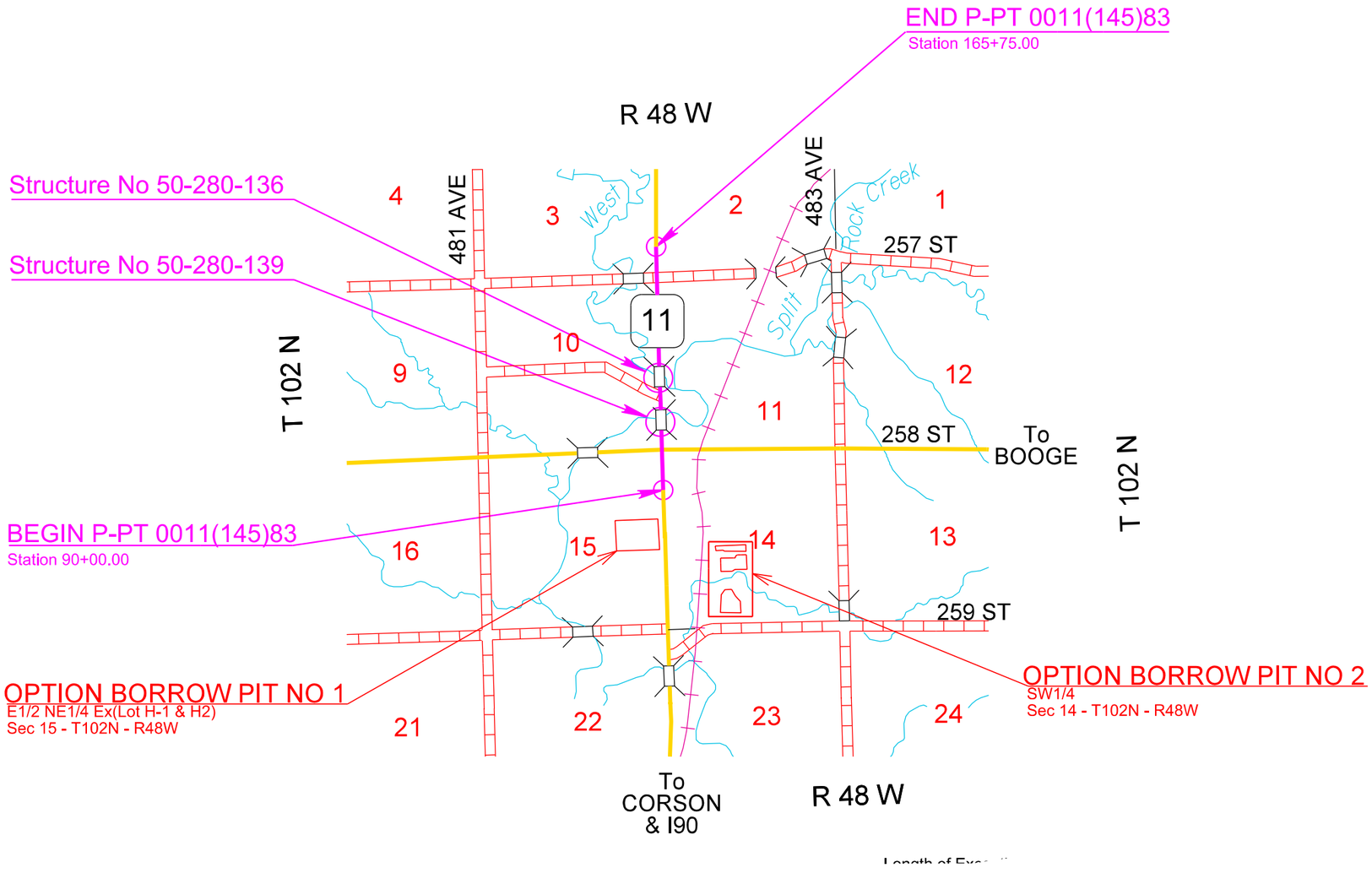
Section F: Surfacing Plans

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F1	F29

Plotting Date: 07/15/2025

INDEX OF SHEETS



SECTION F ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3320	Checker	Lump Sum	LS
120E6200	Water for Granular Material	567.8	MGal
260E1010	Base Course	23,453.0	Ton
260E1030	Base Course, Salvaged	23,865.3	Ton
320E0032	PG 58H-34 Asphalt Binder	792.8	Ton
320E1060	Class G Asphalt Concrete	13,768.4	Ton
320E4000	Hydrated Lime	137.0	Ton
320E7008	Grind 8" Rumble Strip or Stripe in Asphalt Concrete	0.8	Mile
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	2.8	Mile
320E7028	Grind Centerline Rumble Stripe in Asphalt Concrete	1.3	Mile
320E7030	Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete	0.4	Mile
330E0010	MC-70 Asphalt for Prime	64.8	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	29.3	Ton
330E1000	Blotting Sand for Prime	134.5	Ton
900E1980	Storage Unit	1	Each

SURFACING THICKNESS DIMENSIONS

The plans shown spread rates will be applied even though the thickness may vary from that shown on the plans.

At those locations where material must be placed to achieve a required elevation, the depth/quantity may be varied to achieve the required elevation.

CHECKING SPREAD RATES

The Contractor will be responsible for checking the Asphalt Concrete, Base Course, Salvaged and Base Course spread rates and taking the weigh delivery tickets as the surfacing material arrives on the project and is placed onto the roadway.

The Contractor will compute the required spread rates for each typical surfacing section and create a spread chart prior to the start of material delivery and placement. The Engineer will review and check the Contractor's calculations and spread charts. The station to station spread will be written on each ticket as the surfacing material is delivered to the roadway.

At the end of each day's shift, the Contractor will verify the following:

- All tickets are present and accounted for,
- The quantity summary for each item is calculated,
- The amount of material wasted if any,
- Each day's ticket summary is marked with the corresponding 'computed by',
- The ticket summary is initialed and certified that the delivered and placed quantity is correct.

All daily tickets and the summary by item will be given to the Engineer no later than the following morning.

If the checker is not properly and accurately performing the required duties, the Contractor will correct the problem or replace the checker with an individual capable of performing the duties to the satisfaction of the Engineer. Failure to do so will result in suspension of the work.

The Department will perform depth checks. The Contractor will be responsible for placement of material to the correct depth unless otherwise directed by the Engineer. If the placed material is not within a tolerance of ±1/2 inch of the plan shown depth, the Contractor will correct the problem at no additional cost to the Department. Excess material above the tolerance will not be paid for. Achieving the correct depth may require picking up and moving material or other action as required by the Engineer.

All costs for providing the Contractor furnished checker and performing all related duties will be incidental to the contract lump sum price for the "Checker". No allowances will be made to the contract lump sum price for "Checker" due to authorized quantity variations unless the quantities for the material being checked vary above or below the estimated quantities by more than 25 percent. Payment for the Checker will then be increased or decreased by the same proportion as the placed material quantity bears to the estimated material quantity.

BASE COURSE, SALVAGED

Base Course, Salvaged will be obtained from the stockpile site(s) provided by the Contractor and may be used without further gradation testing.

All other requirements for Base Course, Salvaged will apply.

CLASS G ASPHALT CONCRETE

Mineral Aggregate for Class G Asphalt Concrete will conform to the requirements for Class G, Type 1.

When directed by the Engineer, the Contractor will saw and remove a total of three undamaged compaction cores per asphalt concrete lift from designated area(s) and repair the hole(s) to the satisfaction of the Engineer. All costs associated with the compaction cores will be incidental to the contract unit price per each for "Compaction Sample".

All other requirements for Class G will apply.

SUMMARY OF CLASS G ASPHALT CONCRETE COMPACTION

LOCATION	Compaction With Specified Density (Ton)	Compaction Without Specified Density (Ton)
Mainline - SD 11		
Sta. 90+00.00 to Sta. 165+75.00	8,065.8	---
(See typical sections for information)		
Mainline - SD 11 Shoulders		
Sta. 90+00.00 to Sta. 165+75.00	3,167.1	---
(Excluding Bridges)		
Crossroad 107 - 258th Street		
Sta. 13+50.00 to Sta. 33+84.93	1,622.4	27.6
Intersecting Road - Tie-Ins		
XR 107 - 258th Street	---	201.4
XR 126 - Palisade Street	---	82.6
XR 159 - 257th Street	---	102.4
Farm Entrances		
Mainline SD 11 Entrances (9 each)	---	62.8
Crossroad 107 Entrances (5 each)	---	247.3
Surfacing for Guardrail	---	189.0
Subtotals:	9,688.2	4,080.2
Grand Total:	13,768.4	

BLOTTING SAND FOR PRIME

Included in the Estimate of Quantities are 5 tons of Blotting Sand for Prime to be used where necessary for maintenance of traffic as directed by the Engineer. (Rate = 10 pounds per square yard)

GRIND 8" or 12" RUMBLE STRIPS OR STRIPES IN ASPHALT CONCRETE

Asphalt concrete rumble stripes will be constructed on the shoulders. Rumble stripes will be paid for at the contract unit price per mile for "Grind 8" Rumble Strip or Stripe in Asphalt Concrete" or for "Grind 12" Rumble Strip or Stripe in Asphalt Concrete". It is estimated that 3.6 miles of asphalt concrete rumble stripes will be required.

Rumble stripe installation will be completed prior to application of the flush seal and permanent pavement markings. In the event the flush seal is eliminated from the contract, the Contractor will still be required to apply a flush seal to the newly installed 12" rumble stripes at a width of 18" and at the same rate as specified in this plan set. No adjustment in payment will be made and SS-1h or CSS-1h Asphalt for Flush Seal will be paid at the contract unit price per ton.

TABLE OF 12" SHOULDER RUMBLE STRIPS OR STRIPES

Sta	to	Sta.	Length (Mile)
SD11			
90+00.00	to	114+99.46	0.5
118+83.71	to	128+20.67	0.2
130+50.64	to	165+75.00	0.7
		Total =	**1.4***

*Single Shoulder length – Both Shoulders = 2.8 miles

TABLE OF 8" SHOULDER RUMBLE STRIPS OR STRIPES

Sta	to	Sta.	Length (Mile)
Crossroad 107 - 258th Street			
13+50.00	to	33+84.93	0.4
		Total =	0.4*

*Single Shoulder length – Both Shoulders = 0.8 miles

GRIND CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE

Rumble stripes will be constructed on the centerline, as detailed in the plans. Centerline rumble stripe installation will be completed prior to application of the flush seal and permanent pavement markings. Rumble stripes will be paid for at the contract unit price per mile for "Grind Centerline Rumble Stripe in Asphalt Concrete". It is estimated that 1.3 miles of centerline rumble stripes will be required.

Centerline rumble stripes will be constructed according to the details of Standard Plate 320.18 outside the limits shown in the Table of Sinusoidal Centerline Rumble Stripes.

TABLE OF CENTERLINE RUMBLE STRIPES

Sta	to	Sta.	Length (Mile)
SD11			
90+00.00	to	114+99.46	0.5
118+83.71	to	128+20.67	0.2
130+50.64	to	158+05.00	0.5
Crossroad 107 - 258th Street			
20+88.00	to	27+96.00	0.1
		Total =	1.3

GRIND SINUSOIDAL CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE

Sinusoidal rumble stripes will be constructed on the centerline, as detailed in the plan set. Sinusoidal rumble stripes will be paid for at the contract unit price per mile for "Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete". It is estimated that 0.4 miles of sinusoidal rumble stripes will be required.

Sinusoidal rumble stripe installation will be completed prior to application of the flush seal and permanent pavement markings. In the event the flush seal is eliminated from the contract, the Contractor will still be required to apply a flush seal to the newly installed sinusoidal rumble stripes at a width of 24" and a rate of 0.10 gal./SqYd No adjustment in payment will be made and SS-1h or CSS-1h Asphalt for Flush Seal will be paid at the contract unit price per ton.

TABLE OF SINUSOIDAL CENTERLINE RUMBLE STRIPES

Sta	to	Sta.	Length (Mile)
SD11			
158+05	to	165+75	0.1
Crossroad 107 - 258th Street			
13+50.00	to	20+88.00	0.1
27+96.00	to	33+84.93	0.1
		Total =	0.4

CENTERLINE RUMBLE STRIPES – ASPHALT FOR FLUSH SEAL

Asphalt for Flush Seal will be applied after the centerline rumble stripes have been installed and prior to the application of permanent pavement markings. The application width will extend 1 ft beyond the centerline of the roadway in each direction to create a total application rate of 0.10 Gal/SqYd on the centerline rumble stripes.

In the event the flush seal is eliminated from the contract, the Contractor will still be required to apply asphalt for flush seal to the newly installed centerline rumble stripes at a width of 24" and a rate of 0.10 Gal/SqYd. No adjustment in payment will be made and SS-1h or CSS-1h Asphalt for Flush Seal will be paid at the contract unit price per ton.

STORAGE UNIT

The Contractor will provide a storage unit such as a portable storage container or a semi-trailer meeting the minimum size requirements from the table below:

Project Total Asphalt Concrete Tonnage	Minimum Internal Size (Cu Ft)	Minimum External Size (L x W x H)
Less than 50,000 ton	1,166	20' x 8' x 8.6' std
More than 50,000 ton	2,360	40' x 8' x 8.6' std
All Gyratory Controlled QC/QA Projects	2,360	40' x 8' x 8.6' std

The storage unit is intended for use only by the Engineer for the duration of the project. The QC lab personnel or the Contractor will not be allowed to use the storage container while it is on the project, without permission of the Engineer.

The storage unit will be on site and operational prior to asphalt concrete production. Upon completion of asphalt concrete production, the Engineer will notify the Contractor when the storage unit can be removed from the project. The storage unit use will not exceed 30 calendar days from the completion of asphalt concrete production. The storage unit will remain the property of the Contractor.

The storage unit will be weather proof and will be set in a level position. The storage unit will be able to be locked with a padlock.

The storage unit will be placed adjacent to the QA lab, as approved by the Engineer.

The following will apply when the storage unit provided on the project is a portable storage container:

1. The portable storage container will be constructed of steel.
2. The portable storage container will be set such that it is raised above the surrounding ground level to keep water from ponding under or around the storage container.

The following will apply when the storage unit provided on the project is a semi-trailer:

1. A set of steps and hand railings will be provided at the exterior door.
2. If the floor of the semi-trailer is 18 inches or more above the ground, a landing will be constructed at the exterior door. The minimum dimensions for the landing will be 4 feet by 5 feet. The top of the landing will be level with the threshold or opening of the doorway.
3. The semi-trailer may be connected to the QA lab by a stable elevated walkway. The walkway will be a minimum of 48 inches wide and contain handrails installed at 32 inches above the deck of the walkway. The walkway will be constructed such that it is stable and the deck does not deform during use and allows for proper door operation. Walkway construction will be approved by the Engineer.

All cost for furnishing, maintaining, and removing the storage unit including labor, equipment, and materials including any necessary walkways, landings, stairways, and handrails will be included in the contract unit price per each for "Storage Unit".

INTERSECTING ROADS AND ENTRANCES

Intersecting roads and entrances will be satisfactorily cleared of vegetation, shaped and compacted prior to placement of mainline surfacing. This work will be considered incidental to other contract items. Separate measurement and payment will not be made.

RATES OF MATERIALS

Rates quantities are included in the Table of Materials Quantities

The Estimate of Surfacing Quantities is based on the following quantities of materials per **STATION.**

MAINLINE

Sta. 90+00.00 to Sta. 95+98.83
Sta. 118+83.71 to Sta. 128+20.67
Sta. 130+50.64 to Sta. 165+75.00

Base Course, Salvaged or Base Course 339.34 tons

Water for Granular Material at the rate of 4.07 Mgal

MC-70 Asphalt for Prime at the Rate of 0.61 tons applied 46 feet wide (Rate = 0.30 gallon per square yard).

Blotting Sand for Prime at the rate of 1.33 tons applied 24 feet wide (Rate = 10 lbs. per square yard).

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of 0.09 tons applied 30 feet wide (Rate = 0.06 gallon per square yard).

CLASS G ASPHALT CONCRETE – 1ST , 2nd & Top LIFTS

Crushed Aggregate	33.12 tons
PG 58H-34 Asphalt Binder	2.04 tons
Total Mix without Hydrated Lime	35.16 tons
Hydrated Lime	0.35 tons
Total Mix with Hydrated Lime	35.51 tons

The exact proportions of these materials will be determined on construction.

MAINLINE

Sta. 100+18.83 to Sta. 110+19.50

Base Course, Salvaged or Base Course 423.35 tons

Water for Granular Material at the rate of 5.08 Mgal

MC-70 Asphalt for Prime at the Rate of 0.76 tons applied 58 feet wide (Rate = 0.30 gallon per square yard).

Blotting Sand for Prime at the rate of 2.00 tons applied 36 feet wide (Rate = 10 lbs. per square yard).

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of 0.12 tons applied 42 feet wide (Rate = 0.06 gallon per square yard).

CLASS G ASPHALT CONCRETE – 1ST , 2nd & Top LIFTS

Crushed Aggregate	47.06 tons
PG 58H-34 Asphalt Binder	2.90 tons
Total Mix without Hydrated Lime	49.96 tons
Hydrated Lime	0.50 tons
Total Mix with Hydrated Lime	50.46 tons

The exact proportions of these materials will be determined on construction.

MAINLINE SHOULDERS (each)

Sta. 90+00.00 to Sta. 165+75.00

MC-70 Asphalt for Prime at the Rate of 0.12 tons applied 9 feet wide (Rate = 0.30 gallon per square yard).

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of 0.02 tons applied 8.5 feet wide (Rate = 0.06 gallon per square yard).

CLASS G ASPHALT CONCRETE – 1ST & Top LIFTS

Crushed Aggregate	7.84 tons
PG 58H-34 Asphalt Binder	0.48 tons
Total Mix without Hydrated Lime	8.32 tons
Hydrated Lime	0.08 tons
Total Mix with Hydrated Lime	8.40 tons

The exact proportions of these materials will be determined on construction.

MAINLINE SHOULDERS (each)

Sta. 90+00.00 to Sta. 165+75.00

MC-70 Asphalt for Prime at the Rate of 0.12 tons applied 9 feet wide (Rate = 0.30 gallon per square yard).

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of 0.02 tons applied 8.5 feet wide (Rate = 0.06 gallon per square yard).

CLASS G ASPHALT CONCRETE – 2nd LIFT

Crushed Aggregate	5.52 tons
PG 58H-34 Asphalt Binder	0.34 tons
Total Mix without Hydrated Lime	5.86 tons
Hydrated Lime	0.06 tons
Total Mix with Hydrated Lime	5.92 tons

The exact proportions of these materials will be determined on construction.

Crossroad 107 – 258th Street

Sta. 13+50.00 to Sta. 33+84.93

Base Course, Salvaged or Base Course 486.42 tons

Water for Granular Material at the rate of 5.84 Mgal

MC-70 Asphalt for Prime at the Rate of 0.47 tons applied 36 feet wide (Rate = 0.30 gallon per square yard).

Blotting Sand for Prime at the rate of 1.33 tons applied 24 feet wide (Rate = 10 lbs. per square yard).

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of 0.10 tons applied 35 feet wide (Rate = 0.06 gallon per square yard).

CLASS G ASPHALT CONCRETE – 1ST & Top LIFTS

Crushed Aggregate	37.19 tons
PG 58H-34 Asphalt Binder	2.29 tons
Total Mix without Hydrated Lime	39.48 tons
Hydrated Lime	0.39 tons
Total Mix with Hydrated Lime	39.87 tons

The exact proportions of these materials will be determined on construction.

The exact proportions of these materials will be determined on construction.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F5	F29

Plotting Date: 07/15/2025

TABLE OF MATERIALS QUANTIITES

LOCATION	WATER FOR GRANULAR MATERIAL	BASE COURSE, SALVAGED/ BASE COURSE	CLASS G ASPHALT CONCRETE			PG 58H- 34 ASPHALT BINDER			ASPHALT FOR PRIME	BLOTTING SAND FOR PRIME	HYDRATED LIME			ASPHALT FOR TACK		
			1st Lift	2nd Lift	Top Lift	1st Lift	2nd Lift	Top Lift			1st Lift	2nd Lift	Top Lift	1st Lift	2nd Lift	Top Lift
Station to Station	(MGal)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)
Mainline																
90+00.00 to 95+98.83	24.4	2,032.1	212.6	212.6	212.6	12.2	12.2	12.2	3.7	8.0	2.1	2.1	2.1	0.5	0.5	0.5
95+98.83 to 100+18.83	19.1	1,593.8	180.6	180.6	180.6	10.4	10.4	10.4	2.9	7.0	1.8	1.8	1.8	0.4	0.4	0.4
100+18.83 to 110+19.50	50.8	4,236.3	504.9	504.9	504.9	29.0	29.0	29.0	7.6	20.0	5.0	5.0	5.0	1.2	1.2	1.2
110+19.50 to 114+99.46	21.8	1,821.3	206.3	206.3	206.3	11.9	11.9	11.9	3.3	8.0	2.1	2.1	2.1	0.5	0.5	0.5
118+83.71 to 128+20.67	38.1	3,179.5	332.7	332.7	332.7	19.1	19.1	19.1	5.7	12.5	3.3	3.3	3.3	0.8	0.8	0.8
130+50.64 to 165+75.00	143.4	11,959.6	1,251.5	1,251.5	1,251.5	71.9	71.9	71.9	21.5	46.9	12.3	12.3	12.3	3.2	3.2	3.2
Mainline - Both Shoulders																
90+00.00 to 95+98.83			100.8	70.9	100.8	5.8	4.1	5.8	0.7		1.0	0.7	1.0	0.1	0.1	0.1
95+98.83 to 100+18.83			70.7	49.7	70.7	4.1	2.9	4.1	0.5		0.7	0.5	0.7	0.1	0.1	0.1
100+18.83 to 110+19.50			168.4	118.5	168.4	9.7	6.8	9.7	1.2		1.7	1.2	1.7	0.2	0.2	0.2
110+19.50 to 114+99.46			80.8	56.8	80.8	4.7	3.3	4.7	0.6		0.8	0.6	0.8	0.1	0.1	0.1
118+83.71 to 128+20.67			157.7	110.9	157.7	9.1	6.4	9.1	1.1		1.6	1.1	1.6	0.2	0.2	0.2
130+50.64 to 165+75.00			593.1	417.3	593.1	34.2	24.0	34.2	4.2		6.0	4.2	6.0	0.7	0.7	0.7
XR 107 - 258th Street																
13+50.00 to 33+84.93	134.1	11,177.4	925.7		925.7	53.1		53.1	9.6	27.1	9.2		9.2	2.0		2.0
XR 126 -Palisade Street																
0+85.43 to 9+07.72	27.1	2,261.3	41.3		41.3	2.4		2.4			0.4		0.4	0.1		0.1
XR 159 -257th Street																
3+50.00 to 16+50.00	75.4	6,253.0	51.2		51.2	2.9		2.9			0.5		0.5	0.1		0.1
Material for Maintenance of Traffic										5.0						
Mainline SD 11 Entrances (9 each)	10.8	909.0			62.8			3.6					0.6			0.1
Crossroad 107 Entrances (5 each)	5.5	445.0			247.3			14.2					2.5			0.4
Crossroad 159 Entrances (1 each)	0.5	40.0														
Guardrail Surfacing Str. No. 50-280-139																
Begin Bridge - West Shoulder	1.0	86.0			12.0			1.0	0.1				0.1			
Begin Bridge - East Shoulder	2.4	199.0			27.0			2.0	0.3				0.3			0.1
End Bridge - West Shoulder	3.2	270.0			36.0			2.0	0.4				0.4			0.1
End Bridge - East Shoulder	1.3	110.0			15.0			1.0	0.2				0.2			
Guardrail Surfacing Str. No. 50-280-136																
Begin Bridge - West Shoulder	1.3	109.0			15.0			1.0	0.2				0.2			
Begin Bridge - East Shoulder	3.1	258.0			34.0			2.0	0.4				0.3			0.1
End Bridge - West Shoulder	3.2	270.0			36.0			2.0	0.4				0.4			0.1
End Bridge - East Shoulder	1.3	108.0			14.0			1.0	0.2				0.1			
Rates Totals:	567.8	47,318.3	13,768.4			792.8			64.8	134.5	137.0			29.3		

Application Rates: PG 58H-34 Asphalt Binder at 5.8% , Water for Granular Material = 0.012 Mgal/ton
MC-70 Asphalt for Prime rate = 0.30 gallon per square yard, SS-1h or CSS-1h Asphalt for Tack rate = 0.06 gallon per square yard

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F6	F29

Plotting Date: 07/15/2025

LOCATION OF INTERSECTING ROADS AND FARM ENTRANCES

INTERSECTING STREETS & ROADS	
28’ Intersecting Roads - (2 each), 4” AC/8” BCS & 7” BCS	30’ Intersecting Roads - (1 each), 4” AC/8” BCS
Sta. 126+15 Lt. - XR 126, Palisade St.	Sta. 107+46 Lt. & Rt. - XR 107, 258th St.
Sta. 158+92 Lt. & Rt. - FR159, 257th St.	

FARM ENTRANCES	
24’ Farm Entrances - (13 each)	
Mainline Entrances (7 each)	Mainline 40’ Farm Entrances – (2 each)
Sta. 95+97 Lt., 4” BCS	Sta. 122+20 Lt., 4” BCS
Sta. 112+73 Lt., 4” BCS	Sta. 122+20 Rt., 4” BCS
Sta. 133+22 Lt., 4” BCS	
Sta. 133+22 Rt., 4” BCS	
Sta. 142+85 Rt., 4” BCS	
Sta. 160+13 Lt., 3” AC/4” BCS	
Sta. 163+51 Rt., 4” BCS	
Crossroad 107 Entrances (5 each)	
Sta. 16+21 Lt., 3” AC/4” BCS	
Sta. 16+21 Rt., 4” BCS	
Sta. 19+71 Lt., 4” BCS	
Sta. 31+50 Lt., 3” AC/4” BCS & 4” BCS	
Sta. 32+98 Rt., 3” AC/4” BCS & 4” BCS	
Crossroad 159 Entrances (1 each)	
Sta. 7+46 Lt., 4” BCS	

Plot Scale - 1:200

Plotted From - TRPR13462

File - ...\prj\mnn05\V6\NotesSectionF.dgn

IN PLACE TYPICAL SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F7	F29

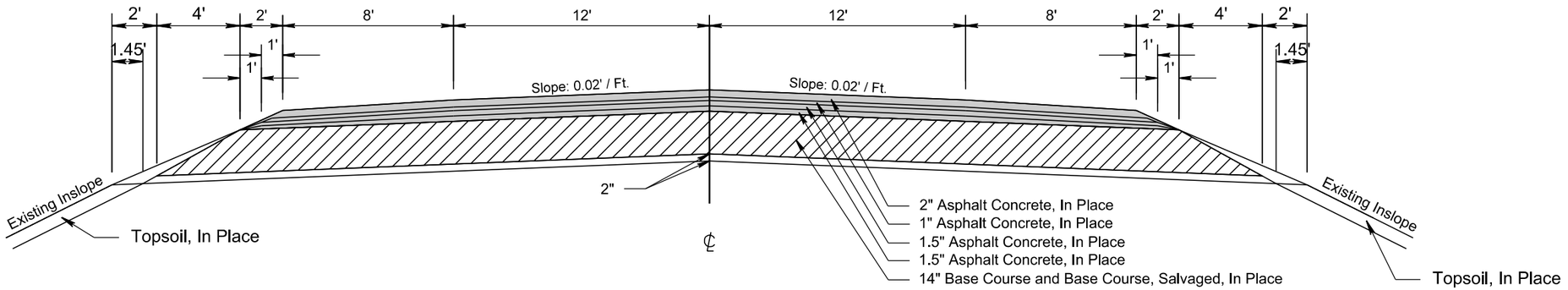
Plotting Date: 07/15/2025

Remove Asphalt Concrete

Salvage and Stockpile Granular Material

Section 1

Sta. 90+00 to Sta. 102+28



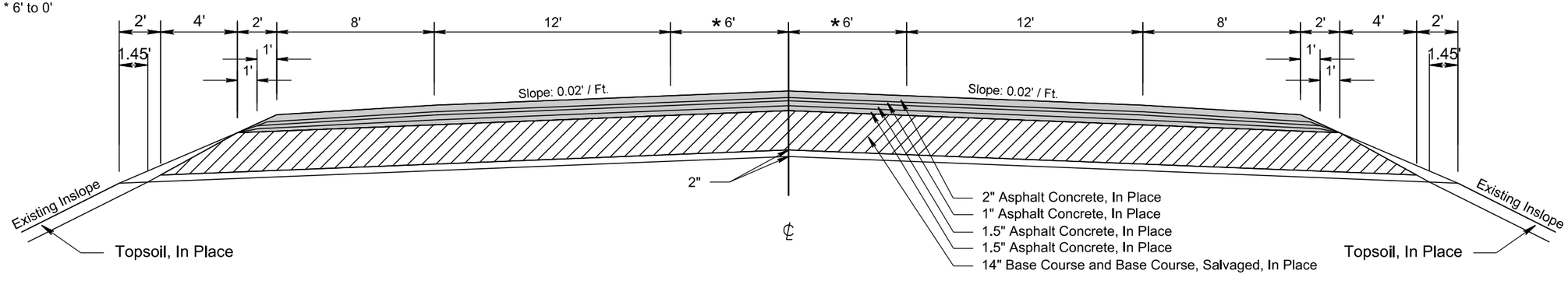
Transitions:

Sta. 102+28 to Sta. 106+18
* 0' to 6'

Sta. 108+88 to Sta. 112+78
* 6' to 0'

Section 2

Sta. 102+28 to Sta. 112+78



Note:

These in place typical sections are from underlying plans PCN 04EX

IN PLACE TYPICAL SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F8	F29

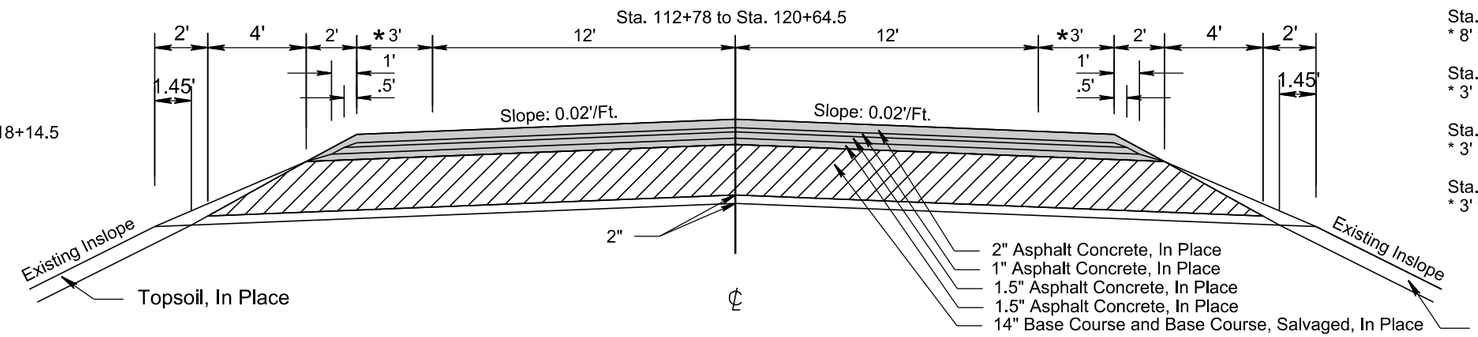
Plotting Date: 07/15/2025

Remove Asphalt Concrete

Salvage and Stockpile Granular Material

Section 3

Sta. 112+78 to Sta. 120+64.5



Bridge Exception:

Sta. 115+00 to Sta. 118+14.5

Transitions:

Sta. 112+78 to Sta. 114+50
* 8' to 3'

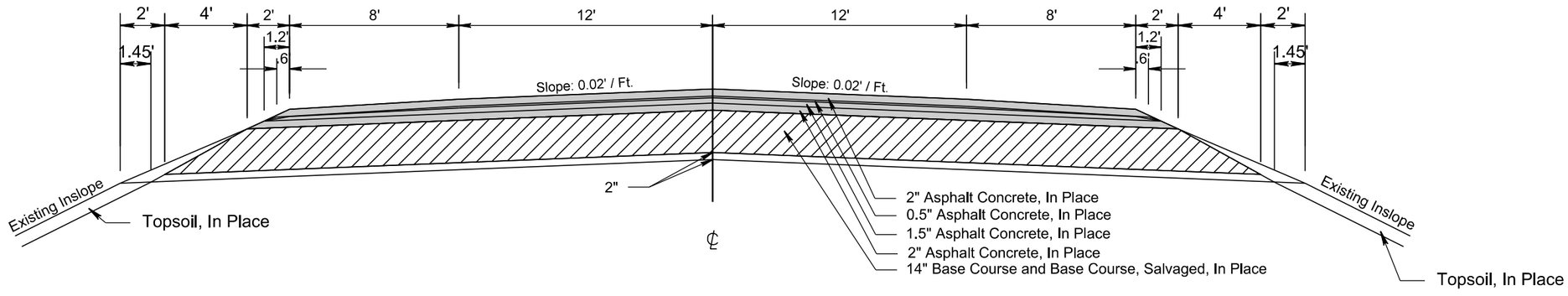
Sta. 114+50 to Sta. 115+00
* 3'

Sta. 118+14.5 to Sta. 118+64.5
* 3'

Sta. 118+64.5 to Sta. 120+64.5
* 3' to 8'

Section 4

Sta. 120+64.5 to Sta. 126+08
Sta. 132+94 to Sta. 165+75

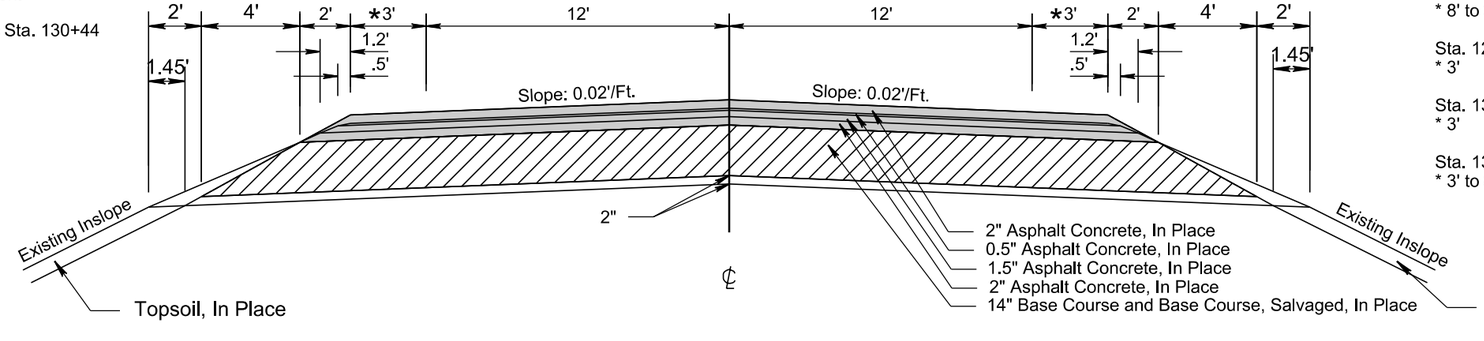


Section 5

Sta. 126+08 to Sta. 132+94

Bridge Exception:

Sta. 128+58 to Sta. 130+44



Transitions:

Sta. 126+08 to Sta. 128+08
* 8' to 3'

Sta. 128+08 to Sta. 128+58
* 3'

Sta. 130+44 to Sta. 130+94
* 3'

Sta. 130+94 to Sta. 132+94
* 3' to 8'

Note:

These in place typical sections are from underlying plans PCN 04EX

TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F9	F29

Plotting Date: 07/15/2025

Section 6

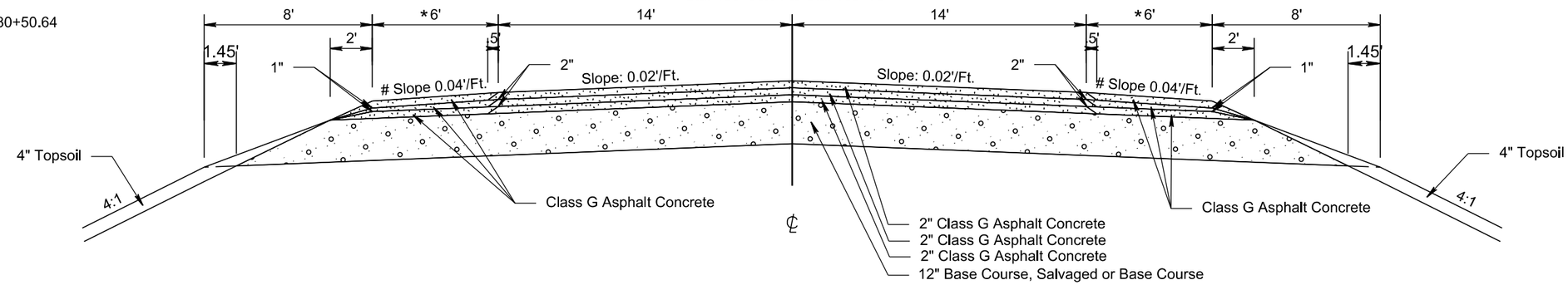
SD HWY 11
Sta. 90+00 to Sta. 95+98.83
Sta. 114+39.50 to Sta. 114+99.46
Sta. 118+83.71 to Sta. 128+20.67
Sta. 130+50.64 to Sta. 165+75

* See Guardrail Embankment Layouts
for Guardrail Surfacing Details at Structures

Bridge Exceptions including Approach Slabs:

Sta. 114+99.46 to Sta. 118+83.71

Sta. 128+20.67 to Sta. 130+50.64



Transitions:

Sta. 113+40.46 to Sta. 114+20.46
0.04'/Ft. to 0.02'/Ft.

Sta. 114+20.46 to Sta. 120+37.53
0.02'/Ft.

Sta. 120+37.53 to Sta. 121+17.53
0.02'/Ft. to 0.04'/Ft.

Sta. 126+61.69 to Sta. 127+41.69
0.04'/Ft. to 0.02'/Ft.

Sta. 127+41.69 to Sta. 132+04.44
0.02'/Ft.

Sta. 132+04.44 to Sta. 132+84.44
0.02'/Ft. to 0.04'/Ft.

Transitions:

Sta. 112+65.63 to Sta. 113+45.63
0.04'/Ft. to 0.02'/Ft.

Sta. 113+45.63 to Sta. 119+62.71
0.02'/Ft.

Sta. 119+62.71 to Sta. 120+42.71
0.02'/Ft. to 0.04'/Ft.

Sta. 125+86.81 to Sta. 126+66.81
0.04'/Ft. to 0.02'/Ft.

Sta. 126+66.81 to Sta. 131+29.68
0.02'/Ft.

Sta. 131+29.69 to Sta. 132+09.68
0.02'/Ft. to 0.04'/Ft.

Transitions:

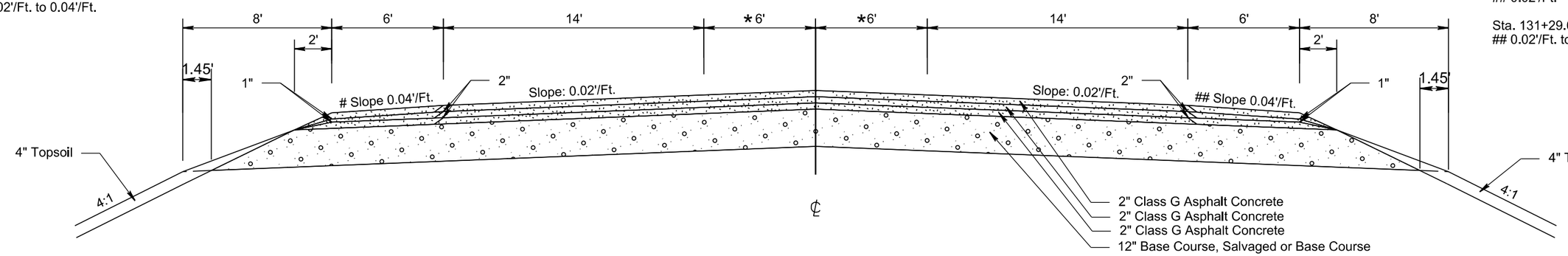
Sta. 95+98.83 to Sta. 100+18.83
* 0' to 6'

Sta. 100+18.83 to Sta. 110+19.5
* 6'

Sta. 110+19.5 to Sta. 114+39.50
* 6' to 0'

Section 7

SD HWY 11
Sta. 95+98.83 to Sta. 114+39.50



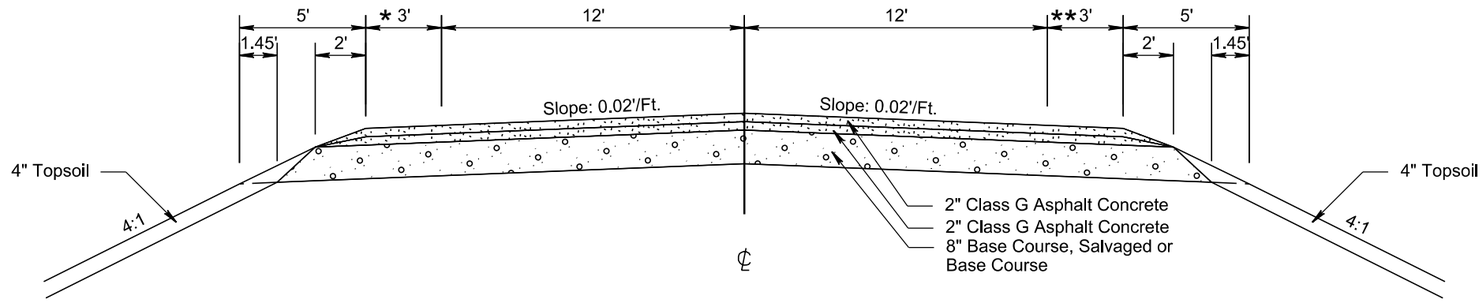
TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F10	F29

Plotting Date: 07/15/2025

Section 8

258th St.
XR 107
Sta. 13+50 to Sta. 33+84.93



Mailbox Turnout Transitions:

Sta. 15+87.29 to Sta. 16+49.77
* 3' to 8'

Sta. 16+49.77 to Sta. 16+77.76
* 8'

Sta. 16+77.76 to Sta. 17+75.95
* 8' to 3'

Sta. 31+41.13 to Sta. 32+41.13
** 3' to 8'

Sta. 32+41.13 to Sta. 32+69.13
** 8'

Sta. 32+69.13 to Sta. 33+31.63
** 8' to 3'

XR 126 Transitions:

Sta. 1+75 to Sta. 3+75
* 10' to 12'
** 10' to 12'

XR 159 Transitions:

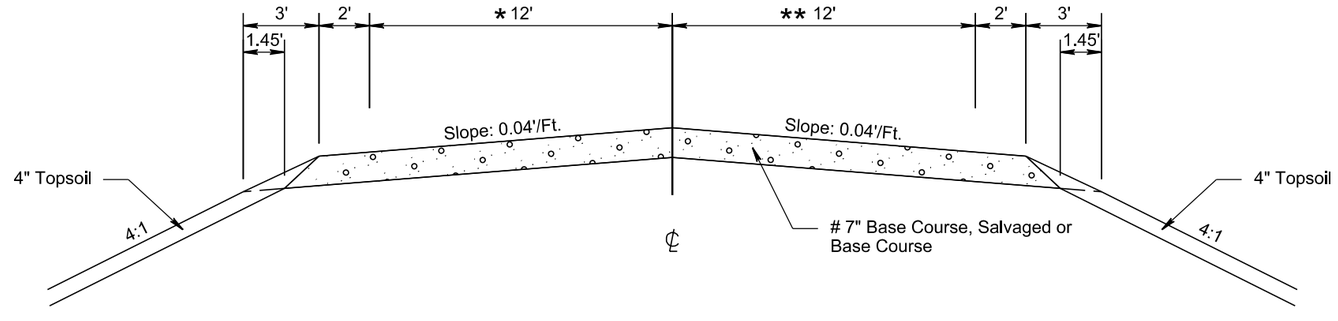
Sta. 3+50 to Sta. 5+50
* 10' to 12'
** 10' to 12'

Sta. 14+00 to Sta. 16+00
* 10' to 12'
** 10' to 12'

Section 9

Palisade St.
XR 126
Sta. 1+75 to Sta. 9+09.41

257th St.
XR 159
Sta. 3+50 to Sta. 16+00



Note:

XR 126

Sta. 8+24.20 to Sta. 9+09.41
4" Class G Asphalt Concrete over
8" Base Course, Salvaged or Base Course

PLOT SCALE - 1:6.00001

PLOTTED FROM - TRPR13462

PLOT NAME - 10

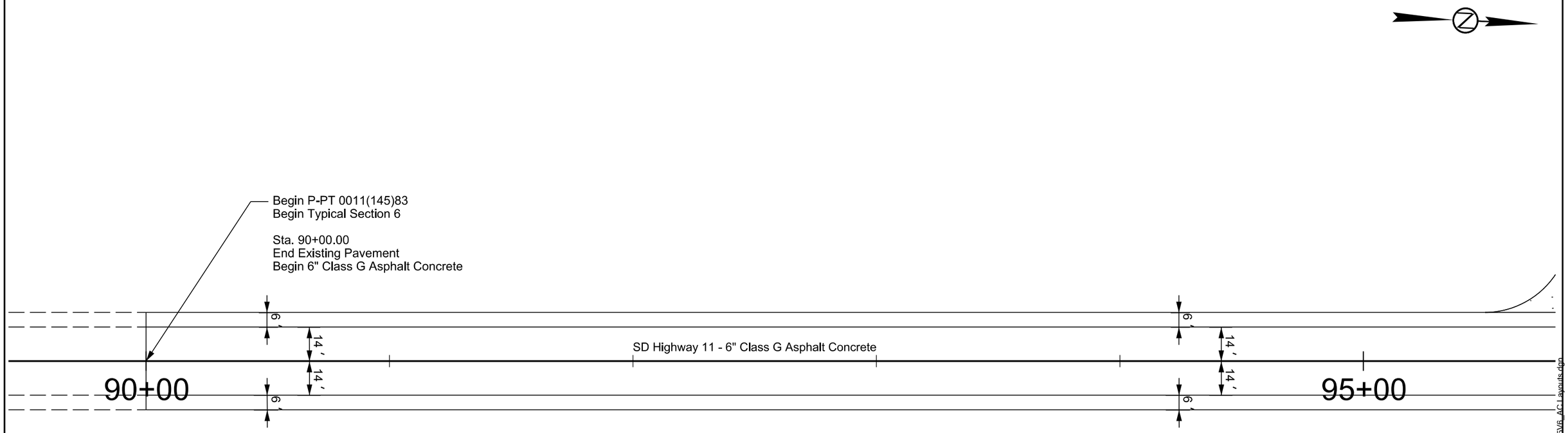
FILE - ...\05V6_TYPICAL SECTIONS.DGN

AC SURFACING LAYOUTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F11	F29

Plotting Date: 07/15/2025

Scale 1 Inch = 40 Feet
Sheet 1 of 11 Sheets



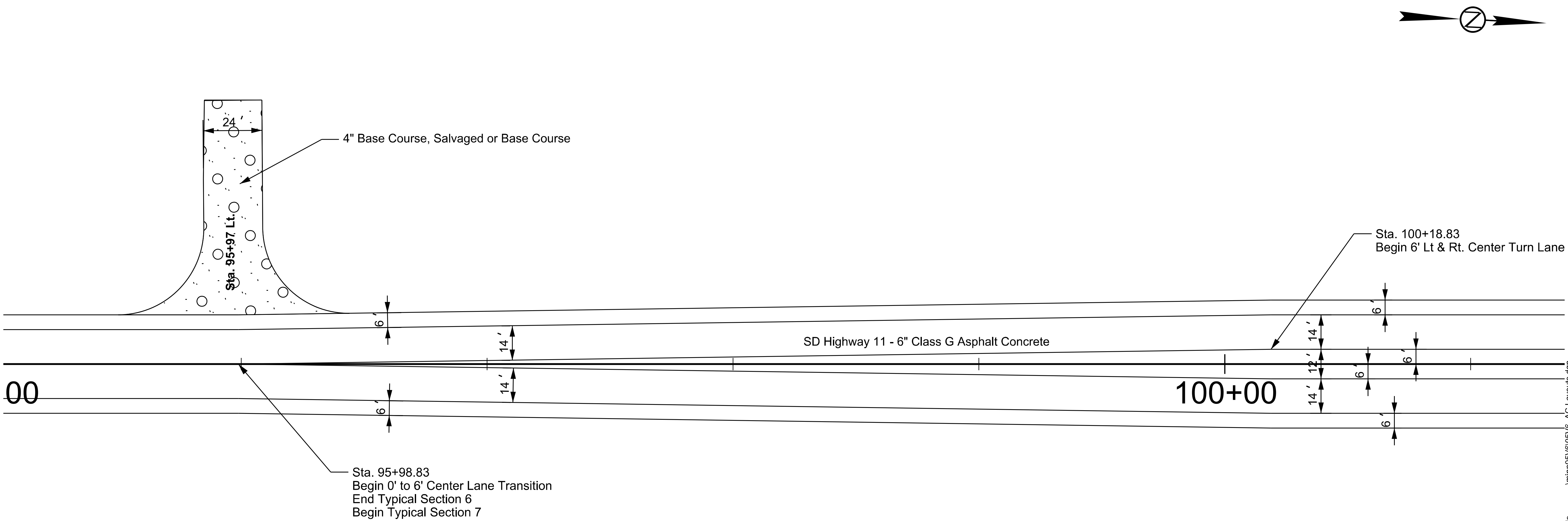
Plot Scale - 1:40

Plotted From - TRPR13462

File - \plan05\V8\05V8_AC Layouts.dgn

AC SURFACING LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 2 of 11 Sheets

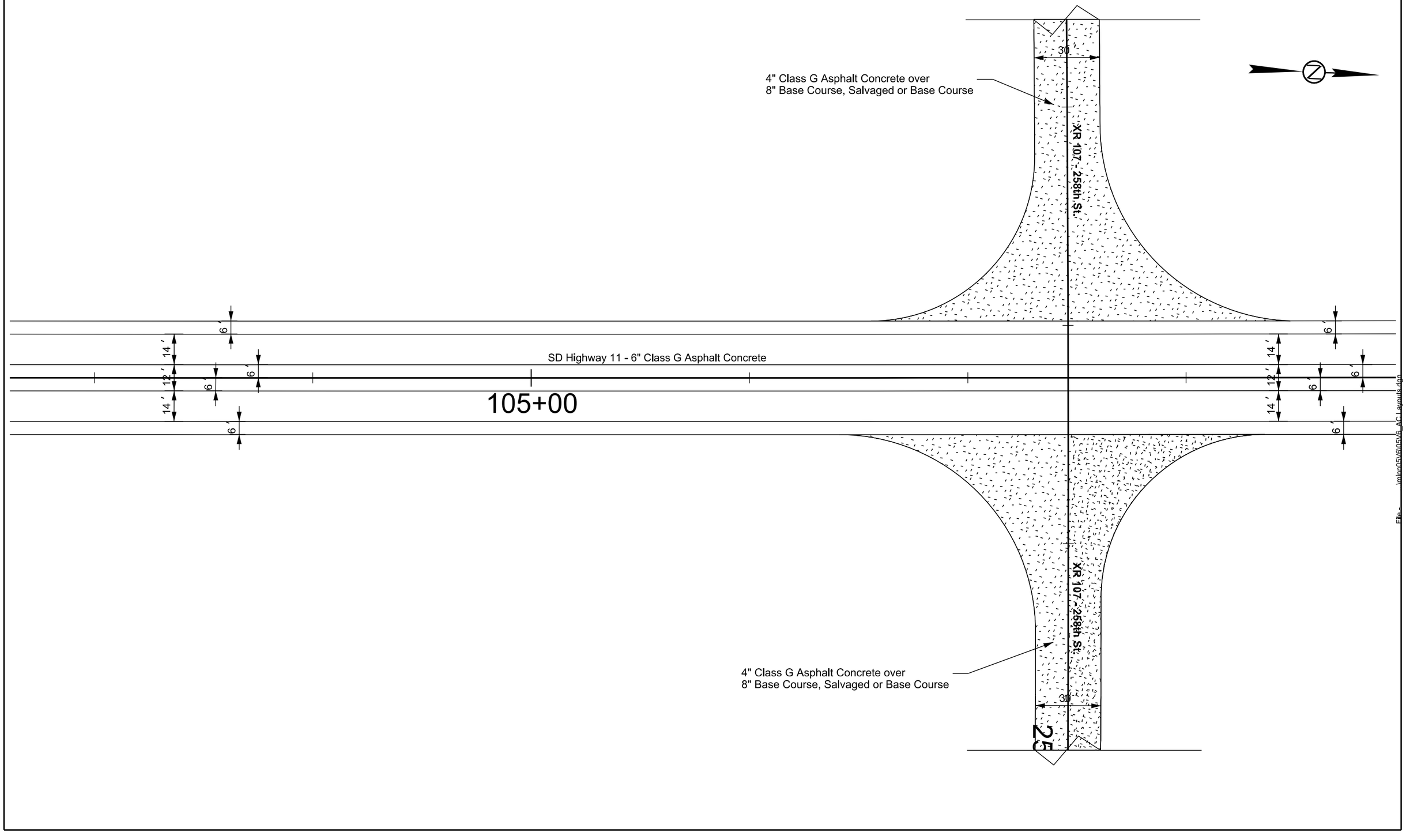


AC SURFACING LAYOUTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F13	F29

Plotting Date: 07/15/2025

Scale 1 Inch = 40 Feet
Sheet 3 of 11 Sheets



Plot Scale - 1:40

Plotted From - TRPR13462

File - \mlon05\V\05V\AC Layouts.dgn

AC SURFACING LAYOUTS

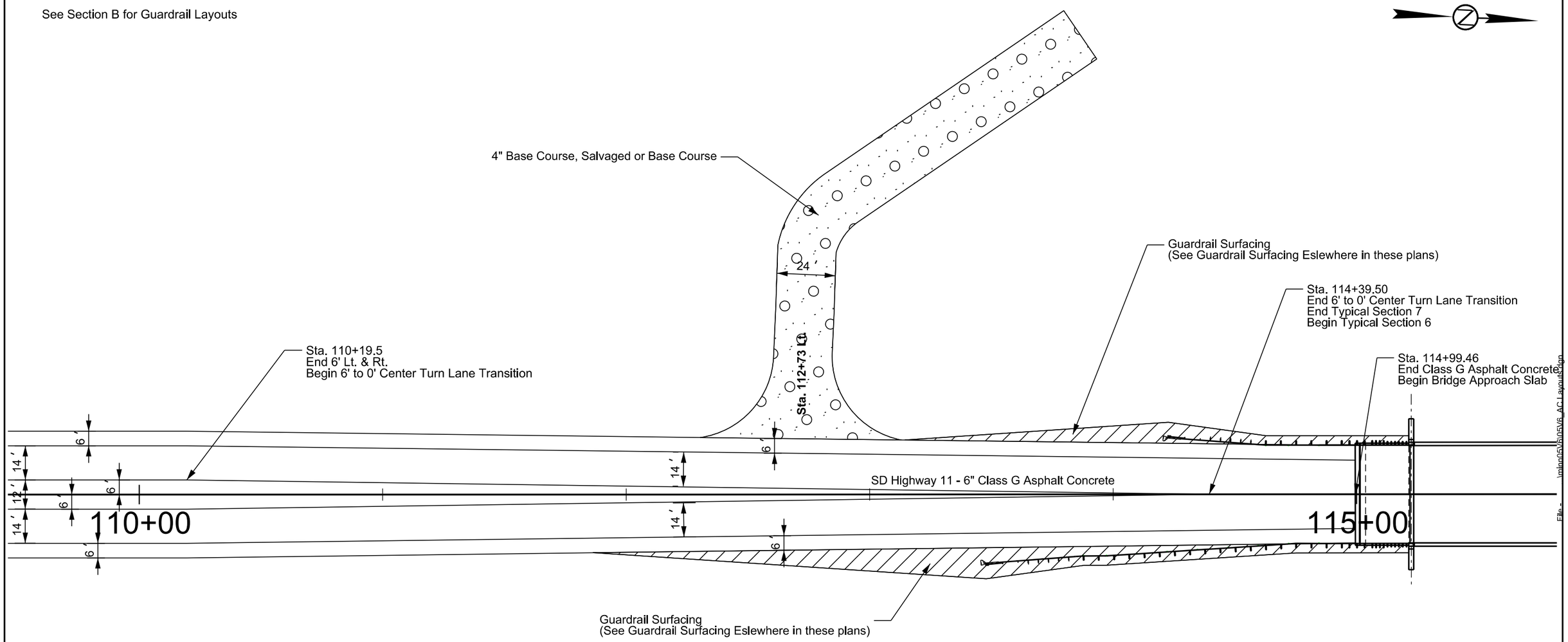
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F14	F29

Plotting Date: 07/15/2025

Scale 1 Inch = 40 Feet
Sheet 4 of 11 Sheets

Note:

See Section B for Guardrail Layouts



Plot Scale - 1:40

Plotted From - TRPR13462

File - Union05\Vol05\VA_AC Layouts.dgn

AC SURFACING LAYOUTS

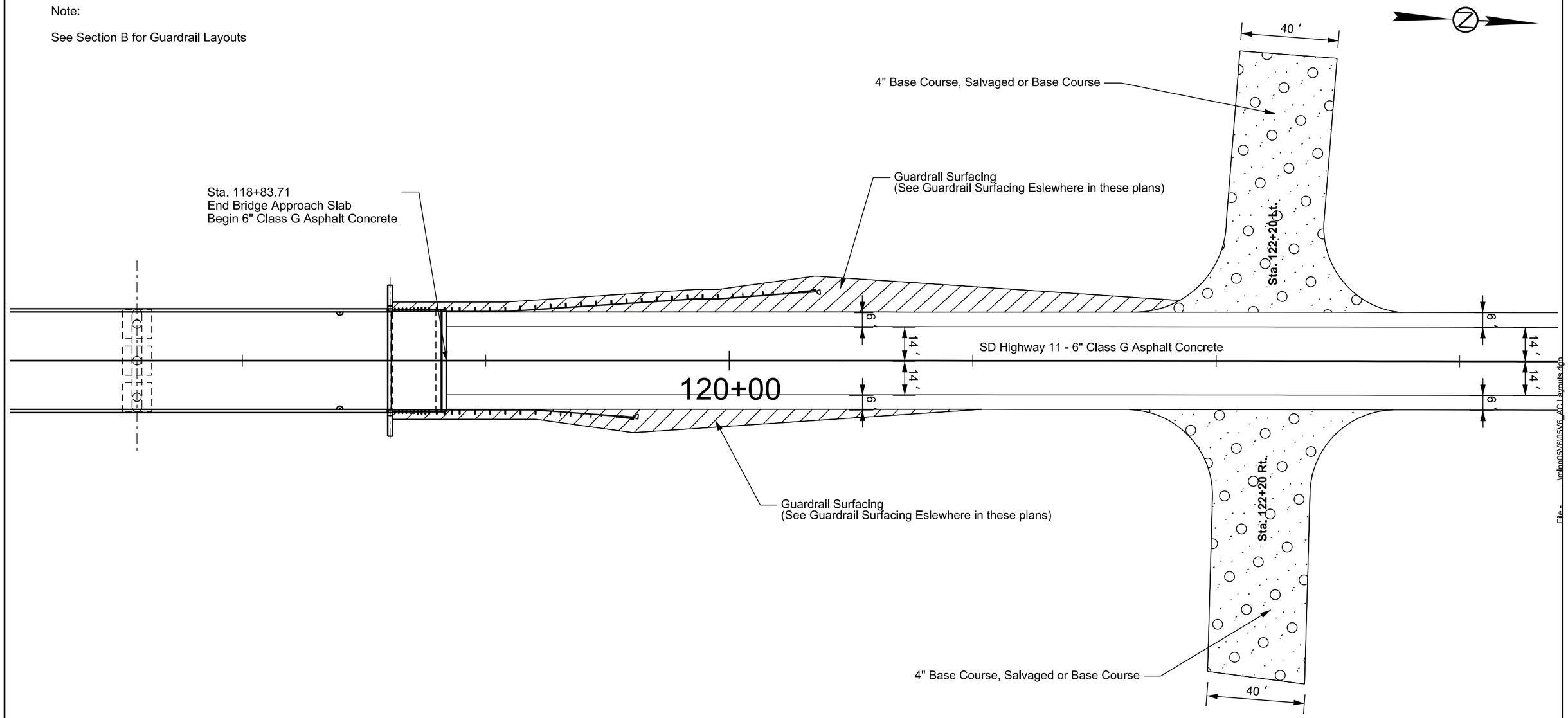
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F15	F29

Plotting Date: 07/15/2025

Scale 1 Inch = 40 Feet
Sheet 5 of 11 Sheets

Note:

See Section B for Guardrail Layouts



Plot Scale - 1:40

Plotted From - TRPR13462

File - \mlinn05\V05\V0_AC Layouts.dgn

AC SURFACING LAYOUTS

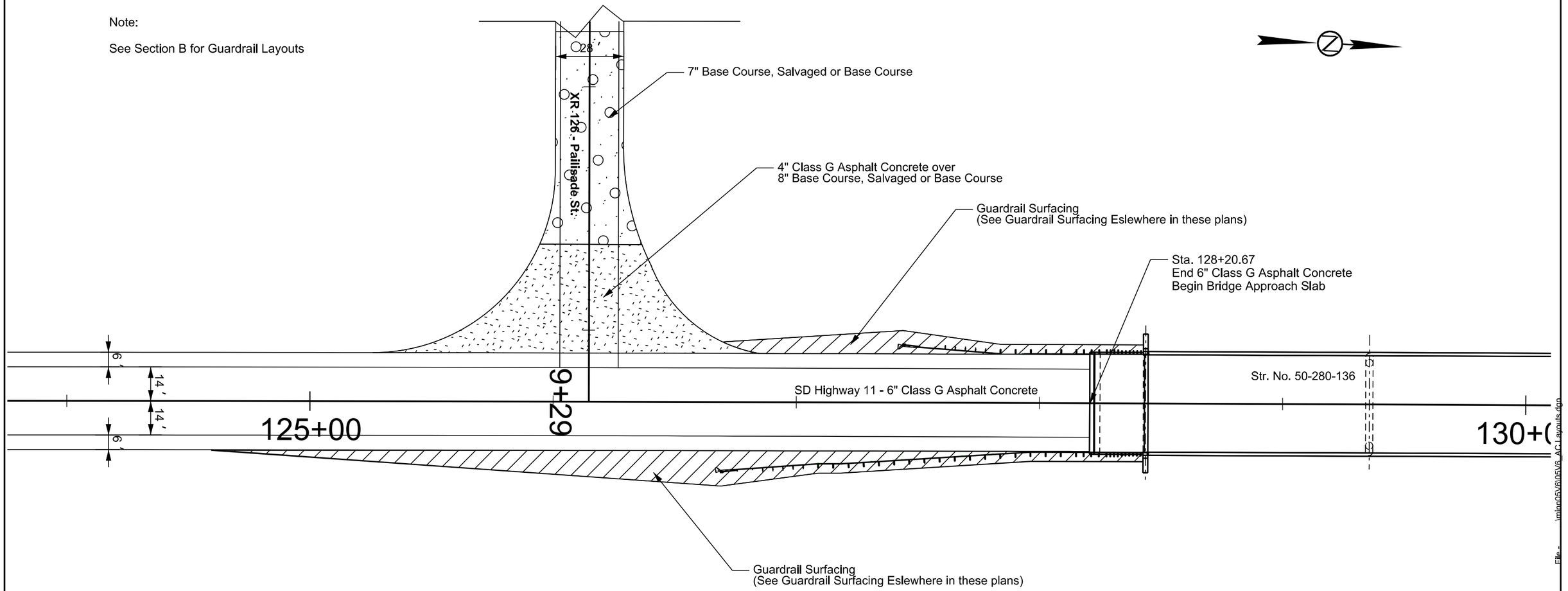
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F16	F29

Plotting Date: 07/15/2025

Scale 1 Inch = 40 Feet
Sheet 6 of 11 Sheets

Note:

See Section B for Guardrail Layouts



Plot Scale - 1:40

Plotted From - TRPR13462

File - lmlin05\V05VA_AC Layouts.dgn

AC SURFACING LAYOUTS

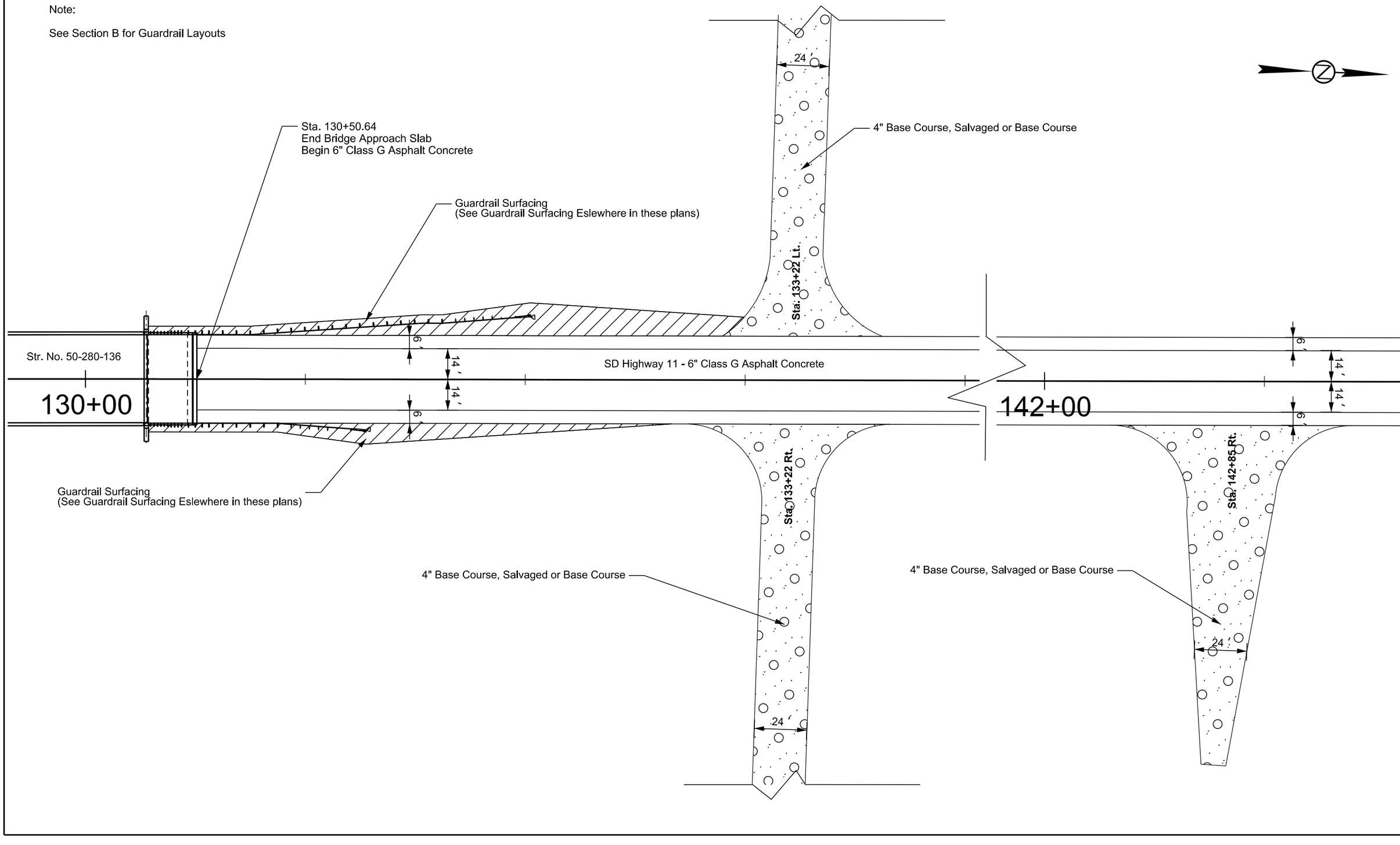
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F17	F29

Plotting Date: 07/15/2025

Scale 1 Inch = 40 Feet
Sheet 7 of 11 Sheets

Note:

See Section B for Guardrail Layouts



Plot Scale - 1:40

Plotted From - TRPR13462

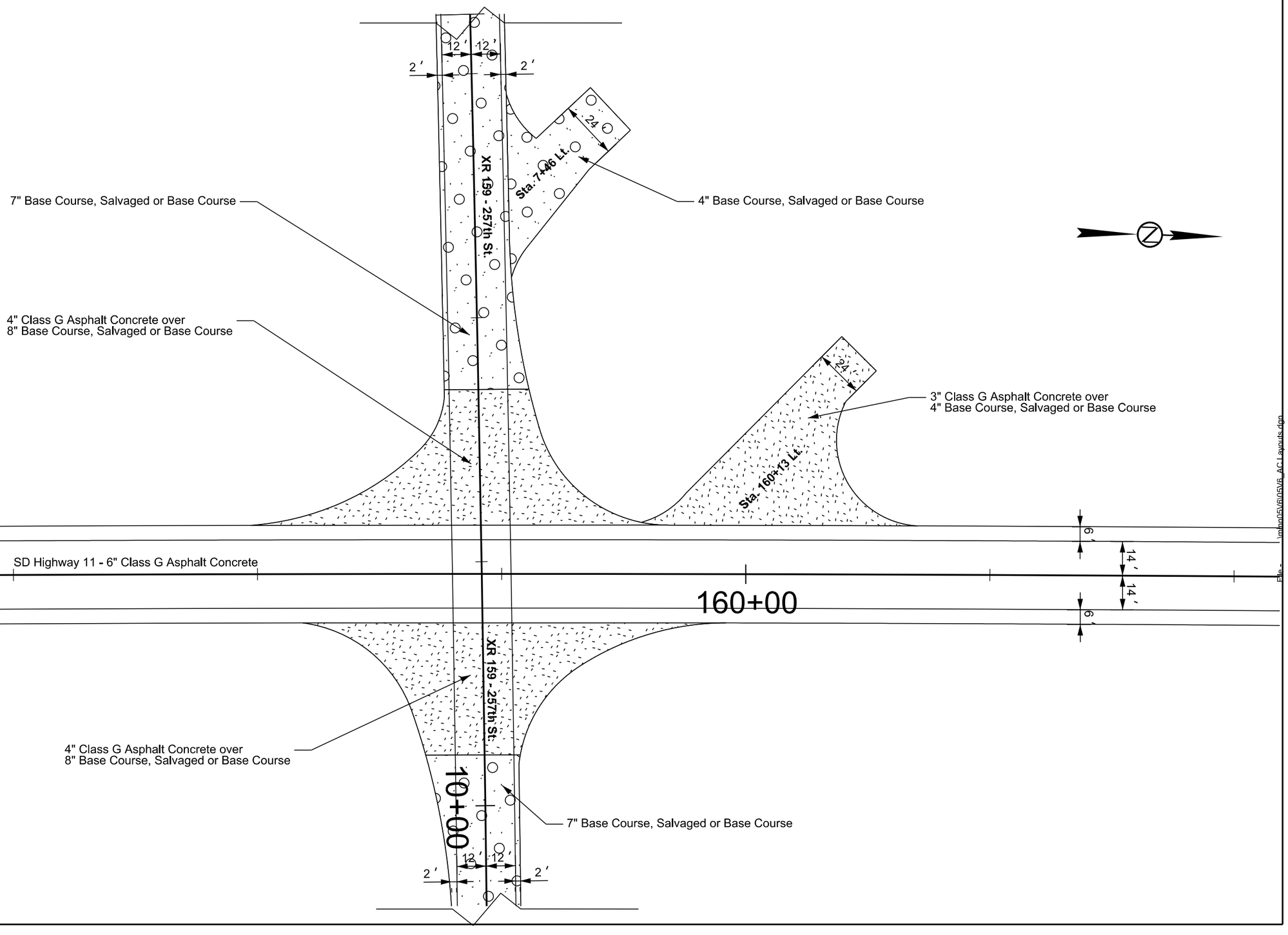
File - Irrigon\SV\05VA_AC Layouts.dgn

AC SURFACING LAYOUTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F18	F29

Plotting Date: 07/15/2025

Scale 1 Inch = 40 Feet
Sheet 8 of 11 Sheets



Plot Scale - 1:40

Plotted From - TRPR13462

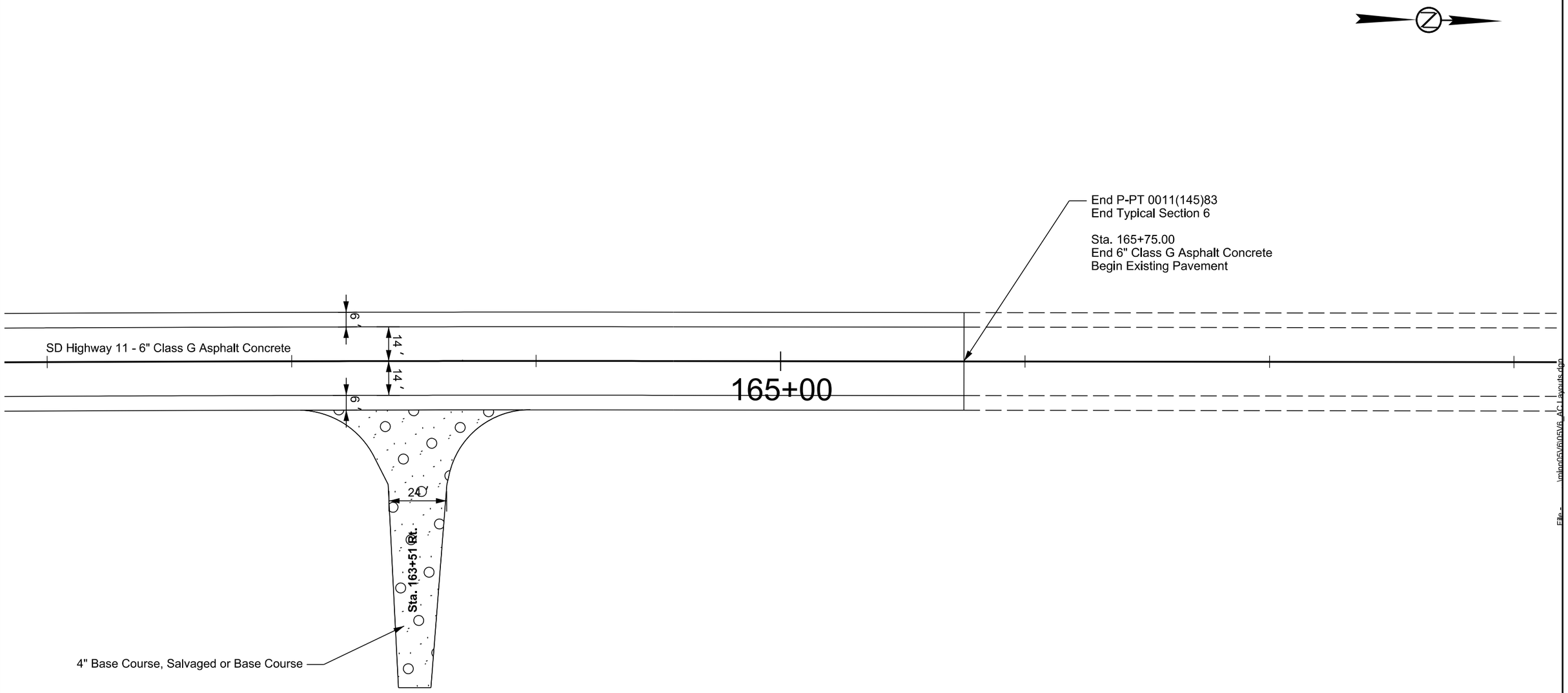
File - intro\05\05V6_AC Layouts.dgn

AC SURFACING LAYOUTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F19	F29

Plotting Date: 07/15/2025

Scale 1 Inch = 40 Feet
Sheet 9 of 11 Sheets



Plot Scale - 1:40

Plotted From - TRPR13462

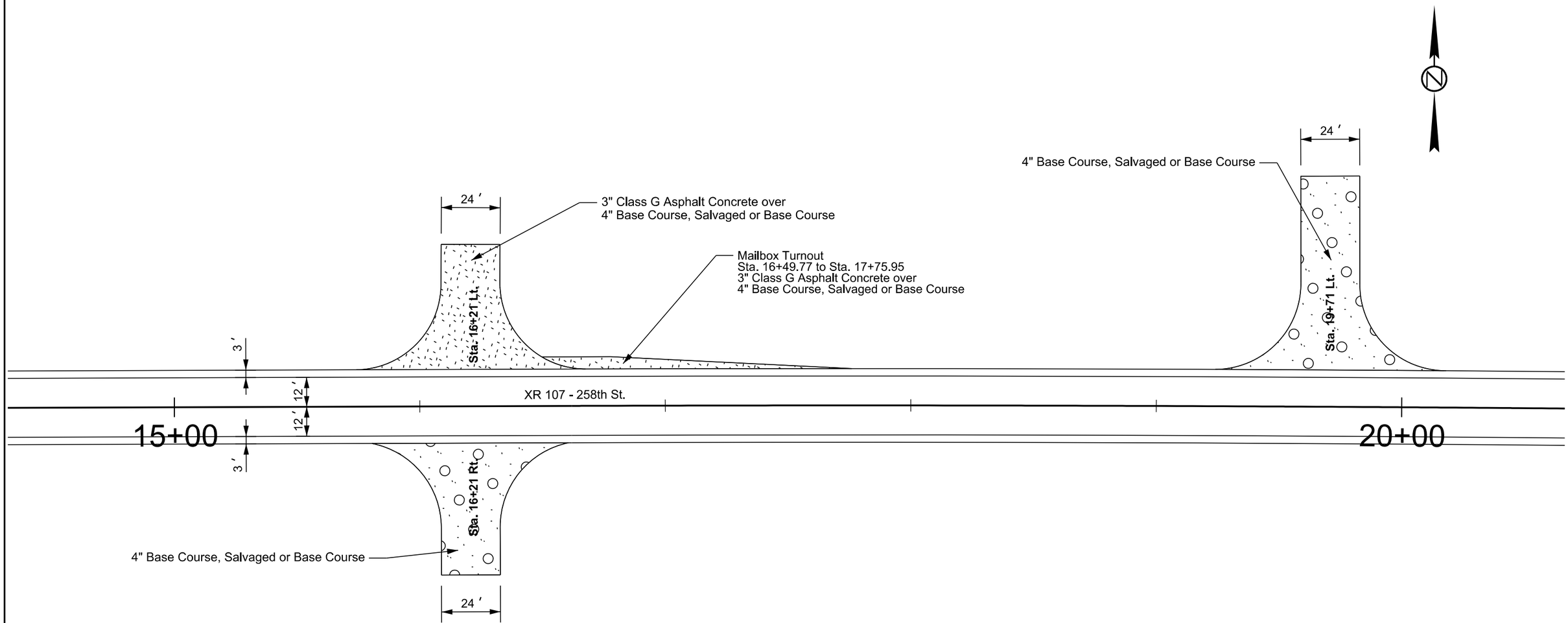
File - \plan05\AI05\G_AC Layouts.dgn

AC SURFACING LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 10 of 11 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F20	F29

Plotting Date: 07/15/2025



Plot Scale - 1:40

Plotted From - TRPR13462

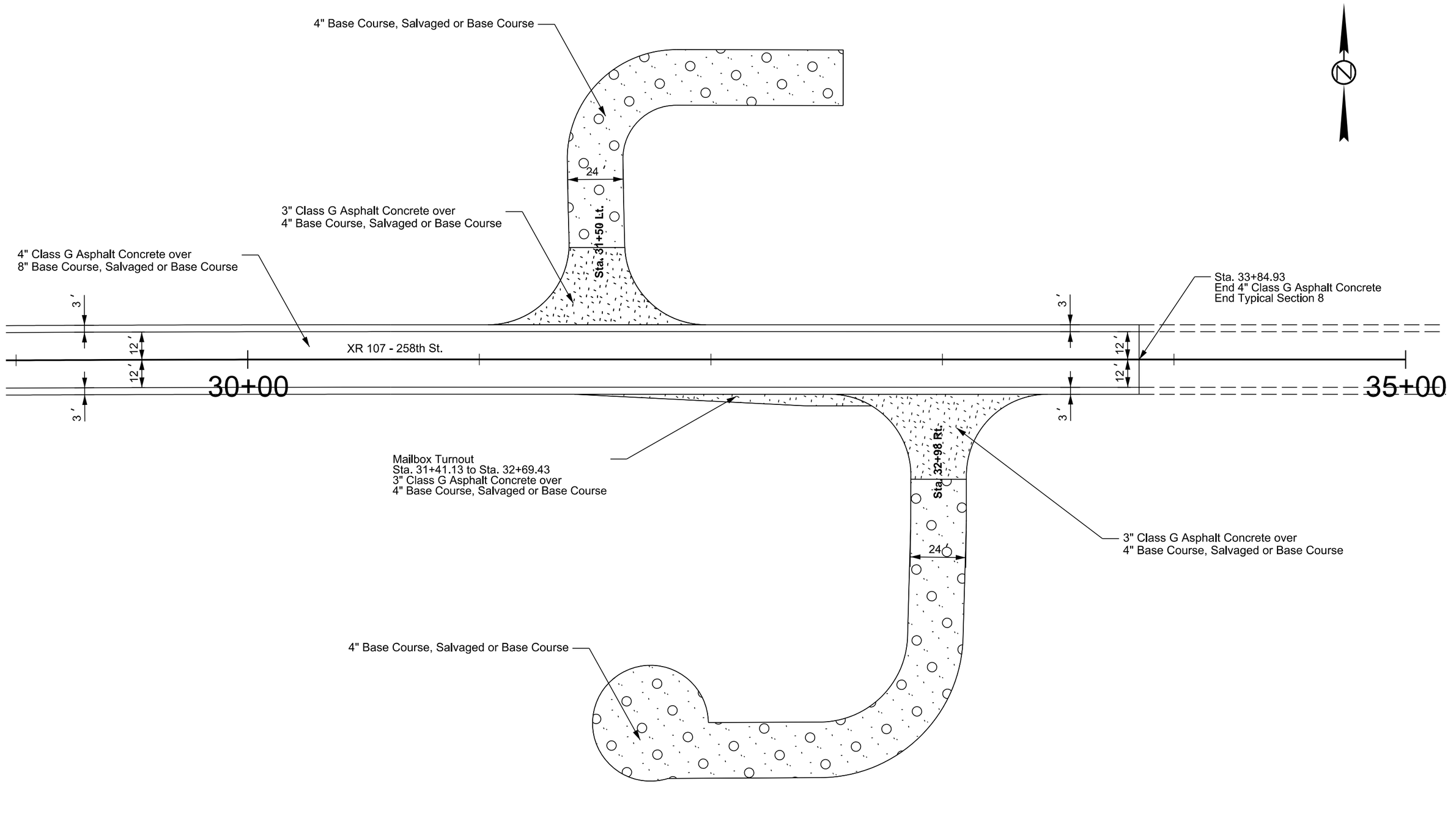
File - \mlong\SV\IGV6_AC Layouts.dgn

AC SURFACING LAYOUTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F21	F29

Plotting Date: 07/15/2025

Scale 1 Inch = 40 Feet
Sheet 11 of 11 Sheets



Plot Scale - 1:40

Plotted From - TRPR13462

File - \mine05\GIS\SVA_AC Layouts.dgn

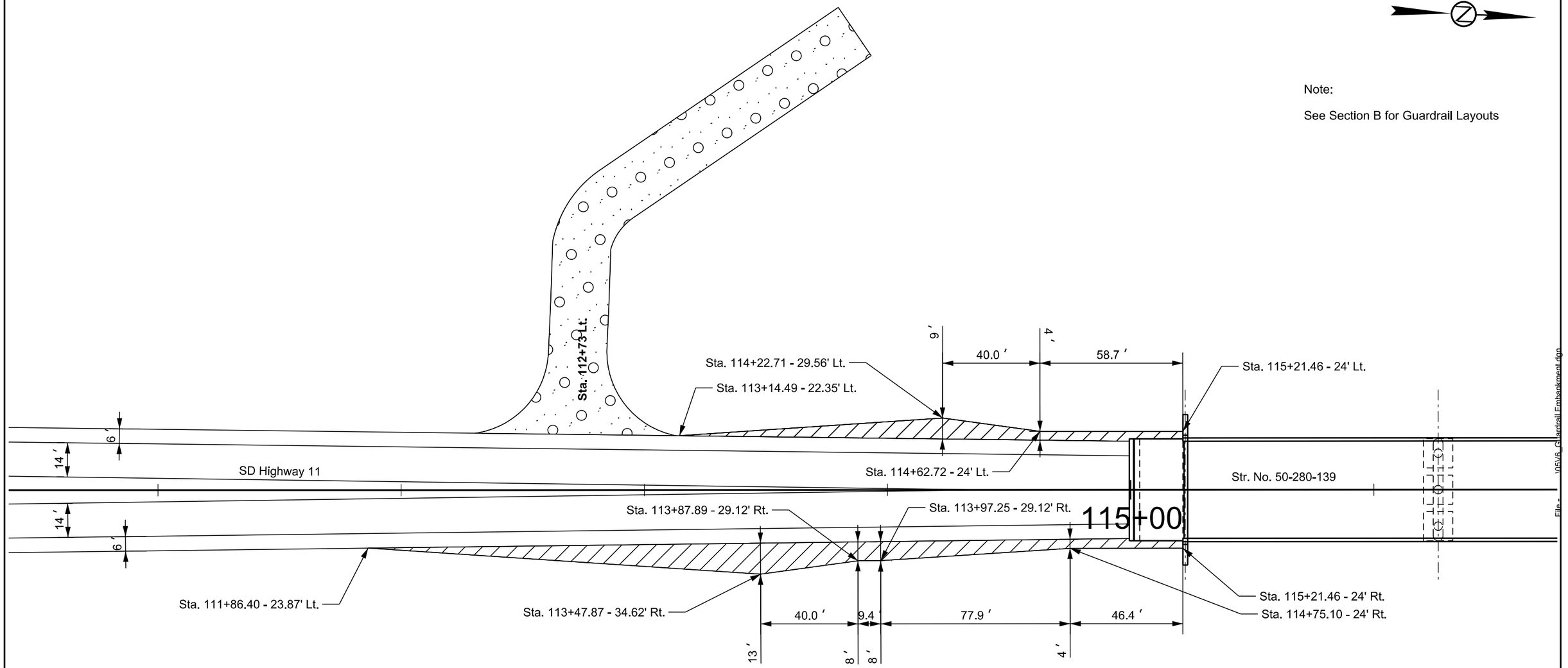
GUARDRAIL SURFACING LAYOUTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F22	F29

Plotting Date: 07/15/2025

Scale 1 Inch = 40 Feet
Sheet 1 of 4 Sheets

2" Class G Asphalt Concrete over
16" Base Course, Salvaged or Base Course



Note:

See Section B for Guardrail Layouts

Plot Scale - 1:40

Plotted From - TRPR13462

File - V06V6_Guardrail Embankment.dgn

GUARDRAIL SURFACING LAYOUTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F23	F29

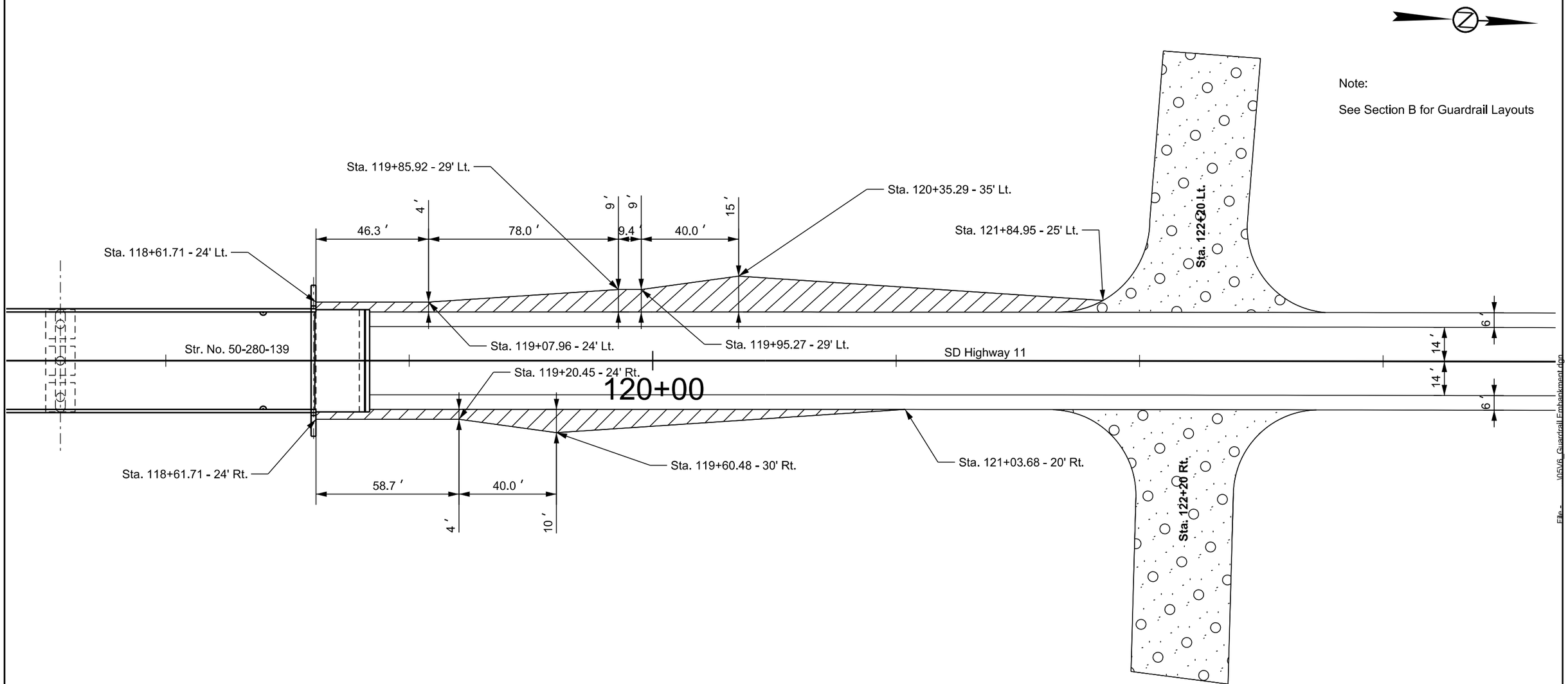
Plotting Date: 07/15/2025

Scale 1 Inch = 40 Feet
Sheet 2 of 4 Sheets

2" Class G Asphalt Concrete over
16" Base Course, Salvaged or Base Course

Note:

See Section B for Guardrail Layouts



Plot Scale - 1:40

Plotted From - TRPR13462

File - 105V6_Guardrail Embankment.dgn

GUARDRAIL SURFACING LAYOUTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F24	F29

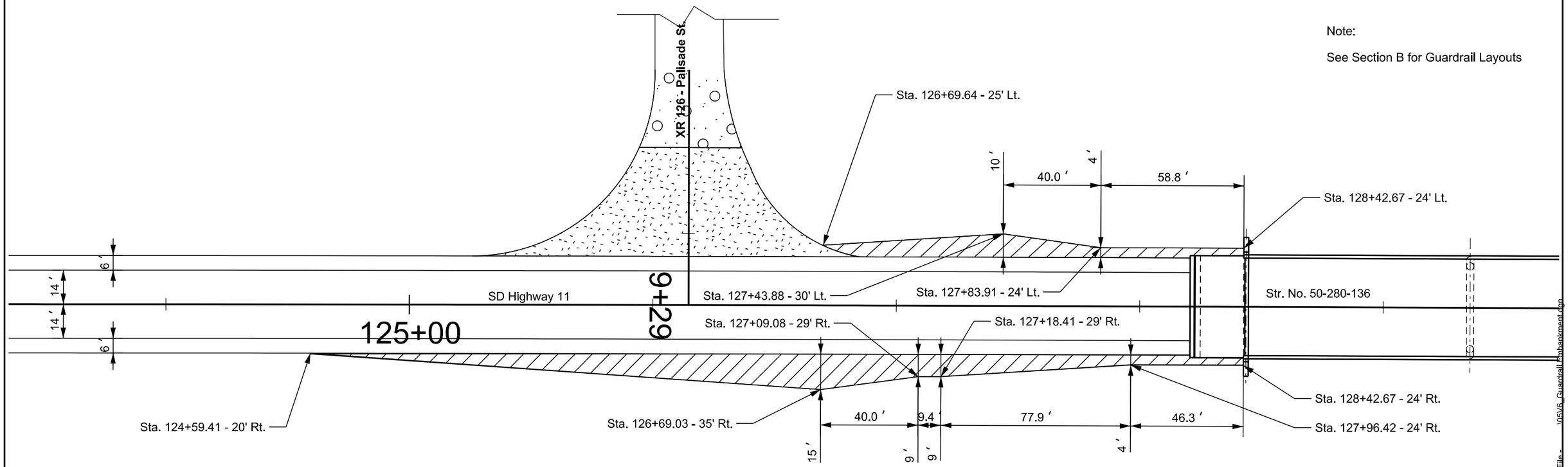
Plotting Date: 07/15/2025

Scale 1 Inch = 40 Feet
Sheet 3 of 4 Sheets

2" Class G Asphalt Concrete over
16" Base Course, Salvaged or Base Course

Note:

See Section B for Guardrail Layouts



Plot Scale - 1:40

Plotted From - TRPR13462

File - \05\6_Guardrail Enhancement.dgn

GUARDRAIL SURFACING LAYOUTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F25	F29

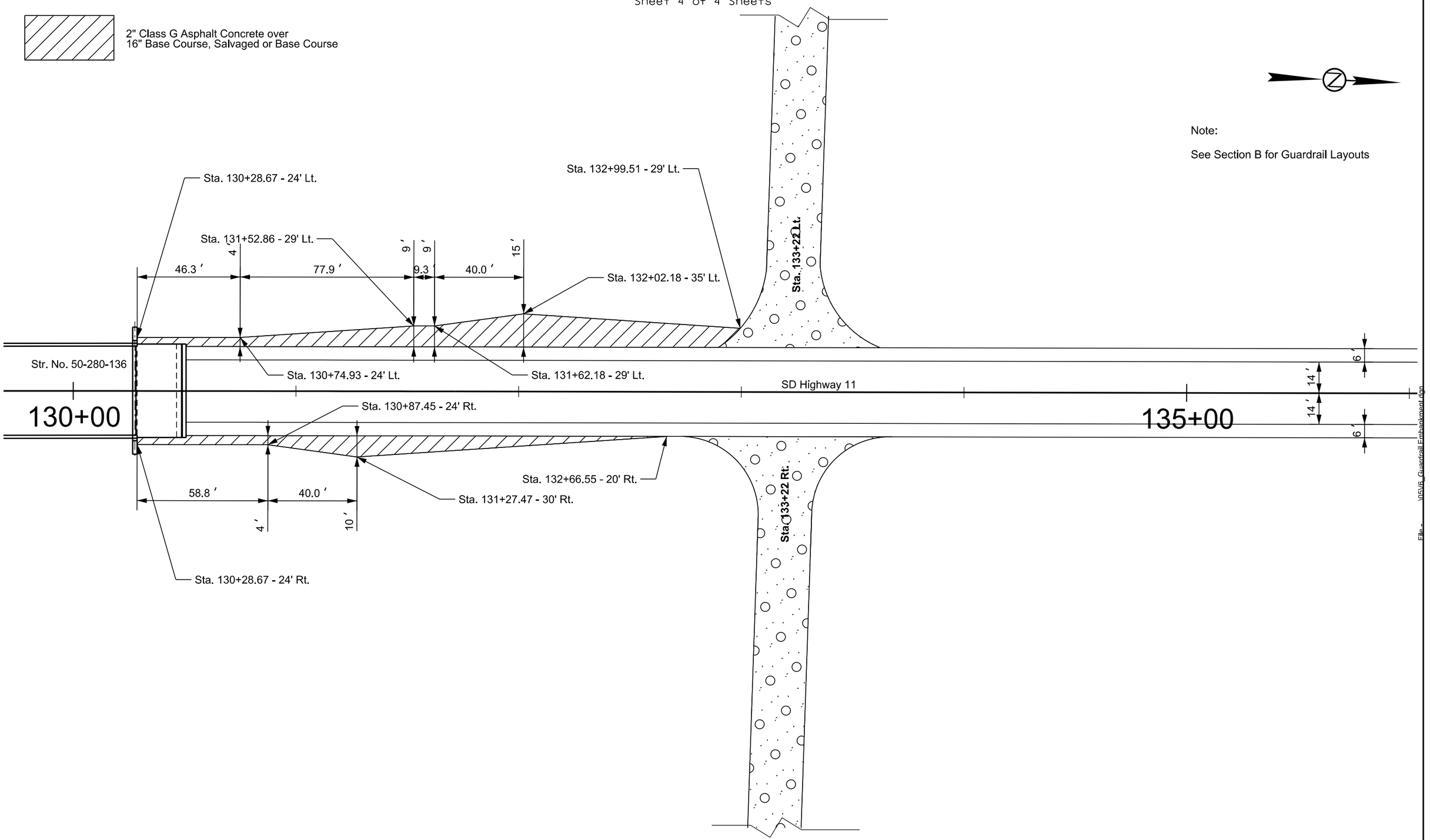
Plotting Date: 07/15/2025

Scale 1 Inch = 40 Feet
Sheet 4 of 4 Sheets

2" Class G Asphalt Concrete over
16" Base Course, Salvaged or Base Course

Note:

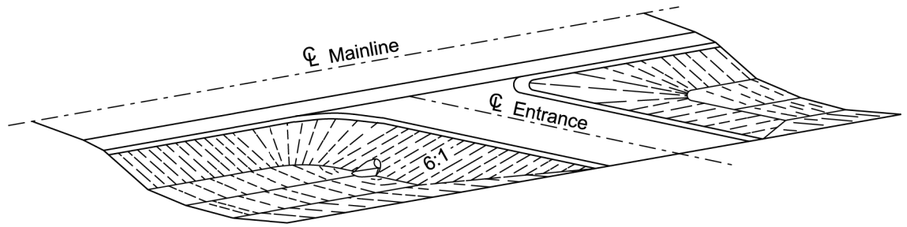
See Section B for Guardrail Layouts



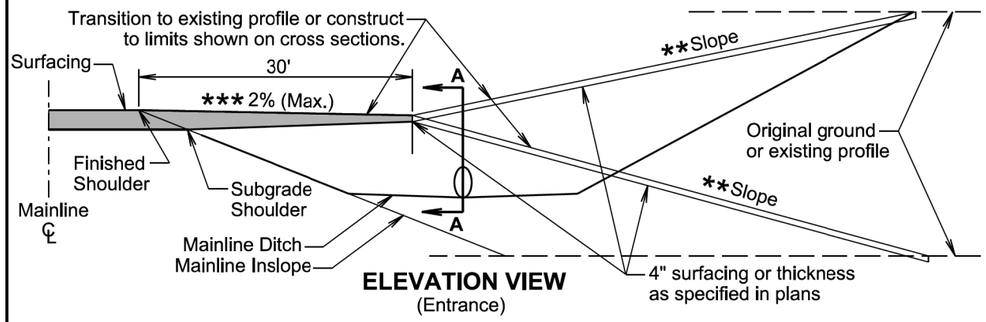
Plot Scale - 1:40

Plotted From - TRPR13462

File - I06V6_Guardrail Embankment.dgn



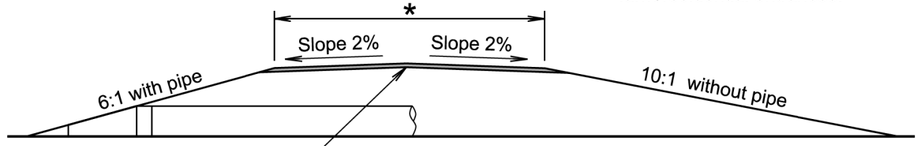
PERSPECTIVE OF ENTRANCE



ELEVATION VIEW
(Entrance)

*** 2% When on the inside of superelevation and 0% or flat when on outside of superelevation.

** Entrance maximum slope is typically 10:1 for field entrances and 15:1 for farm/residential entrances.



SECTION A-A
(Entrance and Intersecting Road)

* The finished surfacing width is stated elsewhere in the plans. The subgrade width is 4' wider than the finished surfacing width unless stated otherwise in the plans.

GENERAL NOTES:

The ditch section shown above in the perspective view is only for illustrative purpose.

The elevation view above is typical for either a ditch cut or fill section. Entrances that vary from above should be specified in the plans.

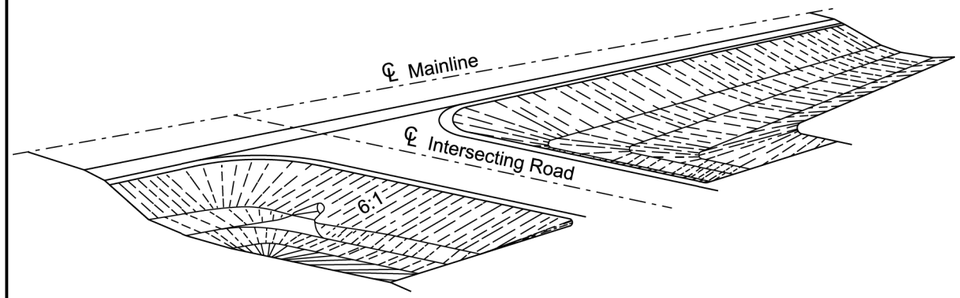
Pipe length will be adjusted if necessary during construction to obtain the 6:1 slope. For grading projects, the pipe length is estimated typically using a 4" thickness of surfacing directly over the subgrade above the pipe.

The transition area between the mainline inslope and the entrance or intersecting road inslope will be rounded to eliminate an abrupt transition.

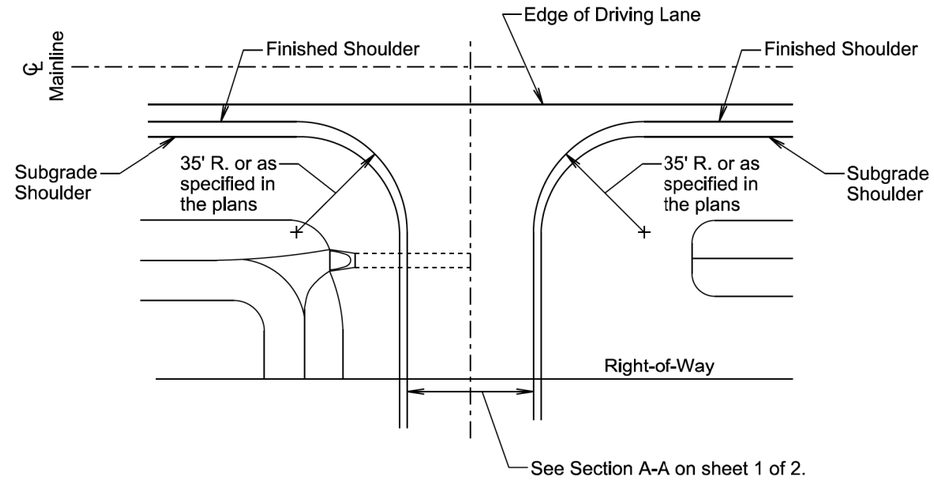
The turning radii will be 35' for intersecting roads and entrances unless stated otherwise in the plans.

November 19, 2021

Published Date: 2026	SDDOT	INTERSECTING ROADS AND ENTRANCES	PLATE NUMBER 120.01
			Sheet 1 of 2



PERSPECTIVE OF INTERSECTING ROAD



PLAN VIEW

GENERAL NOTES:

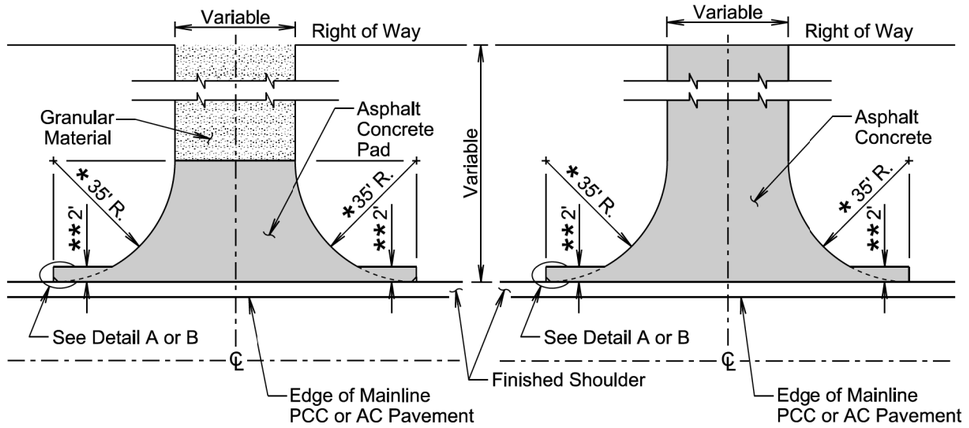
The 6:1 or 10:1 intersecting road inslope will transition to the existing intersecting road inslope near the right-of-way or at a location as determined by the Engineer.

November 19, 2021

Published Date: 2026	SDDOT	INTERSECTING ROADS AND ENTRANCES	PLATE NUMBER 120.01
			Sheet 2 of 2

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F27	F29

Plotting Date: 07/15/2025



PLAN VIEW
(Intersecting Road)
(No Asphalt Concrete Surfacing Beyond Right of Way)

PLAN VIEW
(Intersecting Road)
(Asphalt Concrete Surfacing Beyond Right of Way)

GENERAL NOTES:

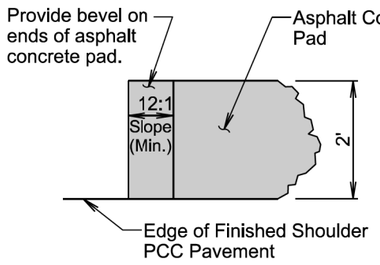
The precise construction limits for situations other than shown above will be determined by the Engineer during construction.

* For new construction, 35' radius typical or as specified in the plans. For resurfacing projects, radius is variable depending on existing conditions.

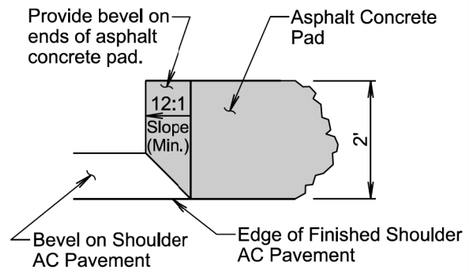
** The Contractor may adjust the screed of the paver during mainline paving operations to provide the 2-foot asphalt concrete pad or the Contractor may provide the 2-foot asphalt concrete pad during paving of the intersecting roads as shown above. The Engineer may eliminate the 2-foot asphalt concrete pads if the Engineer, in the Engineer's sole discretion, determines the pads are infeasible to construct due to site specific reasons including, but not limited to; existing inslope configuration, borrow and material availability, and right-of-way constraints.

August 27, 2020

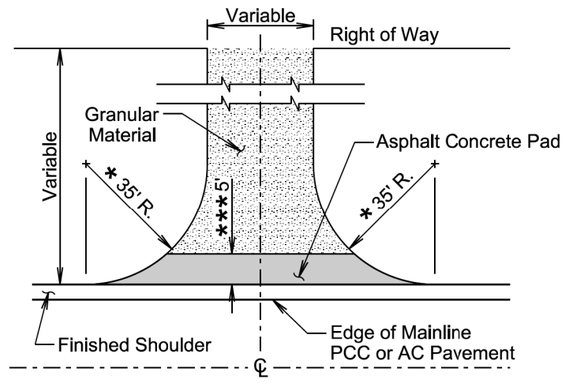
Published Date: 2026	SDDOT	SURFACING OR RESURFACING OF INTERSECTING ROADS AND ENTRANCES (MAINLINE AND SHOULDERS: PCC OR AC PAVEMENT)	PLATE NUMBER 320.04 Sheet 1 of 2



DETAIL A
(Typ. for Projects with PCC Pavement on Shoulder)



DETAIL B
(Typ. for Projects with AC Pavement on Shoulder)



PLAN VIEW
(Entrance)

*** Not required if finished shoulder width is 4' or greater.

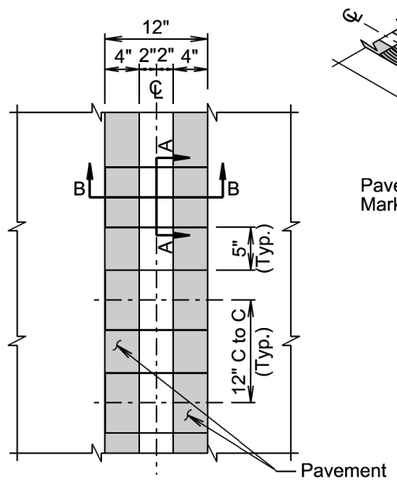
August 27, 2020

Published Date: 2026	SDDOT	SURFACING OR RESURFACING OF INTERSECTING ROADS AND ENTRANCES (MAINLINE AND SHOULDERS: PCC OR AC PAVEMENT)	PLATE NUMBER 320.04 Sheet 2 of 2

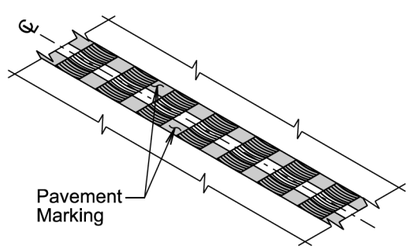
Plot Scale - 1:200
Plotted From - TRPR13462
File - ...\minn05\V6\StdPlateSectionF.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F28	F29

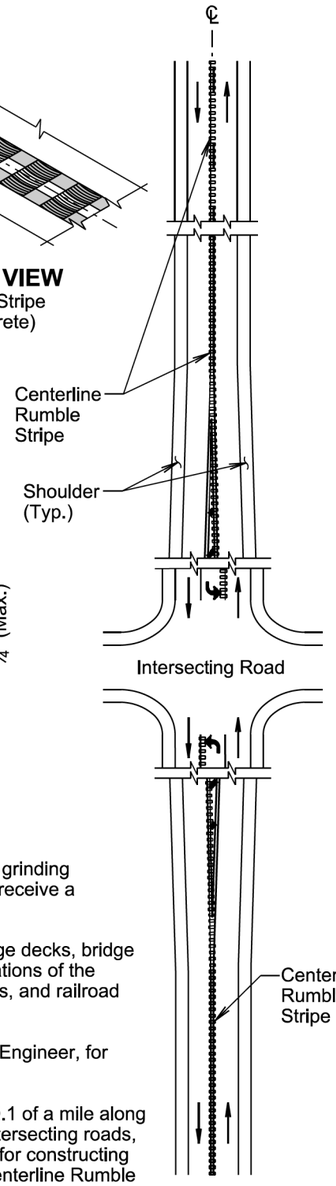
Plotting Date: 07/15/2025



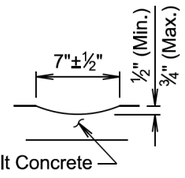
PLAN VIEW
(Typical Rumble Stripe in Asphalt Concrete)



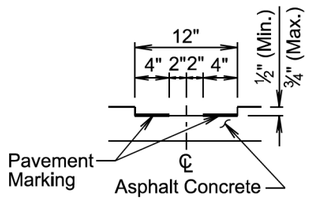
PERSPECTIVE VIEW
(Typical Rumble Stripe in Asphalt Concrete)



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES:

A rumble stripe will be constructed on the centerline of the roadway by grinding continuous indentations in the asphalt concrete. The rumble stripe will receive a flush seal or asphalt surface treatment as specified in the plans.

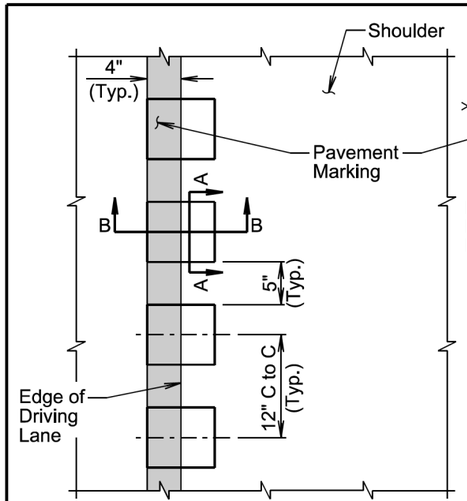
A rumble stripe will not be constructed through intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. The beginning and ending locations of the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings will be adjusted as approved by the Engineer.

Prior to constructing the rumble stripe the Contractor will submit to the Engineer, for approval, the proposed method of constructing the rumble stripe.

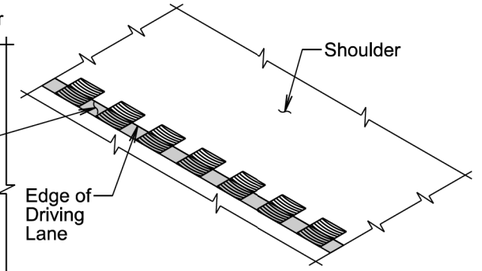
Measurement and payment of the rumble stripe will be to the nearest 0.1 of a mile along the centerline and will include segments without the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. Payment for constructing the rumble stripe will be at the contract unit price per mile for "Grind Centerline Rumble Stripe in Asphalt Concrete".

November 19, 2020

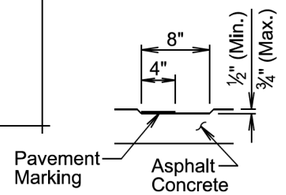
Published Date: 2026	SDDOT	*12" CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE*	*PLATE NUMBER* 320.18
			Sheet 1 of 1



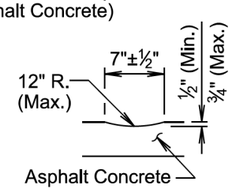
PLAN VIEW
(Typical Rumble Stripe in Asphalt Concrete)



PERSPECTIVE VIEW
(Typical Rumble Stripe in Asphalt Concrete)



SECTION B-B



SECTION A-A

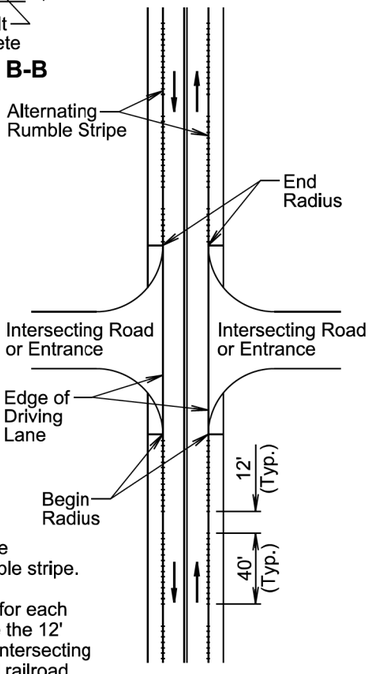
GENERAL NOTES:

A rumble stripe will be constructed on all of the asphalt concrete shoulders by grinding alternating patterns of 40' continuous indentations in the asphalt concrete. The rumble stripe will receive a flush seal or asphalt surface treatment as specified in the plans.

A rumble stripe will not be constructed through intersecting roads, entrances, turnouts, bridge decks, bridge approach slabs, and railroad crossings. The lengths of the 40' segments with continuous indentations and the 12' segments without a rumble stripe adjacent to the intersecting roads, entrances, turnouts, bridge decks, bridge approach slabs, and railroad crossings will be adjusted as approved by the Engineer.

Prior to constructing the rumble stripe the Contractor will submit to the Engineer, for approval, the proposed method of constructing the rumble stripe.

Measurement of the rumble stripe will be to the nearest 0.1 of a mile for each shoulder. Measurement and payment of the rumble stripe will include the 12' long segments without rumble stripes and the segments adjacent to intersecting roads, entrances, turnouts, bridge decks, bridge approach slabs, and railroad crossings without rumble stripes. Payment for constructing the rumble stripe will be at the contract unit price per mile for "Grind 8" Rumble Strip or Stripe in Asphalt Concrete".



PLAN VIEW

September 14, 2019

Published Date: 2026	SDDOT	*8" RUMBLE STRIPE IN ASPHALT CONCRETE ON NONDIVIDED HIGHWAY SHOULDERS*	*PLATE NUMBER* 320.20
			Sheet 1 of 1

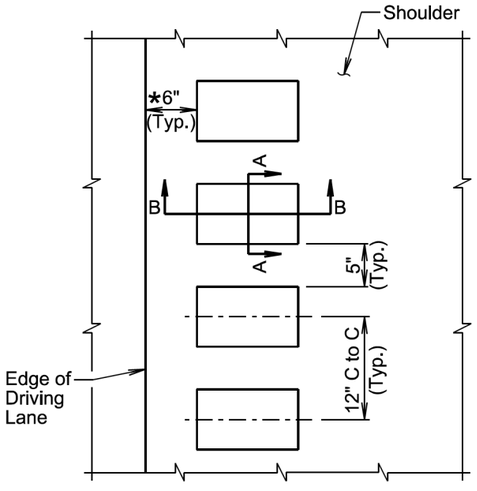
Plot Scale - 1:200

Plotted From - TRPR13462

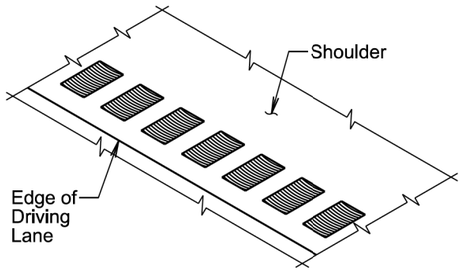
File - ...\mnn05\V8\StdPlateSectionF.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PT 0011(145)83	F29	F29

Plotting Date: 07/15/2025

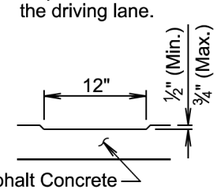


PLAN VIEW
(Typical Rumble Strip in Asphalt Concrete)

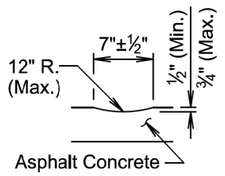


PERSPECTIVE VIEW
(Typical Rumble Strip in Asphalt Concrete)

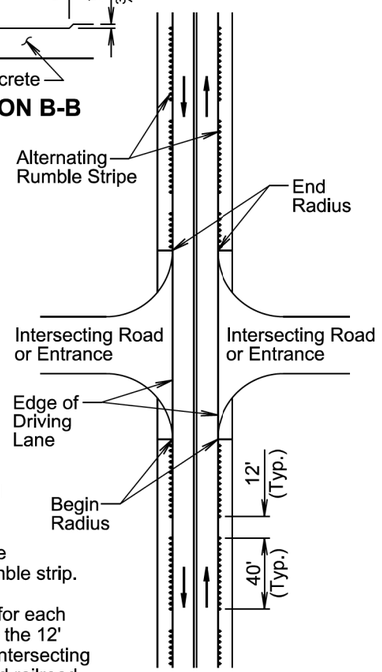
* When PCC pavement width from centerline to edge of pavement is 12', the rumble strip may be placed a maximum of 2' from the edge of the driving lane.



SECTION B-B



SECTION A-A



PLAN VIEW

GENERAL NOTES:

A rumble strip will be constructed on all of the asphalt concrete shoulders by grinding alternating patterns of 40' continuous indentations in the asphalt concrete. The rumble strip will receive a flush seal or asphalt surface treatment as specified in the plans.

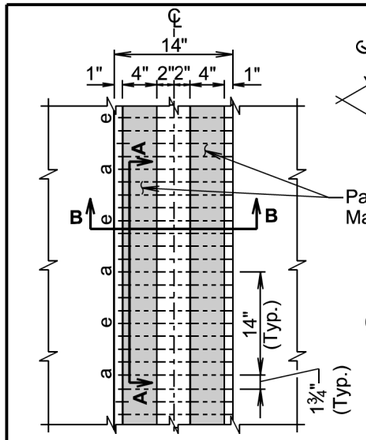
A rumble strip will not be constructed through intersecting roads, entrances, turnouts, bridge decks, bridge approach slabs, and railroad crossings. The lengths of the 40' segments with continuous indentations and the 12' segments without a rumble strip adjacent to the intersecting roads, entrances, turnouts, bridge decks, bridge approach slabs, and railroad crossings will be adjusted as approved by the Engineer.

Prior to constructing the rumble strip the Contractor will submit to the Engineer, for approval, the proposed method of constructing the rumble strip.

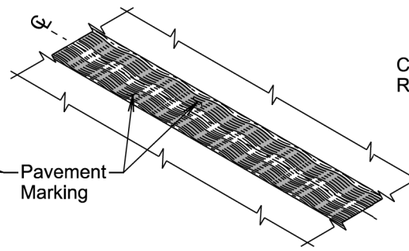
Measurement of the rumble strip will be to the nearest 0.1 of a mile for each shoulder. Measurement and payment of the rumble strip will include the 12' long segments without rumble strips and the segments adjacent to intersecting roads, entrances, turnouts, bridge decks, bridge approach slabs, and railroad crossings without rumble strips. Payment for constructing the rumble strip will be at the contract unit price per mile for "Grind 12" Rumble Strip or Stripe in Asphalt Concrete".

September 14, 2019

Published Date: 2026	SDDOT	12" RUMBLE STRIP IN ASPHALT CONCRETE ON NONDIVIDED HIGHWAY SHOULDERS	PLATE NUMBER 320.24
			Sheet 1 of 1

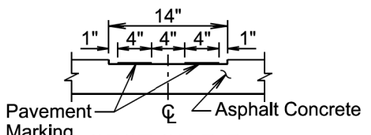


PLAN VIEW
(Typical Rumble Strip in Asphalt Concrete)

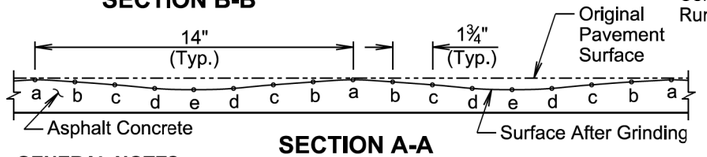


PERSPECTIVE VIEW
(Typical Rumble Strip in Asphalt Concrete)

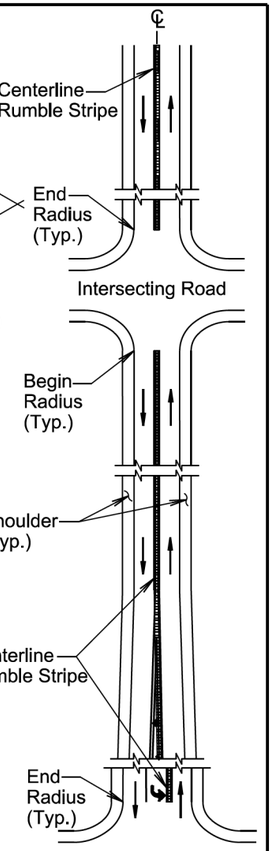
SINUSOIDAL GRINDING	
Location	* Depth (In.)
a	1/16
b	5/32
c	9/32
d	7/16
e	½

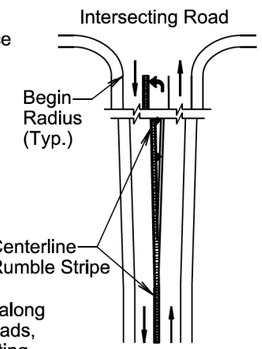


SECTION B-B



SECTION A-A





PLAN VIEW

GENERAL NOTES:

A rumble stripe will be constructed by grinding continuous sinusoidal indentations in the asphalt concrete. The rumble stripe will receive a flush seal or asphalt surface treatment as specified in the plans.

A rumble stripe will not be constructed through intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. The beginning and ending locations of the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings will be adjusted as approved by the Engineer.

Prior to constructing the rumble stripe the Contractor will submit to the Engineer, for approval, the proposed method of constructing the rumble stripe.

* The sinusoidal rumble stripe construction grinding tolerance will be ± 1/16 inch.

Measurement and payment of the rumble stripe will be to the nearest 0.1 of a mile along the centerline and will include segments without the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. Payment for constructing the rumble stripe will be at the contract unit price per mile for "Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete".

September 14, 2019

Published Date: 2026	SDDOT	SINUSOIDAL CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE	PLATE NUMBER 320.40
			Sheet 1 of 1

Plot Scale - 1:200

Plotted From - TRPR13462

File - ...\minn05\V6\StdPlateSectionF.dgn