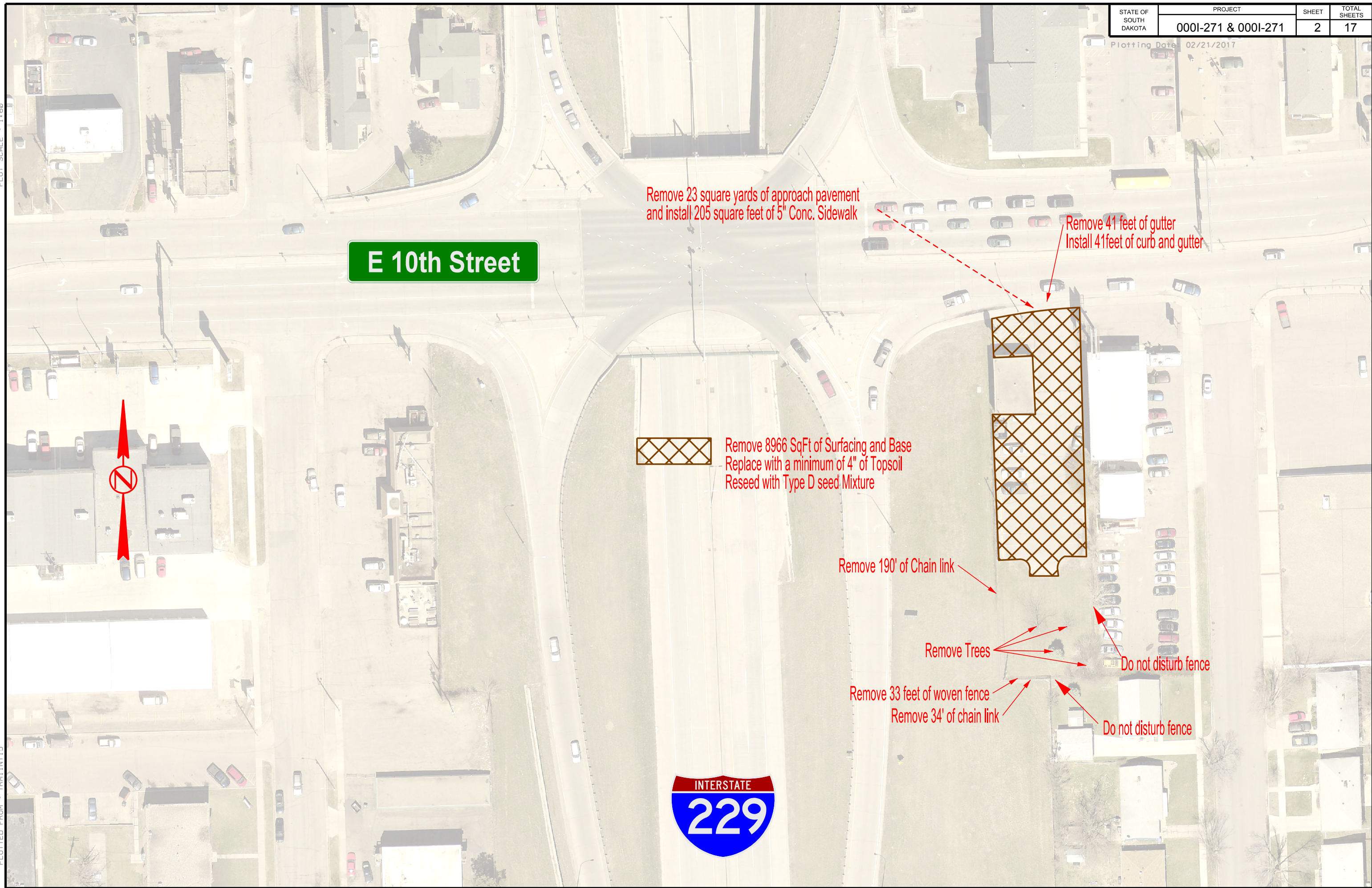


STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	0001-271 & 0001-271	2	17

Plotting Date: 02/21/2017



ESTIMATE OF QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000I-271 & 000I-271	3	17

I229N PROJECT 000I-271 - PCN I4KK

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0300	Remove Concrete Curb and/or Gutter	41	Ft
110E0600	Remove Fence	33	Ft
110E0605	Remove Chain Link Fence	190	Ft
110E1010	Remove Asphalt Concrete Pavement	1,096.0	SqYd
110E1100	Remove Concrete Pavement	23.0	SqYd
120E6300	Water for Vegetation	33.0	MGal
230E0020	Contractor Furnished Topsoil	121	CuYd
380E6110	Insert Steel Bar in PCC Pavement	16	Each
634E0010	Flagging	20.0	Hour
634E0110	Traffic Control Signs	88.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0285	Type 3 Barricade, 8' Double Sided	1	Each
634E0420	Type C Advance Warning Arrow Board	1	Each
650E0100	Type B610 Concrete Curb and Gutter	41	Ft
651E0050	5" Concrete Sidewalk	205	SqFt
730E0206	Type D Permanent Seed Mixture	70	Lb
732E0250	Fiber Mulching	660	Lb

I90W PROJECT 000I-271 - PCN I4KL

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0600	Remove Fence	2,626	Ft
620E0030	Type 3 Right-of-Way Fence	703	Ft
620E1020	2 Post Panel	2	Each
620E1030	3 Post Panel	1	Each
620E1110	Wood Fence Post	43	Each
620E4000	Repair Fence	1,923	Ft
634E0110	Traffic Control Signs	32.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS

ESTIMATE OF QUANTITIES
(FOR INFORMATION ONLY)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000I-271 & 000I-271	4	17

BID ITEM NUMBER	ITEM	000I-271 - PCN I4KK	000I-271 PCN - I4KL	TOTAL QUANTITY
		I229N 10th Street Minnehaha County	I90W Minnehaha County	
009E0010	Mobilization	◄----- LUMP SUM -----►		Lump Sum
100E0100	Clearing	◄----- LUMP SUM -----►		Lump Sum
110E0300	Remove Concrete Curb and / or Gutter	41	----	41 Ft
110E0600	Remove Fence	33	2626	2,659 Ft
110E0605	Remove Chain Link Fence	190	----	190 Ft
110E1010	Remove Asphalt Concrete Pavement	1,096	----	1,096 SqYd
110E1100	Remove Concrete Pavement (Approach)	23	----	23 SqYd
120E6300	Water for Vegetation	33	----	33 Mgal
230E0020	Contractor Furnished Topsoil	121	----	121 CuYd
380E6110	Install Steel Bar in Concrete Pavement	16	----	16 Each
620E0030	Type 3 Right-of-Way Fence	----	703	703 Ft
620E1020	2 Post Panel	----	2	2 Each
620E1030	3 Post Panel	----	1	1 Each
620E1110	Wood Fence Post	----	43	43 Each
620E4000	Repair Fence	----	1,923	1,923 FT
634E0010	Flagging	20	----	20 Hour
634E0110	Traffic Control Signs	88	32	120 SqFt
634E0120	Traffic Control, Miscellaneous	◄----- LUMP SUM -----►		Lump Sum
634E0285	Type 3 Barricade, 8' Double Sided	1	----	1 Each
634E0420	Type C Advance Warning Arrow Board	1	----	1 Each
650E0100	Type B610 Concrete Curb and Gutter	41	----	41 Ft
651E0050	5" Concrete Sidewalk	205	----	205 SqFt
730E0206	Type D Permanent Seed Mixture	70	----	70 Lb
732E0250	Fiber Mulch	660	----	660 Lb

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition
and Required Provisions, Supplemental Specifications and
Special Provisions as included in the Proposal.

ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000I-271 & 000I-271	5	17

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 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 Public ROW.

The waste disposal site(s) shall 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 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:

1. 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 Public 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 Public ROW through the use of 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 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.

Cost 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 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 review of cultural resources impacts. 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 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 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 shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

TABLE OF FENCING QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000I-271 & 000I-271	6	17

LANE	INTERSTATE 90W PSEUDO MRM to PSEUDO MRM (DMI) (DMI)			REMOVE FENCE FT	USE EXISTING POSTS TYPE 3 R/W FENCE FT	TYPE 3 R/W FENCE FT	2 POST PANEL EACH	3 POST PANEL EACH	5" x 8' WOOD FENCE POST EACH
WB	410.34	to	410.77	739	739		2		32
WB	410.53	to	410.56	174	174				2
WB	410.70	to	410.74	248	248				
WB	410.74	to	410.82	419	419				7
WB	410.88	to	410.95	343	343				2
WB	410.95	to	411.08	703		703		1	
I90W TOTALS:				2626	1923	703	2	1	43

UTILITIES

The Contractor shall contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It shall 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 shall contact the Project Engineer to determine modifications that will be necessary to avoid utility impacts.

SCOPE OF WORK

Site No. 1 is formerly as Golden Nugget in Sioux Falls, SD and is located in the SE Quadrant of East 10th Street and I229. The following work needs to be accomplished at this site:

- Remove chain link fence
- Remove trees
- Remove old sign footing
- Remove old parking lot
- Install four inches of contractor furnished topsoil
- Remove existing gutter and install new Curb and Gutter
- Remove existing approach pavement and install 5” concrete sidewalk
- Seed, mulch and water all disturbed areas.

Site No. 2 is located on I90W between MRM 410.34 to 411.08. The following work needs to be accomplished at this site:

- Remove wire, replace posts, post panels, and install new wire where necessary as per table.
- Remove fence and install new fence as per table.

COORDINATION BETWEEN CONTRACTORS

A separate contract for Project IM 0909(87)401, Minnehaha County – PCN 04DD will be awarded to another Contractor for concrete pavement repair/asphalt concrete resurfacing on I90 from MRM 401.61 to MRM 412.52.

The Contractor shall schedule work so as not to interfere with or hinder the progress of the work performed by other Contractors on the concrete pavement repair/asphalt concrete resurfacing project.

CLEARING

Site No. 1

Remove the following:

- Brick Planter
- Old Sign Footing
- Trees (1 -15” Coniferous, 1 - 12” Deciduous and approximately 15 - 2” to 12” Deciduous).

Site No. 2

Prior to installing right-of-way fence, the fence alignment shall be cleared of all trees, tree branches, tree stumps, brush, vegetation, debris, bladed and leveled to the satisfaction of the Engineer. Sod cleared from the fence alignment may be disposed on the interstate ditch back slope. Lumps or clods over 3 inches in diameter shall be broken up.

Clearing will be paid for at the contract lump sum price. Payment shall be full compensation for labor and equipment necessary to clear the entire line for fence and smooth ground irregularities.

RESTORATION OF INSLOPES AND DITCHES

Any slope area or ditch that is rutted or otherwise unduly disturbed during fencing operations shall be restored and seeded by the Contractor, at no expense to the State. Cost for this work shall be incidental to the contract unit prices for the various items.

REMOVE FENCE

The Contractor shall remove the existing right-of-way fence that is to be replaced as designated in the plans and/or as ordered by the Engineer.

Limited Access Security - All fence removed during any one working day is to be replaced during the same day if livestock are being restrained.

FENCE ALIGNMENT

Where fence is being removed and replaced, fence shall be installed on the same alignment as existing. It shall be the Contractor’s responsibility to preserve the fence alignment.

TYPE 3 RIGHT-OF-WAY FENCE

The Contractor shall furnish new posts. Install alternate wood and steel posts at 16'-6" spacing for Type 3 Right-of-Way Fence.

NEW POST PANELS

Existing post panels shall be replaced. Existing 5 Post and 4 Post Panels shall be replaced with a combination of 2 Post and 3 Post Panels as determined by the Engineer.

The number of 2 Post and 3 Post Panels will be the actual number installed and will be paid for at the contract unit price per each.

NEW WOOD FENCE POSTS

Included in the estimate of quantities are 43 (5" x 8') Wood Fence Posts for fencing. No additional payment will be made for the larger posts used for fencing at areas that have failed due to heavy snow load.

The estimated quantities for new steel and wood fence posts are subject to change during construction. The Contractor will be responsible for ordering the actual quantity of fence posts necessary to complete the work.

Wood Fence Posts will be paid for at the contract unit price per each for the respective types. Payment shall be full compensation for furnishing new posts.

Payment for installing new steel or wood posts shall be included in the contract unit price per foot for Type 3 Right-of-Way Fence.

REPAIR FENCE

An estimated 1923’ of Repair Fence is included in the Estimate of Quantities. The Engineer will determine the actual quantity and locations of Repair Fence in the field.

In areas designated on the plans or as ordered by the Engineer, repair of right-of-way fence will consist of furnishing new barb wire, post aligning and installing new posts where necessary. The Contractor shall remove the existing woven\barb wire fence, which will require removal of woven wire staples and fasteners. This work shall be done to the satisfaction of the Engineer.

Necessary replacement of short segments of damaged or destroyed woven/barbed wire fence (50 feet or less) as determined in the field by the Engineer will also be paid for under this item. Cost for new posts shall be included in the contract unit prices per each for Wood Fence Post.

Repair Fence will be measured and paid for at the contract unit price per foot (inclusive of post panels and exclusive of tubular gates). Payment shall be full compensation for material, labor, equipment and incidentals necessary to repair the fence.

POST PANELS LEFT IN PLACE

Post panels that are left in place through areas of new fence or repair fence areas may need some repair work such as:

- Replace dowels and reposition brace post.
- Replace or tighten diagonal tension wire.
- Align and re-tamp posts.
- Other incidental work as necessary.

Cost for the repair work on post panels shall be incidental to the contract unit prices for the various items.

CONCRETE CURB AND GUTTER, SIDEWALK AND APPROACH PAVEMENT

All areas to be replaced shall be designated by the Engineer.

Existing concrete curb and gutter and approach pavement shall be removed and replaced as detailed in these plans or as directed by the Engineer. If the end of any section to be removed does not fall on an existing joint, a sawed joint (3" to 4" deep) must be made to provide a vertical face with the new joint.

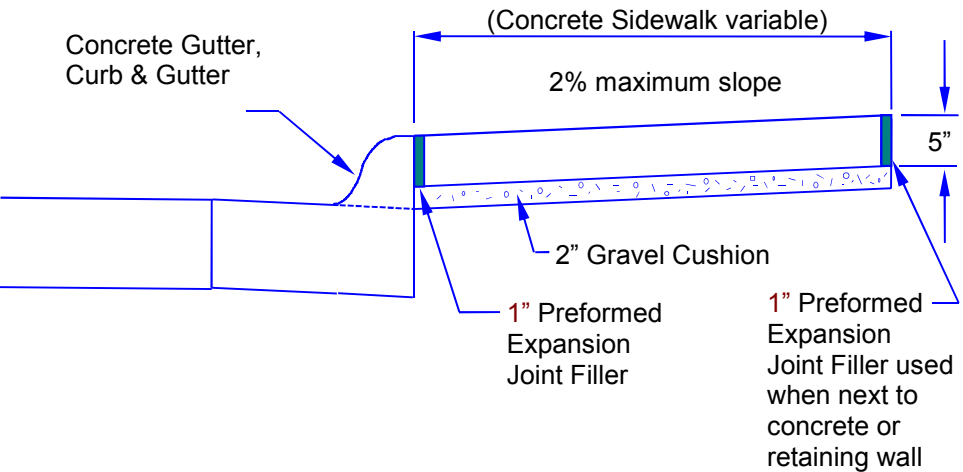
Existing foundation material shall be shaped and compacted to a firm, uniform bearing surface, conforming to the existing section or established grades as set by the Engineer. Unsuitable foundation material shall be removed and replaced as directed.

Cost for labor, equipment, material and incidentals required for excavation and providing cushion material shall be incidental to the contract unit prices for the various items.

Curb and Gutter shall be tied to existing PCC pavement with drilled in No. 5 x 24" epoxy coated deformed tie bars spaced 30" center to center or by salvaged in place tie bars. Also, two No. 5 x 24" epoxy coated deformed tie bar shall be drilled into the existing curb and gutter at each end of the replacement area. Refer to the notes for STEEL BAR INSERTION.

Cost for this work shall be included in the contract unit price per each for Insert Steel Bar in PCC Pavement.

The Contractor shall satisfactorily restore all disturbed areas adjacent to the new concrete placement to the satisfaction of the Engineer. Cost for this restoration work shall be incidental to the contract unit prices for the various items.



STEEL BAR INSERTION

Steel bars shall conform to Section 1010.

Locations and quantities of concrete repair are subject to change in the field at the discretion of the Engineer. The Contractor will be responsible for ordering the actual quantity of steel bars necessary to complete the work.

Longitudinal deformed tie bars shall be inserted 9 inches into the in place concrete at the transverse joint and centered between every other set of two spliced longitudinal bars throughout the width of the repair area. An epoxy resin adhesive must be used to anchor the steel bar in the drilled hole.

Holes drilled into the existing concrete pavement shall be located at mid-depth of the slab and true and normal except that in transverse joints, the drilled in longitudinal steel bar angle will be slightly under 90° to allow for centering of the lap splice between existing longitudinal steel.

A rigid frame or mechanical device will be required to guide the drill to ensure proper horizontal and vertical alignment of the steel bars in the drilled holes.

Cost for drilling holes, furnishing and applying epoxy resin adhesive, furnishing and inserting No. 5 x 24" epoxy coated deformed tie bars into the drilled holes and inserting all other reinforcing steel bars into the drilled holes, and any incidentals necessary to complete the work shall be included in the contract unit price per each for Insert Steel Bar in PCC Pavement.

SEQUENCE OF OPERATION

Due to the large amount of traffic during rush hours, no work\lane closures will be allowed on:

- Site No. 1 between the following hours 630AM-900AM and from 330PM to 6PM

Work activities will be conducted during daylight hours. Any work beyond these hours shall be approved by the Engineer.

GENERAL MAINTENANCE OF TRAFFIC

Sufficient traffic control devices have been included in these plans to sign one workspace on a two-lane highway. If the Contractor elects to work on additional sites simultaneously, the cost for additional traffic control devices shall be incidental to the contract unit price per square foot for Traffic Control Signs.

MAINTENANCE OF TRAFFIC

When work is in progress within an intersection, Flaggers will be required to direct traffic.

Gutter that is removed shall be replaced the same day with curb and gutter, so drop off doesn't exist overnight.

The Contractor shall use Flaggers during peak traffic hours and at times specified by the Engineer to supplement the stop condition and signing shown on Standard Plate 634.25. It is possible that Flagging will be required during all daytime hours. Advance warning Flagger signs will be required when Flaggers are present and removed when no Flaggers are present.

Type B warning lights shall be placed on top of FLAGGER (Symbol) signs and shall conform to Section 634.3A for warning lights and shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

The Contractor shall 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.

Traffic approaching the project from intersecting roadways, streets and approaches must be adequately accommodated. Major intersections or large commercial entrances may require additional signing, flaggers and channelizing devices on a temporary basis until work activities pass these areas.

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS		PCN I4KK			
		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R9-9	SIDEWALK CLOSED	2	24" x 12"	2.0	4.0
R9-11a	SIDEWALK CLOSED with ARROW (L or R) CROSS HERE	2	24" x 12"	2.0	4.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	1	48" x 48"	16.0	16.0
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	1	48" x 48"	16.0	16.0
W20-7	FLAGGER (symbol)	1	48" x 48"	16.0	16.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			
		88.0			

TYPE 3 BARRICADES	
ITEM DESCRIPTION	QUANTITY
Type 3 Barricade, 8' Double Sided	1 Each

ARROW BOARDS	
ITEM DESCRIPTION	QUANTITY
Type C Advance Warning Arrow Board	1 Each

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS		PCN I4KL			
		EXPRESSWAY / INTERSTATE			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			
		32.0			

CONTRACTOR FURNISHED TOPSOIL

It is anticipated that a larger volume of topsoil will be needed for the area where asphalt concrete is being removed. The Contractor will be required to furnish and place 4 inches of topsoil on the disturbed areas as determined by the Engineer during construction.

Contractor furnished topsoil shall be free from clay lumps, stones, coarse gravel, or similar objects larger than 1/2 inch in diameter. Brush, stumps, roots, wood, objectionable weeds, litter, or any other material which may be harmful to plant growth will not be allowed. Organic material shall be decomposed.

Cost for furnishing and placing the Contractor furnished topsoil shall be incidental to the contract unit price per cubic yard for Contractor Furnished Topsoil.

MYCORRHIZAL INOCULUM

Mycorrhizal inoculum shall consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier shall provide certification of the fungal species claimed and the live propagule count. The inoculum shall include the following fungal species:

Glomus intraradices 25%
Glomus aggregatu 25%
Glomus mosseae 25%
Glomus etunicatum 25%

All seed shall be inoculated by the seed supplier with a minimum of 20,000 live propagules of mycorrhizal fungi per 1,000 square feet. Cost for inoculating the seed shall be incidental to the contract unit price per pound for the corresponding permanent seed mixture.

FERTILIZING

Application of fertilizer will not be required on this project.

PERMANENT SEEDING

The areas to be seeded consist of all newly graded areas within the project limits.

Type D Permanent Seed Mixture shall consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/1000 SqFt)
Kentucky Bluegrass	Avalanche, Appalachian, Wildhorse, Blue Bonnet	1.4
Perennial Ryegrass	Turf Type Varieties	1.4
Creeping Red Fescue	Epic, Boreal	1.4
Chewings Fescue	Ambrose, K2, VNS, Zodiac	1.4
Alkali Grass	Fults, Fults II, Quill, Salty	1.4
Total:		7

WATER FOR VEGETATION

Water for vegetation consists of applying water to seeded areas to enhance germination and/or root growth. When watering, use the following guidelines:

Immediately after seeding:

- Keep the topsoil moist but not excessively wet until the seed has germinated.
- Water a minimum of 3 days a week for 2 weeks preferably watering 2 or 3 times a day in small quantities.
- Use fine spray and low pressure to avoid topsoil wash and to prevent uncovering buried seeds.

After emergence:

- Topsoil shall be kept thoroughly moistened by sprinkling, as necessary, for 6 weeks. After the 6 week period, an inspection shall be made to determine if grass is established enough to suspend watering. Continue watering until grass has been thoroughly established.
- Never apply water at a rate faster than the topsoil can absorb.
- Water during early morning hours or early evening hours.
- Do not water when rain is forecasted for the area.
- If rainfall occurs, suspend watering according to rainfall amount.

An estimated 5 Gallons of water per square yard of seeding area was used to compute the quantity for the bid item “Water for Vegetation”.

Cost for furnishing and applying the water including hauling, materials, equipment, labor, and incidentals necessary shall be paid for at the contract unit price per MGal for Water for Vegetation. Plans quantity will be basis of payment.

FIBER MULCHING

Fiber mulch shall be applied in a separate operation following permanent seeding.

An additional 2% by weight of tackifier shall be added to the fiber mulch product selected from the approved product list. If the product selected has guar gum tackifier included, then the additional 2% of tackifier shall be guar gum. If the product selected has synthetic tackifier included, then the additional 2% of tackifier shall be synthetic.

Fiber mulch shall be applied at the rate of 0.6 pounds per square yard.

The Contractor shall allow the fiber mulch to cure a minimum of 18 hours prior to watering or any storm event to ensure proper cohesion between the soil and fiber particles.

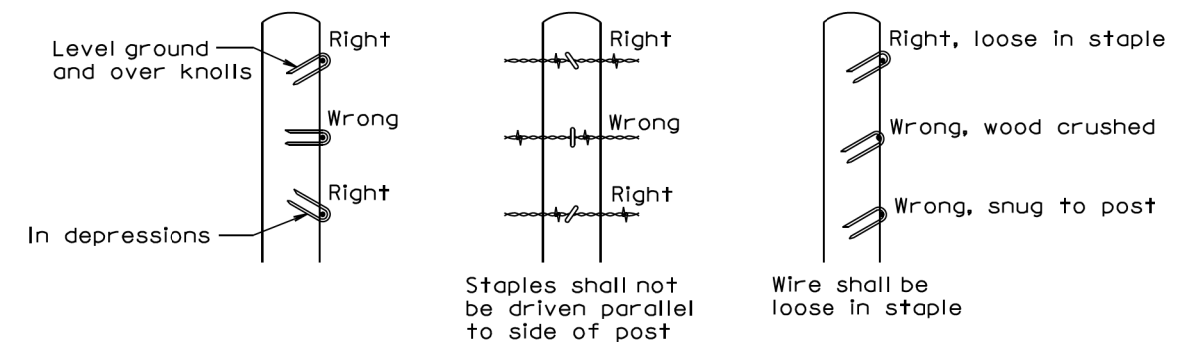
Cost for the additional tackifier added to the fiber mulch including labor, equipment and material shall be incidental to the contract unit price per pound for Fiber Mulching. Plans quantity will be basis of payment.

The fiber mulch provided shall be from the approved product list. The approved product list for fiber mulch may be viewed at the following internet site:

<http://sddot.com/business/certification/products/Default.aspx>

LOCATION OF FIBER MULCHING

It is estimated 660 pounds of fiber mulch will be needed on Site No. 1 (Southeast Quadrant of 10th Street and I229).



GENERAL NOTES:

The gages of wire and wood post lengths and sizes are the minimum acceptable unless otherwise specified in the plans. The tolerances for steel posts shall be as stated in AASHTO M281. Woven wire shall conform to design and specifications of ASTM A116 and barbed wire shall conform to ASTM A121.

GENERAL NOTES:

Fence types designated on the plans that are followed by the letter S shall have smooth (barbless) wires.

When type 5S or 6S is designated the bottom wire may be barbed, smooth, or left off.

All degrees of curvature stated for fence are at centerline of roadway.

September 14, 2009

December 23, 2004

Published Date: 1st Qtr. 2017

***S
D
D
O
T***

RIGHT-OF-WAY FENCE

PLATE NUMBER
620.01

Sheet 1 of 1

Published Date: 1st Qtr. 2017

SDOT

STAPLE INSTALLATION AND GENERAL RIGHT-OF-WAY FENCE NOTES

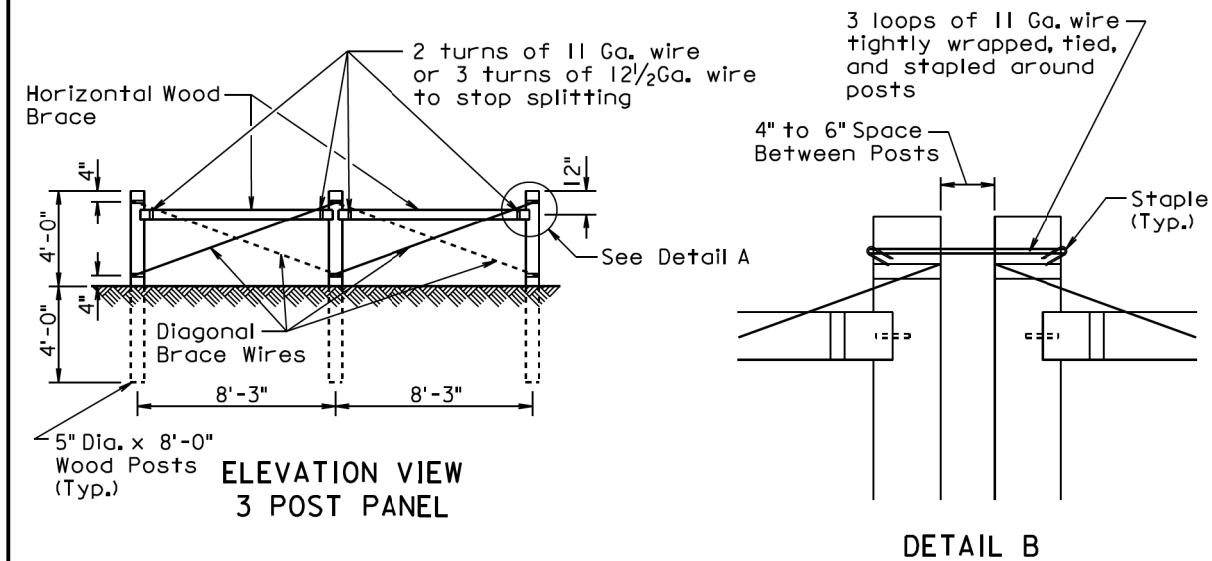
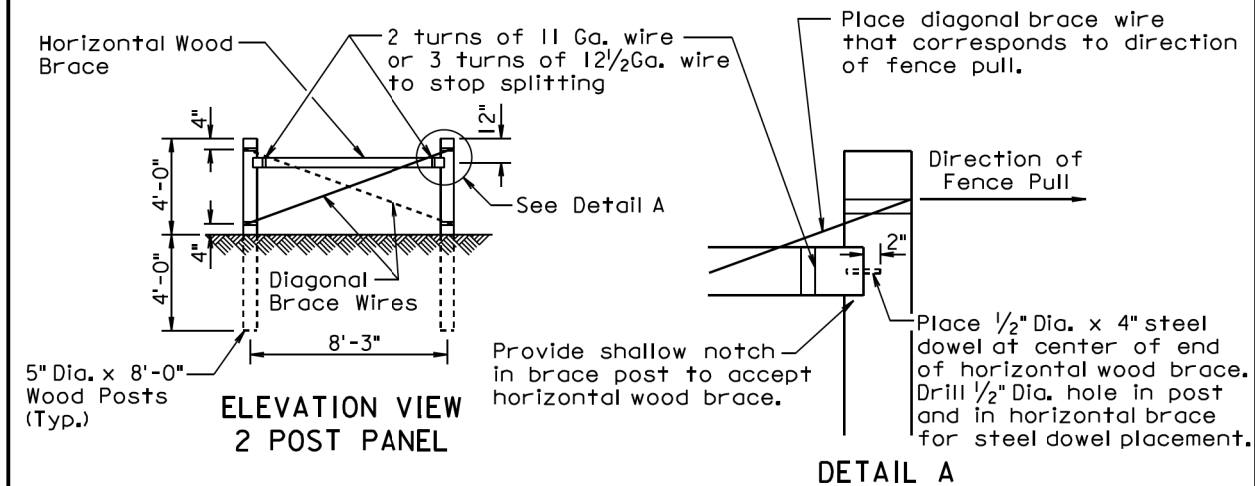
PLATE NUMBER
620.02

Sheet 1 of 1

PLOT SCALE - 1:0.0886059

PLOTTED FROM - TRML1INT15

Plotting Date: 02/21/2017



GENERAL NOTES:

- Two Post Panels shall be installed at least every 1320' between corners.
- Two Post Panels shall be installed at any sharp vertical angle crest points and as directed by the Engineer.
- Horizontal wood braces shall consist of 4" dia. x 8' wood posts or rough 4" x 4" x 8' timbers.
- Diagonal brace wires shall be fabricated with 4 strands of 9 Ga. galvanized wire twisted tight. The diagonal brace wires shall be installed in accordance with the direction of the fence pull. Two diagonal brace wires are required if fence pull is in both directions.

December 23, 2004

Published Date: 1st Qtr. 2017	S D D O T	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 1 of 3

SPACING OF 2 POST PANELS WITHIN CURVES	
DEGREE OF CURVE	SPACING OF 2 POST PANEL
less than 3°15'	** 1320'
3°15' and greater	** At P.C., P.T., and at every 1320' between P.C. and P.T.

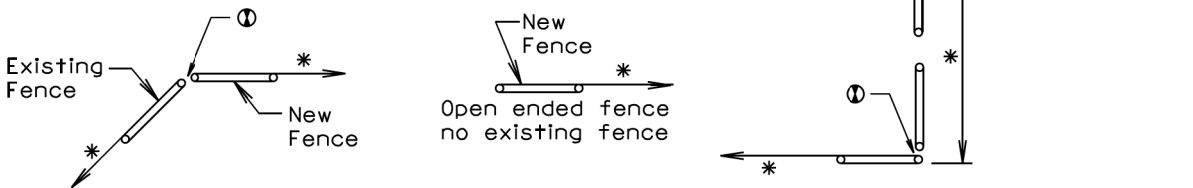
GENERAL NOTE:

All degrees of curvature stated for fence are at centerline of roadway.

- * If fence length is less than 600' to next corner use a 2 post panel.
- * If fence length is greater than 600' to next corner use a 3 post panel.

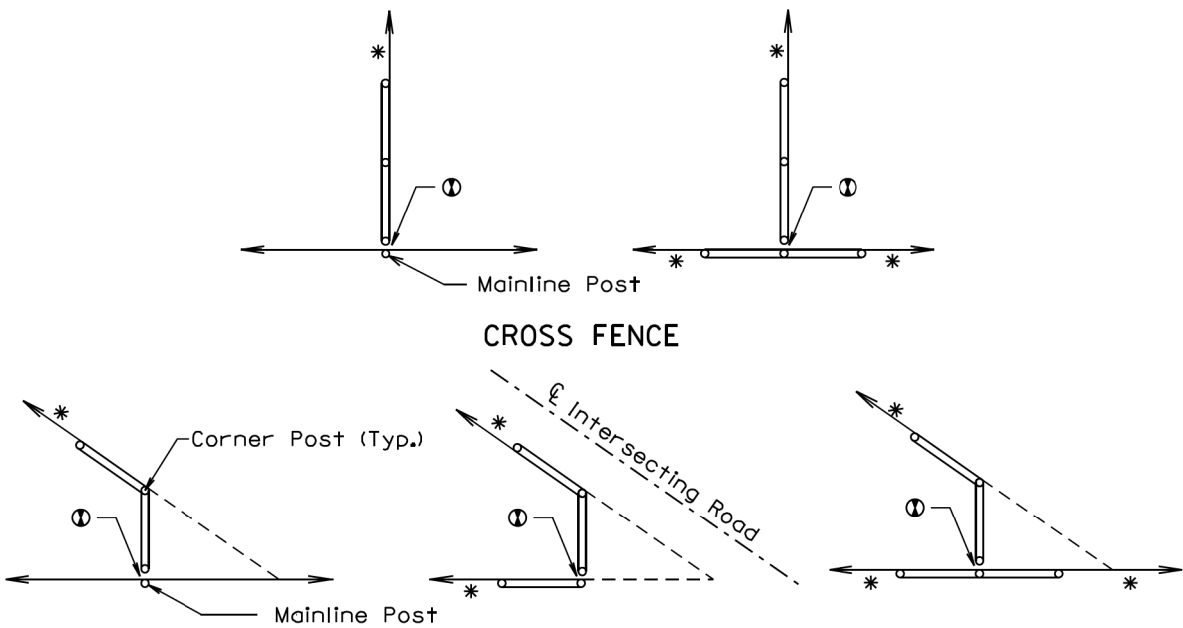
- ** Fence lengths greater than 1320' and less than 2640' place 2 Post Panel approximately at midpoint.

① See Detail B on Sheet 1 of 3.

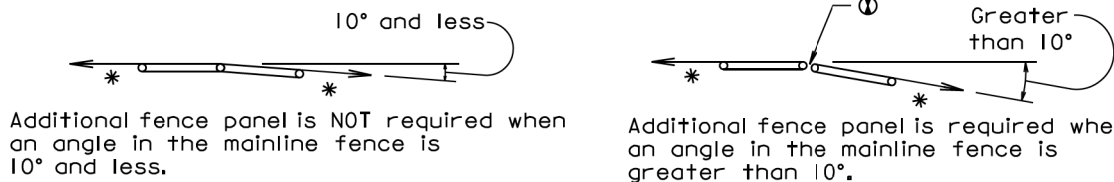


BEGIN OR END FENCE
(where new fence ties into existing fence)

SHORT JOGS IN FENCE



SHARP ANGLES IN CROSS FENCE



Additional fence panel is NOT required when an angle in the mainline fence is 10° and less.

Additional fence panel is required when an angle in the mainline fence is greater than 10°.

ANGLES IN MAINLINE FENCE

December 23, 2004

Published Date: 1st Qtr. 2017	S D D O T	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 2 of 3

PLOT NAME - 2

FILE - ... \STD PLATES 14KK 14KL.DGN

FILE - ... \STD PLATES I4KK I4KL.DGN



26" woven wire shall have a total of two connectors, one secured to the top and one secured to the bottom.

32" woven wire shall have a total of three connectors, one secured to the top, one secured to the middle, and one secured to the bottom.

One connector shall be used for each strand of barbed wire.

A minimum of 3 connectors shall be installed on chain link fence, the connectors shall be placed vertically at every two foot increment and connectors shall be placed on the top and bottom tension wires or top rail.

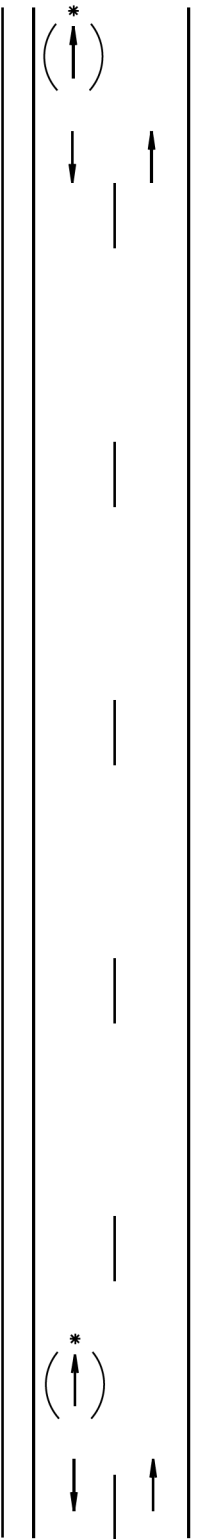
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

The signs illustrated shall 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.

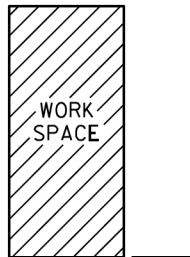
The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* 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



April 15, 2015

Published Date: 1st Qtr. 2017	S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES WORK BEYOND THE SHOULDER	PLATE NUMBER 634.01
			Sheet 1 of 1

Only the traffic control devices controlling pedestrian flows are shown. Other devices may be needed to control traffic on the streets. Use lane closure signing or ROAD NARROWS signs, as needed.

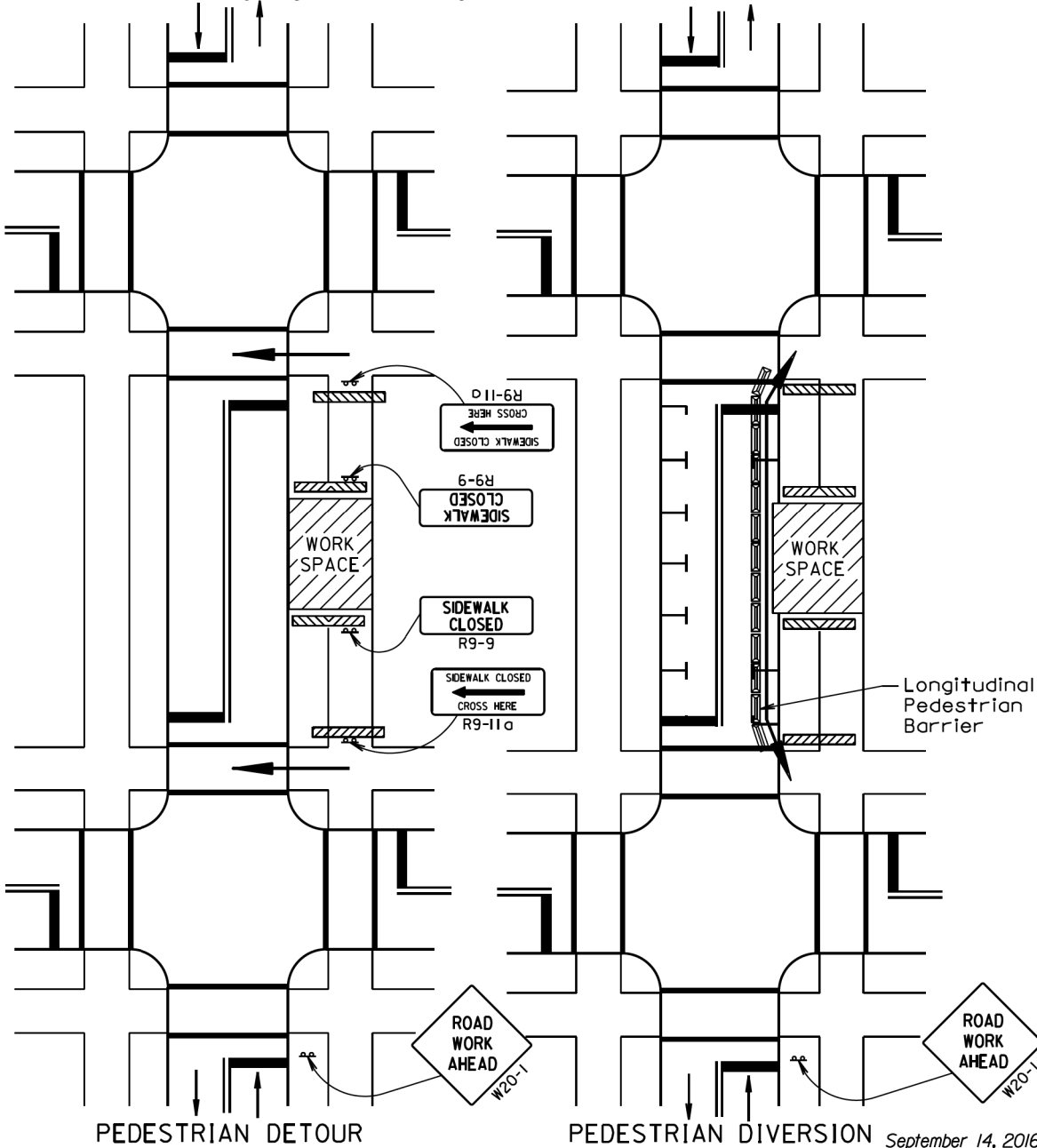
Signs may be placed along a temporary diversion to guide or direct pedestrians. Examples include KEEP RIGHT and KEEP LEFT signs.

Additional advance warning may be necessary.

For nighttime closures, Type A flashing warning lights may be used on barricades supporting signs and closing sidewalks. Type C steady-burn lights may be used on channelizing devices separating the temporary pedestrian diversion from vehicular traffic.

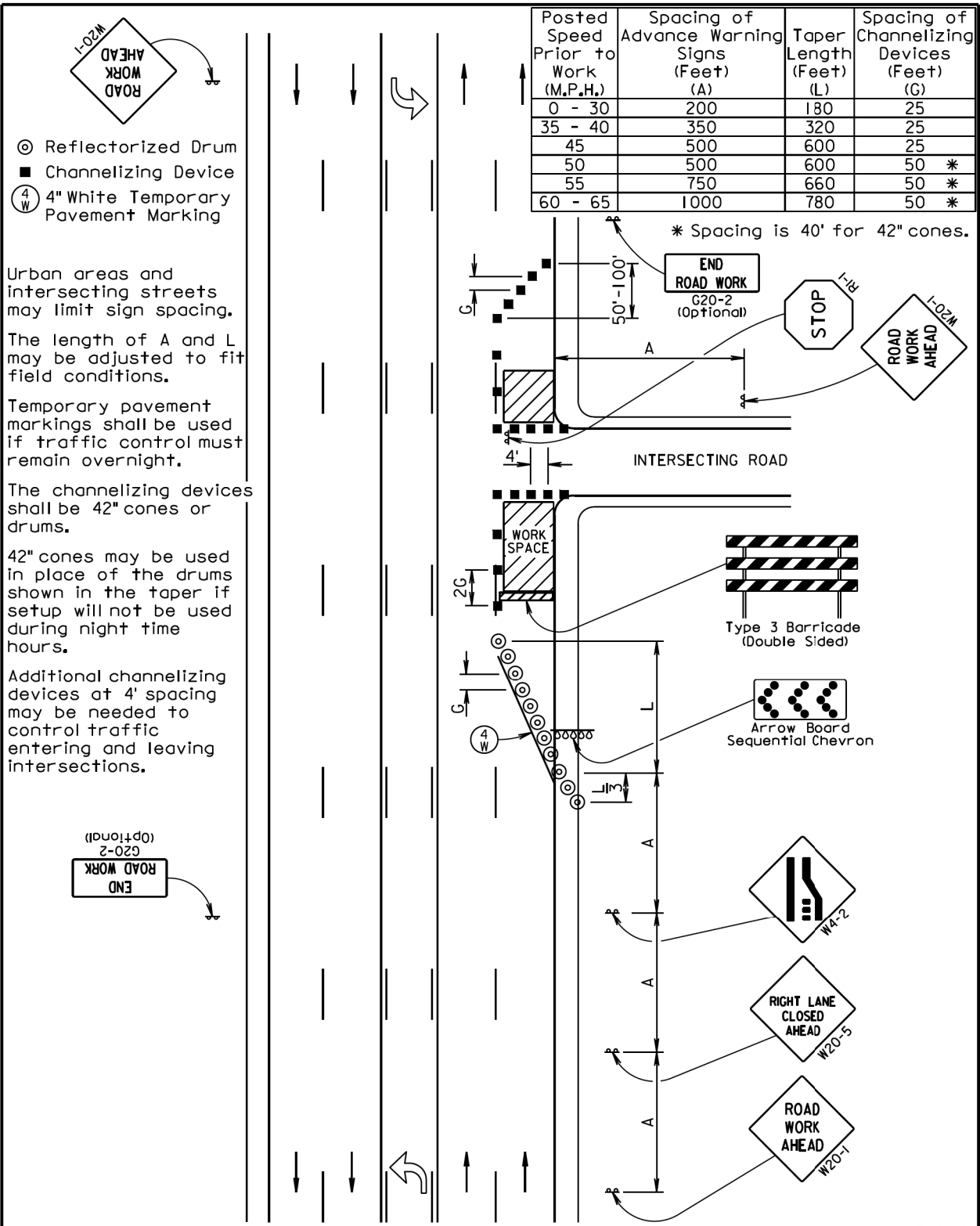
Street lighting should be considered.

Longitudinal Pedestrian Barricade and



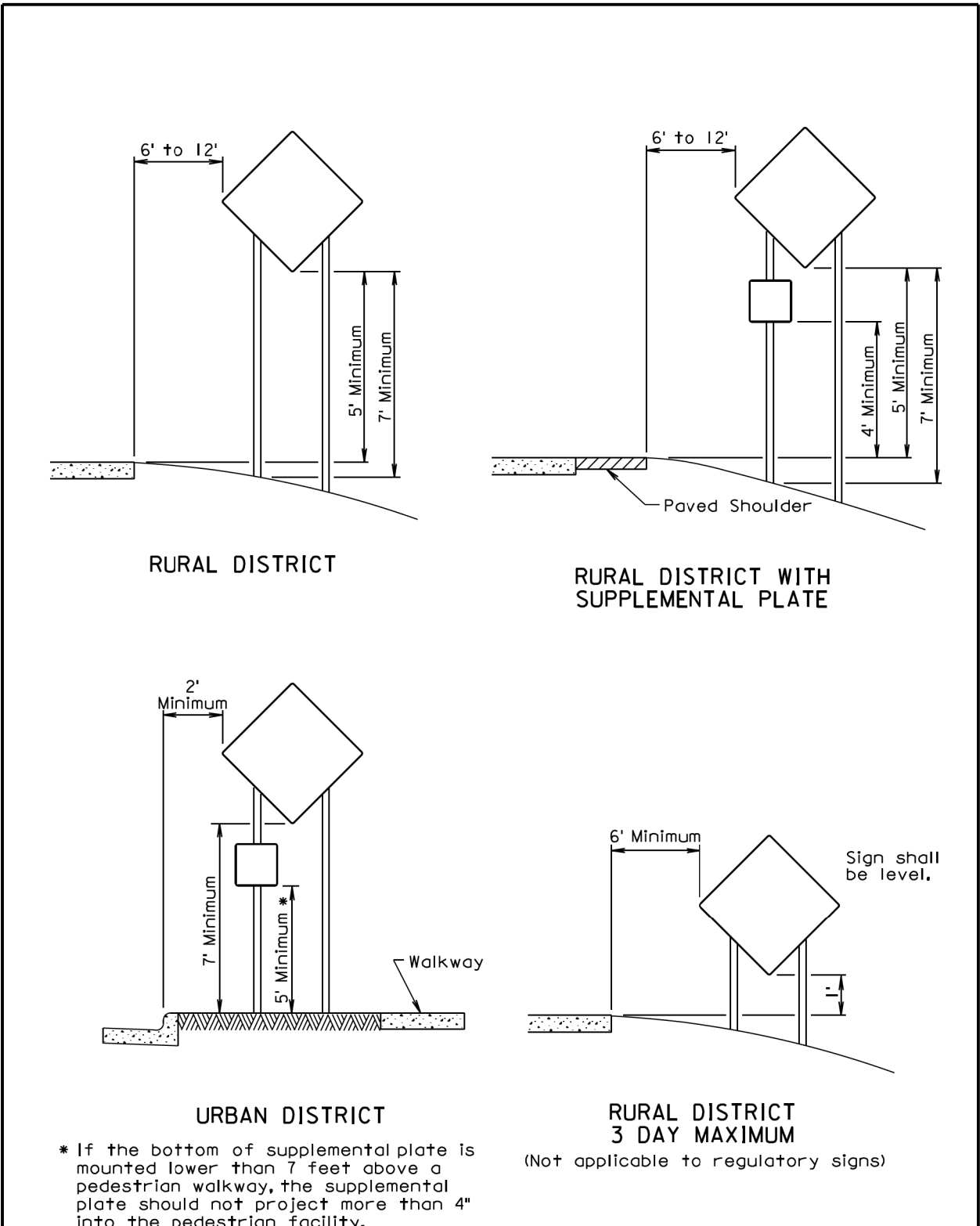
September 14, 2016

Published Date: 1st Qtr. 2017	S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES PEDESTRIAN DETOUR AND PEDESTRIAN DIVERSION	PLATE NUMBER 634.34
			Sheet 1 of 1



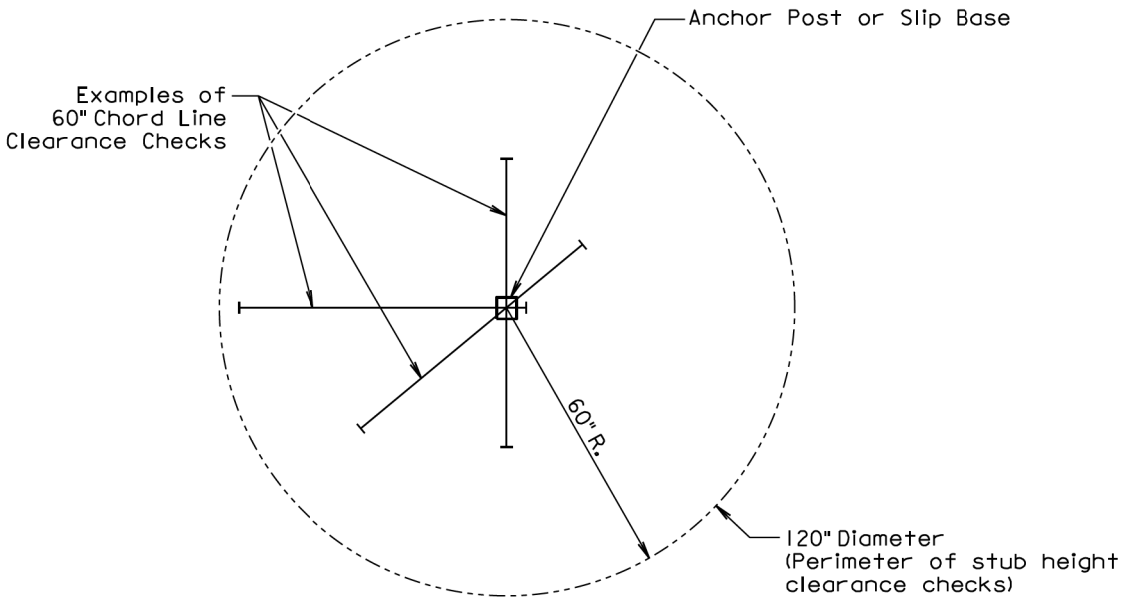
June 3, 2016

Published Date: 1st Qtr. 2017	S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES 5-LANE, OUTSIDE LANE CLOSED	PLATE NUMBER 634.60
			Sheet 1 of 1

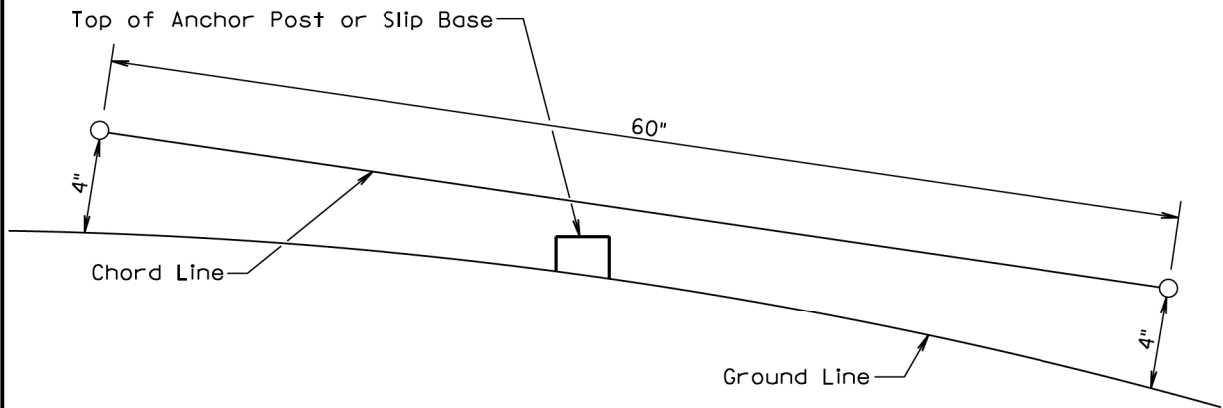


September 22, 2014

Published Date: 1st Qtr. 2017	S D D O T	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:

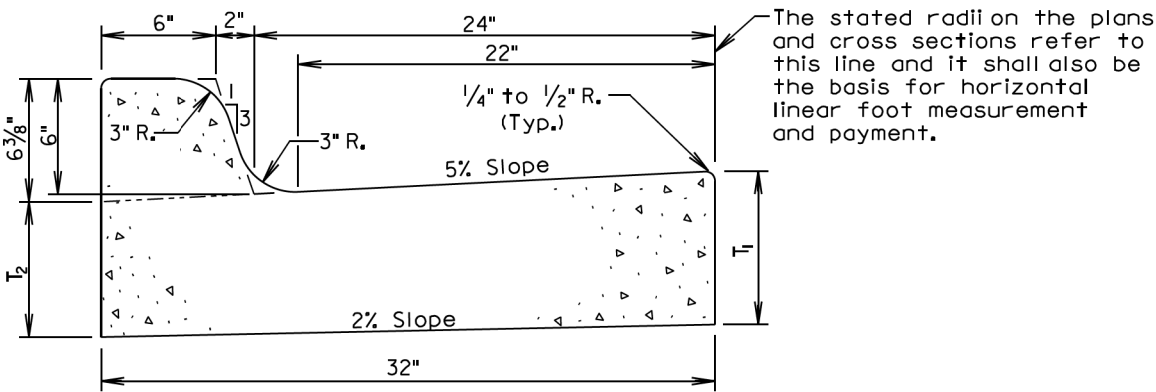
The top of anchor posts and slip bases SHALL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

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. 2017	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1



The stated radii on the plans and cross sections refer to this line and it shall also be the basis for horizontal linear foot measurement and payment.

Type	T ₁ (Inches)	T ₂ (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
B66	6	5/16	0.057	17.7
B67	7	6/16	0.065	15.4
B68	8	7/16	0.073	13.7
B68.5	8.5	7 9/16	0.077	13.0
B69	9	8/16	0.081	12.3
B69.5	9.5	8 9/16	0.085	11.7
B610	10	9/16	0.090	11.2
B610.5	10.5	9 9/16	0.094	10.7
B611	11	10/16	0.098	10.2
B611.5	11.5	10 9/16	0.102	9.8
B612	12	11/16	0.106	9.4

GENERAL NOTES:

When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment shall be by one of the methods shown on Standard Plate 380.11.

See Standard Plate 650.90 for expansion and contraction joints in the curb and gutter.

September 6, 2008

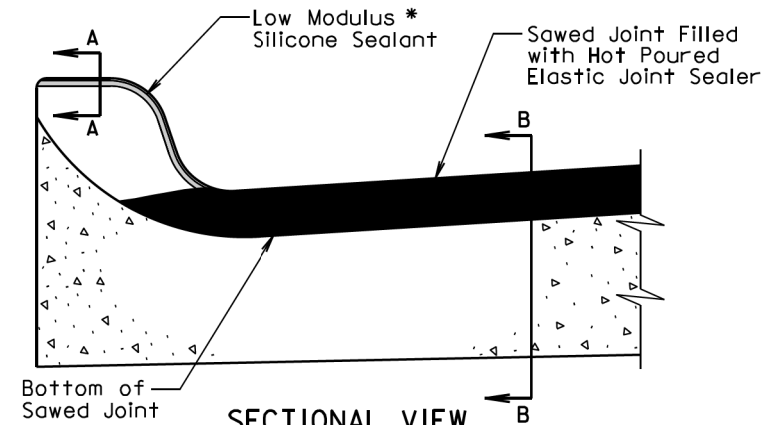
Published Date: 1st Qtr. 2017	S D D O T	TYPE B CONCRETE CURB AND GUTTER	PLATE NUMBER 650.01
			Sheet 1 of 1

PLOT SCALE - 1:0.0886059

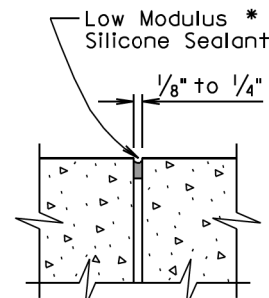
PLOTTED FROM - TRMLINT15

STATE OF SOUTH DAKOTA	PROJECT 0001-271 & 0001-271	SHEET 16	TOTAL SHEETS 17
-----------------------------	--------------------------------	-------------	-----------------------

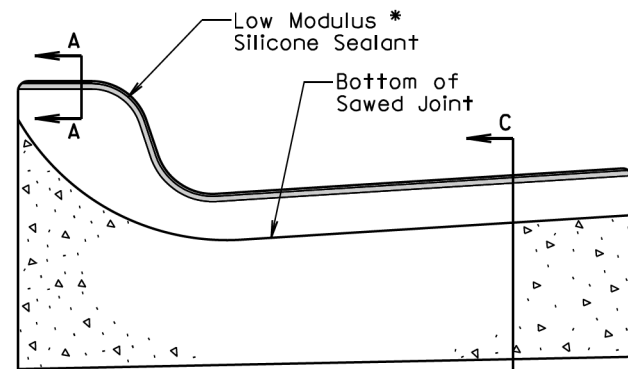
Plotting Date: 02/21/2017



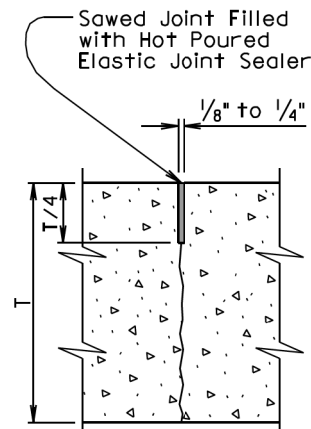
SECTIONAL VIEW
(Curb and Gutter Placed Monolithically with Adjacent Mainline PCC Pavement)



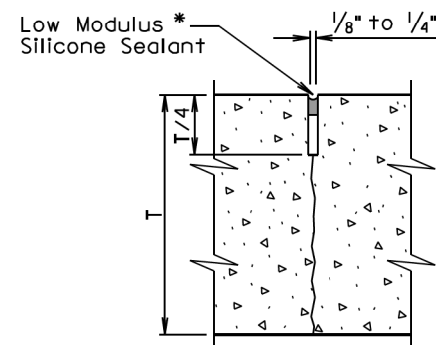
SECTION A-A



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



SECTION B-B

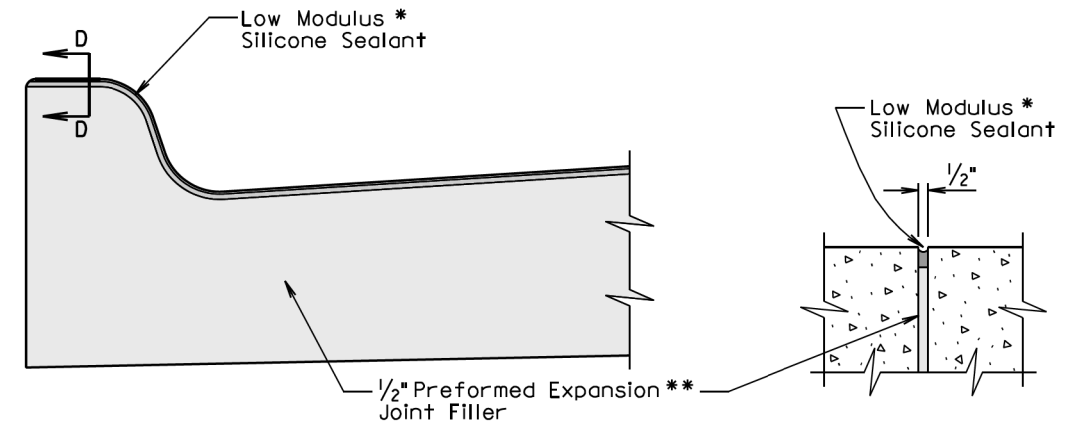


SECTION C-C

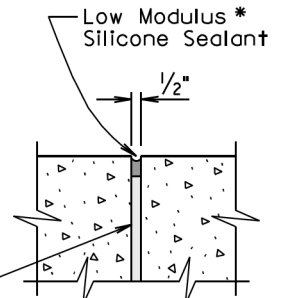
* The silicone sealant shall be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.

September 6, 2013

Published Date: 1st Qtr. 2017	S D D O T	JOINTS IN CONCRETE CURB AND GUTTER	PLATE NUMBER 650.90
			Sheet 1 of 2



SECTIONAL VIEW
(Curb and Gutter at 1/2" Preformed Expansion Joint Filler Location)



SECTION D-D

* The silicone sealant shall 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 1/2" preformed expansion joint filler shall be placed transversely in the curb and gutter at the following locations:

1. At each junction between the radius return of curb and gutter and curb and gutter which is parallel to the project centerline.
2. At each junction between new curb and gutter and existing curb and gutter.

Transverse contraction joints shall be constructed at 10' 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 shall 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 shall be 1 1/2 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 shall be at least 1/4 the thickness of the concrete and the joint shall be sealed in accordance with the details shown above.

September 6, 2013

Published Date: 1st Qtr. 2017	S D D O T	JOINTS IN CONCRETE CURB AND GUTTER	PLATE NUMBER 650.90
			Sheet 2 of 2

PLOT NAME - 7

FILE - ... \STD PLATES I4KK I4KL.DGN

PLOT SCALE - 1/4"=1'-0.0886059

PLOTTED FROM - TRMLINT15

STATE OF SOUTH DAKOTA	PROJECT 0001-271 & 0001-271	SHEET 17	TOTAL SHEETS 17
-----------------------------	--------------------------------	-------------	-----------------------

Plotting Date: 02/21/2017

PLOT NAME - 8

FILE - ... \STD PLATES 14KK 14KL.DGN

