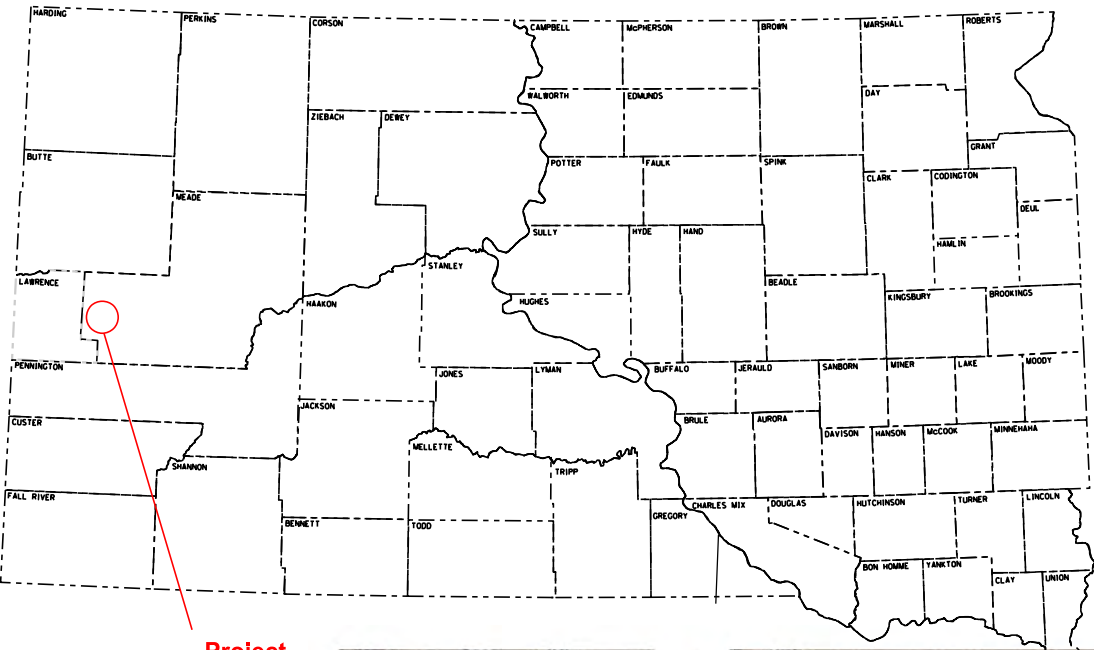


Plot Scale - 1:200

Plotted From -

trc11644



Project

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
PROJECT 0009-451
Meade
PCN I3PH

Asphalt Concrete Surfacing on Otter Rd
Sturgis SD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	0009-451	1	7

Plotting Date: 02/05/2015

INDEX OF SHEETS

- Title Sheet
- Estimate of Quantities and Plan Notes
- Plan Sheets
- Standard Plates



Begin Repair 0+00

End Repair 5+30



Estimate of Quantities

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
110E1010	Remove Asphalt Concrete Pavement	1,475.0	SqYd
120E0100	Unclassified Excavation, Digouts	178	CuYd
260E1080	Base Course, Salvaged, State Furnished	335.1	Ton
320E1200	Asphalt Concrete Composite	331.9	Ton
634E0010	Flagging	40	Hour
634E0100	Traffic Control	408	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS

SPECIFICATIONS

Standard Specifications for Roads & Bridges, 2004 Edition and Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.

ENVIRONMENTAL COMMITMENTS

An Environmental Commitment is a measure that SDDOT commits to implement in order to avoid, minimize, and/or mitigate a real or potential environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency mentioned below with permitting authority can influence a project if perceived 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. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. The environmental commitments associated with this project are as follows:

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 pit, or staging site associated with the project, cease construction activities in the affected area until the Whooping Crane departs and 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 shall not withdraw water with equipment previously used outside the State of South Dakota without prior approval from the SDDOT Environmental Office. Thoroughly wash all construction equipment before entering, South Dakota to reduce the risk of invasive species introduction into the project vicinity.

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 shall 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 State ROW.

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

The waste disposal site(s) shall 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 Project Engineer.

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

- Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the State ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the State ROW through the use of fences, gates, and placement of a sign or signs at the entrance to the site stating "No Dumping Allowed".
- Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall 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) shall be incidental to the various contract items.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) for all work included within the project limits and all designated option borrow sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require review of cultural resources impacts. This work includes, but is not limited to: staging areas, borrow sites, waste disposal sites, and all material processing sites.

The Contractor shall arrange and pay for a cultural resource survey and/or records search. 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; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor shall provide ARC with the following: a topographical map or aerial view on 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 shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). 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.

If evidence for cultural resources is uncovered during project construction activities, then such activities shall cease and the Project Engineer shall be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands, threatened and endangered species, or waterways. The Contractor shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

WORK DESCRIPTION

Work on this project includes removal of in-place asphalt concrete, unclassified excavation digouts, and pave back 4” of asphalt concrete composite on Otter Rd.

UTILITIES

The Contractor shall be responsible for locating and protecting any utility that would conflict with any work. 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 shall contact the project engineer to determine modifications that will be necessary to avoid utility impacts.

Any damage done to a utility will be the Contractor’s responsibility to repair.

SAWING EXISTING SURFACING

Where new asphalt concrete is placed adjacent to existing asphalt concrete, the existing asphalt concrete shall be sawed full depth to a true line with a vertical face. No separate payment shall be made for sawing.

REMOVAL OF IN-PLACE ASHALT CONCRETE

The in-place asphalt surfacing is estimated to be an average of 4 inches thick. The removed material shall be properly disposed of by the Contractor. Plans quantity for Asphalt Removal SqYd shall be the basis of payment, unless changes are made in the field by the Engineer.

SURFACING THICKNESS DIMENSIONS

Plans tonnage 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, plans tonnages may be varied to achieve the required elevation.

TABLE OF QUANTITIES

	Area	Unclassified Excavation Digouts	Base Course, Salvaged, State Furnished	Asphalt Concrete Composite	Asphalt Removal
	SqFt	CuYd	Ton	Ton	SqYd
4" asphalt	12720			318	1413.3
approch digouts	560	21	39.2	13.9	62.2
digouts	4227	157	295.9		
	17507	178	335.1	331.9	1475.5

UNCLASSIFIED EXCAVATION DIGOUTS

Provided in the Estimate of Quantities is Unclassified Excavation-Digouts for the necessary removal of unstable material. The locations of the digouts will be determined in the field by the Engineer. Unclassified Excavation Digouts

depth shall be 1 foot or as directed by the Engineer. Backfill shall be 1 of Base Course, Salvaged Asphalt Mix placed in 4” lifts.

The dimensions provided in these plans are subject to change in the field, at the discretion of the Engineer. Payment will be based on the actual quantities installed.

All costs associated with removal and placement of State Furnished salvaged base material shall be incidental to the contract unit price per cubic yard “Unclassified Excavation Digouts”.

WATER FOR COMPACTION

No separate payment will be made for the Water for Granular Material and all costs associated shall be incidental to the contract unit price per ton of “Base Course, Salvaged, State Furnished”. Four percent, plus or minus, moisture will be required at the time of compaction unless otherwise directed by the Engineer

BASE COURSE, SALVAGED, STATE FURNISHED

Base Course shall be furnished by the State of South Dakota. This material shall be obtained from the stockpile at the Sturgis Maintenance Yard located at 1100 Suite A Otter Rd, in Sturgis.

The Base Course, Salvaged material is a blend of asphalt millings and base course material. Base Course, Salvaged material shall be used without testing.

Base Course, Salvaged, State Furnished shall be used for backfilling digouts.

This material is royalty free to the contractor. Furnished cost to the State for the Base Course, Salvaged, and State Furnished is \$14.83 per ton.

The contract unit price per ton for Base Course, Salvaged, and State Furnished shall include loading, placing, and compacting the Base Course, Salvaged, State Furnished material.

ASPHALT CONCRETE COMPOSITE

Place 4” Asphalt Concrete Composite surfacing in 2 – 2” lift, for a total thickness of 4”. The width shall be 24’. The edges of asphalt surfacing shall beveled at a 4:1 slope.

Asphalt Concrete Composite shall be furnished by the Contractor.

Mineral aggregate for the Asphalt Concrete Composite shall conform to the requirements of the Standard Specifications for Class E, Type 1.

All other requirements in the Standard Specifications for Asphalt Concrete Composite shall apply.

The asphalt binder used in the mixture shall be PG 64-22, PG 64-28 or 64-34 Asphalt Binder.

SS-1h or CSS-1h Emulsified Asphalt for Tack shall be applied to each lift at the rate of 0.05 gallons per square yard.

SS-1h or CSS-1h Emulsified Asphalt for Flush Seal shall be applied to the top lift at the rate of 0.05 gallons per square yard.

Location and quantity shown in the plans are approximate. Exact locations are to be set by the Engineer. The Engineer reserves the right to adjust quantities and/or add location dependent on the condition of the yard at the time of the work.

SEQUENCE OF OPERATIONS

1. Set up temporary traffic control as per standard plate 634.23.
2. Remove in-place asphalt concrete half width at a time to accommodate traffic. Also remove asphalt in DOT Sturgis Maintenance yard approach, as determined by Engineer.
3. Determine digouts areas and complete removal and replacement of these areas.
4. Replace surface with 4” asphalt concrete composite.
5. Remove traffic control.

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
W9-1	48" x 48"	BUMP	2	34	68
W9-7	48" x 48"	LOOSE GRAVEL	2	34	68
W20-1	48" x 48"	ROAD WORK AHEAD	4	34	136
W20-4	48" x 48"	ONE LANE ROAD AHEAD	2	34	68
W20-7a	48" x 48"	FLAGGER	2	34	68
TOTAL UNITS					408

TRAFFIC CONTROL

Flaggers shall be used to maintain traffic through work limits during working Hours. It is the contractor's responsibility to ensure grade is safe for motorists when hard surfacing has been removed.

Traffic control shall be per the standard plates included in this set of plans. All lanes shall be open to traffic during non-working hours.

Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost of this work shall be incidental to the various contract items unless otherwise specified in the plans. Delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

Storage of vehicles and equipment shall be as near the right-of-way line as possible. Contractor’s employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work. Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage to the vegetation, surfacing, embankment, delineators and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer.

Work activities during non-daylight hours are subject to prior approval

Traffic approaching the project from intersecting roadways, streets, and approaches must be adequately accommodated. Major intersections or large

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	0009-451	4	7

commercial entrances may require additional signing, flaggers, and channelizing devices on a temporary basis until work activities pass these areas.

The bottom of signs on portable or temporary supports shall not be less than seven feet above the pavement in urban areas and one foot above the pavement in rural areas. Portable sign supports may be used as long as the duration is less than 3 days. If the duration is more than 3 days the signs shall be on fixed location, ground mounted, breakaway supports.

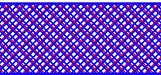
The Contractor shall provide documentation that all breakaway sign supports comply with FHWA NCHRP Report 350 or MASH crash-worthy requirements. The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.

PERMENANT PAVEMENT MARKINGS

Pavement markings will be the responsibility of the City of Sturgis

Plot Scale - 1:200

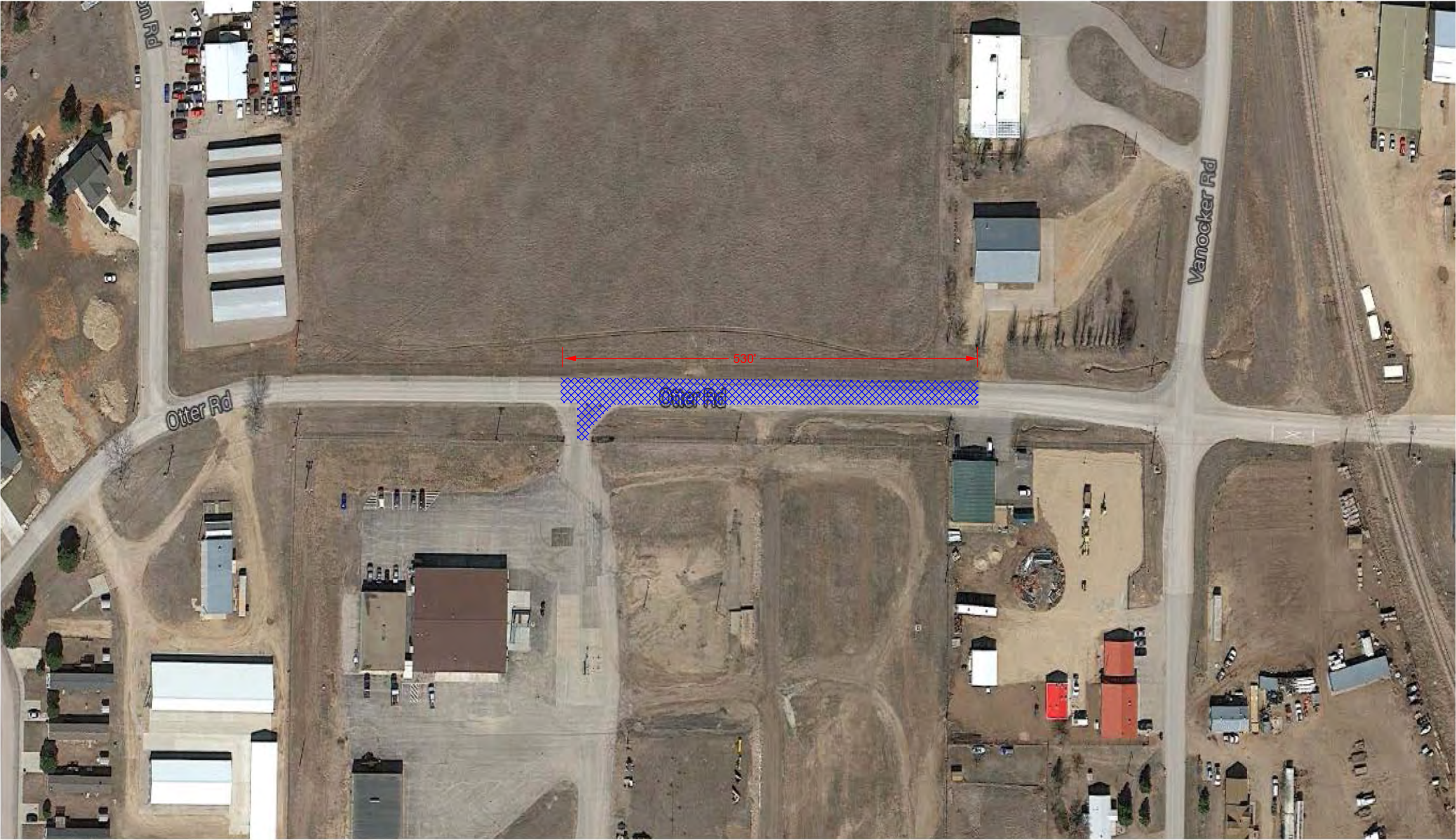
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Work Area

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	0009-451	5	7

Plotting Date: 02/05/2015



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 - 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) shall 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 shall 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.

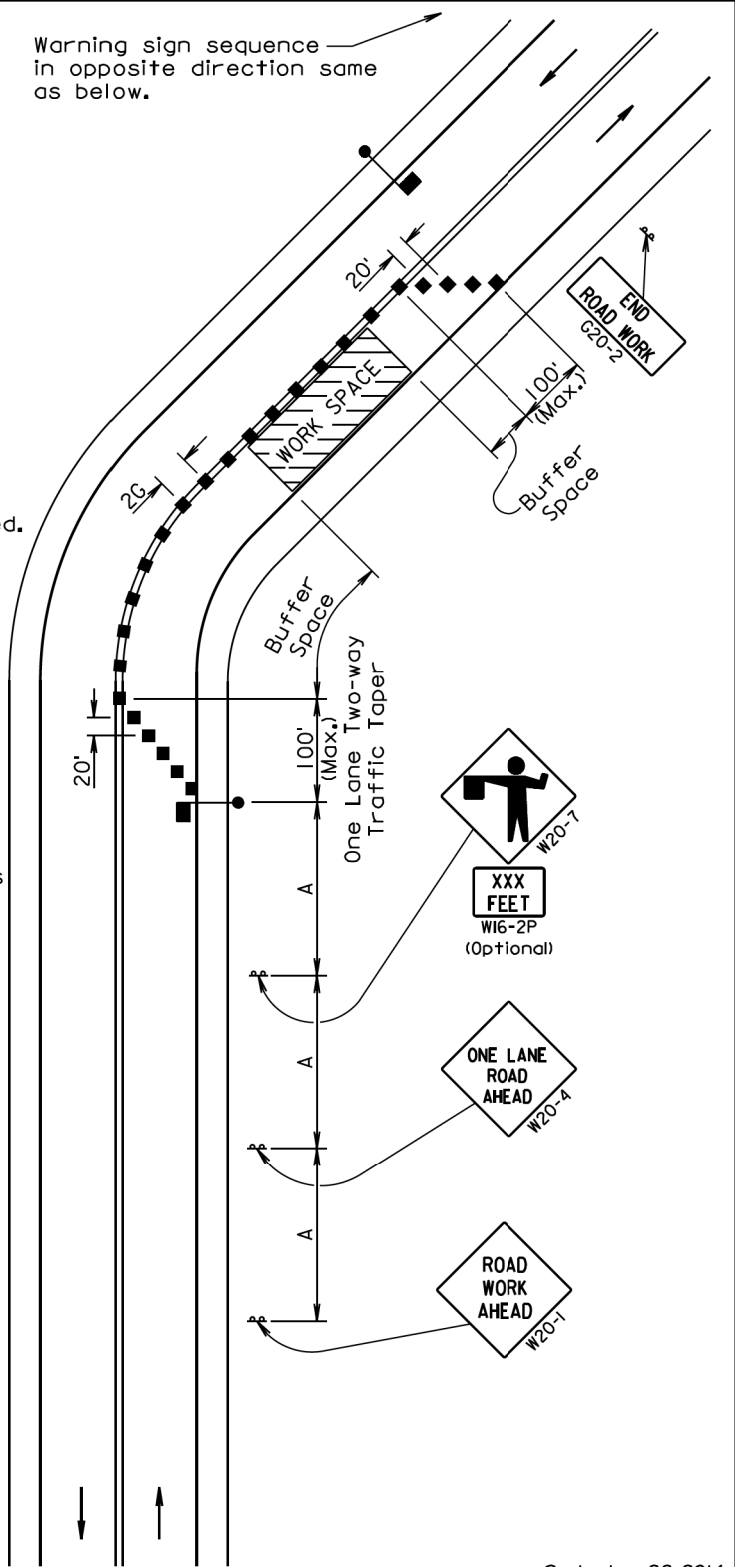
END ROAD WORK
G20-2

Channelizing devices and flaggers shall 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.

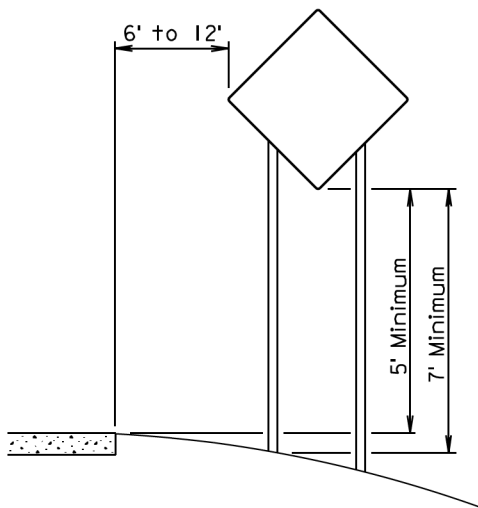
The length of A may be adjusted to fit field conditions.

Warning sign sequence in opposite direction same as below.

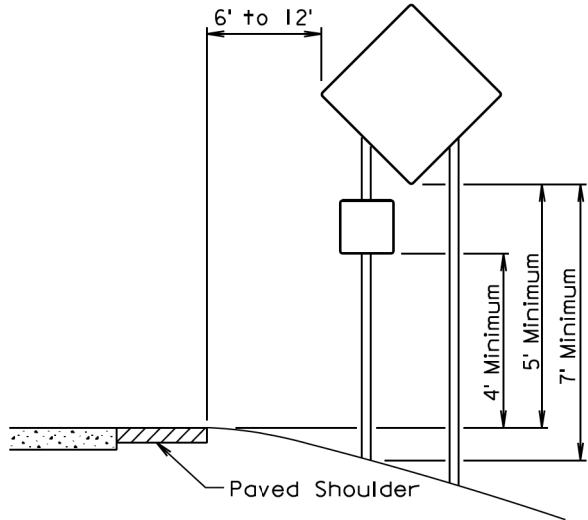


September 22, 2014

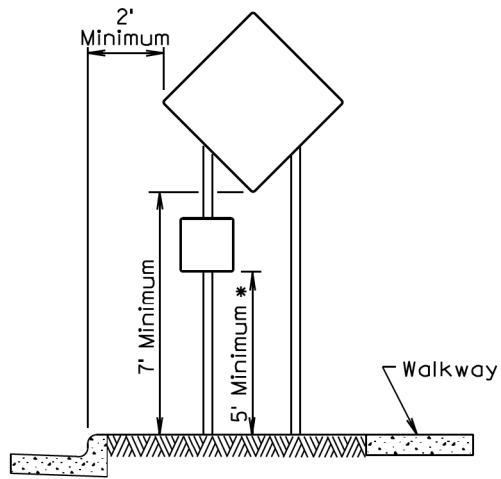
Published Date: 1st Qtr. 2015	S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER
			634.23
			Sheet 1 of 1



RURAL DISTRICT

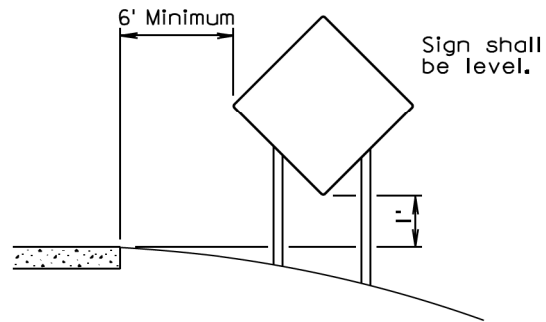


RURAL DISTRICT WITH
SUPPLEMENTAL PLATE



URBAN DISTRICT

* 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.



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

September 22, 2014

Published Date: 1st Qtr. 2015	S D D O T	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER
			634.85
			Sheet 1 of 1

PLOT SCALE - 1:200

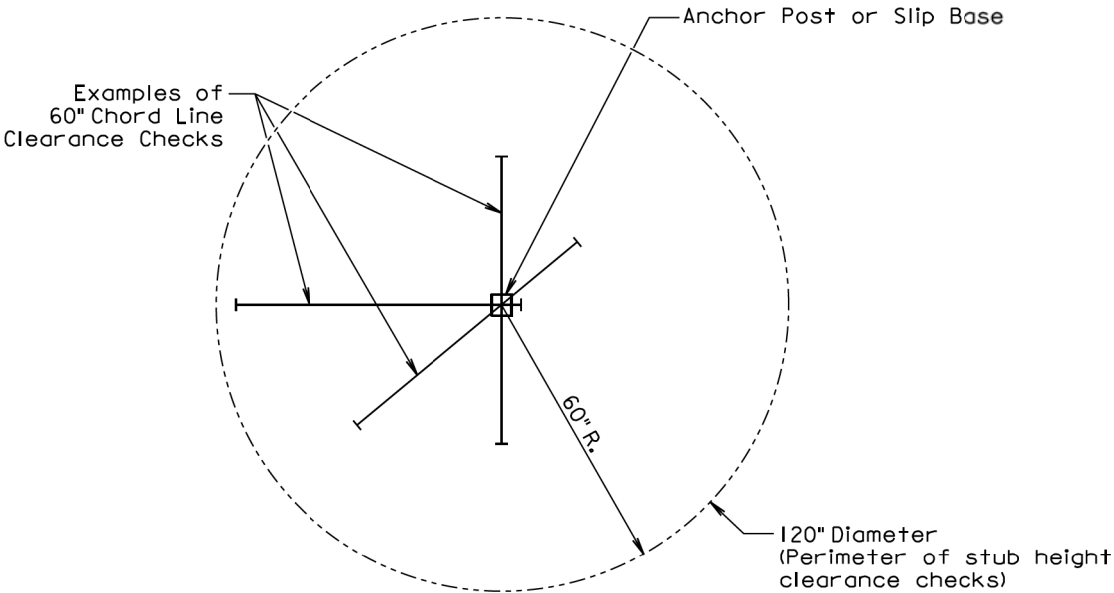
•PLOTTED FROM - TRRC11644

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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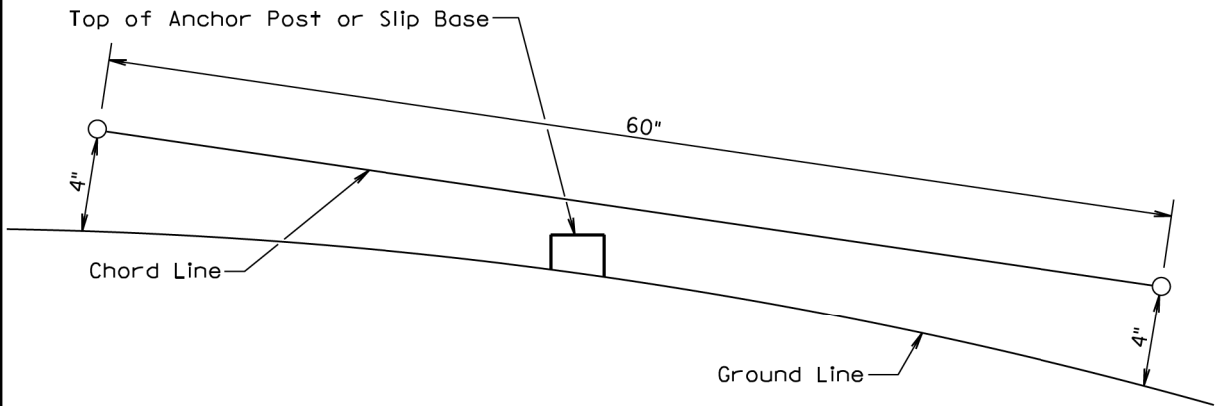
Plotting Date: 02/05/2015

PLOT NAME - 2

FILE - ... \13PH OTTER RD\STDPLATES.DGN



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

The top of anchor posts and slip bases SHALL 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 shall 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.

July 1, 2005

Published Date: 1st Qtr. 2015	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1