

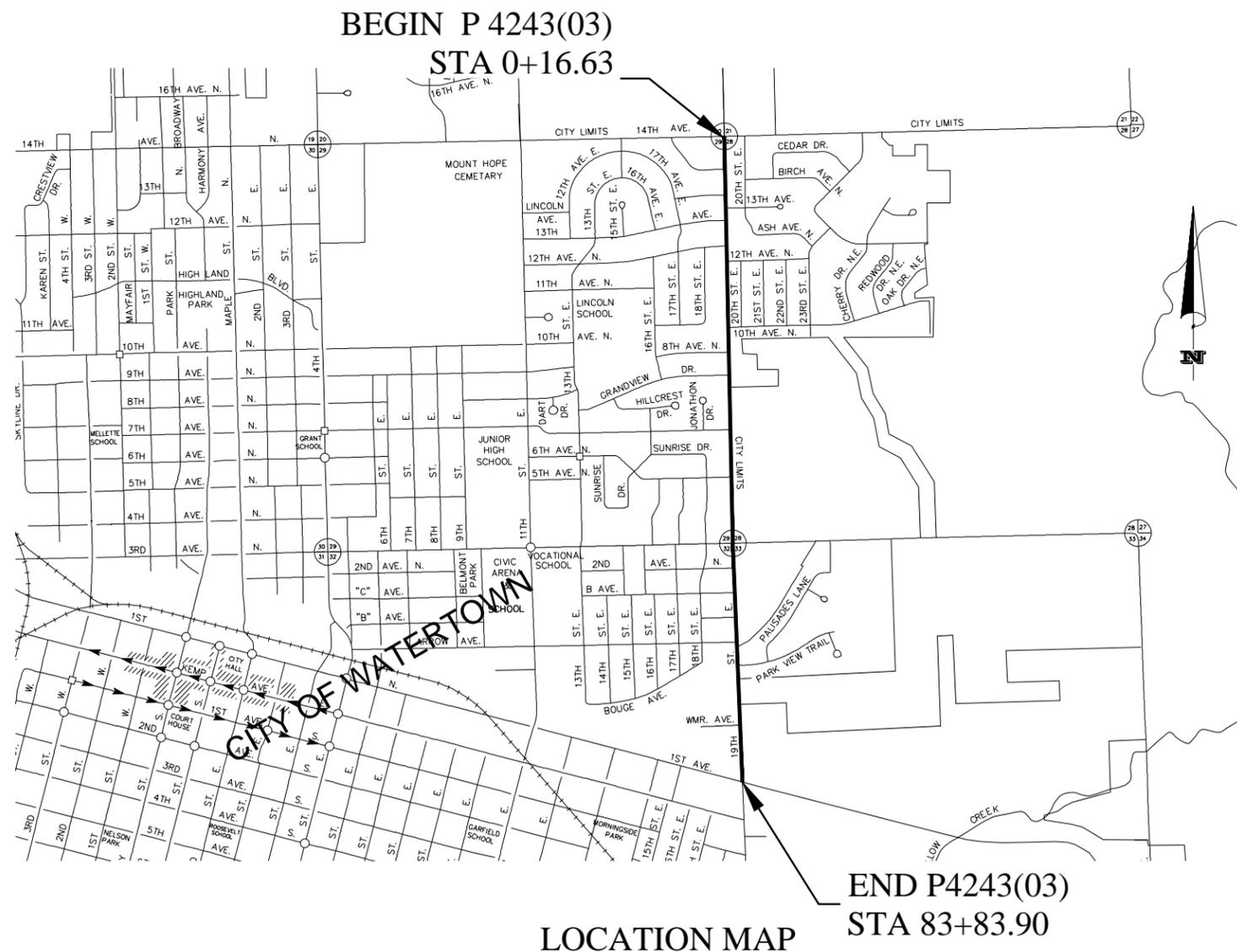
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 4243(03)	C1	C8

# SECTION C: TRAFFIC CONTROL PLANS

## INDEX OF SHEETS

- C1 GENERAL LAYOUT W/INDEX
- C2-C3 ESTIMATE OF QUANTITIES WITH GENERAL NOTES AND TABLE
- C4-C5 TRAFFIC CONTROL
- C6-C8 STANDARD PLATES



**SECTION C ESTIMATE OF QUANTITIES**

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	120	Hour
634E0100	Traffic Control	4044	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E2020	Temporary Curb Ramp	8	Each

**ITEMIZED LIST FOR TRAFFIC CONTROL**

SIGN #	SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQ'D.	UNITS PER SIGN	UNITS
1	R11-2	48"x30"	Road Closed	12	27	324
2	W20-3	36"x36"	Road Closed 500 Ft	6	27	162
3	W20-1	36"x36"	Road Work Ahead	2	27	54
	W20-4	36"x36"	One Lane Road Ahead	2	27	54
	W20-7a	36"x36"	Flagger (Symbol)	2	27	54
	G20-2	36"x18"	End Road Work	2	17	34
	W3-1	48"x48"	Stop Ahead (Symbol)	2	34	68
	R1-1	48"x48"	Stop	2	34	68
	R9-9	24"x12"	Sidewalk Closed	2	4	8
	R9-10	24"x12"	Sidewalk Closed, Use Other Side	2	4	8
	R9-11	24"x18"	Sidewalk Closed Ahead, Cross Here	2	7	14
	R9-11a	24"x12"	Sidewalk Closed, Cross Here	2	4	8
	W8-15	48"x48"	Grooved Pavement	4	34	136
	W8-15P	24"x18"	Motorcycle (Symbol)	4	7	28
1A			Type III Barricades, 8 Ft. Single Sided	54	56	3024
				<b>Total Units =</b>	<b>4044</b>	

If a sign is required on a project and not listed in the above inventory, the units per sign will be determined as follows:

Signs 36"x36" will be measured at 27 units each and signs 48"x48" will be measured at 34 units each, otherwise:

If a sign measures less than 25" high and 25" wide the units per sign will be computed as sign size (sq. ft.) x 3.

If a sign measures between 23" high and 37" high the units per sign will be computed as sign size (sq. ft.) x 1.2 + 15.

**SEQUENCE OF OPERATIONS**

Contractor may to construct the north portion of the project from Station 0+17 to 24+62 simultaneously with the south portion of the project from Station 24+62 to 83+70, or Contractor may construct the north and south portions at different times.

Construction of the south portion of the project from Station 24+62 to 83+70 shall follow the following sequence of operations:

1. Install fixed location signing prior to start of work.
2. Complete ADA sidewalk improvements. Three blocks on one side allowed to be disturbed at a time.
3. Complete cold milling operations.
4. Complete final grading.
5. Complete asphalt leveling, paving, adjust manholes and water valves.
6. Complete flush seal operations.
7. Complete permanent pavement marking operations.
8. Complete all remaining project items.
9. Remove temporary construction signing and barricades.

**GENERAL MAINTENANCE OF TRAFFIC**

One lane of traffic in each direction shall be maintained at all times on 19<sup>th</sup> Street from 1<sup>st</sup> Avenue NE to 10<sup>th</sup> Avenue NE. Any flagging required shall be paid by the Contract Unit Price per hour for Flagging.

The Contractor shall be responsible for maintenance of traffic on the project during the construction period. The project area will be signed and/or barricaded during the work for protection of the public and construction workers. Contractor shall fence and/or barricade off any open excavations that are to remain overnight.

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

Storage of vehicles and equipment shall be outside the clear zone and as near as possible to the right-of-way line. 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.

The Contractor shall expect to move signs periodically throughout the day at no additional cost as work progresses within the mill and overlay portion of the project.

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 City or State, and to the satisfaction of the Engineer.

All breakaway sign supports shall comply with FHWA NCHRP 350 and/or MASH crash-worthy requirements. The Contractor shall provide post installation details at the pre-construction meeting for all steel post breakaway support assemblies.

The Contractor shall provide signing for traffic control on the project. One lane at a time from 1<sup>st</sup> Avenue NE to 10<sup>th</sup> Avenue NE will be closed to traffic as required with concurrence from the City and Engineer to minimize the duration of closure. The Contractor will notify business owners and emergency service of their intended work schedule.

Due to the nature of the work, the Contractor will need to close intersecting streets to traffic. Up to three intersecting streets may be closed at a time. At least one access to the Human Service Agency parking lot shall be maintained at all times. The Contractor will coordinate the traffic control with the City and adjacent land owners. Notification signs, control devices, and barricades will be required on the project to notify traffic of construction.

The Contractor shall remove and reset all traffic control devices as required to correspond to work as it progresses. The project area will be signed and/or barricaded during the work for protection of the public and construction workers. All traffic control shall conform to the current edition of the Manual of Uniform Traffic Control Devices (MUTCD).

The Contractor will be responsible to provide reasonable access and maintenance of roads to homes and businesses along the project between 1<sup>st</sup> Avenue NE and 10<sup>th</sup> Avenue NE as approved by the City of Watertown and the Engineer.

Grooved Pavement signs shall be placed in locations shown until all cold milled areas are covered with asphalt concrete. These signs are included in the Itemized List for Traffic Control.



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 4243(03)	C3	C8

**PEDESTRIAN TRAFFIC CONTROL**

The existing sidewalks cannot be closed without supplying an alternate route. When crosswalks, sidewalks, or other pedestrian facilities are blocked, closed or relocated, temporary facilities shall include accessibility features.

The Contractor shall adhere to the requirements of the Americans with Disabilities Act (ADA) during construction. Tape, rope, or plastic chain strung between devices is not detectable, does not comply with design standards in the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG), and should not be used as a control for pedestrian movements.

The Contractor will be limited to working on one side of 19<sup>th</sup> Street at a time to allow for pedestrian traffic during sidewalk construction. In areas with existing sidewalk only on one side, new sidewalk shall be completed and opened to pedestrian traffic before work on existing sidewalk occurs.

A temporary pedestrian ramp shall be provided by the Contractor in all cases where an alternate route cannot be found, and the intersection will carry pedestrian traffic. A suitable ramp would be one made out of wood that is at least three feet wide and no greater than a 12:1 slope. The ramp should be sufficiently sturdy and unyielding with hand rails.

The cost of the temporary pedestrian ramps shall be incidental to the contract price per each for Temporary Curb Ramp.

The Contractor shall adequately sign and barricade the sidewalk for pedestrian traffic. The Contractor must not leave un-barricaded holes open overnight.

**WORK SCHEDULING**

The Contractor shall provide construction schedules to the City and the Engineer.

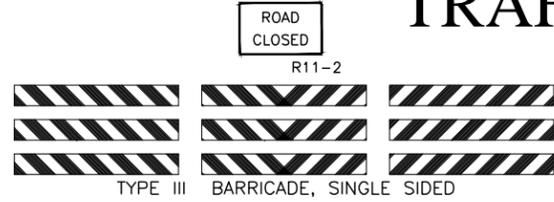


# TRAFFIC CONTROL LAYOUT FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 4243(03)	C4	C8



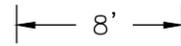
2



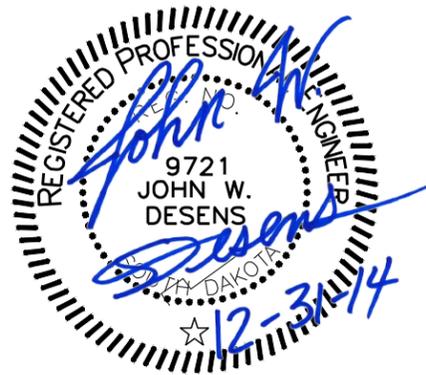
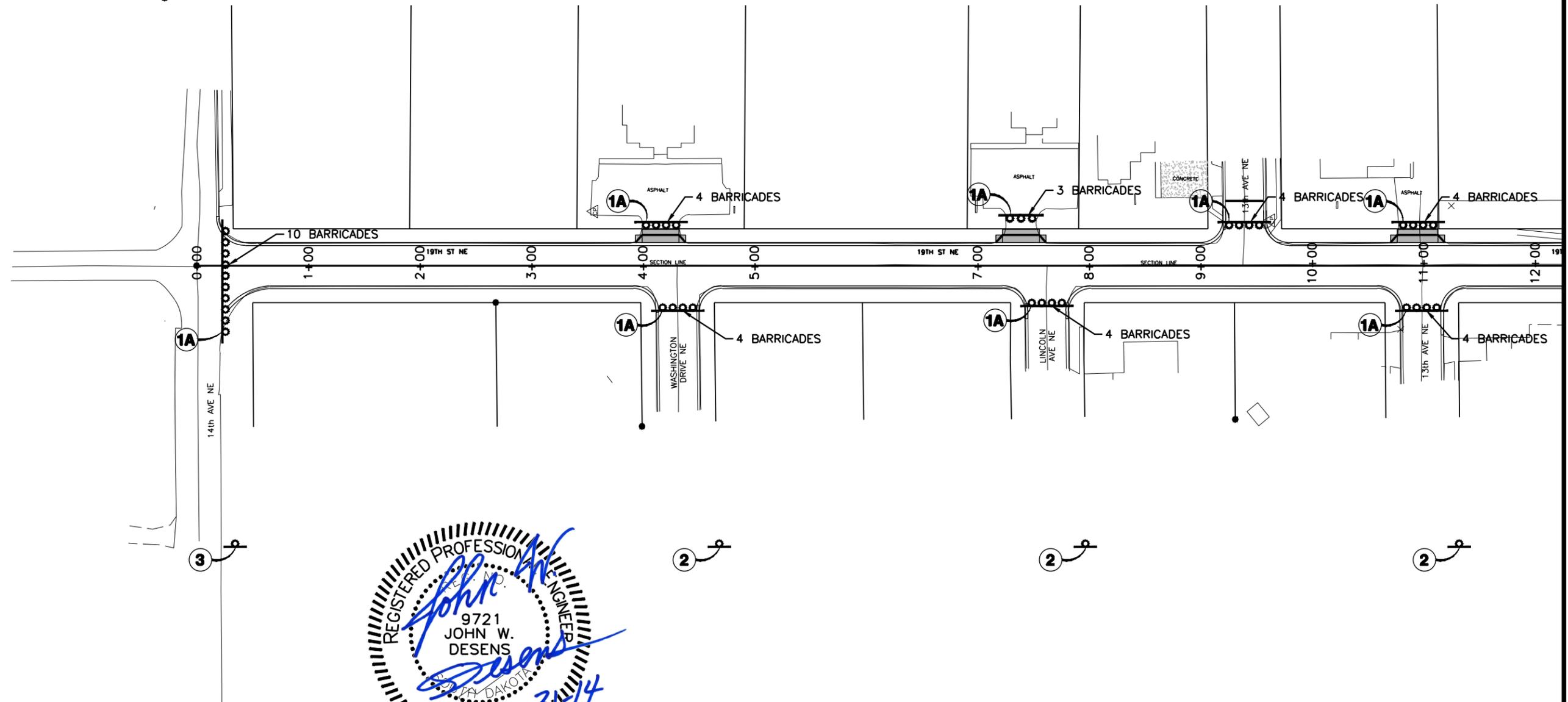
1 & 1A



3



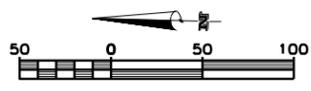
NOTE: STRIPES ON BARRICADES SHALL SLOPE IN THE DIRECTION RECOMMENDED BY THE MUTCD FOR EACH INSTALLATION



2

2

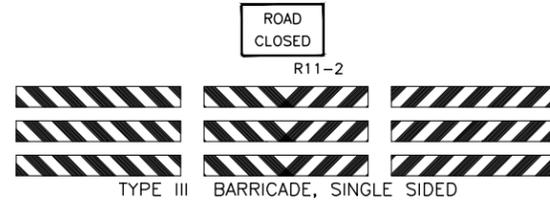
2



# TRAFFIC CONTROL LAYOUT

FOR BIDDING PURPOSES ONLY

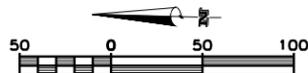
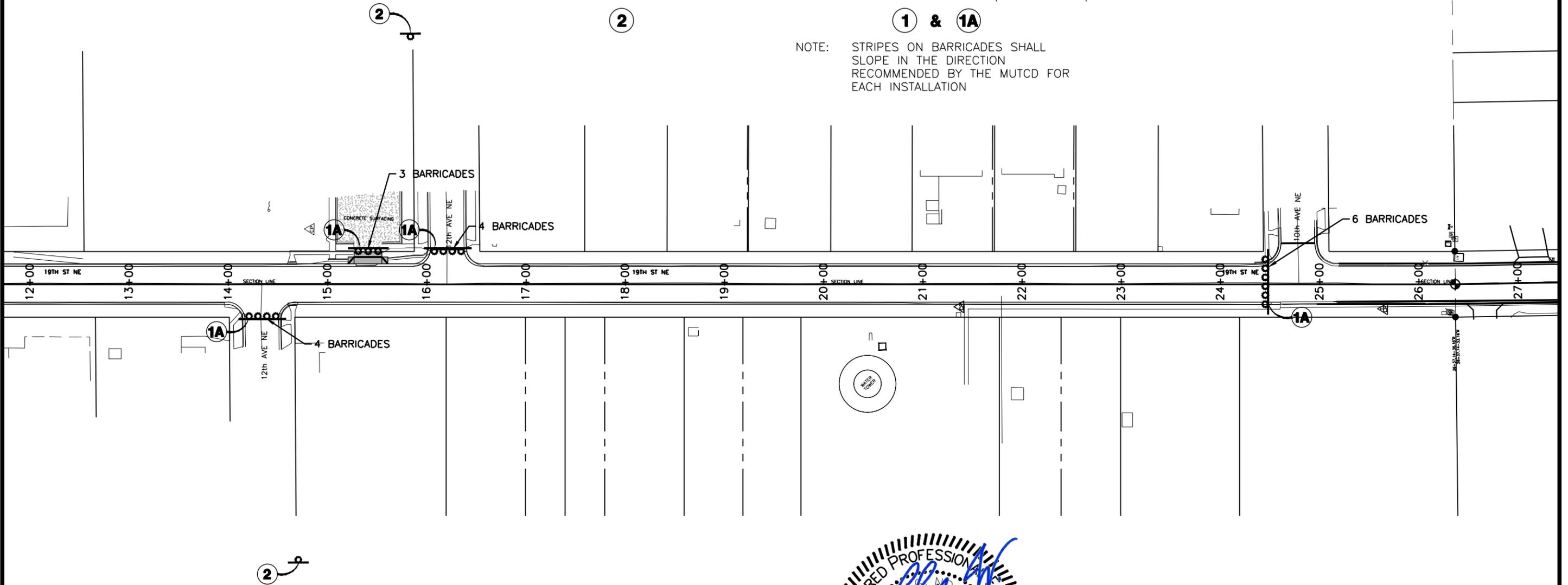
STATE OF SOUTH DAKOTA	PROJECT P 4243(03)	SHEET C5	TOTAL SHEETS C8
-----------------------	-----------------------	-------------	--------------------



8'

① & ①A

NOTE: STRIPES ON BARRICADES SHALL SLOPE IN THE DIRECTION RECOMMENDED BY THE MUTCD FOR EACH INSTALLATION



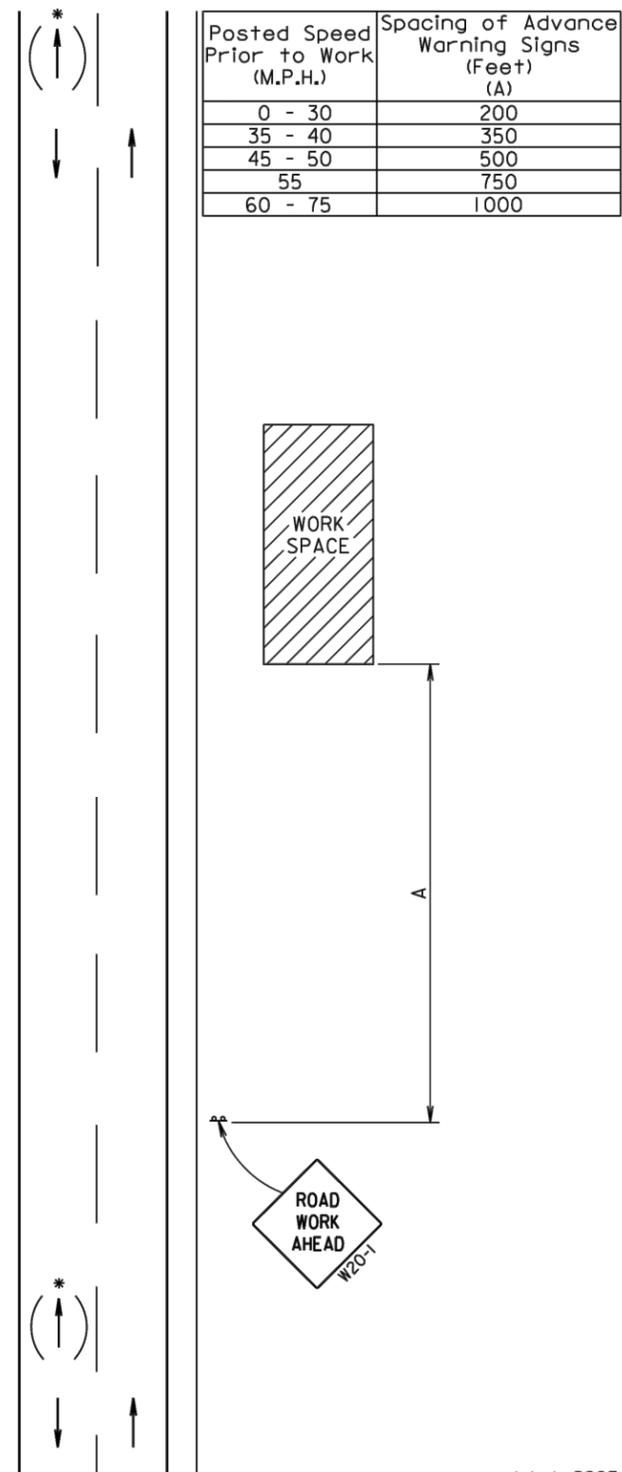
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

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.

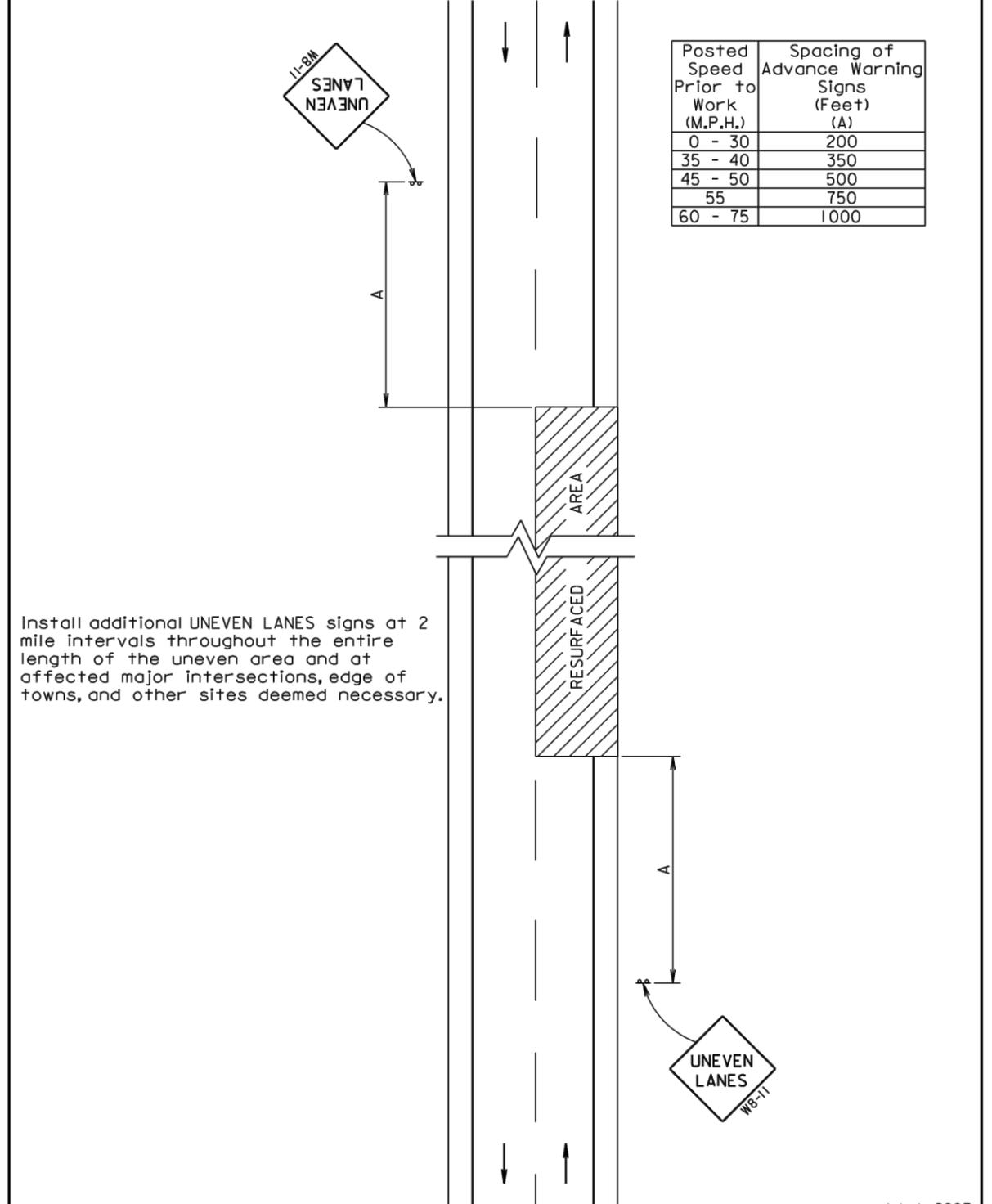
\* If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

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.



July 1, 2005

Published Date: 4th Qtr. 2014	S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES WORK BEYOND THE SHOULDER	PLATE NUMBER 634.01
			Sheet 1 of 1



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.

July 1, 2005

Published Date: 4th Qtr. 2014	S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES 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 - 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.

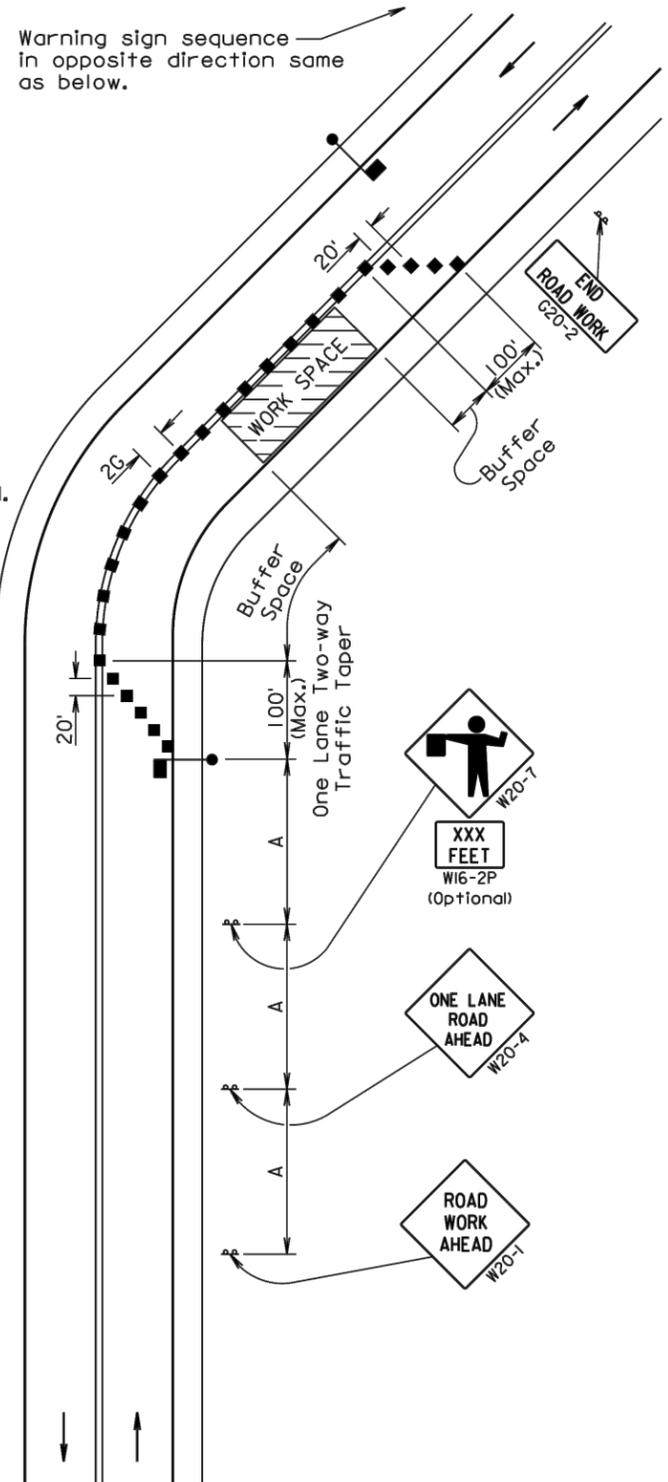
The channelizing devices shall be drums or 42" cones.

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

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.



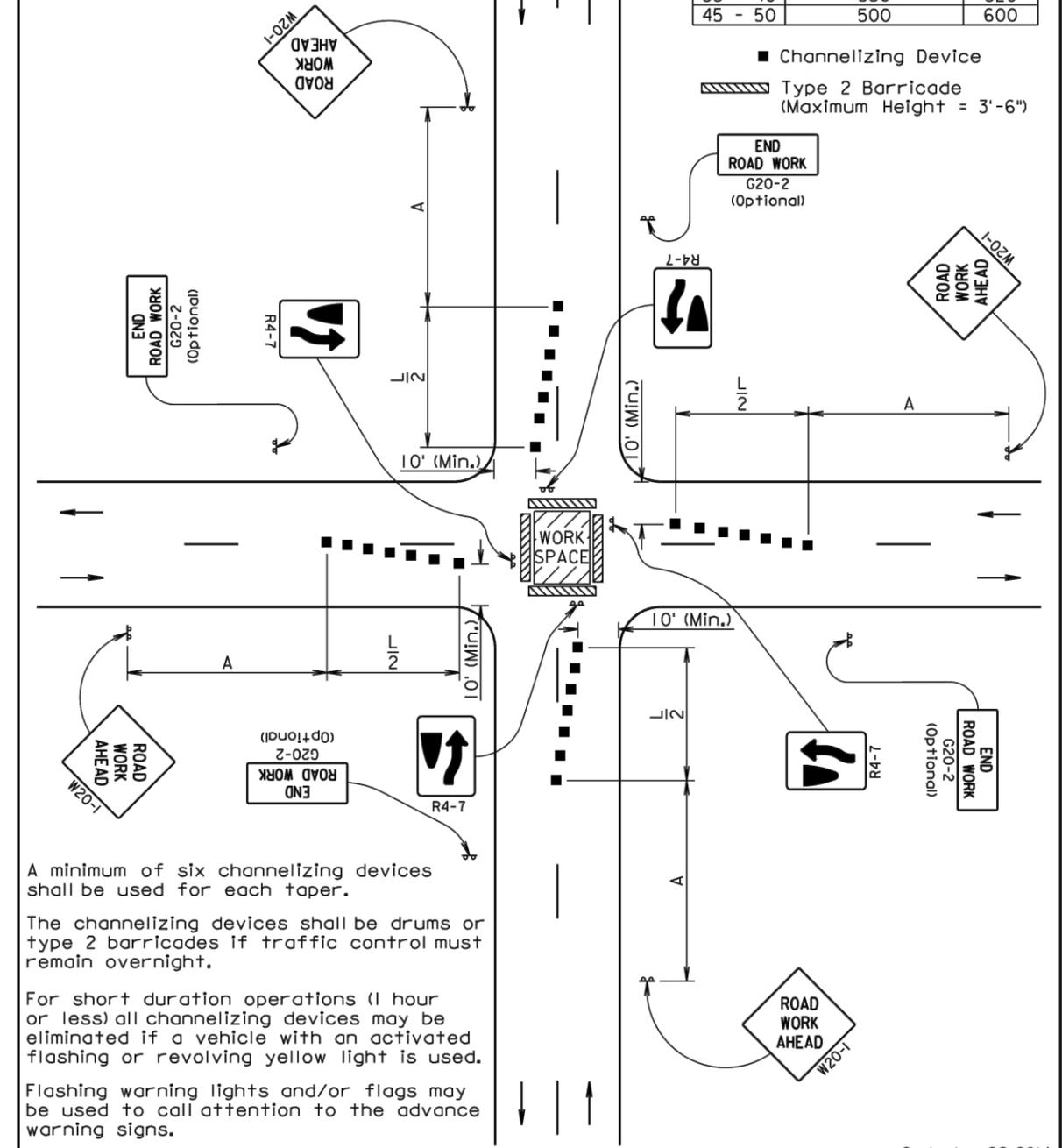
September 22, 2014

<b>S D D O T</b>	<b>GUIDES FOR TRAFFIC CONTROL DEVICES LANE CLOSURE WITH FLAGGER PROVIDED</b>	PLATE NUMBER <b>634.23</b>
	Published Date: 4th Qtr. 2014	Sheet 1 of 1

Prohibit left turns as required by traffic conditions. Unless the streets are wide, it may be physically impossible to turn left, especially for large vehicles.

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600

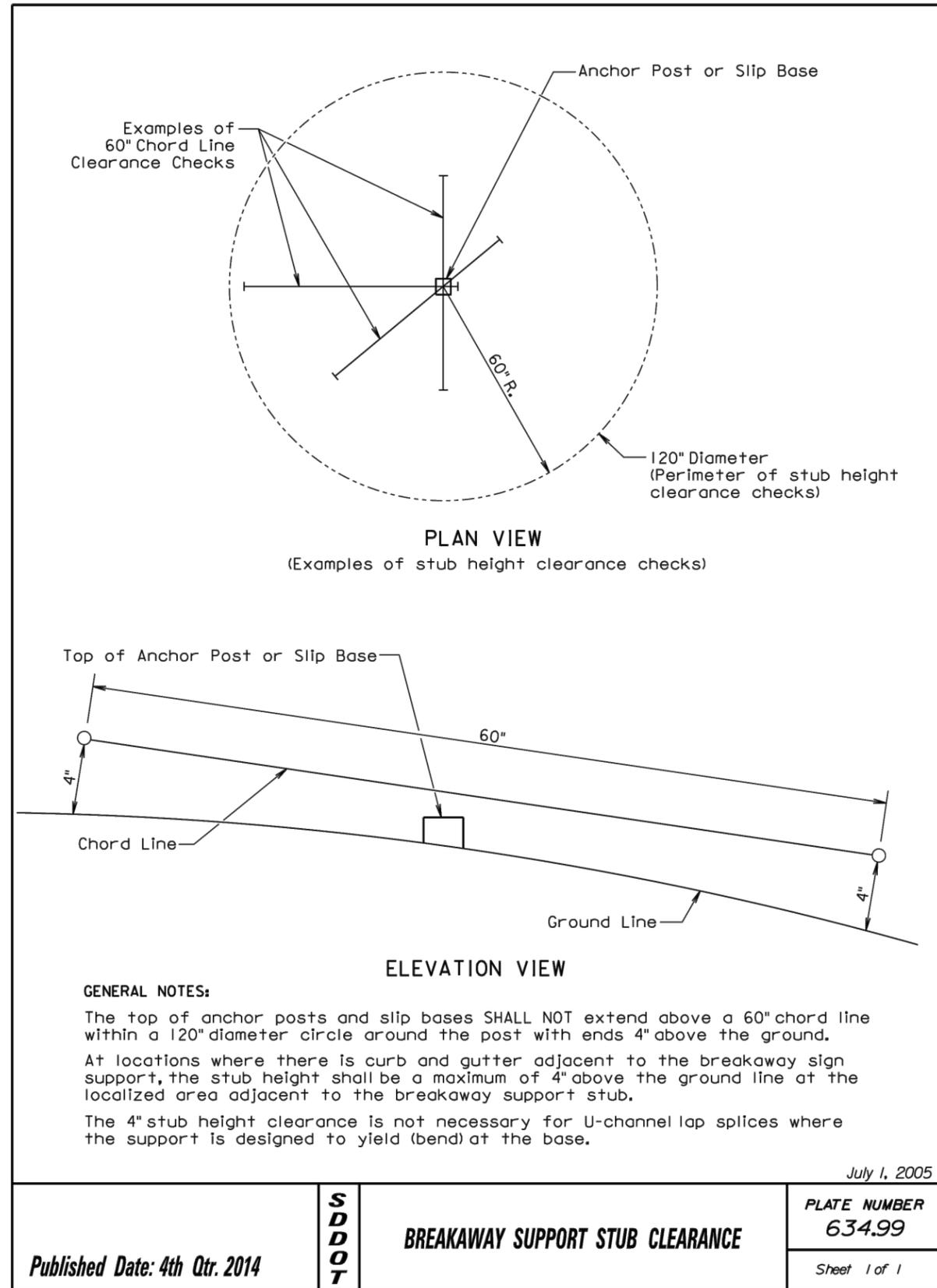
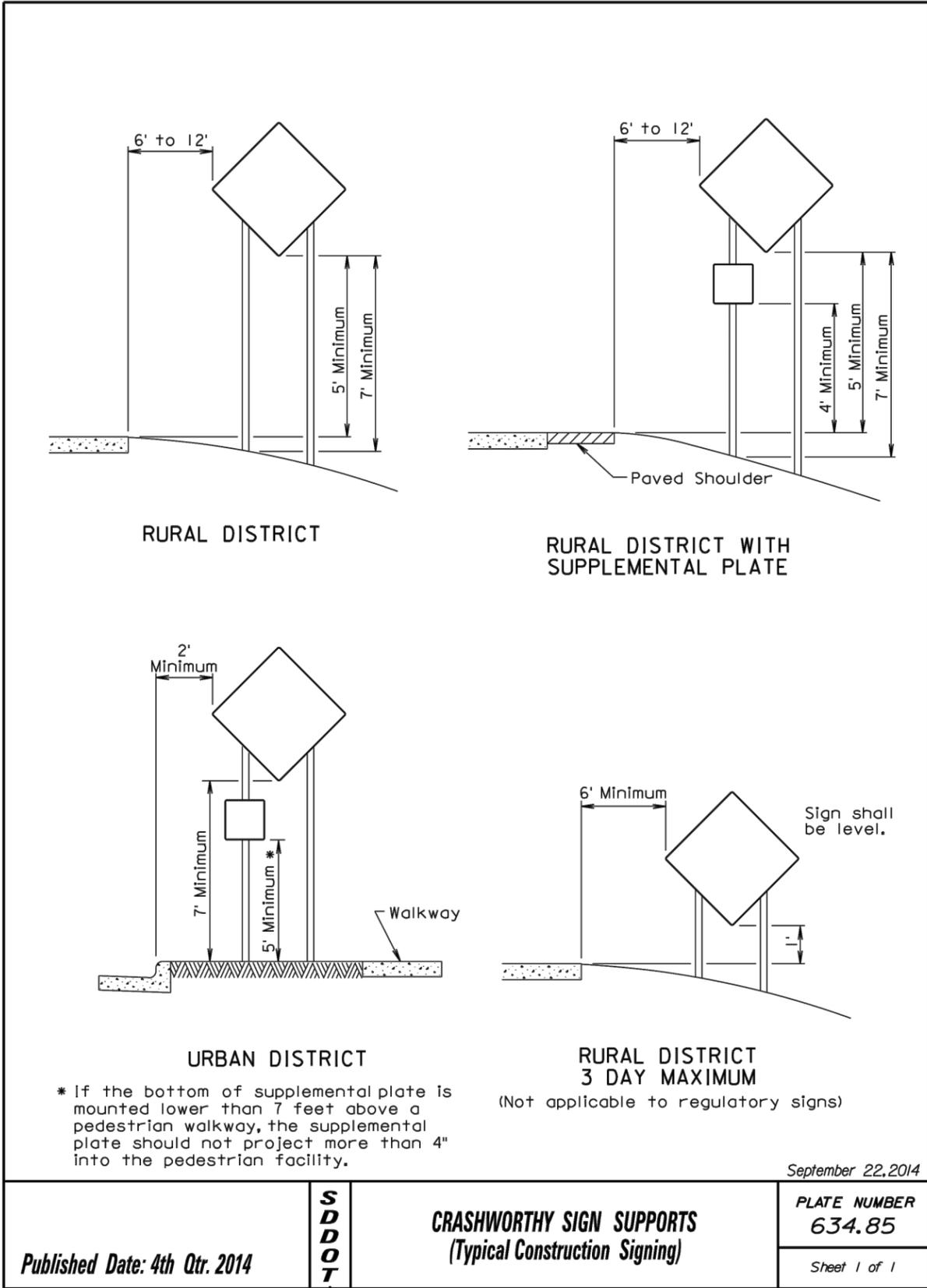
- Channelizing Device
- ▨ Type 2 Barricade (Maximum Height = 3'-6")



September 22, 2014

<b>S D D O T</b>	<b>GUIDES FOR TRAFFIC CONTROL DEVICES CLOSURE IN CENTER OF INTERSECTION</b>	PLATE NUMBER <b>634.35</b>
	Published Date: 4th Qtr. 2014	Sheet 1 of 1

STATE OF SOUTH DAKOTA	PROJECT P 4243(03)	SHEET C8	TOTAL SHEETS C8
-----------------------	-----------------------	-------------	--------------------



12/30/2014 8:12 AM Z:\2013 PROJECTS\13038 WATERTOWN 19TH STREET\DESIGN\SEC C\STANDARD PLATES - C.DWG