



North Dakota Department of Transportation

Thomas K. Sorel
Director

Doug Burgum
Governor

November 8, 2017

ADDENDUM 1 – JOB 39

TO: All prospective bidders on project SOIB-CPU-7-023(050)910, Job No. 39 scheduled for the November 17, 2017 bid opening.

The following plan and request for proposal revisions shall be made:

Plan Revisions:

See attached summary from William Doerr, PE, Brosz Engineering, Inc. dated October 31, 2017 for an explanation.

Request for Proposal Revisions:

Remove and replace pages 5 thru 13 of 16 of the Proposal pages located at the beginning of the Request for Proposal, with the enclosed pages revised 11/7/2017.

The following changes were made to the Bid Items:

Spec No.	Code No.	Description	Description of Change
202	0130	REMOVAL OF CURB AND GUTTER	Increased from 327 to 417 LF
202	0312	REMOVE EXISTING FENCE	Added Bid Item at 182 LF
255	0103	ECB TYPE 3	Increased from 3,876 to 3,906 SY
261	0112	FIBER ROLLS 12IN	Increased from 10,795 to 10,855 LF
261	0113	REMOVE FIBER ROLLS 12IN	Increased from 5,520 to 5,550 LF
714	4116	PIPE CONDUIT 36IN-APPROACH	Increased from 163 to 343 LF
714	4121	PIPE CONDUIT 42IN-STORM DRAIN	Decreased from 208 to 100 LF
714	4122	PIPE CONDUIT 42IN-APPROACH	Increased from 230 to 338 LF
714	4125	PIPE CONDUIT 42IN	Added Bid Item at 126 LF
714	4126	PIPE CONDUIT 48IN-STORM DRAIN	Decreased from 1,132 to 522 LF
714	4128	PIPE CONDUIT 48IN-APPROACH	Added Bid Item at 484 LF
714	4276	PIPE CONDUIT ARCH 58IN X 36IN-APPROACH	Removed Bid Item
752	0922	FENCE REMOVE AND RESET	Removed Bid Item
OPTION 1			
203	0101	COMMON EXCAVATION-TYPE A	Increased from 62,316 to 66,080 CY
203	0109	TOPSOIL	Increased from 26,271 to 26,340 CY
203	0140	BORROW-EXCAVATION	Increased from 33,084 to 36,844 CY
216	0100	WATER	Increased from 1,197 to 1,272 M GAL
748	0140	CURB & GUTTER TYPE I	Increased from 10,080 to 10,170 LF
OPTION 2			
203	0101	COMMON EXCAVATION-TYPE A	Increased from 66,080 to 69,843 CY
203	0109	TOPSOIL	Increased from 27,038 to 27,107 CY
203	0140	BORROW-EXCAVATION	Increased from 26,699 to 30,459 CY

608 East Boulevard Avenue • Bismarck, North Dakota 58505-0700

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Addendum 1

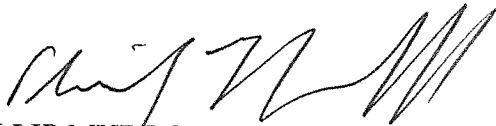
Job 39, November 17, 2017 Bid Opening

Page 2 of 2

Spec No.	Code No.	Description	Description of Change
216	0100	WATER	Increased from 1,486 to 1,561 M GAL
748	0140	CURB & GUTTER TYPE I	Increased from 10,080 to 10,170 LF

Remove the placeholder for SP 5190(14) PERMITS AND ENVIRONMENTAL CONSIDERATIONS and insert SP 5190(14) PERMITS AND ENVIRONMENTAL CONSIDERATIONS.

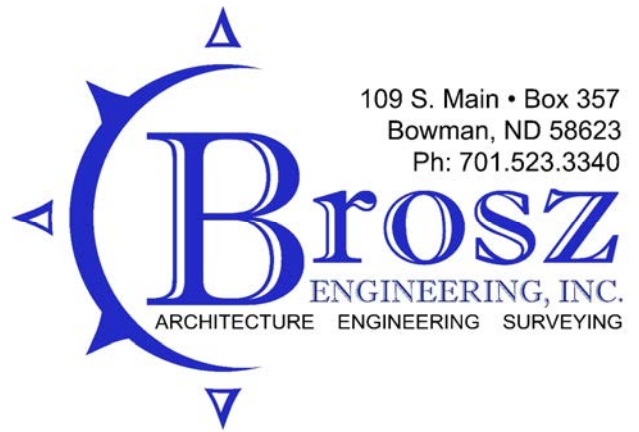
This addendum is to be incorporated into the bidder's proposal for this project. AASHTOWare Project Bids files should be updated by downloading the addendum file from the Bid Express on-line bidding exchange at <http://www.bidx.com/> and load it into the AASHTOWare Project Bids program.



PHILLIP MURDOFF – CONSTRUCTION SERVICES ENGINEER

80:jwj

Enclosure



October 31, 2017

**ADDENDUM 1
JOB NO. 39**

TO: All prospective bidders and suppliers on Project SOIB-CPU-7-023(050)910, Job No. 39 in McKenzie County, scheduled for the November 17, 2017 bid opening.

The following plan revisions shall be made:

Plan Revisions:

Remove and replace sheets 6-1, 8-1, 8-2, 8-3, 11-1, 11-9, 11-17, 20-9, 40-2, 51-1 thru 51-5, 60-1, 60-2, 60-4, 60-6, 60-8, 76-2, 76-3, 76-5, 77-2, 77-3, 77-5, 82-2, 90-7, 90-15, 200-12-1, 200-16-1, 200-27-1, 200-41-1, 200-12-2, 200-16-2, 200-27-2, 200-40-2 and 200-1-B thru 200-6-B.

Supplemental Design Data (SDD):

Remove and replace the updated Supplemental Design Data.

Section 6, Sheet 1: The excess excavation quantities in plan note 203-P01 were revised.

Section 8, Sheet 1: The quantities for the following bid items were updated:
202-0130 Removal of Curb & Gutter; increased from 327 LF to 417 LF
202-0312 Remove Existing Fence; added 182 LF
255-0103 ECB Type 3; increased from 3,876 SY to 3,906 SY
261-0112 Fiber Roll 12IN; increased from 10,795 LF to 10,855 LF
261-0113 Remove Fiber Roll 12IN; increased from 5,520 LF to 5,550 LF

Section 8, Sheet 2: The quantities for the following bid items were updated:
714-4116 Pipe Conduit 36IN-Approach; increased from 163 LF to 343 LF
714-4121 Pipe Conduit 42IN-Storm Drain; decreased from 208 LF to 100 LF
714-4122 Pipe Conduit 42IN-Approach; increased from 230 LF to 338 LF
714-4125 Pipe Conduit 48IN; added 126 LF
714-7126 Pipe Conduit 48IN-Storm Drain; decreased from 1,132 LF to 522 LF
714-4128 Pipe Conduit 48IN-Approach; added 484 LF
714-4276 Pipe Conduit Arch 58IN X 36IN-Approach; removed 106 LF
752-0922 Fence Remove & Reset; removed 140 LF

- Section 8, Sheet 3: The quantities for the following bid items were updated for Option #1 – Concrete Surfacing:
- 203-0101 Common Excavation-Type A; increased from 62,316 CY to 66,080 CY
 - 203-0109 Topsoil; increased from 26,271 CY to 26,340 CY
 - 203-0140 Borrow-Excavation; increased from 33,084 CY to 36,844 CY
 - 216-0100 Water; increased from 1,197 M GAL to 1,272 M GAL
 - 748-0140 Curb & Gutter-Type I; increased from 10,080 LF to 10,170 LF
- The quantities for the following bid items were updated for Option #2 – Asphalt Surfacing:
- 203-0101 Common Excavation-Type A; increased from 66,080 CY to 69,843 CY
 - 203-0109 Topsoil; increased from 27,038 CY to 27,107 CY
 - 203-0140 Borrow-Excavation; increased from 26,699 CY to 30,459 CY
 - 216-0100 Water; increased from 1,486 M GAL to 1,561 M GAL
 - 748-0140 Curb & Gutter-Type I; increased from 10,080 LF to 10,170 LF
- Section 11, Sheet 1: The earthwork quantities for the Temporary Bypass were updated in the summary table for Option 1.
- Section 11, Sheet 9: The earthwork quantities for the Temporary Bypass were updated in the summary table for Option 2.
- Section 11, Sheet 17: The Temporary Bypass end area values and mass haul diagram were updated.
- Section 20, Sheet 9: The ECB Type 3 quantity table was updated.
- Section 40, Sheet 2: The Removal of Curb & Gutter quantity was updated to accommodate the installation of the temporary bypass.
- Section 51, Sheet 1-5: The allowable pipe list was updated.
- Section 60, Sheet 1: The pipe conduit bid items were changed.
- Section 60, Sheet 2: The pipe conduit bid items were changed.
- Section 60, Sheet 4: The pipe conduit bid items were changed.
- Section 60, Sheet 6: The Pipe Conduit Arch 58IN x 36IN Approach bid item was changed to Pipe Conduit 36IN Approach.
- Section 60, Sheet 8: The horizontal and vertical alignment for the temporary bypass were updated. The bid item for Remove & Reset Fence was changed to Remove Existing Fence.
- Section 76, Sheet 2: The grading limits for the temporary bypass were updated.
- Section 76, Sheet 3: An additional fiber roll was added to the approach pipe at Station 601+42 Rt.

- Section 76, Sheet 5: The Fiber Roll 12IN quantity and the Remove Fiber Roll 12IN quantity were updated.
- Section 77, Sheet 2: The grading limits for the temporary bypass were updated.
- Section 77, Sheet 3: An additional fiber roll was added to the approach pipe at Station 601+42 Rt.
- Section 77, Sheet 5: The Fiber Roll 12IN quantity and the Remove Fiber Roll 12IN quantity were updated.
- Section 82, Sheet 2: The survey data for the temporary bypass was updated.
- Section 90, Sheet 7: The installation limits and quantity for Curb & Gutter Type I were updated to accommodate the installation of the temporary bypass.
- Section 90, Sheet 15: The installation limits and quantity for Curb & Gutter Type I were updated to accommodate the installation of the temporary bypass.
- Section 200, Sheets 12-1, 16-1, 27-1, 41-1, 12-2, 16-2, 27-2 & 40-2:
The approach pipe labels were updated.
- Section 200, Sheets 1-B thru 6-B:
The temporary bypass cross-sections were updated.

This Addendum is to be incorporated into the bidder's proposal for this project.

Sincerely,



William Doerr, PE
Project Engineer
Brosz Engineering, Inc.

BID ITEMS

Project: SOIB-CPU-7-023(050)910 (PCN-21172)

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	201	0370	REMOVAL OF TREES 10IN	EA	2.				
004	201	0380	REMOVAL OF TREES 18IN	EA	2.				
005	201	0390	REMOVAL OF TREES 30IN	EA	10.				
006	202	0105	REMOVAL OF STRUCTURE	L SUM	1.				
007	202	0114	REMOVAL OF CONCRETE PAVEMENT	SY	999.				
008	202	0130	REMOVAL OF CURB & GUTTER	LF	417.				
009	202	0136	REMOVAL OF PAVEMENT	TON	14,915.				
010	202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	1,350.				
011	202	0312	REMOVE EXISTING FENCE	LF	182.				
012	210	0050	BOX CULVERT EXCAVATION	EA	1.				
013	210	0210	FOUNDATION FILL	CY	2,612.				
014	210	0405	FOUNDATION PREPARATION-BOX CULVERT	EA	1.				
015	216	0100	WATER	M GAL	179.				
016	230	0165	SUBGRADE PREPARATION-TYPE A-12IN	STA	57.100				

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
017	251	0200	SEEDING CLASS II	ACRE	20.350				
018	253	0201	HYDRAULIC MULCH	ACRE	20.350				
019	253	0301	BONDED FIBER MATRIX	ACRE	18.050				
020	255	0103	ECB TYPE 3	SY	3,906.				
021	256	0200	RIPRAP GRADE II	CY	355.				
022	261	0112	FIBER ROLLS 12IN	LF	10,855.				
023	261	0113	REMOVE FIBER ROLLS 12IN	LF	5,550.				
024	302	0050	TRAFFIC SERVICE AGGREGATE	TON	8,021.				
025	302	0100	SALVAGED BASE COURSE	TON	4,401.				
026	550	0305	9IN NON-REINF CONCRETE PVMT CL AE-DOWELED	SY	6,196.				
027	606	1412	14FT X 12FT PRECAST RCB CULVERT	LF	151.				
028	606	3412	DBL 14FT X 12FT PRECAST RCB CULVERT	LF	151.				
029	606	7412	DBL 14FT X 12FT PRECAST RCB END SECTION	EA	2.				
030	702	0100	MOBILIZATION	L SUM	1.				
031	704	0100	FLAGGING	MHR	2,500.				
032	704	1000	TRAFFIC CONTROL SIGNS	UNIT	3,368.				

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
033	704	1052	TYPE III BARRICADE	EA	45.				
034	704	1060	DELINEATOR DRUMS	EA	109.				
035	704	1067	TUBULAR MARKERS	EA	124.				
036	704	1080	STACKABLE VERTICAL PANELS	EA	130.				
037	704	1081	VERTICAL PANELS-BACK TO BACK	EA	232.				
038	704	1500	OBLITERATION OF PAVEMENT MARKING	SF	22.				
039	706	0400	FIELD OFFICE	EA	1.				
040	706	0500	AGGREGATE LABORATORY	EA	1.				
041	708	1540	INLET PROTECTION-SPECIAL	EA	46.				
042	708	1541	REMOVE INLET PROTECTION-SPECIAL	EA	46.				
043	709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY	960.				
044	709	0151	GEOSYNTHETIC MATERIAL TYPE R1	SY	1,640.				
045	709	0155	GEOSYNTHETIC MATERIAL TYPE RR	SY	699.				
046	714	3030	END SECT-CONC REINF 30IN	EA	1.				
047	714	4092	PIPE CONDUIT 12IN-STORM DRAIN	LF	16.				
048	714	4099	PIPE CONDUIT 18IN-APPROACH	LF	65.				

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
049	714	4101	PIPE CONDUIT 18IN-STORM DRAIN	LF	674.				
050	714	4106	PIPE CONDUIT 24IN-APPROACH	LF	119.				
051	714	4107	PIPE CONDUIT 24IN-STORM DRAIN	LF	941.				
052	714	4116	PIPE CONDUIT 36IN-APPROACH	LF	343.				
053	714	4117	PIPE CONDUIT 36IN-STORM DRAIN	LF	100.				
054	714	4120	PIPE CONDUIT 42IN	LF	80.				
055	714	4121	PIPE CONDUIT 42IN-STORM DRAIN	LF	100.				
056	714	4122	PIPE CONDUIT 42IN-APPROACH	LF	338.				
057	714	4125	PIPE CONDUIT 48IN	LF	126.				
058	714	4126	PIPE CONDUIT 48IN-STORM DRAIN	LF	522.				
059	714	4128	PIPE CONDUIT 48IN-APPROACH	LF	484.				
060	714	4155	PIPE CONDUIT 84IN	LF	100.				
061	714	5315	PIPE CORR STEEL .109IN 42IN	LF	36.				
062	714	5330	PIPE CORR STEEL .109IN 60IN	LF	84.				
063	714	9659	REMOVE & RELAY PIPE-ALL TYPES & SIZES	LF	68.				
064	714	9660	REMOVE & RELAY END SECTION-ALL TYPE & SIZES	EA	6.				

BID ITEMS

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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
065	720	0110	RIGHT OF WAY MARKERS	EA	13.				
066	720	0125	ALIGNMENT MONUMENTS	EA	1.				
067	720	0130	IRON PIN R/W MONUMENTS	EA	7.				
068	720	0135	IRON PIN REFERENCE MONUMENTS	EA	2.				
069	722	3510	INLET-TYPE 2	EA	29.				
070	722	3701	INLET SPECIAL-TYPE 2 48IN	EA	2.				
071	722	3761	INLET SPECIAL-TYPE 2 60IN	EA	8.				
072	722	3766	INLET SPECIAL-TYPE 2 72IN	EA	6.				
073	722	3768	INLET SPECIAL-TYPE 2 84IN	EA	2.				
074	722	6200	ADJUST MANHOLE	EA	1.				
075	722	6240	ADJUST UTILITY APPURTENANCE	EA	2.				
076	722	6695	AIR RELIEF VALVE & MANHOLE	EA	1.				
077	724	0210	FITTINGS-DUCTILE IRON	LBS	662.				
078	724	0270	REMOVE GATE VALVE & BOX	EA	1.				
079	724	0300	GATE VALVE & BOX 6IN	EA	3.				
080	724	0310	GATE VALVE & BOX 8IN	EA	4.				

BID ITEMS

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
081	724	0314	GATE VALVE & BOX 12IN	EA	2.				
082	724	0400	HYDRANT-INSTALL 6IN	EA	2.				
083	724	0807	PLUG 8IN WATERMAIN	EA	3.				
084	724	0810	WATERMAIN 6IN PVC	LF	71.				
085	724	0830	WATERMAIN 8IN PVC	LF	2,617.				
086	724	0850	WATERMAIN 12IN PVC	LF	112.				
087	724	0944	CONNECTION TO EXISTING MAIN	EA	9.				
088	724	0960	WATER SERVICE CONNECTION 2IN	EA	2.				
089	724	6825	8IN 45DEG BEND	EA	10.				
090	724	6826	8IN 90DEG BEND	EA	1.				
091	724	6999	6IN 22.5DEG BEND	EA	1.				
092	724	7010	8IN X 6IN REDUCER	EA	2.				
093	748	0140	CURB & GUTTER-TYPE I	LF	2,171.				
094	750	0115	SIDEWALK CONCRETE 4IN	SY	6,642.				
095	750	0200	CONCRETE MEDIAN PAVING	SY	65.				
096	750	2115	DETECTABLE WARNING PANELS	SF	220.				

BID ITEMS

Project: SOIB-CPU-7-023(050)910 (PCN-21172)

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
097	752	0660	FENCE CHAIN LINK REMOVE & RESET	LF	495.				
098	752	2110	RESET VEHICLE GATE	EA	1.				
099	754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	115.600				
100	754	0112	FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	91.400				
101	754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	366.700				
102	754	0592	RESET SIGN PANEL	EA	1.				
103	754	0805	OBJECT MARKERS - CULVERTS	EA	78.				
104	762	0122	PREFORMED PATTERNED PVMT MK-MESSAGE(GROOVED)	SF	448.				
105	762	1305	PREFORMED PATTERNED PVMT MK 4IN LINE-GROOVED	LF	17,576.				
106	762	1307	PREFORMED PATTERNED PVMT MK 6IN LINE-GROOVED	LF	652.				
107	762	1309	PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED	LF	2,485.				
108	762	1325	PREFORMED PATTERNED PVMT MK 24IN LINE-GROOVED	LF	281.				
109	764	2020	REMOVE 3-CABLE GUARDRAIL & POSTS	LF	313.				
110	770	0001	LIGHTING SYSTEM	EA	1.				
111	900	1000	TEMPORARY STREAM DIVERSION	EA	1.				
112	920	1500	DUST PALLIATIVE MATERIAL	GAL	17,682.				

BID ITEMS

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
			SUBTOTAL						
OPTION 1									
113	203	0101	COMMON EXCAVATION-TYPE A	CY	66,080.				
114	203	0109	TOPSOIL	CY	26,340.				
115	203	0140	BORROW-EXCAVATION	CY	36,844.				
116	216	0100	WATER	M GAL	1,272.				
117	302	0100	SALVAGED BASE COURSE	TON	12,148.				
118	430	0500	COMMERCIAL GRADE HOT MIX ASPHALT	TON	234.				
119	550	0305	9IN NON-REINF CONCRETE PVMT CL AE-DOWELED	SY	22,679.				
120	748	0140	CURB & GUTTER-TYPE I	LF	10,170.				
121	748	1020	VALLEY GUTTER 36IN	SY	182.				
			SUBTOTAL OPTION 1						
OPTION 2									
122	203	0101	COMMON EXCAVATION-TYPE A	CY	69,843.				

BID ITEMS

Project: SOIB-CPU-7-023(050)910 (PCN-21172)

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
123	203	0109	TOPSOIL	CY	27,107.				
124	203	0140	BORROW-EXCAVATION	CY	30,459.				
125	216	0100	WATER	M GAL	1,561.				
126	302	0100	SALVAGED BASE COURSE	TON	27,886.				
127	401	0050	TACK COAT	GAL	2,261.				
128	401	0060	PRIME COAT	GAL	5,882.				
129	401	0160	BLOTTER MATERIAL CL 44	TON	185.				
130	430	0045	SUPERPAVE FAA 45	TON	7,793.				
131	430	1000	CORED SAMPLE	EA	56.				
132	430	5828	PG 58-28 ASPHALT CEMENT	TON	167.				
133	430	6434	PG 64-34 ASPHALT CEMENT	TON	309.				
134	706	0550	BITUMINOUS LABORATORY	EA	1.				
135	706	0600	CONTRACTOR'S LABORATORY	EA	1.				
136	748	0140	CURB & GUTTER-TYPE I	LF	10,170.				
137	748	1020	VALLEY GUTTER 36IN	SY	182.				
			SUBTOTAL OPTION 2						

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

PERMITS AND ENVIRONMENTAL CONSIDERATIONS

PROJECT NUMBER: SOIB-CPU-7-023(050)910 - PCN 21172

This Special Provision incorporates the US Army Corps of Engineers (USACE) Nationwide Section 404 Permit and the US Fish and the Watford City Floodplain Permit obtained by the North Dakota Department of Transportation.

The Contractor shall be responsible for complying with all the terms and conditions as contained in the attached Fact Sheets and Regional Conditions. Bidders shall become familiar with all standard conditions and special conditions when submitting their bid for this project.

- **Section 404 Permit**

The Section 404 Permit number NWO-2016-00223-BIS authorizes fill within USACE jurisdictional waters. This 404 permit authorizes 1.85 acres of temporary and 2.22 acres of permanent jurisdictional wetland impacts. Temporary impacts were assumed by the designer and will be restored to preconstruction contours.

See the Section 75 sheets of the design plans for the permitted USACE impact areas and onsite mitigation locations. The Section 404 Permit is attached.

- **Floodplain Permit**

Floodplain Permit number 2017-003 authorizes impacts within the FEMA mapped 100-year floodplain in Watford City. The floodplain permit and FEMA flood insurance rate maps are attached.

The contractor is responsible for impacts not listed in the plans and which are not authorized by the attached Permit(s) obtained by the NDDOT.

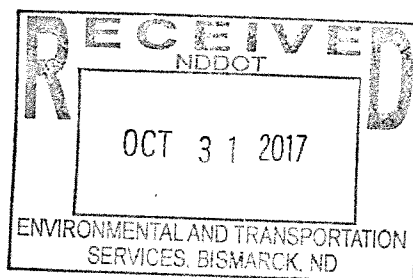


DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
NORTH DAKOTA REGULATORY OFFICE
3319 UNIVERSITY DRIVE
BISMARCK ND 58504-6640

October 27, 2017

NWO-2016-00223-BIS

North Dakota Department of Transportation
Attn: Mr. Steve Kessler
608 E Boulevard Avenue
Bismarck, North Dakota 58505-0700



Dear Mr. Kessler:

We are responding to your 09/25/2017 request for a Department of the Army permit for roadway improvements on North Dakota Highway 23A (PCN 21172). The project site is located in Section 19, Township 150 North, Range 98 West, Latitude 47.796496°, Longitude -103.262890°, McKenzie County, North Dakota.

Based on the information you provided to this office, work includes widening the roadway, installation of storm drains, culverts, and box culverts with riprap. As a result of construction, 2.22 acres of wetlands will be permanently impacted and 1.85 acres will be temporarily impacted. We have determined activities in waters of the U.S. associated with the project are authorized by Nationwide Permit Number (NWP) NWP 23 Approved Categorical Exclusions, found in the January 6, 2017 Federal Register (82 FR 1860), Reissuance of Nationwide Permits. Enclosed is a fact sheet that fully describes this Nationwide Permit and lists the General, Regional and Water Quality Conditions that must be adhered to for this authorization to remain valid. **Please note that deviations from the original plans and specifications of your project could require additional authorization from this office.**

This determination is applicable only to the permit program administered by the Corps of Engineers. It does not eliminate the need to obtain other Federal, state, tribal and local approvals before beginning work.

You are responsible for all work accomplished in accordance with the terms and conditions of the Nationwide Permit, **including the Regional Conditions specific to projects undertaken in North Dakota.** Information about the NWP and regional conditions are available on our website at <http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/NorthDakota>. If a contractor or other authorized representative will be accomplishing the work authorized by the Nationwide Permit on your behalf, it is strongly recommended that they be provided a copy of this letter and the attached conditions so that they are aware of the

limitations of the applicable Nationwide Permit. Any activity that fails to comply with all of the terms and conditions of the Nationwide Permit will be considered unauthorized and subject to appropriate enforcement action.

In addition, your work must comply with the following special condition:

1. As indicated in the submitted Pre-Construction Notification (PCN), 0.39 acres of credits must be deducted from the Foss Mitigation Bank for Wetland 3. The North Dakota Department of Transportation must update their ledger to reflect this deduction.

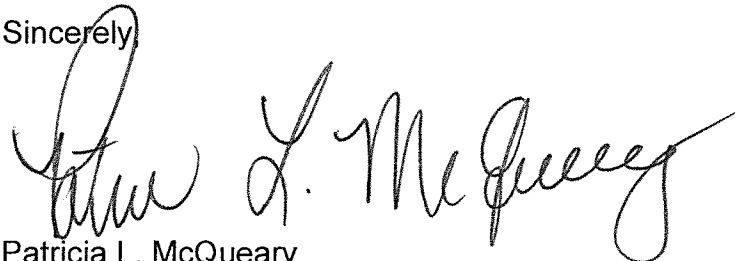
Within 30 days after completion of the authorized work, you must sign the enclosed Compliance Certification and return it to this office.

This verification will be valid until **March 18, 2022**. If the nationwide permit is modified, suspended, or revoked prior to this date, but is reissued without modification or the activity complies with any subsequent modification, this authorization remains valid until the expiration date. All of the existing nationwide permits are scheduled to be modified, reissued, or revoked prior to **March 18, 2022**. It is incumbent upon you to remain informed of changes to the nationwide permits. We will issue a public notice when the nationwide permits are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation to complete the activity under the present terms and conditions.

The Omaha District, North Dakota Regulatory Office is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete our Customer Service Survey found on our website at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. If you do not have Internet access, you may call and request a paper copy of the survey that you can complete and return to us by mail or fax.

Please refer to identification number NWO-2016-00223-BIS in any correspondence concerning this project. If you have any questions, please contact Zackary Poetzsch by email at Zackary.M.Poetzsch@usace.army.mil, or telephone at (701) 255-0015 X 2002.

Sincerely,



Patricia L. McQueary
Regulatory Program Manager
North Dakota

Enclosure

COMPLIANCE CERTIFICATION

Permit File Name: Junction US 85B to ND 23B; Watford City; McKenzie County; PCN 21172; SS-7-023(050)910; Brosz Engineering

Action ID: NWO-2016-00223-BIS

Nationwide Permit Number: NWP 23 Approved Categorical Exclusions.

Permittee: North Dakota Department of Transportation
Attn: Mr. Steve Kessler
608 E Boulevard Avenue
Bismarck, North Dakota 58505-0700

County: McKenzie County

Date of Verification: October 27, 2017

Within 30 days after completion of the activity authorized by this permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers, Omaha District
North Dakota Regulatory Office
3319 University Drive
Bismarck, North Dakota 58504
CENWO-OD-RND@usace.army.mil

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with the terms and conditions of the permit your authorization may be suspended, modified, or revoked. If you have any questions about this certification, please contact the U.S. Army Corps of Engineers.

* * * * *

I hereby certify that the work authorized by the above-referenced permit, including all the required mitigation, was completed in accordance with the terms and conditions of the permit verification.

Permittee Signature

Date

**FACT SHEET
NATIONWIDE PERMIT 23
(2017)**

APPROVED CATEGORICAL EXCLUSIONS

Activities undertaken, assisted, authorized, regulated, funded, or financed, in whole or in part, by another Federal agency or department where:

(a) That agency or department has determined, pursuant to the Council on Environmental Quality's implementing regulations for the National Environmental Policy Act (40 CFR part 1500 et seq.), that the activity is categorically excluded from the requirement to prepare an environmental impact statement or environmental assessment analysis, because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment; and

(b) The Office of the Chief of Engineers (Attn: CECW-CO) has concurred with that agency's or department's determination that the activity is categorically excluded and approved the activity for authorization under NWP 23.

The Office of the Chief of Engineers may require additional conditions, including pre-construction notification, for authorization of an agency's categorical exclusions under this NWP.

Notification: Certain categorical exclusions approved for authorization under this NWP require the permittee to submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 32). The activities that require pre-construction notification are listed in the appropriate Regulatory Guidance Letters. (Sections 10 and 404)

Note: The agency or department may submit an application for an activity believed to be categorically excluded to the Office of the Chief of Engineers (Attn: CECW-CO).

Prior to approval for authorization under this NWP of any agency's activity, the Office of the Chief of Engineers will solicit public comment. As of the date of issuance of this NWP, agencies with approved categorical exclusions are: the Bureau of Reclamation, Federal Highway Administration, and U.S. Coast Guard. Activities approved for authorization under this NWP as of the date of this notice are found in Corps Regulatory Guidance Letter 05-07, which is available at: <http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl05-07.pdf>. Any future approved categorical exclusions will be announced in Regulatory Guidance Letters and posted on this same Web site.

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/ or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain

permit authorization under one or more NWP, or who is currently relying on an existing or prior permit authorization under one or more NWP, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation.

- (a) No activity may cause more than a minimal adverse effect on navigation.
- (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
- (c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements.

No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas.

Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas.

Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds.

No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material.

No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes.

No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects from Impoundments.

If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows.

To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains.

The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment.

Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls.

Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Fills.

Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance.

Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project.

The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers.

(a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.

17. Tribal Rights.

No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.

18. Endangered Species.

(a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre- construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. In cases where the non- Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species- specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where “take” means to harass, harm, pursue, hunt,

shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take” means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide Web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.nmfs.noaa.gov/pr/species/esa/> respectively.

19. Migratory Birds and Bald and Golden Eagles.

The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether “incidental take” permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties.

(a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may

be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect. Where the non-Federal applicant has identified historic properties on which the activity might have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed.

(d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any

views obtained from the applicant, SHPO/ THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts.

If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters.

Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWP 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWP 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation.

The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre- construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally

appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns.

Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the

United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures.

To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality.

Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not

result in more than minimal degradation of water quality. *Specifically for North Dakota, the North Dakota Department of Health has denied water quality certification for all projects proposed to affect Class 1 and 1A rivers and streams, and classified lakes in Appendix I and II of the standards, and individual certification must be obtained. For projects proposed to affect any other waters, the North Dakota Department of Health has issued water quality certification provided the attached Construction and Environmental Disturbance Requirements are followed. The Standards may be found at <http://www.legis.nd.gov/information/acdata/pdf/33-16-02.1.pdf?2016031115632>*

On Tribal Lands, Water Quality Certification is denied for all Nationwide Permits. Applicants must work with EPA to obtain individual water quality certification. Contact: USEPA, Region 8, 401 Certification Program – 8WP-AAP, 1595 Wynkoop Street, Denver, Colorado 80202-1129. (303-312-6909)

26. Coastal Zone Management.

In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions.

The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits.

The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications.

If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

_____ (Transferee) _____ (Date)

30. Compliance Certification.

Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

- (a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;
- (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
- (c) The signature of the permittee certifying the completion of the activity and mitigation. The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States.

If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a “USACE project”), the prospective permittee must submit a pre- construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission is not authorized by NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification.

- (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of

receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no

more than minimal and to determine the need for compensatory mitigation or other mitigation measures. For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-Federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act.

(8) For non-Federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and

(10) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it

is an NWP PCN and must include all of the applicable information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) Agency Coordination:

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) All NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iv) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or email that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

**2017 NATIONWIDE PERMITS
REGIONAL CONDITIONS
OMAHA DISTRICT
STATE OF NORTH DAKOTA**

The following Nationwide Permit Regional Conditions will be used in the State of North Dakota. Regional conditions are placed on Nationwide Permits to ensure projects result in no more than minimal adverse impacts to the aquatic environment and to address local resource concerns.

1. Wetlands Classified as Peatlands – Revoked for use

All Nationwide Permits, with the exception of 3, 5, 20, 32, 38 and 45, are revoked for use in peatlands. Peatlands are permanently or seasonally saturated and inundated wetlands where conditions inhibit organic matter decomposition and allow for the accumulation of peat. Under cool, anaerobic, and acidic conditions, the rate of organic matter accumulation exceeds organic decay.

2. Wetlands Classified as Peatlands – Preconstruction Notification Requirement

For Nationwide Permits 3, 5, 20, 32, 38 and 45 permittees must notify the Corps in accordance with General Condition 32 (Pre-Construction Notification) prior to initiating any regulated activity impacting peatlands.

3. Waters Adjacent to Natural Springs – Preconstruction Notification Requirement

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 32 (Pre-Construction Notification) for regulated activities located within 100 feet of the water source in natural spring areas. For purposes of this condition, a spring source is defined as any location where there is flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

4. Missouri River, including Lake Sakakawea and Lake Oahe – Pre-construction Notification Requirement

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 32 (Pre-Construction Notification) prior to initiating any regulated activity occurring in or under the Missouri River, including Lake Sakakawea and Lake Oahe. In addition, any activity occurring in an off channel area (marinas, bays, etc.) of any of these waterbodies, a preconstruction notification is required.

5. Spawning Areas

Spawning restrictions and important fish habitat areas, if applicable, can be accessed on the North Dakota Game & Fish Department's website at:

<http://gf.nd.gov/gnf/conservation/docs/spawning-restriction-exclusions.pdf>

No regulated activity within the Red River of the North shall occur between 15 April and 1 July. Spawning season restrictions do not apply to projects involving dredging or other discharges of less than 25 cubic yards of material in any jurisdictional water.

6. Counter-Sinking Culverts and Associated Riprap – All Nationwide Permits

In streams with intermittent or perennial flow and a stable stream bed, culvert stream crossings shall be installed with the culvert invert set below the natural streambed according to the table below. This regional condition does not apply in instances where the lowering of the culvert invert would allow a headcut to migrate upstream of the project into an unaffected stream reach or result in lowering the elevation of the stream reach.

Riprap inlet and outlet protection shall be placed to match the height of the culvert invert.

Culvert Type	Drainage Area	Minimum Distance Culvert Invert Shall Be Lowered Below Stream Flow Line
All culvert types	≤ 100 acres	Not required
Pipe diameter <8.0 ft	100 to 640 acres	0.5 ft
Pipe diameter <8.0 ft	>640 acres	1.0 ft
Pipe diameter ≥ 8.0 ft	All drainage sizes	1.0 ft
Box culvert	All drainage sizes	1.0 ft

REGIONAL CONDITIONS APPLICABLE TO SPECIFIC NATIONWIDE PERMITS

Nationwide Permit 7 – Outfall Structures and Associated Intake Structures and Nationwide Permit 12 – Utility Line Activities.

Intake Structures – Intake screens with a maximum mesh opening of ¼-inch must be provided, inspected annually, and maintained. Wire, Johnson-like, screens must have a maximum distance between wires of 1/8-inch. Water velocity at the intake screen shall not exceed ½-foot per second.

Pumping plant sound levels will not exceed 75 dB at 50 feet.

Intakes located in Lake Sakakawea, above river mile 1519, and on the Yellowstone River, are subject to the following conditions:

- The intakes shall be floating.
- At the beginning of the pumping season, the intake shall be placed over water with a minimum depth of 20 feet.
- If the 20-foot depth is not attainable, then the intake shall be located over the deepest water available.

- If the water depth falls below six feet, the intake shall be moved to deeper water or the maximum intake velocity shall be limited to ¼ foot per second.

Intakes located in Lake Sakakawea, below river mile 1519, and the Missouri River below Garrison Dam are subject to the following conditions:

- The intakes shall be submerged.
- At the beginning of the pumping season, the intake will be placed at least 20 vertical feet below the existing water level.
- The intake shall be elevated 2 to 4 feet off the bottom of the river or reservoir bed.
- If the 20-foot depth is not attainable, then the intake velocity shall be limited to ¼-foot per second with intake placed at the maximum practicable attainable depth.

Intakes and associated utility lines that are proposed to cross sandbars in areas designated as piping plover critical habitat are prohibited.

Utility Lines

- Any temporary open trench associated with utility lines are to be closed within 30 days of excavation. This time limit may be extended by notifying the North Dakota Regulatory Office and receiving a written response that the extension is acceptable.

Nationwide Permit 11 – Temporary Recreational Structures – Boat Docks

To ensure that the work or structure shall not cause unreasonable obstruction to the free navigation of the navigable waters, the following conditions are required:

- No boat dock shall be located on a sandbar or barren sand feature. The farthest point riverward of a dock shall not exceed a total length of 30 feet from the ordinary high watermark. Information Note: Issuance of this permit does not supersede authorization required by the North Dakota State Engineer’s Office.
- Any boat dock shall be anchored to the top of the high bank.
- Any boat dock located within an excavated bay or marina that is off the main river channel may be anchored to the bay or marina bottom with spuds.

Section 10 Waters located in the State of North Dakota are:

Bois de Sioux River
 James River
 Missouri River
 Red River of the North
 Upper Des Lacs Lake
 Yellowstone River

Nationwide Permit 13 – Bank Stabilization

Permittees must notify the Corps in accordance with General Condition No. 32 (Pre-Construction Notification) prior to initiating any regulated activity. The notification must also include photo evidence of erosion in the area. Prohibited materials found at

<http://www.nwo.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/2034/Article/487696/prohibited-restricted-materials.aspx> cannot be used in waters of the United States.

Nationwide Permit 23 – Approved Categorical Exclusions

Permittees must notify the Corps in accordance with General Condition No. 32 (Pre-Construction Notification) prior to initiating any regulated activity. In addition to information required by General Condition 32 (Pre-Construction Notification), permittees must identify the approved categorical exclusion that applies and provide documentation that the project fits the categorical exclusion.

GENERAL CONDITIONS (REGIONAL ADDITIONS)

General Condition 32 Notification– Pre-construction Notification

Prospective permittees should be aware that a field aquatic resources delineation may be required for applications where notification is required in accordance with General Condition 32 (Pre-Construction Notification) and/or mitigation may be required. Specific guidelines outlining the aquatic resources delineation process in the State of North Dakota and the Corps 1987 Wetland Delineation Manual and applicable Regional supplements to the Manual can be accessed on the North Dakota Regulatory Office's website at:

<http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/NorthDakota.aspx>



NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov



Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

Surface Waters

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

Fill Material

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.

Environmental Health
Section Chief's Office
701.328.5150

Division of
Air Quality
701.328.5188

Division of
Municipal Facilities
701.328.5211

Division of
Waste Management
701.328.5166

Division of
Water Quality
701.328.5210



City of Watford City
**FLOODPLAIN
 DEVELOPMENT PERMIT**

Gray area to be completed by Floodplain Administrator:	Application #	Date Issued:	Date Compliant:
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PROPERTY INFORMATION

Legal Description (section, township, range, lot, etc.):
Property Address (if assigned) or GPS Coordinates (xx°xx'-xx.x"N,xxx°xx'xx.x"W):

CONTACT INFORMATION

Applicant / Developer / Contractor

Name:	Phone Number:	Email:
Mailing Address:		

Property Owner (if different than applicant)

Name:	Phone Number:	Email:
Mailing Address:		

Additional Contact / Engineer (if necessary)

Name:	Phone Number:	Email:
Mailing Address:		

PROPOSED DEVELOPMENT

Development is defined as: any man-made change to improve or un-improve real estate including building, filling, grading, paving, excavating, or storage of equipment or materials.

Please check all that apply:

BUILDING(S) (walled and roofed structure)

Activity:

- | | | | |
|--|--------------------------------------|---|---|
| <input type="checkbox"/> New Structure | <input type="checkbox"/> Alteration | <input type="checkbox"/> Removal/Demolition | <input type="checkbox"/> Other: (specify below) |
| <input type="checkbox"/> Addition | <input type="checkbox"/> Replacement | <input type="checkbox"/> Remodel/Renovate | _____ |

Structure Type:

- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Single Family Residential | <input type="checkbox"/> Combined Use | <input type="checkbox"/> Non-residential | <input type="checkbox"/> Other: (specify below) |
| <input type="checkbox"/> Multi-family Residential | <input type="checkbox"/> Manufactured Home | | _____ |

Complete for all building activity types: (Except New Structure)

Estimated Cost of Project: (labor and materials)	
Existing Market Value of Structure: (if applicable)	<input type="checkbox"/> Substantial Improvement (50% or more of market value)

(Continued on Page 2)



City of Watford City
**FLOODPLAIN
DEVELOPMENT PERMIT**

PROPOSED DEVELOPMENT

Please check all that apply:

DEVELOPMENT OTHER THAN BUILDING(S)

Activity:

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Fill Placement
(fill brought in from outside the floodplain) | <input type="checkbox"/> Landscaping
(cut and fill, borrow and placement) | <input type="checkbox"/> Removal of fill, embankment or dike |
| <input type="checkbox"/> Excavation
(where native material is removed from floodplain) | <input type="checkbox"/> Construction or maintenance
of a dike/levee/floodwall | <input type="checkbox"/> Watercourse alterations
(river/stream/channel modifications, rip rap) |
| <input checked="" type="checkbox"/> Road or bridge construction
(new, repair/replacement, realignment) | <input checked="" type="checkbox"/> Drainage improvements
(including culvert work) | <input type="checkbox"/> Mining
(removal of gravel, rock, fill, or other natural material) |
| <input checked="" type="checkbox"/> Installation of utilities
(water, sewer, gas, electric, communications) | <input type="checkbox"/> Tower construction
(communications tower, antennae) | <input type="checkbox"/> Well drilling
(water, oil, natural gas, etc.) |
| <input type="checkbox"/> Other: (Please specify) _____ | | |

Description of the extent to which a watercourse will be altered or relocated (if applicable):

See Attached Report & Plans

APPLICATION REQUIREMENTS

- SECTION 4.1* All applications require: Plans drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill storage materials, drainage facilities; and the location of the foregoing.
- SECTION 4.1 (3)* All applications involving flood-proofing require: Certification by a registered professional engineer or architect that the flood-proofing methods for any non-residential structure meet the flood-proofing criteria.
Elevation to which any structure is to be flood-proofed: _____ (determined by Floodplain Administrator)
- SECTION 5.3 (1)* All applications in the floodway require: Certification by a registered professional engineer or architect demonstrating that encroachments shall not result in any increase in flood levels during the occurrence or a base flood discharge.

* of Chapter XIV Watford City Municipal Code

APPLICANT SIGNATURE

By signing, I attest that this application is complete and accurate to the best of my knowledge. I understand the regulations of the City of Watford City as they pertain to this request. Other permits may be required to fulfill local, state, and federal regulatory requirements.

Steven Kessler

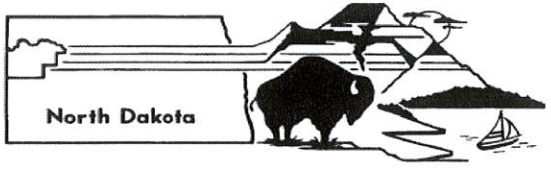
Digitally signed by Steven Kessler
DN: cn=Steven Kessler, o=NDDOT, ou, email=skessler@nd.gov, c=US
Date: 2017.11.06 09:31:57 -0600

Applicant Signature

11/6/17

Date

NOTE: After development is completed, an elevation certificate or non-residential flood-proofing certificate must be submitted to verify as-built conditions match the application. A certificate of compliance will be issued upon verification.



City of Watford City
**FLOODPLAIN
DEVELOPMENT PERMIT**



THIS PAGE IS TO BE COMPLETED BY FLOODPLAIN ADMINISTRATOR ONLY.

Application # <i>2017 - 003</i>	Legal Description of property: <i>ND Hwy 23A from Junction US 85B to ND 23B</i>
------------------------------------	--

FLOODPLAIN DETERMINATION *SS-7-023(050)910-PCN 21172*

Project Location: (check one)

Not located in a Special Flood Hazard Area.

Located in a Special Flood Hazard Area (A, AE, AO, or AH zones)

Located in Floodway.

Ground Elevation at Development Site: <i>Varies</i>	FIRM Zone: <i>38053C0917D</i> <i>38053C0916D</i>	FIRM Date: <i>9/2/2015</i> <i>9/2/2015</i>
Base Flood Elevation at Development Site: <i>2056-2061</i>	Lowest Floor Must Be Elevated to:	

PERMIT DETERMINATION

I have determined that the proposed development:

is in conformance with all provisions of Chapter XIV Flood Damage Ordinance within the City of Watford City Municipal Code of Ordinances.

is NOT in conformance with all provisions of Chapter XIV Flood Damage Ordinance within the City of Watford City Municipal Code of Ordinances, specifically:

Rick M. Jace

Floodplain Administrator Signature

11/7/17

Date

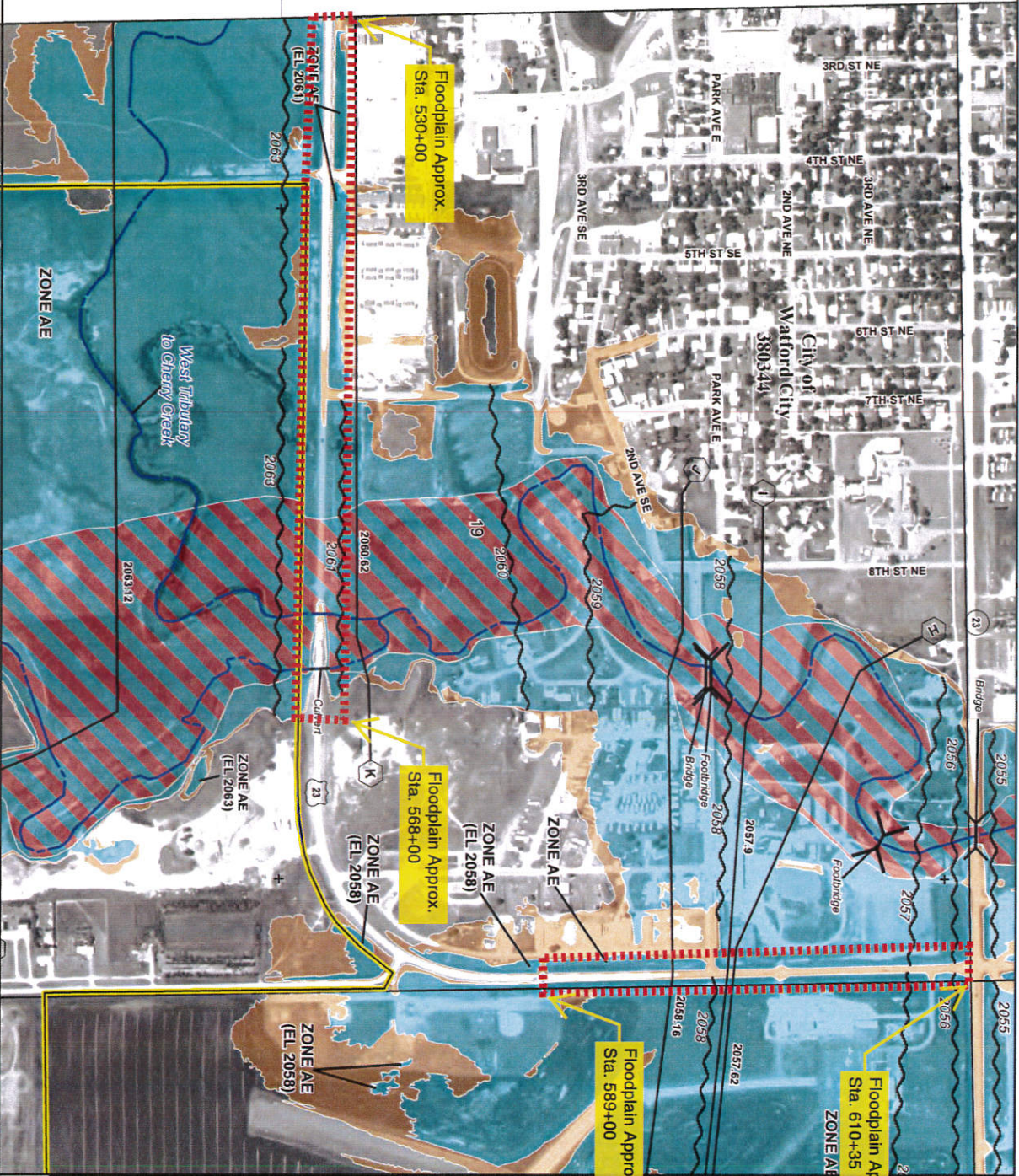
COMPLIANCE DETERMINATION

I hereby issue a certificate of compliance for this development. An elevation certificate or flood-proofing non-residential flood-proofing certificate is on file validating the terms of this permit.

Floodplain Administrator Signature

Date

556960000N



**REGIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP**

Floodplain Approx.
Sta. 610+35
ZONE AE

Floodplain Approx.
Sta. 589+00

Floodplain Approx.
Sta. 568+00
ZONE AE (EL. 2058)

Floodplain Approx.
Sta. 530+00

75

NDAL FLOOD INSURANCE PROGRAM
OPERATIONS UNIT

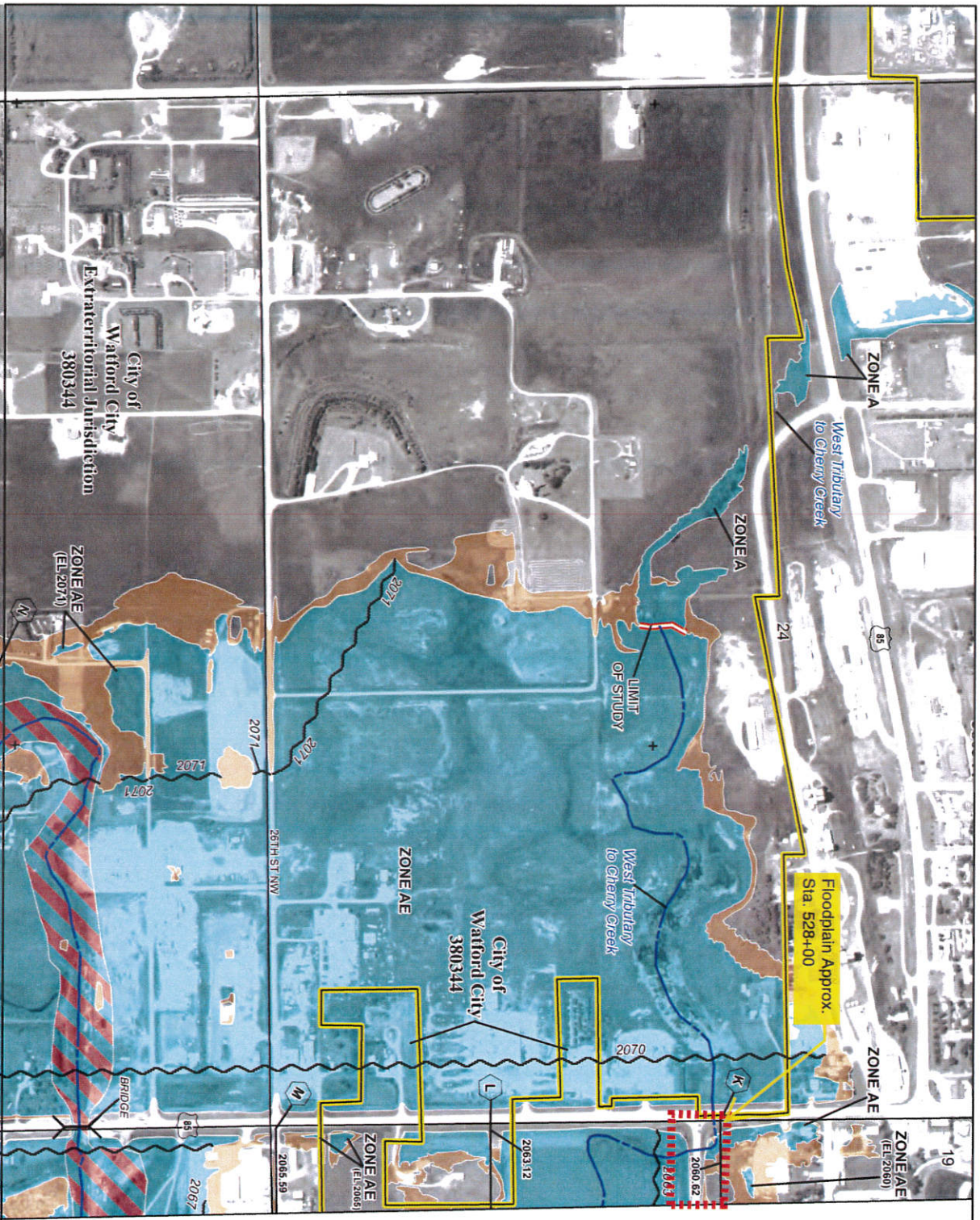
State of North Dakota
and County, NORTH DAKOTA
9/17/2025

NO.	NAME	DATE	BY
1	ADRIAN	09/17/2025	0



VERSION NUMBER: 2.2.2.1
APP NUMBER: 38053C093170
PRINT DATE: SEPTEMBER 2, 2025

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**NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP**

74

NATIONAL FLOOD INSURANCE PROGRAM
 FEDERAL EMERGENCY MANAGEMENT AGENCY
 4849 LBJ FREDERICKS BLVD
 WASHINGTON, DC 20548
 (202) 646-3000
 www.fema.gov

DATE 2/2/21
APP NUMBER 380344001460
OFFICIAL DATE SEPTEMBER 2, 2015

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-7-023(050)910	6	1

NOTES

- 100-P01 MCKENZIE COUNTY FAIR: Do not perform any construction activities between the intersections of 2nd Avenue SE and ND 23B during the 2018 McKenzie County Fair; July 5th, 6th and 7th. Provide and maintain full, two-way access to the Fairgrounds via the approach at Station 601+42 Lt. and the 2nd Avenue SE intersection.
- 105-110 PAVEMENT SWEEPING: Sweep paved areas that were used by construction traffic before opening these areas to public traffic. Sweep all newly constructed pavement no more than 24 hours before a scheduled final inspection. Use a vacuum or pick-up type sweeper to perform this work.
- 105-200 UTILITY COORDINATION: A utility coordination meeting is required.
- 105-P01 WATER LINE ADJUSTMENTS: Coordinate with McKenzie County Water Resource District and Western Area Water Supply Authority regarding the water main adjustments that are required from Station 589+00 Rt to 609+50 Rt. Phase your construction activities to allow them the opportunity and work area necessary to relocate their water mains by June 16, 2018.
- 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 "Salvaged Base Course."

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.
- 202-P01 REMOVAL OF PAVEMENT: The tonnage of "Removal of Pavement" is based on the existing typical section shown in Section 30. The tonnage includes the entire bituminous surfacing and the entire aggregate base except the bottom one inch. The quantity of "Removal of Pavement" has been deducted from the excavation quantity.
- 203-010 SHRINKAGE: 25 percent additional volume is included for shrinkage in earth embankment.

- 203-P01 COMMON EXCAVATION TYPE A: There will be approximately 28,559 CY and 27,606 CY of excess excavation for Options 1 and 2 respectively, as shown on the Earthwork Summary Tables in Section 11. Remove the excess excavation from the project. Include all costs to accomplish this work, including securing a Contractor furnished waste site, loading, hauling and disposing of the excess excavation, in the unit price bid for "Common Excavation-Type A."

Common Excavation will be measured by recross after each phase of the project.
- 203-P02 TEMPORARY BYPASS: The earthwork quantities necessary to construct the Temporary Bypass are shown in Phase 1 of the Earthwork Summary. The earthwork quantities necessary to remove the Temporary Bypass are shown in Phase 3 of the Earthwork Summary.
- 203-P03 CONTRACTOR FURNISHED BORROW: Furnish the Borrow Excavation material necessary to complete the project.
- 203-P04 PROCTORS: Determine the optimum moisture and density, as specified in ND T 180, for each type of material encountered that requires compaction control. Perform a multi-point test. Submit the results to the Engineer along with a split sample of each material.

The Engineer will perform comparison tests using the same procedure on the split sample. The Engineer's results will be used for determining in place density of material.
- 302-110 BASE COURSE: Trim base course as specified in Section 302.04 C.1, "Surface Tolerance Type B."
- 302-P01 TRAFFIC SERVICE AGGREGATE: Do not remove the Traffic Service Aggregate installed on the widened subgrade shown on Section 30; Sheet 4. Instead, leave this material in place to be used as embankment for the finished roadway section. The volume of Traffic Service Aggregate left in place is reflected in the earthwork quantities.

Remove the Traffic Service Aggregate installed on the Temporary Bypass shown on Section 30; Sheet 5. Include all costs to remove and dispose of the Traffic Service Aggregate in the unit price bid for "Traffic Service Aggregate."
- 430-100 HMA LONGITUDINAL JOINTS: Construct the joints within the final lift of pavement as detailed within this note. Place a longitudinal joint at the centerline of the roadway. Construct each lane and the adjoining shoulder using a single pass or a hot seam. A hot seam is defined as follows:
 - Constructed using two pavers simultaneously;
 - No more than 300 feet between pavers; and
 - Roll the seam between paver passes in a manner such that the seam is not visible.
- 430-P01 COMMERCIAL GRADE ASPHALT: Commercial Grade Asphalt and the associated Special Provision are only applicable to the contract being awarded for Option #1 – Concrete Surfacing.
- 704-100 TRAFFIC CONTROL SUPERVISOR: Provide a Traffic Control Supervisor.

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ESTIMATE OF QUANTITIES

Revised	10/31/17	STATE	PROJECT NO.	SECTION	SHEET
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SPEC	CODE	ITEM DESCRIPTION	UNIT	MAINLINE	CITY WATER	CITY STREET	TOTAL
103	0100	CONTRACT BOND	L SUM	1			1
201	0330	CLEARING & GRUBBING	L SUM	1			1
201	0370	REMOVAL OF TREES 10IN	EA	2			2
201	0380	REMOVAL OF TREES 18IN	EA	2			2
201	0390	REMOVAL OF TREES 30IN	EA	10			10
202	0105	REMOVAL OF STRUCTURE	L SUM	1			1
202	0114	REMOVAL OF CONCRETE PAVEMENT	SY	999			999
202	0130	REMOVAL OF CURB & GUTTER	LF	417			417
202	0136	REMOVAL OF PAVEMENT	TON	14,915			14,915
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	1,350			1,350
202	0312	REMOVE EXISTING FENCE	LF	182			182
210	0050	BOX CULVERT EXCAVATION	EA	1			1
210	0210	FOUNDATION FILL	CY	2,612			2,612
210	0405	FOUNDATION PREPARATION-BOX CULVERT	EA	1			1
216	0100	WATER	M GAL	179			179
230	0165	SUBGRADE PREPARATION-TYPE A-12IN	STA	57.1			57.1
251	0200	SEEDING CLASS II	ACRE	20.35			20.35
253	0201	HYDRAULIC MULCH	ACRE	20.35			20.35
253	0301	BONDED FIBER MATRIX	ACRE	18.05			18.05
255	0103	ECB TYPE 3	SY	3,906			3,906
256	0200	RIPRAP GRADE II	CY	355			355
261	0112	FIBER ROLLS 12IN	LF	10,855			10,855
261	0113	REMOVE FIBER ROLLS 12IN	LF	5,550			5,550
302	0050	TRAFFIC SERVICE AGGREGATE	TON	8,021			8,021
302	0100	SALVAGED BASE COURSE	TON	3,553		848	4,401
550	0305	9IN NON-REINF CONCRETE PVMT CL AE-DOWELED	SY	4,360		1,836	6,196
606	1412	14FT X 12FT PRECAST RCB CULVERT	LF	151			151
606	3412	DBL 14FT X 12FT PRECAST RCB CULVERT	LF	151			151
606	7412	DBL 14FT X 12FT PRECAST RCB END SECTION	EA	2			2
702	0100	MOBILIZATION	L SUM	1			1
704	0100	FLAGGING	MHR	2,500			2,500
704	1000	TRAFFIC CONTROL SIGNS	UNIT	3,368			3,368
704	1052	TYPE III BARRICADE	EA	45			45
704	1060	DELINEATOR DRUMS	EA	109			109
704	1067	TUBULAR MARKERS	EA	124			124
704	1080	STACKABLE VERTICAL PANELS	EA	130			130
704	1081	VERTICAL PANELS-BACK TO BACK	EA	232			232
704	1500	OBLITERATION OF PAVEMENT MARKING	SF	22			22
706	0400	FIELD OFFICE	EA	1			1
706	0500	AGGREGATE LAB	EA	1			1
708	1540	INLET PROTECTION-SPECIAL	EA	46			46
708	1541	REMOVE INLET PROTECTION-SPECIAL	EA	46			46
709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY	960			960
709	0151	GEOSYNTHETIC MATERIAL TYPE R1	SY	1,640			1,640
709	0155	GEOSYNTHETIC MATERIAL TYPE RR	SY	699			699
714	3030	END SECT-CONC REINF 30IN	EA	1			1
714	4092	PIPE CONDUIT 12IN-STORM DRAIN	LF	16			16
714	4099	PIPE CONDUIT 18IN-APPROACH	LF	65			65
714	4101	PIPE CONDUIT 18IN-STORM DRAIN	LF	674			674
714	4106	PIPE CONDUIT 24IN-APPROACH	LF	119			119
714	4107	PIPE CONDUIT 24IN-STORM DRAIN	LF	941			941

ESTIMATE OF QUANTITIES

Revised	10/31/17	STATE	PROJECT NO.	SECTION	SHEET
		ND	SS-7-023(050)910	8	2

<u>SPEC</u>	<u>CODE</u>	<u>ITEM DESCRIPTION</u>	<u>UNIT</u>	<u>MAINLINE</u>	<u>CITY WATER</u>	<u>CITY STREET</u>	<u>TOTAL</u>
714	4116	PIPE CONDUIT 36IN-APPROACH	LF	343			343
714	4117	PIPE CONDUIT 36IN-STORM DRAIN	LF	100			100
714	4120	PIPE CONDUIT 42IN	LF	80			80
714	4121	PIPE CONDUIT 42IN-STORM DRAIN	LF	100			100
714	4122	PIPE CONDUIT 42IN-APPROACH	LF	338			338
714	4125	PIPE CONDUIT 48IN	LF	126			126
714	4126	PIPE CONDUIT 48IN-STORM DRAIN	LF	522			522
714	4128	PIPE CONDUIT 48IN-APPROACH	LF	484			484
714	4155	PIPE CONDUIT 84IN	LF	100			100
714	5315	PIPE CORR STEEL .109IN 42IN	LF	36			36
714	5330	PIPE CORR STEEL .109IN 60IN	LF	84			84
714	9659	REMOVE & RELAY PIPE-ALL TYPES & SIZES	LF	68			68
714	9660	REMOVE & RELAY END SECTIONS-ALL TYPES & SIZES	LF	6			6
720	0110	RIGHT OF WAY MARKERS	EA	13			13
720	0125	ALIGNMENT MONUMENTS	EA	1			1
720	0130	IRON PIN R/W MONUMENTS	EA	7			7
720	0135	IRON PIN REFERENCE MONUMENTS	EA	2			2
722	3510	INLET-TYPE 2	EA	29			29
722	3701	INLET SPECIAL-TYPE 2 48IN	EA	2			2
722	3761	INLET SPECIAL-TYPE 2 60IN	EA	8			8
722	3766	INLET SPECIAL-TYPE 2 72IN	EA	6			6
722	3768	INLET SPECIAL-TYPE 2 84IN	EA	2			2
722	6200	ADJUST MANHOLE	EA	1			1
722	6240	ADJUST UTILITY APPURTENANCE	EA	2			2
722	6695	AIR RELIEF VALVE & MANHOLE	EA		1		1
724	0210	FITTINGS-DUCTILE IRON	LBS	412	250		662
724	0270	REMOVE GATE VALVE & BOX	EA	1			1
724	0300	GATE VALVE & BOX 6IN	EA	2	1		3
724	0310	GATE VALVE & BOX 8IN	EA	1	3		4
724	0314	GATE VALVE & BOX 12IN	EA	2			2
724	0400	HYDRANT-INSTALL 6IN	EA	2			2
724	0807	PLUG 8IN WATERMAIN	EA	3			3
724	0810	WATERMAIN 6IN PVC	LF	41	30		71
724	0830	WATERMAIN 8IN PVC	LF	40	2,577		2,617
724	0850	WATERMAIN 12IN PVC	LF	112			112
724	0944	CONNECTION TO EXISTING MAIN	EA	5	4		9
724	0960	WATER SERVICE CONNECTION 2IN	EA	2			2
724	6825	8IN 45.0 DEG BEND	EA		10		10
724	6826	8IN 90.0 DEG BEND	EA		1		1
724	6999	6IN 22.5 DEG BEND	EA		1		1
724	7010	8IN X 6IN REDUCER	EA		2		2
748	0140	CURB & GUTTER-TYPE I	LF	2,171			2,171
750	0115	SIDEWALK CONCRETE 4IN	SY	6,642			6,642
750	0200	CONCRETE MEDIAN PAVING	SY	65			65
750	2115	DETECTABLE WARNING PANELS	SF	220			220
752	0660	FENCE CHAIN LINK REMOVE & RESET	LF	495			495
752	2110	RESET VEHICLE GATE	EA	1			1
754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	115.6			115.6
754	0112	FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	91.4			91.4
754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	366.7			366.7
754	0592	RESET SIGN PANEL	EA	1			1

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ESTIMATE OF QUANTITIES

SPEC	CODE	ITEM DESCRIPTION	UNIT	MAINLINE	CITY WATER	CITY STREET	TOTAL
754	0805	OBJECT MARKERS - CULVERTS	EA	78			78
762	0122	PREFORMED PATTERNED PVMT MK-MESSAGE(GROOVED)	SF	448			448
762	1305	PREFORMED PATTERNED PVMT MK 4IN LINE-GROOVED	LF	17,576			17,576
762	1307	PREFORMED PATTERNED PVMT MK 6IN LINE-GROOVED	LF	652			652
762	1309	PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED	LF	2,485			2,485
762	1325	PREFORMED PATTERNED PVMT MK 24IN LINE-GROOVED	LF	281			281
764	2020	REMOVE 3-CABLE GUARDRAIL & POSTS	LF	313			313
770	0001	LIGHTING SYSTEM	EA	1			1
900	1000	TEMPORARY STREAM DIVERSION	EA	1			1
920	1500	DUST PALLIATIVE MATERIAL	GAL	17,682			17,682

Option #1 - Concrete Surfacing

203	0101	COMMON EXCAVATION-TYPE A	CY	66,080			66,080
203	0109	TOPSOIL	CY	26,340			26,340
203	0140	BORROW-EXCAVATION	CY	36,844			36,844
216	0100	WATER	M GAL	1,272			1,272
302	0100	SALVAGED BASE COURSE	TON	12,148			12,148
430	0500	COMMERCIAL GRADE HOT MIX ASPHALT	TON	234			234
550	0305	9IN NON-REINF CONCRETE PVMT CL AE-DOWELED	SY	22,679			22,679
748	0140	CURB & GUTTER-TYPE I	LF	10,170			10,170
748	1020	VALLEY GUTTER 36IN	SY	182			182

Option #2 - Asphalt Surfacing

203	0101	COMMON EXCAVATION-TYPE A	CY	69,843			69,843
203	0109	TOPSOIL	CY	27,107			27,107
203	0140	BORROW-EXCAVATION	CY	30,459			30,459
216	0100	WATER	M GAL	1,561			1,561
302	0100	SALVAGED BASE COURSE	TON	27,886			27,886
401	0050	TACK COAT	GAL	2,261			2,261
401	0060	PRIME COAT	GAL	5,882			5,882
401	0160	BLOTTER MATERIAL CL 44	TON	185			185
430	0045	SUPERPAVE FAA 45	TON	7,793			7,793
430	1000	CORED SAMPLE	EA	56			56
430	5828	PG 58-28 ASPHALT CEMENT	TON	167			167
430	6434	PG 64-34 ASPHALT CEMENT	TON	309			309
706	0550	BITUMINOUS LABORATORY	EA	1			1
706	0600	CONTRACTOR'S LABORATORY	EA	1			1
748	0140	CURB & GUTTER-TYPE I	LF	10,170			10,170
748	1020	VALLEY GUTTER 36IN	SY	182			182

Option 1 Earthwork Summary (Concrete Surfacing)

Alignment	Location	A	B	C = B-A	Topsoil (CY) [Pay Item]
		Common Excavation Type A (CY) [Pay Item]	Embankment (CY)	Borrow Excavation (CY) [Pay Item]	
PR23A	East/West Phase 1	10,602	31,471	20,869	7,699
PR23A	North/South Phase 1	6,384	9,393	3,009	3,057
Bypass	---	35	13,002	12,967	1,219
Totals		17,022	53,866	36,844	11,975

Alignment	Location	A	B	C = B-A	Topsoil (CY) [Pay Item]
		Common Excavation Type A (CY) [Pay Item]	Embankment (CY)	Borrow Excavation (CY) [Pay Item]	
PR23A	East/West Phase 2	11,075	9,951	-1,124	8,260
PR23A	North/South Phase 2	17,363	3,718	-13,645	6,105
Bypass	---	0	0	0	0
Totals		28,438	13,669	-14,769	14,365

Alignment	Location	A	B	C = B-A	Topsoil (CY) [Pay Item]
		Common Excavation Type A (CY) [Pay Item]	Embankment (CY)	Borrow Excavation (CY) [Pay Item]	
PR23A	East/West Phase 3	4,111	4,154	43	0
PR23A	North/South Phase 3	3,507	2,641	-866	0
Bypass	---	13,002	35	-12,967	0
Totals		20,620	6,830	-13,790	0

Note: 25 percent additional volume is included for shrinkage in earth embankment.

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Earthwork Summary
Option 1: Concrete Surfacing

ND23A

US85B to ND23B

Option 2 Earthwork Summary (Asphalt Surfacing)

Alignment	Location	A	B	C = B-A	Topsoil (CY) [Pay Item]
		Common Excavation Type A (CY) [Pay Item]	Embankment (CY)	Borrow Excavation (CY) [Pay Item]	
PR23A	East/West Phase 1	12,087	29,191	17,104	8,099
PR23A	North/South Phase 1	7,042	7,430	389	3,061
Bypass	---	35	13,002	12,967	1,219
Totals		19,164	49,623	30,459	12,378

Alignment	Location	A	B	C = B-A	Topsoil (CY) [Pay Item]
		Common Excavation Type A (CY) [Pay Item]	Embankment (CY)	Borrow Excavation (CY) [Pay Item]	
PR23A	East/West Phase 2	13,427	9,425	-4,002	8,644
PR23A	North/South Phase 2	18,671	3,762	-14,909	6,085
Bypass	---	0	0	0	0
Totals		32,098	13,187	-18,911	14,729

Alignment	Location	A	B	C = B-A	Topsoil (CY) [Pay Item]
		Common Excavation Type A (CY) [Pay Item]	Embankment (CY)	Borrow Excavation (CY) [Pay Item]	
PR23A	East/West Phase 3	3,146	5,727	2,581	0
PR23A	North/South Phase 3	2,433	4,124	1,690	0
Bypass	---	13,002	35	-12,967	0
Totals		18,581	9,886	-8,695	0

Note: 25 percent additional volume is included for shrinkage in earth embankment.

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Earthwork Summary
Option 2: Asphalt Surfacing

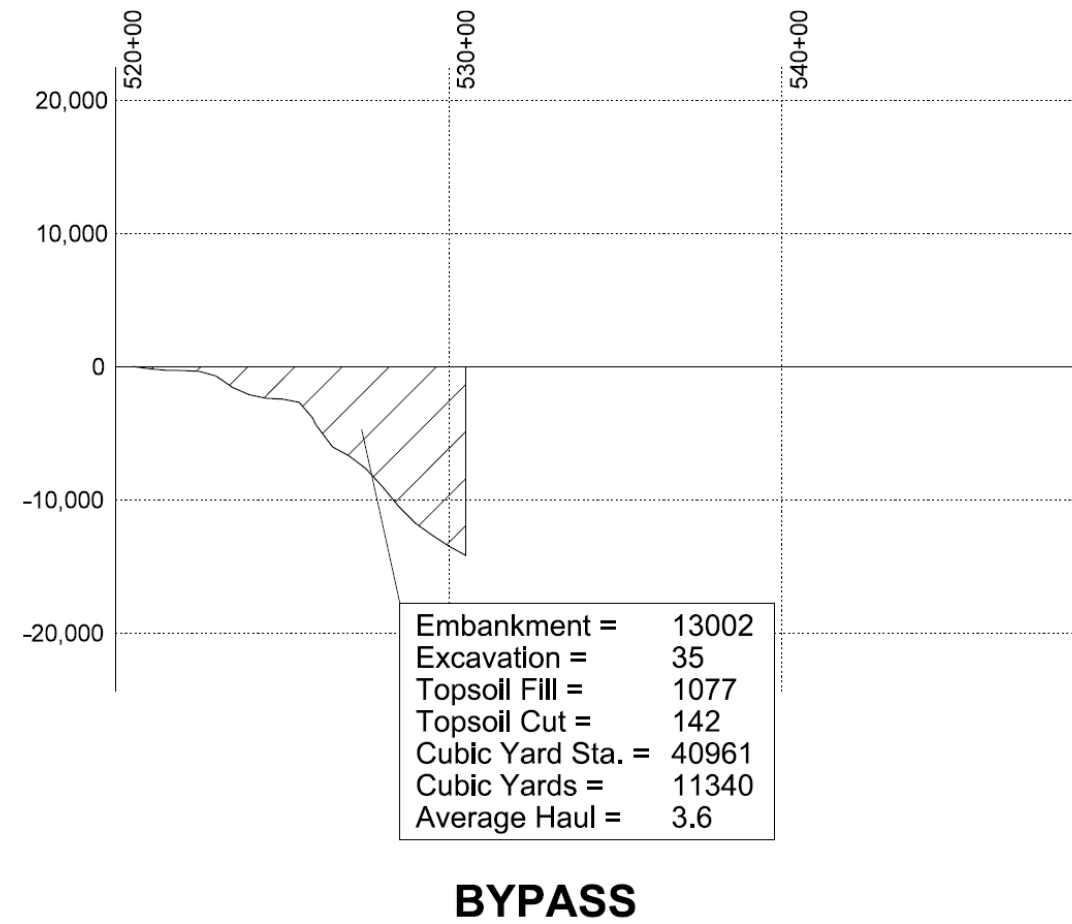
ND23A
US85B to ND23B

TEMPORARY BYPASS EARTHWORK VALUES

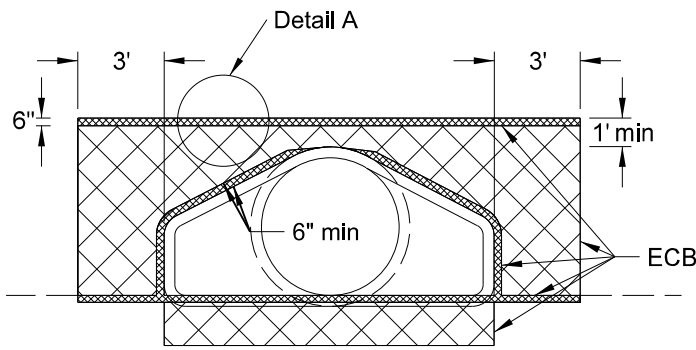
Revised 10/31/17

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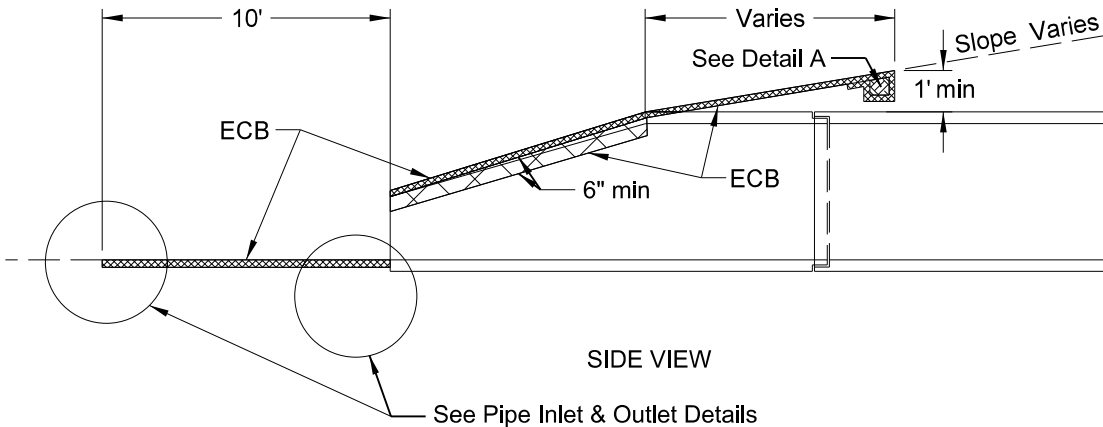
	End Areas (SF)		Volume (CY)		Mass Ordinate
	Exca	Fill	Exca	Fill	
0+00	0.0	0.0	0.0	0.0	0
0+50	0.8	97.7	0.7	175.4	-175
1+00	6.0	1.3	6.3	114.5	-283
1+50	12.1	32.5	16.8	39.1	-305
2+00	0.0	28.2	11.2	70.2	-364
2+50	0.0	274.2	0.0	350.0	-714
3+00	0.0	283.3	0.0	513.3	-1227
3+50	0.0	191.8	0.0	549.9	-1777
4+00	0.0	36.9	0.0	264.7	-2042
4+50	0.0	15.0	0.0	60.0	-2102
5+00	0.0	200.3	0.0	249.1	-2351
5+50	0.0	1182.6	0.0	516.9	-2868
6+00	0.0	256.7	0.0	1665.9	-4534
6+50	0.0	326.9	0.0	675.5	-5209
7+00	0.0	499.8	0.0	956.8	-6166
7+50	0.0	669.4	0.0	1353.3	-7520
8+00	0.0	641.4	0.0	1517.1	-9037
8+50	0.0	434.3	0.0	1245.0	-10282
9+00	0.0	334.1	0.0	889.3	-11171
9+50	0.0	378.2	0.0	824.4	-11995
10+00	0.0	207.8	0.0	678.2	-12674
10+50	0.0	46.0	0.0	293.8	-12967
Temporary Bypass Totals		Volume (CY)		Mass Ordinate	
		Exca	Fill		
		35	13,002		



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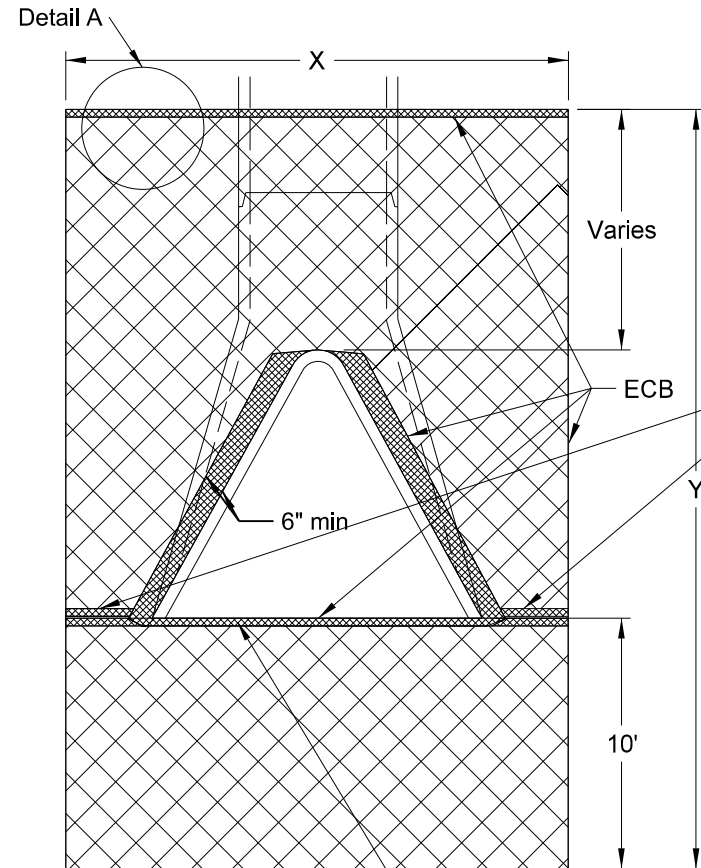


FRONT VIEW



SIDE VIEW

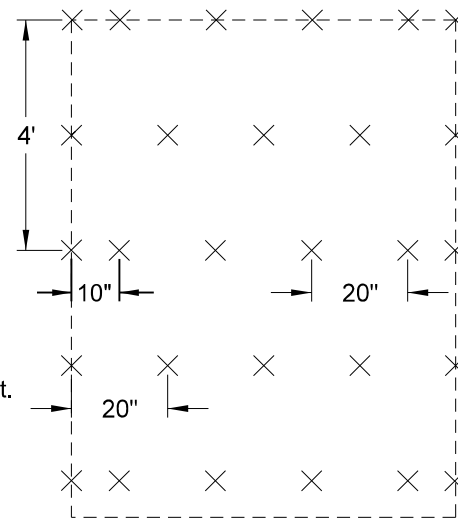
Erosion Control Blanket (ECB)								
Location to be Protected	Culvert Type	Pipe Diam. (Inch)	No	Unit Quantity (SY)	Total Quantity			
					Type 1 (SY)	Type 2 (SY)	Type 3 (SY)	Type 4 (SY)
530+12 Rt	CL	42	1	25	0	0	25	0
540+35 Lt	Appr	42	2	54	0	0	54	0
540+34 Rt	Appr	48	2	58	0	0	58	0
545+37 Rt	Appr	48	2	58	0	0	58	0
551+10 Lt	Appr	42	2	54	0	0	54	0
597+90 Lt	Appr	36	1	30	0	0	30	0
601+42 Lt	Appr	36	1	30	0	0	30	0
601+42 Rt	Appr	36	3	90	0	0	90	0
609+40 Lt	CL	60	2	65	0	0	65	0
610+04 Lt	CL	60	1	35	0	0	35	0
Total (SYs)					0	0	499	0



TOP VIEW

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

Tuck this end a minimum of 6" into the embankment.



STAPLE PATTERN

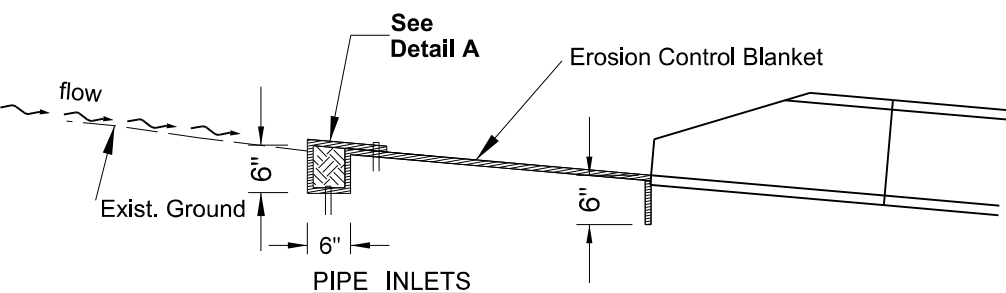
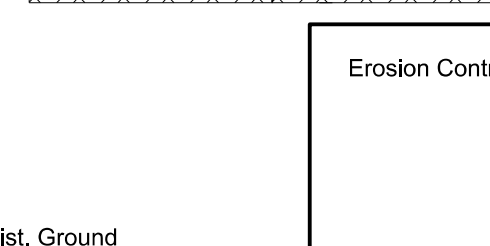
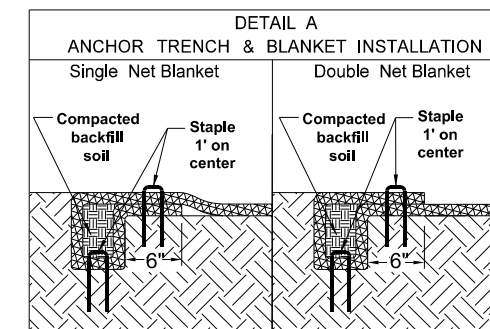
APPROACH CULVERTS				
DIA	X	Y	Surface area to be protected	ECB
In	Ft	Ft	SF	SY
15	9.0	20.0	176.0	20
18	9.5	20.7	190.7	22
21	9.5	21.0	190.9	22
24	10.5	21.6	214.1	24
27	11.0	22.0	226.3	25
30	11.6	22.5	241.5	27
36	12.7	23.3	268.8	30
42	13.3	23.3	279.7	31
48	13.8	24.0	293.2	33
54	14.5	23.4	300.6	34
60	15.0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

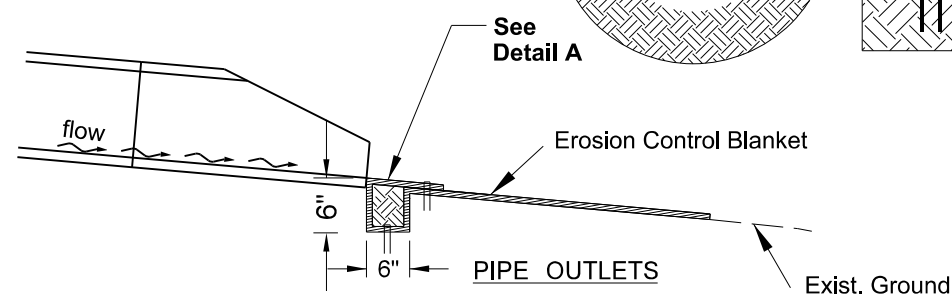
CENTERLINE CULVERTS				
DIA	X	Y	Surface area to be protected	ECB
In	Ft	Ft	SF	SY
24	10.5	27.6	172.1	20
27	11.0	18.0	182.3	21
30	11.6	18.5	195.1	22
36	12.7	19.2	216.7	24
42	13.3	19.2	225.2	25
48	13.8	20.0	238.0	27
54	14.5	19.5	244.7	28
60	15.0	19.0	248.3	28
66	15.6	20.0	264.5	30
72	16.2	20.5	276.8	31

Note: Quantities based on 4:1 slope.

NOTE: 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



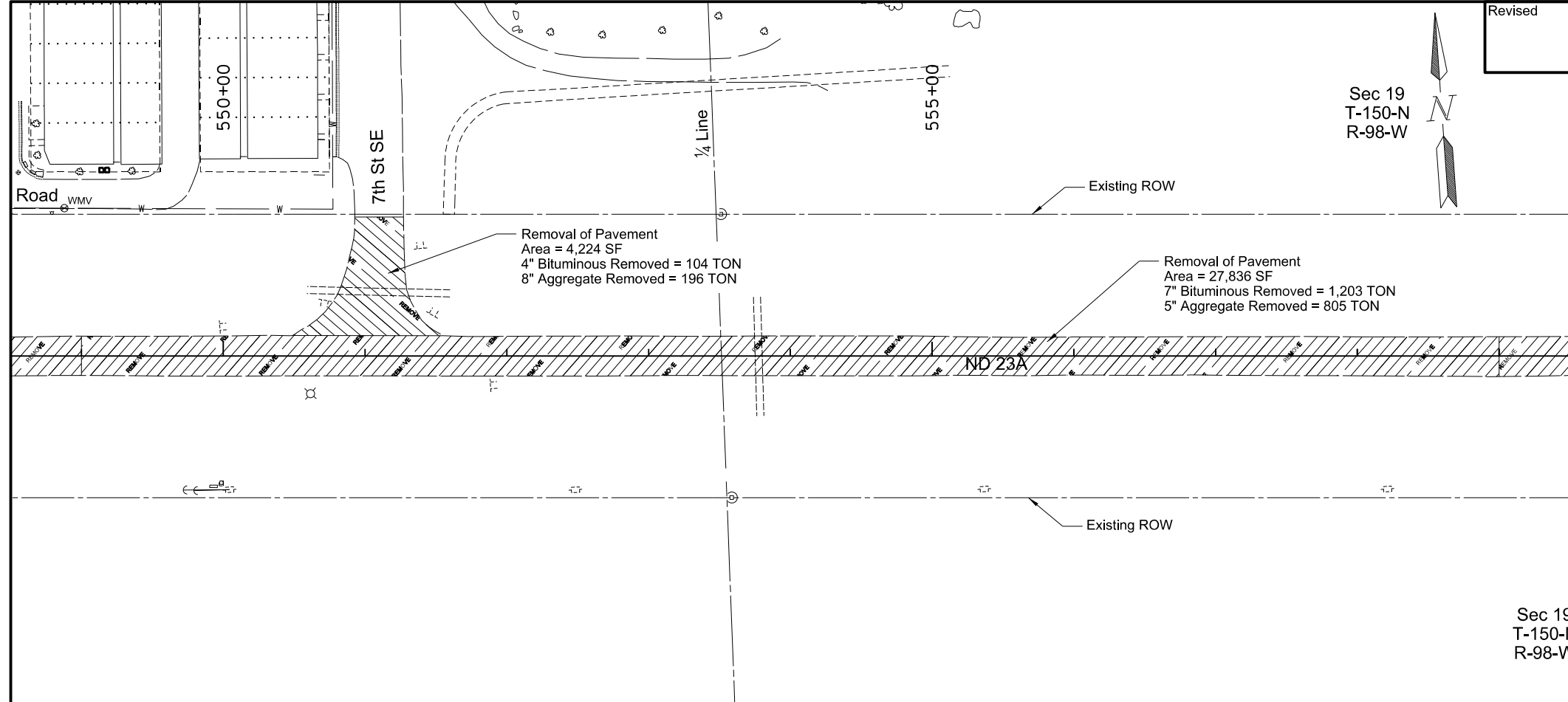
PIPE OUTLETS

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Erosion Control at Culvert Flared End Sections

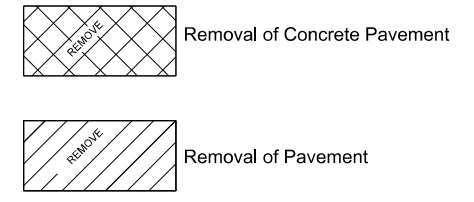
ND23A

US85B to ND23B

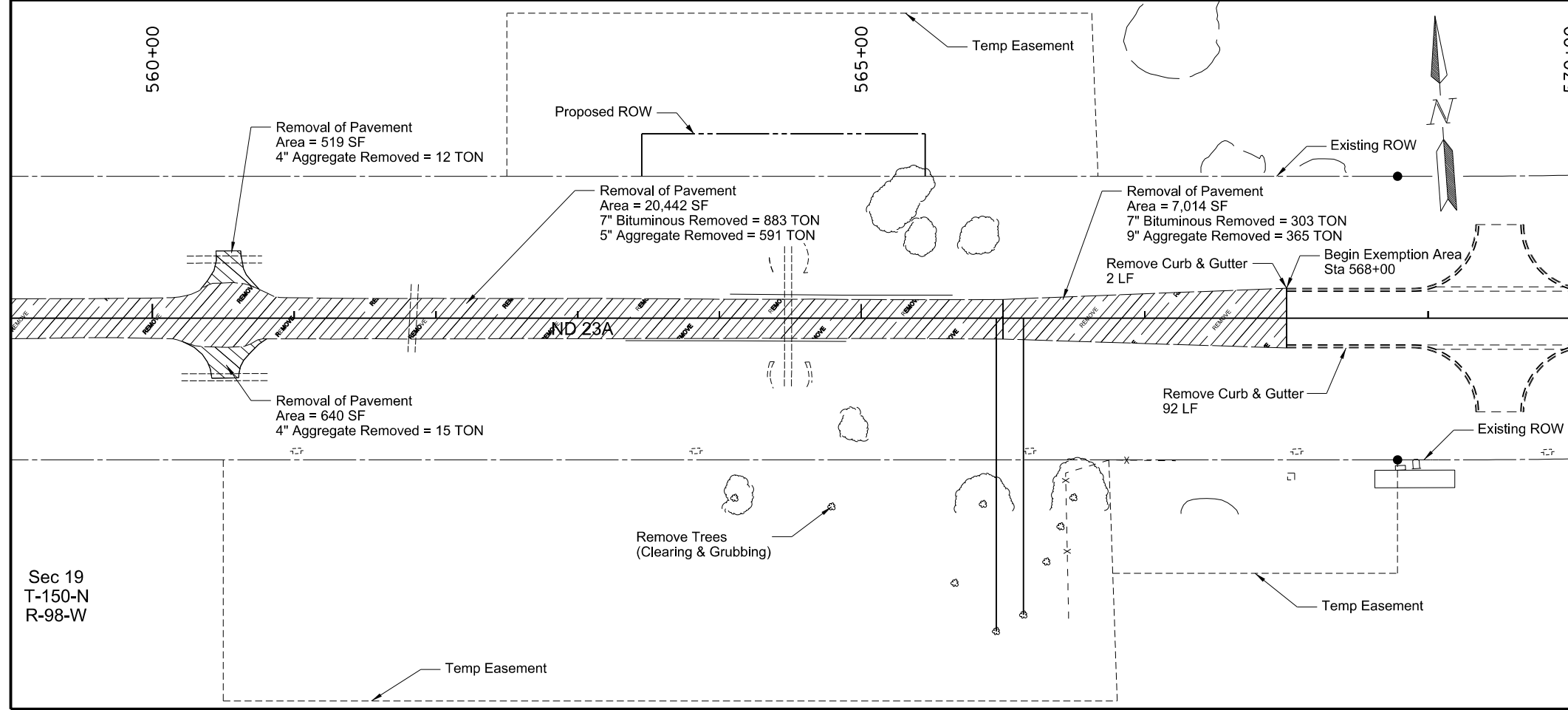


SPEC	CODE	BID ITEM	QUANTITY	UNIT
201	0370	Removal of Trees 10IN		
		565+41 - 53' Lt	1	EA
		566+41 - 147' Rt	1	EA
201	0380	Removal of Trees 18IN		
		565+66 - 187' Rt	1	EA
		566+31 - 172' Rt	1	EA
201	0390	Removal of Trees 30IN		
		564+11 - 127' Rt	1	EA
		564+95 - 77' Rt	1	EA
		565+28 - 84' Lt	2	EA
		565+44 - 62' Lt	1	EA
		565+83 - 58' Lt	3	EA
		565+86 - 131' Rt	1	EA
		566+49 - 126' Rt	1	EA
202	0136	Removal of Pavement		
		549+00 to 568+00	4,477	TON
202	0130	Removal of Curb & Gutter		
		567+98 to 568+90 - Rt	92	LF
		567+98 to 568+00 - Lt	2	LF

LEGEND



1. It is estimated that Concrete Approaches have 6" of concrete and 8" of aggregate base.
2. It is estimated that Asphalt Approaches have 4" of bituminous and 8" of aggregate base.
3. It is estimated that Gravel Approaches have 4" of aggregate surfacing.



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Removals
ND23A
US85B to ND23B

ALLOWABLE PIPE LIST

Begin Station / Location	Begin Offset	End Station / Location	End Offset	Pipe Installation (Pay Item)			Allowable Material	Required Diameter	Steel Pipe Coating	Steel Pipe Corrugations or Spiral Rib	Steel Pipe Minimum Thickness	R1 Fabric (Pay Item)	End Section*		Applicable Backfill Detail	
				Inch	Bid Item	LF							Begin EA	End EA		
530+00	81.3' LT	530+00	61.3' LT	42	Pipe Corr Steel .109IN 42IN	20	Spiral Rib Steel Pipe	42	P	3/4, 1			R & R		D-714-27	
530+12	82.5' LT	29A		42	Pipe Corr Steel .109IN 42IN	16	Spiral Rib Steel Pipe	42	P	3/4, 1			R & R		D-714-27	
30A		532+70	59.0' LT	24	Pipe Conduit - Storm Drain	38	Reinforced Concrete Pipe - Class III (Barrel Length = 36 LF)	24								
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109		FES	D-714-27		
							High-Density Polyethylene (Type S)	24								
30B		532+70	55.0' RT	24	Pipe Conduit - Storm Drain	34	Reinforced Concrete Pipe - Class III (Barrel Length = 32 LF)	24								
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109		FES	D-714-27		
							High-Density Polyethylene (Type S)	24								
31A		535+17	53.0' LT	24	Pipe Conduit - Storm Drain	32	Reinforced Concrete Pipe - Class III (Barrel Length = 30 LF)	24								
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109		FES	D-714-27		
							High-Density Polyethylene (Type S)	24								
31B		535+17	48.0' RT	24	Pipe Conduit - Storm Drain	26	Reinforced Concrete Pipe - Class III (Barrel Length = 24 LF)	24								
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109		FES	D-714-27		
							High-Density Polyethylene (Type S)	24								
31C		31B		18	Pipe Conduit - Storm Drain	72	Reinforced Concrete Pipe - Class III (Barrel Length = 72 LF)	18								
							Spiral Rib Steel Pipe	18	P	3/4, 1	0.109					
535+39	70.0' RT	536+32	70.0' RT	48	Pipe Conduit - Approach	93	Reinforced Concrete Pipe - Class III (Barrel Length = 88.5 LF)	48						FES	FES	D-714-27
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109					
							High-Density Polyethylene (Type S)	48								
535+39	80.0' RT	536+32	80.0' RT	48	Pipe Conduit - Approach	93	Reinforced Concrete Pipe - Class III (Barrel Length = 88.5 LF)	48						FES	FES	D-714-27
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109					
							High-Density Polyethylene (Type S)	48								
32A		537+86	61.0' LT	24	Pipe Conduit - Storm Drain	40	Reinforced Concrete Pipe - Class III (Barrel Length = 38 LF)	24								
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109		FES	D-714-27		
							High-Density Polyethylene (Type S)	24								
32B		537+86	66.0' RT	24	Pipe Conduit - Storm Drain	33	Reinforced Concrete Pipe - Class III (Barrel Length = 31 LF)	24								
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109		FES	D-714-27		
							High-Density Polyethylene (Type S)	24								
539+45	80.0' RT	541+09	80.0' RT	48	Pipe Conduit - Approach	164	Reinforced Concrete Pipe - Class III (Barrel Length = 162 LF)	48					FES	FES	D-714-27	
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109					
539+45	70.0' RT	34A		48	Pipe Conduit - Storm Drain	126	Reinforced Concrete Pipe - Class III (Barrel Length = 124 LF)	48					FES		D-714-27	
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109					
34A		541+09	70.0' RT	48	Pipe Conduit - Storm Drain	34	Reinforced Concrete Pipe - Class III (Barrel Length = 34 LF)	48						FES	D-714-27	
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109					
539+81	80.5' LT	33A		42	Pipe Conduit - Storm Drain	28	Reinforced Concrete Pipe - Class III (Barrel Length = 26 LF)	42					FES		D-714-27	
							Spiral Rib Steel Pipe	42	P	3/4, 1	0.109					
33A		33B		42	Pipe Conduit - Storm Drain	44	Reinforced Concrete Pipe - Class III (Barrel Length = 44 LF)	42							D-714-27	
							Spiral Rib Steel Pipe	42	P	3/4, 1	0.109					

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

Corrugation 2 = 2-2/3" x 1/2"
3 = 3" x 1"
5 = 5" x 1"

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

End Sections: R & R = Remove & Relay
FES = Flared End Section
TES = Traversable End Section

NOTE: * Denotes the price bid for "Pipe Conduit" bid items includes end sections. The pipe barrel length shall be bid separately from the end sections for culvert extensions.

Allowable Pipe List

ND23A

US85B to ND23B

ALLOWABLE PIPE LIST

Begin Station / Location	Begin Offset	End Station / Location	End Offset	Pipe Installation (Pay Item)			Allowable Material	Required Diameter	Steel Pipe Coating	Steel Pipe Corrugations or Spiral Rib	Steel Pipe Minimum Thickness	R1 Fabric (Pay Item)	End Section*		Applicable Backfill Detail
				Inch	Bid Item	LF							Begin	End	
							Inch	Type	Inch	Inch	SY	EA	EA	Plan/Standard	
33B		540+89	80.5' LT	42	Pipe Conduit - Storm Drain	28	Reinforced Concrete Pipe - Class III (Barrel Length = 26 LF)	42						FES	D-714-27
							Spiral Rib Steel Pipe	42	P	3/4, 1	0.109				
33C		33B		24	Pipe Conduit - Storm Drain	8	Reinforced Concrete Pipe - Class III (Barrel Length = 8 LF)	24							D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
539+81	70.5' LT	540+89	70.5' LT	42	Pipe Conduit - Approach	108	Reinforced Concrete Pipe - Class III (Barrel Length = 104 LF)	42				FES	FES	D-714-27	
							Spiral Rib Steel Pipe	42	P	3/4, 1	0.109				
35A		544+00	63.0' LT	24	Pipe Conduit - Storm Drain	42	Reinforced Concrete Pipe - Class III (Barrel Length = 40 LF)	24						FES	D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
544+63	62.5' RT	545+97	62.5' RT	48	Pipe Conduit - Approach	134	Reinforced Concrete Pipe - Class III (Barrel Length = 130 LF)	48				FES	FES	D-714-27	
							Corrugated Steel Pipe	54	P	2	0.109				
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	48							
554+63	72.5' RT	36A		48	Pipe Conduit - Storm Drain	35	Reinforced Concrete Pipe - Class III (Barrel Length = 33 LF)	48				FES		D-714-27	
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	48							
36A		36B		48	Pipe Conduit - Storm Drain	56	Reinforced Concrete Pipe - Class III (Barrel Length = 56 LF)	48						D-714-27	
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	48							
36B		545+97	72.5' RT	48	Pipe Conduit - Storm Drain	37	Reinforced Concrete Pipe - Class III (Barrel Length = 35 LF)	48						FES	D-714-27
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	48							
37A		547+15	61.0' LT	24	Pipe Conduit - Storm Drain	40	Reinforced Concrete Pipe - Class III (Barrel Length = 38 LF)	24						FES	D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
38A		550+15	59.0' LT	24	Pipe Conduit - Storm Drain	38	Reinforced Concrete Pipe - Class III (Barrel Length = 36 LF)	24						FES	D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
38B		550+15	49.0' RT	24	Pipe Conduit - Storm Drain	28	Reinforced Concrete Pipe - Class III (Barrel Length = 26 LF)	24						FES	D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
550+63	79.5' LT	551+78	79.5' LT	42	Pipe Conduit - Approach	115	Reinforced Concrete Pipe - Class III (Barrel Length = 110 LF)	42				FES	FES	Specification 714.04 A	
							Corrugated Steel Pipe	48	P	2	0.109				
							Spiral Rib Steel Pipe	42	P	3/4, 1	0.109				
550+63	67.5' LT	551+78	67.5' LT	42	Pipe Conduit - Approach	115	Reinforced Concrete Pipe - Class III (Barrel Length = 110 LF)	42				FES	FES	Specification 714.04 A	
							Corrugated Steel Pipe	48	P	2	0.109				
							Spiral Rib Steel Pipe	42	P	3/4, 1	0.109				
553+75	66.5' LT	39A		48	Pipe Conduit - Storm Drain	44	Reinforced Concrete Pipe - Class III (Barrel Length = 42 LF)	48				FES		D-714-25	
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109				
39A		39B		48	Pipe Conduit - Storm Drain	36	Reinforced Concrete Pipe - Class III (Barrel Length = 36 LF)	48			120			D-714-25	
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109				
39B		553+75	58.5' RT	48	Pipe Conduit - Storm Drain	36	Reinforced Concrete Pipe - Class III (Barrel Length = 34 LF)	48					FES	D-714-25	
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109				

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

End Sections: R & R = Remove & Relay
FES = Flared End Section
TES = Traversable End Section

NOTE: * Denotes the price bid for "Pipe Conduit" bid items includes end sections. The pipe barrel length shall be bid separately from the end sections for culvert extensions.

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Allowable Pipe List

ND23A

US85B to ND23B

ALLOWABLE PIPE LIST

Begin Station / Location	Begin Offset	End Station / Location	End Offset	Pipe Installation (Pay Item)			Allowable Material	Required Diameter	Steel Pipe Coating	Steel Pipe Corrugations or Spiral Rib	Steel Pipe Minimum Thickness	R1 Fabric (Pay Item)	End Section*		Applicable Backfill Detail					
				Inch	Bid Item	LF							Inch	Type		Inch	Inch	SY	EA	EA
40A		556+27	51.0' LT	18	Pipe Conduit - Storm Drain	30	Reinforced Concrete Pipe - Class III (Barrel Length = 26 LF)	18								D-714-27				
							Spiral Rib Steel Pipe	18	P	3/4, 1	0.109			FES						
							High-Density Polyethylene (Type S)	18												
40B		556+27	37.0' RT	12	Pipe Conduit - Storm Drain	16	Reinforced Concrete Pipe - Class III (Barrel Length = 12 LF)	12								D-714-27				
							Spiral Rib Steel Pipe	12	P	3/4, 1	0.109			FES						
							High-Density Polyethylene (Type S)	12												
557+72	64.0' LT	558+29	64.0' LT	24	Pipe Conduit - Approach	57	Reinforced Concrete Pipe - Class III (Barrel Length = 53 LF)	24					FES	FES	Specification 714.04 A					
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109									
							High-Density Polyethylene (Type S)	24												
41A		559+00	57.0' LT	24	Pipe Conduit - Storm Drain	36	Reinforced Concrete Pipe - Class III (Barrel Length = 34 LF)	24								D-714-27				
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109			FES						
							High-Density Polyethylene (Type S)	24												
41B		559+00	43.0' RT	24	Pipe Conduit - Storm Drain	22	Reinforced Concrete Pipe - Class III (Barrel Length = 20 LF)	24								D-714-27				
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109			FES						
							High-Density Polyethylene (Type S)	24												
560+24	65.0' RT	560+86	65.0' RT	24	Pipe Conduit - Approach	62	Reinforced Concrete Pipe - Class III (Barrel Length = 58 LF)	24					FES	FES	Specification 714.04 A					
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109									
							High-Density Polyethylene (Type S)	24												
561+75	70.0' LT	561+75	56.0' RT	48	Pipe Conduit	126	Reinforced Concrete Pipe - Class III (Barrel Length = 122 LF)	48				630	FES	FES	D-714-25M					
							Corrugated Steel Pipe	54	P	2	0.109									
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109									
561+93	56.0' RT	42B		48	Pipe Conduit - Storm Drain	34	Reinforced Concrete Pipe - Class III (Barrel Length = 32 LF)	48					FES		D-714-25M					
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109									
42B		42A		48	Pipe Conduit - Storm Drain	36	Reinforced Concrete Pipe - Class III (Barrel Length = 36 LF)	48							D-714-25M					
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109									
42A		561+93	70.0' LT	48	Pipe Conduit - Storm Drain	48	Reinforced Concrete Pipe - Class III (Barrel Length = 46 LF)	48						FES	D-714-25M					
							Spiral Rib Steel Pipe	48	P	3/4, 1	0.109									
43A		42A		18	Pipe Conduit - Storm Drain	302	Reinforced Concrete Pipe - Class III (Barrel Length = 302 LF)	18							D-714-27					
							Spiral Rib Steel Pipe	18	P	3/4, 1	0.109									
43B		43A		18	Pipe Conduit - Storm Drain	37	Reinforced Concrete Pipe - Class III (Barrel Length = 37 LF)	18				110			D-714-25					
							Spiral Rib Steel Pipe	18	P	3/4, 1	0.109									
44A		43A		18	Pipe Conduit - Storm Drain	196	Reinforced Concrete Pipe - Class III (Barrel Length = 196 LF)	18							D-714-27					
							Spiral Rib Steel Pipe	18	P	3/4, 1	0.109									
44B		44A		18	Pipe Conduit - Storm Drain	37	Reinforced Concrete Pipe - Class III (Barrel Length = 37 LF)	18				110			D-714-25					
							Spiral Rib Steel Pipe	18	P	3/4, 1	0.109									
590+60	47.5' RT	18B		36	Pipe Conduit - Storm Drain	26	Reinforced Concrete Pipe - Class III (Barrel Length = 24 LF)	36					FES		D-714-26					
							Spiral Rib Steel Pipe	36	P	3/4, 1	0.109									
18B		18A		36	Pipe Conduit - Storm Drain	36	Reinforced Concrete Pipe - Class III (Barrel Length = 36 LF)	36				320			D-714-26					
							Spiral Rib Steel Pipe	36	P	3/4, 1	0.109									

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5 = 5" x 1"

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

End Sections: R & R = Remove & Relay
FES = Flared End Section
TES = Traversable End Section

NOTE: * Denotes the price bid for "Pipe Conduit" bid items includes end sections. The pipe barrel length shall be bid separately from the end sections for culvert extensions.

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Allowable Pipe List

ND23A
US85B to ND23B

ALLOWABLE PIPE LIST

Begin Station / Location	Begin Offset	End Station / Location	End Offset	Pipe Installation (Pay Item)			Allowable Material	Required Diameter	Steel Pipe Coating	Steel Pipe Corrugations or Spiral Rib	Steel Pipe Minimum Thickness	R1 Fabric (Pay Item)	End Section*		Applicable Backfill Detail
				Inch	Bid Item	LF							Begin	End	
18A		590+60	59.5' LT	36	Pipe Conduit - Storm Drain	38	Reinforced Concrete Pipe - Class III (Barrel Length = 36 LF)	36					FES		D-714-26
							Spiral Rib Steel Pipe	36	P	3/4, 1	0.109				
19A		592+85	61.0' LT	24	Pipe Conduit - Storm Drain	40	Reinforced Concrete Pipe - Class III (Barrel Length = 38 LF)	24					FES		D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
19B		592+85	47.0' RT	24	Pipe Conduit - Storm Drain	26	Reinforced Concrete Pipe - Class III (Barrel Length = 24 LF)	24					FES		D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
594+14	69.0' LT	---	---	30	---	0	Reinforced Concrete Pipe - Class III (Barrel Length = 0 LF)	30	---	---	---		FES		---
20A		595+10	59.0' LT	24	Pipe Conduit - Storm Drain	38	Reinforced Concrete Pipe - Class III (Barrel Length = 36 LF)	24					FES		D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
20B		595+10	47.0' RT	24	Pipe Conduit - Storm Drain	26	Reinforced Concrete Pipe - Class III (Barrel Length = 24 LF)	24					FES		D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
21A		597+20	59.0' LT	24	Pipe Conduit - Storm Drain	38	Reinforced Concrete Pipe - Class III (Barrel Length = 36 LF)	24					FES		D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
21B		597+20	45.0' RT	24	Pipe Conduit - Storm Drain	24	Reinforced Concrete Pipe - Class III (Barrel Length = 22 LF)	24					FES		D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
597+42	72.0' LT	598+41	72.0' LT	36	Pipe Conduit - Approach	99	Reinforced Concrete Pipe - Class III (Barrel Length = 94 LF)	36					FES	FES	Specification 714.04 A
							Corrugated Steel Pipe	42	P	2	0.109				
							Spiral Rib Steel Pipe	36	P	3/4, 1	0.109				
22A		600+48	59.0' LT	24	Pipe Conduit - Storm Drain	38	Reinforced Concrete Pipe - Class III (Barrel Length = 36 LF)	24					FES		D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
22B		600+48	45.0' RT	24	Pipe Conduit - Storm Drain	24	Reinforced Concrete Pipe - Class III (Barrel Length = 22 LF)	24					FES		D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
601+11	75.0' LT	601+75	75.0' LT	36	Pipe Conduit - Approach	64	Reinforced Concrete Pipe - Class III (Barrel Length = 60 LF)	36					FES	FES	Specification 714.04 A
							Corrugated Steel Pipe	42	P	2	0.109				
							Spiral Rib Steel Pipe	36	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	36							
601+12	52.1' RT	601+72	52.1' RT	36	Pipe Conduit - Approach	60	Reinforced Concrete Pipe - Class III (Barrel Length = 56 LF)	36					FES	FES	Specification 714.04 A
							Corrugated Steel Pipe	42	P	2	0.109				
							Spiral Rib Steel Pipe	36	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	36							
601+12	65.9' RT	601+72	65.9' RT	36	Pipe Conduit - Approach	60	Reinforced Concrete Pipe - Class III (Barrel Length = 56 LF)	36					FES	FES	Specification 714.04 A
							Corrugated Steel Pipe	42	P	2	0.109				
							Spiral Rib Steel Pipe	36	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	36							
601+12	79.7' RT	601+72	79.7' RT	36	Pipe Conduit - Approach	60	Reinforced Concrete Pipe - Class III (Barrel Length = 56 LF)	36					FES	FES	Specification 714.04 A
							Corrugated Steel Pipe	42	P	2	0.109				
							Spiral Rib Steel Pipe	36	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	36							
23B		602+75	49.0' RT	24	Pipe Conduit - Storm Drain	28	Reinforced Concrete Pipe - Class III (Barrel Length = 26 LF)	24					FES		D-714-26
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
23B		23A		24	Pipe Conduit - Storm Drain	38	Reinforced Concrete Pipe - Class III (Barrel Length = 38 LF)	24				350			D-714-26
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
23A		602+75	63.0' LT	24	Pipe Conduit - Storm Drain	42	Reinforced Concrete Pipe - Class III (Barrel Length = 40 LF)	24					FES		D-714-26
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				

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

Corrugation 2 = 2-2/3" x 1/2"
3 = 3" x 1"
5 = 5" x 1"

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

End Sections: R & R = Remove & Relay
FES = Flared End Section
TES = Traversable End Section

NOTE: * Denotes the price bid for "Pipe Conduit" bid items includes end sections. The pipe barrel length shall be bid separately from the end sections for culvert extensions.

Allowable Pipe List

ND23A

US85B to ND23B

ALLOWABLE PIPE LIST

Begin Station / Location	Begin Offset	End Station / Location	End Offset	Pipe Installation (Pay Item)			Allowable Material	Required Diameter	Steel Pipe Coating	Steel Pipe Corrugations or Spiral Rib	Steel Pipe Minimum Thickness	R1 Fabric (Pay Item)	End Section*		Applicable Backfill Detail
				Inch	Bid Item	LF							Begin	End	
												SY	EA	EA	Plan/Standard
602+92	146.0' LT	603+00	81.5' LT	18	Pipe Conduit - Approach	65	Reinforced Concrete Pipe - Class III (Barrel Length = 57 LF)	18					FES	FES	Specification 714.04 A
							Corrugated Steel Pipe	18	P	2	0.109				
							High-Density Polyethylene (Type S)	18							
24A		606+75	67.0' LT	24	Pipe Conduit - Storm Drain	46	Reinforced Concrete Pipe - Class III (Barrel Length = 44 LF)	24					FES	FES	D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
24B		606+75	53.0' RT	24	Pipe Conduit - Storm Drain	32	Reinforced Concrete Pipe - Class III (Barrel Length = 30 LF)	24					FES	FES	D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
25A		608+50	71.0' LT	24	Pipe Conduit - Storm Drain	50	Reinforced Concrete Pipe - Class III (Barrel Length = 48 LF)	24					FES	FES	D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
25B		608+50	55.0' RT	24	Pipe Conduit - Storm Drain	34	Reinforced Concrete Pipe - Class III (Barrel Length = 32 LF)	24					FES	FES	D-714-27
							Spiral Rib Steel Pipe	24	P	3/4, 1	0.109				
							High-Density Polyethylene (Type S)	24							
609+35	39.6' LT	609+35	59.6' LT	60	Pipe Corr Steel .109IN 60IN	20	Spiral Rib Steel Pipe	60	P	3/4, 1				R & R	D-714-27
609+45	39.6' LT	609+45	63.6' LT	60	Pipe Corr Steel .109IN 60IN	24	Spiral Rib Steel Pipe	60	P	3/4, 1				R & R	D-714-27
610+04	44.0' LT	610+04	84.0' LT	60	Pipe Corr Steel .109IN 60IN	40	Spiral Rib Steel Pipe	60	P	3/4, 1				R & R	D-714-27
3+41 (BYPASS)	35.1' RT	3+00 (BYPASS)	33.9' LT	42	Pipe Conduit	60	Reinforced Concrete Pipe - Class III (Barrel Length = 54 LF)	42					FES	FES	Specification 714.04 A
							Corrugated Steel Pipe	42	P	2	0.109				
							High-Density Polyethylene (Type S)	42							
5+81 (BYPASS)	48.5' RT	5+99 (BYPASS)	50.0' LT	84	Pipe Conduit	100	Reinforced Concrete Pipe - Class III (Barrel Length = 96 LF)	84					FES	FES	Specification 714.04 A
							Corrugated Steel Pipe	84	P	2	0.109				
							High-Density Polyethylene (Type S)	84							

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5 = 5" x 1"

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

End Sections: R & R = Remove & Relay
FES = Flared End Section
TES = Traversable End Section

NOTE: * Denotes the price bid for "Pipe Conduit" bid items includes end sections. The pipe barrel length shall be bid separately from the end sections for culvert extensions.

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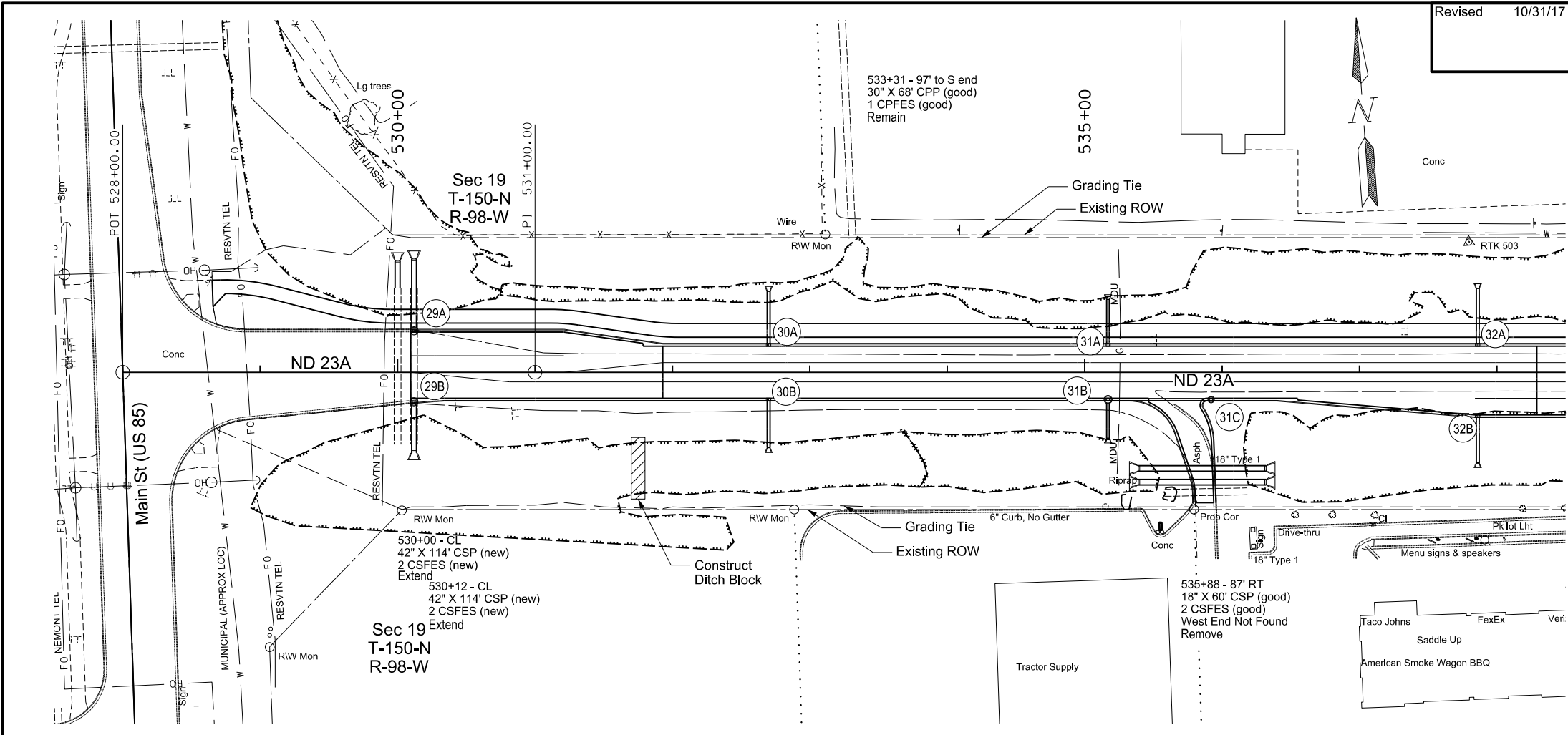
Allowable Pipe List

ND23A

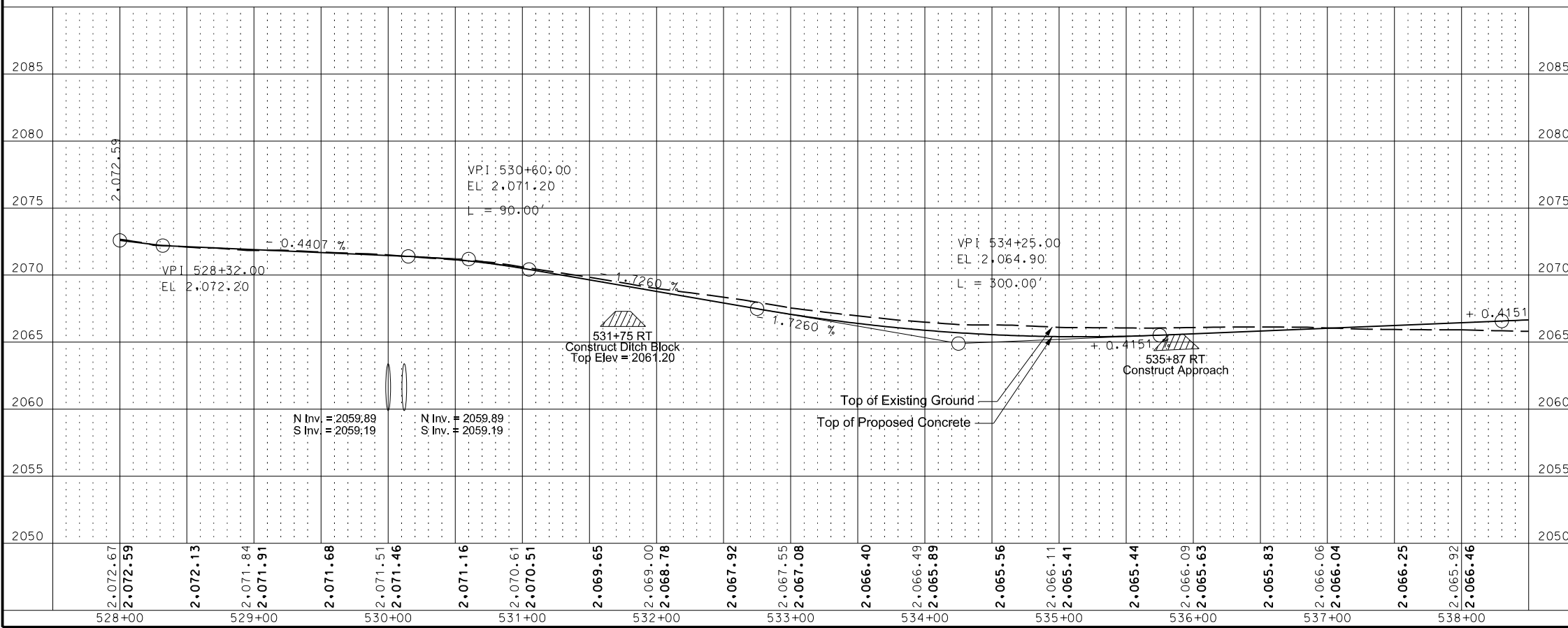
US85B to ND23B

Revised 10/31/17

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-7-023(050)910	60	1



SPEC	CODE	BID ITEM	QUANTITY	UNIT
202	0174	Removal of Pipe-All Types & Sizes 536+00 - 86' Rt	60	LF
302	0100	Salvaged Base Course (under sidewalk) 528+87 Lt to 538+00 Lt	218	TON
714	4101	Pipe Conduit 18In-Storm Drain 31B to 31C	72	LF
714	4107	Pipe Conduit 24In-Storm Drain 30A to 532+70-59' Lt 30B to 532+70-55' Rt 31A to 535+17-53' Lt 31B to 535+17-48' Rt 32A to 537+86-61' Lt 32B to 537+86-66' Rt	38 34 32 26 40 33	LF LF LF LF LF LF
714	4128	Pipe Conduit 48In-Approach 535+39 - 70' Rt to 536+32 - 70' Rt 535+39 - 80' Rt to 536+32 - 80' Rt	93 93	LF LF
714	5315	Pipe Corr Steel .109IN 42IN 530+00-61.3' Lt to 530+00-81.3' Lt 530+12-82.5' Lt to 530+12-66.5' Lt	20 16	LF LF
714	9659	Remove & Relay Pipe-All Types & Sizes 29A to 530+12-66.5' Lt 29B to 530+12-58' Rt	34 34	LF LF
714	9660	Remove & Relay End Section-All Type & Sizes 530+00 Lt 530+12 Lt 530+12 Rt	1 1 1	EA EA EA
722	3510	Inlet-Type 2 30A 30B 31A 32A 32B	1 1 1 1 1	EA EA EA EA EA
722	3701	Inlet Special-Type 2 48in 31C	1	EA
722	3761	Inlet Special-Type 2 60in 29A 29B 31B	1 1 1	EA EA EA
750	0115	Sidewalk Concrete 4in 528+87 Lt to 538+00 Lt	1047	SY



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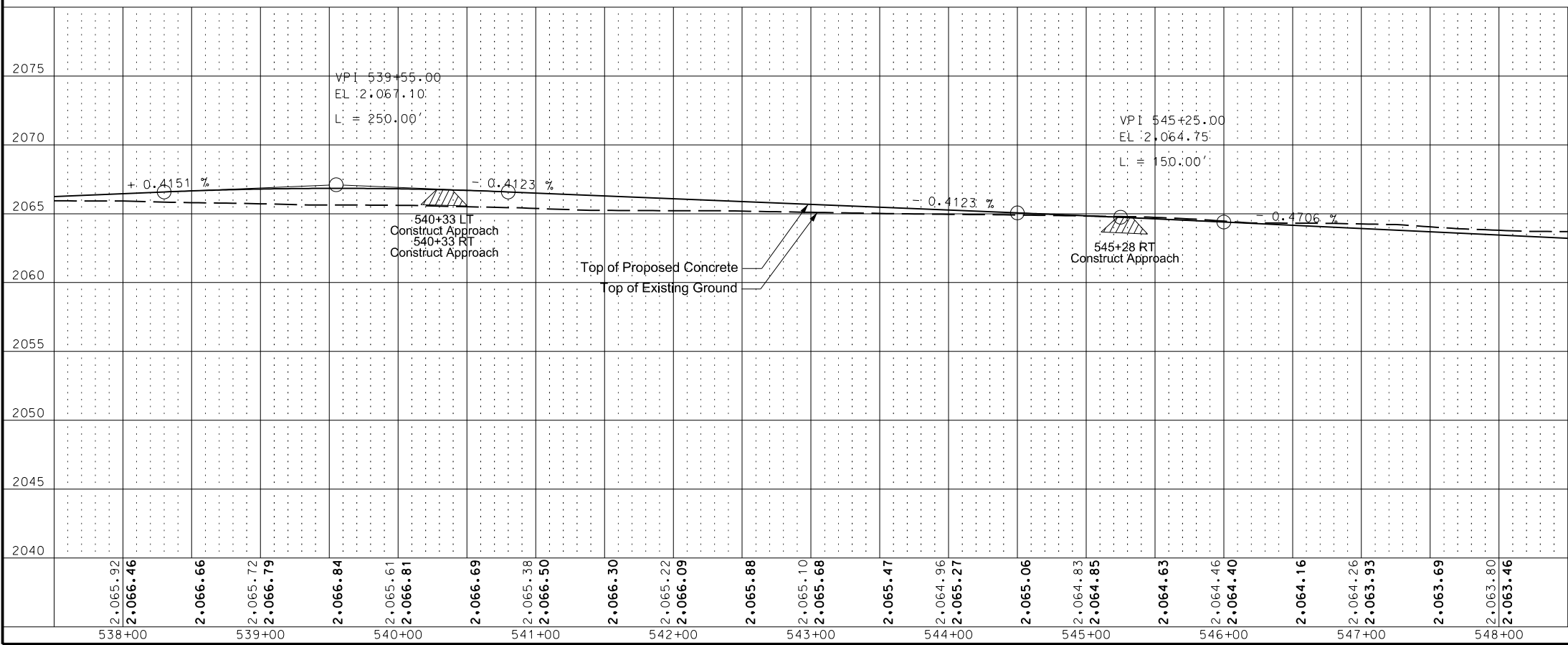
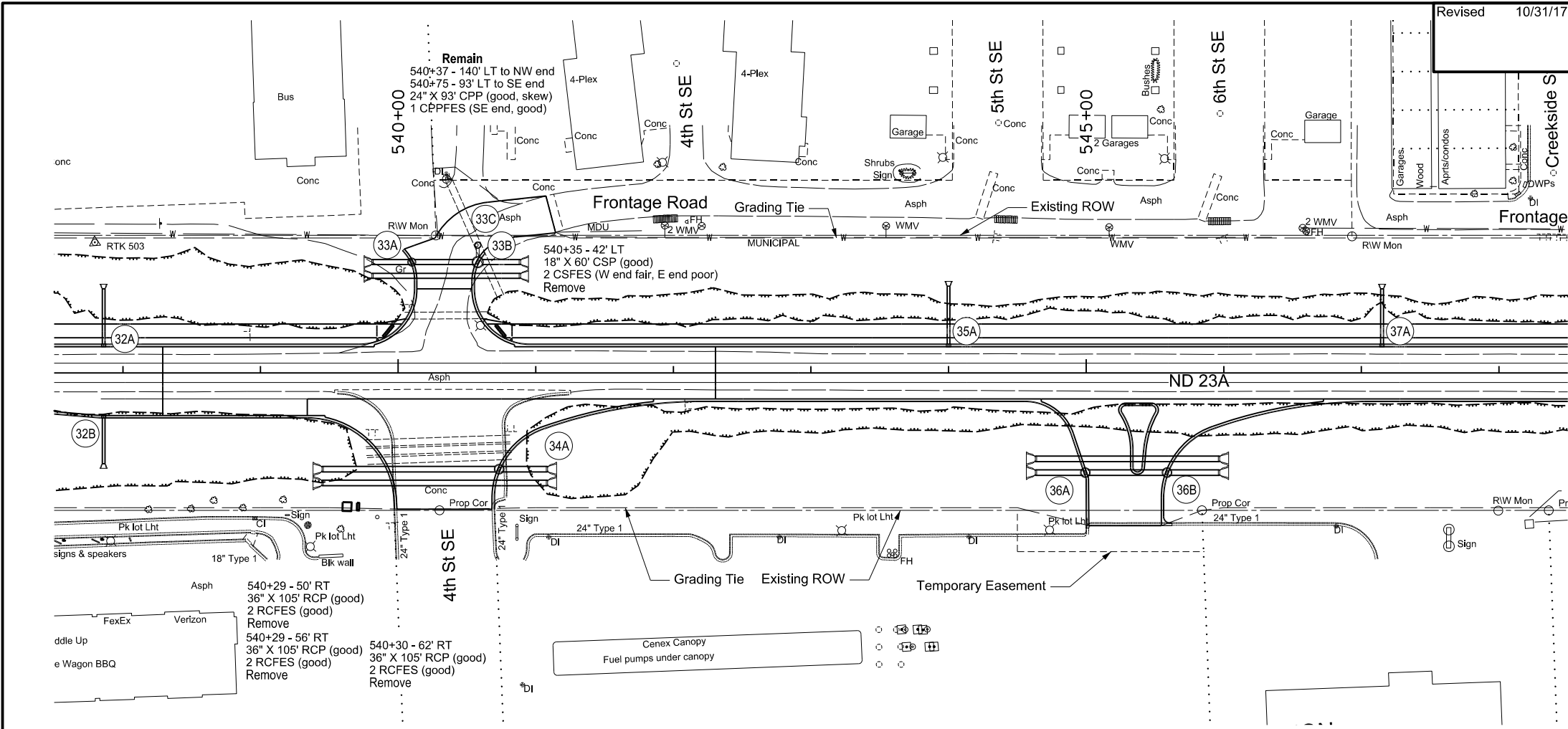
Plan and Profile

ND23A
US85B to ND23B

Revised 10/31/17

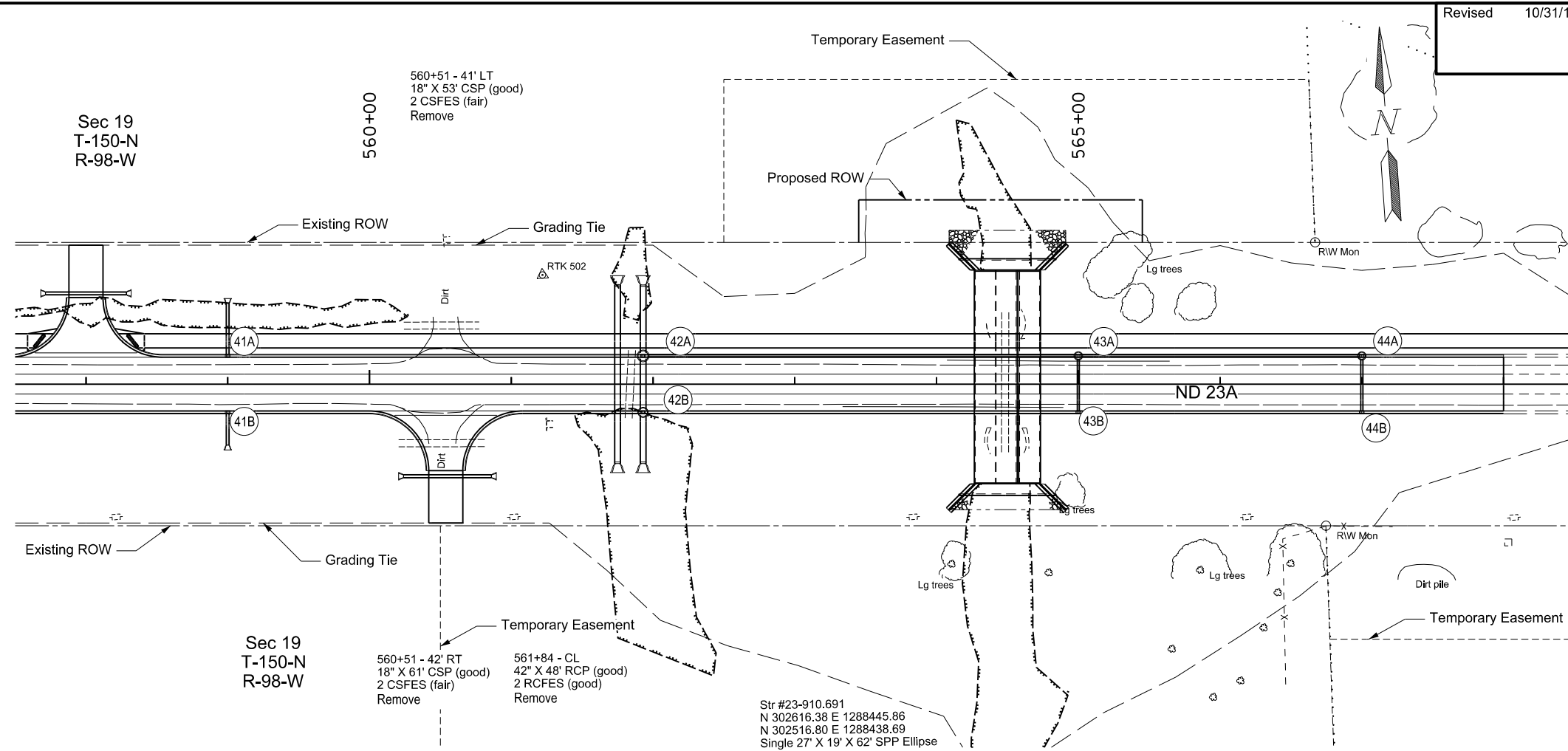
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-7-023(050)910	60	2

SPEC	CODE	BID ITEM	QUANTITY	UNIT
202	0174	Removal of Pipe-All Types & Sizes		
		540+29 - 50' Rt	105	LF
		540+29 - 56' Rt	105	LF
		540+29 - 62' Rt	105	LF
		540+35 - 41' Lt	60	LF
		540+57-94.7' Lt to 540+74.4-55.4' Lt	43	LF
302	0100	Salvage Base Course (under sidewalk)		
		538+00 Lt to 540+12 Lt	49	TON
		540+55 Lt to 548+00 Lt	172	TON
714	4107	Pipe Conduit 24in-Storm Drain		
		33C to 33B	8	LF
		35A to 544+00 - 63' Lt	42	LF
		37A to 547+15 - 61' Lt	40	LF
714	4121	Pipe Conduit 42in-Storm Drain		
		539+81 - 80.5' Lt to 33A	28	LF
		33A to 33B	44	LF
		33B to 540+89 - 80.5' Lt	28	LF
714	4122	Pipe Conduit 42in-Approach		
		539+81 - 70.5' Lt to 540+89 - 70.5' Lt	108	LF
714	4126	Pipe Conduit 48in-Storm Drain		
		539+45 - 70' Rt to 34A	126	LF
		34A to 541+09 - 70' Rt	34	LF
		544+63 - 72.5' Rt to 36A	35	LF
		36A to 36B	56	LF
		36B to 545+97 - 72.5' Rt	37	LF
714	4128	Pipe Conduit 48in-Approach		
		539+45 - 80' Rt to 541+09 - 80' Rt	164	LF
		544+63 - 62.5' Rt to 545+97 - 62.5' Rt	134	LF
722	3510	Inlet-Type 2		
		35A	1	EA
		37A	1	EA
722	3701	Inlet Special-Type 2 48in		
		33C	1	EA
722	3761	Inlet Special-Type 2 60in		
		33A	1	EA
722	3766	Inlet Special-Type 2 72in		
		34A	1	EA
		36A	1	EA
		36B	1	EA
722	3768	Inlet Special-Type 2 84in		
		33B	1	EA
750	0115	Sidewalk Concrete 4in		
		538+00 Lt to 540+12 Lt	233	SY
		540+55 Lt to 548+00 Lt	825	SY
750	2115	Detectable Warning Panels		
		540+05 - 30' Lt	20	SF
		540+62 - 30' Lt	20	SF

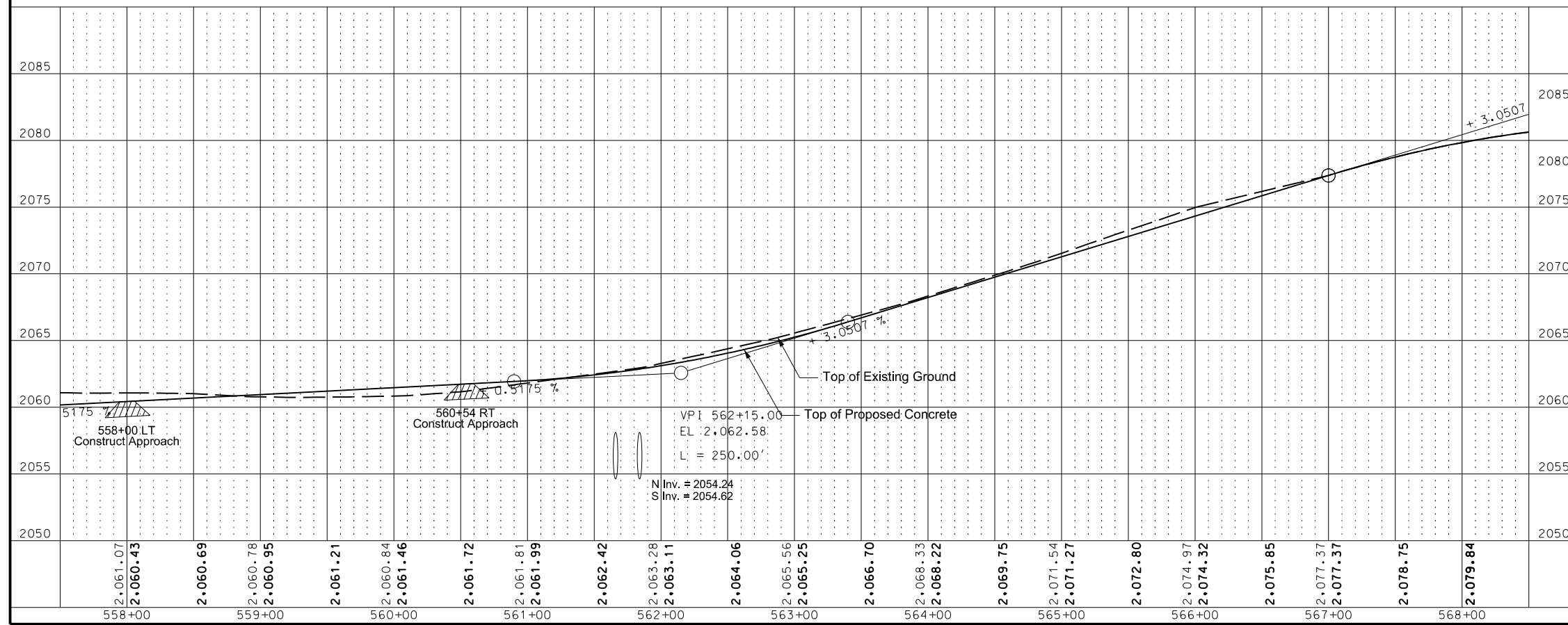


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Plan and Profile
ND23A
US85B to ND23B



SPEC	CODE	BID ITEM	QUANTITY	UNIT
202	0174	Removal of Pipe-All Types & Sizes		
		560+51 - 41' Lt	53	LF
		560+51 - 42' Rt	61	LF
		561+84 - CL	48	LF
302	0100	Salvage Base Course (under sidewalk)		
		558+00 Lt to 560+38 Lt	55	TON
		560+69 Lt to 569+22 Lt	196	TON
714	4101	Pipe Conduit 18in-Storm Drain		
		42A to 43A	302	LF
		43A to 44A	196	LF
		43A to 43B	37	LF
		44A to 44B	37	LF
714	4106	Pipe Conduit 24in-Approach		
		557+72 - 64' Lt to 558+29 - 64' Lt	57	LF
		560+24 - 65' Rt to 560+86 - 65' Rt	62	LF
714	4107	Pipe Conduit 24in-Storm Drain		
		41A to 559+00 - 57' Lt	36	LF
		41B to 559+00 - 43' Rt	22	LF
714	4125	Pipe Conduit 48in		
		561+75 - 70' Lt to 561+75 - 56' Rt	126	LF
714	4126	Pipe Conduit 48in-Storm Drain		
		561+93 - 70.0' Lt to 42A	48	LF
		42A to 42B	36	LF
		42B to 561+93 - 56.0' Rt	34	LF
722	3510	Inlet-Type 2		
		41A	1	EA
		41B	1	EA
		43B	1	EA
		44B	1	EA
722	3761	Inlet Special-Type 2 60in		
		43A	1	EA
		44A	1	EA
722	3766	Inlet Special-Type 2 72in		
		42B	1	EA
722	3768	Inlet Special-Type 2 84in		
		42A	1	EA
750	0115	Sidewalk Concrete 4in		
		558+00 Lt to 560+38 Lt	263	SY
		560+69 Lt to 569+22 Lt	943	SY
750	2115	Detectable Warning Panels		
		557+67 - 30' Lt	20	SF
		558+32 - 30' Lt	20	SF
		569+11 - 30' Lt	20	SF

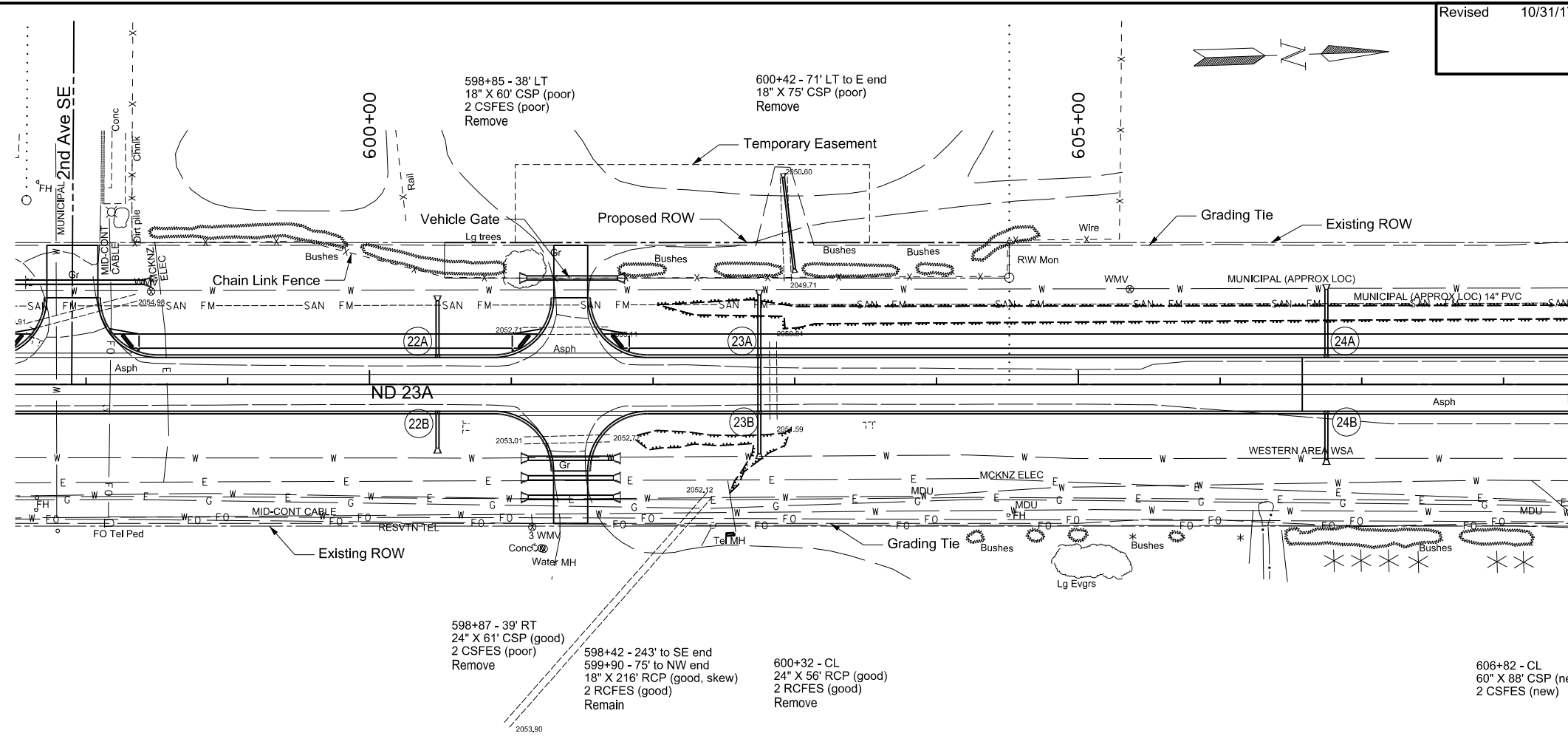


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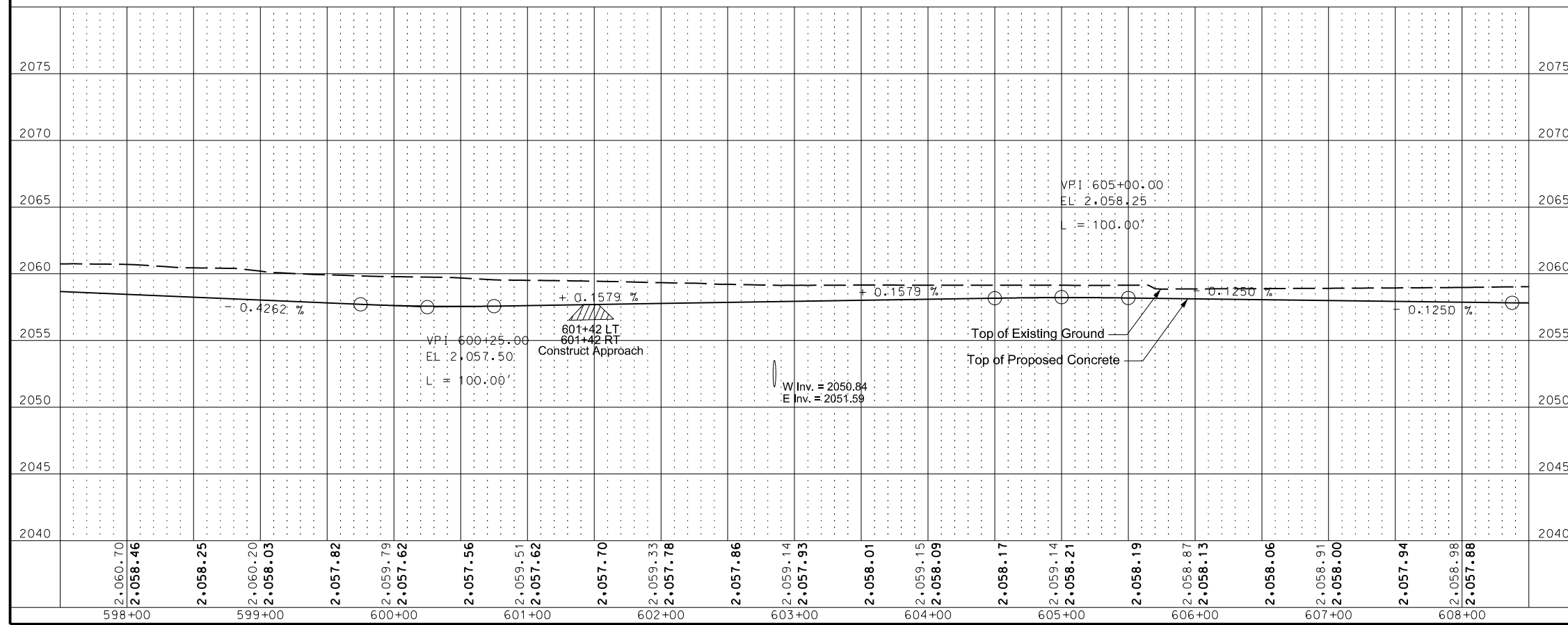
Plan and Profile
ND23A
US85B to ND23B

Revised 10/31/17

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-7-023(050)910	60	6



SPEC	CODE	BID ITEM	QUANTITY	UNIT
202	0174	Removal of Pipe-All Types & Sizes		
		601+38 - 38' Lt	60	LF
		601+39 - 39' Rt	61	LF
		602+85 - CL	56	LF
		602+85 - 109' Lt	75	LF
302	0100	Salvage Base Course (under sidewalk)		
		598+19 Lt to 601+20 Lt	68	TON
		601+64 Lt to 608+00 Lt	146	TON
714	4099	Pipe Conduit 18in-Approach		
		602+92-146' Lt to 603+00 - 81.5'Lt	65	LF
714	4107	Pipe Conduit 24in-Storm Drain		
		22A to 600+48-59' Lt	38	LF
		22B to 600+48-45' Rt	24	LF
		23A to 602+75-63' Lt	42	LF
		23A to 23B	38	LF
		23B to 602+75-49' Rt	28	LF
		24A to 606+75-67' Lt	46	LF
		24B to 606+75-53' Rt	32	LF
714	4116	Pipe Conduit 36in-Approach		
		601+11 - 75' Lt to 601+75 - 75' Lt	64	LF
		601+12 - 52.1' Rt to 601+72 - 52.1' Rt	60	LF
		601+12 - 65.9' Rt to 601+72 - 65.9' Rt	60	LF
		601+12 - 79.7' Rt to 601+72 - 79.7' Rt	60	LF
722	3510	Inlet-Type 2		
		22A	1	EA
		22B	1	EA
		23A	1	EA
		23B	1	EA
		24A	1	EA
		24B	1	EA
750	0115	Sidewalk Concrete 4in		
		598+19 Lt to 601+20 Lt	325	SY
		601+64 Lt to 608+00 Lt	702	SY
750	2115	Detectable Warning Panels		
		598+27 - 30' Lt	20	SF
		601+11 - 30' Lt	20	SF
		601+73 - 30' Lt	20	SF
752	0660	Fence Chain Link Remove & Reset		
		599+54.3-100.9' Lt to 604+50.3-101.4' Lt	495	LF
752	2110	Reset Vehicle Gate		
		601+41.9 - 100.0' Lt	1	EA

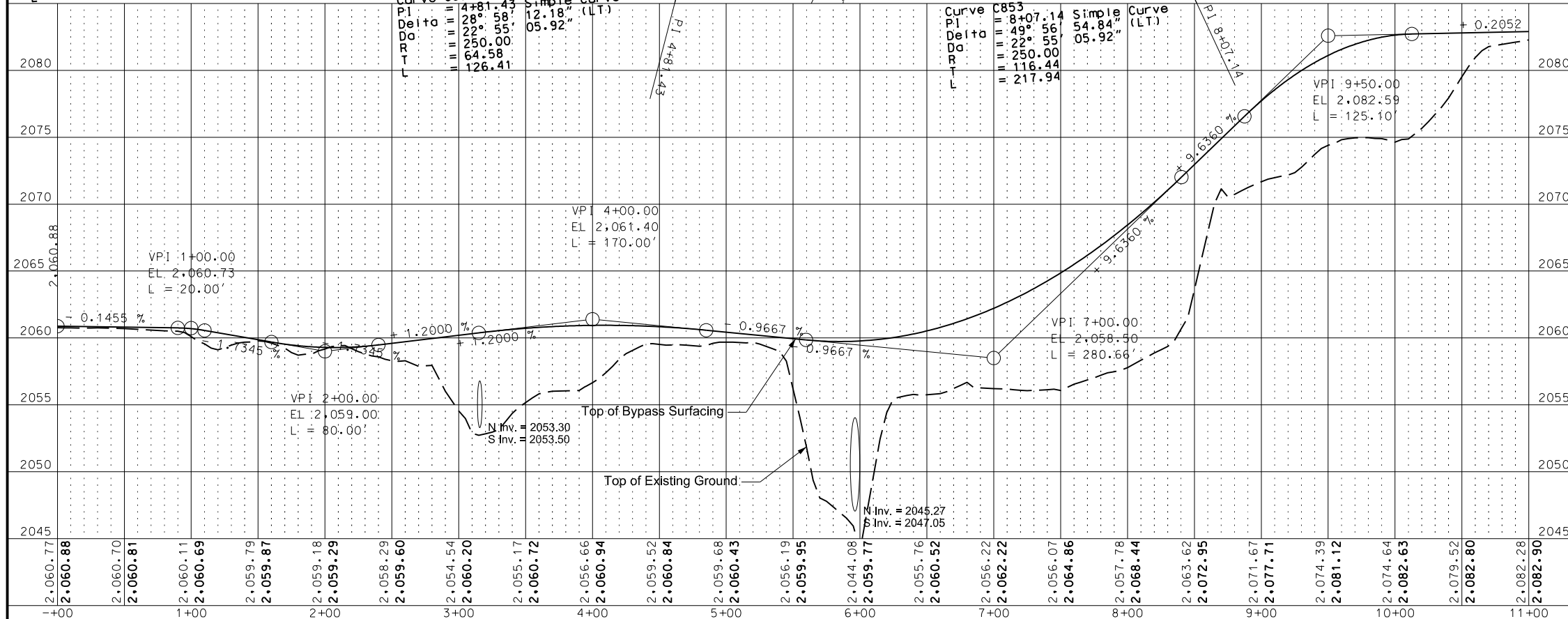
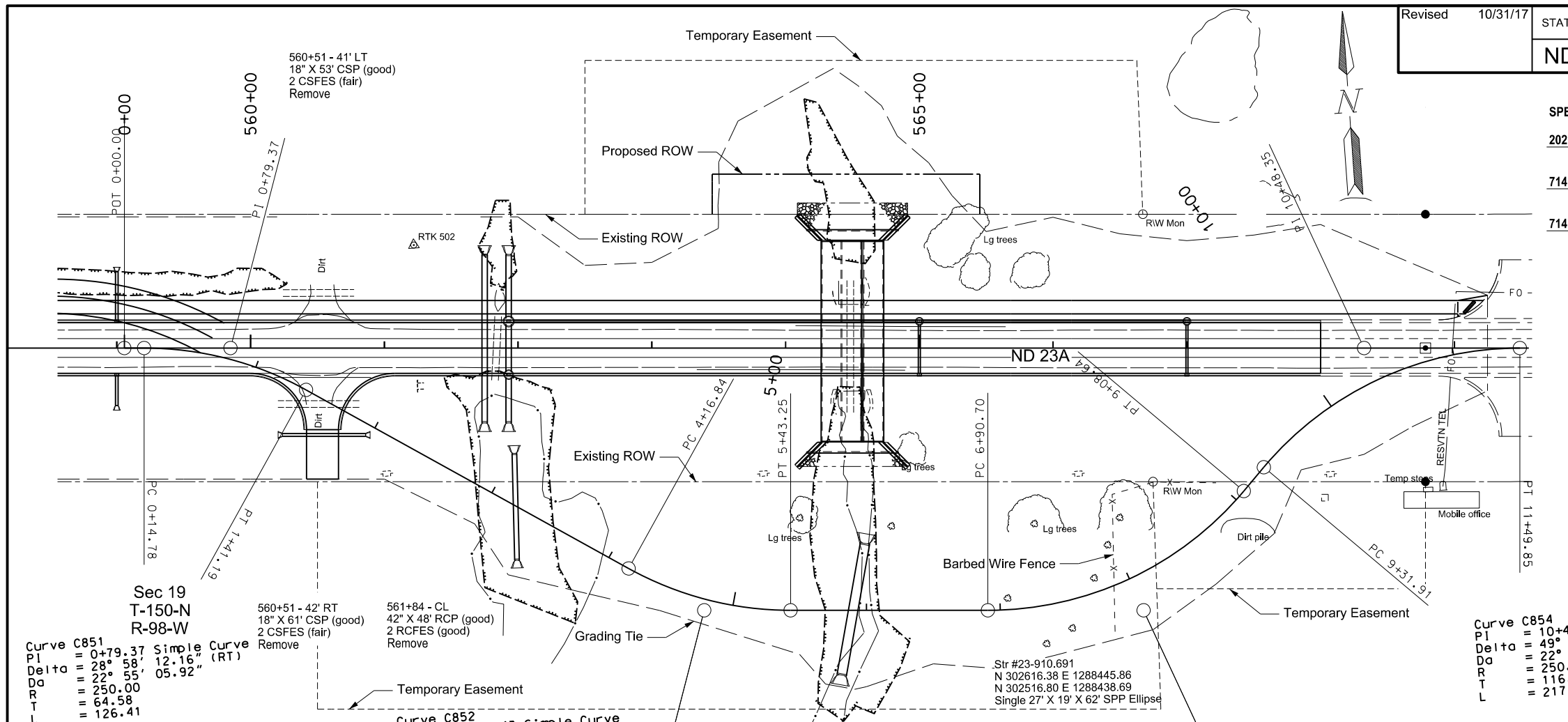


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Plan and Profile
ND23A
US85B to ND23B

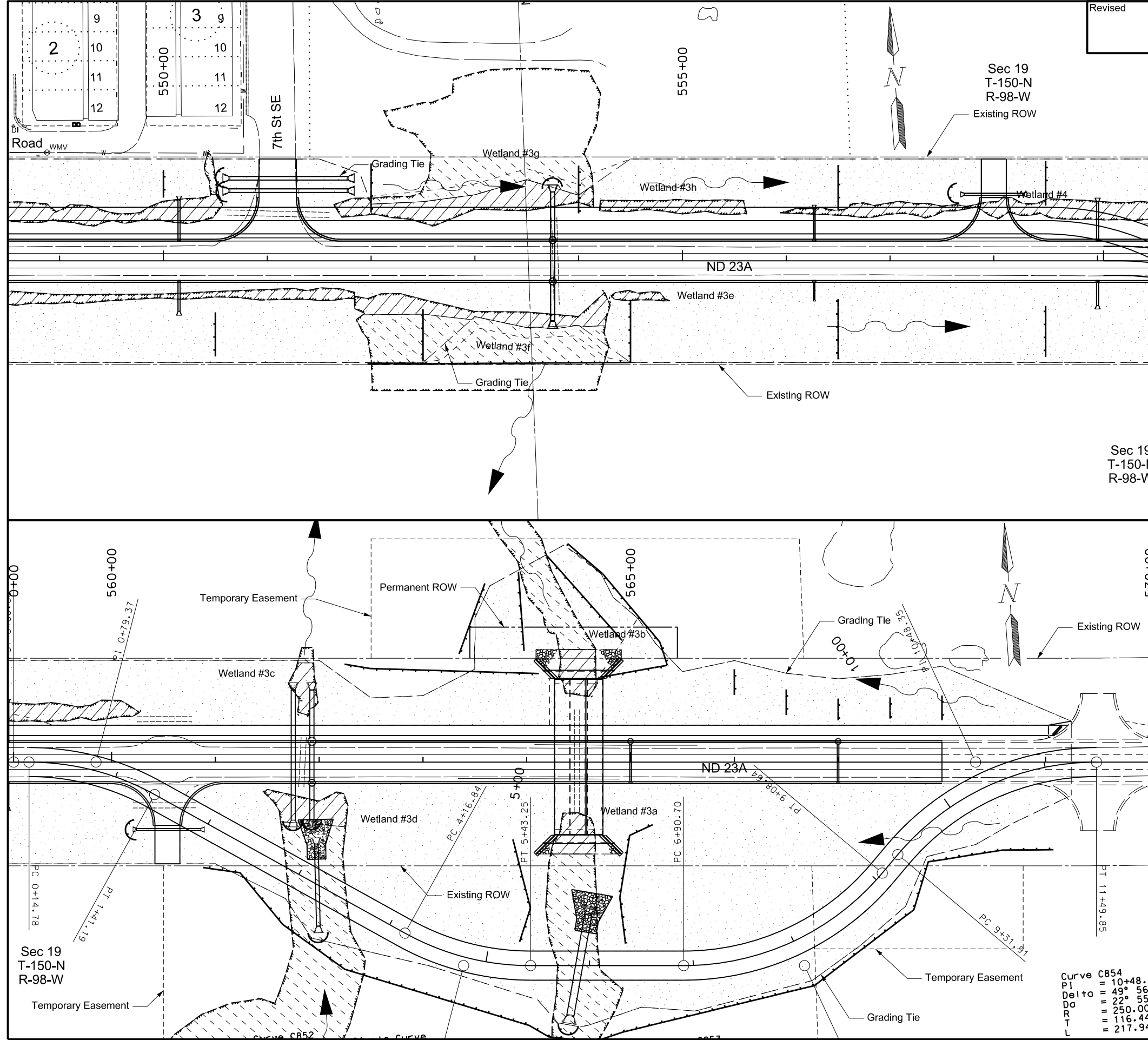
Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	60	8

SPEC	CODE	BID ITEM	QUANTITY	UNIT
202	0312	Remove Existing Fence 7+77 - RT to 9+00 - LT	182	LF
714	4120	Pipe Conduit 42in 3+20 CL, 30deg Skew RHF	80	LF
714	4155	Pipe Conduit 84in 5+90 CL, 10° Skew LHF	100	LF



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Plan and Profile
Bypass
US85B to ND23A



SPEC	CODE	BID ITEM	QUANTITY	UNIT
253	0301	Bonded Fiber Matrix		
		549+00 to 550+93 Lt	0.23	Acre
		551+27 to 559+00 Lt	0.80	Acre
		549+00 to 559+00 Rt	1.68	Acre
		559+00 to 568+71 Lt	1.48	Acre
		559+00 to 560+42 Rt	0.25	Acre
		560+66 to 568+73 Rt	2.03	Acre

LEGEND

- Delineated Wetland
- Seeding Area
- Flow Arrow
- Fiber Rolls

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Temporary Wetland, Erosion Control & Seeding

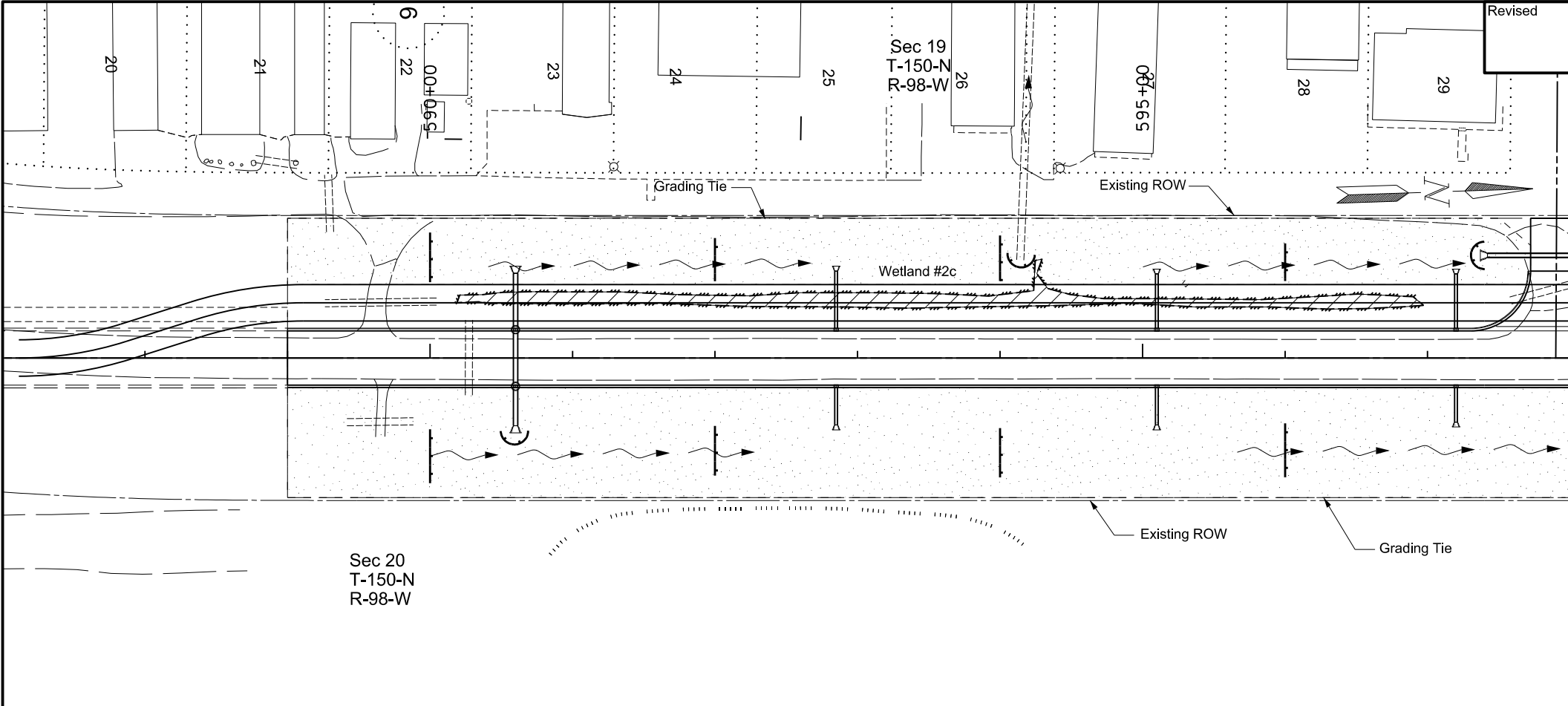
ND23A

US85B to ND23B

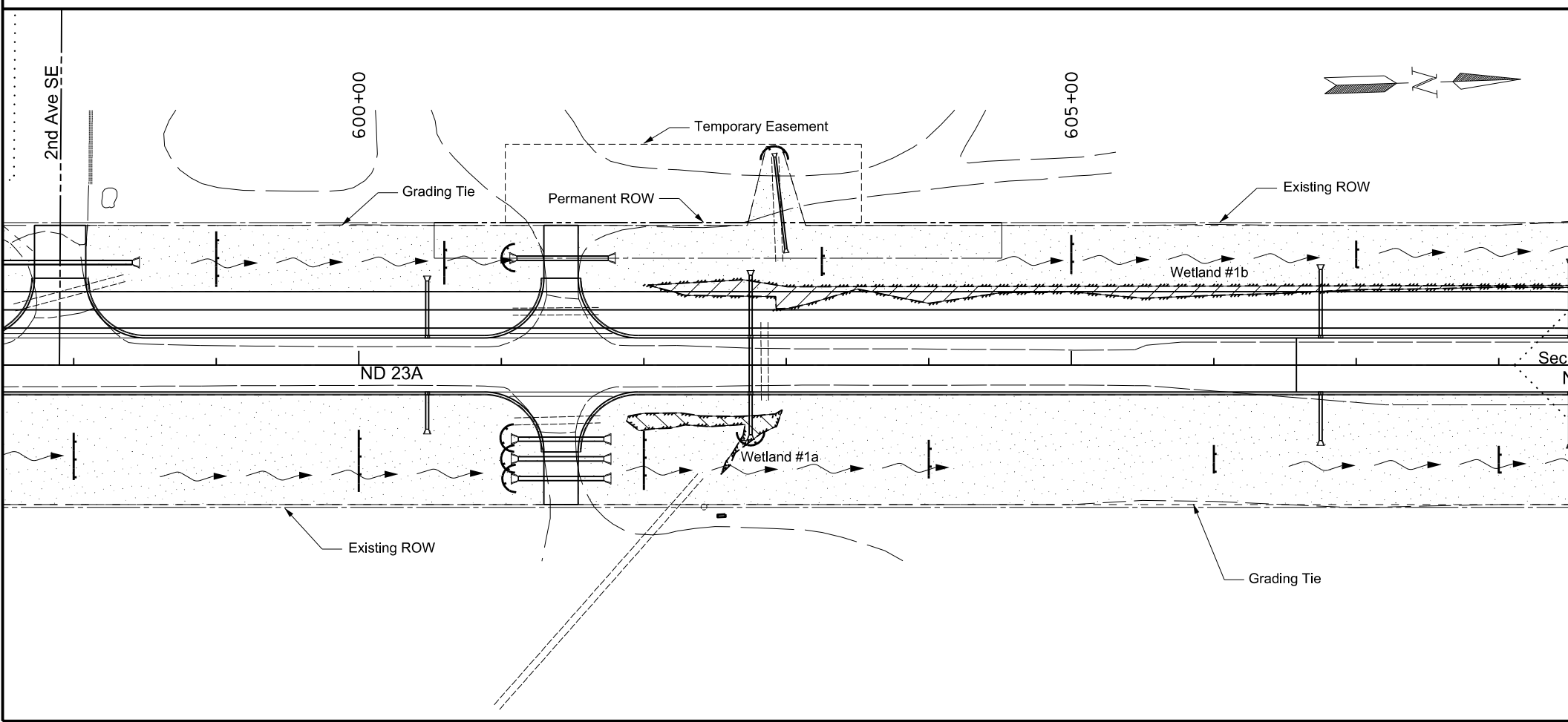
Curve C854
 PI = 10+48.56
 Delta = 49° 55'
 Da = 22° 55'
 R = 250.00
 T = 116.44
 L = 217.94

Revised 10/31/17

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-7-023(050)910	76	3



SPEC	CODE	BID ITEM	QUANTITY	UNIT
253	0301	Bonded Fiber Matrix		
		589+00 to 597+72 Lt	1.04	Acre
		589+00 to 598+00 Rt	1.59	Acre
		598+08 to 601+30 Lt	0.38	Acre
		601+54 to 608+00 Lt	0.81	Acre
		598+00 to 601+30 Rt	0.57	Acre
		601+54 to 608+00 Rt	1.13	Acre



LEGEND

- Delineated Wetland
- Seeding Area
- Flow Arrow
- Fiber Rolls

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Temporary Wetland, Erosion Control & Seeding

ND23A

US85B to ND23B

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	76	5

ND23A Mainline			
Station	Offset	12IN Fiber Roll LF	Description
530+00	LT	30	Inlet End Protection
530+12	LT	30	Inlet End Protection
531+00	LT	16	Ditch Check
531+00	RT	30	Ditch Check
533+00	LT	35	Ditch Check
533+00	RT	35	Ditch Check
535+00	RT	35	Ditch Check
535+25	LT	35	Ditch Check
535+34	RT	60	Inlet End Protection
537+00	LT	30	Ditch Check
537+00	RT	30	Ditch Check
539+00	LT	30	Ditch Check
539+00	RT	30	Ditch Check
539+72	LT	60	Inlet End Protection
540+37	LT	30	Inlet End Protection
542+00	LT	28	Ditch Check
542+00	RT	28	Ditch Check
544+00	RT	26	Ditch Check
544+25	LT	26	Ditch Check
544+58	RT	60	Inlet End Protection
546+25	LT	22	Ditch Check
546+50	RT	25	Ditch Check
548+25	LT	25	Ditch Check
548+50	LT	30	Ditch Check
550+00	LT	26	Ditch Check
550+43	LT	60	Inlet End Protection
550+50	LT	42	Ditch Check
552+00	LT	46	Ditch Check
552+00	RT	250	Runoff Protection
552+50	RT	50	Ditch Check
553+75	LT	30	Inlet End Protection
554+00	LT	46	Ditch Check
554+50	RT	60	Ditch Check
556+50	LT	42	Ditch Check
556+50	RT	48	Ditch Check
557+60	LT	30	Inlet End Protection
558+50	LT	42	Ditch Check
558+50	RT	48	Ditch Check
560+20	RT	30	Inlet End Protection
561+75	LT	30	Inlet End Protection
561+93	LT	30	Inlet End Protection
563+30	LT	188	Runoff Protection
563+47	LT	72	Runoff Protection
563+95	LT	76	Runoff Protection
564+00	RT	102	Runoff Protection
564+55	LT	108	Runoff Protection
564+56	RT	136	Runoff Protection
565+00	LT	152	Runoff Protection
565+03	LT	65	Runoff Protection
566+00	LT	25	Ditch Check
566+50	LT	25	Ditch Check
567+00	LT	25	Ditch Check
567+50	LT	25	Ditch Check
568+00	LT	25	Ditch Check
Total:		2720	

ND23A Mainline			
Station	Offset	12IN Fiber Roll LF	Description
590+00	LT	35	Ditch Check
590+00	RT	35	Ditch Check
590+60	RT	30	Inlet End Protection
592+00	LT	35	Ditch Check
592+00	RT	35	Ditch Check
594+00	LT	35	Ditch Check
594+00	RT	35	Ditch Check
549+14	LT	30	Inlet End Protection
596+00	LT	26	Ditch Check
596+00	RT	38	Ditch Check
597+34	LT	30	Inlet End Protection
599+00	LT	40	Ditch Check
600+00	RT	44	Ditch Check
600+50	LT	30	Ditch Check
601+07	LT	30	Inlet End Protection
601+12	RT	90	Inlet End Protection
602+00	RT	42	Ditch Check
602+75	RT	30	Inlet End Protection
602+92	LT	30	Inlet End Protection
603+25	LT	25	Ditch Check
604+00	RT	30	Ditch Check
605+00	LT	30	Ditch Check
606+00	RT	20	Ditch Check
607+00	LT	20	Ditch Check
608+00	RT	20	Ditch Check
609+00	LT	20	Ditch Check
609+36	RT	45	Inlet End Protection
609+44	RT	45	Inlet End Protection
609+95	LT	140	Runoff Protection
610+04	RT	30	Inlet End Protection
Total:		1125	

ND23A Bypass			
Station	Offset	12IN Fiber Roll LF	Description
2+16 - 10+74	RT	915	Runoff Protection
2+99	LT	60	Inlet End Protection
5+73	LT	30	Inlet End Protection
Total:		1005	

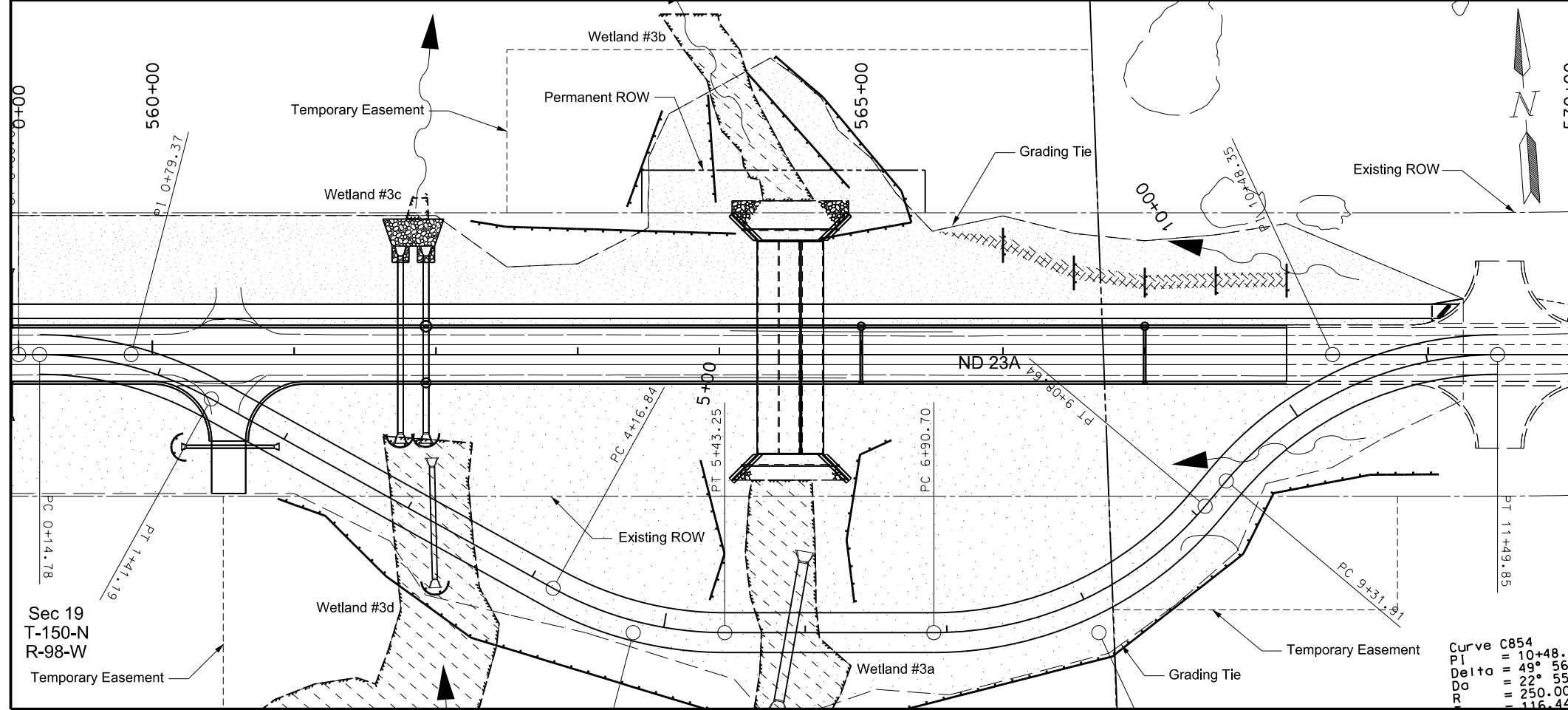
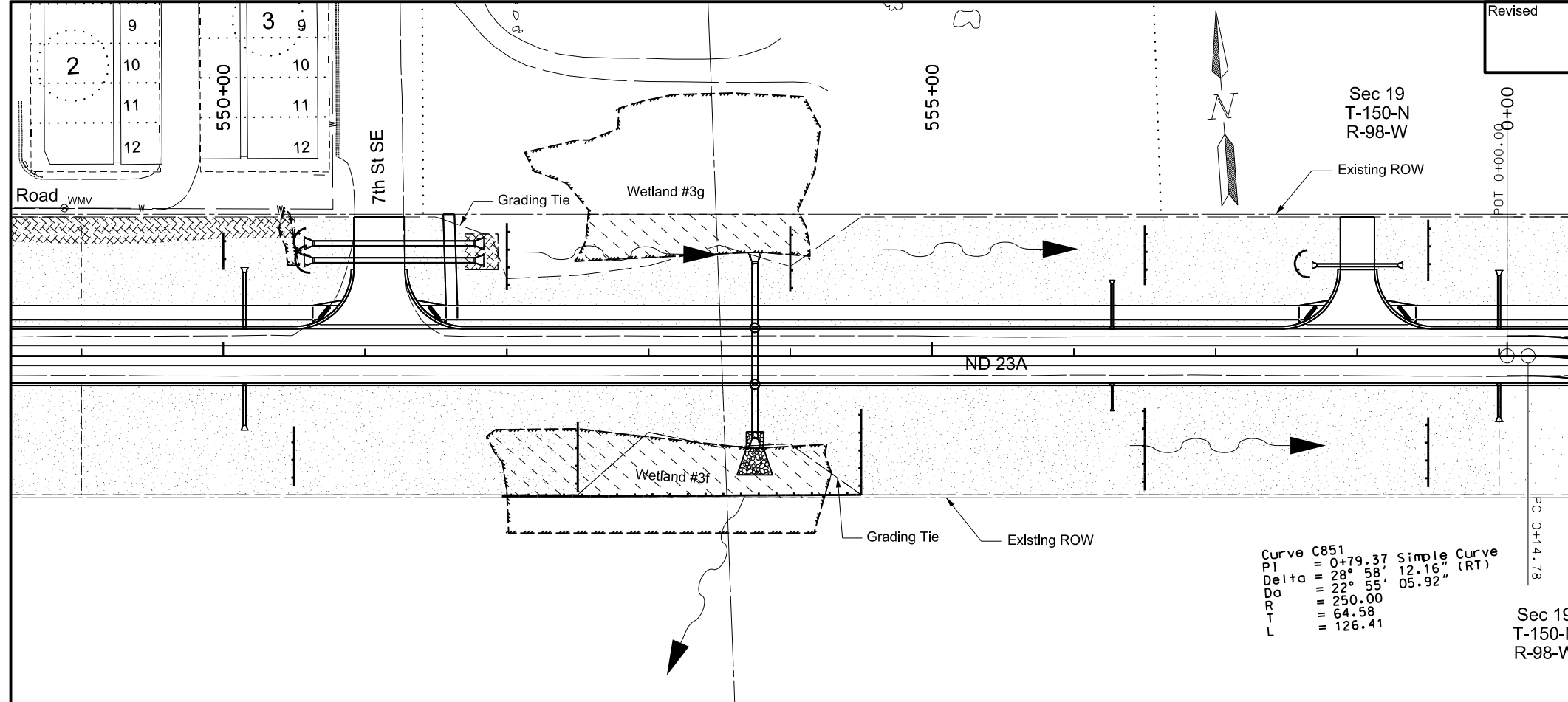
SPEC	CODE	BID ITEM	QUANTITY	UNIT
261	0112	Fiber Rolls 12IN 530+00 to 610+04 2+16 to 10+74 Bypass Discretionary	3845 1005 700	LF LF LF
261	0113	Remove Fiber Rolls 12IN 530+00 to 610+04 2+16 to 10+74 Bypass Discretionary	3845 1005 700	LF LF LF

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Temporary Wetland, Erosion Control and Seeding Tables

ND23A

US85B to ND23B



SPEC	CODE	BID ITEM	QUANTITY	UNIT
251	0200	Seeding Class II		
		549+00 to 550+90 Lt	0.35	Acre
		549+00 to 559+00 Rt	2.06	Acre
		551+30 to 559+00 Lt	1.07	Acre
		559+00 to 560+42 Lt	0.22	Acre
		559+00 to 560+42 Rt	0.25	Acre
253	0201	Hydraulic Mulch		
		549+00 to 550+90 Lt	0.35	Acre
		549+00 to 559+00 Rt	2.06	Acre
		551+30 to 559+00 Lt	1.07	Acre
255	0103	ECB Type 3		
		549+00 to 550+50 Lt	279	SY
		565+50 to 568+00 Lt	267	SY
		560+66 to 568+72 Lt	1.18	Acre
		560+66 to 568+72 Rt	2.44	Acre

Curve C851
 PI = 0+79.37 Simple Curve
 Delta = 28° 58' 12.16" (RT)
 Da = 22° 55' 05.92"
 R = 250.00
 T = 64.58
 L = 126.41

LEGEND

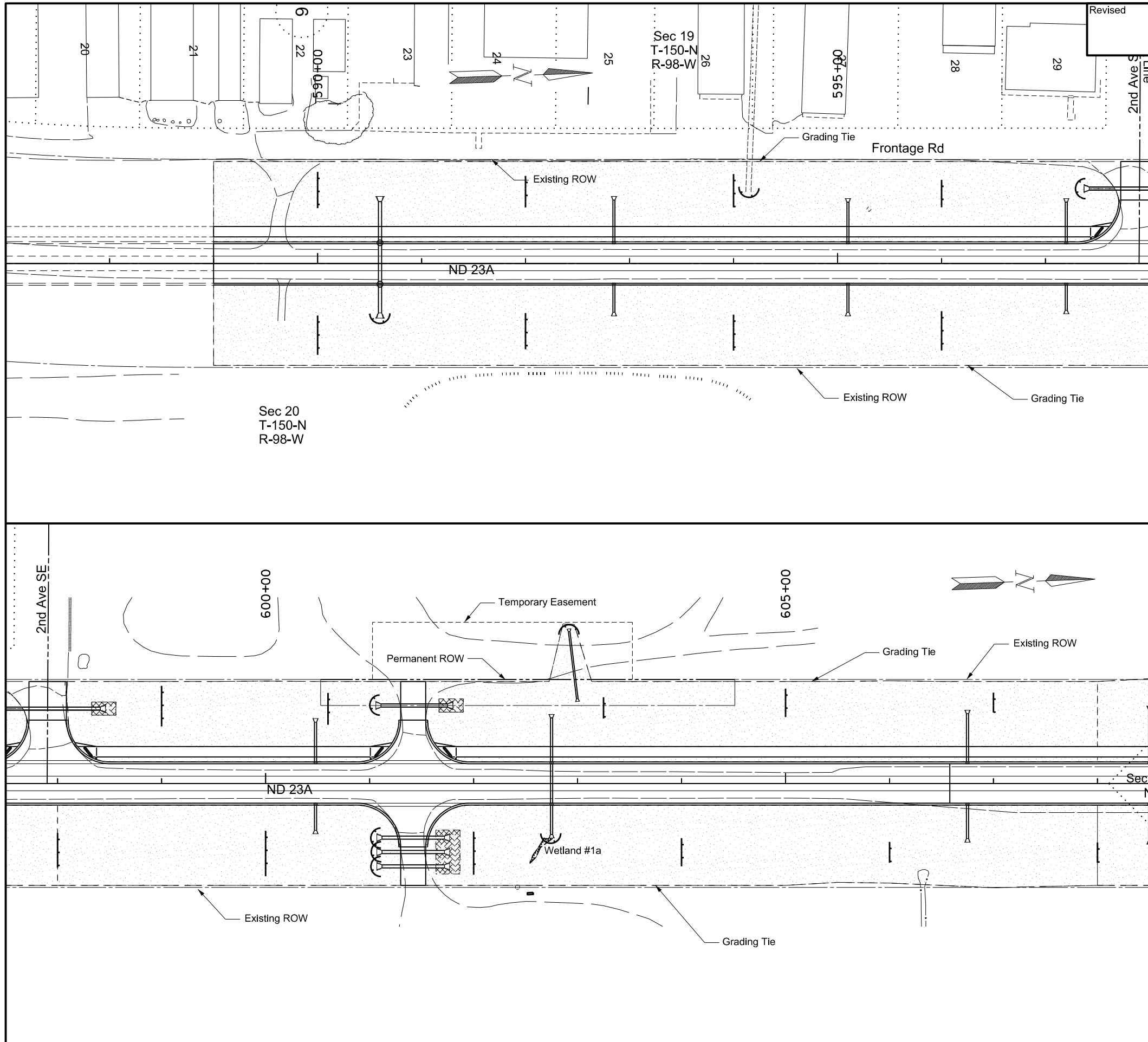
- Erosion Control Blanket
- Delineated Wetland
- Seeding Area
- Flow Arrow
- Fiber Rolls

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Permanent Wetland, Erosion Control & Seeding
 ND23A
 US85B to ND23B

Revised 10/31/17

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-7-023(050)910	77	3



SPEC	CODE	BID ITEM	QUANTITY	UNIT
251	0200	Seeding Class II		
		589+00 to 597+71 Lt	1.32	Acre
		589+00 to 598+00 Rt	1.59	Acre
		598+00 to 601+30 Rt	0.57	Acre
		601+54 to 608+00 Lt	1.02	Acre
253	0201	Hydraulic Mulch		
		589+00 to 597+71 Lt	1.32	Acre
		589+00 to 598+00 Rt	1.59	Acre
		598+00 to 601+30 Rt	0.57	Acre
		601+54 to 608+00 Lt	1.02	Acre

LEGEND

- Erosion Control Blanket
- Delineated Wetland
- Seeding Area
- Flow Arrow
- Fiber Rolls

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Permanent Wetland, Erosion Control & Seeding
 ND23A
 US85B to ND23B

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	77	5

ND23A Mainline			
Station	Offset	12IN Fiber Roll LF	Description
530+00	LT	30	Inlet End Protection
530+12	LT	30	Inlet End Protection
531+00	LT	16	Ditch Check
531+00	RT	30	Ditch Check
533+00	LT	35	Ditch Check
533+00	RT	35	Ditch Check
535+00	RT	35	Ditch Check
535+25	LT	35	Ditch Check
535+34	RT	60	Inlet End Protection
537+00	LT	30	Ditch Check
539+00	LT	30	Ditch Check
539+72	LT	60	Inlet End Protection
540+37	LT	30	Inlet End Protection
542+00	LT	28	Ditch Check
542+00	RT	28	Ditch Check
544+00	RT	26	Ditch Check
544+25	LT	26	Ditch Check
544+58	RT	60	Inlet End Protection
546+25	LT	22	Ditch Check
546+50	RT	25	Ditch Check
548+25	LT	25	Ditch Check
548+50	LT	30	Ditch Check
550+00	LT	26	Ditch Check
550+43	LT	60	Inlet End Protection
550+50	LT	42	Ditch Check
552+00	LT	46	Ditch Check
552+00	RT	250	Runoff Protection
552+50	RT	50	Ditch Check
553+75	LT	30	Inlet End Protection
554+00	LT	46	Ditch Check
554+50	RT	60	Ditch Check
556+50	LT	42	Ditch Check
556+50	RT	48	Ditch Check
557+60	LT	30	Inlet End Protection
558+50	LT	42	Ditch Check
558+50	RT	48	Ditch Check
560+20	RT	30	Inlet End Protection
560+88 - 569+08	RT	915	Runoff Protection
561+75	LT	30	Inlet End Protection
561+93	LT	30	Inlet End Protection
563+30	LT	188	Runoff Protection
563+47	LT	72	Runoff Protection
563+95	LT	76	Runoff Protection
564+00	RT	102	Runoff Protection
564+55	LT	108	Runoff Protection
564+56	RT	136	Runoff Protection
565+00	LT	152	Runoff Protection
565+03	LT	65	Runoff Protection
566+00	LT	25	Ditch Check
566+50	LT	25	Ditch Check
567+00	LT	25	Ditch Check
567+50	LT	25	Ditch Check
568+00	LT	25	Ditch Check
Total:		3575	

ND23A Mainline			
Station	Offset	12IN Fiber Roll LF	Description
590+00	LT	35	Ditch Check
590+00	RT	35	Ditch Check
590+60	RT	30	Inlet End Protection
592+00	LT	35	Ditch Check
592+00	RT	35	Ditch Check
594+00	LT	35	Ditch Check
594+00	RT	35	Ditch Check
549+14	LT	30	Inlet End Protection
596+00	LT	26	Ditch Check
596+00	RT	38	Ditch Check
597+34	LT	30	Inlet End Protection
598+00	RT	35	Ditch Check
599+00	LT	40	Ditch Check
600+00	RT	44	Ditch Check
600+50	LT	30	Ditch Check
601+07	LT	30	Inlet End Protection
601+12	RT	90	Inlet End Protection
602+00	RT	42	Ditch Check
602+75	RT	30	Inlet End Protection
602+92	LT	30	Inlet End Protection
603+25	LT	25	Ditch Check
604+00	RT	30	Ditch Check
605+00	LT	30	Ditch Check
606+00	RT	20	Ditch Check
607+00	LT	20	Ditch Check
608+00	RT	20	Ditch Check
609+00	LT	20	Ditch Check
609+36	RT	30	Inlet End Protection
609+44	RT	30	Inlet End Protection
609+95	LT	140	Runoff Protection
610+04	RT	30	Inlet End Protection
Total:		1130	

SPEC	CODE	BID ITEM	QUANTITY	UNIT
261	0112	Fiber Rolls 12IN 530+00 to 610+04 Discretionary	4705 600	LF LF

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Permanent Wetland, Erosion Control and Seeding Tables
ND23A
US85B to ND23B

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	82	2

Beginning chain BYPASS description

Point 850 N 302,603.6074 E 1,287,900.7227 Sta 0+00.00

Course from 850 to PC C851 S 85° 55' 02.11" E Dist 14.7813

Curve Data

Curve C851
P.I. Station 0+79.37 N 302,597.9567 E 1,287,979.8873
Delta = 28° 58' 12.16" (RT)
Degree = 22° 55' 05.92"
Tangent = 64.5847
Length = 126.4057
Radius = 250.0000
External = 8.2076
Long Chord = 125.0635
Mid. Ord. = 7.9467
P.C. Station 0+14.78 N 302,602.5550 E 1,287,915.4665
P.T. Station 1+41.19 N 302,562.7315 E 1,288,034.0201
C.C. N 302,353.1894 E 1,287,897.6672
Back = S 85° 55' 02.11" E
Ahead = S 56° 56' 49.95" E
Chord Bear = S 71° 25' 56.03" E

Course from PT C851 to PC C852 S 56° 56' 49.95" E Dist 275.6534

Curve Data

Curve C852
P.I. Station 4+81.43 N 302,377.1617 E 1,288,319.1970
Delta = 28° 58' 12.18" (LT)
Degree = 22° 55' 05.92"
Tangent = 64.5847
Length = 126.4057
Radius = 250.0000
External = 8.2076
Long Chord = 125.0635
Mid. Ord. = 7.9467
P.C. Station 4+16.84 N 302,412.3869 E 1,288,265.0641
P.T. Station 5+43.25 N 302,372.5635 E 1,288,383.6177
C.C. N 302,621.9290 E 1,288,401.4170
Back = S 56° 56' 49.95" E
Ahead = S 85° 55' 02.13" E
Chord Bear = S 71° 25' 56.04" E

Course from PT C852 to PC C853 S 85° 55' 02.13" E Dist 147.4515

Curve Data

Curve C853
P.I. Station 8+07.14 N 302,353.7752 E 1,288,646.8399
Delta = 49° 56' 54.84" (LT)
Degree = 22° 55' 05.92"
Tangent = 116.4403
Length = 217.9417
Radius = 250.0000
External = 25.7868
Long Chord = 211.1057
Mid. Ord. = 23.3757
P.C. Station 6+90.70 N 302,362.0654 E 1,288,530.6951
P.T. Station 9+08.64 N 302,437.3457 E 1,288,727.9221
C.C. N 302,611.4309 E 1,288,548.4943
Back = S 85° 55' 02.13" E
Ahead = N 44° 08' 03.03" E
Chord Bear = N 69° 06' 30.45" E

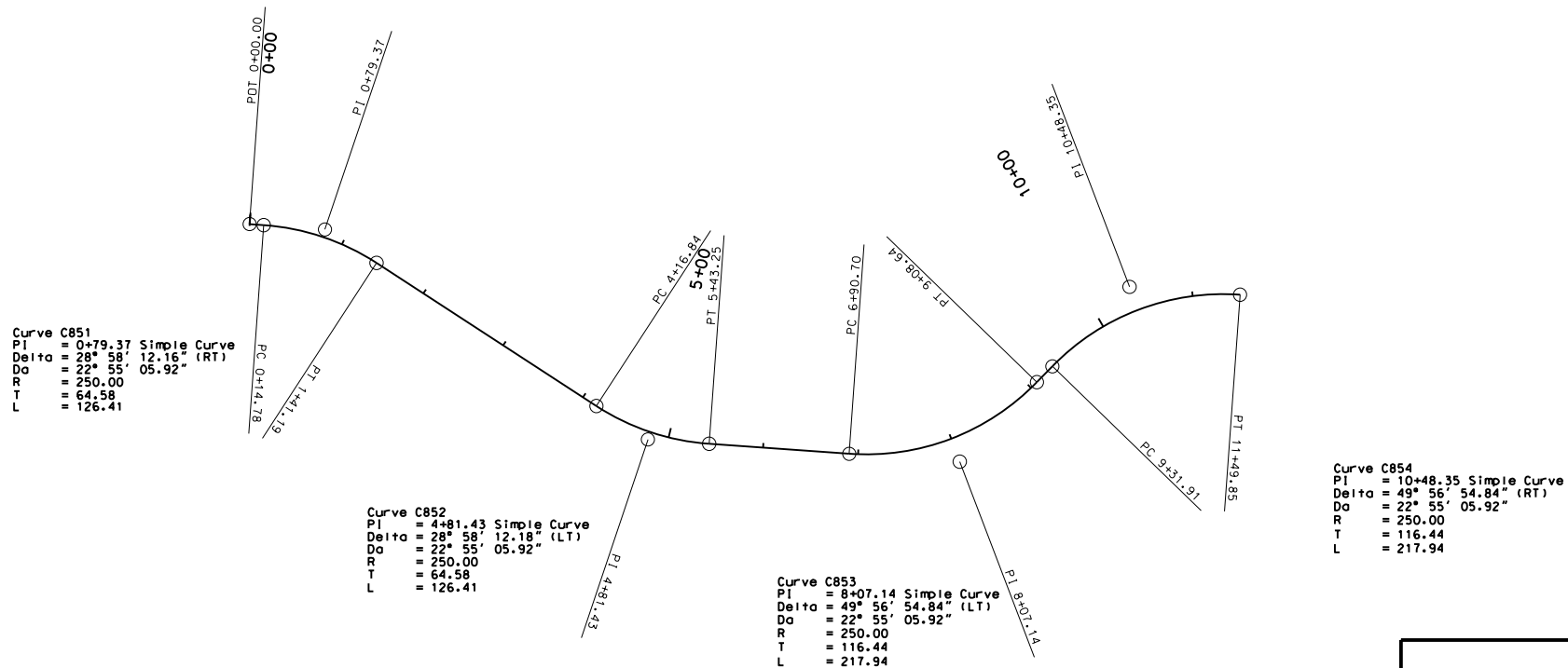
Course from PT C853 to PC C854 N 44° 08' 03.03" E Dist 23.2726

Curve Data

Curve C854
P.I. Station 10+48.35 N 302,537.6192 E 1,288,825.2099
Delta = 49° 56' 54.84" (RT)
Degree = 22° 55' 05.92"
Tangent = 116.4403
Length = 217.9417
Radius = 250.0000
External = 25.7868
Long Chord = 211.1057
Mid. Ord. = 23.3757
P.C. Station 9+31.91 N 302,454.0487 E 1,288,744.1278
P.T. Station 11+49.85 N 302,529.3290 E 1,288,941.3548
C.C. N 302,279.9634 E 1,288,923.5555
Back = N 44° 08' 03.03" E
Ahead = S 85° 55' 02.13" E
Chord Bear = N 69° 06' 30.45" E

Point 855 N 302,529.3290 E 1,288,941.3548 Sta 11+49.85

Ending chain BYPASS description



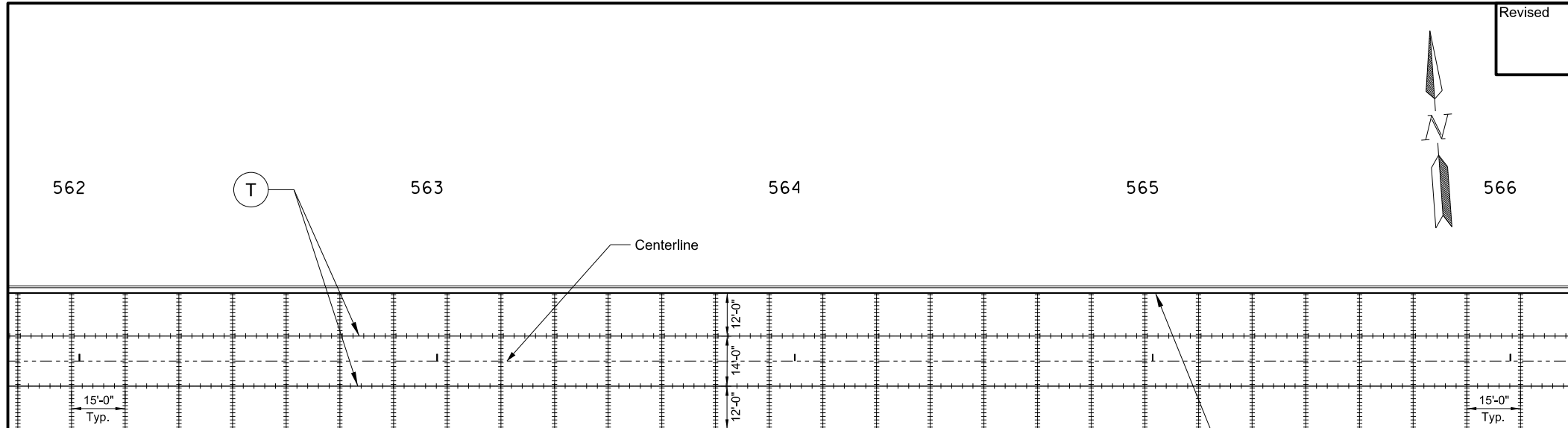
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Survey Data Layout
Temporary Bypass

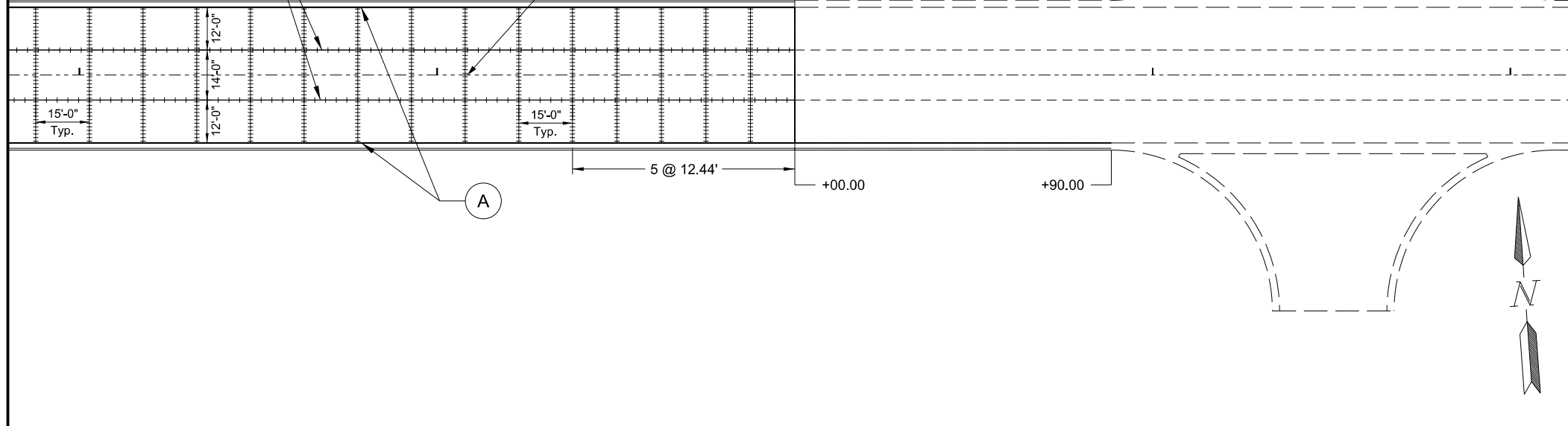
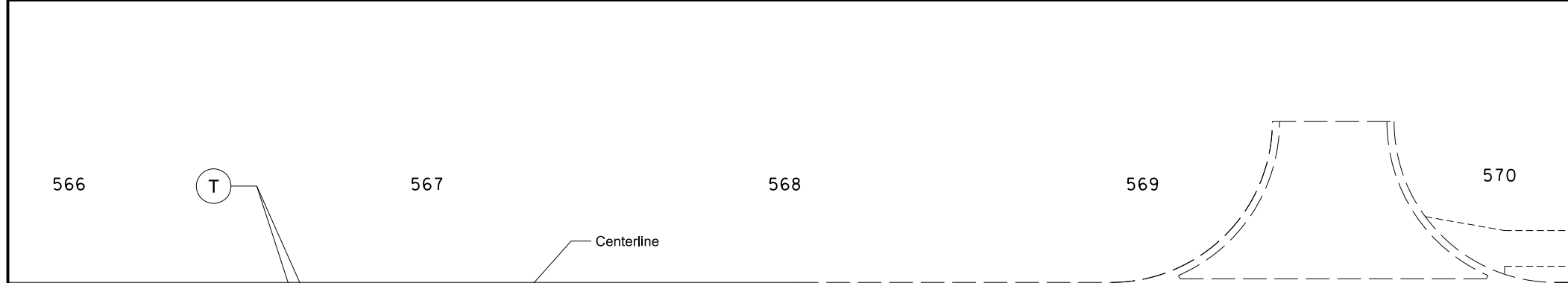
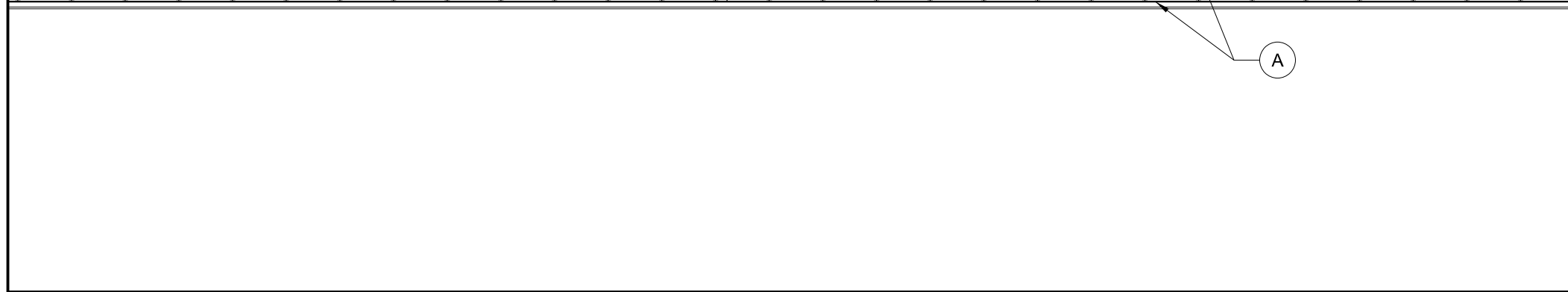
ND23A

US85B to ND23B

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	90	7



SPEC	CODE	BID ITEM	QUANTITY	UNIT
302	0100	Salvaged Base Course 562+00 to 568+00	1306	TON
550	0305	9IN Non-Reinf Concrete Pvmnt CL AE-Doweled 562+00 to 568+00	2533	SY
748	0140	Curb & Gutter-Type I 562+00 to 568+00 LT 562+00 to 568+90 RT	600 690	LF LF



- LEGEND**
- (A) Curb and Gutter (All): No. 3 tie bars, 1'-6" @ 4' c to c (continuous)
 - (T) Tied Joint - See Detail
 - [Grid Symbol] Paving Reinforcement - See Section 20 Detail
 - [Dashed Line Symbol] Doweled Joint
 - [Dashed Line Symbol] 23A Centerline

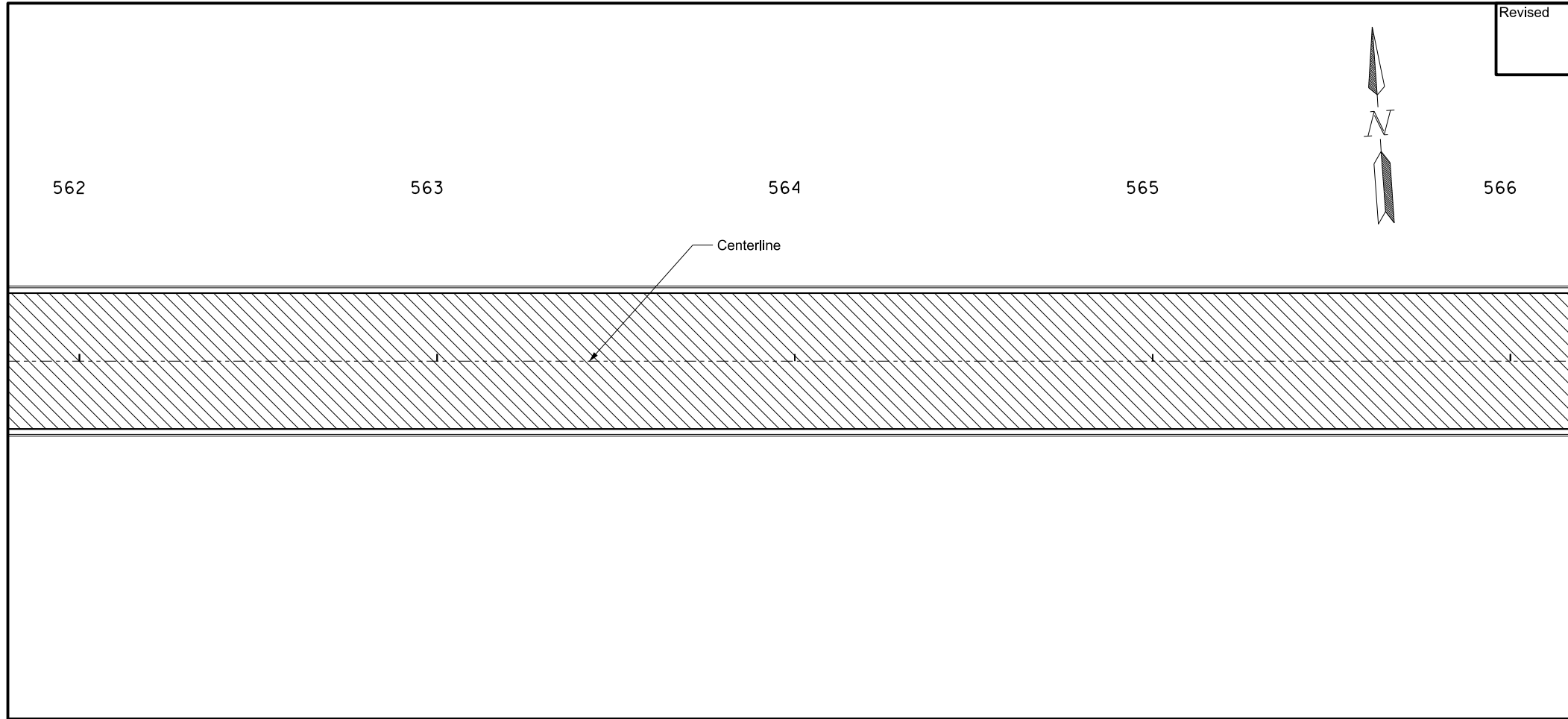
Note: Stations & Offsets from alignment PR23A

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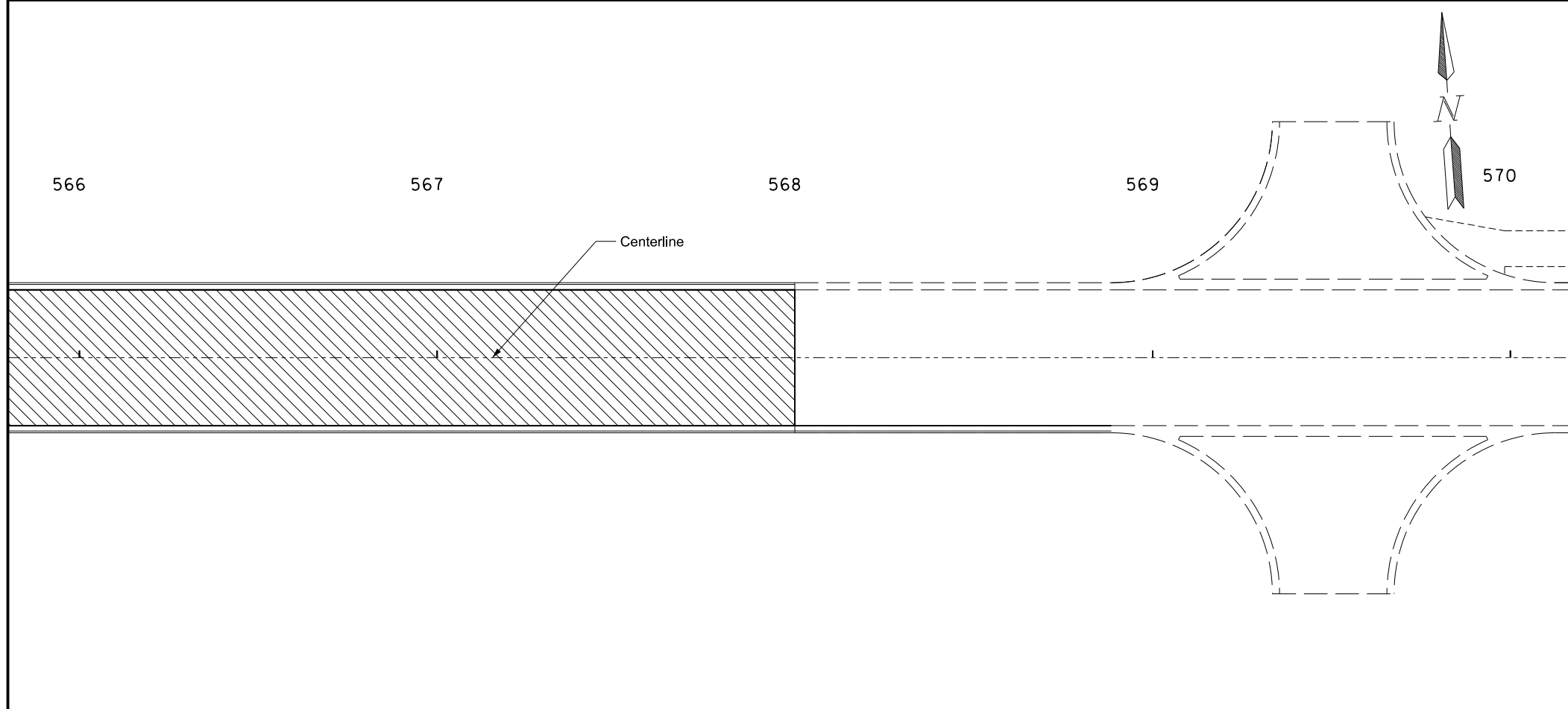
Paving Layout
Option 1: Concrete Pavement

ND23A
US85B to ND23B

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	90	15



SPEC	CODE	BID ITEM	QUANTITY	UNIT
302	0100	Salvaged Base Course 562+00 to 568+00	3125	TON
401	0050	Tack Coat 562+00 to 568+00	254	GAL
401	0060	Prime Coat 562+00 to 568+00	633	GAL
401	0160	Blotter Material CL 44 562+00 to 568+00	19	TON
430	0045	Superpave FAA 45 562+00 to 568+00	844	TON
430	5828	PG 58-28 Asphalt Cement 562+00 to 568+00	17	TON
430	6434	PG 64-34 Asphalt Cement 562+00 to 568+00	34	TON
748	0140	Curb & Gutter-Type I 562+00 to 568+00 LT 562+00 to 568+90 RT	600 690	LF LF



- LEGEND**
- Superpave FAA 45
 - 9" Non-Rerforced Concrete Pavement - Doweled
 - Salvaged Base Course
 - 23A Centerline

Note: Stations & Offsets from alignment PR23A

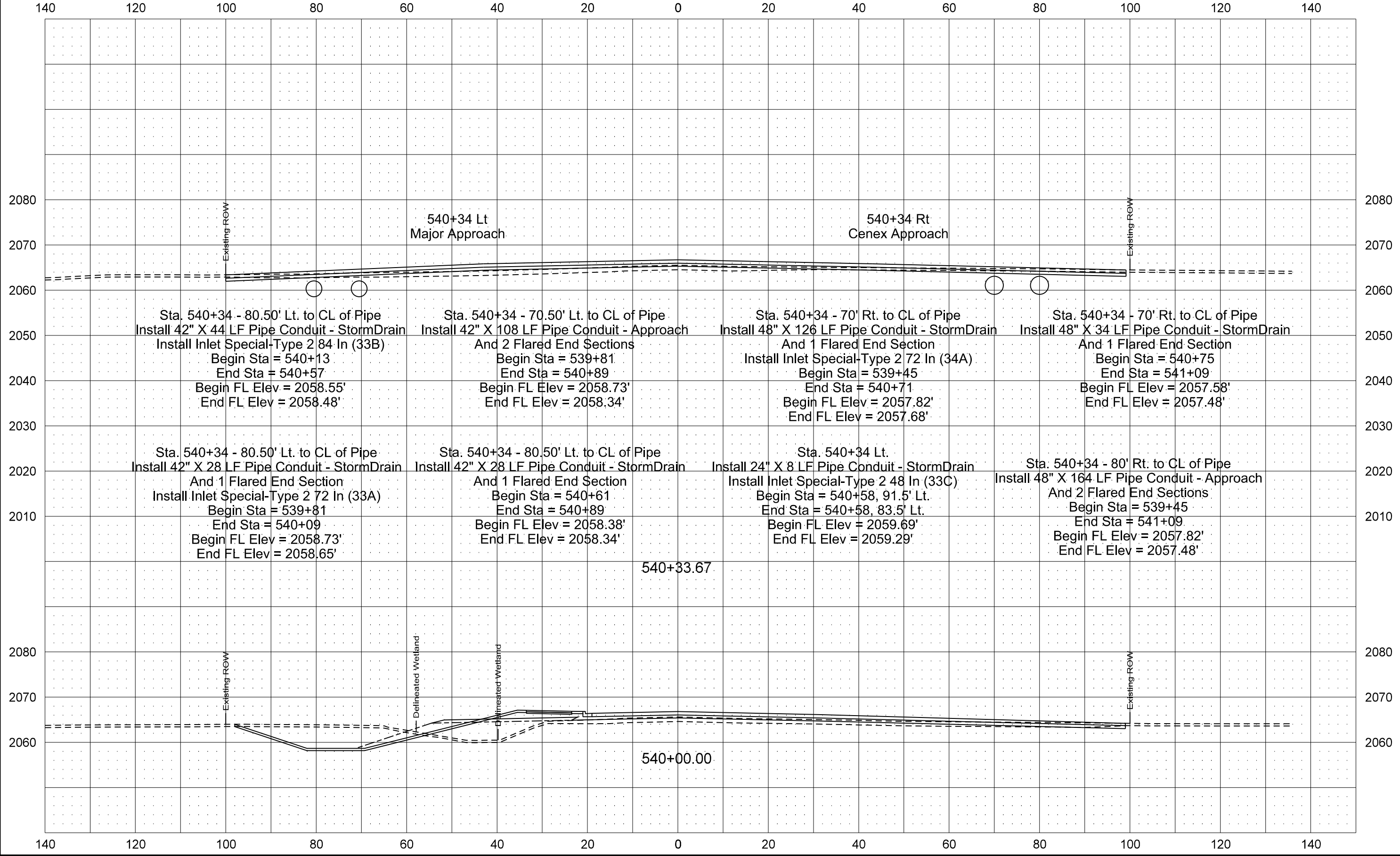
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Paving Layout
Option 2: Asphalt Pavement

ND23A
US85B to ND23B

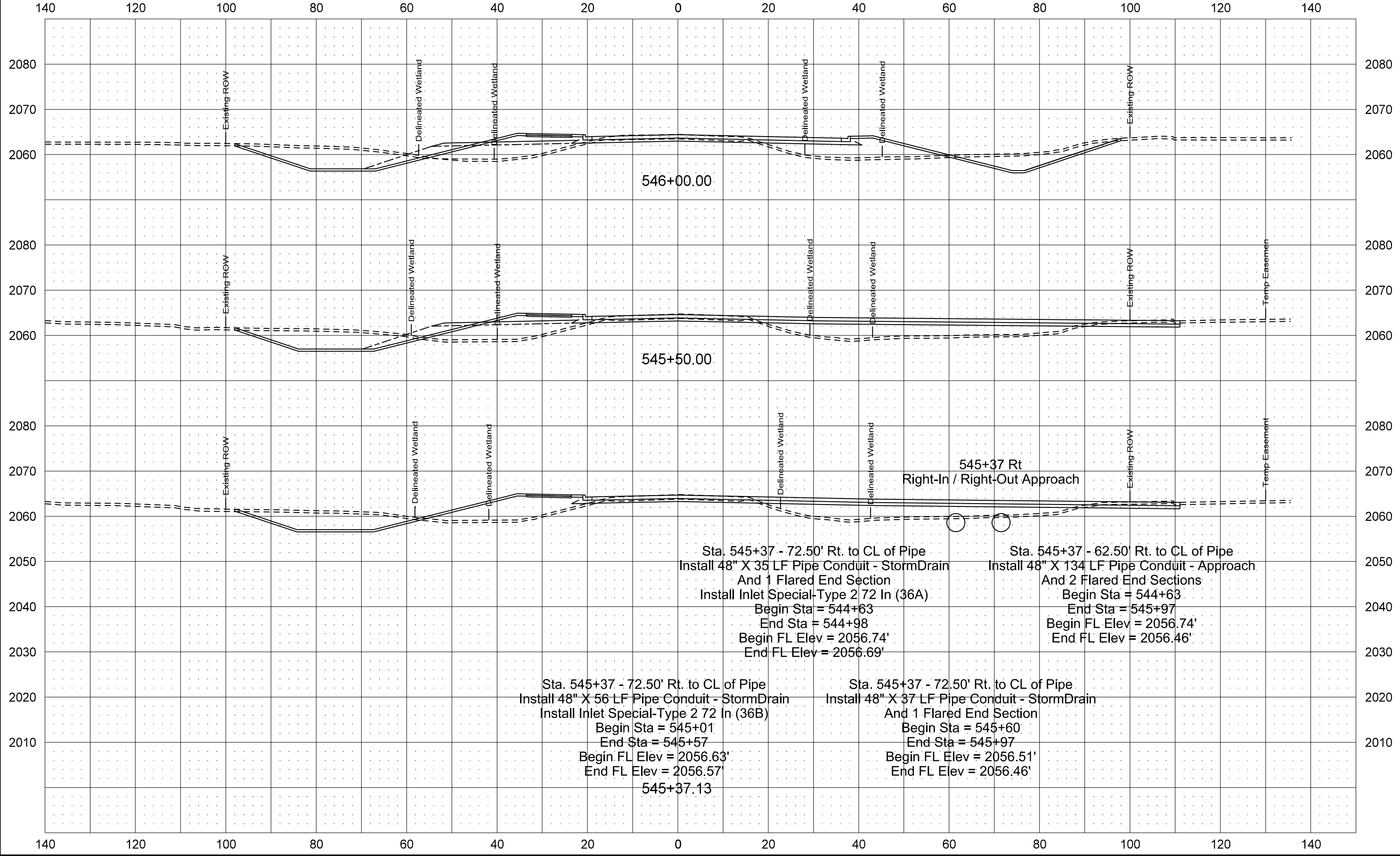
ND23A Option 1 - Concrete

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	200	12-1



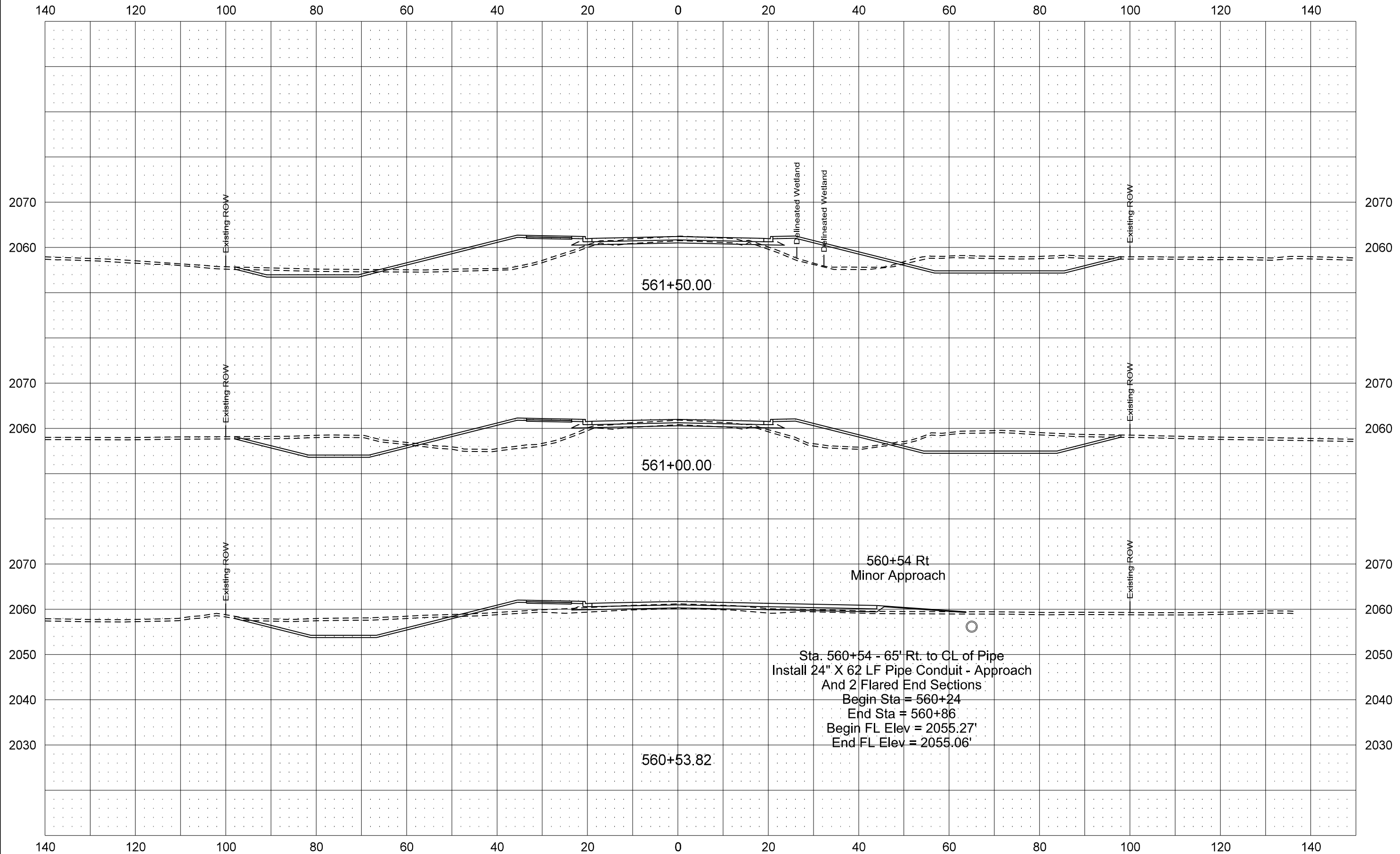
ND23A Option 1 - Concrete

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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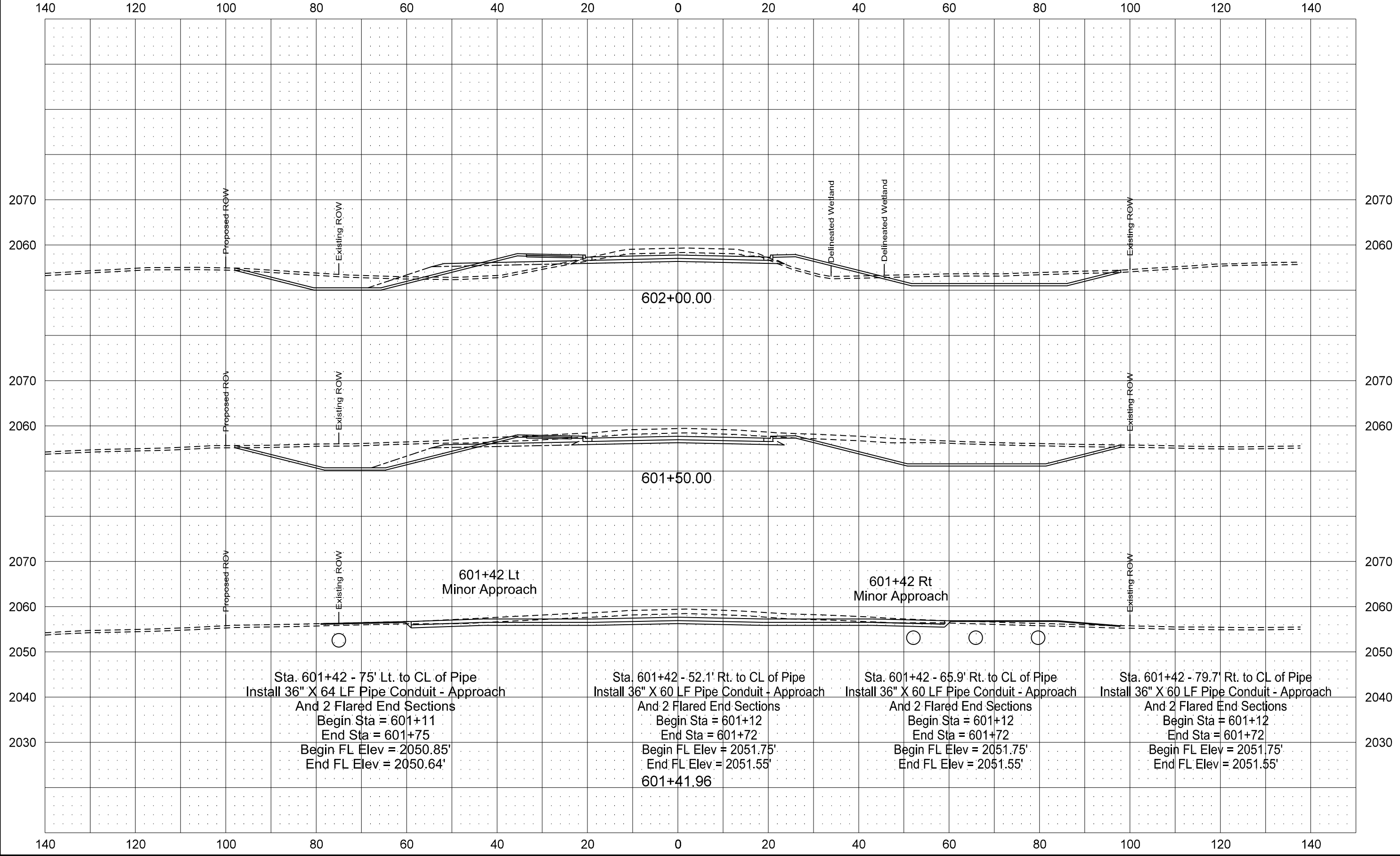
ND23A Option 1 - Concrete

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	200	27-1



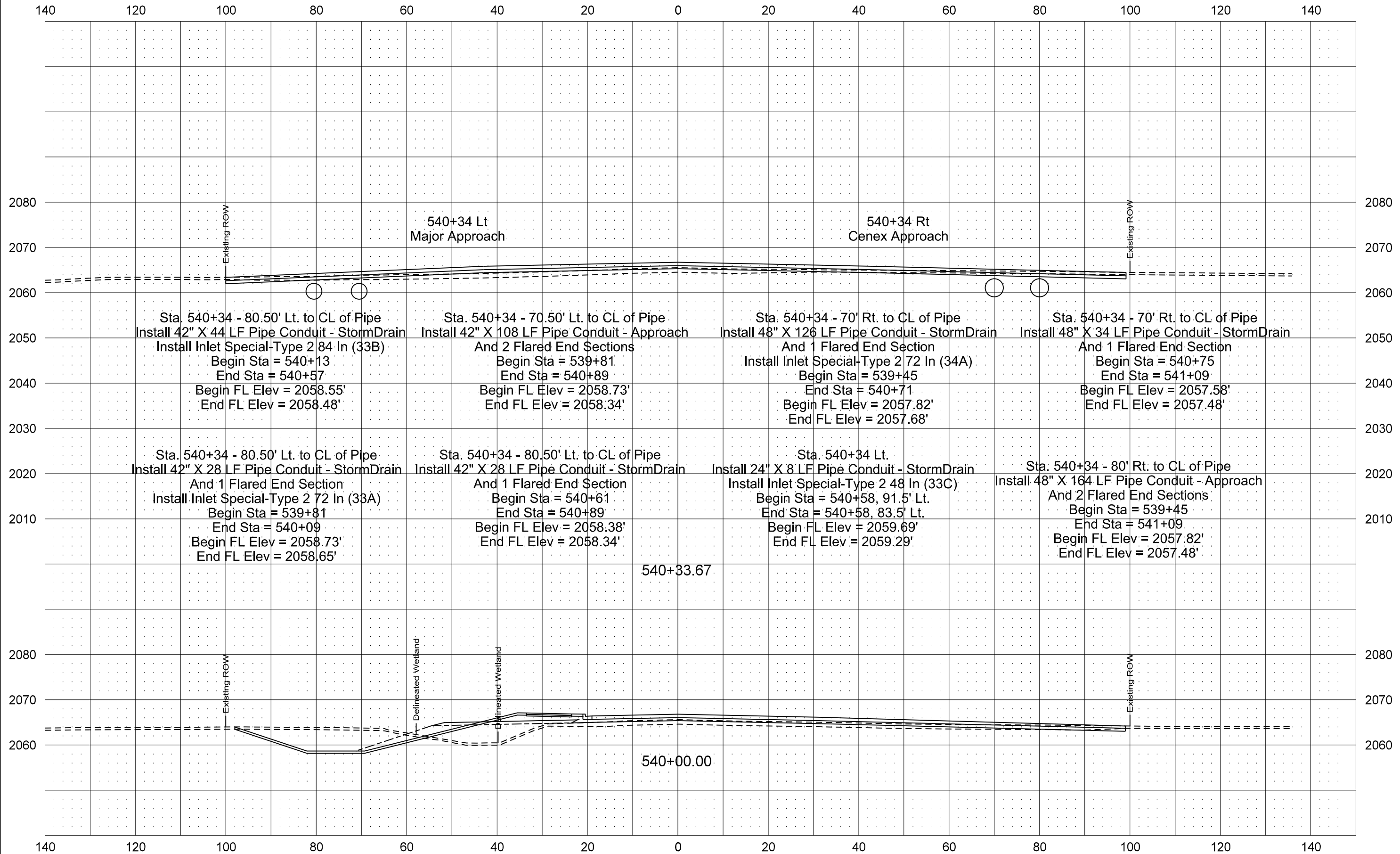
ND23A Option 1 - Concrete

Revised 10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-7-023(050)910	200	41-1



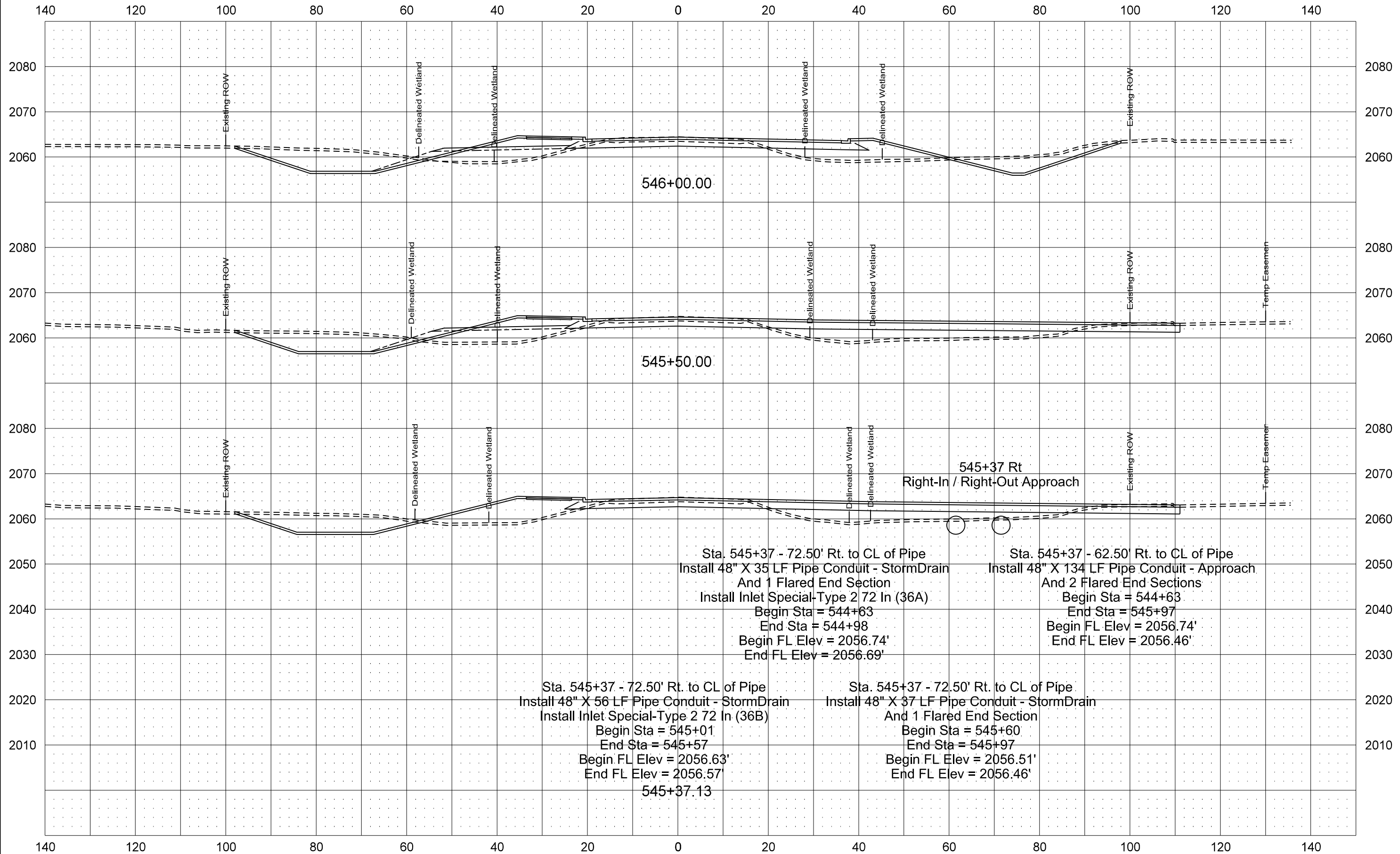
ND23A Option 2 - Asphalt

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	200	12-2



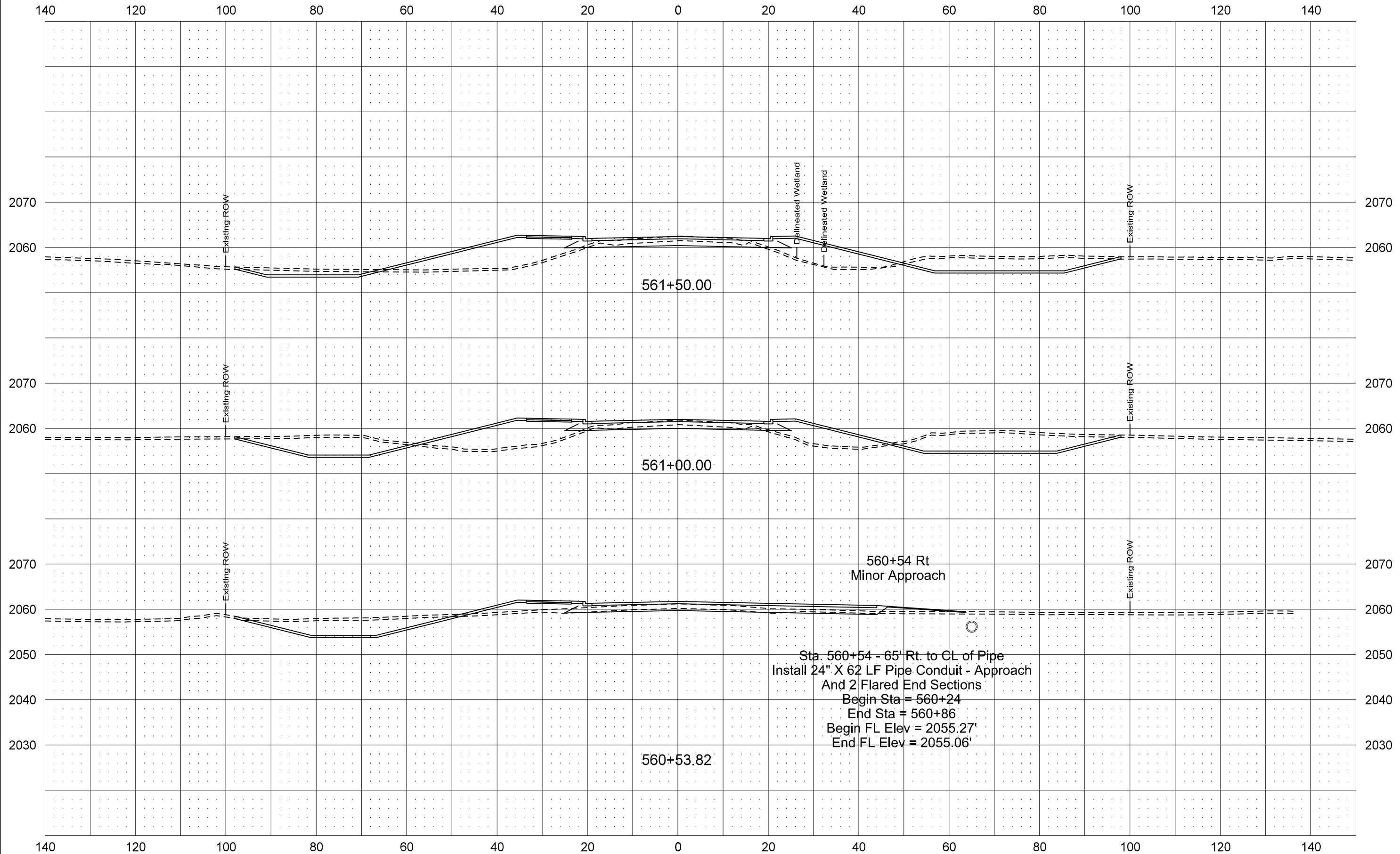
ND23A Option 2 - Asphalt

Revised 10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-7-023(050)910	200	16-2



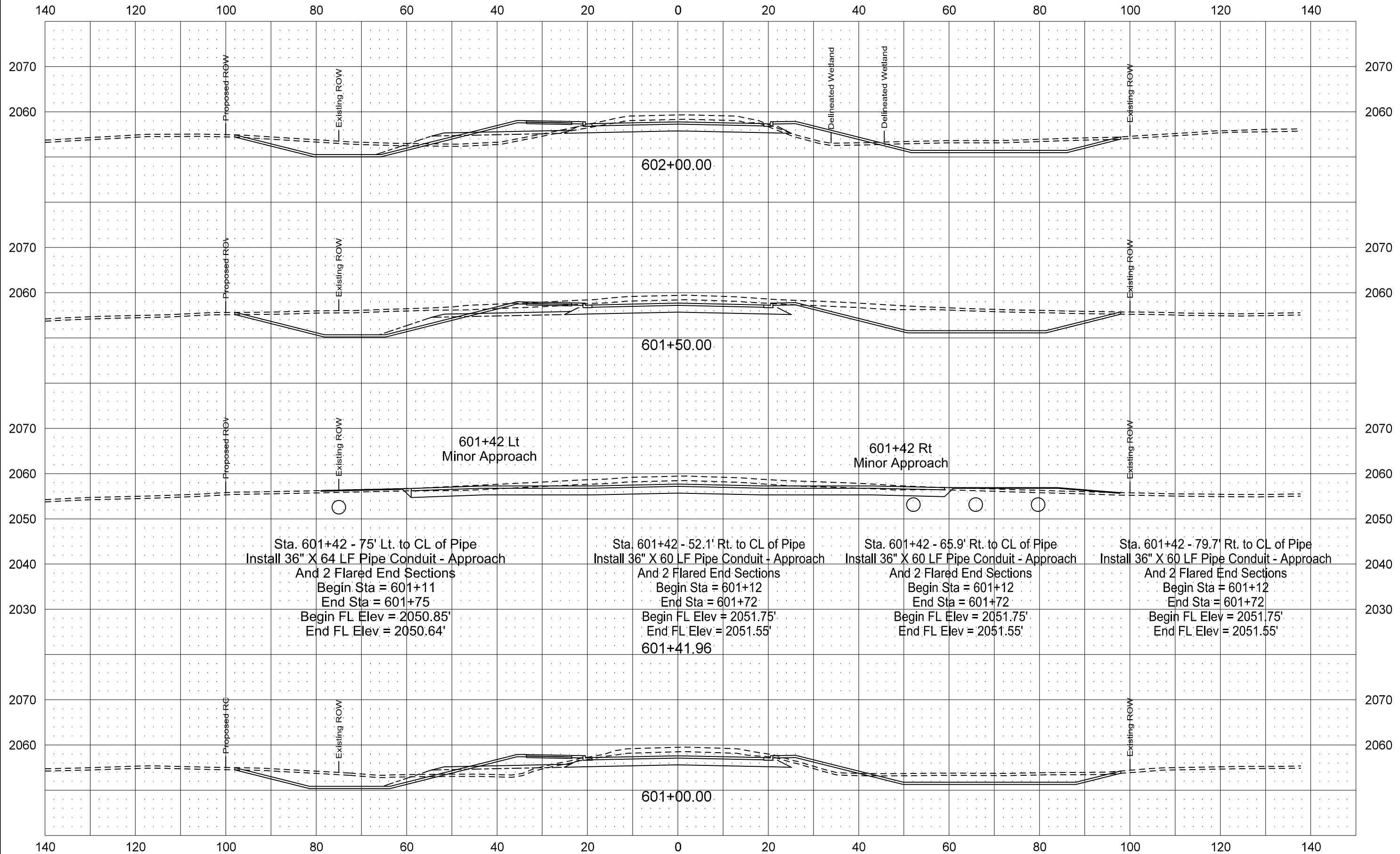
ND23A Option 2 - Asphalt

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	200	27-2



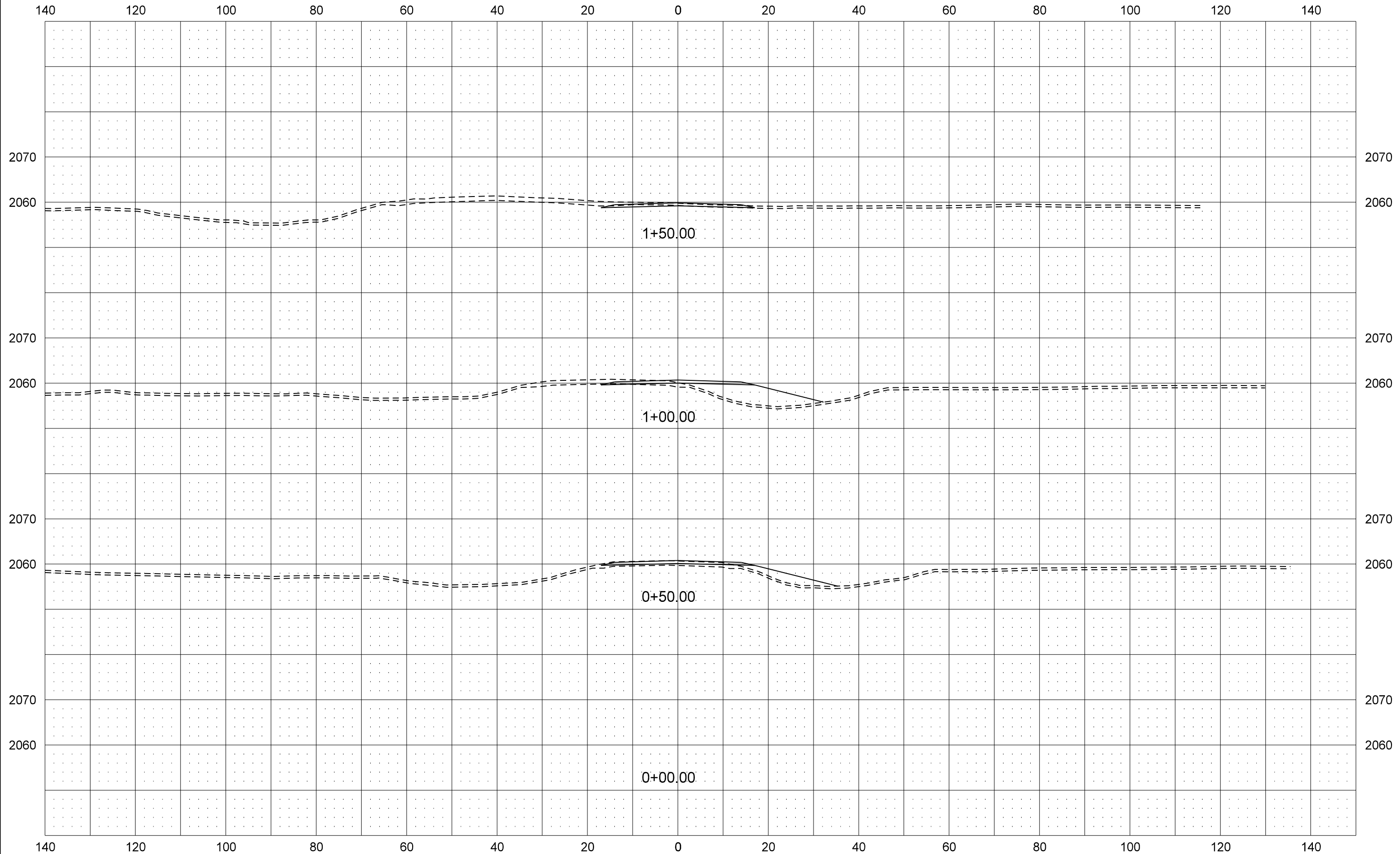
ND23A Option 2 - Asphalt

Revised 10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-7-023(050)910	200	40-2



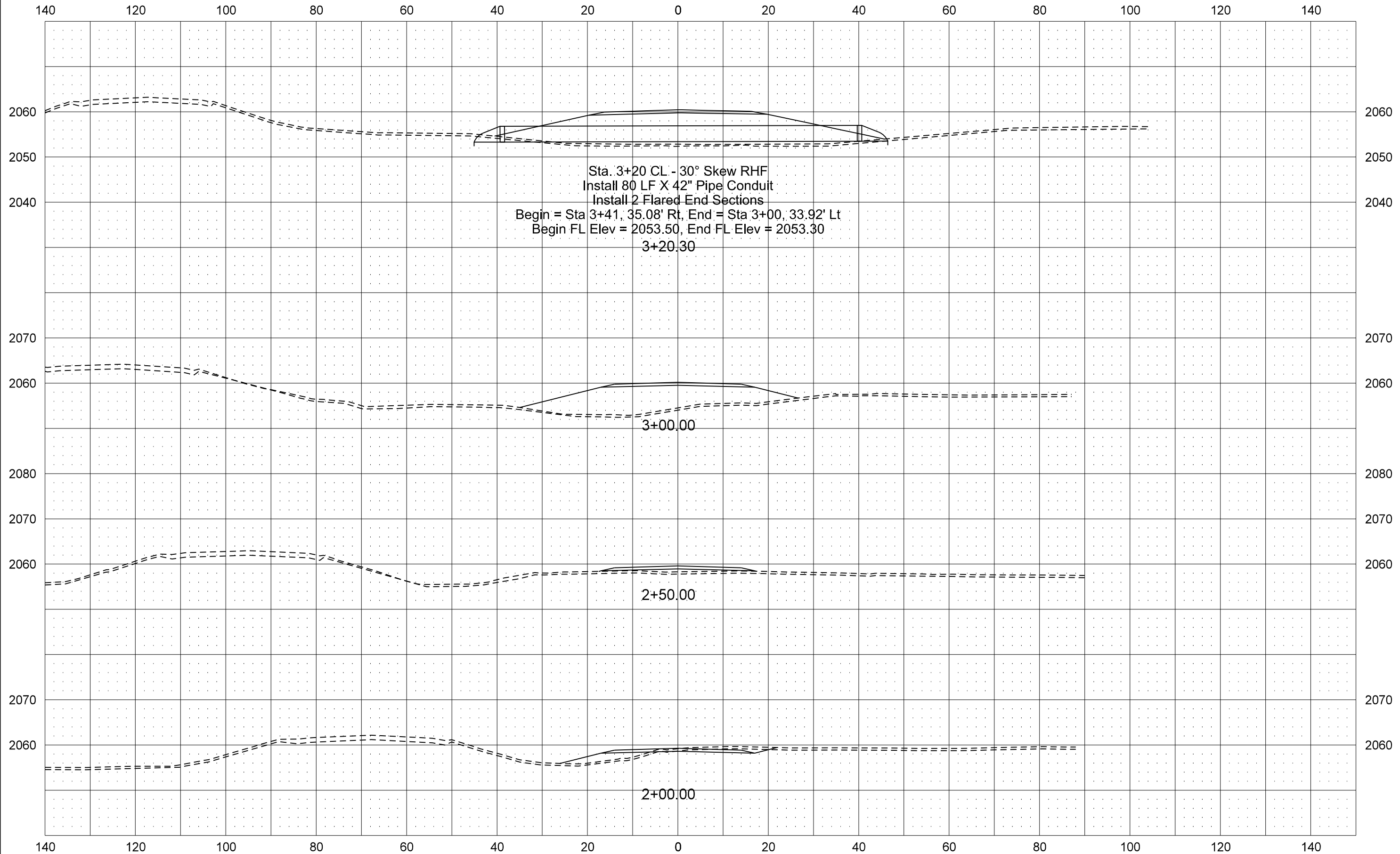
ND23A Bypass

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	200	1-B



ND23A Bypass

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	200	2-B



Sta. 3+20 CL - 30° Skew RHF
 Install 80 LF X 42" Pipe Conduit
 Install 2 Flared End Sections
 Begin = Sta 3+41, 35.08' Rt, End = Sta 3+00, 33.92' Lt
 Begin FL Elev = 2053.50, End FL Elev = 2053.30
 3+20.30

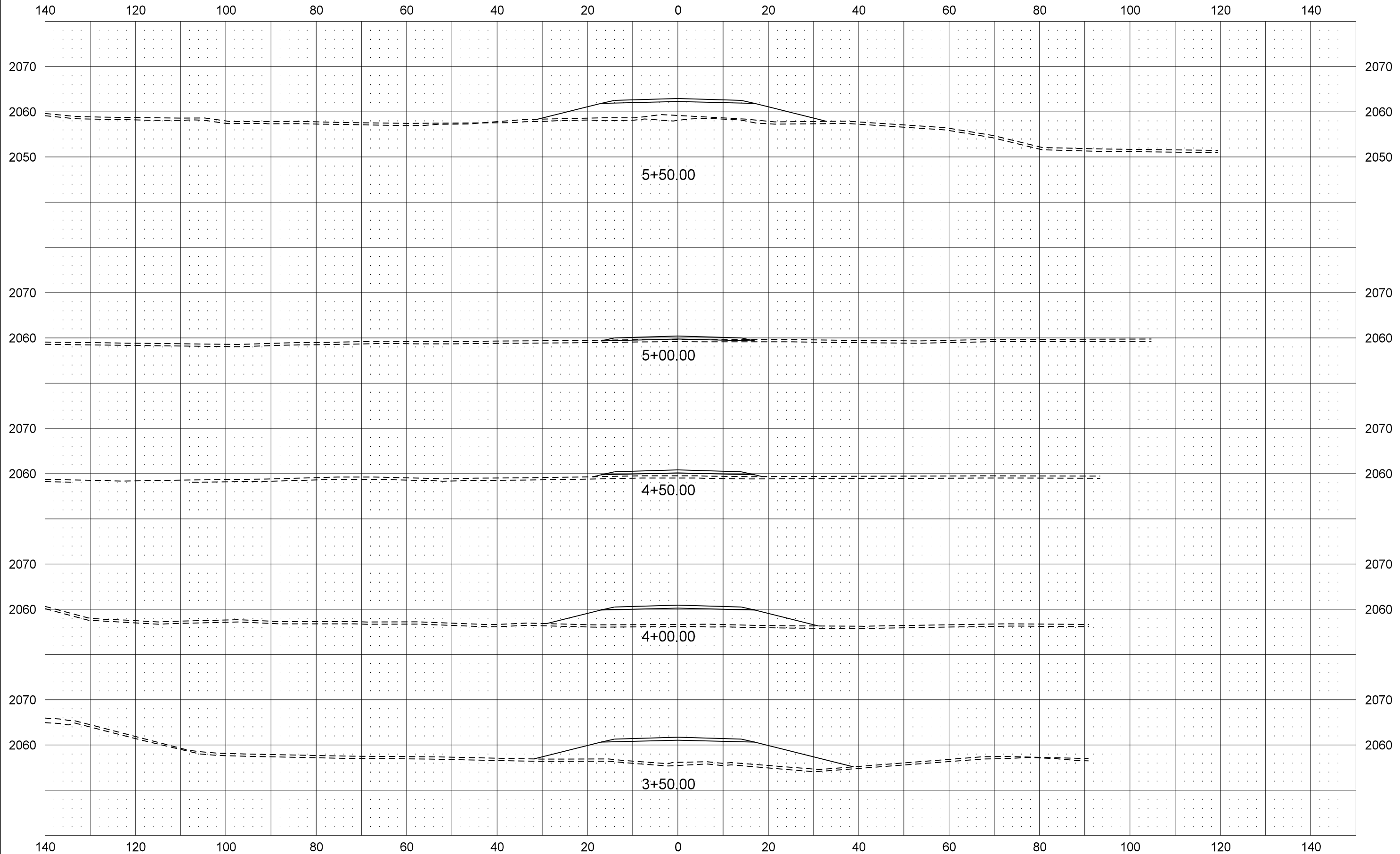
3+00.00

2+50.00

2+00.00

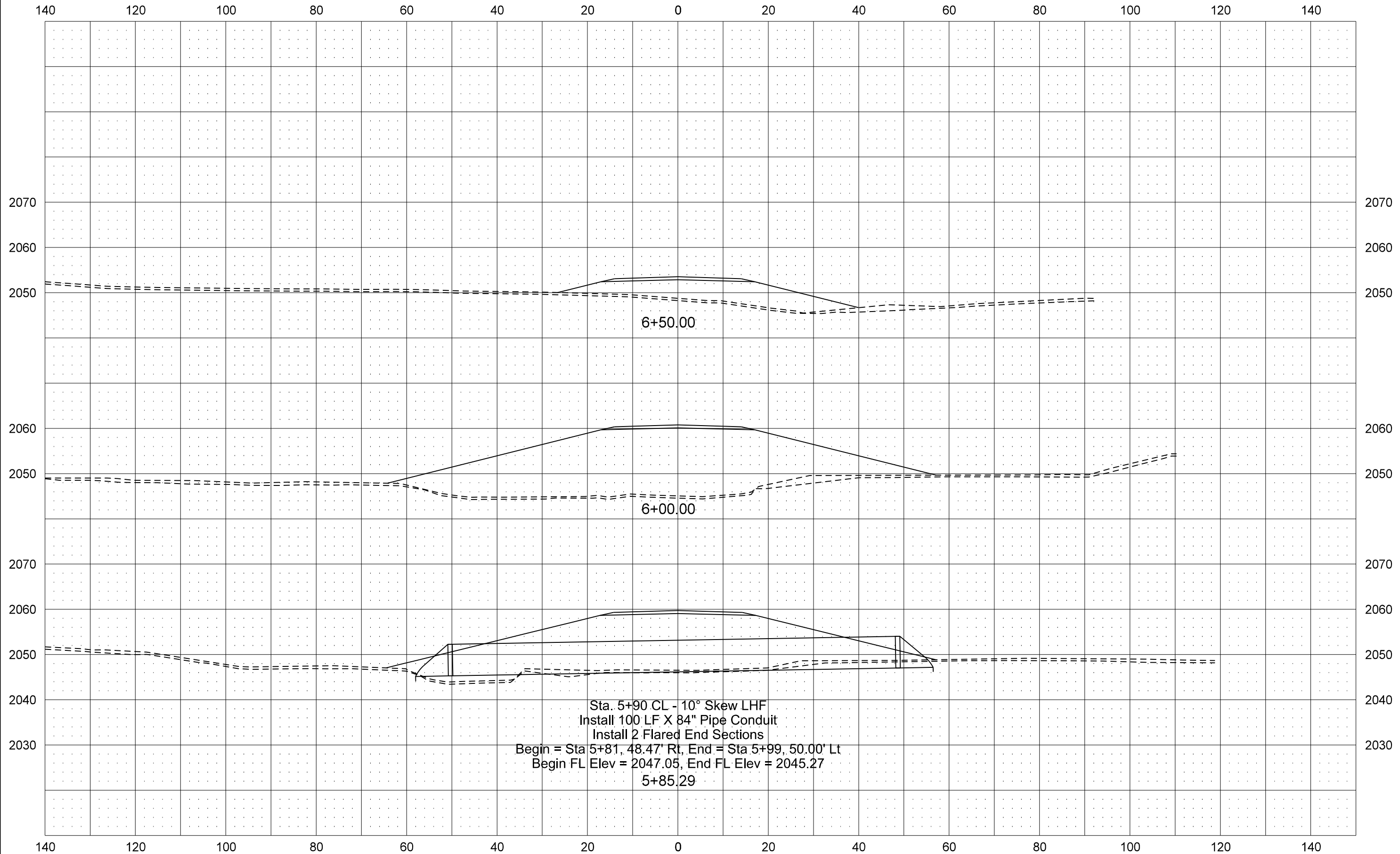
ND23A Bypass

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	200	3-B



ND23A Bypass

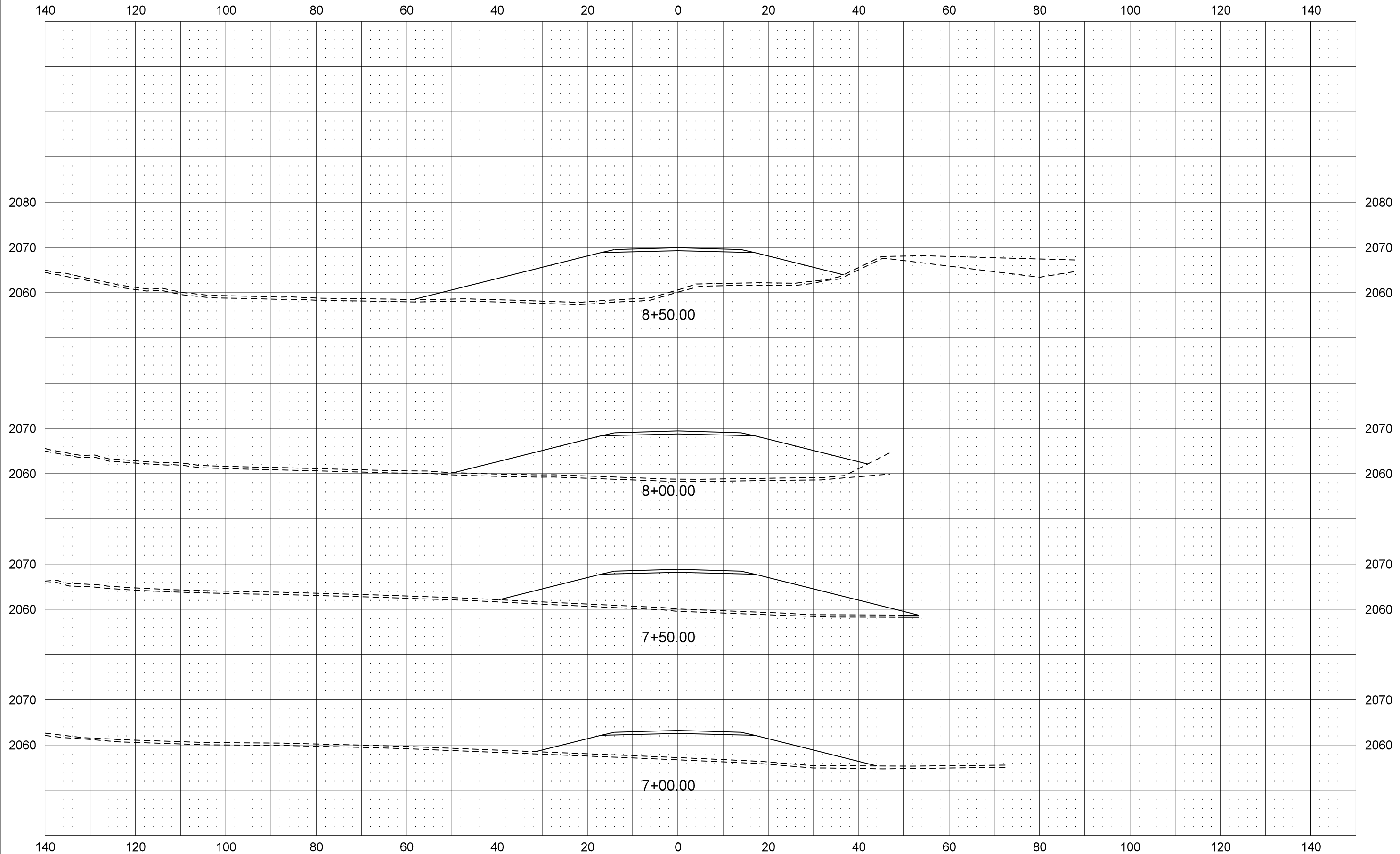
Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	200	4-B



Sta. 5+90 CL - 10° Skew LHF
 Install 100 LF X 84" Pipe Conduit
 Install 2 Flared End Sections
 Begin = Sta 5+81, 48.47' Rt, End = Sta 5+99, 50.00' Lt
 Begin FL Elev = 2047.05, End FL Elev = 2045.27
 5+85.29

ND23A Bypass

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	200	5-B



ND23A Bypass

Revised	10/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SS-7-023(050)910	200	6-B

