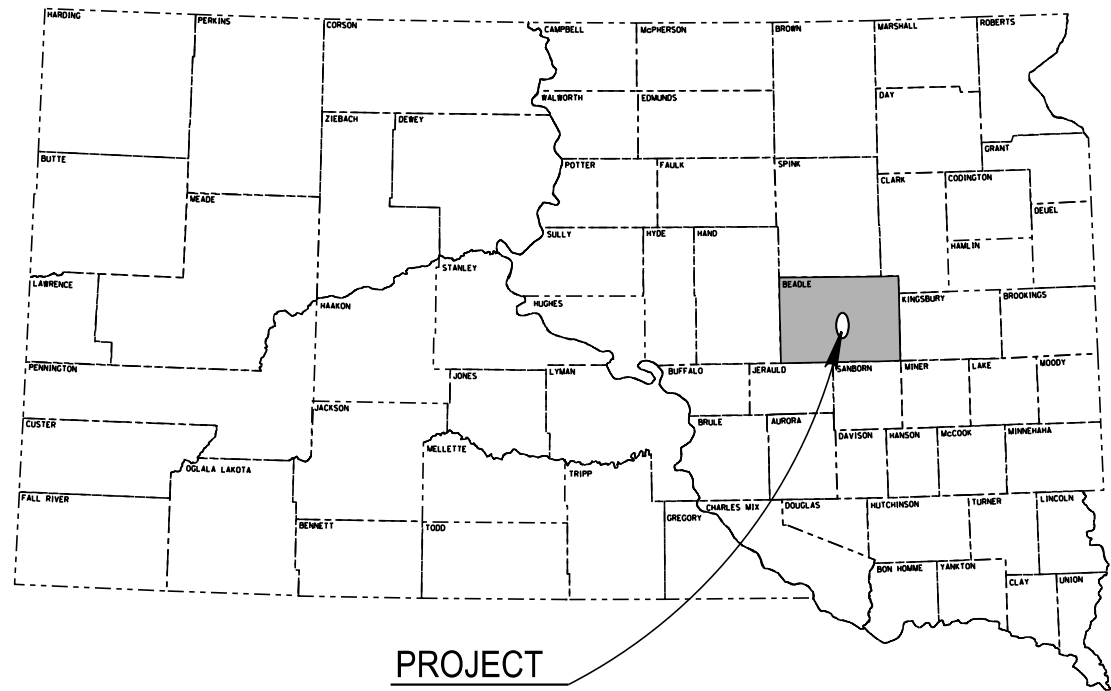


Plot Scale - 1:1800

Plotted From - TRH\UNT07



STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
**PROJECT 014 E-191
& 037 N-191**
**SD HIGHWAY 37
& US HIGHWAY 14**
BEADLE COUNTY
MEDIAN CROSSOVERS

PCN I5F0 & I5F1

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	014 E-191 037 N-191	1	12

Plotting Date: 10/01/2018

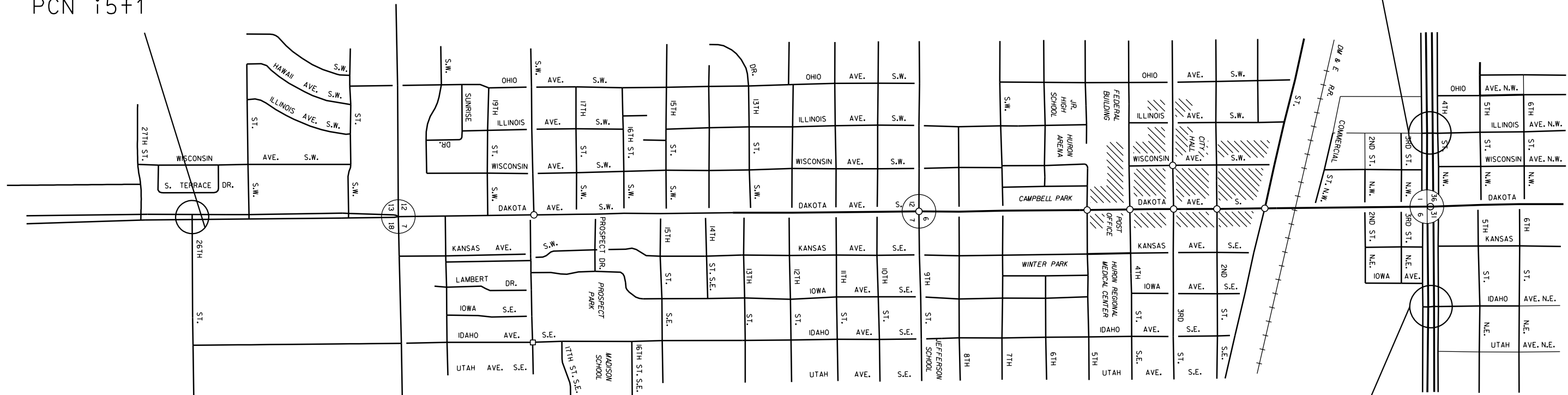
INDEX OF SHEETS

Sheet 1	Cover Sheet
Sheet 2	Estimate of Quantities
Sheet 3	Environmental Commitments
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Sheet 6	Typical Section
Sheet 7-8	Traffic Control
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MRM 125.00+0.340
Median Crossover
SD Highway 37
PCN i5f1

MRM 345.00+0.526
Median Crossover
US Highway 14
PCN i5f0



DESIGN DESIGNATION	US14	SD37 @ 21st Street	SD37 S. of US14	SD37 N. of US14
AADT (2017)	5444	10330	9198	5264
AADT (2042)	6396	12137	10808	6185
DHV	806	1432	1275	730
D	50	50	50	50
DHV T%	3.2%	2.6%	2.4%	3.8%
AADT T%	7.1%	5.7%	5.2%	8.4%
V	50 mph	40 mph	40 mph	40 mph

STORM WATER PERMIT
None Required

MRM 345.00+0.865
Median Crossover
US Highway 14
PCN i5f0

PCN I5F0

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E7150	Remove Sign for Reset	8	Each
120E0010	Unclassified Excavation	150	CuYd
120E6200	Water for Granular Material	10.0	MGal
260E1010	Base Course	315.0	Ton
320E1200	Asphalt Concrete Composite	120.0	Ton
632E3500	Reset Sign	8	Each
634E0010	Flagging	10.0	Hour
634E0110	Traffic Control Signs	698.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	12	Each
634E0420	Type C Advance Warning Arrow Board	4	Each
634E0600	4" Temporary Pavement Marking Tape Type I	1,280	Ft
734E0010	Erosion Control	Lump Sum	LS

PCN I5F1

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E7150	Remove Sign for Reset	3	Each
120E0010	Unclassified Excavation	52	CuYd
120E6200	Water for Granular Material	5.0	MGal
260E1010	Base Course	45.2	Ton
320E1200	Asphalt Concrete Composite	17.2	Ton
632E3500	Reset Sign	3	Each
634E0010	Flagging	5.0	Hour
634E0110	Traffic Control Signs	304.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	3	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0600	4" Temporary Pavement Marking Tape Type I	640	Ft
734E0010	Erosion Control	Lump Sum	LS

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
	014 E-191 037 N-191	3	12

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 B4: BALD EAGLE

Bald eagles are known to occur in this area.

Action Taken/Required:

If a nest is observed within one mile of the project site, notify the Project Engineer immediately so that he/she can consult with the Environmental Office for an appropriate course of action.

COMMITMENT C: WATER SOURCE

The Contractor shall not withdraw water with equipment previously used outside the State of South Dakota without prior approval from the SDDOT Environmental Office. Thoroughly wash all construction equipment before entering South Dakota to reduce the risk of invasive species introduction into the project vicinity.

The Contractor shall not withdraw water directly from streams of the James, Big Sioux, and Vermillion watersheds without prior approval from the SDDOT Environmental Office.

Action Taken/Required:

The Contractor shall obtain the necessary permits from the regulatory agencies such as the Department of Environment and Natural Resources (DENR) and the United States Army Corps of Engineers (COE) prior to executing water extraction activities.

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:

- 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".
- 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

State Historical Preservation Office (SHPO) concurrence has not been obtained for this project.

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: staging areas, borrow sites, waste disposal sites, and all material processing sites.

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.

The Contractor is responsible for obtaining any additional permits and clearances for staging areas, borrow sites, waste disposal sites, or material processing sites 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.

SURFACING THICKNESS DIMENSIONS

The Asphalt Concrete Composite shall be placed in 2 separate 2” lifts. These lifts shall not be completed in the same working day.

At those locations where material must be placed to achieve a required elevation, plans quantity may be varied to achieve the required elevation.

SEQUENCE OF OPERATIONS

1. Install Traffic Control
2. Remove Existing Signs
3. Remove Topsoil, Excavate, & Scarify the top 6” of material
4. Placement of Base Course
5. Placement of Asphalt Concrete Composite
6. Complete grading operations
7. Remove Traffic Control
8. Install Permanent Signs
9. Seed the disturbed areas

GENERAL NOTES

Once work that inconveniences traffic, it shall be pursued in a near continuous expeditious manner to its completion. Any work that restricts the motorist from driving the posted speed limit, reduces existing roadway width, or causes a potentially unsafe condition due to Contractor operations such as frequent movement of equipment or materials on or through the project, is considered to be an inconvenience to traffic.

PROJECT WORK HOURS

The Contractor may perform work on the roadway during daylight hours only, unless additional hours are approved by the Engineer. Daylight hours are considered to be sunrise until sunset. Traffic shall be returned to normal driving lanes during non-working hours.

TRAFFIC CONTROL

All traffic control signs locations shall be set in the field by the Contractor and verified by the Engineer prior to installation.

Certified flaggers properly attired and preceded by FLAGGER symbol signs, will be required where work activity and/or equipment present a hazard to the workers, a hazard to through traffic, or encroaches into a driving lane.

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

Indiscriminate driving and parking of vehicles within the right-of-way will notbe 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 State, 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.

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. Nonapplicable signs and/or devise shall be removed from the view by the Contractor and stored a minimum of 30 feet from the driving lanes during periods of in-activity. All costs to do this work shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

A shadow vehicle, equipped with flashing amber light and a ROAD MACHINERY AHEAD sign prominently displayed, shall be used in advance of landscaping, clean up, and other mobile work activities. Highway equipment working within traffic or adjacent to traffic shall, at all times, display a flashing or revolving amber light to warn the traveling public. The Contractor shall maintain the driving surface on the project to eliminate hazards to the traveling public. The driving surface is defined as both driving lanes along with both shoulders on the project.

The cost for additional signs shall be paid for at the contract unit price per square foot for Traffic Control Signs. Additional Flagger hours shall be paid for at the contract unit price per hour for Flagging. The cost of additional channeling devices shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

Traffic Control Signs, as shown in the Estimate of Quantities, are estimates. Contractor’s operation may require adjustments in quantities, either more or less. Payment will be for those signs actually ordered by the Engineer and used.

UTILITIES

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.

ASPHALT CONCRETE COMPOSITE

The 2” Lifts of Asphalt Concrete Composite shall be paver laid.

No flush seal required for the Asphalt Concrete Composite.

All other requirements in the specifications for Asphalt Concrete Composite shall apply.

UNCLASSIFIED EXCAVATION

Topsoil	69 CuYds
Excavation	133 CuYds
Total:	202 CuYds

These quantities are estimated and for information only, it is recommended the Contractor visit the construction sites before bidding. Plans quantity will be the basis of payment for “Unclassified Excavation”.

BASE COURSE

The Contractor is required to place 12” of Base Course. The Base Course will be required to be placed in 3” lifts.

Base Course shall be compacted using the Specified Density Method and shall be allowed to be compacted with the densities representing a combined lift of 12” thick.

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 100,000 live propagules of mycorrhizal fungi per acre. All costs of inoculating the seed shall be incidental to the Lump Sum price for Erosion Control.

PERMANENT SEEDING

The areas to be seeded consist of all newly graded areas within the project limits except for the top of roadways and temporary easements under cultivation.

Type D Permanent Seed Mixture will cover approximately 11,077 square feet and shall consist of the following:

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

Following seeding, grass hay or straw mulch shall be blown on and punched in at the rate of 2 tons per acre on newly seeded areas.

The cost of seeding and mulching will be incidental to the contract lump sum price for “Erosion Control”.

UNDERCUT

The Contractor is required to scarify the exposed subgrade surface for the width of the subgrade to a depth of 6 inches below the subgrade and recompact to the satisfaction of the Engineer. All costs associated with this undercut shall be incidental to the various bid items.

TOPSOIL

The Contractor is required to remove 4” of Topsoil from the affected areas. When the project is complete, the Contractor will replace the topsoil at a 6:1 Slope. The extra topsoil material will be property of the Contractor. All costs associated with the topsoil shall be incidental to the various bid items.

REMOVE SIGN FOR RESET

Existing signing will need to be temporarily removed during construction.

Those signs to be removed and replaced shall be properly stored to prevent damage to the signs. If the signs are lost or damaged, the Contractor shall be responsible for replacing the signs at their cost. All costs associated with removal and storage of the signs shall be incidental to the bid item “Remove Sign for Reset”.

4” TEMPORARY PAVEMENT MARKING TAPE TYPE I

The 4” Temporary Pavement Marking Tape Type I shall be used to mark the Tapers according to Standard Plate 634.64.

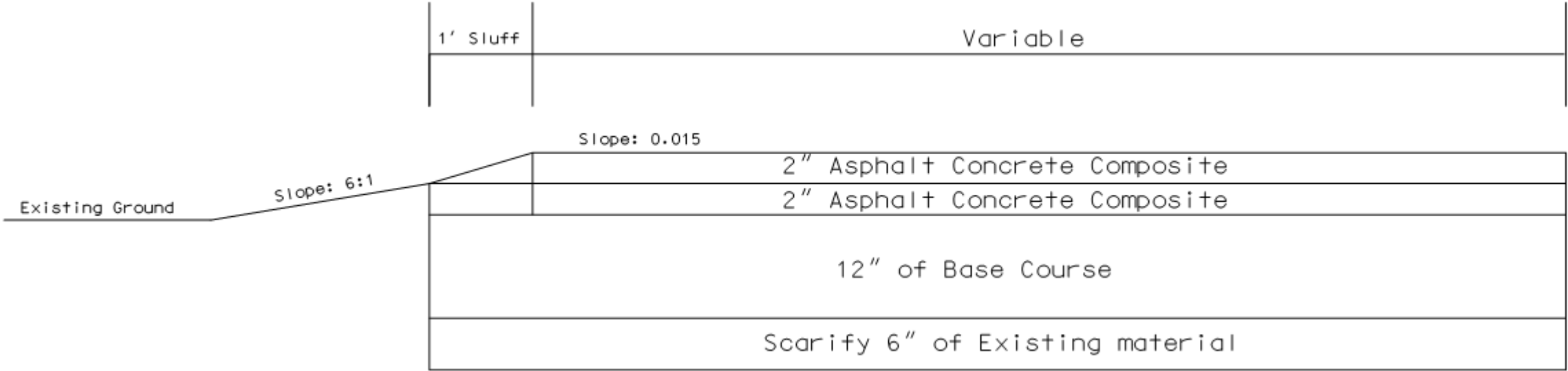
Temporary Raised Pavement Markers will not be allowed to mark the tapers.

Costs for removal of temporary pavement marking tape shall be incidental to the contract unit price per foot for “ 4” Temporary Pavement Marking Tape Type I”.

ESTIMATE OF QUANTITIES

Median Crossovers	Water for Granular Material (Mgal)	Base Course (Tons)	Asphalt Composite (Tons)	Unclassified Excavation (CuYds)
US Highway 14 & Illinois Ave.	5	157.5	60	75
US Highway 14 & Idaho Ave.	5	157.5	60	75
SD Highway 37 & 26th St.	5	45.2	17.2	52
Totals	15	360.2	137.2	202

TYPICAL SECTIONS



TRAFFIC CONTROL SIGNS PCN 05f0

SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R3-2	LEFT TURN PROHIBITION (symbol)	4	24" x 24"	4.0	16.0
R11-2	ROAD CLOSED	4	48" x 30"	10.0	40.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	8	48" x 48"	16.0	128.0
W20-1	ROAD WORK AHEAD	19	48" x 48"	16.0	304.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	8	48" x 48"	16.0	128.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
G20-2	END ROAD WORK	4	36" x 18"	4.5	18.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS			698.0
		SQFT			

11 Road Work Ahead Signs have been added to be placed on the Service Roads, Illinois Ave, and Idaho Ave.

TRAFFIC CONTROL SIGNS PCN 05f1

SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R3-2	LEFT TURN PROHIBITION (symbol)	1	24" x 24"	4.0	4.0
R11-2	ROAD CLOSED	1	48" x 30"	10.0	10.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	4	48" x 48"	16.0	64.0
W20-1	ROAD WORK AHEAD	5	48" x 48"	16.0	80.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	4	48" x 48"	16.0	64.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
G20-2	END ROAD WORK	4	36" x 18"	4.5	18.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS			304.0
		SQFT			

1 Road Work Ahead Sign has been added to be placed on 26th St. SE.

TABLE OF PERMANENT SIGNING

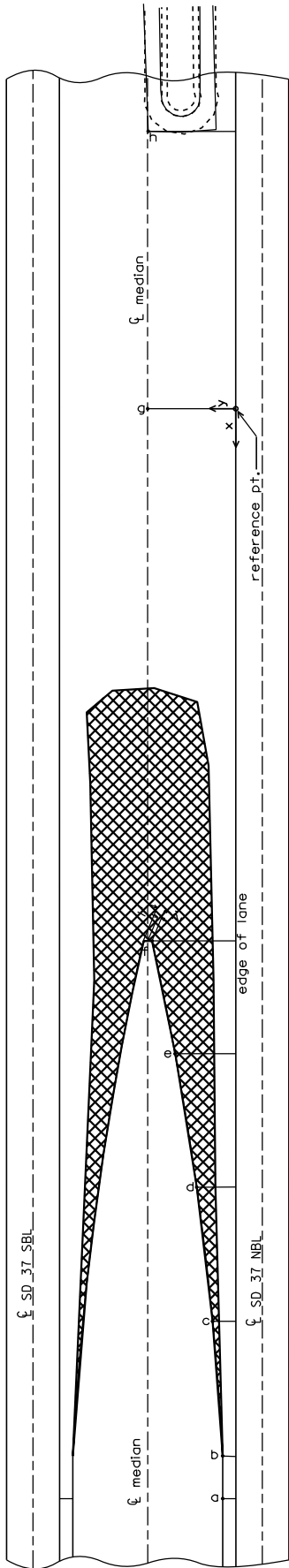
Highway	MRM	Side of Road	Description	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
14	345.00+0.516	Median	Do Not Enter	1	1	SSE	Telspar	Remove Sign for Reset
14	345.00+0.521	Median	One Way	1	1	N & S	Telspar	Remove Sign for Reset
14	345.00+0.533	Median	One Way	1	1	N & S	Telspar	Remove Sign for Reset
14	345.00+0.539	Median	Do Not Enter	1	1	NNW	Telspar	Remove Sign for Reset
14	345.00+0.853	Median	Do Not Enter	1	1	SSE	Telspar	Remove Sign for Reset
14	345.00+0.858	Median	One Way	1	1	N & S	Telspar	Remove Sign for Reset
14	345.00+0.872	Median	One Way	1	1	N & S	Telspar	Remove Sign for Reset
14	345.00+0.877	Median	Do Not Enter	1	1	NNW	Telspar	Remove Sign for Reset
37	125.00+0.306	Median	Wrong Way	1	1	NNE	Telspar	Remove Sign for Reset
37	125.00+0.326	Median	Do Not Enter	1	1	NNE	Telspar	Remove Sign for Reset
37	125.00+0.331	Median	Narrow Keep Right	1	1	N	Telspar	Remove Sign for Reset
			Total:	11	11			

PLOT SCALE - 1:20

PLOTTED FROM - TRHJINT07

26th St. Crossover Details

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	014 E-191 037 N-191	9	12
Plotting Date: 10/01/2018			



21' MEDIAN		
Point	(x)	(y)
* a	128.5'	1.6'
b	123.5'	1.6'
c	107.5'	2.7'
d	92.0'	4.6'
e	76.0'	7.2'
f	63.0'	9.9'
g	0.0'	10.4'
h	-32.5'	10.3'

(*) Point a - may vary to match on site pave

 4" of Asphalt Concrete Composite
12" of Base Course

PLOT NAME - 1

FILE - ... \26TH ST. CROSSOVER DETAILS.DGN

PLOT SCALE - 1:20

PLOTTED FROM - TRHJUNT07

Idaho Ave Crossover Details

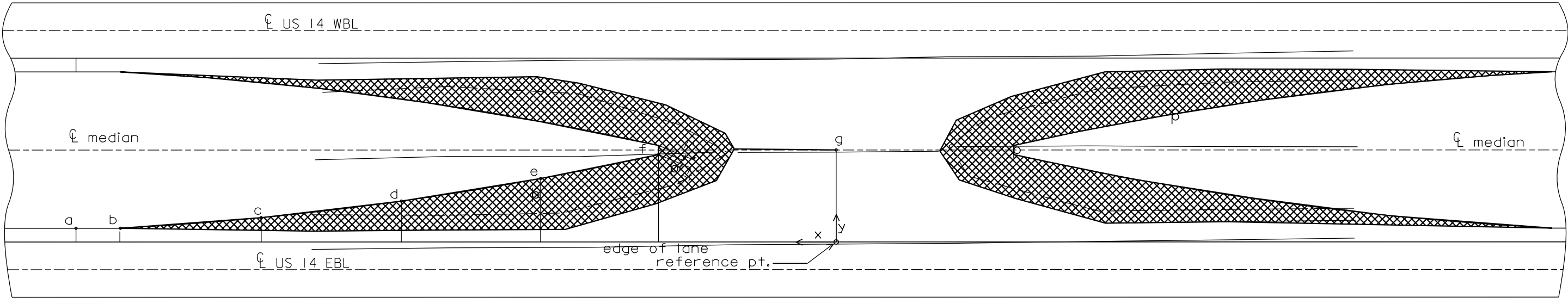
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	014 E-191 037 N-191	10	12
Plotting Date: 10/01/2018			

PLOT NAME - 2

FILE - ... \IDAHO AVE CROSSOVER DETAILS.DGN

Point	36' MEDIAN	
	(x)	(y)
* a	145.5'	3.0'
b	137.0'	3.0'
c	110.0'	5.5'
d	83.0'	8.0'
e	56.5'	12.0'
f	34.0'	17.0'
g	0	18.0'

(*) Point a - may vary to match on site pavement joints



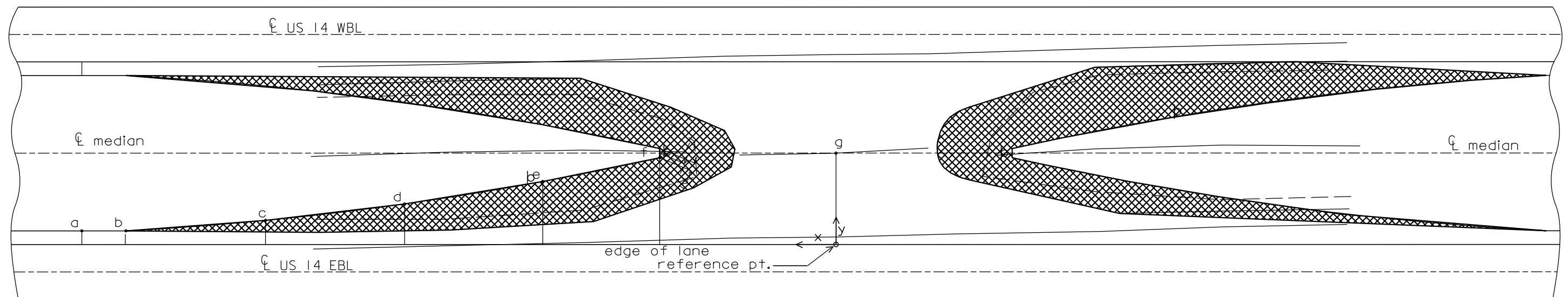
4" of Asphalt Concrete Composite
12" of Base Course

Illinois Ave. Crossover Details

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	014 E-191 037 N-191	11	12
	Plotting Date: 10/01/2018		

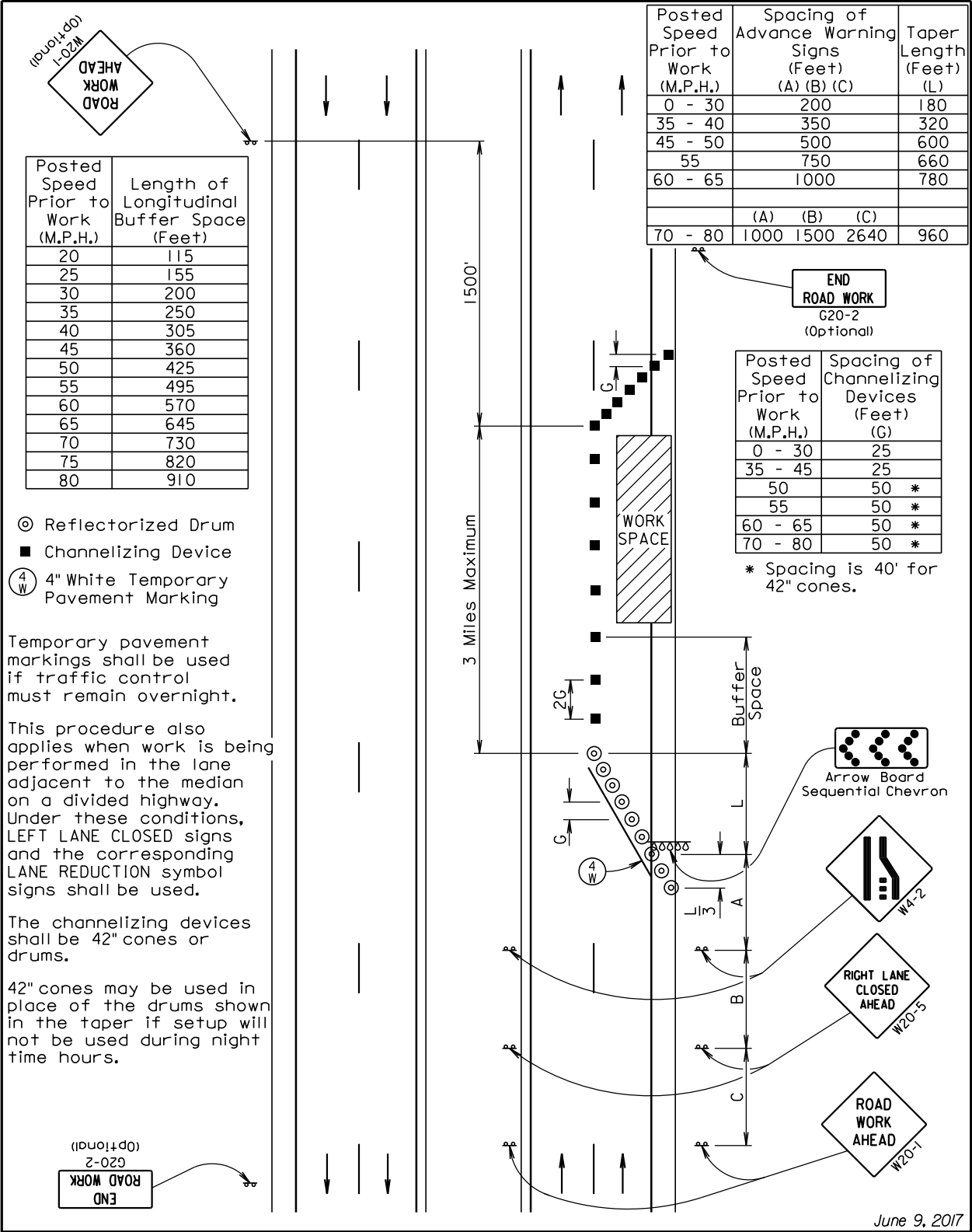
Point	36' MEDIAN	
	(x)	(y)
* a	145.5'	3.0'
b	137.0'	3.0'
c	110.0'	5.5'
d	83.0'	8.0'
e	56.5'	12.0'
f	34.0'	17.0'
g	0	18.0'

(*) Point a - may vary to match on site pavement joints



4" of Asphalt Concrete Composite
12" of Base Course

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	014 E-191 037 N-191	12	12
Plotting Date: 09/20/2018			



Published Date: 2nd Qtr. 2018

S
D
D
O
T

GUIDES FOR TRAFFIC CONTROL DEVICES
LANE CLOSURE WITHOUT BARRIER

PLATE NUMBER
634.64

Sheet 1 of 1

June 9, 2017