

DESIGN DATA			
Traffic	Average Daily - US 52 to 4TH AVE NE		
Current 2017	Pass: 4,405	Trucks: 165	Total: 4,570
Forecast 2037	Pass: 5,155	Trucks: 205	Total: 5,360
Traffic	Average Daily - 4TH AVE NE to 10TH AVE NE		
Current 2017	Pass: 10,630	Trucks: 330	Total: 10,960
Forecast 2037	Pass: 12,440	Trucks: 405	Total: 12,845
Traffic	Average Daily - 10TH AVE NE to 12TH AVE NE		
Current 2017	Pass: 4,930	Trucks: 175	Total: 5,105
Forecast 2037	Pass: 5,770	Trucks: 215	Total: 5,985
Clear Zone Distance: N/A	Design Speed: N/A		
Minimum Sight Dist. for Stopping: N/A	Bridges: N/A		
Sight Dist. for No Passing Zone:			
Pavement Design Life: N/A (years)			
Design Accumulated One-way	ESALs: N/A		

JOB # 14
NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION

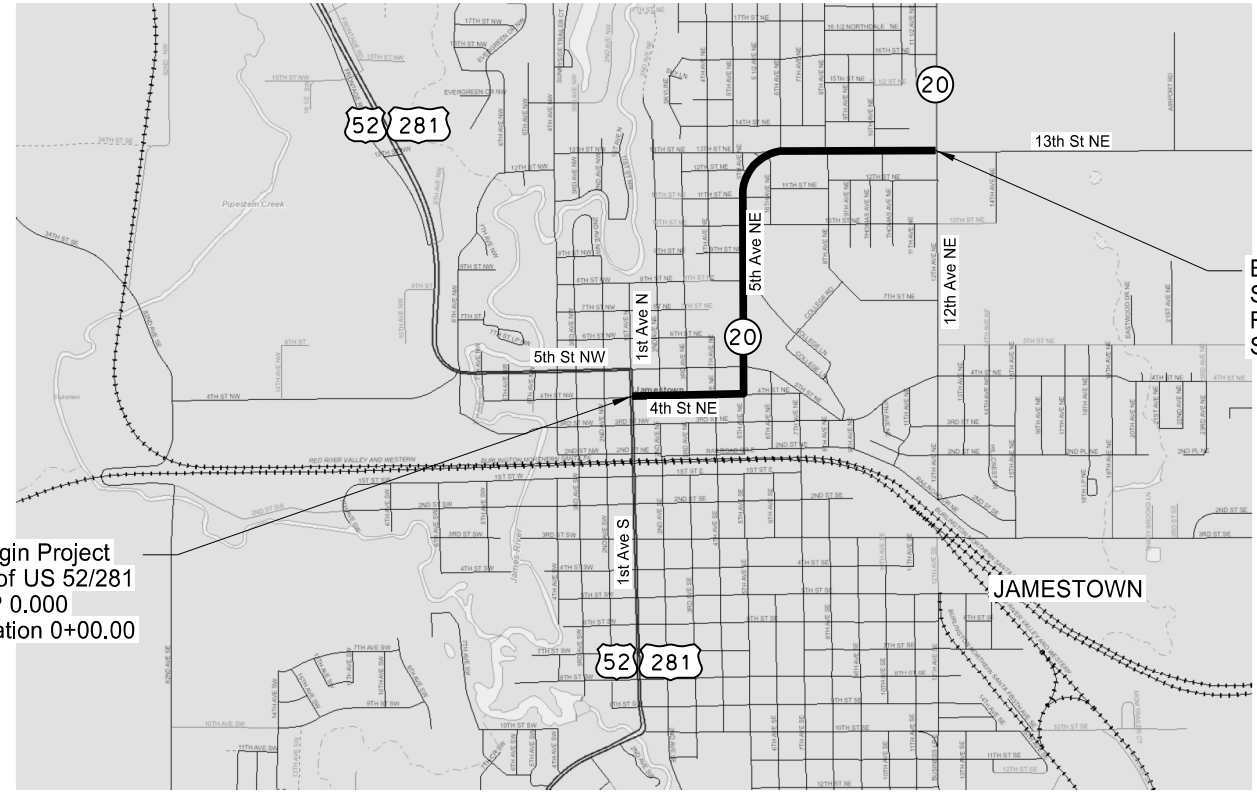
STATE	PROJECT NO.	PCN	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	21645	1	1

NH-2-020(019)000

Stutsman County
City of Jamestown
ND 20, 1st Ave N to 12th Ave NE
ADA Curb Ramps

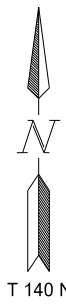
GOVERNING SPECIFICATIONS:
2014 Standard Specifications adopted by the North Dakota Department of Transportation and the Supplemental Specifications effective on the date the project is advertised.

PROJECT NUMBER \ DESCRIPTION	NET MILES	GROSS MILES
NH-2-020(019)000	1.374	1.374

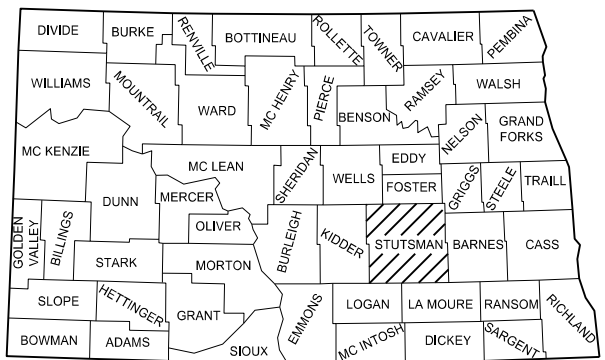


Begin Project
C of US 52/281
RP 0.000
Station 0+00.00

End Project
SE Cor. 24-140-64
RP 1.374
Station 72+58.11



R 64 W
R 63 W



STATE COUNTY MAP

DESIGNERS
Daren Peterka, PE/PLS
Damon DeVillers, PE
Benjamin B. Aaseth, PE
Jeff Nording
Paul Sharp

APPROVED DATE November 22, 2017

Robert Fode /S/
OFFICE OF PROJECT DEVELOPMENT
ND DEPARTMENT OF TRANSPORTATION

I hereby certify that the attached plans were prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of ND.

APPROVED DATE November 17, 2017

Benjamin B. Aaseth /S/
INTERSTATE ENGINEERING, INC

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6	1	Notes
8	1	Quantities
10	1	Basis of Estimate
20	1	Pedestrian Longitudinal Barricade & Temporary Curb Ramp
20	2	Weighted Fiber Roll Detail
20	3	Inlet Protection Detail
20	4	Removal - Patching Detail
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81	1	Survey Coordinate and Curve Data
82	1 - 17	Survey Data Layouts
100	1 - 17	Work Zone Traffic Control
120	1 - 13	Pavement Marking

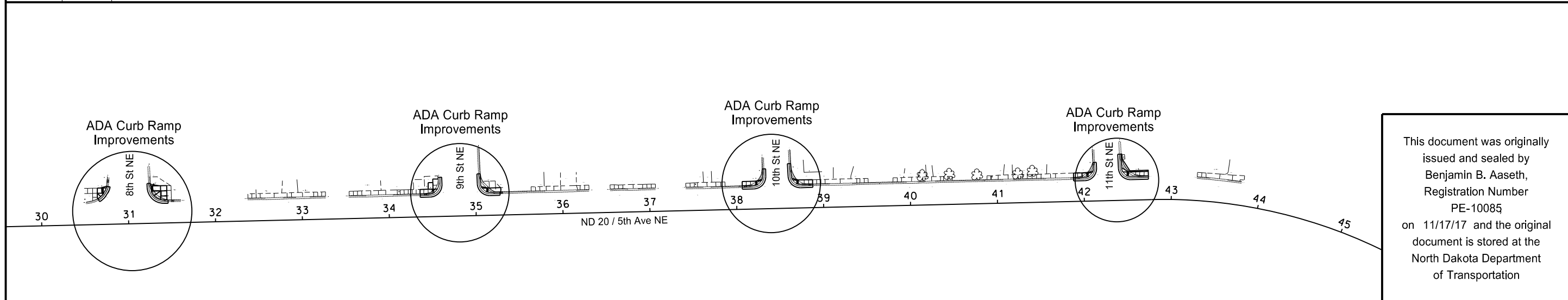
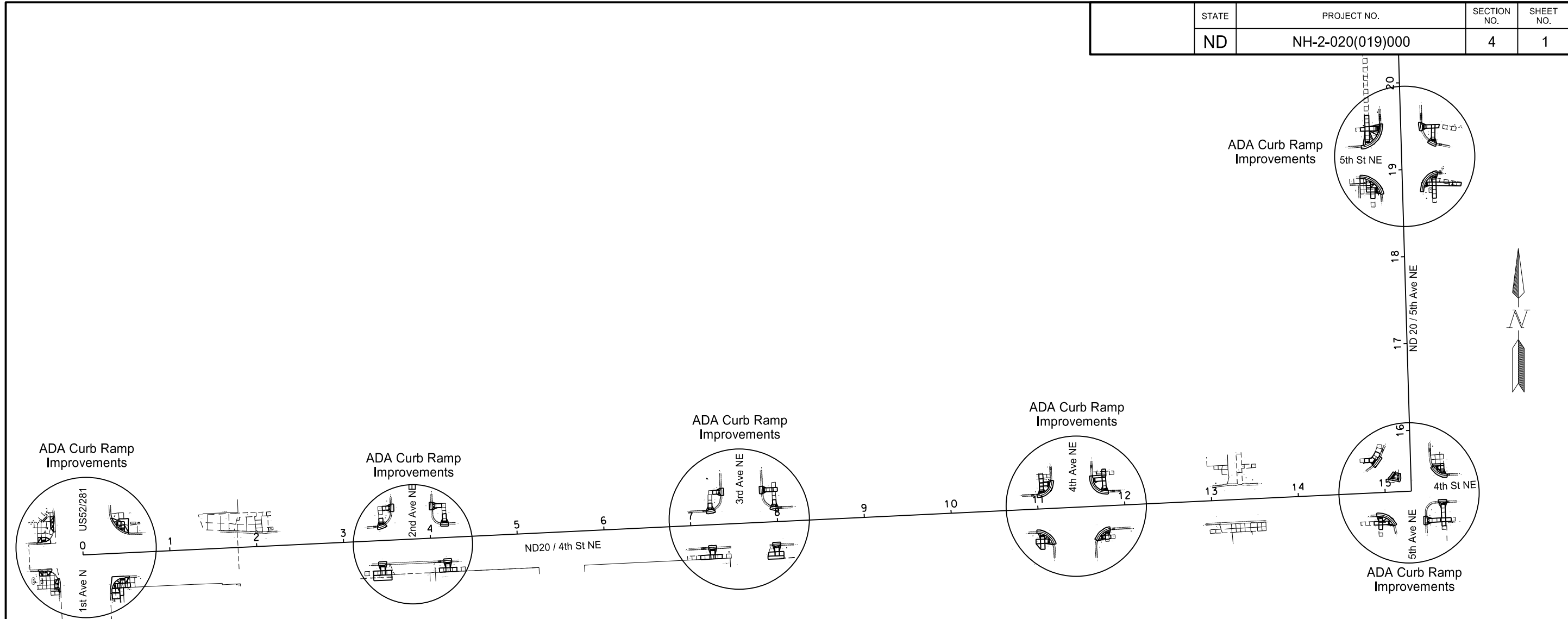
LIST OF STANDARD DRAWINGS

Number	Description
D-101-1, 2 & 3	NDDOT Abbreviations
D-101-10	NDDOT Utility Company and Organization Abbreviations
D-101-20, & 21	Line Styles
D-101-30, 31 & 32	Symbols
D-256-1	Erosion And Siltation Controls
D-261-1	Erosion Control - Fiber Roll Placement Details
D-704-7	Breakaway Systems For Construction Zone Signs - Perforated Tube
D-704-8	Breakaway Systems For Construction Zone Signs - U-Channel Post
D-704-9	Construction Sign Details - Terminal And Guide Signs
D-704-10	Construction Sign Details - Regulatory Signs
D-704-11	Construction Sign Details - Warning Signs
D-704-12	Shoulder Closure Tapers
D-704-15	Road Closure Layouts
D-704-25	Lane Closures On Urban Streets Layouts
D-704-34	Sign Layout For One Lane Closure
D-704-50	Portable Sign Support Assembly
D-748-1	Curb & Gutter And Valley Gutter
D-750-1	Concrete Driveway - Urban
D-750-2	Sidewalk
D-750-3	Curb Ramp Details
D-754-23	Perforated Tube Assembly Details
D-754-24, & 25	Mounting Details Perforated Tube
D-762-1	Pavement Marking Message Details
D-762-4	Pavement Marking

SPECIAL PROVISIONS

Number	Description
SP 583(14)	Commercial Grade Asphalt

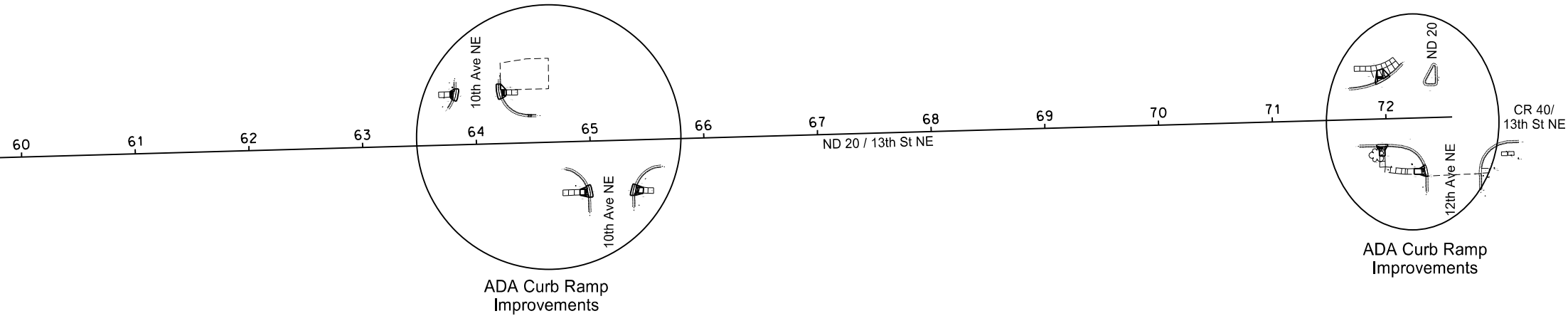
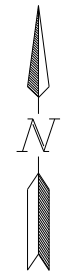
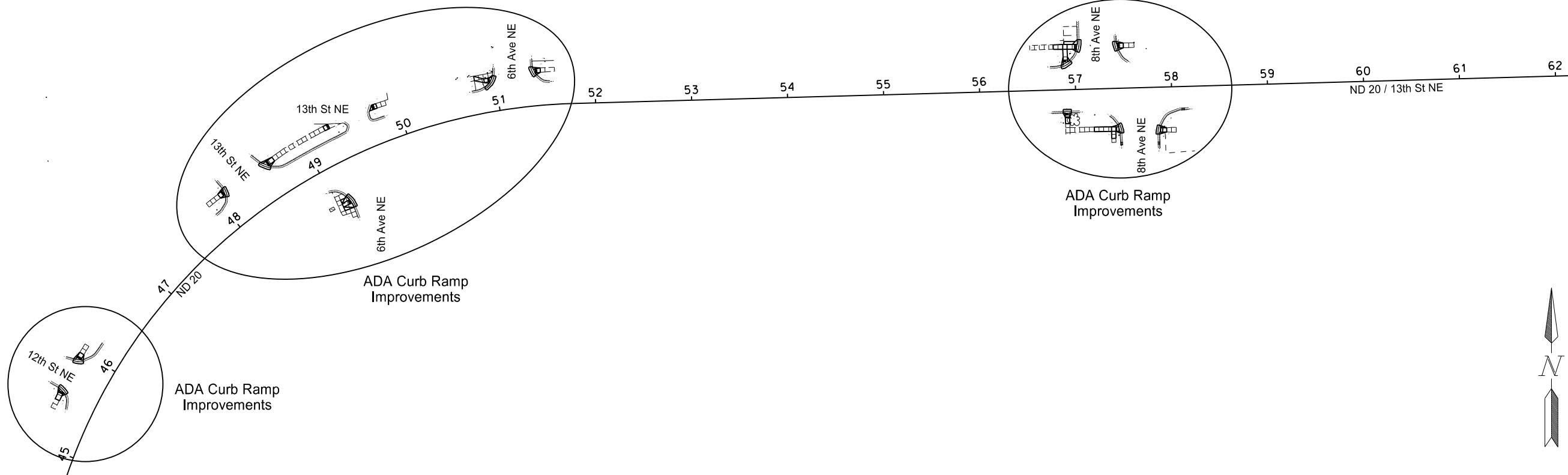
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SCOPE OF WORK
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

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SCOPE OF WORK
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
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105-P01 SPRINKLER HEADS: There has been 4 sprinkler head locations identified that will have conflict with the project. These heads are located on the Right of Way. The owners of these have been contacted to relocate these prior to construction. The contractor shall let the property owner know 2 weeks ahead of time to get the facility relocated. The following are locations of the sprinkler heads:

- 3 heads at 3+50 Lt
- 1 head at 19+45 Lt

105-P02 UTILITIES: Utility lines with the label of "Approx Loc" located on the plans were established based upon detailed drawings provided by the entity.

107-500 PAVEMENT SWEEPING: Sweep the roadway adjacent to the construction area at the end of each day. Utilize a vacuum or pickup type sweeper.

202-P01 REMOVALS: Removal and disposal of existing aggregate or common excavation shall be included in the costs of "Removal of Concrete Pavement".

202-P02 REMOVAL OF CONCRETE PARKING BLOCKS: Removal and reset of existing concrete parking blocks to their original condition shall be included in the costs of "Removal of Bituminous Surfacing".

261-P01 FIBER ROLL 6IN REMOVAL: Removal of Fiber Rolls 6IN shall be included in the costs of "Fiber Roll 6IN".

261-P02 WEIGHTED FIBER ROLL REMOVAL: Removal of the Weighted Fiber Rolls shall be included in the costs of "Weighted Fiber Roll".

704-P01 CONSTRUCTION PHASING PLAN: A phasing plan shall be provided to the Engineer for approval prior to beginning work. The project shall be phased to maintain pedestrian access for the duration of the project as shown in Section 100.

704-P02 TRAFFIC CONTROL DEVICES: The traffic control devices list has been developed using the layouts shown in the plans and the following layouts shown on the Standard Drawings.

- D-704-25 Type X, to be used near the westbound lanes (5 applications provided for closure of 5 sites).
- D-704-34 Lane closure (5 applications provided for closure of 5 sites)

704-P03 TRAFFIC CONTROL DEVICES: Traffic control devices have been provided for a single full lane closure of 5 separate sites simultaneously. A site is defined as a work zone quadrant of an intersection. Closure of the outside driving lane will be permitted during daylight hours while construction within the intersection is active. Remove temporary lane closures at the end of each working day if possible. Lane closures must remain at all times if there are drop offs within the work zone. Closing of the temporary closures will not be applicable where temporary curb ramps and pedestrian barriers are located. If ordinary operation is not restored, provide 24-hour flagger operations until normal traffic operation can be restored. No additional payments will be made for flagging if ordinary traffic operation is not restored at the end of each working day.

The following devices shall remain in place for the duration a construction site is active:

1. W20-1-48 – Road Work Ahead
2. G20-2-48 – End Road Work
3. All pedestrian crosswalk signing devices – See Section 100
4. All lane narrowing devices – See Section 100
5. Temporary safety fence and devices adjacent to active work zones
6. Pedestrian temporary railings and curb ramps – See Section 20 Sheet 1

Supply and maintain temporary ramps and pedestrian rail system as shown in the plans. Include all costs associated with supplying and maintaining devices in the price bid for "Traffic Control Signs."

970-P01 LANDSCAPE PREPARATION: Minimal grading and hydraulic mulch may be required adjacent to the locations designated for sidewalk and curb & gutter replacement. Blend the existing topsoil adjacent to the sidewalk and or curb & gutter to eliminate any steep slopes or vertical edges. Any excess topsoil will become property of the Contractor and must be removed from the project site. Any needed topsoil shall be imported to the project if needed. In these locations hydraulic mulch will be required. The seed mixture shall be NDDOT Class I.

Use of hydraulic mulch material as specified in Sections 253.01 to 253.04 of the NDDOT Standard Specifications. Apply the hydraulic mulch after the seed is incorporated into the topsoil. Apply fertilizer at a rate of 100 pounds per acre with a mixture of 5-10-5. All costs associated with restoring landscaping and topsoil areas shall be included in the price bid for "Landscape Preparation".

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ESTIMATE OF QUANTITIES

SPEC	CODE	ITEM DESCRIPTION	UNIT	TOTAL
103	0100	Contract Bond	L SUM	1
202	0114	Removal of Concrete Pavement	SY	732
202	0131	Removal of Curb-Type 1	LF	932
202	0132	Removal of Bituminous Surfacing	SY	310
261	0106	Fiber Rolls 6IN	LF	20
261	0200	Weighted Fiber Rolls	LF	255
302	0121	Aggregate Base Course CL 5	CY	114
430	0500	Commercial Grade Hot Mix Asphalt	TON	110
702	0100	Mobilization	L SUM	1.0
704	0100	Flagging	M HR	200
704	1000	Traffic Control Signs	UNIT	3,042
704	1052	Type III Barricades	EA	20
704	1054	Sidewalk Barricade	EA	50
704	1060	Delineator Drums	EA	150
704	1067	Tubular Markers	EA	30
704	1087	Sequencing Arrow Panel - Type C	EA	5
704	1500	Obliteration of Pavement Marking	SF	761
708	1540	Inlet Protection-Special	EA	29
708	1541	Remove Inlet Protection-Special	EA	29
722	6140	Adjust Gate Valve Box	EA	4
722	6160	Adjust Inlet	EA	3
748	0140	Curb & Gutter-Type I	LF	1,055
750	0100	Sidewalk Concrete	SY	720
750	1000	Driveway Concrete	SY	13
750	2115	Detectable Warning Panels	SF	696
754	0592	Reset Sign Panel	EA	8
754	0593	Reset Sign Support	EA	8
762	0103	Pvmt Mk Painted - Message	SF	56
762	0420	Short Term 4IN Line - Type R	LF	996

SPEC	CODE	ITEM DESCRIPTION	UNIT	TOTAL
762	0422	Short Term 6IN Line - Type R	LF	1,340
762	1104	Pvmt Mk Painted 4IN Line	LF	180
762	1106	Pvmt Mk Painted 6IN Line	LF	2,989
762	1124	Pvmt Mk Painted 24IN Line	LF	297
762	1140	Pvmt Mk Painted Curb Top & Face	LF	2,021
970	0008	Landscape Preparation	SY	329

BASIS OF ESTIMATE

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Aggregate Base Course CL 5
1.875 Ton/CY

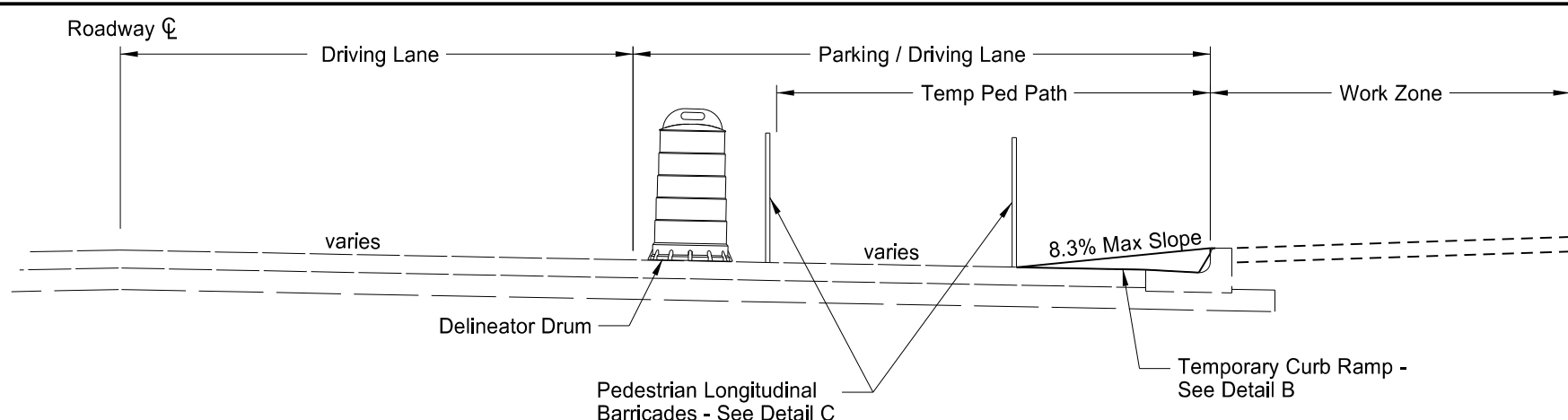
Commercial Grade Hot Mix Asphalt
2 Ton/CY

Water
20 Gal/Ton for Aggregates

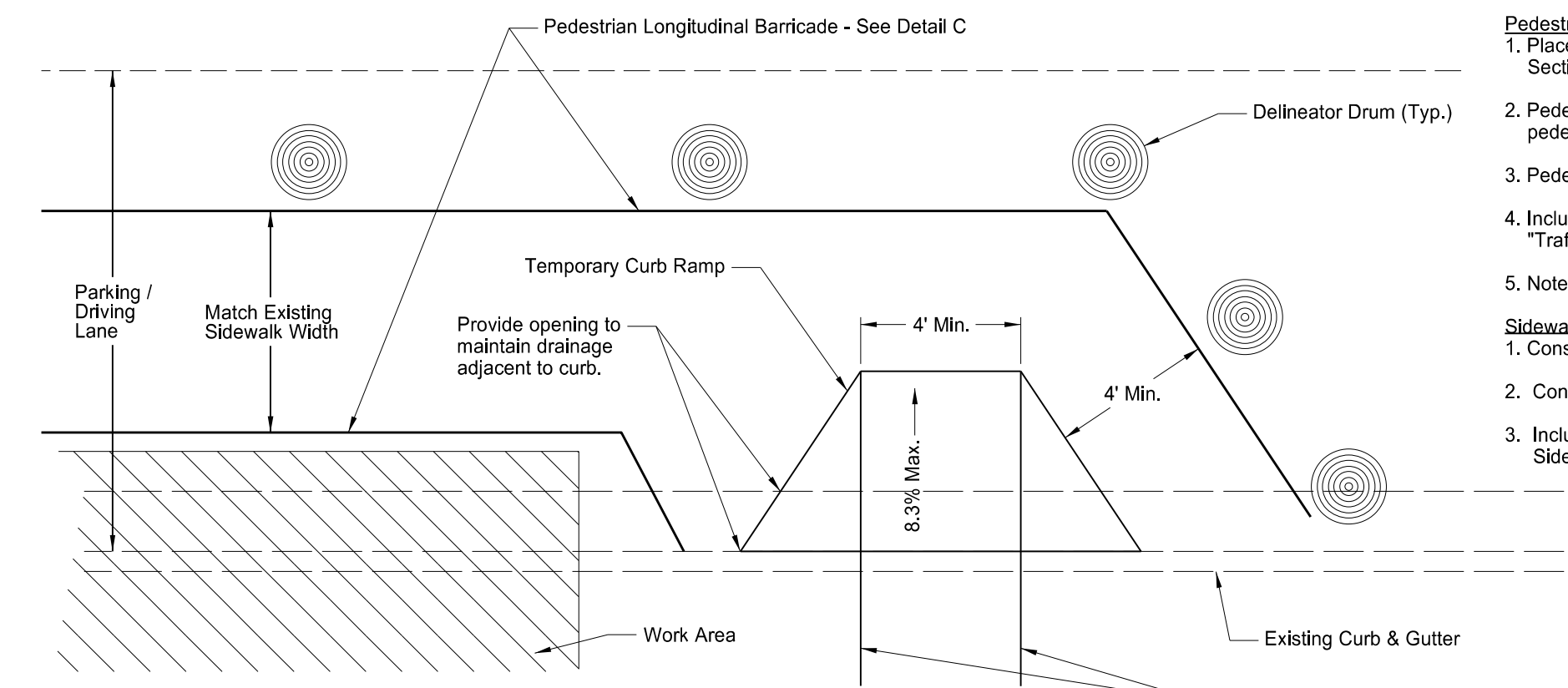
- Reset Sign Support and Panel**
- 3+40 – 40' Rt Private Sign
 - 15+04 – 39' Rt Street Sign
 - 18+80 – 39' Lt Street Sign
 - 18+86 – 43' Lt Stop Sign
 - 34+48 – 34' Lt Street Sign
 - 34+51 – 37' Lt Stop Sign
 - 50+88 – 30' Lt Street Sign
 - 56+99 – 50' Lt Stop Sign

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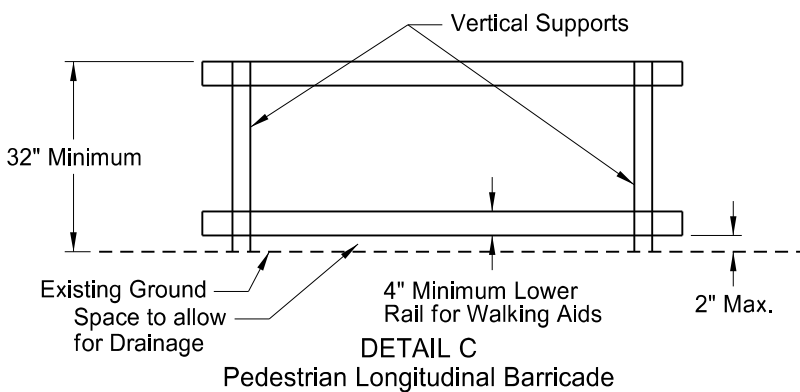
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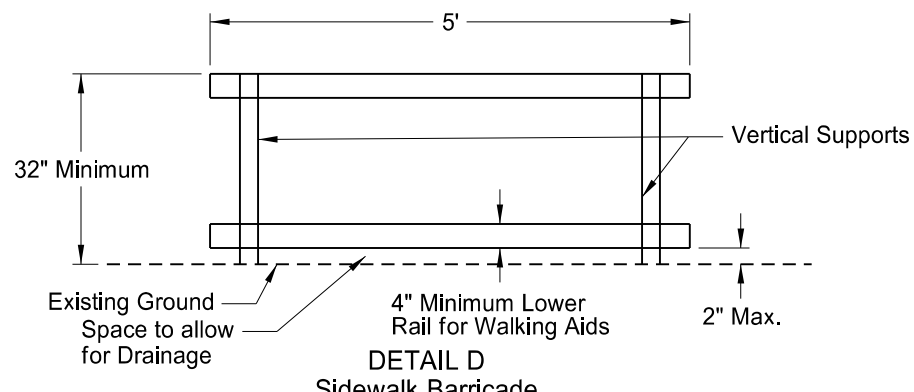
DETAIL A
Temporary Curb Ramp
Cross Section View



DETAIL B
Temporary Curb Ramp
Plan View



DETAIL C
Pedestrian Longitudinal Barricade



DETAIL D
Sidewalk Barricade

NOTES:

Temporary Curb Ramps:

1. Place temporary curb ramps at locations as shown in the Construction Signing - Section 100 plan sheets.
2. Construct with hard surface material such as metal or wood.
3. Coat surface with non-slip, skid resistant material.
4. A minimum 2 inch tall protective edge may be provided in lieu of the 3:1 max slope side aprons.
5. Include all costs to furnish, maintain, and remove the ramps in the price bid for "Traffic Control Signs."
6. A temporary sidewalk, complying with the above requirements, will need to be installed connecting the existing sidewalk to the Temporary Curb Ramp where the sidewalk is not adjacent to the curb. Detectable Edging with 6 inches minimum height and contrasting color shall be installed on all temporary sidewalk. The site shall be restored to existing features when completed. All costs associated with temporary sidewalk shall be included in the bid price for "Traffic Control Signs".

Pedestrian Longitudinal Barricades:

1. Place pedestrian longitudinal barricades at locations as shown in the Construction Signing - Section 100 plan sheets.
2. Pedestrian longitudinal barricades will be self supporting with no supports projecting into the pedestrian path way.
3. Pedestrian barricades will be ADA compliant and NCHRP 350 approved.
4. Include all costs to furnish, maintain, and remove the pedestrian barricades in the price bid for "Traffic Control Signs".
5. Note 704-P03 Traffic Control Devices, applies to Pedestrian Longitudinal Barriers as well.

Sidewalk Barricades:

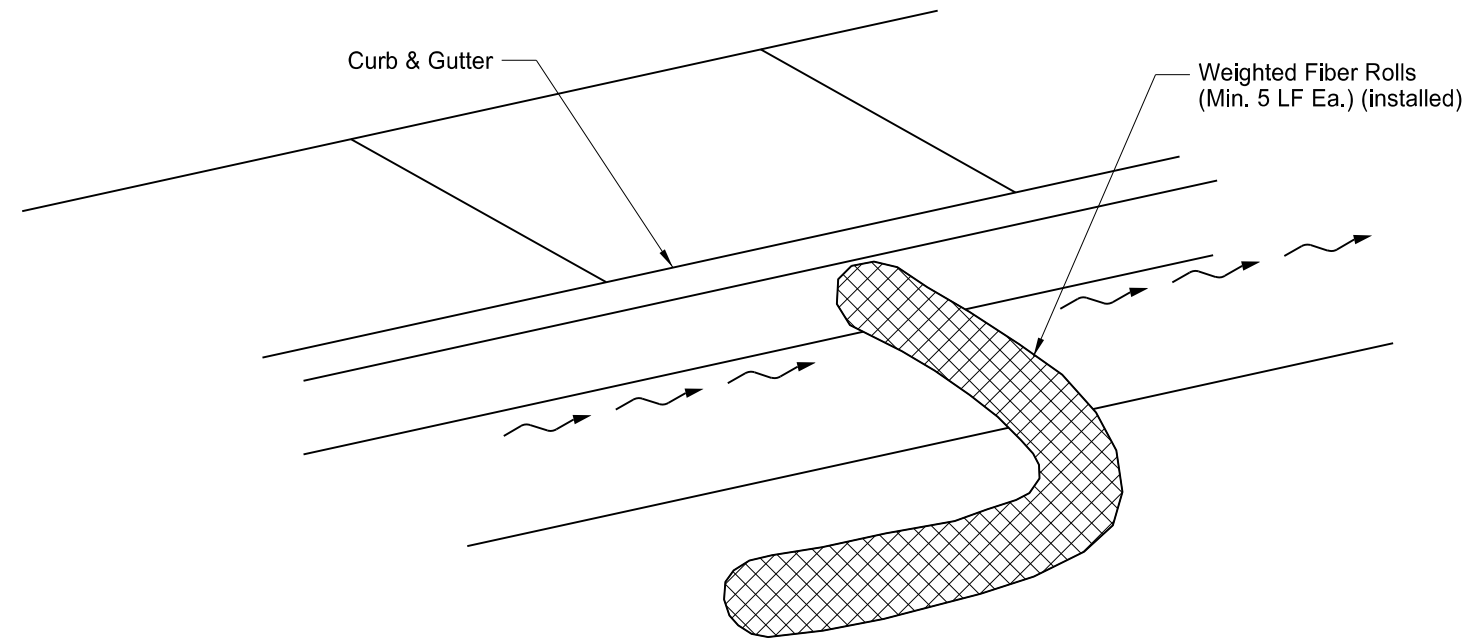
1. Construct self standing sidewalk barricade with no supports extending into the pedestrian path.
2. Construct ADA compliant and NCHRP 350 Approved sidewalk barricades.
3. Include all costs to furnish, maintain and remove the sidewalk barricade in the price for Sidewalk Barricades.

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PEDESTRIAN LONGITUDINAL BARRICADE & TEMPORARY CURB RAMP DETAILS

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Weighted Fiber Roll Detail

Notes:

1. Place an adequate number of weighted fiber rolls down slope from unprotected downstream areas, tight against and along the curb and gutters, to provide complete protection. Ends shall overlap approximately 12 inches.
2. Remove and properly dispose of accumulated silt and debris to allow for proper function of device after every rain event, or as necessary for proper function.
3. Provide materials that meet the following specifications:
A photo degradable extruded netting tube filled with wood curled excelsior and weighted inner core.
Roll Diameter: 6 Inches
Weight: 8.33 Pounds per Lineal Foot
4. Price includes weighted fiber roll, placement, and maintenance after each rain event. All cost related to this work shall be included in the price bid for "Weighted Fiber Rolls".
5. Removal of weighted fiber rolls shall be done after the up gradient surfaces are stabilized and surrounding streets and gutters are clean of debris. Costs related to this work shall be included in the price bid for "Weighted Fiber Rolls".

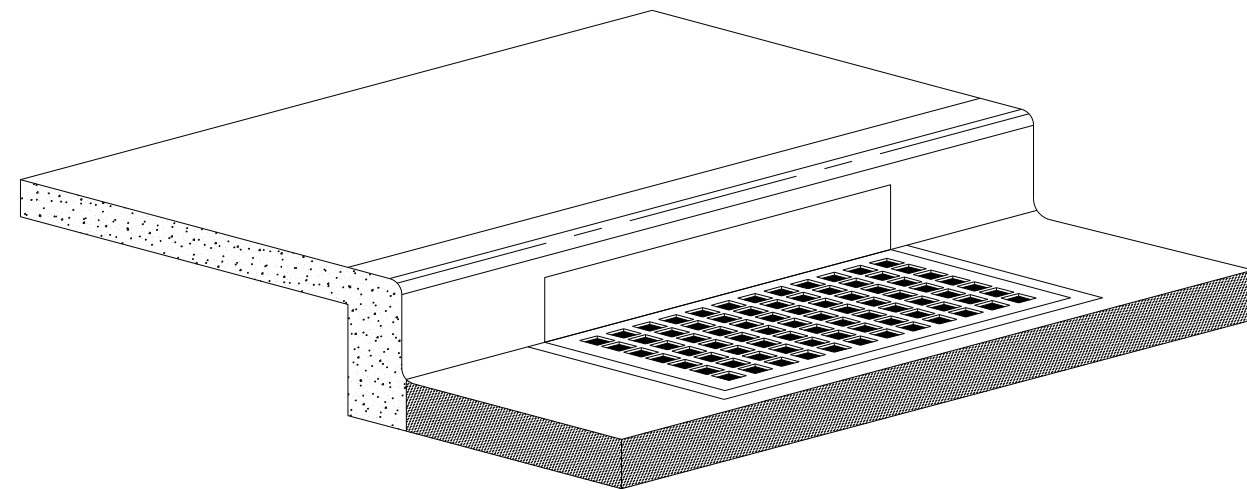
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WEIGHTED FIBER ROLL DETAIL

ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE

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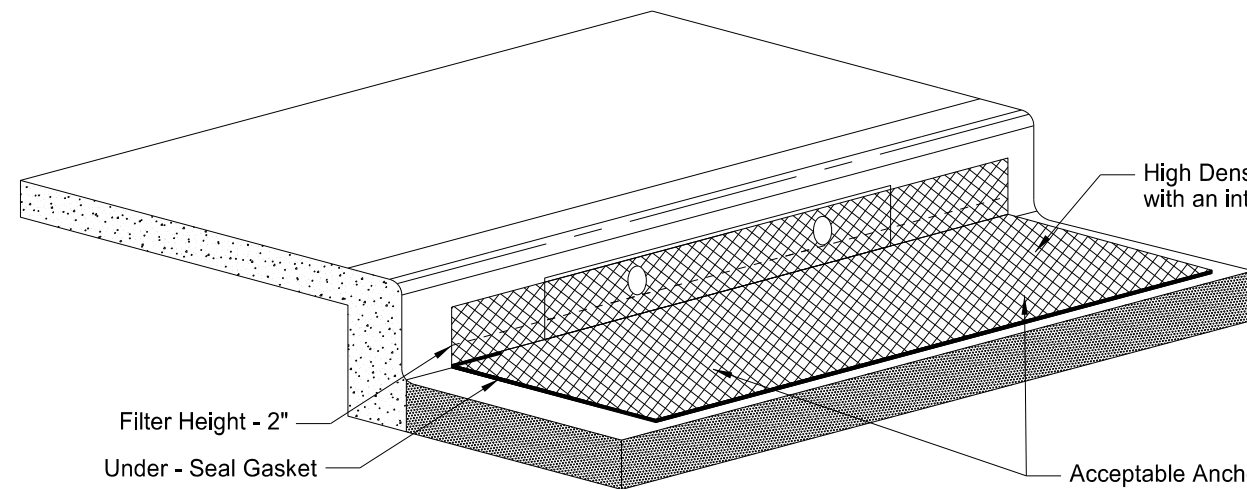
Inlet Protection Device

Installation Notes:

1. Place device tightly against drain opening and cover entire grate. Extend the device at least 2 inches past the grate toward the street.
2. Overlap the segments at longer openings.
3. Anchor the device so that water cannot flow behind it.

General Notes:

1. Remove material that falls into the inlet during maintenance or removal of the device.



High Density Polyethylene (HDPE) high flow jacket filter (8,000 opening per SY) with an integrated 425 um (micron meter) fine filter particle mesh

Filter Height - 2"

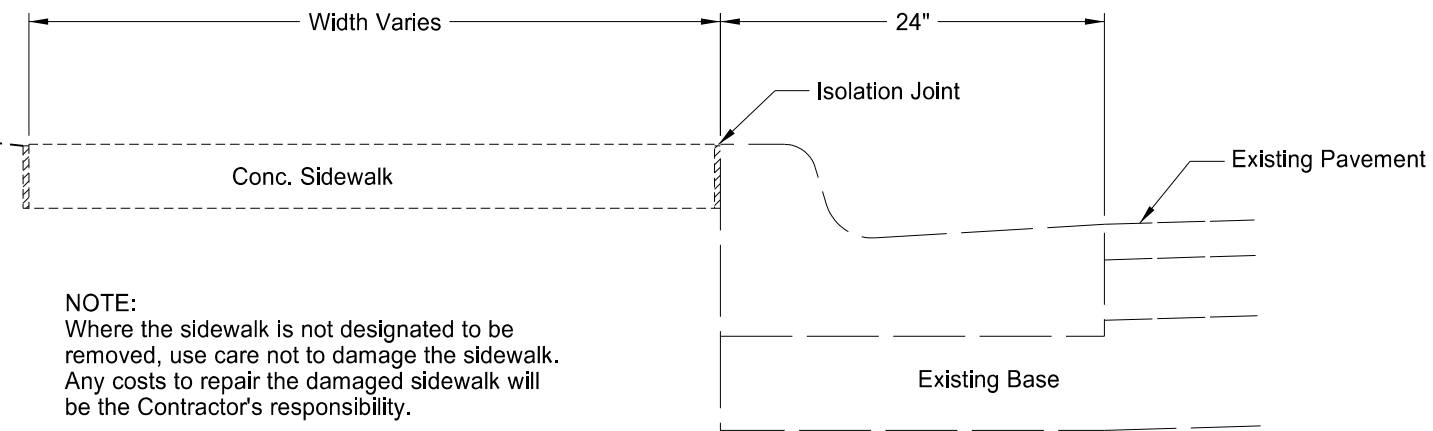
Under - Seal Gasket

Acceptable Anchor Method: Fasten to inlet casting grate with a UV/Weather Resistant Plastic Cable Zip Ties - 16 to 24 in. Install zip ties at each corner of the inlet near the perimeter and two additional zip ties near the middle of the casting. Punch hole through filter and run cable tie downward around grate and back up to fasten.

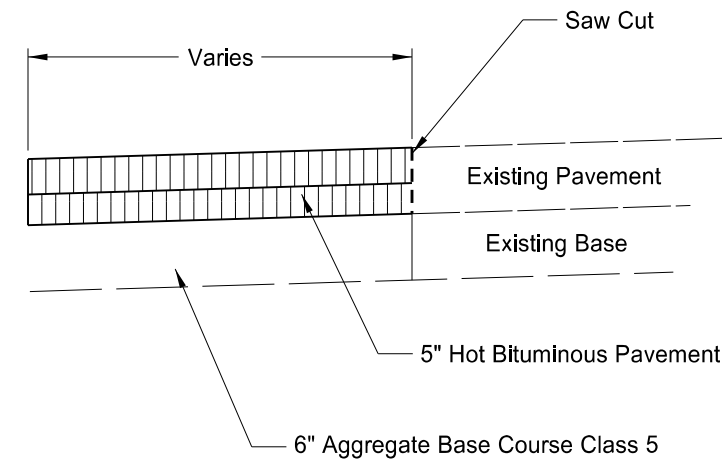
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INLET PROTECTION DETAIL
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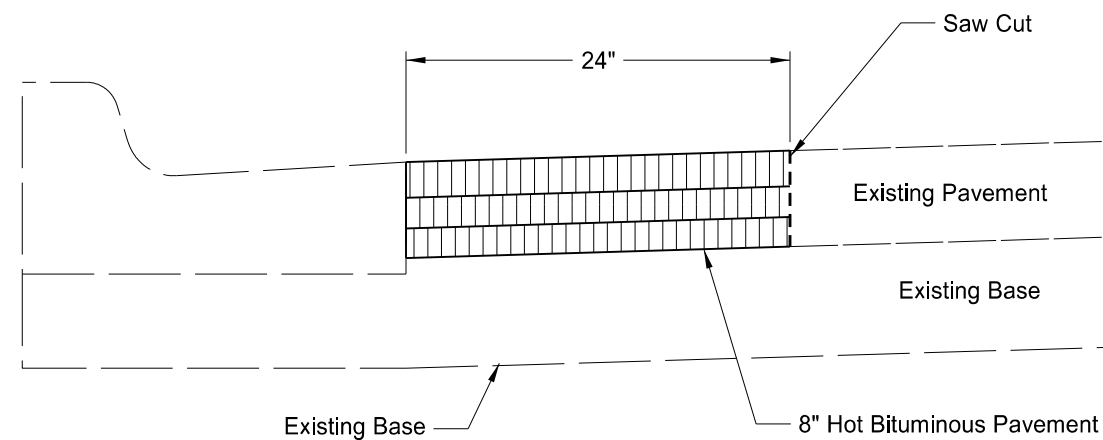
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Existing Sidewalk Adjacent to Curb & Gutter
(Locations Vary)



Pavement Patching Areas(Parking Lots)
(Locations Vary)

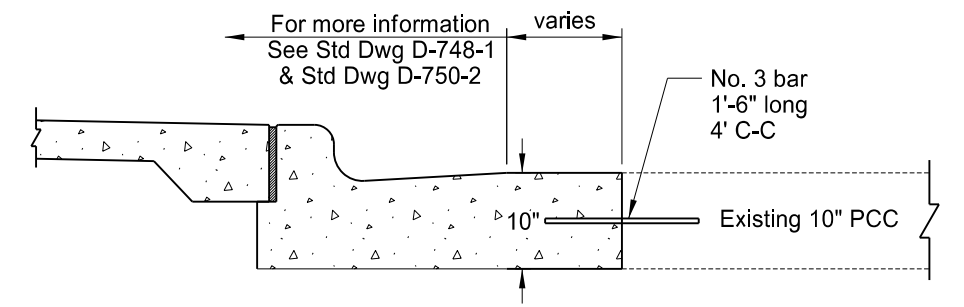
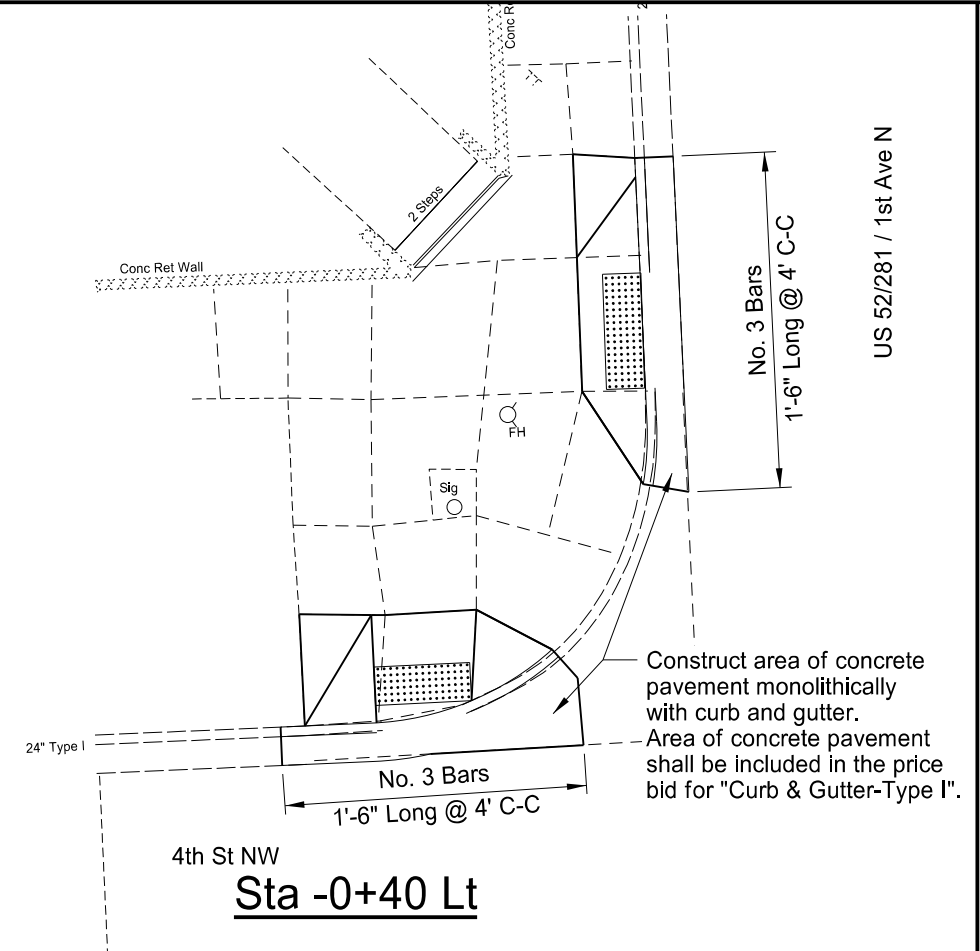


Pavement Patching Areas(Roadway)
(Locations Vary)

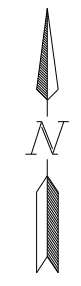
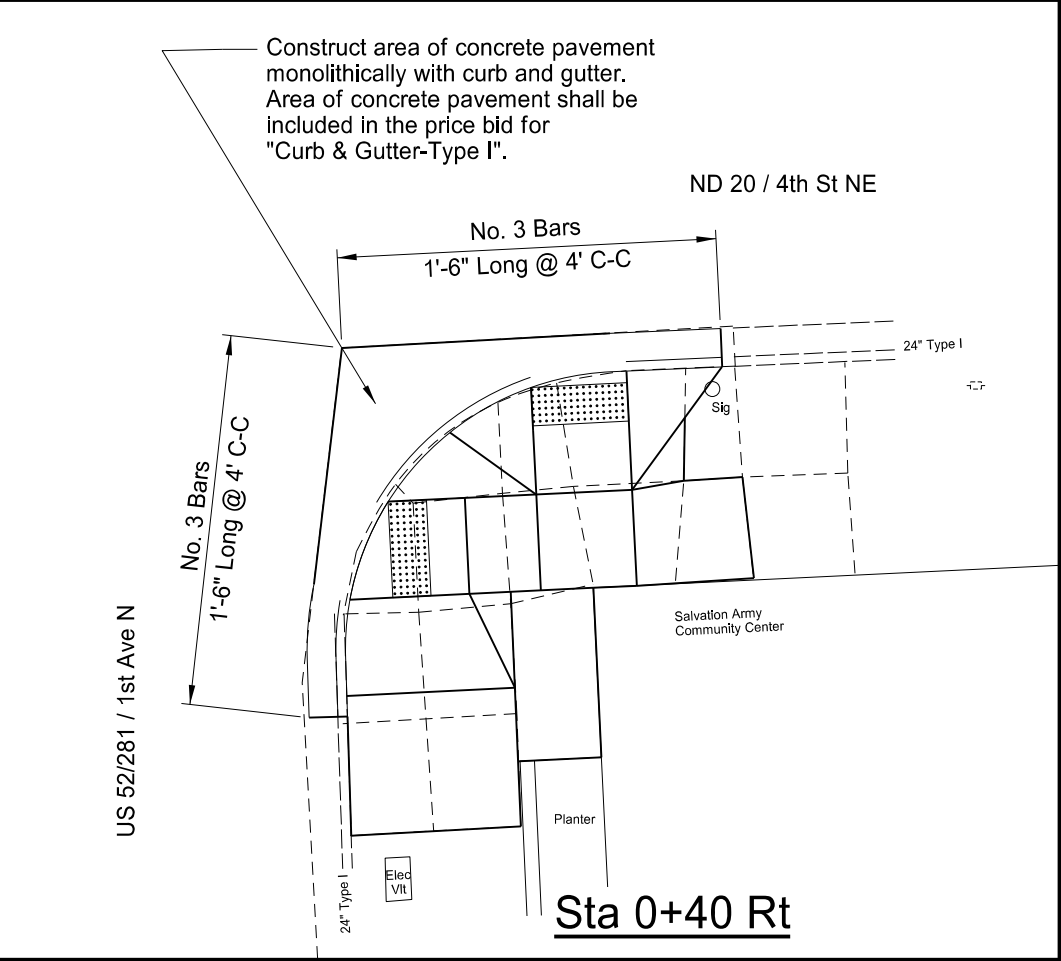
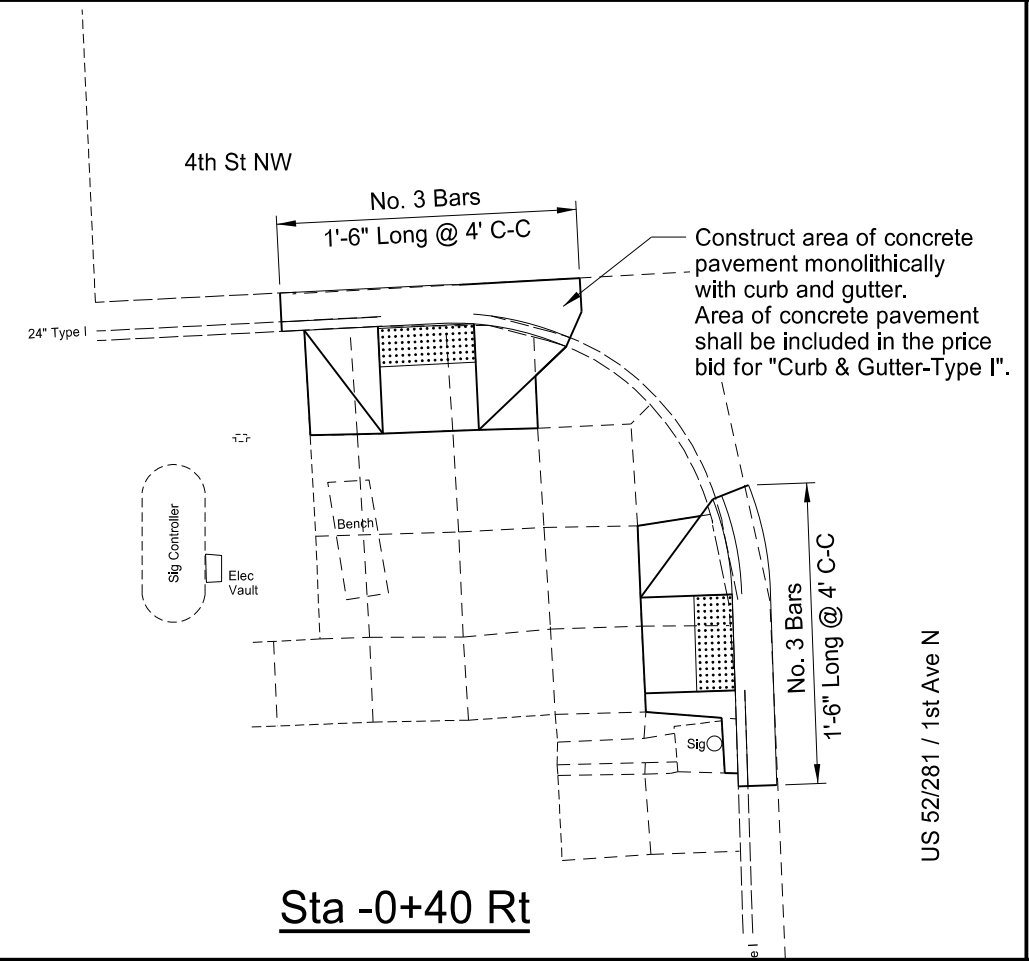
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REMOVAL - PATCHING DETAIL
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Curb & Gutter - Type 1 Detail
 Station -0+40 Lt, Station -0+40 Rt,
 & Station 0+40 Rt

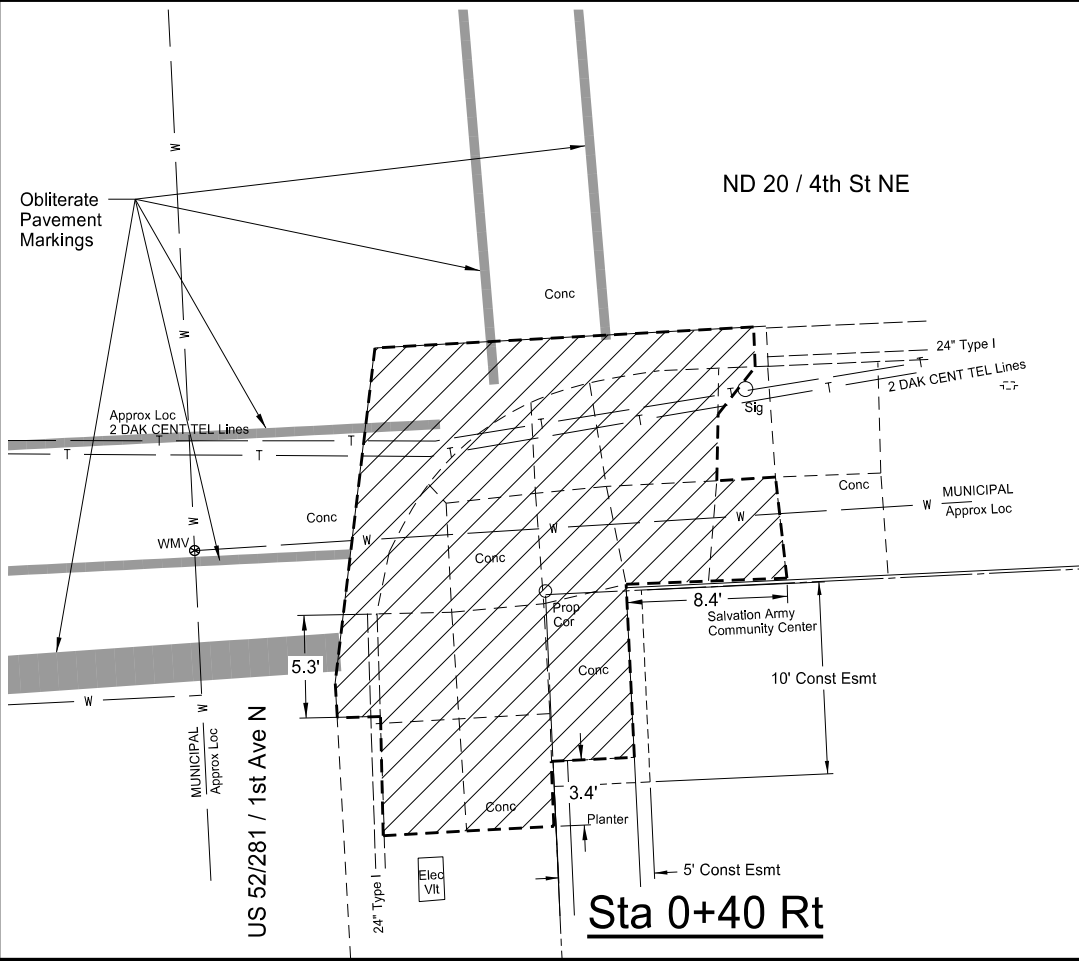
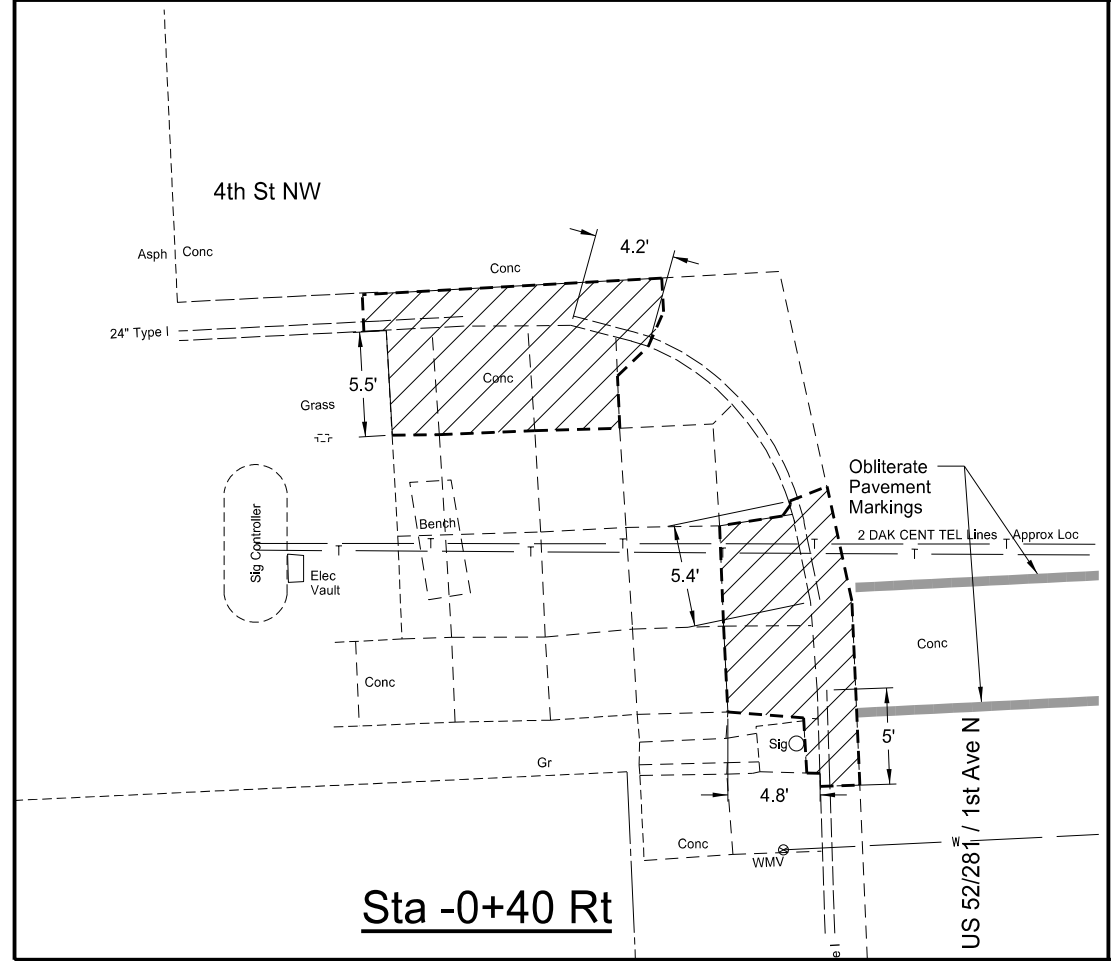
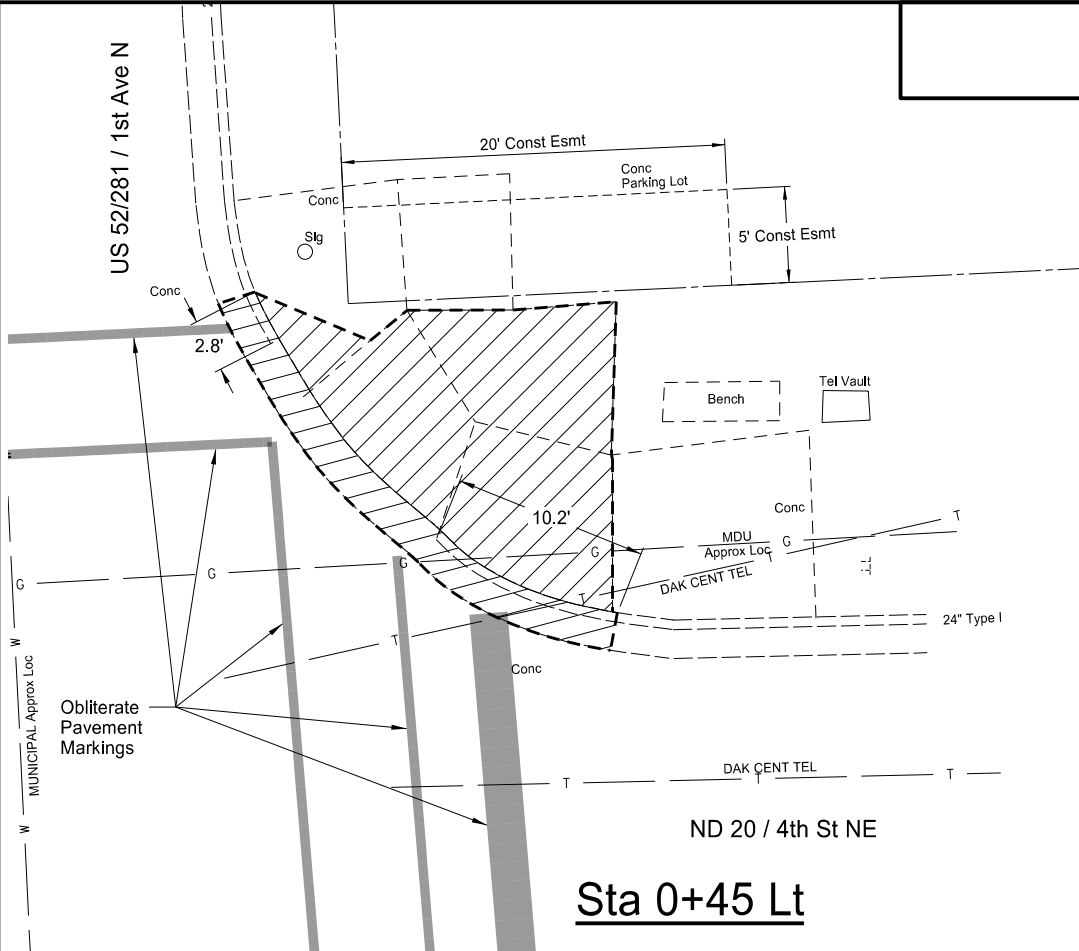
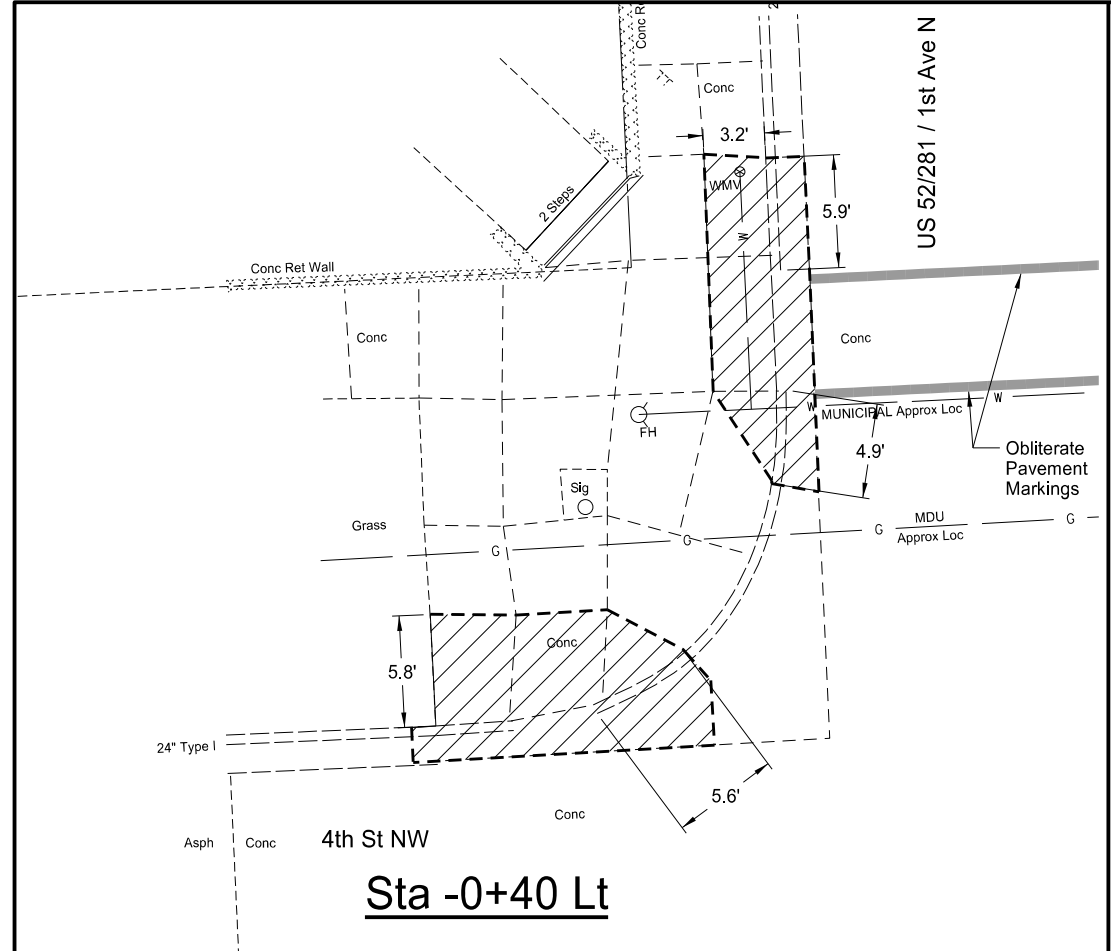


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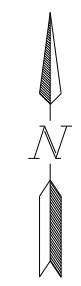
CURB & GUTTER DETAIL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

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SPEC	CODE	BID ITEM	UNIT	QTY
202	0114	Removal of Concrete Pavement		
		-0+40 Lt	SY	20
		-0+40 Rt	SY	20
		0+40 Rt	SY	47
		0+45 Lt	SY	27
202	0131	Removal of Curb-Type 1		
		0+45 Lt	LF	27
704	1500	Obliteration of Pavement Marking		
		US 52/281/1st Ave N & ND20/4th St NE	SF	184



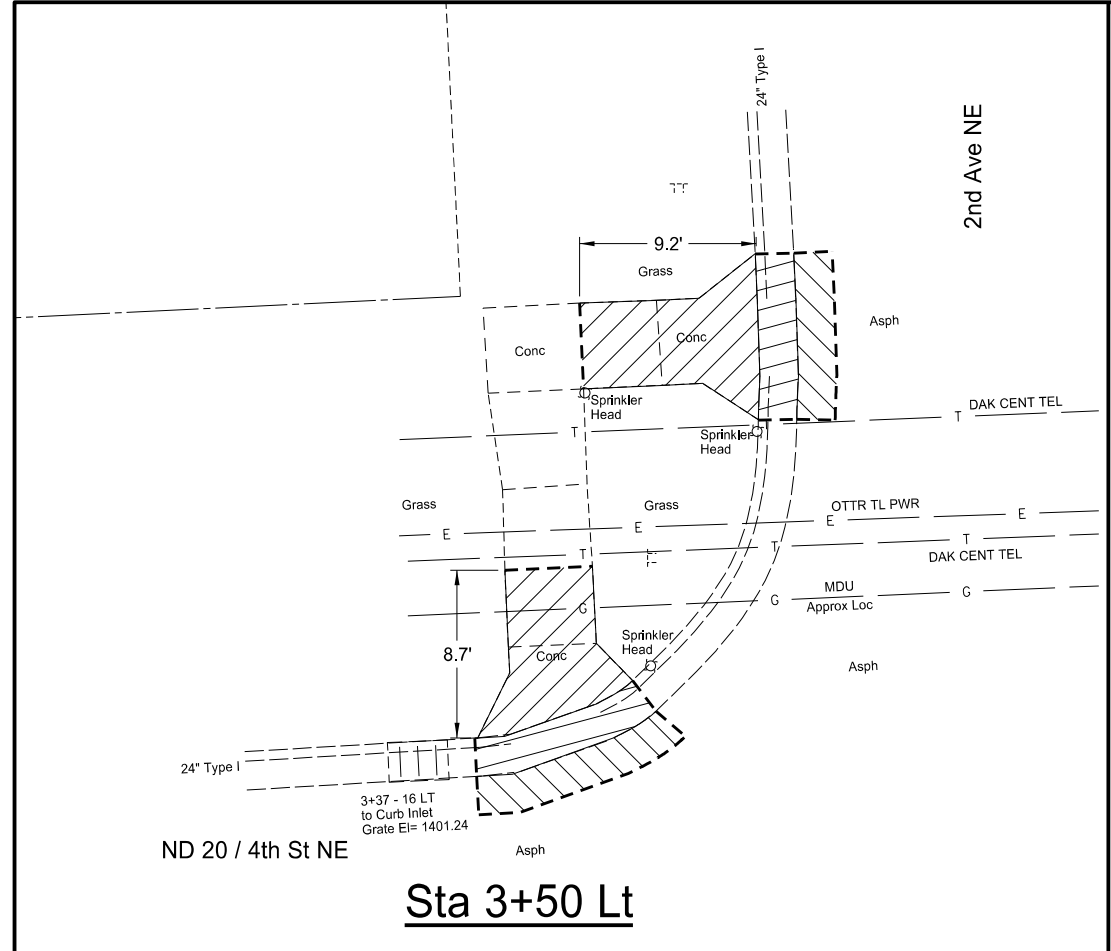
- Saw Cut
- Removal of Concrete
- Removal of Curb - Type 1
- Removal of Bituminous Surfacing



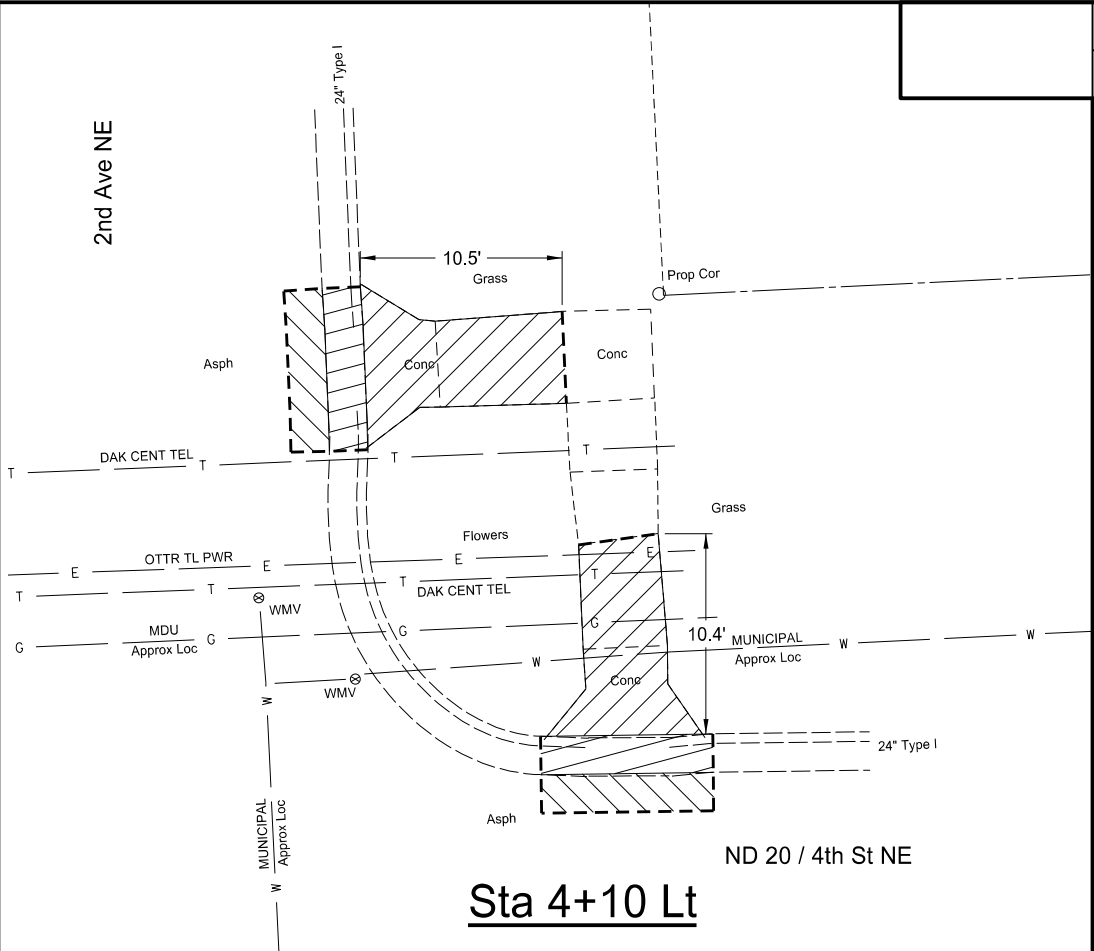
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REMOVALS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

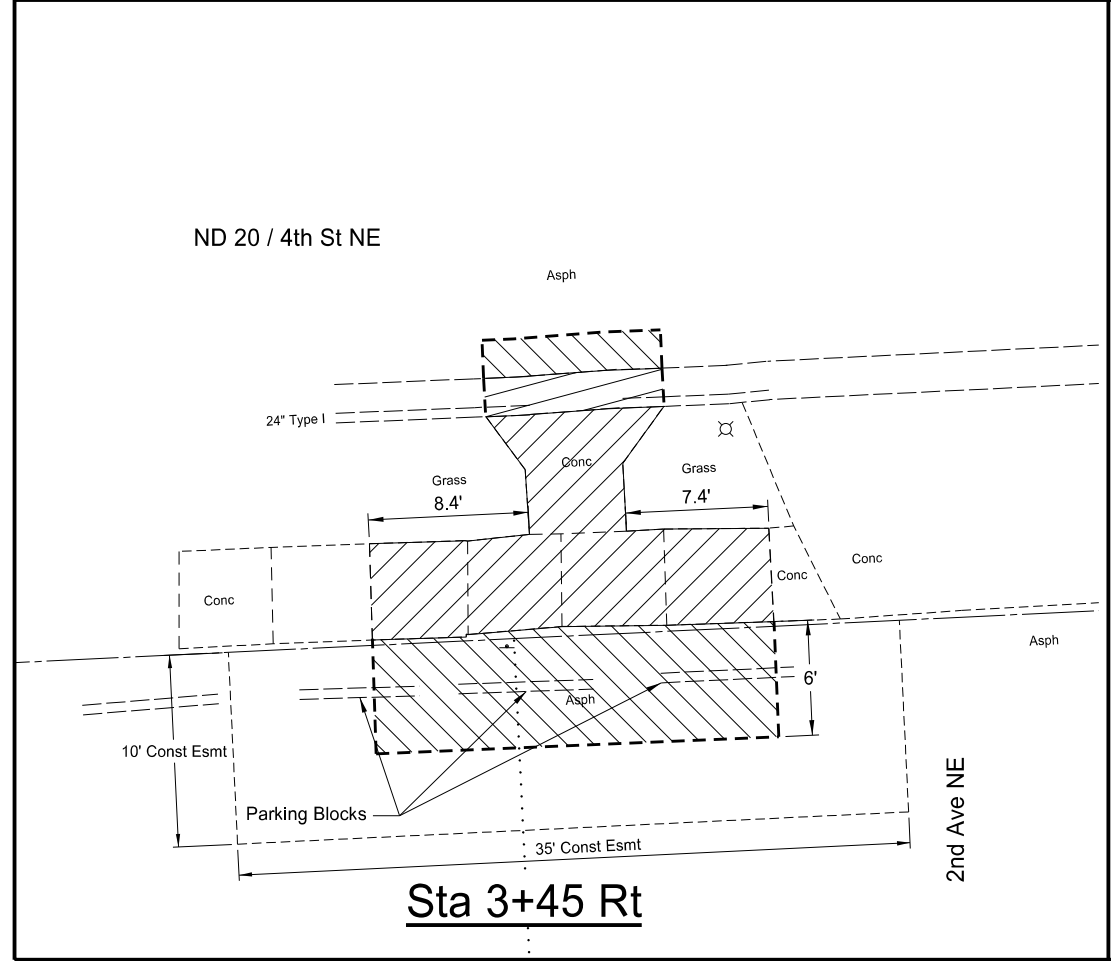
SPEC	CODE	BID ITEM	UNIT	QTY
202	0114	Removal of Concrete Pavement		
		3+45 Rt	SY	16
		3+50 Lt	SY	10
		4+10 Lt	SY	11
		4+20 Rt	SY	15
202	0131	Removal of Curb-Type 1		
		3+45 Rt	LF	9
		3+50 Lt	LF	19
		4+10 Lt	LF	18
		4+20 Rt	LF	9
202	0132	Removal of Bituminous Surfacing		
		3+45 Rt	SY	16
		3+50 Lt	SY	4
		4+10 Lt	SY	4
		4+20 Rt	SY	2



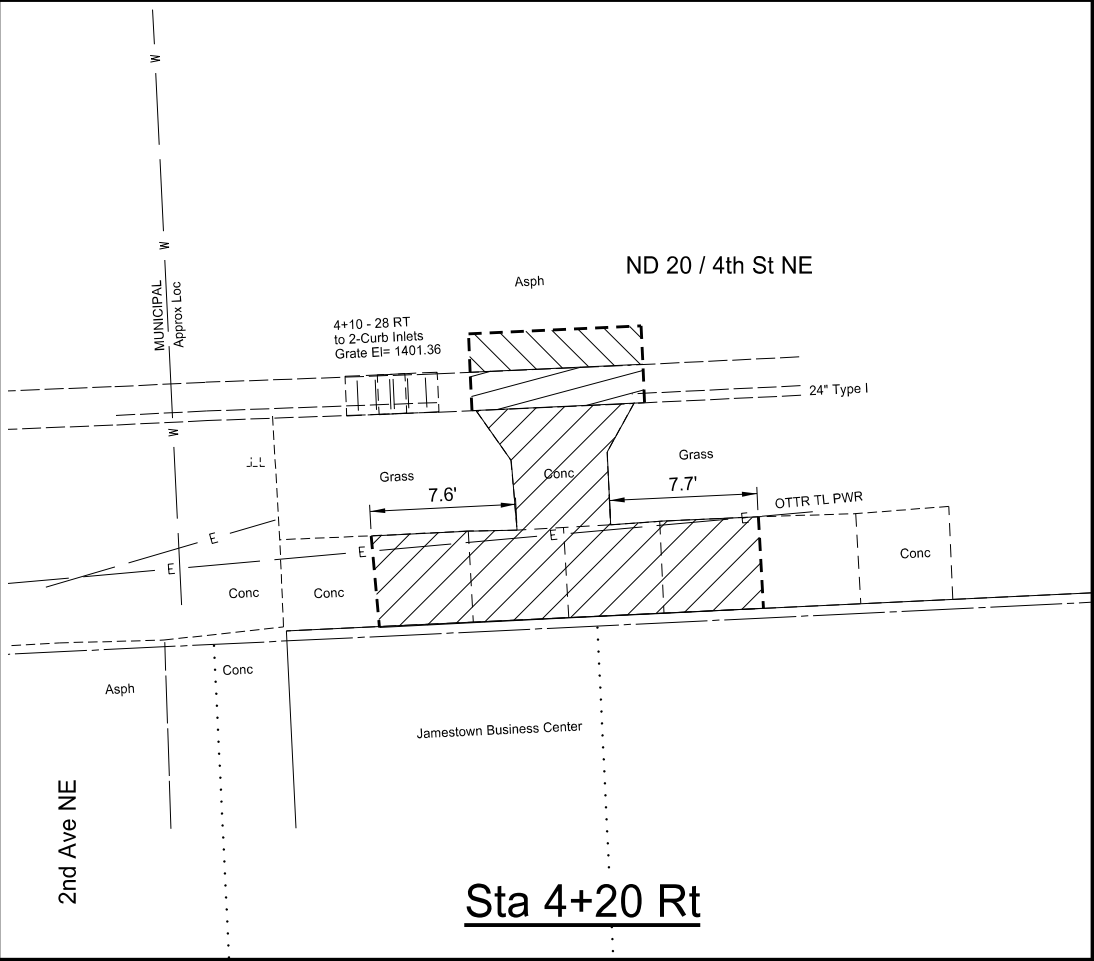
Sta 3+50 Lt



Sta 4+10 Lt

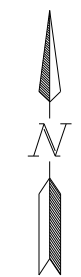


Sta 3+45 Rt



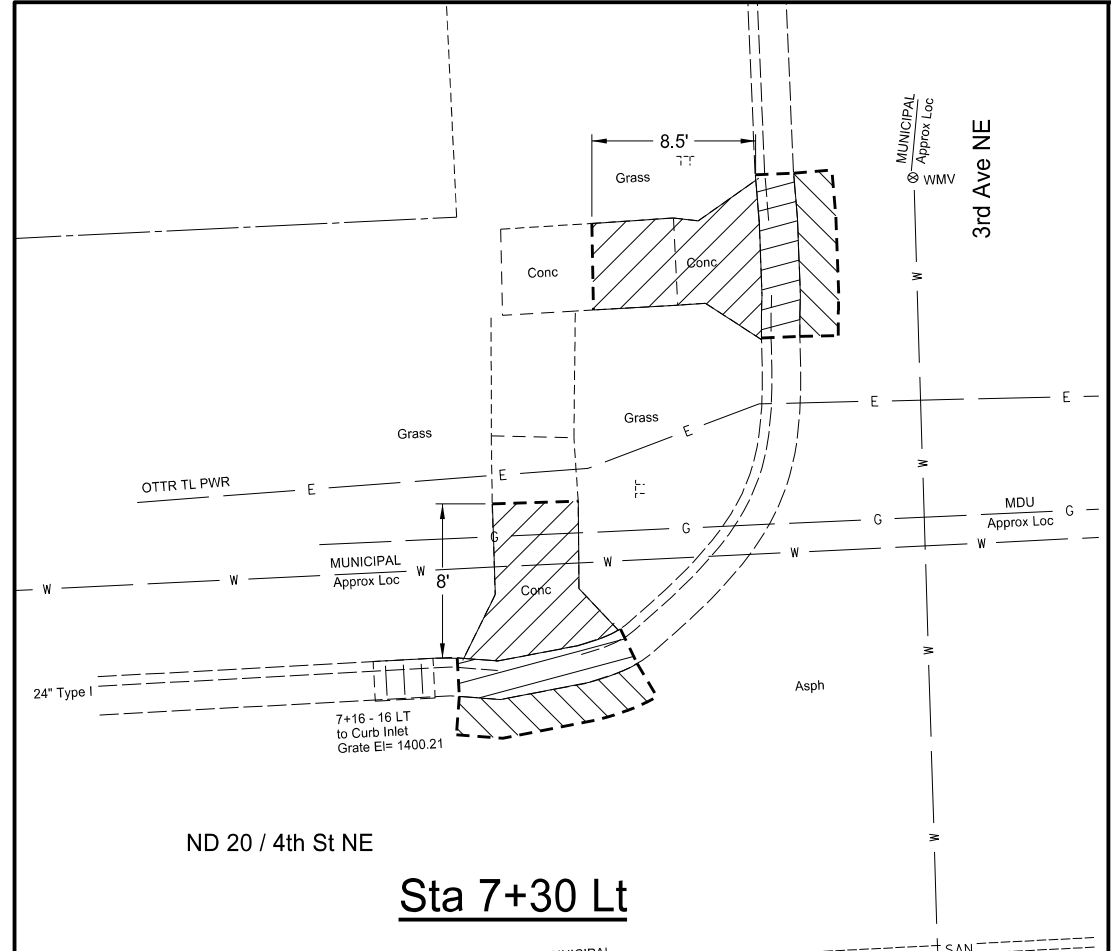
Sta 4+20 Rt

- Saw Cut
- Removal of Concrete
- Removal of Curb - Type 1
- Removal of Bituminous Surfacing

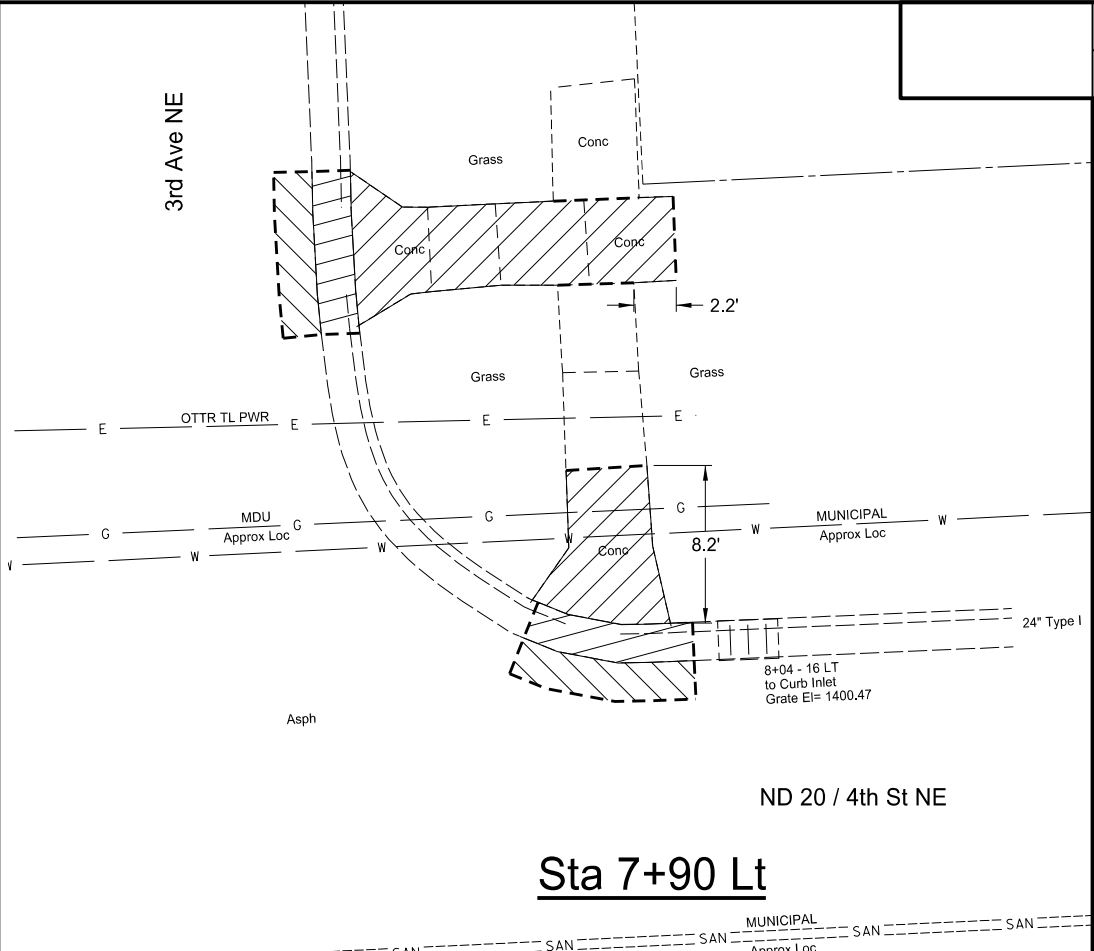


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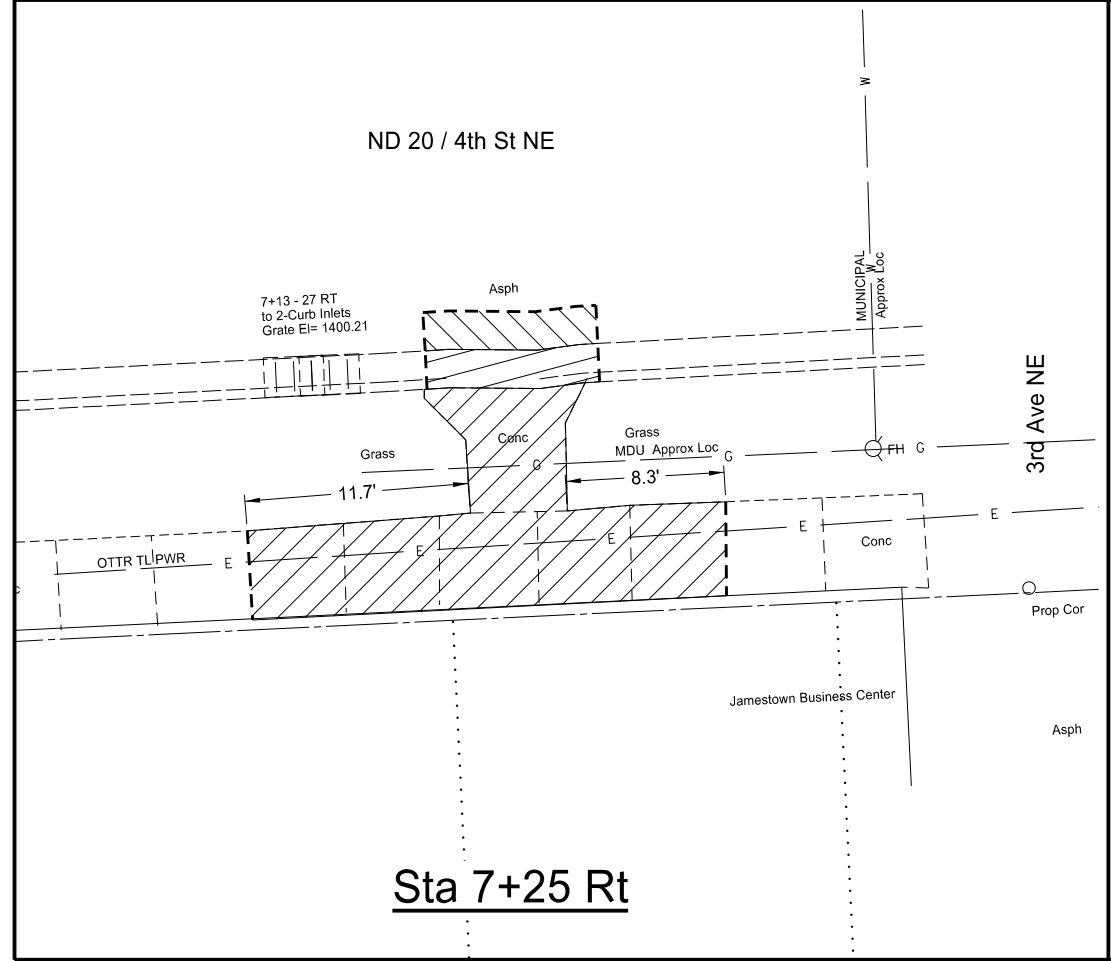
REMOVALS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND



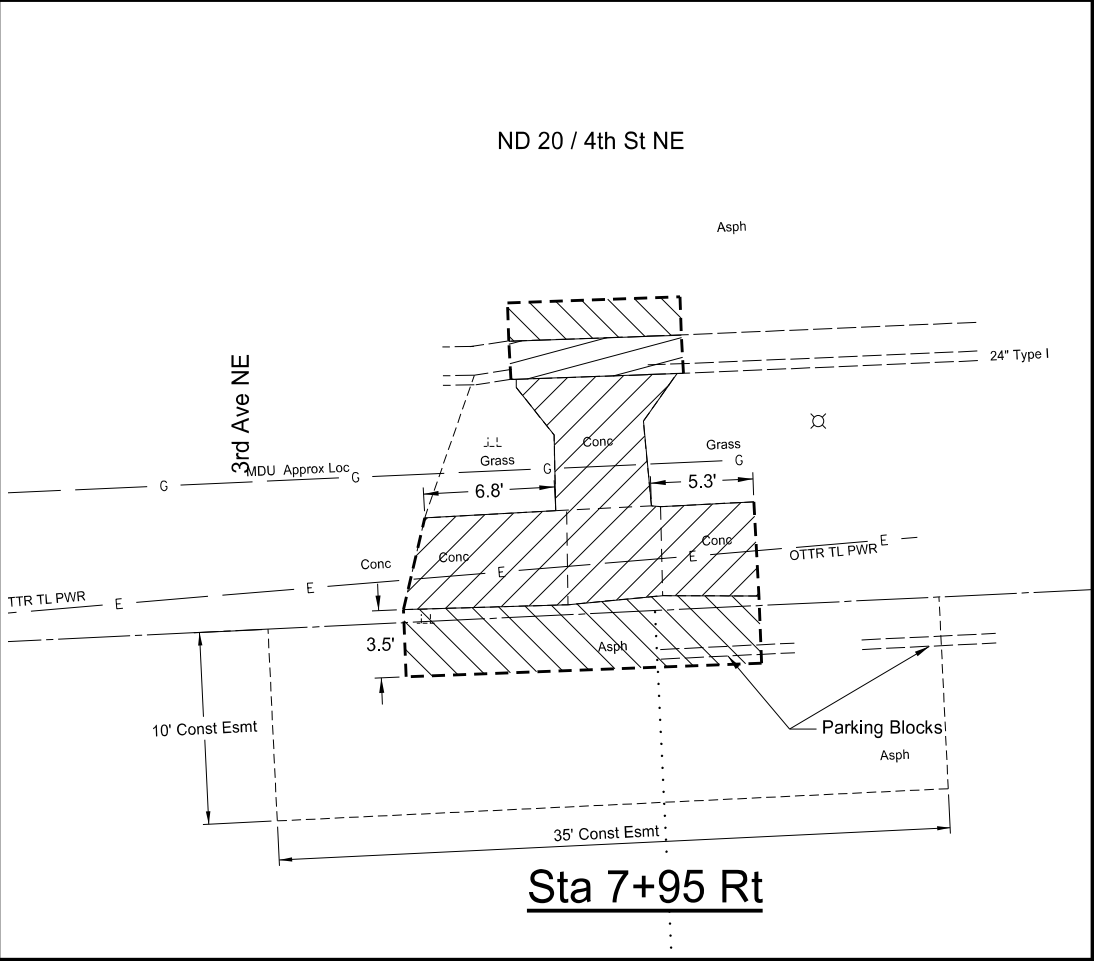
Sta 7+30 Lt



Sta 7+90 Lt



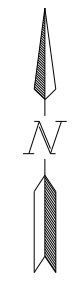
Sta 7+25 Rt



Sta 7+95 Rt

SPEC	CODE	BID ITEM	UNIT	QTY
202	0114	Removal of Concrete Pavement		
		7+25 Rt	SY	18
		7+30 Lt	SY	10
		7+90 Lt	SY	13
		7+95 Rt	SY	14
202	0131	Removal of Curb-Type 1		
		7+25 Rt	LF	9
		7+30 Lt	LF	18
		7+90 Lt	LF	17
		7+95 Rt	LF	9
202	0132	Removal of Bituminous Surfacing		
		7+25 Rt	SY	2
		7+30 Lt	SY	4
		7+90 Lt	SY	4
		7+95 Rt	SY	9

- Saw Cut
- Removal of Concrete
- Removal of Curb - Type 1
- Removal of Bituminous Surfacing

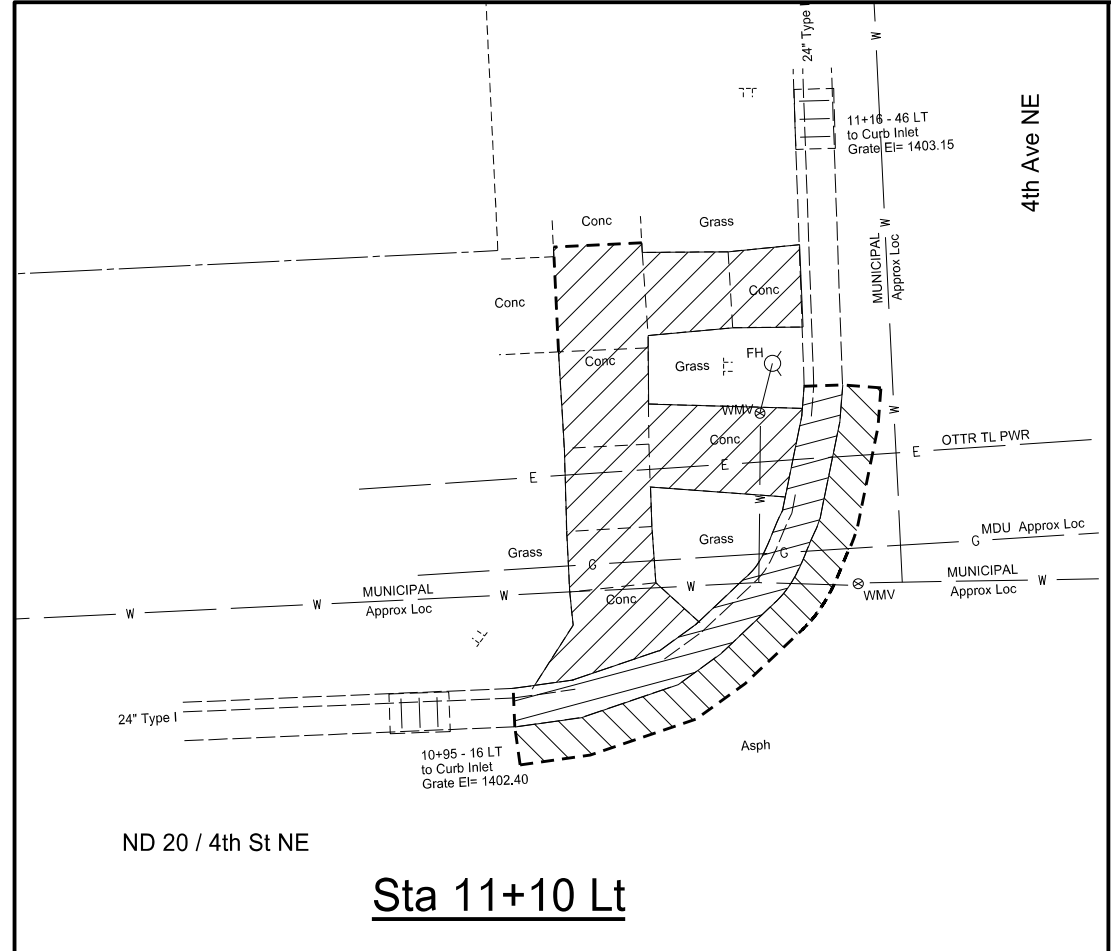


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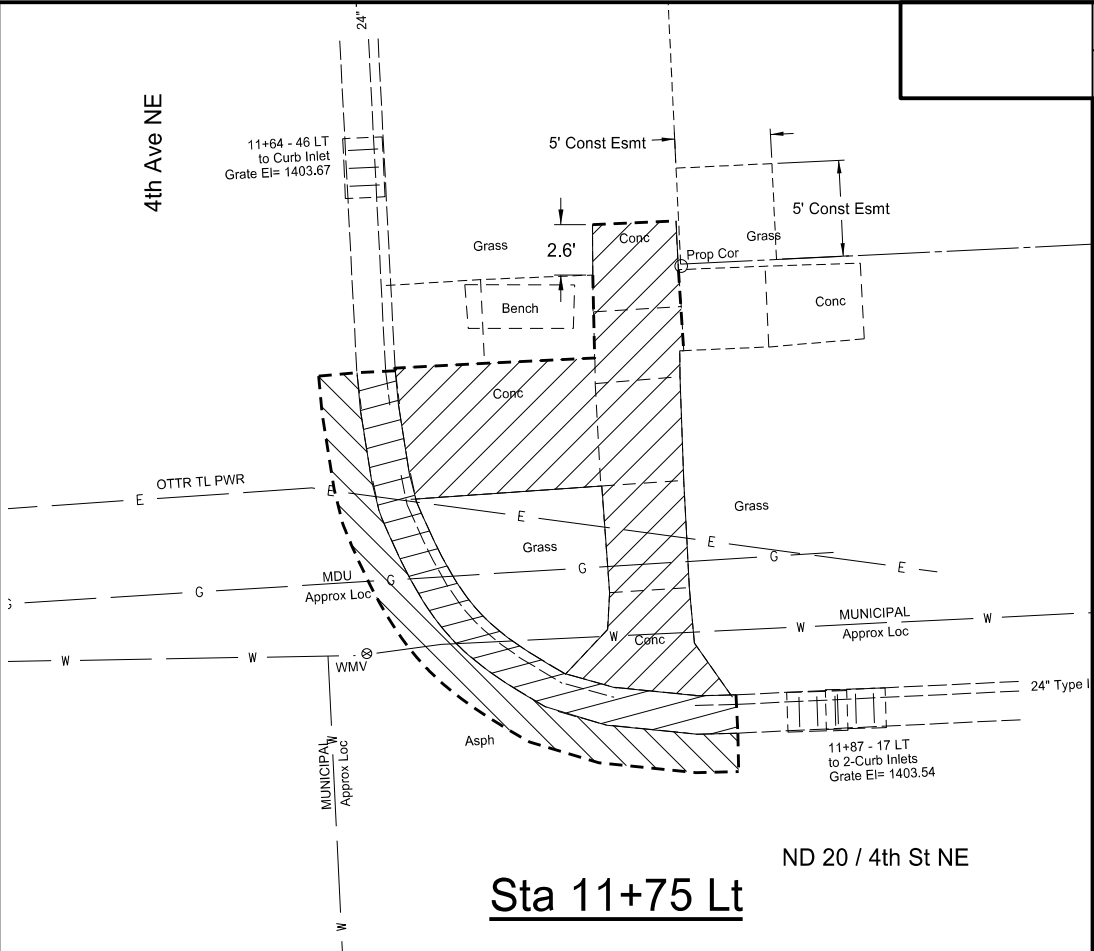
REMOVALS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	40	4

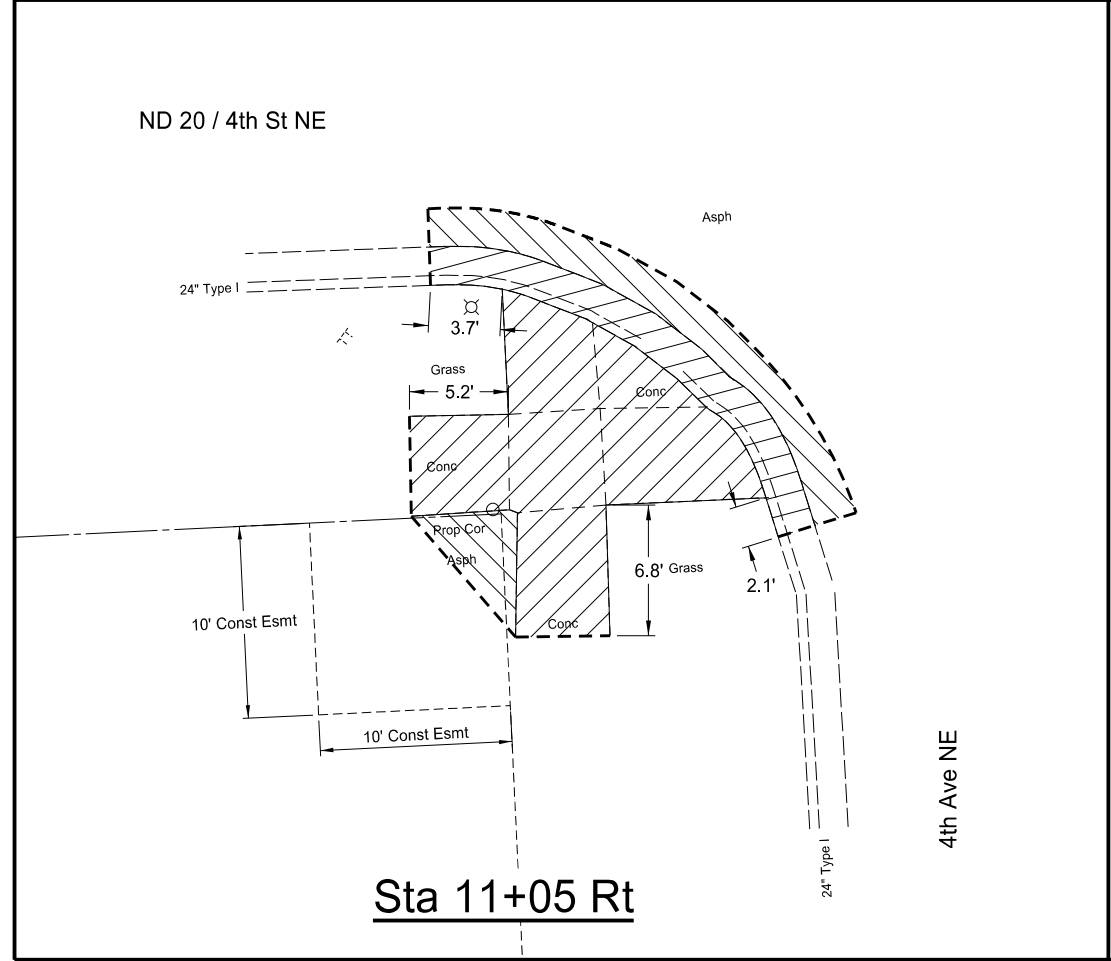
SPEC CODE	BID ITEM	UNIT	QTY
202 0114	Removal of Concrete Pavement		
	11+05 Rt	SY	14
	11+10 Lt	SY	19
	11+75 Lt	SY	20
	11+75 Rt	SY	9
202 0131	Removal of Curb-Type 1		
	11+05 Rt	LF	25
	11+10 Lt	LF	26
	11+75 Lt	LF	30
	11+75 Rt	LF	21
202 0132	Removal of Bituminous Surfacing		
	11+05 Rt	SY	8
	11+10 Lt	SY	6
	11+75 Lt	SY	7
	11+75 Rt	SY	5



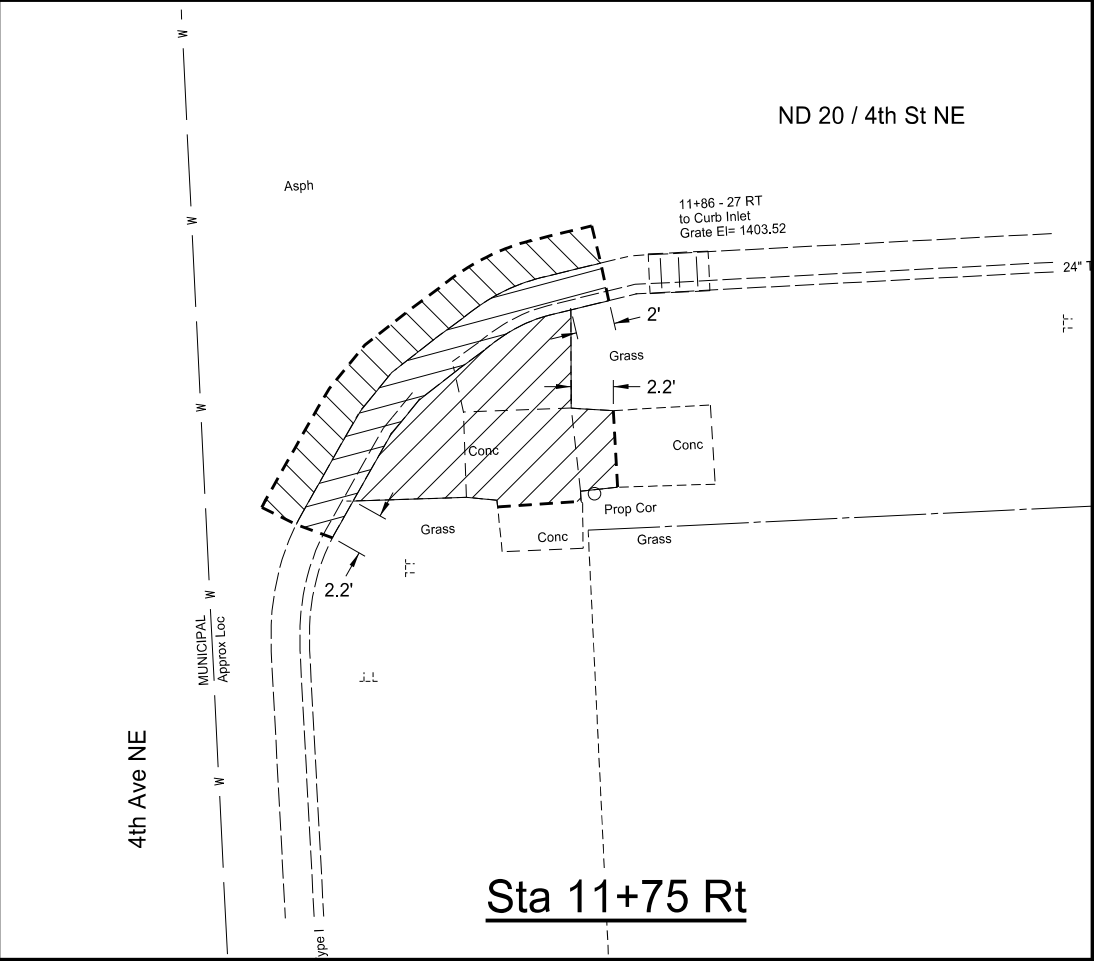
Sta 11+10 Lt



Sta 11+75 Lt

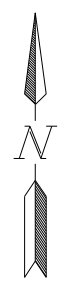


Sta 11+05 Rt



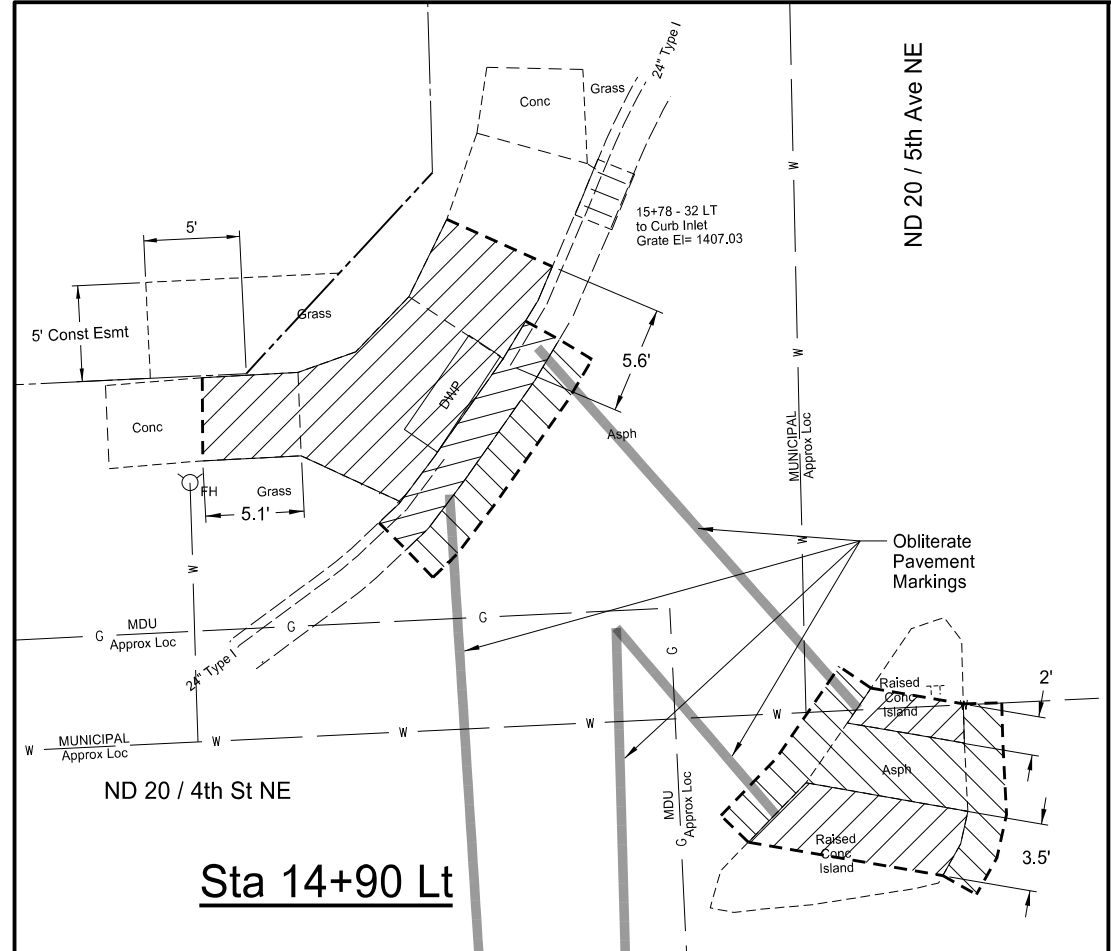
Sta 11+75 Rt

- Saw Cut
- Removal of Concrete
- Removal of Curb - Type 1
- Removal of Bituminous Surfacing

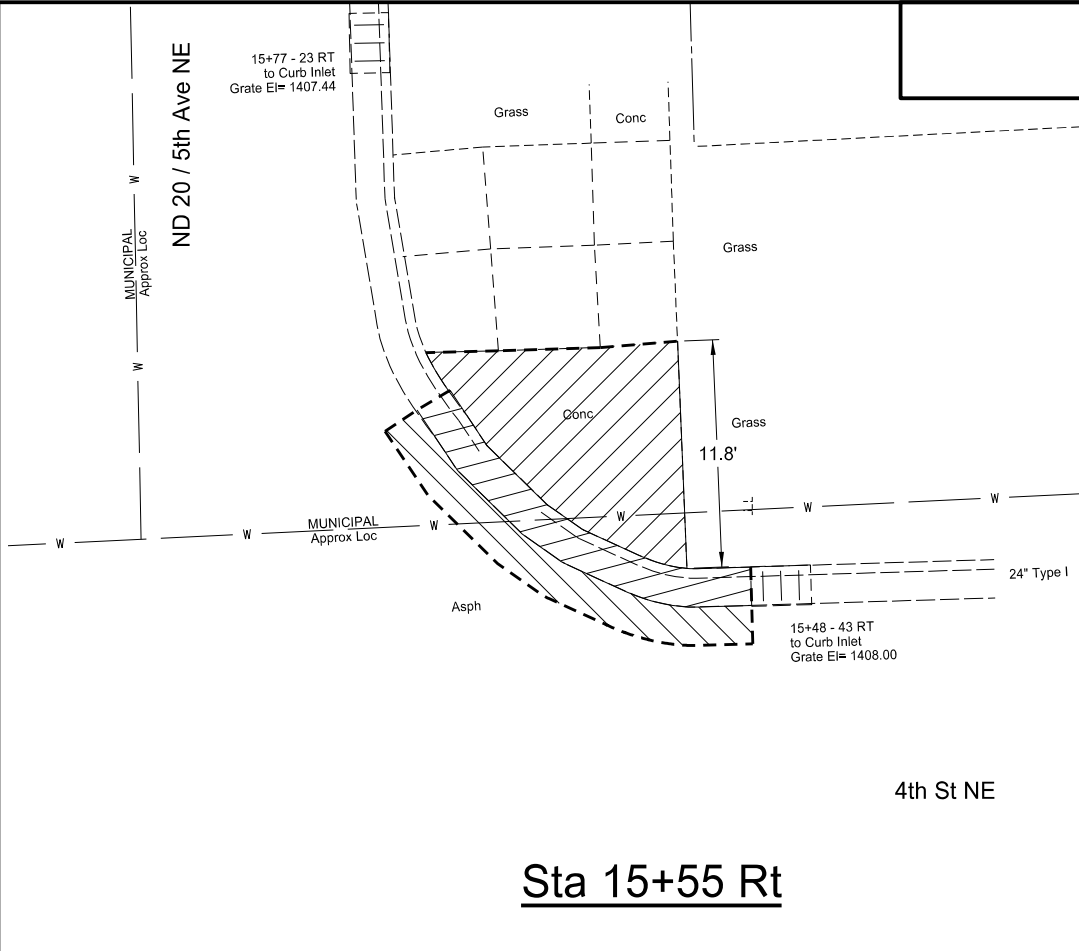


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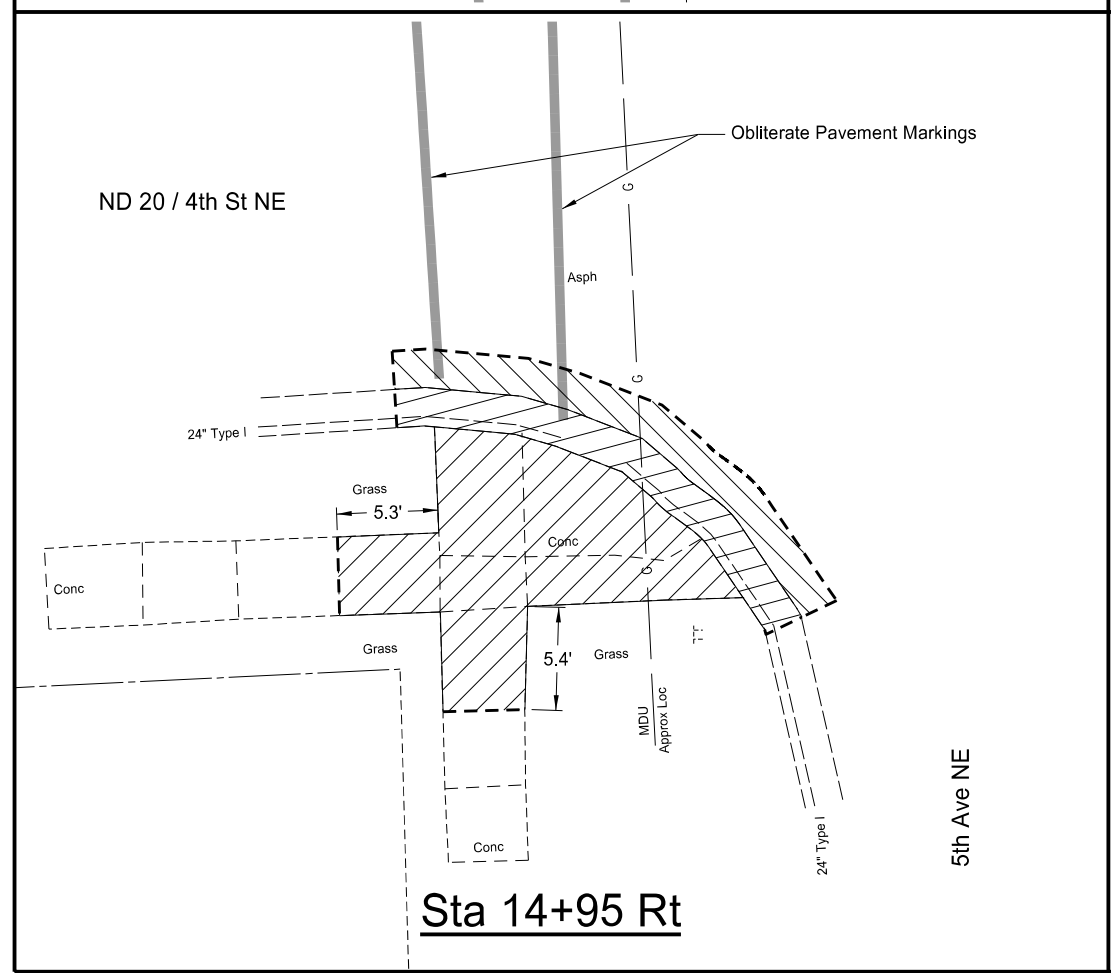
REMOVALS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND



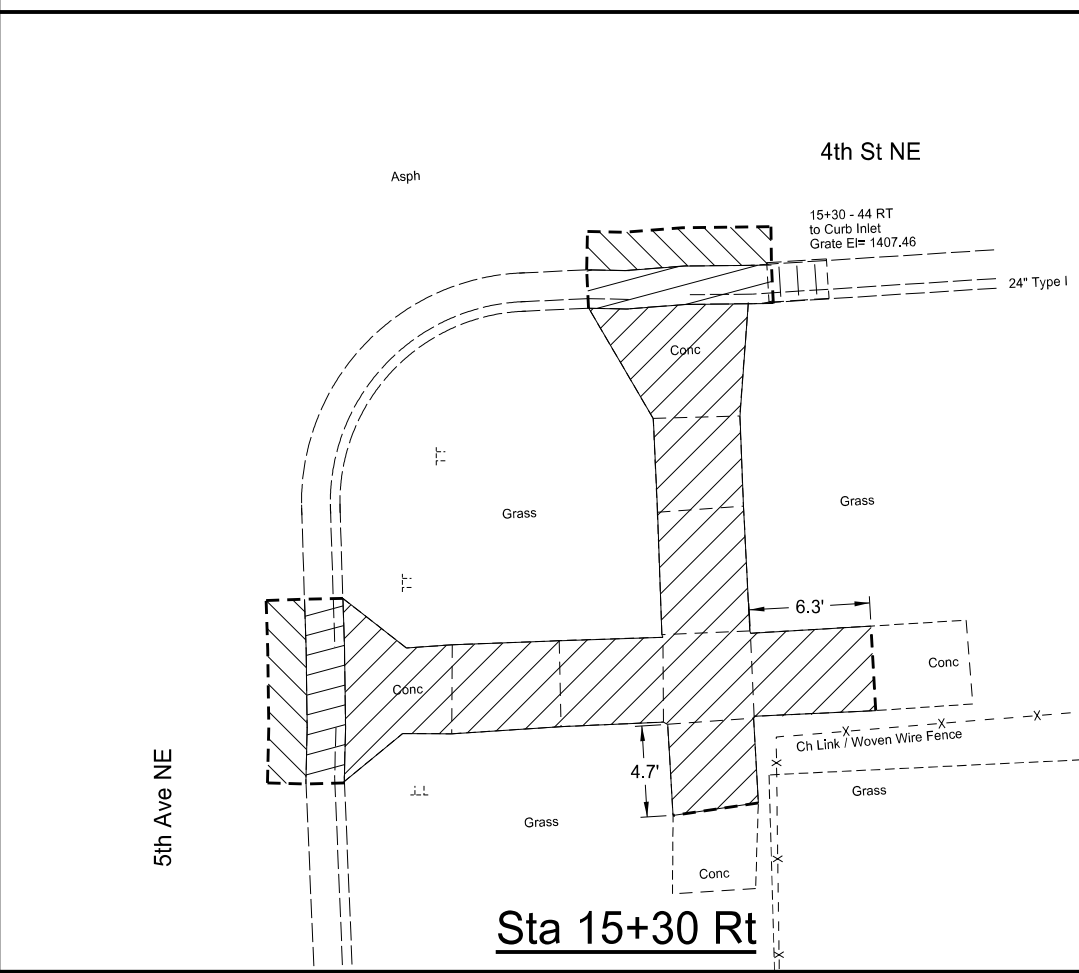
Sta 14+90 Lt



Sta 15+55 Rt



Sta 14+95 Rt



Sta 15+30 Rt

SPEC	CODE	BID ITEM	UNIT	QTY
202	0114	Removal of Concrete Pavement		
		14+90 Lt	SY	18
		14+95 Rt	SY	17
		15+30 Rt	SY	27
		15+55 Rt	SY	11
202	0131	Removal of Curb-Type 1		
		14+90 Lt	LF	13
		14+95 Rt	LF	25
		15+30 Rt	LF	19
		15+55 Rt	LF	20
202	0132	Removal of Bituminous Surfacing		
		14+90 Lt	SY	10
		14+95 Rt	SY	6
		15+30 Rt	SY	4
		15+55 Rt	SY	5
704	1500	Obliteration of Pavement Marking		
		ND20/5th Ave NE & ND20/4th St NE	SF	75

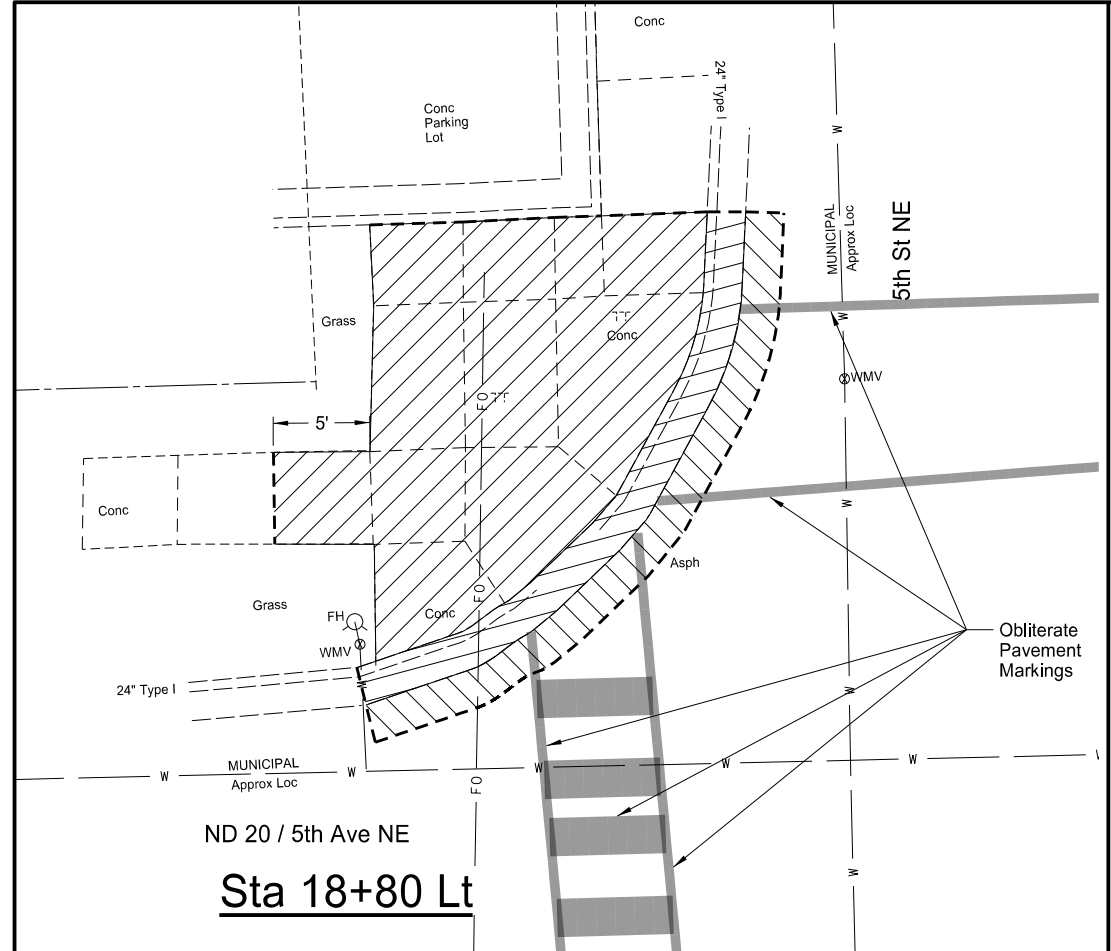
- Saw Cut
- Removal of Concrete
- Removal of Curb - Type 1
- Removal of Bituminous Surfacing



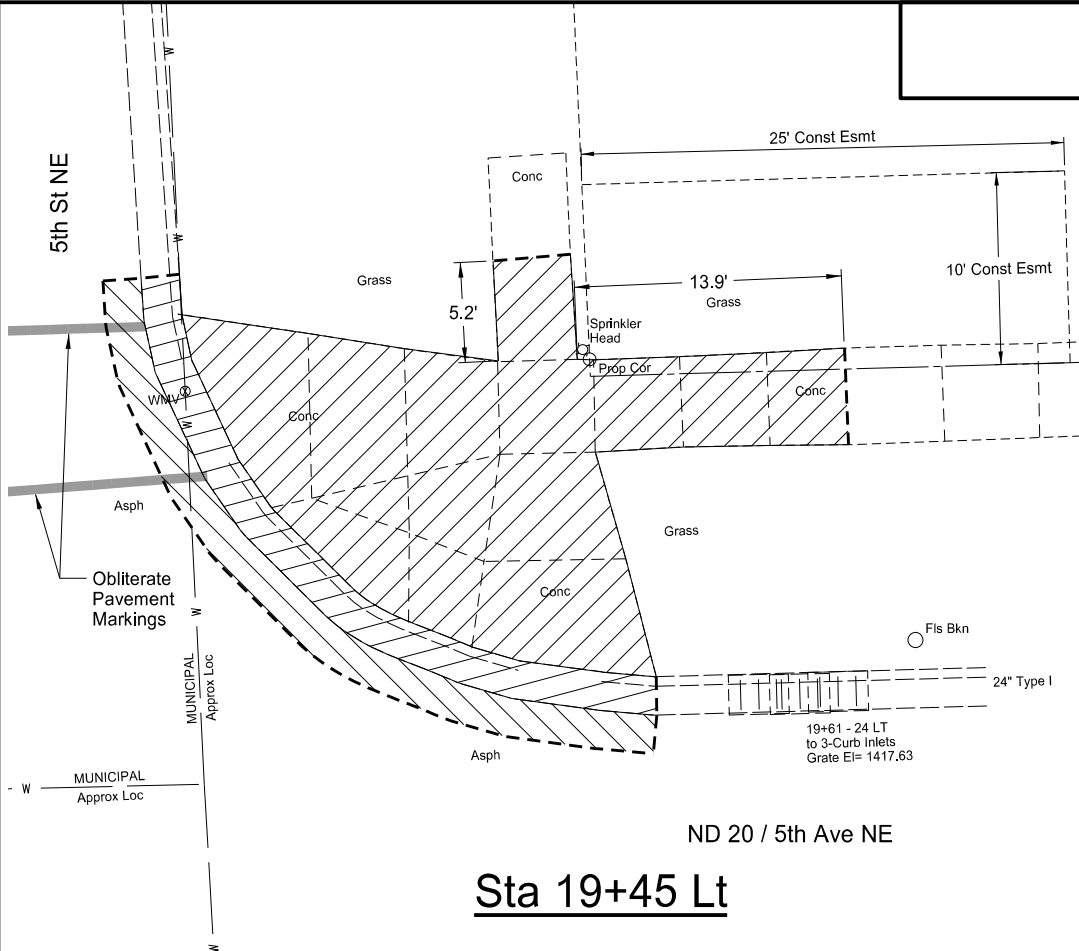
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REMOVALS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

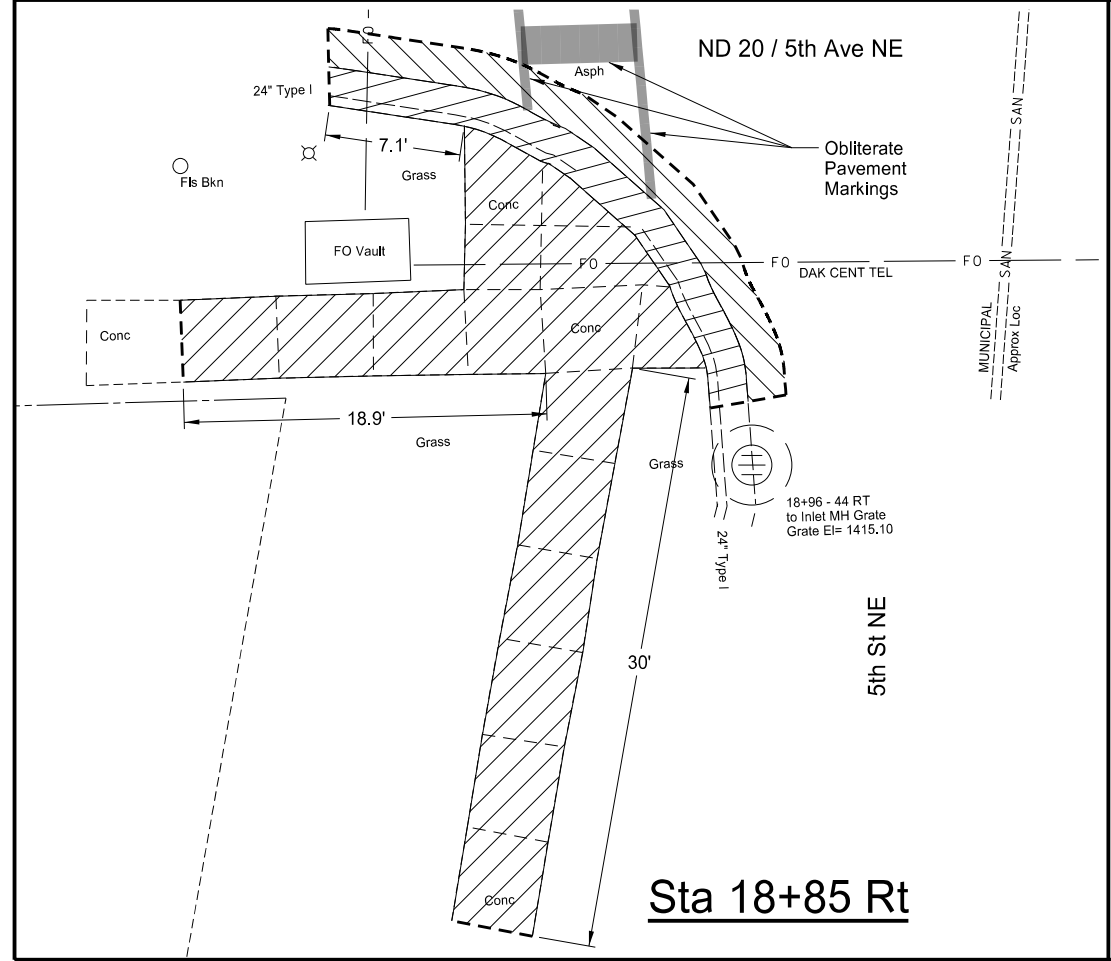
SPEC CODE	BID ITEM	UNIT	QTY
202 0114	Removal of Concrete Pavement		
	18+80 Lt	SY	36
	18+85 Rt	SY	33
	19+45 Lt	SY	41
	19+45 Rt	SY	15
202 0131	Removal of Curb-Type 1		
	18+80 Lt	LF	34
	18+85 Rt	LF	29
	19+45 Lt	LF	37
	19+45 Rt	LF	19
202 0132	Removal of Bituminous Surfacing		
	18+80 Lt	SY	8
	18+85 Rt	SY	7
	19+45 Lt	SY	9
	19+45 Rt	SY	4
704 1500	Obliteration of Pavement Marking		
	5th St NE & ND20/5th Ave NE	SF	252



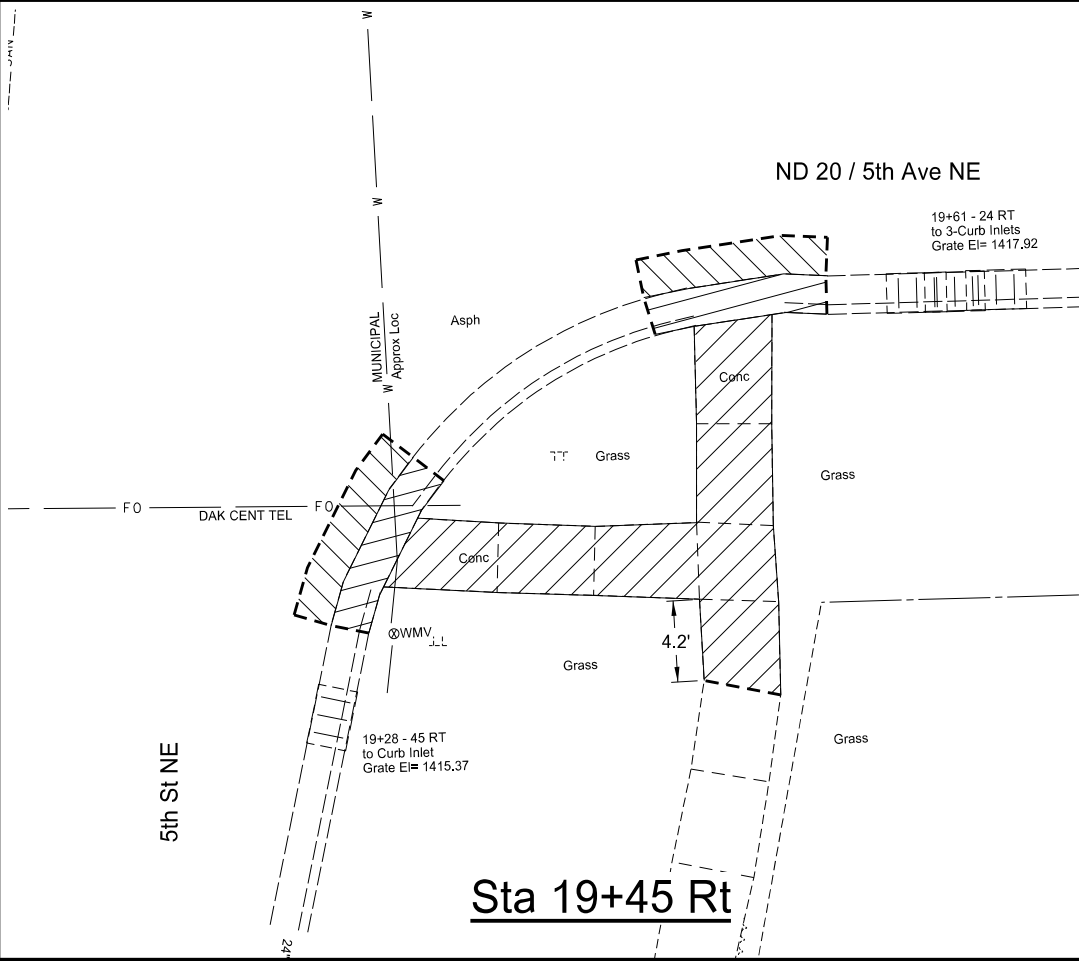
Sta 18+80 Lt



Sta 19+45 Lt

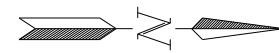


Sta 18+85 Rt



Sta 19+45 Rt

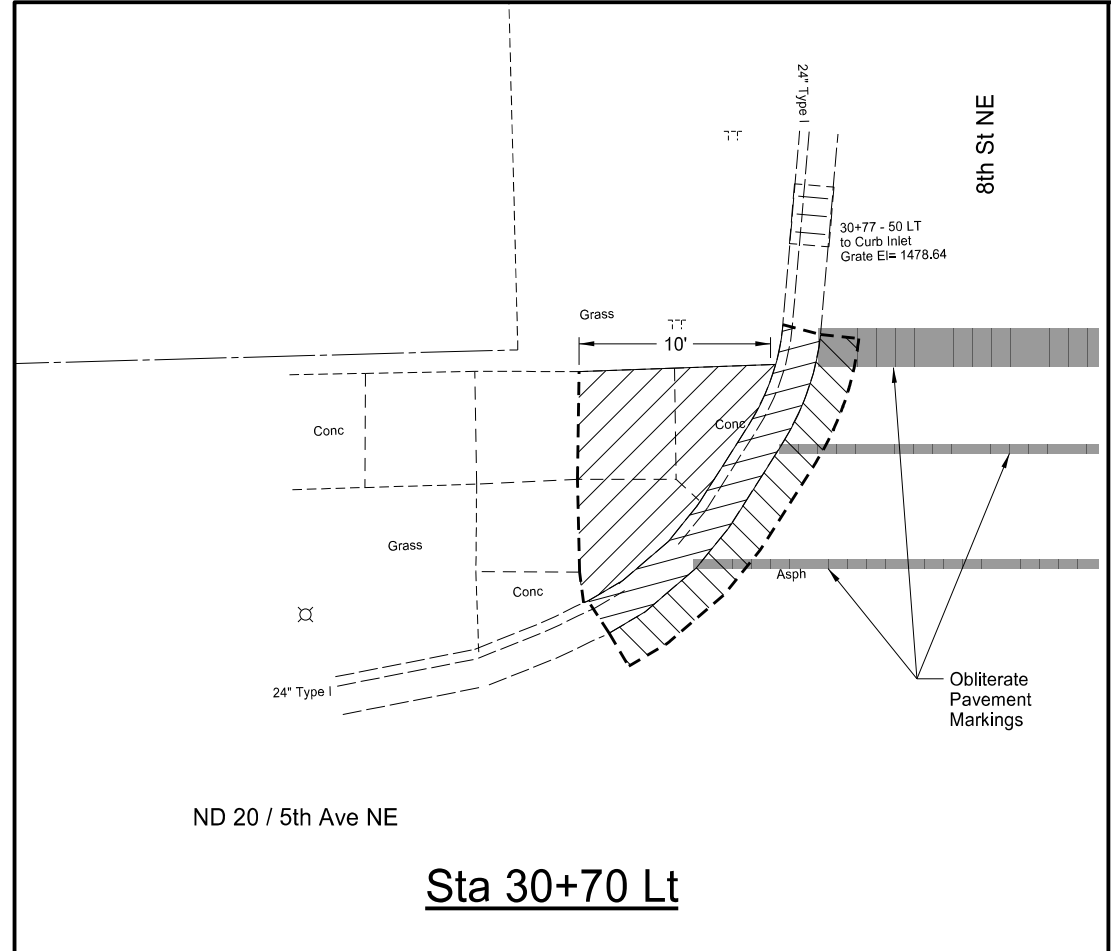
- Saw Cut
- Removal of Concrete
- Removal of Curb - Type 1
- Removal of Bituminous Surfacing



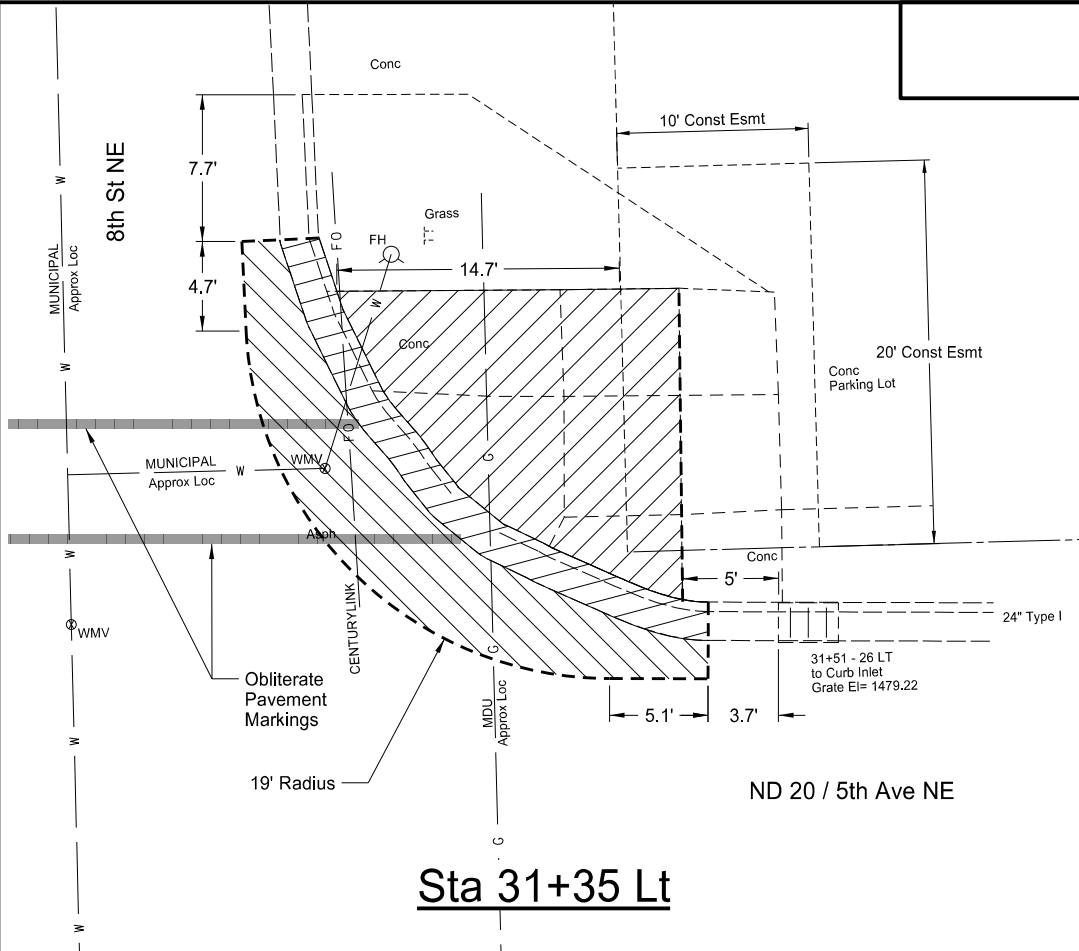
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REMOVALS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

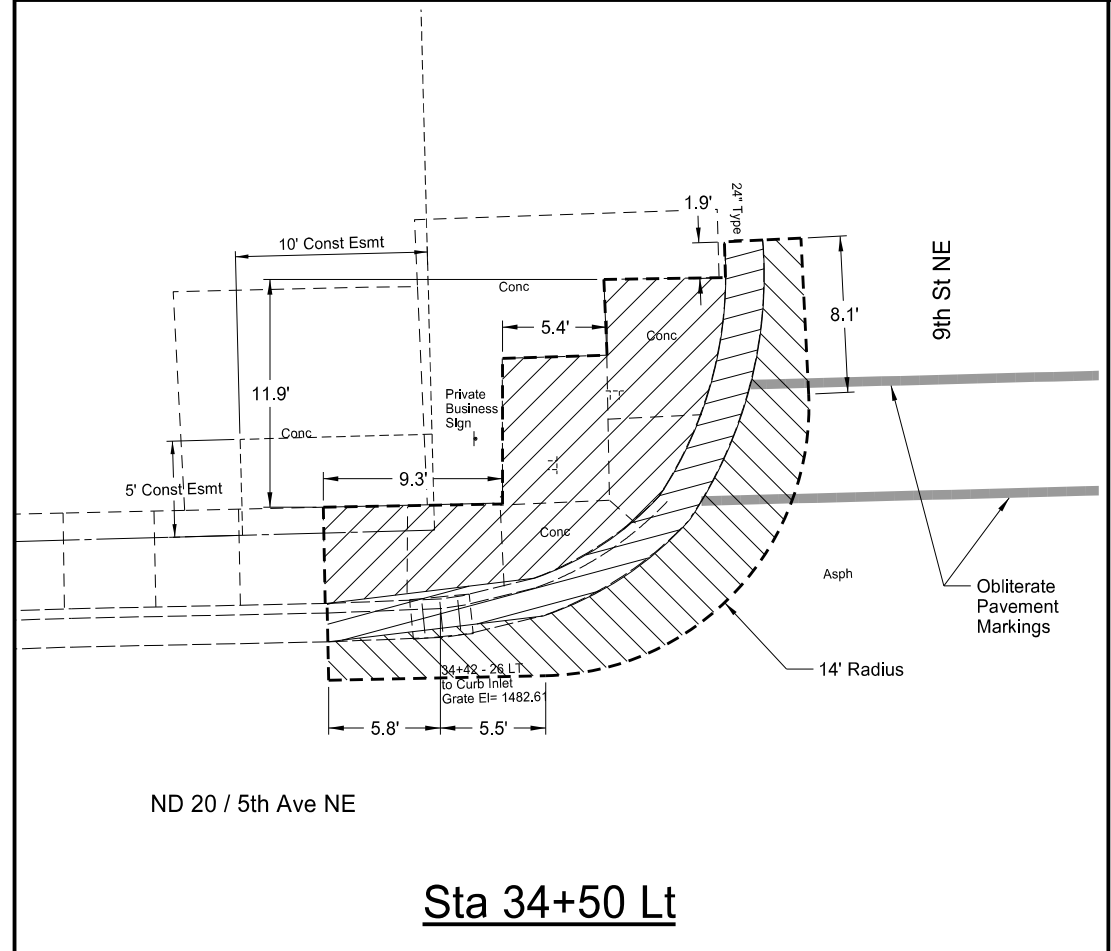
SPEC	CODE	BID ITEM	UNIT	QTY
202	0114	Removal of Concrete Pavement		
		30+70 Lt	SY	8
		31+35 Lt	SY	22
		34+50 Lt	SY	18
		35+20 Lt	SY	17
202	0131	Removal of Curb-Type 1		
		30+70 Lt	LF	31
		31+35 Lt	LF	22
		34+50 Lt	LF	34
		35+20 Lt	LF	36
202	0132	Removal of Bituminous Surfacing		
		30+70 Lt	SY	16
		31+35 Lt	SY	5
		34+50 Lt	SY	14
		35+20 Lt	SY	21
704	1500	Obliteration of Pavement Marking		
		8th St NE & ND20/5th Ave NE	SF	118
		9th St NE & ND20/5th Ave NE	SF	53



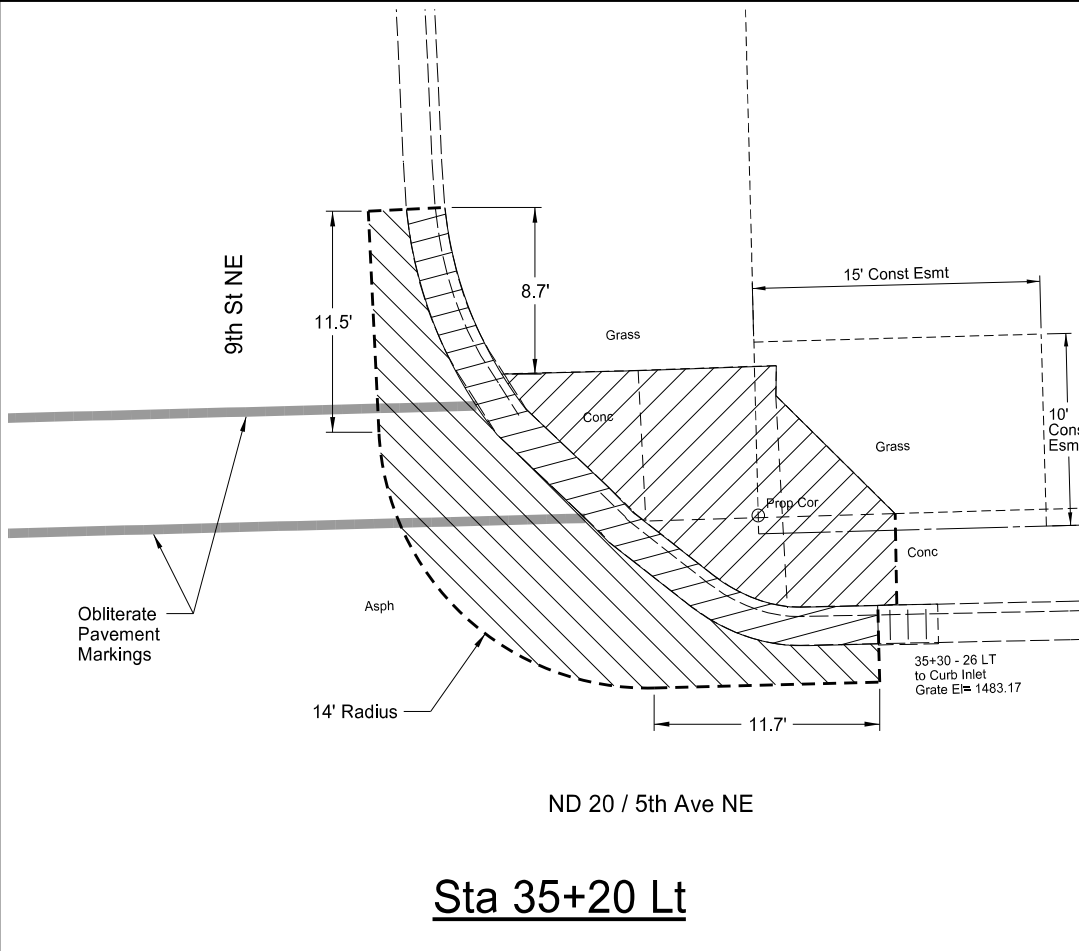
Sta 30+70 Lt



Sta 31+35 Lt

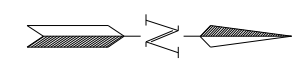


Sta 34+50 Lt



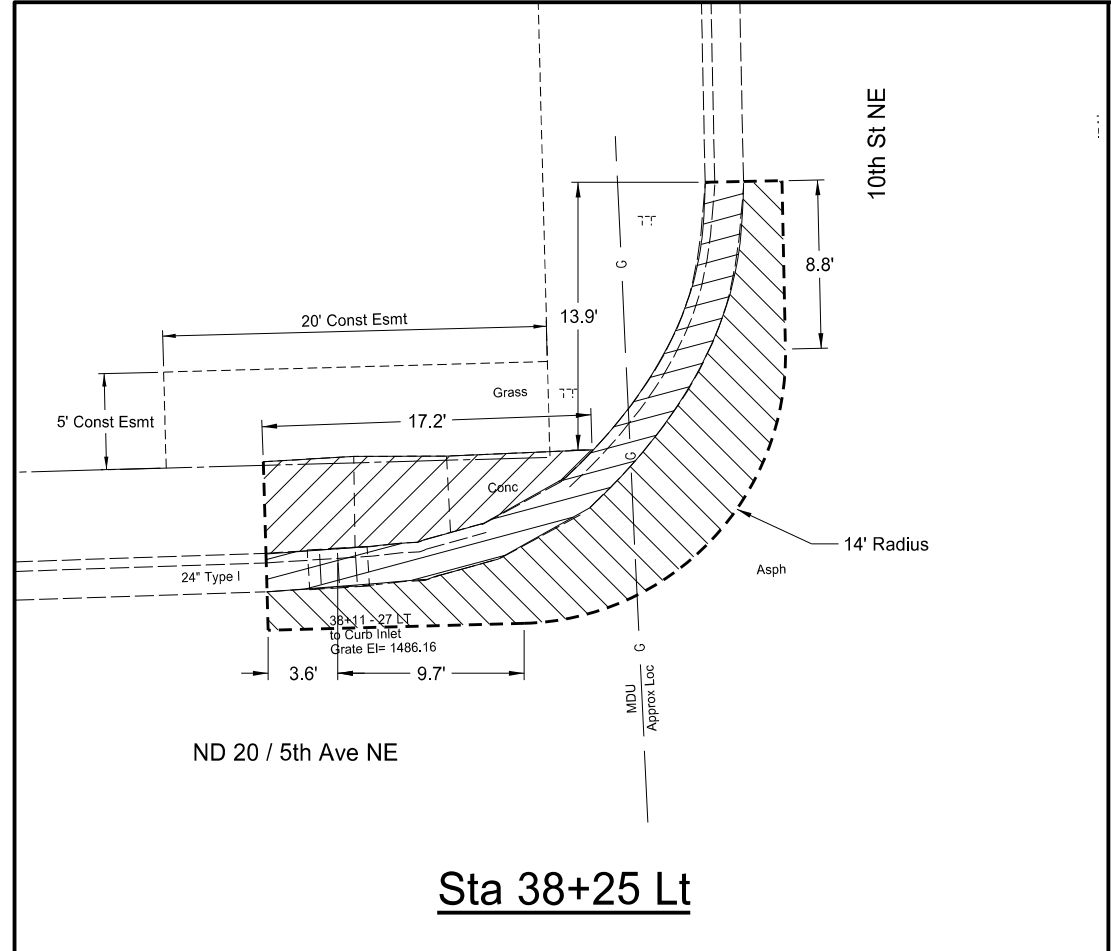
Sta 35+20 Lt

- Saw Cut
- Removal of Concrete
- Removal of Curb - Type 1
- Removal of Bituminous Surfacing

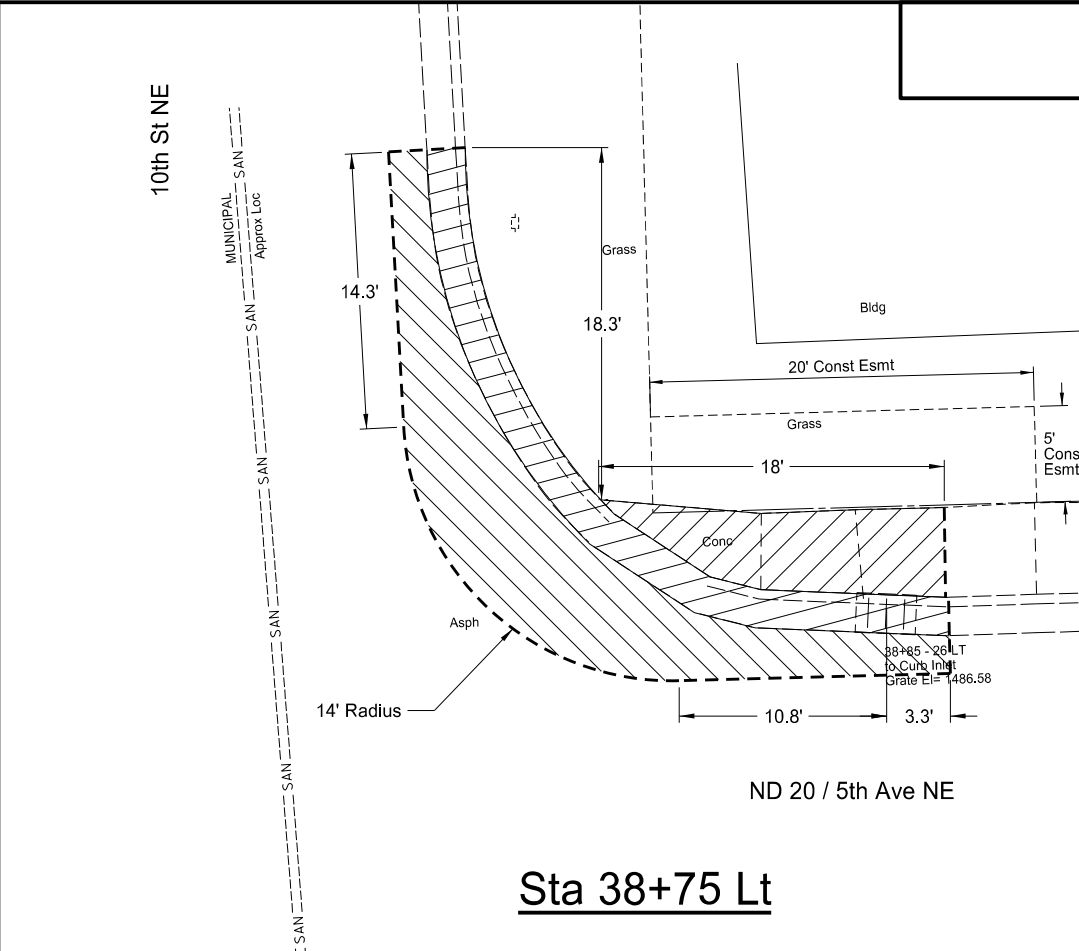


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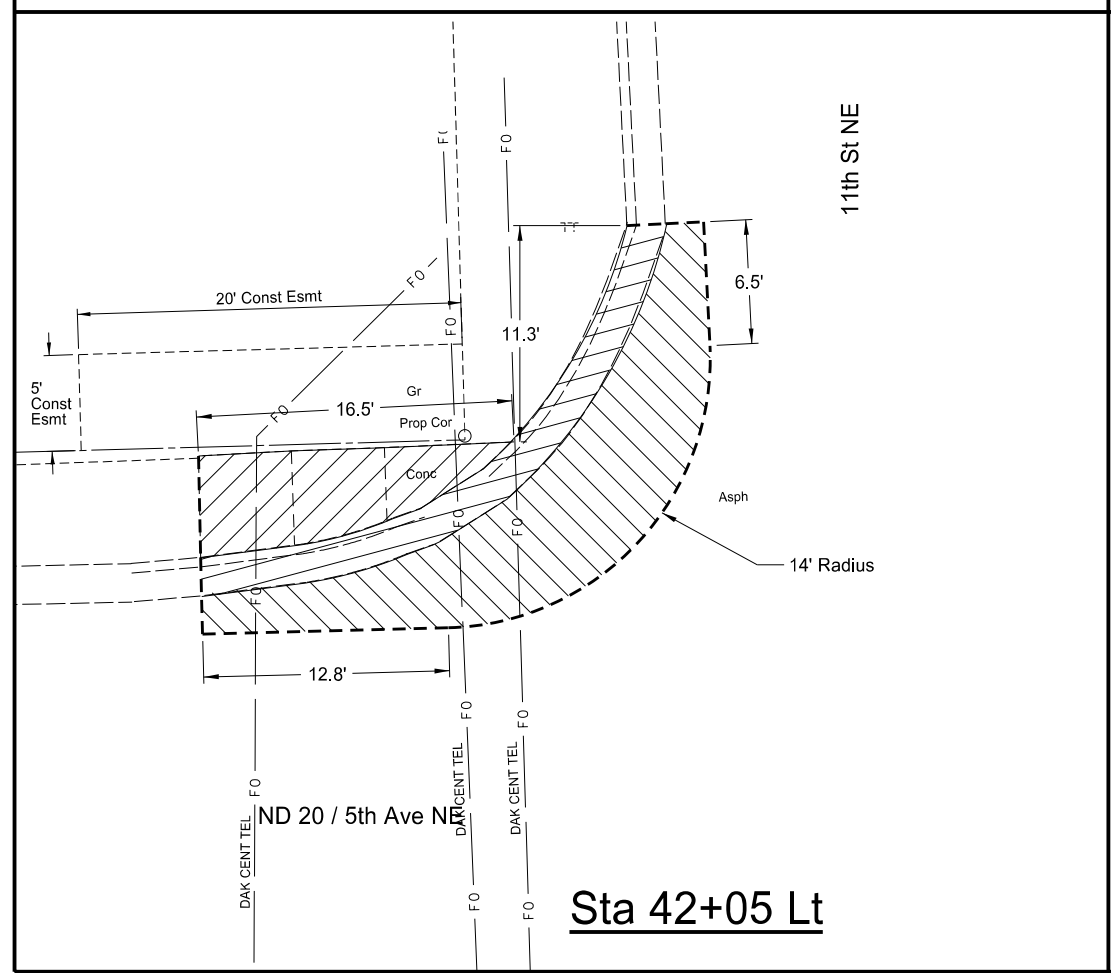
REMOVALS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND



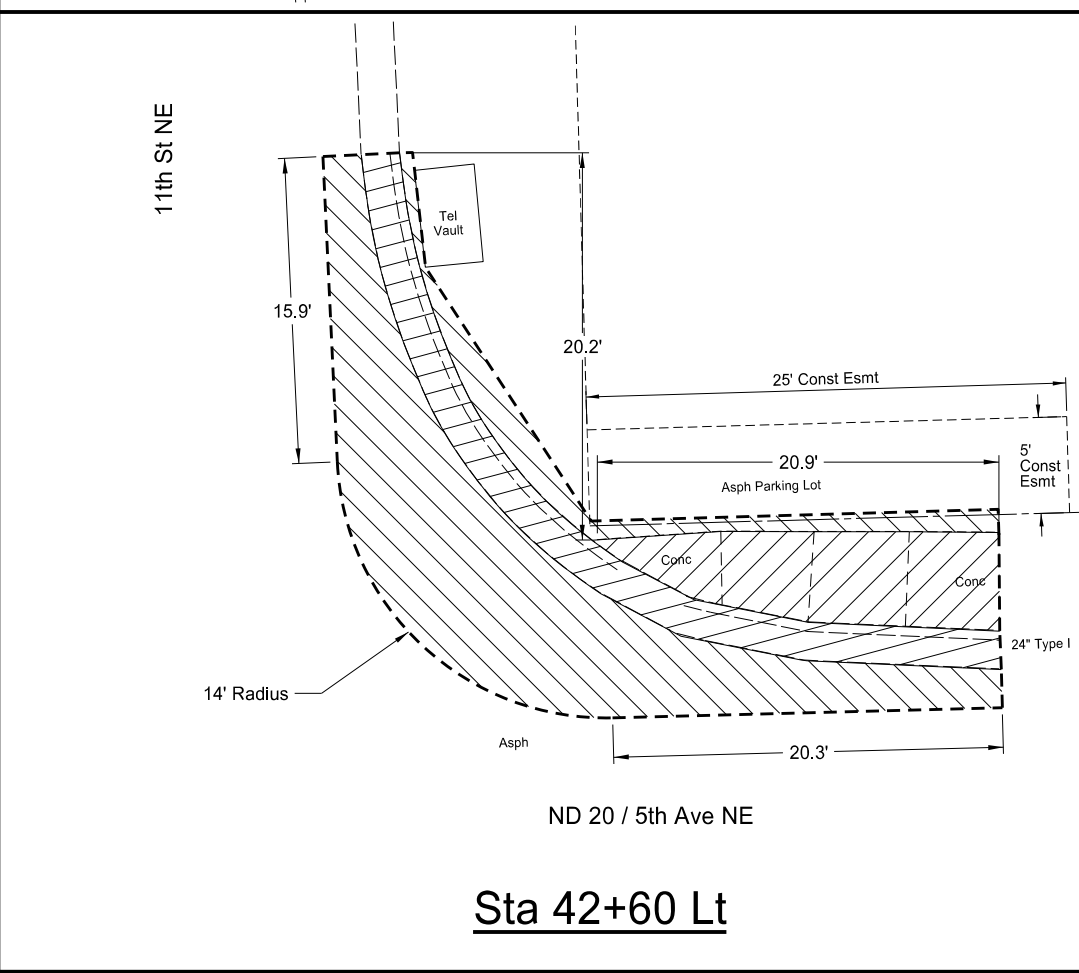
Sta 38+25 Lt



Sta 38+75 Lt



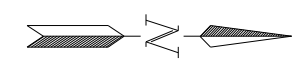
Sta 42+05 Lt



Sta 42+60 Lt

SPEC	CODE	BID ITEM	UNIT	QTY
202	0114	Removal of Concrete Pavement		
		38+25 Lt	SY	7
		38+75 Lt	SY	7
		42+05 Lt	SY	7
		42+60 Lt	SY	9
202	0131	Removal of Curb-Type 1		
		38+25 Lt	LF	35
		38+75 Lt	LF	41
		42+05 Lt	LF	32
		42+60 Lt	LF	47
202	0132	Removal of Bituminous Surfacing		
		38+25 Lt	SY	17
		38+75 Lt	SY	19
		42+05 Lt	SY	18
		42+60 Lt	SY	32

- Saw Cut
- Removal of Concrete
- Removal of Curb - Type 1
- Removal of Bituminous Surfacing

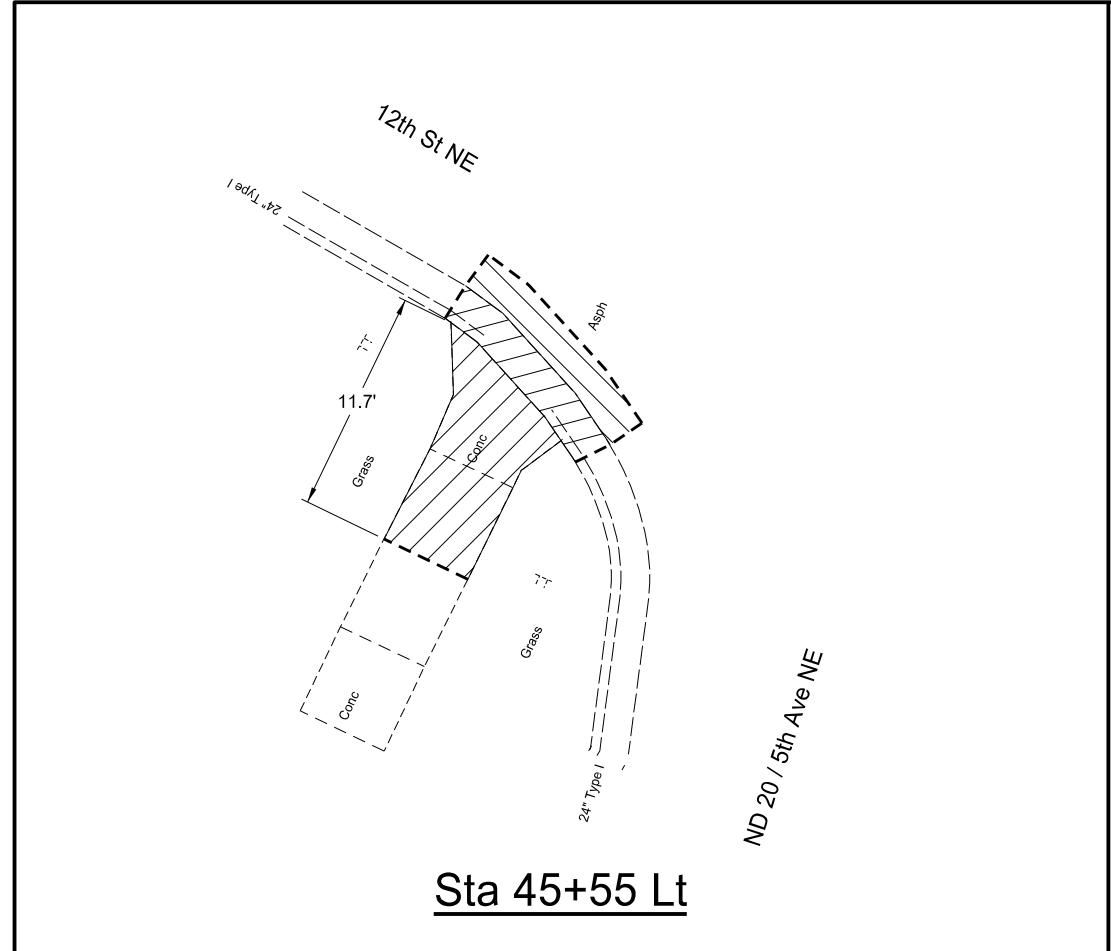


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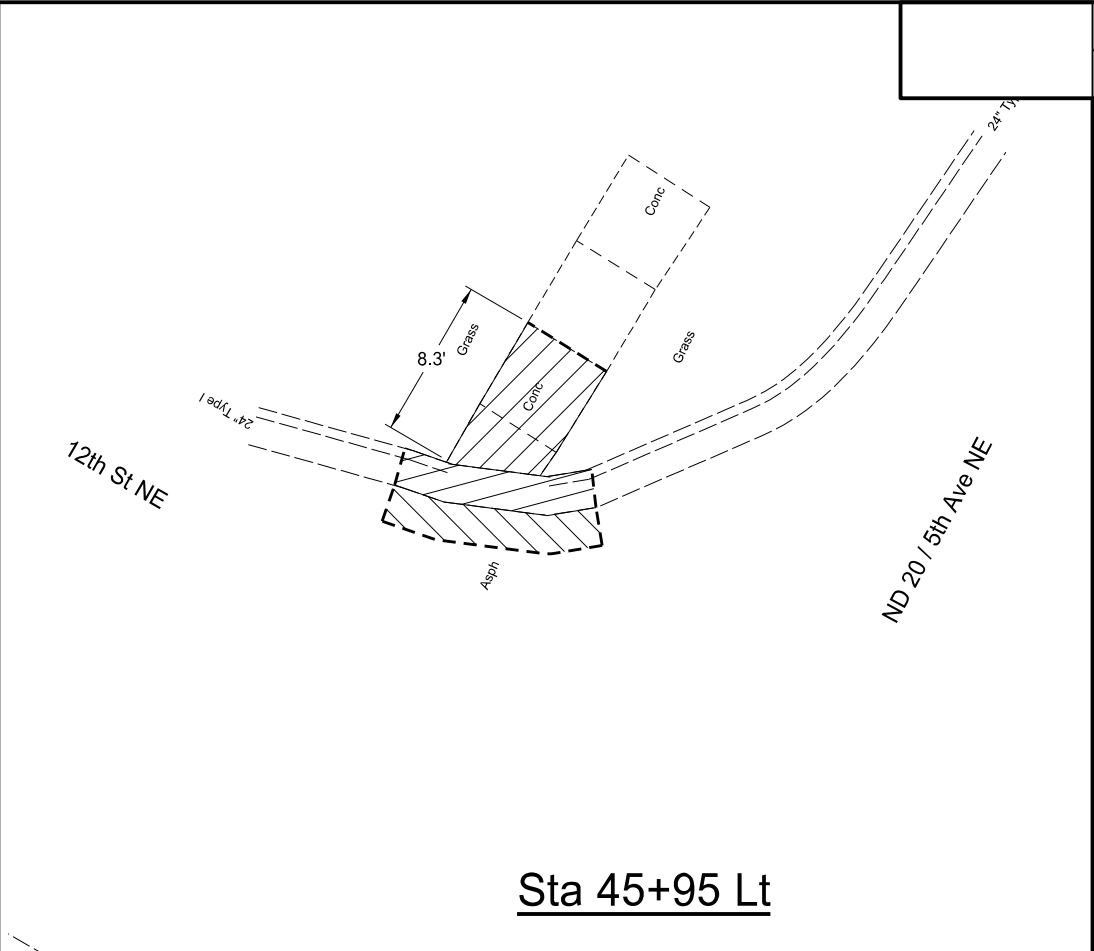
REMOVALS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	40	9

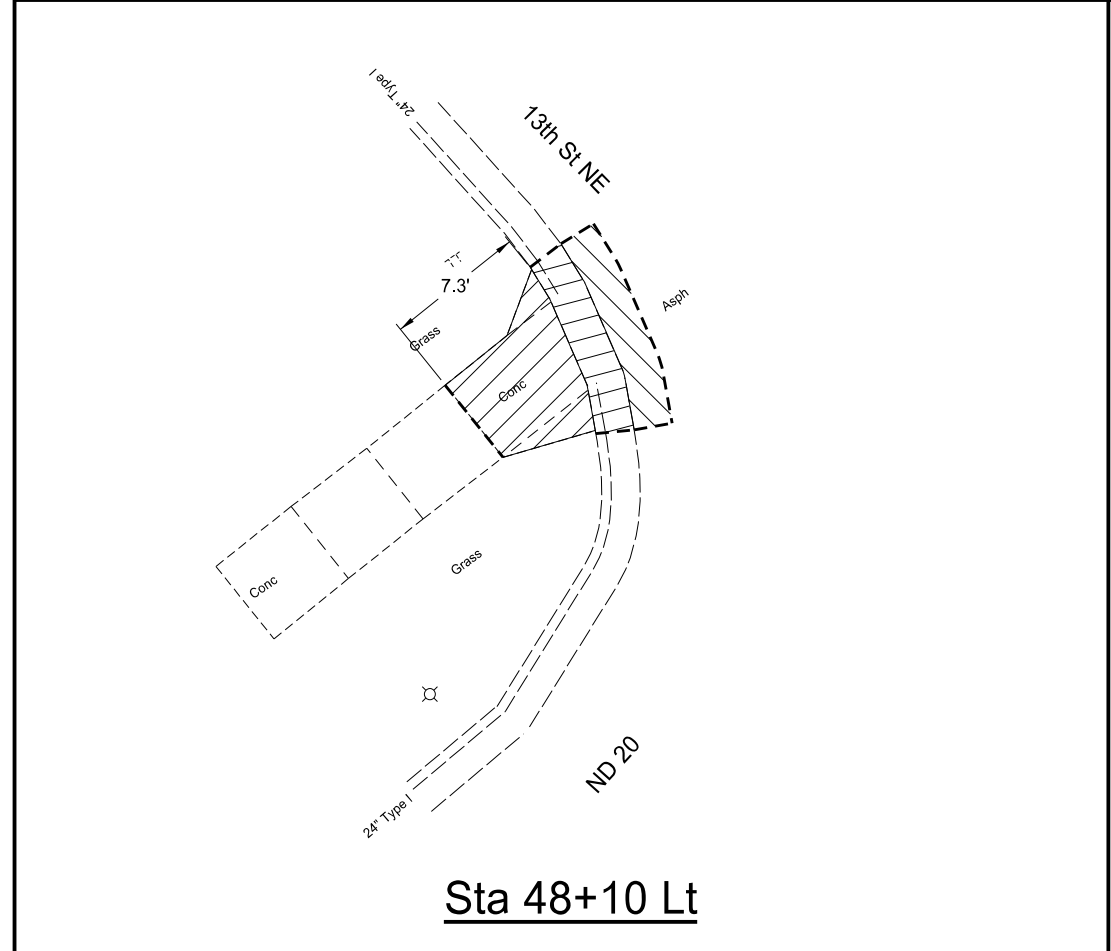
SPEC	CODE	BID ITEM	UNIT	QTY
202	0114	Removal of Concrete Pavement		
		45+55 Lt	SY	6
		45+95 Lt	SY	4
		48+10 Lt	SY	4
		48+65 Lt	SY	6
202	0131	Removal of Curb-Type 1		
		45+55 Lt	LF	11
		45+95 Lt	LF	10
		48+10 Lt	LF	10
		48+65 Lt	LF	12
202	0132	Removal of Bituminous Surfacing		
		45+55 Lt	SY	3
		45+95 Lt	SY	2
		48+10 Lt	SY	2
		48+65 Lt	SY	3



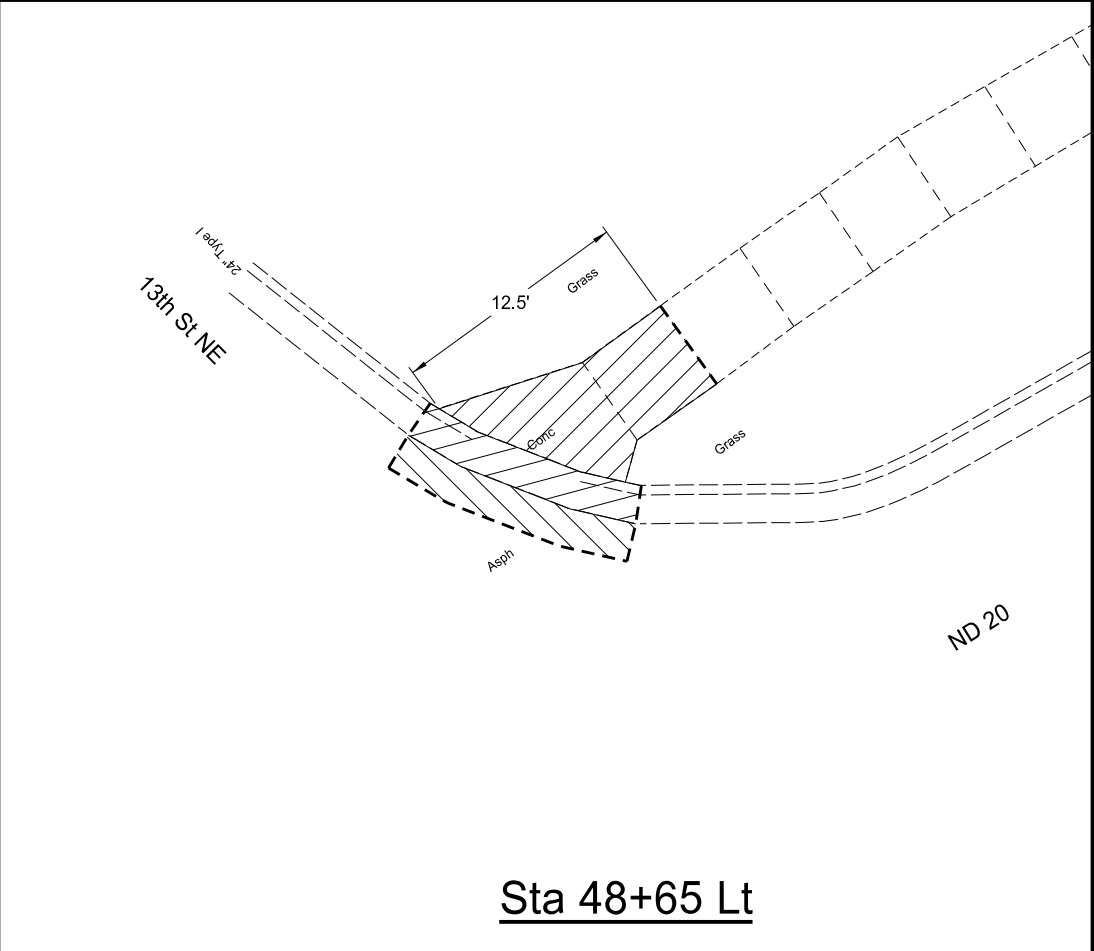
Sta 45+55 Lt



Sta 45+95 Lt

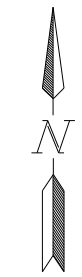


Sta 48+10 Lt



Sta 48+65 Lt

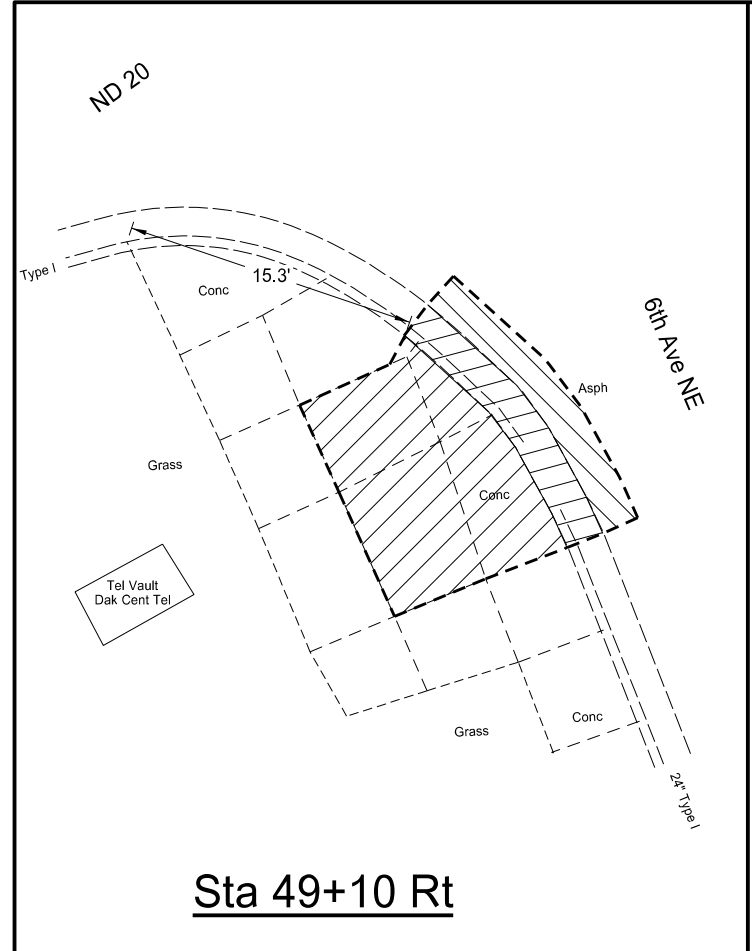
- Saw Cut
- Removal of Concrete
- Removal of Curb - Type 1
- Removal of Bituminous Surfacing



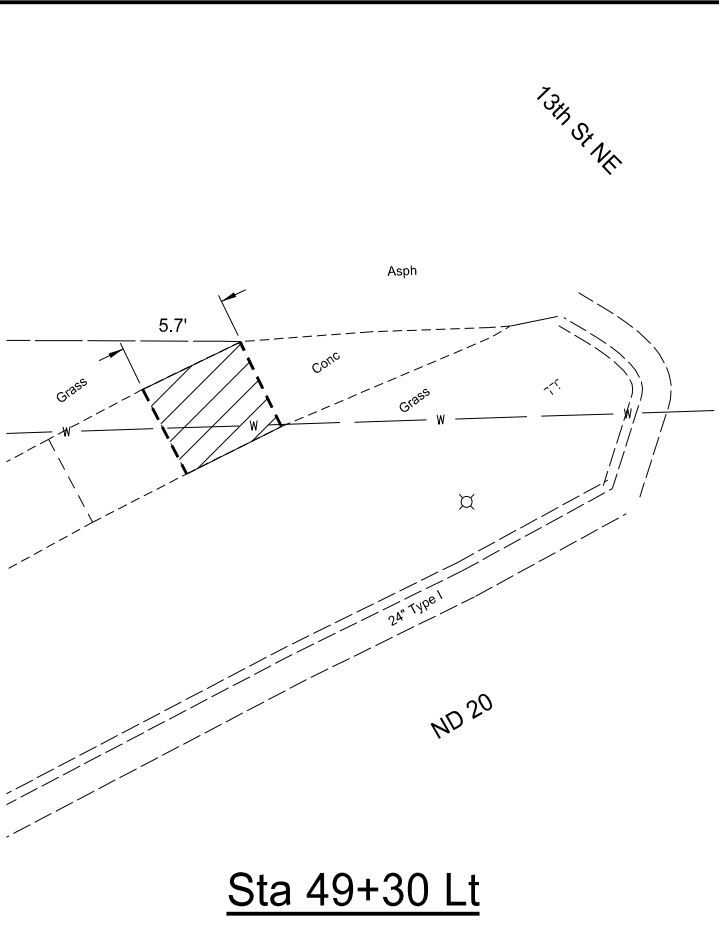
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REMOVALS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

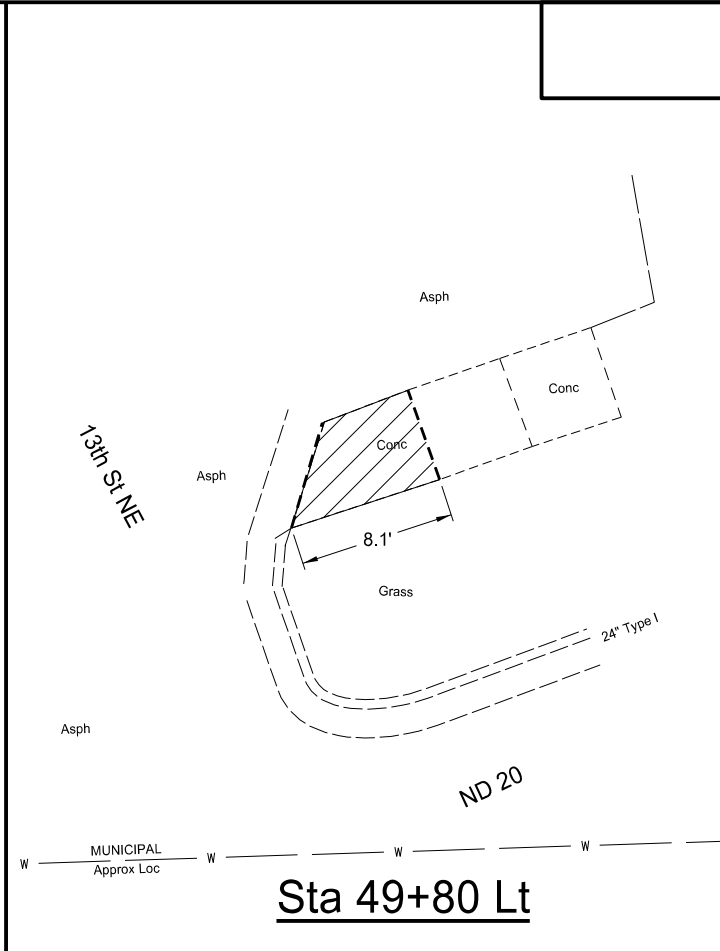
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	40	10



Sta 49+10 Rt

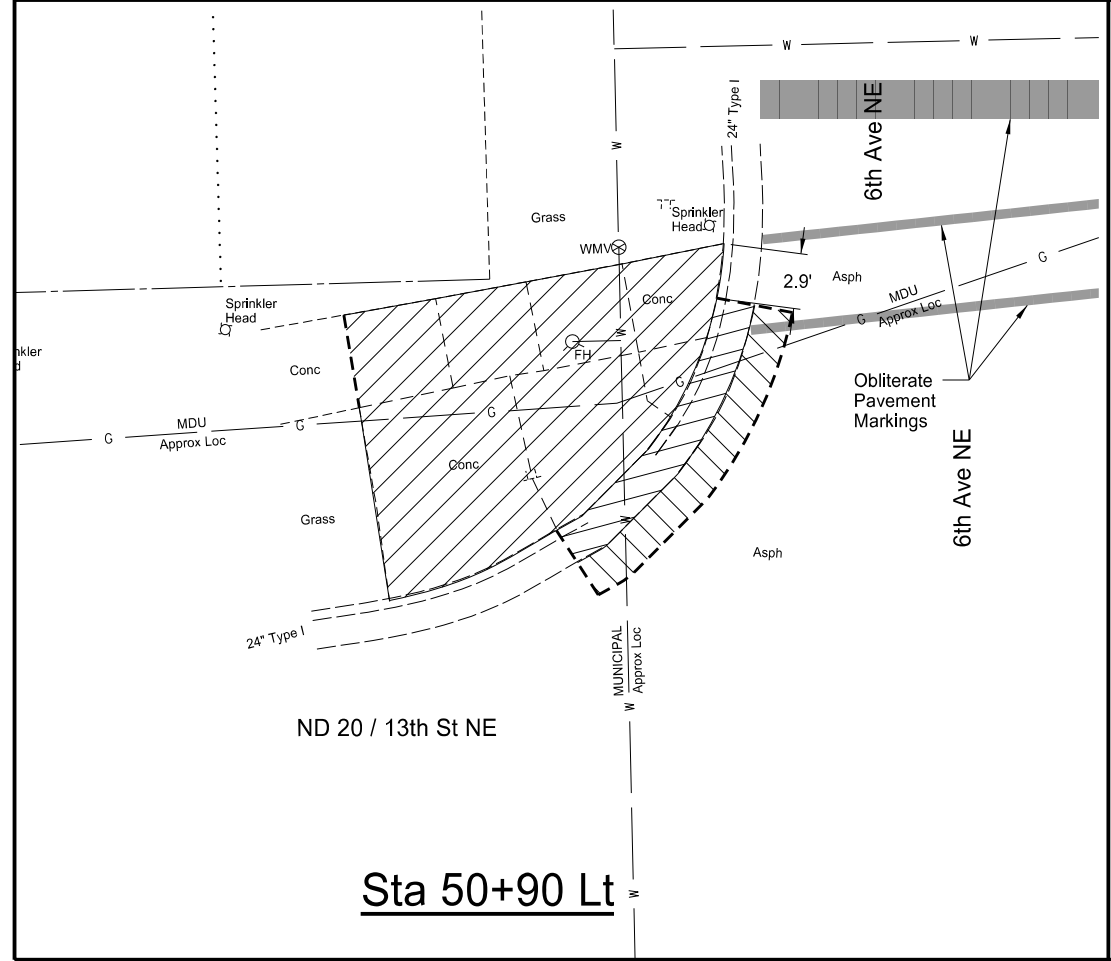


Sta 49+30 Lt

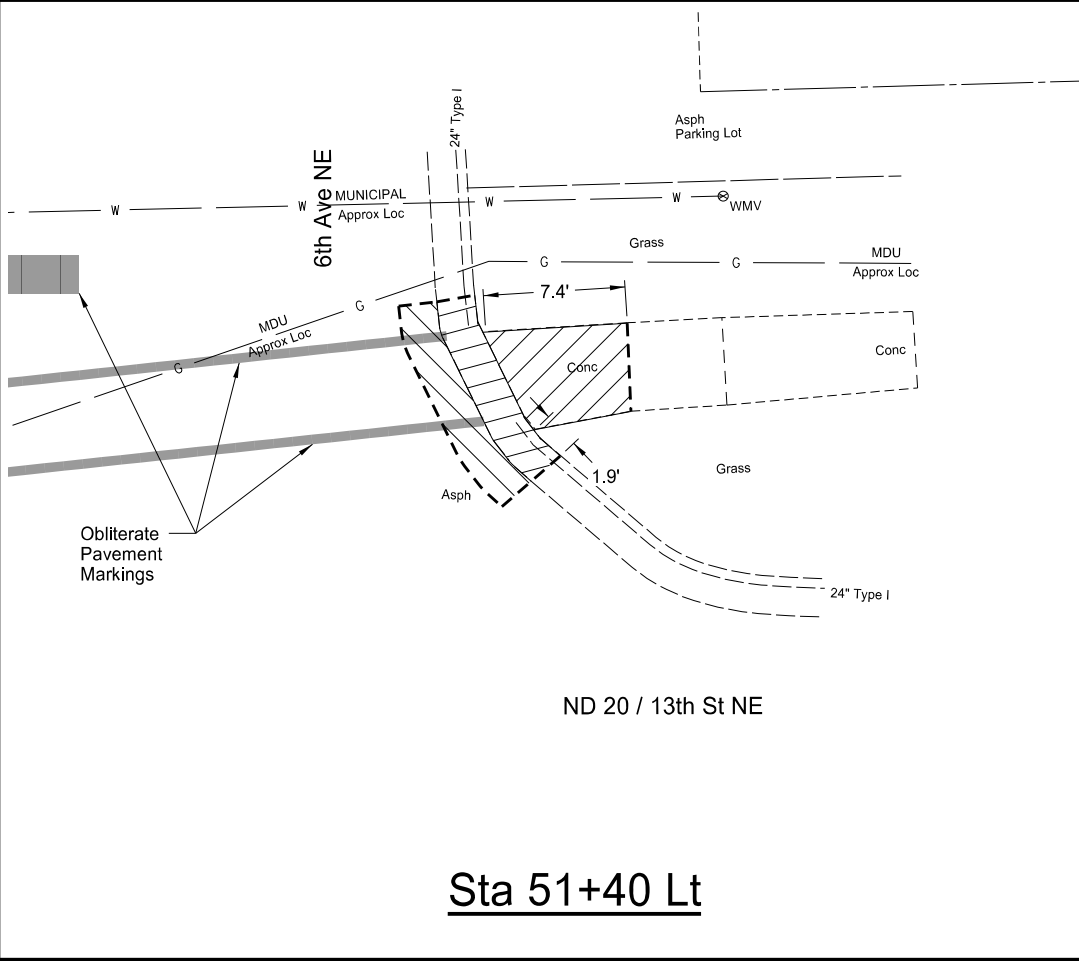


Sta 49+80 Lt

SPEC	CODE	BID ITEM	UNIT	QTY									
202	0114	Removal of Concrete Pavement											
		49+10 Rt	SY	12									
		49+30 Lt	SY	3									
		49+80 Lt	SY	3									
		50+90 Lt	SY	25									
		51+40 Lt	SY	4									
202	0131	Removal of Curb-Type 1											
		49+10 Rt	LF	15									
		50+90 Lt	LF	16									
		51+40 Lt	LF	10									
202	0132	Removal of Bituminous Surfacing											
		49+10 Rt	SY	4									
		50+90 Lt	SY	4									
		51+40 Lt	SY </tr <tr> <td>704</td> <td>1500</td> <td>Obliteration of Pavement Marking</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>50+90 Lt</td> <td>LF</td> <td>79</td> </tr>	704	1500	Obliteration of Pavement Marking					50+90 Lt	LF	79
704	1500	Obliteration of Pavement Marking											
		50+90 Lt	LF	79									

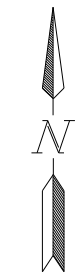


Sta 50+90 Lt



Sta 51+40 Lt

- Saw Cut
- Removal of Concrete
- Removal of Curb - Type 1
- Removal of Bituminous Surfacing

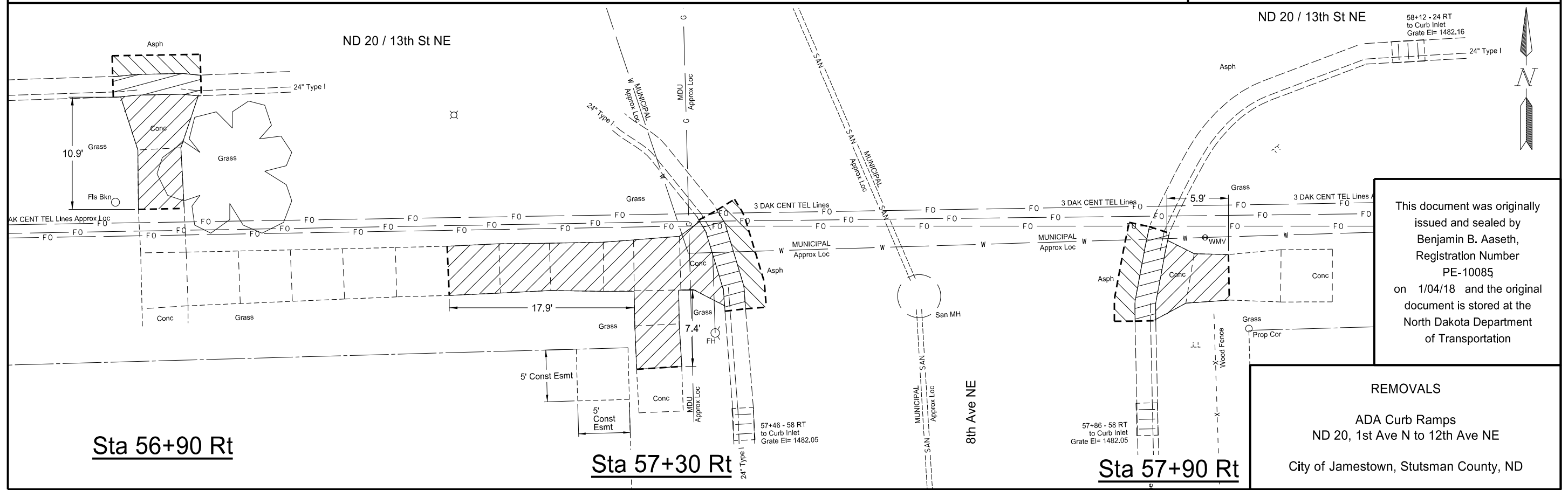
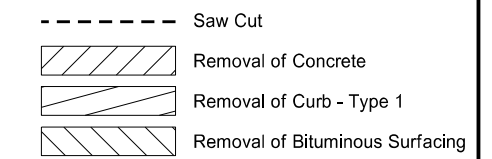
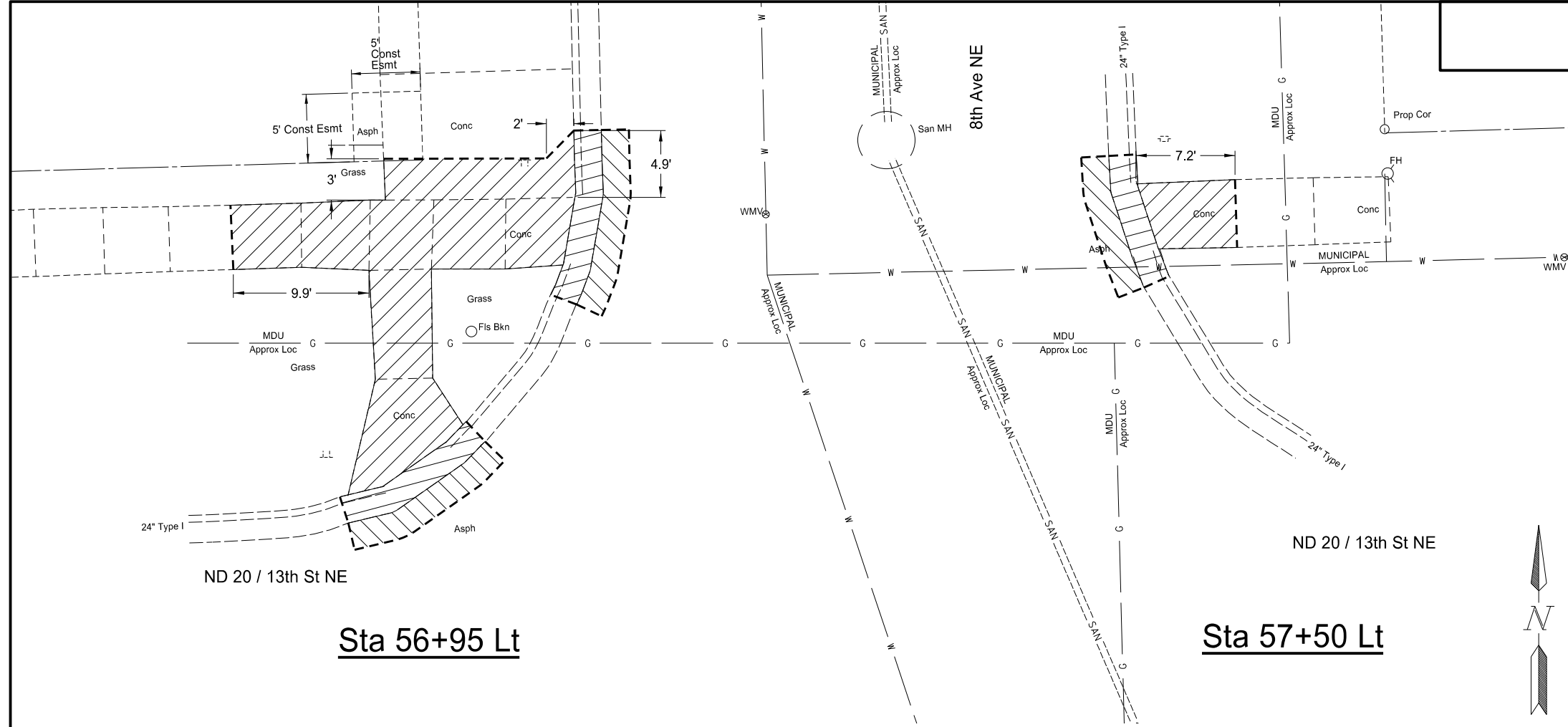


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REMOVALS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	40	11

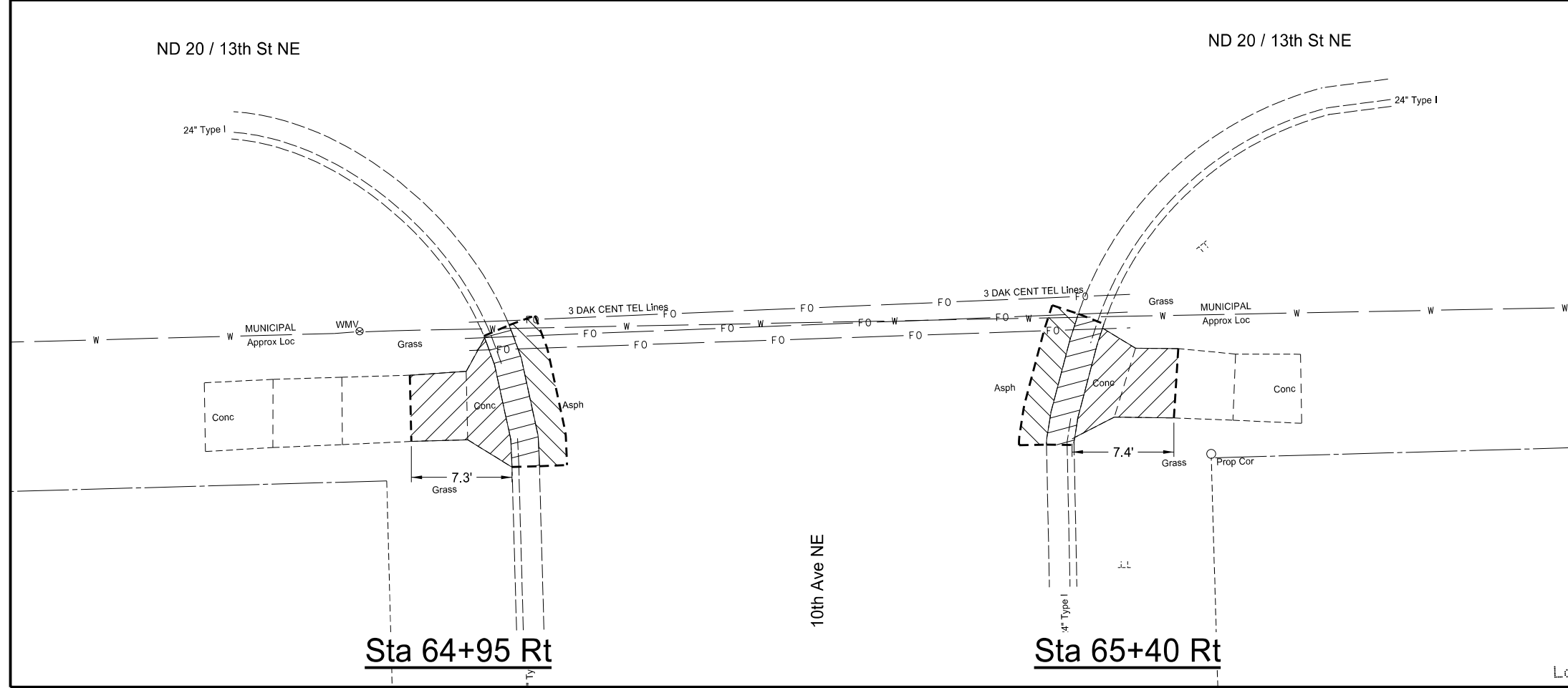
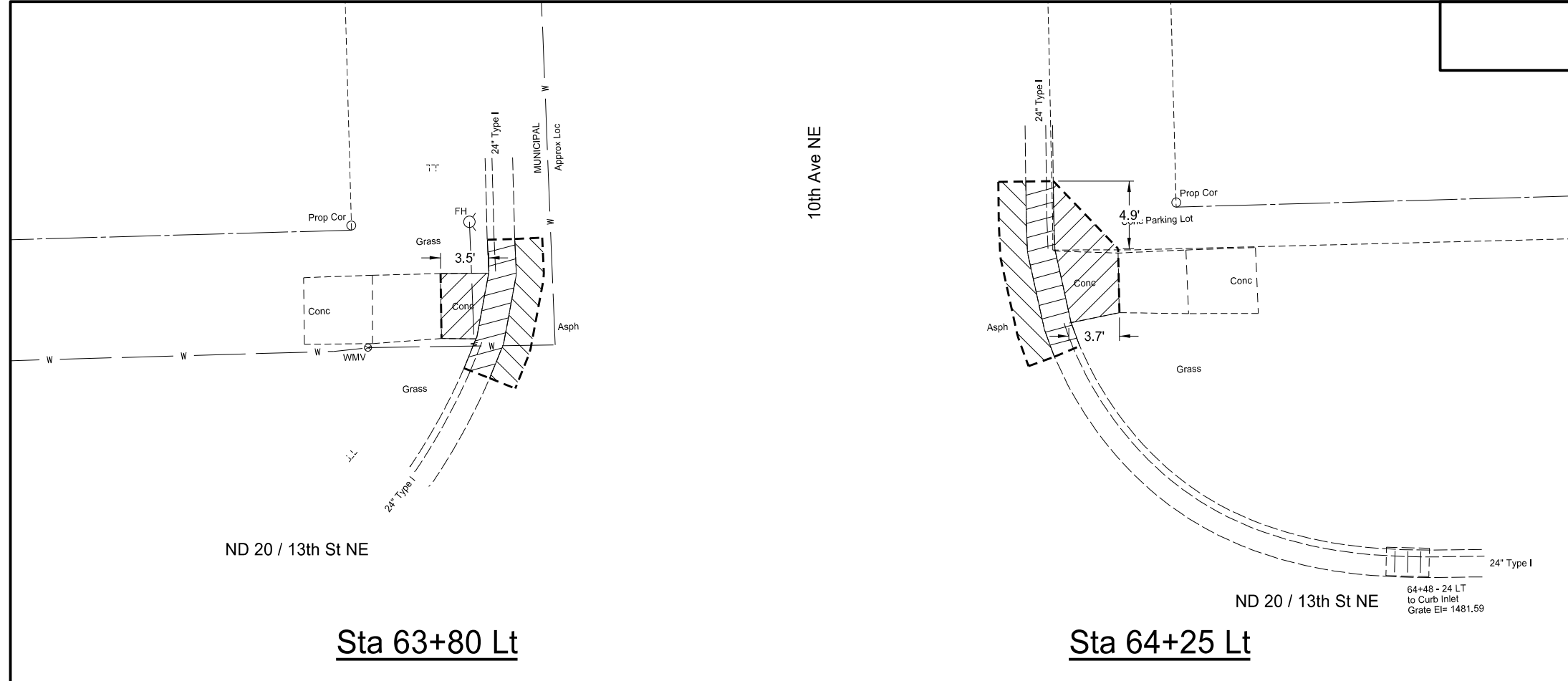
SPEC	CODE	BID ITEM	UNIT	QTY
202	0114	Removal of Concrete Pavement		
		56+95 Lt	SY	27
		56+90 Rt & 57+30 Rt	SY	24
		57+50 Lt	SY	3
		57+90 Rt	SY	4
202	0131	Removal of Curb-Type 1		
		56+95 Lt	LF	24
		56+90 Rt & 57+30 Rt	LF	18
		57+50 Lt	LF	10
		57+90 Rt	LF	9
202	0132	Removal of Bituminous Surfacing		
		56+95 Lt	SY	6
		56+90 Rt & 57+30 Rt	SY	4
		57+50 Lt	SY	2
		57+90 Rt	SY	2



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 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
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SPEC	CODE	BID ITEM	UNIT	QTY
202	0114	Removal of Concrete Pavement		
		63+80 Lt	SY	2
		64+25 Lt	SY	4
		64+95 Rt	SY	4
		65+40 Rt	SY	4
202	0131	Removal of Curb-Type 1		
		63+80 Lt	LF	10
		64+25 Lt	LF	13
		64+95 Rt	LF	10
		65+40 Rt	LF	9
202	0132	Removal of Bituminous Surfacing		
		63+80 Lt	SY	2
		64+25 Lt	SY	3
		64+95 Rt	SY	2
		65+40 Rt	SY	2



- Saw Cut
- Removal of Concrete
- Removal of Curb - Type 1
- Removal of Bituminous Surfacing

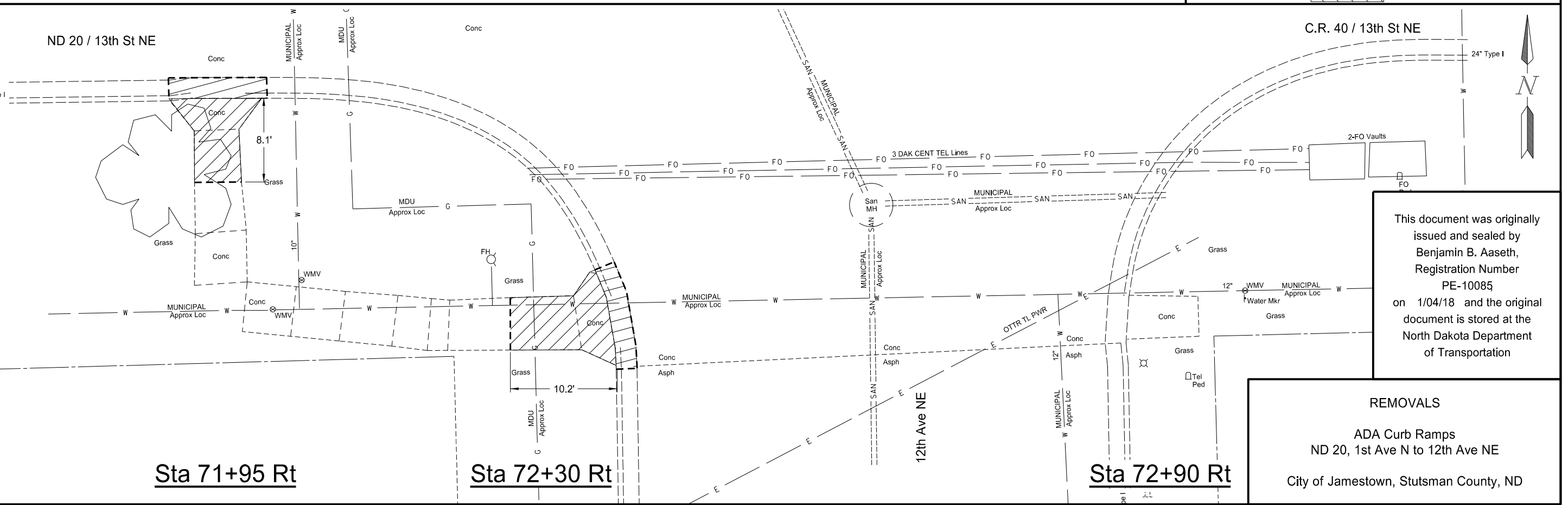
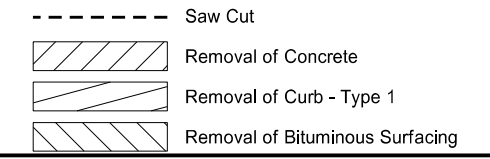
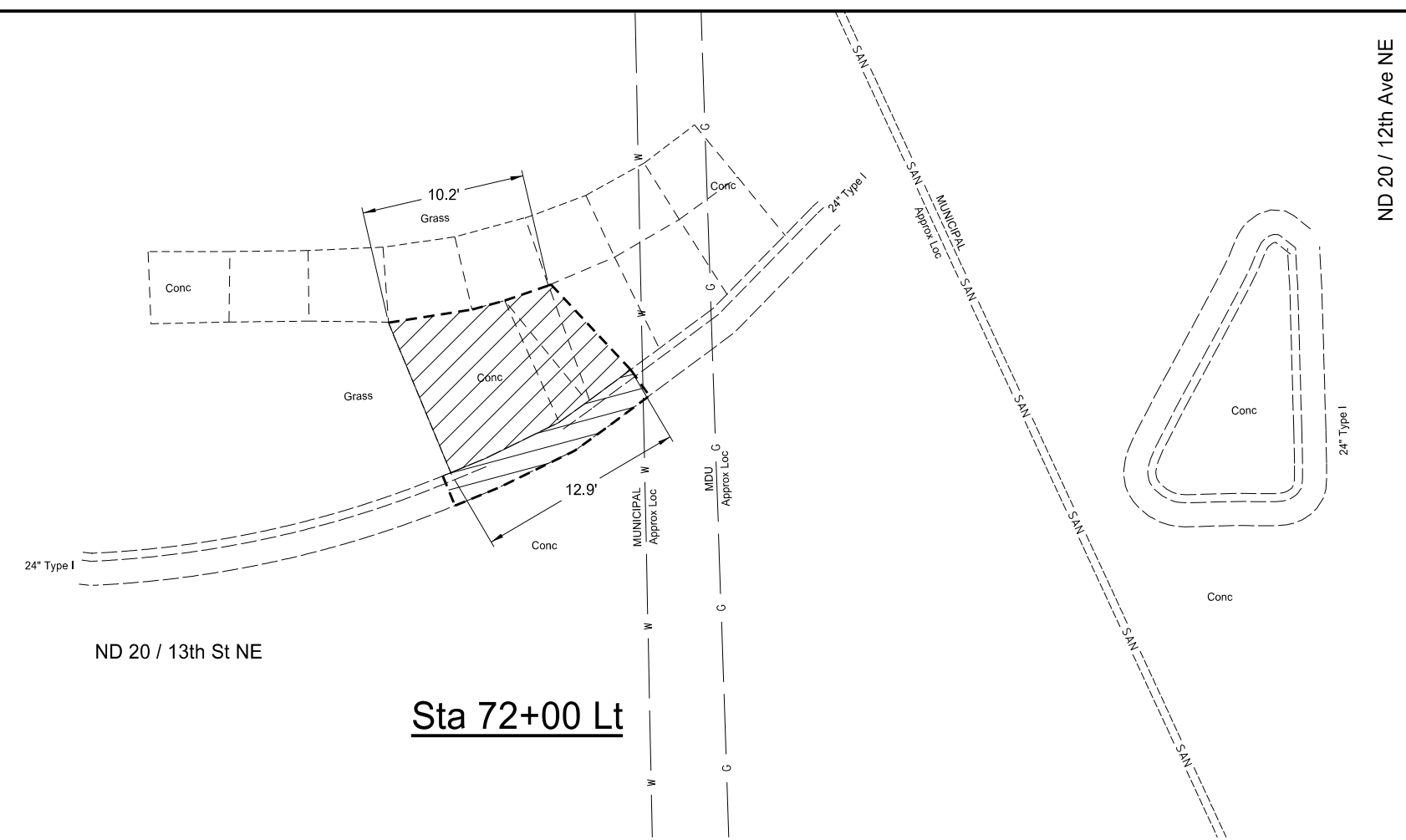


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REMOVALS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	40	13

SPEC	CODE	BID ITEM	UNIT	QTY
202	0114	Removal of Concrete Pavement		
		72+00 Lt	SY	11
		71+95 Rt & 72+30 Rt	SY	11
202	0131	Removal of Curb-Type 1		
		72+00 Lt	LF	14
		71+95 Rt & 72+30 Rt	LF	20

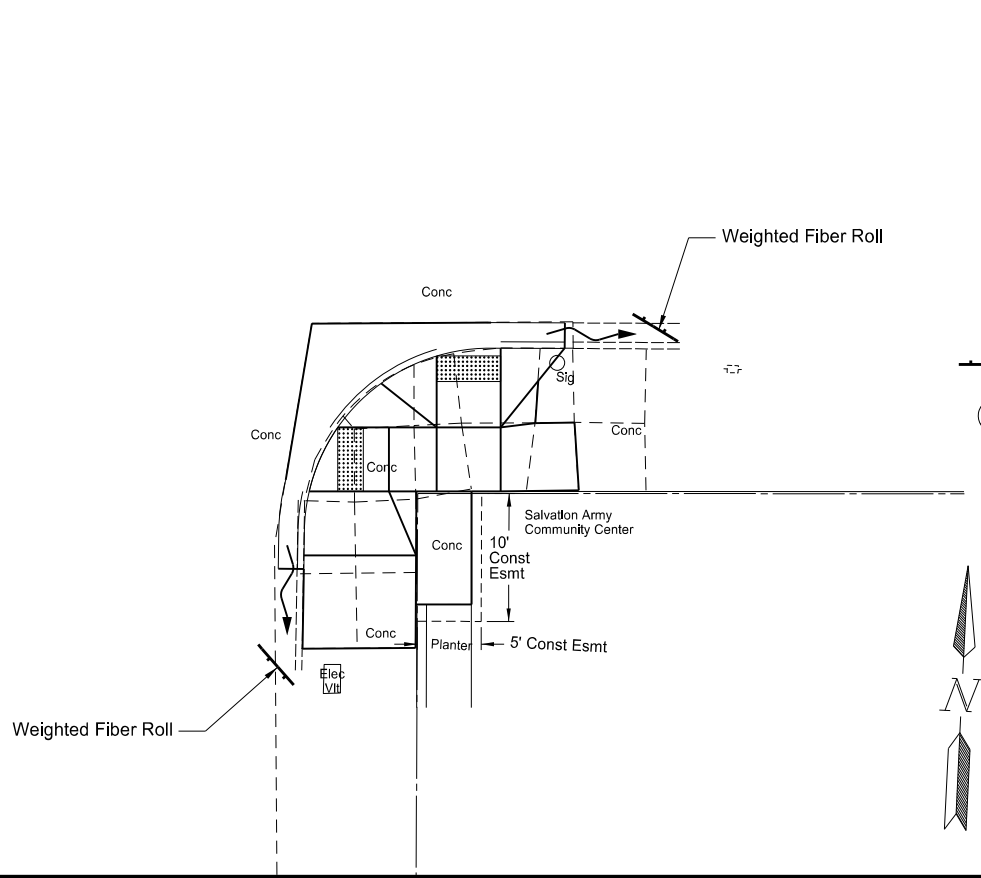
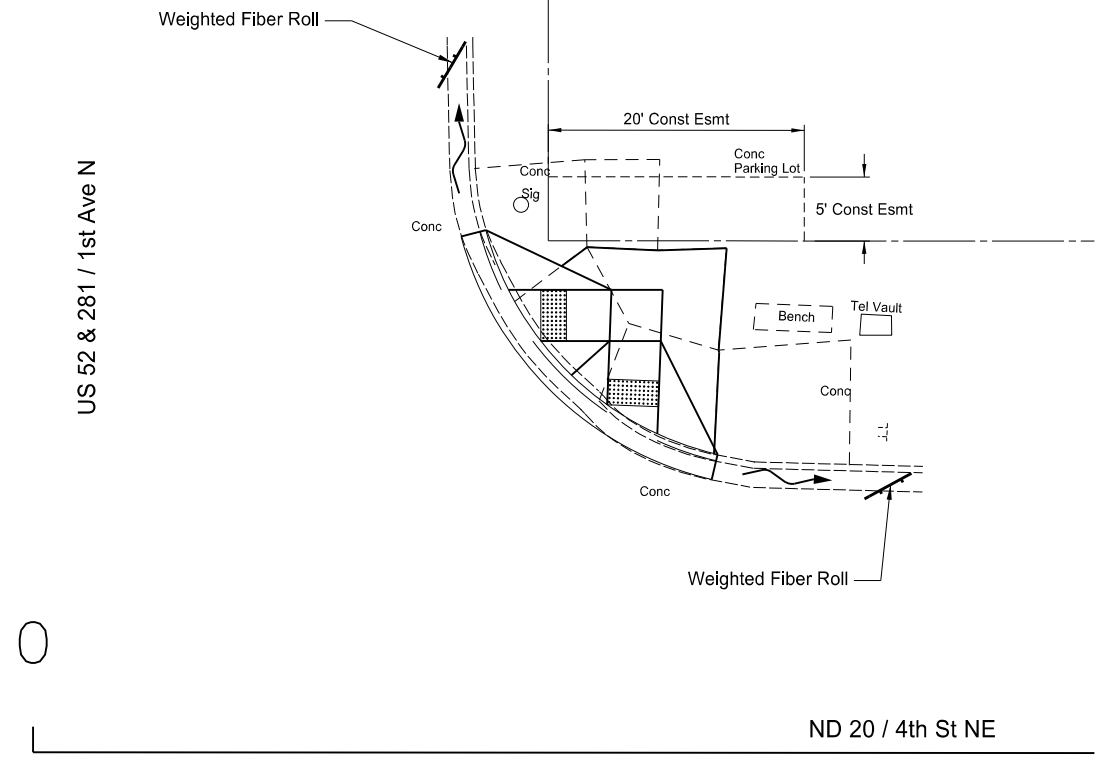
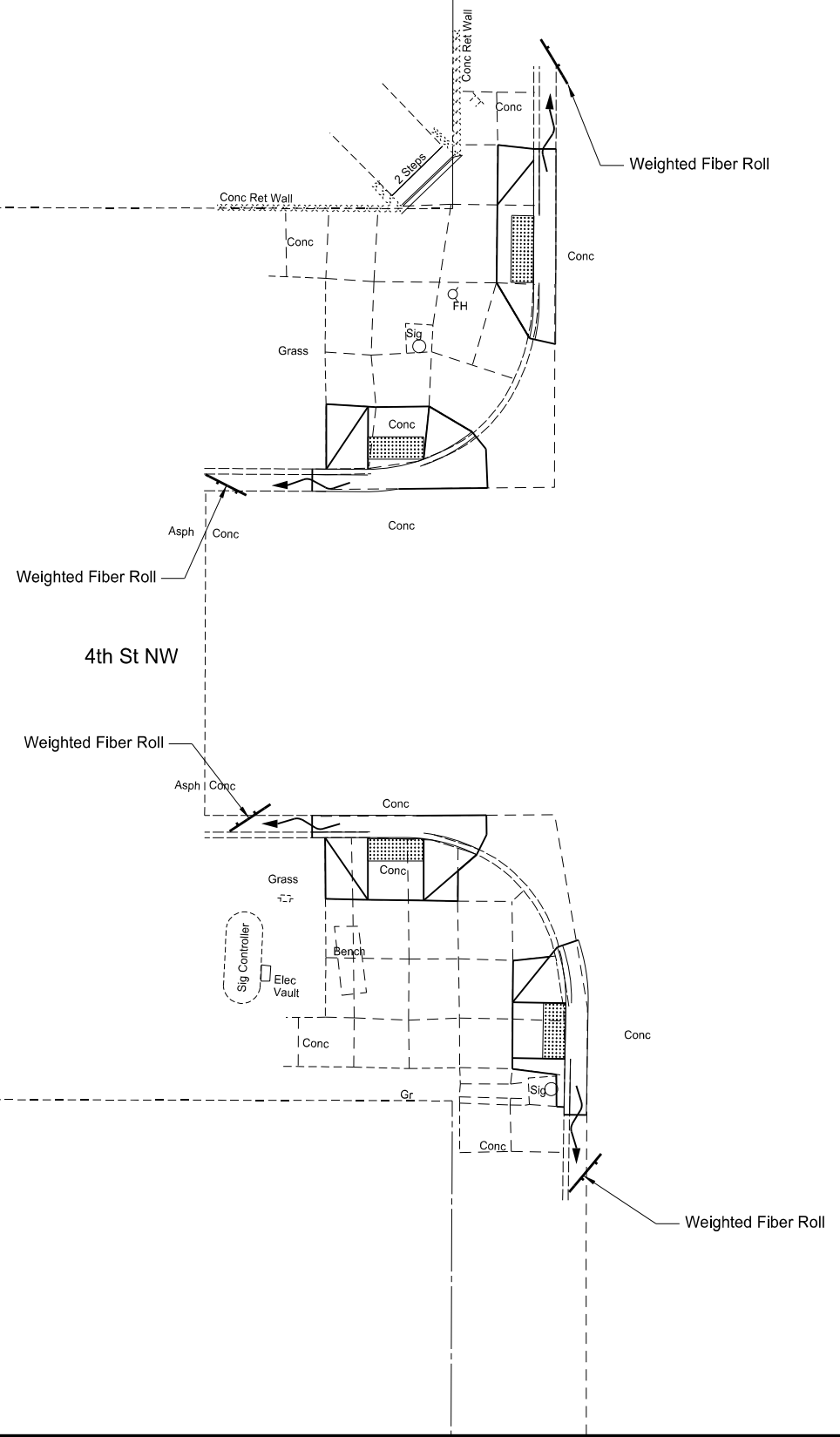


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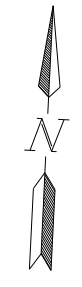
REMOVALS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	76	1

SPEC	CODE	BID ITEM	UNIT	QTY
708	1400	Weighted Fiber Rolls		
		NW Corner - 1st Ave N	LF	10
		NE Corner - 1st Ave N	LF	10
		SW Corner - 1st Ave N	LF	10
		SE Corner - 1st Ave N	LF	10



- Weighted Fiber Roll
- Inlet Protection Special

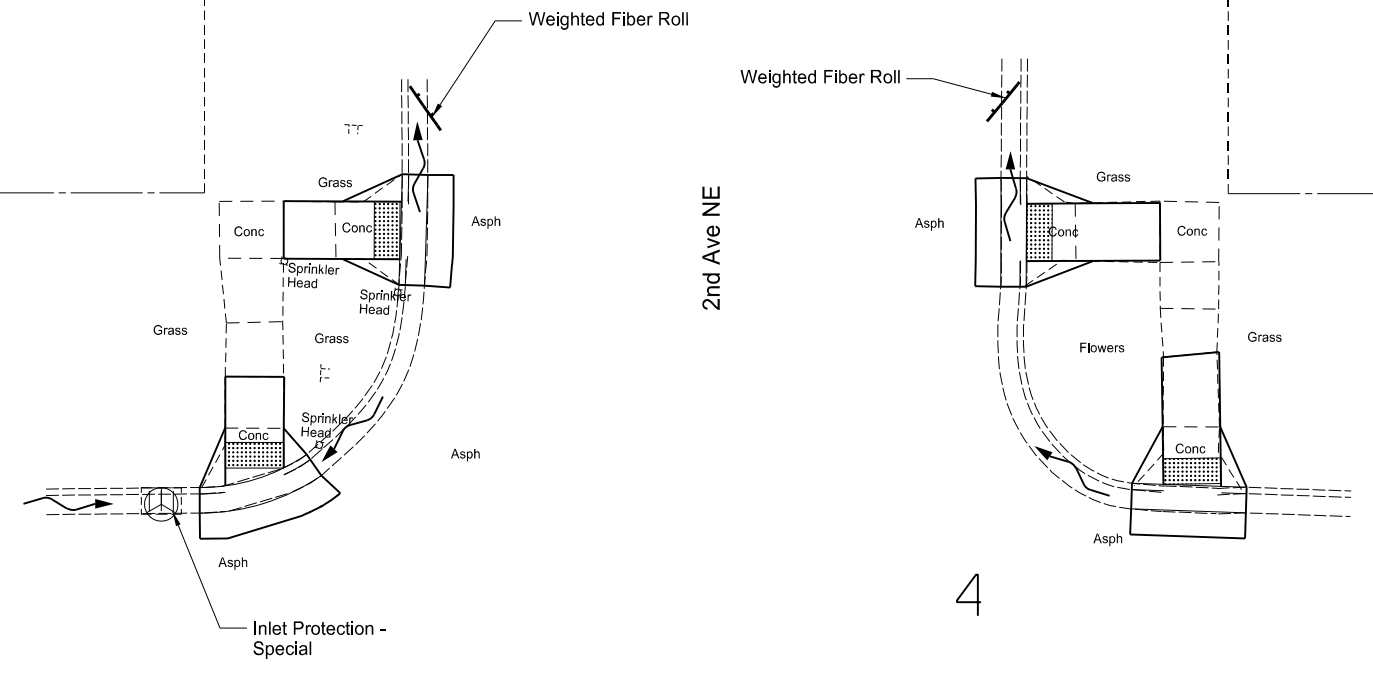


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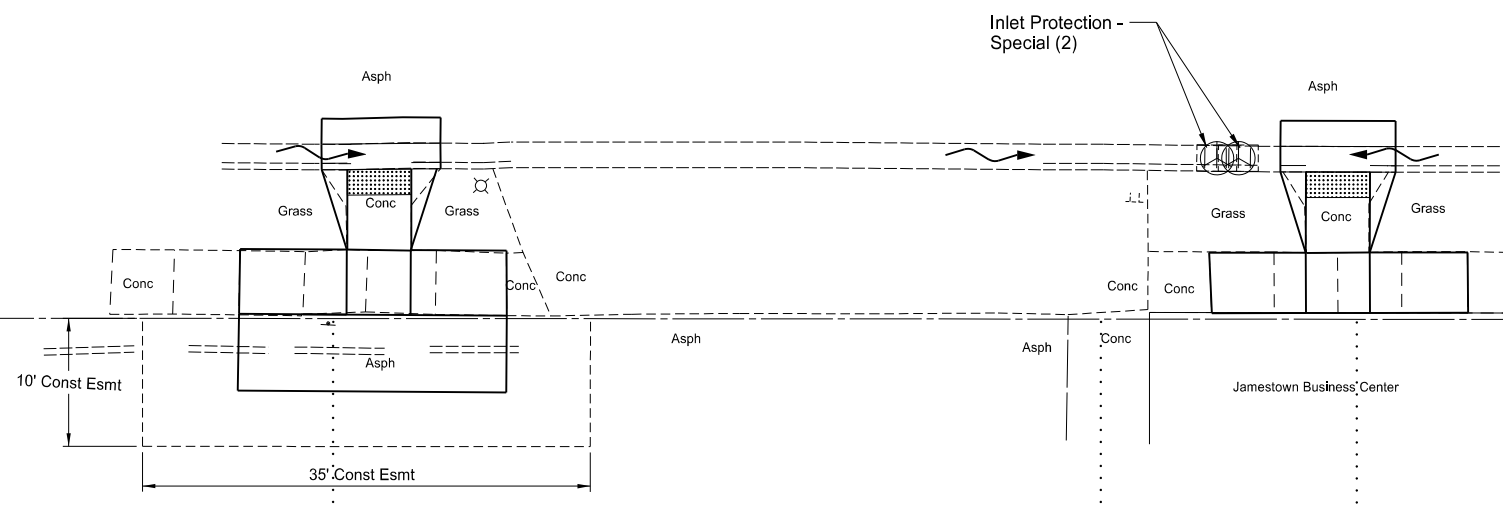
TEMPORARY EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	76	2

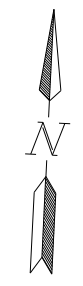
SPEC	CODE	BID ITEM	UNIT	QTY
708	1400	Weighted Fiber Rolls		
		NW Corner - 2nd Ave NE	LF	5
		NE Corner - 2nd Ave NE	LF	5
708	1540	Inlet Protection-Special		
		NW Corner - 2nd Ave NE	EA	1
		SE Corner - 2nd Ave NE	EA	2
708	1541	Remove Inlet Protection-Special		
		NW Corner - 2nd Ave NE	EA	1
		SE Corner - 2nd Ave NE	EA	2



ND 20 / 4th St NE



 Weighted Fiber Roll
 Inlet Protection Special

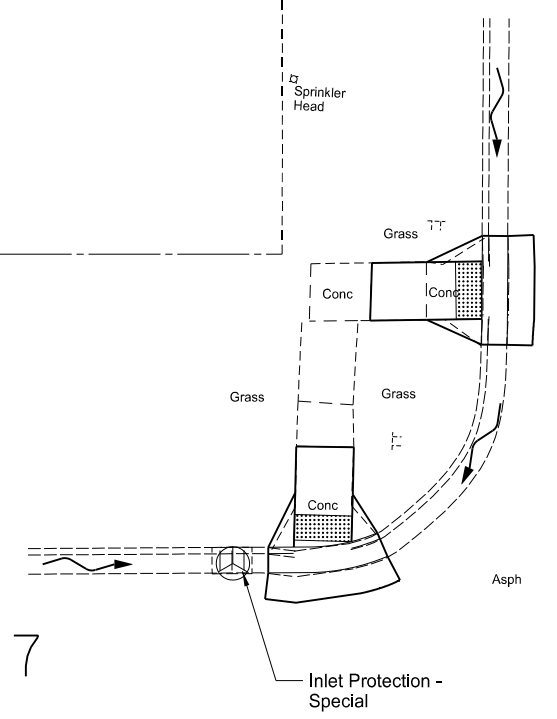


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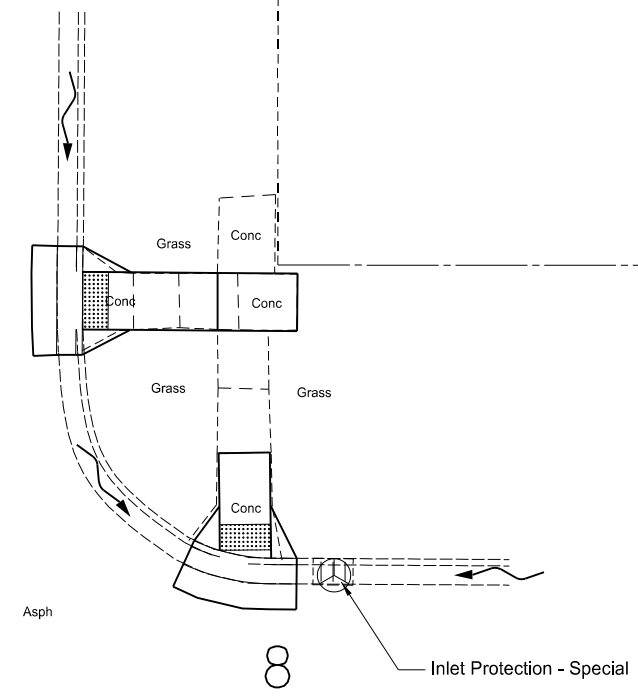
TEMPORARY EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	76	3

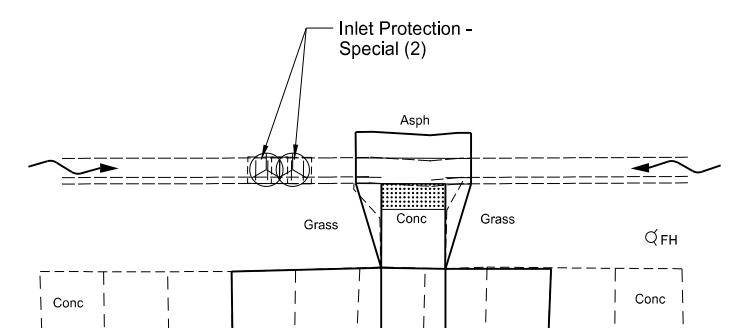
SPEC	CODE	BID ITEM	UNIT	QTY
708	1400	Weighted Fiber Rolls		
		SE Corner - 3rd Ave NE	LF	5
708	1540	Inlet Protection-Special		
		NW Corner - 3rd Ave NE	EA	1
		NE Corner - 3rd Ave NE	EA	1
		SW Corner - 3rd Ave NE	EA	2
708	1541	Remove Inlet Protection-Special		
		NW Corner - 3rd Ave NE	EA	1
		NE Corner - 3rd Ave NE	EA	1
		SW Corner - 3rd Ave NE	EA	2



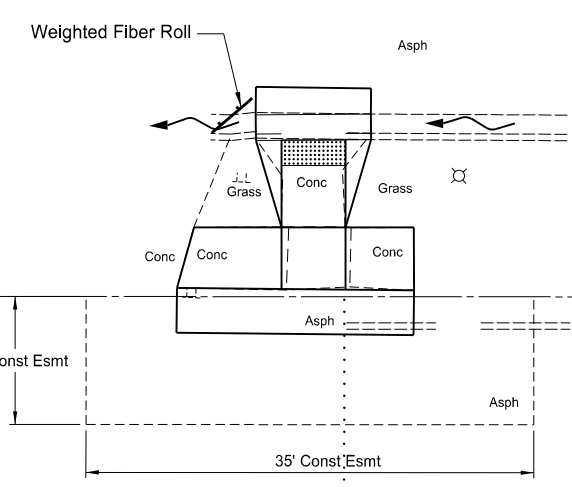
3rd Ave NE





ND 20 / 4th St NE

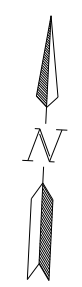


Jamestown Business Center



-  Weighted Fiber Roll
-  Inlet Protection Special

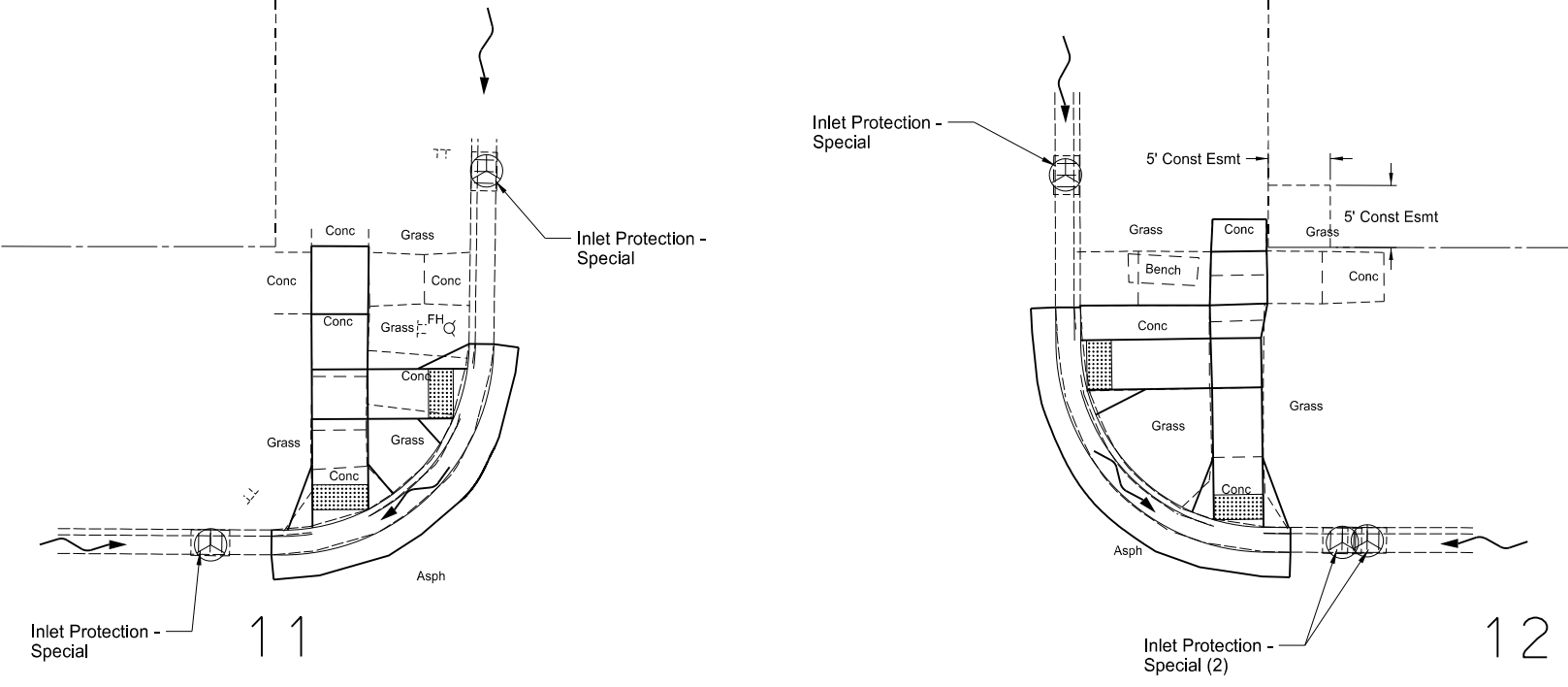
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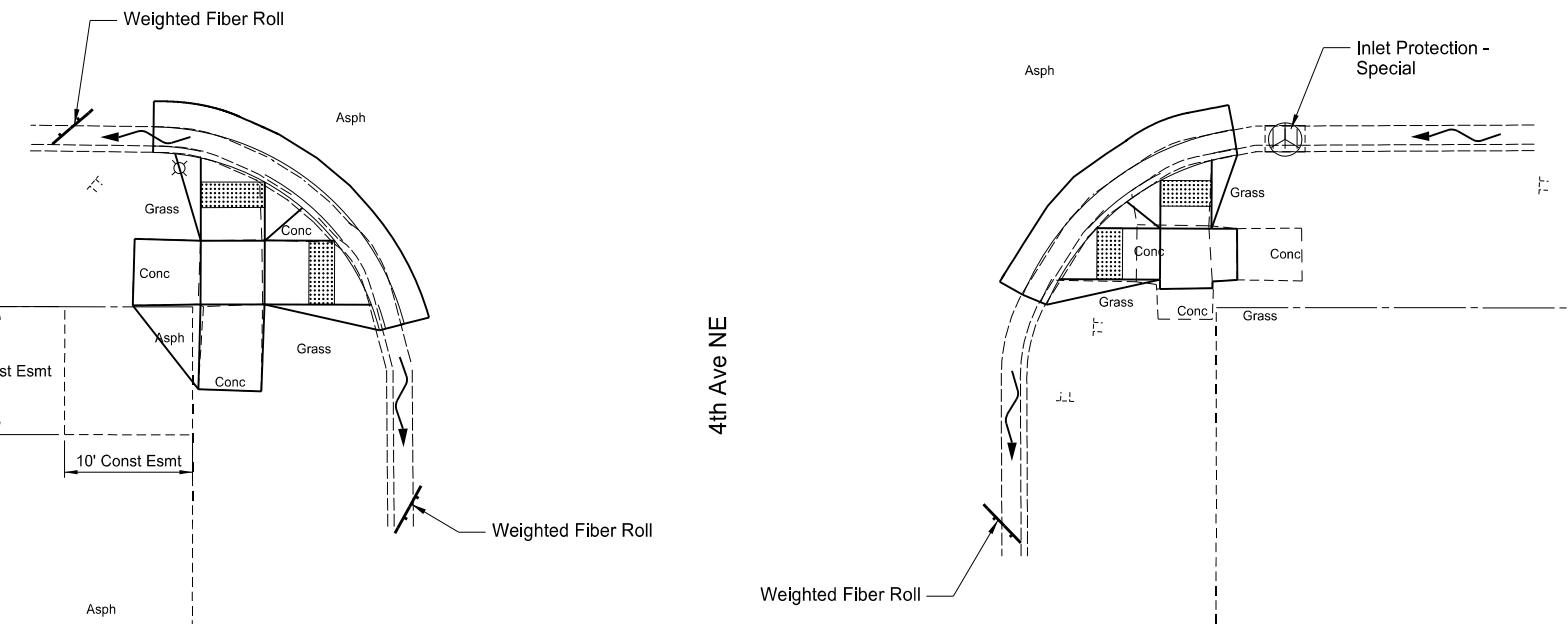
TEMPORARY EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	76	4

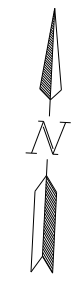
SPEC	CODE	BID ITEM	UNIT	QTY
708	1400	Weighted Fiber Rolls		
		SW Corner - 4th Ave NE	LF	10
		SE Corner - 4th Ave NE	LF	5
708	1540	Inlet Protection-Special		
		NW Corner - 4th Ave NE	EA	2
		NE Corner - 4th Ave NE	EA	3
		SE Corner - 4th Ave NE	EA	1
708	1541	Remove Inlet Protection-Special		
		NW Corner - 4th Ave NE	EA	2
		NE Corner - 4th Ave NE	EA	3
		SE Corner - 4th Ave NE	EA	1



ND 20 / 4th St NE



Weighted Fiber Roll
 Inlet Protection Special

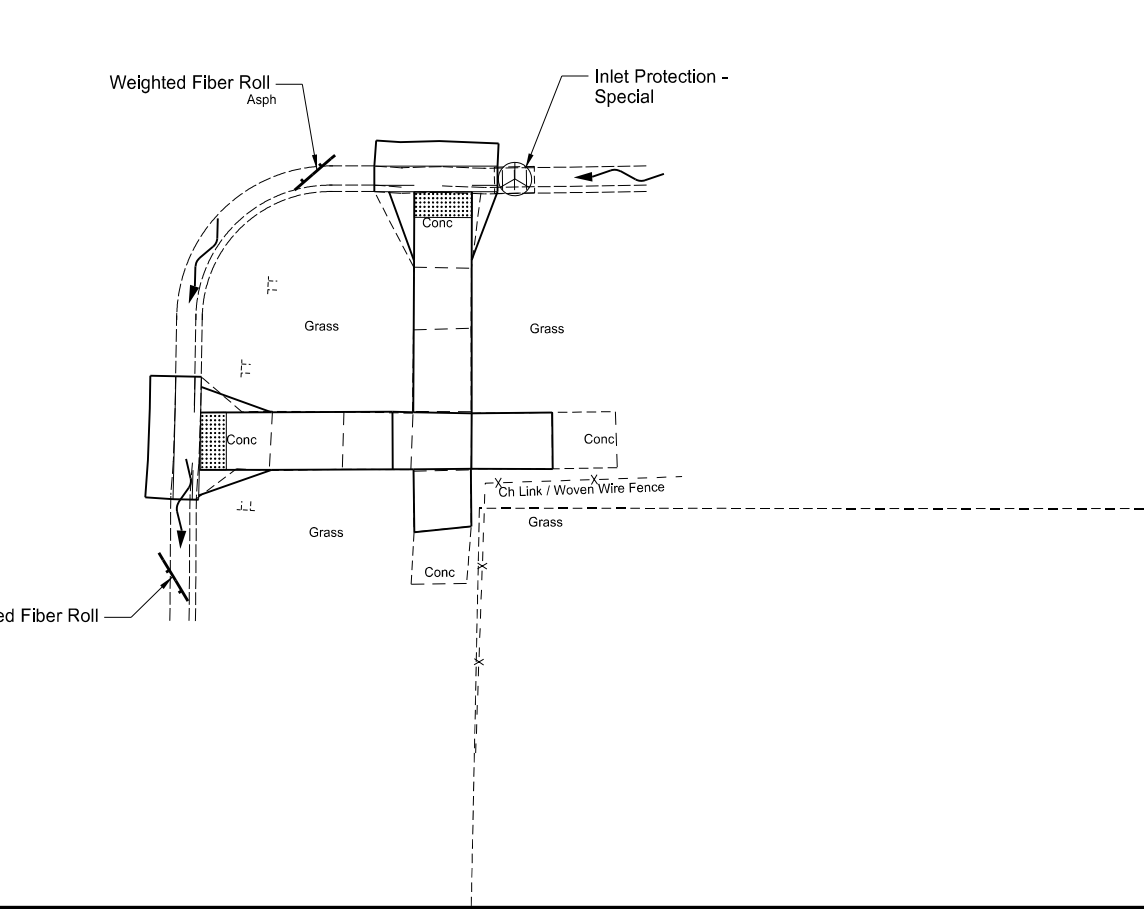
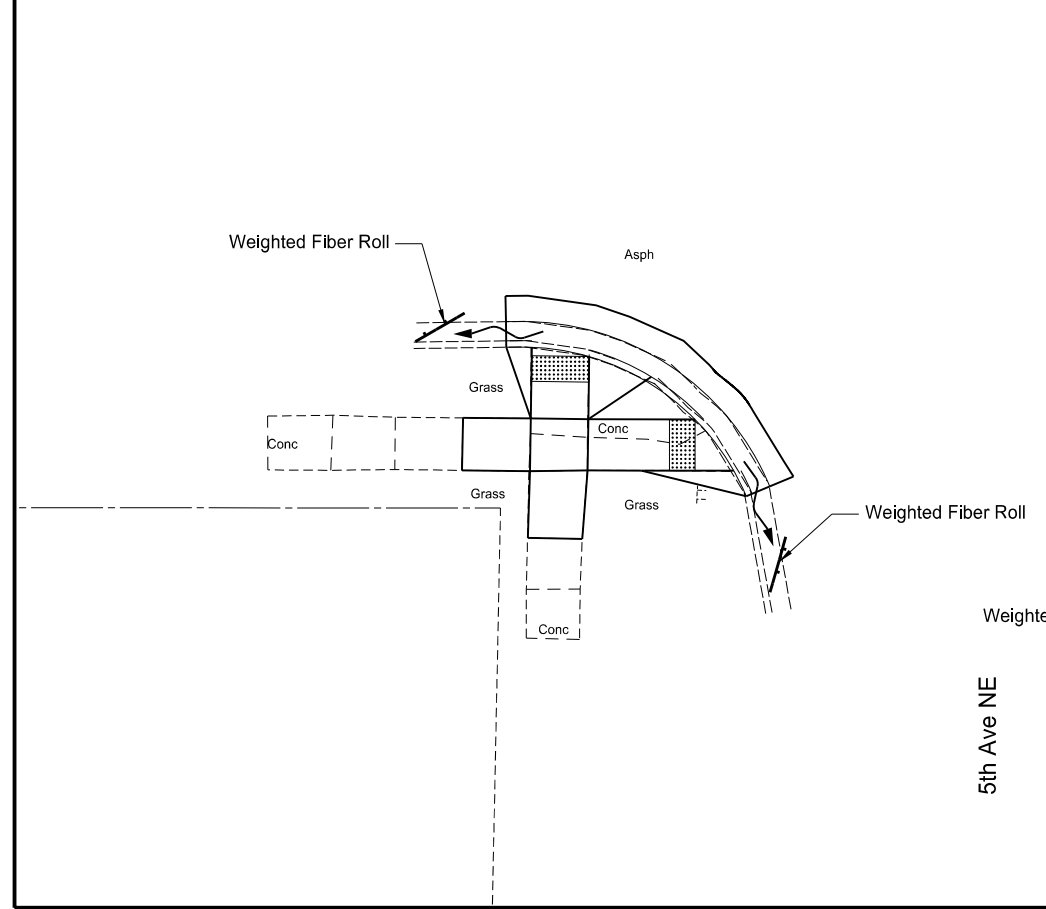
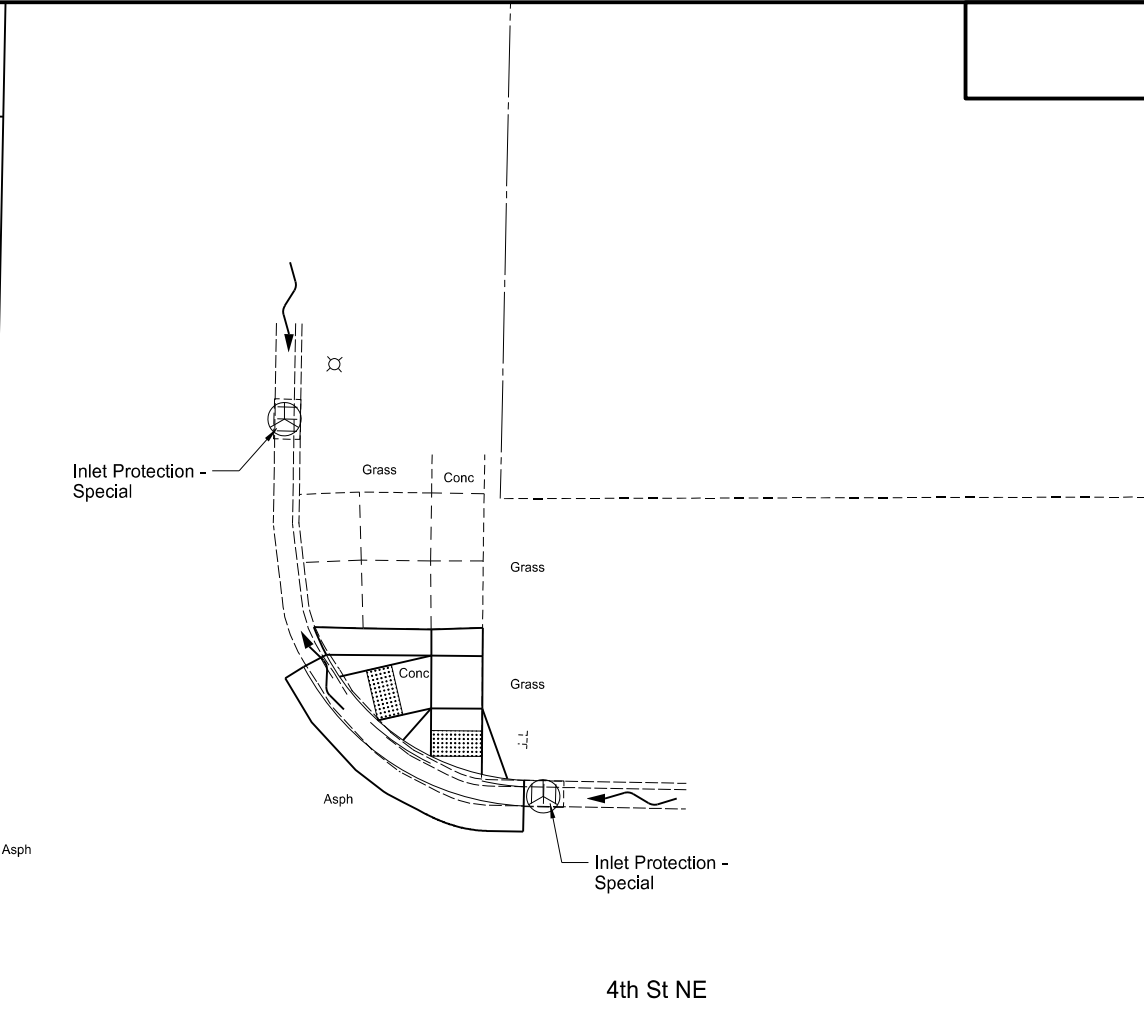
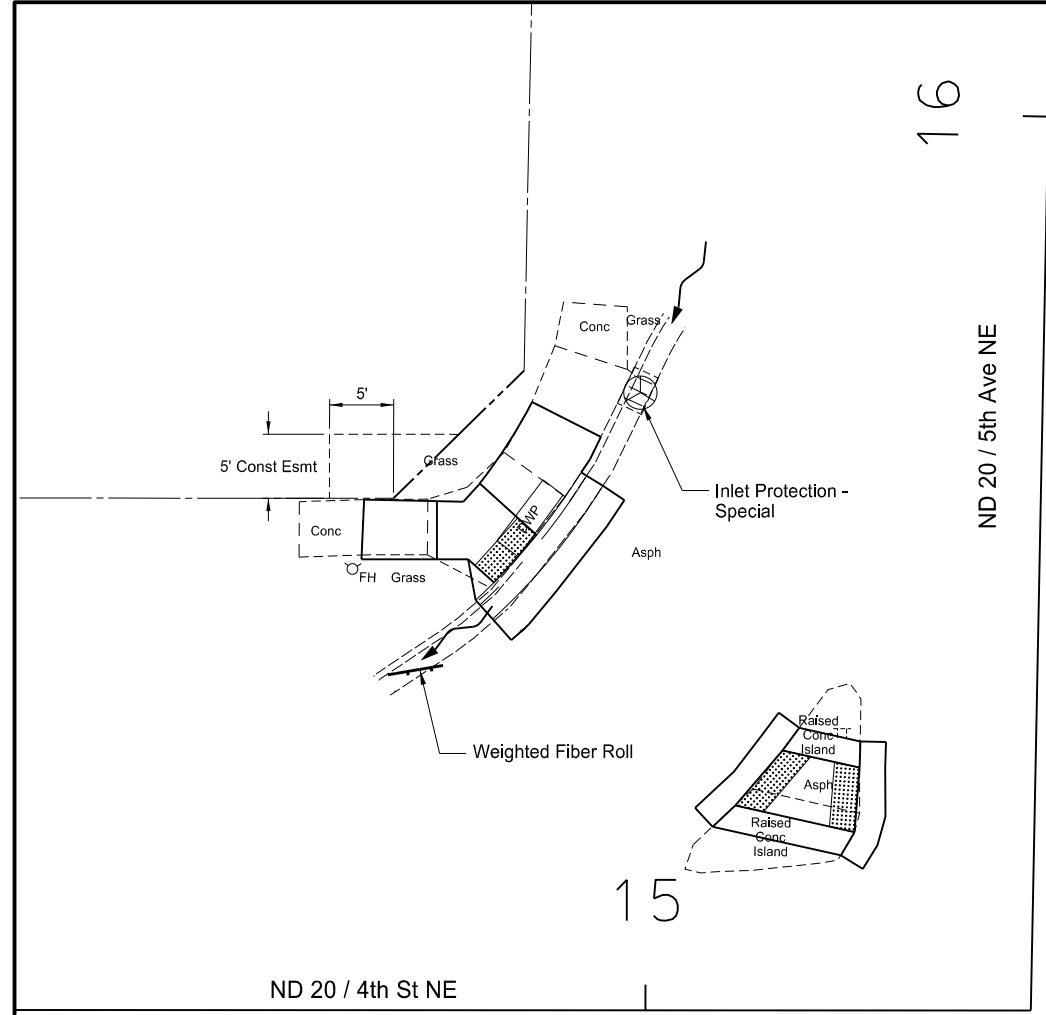




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TEMPORARY EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

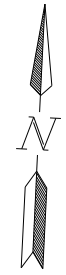
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	76	5

SPEC	CODE	BID ITEM	UNIT	QTY
708	1400	Weighted Fiber Rolls		
		NW Corner - 5th Ave NE	LF	5
		SW Corner - 5th Ave NE	LF	10
		SE Corner - 5th Ave NE	LF	10
708	1540	Inlet Protection-Special		
		NW Corner - 5th Ave NE	EA	1
		NE Corner - 5th Ave NE	EA	2
		SE Corner - 5th Ave NE	EA	1
708	1541	Remove Inlet Protection-Special		
		NW Corner - 5th Ave NE	EA	1
		NE Corner - 5th Ave NE	EA	2
		SE Corner - 5th Ave NE	EA	1



-  Weighted Fiber Roll
-  Inlet Protection Special

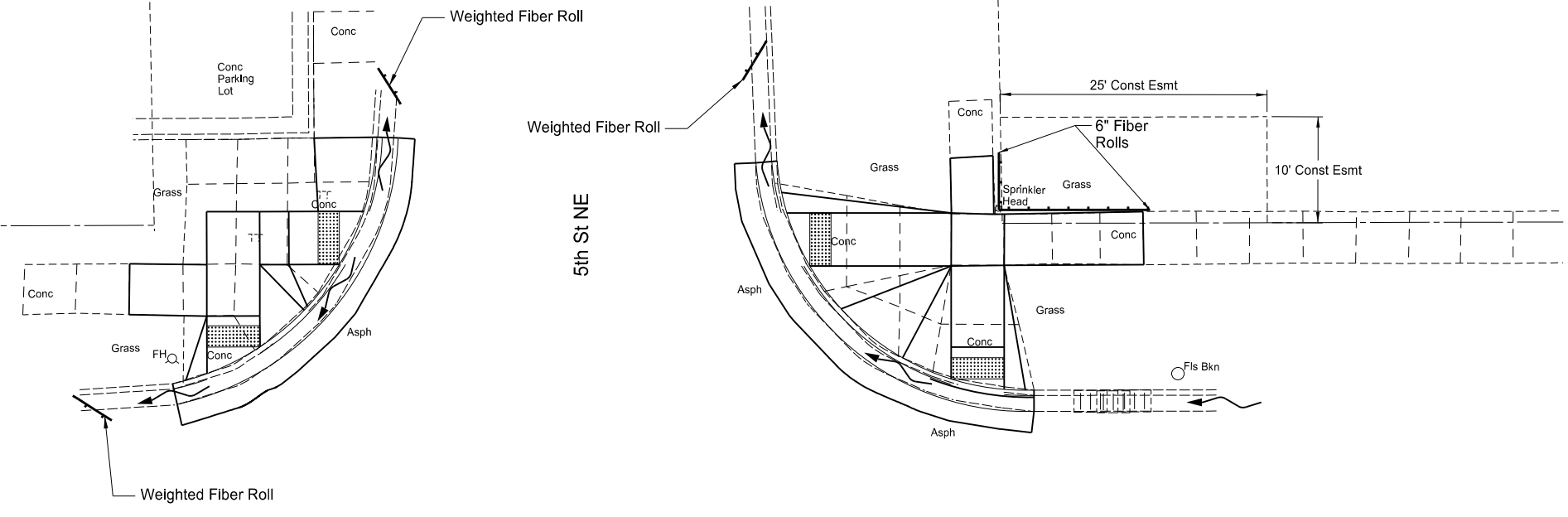
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TEMPORARY EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	76	6

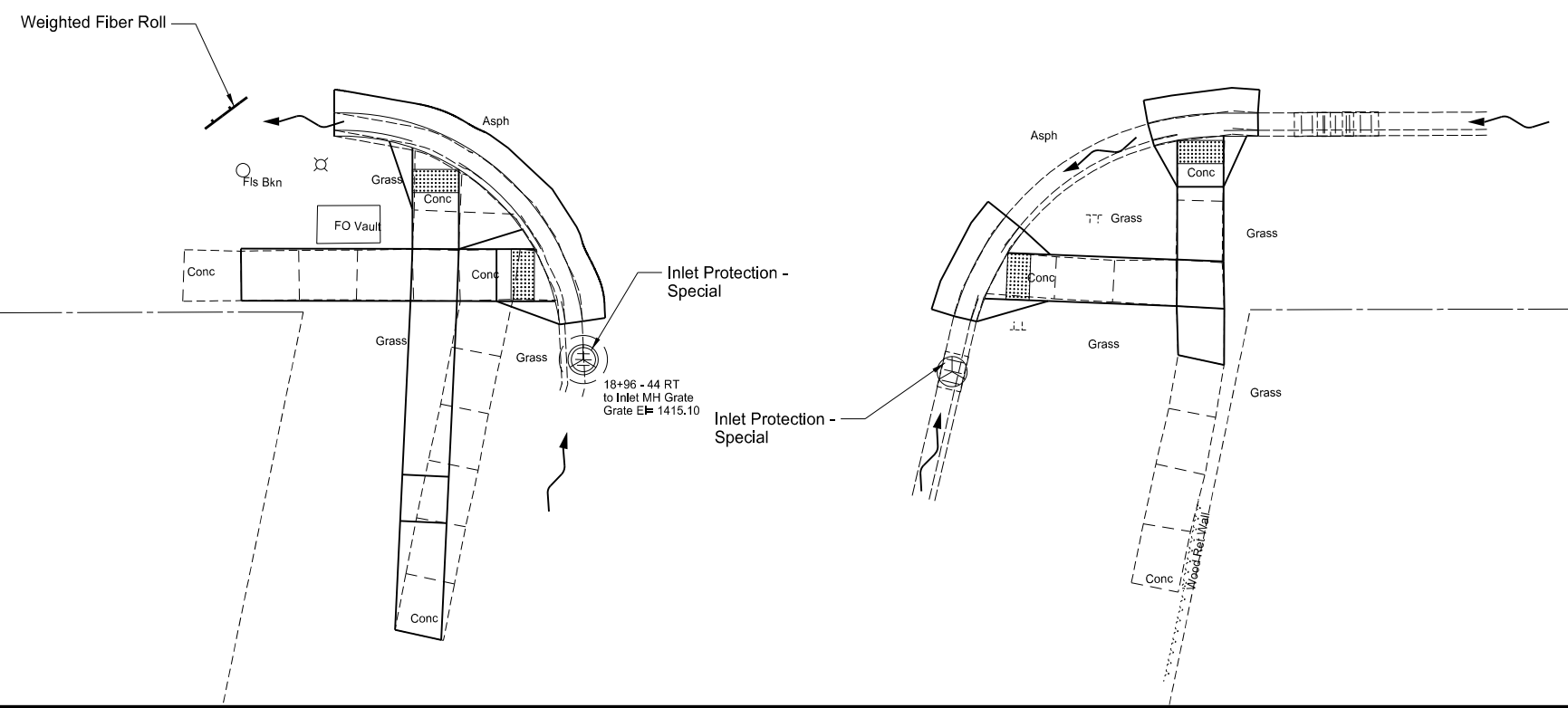
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261	0106	Fiber Rolls 6IN		
		NW Corner - 5th St NE	LF	20
261	0107	Remove Fiber Rolls 6IN		
		NW Corner - 5th St NE	LF	20
708	1400	Weighted Fiber Rolls		
		SW Corner - 5th St NE	LF	10
		SE Corner - 5th St NE	LF	5
		NW Corner - 5th St NE	LF	5
708	1540	Inlet Protection-Special		
		SE Corner - 5th St NE	EA	1
		NE Corner - 5th St NE	EA	1
708	1541	Remove Inlet Protection-Special		
		SE Corner - 5th St NE	EA	1
		NE Corner - 5th St NE	EA	1





19

20

ND 20 / 5th Ave NE



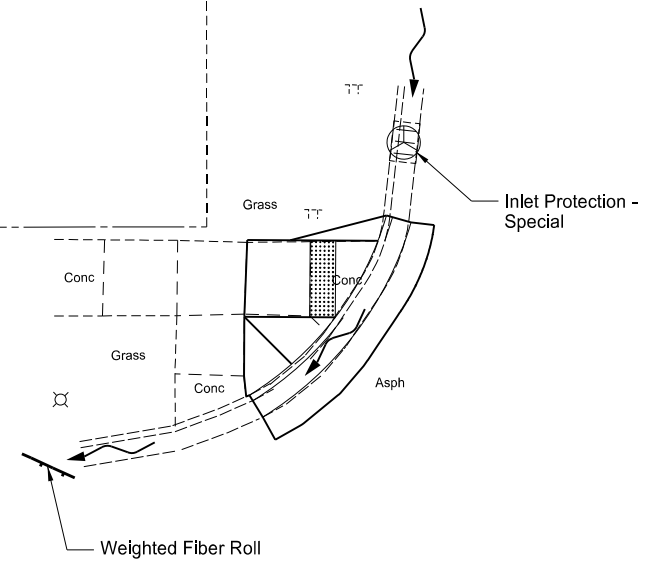
-  Weighted Fiber Roll
-  Inlet Protection Special

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TEMPORARY EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	76	7

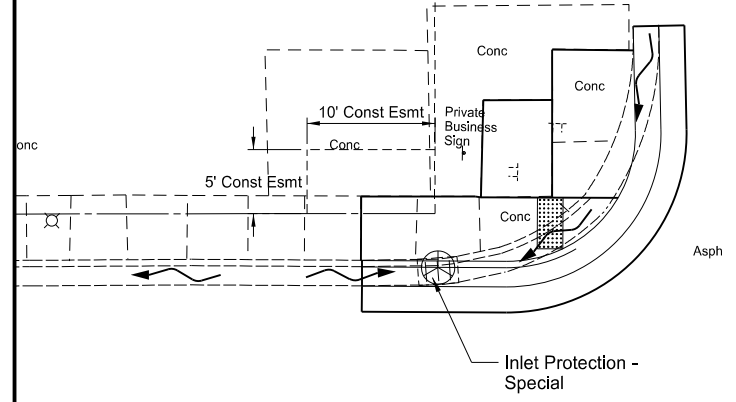
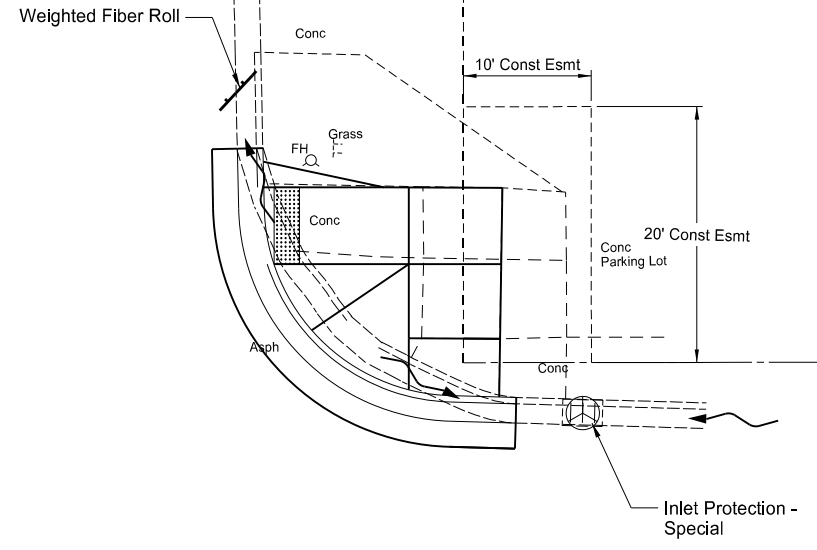
SPEC	CODE	BID ITEM	UNIT	QTY
708	1400	Weighted Fiber Rolls		
		SW Corner - 8th St NE	LF	5
		NW Corner - 8th St NE	LF	5
708	1540	Inlet Protection-Special		
		SW Corner - 8th St NE	EA	1
		NW Corner - 8th St NE	EA	1
		SW Corner - 9th St NE	EA	1
		NW Corner - 9th St NE	EA	1
708	1541	Remove Inlet Protection-Special		
		SW Corner - 8th St NE	EA	1
		NW Corner - 8th St NE	EA	1
		SW Corner - 9th St NE	EA	1
		NW Corner - 9th St NE	EA	1



8th St NE

ND 20 / 5th Ave NE

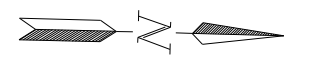
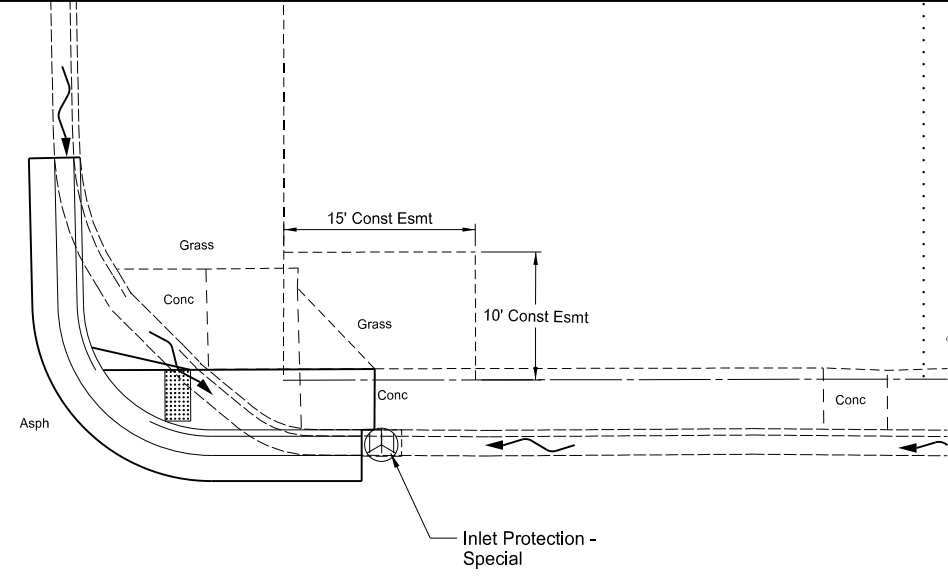
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9th St NE

ND 20 / 5th Ave NE

35



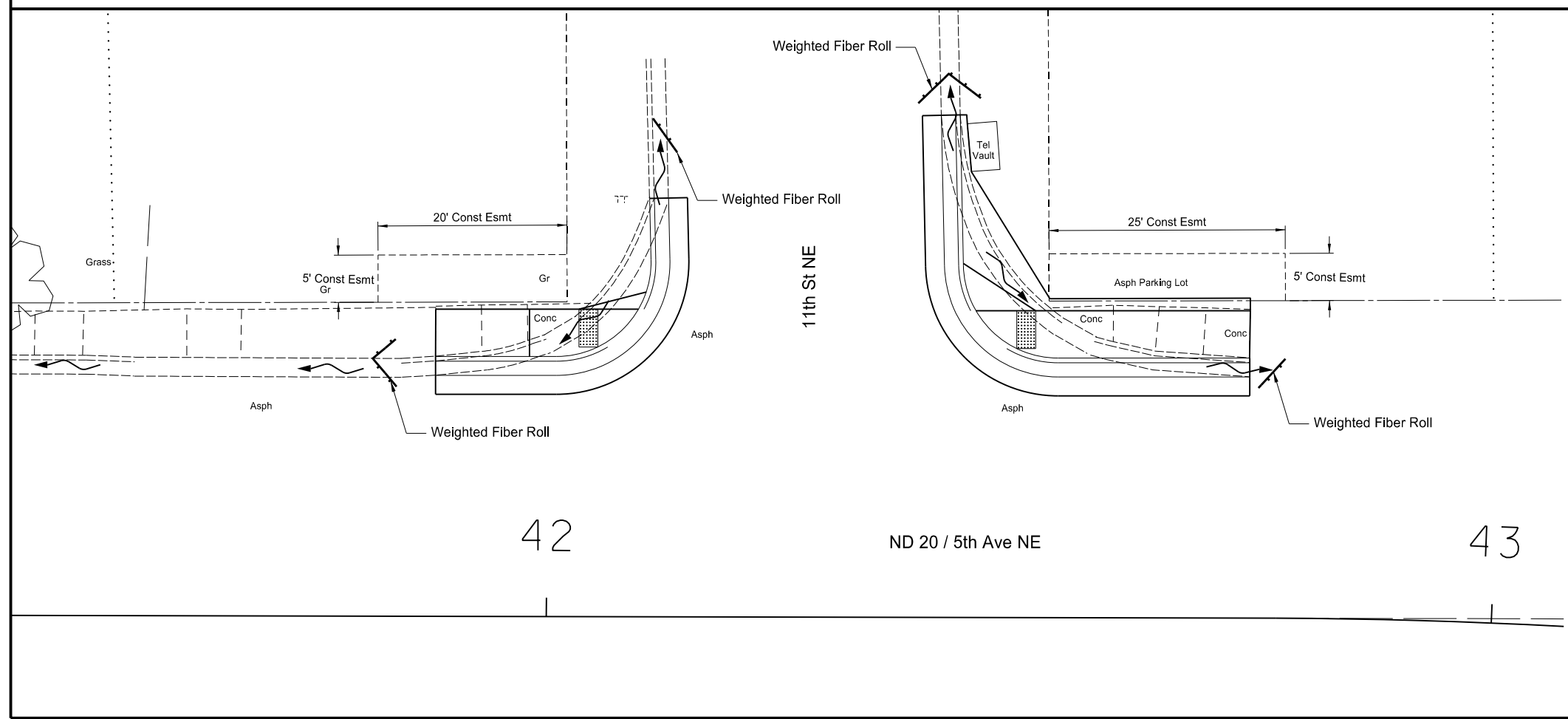
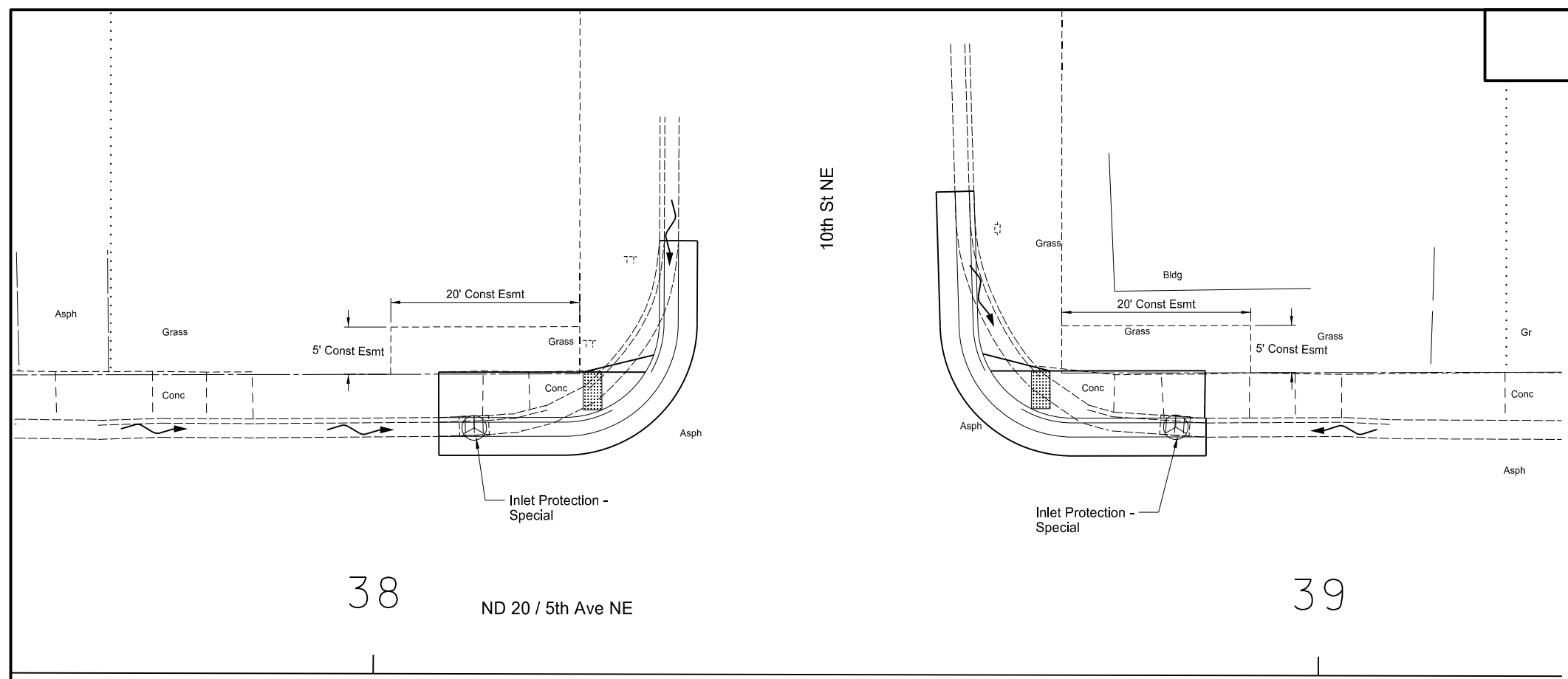
-  Weighted Fiber Roll
-  Inlet Protection Special

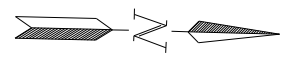
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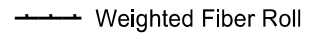

TEMPORARY EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	76	8

SPEC	CODE	BID ITEM	UNIT	QTY
708	1400	Weighted Fiber Rolls		
		SW Corner - 11th St NE	LF	15
		NW Corner - 11th St NE	LF	15
708	1540	Inlet Protection-Special		
		SW Corner - 10th St NE	EA	1
		NW Corner - 10th St NE	EA	1
708	1541	Remove Inlet Protection-Special		
		SW Corner - 10th St NE	EA	1
		NW Corner - 10th St NE	EA	1





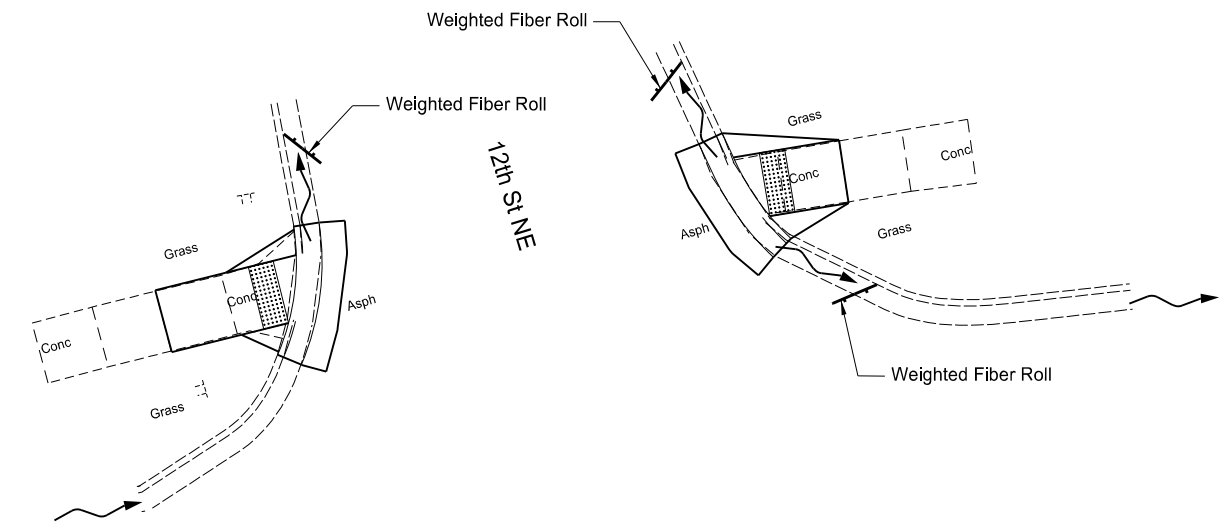
 Weighted Fiber Roll
 Inlet Protection Special

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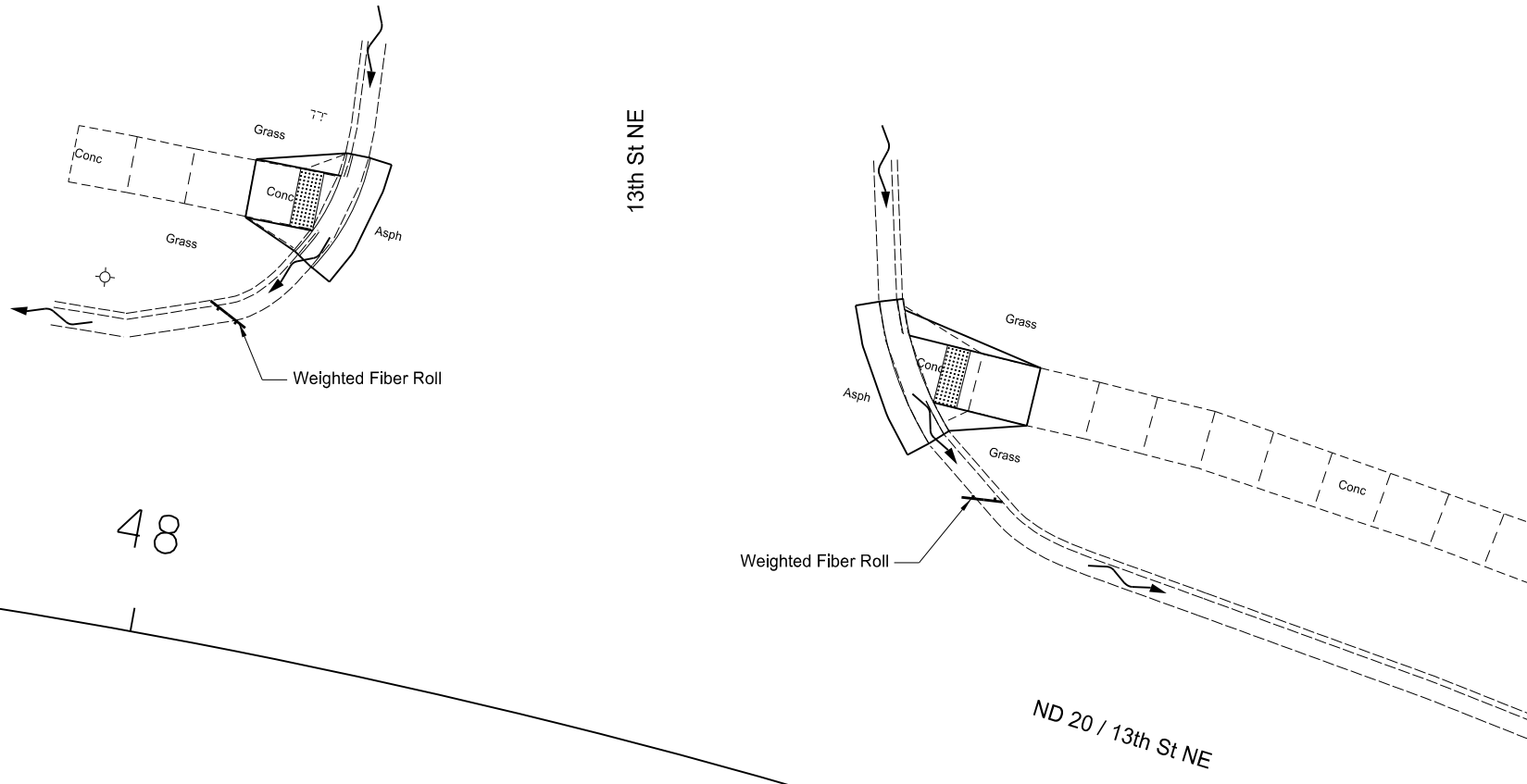
TEMPORARY EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	76	9

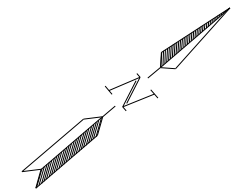
SPEC	CODE	BID ITEM	UNIT	QTY
708	1400	Weighted Fiber Rolls		
		SW Corner - 12th St NE	LF	5
		NW Corner - 12th St NE	LF	10
		SW Corner - 13th St NE	LF	5
		NW Corner - 13th St NE	LF	5



46



48



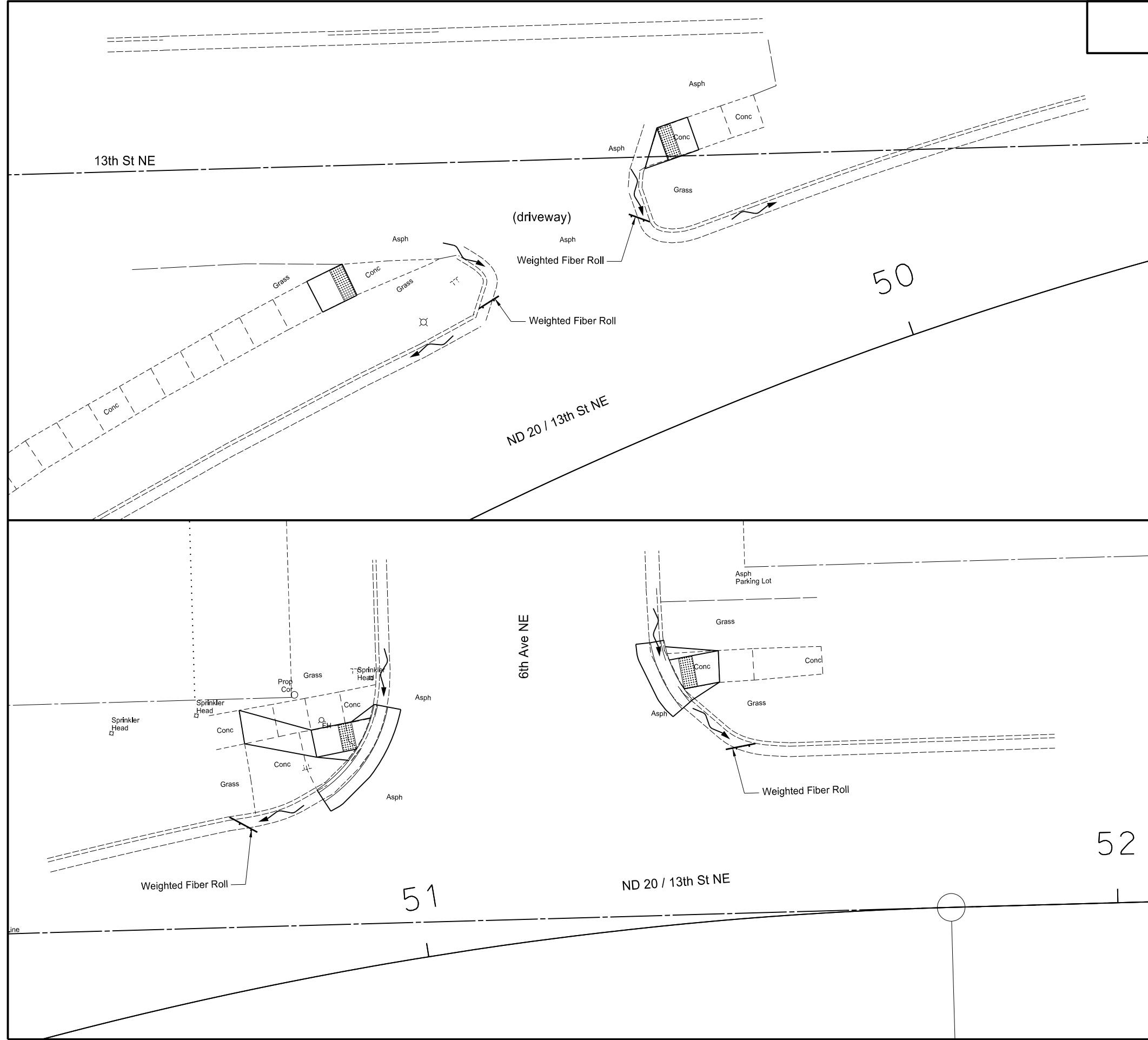
- Weighted Fiber Roll
- Inlet Protection Special



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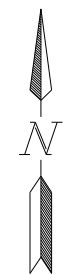
TEMPORARY EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	76	10

SPEC	CODE	BID ITEM	UNIT	QTY
708	1400	Weighted Fiber Rolls		
		NW Corner - 13th St NE - Driveway	LF	5
		NE Corner - 13th St NE - Driveway	LF	5
		NW Corner - 6th Ave NE	LF	5
		NE Corner - 6th Ave NE	LF	5



-  Weighted Fiber Roll
-  Inlet Protection Special

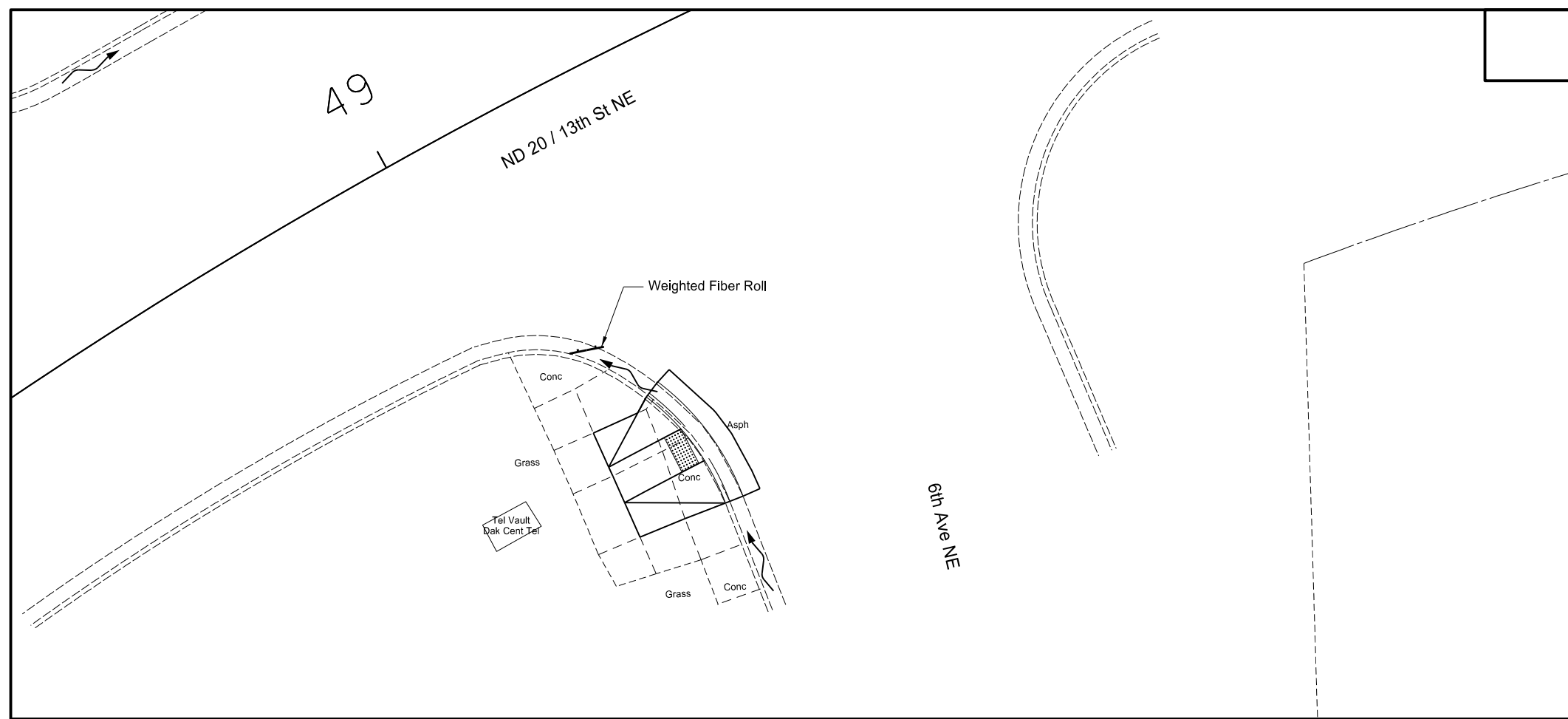




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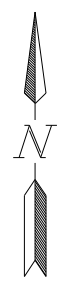
TEMPORARY EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	76	11

SPEC	CODE	BID ITEM	UNIT	QTY
708	1400	Weighted Fiber Rolls	LF	5
SW Corner - 6th Ave NE				



-  Weighted Fiber Roll
-  Inlet Protection Special

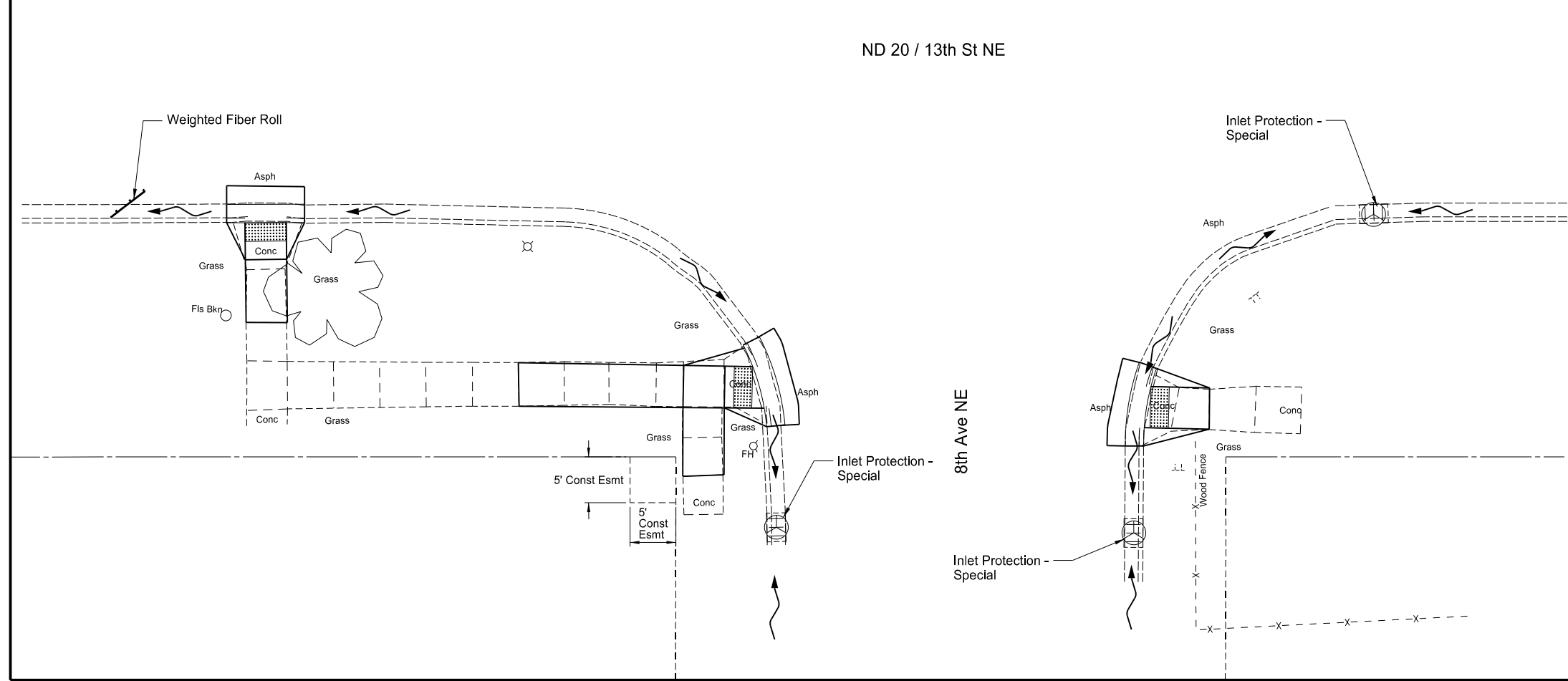
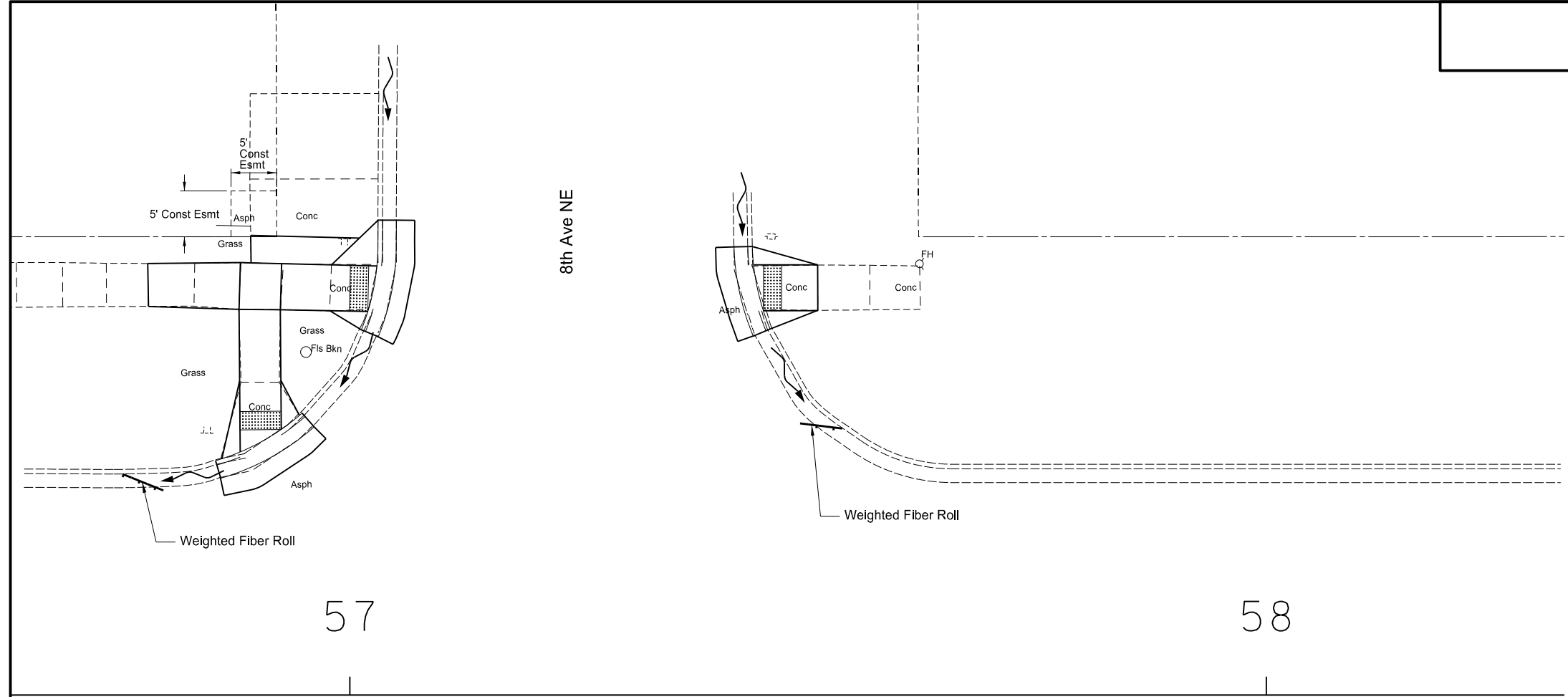


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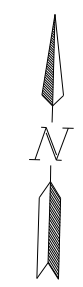
TEMPORARY EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	76	12

SPEC	CODE	BID ITEM	UNIT	QTY
708	1400	Weighted Fiber Rolls		
		NW Corner - 8th Ave NE	LF	5
		NE Corner - 8th Ave NE	LF	5
		SW Corner - 8th Ave NE	LF	5
708	1540	Inlet Protection-Special		
		SW Corner - 8th Ave NE	EA	1
		SE Corner - 8th Ave NE	EA	2
708	1541	Remove Inlet Protection-Special		
		SW Corner - 8th Ave NE	EA	1
		SE Corner - 8th Ave NE	EA	2



- Weighted Fiber Roll
- Inlet Protection Special

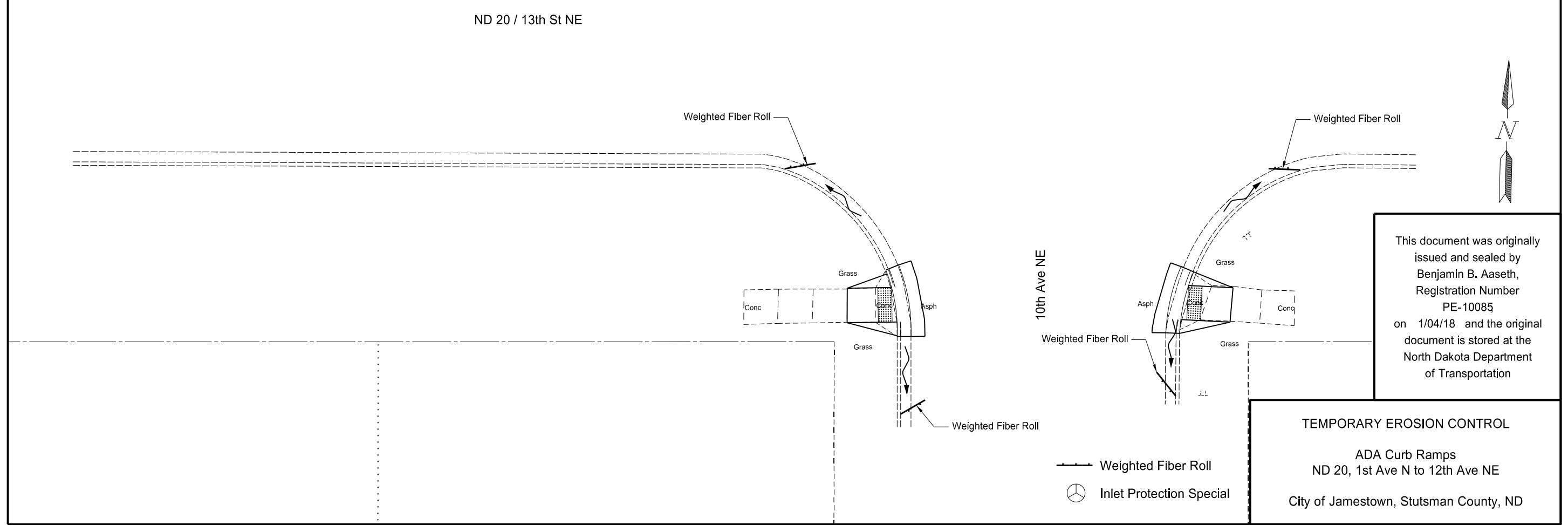
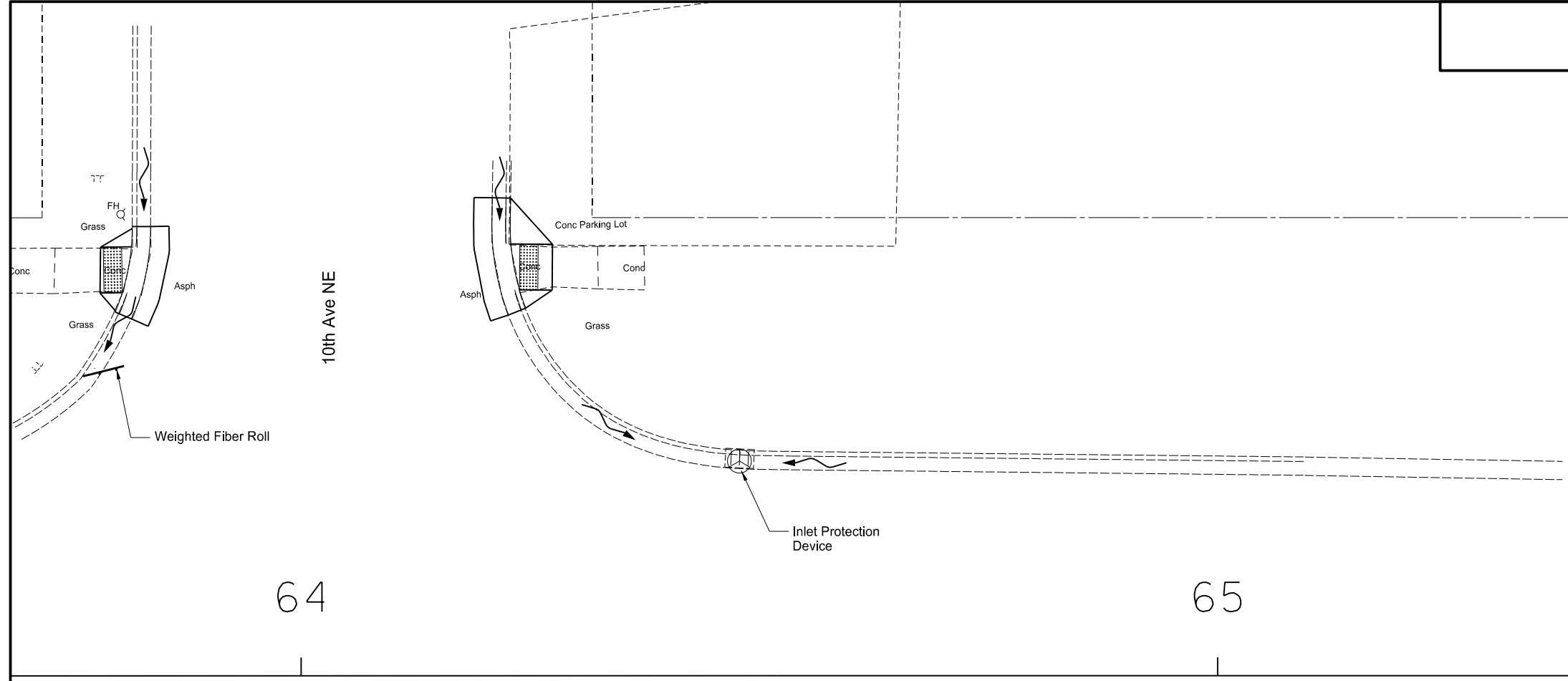


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TEMPORARY EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	76	13

SPEC	CODE	BID ITEM	UNIT	QTY
708	1400	Weighted Fiber Rolls		
		NW Corner - 10th Ave NE	LF	5
		SW Corner - 10th Ave NE	LF	10
		SE Corner - 10th Ave NE	LF	10
708	1540	Inlet Protection-Special		
		NE Corner - 10th Ave NE	EA	1
708	1541	Remove Inlet Protection-Special		
		NE Corner - 10th Ave NE	EA	1



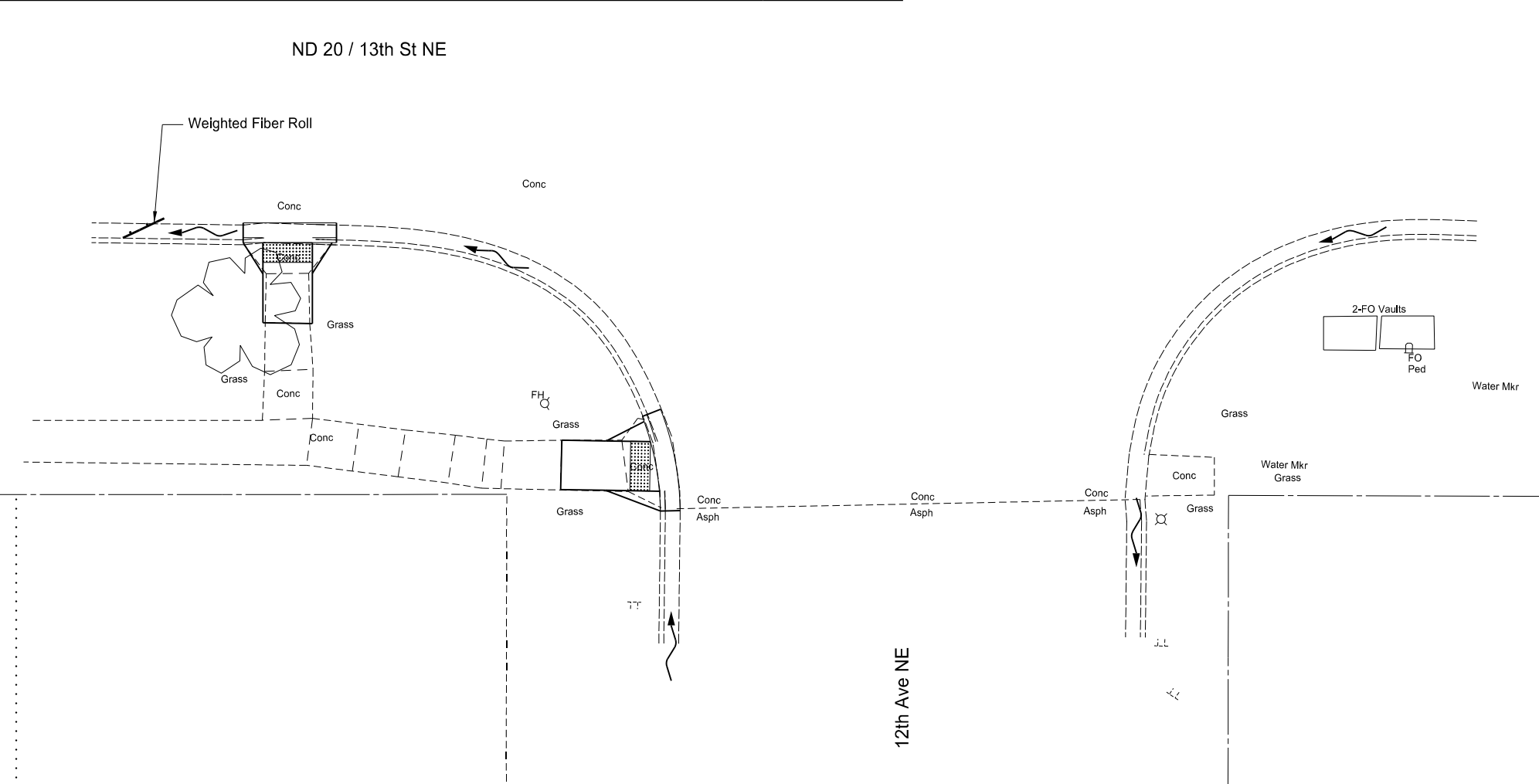
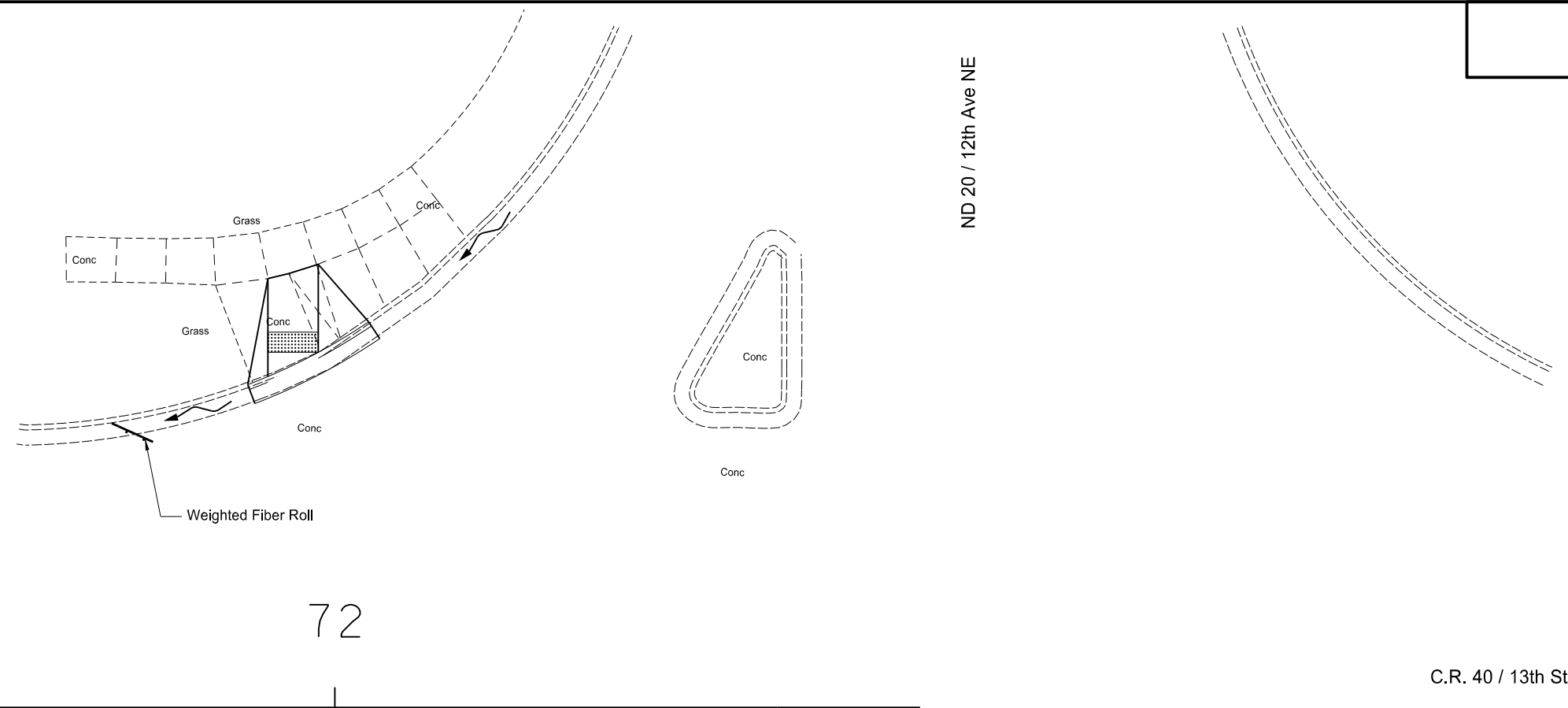
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TEMPORARY EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

- Weighted Fiber Roll
- Inlet Protection Special

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	76	14

SPEC	CODE	BID ITEM	UNIT	QTY
708	1400	Weighted Fiber Rolls		
		NW Corner - 12th Ave NE	LF	5
		SW Corner - 12th Ave NE	LF	5



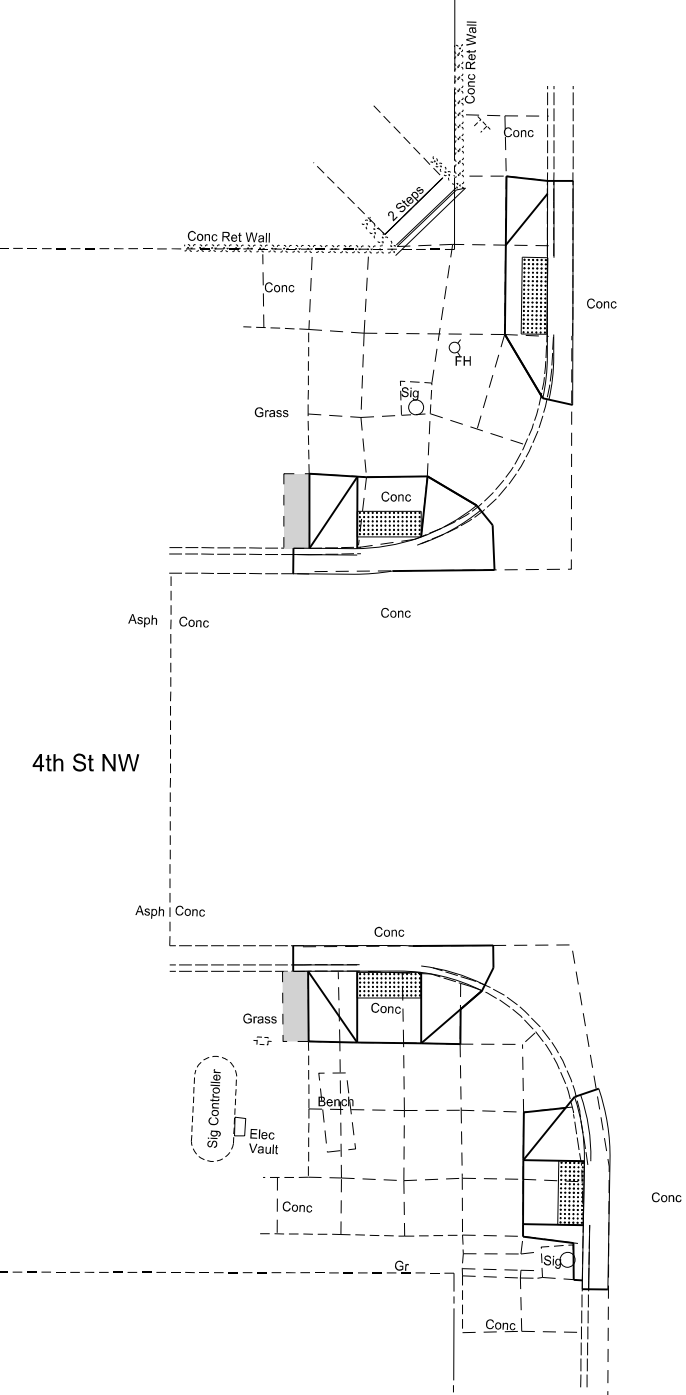
 Weighted Fiber Roll
 Inlet Protection Special

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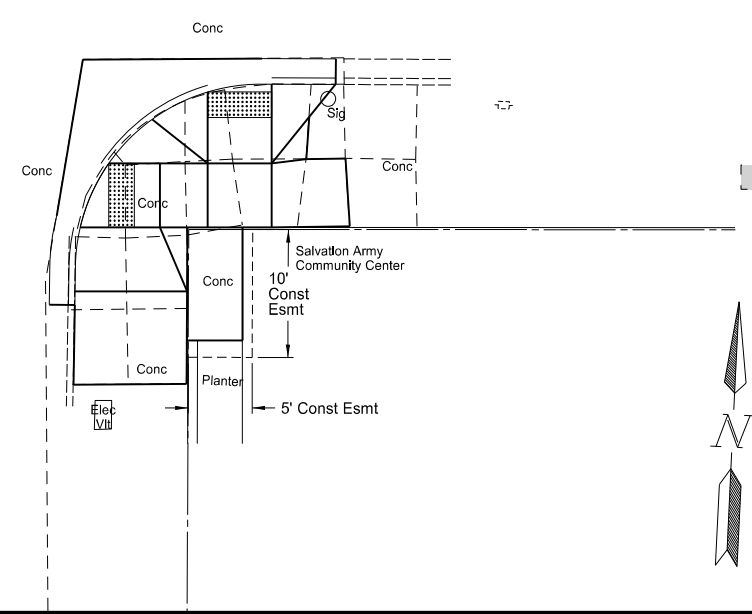
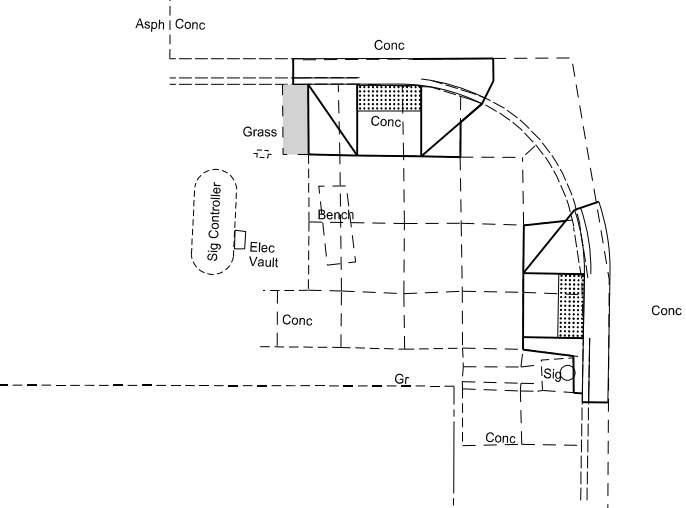
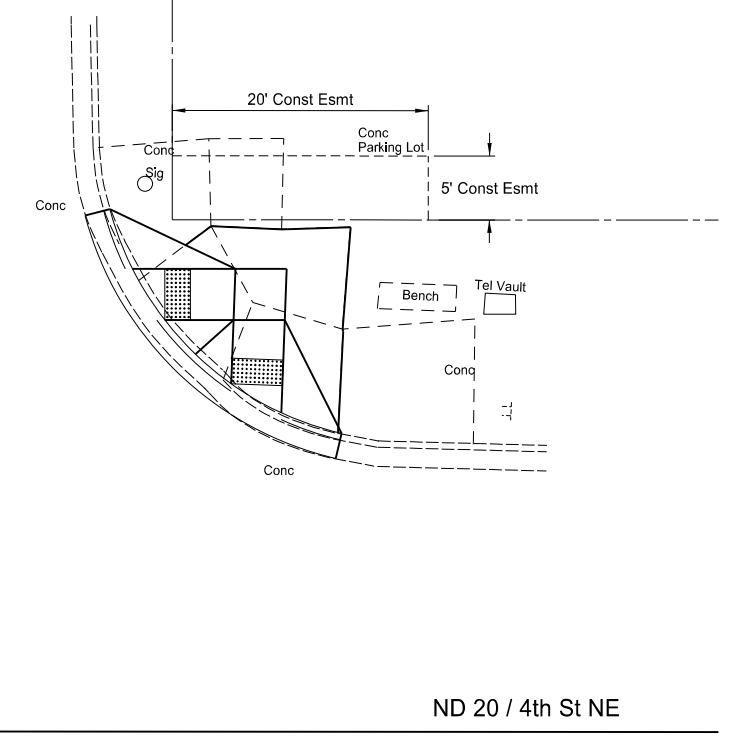
TEMPORARY EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	77	1

SPEC	CODE	BID ITEM	UNIT	QTY
970	0008	Landscape Preparation		
		NW Corner - 1st Ave N	SY	1
		SW Corner - 1st Ave N	SY	1



US 52 & 281 / 1st Ave N



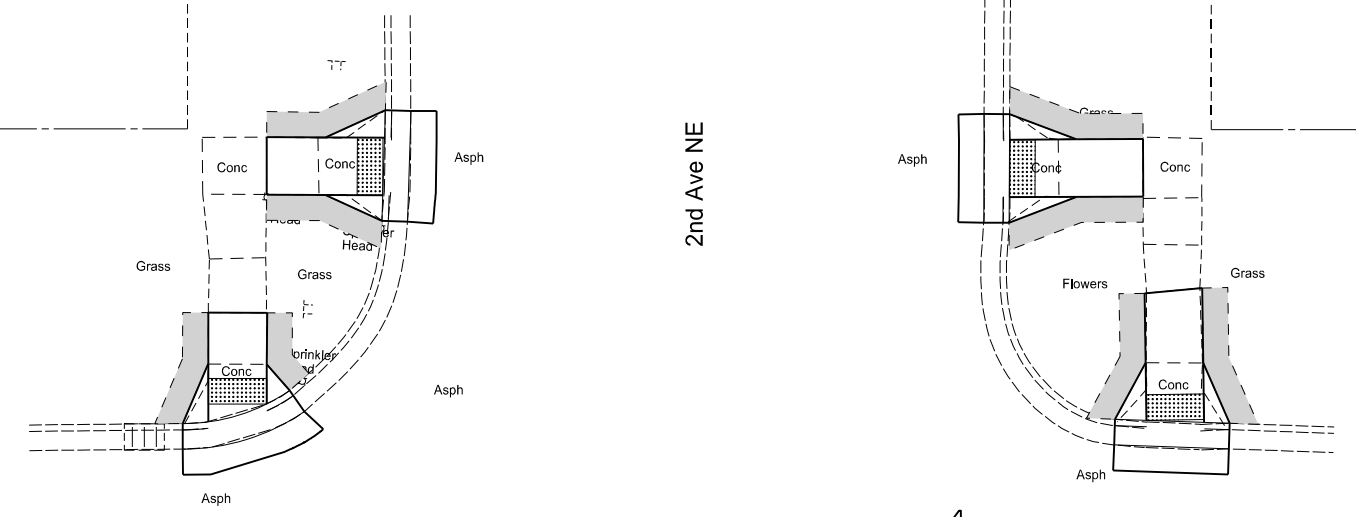
█ Landscape Preparation

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PERMANENT EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	77	2

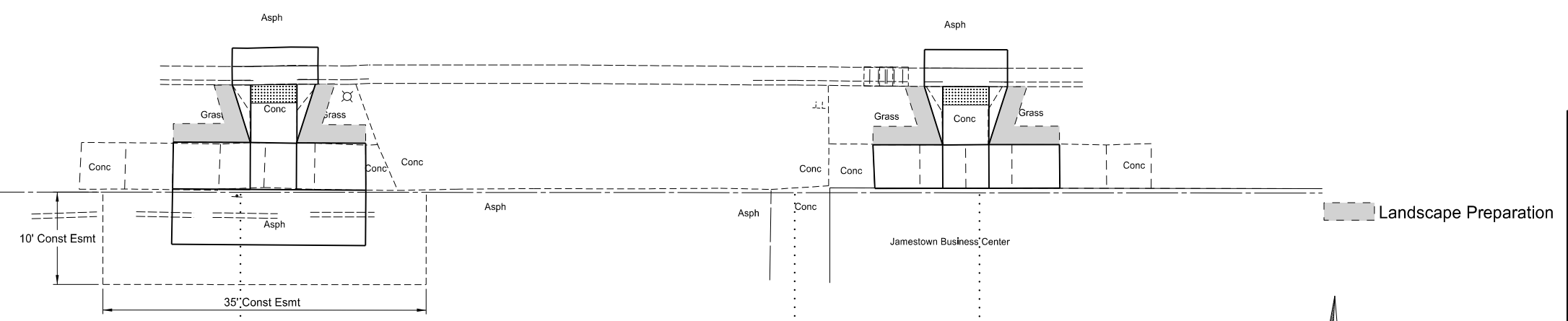
SPEC	CODE	BID ITEM	UNIT	QTY
970	0008	Landscape Preparation		
		SW Corner - 2nd Ave NE	SY	5
		NW Corner - 2nd Ave NE	SY	8
		NE Corner - 2nd Ave NE	SY	10
		SE Corner - 2nd Ave NE	SY	5



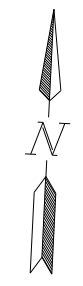
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4

ND 20 / 4th St NE



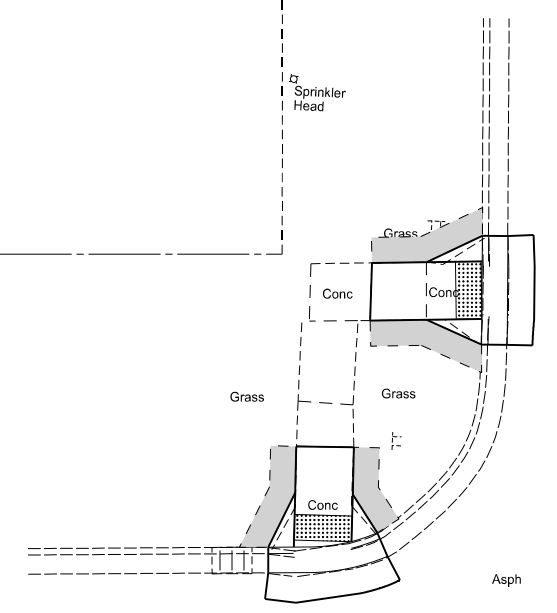
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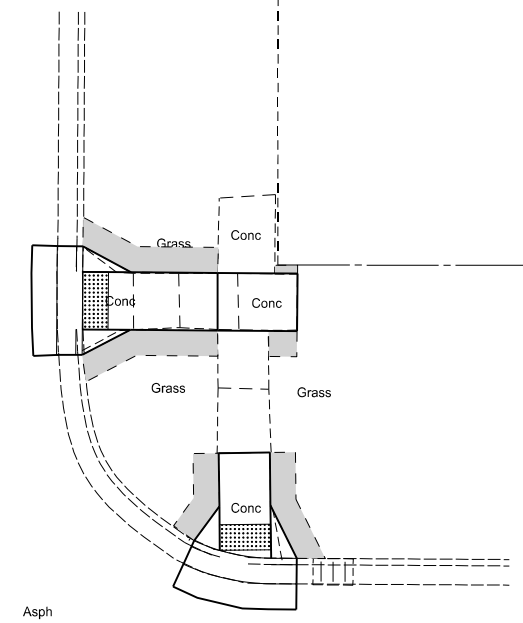
PERMANENT EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	77	3

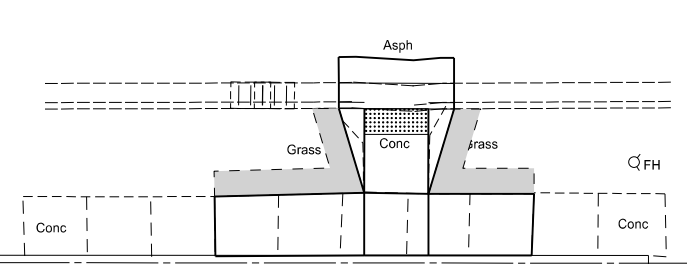
SPEC	CODE	BID ITEM	UNIT	QTY
970	0008	Landscape Preparation		
		SW Corner - 3rd Ave NE	SY	6
		NW Corner - 3rd Ave NE	SY	7
		NE Corner - 3rd Ave NE	SY	9
		SE Corner - 3rd Ave NE	SY	6



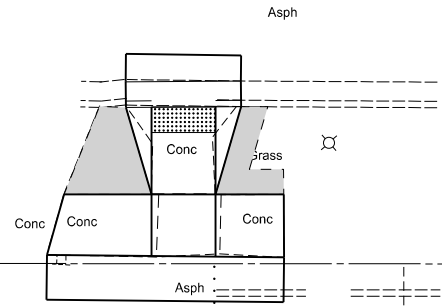
3rd Ave NE



ND 20 / 4th St NE



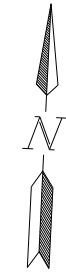
Jamestown Business Center



10' Const Esmt

35' Const Esmt

Landscape Preparation

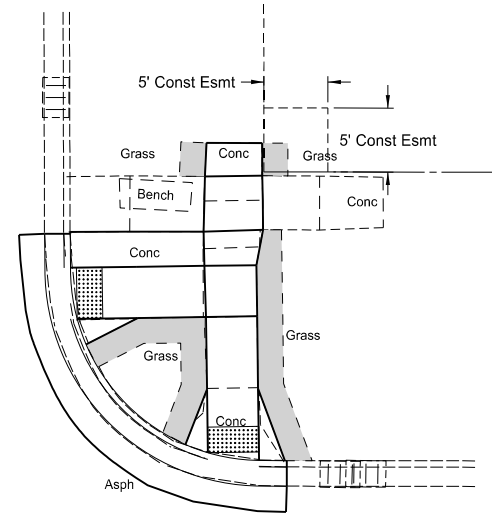
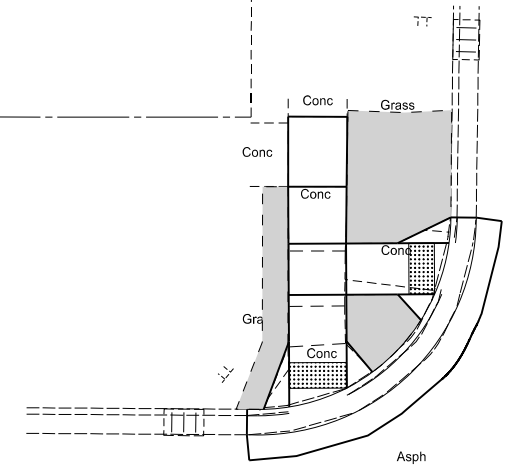


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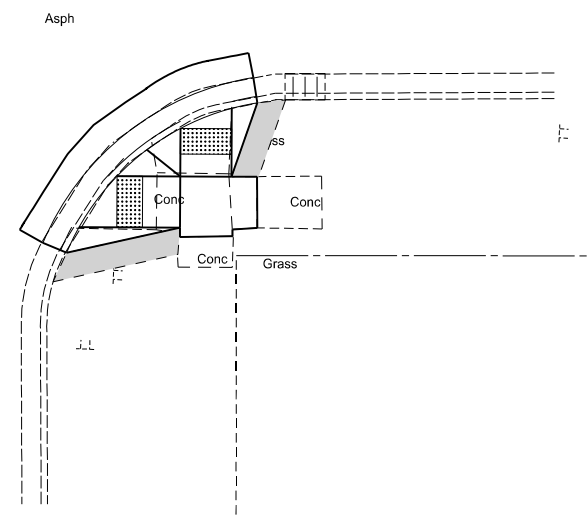
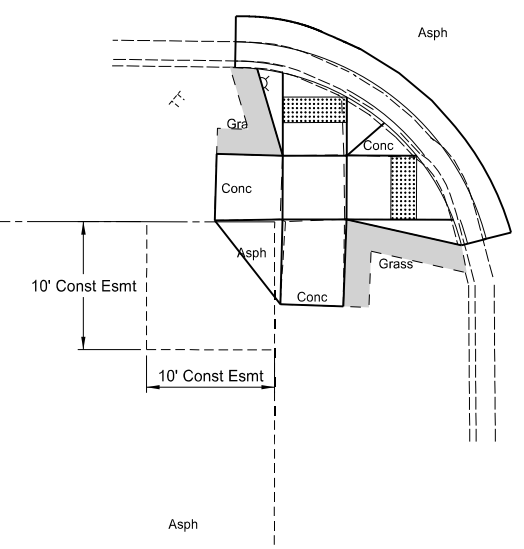
PERMANENT EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	77	4

SPEC	CODE	BID ITEM	UNIT	QTY
970	0008	Landscape Preparation		
		SW Corner - 4th Ave NE	SY	5
		NW Corner - 4th Ave NE	SY	16
		NE Corner - 4th Ave NE	SY	9
		SE Corner - 4th Ave NE	SY	4

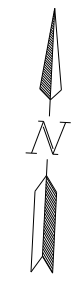


ND 20 / 4th St NE



4th Ave NE

█ Landscape Preparation

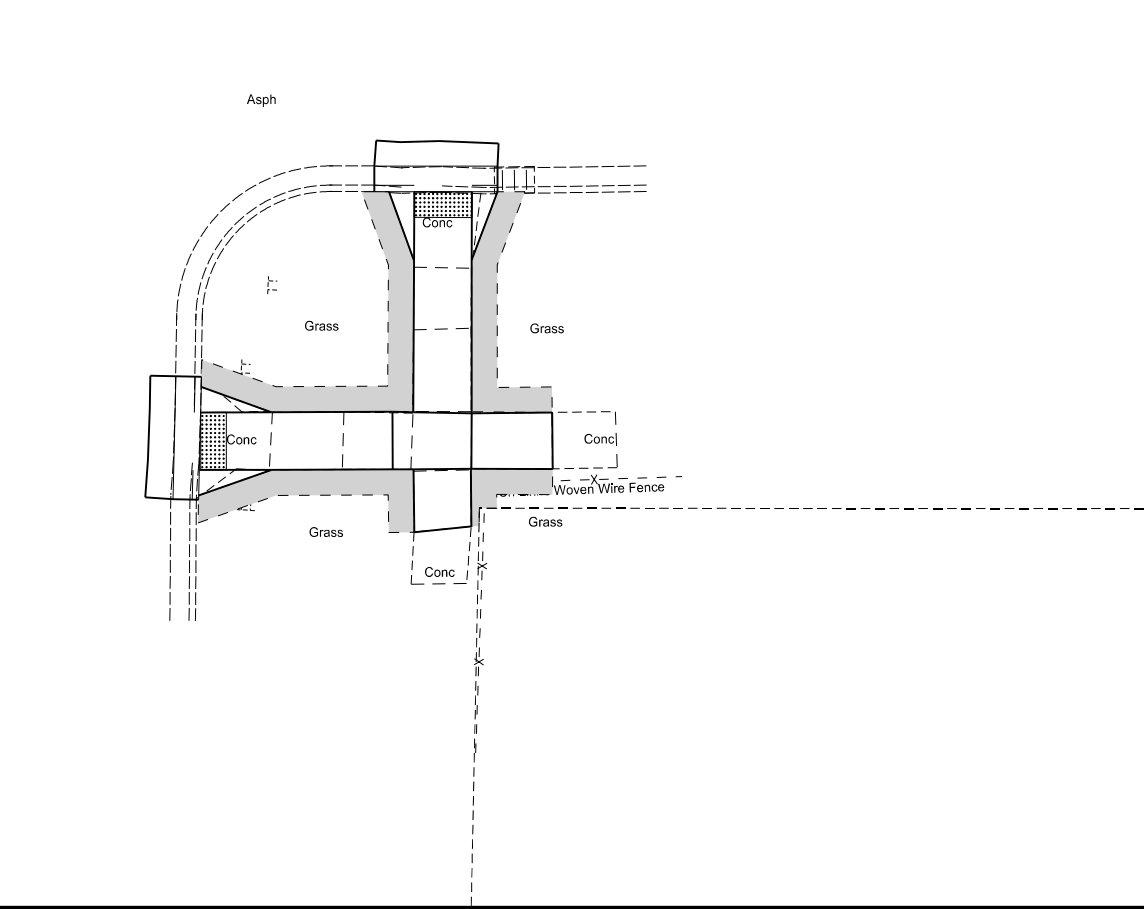
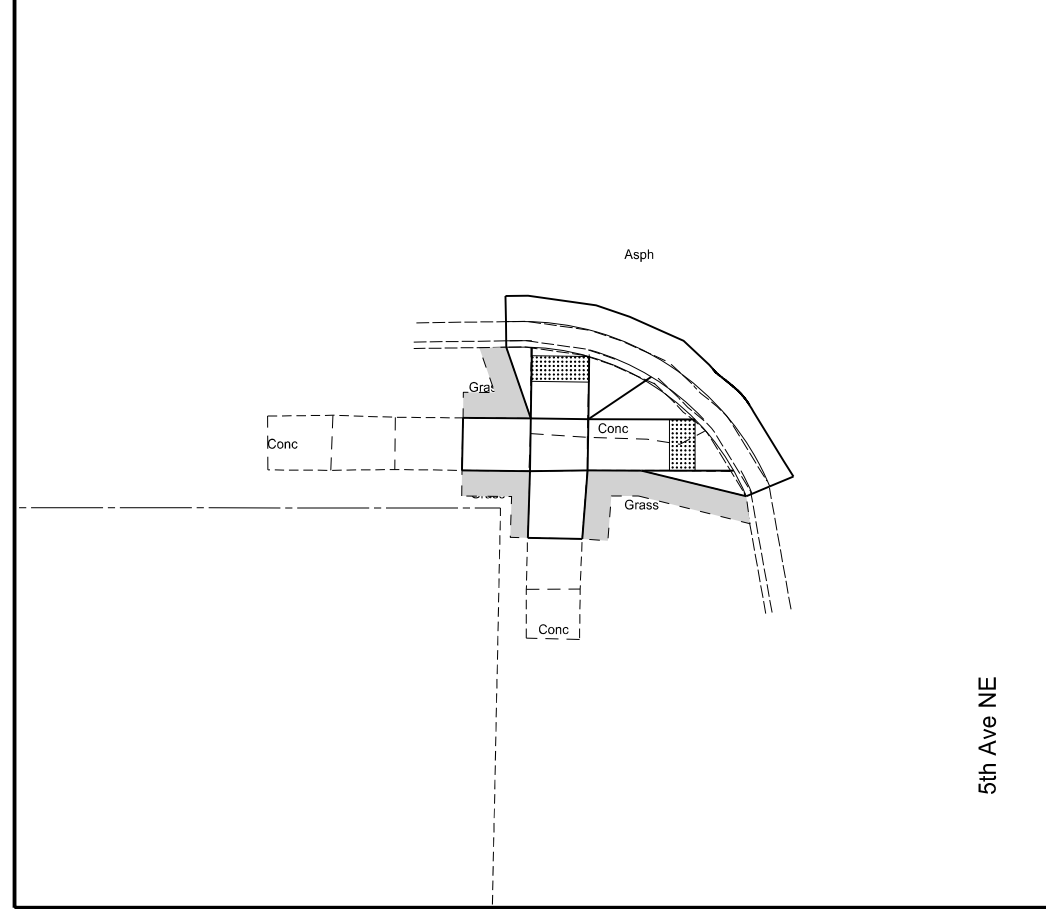
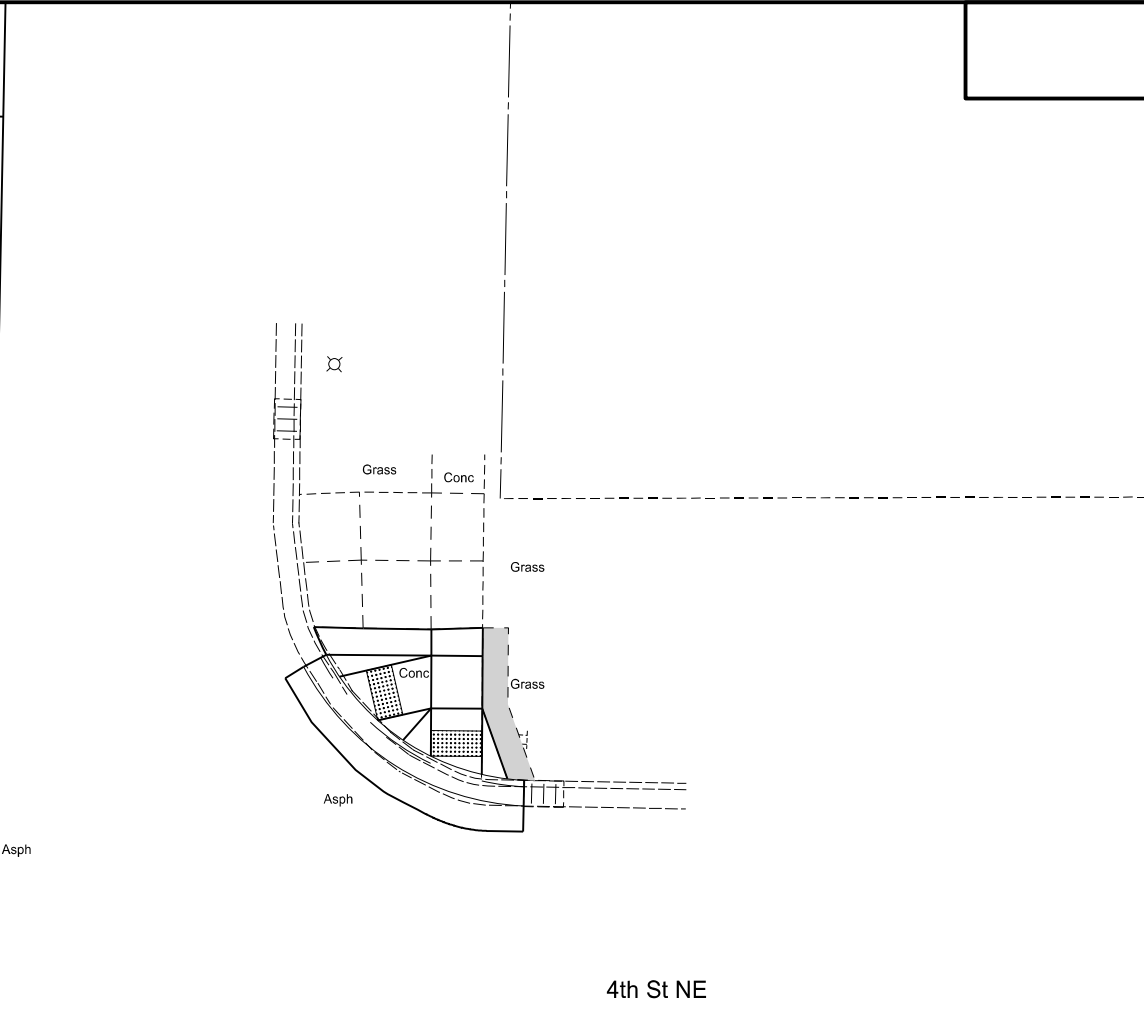
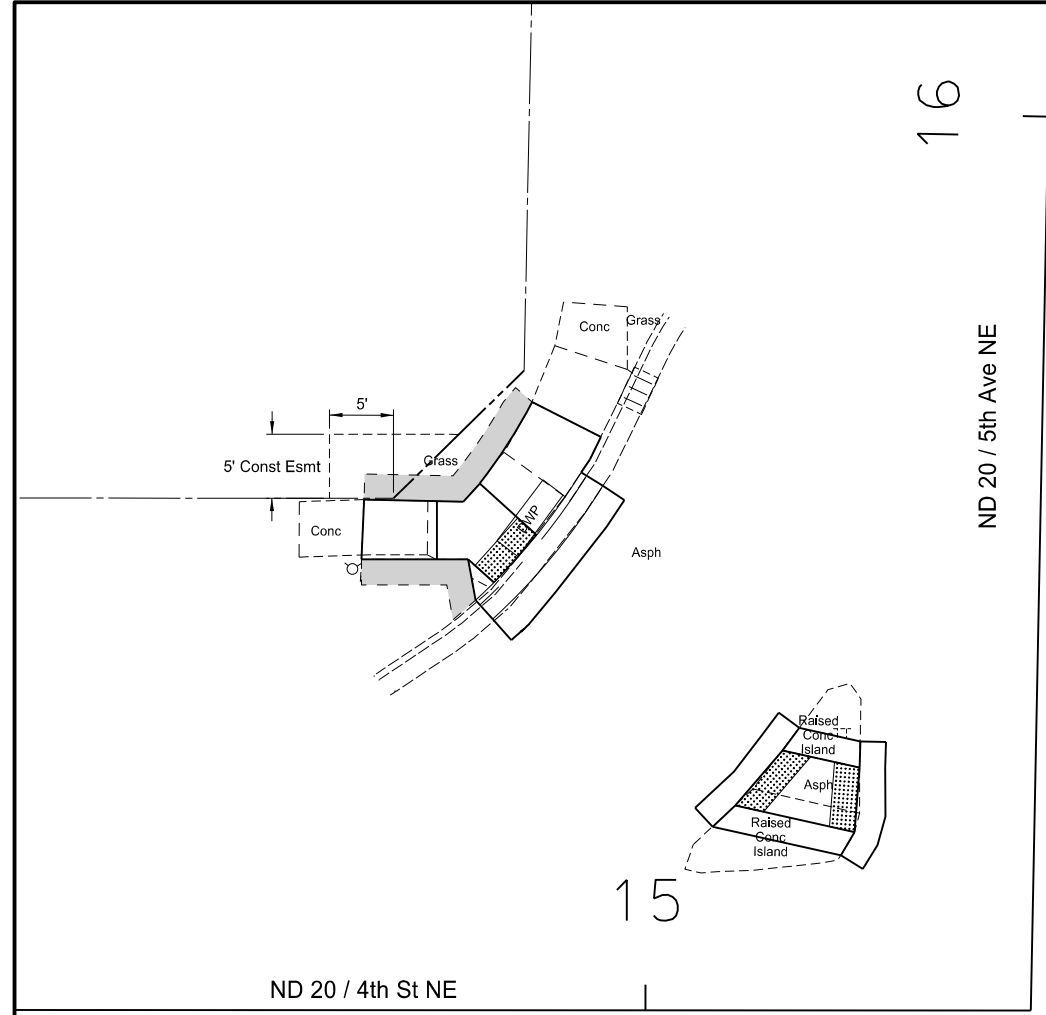


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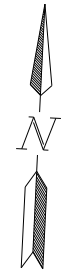
PERMANENT EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	77	5

SPEC	CODE	BID ITEM	UNIT	QTY
970	0008	Landscape Preparation		
		NW Corner - 5th Ave NE	SY	6
		SW Corner - 5th Ave NE	SY	7
		SE Corner - 5th Ave NE	SY	18
		NE Corner - 5th Ave NE	SY	3



█ Landscape Preparation



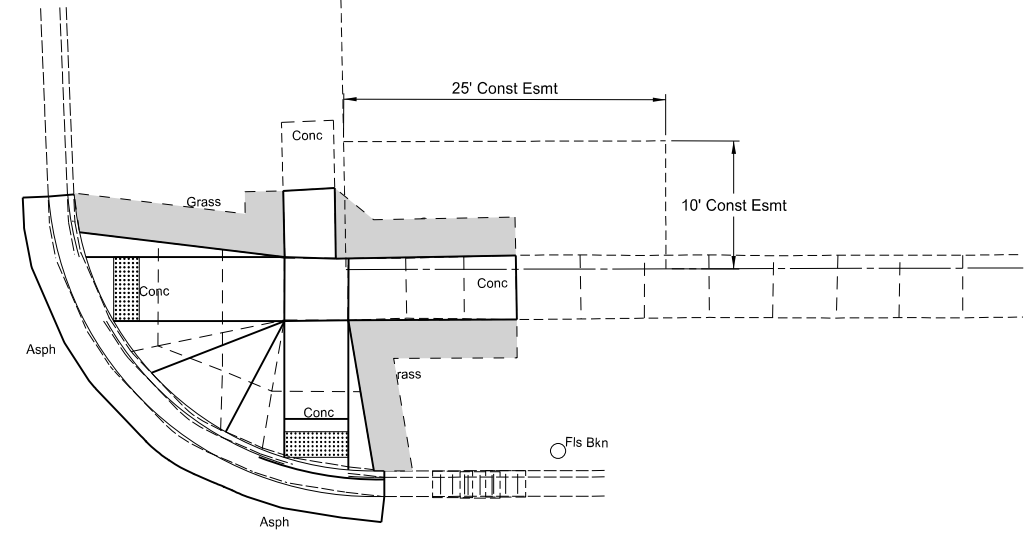
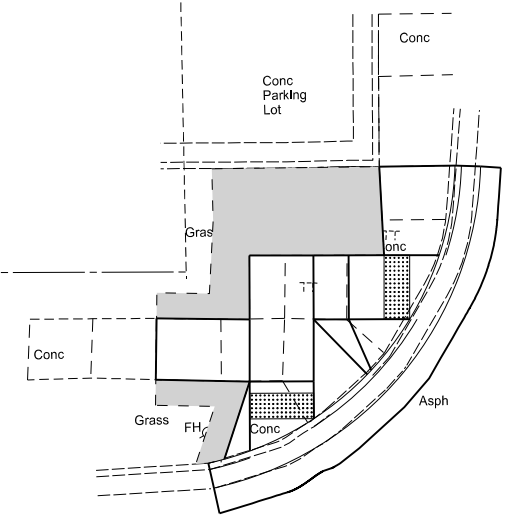
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PERMANENT EROSION CONTROL

ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	77	6

SPEC	CODE	BID ITEM	UNIT	QTY
970	0008	Landscape Preparation		
		SW Corner - 5th St NE	SY	15
		SE Corner - 5th St NE	SY	25
		NW Corner - 5th St NE	SY	18
		NE Corner - 5th St NE	SY </td <td>13</td>	13

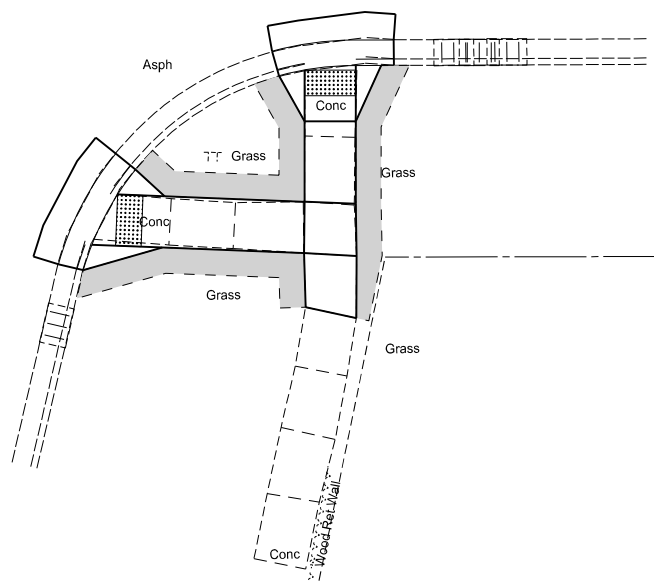
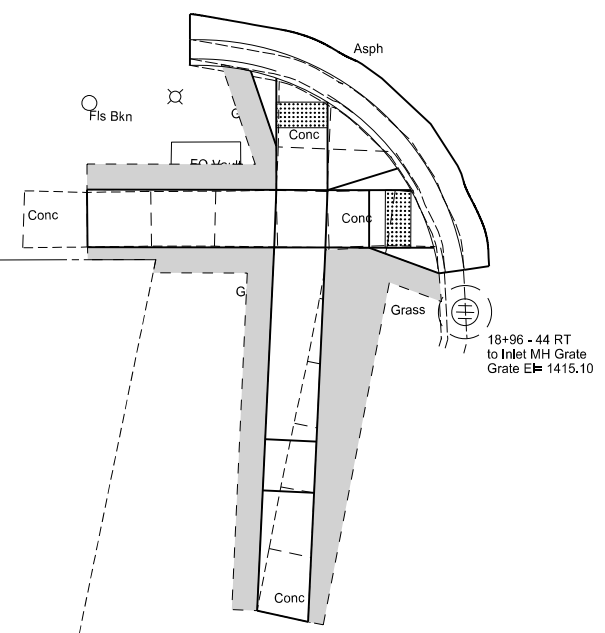


5th St NE

19

20

ND 20 / 5th Ave NE

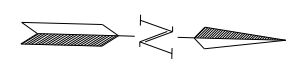


18" x 96" - 44 RT
to Inlet MH Grate
Grate E= 1415.10

Landscape Preparation

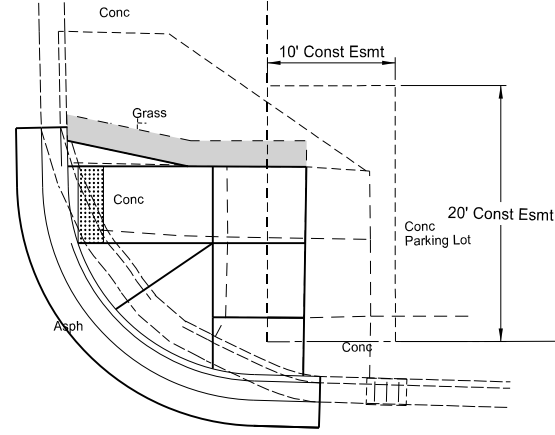
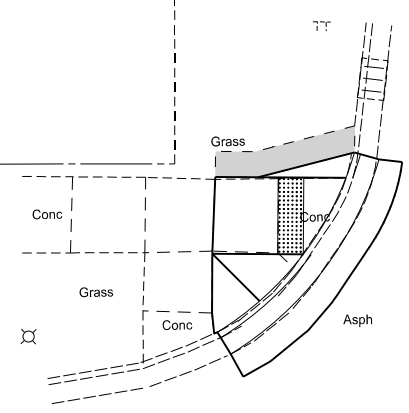
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PERMANENT EROSION CONTROL
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE
City of Jamestown, Stutsman County, ND



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	77	7

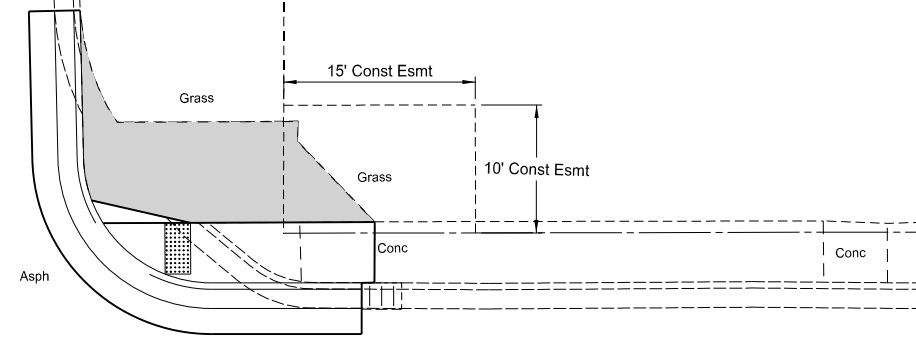
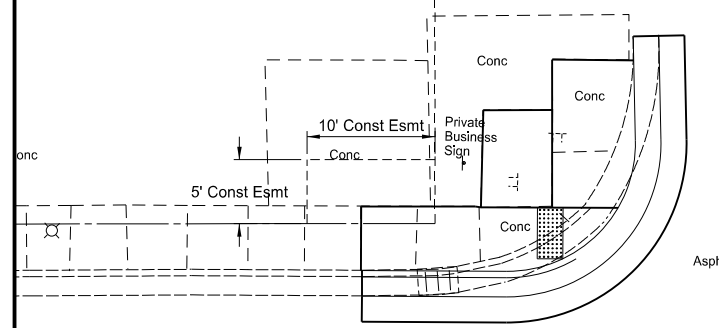
SPEC	CODE	BID ITEM	UNIT	QTY
970	0008	Landscape Preparation		
		SW Corner - 8th St NE	SY	2
		NW Corner - 8th St NE	SY	4
		NW Corner - 9th St NE	SY	17



ND 20 / 5th Ave NE

8th St NE

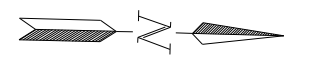
31



ND 20 / 5th Ave NE

9th St NE

35



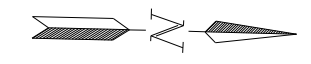
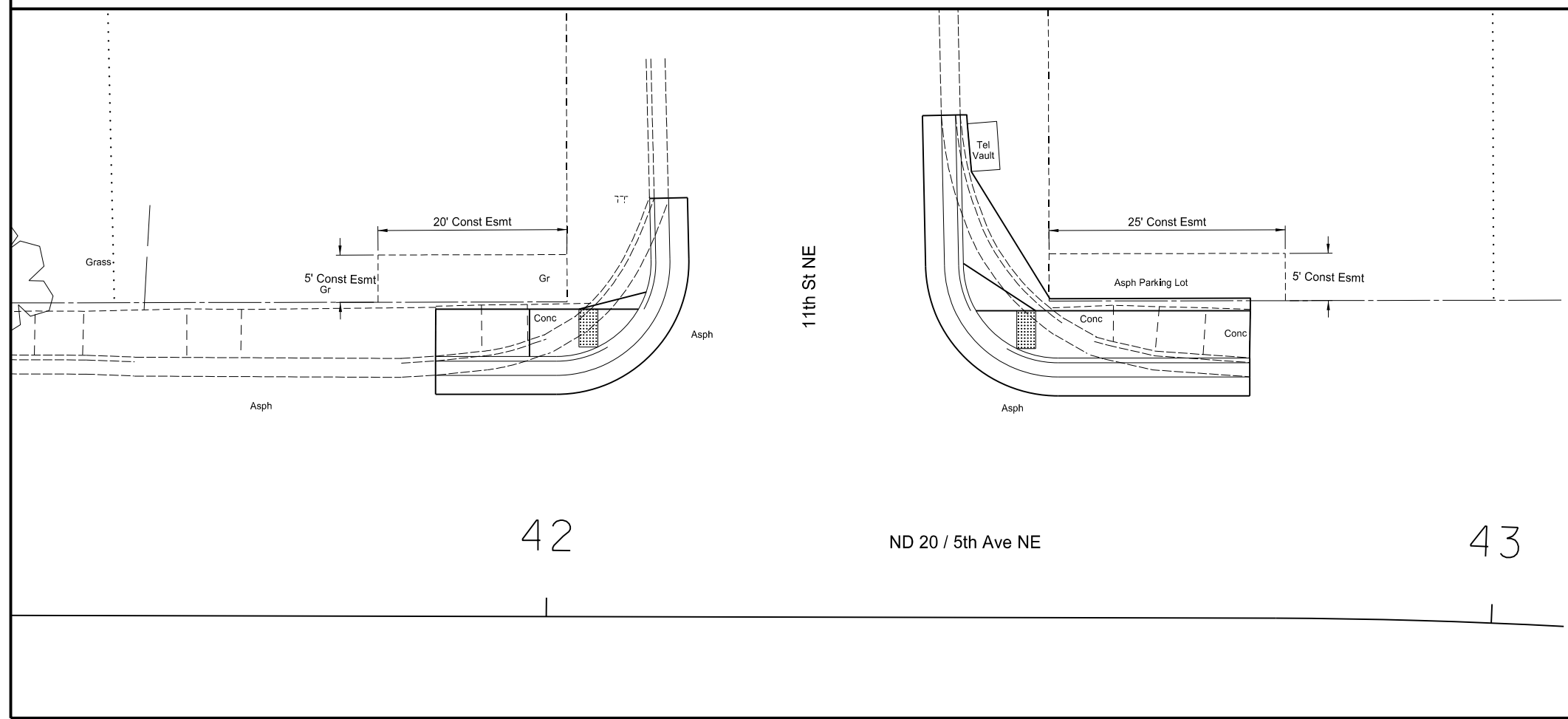
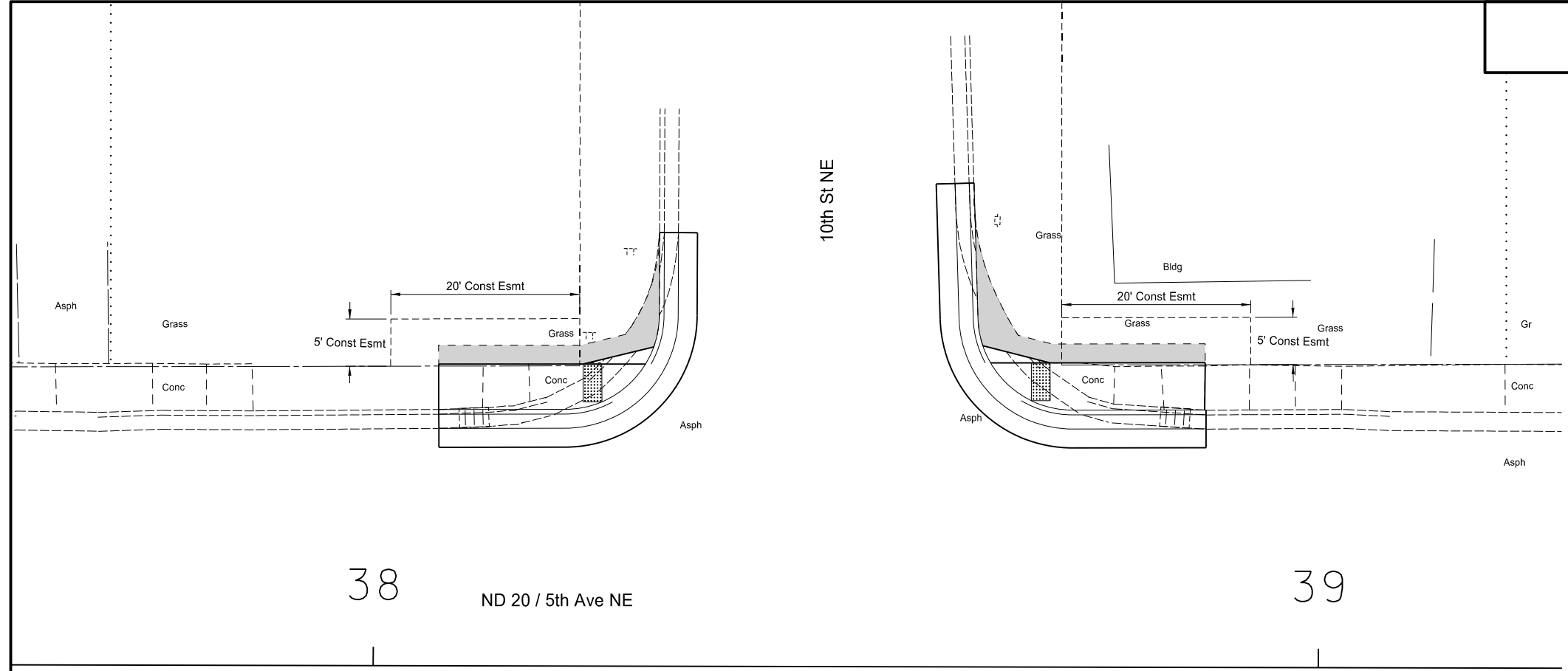
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█ Landscape Preparation

PERMANENT EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	77	8

SPEC	CODE	BID ITEM	UNIT	QTY
970	0008	Landscape Preparation		
		SW Corner - 10th St NE	SY	6
		NW Corner - 10th St NE	SY	7



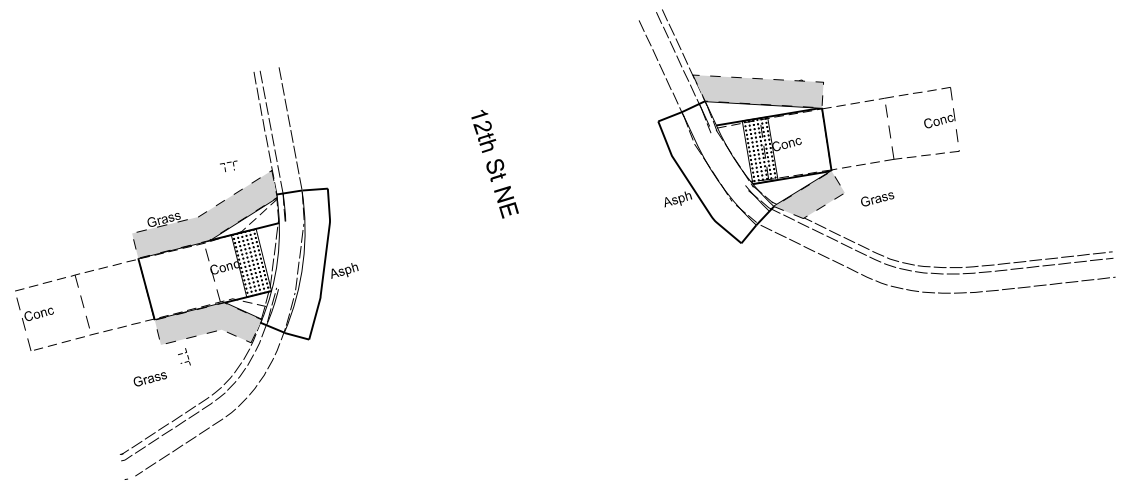
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PERMANENT EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

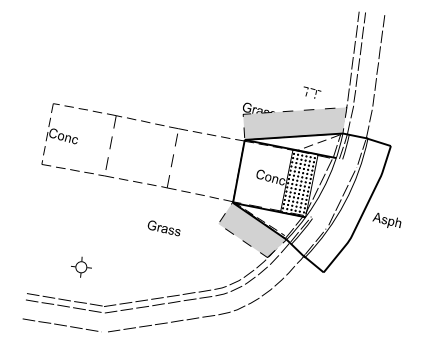
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	77	9

SPEC	CODE	BID ITEM	UNIT	QTY
970	0008	Landscape Preparation		
		SW Corner - 12th St NE	SY	4
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		NW Corner - 13th St NE	SY </td <td>4</td>	4



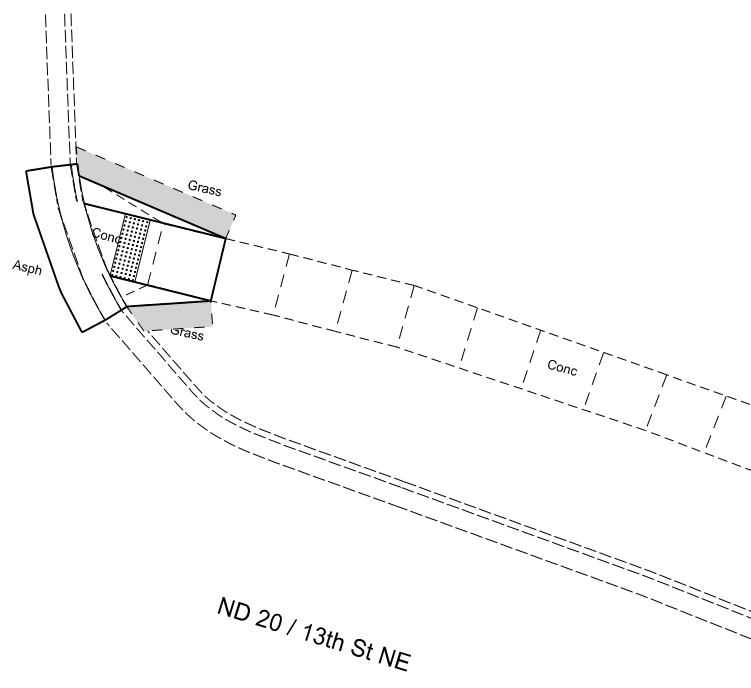
ND 20 / 5th Ave NE

46

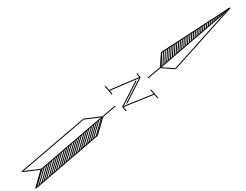


ND 20 / 5th Ave NE

48



ND 20 / 13th St NE



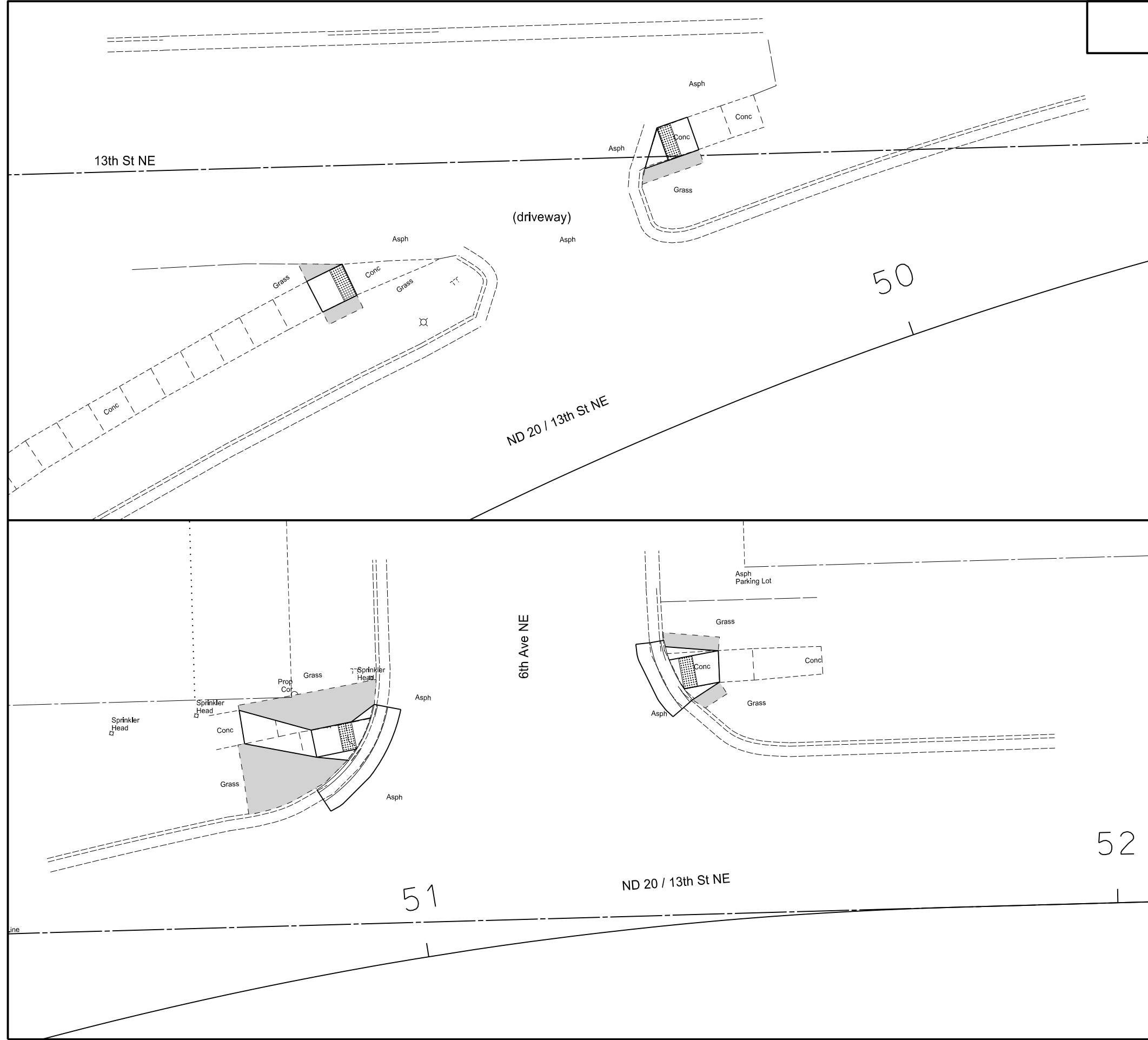
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█ Landscape Preparation


PERMANENT EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

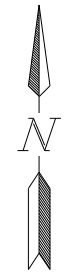
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	77	10

SPEC	CODE	BID ITEM	UNIT	QTY
970	0008	Landscape Preparation		
		NW Corner - 13th St NE - Driveway	SY	2
		NE Corner - 13th St NE - Driveway	SY	2
		NW Corner - 6th Ave NE	SY	19
		NE Corner - 6th Ave NE	SY	3



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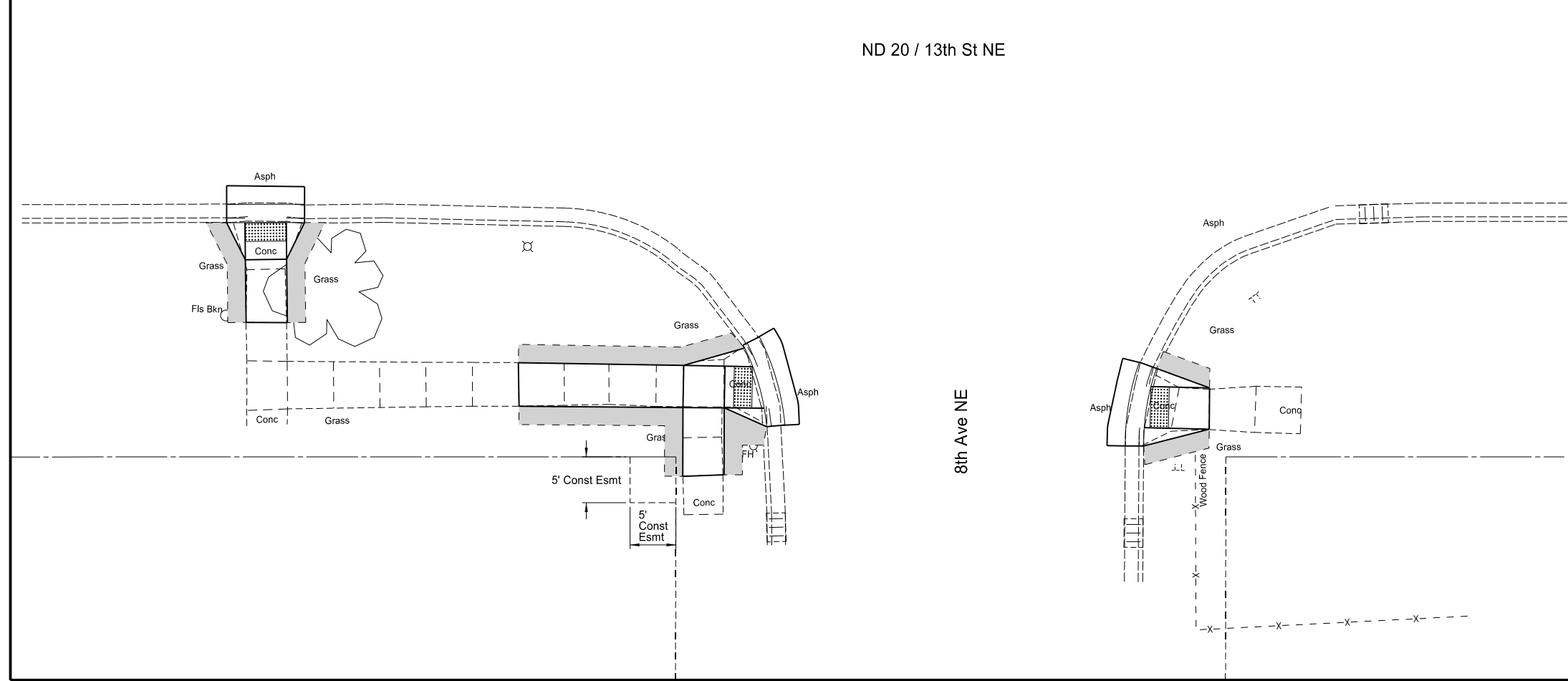
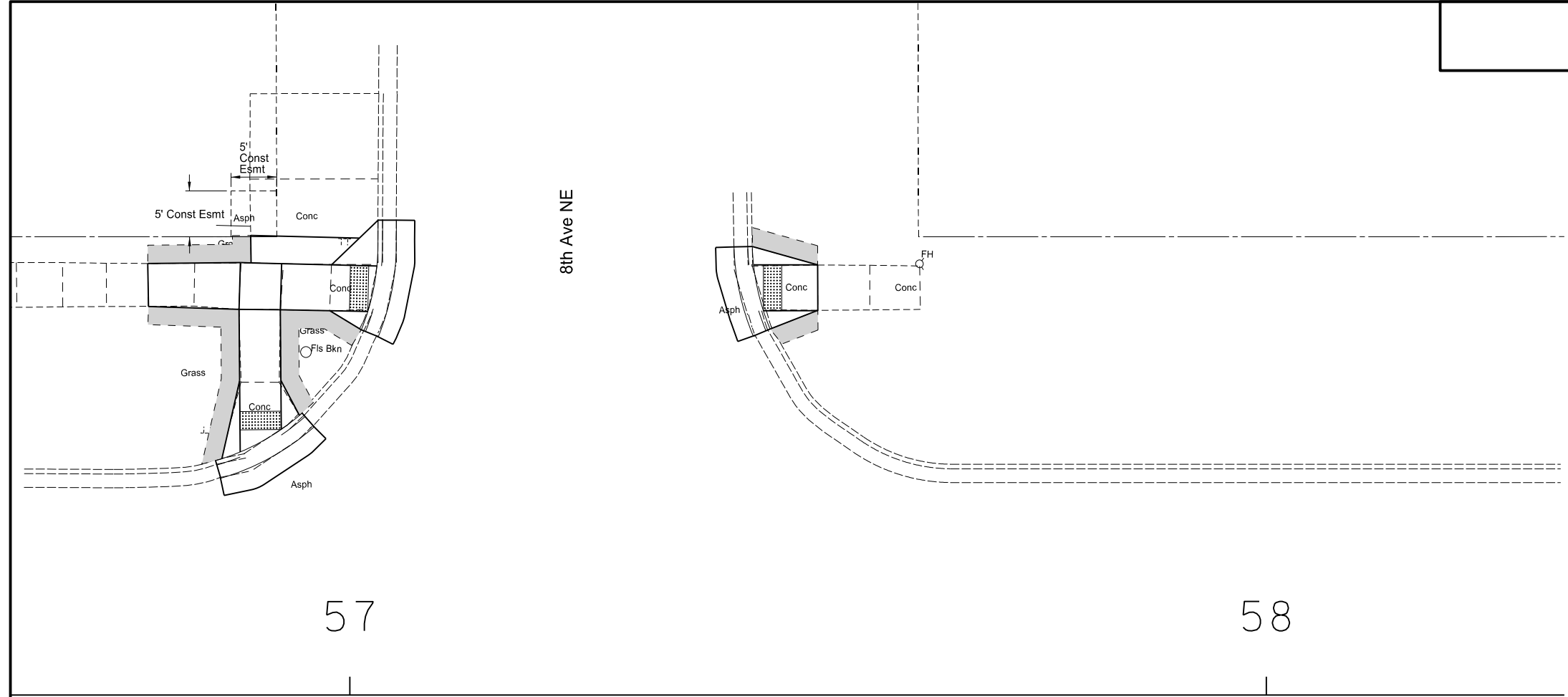
 Landscape Preparation



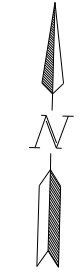
PERMANENT EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	77	11

SPEC	CODE	BID ITEM	UNIT	QTY
970	0008	Landscape Preparation		
		NW Corner - 8th Ave NE	SY	12
		SW Corner - 8th Ave NE	SY	18
		NE Corner - 8th Ave NE	SY	3
		SE Corner - 8th Ave NE	SY	3



█ Landscape Preparation

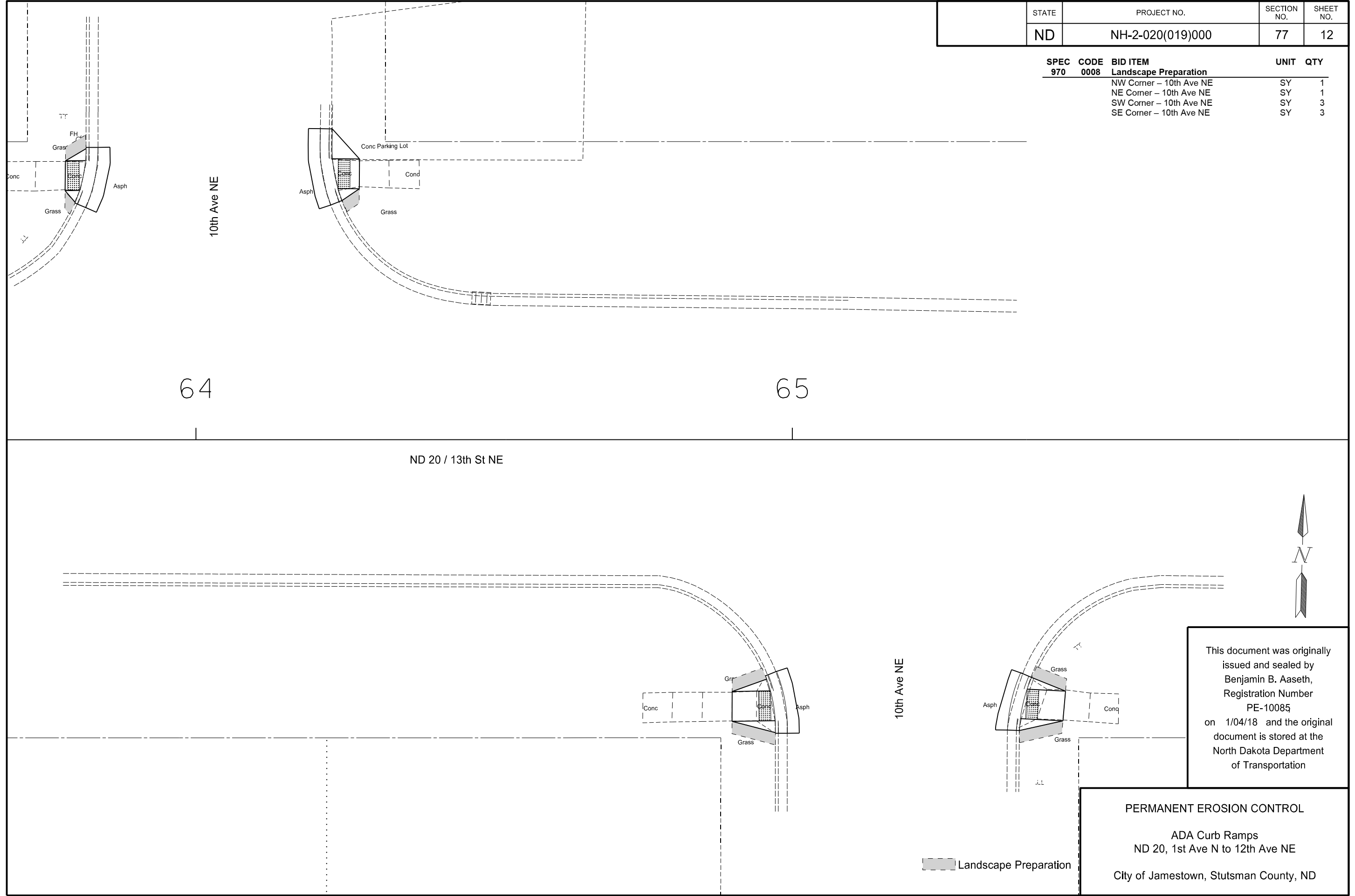


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PERMANENT EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	77	12

SPEC	CODE	BID ITEM	UNIT	QTY
970	0008	Landscape Preparation		
		NW Corner - 10th Ave NE	SY	1
		NE Corner - 10th Ave NE	SY	1
		SW Corner - 10th Ave NE	SY	3
		SE Corner - 10th Ave NE	SY	3

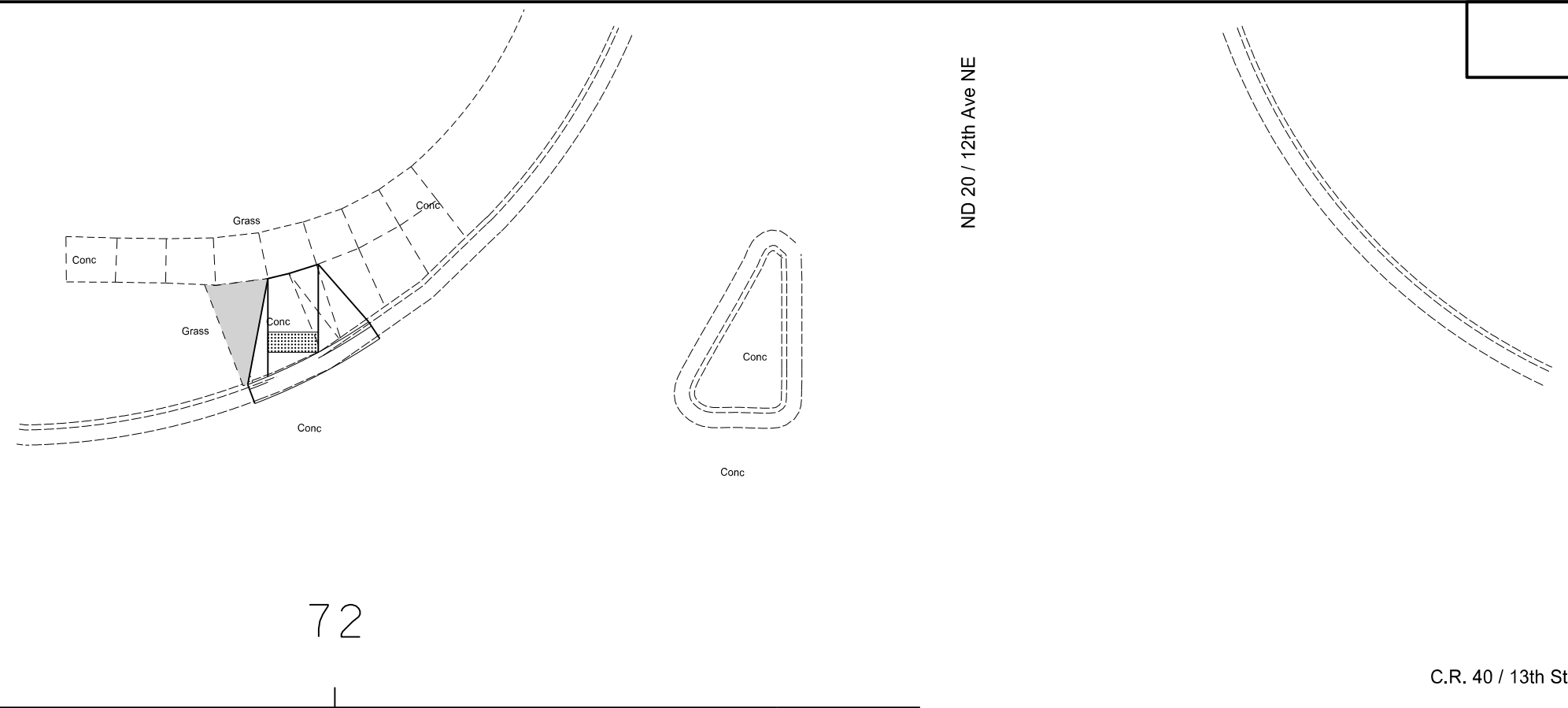


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PERMANENT EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

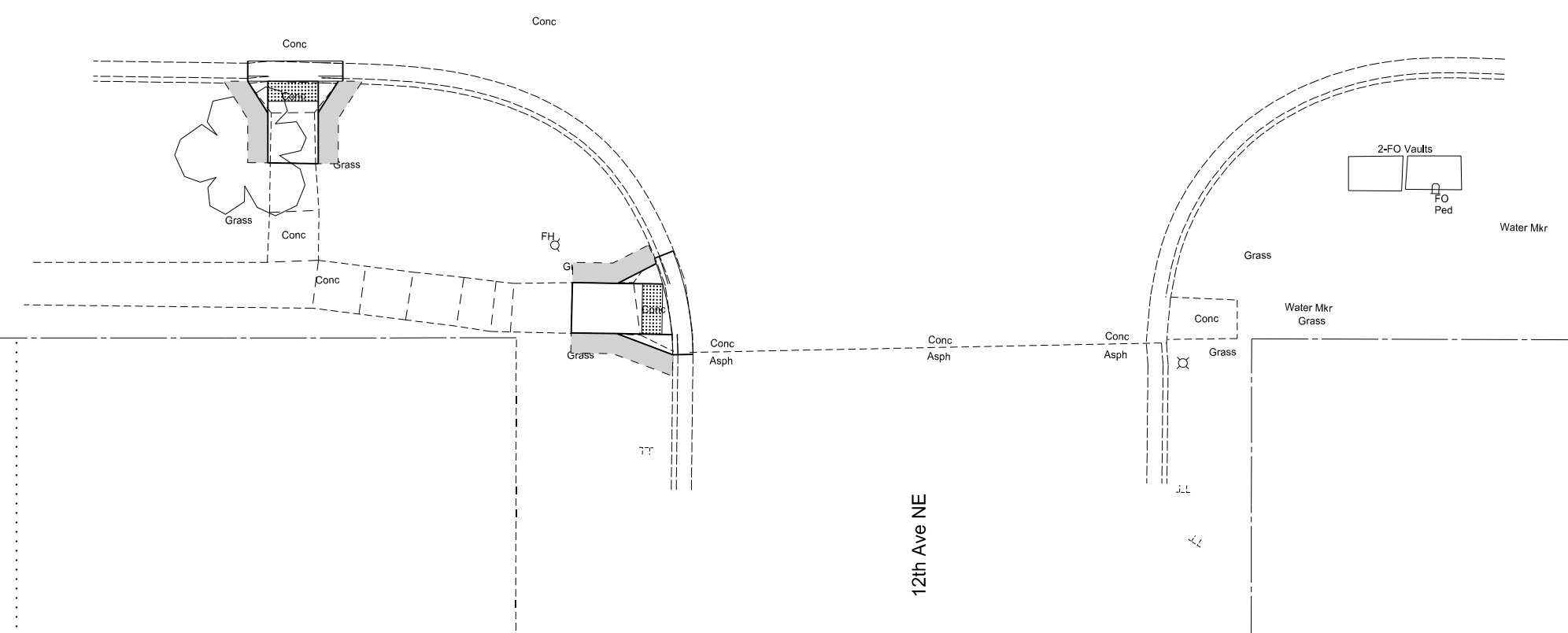
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	77	13

SPEC	CODE	BID ITEM	UNIT	QTY
970	0008	Landscape Preparation		
		NW Corner - 12th Ave NE	SY	4
		SW Corner - 12th Ave NE	SY	8

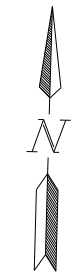


ND 20 / 13th St NE

C.R. 40 / 13th St NE



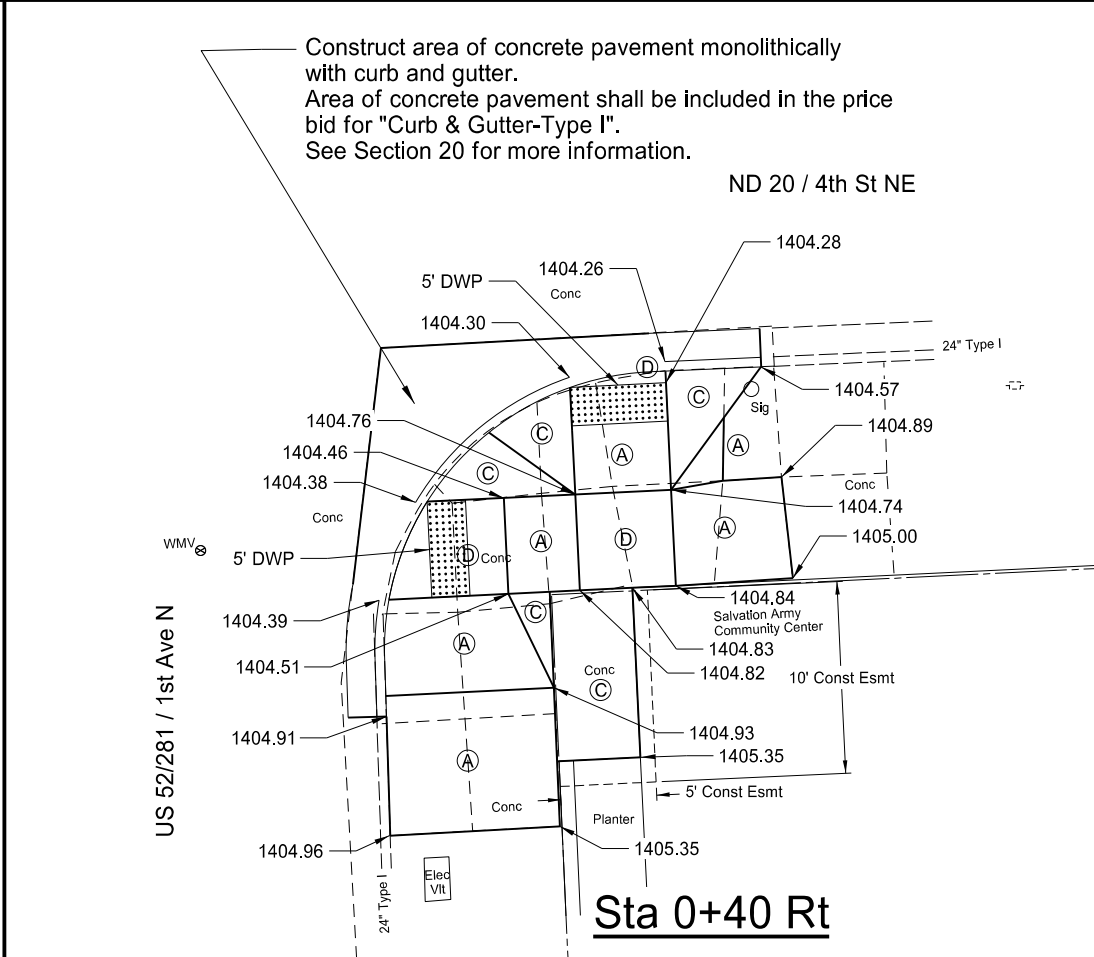
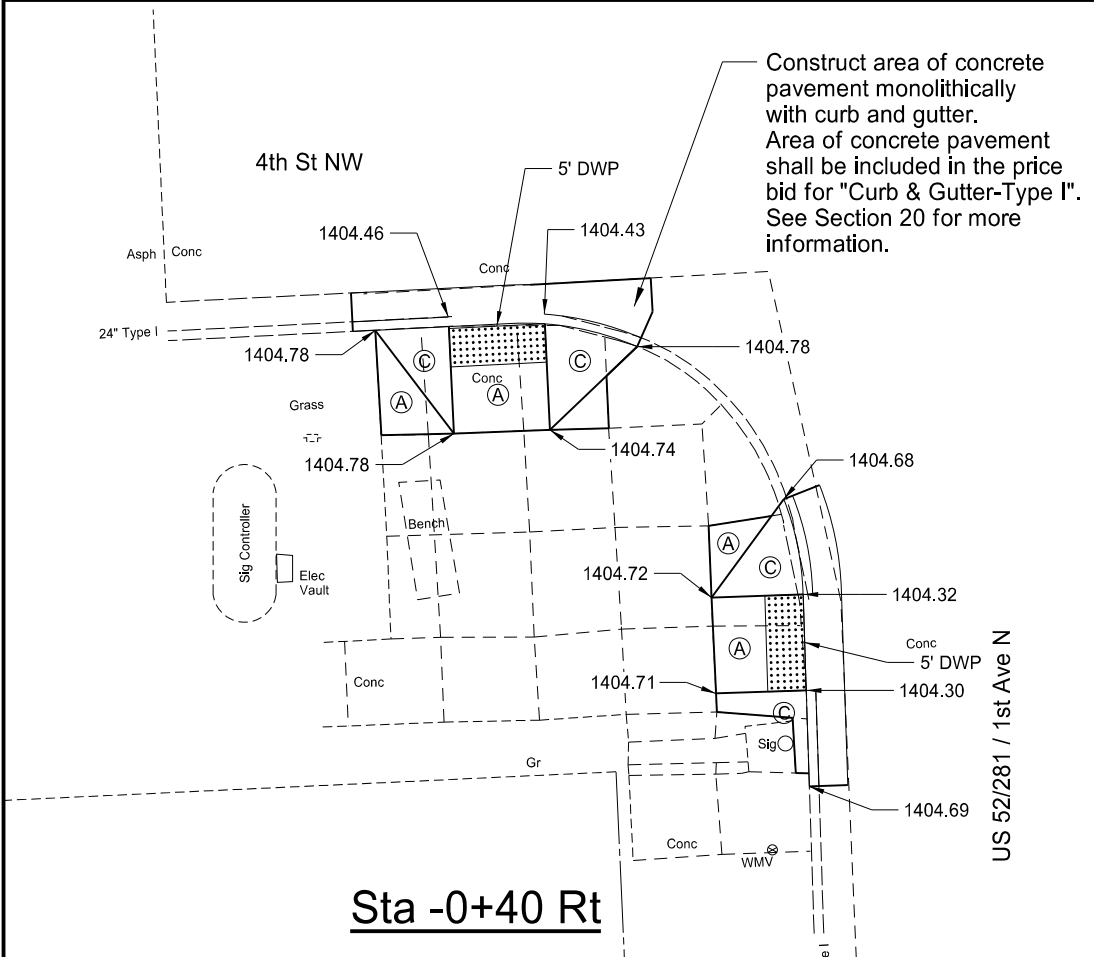
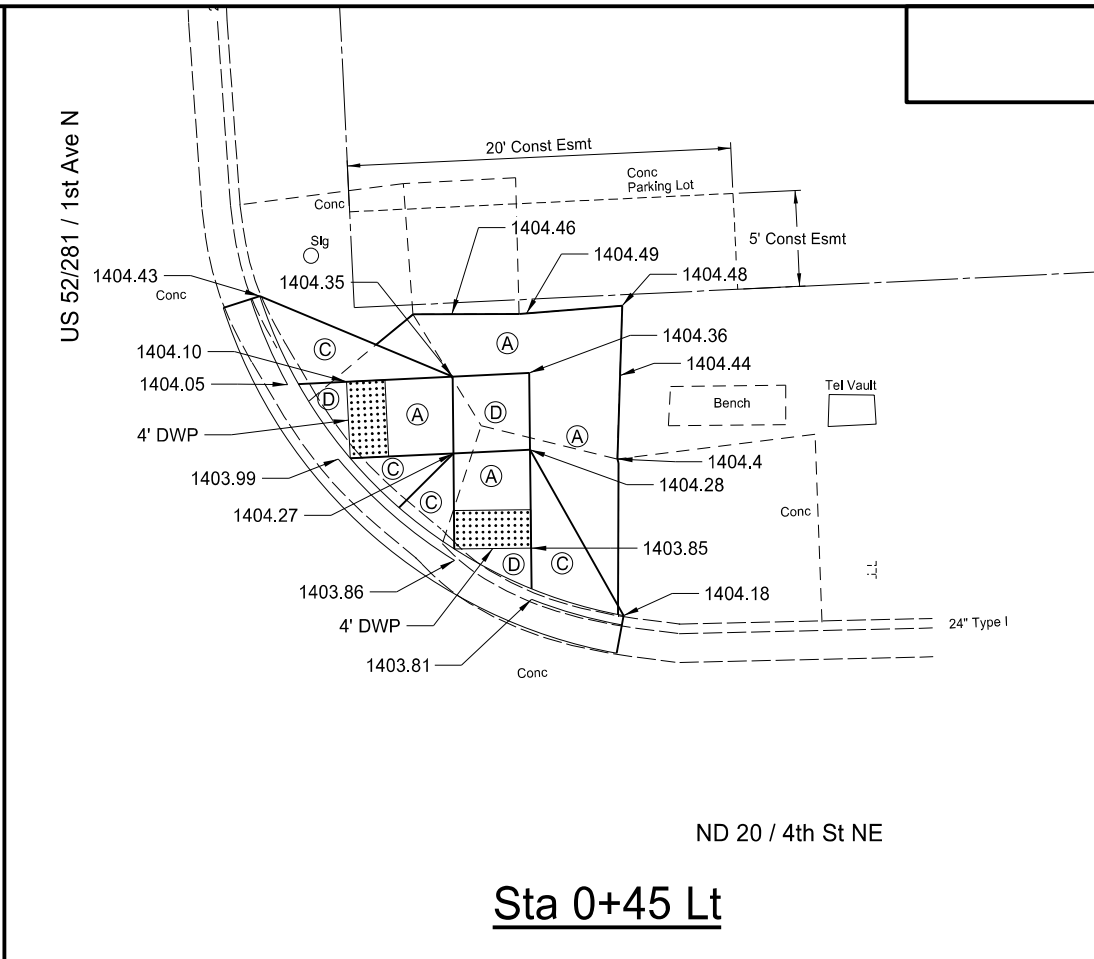
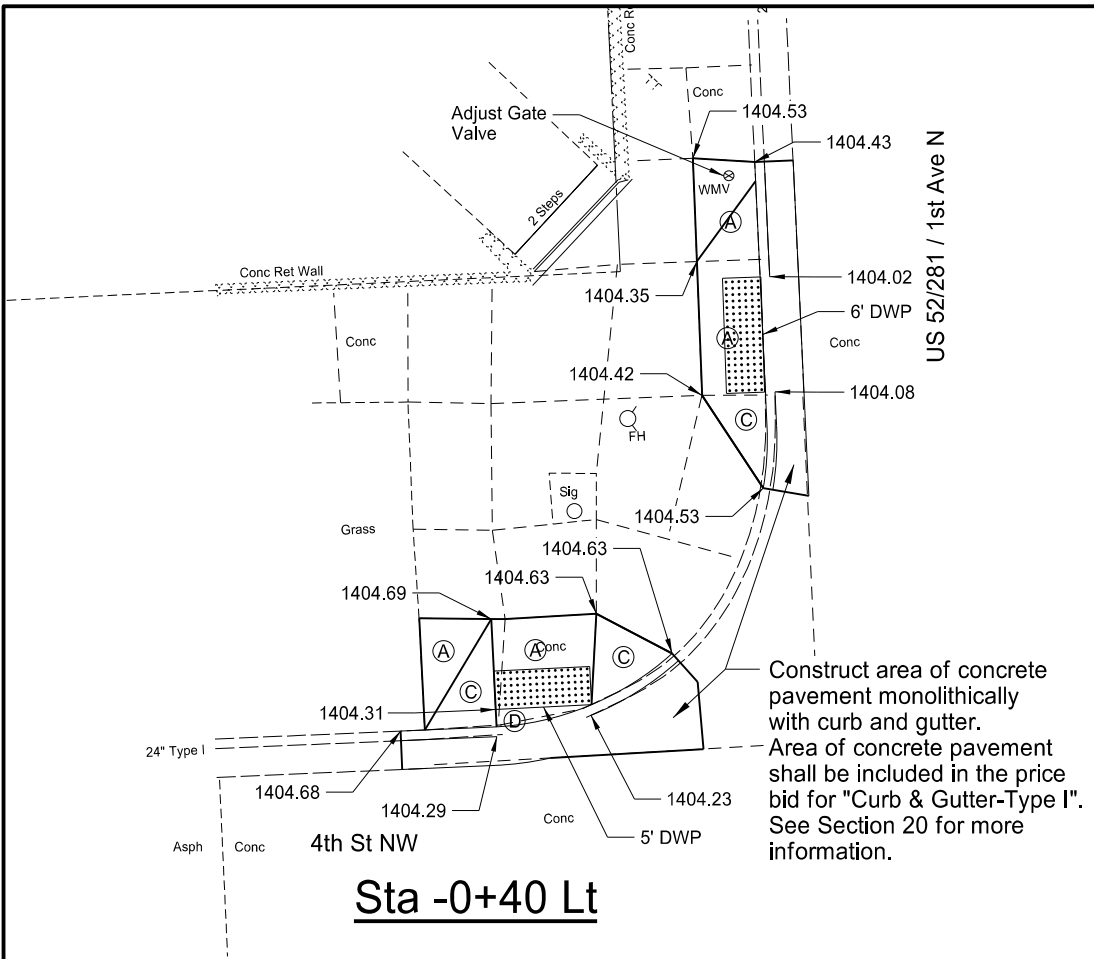
█ Landscape Preparation



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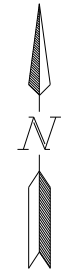
PERMANENT EROSION CONTROL
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

SPEC	CODE	BID ITEM	UNIT	QTY
302	0121	Aggregate Base Course CL 5		
		-0+40 Lt	CY	1
		-0+40 Rt	CY	1
		0+40 Rt	CY	6
		0+45 Lt	CY	2
722	6140	Adjust Gate Valve Box	EA	1
748	0140	Curb & Gutter-Type I		
		-0+40 Lt	LF	33
		-0+40 Rt	LF	31
		0+40 Rt	LF	28
		0+45 Lt	LF	33
750	0100	Sidewalk Concrete		
		-0+40 Lt	SY	12
		-0+40 Rt	SY	12
		0+40 Rt	SY	36
		0+45 Lt	SY	21
750	2115	Detectable Warning Panel		
		-0+40 Lt	SF	22
		-0+40 Rt	SF	20
		0+40 Rt	SF	20
		0+45 Lt	SF	16

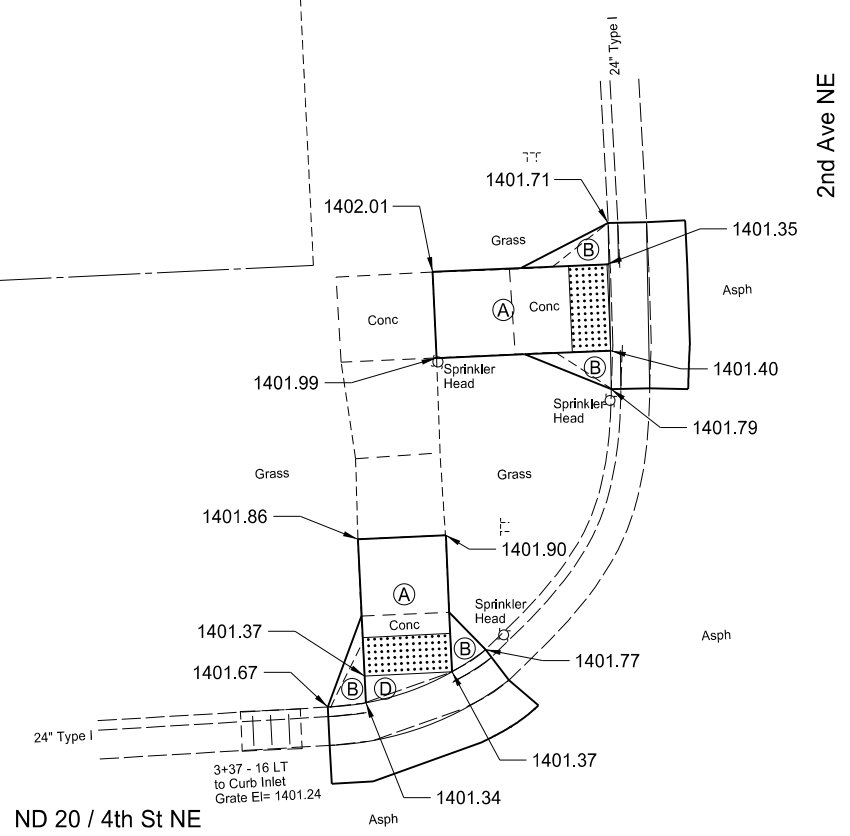


- (A) 8.3% Max Slope
- (B) 25% Max Flare Slope
- (C) 10% Max Flare Slope
- (D) 2% Max Landing

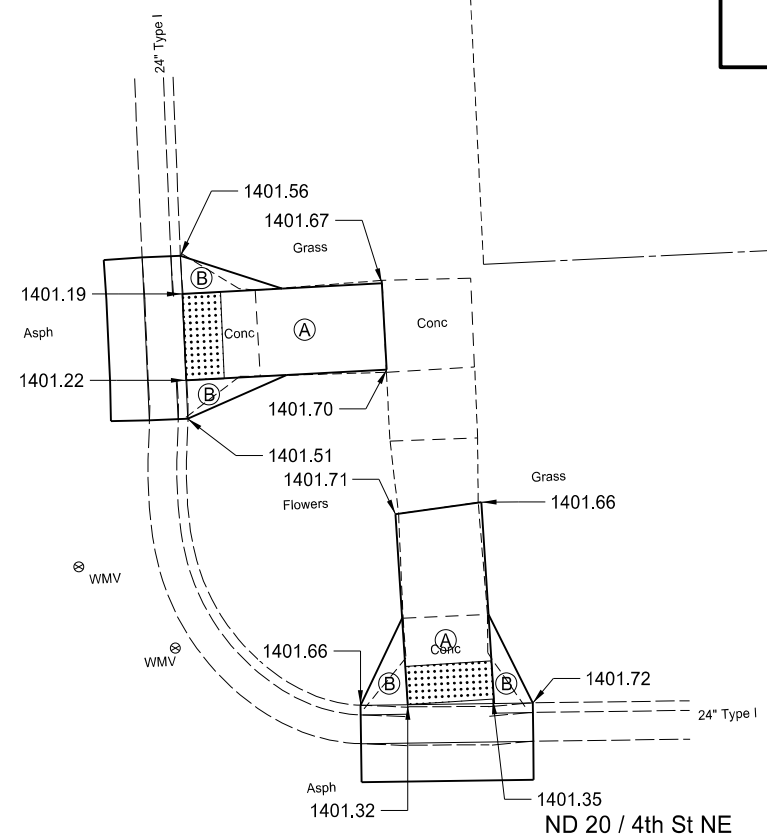
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RAMP LAYOUTS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

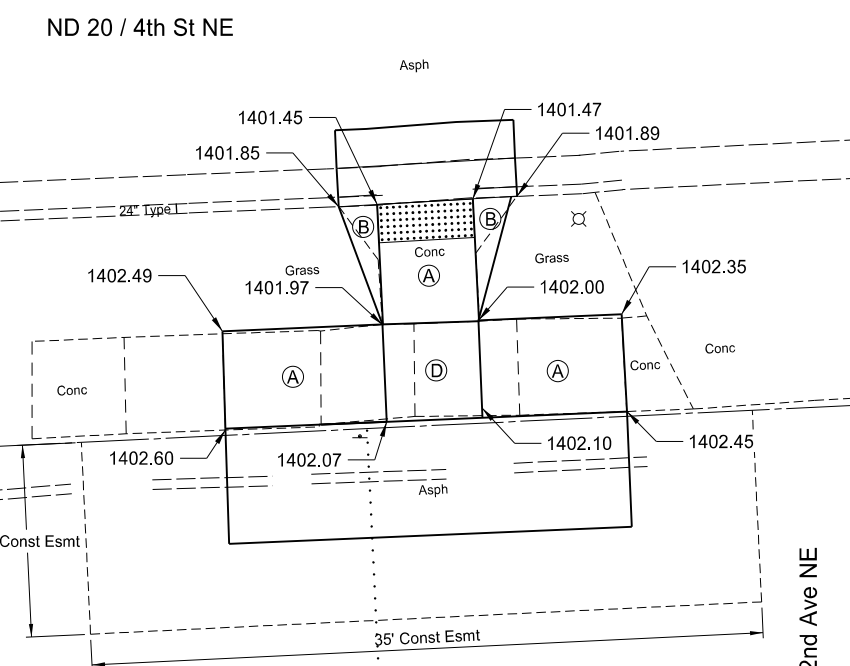


Sta 3+50 Lt

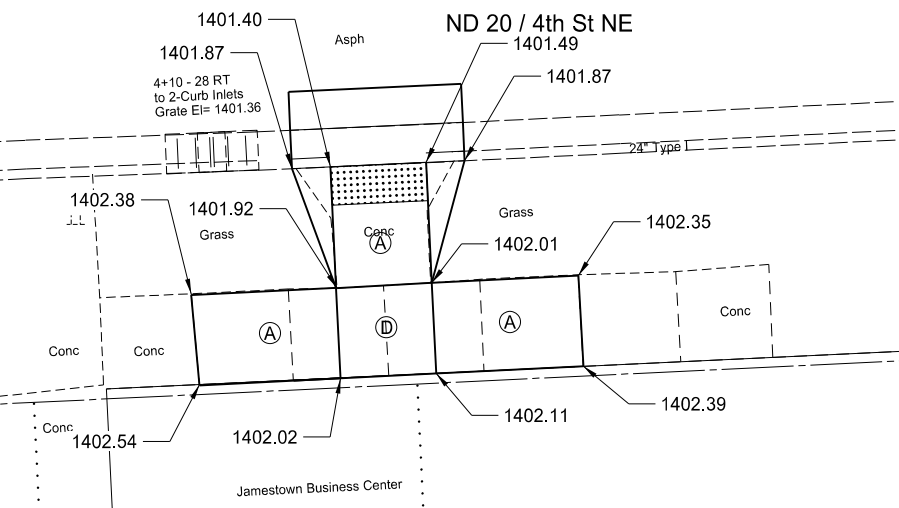


Sta 4+10 Lt

SPEC	CODE	BID ITEM	UNIT	QTY
302	0121	Aggregate Base Course CL 5		
		3+45 Rt	CY	4
		3+50 Lt	CY	3
		4+10 Lt	CY	2
		4+20 Rt	CY	2
430	0500	Commercial Grade Hot Mix Asphalt		
		3+45 Rt	TON	7
		3+50 Lt	TON	2
		4+10 Lt	TON	2
		4+20 Rt	TON	1
748	0140	Curb & Gutter-Type I		
		3+45 Rt	LF	9
		3+50 Lt	LF	18
		4+10 Lt	LF	17
		4+20 Rt	LF	9
750	0100	Sidewalk Concrete		
		3+45 Rt	SY	17
		3+50 Lt	SY	10
		4+10 Lt	SY	13
		4+20 Rt	SY	15
750	2115	Detectable Warning Panel		
		3+45 Rt	SF	10
		3+50 Lt	SF	18
		4+10 Lt	SF	18
		4+20 Rt	SF	10



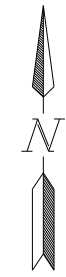
Sta 3+45 Rt



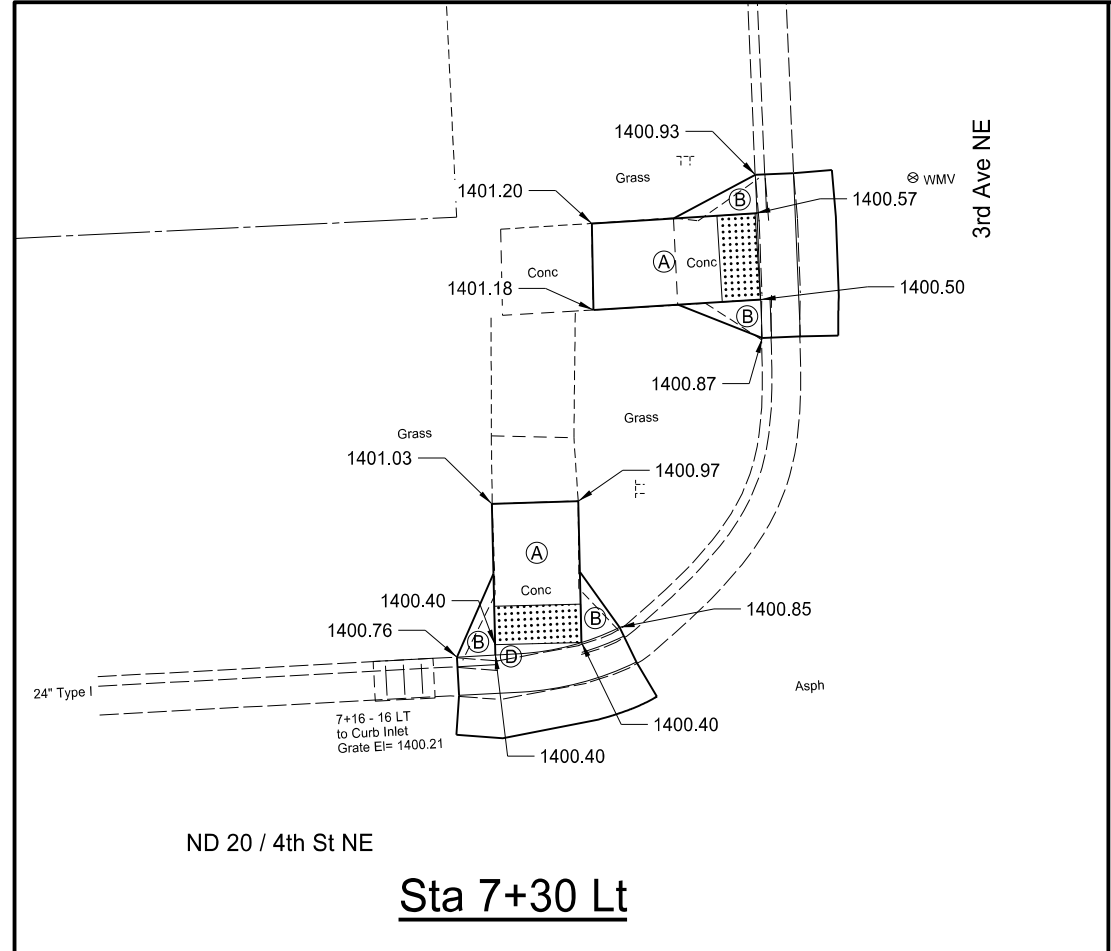
Sta 4+20 Rt

- (A) 8.3% Max Slope
- (B) 25% Max Flare Slope
- (C) 10% Max Flare Slope
- (D) 2% Max Landing

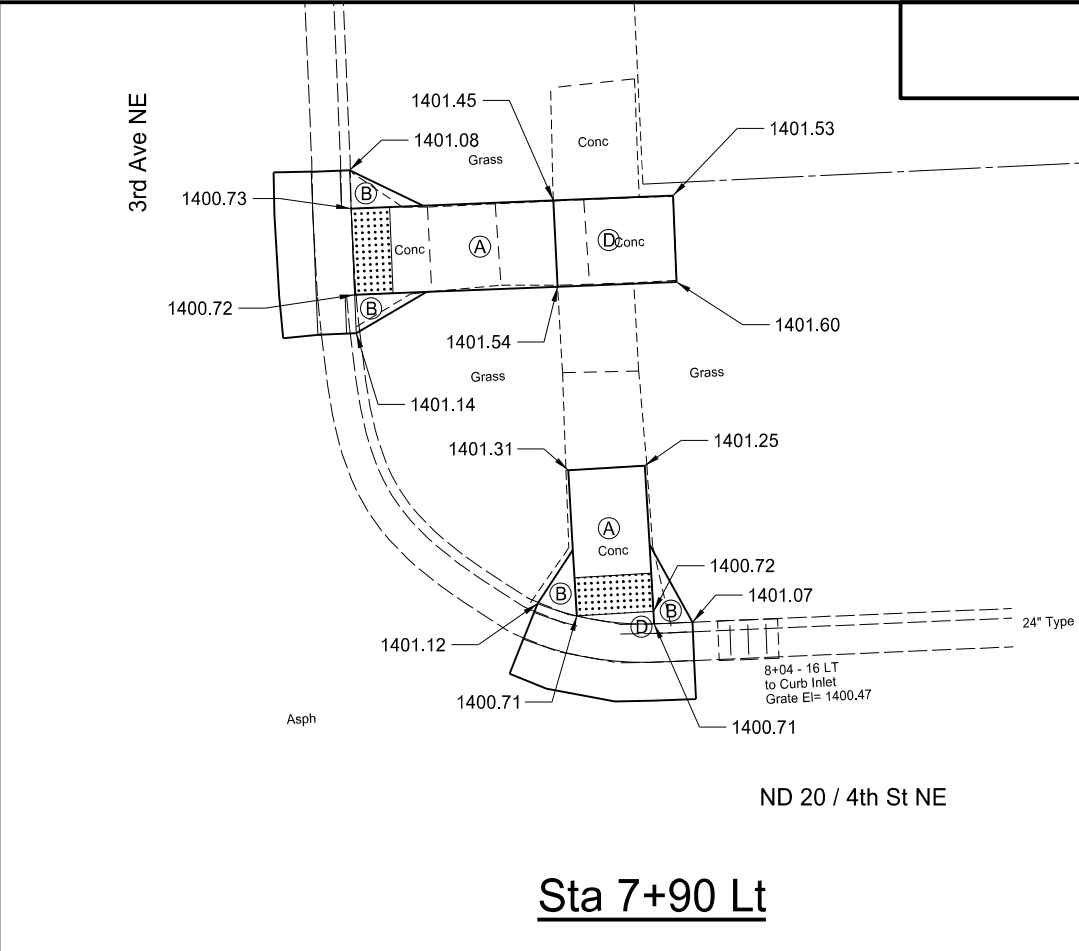
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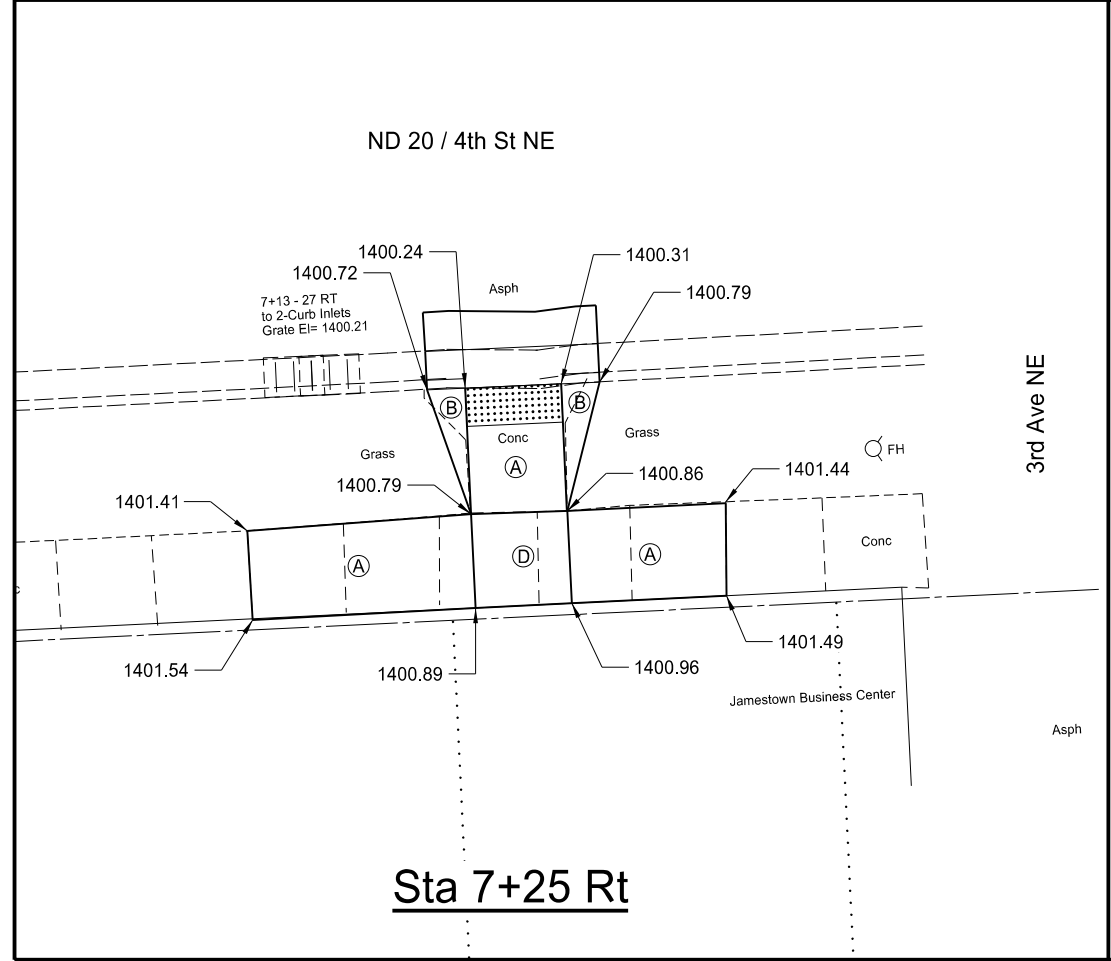
RAMP LAYOUTS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND



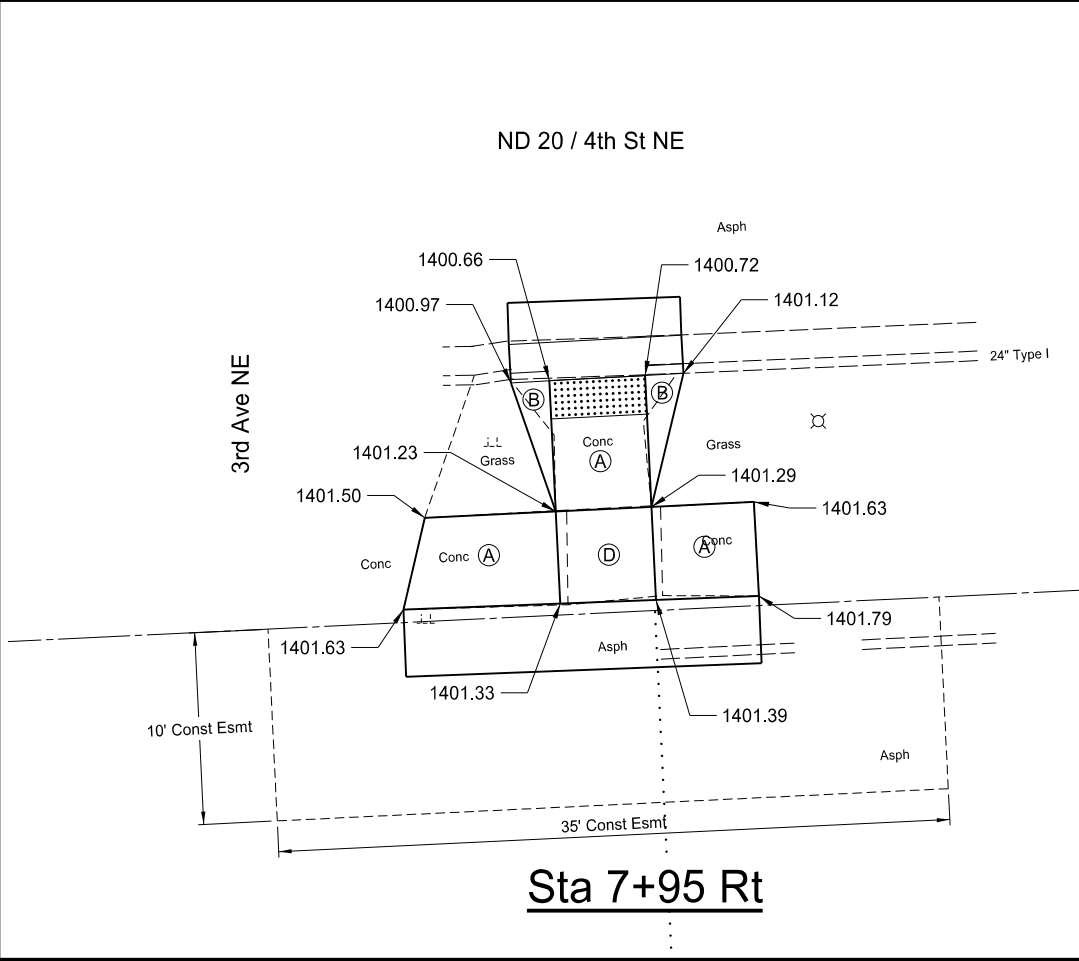
Sta 7+30 Lt



Sta 7+90 Lt



Sta 7+25 Rt

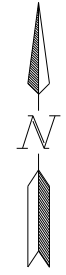


Sta 7+95 Rt

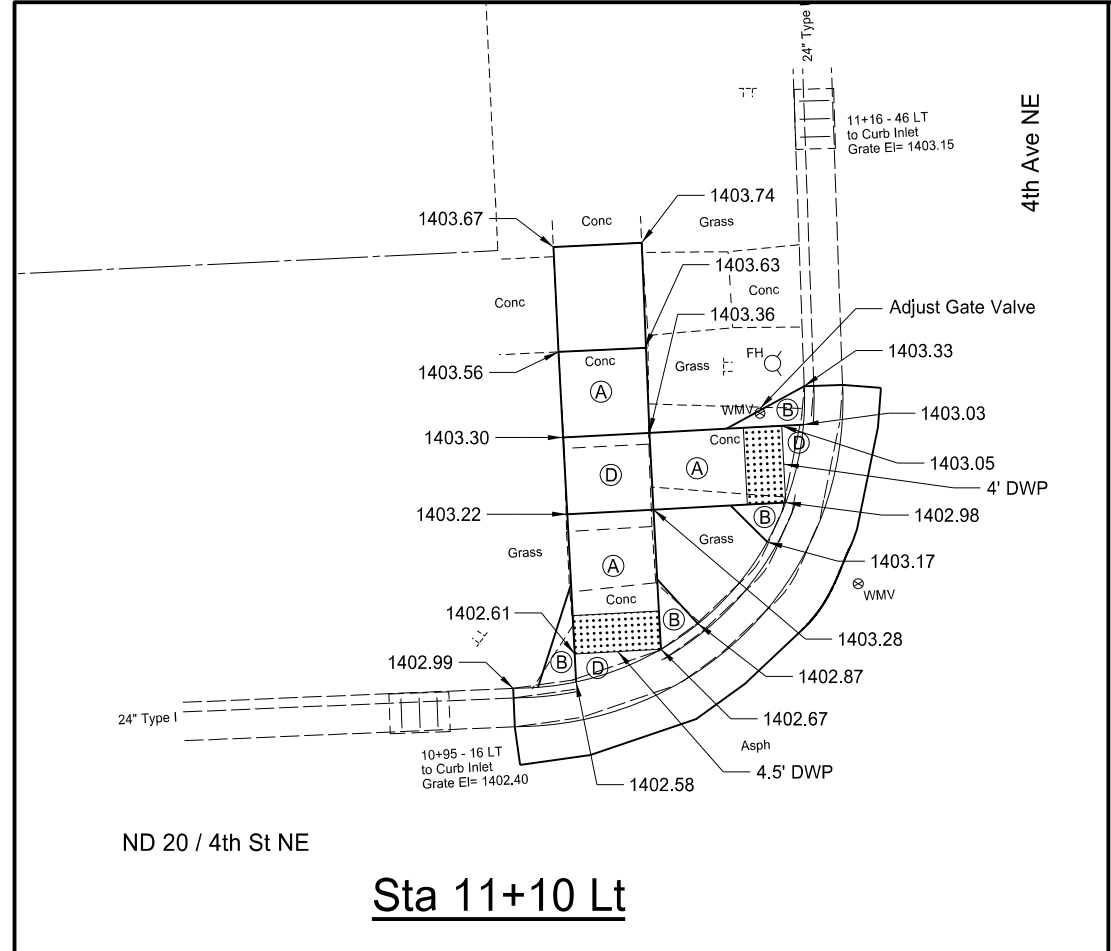
SPEC	CODE	BID ITEM	UNIT	QTY
302	0121	Aggregate Base Course CL 5		
		7+25 Rt	CY	2
		7+30 Lt	CY	2
		7+90 Lt	CY	2
		7+95 Rt	CY	3
430	0500	Commercial Grade Hot Mix Asphalt		
		7+25 Rt	TON	1
		7+30 Lt	TON	2
		7+90 Lt	TON	2
		7+95 Rt	TON	4
748	0140	Curb & Gutter-Type I		
		7+25 Rt	LF	9
		7+30 Lt	LF	18
		7+90 Lt	LF	17
		7+95 Rt	LF	9
750	0100	Sidewalk Concrete		
		7+25 Rt	SY	18
		7+30 Lt	SY	10
		7+90 Lt	SY	14
		7+95 Rt	SY	15
750	2115	Detectable Warning Panel		
		7+25 Rt	SF	10
		7+30 Lt	SF	18
		7+90 Lt	SF	17
		7+95 Rt	SF	10

- (A) 8.3% Max Slope
- (B) 25% Max Flare Slope
- (C) 10% Max Flare Slope
- (D) 2% Max Landing

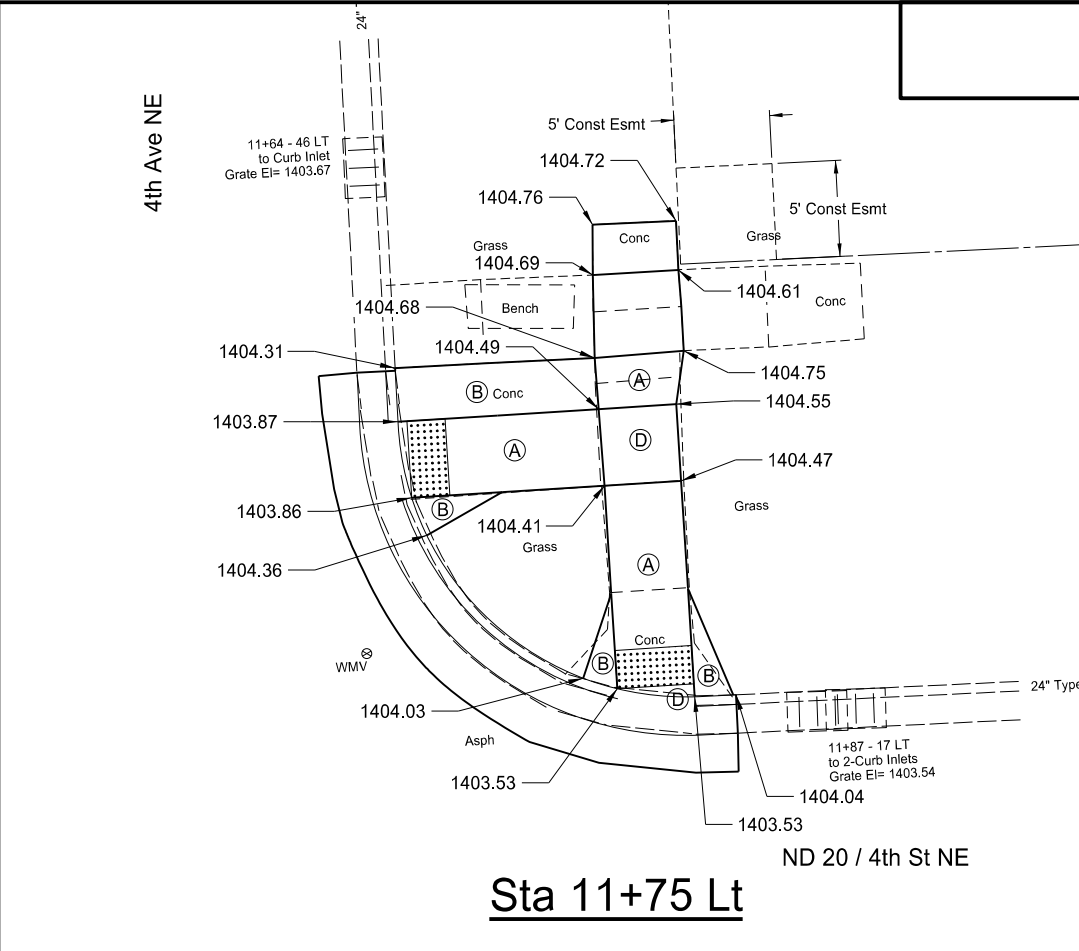
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RAMP LAYOUTS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

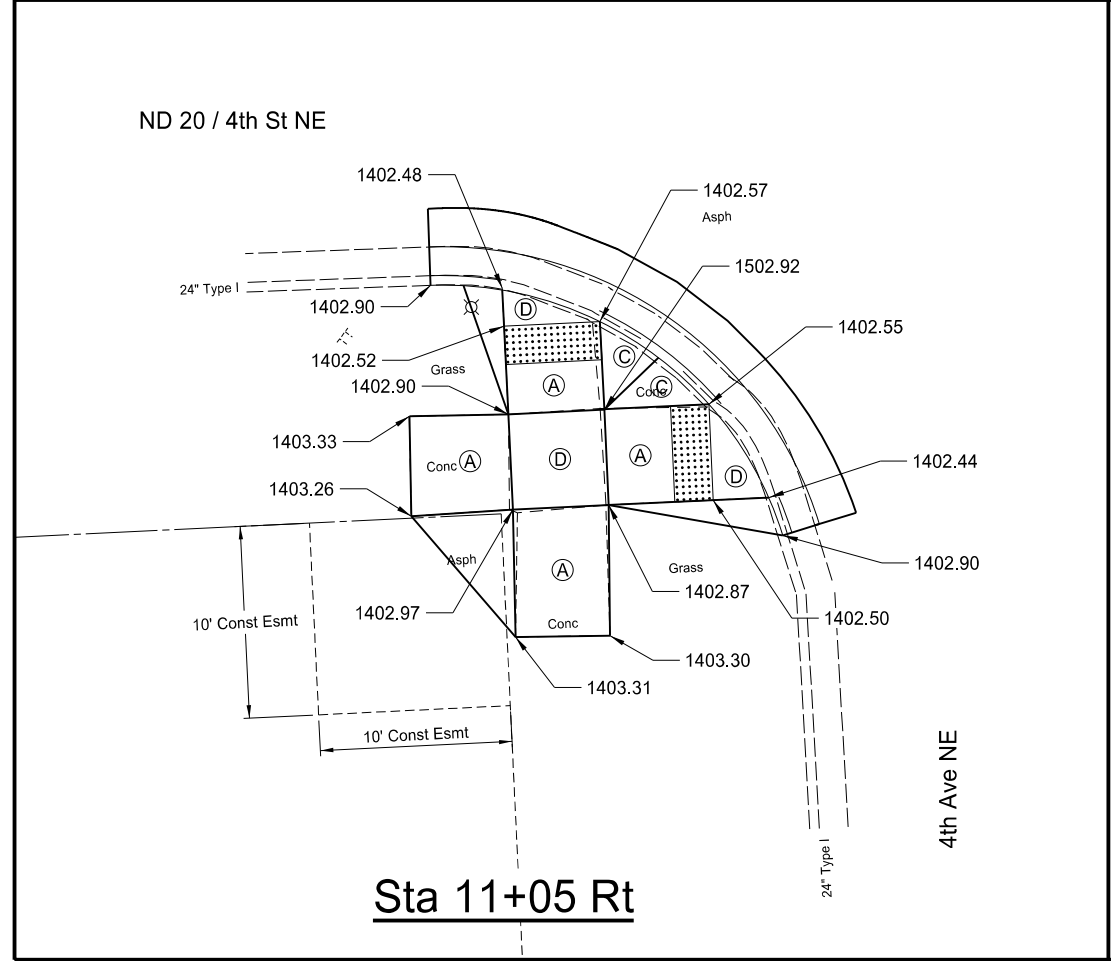


Sta 11+10 Lt

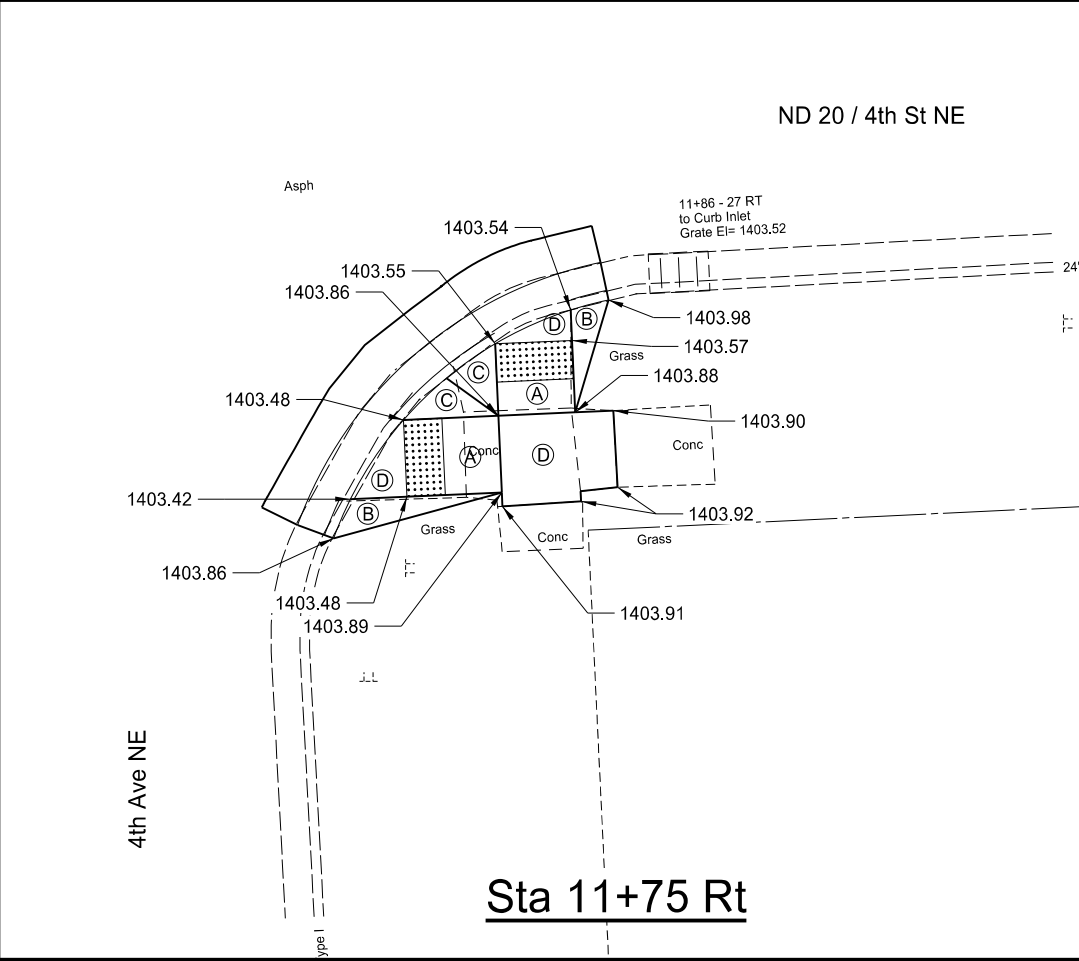


Sta 11+75 Lt

SPEC	CODE	BID ITEM	UNIT	QTY
302	0121	Aggregate Base Course CL 5		
		11+05 Rt	CY	3
		11+10 Lt	CY	2
		11+75 Lt	CY	3
		11+75 Rt	CY	2
430	0500	Commercial Grade Hot Mix Asphalt		
		11+05 Rt	TON	3
		11+10 Lt	TON	3
		11+75 Lt	TON	3
		11+75 Rt	TON	2
722	6140	Adjust Gate Valve Box		
		11+10 Lt	EA	1
748	0140	Curb & Gutter-Type I		
		11+05 Rt	LF	25
		11+10 Lt	LF	26
		11+75 Lt	LF	30
		11+75 Rt	LF	21
750	0100	Sidewalk Concrete		
		11+05 Rt	SY	20
		11+10 Lt	SY	16
		11+75 Lt	SY	21
		11+75 Rt	SY	11
750	2115	Detectable Warning Panel		
		11+05 Rt	SF	20
		11+10 Lt	SF	17
		11+75 Lt	SF	16
		11+75 Rt	SF	16



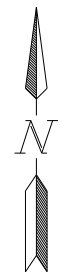
Sta 11+05 Rt



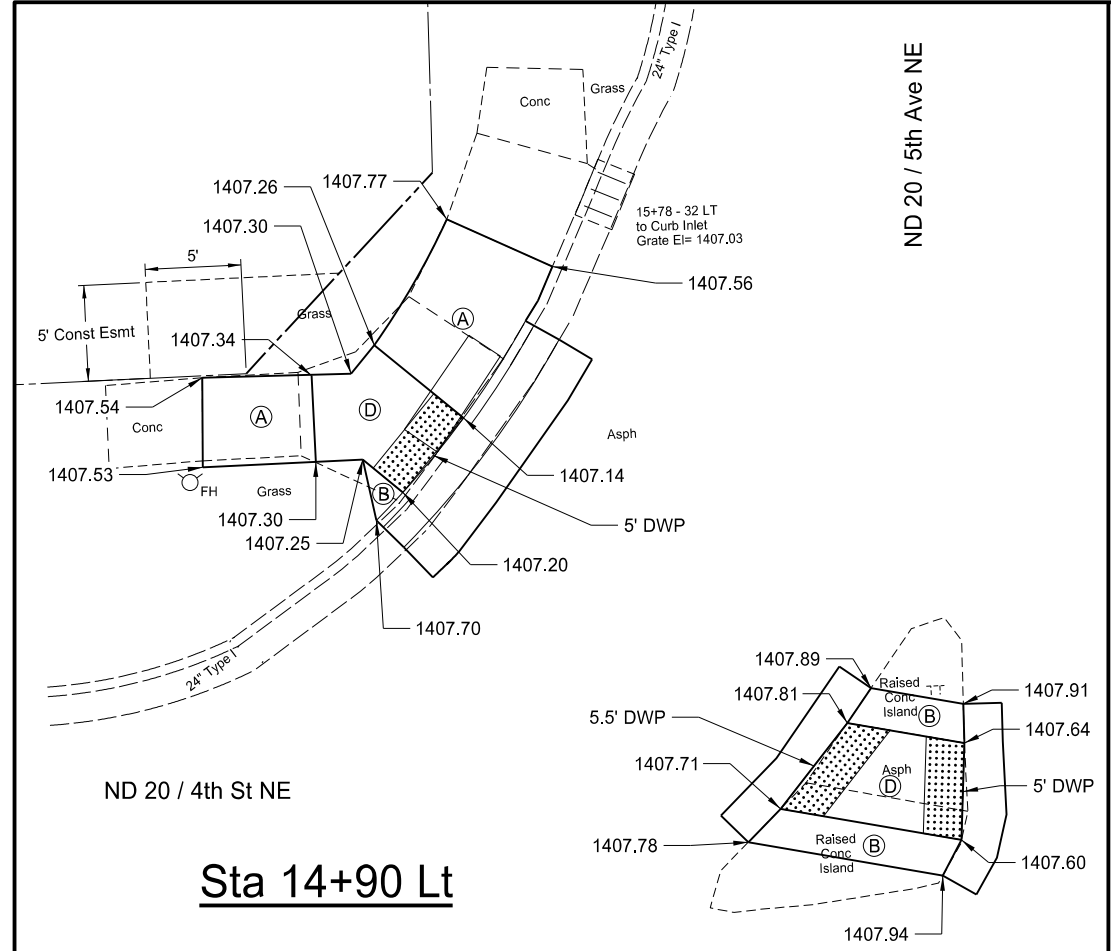
Sta 11+75 Rt

- (A) 8.3% Max Slope
- (B) 25% Max Flare Slope
- (C) 10% Max Flare Slope
- (D) 2% Max Landing

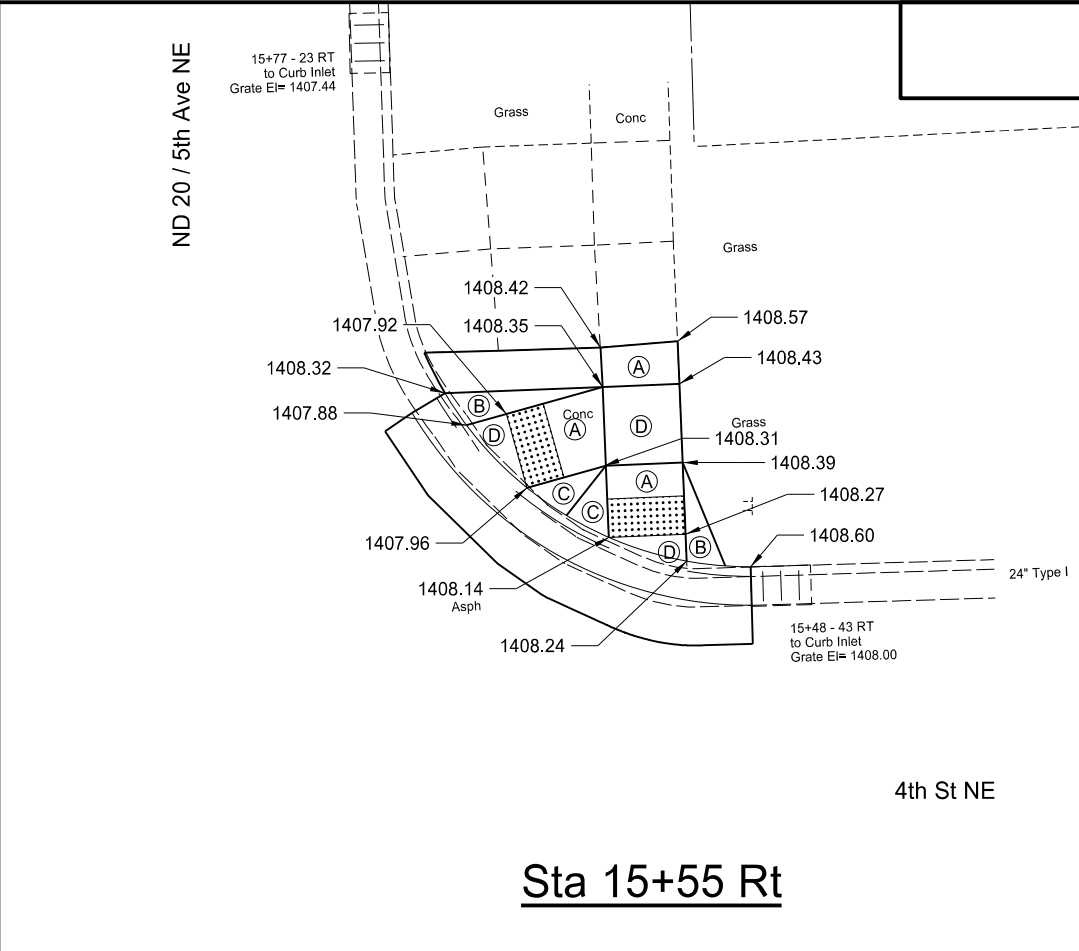
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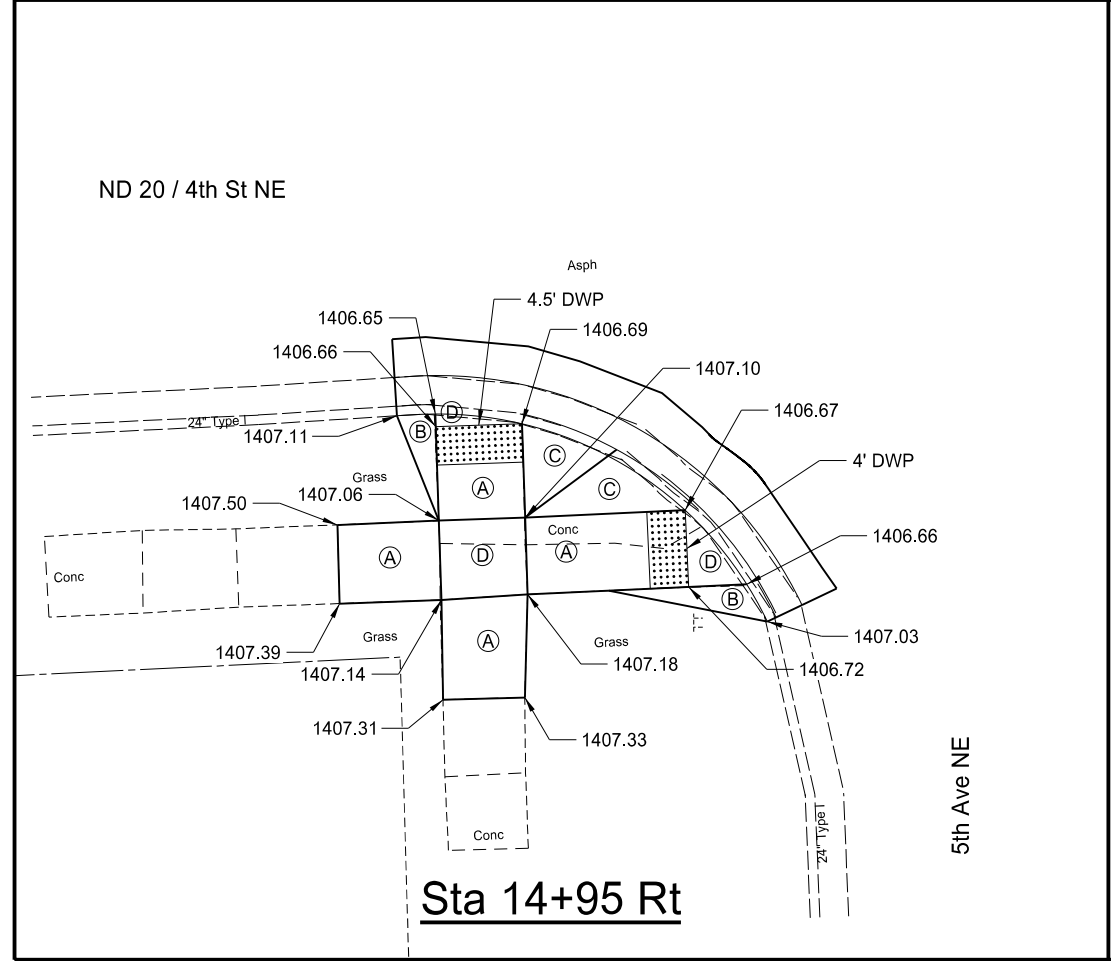
RAMP LAYOUTS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND



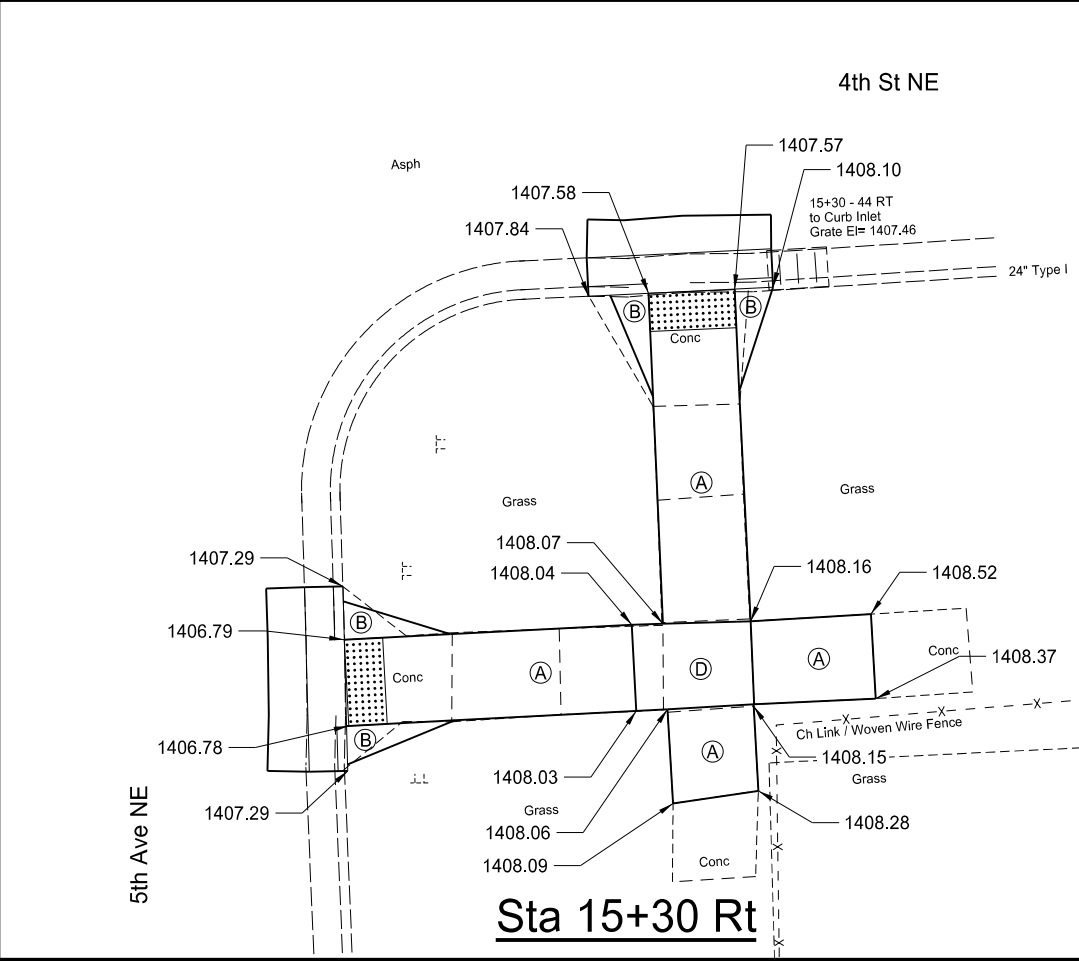
Sta 14+90 Lt



Sta 15+55 Rt



Sta 14+95 Rt



Sta 15+30 Rt

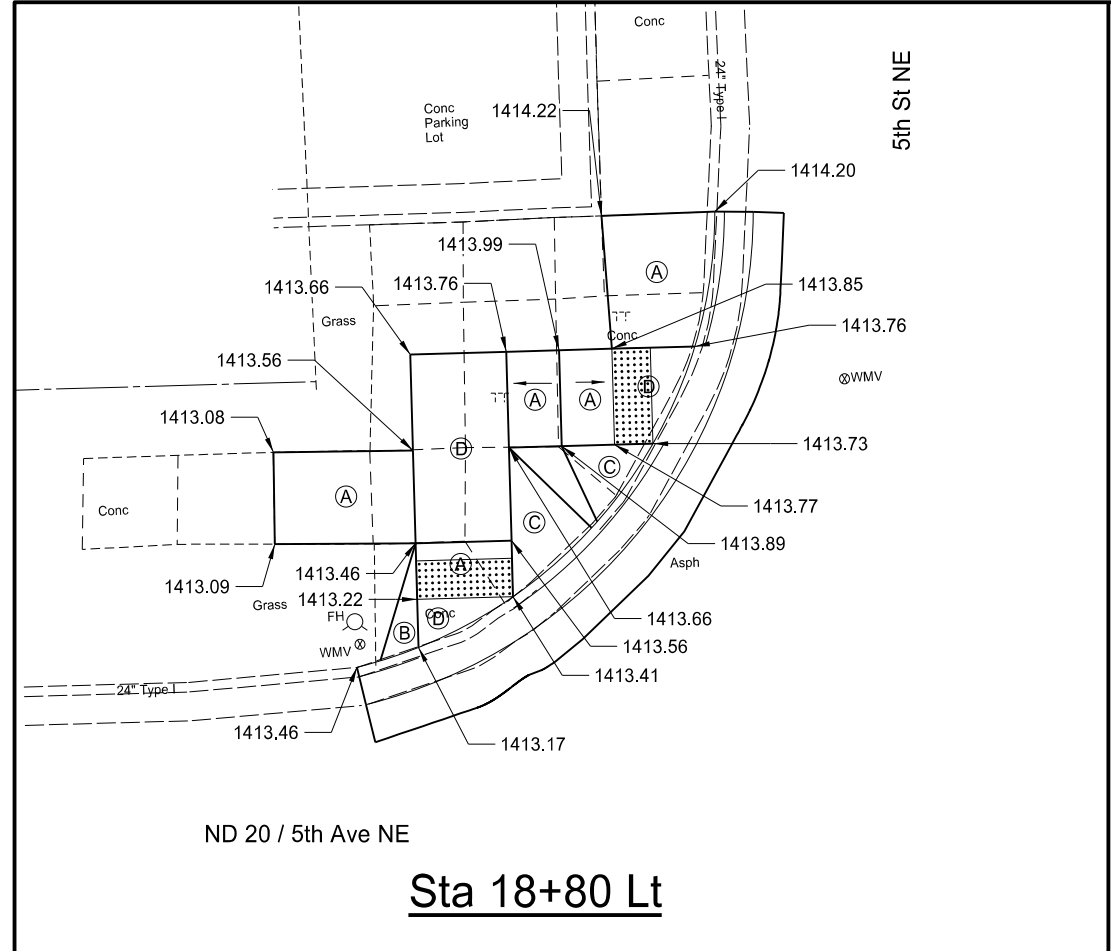
SPEC	CODE	BID ITEM	UNIT	QTY
302	0121	Aggregate Base Course CL 5		
		14+90 Lt	CY	3
		14+95 Rt	CY	3
		15+30 Rt	CY	3
		15+55 Rt	CY	2
430	0500	Commercial Grade Hot Mix Asphalt		
		14+90 Lt	TON	3
		14+95 Rt	TON	3
		15+30 Rt	TON	2
		15+55 Rt	TON	2
748	0140	Curb & Gutter-Type I		
		14+90 Lt	LF	13
		14+95 Rt	LF	25
		15+30 Rt	LF	19
		15+55 Rt	LF	20
750	0100	Sidewalk Concrete		
		14+90 Lt	SY	21
		14+95 Rt	SY	18
		15+30 Rt	SY	27
		15+55 Rt	SY	12
750	2115	Detectable Warning Panel		
		14+90 Lt	SF	31
		14+95 Rt	SF	17
		15+30 Rt	SF	18
		15+55 Rt	SF	16

- (A) 8.3% Max Slope
- (B) 25% Max Flare Slope
- (C) 10% Max Flare Slope
- (D) 2% Max Landing

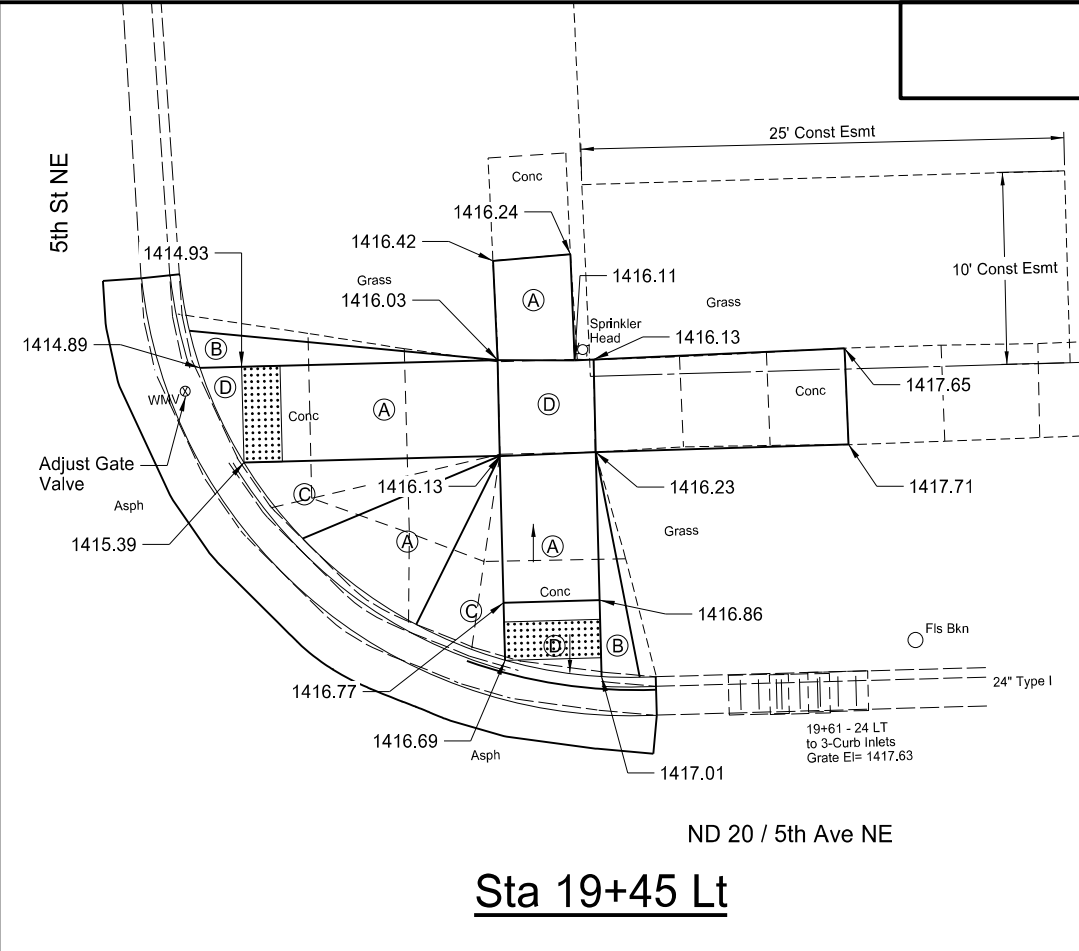
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RAMP LAYOUTS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

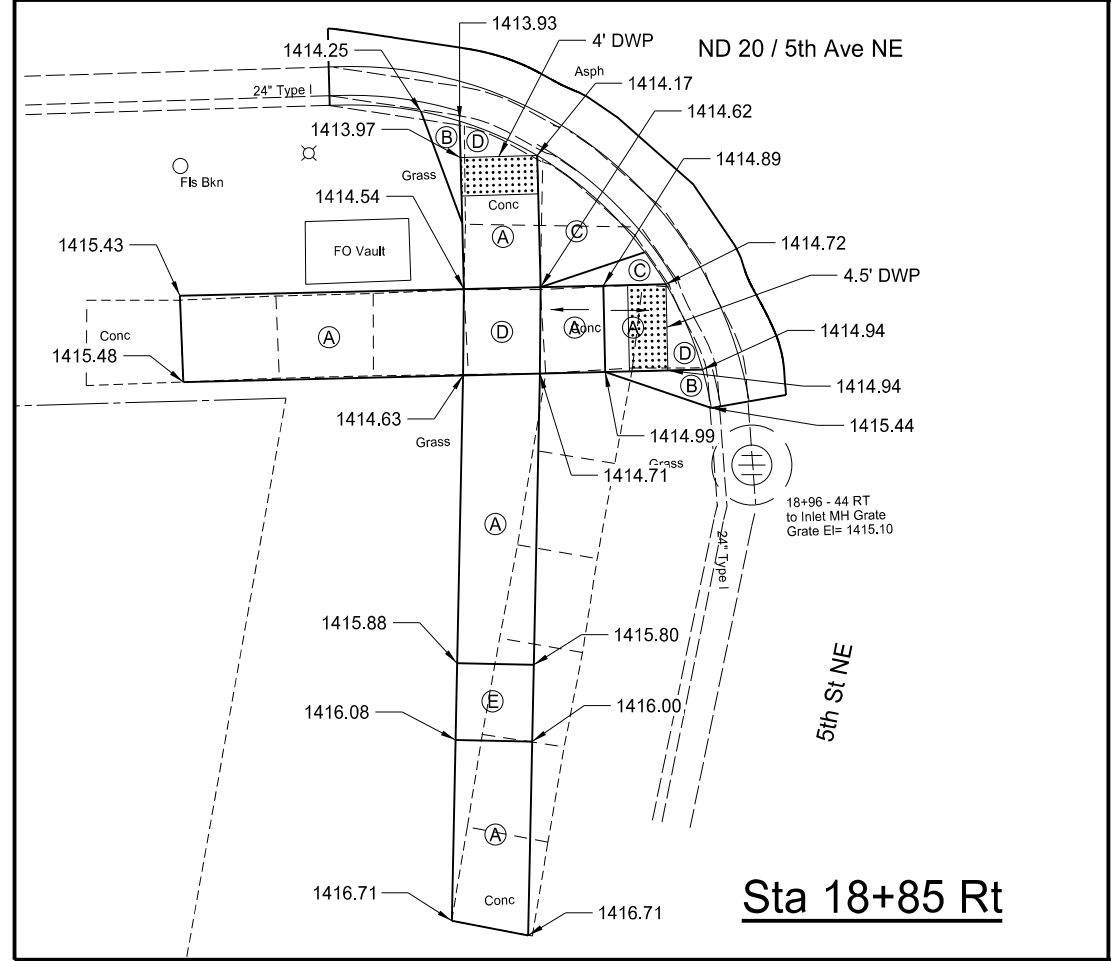


Sta 18+80 Lt

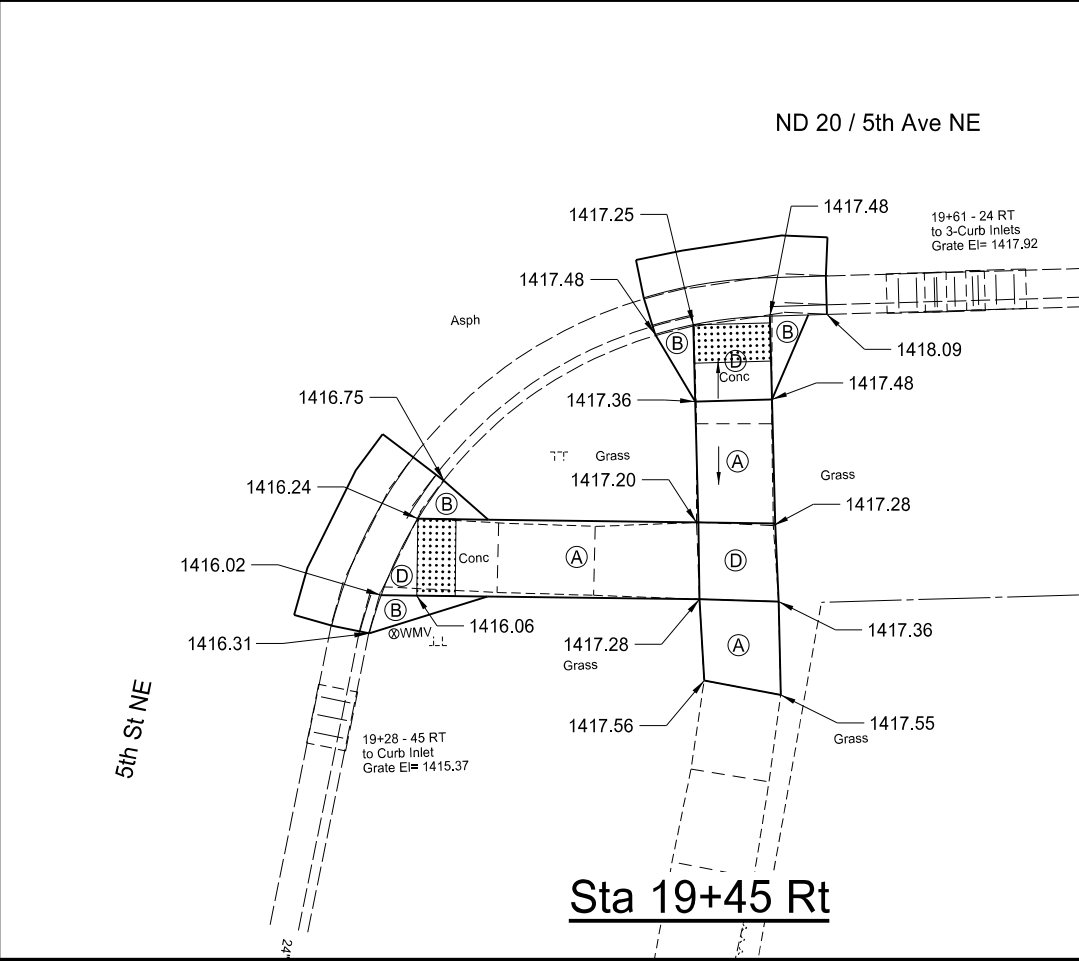


Sta 19+45 Lt

SPEC	CODE	BID ITEM	UNIT	QTY
302	0121	Aggregate Base Course CL 5		
		18+80 Lt	CY	4
		18+85 Rt	CY	5
		19+45 Lt	CY	5
		19+45 Rt	CY	2
430	0500	Commercial Grade Hot Mix Asphalt		
		18+80 Lt	TON	3
		18+85 Rt	TON	3
		19+45 Lt	TON	4
		19+45 Rt	TON	2
722	6140	Adjust Gate Valve Box		
		19+45 Lt	EA	1
748	0140	Curb & Gutter-Type I		
		18+80 Lt	LF	34
		18+85 Rt	LF	29
		19+45 Lt	LF	37
		19+45 Rt	LF	19
750	0100	Sidewalk Concrete		
		18+80 Lt	SY	25
		18+85 Rt	SY	34
		19+45 Lt	SY	40
		19+45 Rt	SY	18
750	2115	Detectable Warning Panel		
		18+80 Lt	SF	20
		18+85 Rt	SF	17
		19+45 Lt	SF	20
		19+45 Rt	SF	16



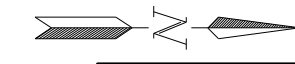
Sta 18+85 Rt



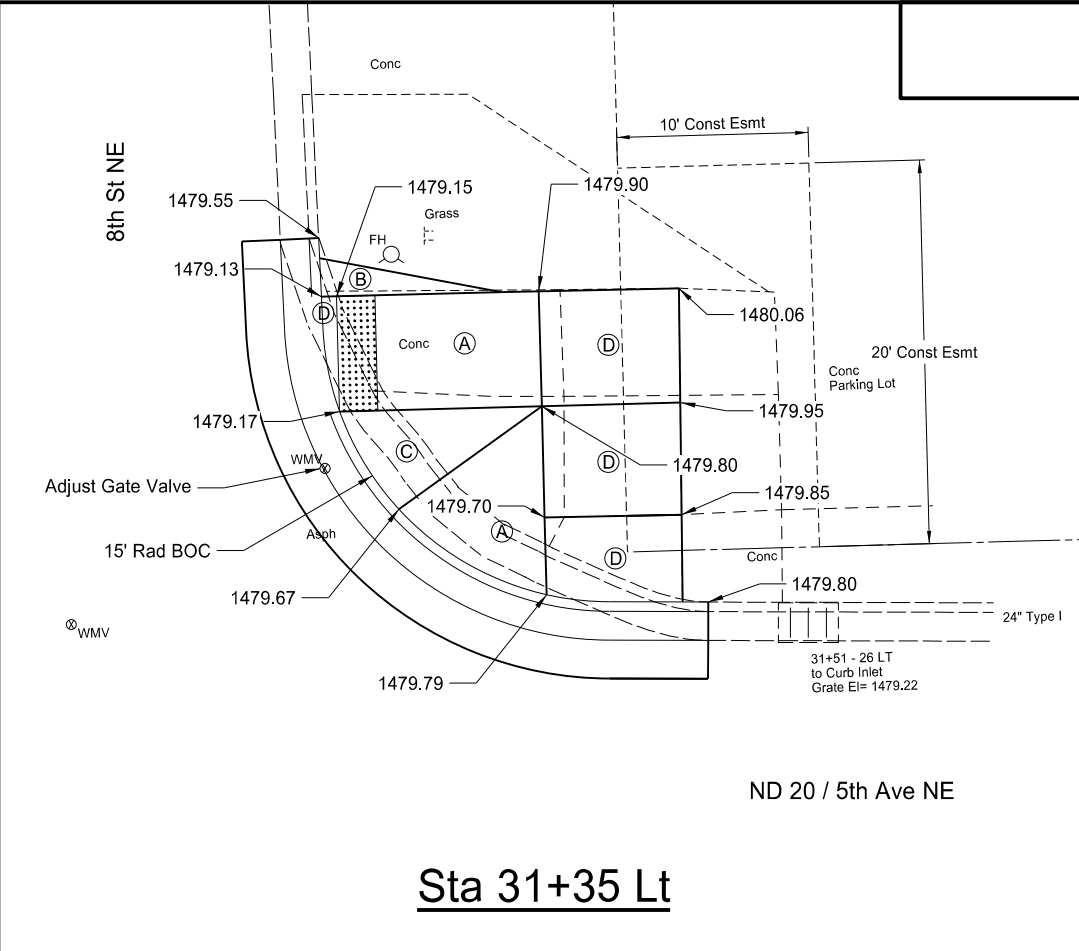
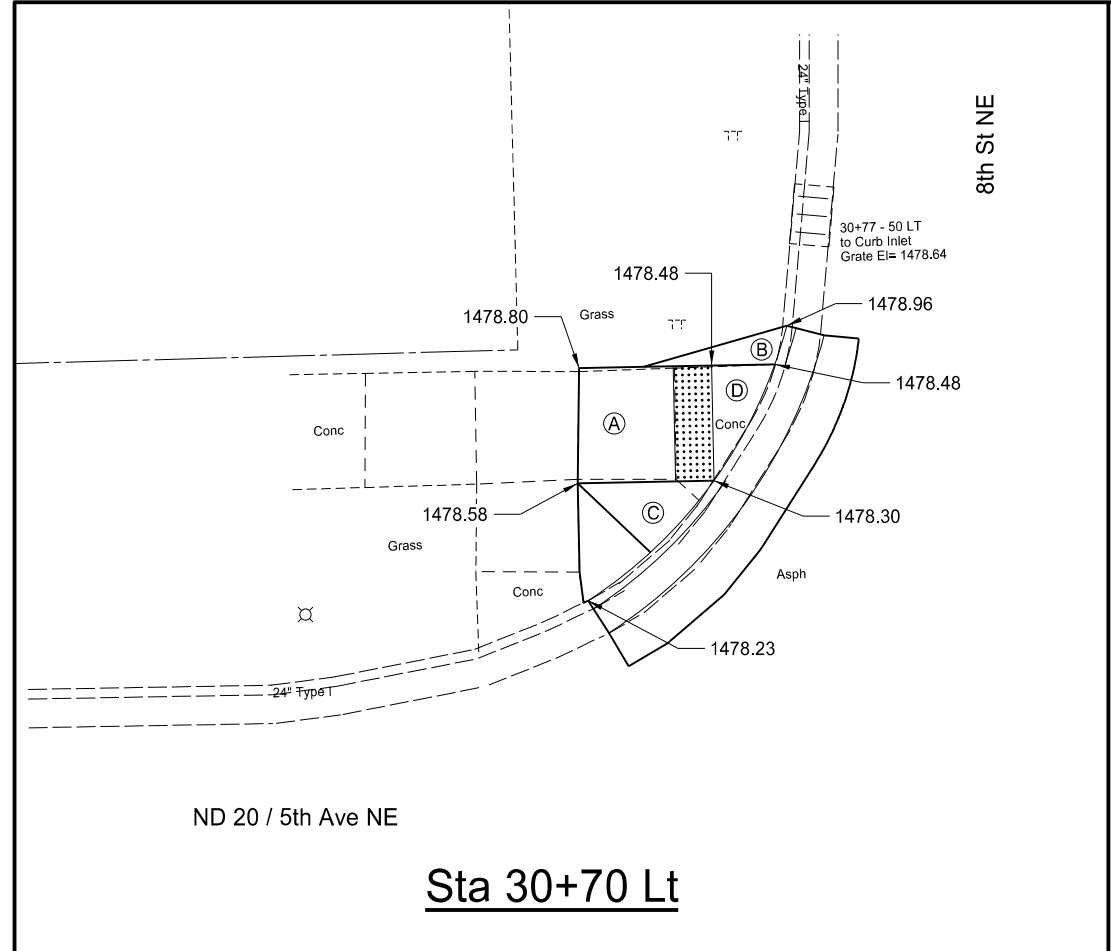
Sta 19+45 Rt

- (A) 8.3% Max Slope
- (B) 25% Max Flare Slope
- (C) 10% Max Flare Slope
- (D) 2% Max Landing
- (E) 5% Max Slope

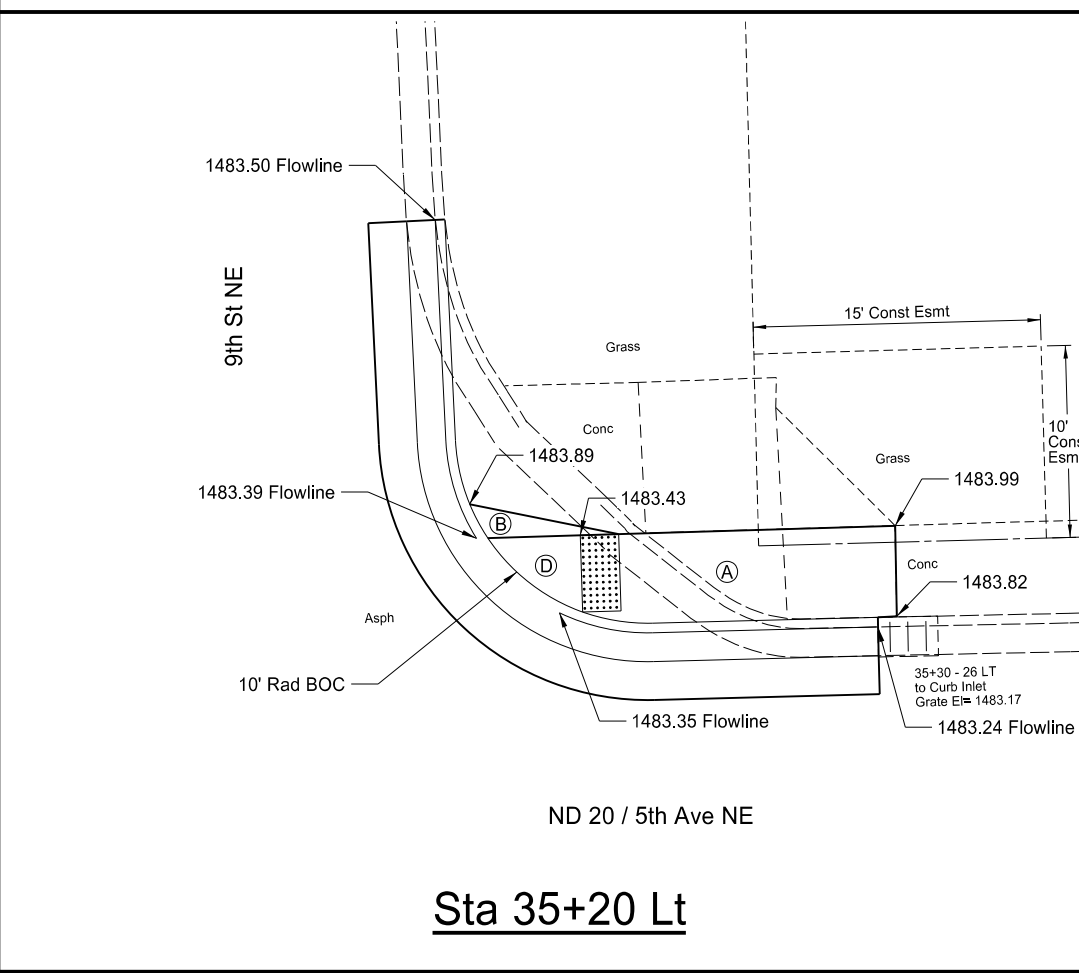
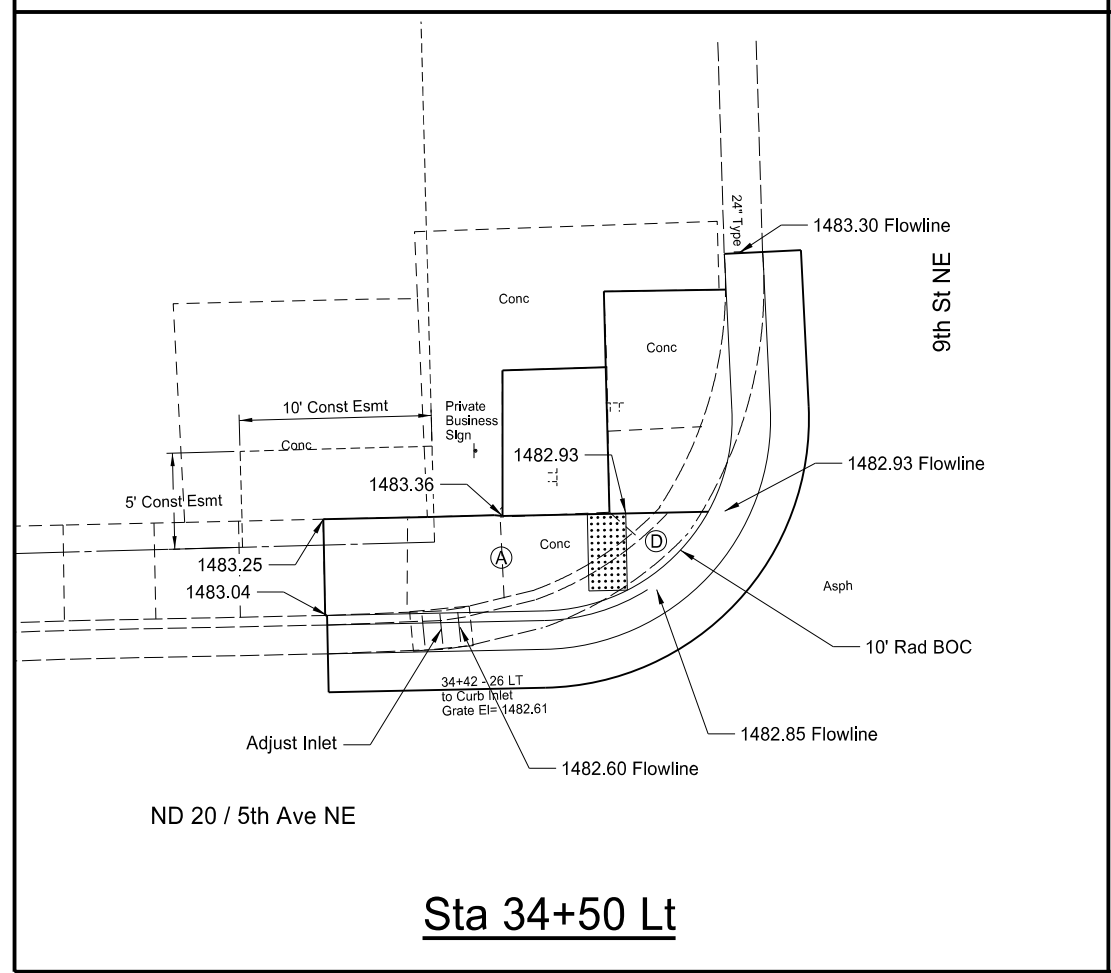
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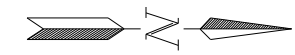
RAMP LAYOUTS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND



SPEC	CODE	BID ITEM	UNIT	QTY
302	0121	Aggregate Base Course CL 5		
		30+70 Lt	CY	2
		31+35 Lt	CY	4
		34+50 Lt	CY	3
		35+20 Lt	CY	2
430	0500	Commercial Grade Hot Mix Asphalt		
		30+70 Lt	TON	4
		31+35 Lt	TON	2
		34+50 Lt	TON	4
		35+20 Lt	TON	4
722	6140	Adjust Gate Valve Box	EA	1
722	6160	Adjust Inlet	EA	1
748	0140	Curb & Gutter-Type I		
		30+70 Lt	LF	19
		31+35 Lt	LF	34
		34+50 Lt	LF	37
		35+20 Lt	LF	40
750	0100	Sidewalk Concrete		
		30+70 Lt	SY	9
		31+35 Lt	SY	26
		34+50 Lt	SY	10
		35+20 Lt	SY	10
750	1000	Driveway Concrete	SY	13
750	2115	Detectable Warning Panel		
		30+70 Lt	SF	12
		31+35 Lt	SF	12
		34+50 Lt	SF	8
		35+20 Lt	SF	8

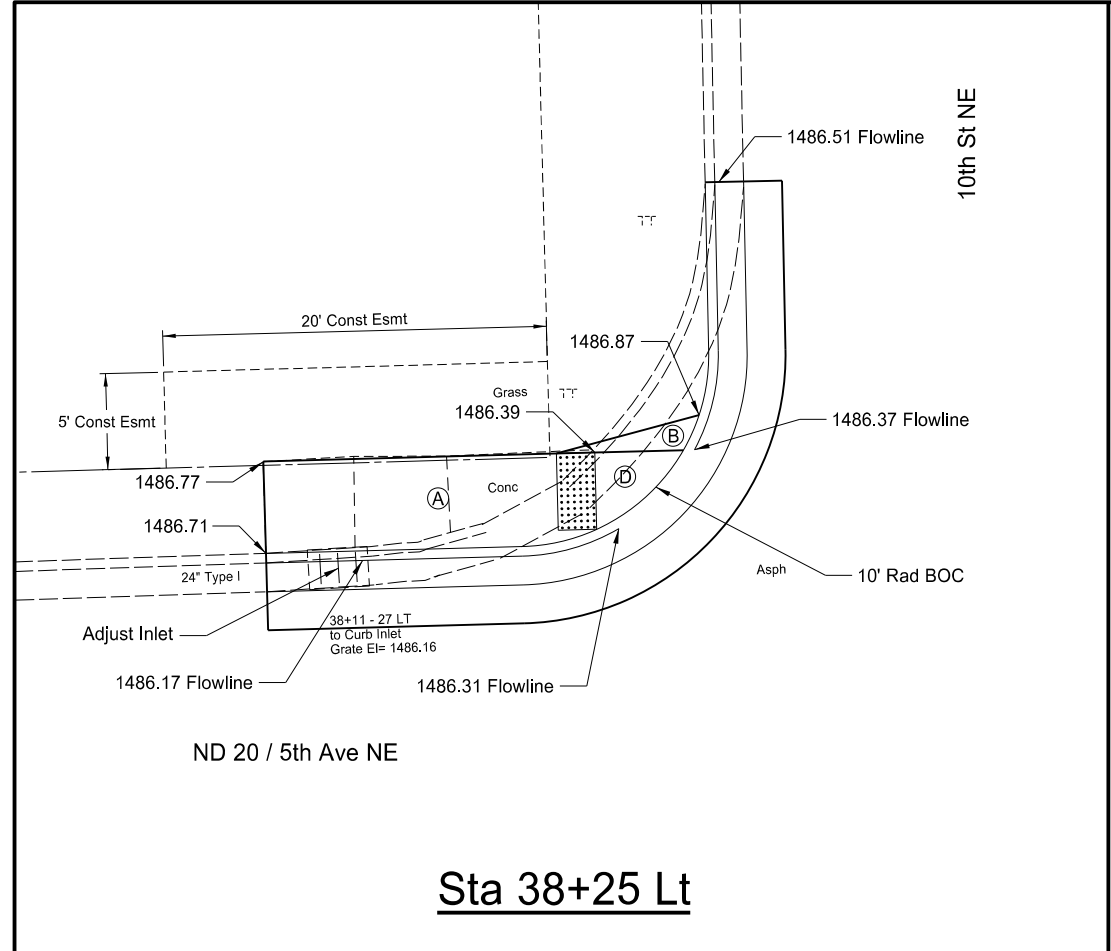


- (A) 8.3% Max Slope
- (B) 25% Max Flare Slope
- (C) 10% Max Flare Slope
- (D) 2% Max Landing

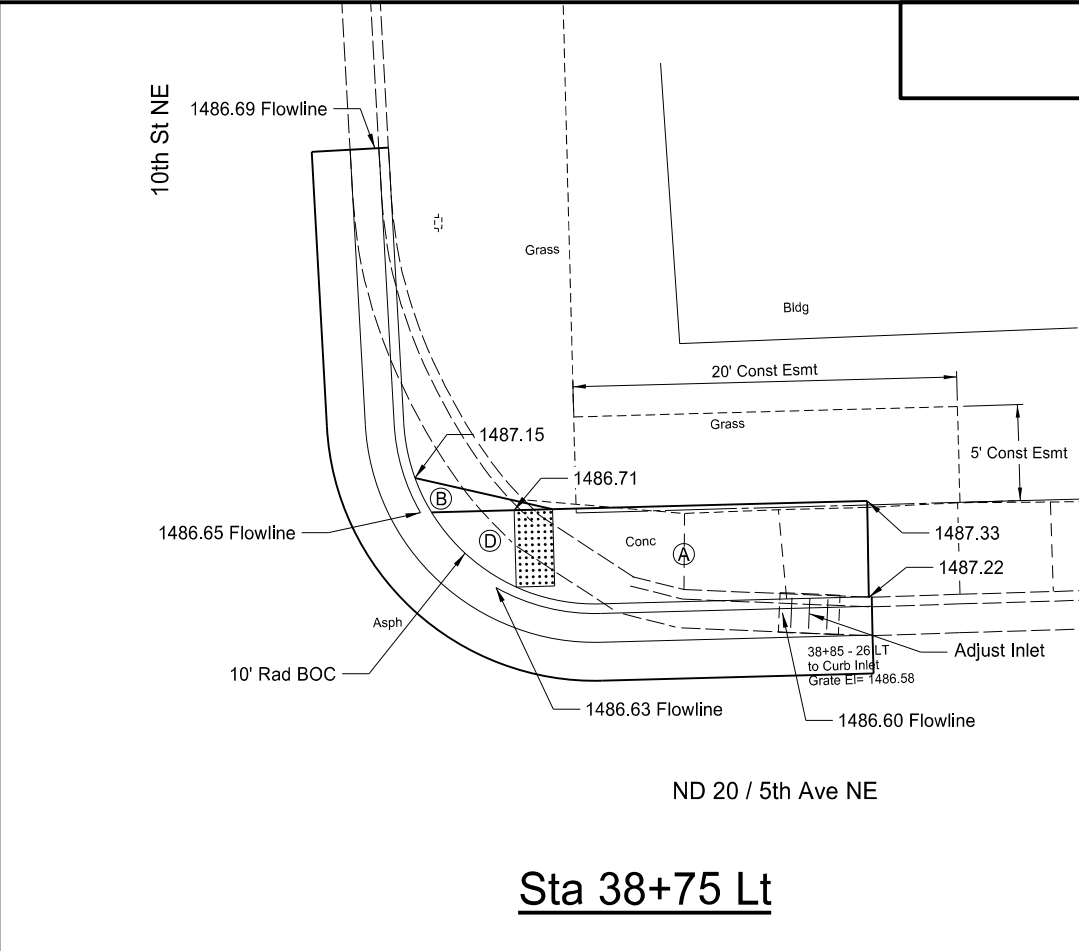


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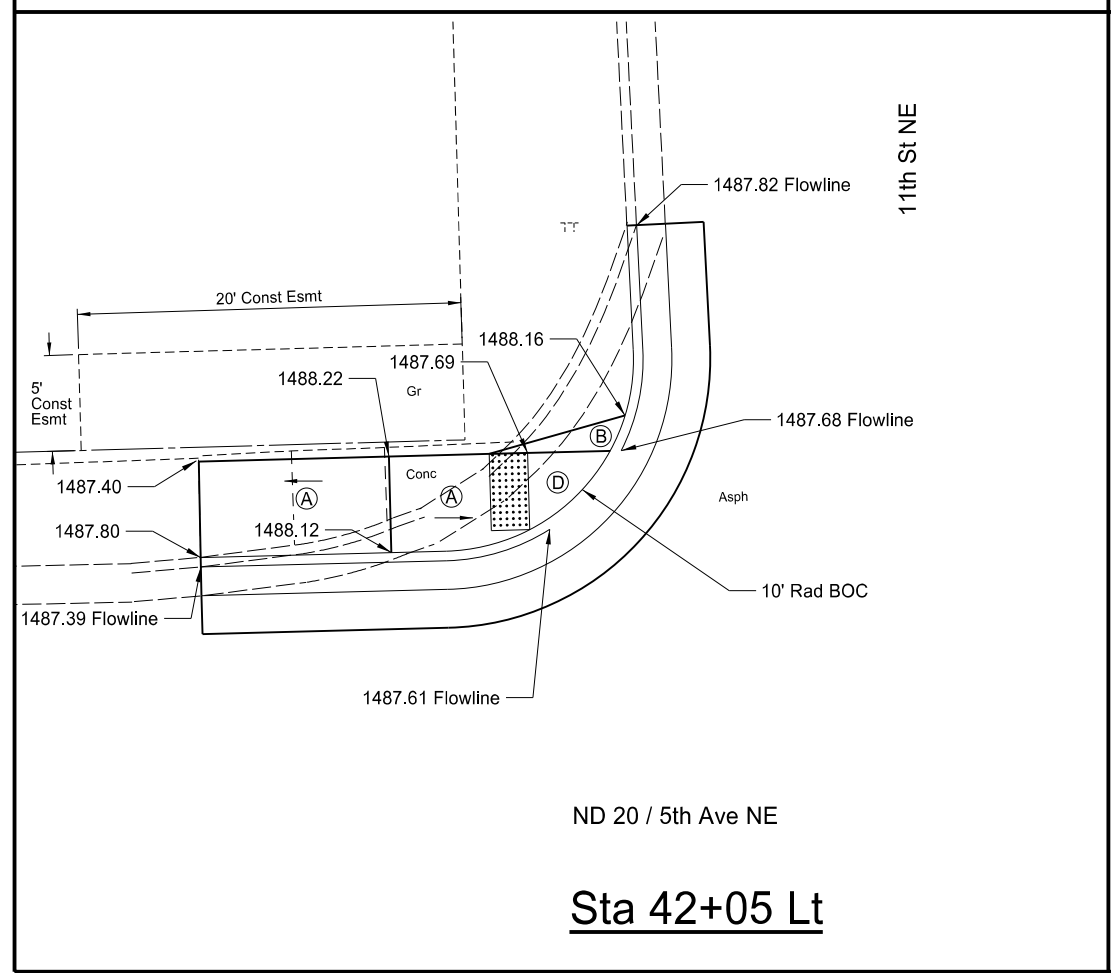
RAMP LAYOUTS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND



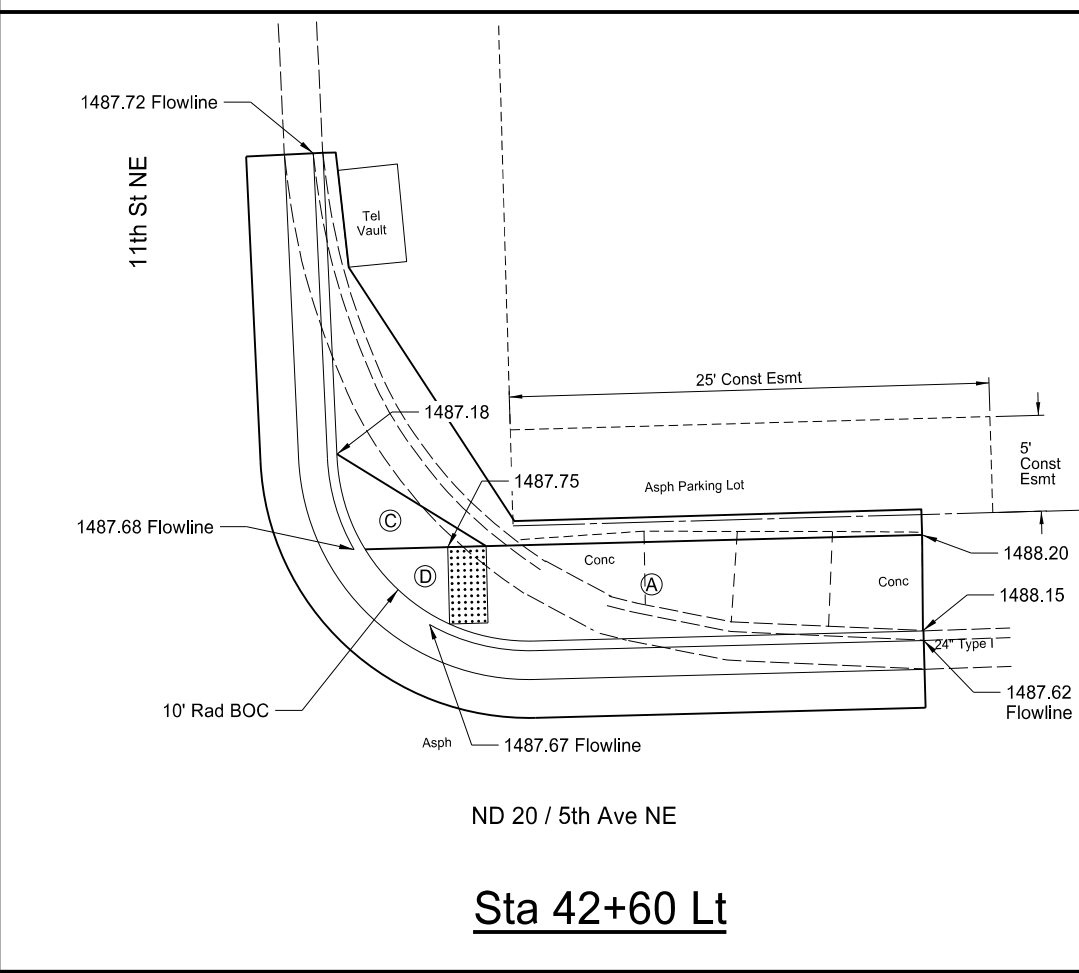
Sta 38+25 Lt



Sta 38+75 Lt



Sta 42+05 Lt

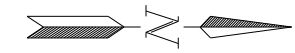


Sta 42+60 Lt

SPEC	CODE	BID ITEM	UNIT	QTY
302	0121	Aggregate Base Course CL 5		
		38+25 Lt	CY	2
		38+75 Lt	CY	2
		42+05 Lt	CY	3
		42+60 Lt	CY	4
430	0500	Commercial Grade Hot Mix Asphalt		
		38+25 Lt	TON	4
		38+75 Lt	TON	5
		42+05 Lt	TON	4
		42+60 Lt	TON	10
722	6160	Adjust Inlet		
		38+25 Lt	EA	1
		38+75 Lt	EA	1
748	0140	Curb & Gutter-Type I		
		38+25 Lt	LF	39
		38+75 Lt	LF	45
		42+05 Lt	LF	37
		42+60 Lt	LF	53
750	0100	Sidewalk Concrete		
		38+25 Lt	SY	11
		38+75 Lt	SY	12
		42+05 Lt	SY	11
		42+60 Lt	SY	17
750	2115	Detectable Warning Panel		
		38+25 Lt	SF	8
		38+75 Lt	SF	8
		42+05 Lt	SF	8
		42+60 Lt	SF	8

- (A) 8.3% Max Slope
- (B) 25% Max Flare Slope
- (C) 10% Max Flare Slope
- (D) 2% Max Landing

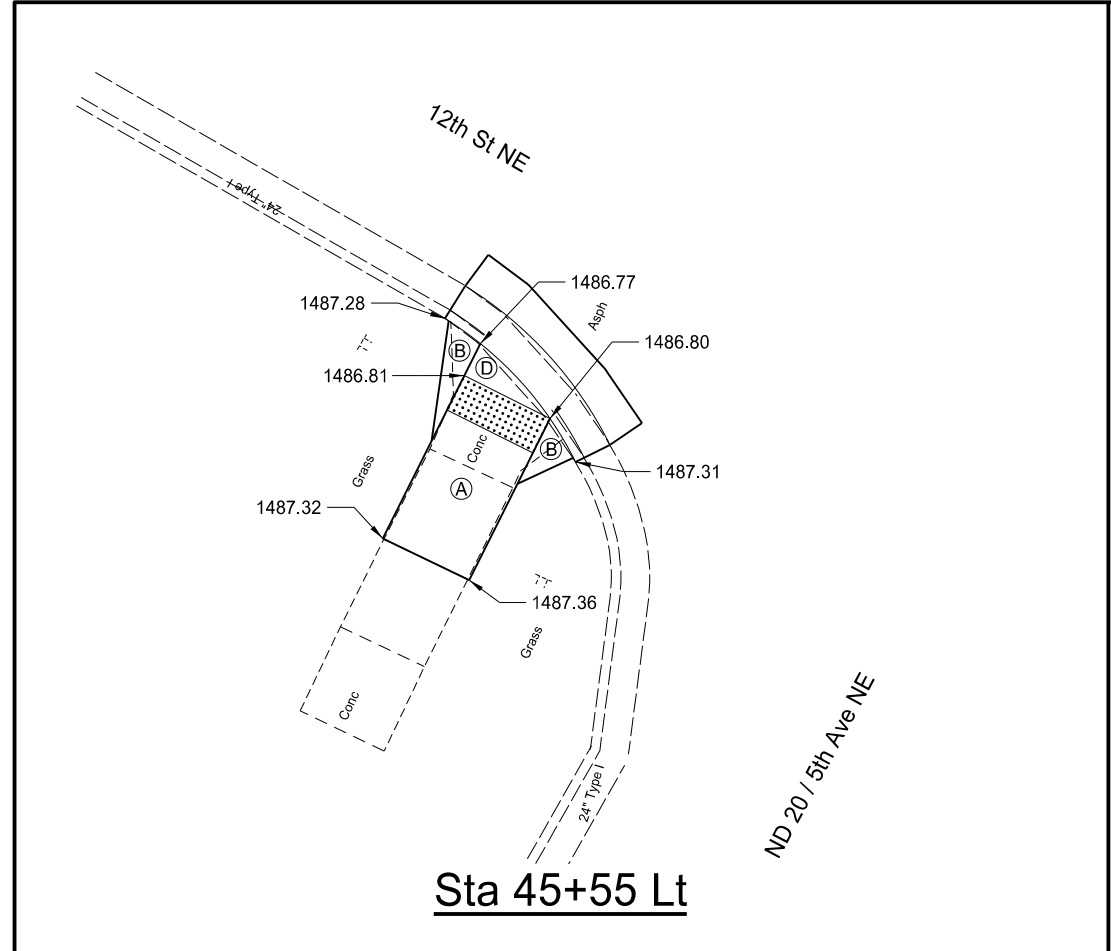
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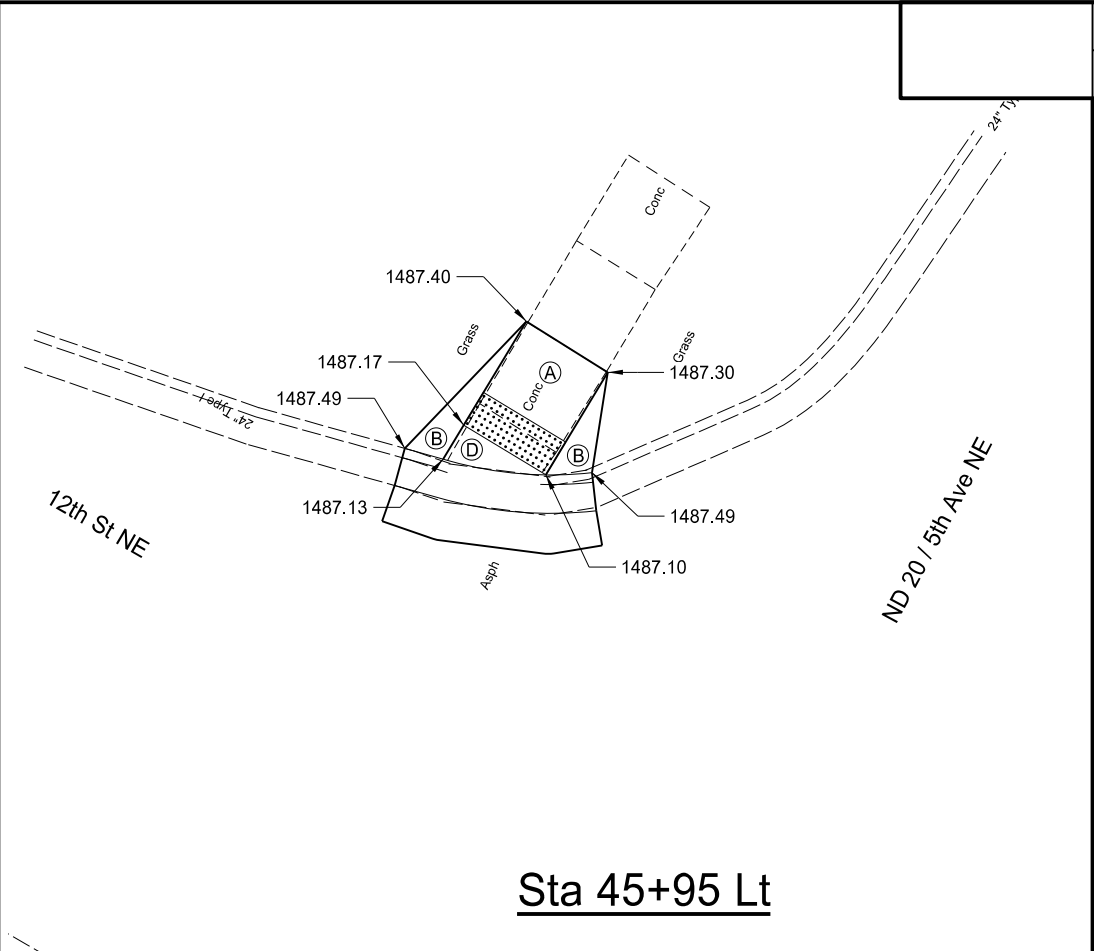
RAMP LAYOUTS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	80	9

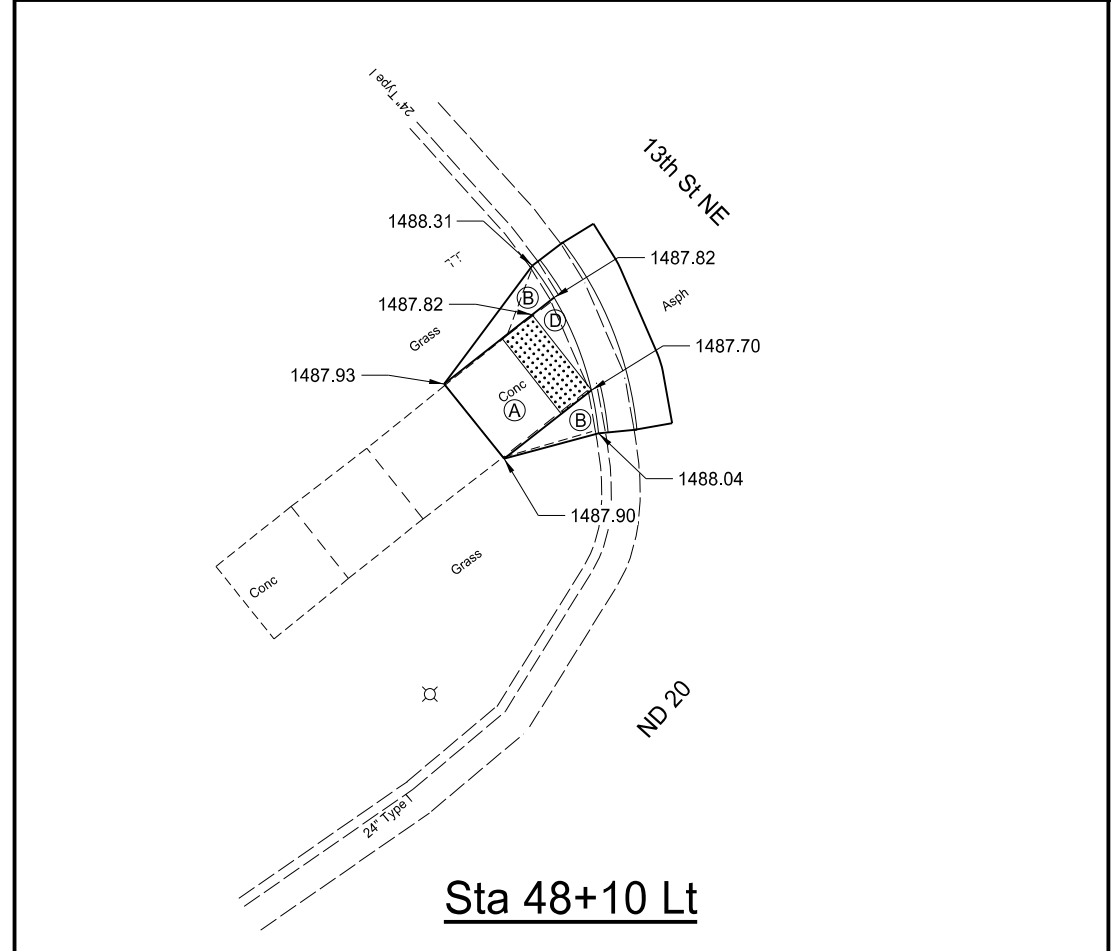
SPEC	CODE	BID ITEM	UNIT	QTY
302	0121	Aggregate Base Course CL 5		
		45+55 Lt	CY	1
		45+95 Lt	CY	1
		48+10 Lt	CY	1
		48+65 Lt	CY	1
430	0500	Commercial Grade Hot Mix Asphalt		
		45+55 Lt	TON	1
		45+95 Lt	TON	1
		48+10 Lt	TON	1
		48+65 Lt	TON	1
748	0140	Curb & Gutter-Type I		
		45+55 Lt	LF	11
		45+95 Lt	LF	10
		48+10 Lt	LF	10
		48+65 Lt	LF	12
750	0100	Sidewalk Concrete		
		45+55 Lt	SY	7
		45+95 Lt	SY	6
		48+10 Lt	SY	5
		48+65 Lt	SY	8
750	2115	Detectable Warning Panel		
		45+55 Lt	SF	10
		45+95 Lt	SF	10
		48+10 Lt	SF	10
		48+65 Lt	SF	10



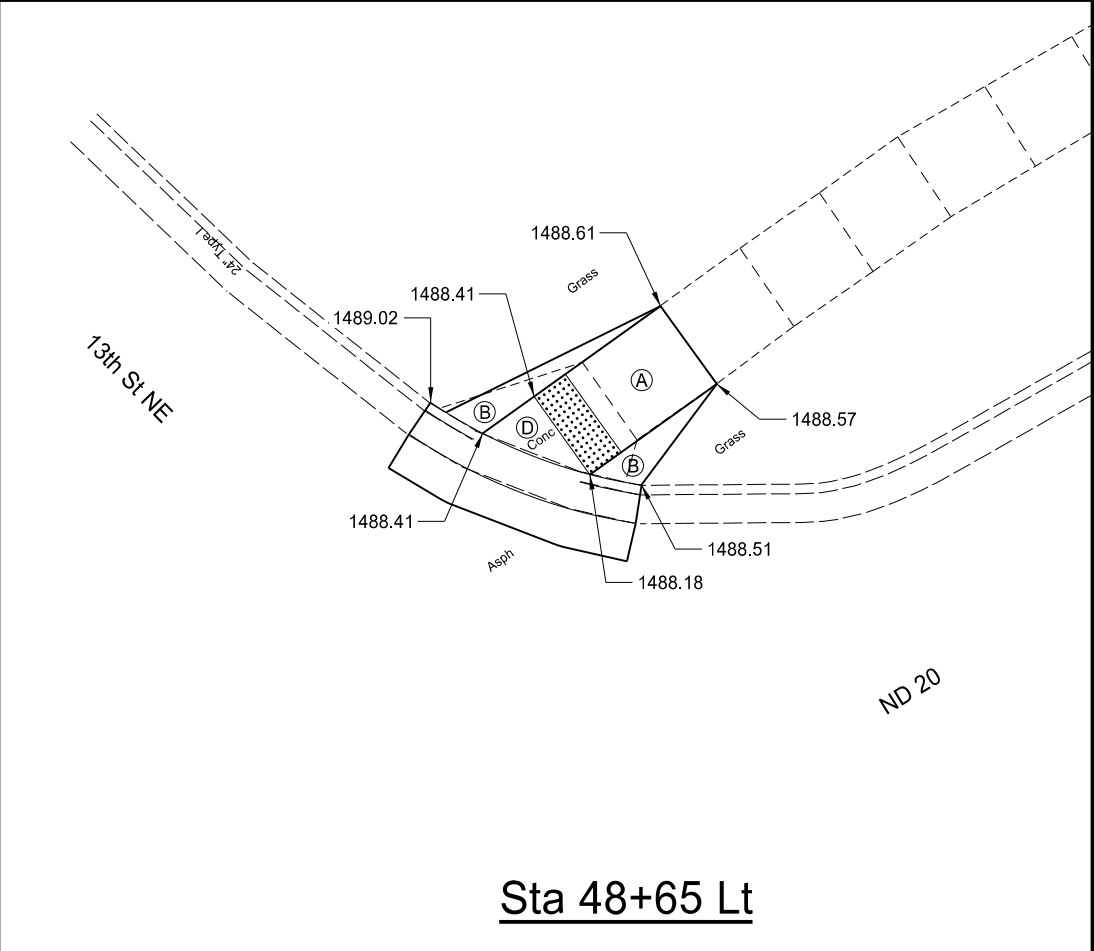
Sta 45+55 Lt



Sta 45+95 Lt



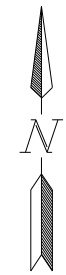
Sta 48+10 Lt



Sta 48+65 Lt

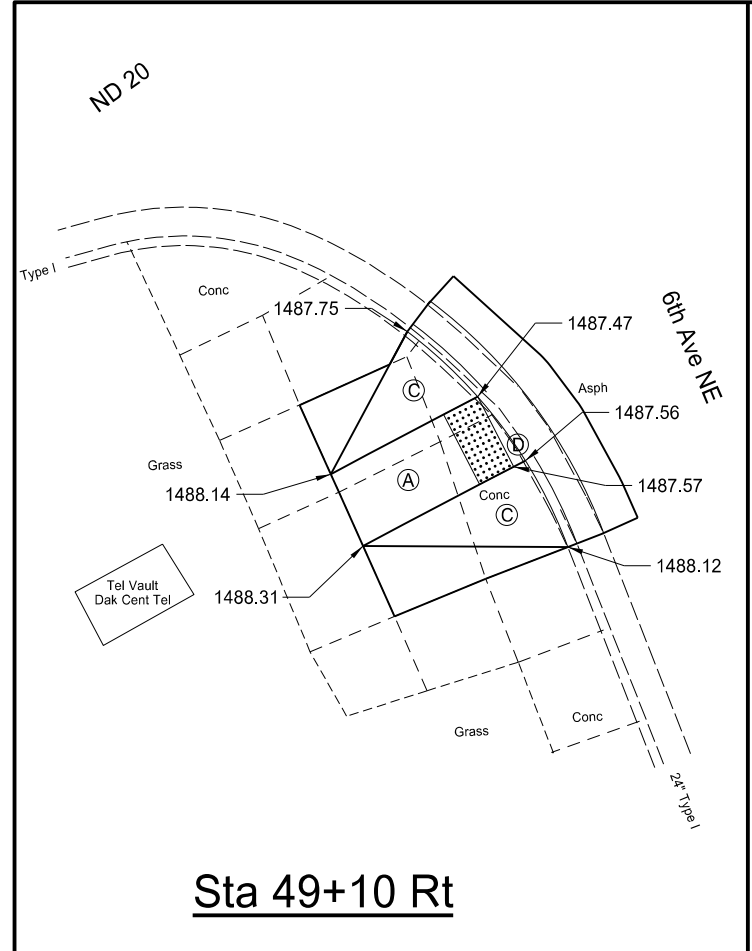
- (A) 8.3% Max Slope
- (B) 25% Max Flare Slope
- (C) 10% Max Flare Slope
- (D) 2% Max Landing

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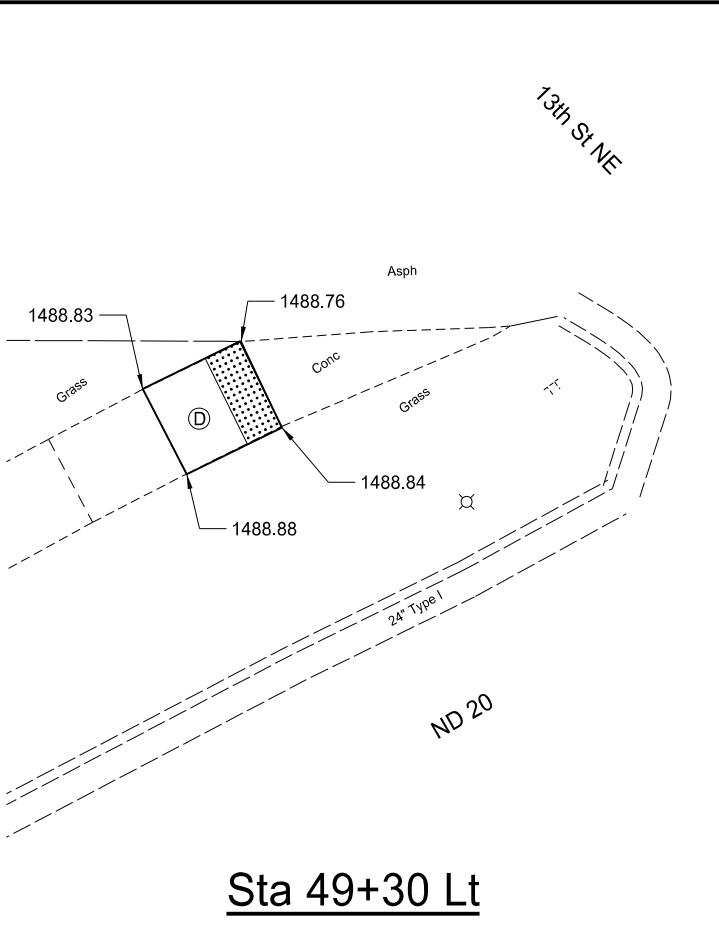


RAMP LAYOUTS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

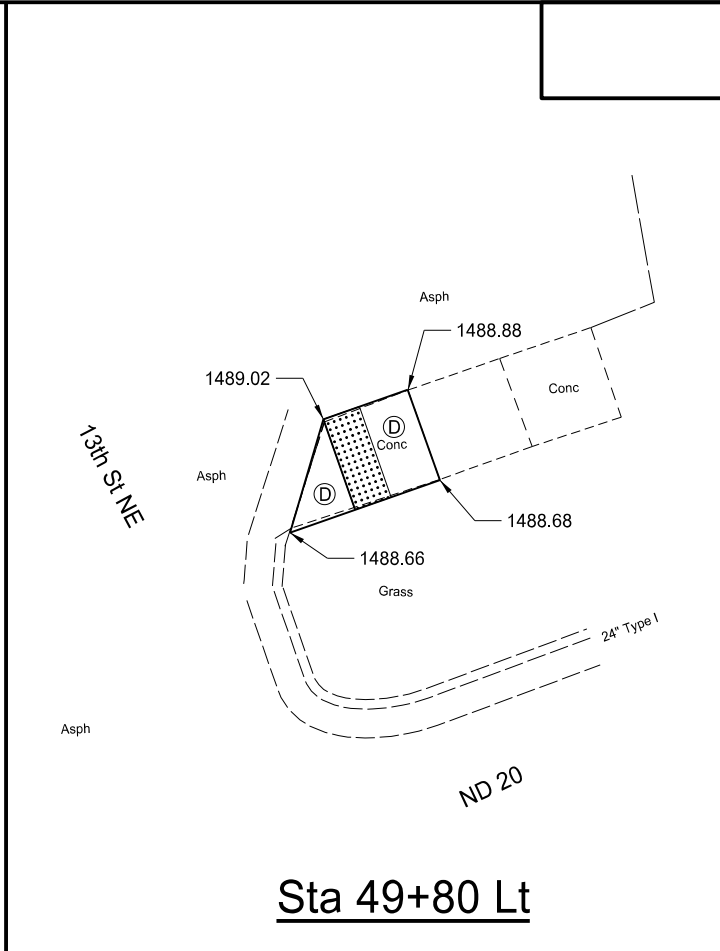
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	80	10



Sta 49+10 Rt

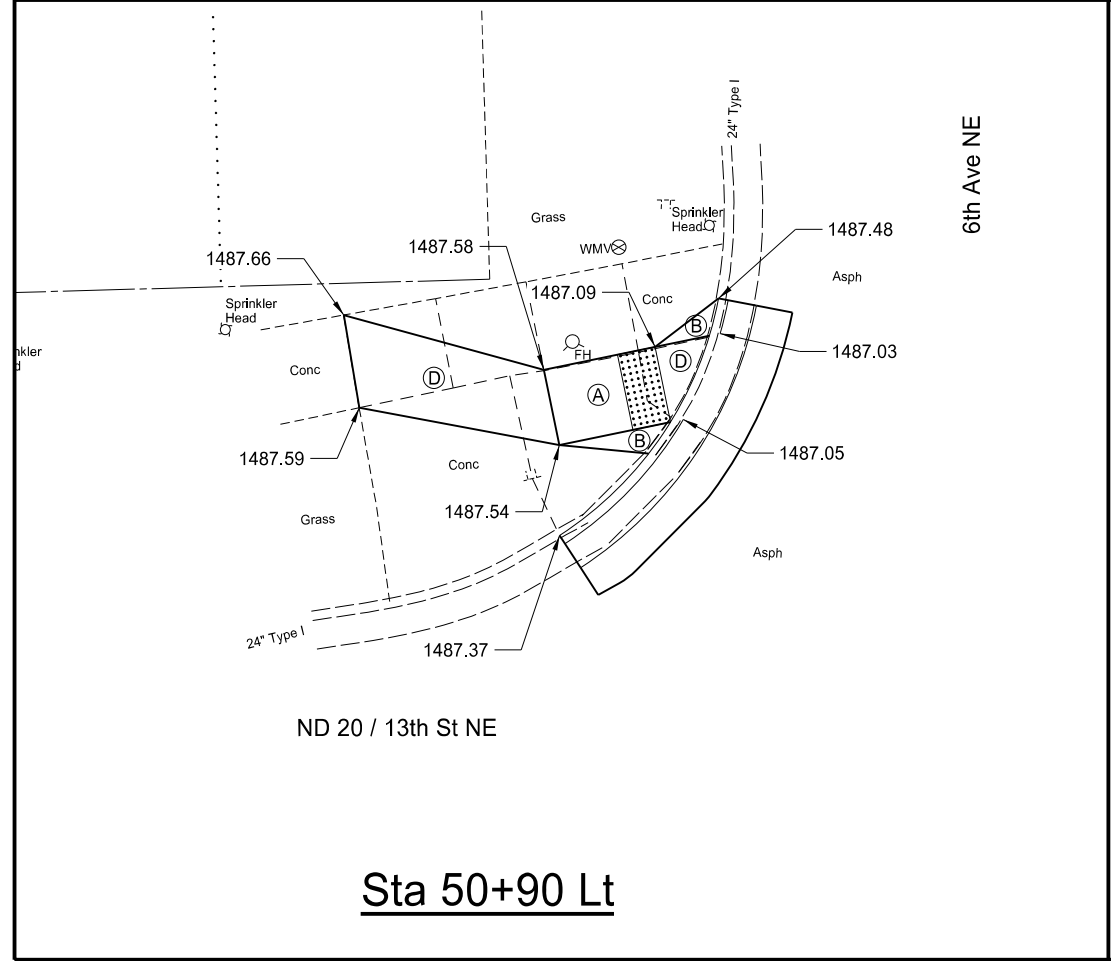


Sta 49+30 Lt

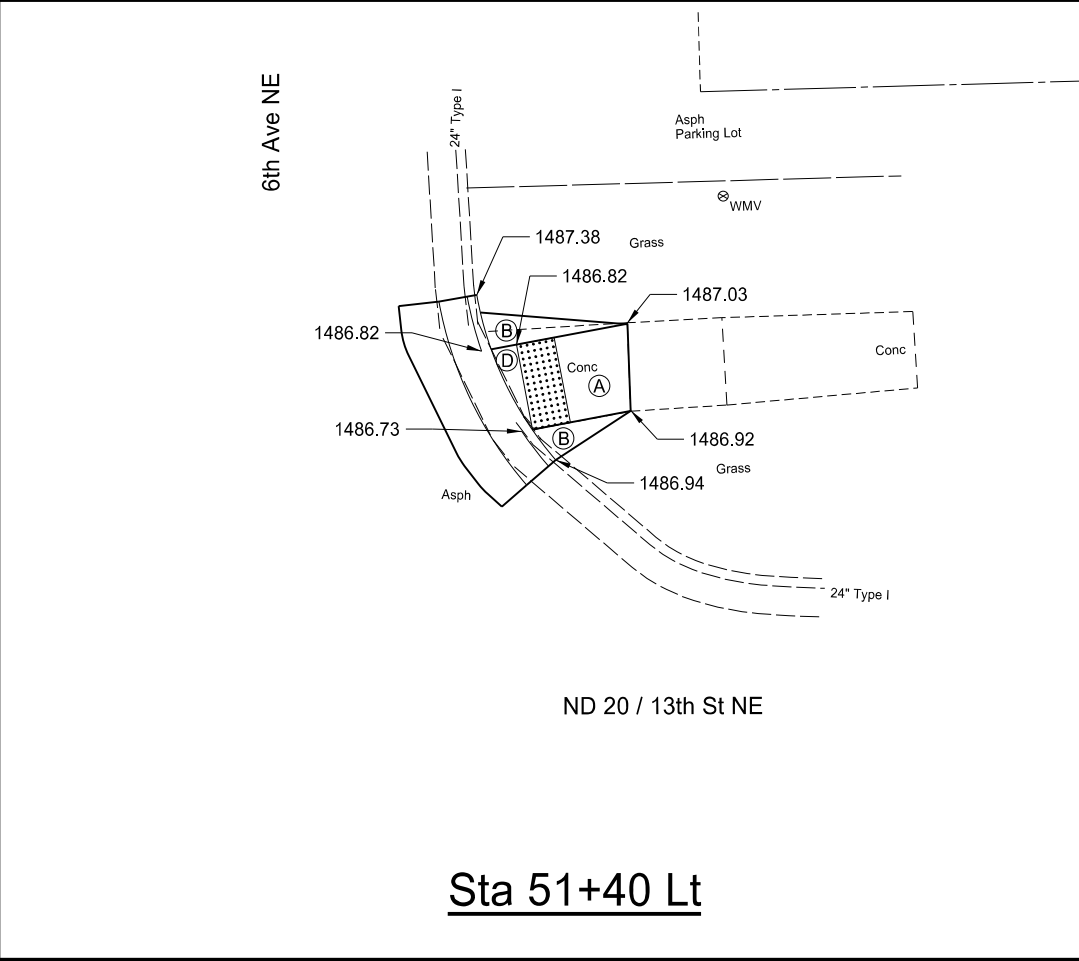


Sta 49+80 Lt

SPEC	CODE	BID ITEM	UNIT	QTY
302	0121	Aggregate Base Course CL 5		
		49+10 Rt	CY	2
		49+30 Lt	CY	1
		49+80 Lt	CY	1
		50+90 Lt	CY	1
		51+40 Lt	CY	1
430	0500	Commercial Grade Hot Mix Asphalt		
		49+10 Rt	TON	1
		50+90 Lt	TON	2
		51+40 Lt	TON	1
748	0140	Curb & Gutter-Type I		
		49+10 Rt	LF	15
		50+90 Lt	LF	16
		51+40 Lt	LF	10
750	0100	Sidewalk Concrete		
		49+10 Rt	SY	12
		49+30 Lt	SY	3
		49+80 Lt	SY	4
		50+90 Lt	SY	9
		51+40 Lt	SY	4
750	2115	Detectable Warning Panel		
		49+10 Rt	SF	8
		49+30 Lt	SF	10
		49+80 Lt	SF	10
		50+90 Lt	SF	8
		51+40 Lt	SF	9



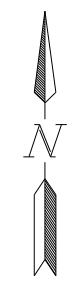
Sta 50+90 Lt



Sta 51+40 Lt

- (A) 8.3% Max Slope
- (B) 25% Max Flare Slope
- (C) 10% Max Flare Slope
- (D) 2% Max Landing

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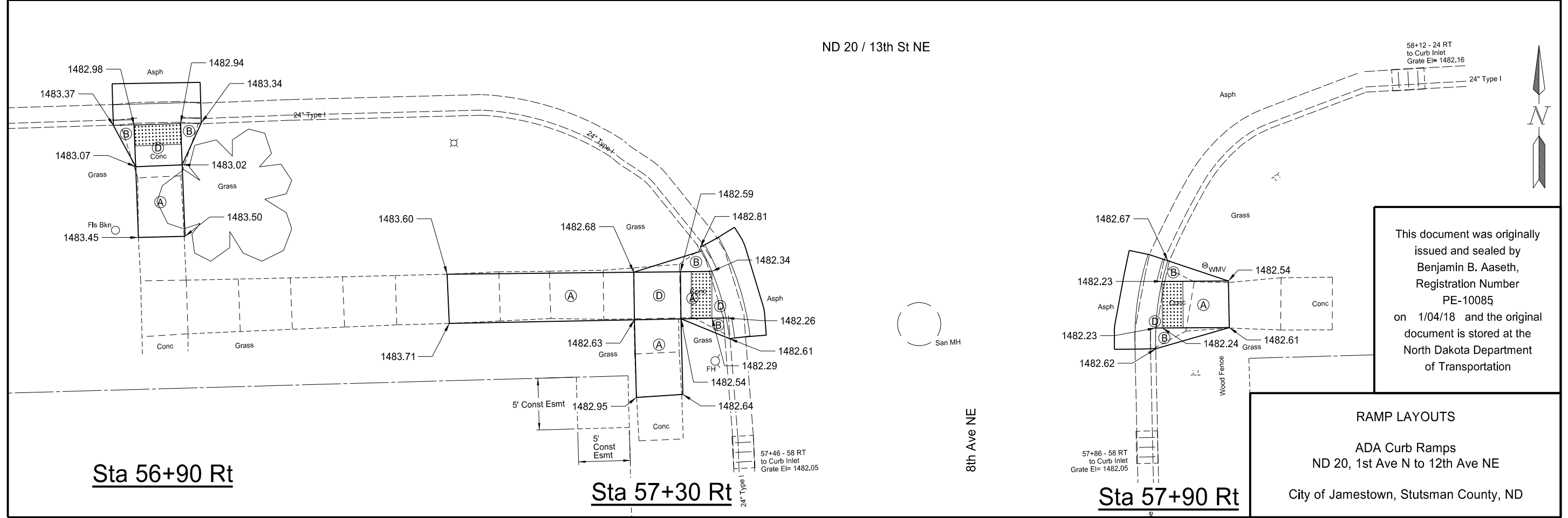
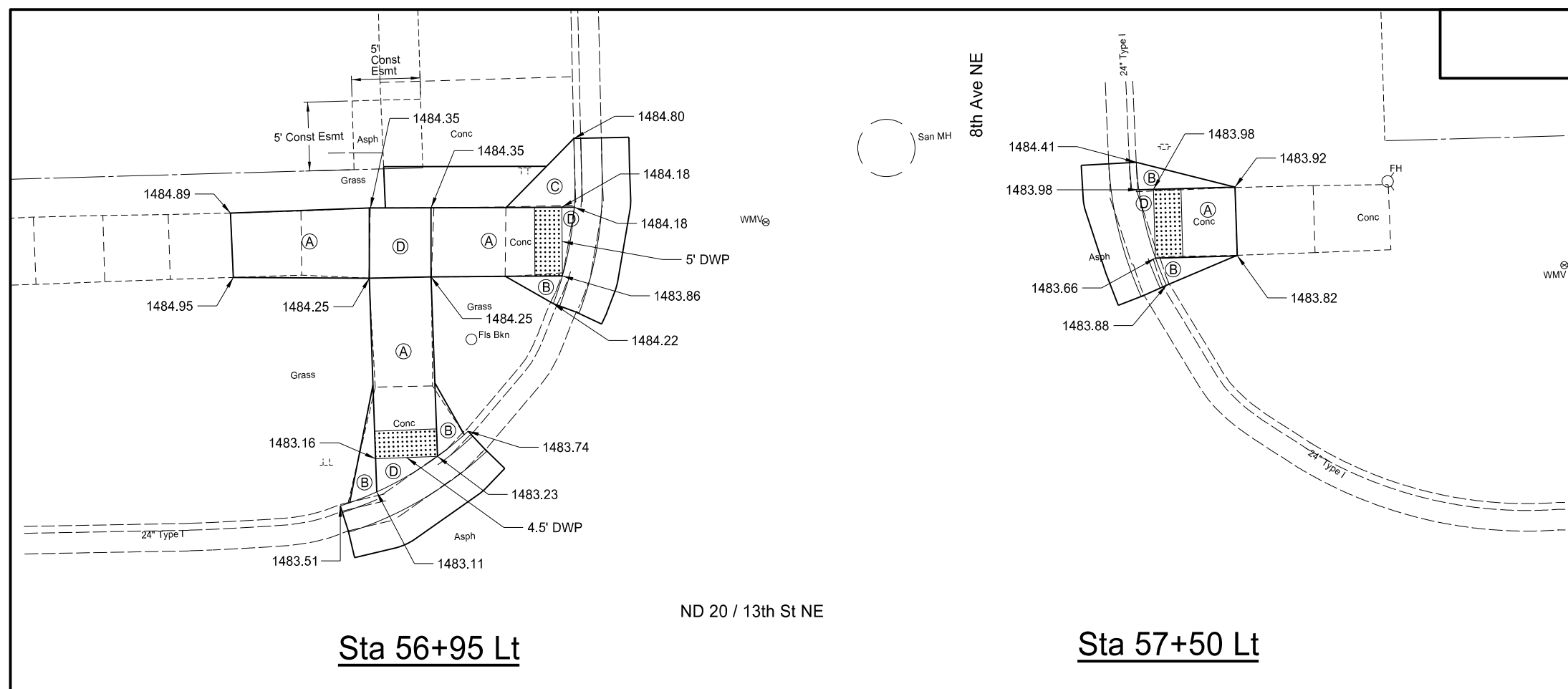


RAMP LAYOUTS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	80	11

SPEC	CODE	BID ITEM	UNIT	QTY
302	0121	Aggregate Base Course CL 5		
		56+95 Lt	CY	4
		56+90 Rt & 57+30 Rt	CY	3
		57+50 Lt	CY	1
		57+90 Rt	CY	1
430	0500	Commercial Grade Hot Mix Asphalt		
		56+95 Lt	TON	3
		56+90 Rt & 57+30 Rt	TON	2
		57+50 Lt	TON	1
		57+90 Rt	TON	1
748	0140	Curb & Gutter-Type I		
		56+95 Lt	LF	24
		56+90 Rt & 57+30 Rt	LF	18
		57+50 Lt	LF	10
		57+90 Rt	LF	9
750	0100	Sidewalk Concrete		
		56+95 Lt	SY	28
		56+90 Rt & 57+30 Rt	SY	25
		57+50 Lt	SY	5
		57+90 Rt	SY	5
750	2115	Detectable Warning Panel		
		56+95 Lt	SF	19
		56+90 Rt & 57+30 Rt	SF	18
		57+50 Lt	SF	10
		57+90 Rt	SF	9

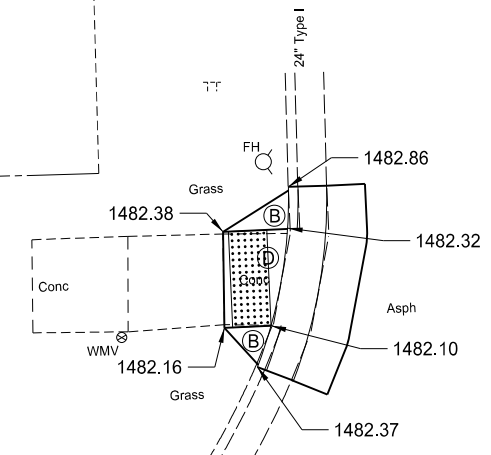
- (A) 8.3% Max Slope
- (B) 25% Max Flare Slope
- (C) 10% Max Flare Slope
- (D) 2% Max Landing



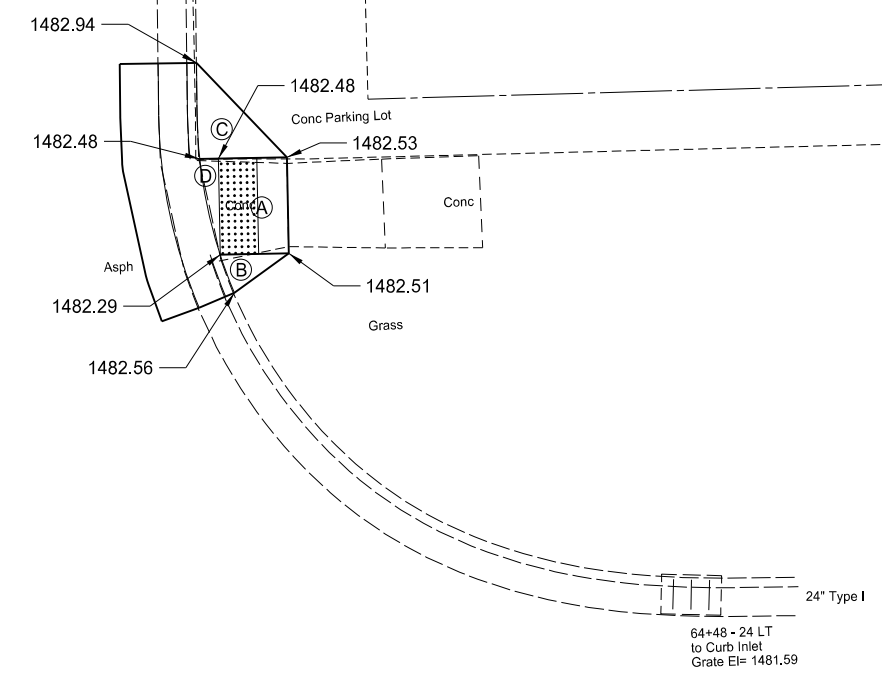
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RAMP LAYOUTS
ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

SPEC	CODE	BID ITEM	UNIT	QTY
302	0121	Aggregate Base Course CL 5		
		63+80 Lt	CY	1
		64+25 Lt	CY	1
		64+95 Rt	CY	1
		65+40 Rt	CY	1
430	0500	Commercial Grade Hot Mix Asphalt		
		63+80 Lt	TON	1
		64+25 Lt	TON	1
		64+95 Rt	TON	1
		65+40 Rt	TON	1
748	0140	Curb & Gutter-Type I		
		63+80 Lt	LF	10
		64+25 Lt	LF	13
		64+95 Rt	LF	10
		65+40 Rt	LF	10
750	0100	Sidewalk Concrete		
		63+80 Lt	SY	2
		64+25 Lt	SY	4
		64+95 Rt	SY	5
		65+40 Rt	SY	5
750	2115	Detectable Warning Panel		
		63+80 Lt	SF	10
		64+25 Lt	SF	10
		64+95 Rt	SF	10
		65+40 Rt	SF	10



Sta 63+80 Lt

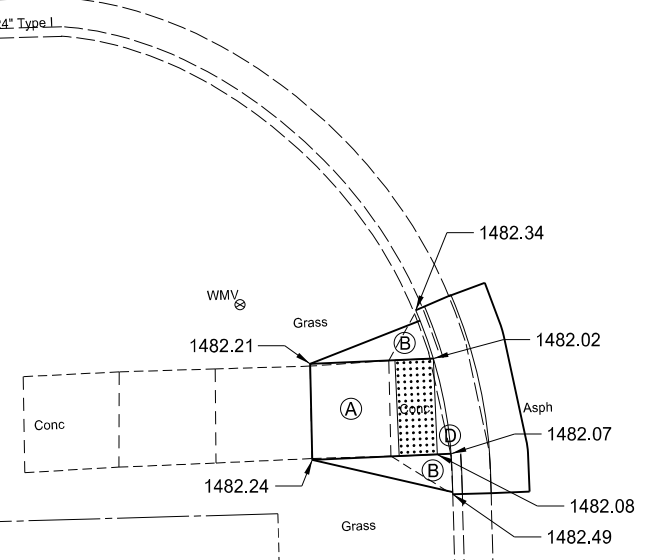


Sta 64+25 Lt

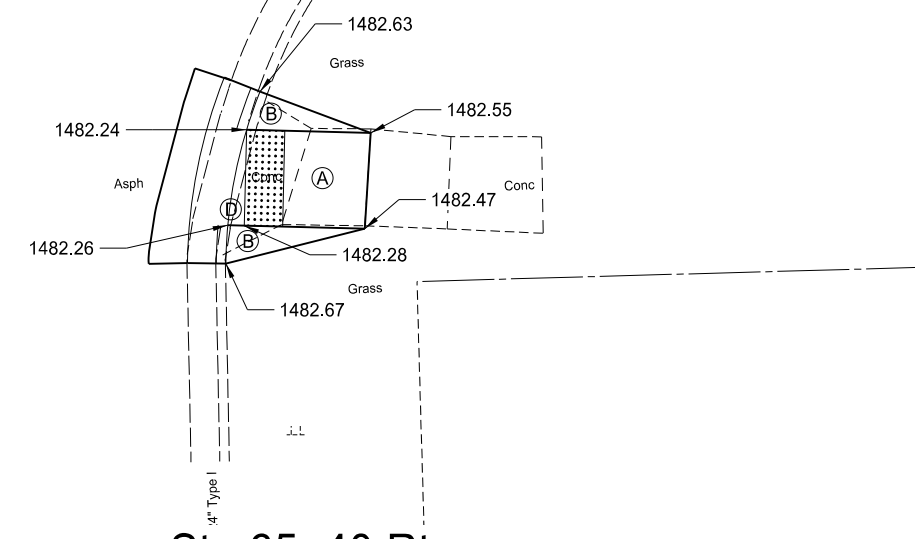
ND 20 / 13th St NE

10th Ave NE

ND 20 / 13th St NE



Sta 64+95 Rt



Sta 65+40 Rt

10th Ave NE

- (A) 8.3% Max Slope
- (B) 25% Max Flare Slope
- (C) 10% Max Flare Slope
- (D) 2% Max Landing

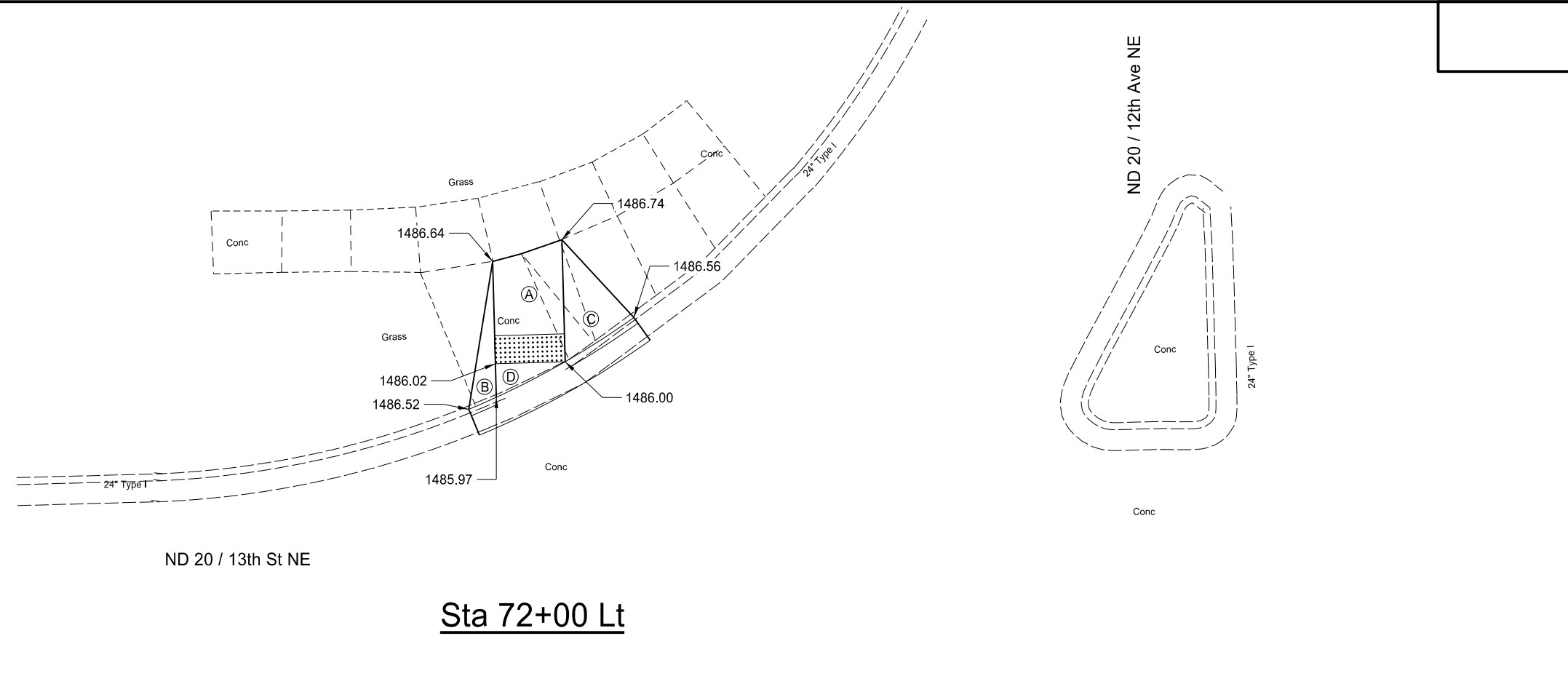
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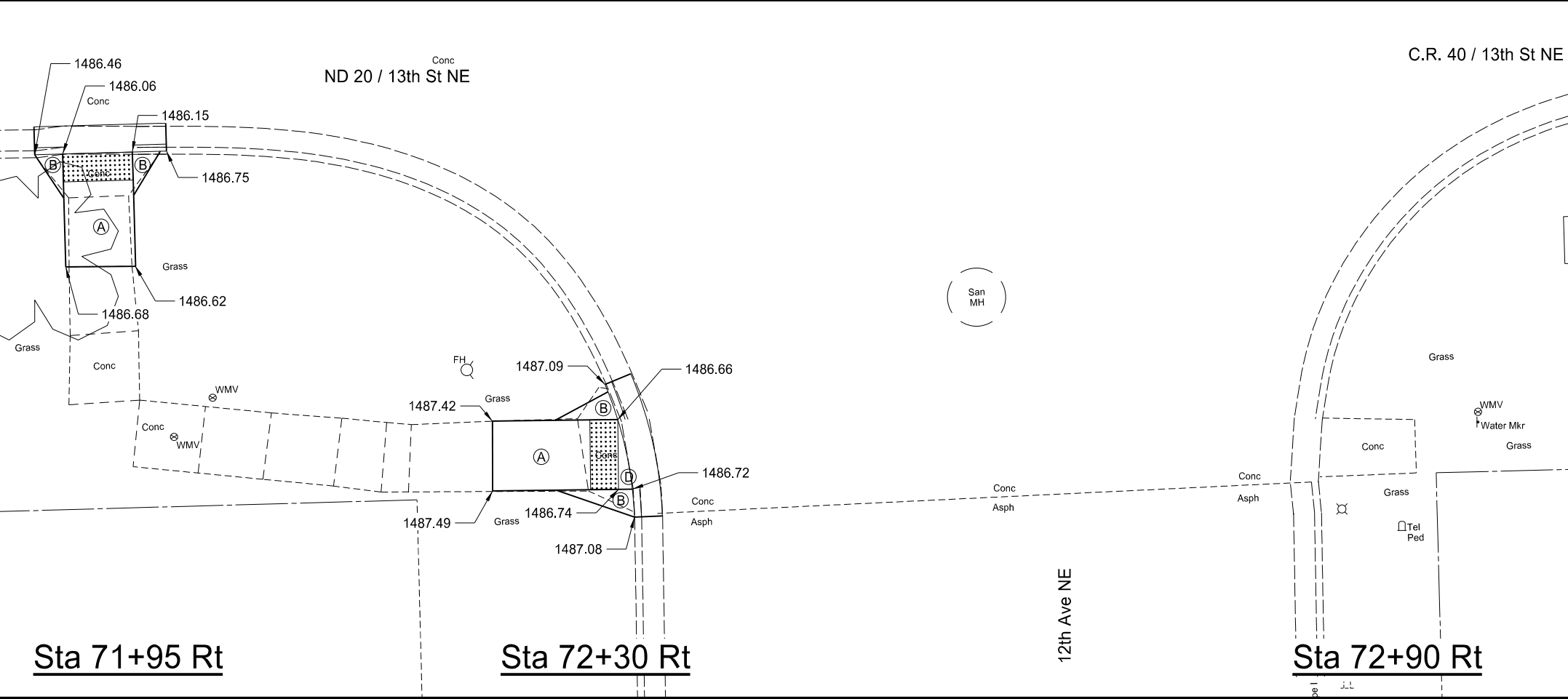
RAMP LAYOUTS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	80	13

SPEC CODE	BID ITEM	UNIT	QTY
302 0121	Aggregate Base Course CL 5		
	72+00 Lt	CY	1
	71+95 Rt & 72+30 Rt	CY	1
748 0140	Curb & Gutter-Type I		
	72+00 Lt	LF	14
	71+95 Rt & 72+30 Rt	LF	20
750 0100	Sidewalk Concrete		
	72+00 Lt	SY	9
	71+95 Rt & 72+30 Rt	SY	12
750 2115	Detectable Warning Panel		
	72+00 Lt	SF	10
	71+95 Rt & 72+30 Rt	SF	20



Sta 72+00 Lt



Sta 71+95 Rt

Sta 72+30 Rt

Sta 72+90 Rt

- (A) 8.3% Max Slope
- (B) 25% Max Flare Slope
- (C) 10% Max Flare Slope
- (D) 2% Max Landing

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RAMP LAYOUTS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

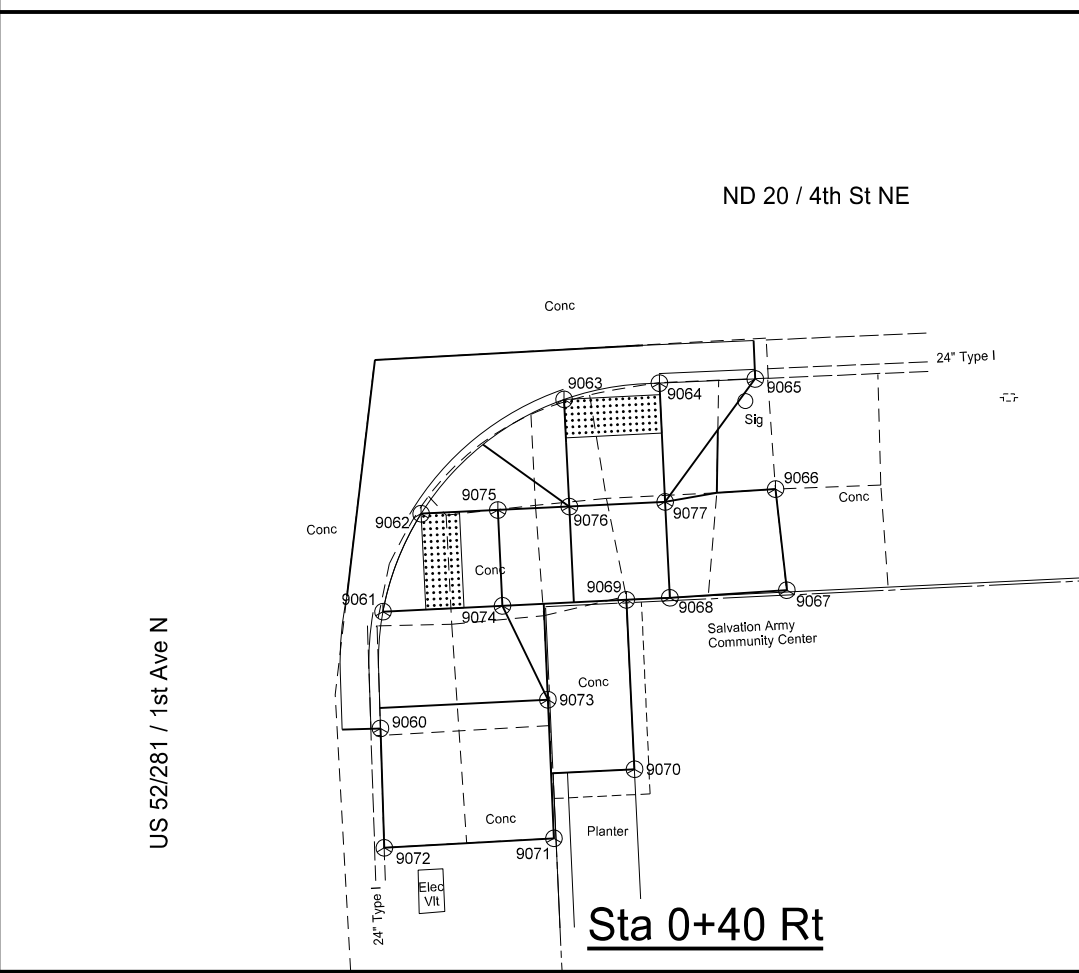
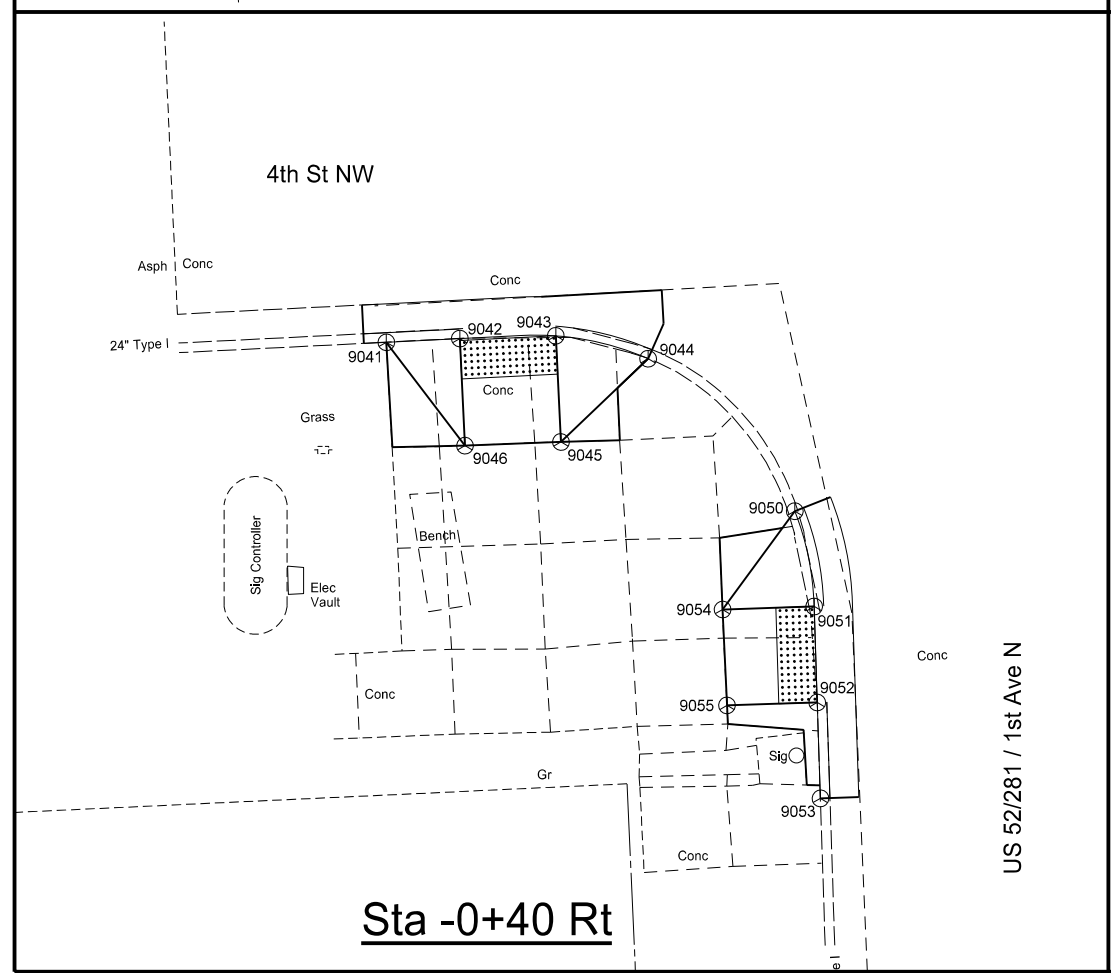
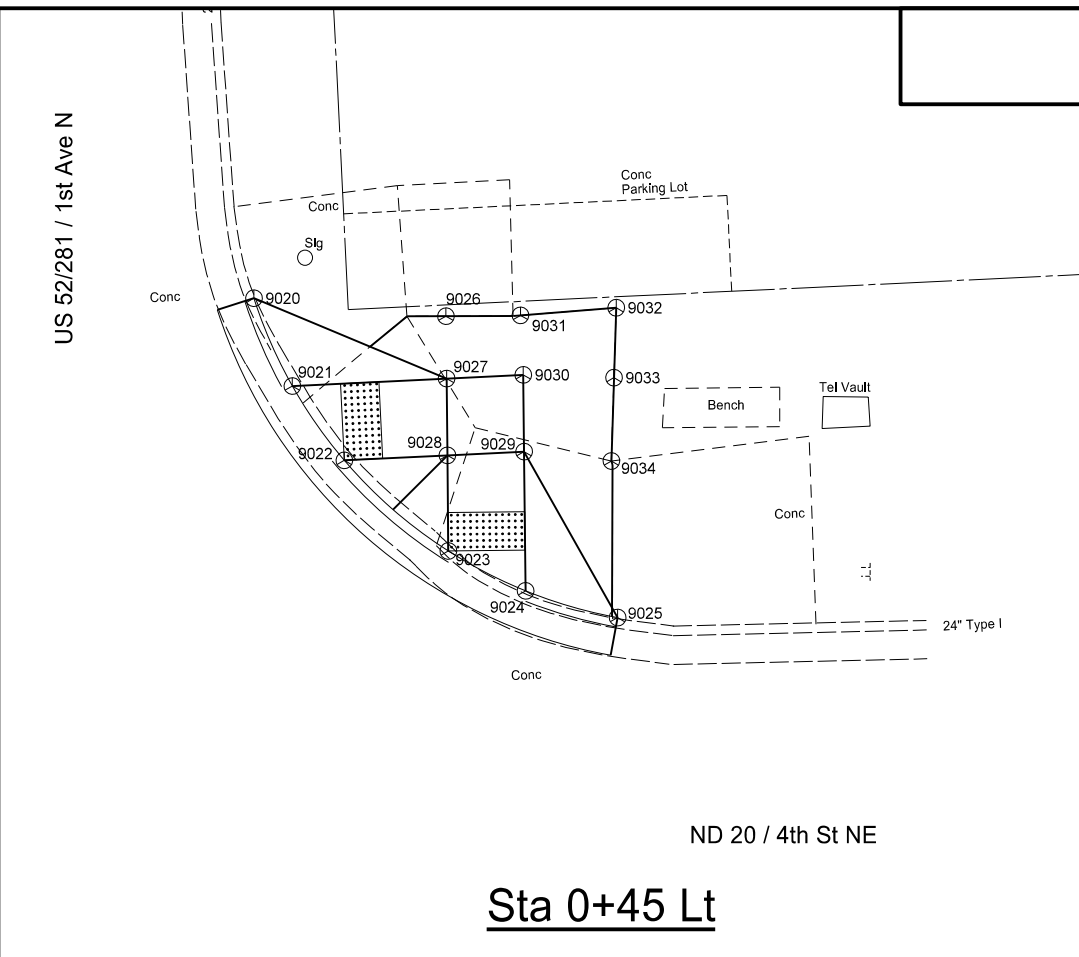
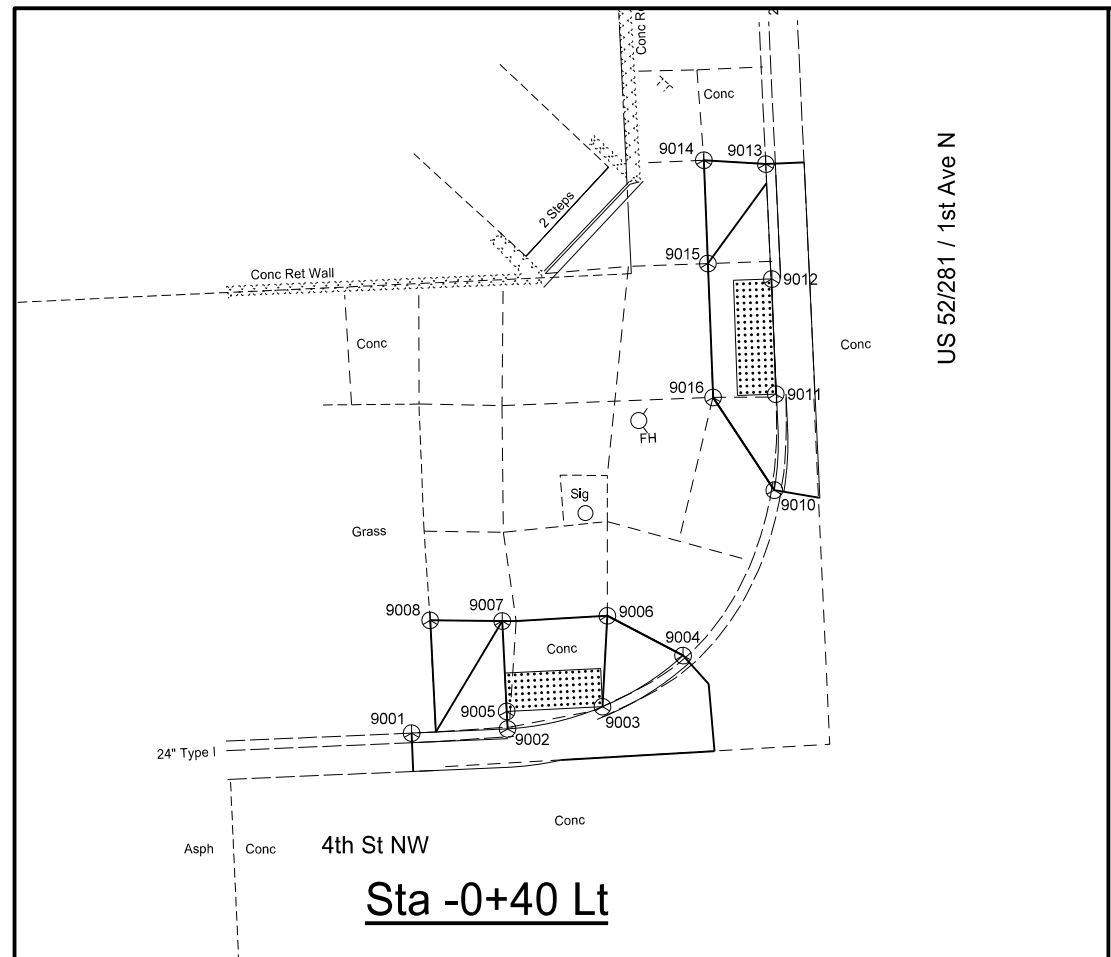
SURVEY COORDINATE AND CURVE DATA - ND 20 IN JAMESTOWN, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	81	1

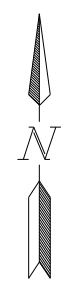
HORIZONTAL ALIGNMENT				CURVE DATA		US PUBLIC LAND SURVEY DATA				SURVEY CONTROL POINTS					
PNT	STATION	NORTHING	EASTING	ARC DEFINITION		DESC.	SEC-TWP-RGE	NORTHING	EASTING	PNT	NORTHING	EASTING	ELEV	STATION	OFFSET
CONTROL POINT DESCRIPTION															
ND 20 (Chain SCLND20)															
BEG	0+00.00	4591998.52	2416522.09	Curve SCLND20_115		NE Sec Cor	Sec 24 T-140-N R-64-W	467959.01	2420486.24						
PI	15+30.12	459271.97	2418050.45	PI STA =	48+48.44	E Qtr Cor	Sec 24 T-140-N R-64-W	465311.40	2420553.06	PRIMARY CONTROL					
PI	22+02.37	459943.93	2418030.79	Delta =	89° 45' 20" (RT)	NW Sec Cor	Sec 25 T-140-N R-64-W	462514.60	2415377.26	GPS 1	462764.88	2420708.89	1488.58	88' East & 101' North of Sta. 72+58.11	
PC	42+77.18	462018.15	2417981.55	D =	9° 59' 13"	N Qtr Cor	Sec 25 T-140-N R-64-W	462590.10	2417998.14	3" Brass BLM Cap					
PI SCLND20_115	48+48.44	462589.25	2417968.00	R =	573.70'	NE Sec Cor	Sec 25 T-140-N R-64-W	462663.54	2420620.43	GPS 2	459216.33	2417537.80	1402.65	10+15	31' Rt
PT	51+75.90	462605.24	2418539.03	T =	571.26'	C Sec	Sec 25 T-140-N R-64-W	459943.95	2418070.81	No. 4 Rebar with 2" aluminum cap marked "Control Point"					
END Rec Sec Cor	72+58.11	462663.54	2420620.43	L =	898.72'	E Qtr Cor	Sec 25 T-140-N R-64-W	460010.55	2420690.28	GPS 3	459169.44	2416449.25	1405.49	73' West & 29' South of Sta. 0+00	
						SW Sec Cor	Sec 25 T-140-N R-64-W	457237.35	2415532.60	No. 4 Rebar with 2" aluminum cap marked "Control Point"					
						S Qtr Cor	Sec 25 T-140-N R-64-W	457306.50	2418145.51						
						SE Sec Cor	Sec 25 T-140-N R-64-W	457377.68	2420759.24						
<input type="checkbox"/> Assumed Coordinates <input checked="" type="checkbox"/> All coordinates on this sheet are Sutusman County ground coordinates. They are derived from the NAD83(2011) reference frame; North Dakota South Zone Combination Factor (cf) = 0.9998560										All coordinates and measurements on this document derived from the International Foot definition.			This document was originally issued and sealed by Daren Peterka, Registration Number LS- 4358 , on 11/17/17 and the original document is stored at the North Dakota Department of Transportation		
NOTES: Sheet 1 of 1										INITIALIZING BENCH MARK NDGPS Stations (OPUS)					
Date Survey Completed 04/28/17										<input checked="" type="checkbox"/> NAVD-88 <input type="checkbox"/> NGVD-29					
										<input type="checkbox"/> GEOID 09 <input checked="" type="checkbox"/> GEOID 12B					
										<input type="checkbox"/> GEOID 12A					

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	82	1

SEE SECTION 82, SHEET 14
FOR SURVEY DATA INFORMATION



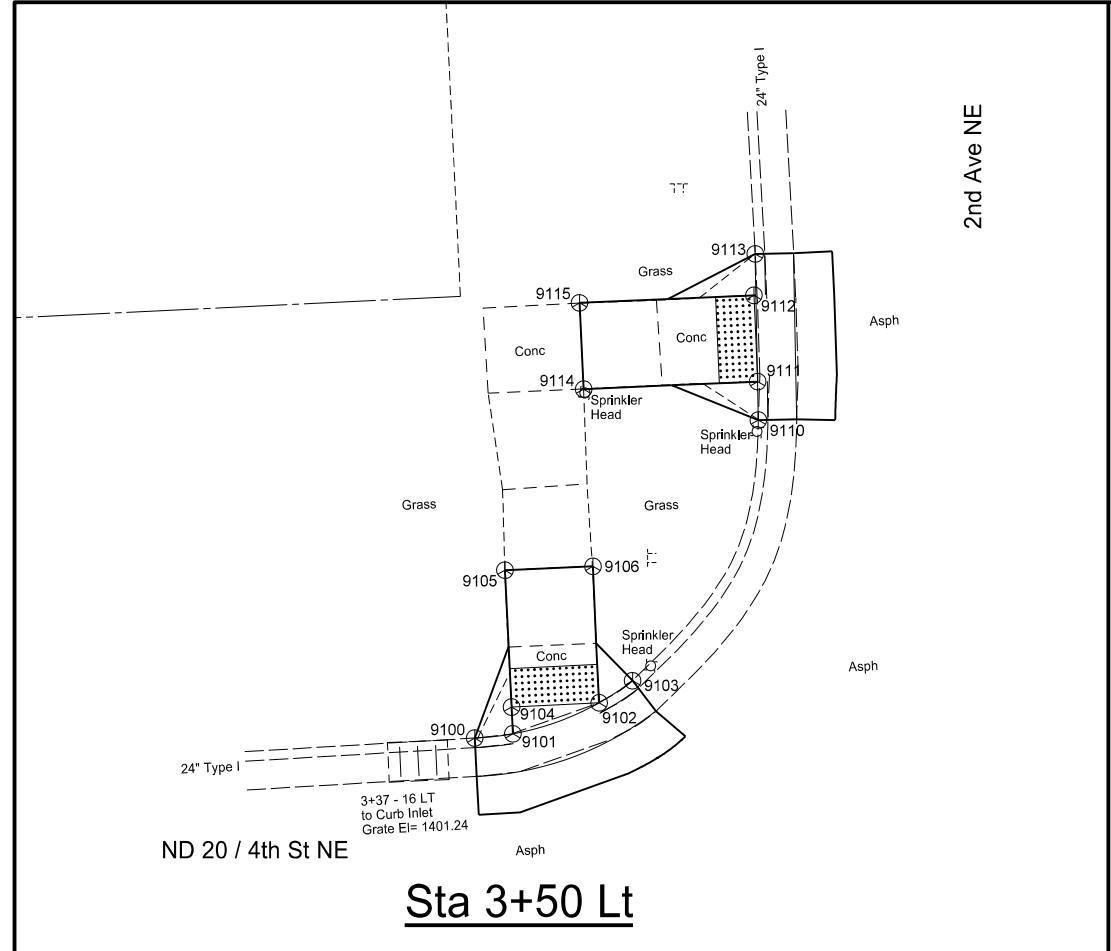
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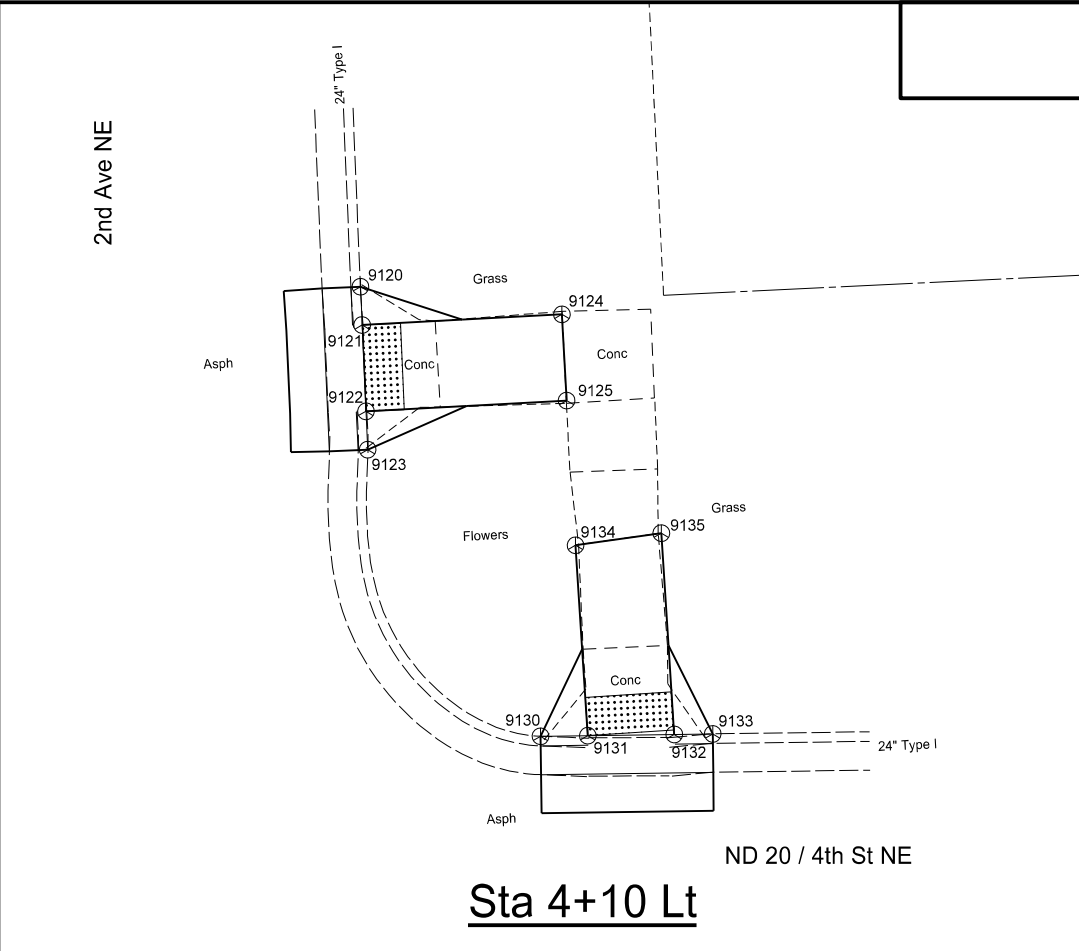
SURVEY DATA LAYOUTS
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE
City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	82	2

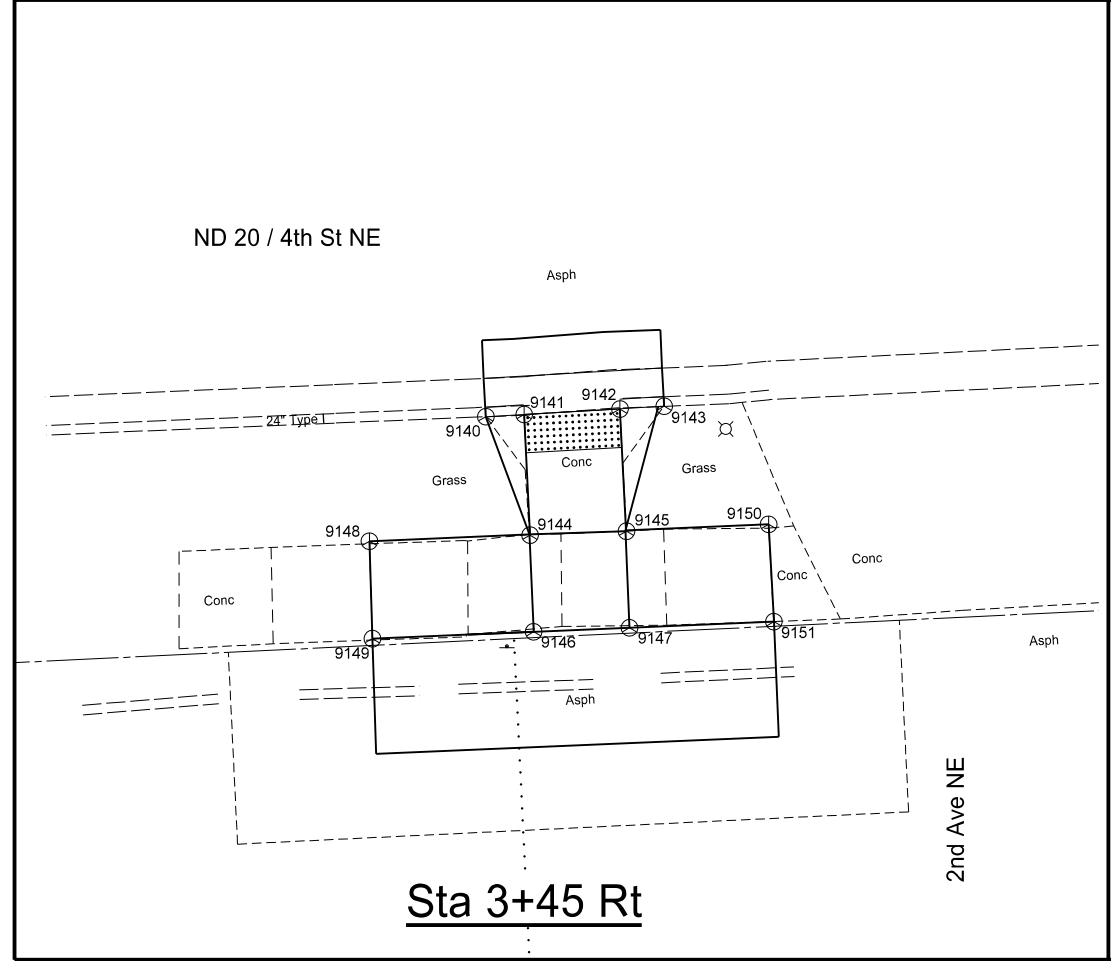
SEE SECTION 82, SHEET 14
FOR SURVEY DATA INFORMATION



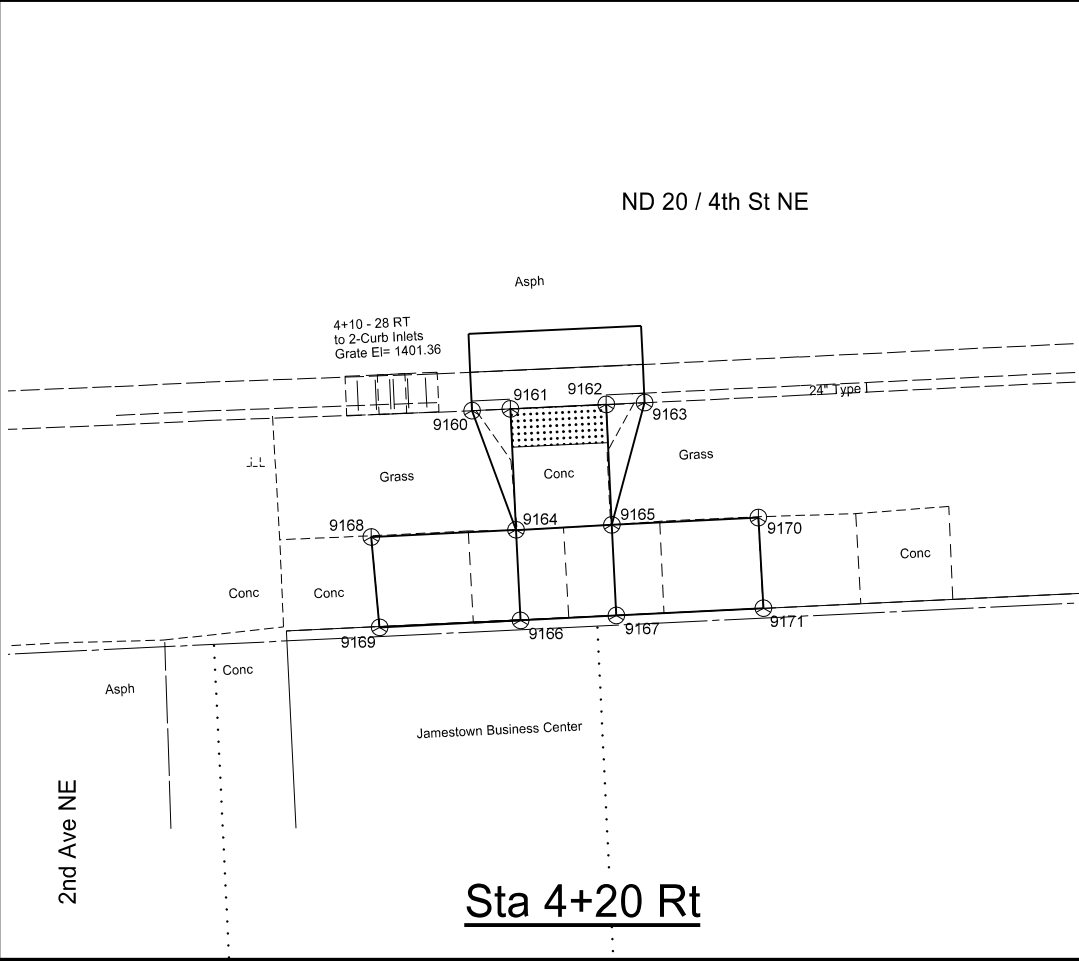
Sta 3+50 Lt



Sta 4+10 Lt

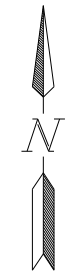


Sta 3+45 Rt



Sta 4+20 Rt

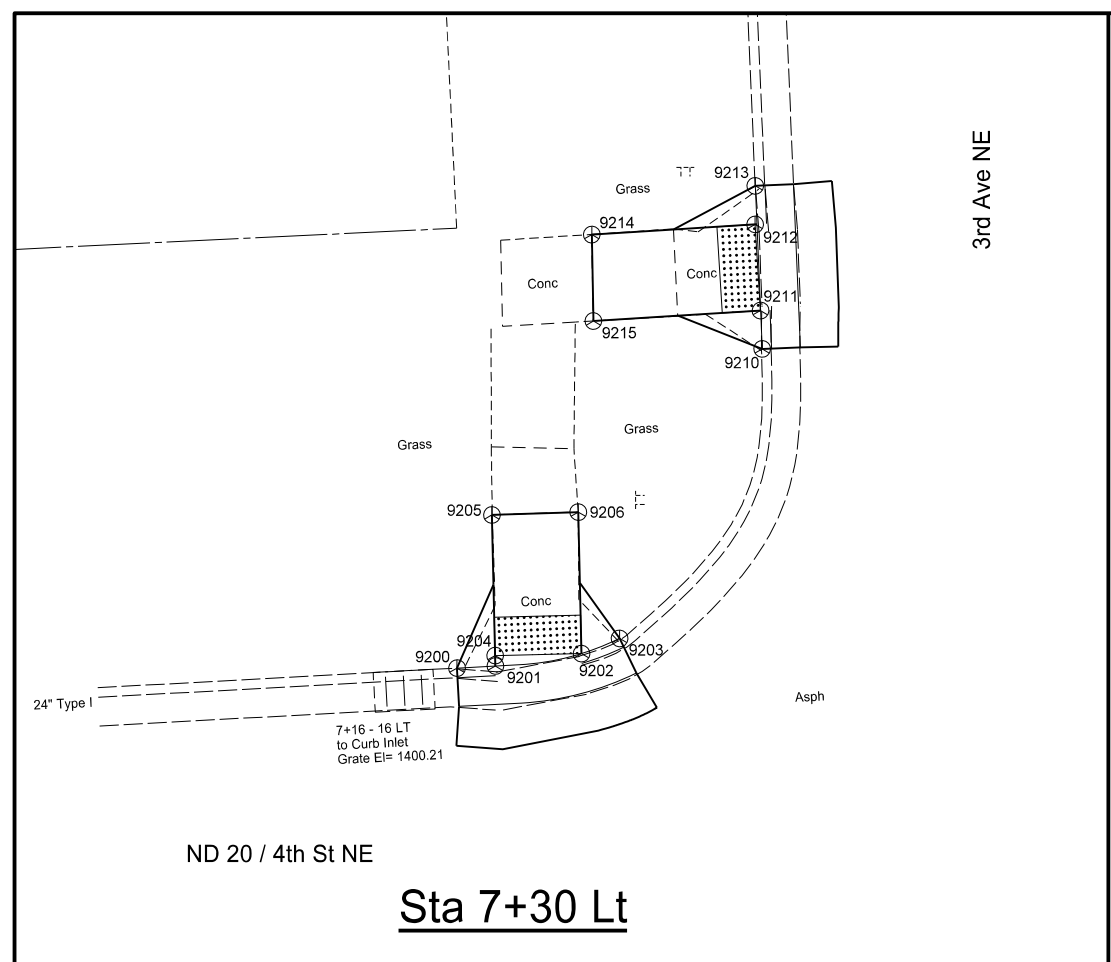
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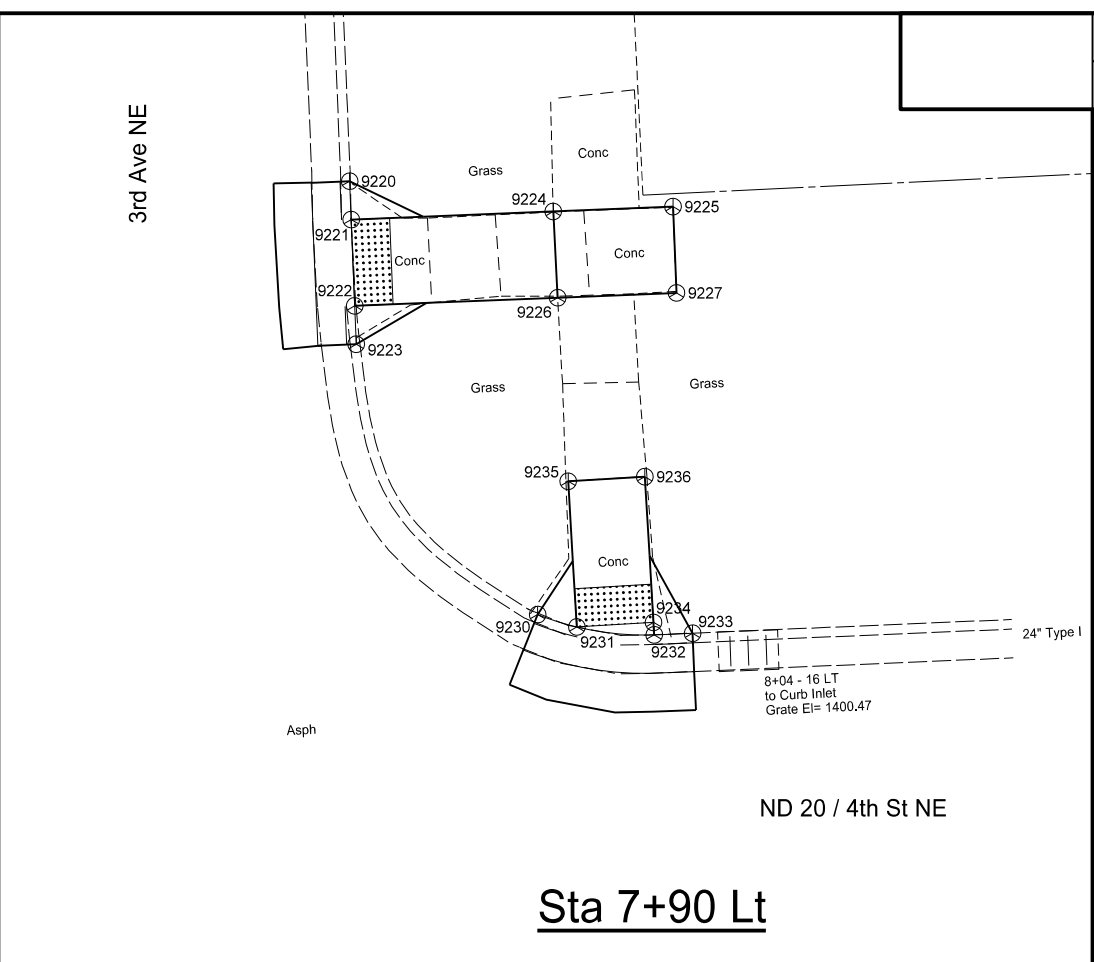
SURVEY DATA LAYOUTS
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE
City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	82	3

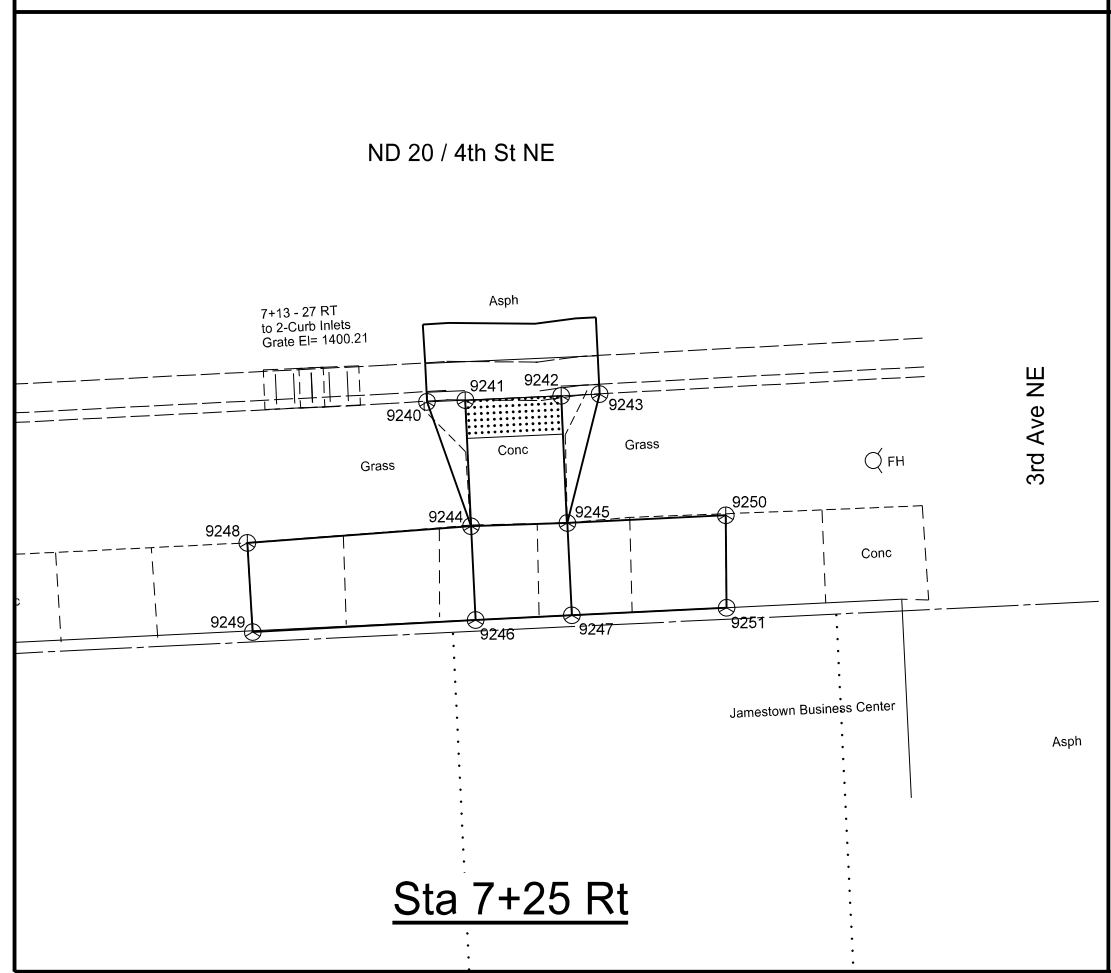
SEE SECTION 82, SHEET 14
FOR SURVEY DATA INFORMATION



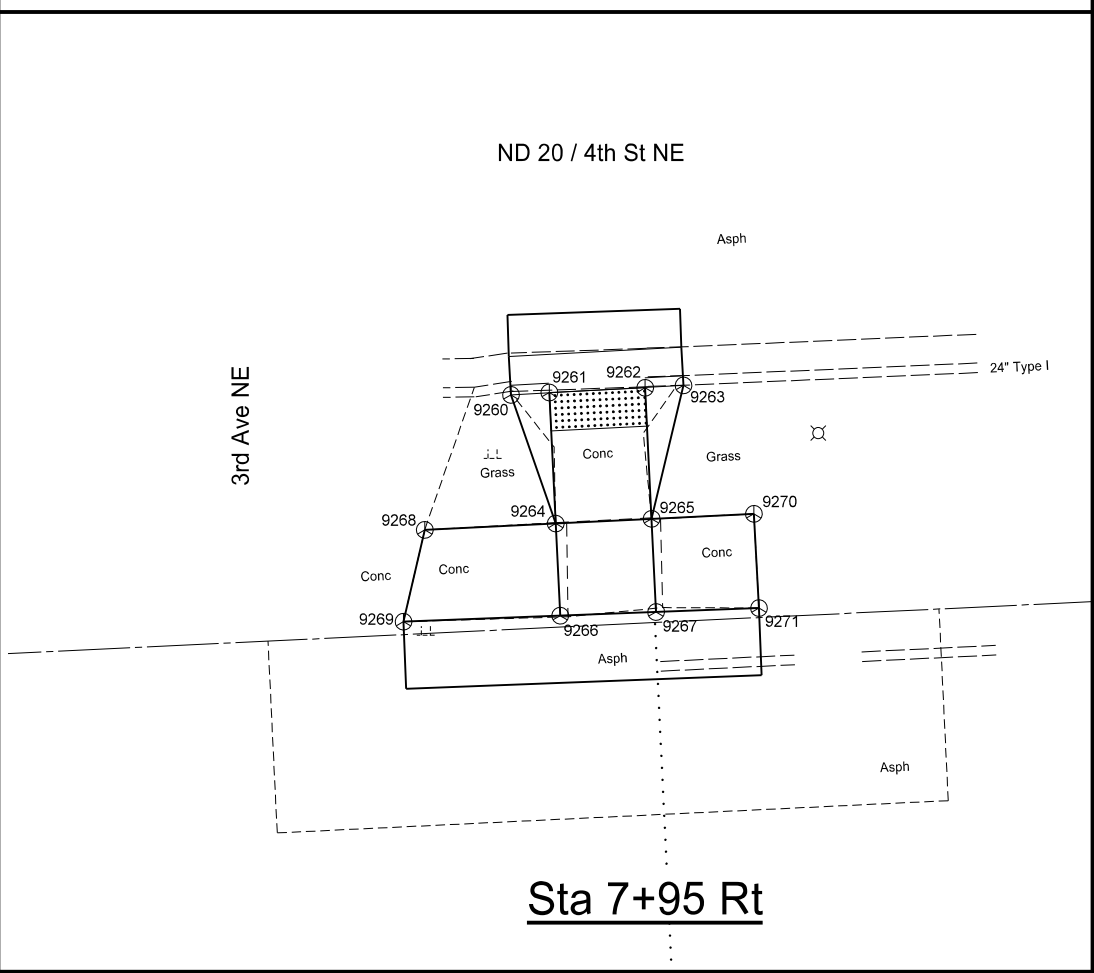
Sta 7+30 Lt



Sta 7+90 Lt

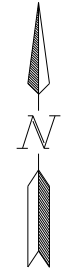


Sta 7+25 Rt



Sta 7+95 Rt

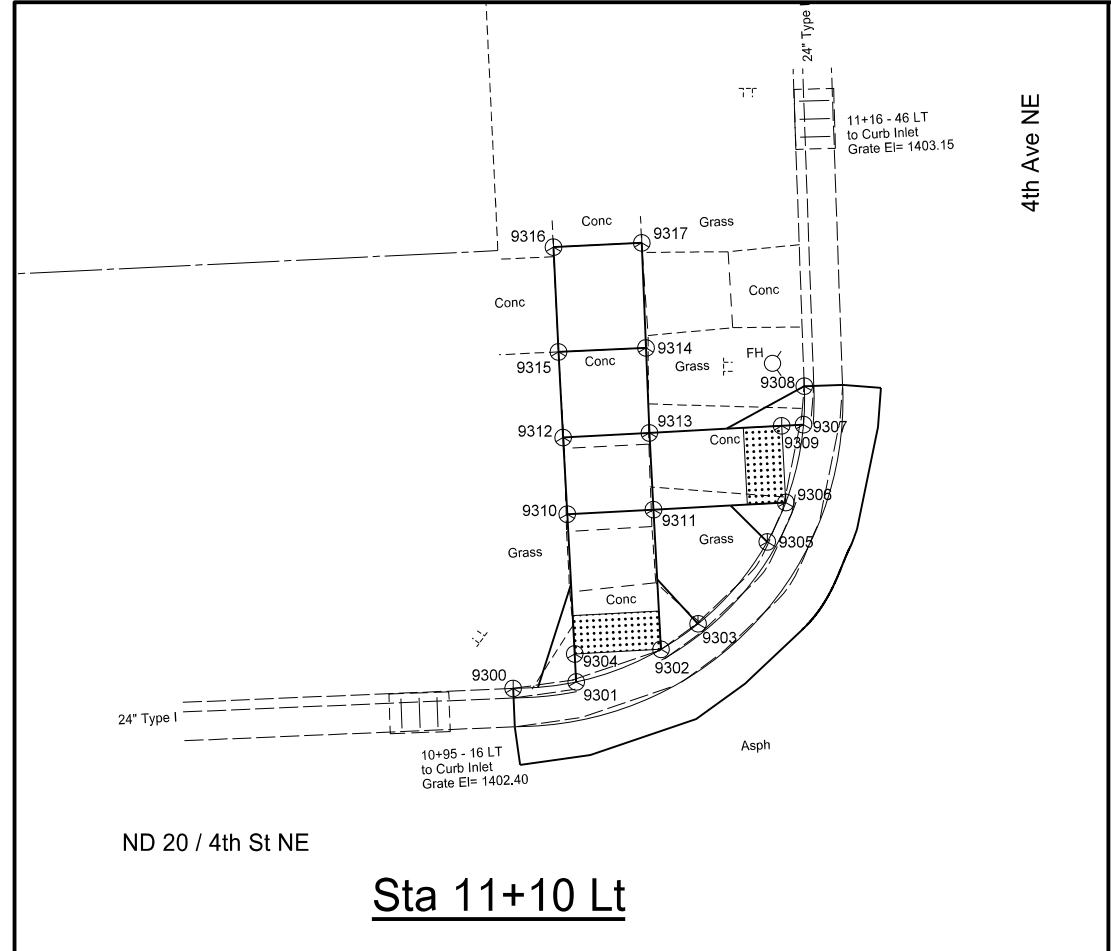
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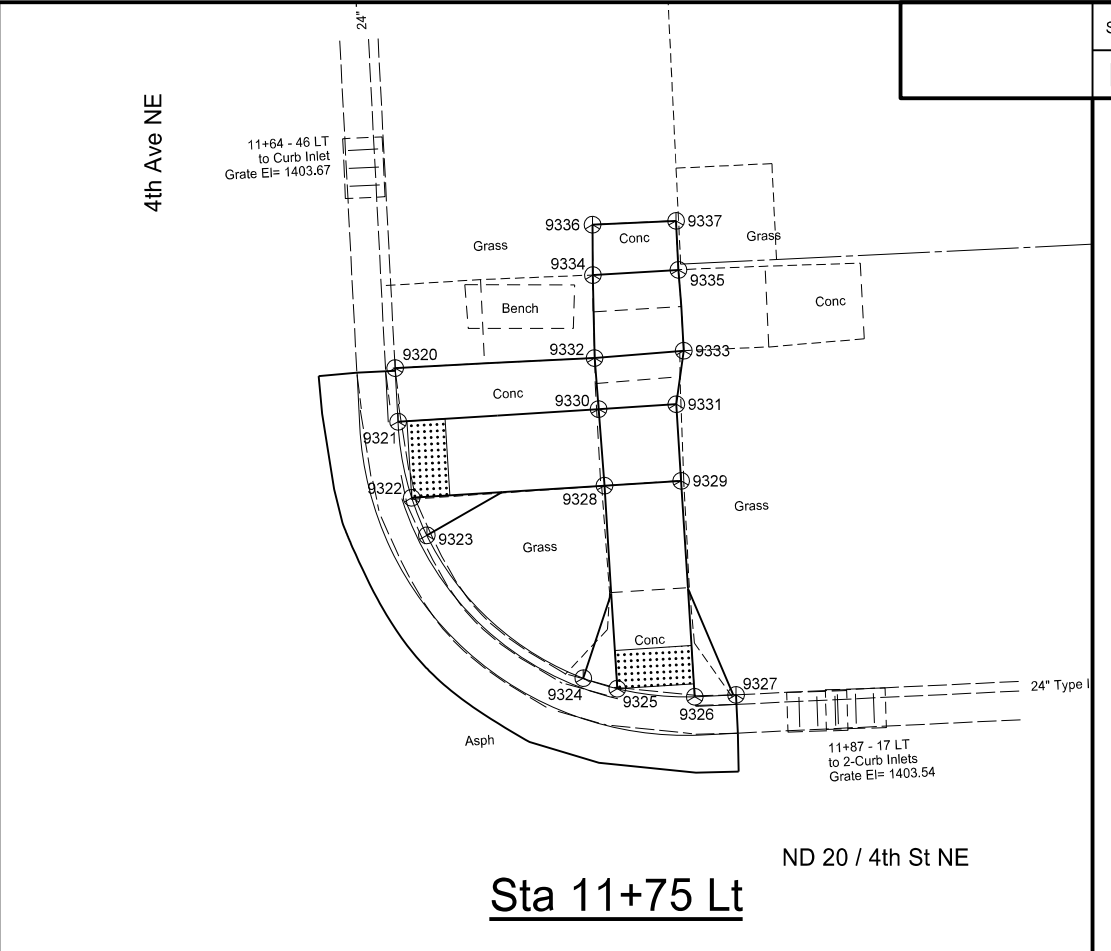
SURVEY DATA LAYOUTS
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE
City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	82	4

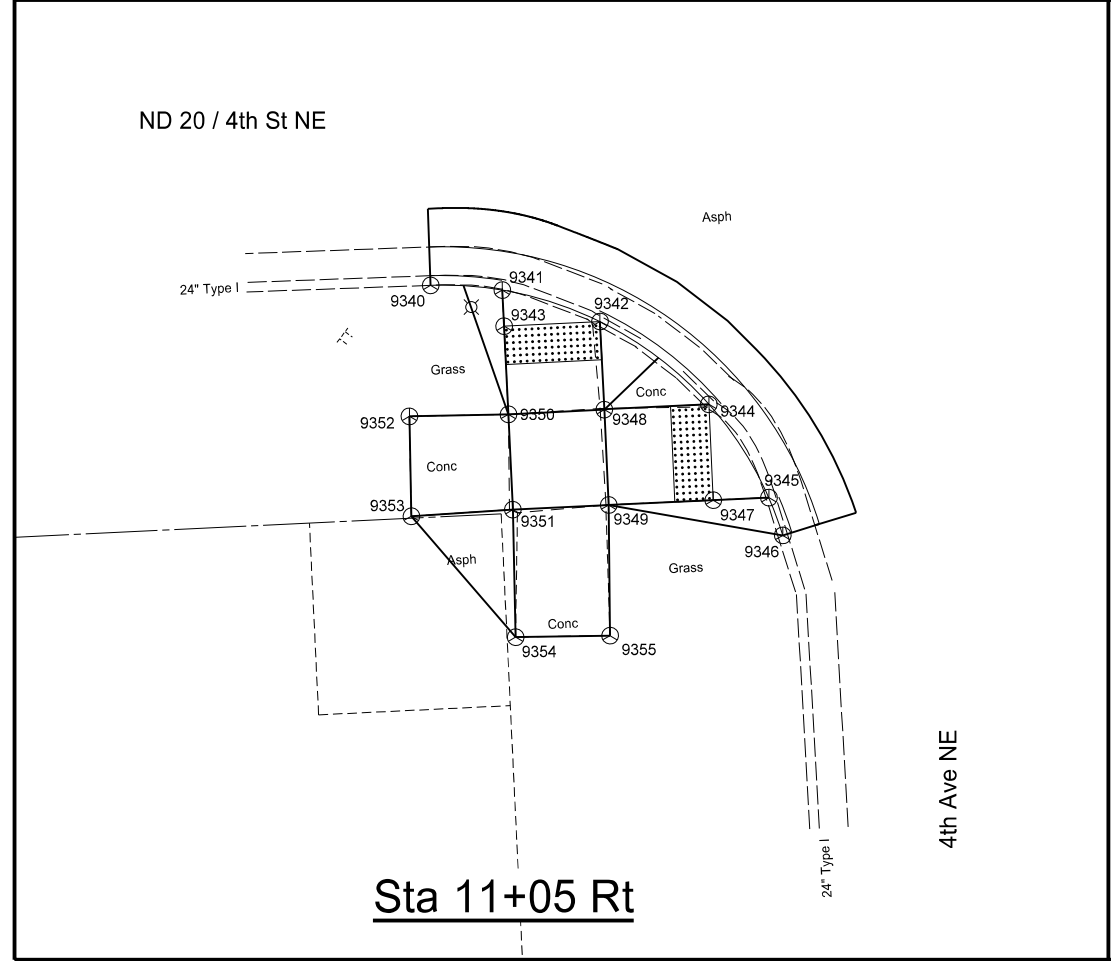
SEE SECTION 82, SHEET 15
FOR SURVEY DATA INFORMATION



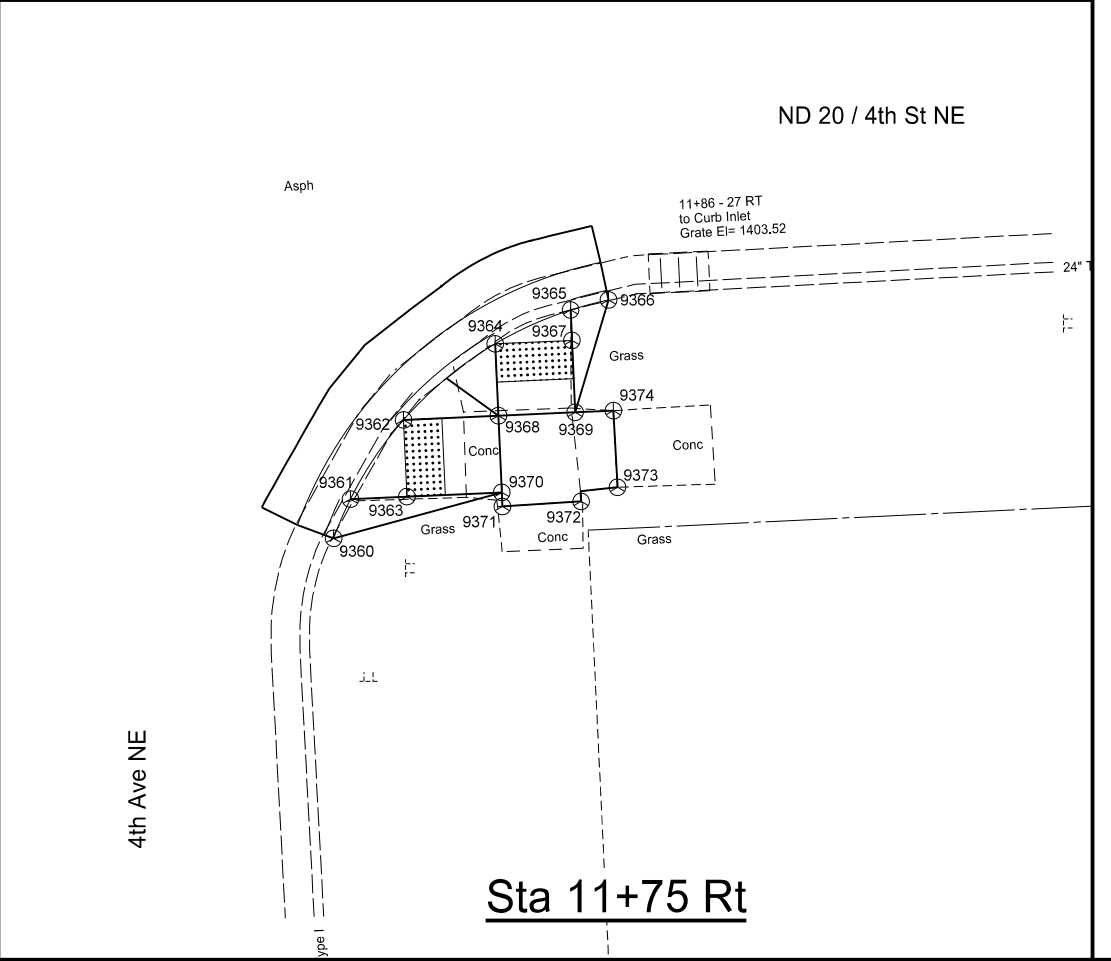
Sta 11+10 Lt



Sta 11+75 Lt

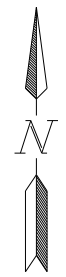


Sta 11+05 Rt



Sta 11+75 Rt

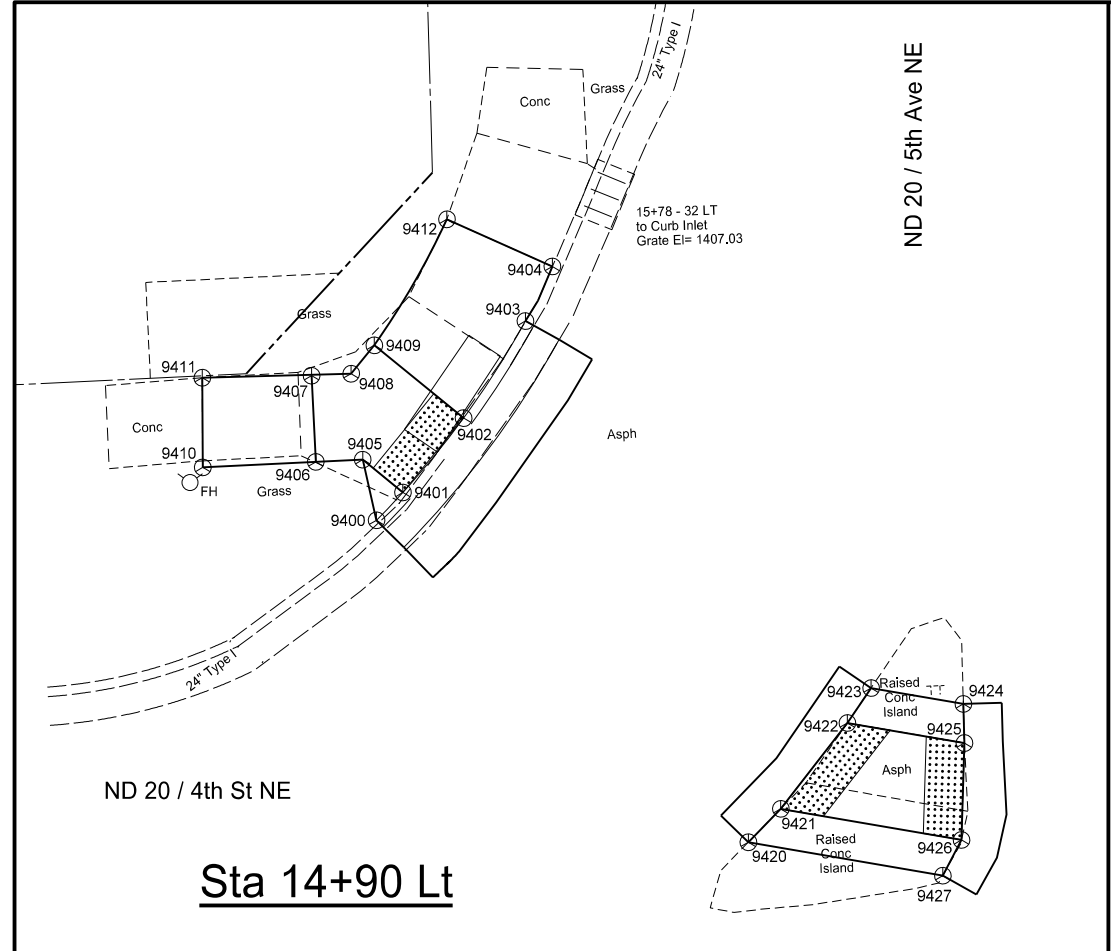
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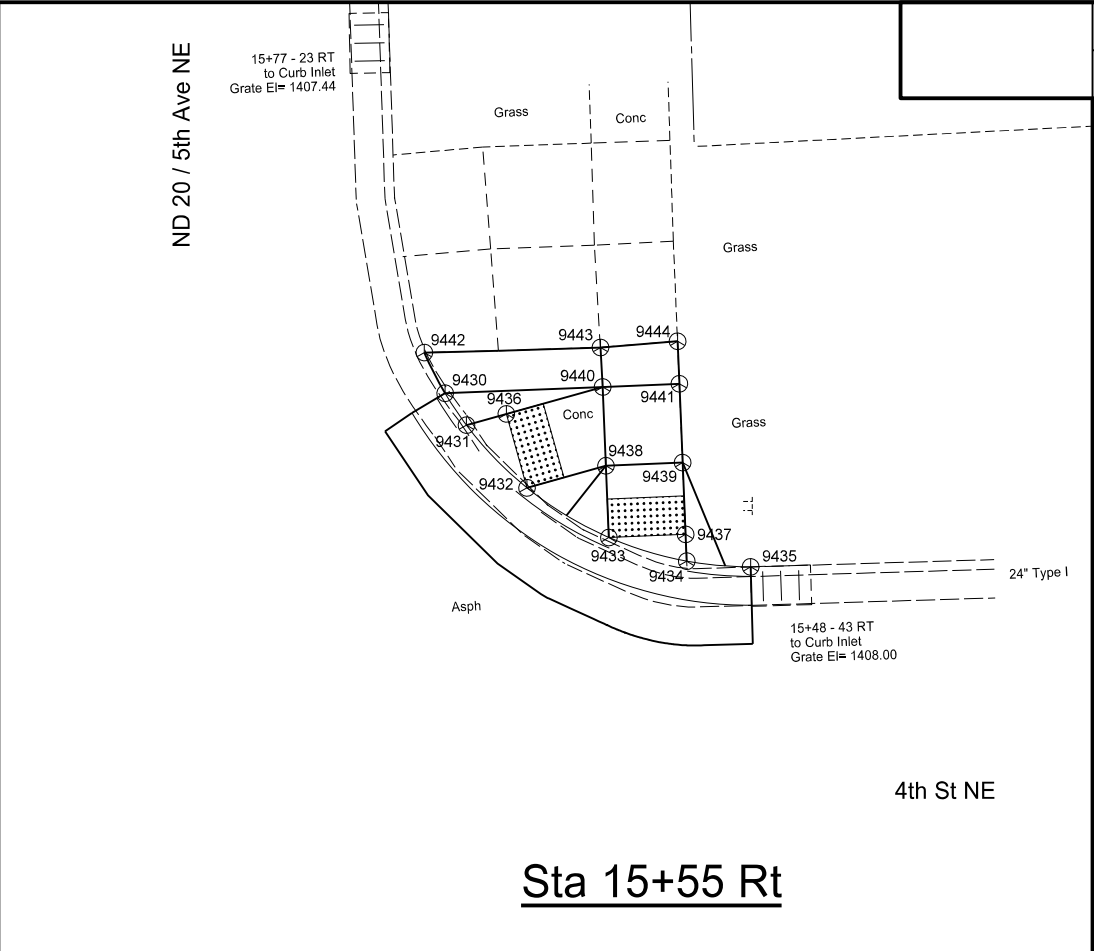
SURVEY DATA LAYOUTS
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE
City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	82	5

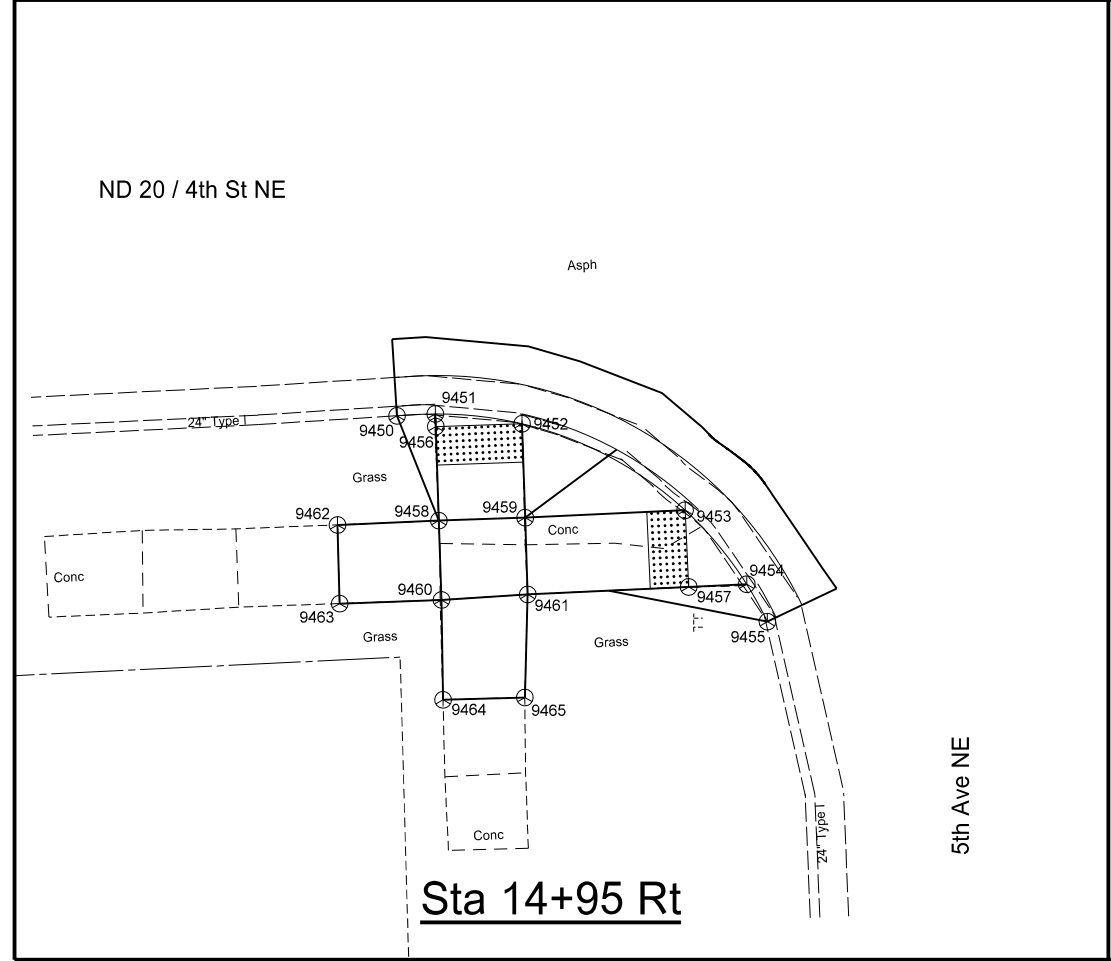
SEE SECTION 82, SHEET 15
FOR SURVEY DATA INFORMATION



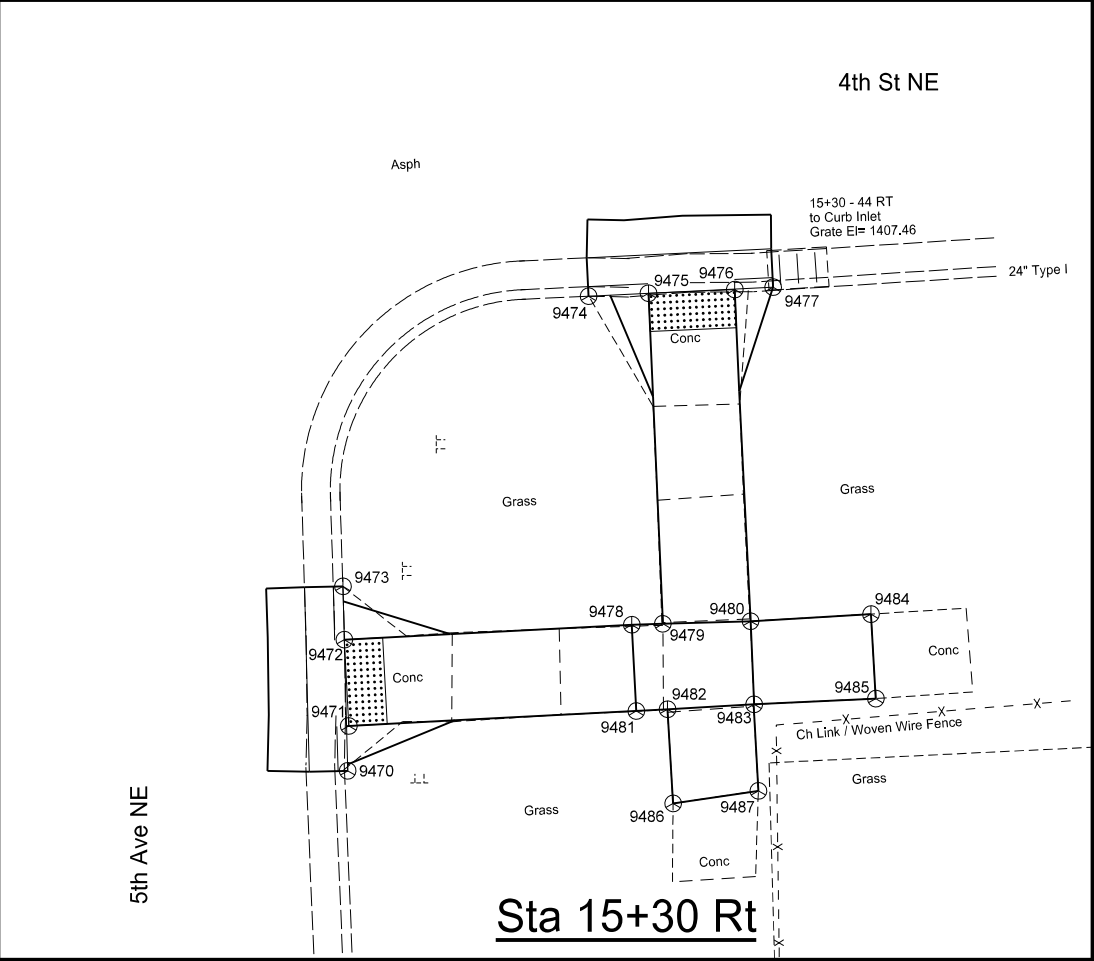
Sta 14+90 Lt



Sta 15+55 Rt



Sta 14+95 Rt



Sta 15+30 Rt

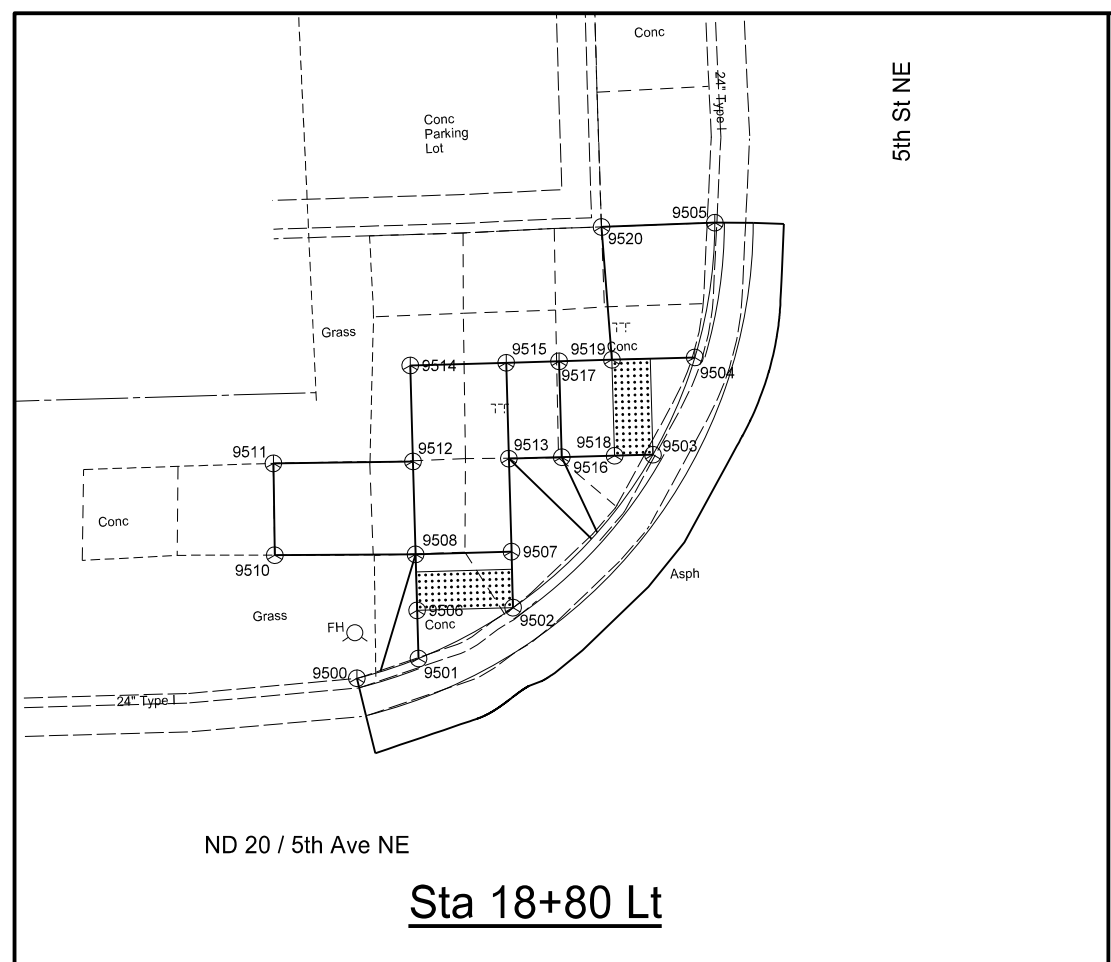
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SURVEY DATA LAYOUTS
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE
City of Jamestown, Stutsman County, ND

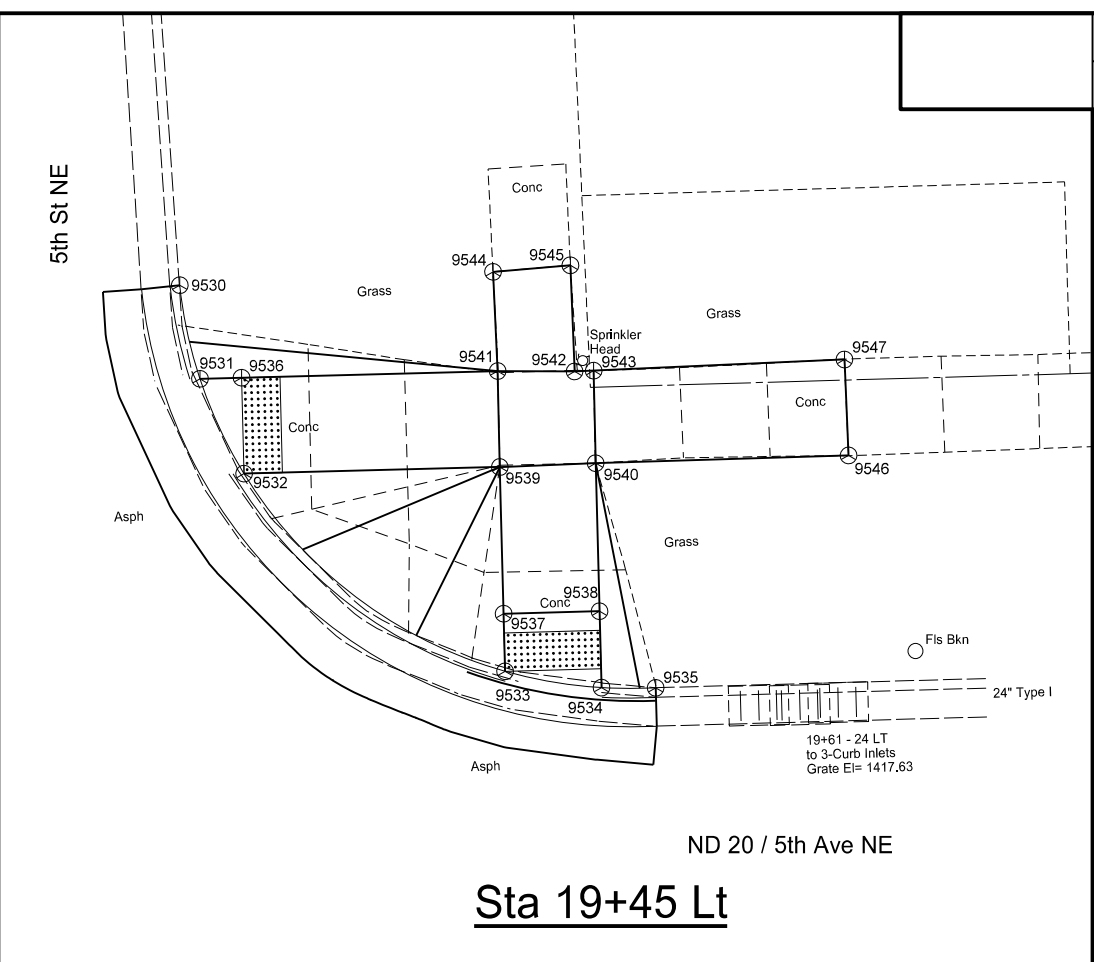
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	82	6

SEE SECTION 82, SHEET 15
FOR SURVEY DATA INFORMATION



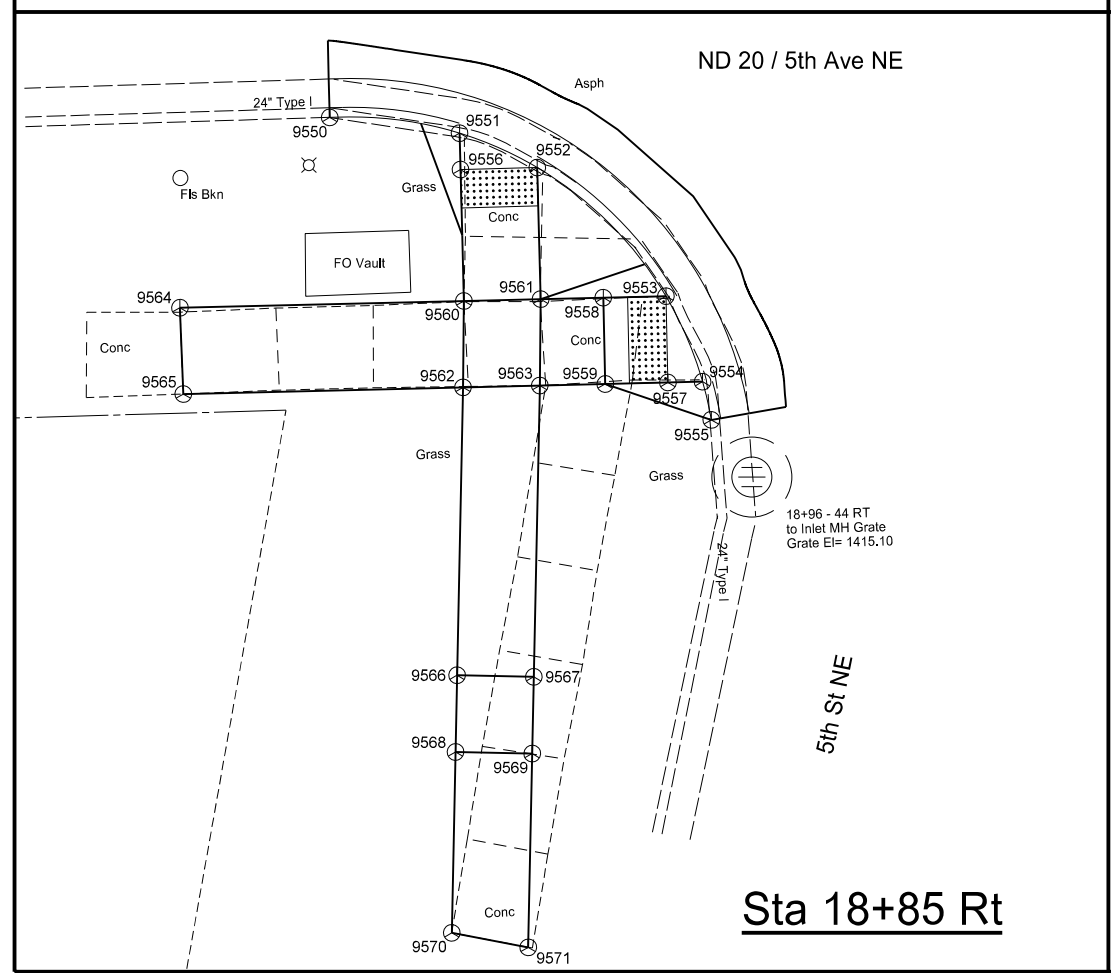
ND 20 / 5th Ave NE

Sta 18+80 Lt



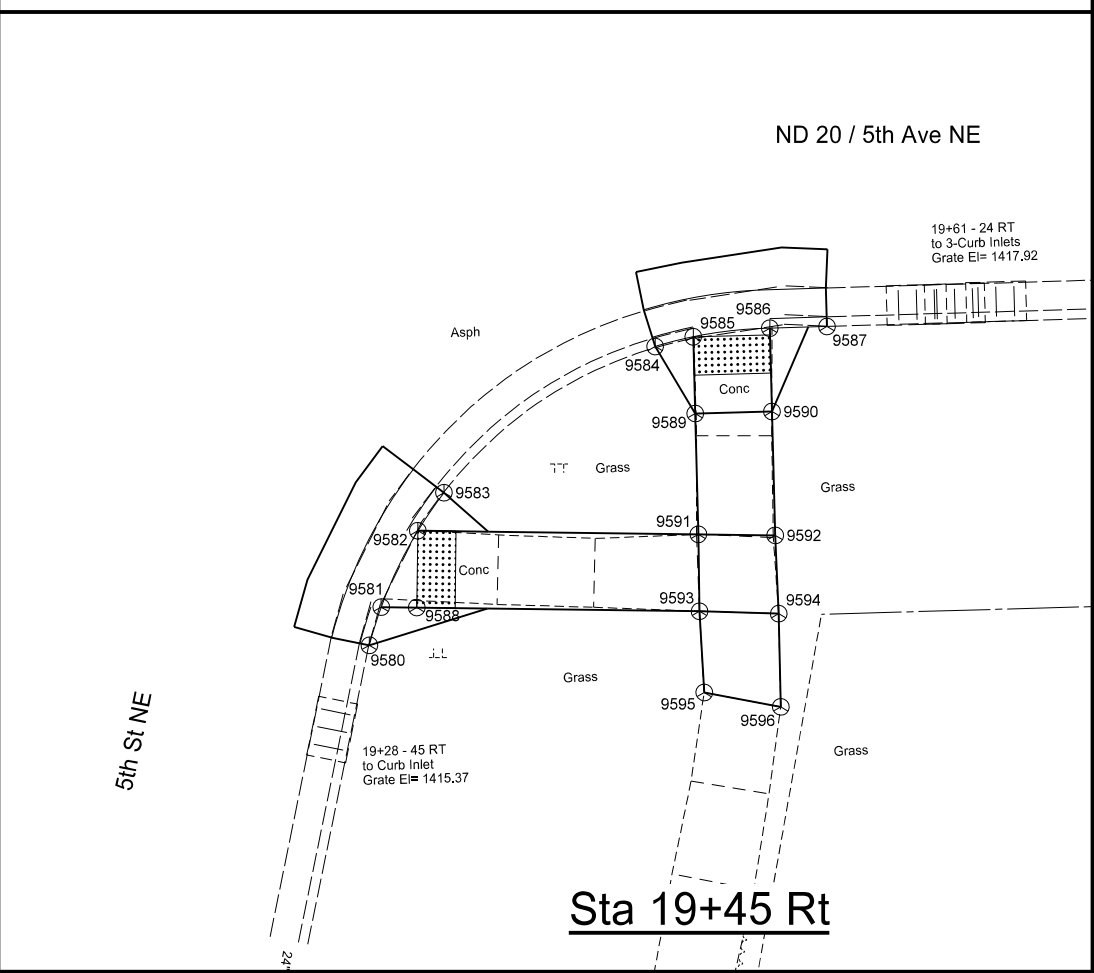
ND 20 / 5th Ave NE

Sta 19+45 Lt



ND 20 / 5th Ave NE

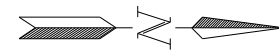
Sta 18+85 Rt



ND 20 / 5th Ave NE

Sta 19+45 Rt

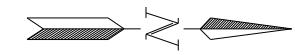
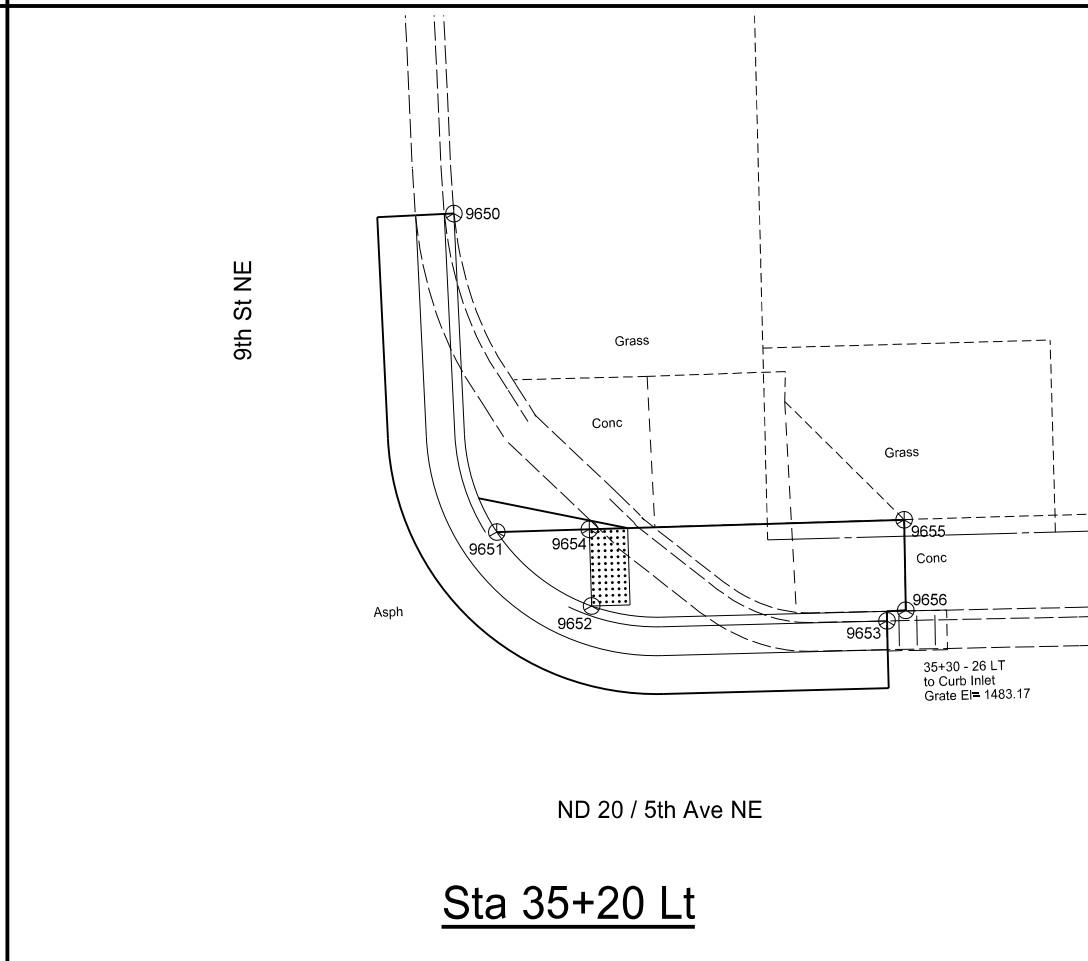
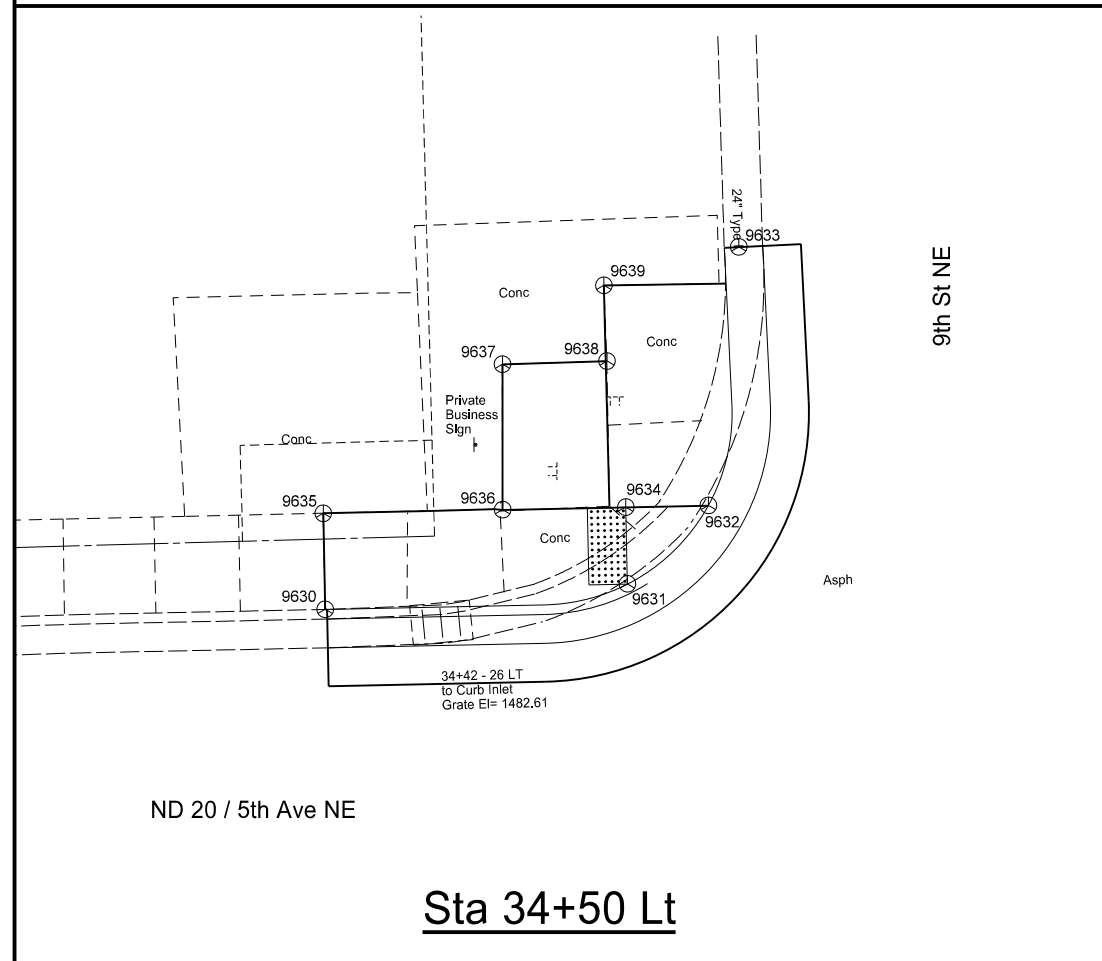
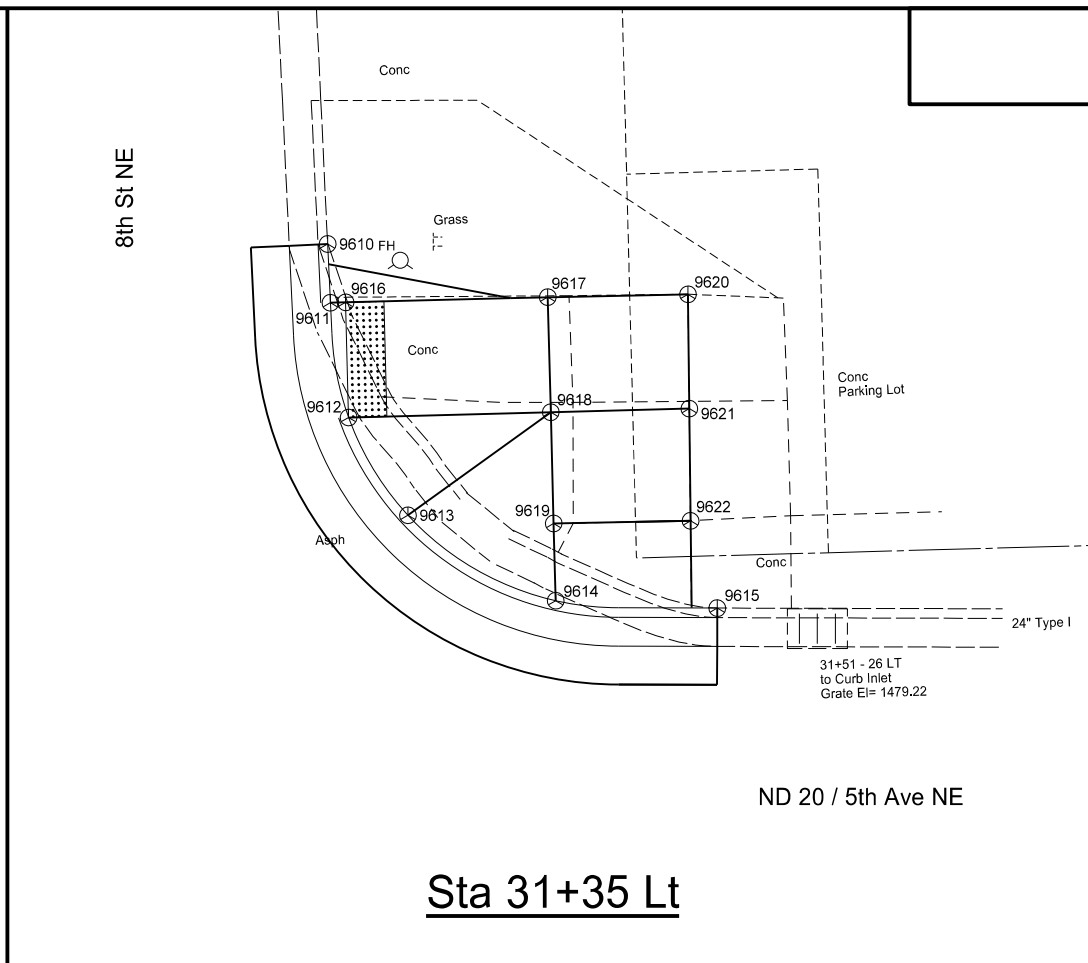
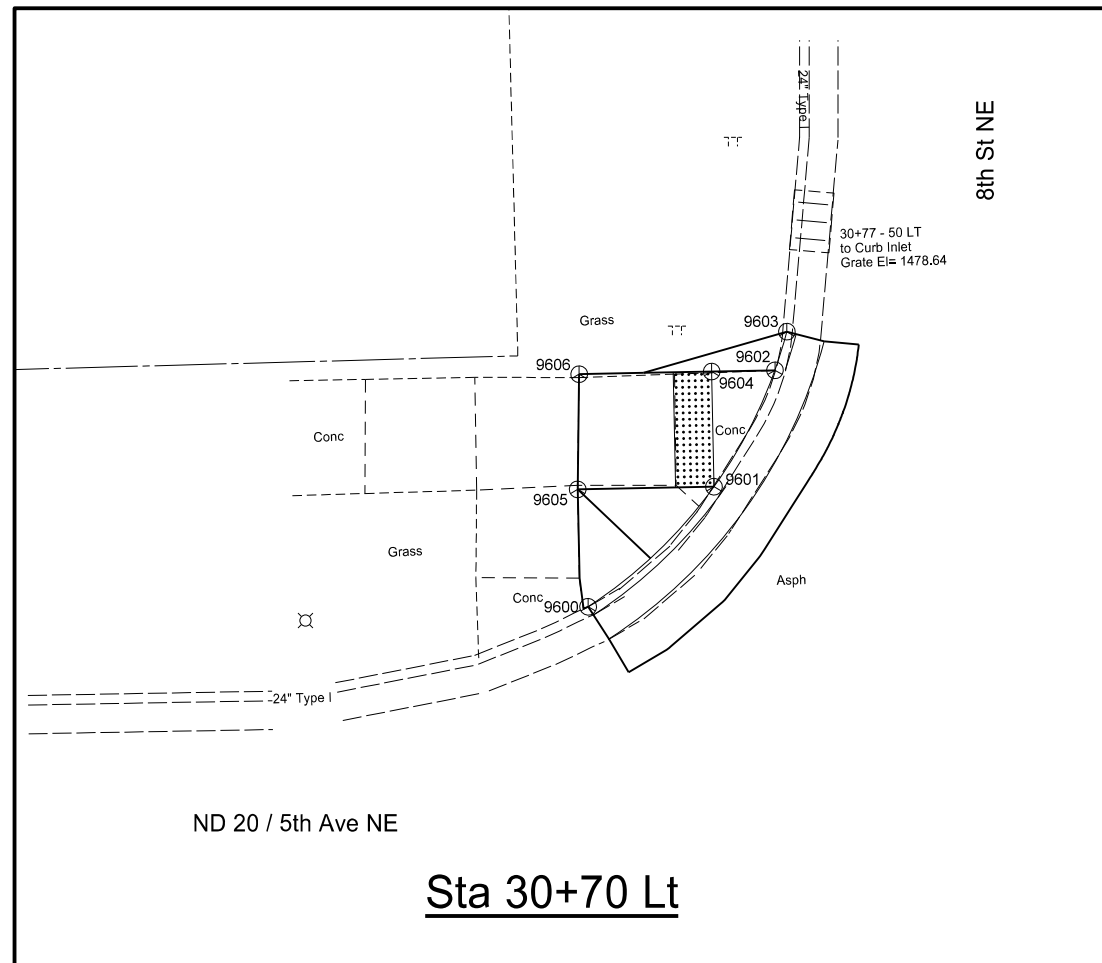
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SURVEY DATA LAYOUTS
ADA Curb Ramps
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City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	82	7

SEE SECTION 82, SHEET 16
FOR SURVEY DATA INFORMATION

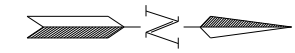
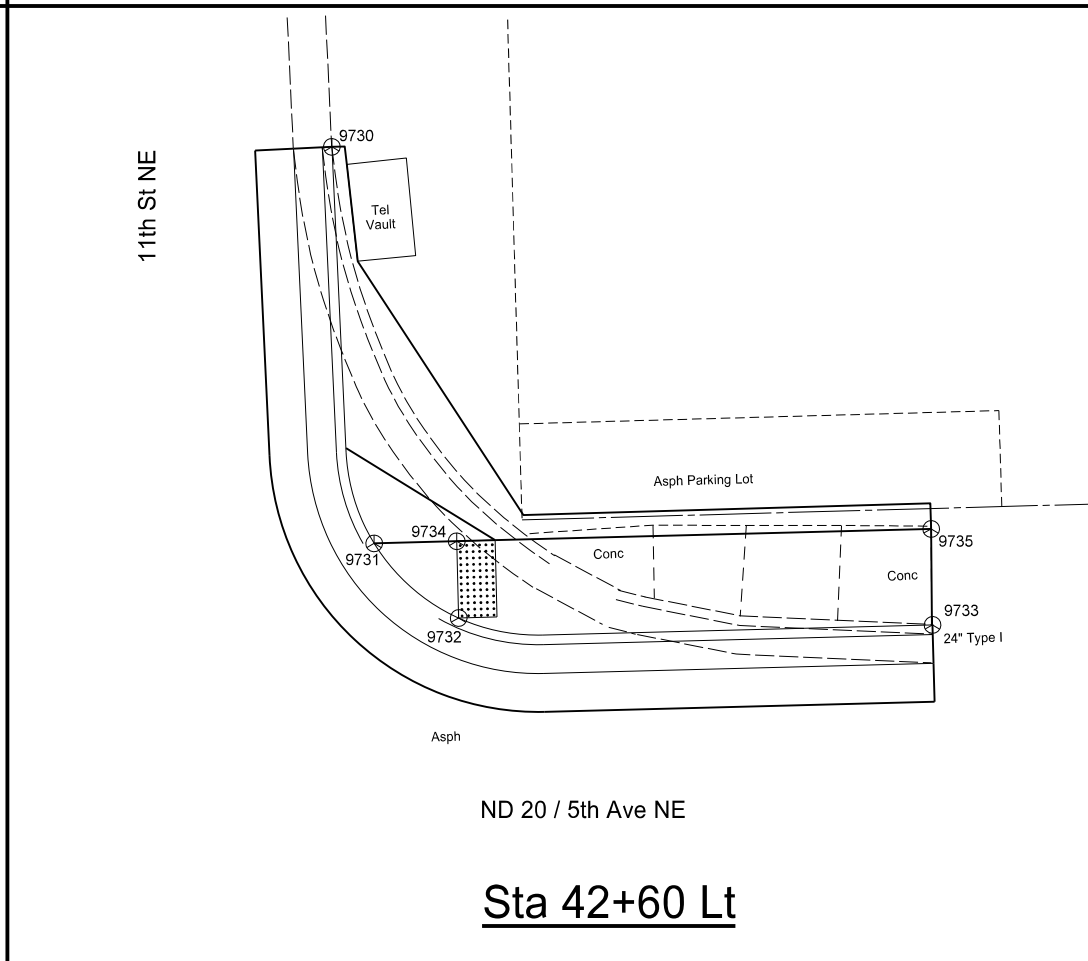
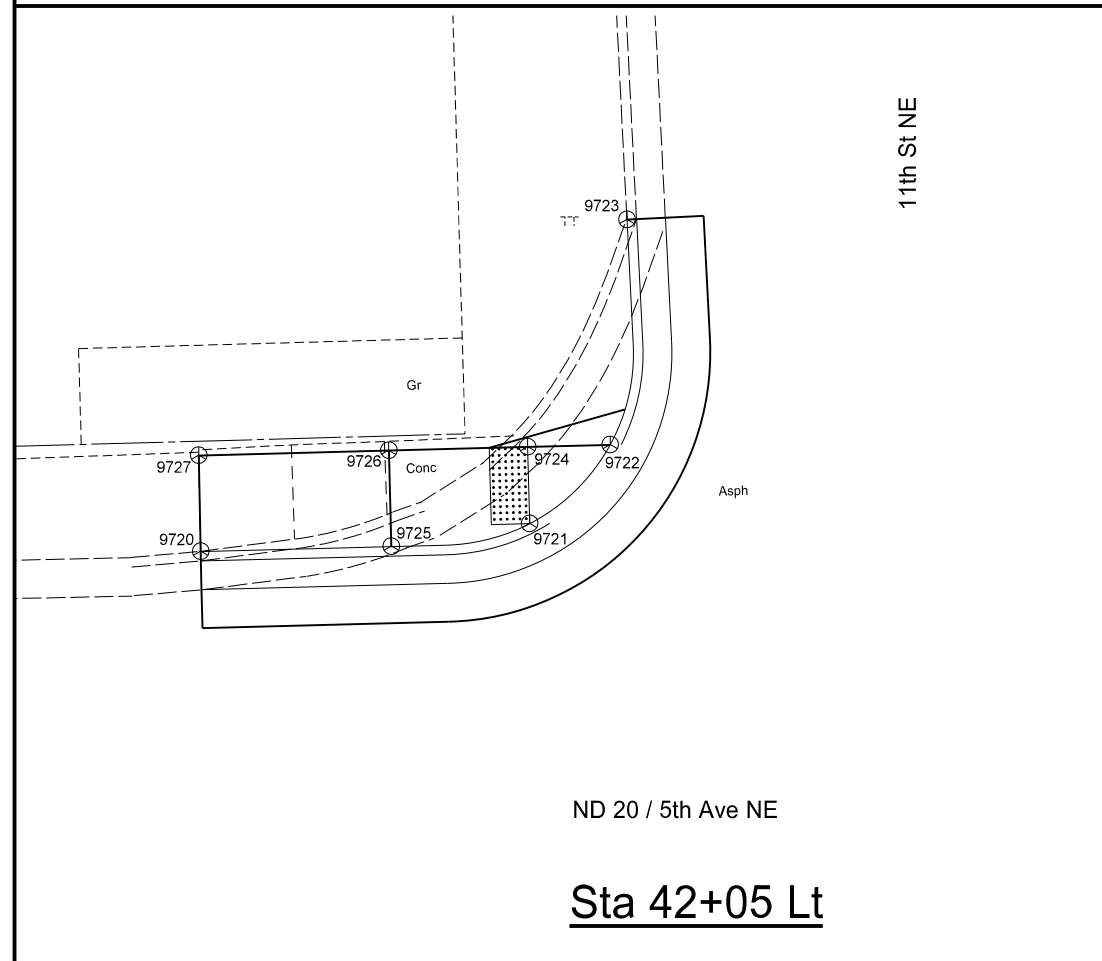
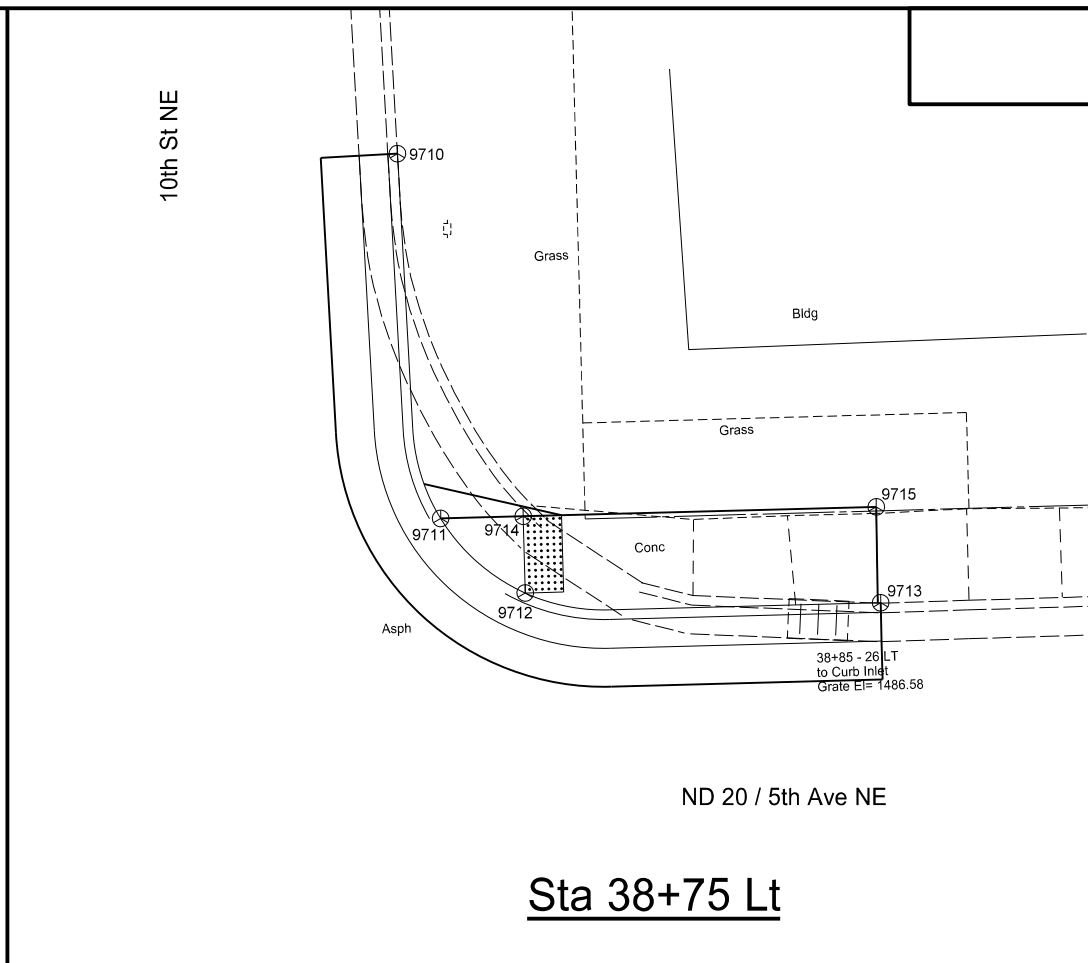
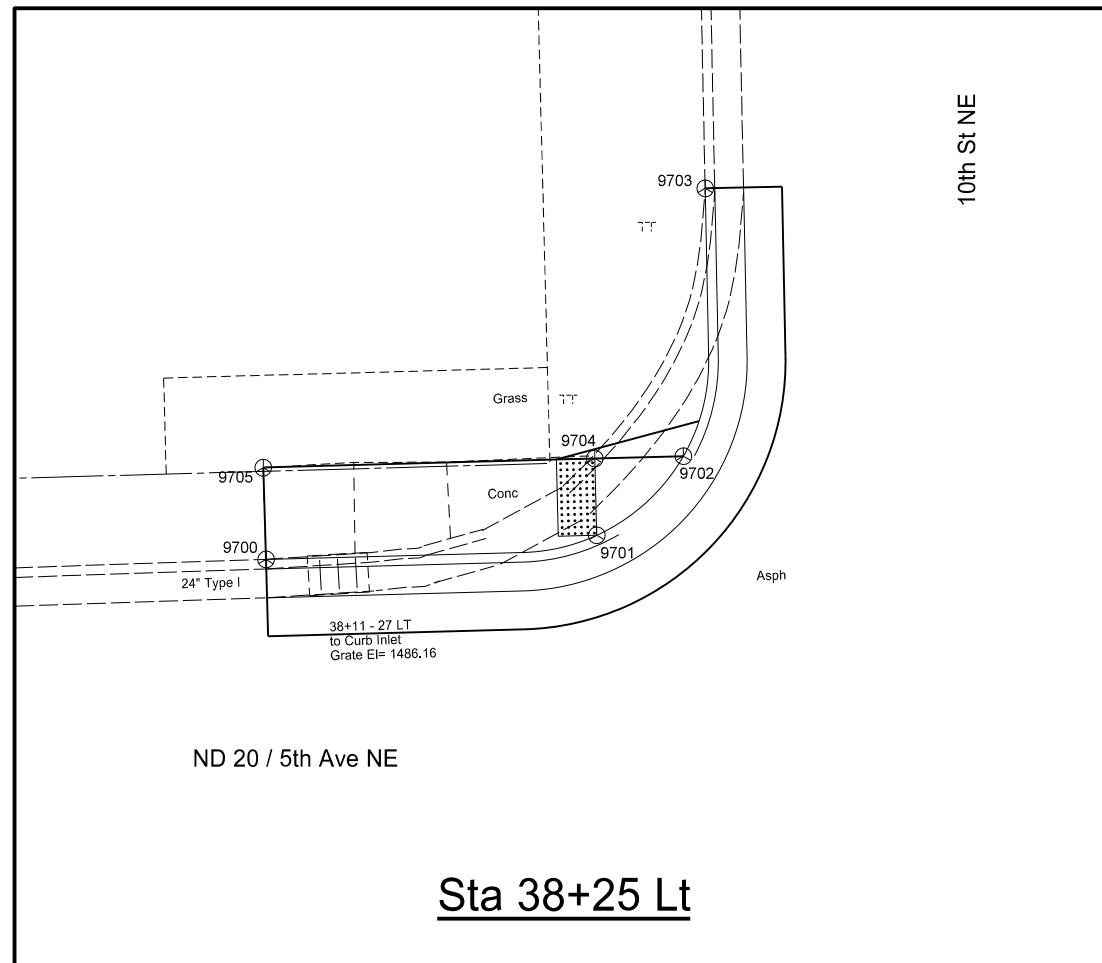


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SURVEY DATA LAYOUTS
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE
City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	82	8

SEE SECTION 82, SHEET 16
FOR SURVEY DATA INFORMATION

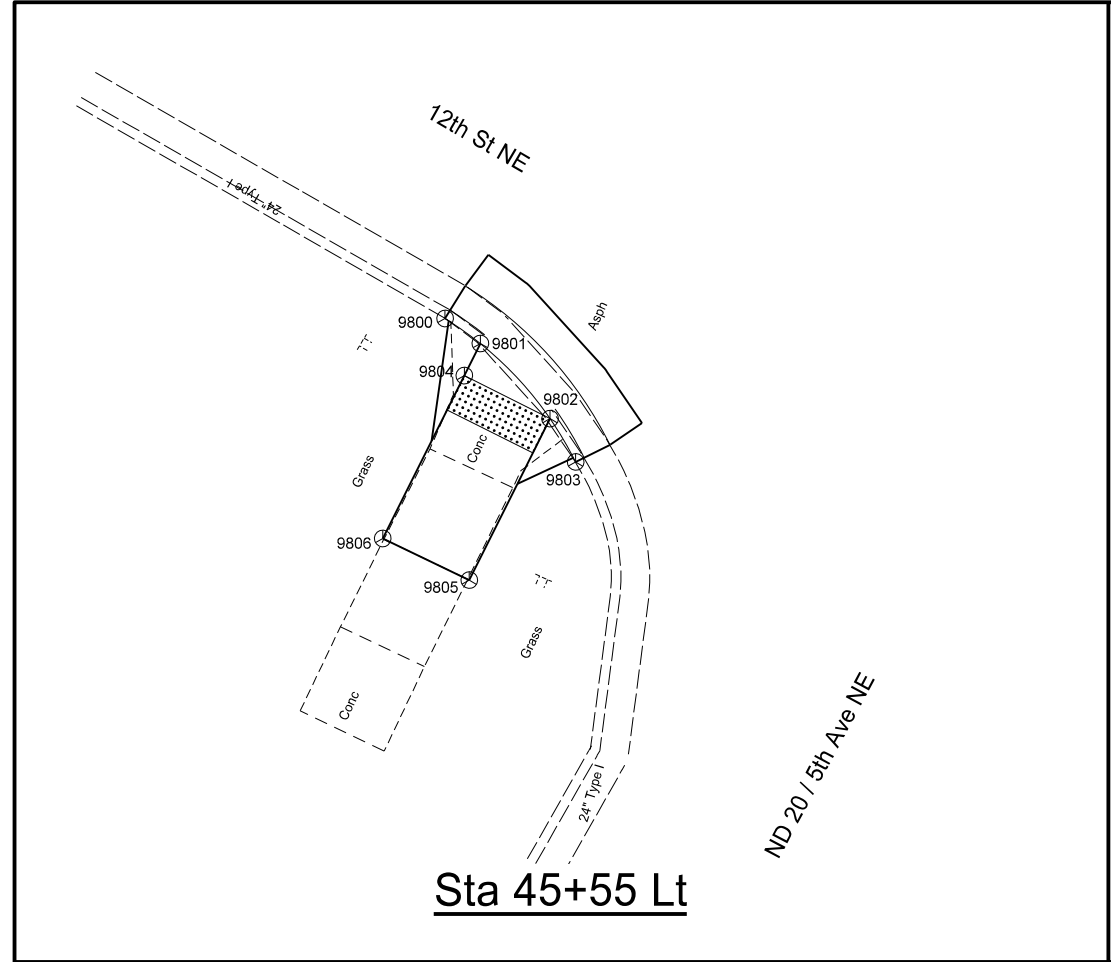


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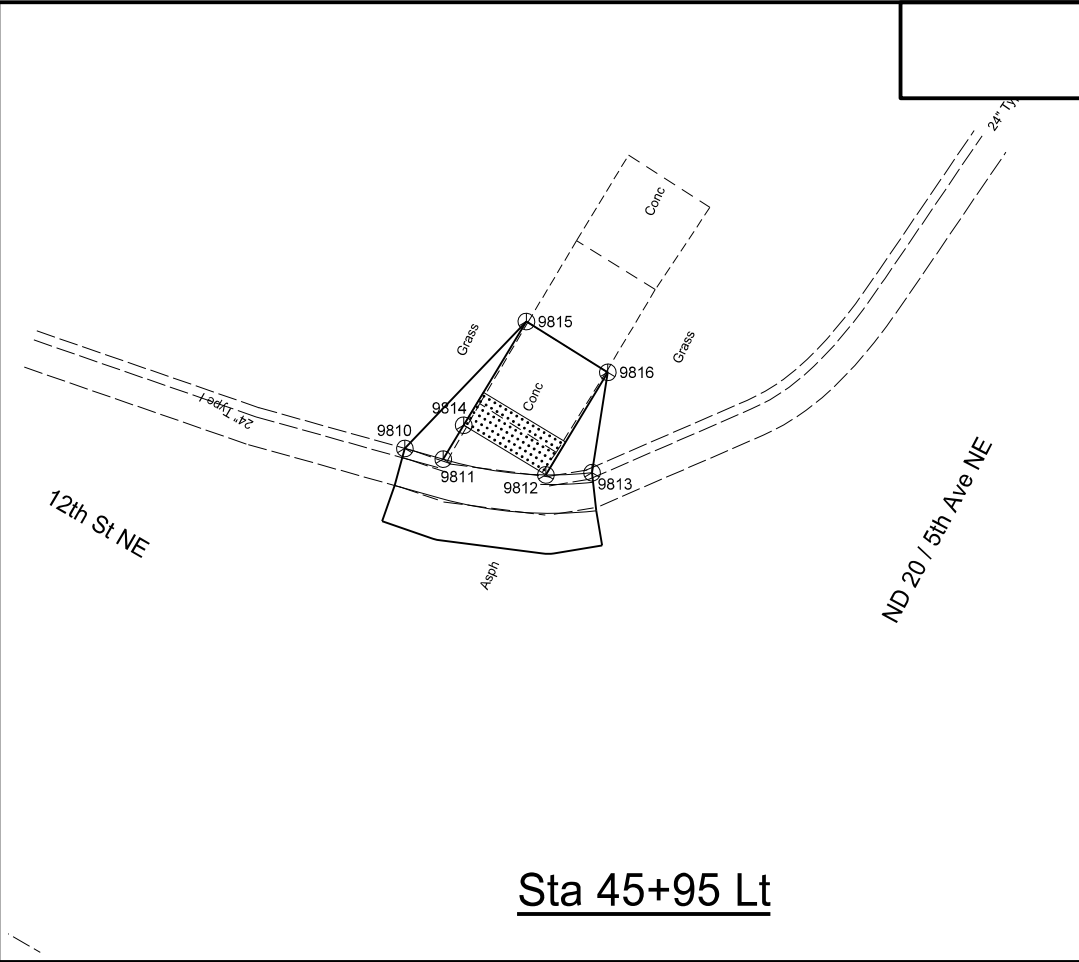
SURVEY DATA LAYOUTS
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE
City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	82	9

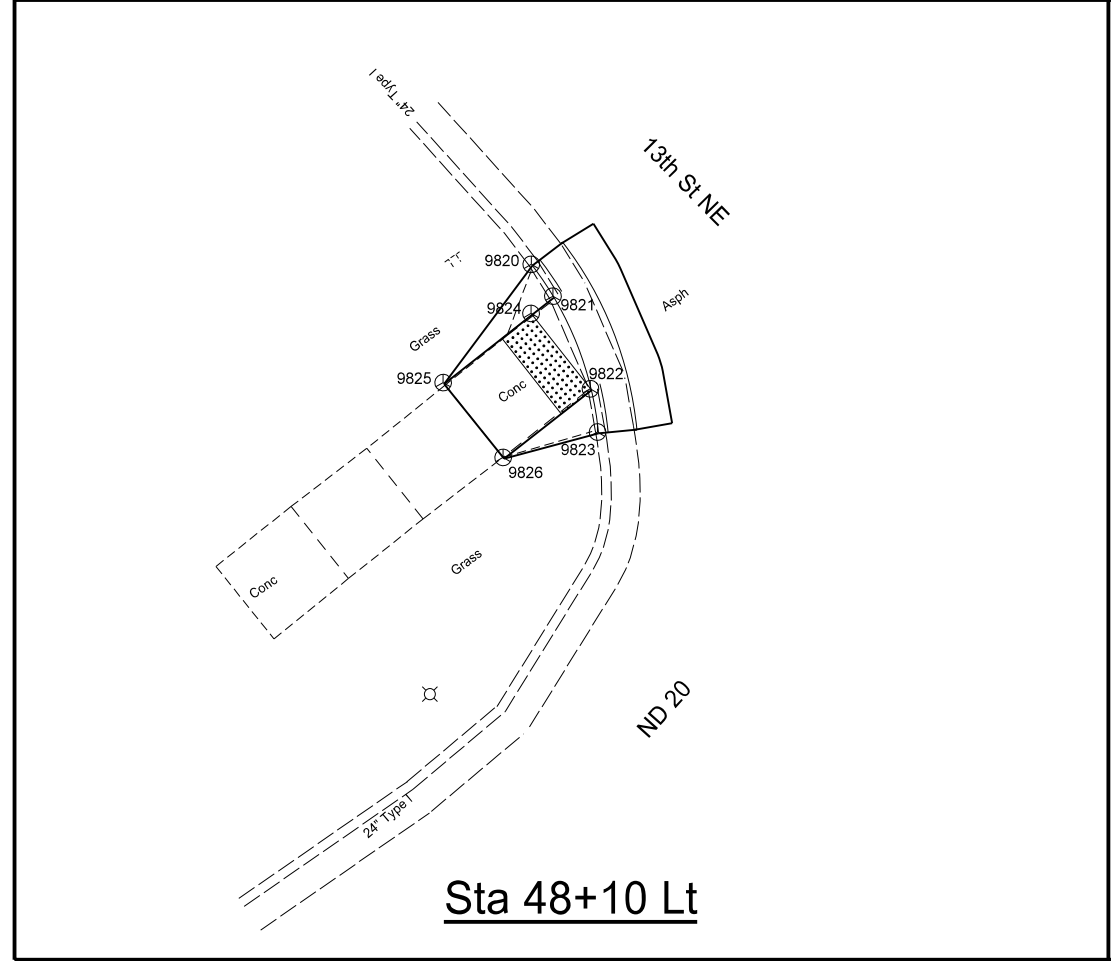
SEE SECTION 82, SHEET 16
FOR SURVEY DATA INFORMATION



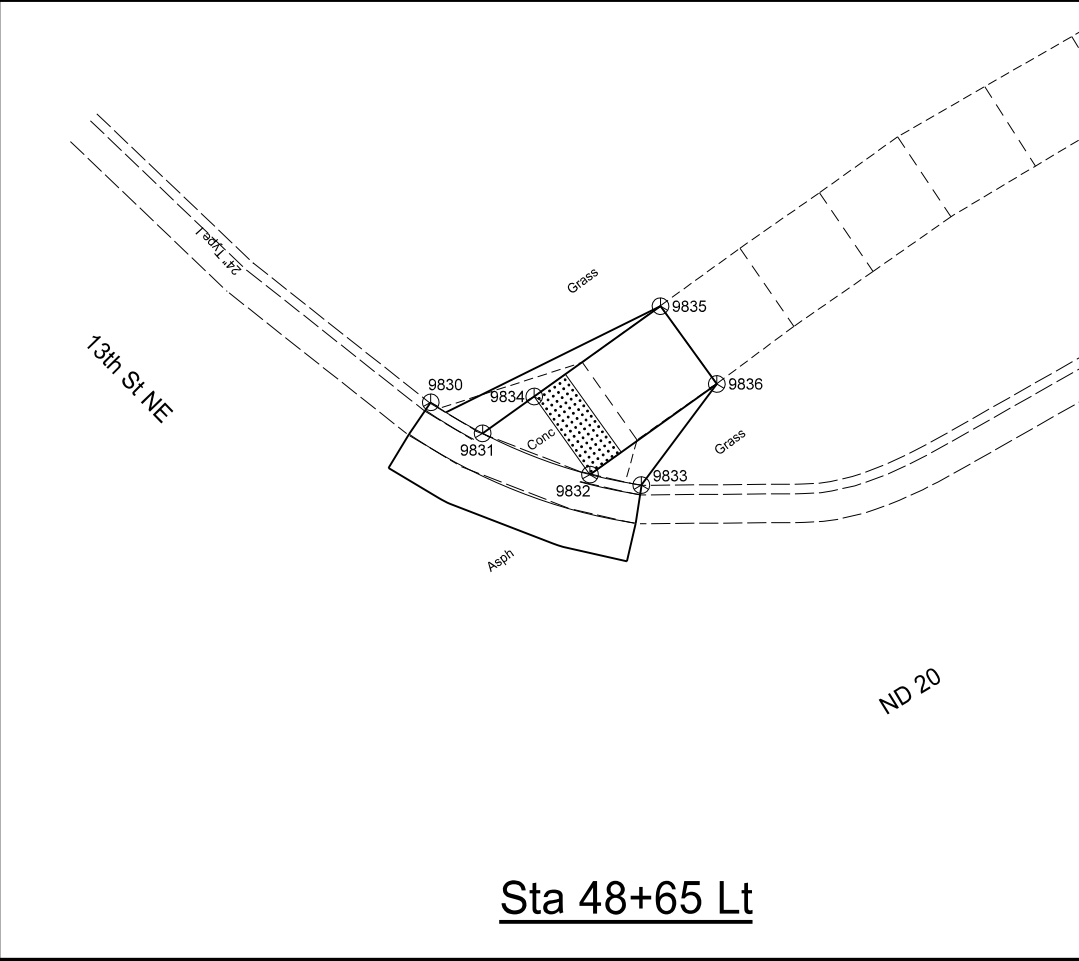
Sta 45+55 Lt



Sta 45+95 Lt

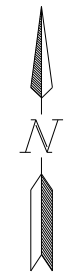


Sta 48+10 Lt



Sta 48+65 Lt

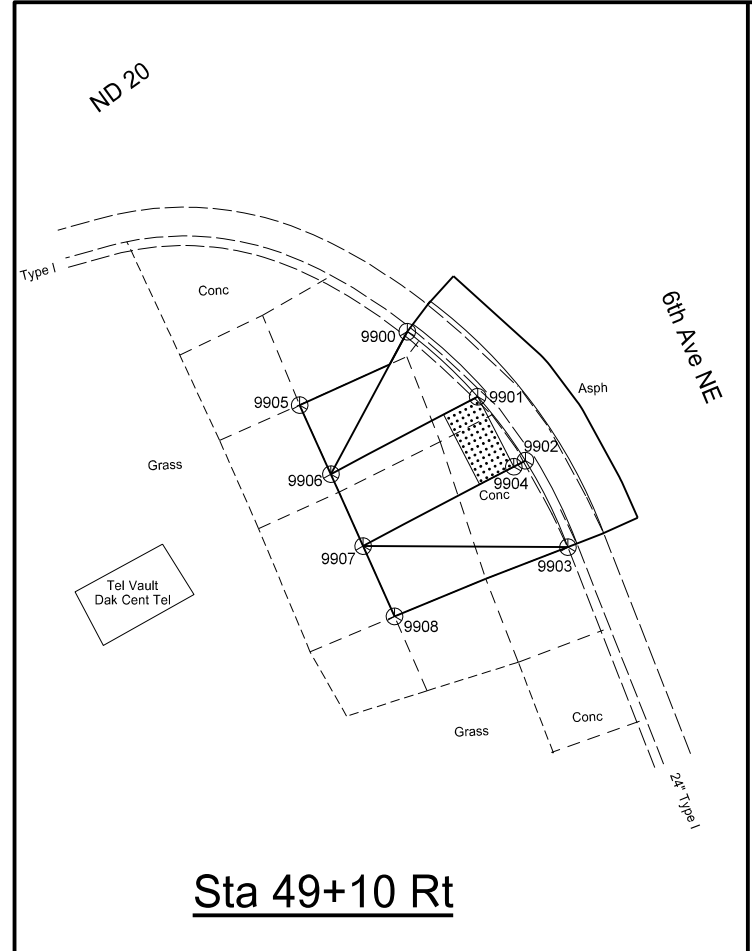
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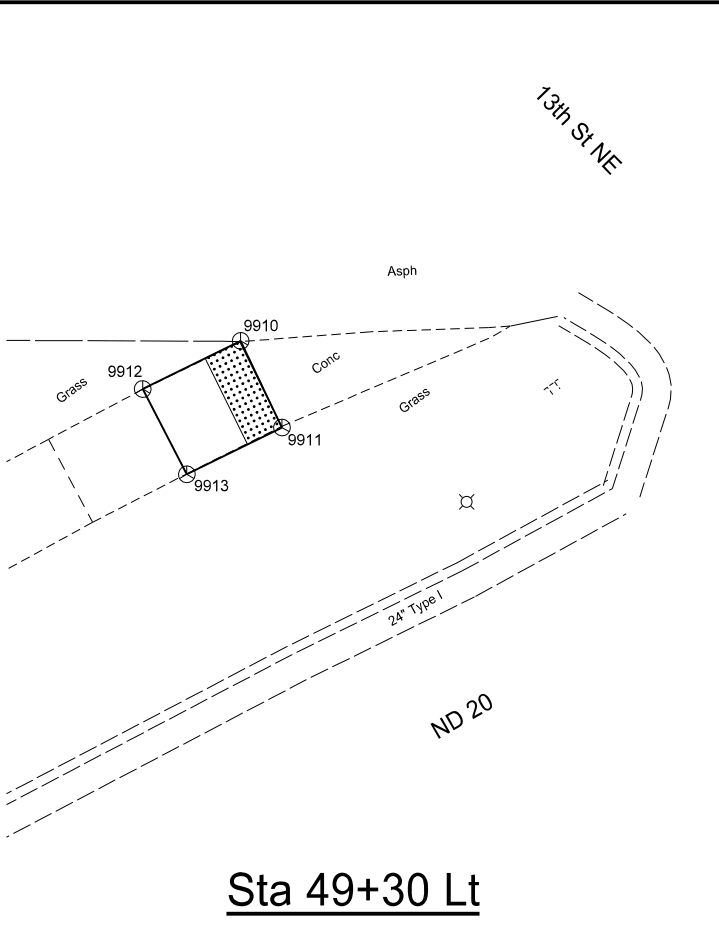
SURVEY DATA LAYOUTS
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE
City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	82	10

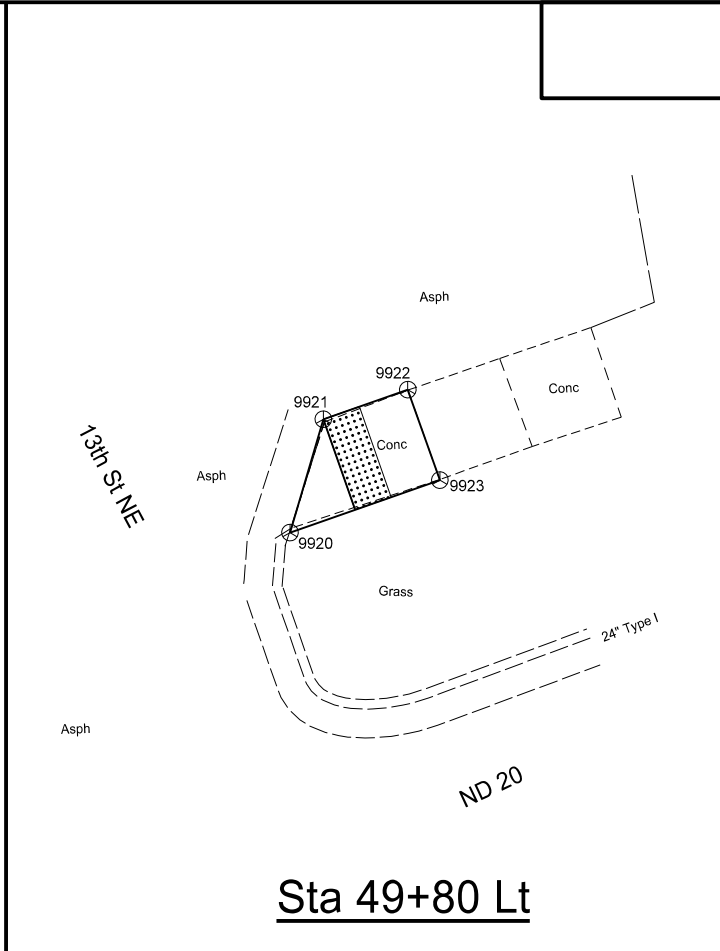
SEE SECTION 82, SHEET 16
FOR SURVEY DATA INFORMATION



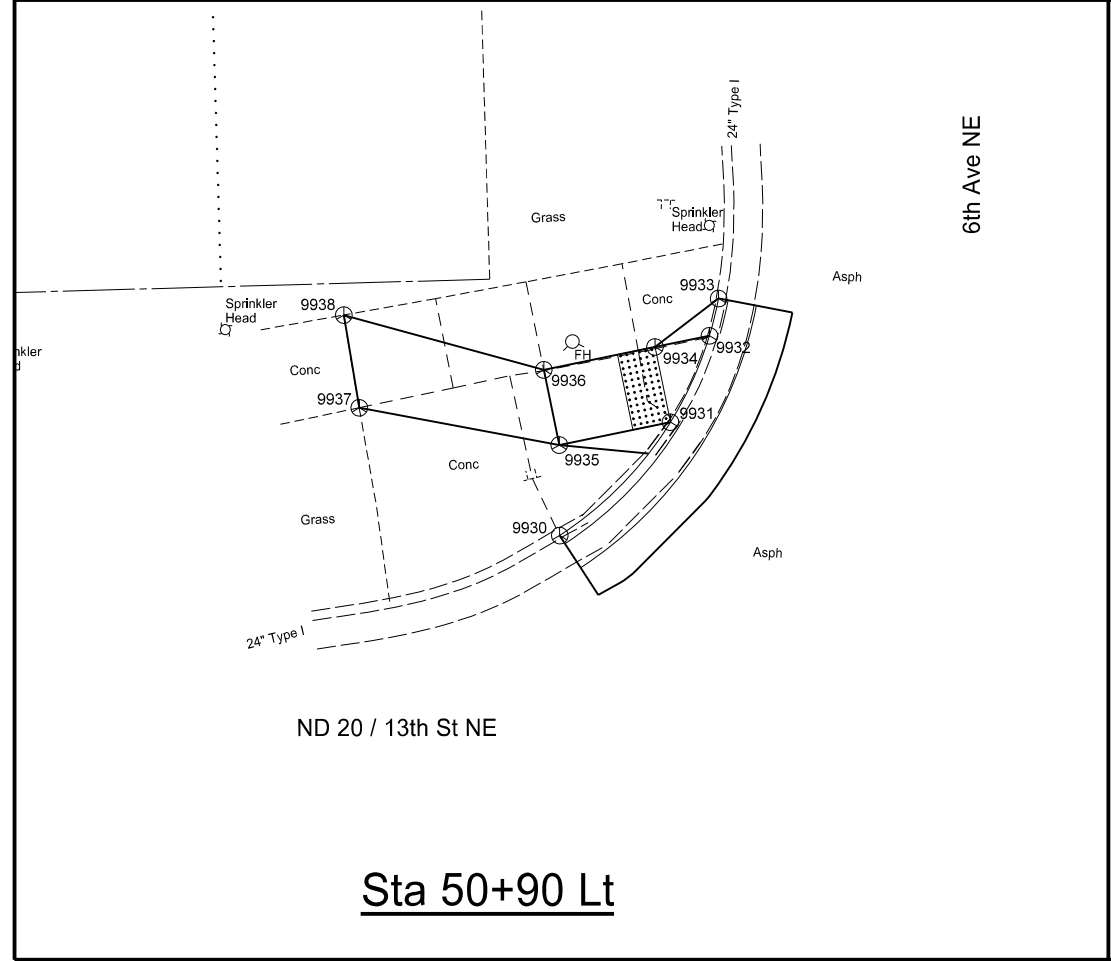
Sta 49+10 Rt



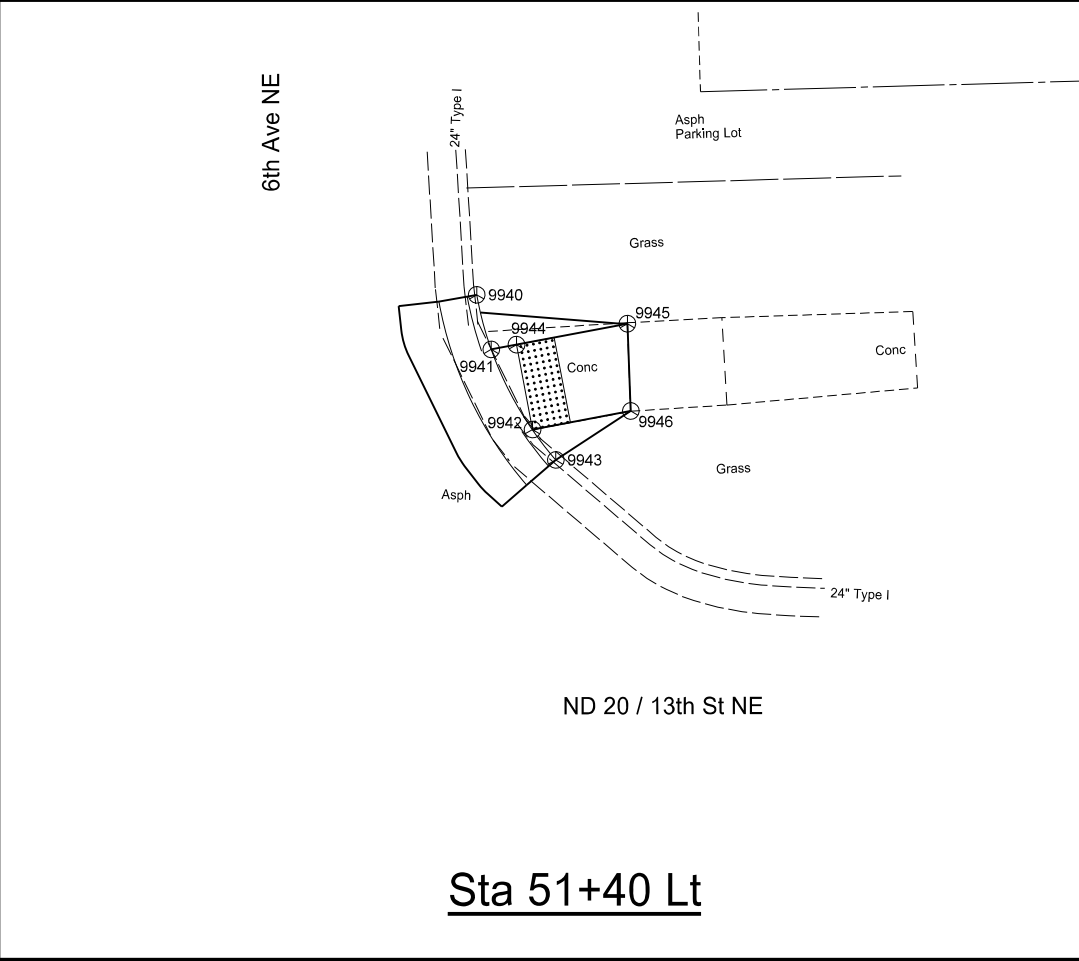
Sta 49+30 Lt



Sta 49+80 Lt

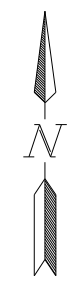


Sta 50+90 Lt



Sta 51+40 Lt

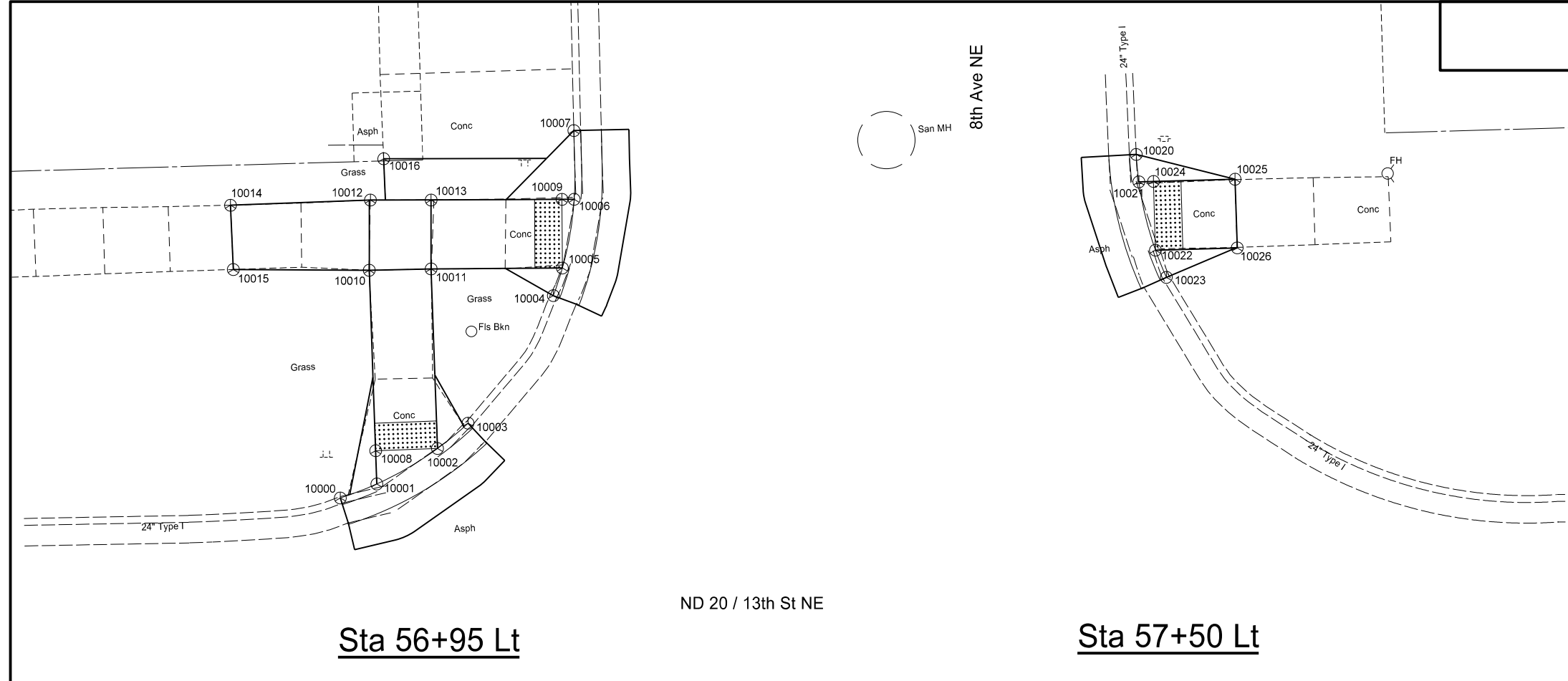
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SURVEY DATA LAYOUTS
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE
City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	82	11

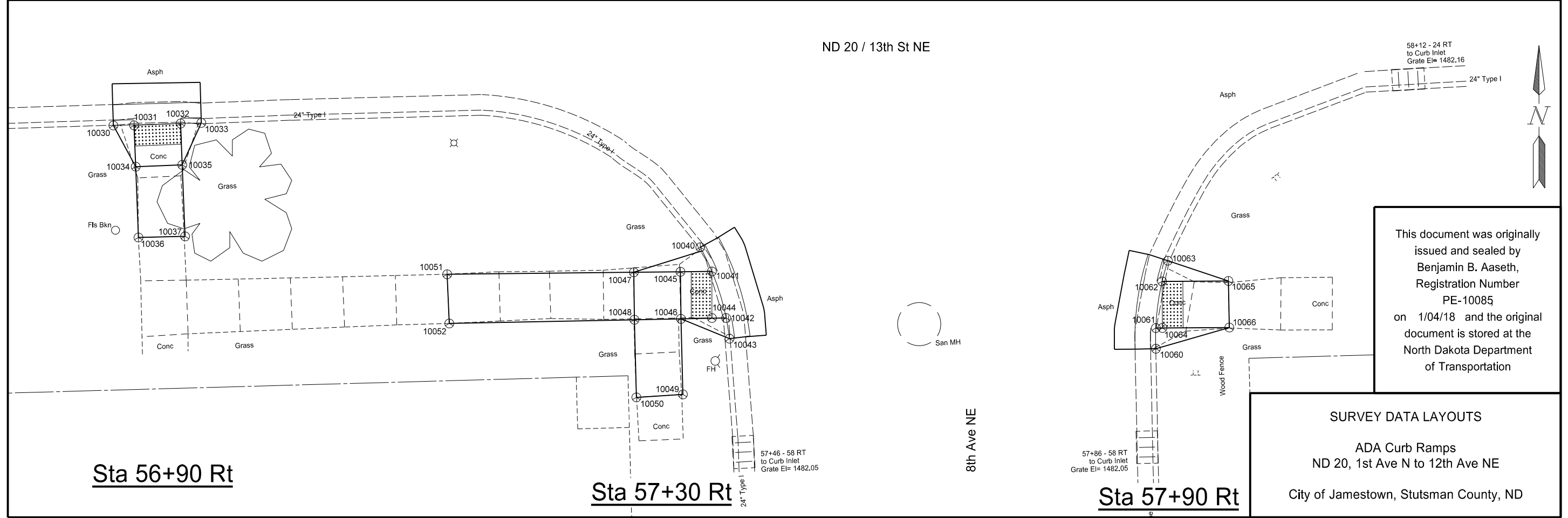
SEE SECTION 82, SHEET 16
FOR SURVEY DATA INFORMATION



Sta 56+95 Lt

ND 20 / 13th St NE

Sta 57+50 Lt



Sta 56+90 Rt

ND 20 / 13th St NE

Sta 57+30 Rt

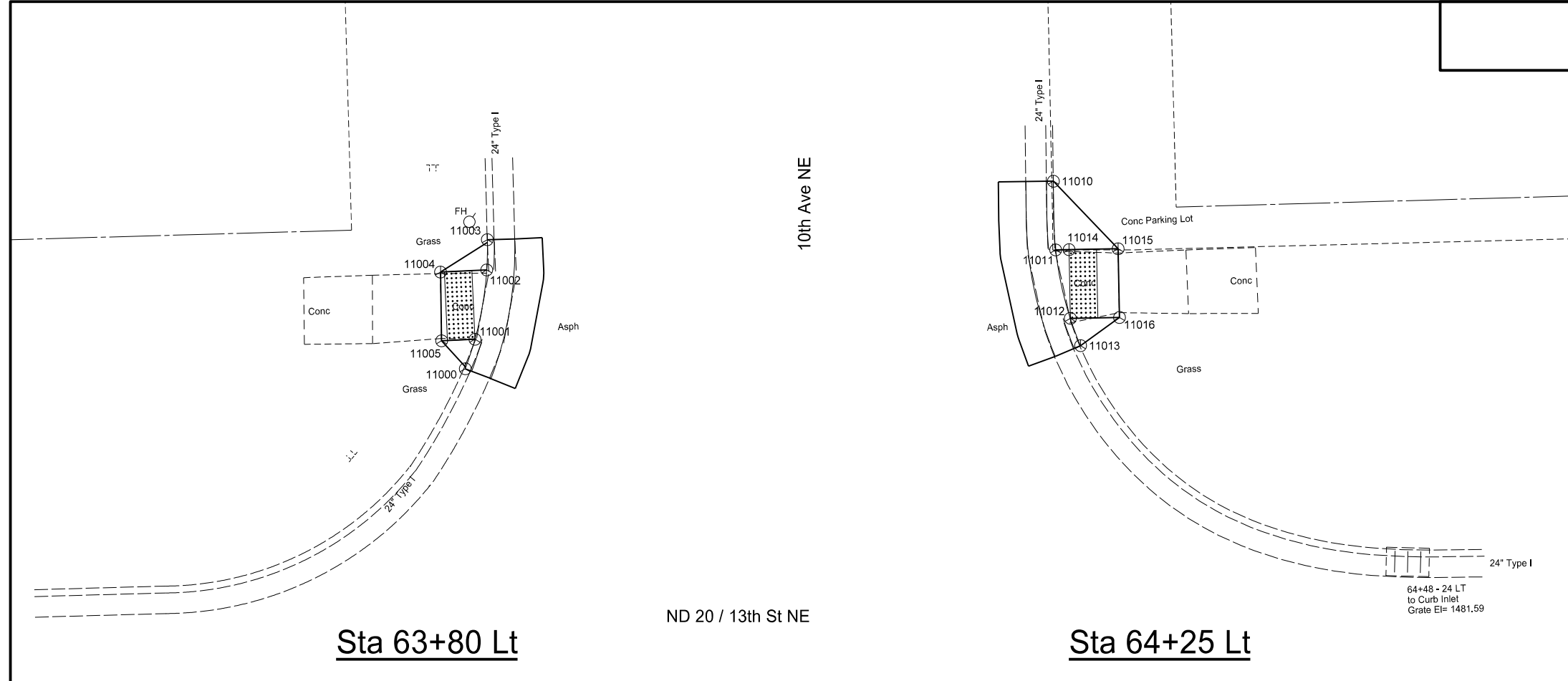
Sta 57+90 Rt

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SURVEY DATA LAYOUTS
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE
City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	82	12

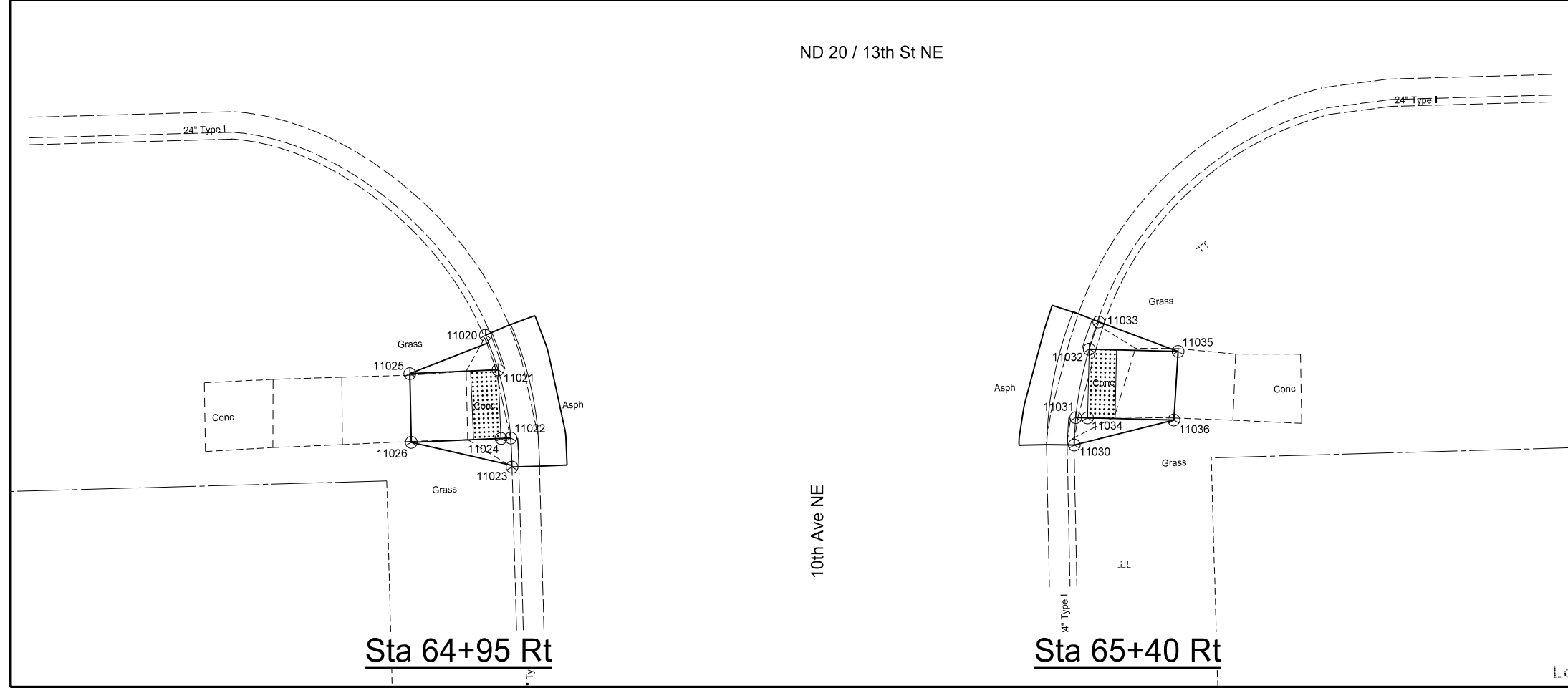
SEE SECTION 82, SHEET 17
FOR SURVEY DATA INFORMATION



Sta 63+80 Lt

ND 20 / 13th St NE

Sta 64+25 Lt



Sta 64+95 Rt

ND 20 / 13th St NE

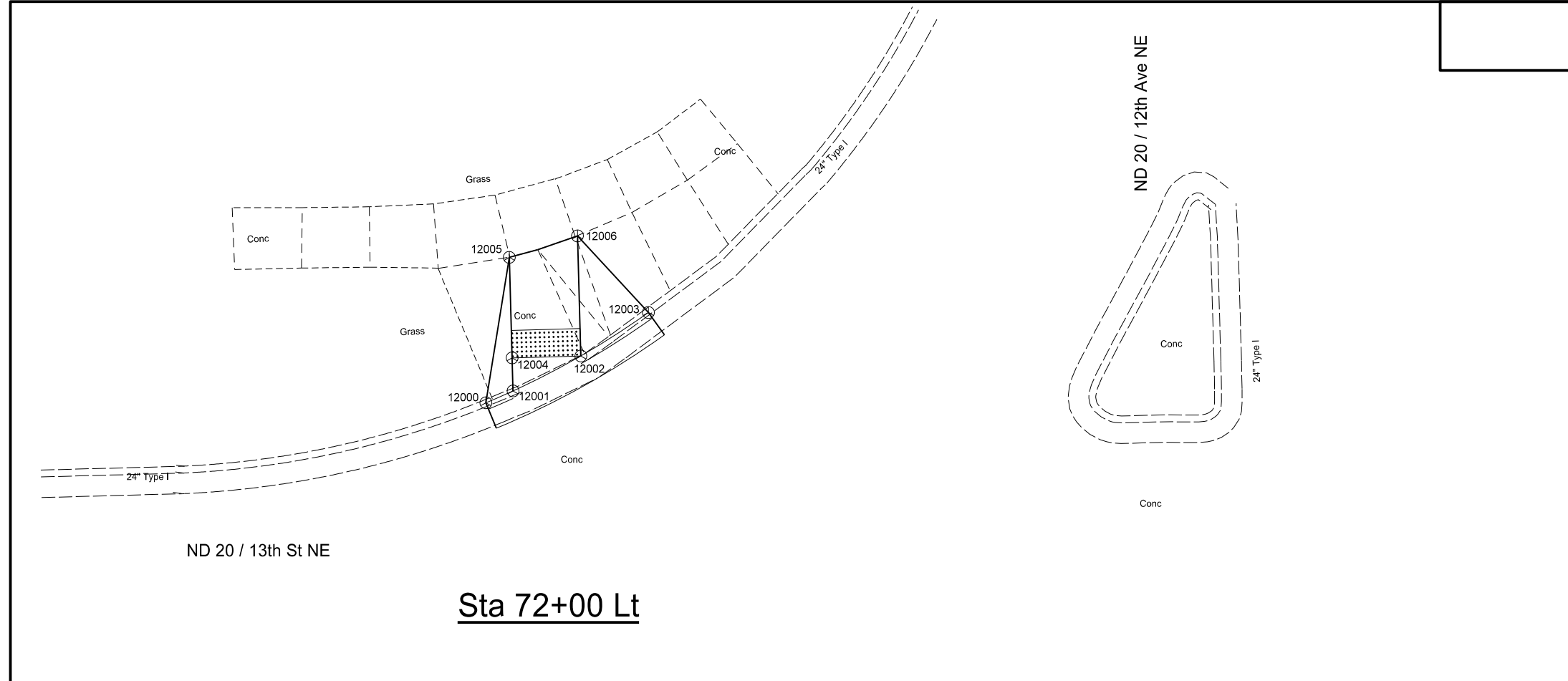
Sta 65+40 Rt

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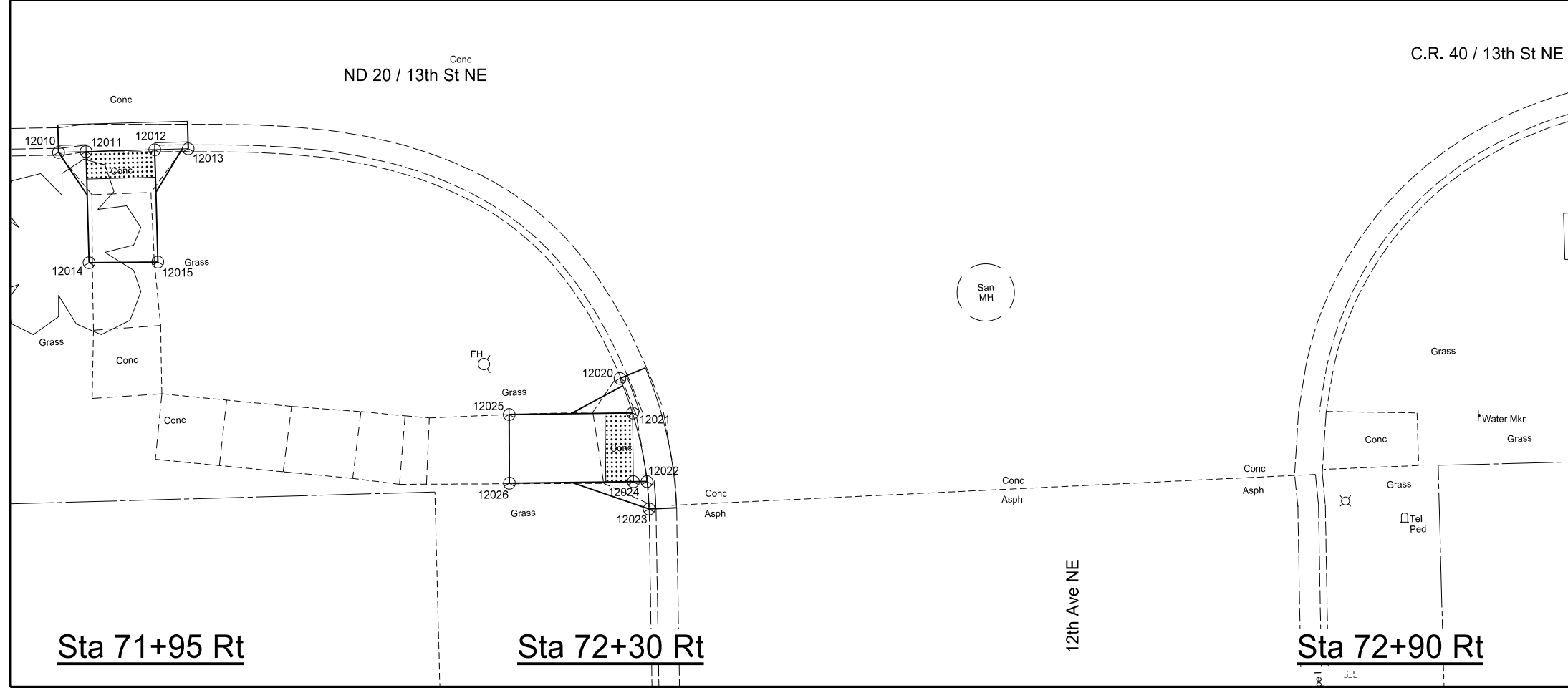
SURVEY DATA LAYOUTS
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE
City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	82	13

SEE SECTION 82, SHEET 17
FOR SURVEY DATA INFORMATION



Sta 72+00 Lt



Sta 71+95 Rt

Sta 72+30 Rt

Sta 72+90 Rt

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SURVEY DATA LAYOUTS
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE
City of Jamestown, Stutsman County, ND

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-2-020(019)000	82	17

Section 82 Sheet 12

Point	Station	Offset	Elevation	North	East	Description
11000	63+79.72	-39.69	1482.37	462678.62	2419741.27	EX TOP OF CURB
11001	63+80.49	-41.81	1482.10	462680.77	2419741.97	RAMP
11002	63+81.48	-46.83	1482.32	462685.81	2419742.83	RAMP
11003	63+81.59	-49.04	1482.86	462688.02	2419742.87	EX TOP OF CURB
11004	63+78.12	-46.78	1482.38	462685.66	2419739.47	EX CONCRETE
11005	63+78.06	-41.77	1482.16	462680.66	2419739.55	EX CONCRETE
11010	64+22.86	-52.14	1482.94	462692.27	2419784.04	EX TOP OF CURB
11011	64+22.89	-47.13	1482.48	462687.27	2419784.21	RAMP
11012	64+23.82	-42.13	1482.29	462682.29	2419785.28	RAMP
11013	64+24.50	-40.12	1482.56	462680.30	2419786.02	EX TOP OF CURB
11014	64+23.86	-47.13	1482.48	462687.29	2419785.19	LANDING
11015	64+27.43	-47.09	1482.53	462687.36	2419788.75	EX CONCRETE
11016	64+27.39	-42.09	1482.51	462682.36	2419788.85	EX CONCRETE
11020	64+95.48	39.61	1482.34	462602.60	2419859.20	EX TOP OF CURB
11021	64+96.32	42.14	1482.02	462600.09	2419860.12	RAMP
11022	64+97.11	47.13	1482.07	462595.12	2419861.05	RAMP
11023	64+97.14	49.25	1482.49	462593.01	2419861.14	EX TOP OF CURB
11024	64+96.40	47.14	1482.08	462595.09	2419860.33	LANDING
11025	64+89.90	42.24	1482.21	462599.81	2419853.70	EX CONCRETE
11026	64+89.87	47.24	1482.24	462594.81	2419853.81	EX CONCRETE
11030	65+38.07	48.79	1482.67	462594.61	2419902.03	EX TOP OF CURB
11031	65+38.23	46.79	1482.26	462596.61	2419902.13	RAMP
11032	65+39.35	41.85	1482.24	462601.59	2419903.11	RAMP
11033	65+40.10	39.88	1482.63	462603.57	2419903.81	EX TOP OF CURB
11034	65+39.08	46.84	1482.28	462596.59	2419902.99	LANDING
11035	65+45.80	42.19	1482.55	462601.42	2419909.58	EX CONCRETE
11036	65+45.36	47.17	1482.47	462596.43	2419909.27	EX CONCRETE

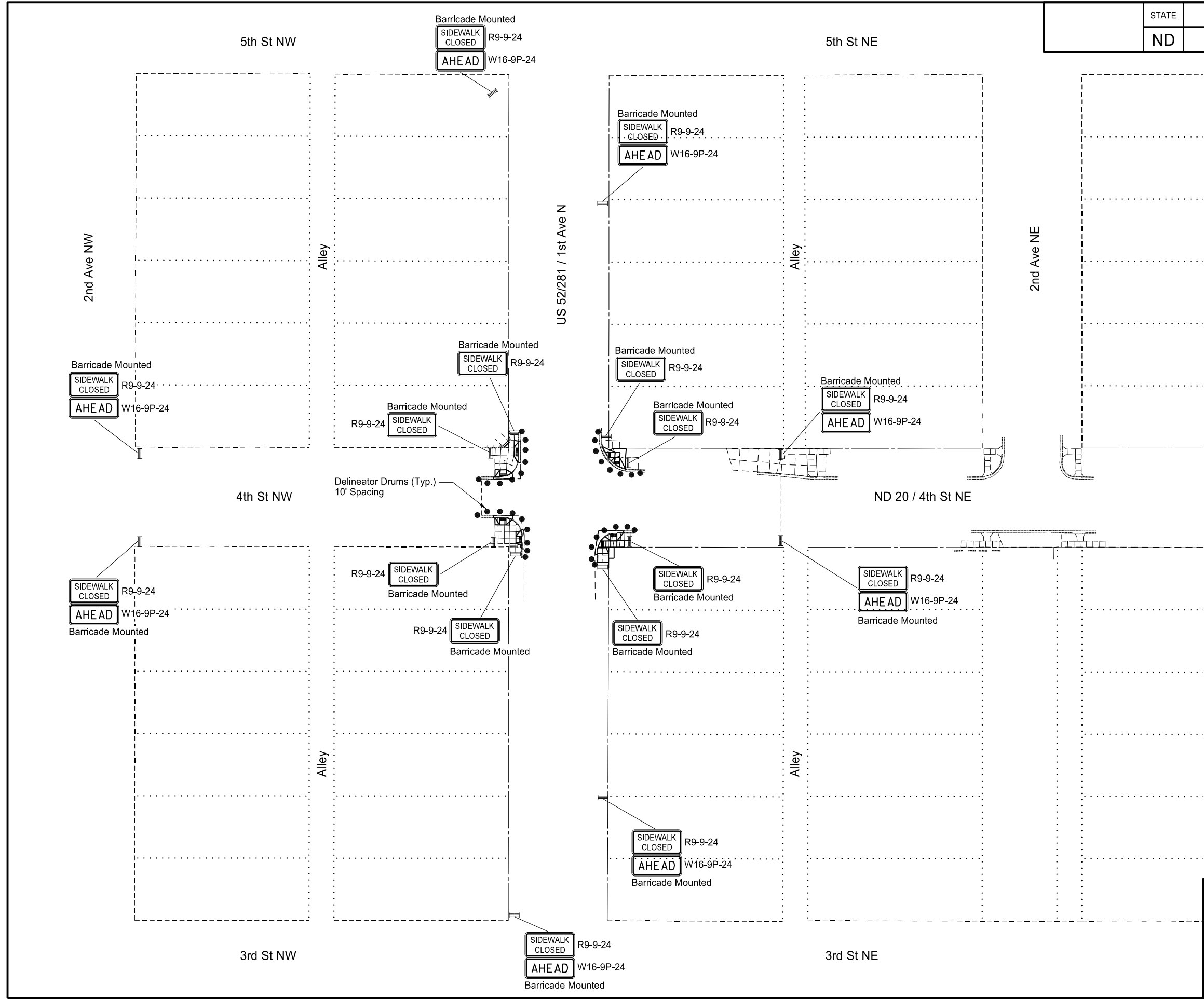
Section 82 Sheet 13

Point	Station	Offset	Elevation	North	East	Description
12000	71+91.36	-32.03	1486.52	462693.69	2420552.80	EX TOP OF CURB
12001	71+93.36	-32.84	1485.97	462694.55	2420554.78	RAMP
12002	71+98.36	-35.24	1486.00	462697.09	2420559.71	RAMP
12003	72+03.36	-38.26	1486.56	462700.25	2420564.62	EX TOP OF CURB
12004	71+93.36	-35.24	1486.02	462696.95	2420554.71	LANDING
12005	71+93.36	-42.56	1486.64	462704.27	2420554.51	EX CONCRETE
12006	71+98.36	-43.98	1486.74	462705.83	2420559.47	EX CONCRETE
12010	71+91.36	24.53	1486.46	462637.15	2420554.38	EX TOP OF CURB
12011	71+93.36	24.53	1486.06	462637.21	2420556.38	RAMP
12012	71+98.36	24.53	1486.15	462637.34	2420561.38	RAMP
12013	72+00.79	24.53	1486.75	462637.41	2420563.81	EX TOP OF CURB
12014	71+93.36	32.62	1486.68	462629.12	2420556.60	EX CONCRETE
12015	71+98.36	32.71	1486.62	462629.17	2420561.60	EX CONCRETE
12020	72+31.72	42.12	1487.09	462620.70	2420595.22	EX TOP OF CURB
12021	72+32.56	44.65	1486.66	462618.19	2420596.13	RAMP
12022	72+33.47	49.67	1486.72	462613.20	2420597.18	RAMP
12023	72+33.57	51.67	1487.08	462611.20	2420597.34	EX TOP OF CURB
12024	72+32.48	49.65	1486.74	462613.19	2420596.20	LANDING
12025	72+23.59	44.51	1487.42	462618.08	2420587.16	EX CONCRETE
12026	72+23.46	49.51	1487.49	462613.08	2420587.18	EX CONCRETE

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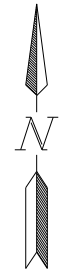
SURVEY DATA LAYOUTS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	2



- Notes:
1. Layout applies to construction on 1st Ave N.
 2. The NE and SE corners may not be worked on at the same time.
 3. See standard drawing D-704-34 for lane closure details.
 4. Work will only be permitted at this location when there is no work commencing at the intersection of 4th St NE & 1st Ave N.

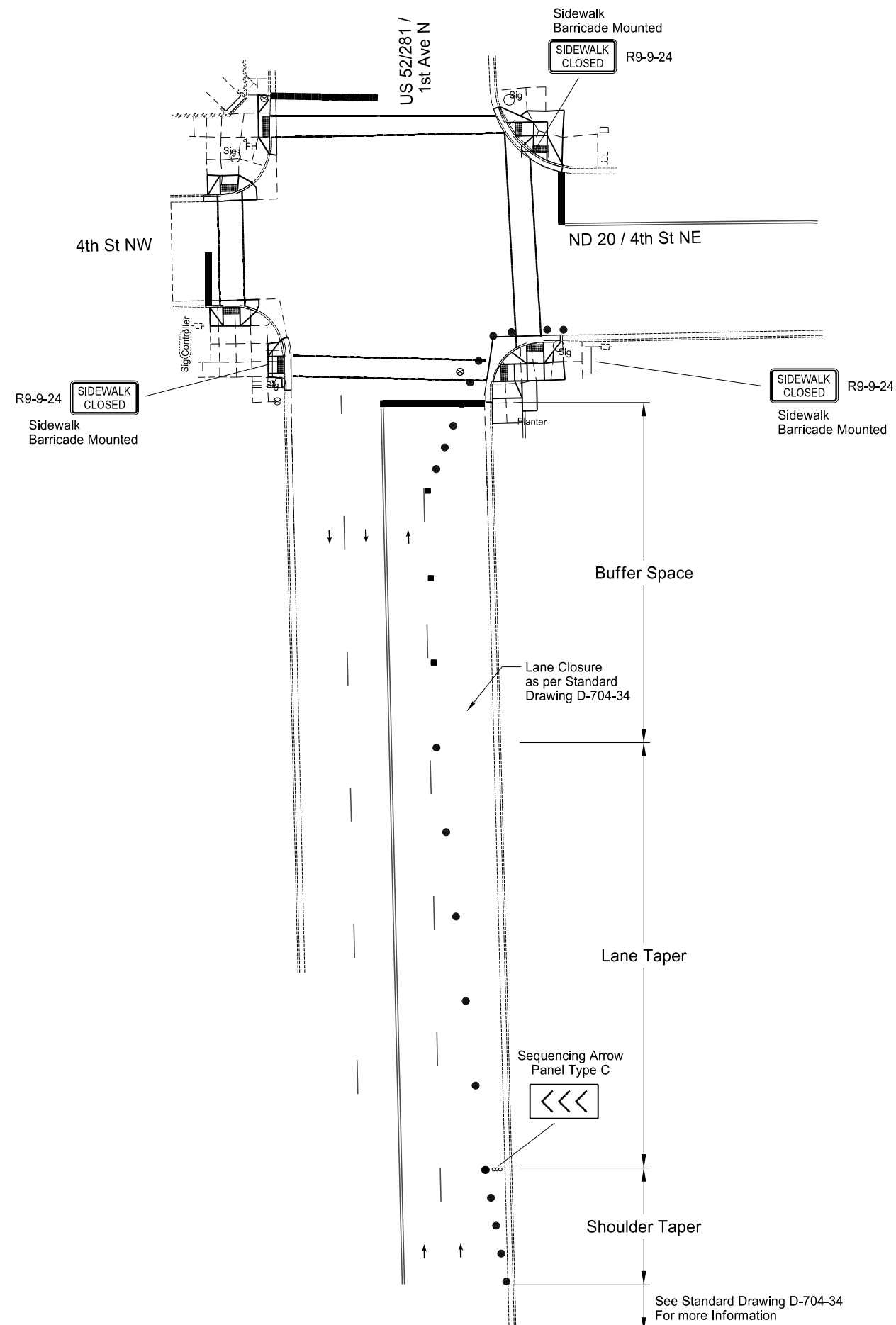
- LEGEND
- Delineator Drum
 - ≡ Type III Barricade



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CONSTRUCTION SIGNING
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	3

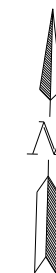


NOTE:

1. For layout of delineator drums and sidewalk closure signing for each quadrant of work at 1st Ave N & 4th St NE, see Section 100, Sheet 2.
2. Use Standard Drawing D-704-34 for one lane closure layout.
3. Work may not be permitted at the NE quadrant of this intersection when work is being performed at the SE quadrant.
4. This layout is specifically for the SE quadrant of the intersection.

LEGEND

- Delineator Drum
- ≡ Type III Barricade
- Tubular Marker
- ⊢ Construction Sign
- Direction of Travel
- Sidewalk Barricade



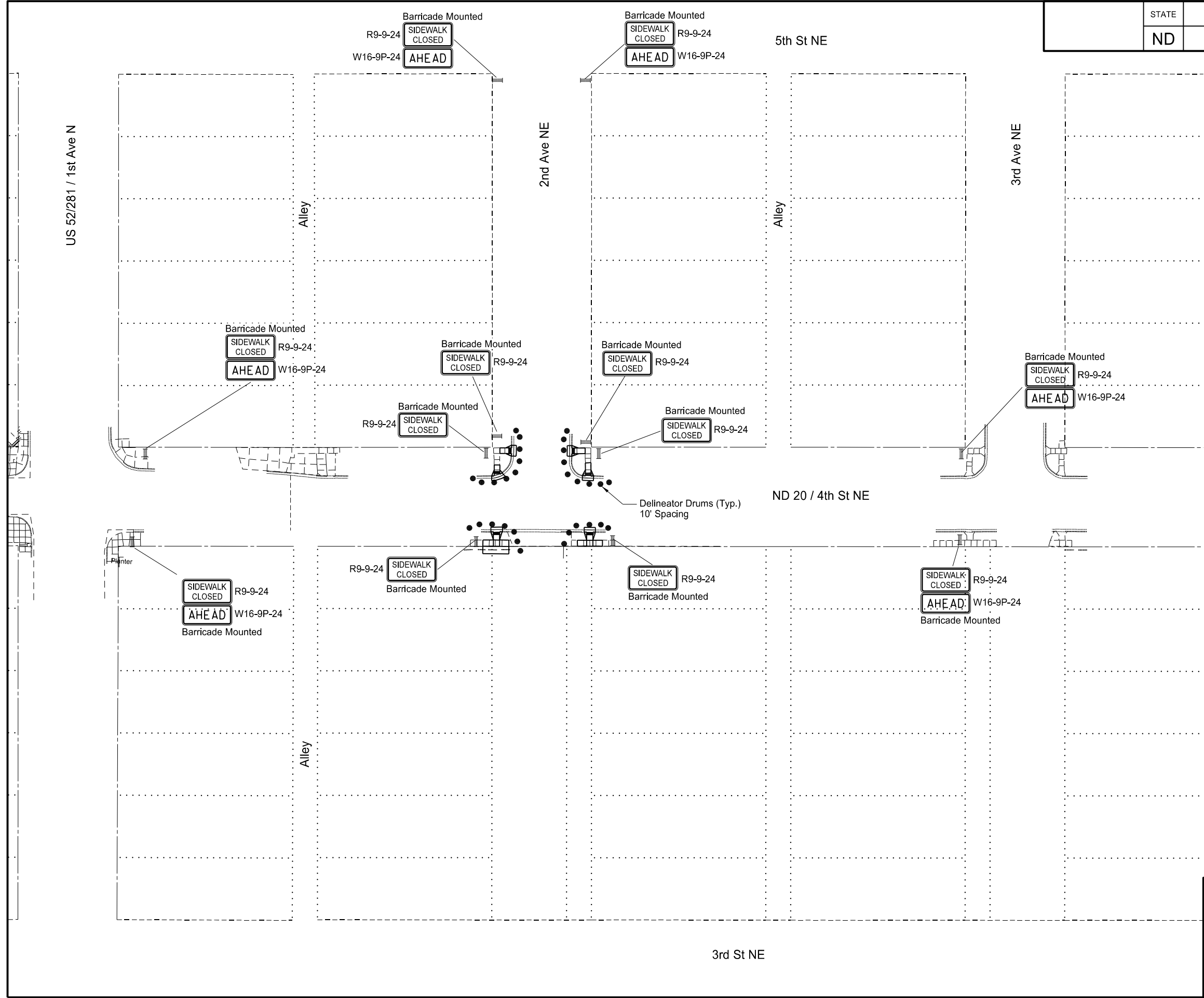
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CONSTRUCTION SIGNING DETAILS
LANE CLOSURE AT
US 52/281/1ST AVE N AND ND20/4TH ST NE

ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE

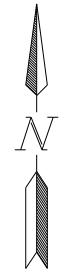
City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	4



- Notes:
1. Layout applies to construction on 2nd Ave NE.
 2. Only one (1) side of the street will be allowed to be worked on at a time.
 3. See standard drawing D-704-34 for lane closure details.
 4. Work will only be permitted at this location when there is no work commencing at the intersection of 4th St NE & 3rd Ave NE, & the intersection of 4th St NE & 1st Ave NE.

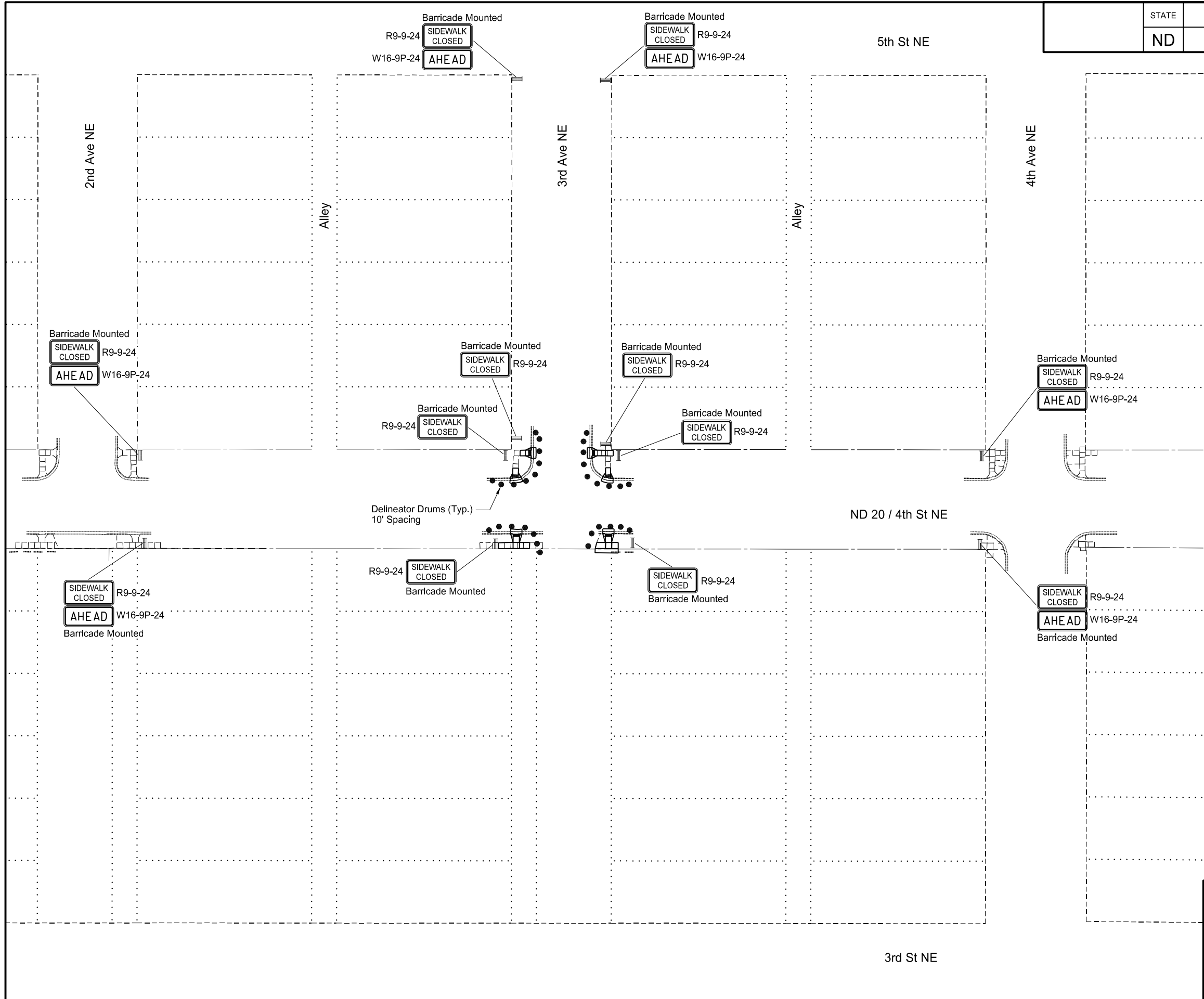
- LEGEND
- Delineator Drum
 - ≡ Type III Barricade



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CONSTRUCTION SIGNING
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	5



- Notes:
1. Layout applies to construction on 3rd Ave NE.
 2. Only one (1) side of the street will be allowed to be worked on at a time.
 3. See standard drawing D-704-34 for lane closure details.
 4. Work will only be permitted at this location when there is no work commencing at the intersection of 4th St NE & 2nd Ave NE, & the intersection of 4th St NE & 4th Ave NE.

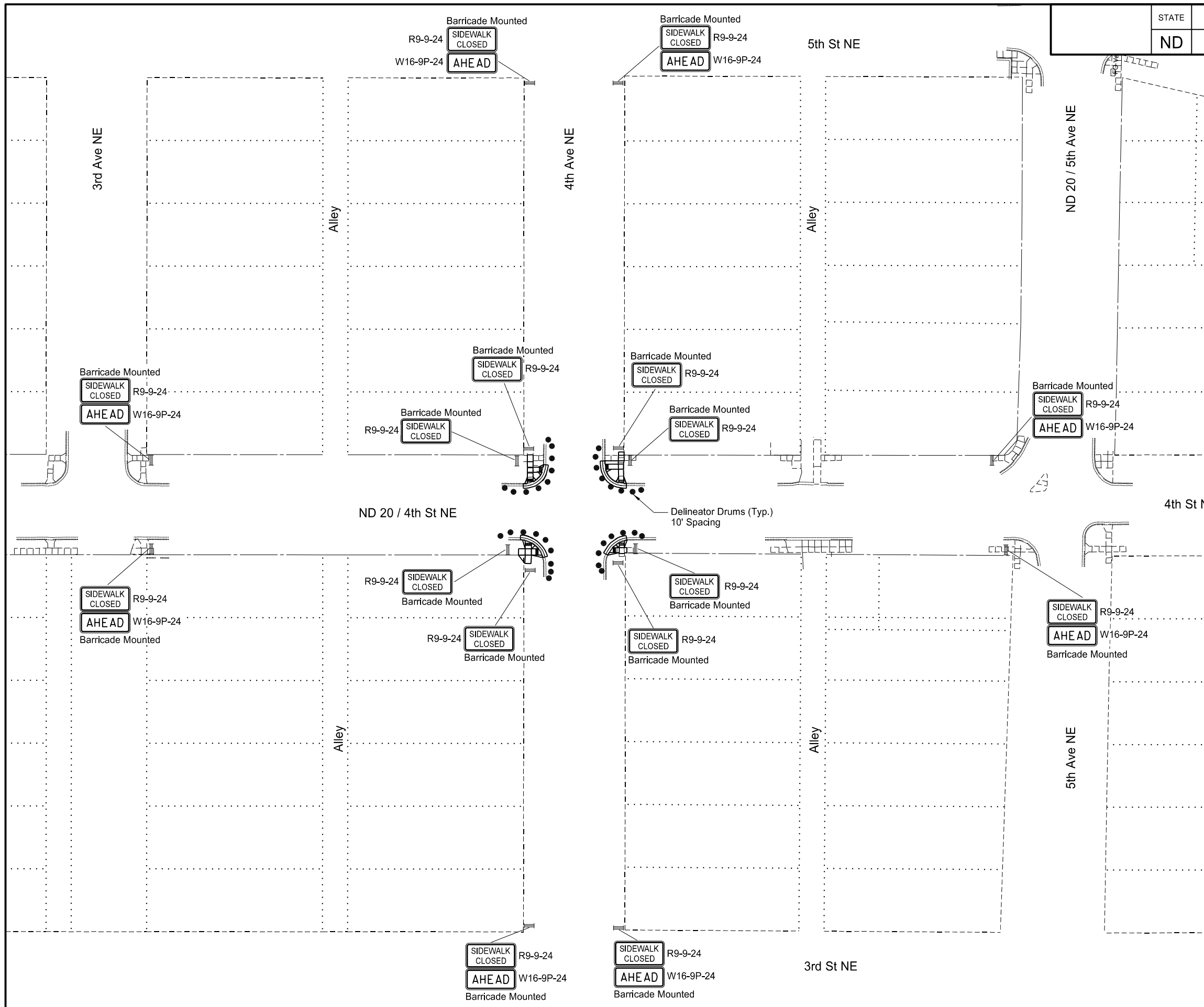
- LEGEND
- Delineator Drum
 - ≡ Type III Barricade



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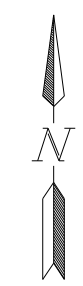
CONSTRUCTION SIGNING
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	6



- Notes:
1. Layout applies to construction on 4th Ave NE.
 2. Only one (1) side of the street will be allowed to be worked on at a time.
 3. See standard drawing D-704-34 for lane closure details.
 4. Work will only be permitted at this location when there is no work commencing at the intersection of 4th St NE & 5th Ave NE, & the intersection of 4th St NE & 3rd Ave NE.

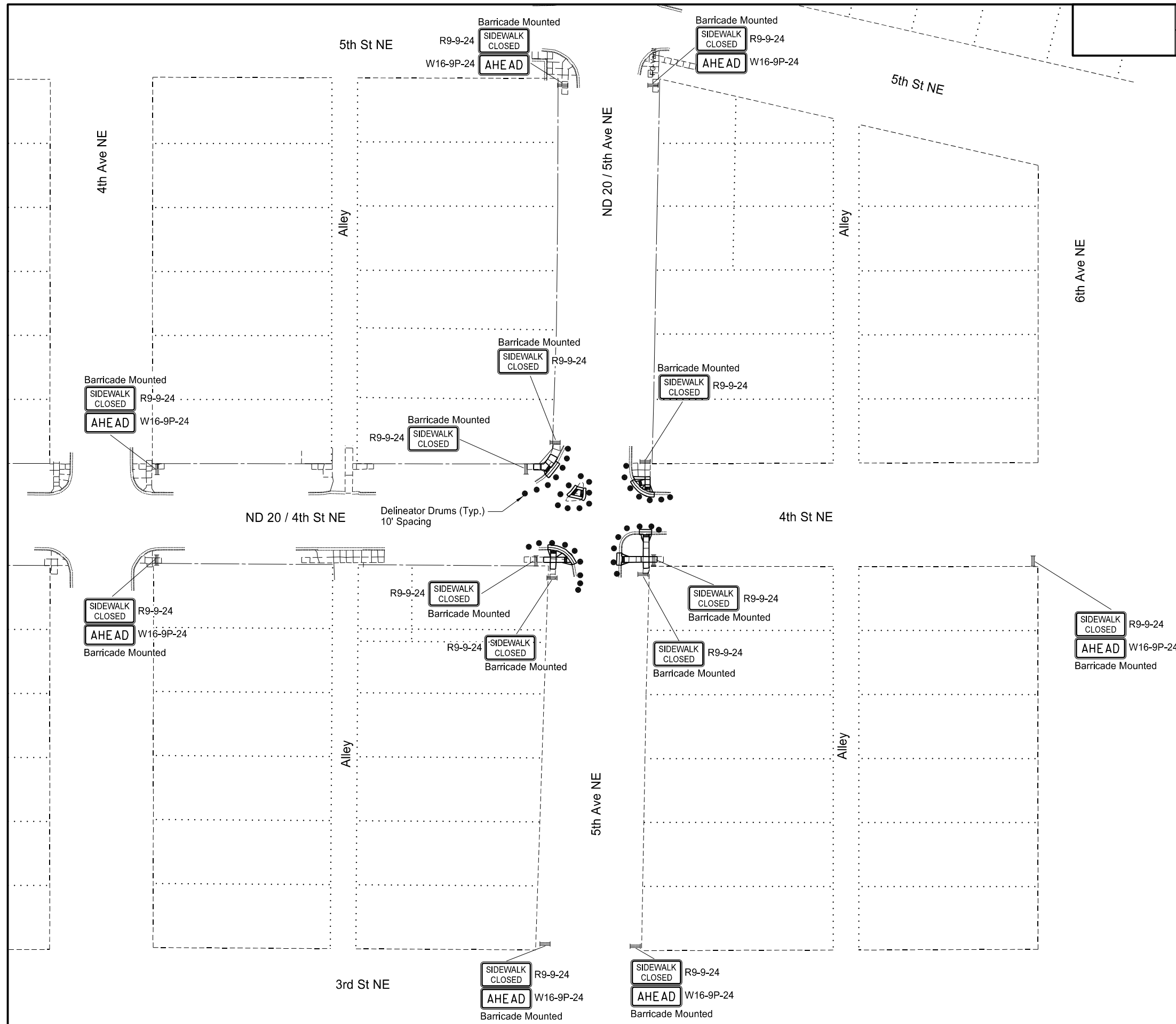
- LEGEND
- Delineator Drum
 - ≡ Type III Barricade



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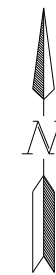
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	7



- Notes:
1. Layout applies to construction on 5th Ave NE.
 2. Only one (1) corner of the intersection will be allowed to be worked on at a time.
 3. The island will be worked on separately from the rest of the quadrants.
 4. See standard drawing D-704-34 for lane closure details.
 5. Work will only be permitted at this location when there is no work commencing at the intersection of 5th St NE & 5th Ave NE, & the intersection of 4th St NE & 4th Ave NE.

LEGEND

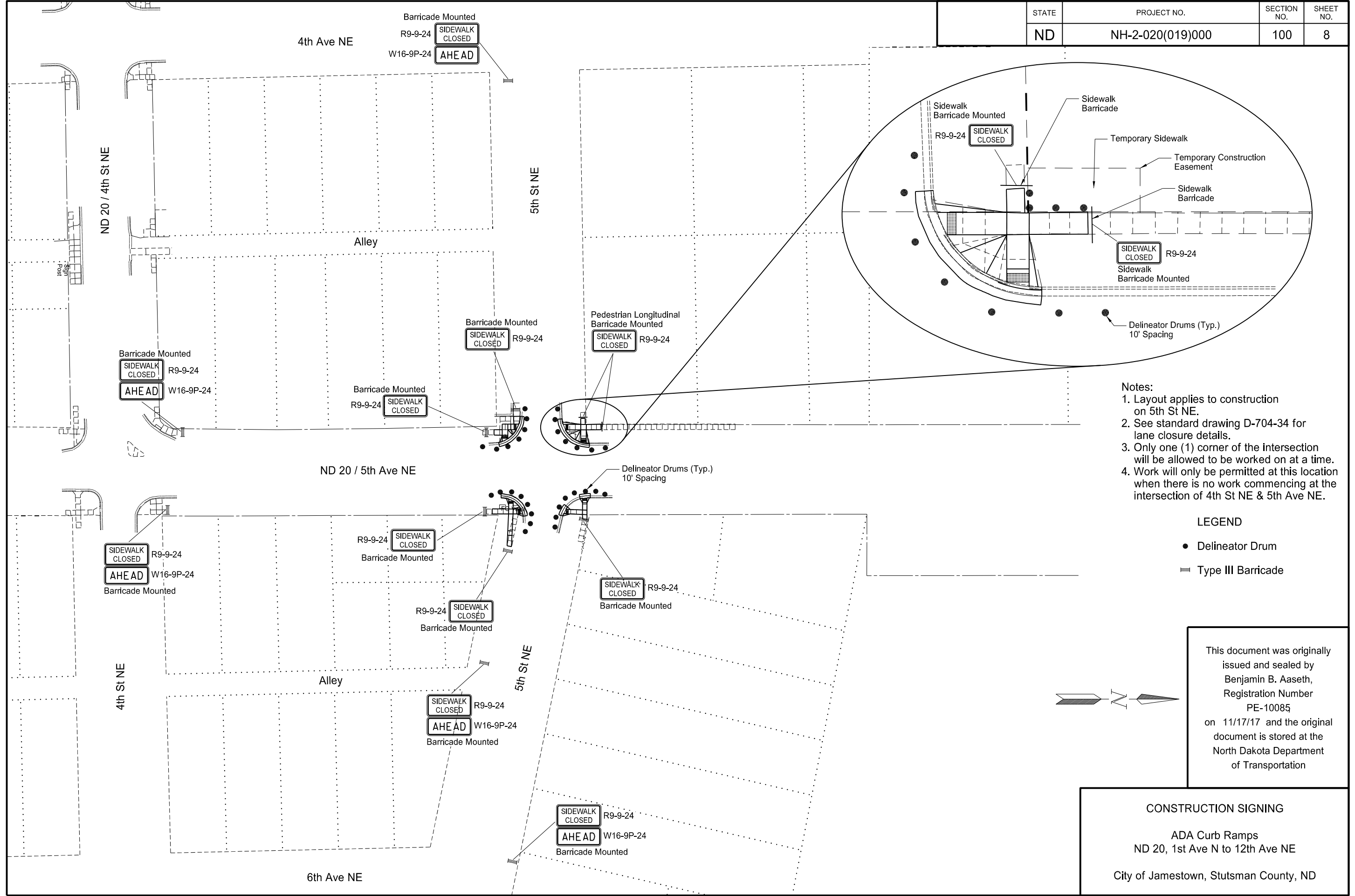
- Delineator Drum
- ≡ Type III Barricade



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 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	8



- Notes:
1. Layout applies to construction on 5th St NE.
 2. See standard drawing D-704-34 for lane closure details.
 3. Only one (1) corner of the intersection will be allowed to be worked on at a time.
 4. Work will only be permitted at this location when there is no work commencing at the intersection of 4th St NE & 5th Ave NE.

LEGEND

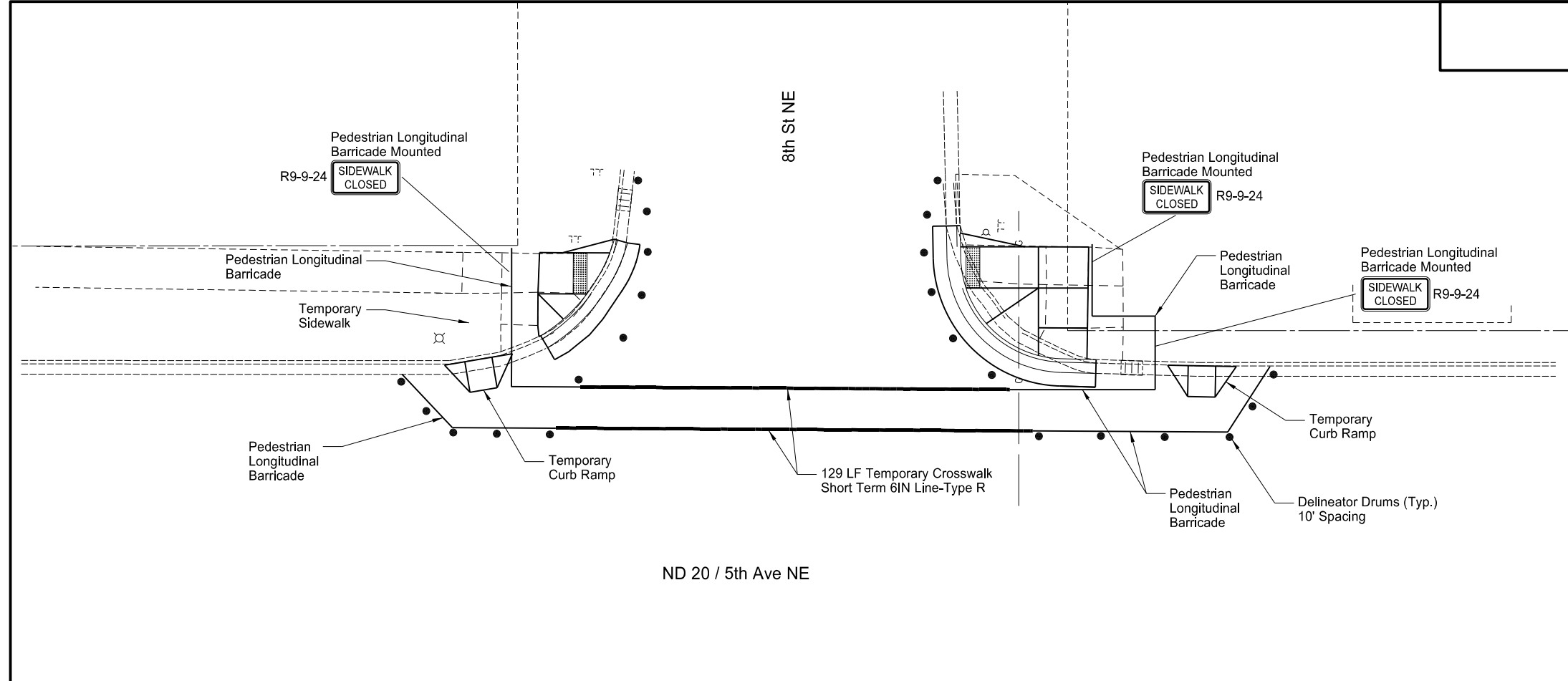
- Delineator Drum
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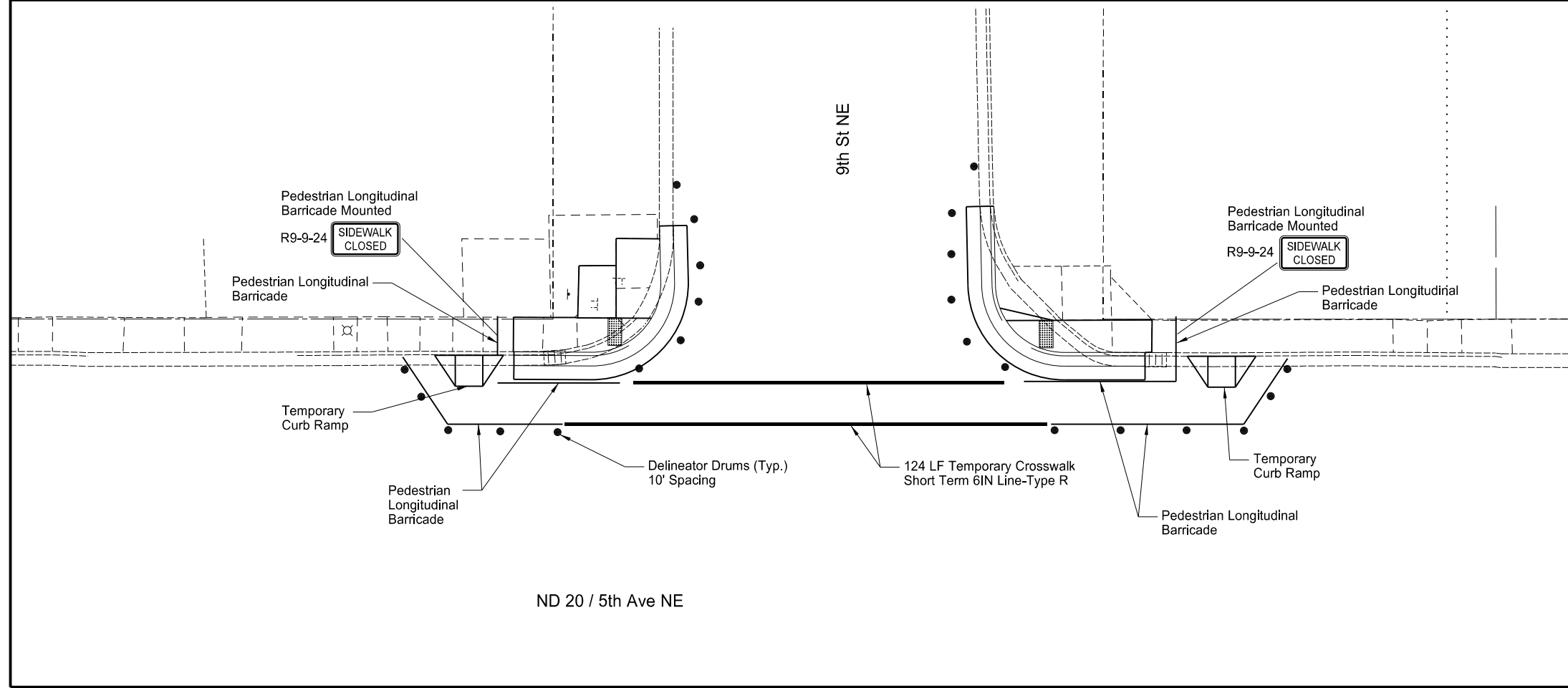
CONSTRUCTION SIGNING

ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

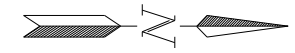
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	9



Notes:
1. Layout applies to construction on 8th St NE and 9th St NE.
2. See standard drawing D-704-34 for lane closure details.



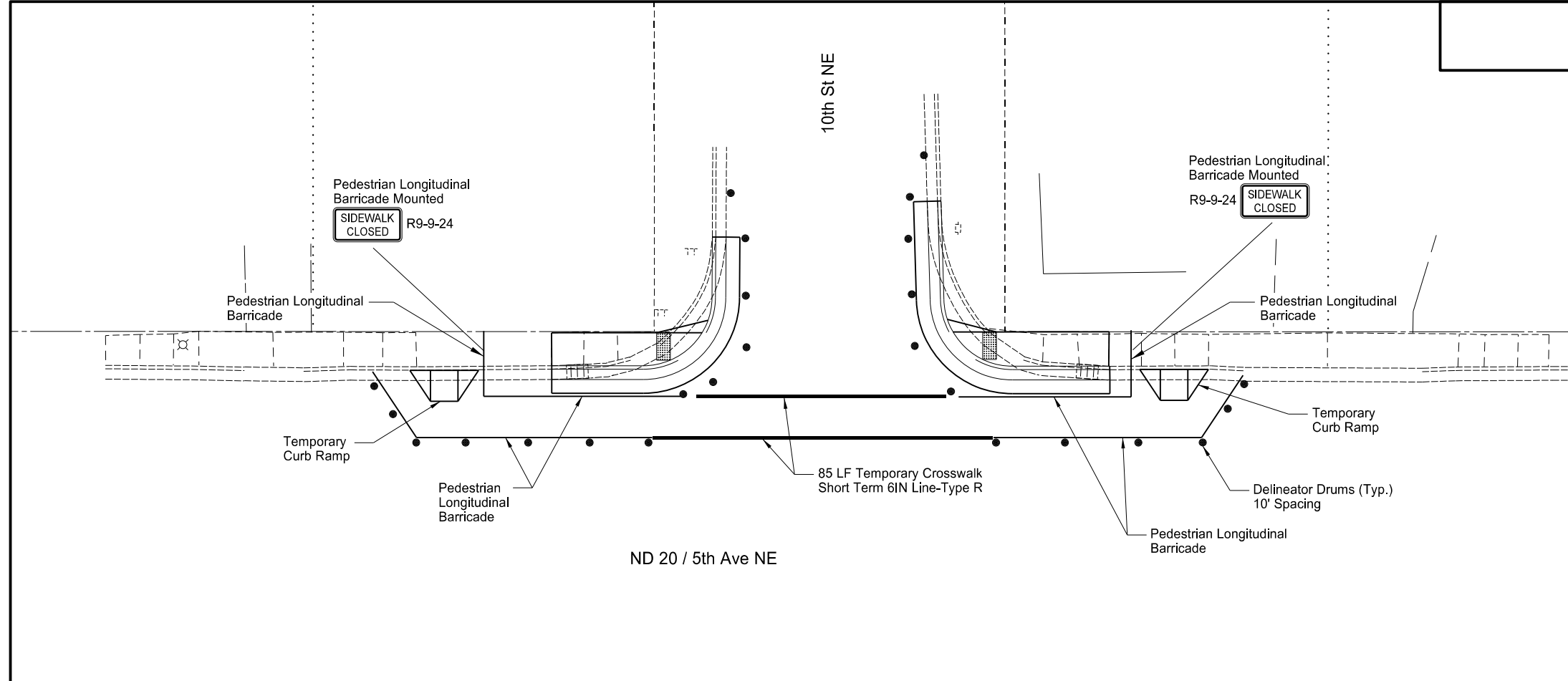
- LEGEND
- Delineator Drum
 - ▬ Type III Barricade
 - Pedestrian Longitudinal Barricade



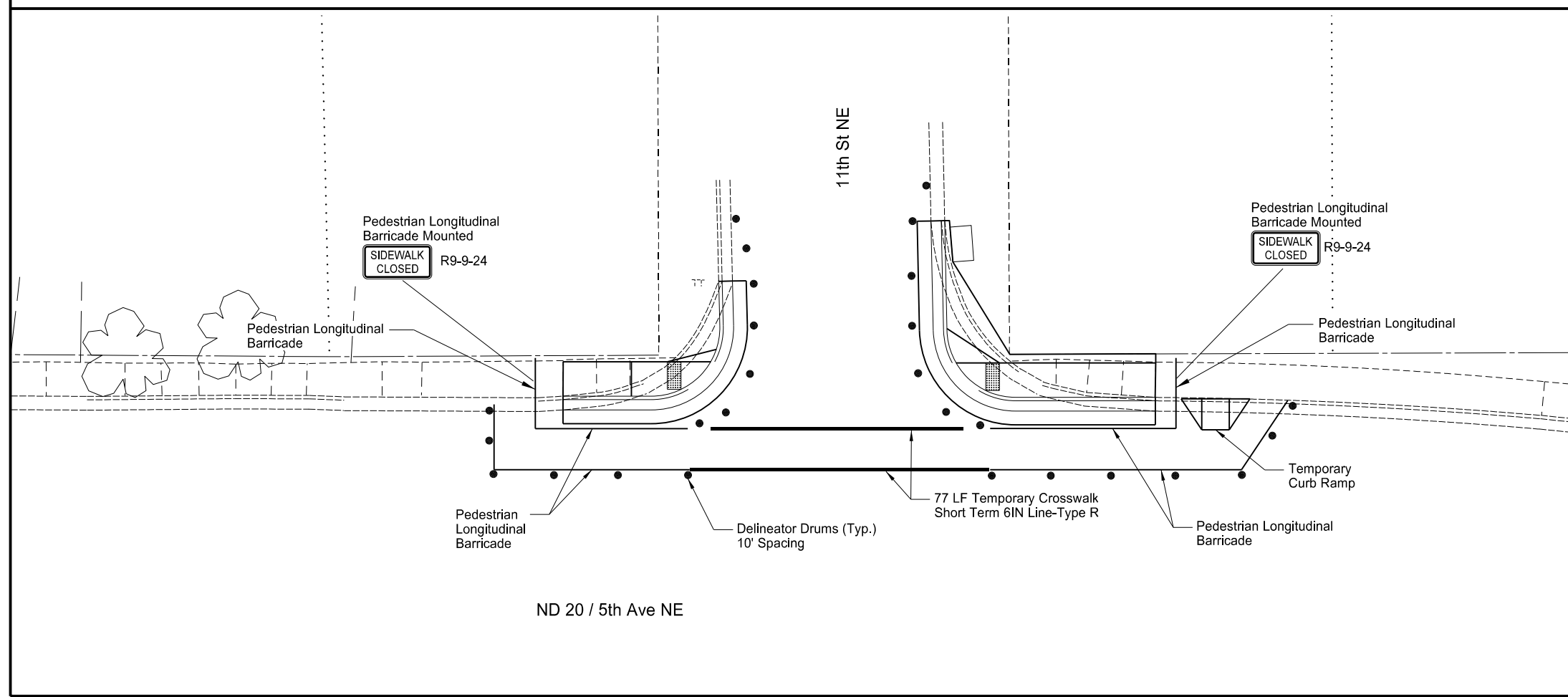
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CONSTRUCTION SIGNING
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE
City of Jamestown, Stutsman County, ND

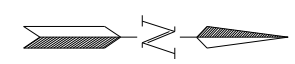
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	10



Notes:
 1. Layout applies to construction on 10th St NE and 11th St NE.
 2. See standard drawing D-704-34 for lane closure details.



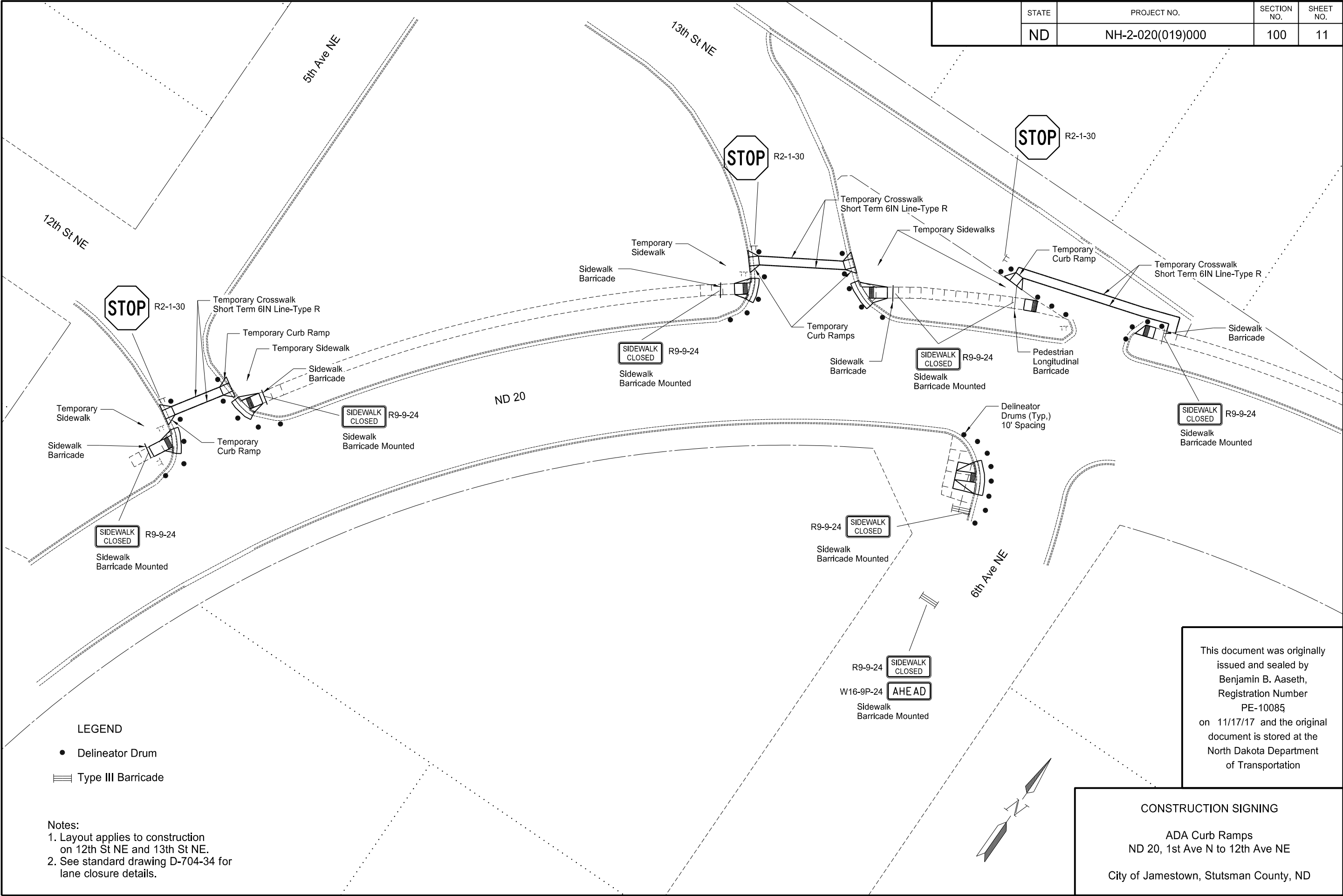
- LEGEND
- Delineator Drum
 - ▬ Type III Barricade
 - Pedestrian Longitudinal Barricade



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CONSTRUCTION SIGNING
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	11



LEGEND

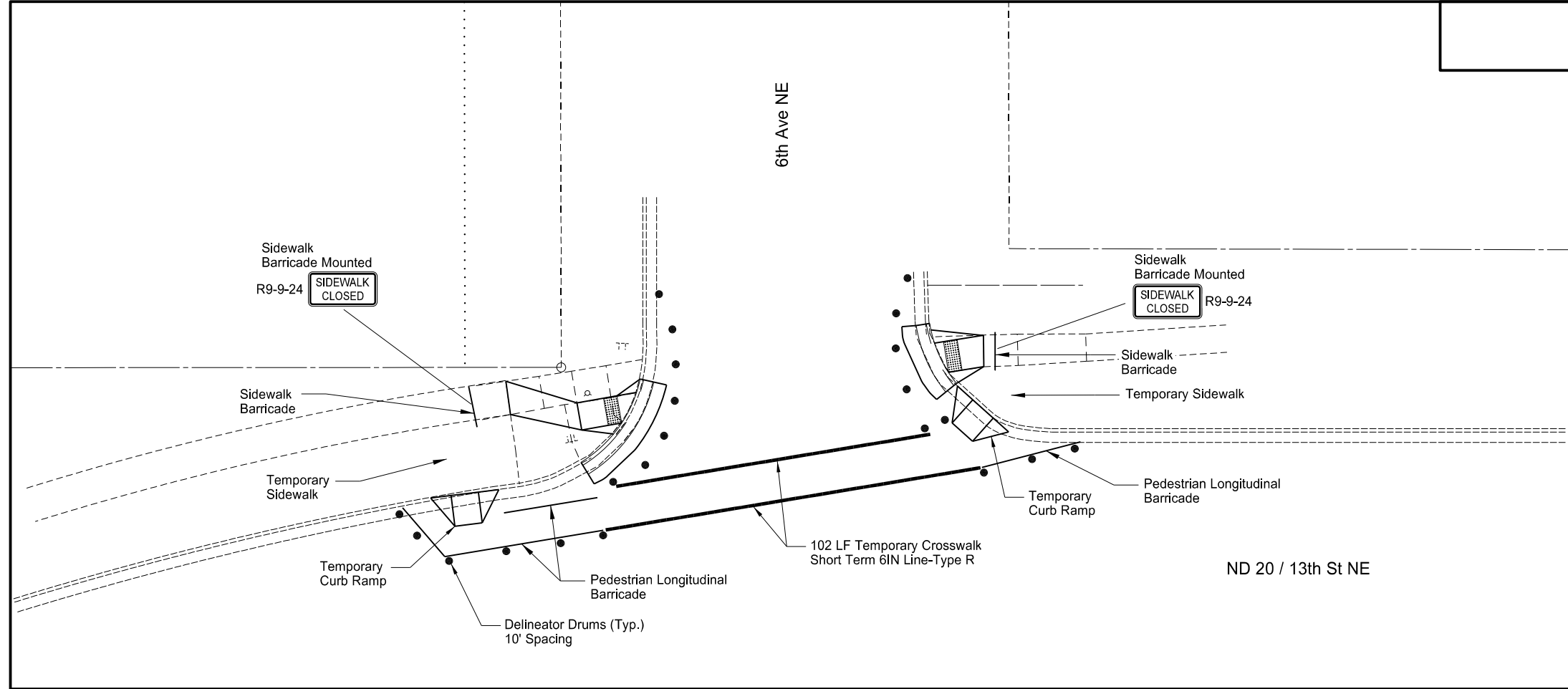
- Delineator Drum
- ≡ Type III Barricade

Notes:
 1. Layout applies to construction on 12th St NE and 13th St NE.
 2. See standard drawing D-704-34 for lane closure details.

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CONSTRUCTION SIGNING
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

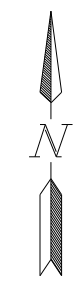
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	12



Notes:
 1. Layout applies to construction on 6th Ave NE.
 2. See standard drawing D-704-34 for lane closure details.

LEGEND

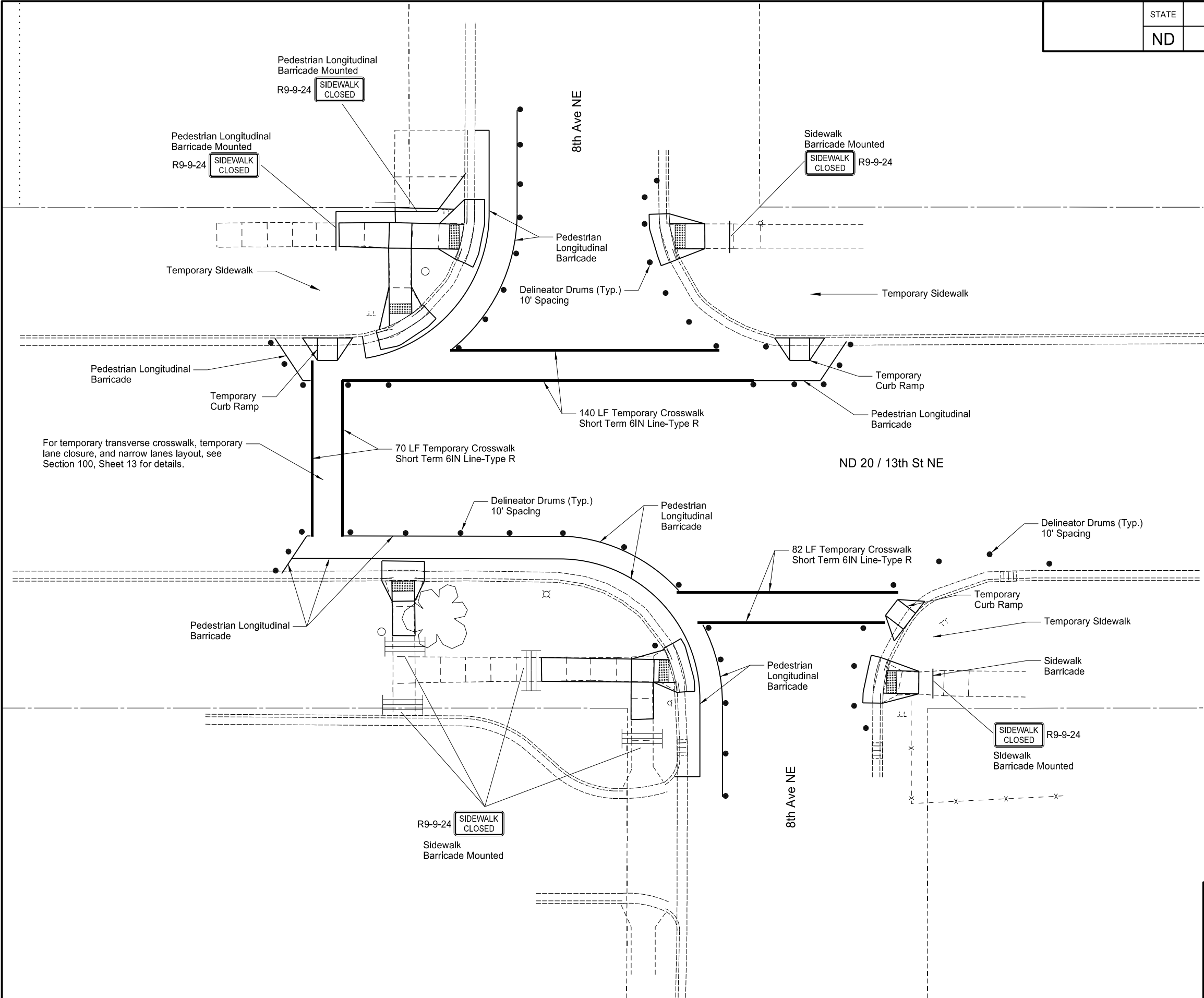
- Delineator Drum
- ≡ Type III Barricade
- Pedestrian Longitudinal Barricade



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CONSTRUCTION SIGNING
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

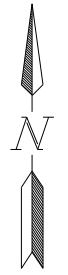
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	13



- Notes:
1. Layout applies to construction on 8th Ave NE.
 2. See standard drawing D-704-34 for lane closure details.

LEGEND

●	Delineator Drum
≡	Type III Barricade
—	Pedestrian Longitudinal Barricade



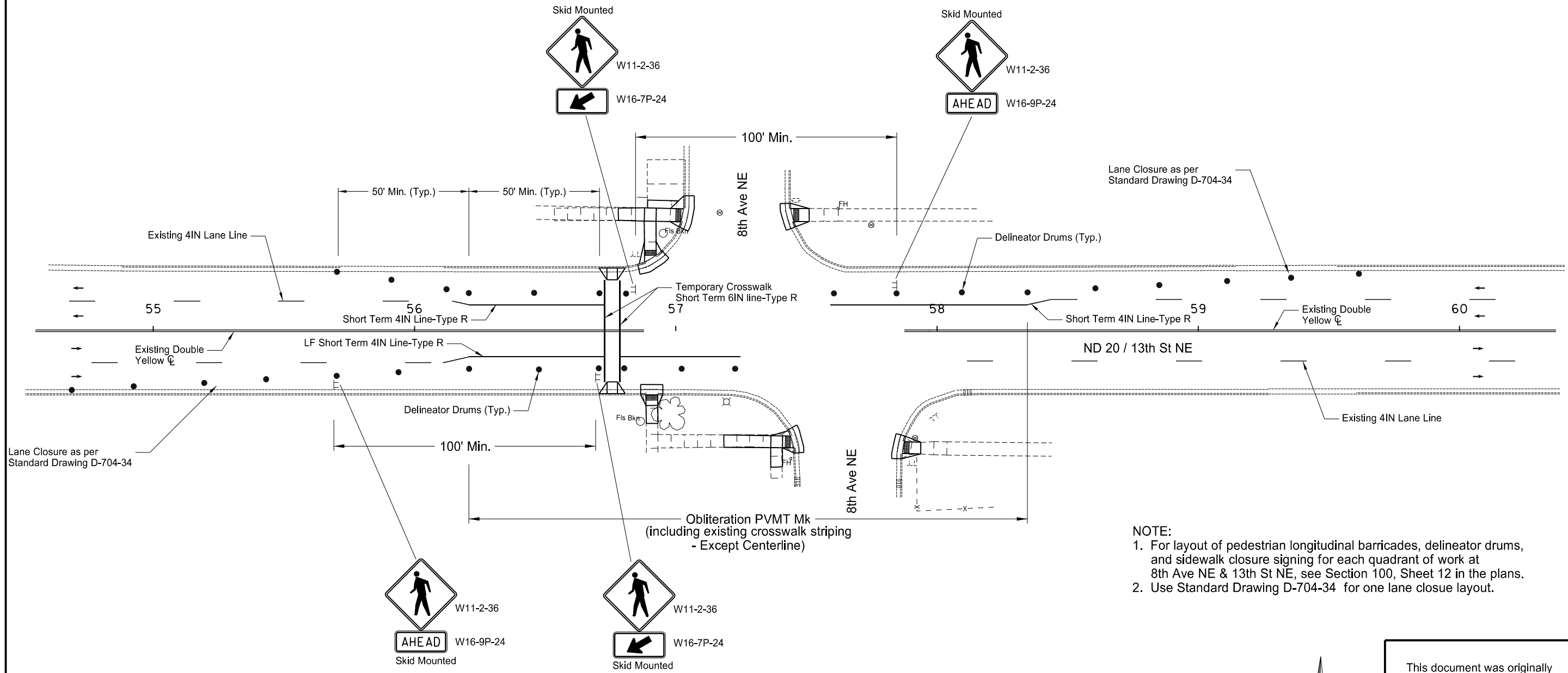
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CONSTRUCTION SIGNING

ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE

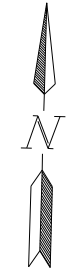
City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	14



NOTE:
 1. For layout of pedestrian longitudinal barricades, delineator drums, and sidewalk closure signing for each quadrant of work at 8th Ave NE & 13th St NE, see Section 100, Sheet 12 in the plans.
 2. Use Standard Drawing D-704-34 for one lane closure layout.

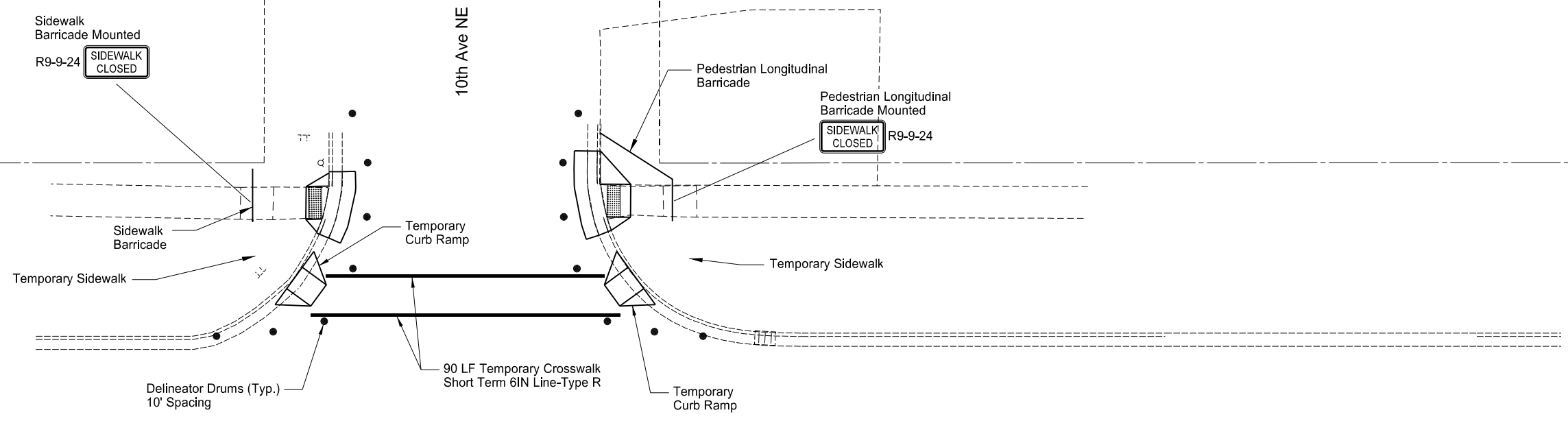
- LEGEND
- Delineator Drum
 - ≡ Type III Barricade
 - Tubular Marker
 - ⊢ Construction Sign
 - Direction of Travel



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CONSTRUCTION SIGNING DETAILS
 LANE CLOSURE & TRANSVERSE CROSSWALK
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

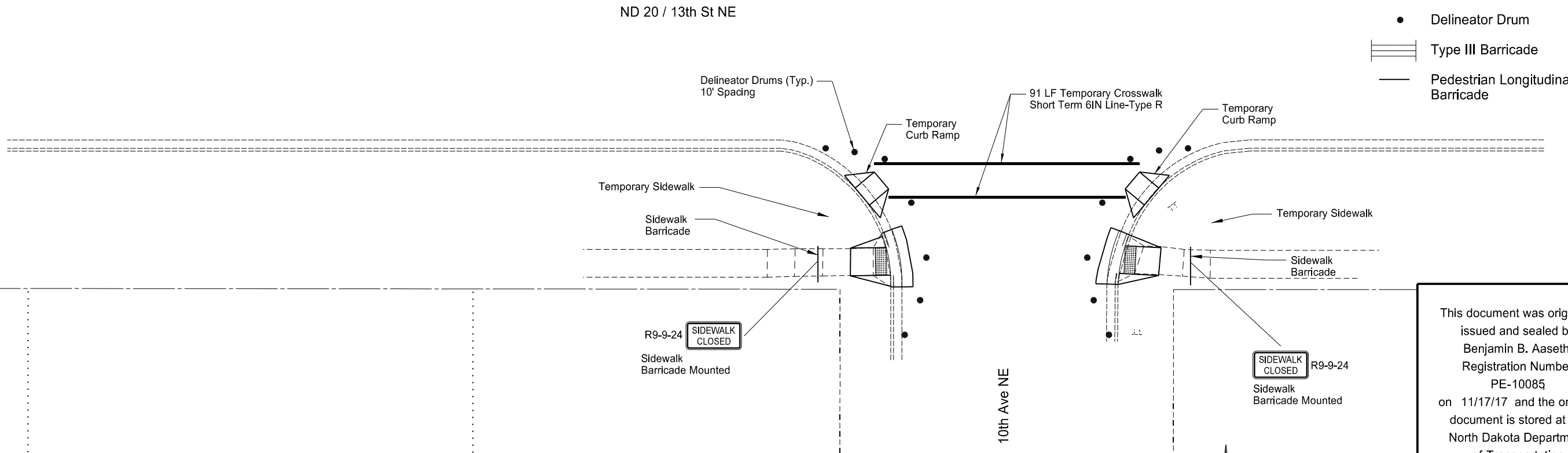
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	15



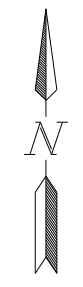
Notes:
 1. Layout applies to construction on 10th Ave NE.
 2. Temporary lane closures shall only be allowed during concrete pours and shall not remain in place at the end of the working day. See standard drawing D-704-34 for lane closure details.

LEGEND

- Delineator Drum
- ≡≡≡ Type III Barricade
- Pedestrian Longitudinal Barricade



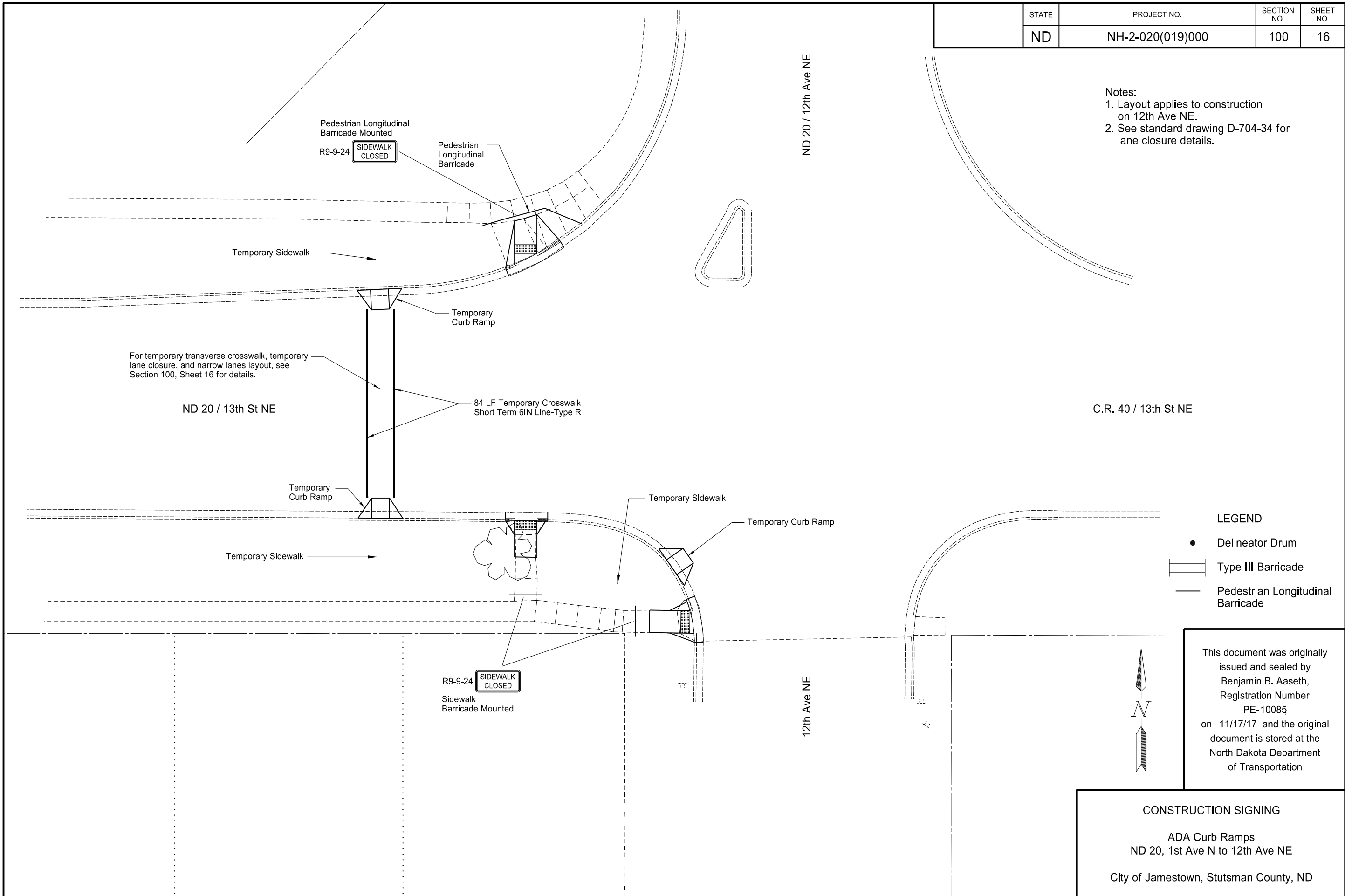
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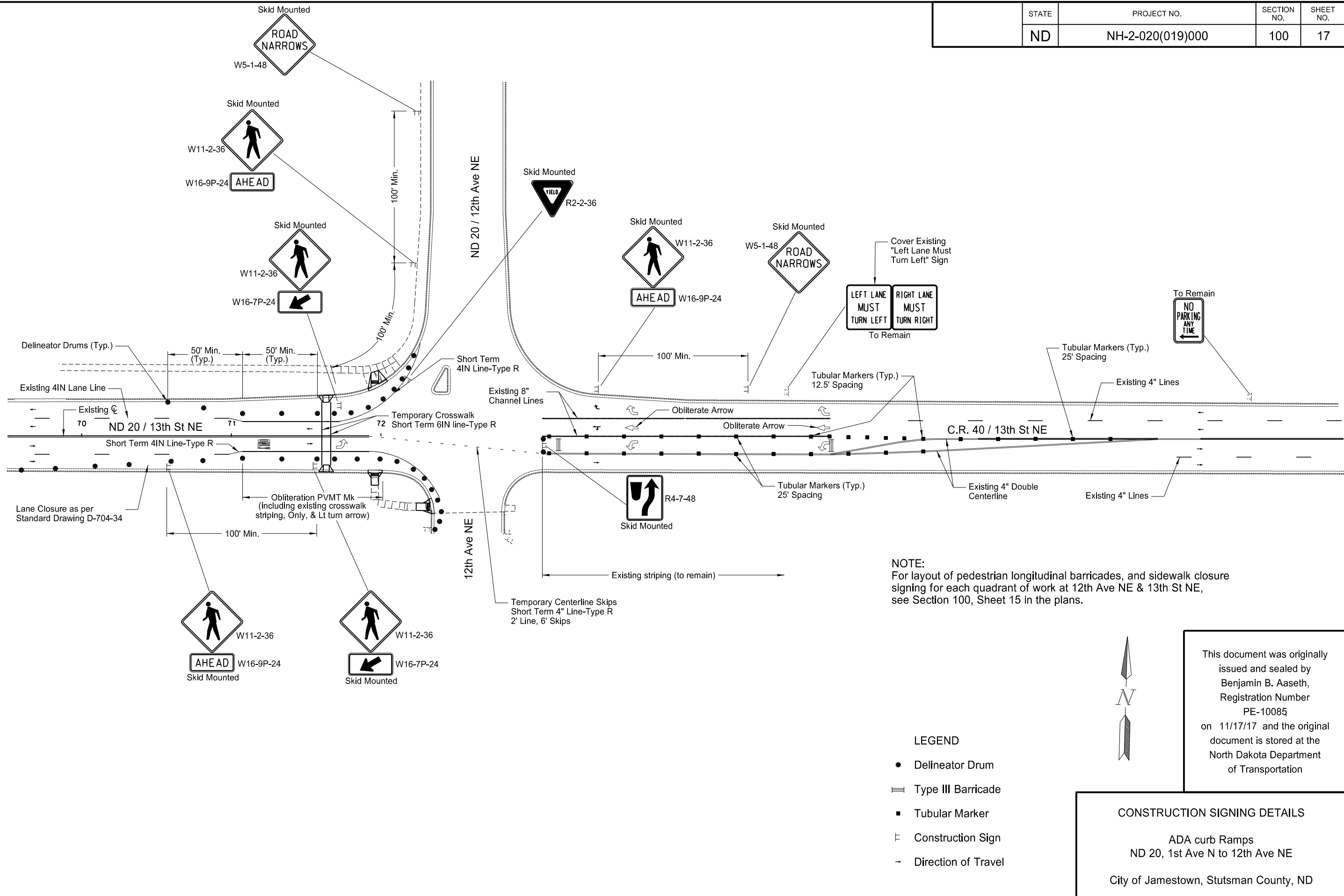
CONSTRUCTION SIGNING
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	16

Notes:
 1. Layout applies to construction on 12th Ave NE.
 2. See standard drawing D-704-34 for lane closure details.

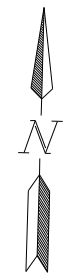


STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	100	17



NOTE:
 For layout of pedestrian longitudinal barricades, and sidewalk closure signing for each quadrant of work at 12th Ave NE & 13th St NE, see Section 100, Sheet 15 in the plans.

- LEGEND**
- Delineator Drum
 - ≡ Type III Barricade
 - Tubular Marker
 - ⊢ Construction Sign
 - Direction of Travel

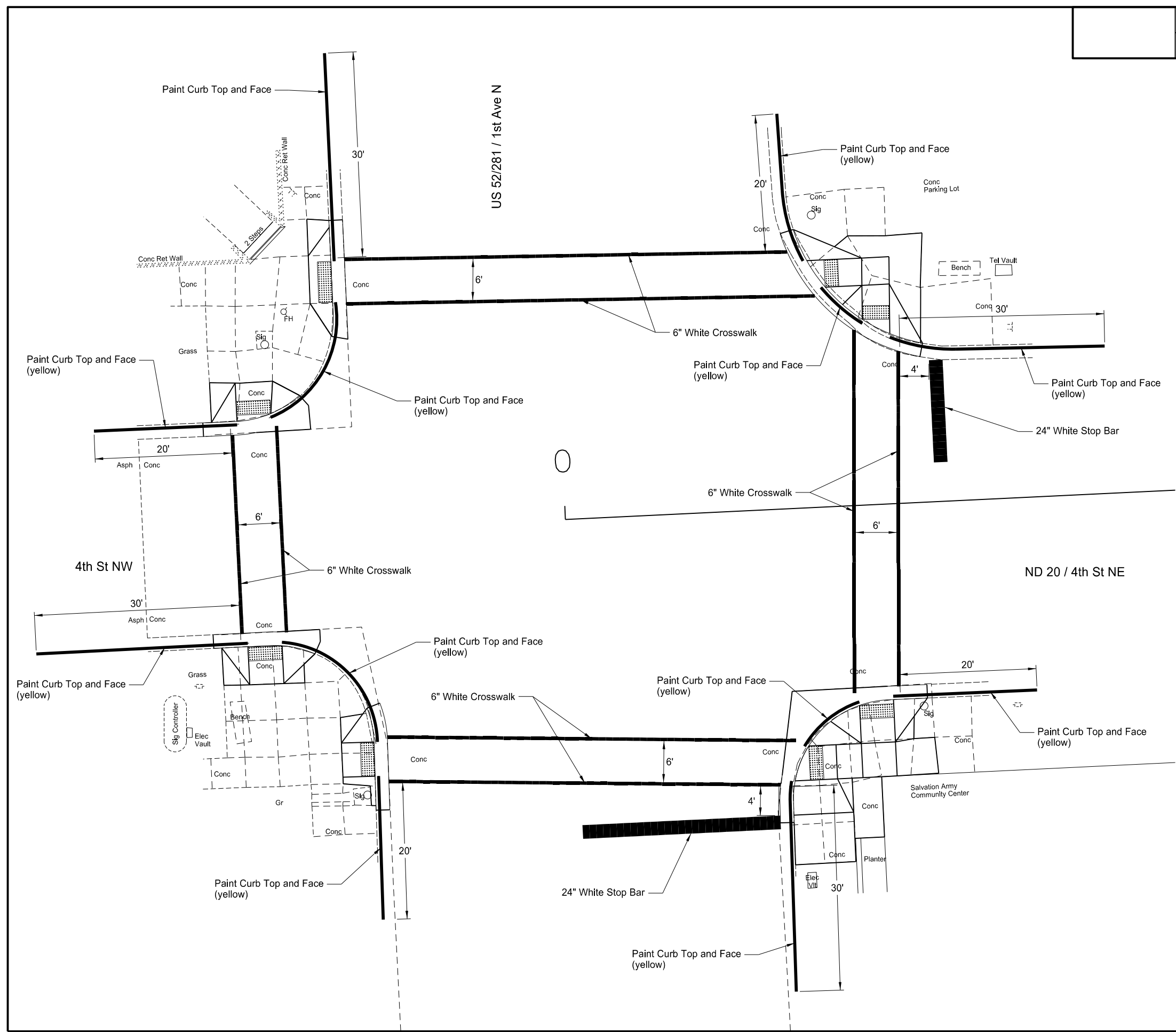


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CONSTRUCTION SIGNING DETAILS
 ADA curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	120	1

SPEC	CODE	BID ITEM	UNIT	QTY
762	1106	PVMT MK Painted 6IN Line US 52/281 and ND 20 / 4 th St NE	LF	412
762	1124	PVMT MK Painted 24IN Line US 52/281 and ND 20 / 4 th St NE	LF	44
762	1140	PVMT MK Painted Curb Top & Face US 52/281 and ND 20 / 4 th St NE	LF	271

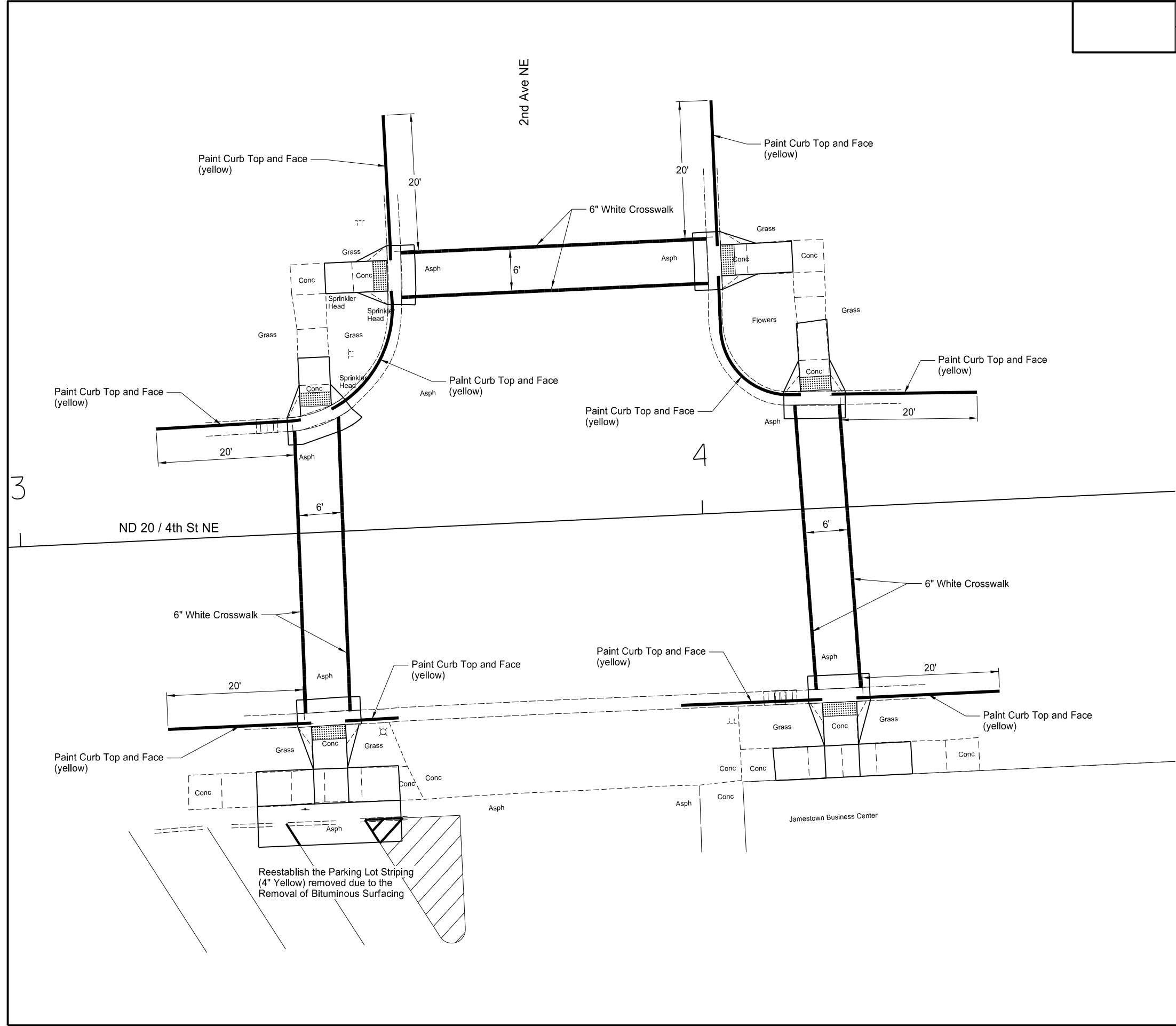


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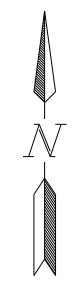
PAVEMENT MARKINGS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	120	2

SPEC	CODE	BID ITEM	UNIT	QTY
762	1104	PVMT MK Painted 4IN Line Parking Lot (Yellow)	LF	22
762	1106	PVMT MK Painted 6IN Line 2nd Ave NE and ND 20 / 4th St NE	LF	258
762	1140	PVMT MK Painted Curb Top & Face 2nd Ave NE and ND 20 / 4th St NE	LF	201



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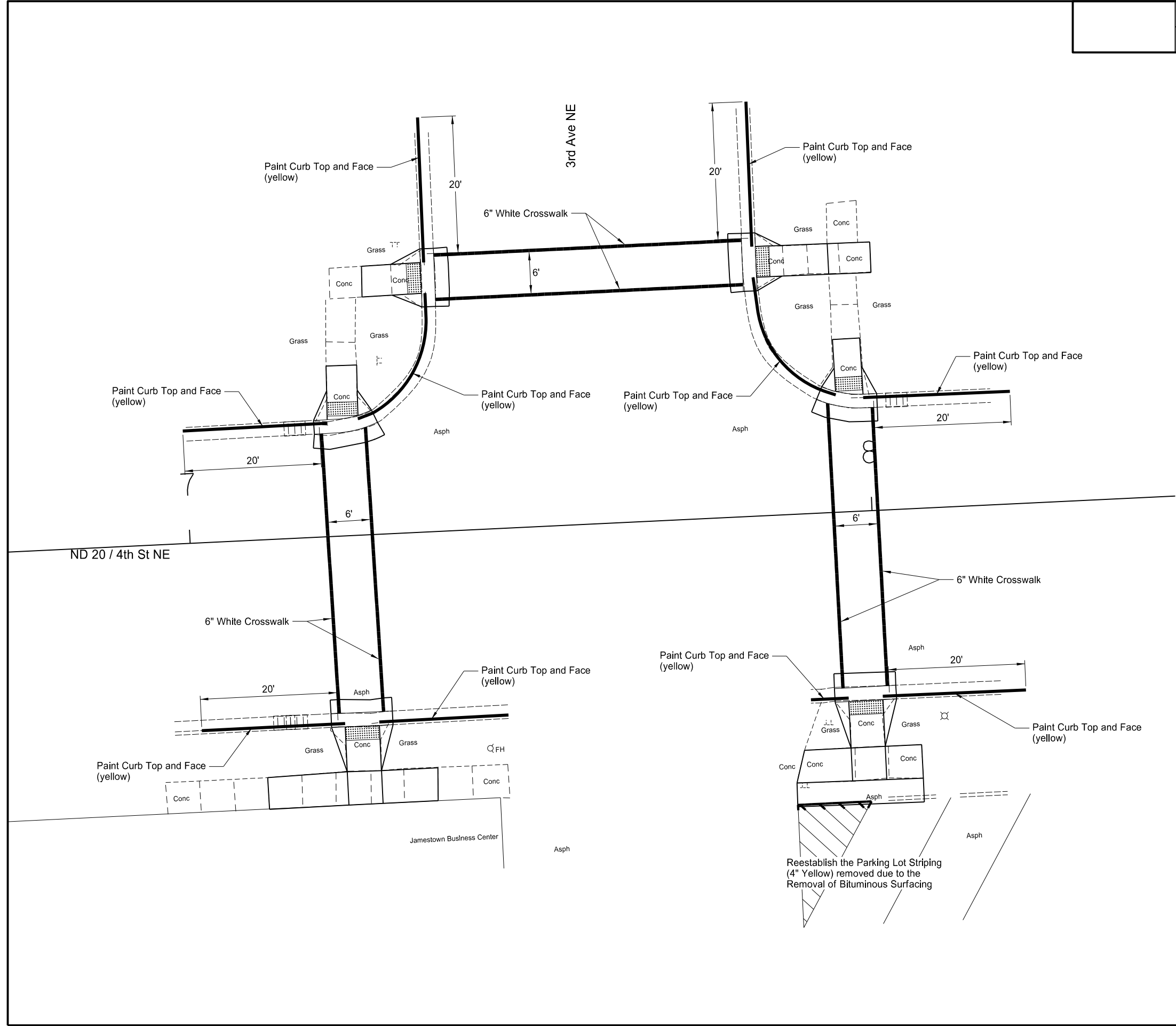
PAVEMENT MARKINGS

ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE

City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	120	3

SPEC	CODE	BID ITEM	UNIT	QTY
762	1104	PVMT MK Painted 4IN Line Parking Lot (Yellow)	LF	18
762	1106	PVMT MK Painted 6IN Line 3rd Ave NE and ND 20 / 4th St NE	LF	256
762	1140	PVMT MK Painted Curb Top & Face 3rd Ave NE and ND 20 / 4th St NE	LF	197



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PAVEMENT MARKINGS

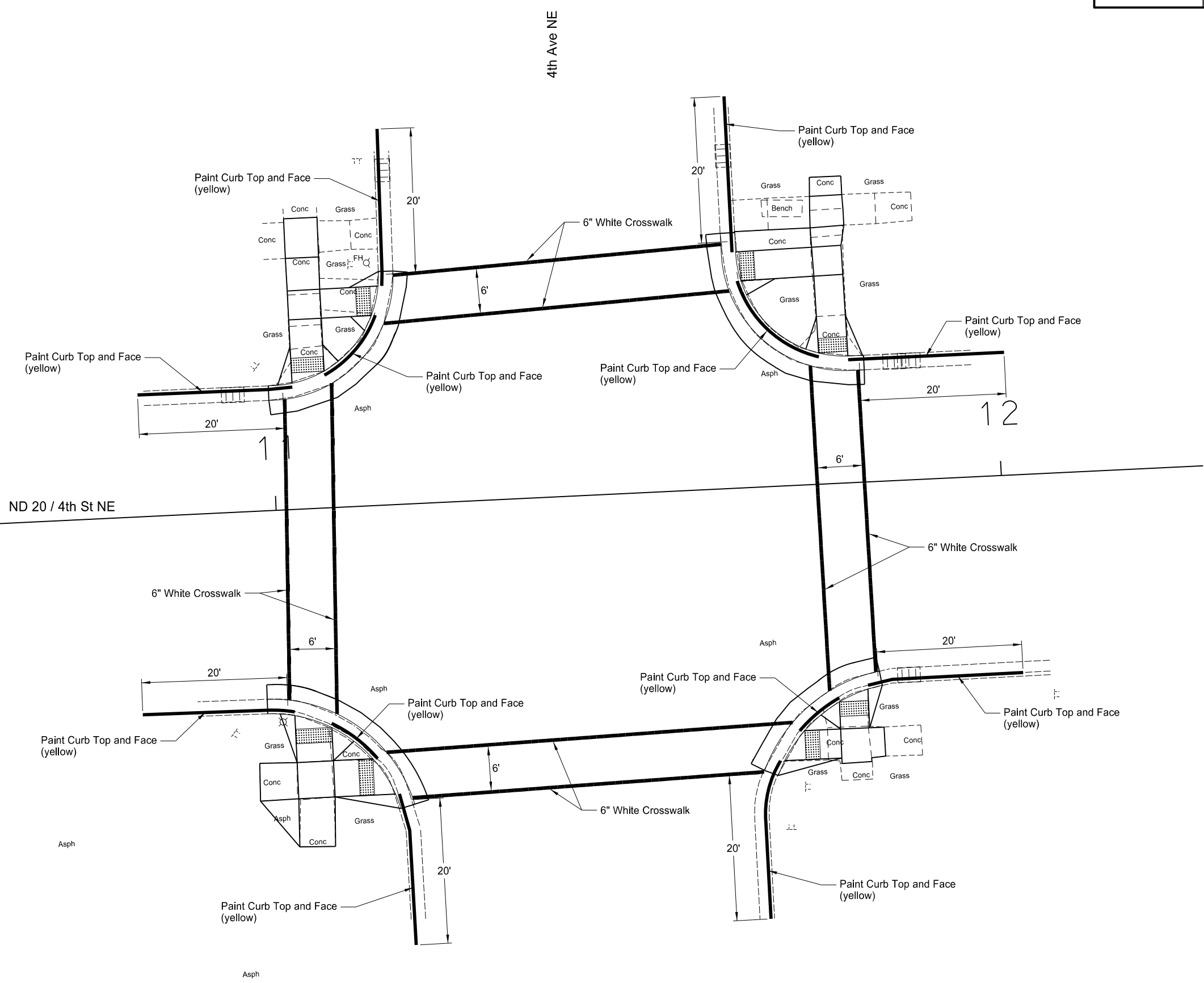
ADA Curb Ramps
ND 20, 1st Ave N to 12th Ave NE

City of Jamestown, Stutsman County, ND



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	120	4

SPEC	CODE	BID ITEM	UNIT	QTY
762	1106	PVMT MK Painted 6IN Line 4th Ave NE and ND 20 / 4th St NE	LF	371
762	1140	PVMT MK Painted Curb Top & Face 4th Ave NE and ND 20 / 4th St NE	LF	214



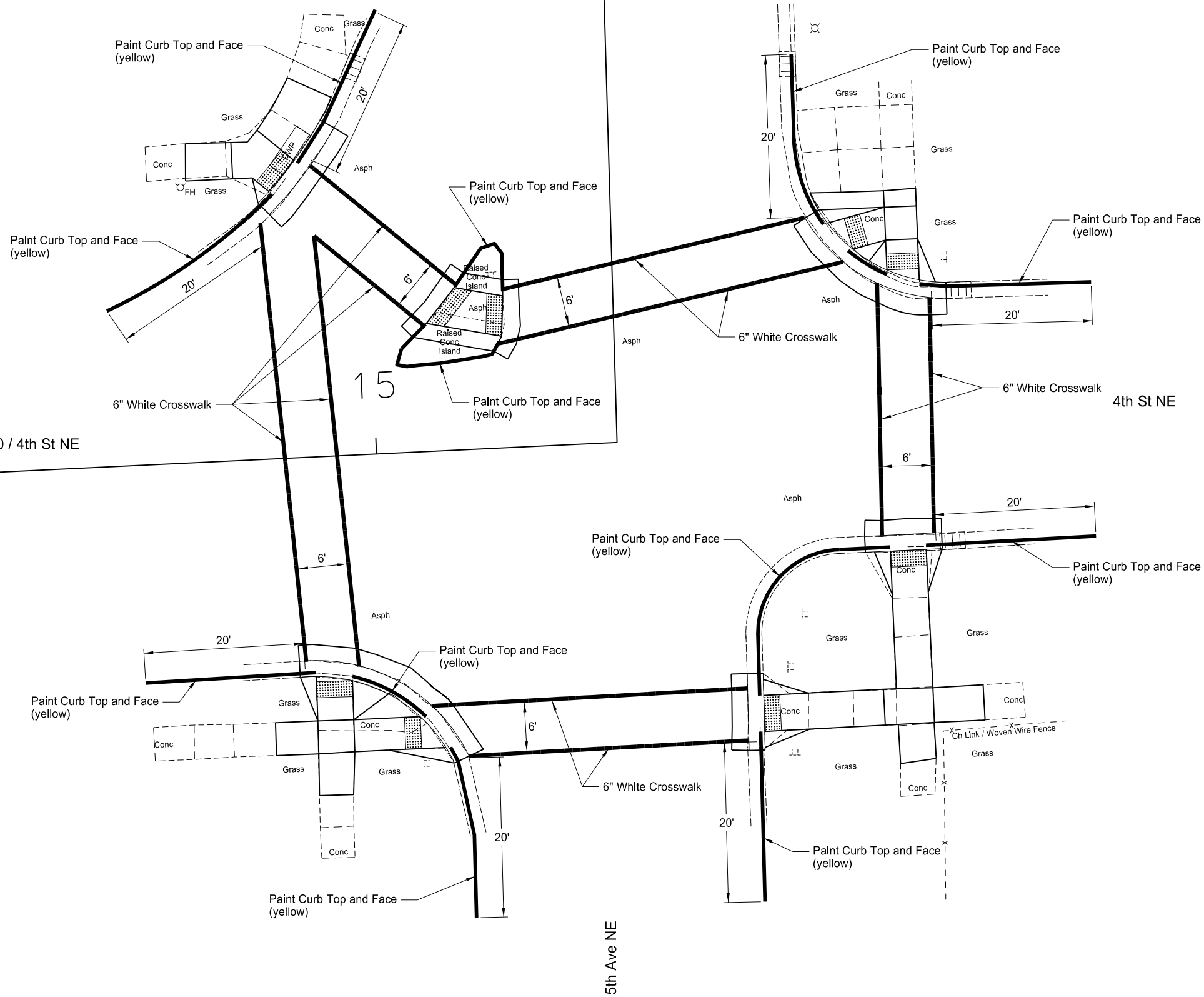
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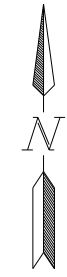
PAVEMENT MARKINGS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	120	5

SPEC	CODE	BID ITEM	UNIT	QTY
762	1106	PVMT MK Painted 6IN Line		
		ND20 / 5 th Ave NE and ND20 / 4 th St NE	LF	369
762	1140	PVMT MK Painted Curb Top & Face		
		ND20 / 5 th Ave NE and ND20 / 4 th St NE	LF	257



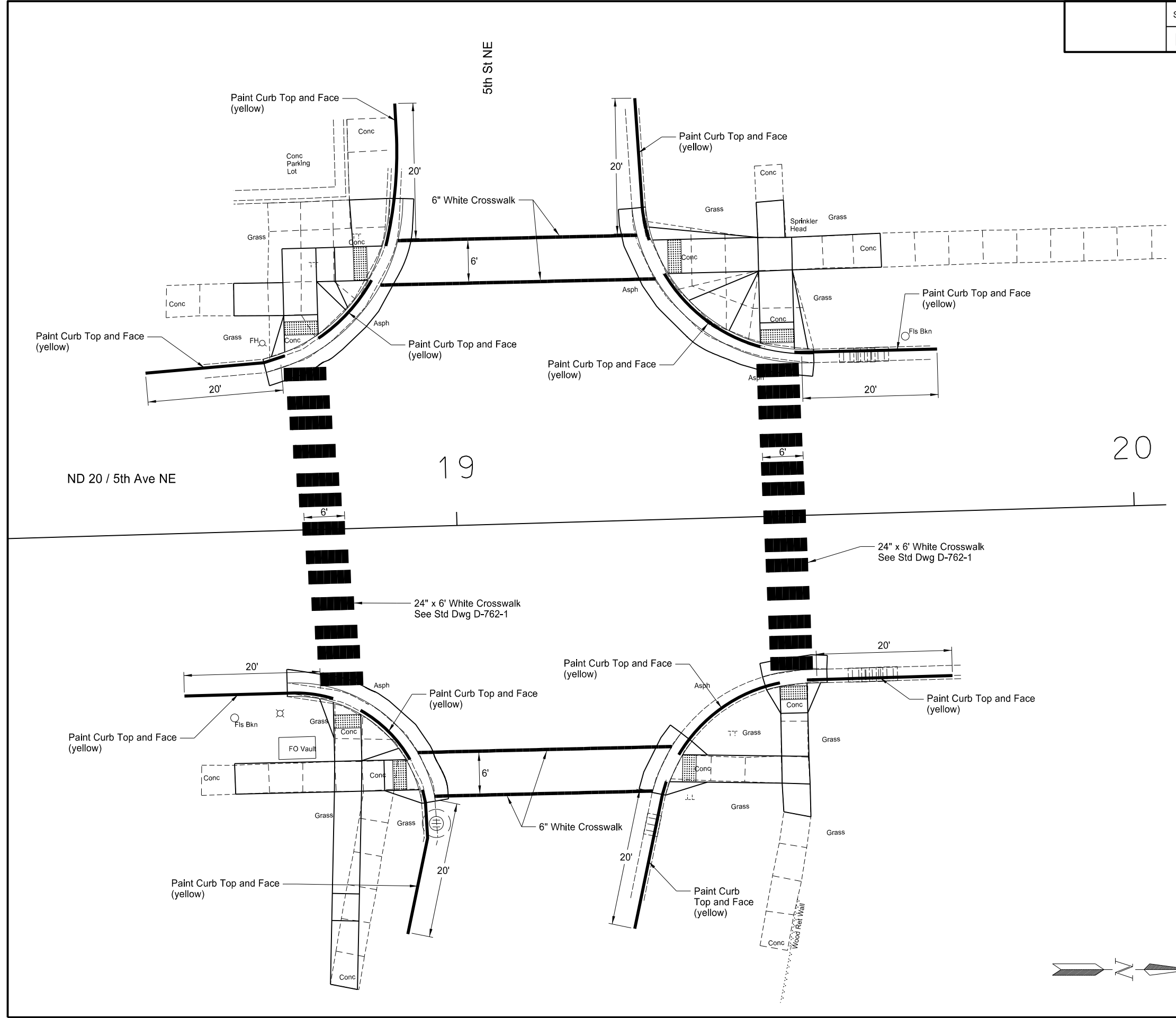
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PAVEMENT MARKINGS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	120	6

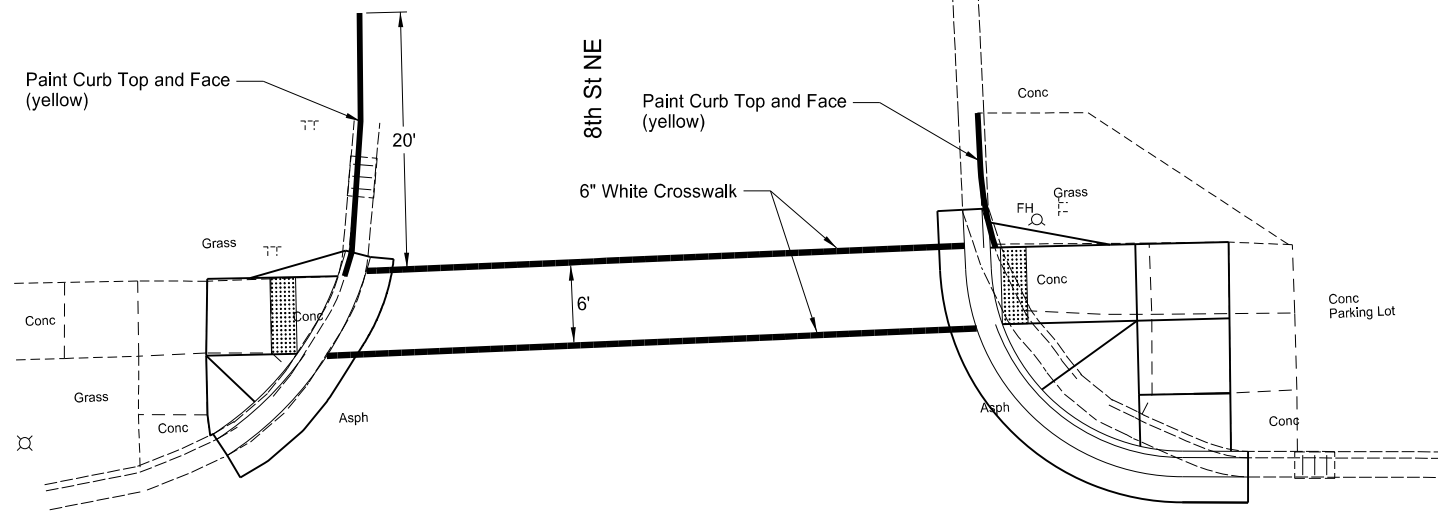
SPEC	CODE	BID ITEM	UNIT	QTY
762	1106	PVMT MK Painted 6IN Line 5th St NE and ND 20 / 5th Ave NE	LF	146
762	1124	PVMT MK Painted 24IN Line 5th St NE and ND 20 / 5th Ave NE (Continental Crosswalks)	LF	156
762	1140	PVMT MK Painted Curb Top & Face 5th St NE and ND 20 / 5th Ave NE	LF	231



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PAVEMENT MARKINGS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

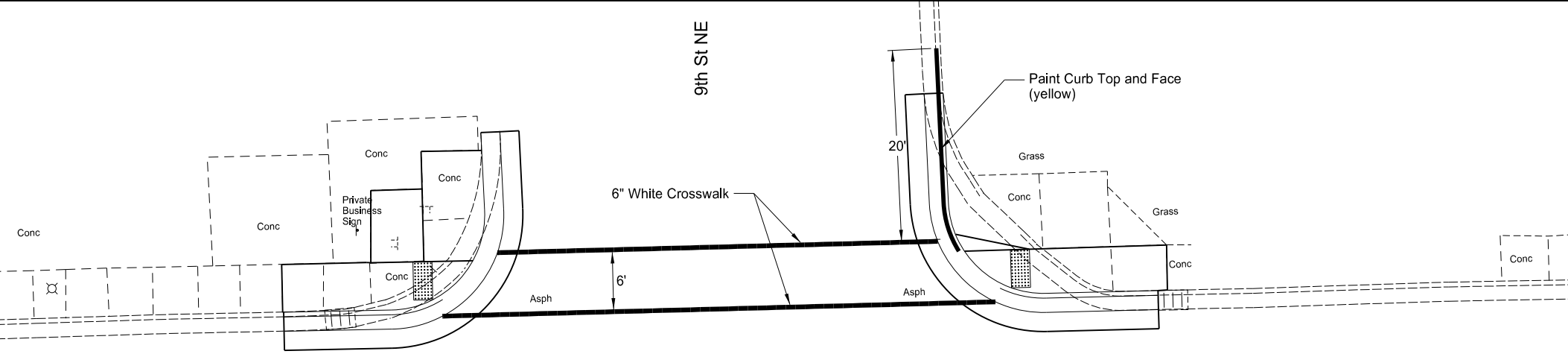
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	120	7



ND 20 / 5th Ave NE

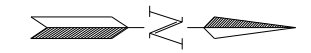
31

SPEC	CODE	BID ITEM	UNIT	QTY
762	1106	PVMT MK Painted 6IN Line		
		8 th St NE and ND 20 / 5 th Ave NE	LF	98
		9 th St NE and ND 20 / 5 th Ave NE	LF	104
762	1140	PVMT MK Painted Curb Top & Face		
		8 th St NE and ND 20 / 5 th Ave NE	LF	32
		9 th St NE and ND 20 / 5 th Ave NE	LF	22



ND 20 / 5th Ave NE

35

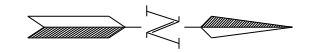
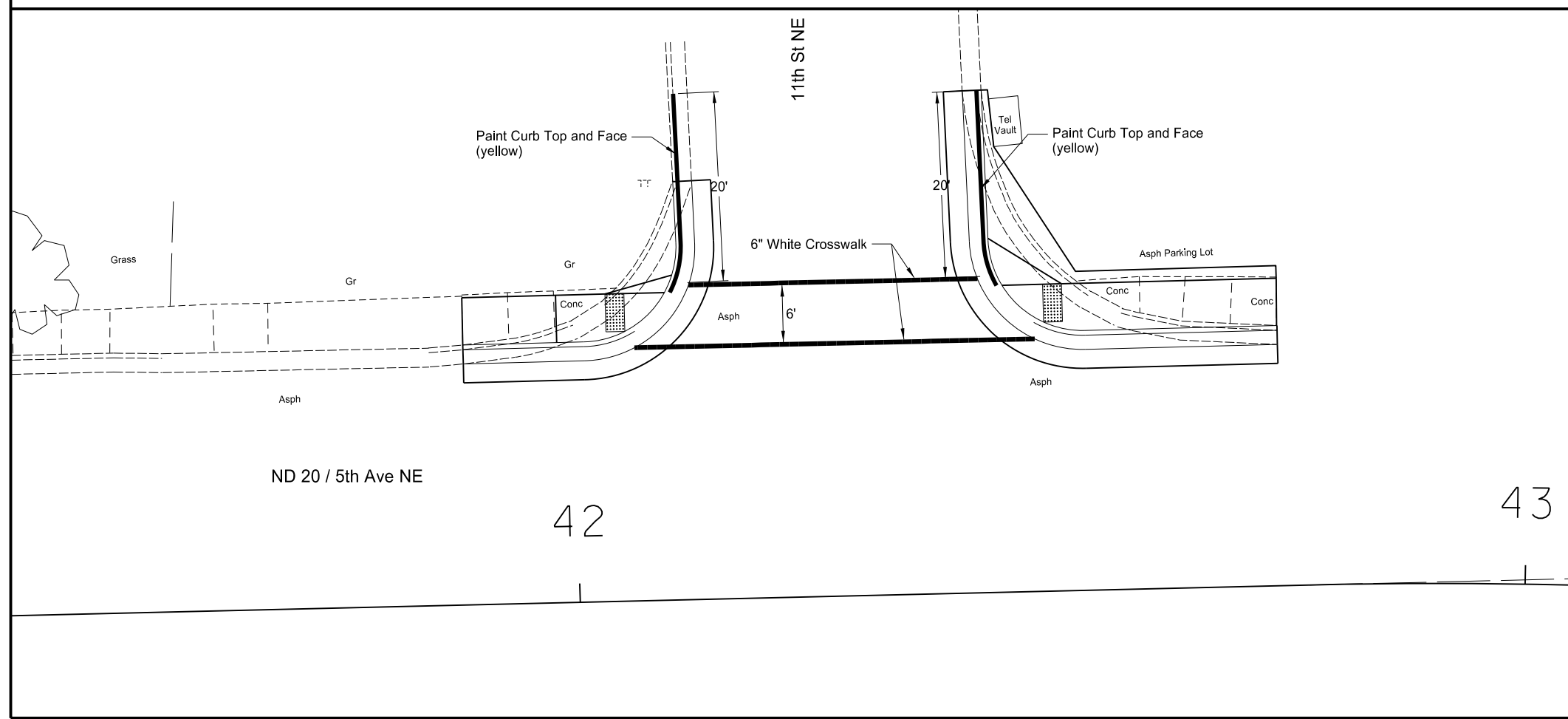
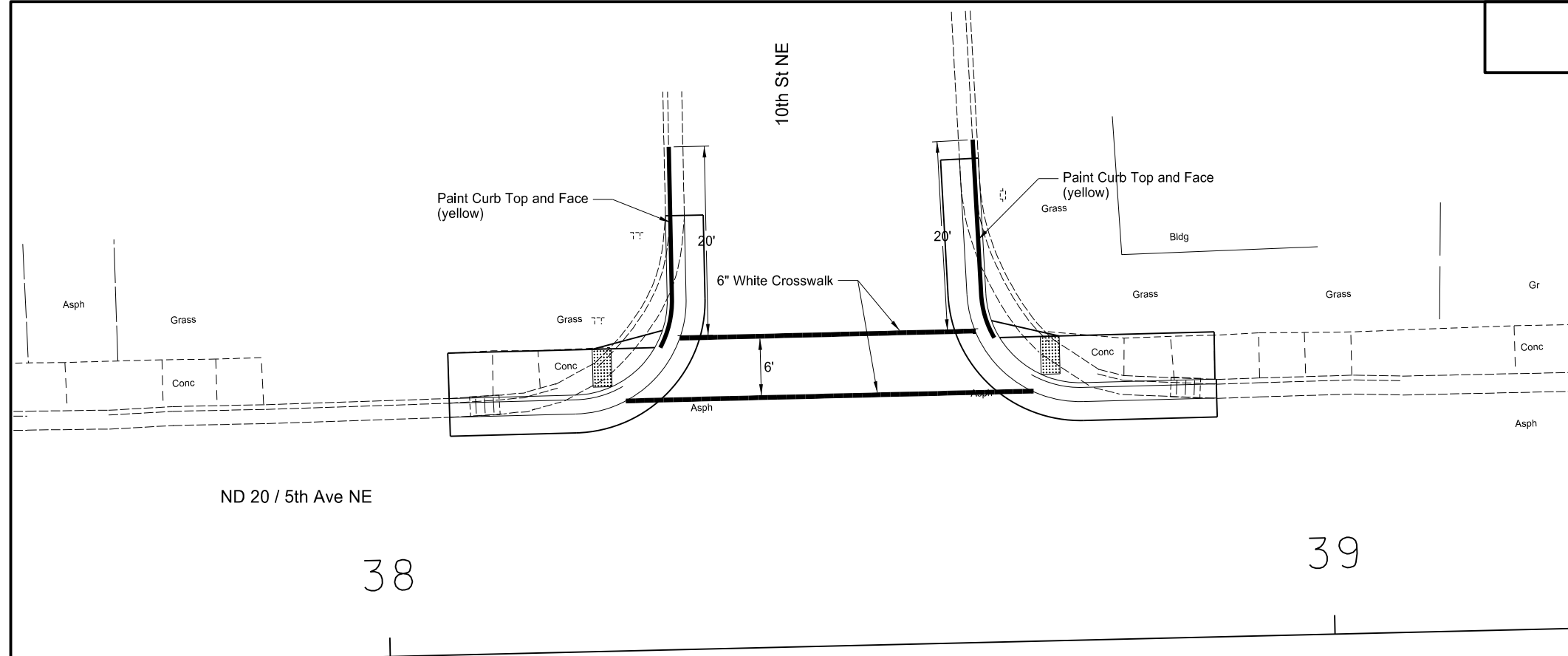


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PAVEMENT MARKINGS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	120	8

SPEC	CODE	BID ITEM	UNIT	QTY
762	1106	PVMT MK Painted 6IN Line		
		10th St NE and ND 20 / 5th Ave NE	LF	74
		11th St NE and ND 20 / 5th Ave NE	LF	73
762	1140	PVMT MK Painted Curb Top & Face		
		10th St NE and ND 20 / 5th Ave NE	LF	42
		11th St NE and ND 20 / 5th Ave NE	LF	42

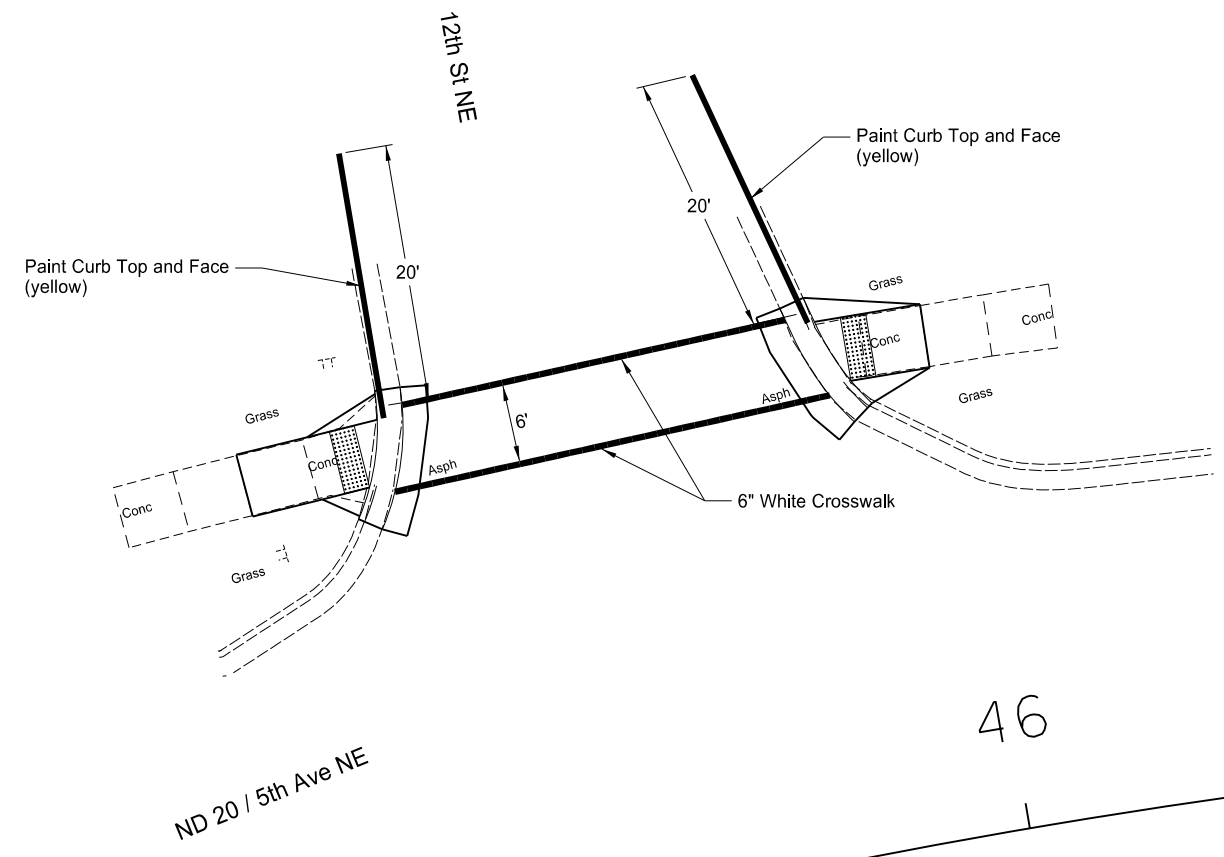


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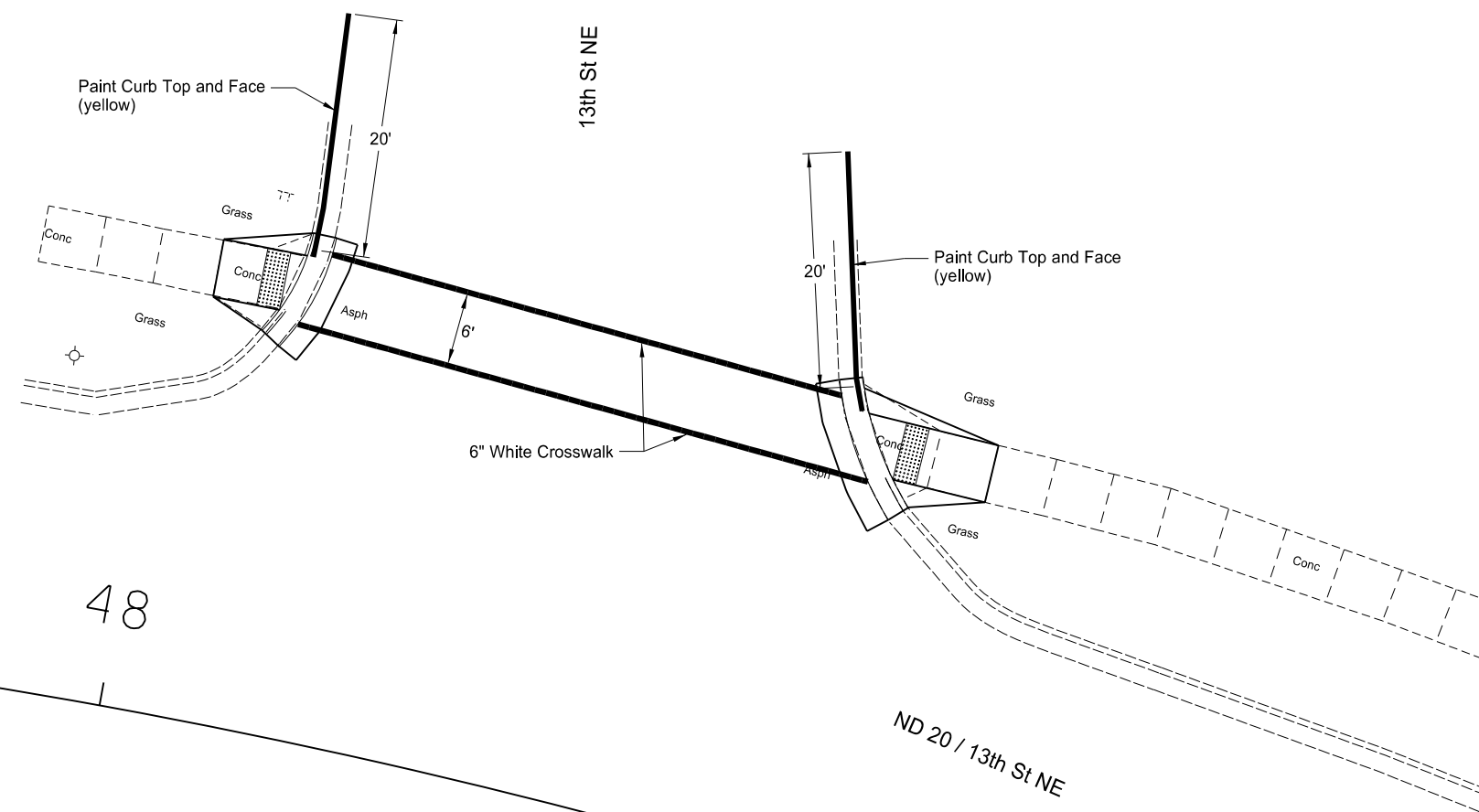
PAVEMENT MARKINGS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	120	9

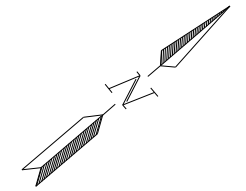
SPEC	CODE	BID ITEM	UNIT	QTY
762	1106	PVMT MK Painted 6IN Line		
		12 th St NE and ND 20 / 5 th Ave NE	LF	65
		13 th St NE and ND 20	LF	96
762	1140	PVMT MK Painted Curb Top & Face		
		12 th St NE and ND 20 / 5 th Ave NE	LF	42
		13 th St NE and ND 20	LF	43



46



48

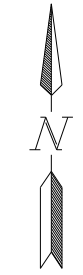
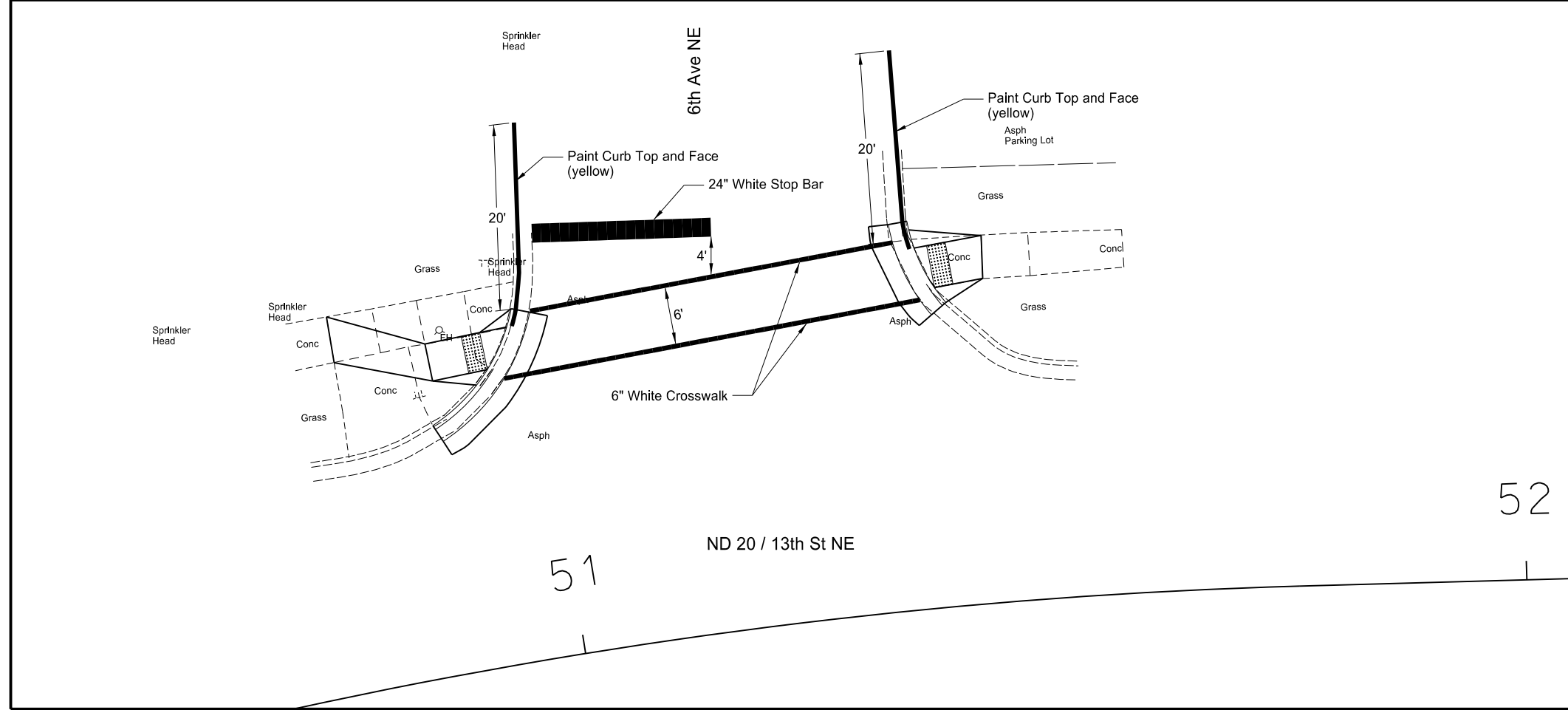
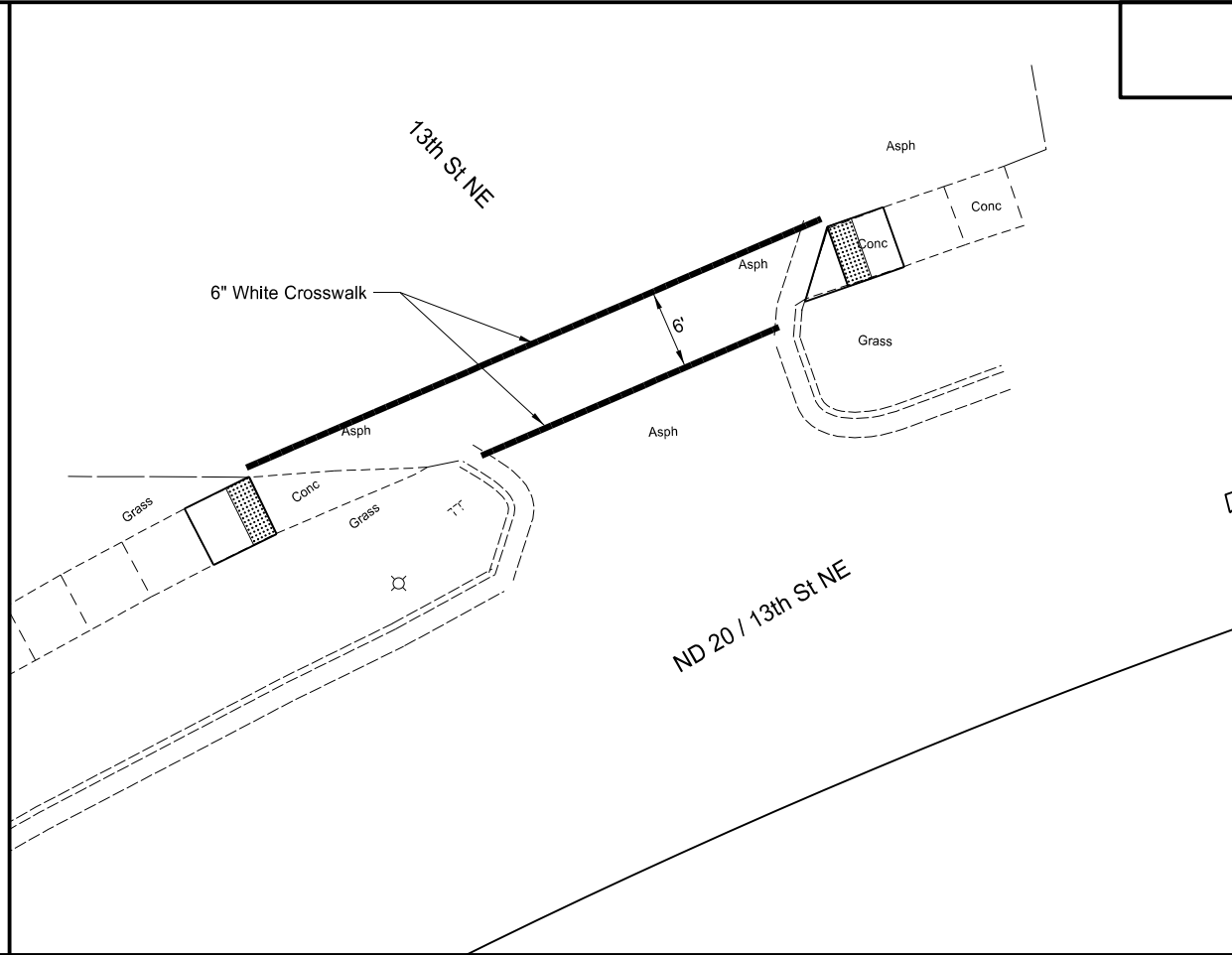
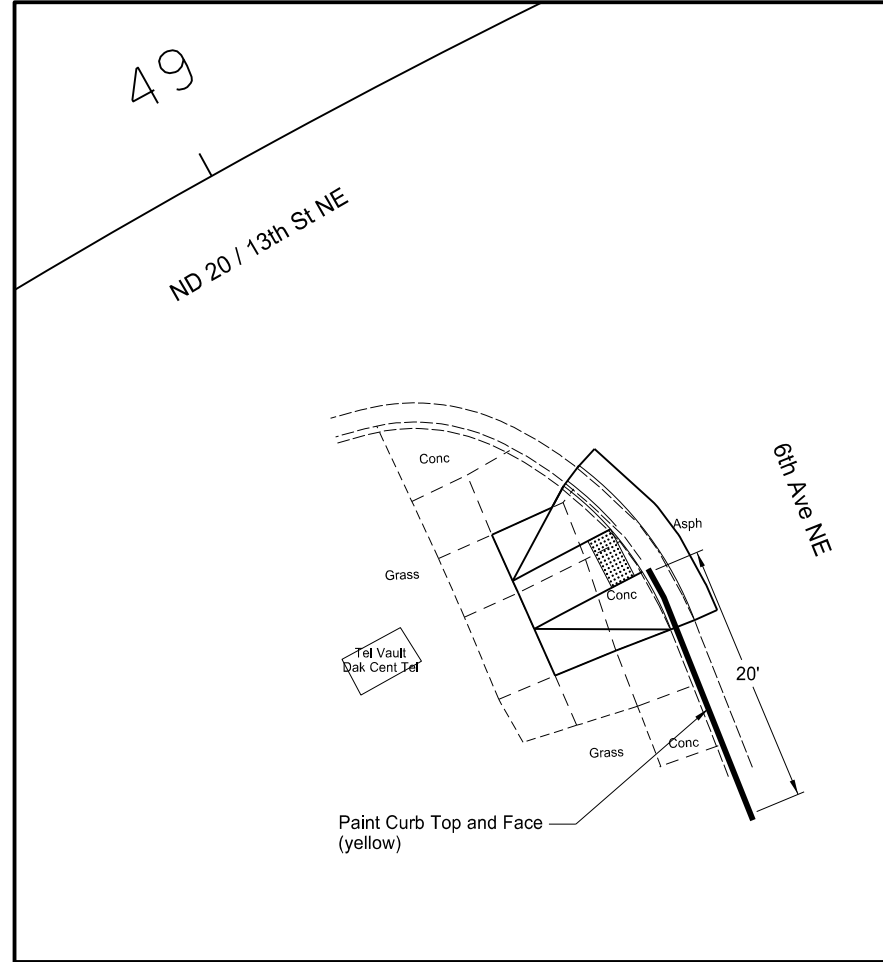


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PAVEMENT MARKINGS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	120	10

SPEC CODE	BID ITEM	UNIT	QTY
762 1106	PVMT MK Painted 6IN Line		
	13th St NE and ND 20	LF	75
	6th Ave NE and ND 20 / 13th St NE	LF	84
762 1124	PVMT MK Painted 24IN Line		
	6th Ave NE and ND 20 / 13th St NE	LF	19
762 1140	PVMT MK Painted Curb Top & Face		
	6th Ave NE and ND 20	LF	21
	6th Ave NE and ND 20 / 13th St NE	LF	43

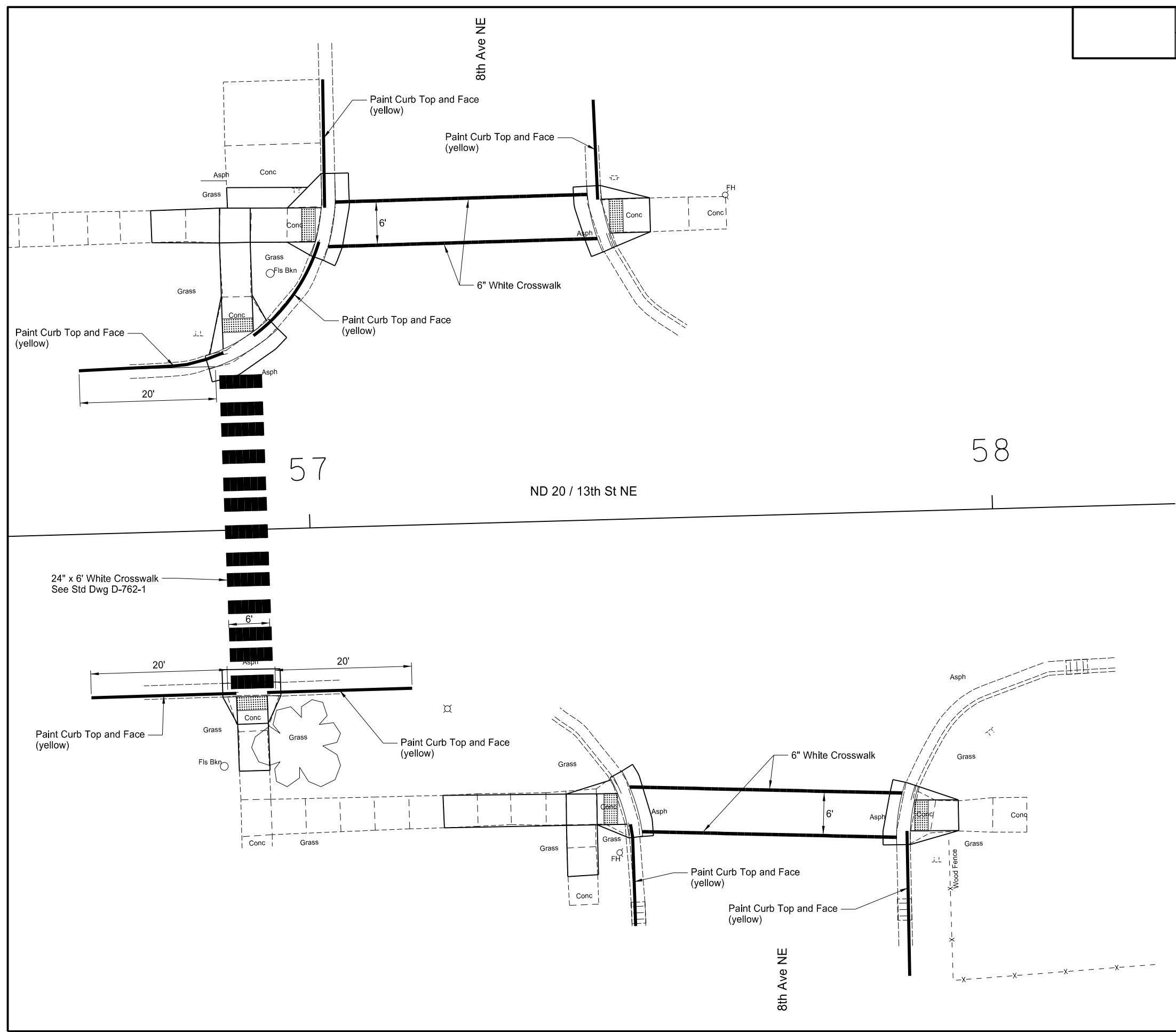


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PAVEMENT MARKINGS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	120	11

SPEC	CODE	BID ITEM	UNIT	QTY
762	1106	PVMT MK Painted 6IN Line	LF	154
762	1124	PVMT MK Painted 24IN Line	LF	78
762	1140	PVMT MK Painted Curb Top & Face	LF	151



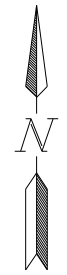
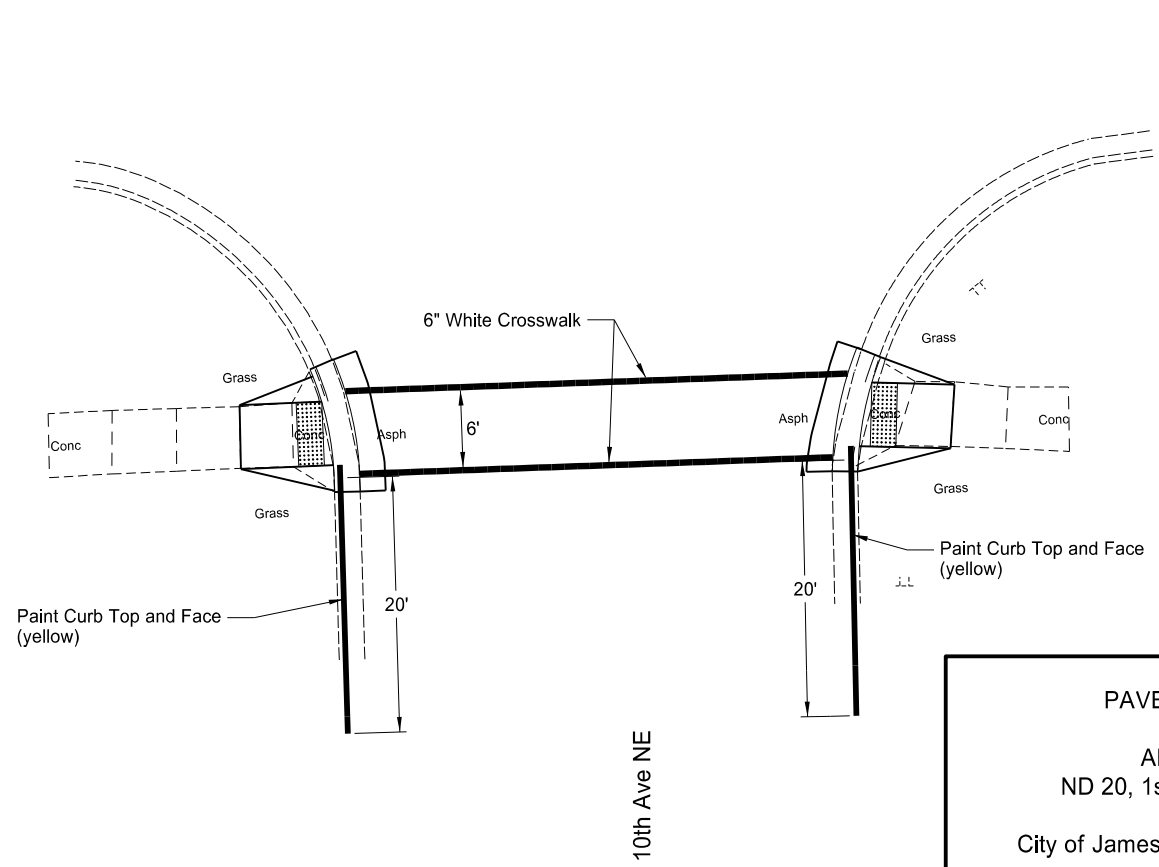
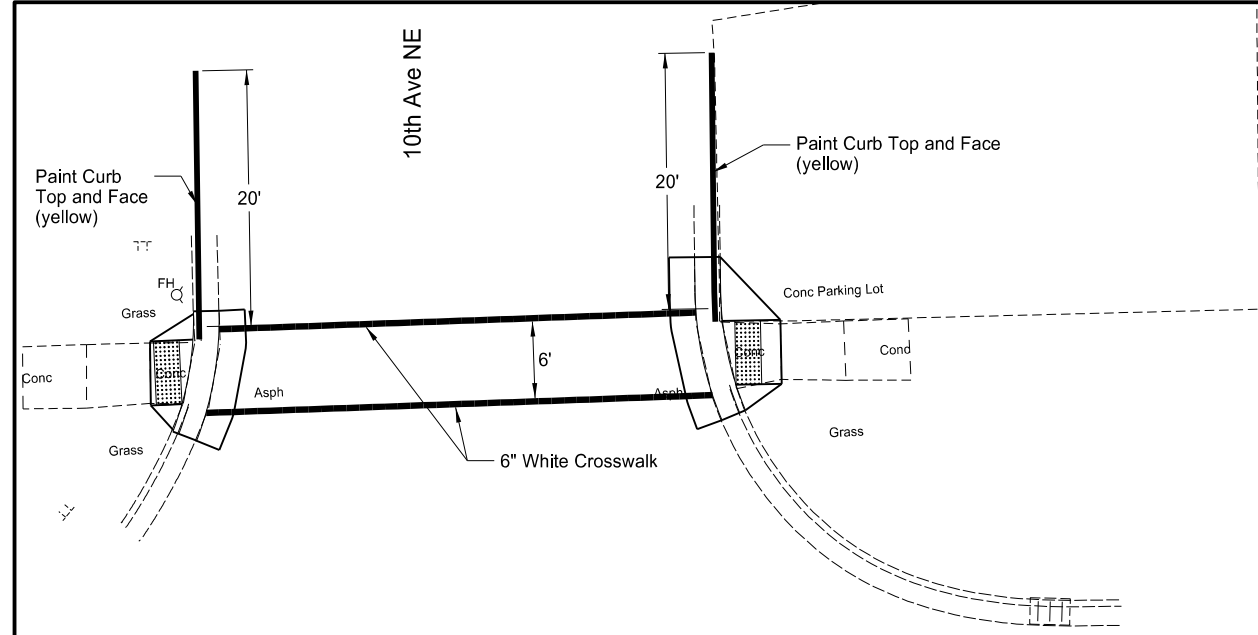
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PAVEMENT MARKINGS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	120	12

SPEC	CODE	BID ITEM	UNIT	QTY
762	1106	PVMT MK Painted 6IN Line	LF	153
762	1140	PVMT MK Painted Curb Top & Face	LF	84

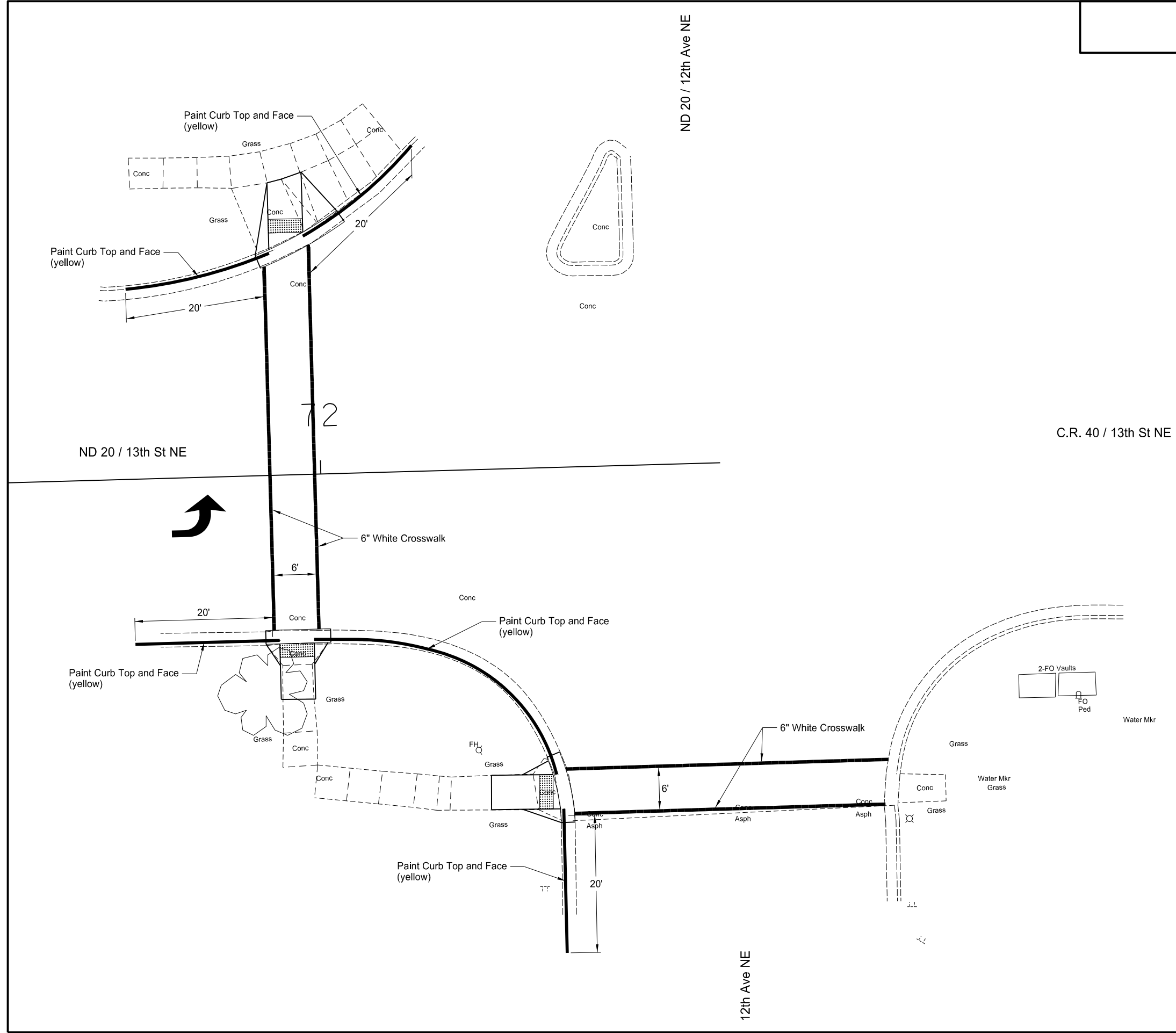


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PAVEMENT MARKINGS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-2-020(019)000	120	13

SPEC	CODE	BID ITEM	UNIT	QTY
762	103	PVMT MK Painted - Message		
		ND20/13 th St NE - 2 Left Turn Arrows	SF	32
		CR 40 / 13 th St NE - 2 Thru Arrows	SF	24
762	1106	PVMT MK Painted 6IN Line		
		ND20/12 th Ave NE and ND20/13 th St NE	LF	201
762	1140	PVMT MK Painted Curb Top & Face		
		ND20/12 th Ave NE and ND20/13 th St NE	LF	128



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PAVEMENT MARKINGS
 ADA Curb Ramps
 ND 20, 1st Ave N to 12th Ave NE
 City of Jamestown, Stutsman County, ND

NDDOT ABBREVIATIONS

? This is a special text character used in the labeling of existing features. It indicates a feature that has an unknown characteristic, potentially based on: lack of description, location accuracy or purpose.

Abn abandoned
 Abut abutment
 Ac acres
 Adj adjusted
 Aggr aggregate
 Ahd ahead
 ARV air release valve
 Align alignment
 Al alley
 Alt alternate
 Alum aluminum
 ADA Americans with Disabilities Act
 A ampere
 & and
 Appr approach
 Approx approximate
 ACP asbestos cement pipe
 Asph asphalt
 AC asphalt cement
 Assmd assumed
 @ at
 Atten attenuation
 ATR automatic traffic recorder
 Ave Avenue
 Avg average
 ADT average daily traffic
 Az azimuth
 Bk back
 BF back face
 Bs backsight
 Balc balcony
 B Wire barbed wire
 Barr barricade
 Btry battery
 Brg bearing
 BI beehive inlet
 Beg begin
 BM bench mark
 Bkwy bikeway
 Bit bituminous
 Blk block
 Bd Ft board feet
 BH bore hole
 BS both sides
 Bot bottom
 Blvd Boulevard
 Bndry boundary
 BC brass cap
 Brkwy breakaway
 Br bridge
 Bldg building

BV butterfly valve
 Byp bypass
 C Gdrl cable guardrail
 Calc calculate
 Cd candela
 CIP cast iron pipe
 CB catch basin
 CRS cationic rapid setting
 C Gd cattle guard
 C To C center to center
 Cl or C centerline
 Cm centimeter
 Ch chain
 Chnlk chain-link
 Ch Blk channel block
 Ch Ch channel change
 Chk check
 Chsld chiseled
 Cir circle
 Cl class
 Cl clay
 Cl F clay fill
 Cl Hvy clay heavy
 Cl Lm clay loam
 Clnt clean-out
 Clr clear
 Cl&gr clearing & grubbing
 Co S coal slack
 Comb. combination
 Coml commercial
 Compr compression
 CADD computer aided drafting & design
 Conc concrete
 Cond conductor
 Const construction
 Cont continuous
 CSB continuous split barrel sample
 Contr contraction
 Contr contractor
 CP control point
 Coord coordinate
 Cor corner
 Corr corrected
 CAES corrugated aluminum end section
 CAP corrugated aluminum pipe
 CMES corrugated metal end section
 CMP corrugated metal pipe
 CPVCP corrugated poly-vinyl chloride pipe
 CSES corrugated steel end section
 CSP corrugated steel pipe
 C coulomb
 Co County
 Crse course
 C Gr course gravel
 CS course sand

Ct Court
 Xarm cross arm
 Xbuck cross buck
 Xsec cross sections
 Xing crossing
 Xrd Crossroad
 Crn crown
 CF cubic feet
 M3 cubic meter
 M3/s cubic meters per second
 CY cubic yard
 Cy/mi cubic yards per mile
 Culv culvert
 C&G curb & gutter
 CI curb inlet
 CR curb ramp
 CS curve to spiral
 C cut
 Dd Ld dead load
 Defl deflection
 Defm deformed
 Deg or D degree
 DInt delineate
 DIntr delineator
 Depr depression
 Desc description
 Det detail
 DWP detectable warning panel
 Dtr detour
 Dia diameter
 Dir direction
 Dist distance
 DM disturbed material
 DB ditch block
 DG ditch grade
 Dbl double
 Dn down
 Dwg drawing
 Dr drive
 Drwy driveway
 DI drop inlet
 D dry density
 Ea each
 Esmt easement
 E East
 EB Eastbound
 Elast elastomeric
 EL electric locker
 E Mtr electric meter
 Elec electric/al
 EDM electronic distance meter
 Elev or El elevation
 Ellipt elliptical
 Emb embankment
 Emuls emulsion/emulsified

ES end section
 Engr engineer
 ESS environmental sensor station
 Eq equal
 Eq equation
 Evgr evergreen
 Exc excavation
 Exst existing
 Exp expansion
 Expy Expressway
 E external of curve
 Extru extruded
 FOS factor of safety
 F Fahrenheit
 FS far side
 F farad
 Fed Federal
 FP feed point
 Ft feet/foot
 Fn fence
 Fn P fence post
 FO fiber optic
 FB field book
 FD field drive
 F fill
 FAA fine aggregate angularity
 FS fine sand
 FH fire hydrant
 Fl flange
 Flrd flared
 FES flared end section
 F Bcn flashing beacon
 FA flight auger sample
 FL flow line
 Ftg footing
 FM force main
 Fs foresight
 Fnd found
 Fdn foundation
 Frac fractional
 Frwy freeway
 Frt front
 FF front face
 F Disp fuel dispenser

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NDDOT ABBREVIATIONS

D-101-2

FFP	fuel filler pipes	IPn	Iron Pin	MC	medium curing	Ped	pedestal
FLS	fuel leak sensor	IP	iron Pipe	M	mega	Ped	pedestrian
Furn	furnish/ed	Jt	joint	Mer	meridian	PPP	pedestrian pushbutton post
Gal	gallon	J	joule	M	meter	Pen.	penetration
Galv	galvanized	Jct	junction	M/s	meters per second	Perf	perforated
Gar	garage	K	kelvin	M	mid ordinate of curve	Per.	perimeter
Gs L	gas line	Kn	kilo newton	Mi	mile	PL	pipeline
G Reg	gas line regulator	Kpa	kilo pascal	MM	mile marker	PI	place
GMV	gas main valve	Kg	kilogram	MP	mile post	P&P	plan & profile
G Mtr	gas meter	Kg/m3	kilogram per cubic meter	MI	milliliter	PL	plastic limit
GSV	gas service valve	Km	kilometer	Mm	millimeter	PI	plate
GVP	gas vent pipe	K	Kip(s)	Mm/hr	millimeters per hour	Pt	point
GV	gate valve	LS	Land Surveyor (licensed)	Min	minimum	PCC	point of compound curve
Ga	gauge	LSIT	Land Surveyor In Training	Misc	miscellaneous	PC	point of curve
Geod	geodetic	Ln	lane	Mon	monument	PI	point of intersection
GIS	Geographical Information System	Lg	large	Mnd	mound	PRC	point of reverse curvature
G	giga	Lat	latitude	Mtbl	mountable	PT	point of tangent
GPS	Global Positioning System	Lt	left	Mtd	mounted	POC	point on curve
Gov	government	L	length of curve	Mtg	mounting	POT	point on tangent
Grd	graded/grade	Lens	lenses	Mk	muck	PE	polyethylene
Gr	gravel	Lvl	level	Mun	municipal	PVC	polyvinyl chloride
Grnd	ground	LB	level book	N	nano	PCC	Portland Cement concrete
GWM	ground water monitor	Lvng	leveling	NGS	National Geodetic Survey	Lb or #	pounds
Gdrl	guardrail	Lht	light	NS	near side	PP	power pole
Gtr	gutter	LP	light pole	Neop	neoprene	Preempt	preemption
H Plg	H piling	Ltg	lighting	Ntwk	network	Prefab	prefabricated
Hdwl	headwall	Lig Co	lignite coal	N	newton	Prfmd	performed
Ha	hectare	Lig Sl	lignite slack	N	North	Prep	preparation
Ht	height	LF	linear foot	NE	North East	Press.	pressure
HI	height of instrument	Liq	liquid	NW	North West	PRV	pressure relief valve
Hel	helical	LL	liquid limit	NB	Northbound	Prestr	prestressed
H	henry	L	litre	No. or #	number	Pvt	private
HZ	hertz	Lm	loam	Obsc	obscure(d)	PD	private drive
HDPE	high density polyethylene	Loc	location	Obsn	observation	Prod.	production/produce
HM	high mast	LC	long chord	Ocpd	occupied	Prog	programmed
HP	high pressure	Long.	longitude	Ocpy	occupy	Prop.	property
HPS	high pressure sodium	Lp	loop	Off Loc	office location	Prop Ln	property line
Hwy	highway	LD	loop detector	O/s	offset	Ppsd	proposed
Hor	horizontal	Lm	lumen	OC	on center	PB	pull box
HBP	hot bituminous pavement	Lum	luminaire	C	one dimensional consolidation		
HMA	hot mix asphalt	L Sum	lump sum	OC	organic content		
Hr	hour(s)	Lx	lux	Orig	original		
Hyd	hydrant	ML	main line	O To O	out to out		
Ph	hydrogen ion content	M Hr	man hour	OD	outside diameter		
Id	identification	MH	manhole	OH	overhead		
In or "	inch	Mkd	marked	PMT	pad mounted transformer		
Incl	inclinometer tube	Mkr	marker	Pg	pages		
IMH	inlet manhole	Mkg	marking	Pntd	painted		
ID	inside diameter	MA	mast arm	Pr	pair		
Inst	instrument	Matl	material	Pnl	panel		
Intchg	interchange	Max	maximum	Pk	park		
Intmdt	intermediate	MC	meander corner	PK	Parker-Kalon nail		
Intscn	intersection	Meas	measure	Pa	pascal		
Inv	invert	Mdn	median	PSD	passing sight distance		
IM	iron monument	MD	median drain	Pvmt	pavement		

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08-03-15	General Revisions

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NDDOT ABBREVIATIONS

D-101-3

Qty	quantity	SN	sign number	Tan	tangent	Wb	weber
Qtr	quarter	Sig	signal	T	tangent (semi)	WIM	weigh in motion
Rad or R	radius	Si Cl	silt clay	TS	tangent to spiral	W	west
RR	railroad	Si Cl Lm	silty clay loam	Tel	telephone	WB	westbound
Rlwy	railway	Si Lm	silty loam	Tel B	Telephone Booth	Wrng	wiring
Rsd	raised	Sgl	single	Tel P	telephone pole	W/	with
RTP	random traverse point	SC	slow curing	Tv	television	W/o	without
Rge or R	range	SS	slow setting	Temp	temperature	WC	witness corner
RC	rapid curing	Sm	small	Temp	temporary	WGS	world geodetic system
Rec	record	S	South	TBM	temporary bench mark	Z	zenith
Rcy	recycle	SE	South East	T	tesla		
RAP	recycled asphalt pavement	SW	South West	T	thinwall tube sample		
RPCC	recycled portland cement concrete	SB	Southbound	T/mi	tons per mile		
Ref	reference	Sp	spaces	Ts	topsoil		
R Mkr	reference marker	Spcl	special	Twp or T	township		
RM	reference monument	SA	special assembly	Traf	traffic		
Refl	reflectorized	SP	special provisions	TSCB	traffic signal control box		
RCB	reinforced concrete box	G	specific gravity	Tr	trail		
RCES	reinforced concrete end section	Spk	spike	Transf	transformer		
RCP	reinforced concrete pipe	SC	spiral to curve	TB	transit book		
RCPS	reinforced concrete pipe sewer	ST	spiral to tangent	Trans	transition		
Reinf	reinforcement	SB	split barrel sample	TT	transmission tower		
Res	reservation	SH	sprinkler head	Trans	transverse		
Ret	retaining	SV	sprinkler valve	Trav	traverse		
Rev	reverse	Sq	square	TP	traverse point		
Rt	right	SF	square feet	Trtd	treated		
R/W	right of way	Km2	square kilometer	Trmt	treatment		
Riv	river	M2	square meter	Qc	triaxial compression		
Rd	road	SY	square yard	TERO	tribal employment rights ordinance		
Rdbd	road bed	Stk	stake	Tpl	triple		
Rdwy	roadway	Std	standard	TP	turning point		
RWIS	roadway weather information system	N	standard penetration test	Typ	typical		
Rk	rock	Std Specs	standard specifications	Qu	unconfined compressive strength		
Rt	route	Sta	station	Ugrnd	underground		
Salv	salvage(d)	Sta Yd	station yards	USC&G	US Coast & Geodetic Survey		
Sd	sand	Stm L	steam line	USGS	US Geologic Survey		
Sdy Cl	sandy clay	SEC	steel encased concrete	Util	utility		
Sdy Cl Lm	sandy clay loam	SMA	stone matrix asphalt	VG	valley gutter		
Sdy Fl	sandy fill	SSD	stopping sight distance	Vap	vapor		
Sdy Lm	sandy loam	SD	storm drain	Vert	vertical		
San	sanitary sewer line	St	street	VC	vertical curve		
Sc	scoria	SPP	structural plate pipe	VCP	vitrified clay pipe		
Sec	seconds	SPPA	structural plate pipe arch	V	volt		
Sec	section	Str	structure	Vol	volume		
SL	section line	Subd	subdivision	Wkwy	walkway		
Sep	separation	Sub	subgrade	W	water content		
Seq	sequence	Sub Prep	subgrade preperation	WGV	water gate valve		
Serv	service	Ss	subsoil	WL	water line		
Sh	shale	SE	superelevation	WM	water main		
Sht	sheet	SS	supplement specification	WMV	water main valve		
Shtng	sheeting	Supp	supplemental	W Mtr	water meter		
Shldr	shoulder	Surf	surfacing	WSV	water service valve		
Sw	sidewalk	Surv	survey	WW	water well		
S	siemens	Sym	symmetrical	W	watt		
SD	sight distance	SI	systems international	Wrng	wearing		

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NDDOT UTILITY COMPANY AND ORGANIZATION ABBREVIATIONS

D-101-10

702COM 702 Communications
 ACCENT Accent Communications
 AGASSIZ WU Agassiz Water Users Incorporated
 AGC Associated General Contractors of America
 AII PI Alliance Pipeline
 ALL SEAS WU All Seasons Water Users Association
 AMOCO PI Amoco Pipeline Company
 AMRDA HESS Amerada Hess Corporation
 AT&T AT&T Corporation
 B PAW Bear Paw Energy Incorporated
 BAKER ELEC Baker Electric
 BASIN ELEC Basin Electric Cooperative Incorporated
 BEK TEL Bek Communications Cooperative
 BELLE PL Belle Fourche Pipeline Company
 BLM Bureau of Land Management
 BNSF Burlington Northern Santa Fe Railway
 BOEING Boeing
 BRNS RWD Barnes Rural Water District
 BURK-DIV ELEC Burke-Divide Electric Cooperative
 BURL WU Burleigh Water Users
 Cable One Cable One
 CABLE SERV Cable Services
 CAP ELEC Capital Electric Cooperative Incorporat
 CASS CO ELEC Cass County Electric Cooperative
 CASS RWU Cass Rural Water Users Incorporated
 CAV ELEC Cavalier Rural Electric Cooperative
 CBLCOM Cablecom Of Fargo
 CENEX PL Cenex Pipeline
 CENT PL WATER DIST Central Pipe Line Water District
 CENT PWR ELEC Central Power Electric Cooperative
 COE Corps of Engineers
 CONS TEL Consolidated Telephone
 CONT RES Continental Resource Inc
 CPR Canadian Pacific Railway
 D O E Department Of Energy
 DAK CARR Dakota Carrier Network
 DAK CENT TEL Dakota Central Telephone
 DAK RWD Dakota Rural Water District
 DGC Dakota Gasification Company
 DICKEY R NET Dickey Rural Networks
 DICKEY RWU Dickey Rural Water Users Association
 DICKEY TEL Dickey Telephone
 DNRR Dakota Northern Railroad
 DOME PL Dome Pipeline Company
 DVELEC Dakota Valley Electric Cooperative
 DVMW Dakota, Missouri Valley & Western
 ENBRDG Enbridge Pipelines Incorporated
 ENVENTIS Enventis Telephone
 FALK MNG Falkirk Mining Company
 FHWA Federal Highway Administration
 G FKS-TRL WD Grand Forks-traill Water District
 GETTY TRD & TRAN Getty Trading & Transportation
 GLDN W ELEC Golden West Electric Cooperative
 GRGS CO TEL Griggs County Telephone

GT PLNS NAT GAS Great Plains Natural Gas Company
 HALS TEL Halstad Telephone Company
 IDEA1 Idea1
 INT-COMM TEL Inter-Community Telephone Company
 KANEB PL Kaneb Pipeline Company
 KEM ELEC Kem Electric Cooperative Incorporated
 KOCH GATH SYS Koch Gathering Systems Incorporated
 LKHD PL Lakehead Pipeline Company
 LNGDN RWU Langdon Rural Water Users Incorporated
 LWR YELL R ELEC Lower Yellowstone Rural Electric
 MCKNZ CON McKenzie Consolidated Telcom
 MCKENZIE ELEC McKenzie Electric Cooperative
 MCKNZ WRD McKenzie County Water Resource District
 MCLEOD McLeod USA
 MCLN ELEC McLean Electric Cooperative
 MCLN-SHRDN R WAT McLean-Sheridan Rural Water
 MDU Montana-dakota Utilities
 MID-CONT CABLE Mid-Continent Cable
 MIDSTATE TEL Midstate Telephone Company
 MINOT CABLE Minot Cable Television
 MINOT TEL Minot Telephone Company
 MISS W W S Missouri West Water System
 MNKOTA PWR Minnkota Power
 MOR-GRAN-SOU ELEC Mor-gran-sou Electric Cooperative
 MOUNT-WILLI ELEC Mountrail-williams Electric Cooperative
 MRE LBTY TEL Moore & Liberty Telephone
 MUNICIPAL City Water And Sewer
 MUNICIPAL City Of '.....'
 N CENT ELEC North Central Electric Cooperative
 N VALL W DIST North Valley Water District
 ND PKS & REC North Dakota Parks And Recreation
 ND TEL North Dakota Telephone Company
 NDDOT North Dakota Department of Transportation
 NDSU SOIL SCI DEPT NDSU Soil Science Department
 NEMONT TEL Nemont Telephone
 NODAK R ELEC Nodak Rural Electric Cooperative
 NOON FRMS TEL Noonan Farmers Telephone Company
 NPR Northern Plains Railroad
 NSP Northern States Power
 NTH PRAIR RW Northern Prairie Rural Water Association
 NTHN BRDR PL Northern Border Pipeline
 NTHN PLNS ELEC Northern Plains Electric Cooperative Incorporated
 NTHWSTRN REF Northwestern Refinery Company
 NW COMM Northwest Communication Cooperation
 ONEOK Oneok gas
 OSHA Occupational Safety and Health Administration
 OTTR TL PWR Otter Tail Power Company
 P L E M Prairielands Energy Marketing
 POLAR COM Polar Communications
 PVT ELEC Private Electric
 QWEST Qwest Communications
 R & T W SUPPLY R & T Water Supply Association
 RAMSEY R SEW Ramsey Rural Sewer Association
 RAMSEY RW Ramsey Rural Water Association
 RAMSEY UTIL Ramsey County Rural Utilities

RED RIV TEL Red River Rural Telephone
 RESVTN TEL Reservation Telephone
 ROBRTS TEL Roberts Company Telephone
 R-RIDER ELEC Roughrider Electric Coop
 RRVW Red River Valley & Western Railroad
 RSR ELEC R.S.R. Electric Cooperative
 S E W U South East Water Users Incorporated
 SCOTT CABLE Scott Cable Television Dickinson
 SHERDN ELEC Sheridan Electric Cooperative
 SHEYN VLY ELEC Sheyenne Valley Electric Cooperative
 SKYTECH Skyland Technologies Incorporated
 SLOPE ELEC Slope Electric Cooperative Incorporated
 SOURIS RIV TELCOM Souris River Telecommunications
 ST WAT COMM State Water Commission
 STATE LN WATER State Line Water Cooperative
 STER ENG Sterling Energy
 STUT RWU Stutsman Rural Water Users
 SW PL PRJ Southwest Pipeline Project
 T M C Turtle Mountain Communications
 TCI TCI of North Dakota
 TESORO GHG PLNS PL Tesoro High Plains Pipeline
 TRI-CNTY WU Tri-County Water Users Incorporated
 TRL CO RWU Traill County Rural Water Users
 UNTD TEL United Telephone
 UPPR SOUR WUA Upper Souris Water Users Association
 US SPRINT U.S. Sprint
 USAF MSL CABLE U.S.A.F. Missile Cable
 USFWS US Fish and Wildlife Service
 USW COMM U.S. West Communications
 VRNDRY ELEC Verendrye Electric Cooperative
 W RIV TEL West River Telephone Incorporated
 WEB W. E. B. Water Development Association
 WILLI RWA Williams Rural Water Association
 WILSTN BAS PL Williston Basin Interstate Pipeline Company
 WLSH RWD Walsh Water Rural Water District
 WOLVRTN TEL Wolverton Telephone
 XLENER Xcel Energy
 YSVR Yellowstone Valley Railroad

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Line Styles

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Existing Topography

- Existing Ground Void
- Existing Cemetary Boundary
- Existing Box Culvert Bridge
- Existing Concrete Surface
- Existing Drainage Structure
- Existing Gravel Surface
- Existing Riprap
- Existing Dirt Surface
- Existing Asphalt Surface
- Existing Tie Point Line
- Existing Railroad Centerline
- Existing Guardrail Cable
- Existing Guardrail Metal
- Existing Edge of Water
- Existing Fence
- Existing Railroad
- Existing Field Line
- Exst Flow
- Existing Curb
- Existing Valley Gutter
- Existing Driveway Gutter
- Existing Curb and Gutter
- Existing Mountable Curb and Gutter

- Existing 3-Cable w Posts
- Site Boundary
- Existing Berm, Dike, Pit, or Earth Dam
- Existing Ditch Block
- Existing Tree Boundary
- Existing Brush or Shrub Boundary
- Existing Retaining Wall
- Existing Planter or Wall
- Existing W-Beam Guardrail with Posts
- Existing Railroad Switch
- Gravel Pit - Borrow Area
- Existing Wet Area-Vegetation Break

Proposed Topography

- 3-Cable w Posts
- Flow
- Fence
- Remove Line
- Wall
- Retaining Wall (Plan View)
- W-Beam w Posts

Existing Utilities

- Existing Electrical
- Existing Fiber Optic Line
- Existing TV Fiber Optic
- Existing Gas Pipe
- Existing Overhead Utility Line
- Existing Power
- Existing Fuel Pipeline
- Existing Undefined Above Ground Pipe Line
- Existing Sanitary Sewer
- Existing Sanitary Force Main
- Existing Storm Drain
- Existing Storm Drain Force Main
- Existing Culvert
- Existing Telephone Line
- Existing TV Line
- Existing Water or Steam Line
- Existing Under Drain
- Existing Slotted Drain
- Existing Conduit
- Existing Conductor
- Existing Down Guy Wire Down Guy
- Existing Underground Vault or Lift Station

Proposed Utilities

- 24 Inch Pipe
- Reinforced Concrete Pipe
- Under Drain
- Edge Drain

Traffic Utilities

- Conductor
- Fiber Optic
- Existing Loop Detector
- Existing Double Micro Loop Detector
- Micro Loop Detector Double
- Existing Micro Loop Detector
- Micro Loop Detector
- Signal Head with Mast Arm
- Existing Signal Head with Mast Arm

Sign Structures

- Existing Overhead Sign Structure
- Existing Overhead Sign Structure Cantilever
- Overhead Sign Structure Cantilever

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09-23-16	Added and Revised Items, Organized by Functional Groups

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Line Styles

D-101-21

Right Of Way

- Easement
- Existing Easement
- Right of Way
- Existing Right of Way
- Existing Right of Way Railroad
- Existing Right of Way Not State Owned
- Existing Government Lot Line
- Existing Adjacent Block Lines
- Existing Adjacent Lot Lines
- Existing Adjacent Property Line
- Existing Adjacent Subdivision Lines
- Sight Distance Triangle Line
- Dimension Leader

Boundary Control

- Existing City Corporate Limits or Reservation Boundary
- Existing State or International Line
- Existing Township
- Existing County
- Existing Section Line
- Existing Quarter Section Line
- Existing Sixteenth Section Line
- Existing Centerline
- Tangent Line

Cross Sections and Typical

- Existing Ground
- Existing Topsoil (Cross Section View)
- Existing Ground Void (Not Surveyed)
- Existing Concrete
- Existing Aggregate (Cross Section View)
- Existing Curb and Gutter (Cross Section View)
- Existing Asphalt (Cross Section View)
- Existing Reinforcement Rebar

Geotechnical

- Geotextile Fabric Type D
- Geogrid
- Geotextile Fabric Type R
- Geotextile Fabric Type R1
- Geotextile Fabric Type RR
- Geotextile Fabric Type S

Countours

- Depression Contours
- Supplemental Contour

Profile

- Subgrade, Subcut or Ditch Grade
- Topsoil Profile

Striping

- Centerline Pavement Marking
- Barrier with Centerline Pavement Marking
- Barrier Pavement Marking
- Stripe 4 IN Dotted Extension White
- Stripe 8 IN Dotted Extension White
- Stripe 8 IN Lane Drop

Pavement Joints

- Doweled Joint
- Tie Bar 30 Inch 4 Foot Center to Center
- Tie Bar 18 Inch 3 Foot Center to Center
- Tie Bar at Random Spacing

Bridge Details

- Hidden Object
- Small Hidden Object
- Large Hidden Object
- Phantom Object
- Centerline Main
- Centerline
- Existing Ground (Details)
- Existing Conditions
- Sheet Piling

Erosion Control

- Limits of Const Transition Line
- Bale Check
- Rock Check
- Floating Silt Curtain
- Silt Fence
- Excavation Limits
- Fiber Rolls

Environmental

- Wetland Mitigation
- Existing Wetland Easement USFWS
- Existing Wetland Jurisdictional
- Existing Wetland
- Tree Row

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Symbols






























































	North Arrow (Half Scale)		Attenuation Device		Existing Railroad Battery Box		Existing Delineator Type E
	Truck Mounted Attenuator		Diamond Grade Delineator Type A		Existing Bush or Shrub		Existing EFB Misc
	Type I Barricade		Diamond Grade Delineator Type B		Existing Gas Cap or Stub		Existing Flashing Beacon
	Type II Barricade		Diamond Grade Delineator Type C		Existing Sanitary Cap or Stub		Existing Pipe Mounted Flasher
	Type III Barricade		Diamond Grade Delineator Type D		Existing Storm Drain Cap or Stub		Existing Pad Mounted Feed Point
	Catch Basin		Diamond Grade Delineator Type E		Existing Water Cap or Stub		Existing Pipe Mounted Feed Point with Pad
	Cairn or Stone Circle		Flexible Delineator		Existing Sanitary Cleanout		Existing Pole Mounted Feed Point
	Video Detection Camera		Flexible Delineator Type A		Existing Concrete Foundation		Existing Railroad Frog
	Storm Drain Cap or Stub		Flexible Delineator Type B		Existing Traffic Signal Controller		Existing Snow Gate 18
	Corrugated Metal End Section 18 Inch		Flexible Delineator Type C		Existing Pad Mounted Signal Controller		Existing Snow Gate 28
	Corrugated Metal End Section 24 Inch		Flexible Delineator Type D		Existing Sixteenth Section Corner		Existing Snow Gate 40
	Corrugated Metal End Section 30 Inch		Flexible Delineator Type E		Existing Quarter Section Corner		Existing Headwall
	Corrugated Metal End Section 36 Inch		Delineator Type A		Existing Section Corner		Existing Pedestrian Head with Number
	Corrugated Metal End Section 42 Inch		Delineator Type A Reset		Existing Railroad Crossbuck		Existing Signal Head
	Corrugated Metal End Section 48 Inch		Delineator Type B		Existing Satellite Dish		Existing Sprinkler Head
	Concrete Foundation		Delineator Type B Reset		Existing Fuel Dispensers		Existing Fire Hydrant
	Ground Connection Conductor		Delineator Type C		Existing Flexible Delineator Type A		Existing Catch Basin Drop Inlet
	Neutral Connection Conductor		Delineator Type D		Existing Flexible Delineator Type B		Existing Curb Inlet
	Phase 1 Connection Conductor		Delineator Type E		Existing Flexible Delineator Type C		Existing Manhole Inlet
	Phase 2 Connection Conductor		Delineator Drums		Existing Flexible Delineator Type D		Existing Junction Box
	Traffic Cone		Spot Elevation		Existing Flexible Delineator Type E		
	Signal Controller		Existing Access Control Arrow		Existing Delineator Type A		
	Pad Mounted Signal Controller		Existing Artifact		Existing Delineator Type B		
	Alignment Data Point		Existing Flashing Beacon		Existing Delineator Type C		
	Emergency Vehicle Detector		Existing Benchmark		Existing Delineator Type D		

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Symbols

D-101-31































































































<p> Existing Light Standard</p> <p> Existing High Mast Light Standard 10 Luminaire</p> <p> Existing High Mast Light Standard 3 Luminaire</p> <p> Existing High Mast Light Standard 4 Luminaire</p> <p> Existing High Mast Light Standard 5 Luminaire</p> <p> Existing High Mast Light Standard 6 Luminaire</p> <p> Existing High Mast Light Standard 7 Luminaire</p> <p> Existing High Mast Light Standard 8 Luminaire</p> <p> Existing High Mast Light Standard 9 Luminaire</p> <p> Existing Overhead Sign Structure Load Center</p> <p> Existing Luminaire</p> <p> Existing Light Standard Luminaire</p> <p> Existing Federal Mailbox</p> <p> Existing Private Mailbox</p> <p> Existing Meander Section Corner</p> <p> Existing Meter</p> <p> Existing Electrical Manhole</p> <p> Existing Gas Manhole</p> <p> Existing Sanitary Manhole</p> <p> Existing Sanitary Force Main Manhole</p> <p> Existing Sanitary Manhole with Valve</p> <p> Existing Storm Drain Manhole</p> <p> Existing Force Main Storm Drain Manhole</p> <p> Existing Force Main Storm Drain Manhole with Valve</p> <p> Existing Telephone Manhole</p>	<p> Existing Manhole with Valve Water</p> <p> Existing Water Manhole</p> <p> Existing Mile Post Type A</p> <p> Existing Mile Post Type B</p> <p> Existing Mile Post Type C</p> <p> Existing Reference Marker</p> <p> Existing RW Marker</p> <p> Existing Utility Marker</p> <p> Iron Monument Found</p> <p> Iron Pin R/W Monument</p> <p> Existing Object Marker Type I</p> <p> Existing Object Marker Type II</p> <p> Existing Object Marker Type III</p> <p> Existing Electrical Pedestal</p> <p> Existing Telephone Pedestal</p> <p> Existing Fiber Optic Telephone Pedestal</p> <p> Existing TV Pedestal</p> <p> Existing Fiber Optic TV Pedestal</p> <p> Existing Fuel Filler Pipes</p> <p> Existing Traverse PI Aerial Panel</p> <p> Existing Pole</p> <p> Existing Power Pole</p> <p> Existing Power Pole with Transformer</p>	<p> Existing Telephone Pole</p> <p> Existing Wood Pole</p> <p> Existing Post</p> <p> Existing Pedestrian Push Button Post</p> <p> Existing Control Point CP</p> <p> Existing Control Point GPS-RTK</p> <p> Existing Control Point TRI</p> <p> Existing Reference Marker Point NGS</p> <p> Existing Pull Box</p> <p> Existing Intelligent Transportation Pull Box</p> <p> Existing Water Pump</p> <p> Existing Slotted Reinforced Concrete Pipe</p> <p> Existing RR Profile Spot</p> <p> Existing Fuel Leak Sensors</p> <p> Existing Highway Sign</p> <p> Existing Miscellaneous Spot</p> <p> Existing Lighting Standard Pole</p> <p> Existing Traffic Signal Standard</p> <p> Existing Transformer</p> <p> Existing Large Evergreen Tree</p> <p> Existing Small Evergreen Tree</p> <p> Existing Large Tree</p> <p> Existing Small Tree</p> <p> Existing Tree Trunk</p> <p> Existing Pad Mounted Traffic Signal Control Box</p>	<p> Existing Undefined Manhole</p> <p> Existing Undefined Pull Box</p> <p> Existing Undefined Pedestal</p> <p> Existing Undefined Valve</p> <p> Existing Undefined Pipe Vent</p> <p> Existing Gas Valve</p> <p> Existing Water Valve</p> <p> Existing Fuel Pipe Vent</p> <p> Existing Gas Pipe Vent</p> <p> Existing Sanitary Pipe Vent</p> <p> Existing Storm Drain Pipe Vent</p> <p> Existing Water Pipe Vent</p> <p> Existing Weather Station</p> <p> Existing Ground Water Well Bore Hole</p> <p> Existing Windmill or Tower</p> <p> Existing Witness Corner</p> <p> Flashing Beacon</p> <p> Flagger</p> <p> Pipe Mounted Flasher</p> <p> Sanitary Force Main with Valve</p>
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NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
07-01-14	
REVISIONS	
DATE	CHANGE

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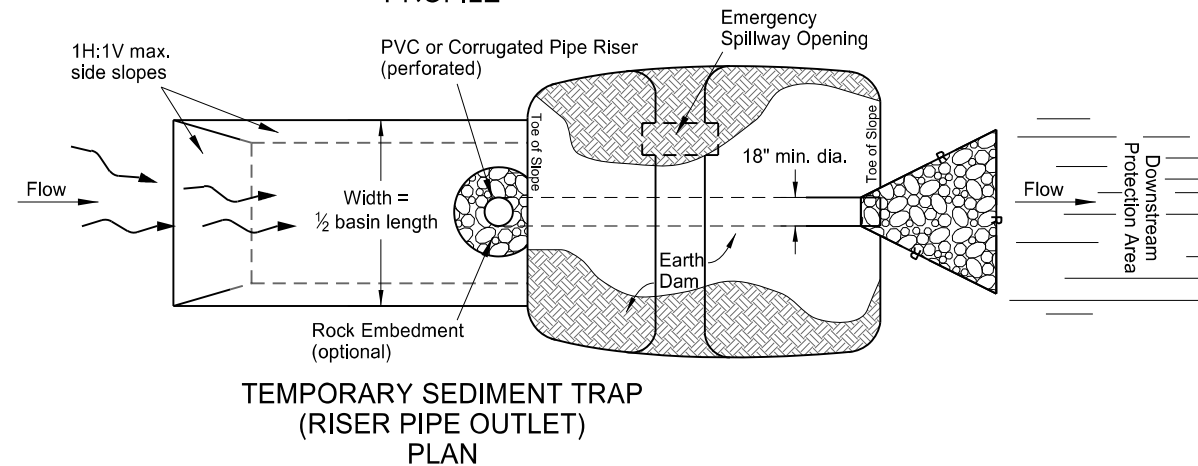
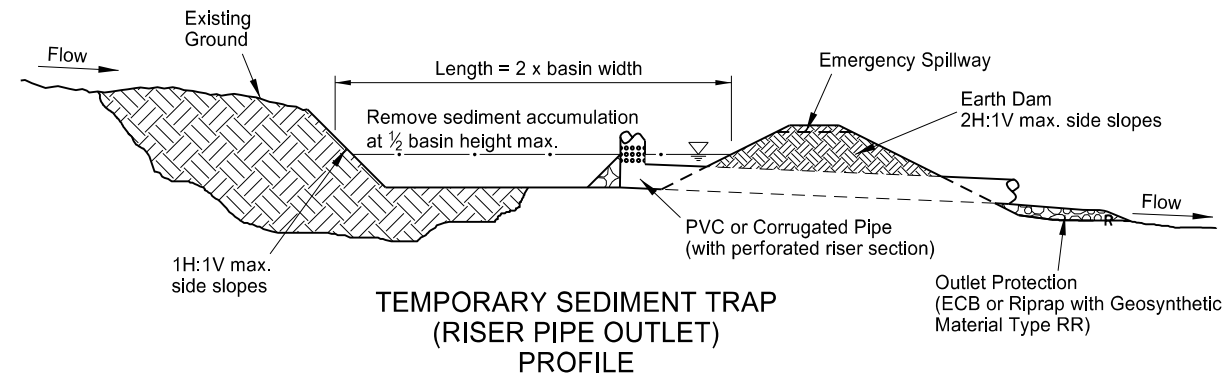
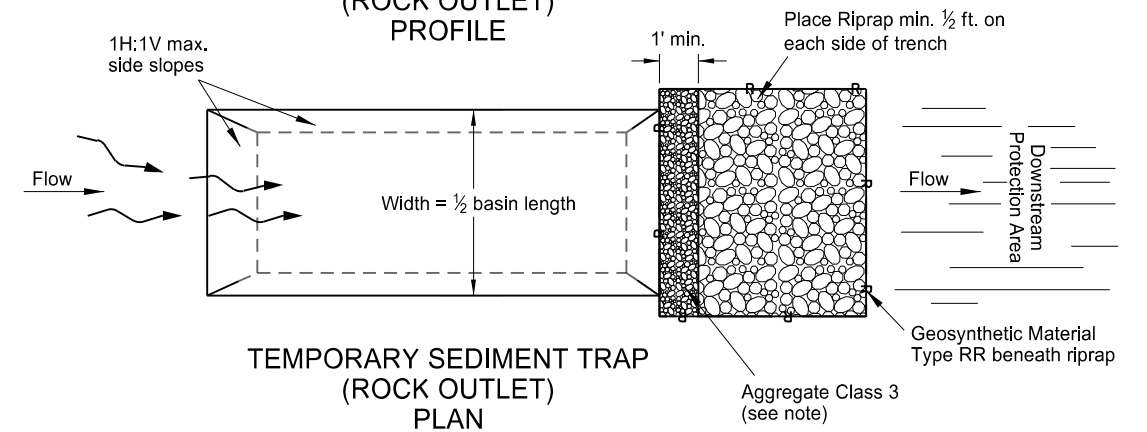
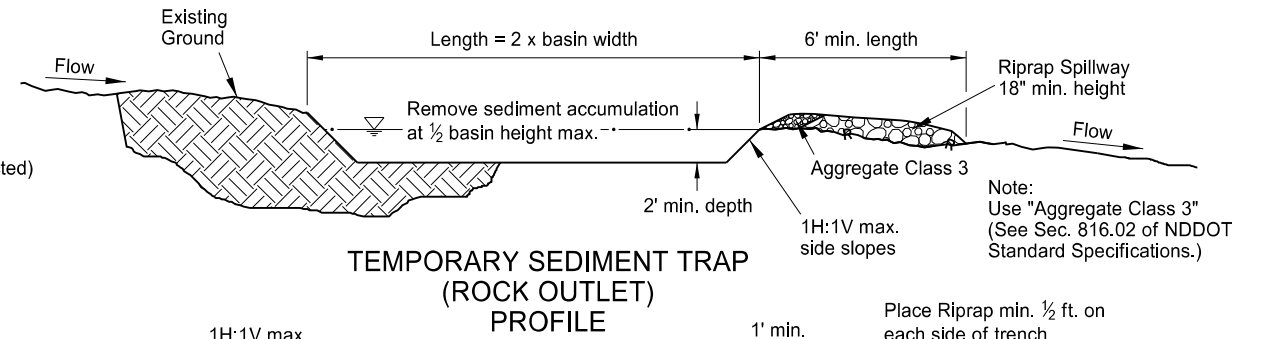
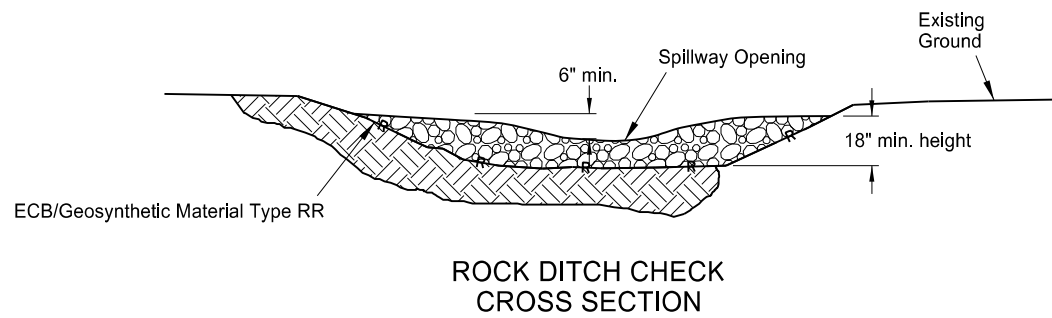
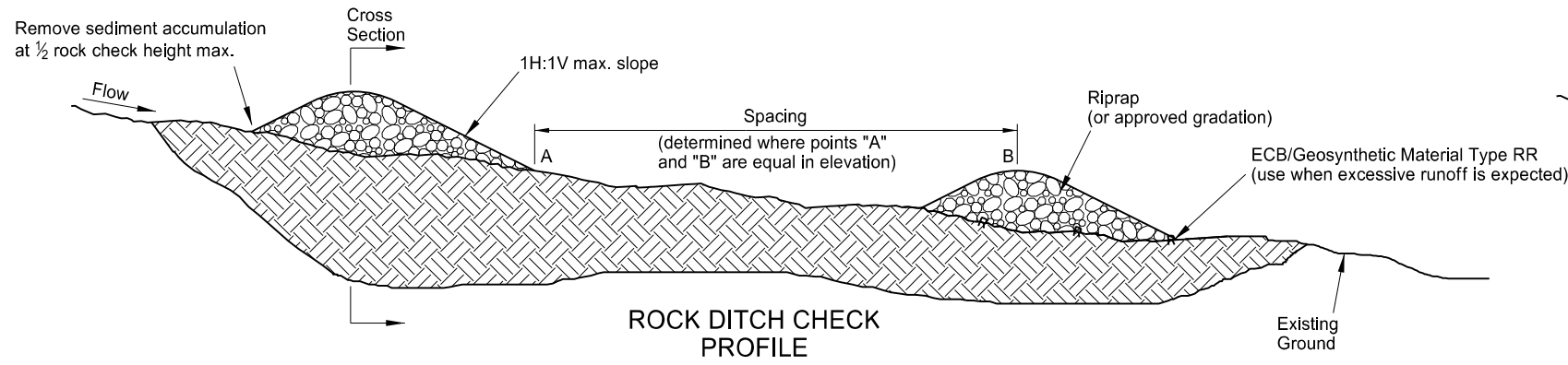
Symbols

D-101-32

 Pad Mounted Feed Point  Pipe Mounted Feed Point with Pad  Pole Mounted Feed Point  Headwall  Double Headwall with Vegetation Barrier  Single Headwall with Vegetation Barrier  Pole Mounted Head  Sprinkler Head  Fire Hydrant  Inlet Type 1  Inlet Type 2  Double Inlet Type 2  Inlet Gate Type 2  Junction Box  High Mast Light Standard 10 Luminaire  High Mast Light Standard 3 Luminaire  High Mast Light Standard 4 Luminaire  High Mast Light Standard 5 Luminaire  High Mast Light Standard 6 Luminaire  High Mast Light Standard 7 Luminaire  High Mast Light Standard 8 Luminaire  High Mast Light Standard 9 Luminaire  Relocate Light Standard  Overhead Sign Structure Load Center  Light Standard 100 Watt High Pressure Sodium Vapor Luminaire	 Light Standard 1000 Watt High Pressure Sodium Vapor Luminaire  Light Standard 150 Watt High Pressure Sodium Vapor Luminaire  Light Standard 175 Watt High Pressure Sodium Vapor Luminaire  Light Standard 200 Watt High Pressure Sodium Vapor Luminaire  Light Standard 250 Watt High Pressure Sodium Vapor Luminaire  Light Standard 310 Watt High Pressure Sodium Vapor Luminaire  Light Standard 35 Watt High Pressure Sodium Vapor Luminaire  Light Standard 400 Watt High Pressure Sodium Vapor Luminaire  Light Standard 50 Watt High Pressure Sodium Vapor Luminaire  Light Standard 70 Watt High Pressure Sodium Vapor Luminaire  Light Standard 700 Watt High Pressure Sodium Vapor Luminaire  Manhole  Manhole 48 Inch  Sanitary Force Main Manhole  Sanitary Sewer Manhole  Storm Drain Manhole  Storm Drain Manhole with Inlet  Reset Mile Post  Mile Post Type A  Mile Post Type B  Mile Post Type C  Right of Way Marker  Tubular Marker  Alignment Monument  Iron Pin Reference Monument	 Object Marker Type I  Object Marker Type II  Object Marker Type III  Caution Mode Arrow Panel  Back to Back Vertical Panel Sign  Double Direction Arrow Panel  Left Directional Arrow Panel  Right Directional Arrow Panel  Sequencing Arrow Panel  Truck Mounted Arrow Panel  Power Pole  Wood Pole  Pedestrian Push Button Post  Property Corner  Pull Box  Intelligent Transportation Pull Box  Sanitary Pump  Storm Drain Pump  Reinforced Pavement  Reinforced Concrete End Section 15 Inch  Reinforced Concrete End Section 18 Inch  Reinforced Concrete End Section 24 Inch  Reinforced Concrete End Section 30 Inch  Reinforced Concrete End Section 36 Inch  Reinforced Concrete End Section 42 Inch	 Reinforced Concrete End Section 48 Inch  Reinforced Concrete End Section 54 Inch  Reset Right of Way Marker  Reset USGS Marker  Right of Way Markers  Riser 30 Inch  Continuous Split Barrel Sample  Flight Auger Sample  Split Barrel Sample  Thinwall Tube Sample  Highway Sign  SNOW GATE 18 FT  SNOW GATE 28 FT  SNOW GATE 40 FT  Standard Penetration Test  Transformer  Inclinometer Tube  Underdrain Cleanout  Excavation Unit  Water Valve
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NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
07-01-14	
REVISIONS	
DATE	CHANGE

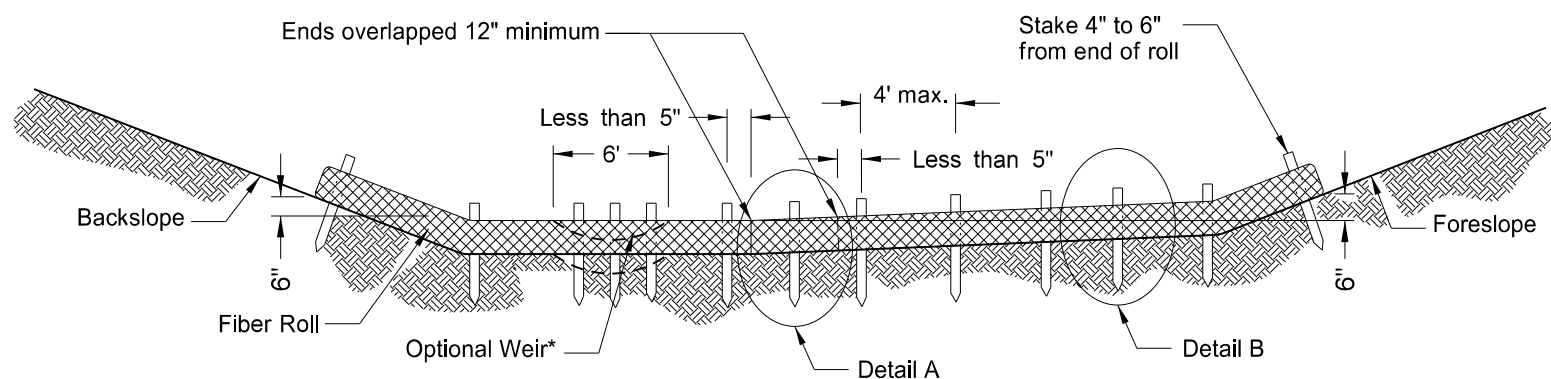
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NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
10-03-13	
REVISIONS	
DATE	CHANGE
06-26-14	Changed standard drawing number from D-708-2 to D-256-1. Deleted silt fence details.
10-17-17	Updated to active voice.

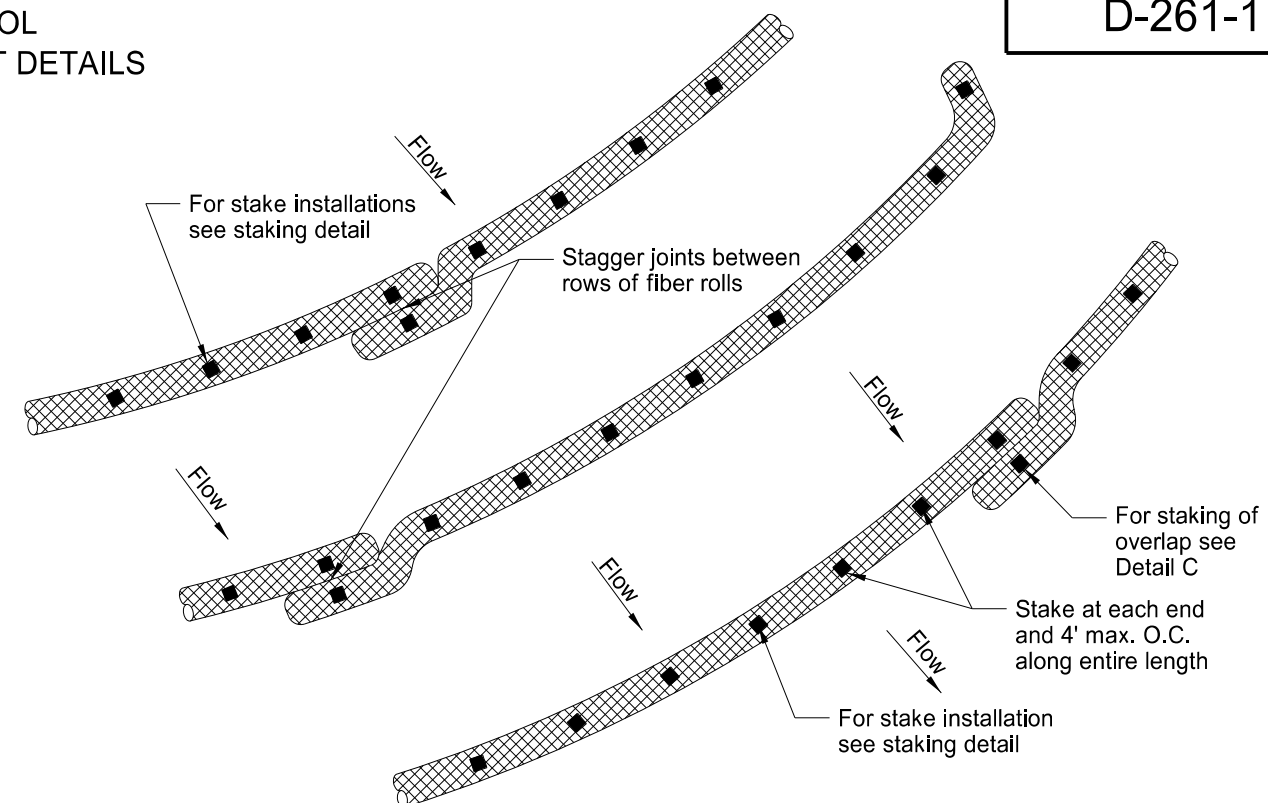
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EROSION CONTROL
FIBER ROLL PLACEMENT DETAILS

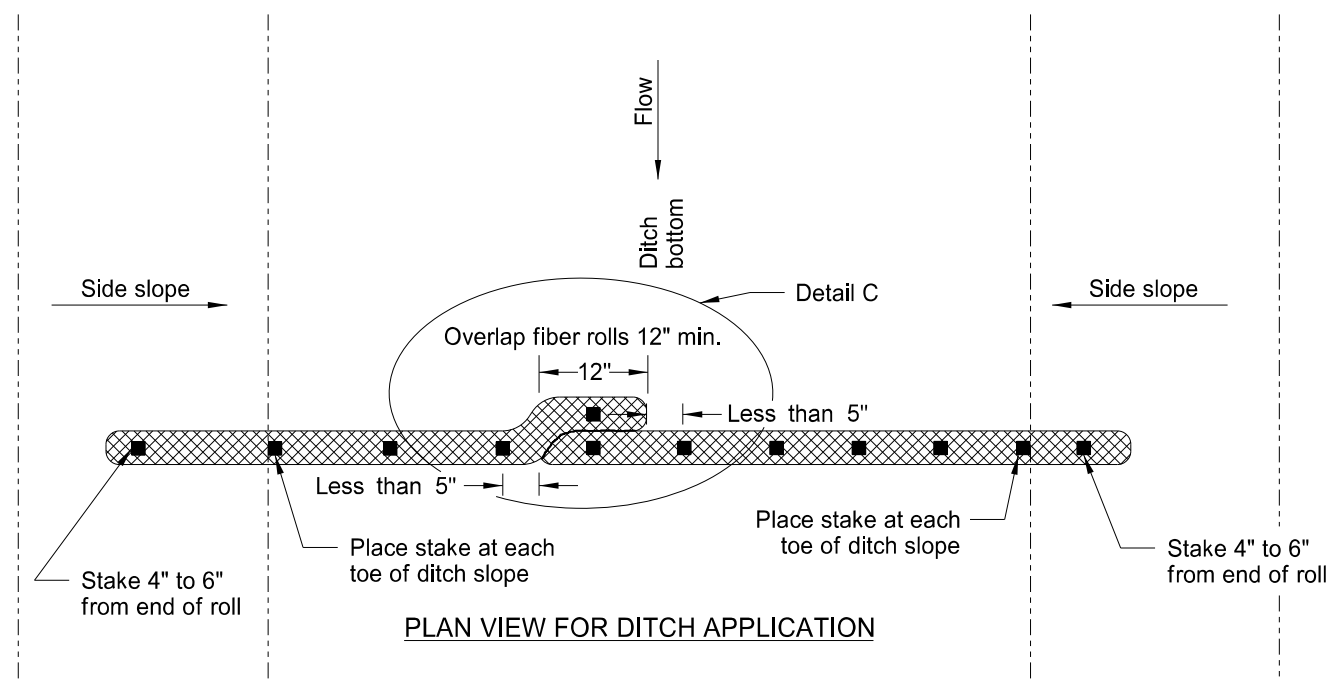


*Optional Weir. Use in flat areas, such as the Red River Valley, where there is potential for water to back up on adjacent property. Lower fiber roll enough to prevent water from backing up on adjacent property. Do not use 20-inch fiber rolls in flat areas where there is potential for water to back up on adjacent property.

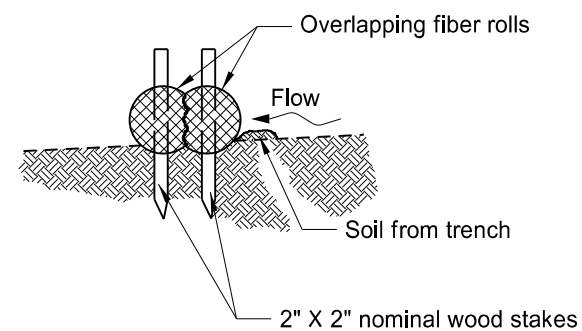
12 OR 20 INCH FIBER ROLL - DITCH BOTTOM



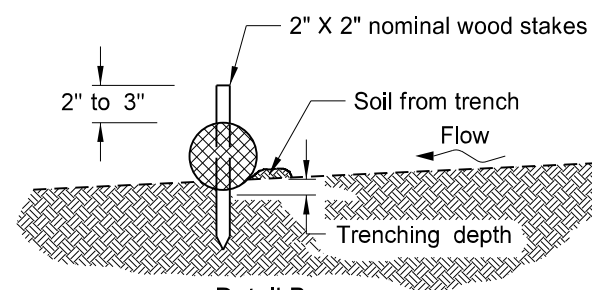
PLAN VIEW FOR SLOPE APPLICATION



PLAN VIEW FOR DITCH APPLICATION



Detail A
Fiber Roll Overlapping Staking Detail



Detail B
Fiber Roll Staking Detail

FIBER ROLL DIAMETER	NOMINAL STAKE SIZE	MINIMUM STAKE LENGTH	MINIMUM TRENCH DEPTH	MAXIMUM TRENCH DEPTH
6"	2" x 2"	18"	2"	2"
12"	2" x 2"	24"	2"	3"
20"	2" x 2"	36"	3"	5"

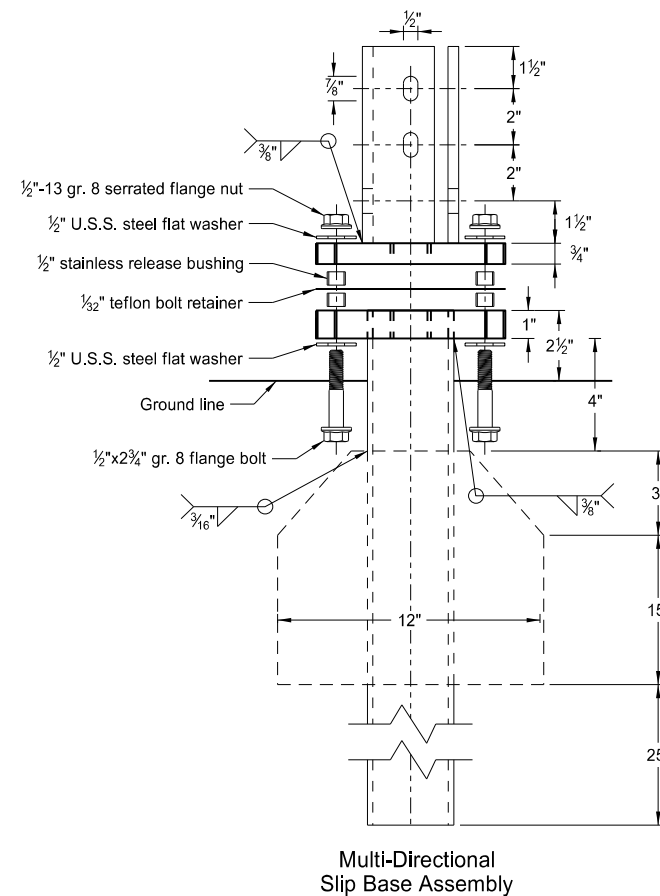
NOTE: Runoff must not be allowed to run under or around roll.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
11-18-10	
REVISIONS	
DATE	CHANGE
06-10-13	Added plan view for ditch and slope application, Added table with values for stake and trench dimensions.
10-04-13	Revised fiber roll overlap detail.
06-26-14	Changed standard drawing number from D-708-7 to D-261-1

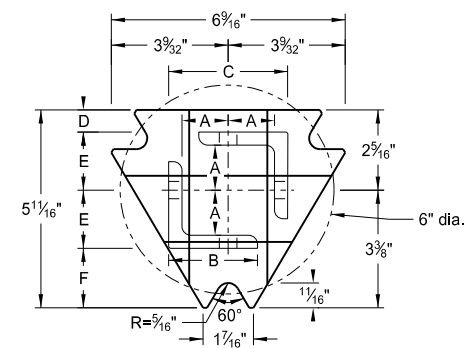
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BREAKAWAY SYSTEMS FOR CONSTRUCTION ZONE SIGNS

Perforated Tube

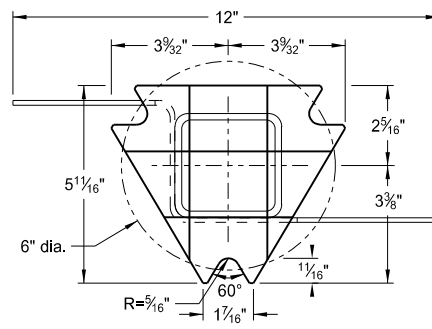


Traffic Flow



Top Post Receiver
Plate - ASTM A572 grade 50
Angle Receiver - 2 1/2" x 2 1/2" x 3/8" ASTM A36 structural angle

Traffic Flow



Bottom Soil Stub
Tube - 3"x3"x7 gauge ASTM A500 grade B tube
Stabilizing Wing - 7 gauge H.R.P.O. ASTM A1011
Plate - ASTM A572 grade 50

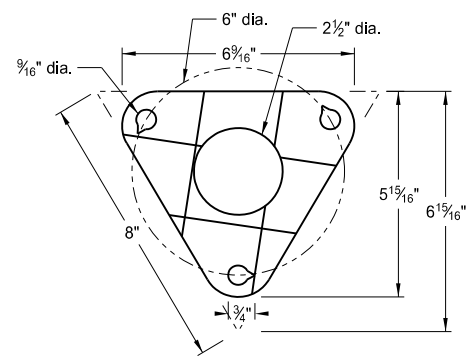
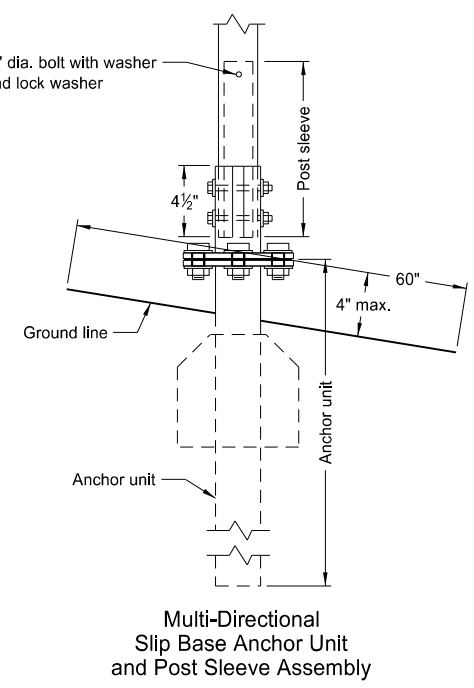
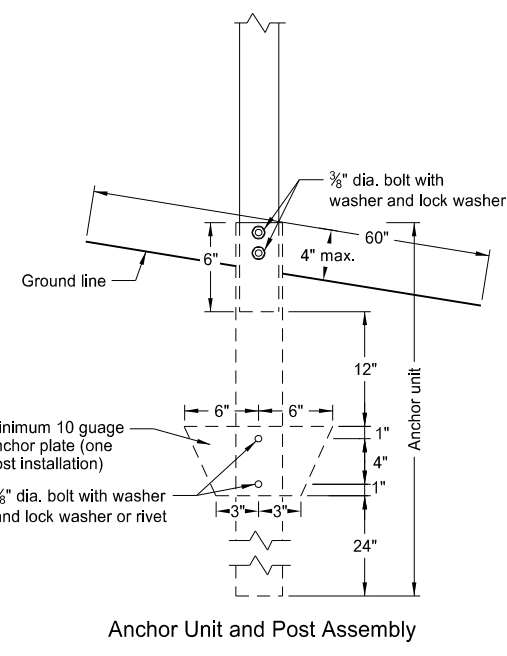
- Notes:
1. Torque slip base bolts as specified by manufacturer.
 2. Use anchor with 43.9 KSI yield strength and 59.3 KSI tensile strength.
 3. Provide 4" vertical clearance for anchor or breakaway base. Measure the 4"x60" measurement above and below post location and back and ahead of post.
 4. In concrete sidewalk, use same anchor without wings.
 5. Provide more than 7' between the first and fourth posts of a four post sign.

Number of Posts	Post Size in.	Wall Thickness Gauge	Sleeve Size in.	Wall Thickness Gauge	Slip Base	Anchor Size without Slip Base in.
1	2	12			No	2 1/4
1	2 1/4	12			No	2 1/2
1	2 1/2	12			(A)	3
1	2 1/2	10			Yes	
1	2 1/2	12	2	12	Yes	
1	2 1/2	12	2 1/4	12	Yes	
2	2	12			No	2 1/4
2	2 1/4	12			No	2 1/2
2	2 1/2	12			Yes	
2	2 1/2	12			Yes	
2	2 1/4	10	2	12	Yes	
2	2 1/2	12	2 1/4	12	Yes	
3 & 4	2 1/2	12			Yes	
3 & 4	2 1/2	10			Yes	
3 & 4	2 1/2	12	2 1/4	12	Yes	
3 & 4	2 1/4	12	2	12	Yes	
3 & 4	2 1/2	10	2 3/16	10	Yes	

Tube Size in.	Wall Thickness in.	U.S. Standard Gauge	Weight per Foot lbs.	Moment of Inertia in. ⁴	Cross Sec. Area in. ²	Section Modulus in. ³
1 1/2 x 1 1/2	0.105	12	1.702	0.129	0.380	0.172
2 x 2	0.105	12	2.416	0.372	0.590	0.372
2 1/4 x 2 1/4	0.105	12	2.773	0.561	0.695	0.499
2 3/16 x 2 3/16	0.135	10	3.432	0.605	0.841	0.590
2 1/2 x 2 1/2	0.105	12	3.141	0.804	0.803	0.643
2 1/2 x 2 1/2	0.135	10	4.006	0.979	1.010	0.785

Square Post Sizes (B)	A	B	C	D	E	F
2 3/16" x 10 ga.	1 3/64"	2 1/2"	3 1/32"	2 5/32"	1 3 3/64"	1 7/8"
2 1/2" x 10 ga.	1 3/32"	2 1/2"	3 5/16"	5/8"	1 2 1/32"	1 3/4"

- (A) Use breakaway base when support is placed in weak soils. Engineer determines if soils are weak.
 (B) For additional wind load, insert the 2 3/16" x 10 ga. into 2 1/2" x 10 ga.



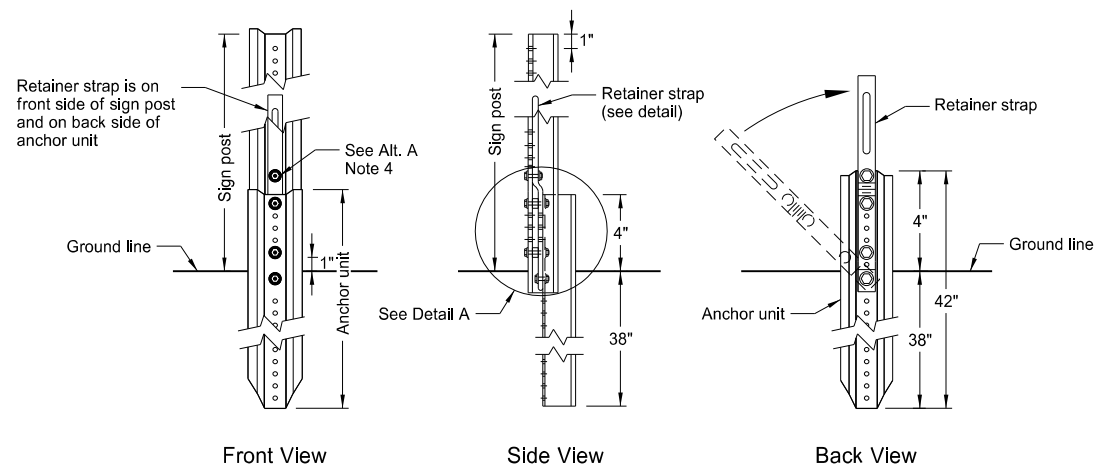
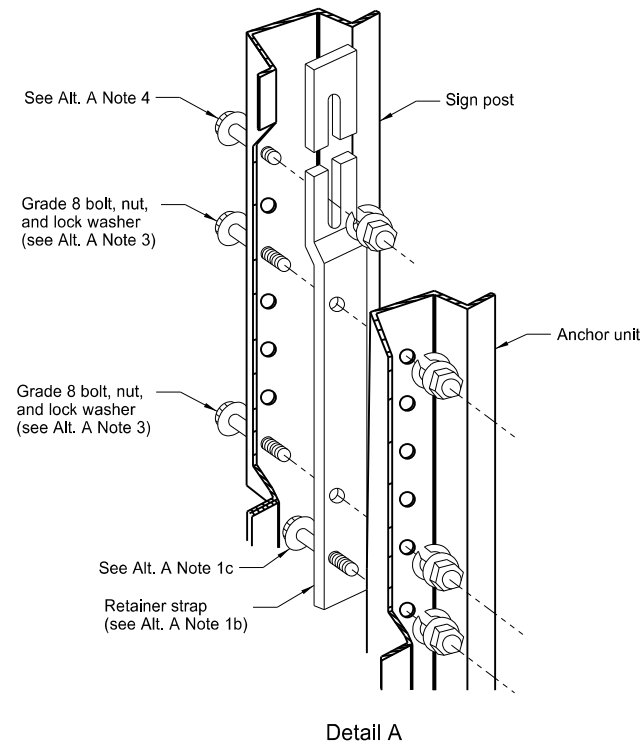
Bolt Retainer for Base Connection
Bolt Retainer - 1/2" Reprocessed Teflon

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
2-28-14	
REVISIONS	
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9-27-17	Updated to active voice

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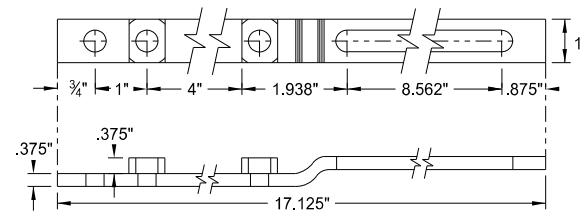
BREAKAWAY SYSTEMS FOR CONSTRUCTION ZONE SIGNS

U-Channel Post

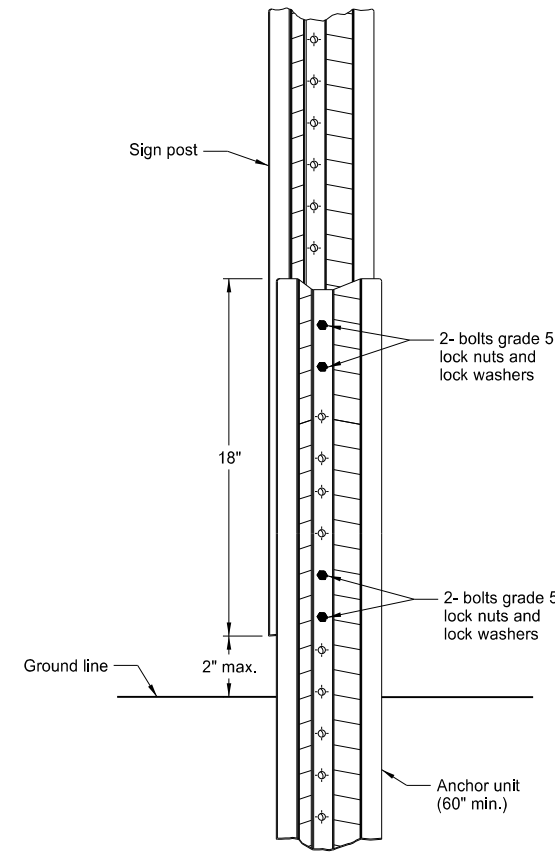


Breakaway U-Channel Detail Alternate A

Install a maximum of 2 posts within 7'.

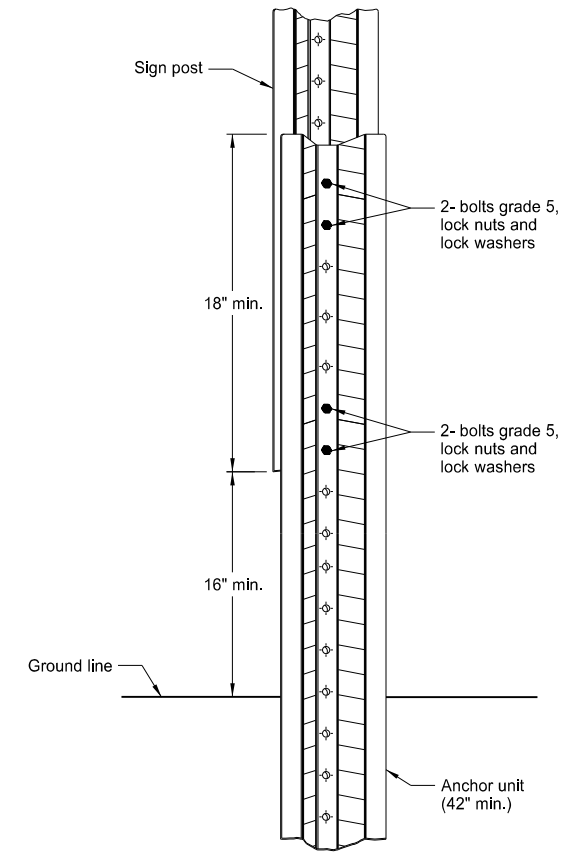


Retainer Strap Detail



Breakaway U-Channel Splice Detail Alternate B (2.5 and 3 lb/ft)

Install a maximum of 3 posts within 7'.



Breakaway U-Channel Splice Detail Alternate C (2.5 and 3 lb/ft)

Install a maximum of 3 posts within 7'.

Alternate A Steps of Installation:

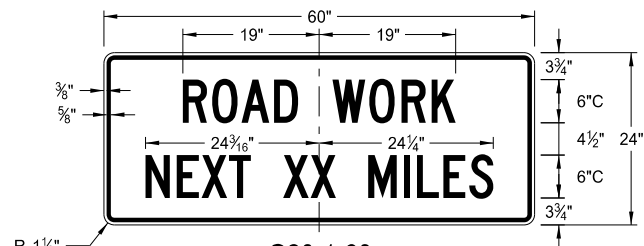
1. a) Drive anchor unit to within 12" of ground level.
b) Establish proper assembly by lining up bottom hole of retainer strap with 6th hole from the top of the anchor unit.
c) Assemble strap to back of anchor unit using 5/16"x2" bolt, lock washer and nut.
d) Rotate strap 90° to left.
2. a) Drive anchor unit to 4" above ground.
b) Rotate strap to vertical position.
3. a) Place 5/16"x2" bolt, lock washer and nut in bottom of sign post to facilitate alignment of sign post with proper hole in anchor unit.
b) Alternately tighten two connector bolts.
4. Complete assembly by tightening 5/16"x2" bolt (this fastens sign post to retainer strap).
5. Properly nest base post, strap, and sign post. Proper nesting occurs when all flat surfaces of the base post, strap, and sign post at the bolts have full contact across the entire width.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
2-28-14	
REVISIONS	
DATE	CHANGE
9-27-17	Updated to active voice

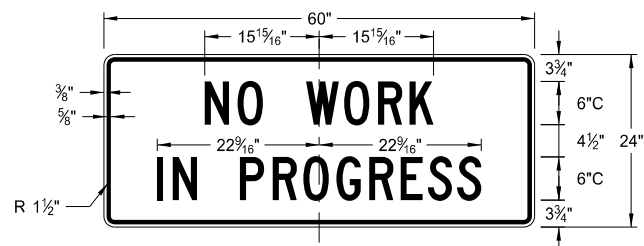
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CONSTRUCTION SIGN DETAILS
TERMINAL AND GUIDE SIGNS

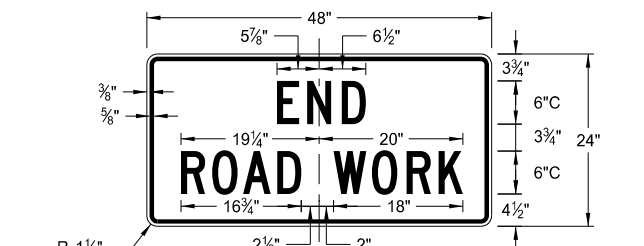
D-704-9



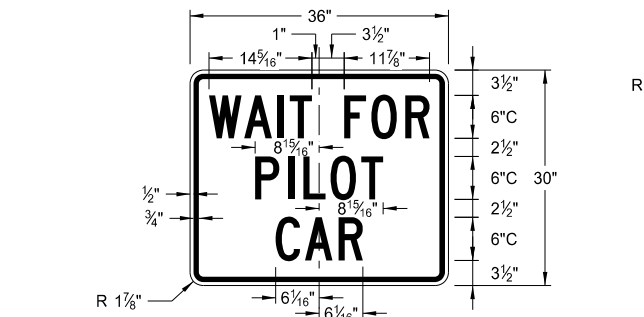
G20-1-60
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Background: orange



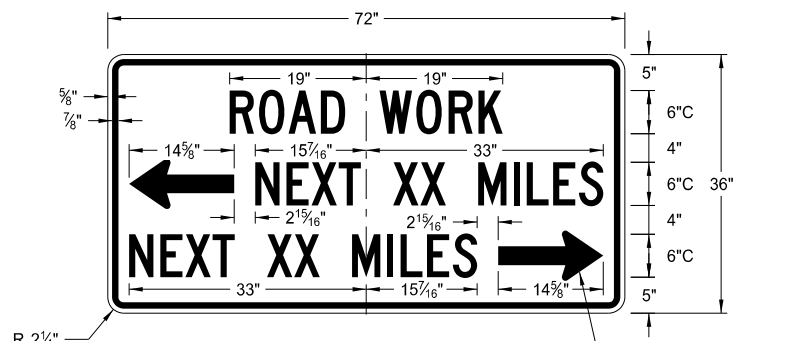
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Legend: black (non-refl)
Background: orange



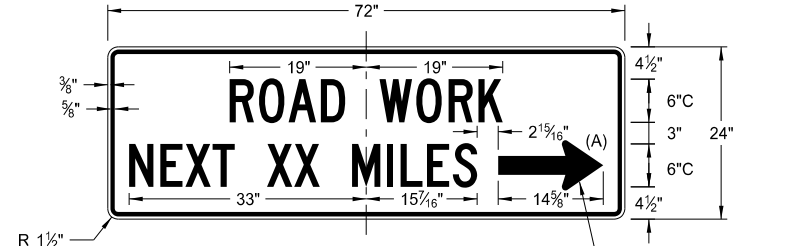
G20-2-48
Legend: black (non-refl)
Background: orange



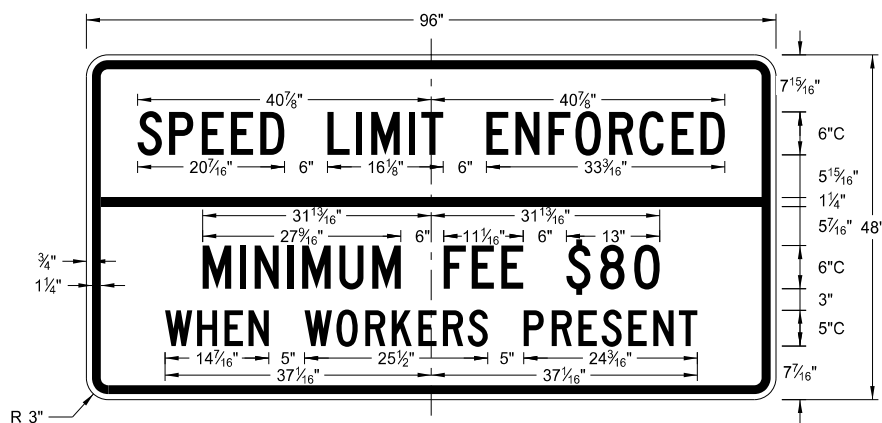
G20-4b-36
Legend: black (non-refl)
Background: orange



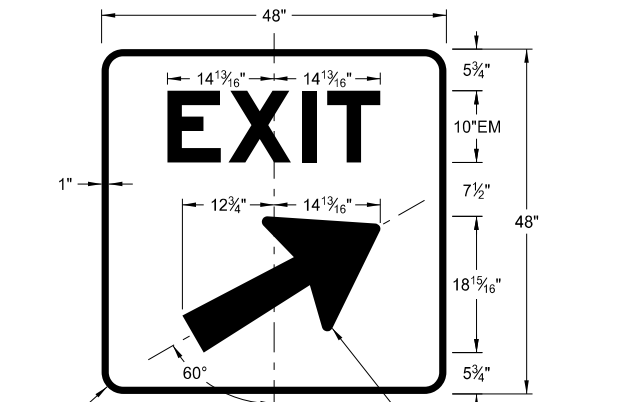
G20-50a-72
Legend: black (non-refl)
Background: orange



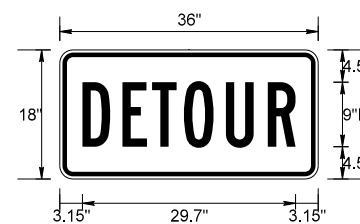
G20-52a-72
Legend: black (non-refl)
Background: orange



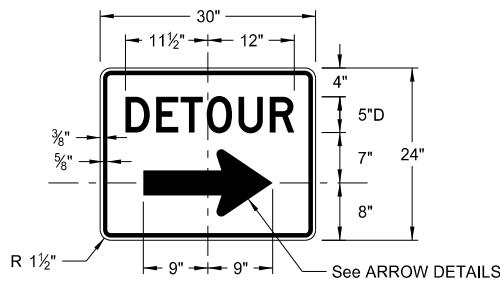
G20-55-96
Legend: black (non-refl)
Background: orange



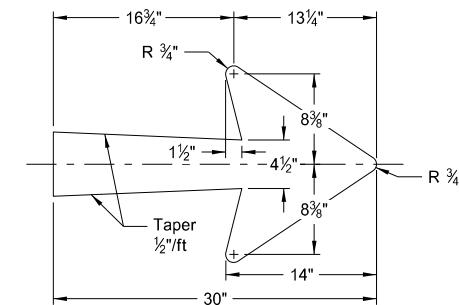
E5-1(L or R)-48
Legend: white
Background: green (orange optional)



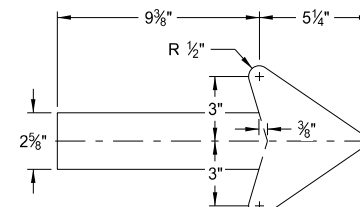
M4-8-36
Legend: black (non-refl)
Background: orange



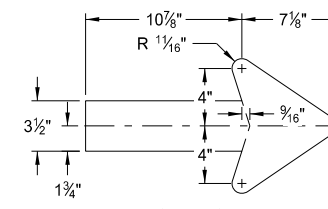
M4-9(L or R)-30 & M4-9-30
Legend: black (non-refl)
Background: orange



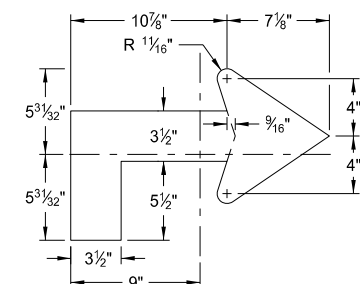
E5-1-48



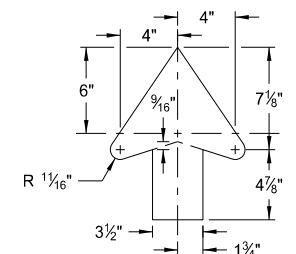
G20-50a-72
G20-52a-72



M4-9(L or R)-30
Right or Left



M4-9(L or R)-30
Advanced Right or Left



M4-9-30
Straight

ARROW DETAILS

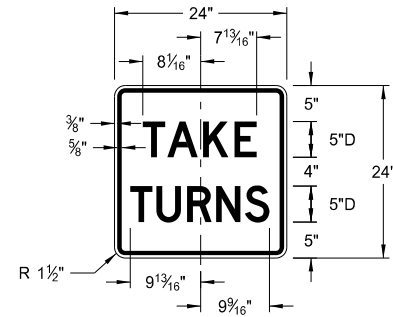
NOTES:

(A) Arrow may be right or left of the legend to indicate construction to the right or left.

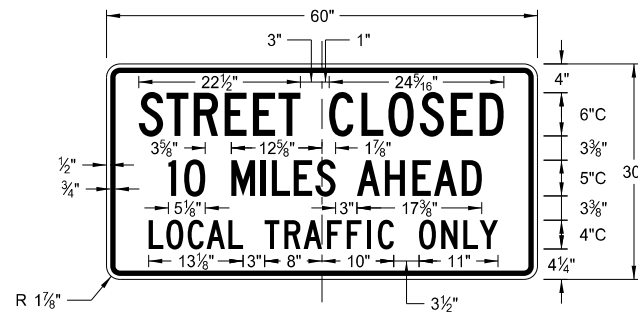
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
8-13-13	
REVISIONS	
DATE	CHANGE
8-17-17	Added sign & background color

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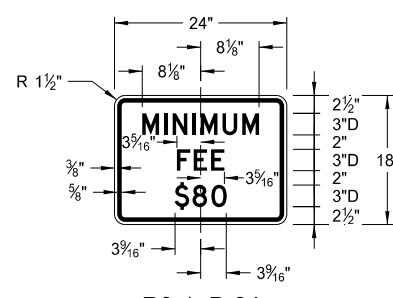
CONSTRUCTION SIGN DETAILS
REGULATORY SIGNS



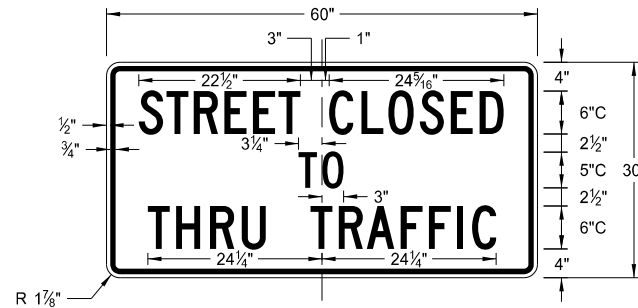
R1-50P-24
Legend: black (non-refl)
Background: white



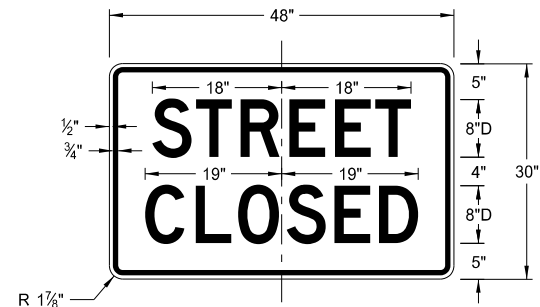
R11-3c-60
Legend: black (non-refl)
Background: white



R2-1aP-24
Legend: black (non-refl)
Background: white



R11-4a-60
Legend: black (non-refl)
Background: white

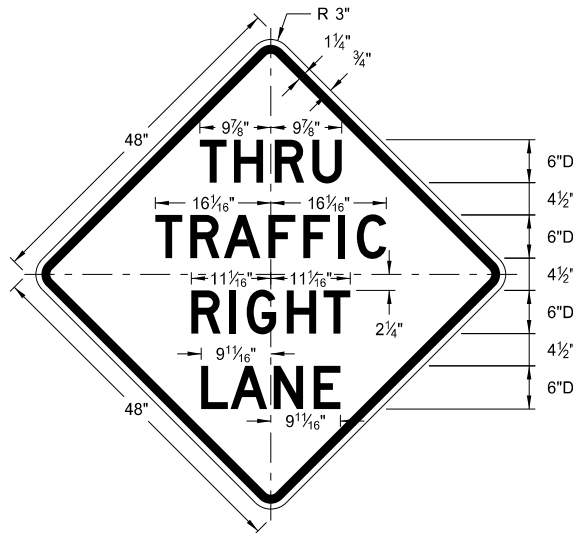


R11-2a-48
Legend: black (non-refl)
Background: white

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
8-13-13	
REVISIONS	
DATE	CHANGE
8-17-17	Revised sign number

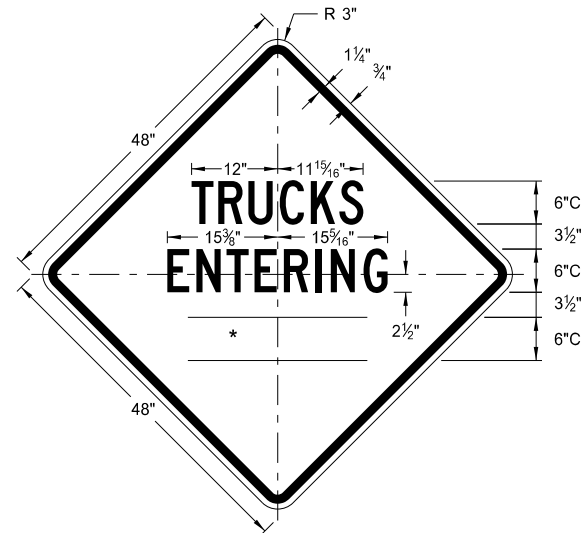
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CONSTRUCTION SIGN DETAILS
WARNING SIGNS



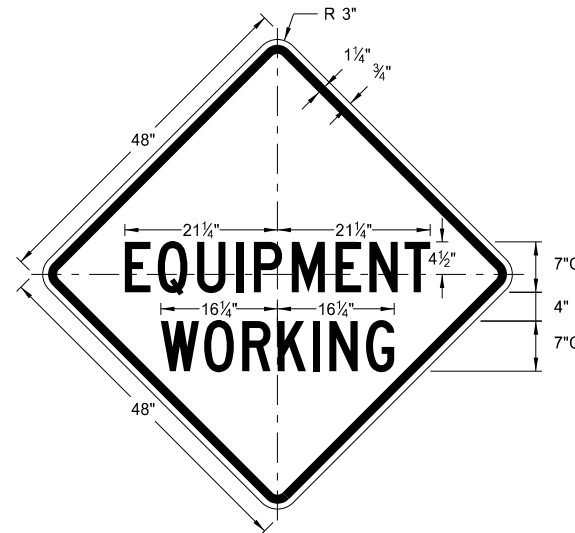
W5-8-48

Legend: black (non-refl)
Background: orange



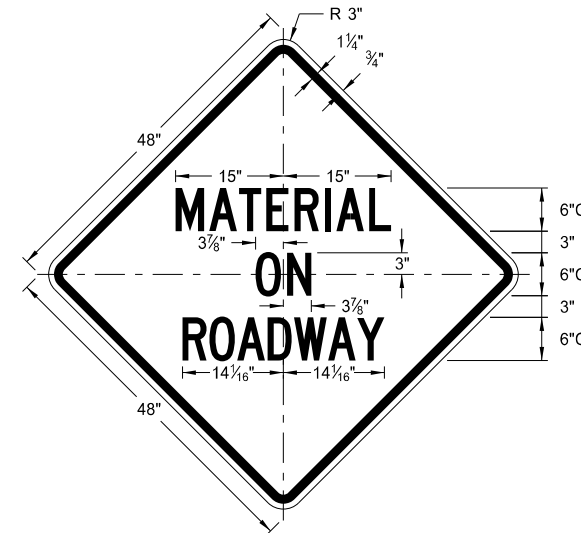
W8-54-48

Legend: black (non-refl)
Background: orange



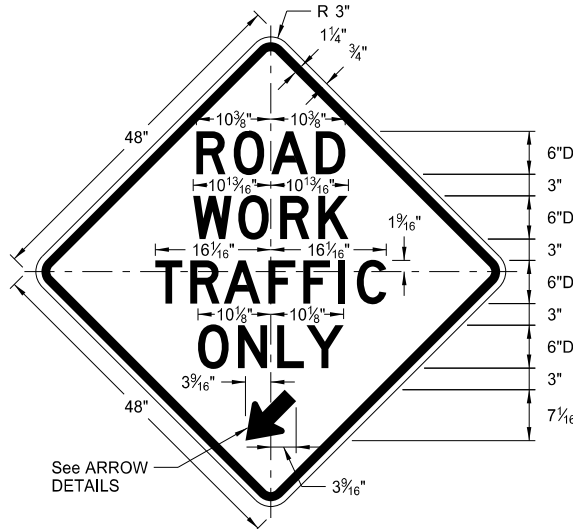
W20-51-48

Legend: black (non-refl)
Background: orange



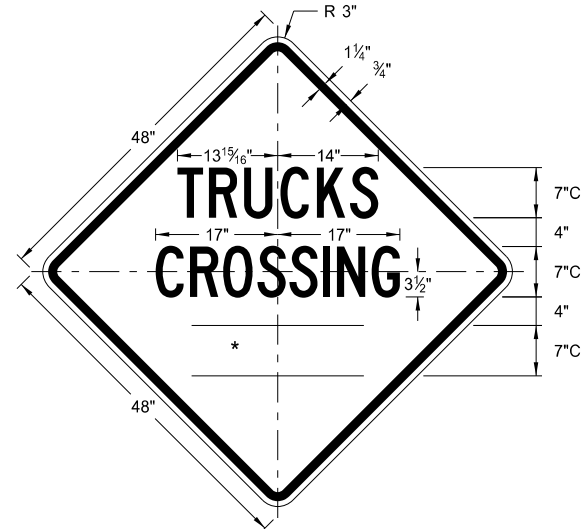
W21-51-48

Legend: black (non-refl)
Background: orange



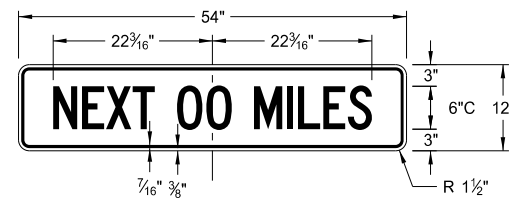
W5-9-48

Legend: black (non-refl)
Background: orange



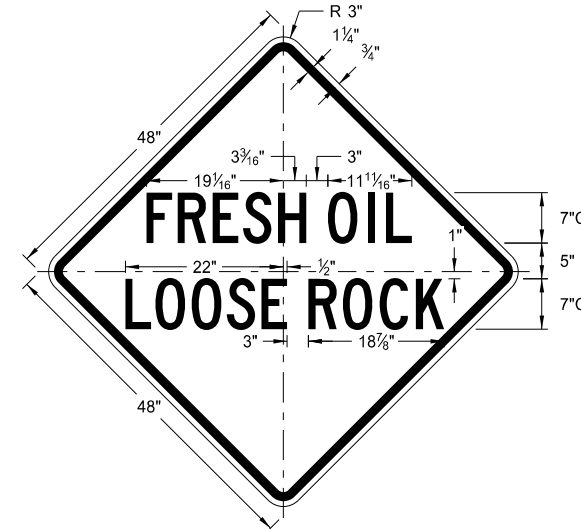
W8-55-48

Legend: black (non-refl)
Background: orange



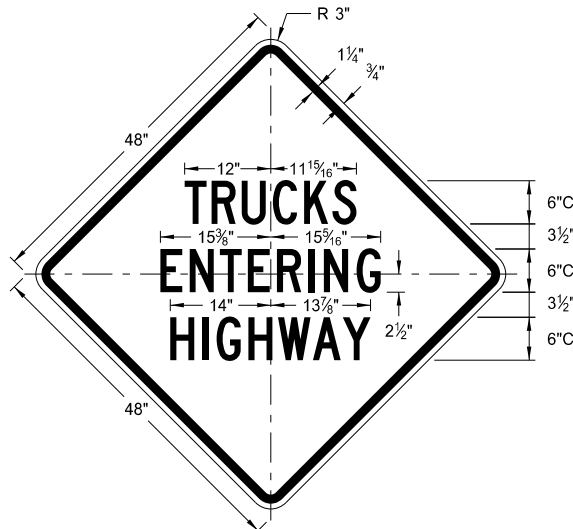
W20-52P-54

Legend: black (non-refl)
Background: orange



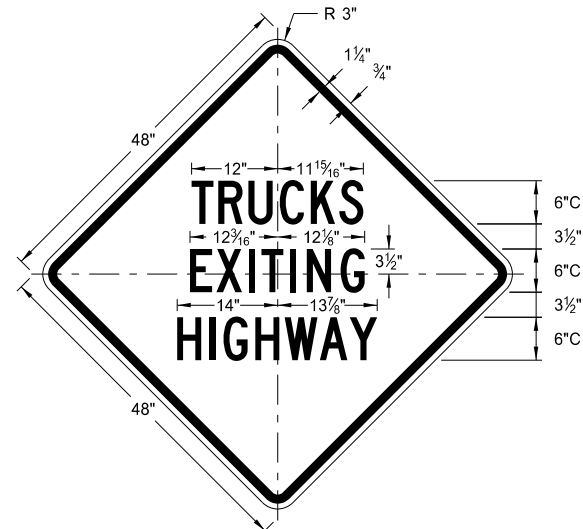
W22-8-48

Legend: black (non-refl)
Background: orange



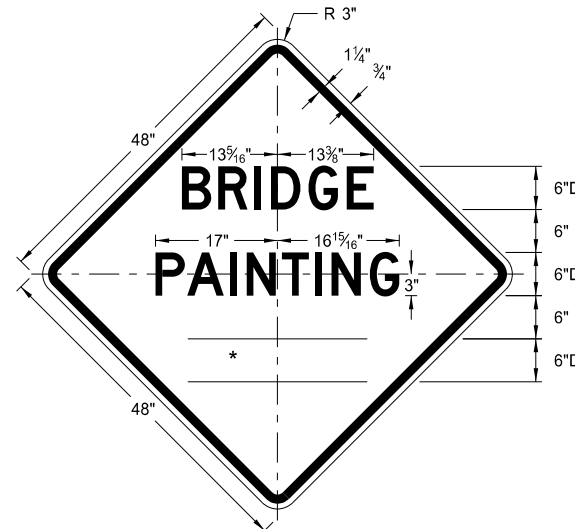
W8-53-48

Legend: black (non-refl)
Background: orange



W8-56-48

Legend: black (non-refl)
Background: orange

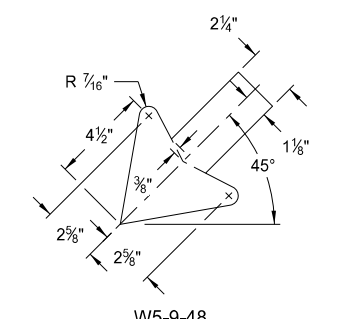


W21-50-48

Legend: black (non-refl)
Background: orange

WORD	LETTER SPACING
AHEAD	Standard
200 FT	Standard
350 FT	Standard
500 FT	Standard
1000 FT	Reduce 40%
1500 FT	Reduce 40%
½ MILE	Reduce 50%
1 MILE	Standard

* DISTANCE MESSAGES



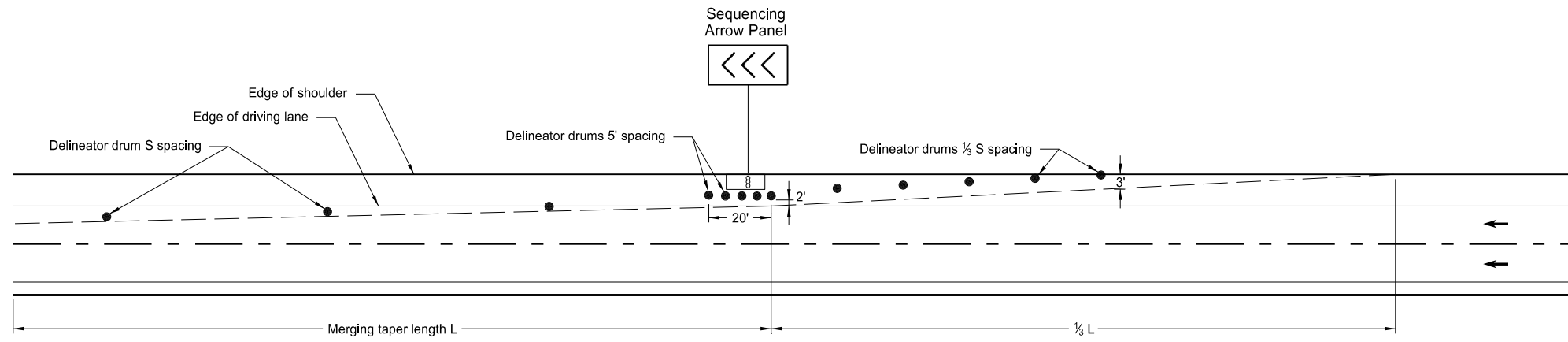
W5-9-48
ARROW DETAILS

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
8-13-13	
REVISIONS	
DATE	CHANGE
8-17-17	Updated sign number

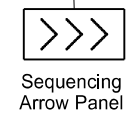
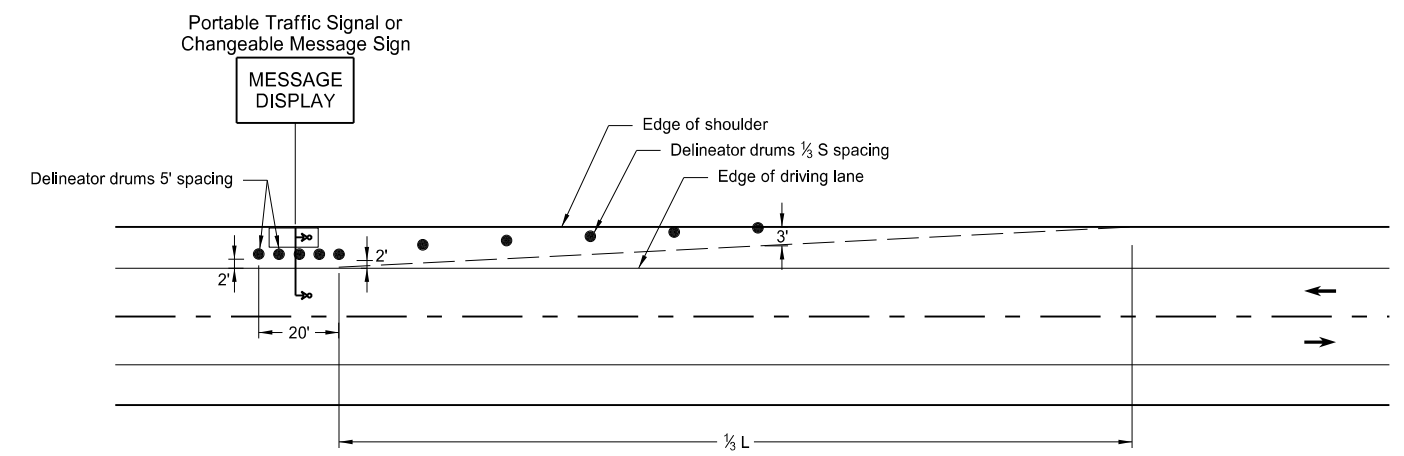
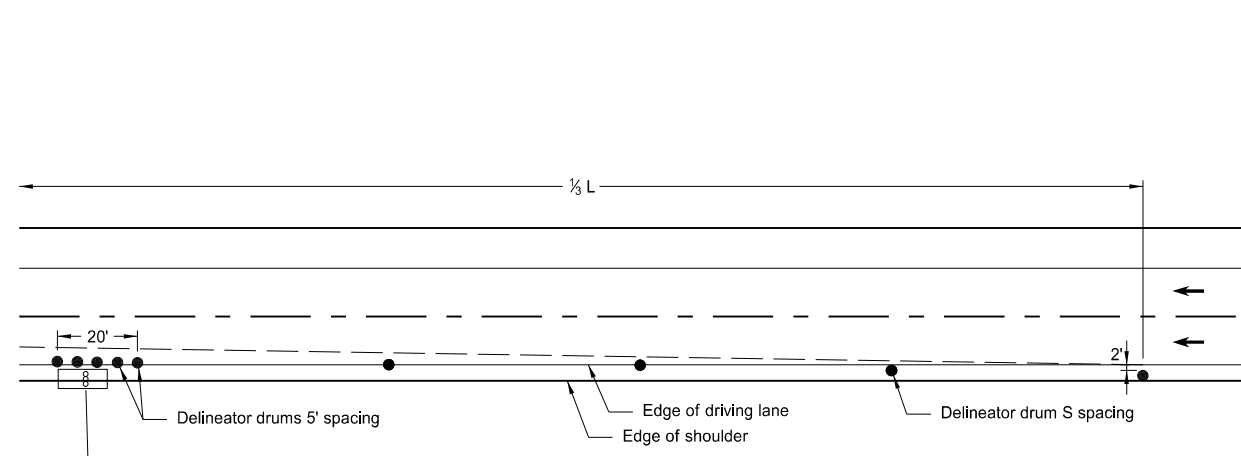
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SHOULDER CLOSURE TAPERS

D-704-12



SHOULDER CLOSURE WITH LANE CLOSURE
(when shoulder is 8' or wider)



SHOULDER CLOSURE USED WITH LANE CLOSURE
(when shoulder is less than 8' wide)

PORTABLE TRAFFIC SIGNAL OR CHANGEABLE MESSAGE SIGN ON SHOULDER

KEY	
● Delineator Drum	∞ Sequencing Arrow Panel
• Message Display	↳ Portable Traffic Signal

Notes:

- S = Posted Speed Limit in mph
W = Width of offset in feet
L = Taper length in feet
L = $WS^2/60$ (40mph or less)
L = WS (45mph or more)
- If a shoulder taper is used, use a length of approximately $1/3L$. If a shoulder is used as a travel lane, use a normal merging or shifting taper.
- When paved shoulders of 8 foot width or more are closed, use channelizing devices to close shoulder in advance, to delineate beginning of work space, and to direct vehicular traffic to remain within the traveled way.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
10-3-13	
REVISIONS	
DATE	CHANGE
9-27-17	Updated to active voice

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ROAD CLOSURE LAYOUTS

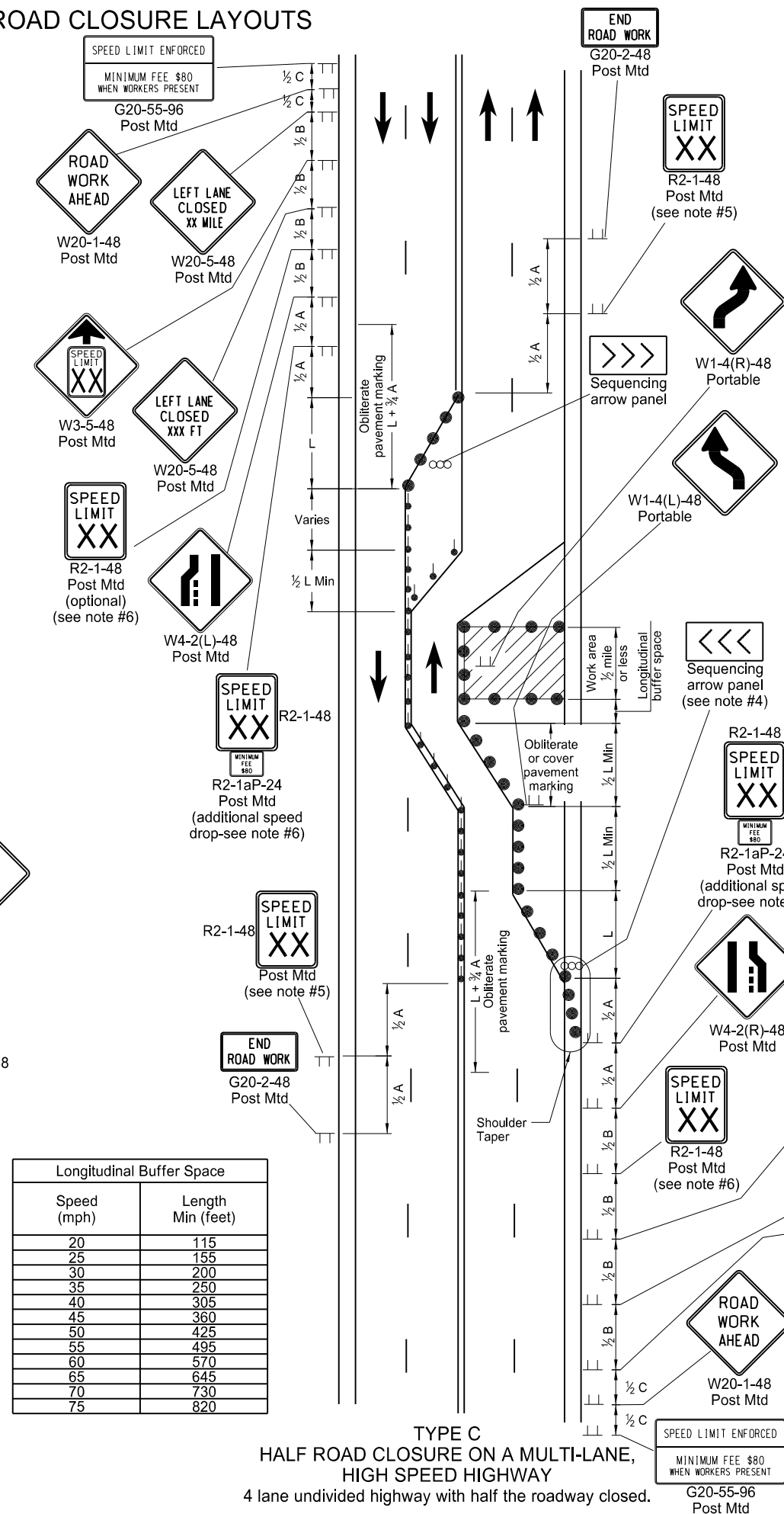
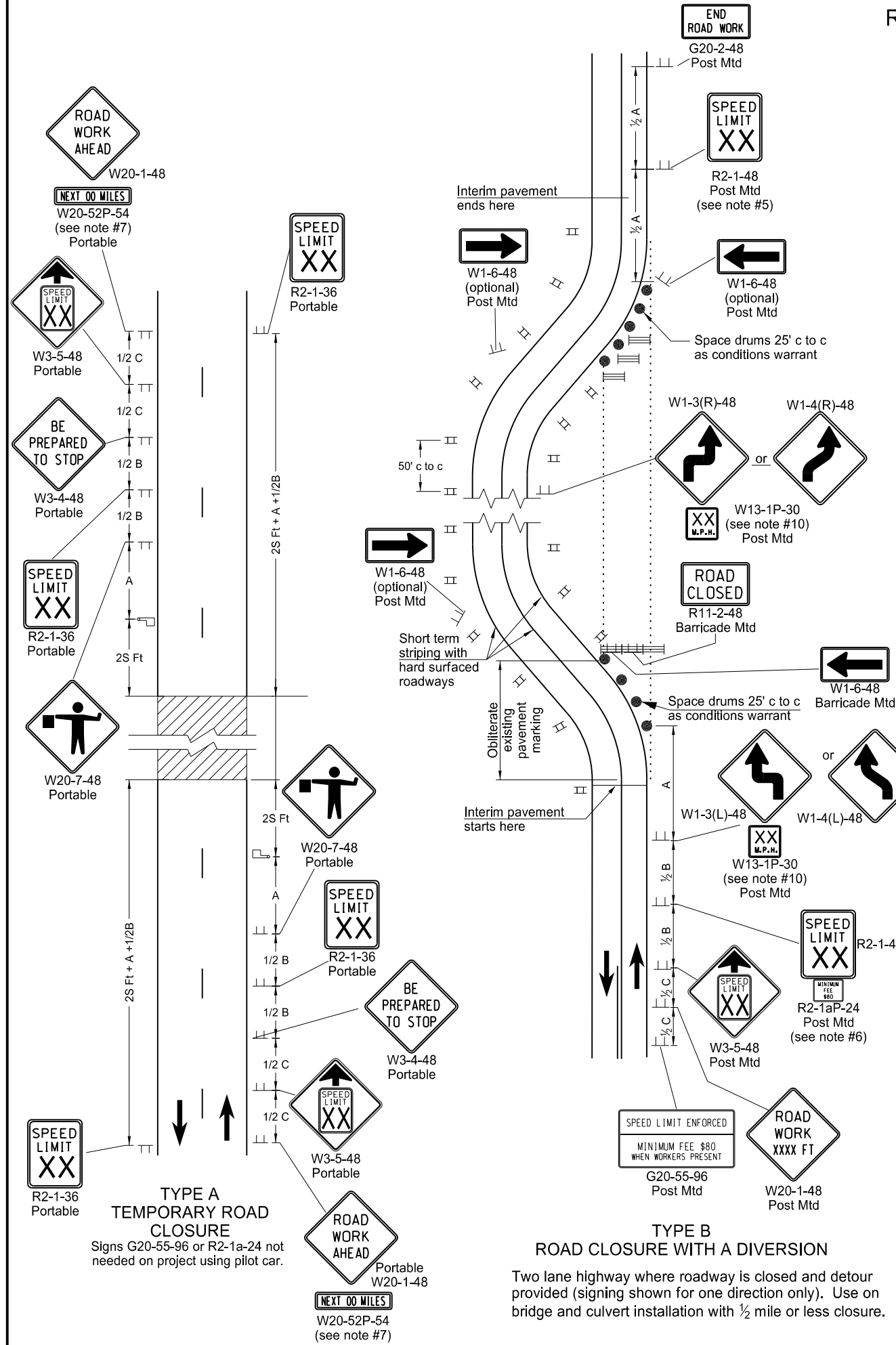
Notes

- Variables
 - S = Numerical value of speed limit or 85th percentile.
 - W = The width of taper in feet.
 - L = Minimum length of taper, S x W for freeways, expressways, and other roads with speeds of 45 mph or greater, or W x S²/60 for urban, residential, and other streets with speeds of 40 mph or less.
- Place barricades on moveable assemblies and signs on portable assemblies when located on roadway.
- Place delineator drums, barricades or cones for tapering traffic at dimension "S" and for tangents space at 2 times dimension "S".
- Place Sequencing Arrow Panels at the beginning of the taper when possible. Where shoulder width does not provide sufficient room, move the panel closer to the work area and place on roadway surface. See Shoulder Closure Standard Drawing.
 - Use Type A on roadways with slow moving traffic speeds and low volume (25 mph or less and 750 ADT or less).
 - Use Type B on roadways with moderate traffic speeds and volumes (40 mph or less and 5000 ADT or less).
 - Use Type C on roadways with high traffic speeds and volumes (over 40 mph or over 5000 ADT).
- Re-establish speed. Determine exact speed limit in the field, dependent on location and conditions.
- Determine the reduced speed limit based on the in-place speed limit before construction. Where speed reductions exceed 30 mph, install a second speed limit sign with the desired speed reduction (not to exceed 30 mph.) Place the second speed limit sign at 1/2 B.
- Use when work area is 1 mile or longer.
- Install flags on warning signs in urban areas when signs are not portable. Mount 24 inch square flags perpendicular to the edges of the sign, and at such a distance above the edge that the flag does not touch the sign when limp.
- Cover existing speed limit signs within reduced speed zones.
- Where necessary, engineer will determine safe speed.
- As an option, use portable sign supports in lieu of post mounted signs in accordance with NDDOT Standard Specifications.
- Sign G20-55-96 is not required if this standard is part of other traffic control, or the work is less than 15 days.
- Recommend using 40 mph speed limit in vicinity of workers, unless location and conditions dictate otherwise.

Road Type	Distance Between Signs Min. (ft)		
	A	B	C
Urban - Low Speed (30 mph or less)	150	150	150
Urban - Low Speed (over 30 to 40 mph)	280	280	280
Urban - High Speed (over 40 mph to 50 mph)	360	360	360
Rural - High Speed (over 50 mph to 65 mph)	720	720	720
Urban Expressway and Freeway (55 mph to 60 mph)	850	1350	2200
Rural Expressway and Freeway (70 mph to 75 mph)	1000	1500	2640
Interstate/4-Lane Divided (Maintenance and Surveying)	750	1000	1500

KEY	
	Type III barricade
	Work area
	Sign
	Flagger
	Delineator drum
	Sequencing arrow panel
	Tubular markers
	Vertical panels back to back

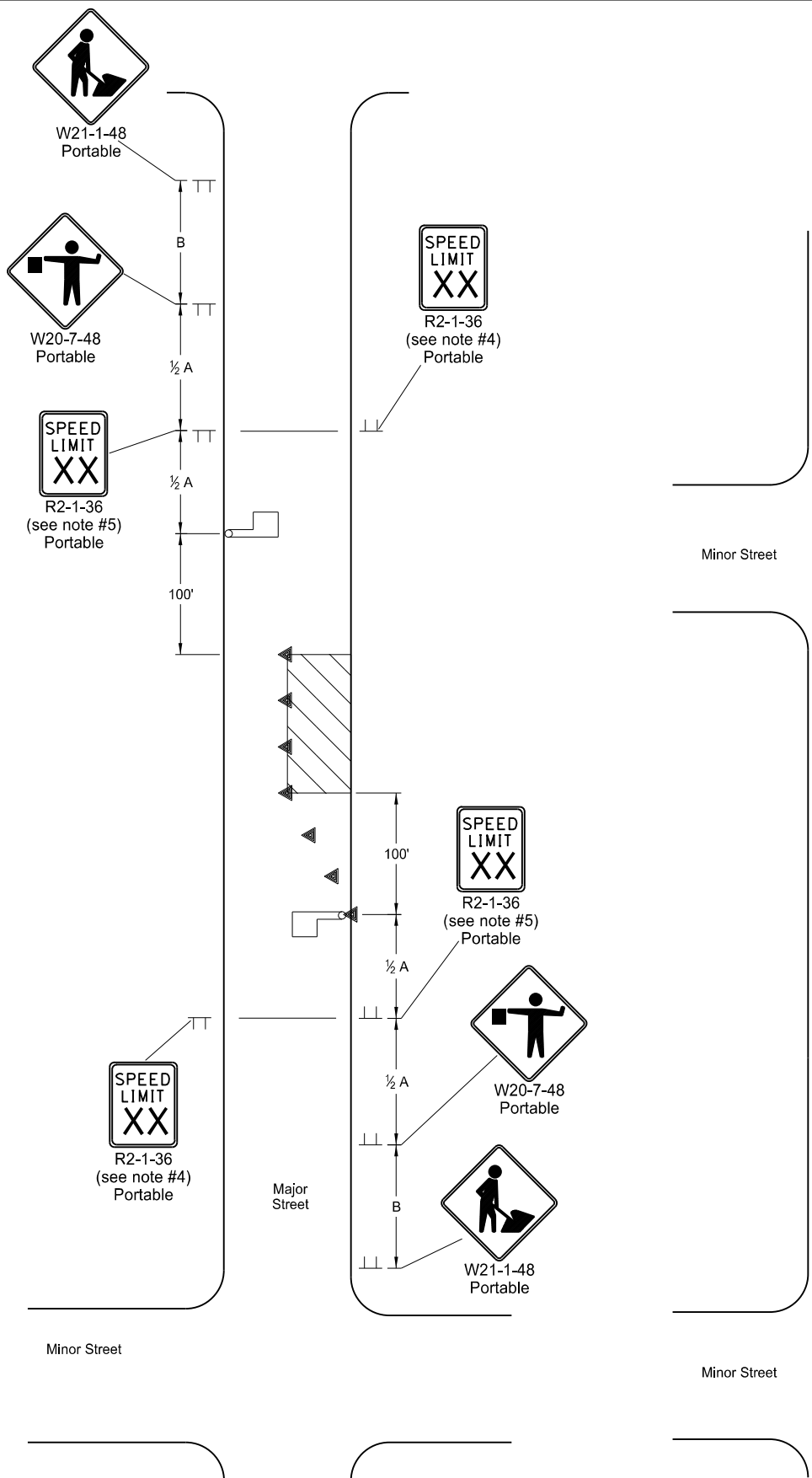
Speed (mph)	Length Min (feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820



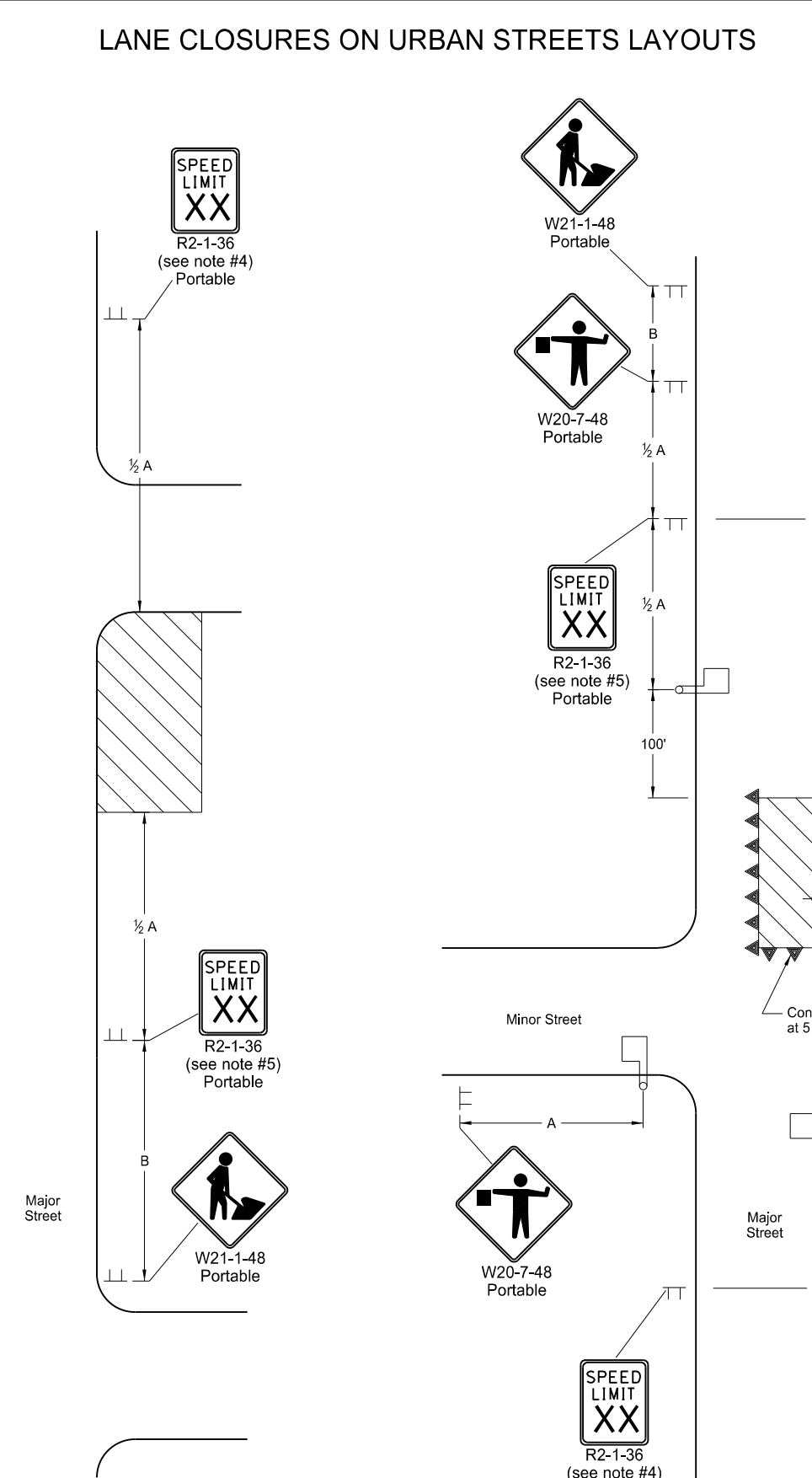
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
9-27-13	
REVISIONS	
DATE	CHANGE
8-17-17	Updated notes & Speed Limit signs

This document was originally issued and sealed by Roger Weigel Registration Number PE-2930, on 08/17/17 and the original document is stored at the North Dakota Department of Transportation

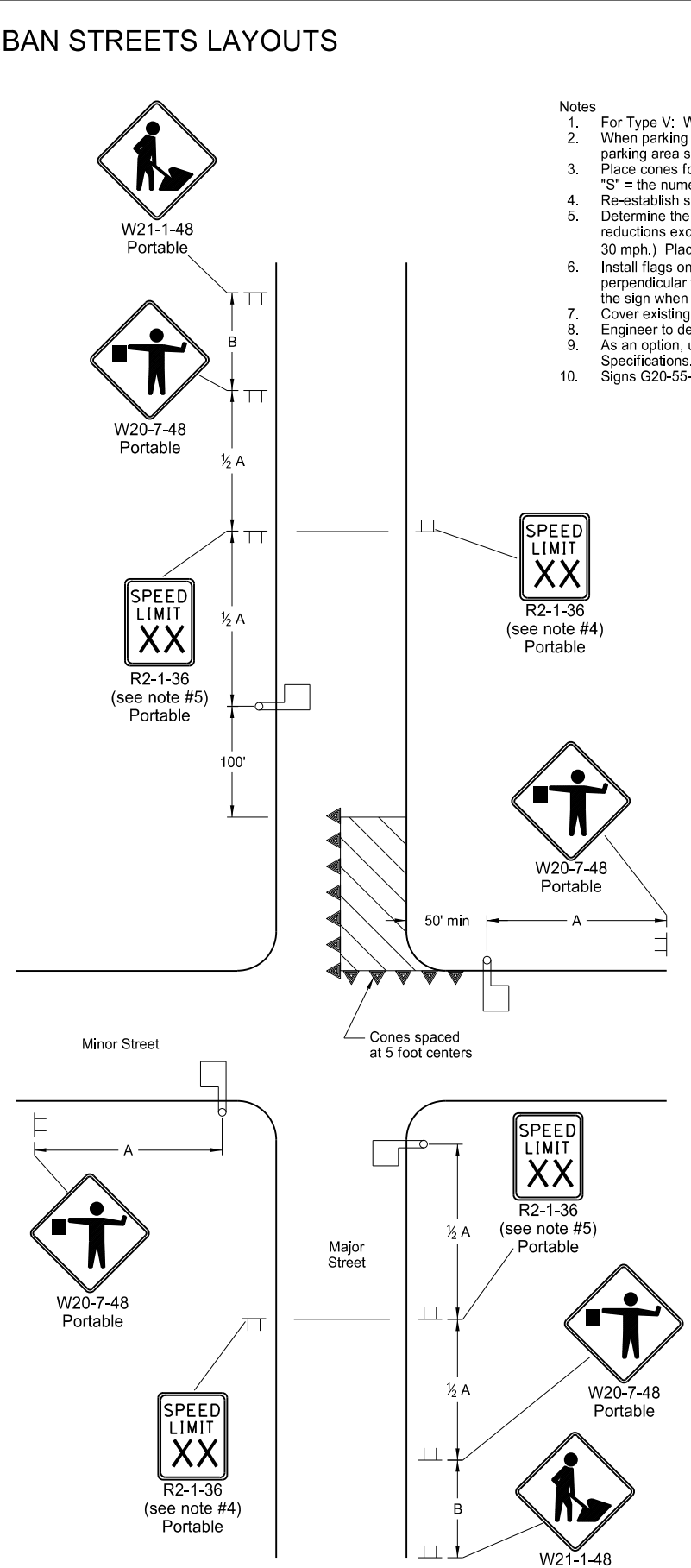
LANE CLOSURES ON URBAN STREETS LAYOUTS



TYPE V
LANE CLOSURE ON URBAN STREET
Portion of roadway closed to traffic only during daylight hours (mid block location).



TYPE W
WORK BEYOND CURB ON URBAN STREET
Work area outside driving lane and no closure necessary.



TYPE X
LANE CLOSURE NEAR INTERSECTION ON URBAN STREET
Portion of roadway closed to traffic only during daylight hours (end block location).

- Notes
1. For Type V: Work on one side of roadway at a time so as not to block off more than one lane of traffic.
 2. When parking is present, place signs so they are entirely visible above parked vehicles or at the edge of the parking area so they are visible to oncoming traffic. Place signs on portable mounts when located on roadway.
 3. Place cones for tapering traffic at 3 equal spaces and cones for tangents at dimension "S". "S" = the numerical value of speed limit.
 4. Re-establish speed limit. Determine exact speed limit in the field, dependent on location and conditions.
 5. Determine the reduced speed limit based on the in-place speed limit before construction. Where speed reductions exceed 30 mph, install a second speed limit sign with the desired speed reduction (not to exceed 30 mph.) Place the second speed limit sign at 1/2 B.
 6. Install flags on warning signs in urban areas when signs are not portable. Mount 24 inches square flags perpendicular to the edges of the sign, and at such a distance above the edge that the flag does not touch the sign when limp.
 7. Cover existing speed limit signs within reduced speed zones.
 8. Engineer to determine safe speed, when necessary.
 9. As an option, use portable sign supports in lieu of post mounted signs in accordance with NDDOT Standard Specifications.
 10. Signs G20-55-96 and R2-1aP-24 are not required for urban projects.

ADVANCE WARNING SIGN SPACING			
Road Type	Distance Between Signs Min. (ft)		
	A	B	C
Urban - Low Speed (30 mph or less)	150	150	150
Urban - Low Speed (over 30 to 40 mph)	280	280	280
Urban - High Speed (over 40 mph to 50 mph)	360	360	360
Rural - High Speed (over 50 mph to 65 mph)	720	720	720
Urban Expressway and Freeway (55 mph to 60 mph)	850	1350	2200
Rural Expressway and Freeway (70 mph to 75 mph)	1000	1500	2640
Interstate/4-Lane Divided (Maintenance and Surveying)	750	1000	1500

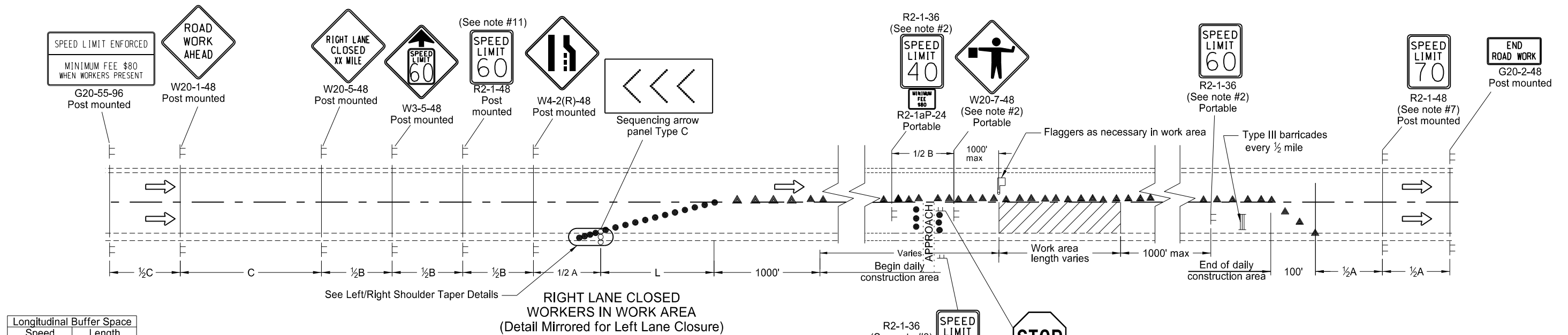
KEY

- Sign
- Cones
- Work area
- Flagger

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
9-27-13	
REVISIONS	
DATE	CHANGE
8-17-17	Updated notes & removed signs

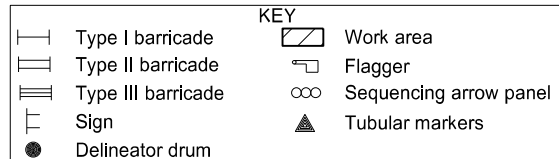
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SIGN LAYOUT FOR ONE LANE CLOSURE



Speed (mph)*	Length Min (feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

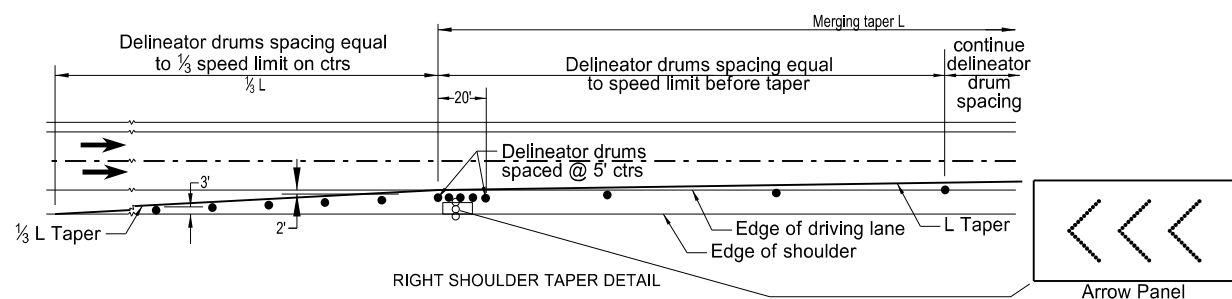
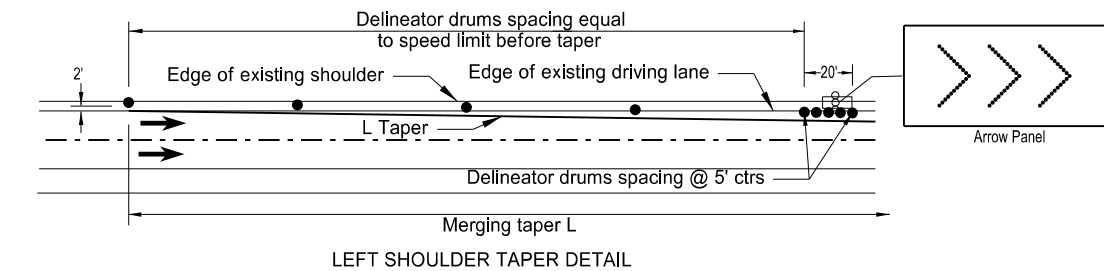
*Posted speed, off-peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.



RIGHT LANE CLOSED WORKERS IN WORK AREA (Detail Mirrored for Left Lane Closure)

Notes:

1. Install advance signs for flagging when flaggers are flagging.
2. Move the advanced flagger sign and speed limit signs as the work area moves through the construction zone. When the work area is not visible from the flagger, move the flagger station so the work area is visible. Place the 40 mph speed limit sign at 1/2 A in advance of the flagger sign and move the 60 mph speed limit sign. Cover or remove the 40 mph speed limit and the Minimum Fee \$80 signs upon completion of the work day or when workers are not present. Determine the exact speed limit in the field, dependent on location and conditions.
3. Approaches: When the work area encompasses an approach, install a 40 mph speed limit sign to control the approach. Cover the existing stop sign and install a new portable stop sign when the approach is on the side of the lane closure. Remove the approach speed limit sign once the main line 40 mph speed zone is moved past the approach.
4. Variables:
 S=Numerical value of speed limit or 85th percentile
 W=The width of taper.
 L=Minimum length of taper, or SxW for freeways, expressways, and all other roads with speeds of 45 mph or greater, or (WxSxS)/60 for urban, residential, and other streets with speeds of 40 mph or less.
5. Space delineator drums for tapering traffic at the dimension "S". Space tubular markers used for tangents at 2 times dimension "S".
6. Place sequencing arrow panels at the beginning of the taper when possible. Where shoulder width does not provide sufficient room, move the panel closer to the work area and place on the roadway surface.
 Use Type A on roadways with slow moving traffic speeds and low volume (25 mph or less and 750 ADT or less).
 Use Type B on roadways with moderate traffic speeds and volumes (40 mph or less and 5000 ADT or less).
 Use Type C on roadways with high traffic speeds and volumes (over 40 mph or over 5000 ADT).
7. Re-establish the speed limit. Determine the exact speed limit in the field, dependent on location and conditions.
8. Cover existing speed limit signs within a reduced speed zone.
9. Install flags on warning signs in urban areas when signs are not portable. Mount 24 inch square flags perpendicular to the edges of the diamond sign, and at such a distance above the edge that the flag does not touch the sign when limp.
10. Determine the reduced speed limit dependent on the in place speed limit before construction. Where speed limits are to be reduced more than 30 mph, install a second speed limit sign with the desired speed reduction (not to exceed 30 mph.) Place the second speed limit sign at 1/2 B.
11. As an option use portable sign supports in lieu of post mounted signs in accordance with NDDOT Standard Specifications.
12. Sign G20-55-96 is not required if this standard is part of other traffic control layouts or the work is less than 15 days.



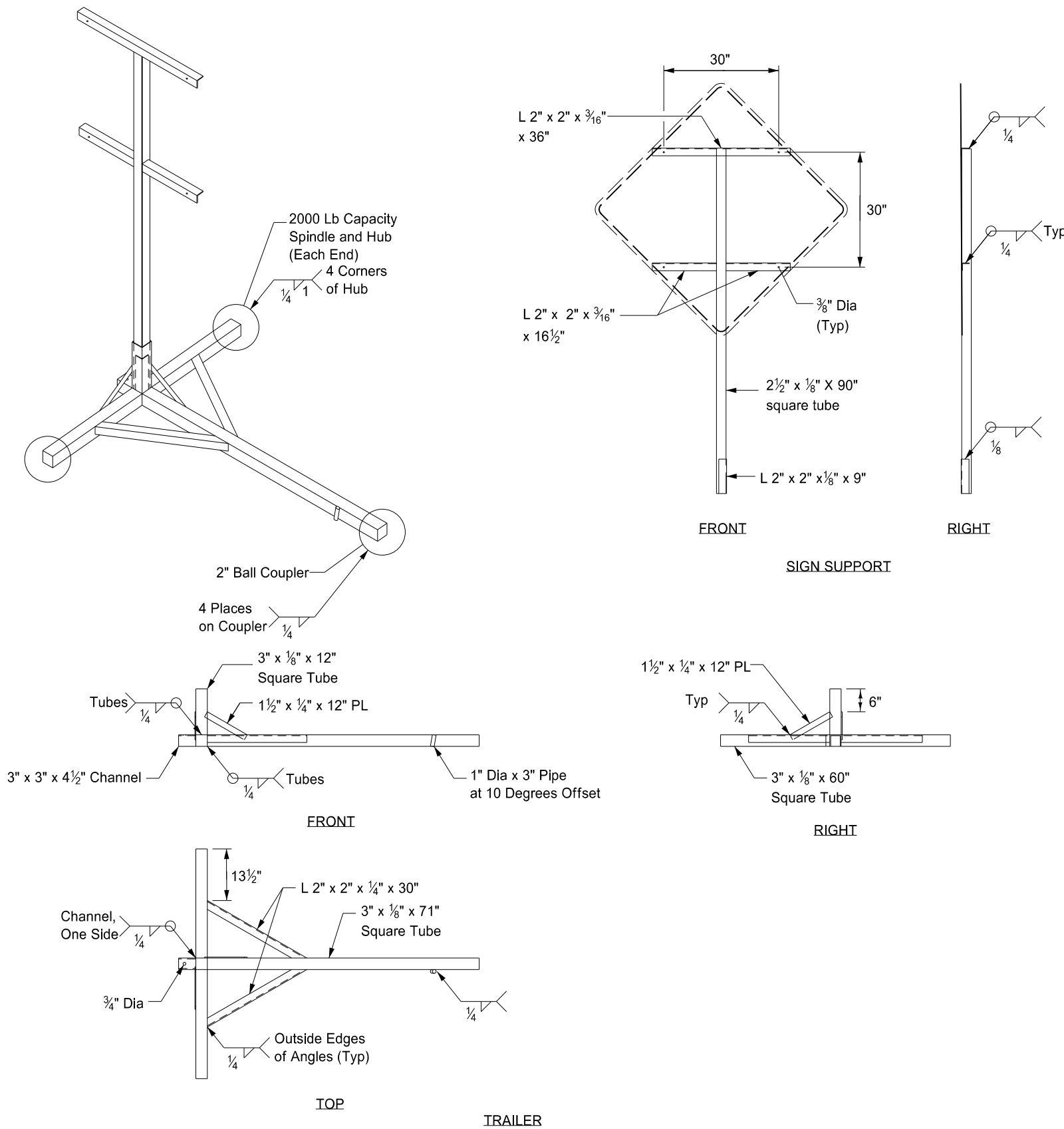
Road Type	Distance Between Signs Min (ft)		
	A	B	C
Urban - Low Speed (30 mph or less)	150	150	150
Urban - Low Speed (over 30 to 40 mph)	280	280	280
Urban - High Speed (over 40 mph to 50 mph)	360	360	360
Rural - High Speed (over 50 mph to 65 mph)	720	720	720
Urban Expressway and Freeway (55 mph to 60 mph)	850	1350	2200
Rural Expressway and Freeway (70 mph to 75 mph)	1000	1500	2640
Interstate/4-Lane Divided (Maintenance and Surveying)	750	1000	1500

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
9-26-2012	
REVISIONS	
DATE	CHANGE
3-15-16	Removed Do Not Pass signs and updated notes
8-17-17	Updated notes & sign nos. & moved Speed Limit signs

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PORTABLE SIGN SUPPORT ASSEMBLY

D-704-50



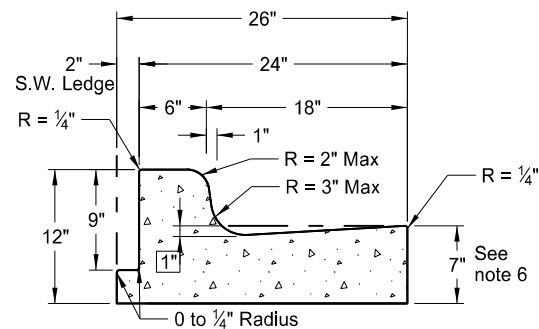
Notes:

- ① The maximum weight of the assembly is 250 pounds.
- ② Use a 14" wheel and tire.
- ③ Automotive and equipment axle assemblies may not be used for trailer-mounted sign supports.
- ④ Other NCHRP 350 crash tested assemblies are acceptable.

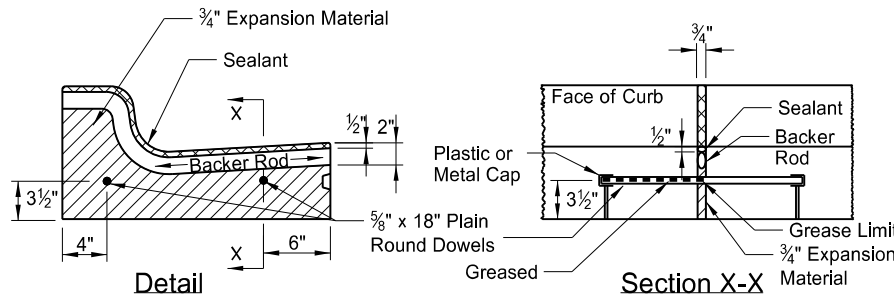
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
11-23-10	
REVISIONS	
DATE	CHANGE

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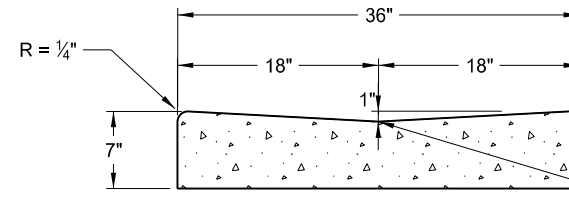
Curb & Gutter and Valley Gutter



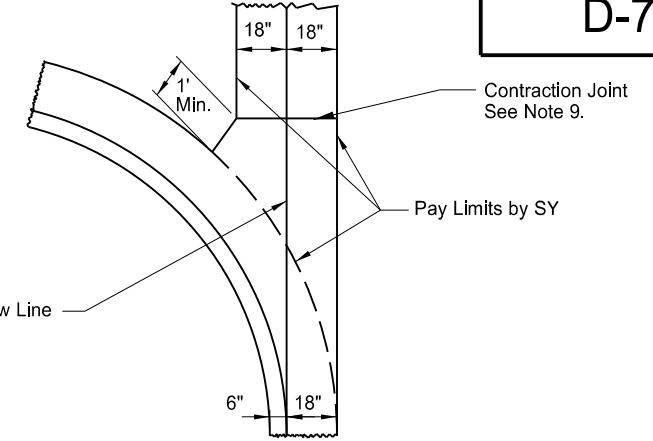
Curb & Gutter Type 1 (Sec. A & B)
Adjacent to Concrete Sidewalk,
Median, or Parking Lot.
(Sec. A shown. See Sec B for
additional details.)



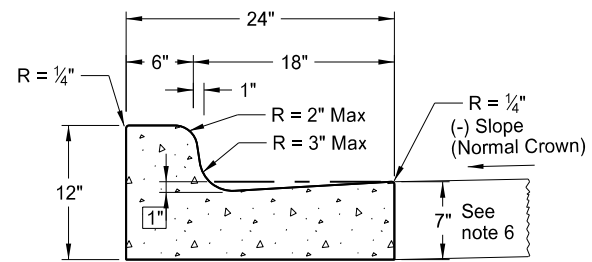
Isolation Joint



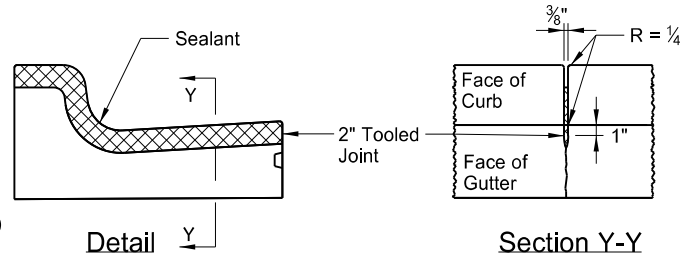
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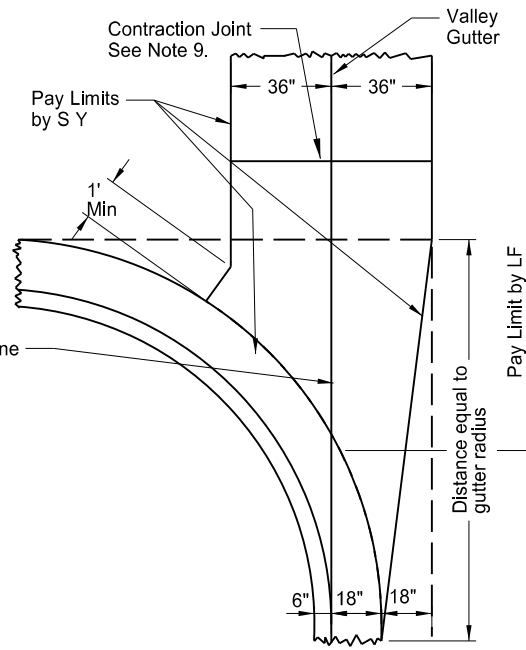
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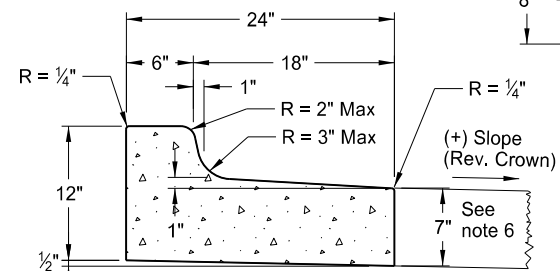
Curb & Gutter Type 1 (Sec. A)



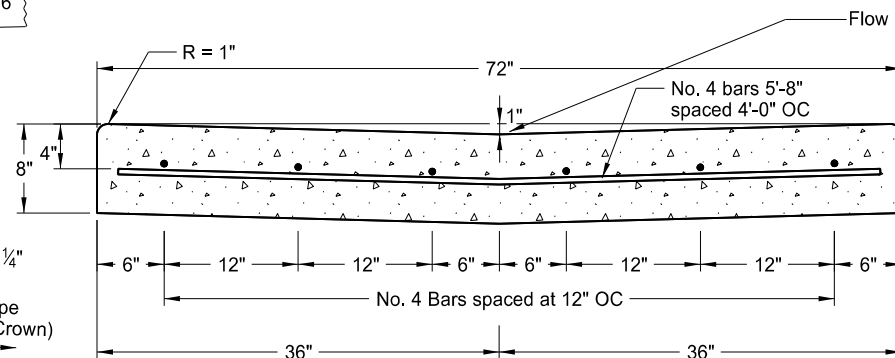
Contraction Joint



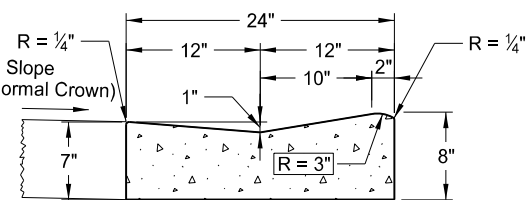
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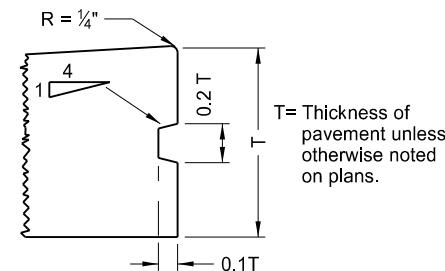
Curb & Gutter Type 1 (Sec. A)



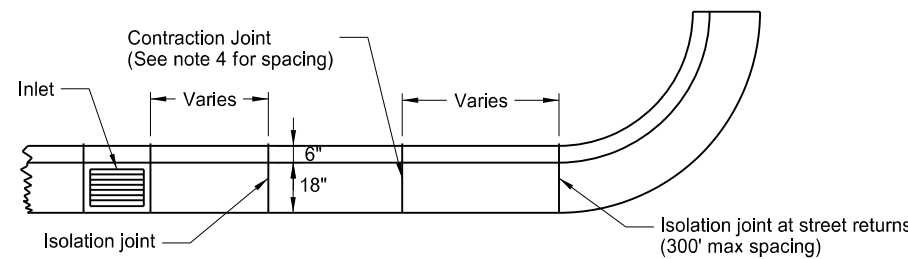
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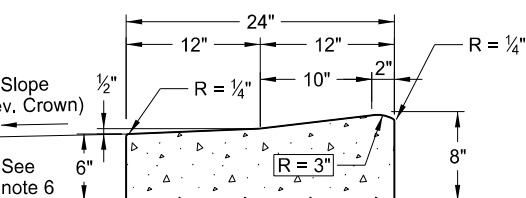
Mountable Curb & Gutter Type 1 (Sec. A)



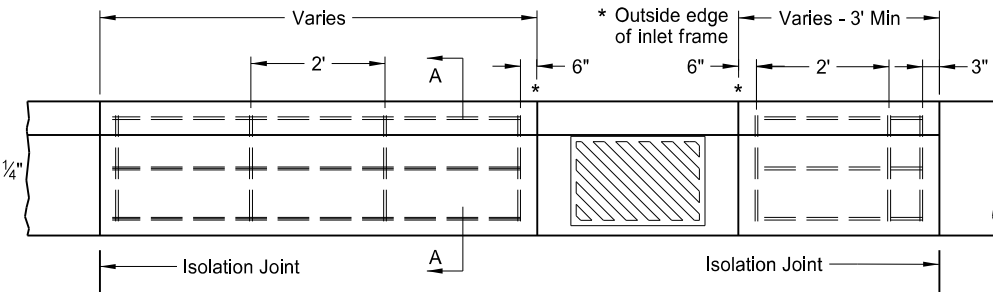
Keyway Detail for Curb & Gutter
(To be used with PCC Pavement and Drives)



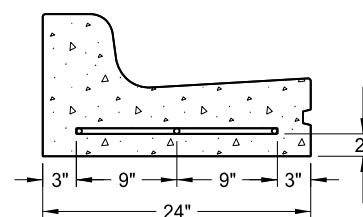
Joint Location Detail



Mountable Curb & Gutter Type 1 (Sec. B)



Curb & Gutter Reinforcing at Inlets



Section A-A

NOTE: Use #4 deformed reinforcing bars without splices. Include all costs for reinforcing bars at inlet locations (even inlets located on radii) in the price bid for "Curb and Gutter - Type 1." Extend reinforcement to the second joint (rebar placed through the first joint) in cases where the 3' min. panel length cannot be obtained.

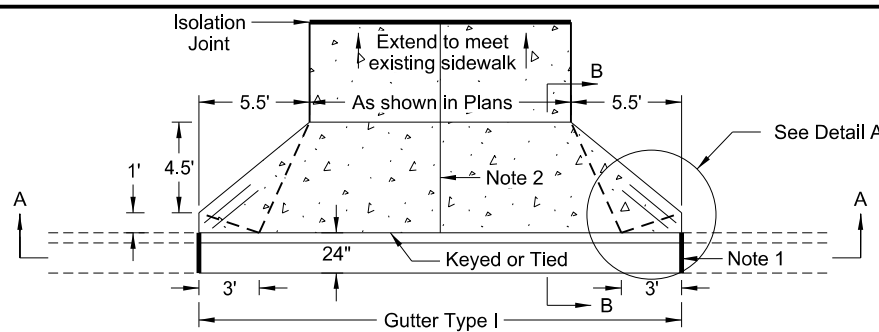
NOTES:

1. Use Curb and Gutter Type 1 (Sec. A & B). Use section "A" with (-) pavement slopes and section "B" with (+) pavement slopes.
2. Contraction Joints: Tool the Curb & Gutter 2" as shown on the contraction joint details.
3. Isolation Joints: Use 3/4" expansion joint filler for isolation joint material. Form the backer rod and joint sealant opening with a pre-cut piece of wood or other material approved by the engineer. Dowel supports are not required on the second pour at a cold joint. Install plastic or metal caps and greased dowels in the cold joint for the second pour.
4. Joint Spacing: For hot bituminous pavements use a 10' max joint spacing for the curb and gutter with panels on each side of the inlets. For concrete pavements match the joint spacing for the curb and gutter to the pavement joint on PCC Pavements (approximately 15' spacing.)
5. Joint sealing: Seal contraction and isolation joints as shown in the details. Use joint sealant for contraction joints that conforms to section 826.02B. Use sealant for expansion joints specified in note 3 above. Tool and install sealant in accordance with the manufacturer's recommendations.
6. Face of Gutter Depth: For hot bituminous pavement use 7" gutter depth as shown. For PCC pavements, match the gutter depth to the depth of adjacent PCC pavement or to construct a 7" depth as shown.
7. Tie curb and gutter to abutting PCC pavement with No. 3 bars, 1'-6" in length, spaced at 4' centers.
8. On street returns and other locations where new curb and gutter ends and does not abut existing curb and gutter, taper the last two (2) feet of the curb from 6" in height to 0". Install a 1/2" premolded full depth isolation joint, the same shape as the curb and gutter just ahead of the taper. Install an 18" tie bar across the joint.
9. Valley Gutter Joints: Form, saw, or score 1/8" min. to 3/8" max. width contraction joints (a minimum 2" depth) at approx 10' intervals. Seal the joints with hot poured elastic type joint sealer (Section 826.02A.2 of the Standard Specifications.) Include all costs for the joint and sealant in the price bid for Valley Gutter.

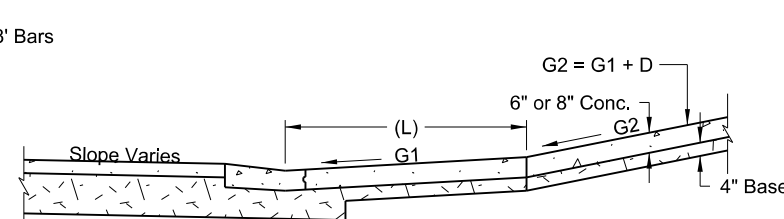
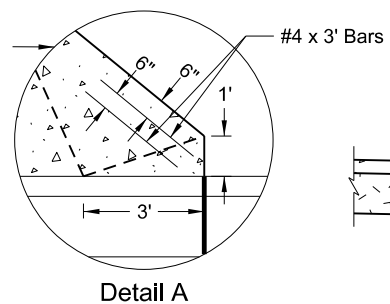
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REVISIONS	
DATE	CHANGE
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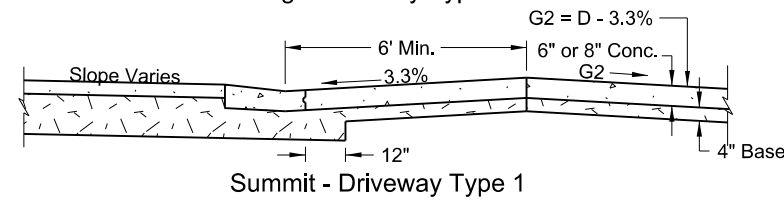
CONCRETE DRIVEWAY - URBAN



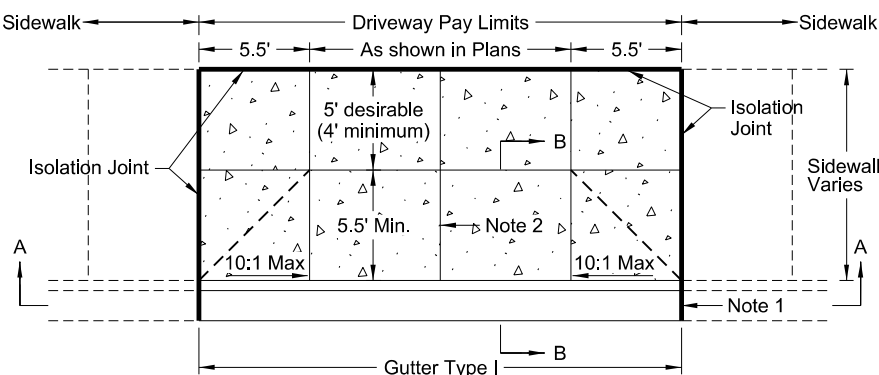
Driveway Type 1



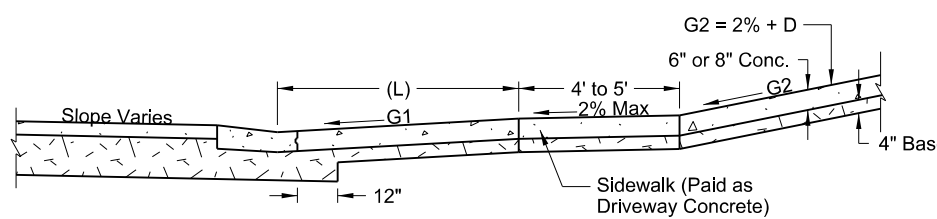
Sag - Driveway Type 1



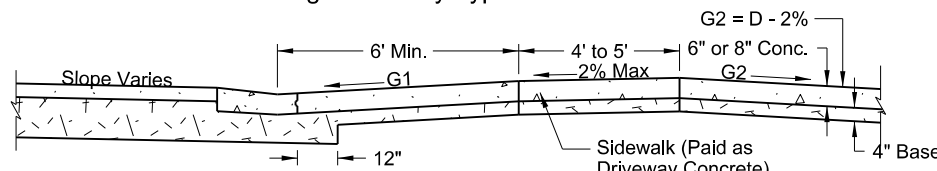
Summit - Driveway Type 1



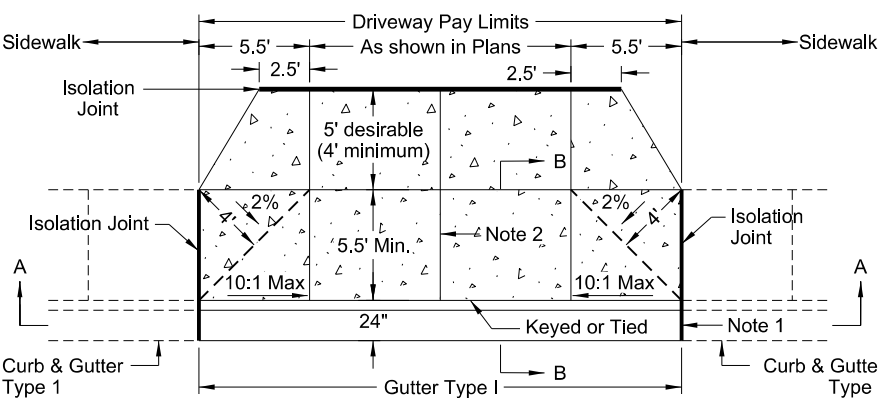
Driveway Type 2A



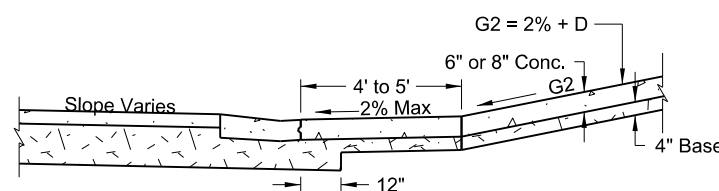
Sag - Driveway Types 2A & 2B



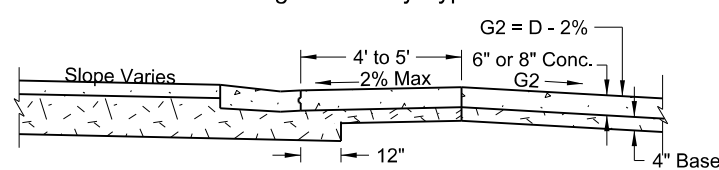
Summit - Driveway Types 2A & 2B



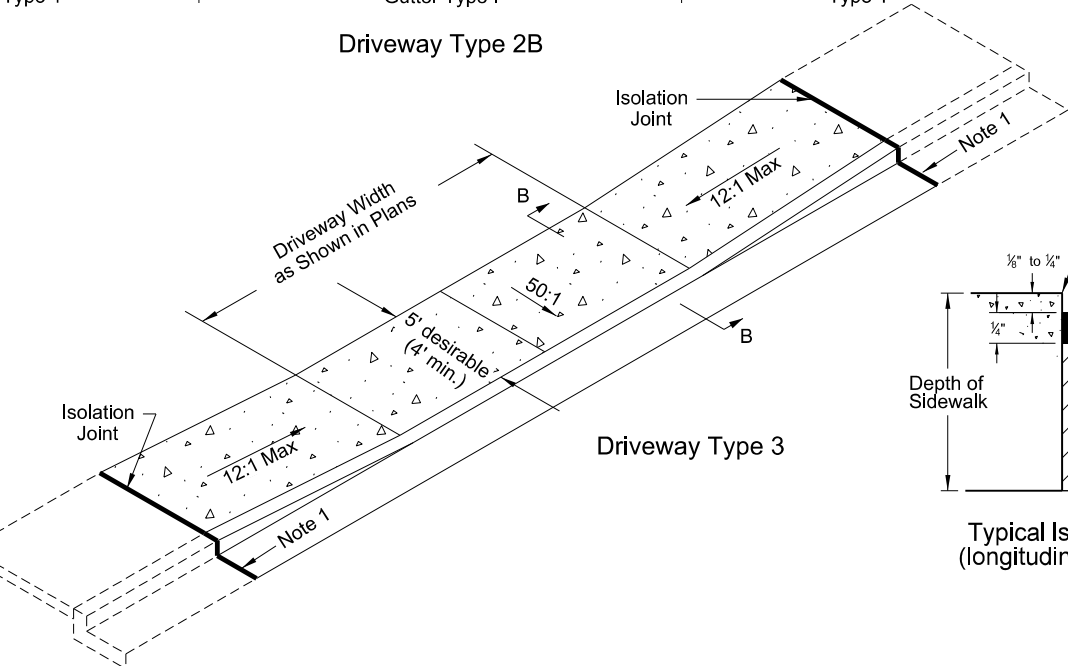
Driveway Type 2B



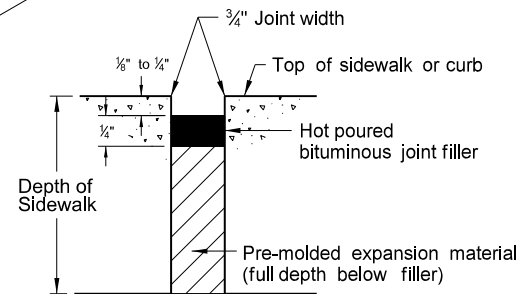
Sag - Driveway Type 3



Summit - Driveway Type 3



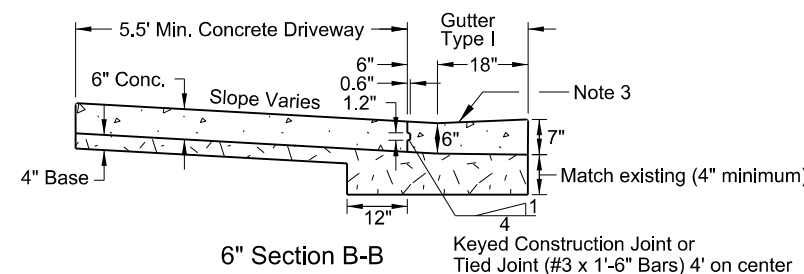
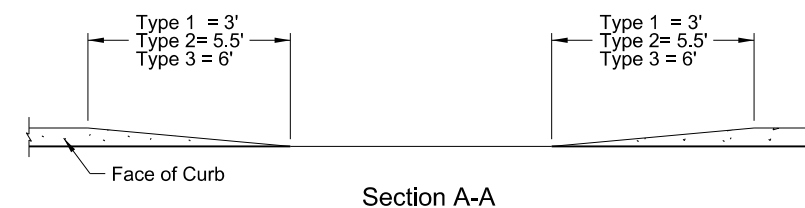
Driveway Type 3



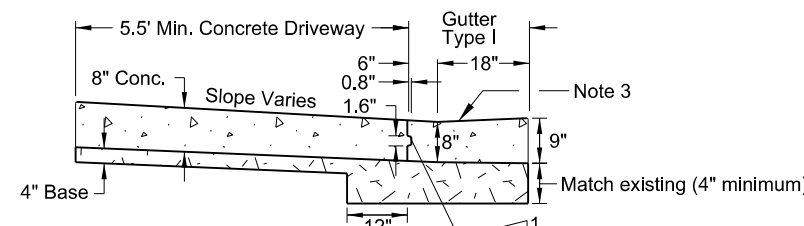
Typical Isolation Joint Seal (longitudinal and transverse)

NOTES:

- See Standard D-748-1 for curb and gutter isolation joint detail. On PCC roadways, match curb and gutter joints with pavement joints, as much as practical.
- Joint Spacing: Use 1 center contraction joint on driveways 20' width or less, 2 center contraction joints for driveways 20' to 30' width, and 3 center contraction joints for driveways greater than 30' width.
Saw or groove contraction joints a minimum depth of 1/3 the depth of the concrete.
Use isolation joints between separately poured concretes, or between old and new concrete.
Seal joints with hot pour bituminous filler or low modulus silicone. Install and tool sealant according to manufacturer's recommendations.
Include all costs for labor, equipment, and material to construct and seal joints in the price bid for the driveway.
- Include all costs for gutter-Type 1 in the unit price bid for "Curb and Gutter-Type 1".
- Use 6" driveway unless otherwise specified.
- Place 4" base material under concrete driveway. Include all costs for labor and materials necessary to place the base material in the price bid for Salvage Base Course or Aggregate Base Course CL 5.
- Construct sidewalk behind a driveway to the same thickness as the driveway. The Engineer will measure it as driveway concrete.



6" Section B-B



8" Section B-B

Driveway ADT	Grade G1		Dimension (L) ft.		Grade Changes (D)	
	Desirable	Maximum	Desirable	Maximum	Desirable	Maximum
(0-500)	5%	12% or controlled by vehicle clearance	12	6	6%	15% or controlled by vehicle clearance
(500-1500)	3%	8%	20	20	3%	6%
(> 1500)	2%	5%	40	40	0%	3%

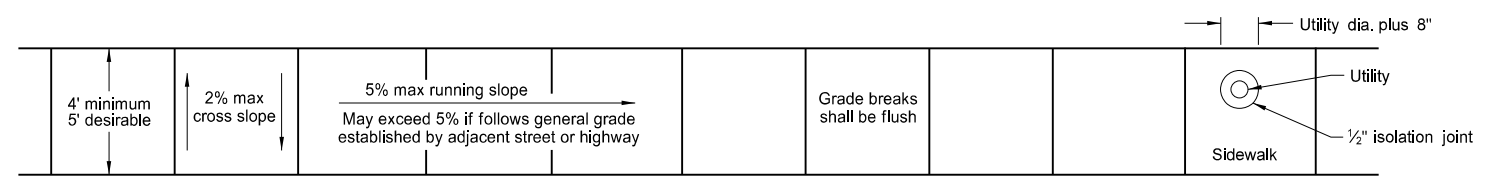
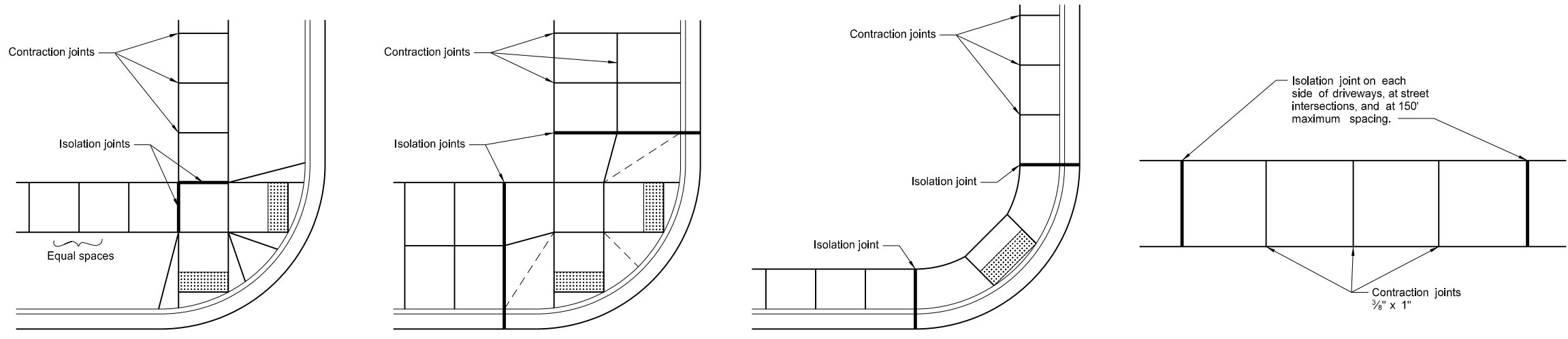
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2-13-2014 REVISIONS	
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SIDEWALK

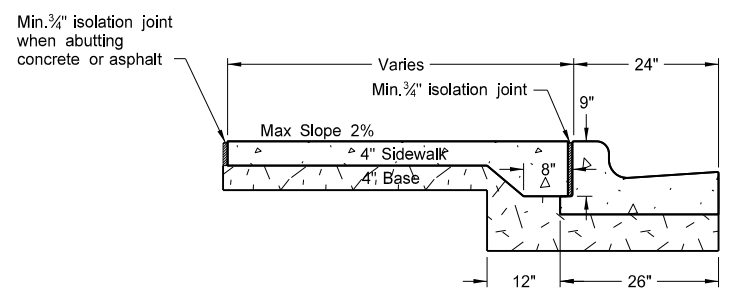
NOTES:

1. Curb ramp and detectable warning panel layouts for informational purposes only. See Standard Drawing D-750-3 for curb ramp and detectable warning panel details.
2. Joint Spacing: Vary transverse contraction joint spacing from 4' to 6' to create approximate square panels.
Use longitudinal contraction joints when sidewalk width is 8' or greater, and space at half the sidewalk width.
Saw or groove contraction joints to a minimum depth of 1/3 the depth of the concrete.
When sidewalk is adjacent to curb & gutter, vary the sidewalk joint spacing to match curb & gutter joints.
Use isolation joints between separate concrete pours, or between old and new concrete.
3. Include all costs for labor, equipment, and material necessary to construct contraction and isolation joints in the price bid for sidewalk concrete.
4. Use 4" sidewalk concrete thickness unless otherwise specified.
5. Use 4" base material thickness unless otherwise specified. Include all costs for labor and materials necessary to place the base material in the price bid for "Salvage Base Course" or "Aggregate Base Course CL 5."
Modify existing ground slope with landscaping as needed. If not possible, such as adjacent buildings, use a vertical curb as shown in the detail below. The Engineer will measure curb at the unit price bid for "Curb - Type I" per lineal foot.

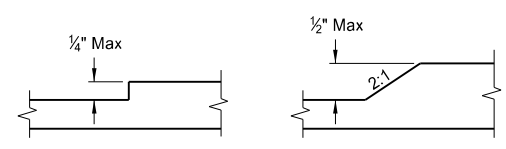


Sidewalk Width and Grade

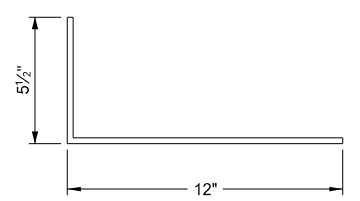
Utility Blockout



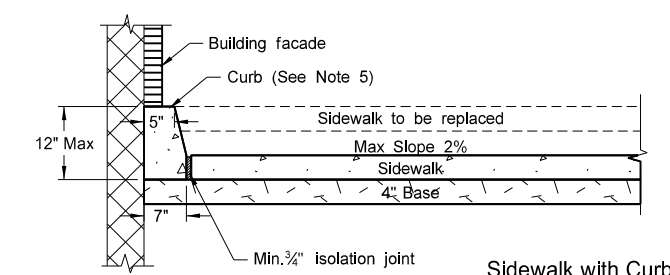
Sidewalk Detail
(Installed adjacent to curb and gutter)



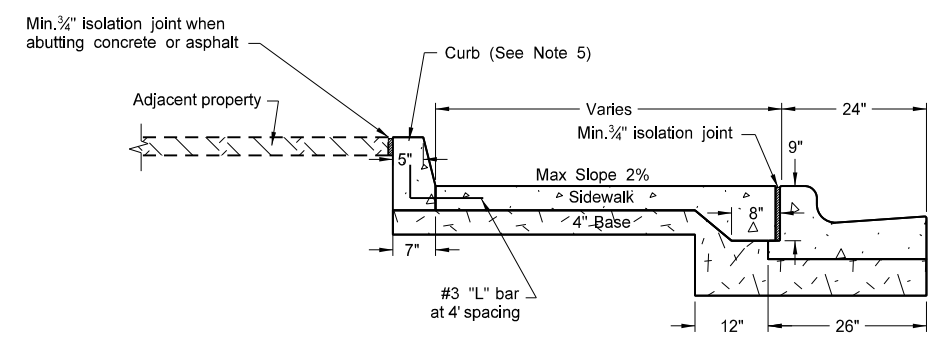
Vertical Discontinuities
(As needed for utility covers, vaults, grating, etc..)



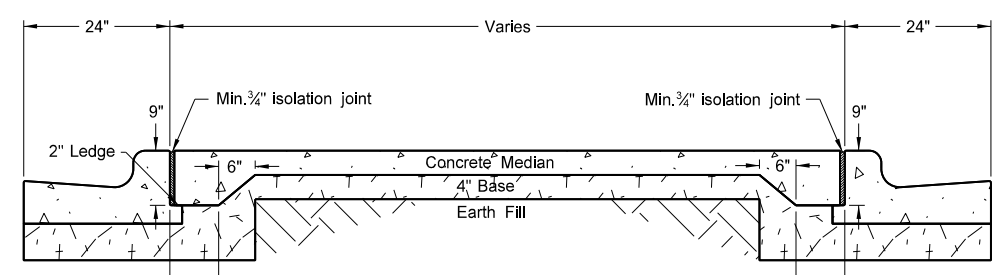
"L" Bar Detail
#3 Bar



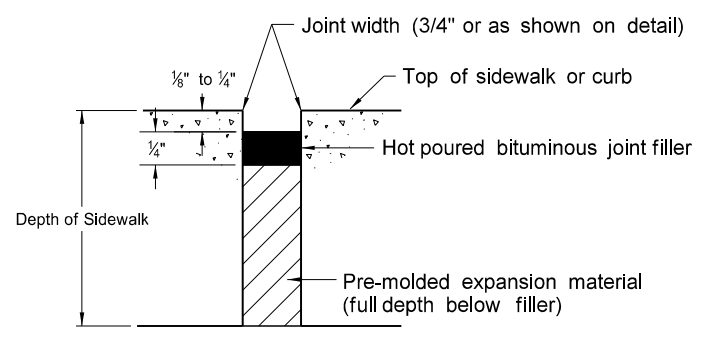
Sidewalk with Curb Detail
(Building face application)



Sidewalk with Curb Detail
(Adjacent property application)



Concrete Median Detail



Typical Isolation Joint Seal
(longitudinal and transverse)

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11-26-13	
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10-17-17	Updated to active voice.

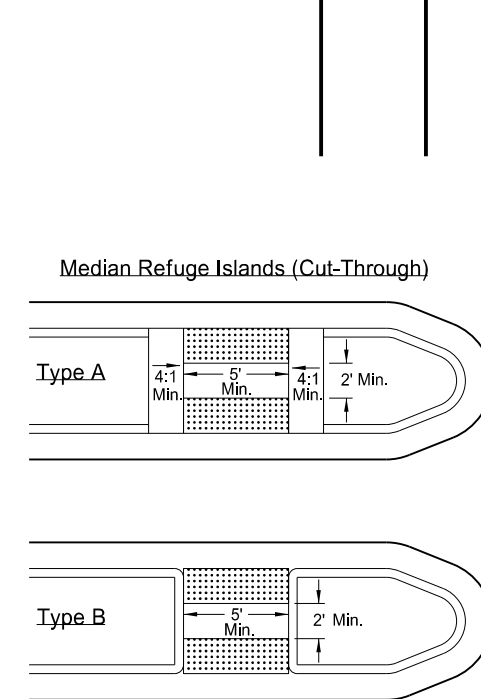
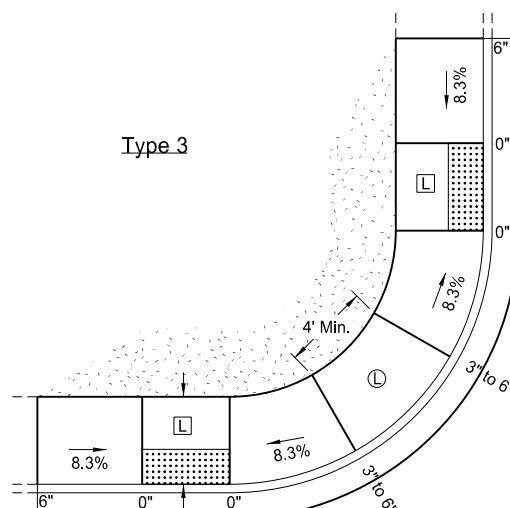
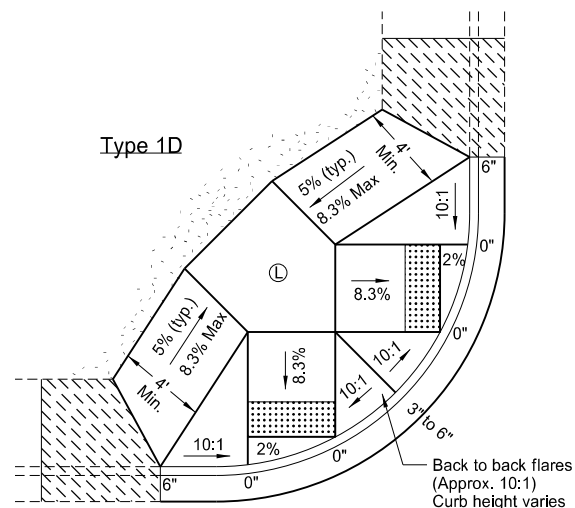
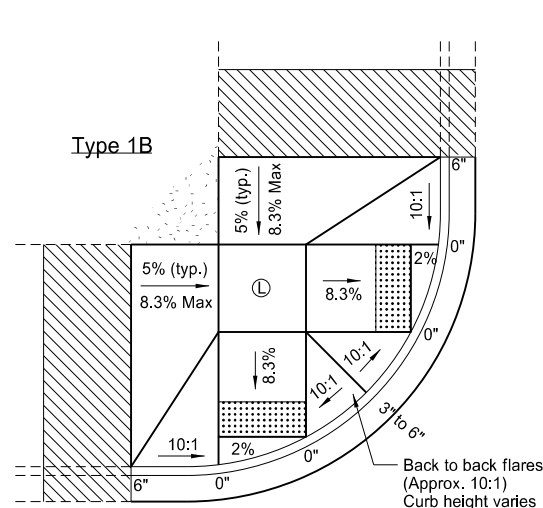
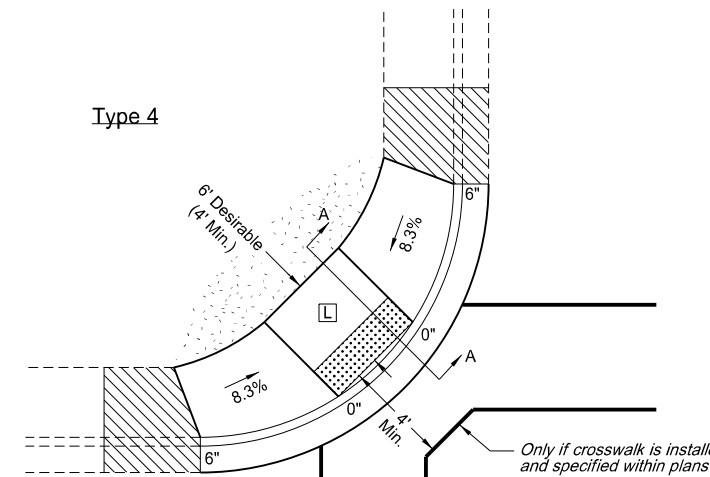
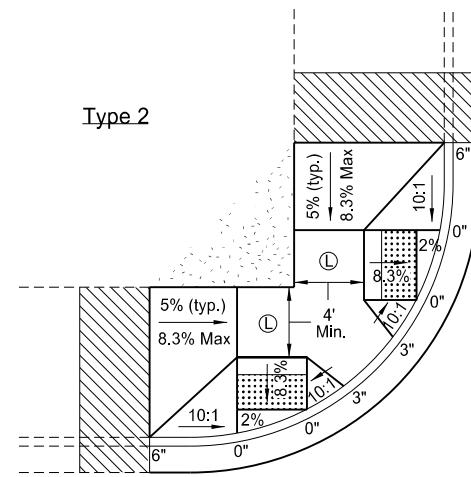
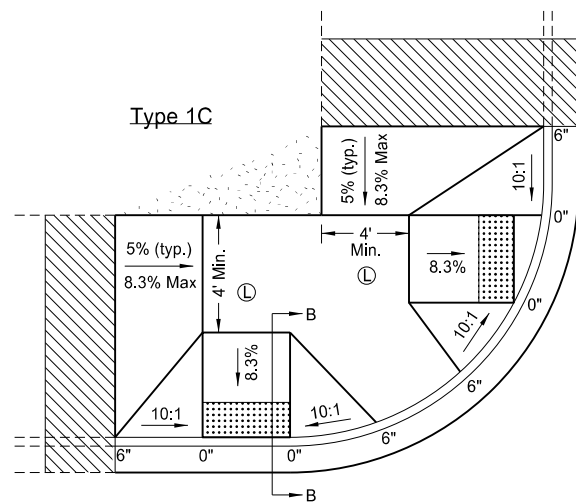
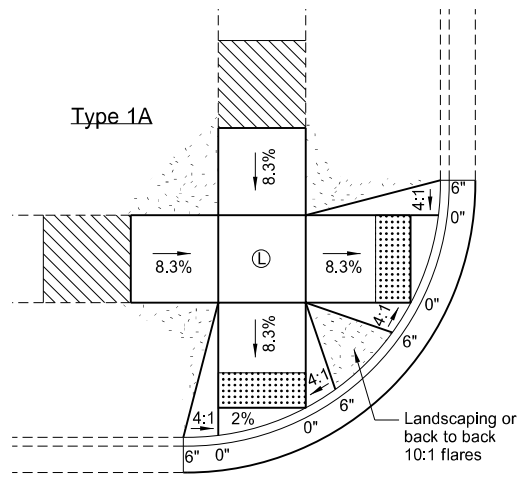
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CURB RAMP DETAILS

D-750-3

+More Right of Way

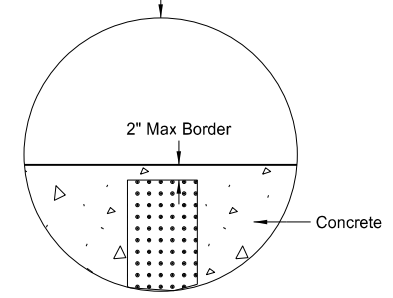
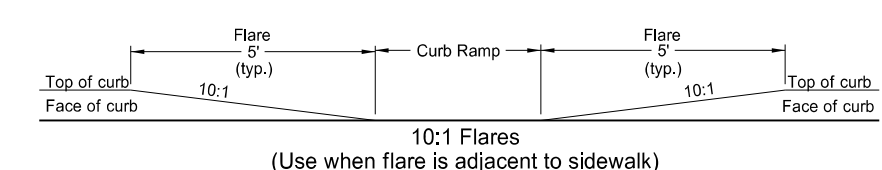
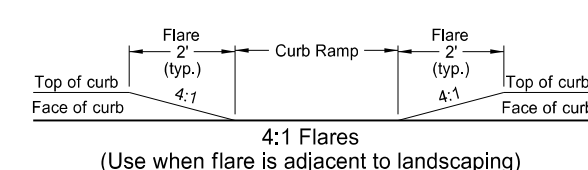
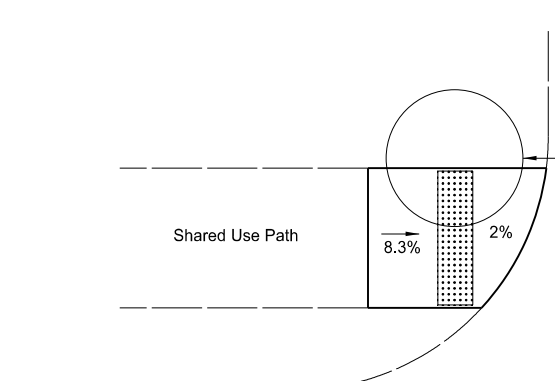
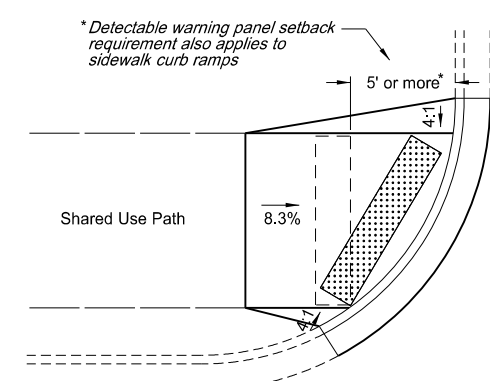
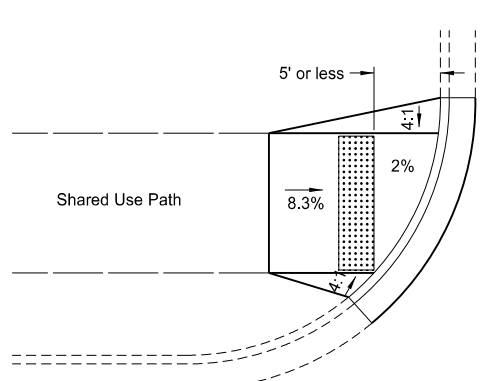
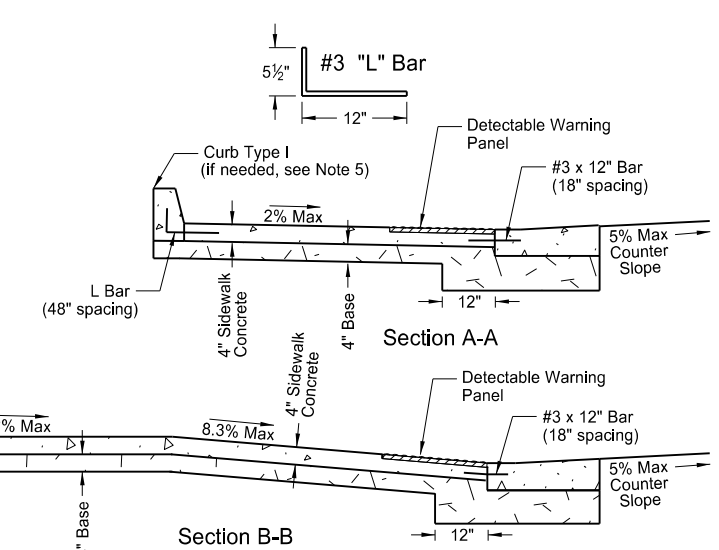
Less Right of Way



- NOTES:**
- Ramp width is the useable portion of the ramp, excluding flares. Match curb ramp width to existing sidewalk width. (4' minimum.) Match ramp width to existing shared use path width. Maximum ramp length is 15'.
 - Desirable landing size is 5' x 5' or larger. Minimum landing size is 4' x 4' with a max 2% slope in any direction.
 - Match detectable warning panel width to ramp width. Radial panels allowed. Locate detectable warning panel within the lower landing.
 - Provide a continuous 4' min width pedestrian access route with max 2% concrete cross slope, excluding flares.
 - Modify existing ground slope with landscaping, as needed. If not possible, such as adjacent buildings, use a vertical curb as shown in the detail below. The Engineer will measure curb at the unit price bid for "Curb - Type I" per lineal foot.

LEGEND:

- : Detectable Warning Panel
- : Landscaping
- : Transitional tie-in segment if needed for retrofits. Max grade slope 8.3%.
- : Upper Landing
- : Lower Landing
- 0", 3", or 6" : Curb Height
- 8.3% : All slopes shown are max grades. Use flatter slopes when possible.



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11-26-13	
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10-17-17	Updated to active voice.

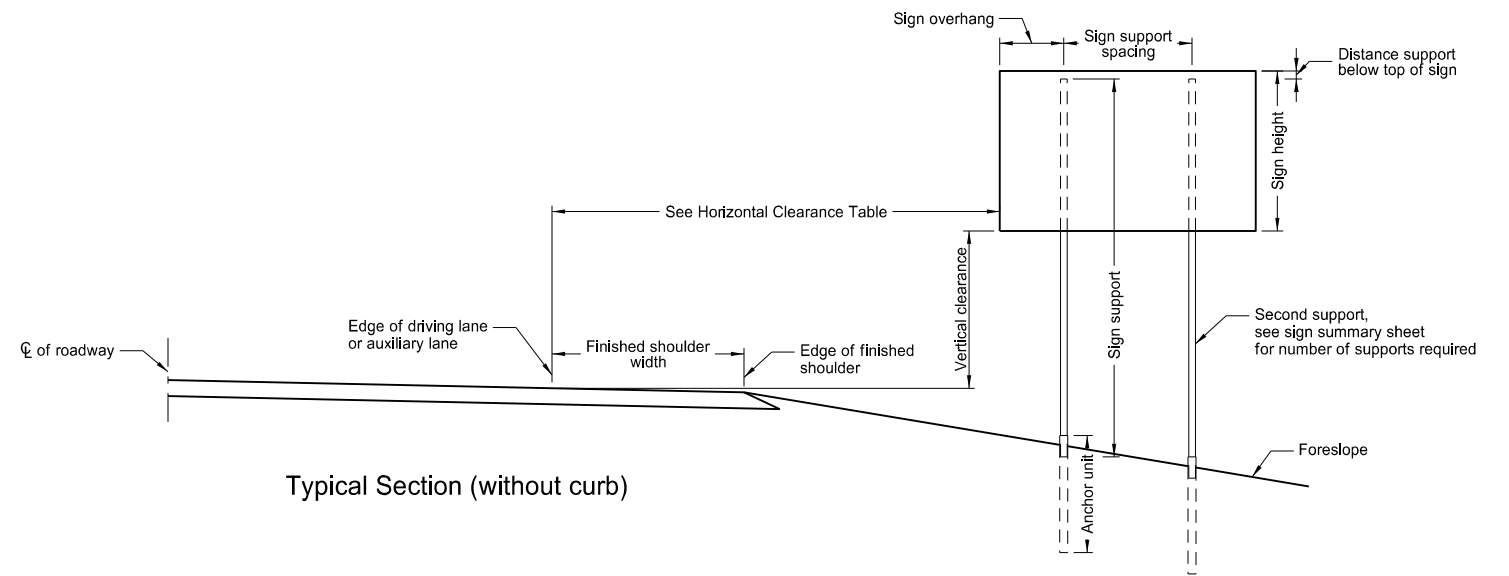
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PERFORATED TUBE ASSEMBLY DETAILS

D-754-23

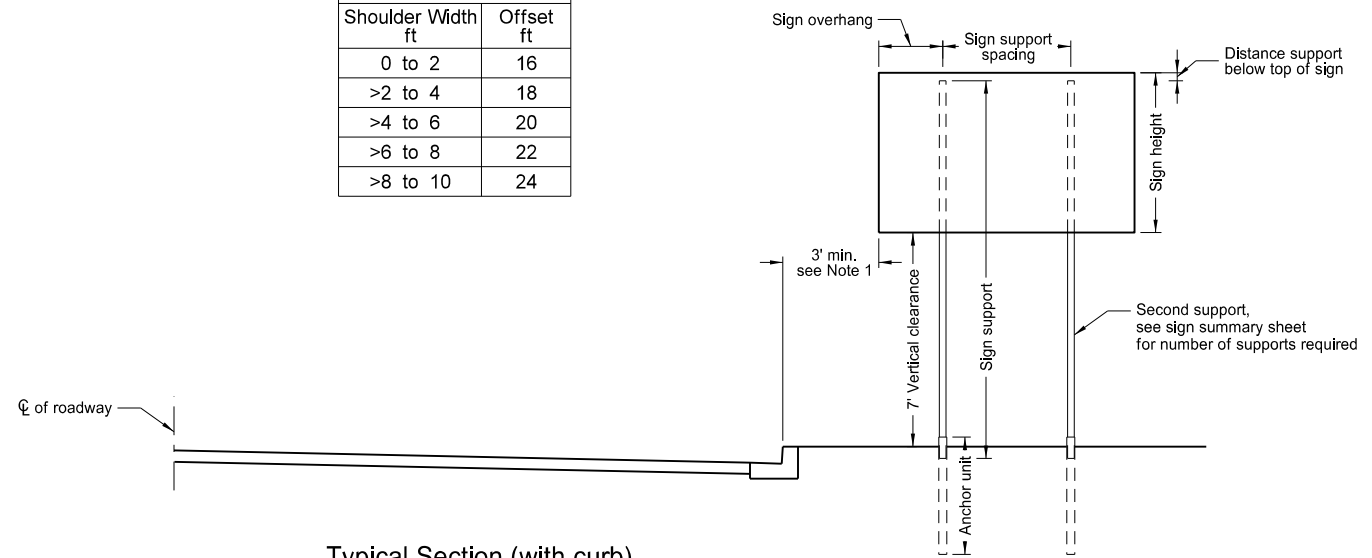
Notes:

1. Curbed Roadways: The clearance from the face of the curb should be 3' except where right of way or sidewalk width is limited, a minimum clearance of 2' shall be provided. The horizontal clearance may need to be increased to maintain a minimum sidewalk clear width of 4' from the sign support, not including any attached curb.
2. Minimum vertical clearance: Signs installed at the side of the road in rural districts shall be at least 5' measured from the bottom of the sign to the edge of the driving lane or auxiliary lane. Where parking or pedestrian movements occur, the clearance to the bottom of the sign shall be at least 7'.
- Signs on expressways shall be installed with a minimum height of 7'.
- Adopt-a-highway signs installed on Freeways shall be at least 7' above the edge of the driving lane.
- The vertical clearance shall have a maximum height of 6" above the vertical clearance specified above.
3. Offset signs: Where signs are placed at least 30 feet or more from the edge of the traveled way, the height to the bottom of such sign shall be 5' above the edge of the driving lane.
4. The clearance from edge of shared use path to edge of sign should be 3' except where width is limited, a minimum clearance of 2' shall be provided.

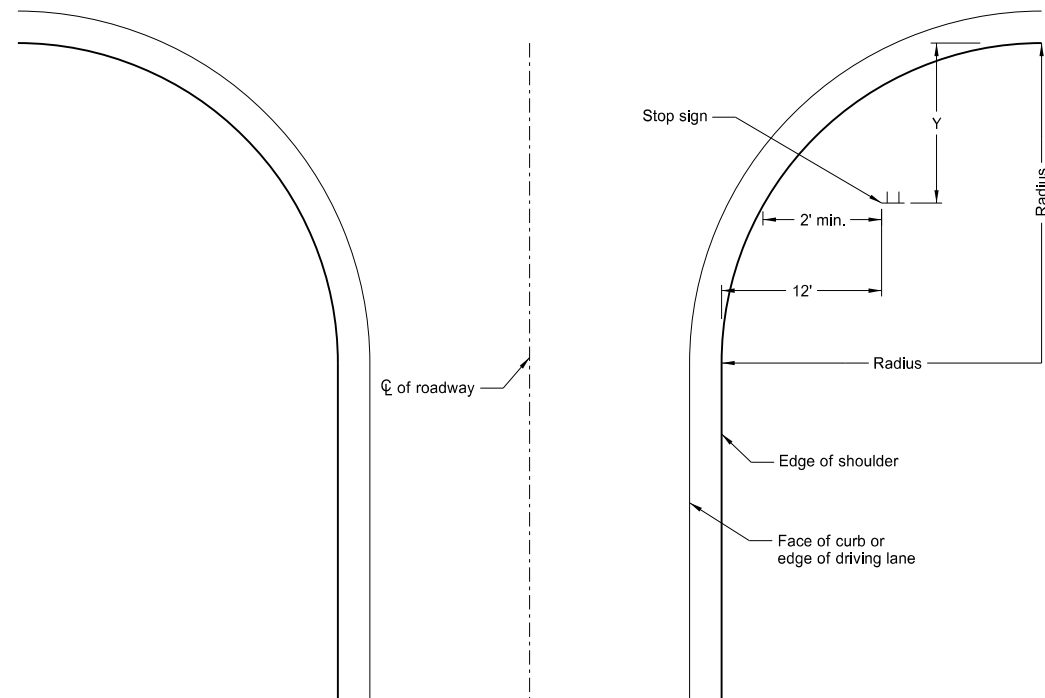


Typical Section (without curb)

Horizontal Clearance Table	
Shoulder Width ft	Offset ft
0 to 2	16
>2 to 4	18
>4 to 6	20
>6 to 8	22
>8 to 10	24



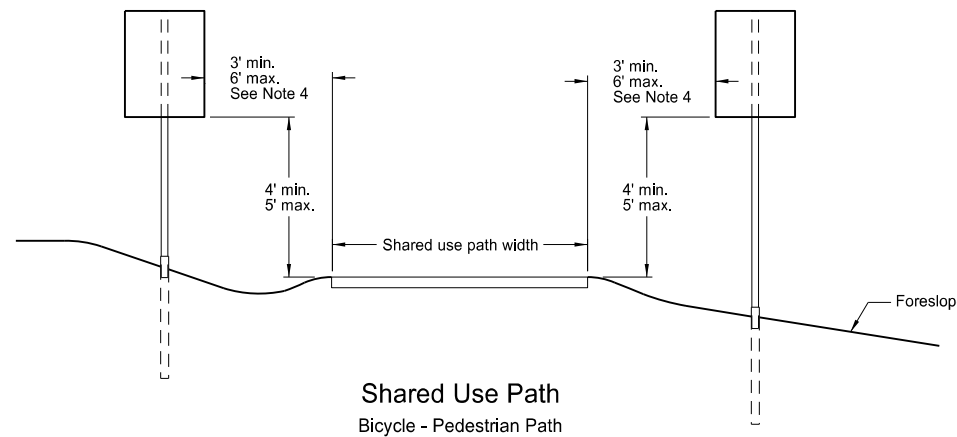
Typical Section (with curb)
Residential or Business District



Stop Sign Location
Wide Throat Intersection

This layout is to be used for the placement of "Stop" signs.

Radius ft.	Y-max. ft.	Y-min. ft.
40	50	15
45	50	18
50	50	21
55	50	25
60	50	28
65	50	32
70	50	35
75	50	39
80	50	43



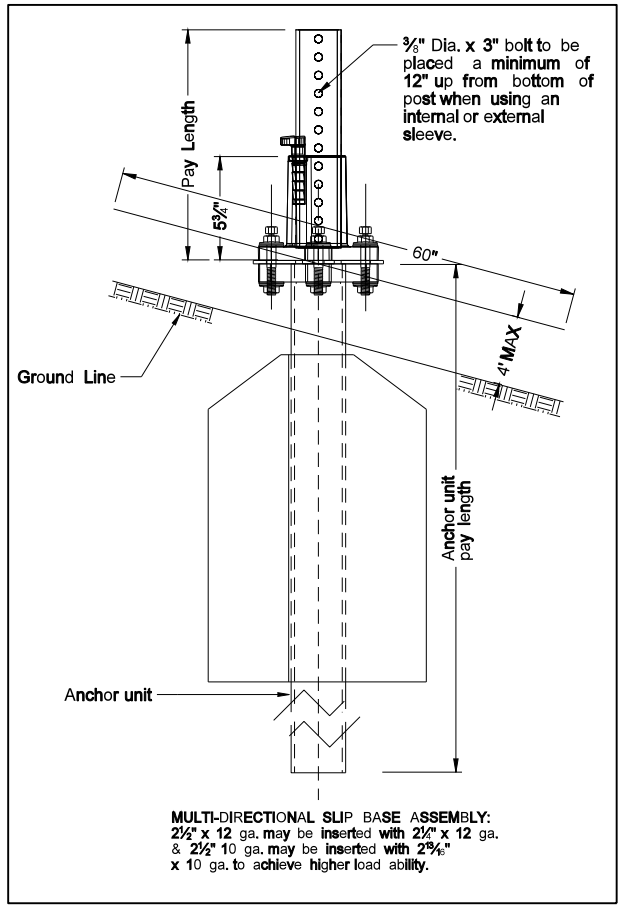
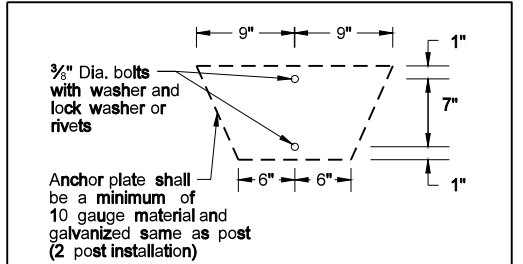
Shared Use Path
Bicycle - Pedestrian Path

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7-8-14	Revised note 2, added note 4.

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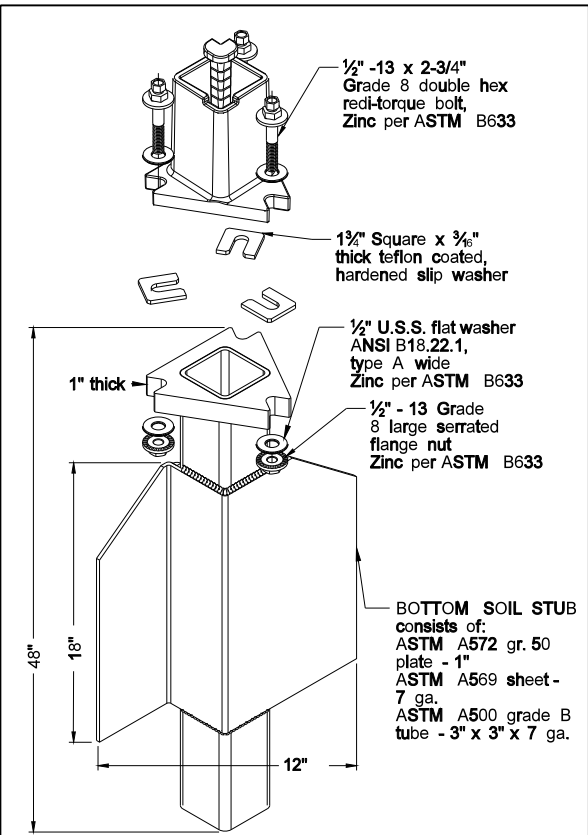
Number of Posts	Telescoping Perforated Tube		Slip Base	Anchor Size Without Slip Base In.	Anchor Wall Thickness Gauge	
	Post Size In.	Wall Thickness Gauge				
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1	2 1/2	12	No	2 1/2	12	
1	2 1/2	12	(B)	3(C)	7	
1	2 1/2	10	Yes		7	
1	2 1/2	12	2 1/2(D)	12	Yes	7
1	2 1/2	12	2 1/2	12	Yes	7
2	2 1/2	10	Yes		7	
2	2 1/2	12	2 1/2(D)	12	Yes	7
2	2 1/2	12	2 1/2	12	Yes	7
3 & 4	2 1/2	12	Yes		7	
3 & 4	2 1/2	10	Yes		7	
3 & 4	2 1/2	12	2 1/2	12	Yes	7
3 & 4	2 1/2	12	2 1/2(D)	12	Yes	7
3 & 4	2 1/2	10	2 1/2	10	Yes	7

(B) - The 2 1/2", 12 gauge posts do not need breakaway bases when placed in standard soils, but require a shim as specified by the manufacturer. The breakaway base is required when the support is placed in weak soils. The Engineer shall determine if the soils are weak. Weak soils are classified as boggy, wet, or loose soil areas.
 (C) - 3" anchor unit
 (D) - 2 1/2" x 12 ga. x 18" minimum length external sleeve required.

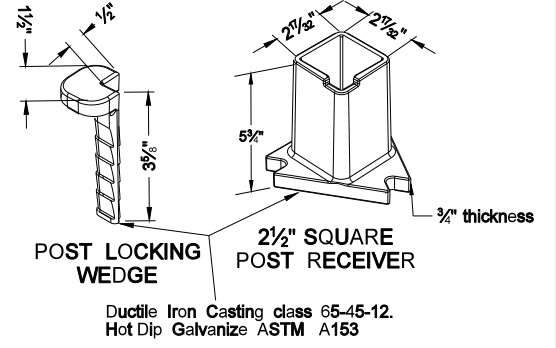


MULTI-DIRECTIONAL SLIP BASE ASSEMBLY:
 2 1/2" x 12 ga. may be inserted with 2 1/2" x 12 ga. & 2 1/2" 10 ga. may be inserted with 2 3/8" x 10 ga. to achieve higher load ability.

Mounting Details Perforated Tube



SLIP BASE FOR 2 1/2" POST

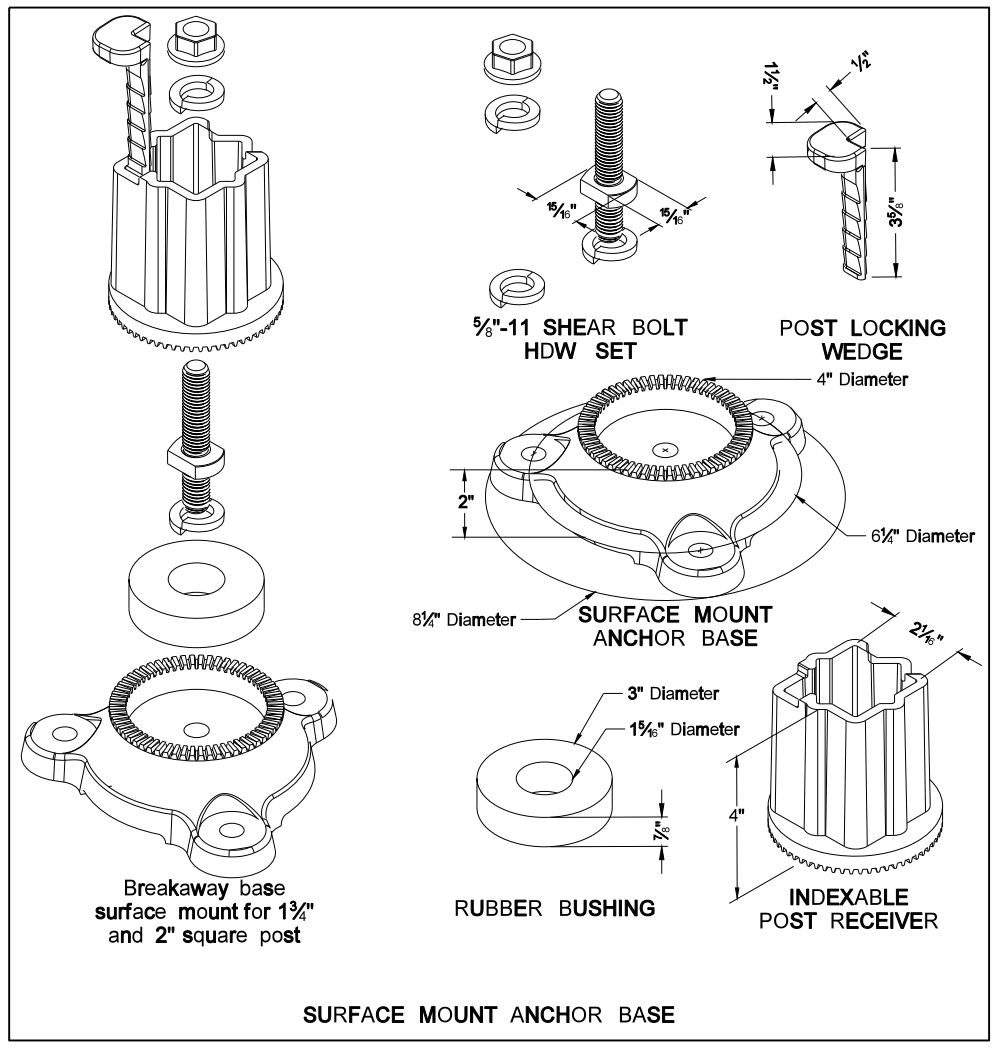


SLIP BASE DETAIL

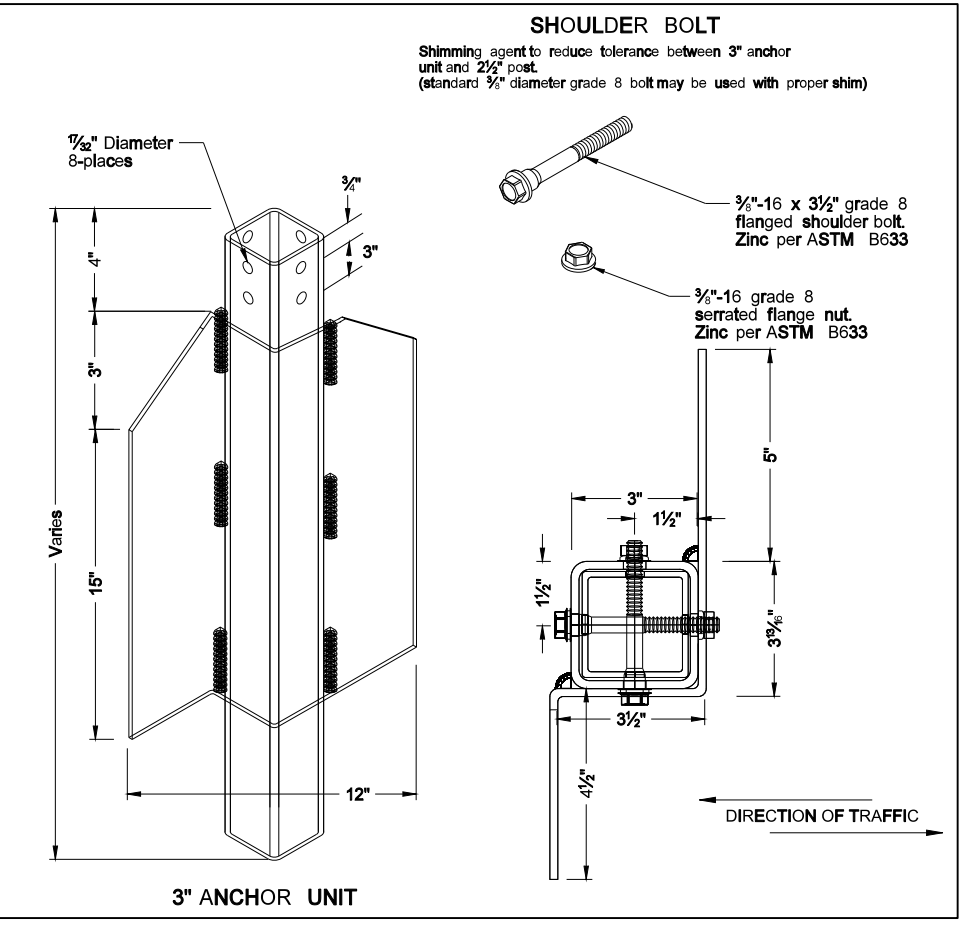
Properties of Telescoping Perforated Tubes							
Tube Size In.	Wall Thickness In.	U.S. Standard Gauge	Weight Per Foot Lus.	Moment of Inertia In. ⁴	Cross Sect. Area In. ²	Section Modulus In. ³	
1 1/2 x 1 1/2	0.105	12	1.702	0.129	0.380	0.172	
2 x 2	0.105	12	2.416	0.372	0.590	0.372	
2 1/2 x 2 1/2	0.105	12	2.773	0.561	0.695	0.499	
2 3/8 x 2 3/8	0.135	10	3.432	0.605	0.841	0.590	
2 1/2 x 2 1/2	0.105	12	3.141	0.804	0.803	0.643	
2 1/2 x 2 1/2	0.135	10	4.006	0.979	1.010	0.783	

The 2 3/8" size 10 gauge is shown as 2.19" size on the plans; The 2 1/2" size is shown as 2.51" size on the plans.

- NOTE:
- 4" Vertical clearance of anchor or breakaway base. The 4" x 60" measurement shall be made above and below post location and also back and ahead of post.
 - Anchor material shall be 7 gauge H.R.P.O. Commercial quality ASTM A569 and 3" x 3" x 7" gauge ASTM A500 grade B. Anchor shall have a yield strength 43.9 KSI and tensile strength of 59.3 KSI. Anchor shall be hot dipped galvanized per ASTM A123/153. All tolerances on anchor unit and slip base bottom assembly are +/- 0.005" unless otherwise noted.
 - When used in concrete sidewalk, anchor shall be the same concept without the wings.
 - Four post signs shall have over 8" between the first and fourth posts.
 - Installation procedures as per manufacturers recommendation.
 - Concrete fasteners for surface mount breakaway base shall be a minimum 1/2" diameter x 4" grade 8.



SURFACE MOUNT ANCHOR BASE



3" ANCHOR UNIT

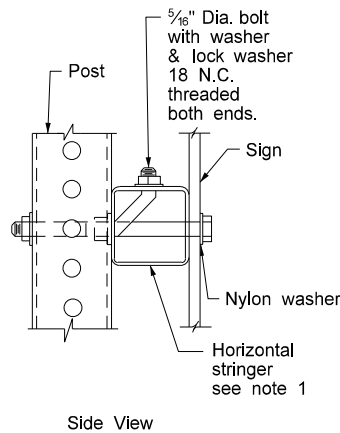
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
8-6-09	
REVISIONS	
DATE	CHANGE

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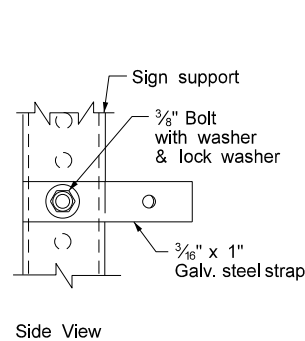
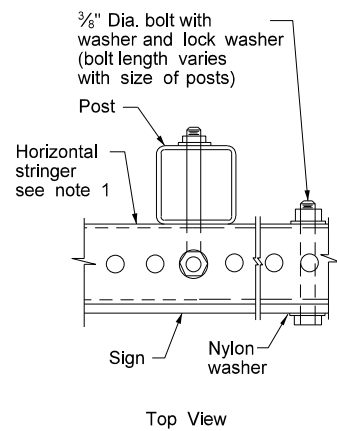
Mounting Details Perforated Tube

Note:

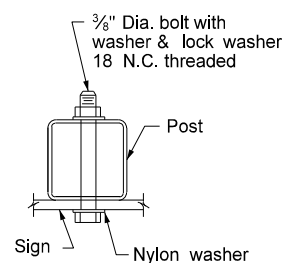
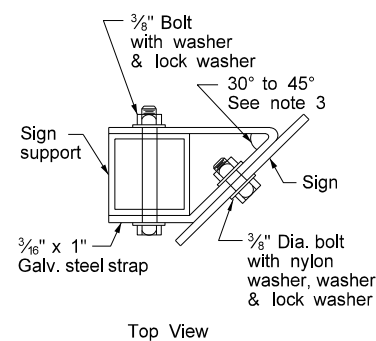
- Horizontal stringers - In lieu of perforated tubes, the contractor may substitute z bar stringers. The z bar stringers shall be 1½" x ¾" thick, 1.08 lbs./ft aluminum or 3.16 lbs./ft steel.
- Metal washers used on sign face shall have a minimum outside diameter of ⅝" ± ⅛" and 10 gauge thickness.
- No Parking Signs: All no parking signs with directional arrows shall be placed at a 30 to 45 degree angle with the line of traffic flow. No parking signs required at the above angles may have the support turned to the correct angle. If the no parking sign is placed with another sign that has to be placed at a 90 degree angle with the line of traffic flow, the detailed angle strap should be used to mount the no parking sign. Flat washers and lock washers shall be used with all nylon washers.
- In lieu of using the bent bolt to attach the post to the stringer, the contractor may choose to punch the sign backing and place the bolt through the sign, the stringer and the post.
- 4" vertical clearance of anchor or breakaway base. The 4" x 60" measurement shall be made above and below post location and also back and ahead of post.



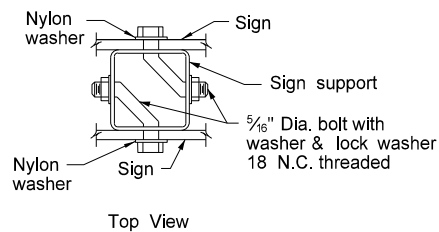
STRINGER MOUNTING
(WITH STRINGER IN FRONT OF POST)



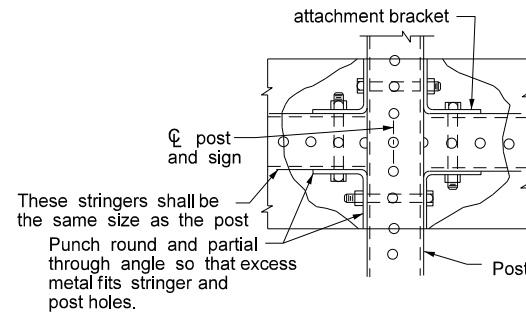
STRAP DETAIL



BOLT MOUNTING

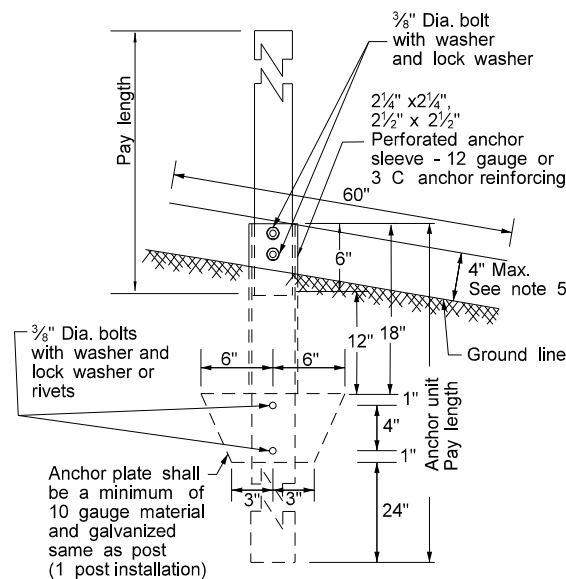


BACK TO BACK
MOUNTING

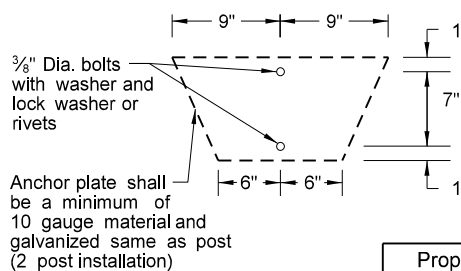


STREET NAME SIGNS
AND ONE WAY SIGNS
SINGLE POST ASSEMBLY
ONE STRINGER OR
BACK TO BACK MOUNTING

These stringers shall be the same size as the post Punch round and partial through angle so that excess metal fits stringer and post holes.



ANCHOR UNIT AND
POST ASSEMBLY



Anchor plate shall be a minimum of 10 gauge material and galvanized same as post (2 post installation)

Tube Size In.	Wall Thickness In.	U.S. Standard Gauge	Weight Per Foot Lbs.	Moment of Inertia In. ⁴	Cross Sect. area In. ²	Section Modulus In. ³
1½ x 1½	0.105	12	1.702	0.129	0.380	0.172
2 x 2	0.105	12	2.416	0.372	0.590	0.372
2¼ x 2¼	0.105	12	2.773	0.561	0.695	0.499
2⅜ x 2⅜	0.135	10	3.432	0.605	0.841	0.590
2½ x 2½	0.105	12	3.141	0.804	0.803	0.643
2½ x 2½	0.135	10	4.006	0.979	1.010	0.783

The 2⅜" size 10 gauge is shown as 2.19" size on the plans. The 2½" size is shown as 2.51" size on the plans.

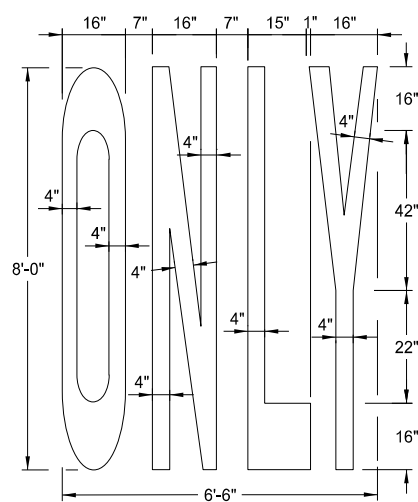
Number of Posts	Post Size In.	Wall Thickness Gauge	Sleeve Size In.	Wall Thickness Gauge	Slip Base	Anchor Size Without Slip Base In.	Anchor Wall Thickness Gauge
	1	2	12			No	2¼
1	2¼	12			No	2½	12
1	2½	12			(B)	3(C)	
1	2½	10			Yes		7
1	2¼	12	2½(D)	12	Yes		7
1	2½	12	2¼	12	Yes		7
2	2½	10			Yes		7
2	2¼	12	2½(D)	12	Yes		7
2	2½	12	2¼	12	Yes		7
3 & 4	2½	12			Yes		7
3 & 4	2½	10			Yes		7
3 & 4	2½	12	2¼	12	Yes		7
3 & 4	2¼	12	2½(D)	12	Yes		7
3 & 4	2½	10	2⅜	10	Yes		7

(B) - The 2½", 12 gauge posts do not need breakaway bases when placed in standard soils, but require a shim as specified by the manufacturer. The breakaway base is required when the support is placed in weak soils. The Engineer shall determine if the soils are weak. Weak soils are classified as boggy, wet, or loose soil areas.
(C) - 3" anchor unit
(D) - 2½" x 12 ga. x 18" minimum length external sleeve required.

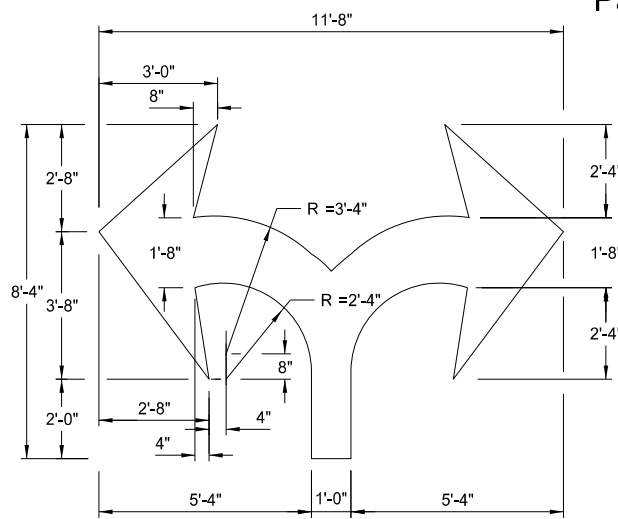
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
8-6-09	
REVISIONS	
DATE	CHANGE
7-8-14	Revised Note 3

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Registration Number
PE- 2930 ,
on 7/8/14 and the original document is stored at the North Dakota Department of Transportation

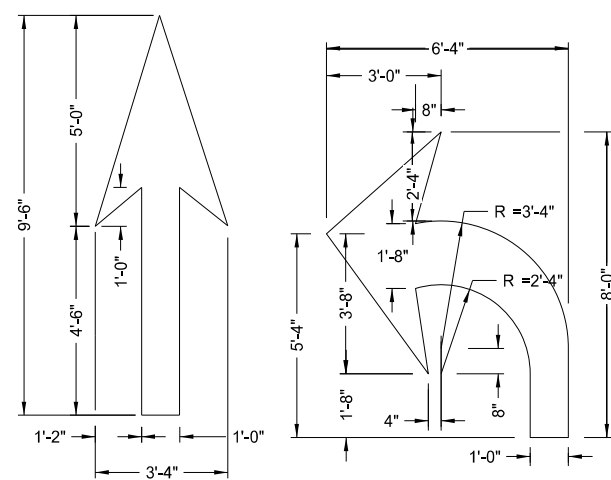
Pavement Marking Message Details



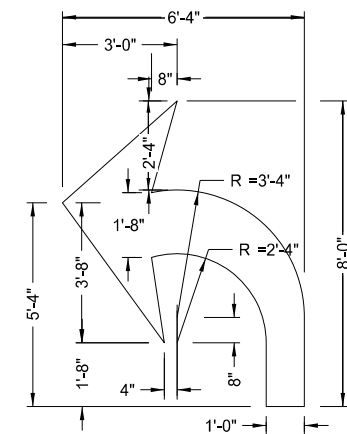
22 S. F.



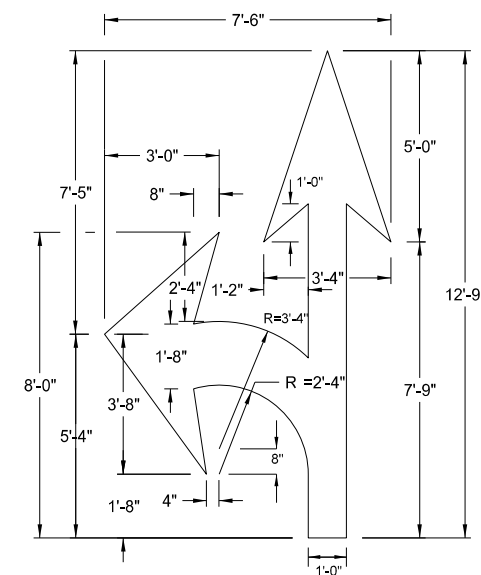
29 S. F.



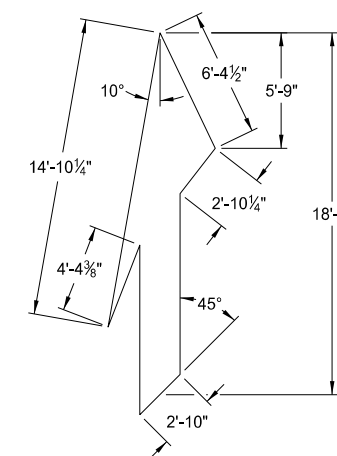
12 S. F.



16 S. F.



27 S. F.

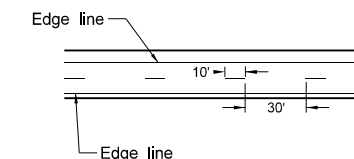


41 S. F.

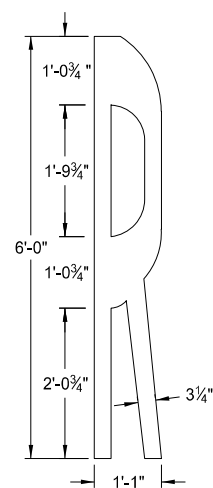
Note: Rotate merge arrow 20° from edge of roadway.

Speed Limit	Chevron Width	Chevron Spacing 45° to Traffic
0-25 mph	8"	5'
30-40 mph	8"	15'
45 mph and above	12"	25'

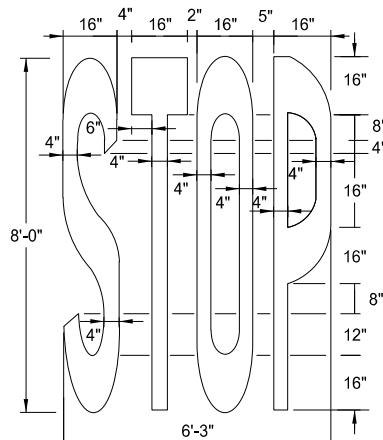
Chevron Crosshatching Table



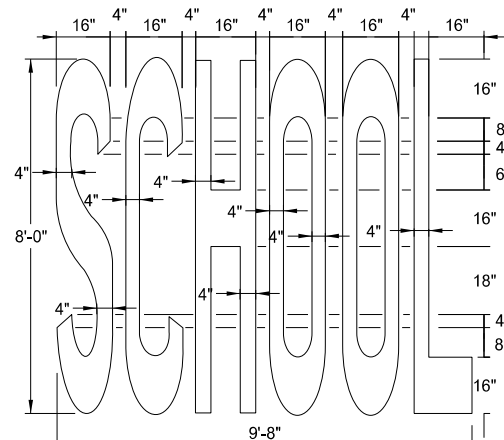
Centerline Pavement Marking Skip Spacing Detail



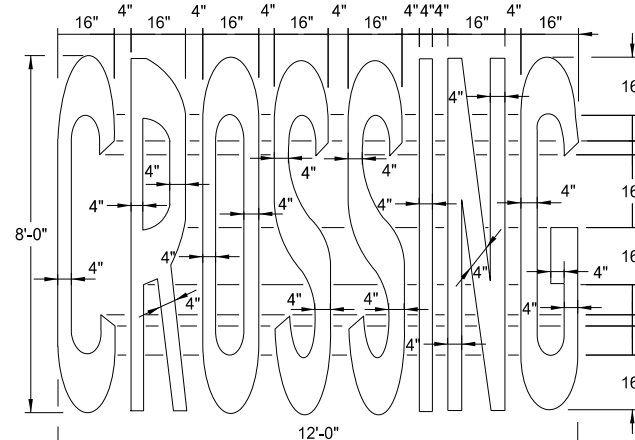
4 S. F.



22 S. F.

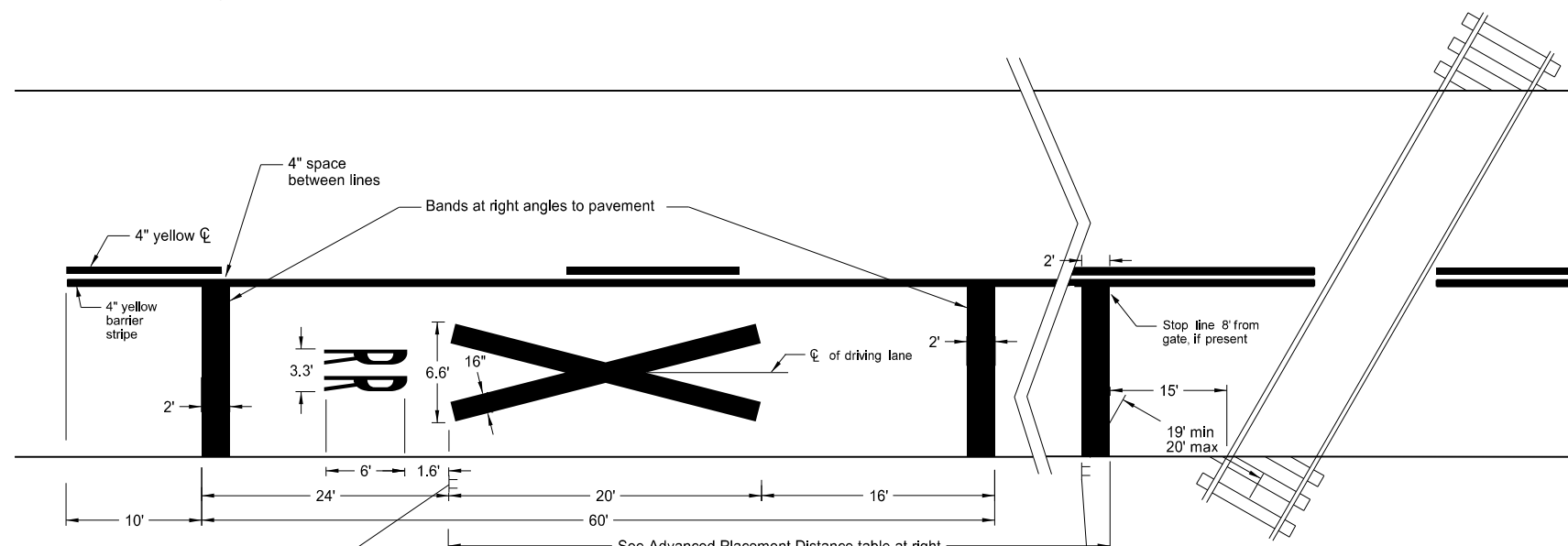


34.5 S. F.

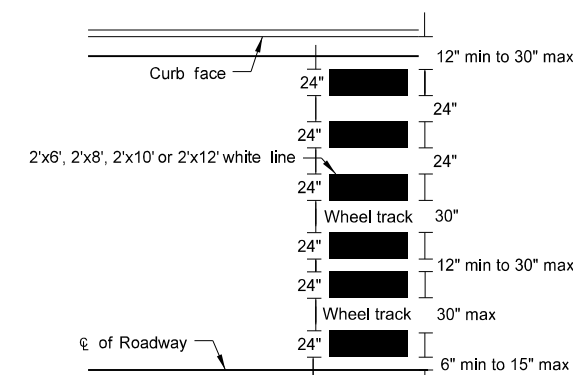


46 S. F.

Advance Placement Distance for Railroad Warning Signs	
Posted or 85th Percentile Speed	Advance Distance
20 mph	min. 100 ft
25 mph	min. 100 ft
30 mph	min. 100 ft
35 mph	min. 100 ft
40 mph	125 ft
45 mph	175 ft
50 mph	250 ft
55 mph	325 ft
60 mph	400 ft
65 mph	475 ft
70 mph	550 ft



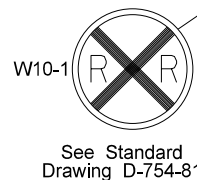
Railroad cross & 2 R's 60.5 S.F.
3 Bands (12' lane) 72 S.F.



Continental Crosswalk Detail

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
12-6-11	
REVISIONS	
DATE	CHANGE
10-17-17	Updated to active voice.

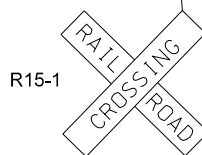
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See Standard Drawing D-754-81

Notes:
Mark a three lane roadway with a centerline for two-lane approach operation on the approach to a crossing. On multi-lane roads, extend the transverse bands across all approach lanes, and use individual R X R symbols in each approach lane.

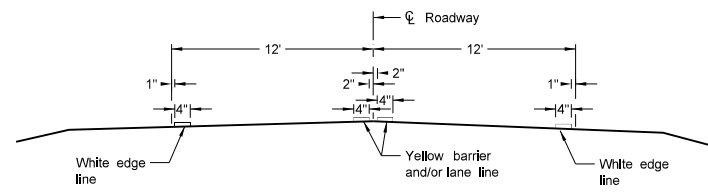
See plans for correct message. Use white pavement markings unless noted otherwise.



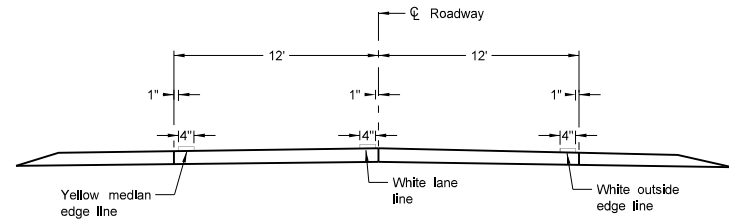
R15-1

PAVEMENT MARKING

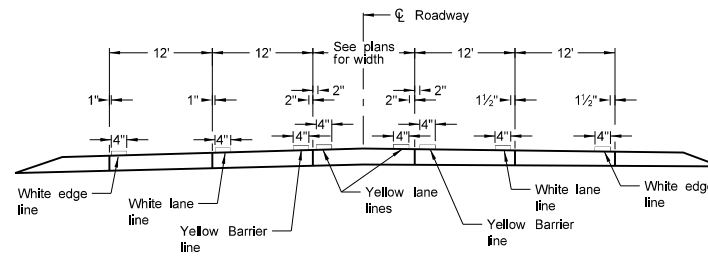
D-762-4



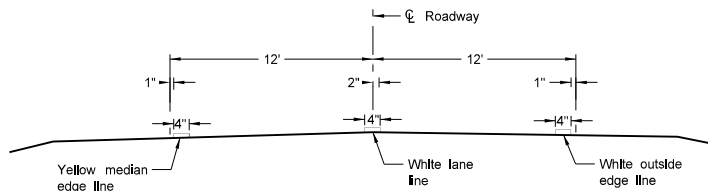
Two Lane Two Way
RURAL ROADWAY



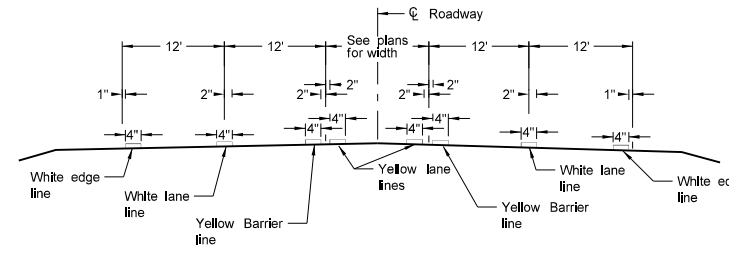
Two Lane Roadway
INTERSTATE HIGHWAY
Concrete Section



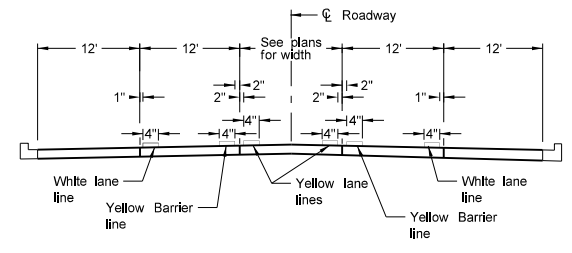
RURAL FIVE LANE ROADWAY
Concrete Section



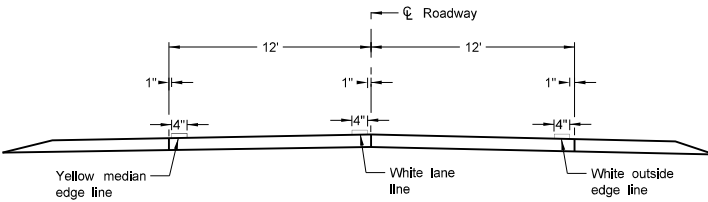
Two Lane Divided
Rural Roadway
PRIMARY HIGHWAY
Asphalt Section



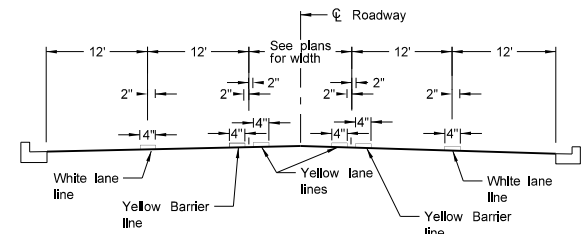
RURAL FIVE LANE ROADWAY
Asphalt Section



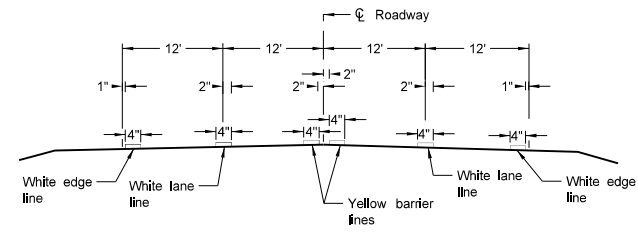
URBAN FIVE LANE SECTION
Concrete Section



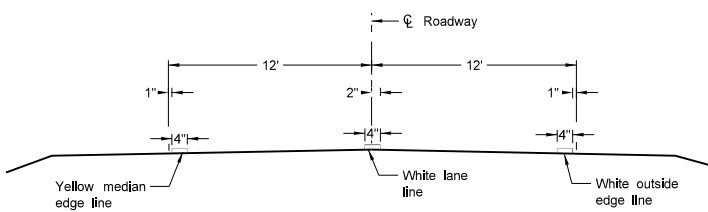
Two Lane Roadway
PRIMARY HIGHWAY
Concrete Section



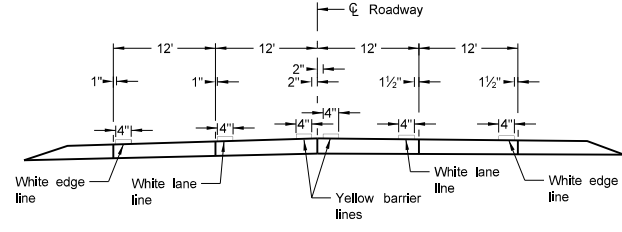
URBAN FIVE LANE SECTION
Asphalt Section



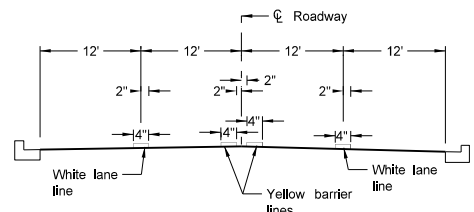
RURAL FOUR LANE ROADWAY
Asphalt Section



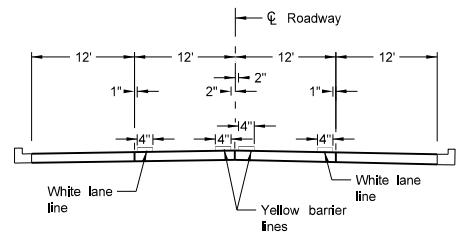
Two Lane Roadway
INTERSTATE HIGHWAY
Asphalt Section



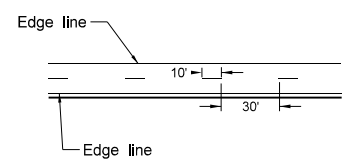
RURAL FOUR LANE ROADWAY
Concrete Section



URBAN FOUR LANE SECTION
Asphalt Section



URBAN FOUR LANE SECTION
Concrete Section



CENTERLINE PAVEMENT MARKING SKIP SPACING DETAIL

NOTES:
1. Edge lines shall be continued through private drives and field drives and broken for intersections.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
12-1-10	
REVISIONS	
DATE	CHANGE

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