DEPARTMENT OF TRANSPORTATION

Planning & Engineering
Office of Project Development
700 East Broadway Avenue
Pierre, South Dakota 57501-2586
O: 605.773.3275
dot.sd.gov

September 11, 2026

To Whom it May Concern,

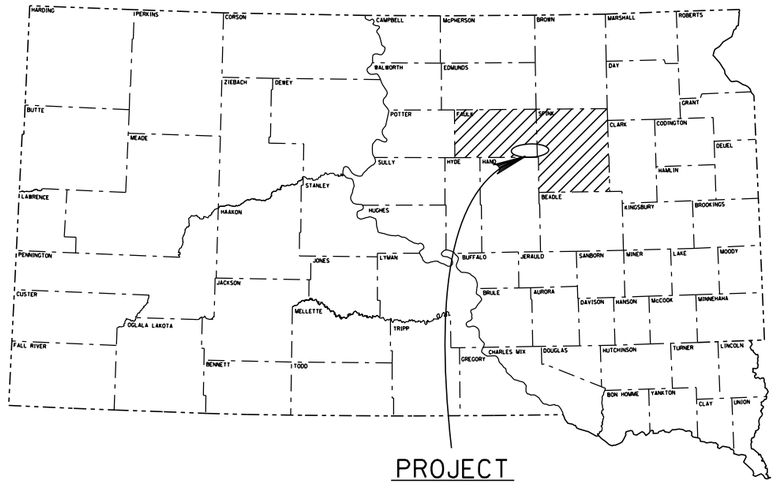
Beginning with the 10/7/2026 letting, the SDDOT will be using the new Electronic Standard Specifications for Roads and Bridges, 10-7-26 Version. The Standard Specifications for Roads and Bridges is available for download and viewing at https://dot.sd.gov/doing-business/contractors/standard-specifications . A printed version of the Standard Specifications for Roads and Bridges will not be provided.

A revised Buy America specification is in effect beginning with the 10/7/26 letting, which aligns with the expiration of the Federal Manufactured Products General Waiver. Contractors should be aware that new provisions for manufactured products, along with updates to material classifications, documentation requirements, and compliance procedures, are included in Section 6.9 of the Standard Specifications (10/07/2026 version). All contractors and suppliers are strongly encouraged to review the updated specification in full. Contractors are encouraged to attend the Buy America Informational Webinar being put on by the SDDOT and AGC. Information on the webinar can be found at:
https://dot.sd.gov/doing-business/contractors/webinars/

FHWA has updated the FHWA-1273 commonly known as the “Pink Sheets”. The new FHWA-1273 will be incorporated into all contracts awarded after 10/7/26. Additional information regarding the updated FHWA-1273 can be found at:
https://www.fhwa.dot.gov/construction/cqit/form1273.cfm

Sincerely,
SDDOT – Bid Letting Office

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212(213)282	1	49
Plotting Date: 05/27/2026			



STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

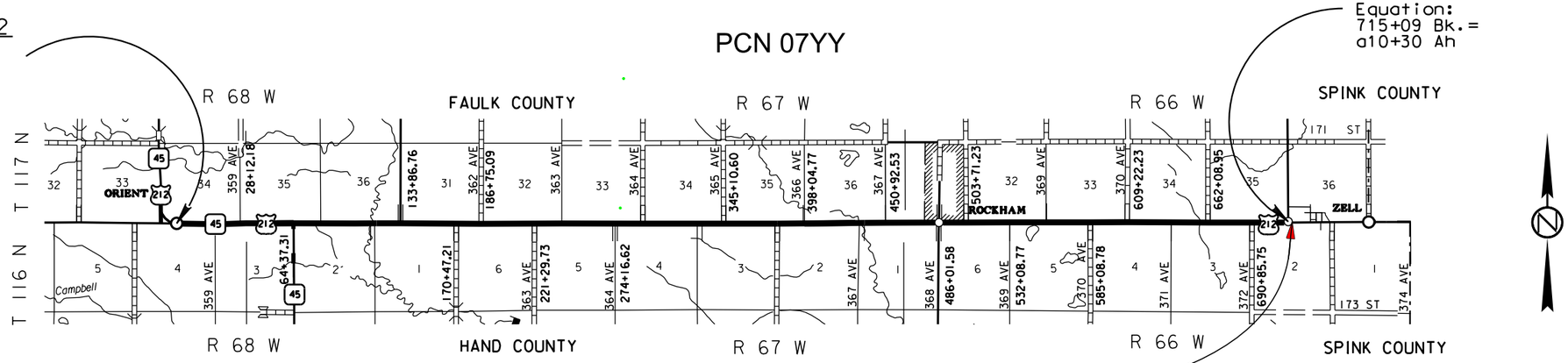
PROJECT NH 0212(213)282
US HIGHWAY 212
FAULK & SPINK COUNTIES

Cold Milling Asphalt Concrete,
Asphalt Concrete Resurfacing

INDEX OF SHEETS

BEGIN NH 0212(213)282
Station 1+78
M.R.M. 282.00 + 0.050

PCN 07YY



DESIGN DESIGNATION

AADT (2025)	784
AADT (2045)	1108
DHV	123
D	51%
DHV T%	15.1%
AADT T%	33.1%
V	65 MPH

STORM WATER PERMIT

No Storm Water Permit Required

GROSS LENGTH	126,556.40 FEET	23.969 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	126,556.40 FEET	23.969 MILES

2

October 7, 2026

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0212(213)282	2	49

Rev. 09/01/26- PB

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E4200	Construction Schedule, Category II	Lump Sum	LS
110E1010	Remove Asphalt Concrete Pavement	1,803.0	SqYd
110E1100	Remove Concrete Pavement	25.9	SqYd
110E1140	Remove Concrete Sidewalk	8.0	SqYd
120E0100	Unclassified Excavation, Digouts	1,198	CuYd
120E6200	Water for Granular Material	18.0	MGal
210E0100	Shoulder Clearing	46.2	Mile
210E1000	Shoulder Preparation	46.170	Mile
260E1010	Base Course	2,397.0	Ton
260E1030	Base Course, Salvaged	3,040.0	Ton
* 260E6000	Granular Material, Furnish	6,766.0	Ton
270E0110	Salvage and Stockpile Granular Material	3,227.0	Ton
* 270E0200	Blend, Haul, and Stockpile Granular Material	13,906.0	Ton
320E0033	PG 58V-34 Asphalt Binder	3,894.2	Ton
320E1200	Asphalt Concrete Composite	600.5	Ton
320E1203	CLASS Q3R HOT MIXED ASPHALT CONCRETE	77,784.8	Ton
320E1800	Asphalt Concrete Blade Laid	3,595.5	Ton
320E4000	Hydrated Lime	811.4	Ton
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	46.5	Mile
320E7028	Grind Centerline Rumble Stripe in Asphalt Concrete	18.0	Mile
320E7030	Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete	5.2	Mile
330E0010	MC-70 Asphalt for Prime	272.8	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	299.0	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	129.3	Ton
330E1000	Blotting Sand for Prime	5.0	Ton
330E2000	Sand for Flush Seal	1,285.7	Ton
332E0010	Cold Milling Asphalt Concrete	411,708	SqYd
380E4010	6" PCC Fillet Section	25.9	SqYd
600E0300	Type III Field Laboratory	1	Each
633E0030	Cold Applied Plastic Pavement Marking, 24"	138	Ft
633E0040	Cold Applied Plastic Pavement Marking, Arrow	2	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	1,079	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	161	Gal
633E1206	High Build Waterborne Pavement Marking Paint with Reflective Elements, Yellow	46	Gal
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	138	Ft
633E5025	Grooving for Cold Applied Plastic Pavement Marking, Arrow	2	Each
634E0010	Flagging	890.0	Hour
634E0020	Pilot Car	420.0	Hour
634E0110	Traffic Control Signs	1,018.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0630	Temporary Pavement Marking	119.8	Mile
634E0800	Temporary Portable Rumble Strips	2	Each
651E0040	4" Concrete Sidewalk	72	SqFt
651E7000	Type 1 Detectable Warnings	10	SqFt
734E0845	Sediment Control at Inlet with Frame and Grate	1	Each
900E0010	Refurbish Single Mailbox	15	Each
900E1980	Storage Unit	1	Each

*** - Denotes Non-Participating**

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf >

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary. Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pits, or staging areas associated with the project, cease construction activities in the affected area until the Whooping Crane departs and immediately contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

The Contractor will not withdraw water directly from streams of the James, Big Sioux, and Vermillion watersheds without prior approval from the SDDOT Environmental Office.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (DANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at:
< https://sdleastwanted.sd.gov/maps/default.aspx >

< South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species: https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04 >

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Agriculture and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements will apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating, "No Dumping Allowed".

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.
Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) will be incidental to the various contract items.

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 150 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

SHPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

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.

SCOPE OF WORK

Work on this project involves cold milling asphalt concrete, placement of asphalt concrete pavement, rumble strips, and pavement markings.

SEQUENCE OF OPERATIONS

The following Sequence of Operations will be adhered to. Any changes must be approved in writing by the Area Engineer prior to changes being made.

1. Install Traffic Control Signing.
2. Complete Fillet Replacement.
2. Complete Cold Milling Operations.
3. Complete Unclassified Excavation for Digouts and Backfill Operations.
4. Complete Asphalt Concrete Paving Operations.
5. Grind Rumble Strips.
6. Complete Flush Seal.
7. Install Permanent Pavement Markings.
8. Refurbish/Remove & Reset Mailboxes.
9. Remove Traffic Control Signing.
10. Mow Project Inslopes and Complete any Remaining Project Cleanup.

Contractor requests to deviate from the sequence of operations will be submitted in writing to the Engineer for review. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work. An alternate sequence will be submitted for review a minimum of one week prior to potential implementation.

GENERAL NOTES

The Contractor will be required to mow the inslopes with a rotary mower to a height of 6 inches for a distance of 14 feet from the edge of the roadway (or shoulder) for the length of the project. This work will be completed to the satisfaction of the Engineer after all construction activities are completed. All costs associated with this work will be incidental to the various contract items.

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.

Utilities are not planned to be affected on this project. 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.

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary speed limit signs will have a minimum mounting height of 5 feet in rural locations, even when mounted on portable supports.

Portable sign supports will not be located on sidewalks, bicycle facilities, or other areas designated for pedestrian or bicycle traffic.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

Traffic will be maintained on the driving lanes. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to rerouted traffic or Contractor's equipment will be repaired at no expense to the Department.

The Contractor will furnish, install, maintain, and remove TRUCK CROSSING (W8-6) signs daily. The TRUCK CROSSING signs will be displayed always when haul vehicles are hauling material. When hauling conditions no longer exist, the signs will be covered or removed from view. The exact number and location will be determined during construction. Payment for additional signs will be based on the contract unit price per square foot for TRAFFIC CONTROL SIGNS.

Included in the Itemized list for Traffic Control Signs table is (W8-1) BUMP signs to be used at areas where cold mill transitions occur or anywhere deemed necessary by the Engineer.

GROOVED PAVEMENT (W8-15) signs with MOTORCYCLE (W8-15P) plaques are required in advance of areas that have been cold milled and are not resurfaced the same day. The GROOVED PAVEMENT sign assemblies will be installed a minimum of 1000 feet in advance of cold milled sections and remain in place until the sections have been resurfaced.

The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction and again a minimum of 48 hours prior to any blocked access to make appropriate arrangements.

A mobile work operation will be allowed provided the rumble strip or rumble stripe grooving, flush sealing, and pavement marking can be completed satisfactorily by a continuously moving work operation. A mobile work operation will require approval by the Engineer.

Lane closures will be limited to 5 miles in length. The distance between the closest points of any two-lane closures will be at least 3 miles, excluding tapers.

TRAFFIC CONTROL FOR ASPHALT CONCRETE RESURFACING

The Contractor will need to install LOOSE GRAVEL (W8-7) signs with advisory speed plaques (W13-1P) in areas where loose sand is present during the flush seal operation. LOOSE GRAVEL signs have been included in these plans for this.

FLAGGING

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

Additional flagger warning signs and flagger hours have been included in the Estimate of Quantities for use on intersecting roads. These flaggers will be used as directed by the Engineer and will be used primarily during daytime hours. Also included in the Estimate of Quantities are WAIT FOLLOW PILOT CAR signs for use on low volume intersecting roads as determined by the Engineer. WAIT FOLLOW PILOT CAR signs will not block the view of the stop sign.

It is required that the flaggers and pilot car operators be able to communicate with one another. If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price per hour for FLAGGING.

TYPE III FIELD LABORATORY

The Contractor will provide high-speed broadband internet connection to the field lab. The multiport internet connection may be hardwired, through a cellular method, or other approved service that allows Wi-Fi connection. Prior to obtaining the internet connection, the Contractor will submit the internet connection's technical data to the Area Office to check for compatibility with the state's computer equipment. The Contractor's personnel are prohibited from using the internet connection unless pre-approved by the Project Engineer. The internet service will be incidental to the contract unit price per each for TYPE III FIELD LABORATORY.

STORAGE UNIT

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

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

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

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

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

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

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

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

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

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

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

INTERSECTING ROADS AND ENTRANCES

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

In areas where granular material has been placed adjacent to the existing asphalt concrete, the Contractor will be required to remove the granular material to a depth below the existing asphalt concrete to allow for the placement of the new asphalt concrete. New asphalt concrete will be placed flush with the existing asphalt concrete. The existing granular material removed will be placed on the entrances, intersecting roads or other locations as directed by the Engineer.

All costs to remove and place the granular material including labor, equipment and incidentals will be incidental to the various related contract items.

SHOULDER CLEARING

If requested by the Contractor two weeks prior to the start of the project, SDDOT personnel will mow and/or spray the 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 placement of shoulder 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.

The Contractor will notify the Aberdeen Area Office at (605) 626-7885 and the Huron Area Office at (605) 353-7140, at least two weeks prior to beginning work on this project so SDDOT personnel can mow and/or spray along the shoulder and inslopes. The Department will not be responsible for the effectiveness of the mowing or spraying.

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".

COLD MILLING ASPHALT CONCRETE

The Los Angeles Abrasion Loss value on the aggregate used for the in-place asphalt concrete was 23. 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”.

The initial/final lift of asphalt paving will be completed within 14 days after the pavement has been cold milled. The blade laid asphalt will be considered the initial lift of asphalt. If any pavement repairs or digouts are required by the Engineer after that time frame they will be repaired by the Contractor at their own expense.

Cold milling asphalt is estimated to produce 21614.7 tons of cold milled asphalt concrete material. An estimated 14661.7 tons of cold milled asphalt concrete material will be used on this project as RAP in the Class Q3R Hot Mixed Asphalt Concrete mixture. The Contractor is responsible to assure enough asphalt concrete salvage is available for the Class Q3R Hot Mixed Asphalt Concrete.

REMOVE ASPHALT CONCRETE PAVEMENT

The Los Angeles Abrasion Loss value on the aggregate used for the in-place asphalt concrete was 23. This value was obtained from testing during construction of the in-place asphalt concrete.

An estimated 75 square yards per mile of the in-place asphalt concrete surfacing will be removed from the existing highway for the Unclassified Excavation, Digouts and become the property of the Contractor for disposal.

This estimated quantity is not included in the unclassified excavation quantities.

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.

SALVAGE AND STOCKPILE GRANULAR MATERIAL

An estimated 3227 tons (1707 Cubic Yards) of granular base material will be salvaged from the existing shoulders according to the in-place surfacing typical sections and stockpiled at a site furnished by the Contractor and satisfactory to the Engineer.

Salvaged material will be processed to meet the requirements of Section 884.2 D.2 prior to stockpiling. The Contractor will ensure that no vegetation, topsoil, subgrade, or other foreign material is incorporated into the salvaged granular base material.

The salvaged material not used on the project will be stockpiled or disposed of as directed by the Engineer.

The quantity of salvaged granular base material may vary from the plans.

The quantity of salvageable material is estimated from the in-place surfacing typical sections.

SHOULDER PREPARATION

Prior to placement of asphalt concrete on the shoulders, the upper 4” of existing granular shoulder material will be scarified, reworked, shaped, watered, and compacted to obtain a uniform and stable surface according to Section 260.3 C. The cross slope and inslope requirements will meet what is shown in the typical sections. The final shaping of the granular material on the shoulder must be completed after the Cold Milling Asphalt Concrete operation. Cost for this work will be incidental to the contract unit price per mile for SHOULDER PREPARATION. Areas where shoulders are paved in front of driveways and intersecting roads, will not be included for shoulder preparation.

Included in the Estimate of Quantities are 18 MGals per mile of Water for Granular Material for shaping and recompaction (9 MGals per shoulder).

All costs associated with blending, scarifying, reworking, shaping, and compacting the existing granular material will be incidental to the contract unit price per mile for SHOULDER PREPARATION.

ASPHALT CONCRETE COMPOSITE

Section 324 will apply except that Class Q3R 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.

The asphalt binder used in the mixture can be PG 58V-34 Asphalt Binder.

WATER FOR COMPACTION OF GRANULAR MATERIALS

Cost of water for compaction of the granular material will be incidental to the contract unit price for the various contract items. Six percent, plus or minus, moisture will be required at the time of compaction unless otherwise directed by the Engineer.

BASE COURSE, SALVAGED

The Base Course, Salvaged will be obtained from the stockpile site(s) provided by the Contractor from the granular material salvaged from the shoulders on this project and may be used without further gradation testing.

Base Course, Salvaged material placed beneath asphalt concrete will be compacted according to Section 260.3 C.

1000 tons of Base Course, Salvaged has been included in the plans to be placed on the shoulder/inslope of the road outside of the final asphalt shoulder lift to fix drop offs and flatten steep areas. The locations where the Base Course, Salvaged is placed will be determined by the Engineer. All costs associated with the hauling, shaping, watering, and compaction of this material will be incidental to the contract unit price per ton for Base Course, Salvaged.

Base Course, Salvaged material placed on entrances, approaches, intersecting roads, and outside of the final asphalt concrete lift to fix drop offs and steep inslopes that is not under an asphalt concrete lift will be compacted according to Section 260.3 D.

2040 tons of Base Course, Salvaged have been included as shown in the “HWY 212: TABLE OF INTERSECTING ROADS, AND RESIDENTIAL/RURAL ENTRANCES”.

All other requirements for Base Course, Salvaged will apply.

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BLEND, HAUL, AND STOCKPILE GRANULAR MATERIAL

Excess salvaged asphalt concrete material estimated at 6953.0 tons (for informational purposes only) will be blended with 187.0 tons of Base Course, Salvaged and 6766.0 tons of Granular Material, Furnish and will be hauled, blended and stockpiled at the Faulkton Maintenance Shop (SEC14 T118N R69W).

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.3 prior to blending into the stockpile.

Salvaged asphalt concrete material will be blended with Base Course, Salvaged and Granular Material, Furnish at a rate of 50% salvaged asphalt mix material and 50% Base Course, Salvaged/Granular Material, Furnish to obtain stockpile material. Material will be uniformly blended to the satisfaction of the Engineer.

Any remaining salvaged asphalt concrete material will become the property of the Contractor for disposal.

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

All other costs for crushing, hauling, stockpiling, and blending salvaged asphalt concrete material, Base Course, Salvaged and Granular Material, Furnish will be incidental to the contract unit price per ton for “BLEND, HAUL AND STOCKPILE GRANULAR MATERIAL”.

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.

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 58V-34 Asphalt Binder per mile and will be tight bladed on the existing surface 24 feet wide prior to the overlay. Gaps at centerline will not be permitted.

Mineral Aggregate for tight bladed material will use only the fine aggregate components combined in the same proportions as the Class Q3R Hot Mixed Asphalt Concrete mix. Mineral Aggregate for tight bladed material will meet the gradation requirements of the Job Mix Formula. 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} Gyratory 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 133.4 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)

FLEXIBLE PAVEMENT SMOOTHNESS PROVISION

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

BLOTTING SAND FOR PRIME

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

ASPHALT FOR TACK

Included in the Estimate of Quantities are 6.0 tons of SS 1h or CSS 1h Asphalt for Tack for surface repair, strengthening, and spot leveling areas throughout the project. (Rate = 0.06 Gal./ Sq.Yd.).

CLASS Q3R HOT MIXED ASPHALT CONCRETE

Mineral Aggregate:

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

Virgin mineral aggregate for Class Q3R Hot Mixed Asphalt Concrete will conform to the requirements of Class Q3.

The Class Q3R 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:

Gyratory Controlled QC/QA Mix Design requirements for the Class Q3R Hot Mixed Asphalt Concrete will conform to the requirements of Class Q3 except as modified by the following:

Gyratory Compactive Effort:

	$N_{initial}$	N_{design}	$N_{maximum}$
Class Q3R	6	50	75

All remaining requirements for Class Q3 will apply.

ADDITIONAL QUANTITIES

Included in the Estimate of Quantities are 100 tons of Class Q3R Asphalt Concrete and, 1.0 tons of Hydrated Lime of Asphalt concrete and 4.7 tons of PG 58V-34 Asphalt Binder per mile for spot leveling, strengthening, and repair of the existing surface throughout the project. This material will be placed where and as directed by the Engineer.

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.

TABLE OF SUPERELEVATION

Station to Station	Remarks
Sta. 1+78.00 to Sta. a398+19.79 (thru eq.)	Normal Crown Section
Sta. a398+19.79 to Sta. a400+47.79	Superelevation Transition
Sta. a400+47.79 to Sta. a410+65.69	2864.79’ Radius Curve Right 0.056 Superelevation Rate Point of Rotation at Centerline
Sta. a410+65.69 to Sta. a412+93.69	Superelevation Transition
Sta. a412+93.69 to Sta. a472+36.45	Normal Crown Section
Sta. a472+36.45 to Sta. a473+56.45	Superelevation Transition
Sta. a473+56.45 to Sta. a481+15.02	10,742.96’ Radius Curve Right 0.020 Superelevation Rate Point of Rotation at Centerline
Sta. a481+15.02 to Sta. a482+35.02	Superelevation Transition
Sta. a482+35.02 to Sta. a500+29.22	Normal Crown Section
Sta. a500+29.22 to Sta. a501+85.22	Superelevation Transition
Sta. a501+85.22 to Sta. a509+22.33	6138.83’ Radius Curve Left 0.032 Superelevation Rate Point of Rotation Centerline
Sta. a509+22.33 to Sta. a510+78.33	Superelevation Transition
Sta. a510+78.33 to Sta. a539+62.02	Normal Crown Section
Sta. a539+62.02 to Sta. a541+60.02	Superelevation Transition
Sta. a541+60.02 to Sta. a559+33.34	3819.72’ Radius Curve Right 0.046 Superelevation Rate Point of Rotation Centerline
Sta. a559+33.34 to Sta. a561+31.34	Superelevation Transition
Sta. a561+61.34 to Sta. a573+26.17	Normal Crown Section

TYPE 1 DETECTABLE WARNINGS

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

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

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

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

Type 1 Detectable Warnings will be installed along a radius at the locations as shown in the plans. The radius necessary will be as shown in the plans. Payment for the radius detectable warnings will be at the contract unit price per square foot for "Type 1 Detectable Warnings".

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

Type 1 Detectable Warnings

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

TABLE OF TYPE 1 DETECTABLE WARNINGS

Station	L/R	Quantity (SqFt)
a 31+46.86	30.00' R	10
	Total:	10

TABLE OF 4" CONCRETE SIDEWALK

Station	to	Station	L/R	Quantity (SqFt)
a 31+42.55		a 31+54.77	R	72.0
			Total:	72.0

6" PCC FILLET SECTIONS

Payment for "6" PCC Fillet Section" will be based on plans quantity. If additions or reductions to the area of PCC fillet sections are ordered by the Engineer, payment will be made in accordance with the contract unit price per square yard for 6'' PCC FILLET SECTION.

TABLE OF 6" PCC FILLET SECTION

Station	to	Station	L/R	Radius (Ft)	Curb Ramp Type	Quantity (SqYd)
a 31+39.88		a 31+64.88	R	25	3	25.93
				Total:		25.93

REFURBISH MAILBOXES

Existing mailboxes will be removed, and mailboxes reset on new posts with the necessary support hardware for single mailbox assemblies (See Standard Plate No's. 900.02 and 900.03). The local Postmaster will determine the recommended mounting height of the mailboxes throughout the project. The Contractor will coordinate with the Engineer on the proper postal representative to contact.

TABLE OF MAILBOXES

MRM	SIDE	SINGLE MAILBOX EACH	ACTION NEEDED
285.00+0.55	Rt	1	Refurbish
287.00+0.65	Rt	1	Refurbish
288.00+0.21	Lt	1	Refurbish
289.00+0.62	Lt	1	Refurbish
291.00+0.19	Lt	1	Refurbish
293.00+0.58	Lt	1	Refurbish
294.00+0.88	Lt	1	Refurbish
295.00+0.41	Lt	1	Refurbish
295.00+0.75	Lt	1	Refurbish
296.00+0.03	Lt	1	Refurbish
296.00+0.06	Lt	1	Refurbish
296.00+0.56	Lt	1	Refurbish
299.00+0.01	Rt	1	Refurbish
304.00+0.83	Lt	1	Refurbish
305.00+0.51	Lt	1	Refurbish

All costs for removing existing mailboxes, providing temporary mailboxes, and resetting mailboxes with new posts and necessary support hardware will be incidental to the contract unit price per each for REFURBISH SINGLE MAILBOX.

RUMBLE STRIPE/STRIP ROADWAY CLEANING

The Contractor will be required to remove loose material from the driving surface and/or asphalt shoulders. Loose material may be broomed to the edge of shoulders and it will be the Contractor's responsibility to ensure the loose material does not enter any vegetated areas and/or waterways. A pick-up broom will not be required.

All costs associated with this work will be incidental to the contract unit price per mile for and/or GRIND 12" RUMBLE STRIP OR STRIPE IN ASPHALT CONCRETE or GRIND CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE or GRIND SINUSOIDAL CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE.

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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 12'' RUMBLE STRIP OR STRIPE IN ASPHALT CONCRETE. It is estimated that 46.5 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 12" rumble strips at a width of 18" and at the same rate as specified in this plan set. No adjustment in payment will be made and SS-1h or CSS-1h Asphalt for Flush Seal will be paid at the contract unit price per ton.

Table of 12'' Rumble Strips on Shoulders

	12'' Rumble Strips
Station to Station:	1+78.0 to a13+62
	BREAK FOR ZELL
	a44+28 a555+05.40
Total:	245480.8 ft
	46.5 mi

GRIND SINUSOIDAL CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE

Sinusoidal rumble stripes will be constructed on the centerline, as detailed in the plan set. Sinusoidal rumble stripes will be paid for at the contract unit price per mile for Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete. It is estimated that 5.2 miles of sinusoidal centerline rumble stripes will be required.

Centerline rumble stripes will be constructed according to the details of Standard Plate 320.40 and as shown in the Table of 12'' Centerline Rumble Stripes.

GRIND CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE

Rumble stripes will be constructed on the centerline, as detailed in the plans. Centerline rumble stripe installation will be completed prior to application of the flush seal and permanent pavement markings. Rumble stripes will be paid for at the contract unit price per mile for GRIND CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE". It is estimated that 18.0 miles of centerline rumble stripes will be required.

Centerline rumble stripes will be constructed according to the details of Standard Plate 320.18 and as shown in the Table of 12'' Centerline Rumble Stripes.

TABLE OF 12'' CENTERLINE RUMBLE STRIPES

	Traditional, 12''	**Sinusoidal, 12''**
Station to Station:	1+78 to 54+88	54+88.0 to 67+88.0
	67+88 to 178+06	178+06.0 to 194+38.0
	194+38 to 273+78	273+78.0 to 304+58.0
	304+58 to 315+63	315+63.0 to 335+11.0
	335+11 to 356+48	356+48.0 to 416+73.0
	416+73 to 478+08	478+08.0 to 486+88.0
	486+88 to 603+64	603+64.0 to 616+64.0
	616+64 to 672+19	672+19 to 685+19
	685+19 to 700+19	700+19 to 713+19
	713+19 to a13+62	-
	a44+28 to a56+75	a56+75 to a69+75
	a69+75 to a237+55	a237+55 to a250+55
	a250+55 to a493+83	a493+83 to a555+05.40
Total:	95253 ft	27487.4 ft
	18.0 mi	5.2 mi

*Rumbles from a13+62 to a44+28 (within Zell limits) will be skipped. Edgeline Rumble Strips will be installed along the full project's length, skipping the limits of Zell and skipping the last 750' of the project length.
(With flush seal application rate of 0.05 gal./sq.yd.)

CENTERLINE RUMBLE STRIPES – ASPHALT FOR FLUSH SEAL

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

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

MARKINGS WITHIN SINUSOIDAL CENTERLINE RUMBLE STRIPES

The sinusoidal centerline rumble stripes are recessed below the pavement surface, so pavement marking grooving will not be required at these locations.

Retroreflectivity readings will not be taken for pavement markings within the sinusoidal rumble stripe. Restriping of pavement markings to meet the specified application rate requirements and to provide a quality retroreflective line will be at the expense of the Contractor with no additional cost to the Department. Sections to be restriped will be determined by the Engineer.

TEMPORARY PORTABLE RUMBLE STRIPS (TPRS)

One set of three (3) Temporary Portable Rumble Strips (TPRS) will be installed in advance of the Flagger Ahead (W20-7) sign on each side of the set up as shown on the special detail for Flagger Operation. The spacing of the three TPRS (center to center) will be as follows:

- 10 feet where the posted speed limit is ≤ 40 MPH
- 15 feet where the posted speed limit is 45 to 55 MPH
- 20 feet where the posted speed limit is 60 MPH
- 35 feet where the posted speed limit is ≥ 65 MPH

Each set of TPRS will consist of three rumble strips placed perpendicular to the centerline and parallel to one another in accordance with the spacing requirements above. The rumble strips will be installed across the lane of travel but will not intrude into the opposing lane of travel. Each strip will provide a minimum coverage of 11 feet across the travel lane and be a minimum of 12" wide.

TPRS will not be used on loose gravel, bleeding asphalt, heavily rutted pavements or unpaved surfaces, nor will they be placed through pedestrian crossings. TPRS will not be required if the work is occurring in rain, snow, or icy conditions. Prior to deployment, sweep area clear of gravel and other debris. Reposition TPRS if lateral movement is greater than 2 feet from original position or if longitudinal movement is greater than 3 feet on one side of the strip or is greater than 5 feet for the entire strip from original position.

TPRS will generate similar levels of sound and vibration as milled rumble strips with a height between ½" and ¾" tall. TPRS will be held in place by their own weight without the use of adhesives. The weight of the strips will not exceed 100 pounds. TPRS will be able to withstand vehicles with a maximum weight of 80,000 pounds while retaining original shape and placement with minor incidental movement of 6" or less during an 8 hour deployment.

TPRS will be flexible enough to conform to the roadway surface. TPRS will be collapsible so that they can be transported at less than full lane width and have a mechanism for grabbing and maneuvering the strips. The color of the rumble strips will be white, black, or orange with a clearly indicated top and bottom. TPRS will be able to be used in temperatures between 0 and 180 degrees Fahrenheit.

Payment for Temporary Portable Rumble Strips will be per Each set of three (3) rumble strips. Two (2) sets of three (3) strips will be required for each one-lane, two-way Flagger operation. All costs for removing and resetting the rumble strips, as needed, will be incidental to the contract unit price per each for Temporary Portable Rumble Strips.

TEMPORARY PAVEMENT MARKINGS

Temporary flexible vertical markers (tabs) will be installed on one side of the centerline rumble for the temporary pavement marking. No passing zones will be marked in accordance with Specifications. DO NOT PASS (R4-1) and PASS WITH CARE (R4-2) signs will also be used in addition to the temporary flexible vertical markers (tabs) placed per Specifications to mark no passing zones.

The total length of no passing zone on this project is estimated to be **1.1** miles.

Quantities of Temporary Pavement Markings consist of:

One pass on top of the milled surface
One pass on the Blade Laid lift of asphalt concrete
One pass on Class Q3R lift of asphalt concrete
One pass prior to the flush seal, length as determined by the Engineer
One pass on Flush Seal

It is estimated that 3 DO NOT PASS and 3 PASS WITH CARE signs will be required.

Temporary pavement marking paint will not be allowed on the final lift of asphalt surfacing. Temporary pavement marking paint will not be allowed on the flush seal. The Contractor may use tabs with covers, uncovering them for the flush seal. As an alternative, the Contractor may install new tabs for the fog seal or flush seal.

Covers on the tabs will be sufficiently secured to prevent traffic from dislodging the cover and when removed, the covers will be properly disposed of. The Contractor will remove and properly dispose of the tabs after permanent pavement marking is applied. Method of removal will be nondestructive to the road surface and will be accomplished within one week of completion of the permanent pavement marking.

Full reflectivity of all temporary flexible vertical markers (tabs) is required at all times. The Contractor will be required to replace any missing or non-reflective tabs after each installation as detailed below at no additional cost to the State.

If the Engineer determines that an additional pass prior to the flush seal is not required, this application of the temporary pavement marking will be eliminated. If the flush seal is eliminated for the project, the application of the temporary pavement marking on top of the flush seal as well as the additional pass prior to the flush seal will be eliminated.

No adjustment in the contract unit price for “Temporary Pavement Marking” will be made because of a variation in quantities.

In the absence of a signed lane closure or pilot car operation, FLAGGER (W20-7) symbol signs and flaggers, or a shadow vehicle with rotating yellow lights or strobe lights will be positioned on the shoulder in advance of workers for both directions of traffic during the installation and removal of the temporary flexible vertical markers (tabs). The traffic control device used will be moved intermittently to provide proper warning of the work operation. A ROAD WORK AHEAD (W20-1) sign, a WORKER (W21-1) symbol sign or a BE PREPARED TO STOP (W3-4) sign will be mounted on the rear of the shadow vehicle. The method of traffic control used by the Contractor for this work must be approved by the Engineer.

Prior to nightfall, tabs will be required to mark centerline on segments of roadway where existing centerline markings have been removed and new markings have not been installed.

PERMANENT PAVEMENT MARKING

The Contractor will advise the Engineer a minimum of 3 weeks prior to the application of the permanent pavement marking to allow the State to check and mark the location of no passing zones.

The application of permanent pavement marking will begin no sooner than 7 calendar days following completion of the fog or flush seal. Application of permanent pavement marking will be completed within 14 calendar days following completion of the final surfacing.

Traffic control will be incidental to the cost of application. The striper and advance or trailing warning vehicle will be equipped with flashing amber lights or advance warning arrow panel.

HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

All materials will be applied as per manufacturer’s recommendations. High build waterborne pavement marking paint will conform to Section 980.1 B.

Reflective media will consist of glass beads. Reflective media will require a Certificate of Compliance for Certification for each source and lot. Acceptance sampling will not be required.

HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT (YELLOW)

High Build Waterborne Pavement Marking Paint with Reflective Elements, Yellow, will be used at centerline sinusoidal rumbles. Reflective media consisting of glass beads as well as wet-reflective optics will be adhered to the paint.

The wet-reflective optics will contain either clear, white, amber, or yellow tinted beads composed of glass or a composite consisting of a core made from ceramic or glass with an outer layer of microcrystalline ceramic or glass beads. The wet-reflective optics will provide a 50/50 blend of dry to wet ratio of optics. All beads bonded to wet-reflective optics will have a minimum index of refraction of 1.8 for dry retroreflectivity and 2.4 for wet retroreflectivity when tested using the liquid oil immersion method.

Reflective media will require a Certificate of Compliance for Certification for each type, source, and lot. Acceptance sampling will not be required.

The Department will take retroreflectivity readings on the pavement marking lines no sooner than 3 days and no later than 30 days after the completion of all line applications required for an individual highway route using a portable retroreflectometer conforming to 30-meter geometry. Retroreflectivity readings will be taken on a test location with cleaning being limited to light hand brooming.

Pavement markings not conforming to the retroreflectivity requirements will be removed and replaced. If replacement of markings cannot be applied within the same year, the Contractor will schedule subject work to be completed no later than June 15th in the following year. Upon replacement, the retroreflectivity testing process will be done again requiring new readings.

The Department will randomly select one test location per mile of each edge line including ramps and one test location per mile of centerline (solid and/or skip line will be considered as one centerline). Three retroreflectivity readings will be taken at each test location. The three readings will be averaged and become the reading for that test location.

Initial readings:

Pavement Marking Color	**Minimum Value**
White	350 mc/m^2/lux
Yellow	275 mc/m^2/lux

All pavement markings not conforming to the requirements provided in these plans will be considered deficient and will be removed and replaced. Additional retroreflectivity readings will be taken by the Department to determine the limits of removal. The removal will be accomplished using suitable sand blasting or grinding equipment unless the Engineer authorizes other means. The removal process will remove at least 90% of the deficient line, with no excessive scarring of the existing pavement. The removal width will be one inch wider all around the nominal width of the pavement marking to be removed. Removal and replacement of the pavement markings will be at the Contractor’s expense, with no cost incurred by the State.

RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

Solid 4” line = 22.5 Gals/Mile
Dashed 4” line = 6.2 Gal/Mile
Glass Beads = 8 Lbs/Gal.

All cost for materials, labor and equipment necessary to furnish and install the pavement markings will be incidental to the contract unit price for the respective High Build Waterborne Pavement Marking Paint items.

RETROREFLECTIVITY FOR PAVEMENT MARKING PAINT

The Department may take retroreflectivity readings on the pavement marking lines after 2 days and within 30 days of the line application using either a portable or mobile retroreflectometer that conforms to 30-meter geometry. If the Department chooses to take retroreflectivity readings, three retroreflectivity readings will be taken on each line at each test location. The three readings will be averaged and become the reading for that test location.

If the Department chooses to take retroreflectivity readings, three readings will be taken on the edge lines and lane lines in the direction of application. For combination solid yellow and skip yellow lines for turn lanes and for centerline markings on two-way roadways, three readings will be taken in one direction, the reflectometer will be turned 180 degrees and three more readings will be taken. The six readings for the centerline markings will be averaged and become the test reading for that test location.

If the Department chooses to take readings, the minimum retroreflectivity values will be 275 mc/m^2/lux for white and 170 mc/m^2/lux for yellow.

GROOVING FOR COLD APPLIED PLASTIC PAVEMENT MARKING

The Contractor will establish a positive means for the removal of the grinding and/or grooving residue. Residue from dry grooving will be vacuumed. Solid residue will be removed from the pavement surfaces before being blown by traffic action or wind. The Contractor will conduct this work to control and minimize airborne dust and similar debris that may become a hazard to motor vehicle operation or nuisance to property owners. Residue from wet grooving will not be permitted to flow across lanes being used by public traffic or into gutter or drainage facilities. Residue, whether in solid or slurry form, will be disposed of in a manner that will prevent it from reaching any waterway in a concentrated state. The cleaning of the residue for grooving will be to the satisfaction of the Engineer and may require more than one pass to adequately remove material. All costs for removal of grinding and/or grooving residue will be included in the contract unit price per foot, square foot, or each for GROOVING FOR COLD APPLIED PLASTIC PAVEMENT MARKING contract items.

GROOVING TABLE

ITEM	LOCATION	QUANTITY
Cold Applied Plastic Pavement Marking, Arrows	SD 45 Intersection	2 Each
Cold Applied Plastic Pavement Marking, 24'' Yellow	SD 45 Intersection	123 Ft
Cold Applied Plastic Pavement Marking, 24'' White	SD 45 Intersection	15 Ft

COLD APPLIED PLASTIC PAVEMENT MARKING

All materials will be applied as per the manufacturer's recommendations.

Cold Applied Plastic Pavement Markings will be 3M Series 380 AW or an approved equal.

Cold Applied Plastic Pavement Marking Table

ITEM	LOCATION	QUANTITY
Cold Applied Plastic Pavement Marking, Arrows	SD 45 Intersection	2 Each
Cold Applied Plastic Pavement Marking, 24'' Yellow	SD 45 Intersection	123 Ft
Cold Applied Plastic Pavement Marking, 24'' White	SD 45 Intersection	15 Ft

SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES

This type of sediment control device should be used where there is pavement in the vicinity of the drop inlets and storm water or sediment could possibly enter the frame and grate. Sediment Control at Inlet with Frame and Grate will be installed prior to working in the vicinity of the drop inlets.

The Contractor will be responsible for maintaining and repairing the sediment control device for the duration of the project for which sediment control measures are required. Maintenance will be scheduled to prevent storm water from backing up into the driving lane.

"Sediment Control at Inlet with Frame and Grate" will be paid for one time at each location, regardless of the number of times the sediment control devices are installed, inspected, cleaned, removed, repaired, or replaced. All costs associated with furnishing, installing, inspecting, maintaining, cleaning, sediment removal, and repairing Sediment Control at Inlet with Frame and Grate will be incidental to the contract unit price per each for "SEDIMENT CONTROL AT INLET WITH FRAME AND GRATE".

The device will be installed in reinforced concrete drop inlets in accordance with the manufacturer's recommendations.

The Sediment Control at Inlets with Frames and Grates provided will be from the approved product list. The approved product list may be viewed at the following internet site:

https://apps.sd.gov/HC60ApprovedProducts/main.aspx

RATES OF MATERIALS

The Estimate of Quantities is based on the following quantities of material per mile.

Mainline Lift

Section 1 Sta. 1+78.00 to Sta. 60+18.39
Sta. 70+90.23 to Sta. 715+09.00
Sta. a 10+30.00 to Sta. a 31+40.00
Sta. a 33+40.00 to Sta. a 400+02.19
Sta. a 411+11.29 to Sta. a 473+32.45
Sta. a 481+39.02 to Sta. a 501+54.02
Sta. a 509+53.53 to Sta. a 541+20.42
Sta. a 559+72.94 to Sta. a 562+55.40

CLASS Q3R HOT MIXED ASPHALT CONCRETE – 3'' LIFT

Crushed Aggregate.....	2345 Tons
Salvaged Asphalt Concrete	586 Tons
PG 58V-34 Asphalt Binder.....	145 Tons
Total without Lime	**3076 Tons**
Hydrated Lime.....	31 Tons
Total with Lime	**3107 Tons**

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

MC-70 Emulsified Asphalt for Prime at the rate of **5.9** tons applied **8** feet wide per shoulder.
(Rate = 0.30 Gal./Sq.Yd.)

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of **6.5** tons applied **44** feet wide prior to mainline lift.
(Rate = 0.06 Gal./Sq.Yd.)

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of **5.5** tons applied **25** feet wide prior to blade laid lift.
(Rate = 0.09 Gal./Sq.Yd.)

Flush Seal:

SS-1h or CSS-1h Emulsified Asphalt for Flush Seal at the rate of **5.3** tons applied **43** feet wide.
(Rate = 0.05 Gal./Sq.Yd.).

Sand for Flush Seal at the rate of **52** tons applied **22** feet wide.
(Rate = 8 Lb./Sq.Yd.).

The Estimate of Quantities is based on the following quantities of material per station.

Mainline Lift

Section 2 Sta.60+18.39 to Sta. 70+90.23

CLASS Q3R HOT MIXED ASPHALT CONCRETE – 3'' LIFT

Crushed Aggregate.....	55.69 Tons
Salvaged Asphalt Concrete	13.92 Tons
PG 58V-34 Asphalt Binder.....	3.43 Tons
Total without Lime	**73.04 Tons**
Hydrated Lime.....	0.73 Tons
Total with Lime	**73.77 Tons**

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

MC-70 Emulsified Asphalt for Prime at the rate of **0.11** tons applied **8** feet wide per shoulder.
(Rate = 0.30 Gal./Sq.Yd.)

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of **0.16** tons applied **56** feet wide prior to mainline lift.
(Rate = 0.06 Gal./Sq.Yd.)

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of **0.16** tons applied **37** feet wide prior to blade laid lift.
(Rate = 0.09 Gal./Sq.Yd.)

Flush Seal:

SS-1h or CSS-1h Emulsified Asphalt for Flush Seal at the rate of **0.13** tons applied **55** feet wide.
(Rate = 0.05 Gal./Sq.Yd.).

Sand for Flush Seal at the rate of **1.47** tons applied **33** feet wide.
(Rate = 8 Lb./Sq.Yd.).

The Estimate of Quantities is based on the following quantities of material per station.

Mainline Lift

Section 3
Sta. a 400+02.19 to Sta. a 411+11.29
Sta. a 473+32.45 to Sta. a 481+39.02
Sta. a 501+54.02 to Sta. a 509+53.53
Sta. a 541+20.42 to Sta. a 559+72.94

CLASS Q3R HOT MIXED ASPHALT CONCRETE – 2'' LIFT

Crushed Aggregate.....	37.46 Tons
Salvaged Asphalt Concrete	9.37 Tons
PG 58V-34 Asphalt Binder.....	2.31 Tons
Total without Lime	**49.14 Tons**
Hydrated Lime.....	0.49 Tons
Total with Lime	**49.63 Tons**

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

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of **0.12** tons applied **42** feet wide prior to mainline lift.
(Rate = 0.06 Gal./Sq.Yd.)

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of **0.11** tons applied **25** feet wide prior to blade laid lift.
(Rate = 0.09 Gal./Sq.Yd.)

Flush Seal:

SS-1h or CSS-1h Emulsified Asphalt for Flush Seal at the rate of **0.10** tons applied **41** feet wide.
(Rate = 0.05 Gal./Sq.Yd.).

Sand for Flush Seal at the rate of **0.98** tons applied **22** feet wide.
(Rate = 8 Lb./Sq.Yd.).

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TABLE OF PROJECT STATIONING

SECTION	STATION	TO	STATION	LENGTH (Ft)	GROSS SECTION LENGTH (Ft)	GROSS SECTION LENGTH (Miles)	NET SECTION LENGTH (Ft)	NET SECTION LENGTH (Miles)
1	1+78.00		60+18.39	5840.4	120716.86	22.863	120716.86	22.863
	70+90.23		715+09.00	64418.8				
	a 10+30.00		a 31+40.00	2110.0				
	a 33+40.00		a 400+02.19	36662.2				
	a 411+11.29		a 473+32.45	6221.2				
	a 481+39.02		a 501+54.02	2015.0				
	a 509+53.53		a 541+20.42	3166.9				
	a 559+72.94		a 562+55.40	282.5				
2	60+18.39		70+90.23	1071.8	1071.84	0.203	1071.84	0.203
3	a 400+02.19		a 411+11.29	1109.1	4567.70	0.865	4567.70	0.865
	a 473+32.45		a 481+39.02	806.6				
	a 501+54.02		a 509+53.53	799.5				
	a 541+20.42		a 559+72.94	1852.5				
4	a 31+40.00		a 33+40.00	200.0	200.00	0.038	200.00	0.038
				TOTAL:	126556.40	23.969	126556.40	23.969

TABLE OF MATERIAL QUANTITIES

	UNCLASSIFIED EXCAVATION, DIGOUTS	REMOVE ASPHALT CONCRETE PAVEMENT	BASE COURSE	BASE COURSE, SALVAGED	COLD MILLING ASPHALT CONCRETE	Estimated Cold Milled Material Produced (NABI.)	ASPHALT CONCRETE COMPOSITE	CLASS Q3R HOT MIXED ASPHALT CONCRETE	HYDRATED LIME	PG 58V-34 ASPHALT BINDER	SALVAGED ASPHALT CONCRETE (RAP) (NABI.)	VIRG. AGGR. (NABI.)	ASPHALT CONCRETE BLADE LAID	HYDRATED LIME	PG 58V-34 ASPHALT BINDER	VIRG. AGGR. (NABI.)	CLASS Q3R HOT MIXED ASPHALT CONCRETE	HYDRATED LIME	PG 58V-34 ASPHALT BINDER	SALVAGED ASPHALT CONCRETE (RAP) (NABI.)	VIRG. AGGR. (NABI.)	MC-70 ASPH. FOR PRIME	BLOTTING SAND FOR PRIME	SS-1h/ CSS-1h ASPH. FOR TACK	SS-1h/ CSS-1h ASPH. FOR FLUSH SEAL	SAND FOR FLUSH SEAL
								<----------Spot Leveling---------->					<----------Blade Laid---------->				<----------Main Line---------->									
SECTION	CuYd	SqYd	Ton	Ton	SqYd	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton
1	1143	1715	2286	-	382270	20069.2	571.6	2286.3	22.9	107.5	431.2	1724.7	3429.5	34.3	253.8	3141.4	71035.5	708.8	3315.1	13397.7	53613.9	270.4	-	148.7	121.1	1180.4
2	10	15	20	-	4823	253.2	5.1	20.3	0.2	1.0	3.8	15.3	30.5	0.3	2.3	27.9	790.7	7.8	36.8	149.2	596.9	2.4	-	1.7	1.4	15.7
3	43	65	87	-	20555	1079.1	21.6	86.5	0.9	4.1	16.3	65.2	129.8	1.3	9.6	118.9	2266.9	22.4	105.5	428.0	1711.0	-	-	5.4	4.4	44.7
4	2	3	4	-	761	40.0	0.9	3.8	0.0	0.2	0.7	2.9	5.7	0.1	0.4	5.2	123.3	0.7	3.4	13.8	105.4	-	-	0.2	0.1	2.0
Table of Additional Quantities	-	6	-	2040	3299	173.2	1.3	-	-	-	-	-	-	-	-	-	1171.5	11.7	54.5	221.0	884.2	-	-	4.0	2.3	42.9
Additional Quantities from Notes	-	-	-	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0	-	-	-
Blaid Laid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	133.4	-	-
Spot Leveling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.0	-	-
Totals	1198	1803	2397	3040	411708	21614.7	600.5	2396.9	24.0	112.8	452.0	1808.1	3595.5	36.0	266.1	3293.4	75387.9	751.4	3515.3	14209.7	56911.5	272.8	5.0	299.0	129.3	1285.7

NABI: Not a Bid Item

TABLE OF ADDITIONAL QUANTITIES

LOCATIONS:	BASE COURSE, SALVAGED TON	CLASS Q3R HOT MIXED ASPHALT CONCRETE TON	PG 58V-34 ASPHALT BINDER TON	HYDRATED LIME TON	Recycled Asphalt (RAP) N.A.B.I. TON	Virgin Aggregate N.A.B.I. TON	SS-1h/ CSS-1h ASPH. FOR TACK TON	SS-1h/ CSS-1h ASPH. FOR FLUSH TON	SAND FOR FLUSH TON	COLD MILLING ASPHALT CONCRETE SQYD	REMOVE ASPHALT CONCRETE PAVEMENT SQYD	ASPHALT CONCRETE COMPOSITE TON
SD 45 Intersection- Pavement to Radius (East and West)	-	52.5	2.4	0.5	9.9	39.6	0.2	0.1	2.0	500	-	-
**Intersecting Roads and Rural Entrances	2040	1119.0	52.1	11.2	211.1	844.6	3.8	2.2	40.9	2799	-	-
Removal of AC adjacent to Fillet at Zell Curb Ramp	-	-	-	-	-	-	-	-	-	-	5.6	1.3
TOTALS	**2040**	**1171.5**	**54.5**	**11.7**	**221.0**	**884.2**	**4.0**	**2.3**	**42.9**	**3299**	**5.6**	**1.3**

**See "HWY 212: TABLE OF INTERSECTING ROADS, AND RESIDENTIAL/RURAL ENTRANCES"

The tonnage shown in the Table of Additional Quantities for Class Q3R Hot Mix Asphalt Concrete is based on an average compacted thickness of 2 inches for intersecting roads/residential entrances.

Application will be at the rate shown on the plans or as directed by the Engineer.

The above quantities are included in the Estimate of Quantities.

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SUMMARY OF ASPHALT CONCRETE

LOCATIONS:	Class Q3R Hot Mixed Asphalt Concrete with Specified Density Compaction TONS	Class Q3R Hot Mixed Asphalt Concrete without Specified Density Compaction TONS	Asphalt Concrete Composite without Specified Density Compaction TONS	Asphalt Concrete Blade Laid without Specified Density Compaction TONS
Section 1 (29' Mainline, 5' Shoulders, and 2' Sluff with Specified Density)	71035.5	-	571.6	3429.5
Section 2 (41' Mainline, 5' Shoulders, and 2' Sluff with Specified Density)	790.7	-	5.1	30.5
Section 3 (28' Mainline with Specified Density)	1594.7	-	21.6	-
Section 3 (5.5' Shoulders, and 1' Sluff without Specified Density)	-	672.2	-	129.8
Section 4 (28.5' Mainline, 5' Shoulder, and 2' Sluff with Specified Density)	109.6	-	0.9	-
Section 4 (6' Shoulder on side with Curb without Specified Density)	-	13.7	-	5.7
Table of Additional Quantities	-	1171.5	1.3	-
Spot Leveling, Strengthening, and Repair of existing surface	-	2396.9	-	-
TOTAL	**73530.5**	**4254.3**	**600.5**	**3595.5**
Total Class Q3R Hot Mixed Asphalt Concrete:	77784.8	*Tons*		

HWY 212: TABLE OF INTERSECTING ROADS, AND RESIDENTIAL/RURAL ENTRANCES

MRM	DSIPL.	SIDE	DESCRIPTION	SURFACING REQUIRED	Asphalt Surface Area (SqFt) (N.A.B.I.)	Cold Mill Asphalt Concrete (Sq Yds)	Base Course, Salvaged (Ton)	Class Q3R Hot Mixed Asphalt Concrete (Ton)	SS-1h or CSS-1h Asphalt for Tack (Ton)	SS-1h or CSS-1h Asphalt for Flush (Ton)	Sand for Flush Seal (Ton)
282.00	0.054	B	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			30				
282.00	0.095	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
282.00	0.235	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
282.00	0.553	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
282.00	0.740	B	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			30				
283.00	0.144	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			30				
283.00	0.222	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
283.23	0.000		SD 45 SOUTH								
283.23	0.281	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
283.23	0.316	L	360TH AVENUE	Gravel			15				
283.23	0.535	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
283.23	0.755	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
284.00	0.050	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
284.00	0.249	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
284.00	0.471	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
284.00	0.546	L	361ST AVENUE	*Asphalt past ROW	3800	423		48	0.16	0.09	1.7
284.00	0.735	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
285.00	0.048	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
285.00	0.252	R	FIELD ENTRANCE	Asphalt to Radius, then Gravel	1800		15				
285.00	0.337	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
285.00	0.557	L	362ND AVENUE	Asphalt to Radius, then Gravel	2300		15	29	0.1	0.06	1.1
285.00	0.557	R	RESIDENTIAL DRIVEWAY	Asphalt to Radius, then Gravel	1500			19	0.07	0.04	0.7
285.00	0.706	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
286.00	0.147	R	363RD AVENUE	*Asphalt past ROW	3200	356		40	0.14	0.08	1.5
286.00	0.473	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
286.00	0.850	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
287.00	0.207	R	GRAVEL ROAD	Gravel			15				
287.00	0.352	L	RESIDENTIAL DRIVEWAY	Gravel			15				
287.00	0.552	L	364TH AVENUE	Asphalt to Radius, then Gravel	2100		15	27	0.09	0.05	1
287.00	0.656	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
287.00	0.656	R	RESIDENTIAL DRIVEWAY	Gravel			15				
288.00	0.006	R	GRAVEL ROAD	Gravel			15				
288.00	0.111	R	GRAVEL ROAD	Gravel			15				
288.00	0.216	R	RESIDENTIAL DRIVEWAY	Gravel			15				
288.00	0.551	L	365TH AVENUE	Asphalt to Radius, then Gravel	1650			21	0.07	0.04	0.8
288.00	0.551	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel							
288.00	0.921	L	RESIDENTIAL DRIVEWAY	Asphalt to ROW, then Gravel	1850		15	24	0.08	0.05	0.9
288.00	0.921	R	RESIDENTIAL DRIVEWAY	Gravel			15				
289.00	0.195	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel							
289.00	0.210	R	366TH AVENUE	Asphalt to Radius, then Gravel	3100		15	39	0.13	0.08	1.4
289.00	0.410	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
289.00	0.497	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
289.00	0.620	B	RESIDENTIAL DRIVEWAY	Gravel			30				
289.00	0.770	R	RESIDENTIAL DRIVEWAY	Gravel			15				
290.00	0.199	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
290.21	0.000		STRUCTURE								
290.21	0.234	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
290.21	0.328	L	367TH AVENUE	Gravel			15				
290.21	0.493	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				

HWY 212: TABLE OF INTERSECTING ROADS, AND RESIDENTIAL/RURAL ENTRANCES

MRM	DSIPL.	SIDE	DESCRIPTION	SURFACING REQUIRED	Asphalt Surface Area (SqFt) (N.A.B.I.)	Cold Mill Asphalt Concrete (Sq Yds)	Base Course, Salvaged (Ton)	Class Q3R Hot Mixed Asphalt Concrete (Ton)	SS-1h or CSS-1h Asphalt for Tack (Ton)	SS-1h or CSS-1h Asphalt for Flush (Ton)	Sand for Flush Seal (Ton)
290.21	0.678	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
291.00	0.190	L	RESIDENTIAL DRIVEWAY	Gravel			15				
291.00	0.204	L	RESIDENTIAL DRIVEWAY	Gravel			15				
291.00	0.222	R	368TH AVENUE	*Asphalt past ROW	3500	389		44	0.15	0.09	1.6
291.18	0.000		ROAD INTO ROCKHAM	*Asphalt past ROW	3300	367		42	0.14	0.08	1.5
291.00	0.549	L	368TH AVENUE	Asphalt to Radius, then Gravel	2400		15	30	0.1	0.06	1.1
291.00	0.768	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
291.00	0.909	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
292.00	0.093	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
292.00	0.093	R	RESIDENTIAL DRIVEWAY	Gravel			15				
292.00	0.552	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
292.00	0.597	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
293.00	0.100	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
293.00	0.100	R	370TH AVENUE	Asphalt to ROW, then Gravel	2200		15	28	0.1	0.06	1
293.00	0.553	L	370TH AVENUE	Asphalt to ROW, then Gravel	2100			27	0.09	0.05	1
293.00	0.579	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
293.00	0.888	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
294.00	0.053	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
294.00	0.098	R	FIELD ENTRANCE (Gravel Road)	Asphalt to Radius, then Gravel	2100		15	27	0.09	0.05	1
294.00	0.370	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
294.00	0.553	L	371ST AVENUE	Asphalt to Radius, then Gravel	2000		15	25	0.09	0.05	0.9
294.00	0.553	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
294.00	0.878	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
294.00	0.878	R	RESIDENTIAL DRIVEWAY	Asphalt to ROW, then Gravel	1400		15	18	0.06	0.04	0.7
295.00	0.110	R	372ND AVENUE	Asphalt to ROW, then Gravel	2150		15	27	0.09	0.05	1
295.00	0.412	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
295.00	0.412	R	RESIDENTIAL DRIVEWAY	Gravel			15				
295.00	0.552	L	372ND AVENUE	*Asphalt past ROW	4400	489		55	0.19	0.11	2
295.00	0.759	L	RESIDENTIAL DRIVEWAY	Gravel			15				
295.00	0.782	L	RESIDENTIAL DRIVEWAY	Gravel			15				
295.00	0.840	L	MAIN STREET	*Asphalt past ROW	2200	245		28	0.1	0.06	1
295.00	0.852	B	ALLEY	Gravel			15				
295.00	0.860	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
295.00	0.892	L	ST MARK STREET	Asphalt to Radius, then Gravel	1200		15	15	0.05	0.03	0.6
295.00	0.930	L	ALLEY	Gravel			15				
295.00	0.952	R	CHURCH	Asphalt to Radius, then Gravel	1000		15	13	0.05	0.03	0.5
295.00	0.968	L	PAUL STREET	Asphalt to Radius, then Gravel	750		15	10	0.04	0.02	0.4
295.00	0.993	L	RESIDENTIAL DRIVEWAY	Gravel			15				
296.00	0.029	L	RESIDENTIAL DRIVEWAY	Gravel			15				
296.00	0.054	L	RESIDENTIAL DRIVEWAY	Gravel			15				
296.00	0.093	R	373RD AVENUE	Asphalt to Radius, then Gravel	2300		15	29	0.1	0.06	1.1
296.00	0.173	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
296.00	0.547	L	373RD AVENUE	Asphalt to Radius, then Gravel	2300		15	29	0.1	0.06	1.1
296.00	0.562	R	RESIDENTIAL DRIVEWAY	Gravel			15				
297.00	0.086	L	SPINK COUNTY/374TH AVENUE	Gravel			15				
297.00	0.090	R	SPINK COUNTY/374TH AVENUE	Asphalt to Radius, then Gravel	1600		15	20	0.07	0.04	0.8
297.00	0.544	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
297.00	0.544	L	375TH AVENUE	Asphalt to Radius, then Gravel	2500		15	32	0.11	0.06	1.2
297.00	0.958	B	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			30				
298.00	0.018	R	375TH AVENUE	Asphalt to Radius, then Gravel	2000		15	25	0.09	0.05	0.9
298.00	0.507	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				

HWY 212: TABLE OF INTERSECTING ROADS, AND RESIDENTIAL/RURAL ENTRANCES

MRM	DSIPL.	SIDE	DESCRIPTION	SURFACING REQUIRED	Asphalt Surface Area (SqFt) (N.A.B.I.)	Cold Mill Asphalt Concrete (Sq Yds)	Base Course, Salvaged (Ton)	Class Q3R Hot Mixed Asphalt Concrete (Ton)	SS-1h or CSS-1h Asphalt for Tack (Ton)	SS-1h or CSS-1h Asphalt for Flush (Ton)	Sand for Flush Seal (Ton)
298.00	0.546	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
298.00	0.760	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
299.00	0.005	R	RESIDENTIAL DRIVEWAY	Gravel			15				
299.00	0.219	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
299.00	0.504	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
299.00	0.560	L	377TH AVENUE	Asphalt to Radius, then Gravel	2900		15	37	0.13	0.07	1.3
299.00	0.977	R	RESIDENTIAL DRIVEWAY	Gravel			15				
300.00	0.002	R	377TH AVENUE	Asphalt to Radius, then Gravel	2200		15	28	0.1	0.06	1
300.00	0.042	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
300.00	0.476	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
300.00	0.601	L	378TH AVENUE	Asphalt to Radius, then Gravel	2600		15	33	0.11	0.07	1.2
300.00	0.665	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
300.00	0.667	R	RESIDENTIAL DRIVEWAY	Gravel			15				
301.00	0.023	R	378TH AVENUE	Gravel			15				
301.00	0.043	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
301.00	0.169	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
301.00	0.169	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
301.00	0.457	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
301.00	0.542	L	379TH AVENUE	Asphalt to Radius, then Gravel	2700		15	34	0.12	0.07	1.2
301.00	0.851	B	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			30				
301.00	0.859	R	379TH AVENUE	Gravel			15				
302.00	0.509	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
302.00	0.540	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
303.00	0.014	B	382ND AVENUE	Asphalt to Radius, then Gravel	2000		30	25	0.09	0.05	0.9
303.00	0.557	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
304.00	0.103	L	383RD AVENUE	Asphalt to Radius, then Gravel	1400		15	18	0.06	0.04	0.7
304.00	0.110	R	383RD AVENUE	Asphalt to Radius, then Gravel	1200		15	15	0.05	0.03	0.6
304.00	0.379	B	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			30				
304.00	0.718	R	TURTLE LANE	Asphalt to ROW, then Gravel	2000		15	25	0.09	0.05	0.9
304.00	0.823	L	RESIDENTIAL DRIVEWAY	Asphalt to Radius, then Gravel	2200		15	28	0.1	0.06	1
304.00	0.918	L	COMMERCIAL DRIVEWAY	Gravel			15				
304.00	0.922	R	COMMERCIAL DRIVEWAY	Gravel			15				
304.00	0.987	L	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
305.00	0.077	L	COMMERCIAL DRIVEWAY	Gravel			15				
305.00	0.152	L	COMMERCIAL DRIVEWAY	Gravel			15				
305.00	0.202	L	384TH AVENUE	Asphalt to Radius, then Gravel	2500		15	32	0.11	0.06	1.2
305.00	0.207	R	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			15				
305.00	0.501	R	RESIDENTIAL DRIVEWAY	Cold Mill to Radius, Asphalt to Radius	500	40		7	0.03	0.02	0.3
305.00	0.580	R	COMMERCIAL DRIVEWAY	Gravel			15				
305.00	0.640	B	FIELD ENTRANCE	Asphalt on full Shoulder width, then Gravel			30	10			
305.98	0.000	L	4TH AVENUE	*Asphalt past ROW	3400	378		43	0.15	0.08	1.6
305.98	0.000	R	4TH AVENUE	Gravel			15				
305.98	0.000	R	PARK	Asphalt to ROW	1000	112		13	0.05	0.03	0.5
				Totals:	89300	2799	2040	1119	3.84	2.23	40.9

*See Detail titled "Transition Details for Intersecting Asphalt"

TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0212(213)282	21	49

Plotting Date: 08/17/2026

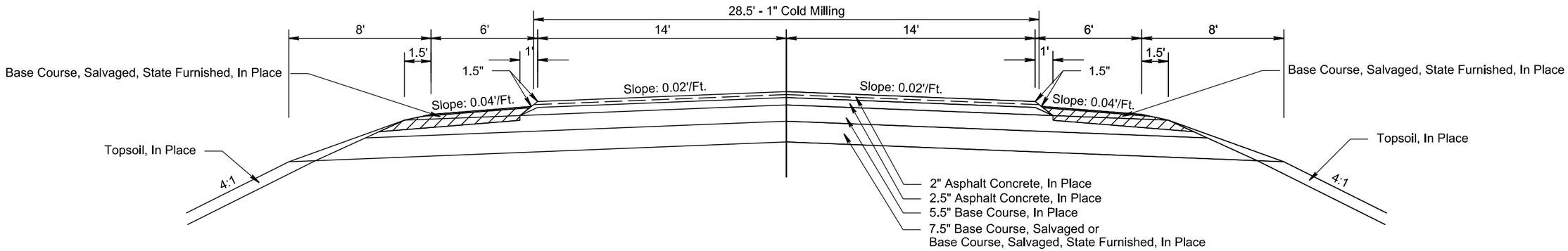
Rev. 09/01/26- PB

Salvage and Stockpile Granular Material

4" Surface Preparation

Section 1

US HWY 212
Sta. 1+78 to Sta. 60+18.39
Sta. 70+90.23 to Sta. 715+09
Sta. a 10+30 to Sta. a 31+40
Sta. a 33+40 to Sta. a 400+02.19
Sta. a 411+11.29 to Sta. a 473+32.45
Sta. a 481+39.02 to Sta. a 501+54.02
Sta. a 509+53.53 to Sta. a 541+20.42
Sta. a 559+72.94 to Sta. a 562+55.40
In Place & Cold Milling Section

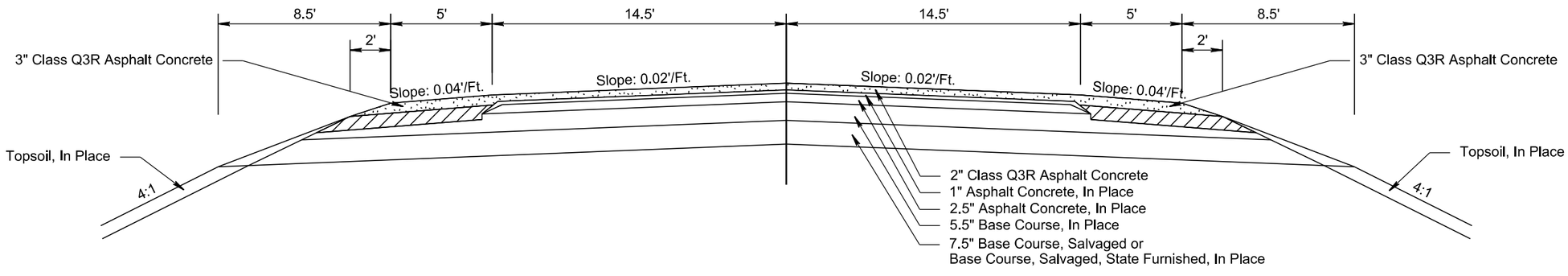


Equation:

Sta. 715+09 Bk. =
Sta. a 10+30 Ah.

Section 1

US HWY 212
Sta. 1+78 to Sta. 60+18.39
Sta. 70+90.23 to Sta. 715+09
Sta. a 10+30 to Sta. a 31+40
Sta. a 33+40 to Sta. a 400+02.19
Sta. a 411+11.29 to Sta. a 473+32.45
Sta. a 481+39.02 to Sta. a 501+54.02
Sta. a 509+53.53 to Sta. a 541+20.42
Sta. a 559+72.94 to Sta. a 562+55.40
Resurfacing Section



TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0212(213)282	22	49

Plotting Date: 08/12/2026

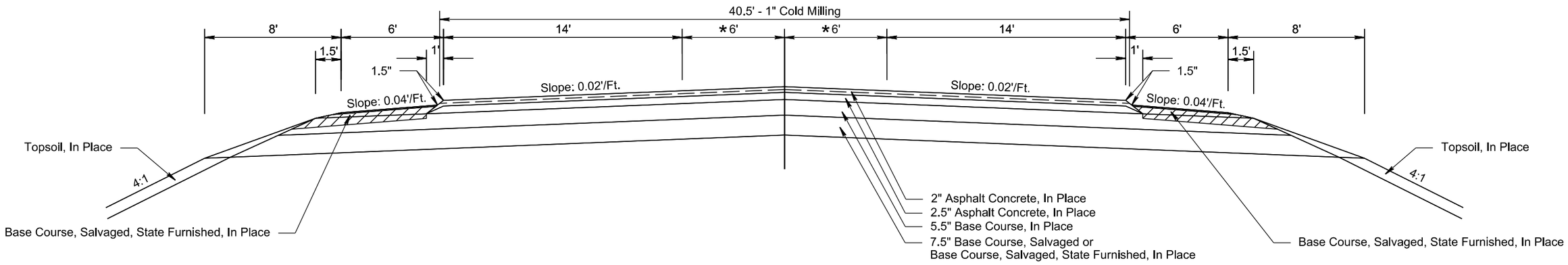
Rev. 09/01/26- PB

Salvage and Stockpile Granular Material

4" Surface Preparation

Section 2

US HWY 212
Sta. 60+18.39 to Sta. 70+90.23
In Place & Cold Milling Section



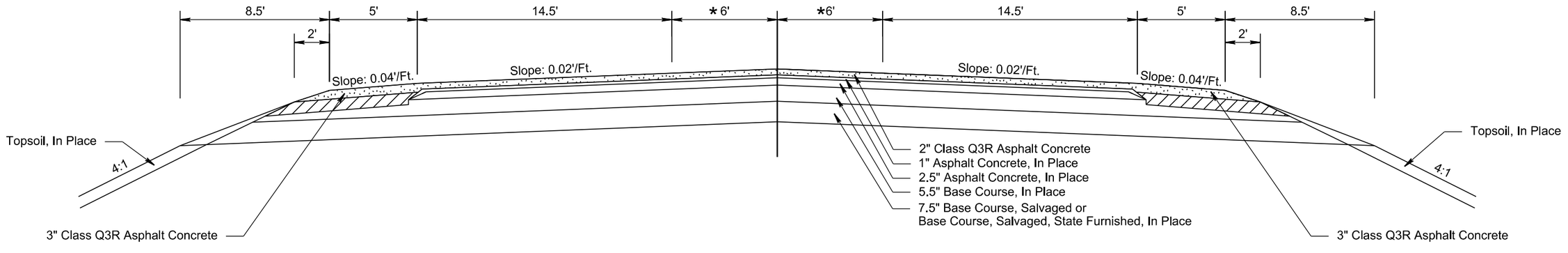
Transitions:

Sta. 60+18.39 to Sta. 64+37.15
* 0' to 6'

Sta. 66+70 to Sta. 70+90.23
* 6' to 0'

Section 2

US HWY 212
Sta. 60+18.39 to Sta. 70+90.23
Resurfacing Section



TYPICAL SURFACING SECTIONS

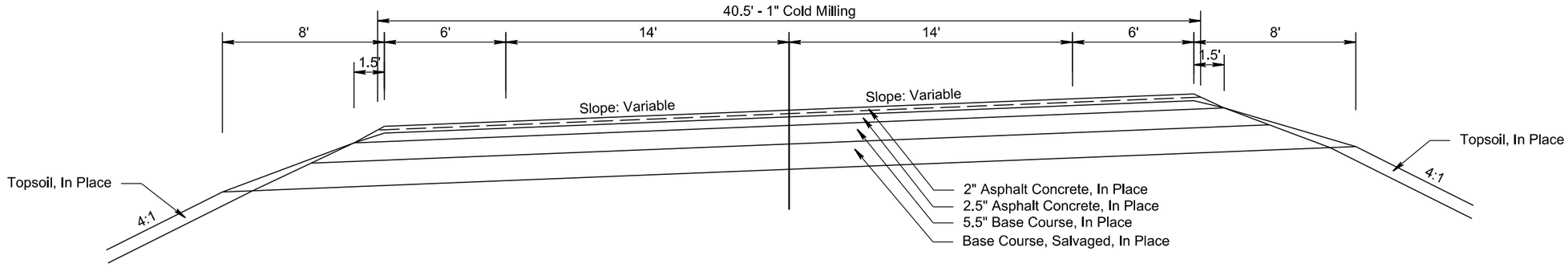
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0212(213)282	23	49

Plotting Date: 08/12/2026

Rev. 09/01/26- PB

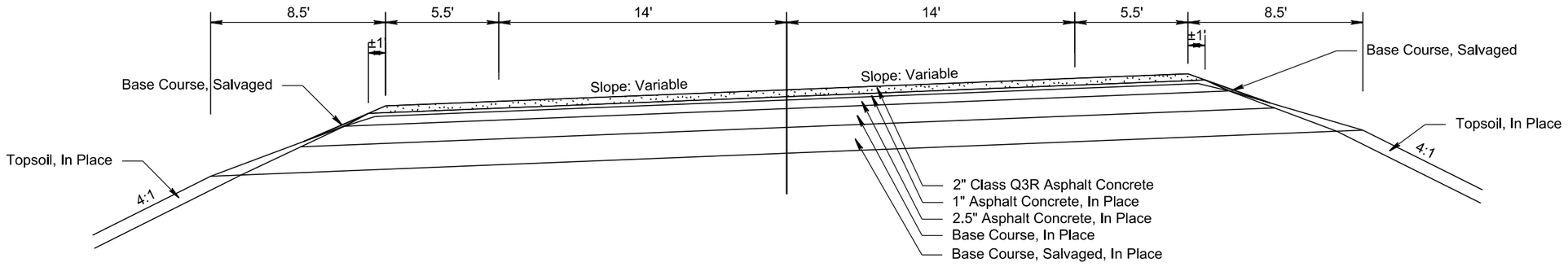
Section 3

US HWY 212
Sta. a 400+02.19 to Sta. a 411+11.29
Sta. a 473+32.45 to Sta. a 481+39.02
Sta. a 501+54.02 to Sta. a 509+53.53
Sta. a 541+20.42 to Sta. a 559+72.94
In Place & Cold Milling Section



Section 3

US HWY 212
Sta. a 400+02.19 to Sta. a 411+11.29
Sta. a 473+32.45 to Sta. a 481+39.02
Sta. a 501+54.02 to Sta. a 509+53.53
Sta. a 541+20.42 to Sta. a 559+72.94
Resurfacing Section



PLOT SCALE - 1:6.00001

PLOTTED FROM - TRPR12283

PLOT NAME - 3

FILE - ...\07YY_TYPSECT_TJ03.DGN

TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0212(213)282	24	49

Plotting Date: 08/12/2026

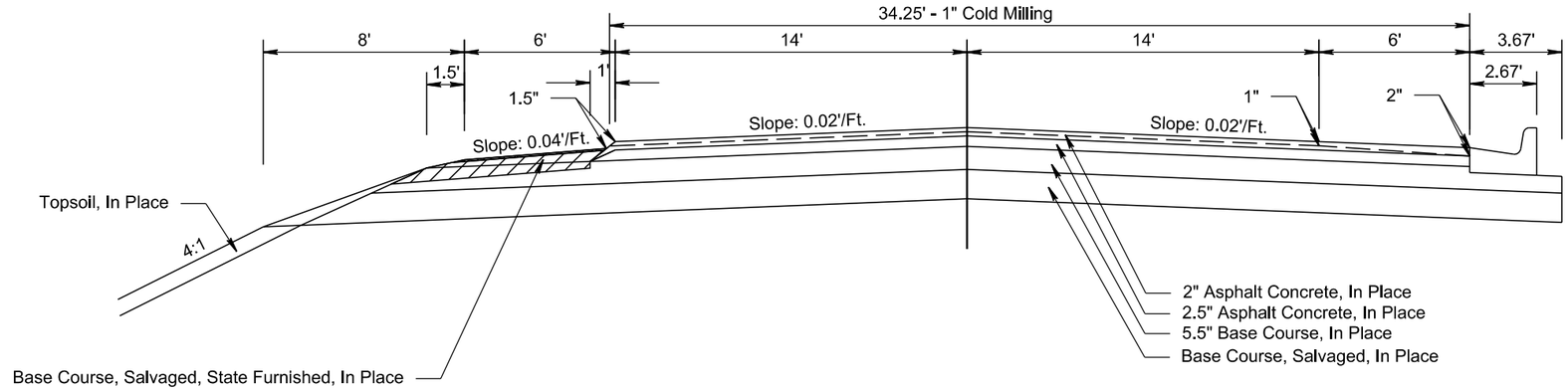
Rev. 09/01/26- PB

Salvage and Stockpile Granular Material

4" Surface Preparation

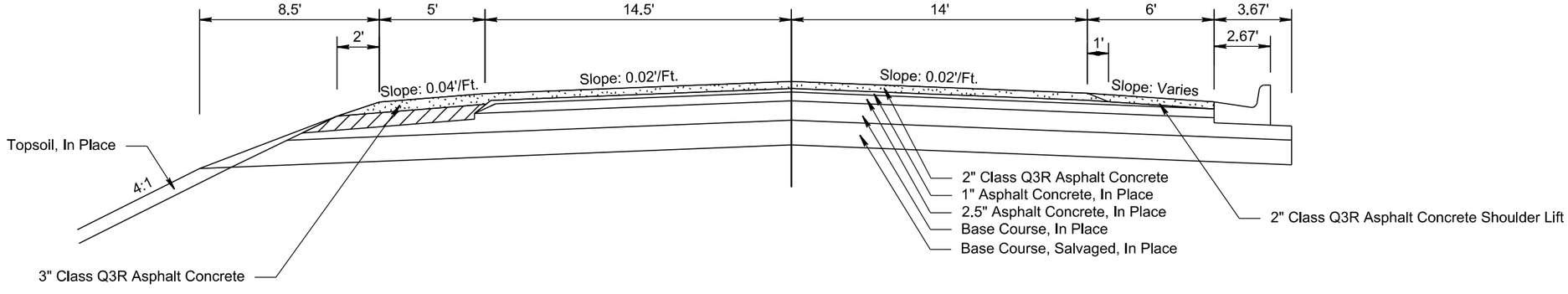
Section 4

US HWY 212
Sta. a 31+40 to Sta. a 33+40
In Place & Cold Milling Section



Section 4

US HWY 212
Sta. a 31+40 to Sta. a 33+40
Resurfacing Section



PLOT SCALE - 1:6.00001

PLOTTED FROM - TRPR12283

PLOT NAME - 4

FILE - ...\07YY_TYPSECT_TJ03.DGN

FIXED LOCATION TRAFFIC CONTROL

A
ROAD WORK NEXT 24 MILES

B
ROAD WORK NEXT 22 MILES

C
ROAD WORK NEXT 21 MILES

D
ROAD WORK NEXT 18 MILES

E
ROAD WORK NEXT 14 MILES

F
ROAD WORK NEXT 10 MILES

G
ROAD WORK NEXT 6 MILES

H
ROAD WORK NEXT 3 MILES

I
ROAD WORK NEXT 2 MILES

J
END ROAD WORK

Z

GROOVED PAVEMENT *

GROOVED PAVEMENT signs must only be visible when the condition exists. Signs will be covered or removed when the grooved road condition is not present.

W8-15P

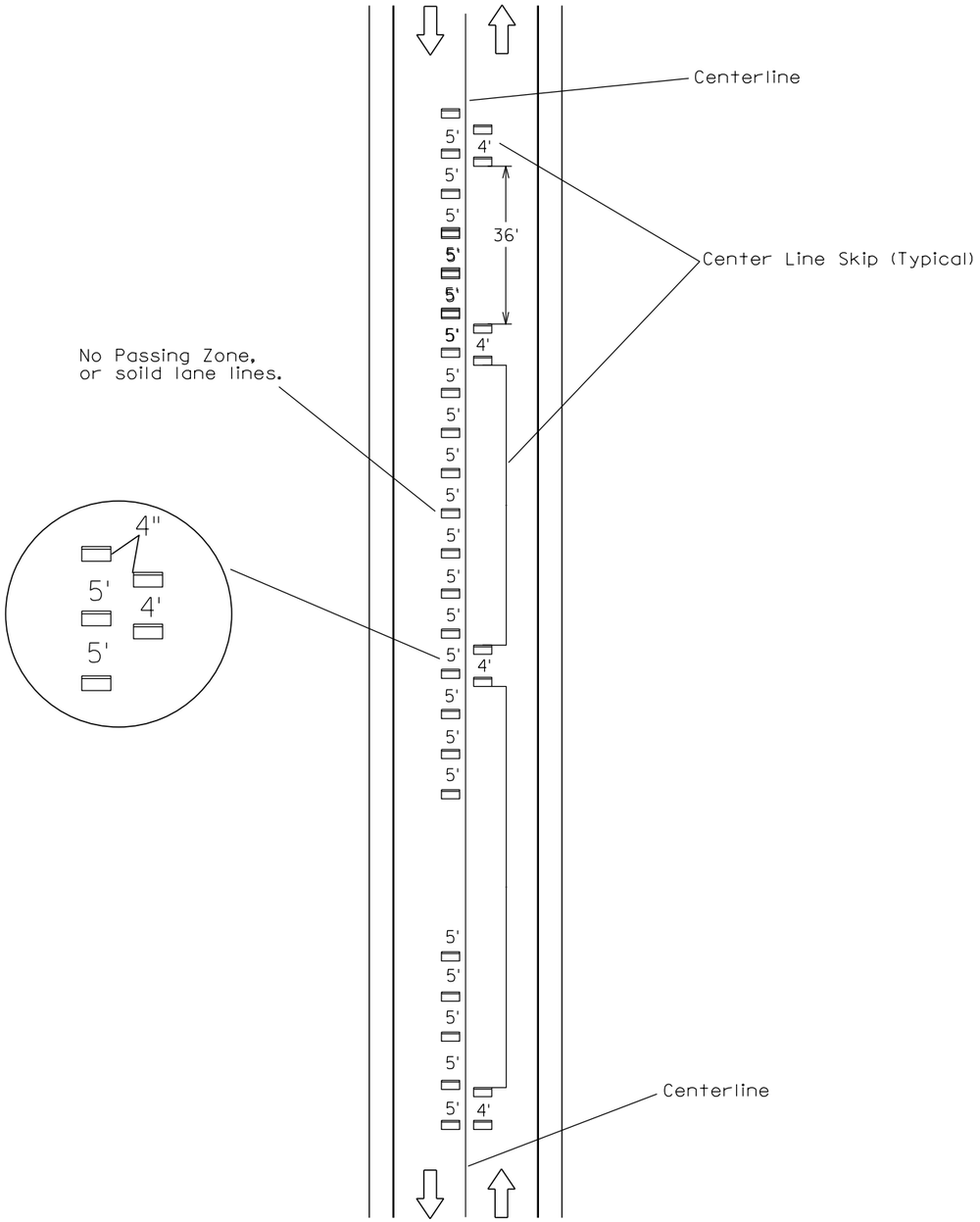
Next Miles

W7-3aP

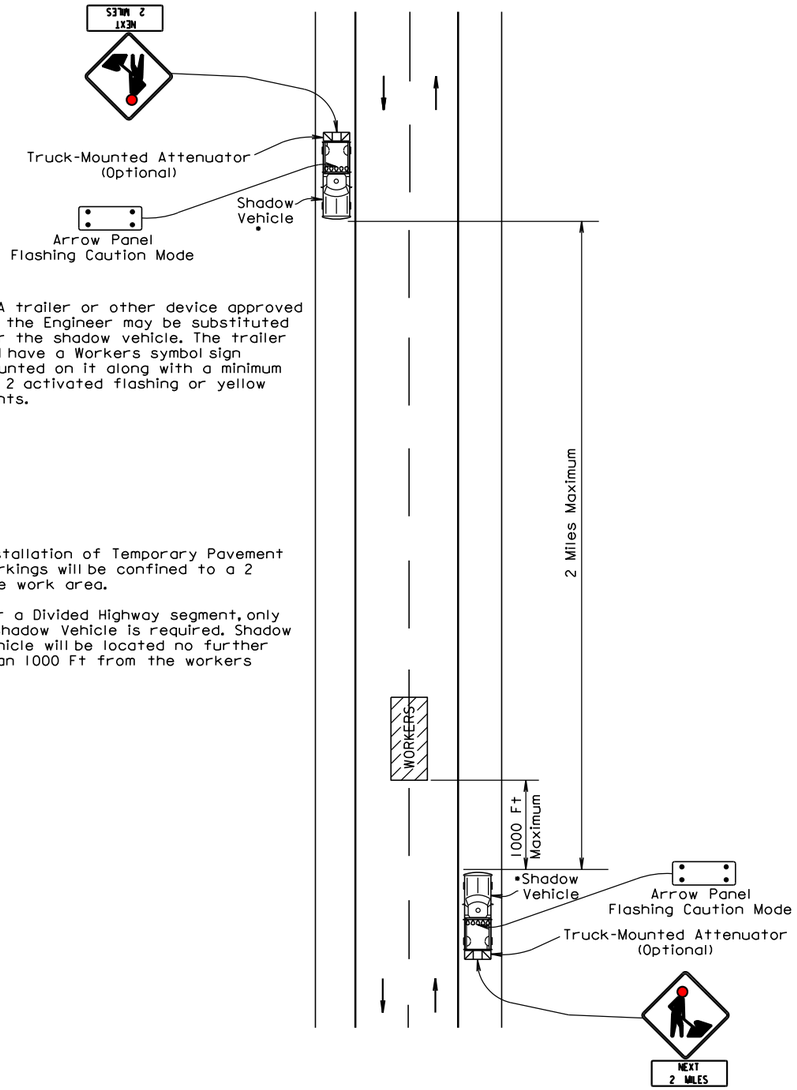
ROAD WORK AHEAD

W20-1 ROAD WORK AHEAD signs will be mounted on portable supports, and will be placed on intersecting roadways as directed by the Engineer. ROAD WORK AHEAD signs will be moved as necessary to keep current with the work activities as shown in the applicable Standard Plates.

GUIDES FOR TRAFFIC CONTROL DEVICES TEMPORARY ROAD MARKER INSTALLATION



GUIDES FOR TRAFFIC CONTROL DEVICES APPLICATION OF TEMPORARY PAVEMENT MARKING TABS



* A trailer or other device approved by the Engineer may be substituted for the shadow vehicle. The trailer will have a Workers symbol sign mounted on it along with a minimum of 2 activated flashing or yellow lights.

Installation of Temporary Pavement Markings will be confined to a 2 Mile work area.

For a Divided Highway segment, only 1 Shadow Vehicle is required. Shadow Vehicle will be located no further than 1000 Ft from the workers

LANE CLOSURE WITH FLAGGER PROVIDED AND TEMPORARY PORTABLE RUMBLE STRIPS

Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	25
35 - 40	350	25
45	500	25
50	500	50
55	750	50
60 - 65	1000	50

Flagger

Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) will be displayed in advance of the liquid asphalt areas.

Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

The channelizing devices will be drums or 42" cones.

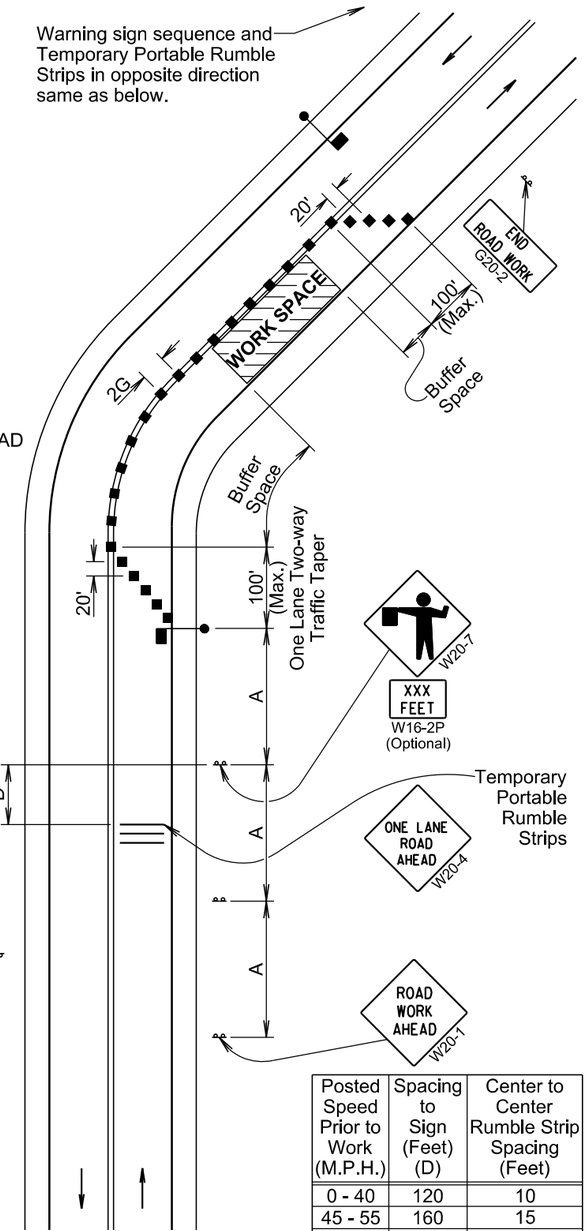
Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.

END ROAD WORK G20-2

Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

The length of A may be adjusted to fit field conditions.



Posted Speed Prior to Work (M.P.H.)	Spacing to Sign (Feet) (D)	Center to Center Rumble Strip Spacing (Feet)
0 - 40	120	10
45 - 55	160	15
60	200	20
65 - 80	240	35

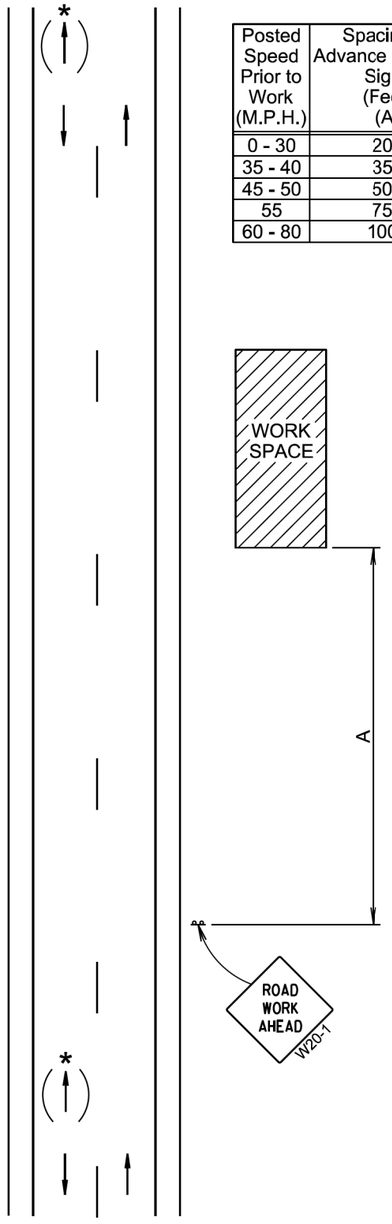
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

The signs illustrated will be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

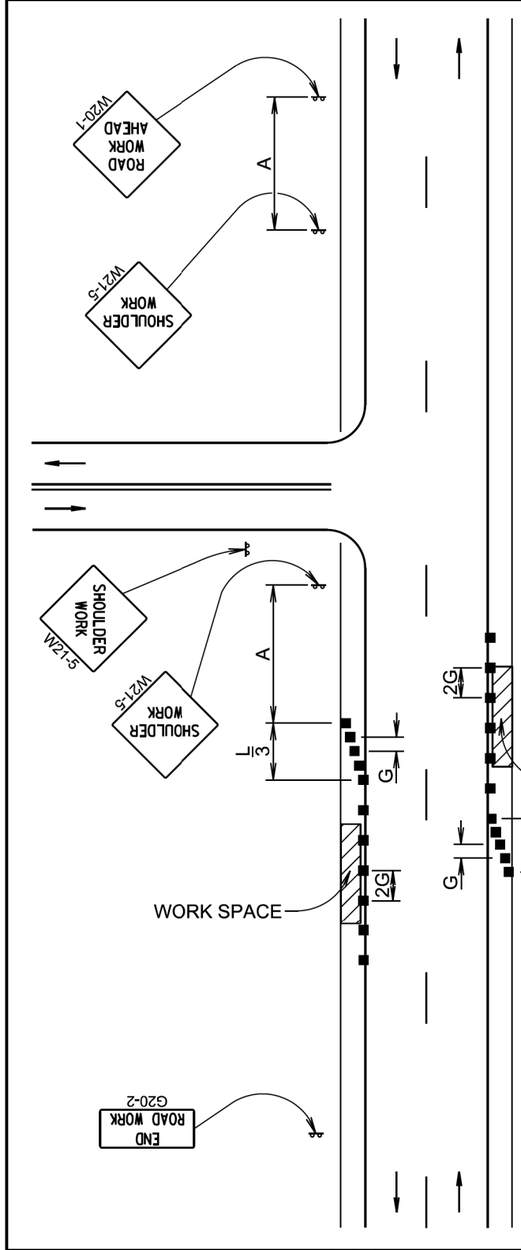
For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 80	1000

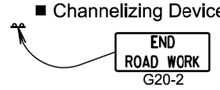
January 22, 2021

Published Date: 2027	SDDOT	WORK BEYOND THE SHOULDER	PLATE NUMBER 634.01 Sheet 1 of 1



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50
55	750	660	50
60 - 65	1000	780	50

■ Channelizing Device



The channelizing devices will be drums or 42" cones if traffic control must remain overnight.

For short duration operations (1 hour or less) all channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

Worker signs (W21-1 or W21-1a) may be used instead of SHOULDER WORK signs.

A SHOULDER WORK sign should be placed on the left side of a divided or one-way roadway only if the left shoulder is affected.

The SHOULDER WORK sign on an intersecting roadway is not required if drivers emerging from that roadway will encounter another advance warning sign before they reach a work activity area.

January 22, 2021

Published Date: 2027	SDDOT	WORK ON SHOULDERS	PLATE NUMBER 634.03 Sheet 1 of 1

* Messages on signs will vary depending on the operation being conducted.

Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

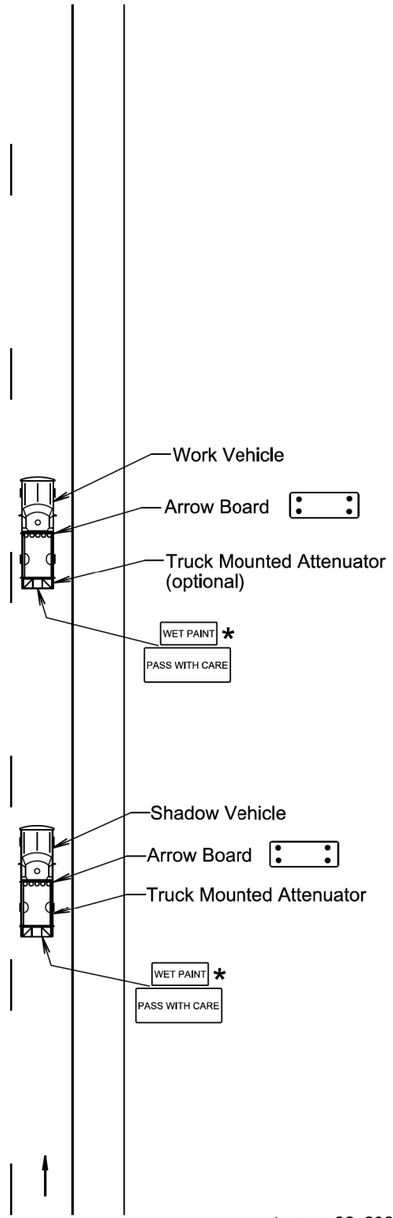
Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow boards.

Vehicle hazard warning signals will not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

When an arrow board is used, it will be used in the caution mode. Marching Diamonds are acceptable.

Arrow boards will, as a minimum, be Type B, with a size of 60" x 30".

All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".



January 22, 2021

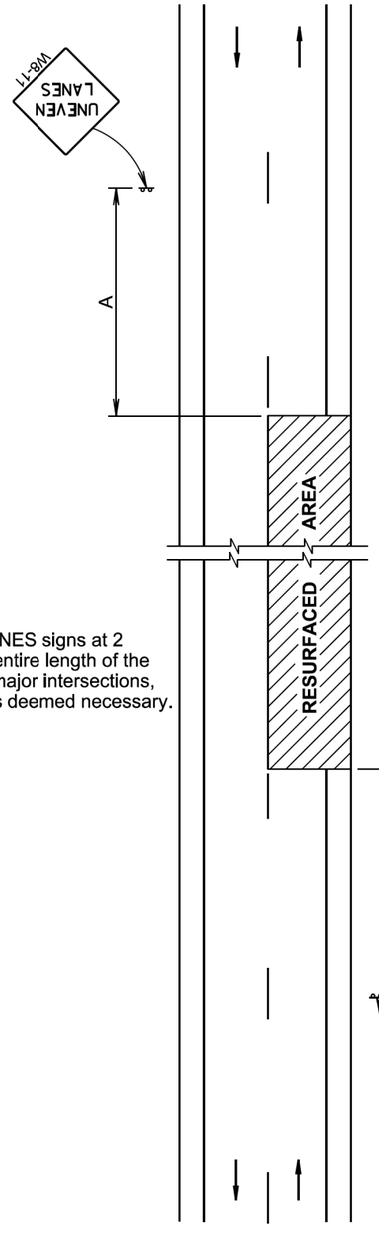
Published Date: 2027

SDDOT

MOBILE OPERATIONS ON 2-LANE ROAD

PLATE NUMBER 634.06

Sheet 1 of 1



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 75	1000

Install additional UNEVEN LANES signs at 2 mile intervals throughout the entire length of the uneven area and at affected major intersections, edge of towns, and other sites deemed necessary.

January 22, 2021

Published Date: 2027	SDDOT	UNEVEN ROAD SURFACE	PLATE NUMBER 634.22
			Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	25
35 - 40	350	25
45	500	25
50	500	50
55	750	50
60 - 65	1000	50

Flagger

Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

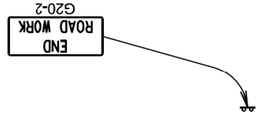
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) will be displayed in advance of the liquid asphalt areas.

Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

The channelizing devices will be drums or 42" cones.

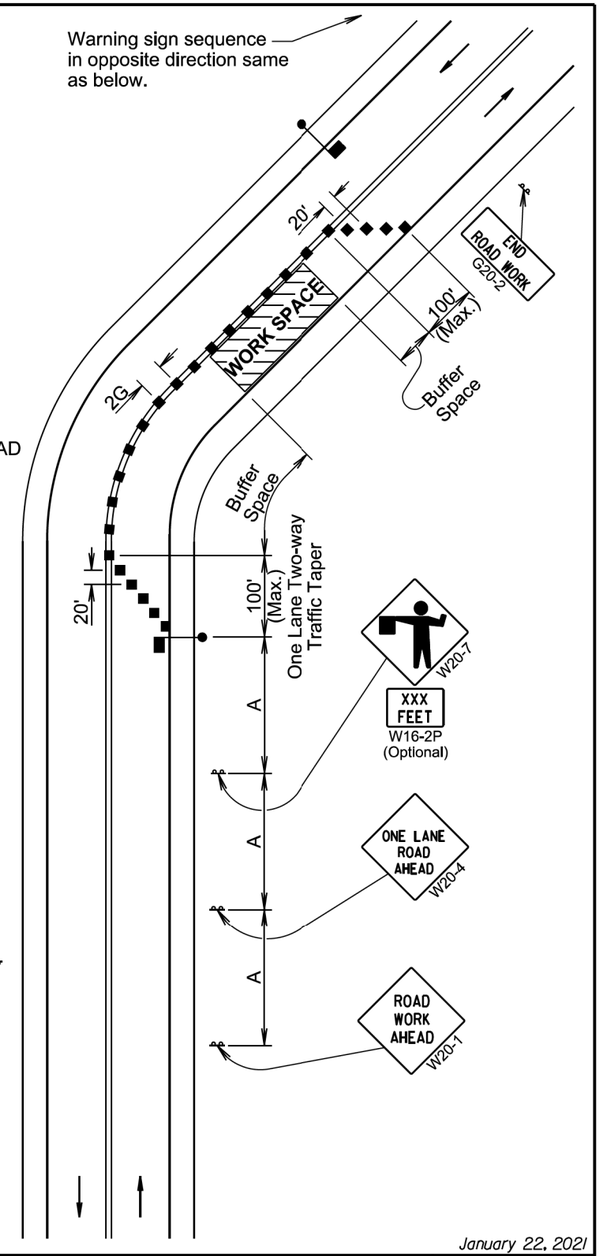
Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.



Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

The length of A may be adjusted to fit field conditions.



January 22, 2021

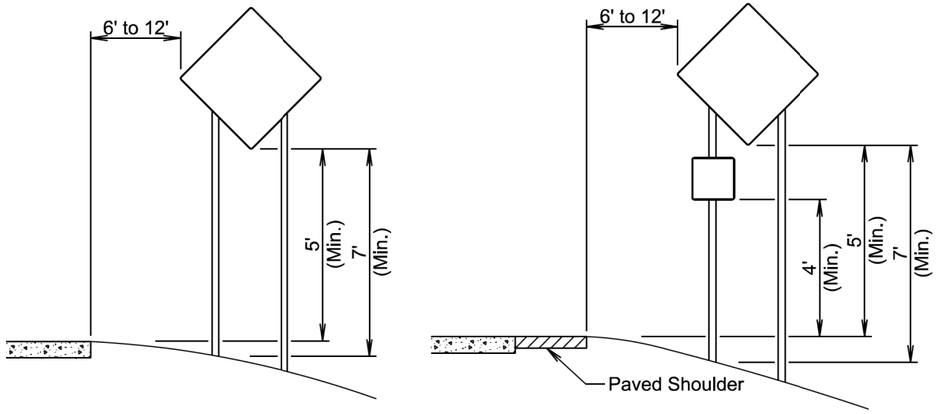
Published Date: 2027	SDDOT	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
			Sheet 1 of 1

PLOT SCALE - 1:200

PLOT NAME - 7

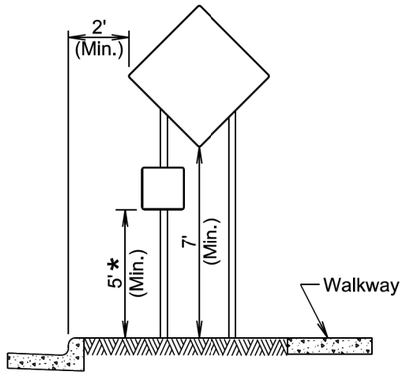
FILE ....\REGION DESIGN\STD PLATES.DGN

-PLOTTED FROM - TRAB17901

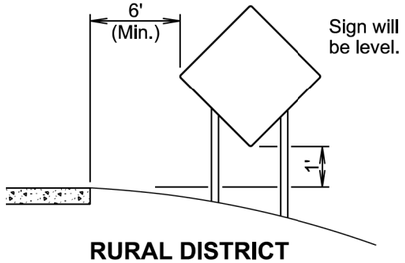


RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

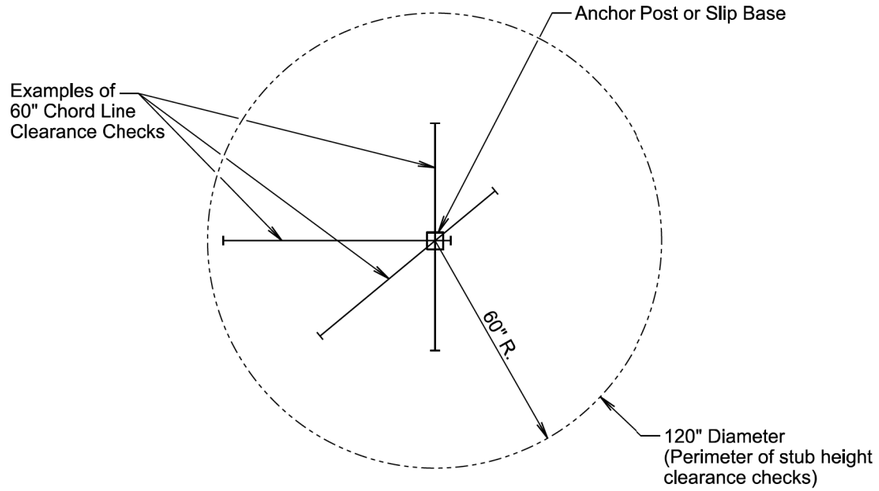


RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

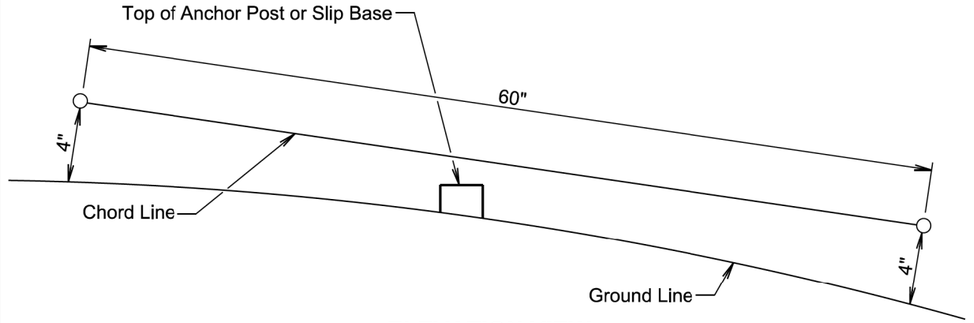
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 2027	SDDOT	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

January 22, 2021

Published Date: 2027	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W7-3aP	NEXT __ MILES (plaque)	10	36" x 30"	7.5	75.0
W8-1	BUMP	6	48" x 48"	16.0	96.0
W8-6	TRUCK CROSSING	6	48" x 48"	16.0	96.0
W8-7	LOOSE GRAVEL	4	48" x 48"	16.0	64.0
W8-11	UNEVEN LANES	4	48" x 48"	16.0	64.0
W8-15	GROOVED PAVEMENT	10	48" x 48"	16.0	160.0
W8-15P	MOTORCYCLE (plaque)	10	24" x 18"	3.0	30.0
W8-17P	SHOULDER DROP-OFF	4	24" x 18"	3.0	12.0
W20-1	ROAD WORK AHEAD	8	48" x 48"	16.0	128.0
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16.0	64.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
W21-2	FRESH OIL	2	48" x 48"	16.0	32.0
W21-5	SHOULDER WORK	4	48" x 48"	16.0	64.0
SPECIAL	WAIT FOLLOW PILOT CAR	4	30" x 18"	3.8	15.2
G20-1	ROAD WORK NEXT 24 MILES	2	36" x 18"	4.5	9.0
G20-1	ROAD WORK NEXT 22 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 21 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 18 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 14 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 10 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 6 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 3 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 2 MILES	1	36" x 18"	4.5	4.5
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			1018.2

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212(213)282	33	49

HORIZONTAL ALIGNMENT DATA

MAINLINE

Type	Station			Northing	Easting
POB	a 10+30.00			390312.905	2295837.329
		TL= 895.11	N 89°31'55" E		
PC	a 19+25.11			390320.217	2296732.404
PI	a 24+27.57	R = 137509.87	Delta = 0°25'07" L	390324.322	2297234.849
PT	a 29+30.02			390332.099	2297737.251
		TL= 931.80	N 89°06'48" E		
POE	a 38+61.82			390346.520	2298668.940
		TL= 4804.37	N 89°05'20" E		

CONTROL DATA

HORIZONTAL AND VERTICAL CONTROL POINTS

POINT	HWY	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING	ELEVATION
142	US 212	-	-	Refmrk	390316.3020	2297897.9870	1370.10
143	US 212	-	-	Refmrk	390324.0230	2297992.0320	1370.83
80	US 212	-	-	Refmrk	390287.9420	2297920.1530	1370.54

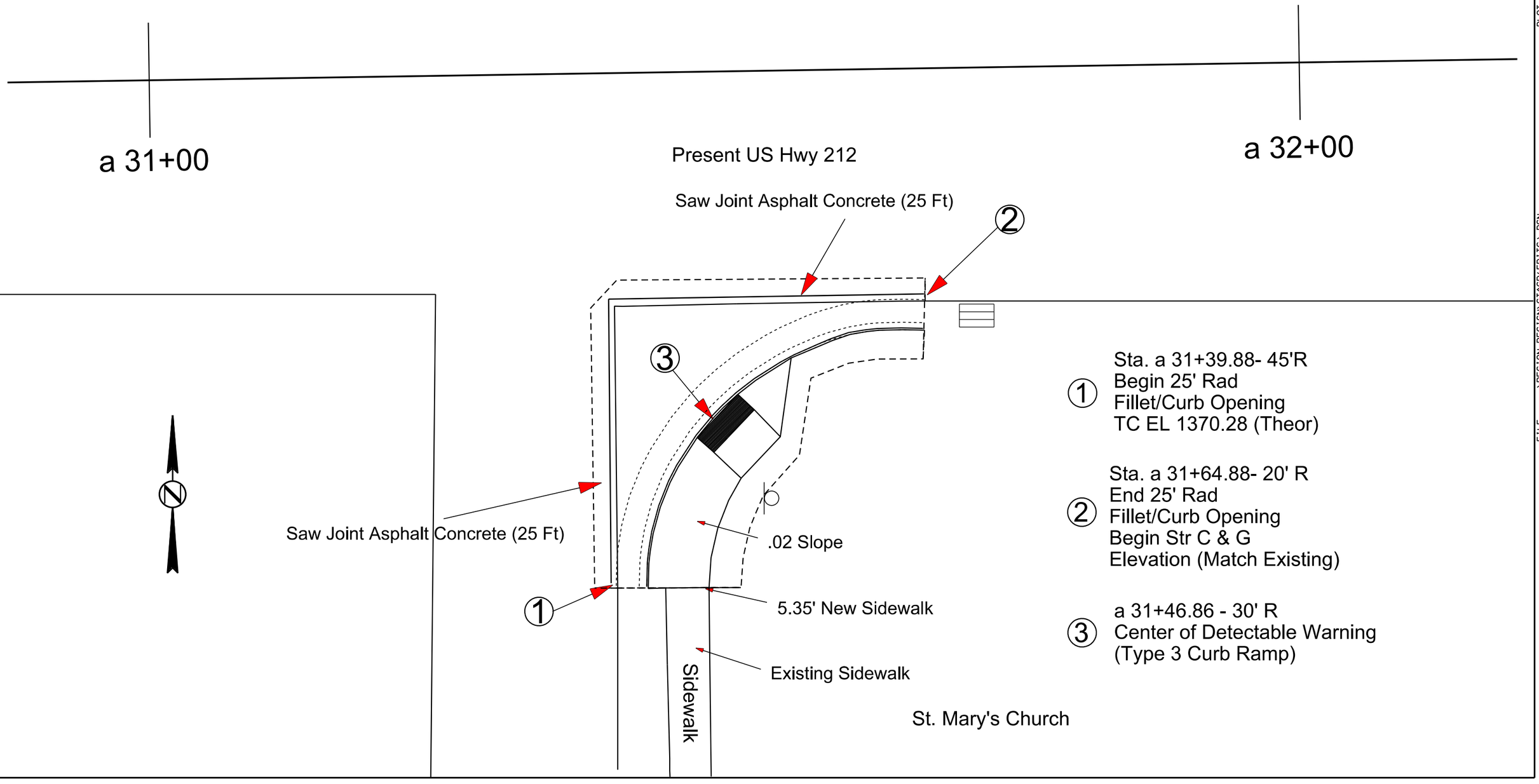
The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. North Zone NAD 83(2011); epoch 2010.0 ; Geoid 12B; SF = 0.999884149
The elevations shown on this sheet are based on NAVD 88.

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. North Zone (NAD 83/96) SF = 0.999884149

PLOT SCALE - 1:8.3688
PLOT NAME - 3
FILE - ...\REGION DESIGN\STACR(EDITS).DGN
PLOTTED FROM - TRAB17901

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212(213)282	34	49
Plotting Date: 05/22/2026			

CURB AND GUTTER LAYOUT



1. Sta. a 31+39.88- 45'R
   Begin 25' Rad
   Fillet/Curb Opening
   TC EL 1370.28 (Theor)

2. Sta. a 31+64.88- 20' R
   End 25' Rad
   Fillet/Curb Opening
   Begin Str C & G
   Elevation (Match Existing)

3. a 31+46.86 - 30' R
   Center of Detectable Warning
   (Type 3 Curb Ramp)

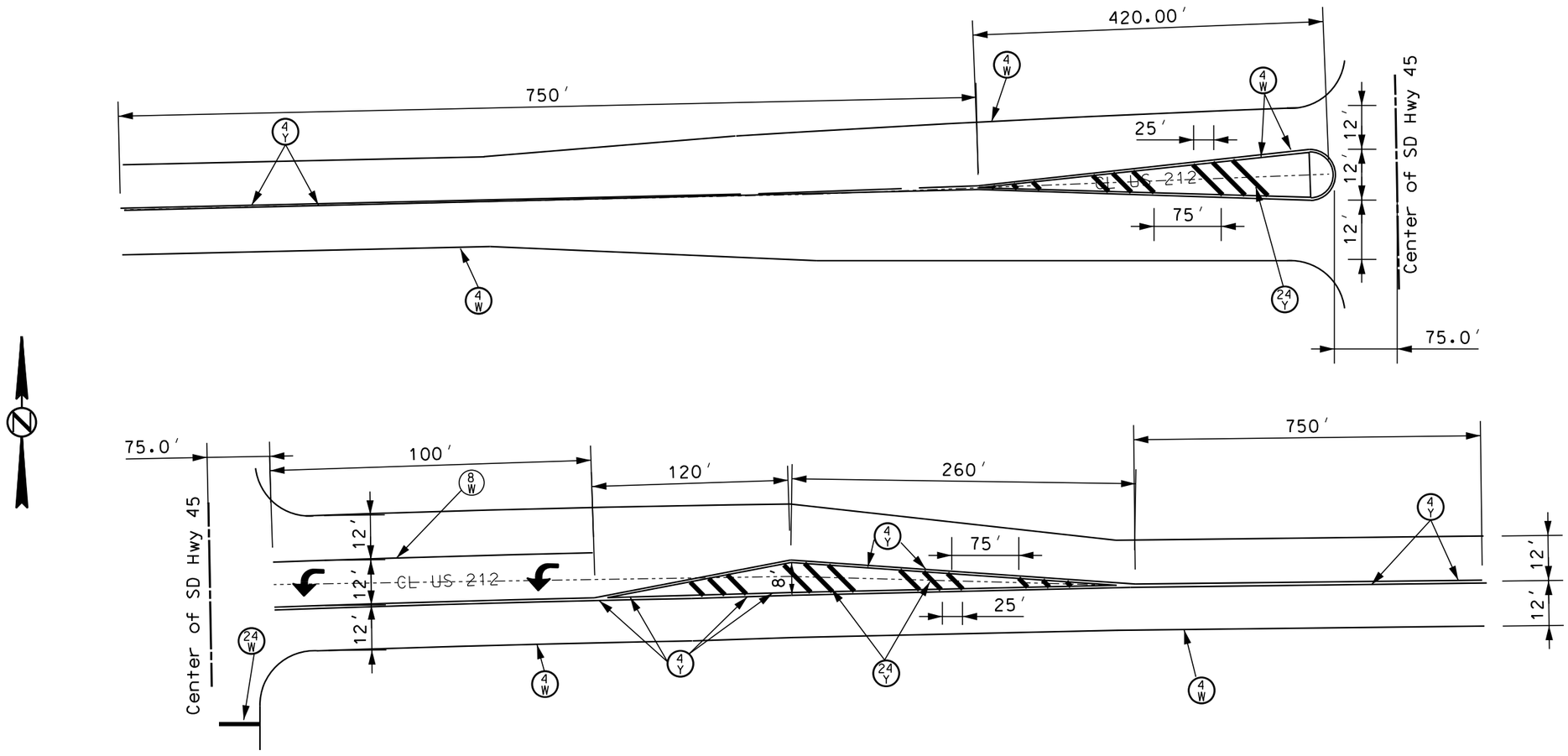
PLOT SCALE - 1:152.361

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212(213)282	35	49
Plotting Date: 5/22/2026			

Pavement Marking Layout
US Hwy 212/SD Hwy 45 Intersection

KEY	ITEM
(4 W)	High Build Waterborne Pavement Marking Paint, 4" White
(4 Y)	High Build Waterborne Pavement Marking Paint, 4" Yellow
(8 W)	High Build Waterborne Pavement Marking Paint, 8" White
(24 Y)	Cold Applied Plastic Pavement Marking, 24" Yellow
(24 W)	Cold Applied Plastic Pavement Marking, 24" White
↰	Cold Applied Plastic Pavement Marking, Arrow

(24 Y)	Cold Applied Plastic Pavement Marking, 24" Yellow	123	Feet
(24 W)	Cold Applied Plastic Pavement Marking, 24" White	15	Feet
↰	Cold Applied Plastic Pavement Marking, Arrow	2	Each
	Grooving for Cold Applied Plastic Pavement Marking, 24"	138	Feet
	Grooving for Cold Applied Plastic Pavement Marking, Arrow	2	Each



PLOTTED FROM - TRAB17901

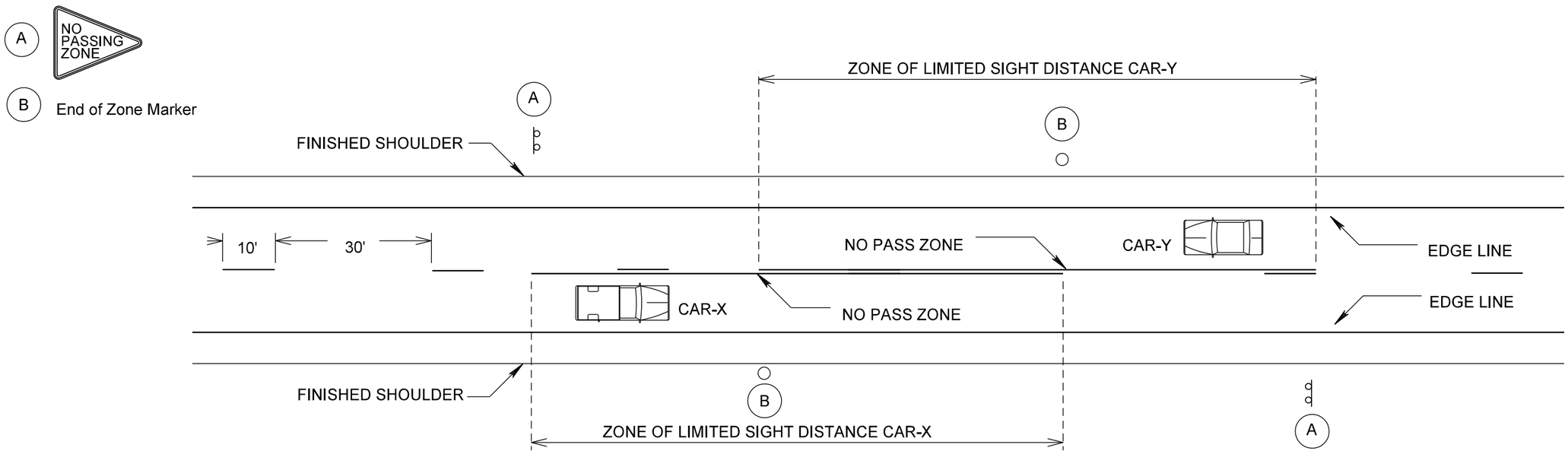
PLOT NAME - $$PLOTNAME$$

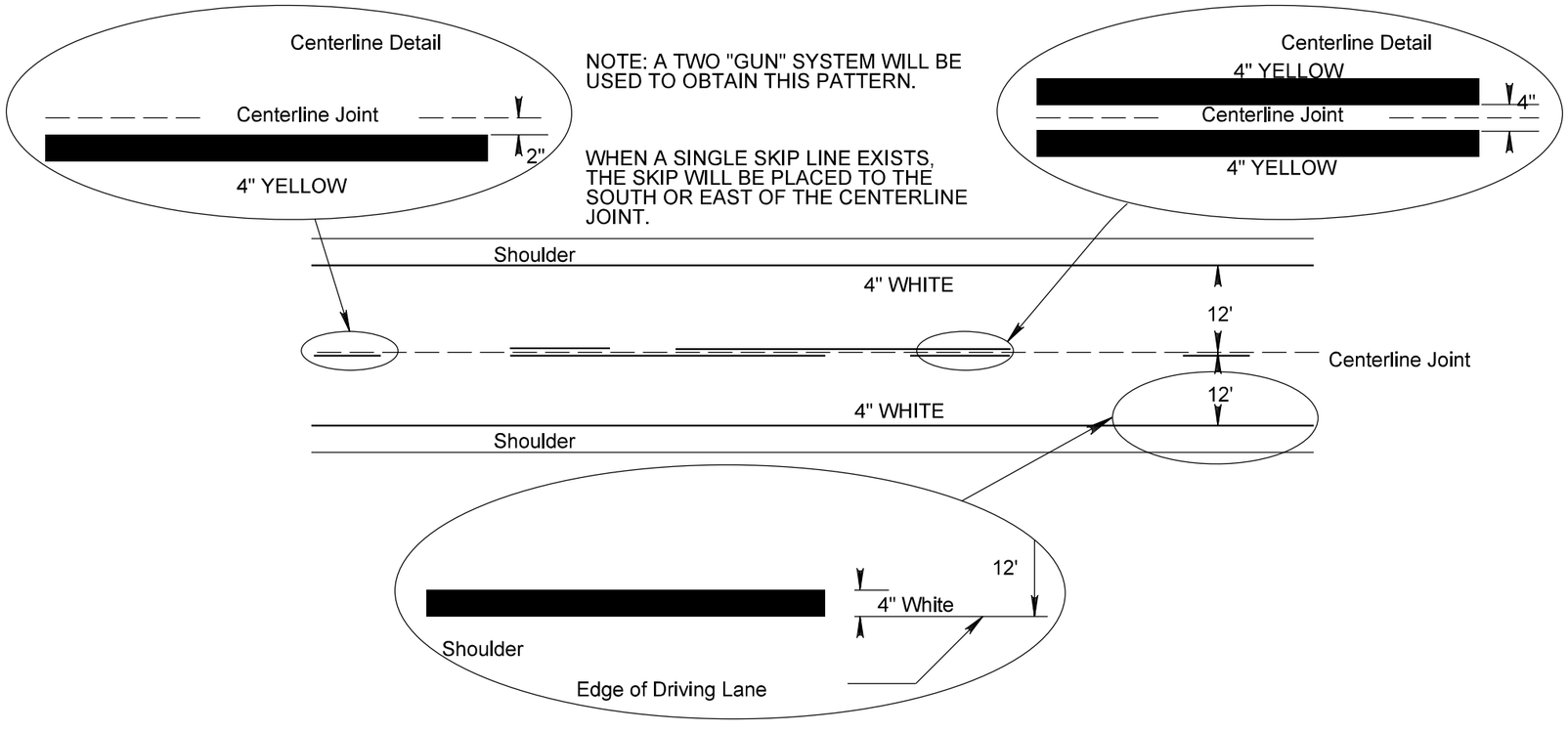
FILE -...\INTERSECTION LAYOUT.DGN

PLOT SCALE - 1:22.1616

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212(213)282	36	49
Plotting Date: 3/9/2026			

TYPICAL PAVEMENT MARKING LAYOUT





FURNISHING AND APPLYING HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT (some w/ Reflective Elements)

1. The typical pavement markings as shown on this sheet will be applied throughout the entire length of the project.
2. Exact location of the NO PASSING ZONE lines will be determined in the field by the Engineer. A dash of white paint will mark the beginning and end of all no passing zones. NO PASSING ZONE signs and the ending post in fence lines, if present, will not be used as the beginning and ending NO PASSING ZONE lines.
3. Traffic Control will be incidental to the cost of application. The striper and advance or trailing warning vehicle will be equipped with flashing amber lights or advance warning arrow panel.

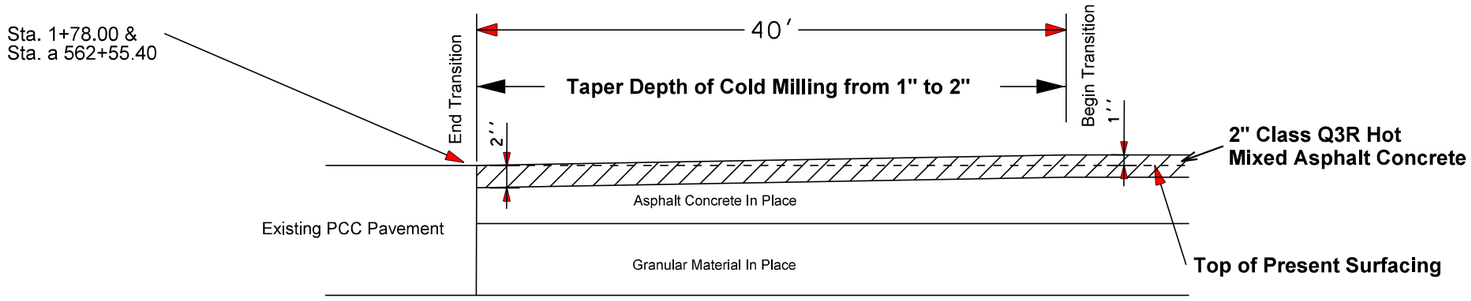
PLOTTED FROM - TRAB17901
PLOT NAME - $$PLOTNAME$$
FILE - ...\PAVEMENTMARKINGDETAIL.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212(213)282	37	49
Plotting Date: 05/13/2026			

TRANSITION DETAILS FOR PROJECT LIMITS

TRANSITION SECTION

Begin and End of Project Limits



Note: Width of Cold Milling Asphalt Concrete at beginning and end of the project will match adjacent surfacing width.

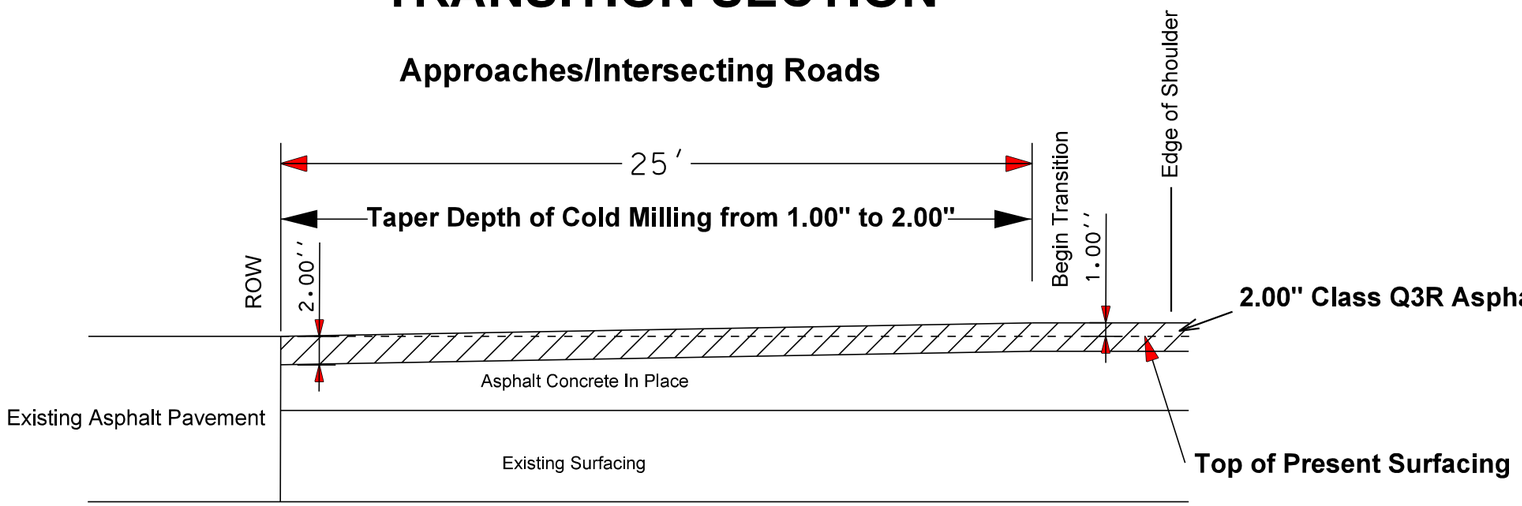
Cost for tapering the width and depth of cold milling will be incidental to the contract unit price per square yard for Cold Milling Asphalt Concrete, unless otherwise indicated.

Class Q3R Hot Mixed Asphalt Concrete

TRANSITION DETAILS FOR INTERSECTING ASPHALT

TRANSITION SECTION

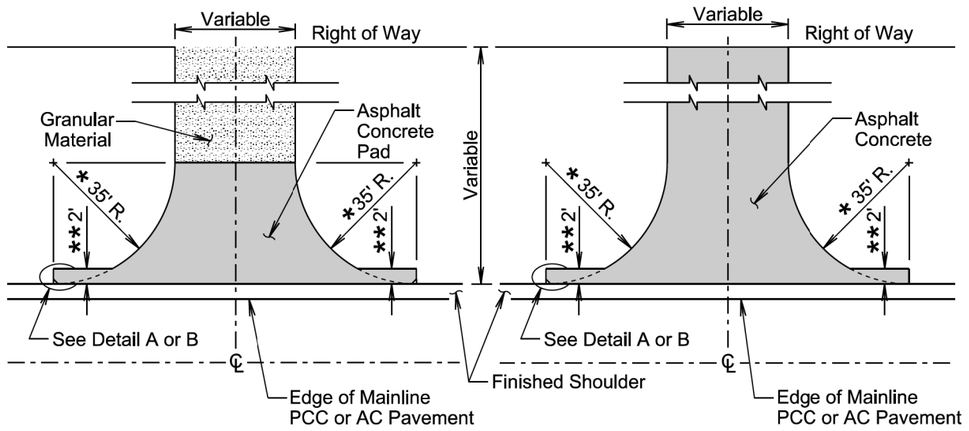
Approaches/Intersecting Roads



Cold Milling Asphalt Concrete

Note: Width of Cold Milling Asphalt Concrete will match adjacent surfacing width

Refer to TABLE OF APPROACHES, ENTRANCES AND INTERSECTING ROADS for quantities and locations.



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:

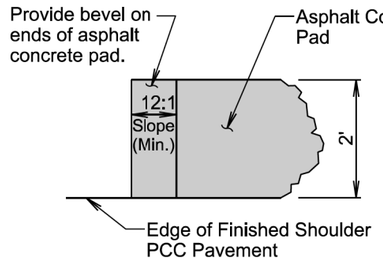
The precise construction limits for situations other than shown above will be determined by the Engineer during construction.

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

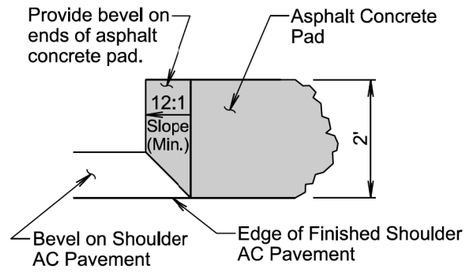
** The Contractor may adjust the screed of the paver during mainline paving operations to provide the 2-foot asphalt concrete pad or the Contractor may provide the 2-foot asphalt concrete pad during paving of the intersecting roads as shown above. The Engineer may eliminate the 2-foot asphalt concrete 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

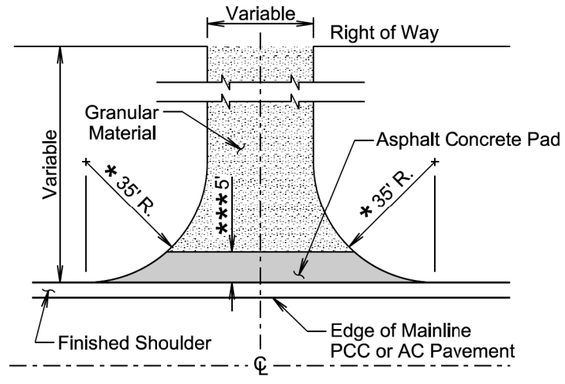
Published Date: 2027	SDDOT	SURFACING OR RESURFACING OF INTERSECTING ROADS AND ENTRANCES (MAINLINE AND SHOULDERS: PCC OR AC PAVEMENT)	PLATE NUMBER 320.04 Sheet 1 of 2



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



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

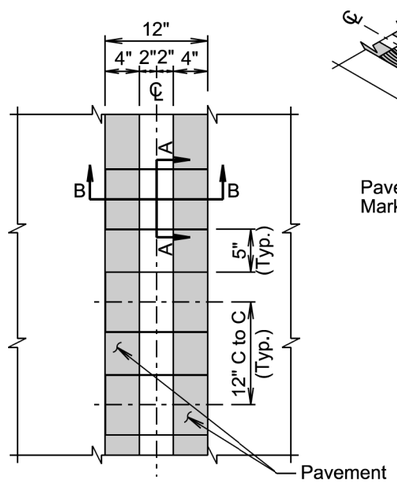


PLAN VIEW
(Entrance)

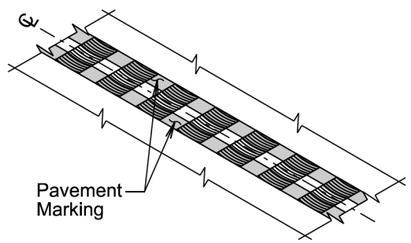
*** Not required if finished shoulder width is 4' or greater.

August 27, 2020

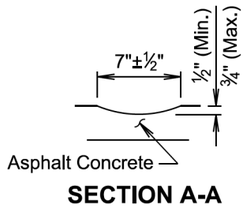
Published Date: 2027	SDDOT	SURFACING OR RESURFACING OF INTERSECTING ROADS AND ENTRANCES (MAINLINE AND SHOULDERS: PCC OR AC PAVEMENT)	PLATE NUMBER 320.04 Sheet 2 of 2



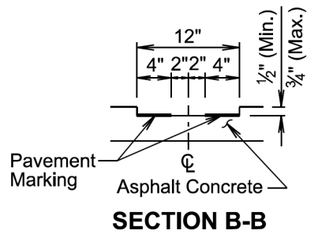
PLAN VIEW
(Typical Rumble Stripe in Asphalt Concrete)



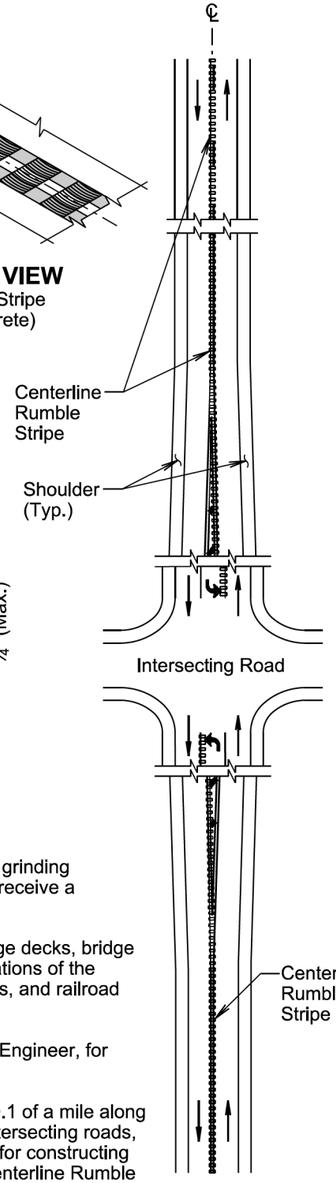
PERSPECTIVE VIEW
(Typical Rumble Stripe in Asphalt Concrete)



SECTION A-A



SECTION B-B



PLAN VIEW

GENERAL NOTES:

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

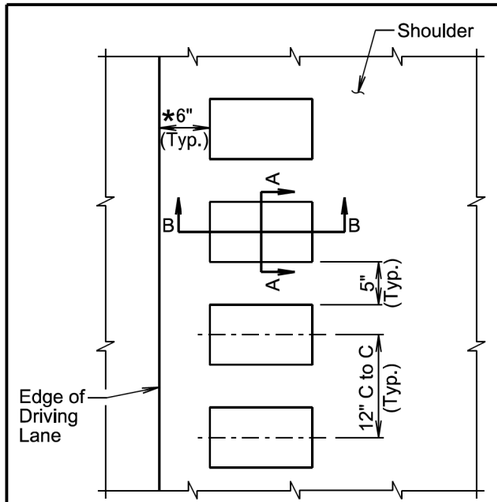
A rumble stripe will not be constructed through intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. The beginning and ending locations of the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings will be adjusted as approved by the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

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

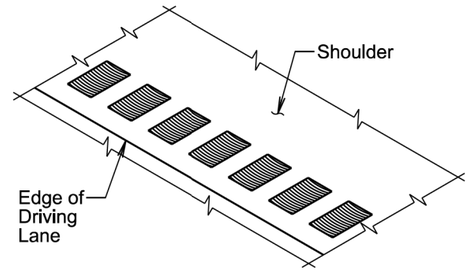
Measurement and payment of the rumble stripe will be to the nearest 0.1 of a mile along the centerline and will include segments without the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. Payment for constructing the rumble stripe will be at the contract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

November 19, 2020

Published Date: 2027	SDDOT	12" CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE	PLATE NUMBER 320.18
			Sheet 1 of 1

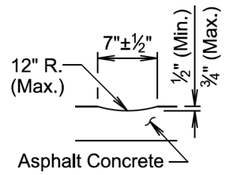


PLAN VIEW
(Typical Rumble Strip in Asphalt Concrete)

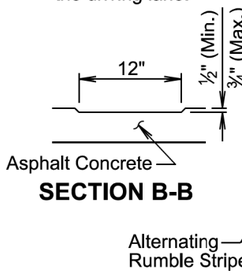


PERSPECTIVE VIEW
(Typical Rumble Strip in Asphalt Concrete)

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



SECTION A-A



SECTION B-B

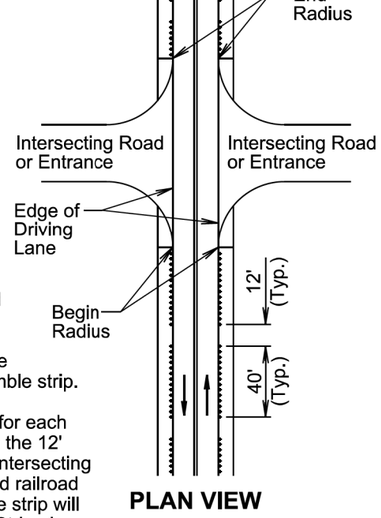
GENERAL NOTES:

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

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

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

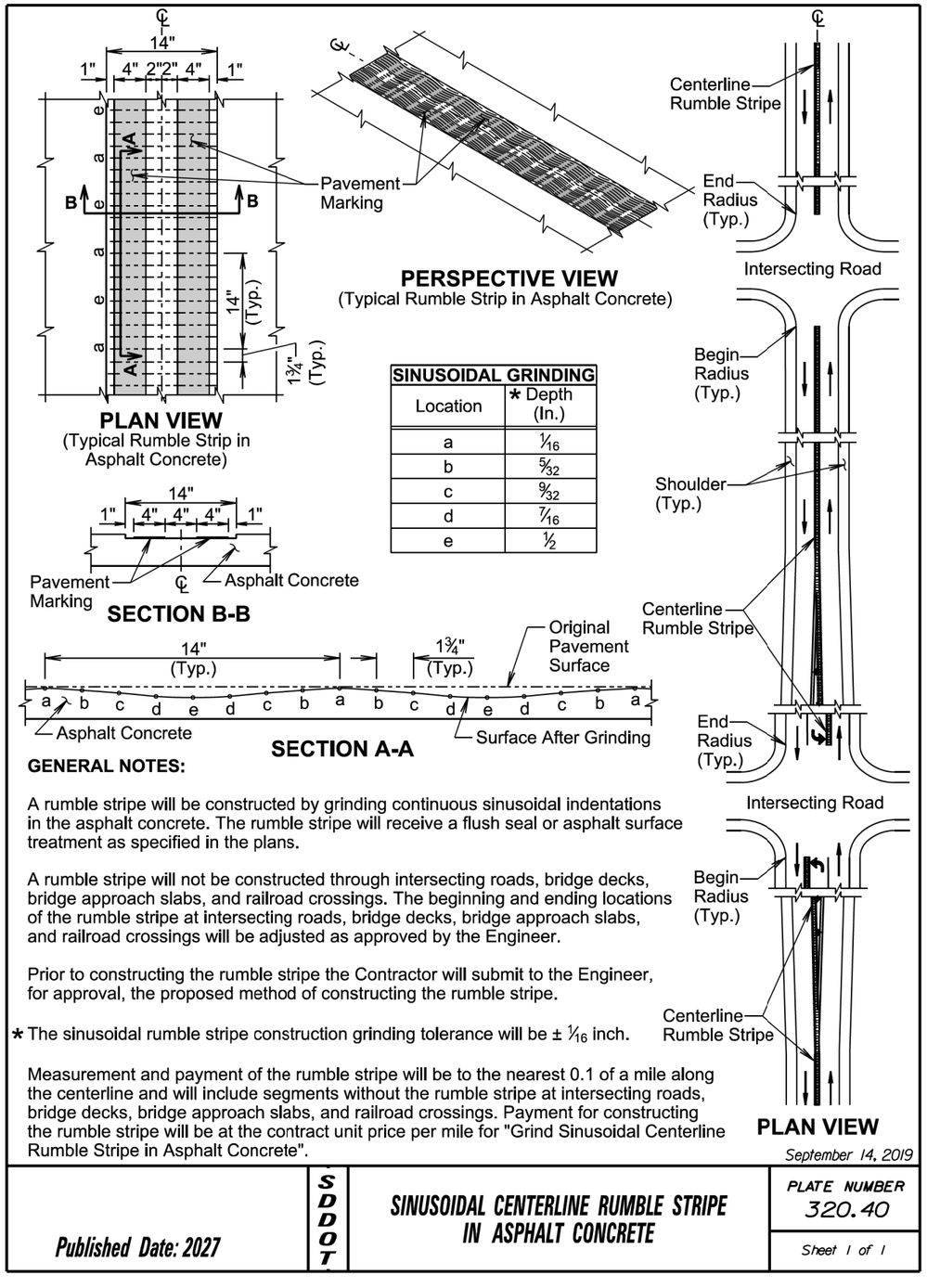
Measurement of the rumble strip will be to the nearest 0.1 of a mile for each shoulder. Measurement and payment of the rumble strip will include the 12' long segments without rumble strips and the segments adjacent to intersecting roads, entrances, turnouts, bridge decks, bridge approach slabs, and railroad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



PLAN VIEW

September 14, 2019

Published Date: 2027	SDDOT	12" RUMBLE STRIP IN ASPHALT CONCRETE ON NONDIVIDED HIGHWAY SHOULDERS	PLATE NUMBER 320.24
			Sheet 1 of 1



SINUSOIDAL GRINDING	
Location	* Depth (In.)
a	1/16
b	5/32
c	9/32
d	7/16
e	1/2

GENERAL NOTES:

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

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

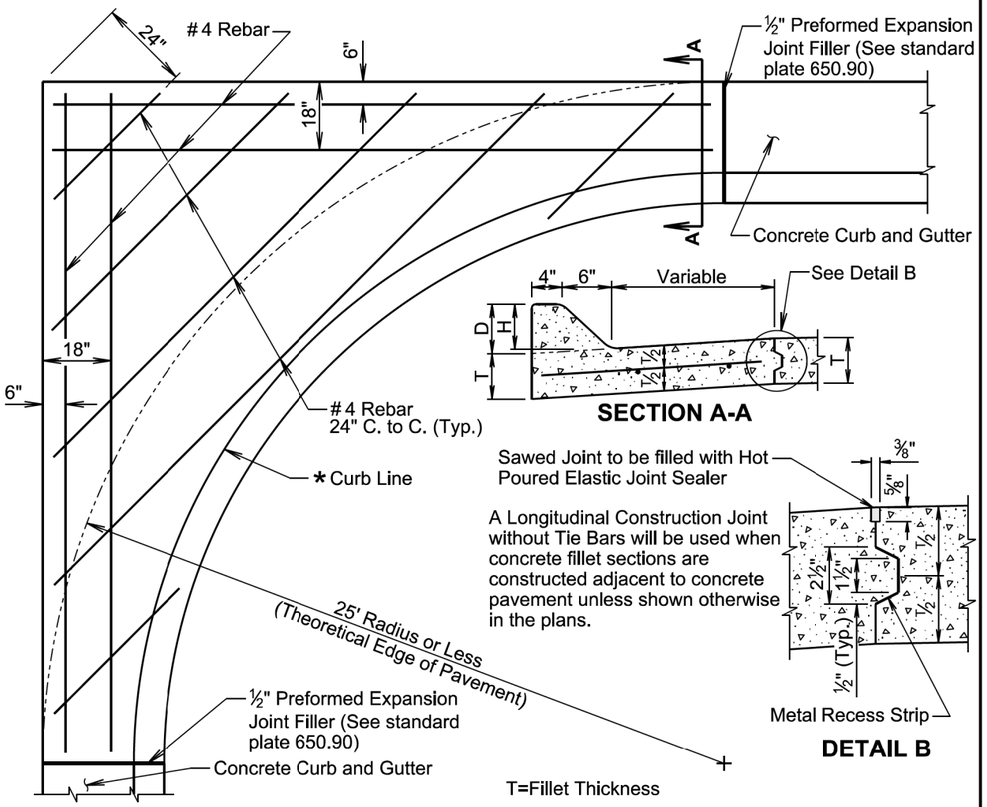
Prior to constructing the rumble stripe the Contractor will submit to the Engineer, for approval, the proposed method of constructing the rumble stripe.

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

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

September 14, 2019

Published Date: 2027	SDDOT	SINUSOIDAL CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE	PLATE NUMBER 320.40 Sheet 1 of 1



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

March 31, 2024

Published Date: 2027	SDDOT	PCC FILLET SECTION WITH TYPE F CURB AND GUTTER	PLATE NUMBER 380.31
			Sheet 1 of 2

GENERAL NOTES:

For fillets with irregular shapes or bump outs:

1) The 6" and 18" offset #4 rebar will be included on any side next to pavement or driveways (not along the Curb and Gutter).

2) All remaining area will have #4 rebar spaced 24" center to center in a square pattern.

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

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

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

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

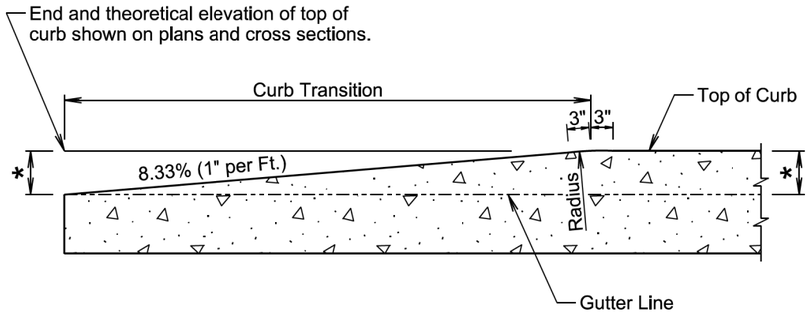
The concrete curb will be monolithic with the concrete fillet. No separate payment for this curb will be made as the curb is considered a part of the fillet.

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

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

March 31, 2024

Published Date: 2027	SDDOT	PCC FILLET SECTION WITH TYPE F CURB AND GUTTER	PLATE NUMBER 380.31
			Sheet 2 of 2



* Height of Curb

LONGITUDINAL SECTION
(Concrete Curb Taper)

December 23, 2019

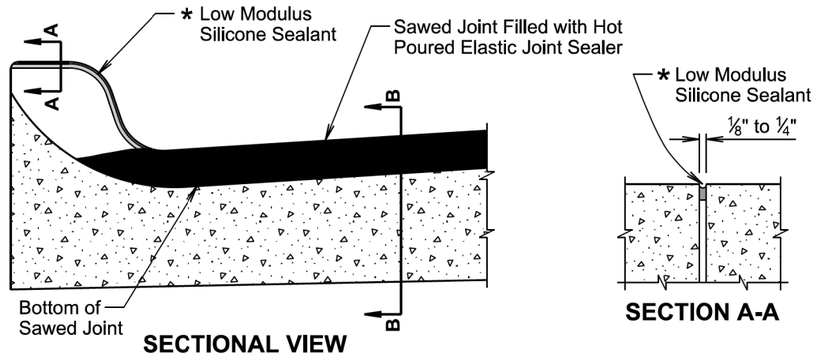
Published Date: 2027

SDDOT

CONCRETE CURB TAPER

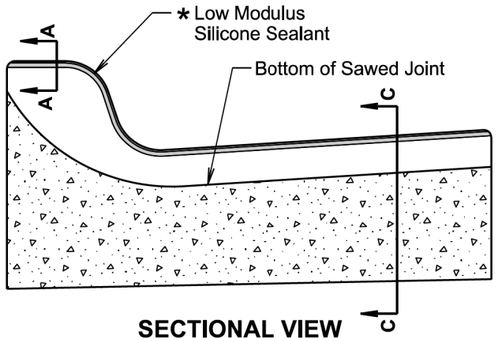
PLATE NUMBER
650.35

Sheet 1 of 1

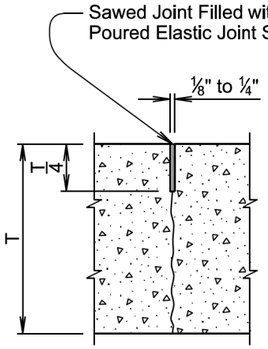


SECTIONAL VIEW
(Curb and Gutter Placed Monolithic with Adjacent Mainline PCC Pavement)

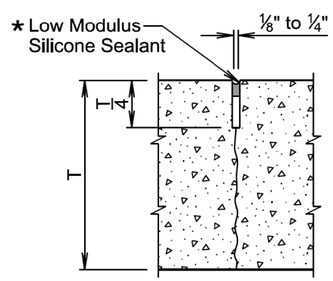
SECTION A-A



SECTIONAL VIEW
(Curb and Gutter not Placed Monolithic with Adjacent Mainline PCC Pavement or Mainline Surfacing is not PCC Pavement)



SECTION B-B

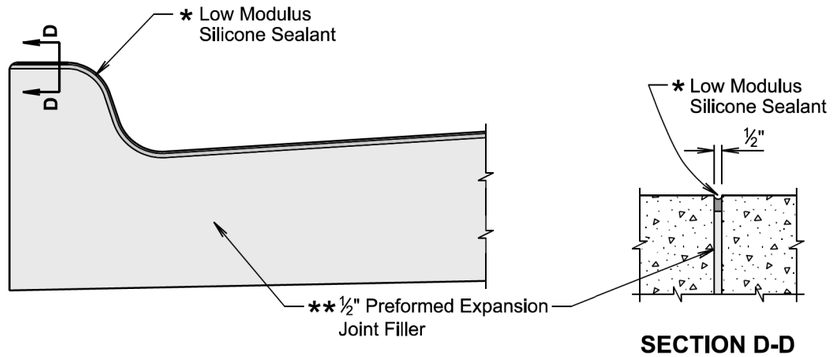


SECTION C-C

* The silicone sealant will be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.

December 23, 2019

Published Date: 2027	SDDOT	JOINTS IN CONCRETE CURB AND GUTTER	PLATE NUMBER 650.90
			Sheet 1 of 2



SECTIONAL VIEW
(Curb and Gutter at ½" Preformed Expansion Joint Filler Location)

SECTION D-D

* The silicone sealant will be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.

GENERAL NOTES:

For illustrative reason, only the type B curb and gutter is shown.

** A ½-inch preformed expansion joint filler will be placed transversely in the curb and gutter at the following locations:

At each junction between the radius return of curb and gutter, and curb and gutter which is parallel to the project centerline.

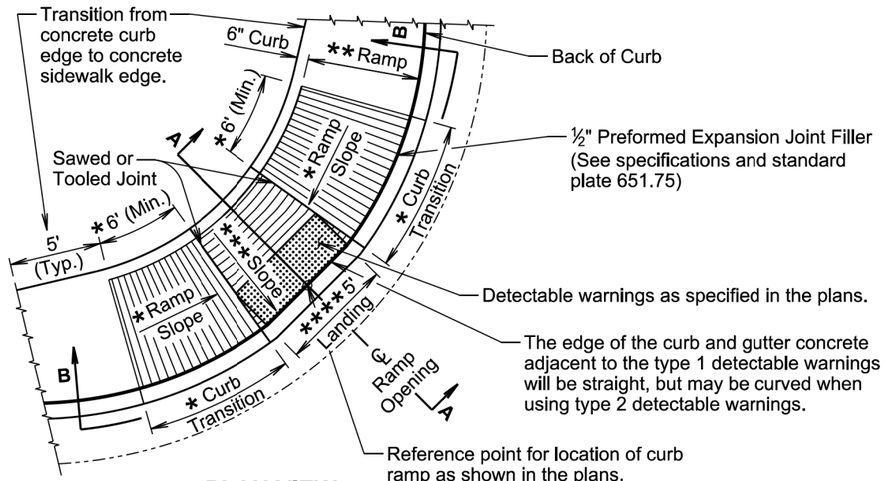
At each junction between new curb and gutter and existing curb and gutter.

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

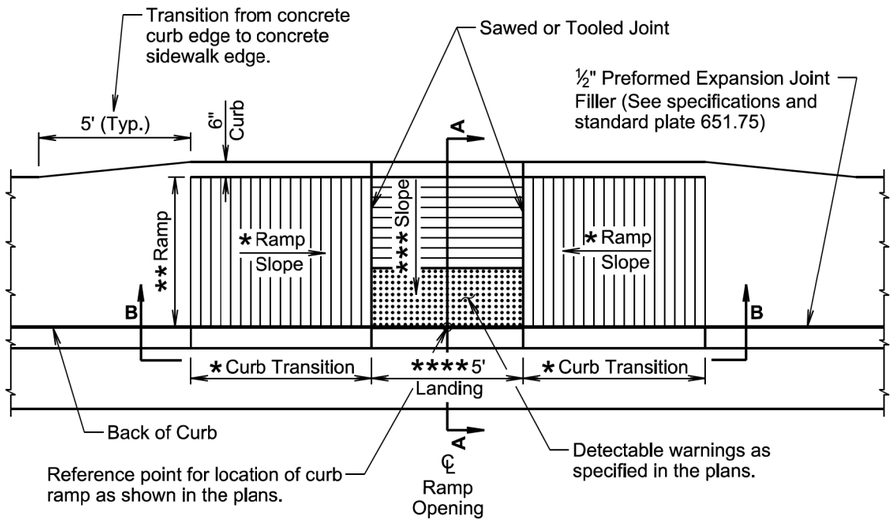
When concrete curb and gutter is not placed monolithically with the mainline PCC pavement or when the adjacent mainline surfacing is not PCC concrete, the transverse contraction joints in the concrete curb and gutter will be 1½ inches deep if formed in the fresh concrete using a suitable grooving tool.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

December 23, 2019

Published Date: 2027	SDDOT	JOINTS IN CONCRETE CURB AND GUTTER	PLATE NUMBER 650.90
			Sheet 2 of 2



PLAN VIEW
(With Curved Curb and Gutter)



PLAN VIEW
(With Straight Curb and Gutter)

April 8, 2025

Published Date: 2027	SDDOT	TYPE 3 CURB RAMP (PARALLEL CURB RAMP)	PLATE NUMBER 651.03 Sheet 1 of 3

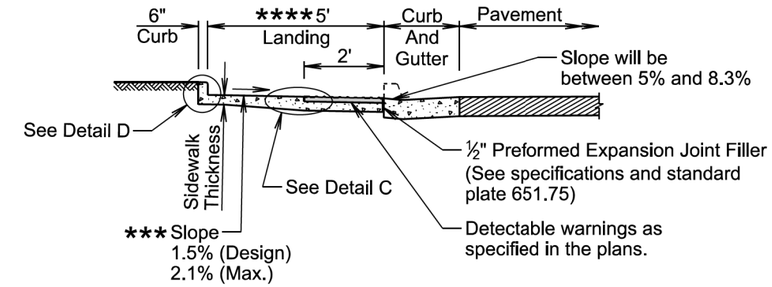
* The curb transition slope will match the curb ramp slope. Curb ramp slopes are designed at 7.5% unless stated otherwise in the plans. The curb ramp may have a maximum slope of 8.3% at any location of the curb ramp and will not exceed 15' in length unless stated otherwise in the plans. The curb transitions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

** The cross slope of the ramp will not be steeper than 2.1% and the ramp width is 5' unless stated otherwise in the plans. Plans are designed using a 1.5% cross slope for the ramp unless stated otherwise in the plans.

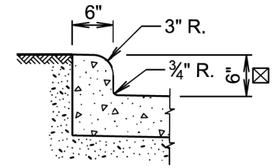
*** The slope in the landing will not be steeper than 2.1% in any direction of pedestrian travel. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

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

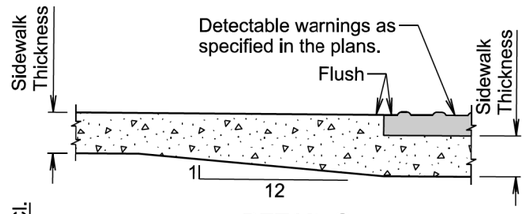
☒ The curb height will be 6" unless stated otherwise in the plans.



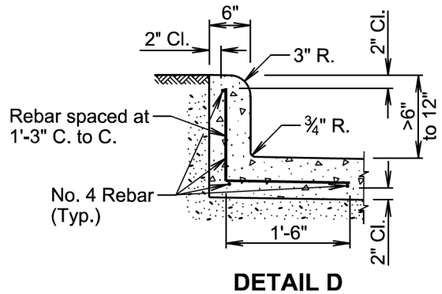
SECTION A-A



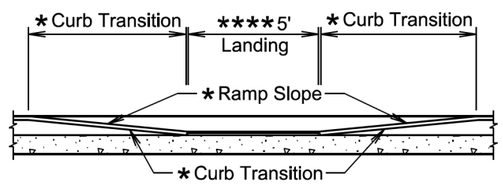
DETAIL D



DETAIL C



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



SECTIONAL VIEW B-B

April 8, 2025

Published Date: 2027	SDDOT	TYPE 3 CURB RAMP (PARALLEL CURB RAMP)	PLATE NUMBER 651.03 Sheet 2 of 3

PLOT SCALE - 1:200
PLOT NAME - 17
FILE - ...\REGION DESIGN\STD PLATES.DGN
-PLOTTED FROM - TRAB17901

GENERAL NOTES:

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

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

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

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

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

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

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

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

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

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

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

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

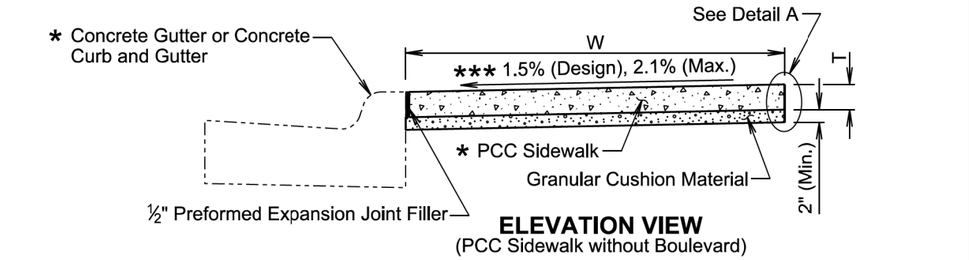
The curb transitions and ramp opening will be measured and paid for at the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used. The curb transitions and ramp opening will be measured and paid for at the contract unit price per square yard for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

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

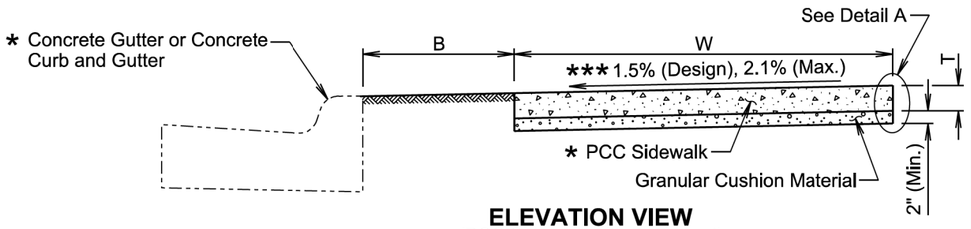
Type 2 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing type 2 detectable warnings including labor, equipment, and materials, including adhesive, necessary sealant or grout, and necessary grinding will be paid for at the contract unit price per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

April 8, 2025

Published Date: 2027	SDDOT	TYPE 3 CURB RAMP (PARALLEL CURB RAMP)	PLATE NUMBER 651.03
			Sheet 3 of 3



ELEVATION VIEW
(PCC Sidewalk without Boulevard)



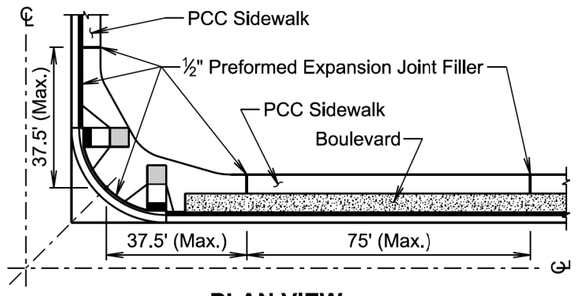
ELEVATION VIEW
(PCC Sidewalk with Boulevard)

B Width of boulevard as specified in the plans.

T Thickness of PCC sidewalk as specified in the plans.

W Width of PCC sidewalk as specified in the plans.

* Type as specified in the plans.



PLAN VIEW

GENERAL NOTES:

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

*** The cross slope of the sidewalk is designed at 1.5% and the maximum slope allowed is 2.1% unless specified otherwise in the plans.

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

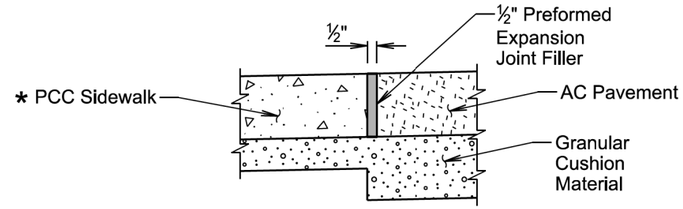
PCC sidewalk placed adjacent to intersection of roadways will have an expansion joint placed transversely a maximum of 37.5 feet from the intersection. See Plan View.

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

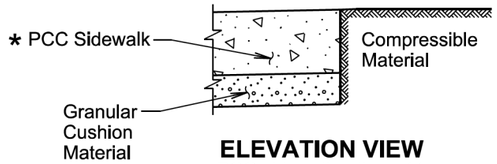
** Large areas of PCC pavement adjacent to the PCC sidewalk may require a different joint treatment than shown in the detail. If a different joint detail is necessary, plans will contain the joint detail and the Contractor will construct the joint treatment in accordance with the plans.

April 8, 2025

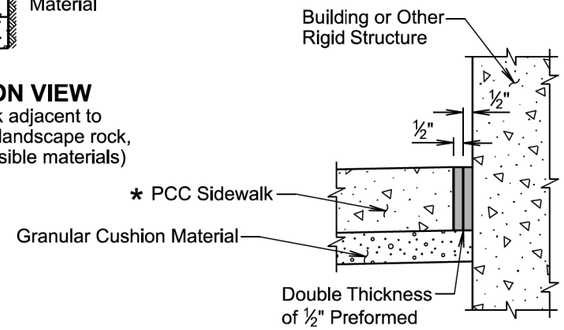
Published Date: 2027	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 1 of 2



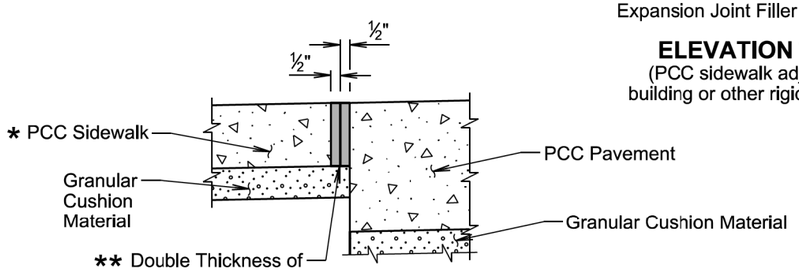
ELEVATION VIEW
(PCC sidewalk adjacent to asphalt concrete pavement)



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



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



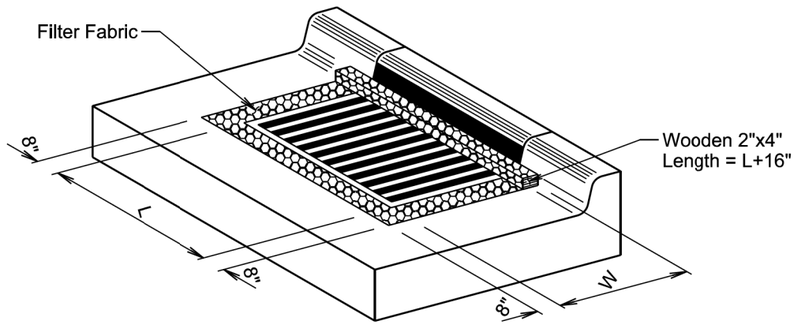
ELEVATION VIEW
(PCC sidewalk adjacent to PCC pavement)

DETAIL A
(Use Appropriate Detail(s))

April 8, 2025

Published Date: 2027	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 2 of 2

L = Length of Grate
W = Width of Grate



ISOMETRIC VIEW

GENERAL NOTES:

The grate and curb and gutter shown are for illustrative purposes only.

The sediment control at inlet with frame and grate will be placed at locations stated in the plans or at locations determined by the Engineer.

The filter fabric will be the type specified in the plans.

The filter fabric will be placed in the inlet opening prior to placing the grate. Approximately 18 inches of excess filter fabric will be wrapped around the 2"x4" and stapled securely to the 2"x4" after the grate has been placed.

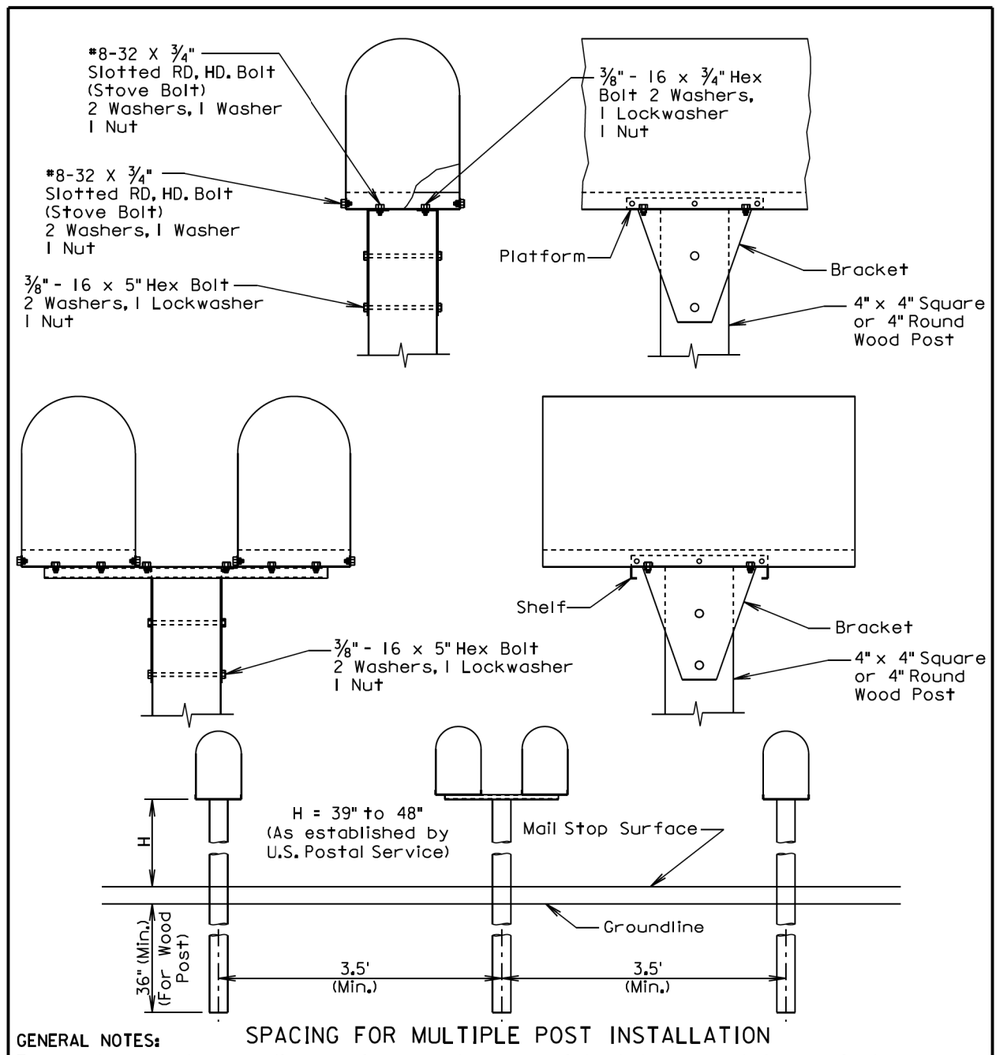
The Contractor and Engineer will inspect the sediment control device in accordance with the storm water permit. The Contractor will maintain the sediment control device by removing accumulated sediment and replacing torn filter fabric with new filter fabric.

The removed sediment will be placed at a location away from the drop inlet where the sediment will not be washed back into the drop inlet or other storm sewer system.

All costs for furnishing, installing, inspecting, maintaining, removing, and replacing the sediment control device at the inlet including labor, equipment, and materials will be incidental to the contract unit price per each for "Sediment Control at Inlet with Frame and Grate".

February 14, 2020

Published Date: 2027	SDDOT	***SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES***	***PLATE NUMBER*** *734.10*
			Sheet 1 of 1



SPACING FOR MULTIPLE POST INSTALLATION

GENERAL NOTES:

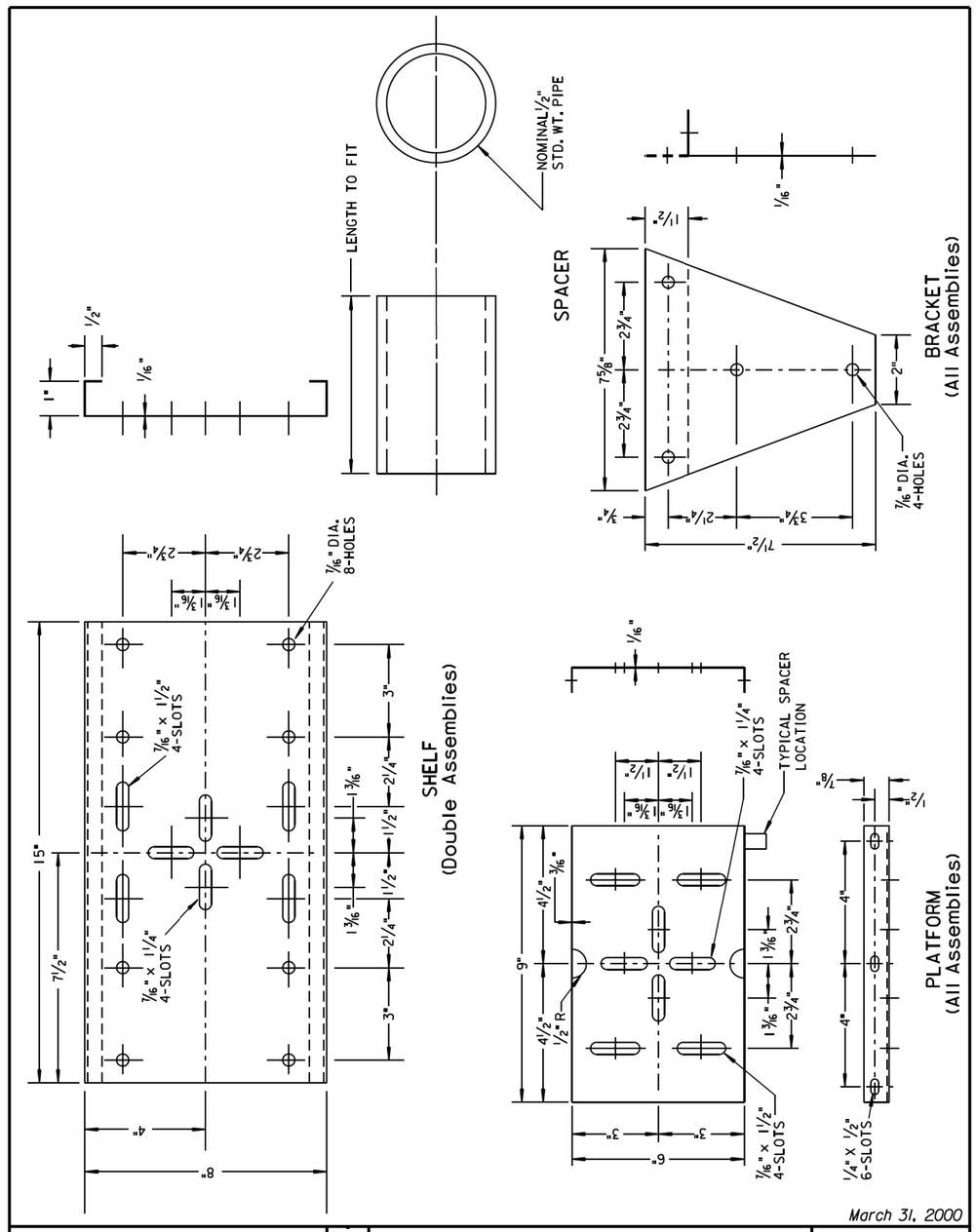
The post support assemblies provided should be consistant throughout the project. Single and double mailboxes may be in any sequence.

Post support assemblies shall be one from the approved products list, a 4"x4" or 4" round wood post, or an alternate post support assembly that meets the test level 3 crash testing requirements of NCHRP 350 or MASH.

Alternate mailbox support assemblies shall be approved by the Engineer prior to installation. The Contractor shall provide the Engineer written certification that the mailbox support assembly has met the crash testing requirements and will be installed in accordance with the manufacturer's installation instructions.

September 6, 2013

Published Date: 2027	SDDOT	SINGLE AND DOUBLE MAILBOX ASSEMBLIES	PLATE NUMBER 900.02
			Sheet 1 of 1



March 31, 2000

Published Date: 2027	SDDOT	MAILBOX SUPPORT HARDWARE	PLATE NUMBER 900.03
			Sheet 1 of 1