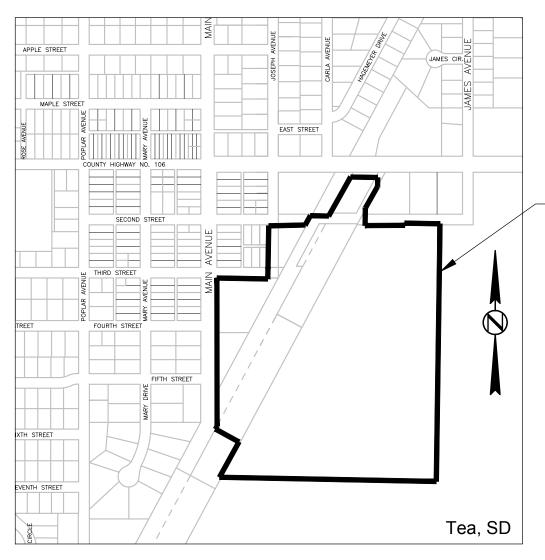


### STATE OF SOUTH DAKOTA **DEPARTMENT OF TRANSPORTATION** PLANS FOR PROPOSED

## PROJECT P TAPU(07) CITY OF TEA - SHARED USE PATH LINCOLN COUNTY

GRADING, CULVERTS, AND CONCRETE SIDEWALK, **PCN 04U8** 



Multi-Use Path Gross Length 2,900 0.549 Feet Miles Length of Exceptions Feet 0.000 Miles Total Net Length 2,900 Feet 0.549 Miles

PROJECT SHEET P TAPU(07) 46 DAKOTA

FILE:

PLOTTING DATE: 05/18/2015

REV DATE: 05/18/2015 INITIAL: BDW

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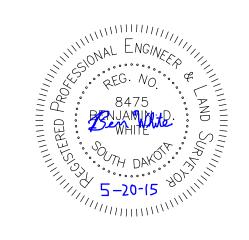
Sheets 15-16 Typical Sections

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PROJECT LOCATION





STORM WATER PERMIT

Major Stream: Big Sioux River Area Disturbed: 2.35 Acres Total Project Area: 2.35 Acres

Approx. Begin Lat/Long: 43.444614°, -96.836150°

# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	P TAPU (07)	2	46

Plotting Date: 5/19/2015

Rev Date: 5/19/2015 Initial: BDW

#### **Estimate of Quantities**

Bid Item No.	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	0.531	Mile
009E3250	Miscellaneous Staking	0.531	Mile
009E3300	Three Man Survey Crew	20.0	Hour
009E3320	Checker	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E1100	Remove Concrete Pavement	13.8	SqYd
110E1690	Remove Sediment	4.5	CuYd
110E1693	Remove Erosion Control Wattle	1268	Ft
120E0010	Unclassified Excavation	890	CuYd
120E0300	Borrow Unclassified Excavation	2707	CuYd
120E6100	Water for Embankment	32	MGal
120E6200	Water for Granular Material	45	MGal
380E4010	6" PCC Fillet Section	13.8	SqYd
450E0122	18" RCP Class 2, Furnish	54	Ft
450E0130	18" RCP, Install	54	Ft
450E2008	18" RCP Flared End, Furnish	4	Each
450E2009	18" RCP Flared End, Install	4	Each
634E0100	Traffic Control	204	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
651E0060	6" Concrete Sidewalk	28185	SqFt
651E7000	Type 1 Detectable Warnings	70	SqFt
730E0100	Cover Crop Seeding	1	Bu
734E0154	12" Diameter Erosion Control Wattle	1268	Ft
734E0165	Remove and Reset Erosion Control Wattle	317	Ft
734E0845	Sediment Control at Inlet with Frame and Grate		Each
734E0847	Sediment Control at Type S Reinforced Concrete Drop Inlet	S Reinforced 48 Ft	
734E5010	Sweeping	4	Hour
900E1310	Concrete Washout Facility	2	Each
900E1320	Construction Entrance	2	Each

#### **PROJECT COORDINATION**

The City of Tea will be constructing Phase 3 of the Athletic Complex, which encompasses this project. Coordination with the Athletic Complex Contractor shall be incidental to other bid items.

All topsoil removal, 6" depth topsoil placement, fine grading, seeding, fertilizing, mulching, and vegetation watering will be completed by Athletic Complex Contractor.

Contractor shall obtain borrow material from stockpile placed by Athletic Complex Contractor. Borrow material stockpile will be located on site, approximately as shown in the plans. Contractor shall coordinate removal of borrow material with Athletic Complex Contractor. Coordination with Athletic Complex Contractor shall be incidental to other bid items.

Elevations of North West Path to be established at 2% above existing top of curb elevations, as measured in the field. A large portion of North West Path to be installed adjacent to curb placed by Athletic Complex Contractor. Contractor to coordinate handicapped accessible ramp locations, handicapped accessible sign locations, and other items as necessary with Athletic Complex Contractor prior to concrete placement. See plan sheets for additional information. Coordination with Athletic Complex Contractor shall be incidental to other bid items.

Contractor shall coordinate Construction Entrance and Concrete Washout Area locations with Athletic Complex Contractor prior to placement.

Additional coordination with Athletic Complex Contractor may be necessary. Additional coordination required, not specifically listed on the plans, with Athletic Complex Contractor shall be incidental to other bid items.

#### **SPECIFICATIONS**

Standard Specifications for Roads & Bridges, 2004 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:

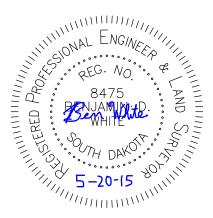
#### **COMMITMENT C: WATER SOURCE**

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

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

#### **Action Taken/Required:**

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



#### **COMMITMENT E: STORM WATER**

#### **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.

Construction activities constitute 1 acre or more of earth disturbance.

#### **Action Taken/Required:**

The DENR and the US Environmental Protection Agency (EPA) have issued separate general permits for the discharge of storm water runoff. The DENR permit applies to discharges on state land and the EPA permit applies to discharges on federal or reservation land. The Contractor is advised this project is regulated under the Phase II Storm Water Regulations and must receive coverage under the General Permit for Construction Activities. A Notice of Intent (NOI) will be submitted to DENR a minimum of 15 days prior to project start by the DOT Environmental Office. A letter must be received from DENR that acknowledges project coverage under this general permit before project start. The Contractor is advised that permit coverage may also be required by off-site activities, such as borrow and staging areas, which are the responsibility of the Contractor.

The Contractor shall adhere to the "Special Provision Regarding Storm Water Discharges to Waters of the State".

A major component of the storm water construction permits is development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which is a joint effort and responsibility of the SDDOT and the Contractor. Erosion control measures and best management practices will be implemented in accordance with the SWPPP. The SWPPP is a dynamic document and is to be available on-site at all times.

Information on storm water permits and SWPPPs are available on the following websites:

#### SDDOT:

http://www.sddot.com/business/environmental/stormwater/swppp/Default.aspx

DENR: http://www.denr.sd.gov/des/sw/stormwater.aspx

EPA: http://cfpub.epa.gov/npdes/home.cfm?program\_id=6

#### **Contractor Certification Form:**

The "Department of Environmental and Natural Resources – Contractor Certification Form" (SD EForm – 2110LDV1-ContractorCertification.pdf) shall be completed by the Contractor or their certified Erosion Control Supervisor after the award of the contract. Work may not begin on the project until this form is signed.

The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the Surface Water Discharge General Permit for Storm Water Discharges Associated with Construction Activities for the Project.

The online form can be found at:

http://denr.sd.gov/des/sw/eforms/E2110LDV1-ContractorCertification.pdf

#### **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 State ROW

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for Highway, Road, and Railway 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 State 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 State 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.

1	STATE OF	PROJECT	SHEET	TOTAL SHEETS
I	SOUTH DAKOTA	P TAPU (07)	3	46

Plotting Date: 3/27/2015

#### **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 designated option borrow 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.

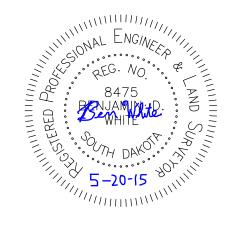
The Contractor shall arrange and pay for a cultural resource survey and/or records search. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record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

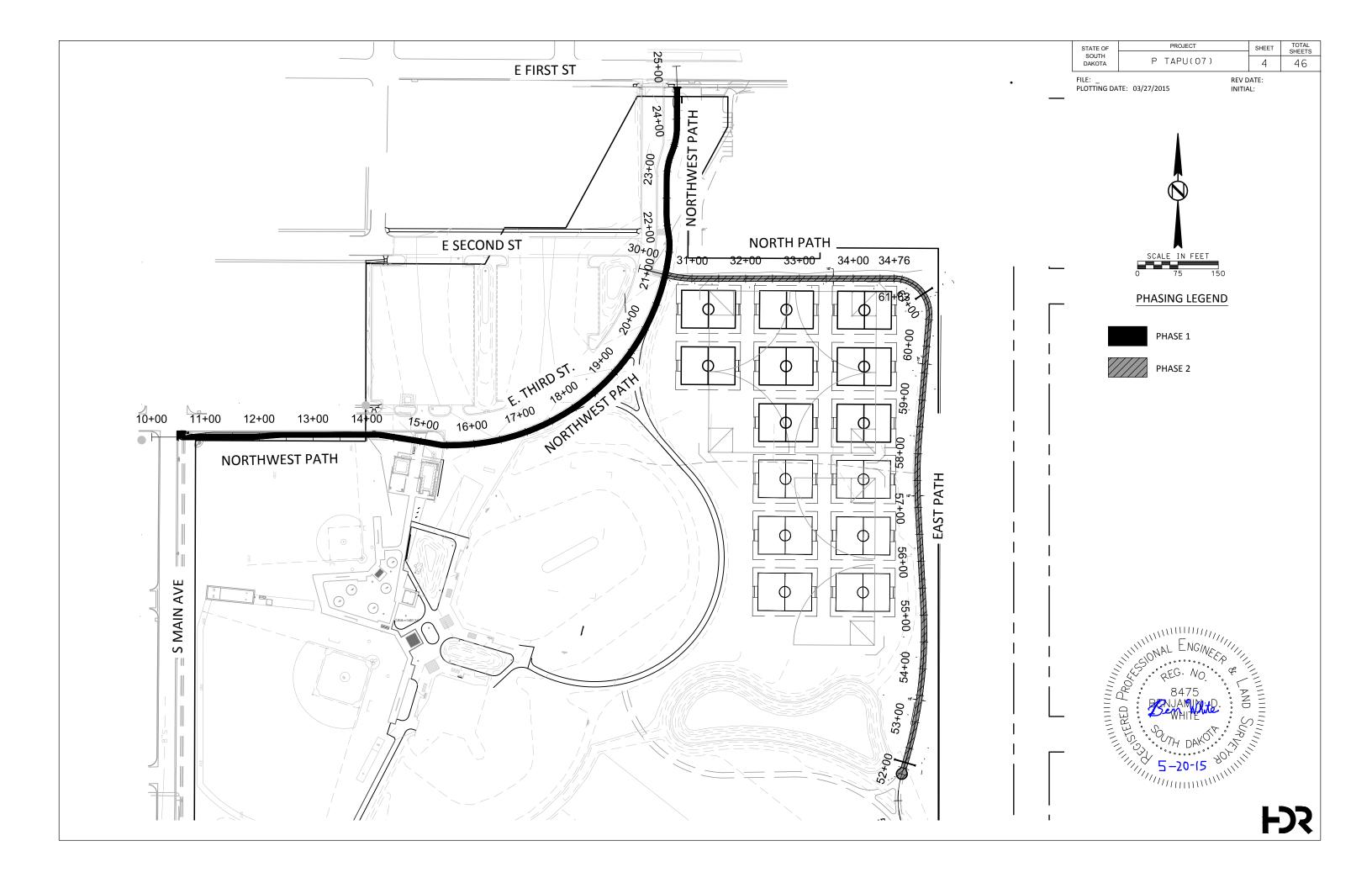
The Contractor shall provide ARC with the following: a topographical map or aerial view on which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner 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.





#### **GRADING OPERATIONS**

Water for Embankment is estimated at the rate of 10 gallons of water per cubic yard of Embankment minus Waste. The estimated quantity of Water for Embankment is 32 MGal. No separate payment will be made for the Water for Embankment and all costs associated shall be incidental to the contract unit price per cubic yard of "Unclassified Excavation".

The estimated cubic yards of excavation and/or embankment required to construct outlet ditches, ditch blocks, and approaches are included in the earthwork balance notes on the profile sheets.

Special ditch grades and other sections of the roadway different than the typical section(s) shall be constructed to the limits shown on the cross sections. If significant changes to the cross sections are necessary during construction, the Engineer shall contact the Designer for the proposed change.

A disk designed and constructed for construction purposes shall be in use as per Section 120.3 of the Specifications.

Compaction of earth embankment shall be per the Specified Density Method.

Rock is not anticipated to be encountered within the project limits.

#### **BORROW UNCLASSIFIED EXCAVATION**

Contractor shall obtain borrow material from stockpile placed by Athletic Complex Contractor. Borrow material stockpile will be located on site, approximately as shown in the plans. Contractor shall coordinate removal of borrow material with Athletic Complex Contractor. Coordination with Athletic Complex Contractor shall be incidental to other bid items. See "Project Coordination" for additional notes regarding Borrow Unclassified Excavation Coordination.

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

#### **SHRINKAGE FACTOR**

Location	% Shrinkage		
Shared Use Path	30		
Area			

#### **UNSTABLE MATERIAL EXCAVATION**

The estimated quantity of 400 cubic yards of unstable material excavation may or may not be used. The estimated quantity of 400 cubic yards of unstable material excavation, if deemed necessary by the Engineer, shall be paid for at the contract unit price per cubic yard for "Unclassified Excavation".

All areas deemed as Unstable by the Engineer shall be excavated. The unstable material excavated on this project shall be placed outside the subgrade shoulder in fill sections or stockpiled and used as topsoil.

Field measurement of unstable material excavation shall be made, if necessary.

### PROCEDURES FOR DETERMINING UNCLASSIFIED EXCAVATION QUANTITY

The final Unclassified Excavation quantity shall be based on plan quantities of 490 CY.

The Unstable Material Excavation quantity of 400 CY is included in the Excavation quantity listed in the Estimate of Quantities, 890 CY. When finaling the project, the Unstable Material Excavation quantity, if necessary, shall be measured and added to the plan Unclassified Excavation quantity of 490 CY to determine final total amount paid for Unclassified Excavation.

#### DRAINAGE DURING CONSTRUCTION

Drainage during construction is the Contractor's responsibility. Contractor shall be aware of existing drainage conditions and facilities, and shall provide for drainage during all phases of construction. Damage caused by improper temporary drainage facilities shall be repaired at the Contractor's expense and to the satisfaction of the Engineer.

#### REINFORCED CONCRETE PIPE

Reinforced concrete pipe may be either bell and spigot or tongue and groove. The pipe sections shall be adjoined such that the ends are fully entered and the inner surfaces are reasonably flush and even.

Lift holes in the reinforced concrete pipe shall be plugged with grout.

Watertight joints are required for reinforced concrete pipe, drop inlets, manholes, and junction boxes where storm sewers run parallel to and within 10 feet horizontally from existing or proposed water mains.

Watertight joints are required where reinforced concrete pipes, drop inlets, manholes, or junction boxes cross water mains and are separated a distance of 18 inches or less, above or below, the water main.

If watertight joints are required then the watertight joints shall extend for a distance of 10 feet beyond the water main. This measurement shall be from the sealed concrete joint to the outer most surface of the water main.

Watertight joint seals shall conform to the following requirements:

1. Reinforced Concrete Pipe (Circular): Gasketed pipe shall conform to the requirements of ASTM C443. Non-gasketed concrete pipe shall be sealed with a mastic joint seal conforming to the requirements of ASTM C990 and encased with a minimum 2' wide by 6" thick M6 concrete collar reinforced with 6x6 W2.9 x W2.9 wire mesh.

Gaskets and seals (mastic, waterstop, and seal wraps) shall be installed in accordance with the manufacturer's recommendations.

The cost for furnishing and installing all gaskets, mastic joint seal, waterstop seal, seal wrap, concrete collars, and for plugging the lift holes shall be incidental to the contract unit price per foot for the corresponding pipe bid item.

#### TABLE OF REINFORCED CONCRETE PIPE

				Length	FE
Station	to	Station	Size	(FT)	(EA)
52+22.53 - 21	.30' L to 52+22.53	– 19.38' R	18"	28	2
61+00.30 - 17	.31' L to 60+99.69	– 20.46' R	18"	26	2
			Total:	54	4

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Initial: BDW

#### **CLEARING**

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

#### 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 6 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.

The detectable warnings shall be a brick red color for application in concrete curb ramps. Cast iron plates may be a natural patina (weathered steel). 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.

Contractor to coordinate handicapped accessible ramp locations, handicapped accessible sign locations, and other items as necessary with Athletic Complex Contractor prior to concrete placement. See plan sheets for additional information. Coordination with Athletic Complex Contractor shall be incidental to other bid items.

<u>Product</u>	Manufacturer	
Detectable Warning Plate	Neenah Foundry Company	
Cast Iron Plate	Neenah, WI	
	800-558-5075	
	http://www.neenahfoundry.com	
Detectable Warning Plate	Deeter Foundry	
Cast Iron Plate	Lincoln, NE	
	800-234-7466	
	http://www.deeter.com	
Detectable Warning Plate	East Jordan Iron Works, Inc.	
Cast Iron Plate	301 Spring Street	
	East Jordan, MI 49727	
	800-626-4653	
	http://www.ejiw.com	
CAST-DWD	Key 3 Casting (Northern Foundry)	
Cast Iron Plate	555 West 25th Street	
	Hibbing, MN 55746	
	218-263-8871	
	http://www.armorcastprod.com/	

#### TABLE OF TYPE 1 DETECTABLE WARNINGS

Station 10+53 - L 14+13 - L 15+56 - L 15+81 - L 16+04 - L 18+69 - L	Quantity (SqFt) 8475 20 10 10 10 10 10 10 10 70
	2711110

#### REMOVAL AND REPLACEMENT OF PAVEMENT

The existing PCC Fillet Section at the southeast corner of S Main Ave and E Third St, Station 10+47, shall be sawcut, removed and replaced with a 6" thick PCC Fillet Section and 6" gravel cushion. Curb dimensions for proposed 6" PCC Fillet Section shall match existing curb dimensions. Payment for gravel cushion under 6" PCC Fillet Section shall be incidental to other bid items.

Asphalt pavement adjacent to PCC fillet section shall be sawcut and removed only as necessary. Payment for sawcutting, removal and replacement of existing asphalt shall be incidental to other bid items.

#### **CONCRETE SIDEWALK**

Concrete for sidewalks shall be Class M6. Refer to Sections 462 and 651 of the Specifications. Provide a ½" Preformed Expansion Joint Filler when adjacent to existing concrete or new/existing curb and gutter. Payment for furnishing and installing the joint filler shall be incidental to the contract unit price per square foot for under the appropriate concrete sidewalk bid item.

Ramp curb to be installed adjacent to Drop Inlet at Station 10+66 - L, per SDDOT Standard Detail 651.03. Drop Inlet Cover at Station 13+97.85-5.89'L to be adjusted to match proposed Shared Use Path. Curb Installation adjacent to Drop Inlet (Station 10+66 - L) and Drop Inlet Cover Adjustment (13+97.85-5.89'L) to be incidental to "6" Concrete Sidewalk" bid item.

#### **TABLE OF 6" CONCRETE SIDEWALK**

Station to	Station	L/R	Quantity (SqFt)
10+49.94	24+61.62	0'	14,137
30+55.00	34+76.31	0'	4,214
52+11.81	61+63.38	0'	9,834
		Total:	28,185

#### SURFACING THICKNESS DIMENSIONS

Plans quantity will be applied even though the thickness may vary from that shown on the plans.

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

#### **CHECKING SPREAD RATES**

The Contractor shall be responsible for checking the Cushion Material and taking the weigh delivery tickets as the surfacing material arrives on the project and is placed onto the subgrade.

The Contractor shall compute the required spread rates for each typical surfacing section and create a spread chart prior to the start of material delivery and placement. The Engineer will review and check the Contractor's calculations and spread charts. The station to station spread shall be written on each ticket as the surfacing material is delivered to the roadway.

At the end of each day's shift, the Contractor shall verify the following:

- All tickets are present and accounted for.
- The quantity summary for each item is calculated.
- The amount of material wasted if any.
- Each day's ticket summary is marked with the corresponding "computed by".
- The ticket summary is initialed and certified that the delivered and placed quantity is correct.

All daily tickets and the summary by item shall be given to the Engineer no later than the following morning. If the checker is not properly and accurately performing the required duties, the Contractor shall correct the problem or replace the checker with an individual capable of performing the duties to the satisfaction of the Engineer. Failure to do so will result in suspension of the work.

The Department will perform depth checks. The Contractor shall be responsible for placement of material to the correct depth unless otherwise directed by the Engineer. If the placed material is not within a tolerance of +/-1/2 inch of the plan shown depth, the Contractor shall correct the problem at no additional cost to the Department. Excess material above the tolerance will not be paid for. Achieving the correct depth may require picking up and moving material or other action as required by the Engineer.

All costs for providing the Contractor furnished checker and performing all related duties shall be incidental to the contract lump sum price for the "Checker". No allowances will be made to the contract lump sum price for Checker due to authorized quantity variations unless the quantities for the material being checked vary above or below the estimated quantities by more than 25 percent. Payment for the checker shall then be increased or decreased by the same proportion as the placed material quantity bears to the estimated material quantity.

#### **TABLE OF CONSTRUCTION STAKING**

(See Special Provision for Contractor Staking)

						· ·	rade Staking	,		25em White
Roadway and Description	Begin Station	End Station	Number of Lanes	Length (Ft)	Length (Mile)	Lane Factor	*Sets of Stakes	**Grade Staking Quantity (Mile)	Miscellaneous Staking  Quantity  (Mile)	SUTH DAKO
Northwest Shared Use Path - (PCCP)	10+50	24+62	1	1,412	0.267	1.0	1	0.267	0.267	
North Shared Use Path - (PCCP)	30+55	34+76	1	421	0.080	1.0	1	0.080	0.080	5-20-15
East Shared Use Path - (PCCP)	51+90	61+63	1	973	0.184	1.0	1	0.184	0.184	//////////////////////////////////////
							Totals:	0.531	0.531	1

<sup>\* 1 =</sup> Blue Top Stakes Only

## STATE OF SOUTH DAKOTA PROJECT PROJECT SHEET SHEET SHEETS TOTAL SHEETS P TAPU (07) 6 46

Plotting Date: 5/19/2015

Rev Date : 5/19/2015

Initial: BDW

#### **LOCATION OF CONCRETE SIDEWALK JOINTS**

Contraction Joints are to be installed according to Section 651.3. Longitudinal Joint will be required at the center of the Multi Use Path.

Expansion Joints are to be installed according to Section 651.3.

#### UTILITIES

Existing utilities are not planned to be affected on this project. If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7:00 AM and Administrative Rule Article 20:25, the Contractor shall Contact the Project Engineer to determine modifications that will be necessary to avoid utility impacts.

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 elsewhere in the plans or bidding documents.

The Contractor shall be responsible for notifying South Dakota One Call 1-800-781-7474 to have utilities field located. The following utility companies are known to have facilities on the project:

	<u>POWER</u>	GAS
	Xcel Energy	MidAmerican Energy
	500 W. Russell Street	1200 S. Blauvelt
	Sioux Falls, SD 57104	Sioux Falls, SD 57105
	Attn: Mike Ronfeldt	Attn: Tim Galbraith
	Office # 605-339-8358	(605) 373-6047
	Email:	Email: tjgalbraith@midamerican.com
	michael.a.ronfeldt@xcelenergy.com	
	Southeastern Electric Cooperative	MUNICIPAL
	47102 280 <sup>th</sup> Street	City of Tea
	Worthing, SD 57077	600 E. First Street
	Attn: Doug Bartling	Tea, SD 57064
	Cell: (605) 940-0873	Attn: Thad Konrad
	Email: dougb@southeasternelectric.com	Office: 605-498-2906
		Email: teamaint1@iw.net
_		•

COMMUNIC	CATIONS
MidContinent Communications	Century Link
=3507 S. Duluth Ave.	125 S. Dakota Ave.
Sioux Falls, SD 57105	Sioux Falls, SD 57104
ÉAttn: Al Mullinix	Attn: Jon Fischer
(605) 274-8546	(605) 977-2821
Cell: (605) 231-0388	Émail:
Email: al_mullinix@mmi.net	jsfisch@centurylink.com
SDN Communications	Wide Open West
Jerry Andersen	Shawn Anderson
2900 W. 10 <sup>th</sup> Street	5100 S. Broadband Lane
Sioux Falls, SD 57104	Sioux Falls, SD 57108
605-321-0234	(605) 809-5462
Email:	Email:
jerry.andersen@sdncommunications.com	shawn.anderson@wideopenwest.com

<sup>\*\*</sup> Grade Staking Quantity = (Length) x (Lane Factor) x (Sets of Stakes)

#### TRAFFIC CONTROL - GENERAL

Unless otherwise stated in these plans, no work will be allowed during hours of darkness. Hours of darkness are defined, as  $\frac{1}{2}$  hour after sunset until  $\frac{1}{2}$  hour before suprise

Storage of vehicles and equipment shall be outside the clear zone and as near the right-of-way as possible. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work.

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

Existing guide, route, informational logo, regulatory, and warning signs shall be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including but not limited to, traffic signal heads, delineation, and signing shall be the responsibility of the Contractor. Non-applicable signing and all traffic control devices shall be covered or removed during periods of inactivity. Periods of inactivity shall be defined as no work taking place for a period of more than 24 hours. The cost of removing or covering non-applicable traffic control devices shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous". If traffic is routed to a completed section and the permanent signing is not complete, the Contractor shall use temporary signing consisting of salvaged permanent signs or temporary traffic control signs for traffic direction and safety. The cost of the temporary signing shall be at the Contractor's expense to install and maintain signs.

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

The quantity of Signs paid for will be for the greatest number of installations per sign in place at any one time regardless of the number of set-ups on the project.

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

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

The Contractor shall provide documentation that all breakaway sign supports comply with NCHRP 350 or MASH crash-worthy requirements. The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.

The Contractor shall be required to have a person available 24 hour/day, 7 days/week to maintain traffic control devices. The name and cellular telephone number of this individual shall be given to the Engineer at the preconstruction meeting.

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

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

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

Drums are required in all lane closure tapers.

The Contractor will be required to maintain access to each residence and business throughout the project.

#### **COVERING/BAGGING OF EXISTING TRAFFIC SIGNS**

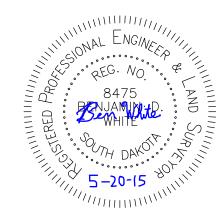
The Contractor shall cover/bag existing traffic signs that conflict with the proposed traffic control. The bags used to cover the signs shall fully conceal the sign. The Contractor shall have the bags, used to cover the signs, approved by the Engineer, prior to installation

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#### **COVER CROP SEEDING**

Oats or spring wheat seed shall be used April through July and winter wheat seed shall be used August through November.

Cover crop seeding may be used on this project as a temporary erosion control measure. The quantity of cover crop seeding was estimated at 25% of the disturbed earthen areas. The actual limits and use of cover crop seeding shall be determined by the Engineer during construction.

Cover Crop Seeding for temporary stabilization:

- Cover Crop Seeding can be used on inslopes on high fills, long backslopes, and steeply sloping ditch channels because these areas are susceptible to erosion.
- Stabilize disturbed areas in Summer because of seasonal seeding limitations.
- Stabilize disturbed areas for Winter stablilization.

A quantity of 1.0 bushel of cover crop seed is included in the estimate of quantities.

#### **EROSION CONTROL WATTLE**

Erosion control wattles for restraining the flow of runoff and sediment shall be installed at locations noted in the table and at locations determined by the Engineer during construction. Refer to Standard Plate 734.06 for details.

The Contractor shall provide certification that the erosion control wattles do not contain noxious weed seeds.

Erosion control wattles shall remain on the project until vegetation has been established and then they shall be removed in accordance with the Engineer.

The erosion control wattle provided shall be from the approved product list. The approved product list for erosion control wattle may be viewed at the following internet site:

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

			Diameter		Quantity
Station to	Station	L/R	(in)	Location	(Ft)
32+50		R	12	ditch	29
34+51		R	12	ditch	29
50+66		R	12	ditch	30
51+65	61+12	R	12	ditch	972
52+23		L	12	PIPE END	44
53+53		L	12	ditch	30
54+78		L	12	ditch	30
58+00		L	12	ditch	30
59+50	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	L	12	ditch	30
61+0Q\\\	AL ENGINA.	1/JL	12	PIPE END	44
11, 5101	, Addik	onál∕Qu	uantity		0
\$ 15	SFG. No	4 /		Total	1,268
STERED PA	AL ENGINA Adding 8475 NJAMINAD. OTH DAY	AND SUPLEY	VVIIIIIIIII		

#### **REMOVE EROSION CONTROL WATTLE**

Erosion control wattles shall be removed when vegetation is established. Some or all of the erosion control wattles may be left on the project until vegetation is established.

#### REMOVE AND RESET EROSION CONTROL WATTLE

Erosion control wattles may be removed and reset as necessary as work progresses. The erosion control wattles removed and reset shall be in useable condition. All costs for removing and resetting the erosion control wattles shall be incidental to the contract unit price per foot for "Remove and Reset Erosion Control Wattle".

#### **CONCRETE WASHOUT AREA**

Construction Requirements: A concrete washout area shall be installed on the project site at a location approved by the Engineer if concrete trucks deliver concrete to the site. No washout area is necessary if all concrete trucks are going to wash out at approved site constructed by the concrete supplier.

Maintenance Requirements: The concrete washout area must be kept in a condition to maintain the capacity for all wasted concrete and washout water on the project.

Measurement: Concrete washout area will only be measured if the corresponding bid item has been included in the plans and a concrete washout area has been constructed on the project site. Measurement for the concrete washout area will be per each.

Payment: Payment for the concrete washout area will be at the contract unit price per each if specified. Payment shall be full compensation for all materials, labor, equipment, and incidentals required to install, maintain, and remove the concrete washout area. If the corresponding bid item has not been included in the plans the concrete washout area will be considered incidental to the contract.

#### STREET SWEEPING

Vehicle tracking of sediment from the construction site shall be minimized. Street sweeping shall be used if erosion and sediment control best management practices are not adequate to prevent sediment from being tracked onto the street.

The Contractor shall use a pickup broom having integral self-contained storage to clean the roadway. The pickup broom used shall be a minimum of 6 feet wide and have working gutter brooms.

At a minimum, sweeping will be required:

- 1. Prior to opening any segment or roadway to traffic.
- 2. Following pavement grooving operations and prior to the application of the pavement marking tape.

All costs for cleaning the roadway with a pickup broom shall be incidental to the contract unit price per hour for "Sweeping".

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#### **CONSTRUCTION ENTRANCE**

The Contractor shall install a Construction Entrance at locations where there is a potential for mud tracking and sediment flow from the construction site and work area onto a paved public roadway.

It is the Contractor's option to use the SDDOT Construction Entrance (See SDDOT Construction Entrance notes and details), a product from the list provided in these notes, or other products or processes as approved by the Engineer during construction.

If the Contractor elects to use one of the products listed in the table, then the Contractor shall install the construction entrance product in accordance with the manufacturer's installation instructions or as directed by the Engineer.

The Contractor shall maintain the construction entrance such that mud tracking and sediment flow will not enter the roadway or adjacent drainage areas. The construction entrance shall be routinely inspected and the Contractor shall repair or replace material as deemed necessary by the Engineer.

All costs for furnishing, installing, maintaining, and removal of the construction entrance including equipment, labor, materials, and incidentals shall be included in the contract unit price per each for "Construction Entrance".

The following table is a list of known construction entrance products available for use:

Product Manufacturer Grizzly Rumble Grate Trackout Control, LLC (10' width and 24' length required) Tempe, AZ Phone: 1-800-761-0056 www.trackoutcontrol.com Rumble Grid Pro-Tec Equipment, Inc.

(12' width and 24' length including combination of grids and ramps required)

Charlotte, MI Phone: 1-800-292-1225 www.pro-tecequipment.com

#### SDDOT CONSTRUCTION ENTRANCE

If the SDDOT Construction Entrance is utilized, then the Contractor shall install the SDDOT Construction Entrance in accordance with these notes and the detail drawings.

Pit run material shall be obtained from a granular source and shall conform to the following gradation:

Sieve Size	Percent Passir
6"	100%
#4	0-60%
#200	0-20%

The pit run material shall be compacted to the satisfaction of the Engineer.

#### SDDOT CONSTRUCTION ENTRANCE CONT'D

The aggregate for the granular material shall conform to the following gradation requirements:

Sieve Size	Percent Passing
3"	100%
2 ½"	90-100%
1 ½"	25-60%
3/4"	0-10%
1/2"	0-5%

The granular material shall be placed in 6" maximum lifts.

It is anticipated that the granular material will need to be periodically removed and replaced as it becomes inundated with mud and sediment.

The MSE geotextile shall conform to Section 831 of the Specifications. The MSE geotextile shall be on the Approved Products List for this material or will be certified by the supplier to meet this specification prior to installation.

The MSE geotextile should be kept as taut as possible prior to placing.

Equipment shall not be allowed on the MSE geotextile until the first lift of granular material is in place.

All seams in the MSE geotextile shall be overlapped at least 2' and shingled.

#### SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES

This type of sediment control device should be used where there is pavement in the vicinity of the drop inlets and storm water or sediment could possibly enter the frame and grate. Sediment Control at Inlets with Frame and Grates shall be installed prior to working in the vicinity of the drop inlets.

The Contractor shall be responsible for maintaining and repairing the sediment control devices for the duration of the project for which sediment control measures are required. Maintenance shall be scheduled to prevent storm water from backing up into the driving lane.

"Sediment Control at Inlets with Frames and Grates" will be paid for one time at each location, regardless of the number of times the sediment control devices are installed, inspected, cleaned, removed, repaired, or replaced. All costs associated with furnishing, installing, inspecting, maintaining, cleaning, sediment removal, and repairing Sediment Control at Inlets with Frames and Grates shall be incidental to the contract unit price per each for "Sediment Control at Inlet with Frame and Grate".

Sediment collection devices shall be a commercial made sediment collection device from the "Sediment Control at Inlet with Frame and Grate" list or an approved equal. The device shall be installed in reinforced concrete drop inlets according to the manufacturer's recommendations.

Sediment Control at Inlet with Frame and Grate Approved List:

	ти типи и
<u>Product</u>	<u>Manufacturer</u>
InfraSafe Debris Collection Device with filter sock	Royal Environmental Systems, Inc. Stacy, MN Phone: 1-800-817-3240
Dandy Curb Sack	www.royalenterprises.net Dandy Products Inc. Dublin, OH Phone: 1-800-591-2284
Silt Trapper	www.dandyproducts.com Storm Water Solutions Lakeville, MN Phone: 1-952-461-4376
DIP Basket	www.silttrapper.com Skyview Construction Co., LLC Waubay, SD
FLEXSTORM Inlet Filters	Phone: 1-605-520-0555 www.skyviewconst.com Inlet and Pipe Protection, Inc. Naperville, IL Phone: 1-866-287-8655
GR-8 Guard or	www.inletfilters.com ERTEC Environmental Systems LLC Alameda, CA
Combo Guard	Phone: 1-866-521-0724
Sediment Catchers	www.ertecsystems.com Shaun Jensen Brookings, SD Phone: 1-605-690-4950

TABLE OF SEDIMENT CONTROL AT INLET WITH FRAMES AND GRATES					
L/R	Quantity (Each)				
L	1				
Total 1					

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#### SEDIMENT CONTROL AT TYPE S REINFORCED CONCRETE DROP **INLETS**

The sediment control device provided shall be from the list shown below. Refer to Standard Plate 734.11 for details.

> Product Manufacturer Dandy Curb Dandy Products Inc.

Dublin, OH

Phone: 1-800-591-2284 www.dandyproducts.com

ACF Environmental Gutterbuddy

Richmond, VA Phone: 1-800-448-3636

www.acfenvironmental.com

SS-300 Silt-Saver, Inc.

Convers, GA

Phone: 1-888-382-7458 www.siltsaver.com

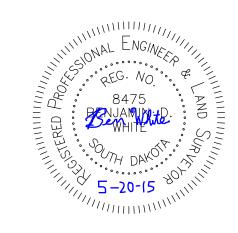
Curb Inlet Guard **ECTEC Environmental Systems LLC** 

Alameda, CA

Phone: 1-866-521-0724 www.ertecsystems.com

TABLE OF SEDIMENT CONTROL AT TYPE S REINFORCED CONCRETE DROP INLETS						
Station	L/R	Clear Opening Width (Ft)	Quantity* (Ft)			
10+67	L	10	12			
13+98	L	10	12			
21+00	L	10	12			
24+70	R	10	12			
		Total:	48			

Quantity shown is the minimum length required and shall be the basis of payment.



	TION PREVENTION PLAN CHECKLIST	$\triangleright$	Stı	ructural Temporary Erosion and Sediment Controls
	MIT FOR STORM WATER DISCHARGES ASSOCIATED		•	☐ Silt Fence
	ION ACTIVITIES is being applied for by the SD DOT during		•	☐ Floating Silt Curtain
	process. The permit number will be available at the		•	Straw Bale Check
preconstruction meet	ting.		•	☐ Temporary Berm
			•	☐ Temporary Slope Drain
SITE DESCRIPTI			•	Straw Wattles or Rolls
Project Limits:	See Title Sheet (4.2 1.b)		•	☐ Turf Reinforcement Mat
Project Descrip	tion: See Title Sheet (4.2 1.a.)		•	☐ Rip Rap
Site Map(s): See	e Title Sheet and Plans (4.2 1.f. (1)-(6))		•	Gabions
Major Soil Distu	urbing Activities (check all that apply)		•	☐ Rock Check Dams
	and grubbing		•	Sediment Traps/Basins
■			•	
■	and shaping		•	Outlet Protection
■ ⊠Filling				Surface Inlet Protection (Area Drain)
■ ⊠Cutting a	nd fillina		•	☐ Curb Inlet Protection
■ ☐Other (de				
	rea 2.35 acres (4.2 1.b.)			☐ Entrance/Exit Equipment Tire Wash
	e Disturbed 2.35 acres (4.2 1.b.)			☐ Interceptor Ditch
	tive Cover (%)85%			☐ Interceptor Bitan
> Soil Properties:	AASHTO Soil or USDA-NRCS Soil Series Classification Silty			☐ Temporary Diversion Channel
Clay <b>(4.2 1. d.)</b>	And ITO doll of Goba-Nixoo doll delies diassilication dilty			Work Platform
	ring Water Body/Bodies Big Sioux River (4.2 1.e.)		-	☐ Temporary Water Barrier
Name of Receiv	Tilly Water Body/Bodies bly Sloux River (4.2 1.e.)			☐ Temporary Water Crossing
* OPDER OF CON	STRUCTION ACTIVITIES (4.2.4.a.)			☐ Erosion Control Blanket
	STRUCTION ACTIVITIES (4.2 1.c.)			
	sures shall be initiated as soon as possible, but in no case	>		etland Avoidance
	after the construction activity in that portion of the site has			ill construction and/or erosion and sediment controls impinge on regulated
	manently ceased. Initiation of final or temporary stabilization			etlands? Yes \( \subseteq \text{No } \( \subseteq \) If yes, the structural and erosion and sediment
	4-day limit if earth disturbing activities will be resumed within			ntrols have been included in the total project wetland impacts and have
21 days.)				en included in the 404 permit process with the USACE.
Install stabilized	d construction entrance(s).			orm Water Management (4.2 2.b., (1) and (2))
	r protection where runoff sheets from the site.			orm water management will be handled by temporary controls outlined in
	and ditch bottom protection.			ROSION AND SEDIMENT CONTROLS" above, and any permanent controls
Remove and sto				eded to meet permanent storm water management needs in the post
Stabilize disturl			COI	nstruction period. Permanent controls will be shown on the plans and noted
	storm sewers, curb and gutter.		as	permanent.
Install inlet and	culvert protection after completing storm drainage and	$\triangleright$	Ot	her Storm Water Controls (4.2 2.c., (1) and (2))
other utility inst	tallations.		•	Waste Disposal
Complete final g	grading.			All liquid waste materials will be collected and stored in sealed metal
Complete final	paving and sealing of concrete.			containers approved by the project engineer. All trash and construction
	isturbed by removal activities.			debris from the site will be deposited in the approved containers.
	•			Containers will be serviced as necessary, and the trash will be hauled to
❖ EROSION AND S	SEDIMENT CONTROLS (4.2 2.a.(1)(a)-(f))			an approved disposal site or licensed landfill. All onsite personnel will be
(Check all that a				instructed in the proper procedures for waste disposal, and notices stating
	actices (See Detail Plan Sheets)			proper practices will be posted in the field office. The general contractor's
	ry Seeding (Cover Crop Seeding)			representative responsible for the conduct of work on the site will be
■ ☐ Permane				responsible for seeing waste disposal procedures are followed.
■ ☐ Sodding	33349			Hazardous Waste
	(Woody Vegetation for Soil Stabilization)			All hazardous waste materials will be disposed of in a manner specified by
	(Woody Vegetation for Soil Stabilization)			local or state regulations or by the manufacturer. Site personnel will be
	C Mulch (Wood Fiber Mulch)			instructed in these practices, and the individual designated as the
■ ☐ Soil Stab				contractor's on-site representative will be responsible for seeing that these
■ ☐ Bonded I			_	practices are followed.
	Control Blankets or Mats		•	Sanitary Waste
	on Buffer Strips			Portable sanitary facilities will be provided on all construction sites.
	ned Surface (e.g. tracking)			Sanitary waste will be collected from the portable units in a timely manner
■ ☐ Dust Cor	ntroi			by a licensed waste management contractor or as required by any local

regulations.

■ ☐ Other

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#### **♦** Maintenance and Inspection (4.2 3. and 4.2 4.)

#### > Maintenance and Inspection Practices

- Inspections will be conducted at least one time per week and after a storm event of 0.50 inches or greater.
- All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
- Silt fence will be inspected for depth of sediment and for tears in order to ensure the fabric is securely attached to the posts and that the posts are well anchored. Sediment buildup will be removed from the silt fence when it reaches 1/3 of the height of the silt fence.
- Sediment basins and traps will be checked. Sediment will be removed when depth reaches approximately 50 percent of the structure's capacity, and at the conclusion of the construction.
- Check dams will be inspected for stability. Sediment will be removed when depth reaches ½ the height of the dam.
- All seeded areas will be checked for bare spots, washouts, and vigorous growth free of significant weed infestations.
- Inspection and maintenance reports will be prepared on form DOT 298 for each site inspection, this form will also be used to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents.
- The SDDOT Project Engineer and contractor's site superintendent are responsible for inspections. Maintenance, repair activities are the responsibility of the contractor. The SDDOT Project Engineer will complete the inspection and maintenance reports and distribute copies per the distribution instructions on DOT 298.

#### Non-Storm Water Discharges (3.0)

The following non-storm water discharges are anticipated during the course of this project (check all that apply).

- Discharges from water line flushing.
- Pavement wash-water, where no spills or leaks of toxic or hazardous materials have occurred.
- Uncontaminated ground water associated with dewatering activities.

#### Materials Inventory (4.2, 2.c.(2))

The following materials or substances are expected to be present on the site during the construction period. These materials will be handled as noted under the headings "EROSION AND SEDIMENT CONTROLS" and "SPILL PREVENTION" (check all that apply).

- ➤ ⊠Concrete and Portland Cement
- ➤ ⊠Detergents

- ➤ ⊠Bituminous Materials
- ➤ ⊠Cleaning Solvents
- ➤ \overline{
- ➤ ⊠Cure
- ➤ X Texture
- ➤ □Chemical Fertilizers
- → ☐ Other

#### Spill Prevention (4.2 2.c.(2))

#### > Material Management

- Housekeeping
- Only needed products will be stored on-site by the contractor.
- Except for bulk materials the contractor will store all materials under cover and in appropriate containers.
- Products must be stored in original containers and labeled.
- Material mixing will be conducted in accordance with the manufacturer's recommendations.
- When possible, all products will be completely used before properly disposing of the container off site.
- The manufacturer's directions for disposal of materials and containers will be followed.
- The contractor's site superintendent will inspect materials storage areas regularly to ensure proper use and disposal.
- Dust generated will be controlled in an environmentally safe manner.
- Vegetation areas not essential to the construction project will be preserved and maintained as noted on the plans.

#### Hazardous Materials

- Products will be kept in original containers unless the container is not resealable.
- Original labels and material safety data sheets will be retained in a safe place to relay important product information.
- If surplus product must be disposed of, manufacturer's label directions for disposal will be followed.
- Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, de-greasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants will be conducted on an impervious surface and under cover during wet weather to prevent the release of contaminants onto the ground.
- Wheel wash water will be collected and allowed to settle out suspended solids prior to discharge. Wheel wash water will not be discharged directly into any storm water system or storm water treatment system.
- Potential pH-modifying materials such as: bulk cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, and mixer washout waters will be collected on site and managed to prevent contamination of storm water runoff.

#### Product Specific Practices (6.8)

#### Petroleum Products

All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled.

#### Fertilizers

Fertilizers will be applied only in the amounts specified by the SDDOT. Once applied, fertilizers will be worked into the soil to limit the exposure to storm water. Fertilizers will be stored in an enclosed area. The contents of partially used fertilizer bags will be transferred to sealable containers to avoid spills.

#### Paints

All containers will be tightly sealed and stored when not required for use. The excess will be disposed of according to the manufacturer's instructions and any applicable state and local regulations.

#### Concrete Trucks

Contractors will provide designated truck washout areas on the site. These areas must be self contained and not connected to any storm water outlet of the site. Upon completion of construction washout areas will be properly stabilized.

#### > Spill Control Practices (4.2 2 c.(2))

In addition to the previous housekeeping and management practices, the following practices will be followed for spill prevention and cleanup if needed.

- For all hazardous materials stored on site, the manufacturer's recommended methods for spill clean up will be clearly posted. Site personnel will be made aware of the procedures and the locations of the information and cleanup supplies.
- Appropriate cleanup materials and equipment will be maintained by the contractor in the materials storage area on-site. As appropriate, equipment and materials may include items such as brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for clean up purposes.
- All spills will be cleaned immediately after discovery and the materials disposed of properly.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- After a spill a report will be prepared describing the spill, what caused it, and the cleanup measures taken. The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring, as well as clean up instructions in the event of reoccurrences.
- The contractor's site superintendent, responsible for day-to-day operations, will be the spill prevention and cleanup coordinator. The contractor is responsible for ensuring that the site superintendent has had appropriate training for hazardous materials handling, spill management, and cleanup.

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#### Spill Response (4.2 2 c.(2))

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into storm water runoff and conveyance systems. If the release has impacted on-site storm water, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens storm water or surface water at the site, the spill response procedures outlined below must be implemented in a timely manner to prevent the release of pollutants.

- The contractor's site superintendent will be notified immediately when a spill or the threat of a spill is observed. The superintendent will assess the situation and determine the appropriate response.
- If spills represent an imminent threat of escaping erosion and sediment controls and entering receiving waters, personnel will be directed to respond immediately to contain the release and notify the superintendent after the situation has been stabilized.
- Spill kits containing appropriate materials and equipment for spill response and cleanup will be maintained by the contractor at the site.

If oil sheen is observed on surface water (e.g. settling ponds, detention ponds, swales), action will be taken immediately to remove the material causing the sheen. The contractor will use appropriate materials to contain and absorb the spill. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.

- If a spill occurs the superintendent or the superintendent's designee will be responsible for completing the spill reporting form and for reporting the spill to SD DENR.
- Personnel with primary responsibility for spill response and clean up will
  receive training by the contractor's site superintendent or designee. The
  training must include identifying the location of the spill kits and other spill
  response equipment and the use of spill response materials.
- Spill response equipment will be inspected and maintained as necessary to replace any materials used in spill response activities.

#### Spill Notification

In the event of a spill, the contractor's site superintendent will make the appropriate notification(s), consistent with the following procedures:

- A release or spill of a regulated substance (includes petroleum and petroleum products) must be reported to DENR immediately if any one of the following conditions exists:
  - The discharge threatens or is in a position to threaten the waters of the state (surface water or ground water).
  - The discharge causes an immediate danger to human health or safety.
  - The discharge exceeds 25 gallons.
  - The discharge causes a sheen on surface water.
  - The discharge of any substance that exceeds the ground water quality standards of ARSD (Administrative Rules of South Dakota) chapter 74:54:01.
  - The discharge of any substance that exceeds the surface water quality standards of ARSD chapter 74:54:01.
  - The discharge of any substance that harms or threatens to harm wildlife or aquatic life.
  - The discharge of crude oil in field activities under SDCL (South Dakota Codified Laws) chapter 45-9 is greater than 1 barrel (42 gallons).

To report a release or spill, call DENR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central time). To report the release after hours, on weekends or holidays, call State Radio Communications at 605-773-3231. Reporting the release to DENR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, the responsible person must also contact local authorities to determine the local reporting requirements for releases. DENR recommends that spills also be reported to the National Response Center at (800) 424-8802.

#### Construction Changes (4.4)

When changes are made to the construction project that will require alterations in the temporary erosion controls of the site, the Storm Water Pollution Prevention Plan (SWPPP) will be amended to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The SDDOT Project Engineer will modify the SWPPP plan (DOT 298) and drawings to reflect the needed changes. Copies of changes will be routed per DOT 298. Copies of forms and the SWPPP will be retained in a designated place for review over the course of the project.

#### **❖** <u>CERTIFICATIONS</u>

#### Certification of Compliance with Federal, State, and Local Regulations

The Storm Water Pollution Prevention Plan (SWPPP) for this project reflects the requirements of all local municipal jurisdictions for storm water management and sediment and erosion control as established by ordinance, as well as other state and federal requirements for sediment and erosion control plans, permits, notices or documentation as appropriate.

#### > South Dakota Department of Transportation

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Signature (See the General Permit, Section 6.7.1.C.)

#### Prime Contractor

This section is to be executed by the General Contractor after the award of the contract. This section may be executed any time there is a change in the Prime Contractor of the project.

I certify under penalty of law that this document and all attachments will be revised or maintained under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Signature	

STATE OF	PROJECT	SHEET	TOTAL SHEETS	
SOUTH DAKOTA	P TAPU (07)	12	46	

Plotting Date: 3/27/2015

CONTACT INFORMAT	<b>ION</b>
------------------	------------

С	ontractor Information:		
•	Prime Contractor Name:		
•	Contractor Contact Name:		
•	Address:		
•	Address:		
•	City:	State:	Zip:
•	Office Phone:	Field:	
•	Cell Phone:	Fax:	
Ε	rosion Control Supervisor		
•	Name:		
•	Address:		
•	Address:		
•	City:	State:	Zip:
•	Office Phone:	Field:	
•	Cell Phone:	Fax:	
S	DDOT Project Engineer		
•	Name:		
•	Business Address:		
•	Job Office Location:		
•	City:	State:	Zip:
•	Office Phone:	Field:	
	Cell Phone:	Fax:	

#### > SD DENR Contact Spill Reporting

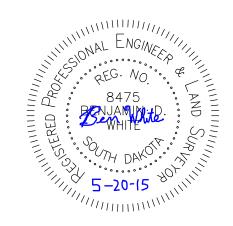
- Business Hours Monday-Friday (605) 773-3296
- Nights and Weekends (605) 773-3231
- SD DENR Contact for Hazardous Materials.
  - **(605)** 773-3153
- National Response Center Hotline
  - **•** (800) 424-8802.

### **CONTROL DATA**

STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	P TAPU (07)	13	46

Plotting Date: 3/27/2015

HORIZONTAL AND VERTICAL CONTROL POINTS							
POINT	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING	ELEVATION	
CP7	24+60.71	1590.84'R	#5 Rebar, +/- 1ft SW of drop inlet corner at SW corner of 1st Street and Hwy111	15789609.39	2217380.674	1473.66	
СР7а	10+69.83	5.21'L	#5 Rebar, +/- 0.5 ft SE of drop inlet corner at SE corner of 3rd Street and Main Ave.	15788893.675	2214901.822	1487.78	



### **HORIZONTAL ALIGNMENT DATA**

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU(07)	14	46

Plotting Date: 3/27/2015

#### **Northwest Path**

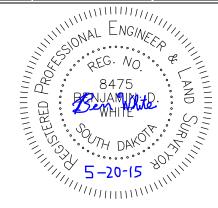
<u>Type</u>	<u>Station</u>			<u>Northing</u>	<u>Easting</u>
POB	10+00.00			15788886.49	2214832.17
		TL = 408.17	N 88° 22' 35.79" E		
PC	14+08.17			15788898.05	2215240.17
PI	14+52.06	R = 500.00	Delta = 10° 01' 57.22" R	15788899.30'	2215284.04
PT	14+95.72			15788892.88	2215327.46
		TL = 45.38	S 81° 35' 27.58" E		
PI	15+41.10			15788886.24	2215372.35
		TL = 19.69	N 88° 05' 10.16" E		
PC	15+60.79			15788886.90	2215392.02
PI	19+18.49	R = 407.50	Delta = 82° 33' 11.02" L		
PCC	21+47.92			15789254.88	2215784.01
PI	21+66.93	R = 120.00	Delta = 18° 00' 02.88" L	15789273.80	2215785.85
PCC	21+85.62			15789292.36	2215781.74
PI	22+04.66	R = 195.00	Delta = 11° 09' 11.15" R	15789310.95	2215777.63
PT	22+23.58			15789329.98	2215777.20
		TL = 62.12	N 01° 18' 52.59" W		
PC	22+85.70			15789392.09	2215775.77
PI	23+12.04	R = 135.00	Delta = 22° 04' 40.45" R	15789418.42	2215775.17
PCC	23+37.72			15789443.04	2215784.50
PI	23+82.89	R = 120.00	Delta = 41° 15' 29.82" L	15789485.28	2215800.52
PCC	24+24.13			15789527.600	2215784.701
PI	24+36.22	R = 24.50	Delta = 52° 31' 07.02" R		
PCC	24+46.59			15789549.17	2215786.88
PI	24+54.27	R = 24.00	Delta = 35° 30' 43.82" L	15789555.69	2215790.95
PT	24+61.46			15789563.36	2215790.49
		TL = 50.19	N 03° 29' 18.75" W		
POE	25+11.65			15789613.45	2215787.43

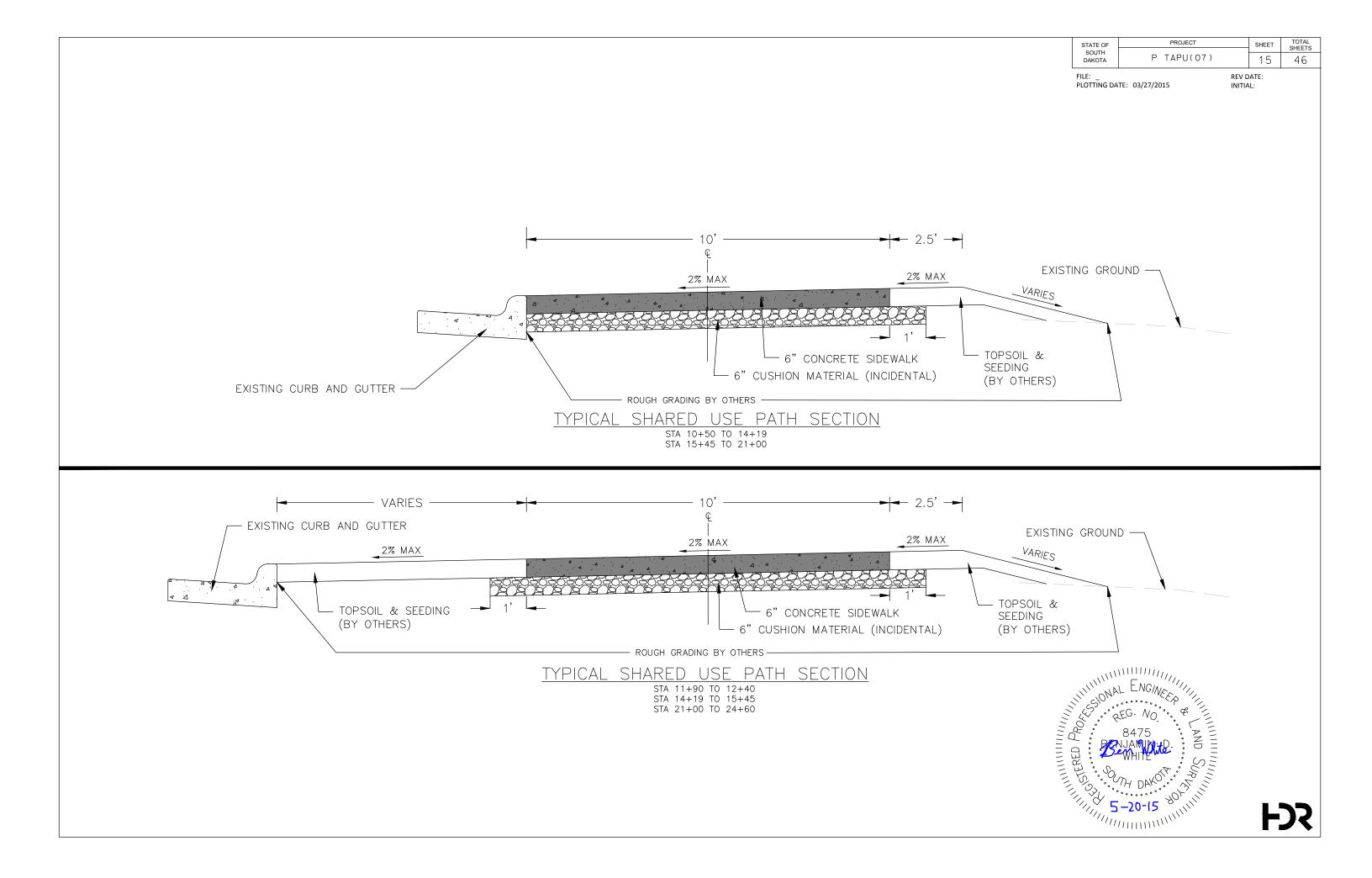
#### **North Path**

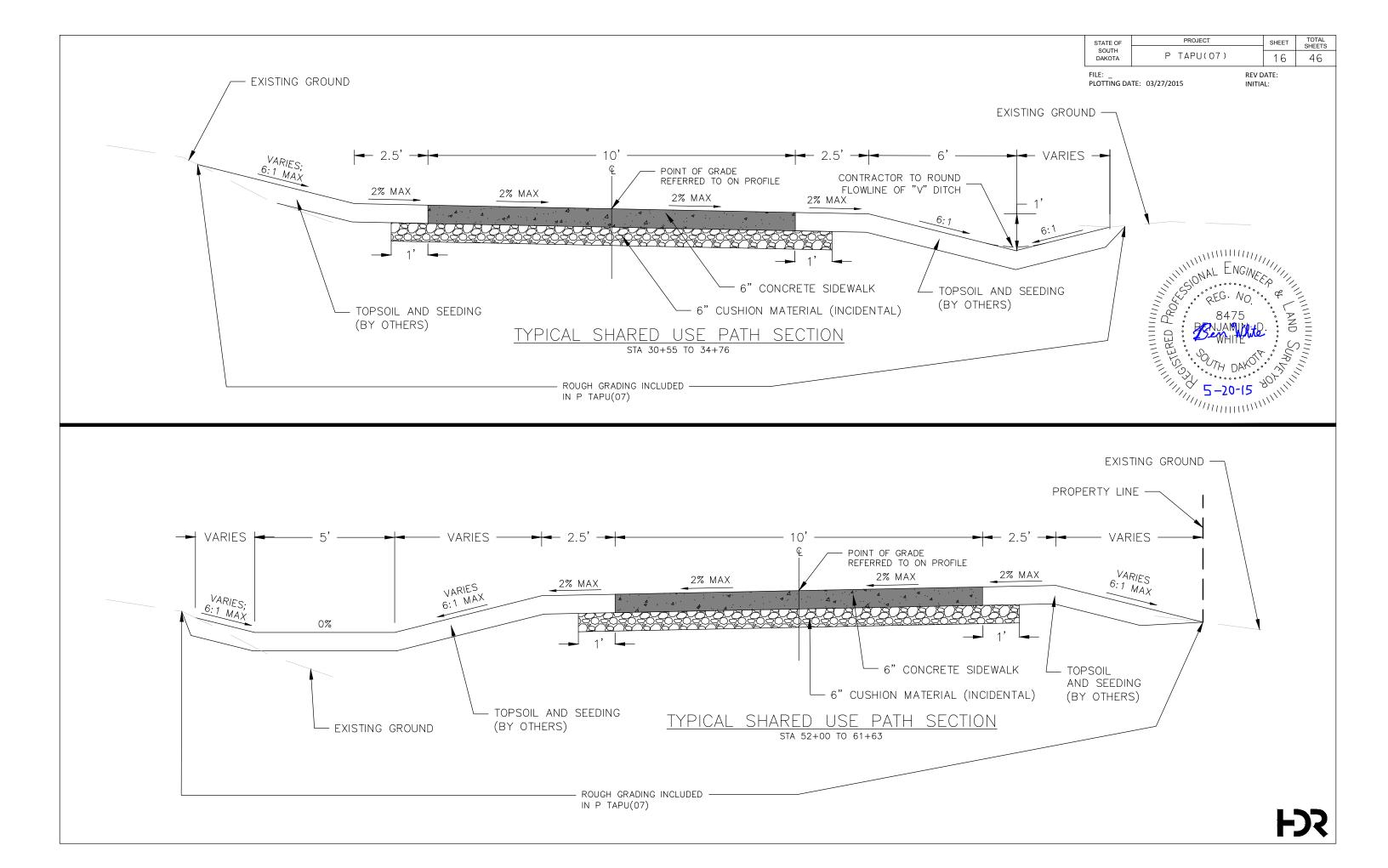
<u>Type</u>	<u>Station</u>			<u>Northing</u>	<u>Easting</u>
POB	30+00.00			15789224.78	2215729.12
		TL = 39.73	S 77° 55' 34.13" E		
PI	30+39.73			15789216.47	2215767.98
		TL = 16.68	S 77° 55' 34.13" E		
PC	30+56.41			15789212.98	2215784.29
PI	30+80.94	R = 205.00	Delta = 13° 38' 51.20" L	15789207.85	2215808.28
PT	31+05.24			15789208.52	2215832.80
		TL = 371.07	N 88° 25' 34.67" E		
POE	34+76.31			15789218.71	2216203.73

#### **East Path**

st Path	Path						
<u>Type</u>	<u>Station</u>			<u>Northing</u>	<u>Easting</u>		
POB /PC	50+00.00			15788109.71	2216288.52		
PI	50+35.96	R = 249.00	Delta = 16° 26' 05.82" L	15788144.40	2216279.05		
PCC	50+71.43			15788174.99	2216260.15		
PI	51+40.42	R = 155.00	Delta = 47° 59' 15.90" R	15788233.69	2216223.89		
PCC	52+01.24			15788299.91	2216243.23		
PI	53+63.49	R = 856.31	Delta = 21° 27' 26.78" L	15788455.65	2216288.72		
PT	55+21.93			15788617.23	2216274.08		
		TL = 0.66	N 05° 10' 36.37" W				
PI	55+22.59			15788617.89	2216274.02		
		TL = 176.67	N 04° 38' 28.51" W				
PC	56+99.26			15788793.98	2216259.72		
PI	57+68.13	R = 1000.00	Delta = 07° 52' 43.31" R	15788862.62	2216254.15		
PT	58+36.77			15788931.37	2216258.04		
		TL = 219.04	N 03° 14' 14.80" E				
PC	60+55.82			15789150.07	2216270.41		
PI	61+26.52	R = 65.00	Delta = 94° 48' 40.13" L	15789220.65	2216274.40		
PT/ POE	61+63.38			15789218.71	2216203.73		







## **EXISTING TOPOGRAPHY SYMBOLOGY** AND LEGEND

	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		P TAPU(07)	17	46

PLOTTING DATE: 03/27/2015

REV DATE: INITIAL:

			0 . 11: 5. 1	•
Information Sign One Post	þ		Satellite Dish	<b>₽</b>
Information Sign Two Post	<b>\$</b>		Septic Tank	<del>Y</del>
Interstate Close Gate	A,		Shrub Tree	<b>\$</b>
Iron Pin	<b>⊙</b>		Sidewalk	
Irrigation Ditch			Sign Face	
Lake Edge			Sign Post	0
Lawn Sprinkler	<b>4</b> 5		Slough Or Marsh	44
Mailbox	0		=	<u></u>
	<del>-</del>		Spring	<b>A</b> Ø
Manhole Electric	•		Stream Gauge	ď
Manhole Gas	0		Street Marker	<b>6</b>
Manhole Misc	•		Telephone Fiber Optics	— T/F —
Manhole Sanitary Sewer	•		Telephone Junction Box	Ф
Manhole Storm Sewer	•		Telephone Pole	Ø
Manhole Telephone	•		Television Cable Jct Box	•
Manhole Water	0		Television Tower	*
Merry-Go-Round	<u> </u>		Test Wells/Bore Holes	<b>+</b>
	<b>₩</b>			
Microwave Radio Tower	*		Traffic Signal	<b>☆</b> •
Misc. Property Corner	<b>└</b>		Trash Barrel	Φ
Misc. Post	۰		Tree Belt	
Overhang Or Encroachment			Tree Coniferous	*
Overhead Utility Line	— он —		Tree Deciduous	<b>©</b>
Parking Meter	f		Tree Stumps	A
Pipe With End Section	<u>.</u>		Triangulation Station	<b>A</b>
Pipe With Headwall			Underground Electric Line	_ P _
				— <b>F</b> —
Pipe Without End Section			Underground Gas Line	— G —
Playground Slide	7		Underground Sanitary Sewer	- s -
Playground Swing	<del>&gt;                                    </del>		Underground Storm Sewer	= s =
Power And Light Pole	•		Underground Tank	
Power And Telephone Pole	Ď		Underground Telephone Line	— т —
Power Meter	<b>●</b> ● ¤ -		Underground Television Cable	— тv —
Power Pole	Ø		Underground Water Line	— w —
Power Pole And Transformer	<del>.</del> 7-		Warning Sign One Post	 b
Power Tower Structure	¥		Warning Sign Two Post	<b>b</b>
	Δ			Þ
Propane Tank			Water Fountain	ı
Property Pipe	<b>O</b>		Water Hydrant	0
Property Pipe With Cap	<b>•</b>		Water Meter	•
Property Stone	PS		Water Tower	<b>A</b>
Public Telephone	a		Water Valve	<b>Ø</b>
Railroad Crossing Signal	- <b>Ģ</b> 4		Water Well	<b>⊙</b>
Railroad Milepost Marker	Š		Weir Rock	
Railroad Profile			Windmill	8
Railroad R.O.W. Marker	0		Wingwall	
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Railroad Signs	<u>þ</u>	IN ENGINE	Witness Corner	•
Railroad Switch	<b>D</b> ′	WAL THOUSE		
Railroad Track			State and National Line	-
Railroad Trestle		S & REG. NO 4	County Line	
Rebar	Æ	≥ 4 · 8175 · F =	Section Line	-
Rebar With Cap	A	$=$ $\bigcirc$	Quarter Line	
Reference Mark	A		Sixteenth Line	
Retaining Wall		三世· WHILE · · SI	Property Line	
		= 4. ° 8. = =		
Riprap		S W. WAN HTV Z S	Construction Line	
River Edge		// S/	R. O. W. Line	
Rock And Wire Baskets		5-20-15 William	New R. O. W. Line	
Rockpiles	<i>A</i>		Cut and Fill Limits	
Route Sign One Post	þ	ENGINERAL ENGINEER  STANDAM DAKE  SOLATION  SO	Control of Access	
Route Sign Two Post	<b>B</b>		New Control of Access	
-	I.			

Anchor Antenna Approach **Assumed Corner Azimuth Marker** Bbg 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 Ditch Block 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** 

7777

Fence Wood

Fence Woven

Fire Hydrant

Flower Bed

Gas Valve Or Meter

Highway R.O.W. Marker

Gas Pump Island

Flag Pole

Grain Bin

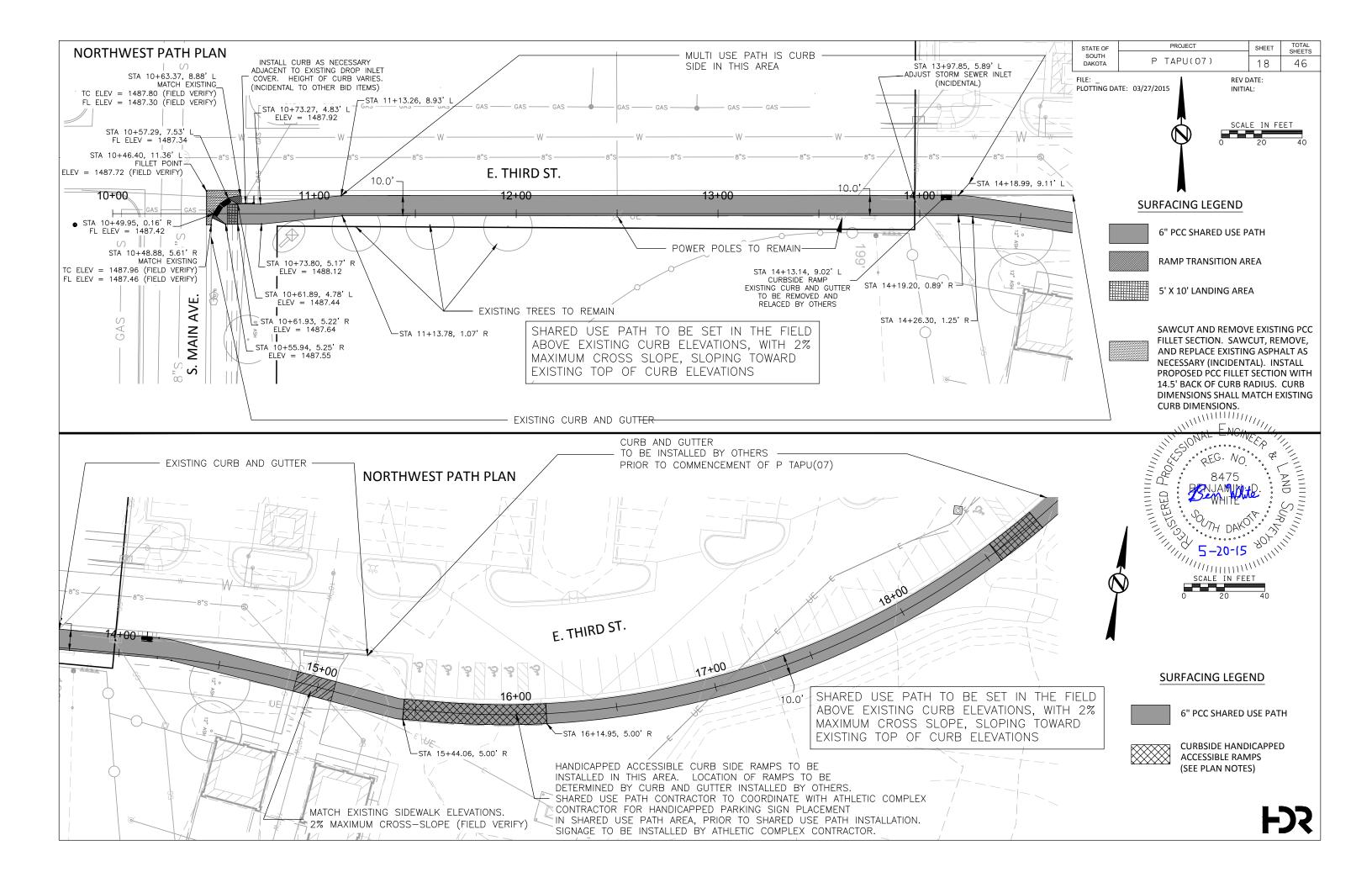
Guardrail

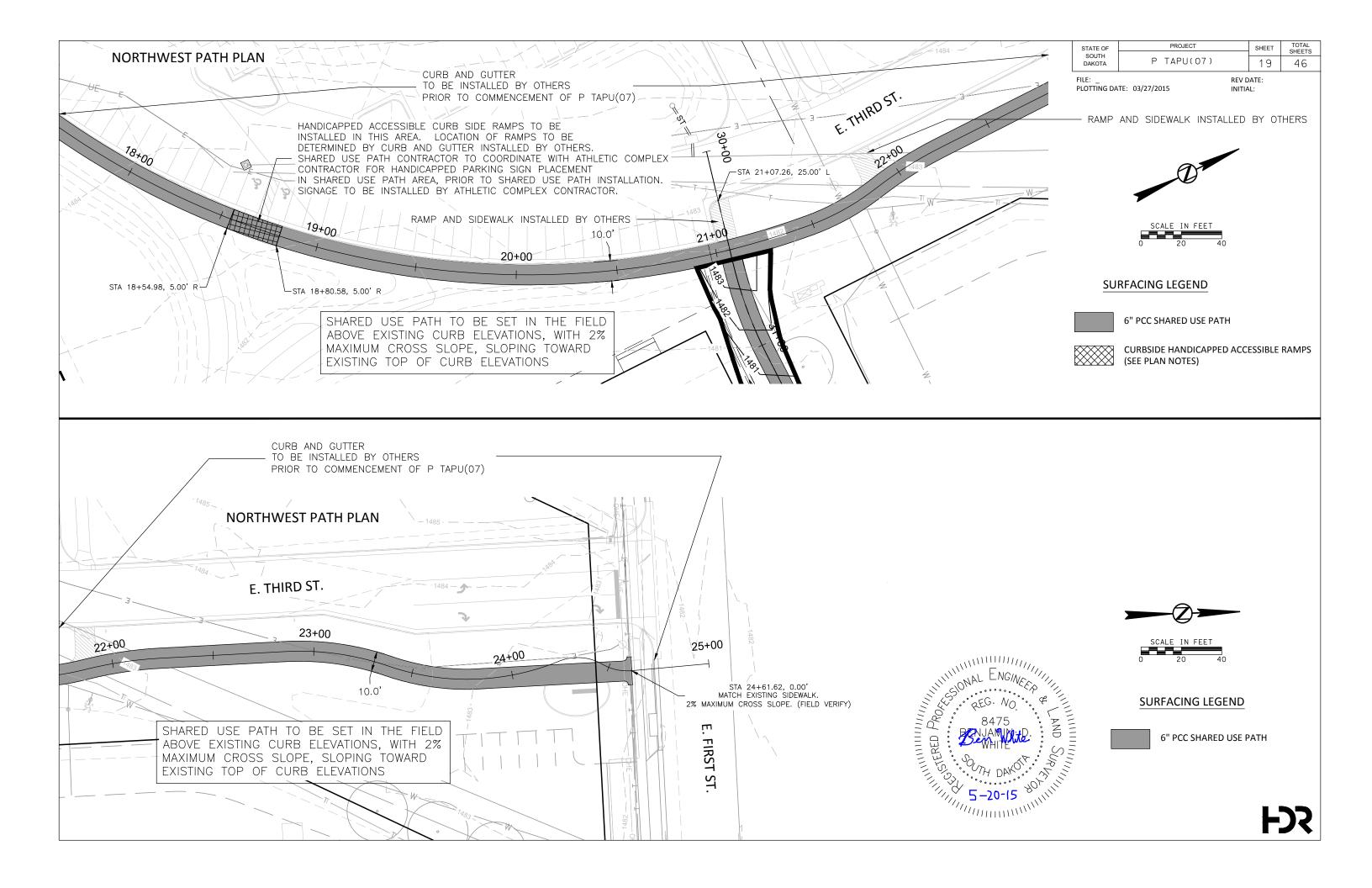
**Guy Pole** 

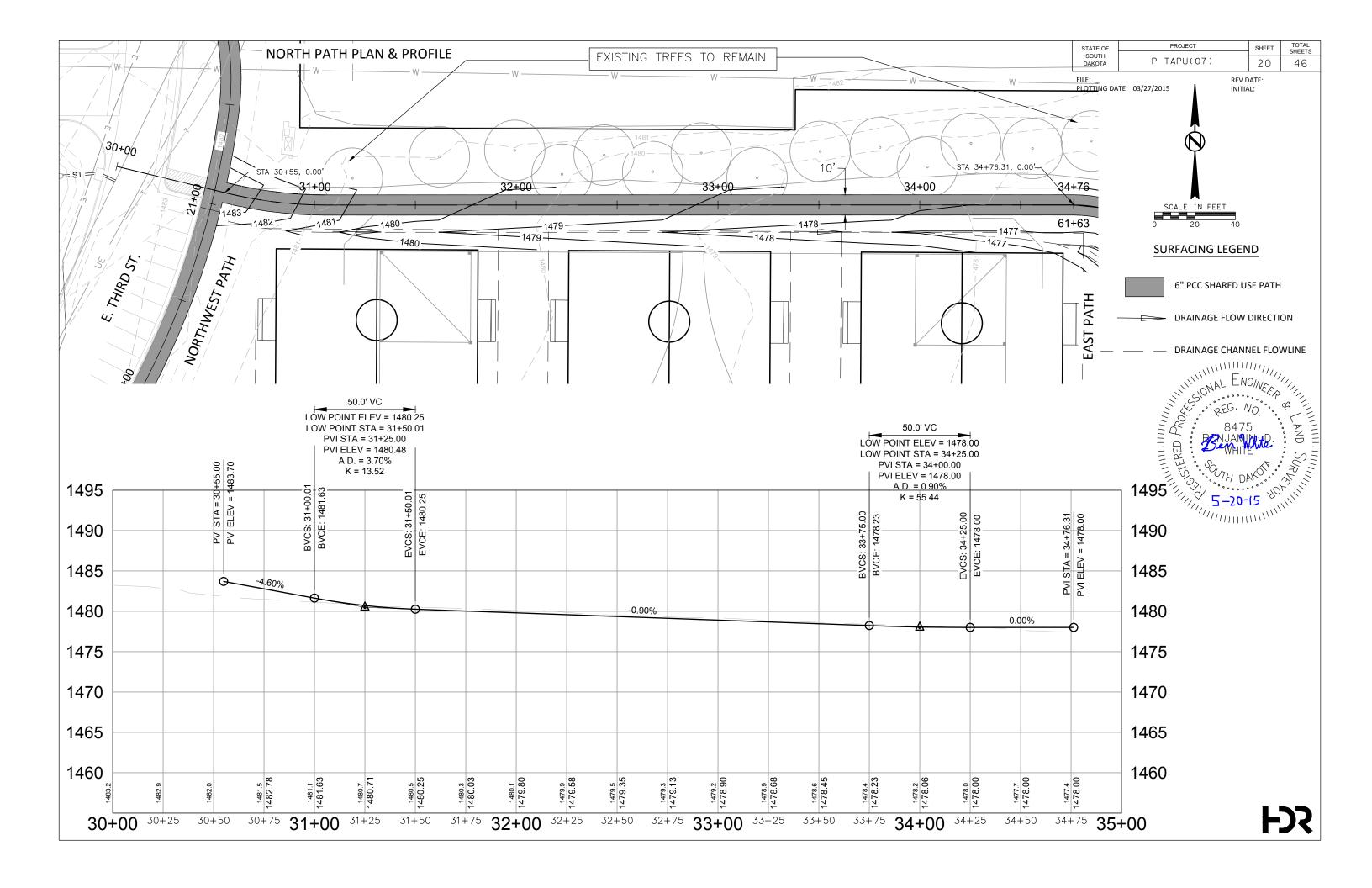
Haystack

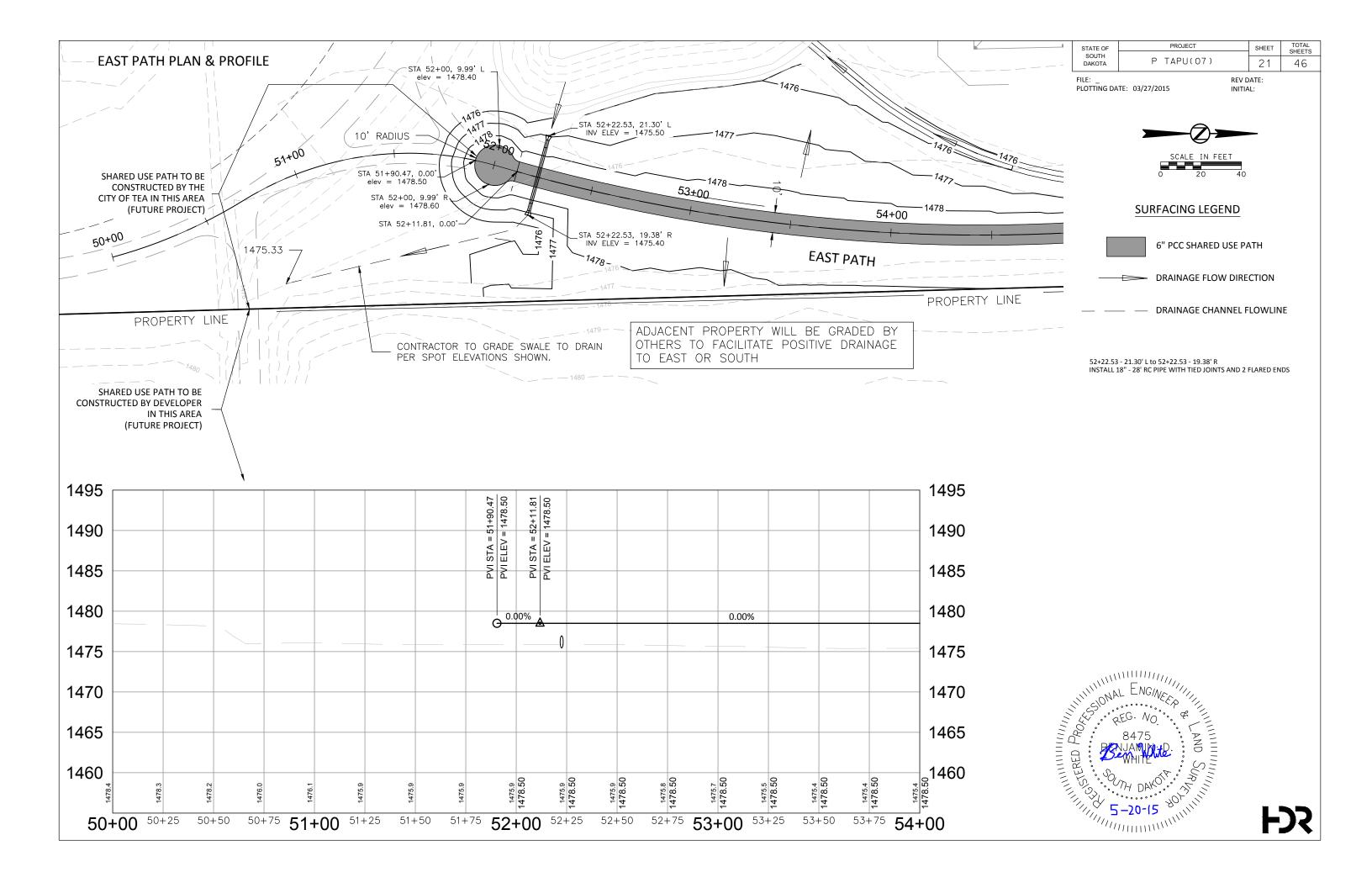
Hedge

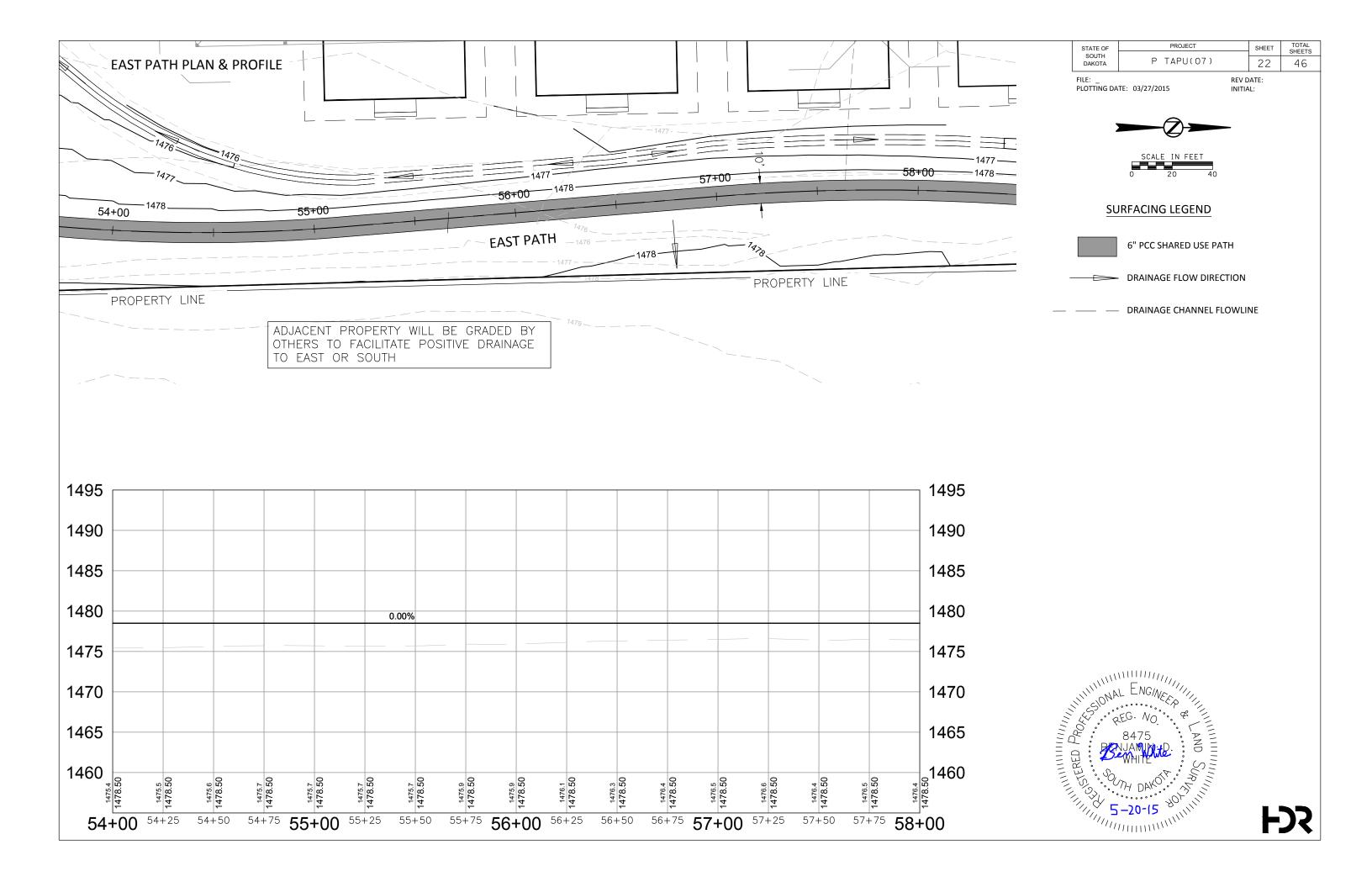
Gutter

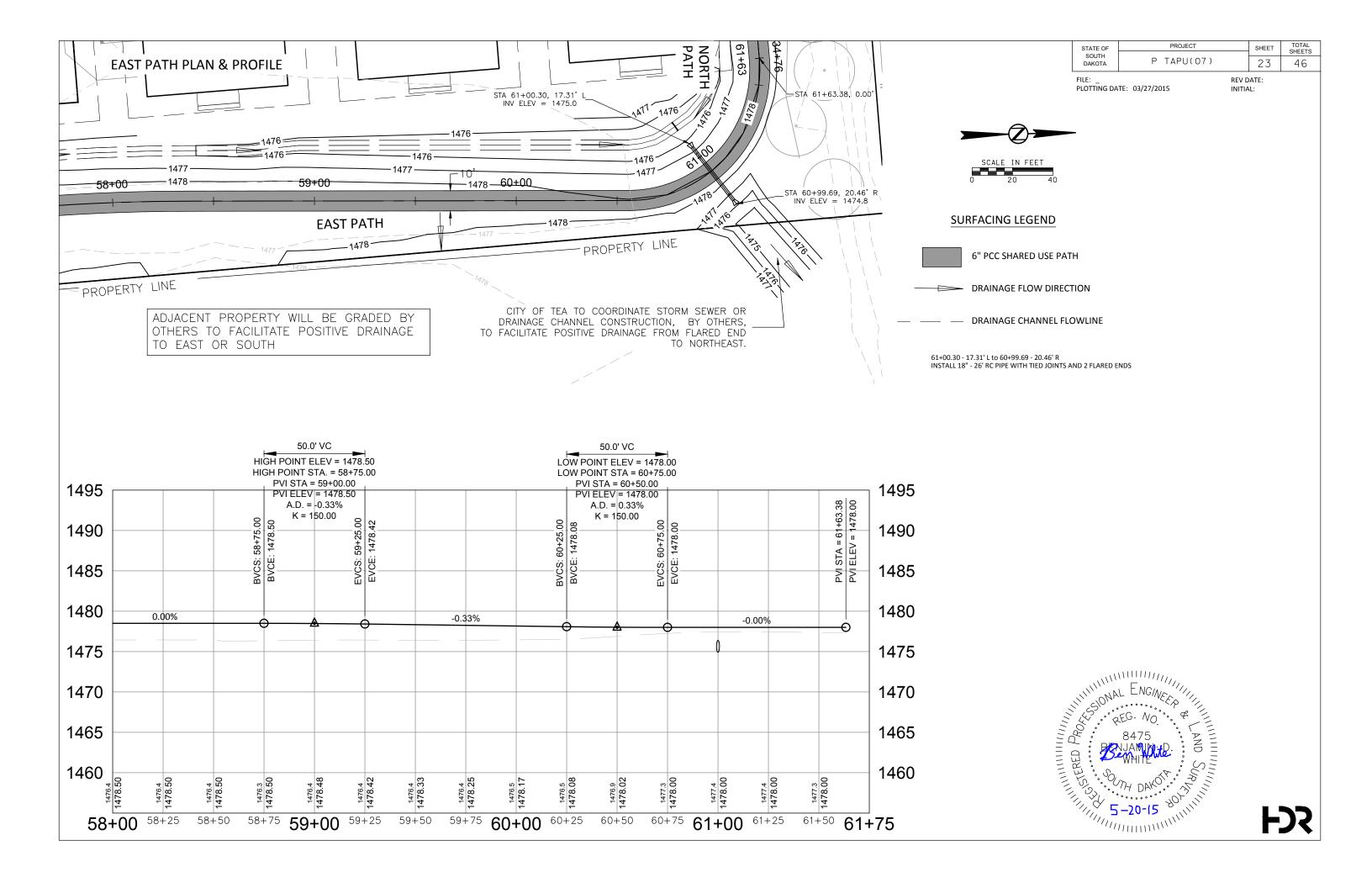


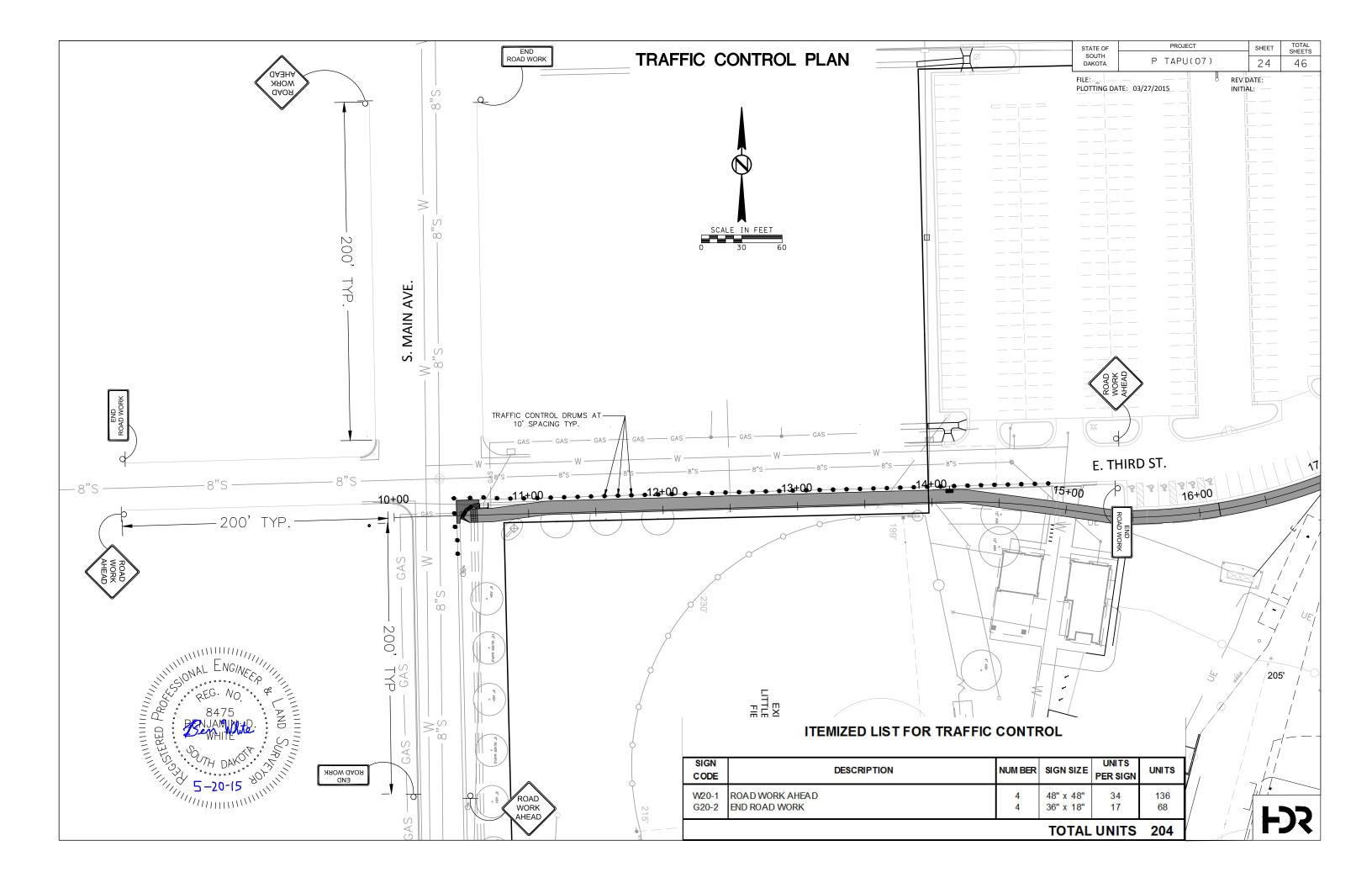


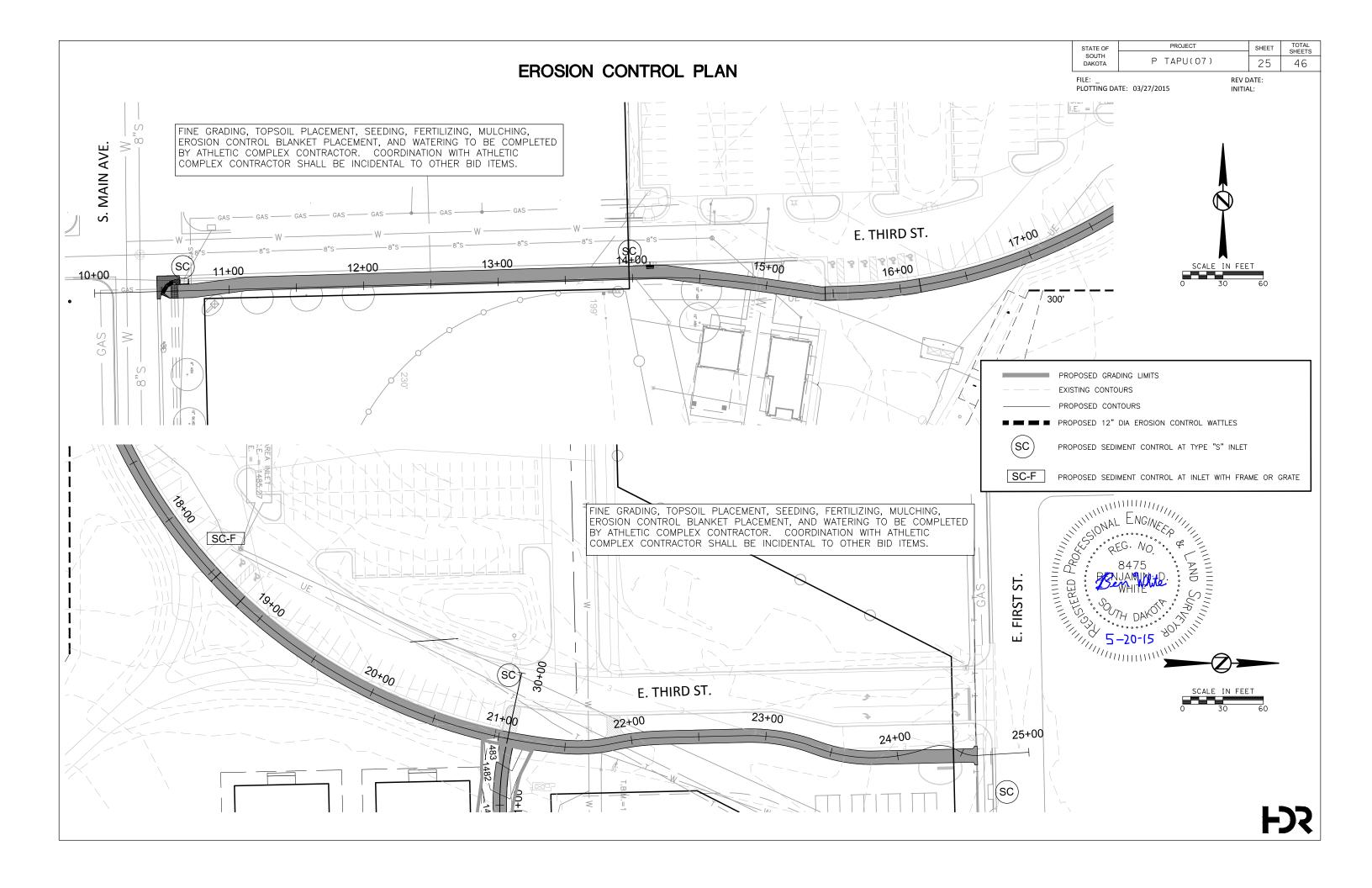


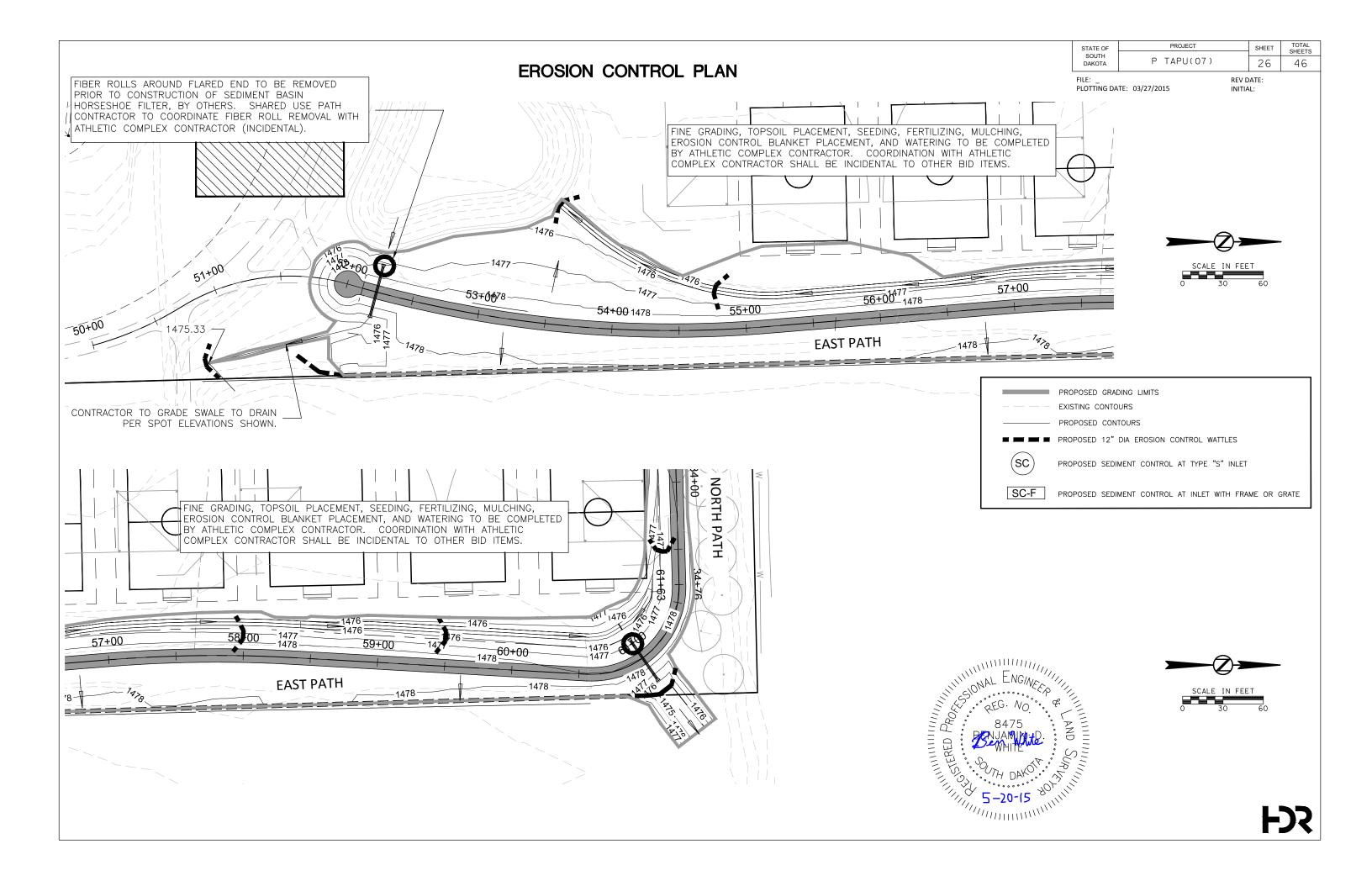


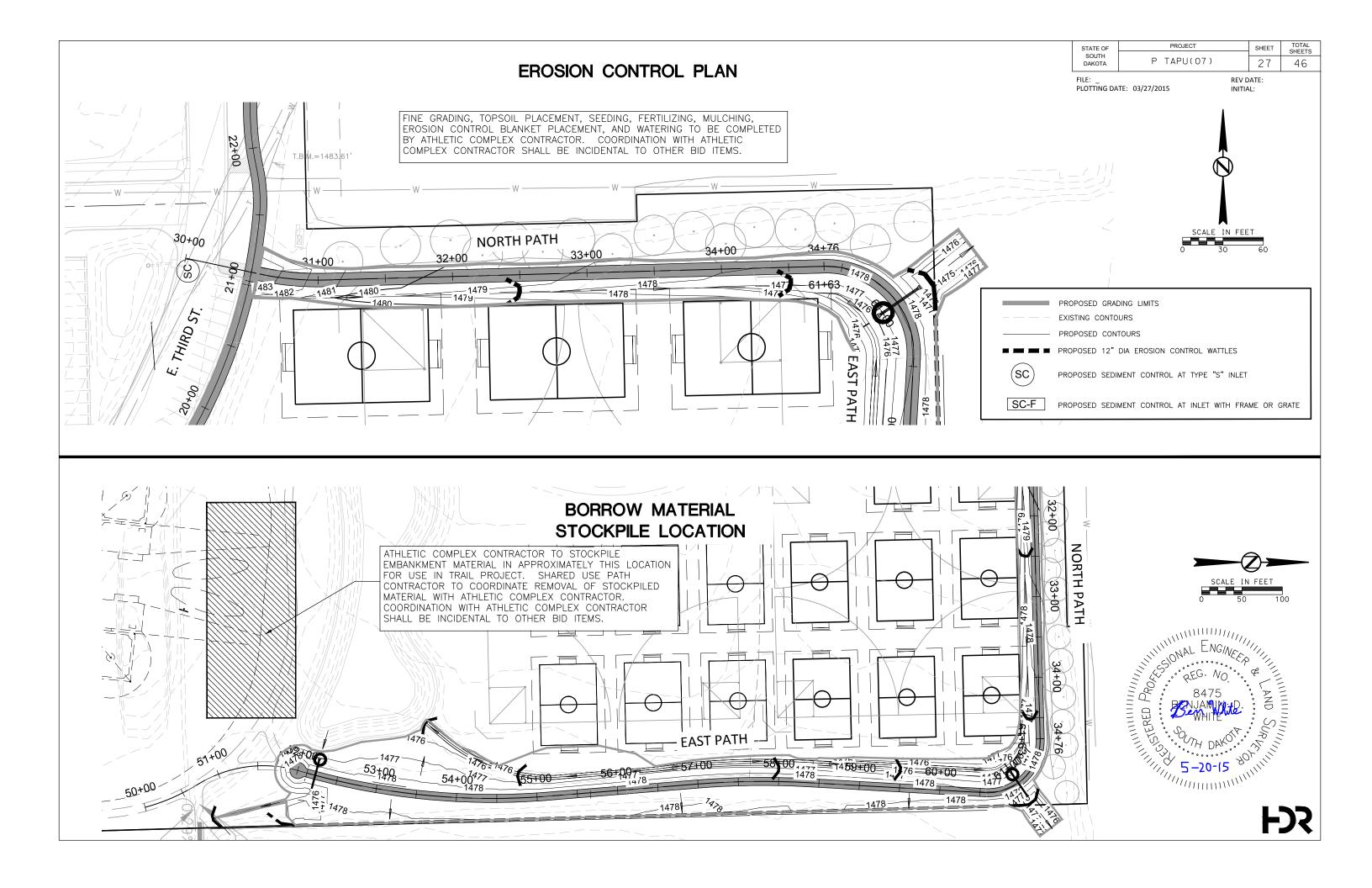


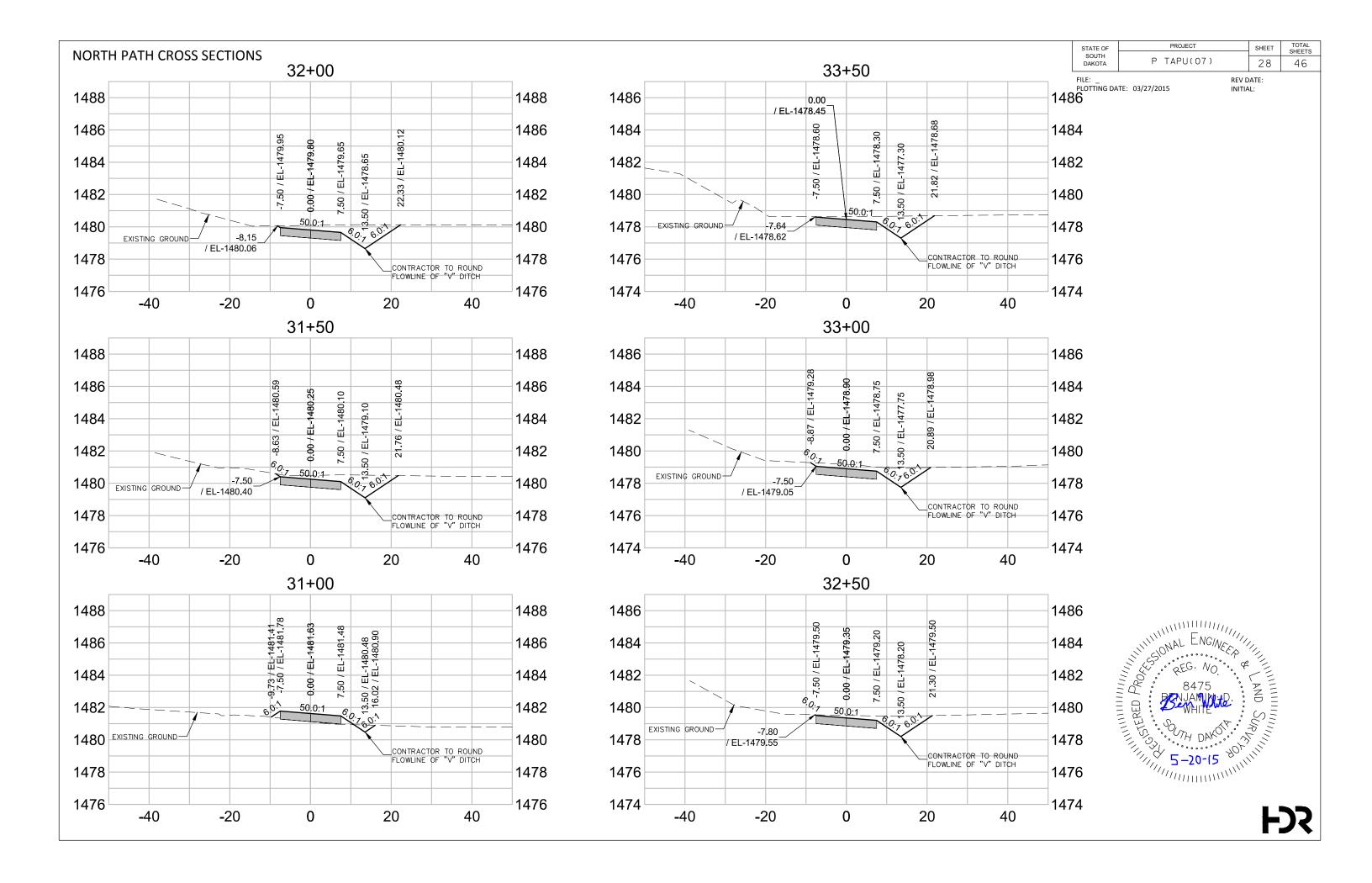








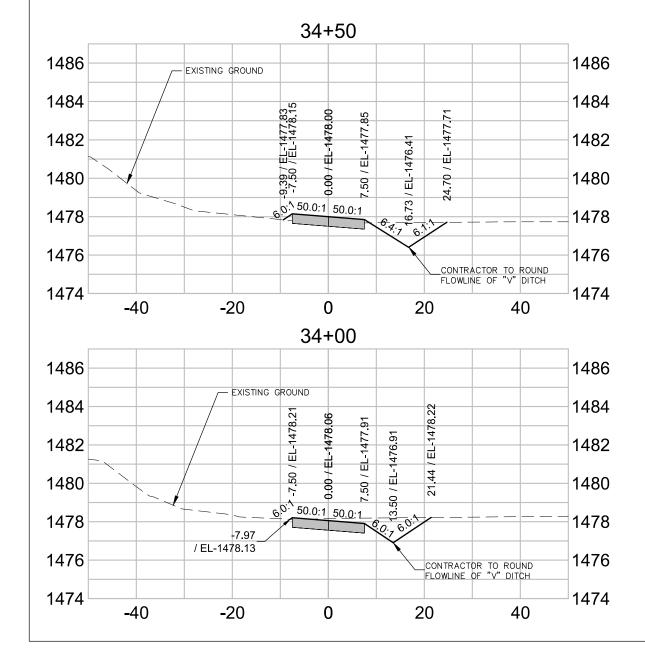


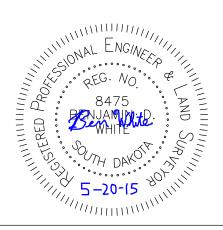


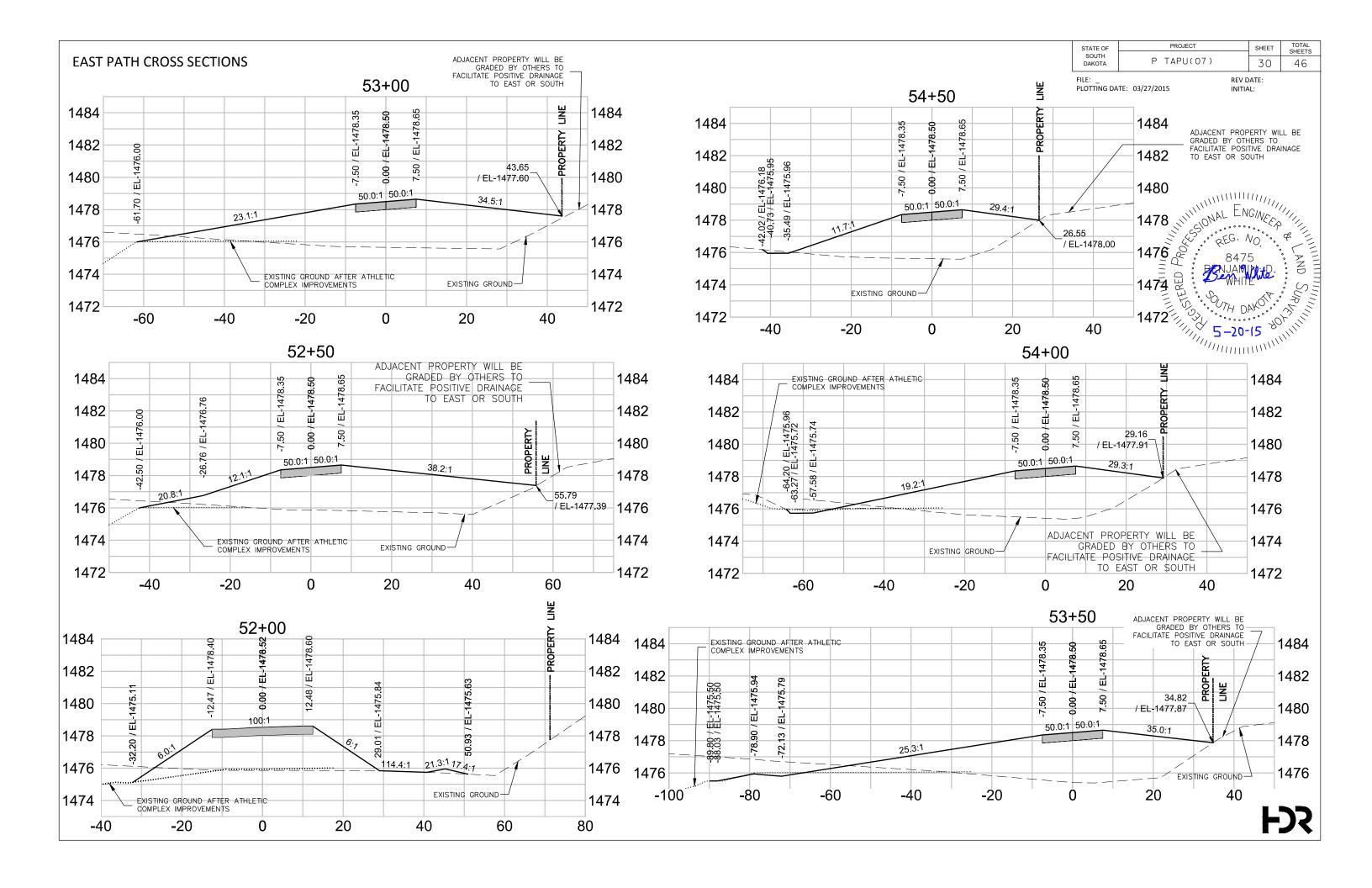
NORTH PATH CROSS SECTIONS

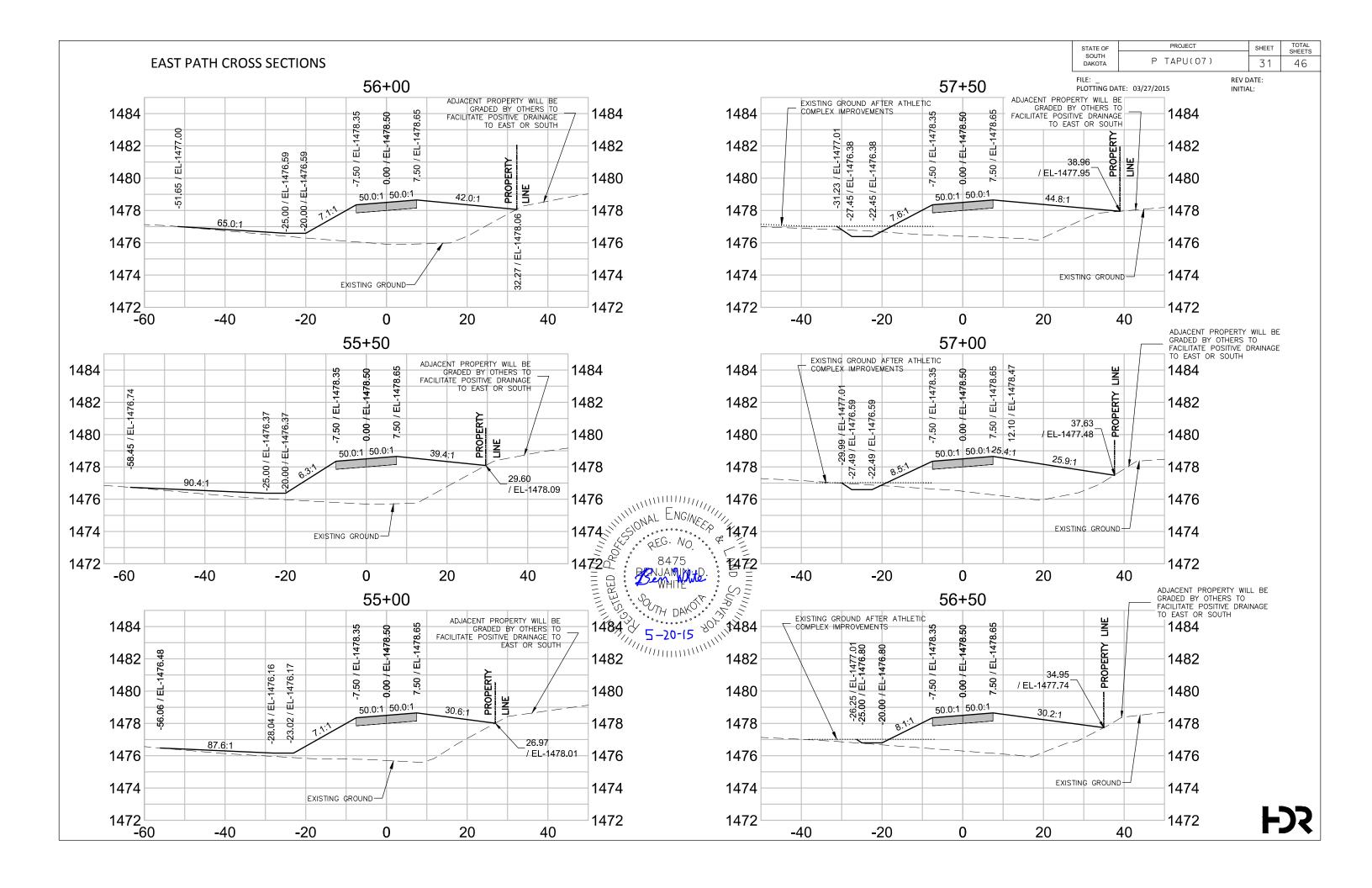
STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH	P TAPU(07)	20	4.C
DAKOTA	1 171 0 ( 0 1 )	29	40

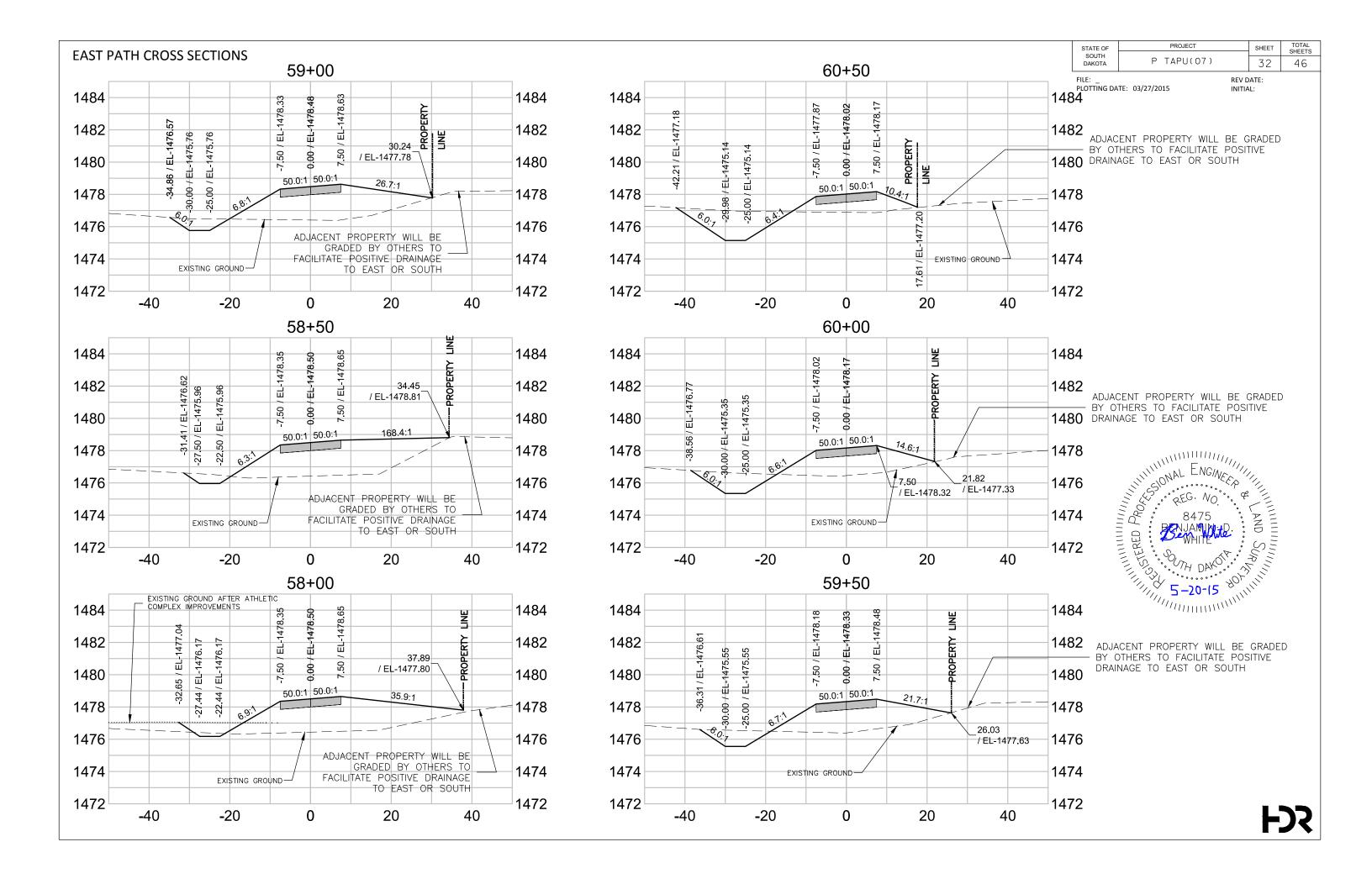
FILE: \_ PLOTTING DATE: 03/27/2015 REV DATE: INITIAL:







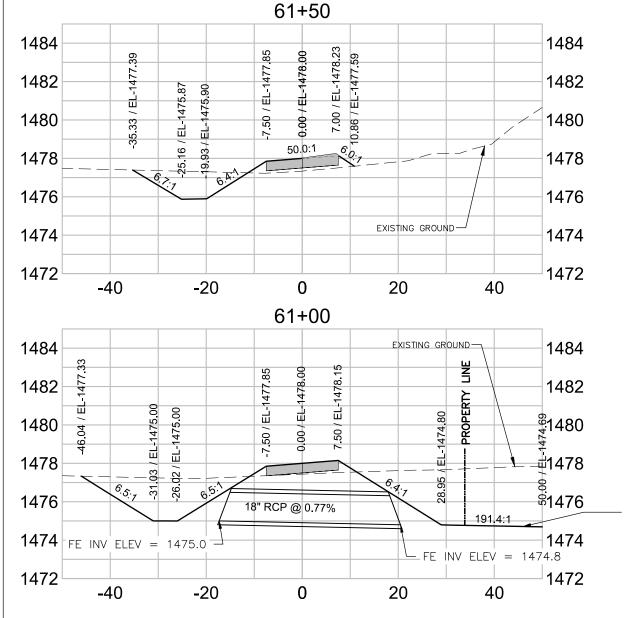




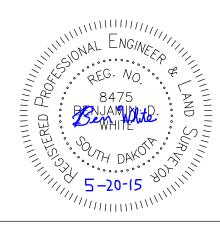
**EAST PATH CROSS SECTIONS** 

	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		H B TABLEOT)	33	46

FILE: \_ PLOTTING DATE: 03/27/2015 REV DATE: INITIAL:



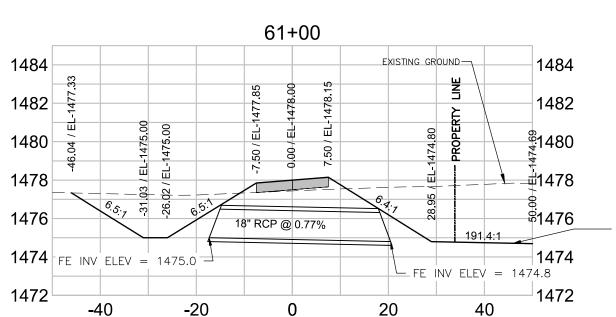
CITY OF TEA TO COORDINATE STORM SEWER OR DRAINAGE CHANNEL CONSTRUCTION, BY OTHERS, TO FACILITATE POSITIVE DRAINAGE FROM FLARED END TO NORTHEAST.



 STATE OF SOUTH DAKOTA
 P TAPU (07)
 SHEET SHEETS
 TOTAL SHEETS

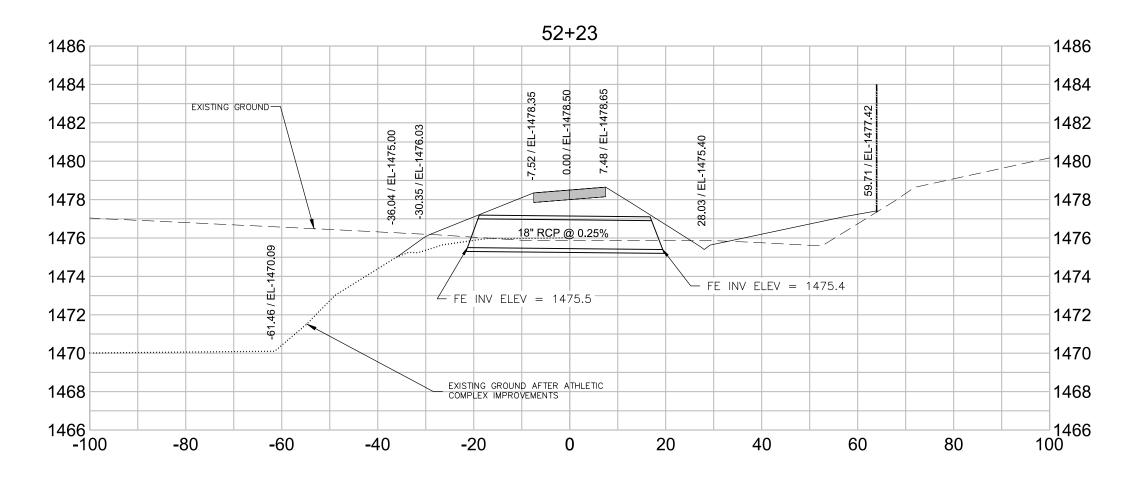
PLOTTING DATE: 03/27/2015

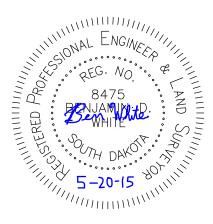
REV DATE: INITIAL:



PIPE SECTIONS

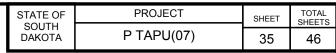
CITY OF TEA TO COORDINATE STORM SEWER OR DRAINAGE CHANNEL CONSTRUCTION, BY OTHERS, TO FACILITATE POSITIVE DRAINAGE FROM FLARED END TO NORTHEAST.





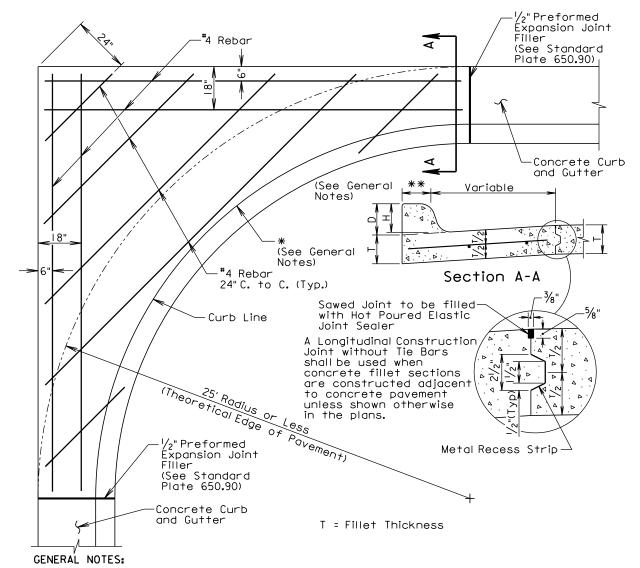


#### PCC FILLET SECTION WITH TYPE B CURB & GUTTER



Plotting Date: 5/18/2015

REV DATE: 05/18/2015 INITIAL: BDW



\*If a curb ramp is constructed adjacent to a PCC fillet section, the curb will need to be modified. Refer to the corresponding curb ramp standard plate or other special details in the plans for modification of the PCC fillet section.

Dimensions D, H, and T shall conform to those shown on the appropriate curb and gutter standard plate.

All rebar shall conform to A.S.T.M. A615 Grade 60 and the Standard Specifications Sections 480 and 1010. All rebar shall have a minimum of 3" clear cover.

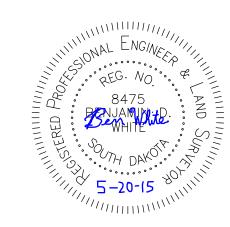
Class M6 Concrete shall be used in construction of the fillets.

The concrete curb shall be monolithic with the concrete fillet. No separate payment for this curb will be made as the curb is considered a part of the fillet.

Joints shall be constructed at 10' intervals except when fillets are constructed adjacent to PCC Pavement. If there is adjacent PCC Pavement the joints shall be extended from edge of pavement through the fillet section as directed by the Engineer.

The cost for all materials, labor, and incidentals necessary to construct the PCC fillet section with curb and gutter shall be incidental to the contract unit price per square yard for the corresponding PCC fillet section bid item.

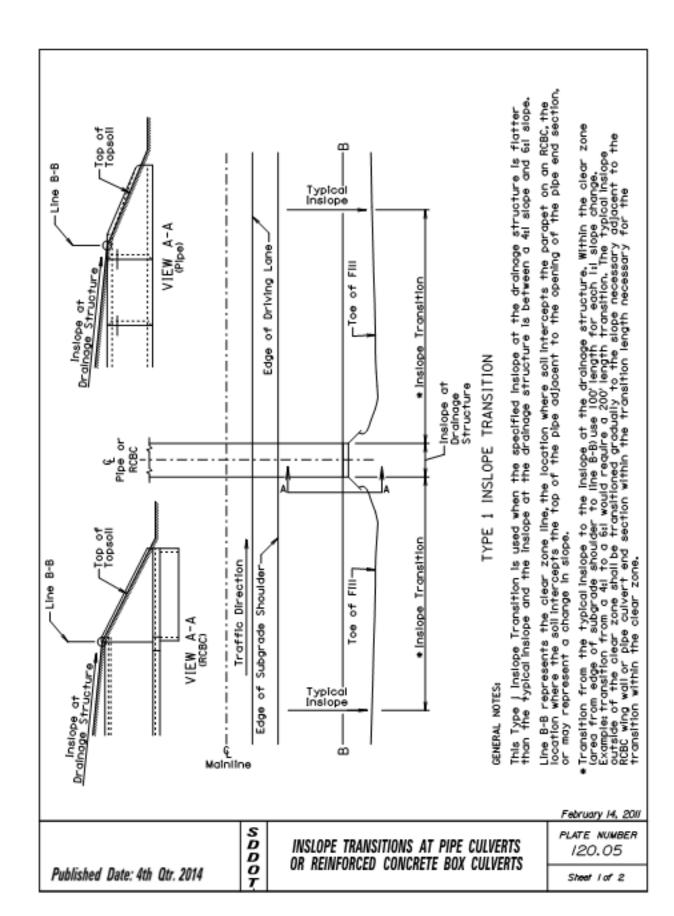
\*\* Curb dimensions to match existing

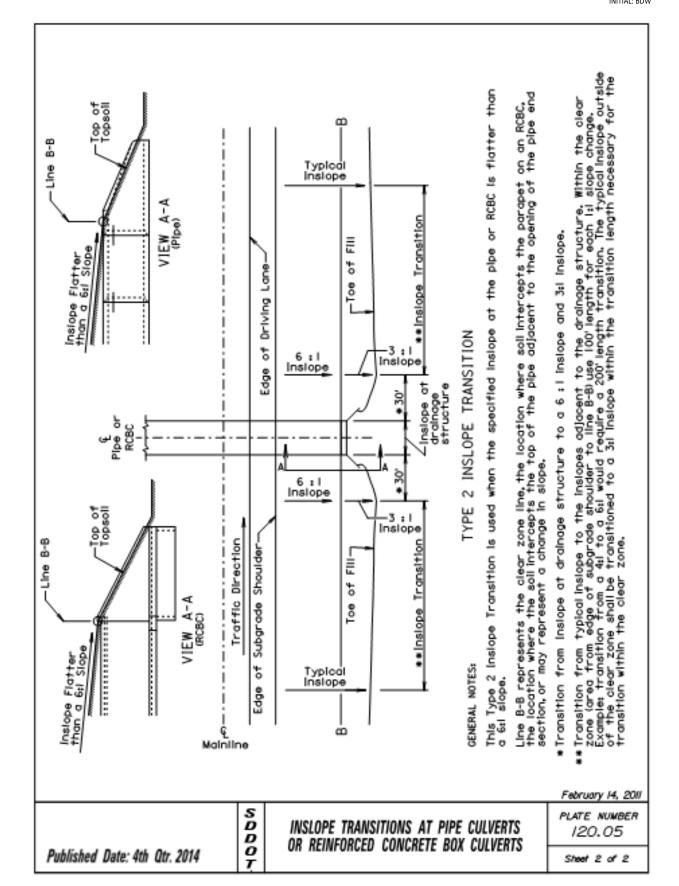


STATE OF SOUTH DAKOTA P TAPU(07) 36 46

Plotting Date: 5/18/2015

REV DATE: 05/18/2015 INITIAL: BDW





STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	P TAPU(07)	37	46

#### TOLERANCES IN DIMENSIONS

Diameter: ±1.5% for 24°Dia. or less and ±1% or 36° whichever is more for 27°Dia. or greater. Diameters at Joints: ±3/16" for 30" Dia. or less and ±1/4" for 36" or greater. Length of Joint (D: ±1/4".

Wall thickness (T): not less than design T by more than 5% or ¾, whichever is greater. Laying length: shall not underrun by more than 1/2.





LONGITUDINAL SECTION

S

D

0

END VIEW

#### GENERAL NOTES:

Construction of R.C.P. shall conform to the requirements of Section 990 of the Standard Specifications for Roads and Bridges.

Not more than 2 four foot sections shall be permitted near the ends of any culvert. Four foot lengths shall be used only to secure the required length of culvert.

Dlam. (In.)	Approx. #t./Ft. (lb.)		(ln.)	(in.)	D2 (In.)	(In.)	D4 (In.)
12	92	2	13/4	131/4	13%	13%	141/4
15	127	21/4	2	161/2	16%	171/4	17%
18	168	21/2	21/4	19%	20	20%	20%
21	214	2 1/4	21/2	221/8	231/4	23¾	241/8
24	265	3	274	26	26%	27	27%
27	322	31/4	3	291/4	29%	301/4	30%
30	384	31/2	31/4	32%	327/4	331/2	33%
36	524	4	37/4	3874	391/4	40	401/2
42	685	41/2	4	451/8	45%	461/2	47
48	867	5	41/2	511/2	52	53	531/2
54	1070	51/2	41/2	57%	58%	59%	59%
60	1296	6	5	641/4	6474	66	661/2
66	1542	61/2	51/2	70%	711/8	721/2	73
72	1810	7	6	77	771/2	79	791/2
78	2098	T1/2	61/2	83%	83%	85%	861/8
84	2410	8	7	8974	901/4	921/8	92%
90	2740	81/2	7	957/4	961/4	98 <sup>1</sup> /8	98%
96	2950	9	7	1021/8	102%	1041/2	105
102	3075	91/2	T1/2	109	1091/2	1111/2	112
108	3870	10	71/2	1151/2	116	118	1181/2

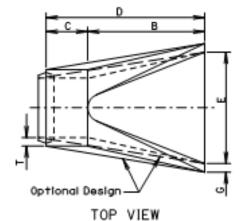
	March	3V,	2000
П	PLATE	NUM	BER

Published Date: 4th Qtr. 2014

REINFORCED CONCRETE PIPE

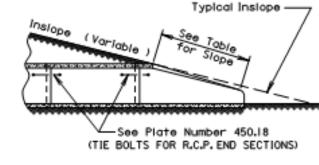
450.01

Published Date: 4th Qtr. 2014 Sheet | of |



-Tongue (Inlet) or

Groove (Outlet)

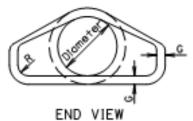


SLOPE DETAIL

#### GENERAL NOTES:

Lengths of concrete pipe shown on Plan Sheets are between flared Ends only.

Construction of R.C.P. Flared End shall conform to the requirements of Section 990 of the Standard Specifications for Roads and Bridges.



LONGITUDINAL SECTION

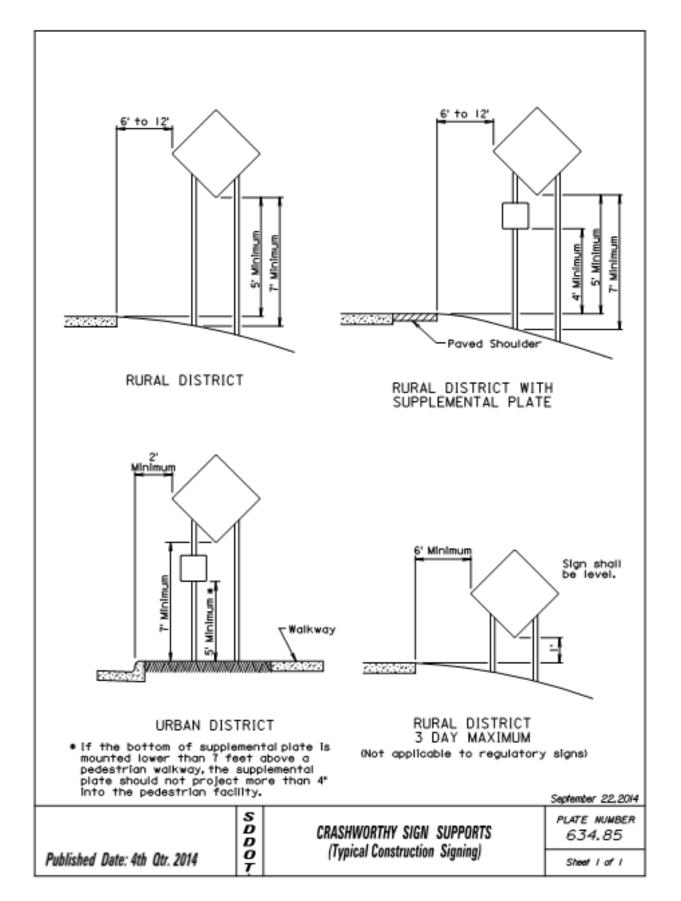
Dia.	Approx. Wt. of Section (lbs.)	Approx. Slope (X to Y)	T (In.)	A (In.)	B (in.)	(lu¹)	(In.)	E (in.)	(lur)	R (In.)
12	530	2.4: 1	2	4	24	48%	72%	24	2	11/2
15	740	2.4: 1	21/4	6	27	46	73	30	21/4	11/2
18	990	2.3:1	21/2	9	27	46	73	36	21/2	11/2
21	1280	2.4: 1	27/4	9	36	371/2	731/2	42	27/4	11/2
24	1520	2.5: I	3	91/2	431/2	30	731/2	48	3	11/2
27	1930	2.5: 1	31/4	101/2	491/2	24	731/2	54	31/4	11/2
30	2190	2.5: 1	31/2	12	54	19¾	73¾	60	31/2	11/2
36	4100	2.5: 1	4	15	63	347/4	977/4	72	4	11/2
42	5380	2.5: 1	41/2	21	63	35	98	78	41/2	11/2
48	6550	2.5: 1	5	24	72	26	98	84	5	11/2
54	8240	2: 1	51/2	27	65	331/4	981/4	90	51/2	11/2
60	8730	1.9:1	6	35	60	39	99	96	5	11/2
66	10710	1.7: 1	61/2	30	72	27	99	102	51/2	11/2
72	12520	1.8:1	7	36	78	21	99	108	6	11/2
78	14770	1.8:1	71/2	36	90	21	111	114	61/2	11/2
84	18160	1.6:1	8	36	901/2	21	1111/2	120	61/2	11/2
90	20900	1.5: 1	81/2	41	871/2	24	1111/2	132	61/2	6

	S D D O	R. C. P. FLARED ENDS	PLATE NUMBER 450.10
4	Ţ		Sheet I of I

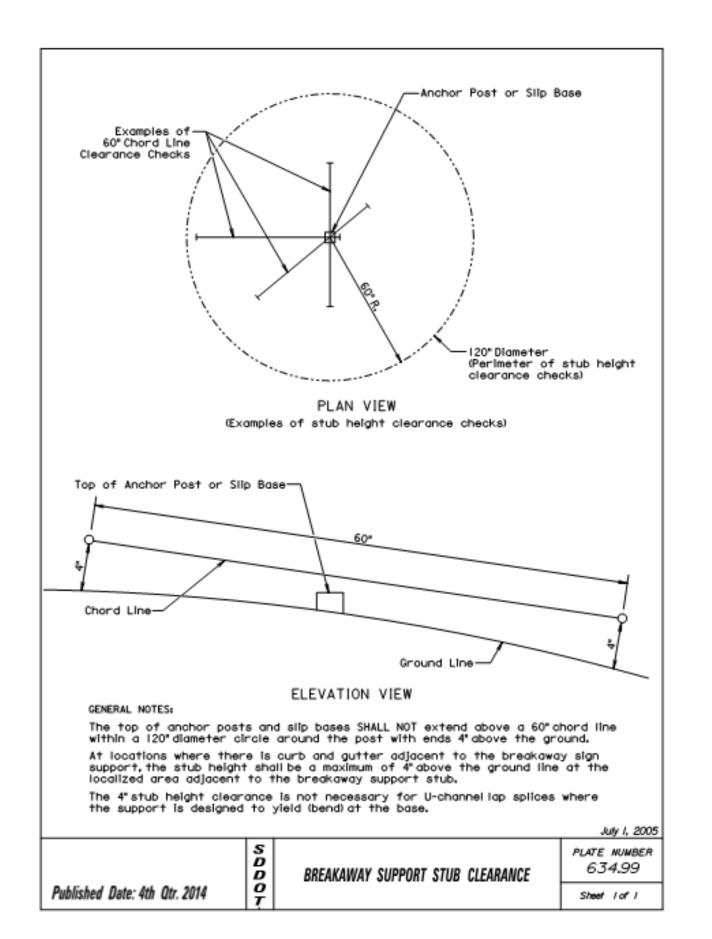
March 31, 2000

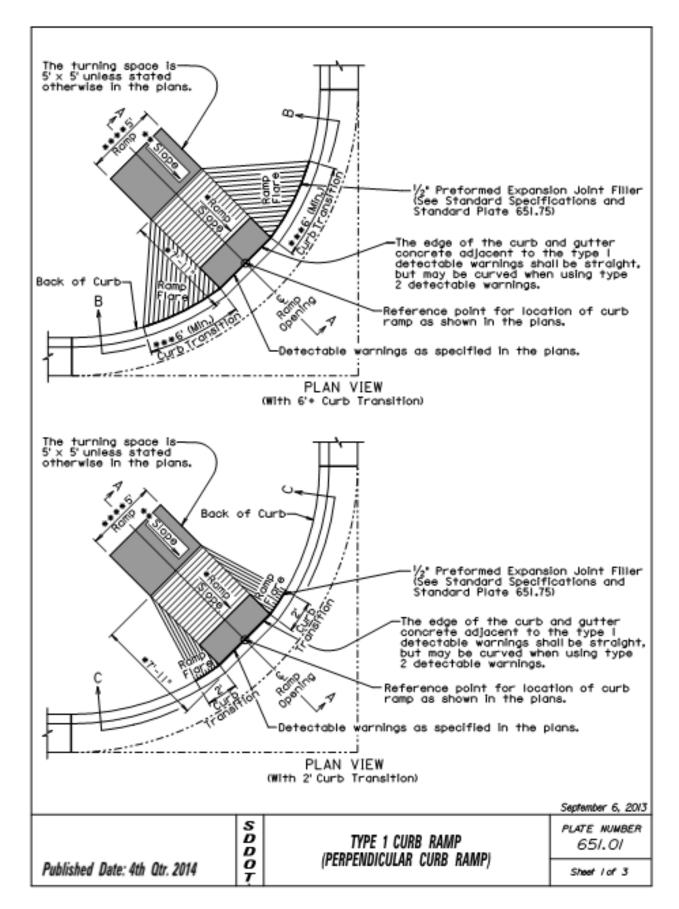
	STATE OF	PROJECT	SHEET	TOTAL
ı	SOUTH DAKOTA	P TAPU(07)	38	46

The signs illustrated are not rif the work space is behind a more than 2 feet behind the afeet or more from the edge or coadway.  The signs illustrated shall be uthere are distracting situation vehicles parked on shoulder, ve accessing the work site via thand equipment traveling on or the roadway to perform work.  The ROAD WORK AHEAD sign may be with other appropriate signs, sithe SHOULDER WORK sign. The SHOULDER WORK sign. The SHOULDER work space is on a dishighway, an advance warning a should also be placed on the of the directional roadway.  For short term, short duration, operations, all signs and channel devices may be eliminated if a an activated flashing or revolving it is used.	barrier, urb, or 15 of any  sed where sis such as: hicles e highway, orossing operations, be replaced uch as DULDER WORK acent to  vided sign left side , or mobile lizing vehicle with	(i)	Posted Speed Prior to Work (M.P.H.)  0 - 30  35 - 40  45 - 50  55  60 - 75	Ing of Advance arning Signs (Feet) (A) 200 350 500 750 1000
Published Date: 4th Qtr. 2014	S GU	IDES FOR TRAFFIC WORK BEYOND	CONTROL DEVICES THE SHOULDER	July I, 200 PLATE NUMBE 634.01 Sheet 1 of 1



	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
ı		P TAPU(07)	39	46





	STATE OF	PROJECT	SHEET	TOTAL SHEETS
ı	SOUTH DAKOTA	P TAPU(07)	40	46

The ramp slope shall be 12:1 (8.3%) maximum. The ramp length shall not exceed 15' unless stated otherwise in the plans. Ramp slopes are designed at 12:1 (8.3%) unless stated otherwise in the plans.

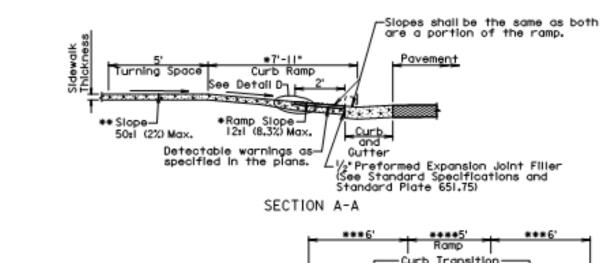
- The cross slope of the ramp shall not be steeper than 50:1 (2%).
- The 7'-II' dimension was computed based on a flat roadway profile, a continuous 2% theoretical slope from top of theoretical curb to the top of ramp, and a 6'high curb. The dimension shall be adjusted based on the curb type shown in the plans, the roadway geometrics, and the sidewalk geometrics.
- \*\* The slope in the turning space shall not be steeper than 50:1 (2%) in any direction of pedestrian travel.
- \*\*\* The ourb transition shall be a minimum of 6' long, a maximum of 10' long, and the ourb transition slope shall not be steeper than 10:1 (10%) unless stated otherwise in the plans.
- \*\*\*\* The ramp width is 5' unless stated otherwise in the plans.

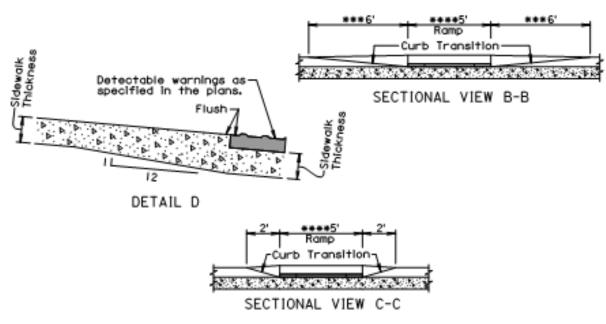
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Published Date: 4th Qtr. 2014





TYPE 1 CURB RAMP (PERPENDICULAR CURB RAMP)

September 6, 2013

PLATE NUMBER 651.01

Sheet 2 of 3

GENERAL NOTES:

For illustrative purpose only, type I detectable warnings are shown in the drawings.

For illustrative purpose only, PCC fillet sections are shown in the drawings. The curb ramp depicted on this standard plate may be used with a PCC fillet section, with curved curb and gutter, or with straight curb and gutter.

For illustrative purpose only, the curb ramp location is shown at the center of a PCC fillet section. The curb ramp shall be placed at the location stated in the plans.

Sidewalk shall not be placed adjacent to the ramp flares when a 2' curb transition is used unless shown otherwise in the plans.

\*Care shall be taken to ensure a uniform grade on the ramp, free of sags and short grade changes.

Surface texture of the ramp shall be obtained by coarse brooming transverse to the slope of the ramp.

The normal gutter line profile shall be maintained through the area of the ramp.

Joints shall be sawed or tooled into the concrete adjacent to the detectable warnings to alleviate possible corner cracking.

Care shall be taken to ensure that the surface of the detectable warnings are clean and maintains a uniform color.

The detectable warnings shall be cut as necessary to fit the plan specified limits of the detectable warnings. Cost for cutting the detectable warnings shall be incidental to the corresponding detectable warning bid item.

There will be no separate payment for curb ramps. The curb ramp shall be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk bid item. The square foot area of the detectable warnings shall be included in the measured and paid for quantity of sidewalk.

The curb transitions and ramp opening shall be measured and paid for at the contract unit price per foot for the corresponding curb and gutter bid item when curb and gutter is used. The curb transitions and ramp opening shall be measured and paid for at the contract unit price per square yard for the corresponding PCC fillet section bid item when a PCC fillet section is used.

The type I detectable warnings shall be measured to the nearest square foot. All costs for furnishing and installing the type I detectable warnings including labor, equipment, materials, and incidentals shall be paid for at the contract unit price per square foot for "Type I Detectable Warnings".

The type 2 detectable warnings shall be measured to the nearest square foot. All costs for furnishing and installing the type 2 detectable warnings including labor, equipment, and materials, including adhesive, necessary sealant or grout, and necessary grinding shall be paid for at the contract unit price per square foot for "Type 2 Detectable Warnings".

September 6, 20/3

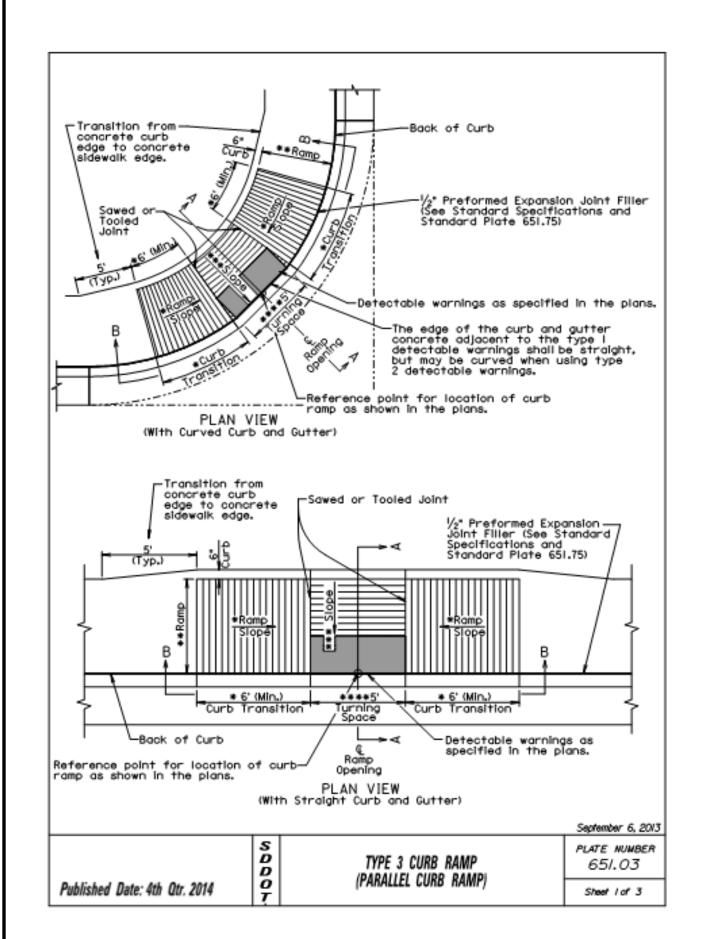
Published Date: 4th Qtr. 2014

TYPE 1 CURB RAMP
(PERPENDICULAR CURB RAMP)

IP PLATE NUMBER 651.01

Sheet 3 of 3

	STATE OF	PROJECT	SHEET	TOTAL
ı	SOUTH DAKOTA	P TAPU(07)	41	46



\* The curb transition slope shall match the ramp slope. The ramp slope, at any location of the ramp, shall be 12:1 (8,3%) maximum. The ramp length shall not exceed 15 unless stated otherwise in the plans. Ramp slopes are designed at 12:1 (8,3%) unless stated otherwise in the plans. The minimum length of the curb transition shall be 6'. \*\* The ramp cross slope shall not be steeper than a 50tl (2%) and the ramp width is 5' unless stated otherwise in the plans. \*\*\* The slope in the turning space shall not be steeper than 50:1 (2%) in any direction of pedestrian travel. \*\*\*\* The turning space is 5' x 5' unless stated otherwise in the plans. ☑ The curb height shall be 6"unless stated otherwise in the plans. \*\*\*\* 5' Pavement Turning Space See Detail C -Slope shall be between 20:1 (5%) and 12:1 (8.3%). Gutter See Detail D-1/2" Preformed Expansion Joint Filler (See Standard Specifications and Standard Plate 651.75) Detectable warnings as specified in the plans. \*\*\*Slope 50:l (2%) Max. SECTION A-A Detectable warnings asspecified in the plans. Flush-DETAIL D DETAIL C \*\*\*\*5" Turning \* 6' (Min.) Rebar spaced at 1'-3" C. to C. Space ◆Ramp Slope No. 4 Rebar THE TAX SHOW OF THE PARTY TO SEE TO (Typ.) - # Curb Transition -SECTIONAL VIEW B-B DETAIL D (Use this detail when the curb height is greater than 6" and less than 12") September 6, 2013 s PLATE NUMBER D TYPE 3 CURB RAMP 651.03 D (PARALLEL CURB RAMP) 0 Published Date: 4th Qtr. 2014 Sheet 2 of 3 7

STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	P TAPU(07)	42	46

#### GENERAL NOTES:

For illustrative purpose only, type I detectable warnings are shown in the drawings.

For illustrative purpose only, a PCC fillet section is shown in one of the drawings. The curb ramp depicted on this standard plate may be used with a PCC fillet section, with curved curb and gutter, or with straight curb and gutter.

The curb ramp shall be placed at the location stated in the plans.

Sidewalk adjacent to the ourb ramp shall be as shown in the plans.

Care shall be taken to ensure a uniform grade on the ramp, free of sags and short grade changes.

Surface texture of the ramp shall be obtained by coarse brooming transverse to the slope of the ramp.

The normal gutter line profile shall be maintained through the area of the ramp.

Joints shall be saved or tooled into the concrete adjacent to the detectable warnings to alleviate possible corner cracking (see plan view for joint location).

Care shall be taken to ensure that the surface of the detectable warnings are clean and maintains a uniform color.

The detectable warnings shall be cut as necessary to fit the plan specified limits of the detectable warnings. Cost for cutting the detectable warnings shall be incidental to the corresponding detectable warning bid item.

When curb height is greater than 6" and less than 12", reinforcing steel is required in accordance with the detail on sheet 2 of 3. The reinforcing steel shall conform to ASTM A615, Grade 60. Cost for furnishing and installing the reinforcing steel shall be incidental to the contract unit price per square foot for the corresponding concrete sidewalk bid item.

There will be no separate payment for curb ramps. The curb ramp shall be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk bid item. The square foot area of the detectable warnings and the curb along the short radius shall be included in the measured and paid for quantity of sidewalk.

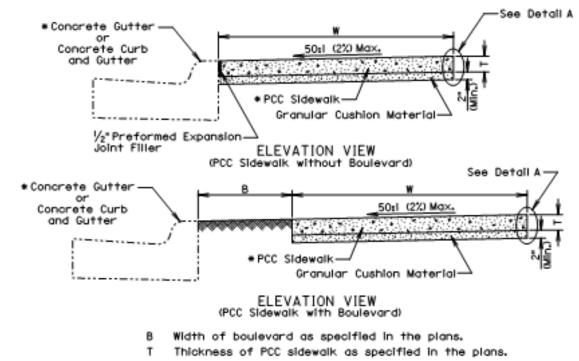
The curb transitions and ramp opening shall be measured and paid for at the contract unit price per foot for the corresponding curb and gutter bid item when curb and gutter is used. The curb transitions and ramp opening shall be measured and paid for at the contract unit price per square yard for the corresponding PCC fillet section bid item when a PCC fillet section is used.

The type I detectable warnings shall be measured to the nearest square foot. All costs for furnishing and installing the type I detectable warnings including labor, equipment, materials, and incidentals shall be paid for at the contract unit price per square foot for "Type I Detectable Warnings".

The type 2 detectable warnings shall be measured to the nearest square foot. All costs for furnishing and installing the type 2 detectable warnings including labor, equipment, and materials, including adhesive, necessary sealant or grout, and necessary grinding shall be paid for at the contract unit price per square foot for "Type 2 Detectable Warnings".

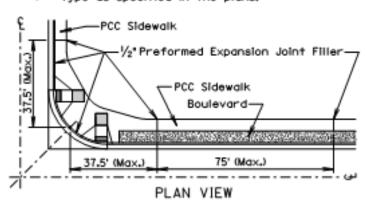
September 6, 2013
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	S D D	TYPE 3 CURB RAMP	PLATE NUMBER 651.03
Published Date: 4th Qtr. 2014	9	(PARALLEL CURB RAMP)	Sheet 3 of 3



W Width of PCC sidewalk as specified in the plans.

Type as specified in the plans.



#### GENERAL NOTES:

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

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  $\frac{1}{2}$  inch thick preformed expansion joint filler material placed full depth and width of the PCC sidewalk.

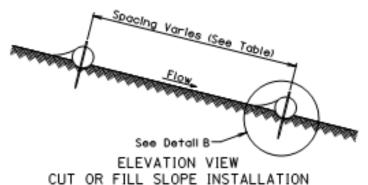
\*\*Large areas of PCC pavement adjacent to PCC sidewalk may require a different joint treatment than shown in the detail. If a different joint detail is necessary, plans will contain the joint detail and the Contractor shall construct the joint treatment in accordance with the plans.

	_		August St, 2013
	S D D	PCC SIDEWALK	PLATE NUMBER 651.75
Published Date: 4th Qtr. 2014	7		Sheet 1 of 2

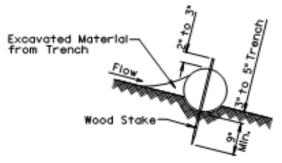
STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	P TAPU(07)	43	46

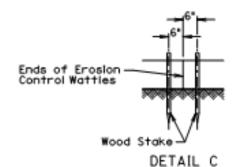
		S D		PCC SID			PLATE NUMBER 651.75
							August 31, 2013
		α	De Ise Appro	etail A priate Det	all(s))		
In the pi	er or as specifi ans ELEVATION (PCC sidewalk to PCC paver	N VIE					
Cushion Material **Double Tr 1/2*Prefor	nickness of med Expansion	<b>V</b>		Granul Cushlor Materi	n		
* PCC Sidewalk	½-1	<u>//2</u> 	√	/	(PCC sidewalk adj building or other structure)	jacent	t to
		PCC P	avement-	7	ELEVATION		
				Sidewo Granular- Cushion Material	Double Thickness of 1/2" Preformed Expansion Joint	a I	Building o
Cushion Material	ELEVATION (PCC sidewalk adearthen materia rock, or other a materials)	Jacent I, land	to scape	* PCC —	<u>y</u>	2-1	o there
* PCC Sidewalk		Com; Mate	ressible rial				<i>V</i>
		**************************************		(PCC sld	EVATION VIEW lewalk adjacent to	o ent)	
			Sidewalk				AC Pavement  — Granular Cushlon Material
					<u>Vi-</u>	Expa	reformed nsion r Filler

	STATE OF	PROJECT	SHEET	TOTAL
ı	SOUTH DAKOTA	P TAPU(07)	44	46

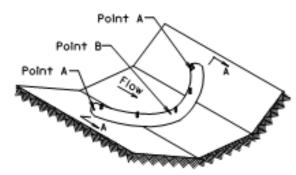


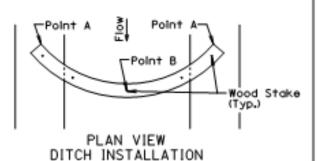
CUT OR FILL SLOPE INSTALLATION						
Slope	Spacing (Ft)					
Isl	10					
2:1	20					
3:1	30					
4:1	40					





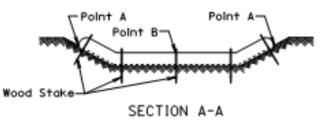
DETAIL B (TYPICAL OF ALL INSTALLATIONS)





ISOMETRIC VIEW DITCH INSTALLATION

Spacing (F†)
150
100
75
50



			December 2	3, 2004
	S D D	EROSION CONTROL WATTLE	PLATE IN. 734.	
Published Date: 4th Qtr. 2014	9		Sheet I d	f 2

#### GENERAL NOTES:

At cut or fill slope installations, wattles shall be installed along the contour and perpendicular to the water flow.

At ditch installations, point A must be higher than point B to ensure that water flows over the wattle and not around the ends.

The Contractor shall dig a 3" to 5" trench, install the wattle tightly in the trench so that daylight can not be seen under the wattle, and then compact the soil excavated from the trench against the wattle on the uphill side. See Detail B.

The stakes shall be 1"x2" or 2"x2" wood stakes, however, other types of stakes such as rebar may be used only if approved by the Engineer. The stakes shall be placed 6" from the ends of the wattles and the spacing of the stakes along the wattles shall be 3' to 4'.

Where installing running lengths of wattles, the Contractor shall butt the second wattle tightly against the first and shall not overlap the ends. See Detail C.

The Contractor and Engineer shall inspect the erosion control wattles once every week and within 24 hours after every rainfall event greater than  $\frac{1}{2}$ . The Contractor shall remove, dispose, or reshape the accumulated sediment when necessary as determined by the Engineer.

Sediment removal, disposal, or necessary shaping shall be as directed by the Engineer.
All costs for removing accumulated sediment, disposal of sediment, and necessary
shaping shall be incidental to the contract unit price per cubic yard for "Remove

All costs for furnishing and installing the erosion control wattles including labor, equipment, and materials shall be incidental to the contract unit price per foot for the corresponding erosion control wattle bid item.

All costs for removing the erosion control wattle from the project including labor, equipment, and materials shall be incidental to the contract unit price per foot for "Remove Erosion Control Wattle".

December 23, 2004

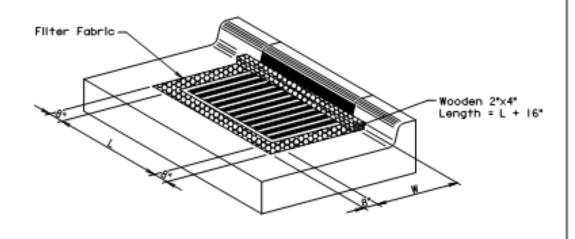
D EROSION CONTROL WATTLE D 0 Published Date: 4th Otr. 2014

PLATE NUMBER 734.06 Sheet 2 of 2

STATE OF SOUTH DAKOTA P TAPU(07) 45 46

Plotting Date: 3/12/2015

L = Length of Grate W = Width of Grate



ISOMETRIC VIEW

#### GENERAL NOTES:

The grate and curb and gutter shown are for illustrative purposes only.

The sediment control at inlet with frame and grate shall be placed at locations stated in the plans or at locations determined by the Engineer.

The filter fabric shall be the type specified in the plans.

The filter fabric shall be placed in the inlet opening prior to placing the grate. Approximately 18 inches of excess filter fabric shall be wrapped around the 2\*x4" and stapled securely to the 2\*x4" after the grate has been placed.

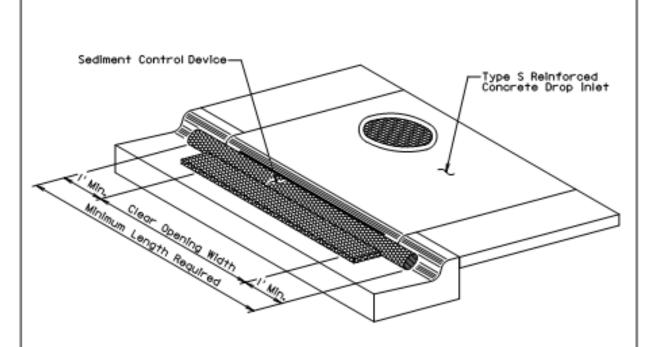
The Contractor shall inspect and maintain the sediment control device once every week and within 24 hours after every rainfall event. The Contractor shall maintain the sediment control device by removing accumulated sediment and replacing torn filter fabric with new filter fabric.

The removed sediment shall be placed at a location away from the drop inlet where the sediment will not be washed back into the drop inlet or other storm sewer system.

All costs for furnishing, installing, inspecting, maintaining, removing, and replacing the sediment control device at the inlet including labor, equipment, and materials shall be incidental to the contract unit price per each for "Sediment Control at inlet with Frame and Grate".

September 14, 2
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	S D D	SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES	PLATE NUMBER 734.10
Published Date: 4th Qtr. 2014	o	WITH FRANCS AND GRATES	Sheet   of



#### ISOMETRIC VIEW

#### GENERAL NOTES:

The type of sediment control device shown is for illustrative purposes only.

The type of sediment control device used shall be one of the types as specified in the plans.

The sediment control device shall be placed at the drop inlets according to the manufacturers' installation instructions.

The sediment control at inlet for type S reinforced concrete drop inlet shall be placed at locations stated in the plans or at locations determined by the Engineer.

The Contractor shall inspect and maintain the sediment control device once every week and within 24 hours after every rainfall event. The Contractor shall maintain the sediment control device by removing the device, removing accumulated sediment, and resetting the device.

The removed sediment shall be placed at a location away from the drop inlet where the sediment will not be washed back into the drop inlet or other storm sewer system.

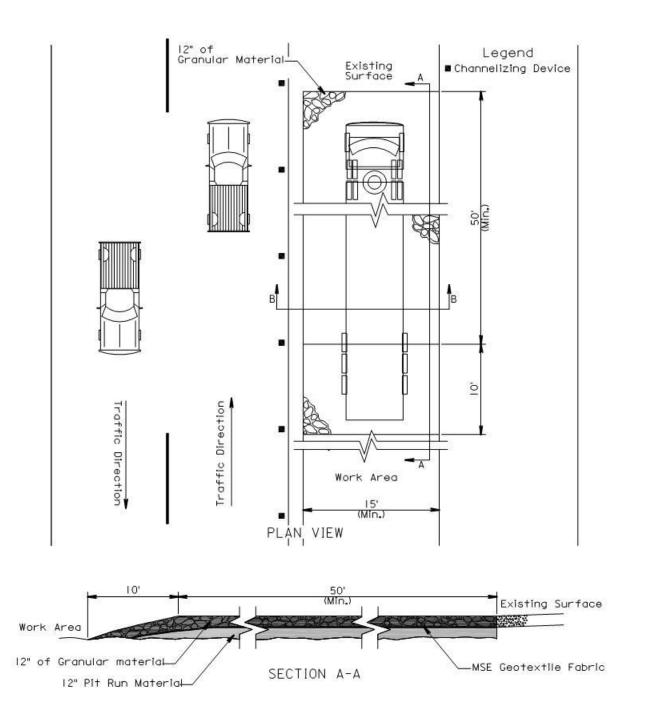
Payment for the "Sediment Control at Type S Drop Inlet" shall be based on the minimum length required at the drop inlets. Some of the sediment control devices specified in the plans will have to be longer due to available length.

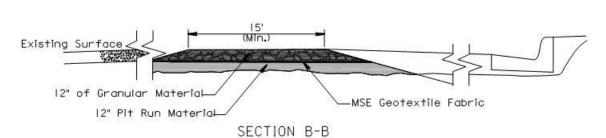
All costs for furnishing, installing, inspecting, maintaining, removing, and resetting the sediment control device at the drop inlet including labor, equipment, and materials shall be incidental to the contract unit price per foot for "Sediment Control at Type S Reinforced Concrete Drop Inlet".

			September 14, 2005
	S D D	SEDIMENT CONTROL AT INLETS FOR TYPE S REINFORCED CONCRETE	PLATE NUMBER 734.11
ıblished Date: 4th Qtr. 2014	Ţ	DROP INLETS	Sheet I of I

STATE OF SOUTH DAKOTA P TAPU(07) 46 46

Plotting Date: 3/12/2015





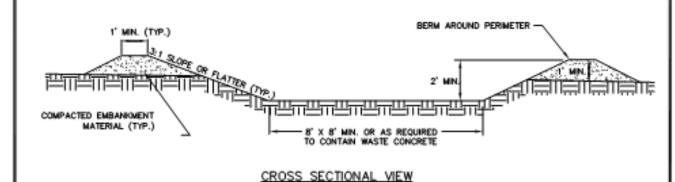
CONSTRUCTION ENTRANCE

#### CONCRETE WASHOUT FACILITY



#### OTES:

- 1. CONCRETE WASHOUT FACILITY SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
- A SIGN SHALL BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE CWF.
- THE CONCRETE WASHOUT FACILITY SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
- WHEN CWF ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE AND MATERIALS USED TO CONSTRUCT THE CWF SHALL BE REMOVED AND DISPOSED OF.
- WHEN THE CONCRETE WASHOUT FACULTY IS REMOVED, THE HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE SHALL BE BACKFILLED, REPAIRED AND STABILIZED.



REVISED: DECEMBER 2008

SPECIFICATION REFERENCE NO. 734



CITY OF SIOUX FALLS ENGINEERING DIVISION CONCRETE WASHOUT FACILITY

PLATE NUMBER 734.28