

SECTION F: SURFACING PLANS

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F1	F41

REV 12-4-24 JT

INDEX OF SHEETS

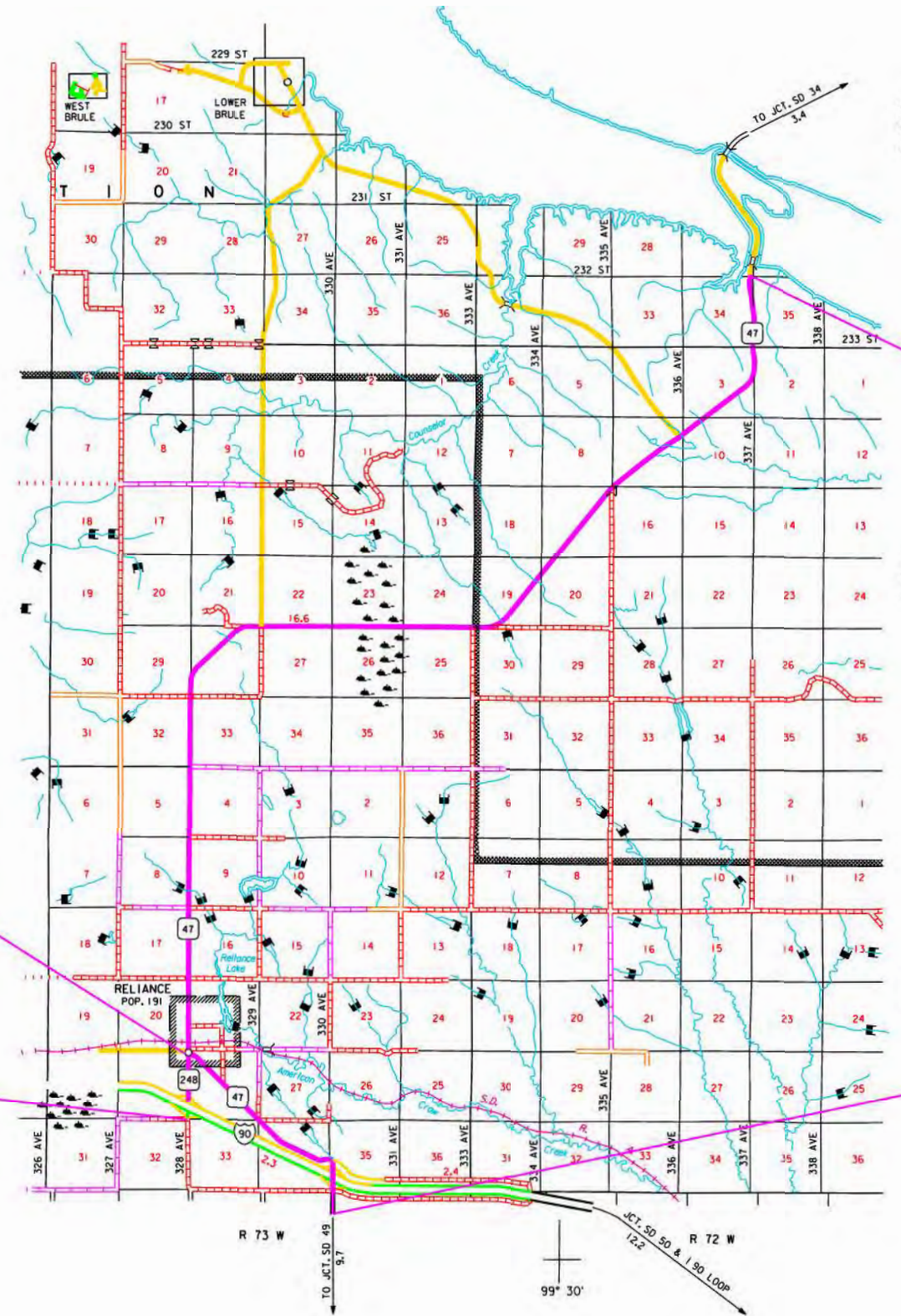
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BEGIN P 0248(13)261
Station 0+00.00
MRM 261.77

END P 0248(13)261
Station 43+82.00
MRM 262.57

BEGIN P 0047(117)67
Station -2+50.00
MRM 87.00 + 0.346

END P 0047(117)67
Station 1024+81.32
MRM 67.00 + 0.602



SECTION F ESTIMATE OF QUANTITIES SD47 (PCN 069Q)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3320	Checker	Lump Sum	LS
110E1010	Remove Asphalt Concrete Pavement	2,412.0	SqYd
120E0100	Unclassified Excavation, Digouts	969	CuYd
120E6200	Water for Granular Material	504.5	MGal
210E0100	Shoulder Clearing	38.8	Mile
260E1010	Base Course	2,893.0	Ton
260E1030	Base Course, Salvaged	1,305.0	Ton
260E6000	Granular Material, Furnish	9,269.0	Ton
* 270E0200	Blend, Haul, and Stockpile Granular Material	18,538.0	Ton
280E0020	Full Depth Reclamation, Shoulder	77,369	SqYd
320E1200	Asphalt Concrete Composite	851.5	Ton
320E1800	Asphalt Concrete Blade Laid	3,142.0	Ton
320E7008	Grind 8" Rumble Strip or Stripe in Asphalt Concrete	38.8	Mile
320E7028	Grind Centerline Rumble Stripe in Asphalt Concrete	19.4	Mile
320E7040	Grind 6" Transverse Rumble Strip in Asphalt Concrete	98.0	Ft
330E0010	MC-70 Asphalt for Prime	151.1	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	305.9	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	102.8	Ton
330E1000	Blotting Sand for Prime	5.0	Ton
330E2000	Sand for Flush Seal	1,085.6	Ton
332E0010	Cold Milling Asphalt Concrete	383,441	SqYd
600E0300	Type III Field Laboratory	1	Each
900E1980	Storage Unit	1	Each

* - Denotes Non-Participating

Alternate A

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E0005	PG 58-34 Asphalt Binder	2,843.1	Ton
320E1202	Class Q2R Hot Mixed Asphalt Concrete	61,763.4	Ton
320E4000	Hydrated Lime	614.5	Ton

Alternate B

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E0005	PG 58-34 Asphalt Binder	2,344.0	Ton
320E1202	Class Q2R Hot Mixed Asphalt Concrete	63,328.9	Ton
320E4000	Hydrated Lime	634.5	Ton

SECTION F ESTIMATE OF QUANTITIES SD248 (PCN 06YC)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3320	Checker	Lump Sum	LS
110E1010	Remove Asphalt Concrete Pavement	328.0	SqYd
120E0100	Unclassified Excavation, Digouts	41	CuYd
120E6200	Water for Granular Material	2.8	MGal
210E0100	Shoulder Clearing	1.6	Mile
260E1010	Base Course	346.0	Ton
260E1030	Base Course, Salvaged	30.0	Ton
320E1200	Asphalt Concrete Composite	124.5	Ton
320E1800	Asphalt Concrete Blade Laid	122.9	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	19.2	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	4.3	Ton
330E2000	Sand for Flush Seal	42.3	Ton
332E0010	Cold Milling Asphalt Concrete	18,590	SqYd

Alternate A

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E0005	PG 58-34 Asphalt Binder	104.5	Ton
320E1202	Class Q2R Hot Mixed Asphalt Concrete	2,275.9	Ton
320E4000	Hydrated Lime	22.8	Ton

Alternate B

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E0005	PG 58-34 Asphalt Binder	86.4	Ton
320E1202	Class Q2R Hot Mixed Asphalt Concrete	2,333.5	Ton
320E4000	Hydrated Lime	23.3	Ton

UTILITIES

The Contractor will contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It will be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor will contact the Engineer to determine modifications that will be necessary to avoid utility impacts.

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.

CHECKING SPREAD RATES

The Contractor will be responsible for checking the Asphalt Concrete 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.

SURFACING THICKNESS DIMENSIONS

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



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 Gyrotory 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".

UNCLASSIFIED EXCAVATION, DIGOUTS

The locations and extent of digout areas will be determined in the field by the Engineer. The backfilling material for the digouts will be Asphalt Concrete Composite and Base Course. The depth of asphalt will match the in-place thickness.

Included in the Estimate of Quantities are 50 cubic yards of Unclassified Excavation, Digouts and 75 square yards of Remove Asphalt Concrete Pavement per mile for the removal of asphalt and unstable material throughout the project.

Included in the Estimate of Quantities are 100 tons of Base Course and 25 tons of Asphalt Concrete Composite per mile for backfill of Unclassified Excavation, Digouts.

The digouts will be extended through the shoulder and backfilled with granular material that will daylight to the inslope to allow water to escape the subsurface.

A copy of the surfacing/subgrade investigation for this project is available from the Pierre Region and Winner Area offices.

COLD MILLING ASPHALT CONCRETE

The Los Angeles Abrasion Loss value on the aggregate used for the in-place asphalt concrete was 24. This value was obtained from testing during construction of the in-place asphalt concrete.

Cold milling asphalt concrete will be done according to the typical section(s). In areas where maintenance patches have raised and/or widened the road, additional asphalt concrete will be milled to provide a uniform typical section from centerline to the edge of the finished shoulder. These areas also include farm, residential, field entrances and intersecting roads. Milling will be daylighted to the outside edge of the roadway. Any additional costs associated with this additional cold milling will be incidental to the contract unit price per square yard for "Cold Milling Asphalt Concrete".

Cold milling asphalt is estimated to produce **20,762** tons of cold milled asphalt concrete material. An estimated **11,493** tons of cold milled asphalt concrete material will be used on this project as RAP in the Class Q2R Hot Mixed Asphalt Concrete mixture. The Contractor is responsible to assure enough asphalt concrete salvage is available for the Class Q2R Hot Mixed Asphalt Concrete.

The remainder of the salvaged asphalt concrete material will be blended and stockpiled at the Reliance SDDOT Maintenance Shop according to the Blend, Haul, and Stockpile Granular Material plan note.

RAP achieved for project use and/or other uses is based on the dimensions given in the typical section(s). Field conditions will vary from that given in the typical section(s). Therefore, the Contractor may be required to adjust the mill depth, as necessary, to provide the quantity of RAP specified by the plans, if approved by the Engineer.

REMOVE ASPHALT CONCRETE PAVEMENT

The Los Angeles Abrasion Loss value on the aggregate used for the in-place asphalt concrete was 24. This value was obtained from testing during construction of the in-place asphalt concrete.

An estimated 381 Cubic Yards of the in-place asphalt concrete surfacing will be removed from the existing highway according to the in-place surfacing typical sections and wasted as directed by the Engineer.

The quantity of removed asphalt material is estimated from the in-place surfacing typical sections. This estimated quantity is not included in the unclassified excavation quantities.

SHOULDER CLEARING

Prior to cold milling or asphalt concrete resurfacing, SDDOT personnel will mow shoulders to kill existing vegetation.

Vegetation and accumulated material on or adjacent to the existing roadway edge will be removed by the Contractor, to the satisfaction of the Engineer, prior to cold milling or placement of the mainline surfacing. Any remaining windrow of accumulated material will be spread evenly on the inslope adjacent to the asphalt shoulder, to the satisfaction of the Engineer, following application of the flush seal.

Each shoulder will be measured for payment. Costs associated with this work will be included in the contract unit price per mile for Shoulder Clearing.

ROADWAY WIDENING

The elevation of the subgrade under roadway widening will be at or below subgrade elevation under existing adjacent mainline pavement that is to remain in place.

BLEND, HAUL, AND STOCKPILE GRANULAR MATERIAL

Excess salvaged asphalt concrete material estimated at **9,269** tons (for informational purposes only) will be blended with **9,269** tons of Granular Material, Furnish and will be hauled, blended and stockpiled in the south west quarter of Section 35, Township 105 North, Range 73 West of the 5th P.M, Lyman County, South Dakota at the Reliance SDDOT Maintenance Shop. The Contractor will have approval from the Engineer of the stockpile location prior to stockpiling the material within the aforementioned site.

A computerized scale, portable platform scale, stationary commercial scale, stationary commercial plant, portable plant scale, or a belt scale along with a scale operator will be provided by the Contractor at the stockpile site to weigh the salvaged material prior to blending.

The salvaged asphalt concrete material will be crushed to meet the requirements of Section 884.2 D.2 prior to blending into the stockpile.

Salvaged asphalt concrete material will be blended with Granular Material, Furnish at a rate of 50% salvaged asphalt mix material and 50% Granular Material, Furnish to obtain stockpile material.

No further gradation testing of the blended material will be required.



BLEND, HAUL, AND STOCKPILE GRANULAR MATERIAL Continued

All other costs for crushing, hauling, stockpiling, and blending salvaged asphalt concrete material and Granular Material, Furnish will be incidental to the contract unit price per ton for "Blend, Haul & Stockpile Granular Material".

BASE COURSE, SALVAGED

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

The Contractor will ensure the Base Course, Salvaged material contains no more than 50% salvaged asphalt mix material and at least 50% granular material (salvaged or virgin). Blended material will be to the satisfaction of the Engineer.

All other requirements for Base Course, Salvaged will apply.

GRANULAR MATERIAL, FURNISH

Granular material will be furnished by the Contractor for use in blending with the salvaged asphalt mix material from this project.

The granular material will be Base Course meeting the requirements of Section 882.

FULL DEPTH RECLAMATION, SHOULDER

Prior to placing asphalt concrete on the shoulder it is anticipated that the Contractor will be required to salvage approximately 150 tons of the in-place blotter and granular material following the Full Depth Reclamation process per mile per shoulder from Section 1, 4, 6, 7, and 9 to meet the cross slope and inslope requirements shown in the typical sections. This salvaged material will be stockpiled at the Contractor(s) stockpile site and used as Base Course, Salvaged at locations shown in the plans. The cost to stockpile 1335 tons of salvaged blotter and granular material will be incidental to the contract unit price per ton for "Base Course, Salvaged". This salvaged material will be processed to meet the requirements of Section 884.2 D.2 prior to stockpiling.

The blotter and granular base material will be processed in place so that a uniform blend is obtained. The material will be handled to ensure that salvaged material is not lost down the inslope. The final rolling of the top surface of the materials will embed as many loose stones as possible. The finished surface will be smooth and free from waves and the Contractor will finish the surfacing materials to within 0.5% of the typical section cross slope. The final shaping of the granular material on the shoulder must be completed after the Cold Milling Asphalt Concrete operation.

The cost to shape and compact the granular material which includes the salvaging or adding of material to meet the shape of the typical section will be incidental to the contract unit price per sqyd for "Full Depth Reclamation, Shoulder."

The requirements of Specifications 280.3.B will not apply. All other requirements of Section 280, Full Depth Reclamation (FDR) will apply.

Included in the Estimate of Quantities are 273 MGal of Water for Granular Material per mile for compaction.

BLOTTING SAND FOR PRIME

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

ASPHALT CONCRETE BLADE LAID

Included in the Estimate of Surfacing Quantities are 150 tons of Asphalt Concrete Blade Laid, 1.5 tons of Hydrated Lime, and 11.1 tons of PG 58-34 Asphalt Binder per mile and will be tight bladed on the existing surface 24 feet wide prior to the overlay of Sections 4, 4a, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16.

Included in the Estimate of Surfacing Quantities are 225 tons of Asphalt Concrete Blade Laid, 2.3 tons of Hydrated Lime, and 16.7 tons of PG 58-34 Asphalt Binder per mile and will be tight bladed on the existing surface 36 feet wide prior to the overlay of Sections 1, 2, 3, 7, and 8.

Mineral Aggregate for tight bladed material will use only the fine aggregate components combined in the same proportions as the Class Q2R Hot Mixed Asphalt Concrete mix. Quality testing is not required on the coarse aggregate (+No. 4 sieve) in this mixture.

The Asphalt Concrete Blade Laid Lift will be designed using an N_{design} Gyrotory Compactive Effort of 65. The asphalt binder content will be determined so that the air voids of Asphalt Concrete Blade Laid Lift are between 3.0% and 5.0%.

Included in the Estimate of Surfacing Quantities are 120.3 tons of SS-1h or CSS-1h Asphalt for Tack for use prior to the application of the Blade Laid lift. (Rate = 0.09 Gal./SqYd)

CLASS Q2R HOT MIXED ASPHALT CONCRETE

Mineral Aggregate:
Asphalt concrete aggregates will consist of reclaimed asphalt pavement (RAP) and virgin aggregate.

Virgin mineral aggregate for Class Q2R Hot Mixed Asphalt Concrete-Alternate A will conform to the requirements of Class Q2.

Virgin mineral aggregate for Class Q2R Hot Mixed Asphalt Concrete-Alternate B will consist of a minimum of 80 percent crushed limestone ledge rock and will conform to the requirements of Class Q2.

The Class Q2R Hot Mixed Asphalt Concrete will include 20 percent RAP in the mixture. RAP will be obtained from the material produced by cold milling on this project.

Mix Design Criteria – Alternate B:
Gyrotory Controlled QC/QA Mix Design requirements for the Class Q2R Hot Mixed Asphalt Concrete will conform to the requirements of Class Q2 except as modified by the following:

Voids in Mineral Aggregate (VMA):

	Minimum VMA (%):
Class Q2R	13.0

Pay Factor Attributes – Alternate B:

Air Voids:

	Air Voids (%):
Class Q2R	3.5 ± 1.0

All remaining requirements for Class Q2 will apply.

ASPHALT CONCRETE COMPOSITE

Section 324 will apply except that Class Q2R Hot Mixed Asphalt Concrete as specified elsewhere in the plans may be used as Asphalt Concrete Composite.

Plans specified locations for Asphalt Concrete Composite will be paid for at the contract unit price per ton for "Asphalt Concrete Composite" regardless of the class of asphalt concrete used at such locations.

FLUSH SEAL

Application of flush seal will be completed within 10 working days following completion of the asphalt concrete surfacing.

Application of flush seal may be eliminated by the Engineer. If the paved surface remains tight, the Engineer will notify the Contractor as soon as possible that the flush seal is unnecessary.

SAND FOR FLUSH SEAL

The sand application will be placed 11' wide in each lane, leaving 12" on center line and 6" on each edge line free of sand.

GRIND RUMBLE STRIPS IN ASPHALT CONCRETE

Asphalt Concrete Rumble Strips will be constructed on the shoulders. Rumble Strips will be paid for at the contract unit price per mile for GRIND 8" RUMBLE STRIP OR STRIPE IN ASPHALT CONCRETE. It is estimated that 19.8 miles of asphalt concrete rumble strips will be required.

Rumble Strip 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 8" Rumble Strips at a width of 1.5' 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.



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GRIND CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE

Rumble stripes will be constructed on the centerline, as detailed in the plan set. 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 9.9 miles of sinusoidal 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 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.

CENTERLINE RUMBLE STRIPES – FLUSH SEAL

Asphalt for Flush Seal will be applied after the centerline rumble stripes have been installed. 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./sq.yd on the centerline rumble stripes.

GRIND 6" TRANSVERSE RUMBLE STRIP IN ASPHALT CONCRETE

Advance intersection warning transverse rumble strips will be constructed on the mainline pavement, as detailed in the plan set. Transverse rumble strips will be paid for at the contract unit price per foot for "Grind 6" Transverse Rumble Strip in Asphalt Concrete". It is estimated that 98 feet of transverse rumble strips will be required.

Transverse rumble strips 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 transverse rumble strips at a width that extends 3" beyond the perimeter of the total area of the transverse rumble strips 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.

FLEXIBLE PAVEMENT SMOOTHNESS PROVISION

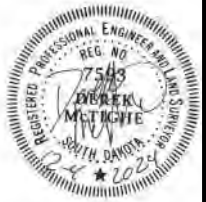
All sections, not excluded by the Special Provision for Flexible Pavement Smoothness, will be evaluated as 2 opportunity.

PAVEMENT PROFILE CORRECTION LOCATIONS

Noticeable deflections in the pavement due to swelling and fault-heaving in the areas listed below. A leveling course(s) of asphalt should be laid at these locations to obtain an acceptable profile prior to milling operations. Areas where asphalt leveling courses have been placed will not be milled unless necessary to correct the profile for or to taper into final lift of pavement.

1000 tons of Class Q2R Hot Mixed Asphalt Concrete have been provided for Pavement Profile Correction Locations.

Station	to	Station
12+07		23+69
28+97		34+25
602+38		604+49
666+79±		
719+06±		
807+77±		
940+82±		
1018+97		1021+08



SECTION 1 (per mile)

SECTION 2 & 3 (per station)

SECTION 4 (per mile)

SECTION 5 (per station)

General

Cold Milling Asphalt Concrete is computed at 26,400 Square Yards, applied 45 feet wide.

Provide MC-70 Asphalt for Prime at the rate of 4.9 ton applied 7 feet wide on left shoulder upon FDR Completion (Rate = 0.30 gallon per square yard)

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

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

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 8.3 ton applied 37 feet wide (Rate = 0.09 gallon per square yard), prior to application of Asphalt Concrete Blade Laid.

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 7.7 ton applied 51.5 feet wide (Rate = 0.06 gallon per square yard), prior to application of 2" lift of Class Q2R Hot Mixed Asphalt Concrete.

Flush Seal

Provide SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 6.3 ton applied 50.5 feet wide (Rate = 0.05 gallon per square yard).

Provide Sand for Flush Seal at the rate of 77.4 ton applied 33 feet wide (Rate = 8 pounds per square yard)

ALTERNATE A

Class Q2R Hot Mixed Asphalt Concrete (2"- 3" Lift)

Aggregate (80% Contractor Furnished)	2,503 Ton
Salvaged Asphalt Concrete (20%)	626 Ton
PG 58-34 Asphalt Binder	151 Ton

TOTAL MIX 3,280 Ton

Hydrated Lime 33 Ton

TOTAL MIX WITH HYDRATED LIME 3,313 Ton

ALTERNATE B

Class Q2R Hot Mixed Asphalt Concrete (2"- 3" Lift)

Aggregate (80% Contractor Furnished)	2,595 Ton
Salvaged Asphalt Concrete (20%)	649 Ton
PG 58-34 Asphalt Binder	125 Ton

TOTAL MIX 3,369 Ton

Hydrated Lime 34 Ton

TOTAL MIX WITH HYDRATED LIME 3,403 Ton

General

Cold Milling Asphalt Concrete is computed at 478 Square Yards, applied 43 feet wide.

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

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

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.16 ton applied 37 feet wide (Rate = 0.09 gallon per square yard), prior to application of Asphalt Concrete Blade Laid.

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.14 ton applied 51 feet wide (Rate = 0.06 gallon per square yard), prior to application of 2" lift of Class Q2R Hot Mixed Asphalt Concrete.

Flush Seal

Provide SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 0.12 ton applied 50 feet wide (Rate = 0.05 gallon per square yard).

Provide Sand for Flush Seal at the rate of 1.47 ton applied 33 feet wide (Rate = 8 pounds per square yard)

ALTERNATE A

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

Aggregate (80% Contractor Furnished)	45.11 Ton
Salvaged Asphalt Concrete (20%)	11.28 Ton
PG 58-34 Asphalt Binder	2.72 Ton

TOTAL MIX 59.11 Ton

Hydrated Lime 0.59 Ton

TOTAL MIX WITH HYDRATED LIME 59.70 Ton

ALTERNATE B

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

Aggregate (80% Contractor Furnished)	46.77 Ton
Salvaged Asphalt Concrete (20%)	11.69 Ton
PG 58-34 Asphalt Binder	2.25 Ton

TOTAL MIX 60.71 Ton

Hydrated Lime 0.61 Ton

TOTAL MIX WITH HYDRATED LIME 61.32 Ton

General

Cold Milling Asphalt Concrete is computed at 17,013 Square Yards, applied 29 feet wide.

Provide MC-70 Asphalt for Prime at the rate of 4.9 ton applied 7 feet wide per shoulder upon FDR Completion (Rate = 0.30 gallon per square yard)

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

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

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 5.6 ton applied 25 feet wide (Rate = 0.09 gallon per square yard), prior to application of Asphalt Concrete Blade Laid.

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 6.3 ton applied 42 feet wide (Rate = 0.06 gallon per square yard), prior to application of 2" lift of Class Q2R Hot Mixed Asphalt Concrete.

Flush Seal

Provide SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 5.1 ton applied 41 feet wide (Rate = 0.05 gallon per square yard).

Provide Sand for Flush Seal at the rate of 51.6 ton applied 22 feet wide (Rate = 8 pounds per square yard)

ALTERNATE A

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

Aggregate (80% Contractor Furnished)	2,155 Ton
Salvaged Asphalt Concrete (20%)	539 Ton
PG 58-34 Asphalt Binder	130 Ton

TOTAL MIX 2,824 Ton

Hydrated Lime 28 Ton

TOTAL MIX WITH HYDRATED LIME 2,852 Ton

ALTERNATE B

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

Aggregate (80% Contractor Furnished)	2,234 Ton
Salvaged Asphalt Concrete (20%)	559 Ton
PG 58-34 Asphalt Binder	107 Ton

TOTAL MIX 2,900 Ton

Hydrated Lime 29 Ton

TOTAL MIX WITH HYDRATED LIME 2,929 Ton

General

Cold Milling Asphalt Concrete is computed at 411 Square Yards, applied 37 feet wide.

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

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

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.11 ton applied 25 feet wide (Rate = 0.09 gallon per square yard), prior to application of Asphalt Concrete Blade Laid.

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.13 ton applied 45 feet wide (Rate = 0.06 gallon per square yard), prior to application of 2" lift of Class Q2R Hot Mixed Asphalt Concrete.

Flush Seal

Provide SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 0.10 ton applied 44 feet wide (Rate = 0.05 gallon per square yard).

Provide Sand for Flush Seal at the rate of 0.98 ton applied 22 feet wide (Rate = 8 pounds per square yard)

ALTERNATE A

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

Aggregate (80% Contractor Furnished)	39.38 Ton
Salvaged Asphalt Concrete (20%)	9.85 Ton
PG 58-34 Asphalt Binder	2.37 Ton

TOTAL MIX 51.60 Ton

Hydrated Lime 0.52 Ton

TOTAL MIX WITH HYDRATED LIME 52.12 Ton

ALTERNATE B

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

Aggregate (80% Contractor Furnished)	40.83 Ton
Salvaged Asphalt Concrete (20%)	10.27 Ton
PG 58-34 Asphalt Binder	1.96 Ton

TOTAL MIX 53.06 Ton

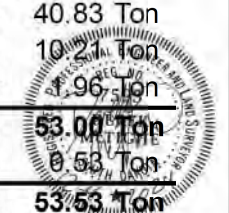
Hydrated Lime 0.53 Ton

TOTAL MIX WITH HYDRATED LIME 53.59 Ton

Plot Scale - 1:200

Plotted From - Justin

File - ...Section P\Plan_Quantities.dgn



SECTION 6 (per station)

General

Cold Milling Asphalt Concrete is computed at 400 Square Yards, applied 36 feet wide.

Provide MC-70 Asphalt for Prime at the rate of 0.10 ton applied 7.5 feet wide per shoulder upon FDR Completion (Rate = 0.30 gallon per square yard)

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

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

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.11 ton applied 25 feet wide (Rate = 0.09 gallon per square yard), prior to application of Asphalt Concrete Blade Laid.

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.12 ton applied 42 feet wide (Rate = 0.06 gallon per square yard), prior to application of 2" lift of Class Q2R Hot Mixed Asphalt Concrete.

Flush Seal

Provide SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 0.10 ton applied 41 feet wide (Rate = 0.05 gallon per square yard).

Provide Sand for Flush Seal at the rate of 0.98 ton applied 22 feet wide (Rate = 8 pounds per square yard)

ALTERNATE A

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)	
Aggregate (80% Contractor Furnished)	40.94 Ton
Salvaged Asphalt Concrete (20%)	10.24 Ton
PG 58-34 Asphalt Binder	2.47 Ton
TOTAL MIX	53.65 Ton
Hydrated Lime	0.54 Ton
TOTAL MIX WITH HYDRATED LIME	54.19 Ton

ALTERNATE B

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)	
Aggregate (80% Contractor Furnished)	42.45 Ton
Salvaged Asphalt Concrete (20%)	10.61 Ton
PG 58-34 Asphalt Binder	2.04 Ton
TOTAL MIX	55.10 Ton
Hydrated Lime	0.55 Ton
TOTAL MIX WITH HYDRATED LIME	55.65 Ton

SECTION 7 (per station)

General

Cold Milling Asphalt Concrete is computed at 489 Square Yards, applied 44 feet wide.

Provide MC-70 Asphalt for Prime at the rate of 0.10 ton applied 7.5 feet wide on left shoulder upon FDR Completion (Rate = 0.30 gallon per square yard)

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

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

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.16 ton applied 37 feet wide (Rate = 0.09 gallon per square yard), prior to application of Asphalt Concrete Blade Laid.

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.15 ton applied 51.5 feet wide (Rate = 0.06 gallon per square yard), prior to application of 2" lift of Class Q2R Hot Mixed Asphalt Concrete.

Flush Seal

Provide SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 0.12 ton applied 50.5 feet wide (Rate = 0.05 gallon per square yard).

Provide Sand for Flush Seal at the rate of 1.47 ton applied 33 feet wide (Rate = 8 pounds per square yard)

ALTERNATE A

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)	
Aggregate (80% Contractor Furnished)	48.63 Ton
Salvaged Asphalt Concrete (20%)	12.16 Ton
PG 58-34 Asphalt Binder	2.93 Ton
TOTAL MIX	63.72 Ton
Hydrated Lime	0.64 Ton
TOTAL MIX WITH HYDRATED LIME	64.36 Ton

ALTERNATE B

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)	
Aggregate (80% Contractor Furnished)	50.42 Ton
Salvaged Asphalt Concrete (20%)	12.61 Ton
PG 58-34 Asphalt Binder	2.42 Ton
TOTAL MIX	65.45 Ton
Hydrated Lime	0.65 Ton
TOTAL MIX WITH HYDRATED LIME	66.10 Ton

SECTION 8 (per station)

General

Cold Milling Asphalt Concrete is computed at 478 Square Yards, applied 43 feet wide.

Provide MC-70 Asphalt for Prime at the rate of 0.10 ton applied 7.5 feet wide on left shoulder upon FDR Completion (Rate = 0.30 gallon per square yard)

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

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

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.16 ton applied 37 feet wide (Rate = 0.09 gallon per square yard), prior to application of Asphalt Concrete Blade Laid.

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.15 ton applied 53 feet wide (Rate = 0.06 gallon per square yard), prior to application of 2" lift of Class Q2R Hot Mixed Asphalt Concrete.

Flush Seal

Provide SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 0.12 ton applied 52 feet wide (Rate = 0.05 gallon per square yard).

Provide Sand for Flush Seal at the rate of 1.47 ton applied 33 feet wide (Rate = 8 pounds per square yard)

ALTERNATE A

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)	
Aggregate (80% Contractor Furnished)	46.92 Ton
Salvaged Asphalt Concrete (20%)	11.73 Ton
PG 58-34 Asphalt Binder	2.83 Ton
TOTAL MIX	61.48 Ton
Hydrated Lime	0.61 Ton
TOTAL MIX WITH HYDRATED LIME	62.09 Ton

ALTERNATE B

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)	
Aggregate (80% Contractor Furnished)	48.64 Ton
Salvaged Asphalt Concrete (20%)	12.16 Ton
PG 58-34 Asphalt Binder	2.34 Ton
TOTAL MIX	63.14 Ton
Hydrated Lime	0.63 Ton
TOTAL MIX WITH HYDRATED LIME	63.77 Ton

SECTION 9 (per mile)

General

Cold Milling Asphalt Concrete is computed at 23,467 Square Yards, applied 40 feet wide.

Provide MC-70 Asphalt for Prime at the rate of 4.9 ton applied 7 feet wide per shoulder upon FDR Completion (Rate = 0.30 gallon per square yard)

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

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

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 5.6 ton applied 25 feet wide (Rate = 0.09 gallon per square yard), prior to application of Asphalt Concrete Blade Laid.

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 6.3 ton applied 42 feet wide (Rate = 0.06 gallon per square yard), prior to application of 2" lift of Class Q2R Hot Mixed Asphalt Concrete.

Flush Seal

Provide SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 5.1 ton applied 41 feet wide (Rate = 0.05 gallon per square yard).

Provide Sand for Flush Seal at the rate of 51.6 ton applied 22 feet wide (Rate = 8 pounds per square yard)

ALTERNATE A

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)	
Aggregate (80% Contractor Furnished)	2,159 Ton
Salvaged Asphalt Concrete (20%)	540 Ton
PG 58-34 Asphalt Binder	130 Ton
TOTAL MIX	2,829 Ton
Hydrated Lime	28 Ton
TOTAL MIX WITH HYDRATED LIME	2,857 Ton

ALTERNATE B

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)	
Aggregate (80% Contractor Furnished)	2,239 Ton
Salvaged Asphalt Concrete (20%)	560 Ton
PG 58-34 Asphalt Binder	108 Ton
TOTAL MIX	2,907 Ton
Hydrated Lime	29 Ton
TOTAL MIX WITH HYDRATED LIME	2,936 Ton



Plot Scale - 1:200

Plotted From - Justin

File - ...Section P\Plan_Quantities.dgn

SECTION 10 (per station)

General

Cold Milling Asphalt Concrete is computed at 367 Square Yards, applied 33 feet wide.

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

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

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.11 ton applied 25 feet wide (Rate = 0.09 gallon per square yard), prior to application of Asphalt Concrete Blade Laid.

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.10 ton applied 37 feet wide (Rate = 0.06 gallon per square yard), prior to application of 2" lift of Class Q2R Hot Mixed Asphalt Concrete.

Flush Seal

Provide SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 0.09 ton applied 36 feet wide (Rate = 0.05 gallon per square yard).

Provide Sand for Flush Seal at the rate of 0.98 ton applied 22 feet wide (Rate = 8 pounds per square yard)

ALTERNATE A

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)	
Aggregate (80% Contractor Furnished)	31.30 Ton
Salvaged Asphalt Concrete (20%)	7.83 Ton
PG 58-34 Asphalt Binder	1.89 Ton
TOTAL MIX	41.02 Ton
Hydrated Lime	0.41 Ton
TOTAL MIX WITH HYDRATED LIME	41.43 Ton

ALTERNATE B

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)	
Aggregate (80% Contractor Furnished)	32.45 Ton
Salvaged Asphalt Concrete (20%)	8.11 Ton
PG 58-34 Asphalt Binder	1.56 Ton
TOTAL MIX	42.12 Ton
Hydrated Lime	0.42 Ton
TOTAL MIX WITH HYDRATED LIME	42.54 Ton

SECTION 11 (per station)

General

Cold Milling Asphalt Concrete is computed at 367 Square Yards, applied 33 feet wide.

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

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

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.11 ton applied 25 feet wide (Rate = 0.09 gallon per square yard), prior to application of Asphalt Concrete Blade Laid.

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.10 ton applied 37 feet wide (Rate = 0.06 gallon per square yard), prior to application of 2" lift of Class Q2R Hot Mixed Asphalt Concrete.

Flush Seal

Provide SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 0.09 ton applied 36 feet wide (Rate = 0.05 gallon per square yard).

Provide Sand for Flush Seal at the rate of 0.98 ton applied 22 feet wide (Rate = 8 pounds per square yard)

ALTERNATE A

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)	
Aggregate (80% Contractor Furnished)	31.30 Ton
Salvaged Asphalt Concrete (20%)	7.83 Ton
PG 58-34 Asphalt Binder	1.89 Ton
TOTAL MIX	41.02 Ton
Hydrated Lime	0.41 Ton
TOTAL MIX WITH HYDRATED LIME	41.43 Ton

ALTERNATE B

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)	
Aggregate (80% Contractor Furnished)	32.45 Ton
Salvaged Asphalt Concrete (20%)	8.11 Ton
PG 58-34 Asphalt Binder	1.56 Ton
TOTAL MIX	42.12 Ton
Hydrated Lime	0.42 Ton
TOTAL MIX WITH HYDRATED LIME	42.54 Ton

SECTION 12 (per station)

General

Cold Milling Asphalt Concrete is computed at 281 Square Yards, applied 25.25 feet wide.

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

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

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.11 ton applied 25 feet wide (Rate = 0.09 gallon per square yard), prior to application of Asphalt Concrete Blade Laid.

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.11 ton applied 39 feet wide (Rate = 0.06 gallon per square yard), prior to application of 2" lift of Class Q2R Hot Mixed Asphalt Concrete.

Flush Seal

Provide SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 0.09 ton applied 38 feet wide (Rate = 0.05 gallon per square yard).

Provide Sand for Flush Seal at the rate of 0.98 ton applied 22 feet wide (Rate = 8 pounds per square yard)

ALTERNATE A

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)	
Aggregate (80% Contractor Furnished)	35.62 Ton
Salvaged Asphalt Concrete (20%)	8.91 Ton
PG 58-34 Asphalt Binder	2.15 Ton
TOTAL MIX	46.68 Ton
Hydrated Lime	0.47 Ton
TOTAL MIX WITH HYDRATED LIME	47.15 Ton

ALTERNATE B

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)	
Aggregate (80% Contractor Furnished)	36.93 Ton
Salvaged Asphalt Concrete (20%)	9.23 Ton
PG 58-34 Asphalt Binder	1.77 Ton
TOTAL MIX	47.93 Ton
Hydrated Lime	0.48 Ton
TOTAL MIX WITH HYDRATED LIME	48.41 Ton



PCN 06YC

SECTION 15 (per station)

General

Cold Milling Asphalt Concrete is computed at 414 Square Yards, applied 37.25 feet wide.

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

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

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.11 ton applied 25 feet wide (Rate = 0.09 gallon per square yard), prior to application of Asphalt Concrete Blade Laid.

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.12 ton applied 42 feet wide (Rate = 0.06 gallon per square yard), prior to application of 2" lift of Class Q2R Hot Mixed Asphalt Concrete.

Flush Seal

Provide SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 0.10 ton applied 41 feet wide (Rate = 0.05 gallon per square yard).

Provide Sand for Flush Seal at the rate of 0.98 ton applied 22 feet wide (Rate = 8 pounds per square yard)

ALTERNATE A

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

Aggregate (80% Contractor Furnished)	35.92 Ton
Salvaged Asphalt Concrete (20%)	8.98 Ton
PG 58-34 Asphalt Binder	2.16 Ton

TOTAL MIX 47.06 Ton

Hydrated Lime 0.47 Ton

TOTAL MIX WITH HYDRATED LIME 47.53 Ton

ALTERNATE B

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

Aggregate (80% Contractor Furnished)	37.24 Ton
Salvaged Asphalt Concrete (20%)	9.31 Ton
PG 58-34 Asphalt Binder	1.79 Ton

TOTAL MIX 48.34 Ton

Hydrated Lime 0.48 Ton

TOTAL MIX WITH HYDRATED LIME 48.82 Ton

PCN 06YC

SECTION 16 (per station)

General

Cold Milling Asphalt Concrete is computed at 500 Square Yards, applied 45 feet wide.

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

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

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.11 ton applied 25 feet wide (Rate = 0.09 gallon per square yard), prior to application of Asphalt Concrete Blade Laid.

Provide SS-1h or CSS-1h Asphalt for Tack at the rate of 0.14 ton applied 49 feet wide (Rate = 0.06 gallon per square yard), prior to application of 2" lift of Class Q2R Hot Mixed Asphalt Concrete.

Flush Seal

Provide SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 0.11 ton applied 48 feet wide (Rate = 0.05 gallon per square yard).

Provide Sand for Flush Seal at the rate of 0.98 ton applied 22 feet wide (Rate = 8 pounds per square yard)

ALTERNATE A

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

Aggregate (80% Contractor Furnished)	42.84 Ton
Salvaged Asphalt Concrete (20%)	10.71 Ton
PG 58-34 Asphalt Binder	2.58 Ton

TOTAL MIX 56.13 Ton

Hydrated Lime 0.56 Ton

TOTAL MIX WITH HYDRATED LIME 56.69 Ton

ALTERNATE B

Class Q2R Hot Mixed Asphalt Concrete (2.0" Lift)

Aggregate (80% Contractor Furnished)	44.41 Ton
Salvaged Asphalt Concrete (20%)	11.10 Ton
PG 58-34 Asphalt Binder	2.13 Ton

TOTAL MIX 57.64 Ton

Hydrated Lime 0.58 Ton

TOTAL MIX WITH HYDRATED LIME 58.22 Ton



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F10	F41

Plotting Date: 12/4/2024 REV 12-4-24 JT

TABLE OF MATERIAL QUANTITIES

SD47 (PCN 069Q)	Water For Granular Material (Mgal)	Cold Milling Asphalt Concrete (SqYd)	Full Depth Reclamation (FDR) (SqYd)	Unclassified Excavation, Digouts (CuYd)	Base Course (Ton)	Base Course, Salvaged (Ton)	Asphalt Concrete Blade Laid (Ton)	Alternate A			Alternate B			MC-70 Asphalt For Prime (Ton)	SS-1h or CSS-1h Asphalt For Tack Final Lift (Ton)	SS-1h or CSS-1h Asphalt For Tack Blade Laid (Ton)	SS-1h or CSS-1h Asphalt For Flush Seal (Ton)
								Class Q2R Hot Mixed Asphalt Concrete (Ton)	PG 58-34 Asphalt Binder (Ton)	Hydrated Lime (Ton)	Class Q2R Hot Mixed Asphalt Concrete (Ton)	PG 58-34 Asphalt Binder (Ton)	Hydrated Lime (Ton)				
Section 1	48.3	45,322	8,057	-	-	-	386.3	5630.9	259.2	56.7	5783.6	214.6	58.4	8.4	13.2	14.3	10.8
Section 2	-	7,332	-	-	-	-	65.4	907.2	41.7	9.1	931.7	34.5	9.4	-	2.2	2.4	1.8
Section 3	-	16,249	-	-	-	-	144.9	2010.3	92.5	20.1	2064.7	76.5	20.7	-	4.9	5.3	4.0
Section 4	336.8	203,506	56,139	-	-	-	1794.2	33779.4	1555.0	334.9	34688.4	1279.9	346.9	116.4	75.2	67.1	61.1
Section 4A	-	2,397	-	-	-	-	25.5	999.8	45.0	9.0	1027.7	38.0	10.3	-	1.2	-	1.0
Section 5	-	14,454	-	-	-	-	99.9	1814.2	83.3	18.3	1863.4	68.9	18.6	-	4.5	3.7	3.7
Section 6	16.4	11,600	2,739	-	-	-	82.4	1555.9	71.6	15.7	1597.9	59.2	16.0	5.7	3.5	3.1	2.8
Section 7	6.2	5,349	1,033	-	-	-	46.6	697.2	32.1	7.0	716.2	26.5	7.1	1.1	1.6	1.7	1.3
Section 8	-	6,717	-	-	-	-	59.9	864.3	39.8	8.6	887.6	32.9	8.9	-	2.1	2.2	1.7
Section 9	56.4	47,002	9,400	-	-	-	300.4	5666.3	260.4	56.1	5822.6	216.3	58.1	19.5	12.6	11.2	10.2
Section 10	-	8,844	-	-	-	-	68.5	989.4	45.6	9.9	1015.9	37.6	10.1	-	2.5	2.6	2.1
Section 11	-	4,432	-	-	-	-	34.3	495.8	22.8	5.0	509.1	18.9	5.1	-	1.3	1.3	1.0
Section 12	-	2,001	-	-	-	-	20.3	333.0	15.3	3.4	341.9	12.6	3.4	-	0.8	0.8	0.6
Section 13	-	842	-	-	-	-	8.5	148.2	6.0	1.5	152.0	5.6	1.5	-	0.4	-	0.3
Section 14	-	842	-	-	-	-	4.3	77.1	6.0	1.5	76.5	5.6	1.5	-	0.4	-	0.3
Table of Additional Quantities	40.3	6552.0	0.0	969.0	2893.0	1305.0	-	5794.5	266.7	58.0	5849.6	216.3	58.6	0.0	63.9	0.0	0.0
Section Totals	504.5	383,441	77,369	969	2,893	1,305	3,142	61763.4	2843.1	614.5	63328.9	2344.0	634.5	151.1	190.2	115.7	102.8
SD248 (PCN 06YC)																	
Section 15	-	14,590	-	-	-	-	100.1	1658.87	76.14	16.57	1703.99	63.10	16.92	-	4.19	3.75	3.41
Section 16	-	4,000	-	-	-	-	22.7	449.04	20.64	4.48	461.12	17.04	4.64	-	1.11	0.85	0.91
Table of Additional Quantities	2.8	0.0	0.0	41.0	346.0	30.0	0.0	168.0	7.7	1.7	168.4	6.3	1.7	-	9.3	0.0	-
Section Totals	2.8	18,590	-	41.0	346.0	30.0	122.9	2275.91	104.48	22.75	2333.51	86.44	23.26	0.00	14.58	4.60	4.32
Project Totals	507.3	402,031	77,369	1,010.0	3,239.0	1,335.0	3,264.4	64,039.3	2,947.6	637.2	65,662.4	2,430.4	657.8	151.1	204.8	120.3	107.1

Plot Scale - 1:200

Plotted From - Justin

File - ...Section F:\Plan_Quantities.dgn



TABLE OF ADDITIONAL QUANTITIES

SD47 (PCN 069Q)	Water For Granular Material (Mgal)	Cold Milling Asphalt Concrete (SqYd)	Full Depth Reclamation (FDR) (SqYd)	Unclassified Excavation, Digouts (CuYd)	Base Course (Ton)	Base Course, Salvaged (Ton)	Remove Asphalt Concrete Pavement (SqYd)	Asphalt Concrete Composite (Ton)	Alternate A			Alternate B			MC-70 Asphalt For Prime (Ton)	SS-1h or CSS-1h Asphalt For Tack (Ton)	SS-1h or CSS-1h Asphalt For Flush Seal (Ton)	Sand For Flush Seal (Ton)
									Class Q2R Hot Mixed Asphalt Concrete (Ton)	PG 58-34 Asphalt Binder (Ton)	Hydrated Lime (Ton)	Class Q2R Hot Mixed Asphalt Concrete (Ton)	PG 58-34 Asphalt Binder (Ton)	Hydrated Lime (Ton)				
*Asphalt Pad (5') w/Granular Material to R.O.W.																		
68- Farm & Field Entrances	9.8	-	-	-	-	1020	-	-	136.0	6.3	1.4	149.6	5.4	1.5	-	0.9	-	-
5- Private Entrances	0.7	-	-	-	-	75	-	-	10.0	0.5	0.1	11.0	0.4	0.1	-	0.1	-	-
*Asphalt to Radius (35') w/Granular Material to R.O.W.																		
5- Private Entrances	0.5	560	-	-	-	50	-	-	62.5	2.9	0.6	65.0	2.4	0.7	-	0.2	-	-
16 - Intersecting Roads	1.5	1,792	-	-	-	160	-	-	200.0	9.2	2.0	208.0	7.7	2.1	-	0.5	-	-
*Asphalt to R.O.W.																		
11 - Intersecting Roads	-	3,080	-	-	-	-	-	-	374.0	17.2	3.7	396.0	14.7	4.0	-	0.8	-	-
4 - Private Entrances	-	1,120	-	-	-	-	-	-	136.0	6.3	1.4	144.0	5.3	1.4	-	0.3	-	-
Mainline Pipe Culvert Replacement																		
13+77 to 14+17	1.4	-	-	-	150	-	169	61	-	-	-	-	-	-	-	0.1	-	-
102+68 to 103+08	1.4	-	-	-	150	-	169	61	-	-	-	-	-	-	-	0.1	-	-
413+92 to 414+32	1.2	-	-	-	128	-	124	49	-	-	-	-	-	-	-	0.1	-	-
432+92 to 433+32	1.2	-	-	-	128	-	124	49	-	-	-	-	-	-	-	0.1	-	-
912+36 to 912+76	1.3	-	-	-	133	-	124	49	-	-	-	-	-	-	-	0.1	-	-
921+84 to 922+24	1.3	-	-	-	133	-	124	49	-	-	-	-	-	-	-	0.1	-	-
968+31 to 968+71	1.3	-	-	-	133	-	124	49	-	-	-	-	-	-	-	0.1	-	-
Digouts (Surfacing/Subgrade Repair)	18.6	-	-	969	1938	-	1454	484.5	-	-	-	-	-	-	-	-	-	-
Pavement Profile Correction Locations	-	-	-	-	-	-	-	-	1000.0	46.0	10.0	1000.0	37.0	10.0	-	50.6	-	-
Spot Leveling, Strengthening and Repair	-	-	-	-	-	-	-	-	3876.0	178.3	38.8	3876.0	143.4	38.8	-	9.8	-	-
Section Totals	40.3	6,552	0	969	2,893	1,305	2,412	851.5	5794.5	266.7	58.0	5849.6	216.3	58.6	0.0	63.9	0.0	0.0
SD248 (PCN 06YC)																		
*Asphalt Pad (5') w/Granular Material to R.O.W.																		
2- Farm & Field Entrances	0.288	-	-	-	-	30	-	-	4.00	0.20	0.10	4.40	0.20	0.10	-	1.11	-	-
Mainline Pipe Culvert Replacement																		
4+38 to 5+23	1.3	-	-	-	132	-	133	52	-	-	-	-	-	-	-	2.4	-	-
18+82 to 19+22	1.3	-	-	-	132	-	133	52	-	-	-	-	-	-	-	5.3	-	-
Digouts (Surfacing/Subgrade Repair)	-	-	-	41	82	-	62	20.5	-	-	-	-	-	-	-	-	-	-
Spot Leveling, Strengthening and Repair	-	-	-	-	-	-	-	-	164.0	7.5	1.6	164.0	6.1	1.6	-	0.4	-	-
Section Totals	2.8	0.0	0.0	41.0	346.0	30.0	328.0	124.5	168.0	7.7	1.7	168.4	6.3	1.7	0.0	9.3	0.0	0.0
Project Totals	43.1	6552.0	0.0	1010.0	3239.0	1335.0	2740.0	976.0	5962.5	274.4	59.7	6018.0	222.6	60.3	0.0	73.2	0.0	0.0

Tonnage Shown in the table above for Asphalt Concrete is based on a compacted depth as detailed in the plans.

(A) *Asphalt Pad (5') w/Granular Material to R.O.W. - The area will have 2" Class Q2R Hot Mixed Asphalt Concrete placed from finished shoulder to construct an asphalt pad that is 5' from edgeline w/Base Course, Salvaged being placed on the remaining approach surface transitioned from the edge of the asphalt pad to the R.O.W. line. It is estimated that 15 tons of Base Course, Salvaged will be needed for each approach.

(B) *Asphalt to Radius (35') w/Granular Material to R.O.W. - Each approach will be cold milled 1" from edge of shoulder to the end of the approach radius. The milled area will have 2" Class Q2R Hot Mixed Asphalt Concrete placed 35' or to end of Radius from edgeline w/ Base Course, Salvaged being placed on the remaining intersecting road surface transitioned from the edge of the placed asphalt to the R.O.W. line. It is estimated that 10 tons of Base Course, Salvaged will be needed for each approach

(C) *Asphalt to R.O.W. - Each approach will have a cold milling transition from 1" at edge of shoulder to 2" at the R.O.W. Upon cold milling completion the area will have 2" Class Q2R Hot Mixed Asphalt Concrete Placed.



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F12	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

SD47 (PCN 069Q)	Alternate A		Alternate B	
	Compaction WITH Specified Density for Class Q2R Hot Mixed Asphalt Concrete	Compaction WITHOUT Specified Density for Class Q2R Hot Mixed Asphalt Concrete	Compaction WITH Specified Density for Class Q2R Hot Mixed Asphalt Concrete	Compaction WITHOUT Specified Density for Class Q2R Hot Mixed Asphalt Concrete
	(Ton)	(Ton)	(Ton)	(Ton)
Section 1	4024.5	1606.3	4133.3	1650.3
Section 2	681.4	225.8	699.8	231.9
Section 3	1510.0	500.3	1550.9	513.9
Section 4	19068.3	14711.0	19583.7	15104.8
Section 4A	299.1	700.7	306.5	721.2
Section 5	1061.5	752.7	1090.2	773.2
Section 6	875.6	680.3	899.2	698.7
Section 7	495.5	201.7	508.9	207.2
Section 8	636.7	227.6	653.9	233.8
Section 9	3356.3	2310.0	3356.3	2466.3
Section 10	728.2	261.2	747.9	268.0
Section 11	365.0	130.9	374.8	134.3
Section 12	215.4	117.6	221.2	120.7
Section 13	90.6	57.6	93.0	59.0
Section 14	77.1	0.0	76.5	0.0
Table of Additional Quantities		5794.5		5849.6
Tons with Specified Density	33485.24		34296.11	
Tons without Specified Density		28278.1		29032.8
Tons Total	61,763.4		63,328.9	

SD248 (PCN 06YC)	Alternate A		Alternate B	
	Compaction WITH Specified Density for Class Q2R Hot Mixed Asphalt Concrete	Compaction WITHOUT Specified Density for Class Q2R Hot Mixed Asphalt Concrete	Compaction WITH Specified Density for Class Q2R Hot Mixed Asphalt Concrete	Compaction WITHOUT Specified Density for Class Q2R Hot Mixed Asphalt Concrete
	(Ton)	(Ton)	(Ton)	(Ton)
Section 15	1064.3	594.6	1093.0	611.0
Section 16	241.5	207.5	248.1	213.1
Table of Additional Quantities		168.0		168.4
Tons with Specified Density	1305.80		1341.10	
Tons without Specified Density		970.1		992.4
Tons Total	2,275.9		2,333.5	

Plot Scale - 1:200

Plotted From - Justin

File - ...Section P\Plan_Quantities.dgn



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT P 0047(117)67 P 0248(13)261	SHEET F13	TOTAL SHEETS F41
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Plotting Date: 12/4/2024 REV 12-4-24 JT

TABLE OF APPROACHES

HIGHWAY 47				HIGHWAY 47			
APPROACH NUMBER	STATION	LEFT OR RIGHT	COMMENTS	APPROACH NUMBER	STATION	LEFT OR RIGHT	COMMENTS
1	7+66.35	Lt	Boat Ramp (Paved)	41	365+66.30	Lt	Field Entrance
2	9+16.15	Rt	Good Soldier Creek Rec. Area (Paved)	42	371+27.37	Lt	Intersecting Road (333rd Ave)
3	10+46.68	Lt	Field Entrance	42	371+27.37	Rt	Field Entrance (333rd Ave)
4	15+78.69	Rt	Private Entrance	43	397+48.02	Rt	Field Entrance
5	17+45.55	Lt	Field Entrance	44	397+48.92	Lt	Private Entrance
6	22+67.08	Rt	Field Entrance	45	409+94.41	Rt	Field Entrance
7	23+97.05	Rt	Field Entrance	46	409+95.91	Lt	Field Entrance
8	38+55.12	Rt	Field Entrance	47	477+07.19	Rt	Field Entrance
9	38+63.93	Lt	Field Entrance	48	477+08.31	Lt	Field Entrance
10	86+41.14	Lt	Field Entrance	49	515+73.40	Rt	Field Entrance
11	96+57.59	Rt	Field Entrance	50	529+65.46	Lt	Intersecting Road (329th Ave)
12	96+58.16	Lt	Field Entrance	51	529+65.48	Rt	Intersecting Road (County Rd 10)
13	123+14.61	Lt	Field Entrance	52	543+29.53	Rt	Intersecting Road (Tower Rd)
14	128+90.79	Lt	Field Entrance	53	553+60.70	Lt	Field Entrance
15	139+98.70	Rt	Field Entrance	54	553+69.20	Rt	Field Entrance
16	139+98.77	Lt	Field Entrance	57	568+23.60	Lt	Field Entrance
17	155+47.06	Lt	Field Entrance	58	568+28.71	Rt	Field Entrance
18	155+68.13	Rt	BIA 5	59	596+16.32	Rt	Field Entrance
19	182+12.56	Rt	Field Entrance	60	602+66.15	Lt	Field Entrance
20	183+77.03	Lt	Field Entrance	61	612+18.73	Rt	Intersecting Road (238th St)
21	207+41.94	Lt	Field Entrance	62	612+19.98	Lt	Intersecting Road (238th St)
22	208+40.34	Rt	Field Entrance	63	621+17.32	Rt	Field Entrance
23	216+75.37	Rt	Private Entrance	64	621+19.45	Lt	Field Entrance
24	220+12.79	Lt	Intersecting Road (County Rd 5)	65	629+71.13	Lt	Field Entrance
25	241+31.83	Lt	Field Entrance	66	661+12.84	Lt	Field Entrance
26	241+34.09	Rt	Field Entrance	67	664+99.55	Lt	Intersecting Road (239th St)
27	255+35.86	Rt	Field Entrance	68	665+03.29	Rt	Field Entrance (239th St)
28	255+55.16	Lt	Field Entrance	70	690+21.24	Rt	Field Entrance
29	273+51.42	Rt	Field Entrance	71	690+22.88	Lt	Field Entrance
30	273+53.43	Lt	Field Entrance	72	713+18.99	Lt	Field Entrance
31	303+28.90	Lt	Field Entrance	73	717+72.70	Lt	Intersecting Road (240th St)
32	303+36.61	Rt	Field Entrance	74	717+74.47	Rt	Field Entrance (240th St)
33	314+15.81	Lt	Field Entrance	75	737+20.76	Rt	Private Entrance
34	314+22.66	Rt	Field Entrance	76	755+80.01	Lt	Field Entrance
35	330+44.19	Lt	Field Entrance	77	758+43.84	Rt	Field Entrance
36	330+50.47	Rt	Field Entrance	78	770+60.93	Rt	Intersecting Road (241st St)
37	343+90.95	Lt	Field Entrance	79	770+61.18	Lt	Intersecting Road (241st St)
38	344+07.34	Rt	Field Entrance	80	783+36.75	Rt	Field Entrance
39	355+13.37	Lt	Intersecting Road (237th St)				
40	365+64.47	Rt	Field Entrance				



Plot Scale - 1:200

Plotted From - Justin

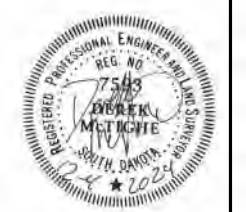
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FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT P 0047(117)67 P 0248(13)261	SHEET F14	TOTAL SHEETS F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

TABLE OF APPROACHES

HIGHWAY 47				HIGHWAY 248			
APPROACH NUMBER	STATION	LEFT OR RIGHT	COMMENTS	APPROACH NUMBER	STATION	LEFT OR RIGHT	COMMENTS
81	799+10.22	Rt	Field Entrance				
82	814+16.24	Rt	Field Entrance				
83	814+17.68	Lt	Cemetery Entrance				
84	823+35.76	Rt	Intersecting Road (242nd St)				
85	823+37.13	Lt	Intersecting Road (242nd St)				
86	830+10.41	Rt	Private Entrance				
87	830+11.33	Lt	Field Entrance				
88	838+91.30	Rt	Field Entrance				
89	849+63.99	Rt	Field Entrance				
90	850+09.57	Lt	Intersecting Road (Caldwell St)				
91	853+38.67	Lt	Private Entrance				
92	857+80.85	Rt	Private Entrance				
93	859+26.43	Lt	Intersecting Road (Dirks Ave)				
94	862+86.28	Rt	Private Entrance				
95	862+93.19	Lt	Intersecting Road (E Chamberlain Ave)				
96	864+63.00	Rt	Private Entrance				
97	866+58.58	Lt	Intersecting Road (E Lyman St)				
98	867+73.89	Lt	Family Dollar Entrance				
99	870+21.63	Lt	Intersecting Road (E Railway St)				
100	873+08.42	Lt	Agtegra Entrance				
101	876+22.35	Lt	Intersecting Road (Rel Alumni St)				
102	876+23.37	Rt	Intersecting Road (243rd St)				
103	878+30.98	Lt	Hiebs Cenex Entrance				
104	879+71.70	Rt	Intersecting Road (HWY 248)				
105	879+71.70	Cl	Intersecting Road (HWY 47)				
106	882+37.97	Rt	Post Office Entrance				
107	903+25.08	Rt	Field Entrance				
108	915+75.93	Lt	Intersecting Road (6th Ave)				
109	916+53.63	Rt	Field Entrance				
110	952+57.48	Lt	Intersecting Road (244th St, 329th Ave)				
111	991+17.73	Lt	Field Entrance				
112	991+59.13	Rt	Field Entrance				
113	1010+61.50	Lt	Private Entrance				
114	1018+60.95	Lt	Intersecting Road (330th Ave)				
115	1021+64.25	Lt	Intersecting Road (HWY 16)				



Plot Scale - 1:200

Plotted From - Justin

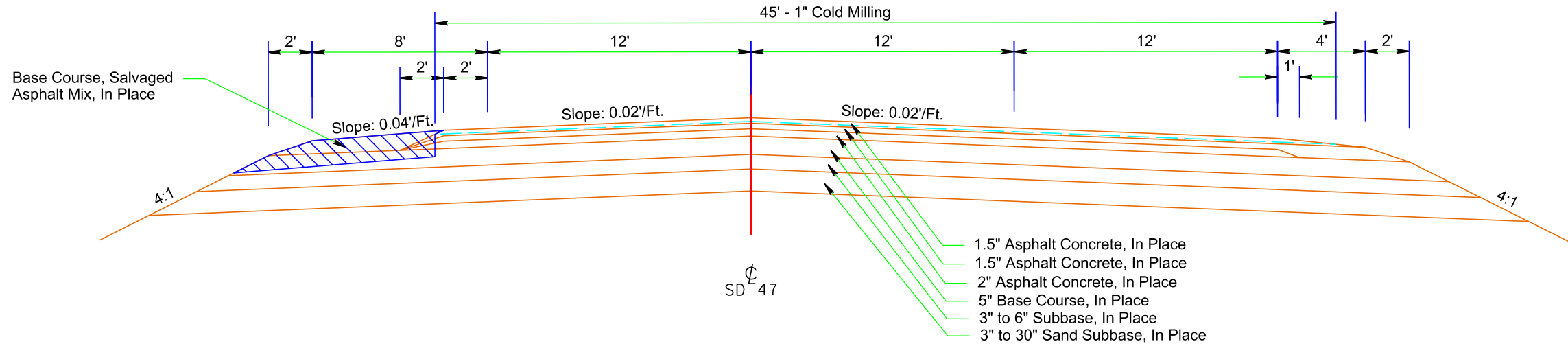
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TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

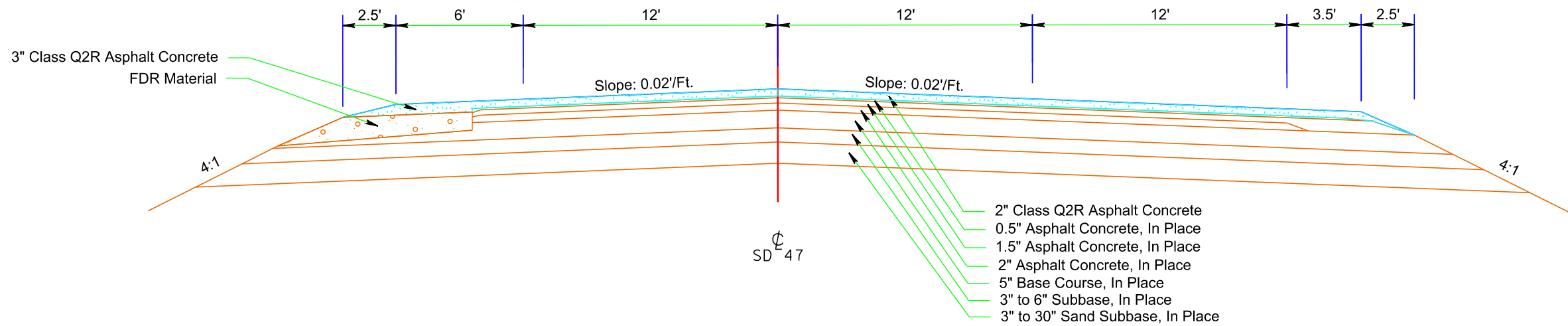
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F15	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

 7" Full Depth Reclamation (FDR)

Section 1
 Sta. 4+06.4 to Sta. 21+68.7
 Sta. 35+77 to Sta. 40+23
 Sta. 51+51.3 to Sta. 64+20.9
 Sta. 84+13.6 to Sta. 116+00
 Sta. 173+00 to Sta. 192+00
 Sta. 217+00 to Sta. 222+00
 In Place & Cold Milling Section



Section 1
 Sta. 4+06.4 to Sta. 21+68.7
 Sta. 35+77 to Sta. 40+23
 Sta. 51+51.3 to Sta. 64+20.9
 Sta. 84+13.6 to Sta. 116+00
 Sta. 173+00 to Sta. 192+00
 Sta. 217+00 to Sta. 222+00
 Resurfacing Section



PLOT SCALE - 1/8" = 1'-0"

PLOTTED FROM - JUSTIN

PLOT NAME - I1

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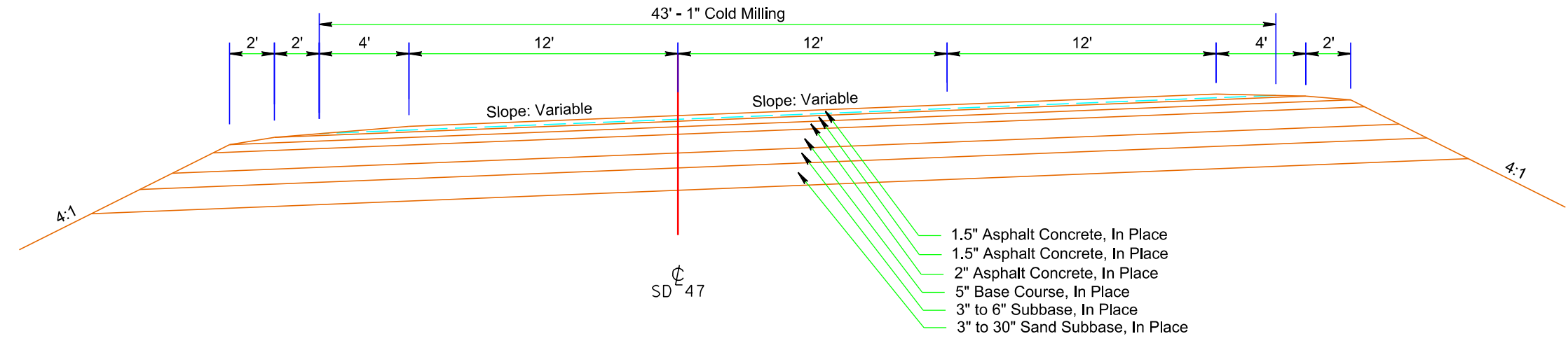
TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F16	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

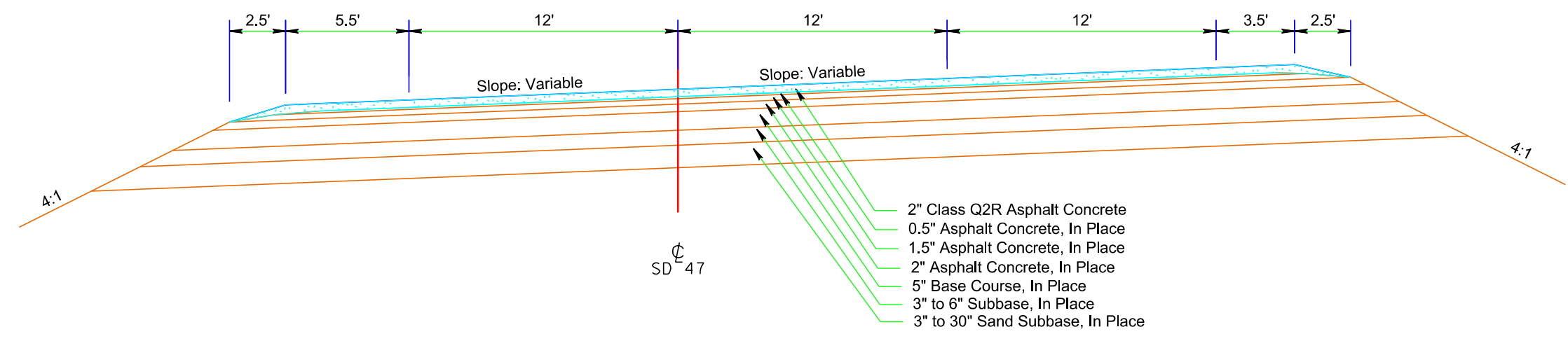
PLOT SCALE - 1+6.000001

PLOT NAME - 12

Section 2
Superelevated Curves
Sta. -2+50 to Sta. 4+06.4
Sta. 49+23.0 to Sta. 51+51.3
In Place & Cold Milling Section

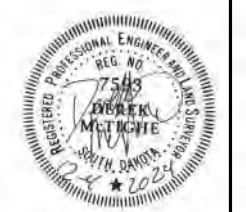


Section 2
Superelevated Curves
Sta. -2+50 to Sta. 4+06.4
Sta. 49+23.0 to Sta. 51+51.3
Resurfacing Section



PLOTTED FROM - JUSTIN

FILE - ... \SECTION F\0690_TYPSECT_JT.DGN



TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

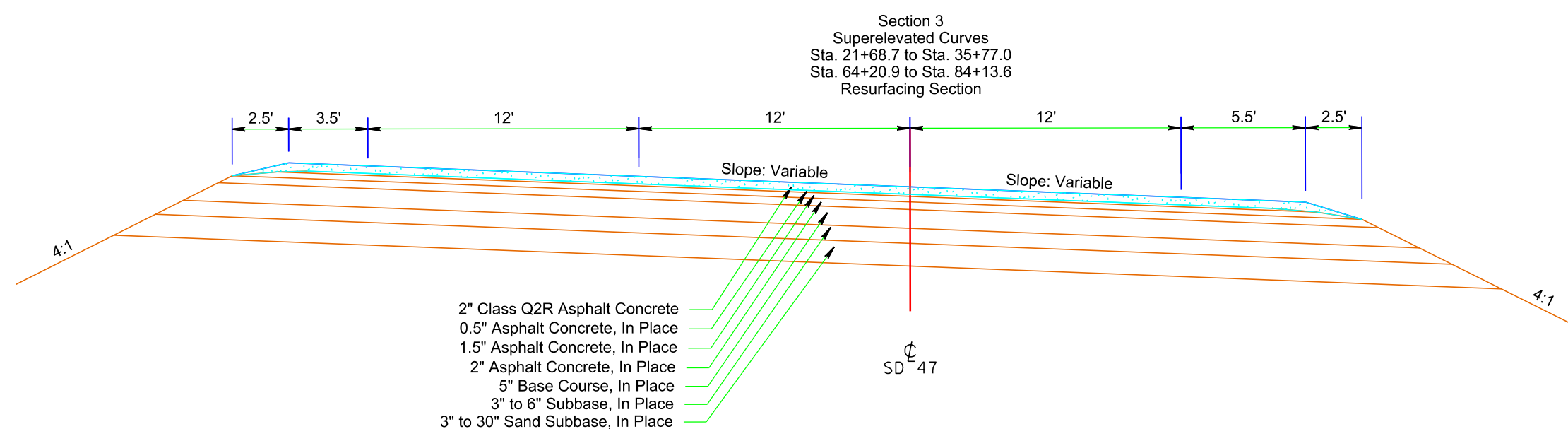
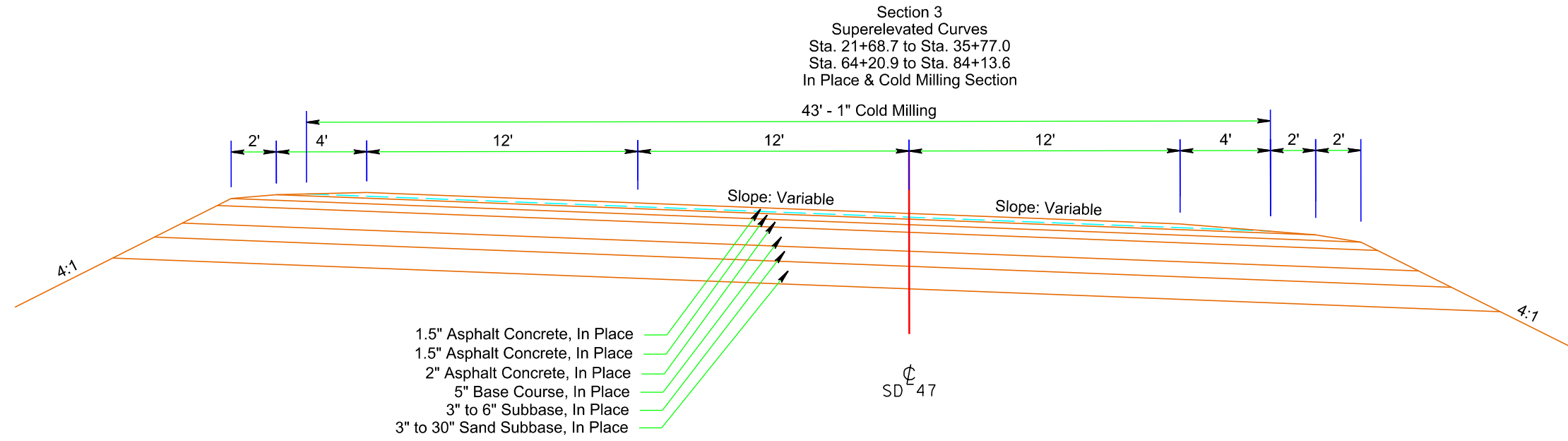
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F17	F41

Plotting Date: 12/4/2024 REV 12-4-24 JT

PLOT SCALE -- 1/8"=1'-0"

PLOT NAME -- 13

FILE -- ... \SECTION F\0690-TYPSECT-JT.DGN



PLOTTED FROM -- JUSTIN

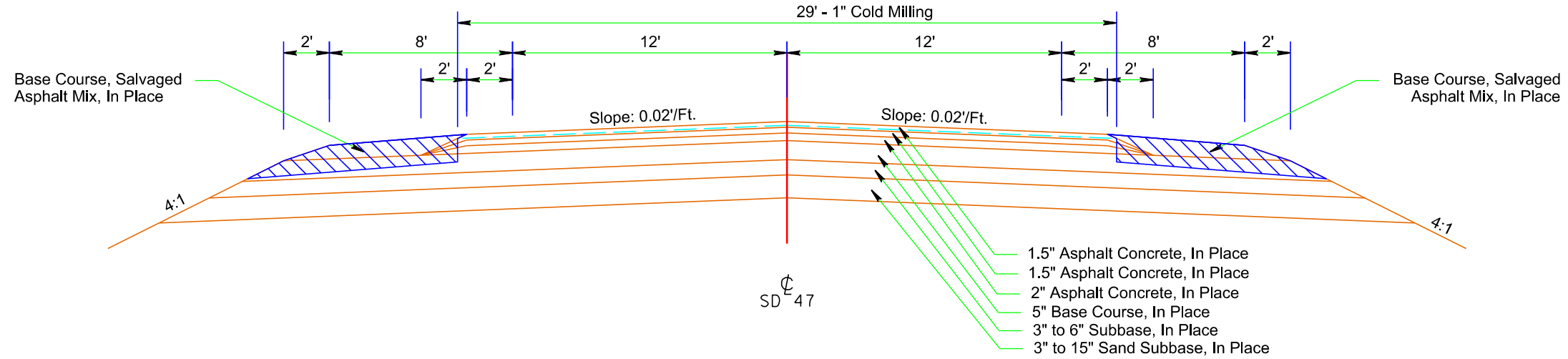


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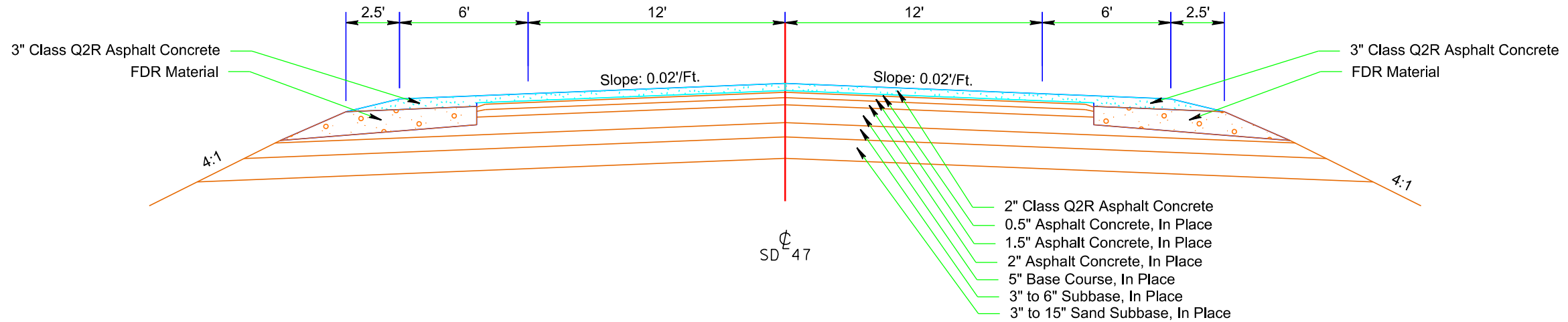
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F18	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

 7" Full Depth Reclamation (FDR)

Section 4
 Sta. 116+00 to Sta. 144+00
 Sta. 222+00 to Sta. 336+23.5
 Sta. 349+39.9 to Sta. 517+05
 Sta. 526+04 to Sta. 529+25.5
 Sta. 539+67.1 to Sta. 579+68.3
 Sta. 591+26.1 to Sta. 869+71.7
 In Place & Cold Milling Section



Section 4
 Sta. 116+00 to Sta. 144+00
 Sta. 222+00 to Sta. 336+23.5
 Sta. 349+39.9 to Sta. 517+05
 Sta. 526+04 to Sta. 529+25.5
 Sta. 539+67.1 to Sta. 579+68.3
 Sta. 591+26.1 to Sta. 869+71.7
 Resurfacing Section



PLOT SCALE - 1+6.00001

PLOT NAME - 14

FILE - ... \SECTION F\0690_TYPSECT_JT.DGN

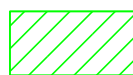

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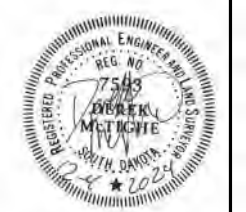
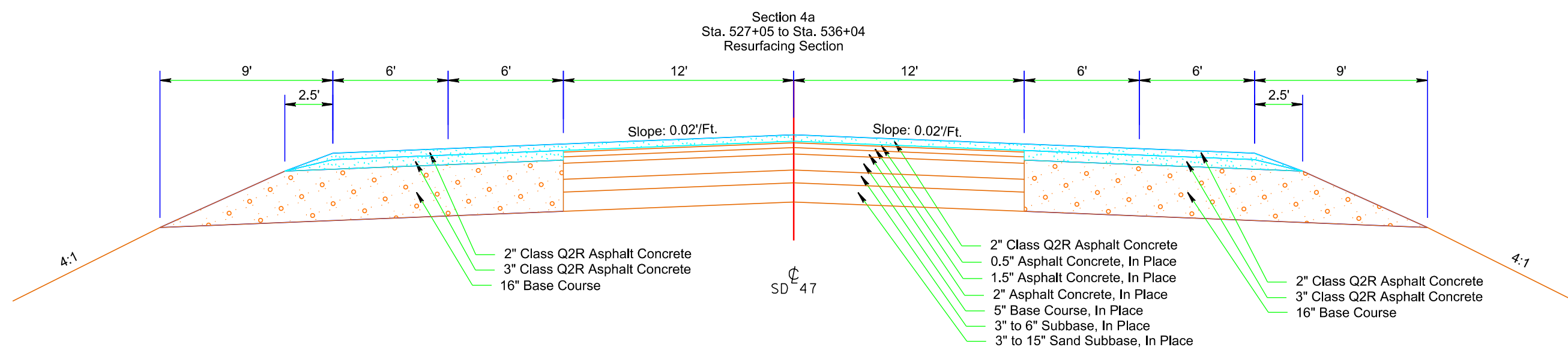
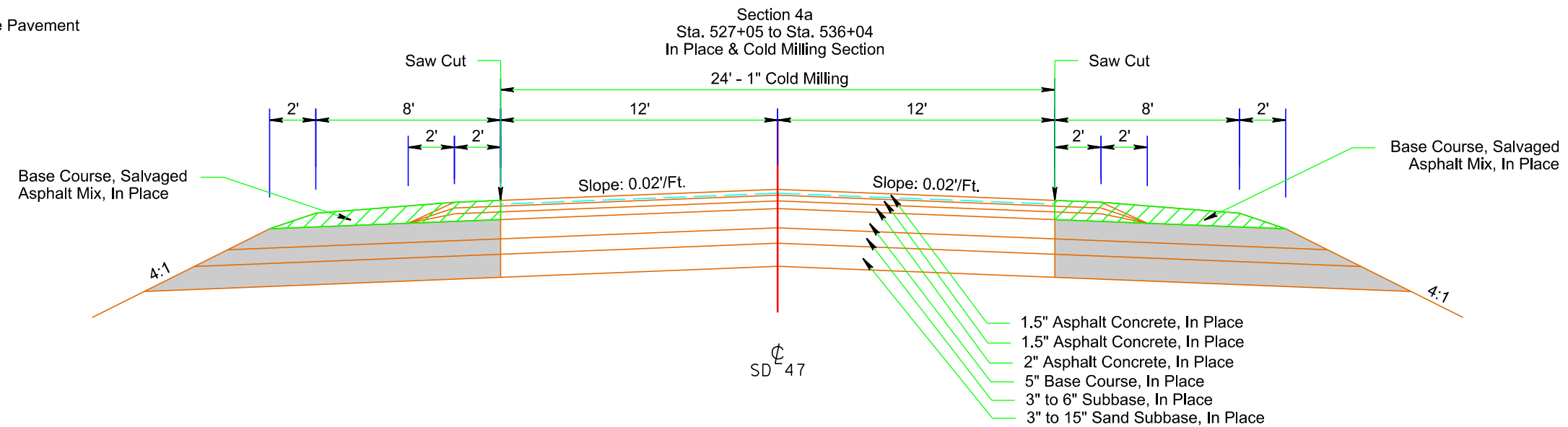


TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F19	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

PLOT SCALE - 1/4" = 1'-0"

-  Remove Asphalt Concrete Pavement
-  Unclassified Excavation



PLOT NAME - 15
FILE - ... \SECTION F\0690_TYPSECT_JT.DGN

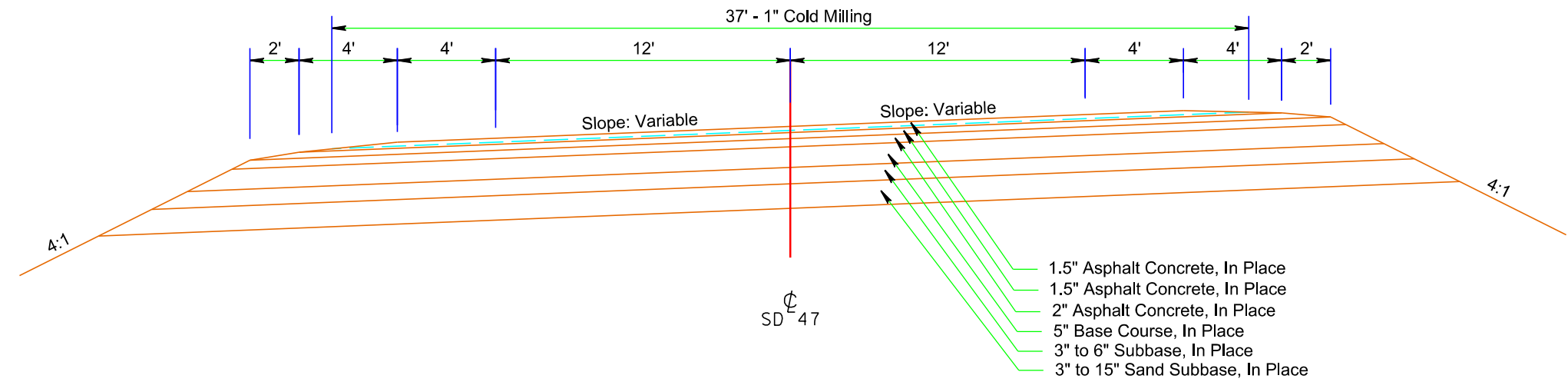
TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F20	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

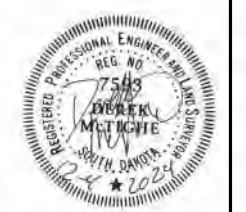
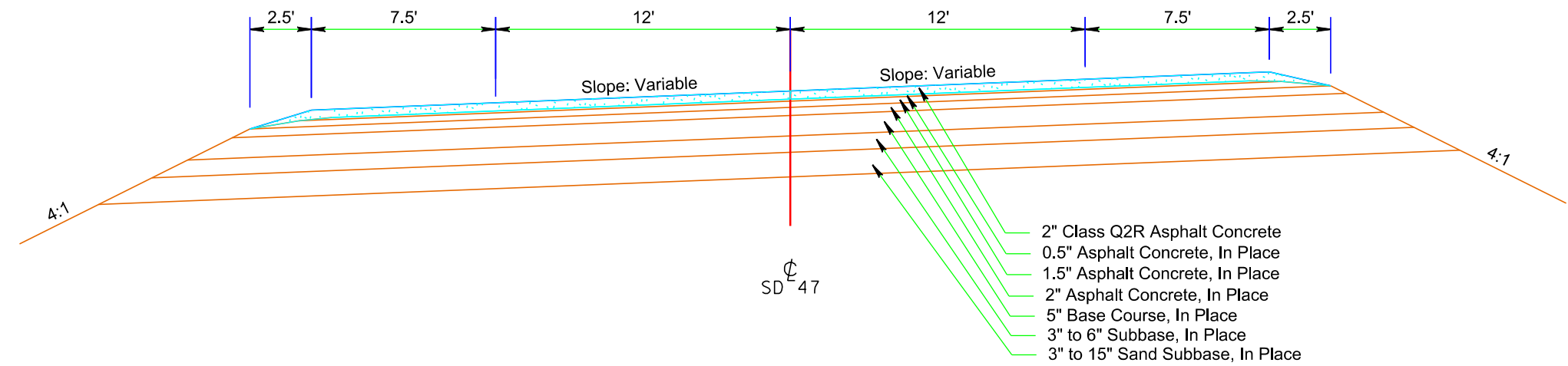
PLOT SCALE - 1+6.00001

PLOT NAME - 16

Section 5
Superelevated Curves
Sta. 336+23.5 to Sta. 349+39.9 (Reverse Section)
Sta. 529+25.5 to Sta. 539+67.1
Sta. 579+68.3 to Sta. 591+26.1
In Place & Cold Milling Section



Section 5
Superelevated Curves
Sta. 336+23.5 to Sta. 349+39.9 (Reverse Section)
Sta. 529+25.5 to Sta. 539+67.1
Sta. 579+68.3 to Sta. 591+26.1
Resurfacing Section

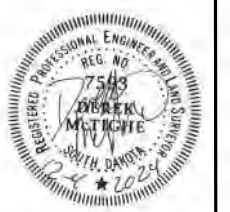
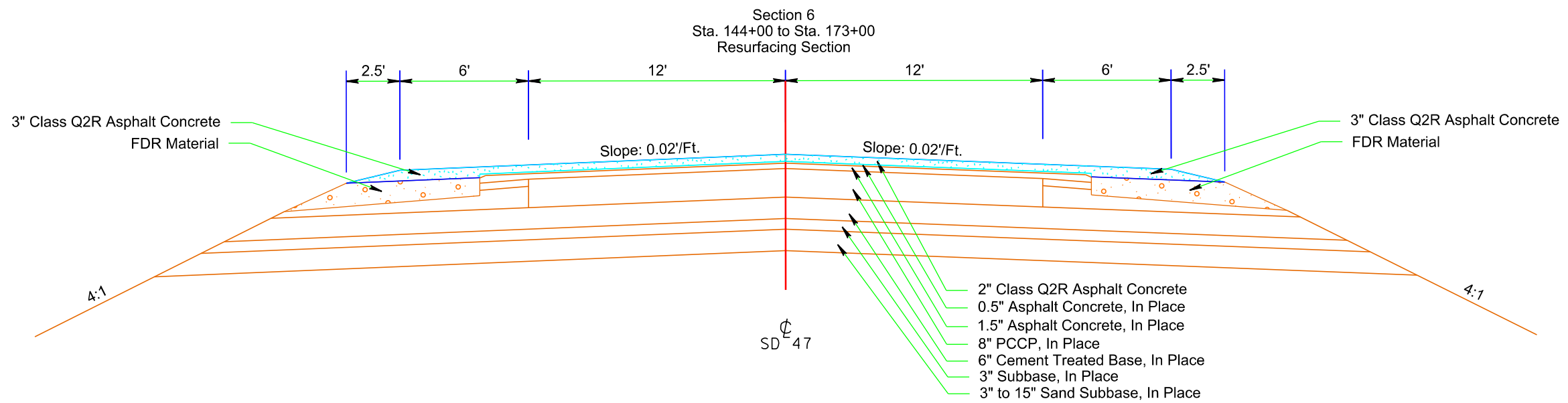
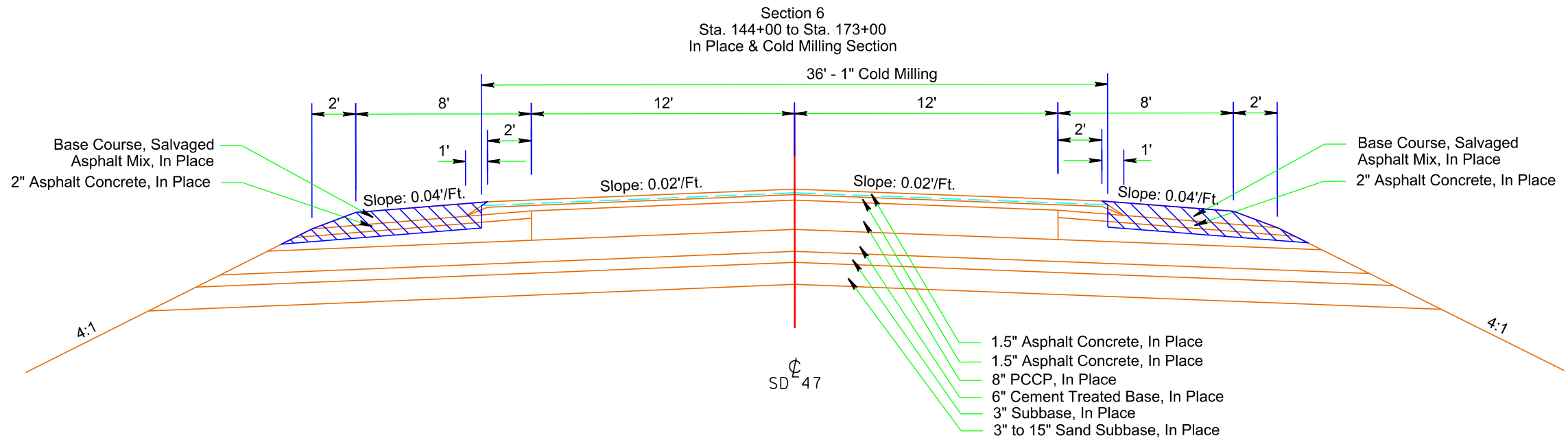


TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F21	F41

Plotting Date: 12/4/2024 REV 12-4-24 JT

 7" Full Depth Reclamation (FDR)



PLOT SCALE -- 1/8"=1'-0"

PLOTTED FROM -- JUSTIN

PLOT NAME -- 17

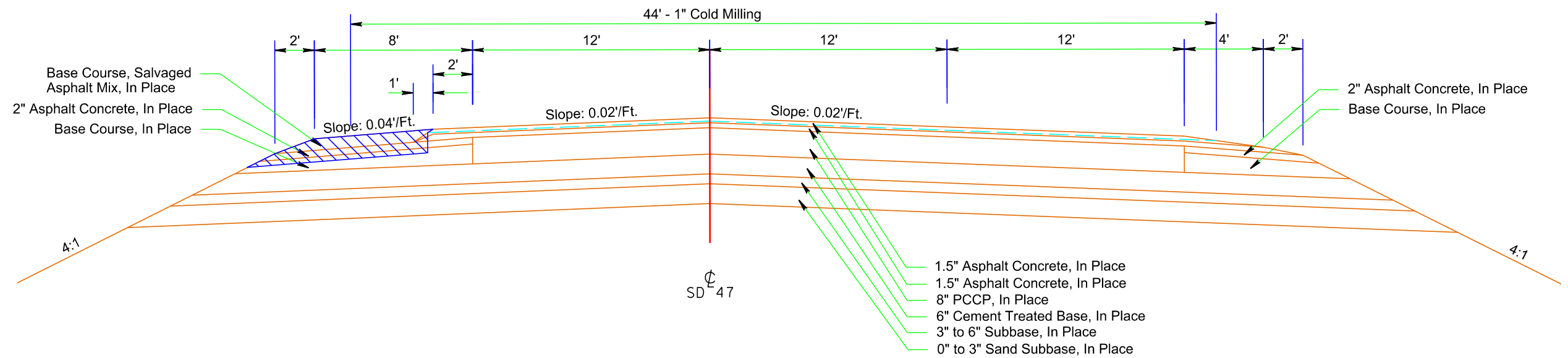
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TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

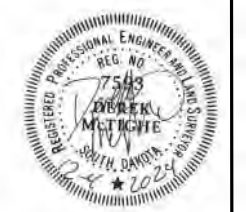
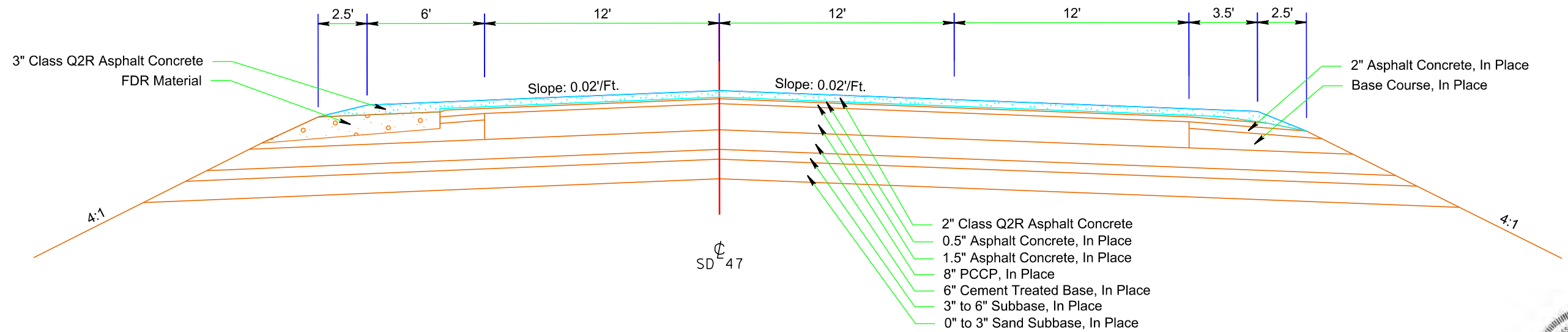
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F22	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

7" Full Depth Reclamation (FDR)

Section 7
Sta. 192+00 to Sta. 201+18.6
Sta. 215+24.4 to Sta. 217+00
In Place & Cold Milling Section



Section 7
Sta. 192+00 to Sta. 201+18.6
Sta. 215+24.4 to Sta. 217+00
Resurfacing Section



PLOT SCALE -- 1/8"=1'-0"

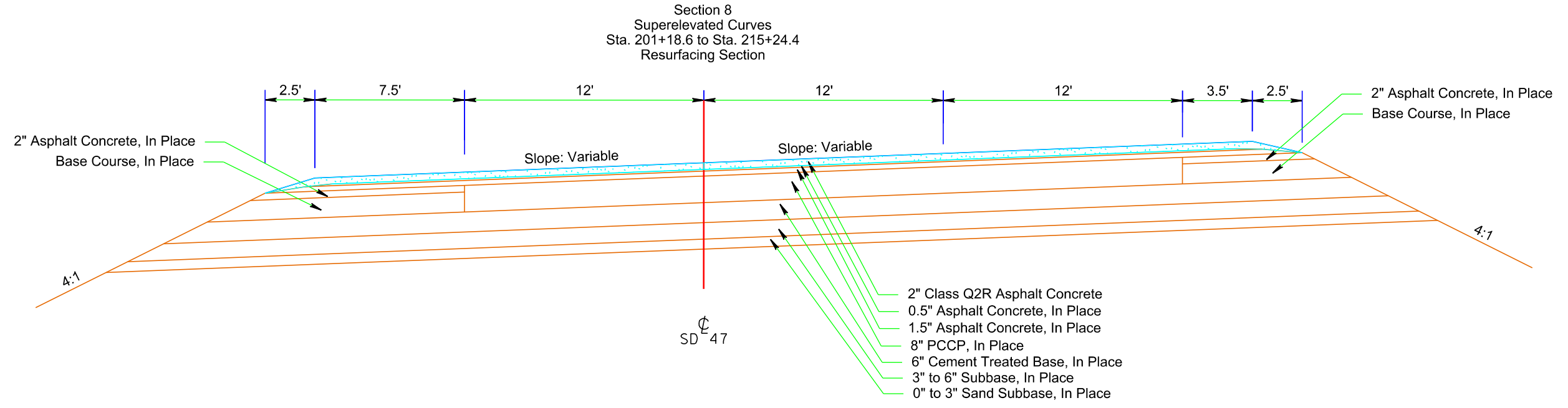
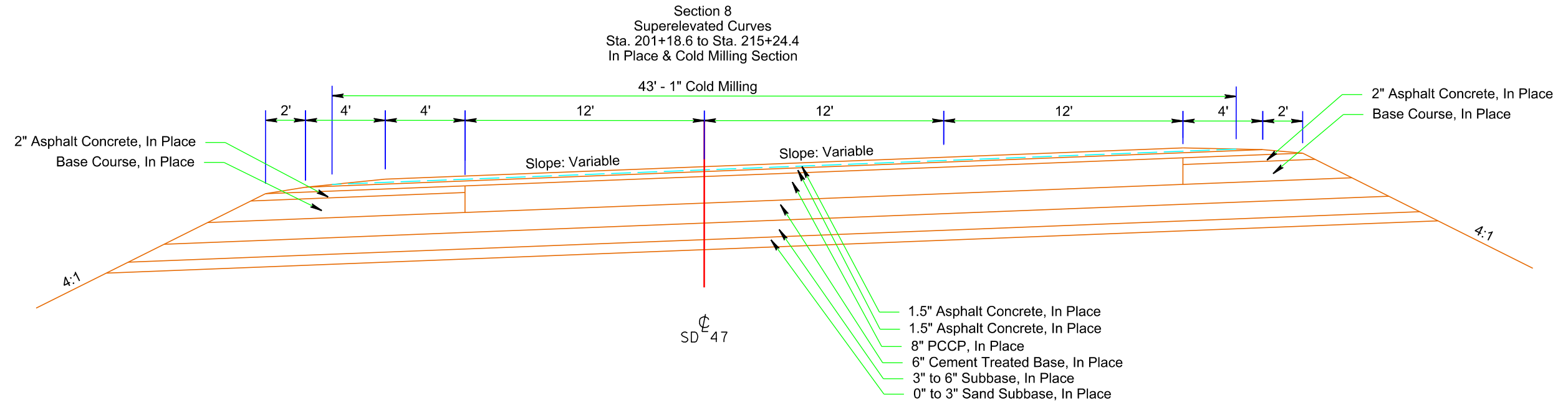
PLOTTED FROM -- JUSTIN

PLOT NAME -- 18

FILE -- ... \SECTION F\0690-TYPSECT-JT.DGN

TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F23	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	



PLOT SCALE - 1+6.00001

PLOT NAME - 19

FILE - ... \SECTION F\0690_TYPSPECT_JT.DGN

PLOTTED FROM - JUSTIN

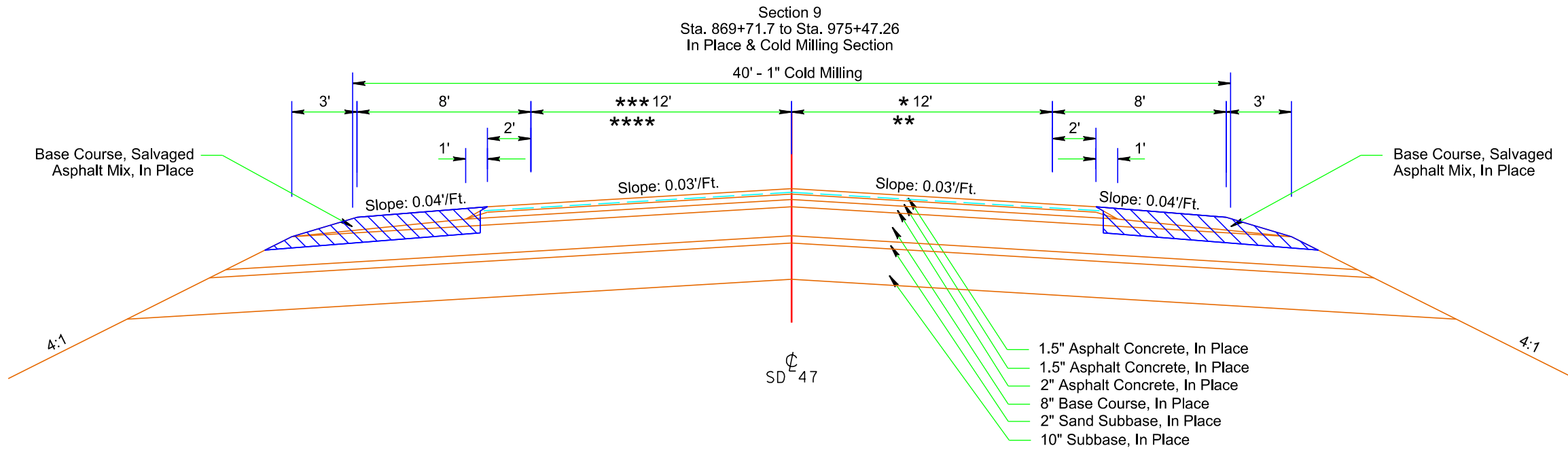


TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F24	F41

Plotting Date: 12/4/2024 REV 12-4-24 JT

 7" Full Depth Reclamation (FDR)



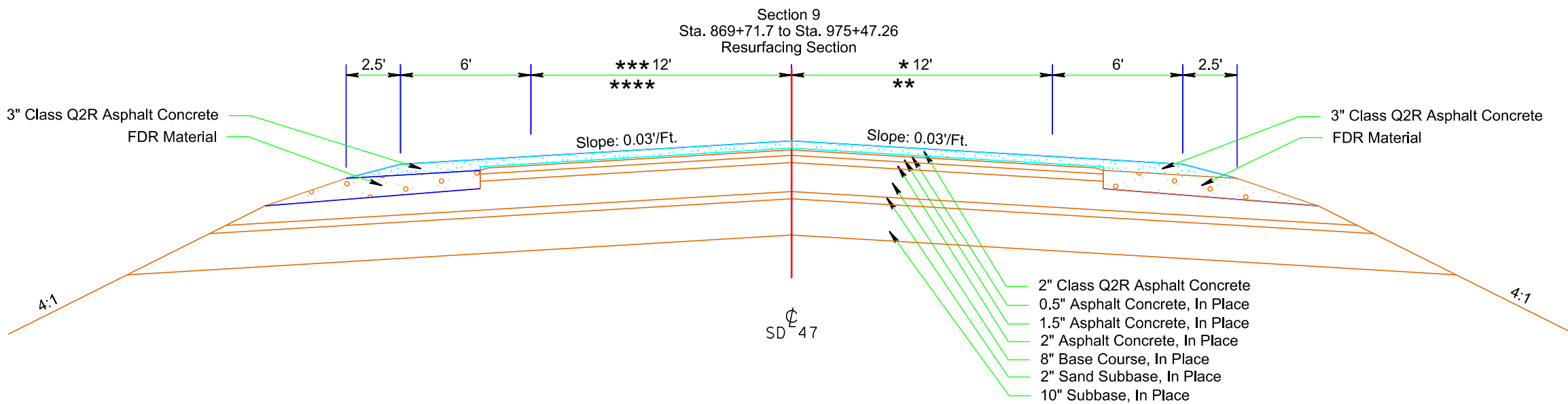
Transitions:

Sta. 870+21.7 to Sta. 874+32.26
* 24'

Sta. 874+32.26 to Sta. 876+93.34
** 24' to 12'

Sta. 870+21.7 to Sta. 875+71.7
*** 24'

Sta. 875+71.7 to Sta. 878+34.62
**** 24' to 12'



Transitions:

Sta. 870+21.7 to Sta. 874+32.26
* 24'

Sta. 874+32.26 to Sta. 876+93.34
** 24' to 12'

Sta. 870+21.7 to Sta. 875+71.7
*** 24'

Sta. 875+71.7 to Sta. 878+34.62
**** 24' to 12'



PLOT SCALE - 1+6.00001

PLOTTED FROM - JUSTIN

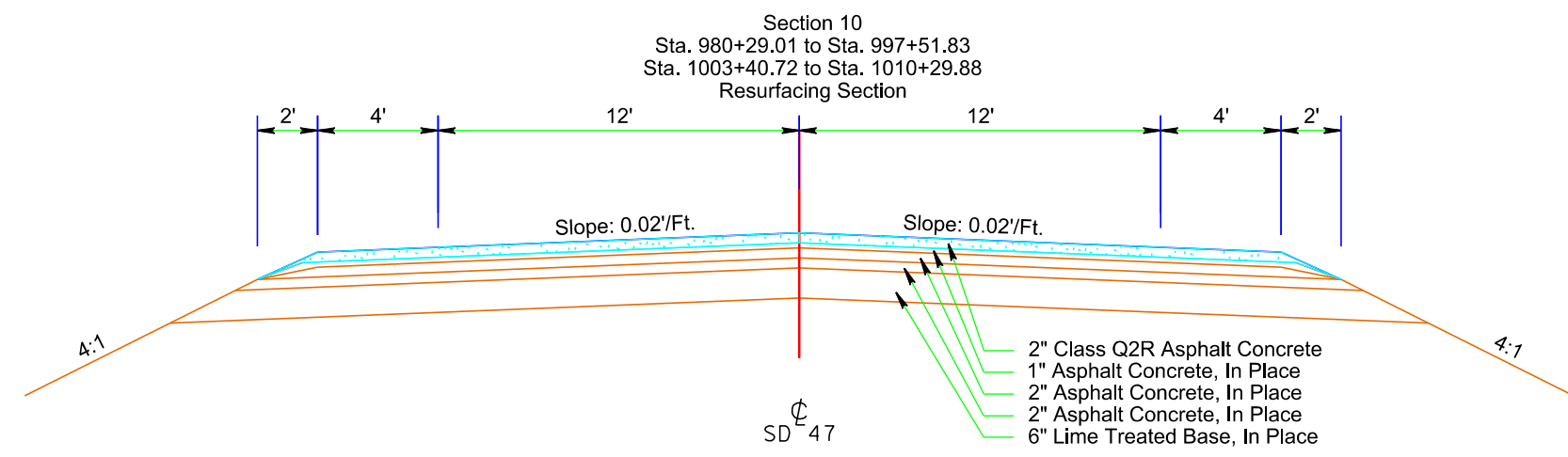
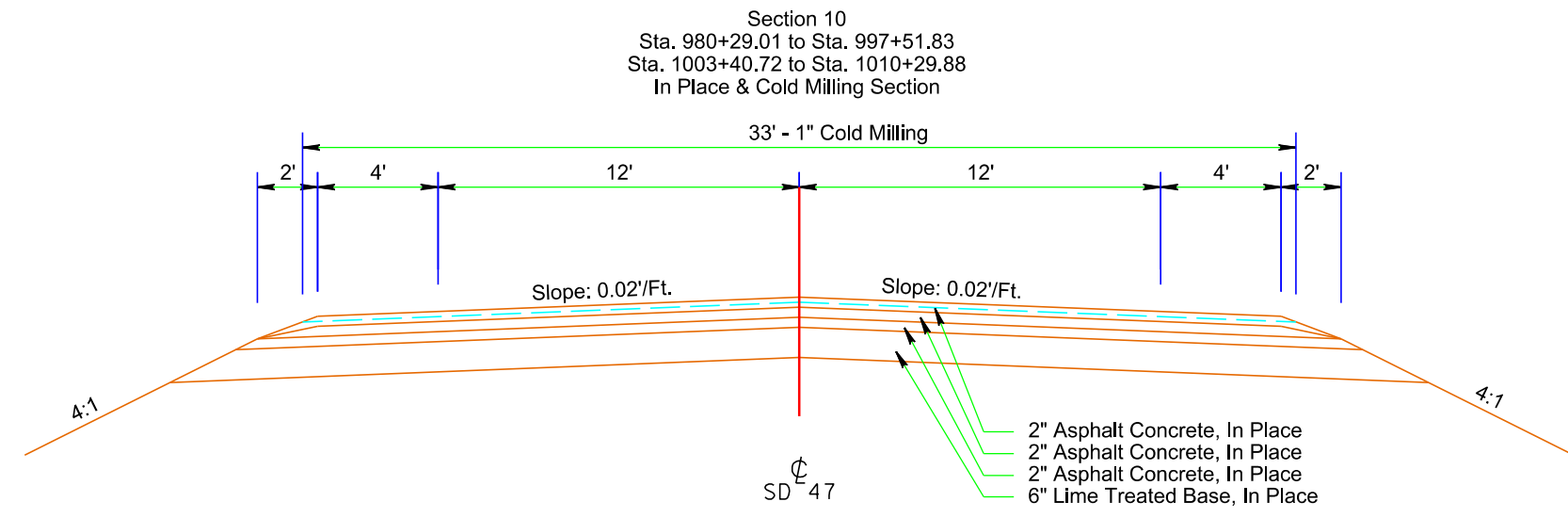
FILE - ... \SECTION F\0690_TYPSECT_JT.DGN PLOT NAME - 20

TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F25	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

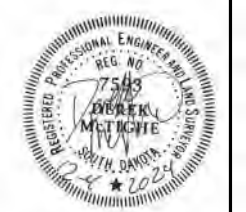
PLOT SCALE - 1+6.000001

PLOT NAME - 21



PLOTTED FROM - JUSTIN

FILE - ... \SECTION F\0690_TYPSECT_JT.DGN

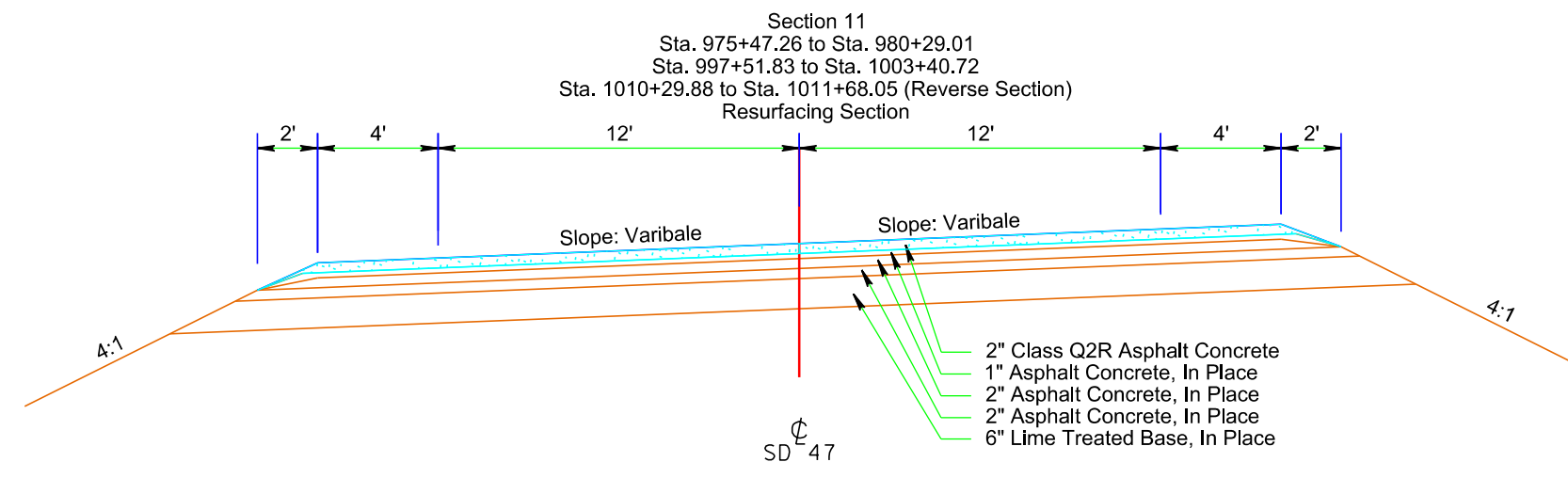
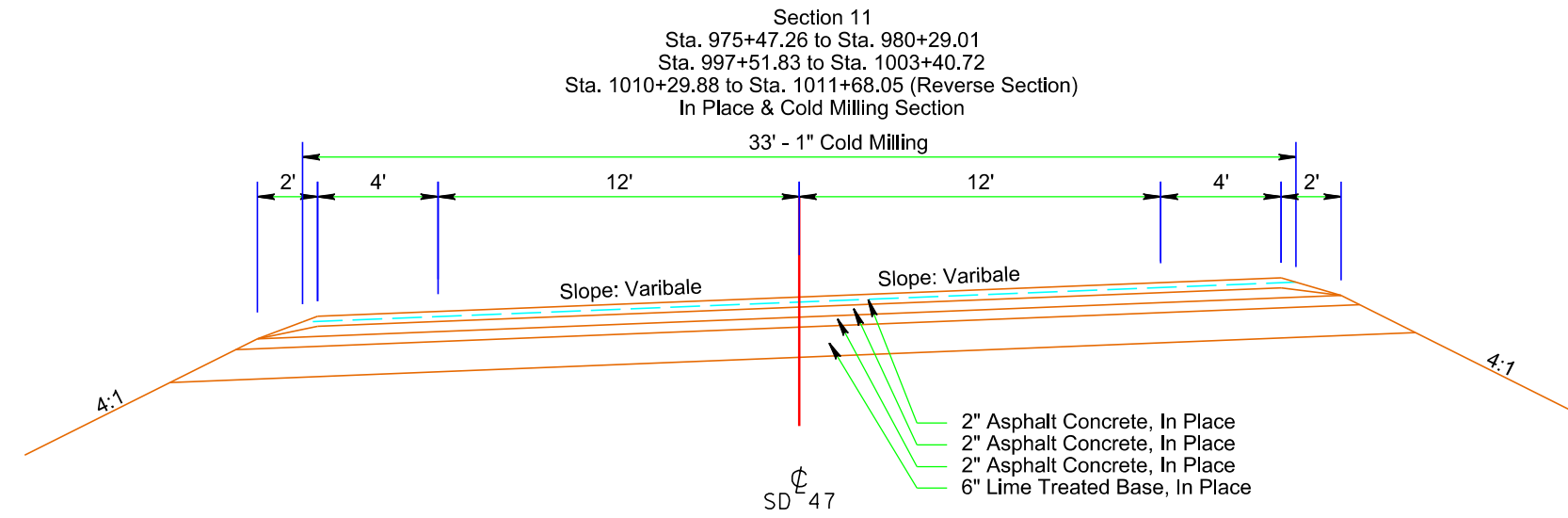


TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F26	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

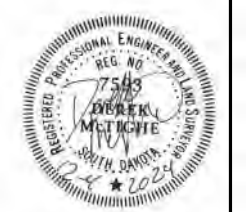
PLOT SCALE - 1+6.000001

PLOT NAME - 22



PLOTTED FROM - JUSTIN

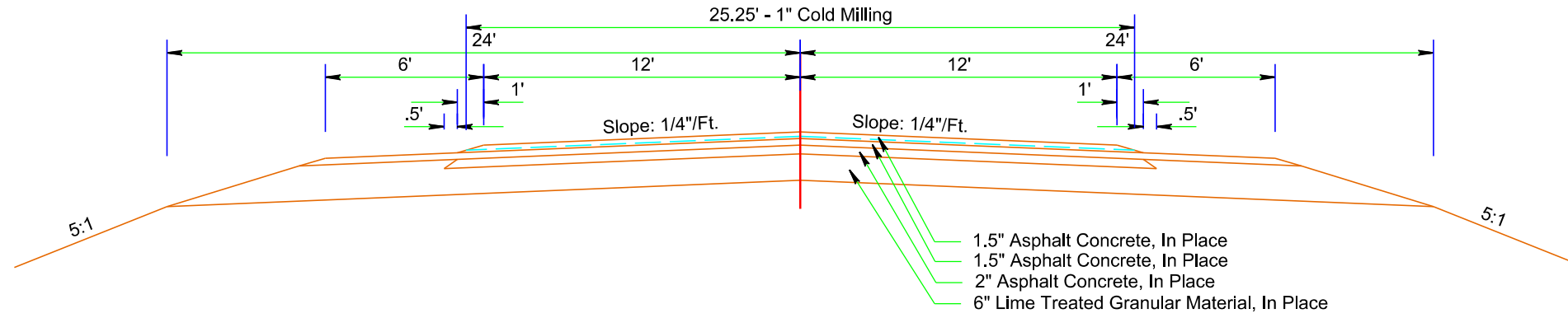
FILE - ... \SECTION F\0690_TYPSECT_JT.DGN



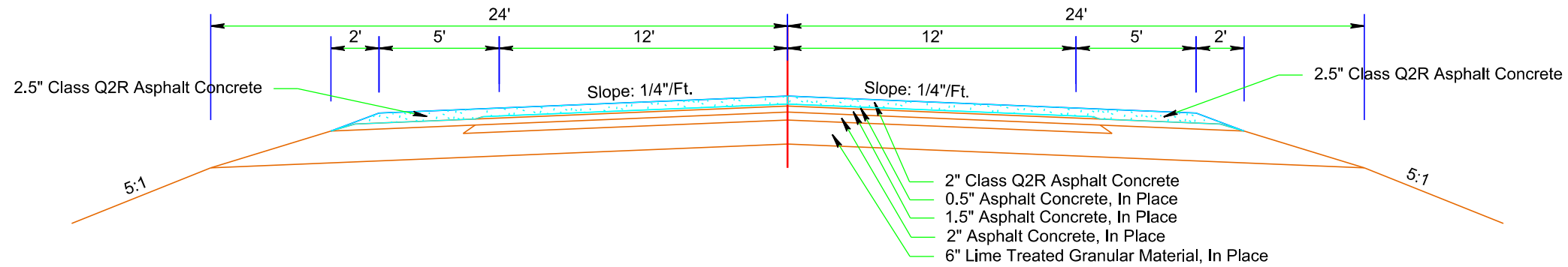
TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F27	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

Section 12
SD 47
Sta. 1011+68.05 to Sta. 1014+48.45
Sta. 1015+98.45 to Sta. 1020+31.32
In Place & Cold Milling Section



Section 12
SD 47
Sta. 1011+68.05 to Sta. 1014+48.45
Sta. 1015+98.45 to Sta. 1020+31.32
Resurfacing Section



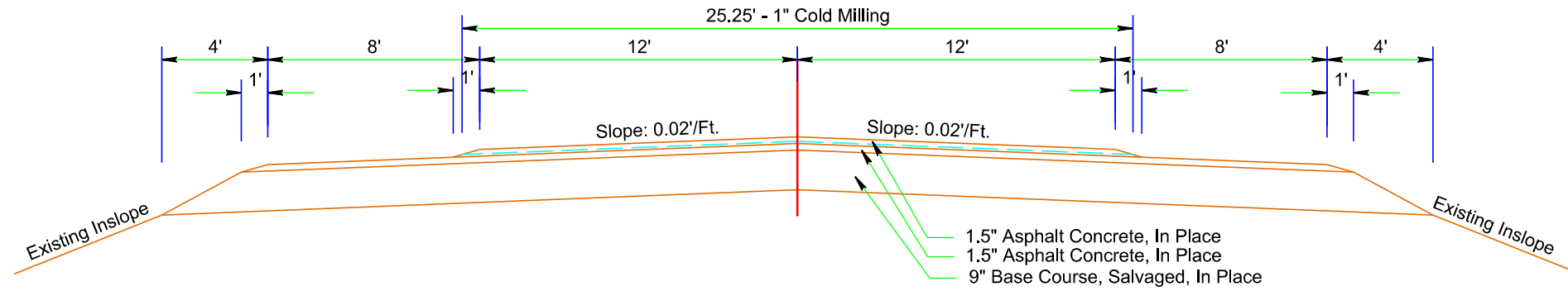
PLOT SCALE - 1+6.00001
PLOTTED FROM - JUSTIN

PLOT NAME - 23
FILE - ... \SECTION F\0690_TYPSECT_JT.DGN

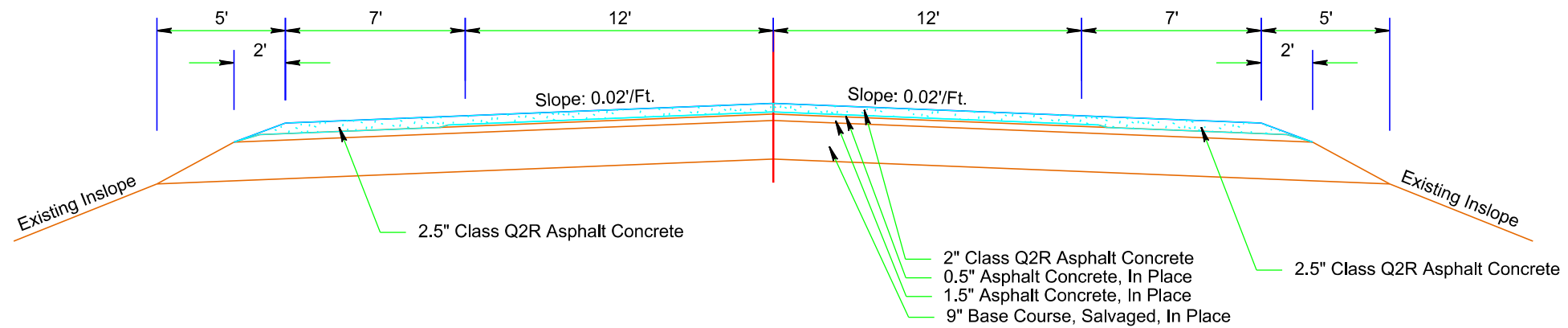
TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F28	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

Section 13
SD 47
Sta. 1014+48.45 to Sta. 1015+98.45
Sta. 1020+31.32 to Sta. 1021+81.32
In Place & Cold Milling Section



Section 13
SD 47
Sta. 1014+48.45 to Sta. 1015+98.45
Sta. 1020+31.32 to Sta. 1021+81.32
Resurfacing Section



PLOT SCALE - 1+6.00001

PLOTTED FROM - JUSTIN

PLOT NAME - 24

FILE - ... \SECTION F\0690_TYPSECT_JT.DGN



TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

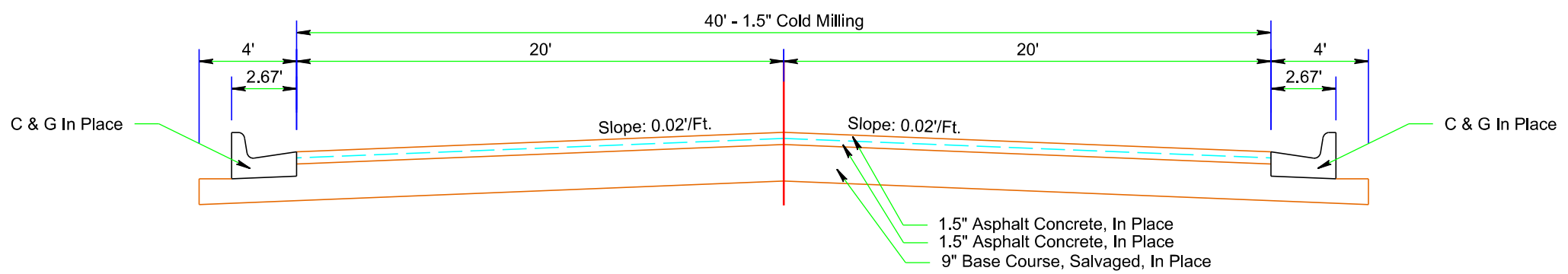
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F29	F41

Plotting Date: 12/4/2024 REV 12-4-24 JT

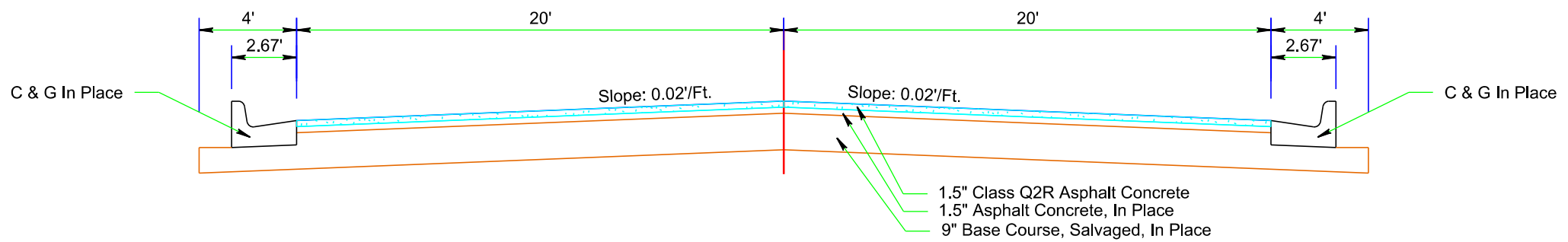
PLOT SCALE - 1+6.000001

PLOT NAME - 25

Section 14
SD 47
Sta. 1021+81.32 to Sta. 1024+81.32
In Place & Cold Milling Section



Section 14
SD 47
Sta. 1021+81.32 to Sta. 1024+81.32
Resurfacing Section



PLOTTED FROM - JUSTIN

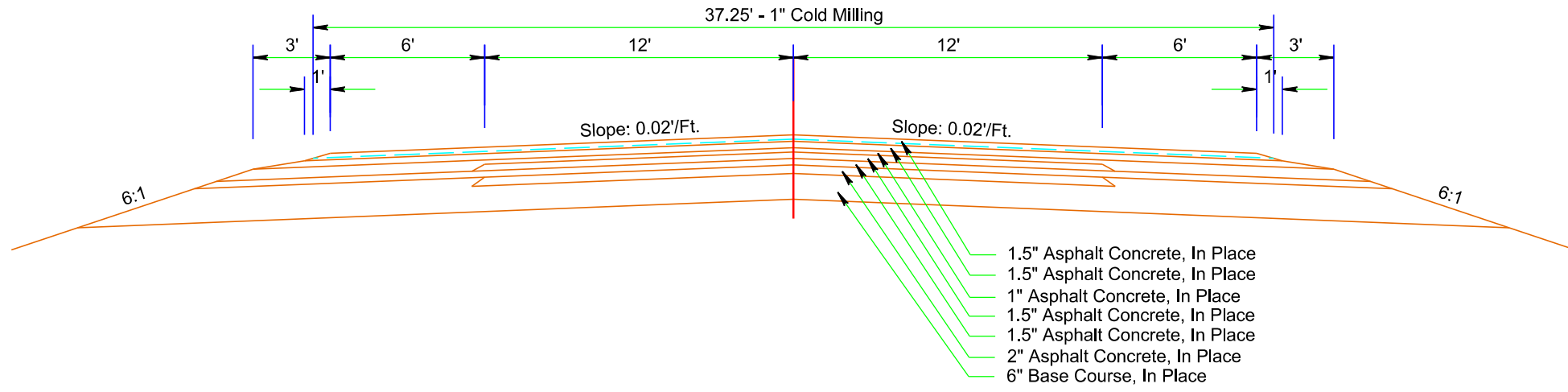
FILE - ... \SECTION F\0690_TYPSECT_JT.DGN



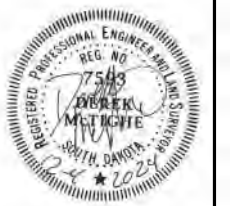
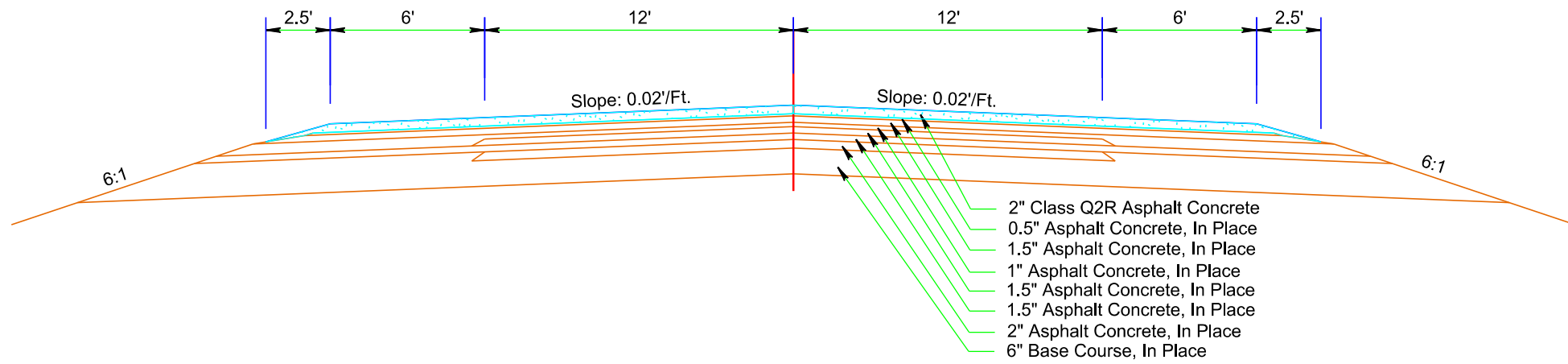
TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F30	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

Section 15
SD 248
Sta. 0+75.0 to Sta. 36+00.0
In Place & Cold Milling Section



Section 15
SD 248
Sta. 0+75.0 to Sta. 36+00.0
Resurfacing Section



PLOT SCALE - 1+6.00001

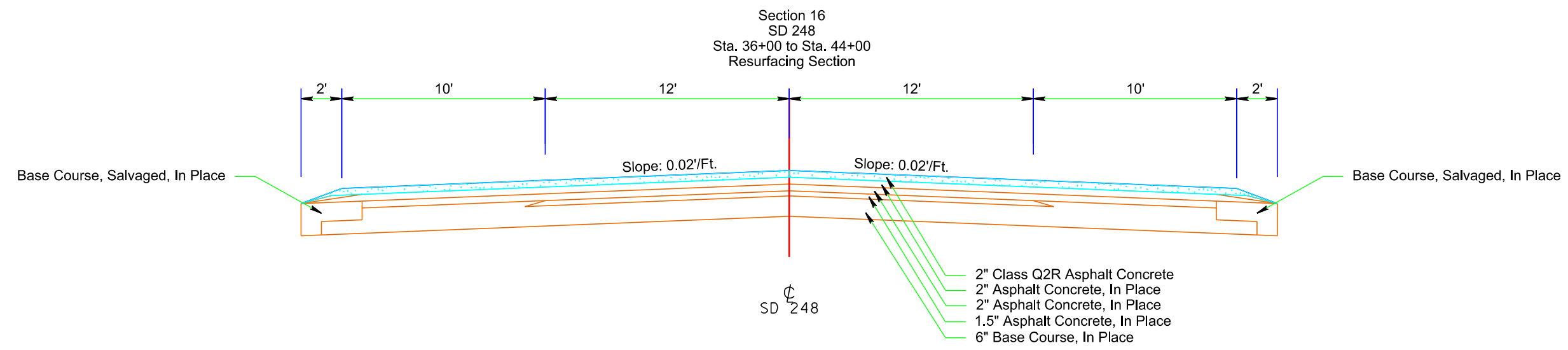
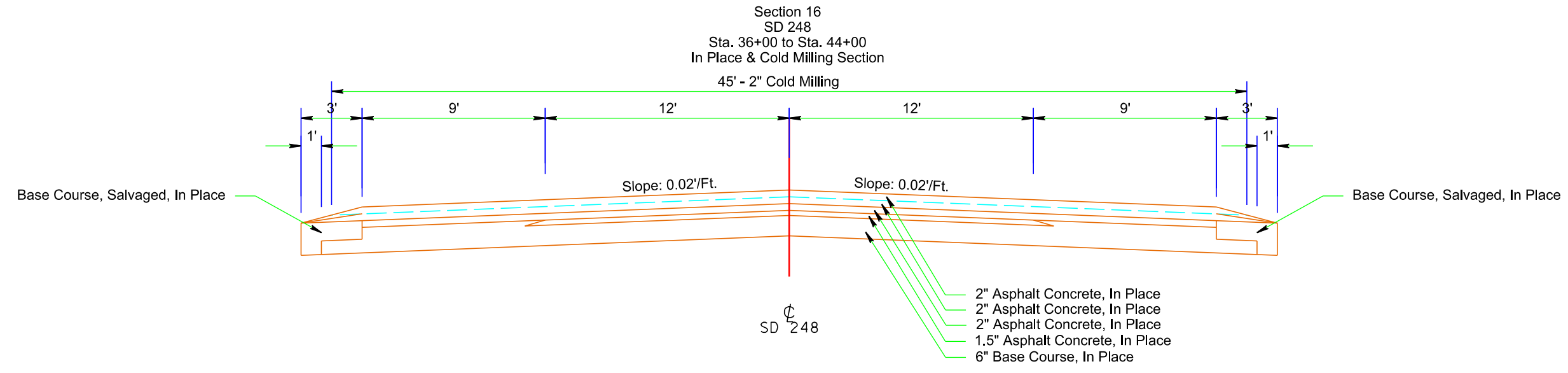
PLOT NAME - 26

FILE - ... \SECTION F\0690_TYPSECT_JT.DGN

PLOTTED FROM - JUSTIN

TYPICAL SURFACING SECTIONS FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F31	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

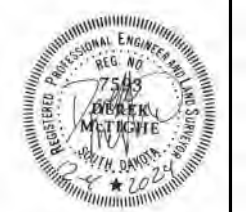


PLOT SCALE - 1+6.000001

PLOT NAME - 27

FILE - ... \SECTION F\0690_TYPSECT_JT.DGN

PLOTTED FROM - JUSTIN

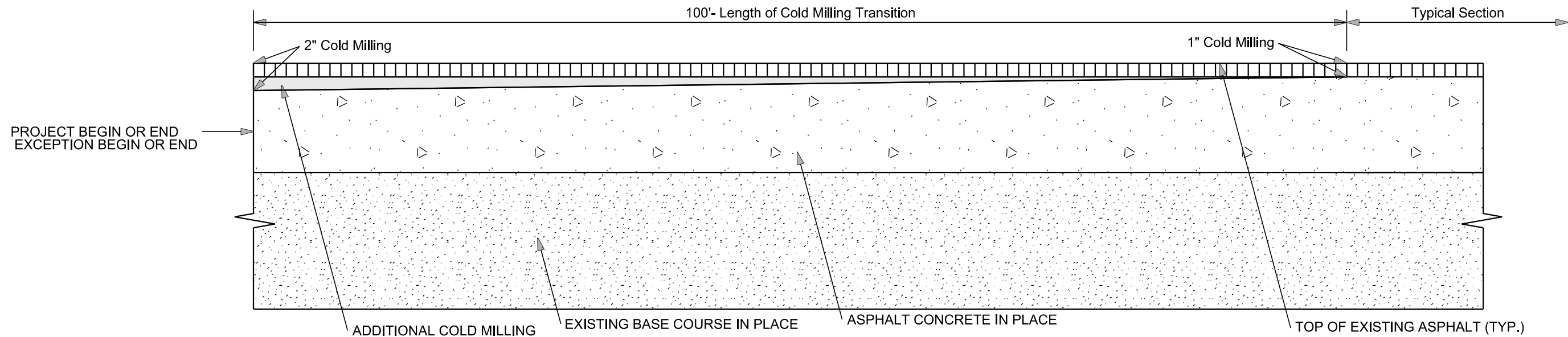


LAYOUT FOR COLD MILLING TAPERS

FOR BIDDING PURPOSES ONLY

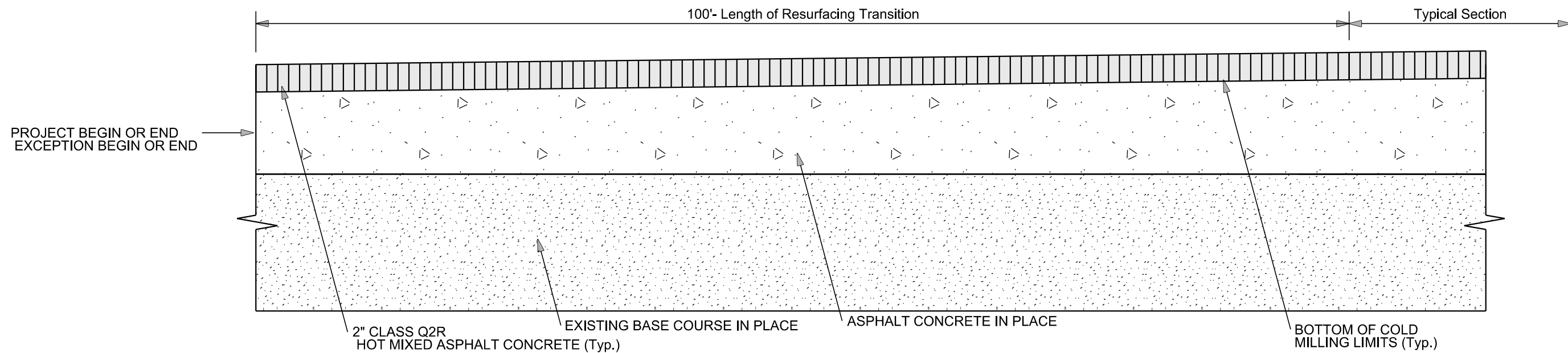
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F32	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

Plot Scale - 1:200



- The shaded area is the approximate limits of additional cold milling asphalt concrete.
- The hatched area is the approximate limits of 1" cold milling of asphalt concrete.
- The shaded/hatched area is the approximate limits of 2" Class Q2R Hot Mixed Asphalt Concrete

THE CONTRACTOR WILL TRANSITION THE COLD MILLING FROM THE EXCEPTION BEGIN/END (OR PROJECT BEGIN/END) TO A POINT 100' FROM THE EXCEPTION BEGIN/END (OR PROJECT BEGIN/END), AS SHOWN IN THE DETAIL



NOTE: Cost of additional milling as shown in the detail will be incidental to the contract unit price per square yard for "Cold Milling Asphalt Concrete".

Plotted From - Justin

File - ...Section F Cold Milling.dgn



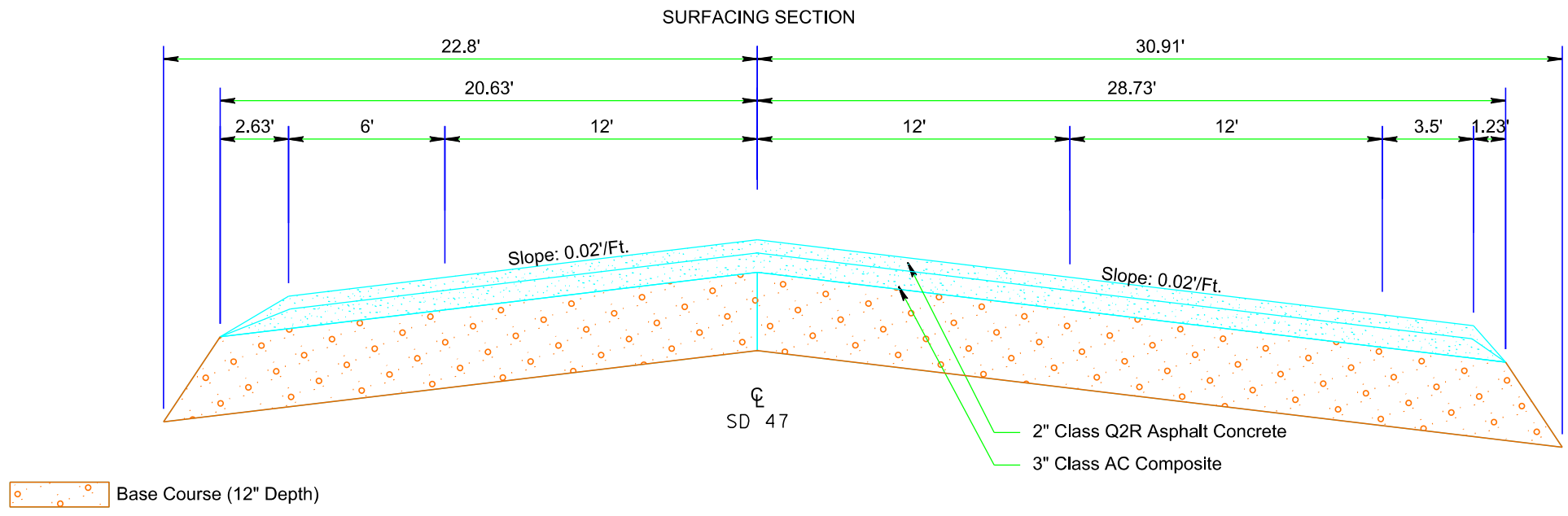
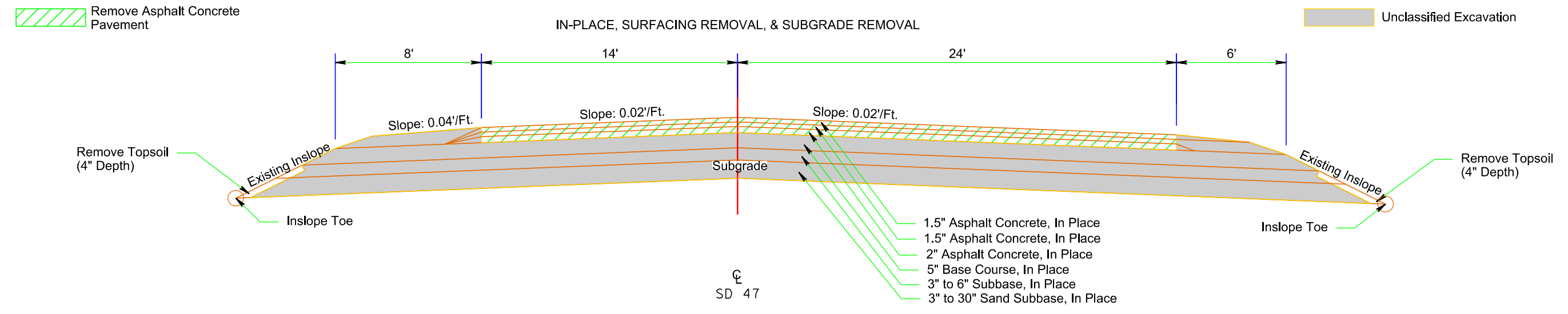
MAINLINE PIPE CULVERT REPLACEMENT DETAIL

FOR BIDDING PURPOSES ONLY

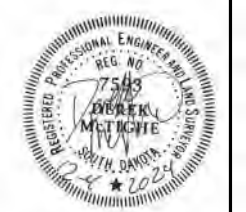
STATE OF SOUTH DAKOTA	PROJECT P 0047(117)67 P 0248(13)261	SHEET F33	TOTAL SHEETS F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

Section 1 (Pipe Culvert Replacement Sites)

Station 13+77 to Station 14+17
Station 102+68 to Station 103+08



DRAWING NOT TO SCALE



PLOT SCALE - 1+6.00001

PLOTTED FROM - JUSTIN

PLOT NAME - 29

FILE - ... \MAINLINE CULVERT REPLACEMENT DETAIL.DGN

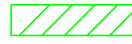
MAINLINE PIPE CULVERT REPLACEMENT DETAIL


FOR BIDDING PURPOSES ONLY

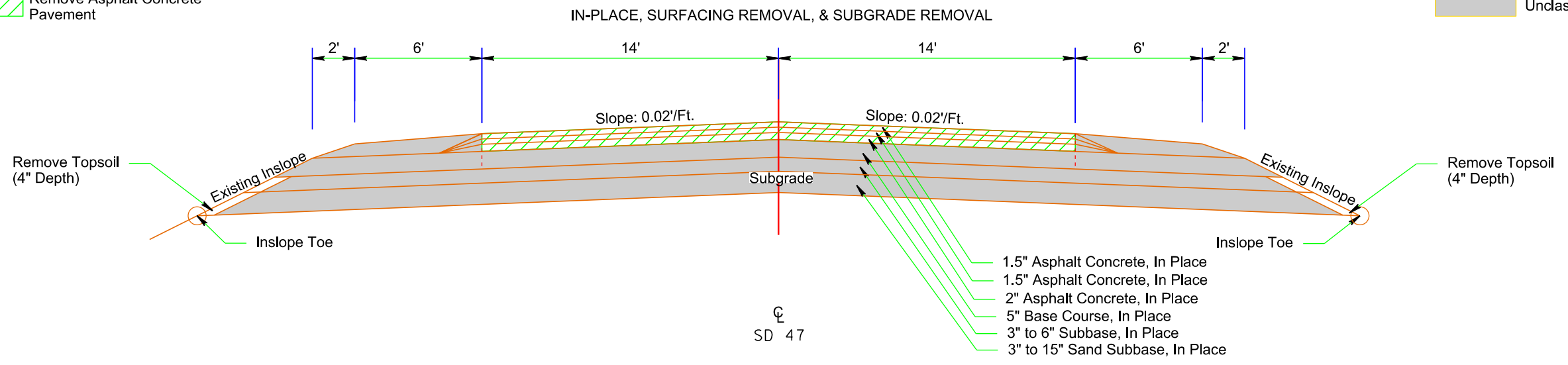
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F34	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

Section 4 (Pipe Culvert Replacement Sites)

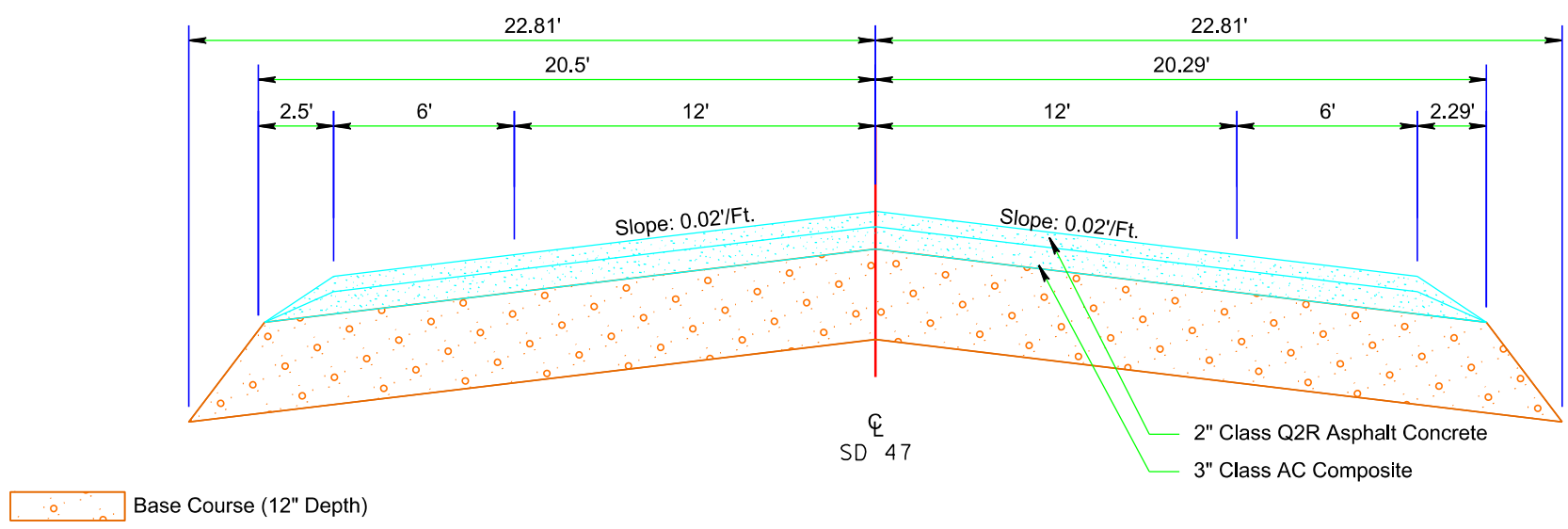
Station 413+92 to Station 414+32
Station 432+92 to Station 433+32

 Remove Asphalt Concrete Pavement

 Unclassified Excavation



SURFACING SECTION



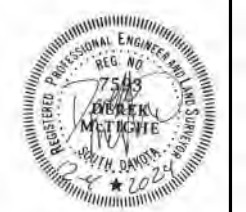
PLOT SCALE - 1+6.00001

PLOT NAME - 30

FILE - ... \MAINLINE CULVERT REPLACEMENT DETAIL.DGN

PLOTTED FROM - JUSTIN

DRAWING NOT TO SCALE



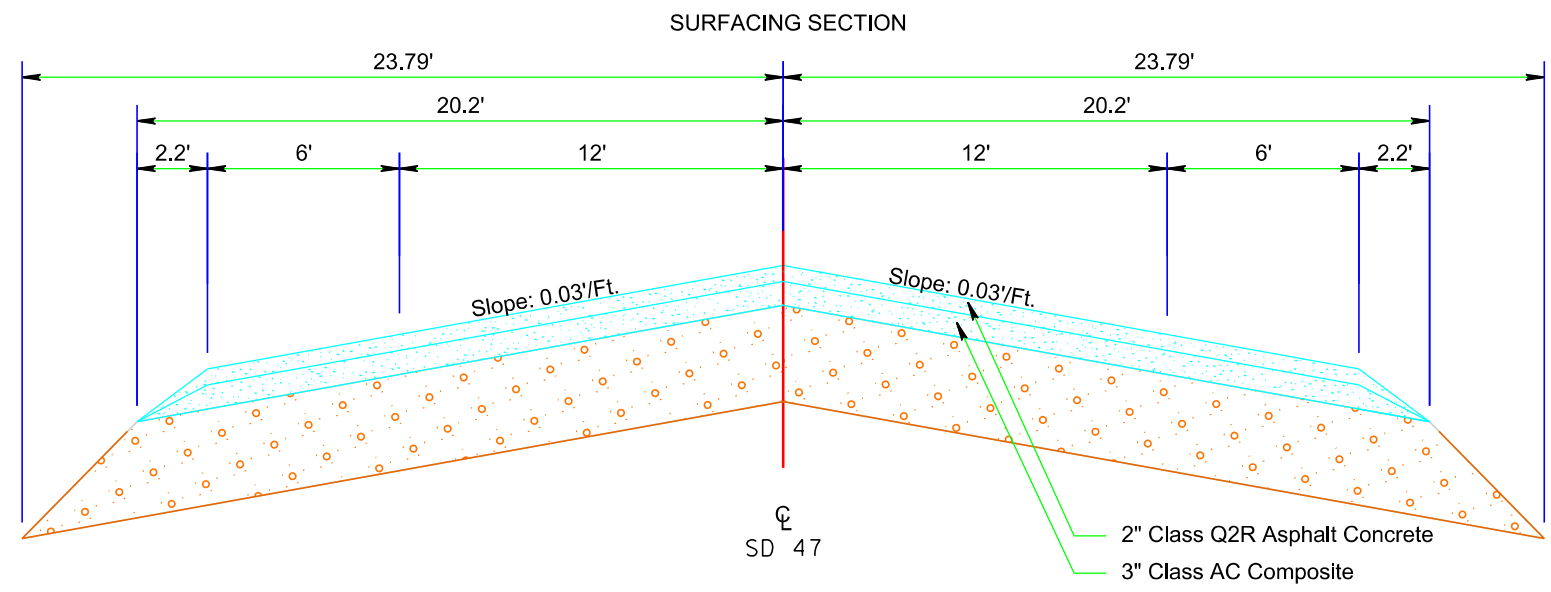
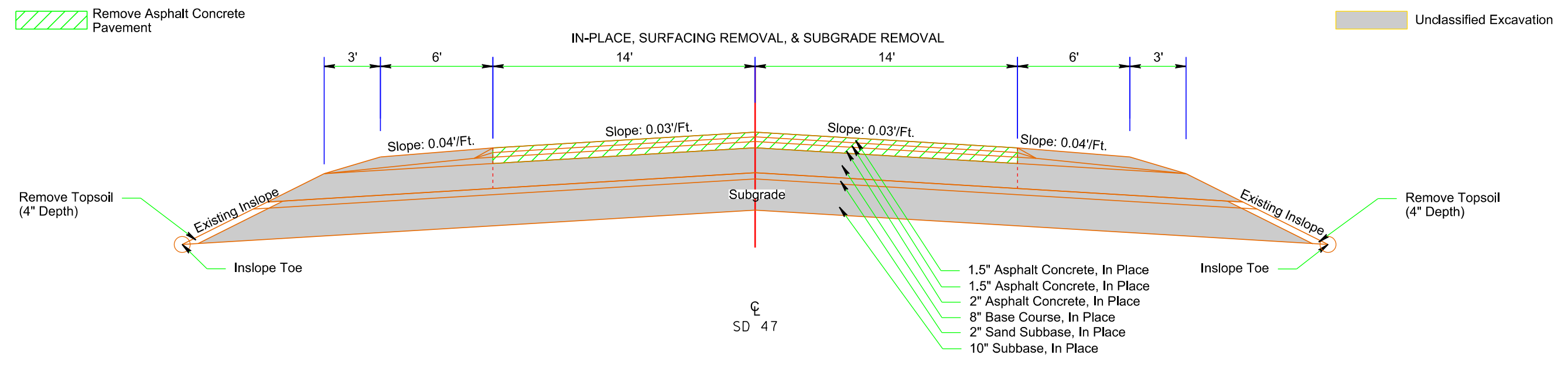
MAINLINE PIPE CULVERT REPLACEMENT DETAIL

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F35	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

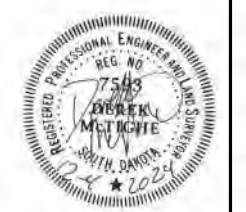
Section 9 (Pipe Culvert Replacement Sites)

Station 912+36 to Station 912+76
 Station 921+84 to Station 922+24
 Station 968+31 to Station 968+71



Base Course (12" Depth)

DRAWING NOT TO SCALE



PLOT SCALE - 1+6.00001

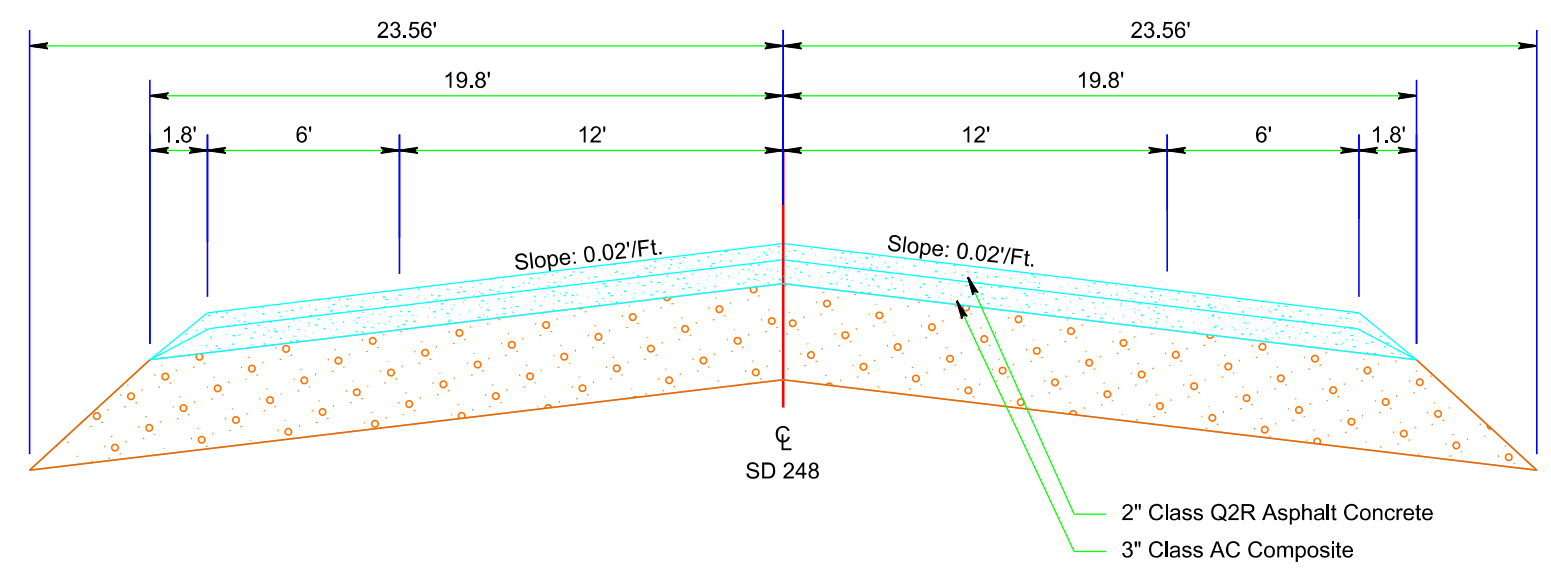
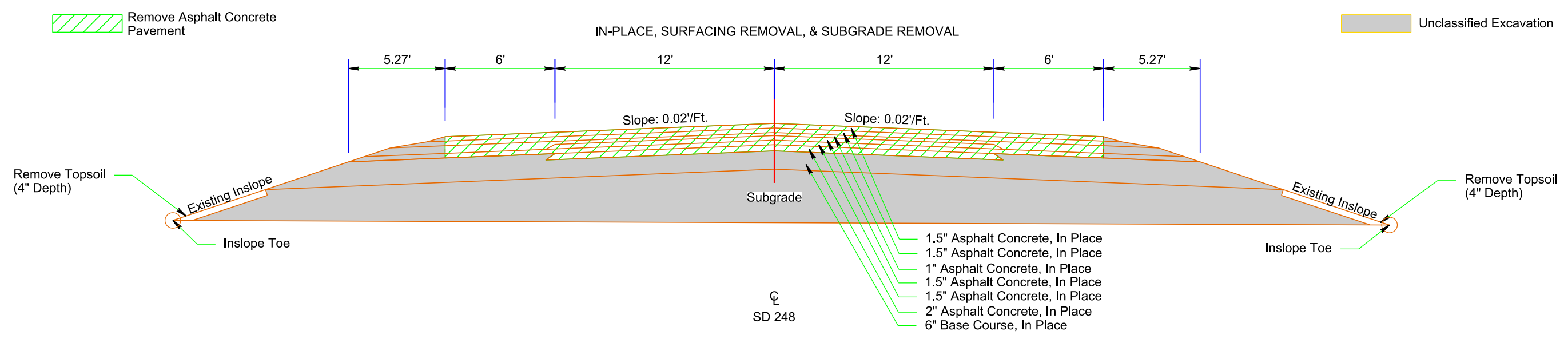
PLOT NAME - 31
FILE - ... \MAINLINE CULVERT REPLACEMENT DETAIL.DWG

MAINLINE PIPE CULVERT REPLACEMENT DETAIL

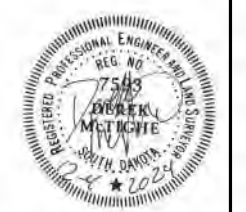
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(117)67 P 0248(13)261	F36	F41
Plotting Date: 12/4/2024		REV 12-4-24 JT	

Section 15 (Pipe Culvert Replacement Sites)
 Hwy 248
 Station 4+83 to Station 5+23
 Station 18+82 to Station 19+22

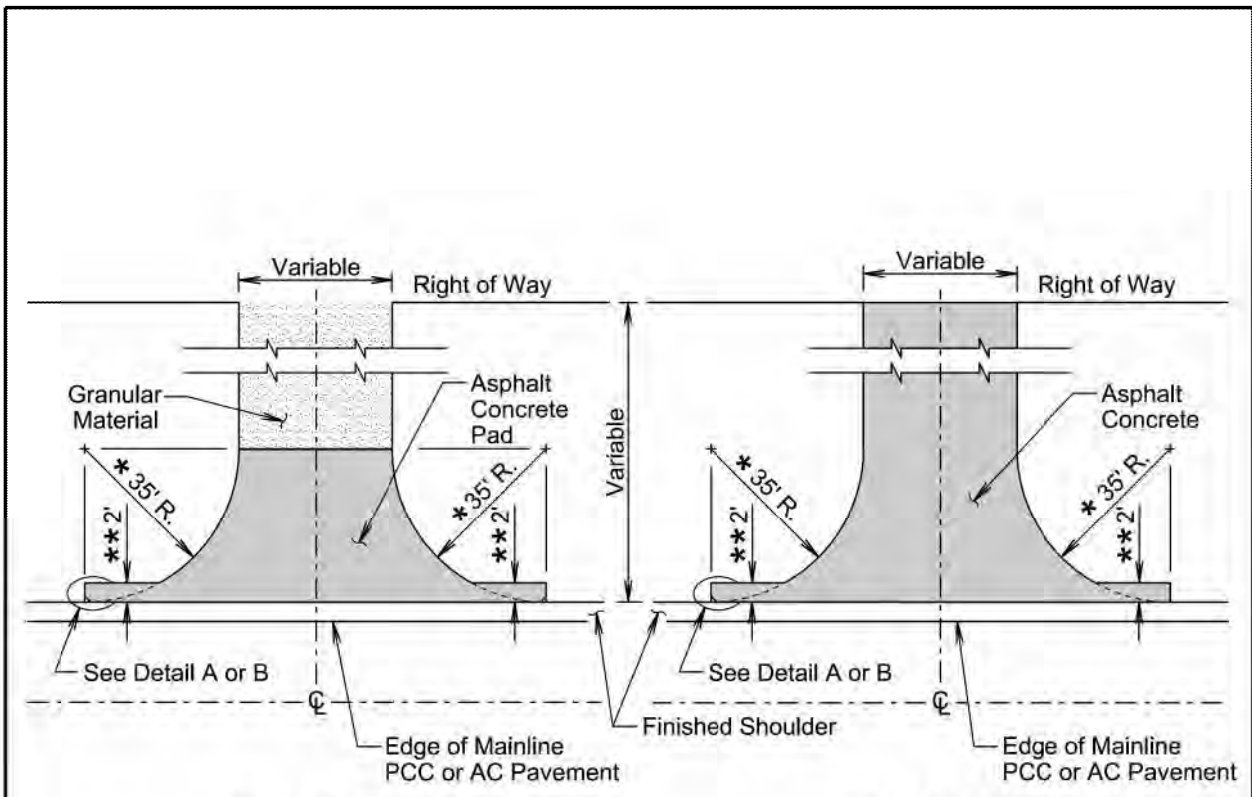


DRAWING NOT TO SCALE



PLOT SCALE - 1+6.00001

PLOT NAME - 32
 FILE - ... \MAINLINE CULVERT REPLACEMENT DETAIL.DGN



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:

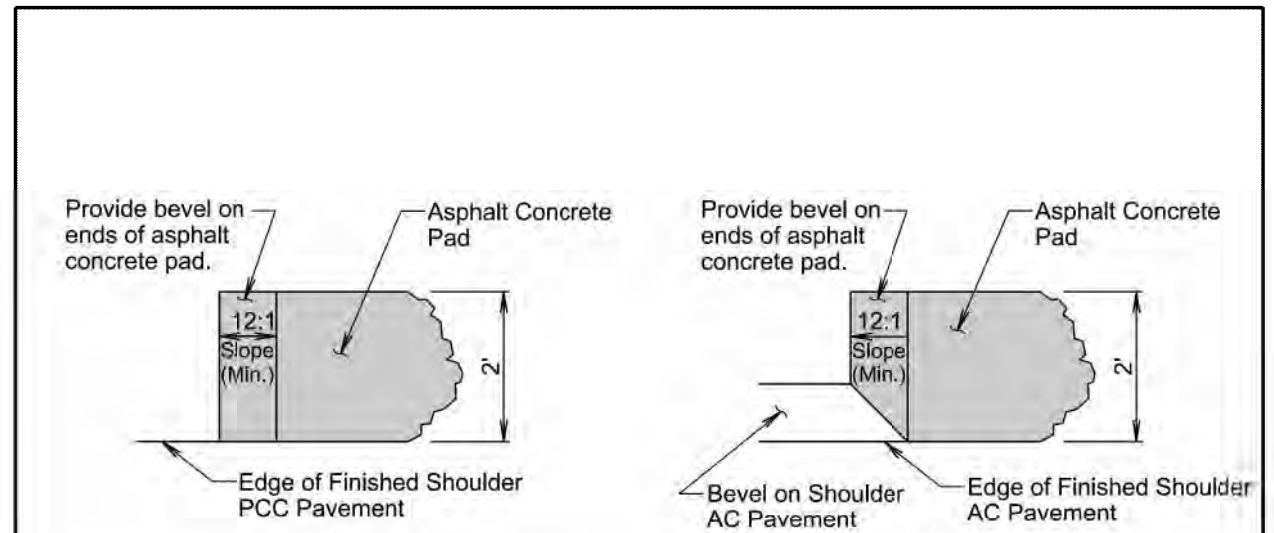
The precise construction limits for situations other than shown above will be determined by the Engineer during construction.

* 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.

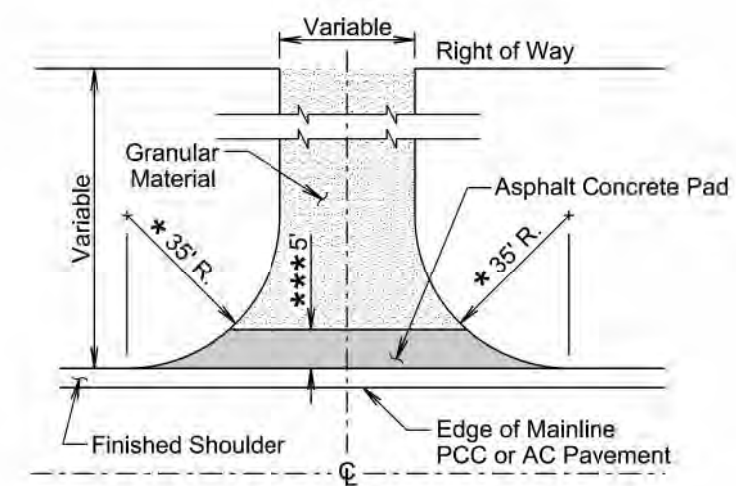
August 27, 2020

Published Date: 2025	S D D O T	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.

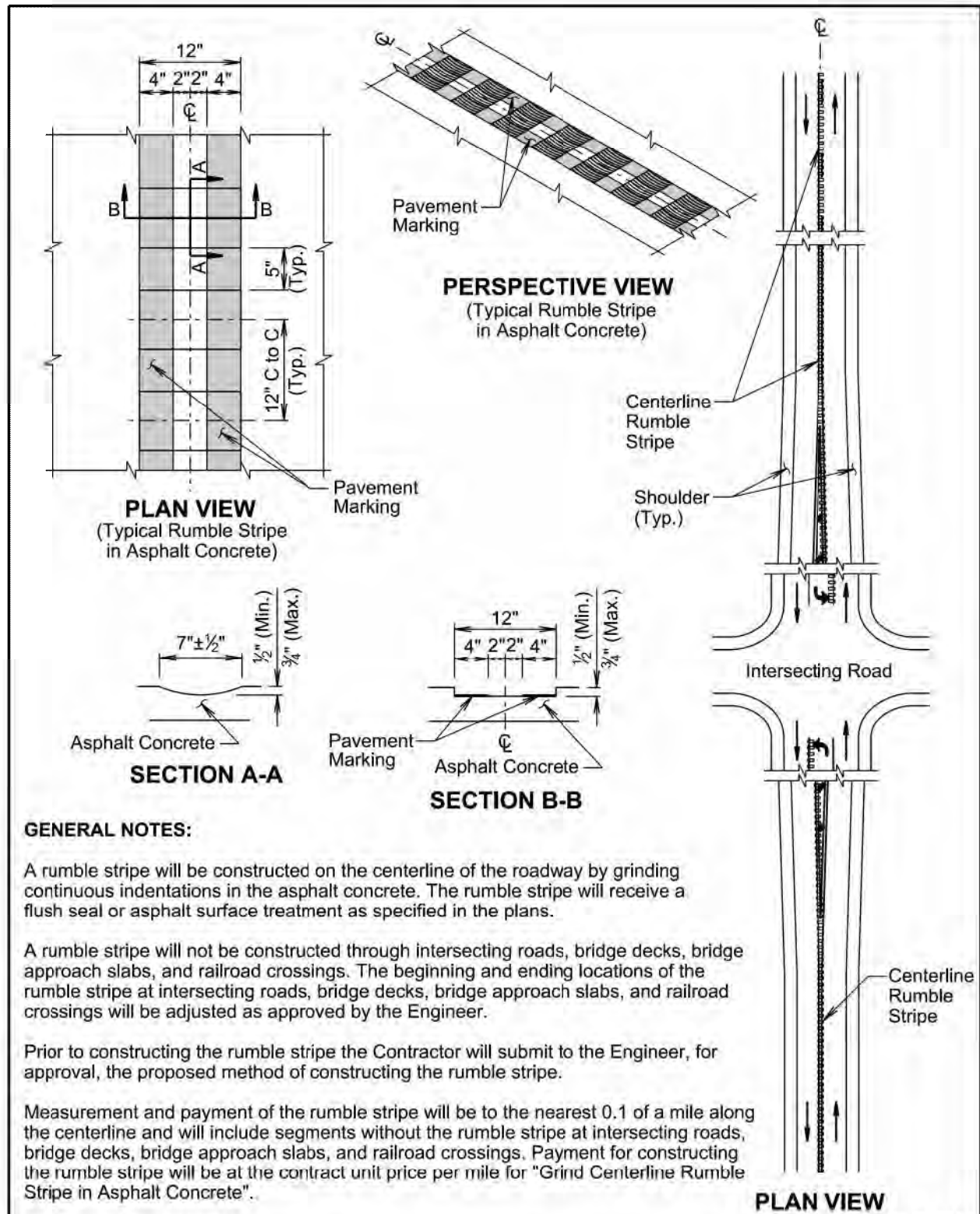
August 27, 2020

Published Date: 2025	S D D O T	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

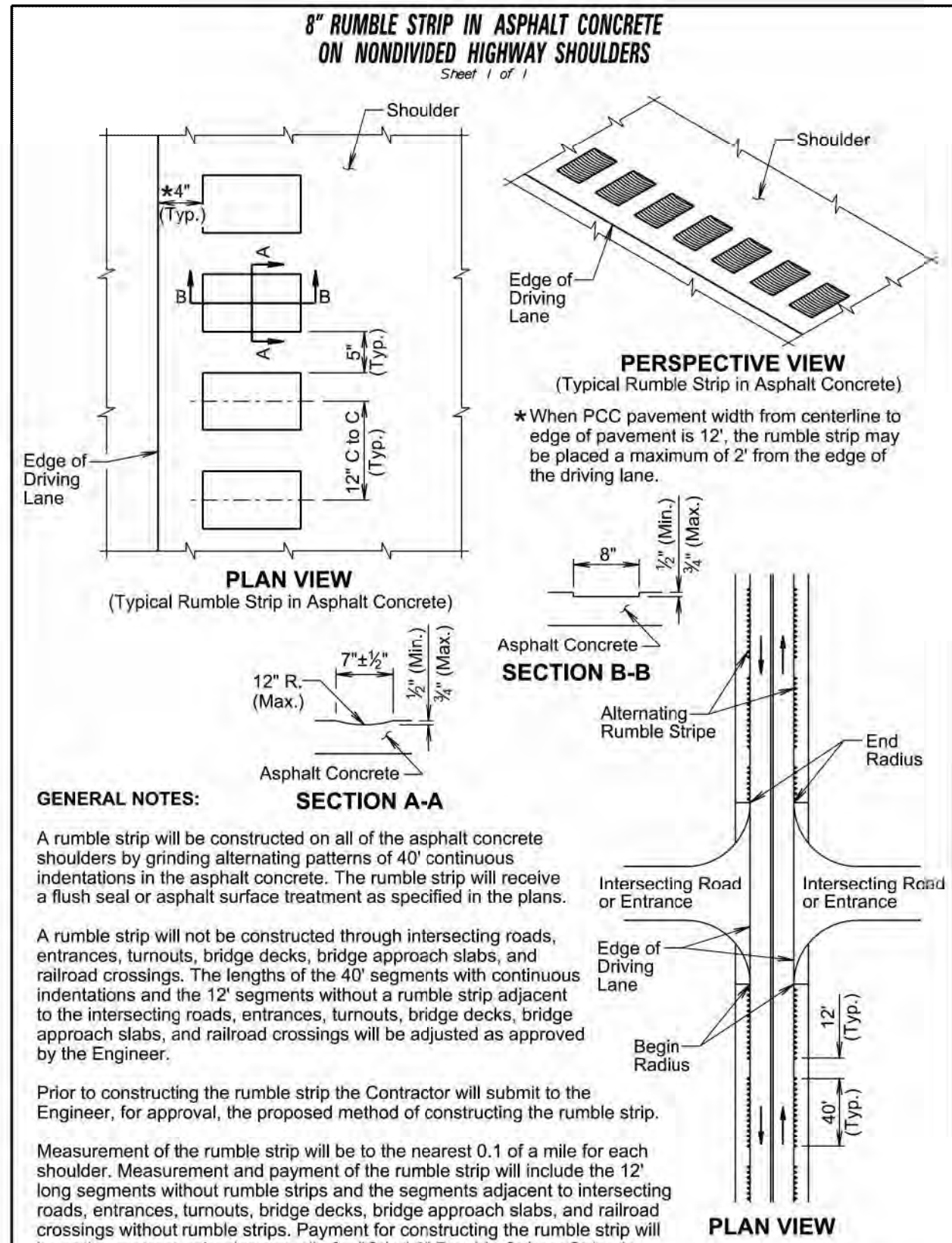
Plotted From - Justin

File - ...Section F\StandardPlates.dgn

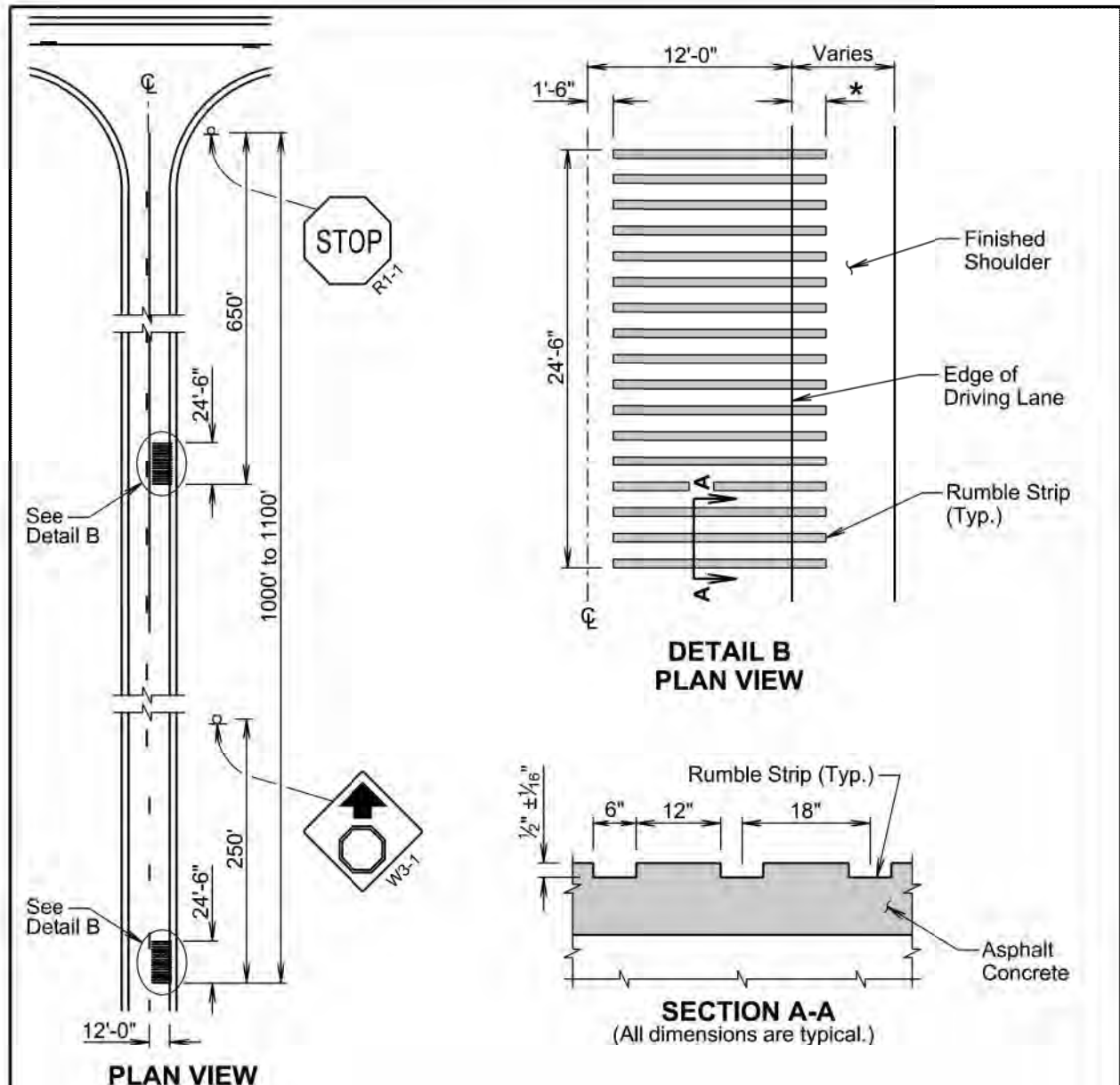


November 19, 2020

Published Date: 2025	S D D O T	12" CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE	PLATE NUMBER 320.18
			Sheet 1 of 1



PLAN VIEW



GENERAL NOTES:

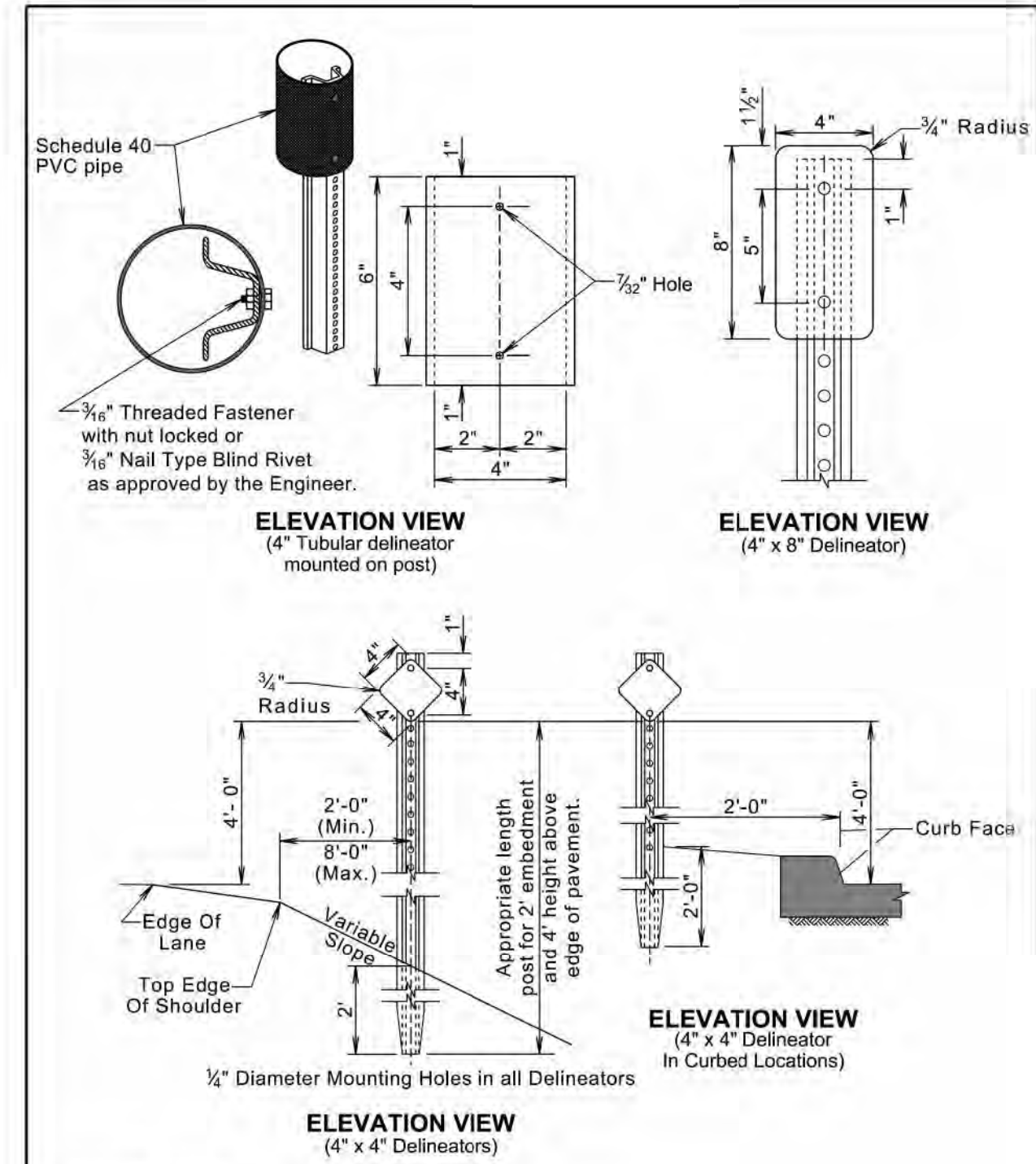
Transverse rumble strips will be constructed by grinding, routing, or cutting recessed indentations into the asphalt concrete as approved by the Engineer. The transverse rumble strips will receive a flush seal or fog seal as specified in the plans.

* The transverse rumble strips will extend into the finished shoulder as approved by the Engineer.

Measurement of the recessed transverse rumble strips will be to the nearest foot. Payment for constructing the recessed transverse rumble strips will be at the contract unit price per foot for "Grind 6" Transverse Rumble Strip in Asphalt Concrete".

January 22, 2021

Published Date: 2025	S D D O T	TRANSVERSE RUMBLE STRIP IN ASPHALT CONCRETE HIGHWAY ADJACENT TO STOP CONTROLLED INTERSECTION	PLATE NUMBER 320.45
			Sheet 1 of 1

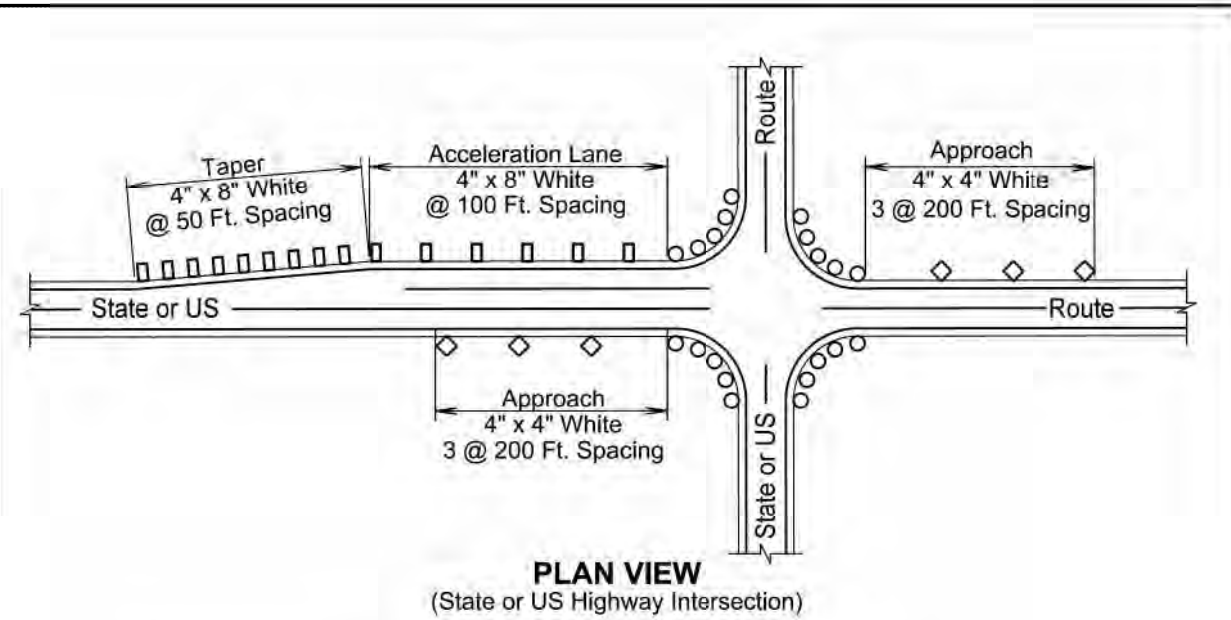


GENERAL NOTES:

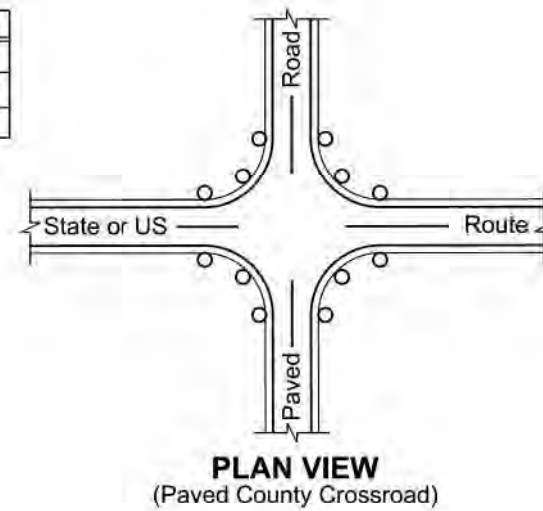
Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

March 31, 2024

Published Date: 2025	S D D O T	DELINEATOR INSTALLATION DETAIL	PLATE NUMBER 632.42
			Sheet 1 of 1



LEGEND	
◇	4" x 4" White Delineator
□	4" x 8" White Delineator
○	4" x 6" White Tubular Delineator

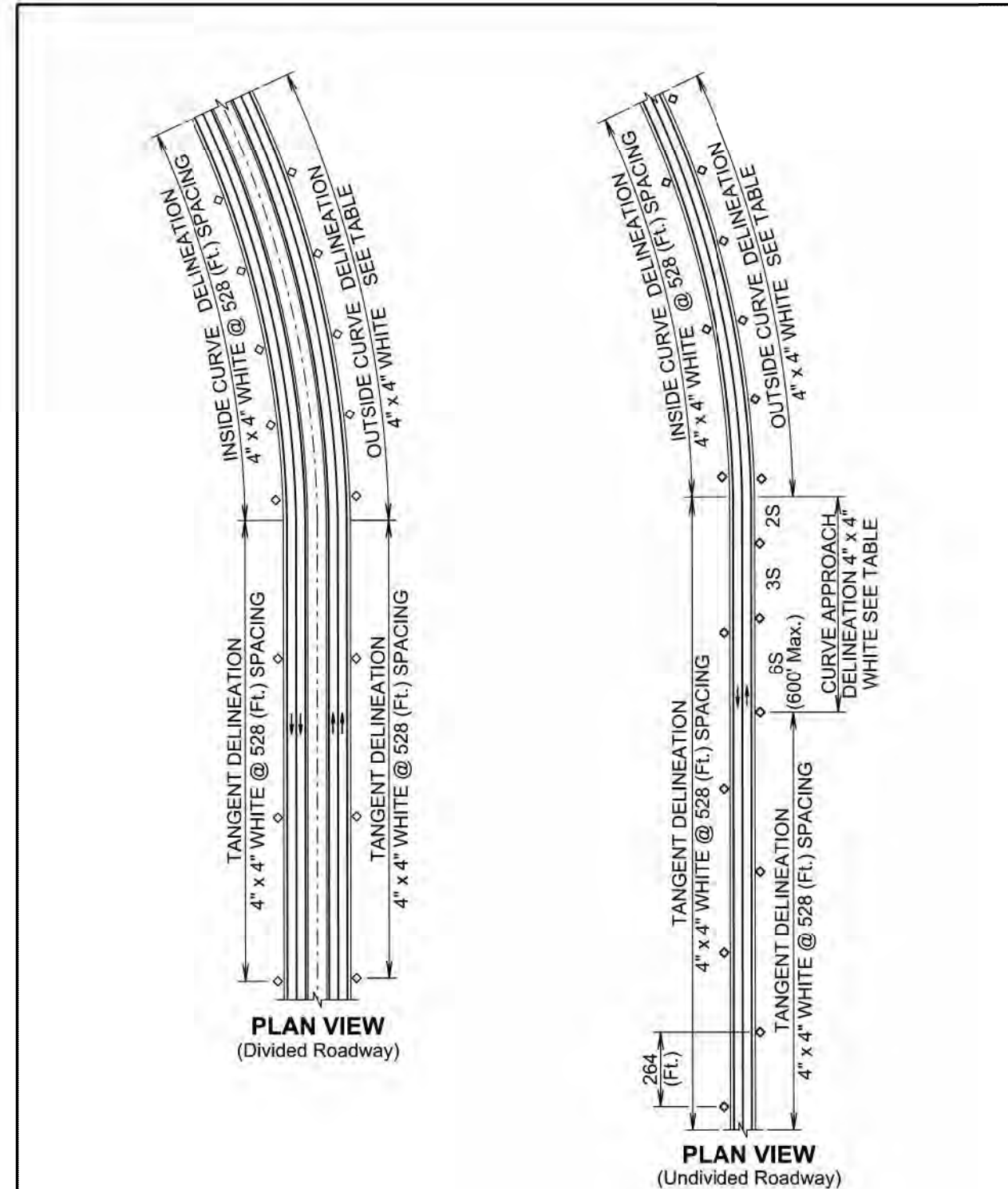


GENERAL NOTES:

- At all intersections with State or US highways and paved county roads:
- For radii greater than 100 feet, place 5 tubular white delineators on equally spaced posts around the turning radius.
- For radii greater than 50 feet up to 100 feet, place 4 tubular white delineators on equally spaced posts around the turning radius.
- For radii of 50 feet or less, place 3 tubular white delineators on equally spaced posts around the turning radius.

November 19, 2020

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March 31, 2024

Published Date: 2025	S D D O T	DELINEATOR INSTALLATION SPACING	PLATE NUMBER 632.46
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GENERAL NOTES:

Delineators will be located from 2 to 8 feet outside of the outer edge of shoulder. When a roadside barrier or other obstruction intrudes into the space between the pavement edge and the extension of the line of delineators, the delineators should be in line with the barrier or in line with the innermost edge of the obstruction.

When normal spacing is interrupted by driveways, crossroads, or approaches, delineators falling within such areas may be moved in either direction a distance not exceeding one-quarter of the standard spacing. Delineators still falling within such areas should be eliminated.

The spacing for specific radii may be interpolated from the table. The minimum spacing should be 20 feet. The spacing on curves should not exceed 300 feet. In advance of or beyond a curve, and proceeding away from the end of the curve, the spacing of the first delineator is 2S, the second 3S, and the third 6S, but not to exceed 300 feet. S refers to the delineator spacing for specific radii computed from the formula $S = 3\sqrt{R - 50}$. The distances for S shown in the table were rounded to the nearest 5 feet.

Curve approach delineation is not required if curve delineation spacing exceeds 100 ft.

Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

DELINEATOR SPACING OUTSIDE CURVE				
Radius of Curve (Ft.)	Curve Delineator Spacing (Ft.)	Curve Approach Spacing (Ft.)		
		A	B	C
50	20	40	65	125
115	25	50	75	150
150	30	60	90	180
180	35	70	110	215
250	40	85	125	250
300	45	95	140	285
400	55	110	170	300
500	65	125	190	300
600	70	140	210	300
700	75	150	230	300
800	80	165	245	300
900	85	175	260	300
1000	90	185	275	300

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