

FOR BIDDING PURPOSES ONLY

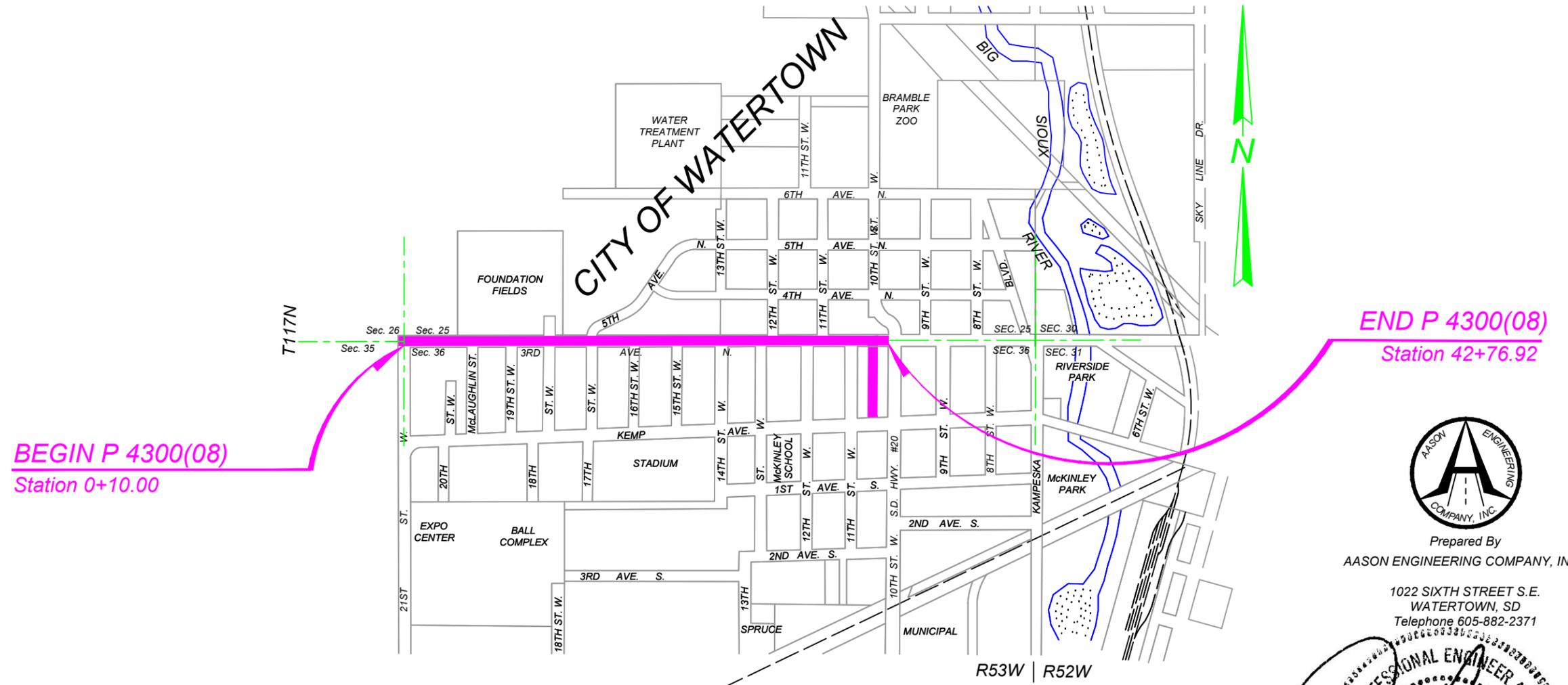
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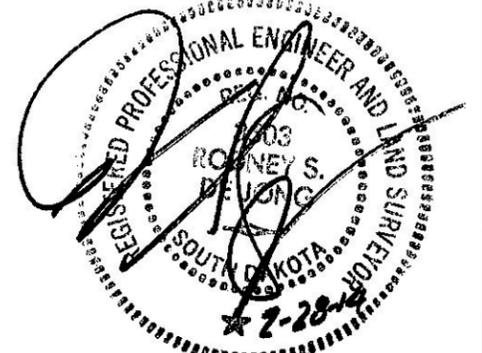
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# Section C: Traffic Control Plans



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**SECTION C - ESTIMATE OF QUANTITIES**

Bid Item Number	Item	Quantity	Unit
260E1030	Base Course, Salvaged	400.0	Ton
632E3600	Temporary Signing	24.5	SqFt
634E0010	Flagging	40	Hour
634E0100	Traffic Control	2498	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E2000	Longitudinal Pedestrian Barricade	600	Ft
634E2025	Longitudinal Pedestrian Channelizer	250	Ft

**EXISTING SIGNS**

The Contractor shall remove the existing signs and stockpile the signs at the City's maintenance yard located at 730 Arrow Avenue NE for future installation by City Forces on this project. All costs for removal and transporting to the maintenance yard shall be included in the various items of the contract.

**TRAFFIC CONTROL AND SEQUENCE OF OPERATIONS**

Work on this project shall be done in 2 phases.

A detour for 3<sup>rd</sup> Avenue North has been established on Kemp Avenue (1 block south).

Traffic control devices shall be appropriately installed prior to any construction activity in both phases.

The Contractor shall coordinate his work with the local residences and businesses to maintain access along the project.

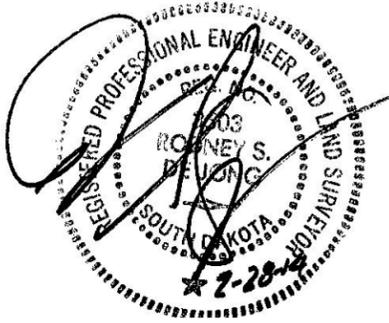
Refer to Proposal for Special Provision for Contract Time. The work shall proceed in the following order:

Phase 1: Phase 1 work shall consist of work between Sta. 24+15 and the End of the Project including the installation of the storm sewer outfall line in the alley. Before proceeding to Phase 2, the Base Course, Salvaged shall be in place to be able to handle local traffic.

Phase 2: Phase 2 work shall consist of work between Sta. 0+10 and Sta. 24+15.

At least one of the driveways at 6+14 or 14+08 – L shall be open to ensure access to the ball field at any time for the public. The traffic control and detour signing shall be moved from one location to the other to accommodate access to the ball field during construction of either entrance. No additional payment will be made for the relocation of these signs and shall be considered incidental the traffic control items.

The Contractor's attention is directed to Section 120.3, "CONSTRUCTION REQUIREMENTS", of the Standard Specifications regarding sequence of work. In addition, the erosion control shall follow closely to the finish grading.



**MAINTENANCE OF TRAFFIC**

Thru Traffic will not be maintained through the project, except as noted under TRAFFIC CONTROL AND SEQUENCE OF OPERATIONS notes. The Contractor shall be responsible for the installation, maintenance and removal of all traffic control devices in accordance with Section 4.4 of the Standard Specifications, Special Provisions and the Plan Notes pertaining thereto.

It is the responsibility of the Contractor to coordinate and maintain access to the residences and businesses along the project.

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.

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, and to the satisfaction of the Engineer.

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.

All breakaway sign supports shall comply with FHWA NCHRP350 crashworthy requirements. The Contractor shall provide post installation details at the preconstruction meeting for all steel post breakaway sign support assemblies.

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

Traffic control drums, Type II barricades, cones, and/or tubular markers shall be used as needed to safely delineate traffic during each phase of work per standard plates. These items will not be measured in the field thus the furnishing, installing, maintaining, and removing of these items shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

Erect only those signs that are applicable to the work in progress. When the Contractor is working at specific work spaces within the project, only those traffic control devices applicable to that operation should be displayed. The Fixed Location signs at the ends of the project shall not be installed until a work activity that encompasses the entire project has begun.

The cost of moving traffic control signs from Phase 1 to Phase 2 locations shall be incidental to the various contract items.

Removing, relocating, covering, salvaging and resetting of permanent traffic control devices shall be the responsibility of the Contractor. The cost of this work shall be incidental to the various contract items unless otherwise specified in the plans. Any signs damaged or lost shall be replaced by the Contractor at no cost to the City.

Orange plastic safety fence shall be provided to enclose any areas that are unsafe including the last 50' of pipe excavation that is allowed to be open overnight, open excavation for inlets/manholes, and during undercutting operations. All related costs to furnish, place, and maintain the plastic safety fence shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

The Contractor shall designate an employee to maintain traffic as described in Section 634.3 of the Standard Specifications. This person shall be required to do weekend checks to ensure traffic control devices are in satisfactory condition. The Contractor shall submit a weekly log stating time and date of such inspections and the log shall be signed by the person doing the inspections. The cost of the traffic control person shall be incidental to the

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contract lump sum price for "Traffic Control Miscellaneous". The employee selected must be approved by the Engineer.

The Contractor shall provide the City Police Department, and the City Fire Department updates regarding the status of the project for emergency vehicles.

**BASE COURSE, SALVAGED**

Included in the Estimate of Quantities are 400 tons of Base Course, Salvaged for maintaining traffic to businesses, residences, and at other locations designated by the Engineer.

**PEDESTRIAN TRAFFIC CONTROL**

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

The Contractor shall adhere to the requirements of the Americans with Disabilities Act (ADA) during construction. Tape, rope, or plastic chains strung between devices are not detectable, do not comply with the 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.

A smooth, continuous hard surface shall be provided throughout the entire length of the temporary pedestrian facility. There should be no curbs or abrupt changes in grade or terrain that could cause tripping or be a barrier to wheelchair use. 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 3' wide and no greater than a 12:1 slope. The ramp shall be sufficiently sturdy and unyielding with hand rails.

The Contractor shall adequately sign and barricade the sidewalk for pedestrian traffic. The Contractor shall not leave un-barricaded holes open either overnight or over the weekend. Safety fence shall be installed around all work areas that are adjacent to pedestrian walkways and at other locations as designated by the Engineer. All related costs to furnish, place, and maintain the plastic safety fence shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

The Contractor shall submit a detailed plan to the Engineer on how pedestrian traffic shall be accommodated during the various phases of the work at the affected locations. This plan shall be in conformance with the details mentioned above or shown on the plans. The plan shall be submitted no later than two weeks prior to the start of work. The plan may be submitted at the Preconstruction Meeting. Items to be detailed in this plan shall include the following:

1. The use of various approved traffic control devices to maintain the pedestrians through or past the immediate work area.
2. The detour of pedestrians to the opposite side of the street, alternate route(s) or around a City block.
3. Manned crossing assistance (crossing guards) combined with an accessible path.

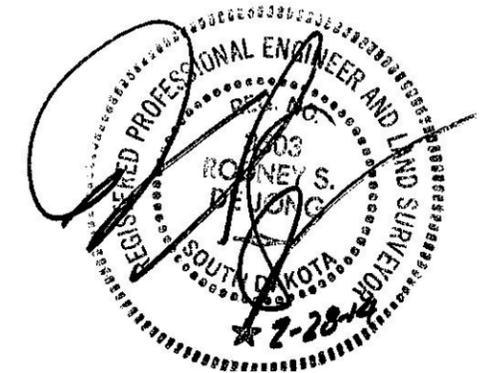
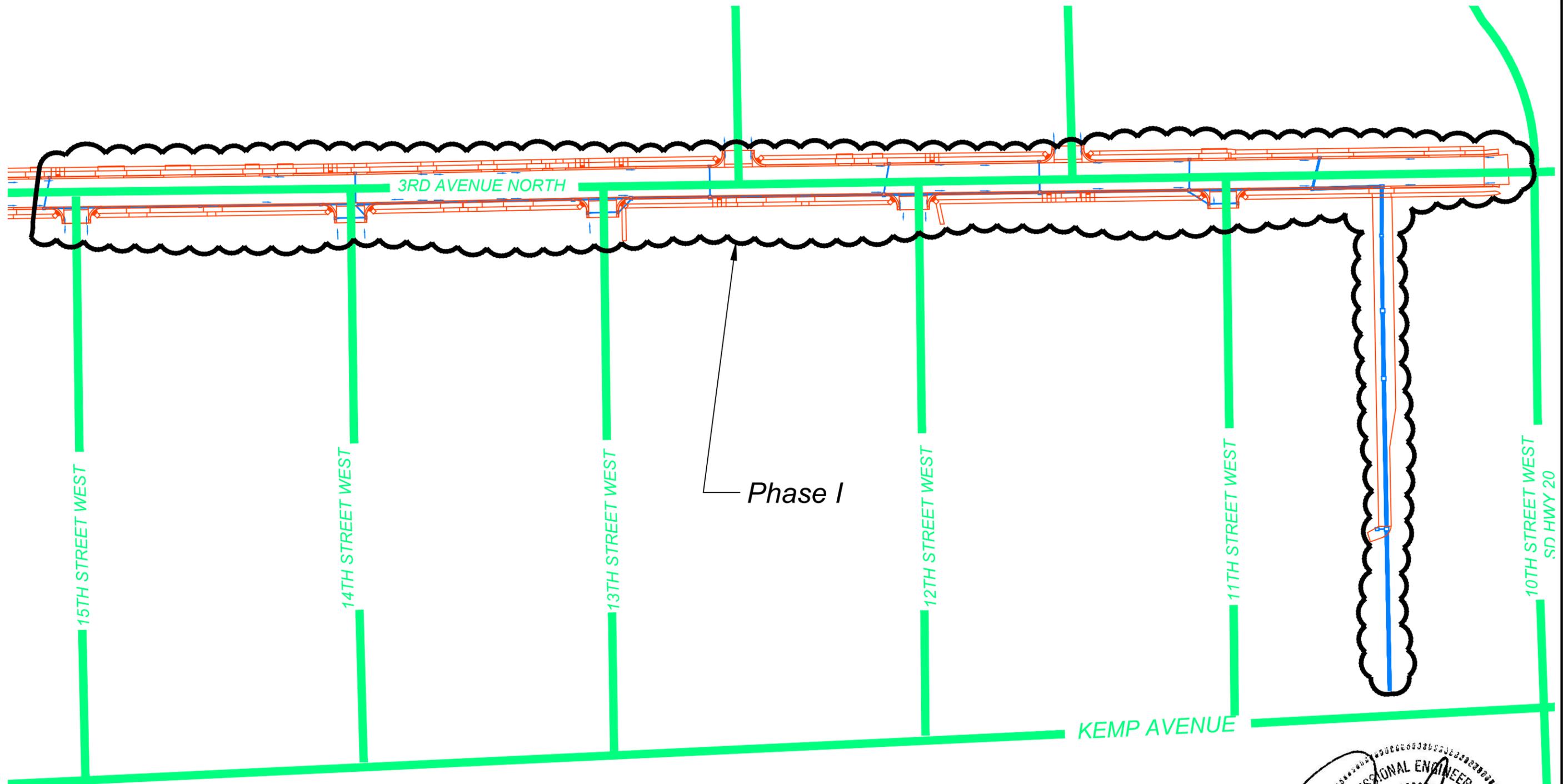
# TRAFFIC CONTROL - PHASING DIAGRAM

(Sheet 1 of 2)

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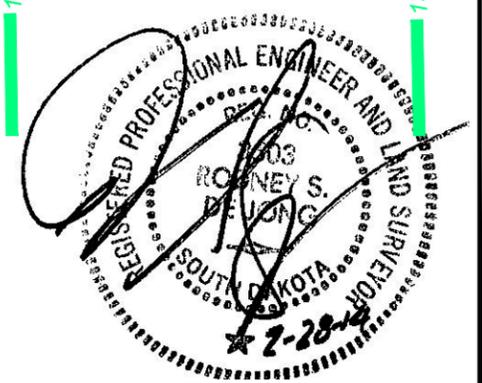
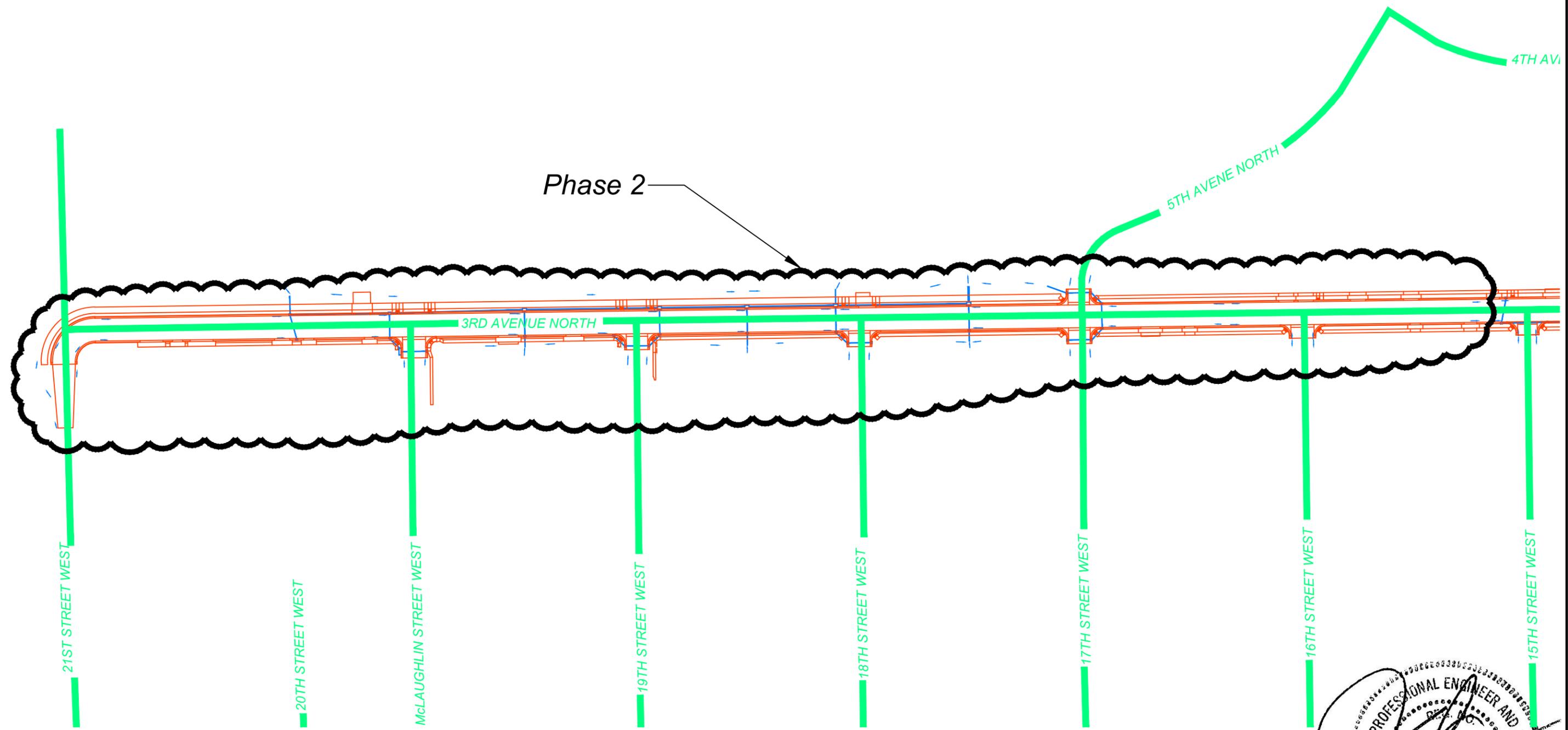
# TRAFFIC CONTROL - PHASING DIAGRAM

(Sheet 2 of 2)

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	P 4300(08)	C4	C12

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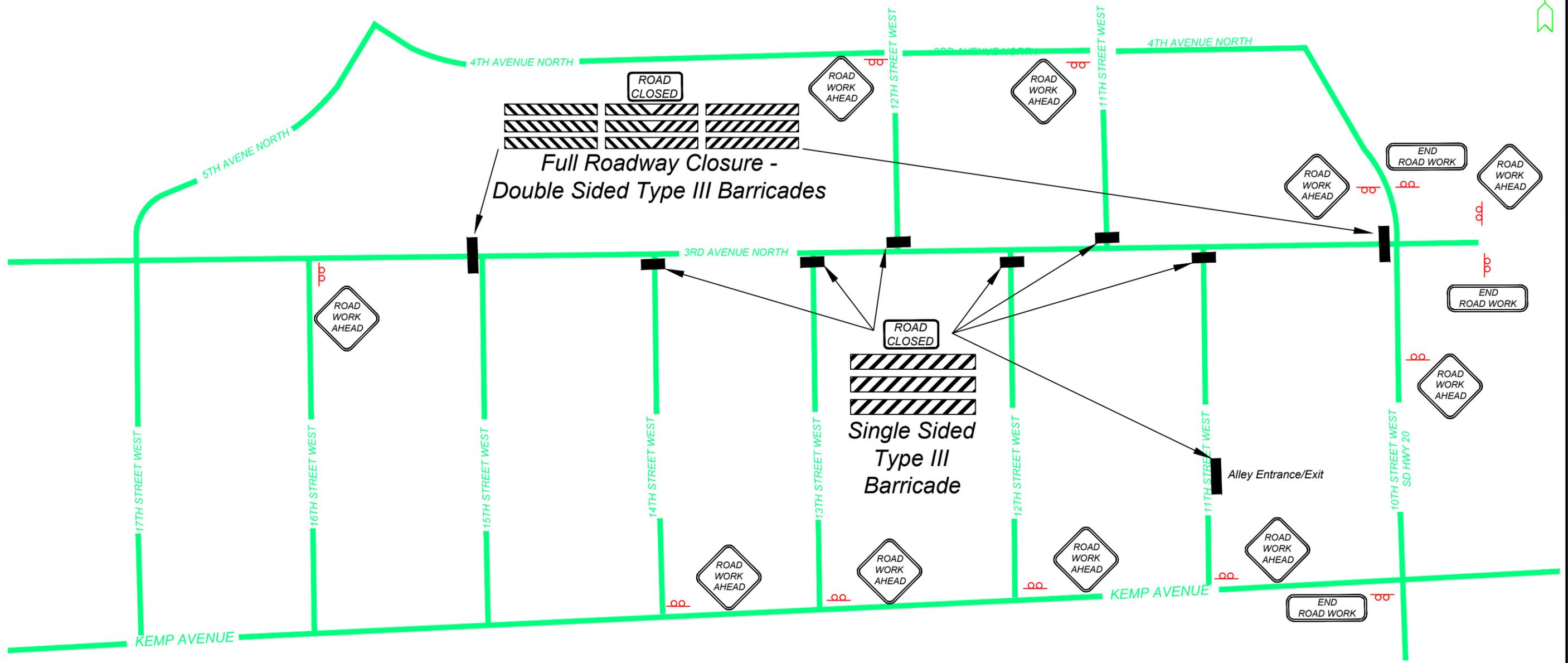


# TRAFFIC CONTROL - FIXED LOCATION SIGNING - PHASE 1

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	P 4300(08)	C5	C12

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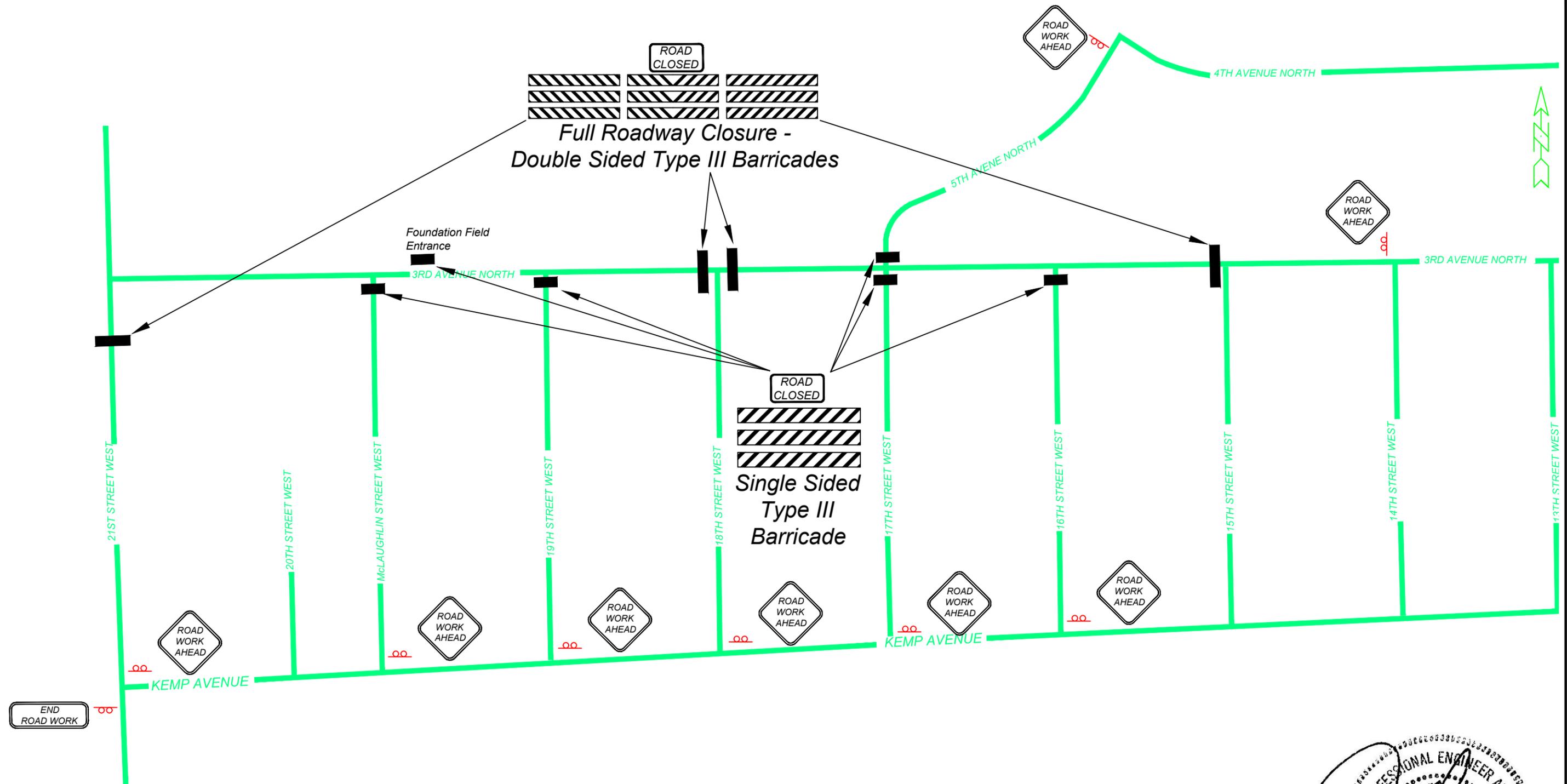


# TRAFFIC CONTROL - FIXED LOCATION SIGNING - PHASE 2

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State of SD	PROJECT	SHEET NO.	TOTAL SHEETS
	P 4300(08)	C6	C12

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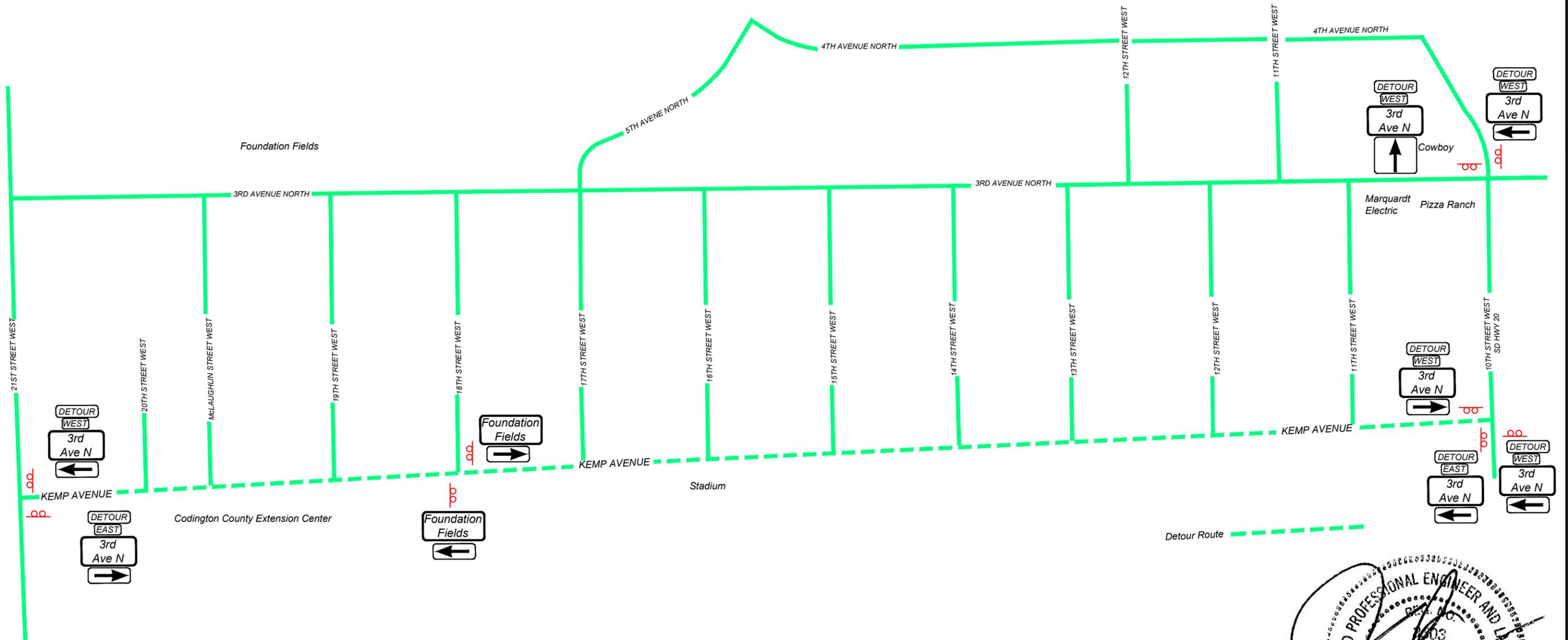


# TRAFFIC CONTROL - DETOUR

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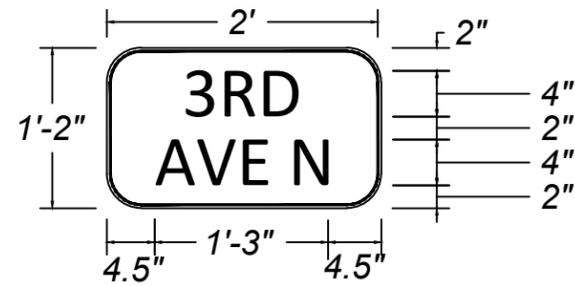
State of SD	PROJECT	SHEET NO.	TOTAL SHEETS
	P 4300(08)	C8	C12

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# DETOUR ROUTE SIGNS

7 - Signs

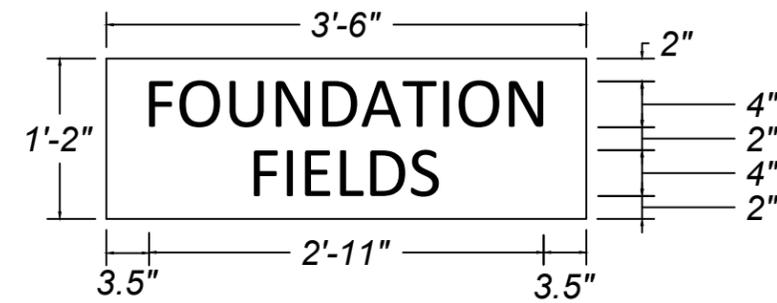
R = 3"  
Border  
TH = 1"  
IN = 0.75"



Signs to be constructed,  
Background = Orange  
Legend and Border = Black

Sign Tab

2 - Signs



Signs to be constructed,  
Background = Orange  
Legend = Black



**FIXED LOCATION SIGNING**

SIGN CODE	SIGN SIZE			DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
G20-2A	36"	x	18"	END ROAD WORK	8	17	136
M3-2	24"	x	12"	DIRECTION MARKER - EAST	2	4	8
M3-4	24"	x	12"	DIRECTION MARKER - WEST	5	4	20
M4-8	24"	x	12"	DETOUR	7	4	28
M6-1	21"	x	15"	DIRECTION ARROW - HORIZONTAL SINGLE HEAD	8	5	40
M6-3	21"	x	15"	DIRECTION ARROW - VERTICAL SINGLE HEAD	1	5	5
R1-1	48"	x	48"	STOP	2	34	68
R9-9	24"	x	12"	SIDEWALK CLOSED	2	20	40
R9-10	24"	x	12"	SIDEWALK CLOSED USE OTHER SIDE	2	20	40
R9-11	24"	x	18"	SIDEWALK CLOSED AHEAD ARROW CROSS HERE	2	20	40
R11-2	48"	x	30"	ROAD CLOSED	11	27	297
W8-1	36"	x	36"	BUMP	2	27	54
W11-2	36"	x	36"	PEDESTRIAN	4	25	100
W13-1	24"	x	24"	ADVISORY SPEED PLATE	2	16	32
W16-7P	24"	x	12"	DOWNWARD DIAGONAL ARROW (PLAGUE)	4	15	60
W20-1	48"	x	48"	ROAD WORK ##### FT. OR AHEAD	13	34	442
W20-4	48"	x	48"	ONE LANE ROAD ##### FT. OR AHEAD	1	34	34
W20-7a	48"	x	48"	FLAGGER	3	34	102
*****				TYPE III BARRICADE - 8 FT. SINGLE SIDED	7	40	280
*****				TYPE III BARRICADE - 8 FT. DOUBLE SIDED	12	56	672
<b>TOTAL UNITS</b>					<b>2498</b>		

**TEMPORARY SIGNING TABLE**

Quantity	Width	Height	Description	Color	Sq. Ft	Total Sq. Ft.
7	24"	14"	3RD AVE N	Black/Orange	2.33	16.33
2	42"	14"	FOUNDATION FIELDS	Black/Orange	4.08	8.17
<b>TOTAL</b>					<b>24.50</b>	

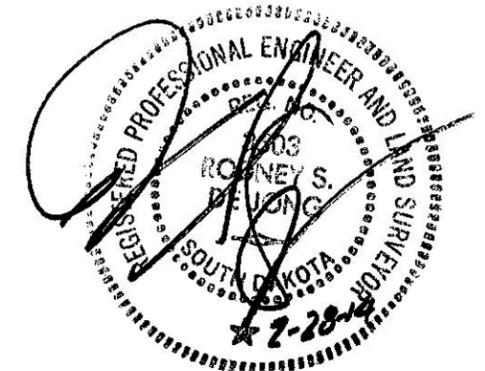
**MISCELLANEOUS TRAFFIC CONTROL DEVICES**

SIGN CODE	SIGN SIZE			DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
R9-9	24"	x	12"	SIDEWALK CLOSED	2	20	40
R9-10	24"	x	12"	SIDEWALK CLOSED USE OTHER SIDE	2	20	40
R9-11	24"	x	18"	SIDEWALK CLOSED AHEAD ARROW CROSS HERE	2	20	40
W11-2	36"	x	36"	PEDESTRIAN	4	25	100
W16-7P	24"	x	12"	DOWNWARD DIAGONAL ARROW (PLAGUE)	4	15	60
<b>TOTAL UNITS</b>					<b>280</b>		

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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.

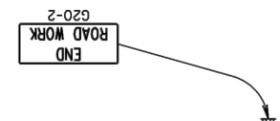
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

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.

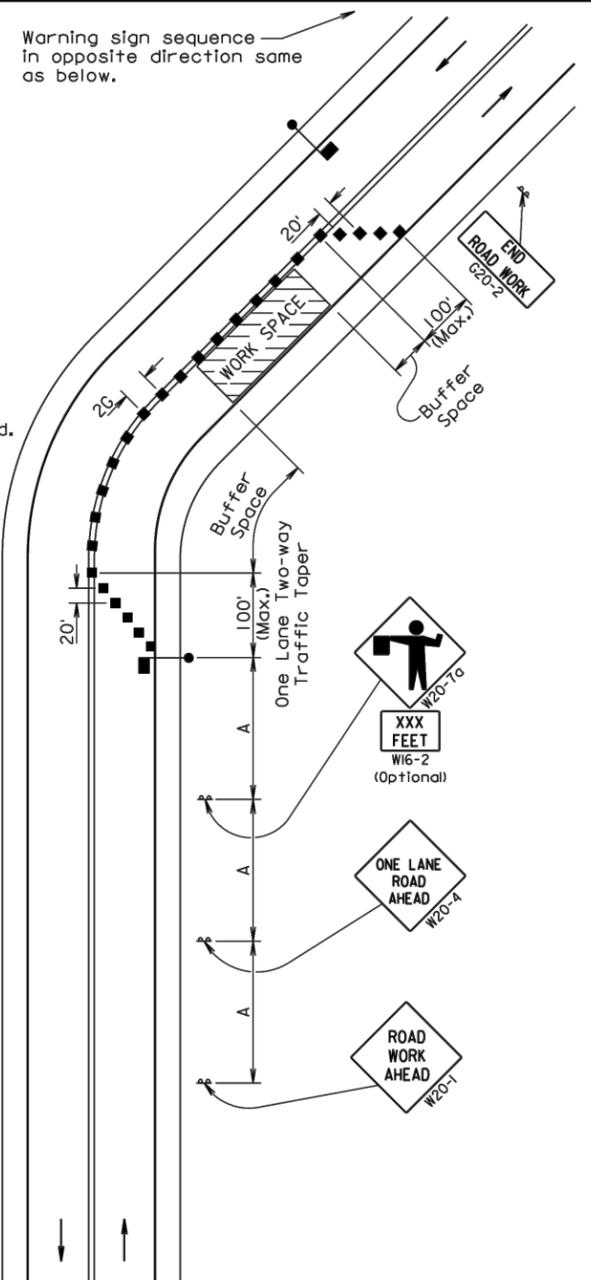
The channelizing devices shall be drums or 42" cones.

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



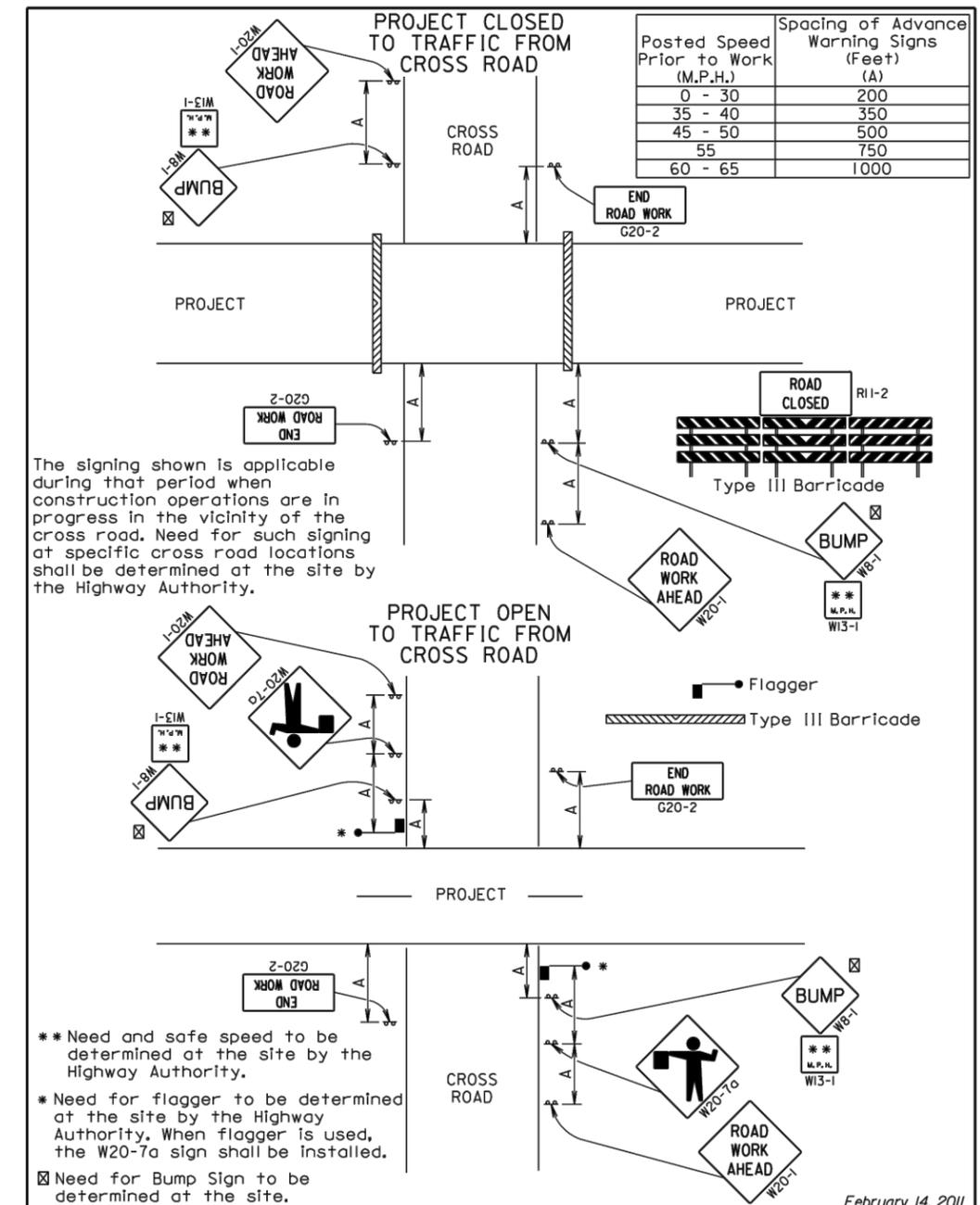
Channelizing devices and flaggers shall be used at intersecting roads to control intersecting road traffic as required.

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.



Warning sign sequence in opposite direction same as below.

February 14, 2011



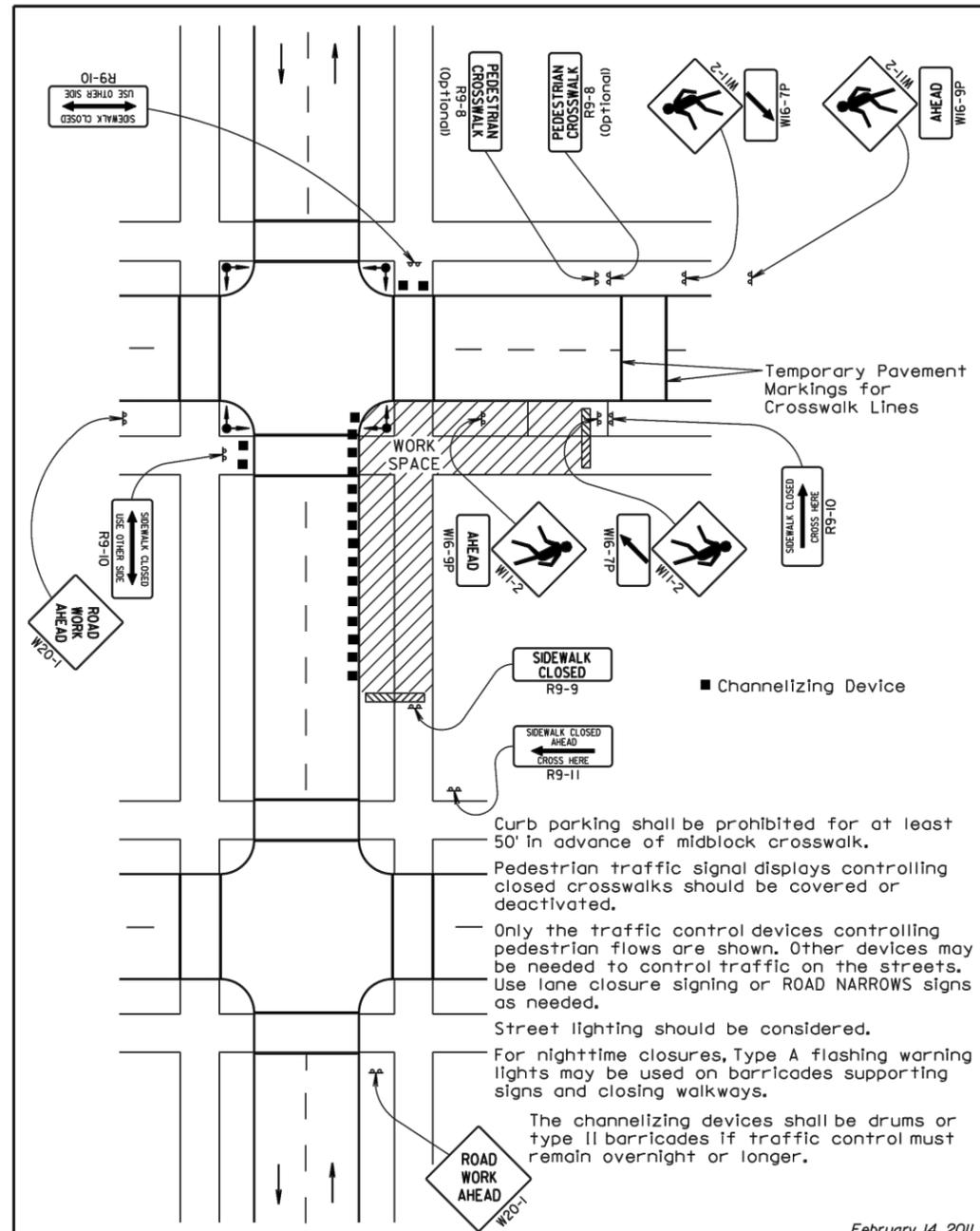
The signing shown is applicable during that period when construction operations are in progress in the vicinity of the cross road. Need for such signing at specific cross road locations shall be determined at the site by the Highway Authority.

- \*\* Need and safe speed to be determined at the site by the Highway Authority.
- \* Need for flagger to be determined at the site by the Highway Authority. When flagger is used, the W20-7a sign shall be installed.
- ☒ Need for Bump Sign to be determined at the site.

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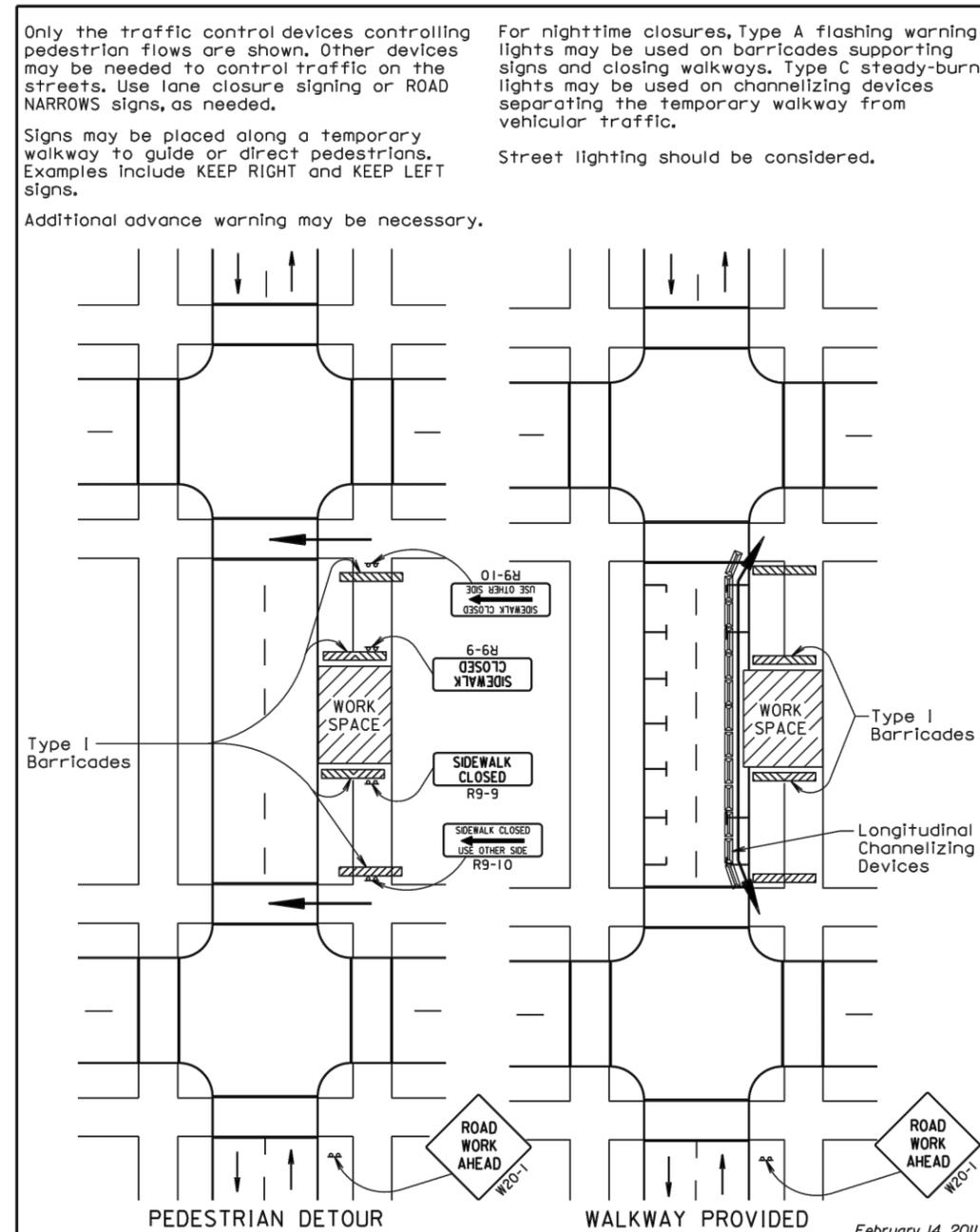
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SD  
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GUIDES FOR TRAFFIC CONTROL DEVICES  
SIDEWALK CLOSURES AND PEDESTRIAN DETOURS

PLATE NUMBER  
634.33

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 walkway 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 walkways. Type C steady-burn lights may be used on channelizing devices separating the temporary walkway from vehicular traffic.

Street lighting should be considered.

February 14, 2011

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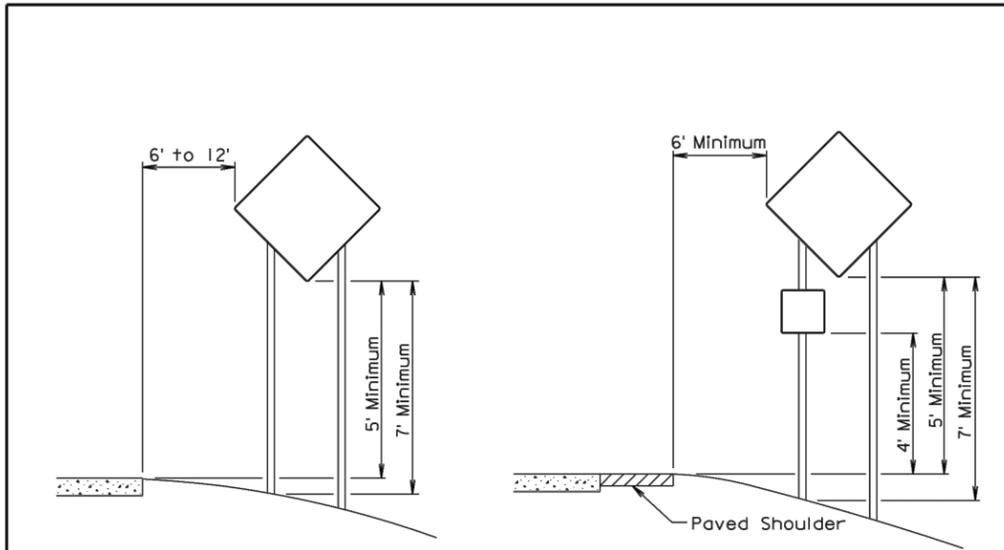
GUIDES FOR TRAFFIC CONTROL DEVICES  
SIDEWALK CLOSURES AND BYPASS WALKWAY

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634.35

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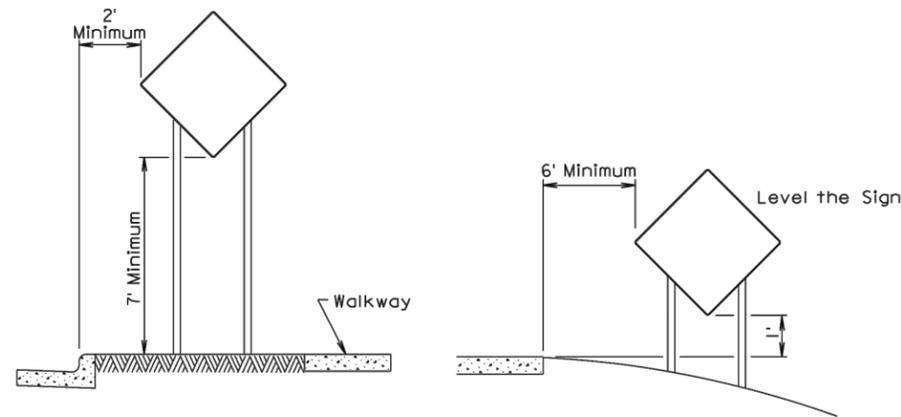
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RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

RURAL DISTRICT 3 DAY MAXIMUM

February 14, 2011

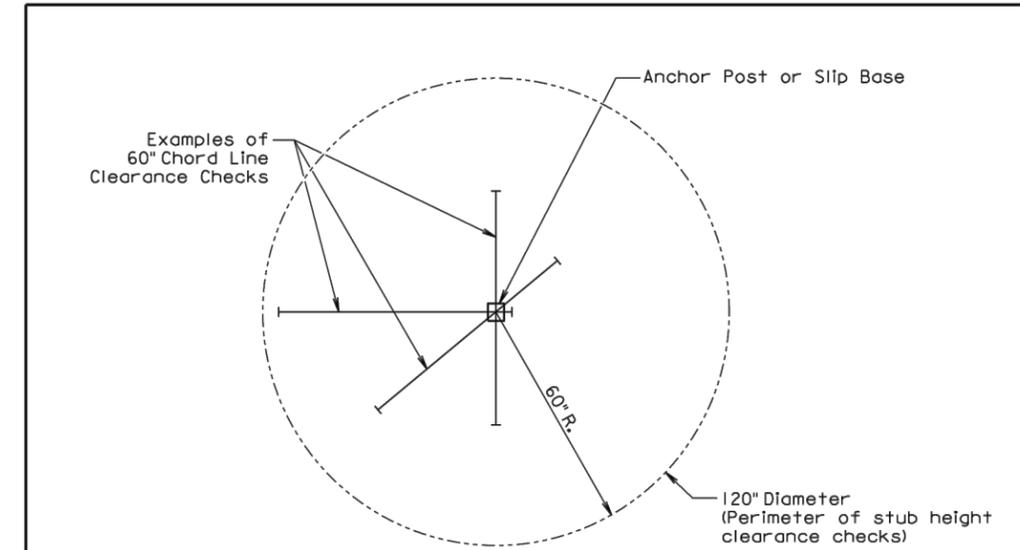
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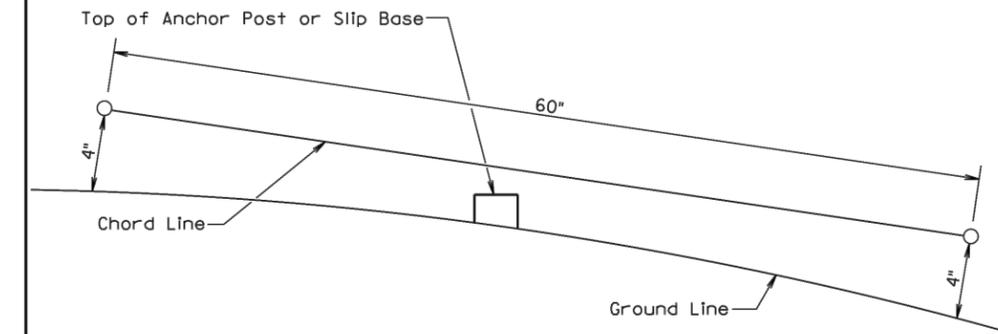
CRASHWORTHY SIGN SUPPORTS  
(Typical Construction Signing)

PLATE NUMBER  
634.85

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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

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SD  
DOT

BREAKAWAY SUPPORT STUB CLEARANCE

PLATE NUMBER  
634.99

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