

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-451	1	7

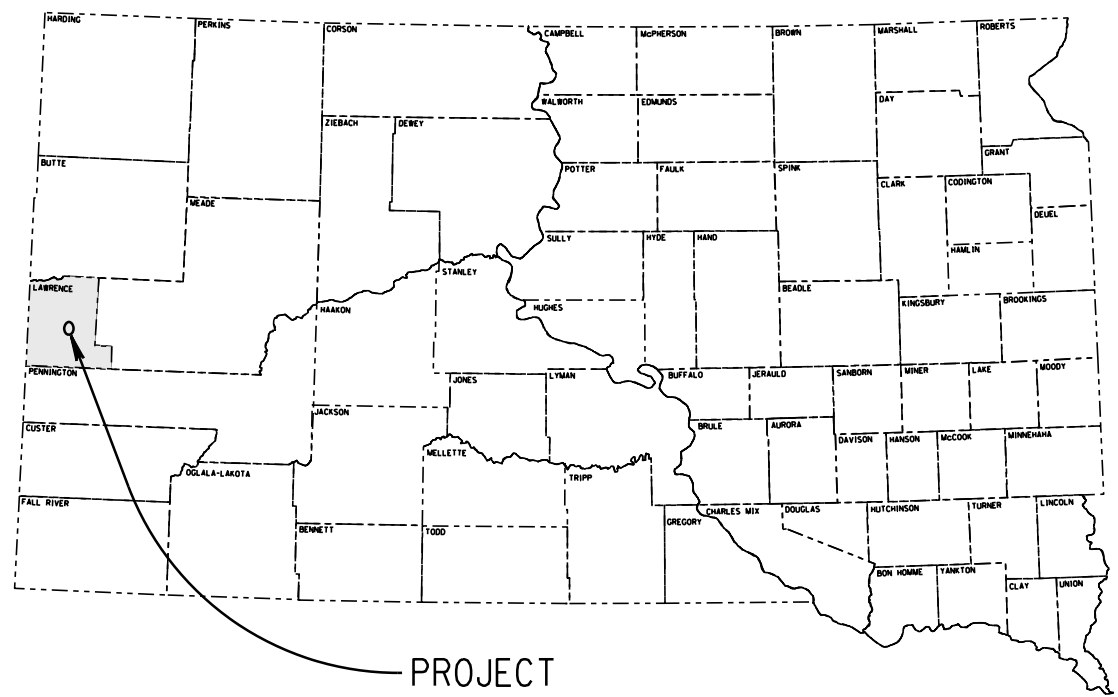
Plotting Date: 08/12/2016

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
PROJECT 000N-451
US HIGHWAY 85 & US14A
LAWRENCE COUNTY

INDEX OF SHEETS

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Plot Scale - 1:200



TREE CLEARING
 PCN i3ah

R 3 E

DESIGN DESIGNATION (US 14A)

ADT (2015)	5980
ADT (2035)	8092
DHV	1279
D	51%
T DHV	3.2%
T ADT	7.1%
V	45 MPH

DESIGN DESIGNATION (US 85)

ADT (2015)	3040
ADT (2035)	4113
DHV	650
D	51%
T DHV	2.5%
T ADT	5.5%
V	35 MPH

STORM WATER PERMIT

None Required

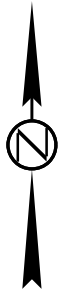
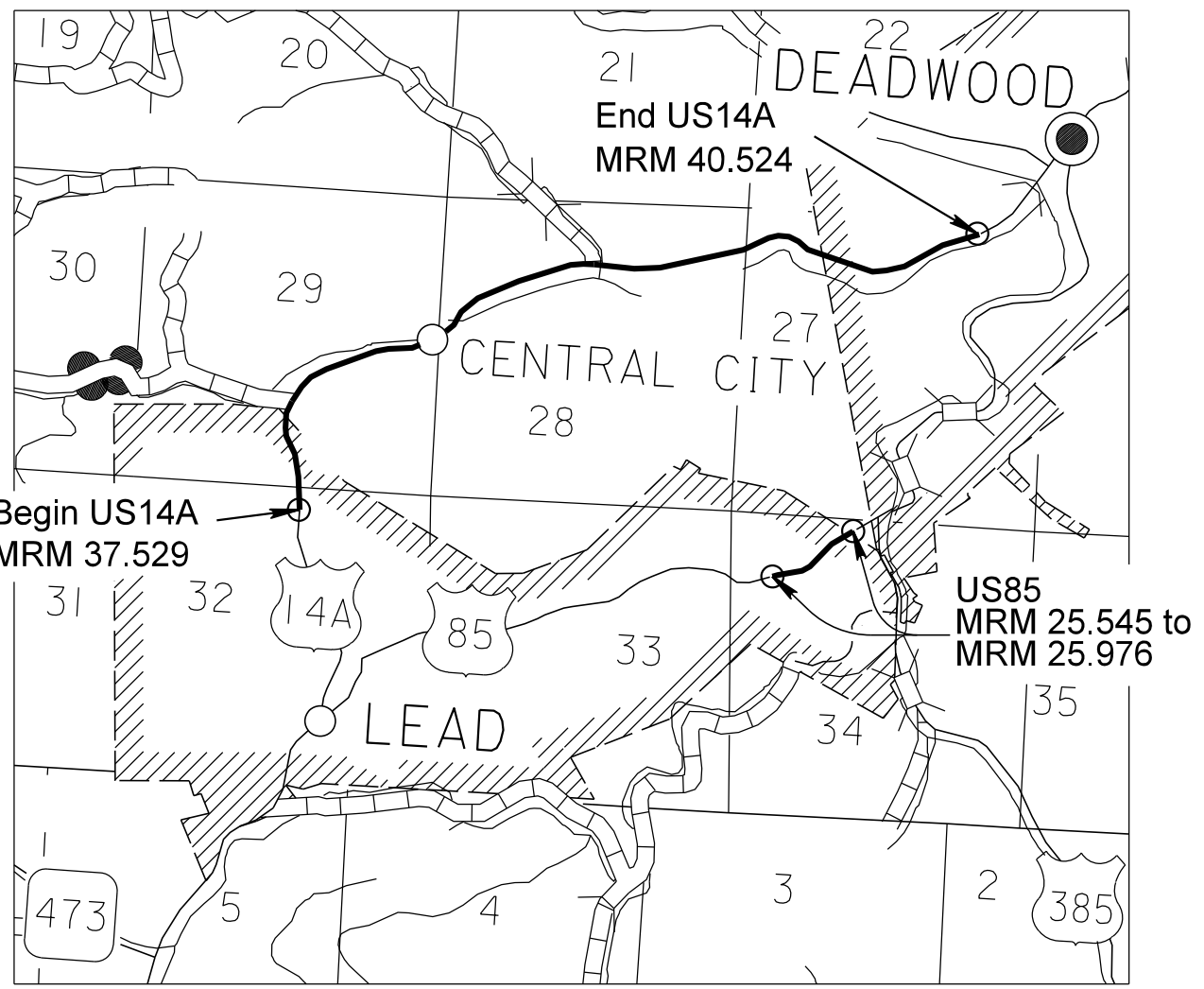
SCALE

SUBURBAN

PLAN	1"=100'
PROFILE,	{ HORIZONTAL: 1"=100'
	{ VERTICAL: 1"=20'
CROSS SECTIONS	{ HORIZONTAL: 1"=20'
	{ VERTICAL: 1"=10'

T 5 N

T 4 N



Plotted From: trcs11951

PLOT NAME: ..\33ant\cadd\legare\title\leganup\TITLE.DGN

Estimate of Quantities

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
100E0020	Clear and Grub Tree	151	Each
634E0010	Flagging	400.0	Hour
634E0100	Traffic Control	214	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Panel	1	Each

SPECIFICATIONS

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

ENVIRONMENTAL COMMITMENTS

An Environmental Commitment is a measure that SDDOT commits to implement in order to avoid, minimize, and/or mitigate a real or potential environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency mentioned below with permitting authority can influence a project if perceived environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. The environmental commitments associated with this project are as follows:

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pit, or staging site associated with the project, cease construction activities in the affected area until the Whooping Crane departs and contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT 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 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.

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

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

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

COMMITMENT R: FIRE PREVENTION IN THE BLACK HILLS AREA

This project is located within the confines of the Black Hills Forest Fire Protection Boundary.

Action Taken/Required:

The Contractor shall adhere to the "Special Provision for Fire Plan".

WORK DESCRIPTION

Work on this project will consist of the following:

- Clearing and disposal of hazard or dead trees, within designated areas along US Hwy 85 and 14A.

CLEARING

Note: The Contractor is highly encouraged to visit the project locations prior to bidding.

Before clearing activities begin, the Contractor shall contact the Engineer to determine the limits of clearing for the project.

Extra care shall be taken not to damage other nearby trees during the clearing process.

The Contractor is responsible for keeping the roadway clear of debris. No separate payment will be made for this work.

The Contractor shall restore and grade areas disturbed by clearing activities including ruts. No separate payment will be made for this work.

Trees shall be cut to a maximum height of 3" above the ground.

All costs for clearing, disposal, and other work as described in this section, "CLEARING", shall be incidental to the contract unit price per each for "Clear and Grub Tree".

1. Trees are to be dead, dying or leaning over the roadway (hazard trees).
2. Trees are to become property of the contractor.
3. Tree disposal by hauling off site.
4. Chips shall be spread to a depth no greater than 3"

TABLE OF QUANTITIES FOR TREE CLEARING (US14A)

Hwy.	MRM		Clear and Grub Tree (EACH)	Comments
US14A	37.529	L	2	
US14A	37.557	L	1	Remove 1 Cottonwood
US14A	37.576	L	6	Remove 1 Cottonwood
US14A	37.588	L	1	
US14A	37.590	R	1	On the Ground
US14A	37.629	L	1	Cottonwood Near Creek
US14A	37.643	R	1	On the Ground
US14A	37.648	L	3	1-Cottonwood Leaning Over the Road
US14A	37.689	L	4	
US14A	37.700	R	1	
US14A	37.717	L	1	
US14A	37.727	L	4	
US14A	37.756	L	2	
US14A	37.763	R	2	
US14A	37.766	L	2	
US14A	37.775	L	4	
US14A	37.81	L	1	
US14A	37.972	R	1	
US14A	37.988	L	1	Distressed Pine Tree
US14A	38.003	L	2	
US14A	38.010	L	2	
US14A	38.067	L	3	3-Cottonwoods Leaning Over the Road
US14A	38.088	L	4	Distressed Pine Tree
US14A	38.108	L	1	Distressed Pine Tree
US14A	38.116	L	1	Distressed Deciduous Tree
US14A	38.186	L	1	
US14A	38.209	R	1	
US14A	38.218	L	1	
US14A	38.226	R	1	
US14A	38.237	R	2	
US14A	38.254	R	2	
US14A	38.293	R	1	
US14A	38.324	L	4	
US14A	38.326	R	2	
US14A	38.339	R	1	
US14A	38.344	R	2	
US14A	38.351	L	2	
US14A	38.358	R	4	
US14A	38.392	L	6	
US14A	38.472	R	4	
US14A	38.645	R	1	
US14A	38.708	R	1	
US14A	38.736	R	1	
US14A	38.739	R	1	
US14A	38.816	L	1	
US14A	39.255	L	1	
US14A	39.283	R	1	
US14A	39.313	R	1	
US14A	39.457	R	3	On the Ground
US14A	39.475	R	1	
US14A	39.570	L	1	

US14A	39.602	L	1	On the Ground
US14A	39.957	R	1	
US14A	40.135	R	3	
US14A	40.151	R	2	
US14A	40.358	R	2	
US14A	40.366	R	2	
US14A	40.372	R	1	
US14A	40.428	L	1	
US14A	40.480	L	2	
US14A	40.489	L	1	
US14A	40.502	R	1	
US14A	40.524	L	4	
			Total	120

TABLE OF QUANTITIES FOR TREE CLEARING (US85)

Hwy.	MRM		Clear and Grub Tree (EACH)	Comments
US85	25.545	R	1	
US85	25.555	R	1	Distressed Pine Tree
US85	25.593	R	2	
US85	25.593	L	2	On the Ground
US85	25.615	R	3	
US85	25.625	R	1	
US85	25.657	R	1	
US85	25.666	L	2	
US85	25.672	R	2	Leaning Towards the Road
US85	25.686	R	1	
US85	25.718	R	2	
US85	25.737	R	1	On the Ground
US85	25.778	L	2	On the Ground
US85	25.788	L	4	Cottonwoods
US85	25.847	L	4	On the Ground
US85	25.866	R	1	Mostly Dead Deciduous
US85	25.976	R	1	
			Total	31
Total Trees US85 & US14A			151	

TRAFFIC CONTROL – GENERAL NOTES

Unless otherwise stated in these plans, no work will be allowed during hours of darkness.

Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage of the vegetation, surfacing, embankment, delineators, and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer.

Existing guide, route, informational logo, regulatory, warning signs and delineation shall be temporarily reset and maintained during construction as directed by the Engineer. Removing, relocating, salvaging and resetting of the above items shall be the responsibility of the Contractor.

Non-applicable traffic control devices shall be completely covered or removed during periods of inactivity. Periods of inactivity shall be defined as no work taking place for a period of more than 2 calendar days.

Construction signing mounted on portable supports shall not be used for a duration of more than 3 days, unless approved by the Engineer. Construction signing that remains in the same location for more than 3 days shall be mounted on fixed location, ground mounted, breakaway supports.

All regulatory signs shall have a minimum mounting height of 5' in rural locations, even when mounted on portable supports.

Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

All materials and equipment shall be stored a minimum distance of 30' from the traveled way during nonworking hours.

The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.

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

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

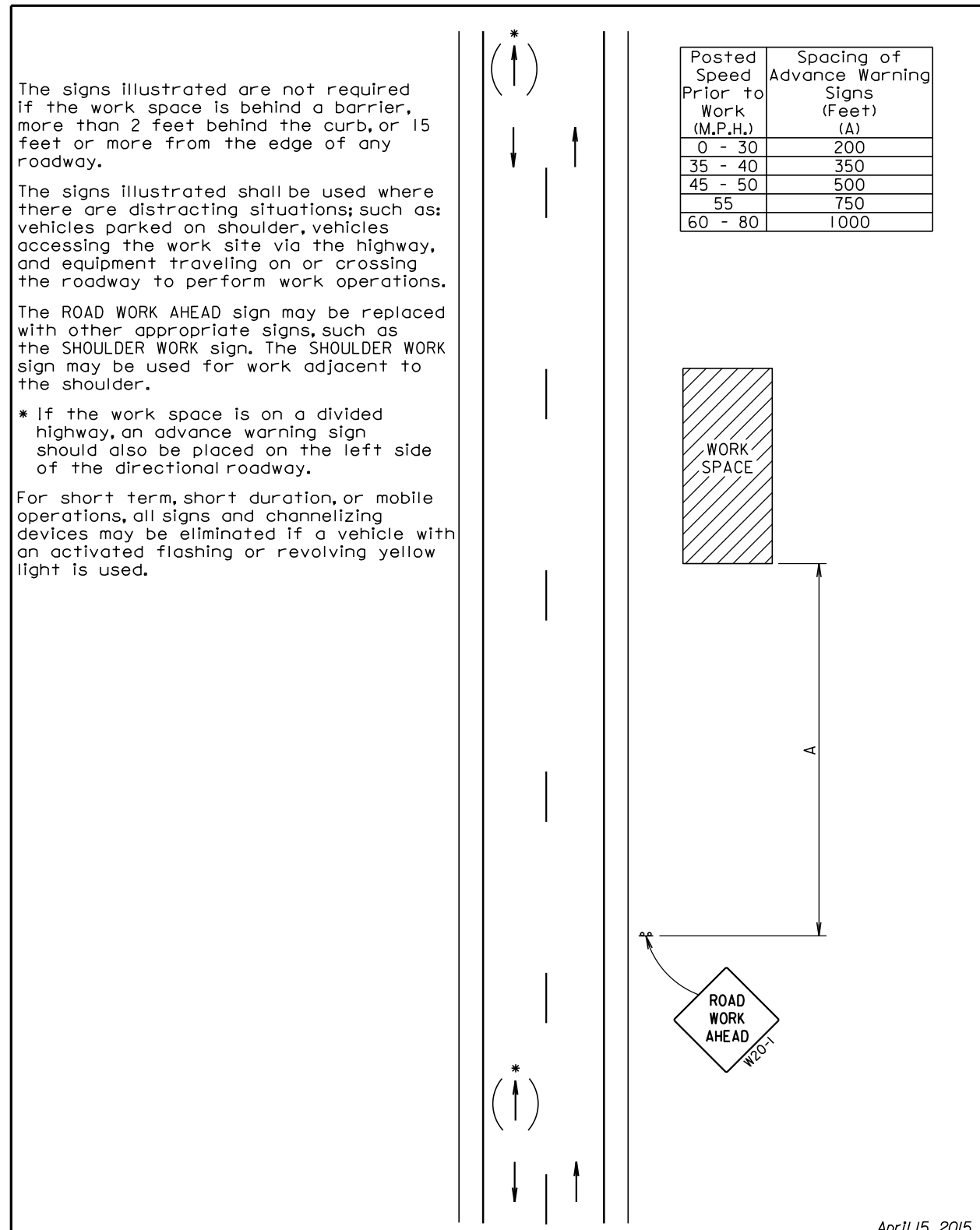
If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD – whichever is more stringent shall be used, as determined by the Engineer.

Temporary Flexible Vertical Markers (Tabs) shall be used for lane closure tapers or lane shift tapers and shall be installed at 5' spacing. Tabs used for tapers and shifts will not be measured for payment. All costs associated to furnish, install, maintain (including replacement as required by the Engineer at no added cost to the Department), and remove all markers will be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

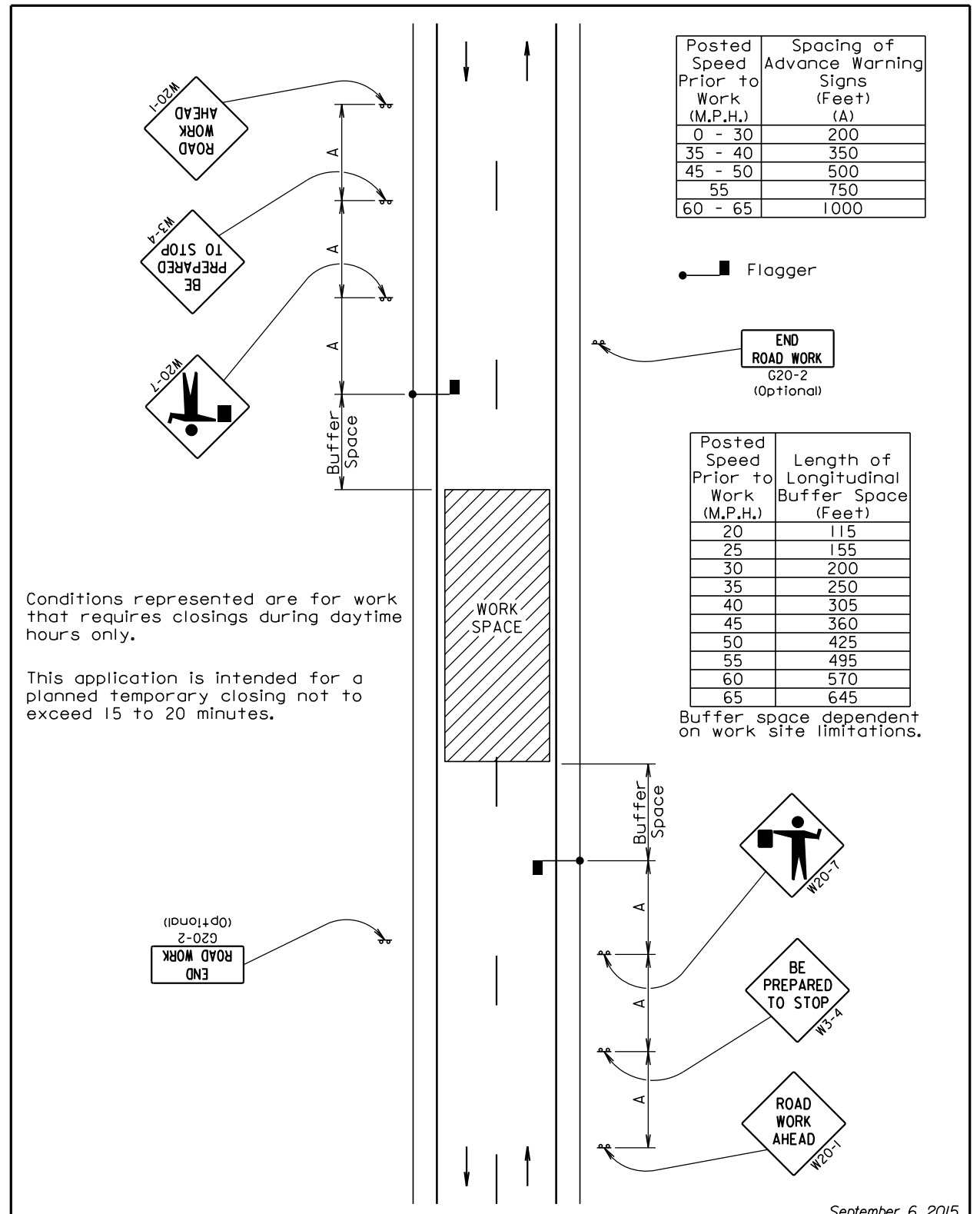
Certified flaggers with appropriate advance warning signs for both directions of travel will be required for any work that occupies the traveled lanes. The road shall be kept open to traffic with not more than 5 minutes delay time. The 15-20 minute closure shown on Standard Plate Number 634.30 shall be changed to not exceed **5 minutes**.

TABLE OF TRAFFIC CONTROL SIGNS

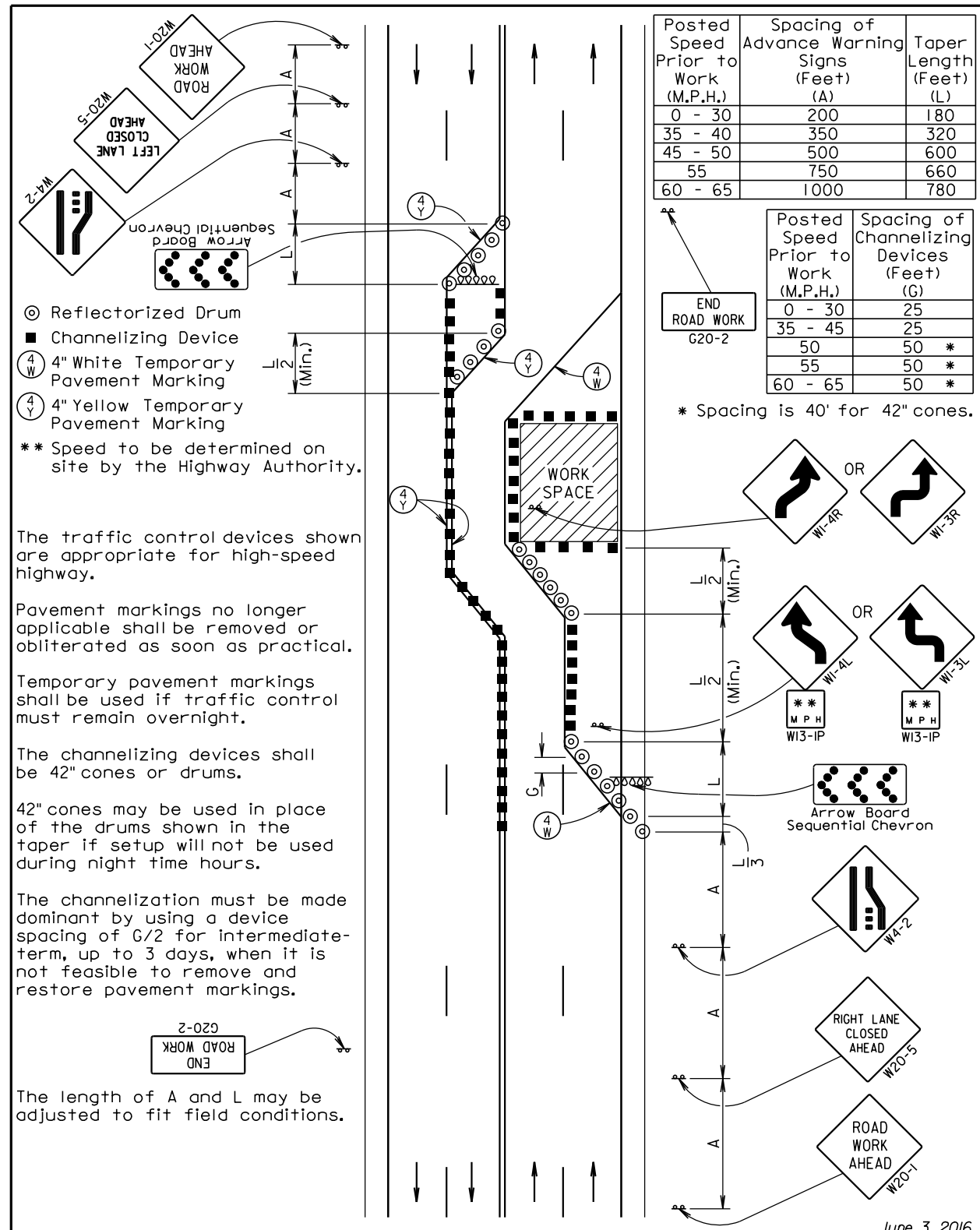
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W1-4	REVERSE CURVE (L or R)	2	48" x 48"	16.0	32.0
W3-4	BE PREPARED TO STOP	2	48" x 48"	16.0	32.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W13-1P	ADVISORY SPEED (plaque)	2	30" x 30"	6.3	12.6
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	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	213.6



April 15, 2015



September 6, 2015



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
55	750	660
60 - 65	1000	780

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	25
35 - 45	25
50	50 *
55	50 *
60 - 65	50 *

* Spacing is 40' for 42" cones.

- ⊙ Reflectorized Drum
 - Channelizing Device
 - ④ 4" White Temporary Pavement Marking
 - ④ 4" Yellow Temporary Pavement Marking
- ** Speed to be determined on site by the Highway Authority.

The traffic control devices shown are appropriate for high-speed highway.

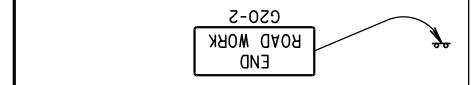
Pavement markings no longer applicable shall be removed or obliterated as soon as practical.

Temporary pavement markings shall be used if traffic control must remain overnight.

The channelizing devices shall be 42" cones or drums.

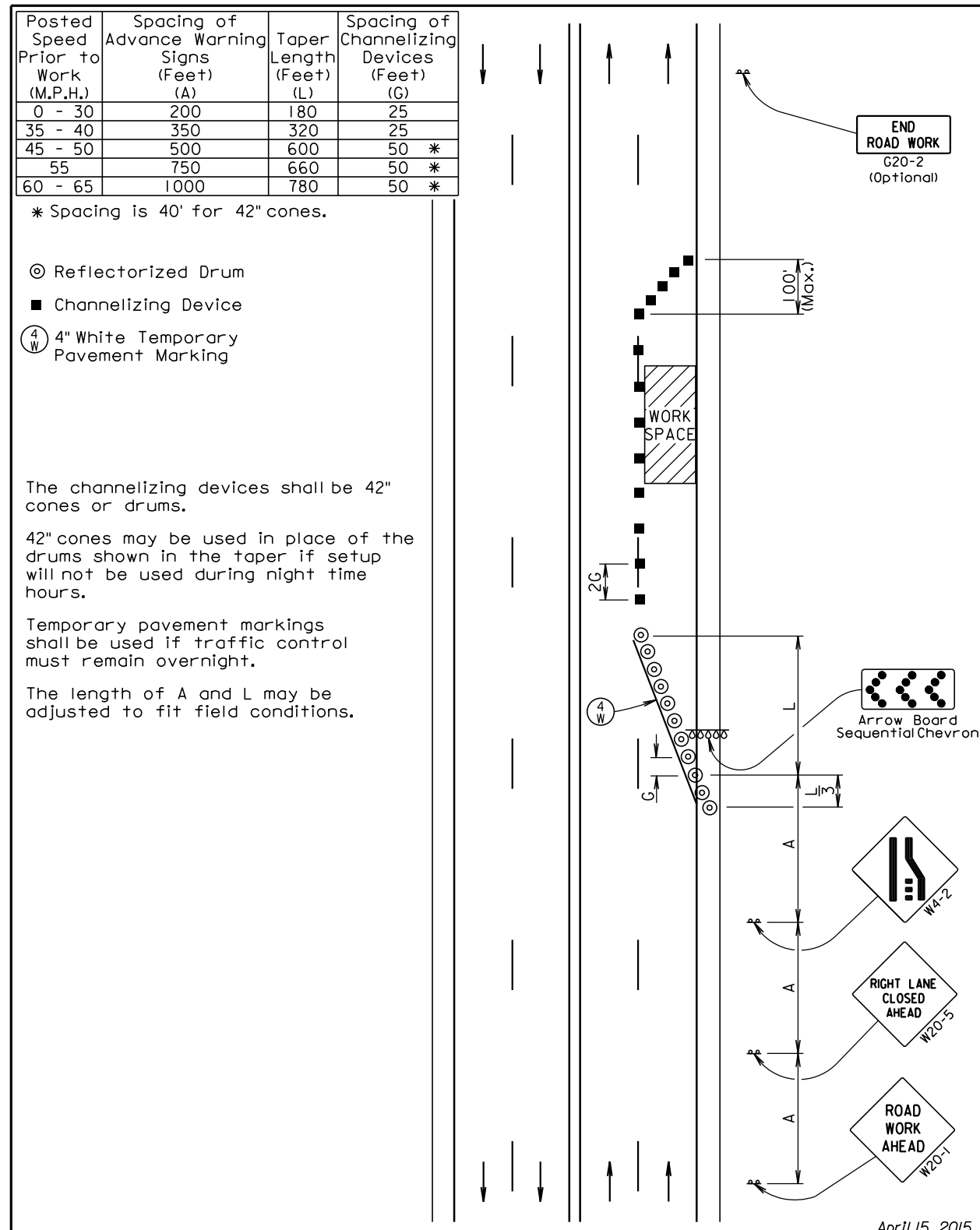
42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

The channelization must be made dominant by using a device spacing of G/2 for intermediate-term, up to 3 days, when it is not feasible to remove and restore pavement markings.



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

June 3, 2016



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 - 50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *

* Spacing is 40' for 42" cones.

- ⊙ Reflectorized Drum
- Channelizing Device
- ④ 4" White Temporary Pavement Marking

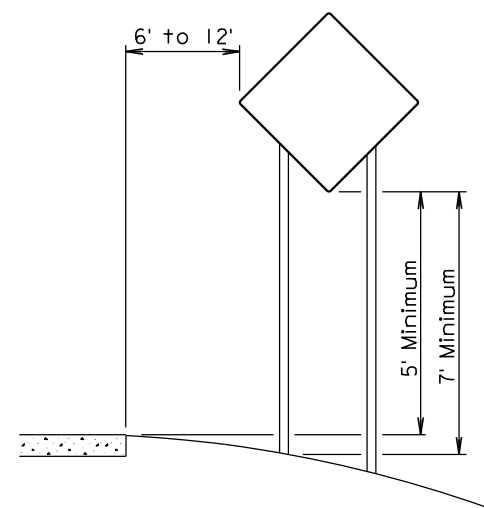
The channelizing devices shall be 42" cones or drums.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

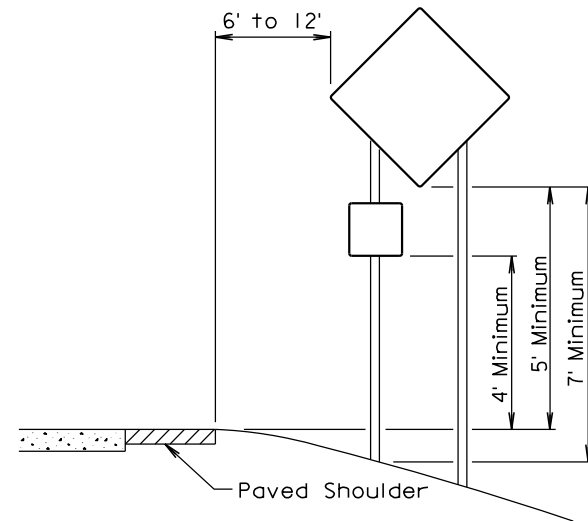
Temporary pavement markings shall be used if traffic control must remain overnight.

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

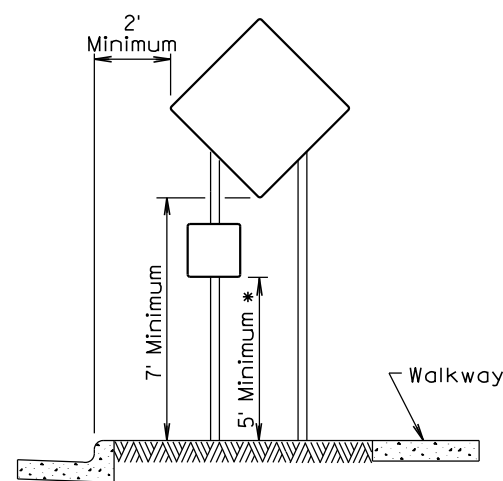
April 15, 2015



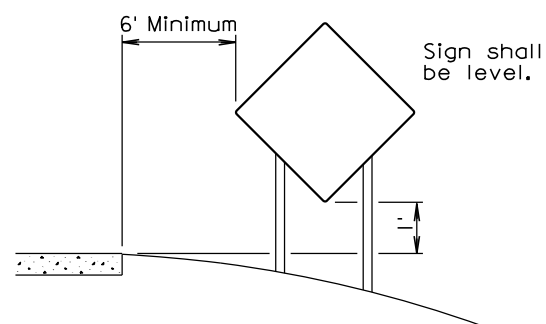
RURAL DISTRICT



RURAL DISTRICT WITH
SUPPLEMENTAL PLATE



URBAN DISTRICT



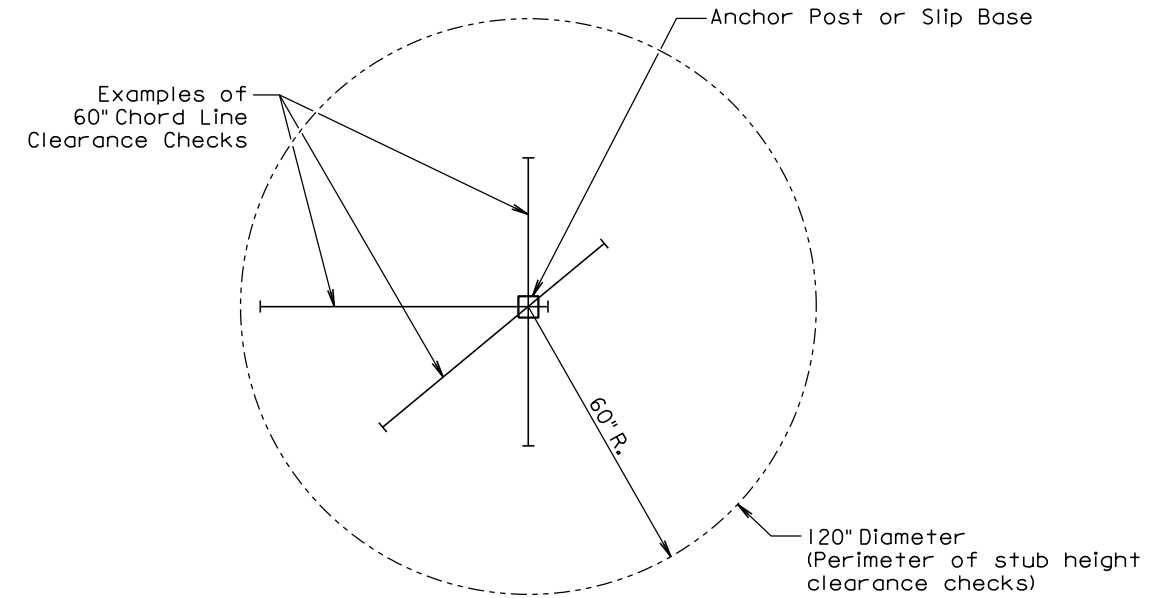
RURAL DISTRICT
3 DAY MAXIMUM

(Not applicable to regulatory signs)

* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

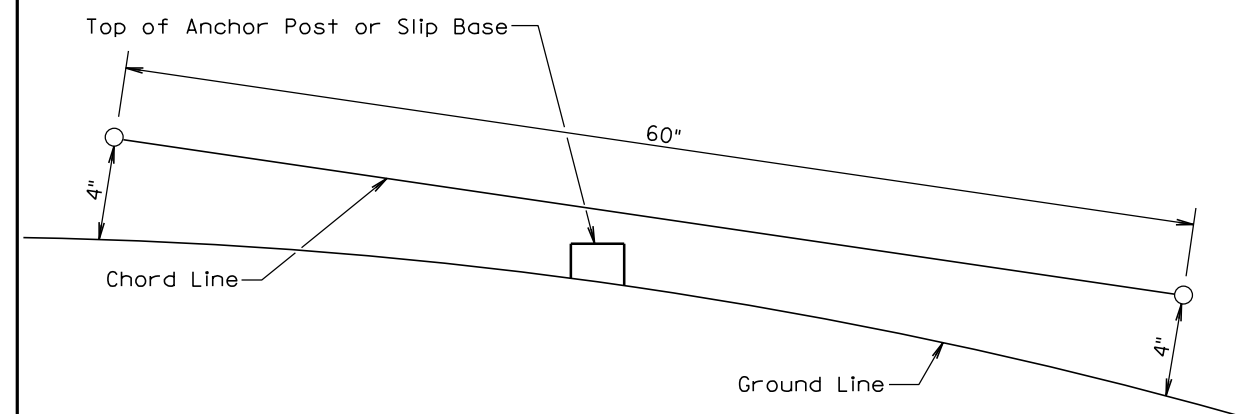
September 22, 2014

Published Date: 2nd Qtr. 2016	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: 2nd Qtr. 2016	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1