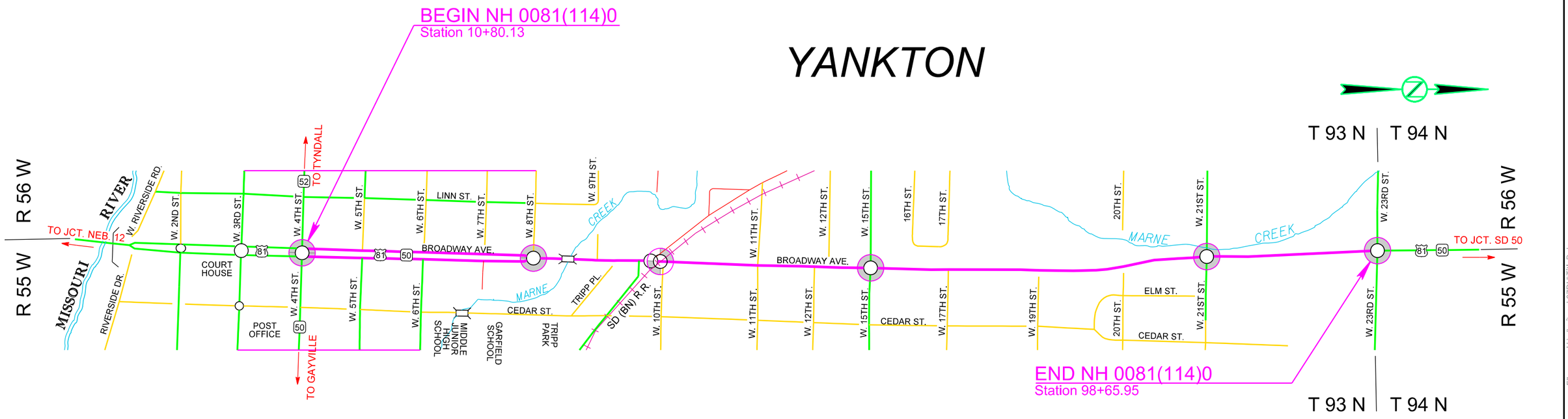
SECTION B: GRADING PLANS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B1	B38

Plotting Date: 03/22/2024

INDEX OF SHEETS

B1	General Layout with Index
B2-B4	Estimate with General Notes & Tables
B5	Table of Pavement, Curb and Gutter, and Sidwalk Quantities
B6	Horizontal Alignment Data
B7	Control Data
B8	Legend
B9-B14	Plan and Profile Sheets
B15-B22	Curb Ramp with Curb and Gutter Layouts
B23-B37	Standard Plates



SECTION B ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3220	Reestablish Right-of-Way and Property Corner	15	Each
009E3230	Grade Staking	0.141	Mile
009E3250	Miscellaneous Staking	0.070	Mile
009E3280	Slope Staking	0.070	Mile
009E4200	Construction Schedule, Category II	Lump Sum	LS
110E0300	Remove Concrete Curb and/or Gutter	1,722	Ft
110E0400	Remove Drop Inlet	4	Each
110E1010	Remove Asphalt Concrete Pavement	1.3	SqYd
110E1100	Remove Concrete Pavement	543.0	SqYd
110E1140	Remove Concrete Sidewalk	1,175.9	SqYd
250E0020	Incidental Work, Grading	Lump Sum	LS
260E2010	Gravel Cushion	287.4	Ton
320E1200	Asphalt Concrete Composite	0.2	Ton
380E0080	9.5" Nonreinforced PCC Pavement	547.4	SqYd
380E3540	8" PCC Approach Pavement	396.0	SqYd
380E4080	9.5" PCC Fillet Section	623.5	SqYd
380E6110	Insert Steel Bar in PCC Pavement	1,143	Each
450E0122	18" RCP Class 2, Furnish	4	Ft
450E0130	18" RCP, Install	4	Ft
450E0142	24" RCP Class 2, Furnish	36	Ft
450E0150	24" RCP, Install	36	Ft
450E0416	24" RCP Bend, Furnish	1	Each
450E0417	24" RCP Bend, Install	1	Each
462E0100	Class M6 Concrete	17.0	CuYd
480E0100	Reinforcing Steel	2,866	Lb
650E0095	Type B69.5 Concrete Curb and Gutter	1,074	Ft
650E0395	Type BL69.5 Concrete Curb and Gutter	499	Ft
650E4695	Type P9.5 Concrete Gutter	24	Ft
651E0040	4" Concrete Sidewalk	11,367	SqFt
651E0740	4" Reinforced Colored Concrete Sidewalk	187	SqFt
651E7000	Type 1 Detectable Warnings	660	SqFt
670E5340	4' x 11' Precast Concrete Type S Drop Inlet Lid	4	Each
671E6007	Type A7 Manhole Frame and Lid	1	Each
998E0100	Railroad Protective Insurance	Lump Sum	LS

UTILITIES

The Contractor will be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, might be relocated or replaced by a new utility facility during the construction of this project, or might not require adjustment and may remain in its current location. The Contractor will contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided elsewhere in the plans or bidding documents.

Prior to excavation in or adjacent to BNSF (Burlington Northern Santa Fe) Railway ROW and in conjunction with contacting the SD One-Call, the Contractor will call the BNSF Utility Locate number 1-800-533-2891.

US81 & 15th Street Utility Adjustment
A 2" plastic gas line exists in the northwest quadrant of US81 & 15th Street at the location of Signal Pole C2. MidAdmerican Energy Company will adjust the gas week prior to signal footing install. The Contractor will notify MidAdmerican Energy Company 4 weeks before the installation of the signal pole footing. The MidAdmerican Energy Company contact is

Nicolle Rasmusson
MidAmerican Energy Company
1200 South Blauvelt Ave.
Sioux Falls, SD 57105
Phone – (605) 373-6081

RAILROAD CONSTRUCTION

Construction to the railroad will be done by a separate contractor. The Contractor will need to coordinate with the railroad.

TABLE OF DROP INLET REMOVAL

All costs for removal of the frame and grate assembly will be incidental to the contract unit price per each for "Remove Drop Inlet".

Station	L/R	Quantity (Each)
42+23	R	1
42+41	L	1
84+11	R	1
84+22	R	1
	Total:	4

ASPHALT REMOVAL

The general limits of asphalt removal are 1 foot beyond the proposed curb and gutter and or fillet. This limit was used as the basis for the estimated quantity of "Remove Asphalt Concrete Pavement".

SIDEWALK REMOVAL

The limits of the sidewalk removal shown in these plans are approximate. The limits should be adjusted to meet field conditions (i.e. joint lines) and to ensure that the new curb ramps meet the slope and grade requirements

PUBLIC LANDS SURVEY SYSTEM, RIGHT OF WAY, AND PROPERTY CORNERS

The Contractor will have a Land Surveyor, licensed in the State of South Dakota, to set, reestablish or verify public land survey system (PLSS) corners, right of way (ROW) corners, and property corners as directed by the appropriate SDDOT Region Land Surveyor. It is estimated that 15 ROW and property corners will be set, reestablished, or verified for this project. The Contractor's Land Surveyor, under the direction of the Region Land Surveyor, will set, reestablish, or verify all corner monuments after surfacing and fencing operations are completed in accordance with the PUBLIC LANDS SURVEY SYSTEM CORNERS section and the RIGHT OF WAY AND PROPERTY CORNERS section in Chapter 8 of the SDDOT Survey Manual.

< https://dot.sd.gov/doing-business/engineering/design-services/surveyors >

All costs associated with furnishing and installing PLSS caps, rebar, and all other materials associated with setting, reestablishing, or verifying PLSS, ROW corners, and property corners in accordance with the SDDOT Survey Manual will be incidental to the contract unit price per each for "Reestablish Public Land Survey System Corner" and/or "Reestablish Right-of-Way and Property Corner".

INCIDENTAL WORK, GRADING

Station	Remarks
42+20-42' R to 42+24-32' R	Take Out 18"-10' RCP
42+40-32' L to 42+40-42' L	Take Out 18"-12' RCP
84+07-56' R to 84+24-47' R	Take Out 24"-18' RCP
84+07-56' R to 84+23-94' R	Take Out 24"-18' RCP

STORM SEWER

Reinforced concrete pipe may be bell and spigot. The pipe sections will be adjoined such that the ends are fully entered and the inner surfaces are reasonably flush and even.

Lift holes in the reinforced concrete pipe will be plugged with grout.

Watertight joints are required for reinforced concrete pipe, drop inlets, manholes, and junction boxes where storm sewers run parallel to and within 10 feet horizontally from existing or proposed water mains.

Watertight joints are required where reinforced concrete pipes, drop inlets, manholes, or junction boxes cross water mains and are separated a distance of 18 inches or less, above or below, the water main.

If watertight joints are required then the watertight joints will extend for a distance of 10 feet beyond the water main. This measurement will be from the sealed concrete joint to the outer most surface of the water main.

Watertight joint seals will conform to the following requirements:

1. Reinforced Concrete Pipe (Circular): Gasketed pipe will conform to the requirements of ASTM C443 and the gasket will be in conformance with Section 990 of the Specifications. Non-gasketed concrete pipe will be sealed with a mastic joint seal conforming to the requirements of ASTM C990 and encased with a minimum 2-foot wide by 6-inch thick M6 concrete collar reinforced with 6x6 W2.9 x W2.9 wire mesh.

2. Reinforced Concrete Pipe (Arch): Gasketed pipe will conform to the requirements of ASTM C443 and the gasket will be in conformance with Section 990 of the Specifications. Non-gasketed concrete pipe joints will be sealed with a hydrophilic flexible water stop seal and wrapped with a 1-foot wide strip of fabric above the cradle. The fabric will conform to the requirements of Section 831 of the Specifications for Type A Drainage Fabric. The hydrophilic flexible water stop will be from the list below.

3. Drop Inlets, Manholes, and Junction Boxes: Joints will be sealed with one of the following methods:

   A. A flexible strip seal placed in the joints conforming to the requirements of ASTM C990 and the perimeter encased with a minimum 2-foot wide by 6-inch thick M6 concrete collar reinforced with 6x6 W2.9 x W2.9 wire mesh.

   B. A hydrophilic flexible water stop seal placed in the joints and a 1-foot wide strip of fabric wrapped around the perimeter of the pipe. The fabric will conform to the requirements of Section 831 of the Specifications for Type A Drainage Fabric. The hydrophilic flexible water stop will be from the list below.

   C. A self-adhesive external joint seal wrap. The seal wrap will be from the list below.

Approved List of Self-adhesive Joint Wrap

Product	Manufacturer
Mar Mac Seal Wrap	Mar Mac Construction Products McBee, SC 843-335-5909 www.marmac.com
ConWrap CS-212	Concrete Sealants, Inc. Tipp City, OH 800-332-7325 http://www.conseal.com

Approved List of Hydrophilic Flexible Water Stop Seal:

Product	Manufacturer
Waterstop RX	Cetco Hoffman Estates, IL 800-527-9948 www.cetco.com
Conseal CS-231	Concrete Sealants, Inc. Tipp City, OH 800-332-7325 http://www.conseal.com

Gaskets and seals (mastic, waterstop, and seal wraps) will be installed in accordance with the Manufacturer's recommendations.

The cost for furnishing and installing all gaskets, mastic joint seal, water stop seal, seal wrap, concrete collars, and for plugging the lift holes will be incidental to the contract unit price per foot for the corresponding pipe contract item.

CONCRETE PIPE CONNECTIONS

Pipe connections to existing pipes, manholes, junction boxes, and drop inlets will be done by breaking a hole into the existing structure and inserting the pipe. A concrete collar will then be poured around the pipe in the area of the connection.

When it is not possible to use a normal pipe joint (male-female ends), connections to existing pipe will be made by placing a 2' wide by 6" thick M6 concrete collar around the outside of the connection. The concrete collar will be reinforced with 6x6 W2.9 x W2.9 wire mesh.

All costs for constructing the concrete collars including materials and labor will be incidental to the contract unit price per foot for the corresponding pipe contract item.

DROP INLETS

Where drop inlets are constructed within areas of curb and gutter, the Contractor will construct weep holes of at least 3 inches in diameter in the drop inlet walls. The weep holes will be constructed at the same elevation as the adjacent top of the earthen subgrade and will be maintained clean and open at all times until the permanent surfacing is placed. The drop inlets will be covered throughout construction operations as necessary with an Engineer approved cover to provide safe travel for motorists and to prevent materials from entering the storm sewer system. After the permanent surfacing has been placed, the Contractor will seal the weep holes with grout and remove all debris from the drop inlet. All costs involved with the coverings, weep holes, and removing debris from the drop inlets will be incidental to the contract unit prices for the components of the drop inlets.

The plan shown quantities of the drop inlet components such as Class M6 Concrete, Reinforcing Steel, Precast Drop Inlet Collar, and Precast Concrete Type S Drop Inlet Lid will be the basis of payment for these items.

If additions or reductions to the number of drop inlets are ordered by the Engineer, payment for the components required to construct the drop inlets will be made at the contract unit prices for the components of the drop inlets.

TABLE OF DROP INLETS AND QUANTITIES

Station	L / R	Drop Inlet Size	Drop Inlet Type	Class M6 Concrete (CuYd)	Reinf. Steel (Lb)	Frame and Grate/Lid Type
42+23.11	R	4'x11'	S	4.20	701	S
42+40.71	L	4'x11'	S	4.17	737	S
84+07.11	R	4'x11'	S	1.91	233	S
84+23.21	R	4'x11'	S	1.55	175	S
			Totals:	11.83	1846	4

Total 4'x11' Precast Concrete Type S Drop Inlet Lid 4

TABLE OF JUNCTION BOXES AND QUANTITIES

Station	L/R	Size L'xW'xH'	Frame and Lid (Type)	Class M6 Concrete (CuYd)	Reinforcing Steel (Lb)
42+41.05	L	5'x5'x6'6"	A7	5.18	1020
			Totals:	5.18	1020

Total Type A7 Manhole Frame and Lid 1

TABLE OF REINFORCED CONCRETE PIPE & PIPE BEND

Station to Station	Size	Length	Each
42+40.71-33.81' L to 42+41.05-43.47' L	18"	4'	
84+07.11-55.99' R to 84+24.19-47.06' R	24"	18'	
84+07.11-55.99' R to 84+23.21-93.62' R	24"	18'	
84+24.19 R (Long Radius Pipe Bend)	24"		1

RESTORATION OF GRAVEL CUSHION

An inspection of the gravel cushion subgrade will be made after removing concrete from each pavement replacement area and areas of new curb and gutter. Areas of excess moisture will be dried to the satisfaction of the Engineer. Loose material will be removed. Each replacement area will be leveled and compacted to the satisfaction of the Engineer.

If additional gravel cushion material is required, the Contractor will haul, place and compact gravel cushion to the satisfaction of the Engineer at the contract unit price for "Gravel Cushion".

CONCRETE CURB & GUTTER, SIDEWALK, DRIVEWAY PAVEMENT AND FILLET SECTIONS

Concrete curb and gutter, sidewalk, driveway pavement and fillet sections will be constructed as detailed in these plans or as directed by the Engineer. If the end of any concrete section to be removed does not fall on existing joint, a sawed joint (3" to 4" deep) will be made to provide a vertical face with the new joint.

Existing foundation material will be shaped and compacted to a firm, uniform bearing surface, conforming to the existing section or established grades as set by the Engineer. Unsuitable foundation material will be removed and replaced as directed. Cost for labor, equipment, material and incidentals required for excavation and providing cushion material will be at the contract price for "Gravel Cushion".

The Contractor will satisfactorily shape restore all disturbed areas adjacent to concrete placement to the satisfaction of the Engineer. All costs to shape and restore all disturbed areas (Excluding the Erosion Control bid items) will be incidental to the contract unit prices for the various items.

CONCRETE CURB & GUTTER, CONCRETE CURB, AND CONCRETE SIDEWALK

Payment for "B69.5 Concrete Curb and Gutter," ""4" Concrete Sidewalk," "BL69.5 Concrete Curb and Gutter," and "P9.5 Concrete Gutter" will be based on plans quantity. If additions or reductions to the area of Concrete Curb and Gutter, Concrete Gutter, or Sidewalk are ordered by the Engineer, payment will be made in accordance with the contract unit prices for the various items.

Unsuitable foundation material will be removed and replaced as directed by the engineer. All costs for labor, equipment, material and incidentals required for excavation and providing gravel cushion material will be incidental to the contract unit prices for the various items.

Cost for this work will be incidental to the contract unit price per square foot or per foot for "Type B69.5 Concrete Curb and Gutter", "Type BL69.5 Concrete Curb and Gutter", ""4" Concrete Sidewalk" and "P9.5 Concrete Gutter".

9.5" PCC FILLET SECTIONS

Payment for "9.5" PCC Fillet Section" will be based on plans quantity. If additions or reductions to the area of PCC fillet sections are ordered by the Engineer, payment will be made in accordance with the contract unit price per square yard for "9.5" PCC Fillet Section."

Unsuitable foundation material will be removed and replaced as directed by the engineer. All costs for labor, equipment, material and incidentals required for excavation and providing gravel cushion material will be incidental to the contract unit price per square yard for "9.5" PCC Fillet Section."

STEEL BAR INSERTION

The Contractor will install the Steel Bars (No. 5 x 24 inch epoxy coated deformed tie bar) into drilled holes in the existing concrete pavement. An epoxy resin adhesive must be used to anchor the steel bar in the drilled hole. Steel bars will conform to Section 1010.

The steel bars will be cut to the specified length by sawing an will be free from burring or other deformations. Shearing will not be permitted.

Epoxy coated deformed steel bars will be inserted on 30 inch centers in the longitudinal joint and will be placed a minimum of 15 inches form the exiting transverse contraction joint.

The diameter of the drilled holes in the existing concrete pavement for the steel bars will not be less than 1/8 inch nor more than 3/8 inch greater than the overall diameter of the steel bar. Holes drilled into the existing concrete pavement will be located at mid-depth of the slab and true and normal. The drilled holes will be blown out with compressed air using a device that will reach to the back of the hole to ensure that all debris or loose material has been removed prior to epoxy injection.

Mix the epoxy resin as recommended by the manufacturer and apply by an injection method approved by the Engineer. If an epoxy pump is utilized, it will be capable of metering the components at the manufacturer's designated rate and be equipped with an automatic shut-off. The pump will shut off when any of the components are not being metered at the designated rate. Fill the drilled holes 1/3 to 1/2 full of epoxy, or as recommended by the manufacturer, prior to insertion of the steel bar. Care will be taken to prevent epoxy from running out of the horizontal holes prior to steel bar insertion. Rotate the steel bar during insertion to eliminate voids and ensure complete bonding of the bar. Insertion of the bars by the dipping method will not be allowed.

Cost for the epoxy resin adhesive, steel bars, drilling of holes, applying the adhesive, inserting the steel bars into the drilled holes and all other items incidental to the insertion of the steel bars will be incidental to the contract unit price per each for "Insert Steel Bar in PCC Pavement".

See "PAVEMENT, CURB AND GUTTER AND SIDEWALK QUANTITIES" for quantities.

TYPE 1 DETECTABLE WARNINGS

Detectable warnings will be in compliance with the Americans with Disabilities Act regulations.

The detectable warnings will be installed according to the manufacturer's installation instructions.

A concrete thickness equal to the adjacent concrete sidewalk thickness and 2 inches of granular cushion material will be placed below the Type 1 Detectable Warnings. When concrete is placed below the detectable warnings then the concrete thickness will be transitioned at the rate of 1" per foot to match the adjacent concrete sidewalk thickness.

The detectable warnings will be a brick red color for application in concrete curb ramps. Cast iron plates may be a natural patina (weathered steel).

Type 1 Detectable Warning Panels will be one of the following products:

Type 1 Detectable Warnings

Product	Manufacturer
Detectable Warning Plate Cast Iron Plate	Neenah Foundry Company Neenah, WI 800-558-5075 http://www.neenahfoundry.com/
Detectable Warning Plate Cast Iron Plate	Deeter Foundry Lincoln, NE 800-234-7466 http://www.deeter.com/
Detectable Warning Plate Cast Iron Plate(No Coating)	East Jordan Iron Works, Inc. 301 Spring Street East Jordan, MI 49727 800-626-4653 http://www.ejiw.com

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B5	B38

Plotting Date: 03/22/2024
Revised Date: 03/18/2024 MDJ

TABLE OF CONSTRUCTION STAKING

(See Special Provision for Contractor Staking)

Roadway and Description	Begin Station	End Station	Number of Lanes	Length (Ft)	Grade Staking				Miscellaneous Staking Quantity (Mile)	Slope Staking Quantity (Mile)
					Length (Mile)	Lane Factor	*Sets of Stakes	**Grade Staking Quantity (Mile)		
US 81 (1 Turnlane PCCP)	10+80	12+85	1	205	0.039	0.5	2	0.039	0.019	0.019
US 81 (1 Turnlane PCCP)	13+85	15+74	1	189	0.036	0.5	2	0.036	0.018	0.018
US 81 (1 Turnlane PCCP)	82+45	84+27	1	182	0.034	0.5	2	0.034	0.017	0.017
US 81 (1 Turnlane PCCP)	98+06	99+78	1	172	0.032	0.5	2	0.032	0.016	0.016
							Totals:	0.141	0.070	0.070

* 2 = Blue Top and Paving Hub Stakes (PCC Pavement)

** Grade Staking Quantity = (Length) x (Lane Factor) x (Sets of Stakes)

PAVEMENT, CURB AND GUTTER, AND SIDEWALK QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B6	B38

Plotting Date: 03/22/2024
Revised Date: 03/18/2024 MDJ

		REMOVE				INSTALL																				
		Concrete Curb and/or Gutter	Concrete Pavement	Concrete Sidewalk	Asphalt Concrete	PCC Fillet Section	Concrete Curb and Gutter Type		Concrete Sidewalk		Detectable Warnings		Type A PCC Approach Pavement	Concrete Curb		Nonreinforced PCC Pavement		Steel Bar Insertion		Gravel Cushion		Asphalt Concrete Composite		
						9.5"	B69.5	BL69.5	4"	4" Reinforced	Type 1		8"	P9.5		9.5"		No. 5 x 30 Inch							
Intersection	**Quadrant**	Ft	SqYd	SqYd	SqYd	SqYd	Ft	Ft	SqFt	SqFt	SqFt		SqFt	Ft		SqYd		Ea		Ton		Ton			
US Hwy 81																									
West 4th Steet	Northwest	56.8		46.0			56.8		414.4		30.0							25							
	Northeast	68.9		35.0			68.9		360.1		30.0							29							
	Southeast	66.8		33.6			66.8		302.2		30.0							28							
	Southwest	40.3	4.1	43.8		4.1	40.3		394.0		30.0							17							
	North Splitter Island	242.9						237.5								175.0		96		91.9					
	South Splitter Island	264.8						261.9								215.6		106		113.2					
West 8th Steet	Northwest		35.1			35.1	0.7		342.4		30.0							25							
	Northeast			9.8		26.7	11.0		136.5		10.0							4							
	Southeast			16.2			9.0		139.0		10.0							4							
	Southwest			55.5		26.7			467.7		30.0							21							
West 10th Steet	Northwest	151.1	27.1	110.7	0.2	22.6	115.8		902.2		40.0		396	24				77				0.05			
	Northeast	99.3	26.8	93.0	0.2	32.0	100.2		847.2		20.0							64				0.05			
	Southeast	64.1	74.1	67.3	0.1	71.9	89.7		722.1		50.0							90				0.02			
	Southwest	89.9	25.0	80.4	0.8	27.1	96.0		300.8		20.0							162				0.1			
West 15th Steet	Northwest		25.9	42.7		25.9			411.6		30.0							21							
	Northeast	5.0	26.0	42.6		25.9	5.0		383.2		30.0							23							
	Southeast	10.0	25.0	24.3		25.0	10.0		1330.9		30.0							25							
	Southwest	5.0	26.8	27.0		24.1	5.0		482.6		30.0							23							
West 21st Steet	Northwest		45.9	21.7		45.8			195.6		30.0							25							
	Northeast	46.7		42.6			46.7		383.2		20.0							20							
	Southeast	230.5	112.6	152.2		67.5	153.3		1164.6	186.6	20.0							97							
	Southwest		88.6	53.6		55.3			482.6		20.0					62.3		36		32.7					
West 23rd Steet	Northwest	203.7		89.1		86.8	122.6		266.2		30.0					94.5		91		49.6					
	Northeast	39.1		44.6		21.0	2.0		413.0		30.0							2							
	Southeast	33.2		26.9			33.2		288.9		30.0							14							
	Southwest	3.9		17.3			40.5		236.1		30.0							18							
	Total:	1722.0	543.0	1175.9	1.3	623.5	1073.5	499.4	11367.1	186.6	660.0		396	24		547.4		1143		287.4		0.2			

Plot Scale - 1:200
Plotted From - TRSF12140
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HORIZONTAL ALIGNMENT DATA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B7	B38

Plotting Date: 03/22/2024

MAINLINE

Type	Station			Northing	Easting
POB	0+00.00			208607.550	2755533.030
		TL= 854.64	N 1°02'28" W		
PI	8+54.64			209462.050	2755517.500
		TL= 477.54	N 1°01'55" W		
PI	13+32.18			209939.510	2755508.900
		TL= 1821.68	N 1°13'09" W		
PI	31+53.86			211760.780	2755470.140
		TL= 1005.16	N 0°42'12" W		
PI	41+59.02			212765.860	2755457.800
		TL= 779.93	N 0°47'49" W		
PI	49+38.94			213545.712	2755446.954
		TL= 205.26	N 0°50'55" W		
PC	51+44.20			213750.947	2755443.914
PI	52+41.84	R = 8000.00	Delta = 1°23'55" L	213848.573	2755442.468
PT	53+39.47			213946.135	2755438.639
		TL= 170.74	N 2°14'50" W		
PC	55+10.21			214116.749	2755431.944
PI	56+02.97	R = 8000.00	Delta = 1°19'43" R	214209.436	2755428.307
PT	56+95.72			214302.183	2755426.820
		TL= 104.83	N 0°55'07" W		
PI	58+00.55			214407.000	2755425.140
		TL= 599.83	N 1°30'54" W		
PI	64+00.38			215006.620	2755409.280
		TL= 890.19	N 1°52'10" W		
PI	72+90.57			215896.340	2755380.240
		TL= 110.38	N 2°13'04" W		
PC	74+00.95			216006.638	2755375.968
PI	76+12.02	R = 1909.88	Delta = 12°36'46" L	216217.550	2755367.800
PT	78+21.39			216421.588	2755313.774
		TL= 180.89	N 14°49'51" W		
PC	80+02.28			216596.451	2755267.473
PI	81+62.50	R = 1910.00	Delta = 9°35'26" R	216751.340	2755226.460
PT	83+21.98			216910.898	2755211.826
		TL= 1467.45	N 5°14'25" W		
PI	97+89.43			218372.210	2755077.800
		TL= 192.05	N 2°43'39" W		
POE	99+81.48			218564.046	2755068.661

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. South Zone NAD 83(2011); epoch 2010.00; Geoid 18; SF = 0.999934091

Plot Scale - 1:200

Plotted From - TRSF12140

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CONTROL DATA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B8	B38

Plotting Date: 03/22/2024

Plot Scale - 1:200

Plotted From - TRSF12140

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HORIZONTAL AND VERTICAL CONTROL POINTS

POINT	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING	ELEVATION
cp01	9+06.83	52.91’ R	NAIL IN TOP OF CURB - NE QUAD OF 3RD & BROADWAY	209515.185	2755569.461	1208.13
cp02	15+56.72	48.52’ L	NAIL IN TOP OF CURB - 215' NORTH OF CL OF 4TH STREET - IN FRONT OF TRINITY LUTHERAN CHURCH	210162.964	2755455.616	1208.085
cp03	31+31.51	151.92’ L	NAIL IN TOP CURB SOUTH SIDE OF 8TH STREET - 140' WEST OF CL OF BROADWAY AVE.	211735.201	2755318.731	1202.598
cp04	32+88.42	40.39’ R	NAIL IN TOP OF CURB EAST SIDE OF BROADWAY AVE. - 130' NORTH OF CL OF 8TH STREET	211895.824	2755508.872	1202.388
cp05	55+98.82	40.18’ R	NAIL IN TOP OF CURB EAST SIDE OF BROADWAY AVE. - 205' SOUTH OF CL OF 15TH STREET	214206.439	2755469.123	1235.73
cp06	59+43.61	40.39’ L	NAIL IN TOP OF CURB WEST SIDE OF BROADWAY AVE. - 140' NORTH OF CL OF 15TH STREET - IN FRONT OF PIZZA RANCH	214548.794	2755380.978	1247.389
cp07	83+71.31	70.74’ R	NAIL IN SW CORNER STORM DRAIN INLET LID AT SE CORNER BROADWAY & 21TH	216966.480	2755277.766	1220.54
cp08	87+43.56	104.88’ R	NAIL IN TOP OF CURB WEST SIDE OF BROADWAY AVE. - SOUTH ENTRANCE TO FIRST DAKOTA BANK	217340.296	2755084.450	1221.033
cp09	98+10.45	226.97’ R	NAIL IN NW CORNER SF TYPE INLET COVER - 220' EAST OF CL OF BROADWAY AVE. - NORTH SIDE OF 23RD STREET	218404.012	2755303.515	1235.528
bm7	28+48.71	58.99’ R	5/8" REBAR AT THE NE QUAD OF 7TH & BROADWAY - IN HEDGE LINE - BM IS FROM PREVIOUS PROJECT PCN 5610	211456.957	2755535.611	1202.863
bm5	17+73.32	61.95’ L	5/8" REBAR AT THE SW QUAD OF 5TH & BROADWAY - BM IS FROM PREVIOUS PROJECT PCN 5610	210379.238	2755437.581	1207.484
bm8	35+32.04	83.14’ R	5/8" REBAR OFF OF THE SW CORNER OF THE TRIPP PARK WARMING HOUSE - BM IS FROM THE PREVIOUS PROJECT PCN 5610	212139.954	2755548.626	1202.179
bm15	81+66.77	91.40’ L	TOP OF BOLT ON SOUTH END OF ABUTMENT ON SE CORNER OF BRIDGE TO YANKTON PLAZA - SOUTH BOLT - BM IS FROM PREVIOUS PROJECT PCN 5610	216741.373	2755142.219	1219.053
cp10	106+06.20	79.62’ R	SURVEY SPIKE IN TOP OF CURB SOUTH ENTRANCE TO SLUMBERLAND - 320' NORTH OF CL OF 23RD STREET	218693.325	2754996.333	1231.912

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. South Zone NAD 83(2011); epoch 2010.00
Geoid 18; SF = 0.999934091
The elevations shown on this sheet are based on NAVD 88.

LEGEND

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B9	B38

Plotting Date: 03/22/2024

- Anchor
- Antenna
- Approach
- Assumed Corner
- Azimuth Marker
- BBQ Grill/ Fireplace
- Bearing Tree
- Bench Mark
- Box Culvert
- Bridge
- Brush/Hedge
- Buildings
- Bulk Tank
- Cattle Guard
- Cemetery
- Centerline
- Cistern
- Clothes Line
- Concrete Symbol
- Control Point
- Creek Edge
- Curb/Gutter
- Curb
- Dam Grade/Dike/Levee
- Deck Edge
- Ditch Block
- Doorway Threshold
- Drainage Profile
- Drop Inlet
- Edge Of Asphalt
- Edge Of Concrete
- Edge Of Gravel
- Edge Of Other
- Edge Of Shoulder
- Electric Transformer/Power Junction Box
- Fence Barbwire
- Fence Chainlink
- Fence Electric
- Fence Miscellaneous
- Fence Rock
- Fence Snow
- Fence Wood
- Fence Woven
- Fire Hydrant
- Flag Pole
- Flower Bed
- Gas Valve Or Meter
- Gas Pump Island
- Grain Bin
- Guardrail
- Gutter
- Guy Pole
- Haystack
- Highway ROW Marker
- Interstate Close Gate
- Iron Pin
- Irrigation Ditch
- Lake Edge
- Lawn Sprinkler
- Mailbox
- Manhole Electric
- Manhole Gas
- Manhole Miscellaneous
- Manhole Sanitary Sewer
- Manhole Storm Sewer
- Manhole Telephone
- Manhole Water
- Merry-Go-Round
- Microwave Radio Tower
- Miscellaneous Line
- Miscellaneous Property Corner
- Miscellaneous Post
- Overhang Or Encroachment
- Overhead Utility Line — OH —
- Parking Meter
- Pedestrian Push Button Pole
- Pipe With End Section
- Pipe With Headwall
- Pipe Without End Section
- Playground Slide
- Playground Swing
- Power And Light Pole
- Power And Telephone Pole
- Power Meter
- Power Pole
- Power Pole And Transformer
- Power Tower Structure
- Propane Tank
- Property Pipe
- Property Pipe With Cap
- Property Stone
- Public Telephone
- Railroad Crossing Signal
- Railroad Milepost Marker
- Railroad Profile
- Railroad ROW Marker
- Railroad Signs
- Railroad Switch
- Railroad Track
- Railroad Trestle
- Rebar
- Rebar With Cap
- Reference Mark
- Retaining Wall
- Riprap
- River Edge
- Rock And Wire Baskets
- Rockpiles
- Satellite Dish
- Septic Tank
- Shrub Tree
- Sidewalk
- Sign Face
- Sign Post
- Slough Or Marsh
- Spring
- Stream Gauge
- Street Marker
- Subsurface Utility Exploration Test Hole
- Telephone Fiber Optics — T/F —
- Telephone Junction Box
- Telephone Pole
- Television Cable Jct Box
- Television Tower
- Test Wells/Bore Holes
- Traffic Sign Double Face
- Traffic Sign One Post
- Traffic Sign Two Post
- Traffic Signal
- Trash Barrel
- Tree Belt
- Tree Coniferous
- Tree Deciduous
- Tree Stumps
- Triangulation Station
- Underground Electric Line — P —
- Underground Gas Line — G —
- Underground High Pressure Gas Line — HG —
- Underground Sanitary Sewer — S —
- Underground Storm Sewer — S —
- Underground Tank
- Underground Telephone Line — T —
- Underground Television Cable — TV —
- Underground Water Line — W —
- Water Fountain
- Water Hydrant
- Water Meter
- Water Tower
- Water Valve
- Water Well
- Weir Rock
- Windmill
- Wingwall
- Witness Corner

- State and National Line
- County Line
- Section Line
- Quarter Line
- Sixteenth Line
- Property Line
- Construction Line
- ROW Line
- New ROW Line
- Cut and Fill Limits
- Control of Access
- New Control of Access
- Proposed ROW (After Property Disposal)

- Drainage Arrow

- Remove Concrete Pavement
- Remove Concrete Driveway Pavement
- Remove Asphalt Concrete Pavement
- Remove Concrete Sidewalk
- Remove Concrete Median Pavement
- Remove Concrete Curb and/or Gutter

- Detectable Warning
- Pedestrian Push Button Pole and 30" x 48" Clear Space with 1.5% slope

Plot Scale - 1:200

Plotted From - TRSF12140

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B10	B38

Plotting Date: 05/03/2024
Revise Date: 05/03/2024 MDJ

Plot Scale - 1:40

WITHERSPOON'S YANKTON
BLOCK 23
TODD'S ADDITION
Lot 12
Lot 13
Lot 14
Lot 15
Lot 16
Lot 17
LOT 18
Lot B
Lot A
Property Line
Midwest Real Estate Solutions, L.L.C. (INFORMATION ONLY)
Den Herder Properties, LLC (INFORMATION ONLY)
State of South Dakota (Department of Transportation) (INFORMATION ONLY)
W. 4th Street 80'
Present SD Hwy 52
JT Properties, L.L.C.
Lot 10 in Block 36 of Todd's Addition to Yankton
Parcel A1
Trinity Lutheran Church (INFORMATION ONLY)
Lot 10
Lot 11
Section Line
Lot 12
Lot 13 BLOCK 36
Lot 14
Lot 15
13+76.00-93.40'
13+81-92'
13+88-83'
14+01-78'
14+06.00-65.72'
13+92 L
Do not Disturb
Sign Footing
Broadway Avenue
130'
Present US Hwy 81
Present SD Hwy 50
10+00
11+00
12+00
13+00
14+00
15+00
16+00
Lot 7
Lot 6
Lot 5
Lot 4
Lot 3
Lot 2
Lot 1
BLOCK 24
TODD'S ADDITION
12+67 R
Do not Disturb
Electronic Sign
12+60.00-66.66'
12+77.58-81.04'
12+78.90-80'
12+80.33-78.88'
12+81.97-86.49'
12+83.87-85'
12+84.72-84.33'
12+91-98.27'
First National Bank South Dakota
Lot 1 of Block 24 of Todd's Addition to Yankton
Parcel 1
25 sq ft, R.O.W.
more or less
Present SD Hwy 50
W. 4th Street 80'
LOT A
Lot C
Lot B
Lot 9
Lot 8
Prop Line
State of South Dakota (Department of Transportation) (INFORMATION ONLY)
Judy Sagmoe Revocable Trust (INFORMATION ONLY)
BLOCK 35
TODD'S ADDITION
First National Bank South Dakota (INFORMATION ONLY)

Parcel 1
12+60.00 to 12+80.33 R
Temporary Easement containing
46 Sq ft, more or less

Parcel 1
12+83.87 to 12+91.00 R
Temporary Easement containing
15 Sq ft, more or less

YANKTON

Parcel A1
13+76.00 to 14+06.00 L
Temporary Easement containing
178 Sq ft, more or less

Plotted From - TRSF12140

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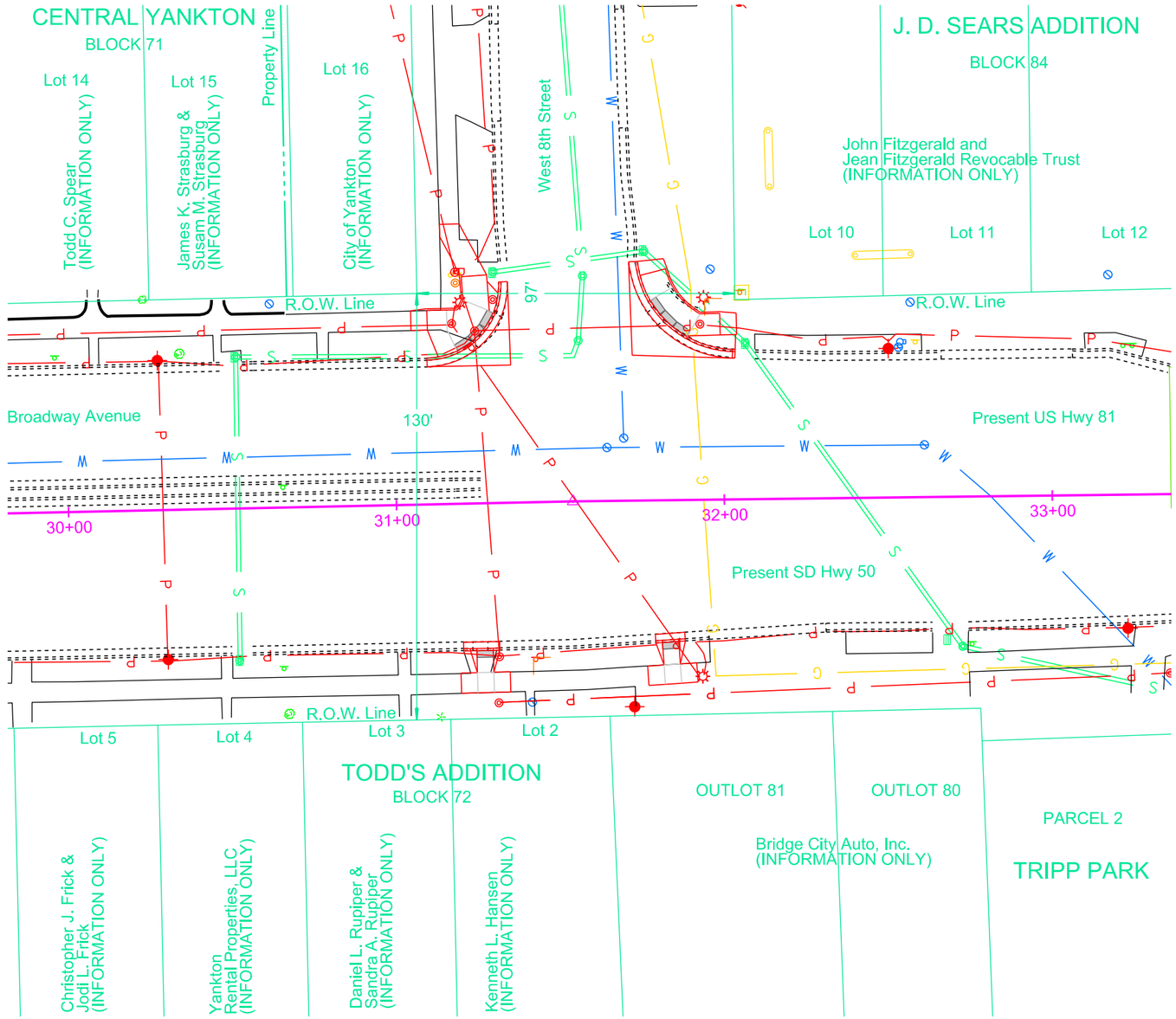
YANKTON

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B11	B38

Plotting Date: 03/22/2024



Plot Scale - 1:40

Plotted From - TRSF12140

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42+20-42' R to 42+24-32' R
Take Out 18"-10' RCP
(Incidental Work, Grading)

42+40-32' L to 42+40-42' L
Take Out 18"-12' RCP
(Incidental Work, Grading)

42+40.71-33.81' L to 42+41.05-43.47' L
Install 18"-4' RCP
(Between Drop Inlet and Junction Box)

42+41.05-43.47' L
Install 5'x5'x6'6"H Junction Box
with Type A7 Manhole
Frame & Lid

Take Out Drop Inlets
and Frame & Grate at
the following locations:
42+40-42' L
42+20-42' R

Install 4'x11' Type S Drop Inlet
Base and Precast Concrete
Type S Drop Inlet Lid
at the following locations:
42+40.71-33.81' L
42+23.11-34.41' R

YANKTON

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B12	B38

Plotting Date: 06/20/2024 Revised 06/20/2024 AR

PARCEL D
PARCEL C
BLOCK 95
B.C. FOWLER'S ADDITION
PARCEL A
R.O.W. Line
Railroad Street
80'
BLOCK 108
PARCEL B
B.C. FOWLER'S ADDITION
BURLINGTON NORTHERN/SANTA FE RAILWAY
100'
BNSF Railway Company
(INFORMATION ONLY)
BLOCK 108
B. C. FOWLER'S ADDITION
Lot 14
Lot 15
James G. Cox & Elizabeth Cox
(INFORMATION ONLY)
Lot 16
Lot 13
16.5'
R.O.W. Line
Present US Hwy 81
Broadway Avenue
39+00
40+00
41+00
42+00
43+00
44+00
45+00
Present SD Hwy 50
R.O.W. Line
Lot 1
PARCEL D
West 8th Street
PARCEL A
50'
40+96.00 - 57.78'
40+90.31 - 57.75'
41+13.00 - 75.00'
41+13.76 - 71.58'
41+23.76 - 71.46'
41+23.85 - 73.00'
66'
West 10th Street
Horizon Health Care, Inc.
(INFORMATION ONLY)
BNSF Railway Company
Railroad Right-Of-Way in the NW1/4 NW1/4
of Section 18, Township 93 North - Range 55
West of the 5th P.M.
Parcel 2
Containing 0.01 ac
239 Sq ft
more or less
City of Yankton
(INFORMATION ONLY)
WETMORE STEWARTS ADDITION
Vanderhule Moving and
Storage, Inc.
(INFORMATION ONLY)
Lot 12
Lot 11 BLOCK 4
Lot 7
Lot 8
BLOCK 3
Lot 9
Lot 10
Lot 11
Lot 12
WETMORE STEWARTS ADDITION

Parcel 2
40+96.00 to 41+23.85 R
Temporary Easement containing
95 Sq ft, more or less

Plot Scale - 1:40
Plotted From - TRSF12141
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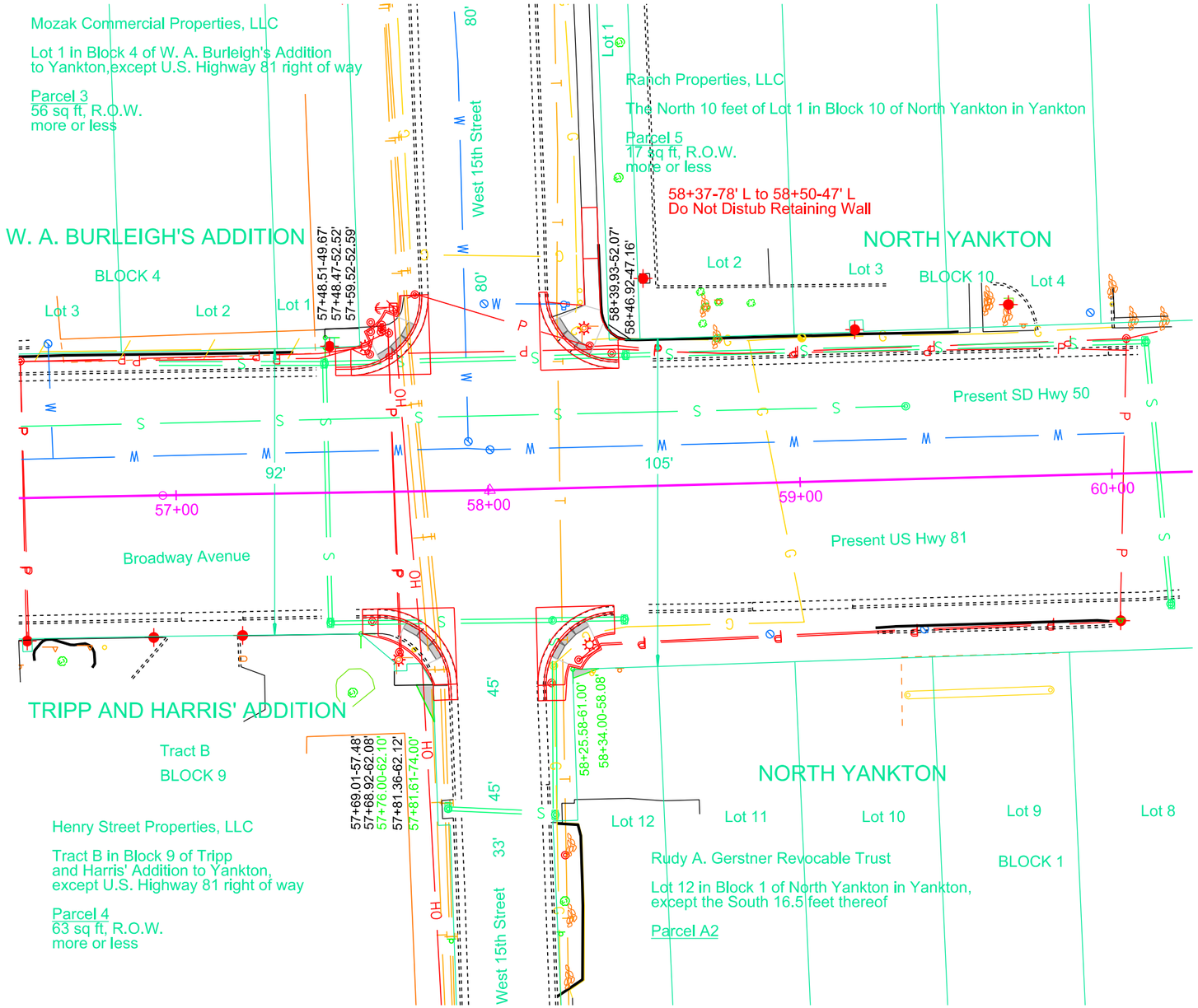
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B13	B38

Plotting Date: 03/22/2024 Revised 11/06/2023 AR

YANKTON



Parcel 4
57+76.00 to 57+81.61 R
Temporary Easement containing
32 Sq ft, more or less

Parcel A2
58+25.58 to 58+34.00 R
Temporary Easement containing
12 Sq ft, more or less

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B14	B38

Plotting Date: 03/22/2024 Revised 07/27/2023 AR

YANKTON

Sec 12 - T93N - R56W

84+07-56' R to 84+24-47' R
Take Out 24"-18' RCP
(Incidental Work, Grading)

84+07-56' R to 84+23-94' R
Take Out 24"-18' RCP
(Incidental Work, Grading)

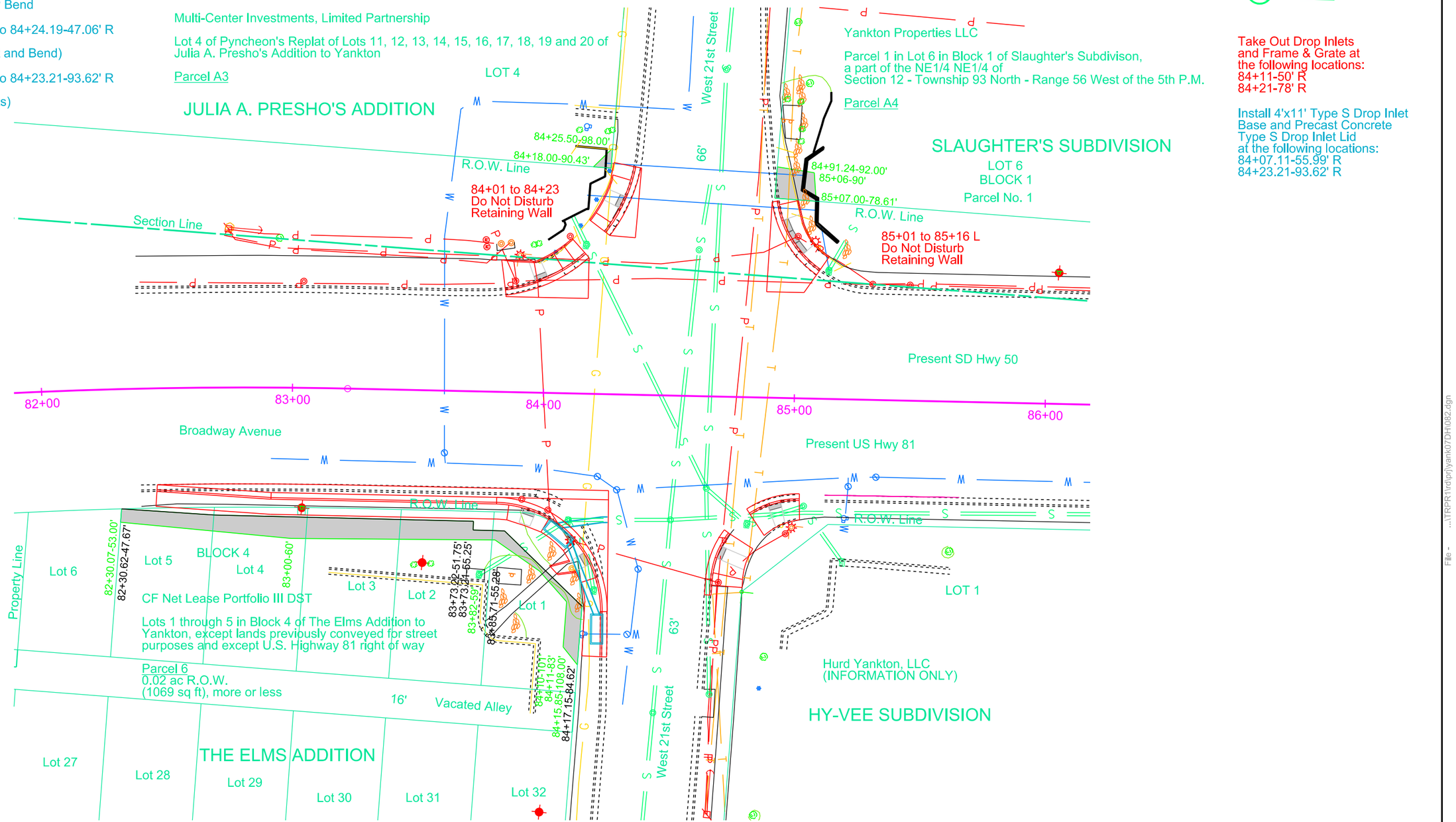
84+24.19-47.06' R
Install 24"-7.5° RCP Bend

84+07.11-55.99' R to 84+24.19-47.06' R
Install 24"-18' RCP
(Between Drop Inlet and Bend)

84+07.11-55.99' R to 84+23.21-93.62' R
Install 24"-18' RCP
(Between Drop Inlets)

Take Out Drop Inlets
and Frame & Grate at
the following locations:
84+11-50' R
84+21-78' R

Install 4'x11' Type S Drop Inlet
Base and Precast Concrete
Type S Drop Inlet Lid
at the following locations:
84+07.11-55.99' R
84+23.21-93.62' R



Parcel A3
84+18.00 to 84+25.50 L
Temporary Easement containing
28 Sq ft, more or less

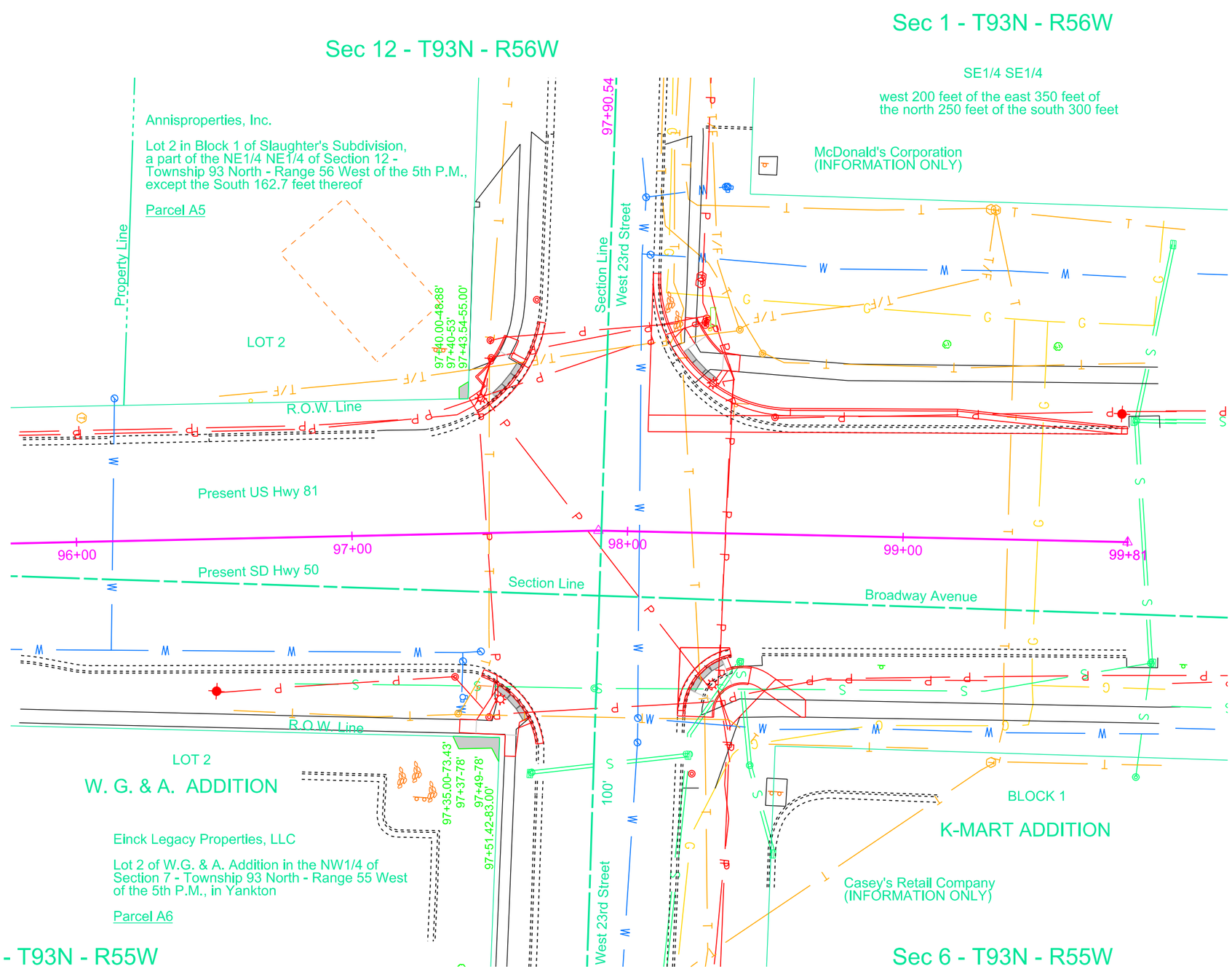
Parcel 6
82+30.07 to 84+17.15 R
Temporary Easement containing
1317 Sq ft, more or less

Parcel A4
84+91.24 to 85+07.00 L
Temporary Easement containing
186 Sq ft, more or less

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B15	B38

Plotting Date: 03/22/2024

YANKTON



Parcel A5
97+40.00 to 97+43.54 L
Temporary Easement containing
17 Sq ft, more or less

Parcel A6
97+35.00 to 97+51.42 R
Temporary Easement containing
73 Sq ft, more or less

Plot Scale - 1:40
Plotted From - TRSF12140
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CURB RAMP LAYOUT

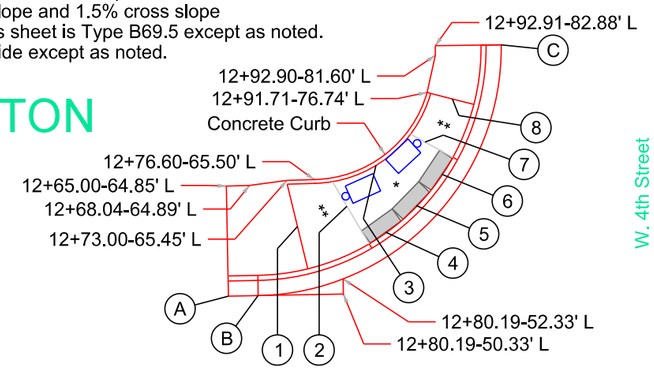
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B16	B38

Plotting Date: 03/22/2024

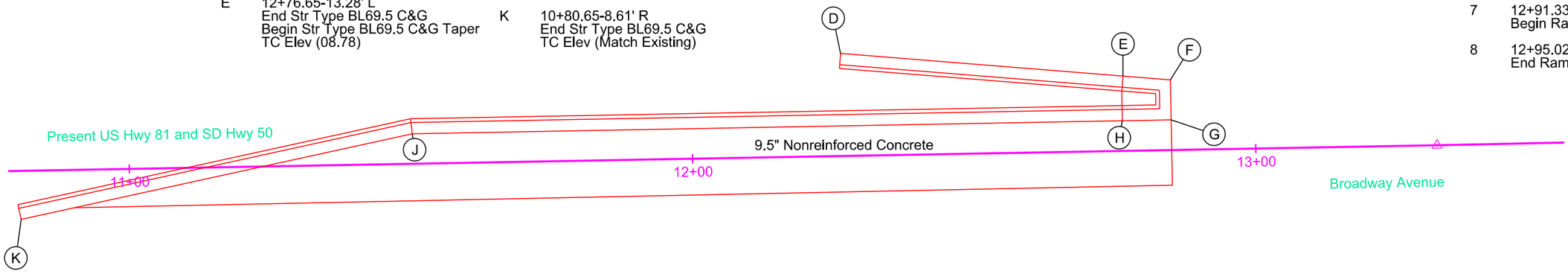
* Turning Space with 1.5% slope
** Curb Ramp with 7.5% slope and 1.5% cross slope
Note: All curb and gutter shown on this sheet is Type B69.5 except as noted.
All sidewalk is 5' wide except as noted.

YANKTON

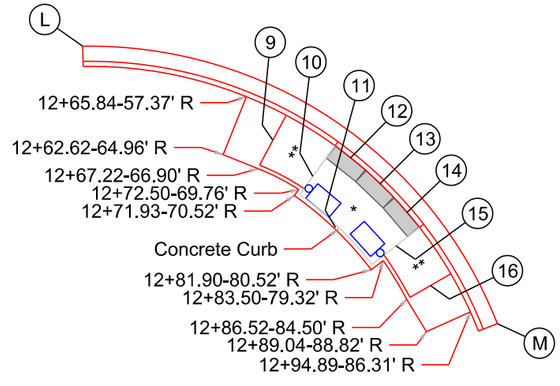
A	12+65.00-50.32' L Begin Str C&G TC Elev (Match Existing)
B	12+68.93-50.32' L End Str C&G Begin 32.67' Rad C&G TC Elev (Theor) 08.25
C	13+01.60-82.85' L End 32.67' Rad C&G TC Elev (Match Existing)
D	12+26.61-18.19' L Begin Str Type BL69.5 C&G TC Elev (Match Existing)
E	12+76.65-13.28' L End Str Type BL69.5 C&G Begin Str Type BL69.5 C&G Taper TC Elev (08.78)
F	12+85.06-12.45' L End Str C&G Type BL69.5 Taper TC Elev (Match Existing)
G	12+85.06-5.37' L Begin Str Type BL69.5 C&G Taper TC Elev (Match Existing)
H	12+76.39-5.36' L End Str Type BL69.5 C&G Taper Begin Str Type BL69.5 C&G TC Elev (09.11)
J	11+50.35-5.32' L End Str Type BL69.5 C&G Begin Str Type BL69.5 C&G TC Elev (09.79)
K	10+80.65-8.61' R End Str Type BL69.5 C&G TC Elev (Match Existing)



1	12+74.28-59.34' L End Ramp Slope
2	12+80.87-61.90' L Begin Ramp Slope
3	12+84.80-67.23' L Back of Turning Space
4	12+85.92-58.39' L Center of Detectable Warning
5	12+90.02-61.81' L Center of Detectable Warning & Type 3 Curb Ramp
6	12+93.45-65.89' L Center of Detectable Warning
7	12+91.33-70.18' L Begin Ramp Slope
8	12+95.02-75.82' L End Ramp Slope



L	12+44.35-50.33' R Begin 57.67' Rad C&G TC Elev (Match Existing)
M	12+98.41-87.92' R End 57.67' Rad C&G TC Elev (Match Existing)



9	12+69.23-63.17' R End Ramp Slope
10	12+74.41-68.05' R Begin Ramp Slope
11	12+77.29-74.84' R Back of Turning Space
12	12+79.42-65.70' R Center of Detectable Warning
13	12+83.25-69.20' R Center of Detectable Warning & Type 3 Curb Ramp
14	12+86.73-73.03' R Center of Detectable Warning
15	12+85.20-77.42' R Begin Ramp Slope
16	12+89.67-82.74' R End Ramp Slope

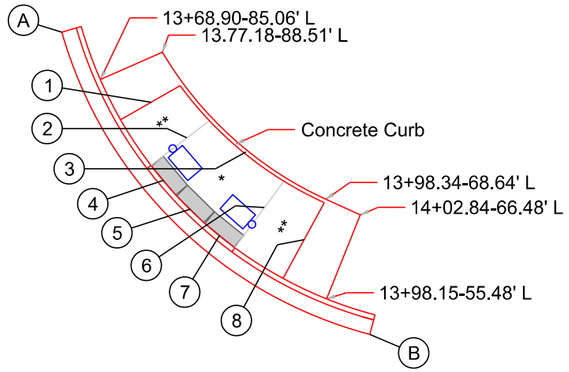
CURB RAMP LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B17	B38

Plotting Date: 03/22/2024

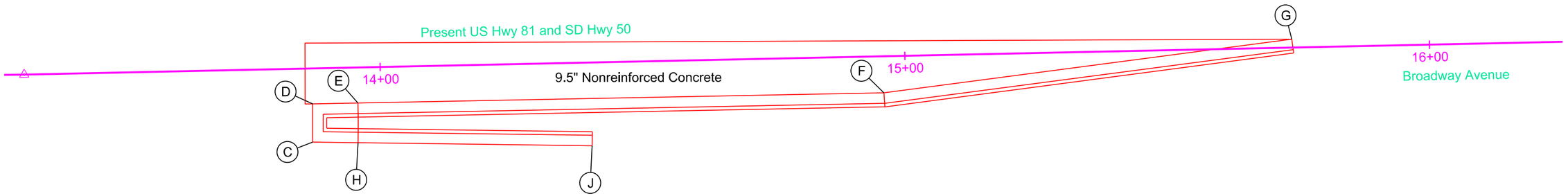
* Turning Space with 1.5% slope
** Curb Ramp with 7.5% slope and 1.5% cross slope
Note: All curb and gutter shown on this sheet is Type B69.5 except as noted.
All sidewalk is 5' wide except as noted.

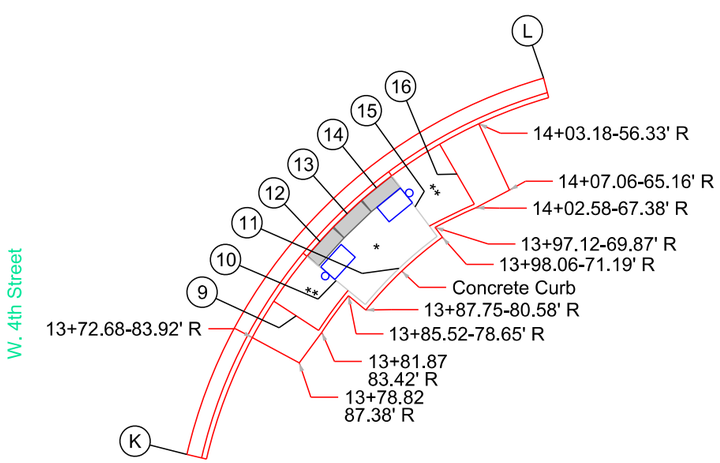
YANKTON



A	13+63.94-91.44' L Begin 57.67' Rad C&G TC Elev (Match Existing)
B	14+03.74-50.66' L End 57.67' Rad C&G TC Elev (Match Existing)
C	13+86.87-14.02' R Begin Str Type BL69.5 C&G Taper TC Elev (Match Existing)
D	13+87.00-6.76' R Begin Str Type BL69.5 C&G Taper TC Elev (Match Existing)
E	13+95.63-6.78' R End Str Type BL69.5 C&G Taper Begin Str Type BL69.5 C&G TC Elev (09.23)
F	14+95.88-6.97' R End Str Type BL69.5 C&G Begin Str Type BL69.5 C&G TC Elev (09.35)
G	15+73.80-1.61' L End Str Type BL69.5 C&G TC Elev (Match Existing)
H	13+95.49-14.32' R End Str Type BL69.5 C&G Taper Begin Str Type BL69.5 C&G TC Elev (08.75)
J	14+40.08-15.87' R End Str Type BL69.5 C&G TC Elev (Match Existing)

1	13+75.54-81.93' L End Ramp Slope
2	13+80.17-77.13' L Begin Ramp Slope
3	13+87.92-75.10' L Back of Turning Space
4	13+76.96-71.57' L Center of Detectable Warning
5	13+80.41-67.70' L Center of Detectable Warning & Type 3 Curb Ramp
6	13+90.19-67.71' L Begin Ramp Slope
7	13+84.20-64.16' L Center of Detectable Warning
8	13+95.34-63.36' L End Ramp Slope





K	13+63.72-99.14' R Begin 67.67' Rad C&G TC Elev (Match Existing)
L	14+11.88-50.46' R End 67.67' Rad C&G TC Elev (Match Existing)

9	13+78.55-81.15' R End Ramp Slope
10	13+83.92-76.60' R Begin Ramp Slope
11	13+92.27-75.19' R Back of Turning Space
12	13+81.91-71.45' R Center of Detectable Warning
13	13+85.57-67.84' R Center of Detectable Warning & Type 3 Curb Ramp
14	13+89.51-64.51' R Center of Detectable Warning
15	13+94.54-67.13' R Begin Ramp Slope
16	14+00.18-62.91' R End Ramp Slope

Plot Scale - 1:20
Plotted From - TRSF12140
File - U:\rd\prj\yank07DH\t014cr.dgn

CURB RAMP LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B18	B38

Plotting Date: 03/22/2024

* Turning Space with 1.5% slope
** Curb Ramp with 7.5% slope and 1.5% cross slope
Note: All curb and gutter shown on this sheet is Type B69.5 except as noted.
All sidewalk is 5' wide except as noted.

YANKTON

1 31+10.53-56.16' L
End Ramp Slope

2 31+16.53-56.38' L
Begin Ramp Slope

3 31+21.84-48.05' L
Center of Detectable Warning

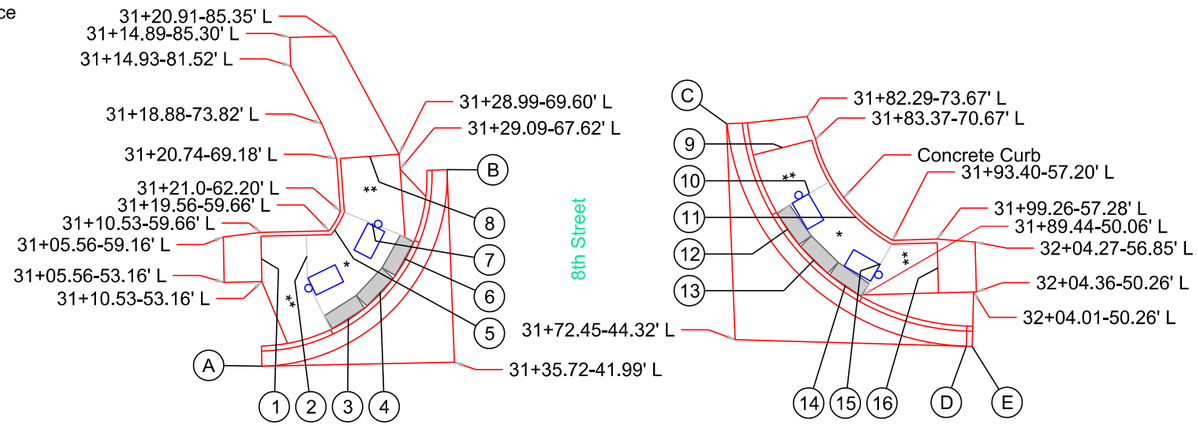
4 31+26.11-51.44' L
Center of Detectable Warning
& Type 3 Curb Ramp

5 31+20.27-59.76' L
Back of Turning Space

6 31+29.42-55.77' L
Center of Detectable Warning

7 31+25.28-60.52' L
Begin Ramp Slope

8 31+25.12-69.40' L
End Ramp Slope



9 31+79.00-69.61' L
End Ramp Slope

10 31+82.46-63.52' L
Begin Ramp Slope

11 31+88.61-60.29' L
Back of Turning Space

12 31+79.60-58.86' L
Center of Detectable Warning

13 31+82.99-54.74' L
Center of Detectable Warning
& Type 3 Curb Ramp

14 31+87.07-51.29' L
Center of Detectable Warning

15 31+91.77-54.09' L
Begin Ramp Slope

16 31+99.31-53.49' L
End Ramp Slope

A 31+10.28-41.99' L
Begin 25' Rad C&G Fillet
TC Elev (Match Existing)

B 31+35.28-67.43' L
End 25' Rad C&G Fillet
TC Elev (Match Existing)

C 31+71.66-72.85' L
Begin 32.67' Rad C&G Fillet
TC Elev (Match Existing)

D 32+02.96-43.10' L
End 32.67' Rad C&G Fillet
TC Elev (Theor) 01.69

E 32+03.72-43.07' L
End Str C&G
TC Elev (Match Existing)

F 31+19.60-42.25' R
Begin Str C&G
TC Elev (Match Existing)

G 31+30.61-42.25' R
End Str C&G
TC Elev (Match Existing)

H 31+78.43-40.85' R
Begin Str C&G
TC Elev (Match Existing)

J 31+87.41-40.33' R
End Str C&G
TC Elev (Match Existing)

17 31+28.62-54.65' R
Begin Ramp Slope

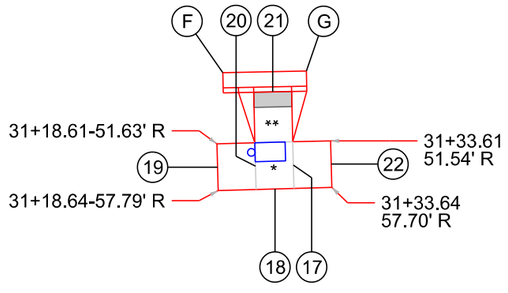
18 31+26.14-57.74' R
Back of Turning Space

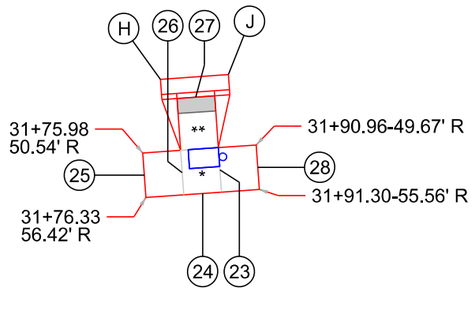
19 31+18.62-54.71' R
End Ramp Slope

20 31+23.62-54.68' R
Begin Ramp Slope

21 31+26.11-44.92' R
Center of Detectable Warning
& Type 1 Curb Ramp

22 31+33.62-54.62' R
End Ramp Slope





23 31+86.14-52.90' R
Begin Ramp Slope

24 31+83.81-55.99' R
Back of Turning Space

25 31+76.16-53.48' R
End Ramp Slope

26 31+81.15-53.19' R
Begin Ramp Slope

27 31+83.08-43.25' R
Center of Detectable Warning
& Type 1 Curb Ramp

28 31+91.13-52.61' R
End Ramp Slope

Plot Scale - 1:20
Plotted From - TRSF12140
File - U:\rdp\jyank07\DH031cr.dgn

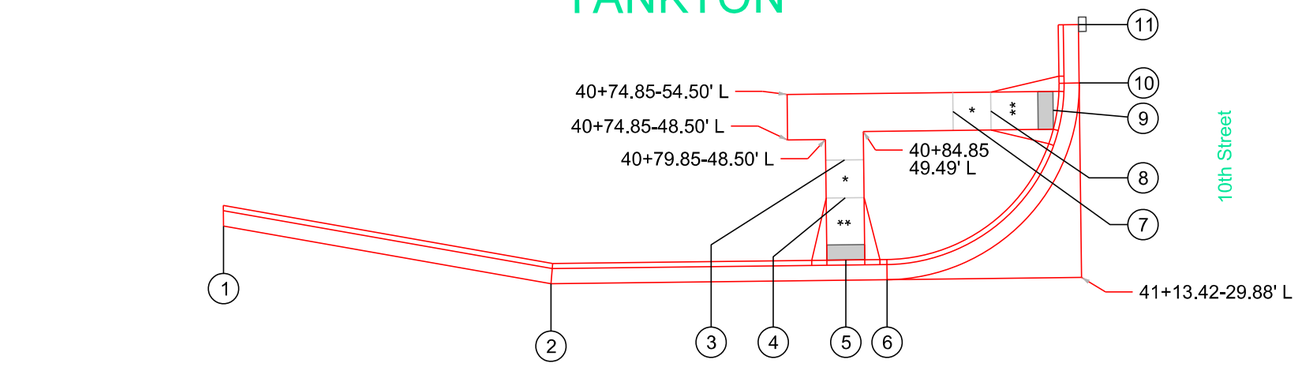
CURB RAMP LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B19	B38

Plotting Date: 03/22/2024

* Turning Space with 1.5% slope
** Curb Ramp with 7.5% slope and 1.5% cross slope
Note: All curb and gutter shown on this sheet is Type B69.5 except as noted.
All sidewalk is 5' wide except as noted.

YANKTON



1 40+00.24-38.05' L
Begin Str C&G
TC Elev (Match Existing)

2 40+43.37-29.91' L
End Str C&G
Begin Str C&G
TC Elev 06.43

3 40+82.35-45.77' L
Back of Landing

4 40+82.35-40.77' L
End Ramp Slope

5 40+82.34-32.57' L
Center of Detectable Warning
& Type 1 Curb Ramp

6 40+87.75-29.89' L
End Str C&G
Begin 25' Rad Fillet C&G
TC Elev 07.38

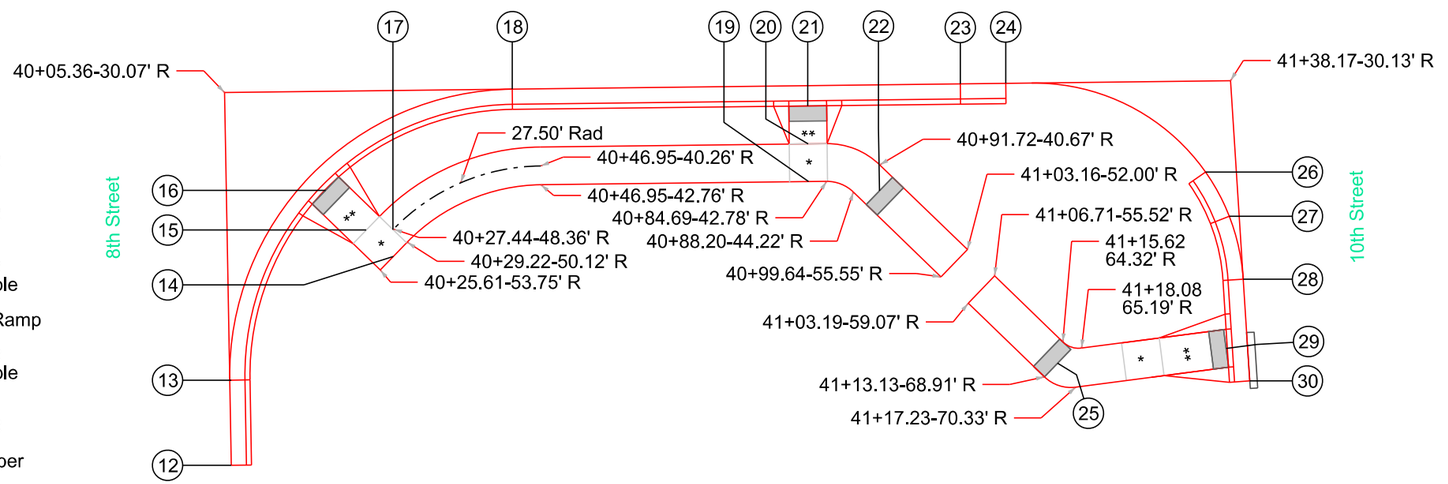
7 40+96.73-51.99' L
Back of Landing

8 41+01.73-51.99' L
End Ramp Slope

9 41+09.94-51.98' L
Center of Detectable Warning
& Type 2 Curb Ramp

10 41+13.43-55.55' L
End 25' Rad Fillet C&G
Begin Str C&G Taper
TC Elev (Theor) 07.80

11 41+13.43-63.26' L
End Str C&G Taper
TC Elev (Match Existing)



12 40+05.63-79.29' R
Begin Str C&G
TC Elev (Match Existing)

13 40+05.76-68.05' R
End Str C&G
Begin 37.76' Rad Fillet C&G
TC Elev 05.79

14 40+27.37-51.97' R
Back of Landing

15 40+23.83-48.45' R
End Ramp Slope

16 40+18.51-43.16' R
Center of Detectable Warning
& Type 1 Curb Ramp

17 40+27.36-48.44' R
End of Turning Space

18 40+43.34-30.09' R
End 37.76' Rad Fillet C&G
Begin Str C&G
TC Elev 06.98

19 40+82.30-42.77' R
Back of Landing

20 40+82.31-37.77' R
End Ramp Slope

21 40+82.31-32.77' R
Center of Detectable Warning
and Type 1 Curb Ramp

22 40+91.64-44.11' R
Center of Detectable Warning

23 41+02.49-30.11' R
End Str C&G
Begin Str C&G Taper
TC El 08.04

24 41+08.49-30.12' R
End Str C&G Taper
TC El (Theor) 08.02

25 41+14.89-67.14' R
Center of Detectable Warning

26 41+34.72-42.15' R
Begin 27.67' Rad C&G Taper

27 41+37.79-48.04' R
End 27.67' Rad C&G Taper
Begin 27.67' Rad C&G
TC Elev 07.02

28 41+39.53-56.36' R
End 27.67' Rad C&G
Begin Str C&G
TC Elev 06.98

29 41+37.16-65.46' R
Center of Detectable Warning
& Type 2 Curb Ramp

30 41+40.22-69.80' R
End Str C&G
TC Elev (Match Existing)

CURB RAMP LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B20	B38

Plotting Date: 03/22/2024

* Turning Space with 1.5% slope
** Curb Ramp with 7.5% slope and 1.5% cross slope
Note: All curb and gutter shown on this sheet is Type B69.5 except as noted.
All sidewalk is 5' wide except as noted.

YANKTON

1 41+49.36-63.24' L
Begin Str C&G Taper
TC Elev (Match Existing)

2 41+49.56-54.90' L
End Str C&G Taper
Begin 25.67' Rad Fillet C&G
TC Elev (Theor) 08.30

3 41+53.21-51.46' L
Center of Detectable Warning
& Type 2 Curb Ramp

4 41+61.50-51.36' L
End Ramp Slope

5 41+66.50-51.29' L
Back of Landing

6 41+66.28-31.47' L
End 25.67' Rad C&G
Begin 25.67' Rad C&G Taper
TC Elev 08.38

7 41+72.10-30.02' L
End 25.67' Rad C&G Taper
TC Elev (Theor) 08.50

7a 41+75.26-29.82' L
End 25.67' Rad Fillet C&G

8 42+07.67-66.11' L
Center of Detectable Warning

9 42+11.15-29.75' L
Begin Str C&G Taper
TC Elev (Theor) 08.45

10 42+17.15-29.73' L
End Str C&G Taper
Begin Str C&G
TC Elev 08.42

11 42+27.48-44.98' L
Center of Detectable Warning

12 42+30.21-32.38' L
Center of Detectable Warning
& Type 1 Curb Ramp

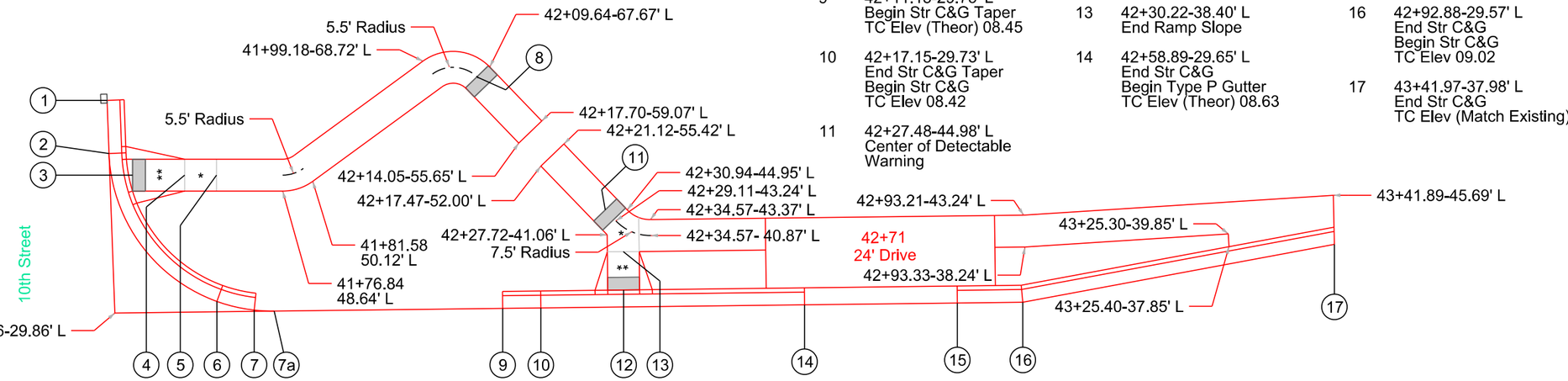
13 42+30.22-38.40' L
End Ramp Slope

14 42+58.89-29.65' L
End Str C&G
Begin Type P Gutter
TC Elev (Theor) 08.63

15 42+82.59-29.59' L
End Type P Gutter
Begin Str C&G
TC Elev (Theor) 08.85

16 42+92.88-29.57' L
End Str C&G
Begin Str C&G
TC Elev 09.02

17 43+41.97-37.98' L
End Str C&G
TC Elev (Match Existing)



18 41+72.00-69.63' R
Begin Str C&G
TC Elev (Match Existing)

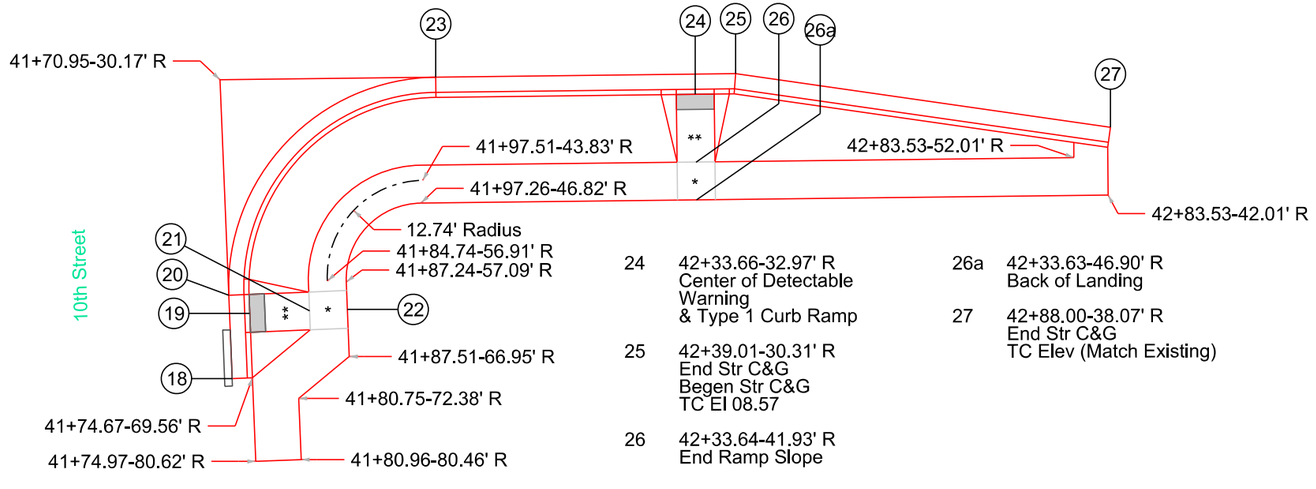
19 41+74.44-61.06' R
Center of Detectable Warning
& Type 1 Curb Ramp

20 41+71.71-58.64' R
End Str C&G
Begin 27.67' Rad Fillet C&G
TC Elev (Theor) 07.46

21 41+82.34-60.85' R
End Ramp Slope

22 41+87.34-60.72' R
Back of Landing

23 41+99.43-30.23' R
End 27.67' Rad C&G
Begin 27.67' Rad C&G Taper
TC Elev 08.05



24 42+33.66-32.97' R
Center of Detectable Warning
& Type 1 Curb Ramp

25 42+39.01-30.31' R
End Str C&G
Begen Str C&G
TC El 08.57

26 42+33.64-41.93' R
End Ramp Slope

26a 42+33.63-46.90' R
Back of Landing

27 42+88.00-38.07' R
End Str C&G
TC Elev (Match Existing)

CURB RAMP LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B21	B38

Plotting Date: 03/22/2024

* Turning Space with 1.5% slope
** Curb Ramp with 7.5% slope and 1.5% cross slope
Note: All curb and gutter shown on this sheet is Type B69.5 except as noted.
All sidewalk is 5' wide except as noted.

YANKTON

1 57+56.68-43.17' L
End Ramp Slope

2 57+64.30-45.80' L
Begin Ramp Slope

3 57+65.54-53.87' L
Back of Turning Space

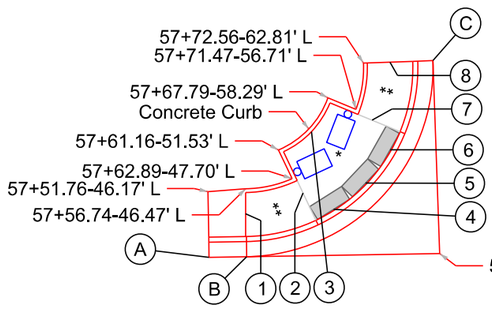
4 57+68.31-43.57' L
Center of Detectable Warning

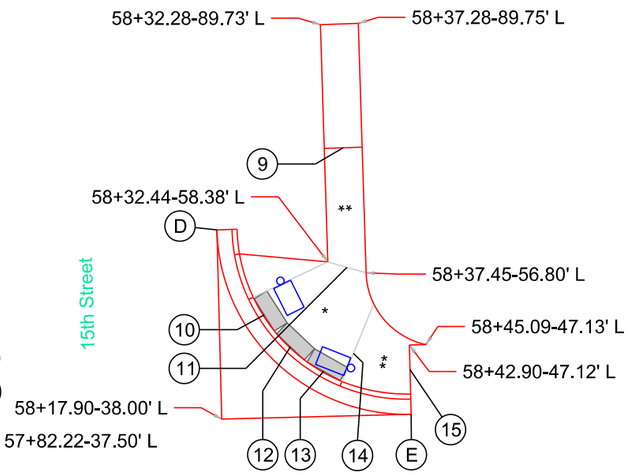
5 57+72.58-46.96' L
Center of Detectable Warning
& Type 3 Curb Ramp

6 57+75.89-51.30' L
Center of Detectable Warning

7 57+73.58-55.26' L
Begin Ramp Slope

8 57+76.06-62.87' L
End Ramp Slope





9 58+34.87-73.40' L
End Ramp Slope

10 58+23.85-51.61' L
Center of Detectable Warning

11 58+34.94-57.59' L
Begin Ramp Slope

12 58+27.21-47.31' L
Center of Detectable Warning
& Type 3 Curb Ramp

13 58+31.51-43.96' L
Center of Detectable Warning

14 58+35.49-46.23' L
Begin Ramp Slope

15 58+42.90-43.90' L
End Ramp Slope

A 57+51.76-37.50' L
Begin Str C&G
TC Elev (Match Existing)

B 57+56.74-37.50' L
End Str C&G
Begin 25' Rad C&G Fillet
TC Elev (Theor) 39.70

C 57+81.73-62.98' L
End 25' Rad C&G Fillet
TC Elev (Match Existing)

D 58+17.90-63.00' L
Begin 25' Rad C&G Fillet
TC Elev (Match Existing)

E 58+42.90-38.00' L
End 25' Rad C&G Fillet
TC Elev (Match Existing)

Present US Hwy 81 and SD Hwy 50

58+00

Broadway Avenue

F 57+59.09-37.50' R
Begin Str C&G
TC Elev (Match Existing)

G 57+64.03-37.50' R
End Str C&G
Begin 25' Rad C&G Fillet
TC Elev 41.73

H 57+89.03-61.96' R
End 25' Rad C&G Fillet
Begin Str C&G
TC Elev (Theor) 44.23

J 57+89.13-66.94' R
End Str C&G
TC Elev (Match Existing)

K 58+14.30-67.93' R
Begin Str C&G
TC Elev (Match Existing)

L 58+14.31-62.96' R
End Str C&G
Begin 25' Rad C&G Fillet
TC Elev 44.58

M 58+39.31-38.00' R
End 25' Rad C&G Fillet
TC Elev (Match Existing)

16 57+64.03-43.17' R
End Ramp Slope

17 57+71.26-45.65' R
Begin Ramp Slope

18 57+75.21-43.34' R
Center of Detectable Warning

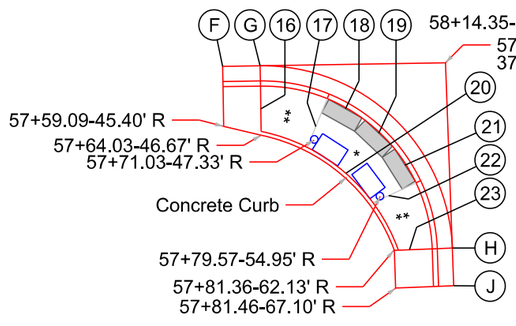
19 57+79.55-46.64' R
Center of Detectable Warning
& Type 3 Curb Ramp

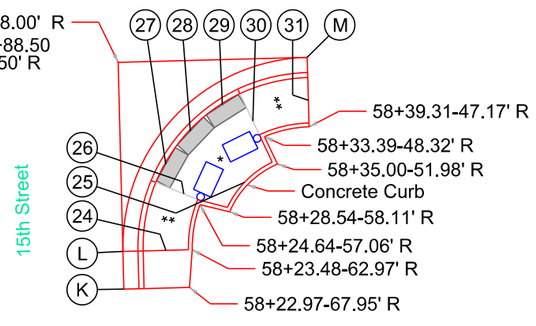
20 57+75.16-51.85' R
Back of Turning Space

21 57+82.95-50.91' R
Center of Detectable Warning

22 57+80.73-54.91' R
Begin Ramp Slope

23 57+83.36-62.08' R
End Ramp Slope





24 58+19.98-62.97' R
End Ramp Slope

25 58+30.60-54.28' R
Back of Turning Space

26 58+22.54-55.58' R
Begin Ramp Slope

27 58+20.28-51.60' R
Center of Detectable Warning

28 58+23.63-47.30' R
Center of Detectable Warning
& Type 3 Curb Ramp

29 58+27.94-43.95' R
Center of Detectable Warning

30 58+31.92-46.22' R
Begin Ramp Slope

31 58+39.31-43.67' R
End Ramp Slope

CURB RAMP LAYOUT

YANKTON

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B22	B38

Plotting Date: 03/22/2024

* Turning Space with 1.5% slope
** Curb Ramp with 7.5% slope and 1.5% cross slope
Note: All curb and gutter shown on this sheet is Type B69.5 except as noted.
All sidewalk is 5' wide except as noted.

1 83+87.88-47.07' L
End Ramp Slope

2 83+94.39-48.56' L
Begin Ramp Slope

3 83+98.34-45.35' L
Center of Detectable Warning
& Type 3 Curb Ramp

4 83+95.63-51.74' L
Back of Turning Space

5 83+98.79-50.42' L
Begin Ramp Slope

6 84+04.80-52.60' L
End Ramp Slope

7 84+22.45-70.27' L
End Ramp Slope

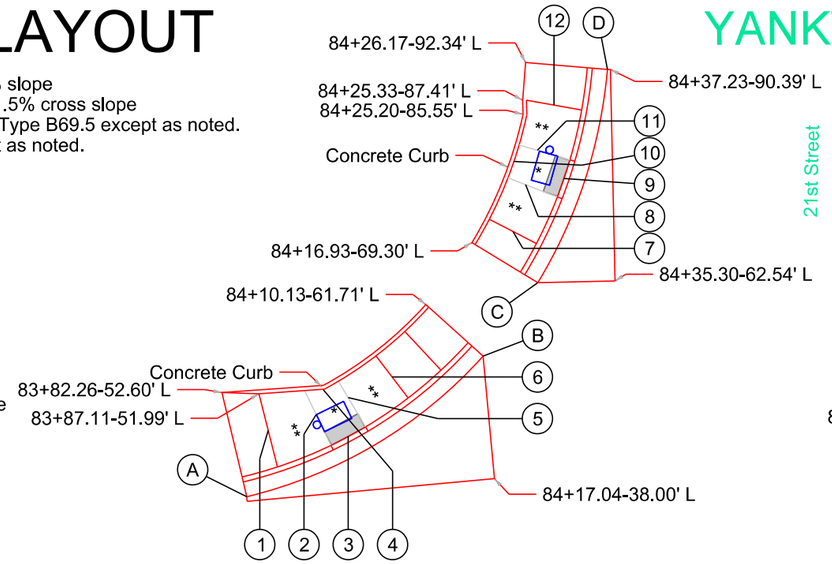
8 84+24.70-76.27' L
Begin Ramp Slope

9 84+29.78-76.63' L
Center of Detectable Warning
& Type 3 Curb Ramp

10 84+23.43-79.46' L
Back of Turning Space

11 84+26.64-80.65' L
Begin Ramp Slope

12 84+29.40-86.40' L
End Ramp Slope

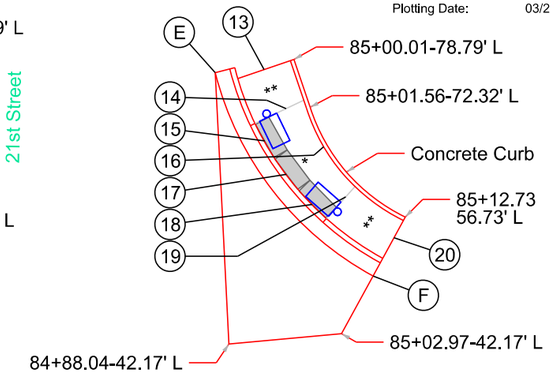


A 83+84.27-38.62' L
Begin 61' Rad C&G
TC Elev (Match Existing)

B 84+17.04-54.24' L
End 61' Rad C&G
TC Elev (Match Existing)

C 84+25.10-63.25' L
Begin 65.06' Rad C&G
TC Elev (Match Existing)

D 84+36.84-90.42' L
End 65.06' Rad C&G
TC Elev (Match Existing)



E 84+89.49-78.01' L
Begin 42.5' Rad C&G
TC Elev (Match Existing)

F 85+07.80-49.37' L
End 42.5' Rad C&G
TC Elev (Match Existing)

13 84+95.96-77.82' L
End Ramp Slope

14 84+98.39-72.43' L
Begin Ramp Slope

15 84+95.18-68.44' L
Center of Detectable Warning

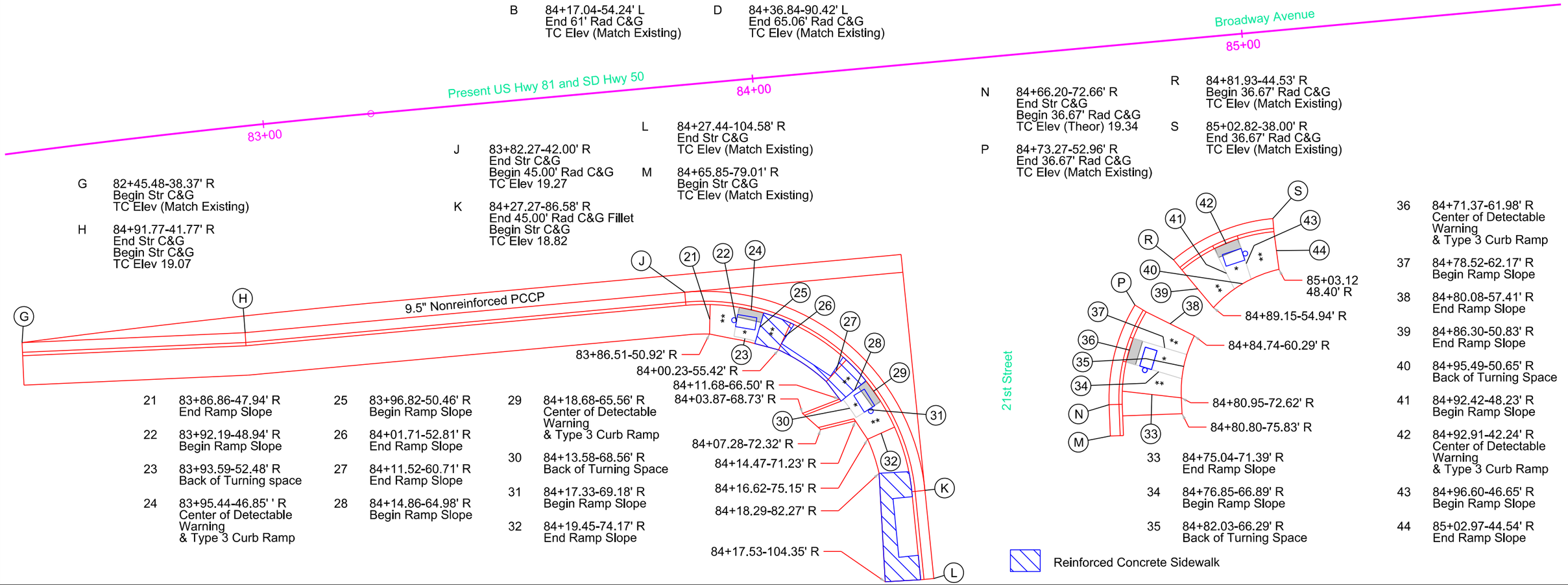
16 85+02.86-66.97' L
Back of Turning Space

17 84+97.64-63.80' L
Center of Detectable Warning
& Type 3 Curb Ramp

18 85+00.68-59.52' L
Center of Detectable Warning

19 85+05.16-60.11' L
Begin Ramp Slope

20 85+11.01-54.16' L
End Ramp Slope



G 82+45.48-38.37' R
Begin Str C&G
TC Elev (Match Existing)

H 84+91.77-41.77' R
End Str C&G
Begin Str C&G
TC Elev 19.07

J 83+82.27-42.00' R
End Str C&G
Begin 45.00' Rad C&G
TC Elev 19.27

K 84+27.27-86.58' R
End 45.00' Rad C&G Fillet
Begin Str C&G
TC Elev 18.82

L 84+27.44-104.58' R
End Str C&G
TC Elev (Match Existing)

M 84+65.85-79.01' R
Begin Str C&G
TC Elev (Match Existing)

N 84+66.20-72.66' R
End Str C&G
Begin 36.67' Rad C&G
TC Elev (Theor) 19.34

P 84+73.27-52.96' R
End 36.67' Rad C&G
TC Elev (Match Existing)

R 84+81.93-44.53' R
Begin 36.67' Rad C&G
TC Elev (Match Existing)

S 85+02.82-38.00' R
End 36.67' Rad C&G
TC Elev (Match Existing)

21 83+86.86-47.94' R
End Ramp Slope

22 83+92.19-48.94' R
Begin Ramp Slope

23 83+93.59-52.48' R
Back of Turning space

24 83+95.44-46.85' ' R
Center of Detectable Warning
& Type 3 Curb Ramp

25 83+96.82-50.46' R
Begin Ramp Slope

26 84+01.71-52.81' R
End Ramp Slope

27 84+11.52-60.71' R
End Ramp Slope

28 84+14.86-64.98' R
Begin Ramp Slope

29 84+18.68-65.56' R
Center of Detectable Warning
& Type 3 Curb Ramp

30 84+13.58-68.56' R
Back of Turning Space

31 84+17.33-69.18' R
Begin Ramp Slope

32 84+19.45-74.17' R
End Ramp Slope

33 84+75.04-71.39' R
End Ramp Slope

34 84+76.85-66.89' R
Begin Ramp Slope

35 84+82.03-66.29' R
Back of Turning Space

36 84+71.37-61.98' R
Center of Detectable Warning
& Type 3 Curb Ramp

37 84+78.52-62.17' R
Begin Ramp Slope

38 84+80.08-57.41' R
End Ramp Slope

39 84+86.30-50.83' R
End Ramp Slope

40 84+95.49-50.65' R
Back of Turning Space

41 84+92.42-48.23' R
Begin Ramp Slope

42 84+92.91-42.24' R
Center of Detectable Warning
& Type 3 Curb Ramp

43 84+96.60-46.65' R
Begin Ramp Slope

44 85+02.97-44.54' R
End Ramp Slope

Reinforced Concrete Sidewalk

Plot Scale - 1:20
Plotted From - TRSF12140
File - U:\rdp\rjyank07DH084cr.dgn

CURB RAMP LAYOUT

YANKTON

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B23	B38

Plotting Date: 03/22/2024

* Turning Space with 1.5% slope
** Curb Ramp with 7.5% slope and 1.5% cross slope
Note: All curb and gutter shown on this sheet is Type B69.5 except as noted.
All sidewalk is 5' wide except as noted.

1 97+44.99-46.68' L
End Ramp Slope

2 97+51.42-51.17' L
Begin Ramp Slope

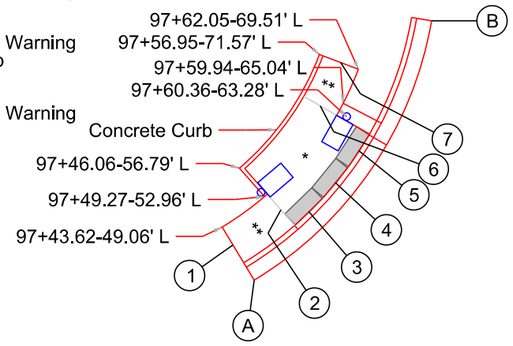
3 97+55.09-50.84' L
Center of Detectable Warning

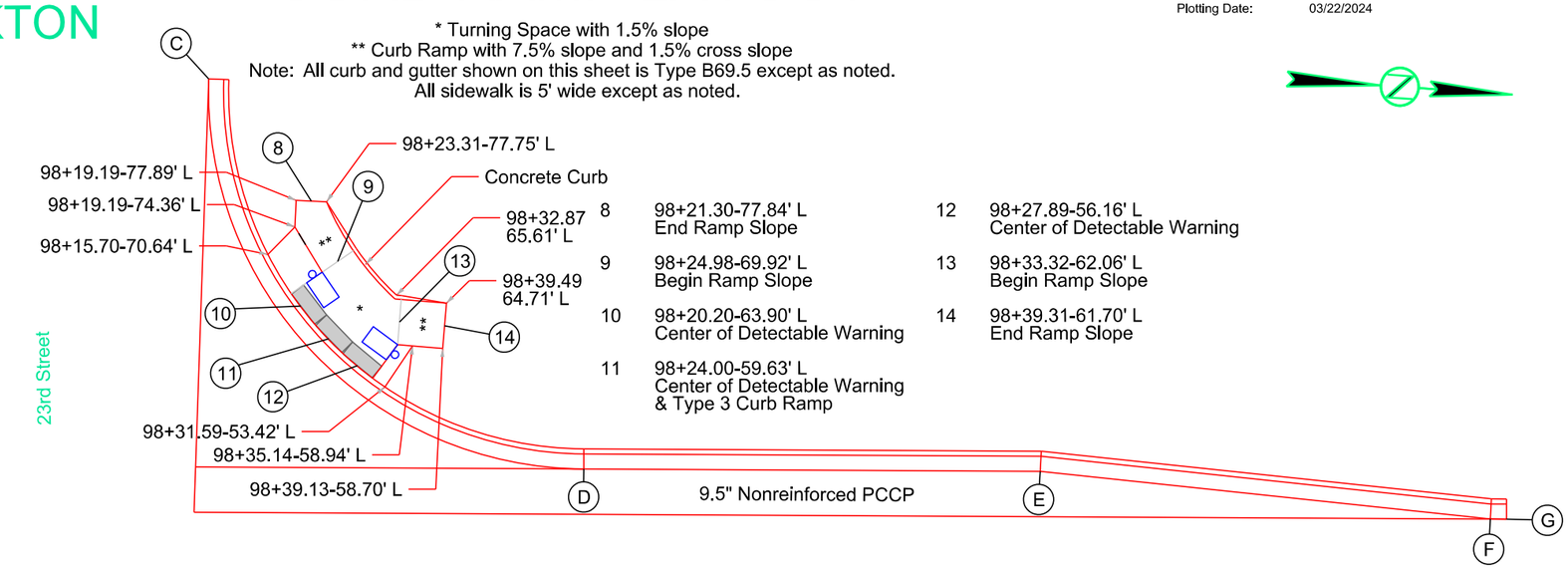
4 97+58.70-54.60' L
Center of Detectable Warning
& Type 3 Curb Ramp

5 97+61.87-58.75' L
Center of Detectable Warning

6 97+56.91-64.78' L
Begin Ramp Slope

7 97+59.74-70.45' L
End Ramp Slope





8 98+21.30-77.84' L
End Ramp Slope

9 98+24.98-69.92' L
Begin Ramp Slope

10 98+20.20-63.90' L
Center of Detectable Warning

11 98+24.00-59.63' L
Center of Detectable Warning
& Type 3 Curb Ramp

12 98+27.89-56.16' L
Center of Detectable Warning

13 98+33.32-62.06' L
Begin Ramp Slope

14 98+39.31-61.70' L
End Ramp Slope

A 97+47.68-41.98' L
Begin 50' Rad C&G
TC Elev (Match Existing)

B 97+71.85-75.68' L
End 50' Rad C&G
TC Elev (Match Existing)

C 98+07.35-93.72' L
Begin 50' Rad C&G
TC Elev (Match Existing)

D 98+58.17-43.14' L
End 50' Rad C&G
Begin Str C&G
TC Elev 31.22

E 99+18.66-44.13' L
Begin Str C&G
End Str C&G
TC Elev 31.02

F 99+78.45-39.12' L
End Str C&G
Begin Str C&G
TC Elev 30.79

G 99+80.58-39.15' L
End Str C&G
TC Elev (Match Existing)

Present US Hwy 81 and SD Hwy 50 — Broadway Avenue

97+00 — 98+00 — 99+00 — 99+81

15 97+37.56-69.70' R
End Ramp Slope

16 97+43.55-70.11' R
Begin Ramp Slope

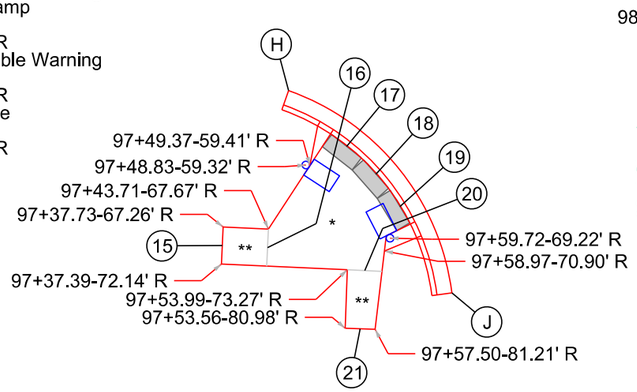
17 97+54.27-56.97' R
Center of Detectable Warning

18 97+58.06-60.72' R
Center of Detectable Warning
& Type 3 Curb Ramp

19 97+61.14-65.09' R
Center of Detectable Warning

20 97+56.29-73.43' R
Begin Ramp Slope

21 97+55.53-81.09' R
End Ramp Slope



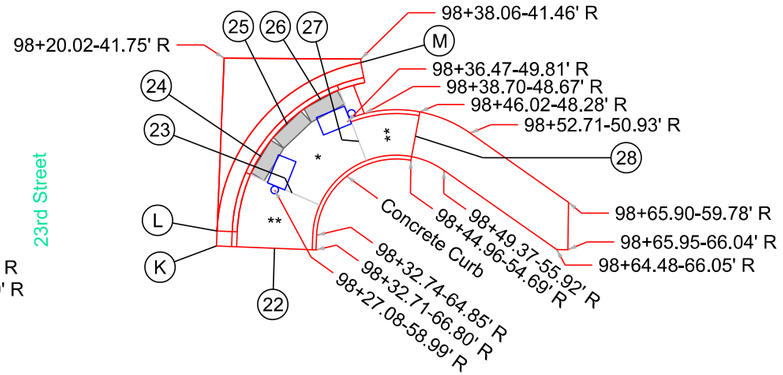
H 97+46.76-49.46' R
Begin 32.67' Rad C&G
TC Elev (Match Existing)

J 97+67.74-76.64' R
End 32.67' Rad C&G
TC Elev (Match Existing)

K 98+19.54-66.55' R
Begin Str C&G
TC Elev (Match Existing)

L 98+19.58-64.59' R
End Str C&G
Begin 23.67' Rad C&G
TC Elev (Theor) 32.57

M 98+38.07-41.95' R
End 23.67' Rad C&G
TC Elev (Match Existing)



22 98+27.21-66.69' R
End Ramp Slope

23 98+29.37-59.32' R
Begin Ramp Slope

24 98+25.18-54.63' R
Center of Detectable Warning

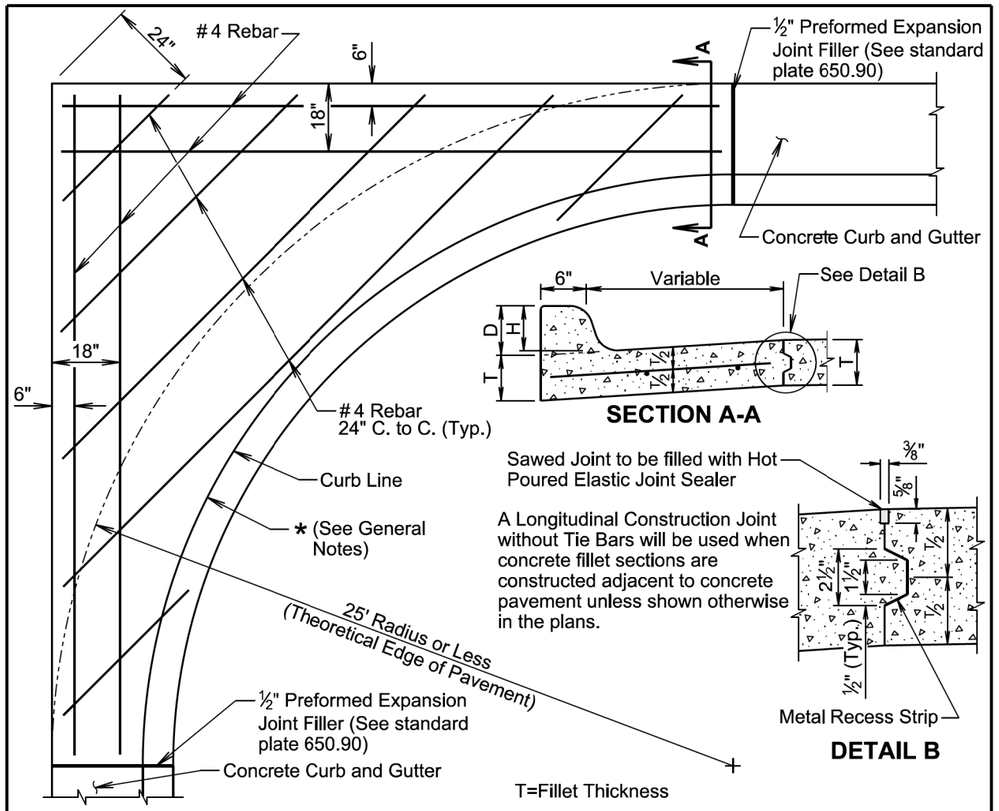
25 98+28.52-50.28' R
Center of Detectable Warning
& Type 3 Curb Ramp

26 98+32.88-46.95' R
Center of Detectable Warning

27 98+38.04-52.32' R
Begin Ramp Slope

28 98+45.49-51.49' R
End Ramp Slope

Plot Scale - 1:20
Plotted From - TRSF12140
File - U:\d\prj\yank07DH\097cr.dgn



GENERAL NOTES:

* If a curb ramp is constructed adjacent to a PCC fillet section, the curb will need to be modified. Refer to the corresponding curb ramp standard plate or other special details in the plans for modification of the PCC fillet section.

Dimensions D, H, and T will conform to those shown on the appropriate curb and gutter standard plate.

All rebar will be in conformance with Sections 480 and 1010 of the Specifications. All rebar will have a minimum of 3 inches of clear cover.

Class M6 Concrete will be used in construction of the fillets.

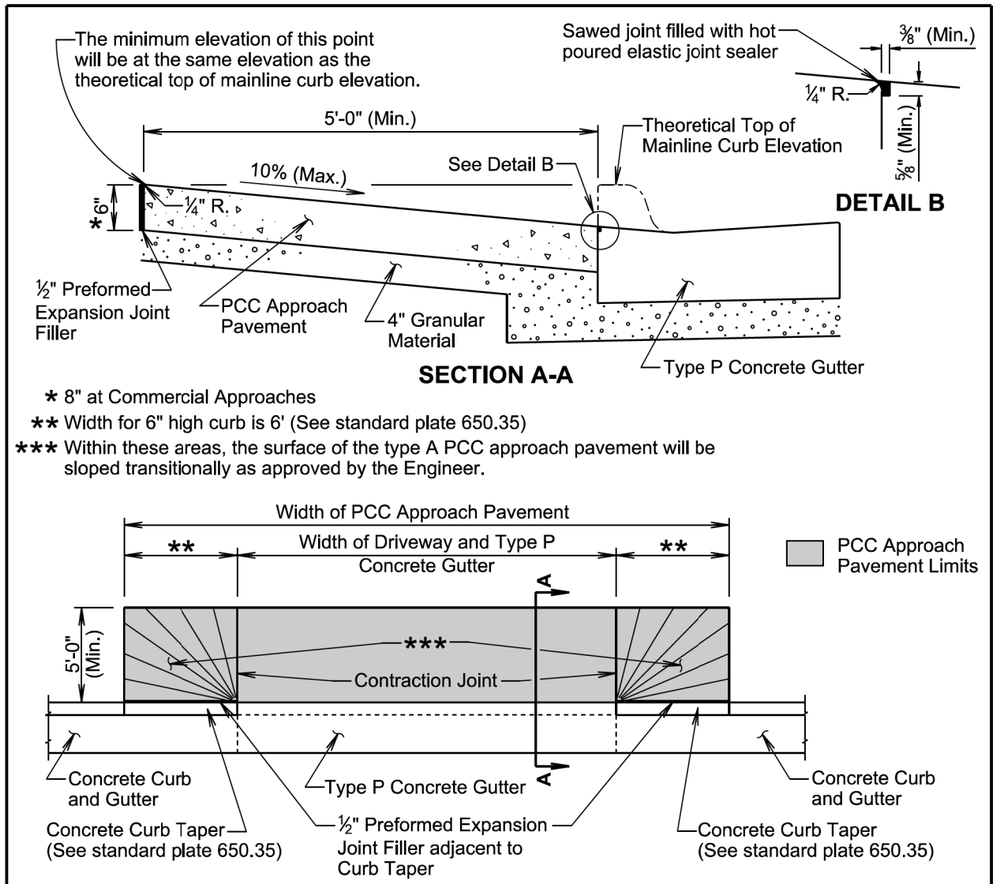
The concrete curb will be monolithic with the concrete fillet. No separate payment for this curb will be made as the curb is considered a part of the fillet.

Joints will be constructed at 10-foot intervals except when fillets are constructed adjacent to PCC Pavement. If there is adjacent PCC Pavement the joints will be extended from edge of pavement through the fillet section as directed by the Engineer.

The cost for all materials, labor, and incidentals necessary to construct the PCC fillet section with curb and gutter will be incidental to the contract unit price per square yard for the corresponding PCC fillet section contract item.

November 19, 2022

Published Date: 2024	SDDOT	PCC FILLET SECTION WITH TYPE B CURB AND GUTTER	PLATE NUMBER 380.30
			Sheet 1 of 1



* 8" at Commercial Approaches

** Width for 6" high curb is 6' (See standard plate 650.35)

*** Within these areas, the surface of the type A PCC approach pavement will be sloped transitionally as approved by the Engineer.

PLAN VIEW

GENERAL NOTES:

The concrete for the type A PCC approach pavement and adjacent driveway will comply with the requirements of the Specifications for class M6 concrete unless otherwise stated in the plans.

Contraction joints in the type A PCC approach pavement will be 1½ inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint will be at least ¼ the thickness of the approach pavement. Additional contraction joints not shown in the Plan View will be spaced as follows:

One joint at the center of the approach for driveways 16 feet to 24 feet wide.
Two joints spaced at equal intervals for driveways greater than 24 feet to 40 feet wide.

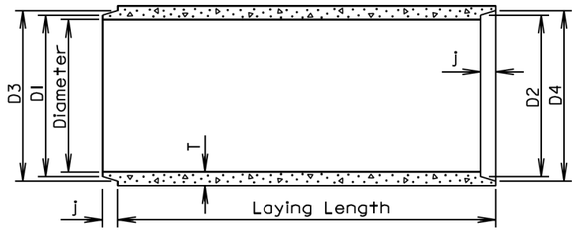
All costs for furnishing and placing the type A PCC approach pavement and constructing the expansion and contraction joints including labor, equipment, excavation, and materials including the earthen backfill and granular material, will be incidental to the contract unit price per square yard for the corresponding PCC Approach Pavement contract item.

June 26, 2019

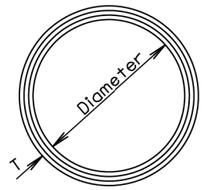
Published Date: 2024	SDDOT	TYPE A PCC APPROACH PAVEMENT	PLATE NUMBER 380.40
			Sheet 1 of 1

TOLERANCES IN DIMENSIONS

Diameter: ±1.5% for 24" Dia. or less and ±1% or 3/8" whichever is more for 27" Dia. or greater.
Diameters at joints: ± 3/16" for 30" Dia. or less and ± 1/4" for 36" or greater.
Length of joint (j): ± 1/4".
Wall thickness (T): not less than design T by more than 5% or 3/16", whichever is greater.
Laying length: shall not underrun by more than 1/2".



LONGITUDINAL SECTION



END VIEW

GENERAL NOTES:

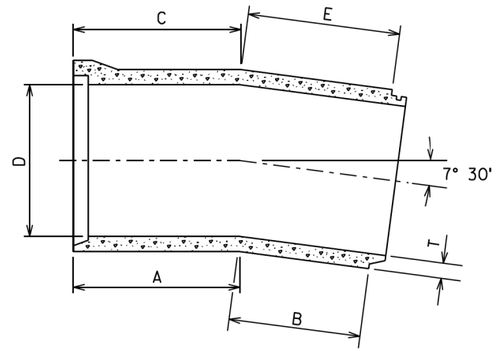
Construction of R. C. P. shall conform to the requirements of Section 990 of the Specifications.

Not more than 2 four-foot sections shall be permitted near the ends of any culvert. Four-foot lengths shall be used only to secure the required length of culvert.

Diam. (in.)	Approx. Wt. /Ft. (lb.)	T (in.)	J (in.)	D1 (in.)	D2 (in.)	D3 (in.)	D4 (in.)
12	92	2	1 3/4	13 1/4	13 5/8	13 7/8	14 1/4
15	127	2 1/4	2	16 1/2	16 7/8	17 1/4	17 5/8
18	168	2 1/2	2 1/4	19 5/8	20	20 3/8	20 3/4
21	214	2 3/4	2 1/2	22 7/8	23 1/4	23 3/4	24 1/8
24	265	3	2 3/4	26	26 3/8	27	27 3/8
27	322	3 1/4	3	29 1/4	29 5/8	30 1/4	30 5/8
30	384	3 1/2	3 1/4	32 3/8	32 3/4	33 1/2	33 7/8
36	524	4	3 3/4	38 3/4	39 1/4	40	40 1/2
42	685	4 1/2	4	45 1/8	45 5/8	46 1/2	47
48	867	5	4 1/2	51 1/2	52	53	53 1/2
54	1070	5 1/2	4 1/2	57 7/8	58 3/8	59 3/8	59 7/8
60	1296	6	5	64 1/4	64 3/4	66	66 1/2
66	1542	6 1/2	5 1/2	70 5/8	71 1/8	72 1/2	73
72	1810	7	6	77	77 1/2	79	79 1/2
78	2098	7 1/2	6 1/2	83 3/8	83 7/8	85 5/8	86 1/8
84	2410	8	7	89 3/4	90 1/4	92 1/8	92 5/8
90	2740	8 1/2	7	95 3/4	96 1/4	98 1/8	98 5/8
96	2950	9	7	102 1/8	102 5/8	104 1/2	105
102	3075	9 1/2	7 1/2	109	109 1/2	111 1/2	112
108	3870	10	7 1/2	115 1/2	116	118	118 1/2

June 26, 2015

Published Date: 2024	SDDOT	REINFORCED CONCRETE PIPE	PLATE NUMBER 450.01
			Sheet 1 of 1



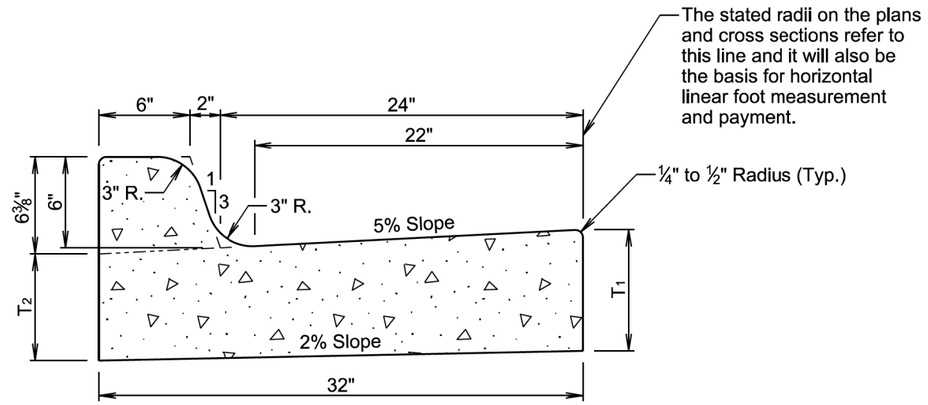
GENERAL NOTE:

Centerline laying length: 4'-0
Radius of Curve: 30.5'

D (in.)	T (in.)	A (in.)	B (in.)	C (in.)	E (in.)	Weight of Section (lbs.)
12	2	36 15/32	10 15/32	37 17/32	11 17/32	368
15	2 1/4	36 1/2	10 1/4	37 3/4	11 1/2	508
18	2 1/2	24 1/2	22	26	23 1/2	672
21	2 3/4	24 1/2	21 3/4	26 1/4	23 1/2	856
24	3	25 1/32	21 1/32	26 31/32	22 31/32	1060
27	3 1/4	25 1/32	20 25/32	27 7/32	22 31/32	1288
30	3 1/2	25 1/32	20 17/32	27 15/32	22 31/32	1536
33	3 3/4	24 15/16	20 7/16	27 9/16	23 1/16	1808
36	4	24 13/16	20 5/16	27 11/16	23 3/16	2096
42	4 1/2	24 27/32	19 27/32	28 5/32	23 5/32	2740
48	5	24 19/32	19 19/32	28 13/32	23 13/32	3468
54	5 1/2	24 5/8	19 1/8	29 11/32	23 3/8	4280
60	6	24 21/32	18 21/32	29 11/32	23 11/32	5184
66	6 1/2	24 11/16	18 3/16	29 13/16	23 5/16	6168
72	7	24 1/8	18 1/8	29 7/8	23 7/8	7240
84	8	24 1/4	17 1/4	30 3/4	23 3/4	9640
96	9	23 5/16	17 5/16	30 11/16	24 11/16	12400

March 31, 2000

Published Date: 2024	SDDOT	REINFORCED CONCRETE PIPE LONG RADIUS BEND	PLATE NUMBER 450.04
			Sheet 1 of 1



TYPE B CONCRETE CURB AND GUTTER

Type	T_1 (Inches)	T_2 (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
B66	6	5 1/16	0.057	17.7
B67	7	6 1/16	0.065	15.4
B68	8	7 1/16	0.073	13.7
B68.5	8.5	7 9/16	0.077	13.0
B69	9	8 1/16	0.081	12.3
B69.5	9.5	8 9/16	0.085	11.7
B610	10	9 1/16	0.090	11.2
B610.5	10.5	9 9/16	0.094	10.7
B611	11	10 1/16	0.098	10.2
B611.5	11.5	10 9/16	0.102	9.8
B612	12	11 1/16	0.106	9.4

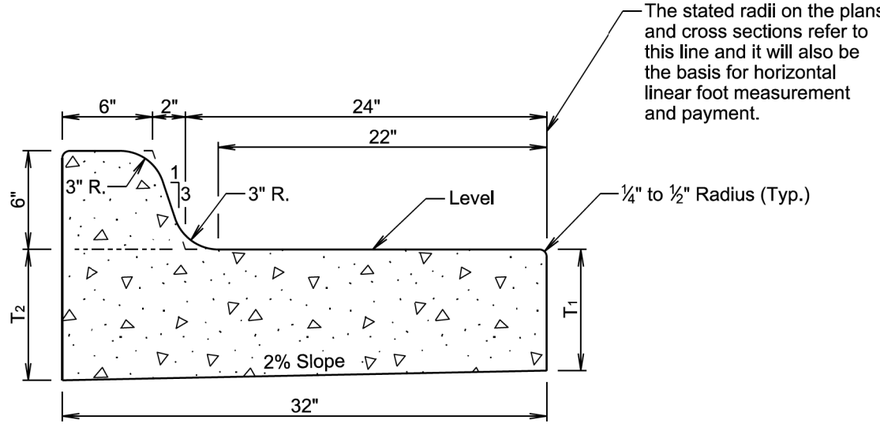
GENERAL NOTES:

When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment will be by one of the methods shown on standard plate 380.21.

See standard plate 650.90 for expansion and contraction joints in the curb and gutter.

January 22, 2023

Published Date: 2024	SDDOT	TYPE B CONCRETE CURB AND GUTTER	PLATE NUMBER 650.01
			Sheet 1 of 1



TYPE BL CONCRETE CURB AND GUTTER

Type	T_1 (Inches)	T_2 (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
BL66	6	6⅝	0.063	15.9
BL67	7	7⅝	0.071	14.1
BL68	8	8⅝	0.080	12.5
BL68.5	8.5	9⅛	0.084	11.9
BL69	9	9⅝	0.088	11.4
BL69.5	9.5	10⅛	0.092	10.9
BL610	10	10⅝	0.096	10.4
BL610.5	10.5	11⅛	0.100	10.0
BL611	11	11⅝	0.104	9.6
BL611.5	11.5	12⅛	0.108	9.3
BL612	12	12⅝	0.112	8.9

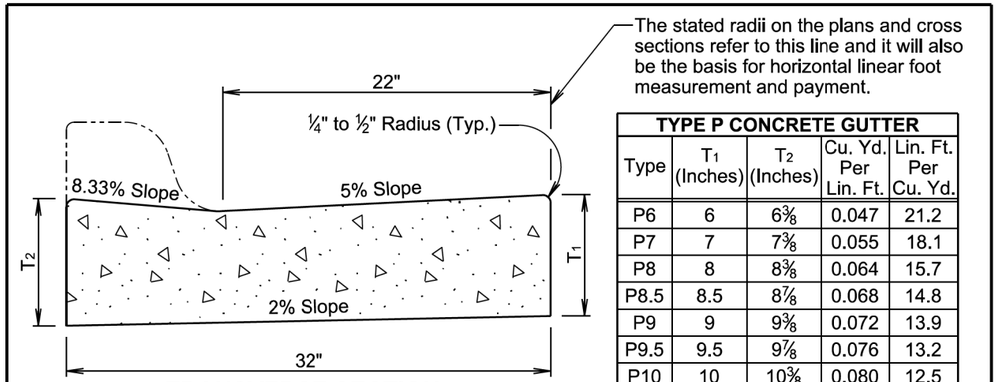
GENERAL NOTES:

When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment will be by one of the methods shown on standard plate 380.21.

See standard plate 650.90 for expansion and contraction joints in the curb and gutter.

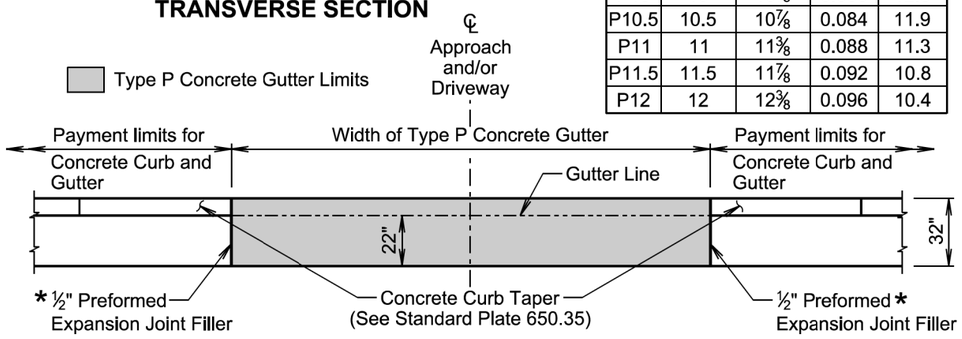
January 22, 2023

Published Date: 2024	SDDOT	TYPE BL CONCRETE CURB AND GUTTER	PLATE NUMBER 650.05
			Sheet 1 of 1



TRANSVERSE SECTION

TYPE P CONCRETE GUTTER				
Type	T_1 (Inches)	T_2 (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
P6	6	6⅜	0.047	21.2
P7	7	7⅜	0.055	18.1
P8	8	8⅜	0.064	15.7
P8.5	8.5	8⅞	0.068	14.8
P9	9	9⅜	0.072	13.9
P9.5	9.5	9⅞	0.076	13.2
P10	10	10⅜	0.080	12.5
P10.5	10.5	10⅞	0.084	11.9
P11	11	11⅜	0.088	11.3
P11.5	11.5	11⅞	0.092	10.8
P12	12	12⅜	0.096	10.4



PLAN VIEW

* Joint will not be needed if concrete curb and gutter and type P concrete gutter is placed at the same time. If the ½" preformed expansion joint filler is provided, then the joint will be sealed in accordance with standard plate 650.90.

GENERAL NOTES:

The concrete for the type P concrete gutter will comply with the requirements of the specifications for class M6 concrete.

When concrete gutter longitudinally adjoins new concrete pavement, the method of attachment will be by one of the methods shown on standard plate 380.21.

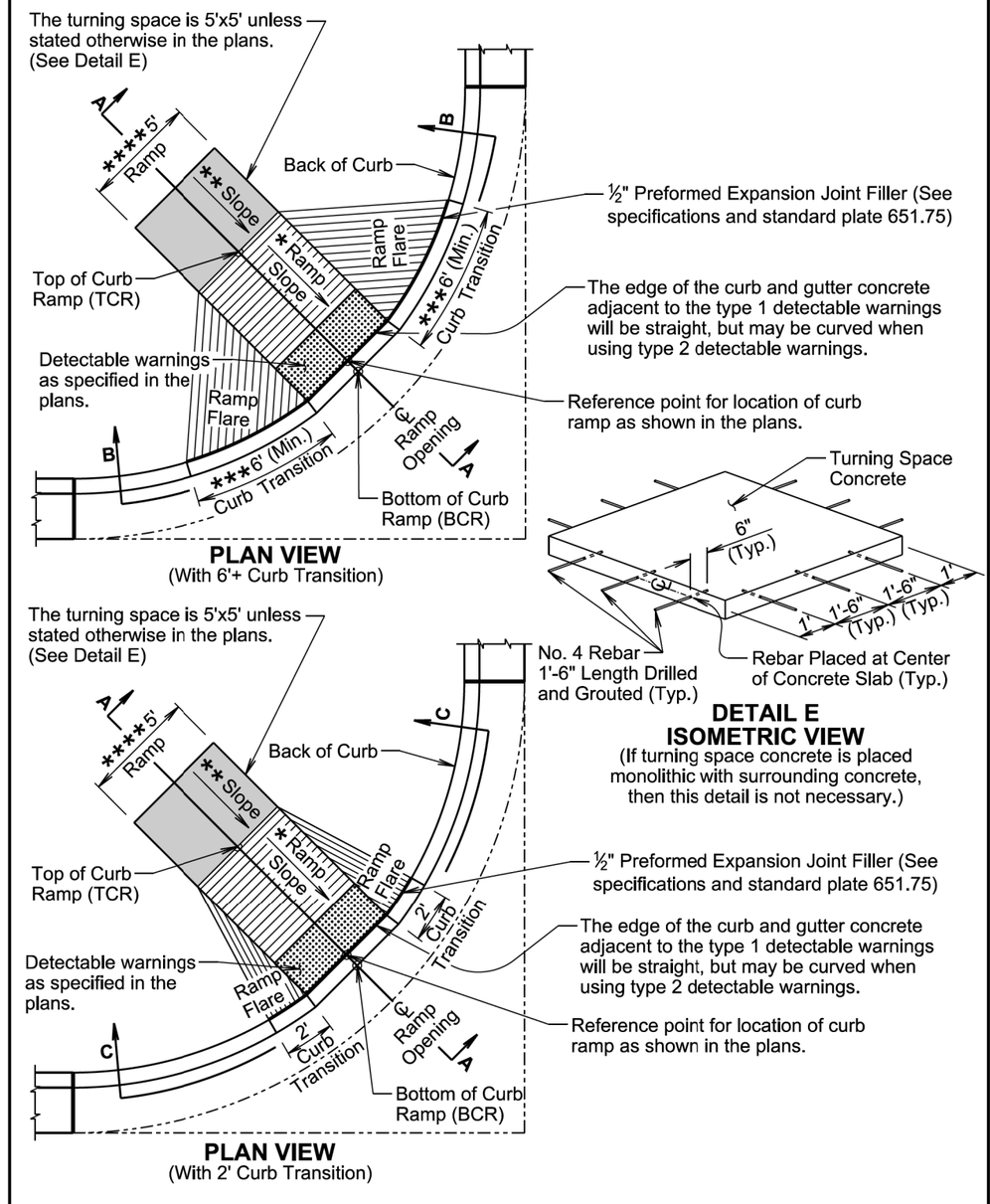
Transverse contraction joints will be constructed at 10-foot intervals in the concrete gutter except when concrete gutter is constructed adjacent to mainline PCC pavement. When concrete gutter is constructed adjacent to mainline PCC pavement, a transverse contraction joint will be constructed in the concrete gutter at each mainline PCC pavement transverse contraction joint location.

When concrete gutter is placed monolithically with mainline PCC pavement, the transverse contraction joints in the concrete gutter will be sawed and sealed the same as the transverse contraction joints in the mainline PCC pavement.

When concrete gutter is not placed monolithically with the mainline PCC pavement and when the adjacent mainline surfacing is not PCC concrete, the transverse contraction joints in the concrete gutter will be 1½ inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint will be at least ¼ the thickness of the concrete.

January 22, 2023

Published Date: 2024	SDDOT	**TYPE P CONCRETE GUTTER**	PLATE NUMBER 650.30
			Sheet 1 of 1



PLAN VIEW
(With 6'+ Curb Transition)

DETAIL E
ISOMETRIC VIEW
(If turning space concrete is placed monolithic with surrounding concrete, then this detail is not necessary.)

PLAN VIEW
(With 2' Curb Transition)

February 14, 2020

Published Date: 2024	SDDOT	**TYPE 1 CURB RAMP (PERPENDICULAR CURB RAMP)**	PLATE NUMBER 651.01
			Sheet 1 of 3

* Curb ramp slopes are designed at 7.5% unless stated otherwise in the plans. The curb ramp may have a maximum slope of 8.3% and will not exceed 15' in length unless stated otherwise in the plans.

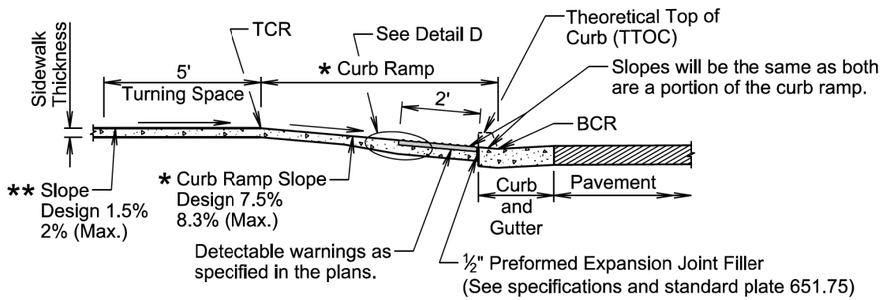
The curb ramp length may be computed based on the intersection of a continuous 1.5% theoretical slope from theoretical top of curb (TTOC) with the curb ramp using a continuous 7.5% curb ramp slope. The elevation of point TCR will always be higher than the elevation of point TTOC unless specified otherwise in the plans. The curb ramp length dimension as shown in the plans will be adjusted as necessary to meet all slope and length requirements based on field geometrics.

The cross slope of the ramp will not be steeper than 2%. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

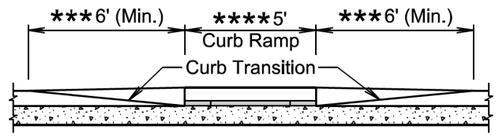
** The slope in the turning space will not be steeper than 2% in any direction of pedestrian travel. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

*** The curb transition will be a minimum of 6' long, a maximum of 10' long, and the curb transition slope will not be steeper than 10% unless stated otherwise in the plans. The curb transition length will be adjusted as necessary to meet slope and length requirements based on field geometrics.

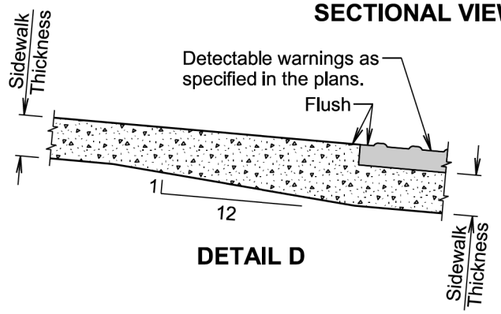
**** The ramp width is 5' unless stated otherwise in the plans.



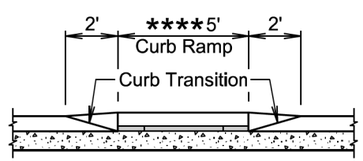
SECTION A-A



SECTIONAL VIEW B-B



DETAIL D



SECTIONAL VIEW C-C

February 14, 2020

Published Date: 2024	SDDOT	TYPE 1 CURB RAMP (PERPENDICULAR CURB RAMP)	PLATE NUMBER 651.01
			Sheet 2 of 3

GENERAL NOTES:

For illustrative purpose only, type 1 detectable warnings are shown in the drawings.

For illustrative purpose only, PCC fillet sections are shown in the drawings. The curb ramp depicted on this standard plate may be used with a PCC fillet section or curb and gutter.

For illustrative purpose only, the curb ramp location is shown at the center of a PCC fillet section. The curb ramp will be placed at the location stated in the plans.

Sidewalk will not be placed adjacent to the curb ramp flares when a 2-foot curb transition is used unless shown otherwise in the plans.

* Care will be taken to ensure a uniform grade on the curb ramp, free of sags and short grade changes.

Surface texture of the curb ramp will be obtained by coarse brooming transverse to the slope of the curb ramp.

The normal gutter line profile will be maintained through the area of the ramp opening.

Joints will be sawed or tooled into the concrete adjacent to the detectable warnings to alleviate possible corner cracking.

Care will be taken to ensure that the surface of the detectable warnings are clean and maintains a uniform color.

The detectable warnings will be cut as necessary to fit the plan specified limits of the detectable warnings. Cost for cutting the detectable warnings will be incidental to the corresponding detectable warning contract item.

There will be no separate payment for curb ramps. The curb ramp will be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk contract item. The square foot area of the detectable warnings will be included in the measured and paid for quantity of sidewalk.

If rebar is placed in the turning space as depicted in detail E, the cost of the materials, labor, and equipment to furnish and install the rebar will be incidental to the contract unit price per square foot for the corresponding concrete sidewalk contract item.

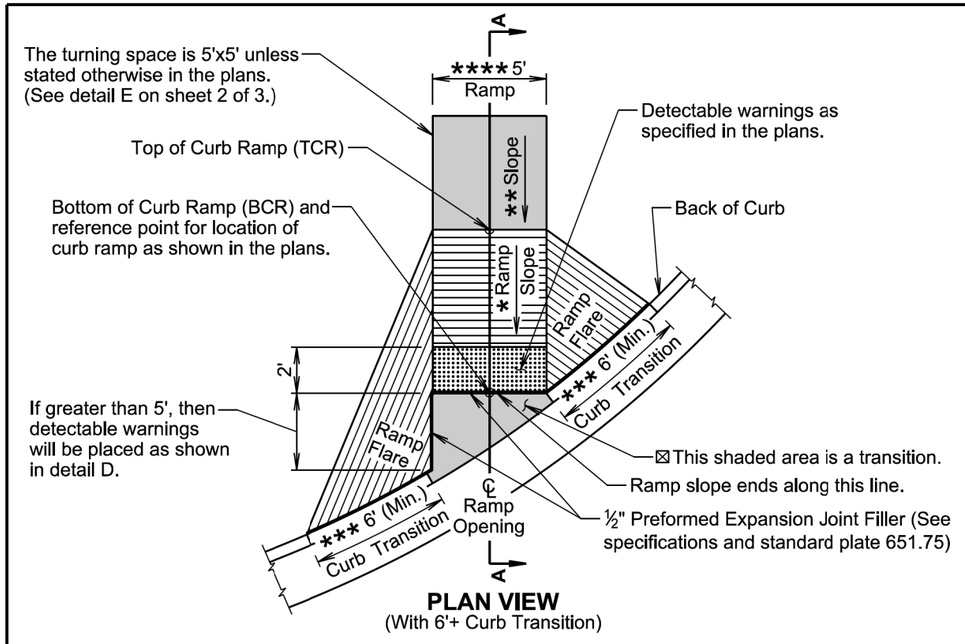
The curb transitions and ramp opening will be measured and paid for at the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used. The curb transitions and ramp opening will be measured and paid for at the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.

The type 1 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 1 detectable warnings including labor, equipment, materials, and incidentals will be paid for at the contract unit price per square foot for "Type 1 Detectable Warnings".

The type 2 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 2 detectable warnings including labor, equipment, and materials, including adhesive, necessary sealant or grout, and necessary grinding will be paid for at the contract unit price per square foot for "Type 2 Detectable Warnings".

February 14, 2020

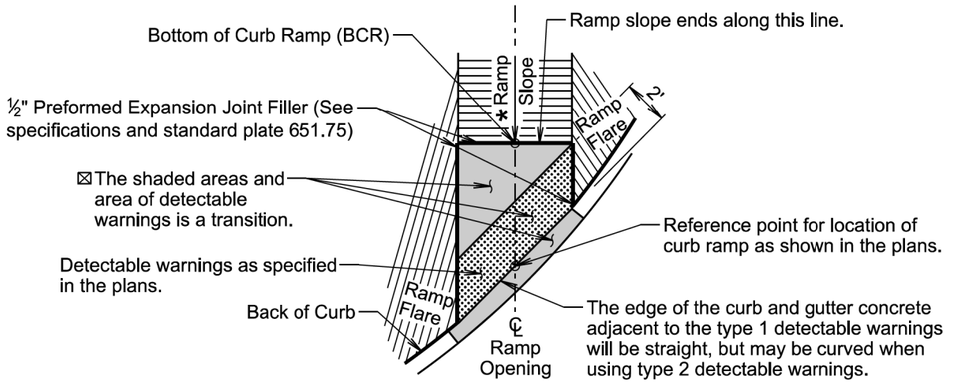
Published Date: 2024	SDDOT	TYPE 1 CURB RAMP (PERPENDICULAR CURB RAMP)	PLATE NUMBER 651.01
			Sheet 3 of 3



PLAN VIEW
(With 6'+ Curb Transition)

⊠The slope within the transition area will not be steeper than 5%. The concrete within the transition will be placed monolithic with the curb and gutter or fillet section concrete. The concrete thickness within the transition will be the same as the curb and gutter or fillet section concrete thickness.

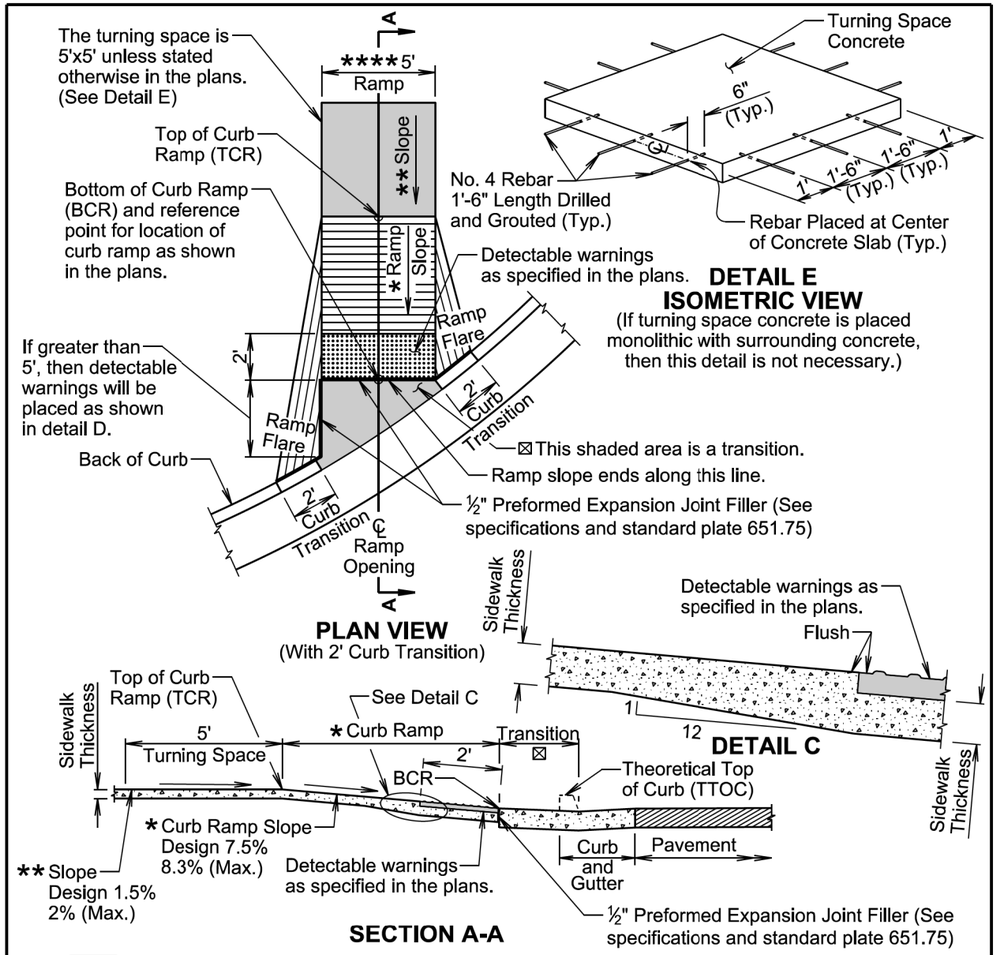
*** The curb transition will be a minimum of 6' long, a maximum of 10' long, and the curb transition slope will not be steeper than 10% unless stated otherwise in the plans. The curb transition length will be adjusted as necessary to meet slope and length requirements based on field geometrics.



DETAIL D

February 14, 2020

Published Date: 2024	SDDOT	TYPE 2 CURB RAMP (DIRECTIONAL CURB RAMP)	PLATE NUMBER 651.02
			Sheet 1 of 3



DETAIL E
ISOMETRIC VIEW
(If turning space concrete is placed monolithic with surrounding concrete, then this detail is not necessary.)

PLAN VIEW
(With 2' Curb Transition)

SECTION A-A

* Curb ramp slopes are designed at 7.5% unless stated otherwise in the plans. The curb ramp may have a maximum slope of 8.3% and will not exceed 15' in length unless stated otherwise in the plans.

The elevation of point TCR will always be higher than the elevation of point TTOC unless specified otherwise in the plans. The curb ramp length dimension as shown in the plans will be adjusted as necessary to meet all slope and length requirements based on field geometrics.

The cross slope of the ramp will not be steeper than 2%. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

** The slope in the turning space will not be steeper than 2% in any direction of pedestrian travel. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

**** The ramp width is 5' unless stated otherwise in the plans.

February 14, 2020

Published Date: 2024	SDDOT	TYPE 2 CURB RAMP (DIRECTIONAL CURB RAMP)	PLATE NUMBER 651.02
			Sheet 2 of 3

GENERAL NOTES:

For illustrative purpose only, type 1 detectable warnings are shown in the drawings.

The curb ramp depicted on this standard plate may be used with a PCC fillet section or curb and gutter. The curb ramp will be placed at the location stated in the plans.

Sidewalk will not be placed adjacent to the curb ramp flares when a 2-foot curb transition is used unless shown otherwise in the plans.

* Care will be taken to ensure a uniform grade on the curb ramp, free of sags and short grade changes.

Surface texture of the curb ramp will be obtained by coarse brooming transverse to the slope of the curb ramp.

The normal gutter line profile will be maintained through the area of the ramp opening.

Joints will be sawed or tooled into the concrete adjacent to the detectable warnings to alleviate possible corner cracking.

Care will be taken to ensure that the surface of the detectable warnings are clean and maintains a uniform color.

The detectable warnings will be cut as necessary to fit the plan specified limits of the detectable warnings. Cost for cutting the detectable warnings will be incidental to the corresponding detectable warning contract item.

There will be no separate payment for curb ramps. The curb ramp will be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk contract item. The square foot area of the detectable warnings will be included in the measured and paid for quantity of sidewalk.

If rebar is placed in the Turning Space as depicted in DETAIL E, the cost of the materials, labor, and equipment to furnish and install the rebar will be incidental to the contract unit price per square foot for the corresponding concrete sidewalk contract item.

The curb transitions and ramp opening will be measured and paid for at the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used. The curb transitions and ramp opening will be measured and paid for at the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.

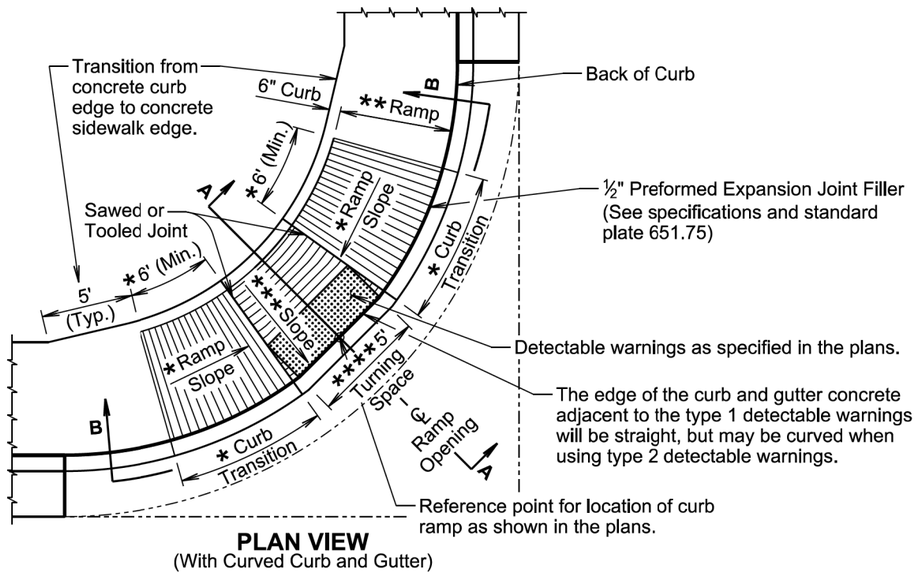
All costs for furnishing and installing the transition area at the base of the curb ramp will be incidental to the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used and will be incidental to the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.

The type 1 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 1 detectable warnings including labor, equipment, materials, and incidentals will be paid for at the contract unit price per square foot for "Type 1 Detectable Warnings".

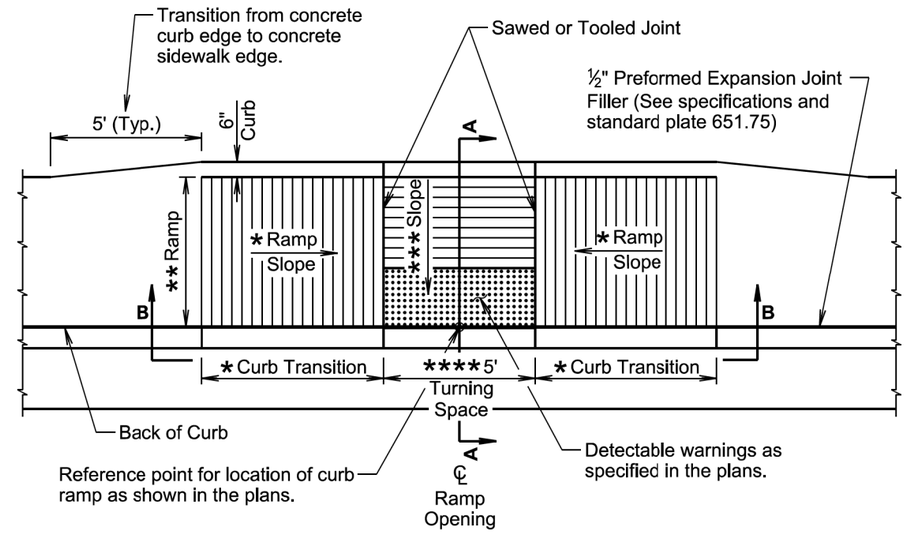
The type 2 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 2 detectable warnings including labor, equipment, and materials, including adhesive, necessary sealant or grout, and necessary grinding will be paid for at the contract unit price per square foot for "Type 2 Detectable Warnings".

February 14, 2020

Published Date: 2024	SDDOT	TYPE 2 CURB RAMP (DIRECTIONAL CURB RAMP)	PLATE NUMBER 651.02
			Sheet 3 of 3



PLAN VIEW
(With Curved Curb and Gutter)



PLAN VIEW
(With Straight Curb and Gutter)

April 18, 2021

Published Date: 2024	SDDOT	TYPE 3 CURB RAMP (PARALLEL CURB RAMP)	PLATE NUMBER 651.03
			Sheet 1 of 3

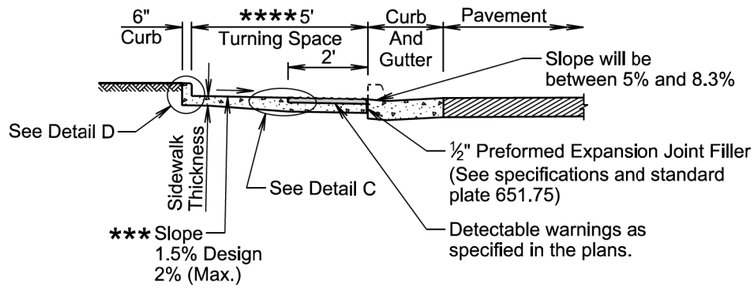
* The curb transition slope will match the curb ramp slope. Curb ramp slopes are designed at 7.5% unless stated otherwise in the plans. The curb ramp may have a maximum slope of 8.3% at any location of the curb ramp and will not exceed 15' in length unless stated otherwise in the plans. The curb transitions and curb ramp lengths will be adjusted as necessary to meet all slope and length requirements based on field geometrics.

** The cross slope of the ramp will not be steeper than 2% and the ramp width is 5' unless stated otherwise in the plans. Plans are designed using a 1.5% cross slope for the ramp unless stated otherwise in the plans.

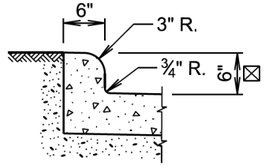
*** The slope in the turning space will not be steeper than 2% in any direction of pedestrian travel. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

**** The turning space is 5'x5' unless stated otherwise in the plans.

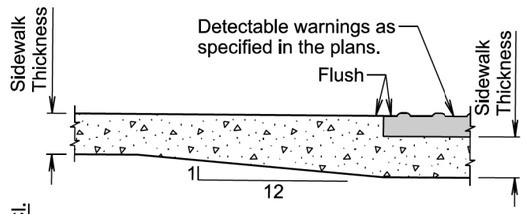
☒ The curb height will be 6" unless stated otherwise in the plans.



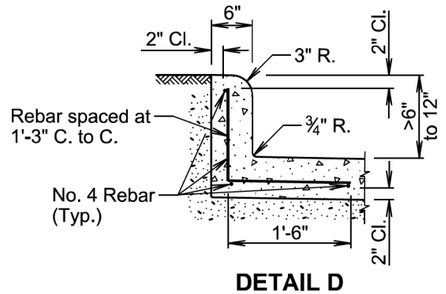
SECTION A-A



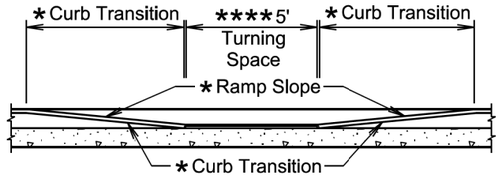
DETAIL D



DETAIL C



DETAIL D
(Use this detail when the curb height is greater than 6" and less than 12")



SECTIONAL VIEW B-B

April 18, 2021

Published Date: 2024	SDDOT	TYPE 3 CURB RAMP (PARALLEL CURB RAMP)	PLATE NUMBER 651.03
			Sheet 2 of 3

GENERAL NOTES:

For illustrative purpose only, type 1 detectable warnings are shown in the drawings.

For illustrative purpose only, a PCC fillet section is shown in one of the drawings. The curb ramp depicted on this standard plate may be used with a PCC fillet section or with curb and gutter.

The curb ramp will be placed at the location stated in the plans.

Sidewalk adjacent to the curb ramp will be as shown in the plans.

Care will be taken to ensure a uniform grade on the curb ramp, free of sags and short grade changes.

Surface texture of the curb ramp will be obtained by coarse brooming transverse to the slope of the curb ramp.

The normal gutter line profile will be maintained through the area of the ramp opening.

Joints will be sawed or tooled into the concrete adjacent to the detectable warnings to alleviate possible corner cracking (see plan view for joint location).

Care will be taken to ensure that the surface of the detectable warnings are clean and maintains a uniform color.

The detectable warnings will be cut as necessary to fit the plan specified limits of the detectable warnings. Cost for cutting the detectable warnings will be incidental to the corresponding detectable warning contract item.

When curb height is greater than 6" and less than 12", reinforcing steel is required in accordance with the detail on sheet 2 of 3. The reinforcing steel will conform to ASTM A615, Grade 60. Cost for furnishing and installing the reinforcing steel will be incidental to the contract unit price per square foot for the corresponding concrete sidewalk contract item.

There will be no separate payment for curb ramps. The curb ramp will be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk contract item. The square foot area of the detectable warnings and the curb along the short radius will be included in the measured and paid for quantity of sidewalk.

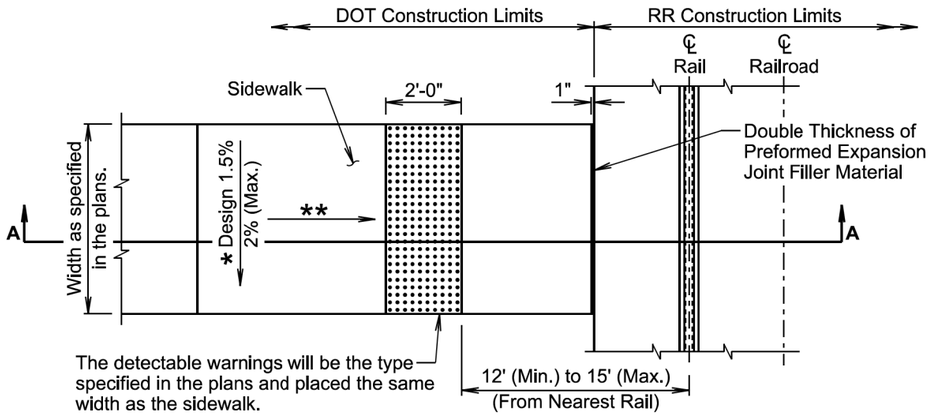
The curb transitions and ramp opening will be measured and paid for at the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used. The curb transitions and ramp opening will be measured and paid for at the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.

The type 1 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 1 detectable warnings including labor, equipment, materials, and incidentals will be paid for at the contract unit price per square foot for "Type 1 Detectable Warnings".

The type 2 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 2 detectable warnings including labor, equipment, and materials, including adhesive, necessary sealant or grout, and necessary grinding will be paid for at the contract unit price per square foot for "Type 2 Detectable Warnings".

April 18, 2021

Published Date: 2024	SDDOT	TYPE 3 CURB RAMP (PARALLEL CURB RAMP)	PLATE NUMBER 651.03
			Sheet 3 of 3



PLAN VIEW

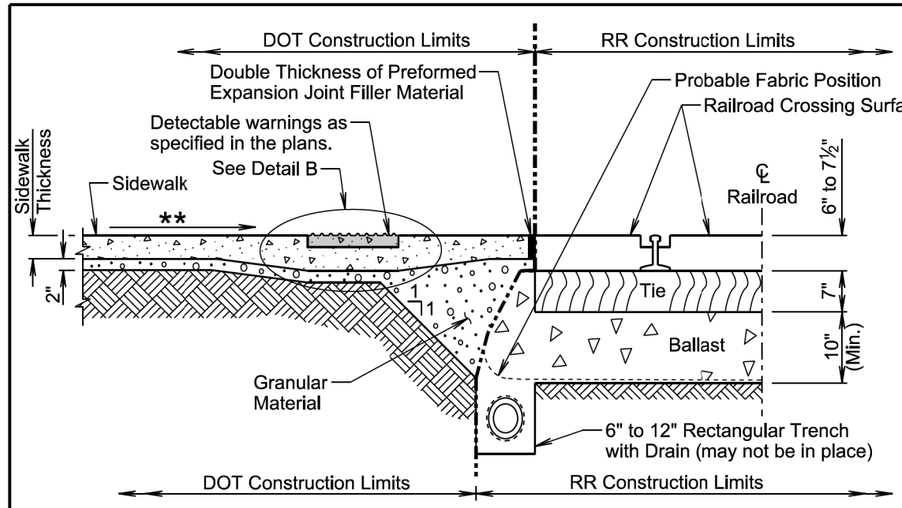
* The cross slope of the sidewalk will not be steeper than 2%. Plans are designed using a 1.5% cross slope unless stated otherwise in the plans.

** If the sidewalk is curbside, then the surface of the curbside sidewalk will match the slope of the curb transition. The longitudinal slope of the sidewalk and curb transition, where the sidewalk transitions to the railroad crossing elevation, is designed at 4.5% and will not be steeper than 5% unless stated otherwise in the plans.

** If there is a boulevard sidewalk, then the curb and gutter transition will be in accordance with standard plate 650.35. The longitudinal slope of the sidewalk, where the sidewalk transitions to the railroad crossing elevation, is designed at 4.5% and will not be steeper than 5% unless stated otherwise in the plans.

February 14, 2020

Published Date: 2024	SDDOT	SIDEWALK AND DETECTABLE WARNINGS ADJACENT TO RAILROAD CROSSING	PLATE NUMBER 651.20
			Sheet 1 of 2

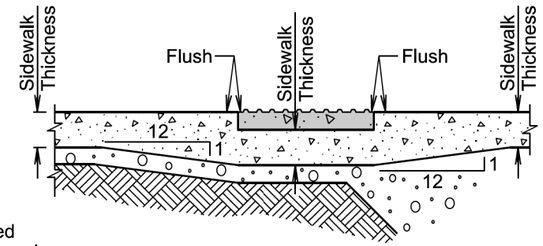


SECTION A-A

GENERAL NOTES:

For illustrative purpose only, type 1 detectable warnings are shown in the drawings.

Ballast material will not be disturbed during construction work adjacent to the railroad crossing unless the adjacent work involves reconstruction or maintenance of the railroad crossing.



DETAIL B

The sidewalk will be placed at the location stated in the plans and will be perpendicular to the railroad crossing.

Care will be taken to ensure that the surface of the detectable warnings are clean and maintains a uniform color.

If curb and gutter is required adjacent to the railroad crossing, the curb transition will be measured and paid for at the contract unit price per foot for the corresponding curb and gutter contract item.

The type 1 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 1 detectable warnings including labor, equipment, materials, and incidentals will be paid for at the contract unit price per square foot for "Type 1 Detectable Warnings".

The type 2 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 2 detectable warnings including labor, equipment, and materials, including adhesive, necessary sealant or grout, and necessary grinding will be paid for at the contract unit price per square foot for "Type 2 Detectable Warnings".

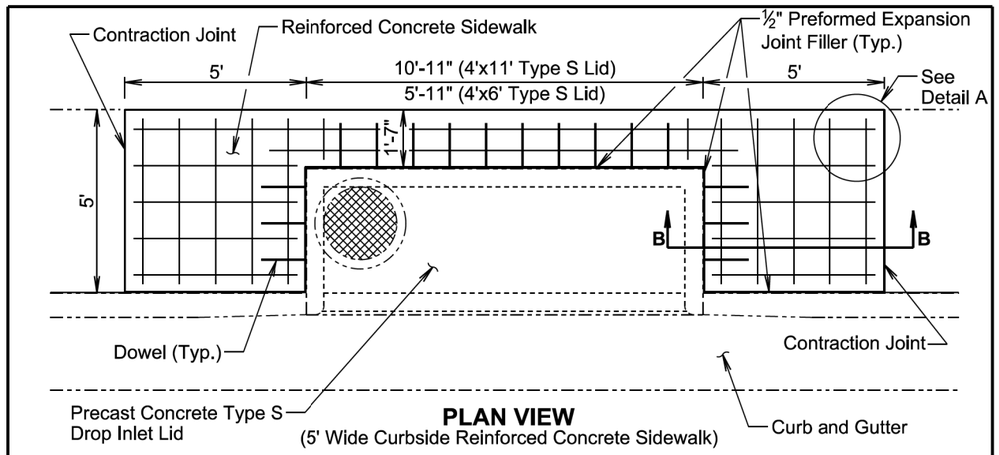
The square foot area of the detectable warnings will be included in the measured and paid for quantity of sidewalk.

February 14, 2020

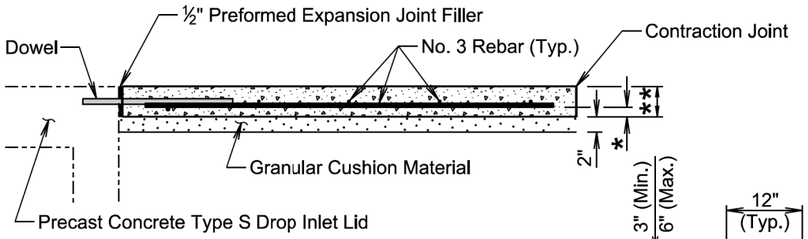
Published Date: 2024	SDDOT	SIDEWALK AND DETECTABLE WARNINGS ADJACENT TO RAILROAD CROSSING	PLATE NUMBER 651.20
			Sheet 2 of 2

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B33	B38

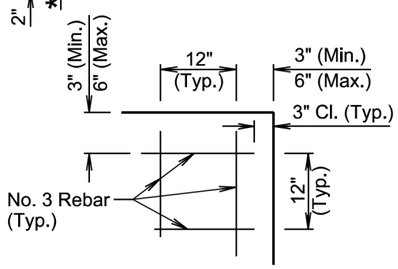
Plotting Date: 03/22/2024



PLAN VIEW
(5' Wide Curbside Reinforced Concrete Sidewalk)



SECTION B-B



DETAIL A

** 4", 5", or 6" as specified elsewhere in the plans.

* 1⅝" for 4" sidewalk, 2⅛" for 5" sidewalk, and 2⅝" for 6" sidewalk.

GENERAL NOTES:

The precast concrete Type S lids shown are 4'x11' for illustrative purpose.

The cross slope of the sidewalk and precast concrete type S drop inlet lid will be as specified elsewhere in the plans.

The reinforcing steel will conform to Section 1010 of the Specifications. The Contractor will be in conformance with the construction requirements of Section 480.3 of the Specifications.

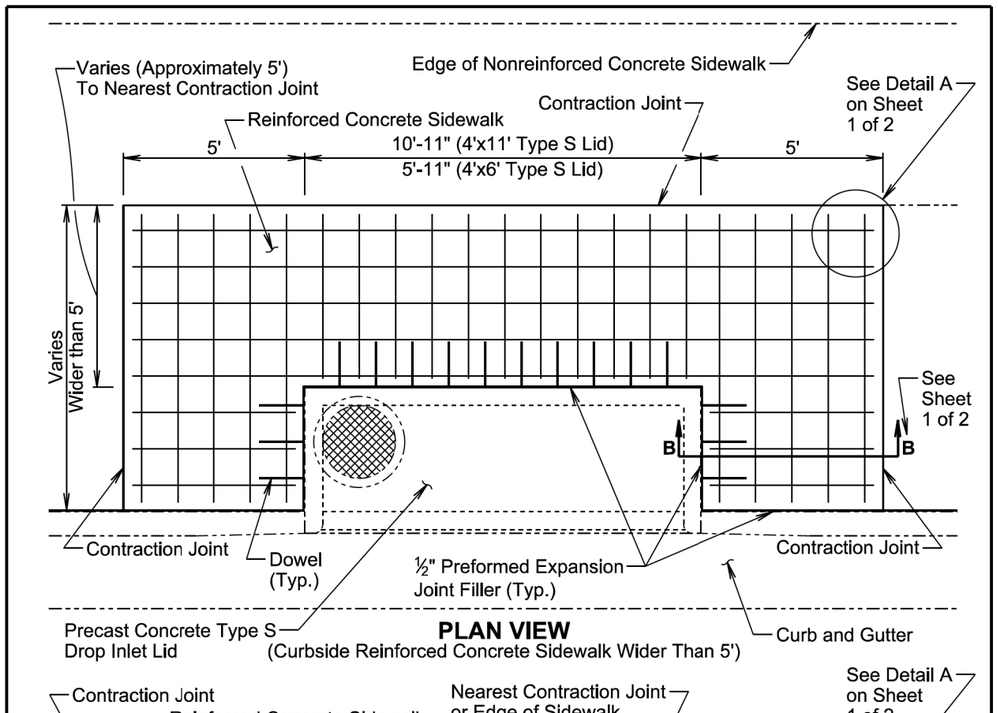
When lapping of reinforcing steel is necessary, the No. 3 rebar will be lapped 12".

The reinforced concrete sidewalk will conform to the requirements of Section 651 of the Specifications.

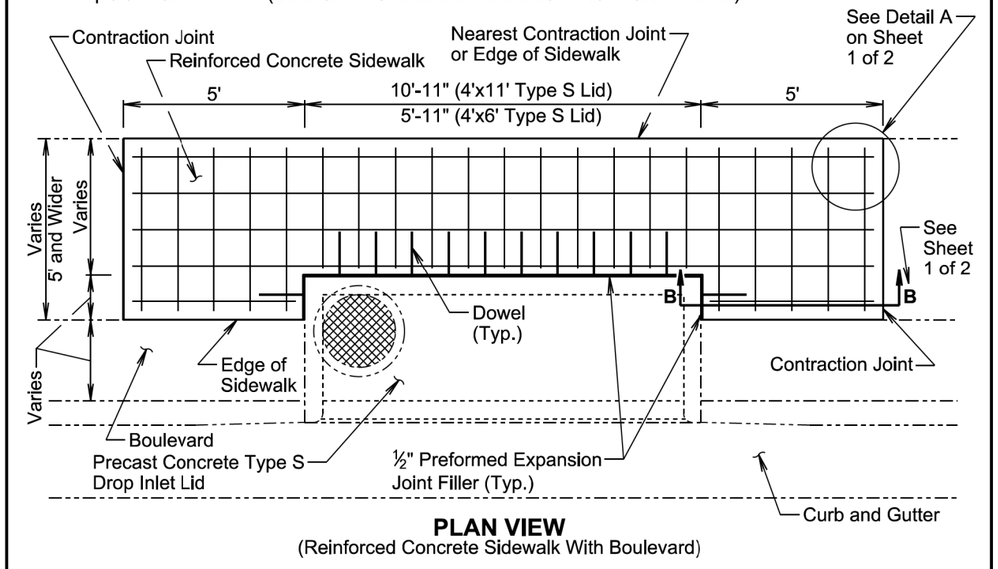
All costs for constructing the reinforced concrete sidewalk including labor, equipment, tools, backfilling, furnishing and placing materials, including granular cushion, reinforcing steel, preformed expansion joint filler, and incidentals will be included in the contract unit price per square foot for the corresponding reinforced concrete sidewalk contract item.

February 14, 2020

Published Date: 2024	SDDOT	REINFORCED CONCRETE SIDEWALK ADJACENT TO PRECAST CONCRETE TYPE S DROP INLET LID	PLATE NUMBER 651.70
			Sheet 1 of 2



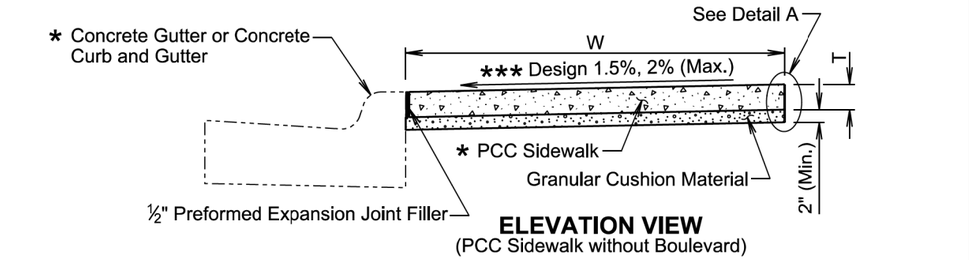
PLAN VIEW
(Curbside Reinforced Concrete Sidewalk Wider Than 5')



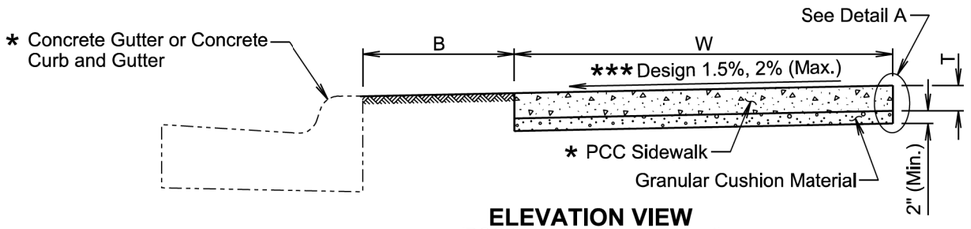
PLAN VIEW
(Reinforced Concrete Sidewalk With Boulevard)

February 14, 2020

Published Date: 2024	SDDOT	REINFORCED CONCRETE SIDEWALK ADJACENT TO PRECAST CONCRETE TYPE S DROP INLET LID	PLATE NUMBER 651.70
			Sheet 2 of 2



ELEVATION VIEW
(PCC Sidewalk without Boulevard)



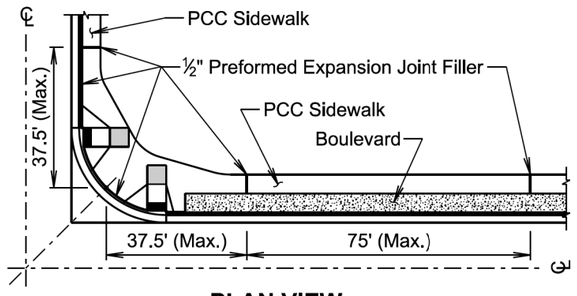
ELEVATION VIEW
(PCC Sidewalk with Boulevard)

B Width of boulevard as specified in the plans.

T Thickness of PCC sidewalk as specified in the plans.

W Width of PCC sidewalk as specified in the plans.

* Type as specified in the plans.



PLAN VIEW

GENERAL NOTES:

The PCC sidewalk will be constructed in accordance with Section 651 of the Specifications.

*** The cross slope of the sidewalk is designed at 1.5% and the maximum slope allowed is 2% unless specified otherwise in the plans.

The maximum length between expansion joints in the PCC sidewalk is 75 feet.

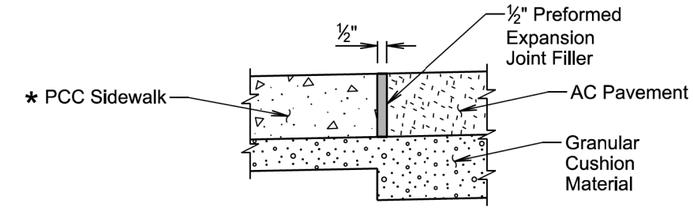
PCC sidewalk placed adjacent to intersection of roadways will have an expansion joint placed transversely a maximum of 37.5 feet from the intersection. See Plan View.

An expansion joint in the PCC sidewalk will consist of a ½ -inch thick preformed expansion joint filler material placed full depth and width of the PCC sidewalk.

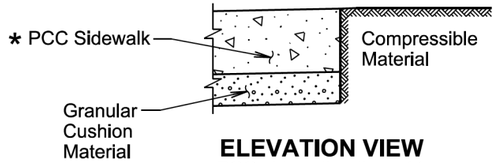
** Large areas of PCC pavement adjacent to the PCC sidewalk may require a different joint treatment than shown in the detail. If a different joint detail is necessary, plans will contain the joint detail and the Contractor will construct the joint treatment in accordance with the plans.

February 14, 2020

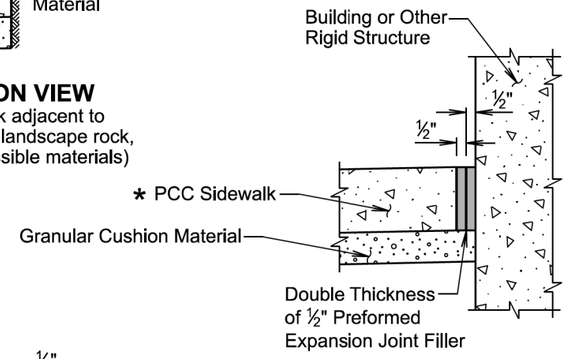
Published Date: 2024	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 1 of 2



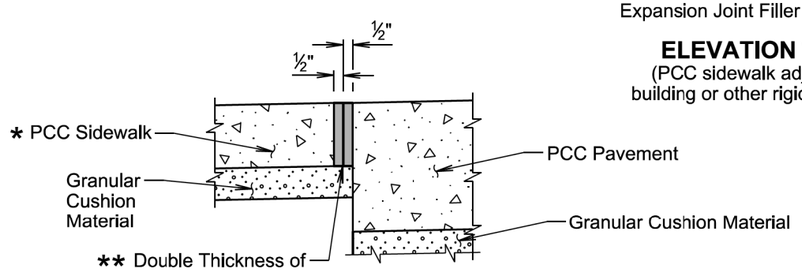
ELEVATION VIEW
(PCC sidewalk adjacent to asphalt concrete pavement)



ELEVATION VIEW
(PCC sidewalk adjacent to earthen material, landscape rock, or other compressible materials)



ELEVATION VIEW
(PCC sidewalk adjacent to building or other rigid structure)

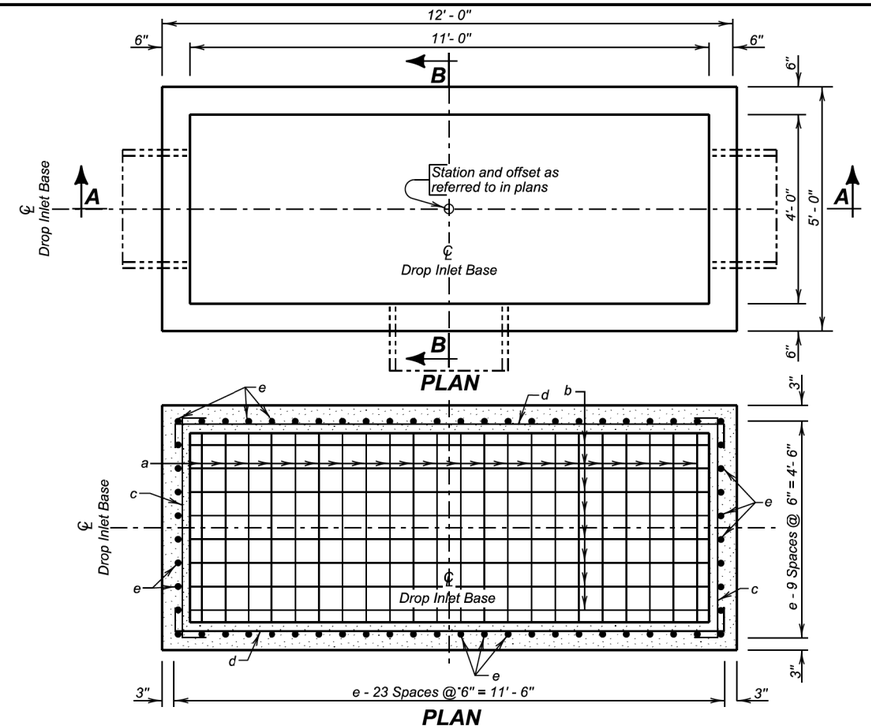


ELEVATION VIEW
(PCC sidewalk adjacent to PCC pavement)

DETAIL A
(Use Appropriate Detail(s))

February 14, 2020

Published Date: 2024	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 2 of 2



PLAN
(Bottom Steel)
(Pipe Not Shown)

SPECIFICATIONS:

1. Design Specifications: AASHTO LRFD Bridge Design Specifications 2012 Edition.
2. Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, Current Edition and required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

GENERAL NOTES:

1. Design Live Load: HL-93 loading. No construction loading in excess of legal load was considered.
2. Base is intended for use with a Precast Concrete Type S Drop Inlet Lid, Standard Plate 670.40. Base may be precast. If precast base used, and details differ from that shown, the precast base must be on the current approved list. The current approved list is available through proper channels from the SDDOT Office of Bridge Design.
3. To qualify for addition to the approved list, submit a checked design, by South Dakota Registered Professional Engineers and shop plans to the Office of Bridge Design for approval. Design shall be in accordance with the current edition of the AASHTO LRFD Bridge Design Specifications.
4. ✳ Reduce total quantities of concrete by the amount of concrete displaced by the pipe. The total quantity of concrete shall be computed to the nearest hundredth of a cubic yard. The total quantity of reinforcing steel shall be computed to the nearest pound.
5. Inlets shown may be modified by the addition or omission of connecting pipes as shown on the layouts. Connecting pipes shall not enter the inlet through the corners.
6. Maximum R.C.P. diameter shall not exceed 36 inches (30 inches for R.C. Arch) on the 4-foot wide side of the Drop Inlet.
7. Reinforcing steel shall conform to ASTM A615 Grade 60. Cut and bend reinforcing steel as required to place pipe(s) through the inlet wall.
8. Use 1 inch clear cover on all reinforcing steel unless otherwise noted.
9. The dimension of H is in feet. Maximum H is 8 feet.

June 26, 2015

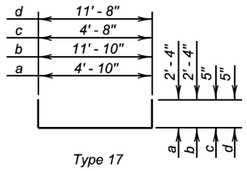
Published Date: 2024	SDDOT	4'X 11' TYPE S DROP INLET BASE	PLATE NUMBER 670.32
			Sheet 1 of 2

PIPE DISPLACEMENT REDUCTIONS

	Diameter (Inches)	Wall T (Inches)	Class M6 Concrete (Cu. Yd.)
R.C.P.	12	2	0.03
	15	2 ¼	0.04
	18	2 ½	0.05
	24	3	0.09
	30	3 ½	0.14
	36	4	0.20
	42	4 ½	0.26
	48	5	0.34
	54	5 ½	0.43
	60	6	0.52
R.C. ARCH	18	2 ½	0.05
	24	3 ½	0.09
	30	4	0.14
	36	4 ½	0.19
	42	4 ½	0.24
	48	5	0.32
	54	5 ½	0.39
	60	6	0.49
	72	7	0.70
	84	8	0.93

REINFORCING SCHEDULE

Mk.	No.	Size	Length	Type	Bending Details
a	24	5	9' - 6"	17	
b	10	5	16' - 6"	17	
c	2H	4	5' - 6"	17	
d	2H	4	12' - 6"	17	
e	64	4	H - 2"	Str.	

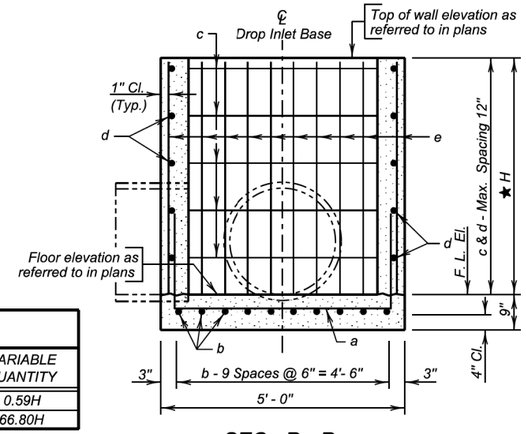


Type 17

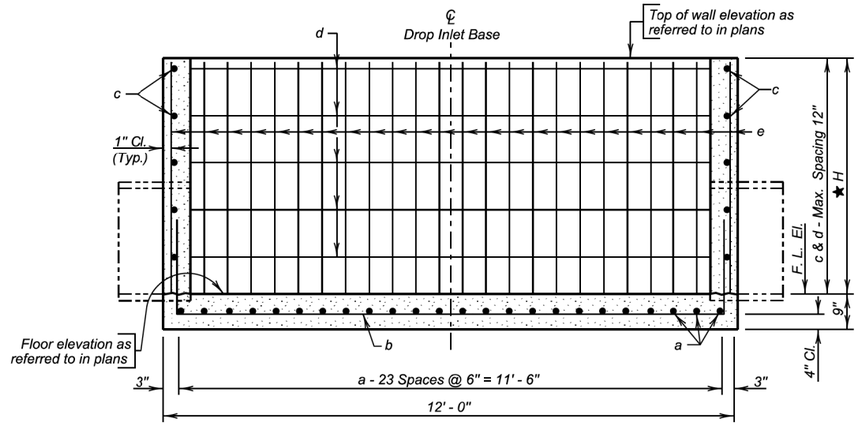
NOTE:
All dimensions are out to out of bars.

ESTIMATED QUANTITIES

ITEM	UNIT	CONSTANT QUANTITY	VARIABLE QUANTITY
✳ Class M6 Concrete	Cu. Yd.	1.67	0.59H
Reinforcing Steel	Lb.	402.77	66.80H



SEC. B - B

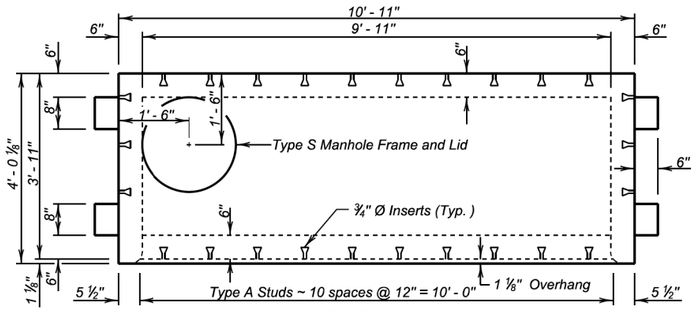


SEC. A - A

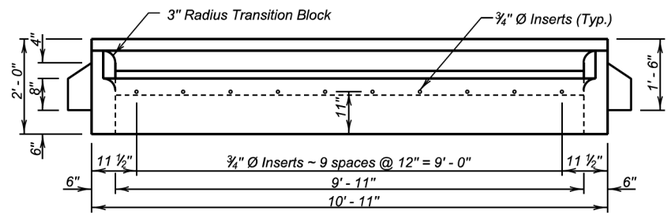
★ Maximum H is 8' - 0"

June 26, 2015

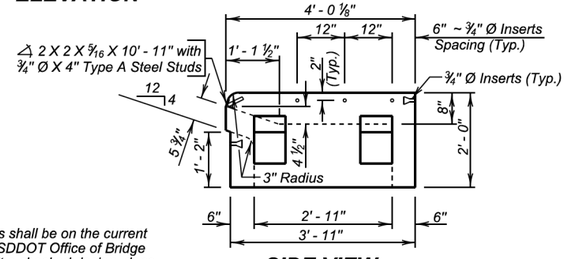
Published Date: 2024	SDDOT	4'X 11' TYPE S DROP INLET BASE	PLATE NUMBER 670.32
			Sheet 2 of 2



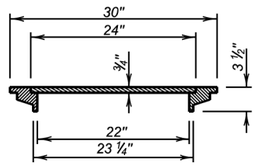
PLAN



ELEVATION



SIDE VIEW
(With Sidewalk Inserts)



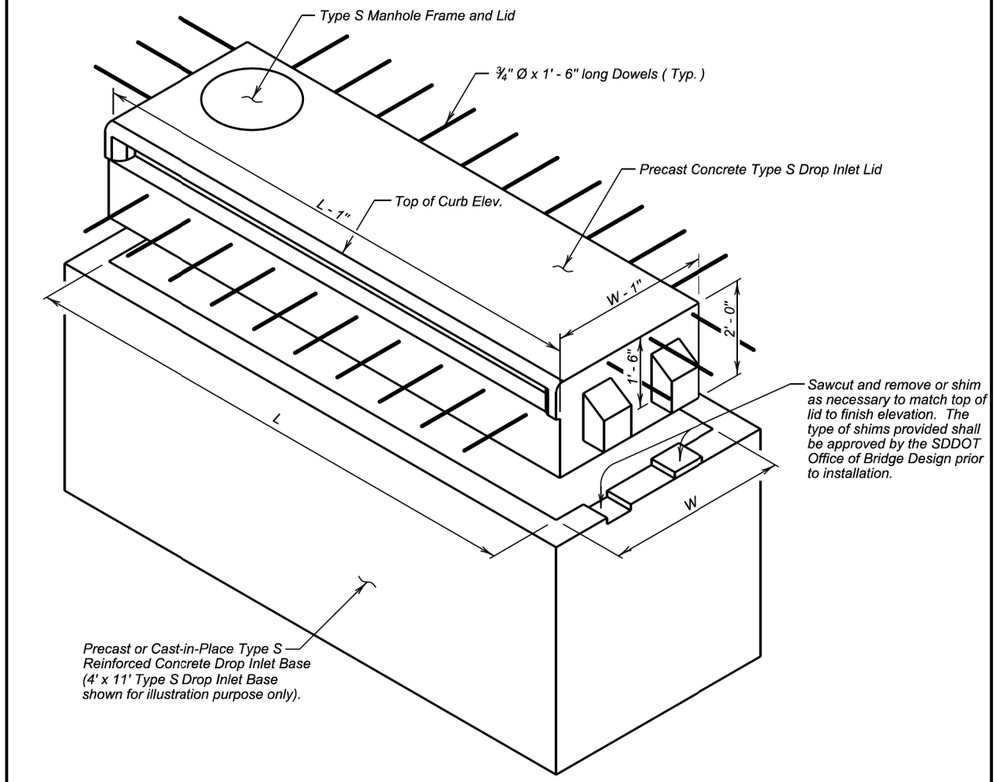
TYPICAL SECTION THROUGH TYPE S MANHOLE FRAME AND LID
(Weight 140 Lbs.)

GENERAL NOTES:

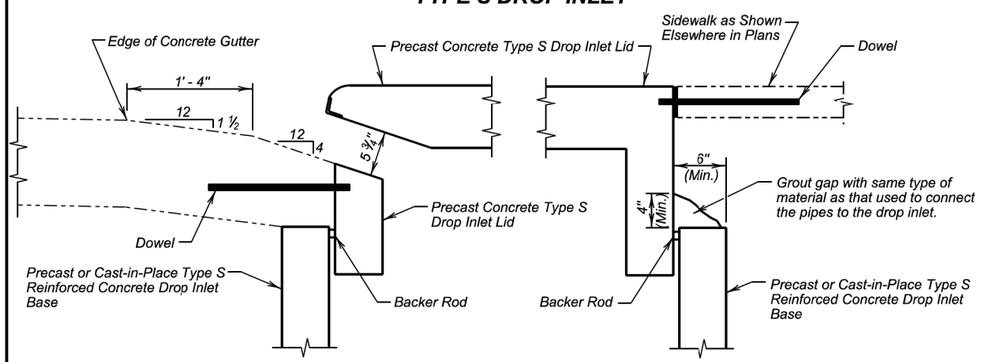
1. The Precast Concrete Type S Drop Inlet Lid and the shims shall be on the current approved list available through proper channels from the SDDOT Office of Bridge Design. To qualify for addition to the approved list, submit a checked design, done by South Dakota Registered Professional Engineers, and shop plans to the Office of Bridge Design for approval. Design shall be in accordance with the current edition of the AASHTO LRFD Bridge Design Specifications.
2. Design Live Load shall be HL - 93.
3. Concrete mix shall be as per fabricators design, however, minimum compressive strength shall not be less than 4500 psi. Type II Cement is required.
4. The Type S Manhole Frame and Lid shall conform to AASHTO M105, Class 30.
5. Structural Steel shall conform to ASTM A36. The ¾ inch diameter Headed Type A Steel Studs shall conform to Section 7 of the current edition of AWS D1. 1 Structural Steel Welding Code.
6. The ¾ inch diameter Concrete Inserts shall be galvanized or made of a corrosion resistant material. Provide ¾ inch diameter x 1' - 6" long dowels conforming to ASTM A615, Gr. 60 threaded to fit inserts with each lid.
7. All costs associated with furnishing and installing the Precast Concrete Type S Drop Inlet Lid including the type S manhole frame and lid, shims, inserts, and dowels shall be included in the contract unit price per each for " 4' x 11' Precast Concrete Type S Drop Inlet Lid ".

December 23, 2012

Published Date: 2024	SDDOT	4' X 11' PRECAST CONCRETE TYPE S DROP INLET LID	PLATE NUMBER 670.40
			Sheet 1 of 1



TYPE S DROP INLET

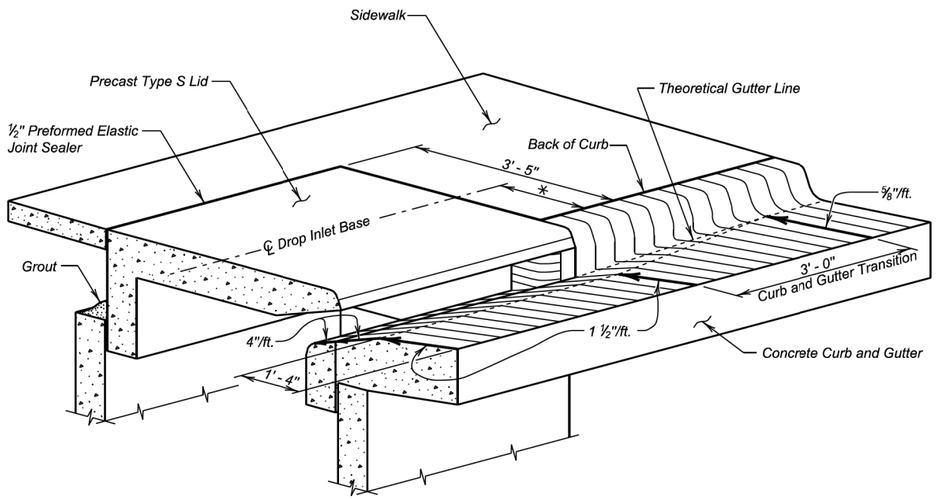


CONCRETE GUTTER DETAIL

GROUTING DETAIL
(Sides and Back, Adjacent to Sidewalk)

December 23, 2012

Published Date: 2024	SDDOT	INSTALLATION DETAILS FOR PRECAST CONCRETE TYPE S DROP INLET LID	PLATE NUMBER 670.45
			Sheet 1 of 2



CURB AND GUTTER TRANSITION DETAILS

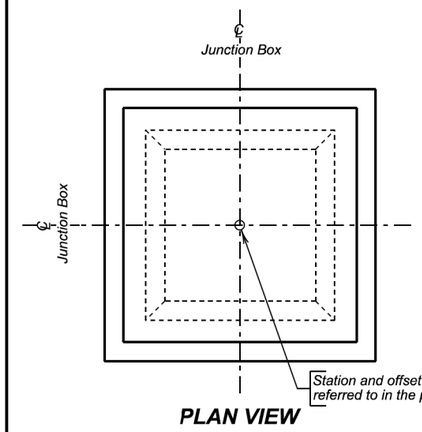
Drop Inlet Base Unit Size	⚹ Distance
4' x 6'	1' - 5 ½"
4' x 11'	1' - 5 ½"
7' x 11'	2' - 11 ½"

GENERAL NOTES:

1. Dowels shall be used to anchor the precast concrete Type S drop inlet lid to the concrete gutter. See Standard Plate 670.38 or 670.40 as applicable. If there is sidewalk adjacent dowels shall be used to anchor the precast concrete Type S drop inlet lid to the sidewalk. If there is sidewalk adjacent to the drop inlet, the precast lid shall match the finish elevations and cross slopes of the sidewalk.
2. The sidewalk shall be steel reinforced when the sidewalk adjoins the precast lid. Refer to Standard Plate 651.70 for reinforced concrete sidewalk details.

December 23, 2012

Published Date: 2024	SDDOT	INSTALLATION DETAILS FOR PRECAST CONCRETE TYPE S DROP INLET LID	PLATE NUMBER 670.45
			Sheet 2 of 2



PLAN VIEW

SPECIFICATIONS

Design Specifications: AASHTO LRFD Bridge Design Specifications, 2012 Edition.

Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, Current Edition and required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

GENERAL NOTES

Design Live Load: HL-93. No construction loading in excess of legal load was considered.

The design of the junction box is based on a maximum fill over the junction box of 5 feet and minimum fil over the junction box of 2 feet.

Reinforcing steel shall conform to ASTM A615 Grade 60. Cut and bend reinforcing steel as required to place pipe(s) through junction box wall.

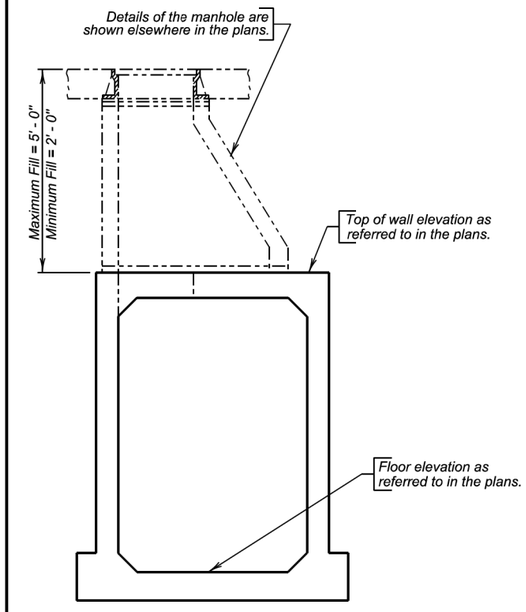
Junction box may be precast. If precast junction box details differ from this standard plate, submit a checked design done by a SD registered P.E. and shop plans to the Office of Bridge Design for approval.

Use 1 inch clear cover on all reinforcing steel unless otherwise noted.

All exposed edges shall be chamfered ¾ inch.

Junction box shown may be modified by the addition or omission of connecting pipes as noted elsewhere in the plans. All pipes entering junction box must fit between the inside face of walls and shall not enter through the corners.

The cost of furnishing and installing the manhole steps shall be incidental to the contract unit price per pound for "Reinforcing Steel".



ELEVATION VIEW

PIPE DISPLACEMENT REDUCTIONS

	Diameter (Inches)	Wall T (Inches)	Class M6 Concrete (Cu. Yd.)
R.C.P.	12	2	0.03
	15	2 ¼	0.04
	18	2 ½	0.06
	24	3	0.11
	30	3 ½	0.16
	36	4	0.23
	42	4 ½	0.31
	48	5	0.40
	54	5 ½	0.50

ESTIMATED QUANTITIES

ITEM	⚹ Class M6 Concrete	Reinforcing Steel
UNIT	Cu. Yd.	Lb.
H = 4' - 0"	4.37	821
H = 4' - 6"	4.61	846
H = 5' - 0"	4.85	908
H = 5' - 6"	5.10	933
H = 6' - 0"	5.34	958
H = 6' - 6"	5.58	1020
H = 7' - 0"	5.82	1045
H = 7' - 6"	6.06	1071
H = 8' - 0"	6.30	1132

⚹ Reduce total quantities of concrete by the amount of concrete displaced by the pipe(s). Quantity shown includes reduction for a 24-inch diameter manhole opening. The total quantity of concrete shall be computed to the nearest hundredth of a cubic yard.

May 9, 2020

Published Date: 2024	SDDOT	5'X 5' JUNCTION BOX	PLATE NUMBER 671.01
			Sheet 1 of 3

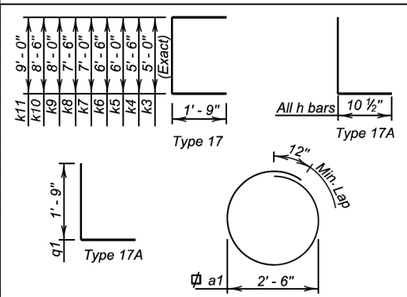
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	B38	B38

Plotting Date: 03/22/2024

REINFORCING SCHEDULE

	Mk.	No.	Size	Length	Type
H = 4' - 0"	⌀ a1	1	6	9' - 0"	T3
	▼ a2	4	–	———	—
	h3	28	4	5' - 9"	17A
	k3	48	4	8' - 6"	17
	m1	18	5	6' - 9"	Str.
	n1	18	5	5' - 9"	Str.
	p1	52	4	5' - 0"	Str.
	q1	8	4	3' - 6"	17A
H = 4' - 6"	⌀ a1	1	6	9' - 0"	T3
	▼ a2	4	–	———	—
	h4	28	4	6' - 3"	17A
	k4	48	4	9' - 0"	17
	m1	18	5	6' - 9"	Str.
	n1	18	5	5' - 9"	Str.
	p1	52	4	5' - 0"	Str.
	q1	8	4	3' - 6"	17A
H = 5' - 0"	⌀ a1	1	6	9' - 0"	T3
	▼ a2	5	–	———	—
	h5	28	4	6' - 9"	17A
	k5	48	4	9' - 6"	17
	m1	18	5	6' - 9"	Str.
	n1	18	5	5' - 9"	Str.
	p1	52	4	5' - 0"	Str.
	q1	8	4	3' - 6"	17A
H = 5' - 6"	⌀ a1	1	6	9' - 0"	T3
	▼ a2	5	–	———	—
	h6	28	4	7' - 3"	17A
	k6	48	4	10' - 0"	17
	m1	18	5	6' - 9"	Str.
	n1	18	5	5' - 9"	Str.
	p1	60	4	5' - 0"	Str.
	q1	12	4	3' - 6"	17A
H = 6' - 0"	⌀ a1	1	6	9' - 0"	T3
	▼ a2	6	–	———	—
	h7	28	4	7' - 9"	17A
	k7	48	4	10' - 6"	17
	m1	18	5	6' - 9"	Str.
	n1	18	5	5' - 9"	Str.
	p1	60	4	5' - 0"	Str.
	q1	12	4	3' - 6"	17A
H = 6' - 6"	⌀ a1	1	6	9' - 0"	T3
	▼ a2	6	–	———	—
	h8	28	4	8' - 3"	17A
	k8	48	4	11' - 0"	17
	m1	18	5	6' - 9"	Str.
	n1	18	5	5' - 9"	Str.
	p1	68	4	5' - 0"	Str.
	q1	16	4	3' - 6"	17A
H = 7' - 0"	⌀ a1	1	6	9' - 0"	T3
	▼ a2	7	–	———	—
	h9	28	4	8' - 9"	17A
	k9	48	4	11' - 6"	17
	m1	18	5	6' - 9"	Str.
	n1	18	5	5' - 9"	Str.
	p1	68	4	5' - 0"	Str.
	q1	16	4	3' - 6"	17A

Bending Details



	Mk.	No.	Size	Length	Type
H = 7' - 6"	⌀ a1	1	6	9' - 0"	T3
	▼ a2	7	–	———	—
	h10	28	4	9' - 3"	17A
	k10	48	4	12' - 0"	17
	m1	18	5	6' - 9"	Str.
	n1	18	5	5' - 9"	Str.
	p1	68	4	5' - 0"	Str.
	q1	16	4	3' - 6"	17A
H = 8' - 0"	⌀ a1	1	6	9' - 0"	T3
	▼ a2	8	–	———	—
	h11	28	4	9' - 9"	17A
	k11	48	4	12' - 6"	17
	m1	18	5	6' - 9"	Str.
	n1	18	5	5' - 9"	Str.
	p1	76	4	5' - 0"	Str.
	q1	20	4	3' - 6"	17A

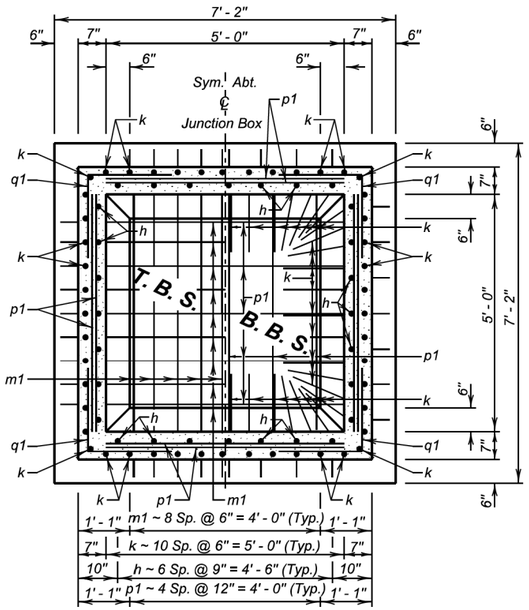
LEGEND FOR PLACING RE-STEEL

T. B. S. - Top of Bottom Slab
B. B. S. - Bottom of Bottom Slab

▼ *Cast iron Manhole Steps (R - 1980 - C) from Neenah Foundry or equivalent.*

⌀ *Locate in center of top slab with 3" clearance at manhole opening.*

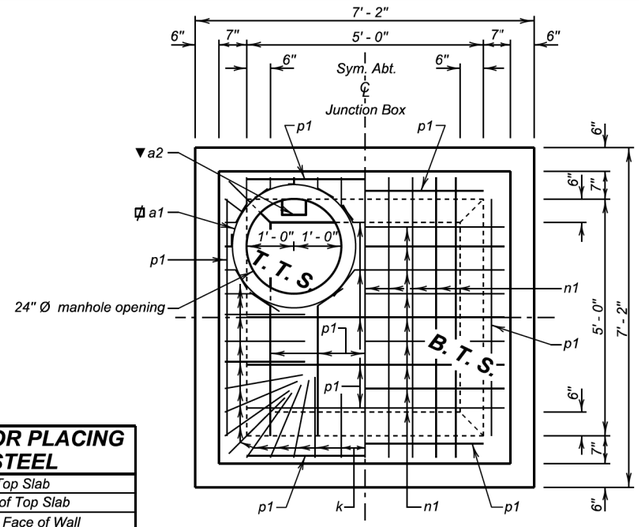
All dimensions are out to out of bars.



SEC. A - A

May 9, 2020

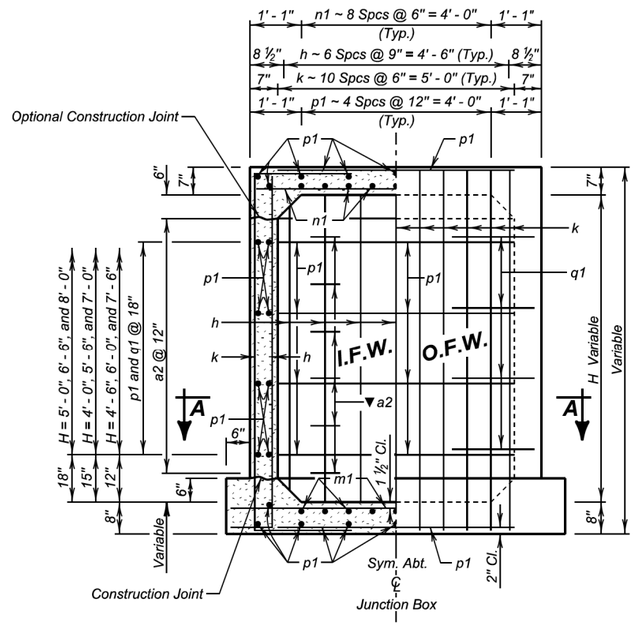
Published Date: 2024	SDDOT	5'X 5' JUNCTION BOX	PLATE NUMBER 671.01
			Sheet 2 of 3



LEGEND FOR PLACING RE-STEEL

T. T. S. - Top of Top Slab
B. T. S. - Bottom of Top Slab
O. F. W. - Outside Face of Wall
I. F. W. - Inside Face of Wall

PLAN VIEW



ELEVATION VIEW

May 9, 2020

Published Date: 2024	SDDOT	5'X 5' JUNCTION BOX	PLATE NUMBER 671.01
			Sheet 3 of 3