



North Dakota Department of Transportation

Thomas K. Sorel
Director

Doug Burgum
Governor

July 11, 2018

ADDENDUM 2 – JOB 8

TO: All prospective bidders on Project ROM-0300(134), Job No. 8 scheduled for the July 13, 2018 bid opening.

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

Plan Revisions:

See attached summary from Holly M. Beck, PLS, PE, Holly Beck Surveying & Engineering Inc. dated July 11, 2018 for an explanation.

Request for Proposal Revisions:

Remove and replace page 5 thru 8 of 10 of the Proposal pages located at the beginning of the Request for Proposal, with the enclosed pages revised 7/11/2018.

The following changes were made to the Bid Items:

Spec No.	Code No.	Description	Description of Change
709	0151	GEOSYNTHETIC MATERIAL TYPE R1	Removed Bid Item

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

PHILLIP MURDOFF, P.E. – CONSTRUCTION SERVICES ENGINEER

80: jwj

Enclosure

July 10, 2018

ADDENDUM 2 – JOB 8

To: All prospective bidders on Project ROM-0300(134), PCN 21834
Ward and Mountrail Counties; Road Inslope Repair and Permanent Stabilization: Job 8,
scheduled for July 13, 2018 bid opening.

The following plan revisions shall be made:

Plan Revisions: ROM-0300(134), PCN 21834

Remove and replace the following sheets with the revised sheets dated 7/10/18:

1. Sec 2 Sheet 1: Removed Standard Drawings D-714-25M & D-714-28M. Added Standard Drawing D-714-26M.
2. Sec 6 Sheet 3: Added Plan Notes to 714-P01 PIPE INSTALLATION.

“The minimum 30 day wait for deflection testing in section 714.05 A.5 shall be waived where a berm is installed. In these areas, the deflection testing shall be done before the berm is removed”.

“Do not install Geosynthetic Material Type R1 as shown on Standard Drawings D-714-25, D-714-26, D-714-26M & D-714-28”.
3. Sec 8 Sheet 1: Removed Spec 709 Code 0151 Geosynthetic Material Type R1.
4. Sec 60 Sheets 1-8, 10-20, 22-27 & 29-31:
Removed Spec 709 Code 0151 GEOSYNTHETIC MATERIAL TYPE R1 from sheets.

Sincerely;



HOLLY M. BECK, PLS, PE
HOLLY BECK SURVEYING & ENGINEERING, INC
3320 HAMILTON STREET, UNIT 3
BISMARCK, ND 58503
OFFICE: 701-223-3546

BID ITEMS

Project: ROM-0300(134) (PCN-21834)

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

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
001	103	0100	CONTRACT BOND	L SUM	1.				
002	201	0330	CLEARING & GRUBBING	L SUM	1.				
003	202	0136	REMOVAL OF PAVEMENT	TON	210.				
004	202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	1,178.				
005	202	0312	REMOVE EXISTING FENCE	LF	1,823.				
006	202	0400	REMOVAL OF RIPRAP - LOOSE ROCK	CY	8,295.				
007	203	0102	COMMON EXCAVATION-TYPE B	CY	2,920.				
008	203	0109	TOPSOIL	CY	4,319.				
009	203	0119	TOPSOIL-IMPORTED	CY	2,166.				
010	203	0138	COMMON EXCAVATION-SUBCUT	CY	1,501.				
011	203	0140	BORROW-EXCAVATION	CY	85,420.				
012	216	0100	WATER	M GAL	851.				
013	251	0200	SEEDING CLASS II	ACRE	8.310				
014	251	2000	TEMPORARY COVER CROP	ACRE	8.310				
015	253	0101	STRAW MULCH	ACRE	16.620				
016	255	0101	ECB TYPE 1	SY	8,050.				

BID ITEMS

Project: ROM-0300(134) (PCN-21834)

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
017	255	0202	TRM TYPE 2	SY	11,549.				
018	255	0305	ROLLED CONCRETE EROSION CONTROL BLANKET	SY	2,396.				
019	256	0200	RIPRAP GRADE II	CY	84.				
020	260	0100	SILT FENCE UNSUPPORTED	LF	3,555.				
021	260	0101	REMOVE SILT FENCE UNSUPPORTED	LF	3,555.				
022	261	0112	FIBER ROLLS 12IN	LF	35,881.				
023	261	0113	REMOVE FIBER ROLLS 12IN	LF	7,732.				
024	262	0100	FLOTATION SILT CURTAIN	LF	5,220.				
025	262	0101	REMOVE FLOTATION SILT CURTAIN	LF	5,220.				
026	302	0356	AGGREGATE SURFACE COURSE CL 13	TON	4,676.				
027	702	0100	MOBILIZATION	L SUM	1.				
028	704	0100	FLAGGING	MHR	500.				
029	704	1000	TRAFFIC CONTROL SIGNS	UNIT	4,050.				
030	704	1052	TYPE III BARRICADE	EA	10.				
031	704	1060	DELINEATOR DRUMS	EA	30.				
032	704	1065	TRAFFIC CONES	EA	60.				

BID ITEMS

Project: ROM-0300(134) (PCN-21834)

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
033	704	1067	TUBULAR MARKERS	EA	60.				
034	704	1080	STACKABLE VERTICAL PANELS	EA	50.				
035	708	5810	CONCRETE EROSION CONTROL BLANKET	SY	23,046.				
036	709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY	2,997.				
037	709	0155	GEOSYNTHETIC MATERIAL TYPE RR	SY	36,310.				
038	714	0615	PIPE CONC REINF 24IN CL III	LF	110.				
039	714	1005	PIPE CONC REINF 42IN CL III	LF	66.				
040	714	3020	END SECT-CONC REINF 24IN	EA	4.				
041	714	3040	END SECT-CONC REINF 42IN	EA	2.				
042	714	5015	PIPE CORR STEEL .064IN 18IN	LF	40.				
043	714	5035	PIPE CORR STEEL .064IN 24IN	LF	1,072.				
044	714	5040	PIPE CORR STEEL .064IN 30IN	LF	90.				
045	714	5045	PIPE CORR STEEL .064IN 36IN	LF	184.				
046	714	5810	END SECT CORR STEEL .064IN 18IN	EA	4.				
047	714	5820	END SECT CORR STEEL .064IN 24IN	EA	48.				
048	714	5825	END SECT CORR STEEL .079IN 30IN	EA	6.				

BID ITEMS

Project: ROM-0300(134) (PCN-21834)

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

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
049	714	5830	END SECT CORR STEEL .079IN 36IN	EA	8.				
050	752	0110	FENCE BARBED WIRE 3 STRAND-STEEL POST	LF	846.				
051	752	0905	TEMPORARY FENCE	LF	846.				
052	752	2996	CORNER ASSEMBLY-STEEL POST	EA	22.				
053	754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	13.100				
054	754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	44.800				
055	754	0592	RESET SIGN PANEL	EA	9.				
056	754	0593	RESET SIGN SUPPORT	EA	9.				
057	754	0805	OBJECT MARKERS - CULVERTS	EA	72.				
058	900	2001	WETLAND MITIGATION SITE 1	ACRE	.510	50,000	00	25,500	00
059	900	2002	WETLAND MITIGATION SITE 2	ACRE	.410	68,000	00	27,880	00
			TOTAL SUM BID						

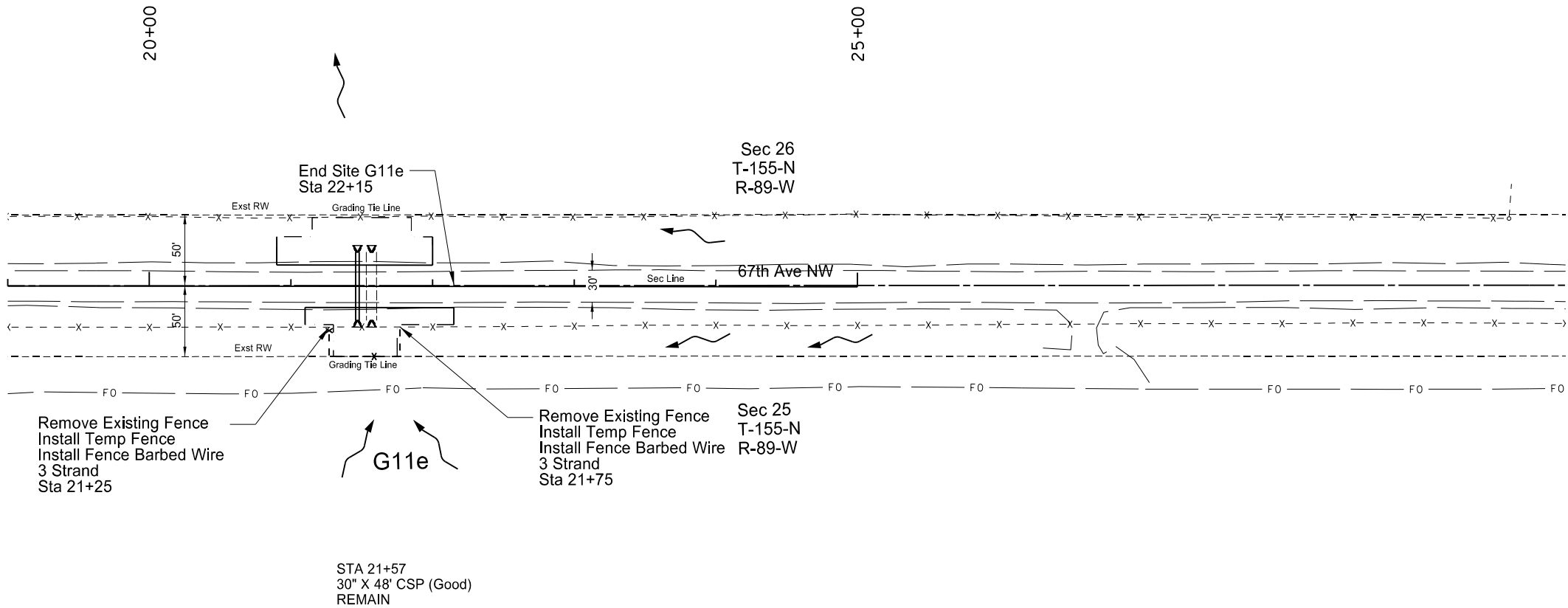
TABLE OF CONTENTS				Revised 7/10/2018		STATE	PROJECT NO.	SECTION NO.	SHEET NO.
						ND	ROM-0300(134)	2	1
PLAN SECTIONS			LIST OF STANDARD DRAWINGS						
Section	Page(s)	Description	Number	Description					
1	1	Title Sheet	D-101-1, 2, 3	NDDOT Abbreviations					
2	1	Table of Contents	D-101-10	NDDOT Utility Company and Organization Abbreviations					
4	1 - 15	Scope of Work	D-101-20, 21	Line Styles					
6	1 - 3	Notes	D-101-30, 31, 32	Symbols					
6	4 - 5	Environmental Notes	D-255-2	Erosion And Siltation Control - Erosion Control Blanket Installation					
8	1	Quantities	D-260-1	Erosion And Siltation Controls - Silt Fence					
10	1	Basis of Estimate	D-261-1	Erosion Control - Fiber Roll Placement Details					
11	1 - 3	Data Tables	D-704-8	Breakaway Systems For Construction Zone Signs - U-Channel Post					
20	1 - 7	General Details	D-704-9	Construction Sign Details - Terminal And Guide Signs					
30	1 - 20	Typical Sections	D-704-11	Construction Sign Details - Warning Signs					
60	1 - 31	Plan & Profile	D-704-13	Barricade And Channelizing Device Details					
75	1 - 18	Wetland Impacts	D-704-14	Construction Sign Punching And Mounting Details					
76	1 - 16	Temporary Erosion Control	D-704-15	Road Closure Layouts					
77	1 - 16	Permanent Erosion Control	D-704-19	Road Closure And Lane Closure On A Two Way Road Layouts					
81	1 - 4	Survey Coordinate and Curve Data	D-704-20	Terminal And Seal Coat Sign Layouts					
100	1	Work Zone Traffic Control	D-704-22	Construction Truck And Temporary Detour Layouts					
110	1 - 3	Signing	D-704-26	Miscellaneous Sign Layouts					
200	1 - 107	Cross Sections	D-704-30	Windrow Marking					
			D-704-31	Construction Sign Layout - Non-Signalized Low Volume One Lane Closure					
			D-714-1	Reinforced Concrete Pipe Culverts And End Sections (Round Pipe)					
			D-714-4	Round Corrugated Steel Pipe Culverts And End Sections					
			D-714-22	Concrete Pipe Or Precast Concrete Box Culvert Ties					
			D-714-25	Transverse Mainline Pipe Installation Detail for Pipes More Than 4 Feet Below Top of the Proposed Subgrade					
			D-714-26	Transverse Mainline Pipe Installation Detail for Pipes 4 Feet or Less Below Top of the Proposed Subgrade					
			D-714-26M	Transverse Mainline Pipe Installation Detail for Multiple Pipes 4 Feet or Less Below Top of Subgrade					
			D-714-28	Transverse Mainline Pipe Installation Detail for Pipes Installed in New Embankment Areas					
			D-752-1	Standard Barbed Wire Fence					
			D-754-23	Perforated Tube Assembly Details					
			D-754-25	Mounting Details Perforated Tube					
			D-754-28, 37	Sign Punching, Stringer And Support Location Details Regulatory, Warning, And Guide Signs					
			D-754-82	Object Markers					
SPECIAL PROVISIONS									
Number	Description								
SP 003(14)	Temporary Erosion and Sediment Best Management Practices								
SP 569(14)	Concrete Erosion Control Blanket								
SP 671(14)	Rolled Concrete Erosion Control Blanket								
SP 702(14)	Winter Suspension								
SP 5175(14)	Permits and Environmental Considerations								

Revised7/10/18			STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND			ND	ROM 0300(134)	6	3
NOTES						
For more details see special provision 671(14) – Rolled Concrete Erosion Control Blanket.			708-P01 CONCRETE EROSION CONTROL BLANKET: Place concrete erosion control blanket within a day after embankment completion to minimize erosion potential.			
Product: Flexamat - Plus Brock White Co. 4401 E. Burdick Expressway Minot, ND 58701 701.839.0509			Below is a list of suppliers that can supply the “CONCRETE EROSION CONTROL BLANKET”. Submit other suppliers to the Engineer to be considered approved equals.			
Product: ShoreFlex Premier Concrete Products, INC. 38200 LA-16 Denham Springs, LA 70706 225.304.3985			For more details see special provision 569(14) - Concrete Erosion Control Blanket.			
256-P01 RIPRAP-GRADE II: Place riprap within a day after embankment completion to minimize erosion potential.			Product: CC35 Forterra Pipe & Precast 925 Basin Avenue Bismarck, ND 58504 701.223.7178			
256-P02 Tires need to be removed at Site G11e where the three existing culverts are using for erosion control. The tires need to be removed according to section 107.17. All costs associated with removing the tires will be included in the price bid for “RipRap Grade II”.			Product: UltraFlex M4545 Submar, Inc. 1711 Dunn St. Houma, LA 70360 1.800.978.2627 270.535.0196			
262-P01 FLOTATION SILT CURTAIN: Place flotation silt curtain prior to any work in the water. Do not remove the flotation silt curtain until permanent erosion control has been installed on the protected area.			Product: ArmorFlex 45S Contech Engineered Solutions 5670 Greenwood Plaza Blvd #530 Greenwood Village, CO 80111 1.800.338.1122 307.631.5761			
A quantity of 5220 linear feet has been provided to accommodate operations.			714-P01 PIPE INSTALLATION: The Contractor will need to install the pipe, backfill the trench up to grade, and return traffic to normal by end of day's work. If the Contractor is unable to complete the centerline pipe replacement work in one working day, the area shall be made traversable for one lane of traffic and be flagged 24 hours per day.			
The Flotation Silt Curtain shall be cleaned and reused for each site. All costs associated with this work, including the installation, removal and disposal of the Flotation Silt Curtain shall be included in the price bid for “FLOTATION SILT CURTAIN” & “REMOVE FLOTATION SILT CURTAIN”.			The minimum 30 day wait for deflection testing in section 714.05 A.5 shall be waived where a berm is installed. In these areas, the deflection testing shall be done before the berm is removed.			
704-P01 TRAFFIC CONTROL: Maintain one lane open to traffic at all times. Open the roadway to 2-way traffic at the end of each work day. Provide traffic control consisting of the following layouts:			Do not install Geosynthetic Material Type R1 as shown on Standard Drawings D-714-25, D-714-26, D-714-26M, & D-714-28.			
1. Standard D-704-15, Layout Type A; 5 work sites, 10 flaggers 2. Standard D-704-19, Layout Type F; Site J8a & J9 3. Standard D-704-20, Layout G; 5 project termini 4. Standard D-704-22, Layouts K; 2 truck entering layouts 5. Standard D-704-26, Layouts JJ; Sites J8a & J8b 6. Standard D-704-30, 3 windrow sites 7. Standard D-704-31, as applicable			752-P01 FENCE: New fence shall be installed after temporary fence has been removed. All costs associated with this work shall be included in the price bid for “FENCE BARBED WIRE 3 STRAND-STEEL POST & CORNER ASSEMBLY-STEEL POST”.			
			This document was originally issued and sealed by Holly M. Beck, Registration Number PE-4934, on 7/10/18 and the original document is stored at the North Dakota Department of Transportation.			

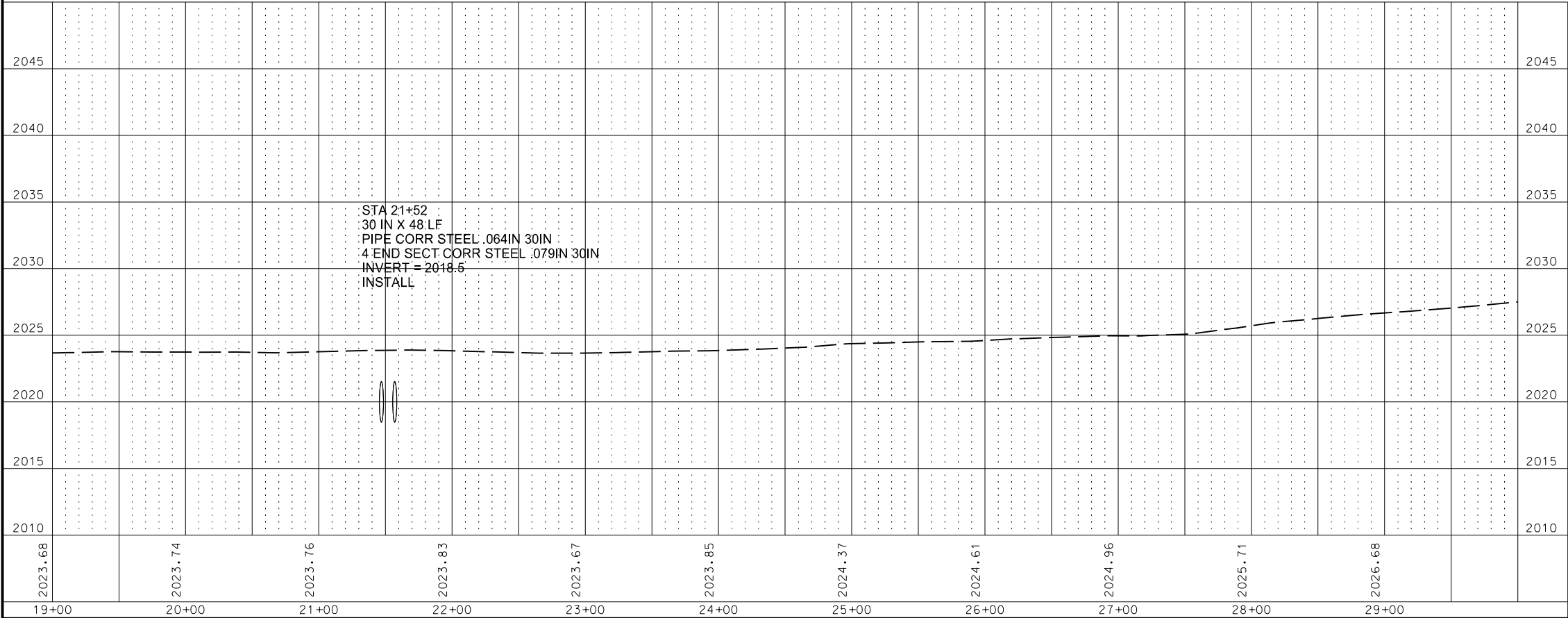
ESTIMATE OF QUANTITIES

SPEC	CODE	ITEM DESCRIPTION	UNIT	MOUNTRAIL COUNTY SUBTOTAL	WARD COUNTY SUBTOTAL	PROJECT TOTAL
103	0100	CONTRACT BOND	L SUM	0.5	0.5	1
201	0330	CLEARING & GRUBBING	L SUM	0.6	0.4	1
202	0136	REMOVAL OF PAVEMENT	TON	210	0	210
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	876	302	1178
202	0312	REMOVE EXISTING FENCE	LF	1823	0	1823
202	0400	REMOVAL OF RIPRAP - LOOSE ROCK	CY	6808	1487	8295
203	0102	COMMON EXCAVATION-TYPE B	CY	2920	0	2920
203	0109	TOPSOIL	CY	3268	1051	4319
203	0119	TOPSOIL-IMPORTED	CY	1639	527	2166
203	0138	COMMON EXCAVATION-SUBCUT	CY	1056	445	1501
203	0140	BORROW EXCAVATION	CY	73905	11515	85420
216	0100	WATER	M GAL	737	114	851
251	0200	SEEDING CLASS II	ACRE	6.15	2.16	8.31
251	2000	TEMPORARY COVER CROP	ACRE	6.15	2.16	8.31
253	0101	STRAW MULCH	ACRE	12.30	4.32	16.62
255	0101	ECB TYPE 1	SY	5476	2574	8050
255	0202	TRM TYPE 2	SY	6056	5493	11549
255	0305	ROLLED CONCRETE EROSION CONTROL BLANKET	SY	2396	0	2396
256	0200	RIPRAP GRADE II	CY	84	0	84
260	0100	SILT FENCE UNSUPPORTED	LF	2040	1515	3555
260	0101	REMOVE SILT FENCE UNSUPPORTED	LF	2040	1515	3555
261	0112	FIBER ROLLS 12IN	LF	25899	9982	35881
261	0113	REMOVE FIBER ROLLS 12IN	LF	4750	2982	7732
262	0100	FLOTATION SILT CURTAIN	LF	2610	2610	5220
262	0101	REMOVE FLOTATION SILT CURTAIN	LF	2610	2610	5220
302	0356	AGGREGATE SURFACE COURSE CL 13	TON	3684	992	4676
702	0100	MOBILIZATION	L SUM	0.8	0.2	1
704	0100	FLAGGING	MHR	250	250	500
704	1000	TRAFFIC CONTROL SIGNS	UNIT	2025	2025	4050
704	1052	TYPE III BARRICADE	EA	5	5	10
704	1060	DELINEATOR DRUMS	EA	15	15	30
704	1065	TRAFFIC CONES	EA	30	30	60
704	1067	TUBULAR MARKERS	EA	30	30	60
704	1080	STACKABLE VERTICAL PANELS	EA	25	25	50
708	5810	CONCRETE EROSION CONTROL BLANKET	SY	18886	4160	23046
709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY	2109	888	2997
709	0155	GEOSYNTHETIC MATERIAL TYPE RR	SY	26384	9926	36310
714	0615	PIPE CONC REINF 24IN CL III	LF	110	0	110
714	1005	PIPE CONC REINF 42IN CL III	LF	66	0	66
714	3020	END SECT-CONC REINF 24IN	EA	4	0	4
714	3040	END SECT-CONC REINF 42IN	EA	2	0	2
714	5015	PIPE CORR STEEL .064IN 18IN	LF	0	40	40
714	5035	PIPE CORR STEEL .064IN 24IN	LF	666	406	1072
714	5040	PIPE CORR STEEL .064IN 30IN	LF	90	0	90
714	5045	PIPE CORR STEEL .064IN 36IN	LF	184	0	184
714	5810	END SECT CORR STEEL .064IN 18IN	EA	0	4	4
714	5820	END SECT CORR STEEL .064IN 24IN	EA	28	20	48
714	5825	END SECT CORR STEEL .079IN 30IN	EA	6	0	6
714	5830	END SECT CORR STEEL .079IN 36IN	EA	8	0	8
752	0110	FENCE BARBED WIRE 3 STRAND-STEEL POST	LF	846	0	846
752	0905	TEMPORARY FENCE	LF	846	0	846
752	2996	CORNER ASSEMBLY-STEEL POST	EA	22	0	22
754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	4.6	8.5	13.1
754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	27.8	17.0	44.8
754	0592	RESET SIGN PANEL	EA	8	1	9
754	0593	RESET SIGN SUPPORT	EA	8	1	9
754	0805	OBJECT MARKERS - CULVERTS	EA	48	24	72
900	2001	WETLAND MITIGATION SITE 1	ACRE	0.23	0.28	0.51
900	2002	WETLAND MITIGATION SITE 2	ACRE	0.41	0	0.41

Revised	7/10/18	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(134)	8	1



Spec	Code	Description	Quantity	Unit
202	0312	Remove Existing Fence Sta 21+25 to Sta 21+75	50	LF
Total =			50	LF
714	5040	Pipe Corr Steel .064IN 30IN Sta 21+47	48	LF
Total =			48	LF
714	5825	End Sect Corr Steel .079IN 30IN Sta 21+47	2	EA
		Sta 21+57	2	EA
Total =			4	EA
752	0110	Fence Barbed Wire 3 Strand-Steel Post Sta 21+25 to Sta 21+75	93	LF
Total =			93	LF
752	0905	Temporary Fence Sta 21+25 to Sta 21+75	93	LF
Total =			93	LF
752	2996	Corner Assembly-Steel Post Sta 21+25 - 29 RT & 50 RT	2	EA
		Sta 21+75 - 29 RT & 50 RT	2	EA
Total =			4	EA



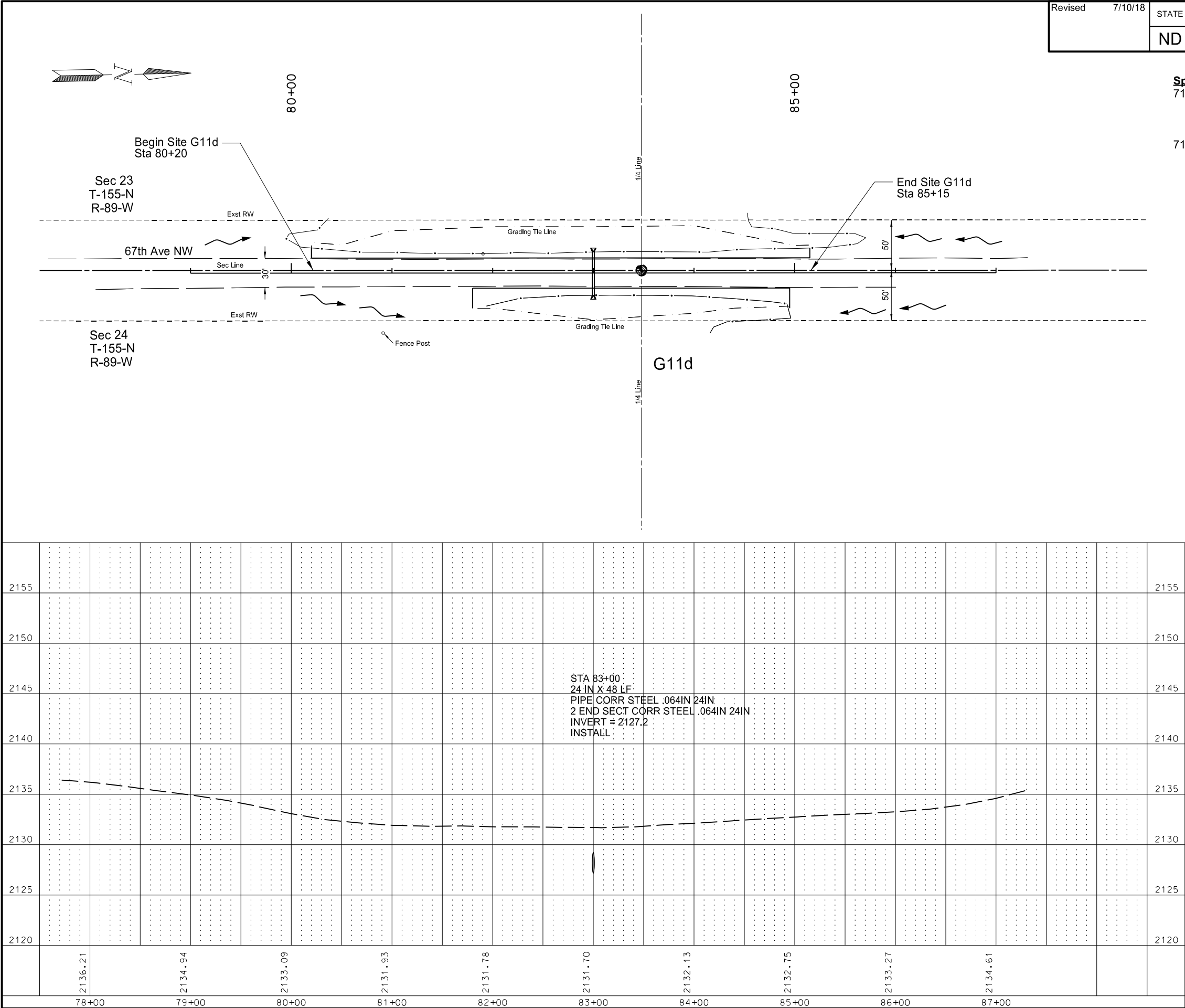
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Plan and Profile Sheet

Site G11e
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

Revised	7/10/18	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(134)	60	3

Spec	Code	Description	Quantity	Unit
714	5035	Pipe Corr Steel .064IN 24IN Sta 83+00	48	LF
Total =			48	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 83+00	2	EA
Total =			2	EA



STA 83+00:
24-IN X 48 LF
PIPE CORR STEEL .064IN 24IN
2 END SECT CORR STEEL .064IN 24IN
INVERT = 2127.2
INSTALL

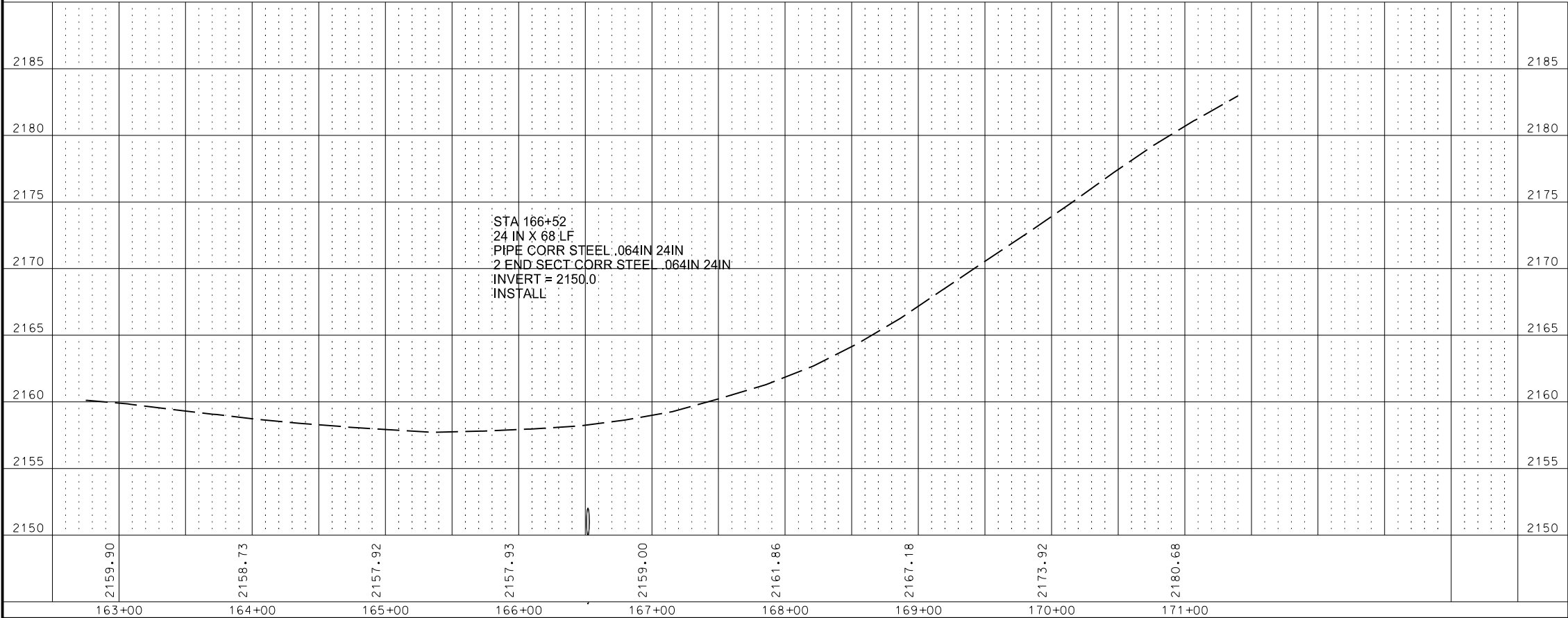
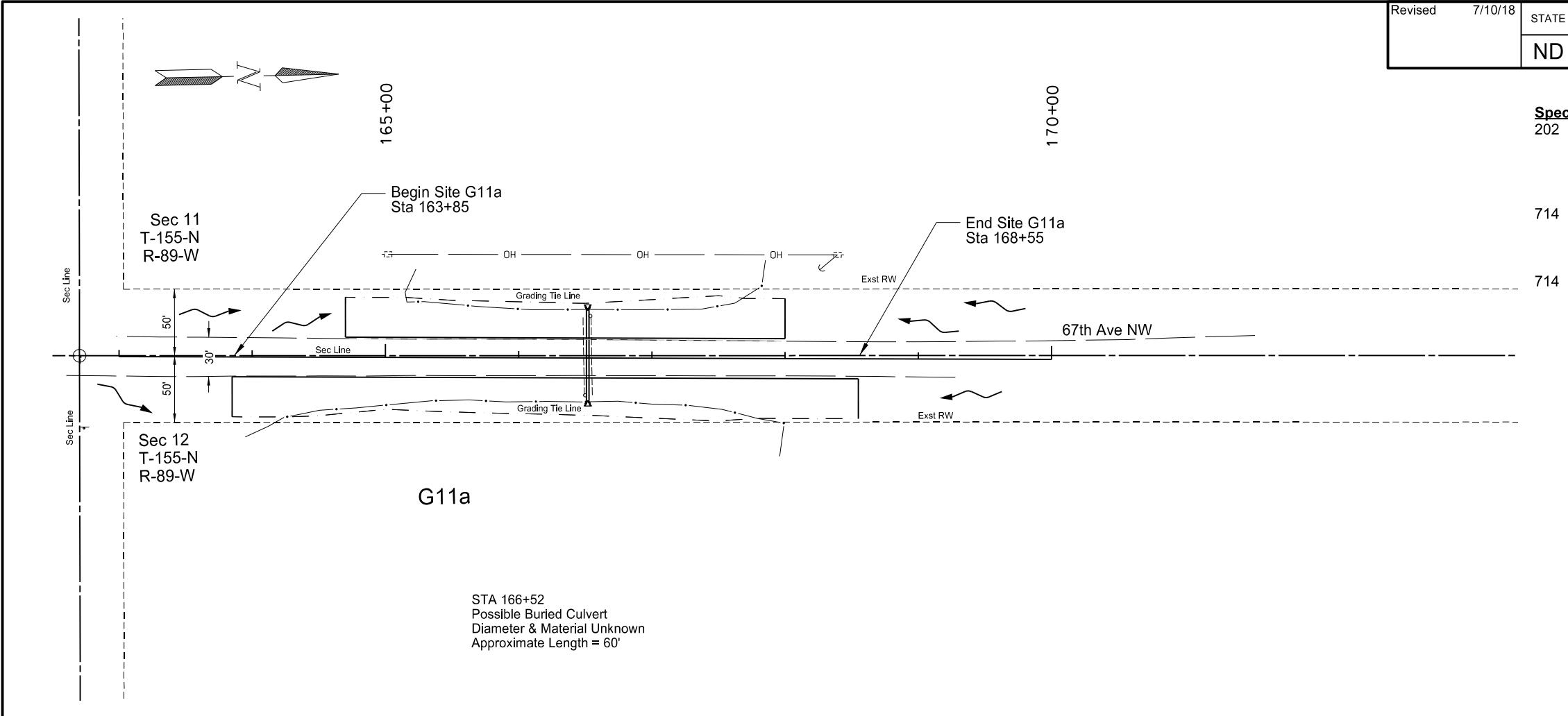
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Plan and Profile Sheet

Site G11d
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

Revised	7/10/18	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(134)	60	6

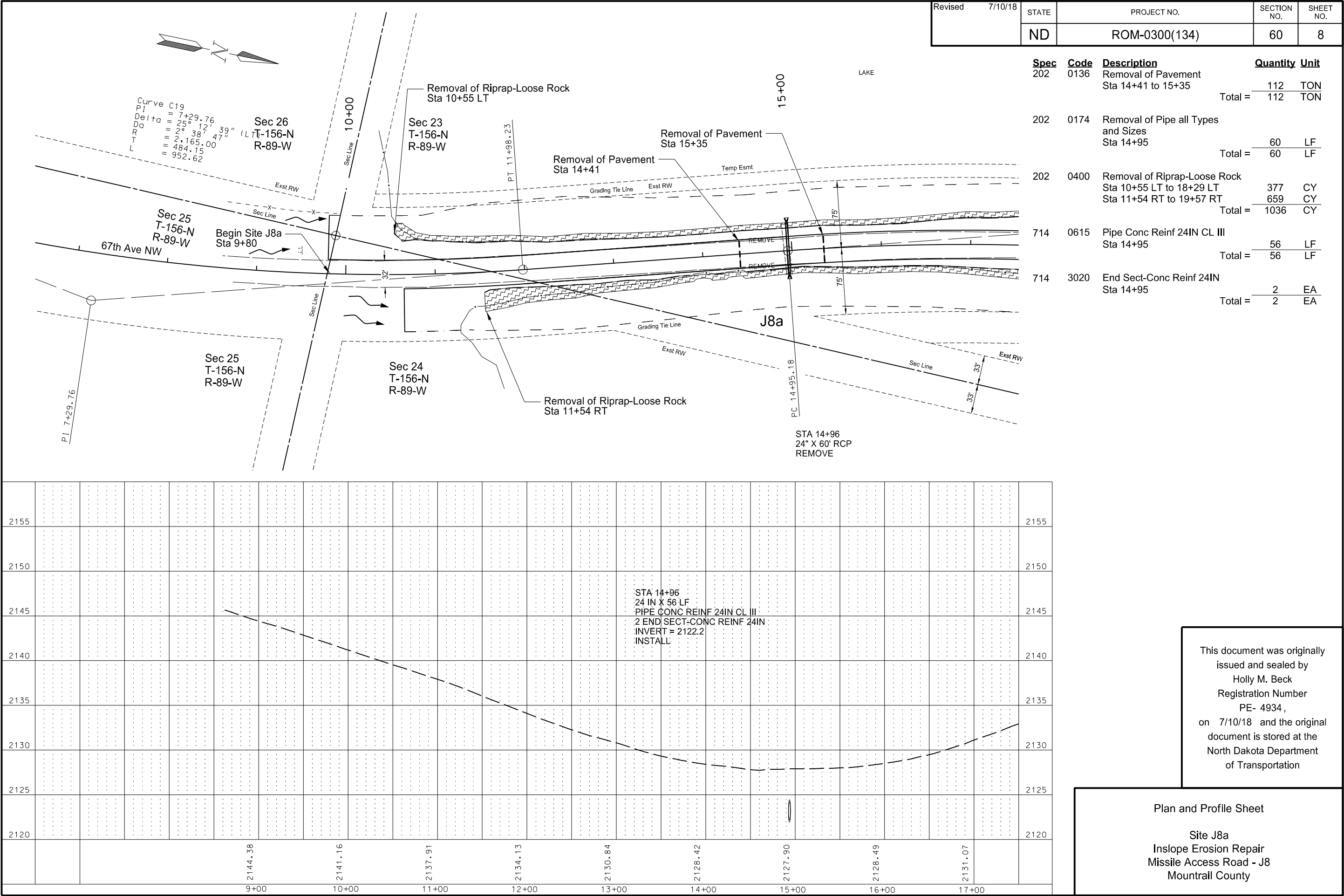
Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 166+52	60	LF
Total =			60	LF
714	5035	Pipe Corr Steel .064IN 24IN Sta 166+52	68	LF
Total =			68	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 166+52	2	EA
Total =			2	EA

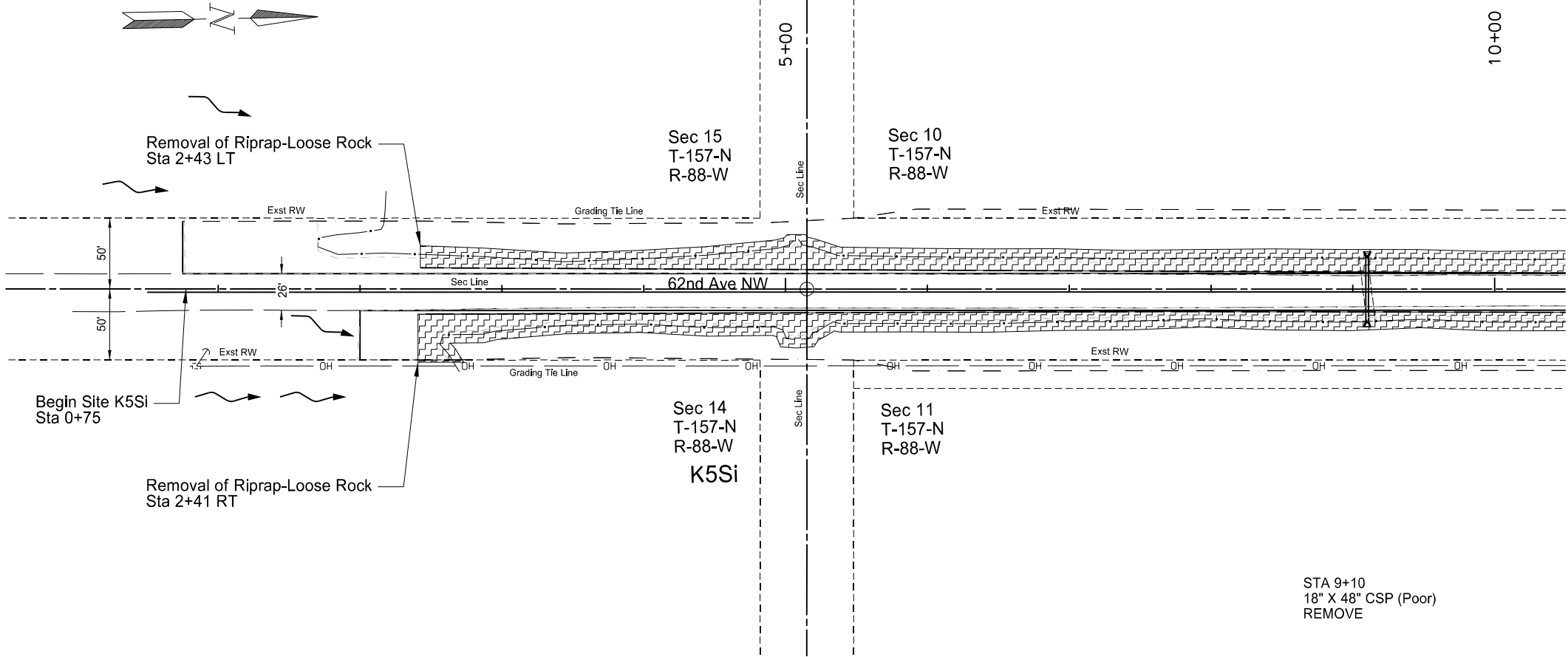


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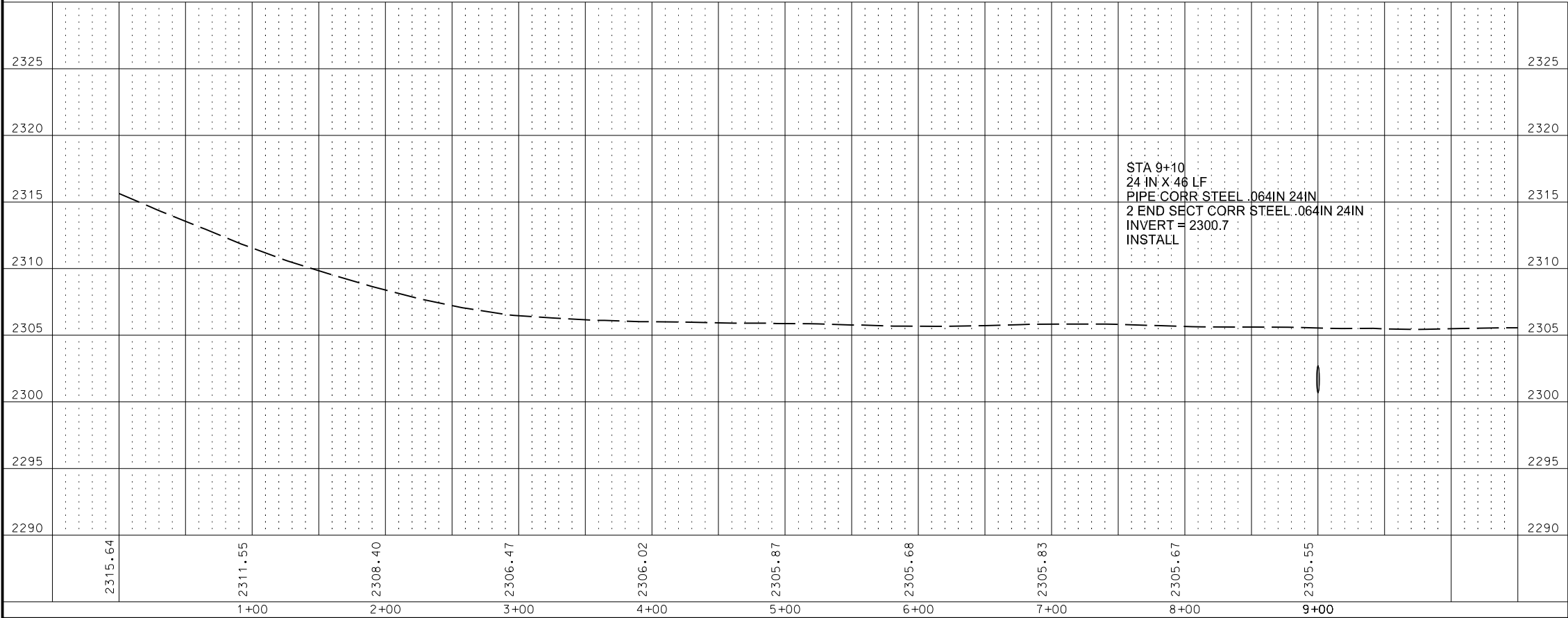
Plan and Profile Sheet

Site G11a
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County





Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 9+10	48	LF
Total =			48	LF
202	0400	Removal of Riprap-Loose Rock Sta 2+43 LT to 28+59 LT	2808	CY
		Sta 2+41 RT to 27+41 RT	2425	CY
Total =			5233	CY
714	5035	Pipe Corr Steel .064IN 24IN Sta 9+10	46	LF
Total =			46	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 9+10	2	EA
Total =			2	EA

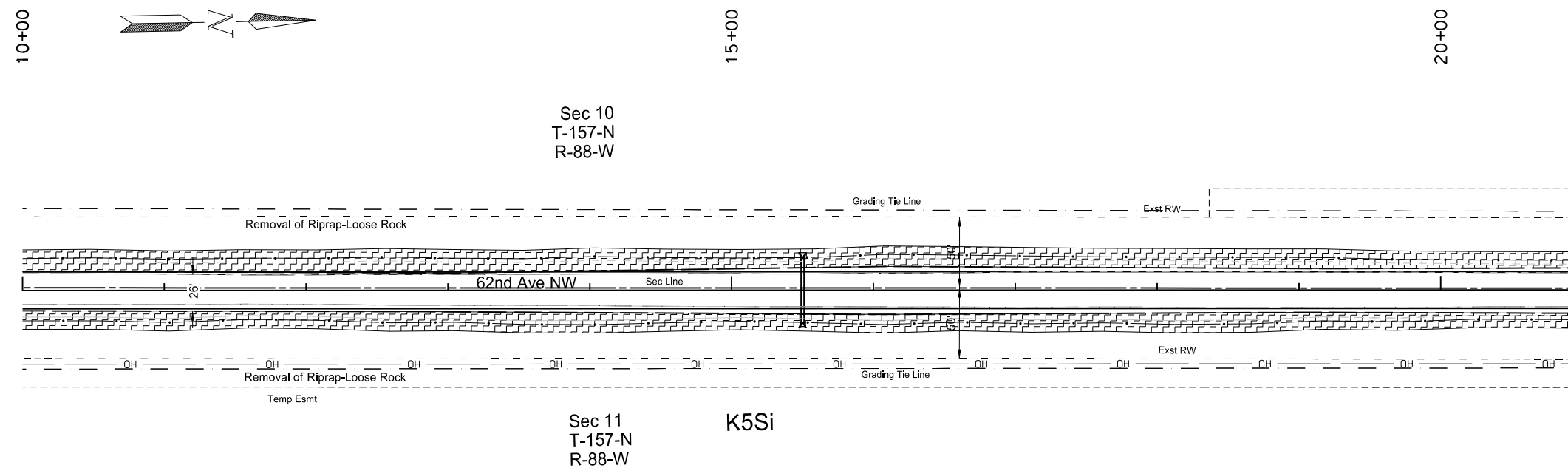


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Plan and Profile Sheet

Site K5Si
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

Revised	7/10/18	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(134)	60	12



<u>Spec</u>	<u>Code</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit</u>
202	0174	Removal of Pipe all Types and Sizes Sta 15+50	48	LF
		Total =	48	LF
202	0400	Removal of Riprap-Loose Rock Quantity Totals are Included on the Previous Sheet		
714	5035	Pipe Corr Steel .064IN 24IN Sta 15+50	46	LF
		Total =	46	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 15+50	2	EA
		Total =	2	EA

[illegible]

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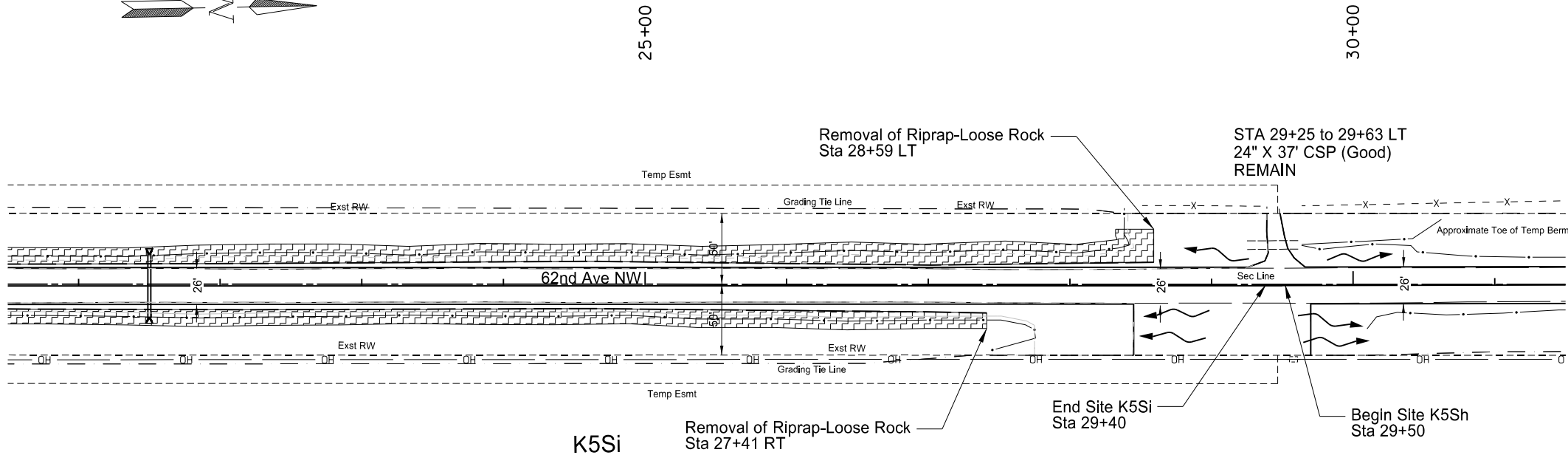
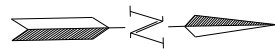
Plan and Profile Sheet

Site K5Si

Inslope Erosion Repair

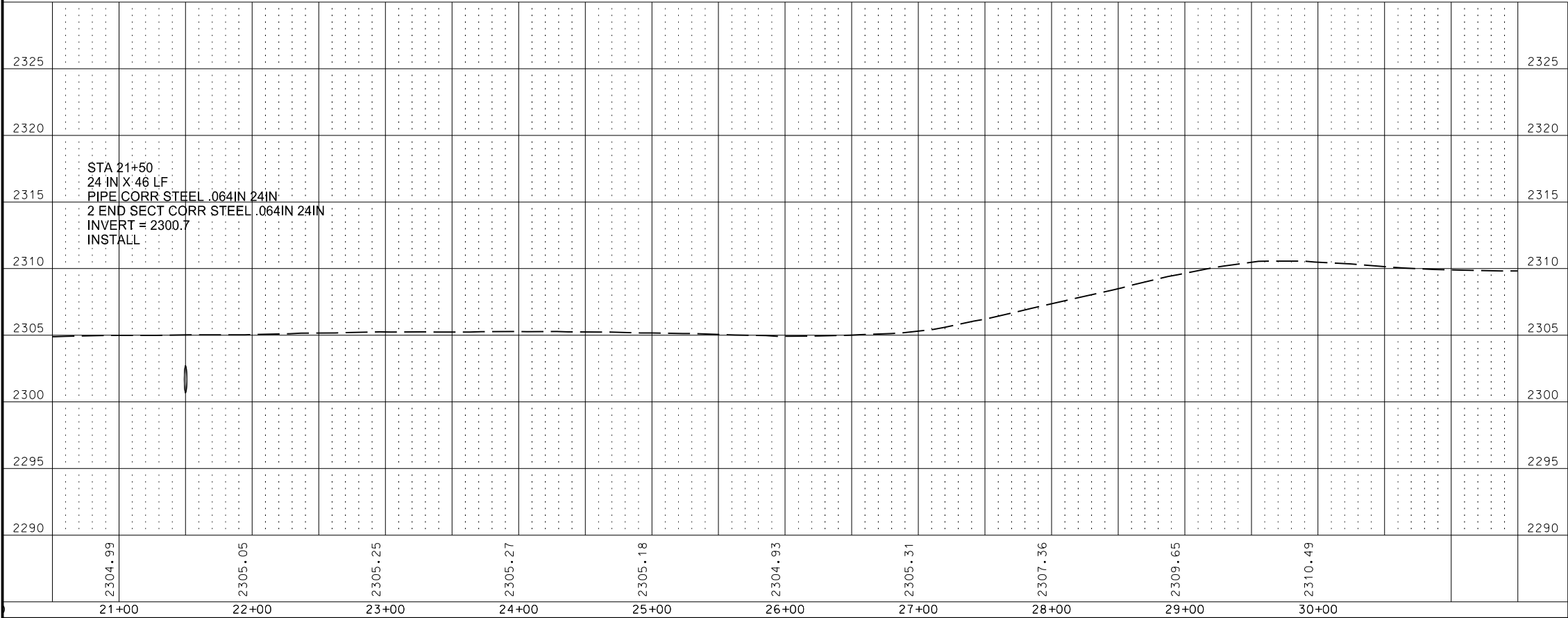
Missile Access Road - K5S

Mountrail County



Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 21+50	48	LF
Total =			48	LF
202	0400	Removal of Riprap-Loose Rock Quantity Totals are Included on the Previous Sheet		
714	5035	Pipe Corr Steel .064IN 24IN Sta 21+50	46	LF
Total =			46	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 21+50	2	EA
Total =			2	EA

STA 21+50
Buried Culvert
Diameter & Material Unknown
Approximate Length = 48'
REMOVE

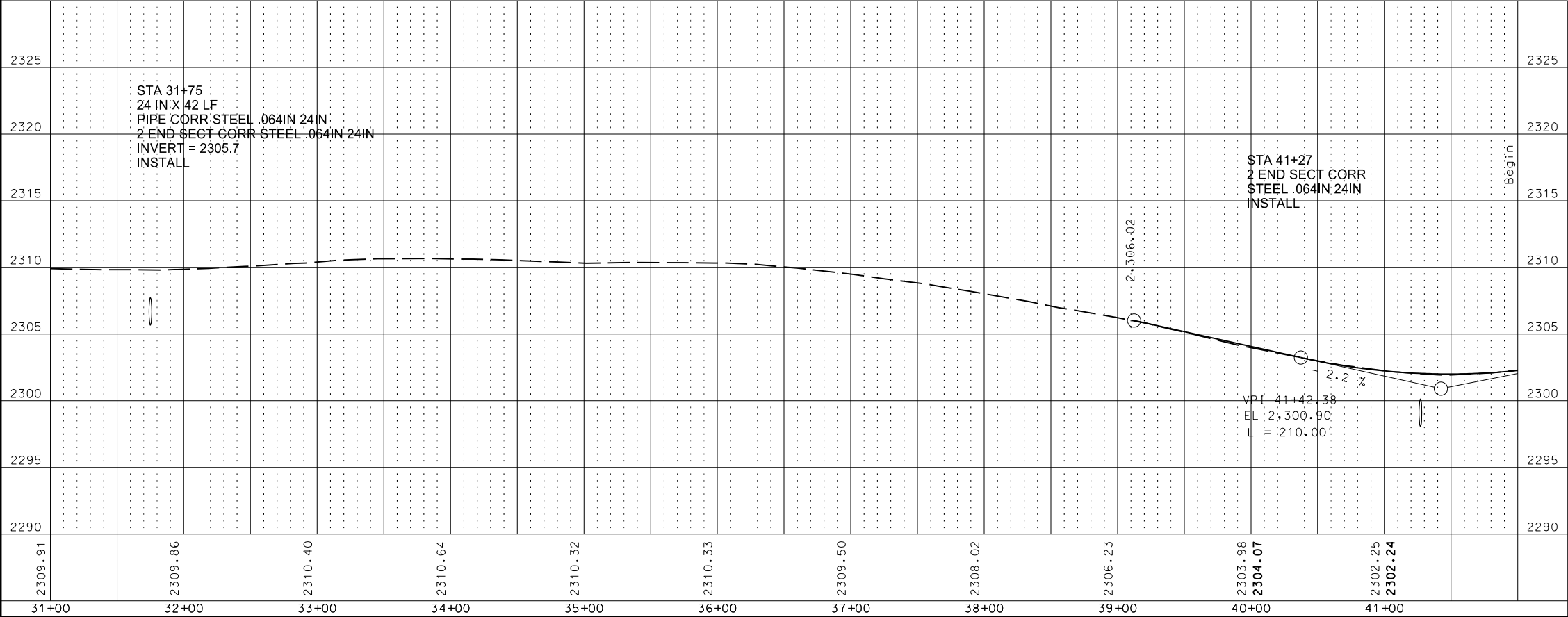
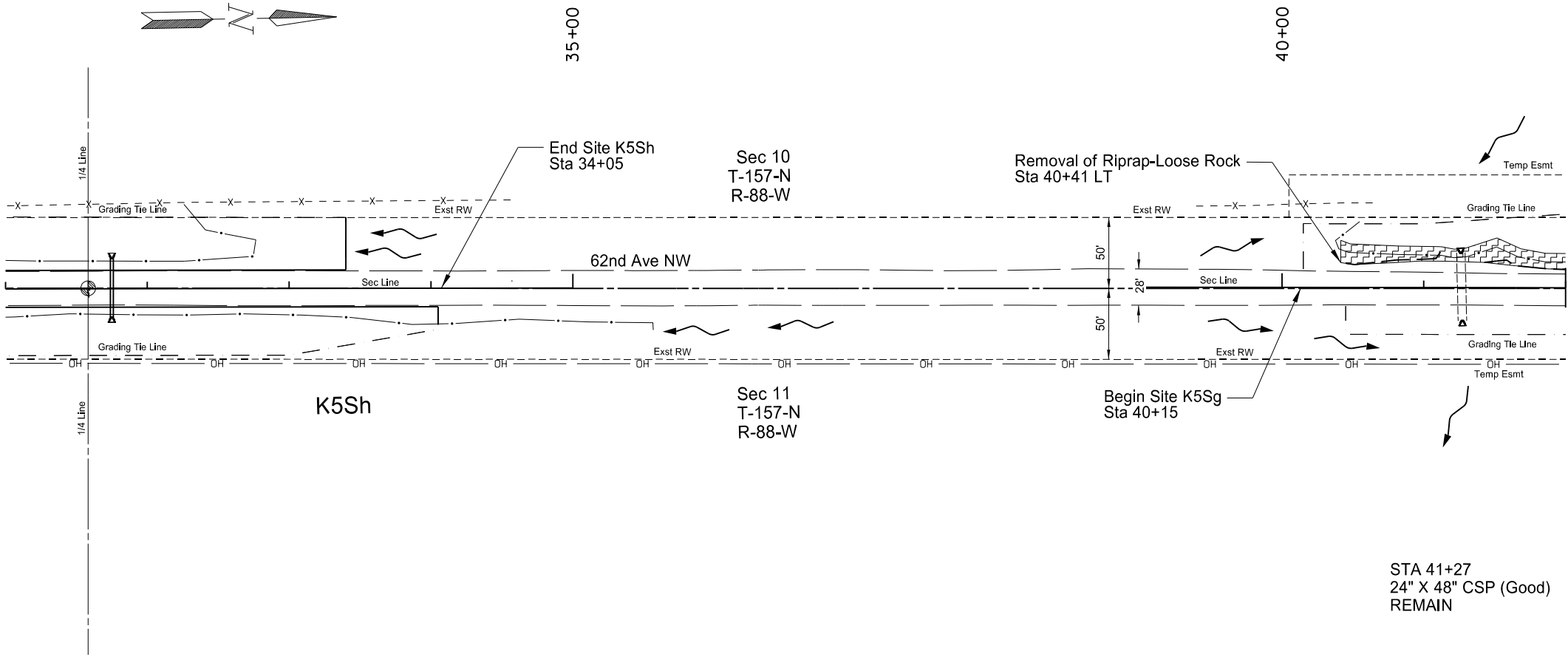


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Site K5Si
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 31+75	38	LF
Total =			38	LF
202	0400	Removal of Riprap-Loose Rock Sta 40+41 LT to 42+59 LT	192	CY
Total =			192	CY
714	5035	Pipe Corr Steel .064IN 24IN Sta 31+75	42	LF
Total =			42	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 31+75	2	EA
			2	EA
Total =			4	EA

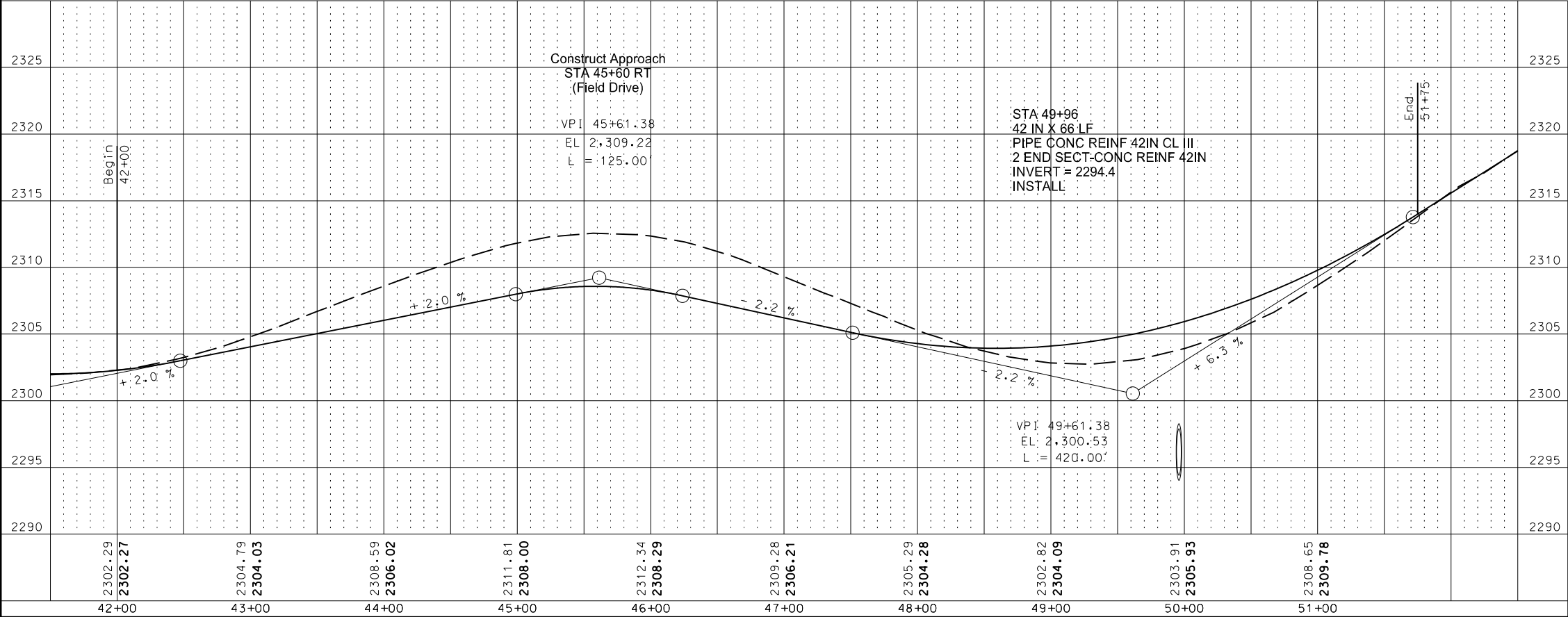
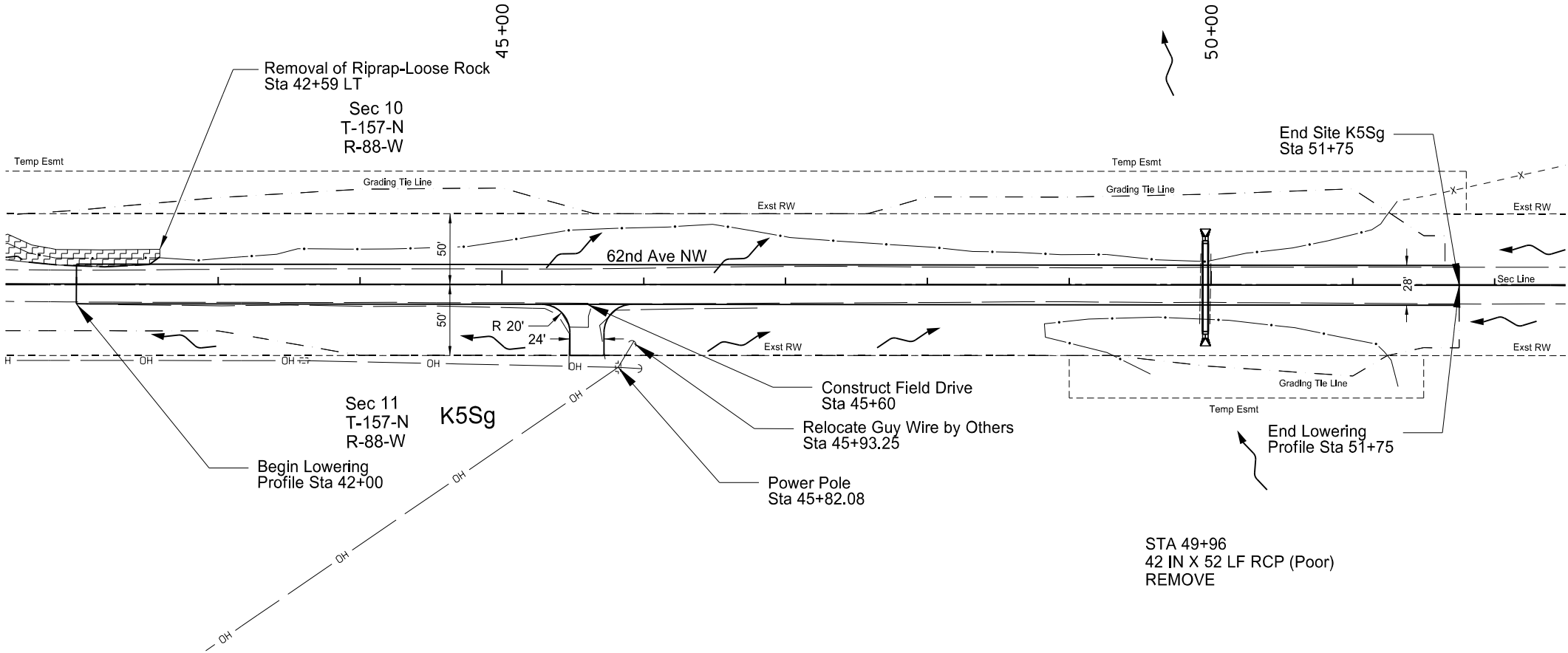


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Site K5Sh
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 49+96	52	LF
Total =			52	LF
202	0400	Removal of Riprap-Loose Rock Quantity Totals are Included on the Previous Sheet		
302	0356	Aggregate Surface Course CL 13 Sta 42+00 to Sta 51+75	1286	TON
Total =			1286	TON
714	1005	Pipe Conc Reinf 42IN CL III Sta 49+96	66	LF
Total =			66	LF
714	3040	End Sect-Conc Reinf 42IN Sta 49+96	2	EA
Total =			2	EA



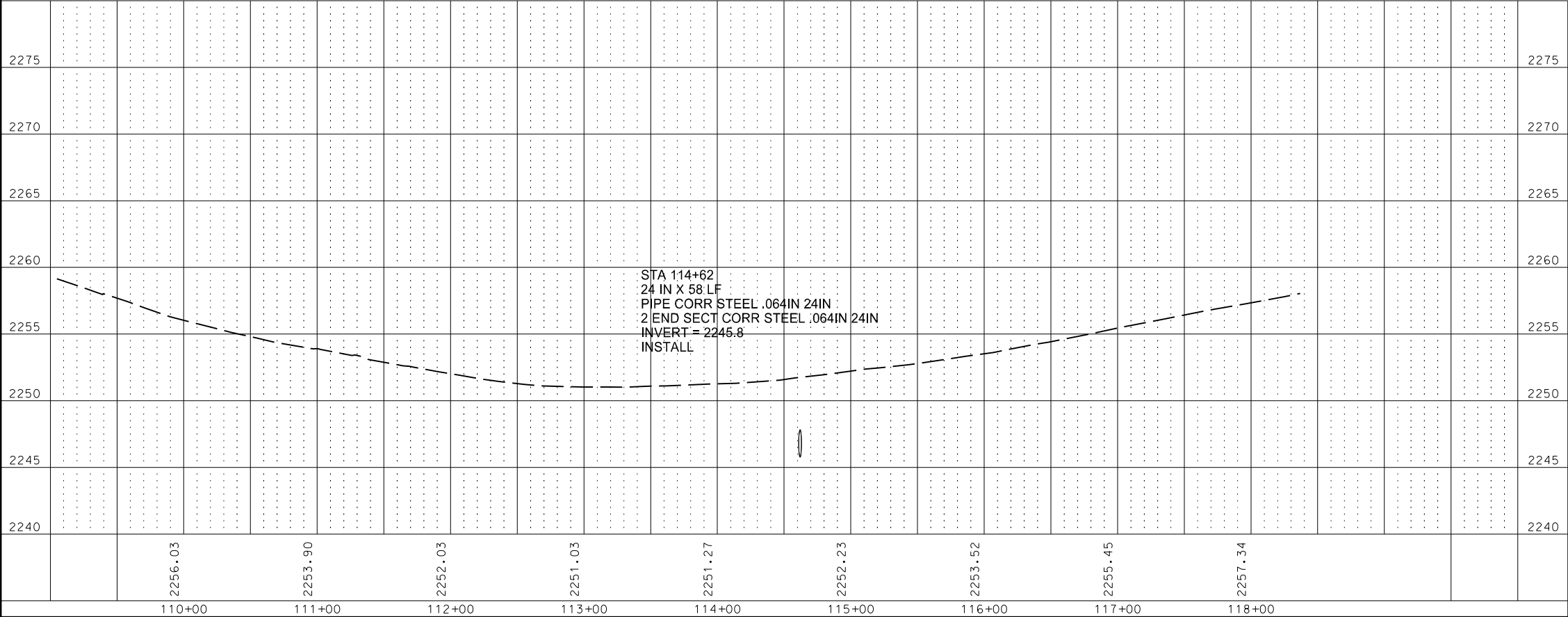
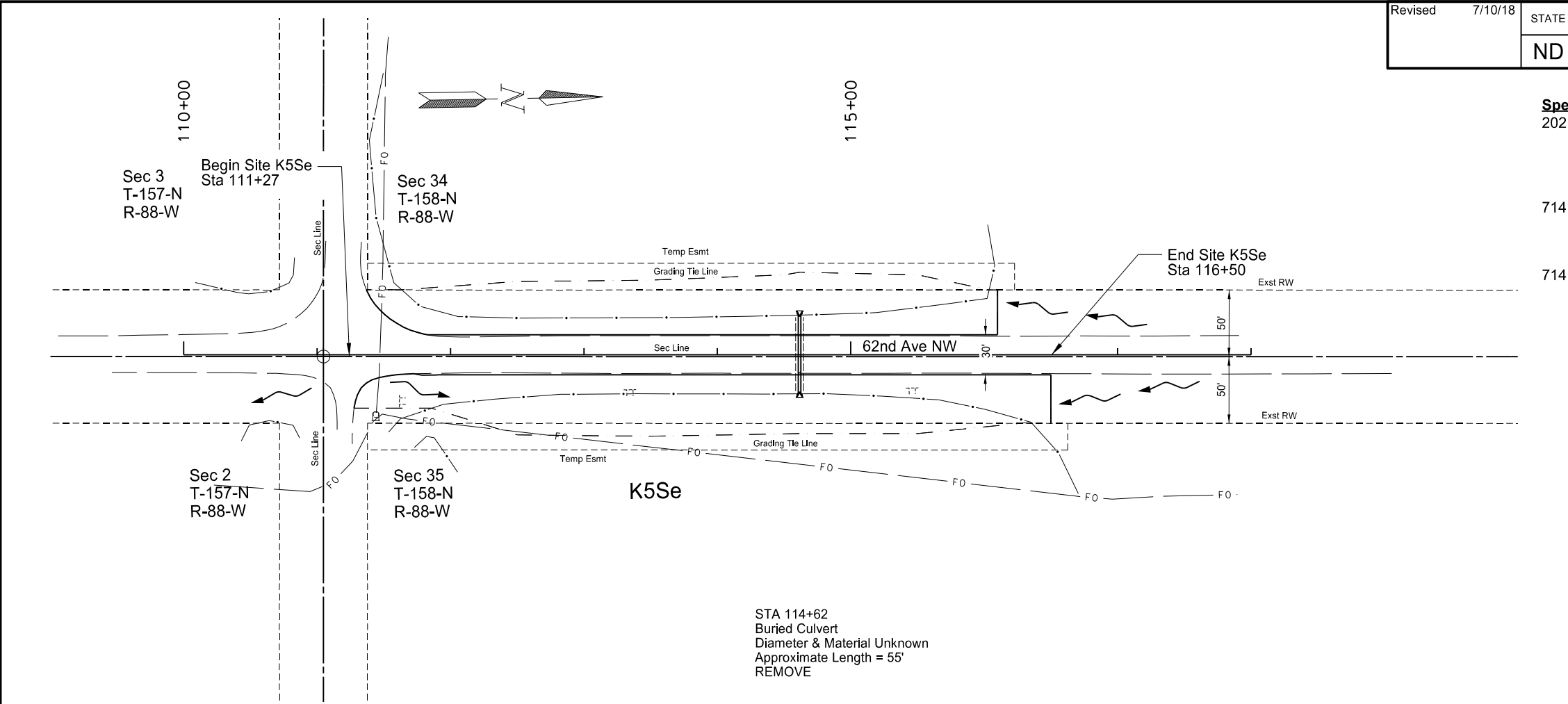
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Plan and Profile Sheet

Site K5Sg
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

Revised	7/10/18	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(134)	60	18

Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 114+62	55	LF
Total =			55	LF
714	5035	Pipe Corr Steel .064IN 24IN Sta 114+62	58	LF
Total =			58	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 114+62	2	EA
Total =			2	EA

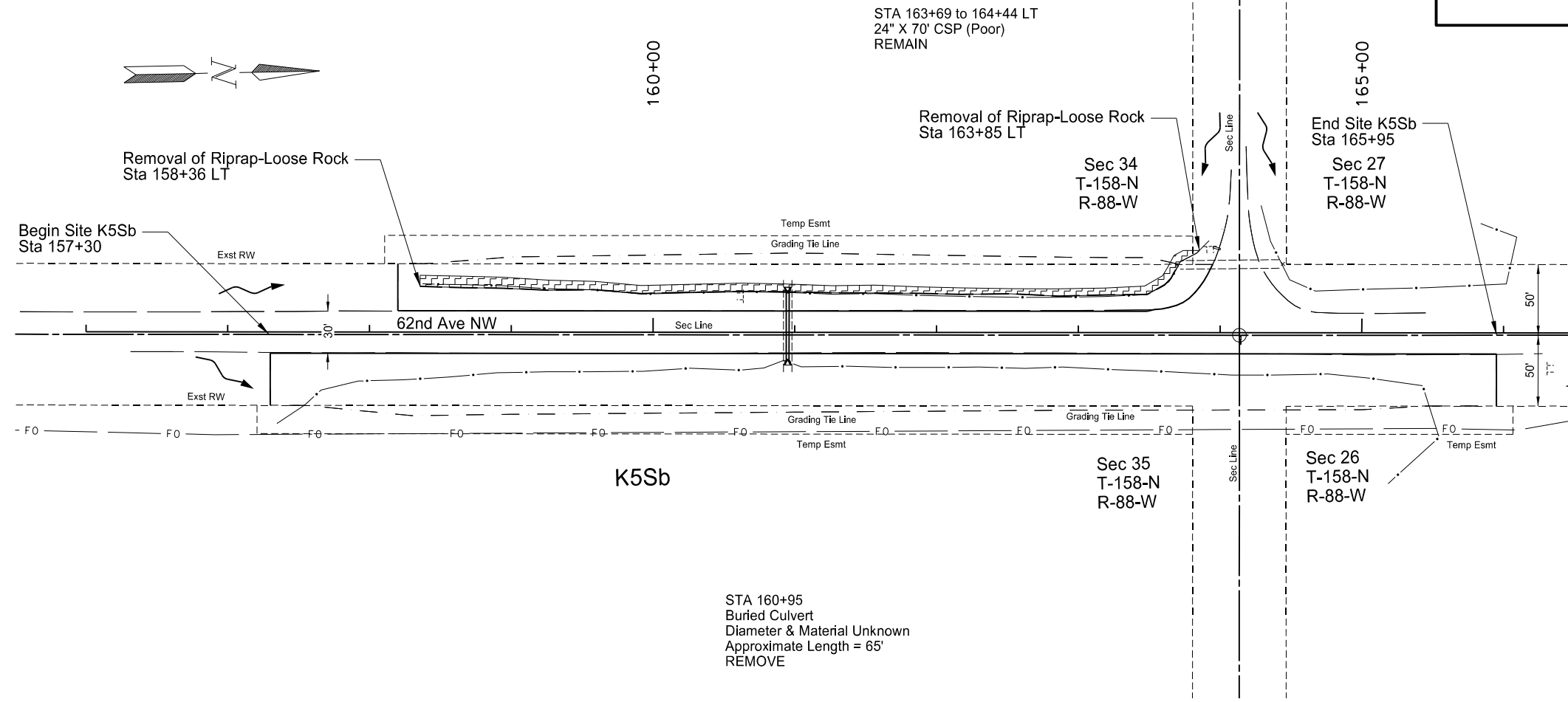


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Site K5Se
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

Revised 7/10/18	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	20



<u>Spec</u>	<u>Code</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit</u>
202	0174	Removal of Pipe all Types and Sizes Sta 160+95		
			65	LF
		Total =	65	LF
202	0400	Removal of Riprap-Loose Rock Sta 158+36 LT to 163+85 LT		
			236	CY
		Total =	236	CY
714	5035	Pipe Corr Steel .064IN 24IN Sta 160+95		
			48	LF
		Total =	48	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 160+95		
			2	EA
		Total =	2	EA

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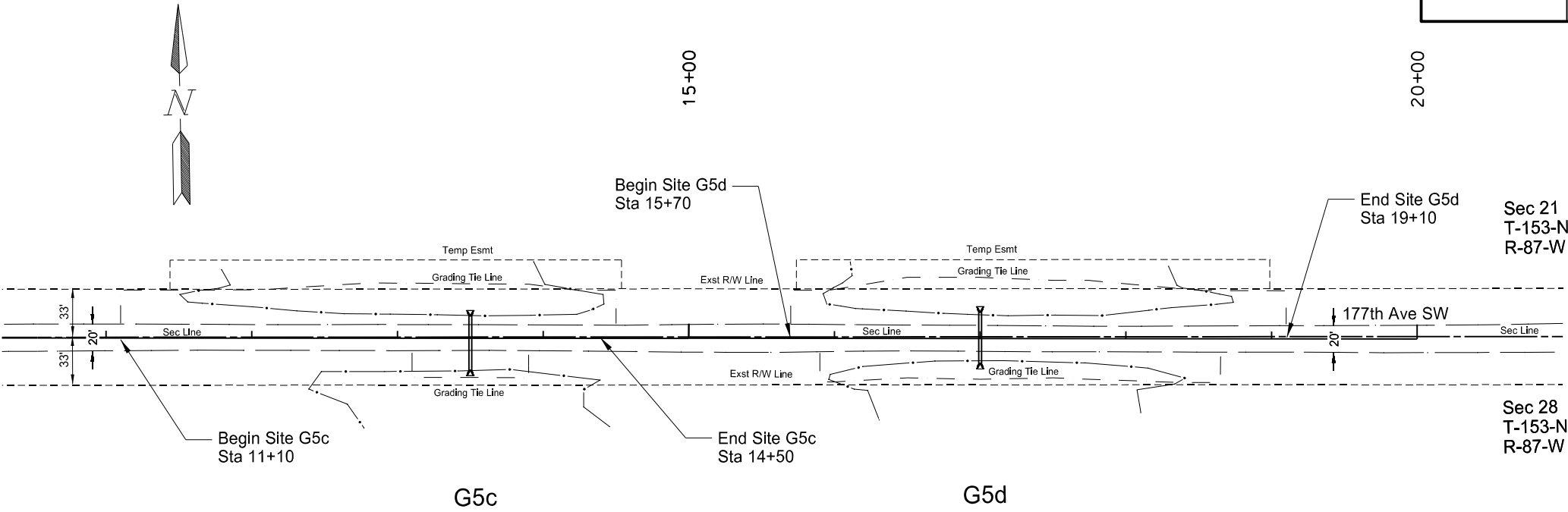
Site K5Sb

Inslope Erosion Repair

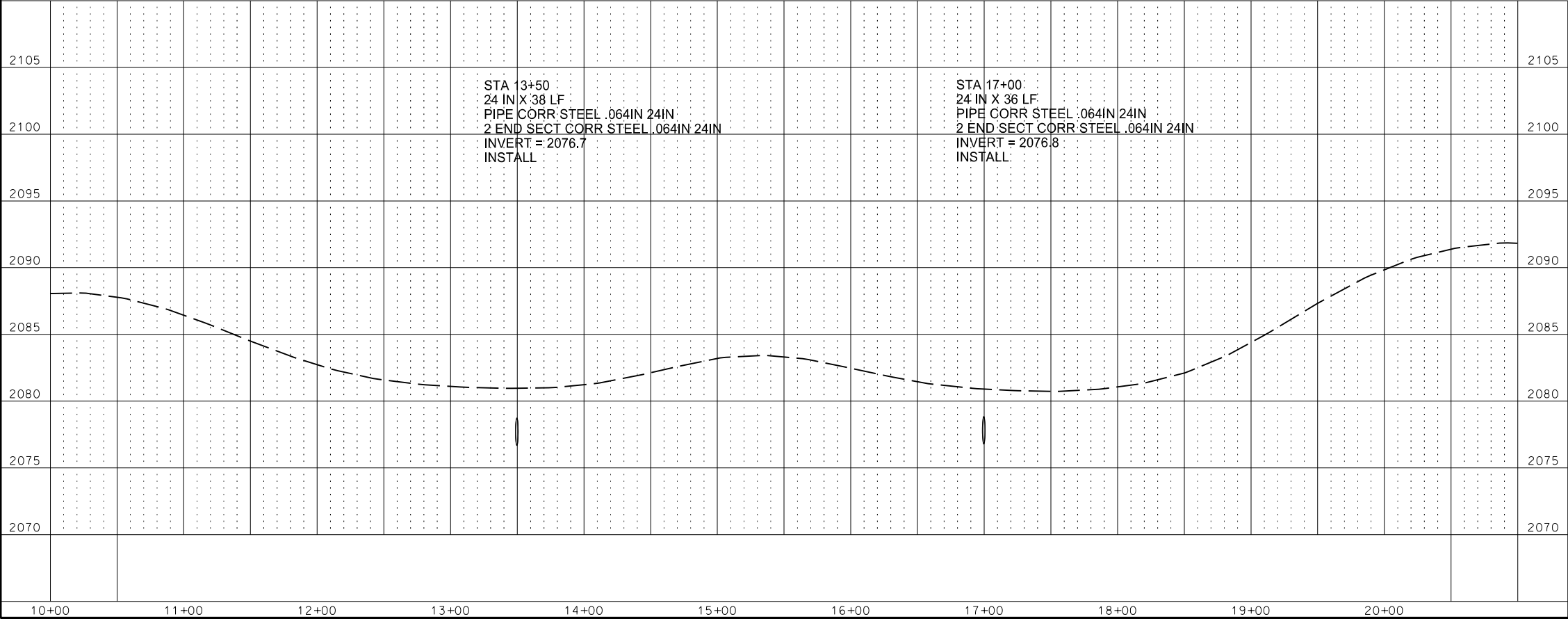
Missile Access Road - K5S

Mountrail County

Revised	7/10/18	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(134)	60	23



Spec	Code	Description	Quantity	Unit
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 13+50	38	LF
		Sta 17+00	36	LF
		Total =	74	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 13+50	2	EA
		Sta 17+00	2	EA
		Total =	4	EA



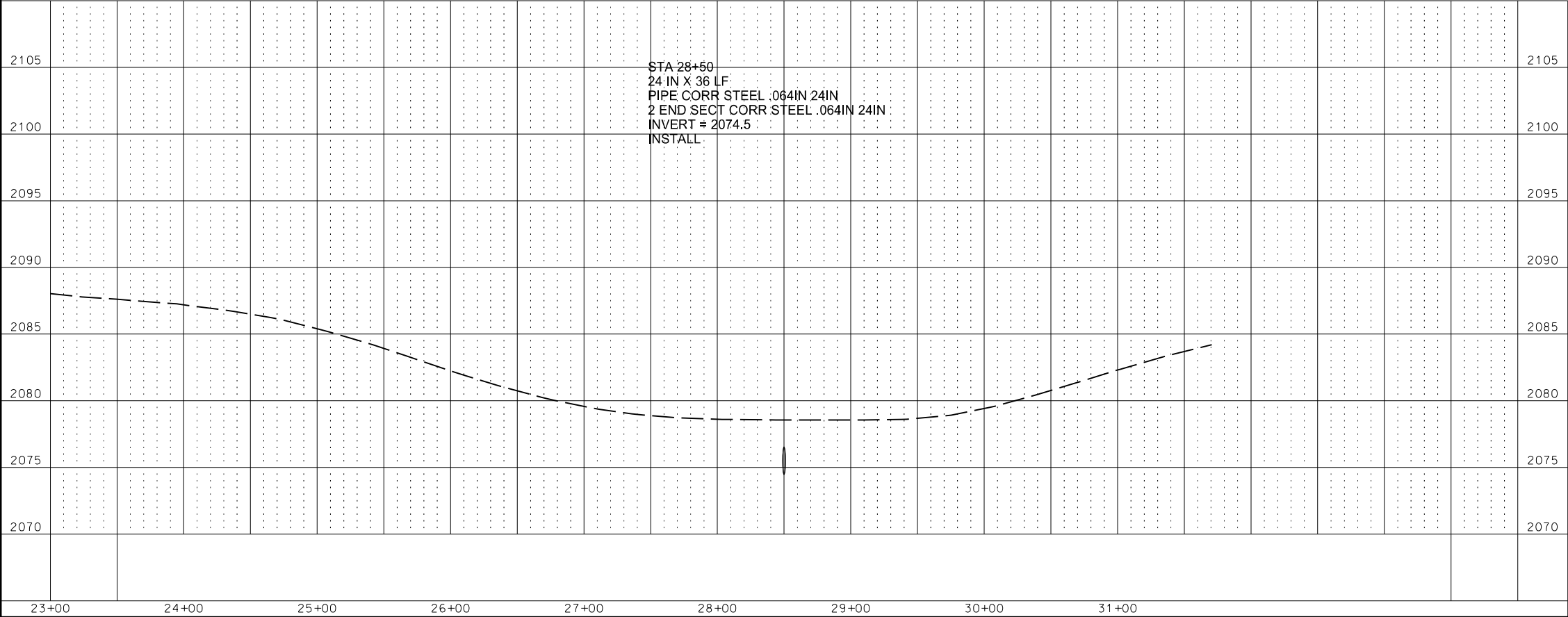
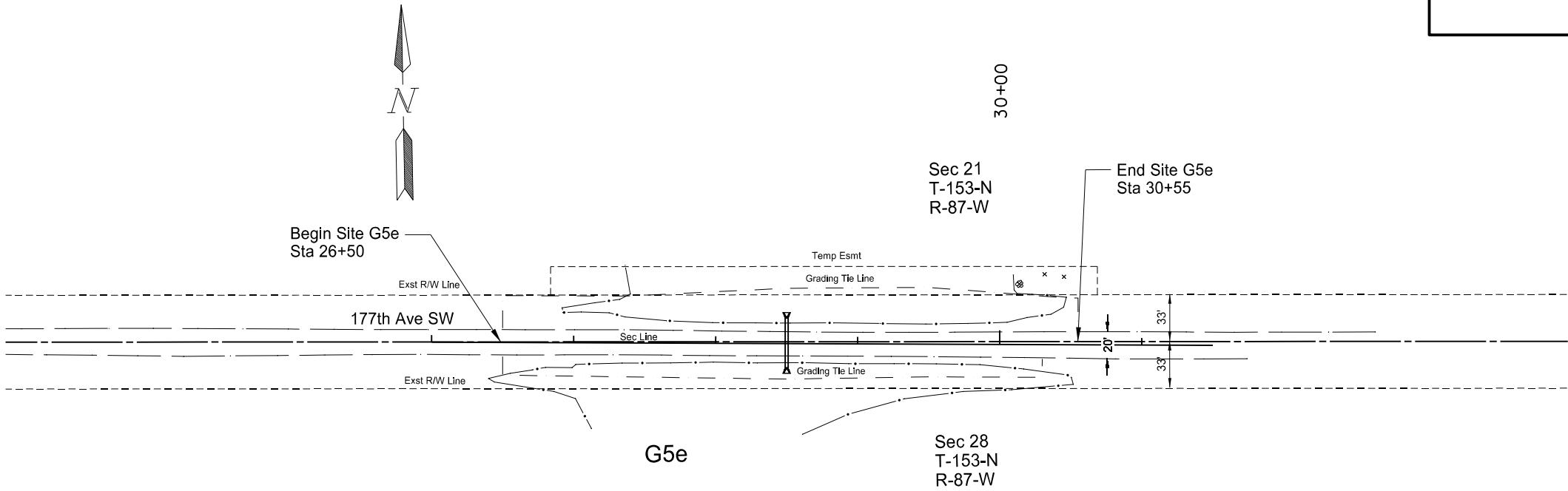
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Site G5c & b
Inslope Erosion Repair
Missile Access Road - G5
Ward County

Revised	7/10/18	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(134)	60	24

Spec	Code	Description	Quantity	Unit
714	5035	Pipe Corr Steel .064IN 24IN Sta 28+50	36	LF
Total =			36	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 28+50	2	EA
Total =			2	EA

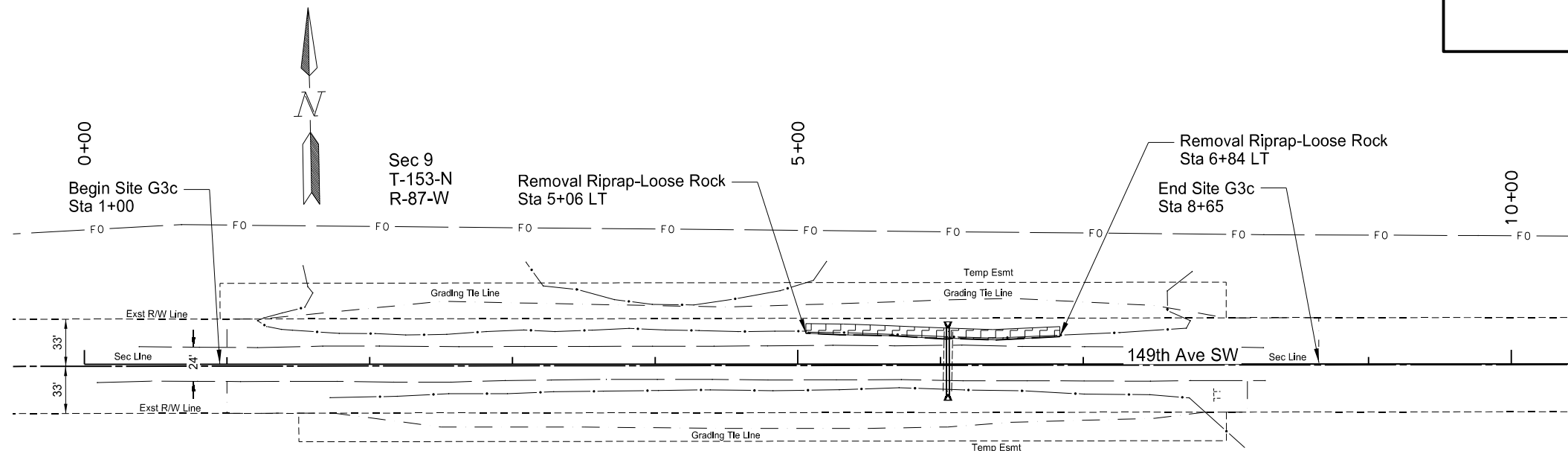


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Site G5e
Inslope Erosion Repair
Missile Access Road - G5
Ward County

Revised 7/10/18	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	25



Sec 16
T-153-N
R-87-W

G3c

STA 6+05
18 IN X 42 LF CSP (Fair)
REMOVE

<u>Spec</u>	<u>Code</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit</u>
202	0174	Removal of Pipe all Types and Sizes Sta 6+05	42	LF
		Total =	42	LF
202	0400	Removal of Riprap-Loose Rock Sta 5+06 LT to 6+84 LT	95	CY
		Total =	95	CY
714	5035	Pipe Corr Steel .064IN 24IN Sta 6+05	48	LF
		Total =	48	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 6+05	2	EA
		Total =	2	EA

[illegible]

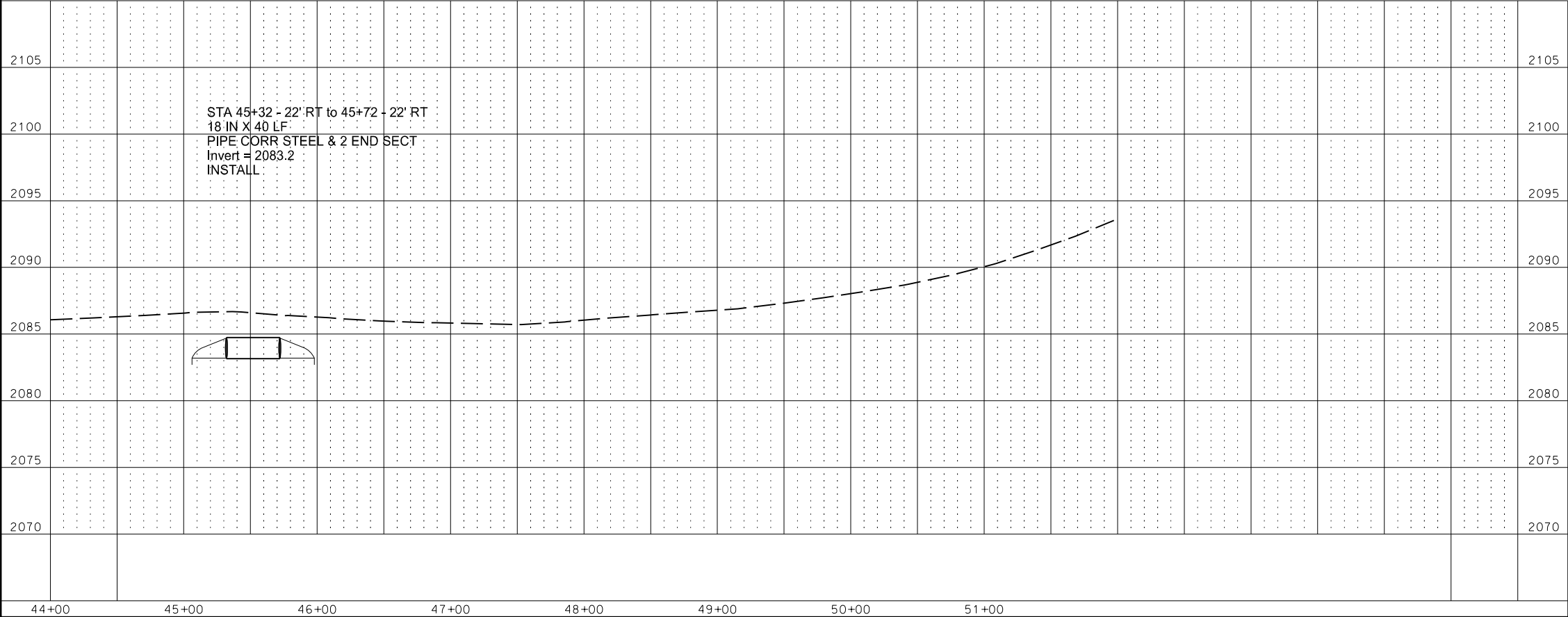
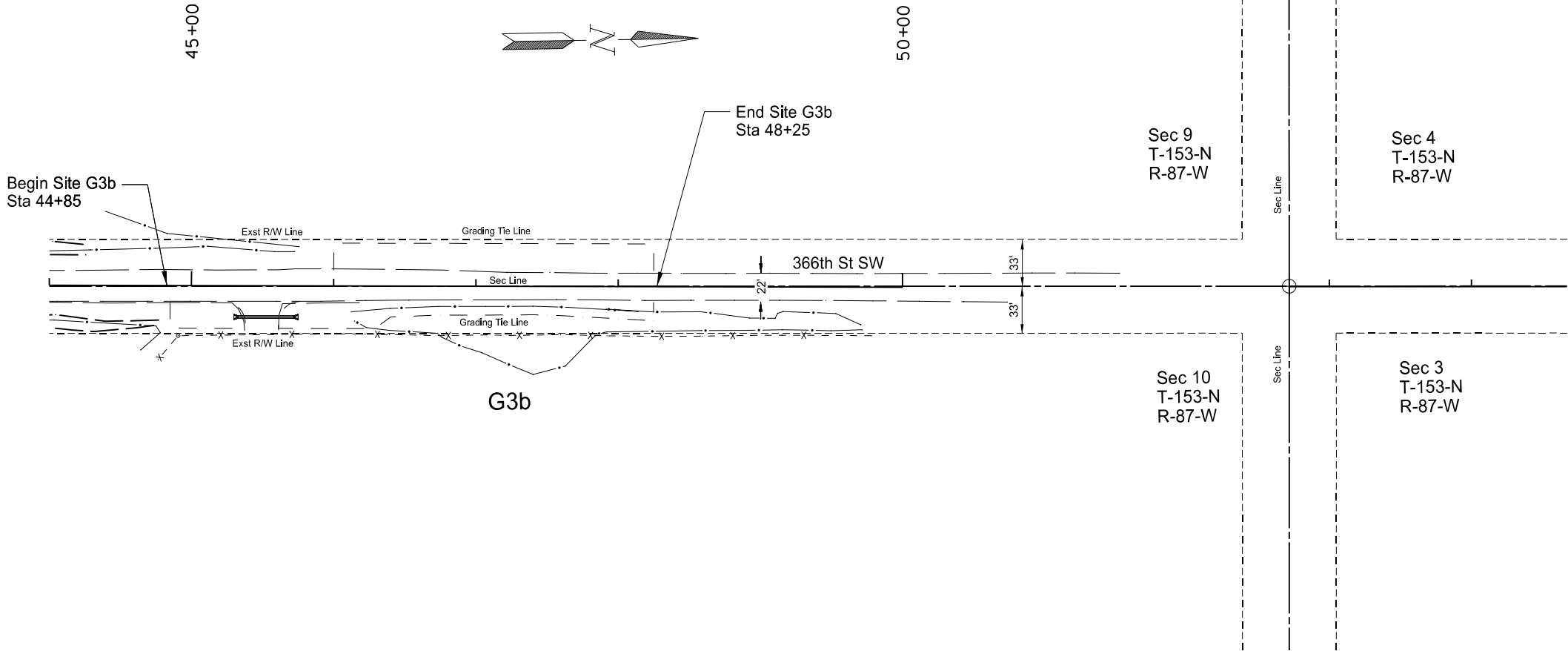
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Site G3c
Inslope Erosion Repair
Missile Access Road - G3
Ward County

Revised	7/10/18	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(134)	60	26

Spec	Code	Description	Quantity	Unit
714	5015	Pipe Corr Steel .064IN 18IN Sta 45+32 to 45+72 (22' RT)	40	LF
		Total =	40	LF
714	5810	End Sect Corr Steel .64IN 18IN Sta 45+32 to 45+72 (22' RT)	2	EA
		Total =	2	EA



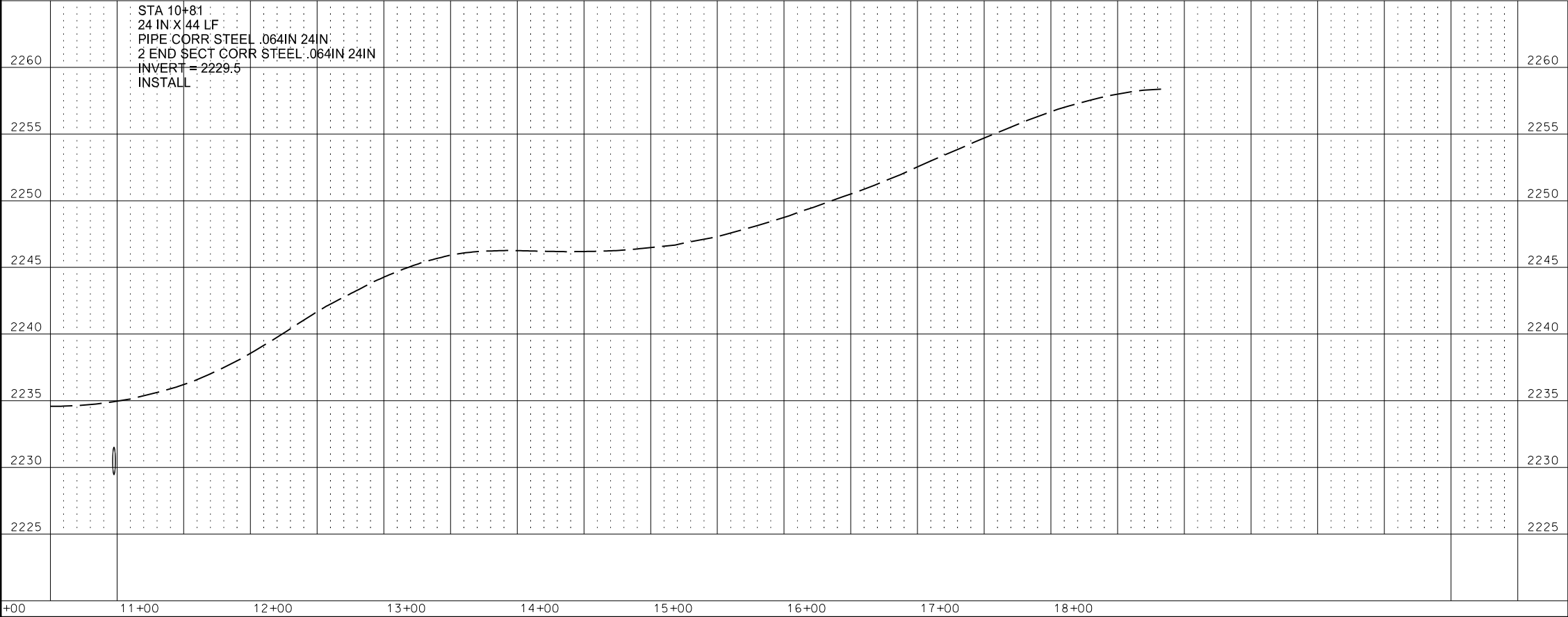
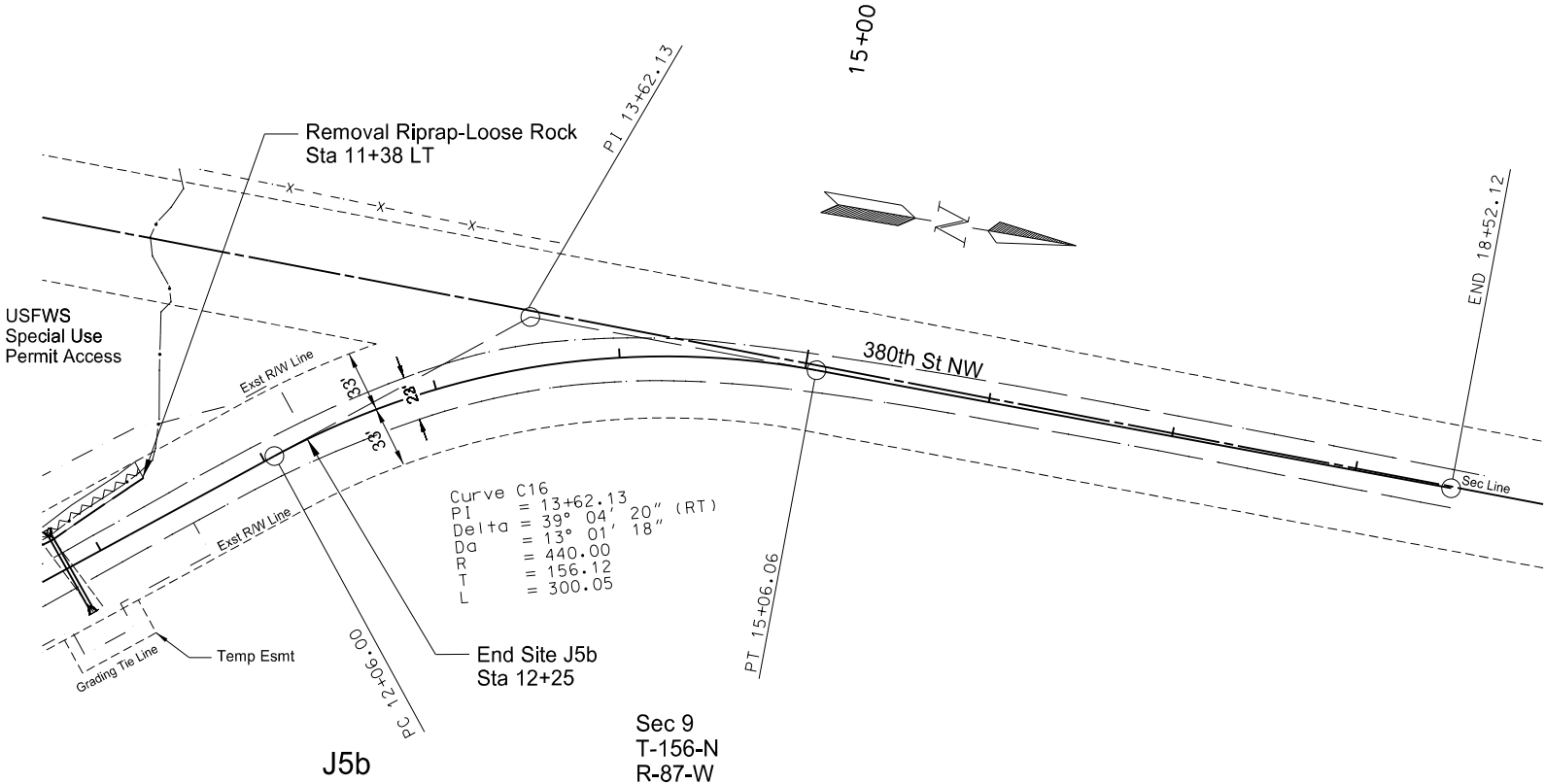
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Site G3b
Inslope Erosion Repair
Missile Access Road - G3
Ward County

Revised	7/10/18	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(134)	60	30

Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 10+81	50	LF
Total =			50	LF
202	0400	Removal Riprap-Loose Rock	Quantity Totals are Included on the Previous Sheet	
714	5035	Pipe Corr Steel .064IN 24IN Sta 10+81	44	LF
Total =			44	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 10+81	2	EA
Total =			2	EA

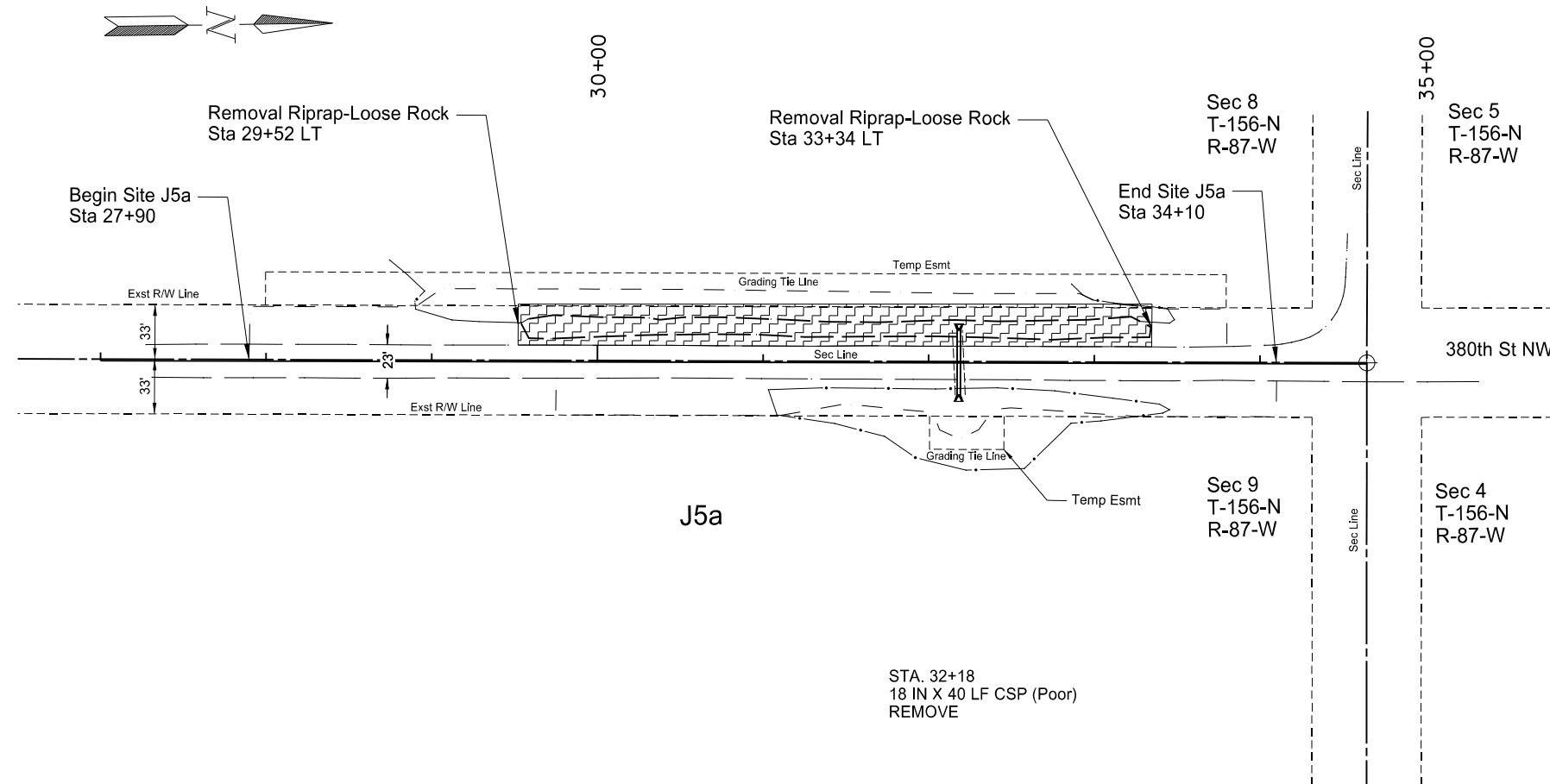


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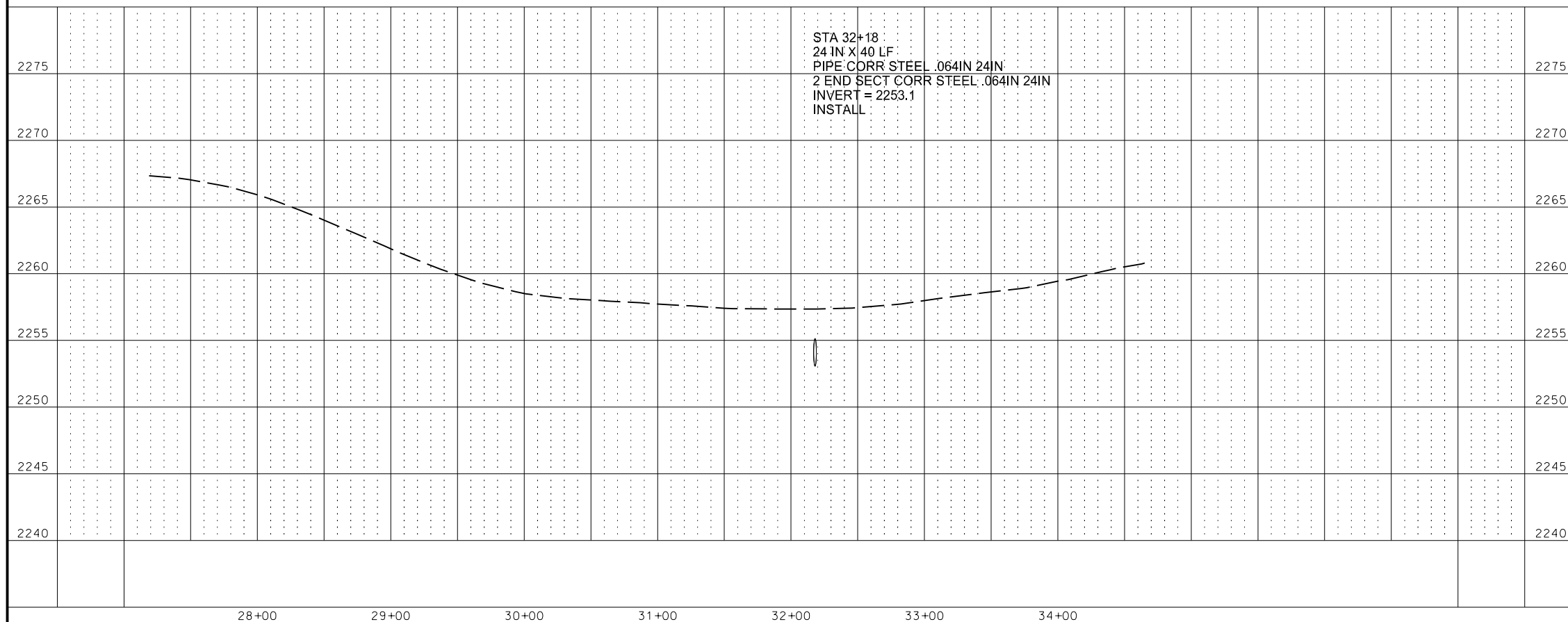
Plan and Profile Sheet

Site J5b
Inslope Erosion Repair
Missile Access Road - J5
Ward County

Revised 7/10/18	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	31



<u>Spec</u>	<u>Code</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit</u>
202	0174	Removal of Pipe all Types and Sizes Sta 32+18	40	LF
		Total =	40	LF
202	0400	Removal of Riprap-Loose Rock Sta 29+52 LT to 33+34 LT	717	CY
		Total =	717	CY
714	5035	Pipe Corr Steel .064IN 24IN Sta 32+18	40	LF
		Total =	40	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 32+18	2	EA
		Total =	2	EA



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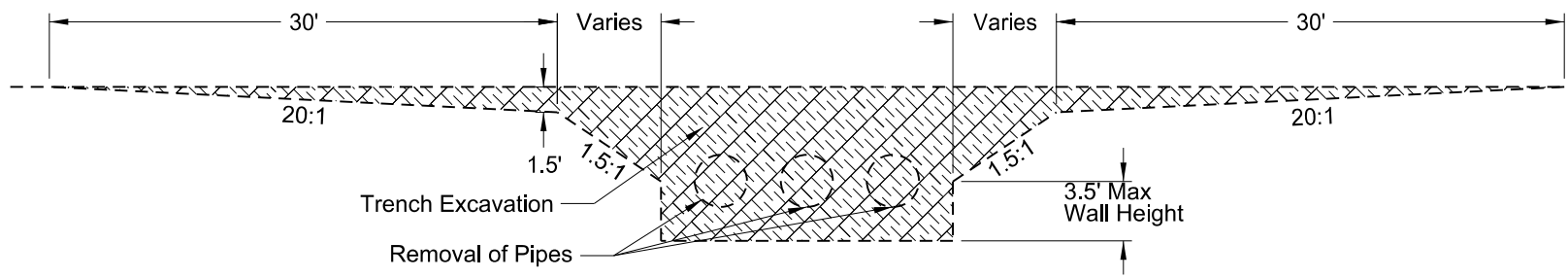
Site J5a

Inslope Erosion Repair

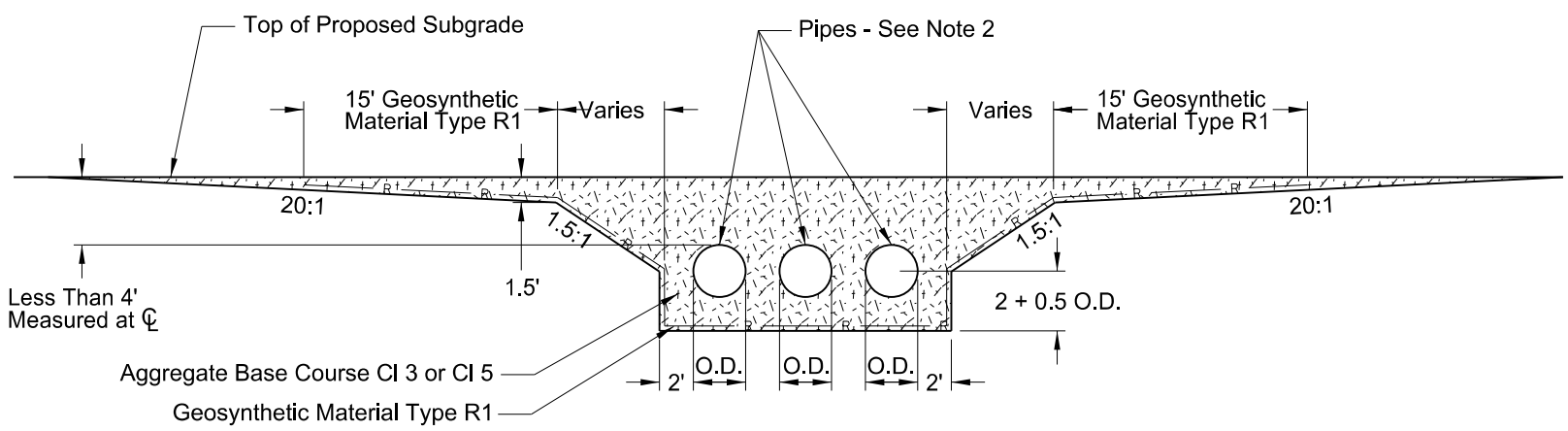
Missile Access Road - J5

Ward County

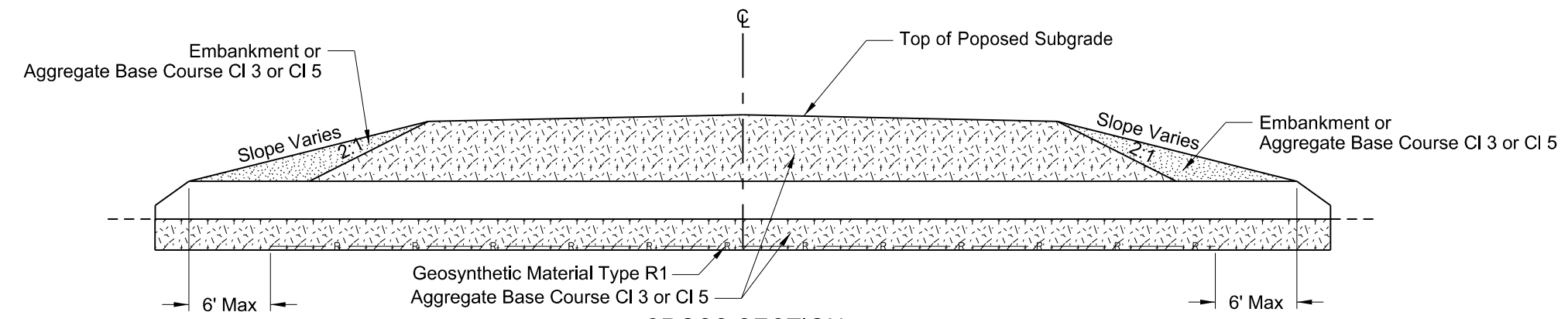
TRANSVERSE MAINLINE PIPE INSTALLATION DETAIL
MULTIPLE PIPES 4 FEET OR LESS BELOW TOP OF SUBGRADE



EXCAVATION DETAIL



INSTALLATION DETAIL



CROSS SECTION

Pay Items

- 1) Pipe*
- 2) Geosynthetic Material Type R1
- 3) Removal of Pipe (if required)

*Included in Pipe Pay Item

- 1) Pipe
- 2) Trench Excavation
- 3) Aggregate Base Course CI 3 or CI 5
- 4) Embankment

NOTES:

- 1) This drawing applies to new/replaced mainline and paved intersection roadway pipes only (including ramps). It does not include pipes in approaches.
- 2) Embankment may be either Borrow Excavation or Common Excavation - Type A

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
2-4-14	
REVISIONS	
DATE	CHANGE
1-21-15 9-18-15	Nomenclature Title Rewording

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