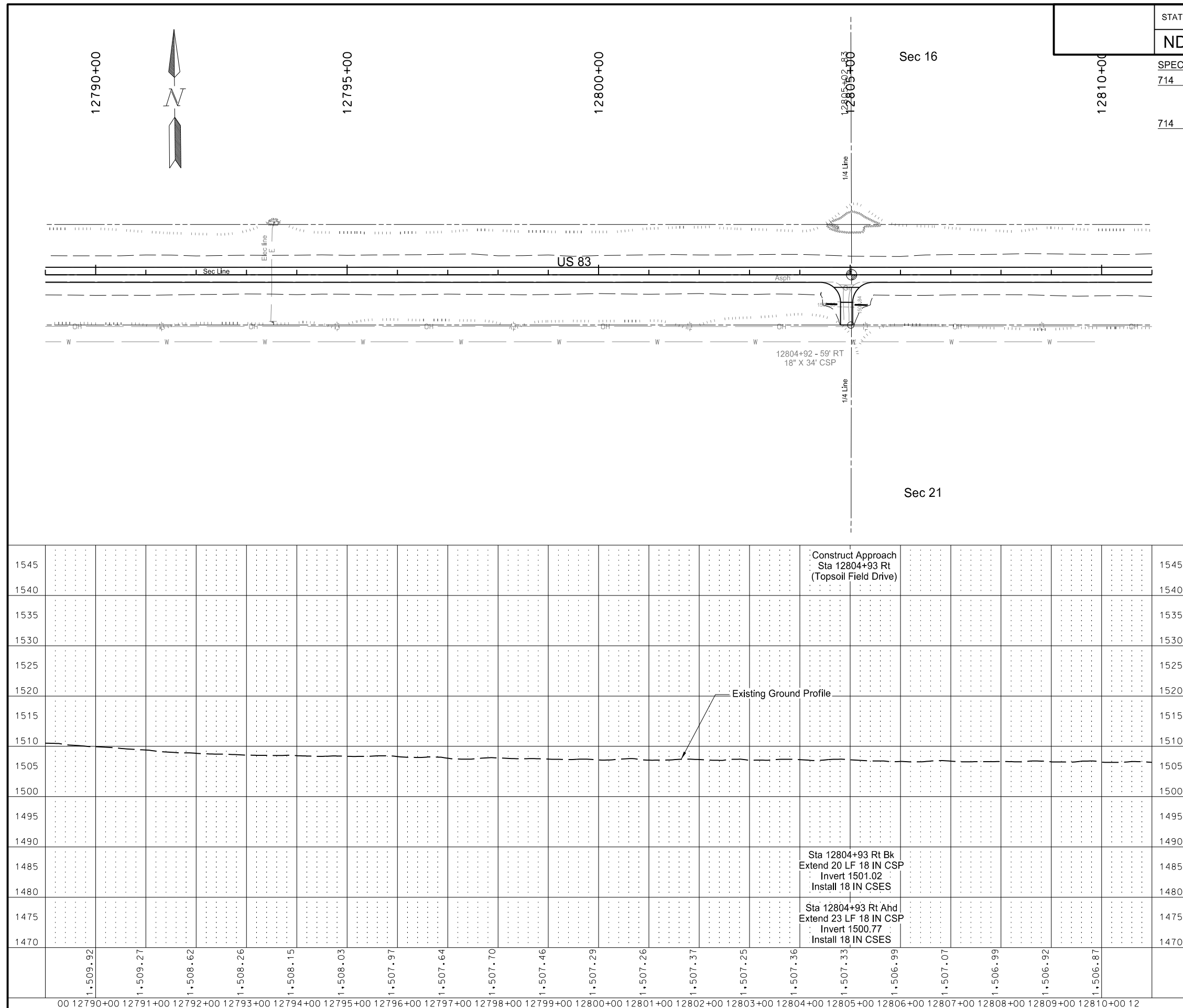








	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-4-083(141)237	60	15
12810+00	SPEC CODE	BID ITEM	QTY	UNIT
	714 5015	PIPE CORR STEEL .064IN 18IN		
		Sta 12804+93 Rt Bk	20	LF
		Sta 12804+93 Rt Ahd	23	LF
	714 5810	END SECT CORR STEEL .064IN 18IN		
		Sta 12804+93 Rt Bk	1	EA
		Sta 12804+93 Rt Ahd	1	EA



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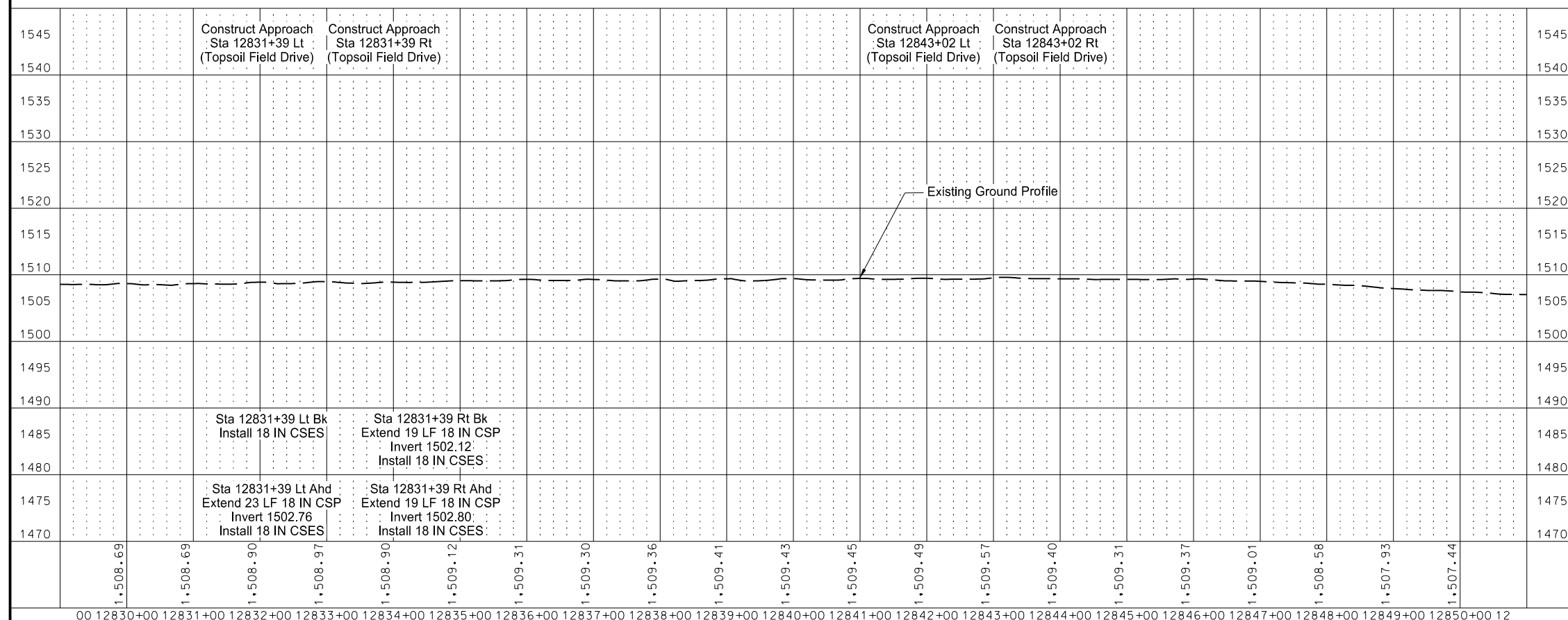
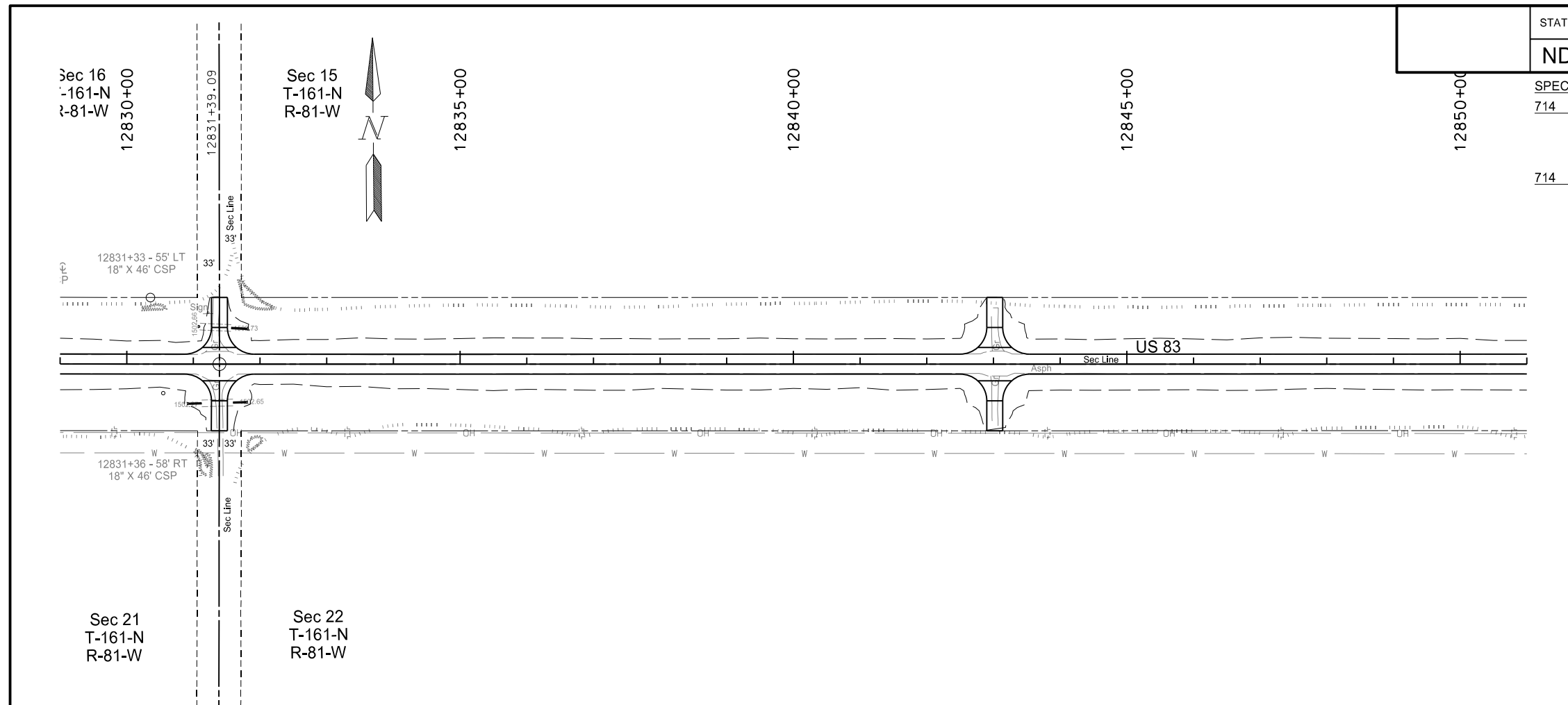
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US 83

Sta 12790+00 to 12810+00

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-4-083(141)237	60	17

SPEC CODE	BID ITEM	QTY	UNIT
714 5015	PIPE CORR STEEL .064IN 18IN		
	Sta 12831+39 Lt Ahd	23	LF
	Sta 12831+39 Rt Bk	19	LF
	Sta 12831+39 Rt Ahd	19	LF
714 5810	END SECT CORR STEEL .064IN 18IN		
	Sta 12831+39 Lt Bk	1	EA
	Sta 12831+39 Lt Ahd	1	EA
	Sta 12831+39 Rt Bk	1	EA
	Sta 12831+39 Rt Ahd	1	EA

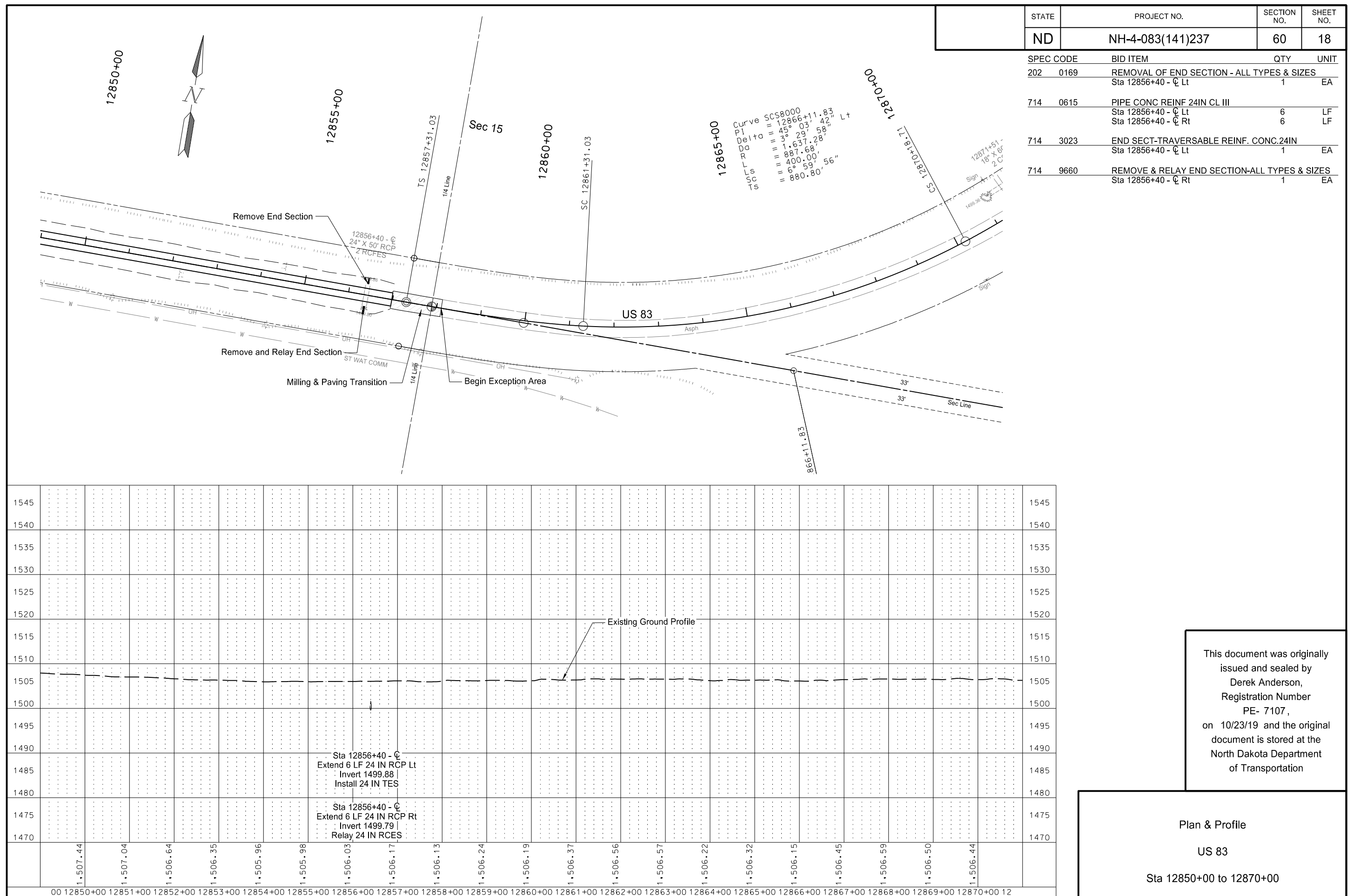


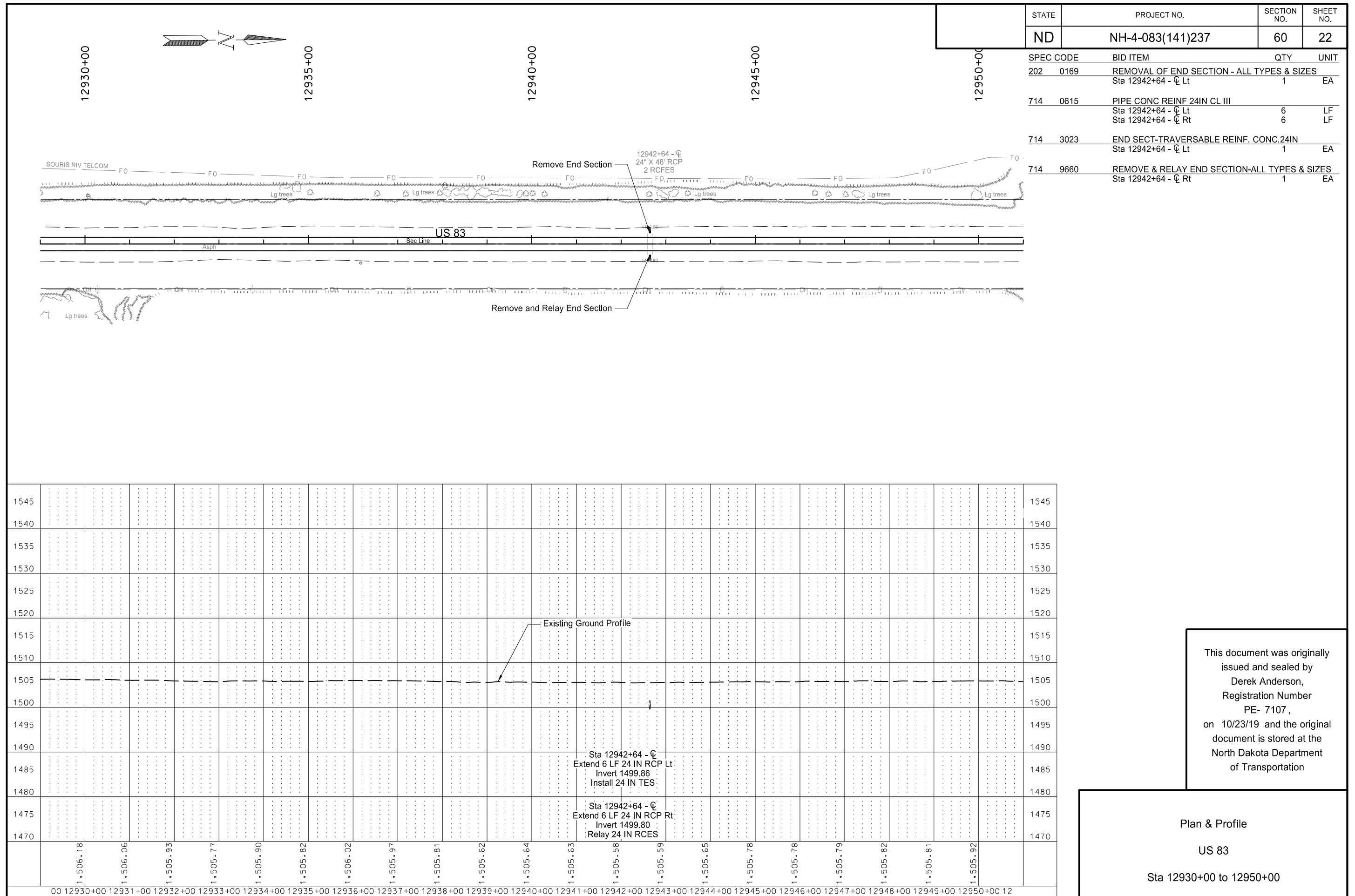
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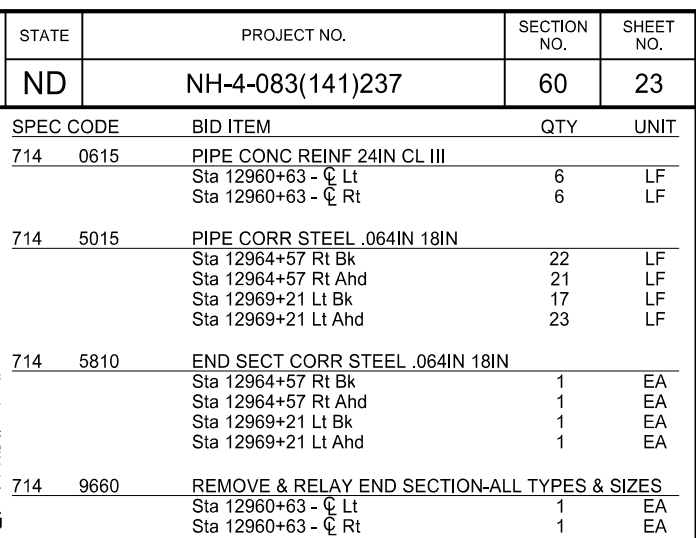
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US 83

Sta 12830+00 to 12850+00





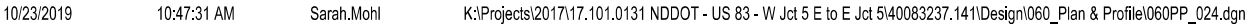


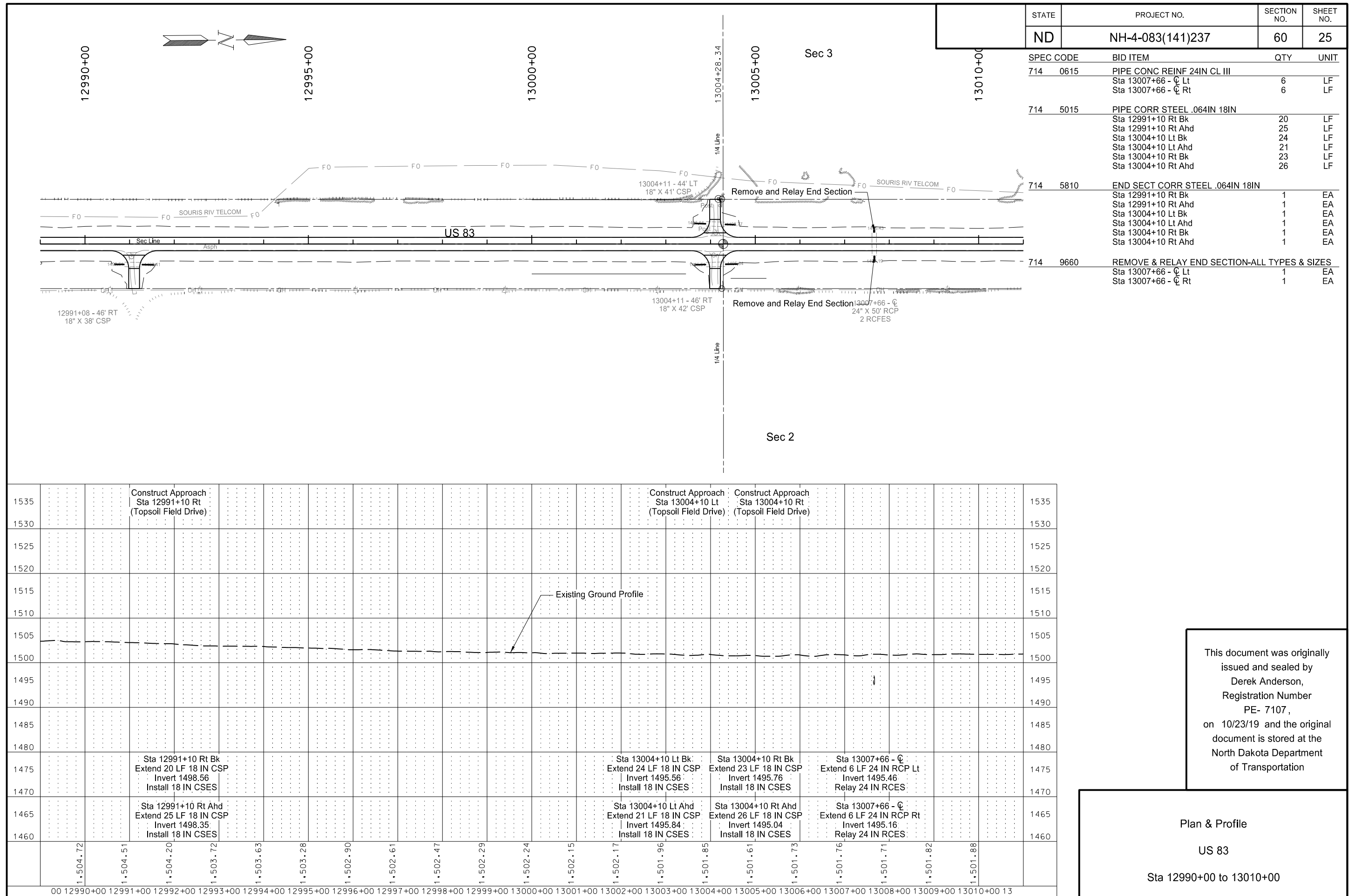
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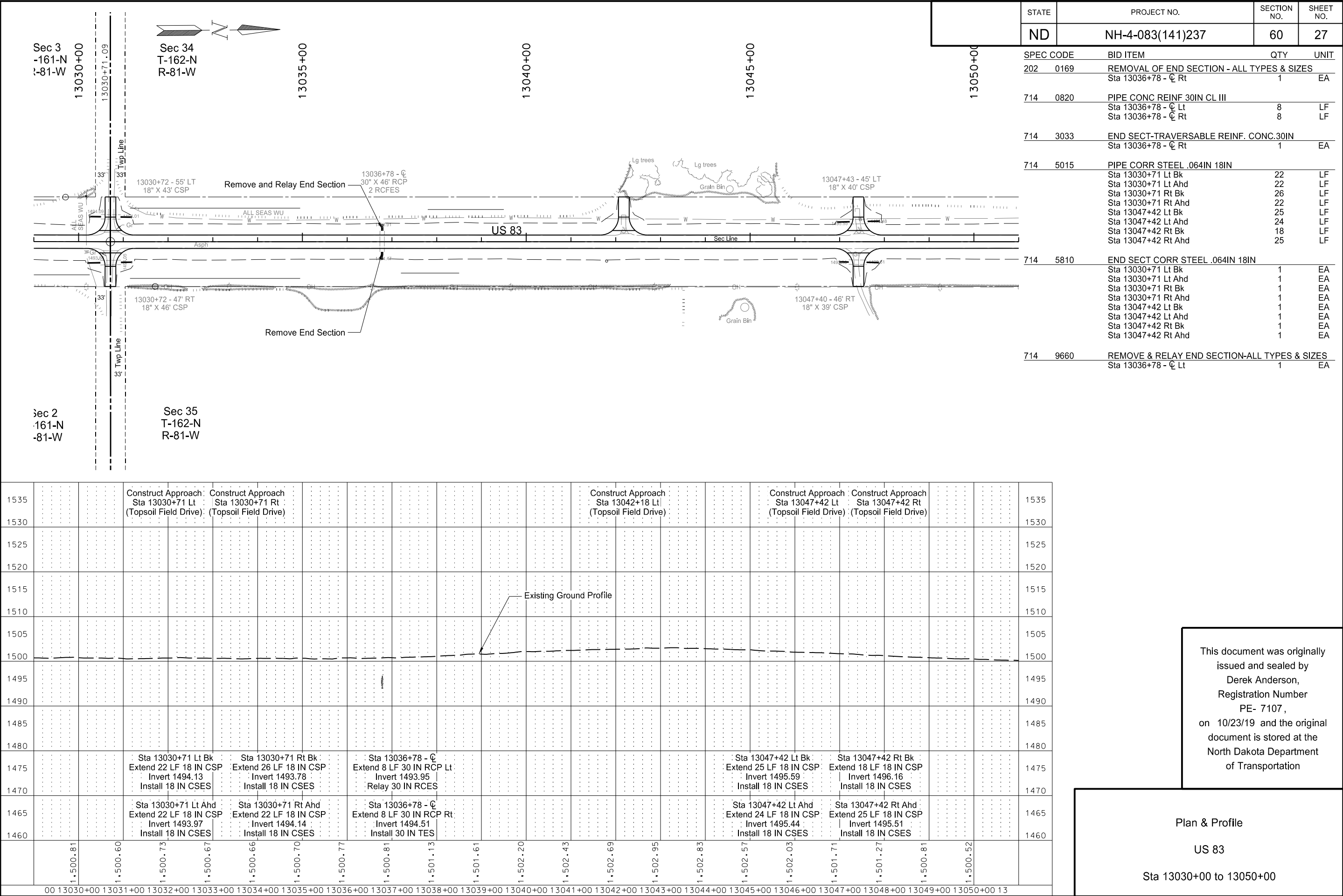
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US 83

Sta 12950+00 to 12970+00





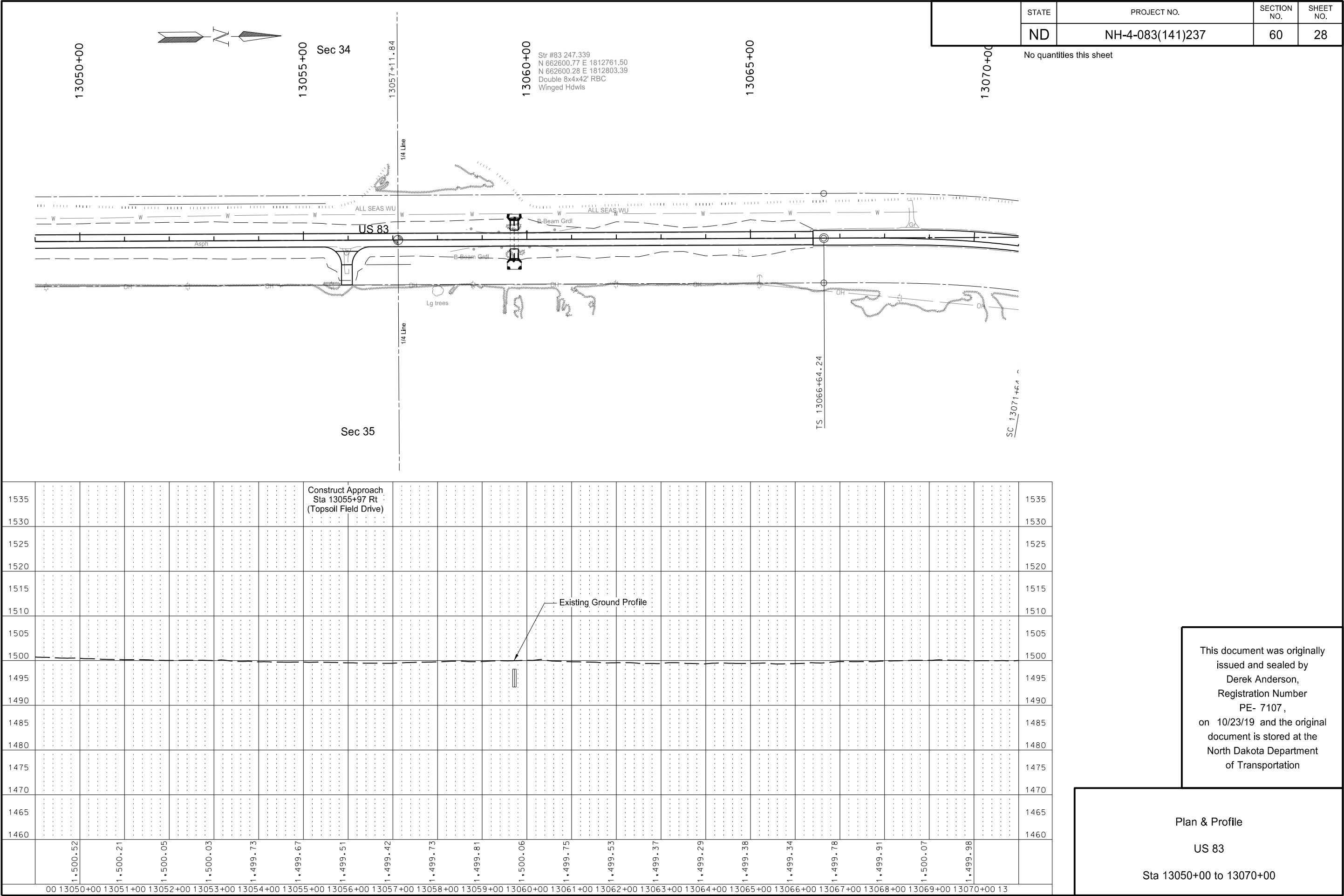


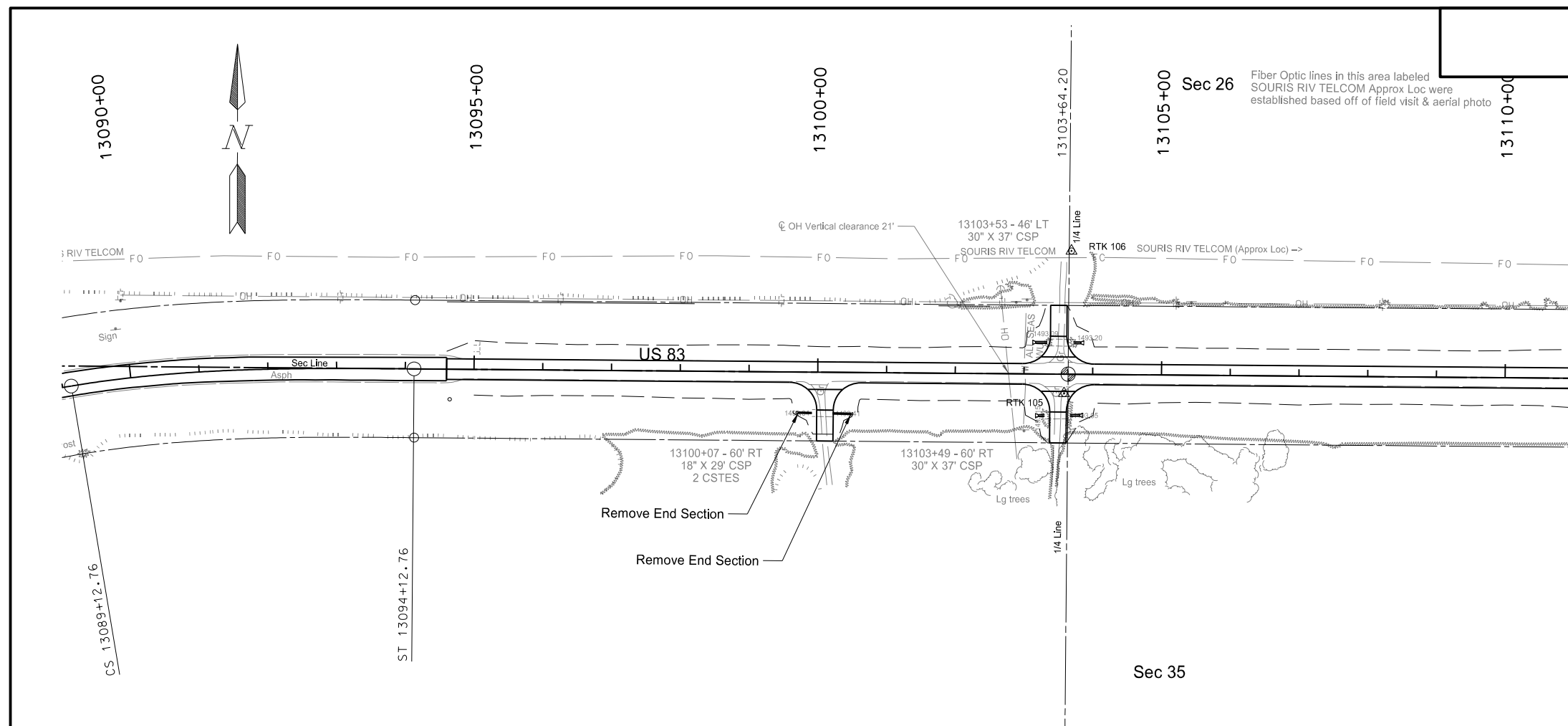
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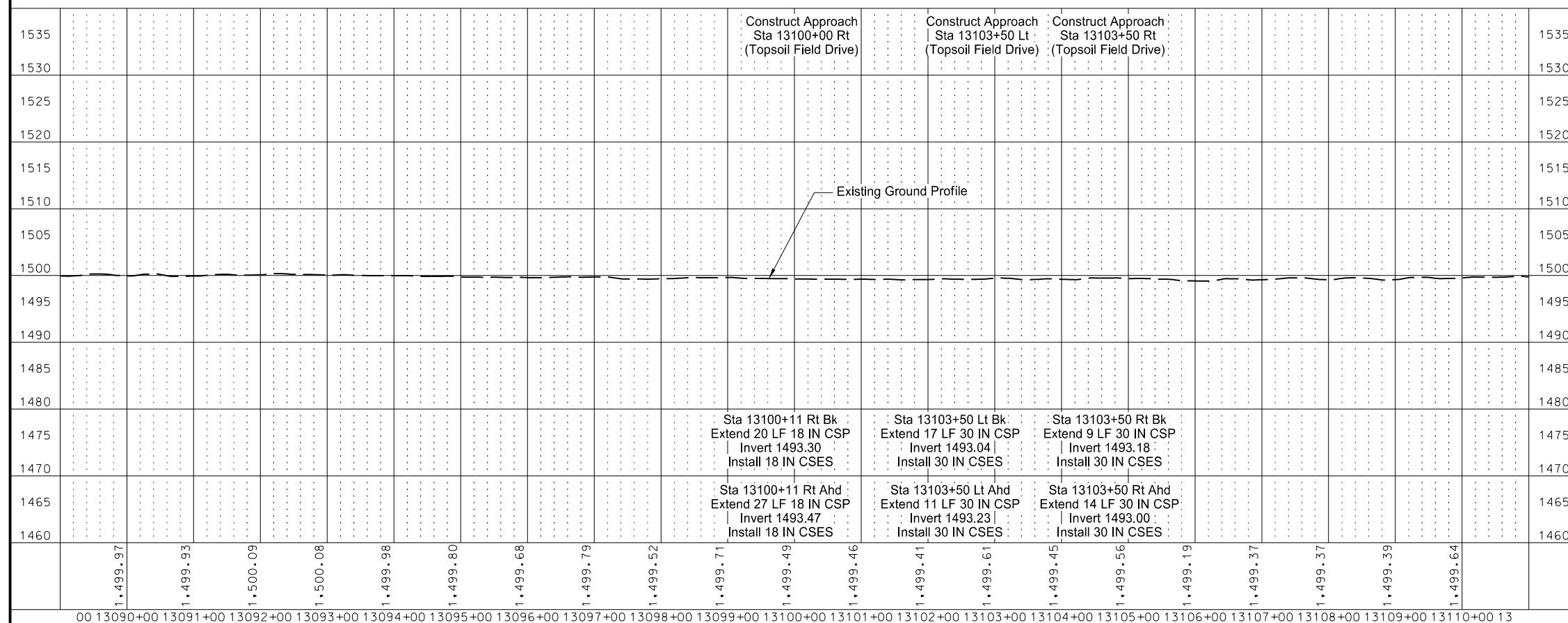
US 83

Sta 13030+00 to 13050+00





STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	60	30
SPEC CODE	BID ITEM	QTY	UNIT
202 0169	REMOVAL OF END SECTION - ALL TYPES AND SIZES		
	Sta 13100+11 Rt Bk	1	EA
	Sta 13100+11 Rt Ahd	1	EA
714 5015	PIPE CORR STEEL .064IN 18IN		
	Sta 13100+11 Rt Bk	20	LF
	Sta 13100+11 Rt Ahd	27	LF
714 5210	PIPE CORR STEEL .079IN 30IN		
	Sta 13103+50 Lt Bk	17	LF
	Sta 13103+50 Lt Ahd	11	LF
	Sta 13103+50 Rt Bk	9	LF
	Sta 13103+50 Rt Ahd	14	LF
714 5810	END SECT CORR STEEL .064IN 18IN		
	Sta 13100+11 Rt Bk	1	EA
	Sta 13100+11 Rt Ahd	1	EA
714 5825	END SECT CORR STEEL .079IN 30IN		
	Sta 13103+50 Lt Bk	1	EA
	Sta 13103+50 Lt Ahd	1	EA
	Sta 13103+50 Rt Bk	1	EA
	Sta 13103+50 Rt Ahd	1	EA

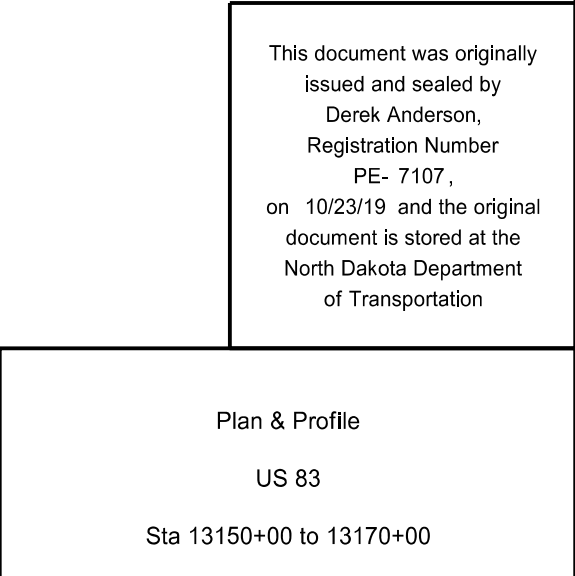
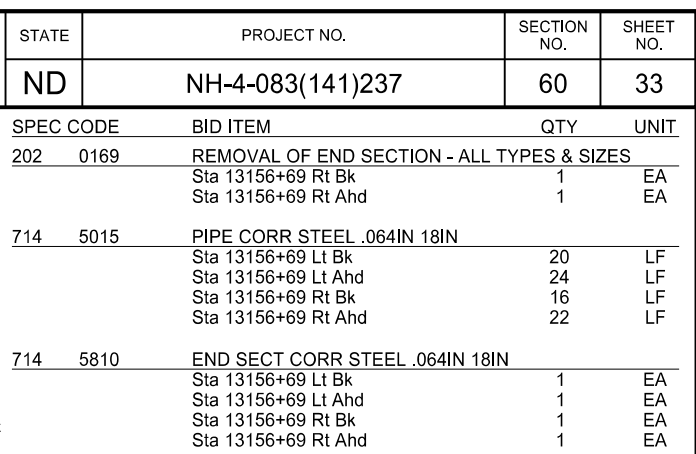


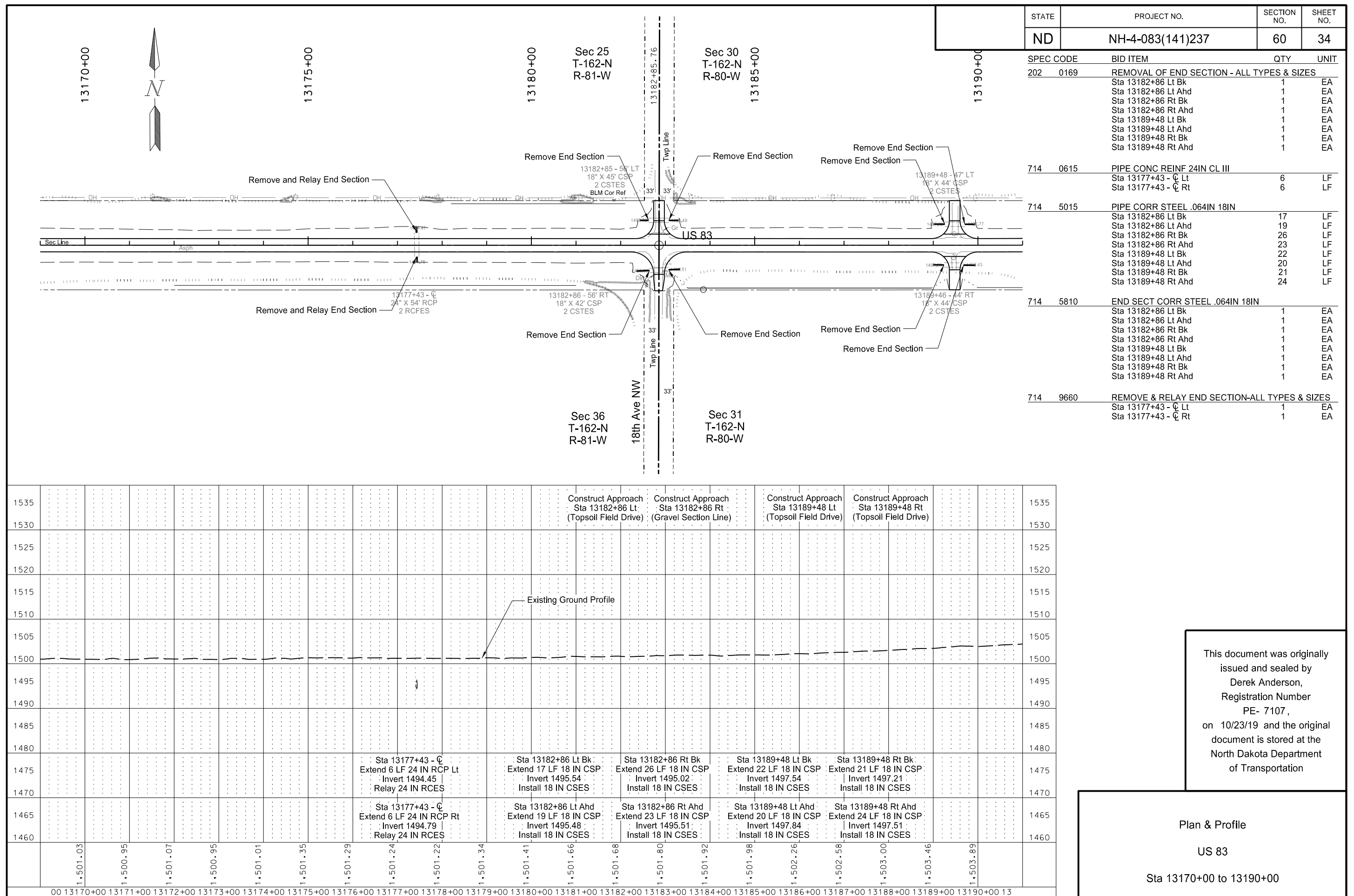
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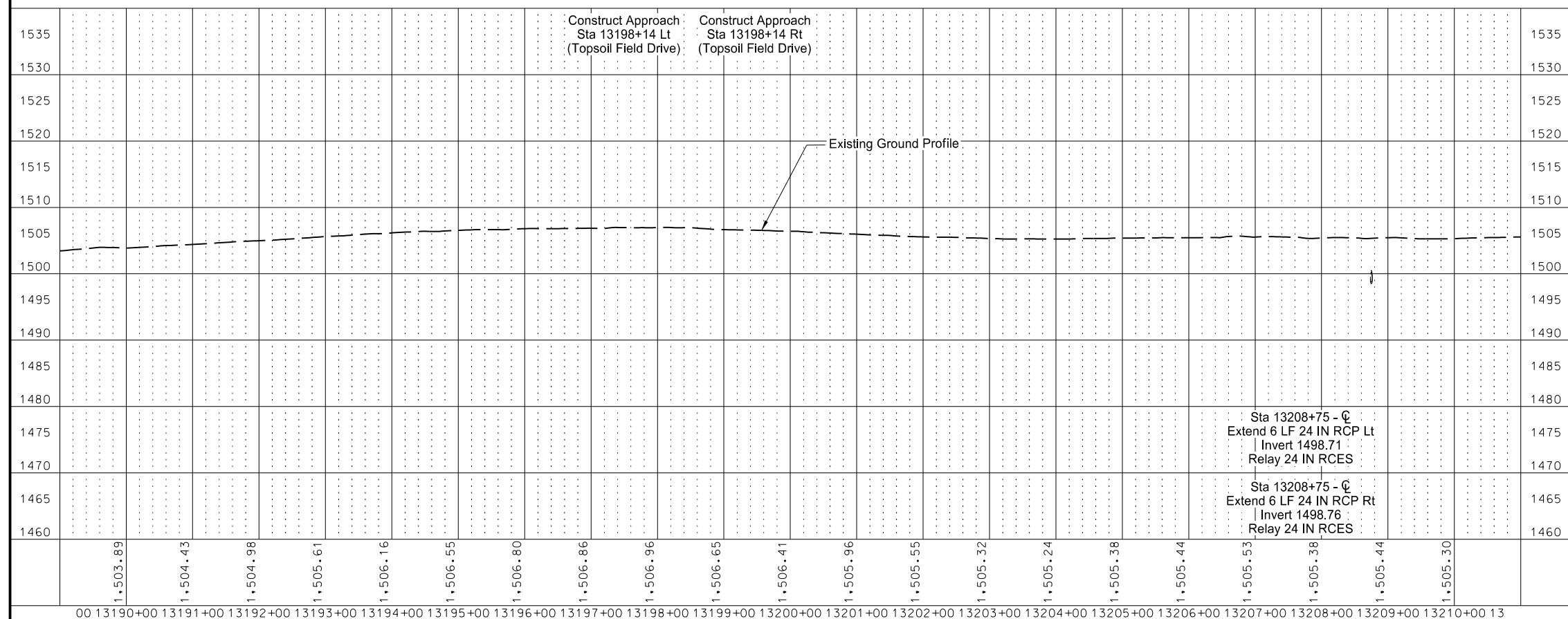
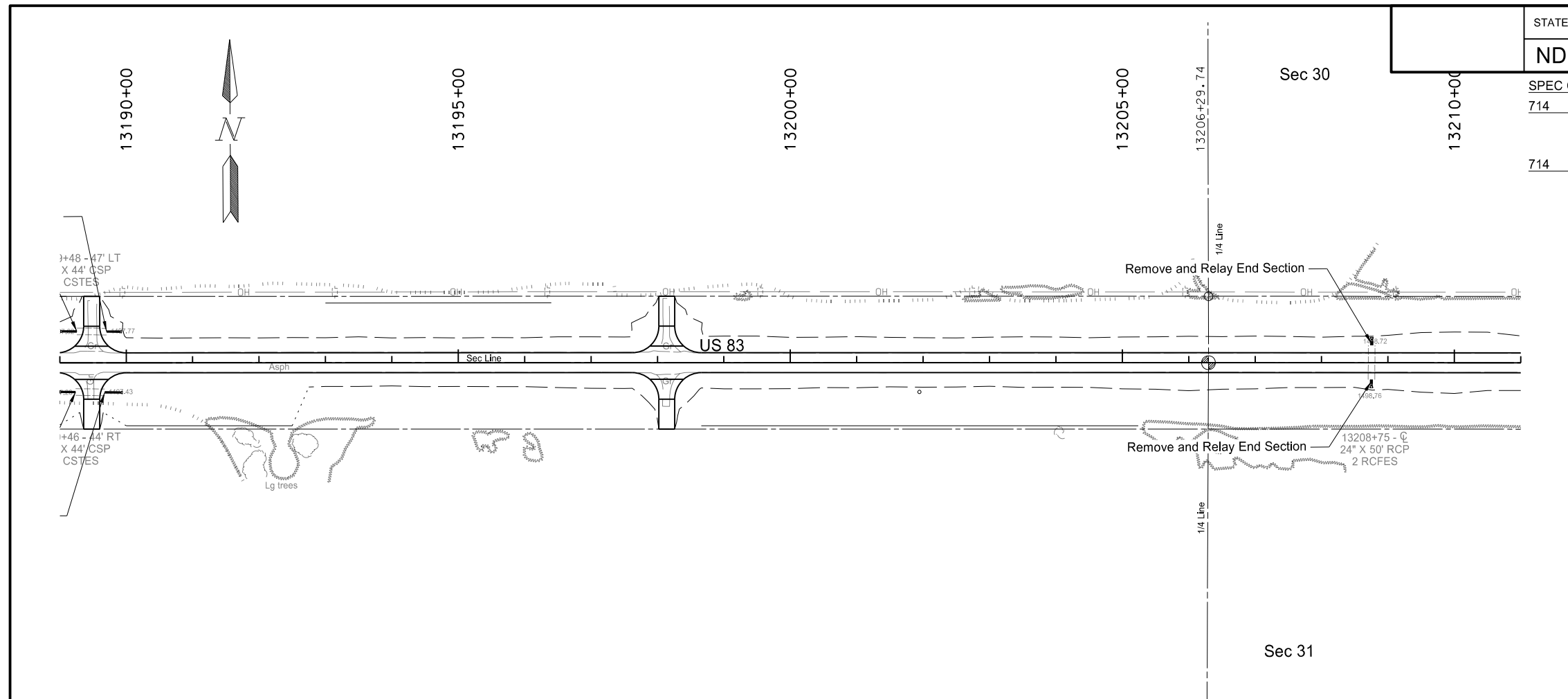
US 83

Sta 13090+00 to 13110+00





	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-4-083(141)237	60	35
13210+00	SPEC CODE	BID ITEM	QTY	UNIT
	714 0615	PIPE CONC REINF 24IN CL III		
		Sta 13208+75 - C Lt	6	LF
		Sta 13208+75 - C Rt	6	LF
	714 9660	REMOVE & RELAY END SECTION-ALL TYPES & SIZES		
		Sta 13208+75 - C Lt	1	EA
		Sta 13208+75 - C Rt	1	EA



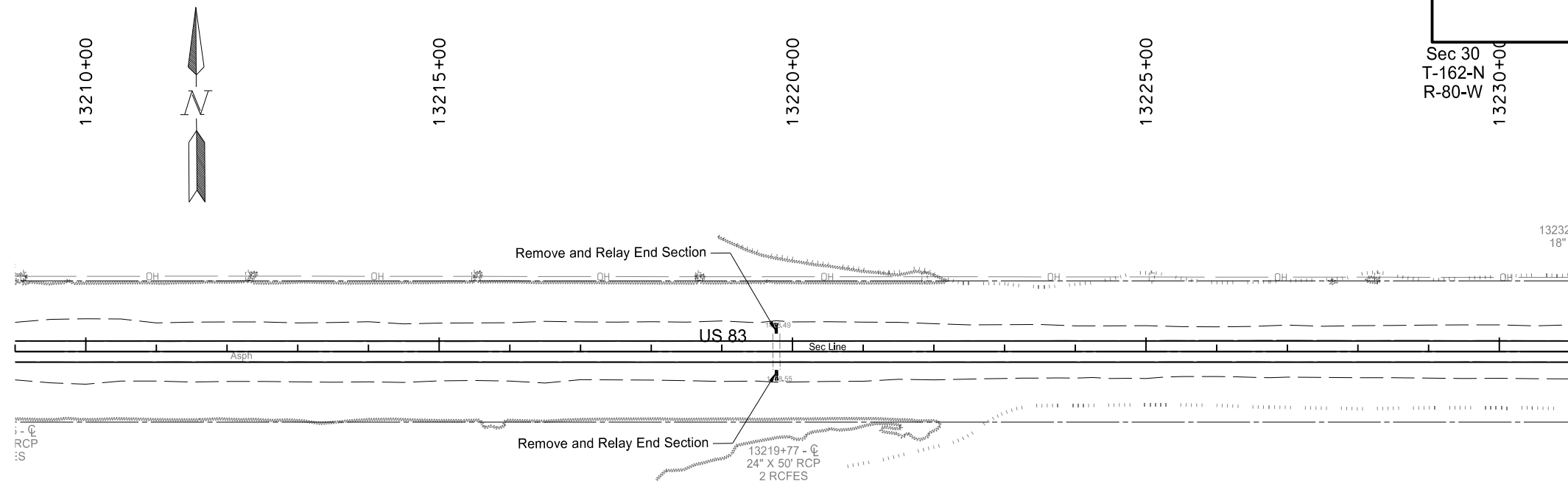
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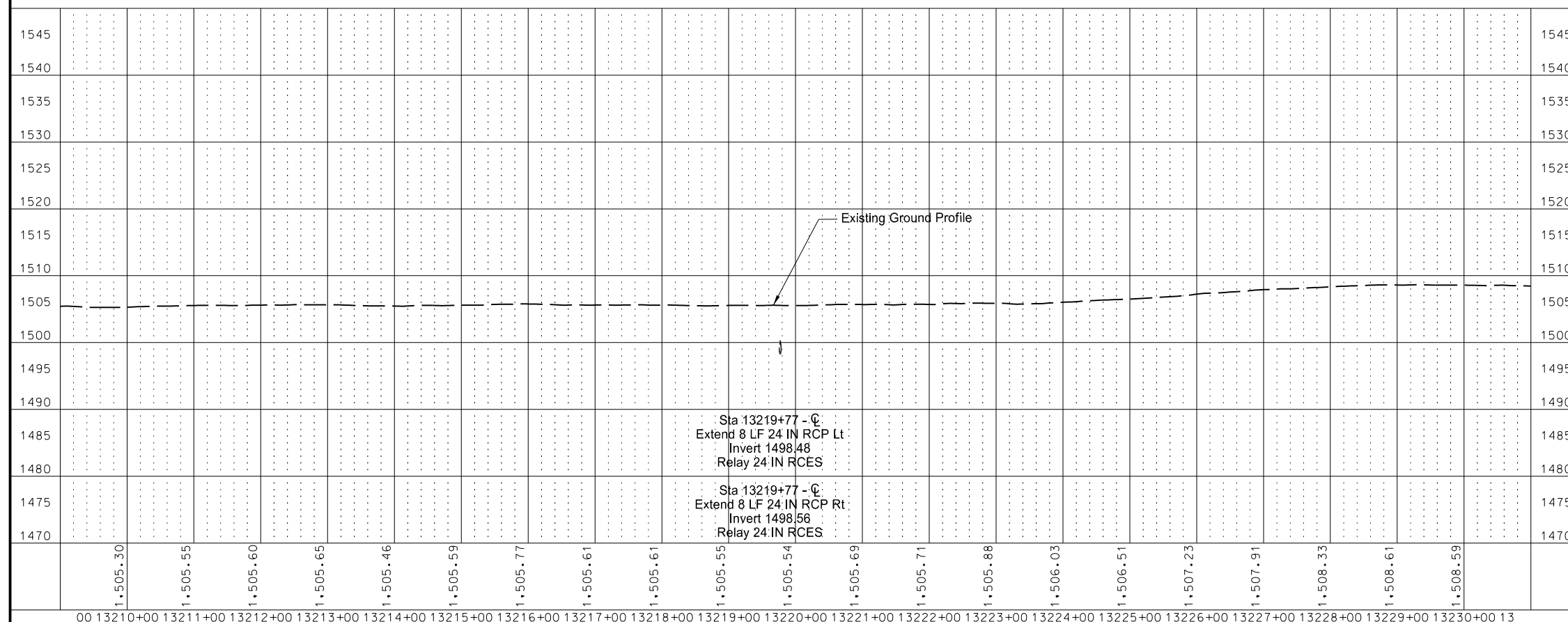
US 83

Sta 13190+00 to 13210+00

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-4-083(141)237	60	36
Sec 30 T-162-N R-80-W	SPEC CODE	BID ITEM	QTY	UNIT
13230+00	714 0615	PIPE CONC REINF 24IN CL III		
		Sta 13219+77 - C Lt	8	LF
		Sta 13219+77 - C Rt	8	LF
	714 9660	REMOVE & RELAY END SECTION-ALL TYPES & SIZES		
		Sta 13219+77 - C Lt	1	EA
		Sta 13219+77 - C Rt	1	EA



Sec 31
T-162-N
R-80-W



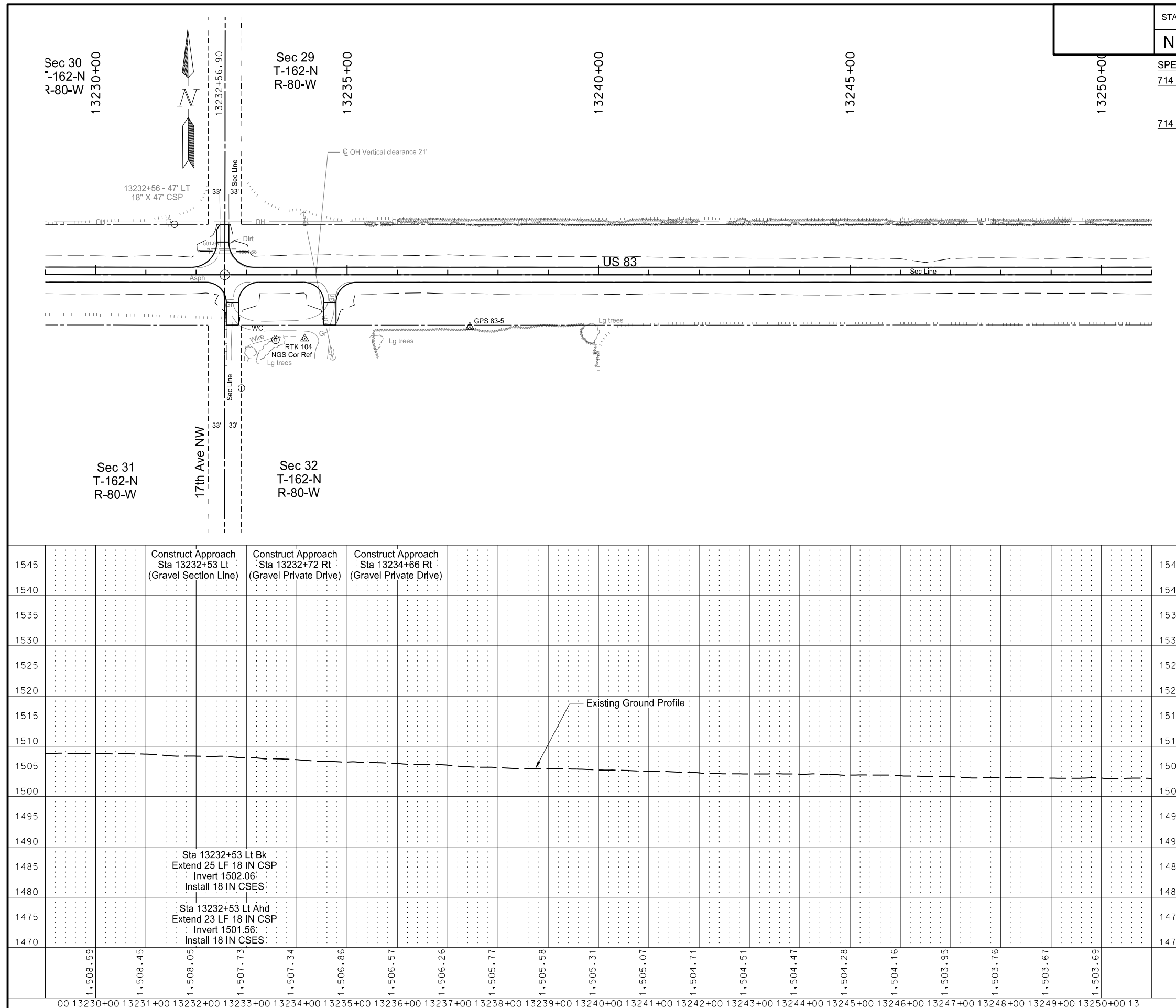
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US 83

Sta 13210+00 to 13230+00

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.	
	ND	NH-4-083(141)237	60	37	
13250+00	SPEC CODE		BID ITEM	QTY	UNIT
	714	5015	PIPE CORR STEEL .064IN 18IN		
			Sta 13232+53 Lt Bk	25	LF
			Sta 13232+53 Lt Ahd	23	LF
	714	5810	END SECT CORR STEEL .064IN 18IN		
			Sta 13232+53 Lt Bk	1	EA
			Sta 13232+53 Lt Ahd	1	EA

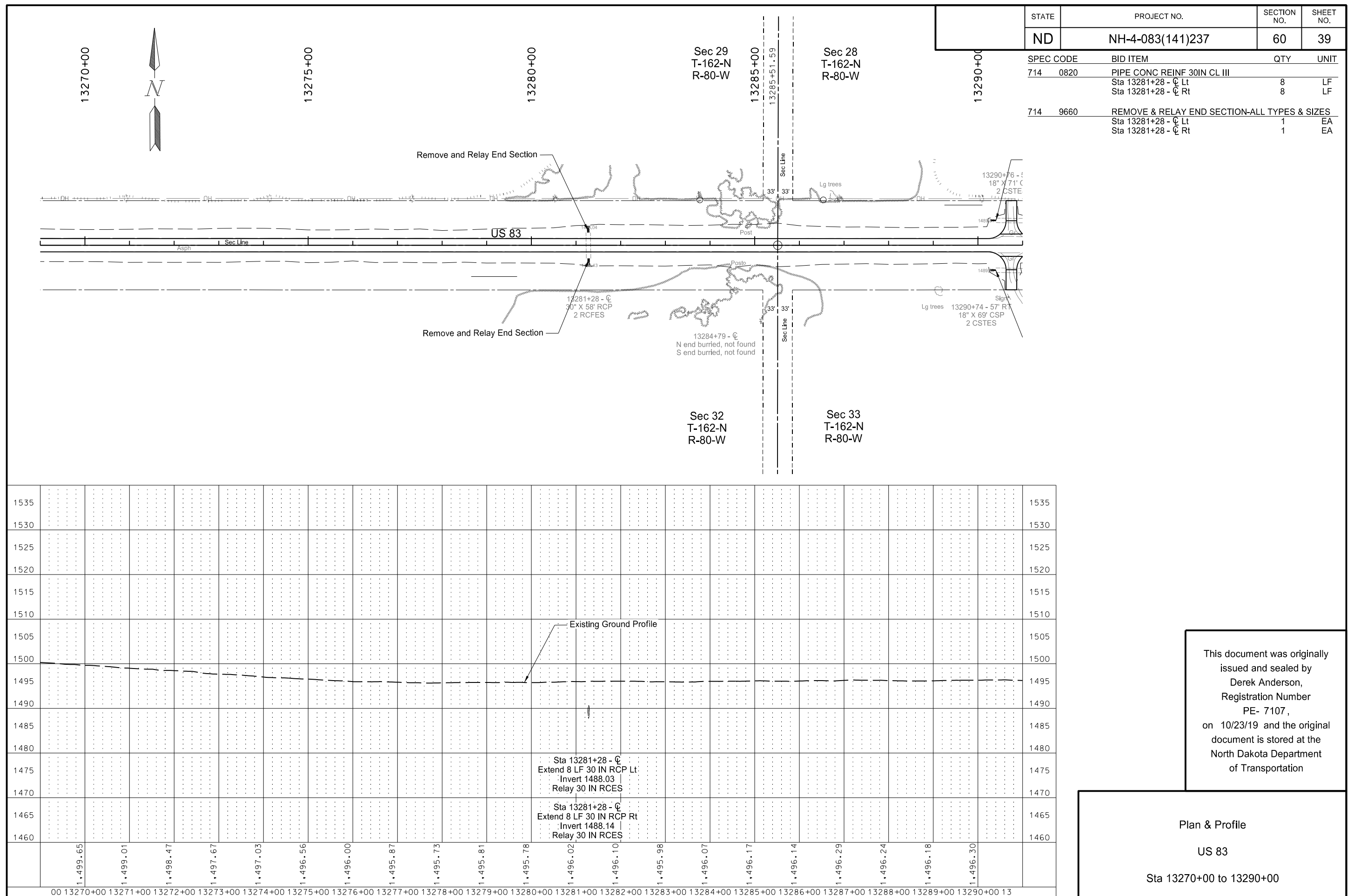


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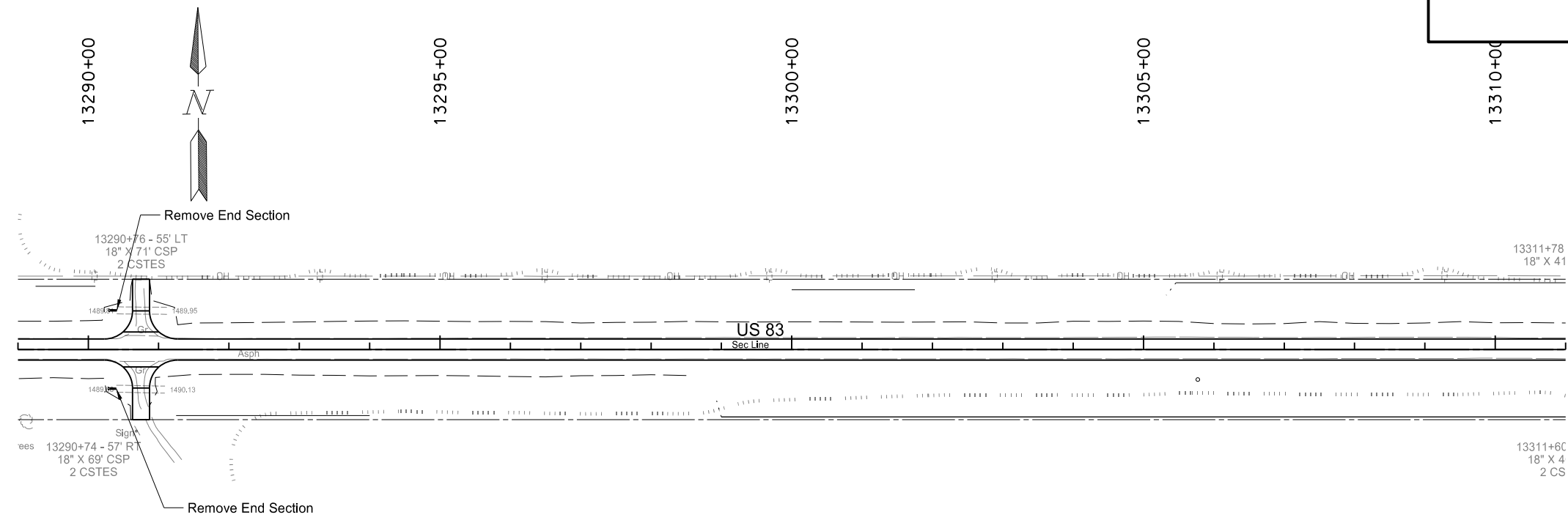
US 83

Sta 13230+00 to 13250+00



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-4-083(141)237	60	40

SPEC CODE	BID ITEM	QTY	UNIT
202 0169	REMOVAL OF END SECTION - ALL TYPES & SIZES		
	Sta 13290+75 Rt Bk	1	EA
	Sta 13290+75 Lt Bk	1	EA
714 5015	PIPE CORR STEEL .064IN 18IN		
	Sta 13290+75 Lt Bk	9	LF
	Sta 13290+75 Rt Bk	9	LF
714 5810	END SECT CORR STEEL .064IN 18IN		
	Sta 13290+75 Rt Bk	1	EA
	Sta 13290+75 Lt Bk	1	EA

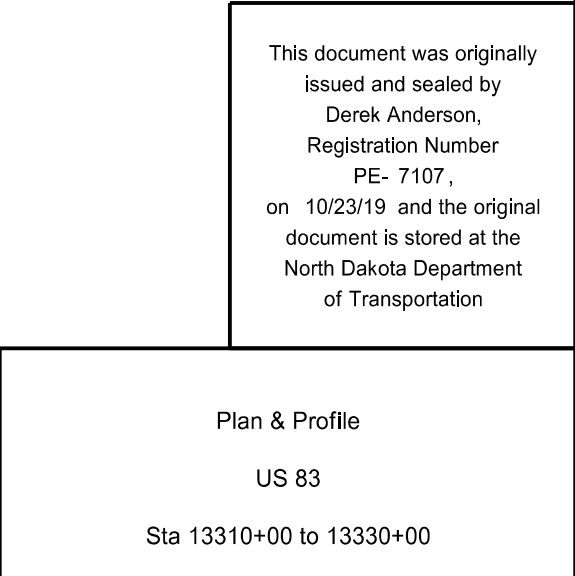
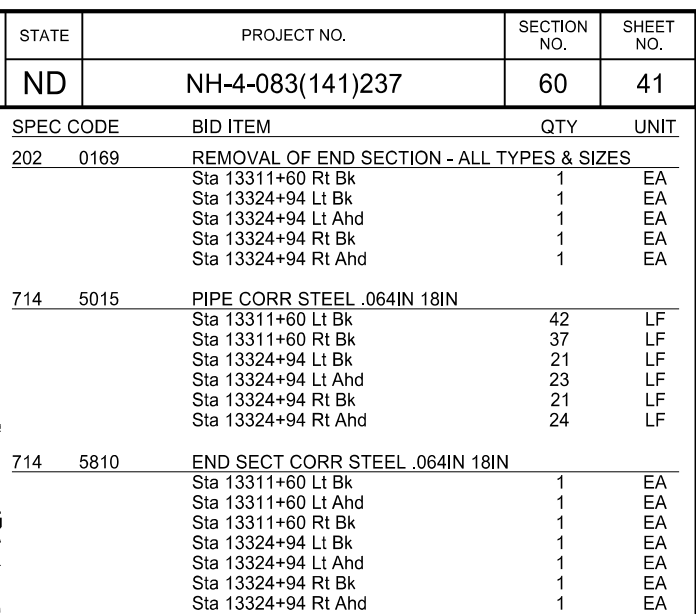
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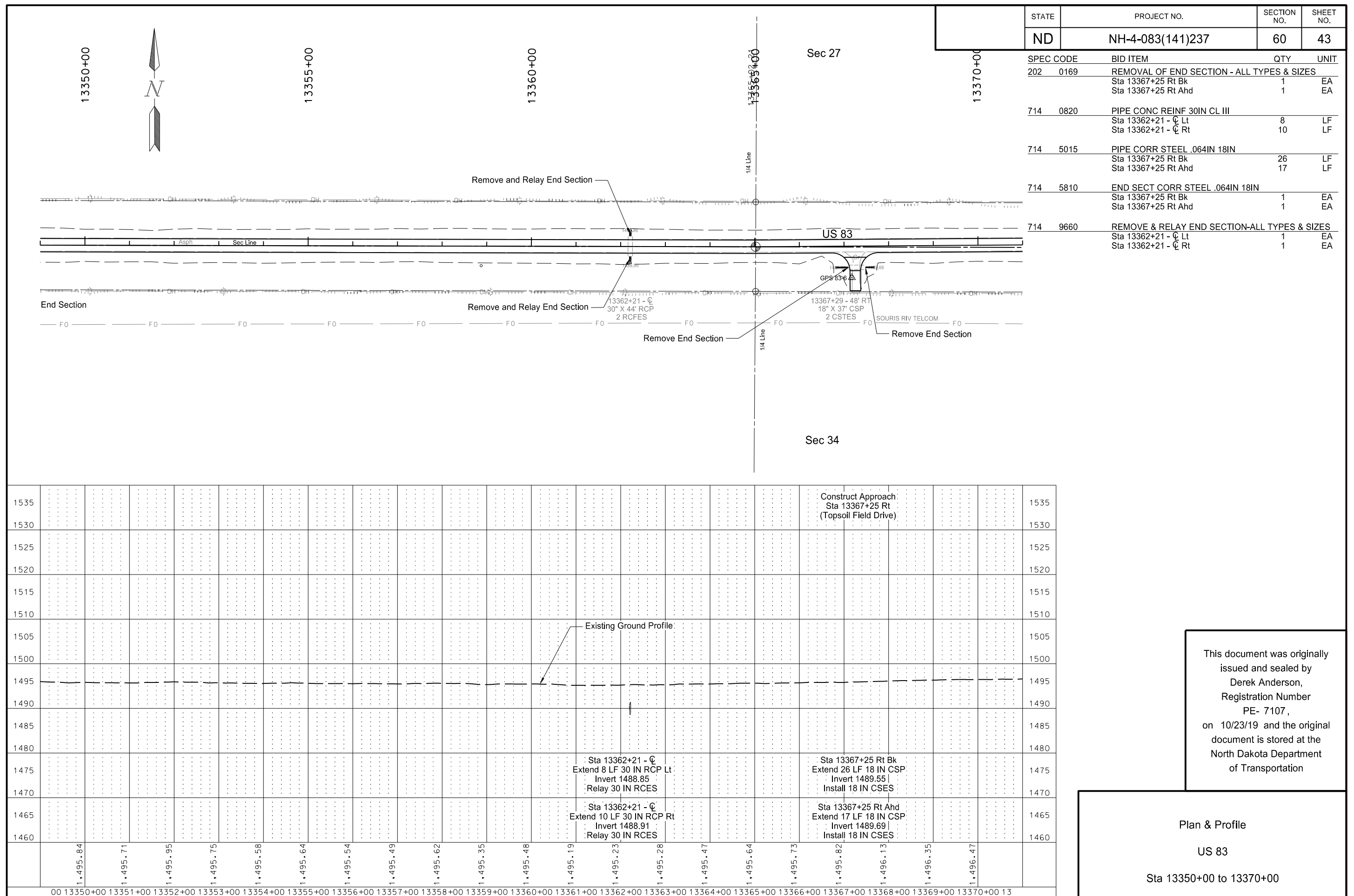
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US 83

Sta 13290+00 to 13310+00







Wetland Impact Table																	
Wetland Number	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands	Wetland Impacts Acre(s)			Wetland Mitigation									
					Temp.	Perm. (Fill/Drain)	Perm. (Cut)	Mitigation Required		11990 Bank							
								EO 11990	USACE	Location	Acre(s)	Mitigation Location	Mitigation Ratio	Acre(s)	Ditch Shift Acre(s)	Constructed Site #	Constructed Size Acre(s)
1a	Sec 21 T161N R82W	Basin	Natural	Yes				N	N								
1b	Sec 21 T161N R82W	Ditch	Created	Yes				N	N								
2	Sec 16 T161N R82W	Ditch	Created	Yes				N	N								
3a	Sec 16 T161N R82W	Ditch	Created	Yes				N	N								
3b	Sec 16 T161N R82W	Ditch	Created	Yes				N	N								
4	Sec 22 T161N R82W	Ditch	Created	Yes	0.01			N	N								
5	Sec 15 T161N R82W	Ditch	Created	Yes	0.02			N	N								
6	Sec 15 T161N R82W	Basin	Created	Yes				N	N								
7a	Sec 22 T161N R82W	Ditch	Created	Yes	0.05			N	N								
7b	Sec 22 T161N R82W	Ditch	Created	Yes	0.15	0.03		N	Y			Ditch Shift	1:1		0.03		
7c	Sec 22 T161N R82W	Ditch	Created	Yes	0.09	0.02		N	Y			Ditch Shift	1:1		0.02		
7d	Sec 22 T161N R82W	Basin	Natural	Yes	0.09	0.01		Y	Y			Site 6	2:1	0.02			
8a	Sec 15 T161N R82W	Ditch	Created	Yes	0.05	0.01		N	Y			Ditch Shift	1:1		0.01		
8b	Sec 15 T161N R82W	Basin	Natural	Yes				N	N								
8c	Sec 15 T161N R82W	Ditch	Created	Yes	0.08	0.05		N	Y			Ditch Shift	1:1		0.05		
9	Sec 15 T161N R82W	Basin	Natural	Yes				N	N								
10	Sec 15 T161N R82W	Ditch	Created	Yes	0.01			N	N								
11	Sec 15 T161N R82W	Ditch	Created	Yes	0.03	0.01		N	Y			Ditch Shift	1:1		0.01		
12	Sec 15 T161N R82W	Basin	Natural	Yes	0.02			N	N								
13	Sec 15 T161N R82W	Ditch	Created	Yes	0.12			N	N								
14	Sec 22 T161N R82W	Ditch	Created	Yes	0.07			N	N								
15a	Sec 22 T161N R82W	Ditch	Created	Yes	0.08			N	N								
15b	Sec 22 T161N R82W	Basin	Natural	Yes	0.16			N	N								
15c	Sec 22 T161N R82W	Ditch	Created	Yes	0.09	0.01		N	Y			Ditch Shift	1:1		0.01		
15d	Sec 23 T161N R82W	Ditch	Created	Yes	0.76	0.03		N	Y			Ditch Shift	1:1		0.03		
15e	Sec 23 T161N R82W	Basin	Natural	Yes	0.11	0.01		Y	Y			Site 7	2:1	0.02			
15f	Sec 15 T161N R82W	Basin	Natural	Yes	0.11			N	N								
15g	Sec 15 T161N R82W	Ditch	Created	Yes	0.03			N	N								
15h	Sec 14 T161N R82W	Ditch	Created	Yes	0.26	0.02		N	Y			Site 7	2:1	0.04			
15i	Sec 14 T161N R82W	Ditch	Created	Yes	0.38	0.05		N	Y			Ditch Shift	1:1		0.05		
15j	Sec 14 T161N R82W	Ditch	Created	Yes	0.01	0.01		N	Y			Site 7	2:1	0.02			
16	Sec 14 T161N R82W	Basin	Natural	Yes				N	N								
17	Sec 23 T161N R82W	Basin	Natural	Yes				N	N								
18	Sec 23 T161N R82W	Basin	Natural	Yes				N	N								
19	Sec 23 T161N R82W	Ditch	Created	Yes	0.16			N	N								
20	Sec 14 T161N R82W	Basin	Natural	Yes				N	N								
21	Sec 14 T161N R82W	Ditch	Created	Yes				N	N								
22	Sec 14 T161N R82W	Ditch	Created	Yes				N	N								
23	Sec 14 T161N R82W	Ditch	Created	Yes	0.06			N	N								
24	Sec 23 T161N R82W	Basin	Natural	Yes	0.01			N	N								

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Wetlands, Mitigation and Environmental
US 83

Wetland Impact Table																	
Wetland Number	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands	Wetland Impacts Acre(s)			Wetland Mitigation									
					Temp.	Perm. (Fill/Drain)	Perm. (Cut)	Mitigation Required		11990 Bank							
								EO 11990	USACE	Location	Acre(s)	Mitigation Location	Mitigation Ratio	Acre(s)	Ditch Shift Acre(s)	Constructed Site #	Constructed Size Acre(s)
25a	Sec 23 T161N R82W	Ditch	Created	Yes	0.02	0.02		N	Y			Site 6	2:1	0.04			
25b	Sec 24 T161N R82W	Ditch	Created	Yes	0.01	0.01		N	Y			Site 6	2:1	0.02			
26a	Sec 24 T161N R82W	Basin	Natural	Yes	0.05			N	N								
26b	Sec 24 T161N R82W	Ditch	Created	Yes		0.01		N	Y			Ditch Shift	1:1		0.01		
26c	Sec 24 T161N R82W	Ditch	Created	Yes	0.01	0.01		N	Y			Ditch Shift	1:1		0.01		
27	Sec 13 T161N R82W	Ditch	Created	Yes	0.03			N	N								
28	Sec 24 T161N R82W	Ditch	Created	Yes				N	N								
29a	Sec 24 T161N R82W	Ditch	Created	Yes	0.01	0.03		N	Y			Ditch Shift	1:1		0.03		
29b	Sec 24 T161N R82W	Ditch	Created	Yes	0.39	0.05		N	Y			Ditch Shift	1:1		0.05		
29c	Sec 13 T161N R82W	Ditch	Created	Yes	0.03			N	N								
30	Sec 13 T161N R82W	Ditch	Created	Yes	0.12			N	N								
31	Sec 24 T161N R82W	Basin	Natural	Yes				N	N								
32	Sec 24 T161N R82W	Basin	Natural	Yes				N	N								
33	Sec 24 T161N R82W	Basin	Natural	Yes				N	N								
34	Sec 24 T161N R82W	Ditch	Created	Yes	0.07	0.01		N	Y			Ditch Shift	1:1		0.01		
35	Sec 24 T161N R82W	Ditch	Created	No				N	N								
36	Sec 19 T161N R81W	Ditch	Created	No				N	N								
37a	Sec 19 T161N R81W	Ditch	Created	Yes	0.11	0.03		N	Y			Ditch Shift	1:1		0.03		
37b	Sec 19 T161N R81W	Ditch	Created	Yes	0.06	0.03		N	Y			Ditch Shift	1:1		0.03		
38a	Sec 19 T161N R81W	Ditch	Created	Yes	0.15	0.02		N	Y			Ditch Shift	1:1		0.02		
38b	Sec 18 T161N R81W	Basin	Natural	Yes	0.02			N	N								
39	Sec 18 T161N R81W	Basin	Natural	Yes				N	N								
40	Sec 19 T161N R81W	Basin	Natural	Yes				N	N								
41	Sec 18 T161N R81W	Ditch	Created	No	0.02	0.01		N	Y								
42	Sec 18 T161N R81W	Ditch	Created	No	0.01			N	N								
43	Sec 18 T161N R81W	Basin	Created	Yes				N	N								
44	Sec 19 T161N R81W	Ditch	Created	Yes	0.04	0.01		N	Y			Ditch Shift	1:1		0.01		
45	Sec 17 T161N R81W	Ditch	Created	Yes	0.01			N	N								
46a	Sec 20 T161N R81W	Ditch	Created	Yes	0.10	0.01		N	Y			Ditch Shift	1:1		0.01		
46b	Sec 20 T161N R81W	Ditch	Created	Yes	0.03	0.02		N	Y			Ditch Shift	1:1		0.02		
47	Sec 17 T161N R81W	Ditch	Created	Yes	0.01			N	N								
48	Sec 17 T161N R81W	Ditch	Created	Yes	0.03			N	N								
49	Sec 20 T161N R81W	Ditch	Created	Yes	0.18			N	N								
50a	Sec 17 T161N R81W	Ditch	Created	Yes	0.15	0.02		N	Y			Ditch Shift	1:1		0.02		
50b	Sec 20 T161N R81W	Ditch	Created	Yes	0.01	0.01		N	Y			Site 6	2:1	0.02			
51	Sec 20 T161N R81W	Basin	Natural	Yes				N	N								
52	Sec 20 T161N R81W	Ditch	Created	Yes				N	N								
53	Sec 17 T161N R81W	Ditch	Created	Yes				N	N								
54a	Sec 16 T161N R81W	Ditch	Created	Yes	0.12	0.05		N	Y			Ditch Shift	1:1		0.05		
54b	Sec 21 T161N R81W	Ditch	Created	Yes	0.01	0.01		N	Y			Ditch Shift	1:1		0.01		
54c	Sec 21 T161N R81W	Basin	Created	Yes	0.03			N	N								

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Wetlands, Mitigation and Environmental
US 83

																		STATE	PROJECT NO.			SECTION NO.	SHEET NO.
																		ND	NH-4-083(141)237			75	3
Wetland Impact Table																							
Wetland Number	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands	Wetland Impacts Acre(s)			Wetland Mitigation															
								Mitigation Required		11990 Bank													
					Temp.	Perm. (Fill/Drain)	Perm. (Cut)	EO 11990	USACE	Location	Acre(s)	Mitigation Location	Mitigation Ratio	Acre(s)	Ditch Shift Acre(s)	Constructed Site #	Constructed Size Acre(s)						
55	Sec 21 T161N R81W	Ditch	Created	Yes	0.13			N	N														
56	Sec 16 T161N R81W	Ditch	Created	Yes	0.03	0.02		N	Y			Ditch Shift	1:1		0.02								
57	Sec 21 T161N R81W	Ditch	Created	Yes	0.01			N	N														
58a	Sec 21 T161N R81W	Ditch	Created	Yes	0.25	0.01		N	Y			Ditch Shift	1:1		0.01								
58b	Sec 21 T161N R81W	Ditch	Created	Yes	0.04	0.01		N	Y			Ditch Shift	1:1		0.01								
59a	Sec 16 T161N R81W	Ditch	Created	Yes	0.10			N	N														
59b	Sec 16 T161N R81W	Basin	Natural	Yes	0.26			N	N														
59c	Sec 16 T161N R81W	Ditch	Created	Yes	0.18	0.02		N	Y			Ditch Shift	1:1		0.02								
59d	Sec 21 T161N R81W	Drainage	Created	Yes	0.04	0.02		N	Y			Ditch Shift	1:1		0.02								
59e	Sec 21 T161N R81W	Ditch	Created	Yes	0.11			N	N														
60	Sec 21 T161N R81W	Ditch	Created	Yes	0.07	0.01		N	Y			Ditch Shift	1:1		0.01								
61	Sec 15 T161N R81W	Ditch	Created	Yes	0.38	0.02		N	Y			Ditch Shift	1:1		0.02								
62	Sec 22 T161N R81W	Ditch	Created	Yes	0.15			N	N														
63	Sec 22 T161N R81W	Ditch	Created	Yes				N	N														
64	Sec 22 T161N R81W	Ditch	Created	Yes	0.01			N	N														
65	Sec 22 T161N R81W	Ditch	Created	Yes				N	N														
66a	Sec 15 T161N R81W	Ditch	Created	Yes				N	N														
66b	Sec 15 T161N R81W	Ditch	Created	Yes				N	N														
67	Sec 15 T161N R81W	Ditch	Created	Yes				N	N														
68	Sec 15 T161N R81W	Ditch	Created	Yes				N	N														
69	Sec 15 T161N R81W	Ditch	Created	Yes				N	N														
70a	Sec 15 T161N R81W	Basin	Natural	Yes				N	N														
70b	Sec 15 T161N R81W	Ditch	Created	Yes				N	N														
70c	Sec 15 T161N R81W	Ditch	Created	Yes				N	N														
70d	Sec 15 T161N R81W	Ditch	Created	Yes				N	N														
71a	Sec 15 T161N R81W	Ditch	Created	Yes	0.02	0.01		N	Y			Site 6	2:1	0.02									
71b	Sec 15 T161N R81W	Basin	Natural	Yes				N	N														
71c	Sec 15 T161N R81W	Ditch	Created	Yes	0.13	0.02		N	Y			Ditch Shift	1:1		0.02								
71d	Sec 15 T161N R81W	Basin	Natural	Yes	0.02	0.01		Y	Y			Site 6	2:1	0.02									
71e	Sec 15 T161N R81W	Ditch	Created	Yes	0.02			N	N														
71f	Sec 14 T161N R81W	Ditch	Created	Yes				N	N														
71g	Sec 14 T161N R81W	Drainage	Natural	Yes				N	N														
71h	Sec 14 T161N R81W	Ditch	Created	Yes	0.23			N	N														
71i	Sec 14 T161N R81W	Basin	Natural	Yes	0.03	0.01		Y	Y			Site 6	2:1	0.02									
72a	Sec 15 T161N R81W	Ditch	Created	Yes	0.07	0.03		N	Y			Site 5	2:1	0.06									
72b	Sec 15 T161N R81W	Basin	Natural	Yes				N	N														
72c	Sec 14 T161N R81W	Ditch	Created	Yes	0.01	0.01		N	Y			Ditch Shift	1:1		0.01								
72d	Sec 10 T161N R81W	Ditch	Created	Yes	0.02	0.01		N	Y			Ditch Shift	1:1		0.01								
73	Sec 14 T161N R81W	Ditch	Created	Yes				N	N														
74	Sec 11 T161N R81W	Ditch	Created	Yes				N	N														

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Wetlands, Mitigation and Environmental
US 83

Wetland Impact Table																	
Wetland Number	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands	Wetland Impacts Acre(s)			Wetland Mitigation									
								Mitigation Required		11990 Bank							
					Temp.	Perm. (Fill/Drain)	Perm. (Cut)	EO 11990	USACE	Location	Acre(s)	Mitigation Location	Mitigation Ratio	Acre(s)	Ditch Shift Acre(s)	Constructed Site #	Constructed Size Acre(s)
75a	Sec 10 T161N R81W	Basin	Natural	Yes				N	N								
75b	Sec 10 T161N R81W	Ditch	Created	Yes	0.18			N	N								
76	Sec 11 T161N R81W	Ditch	Created	Yes	0.03			N	N								
77a	Sec 10 T161N R81W	Ditch	Created	Yes	0.38	0.01		N	Y			Ditch Shift	1:1		0.01		
77b	Sec 11 T161N R81W	Ditch	Created	Yes	0.26			N	N								
78	Sec 10 T161N R81W	Ditch	Created	Yes	0.02			N	N								
79	Sec 11 T161N R81W	Basin	Natural	Yes				N	N								
80a	Sec 11 T161N R81W	Ditch	Created	Yes	0.17	0.02		N	Y			Ditch Shift	1:1		0.02		
80b	Sec 10 T161N R81W	Basin	Natural	Yes	0.03	0.01		Y	Y			Site 5	2:1	0.02			
80c	Sec 10 T161N R81W	Ditch	Created	Yes	0.14	0.01		N	Y			Ditch Shift	1:1		0.01		
81	Sec 10 T161N R81W	Ditch	Created	Yes	0.05	0.02		N	Y			Ditch Shift	1:1		0.02		
82	Sec 11 T161N R81W	Ditch	Created	Yes	0.02			N	N								
83a	Sec 10 T161N R81W	Ditch	Created	Yes	0.17	0.03		N	Y			Ditch Shift	1:1		0.03		
83b	Sec 10 T161N R81W	Basin	Natural	Yes	0.06	0.05		Y	Y			Site 7	2:1	0.10			
83c	Sec 11 T161N R81W	Ditch	Created	Yes	0.04			N	N								
83d	Sec 11 T161N R81W	Basin	Natural	Yes	0.05	0.02		Y	Y			Site 7	2:1	0.04			
83e	Sec 2 T161N R81W	Basin	Natural	Yes	0.06	0.03		Y	Y			Site 7	2:1	0.06			
83f	Sec 2 T161N R81W	Ditch	Created	Yes	0.10	0.01		N	Y			Ditch Shift	1:1		0.01		
83g	Sec 3 T161N R81W	Basin	Natural	Yes	0.06	0.03		Y	Y			Site 7	2:1	0.06			
83h	Sec 3 T161N R81W	Ditch	Created	Yes	0.11			N	N								
84	Sec 2 T161N R81W	Ditch	Created	Yes	0.03	0.01		N	Y			Ditch Shift	1:1		0.01		
85a	Sec 3 T161N R81W	Ditch	Created	Yes	0.28	0.02		N	Y			Ditch Shift	1:1		0.02		
85b	Sec 3 T161N R81W	Basin	Natural	Yes	0.28	0.11		Y	Y			Site 6	2:1	0.22			
85c	Sec 3 T161N R81W	Ditch	Created	Yes	0.11	0.01		N	Y			Ditch Shift	1:1		0.01		
85d	Sec 2 T161N R81W	Ditch	Created	Yes	0.03	0.07		N	Y			Ditch Shift	1:1		0.07		
85e	Sec 2 T161N R81W	Ditch	Created	Yes	0.01	0.02		N	Y			Ditch Shift	1:1		0.02		
85f	Sec 2 T161N R81W	Basin	Natural	Yes	0.22	0.05		Y	Y			Site 6	2:1	0.10			
85g	Sec 2 T161N R81W	Ditch	Created	Yes	0.16	0.06		N	Y			Ditch Shift	1:1		0.06		
86	Sec 3 T161N R81W	Ditch	Created	Yes	0.03			N	N								
87a	Sec 2 T161N R81W	Ditch	Created	Yes	0.38	0.16		N	Y			Ditch Shift	1:1		0.16		
87b	Sec 35 T162N R81W	Ditch	Created	Yes	0.07	0.08		N	Y			Ditch Shift	1:1		0.08		
87c	Sec 35 T162N R81W	Basin	Natural	Yes	0.08	0.03		Y	Y			Site 6	2:1	0.06			
87d	Sec 35 T162N R81W	Ditch	Created	Yes	0.06	0.01		N	Y			Ditch Shift	1:1		0.01		
87e	Sec 3 T161N R81W	Ditch	Created	Yes	0.29	0.13		N	Y			Ditch Shift	1:1		0.13		
87f	Sec 34 T162N R81W	Ditch	Created	Yes	0.13	0.09		N	Y			Ditch Shift	1:1		0.09		
87g	Sec 34 T162N R81W	Basin	Natural	Yes	0.10	0.04		Y	Y			Site 6	2:1	0.08			
87h	Sec 34 T162N R81W	Ditch	Created	Yes	0.04	0.03		N	Y			Site 5	2:1	0.06			
88	Sec 35 T162N R81W	Ditch	Created	Yes	0.03	0.01		N	Y			Ditch Shift	1:1		0.01		
89	Sec 34 T162N R81W	Ditch	Created	Yes	0.04	0.01		N	Y			Site 5	2:1	0.02			
90	Sec 35 T162N R81W	Ditch	Created	Yes	0.01	0.01		N	Y			Ditch Shift	1:1		0.01		

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Wetlands, Mitigation and Environmental
US 83

Wetland Impact Table																	
Wetland Number	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands	Wetland Impacts Acre(s)			Wetland Mitigation									
								Mitigation Required		11990 Bank							
					Temp.	Perm. (Fill/Drain)	Perm. (Cut)	EO 11990	USACE	Location	Acre(s)	Mitigation Location	Mitigation Ratio	Acre(s)	Ditch Shift Acre(s)	Constructed Site #	Constructed Size Acre(s)
91a	Sec 35 T162N R81W	Ditch	Created	Yes	0.15	0.04		N	Y			Ditch Shift	1:1		0.04		
91b	Sec 35 T162N R81W	Basin	Natural	Yes	0.02			N	N								
92a	Sec 34 T162N R81W	Ditch	Created	Yes	0.18	0.04		N	Y			Ditch Shift	1:1		0.04		
92b	Sec 34 T162N R81W	Drainage	Natural	Yes	0.22	0.06		Y	Y			Site 1	1:1	0.04			
												Site 7	2:1	0.04			
92c	Sec 34 T162N R81W	Ditch	Created	Yes	0.07			N	N								
92d	Sec 34 T162N R81W	Ditch	Created	Yes				N	N								
92e	Sec 34 T162N R81W	Basin	Natural	Yes				N	N								
92f	Sec 34 T162N R81W	Ditch	Created	Yes				N	N								
92g	Sec 35 T162N R81W	Ditch	Created	Yes	0.01	0.01		N	Y			Ditch Shift	1:1		0.01		
92h	Sec 35 T162N R81W	Drainage	Natural	Yes	0.30	0.06		Y	Y			Site 2	1:1	0.06			
92i	Sec 35 T162N R81W	Ditch	Created	Yes				N	N								
92j	Sec 35 T162N R81W	Ditch	Created	Yes	0.06	0.01		N	Y			Site 2	1:1	0.01			
92k	Sec 35 T162N R81W	Basin	Natural	Yes				N	N								
92l	Sec 35 T162N R81W	Basin	Natural	Yes				N	N								
92m	Sec 35 T162N R81W	Basin	Natural	Yes	0.13	0.05		Y	Y			Site 2	1:1	0.05			
92n	Sec 26 T162N R81W	Ditch	Created	Yes	0.30	0.07		N	Y			Ditch Shift	1:1		0.07		
92o	Sec 26 T162N R81W	Drainage	Natural	Yes	0.28	0.15		Y	Y			Site 1	1:1	0.15			
92p	Sec 26 T162N R81W	Ditch	Created	Yes	0.15	0.03		N	Y			Ditch Shift	1:1		0.03		
																Site 1	0.29
92q	Sec 35 T162N R81W	Basin	Natural	Yes	0.13	0.10		Y	Y			Site 2	1:1	0.10			
92r	Sec 35 T162N R81W	Basin	Natural	Yes	0.17	0.09		Y	Y			Site 2	1:1	0.09			
92s	Sec 35 T162N R81W	Ditch	Created	Yes	0.11	0.04		N	Y			Site 1	1:1	0.04			
92t	Sec 35 T162N R81W	Drainage	Natural	Yes	0.13	0.06		Y	Y			Site 1	1:1	0.06			
92u	Sec 35 T162N R81W	Ditch	Created	Yes	0.15	0.01		N	Y			Ditch Shift	1:1		0.01		
																Site 2	0.31
93a	Sec 26 T162N R81W	Ditch	Created	Yes				N	N								
93b	Sec 26 T162N R81W	Ditch	Created	Yes				N	N								
94	Sec 35 T162N R81W	Ditch	Created	Yes	0.03	0.02		N	Y			Site 5	2:1	0.04			
95a	Sec 26 T162N R81W	Ditch	Created	Yes	0.23	0.04		N	Y			Ditch Shift	1:1		0.04		
95b	Sec 25 T162N R81W	Ditch	Created	Yes	0.29	0.08		N	Y			Ditch Shift	1:1		0.08		
95c	Sec 35 T162N R81W	Ditch	Created	Yes	0.16	0.03		N	Y			Ditch Shift	1:1		0.03		
95d	Sec 35 T162N R81W	Basin	Natural	Yes	0.03	0.01		Y	Y			Site 3	1:1	0.01			
95e	Sec 36 T162N R81W	Basin	Natural	Yes	0.32	0.15		Y	Y			Site 3	1:1	0.15			
96a	Sec 36 T162N R81W	Ditch	Created	Yes	0.17	0.08		N	Y			Site 3	1:1	0.08			
96b	Sec 36 T162N R81W	Basin	Natural	Yes	0.27	0.09		Y	Y			Site 4	1:1	0.09			
96c	Sec 36 T162N R81W	Ditch	Created	Yes	0.11	0.04		N	Y			Ditch Shift	1:1		0.04		
96d	Sec 36 T162N R81W	Basin	Natural	Yes	0.06	0.03		Y	Y			Site 3	1:1	0.03			
96e	Sec 36 T162N R81W	Ditch	Created	Yes	0.87	0.23		N	Y			Ditch Shift	1:1		0.23		
96f	Sec 36 T162N R81W	Basin	Natural	Yes	0.04	0.03		Y	Y			Site 4	1:1	0.03			
96g	Sec 36 T162N R81W	Ditch	Created	Yes	0.02	0.03		N	Y			Site 4	1:1	0.03			
																Site 3	0.46

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Wetlands, Mitigation and Environmental
US 83

Wetland Impact Table																	
Wetland Num ber	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands	Wetland Impacts Acre(s)			Wetland Mitigation									
								Mitigation Required		11990 Bank							
					Temp.	Perm. (Fill/Drain)	Perm. (Cut)	EO 11990	USACE	Location	Acre(s)	Mitigation Location	Mitigation Ratio	Acre(s)	Ditch Shift Acre(s)	Constructed Site #	Constructed Size Acre(s)
																Site 4	0.15
96h	Sec 25 T162N R81W	Ditch	Created	Yes	0.27	0.02		N	Y			Site 3	1:1	0.02			
96i	Sec 25 T162N R81W	Basin	Natural	Yes	0.33	0.14		Y	Y			Site 3	1:1	0.07			
												Site 6	2:1	0.14			
96j	Sec 25 T162N R81W	Ditch	Created	Yes	0.26	0.07		N	Y			Ditch Shift	1:1		0.07		
96k	Sec 25 T162N R81W	Basin	Natural	Yes	0.11	0.02		Y	Y			Site 3	1:1	0.02			
96l	Sec 25 T162N R81W	Ditch	Created	Yes	0.08	0.03		N	Y			Ditch Shift	1:1		0.03		
96m	Sec 25 T162N R81W	Basin	Natural	Yes	0.29	0.08		Y	Y			Site 3	1:1	0.08			
96n	Sec 25 T162N R81W	Ditch	Created	Yes	0.17	0.04		N	Y			Ditch Shift	1:1		0.04		
96o	Sec 30 T162N R80W	Ditch	Created	Yes	0.22	0.08		N	Y			Ditch Shift	1:1		0.08		
96p	Sec 30 T162N R80W	Ditch	Created	Yes	0.24	0.03		N	Y			Ditch Shift	1:1		0.03		
97	Sec 31 T162N R80W	Ditch	Created	Yes		0.02		N	Y			Site 5	2:1	0.04			
98a	Sec 30 T162N R80W	Ditch	Created	No	0.26	0.08		N	N								
98b	Sec 30 T162N R80W	Basin	Natural	No	0.48	0.20		Y	N	Volrath 15/17	0.20						
98c	Sec 30 T162N R80W	Ditch	Created	No	0.07			N	N								
98d	Sec 31 T162N R80W	Ditch	Created	No	0.11	0.02		N	N								
																Site 5	0.48
98e	Sec 31 T162N R80W	Basin	Natural	No	0.62	0.28		Y	N	Volrath 15/17	0.28						
98f	Sec 31 T162N R80W	Ditch	Created	No	0.10			N	N								
99	Sec 32 T162N R80W	Ditch	Created	No	0.03	0.01		N	N								
100	Sec 32 T162N R80W	Ditch	Created	No	0.01	0.01		N	N								
101a	Sec 32 T162N R80W	Ditch	Created	Yes	0.11	0.01		N	Y			Ditch Shift	1:1		0.01		
101b	Sec 32/33 T162N R80W	Basin	Created	Yes	0.38	0.08		N	Y			Site 6	1:1	0.08			
101c	Sec 33 T162N R80W	Ditch	Created	Yes	0.43	0.04		N	Y			Ditch Shift	1:1		0.04		
																Site 6	0.92
101d	Sec 29/28 T162N R80W	Basin	Natural	Yes	0.31	0.08		Y	Y			Site 6	1:1	0.08			
101e	Sec 28 T162N R80W	Ditch	Created	Yes	0.05	0.01		N	Y			Ditch Shift	1:1		0.01		
101f	Sec 28 T162N R80W	Ditch	Created	Yes	0.50	0.03		N	Y			Ditch Shift	1:1		0.03		
																Site 7	0.38
102	Sec 28 T162N R80W	Ditch	Created	No	0.02	0.01		N	N								
103a	Sec 28 T162N R80W	Ditch	Created	Yes	0.31	0.03		N	Y			Ditch Shift	1:1		0.03		
103b	Sec 27 T162N R80W	Ditch	Created	Yes	0.07	0.01		N	Y			Ditch Shift	1:1		0.01		
103c	Sec 33 T162N R80W	Ditch	Created	Yes	0.13	0.01		N	Y			Ditch Shift	1:1		0.01		
103d	Sec 33 T162N R80W	Basin	Natural	Yes	0.02			N	N								
103e	Sec 33 T162N R80W	Ditch	Created	Yes	0.13	0.02		N	Y			Ditch Shift	1:1		0.02		
103f	Sec 34 T162N R80W	Ditch	Created	Yes	0.01	0.02		N	Y			Site 5	2:1	0.04			
104a	Sec 27 T162N R80W	Ditch	Created	Yes	0.03	0.01		N	Y			Ditch Shift	1:1		0.01		
104b	Sec 27 T162N R80W	Ditch	Created	Yes	0.48	0.02		N	Y			Ditch Shift	1:1		0.02		
104c	Sec 27 T162N R80W	Basin	Natural	Yes				N	N								
104d	Sec 34 T162N R80W	Ditch	Created	Yes	0.40	0.04		N	Y			Ditch Shift	1:1		0.04		
					23.65	5.25					0.48			2.79	2.55		2.99

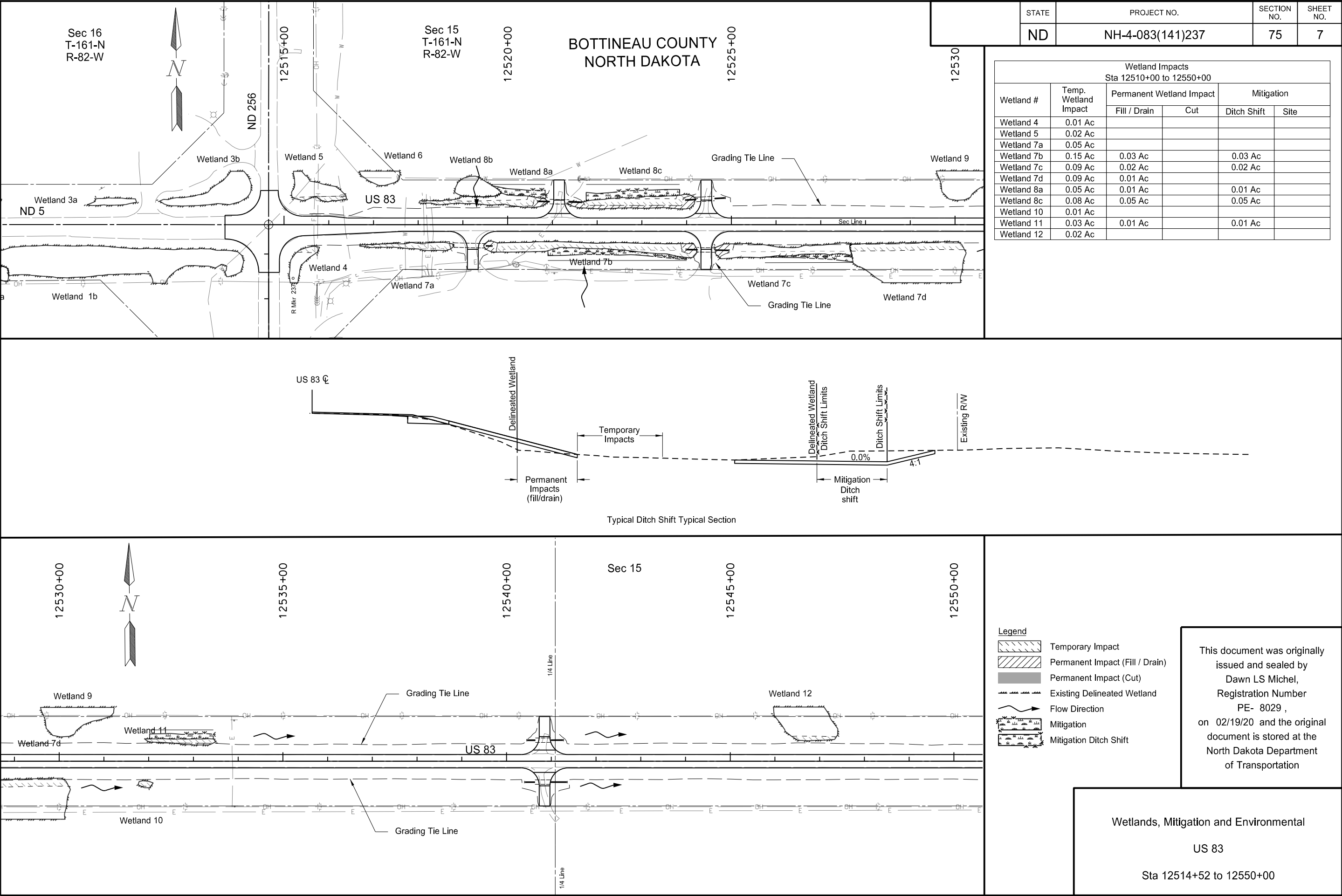
Impact Summary Table			
Permanent Impact Summary		Temporary Impacts and additional information	
Wetland Type	Total (Acres)	Wetland Type	Total (Acres)
Natural/JD (Fill/Drain)	1.61	Temporary JD	21.92
Natural/Non-JD (Fill/Drain)	0.48	Non-JD Temporary	1.73
Created/JD (Fill/Drain)	3.02	Permanent JD > 0.10	4.63
Created/Non-JD (Fill/Drain)	0.14	Permanent OW	
Total (Fill/Drain)	5.25	Temporary OW	
JD Natural (Cut)	0		
JD Created (Cut)	0		
Non-JD Natural (Cut)	0		
Non-JD Created (Cut)	0		
Total (Cut)	0		

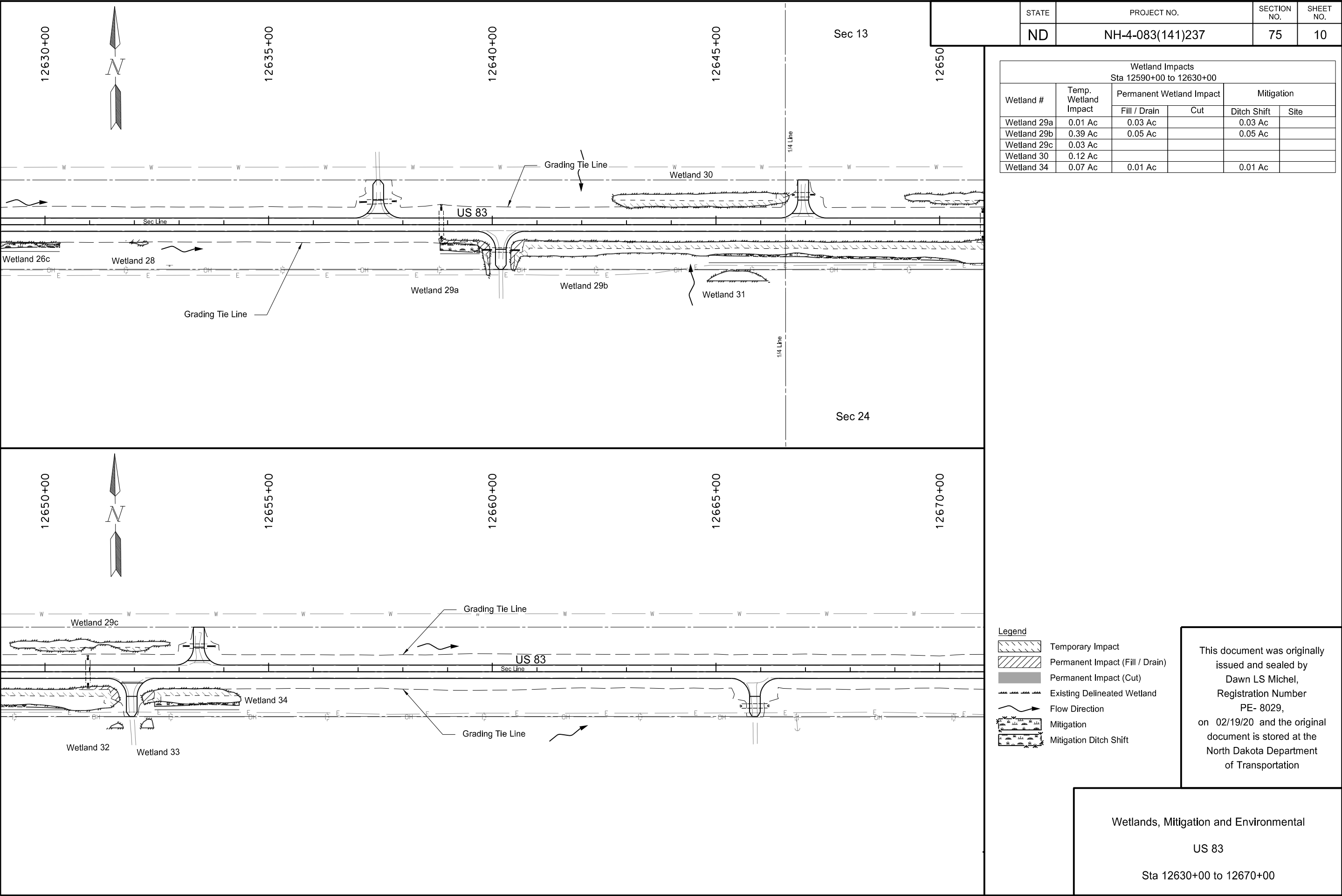
Mitigation Summary Table					
	Location	Onsite Acre(s)	11990 Bank	USACE/11 990	USFWS Bank
USACE Only					
EO 11990 Only	Vollrath 15/17		0.48		
USACE/11990	Onsite	2.99			
USACE/11990	Ditch Shift	2.55			
USFWS					
Total		5.54	0.48		

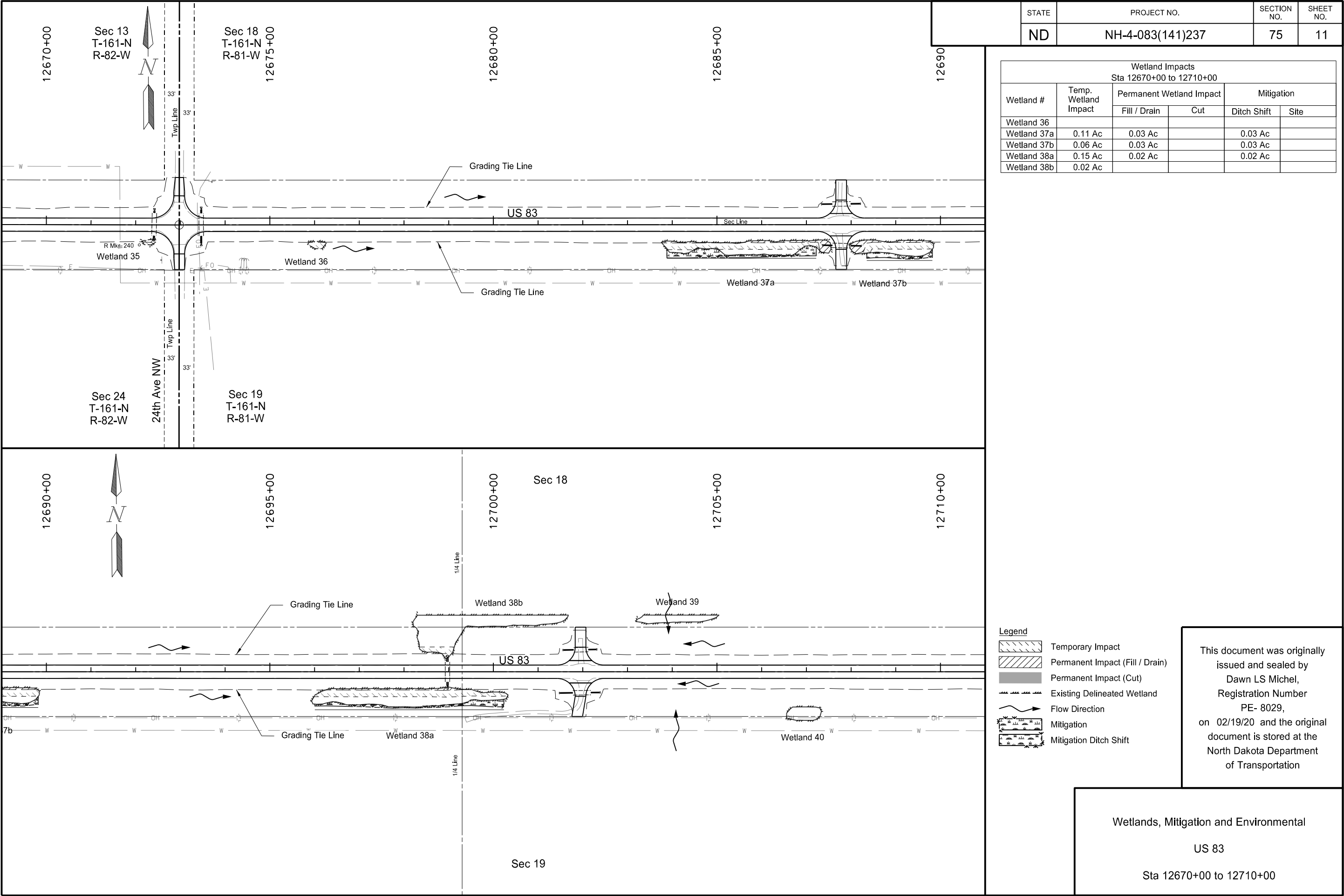
1 A wetland Jurisdictional Determination was issued by the USACE on 12/12/2018; NWO-2013-02254-BIS.

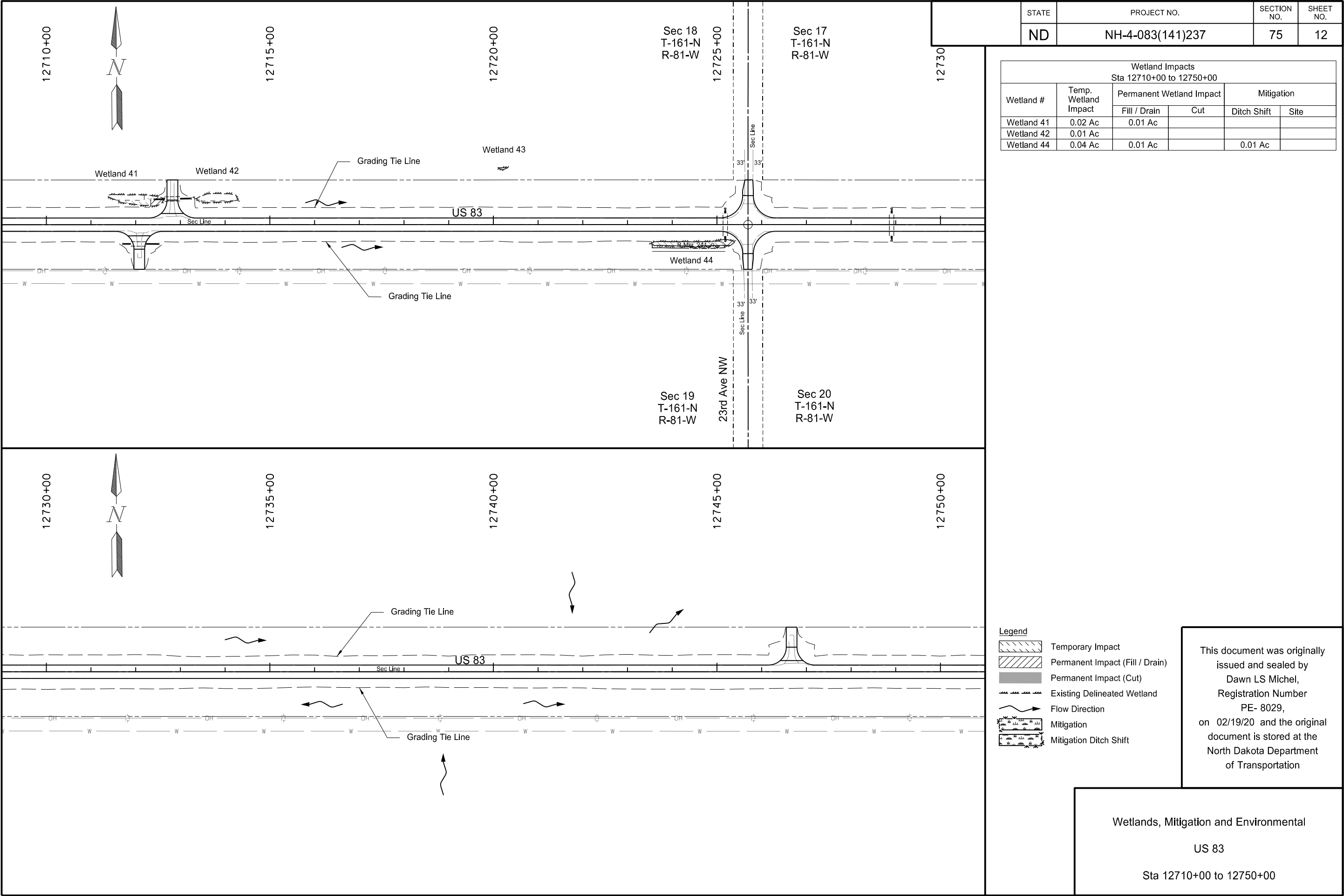
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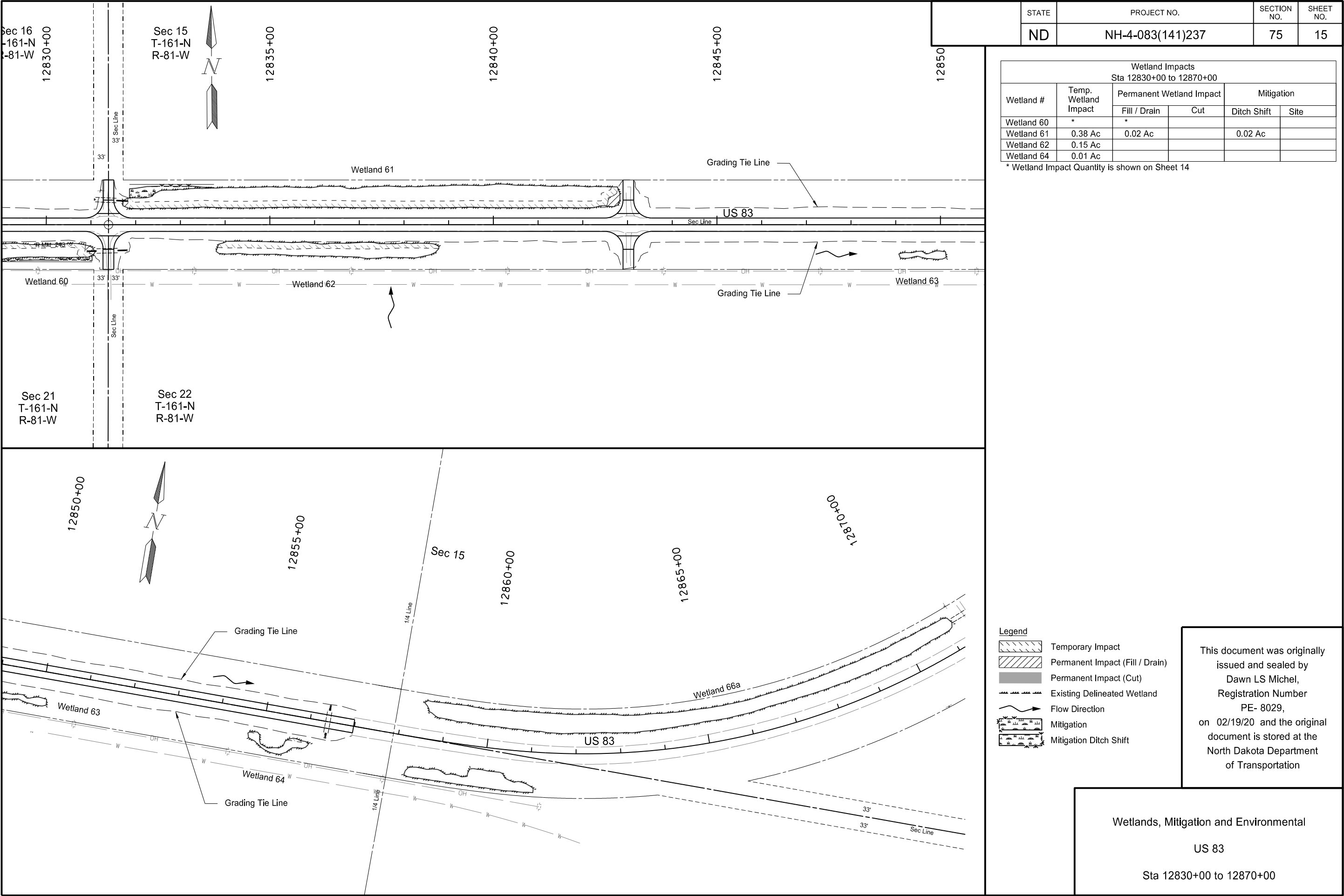
Wetlands, Mitigation and Environmental
US 83









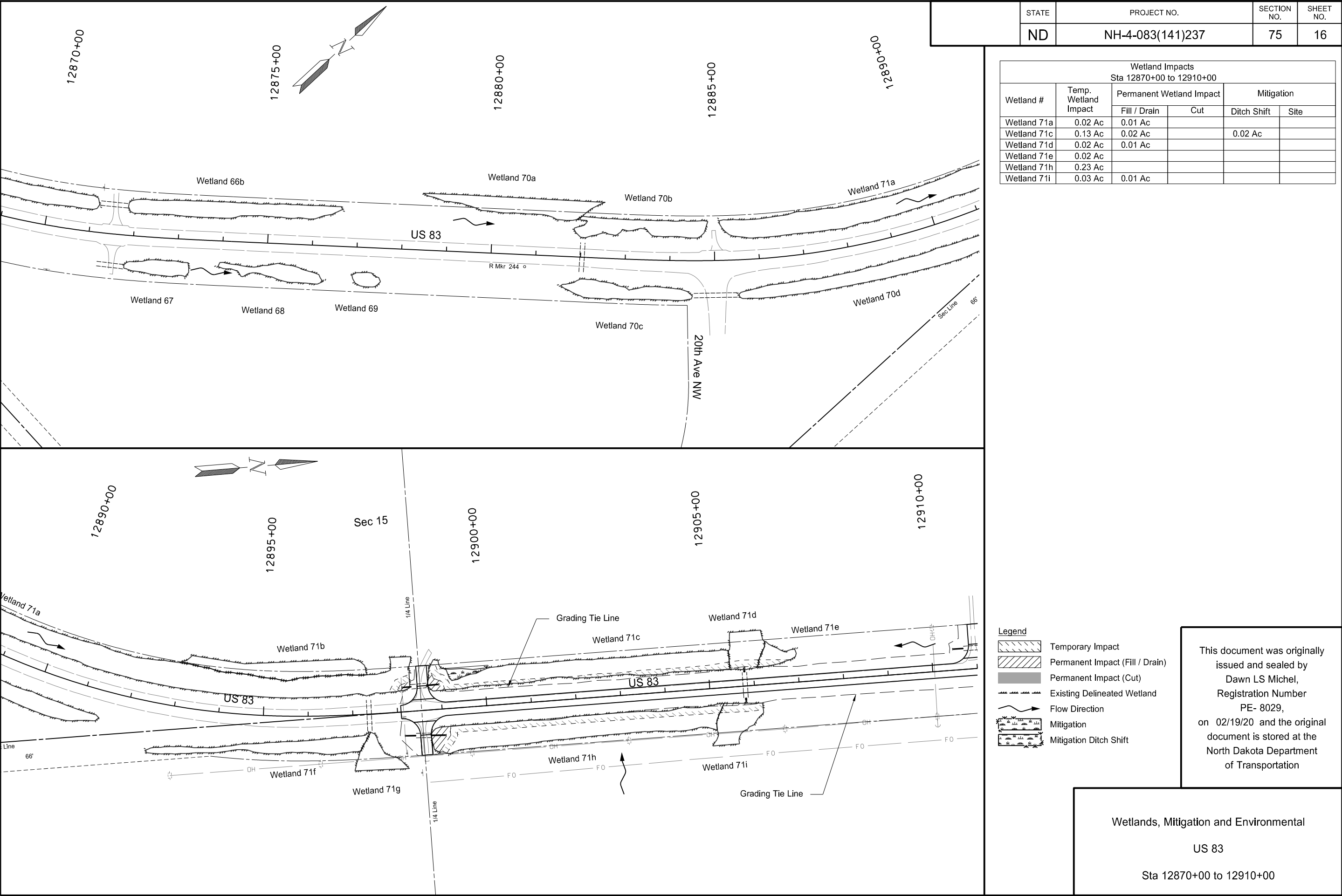


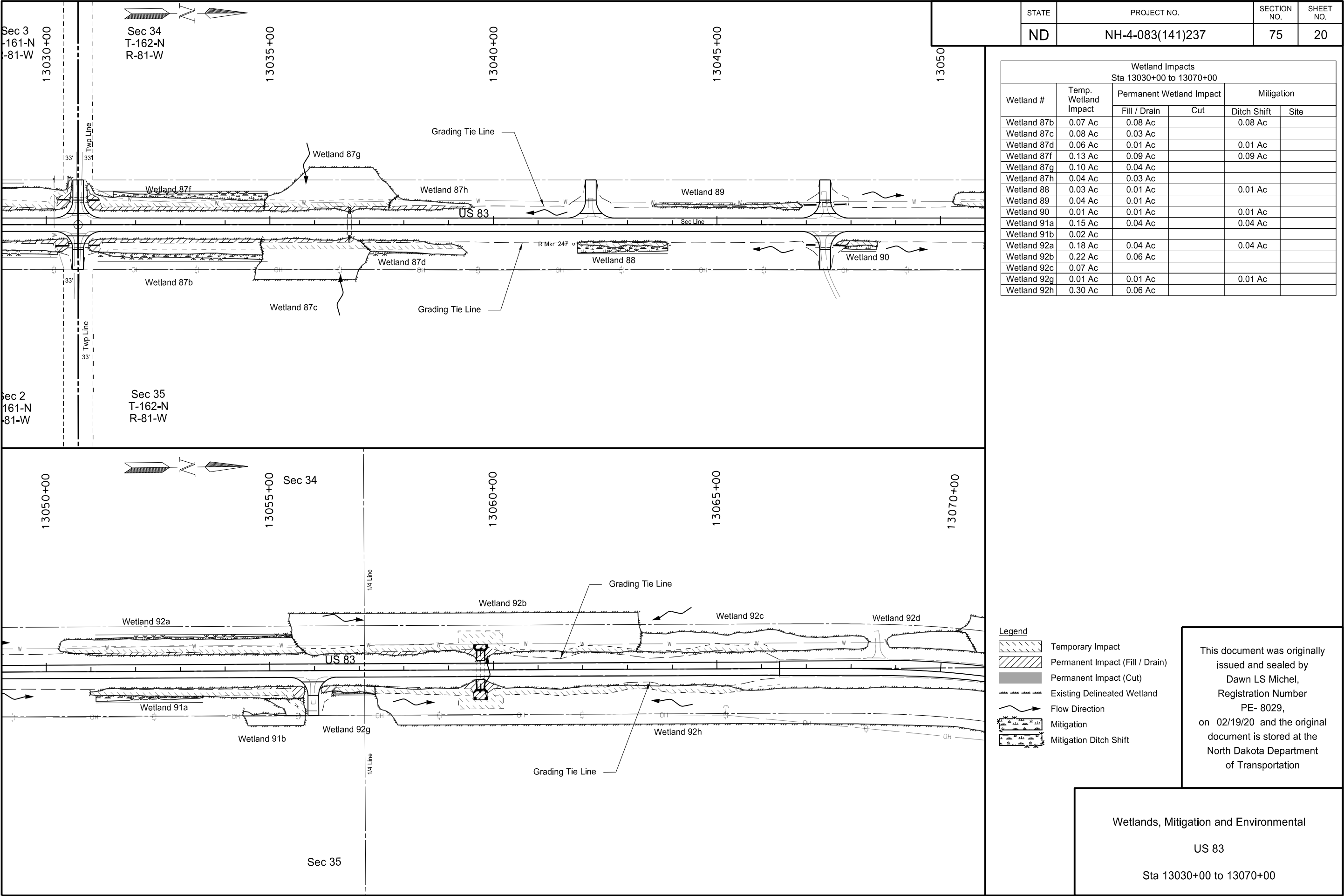
2/19/2020

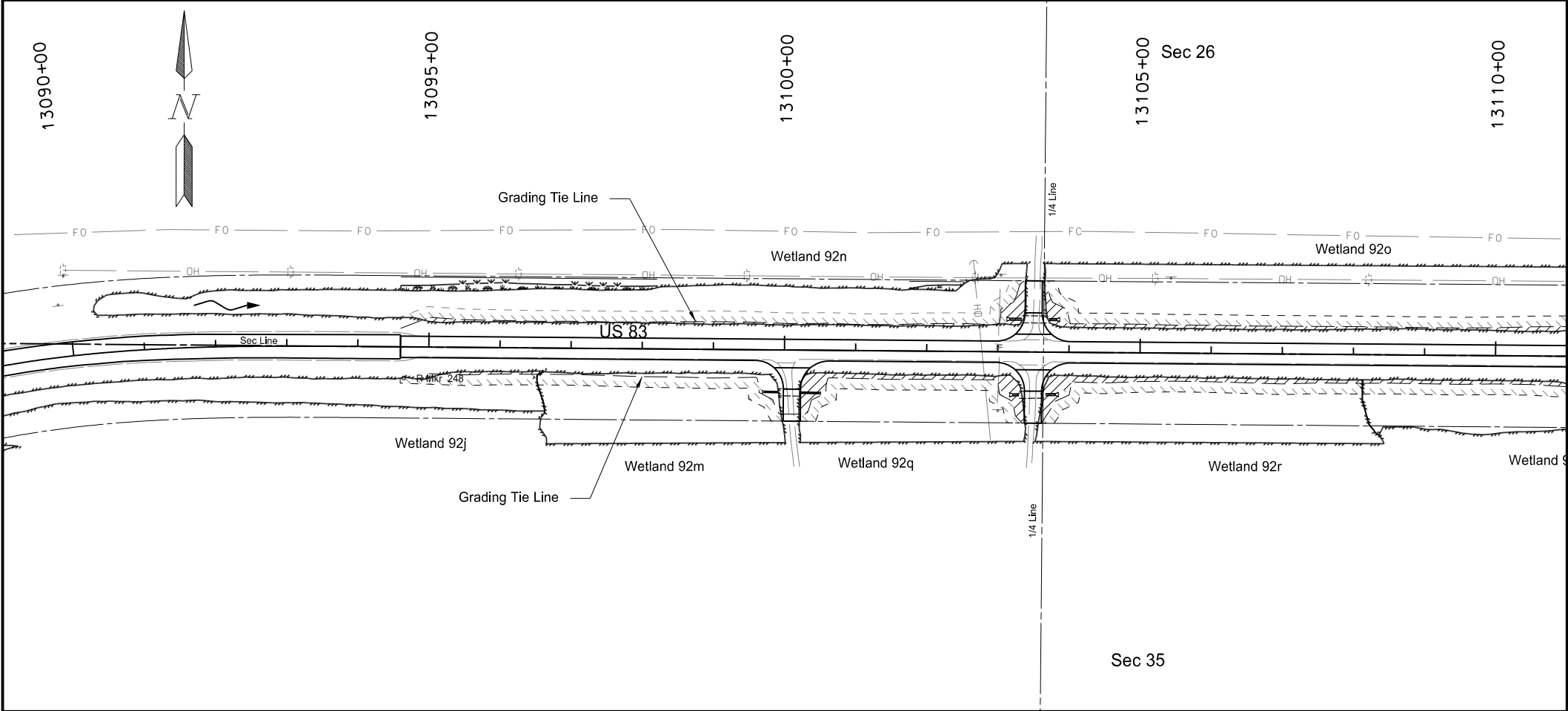
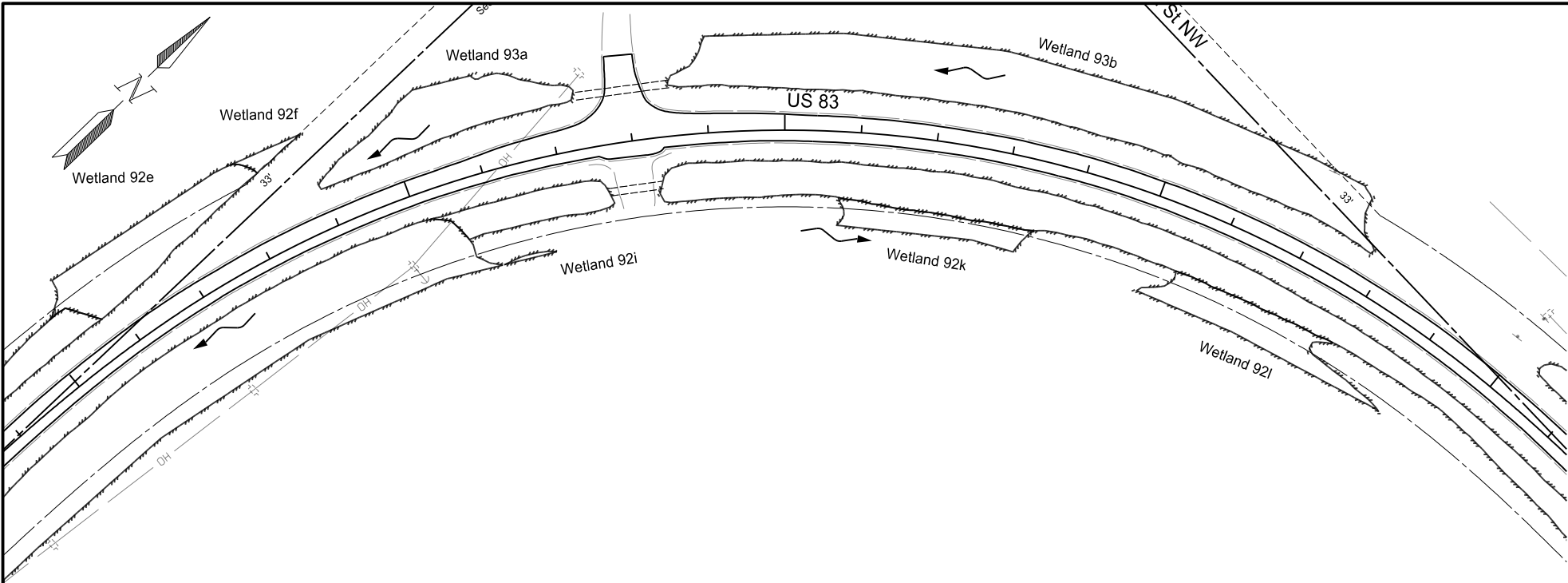
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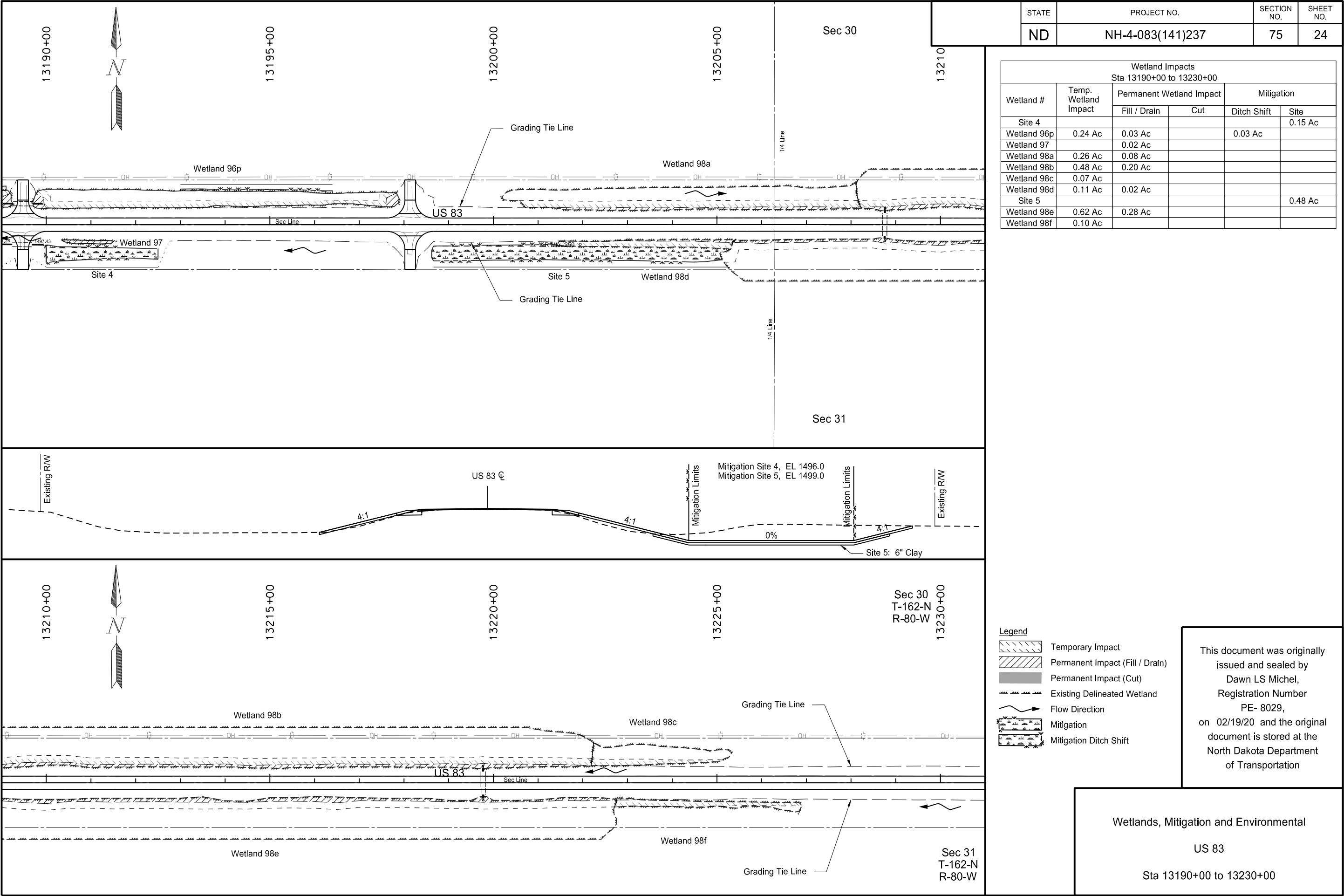
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	ND	NH-4-083(141)237	75	21

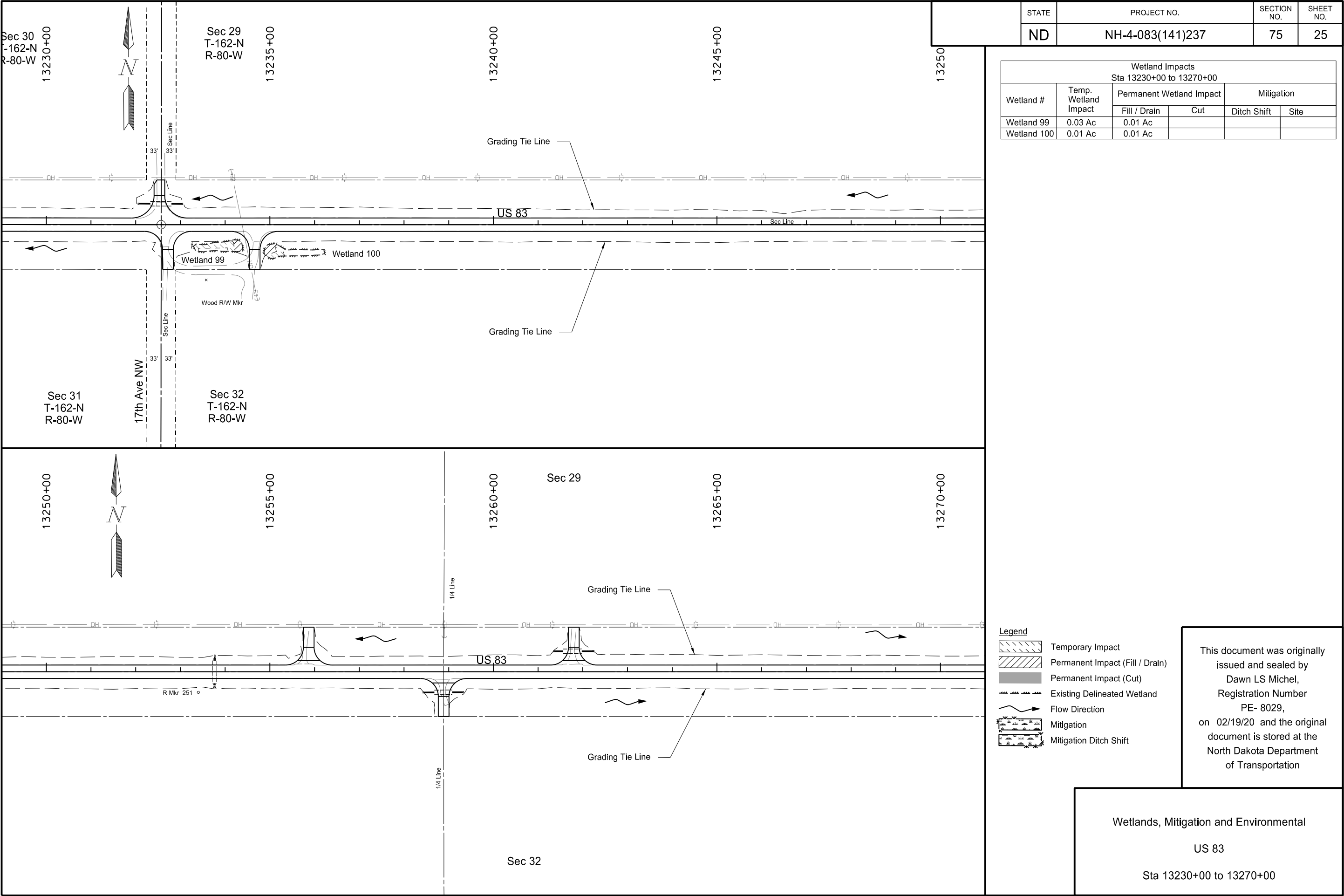
Wetland Impacts Sta 13070+00 to 13110+00					
Wetland #	Temp. Wetland Impact	Permanent Wetland Impact		Mitigation	
		Fill / Drain	Cut	Ditch Shift	Site
Wetland 92j	0.06 Ac	0.01 Ac			
Wetland 92m	0.13 Ac	0.05 Ac			
Wetland 92n	0.30 Ac	0.07 Ac		0.07 Ac	
Wetland 92o	0.28 Ac	0.15 Ac			
Wetland 92q	0.13 Ac	0.10 Ac			
Wetland 92r	0.17 Ac	0.09 Ac			
Wetland 92s	0.11 Ac	0.04 Ac			

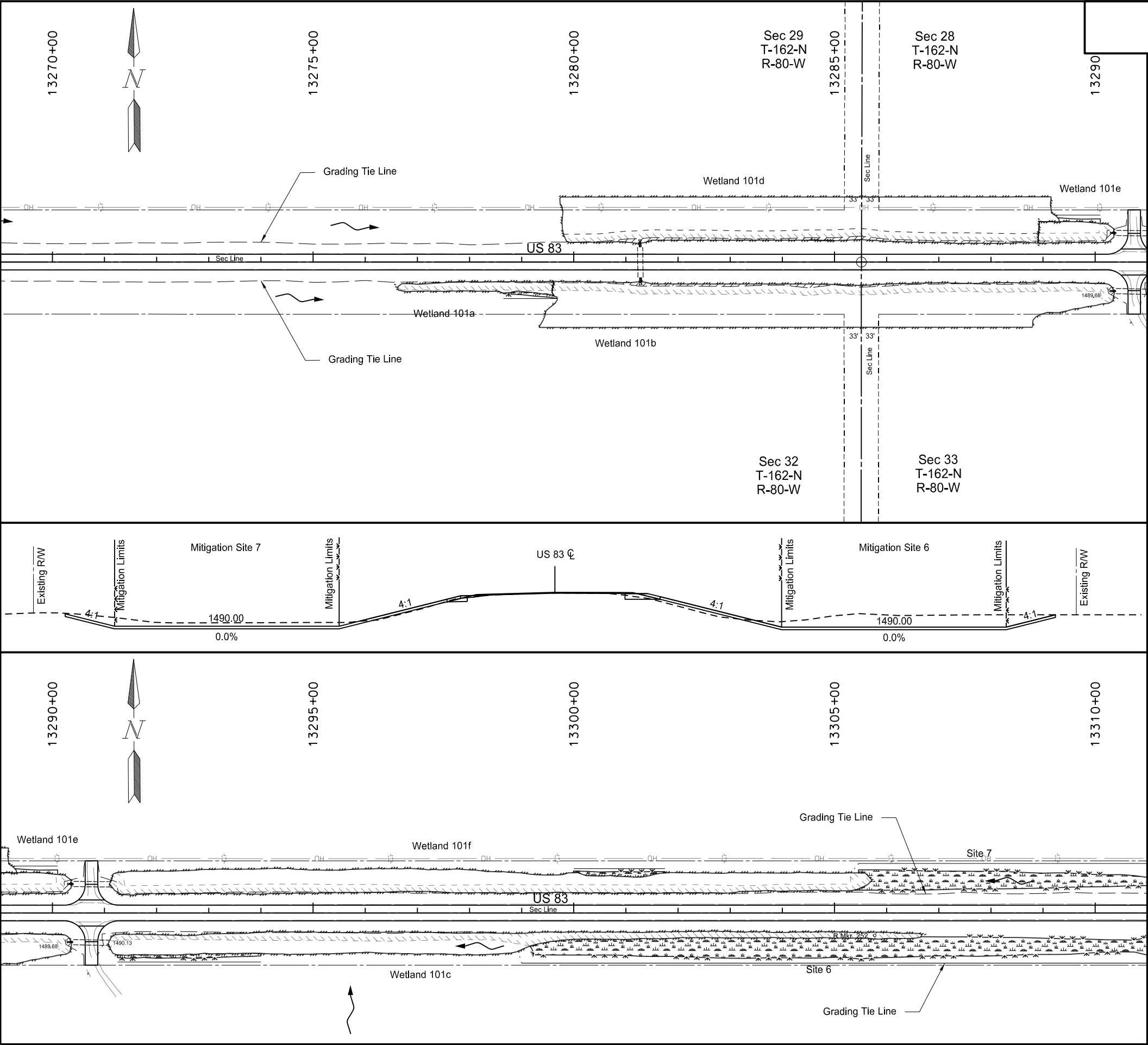
Legend	
	Temporary Impact
	Permanent Impact (Fill / Drain)
	Permanent Impact (Cut)
	Existing Delineated Wetland
	Flow Direction
	Mitigation
	Mitigation Ditch Shift

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Wetlands, Mitigation and Environmental
US 83
Sta 13070+00 to 13110+00







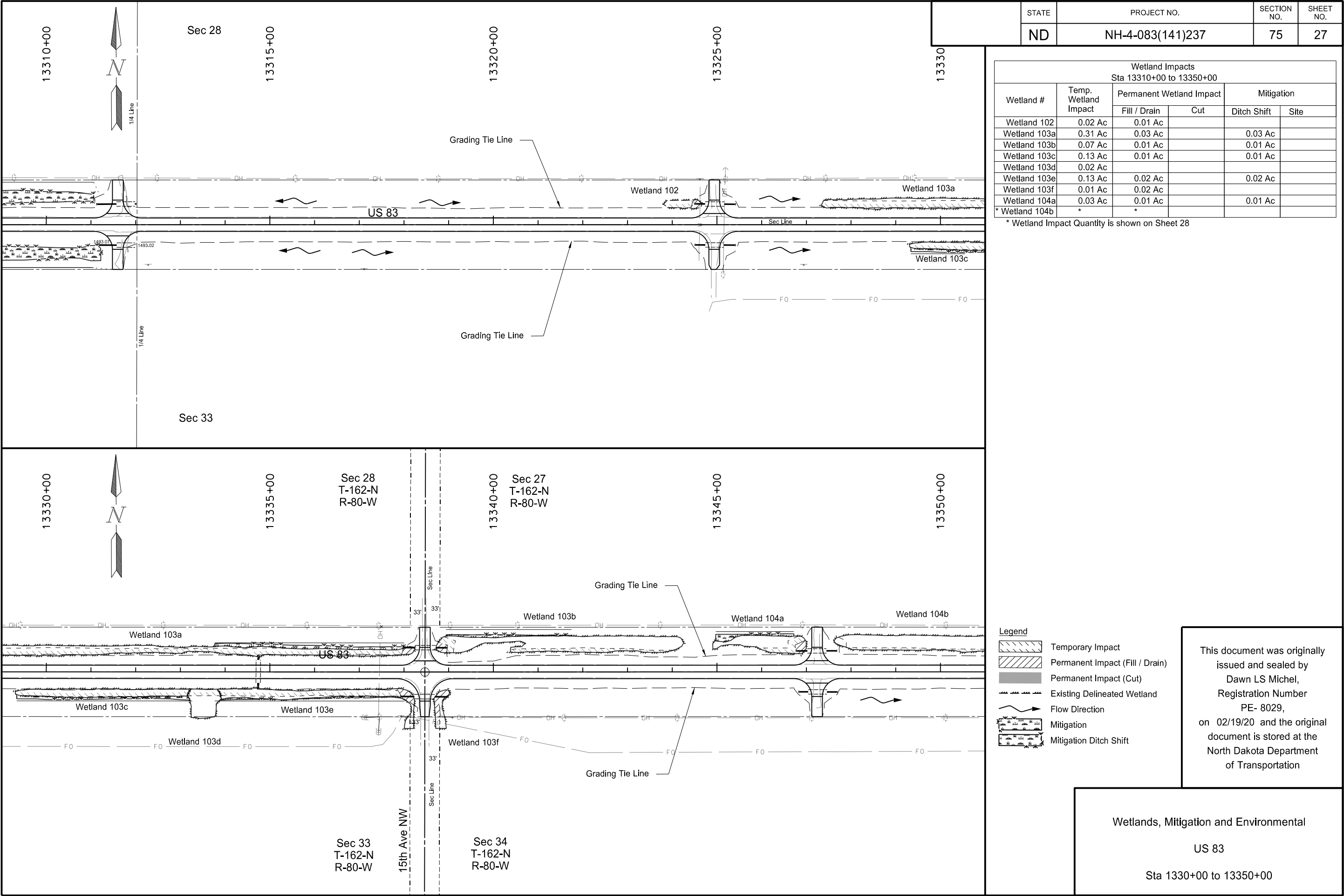
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ND	NH-4-083(141)237	75	26

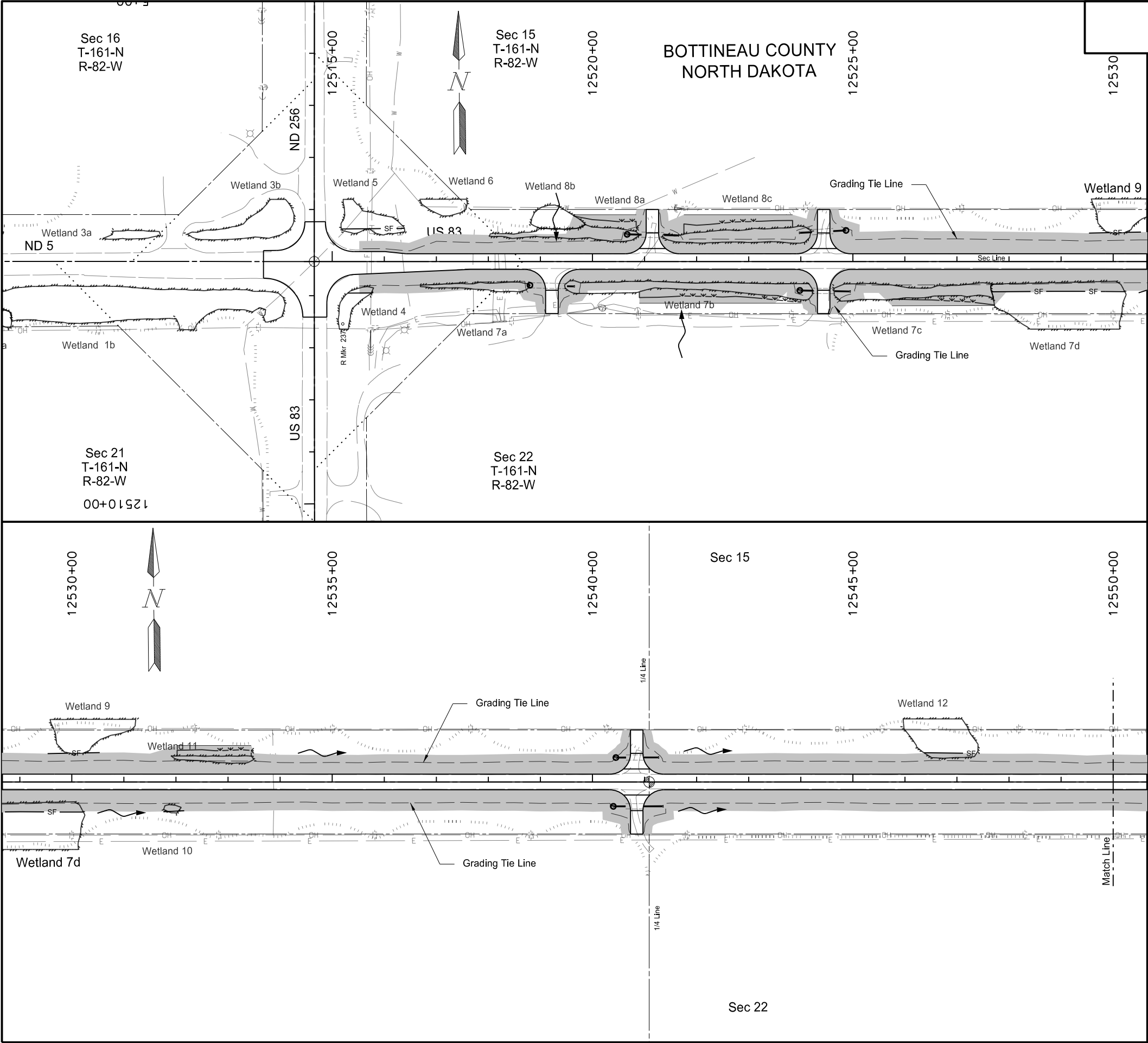
Wetland Impacts Sta 13270+00 to 13310+00					
Wetland #	Temp. Wetland Impact	Permanent Wetland Impact		Mitigation	
		Fill / Drain	Cut	Ditch Shift	Site
Wetland 101a	0.11 Ac	0.01 Ac		0.01 Ac	
Wetland 101b	0.38 Ac	0.08 Ac			
Wetland 101c	0.43 Ac	0.04 Ac		0.04 Ac	
Site 6					0.92 Ac
Wetland 101d	0.31 Ac	0.08 Ac			
Wetland 101e	0.05 Ac	0.01 Ac		0.01 Ac	
Wetland 101f	0.50 Ac	0.03 Ac		0.03 Ac	
Site 7					0.38 Ac

- Legend
- Temporary Impact
 - Permanent Impact (Fill / Drain)
 - Permanent Impact (Cut)
 - Existing Delineated Wetland
 - Flow Direction
 - Mitigation
 - Mitigation Ditch Shift

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Wetlands, Mitigation and Environmental
US 83
Sta 13270+00 to 13310+00





STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	76	1

SPEC CODE	BID ITEM	QTY	UNIT
260 0200	SILT FENCE SUPPORTED		
	Sta 12515+00 to 12550+00 Lt	426	LF
	Sta 12515+00 to 12550+00 Rt	345	LF
260 0201	REMOVE SILT FENCE SUPPORTED		
	Sta 12515+00 to 12550+00 Lt	426	LF
	Sta 12515+00 to 12550+00 Rt	345	LF
261 0112	FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	192	LF
261 0113	REMOVE FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	192	LF

- Legend
- Fiber Rolls 12IN or 20IN
 - SF Silt Fence Supported
 - s Flotation Silt Curtain
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Temp Cover Crop / Mulch

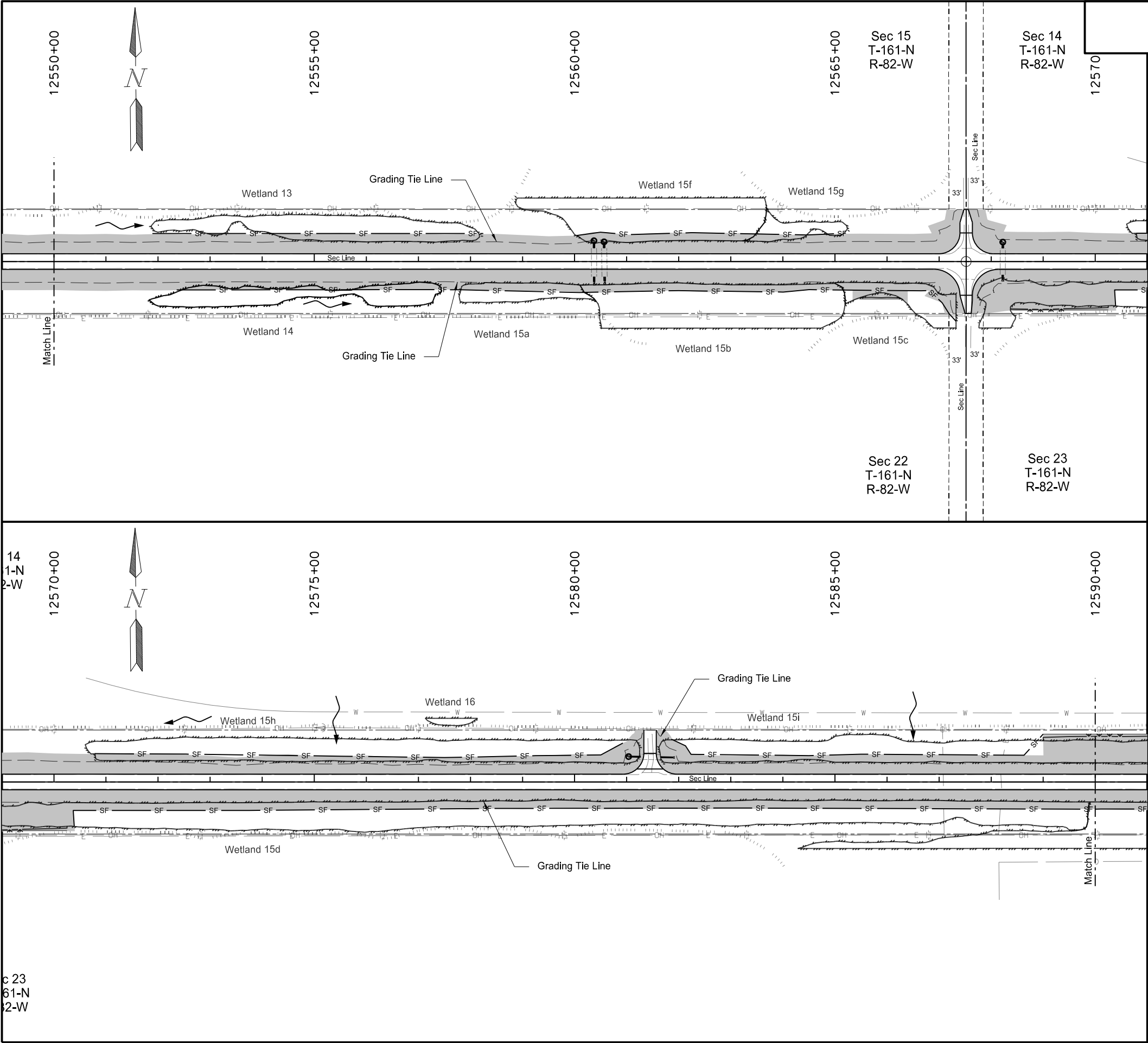
Note: See Section 76 Sheet 23 for Silt Fence Station Locations

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Temporary Sediment and Erosion Control

US 83

Sta 12510+00 to 12550+00



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	76	2
SPEC CODE	BID ITEM	QTY	UNIT
260 0200	SILT FENCE SUPPORTED		
	Sta 12550+00 to 12590+00 Lt	2930	LF
	Sta 12550+00 to 12590+00 Rt	3516	LF
260 0201	REMOVE SILT FENCE SUPPORTED		
	Sta 12550+00 to 12590+00 Lt	2930	LF
	Sta 12550+00 to 12590+00 Rt	3516	LF
261 0112	FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	128	LF
261 0113	REMOVE FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	128	LF

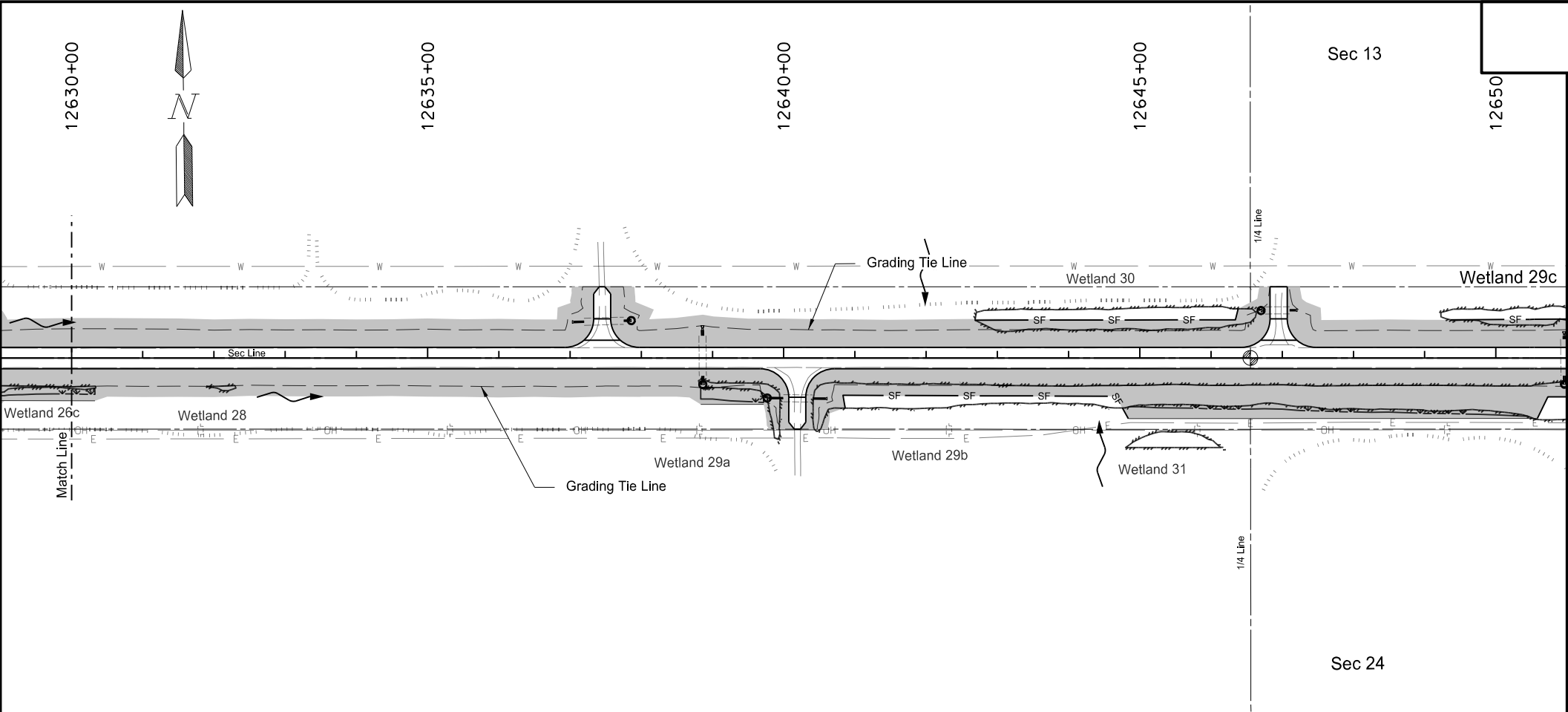
Note: See Section 76 Sheet 23 for Silt Fence Station Locations

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Temporary Sediment and Erosion Control

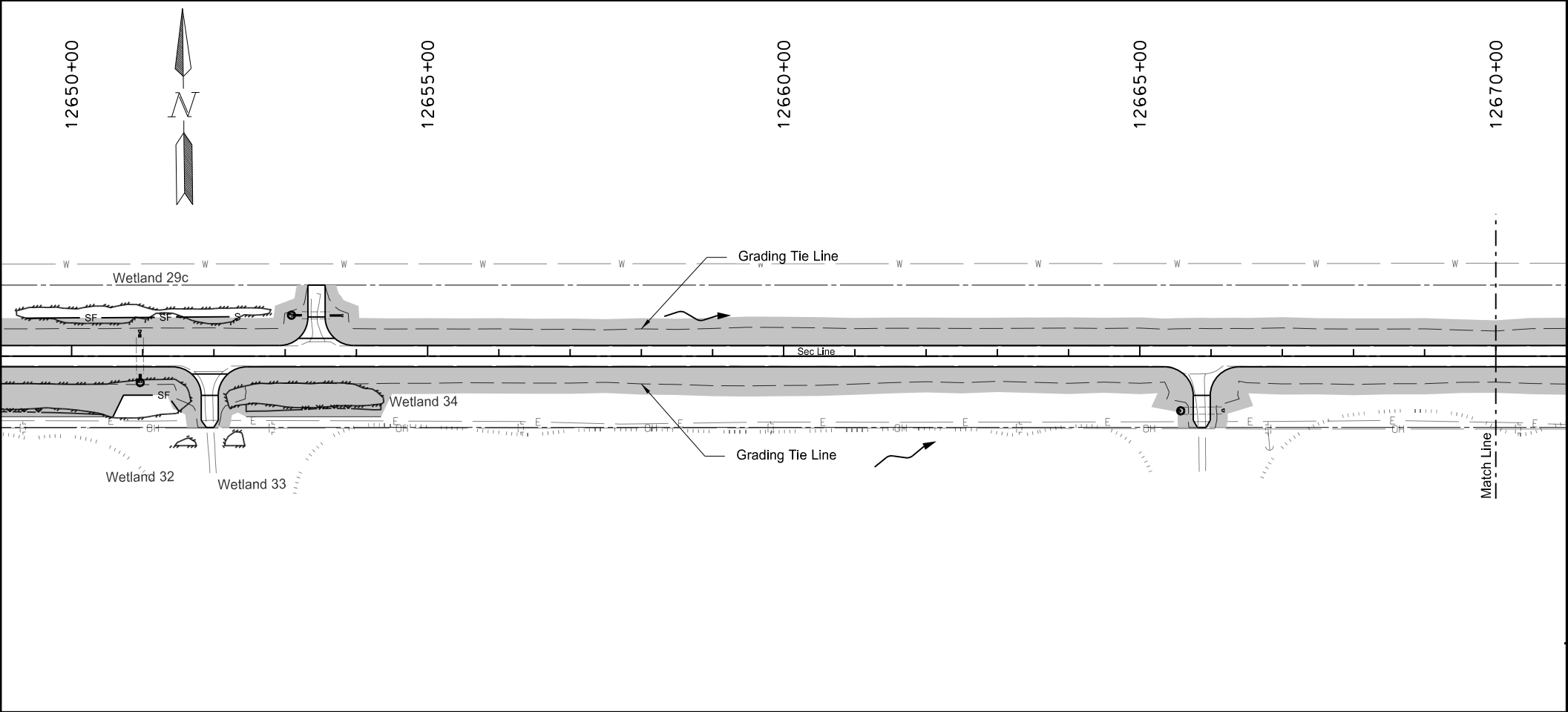
US 83

Sta 12550+00 to 12590+00



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	76	4

SPEC CODE	BID ITEM	QTY	UNIT
260 0200	SILT FENCE SUPPORTED		
	Sta 12630+00 to 12670+00 Lt	681	LF
	Sta 12630+00 to 12670+00 Rt	561	LF
260 0201	REMOVE SILT FENCE SUPPORTED		
	Sta 12630+00 to 12670+00 Lt	681	LF
	Sta 12630+00 to 12670+00 Rt	561	LF
261 0112	FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	224	LF
261 0113	REMOVE FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	224	LF



- Legend**
- Fiber Rolls 12IN or 20IN
 - SF Silt Fence Supported
 - S Flotation Silt Curtain
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Temp Cover Crop / Mulch

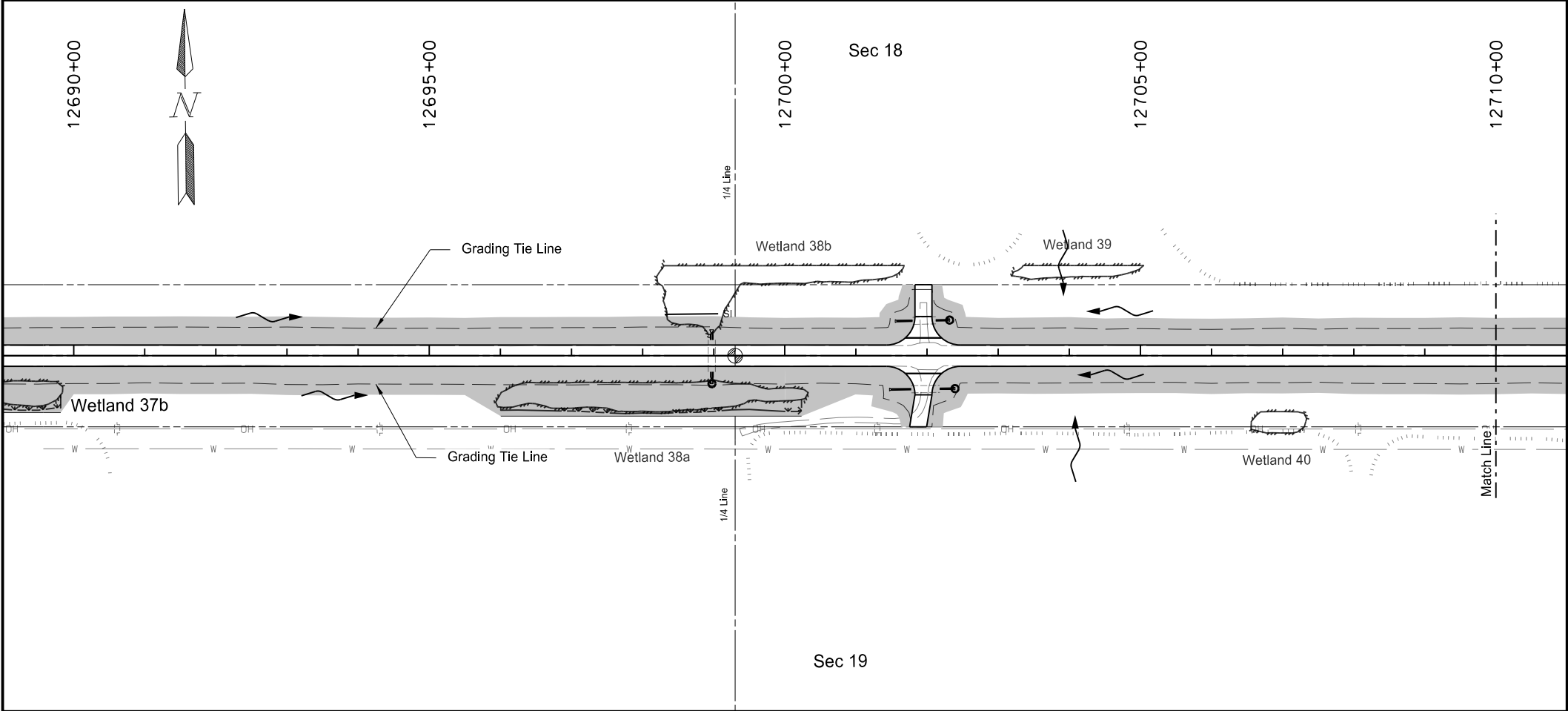
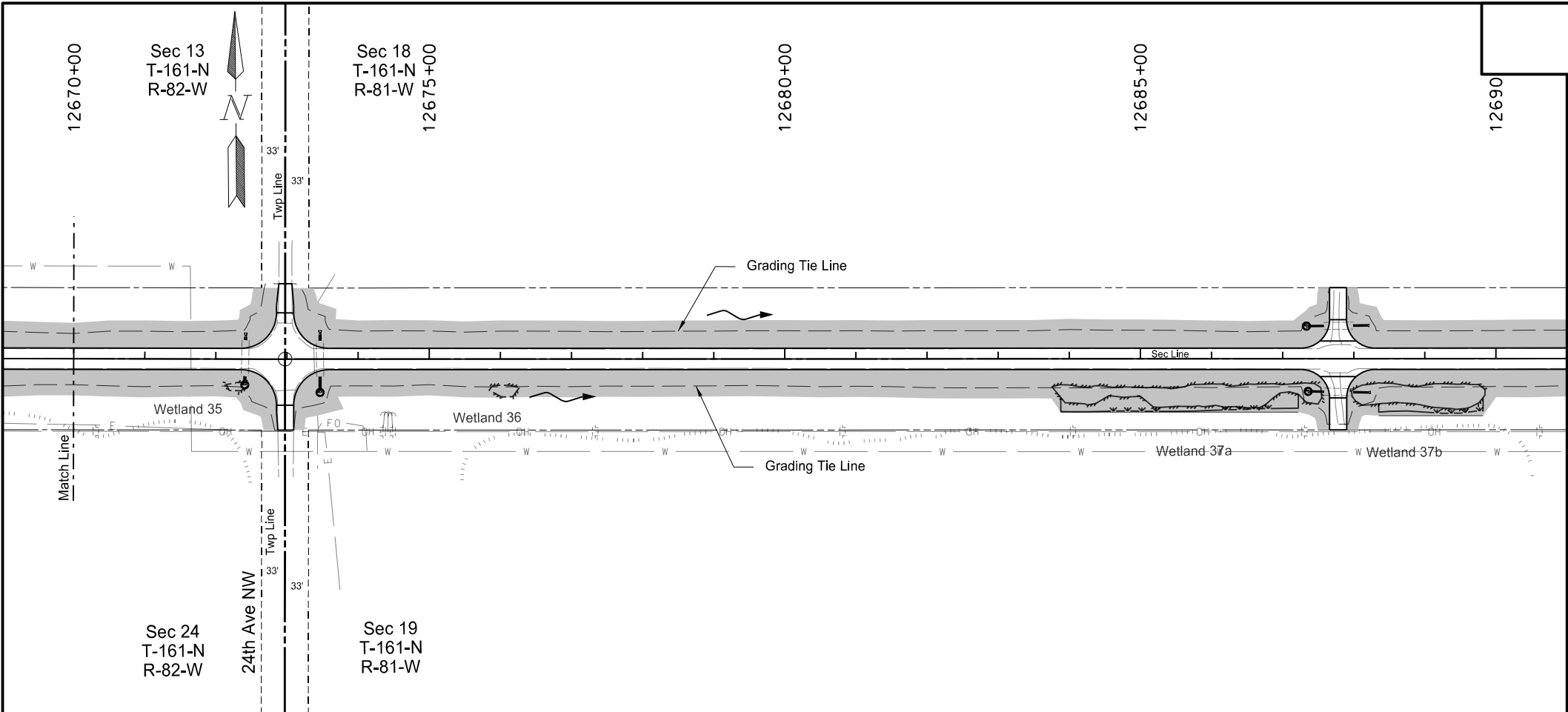
Note: See Section 76 Sheet 23 for Silt Fence Station Locations

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Temporary Sediment and Erosion Control

US 83

Sta 12630+00 to 12670+00



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	76	5

SPEC CODE	BID ITEM	QTY	UNIT
260 0200	SILT FENCE SUPPORTED Sta 12670+00 to 12710+00 Lt	93	LF
260 0201	REMOVE SILT FENCE SUPPORTED Sta 12670+00 to 12710+00 Lt	93	LF
261 0112	FIBER ROLLS 12IN Culvert Inlet Locations (32 LF EA)	224	LF
261 0113	REMOVE FIBER ROLLS 12IN Culvert Inlet Locations (32 LF EA)	224	LF

- Legend
- Fiber Rolls 12IN or 20IN
 - SF Silt Fence Supported
 - s Flotation Silt Curtain
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Temp Cover Crop / Mulch

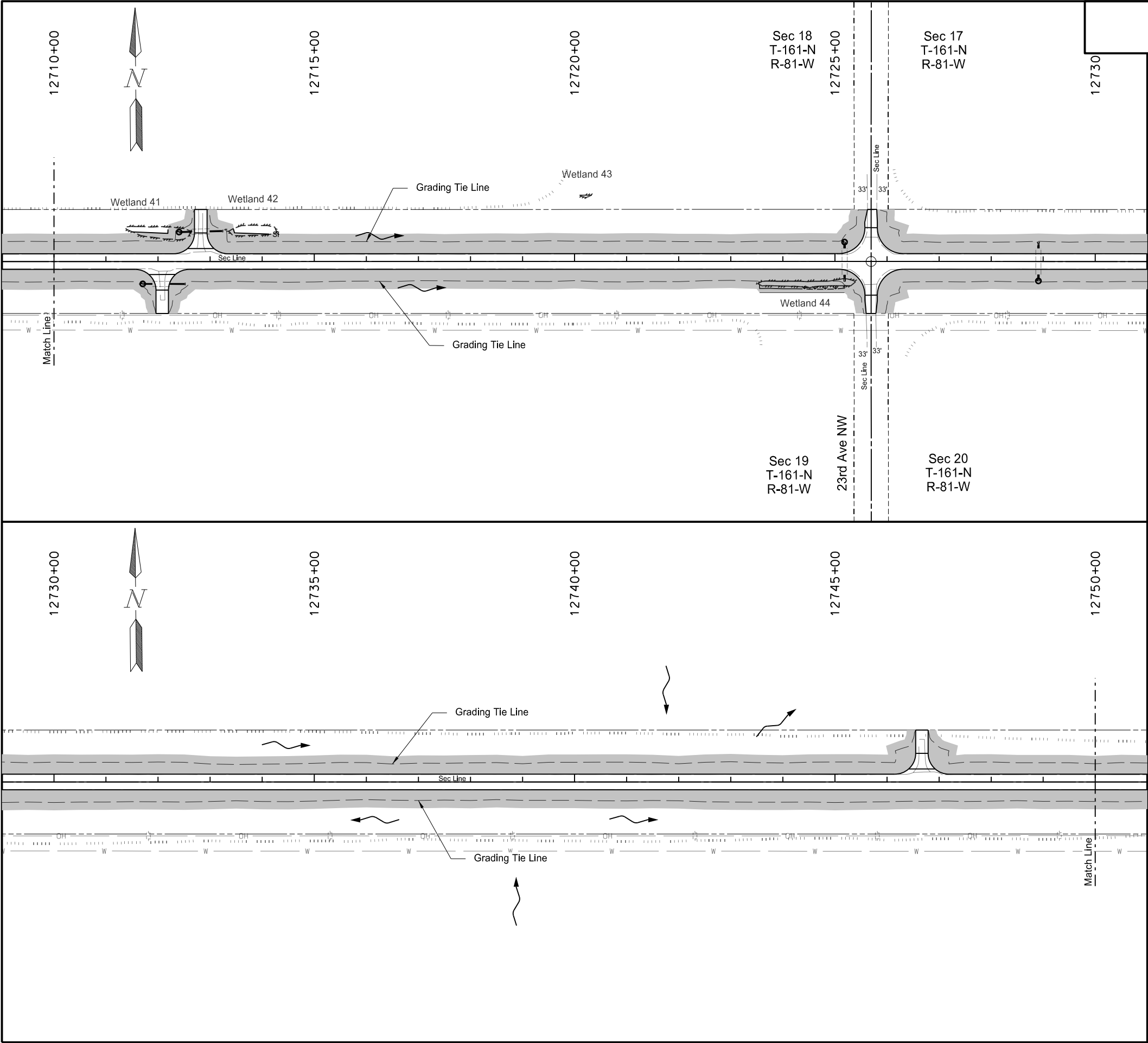
Note: See Section 76 Sheet 23 for Silt Fence Station Locations

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Temporary Sediment and Erosion Control

US 83

Sta 12670+00 to 12710+00



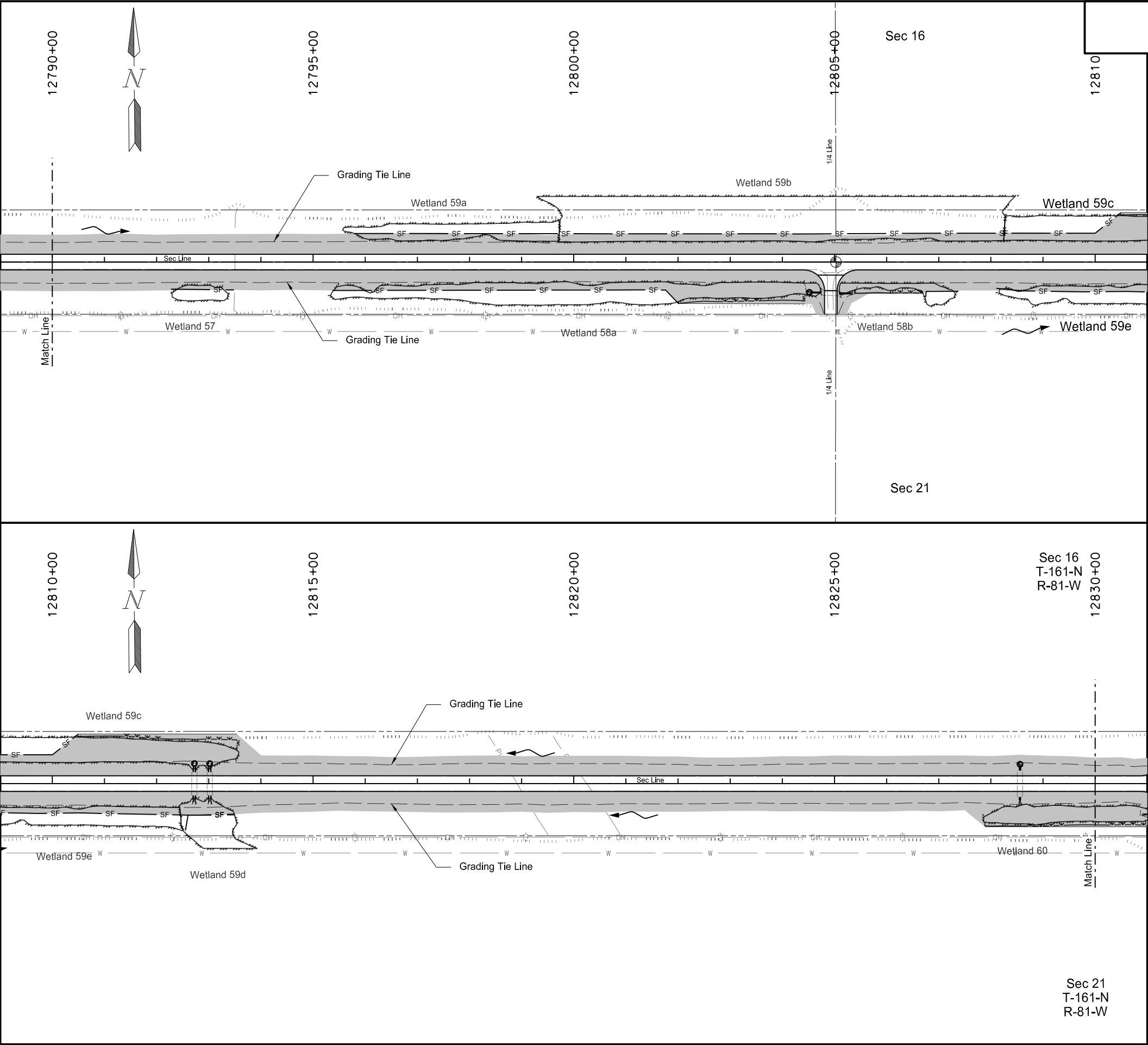
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	76	6
SPEC CODE	BID ITEM	QTY	UNIT
260 0200	SILT FENCE SUPPORTED Sta 12710+00 to 12750+00 Lt	178	LF
260 0201	REMOVE SILT FENCE SUPPORTED Sta 12710+00 to 12750+00 Lt	178	LF
261 0112	FIBER ROLLS 12IN Culvert Inlet Locations (32 LF EA)	128	LF
261 0113	REMOVE FIBER ROLLS 12IN Culvert Inlet Locations (32 LF EA)	128	LF

- Legend
- Fiber Rolls 12IN or 20IN
 - SF Silt Fence Supported
 - s Flotation Silt Curtain
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Temp Cover Crop / Mulch

Note: See Section 76 Sheet 23 for Silt Fence Station Locations

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Temporary Sediment and Erosion Control
US 83
Sta 12710+00 to 12750+00



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	76	8

SPEC CODE	BID ITEM	QTY	UNIT
260 0200	SILT FENCE SUPPORTED		
	Sta 12790+00 to 12830+00 Lt	1485	LF
	Sta 12790+00 to 12830+00 Rt	1412	LF
260 0201	REMOVE SILT FENCE SUPPORTED		
	Sta 12790+00 to 12830+00 Lt	1485	LF
	Sta 12790+00 to 12830+00 Rt	1412	LF
261 0112	FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	128	LF
261 0113	REMOVE FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	128	LF

- Legend
- Fiber Rolls 12IN or 20IN
 - SF Silt Fence Supported
 - s Flotation Silt Curtain
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Temp Cover Crop / Mulch

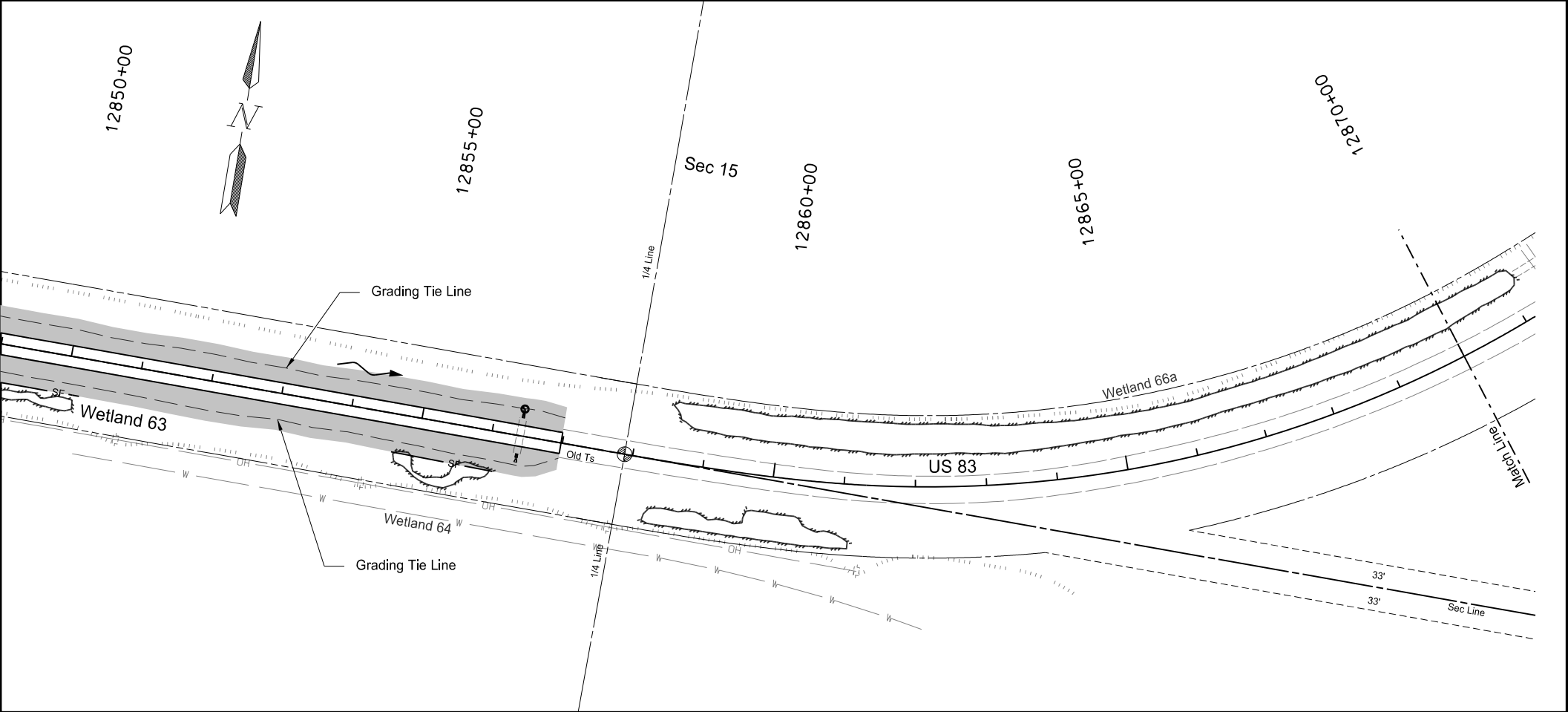
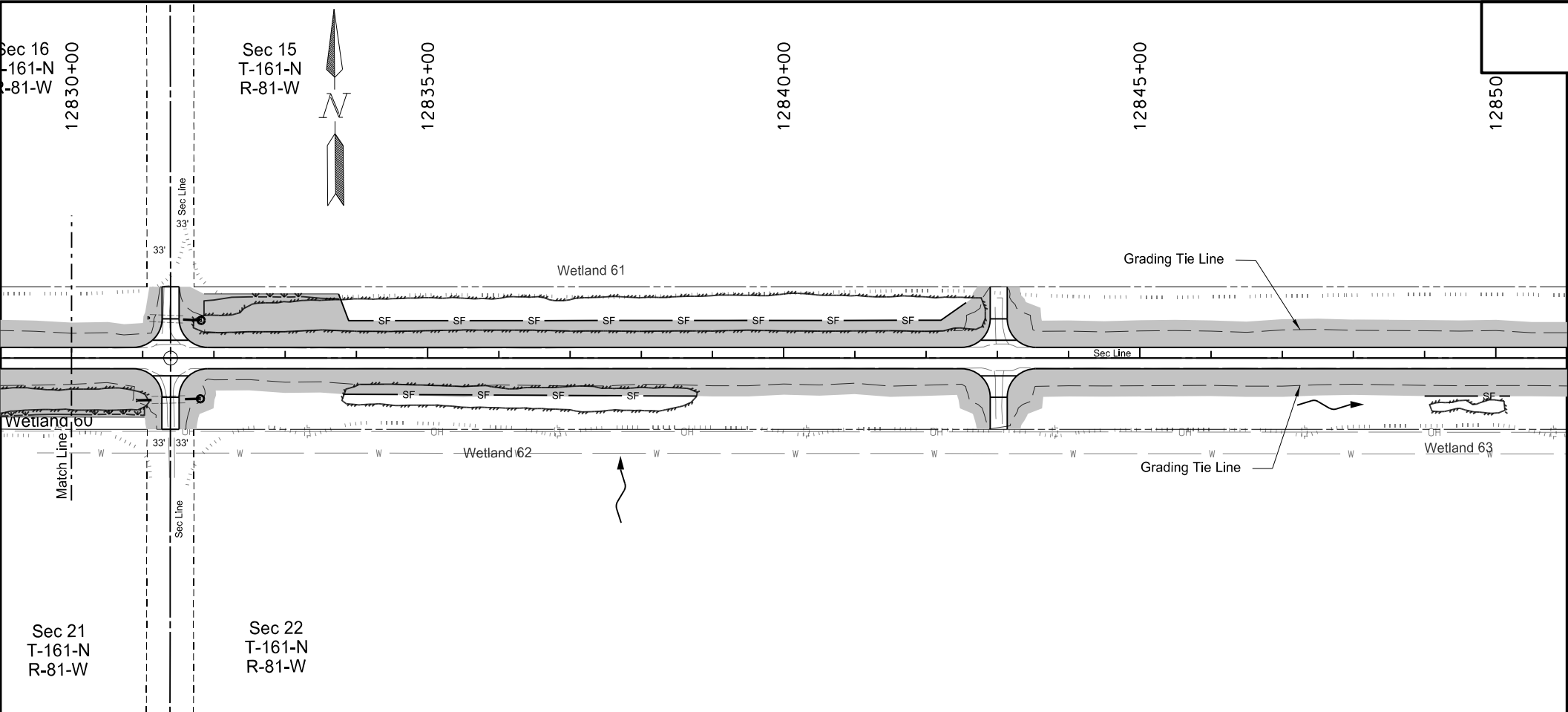
Note: See Section 76 Sheet 23 for Silt Fence Station Locations

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Temporary Sediment and Erosion Control

US 83

Sta 12790+00 to 12830+00



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	76	9

SPEC CODE	BID ITEM	QTY	UNIT
260 0200	SILT FENCE SUPPORTED		
	Sta 12830+00 to 12870+00 Lt	926	LF
	Sta 12830+00 to 12870+00 Rt	760	LF
260 0201	REMOVE SILT FENCE SUPPORTED		
	Sta 12830+00 to 12870+00 Lt	926	LF
	Sta 12830+00 to 12870+00 Rt	760	LF
261 0112	FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	96	LF
261 0113	REMOVE FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	96	LF

- Legend**
- Fiber Rolls 12IN or 20IN
 - SF Silt Fence Supported
 - s Flotation Silt Curtain
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Temp Cover Crop / Mulch

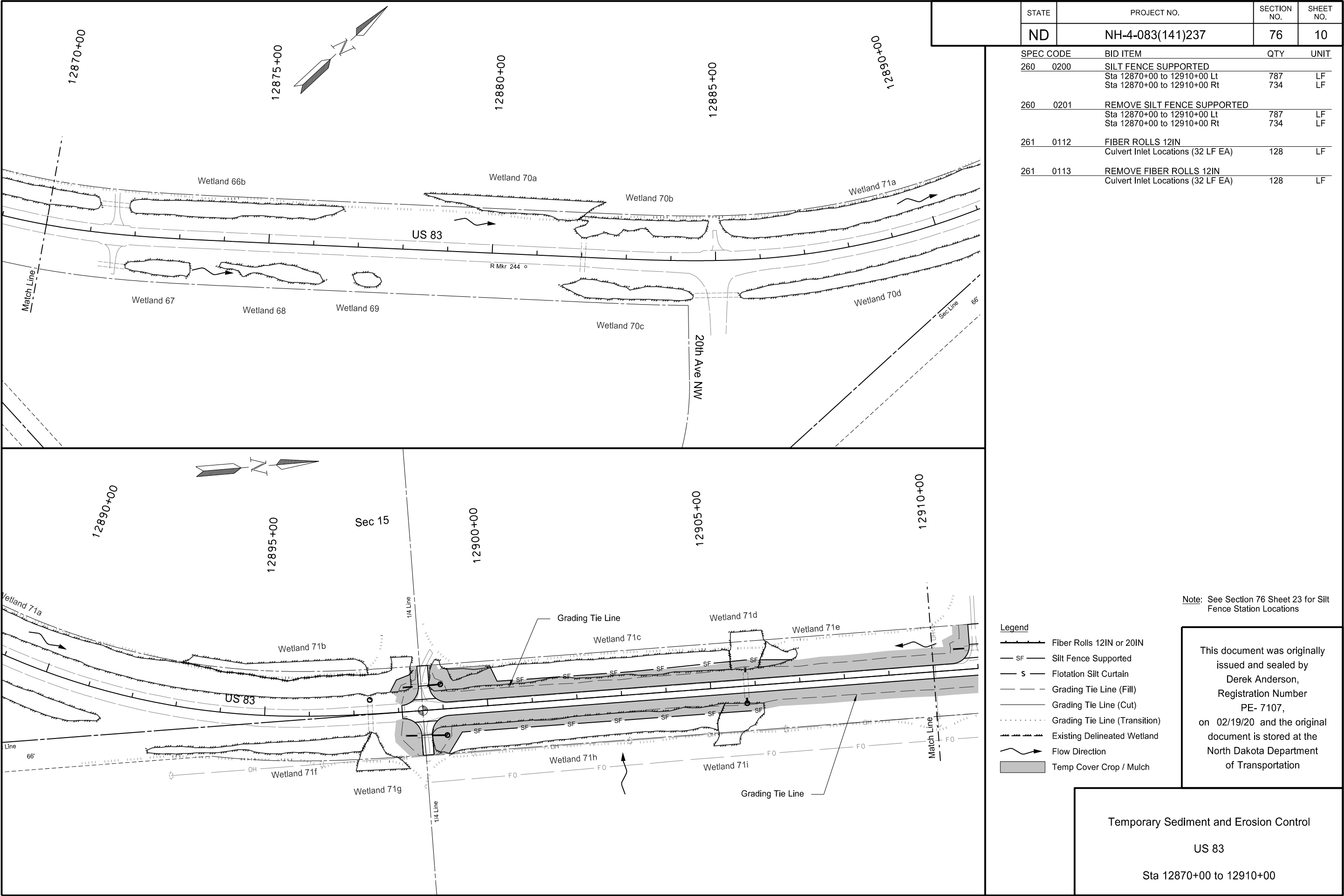
Note: See Section 76 Sheet 23 for Silt Fence Station Locations

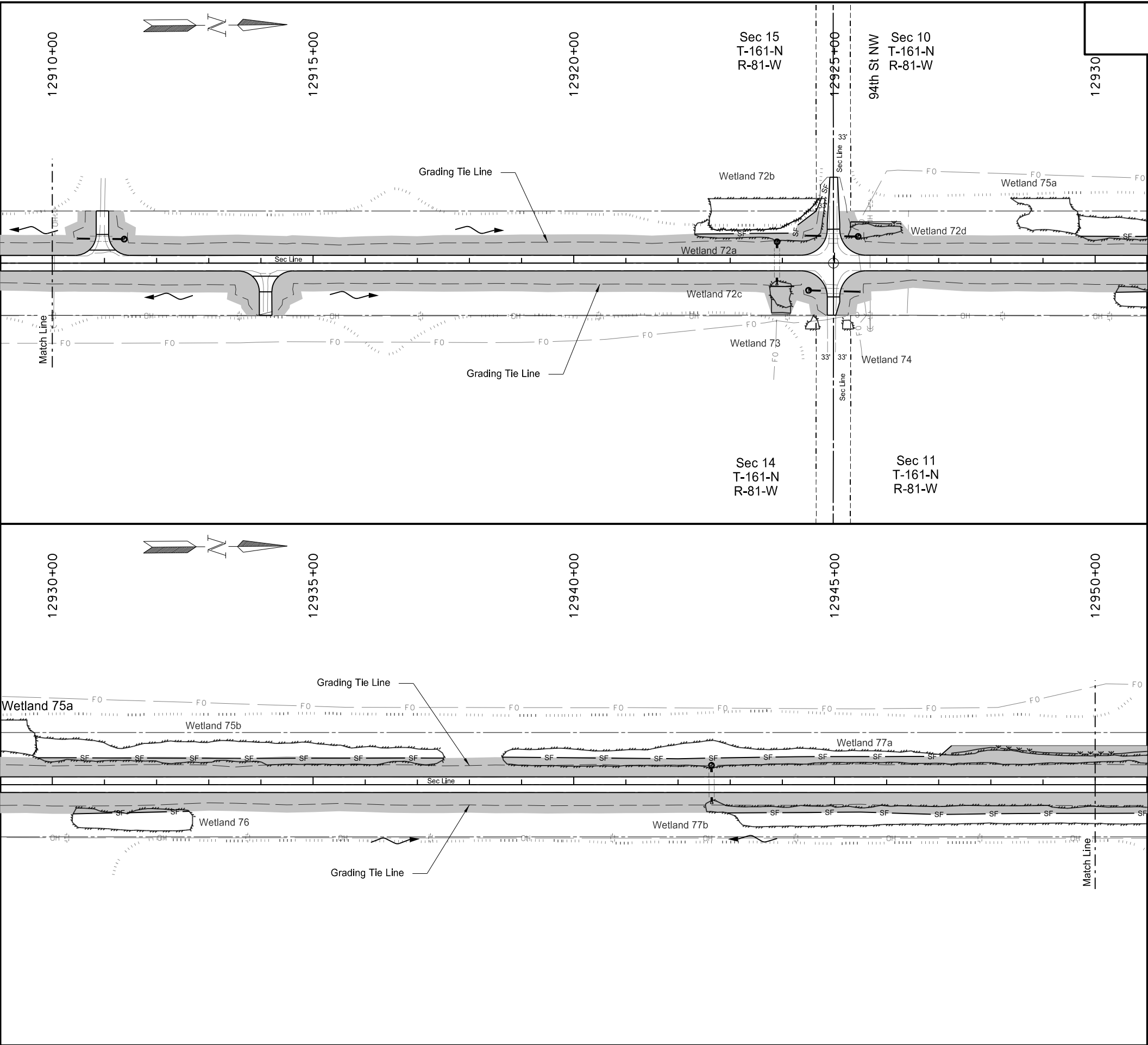
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Temporary Sediment and Erosion Control

US 83

Sta 12830+00 to 12870+00





STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	76	11

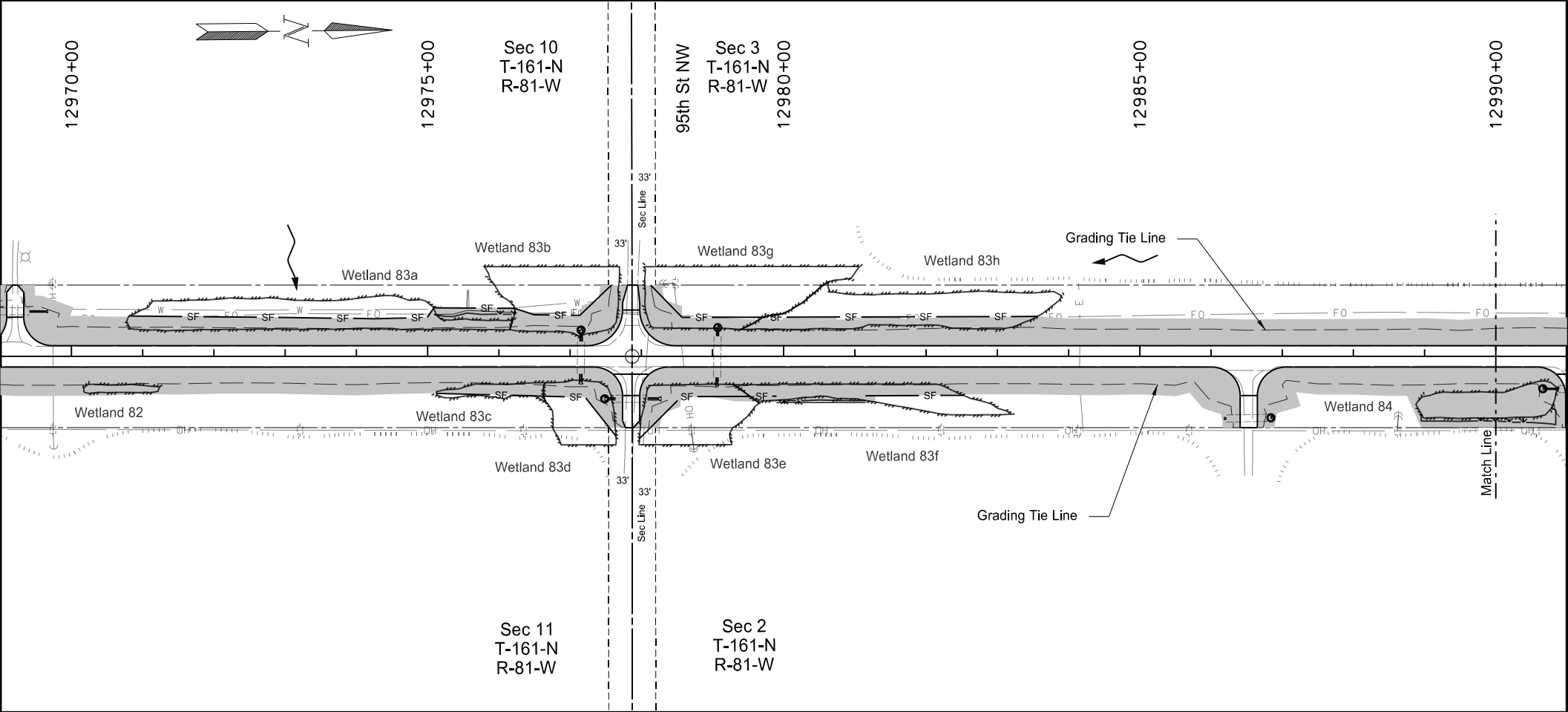
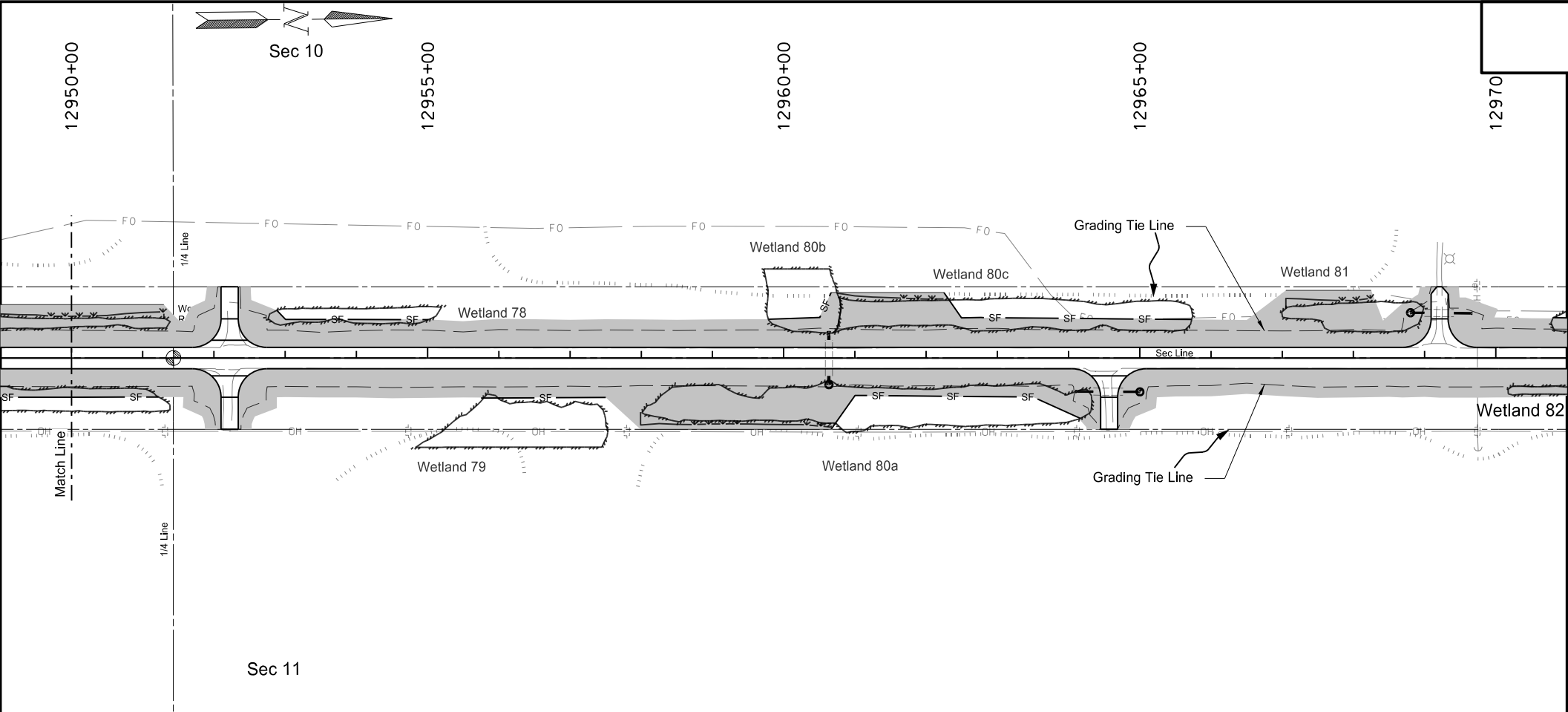
SPEC CODE	BID ITEM	QTY	UNIT
260 0200	SILT FENCE SUPPORTED		
	Sta 12910+00 to 12950+00 Lt	1960	LF
	Sta 12910+00 to 12950+00 Rt	973	LF
260 0201	REMOVE SILT FENCE SUPPORTED		
	Sta 12910+00 to 12950+00 Lt	1960	LF
	Sta 12910+00 to 12950+00 Rt	973	LF
261 0112	FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	160	LF
261 0113	REMOVE FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	160	LF

- Legend
- Fiber Rolls 12IN or 20IN
 - SF Silt Fence Supported
 - s Flotation Silt Curtain
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Temp Cover Crop / Mulch

Note: See Section 76 Sheet 23 for Silt Fence Station Locations

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Temporary Sediment and Erosion Control
US 83
Sta 12910+00 to 12950+00



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	76	12

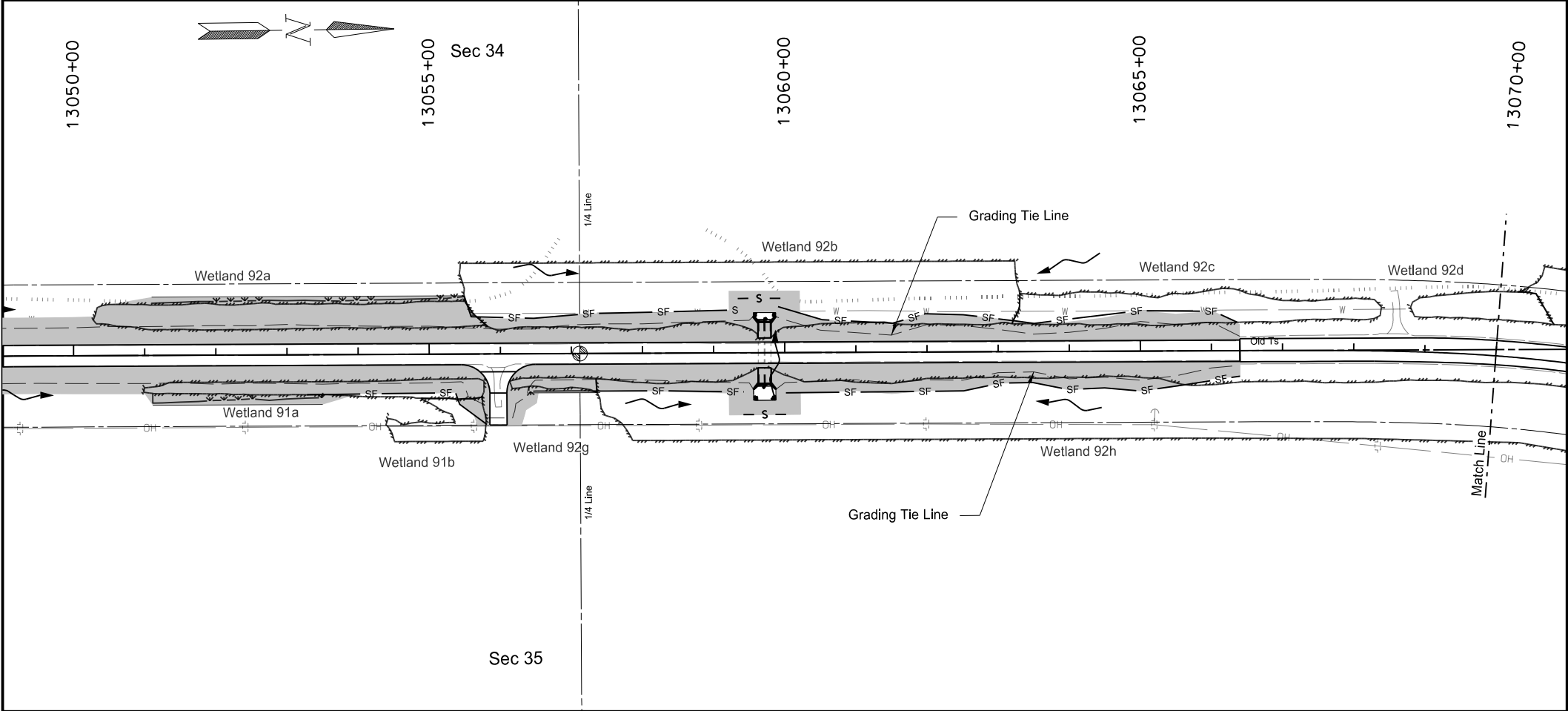
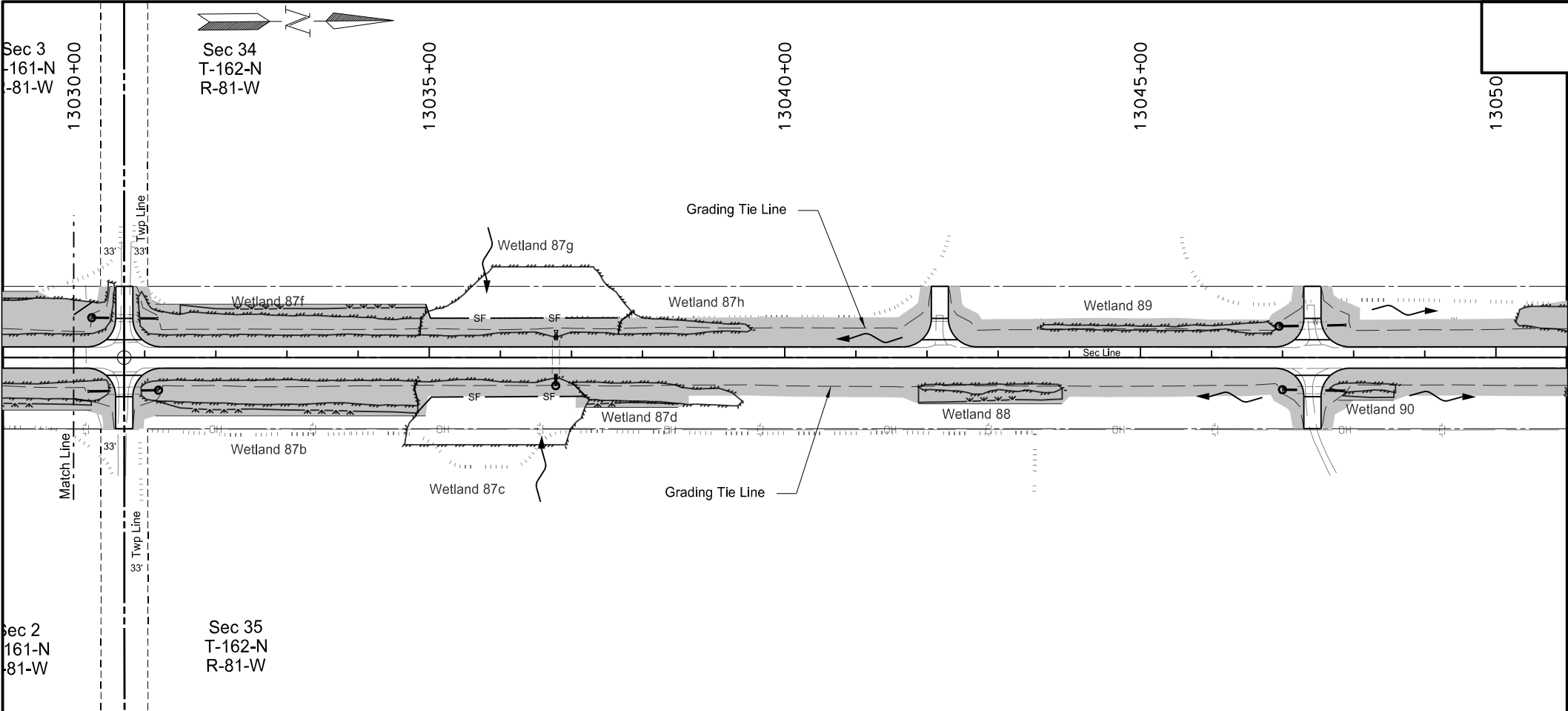
SPEC CODE	BID ITEM	QTY	UNIT
260 0200	SILT FENCE SUPPORTED		
	Sta 12950+00 to 12990+00 Lt	1760	LF
	Sta 12950+00 to 12990+00 Rt	1310	LF
260 0201	REMOVE SILT FENCE SUPPORTED		
	Sta 12950+00 to 12990+00 Lt	1760	LF
	Sta 12950+00 to 12990+00 Rt	1310	LF
261 0112	FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	224	LF
261 0113	REMOVE FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	224	LF

- Legend
- Fiber Rolls 12IN or 20IN
 - SF Silt Fence Supported
 - s Flotation Silt Curtain
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Temp Cover Crop / Mulch

Note: See Section 76 Sheet 23 for Silt Fence Station Locations

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US 83
Sta 12950+00 to 12990+00



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	76	14

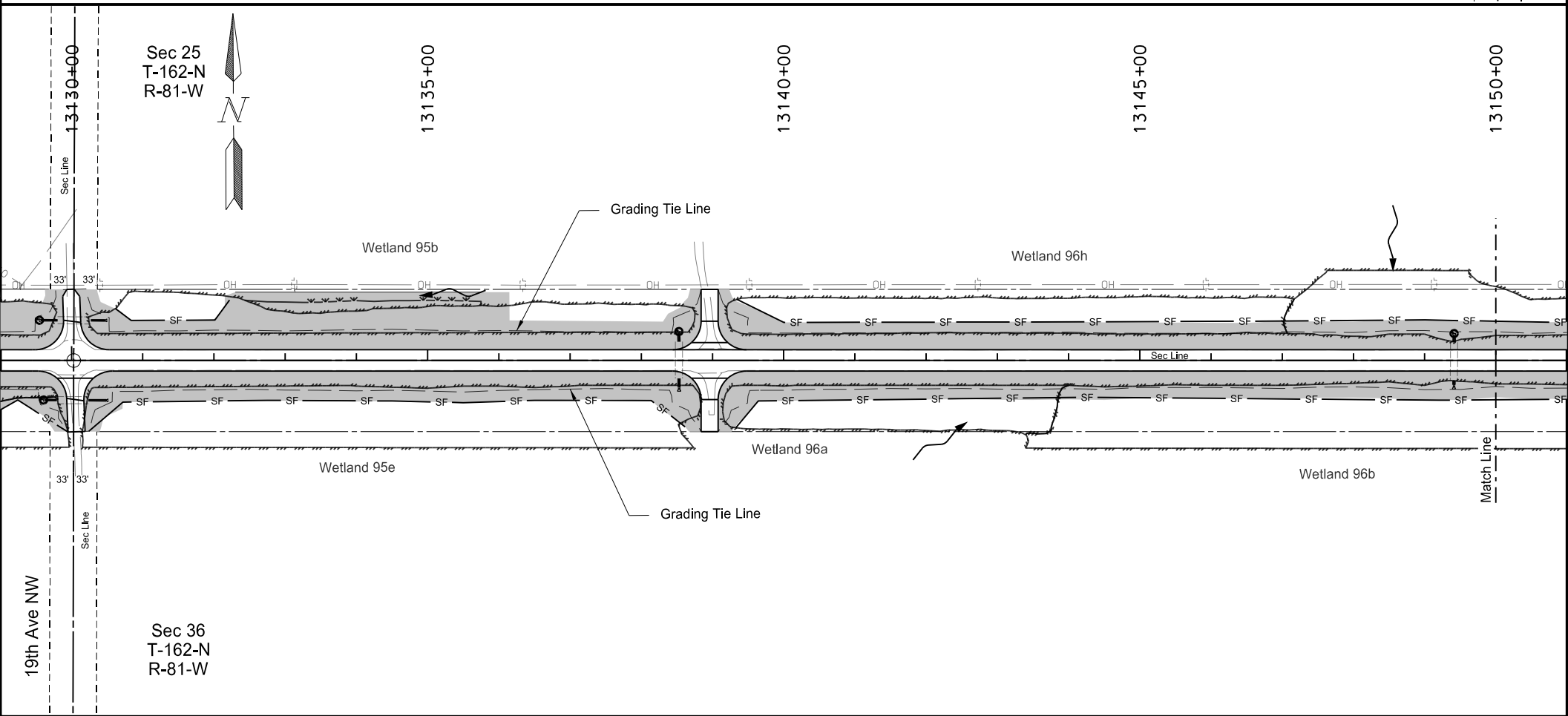
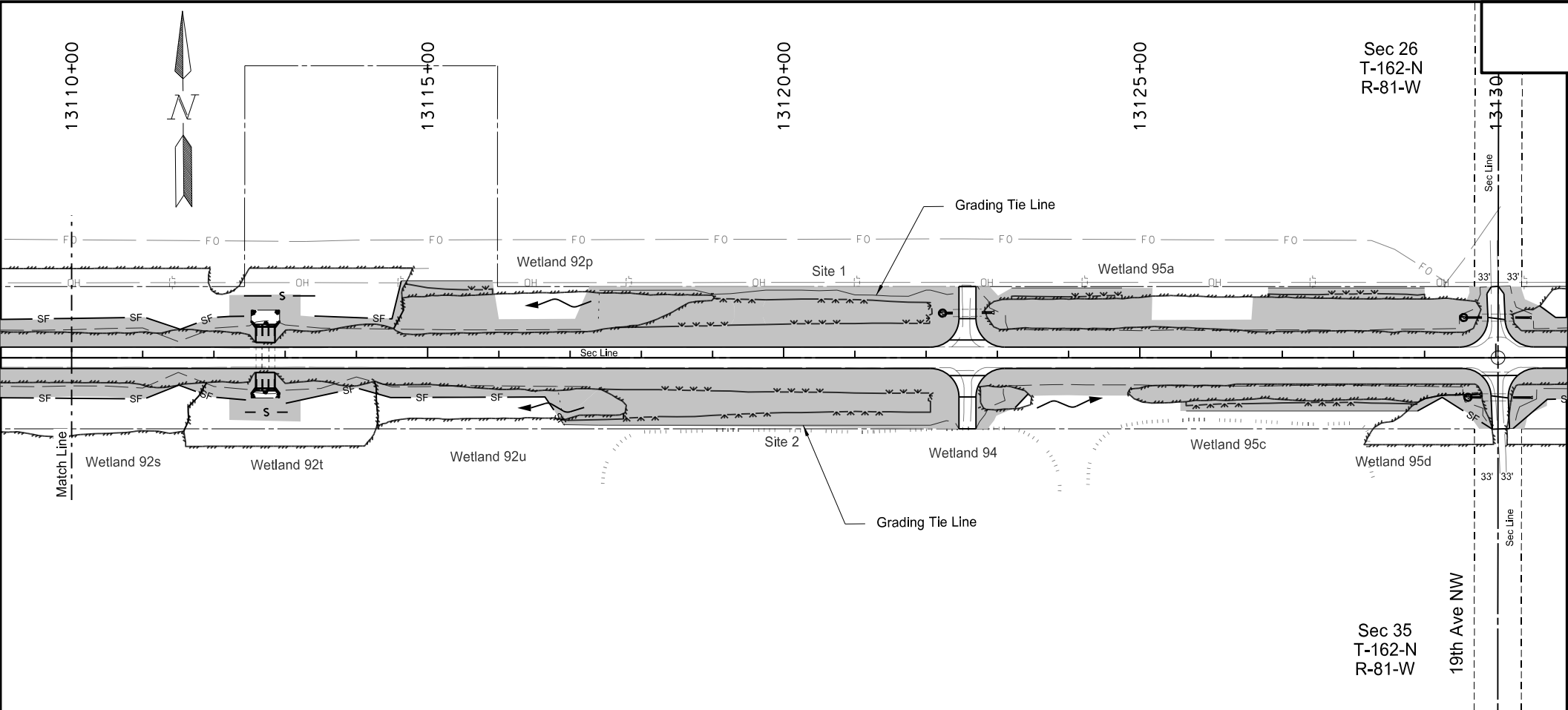
SPEC CODE	BID ITEM	QTY	UNIT
260 0200	SILT FENCE SUPPORTED		
	Sta 13030+00 to 13070+00 Lt	1369	LF
	Sta 13030+00 to 13070+00 Rt	1403	LF
260 0201	REMOVE SILT FENCE SUPPORTED		
	Sta 13030+00 to 13070+00 Lt	1369	LF
	Sta 13030+00 to 13070+00 Rt	1403	LF
261 0112	FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	160	LF
261 0113	REMOVE FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	160	LF
262 0100	FLOTATION SILT CURTAIN		
	Box Culvert Location Lt	60	LF
	Box Culvert Location Rt	60	LF
262 0101	REMOVE FLOTATION SILT CURTAIN		
	Box Culvert Location Lt	60	LF
	Box Culvert Location Rt	60	LF

- Legend
- Fiber Rolls 12IN or 20IN
 - SF Silt Fence Supported
 - S Flotation Silt Curtain
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Temp Cover Crop / Mulch

Note: See Section 76 Sheet 23 for Silt Fence Station Locations

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Temporary Sediment and Erosion Control
US 83
Sta 13030+00 to 13070+00



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	76	16

SPEC CODE	BID ITEM	QTY	UNIT
260 0200	SILT FENCE SUPPORTED		
	Sta 13110+00 to 13150+00 Lt	1681	LF
	Sta 13110+00 to 13150+00 Rt	2751	LF
260 0201	REMOVE SILT FENCE SUPPORTED		
	Sta 13110+00 to 13150+00 Lt	1681	LF
	Sta 13110+00 to 13150+00 Rt	2751	LF
261 0112	FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	160	LF
261 0113	REMOVE FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	160	LF
262 0100	FLOTATION SILT CURTAIN		
	Box Culvert Location Lt	100	LF
	Box Culvert Location Rt	60	LF
262 0101	REMOVE FLOTATION SILT CURTAIN		
	Box Culvert Location Lt	100	LF
	Box Culvert Location Rt	60	LF

- Legend
- Fiber Rolls 12IN or 20IN
 - SF Silt Fence Supported
 - S Flotation Silt Curtain
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Temp Cover Crop / Mulch

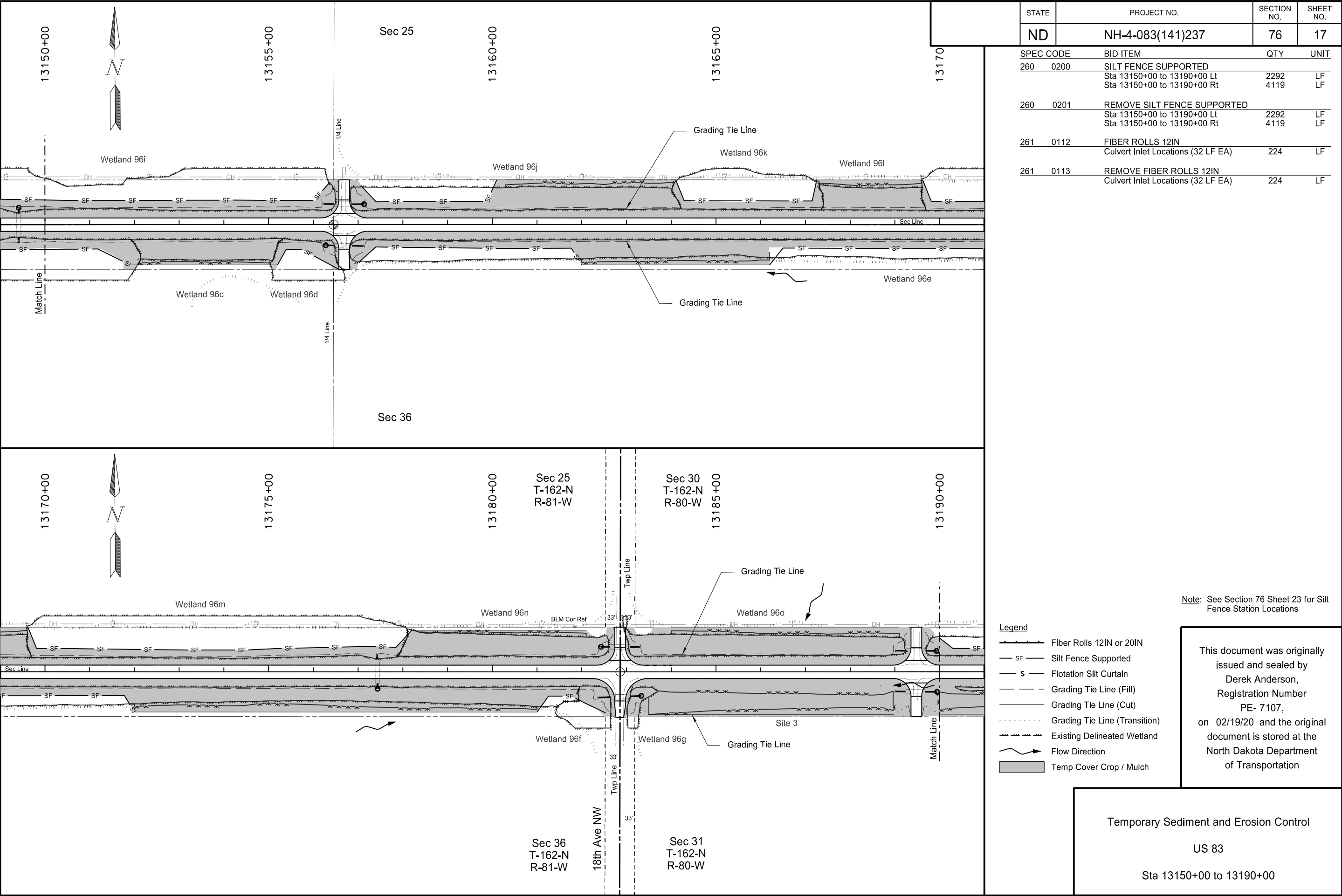
Note: See Section 76 Sheet 23 for Silt Fence Station Locations

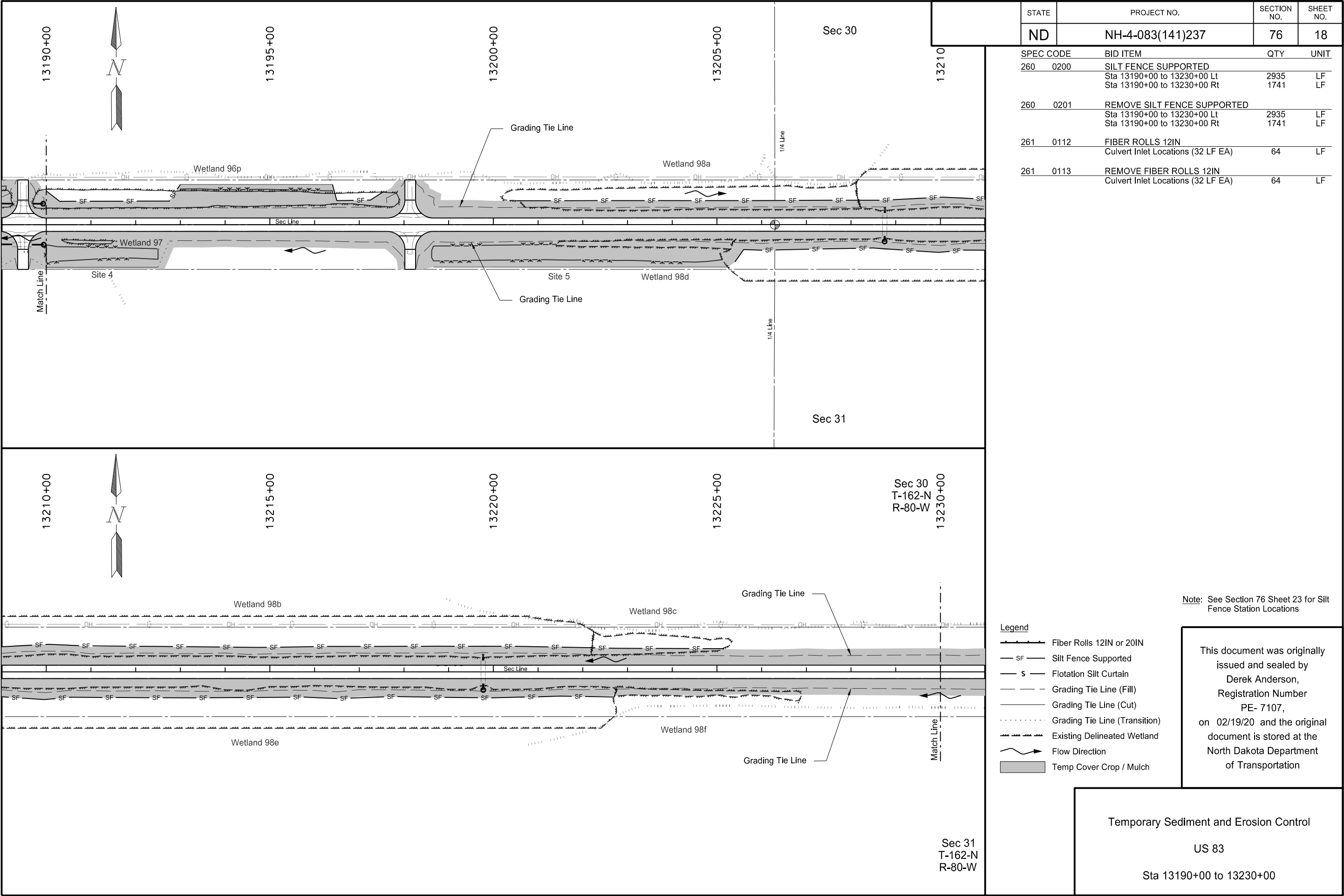
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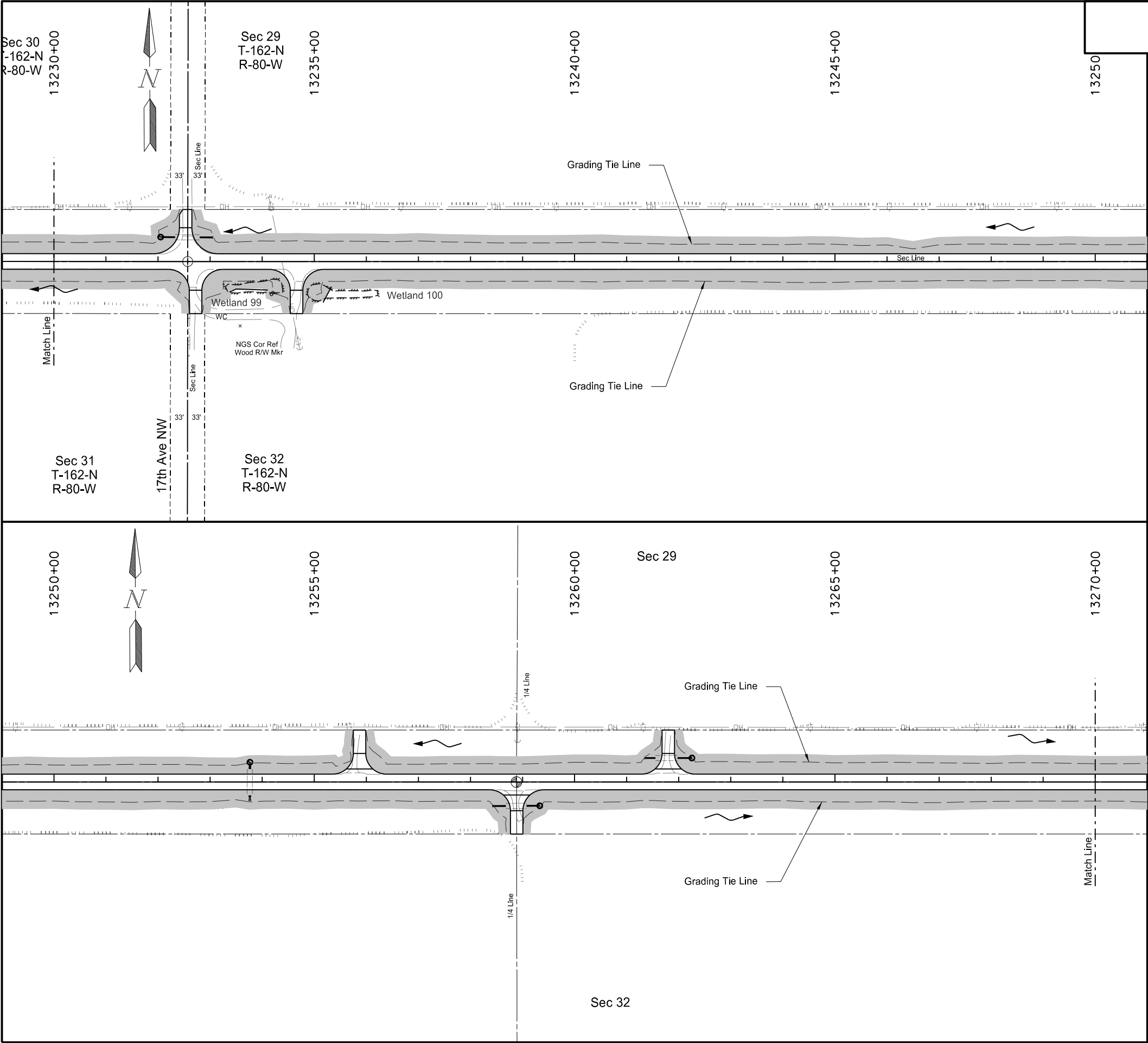
Temporary Sediment and Erosion Control

US 83

Sta 13110+00 to 13150+00







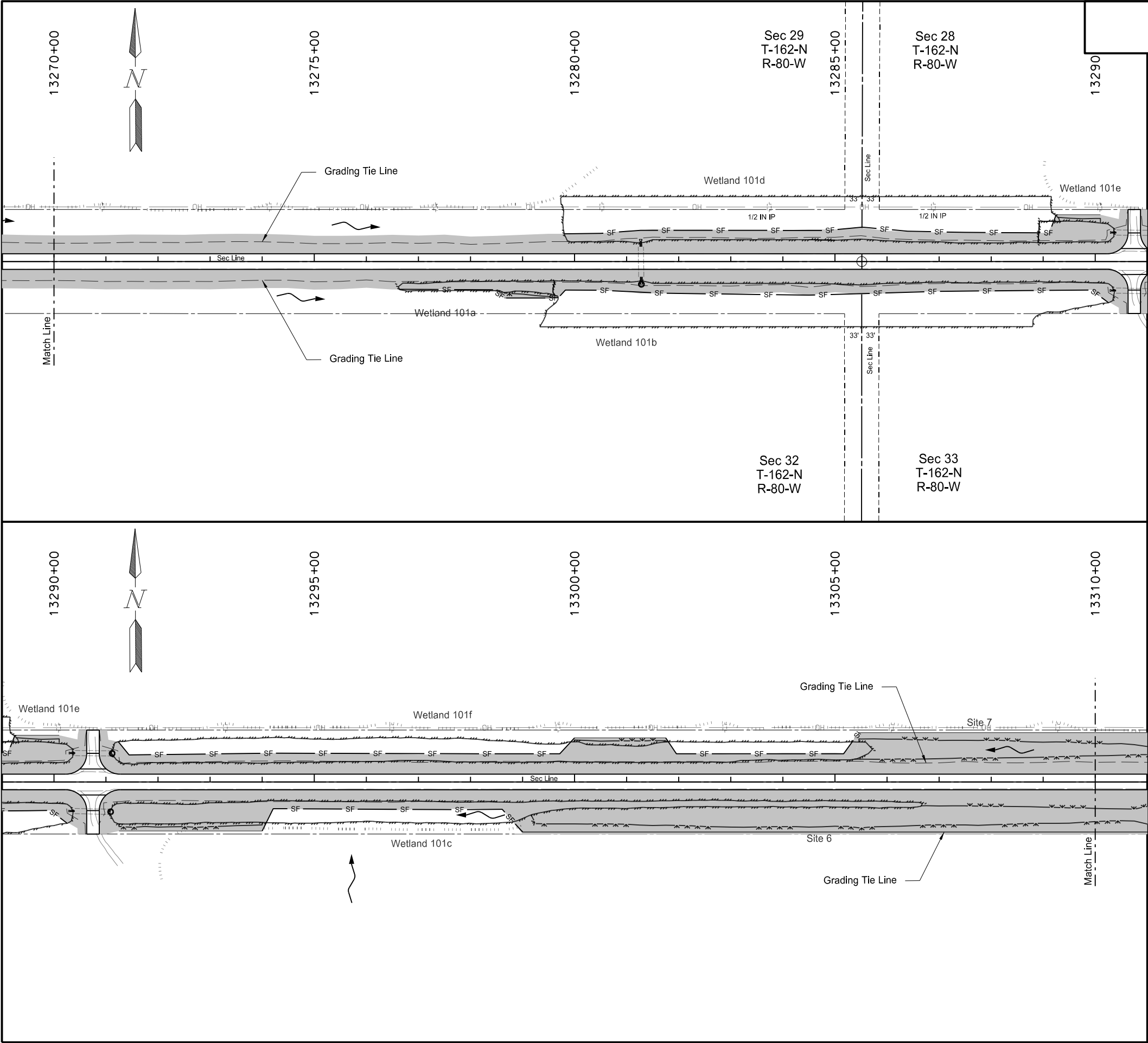
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	76	19
SPEC CODE	BID ITEM	QTY	UNIT
260 0200	SILT FENCE SUPPORTED Sta 13230+00 to 13270+00 Rt	119	LF
260 0201	REMOVE SILT FENCE SUPPORTED Sta 13230+00 to 13270+00 Rt	119	LF
261 0112	FIBER ROLLS 12IN Culvert Inlet Locations (32 LF EA)	128	LF
261 0113	REMOVE FIBER ROLLS 12IN Culvert Inlet Locations (32 LF EA)	128	LF

- Legend
- Fiber Rolls 12IN or 20IN
 - SF Silt Fence Supported
 - s Flotation Silt Curtain
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Temp Cover Crop / Mulch

Note: See Section 76 Sheet 23 for Silt Fence Station Locations

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Temporary Sediment and Erosion Control
US 83
Sta 13230+00 ot 13270+00



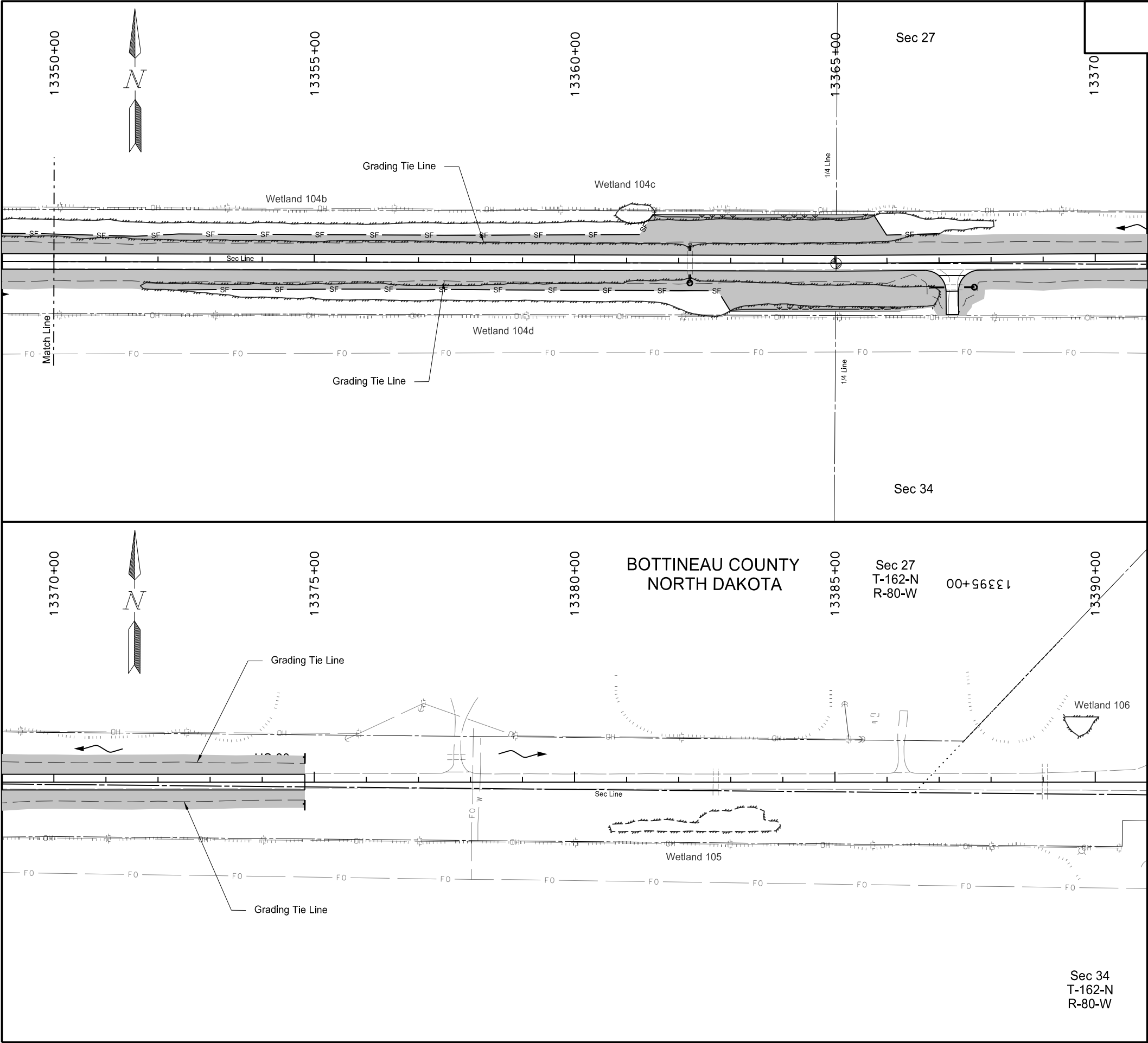
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	76	20
SPEC CODE	BID ITEM	QTY	UNIT
260 0200	SILT FENCE SUPPORTED		
	Sta 13270+00 to 13310+00 Lt	1871	LF
	Sta 13270+00 to 13310+00 Rt	2388	LF
260 0201	REMOVE SILT FENCE SUPPORTED		
	Sta 13270+00 to 13310+00 Lt	1871	LF
	Sta 13270+00 to 13310+00 Rt	2388	LF
261 0112	FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	96	LF
261 0113	REMOVE FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	96	LF

- Legend
- Fiber Rolls 12IN or 20IN
 - SF Silt Fence Supported
 - s Flotation Silt Curtain
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Temp Cover Crop / Mulch

Note: See Section 76 Sheet 23 for Silt Fence Station Locations

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US 83
Sta 13270+00 to 13310+00



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	76	22

SPEC CODE	BID ITEM	QTY	UNIT
260 0200	SILT FENCE SUPPORTED		
	Sta 13350+00 to 13390+00 Lt	1335	LF
	Sta 13350+00 to 13390+00 Rt	1105	LF
260 0201	REMOVE SILT FENCE SUPPORTED		
	Sta 13350+00 to 13390+00 Lt	1335	LF
	Sta 13350+00 to 13390+00 Rt	1105	LF
261 0112	FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	64	LF
261 0113	REMOVE FIBER ROLLS 12IN		
	Culvert Inlet Locations (32 LF EA)	64	LF

- Legend
- Fiber Rolls 12IN or 20IN
 - SF Silt Fence Supported
 - s Flotation Silt Curtain
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Temp Cover Crop / Mulch

Note: See Section 76 Sheet 23 for Silt Fence Station Locations

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Temporary Sediment and Erosion Control

US 83

Sta 13350+00 to 13390+00

Sec 76 Sheet #	Begin Station	End Station	Silt Fence Supported (LF)	
			Lt.	Rt.
1	12515+18	12516+38	120	
	12515+30	12515+79		49
	12529+54	12530+53	100	
	12531+76	12532+16		40
	12546+36	12547+43	107	
2	12552+36	12567+33		1522
	12551+89	12558+24	635	
	12560+04	12565+22	519	
	12570+37	12590+00		1994
	12570+79	12581+02	1031	
	12581+86	12589+00	745	
	12590+00	12593+28		372
	12594+44	12594+83	48	
	12599+27	12603+80		453
	12617+77	12619+57	186	
	12619+72	12619+95		27
	12620+39	12620+85		56
	12626+36	12627+85		167
4	12626+99	12627+98	93	
	12640+83	12645+00		437
	12642+69	12646+38	381	
	12649+37	12652+46	300	
	12650+60	12651+50		124
6	12698+31	12699+24	93	
	12711+51	12712+19	84	
	12713+44	12714+32	94	
7	12762+88	12763+57	69	
	12765+65	12767+21	156	
	12767+31	12775+41		810
	12771+73	12774+50	295	
	12778+78	12780+09		159
8	12781+93	12785+36		343
	12792+27	12793+48		121
	12795+37	12802+00		675
	12795+79	12810+50	1485	
	12806+62	12807+38		76
	12808+10	12813+49		540

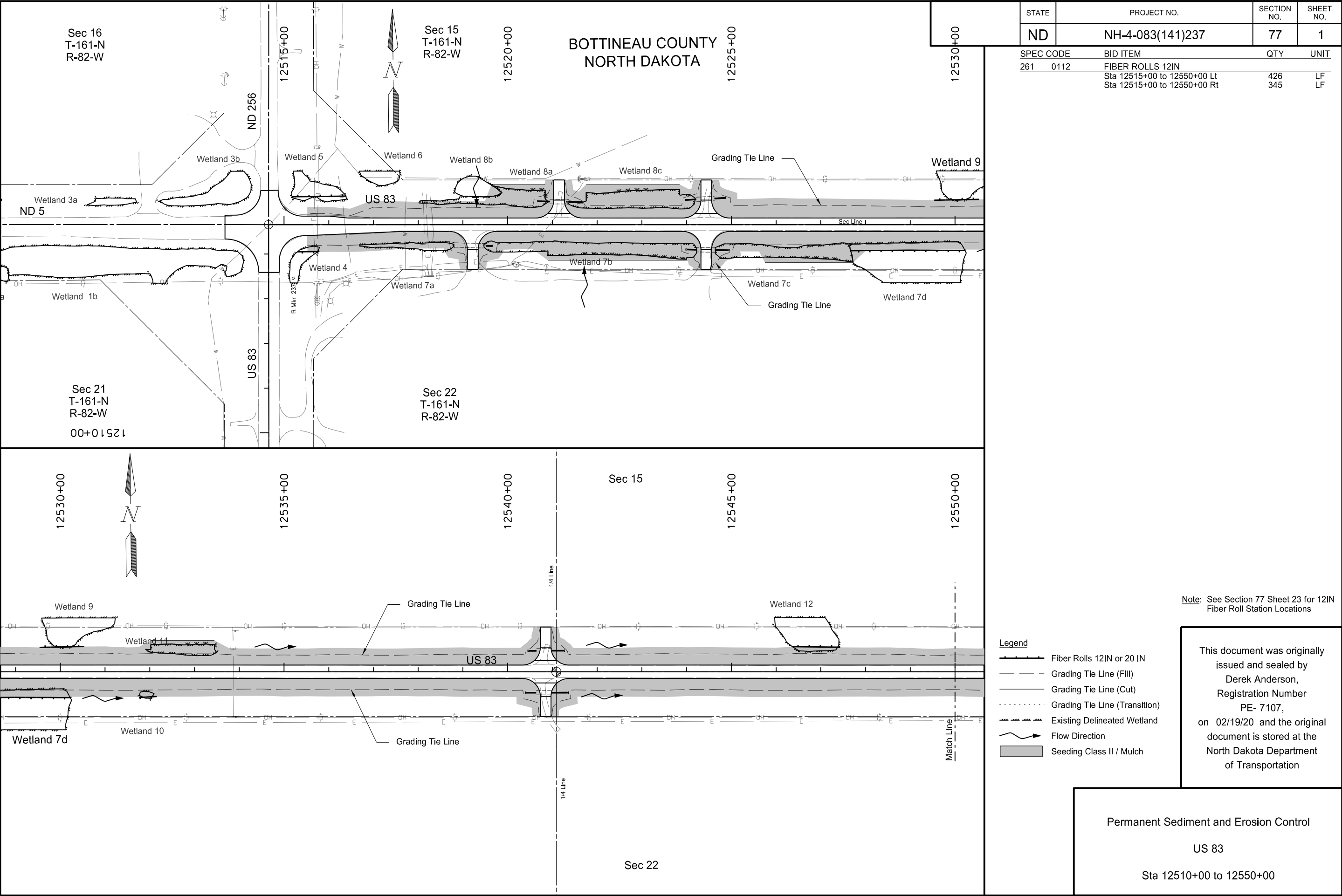
Sec 76 Sheet #	Begin Station	End Station	Silt Fence Supported (LF)	
			Lt.	Rt.
9	12833+83	12838+78		495
	12833+75	12842+65	926	
	12849+00	12850+20		120
	12864+65	12856+10		145
10	12897+84	12898+38	87	
	12900+00	12906+89	700	
	12899+04	12906+17		734
11	12922+32	12924+86	310	
	12923+77	12924+23		45
	12929+72	12937+50	779	
	12930+40	12932+62		223
	12938+62	12947+25	871	
12	12942+95	12950+00		705
	12950+00	12951+22		122
	12952+88	12955+01	218	
	12955+75	12957+50		175
	12960+66	12946+17		382
	12962+00	12965+73	366	
	12970+80	12975+16	436	
	12975+13	12977+64		278
	12976+16	12977+74	171	
	12977+98	12979+90		216
	12978+03	12983+56	569	
	12981+15	12982+52		137
13	12995+40	12999+87	474	
	13004+39	13014+75	966	
	13005+10	13011+00		623
	13018+72	13020+52	180	
14	13030+00	13030+29	35	
	13030+00	13030+25		25
	13034+95	13037+75	294	
	13034+82	13037+20		247
	13055+50	13066+36	1040	
	13053+28	13055+81		274
	13057+31	13066+42		857
15	13092+33	13099+97		778
	13098+20	13100+75	355	
	13100+29	13103+38		345
	13103+62	13110+00	655	
	13103+62	13110+00		653

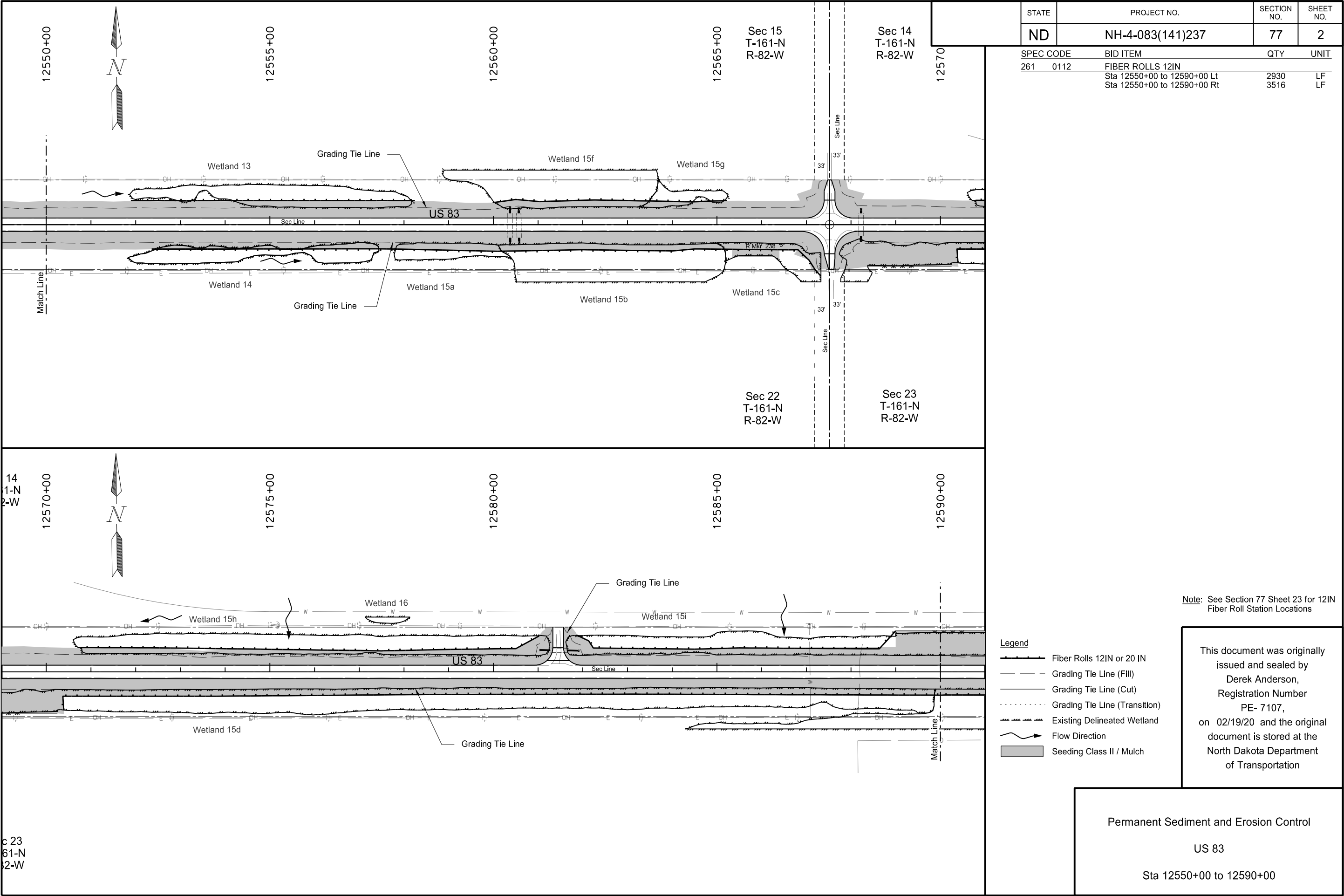
Sec 76 Sheet #	Begin Station	End Station	Silt Fence Supported (LF)	
			Lt.	Rt.
16	13110+00	13112+45	250	
	13110+00	13112+45		250
	13113+00	13116+90		416
	13113+41	13115+91	164	
	13128+90	13129+95		123
	13130+24	13138+78		878
	13130+62	13132+30	194	
	13139+33	13150+00		1084
17	13139+35	13150+00	1073	
	13150+00	13156+36	654	
	13150+00	13151+90		198
	13157+05	13182+65		2582
	13157+05	13161+00		528
	13157+09	13160+10	346	
	13164+10	13167+24	385	
	13166+20	13177+00		618
	13169+62	13178+20	907	
	13181+00	13182+65		193
18	13190+00	13193+00	328	
	13196+40	13197+53	145	
	13200+53	13225+15	2462	
	13205+30	13222+70		1741
19	13233+37	13234+31		90
	13235+33	13235+33		29
20	13276+64	13290+26		1370
	13279+80	13289+25	969	
	13294+00	13299+87		613
	13291+24	13300+00	902	
	13301+75	13305+64		405
21	13327+39	13333+75	640	
	13337+94	13338+35		58
	13338+70	13339+04		66
	13338+94	13339+16	53	
	13342+00	13344+17	265	
	13347+72	13350+00	234	
22	13350+00	13361+50	1171	
	13365+60	13367+00	144	
	13352+38	13363+00		1085
	13374+82	13374+82	20	20
Subtotal			27279	27891

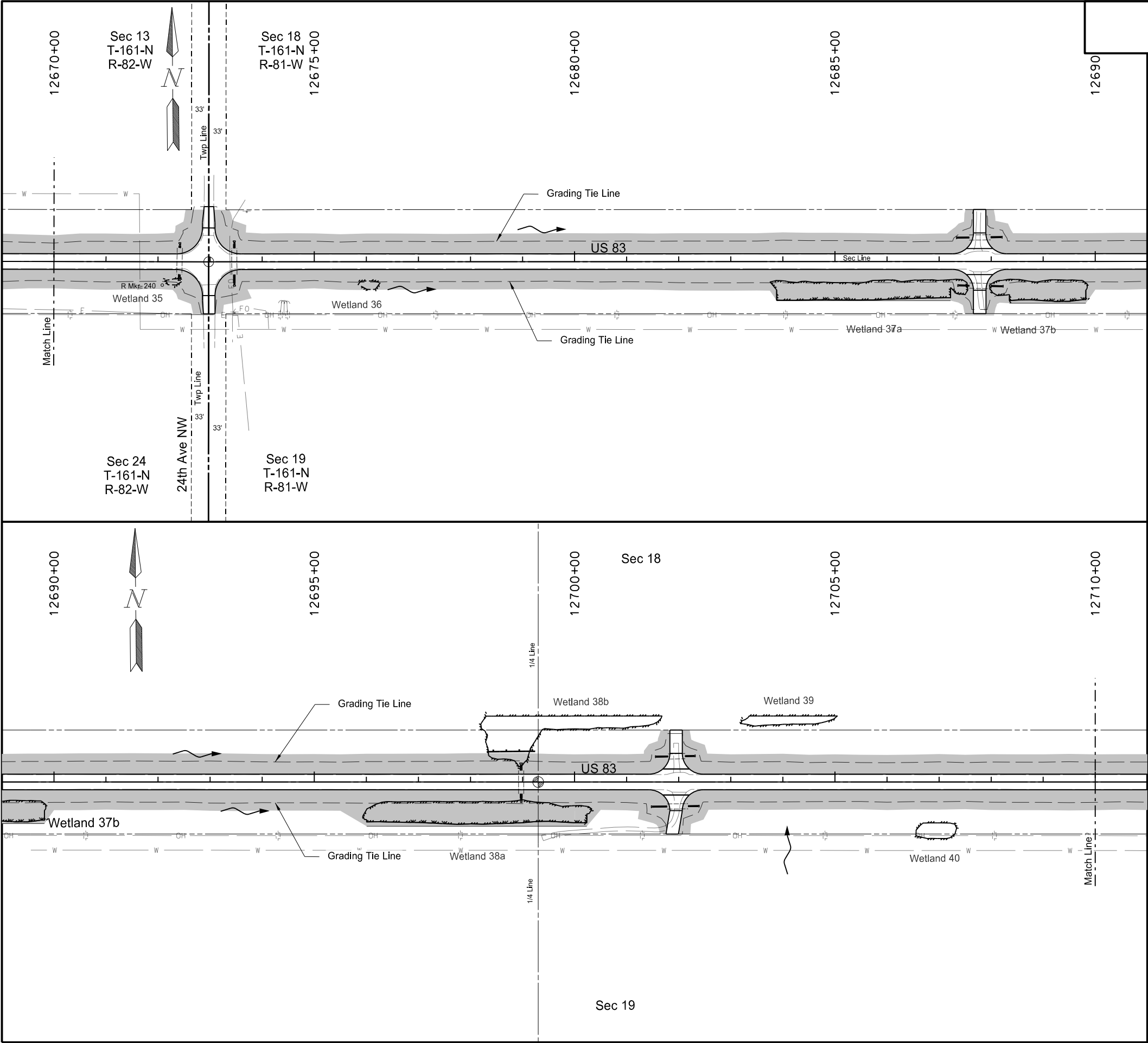
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US 83







STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	77	5
SPEC CODE	BID ITEM	QTY	UNIT
261 0112	FIBER ROLLS 12IN Sta 12670+00 to 12710+00 Lt	93	LF

- Legend
- Fiber Rolls 12IN or 20 IN
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Seeding Class II / Mulch

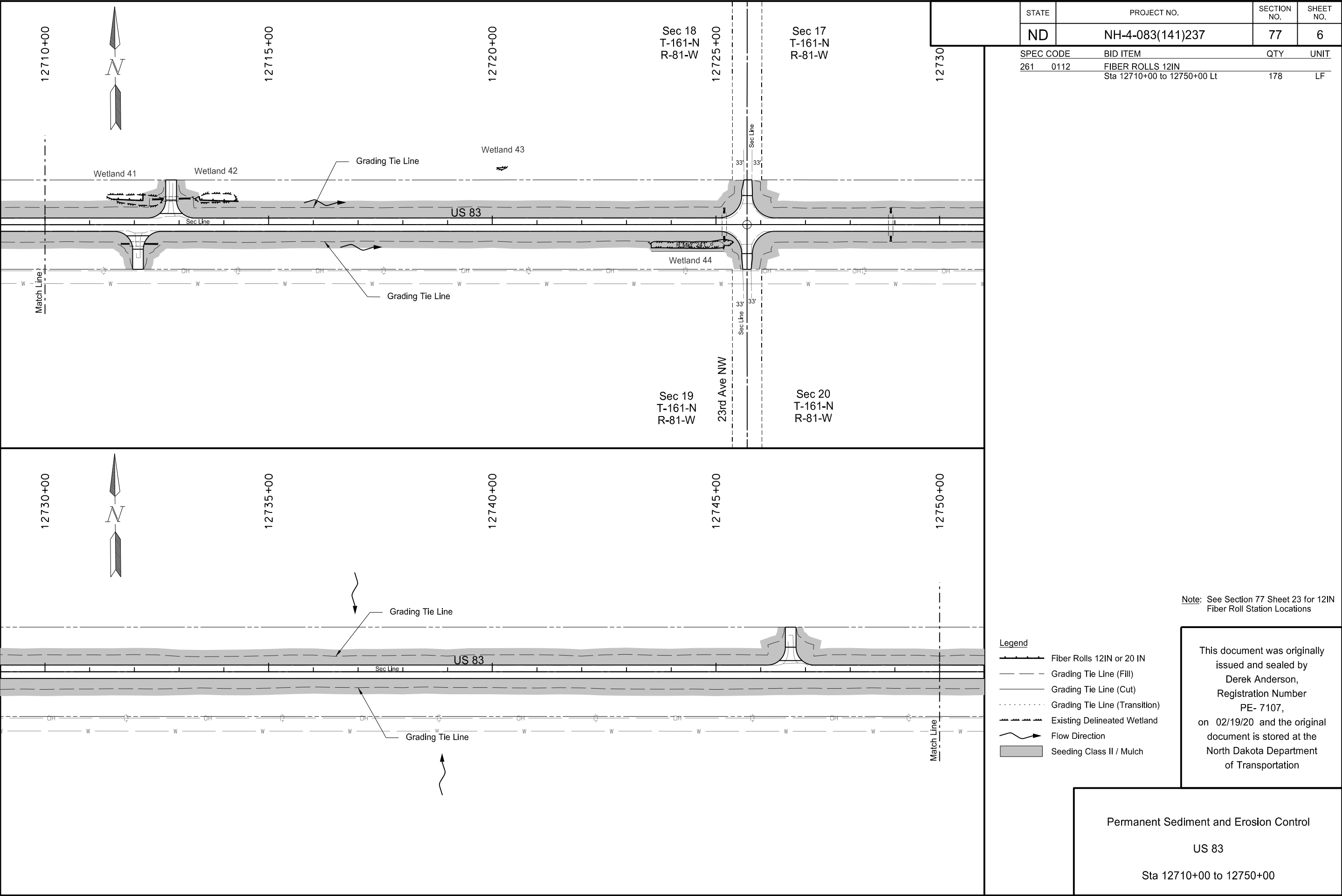
Note: See Section 77 Sheet 23 for 12IN
Fiber Roll Station Locations

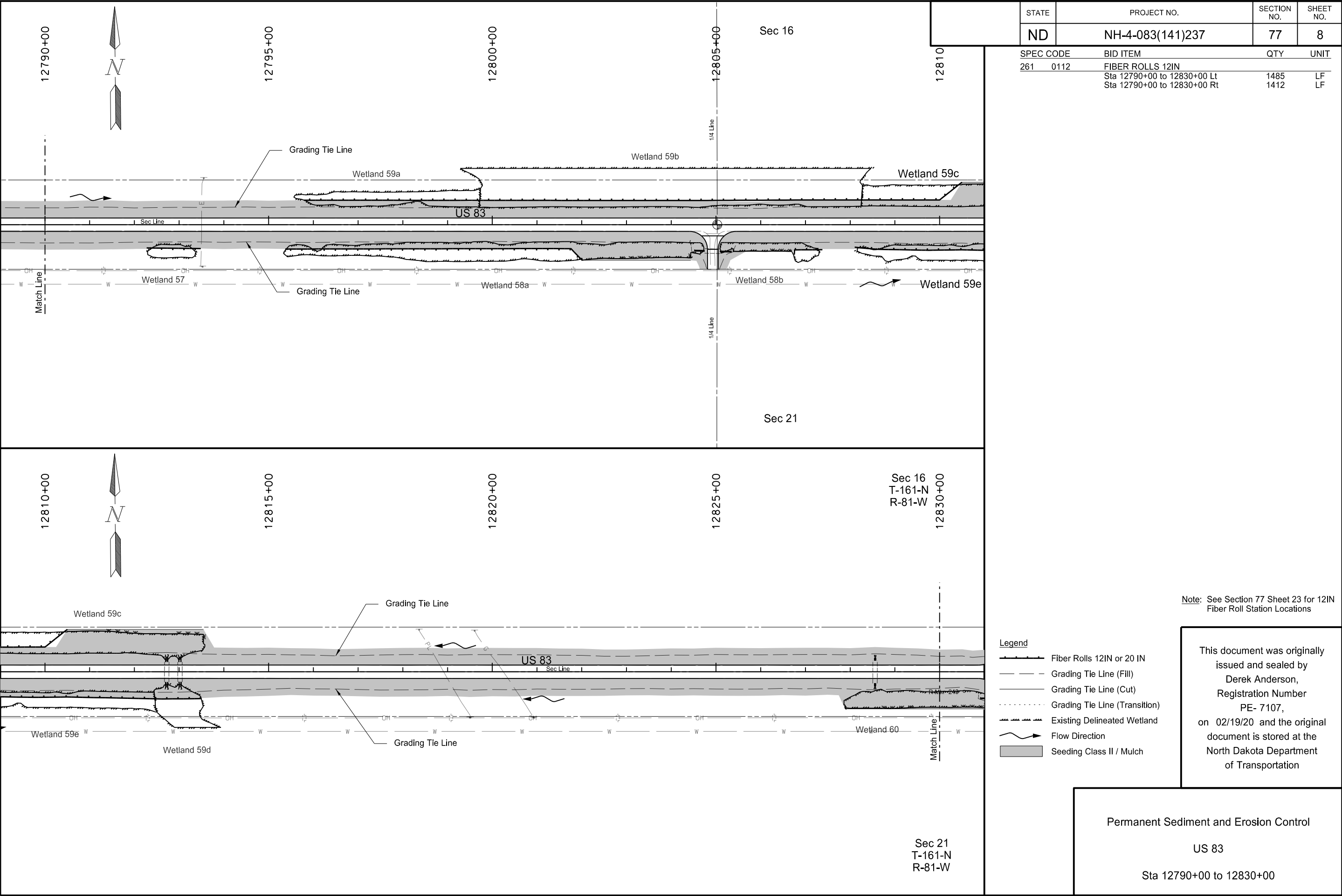
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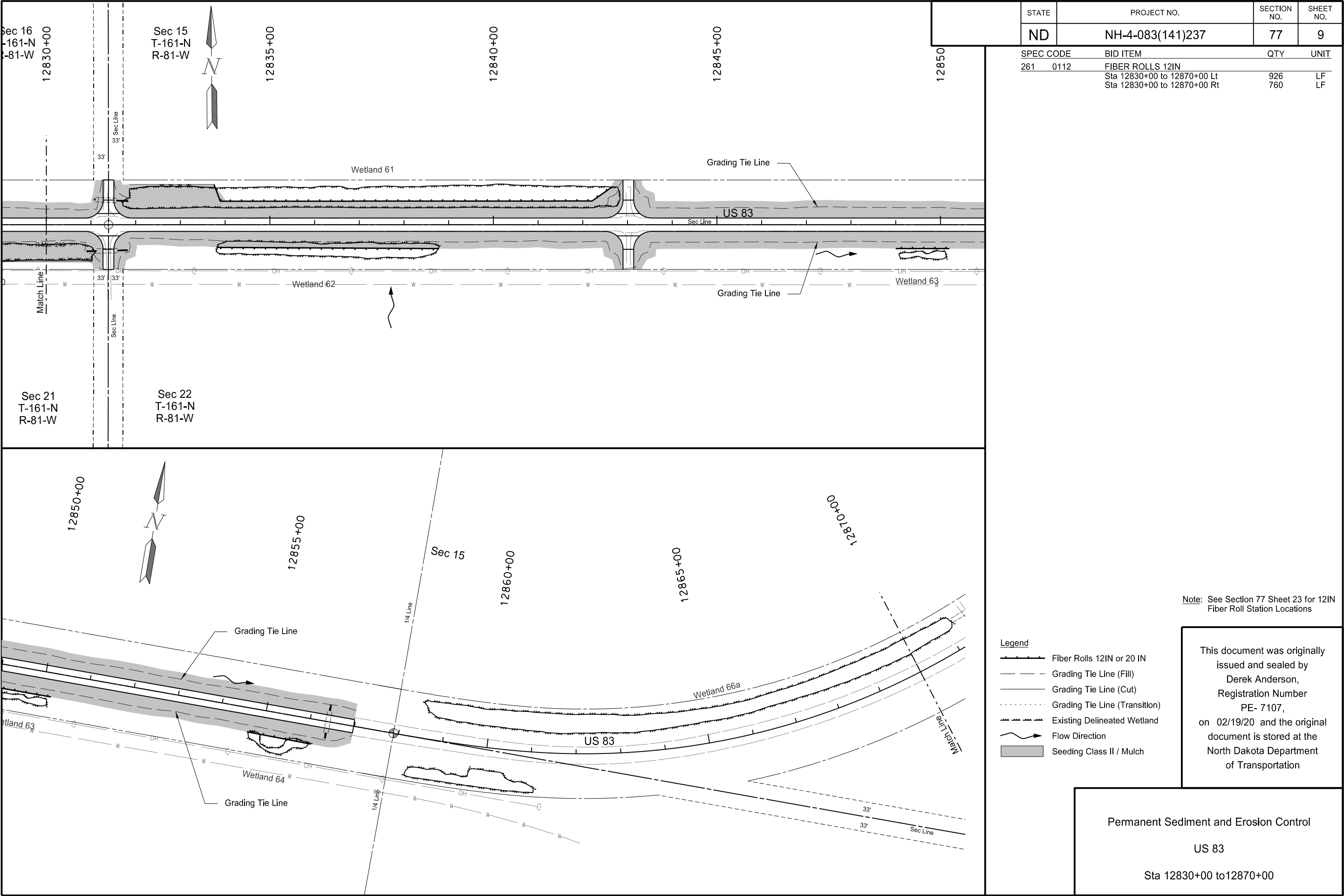
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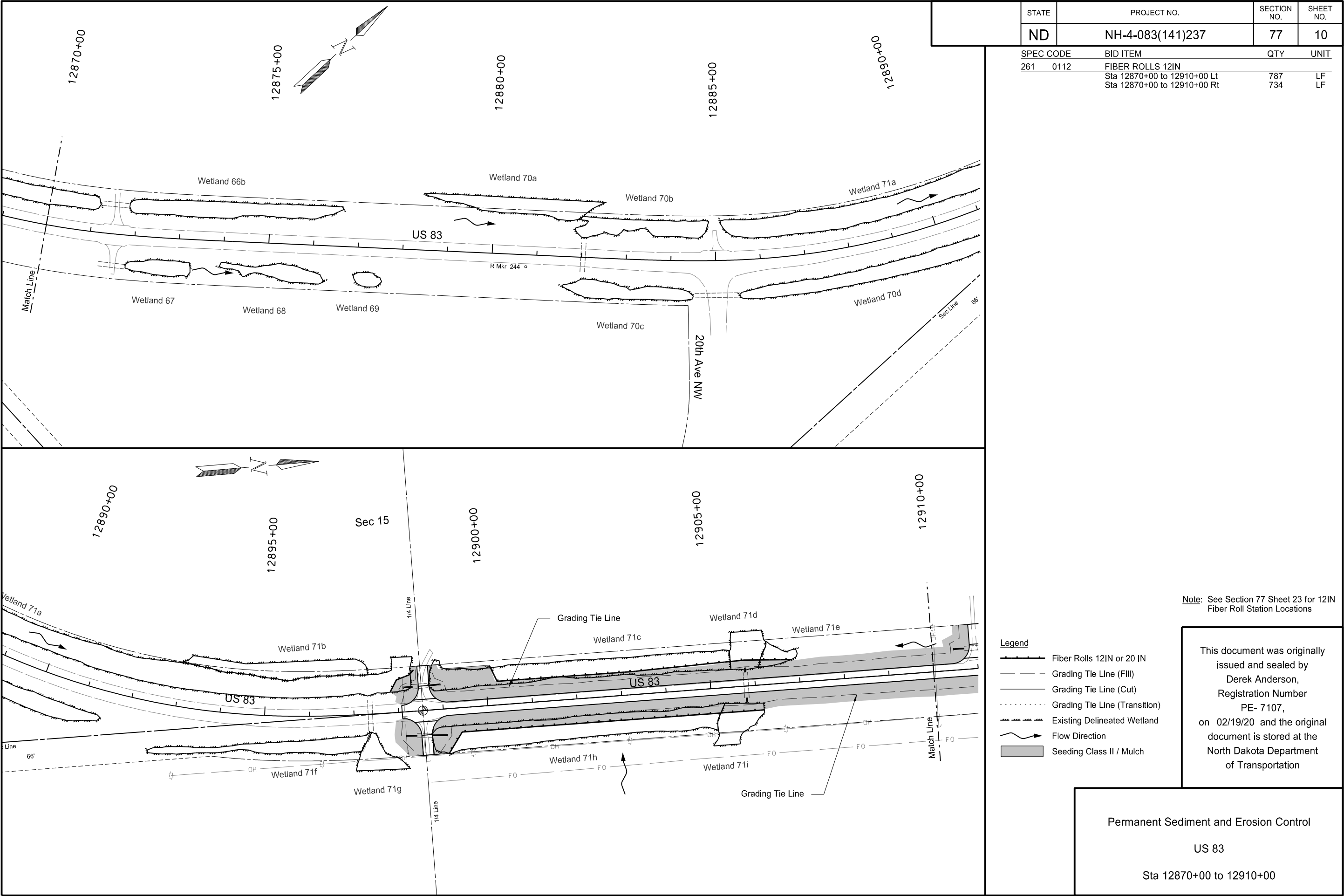
US 83

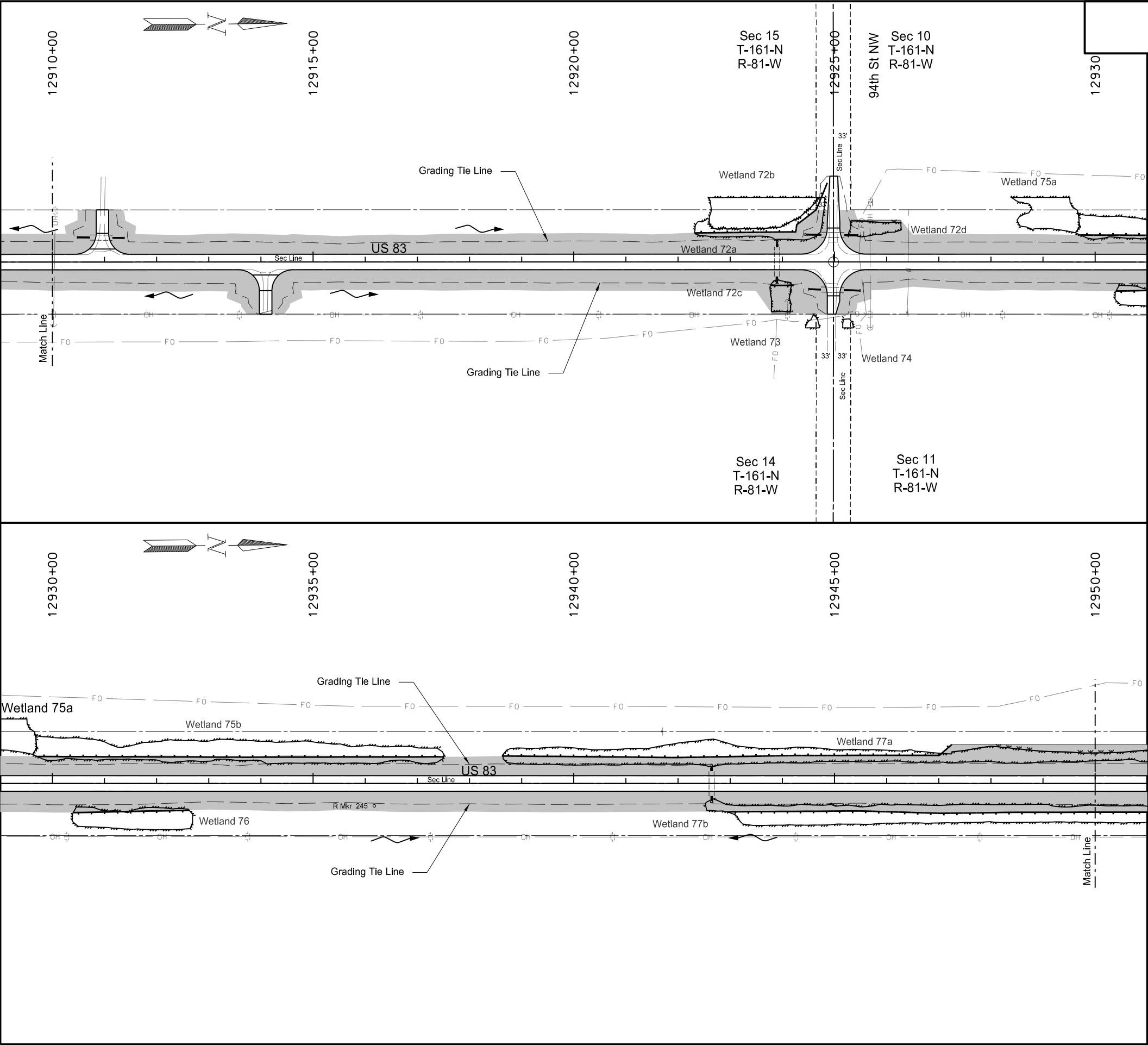
Sta 12670+00 to 12710+00











STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	77	11

SPEC CODE	BID ITEM	QTY	UNIT
261 0112	FIBER ROLLS 12IN		
	Sta 12910+00 to 12950+00 Lt	1960	LF
	Sta 12910+00 to 12950+00 Rt	973	LF

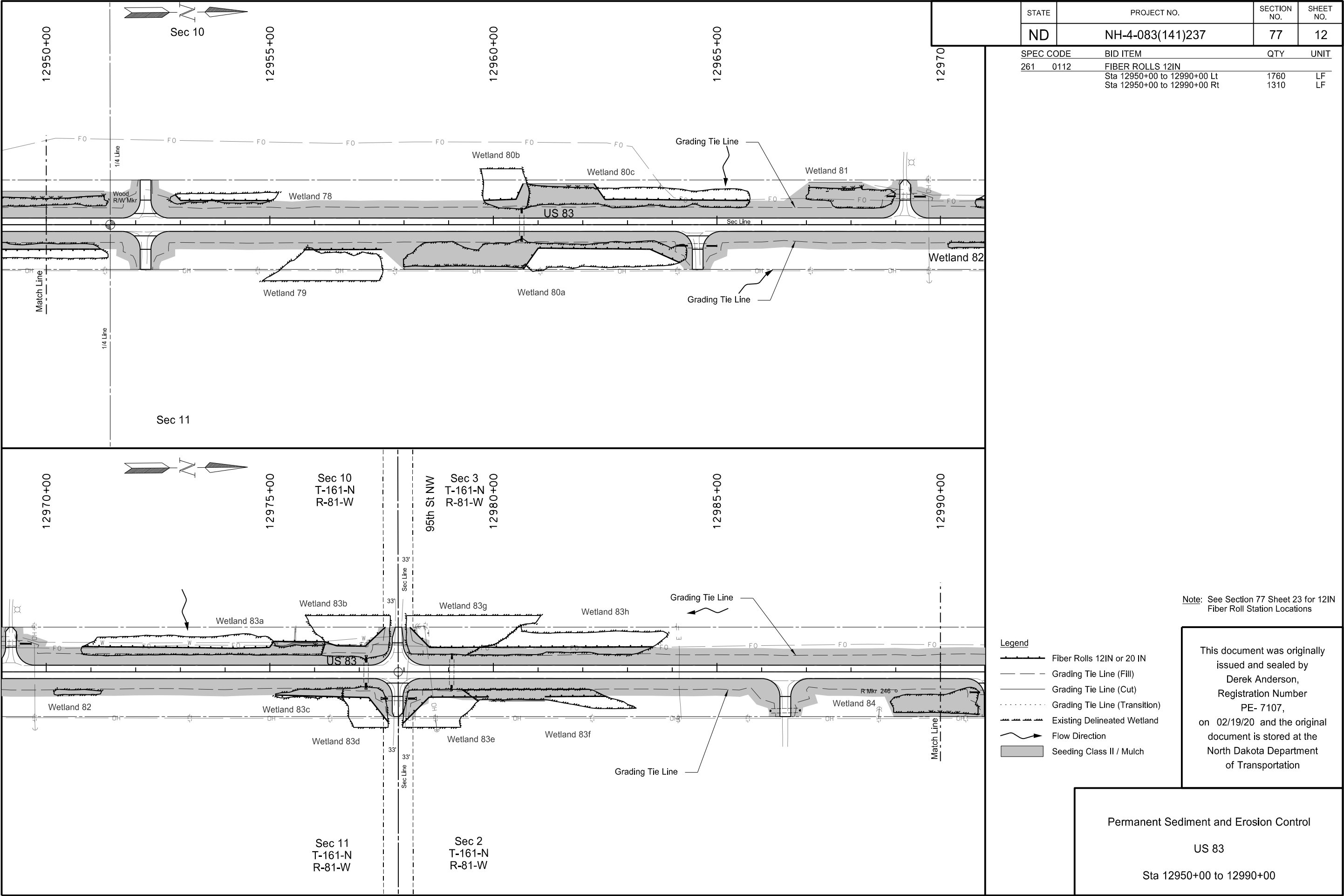
Note: See Section 77 Sheet 23 for 12IN Fiber Roll Station Locations

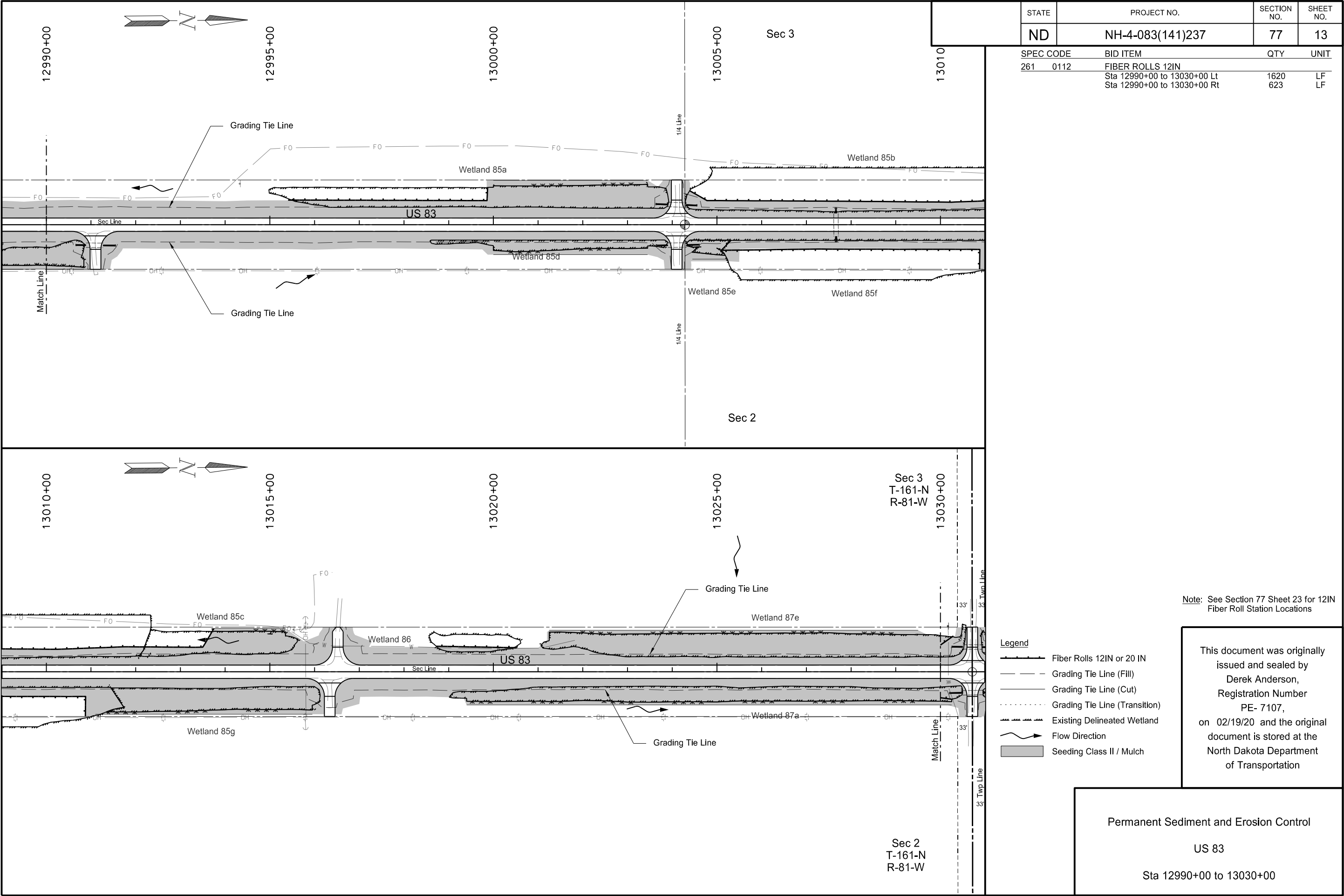
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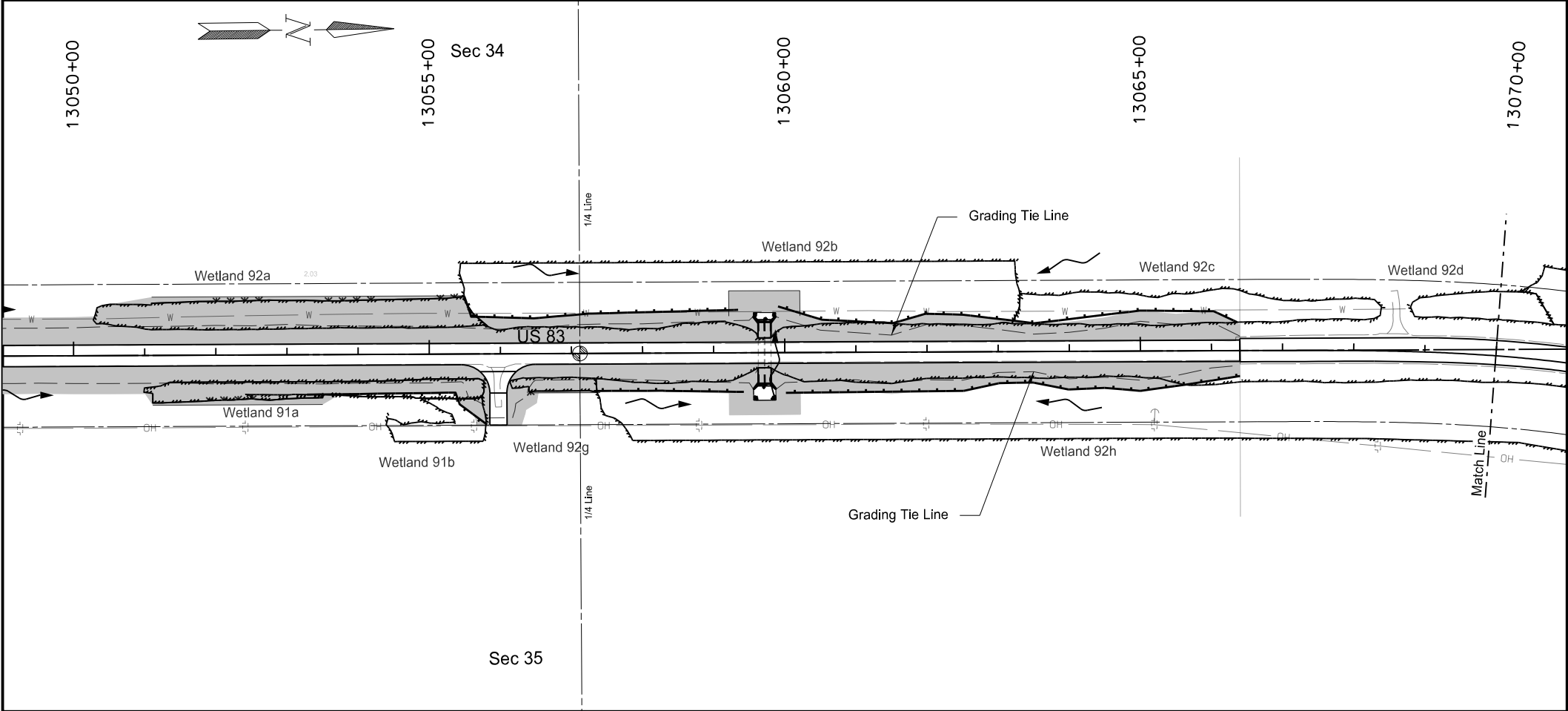
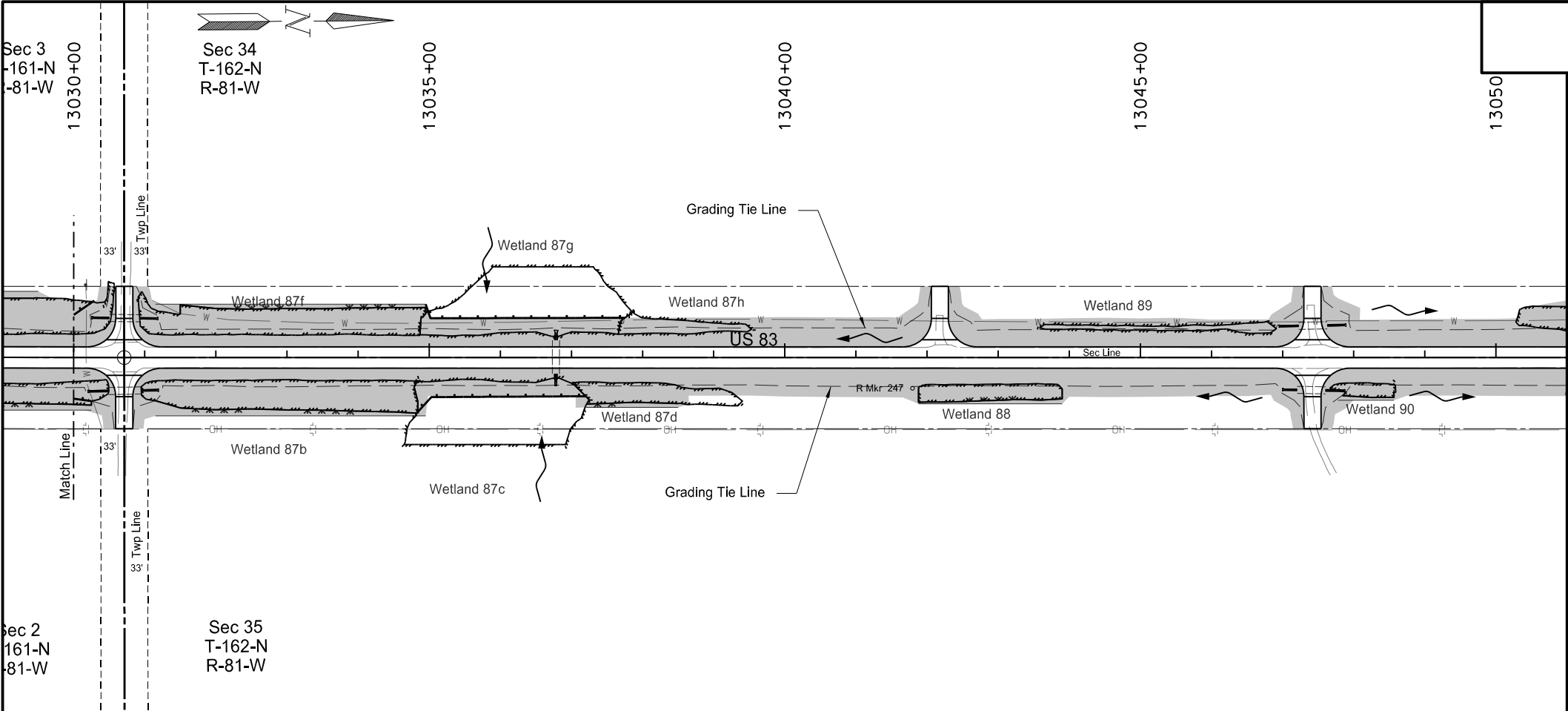
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US 83

Sta 12910+00 to 12950+00







STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	77	14

SPEC CODE	BID ITEM	QTY	UNIT
261 0112	FIBER ROLLS 12IN		
	Sta 13030+00 to 13070+00 Lt	1369	LF
	Sta 13030+00 to 13070+00 Rt	1403	LF

- Legend
- Fiber Rolls 12IN or 20 IN
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Seeding Class II / Mulch

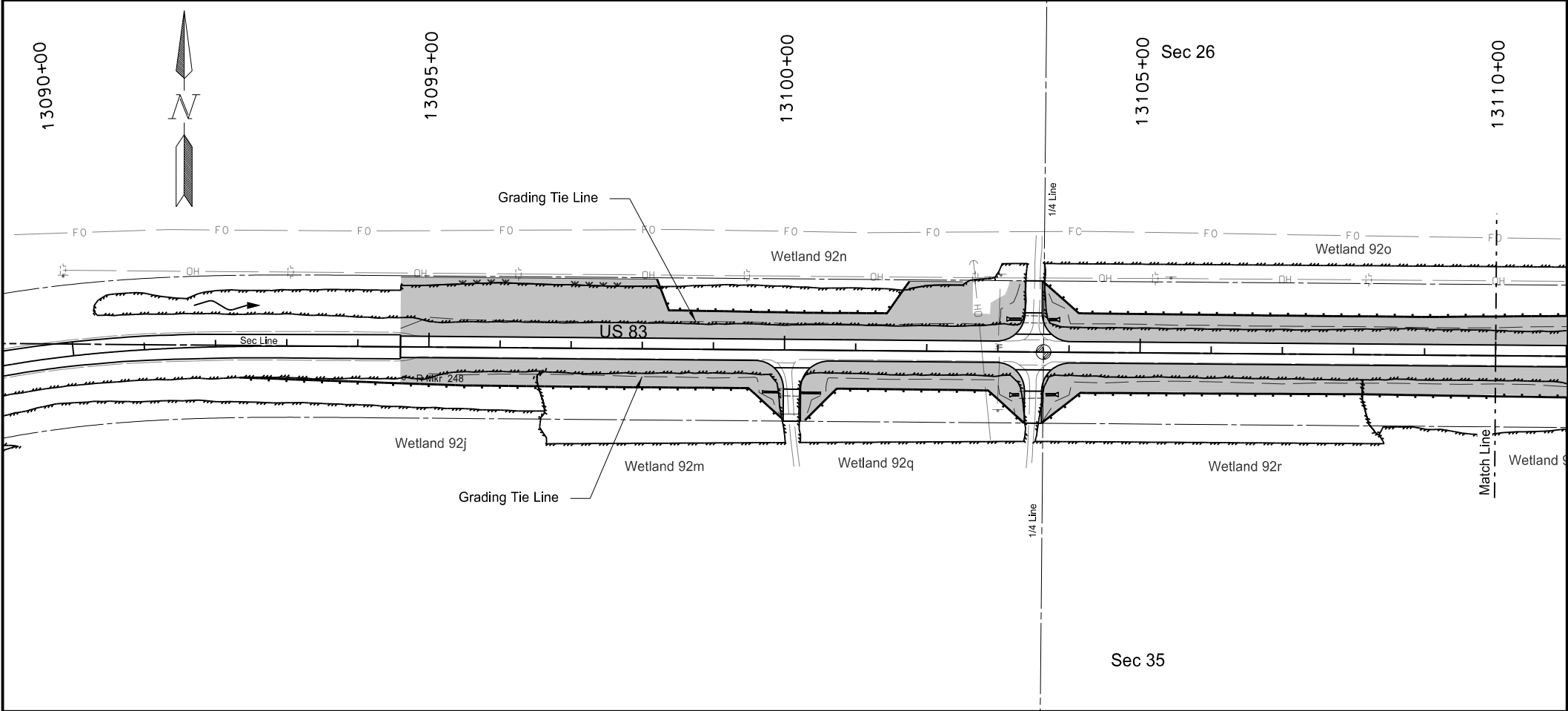
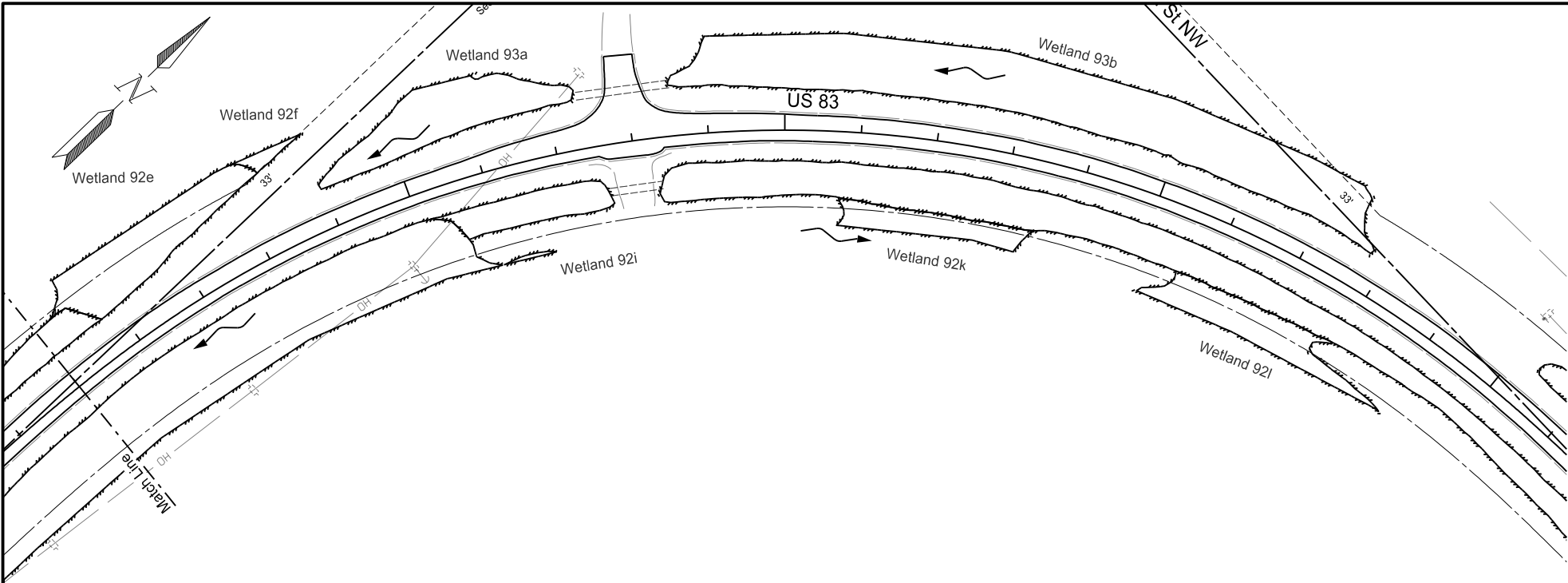
Note: See Section 77 Sheet 23 for 12IN Fiber Roll Station Locations

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Sta 13030+00 to 13070+00



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	77	15
SPEC CODE	BID ITEM	QTY	UNIT
261 0112	FIBER ROLLS 12IN		
	Sta 13070+00 to 13110+00 Lt	1010	LF
	Sta 13070+00 to 13110+00 Rt	1776	LF

- Legend
- Fiber Rolls 12IN or 20 IN
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Seeding Class II / Mulch

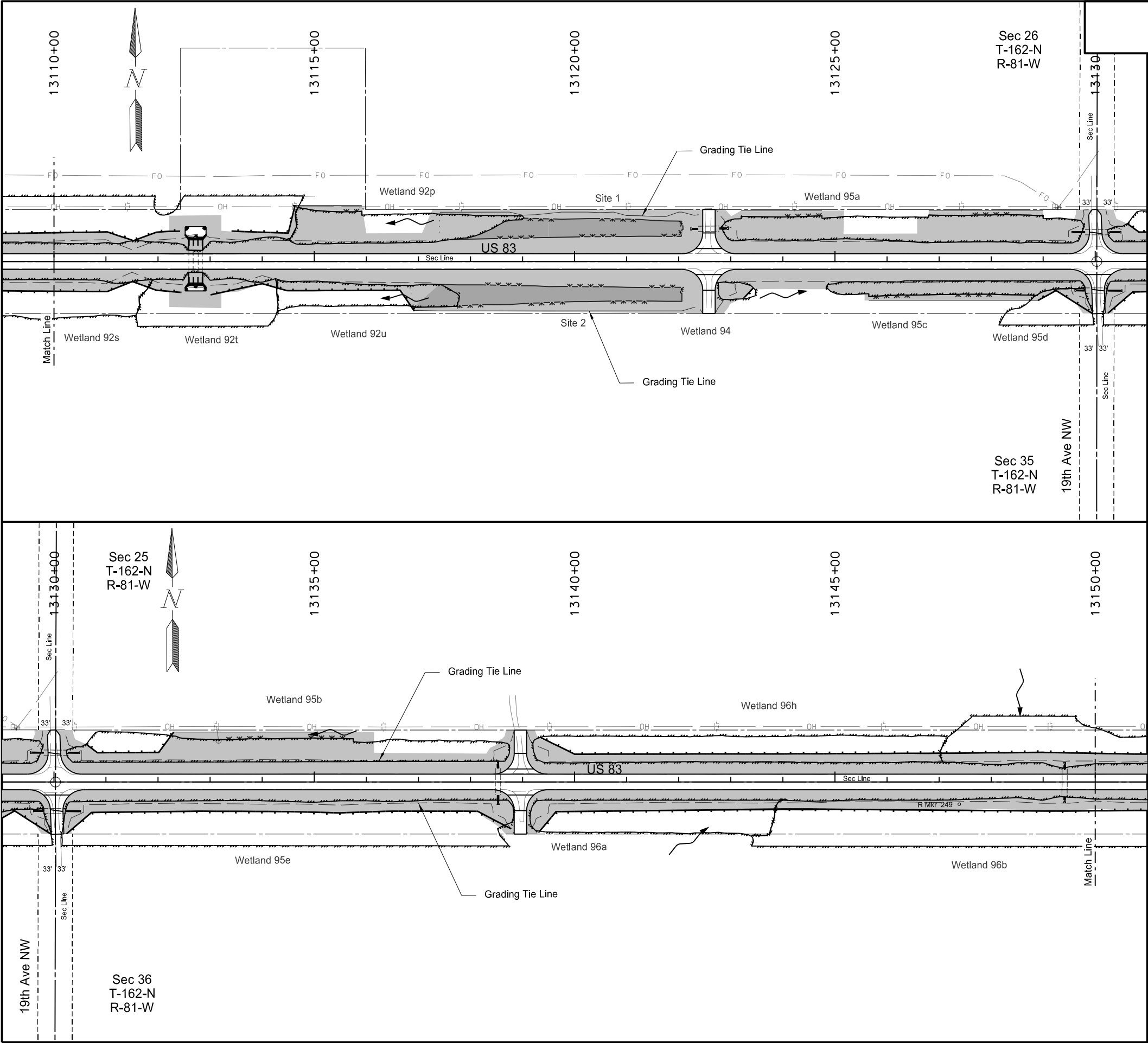
Note: See Section 77 Sheet 23 for 12IN Fiber Roll Station Locations

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US 83

Sta 13070+00 to 13110+00



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	77	16

SPEC CODE	BID ITEM	QTY	UNIT
261 0112	FIBER ROLLS 12IN		
	Sta 13110+00 to 13150+00 Lt	1681	LF
	Sta 13110+00 to 13150+00 Rt	2751	LF

Legend

- Fiber Rolls 12IN or 20 IN
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction
- Seeding Class II / Mulch
- Wetland Seeding / Mulch

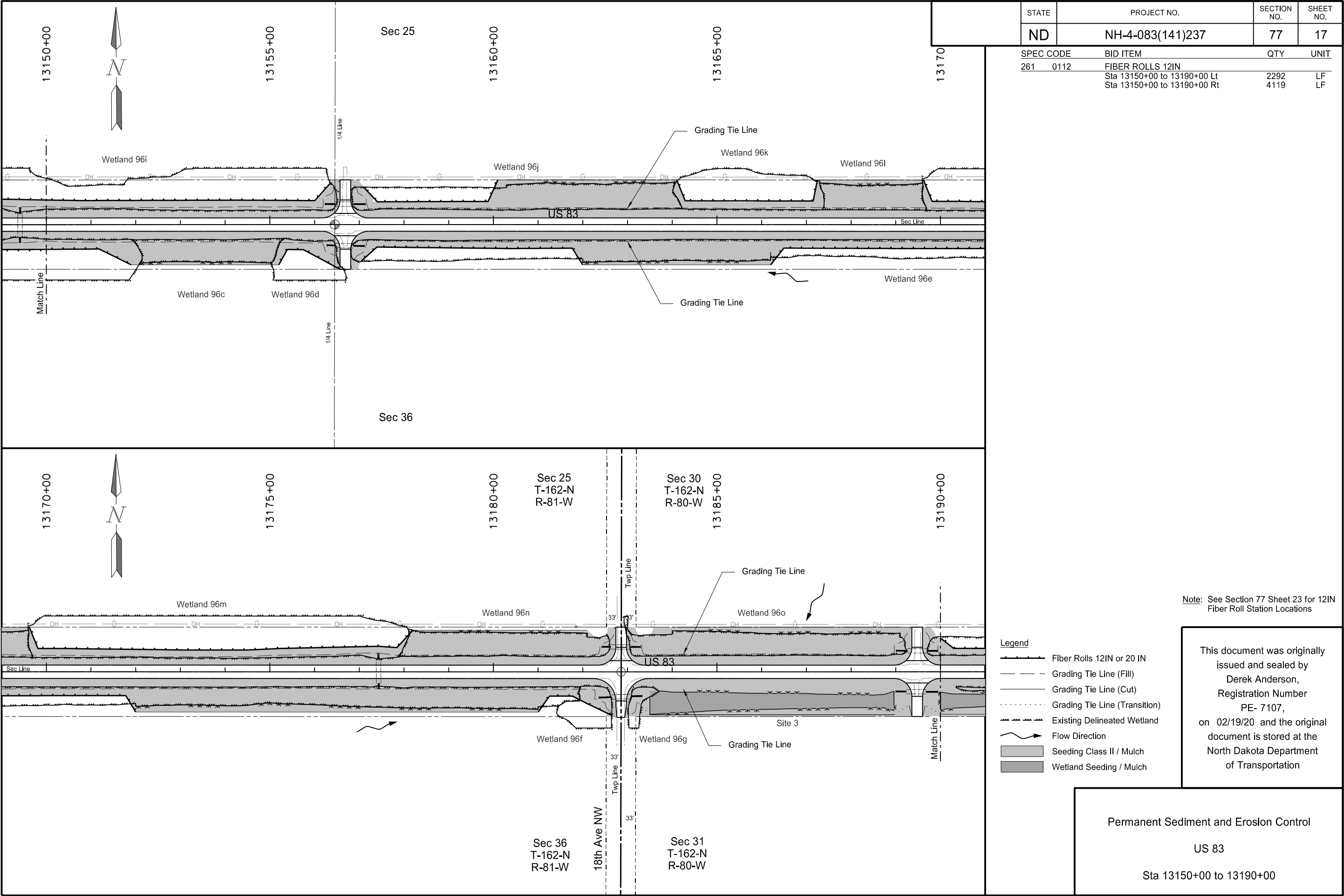
Note: See Section 77 Sheet 23 for 12IN Fiber Roll Station Locations

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Sta 13110+00 to 13150+00



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	77	17
SPEC CODE	BID ITEM	QTY	UNIT
261 0112	FIBER ROLLS 12IN		
	Sta 13150+00 to 13190+00 Lt	2292	LF
	Sta 13150+00 to 13190+00 Rt	4119	LF

- Legend
- Fiber Rolls 12IN or 20 IN
 - Grading Tie Line (Fill)
 - Grading Tie Line (Cut)
 - Grading Tie Line (Transition)
 - Existing Delineated Wetland
 - Flow Direction
 - Seeding Class II / Mulch
 - Wetland Seeding / Mulch

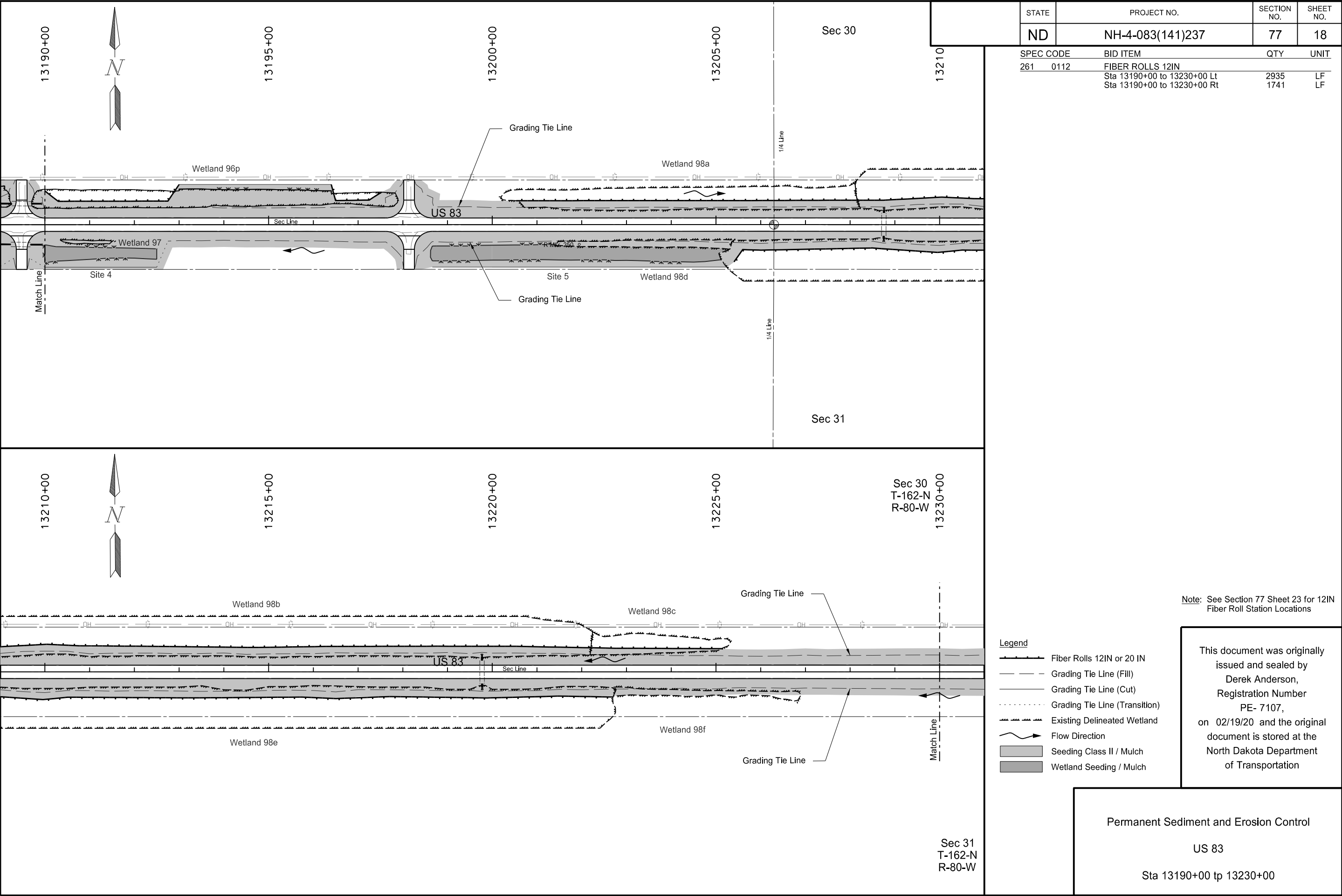
Note: See Section 77 Sheet 23 for 12IN Fiber Roll Station Locations

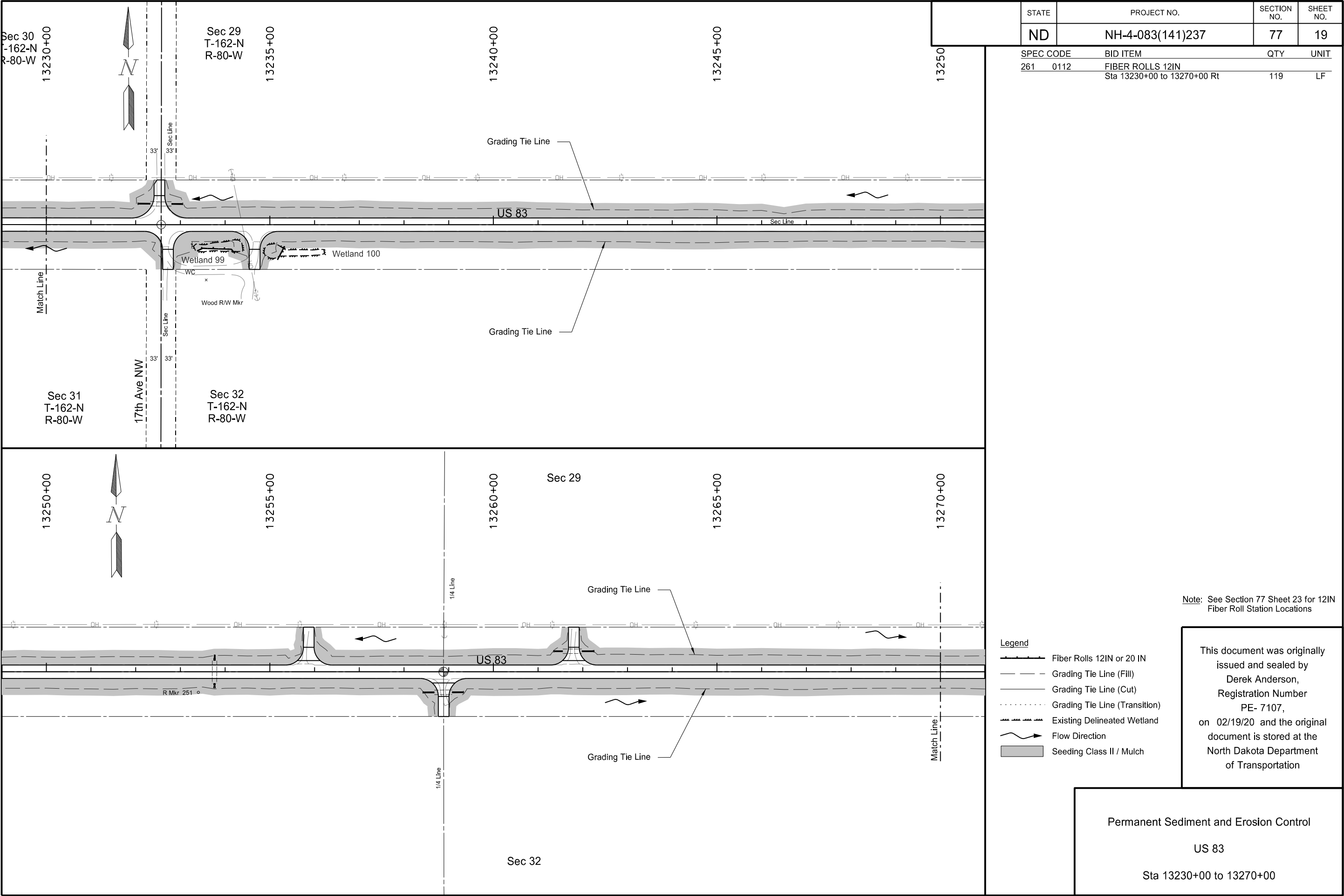
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US 83

Sta 13150+00 to 13190+00





STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-4-083(141)237	77	19
SPEC CODE	BID ITEM	QTY	UNIT
261 0112	FIBER ROLLS 12IN Sta 13230+00 to 13270+00 Rt	119	LF

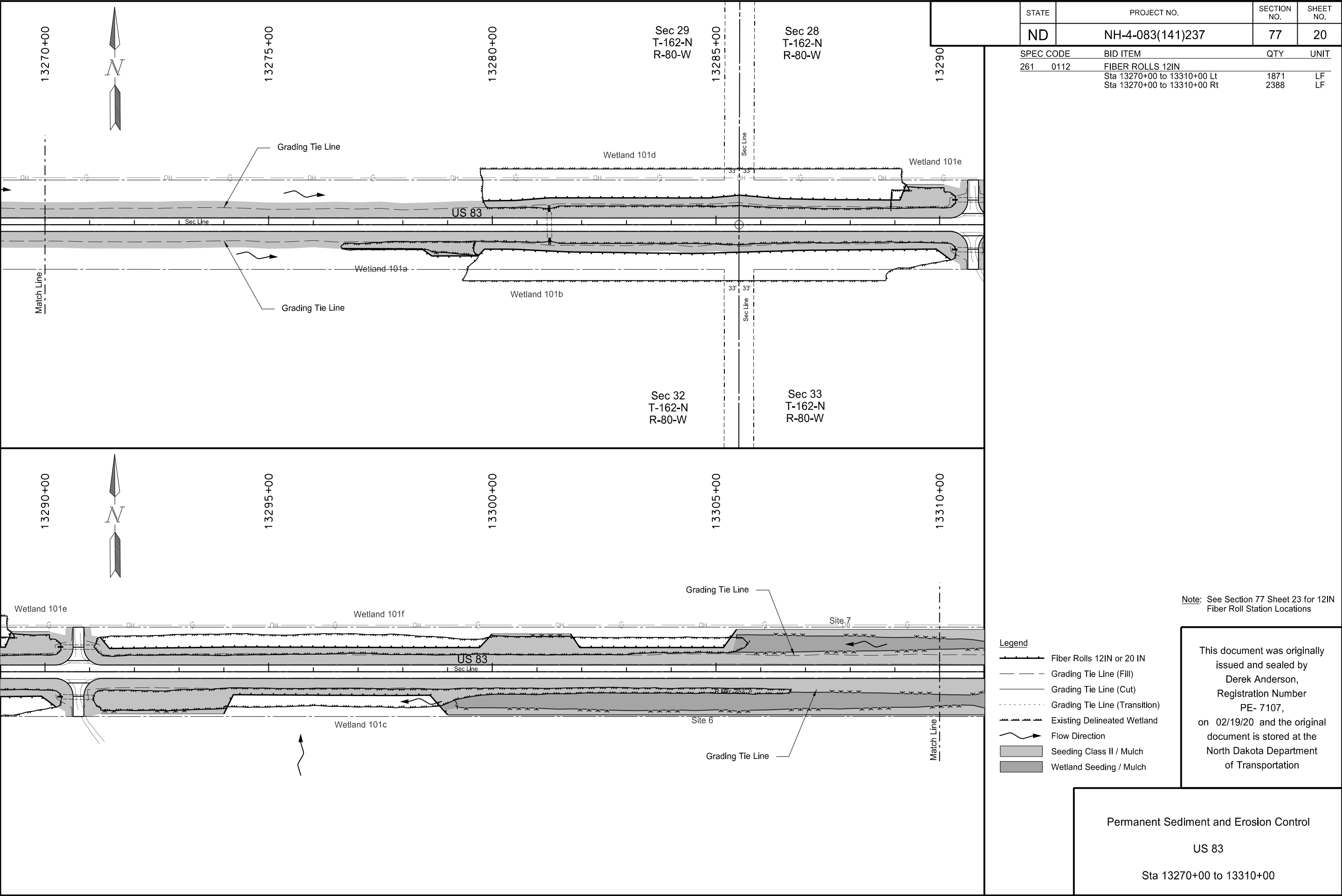
Note: See Section 77 Sheet 23 for 12IN Fiber Roll Station Locations

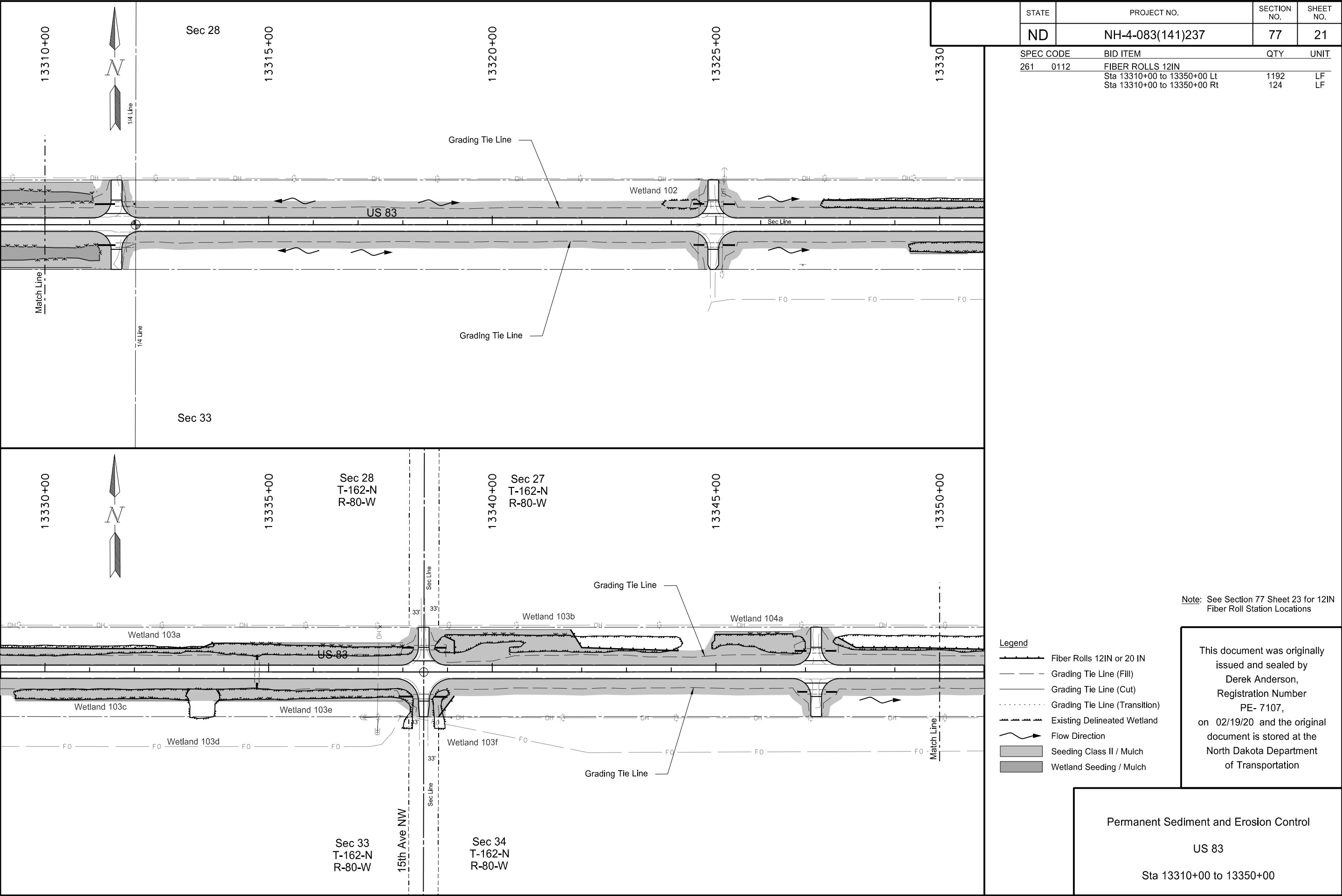
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Sta 13230+00 to 13270+00





Sec 77 Sheet #	Begin Station	End Station	Fiber Rolls 12IN (LF)	
			Lt.	Rt.
1	12515+18	12516+38	120	
	12515+30	12515+79		49
	12529+54	12530+53	100	
	12531+76	12532+16		40
	12546+36	12547+43	107	
2	12552+36	12567+33		1522
	12551+89	12558+24	635	
	12560+04	12565+22	519	
	12570+37	12590+00		1994
	12570+79	12581+02	1031	
	12581+86	12589+00	745	
	12590+00	12593+28		372
	12594+44	12594+83	48	
	12599+27	12603+80		453
	12617+77	12619+57	186	
	12619+72	12619+95		27
	12620+39	12620+85		56
	12626+36	12627+85		167
4	12626+99	12627+98	93	
	12640+83	12645+00		437
	12642+69	12646+38	381	
	12649+37	12652+46	300	
	12650+60	12651+50		124
6	12698+31	12699+24	93	
	12711+51	12712+19	84	
7	12713+44	12714+32	94	
	12762+88	12763+57	69	
7	12765+65	12767+21	156	
	12767+31	12775+41		810
	12771+73	12774+50	295	
	12778+78	12780+09		159
	12781+93	12785+36		343
8	12792+27	12793+48		121
	12795+37	12802+00		675
	12795+79	12810+50	1485	
	12806+62	12807+38		76
	12808+10	12813+49		540
	12808+10	12813+49		540

Sec 77 Sheet #	Begin Station	End Station	Fiber Rolls 12IN (LF)	
			Lt.	Rt.
9	12833+83	12838+78		495
	12833+75	12842+65	926	
	12849+00	12850+20		120
	12864+65	12856+10		145
10	12897+84	12898+38	87	
	12900+00	12906+89	700	
	12899+04	12906+17		734
11	12922+32	12924+86	310	
	12923+77	12924+23		45
	12929+72	12937+50	779	
	12930+40	12932+62		223
	12938+62	12947+25	871	
12	12942+95	12950+00		705
	12950+00	12951+22		122
	12952+88	12955+01	218	
	12955+75	12957+50		175
	12960+66	12946+17		382
	12962+00	12965+73	366	
	12970+80	12975+16	436	
	12975+13	12977+64		278
	12976+16	12977+74	171	
	12977+98	12979+90		216
	12978+03	12983+56	569	
	12981+15	12982+52		137
13	12995+40	12999+87	474	
	13004+39	13014+75	966	
	13005+10	13011+00		623
	13018+72	13020+52	180	
14	13030+00	13030+29	35	
	13030+00	13030+25		25
	13034+95	13037+75	294	
	13034+82	13037+20		247
	13055+50	13066+36	1040	
	13053+28	13055+81		274
15	13057+31	13066+42		857
	13092+33	13099+97		778
	13098+20	13100+75	355	
	13100+29	13103+38		345
	13103+62	13110+00	655	
	13103+62	13110+00		653

Sec 77 Sheet #	Begin Station	End Station	Fiber Rolls 12IN (LF)	
			Lt.	Rt.
16	13110+00	13112+45	250	
	13110+00	13112+45		250
	13113+00	13116+90		416
	13113+41	13115+91	164	
	13128+90	13129+95		123
	13130+24	13138+78		878
	13130+62	13132+30	194	
17	13139+33	13150+00		1084
	13139+35	13150+00	1073	
	13150+00	13156+36	654	
	13150+00	13151+90		198
	13157+05	13182+65		2582
	13157+05	13161+00		528
	13157+09	13160+10	346	
	13164+10	13167+24	385	
	13166+20	13177+00		618
	13169+62	13178+20	907	
18	13181+00	13182+65		193
	13190+00	13193+00	328	
	13196+40	13197+53	145	
	13200+53	13225+15	2462	
19	13205+30	13222+70		1741
	13233+37	13234+31		90
20	13235+33	13235+33		29
	13276+64	13290+26		1370
	13279+80	13289+25	969	
	13294+00	13299+87		613
	13291+24	13300+00	902	
21	13301+75	13305+64		405
	13327+39	13333+75	640	
	13337+94	13338+35		58
	13338+70	13339+04		66
	13338+94	13339+16	53	
	13342+00	13344+17	265	
22	13347+72	13350+00	234	
	13350+00	13361+50	1171	
	13365+60	13367+00	144	
	13352+38	13363+00		1085
	13374+82	13374+82	20	20
Subtotal			27279	27891

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