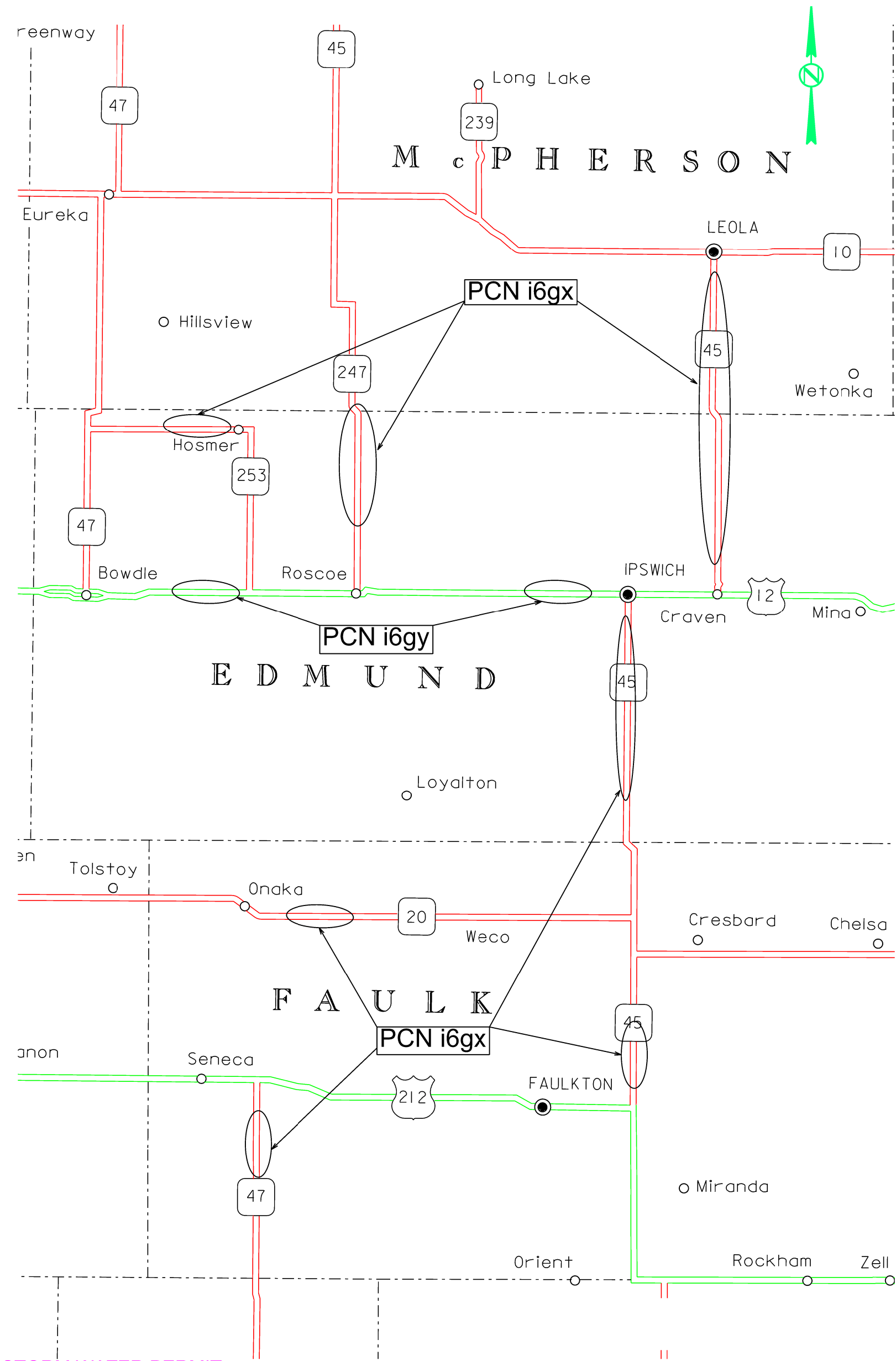


PROJECT
000N-152, 000P-152
PCN i6gx & i6gy
Remove Debris from Right of Way



STORM WATER PERMIT
(none required)

INDEX OF PLAN SHEETS

Sheet No. 1	Layout Map
Sheet No. 2	Index of Plan Sheets and Estimate of Quantities and Specifications
Sheet No. 3 and 4	Table of Quantities
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Sheet No. 10 thru 12	Standard Plates

Estimate of Quantities

Project 000P-152 PCN i6gy

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	1	LS
634E0010	Flagging	10	Hour
634E0110	Traffic Control Signs	137.0	SqFt
634E0120	Traffic Control, Miscellaneous	1	LS
730E0202	Type B Permanent Seed Mixture	73.4	Lb
900E2030	Miscellaneous Work 1	1	Site
900E2030	Miscellaneous Work 3	1	Site

Project 000N-152 PCN i6gx

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	1	LS
634E0010	Flagging	80	Hour
634E0110	Traffic Control Signs	137.0	SqFt
634E0120	Traffic Control, Miscellaneous	1	LS
730E0202	Type B Permanent Seed Mixture	849.9	Lb
900E2030	Miscellaneous Work 1	24	Site
900E2030	Miscellaneous Work 2	12	Site
900E2030	Miscellaneous Work 3	8	Site

SPECIFICATIONS

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

Approximate										Type B Permanent Seed	Misc. Work 1	Misc. Work 2	Misc. Work 3
Site	Highway	Location (MRM)	Side of the Road	Description	Width	Depth	Length	Area	Volume	Lb	Site	Site	Site
Project 000P-152 PCN i6gy													
1	hwy 12	242.70	NORTH	debris	20	3	1000	0.46	185	8.3	1		
2	hwy 12	260.10	NORTH	dirt/debris	35	3	4500	3.62	1458	65.1			1
							Totals	4.07	1643	73.4	1		1
Project 000N-152 PCN i6gx													
3	hwy 20	280.50	NORTH	dirt/debris	50	2	1350	1.55	417	27.9		1	
4	hwy 45	153.50	EAST	dirt/debris	40	3	300	0.28	111	5.0	1		
5	hwy 45	153.50	WEST	dirt/debris	50	3	800	0.92	370	16.5	1		
6	hwy 45	167.06	WEST	debris	30	2	1000	0.69	185	12.4	1		
7	hwy 45	167.56	WEST	debris	20	1.5	5000	2.30	463	41.3			1
8	hwy 45	168.93	WEST	debris	30	5	2400	1.65	1111	29.8		1	
9	hwy 45	169.57	WEST	debris	18	2.5	1500	0.62	208	11.2	1		
10	hwy 45	171.24	WEST	dirt/debris	45	6	2400	2.48	2000	44.6			1
11	hwy 45	171.60	WEST	dirt/debris	20	3	120	0.06	22	1.0	1		
12	hwy 45	171.75	WEST	dirt/debris	45	4	3900	4.03	2167	72.5			1
13	hwy 45	172.12	EAST	dirt	45	3	1070	1.11	446	19.9		1	
14	hwy 45	174.09	WEST	debris	40	3	1500	1.38	556	24.8		1	
15	hwy 45	185.70	EAST	dirt/debris	36	4	1700	1.40	756	25.3		1	
16	hwy 45	185.70	WEST	dirt/debris	42	5	2500	2.41	1620	43.4			1
17	hwy 45	186.30	WEST	dirt/debris	20	3	550	0.25	102	4.5	1		
18	hwy 45	186.67	WEST	dirt/debris	45	8	400	0.41	444	7.4	1		
19	hwy 45	186.87	WEST	dirt/debris	25	4	2200	1.26	679	22.7		1	
20	hwy 45	186.95	EAST	dirt/debris	20	2	380	0.17	47	3.1	1		
21	hwy 45	187.10	EAST	dirt/debris	25	3	860	0.49	199	8.9	1		
22	hwy 45	187.39	EAST	dirt/debris	25	2.5	550	0.32	106	5.7	1		
23	hwy 45	187.39	WEST	dirt/debris	30	5	980	0.67	454	12.1	1		
24	hwy 45	187.74	EAST	dirt/debris	35	3	400	0.32	130	5.8	1		

Approximate										Type B Permanent Seed	Misc. Work 1	Misc. Work 2	Misc. Work 3
Site	Highway	Location (MRM)	Side of the Road	Description	Width	Depth	Length	Area	Volume	Lb	Site	Site	Site
25	hwy 45	187.74	WEST	dirt/debris	40	4	2775	2.55	1370	45.9			1
26	hwy 45	187.89	EAST	dirt/debris	35	3	200	0.16	65	2.9	1		
27	hwy 45	188.33	WEST	dirt/debris	35	3	440	0.35	143	6.4	1		
28	hwy 45	188.49	WEST	dirt/debris	35	3	600	0.48	194	8.7	1		
29	hwy 45	188.82	EAST	dirt/debris	45	3	3350	3.46	1396	62.3			1
30	hwy 45	188.90	WEST	dirt/debris	35	4	3400	2.73	1469	49.2			1
31	hwy 45	189.72	WEST	dirt/debris	30	4	1500	1.03	556	18.6		1	
32	hwy 45	187.72	EAST	dirt/debris	45	2.5	400	0.41	139	7.4	1		
33	hwy 45	189.86	EAST	dirt/debris	35	2.5	400	0.32	108	5.8	1		
34	hwy 45	190.00	EAST	dirt/debris	20	2	550	0.25	68	4.5	1		
35	hwy 45	190.00	WEST	dirt/debris	30	4	2900	2.00	1074	36.0			1
36	hwy 45	197.87	WEST	debris	35	3	2100	1.69	681	30.4		1	
37	hwy 45	198.41	WEST	dirt	20	2	180	0.08	22	1.5	1		
38	hwy 45	198.55	WEST	dirt/debris	10	2	250	0.06	15	1.0	1		
39	hwy 45	198.68	WEST	dirt/debris	10	2	300	0.07	19	1.2	1		
40	hwy 47	172.50	EAST	dirt/debris	40	3	1500	1.38	556	24.8		1	
41	hwy 47	172.50	WEST	dirt/debris	40	3	1500	1.38	556	24.8		1	
42	hwy 247	174.20	WEST	dirt	20	2	700	0.32	86	5.8	1		
43	hwy 247	175.65	WEST	debris	35	2.5	1900	1.53	513	27.5		1	
44	hwy 247	177.21	WEST	debris	20	2	400	0.18	49	3.3	1		
45	hwy 247	177.55	WEST	debris	20	2.5	375	0.17	58	3.1	1		
46	hwy 253	182.20	NORTH	dirt/debris	40	2	2000	1.84	494	33.1		1	
Totals									22223	849.9	24	12	8

ENVIRONMENTAL COMMITMENTS

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

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at:

<<https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf>>

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

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

COMMITMENT H: WASTE DISPOSAL SITE

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

Action Taken/Required:

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

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

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

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

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

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

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

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

Action Taken/Required:

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

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

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

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

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 100 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

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

GENERAL NOTES

The Contractor will remove the corn stalks and topsoil that blew into the Right of Way at the locations specified in the tables provided. Care will be taken to minimize the disturbance to the existing sod and maintain the shape of the ditch. The corn stalks and topsoil will become property of the Contractor for disposal. Burning the corn stalks in the Right of Way will not be permitted. It is recommended that the Contractor inspect each site prior to bidding. The sites are categorized by size as Miscellaneous Work 1 through 3.

TRAFFIC CONTROL

The work will be completed using Standard Plates 634.01, 634.03 or 634.23. Work activities during non-daylight hours are subject to prior approval.

Any damage to the vegetation, surfacing, embankment, delineators and existing signs beyond work limits will be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer.

Flaggers will be present when work activities or equipment present a hazard to workers and/or traffic.

The bottom of signs on portable or temporary supports will 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 if the duration is less than 3 days. If the duration is more than 3 days the signs will be on fixed location, ground mounted, breakaway supports.

Traffic Control will be set up for each site individually.

Work zones will not exceed 2 miles in length.

All construction operations will be conducted in the general direction of traffic movement.

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

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
W21-5	SHOULDER WORK	2	48" x 48"	16.0	32.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			
		137.0			

PERMANENT SEEDING

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

Application of fertilizer will not be required on this project.

Type B Permanent Seed Mixture will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana, Walsh	7
Switchgrass	Dacotah, Forestburg, Nebraska 28, Pathfinder, Summer, Sunburst, Trailblazer	3
Indiangrass	Holt, Tomahawk, Chief, Nebraska 54	3
Big Bluestem	Bison, Bonilla, Champ, Sunnyview, Rountree, Bonanza	3
Canada Wildrye	Mandan	2
Total:		18

MYCORRHIZAL INOCULUM

Mycorrhizal inoculum will 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 will provide certification of the fungal species claimed and the live propagule count. The inoculum will include the following fungal species:

- 25% *Glomus intraradices*
- 25% *Glomus aggregatum or deserticola*
- 25% *Glomus mosseae*
- 25% *Glomus etunicatum*

All seed will be inoculated by the seed supplier with a minimum of 100,000 live propagules of mycorrhizal fungi per acre. All costs of inoculating the seed will be incidental to the contract unit price per pound for the corresponding permanent seed mixture.

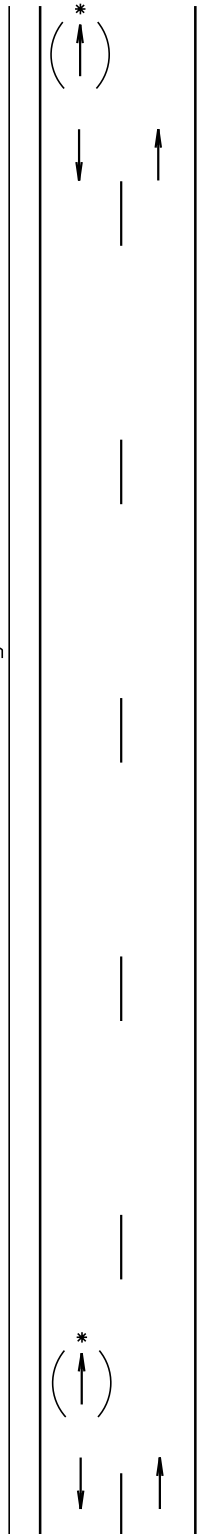
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

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.

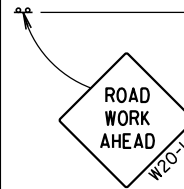
For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



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



A



April 15, 2015

Published Date: 1st Qtr. 2021

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GUIDES FOR TRAFFIC CONTROL DEVICES WORK BEYOND THE SHOULDER

PLATE NUMBER
634.01

Sheet 1 Of 1

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

■ Channelizing Device

END ROAD WORK
G20-2

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

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

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

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

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

WORK SPACE

June 3, 2016

Published Date: 1st Qtr. 2021

SDOT
GUIDES FOR TRAFFIC CONTROL DEVICES
WORK ON SHOULDERS

PLATE NUMBER
634.03
 Sheet 1 of 1

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

- Flagger
- Channelizing Device

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

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

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) 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.

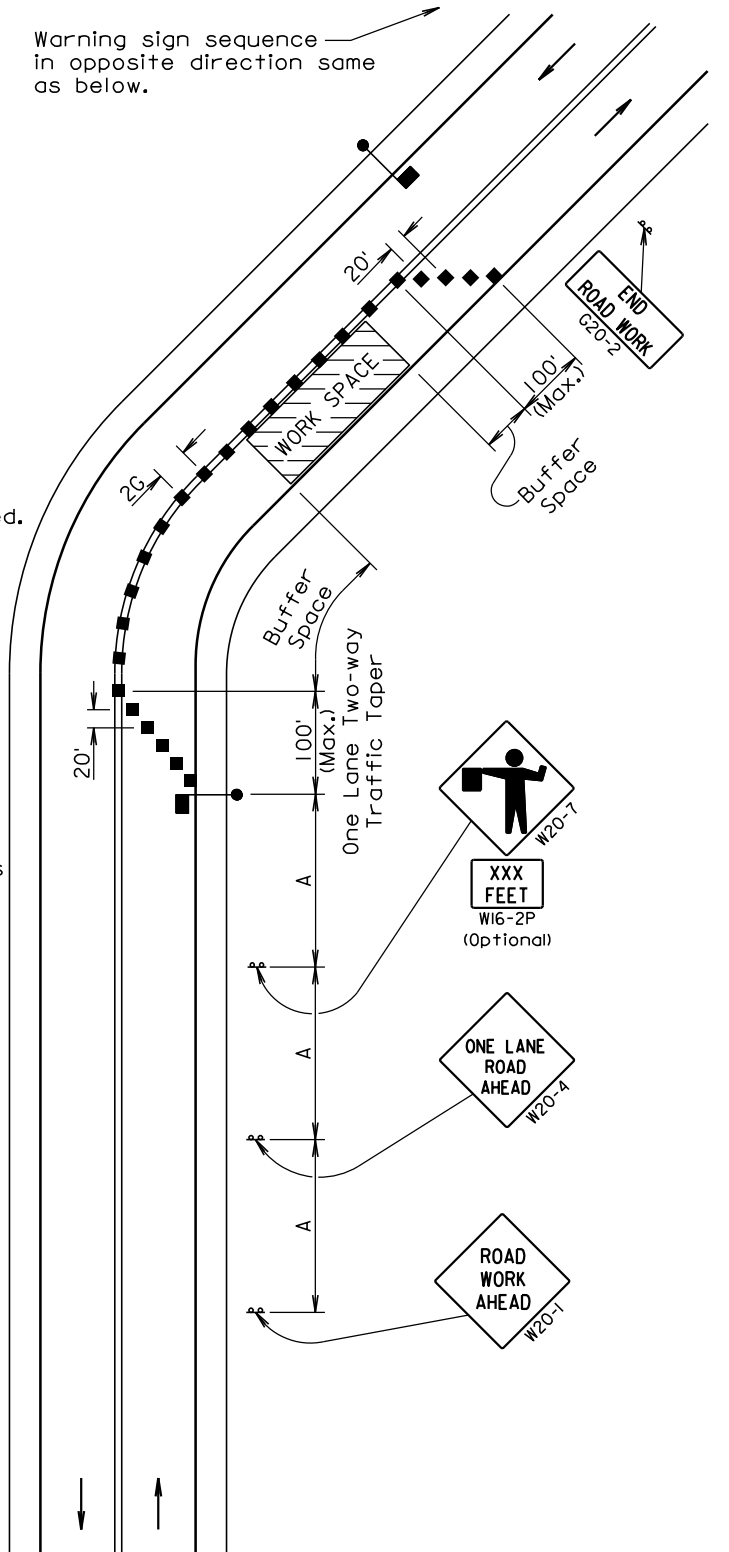
END ROAD WORK
G20-2

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.



June 3, 2016

Published Date: 1st Qtr. 2021

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**GUIDES FOR TRAFFIC CONTROL DEVICES
LANE CLOSURE WITH FLAGGER PROVIDED**

PLATE NUMBER
634.23

Sheet 1 of 1