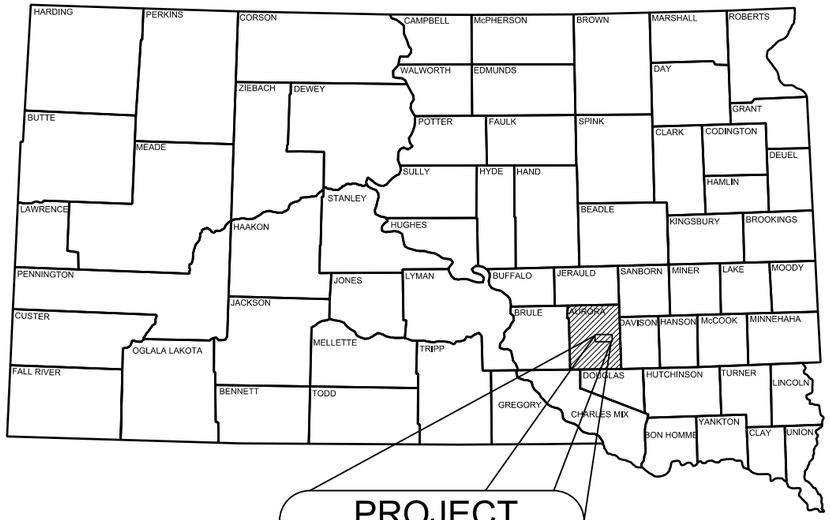
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	1	38

Plotting Date: 12/1/14
Revised Date: 6/3/15
Initials: TLW



PROJECT
City of Plankinton
South Dakota

END PROJECT
At Sta. 11+75 = Intersection of Campbell and 1st Street
NW 1/4 of Section 23, T103N, R64W

START PROJECT
At Sta. 0+00 = Intersection of East State Street and Campbell Street
NW 1/4 of Section 23, T103N, R64W

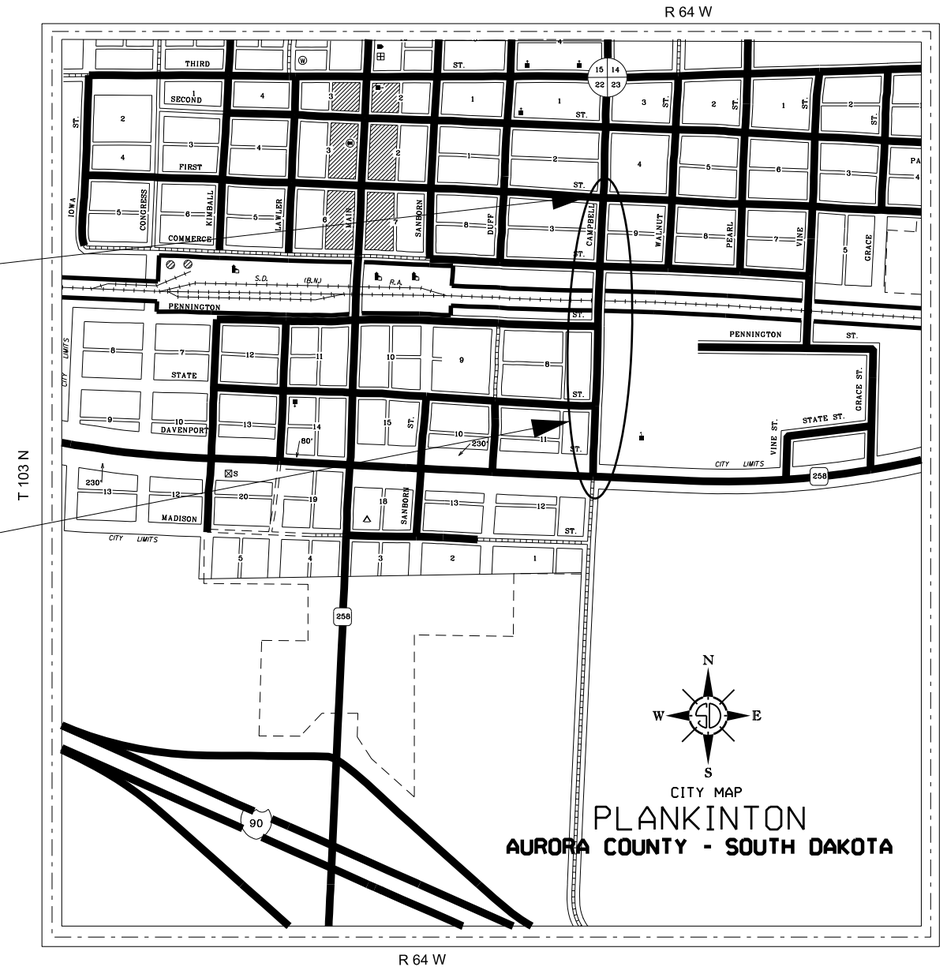
STORM WATER PERMIT

Major Recieving Body of Water:	Plankinton Creek
Area Disturbed:	0.57 Acres
Total Project Area:	0.57 Acres
Latitude:	43° 42' 40.51"N
Longitude:	98° 28' 50.24"W

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
PROJECT P TAPR (08)
AURORA COUNTY
Concrete Sidewalk

PCN 04UF



Length 1105.00 Feet 0.21 Miles

INDEX OF SHEETS

PLANS BEI# S14-P619

Survey by:	Brosz Engineering, Inc. Pierre, SD
Plans by:	Brosz Engineering, Inc. Pierre, SD

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	0.44	Mile
009E3250	Miscellaneous Staking	0.22	MIle
009E3280	Slope Staking	0.22	Mile
009E3300	Three Man Survey Crew	20	Hour
100E0100	Clearing	Lump Sum	LS
110E0300	Remove Concrete Curb and/or Gutter	60	Ft
110E1010	Remove Asphalt Concrete Pavement	41.0	SqYd
110E1140	Remove Concrete Sidewalk	45.0	SqYd
110E1700	Remove Silt Fence	557	Ft
120E0010	Unclassified Excavation	527	CuYd
120E0600	Contractor Furnished Borrow Excavation	715	CuYd
230E0010	Placing Topsoil	460	CuYd
260E3010	Gravel Surfacing	15.0	Ton
320E2000	Maintenance Patching	11.0	Ton
450E4749	15" CMP 16 Gauge, Furnish	10	Ft
450E4750	15" CMP, Install	10	Ft
450E4789	36" CMP 16 Gauge, Furnish	8	Ft
450E4790	36" CMP, Install	8	Ft
450E4819	54" CMP 16 Gauge, Furnish	24	Ft
450E4820	54" CMP, Install	24	Ft
450E5302	15" CMP Sloped End, Furnish	1	Each
450E5303	15" CMP Sloped End, Install	1	Each
450E5318	36" CMP Sloped End, Furnish	1	Each
450E5319	36" CMP Sloped End, Install	1	Each
450E5330	54" CMP Sloped End, Furnish	2	Each
450E5331	54" CMP Sloped End, Install	2	Each
632E1320	2.0”x2.0” Perforated Tube Post	48.0	Ft
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	29.0	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	4.7	SqFt
632E3520	Remove, Salvage, Relocate, and Reset Traffic Sign	17	Each
633E1430	Pavement Marking Paint, 24" White	440	Ft
634E0110	Traffic Control Signs	523.9	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0260	Type 3 Barricade, 6’ Single Sided	4	Each
635E2000	Pedestal Signal Pole	2	Each
635E4010	1 Section Vehicle Signal Head	4	Each
635E5020	2' Diameter Footing	12.0	Ft
635E5410	Controller Cabinet	1	Each
635E9020	1/C #10 AWG Copper Wire	425	Ft
635E8210	1" Rigid Conduit, Schedule 80	116	Ft
635E9353	3/C #16 AWG IMSA Copper Cable, K1	125	Ft
650E0060	Type B66 Concrete Curb and Gutter	44	Ft
651E0160	6” Reinforced Concrete Sidewalk	6559	SqFt
651E7000	Type 1 Detectable Warnings	216	SqFt
730E0204	Type C Permanent Seed Mixture	11	Lb
732E0100	Mulching	2.7	Ton
734E0604	High Flow Silt Fence	557	Ft
734E0610	Mucking Silt Fence	15	CuYd
998E0100	Railroad Protective Insurance	Lump Sum	LS

SPECIFICATIONS

South Dakota 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 A: WETLANDS

Approximately 0.06 acres of wetlands will be impacted by the project. Refer to erosion control sheet for location and boundaries of the impacted wetlands. These unavoidable impacts to wetlands shall be mitigated on-site, off-site of the project, through an approved wetland mitigation bank site, through In Lieu Fee wetland program at the time of construction.

Table of Impacted Wetlands

Wetland No.	Type	Station	Impact Left (Acres)	Impact Right (Acres)	Temporary Impact (Acres)	Total Impact (Acres)
1	N/A	5+30	0.06	0.00	0.00	0.06

Action Taken/Required:

A total of 0.06 acres of wetlands will be disturbed over the course of the project. A Section 404 Permit has been obtained for this project and is on file with the Project Engineer. The disturbed threshold has not been exceeded for any type of mitigation efforts, therefore, no action is required to be taken to offset the amount of wetland disturbed in this project.

The contact person is the Environmental Project Scientist of the SDDOT Environmental Office at 605-773-3268.

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 D: WATER QUALITY STANDARDS

COMMITMENT D2: SURFACE WATER DISCHARGE

Unnamed Tributary of Firesteel Creek is classified as warm water, marginal fishery with a Surface Water Discharge standard of 150 milligrams/liter total suspended solids.

Action Taken/Required:

If construction dewatering is required, the Contractor shall obtain a Temporary Discharge Permit from the DENR and provide a copy to the Project Engineer. Contact the DENR Surface Water Program at 605-773-3351 to apply for a permit.

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:

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: 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.

SHPO/THPO review does not relieve the Contractor of the responsibility 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.

COMMITMENT N: SECTION 404 PERMIT

The SDDOT has obtained a Section 404 Permit from the US Army Corps of Engineers for the permanent actions associated with this project.

Action Taken/Required:

The Contractor shall comply with all requirements contained in the Section 404 permit.

The Contractor shall also be responsible for obtaining a Section 404 permit for any dredge, excavation, or fill activities associated with staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands or waters of the United States.

UTILITIES

The Contractor shall be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, might be relocated or replaced by a new utility facility during the construction of this project, or might not require adjustment and may remain in its current location. The Contractor shall contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided below.

The Contractor shall be responsible for all damage to utilities in the limits of the proposed construction at no cost to the Owners.

South Dakota One Call	1-800-781-7474
City of Plankington, Water, Sewer & Electric	1-605-942-7767
Golden West, Telephone	1-855-888-7777
Central Electric, Electric	1-800-477-2892

CLEARING

Before clearing activities begin, the Contractor shall contact the Engineer to determine the limits of clearing for the project and mark the trees that are to be cleared. If the trees or shrubs that are supposed to remain within the limits of work are damaged or destroyed by the Contractor, the Contractor shall replace them with the same size and type at the Contractor’s expense. Fill material around the trees shall be warped as to avoid damage to the trees during grading activates.

REMOVE ASPHALT CONCRETE PAVEMENT

Existing asphalt concrete and/or existing asphalt concrete patch work that was placed above the existing concrete pavement is included in the quantity for “Remove Asphalt Concrete Pavement”. The Contractor shall dispose of the concrete pavement and asphalt concrete at a site approved by the Engineer.

The contractor shall install asphalt concrete composite on the areas of removed concrete. Asphalt concrete composite shall conform to Section 324 of the Specification and shall be paid at the contract unit price per ton for “Maintenance Patching”.

TABLE OF ASPHALT CONCRETE PAVEMENT REMOVAL

Station	to	Station	L/R	Quantity (SqYd)
8+94		9+27	CL	37
10+87		10+93	L	1
10+35		11+67	L	3
			Total:	41.0 SqYd

TABLE OF CONCRETE SIDEWALK REMOVAL

Station	to	Station	L/R	Quantity (SqYd)
10+87		11+02	L	8
10+88		10+94	R	7
11+44		11+59	L	12
11+37		11+59	R	18
			Total:	45.0 SqYd

UNCLASSIFIED EXCAVATION

The cost of water shall be incidental to the contract unit prices per cubic yard for Unclassified Excavation and Contractor Furnished Borrow Excavation.

Excavation and construction of embankments for grading shall be performed in accordance with Section 120 of the Specifications. Compaction of embankments shall be governed by the Ordinary Compaction Method.

The path will be constructed to the typical sections shown in the plans. Additional grading may be required as directed by the Engineer to provide a smooth profile free from abrupt changes in grade. The grade shall conform to the guidelines as stated in the current AASHTO publication of "Guide for development of Bicycle Facilities".

All costs for excavation and construction of embankments required for grading shall be incidental to the contract unit prices per cubic yard for "Unclassified Excavation" or "Contractor Furnished Borrow Excavation".

The plans quantity for Unclassified Excavation shall be the basis of payment unless changes are directed by the Engineer.

CONTRACTOR FURNISHED BORROW EXCAVATION

The Contractor shall provide a suitable site for Contractor furnished borrow material. The Contractor is responsible for obtaining all required permits and clearances for the borrow site. The borrow material shall be approved by the Engineer. The plans quantity for "Contractor Furnished Borrow Excavation" as shown in the Estimate of Quantities will be the basis of payment for this item.

Restoration of the Contractor furnished borrow site shall be the responsibility of the Contractor.

TOPSOIL

Prior to the path development, topsoil shall be removed to a depth of 6" +/- and stockpiled at a location as shown on the Drawings. Silt Fence will be utilized at various break points along the topsoil pile to allow for drainage to leave the project. Excavation other than topsoil shall be separated and utilized as fill material if suitable. Following completion of the section development, topsoil shall be re-spread evenly over the disturbed areas that are not surfaced. All cost associated with laying topsoil shall be included in and paid for at the contract unit price per cubic yard for "Placing Topsoil". Plans quantity will be the basis for payment unless changes are ordered by the Engineer.

Topsoil on existing wetland area shall be stockpiled separately in accordance with Environmental Commitment A. Topsoil take from the existing wetland area shall be used as topsoil for the created wetland mitigation area. If additional wetland topsoil material is available, Contractor may use this material in the shared use path project limits.

CORRUGATED METAL PIPE

Corrugated metal pipes shall have 2 ⅔-inch X ½-inch corrugations for 42-inch and smaller round pipe and 48-inch and smaller arch pipe unless otherwise stated in the plans. Corrugated metal pipes shall have 3-inch X 1-inch or 5-inch X 1-inch corrugations for 48-inch and larger round pipe and 54-inch and larger arch pipe unless otherwise stated in the plans.

The corrugated metal pipes including the elbows, tees, crosses, wyes, and ends shall be 16 gauge galvanized in accordance with AASHTO M36.

The furnishing and installation of the required connection band and accessories to extend the existing CMP shall be incidental to the lineal foot price of pipe.

PERMANENT SIGNS

The Contractor shall provide all labor and equipment necessary to install permanent signing, remove existing signs, and reset existing signs as detailed in these plans and/or as required by the Engineer. Payment for furnishing and installing permanent signs will be paid for at the contract unit price for each type of sign based on sheeting requirements per square foot of sign. All signs shall have ASTM D4956 Type IV sheeting (high intensity) or ASTM D4956 Type XI (super very/high intensity), as detailed in plans.. Payment for new signposts, hardware, bases, and labor will be made at the contract unit price per foot for "2.0" x 2.0" Perforated Tube Post". See breakaway post details and fixed post details regarding posts, hardware, bases, and footings. *Measurement of post lengths for payment will be for above ground post lengths as field measured.* The sign post contract items shall include post bases and all hardware. The post lengths shall be verified by the Contractor. The Contractor is urged to cut posts to length on job site after verification of post length.

The Contractor shall use Telespar brand (or equivalent) posts and bases on all new signs as approved by the Engineer. All post materials shall conform to Section 982 of the Specifications, and be in accordance with ASTM specifications. The height of the post shall not exceed the minimum height needed by more than 0.5 feet. Any portion that extends above the sign shall be cut off. No separate payment will be made for cutting the post or for that length cut off. All posts and bases shall be accompanied by Certificates of Compliance and shall meet all safety standards as set forth in the current edition of the Manual on Uniform Traffic Control Devices (MUTCD).

Payment for 2.0" x 2.0" perforated tube post shall include all cost for labor, equipment, and materials necessary to complete the following work:

1. Furnishing all posts, stiffeners, breakaway bases, soil stabilizers, and hardware.
2. Assembly and installation of breakaway base sign supports as per details shown in these plans.
3. Assembly of sign(s) to sign post as per erection details for Highway Signs as shown in these plans.
4. Installation of signpost and sign(s).

TEMPORARY TRAFFIC CONTROL

Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the responsibility of the Contractor. The Contractor shall coordinate with the Engineer to determine which signs will be reset and to verify reset locations. 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 State or County.

Vehicles and/or equipment used to accomplish the contract work shall be equipped with working flashing yellow warning lights when entering, leaving, or working in the roadway.

MAINTENANCE OF TRAFFIC

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

RAILROAD CROSSING PROJECT COORDINATION

It is anticipated that a railroad crossing signal project under separate contract will be constructed concurrently with this project.

Contractor shall be aware that construction coordination between the two projects may be required.

6" REINFORCED CONCRETE SIDEWALK

The bid item 6" Reinforced Concrete Sidewalk shall include all materials, tools, and labor necessary to install the concrete path.

The reinforcing steel shall conform to ASTM A615 Grade 60 for Deformed Bars. #5 smooth bars can be Grade 40. The longitudinal reinforcement shall consist of five No. 4 bars spaced as per typical section. The transverse reinforcement shall consist of No. 4 bars fabricated into chair assemblies or other support approved by the engineer capable of supporting longitudinal reinforcement without displacement using wire legs or by using regular rebar chairs. Contraction joints shall be equally spaced transversely across the new concrete at 9' spacing. Expansion joints will be placed at 100 feet as per the Typical Joint and Rebar Layout Detail. All materials and labor for the installation of the contraction and expansion joints shall be incidental to the cost of the sidewalk.

Subgrade within cut sections shall be scarified and recompacted prior to placing granular cushion material.

Furnishing and installation of granular cushion material shall be incidental to the contract unit price per square foot of 6" Reinforced Concrete Sidewalk.

TABLE OF 6" REINFORCED CONCRETE SIDEWALK

Station	to	Station	L/R	Quantity (SqFt)
0+00		11+59	CL	6,559.0
			Total:	6,559.0

TYPE 1 DETECTABLE WARNINGS

Detectable warnings shall be in compliance with the Americans with Disability Act regulations.

The detectable warnings shall be installed according to the manufacturer's installation instructions.

A concrete thickness equal to the adjacent concrete sidewalk thickness and 2 inches of granular cushion material shall be placed below the Type 1 Detectable Warnings. When concrete is placed below the detectable warnings then the concrete thickness shall be transitioned at the rate of 1" per foot to match the adjacent concrete sidewalk thickness.

When Type 1 Detectable Warnings are specified, the Contractor shall furnish and install only one of the products listed in the Type 1 Detectable Warnings table.

Type 1 Detectable Warnings

Product	Manufacturer
Detectable Warning Plate Cast Iron Plate	Neenah Foundry Company Neenah, WI 800-558-5075 http://www.neenahfoundry.com/
Detectable Warning Plate Cast Iron Plate	Deeter Foundry Lincoln, NE 800-234-7466 http://www.deeter.com/
Detectable Warning Plate Cast Iron Plate(No Coating)	East Jordan Iron Works, Inc. 301 Spring Street East Jordan, MI 49727 800-626-4653 http://www.ejiw.com
CAST-DWD Cast Iron Plate	Key 3 Casting (Northern Foundry) 555 West 25th Street Hibbing, MN 55746 218-263-8871 http://key3casting.com

TABLE OF TYPE 1 DETECTABLE WARNINGS

Station	L/R	Quantity (SqFt)
0+23	CL	12
0+53	CL	12
2+20	CL	12
2+69	CL	12
3+85	L	12
3+85	L	12
5+55	CL	12
5+75	CL	12
7+30	CL	12
7+70	CL	12
10+89	L	12
11+05	R	12
11+05	L	12
11+09	L	12
11+34	R	12
11+42	L	12
11+51	L	12
11+51	L	12
	Total:	216

TABLE OF REMOVE CONCRETE CURB AND GUTTER

Station	to	Station	L/R	Quantity (Ft)
11+02		11+02	L	5
11+02		11+02	R	12
11+38		11+65	R	43
			Total:	60

TABLE OF TYPE B66 CONCRETE CURB AND GUTTER

Station	to	Station	L/R	Quantity (Ft)
11+40		11+65	L	44
			Total:	44

PERMANENT SEEDING

The contractor shall be responsible for preparing all disturbed areas for seeding which will include proper topsoil replacement and preparation. The areas to be seeded comprise all newly graded areas within the project limits except for the top of paths.

Type C Permanent Seed Mixture shall consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Flintlock, Rodan, Rosana	16
Canada Wildrye	Mandan	2
	Total:	18

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 contract unit price per pound for the corresponding permanent seed mixture.

The mycorrhizal inoculum shall be from the list below or an approved equal:

Product	Manufacturer
MycoApply	Mycorrhizal Applications, Inc. Grants Pass, OR Phone: 1-866-476-7800 http://www.mycorrhizae.com/

MULCHING (GRASS HAY OR STRAW)

The maximum time an area can remain open when the area is not being actively seeded is 14 calendar days. If this time is to be exceeded Contractor shall perform Temporary Erosion Control via Mulching in the interim.

An additional 1.7 tons of Grass Hay or Straw Mulch has been added to the Estimate of Quantities for temporary erosion control on areas determined by the Engineer during construction.

All disturbed ground shall be mulched with the exception of the wetland mitigation area

HIGH FLOW SILT FENCE

The high flow silt fence fabric provided shall be from the approved product list. The approved product list for high flow silt fence may be viewed at the following Internet site:

http://sddot.com/business/certification/products/Default.aspx

High flow silt fence shall be placed at the locations that will minimize siltation of adjacent streams, lakes, dams, and drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.05 for details.

Silt Fence will also be utilized at various break points along the topsoil windrow to allow for drainage to leave the project. The engineer has estimated 100 feet of High Flow Silt Fence to be used at his discretion.

Plans quantity for silt fence may be adjusted due to requirements on site. Acceptable alternates to silt fence may be used, but must be approved by the engineer, and must meet SDDOT and SDDENR requirements for the general permit. Should the contractor choose to alter the erosion control plan, an alternate plan will be submitted to the engineer for review.

HORIZONTAL ALIGNMENT DATA

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. South Zone (NAD 83/96) SF = 0.9998911

POLE FOOTINGS

Where indicated on the Drawings, footings shall be installed by the Contractor in accordance with Standard Plate 635.55. Footing design data is located in the Drawings.

Anchor rods shall be installed to anchor the pedestal. Anchor rods shall be hot dipped galvanized per ASTM A-123. Bolts shall be Grade 5 galvanized. Anchors shall have a minimum shaft length of 60 inches. Approved manufacturers include Pelco Products or approved equal.

All labor and materials required shall be paid for at the contract unit price per foot for “2’ Diameter Footing”.

BREAKAWAY BASES

A statement is required, signed by a Professional Engineer registered in the State of South Dakota, certifying that the breakaway base devices meet the design requirements, including breakaway and structural adequacy, of the "AASHTO Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals". The physical testing procedures outlined in Section 8 of the Fifth Edition of the Aluminum Association's "Specifications for Aluminum Structures" may be used to establish service limits for structural adequacy certification of aluminum breakaway transformer bases and frangible couplings. If requested, test data of production samples to support the certification shall be provided.

POLES

New poles shall be a standard 4.5 inch OD aluminum pedestal pole. Poles shall be supplied with one end threaded for easy installation into pedestal base.

All poles shall have transformer bases and a convenience duplex festoon outlet receptacle (15 amp, 3 wire) suitable for outdoor use.

All items to be furnished and installed in association with the pedestal bases and poles shall be paid at the contract unit price per each for “1 Section Vehicle Signal Head”.

AC POWERED PEDESTRIAN CROSSING FLASHING BEACON

AC Powered Pedestrian Crossing Flashing Beacon shall conform to FHWA Interim Approval Memorandum (1A-11). Beacons shall be provided at the locations specified in the plans and constructed in accordance with the detail located in the plans. Beacons shall operate in a flash pattern inconformance with the MUTCD. Furnishing and installation of flashing beacons shall be paid for at the contract unit price per each for 1 section vehicle signal head.

An aluminum controller cabinet shall be furnished and installed to house the flasher unit and controller. Cabinet shall also include a circuit breaker and surge arrestor. Flasher unit shall be furnished and installed capable of alternating signal beacon flash cycles in accordance with MUTCD. Activation of the beacons shall be by scalable time based controller ELTEC (TC-18) or approved equal. Software shall be supplied to program the controller. Contractor shall supply a service representative to initially program the controller and to provide a minimum of 2 hours of instruction to 4 people.

Cabinet, Flasher, and Controller units shall be of same manufacturer to ensure compatibility. Flasher Unit, Controller, controller cabinet, software, and initial programming and instruction shall be paid for at the contract unit price per each for “Controller Cabinet”.

1” RIGID CONDUIT, SCHEDULE 80

The City of Plankinton is providing 120VAC primary power for the proposed AC Powered Pedestrian Crossing Flashing Beacons. Contractor shall provide 1 inch Sch 80 rigid conduit from designated utility pole to both crossing flashing beacon locations, as shown on the plans.

Contractor shall be required to horizontally bore under the roadway to install rigid conduit. All costs to install conduit under roadway shall be considered incidental and included in the unit price of conduit.

CROSSWALK MARKINGS

All crosswalks shall be marked as shown in the plans. Crosswalk markings shall be white, 24” wide and a minimum of 8’ long. Spacing between markings shall be no more than 2.5’.

TABLE OF CROSSWALK MARKINGS

Station	to	Station	L/R	Quantity (Ft)
0+25		0+51	CL	48
2+27		2+61	CL	72
3+85		3+85	L	48
7+38		7+65	CL	56
10+90		10+90	L	48
11+07		11+37	L	64
11+08		11+30	R	48
11+51		11+51	L	56
			Total:	440

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR (08)	7	38

TABLE OF CONSTRUCTION STAKING

Roadway and Description	Begin Station	End Station	Number of Lanes	Length (Ft)	Grade Staking				Miscellaneous Staking Quantity (Mile)	Slope Staking Quantity (Mile)
					Length (Mile)	Lane Factor	*Sets of Stakes	**Grade Staking Quantity (Mile)		
P TAPR (08)	0+00	11+75	1	1,175	0.22	1	2	0.44	0.22	0.22
							Totals:	0.44	0.22	0.22

* 1 = Blue Top Stakes Only (Asphalt Concrete Pavement)
2 = Blue Top and Paving Hub Stakes (PCC Pavement)

** Grade Staking Quantity = (Length) x (Lane Factor) x (Sets of Stakes)

MAINTENANCE PATCHING

The contractor will install asphalt concrete composite as specified on the plans sheets. Asphalt concrete composite will conform to section 324 of the specifications and will be paid for at the contract unit price per ton for Maintenance Patching.

CONTROL DATA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR (08)	8	38

HORIZONTAL AND VERTICAL CONTROL POINTS						
POINT	**STATION**	**OFFSET**	**DESCRIPTION**	**NORTHING**	**EASTING**	**ELEVATION**
CP 1	0+54.71	83.76' R	REBAR	507592.047	2458320.5	1522.703
CP 2	5+46.21	44.95' L	REBAR	508160.687	2458292.3	1520.327
CP 3	9+27.01	0.73' R	MAG NAIL	508541.318	2458342.1	1521.649
CP 4	11+49.29	50.49 L	MAG NAIL	508764.841	2458296.6	1523.618

EXISTING TOPOGRAPHY SYMBOLOGY AND LEGEND

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	9	38

Plotting Date: 4/25/15
Revised Date: x/xx/07
Initials: TLW

- Anchor
- Antenna
- Approach
- Assumed Corner
- Azimuth Marker
- BBQ Grill/ Fireplace
- Bearing Tree
- Bench Mark
- Box Culvert
- Bridge
- Brush
- Buildings
- Bulk Tank
- Cattle Guard
- Cemetery
- Centerline
- Cistern
- Clothes Line
- Commercial Sign Double Face
- Commercial Sign One Post
- Commercial Sign Overhead
- Commercial Sign Two Post
- Concrete Symbol
- Creek Edge
- Curb/Gutter
- Curb
- Dam Grade/Dike/Levee
- Deck Edge
- Ditch Block
- Doorway Threshold
- Drainage Profile
- Drop Inlet
- Edge Of Asphalt
- Edge Of Concrete
- Edge Of Gravel
- Edge Of Other
- Edge Of Shoulder
- Elec. Trans./Power Jct. Box
- Fence Barbwire
- Fence Chainlink
- Fence Electric
- Fence Misc.
- Fence Rock
- Fence Snow
- Fence Wood
- Fence Woven
- Fire Hydrant
- Flag Pole
- Flower Bed
- Gas Valve Or Meter
- Gas Pump Island
- Grain Bin
- Guardrail
- Guide Sign One Post
- Guide Sign Two Post
- Gutter
- Guy Pole
- Haystack
- Hedge
- Highway R.O.W. Marker
- Interstate Close Gate
- Iron Pin
- Irrigation Ditch
- Lake Edge
- Lawn Sprinkler
- Mailbox
- Manhole Electric
- Manhole Gas
- Manhole Misc
- Manhole Sanitary Sewer
- Manhole Storm Sewer
- Manhole Telephone
- Manhole Water
- Merry-Go-Round
- Microwave Radio Tower
- Misc. Line
- Misc. Property Corner
- Misc. Post
- Overhang Or Encroachment
- Overhead Utility Line — OH —
- Parking Meter
- Pipe With End Section
- Pipe With Headwall
- Pipe Without End Section
- Playground Slide
- Playground Swing
- Power And Light Pole
- Power And Telephone Pole
- Power Meter
- Power Pole
- Power Pole And Transformer
- Power Tower Structure
- Propane Tank
- Property Pipe
- Property Pipe With Cap
- Property Stone
- Public Telephone
- Railroad Crossing Signal
- Railroad Milepost Marker
- Railroad Profile
- Railroad R.O.W. Marker
- Railroad Signs
- Railroad Switch
- Railroad Track
- Railroad Trestle
- Rebar
- Rebar With Cap
- Reference Mark
- Regulatory Sign One Post
- Regulatory Sign Two Post
- Retaining Wall
- Riprap
- River Edge
- Rock And Wire Baskets
- Rockpiles
- Satellite Dish
- Septic Tank
- Shrub Tree
- Sidewalk
- Sign Face
- Sign Post
- Slough Or Marsh
- Spring
- Stream Gauge
- Street Marker
- Subsurface Utility Exploration Test Hole
- Telephone Fiber Optics — T/F —
- Telephone Junction Box
- Telephone Pole
- Television Cable Jct Box
- Television Tower
- Test Wells/Bore Holes
- Traffic Signal
- Trash Barrel
- Tree Belt
- Tree Coniferous
- Tree Deciduous
- Tree Stumps
- Triangulation Station
- Underground Electric Line — P —
- Underground Gas Line — G —
- Underground High Pressure Gas Line — HG —
- Underground Sanitary Sewer — S —
- Underground Storm Sewer — S —
- Underground Tank
- Underground Telephone Line — T —
- Underground Television Cable — TV —
- Underground Water Line — W —
- Warning Sign One Post
- Warning Sign Two Post
- Water Fountain
- Water Hydrant
- Water Meter
- Water Tower
- Water Valve
- Water Well
- Weir Rock
- Windmill
- Wingwall
- Witness Corner

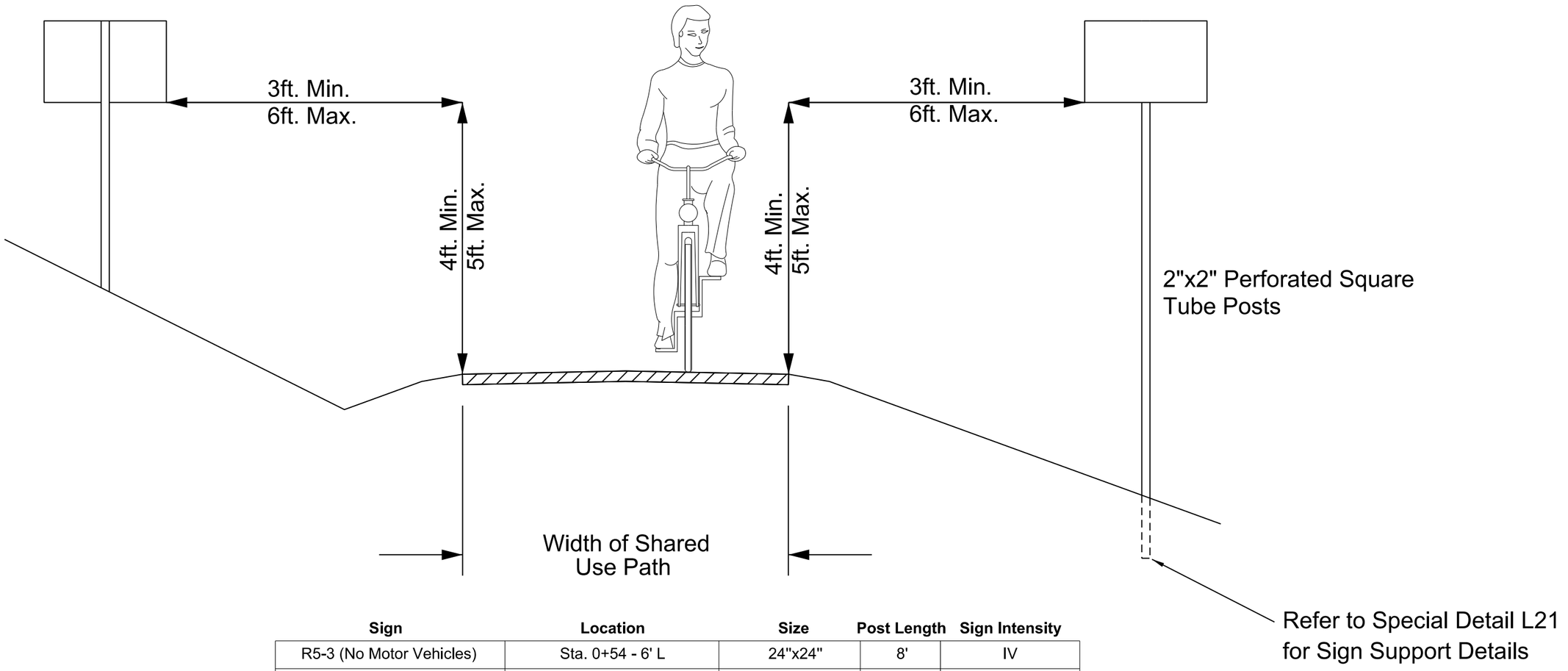
- State and National Line
- County Line
- Section Line
- Quarter Line
- Sixteenth Line
- Property Line
- Construction Line
- R. O. W. Line
- New R. O. W. Line
- Cut and Fill Limits
- Control of Access
- New Control of Access
- Proposed ROW (After Property Disposal)

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	10	38

Plotting Date: 4/25/15
Revised Date: XX
Initials: TLW

PERMANENT SIGNING

TYPICAL SIGN PLACEMENT ON SHARED-USE PATH



Note:
The quantity of post shown in the table on this sheet and the Estimate of Quantities is based on post length from ground elevation. The values shown does not include the length of post needed to go into the anchor. 2"x2" Perforated Tube Post shall be paid at the contract unit price for length of tubing above the ground.

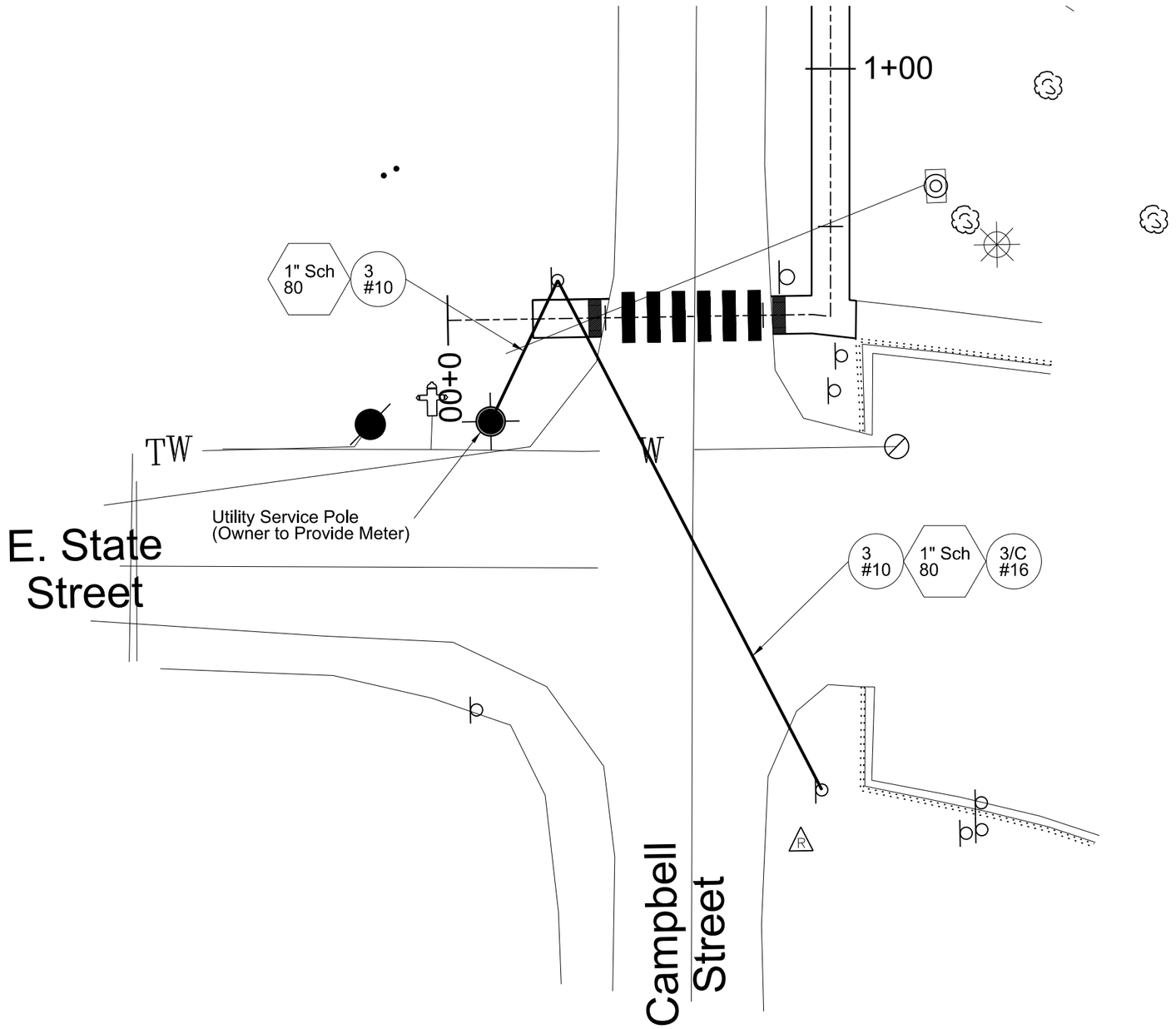
Sign	Location	Size	Post Length	Sign Intensity
R5-3 (No Motor Vehicles)	Sta. 0+54 - 6' L	24"x24"	8'	IV
S4-4 (When Flashing)	Sta. 0+60 - 235' R	24"x10"	N/A	XI
R5-3 (No Motor Vehicles)	Sta. 2+20 - 6' L	24"x24"	8'	IV
S4-3 (School)	Sta. 2+50 - 43' L	24"x8"	8' Exist.	XI
R2-1 (Speed Limit 15)	Sta. 2+50 - 43' L	24"x30"	N/A	IV
S4-4 (When Flashing)	Sta. 2+50-43' L	24"x10"	N/A	XI
R5-3 (No Motor Vehicles)	Sta. 2+69 - 6' R	24"x24"	8'	IV
R5-3 (No Motor Vehicles)	Sta. 7+30 - 6' R	24"x24"	8'	IV
R5-3 (No Motor Vehicles)	Sta. 7+75 - 6' R	24"x24"	8'	IV
R5-3 (No Motor Vehicles)	Sta. 11+05 - 16' R	24"x24"	8'	IV

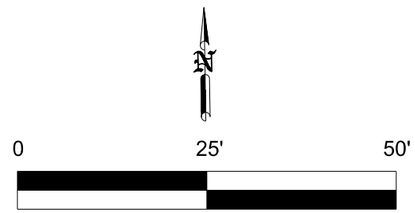
CONDUIT LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	11	38

Plotting Date: 4/25/15
Revised Date: 5/23/16
Initials: TLW

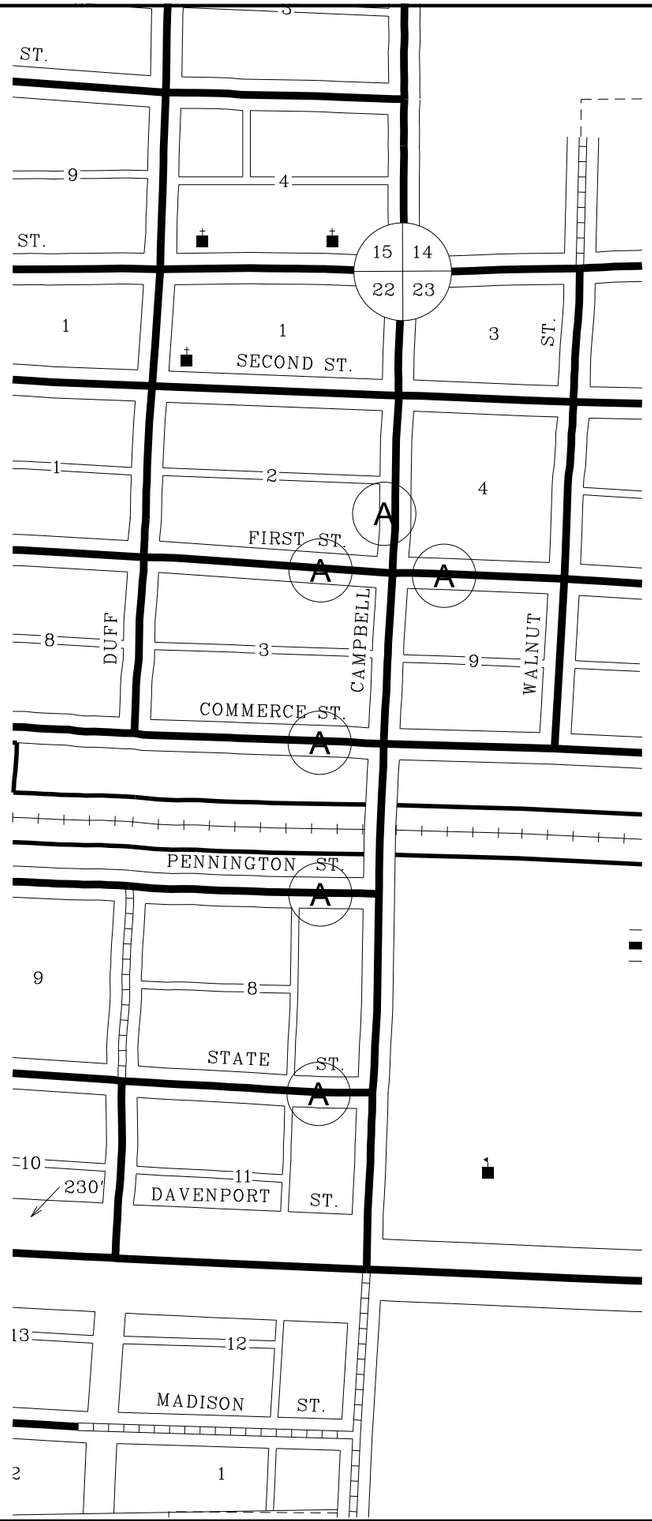
REVISED
5/23/16





ESTIMATE OF QUANTITIES

1" Sch 80	1" Rigid Conduit
3 #10	1/C #10 AWG Copper Wire
3/C #16	3/C #16 AWG IMSA Copper Cable, K1



TRAFFIC CONTROL

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	12	38

Plotting Date: 12/6/14
Revised Date: 5/23/16
Initials: TLW

REVISED
5/24/16

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R4-2	PASS WITH CARE	8	24" x 30"	5.0	40.0
W3-4	BE PREPARED TO STOP	4	48" x 48"	16.0	64.0
W8-6	TRUCK CROSSING	4	48" x 48"	16.0	64.0
W8-7	LOOSE GRAVEL	4	48" x 48"	16.0	64.0
W13-1P	ADVISORY SPEED (plaque)	8	30" x 30"	6.3	50.4
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16.0	64.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
W21-2	FRESH OIL	4	48" x 48"	16.0	64.0
G20-1	ROAD WORK NEXT __ MILES	8	36" x 18"	4.5	36.0
G20-2	END ROAD WORK	3	36" x 18"	4.5	13.5
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			523.9

A — Contractor shall provide traffic control per Standard Plate 634.03 for sidewalk mainline installation, as well as, construction of curb ramps in the intersections of quadrants. Only one quadrant of sidewalk shall be closed at a time to minimize impact to pedestrians.

EROSION CONTROL

0 25' 50'

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	13	38

Plotting Date: 4/25/15
Revised Date: x/xx/07
Initials: GB

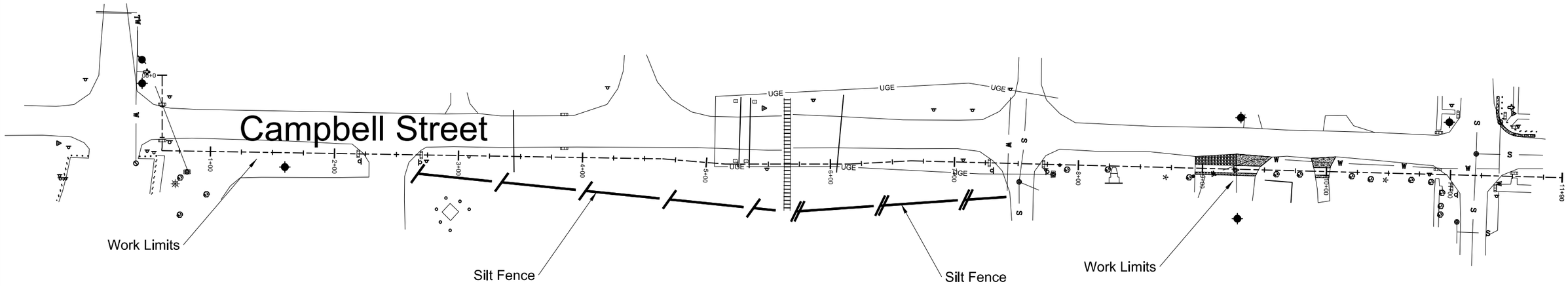
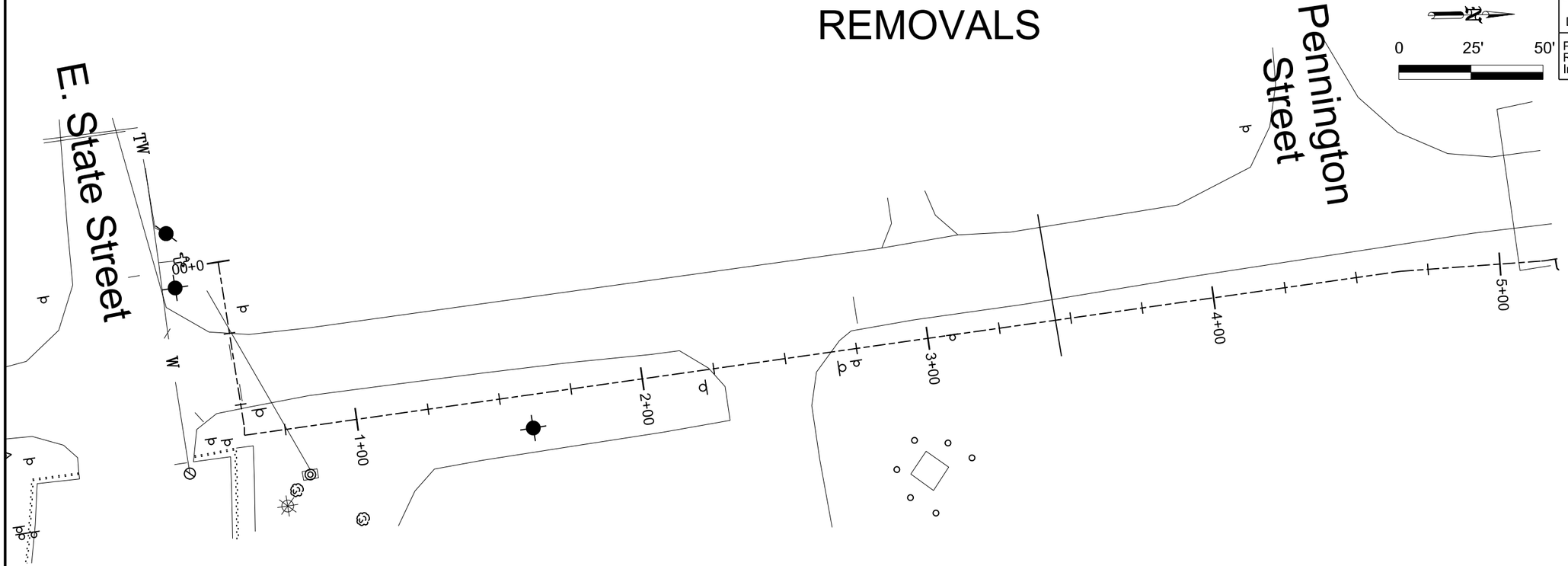


TABLE OF HIGH FLOW SILT FENCE

Station	L/R	Location	Quantity (Ft)
2+67 to 5+56	R	Campbell Street	290
5+75 to 7+43	R	Campbell Street	167
		Additional Quantity:	100
		Total:	557

REMOVALS



STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	14	38

Plotting Date: 4/25/15
Revised Date: x/xx/07
Initials: TLW

Sta. 0+18 - 6' L	Remove and Salvage Signs (S1-1,W16-7P) Reinstall on Pedestrian Crossing
Sta. 0+60 - 6' R	Remove and Reset Sign
Sta. 0+60 - 12' R	Remove and Reset Sign
Sta. 0+60 - 70' R	Remove and Salvage Signs (S1-1, W16-7P) Reinstall on Pedestrian Crossings
Sta. 0+60 - 235' R	Remove and Salvage Sign (S4-2)
Sta. 2+66 - 3' L	Remove and Reset Sign
Sta. 2+74 - 5' R	Remove and Reset Sign
Sta. 3+08 - 1' R	Remove and Reset Sign

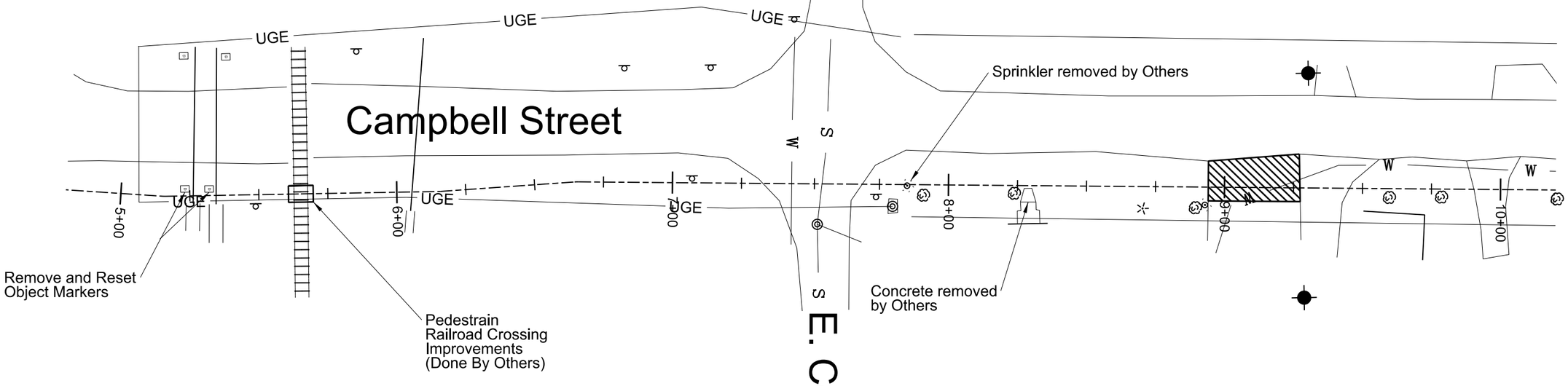
REMOVALS

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	15	38

Plotting Date: 4/25/15
Revised Date: 5/23/16
Initials: TLW

REVISED
5/23/16

0 25' 50'



Sta. 5+23 - 5' L	Remove and Reset Object Marker
Sta. 5+30 - 5' L	Remove and Reset Object Marker
Sta. 5+49 - 4' R	Remove and Reset Sign
Sta. 7+07 - 1' L	Remove and Reset Sign
Sta. 7+74 - 5' R	Remove and Reset Sign

Sta. 7+91 - 4' R	Remove Tree
Sta. 8+24 - 3' R	Remove Tree
Sta. 9+60 - 3' R	Remove Tree
Sta. 9+79 - 3' R	Remove Tree
Sta. 10+20 - 3' R	Remove Tree
Sta. 8+94 to 9+27	Remove 37 SY Asphalt Surfacing

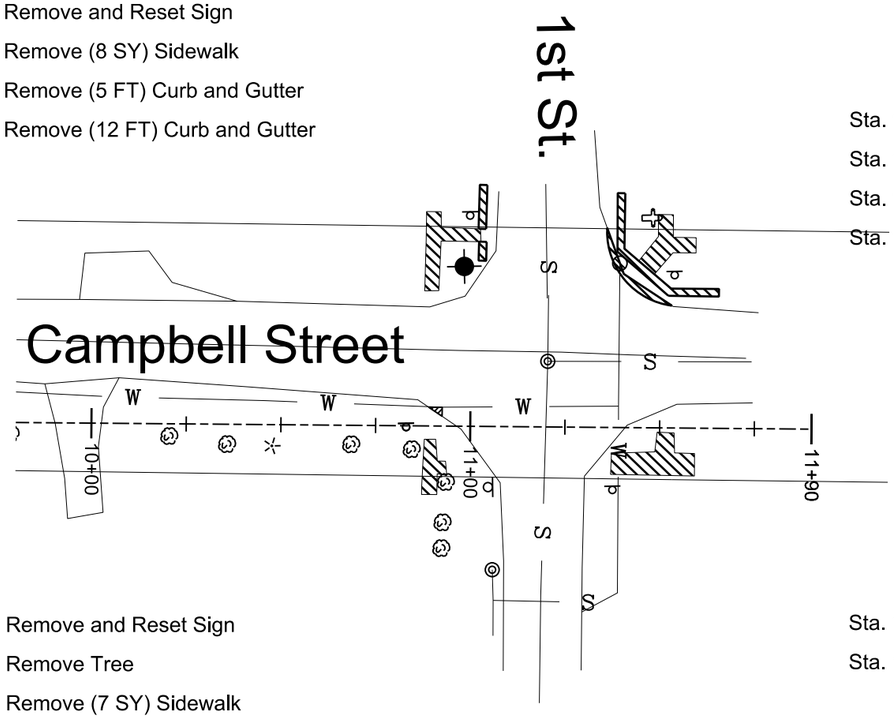
REMOVALS

0 25' 50'

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	16	38

Plotting Date: 4/25/15
Revised Date: x/xx/07
Initials: GB

Sta. 11+00 - 56' L	Remove and Reset Sign
Sta. 10+87 - 36' L to 11+02 - 64' L	Remove (8 SY) Sidewalk
Sta. 11+02 - 64' L to 11+02 - 52 ' L	Remove (5 FT) Curb and Gutter
Sta. 11+02 - 49' L to 11+02 - 44' L	Remove (12 FT) Curb and Gutter



Sta. 11+54 - 41' L	Remove and Reset Sign
Sta. 11+38 - 62' L to 11+65 37' L	Remove (43 FT) Curb and Gutter
Sta. 11+44 - 44' L to 11+59 - 50' L	Remove (12 SY) Sidewalk
Sta. 11+35 -64' L to 11+67 - 34' L	Remove (3 SY) Asphalt

Sta. 10+83	Remove and Reset Sign
Sta. 10+21 - 3' R	Remove Tree
Sta. 10+88 - 4' L to 10+94 - 13' L	Remove (7 SY) Sidewalk
Sta. 10+87 - 7' L to 10+93 - 5' L	Remove (1 SY) Asphalt

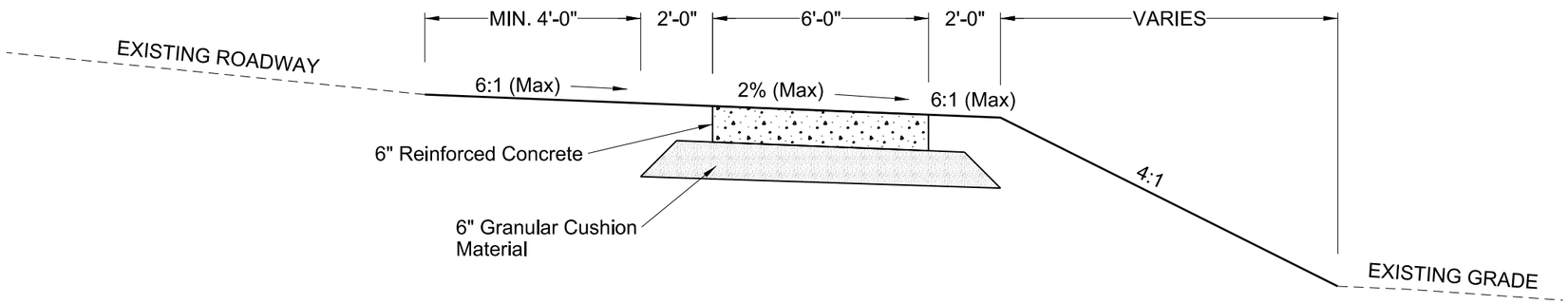
Sta. 11+38 - 16' R	Remove and Reset Sign
Sta. 11+37 - 12' R to 11+59 - 13' R	Remove (18 SY) Sidewalk

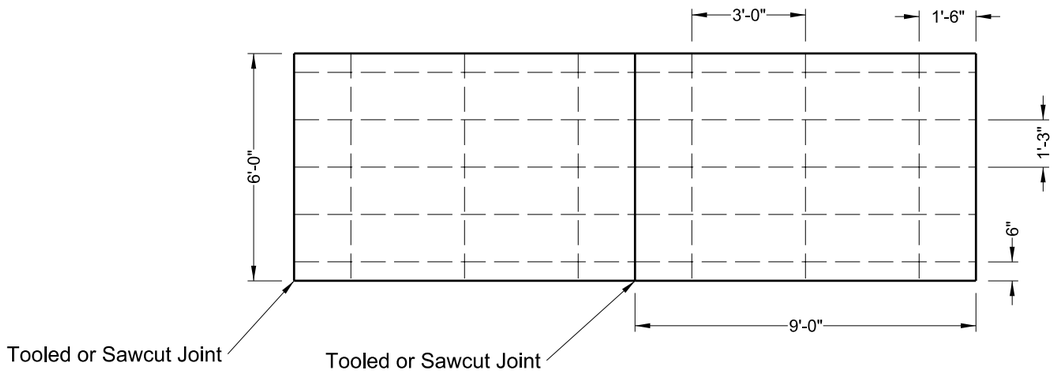
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	17	38

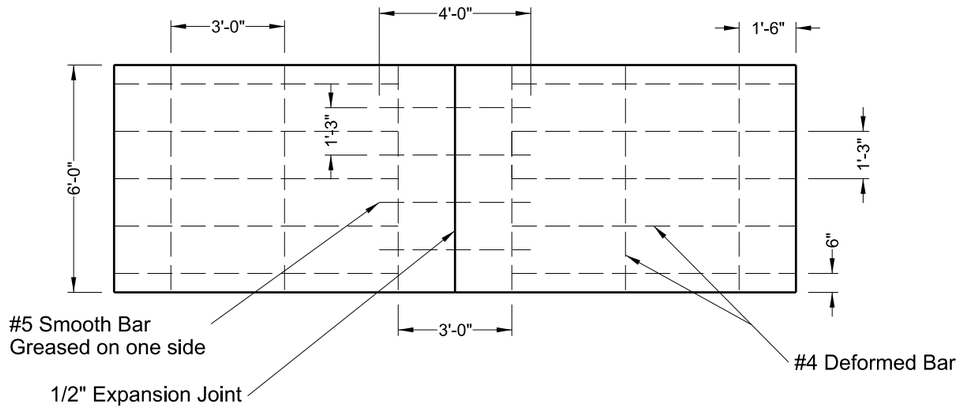
Plotting Date: 4/25/15
Revised Date: 4/25/15
Initials: TLW

SHARED USE PATH TYPICAL SECTION

SECTION 0+00 TO 10+91







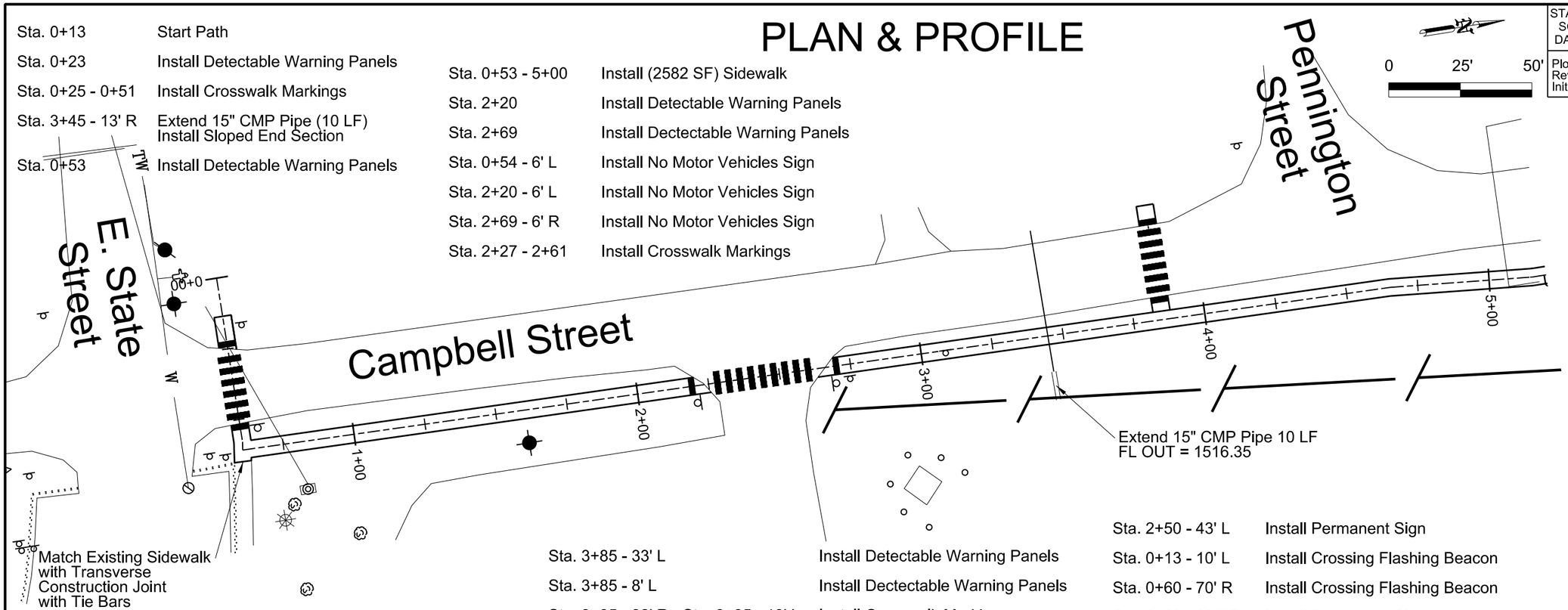
PLAN & PROFILE

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	18	38

Plotting Date: 4/25/15
Revised Date: x/xx/07
Initials: GB

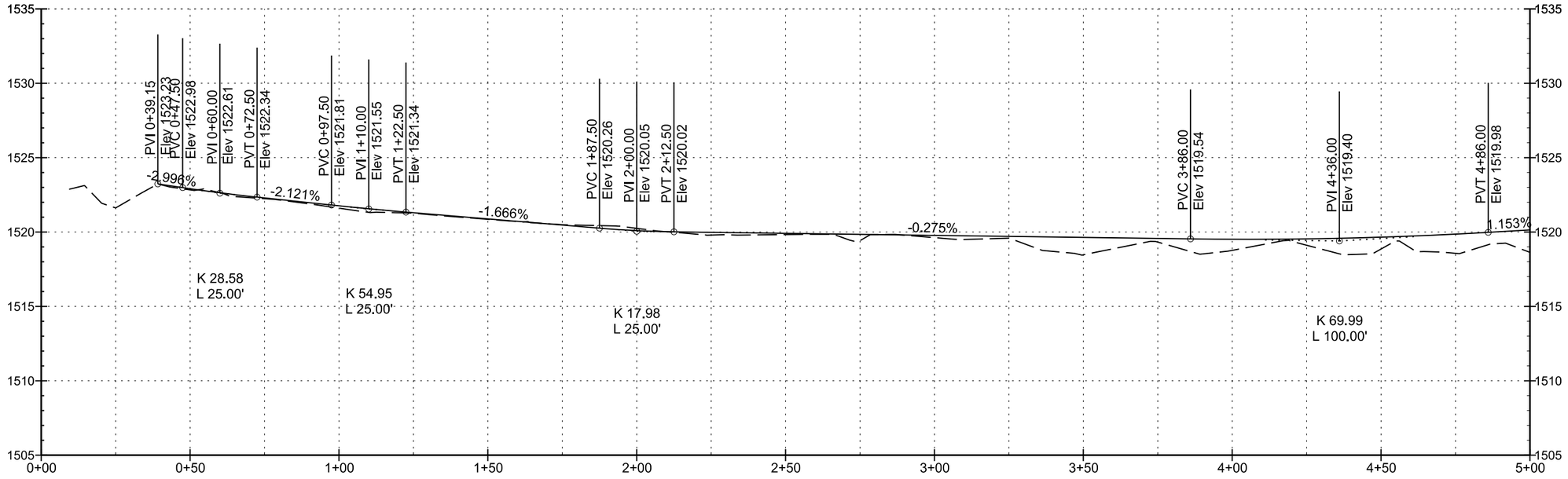
Sta. 0+13	Start Path
Sta. 0+23	Install Detectable Warning Panels
Sta. 0+25 - 0+51	Install Crosswalk Markings
Sta. 3+45 - 13' R	Extend 15" CMP Pipe (10 LF) Install Sloped End Section
Sta. 0+53	Install Detectable Warning Panels

Sta. 0+53 - 5+00	Install (2582 SF) Sidewalk
Sta. 2+20	Install Detectable Warning Panels
Sta. 2+69	Install Dectectable Warning Panels
Sta. 0+54 - 6' L	Install No Motor Vehicles Sign
Sta. 2+20 - 6' L	Install No Motor Vehicles Sign
Sta. 2+69 - 6' R	Install No Motor Vehicles Sign
Sta. 2+27 - 2+61	Install Crosswalk Markings



Sta. 3+85 - 33' L	Install Detectable Warning Panels
Sta. 3+85 - 8' L	Install Dectectable Warning Panels
Sta. 3+85 - 32' R - Sta. 3+85 - 10' L	Install Crosswalk Markings

Sta. 2+50 - 43' L	Install Permanent Sign
Sta. 0+13 - 10' L	Install Crossing Flashing Beacon
Sta. 0+60 - 70' R	Install Crossing Flashing Beacon
Sta. 0+60 - 235' R	Install Permanent Sign



PLAN & PROFILE

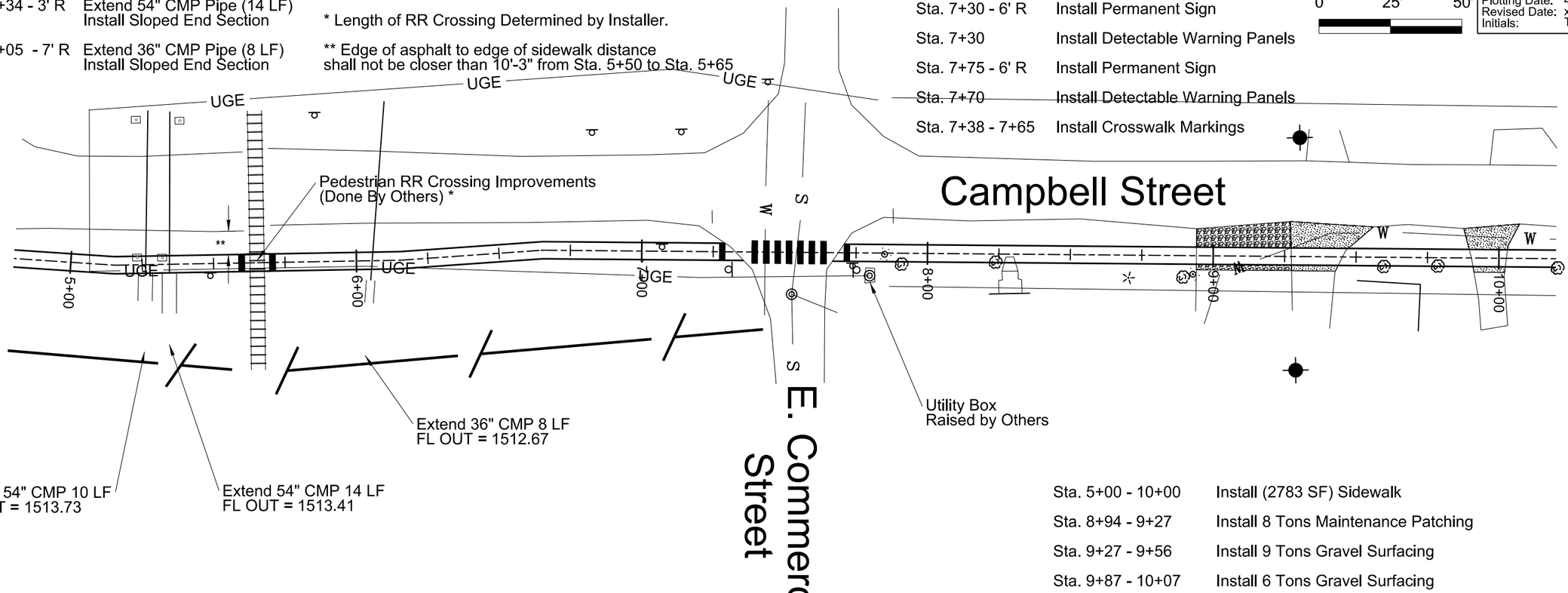
Sta. 5+26 - 3' R	Extend 54" CMP Pipe (10 LF) Install Sloped End Section	Sta. 5+59 Install Detectable Warning Panels
		Sta. 5+70 Install Detectable Warning Panels
Sta. 5+34 - 3' R	Extend 54" CMP Pipe (14 LF) Install Sloped End Section	* Length of RR Crossing Determined by Installer.
Sta. 6+05 - 7' R	Extend 36" CMP Pipe (8 LF) Install Sloped End Section	** Edge of asphalt to edge of sidewalk distance shall not be closer than 10'-3" from Sta. 5+50 to Sta. 5+65

Sta. 7+30 - 6' R	Install Permanent Sign
Sta. 7+30	Install Detectable Warning Panels
Sta. 7+75 - 6' R	Install Permanent Sign
Sta. 7+70	Install Detectable Warning Panels
Sta. 7+38 - 7+65	Install Crosswalk Markings

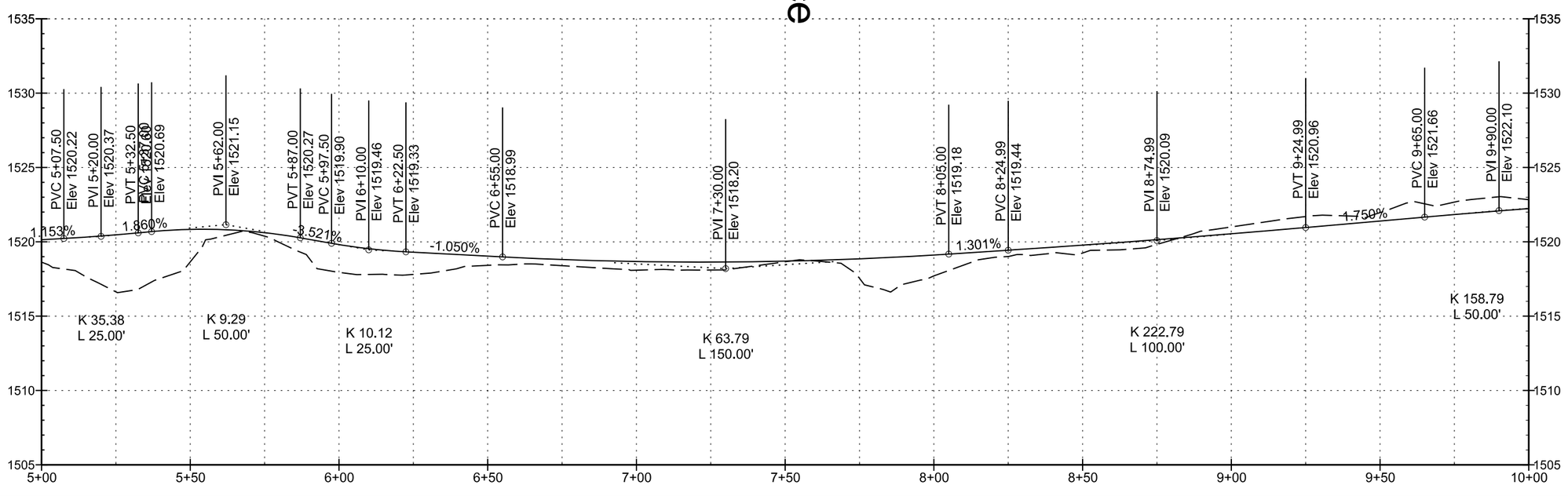
0 25' 50'

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	19	38

Plotting Date: 4/25/15
Revised Date: x/xx/07
Initials: TLW



Sta. 5+00 - 10+00	Install (2783 SF) Sidewalk
Sta. 8+94 - 9+27	Install 8 Tons Maintenance Patching
Sta. 9+27 - 9+56	Install 9 Tons Gravel Surfacing
Sta. 9+87 - 10+07	Install 6 Tons Gravel Surfacing



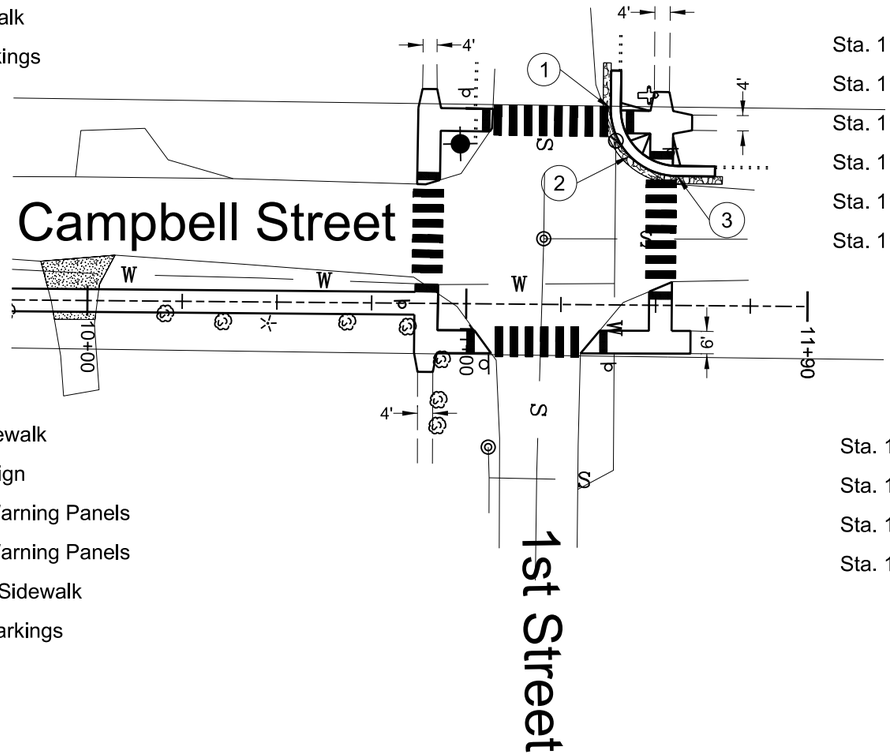
PLAN & PROFILE

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	20	38

0 25' 50'

Plotting Date: 4/25/15
Revised Date: x/xx/07
Initials: TLW

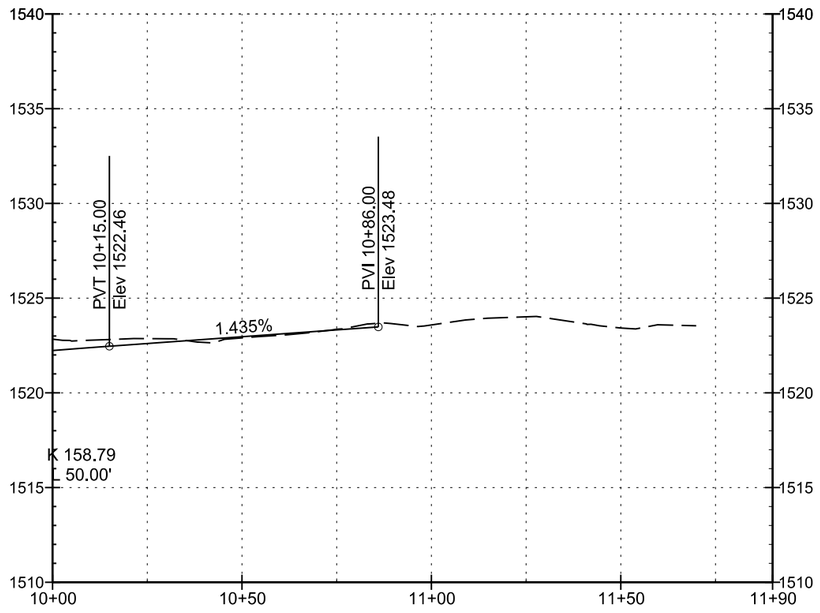
Sta. 11+05 - 49' L	Install Detectable Warning Panels
Sta. 11+09 - 50' L	Install Detectable Warning Panels
Sta. 10+85 - 33' L to 11+07 - 52' L	Install (248 SF) Sidewalk
Sta. 10+90 - 30' L to 10+90 - 8' L	Install Crosswalk Markings



Sta. 11+51 - 39' L	Install Type 2 Curb Ramp with Detectable Warning Panels
Sta. 11+42 - 48' L	Install Type 2 Curb Ramp with Detectable Warning Panels
Sta. 11+40 - 51' R to 11+59 - 50' L	Install (218 SF) Sidewalk
Sta. 11+40 - 62' R to 11+65 - 37' L	Install (44 LF) Curb and Gutter
Sta. 11+07 - 48' L to 11+37 - 48' L	Install Crosswalk Markings
Sta. 11+38 - 64' L to 11+67 - 34' L	Install 3 Tons of Asphalt Patching

Sta. 10+00 - 10+89	Install (725 SF) Sidewalk
Sta. 11+05 - 16' R	Install Permanent Sign
Sta. 10+89 - 5' L	Install Detectable Warning Panels
Sta. 11+05 - 10' R	Install Detectable Warning Panels
Sta. 7+67 - 3' R to 11+06 - 13' R	Install (2158 SF) of Sidewalk
Sta. 11+30 - 10' R to 11+08 - 10' R	Install Crosswalk Markings

Sta. 11+34 - 10' R	Install Detectable Warning Panels
Sta. 11+51 - 2' L	Install Detectable Warning Panels
Sta. 11+33 - 15' R to 11+59 - 7' R	Install (247 SF) of Sidewalk
Sta. 11+51 - 33' L to 11+51 - 7' L	Install Crosswalk Markings



1
Sta 11+55.34 - Off 34.15 L
Bgn Str C&G
Bgn 15' Rad
TC Elev. 24.05 (Theor)

2
Sta 11+42.84 - Off 39.36 L
Mid 15' Rad
TC Elev. 24.15 (Theor)

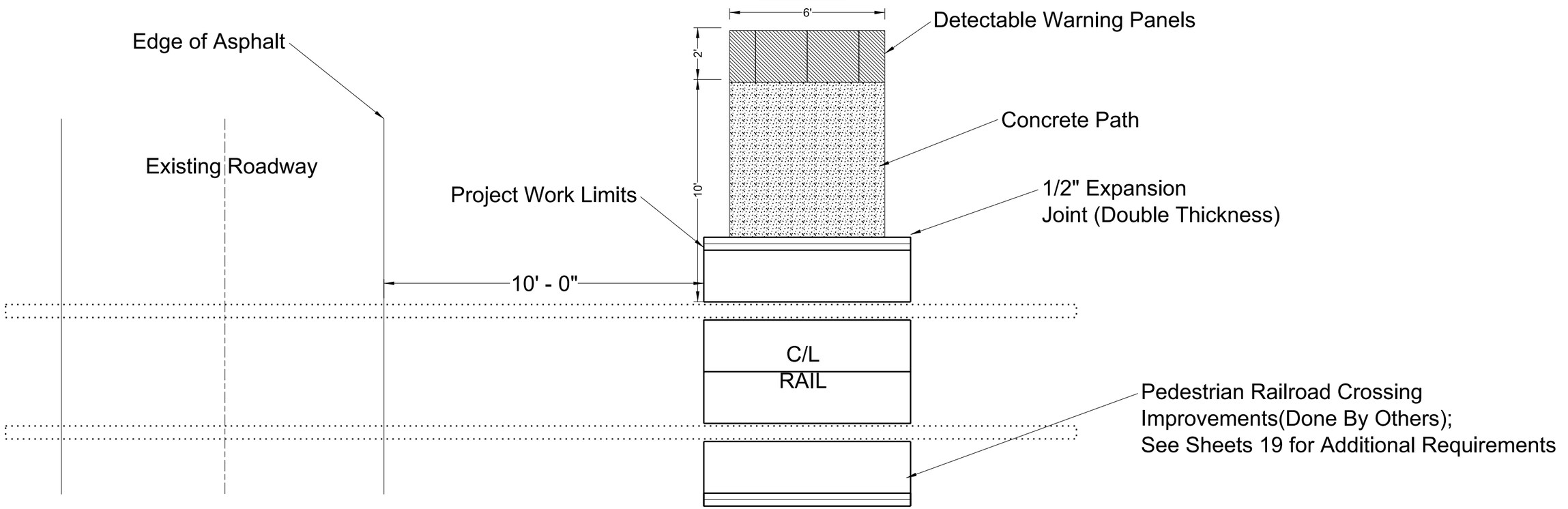
3
Sta 11+37.70 - Off 51.89 L
End Str C&G
End 15' Rad
TC Elev. 24.00 (Theor)

RR CROSSING DETAIL

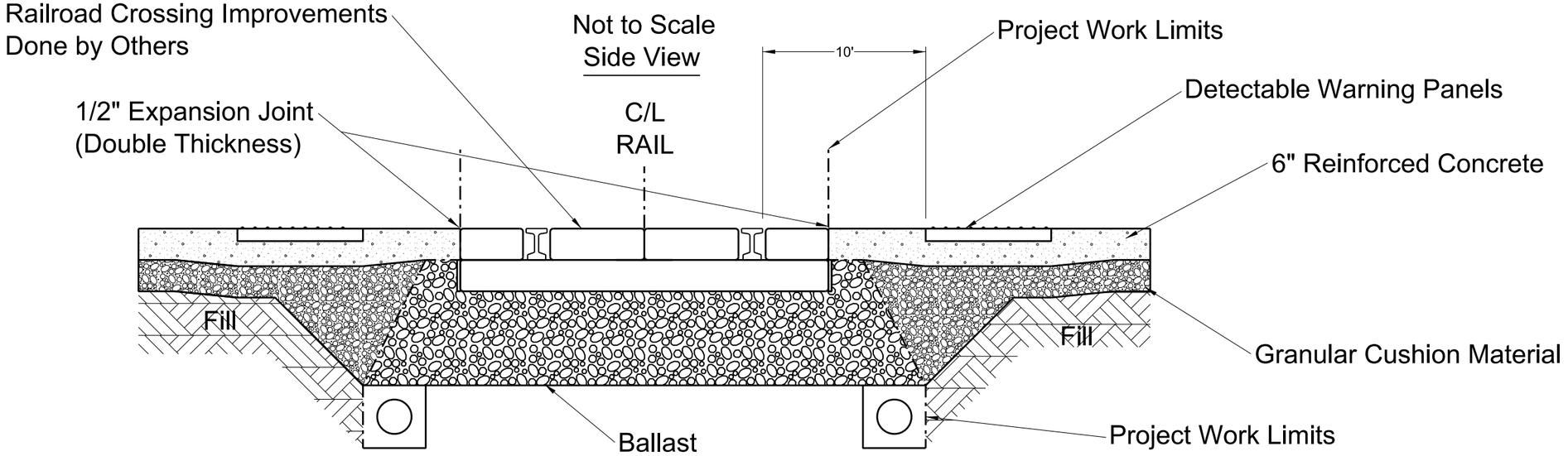
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	21	38

Plotting Date: 4/25/15
Revised Date: x/xx/xx
Initials: TLW

Not to Scale
Top View



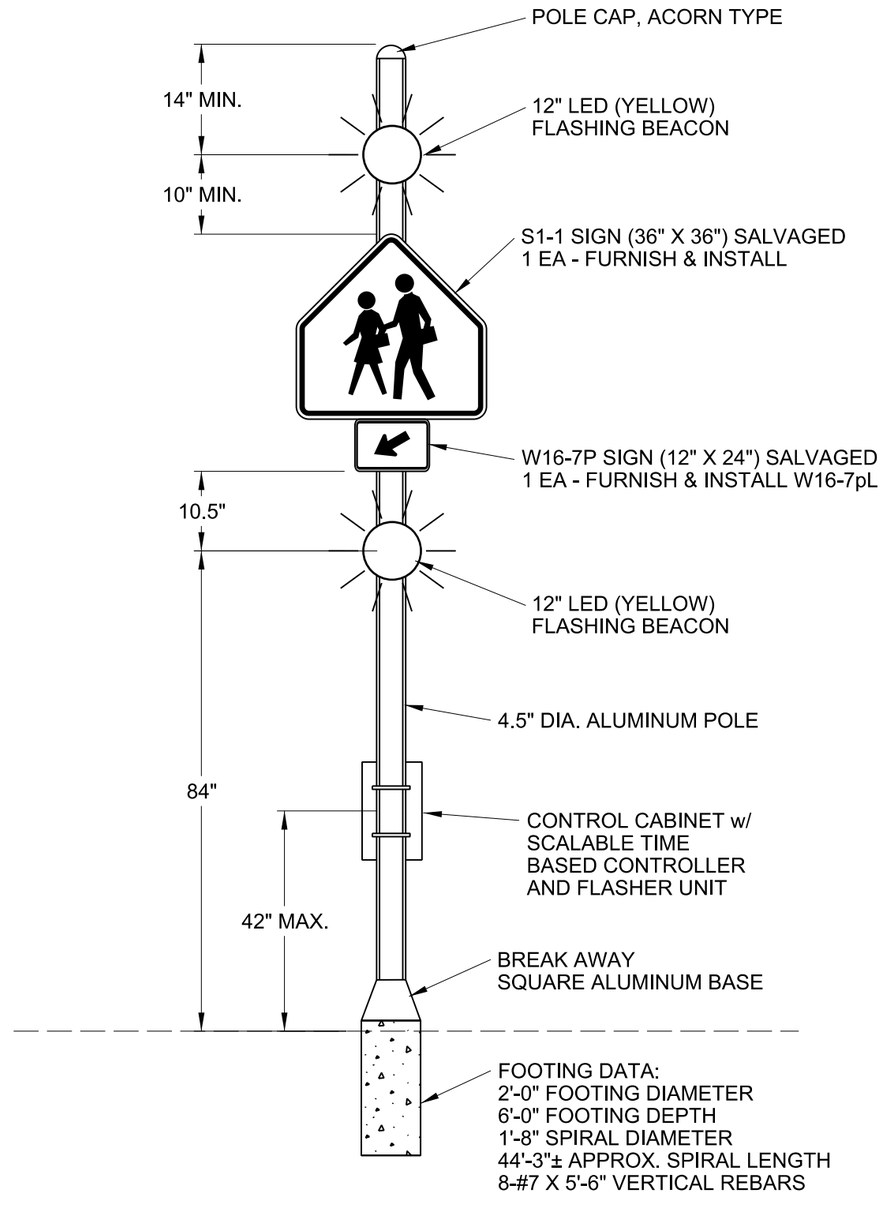
Not to Scale
Side View



PERMANENT TRAFFIC CONTROL

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	22	38

Plotting Date: 12/6/14
Revised Date: 03/12/15
Initials: EJC



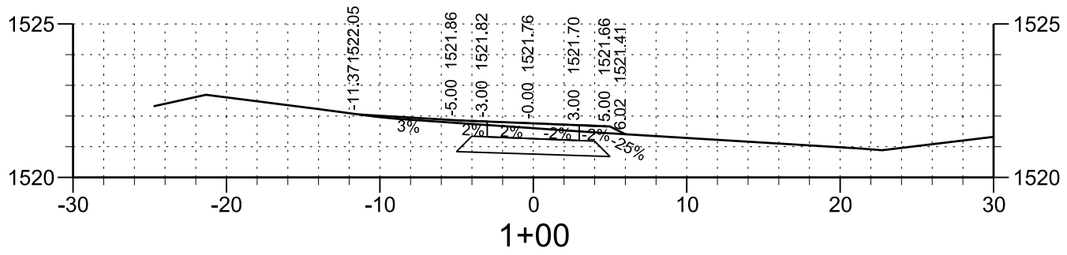
NOTES:

1. Anchor rods shall be hot dipped galvanized per ASTM A-123.
2. Bolts shall be Grade 5 with minimum length of 60 inches.
3. Control cabinet to be mounted on NW pole.

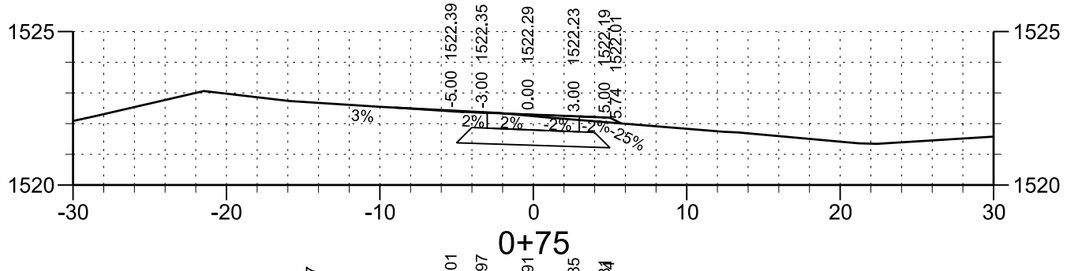
AC POWERED PEDESTRIAN CROSSING FLASHING BEACON / NO PUSH BUTTON

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	23	38

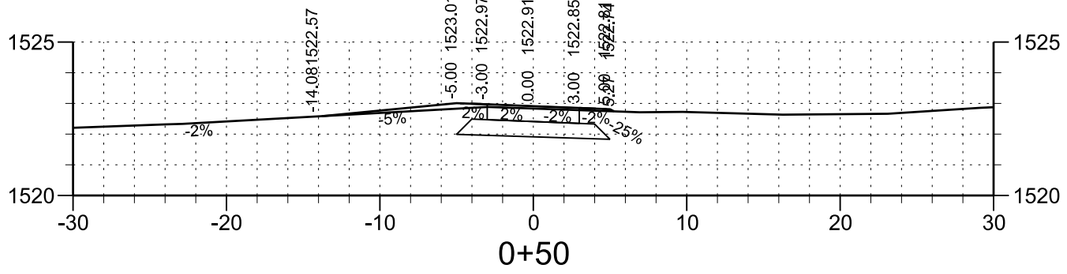
Plotting Date: 4/25/15
Revised Date: x/xx/07
Initials: GB



1+00



0+75



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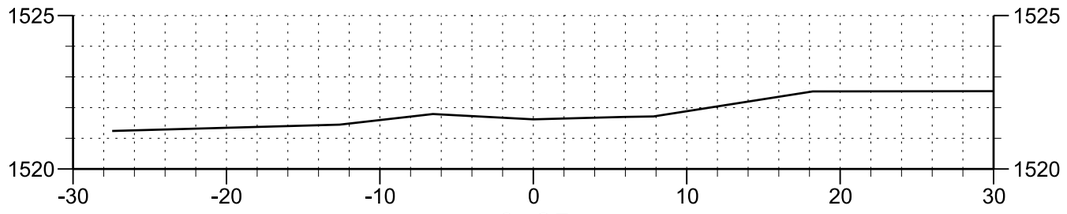

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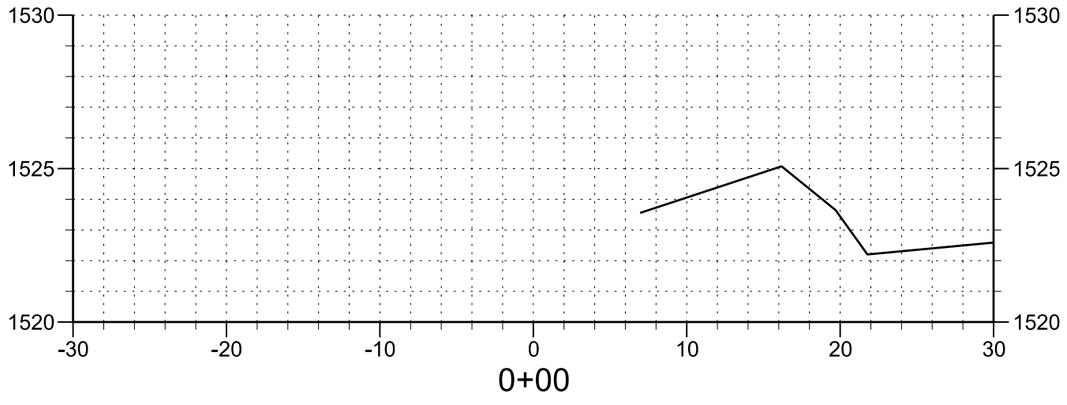
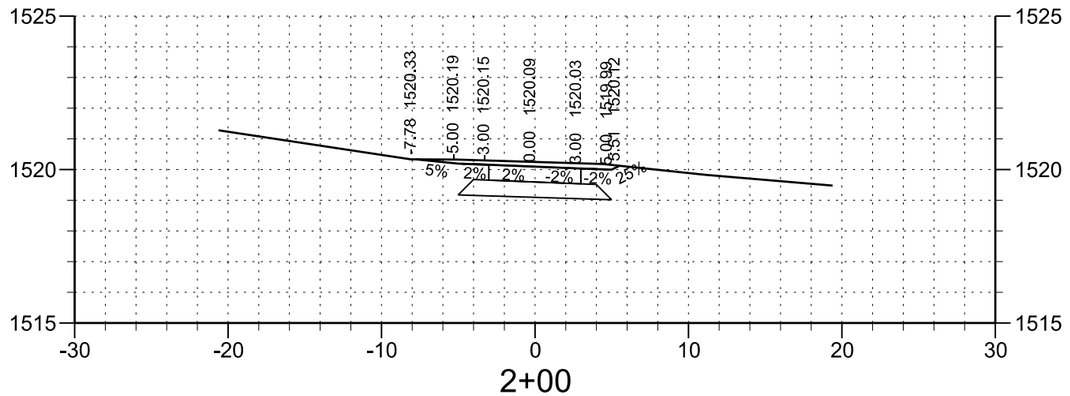
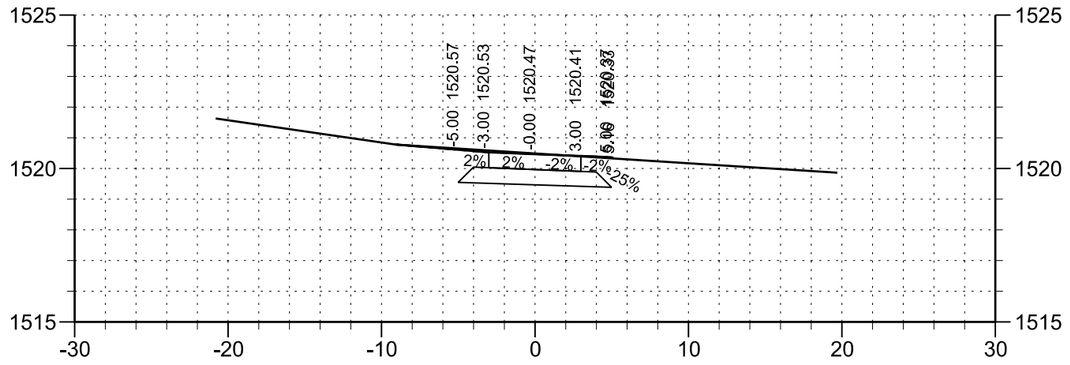


0+00



2+00



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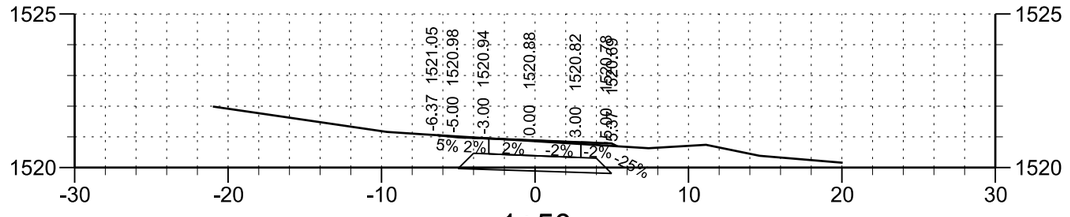
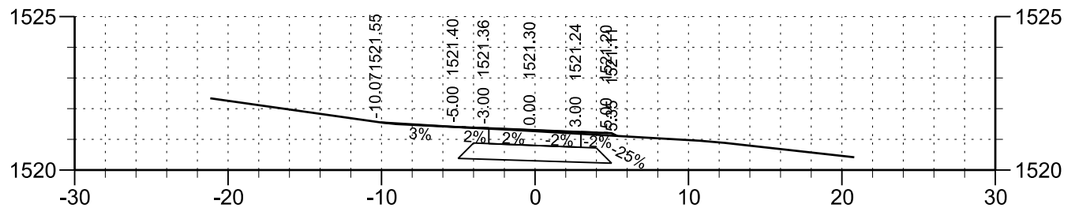


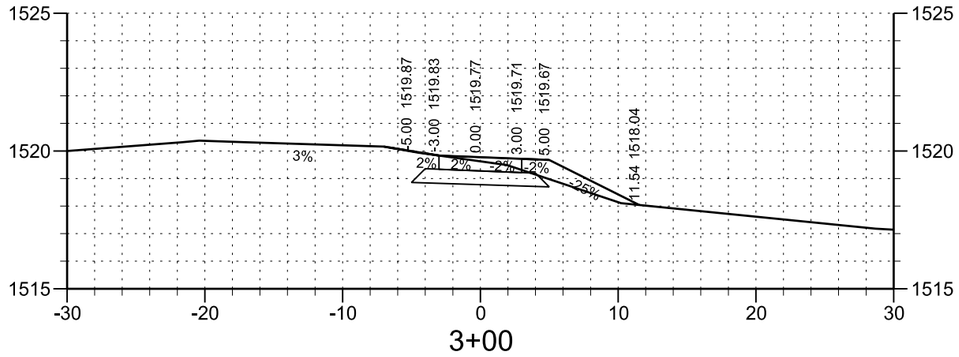
1+50



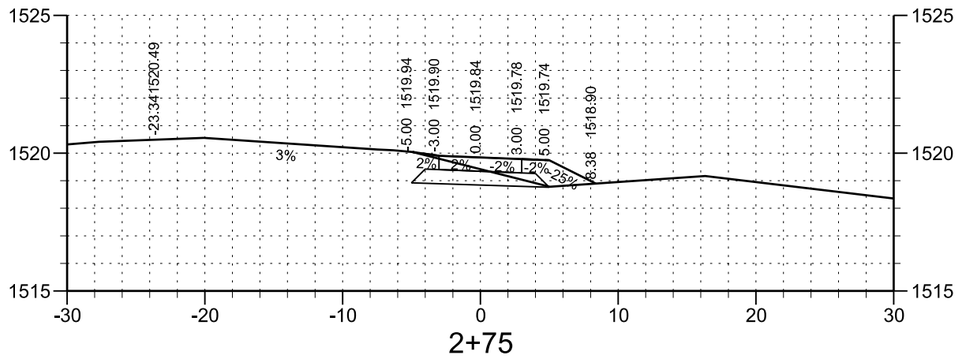
1+25

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	24	38

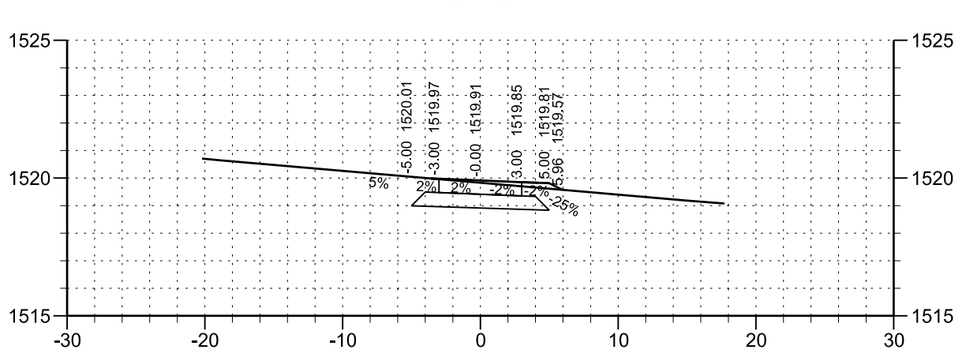
Plotting Date: 4/25/15
Revised Date: x/xx/07
Initials: TLW



3+00



2+75



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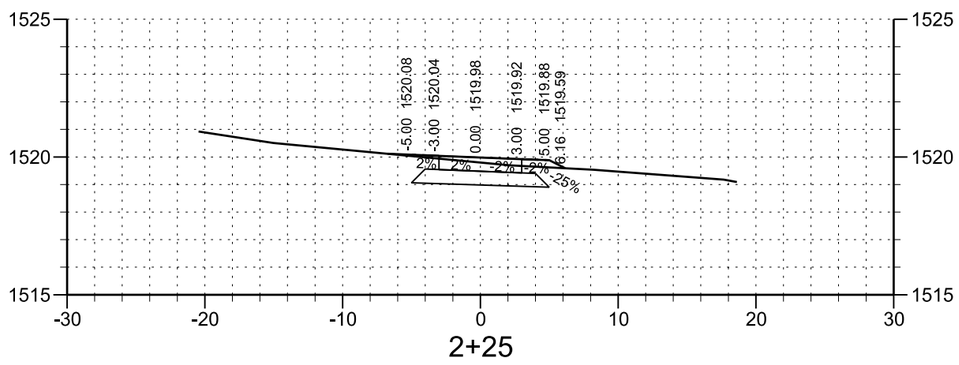

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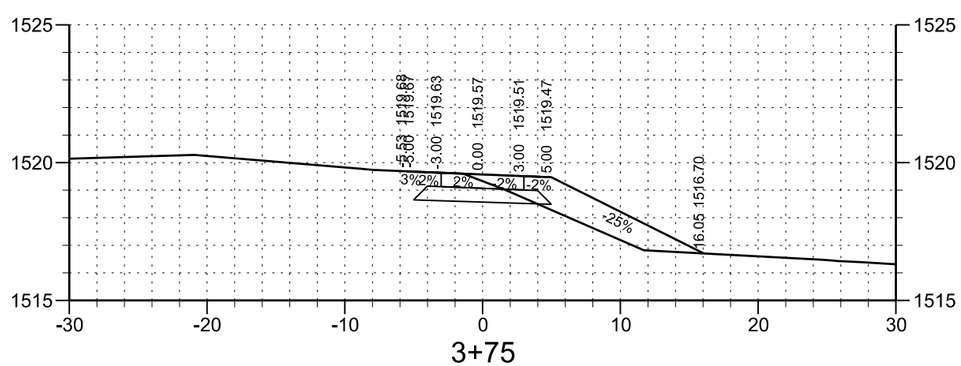

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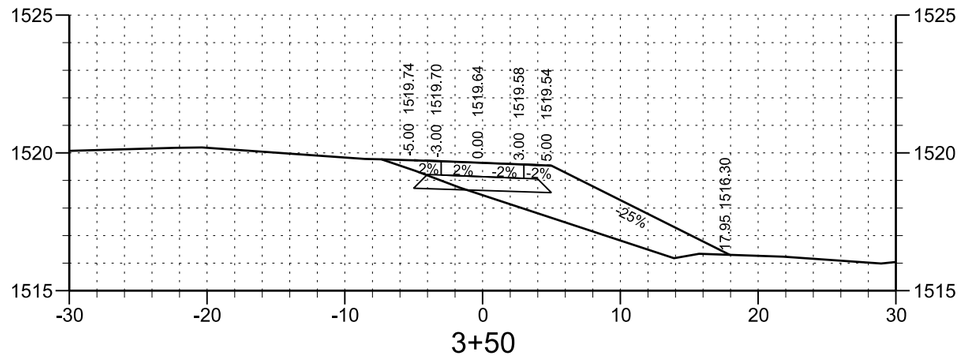

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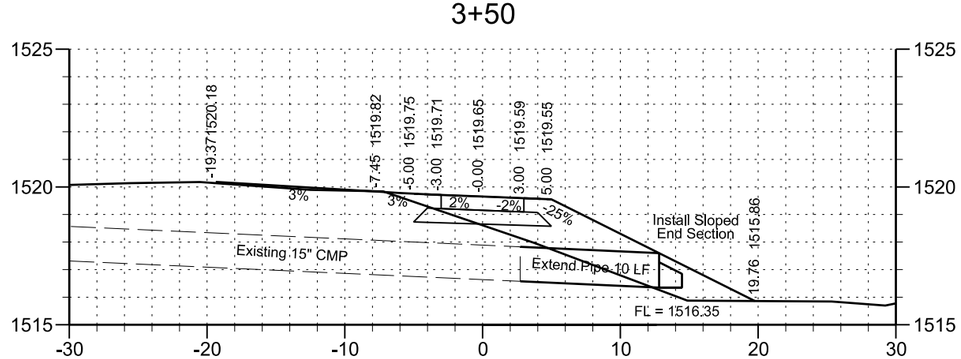

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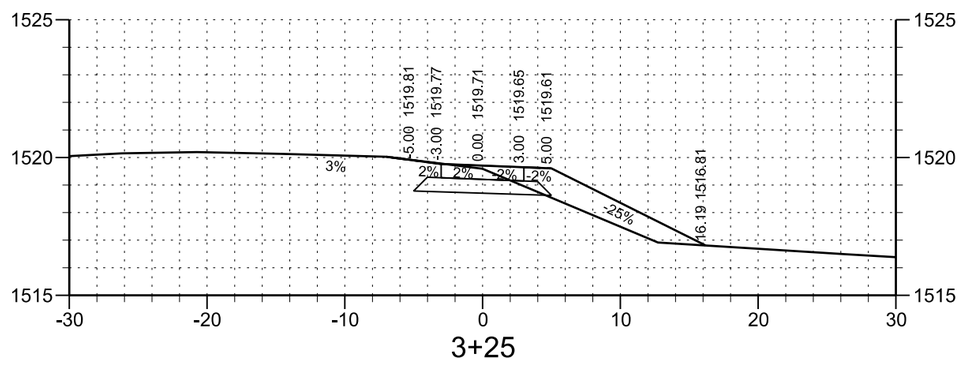
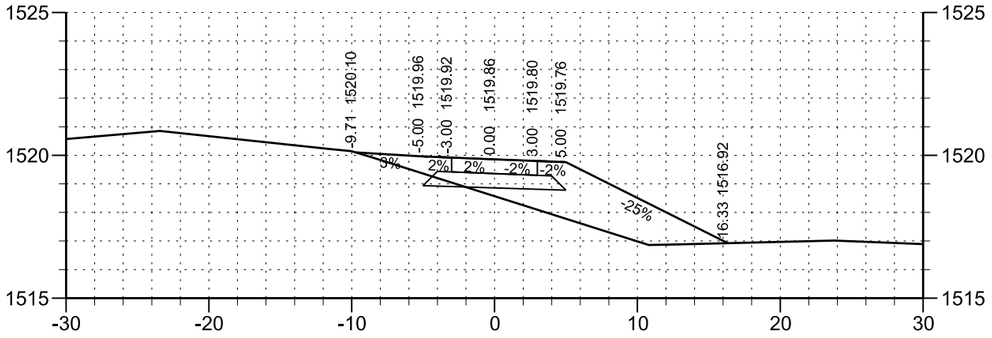


3+25

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	25	38

Plotting Date: 4/25/15
Revised Date: x/xx/07
Initials: TLW



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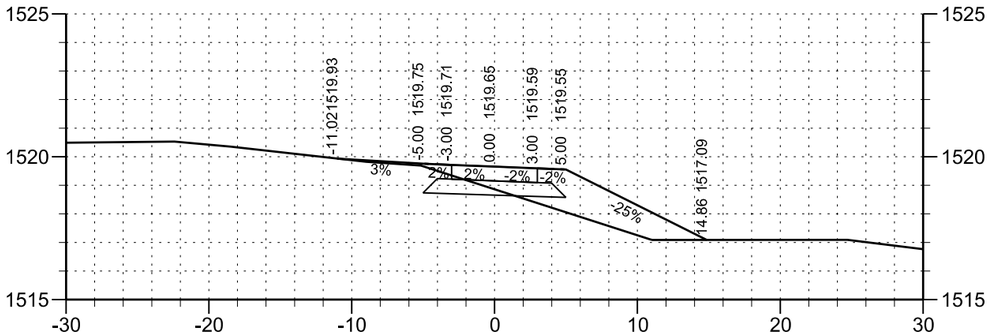

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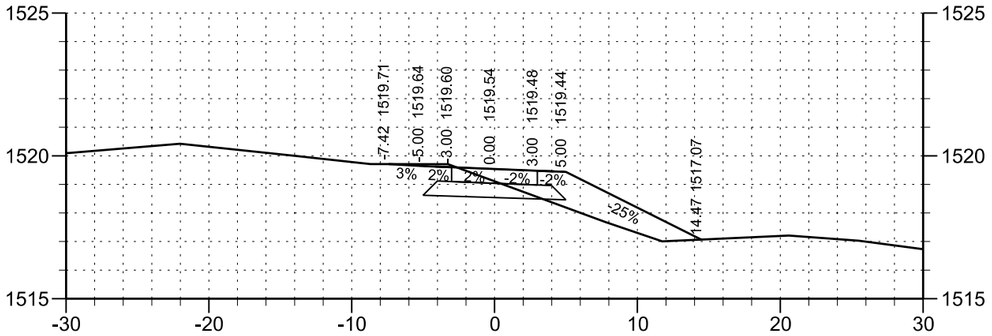

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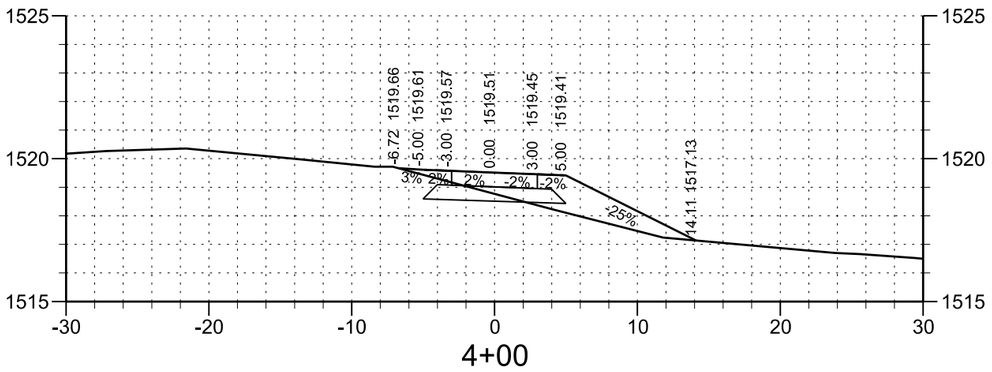

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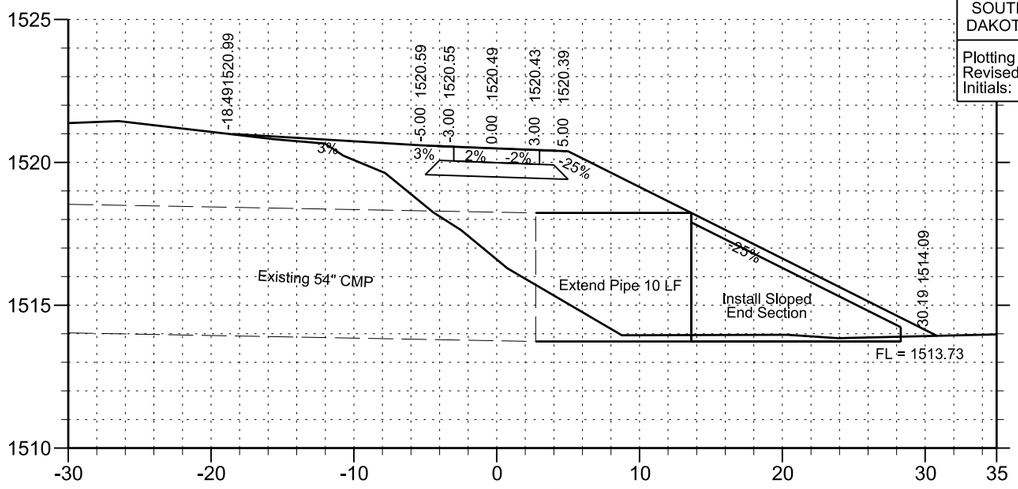

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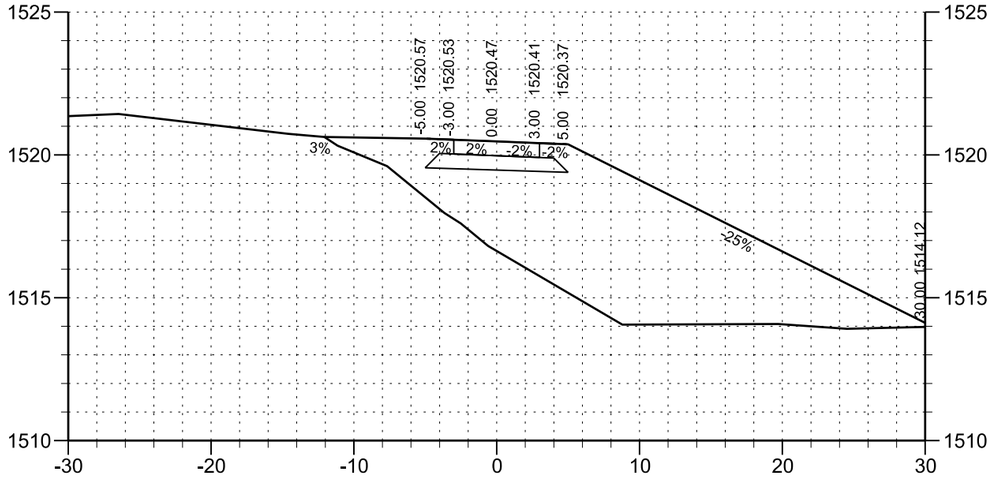

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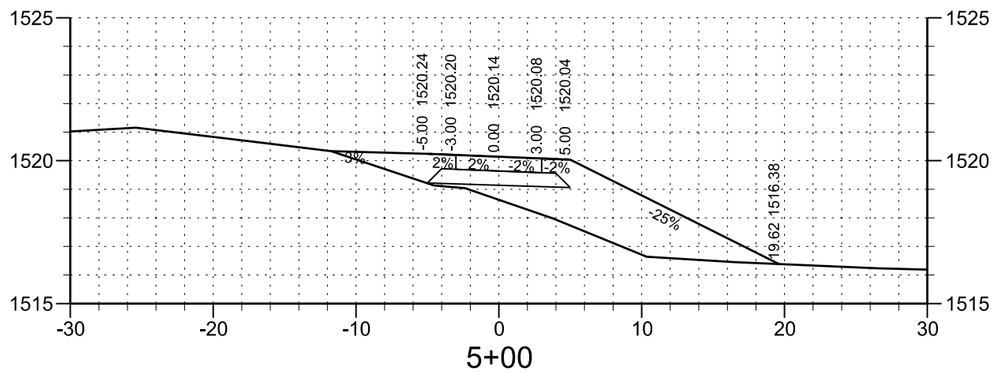
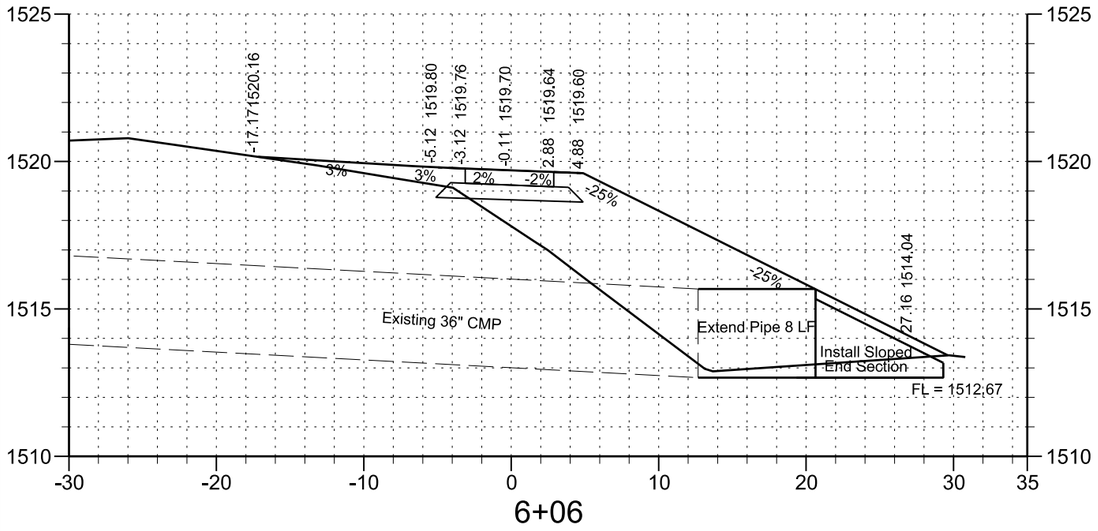
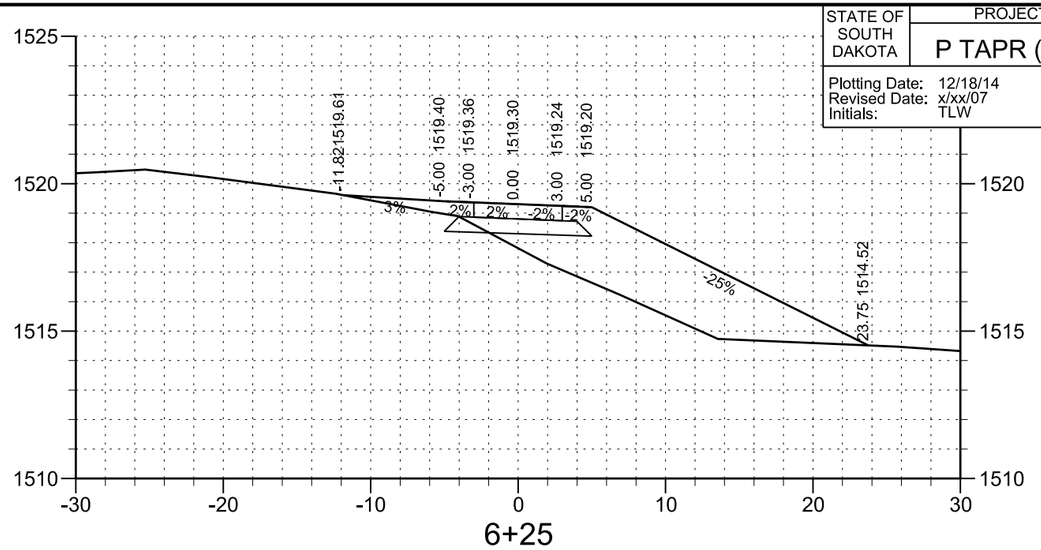


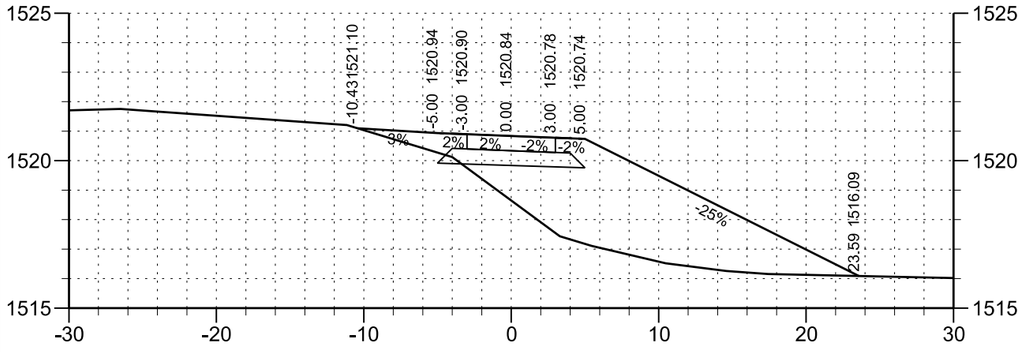
5+00

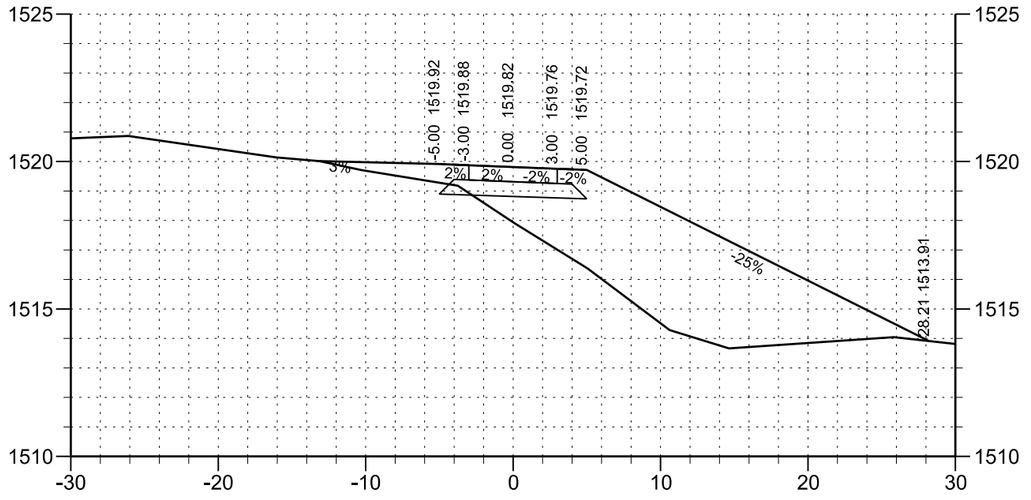
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	26	38

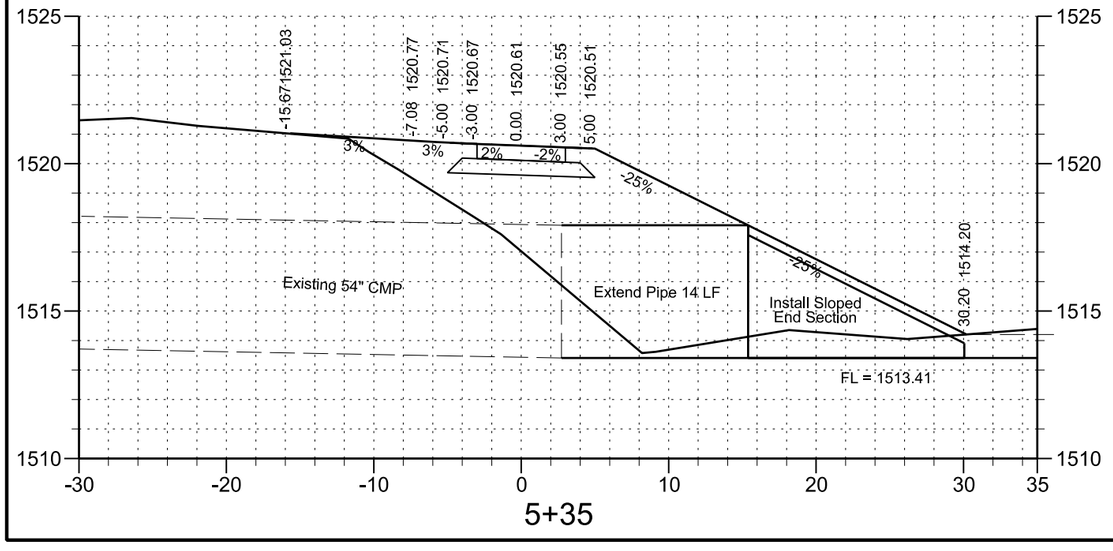
Plotting Date: 12/18/14
Revised Date: x/xx/07
Initials: TLW

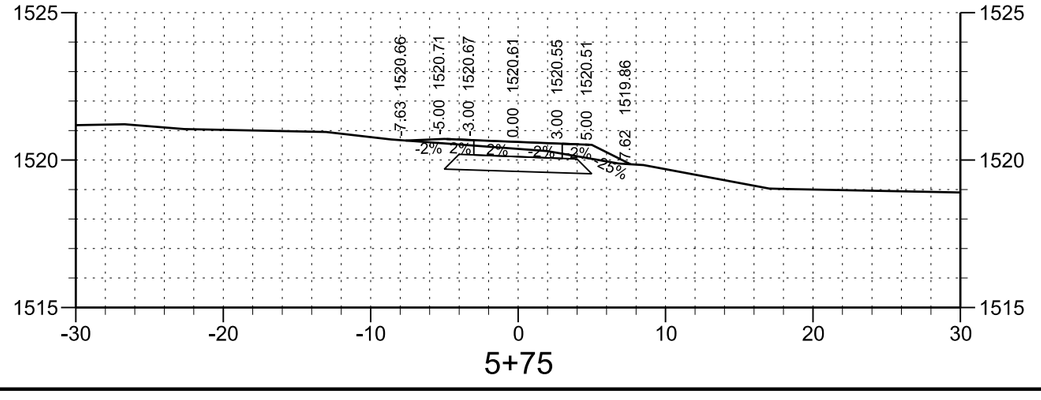






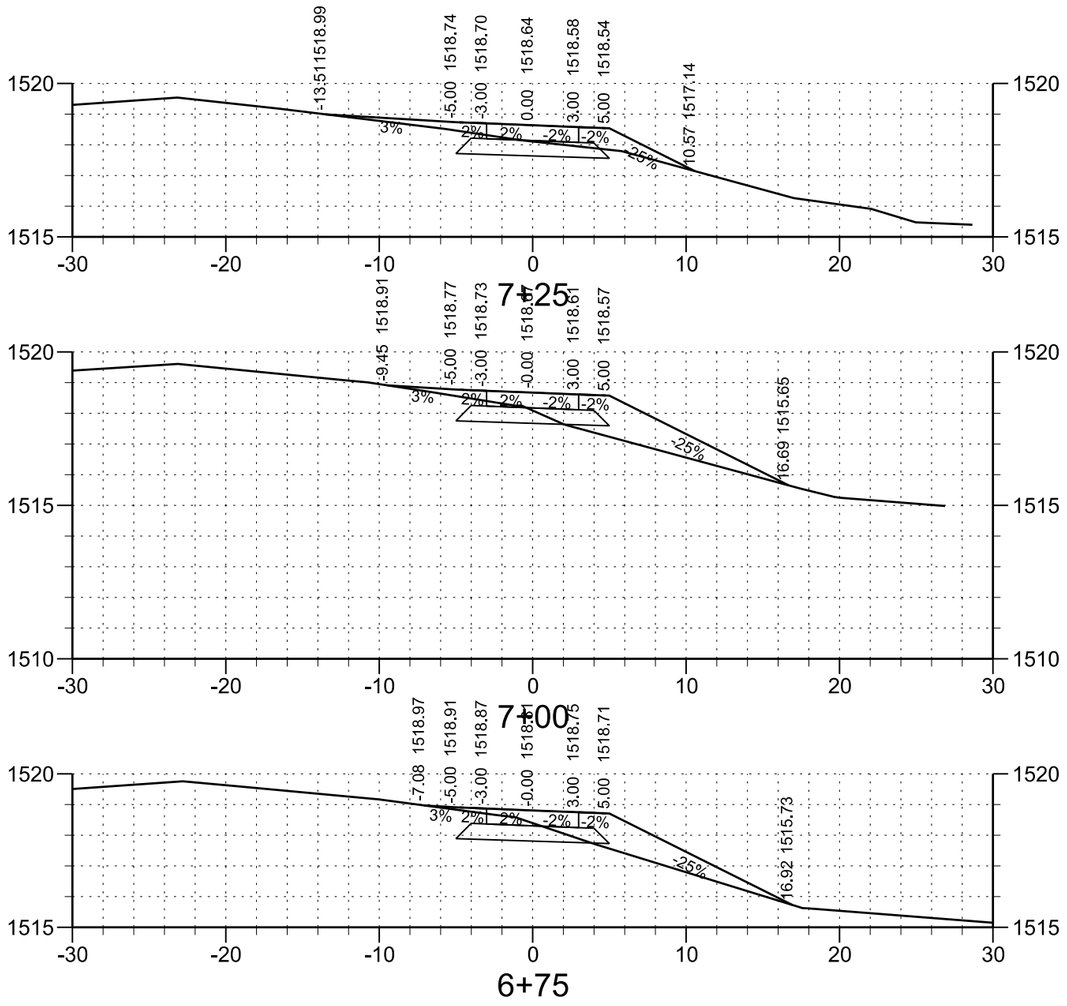


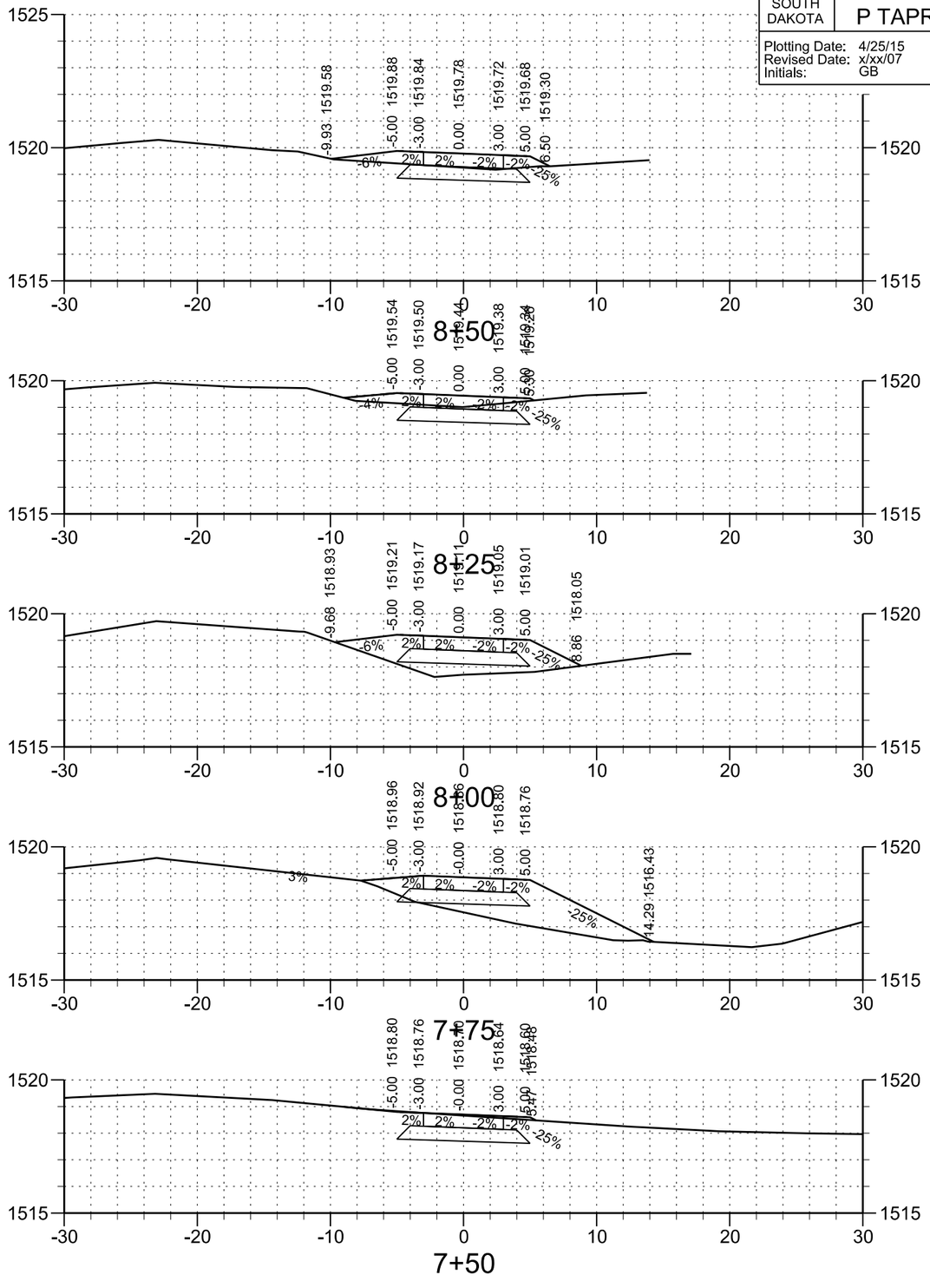




STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	27	38

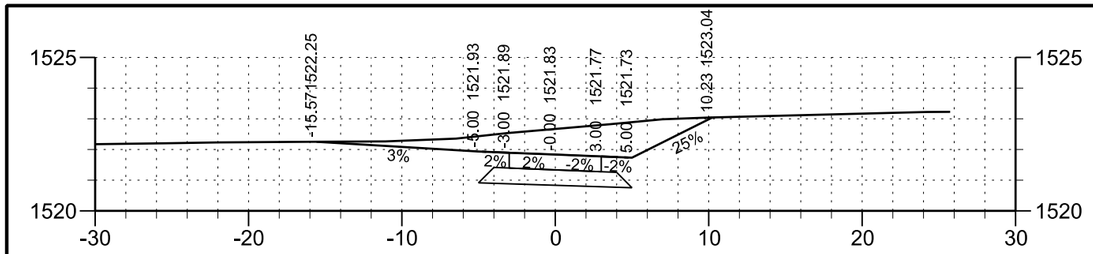
Plotting Date: 4/25/15
Revised Date: x/xx/07
Initials: GB



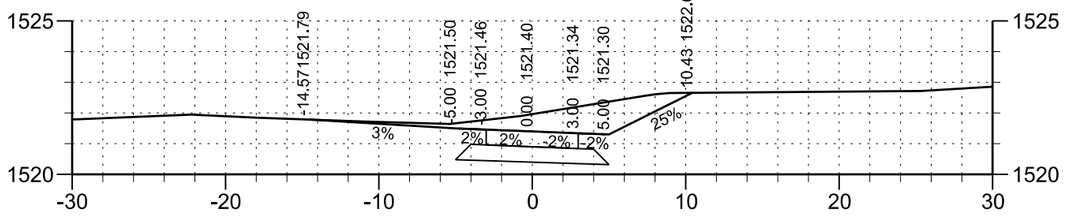


STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	28	38

Plotting Date: 4/25/15
Revised Date: x/xx/07
Initials: GB



9+75



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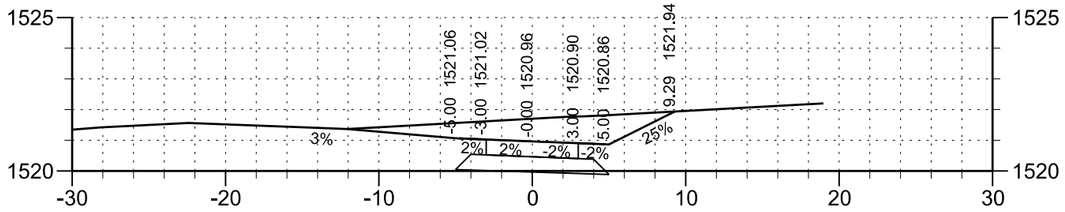

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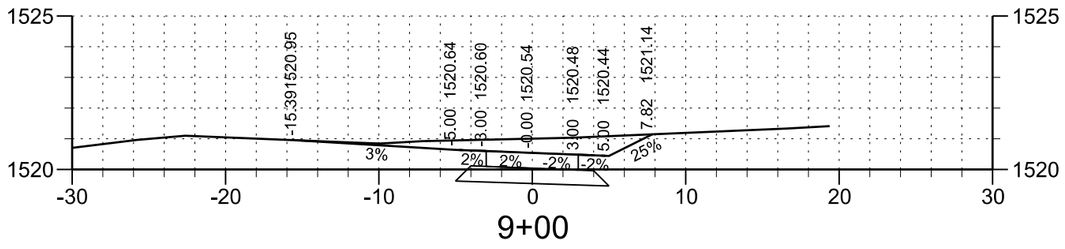

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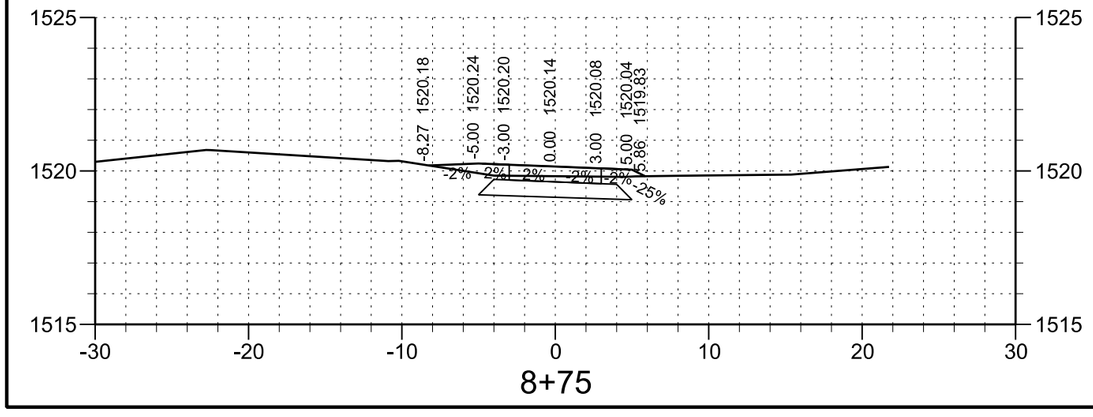

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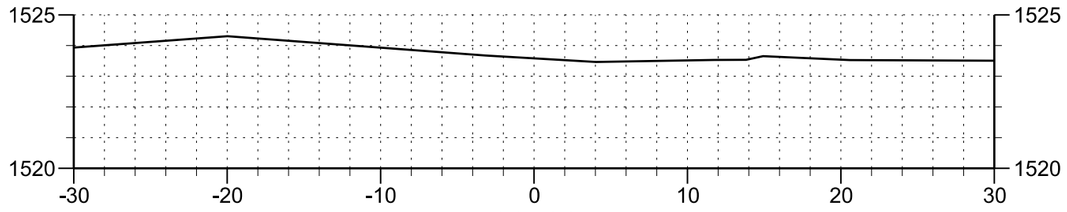

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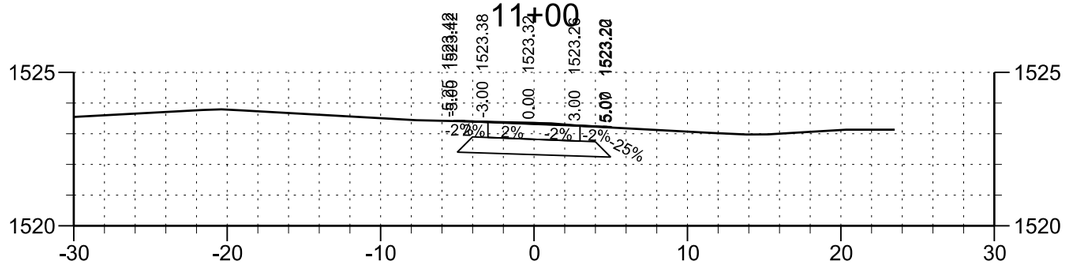
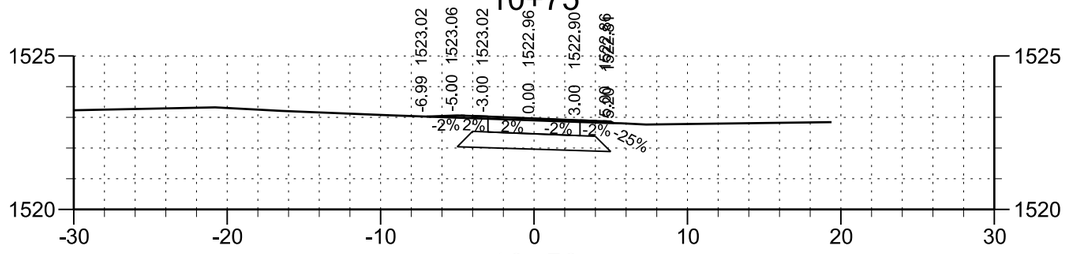


10+75



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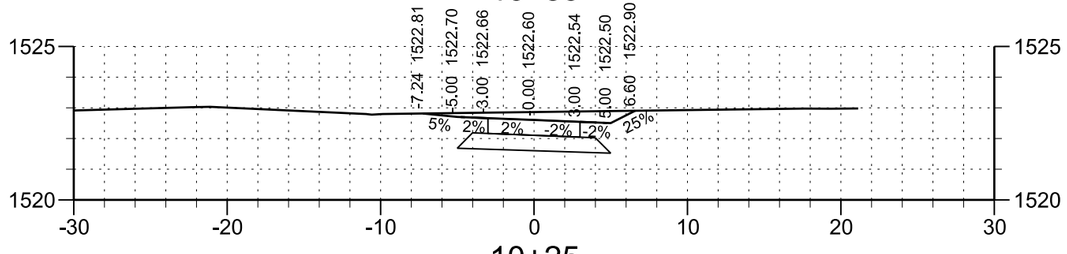

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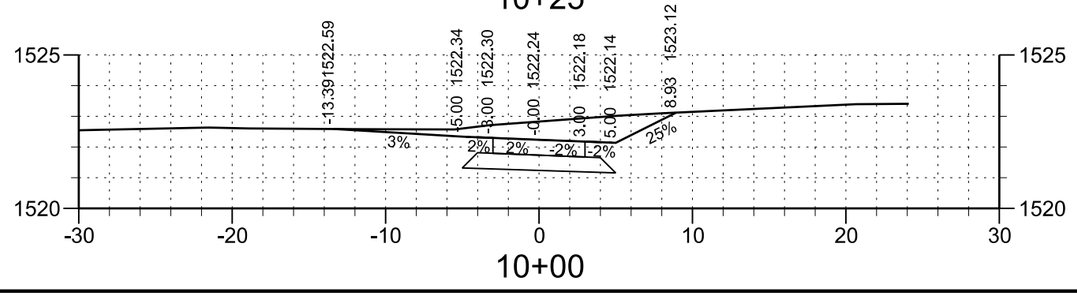

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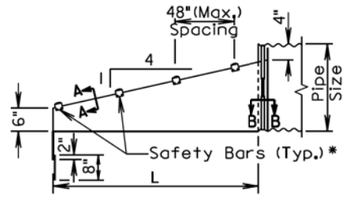
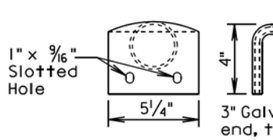
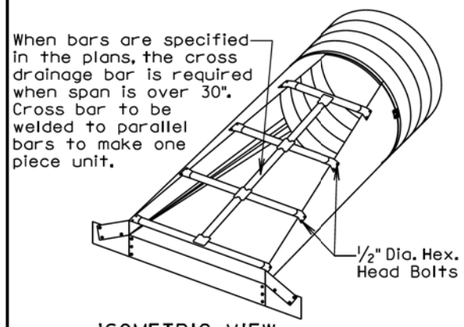


ELEVATION VIEW

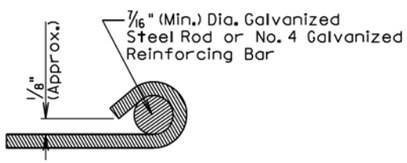
* Number of bars required will vary depending on the length of the end section.



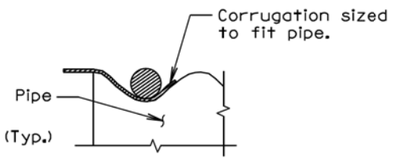
DETAIL OF SAFETY BARS



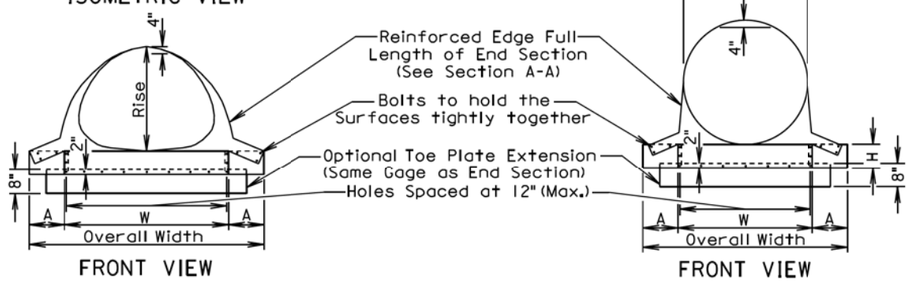
ISOMETRIC VIEW



SECTION A-A

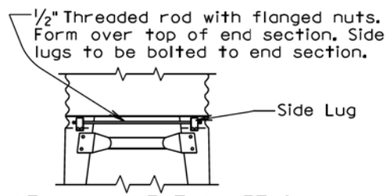


SECTION B-B

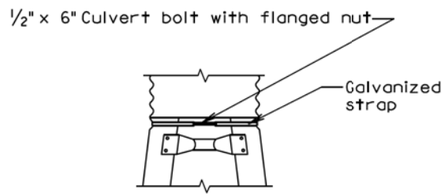


FRONT VIEW

FRONT VIEW



TYPE #2 CONNECTOR DETAIL
(For 30" and Larger)
(For 21" X 15" and Larger)



TYPE #1 CONNECTOR DETAIL
(For 15" Through 24")

February 10, 2014

Published Date: 2nd Qtr. 2016	SDDOT	C. M. P. SLOPED ENDS	PLATE NUMBER 450.37
			Sheet 1 of 2

ARCH C.M.P. SLOPED ENDS

Equv. Dia. (Inch)	(Inches) Span	(Inches) Rise	Min. Thick. Inch	Min. Thick. Gage	Dimensions (Inches) A	H	W	Overall Width	L Dimensions Slope	L Dimensions Length (Inch)
18	21	15	.064	16	8	6	27	43	4:1	20
21	24	18	.064	16	8	6	30	46	4:1	32
24	28	20	.064	16	8	6	34	50	4:1	40
30	35	24	.079	14	12	9	41	65	4:1	56
36	42	29	.109	12	12	9	48	72	4:1	76
42	49	33	.109	12	16	12	55	87	4:1	92
48	57	38	.109	12	16	12	63	95	4:1	112
54	64	43	.109	12	16	12	70	102	4:1	132
60	71	47	.109	12	16	12	77	109	4:1	148
72	83	57	.109	12	16	12	89	121	4:1	188

CIRCULAR C.M.P. SLOPED ENDS

Pipe Dia. (Inch)	Min. Thick. Inch	Min. Thick. Gage	Dimensions (Inches) A	H	W	Overall Width	L Dimensions Slope	L Dimensions Length (Inch)
15	.064	16	8	6	21	37	4:1	20
18	.064	16	8	6	24	40	4:1	32
21	.064	16	8	6	27	43	4:1	44
24	.064	16	8	6	30	46	4:1	56
30	.109	12	12	9	36	60	4:1	80
36	.109	12	12	9	42	66	4:1	104
42	.109	12	16	12	48	80	4:1	128
48	.109	12	16	12	54	86	4:1	152
54	.109	12	16	12	60	92	4:1	176
60	.109	12	16	12	66	98	4:1	200

GENERAL NOTES:

Safety bars shall be attached to sloped ends over 30" in diameter only when specified in the plans.

Sloped ends shall be fabricated from galvanized steel and shall conform to the requirements of the Specifications.

Safety bars shall be fabricated from steel schedule 40 pipe in conformance with ASTM A53, grade B or HSS 3.5X.216 in conformance with ASTM A500, grade B.

Slotted holes for safety bar attachment shall be provided for all end sections.

Attachment to circular pipes 15" through 24" diameter shall be made with Type #1 straps. All other sizes shall be attached with Type #2 rods and lugs.

When stated in the plans, optional toe plate extension shall be punched and bolted to end section apron lip with 3/8" diameter galvanized bolts. Steel for toe plate extension shall be same gauge as end section. Dimensions shall be overall width less 6" by 8" high.

Installation shall be performed in accordance with the Specifications.

Cost of all work and materials required for fabrication and installation of sloped ends shall be incidental to the bid items for the various sizes of sloped ends.

February 10, 2014

Published Date: 2nd Qtr. 2016	SDDOT	C. M. P. SLOPED ENDS	PLATE NUMBER 450.37
			Sheet 2 of 2

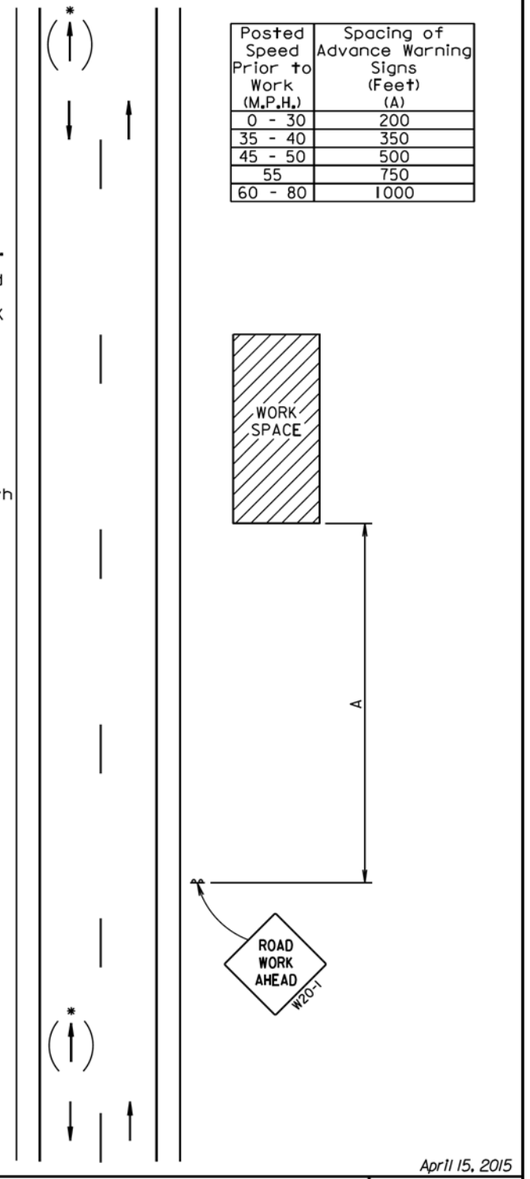
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

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.

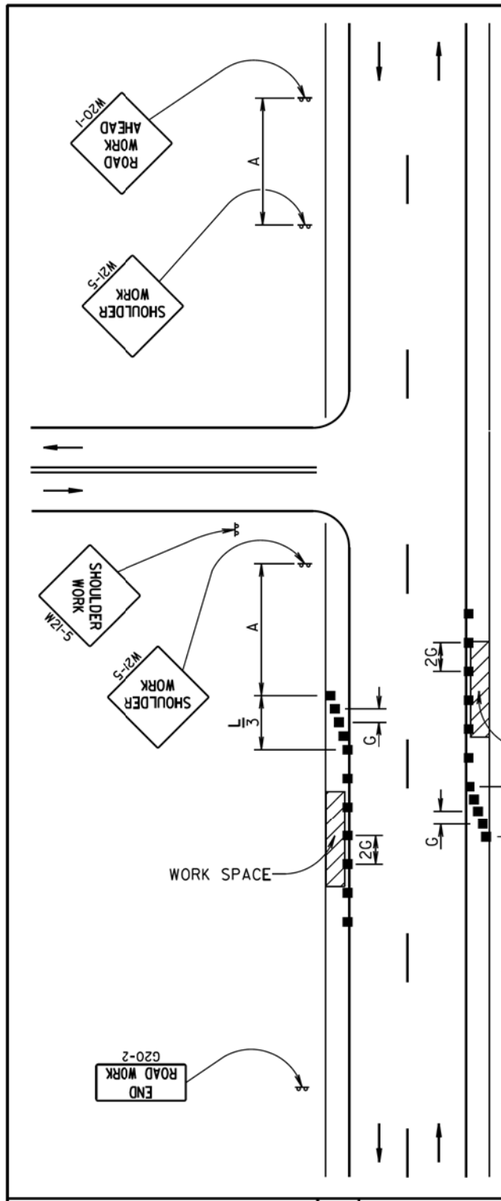
For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



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

April 15, 2015

Published Date: 2nd Qtr. 2016	SDDOT	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 - 50	500	600	50
55	750	660	50
60 - 65	1000	780	50

■ Channelizing Device

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.

September 22, 2014

Published Date: 2nd Qtr. 2016	SDDOT	GUIDES FOR TRAFFIC CONTROL DEVICES WORK ON SHOULDERS	PLATE NUMBER 634.03
			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.

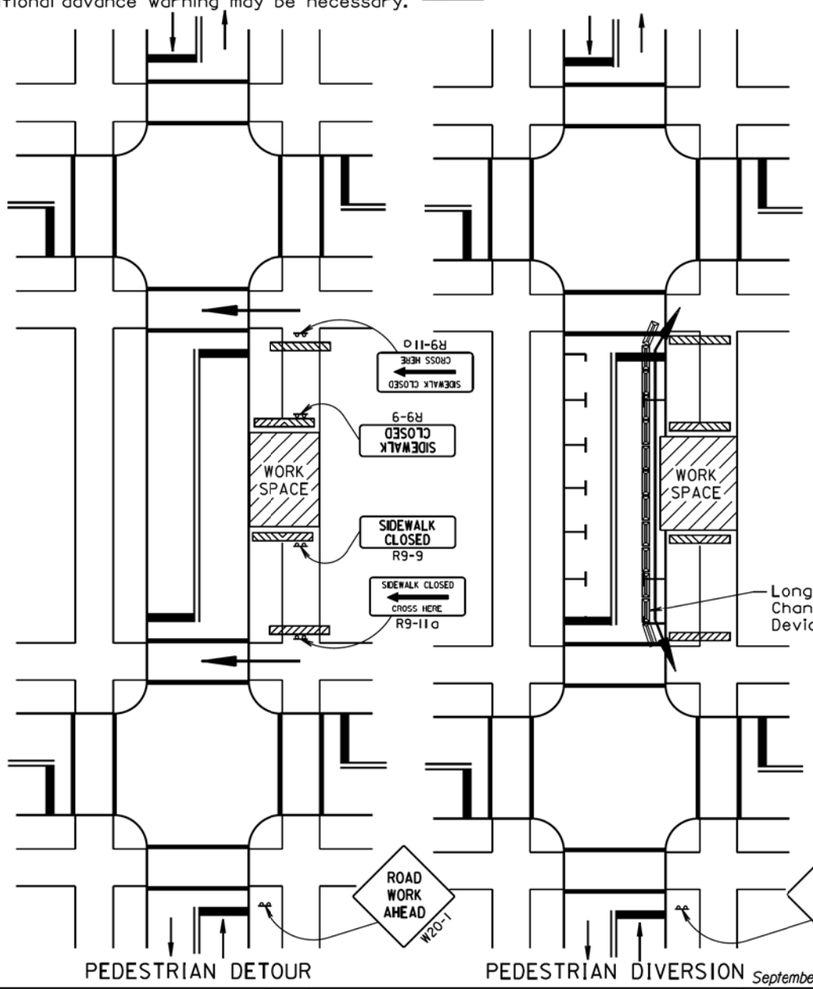
Signs may be placed along a temporary diversion to guide or direct pedestrians. Examples include KEEP RIGHT and KEEP LEFT signs.

Additional advance warning may be necessary.

For nighttime closures, Type A flashing warning lights may be used on barricades supporting signs and closing sidewalks. Type C steady-burn lights may be used on channelizing devices separating the temporary pedestrian diversion from vehicular traffic.

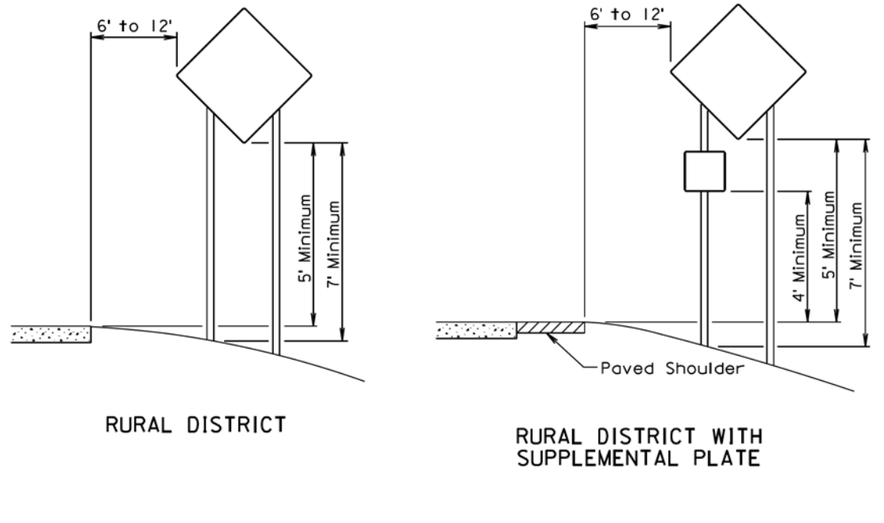
Street lighting should be considered.

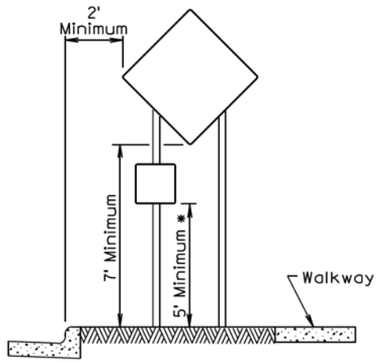
Type I Barricade and



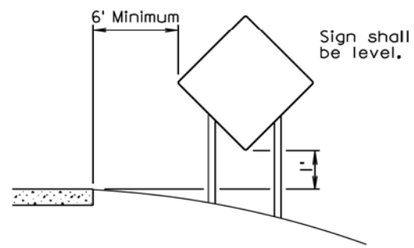
September 22,2014

Published Date: 2nd Qtr. 2016	SDDOT	GUIDES FOR TRAFFIC CONTROL DEVICES PEDESTRIAN DETOUR AND PEDESTRIAN DIVERSION	PLATE NUMBER 634.34
			Sheet 1 of 1



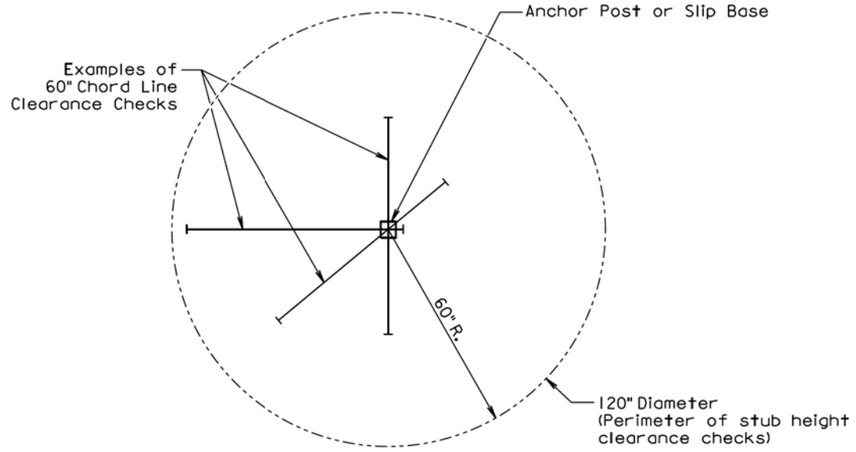


* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.



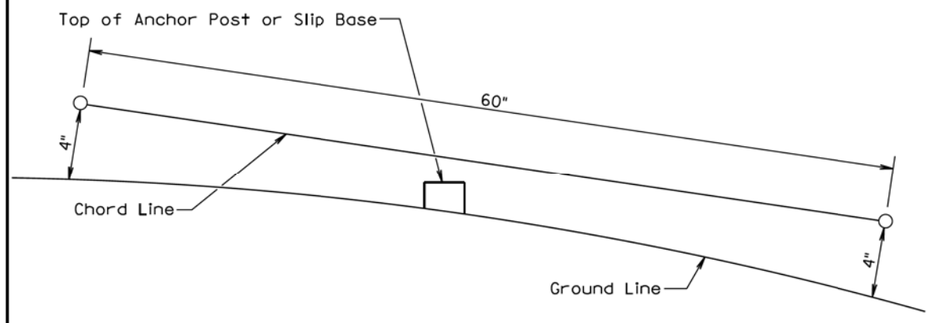
September 22,2014

Published Date: 2nd Qtr. 2016	SDDOT	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:

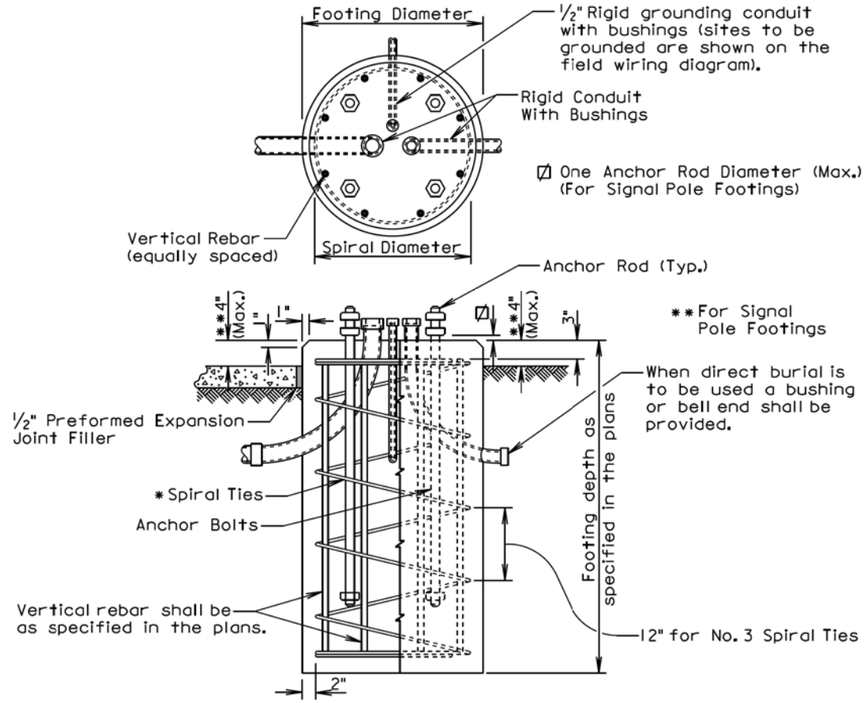
The top of anchor posts and slip bases SHALL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

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	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1



GENERAL NOTES:

* Circular ties may be used in lieu of the spiral ties. The No. 3 ties shall be spaced 12 inches apart except for the top two which shall be spaced 6 inches apart. The ties shall be lapped 18 inches and the laps shall be staggered around the cage.

Spiral ties shall have 1-1/2 extra turns at each end.

See Section 985 of the Specifications for footing materials.

Conduits and bushings may project 2½ inches to 6 inches above footing for fixed base poles but shall not project above the slip plane or fracture plane for breakaway poles.

Conduits shall be sealed water-tight during all phases of construction until poles are in place.

The anchor rods shall fit inside the reinforcing steel cage. If the anchor rods designed by the Pole Manufacturer do not fit, contact the Office of Bridge Design for footing redesign. No additional payment will be made for the redesigned footing.

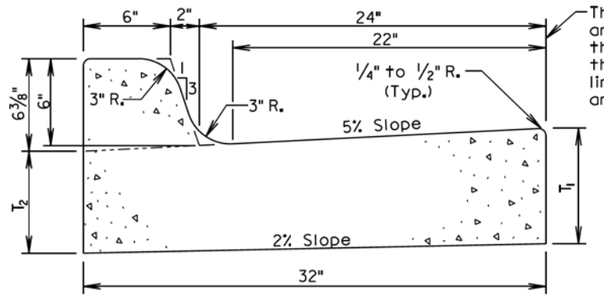
Costs of conduit and conduit bushings shown on footing detail shall be incidental to the footing bid item(s).

The pole shall not be installed until the concrete has attained design strength (4000 psi).

The contour of the area surrounding the breakaway pole shall be flat, though not necessarily level for a distance of 5 feet in all directions. The Contractor may be required to provide finish grading at some breakaway pole locations.

June 26, 2015

Published Date: 2nd Qtr. 2016	SDDOT	POLE FOOTING	PLATE NUMBER 635.55
			Sheet 1 of 1



The stated radii on the plans and cross sections refer to this line and it shall also be the basis for horizontal linear foot measurement and payment.

Type	T_1 (Inches)	T_2 (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
B66	6	5 1/16	0.057	17.7
B67	7	6 1/16	0.065	15.4
B68	8	7 1/16	0.073	13.7
B68.5	8.5	7 9/16	0.077	13.0
B69	9	8 1/16	0.081	12.3
B69.5	9.5	8 9/16	0.085	11.7
B610	10	9 1/16	0.090	11.2
B610.5	10.5	9 9/16	0.094	10.7
B611	11	10 1/16	0.098	10.2
B611.5	11.5	10 9/16	0.102	9.8
B612	12	11 1/16	0.106	9.4

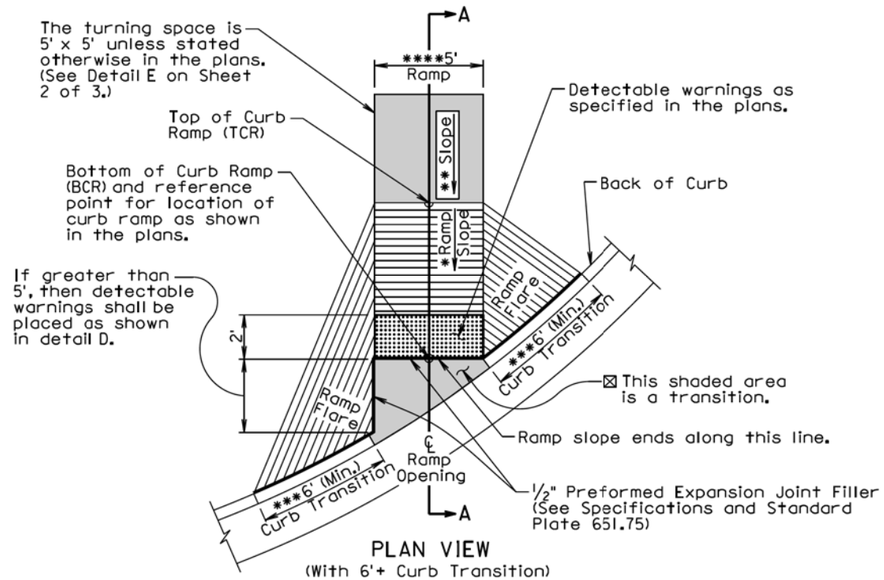
GENERAL NOTES:

When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment shall be by one of the methods shown on Standard Plate 380.11.

See Standard Plate 650.90 for expansion and contraction joints in the curb and gutter.

September 6, 2008

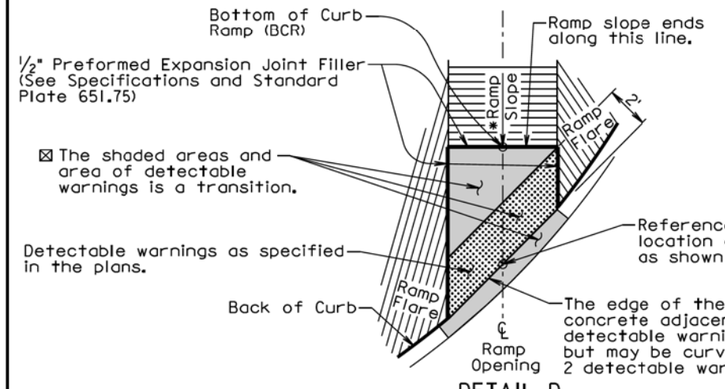
Published Date: 2nd Qtr. 2016	SDDOT	TYPE B CONCRETE CURB AND GUTTER	PLATE NUMBER 650.01
			Sheet 1 of 1



PLAN VIEW
(With 6'+ Curb Transition)

⊠ The slope within the transition area shall not be steeper than 5%. The concrete within the transition shall be placed monolithic with the curb and gutter or fillet section concrete. The concrete thickness within the transition shall be the same as the curb and gutter or fillet section concrete thickness.

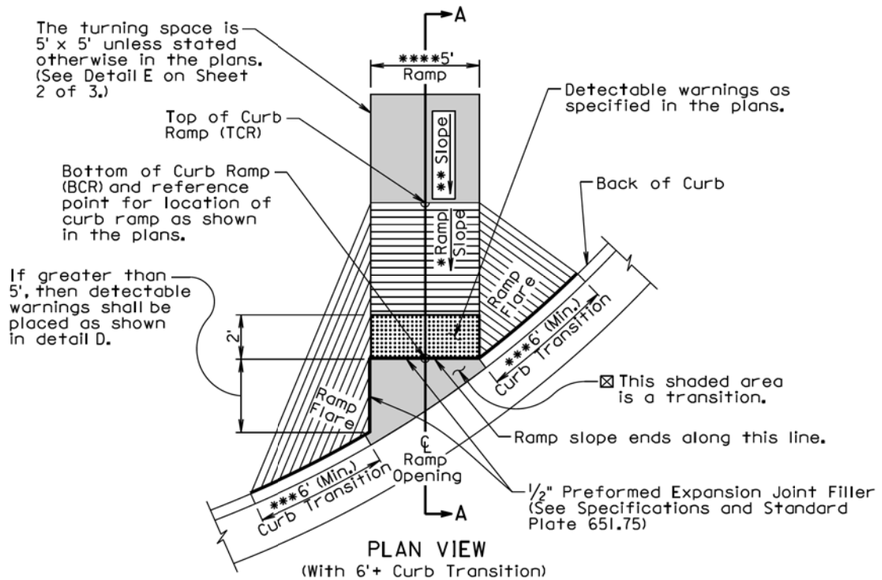
*** The curb transition shall be a minimum of 6' long, a maximum of 10' long, and the curb transition slope shall not be steeper than 10% unless stated otherwise in the plans. The curb transition length shall be adjusted as necessary to meet slope and length requirements based on field geometrics.



DETAIL D

September 6, 2015

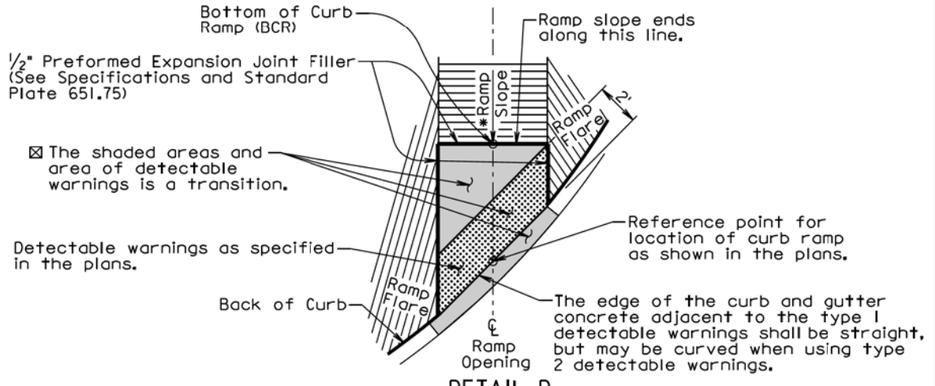
Published Date: 2nd Qtr. 2016	SDDOT	TYPE 2 CURB RAMP (DIRECTIONAL CURB RAMP)	PLATE NUMBER 651.02
			Sheet 1 of 3



PLAN VIEW
(With 6'+ Curb Transition)

☒ The slope within the transition area shall not be steeper than 5%. The concrete within the transition shall be placed monolithic with the curb and gutter or fillet section concrete. The concrete thickness within the transition shall be the same as the curb and gutter or fillet section concrete thickness.

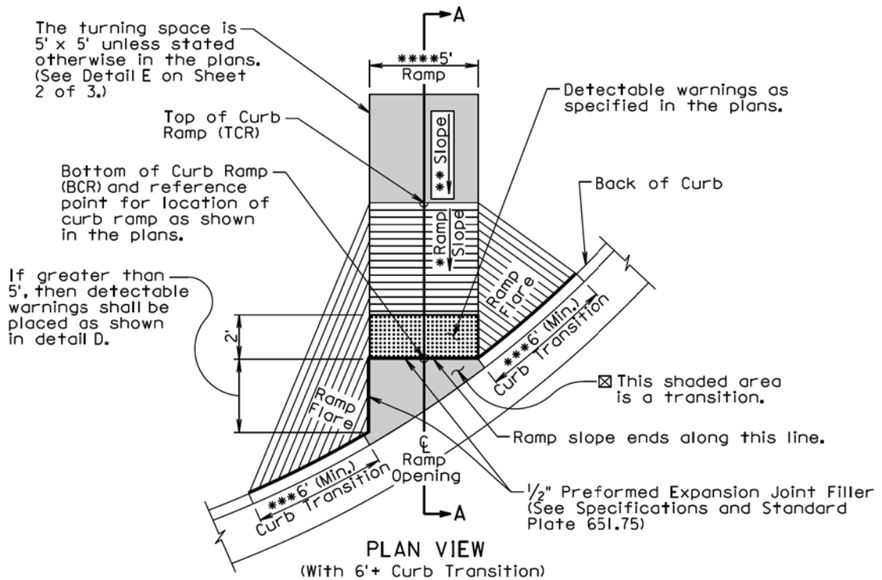
*** The curb transition shall be a minimum of 6' long, a maximum of 10' long, and the curb transition slope shall not be steeper than 10% unless stated otherwise in the plans. The curb transition length shall be adjusted as necessary to meet slope and length requirements based on field geometrics.



DETAIL D

September 6, 2015

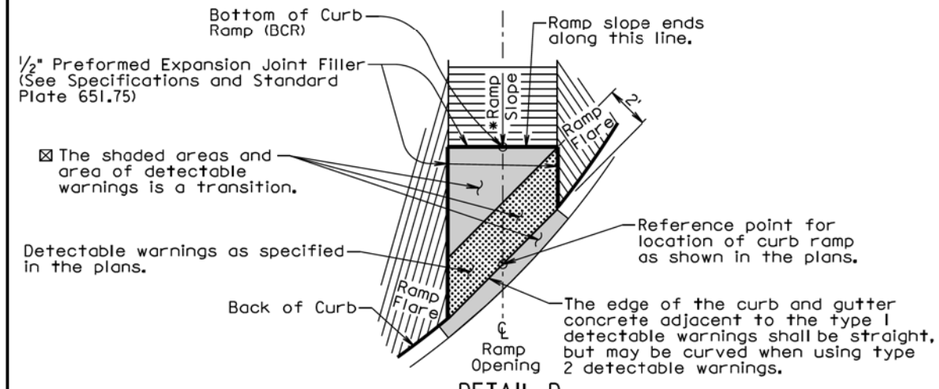
Published Date: 2nd Qtr. 2016	SDDOT	TYPE 2 CURB RAMP (DIRECTIONAL CURB RAMP)	PLATE NUMBER 651.02
			Sheet 1 of 3



PLAN VIEW
(With 6'+ Curb Transition)

☒ The slope within the transition area shall not be steeper than 5%. The concrete within the transition shall be placed monolithic with the curb and gutter or fillet section concrete. The concrete thickness within the transition shall be the same as the curb and gutter or fillet section concrete thickness.

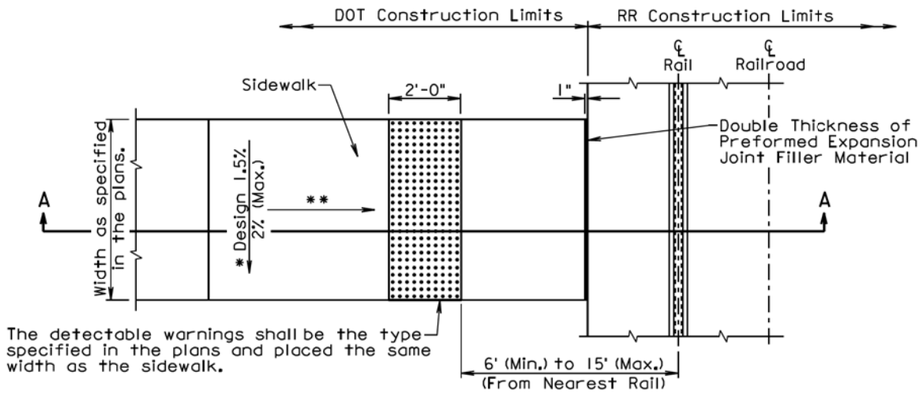
*** The curb transition shall be a minimum of 6' long, a maximum of 10' long, and the curb transition slope shall not be steeper than 10% unless stated otherwise in the plans. The curb transition length shall be adjusted as necessary to meet slope and length requirements based on field geometrics.



DETAIL D

September 6, 2015

Published Date: 2nd Qtr. 2016	SDDOT	TYPE 2 CURB RAMP (DIRECTIONAL CURB RAMP)	PLATE NUMBER 651.02
			Sheet 1 of 3

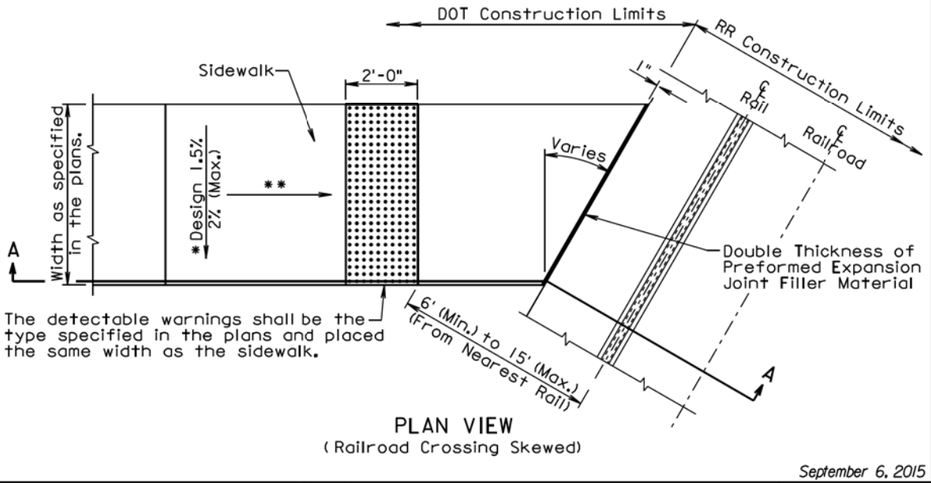


PLAN VIEW
(Railroad Crossing Not Skewed)

*The cross slope of the sidewalk shall not be steeper than 2%. Plans are designed using a 1.5% cross slope unless stated otherwise in the plans.

**If the sidewalk is curbside, then the surface of the curbside sidewalk shall match the slope of the curb transition. The longitudinal slope of the sidewalk and curb transition, where the sidewalk transitions to the railroad crossing elevation, is designed at 4.5% and shall not be steeper than 5% unless stated otherwise in the plans.

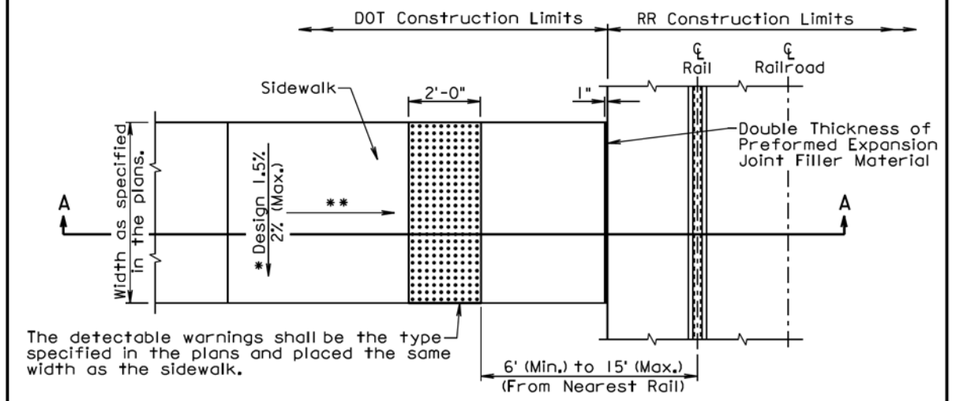
**If there is a boulevard sidewalk, then the curb and gutter transition shall be in accordance with Standard Plate 650.35. The longitudinal slope of the sidewalk, where the sidewalk transitions to the railroad crossing elevation, is designed at 4.5% and shall not be steeper than 5% unless stated otherwise in the plans.



PLAN VIEW
(Railroad Crossing Skewed)

September 6, 2015

Published Date: 2nd Qtr. 2016	SDDOT	SIDEWALK AND DETECTABLE WARNINGS ADJACENT TO RAILROAD CROSSING	PLATE NUMBER 651.20
			Sheet 1 of 2

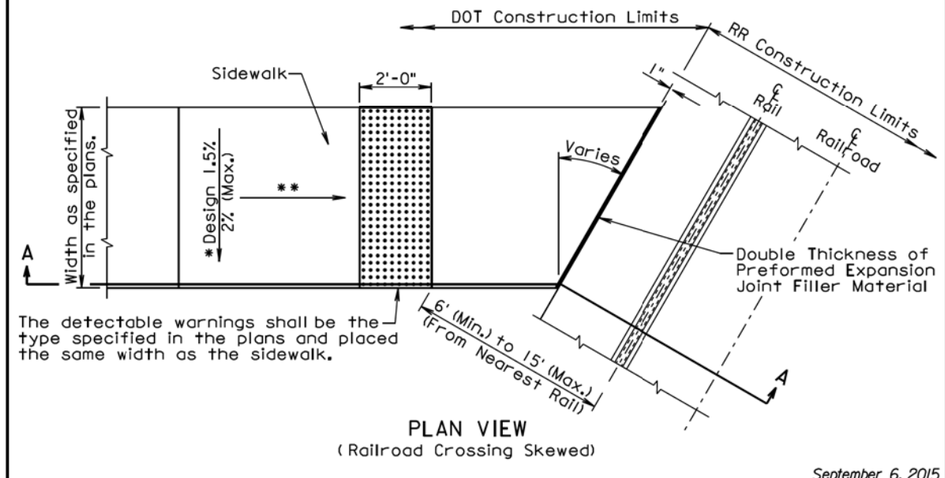


PLAN VIEW
(Railroad Crossing Not Skewed)

*The cross slope of the sidewalk shall not be steeper than 2%. Plans are designed using a 1.5% cross slope unless stated otherwise in the plans.

**If the sidewalk is curbside, then the surface of the curbside sidewalk shall match the slope of the curb transition. The longitudinal slope of the sidewalk and curb transition, where the sidewalk transitions to the railroad crossing elevation, is designed at 4.5% and shall not be steeper than 5% unless stated otherwise in the plans.

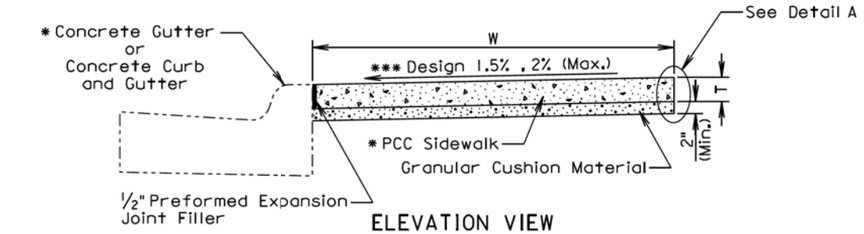
**If there is a boulevard sidewalk, then the curb and gutter transition shall be in accordance with Standard Plate 650.35. The longitudinal slope of the sidewalk, where the sidewalk transitions to the railroad crossing elevation, is designed at 4.5% and shall not be steeper than 5% unless stated otherwise in the plans.



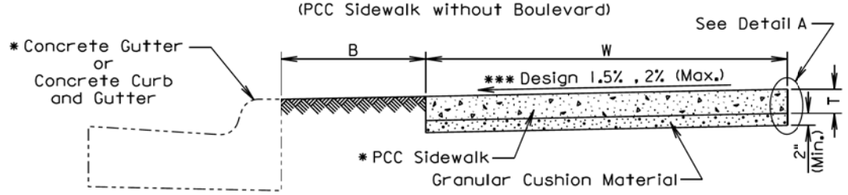
PLAN VIEW
(Railroad Crossing Skewed)

September 6, 2015

Published Date: 2nd Qtr. 2016	SDDOT	SIDEWALK AND DETECTABLE WARNINGS ADJACENT TO RAILROAD CROSSING	PLATE NUMBER 651.20
			Sheet 1 of 2

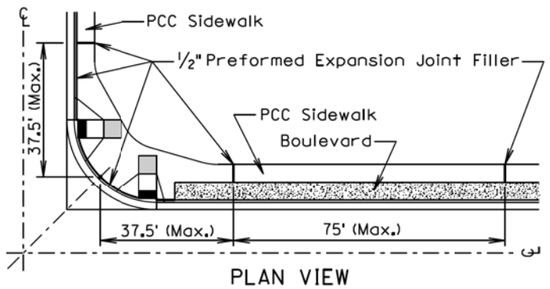


ELEVATION VIEW
(PCC Sidewalk without Boulevard)



ELEVATION VIEW
(PCC Sidewalk with Boulevard)

B Width of boulevard as specified in the plans.
T Thickness of PCC sidewalk as specified in the plans.
W Width of PCC sidewalk as specified in the plans.
* Type as specified in the plans.



PLAN VIEW

GENERAL NOTES:

The PCC sidewalk shall be constructed in accordance with Section 651 of the Specifications.

*** The cross slope of the sidewalk is designed at 1.5% and the maximum slope allowed is 2% unless specified otherwise in the plans.

The maximum length between expansion joints in PCC sidewalk is 75 feet.

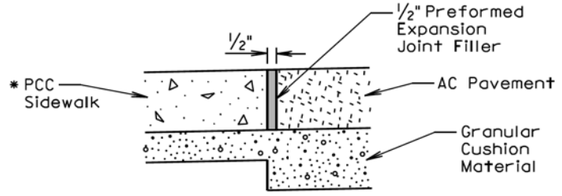
PCC sidewalk placed adjacent to intersection of roadways shall have an expansion joint placed transversely a maximum of 37.5 feet from the intersection. See PLAN VIEW.

An expansion joint in PCC sidewalk shall consist of a ½ inch thick preformed expansion joint filler material placed full depth and width of the PCC sidewalk.

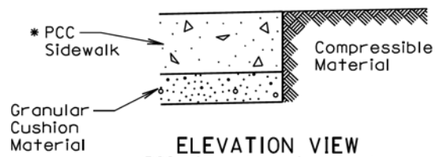
** Large areas of PCC pavement adjacent to PCC sidewalk may require a different joint treatment than shown in the detail. If a different joint detail is necessary, plans will contain the joint detail and the Contractor shall construct the joint treatment in accordance with the plans.

September 6, 2015

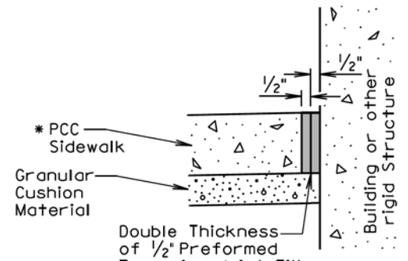
Published Date: 2nd Qtr. 2016	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 1 of 2



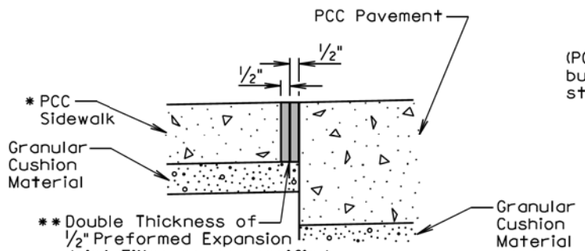
ELEVATION VIEW
(PCC sidewalk adjacent to asphalt concrete pavement)



ELEVATION VIEW
(PCC sidewalk adjacent to earthen material, landscape rock, or other compressible materials)



ELEVATION VIEW
(PCC sidewalk adjacent to building or other rigid structure)



ELEVATION VIEW
(PCC sidewalk adjacent to PCC pavement)

Detail A
(Use Appropriate Detail(s))

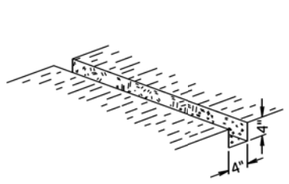
September 6, 2015

Published Date: 2nd Qtr. 2016	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 2 of 2

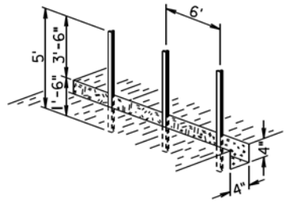
REVISED	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
5/23/16	SOUTH DAKOTA	P TAPR (08)	37	38

Plotting Date: 4/25/15
Revised Date: 5/23/16
Initials: TLW

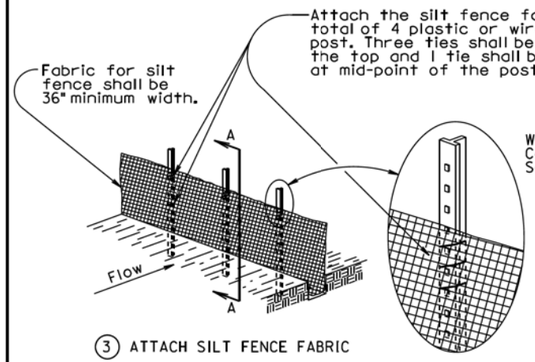
MANUAL HIGH FLOW SILT FENCE INSTALLATION



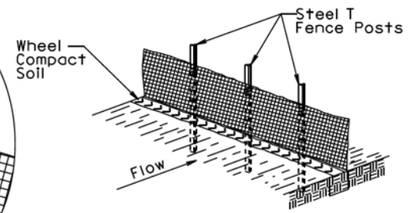
(1) EXCAVATE TRENCH



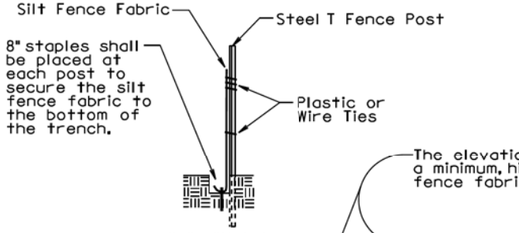
(2) DRIVE STEEL T FENCE POSTS



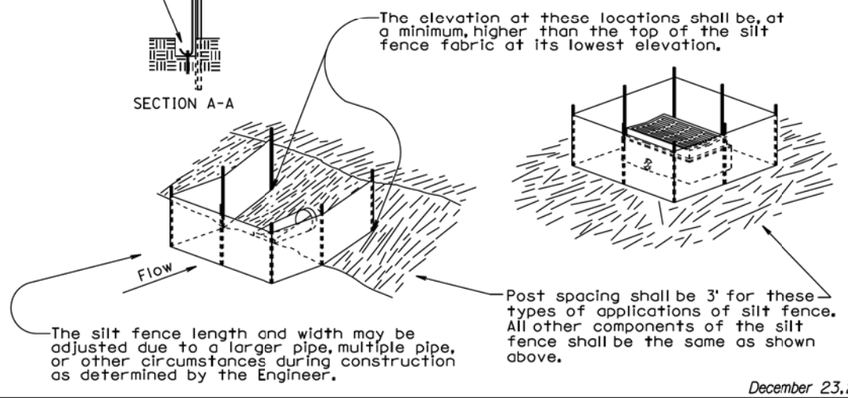
(3) ATTACH SILT FENCE FABRIC



(4) BACKFILL TRENCH AND WHEEL COMPACT SOIL



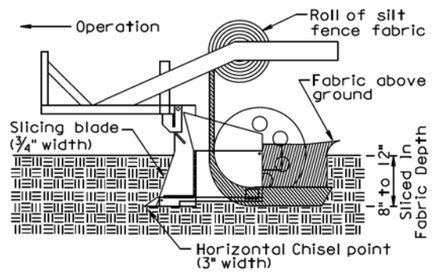
SECTION A-A



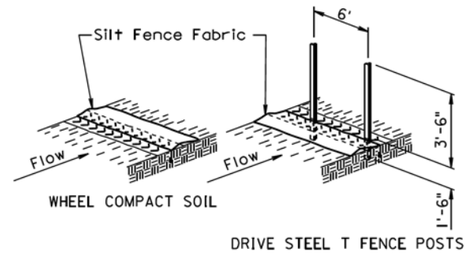
December 23,2003

	SDDOT	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
Published Date: 2nd Qtr. 2016			Sheet 1 of 2

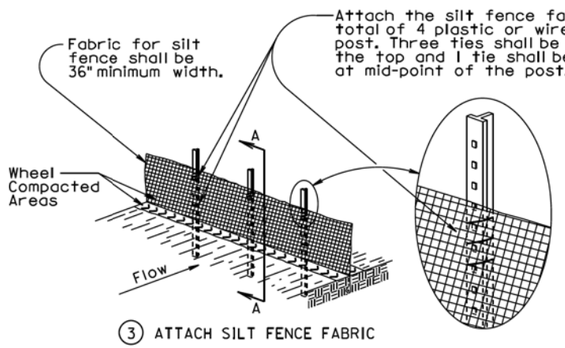
MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION



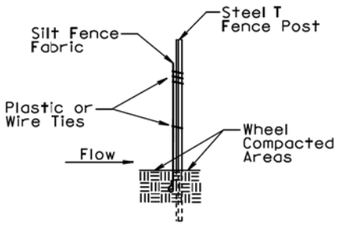
(1) INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.



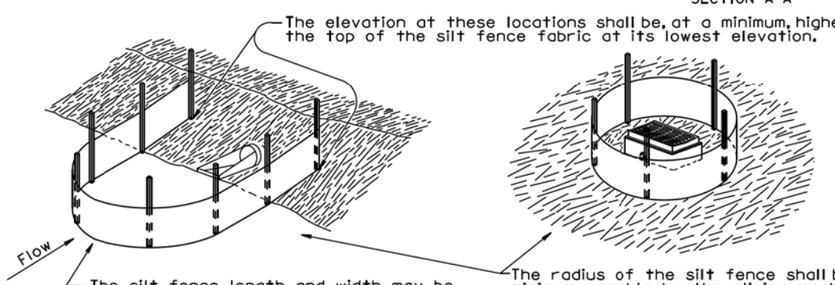
(2) WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.



(3) ATTACH SILT FENCE FABRIC



SECTION A-A



GENERAL NOTE:

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end shall be provided on top of the extra length of silt fence fabric to prevent underflow.

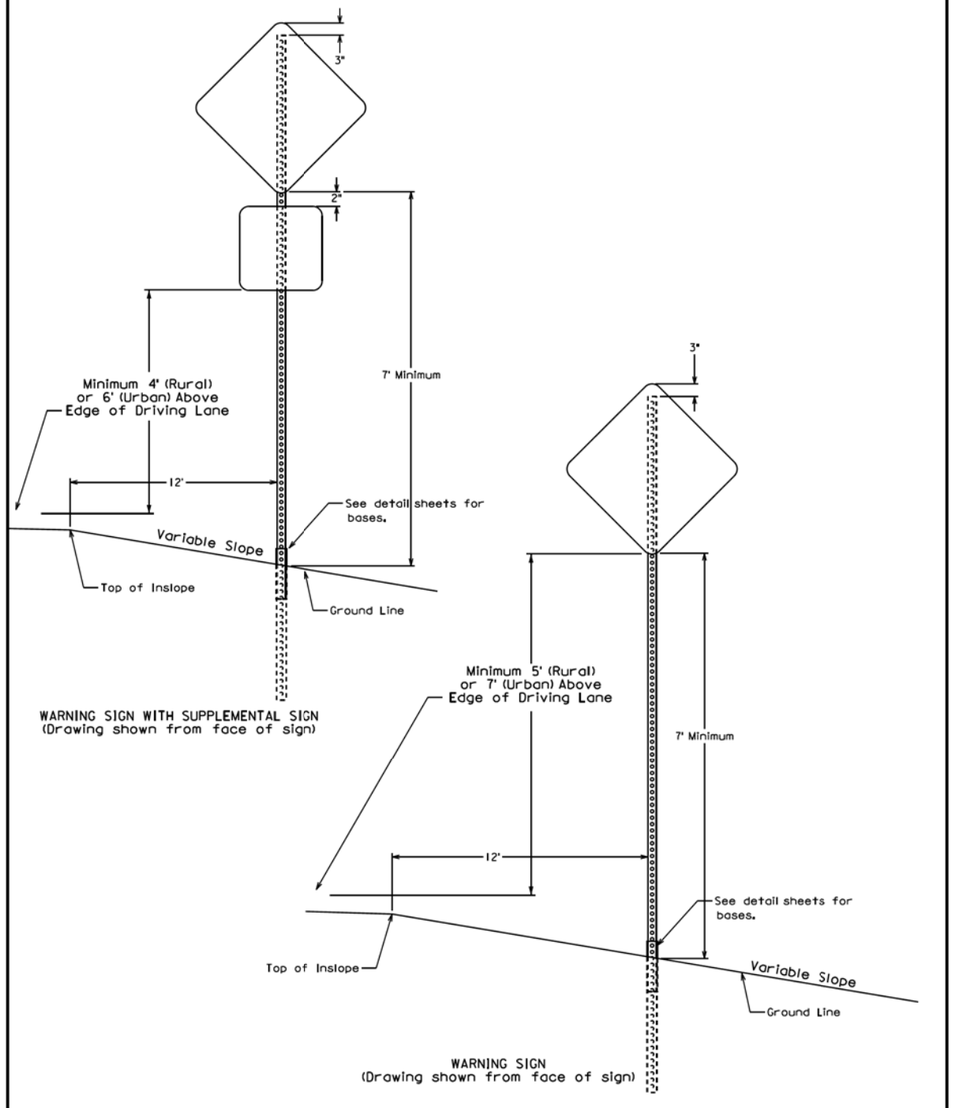
December 23,2003

	SDDOT	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
Published Date: 2nd Qtr. 2016			Sheet 2 of 2

REVISED
5/23/16

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (08)	38	38

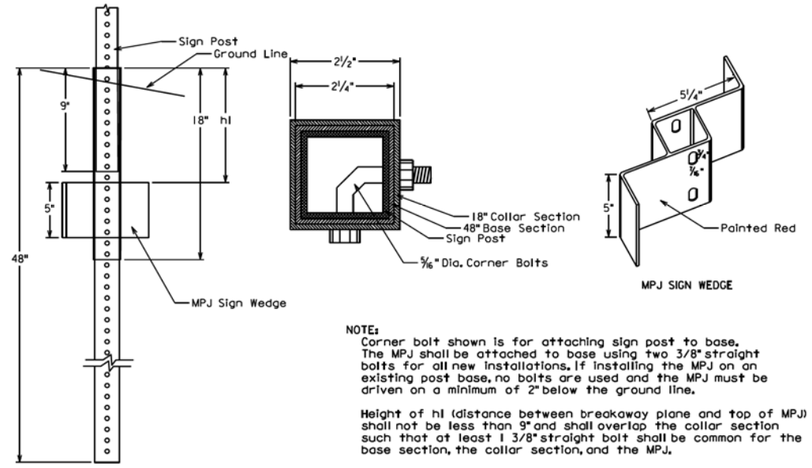
Plotting Date: 4/25/15
Revised Date: 5/23/16
Initials: TLW



December 9, 2013

SDDOT	30" WARNING SIGNS (Typical Sign Detail)	SPECIAL DETAIL L01
		Sheet 1 of 1

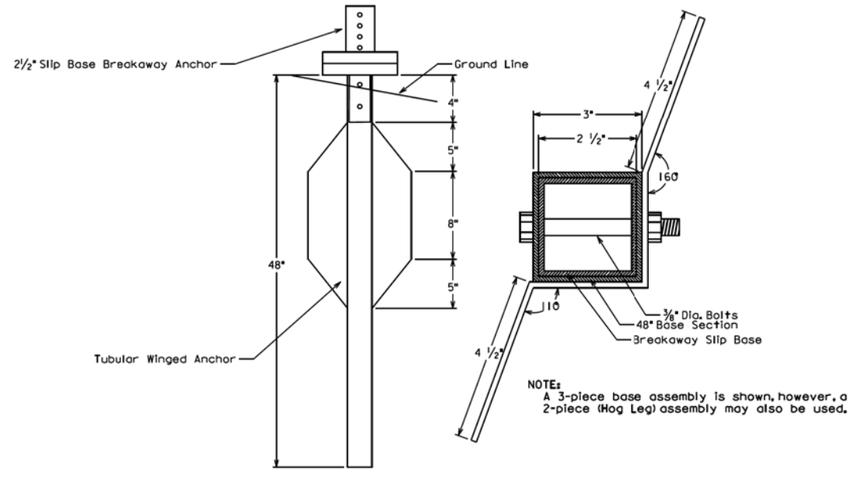
SIGN BASE DETAILS FOR A 2" SIGN POST



NOTE:
Corner bolt shown is for attaching sign post to base. The MPJ shall be attached to base using two 3/8" straight bolts for all new installations. If installing the MPJ on an existing post base, no bolts are used and the MPJ must be driven on a minimum of 2" below the ground line.

Height of hi (distance between breakaway plane and top of MPJ) shall not be less than 9" and shall overlap the collar section such that at least 1 3/8" straight bolt shall be common for the base section, the collar section, and the MPJ.

SIGN BASE DETAILS FOR A 2½" SIGN POST



NOTE:
A 3-piece base assembly is shown, however, a 2-piece (Hog Leg) assembly may also be used.

March 28, 2014

SDDOT	TUBULAR POST BASE DETAILS (Typical Soil Installation)	SPECIAL DETAIL L21
		Sheet 1 of 1