

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
PROJECT 410A375
MAINTENANCE YARD
FAULK COUNTY

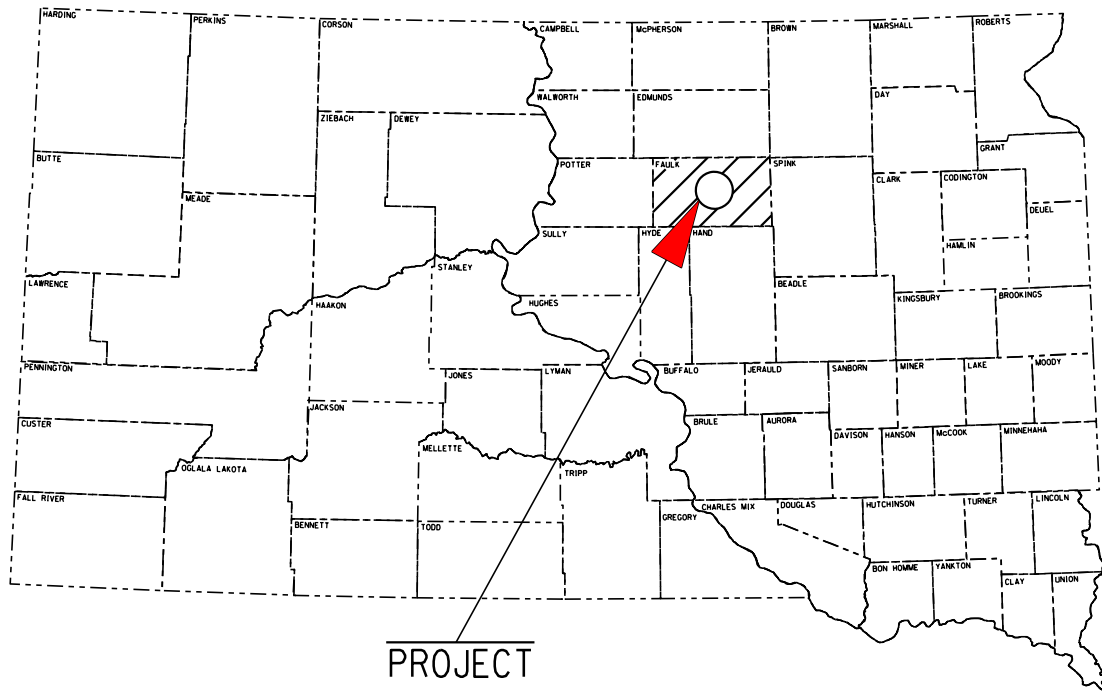
GRADING, RESURFACING, and VALLEY GUTTER
PCN i51R

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410A375	1	12

Plotting Date: 05/21/2018

INDEX OF SECTIONS

- Sheet 1: Title Sheet and Layout Map
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FAULKTON
T 118 N - R 69 W



STORM WATER PERMIT
(None Required)

PLOT SCALE - 1:891.7

PLOTTED FROM - TRABINT01

PLOT NAME - 1

FILE - ... \TITLE SHEET.DGN

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410A375	2	12
Plotting Date: 05/07/2018			

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E0605	Remove Chain Link Fence	205	Ft
120E0010	Unclassified Excavation	3,425	CuYd
260E1090	Base Course, State Furnished	4,015.0	Ton
320E1200	Asphalt Concrete Composite	1,113.0	Ton
332E0010	Cold Milling Asphalt Concrete	5,580	SqYd
462E0100	Class M6 Concrete	0.1	CuYd
621E0080	8' Chain Link Fence with Top Rail	145	Ft
621E0420	Single Vehicular Swing Gate	1	Each
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
650E6280	8" Concrete Valley Gutter	251.0	SqYd
671E7010	Adjust Manhole	3	Each
720E1015	Bank and Channel Protection Gabion	5.3	CuYd
734E0154	12" Diameter Erosion Control Wattle	75	Ft
831E0200	Woven Separator Fabric	6,373	SqYd
900E2030	Miscellaneous Work	1	Site
900E5145	Bollard	2	Each

SPECIFICATIONS

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

ENVIRONMENTAL COMMITMENTS

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

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <http://www.sddot.com/resources/Manuals/EnvironProcManual.pdf>

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Office at 605-773-3098 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

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

Action Taken/Required:

The DENR General Permit for Storm Water Discharges Associated with Construction Activities is required for construction activity disturbing one or more acres of earth and work in a waterway. The SDDOT is the owner of this permit and will submit the NOI to DENR 15 days prior to project start in order to obtain coverage under the General Permit. Work can begin once the DENR letter of approval is received.

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

The Contractor will complete the DENR Contractor Certification Form prior to the pre-construction meeting. The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the permit for this project. Work may not begin on this project until this form is signed and submitted to DENR.

The form can be found at:

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

The Contractor is advised that permit coverage may also be required for off-site activities, such as borrow and staging areas, which are the responsibility of the Contractor.

Action Taken/Required:

The Contractor will meet the terms of the Temporary Discharge Permit and the Storm Water Permit for Construction Activities.

The Contractor will create a Pollution Prevention Plan (PPP) for dewatering and sediment collection if the Contractor chooses to discharge the water into "Waters of the US" or "Waters of the State". Refer to the detail sheet OPTIONS FOR DEWATERING AND SEDIMENT COLLECTION in the plans. The PPP must be kept on-site and updated as site conditions change.

COMMITMENT H: WASTE DISPOSAL SITE

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

Action Taken/Required:

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

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

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

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

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

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period 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) will be incidental to the various contract items.

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

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

Action Taken/Required:

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

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

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

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

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

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

The Contractor will take all precautions necessary to prevent any incidental discharges associated with the excavation and hauling of material from the stream channel. This pertains to any excavation operations such as, foundation, pier, or abutment excavation, channel cleanout, excavation for riprap protection, and removal of any temporary fill associated with construction activities.

PLOT SCALE - 1:891.7

PLOTTED FROM - TRABINT01

PLOT NAME - 2

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STATE OF SOUTH DAKOTA	PROJECT 410A375	SHEET NO. 4	TOTAL SHEETS 12
Plotting Date: 05/07/2018			

SURFACING THICKNESS DIMENSIONS

Plans tonnage 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 tonnage may be varied to achieve the required elevation.

SEQUENCE OF OPERATIONS

1. Mill areas designated on the plans.
2. Install water line
3. Grade areas designated on the plans.
4. Install concrete valley gutters
5. Pave areas designated on the plans: Paving must begin within 21 calendar days after grading operations have been completed.
6. Flush Seal all newly paved areas: Flush seal must be completed with 10 working days of completion of the paving.

TRAFFIC CONTROL

The Contractor shall coordinate with the DOT maintenance personnel to provide access to the facilities for day to day operations.

The Contractor will be responsible to provide and install any traffic control devices necessary to keep the public from entering the work zone. The Contractor shall install road work ahead signs on US 212 when construction activities are near the highway. Payment for supplying and installing any traffic control devices will be incidental contract Lump Sum price for traffic Control Miscellaneous.

Work activities during non-daylight hours are subject to prior approval.

UTILITIES

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

The Contractor shall notify the Engineer Prior to work to allow the Department to locate private utilities in the work area.

REMOVALS

All removed material from both projects shall become property of the Contractor for their disposal.

It is anticipated that concrete rubble and other debris will be encountered during excavation, no additional payment will be made for removal of this material.

BASE COURSE, STATE FURNISHED

For excise tax purposes the cost of Base Course, State Furnished is \$18.27. Payment for State Furnished Base Course Shall be based on a survey of the stockpile prior to work and after work, a conversion factor of 1.89 tons per cubic yard will be applied. The State Furnished Base Course is located on the project site.

Gradation testing of the material will not be required. Density testing may be waived in the field by the Engineer.

WATER FOR COMPACTION OF GRANULAR MATERIALS

Cost of water for compaction of the granular material shall be incidental to the contract unit price for the various contract items. Six percent, plus or minus, moisture will be required at the time of compaction unless otherwise directed by the Engineer.

COLD MILLING ASPHALT CONCRETE

The cold milled material obtained from the project shall become the property of the Contractor for their disposal. No surface texture testing will be required.

The placement of asphalt concrete shall begin within 21 calendar days after completion of cold milling of asphalt concrete.

Enough material shall be milled out to allow the Contractor to place 2" of Asphalt Concrete Composite in all areas designated on the plan sheets.

Cold milling is estimated to produce 549 tons of material.

ASPHALT CONCRETE COMPOSITE

The asphalt binder used in the mixture shall be a PG 64-28, PG 58-34 or PG 64-34 Asphalt Binder.

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

It can be anticipated that hand work will be required to shape the asphalt concrete near buildings and other obstructions.

FLUSH SEAL

Application of flush seal shall be completed within 10 working days following completion of the asphalt concrete surfacing.

For each working day that the flush seal remains uncompleted after the 10 working day limitation, the Contractor will be assessed liquidated damages at the rate of \$250.00 per day.

The liquidated damages shall apply up to the expiration of the contract time requirement in which the flush seal is required to be completed, including any formally approved time extensions. Following the expiration of the contract time requirement in which the flush seal is required to be completed, including any formally approved time extensions, liquidated damages will be assessed in accordance with Section 8.8 of the specifications.

Tack or flush seal oil applied to concrete or buildings shall be removed to the satisfaction of the Engineer at no cost to the State.

MANHOLE ADJUSTMENT

Included in the Estimate of Quantities are 3 Adjust Manholes. The Contractor shall adjust the height of the manholes to be flush with the newly placed asphalt concrete. Prior to bidding the project the Contractor shall inspect the manholes to determine the extent of the work needed and determine if any additional materials will be needed. All labor and materials needed to adjust the manholes shall be incidental to the contract unit price for ADJUST MANHOLE. Any additional materials needed to adjust the manholes shall be approved by the Engineer prior to use.

8" VALLEY GUTTER

The valley gutter shall be built in accordance with standard plate 650.40. The coarse aggregate used in the M6 concrete shall be crushed ledge rock.

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WATER LINE AND HYDRANT INSTALLATION

The waterline shall be 1 inch diameter with a 6 foot minimum burry depth. It is estimated that there will be 115 lineal feet of water line to be installed, general installation locations are shown on the General Layout sheet. The Hydrant shall be 108.5 inch frost proof yard hydrant from Woodford MFG or approved equal. The bury depth shall be a minimum of 6 feet, installation shall be according to the manufactures recommendations. The hydrant will be installed inside the cold storage building, a block out in the concrete was left in the floor of the cold storage building during construction for this purpose. The back fill in the shop for the thickness of the concrete slab shall be pea rock. The water line shall be connected to the waterline in the brine building a valve shall be installed to shut off water to the cold storage building. No additional field measurements will be made for pipe length of the water line installation. All costs for materials and labor shall be incidental to the contract unit price for MISCELLANEOUS WORK per site. The Contractor is encouraged to visit the site prior to bidding the work. To arrange a site visit contact the Aberdeen Area office at 605-626-7885.

BOLLARD INSTALLATION

The Contractor shall install bollards in front of the water hydrant in the cold storage building. The bollards shall be approved by the Engineer prior to installation. The bollards shall bolt to the in place concrete floor using wedge type anchor bolts. The exact location of the bollards shall be determined in the field by the Engineer. Payment for labor and materials for the installation of bollards shall be incidental to the contract unit price for BOLLARD.

FENCE INSTALLATION/REMOVAL

The limits of fence installation shall be marked in the field by the Engineer. The fence shall be installed one foot inside the property line, the Engineer will mark the property line upon the start of construction.

SIDEWALK DRAIN REMOVAL

The Contractor shall remove all hardware from the sidewalk drain and place class M6 concrete in the void area. All payment for labor and materials shall be incidental to the contract unit price for M6 concrete. No additional measurements will be made plans quantity shall be the basis of payment.

EROSION CONTROL WATTLE

Wattles are to be placed at the end of the valley gutter and any other location needed as determined by the Engineer.

Erosion control wattles for restraining the flow of runoff and sediment shall be installed 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.

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:

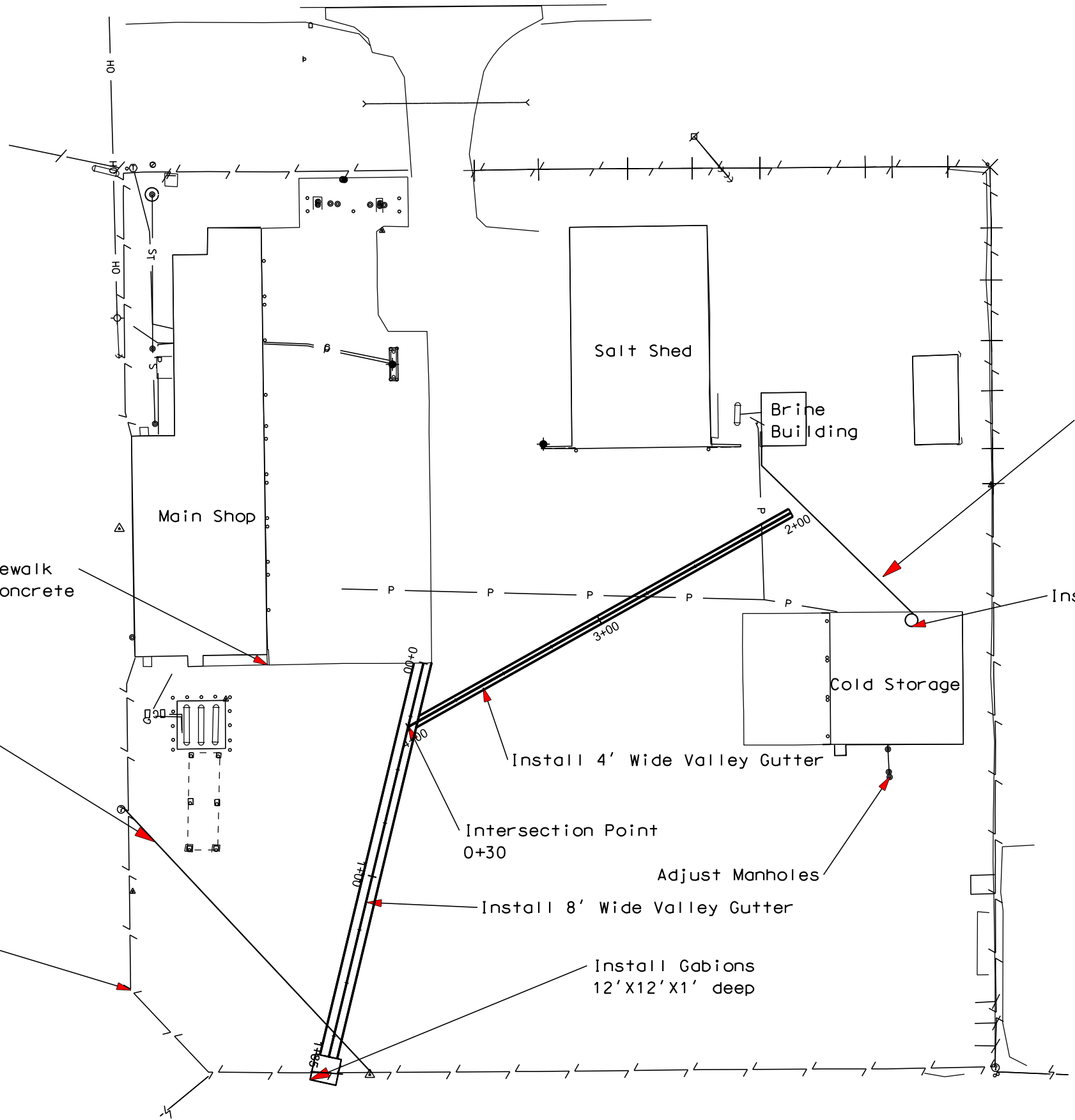
<http://sddot.com/business/certification/products/Default.aspx>

General Layout

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410A384	6	12
Plotting Date: 05/21/2018			

PLOT SCALE - 1:55,921

PLOT NAME - 2



Remove Hardware From Sidewalk Drain and Fill With M6 Concrete

Install Chainlink Fence With 20' Gate (location to be determined in the field)

Fence To Be Removed

Salt Shed

Brine Building

Main Shop

Install 1" Water Line

Install Frost Free Hydrant and Bollards

Cold Storage

Install 4' Wide Valley Gutter

Intersection Point 0+30

Adjust Manholes

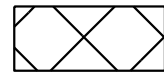
Install 8' Wide Valley Gutter

Install Gabions 12' X 12' X 1' deep

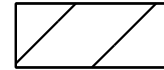
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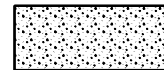
Surfacing Detail



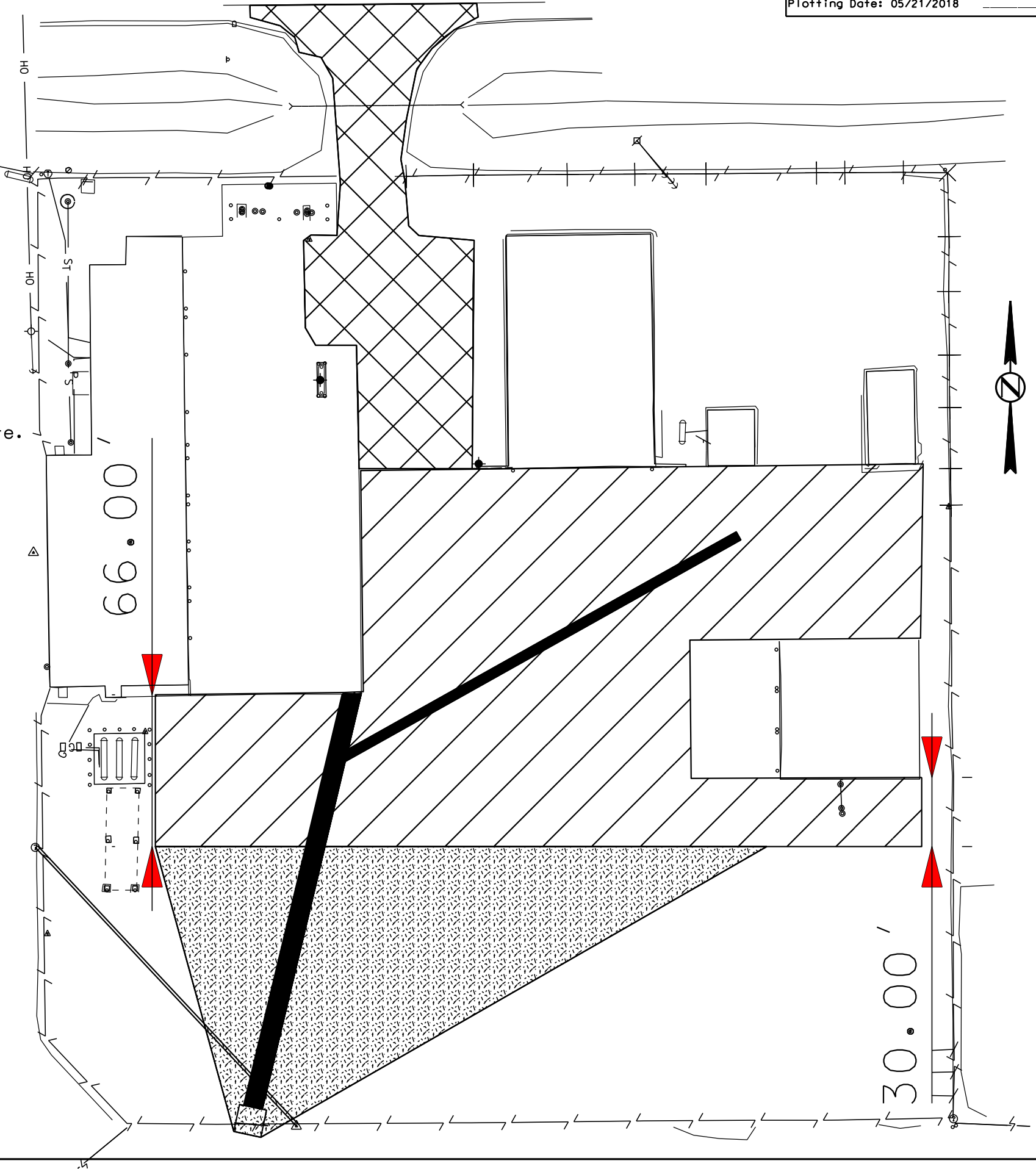
Mill 2" and Resurface 2" Asphalt Composite
10,300 Sq. Ft.

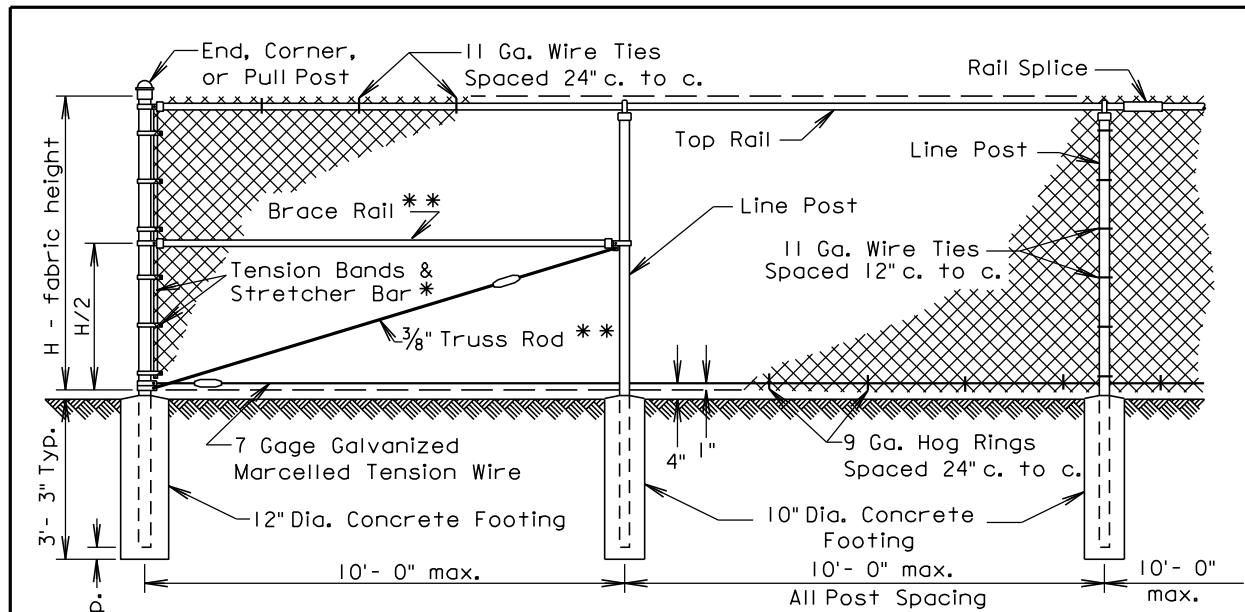


Mill, regrade, place woven separator fabric,
place 12" of state furnished base course,
resurface with 4" of asphalt concrete composite.
39,925 Sq. Ft.



Regrade, place woven separator fabric,
and 12" of state furnished base course
17,430 Sq. Ft.





* Tension Bands shall be spaced 12" c. to c.
 ** Are not required for 3' thru 5' fences.
 ⊕ Tightening Device such as shown on Plate No. 621.03

Component	End, Corner & Pull Post		Line Post			Top & Brace Rail	
	Round Pipe Nominal	Roll Formed Steel	Round Pipe Nominal	"C" Section	H-Beam Steel	Round Pipe Nominal	Roll Formed Steel
Size	3.00" O.D.	3.5" x 3.5"	2.50" O.D.	1.875"x1.625"	2.25"x1.70"	1.625" O.D.	1.625"x1.25"
Weight (lb. / ft.)	5.79 or 4.64	5.14	3.65 or 3.12	2.34	3.43	2.27 or 1.84	1.35

GENERAL NOTES:

Specific details of manufacture of component parts of the complete fence construction shall be subject to the approval of the Engineer. Commercially available items produced specifically for the use intended shall be used wherever possible in the construction of the fence.

"H" (Height of Fabric) shall be as shown on the Plans. Fabric is available in the the following heights; 36", 42", 48", 60", 72", 84", 96", 108", 120", & 144". Fabric heights 60 inches and under shall be knuckled at both selvages. Fabric heights 72 inches and over shall be knuckled at one selvage and twisted at the other selvage.

Chain Link Fabric shall be 2" mesh, No. 9 gage galvanized wire securely fastened to Tension Wire, Line Post, Rails, Braces and Stretcher Bars spaced as shown hereon.

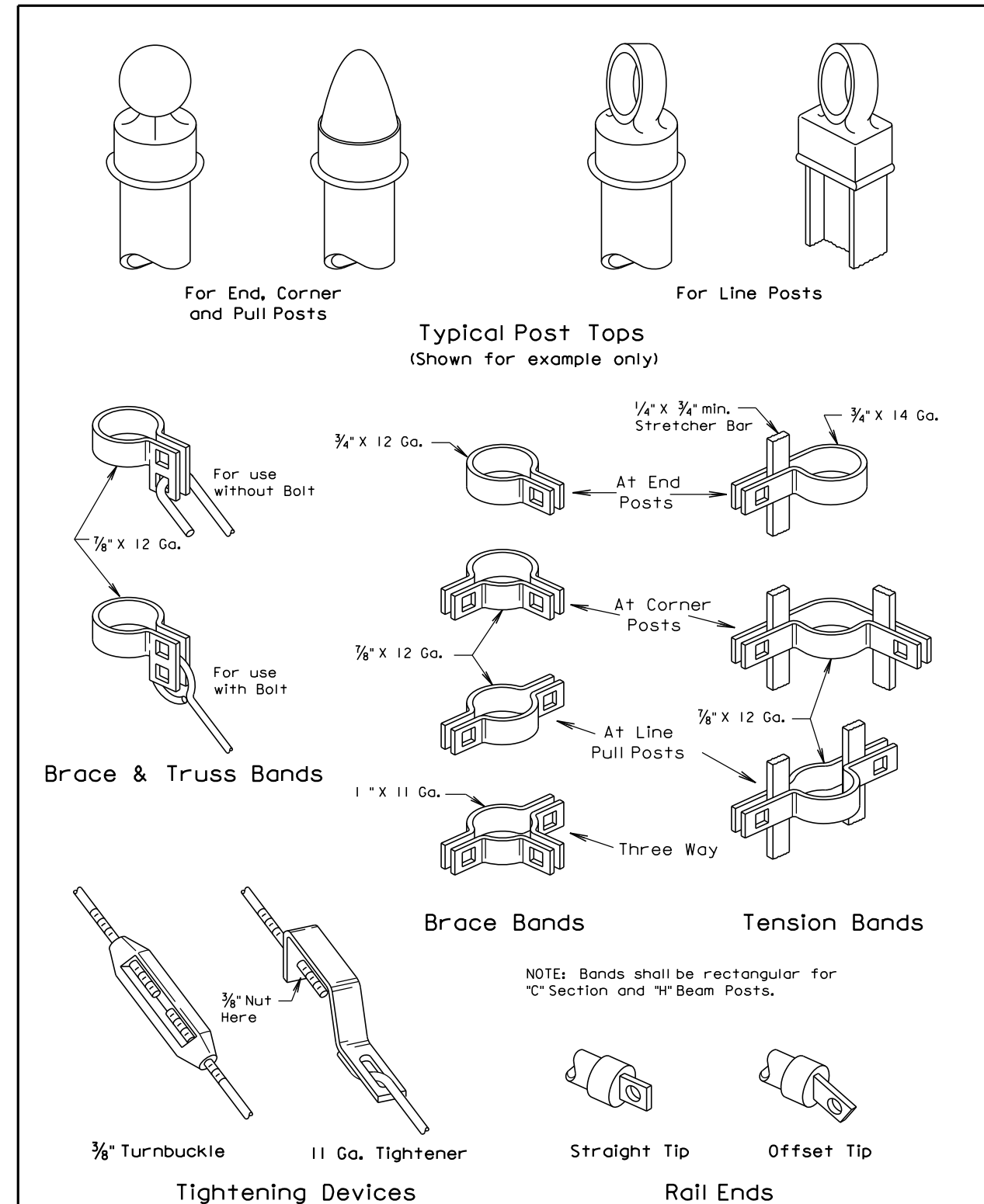
Fence may be constructed with either Round Pipe, "C" Section, "H" Beam, or roll Formed Steel components as shown in the table above. Line post may be Round Pipe, "C" Section, or "H" Beam. The Corner Post and Rails shall be either Round Pipe or Roll Formed Steel. The type of components used shall have prior approval by the Engineer before construction.

Where fence must cross small bodies of water (such as drainage areas or ponds) that could freeze during the winter, use 11 gage Hog Rings. Provide only two ties per Tension Wire and Top Rail between line posts.

A suitable method of rail splicing shall be used to allow for expansion and contraction while maintaining proper position of the Top Rail.

March 31, 2000

Published Date: 2nd Qtr. 2018	S D D O T	CHAIN LINK FENCE WITH TOP RAIL	PLATE NUMBER 621.01
			Sheet 1 of 1

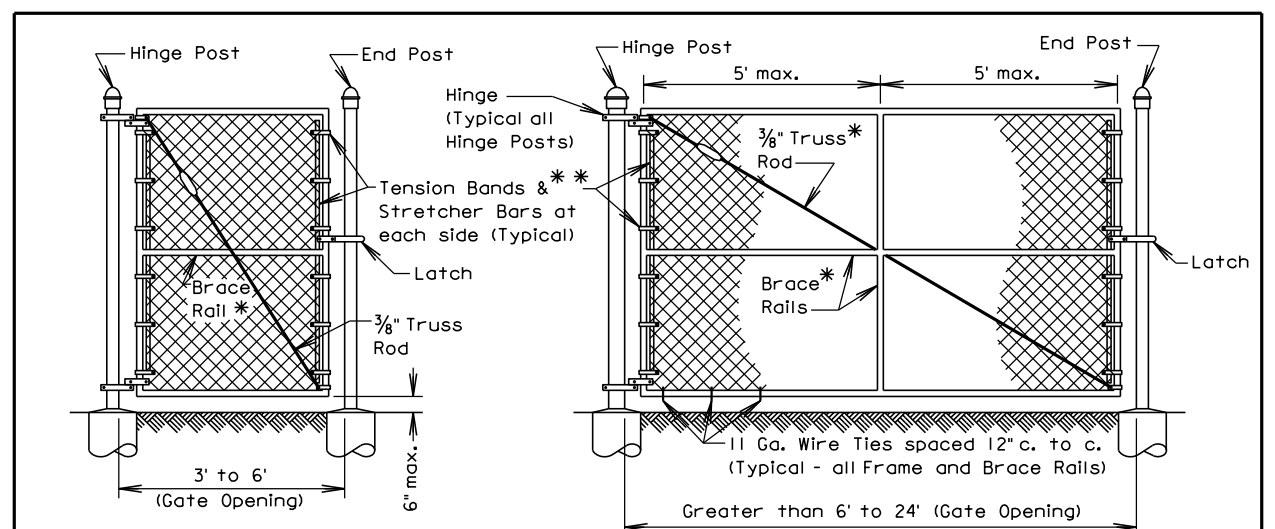


NOTE: Bands shall be rectangular for "C" Section and "H" Beam Posts.

Published Date: 2nd Qtr. 2018	S D D O T	HARDWARE FOR CHAIN LINK FENCE	PLATE NUMBER 621.03
			Sheet 1 of 1

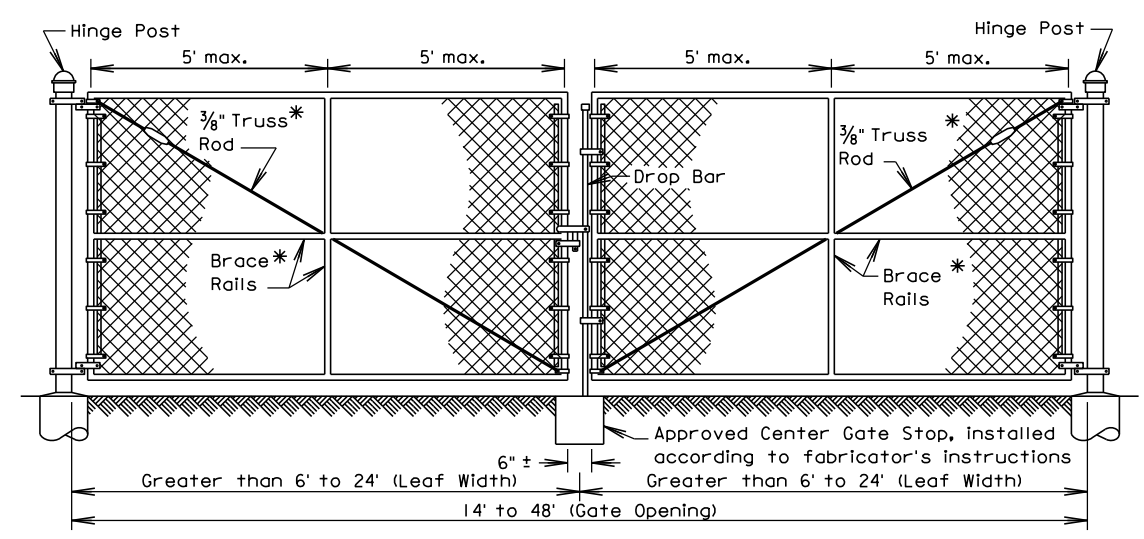
PLOT SCALE - 1:891.7

PLOT NAME - 2



PEDESTRIAN SWING GATE

SINGLE VEHICULAR SWING GATE



DOUBLE VEHICULAR SWING GATE

Gate Opening		Frame Pipe Nominal	Brace Rail - Pipe Nominal
Width ¹	Height ²		
3' to 8'	3' to 6'	1.50"	1.50"
>8' to 23'	6'	1.90"	1.50"
>8' to 23'	> 6' to 12'	1.90"	1.90"

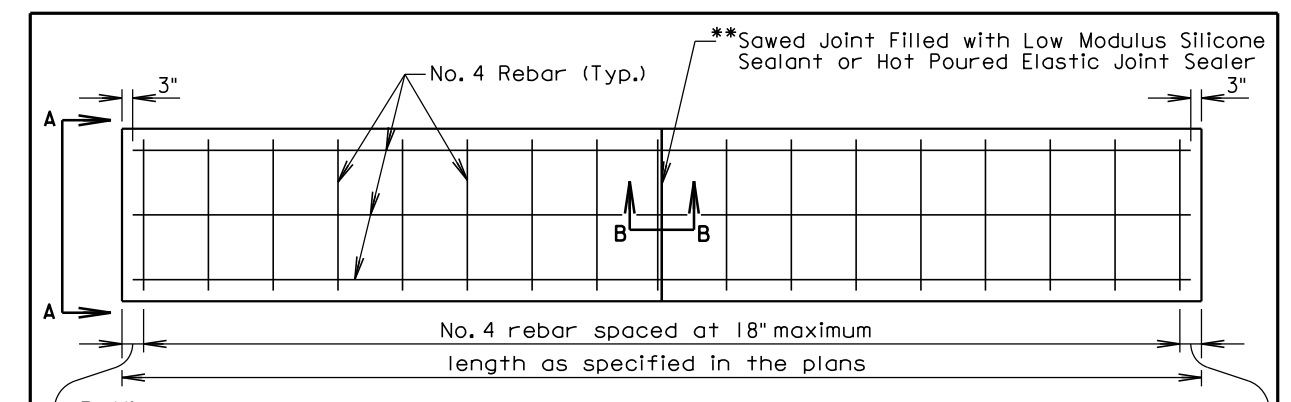
Gate Opening Width ¹	Hinge Post		Concrete Footing	
	Round Pipe Nominal	Roll Formed Steel	Depth	Diameter
3' to 6'	3.00"	3.50"x3.50"	36"	12"
> 6' to 13'	4.00"	—	42"	12"
> 13' to 18'	6.625"	—	48"	18"
> 18' to 23'	8.625"	—	48"	24"

NOTE: Gate frames may be constructed of bent or welded steel tubing installed according to fabricator's instructions and subject to the Engineer's approval.

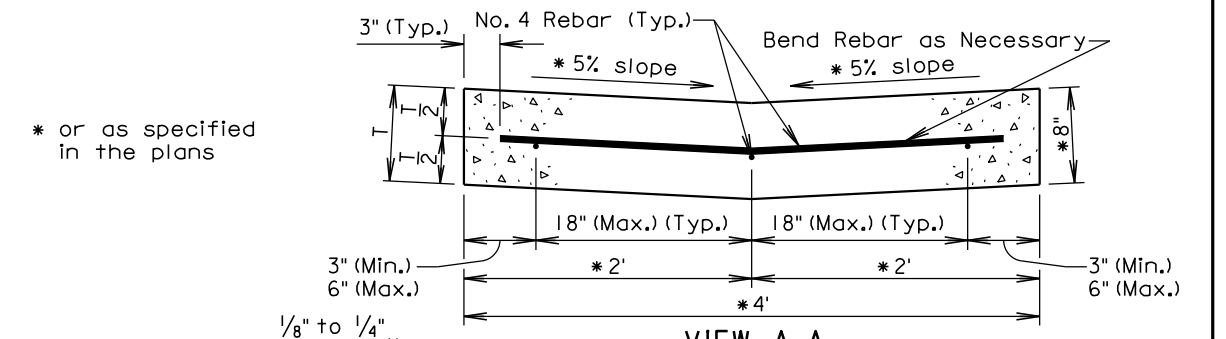
- * Are not required for gates 3' to 5' height or 5' or less in width.
- ** Tension Bands shall be spaced 12" c. to c.
- Tightening Device such as shown on standard plate 621.03
 - 1 Leaf width for Double Vehicular Swing Gate
 - 2 Shall coincide with fence height

September 14, 2001

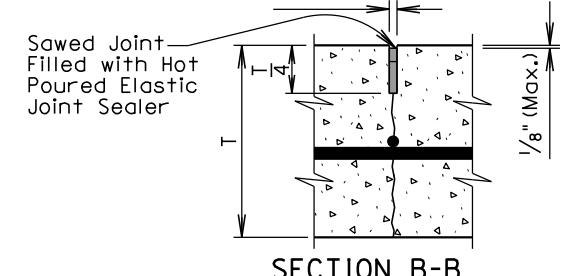
S D D O T	SWING GATES FOR CHAIN LINK FENCE	PLATE NUMBER 621.10
	Published Date: 2nd Qtr. 2018	Sheet 1 of 1



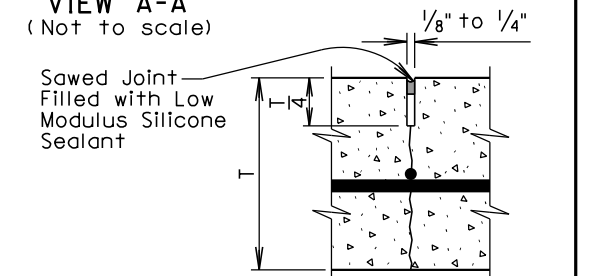
PLAN VIEW



VIEW A-A
(Not to scale)



SECTION B-B
(Sawed Joint Filled with Hot Poured Elastic Joint Sealer)



SECTION B-B
(Sawed Joint Filled with Low Modulus Silicone Sealant)

GENERAL NOTES:

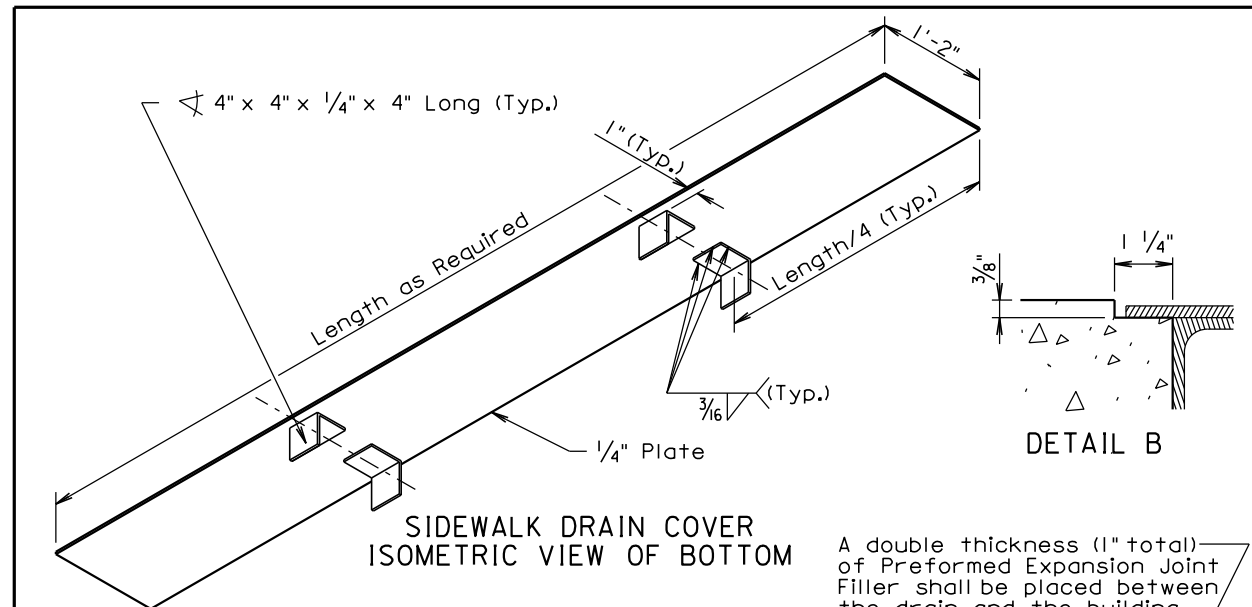
- The concrete shall comply with the Specifications for Class M6 concrete.
- The reinforcing steel shall comply with the requirements of the Specification Sections 480 and 1010.
- If a lap splice is provided the No. 4 rebar shall be lapped a minimum of 12".
- ** The sawed joints shall be spaced at 12'; however, when the length of the valley gutter is 12' to 24' there shall be a joint at the midpoint of the length. The saw cut to control cracking shall be a minimum of 1/4 the thickness of the pavement.
- All hot poured elastic joint sealer material spilled on the surface of the concrete pavement shall be removed as soon as the material has cooled. The extent of removal of material shall be to the satisfaction of the Engineer. All costs for removal of the spilled joint sealer material shall be borne by the Contractor.
- The silicone sealant shall be bonded to the sides of a clean joint to completely seal the joint as approved by the Engineer.
- All costs for furnishing and installing the valley gutter including materials, equipment, labor, and incidentals shall be included in the contract unit price per square yard for the corresponding Valley Gutter bid item.

February 10, 2014

S D D O T	VALLEY GUTTER	PLATE NUMBER 650.40
	Published Date: 2nd Qtr. 2018	Sheet 1 of 1

PLOTTED FROM - TRABINT01

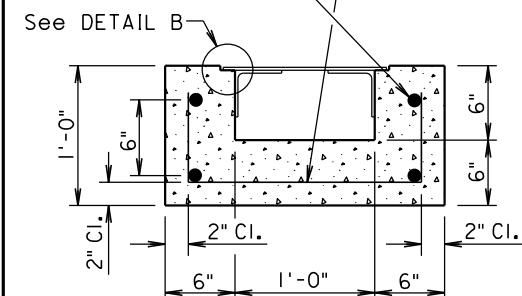
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**SIDEWALK DRAIN COVER
ISOMETRIC VIEW OF BOTTOM**

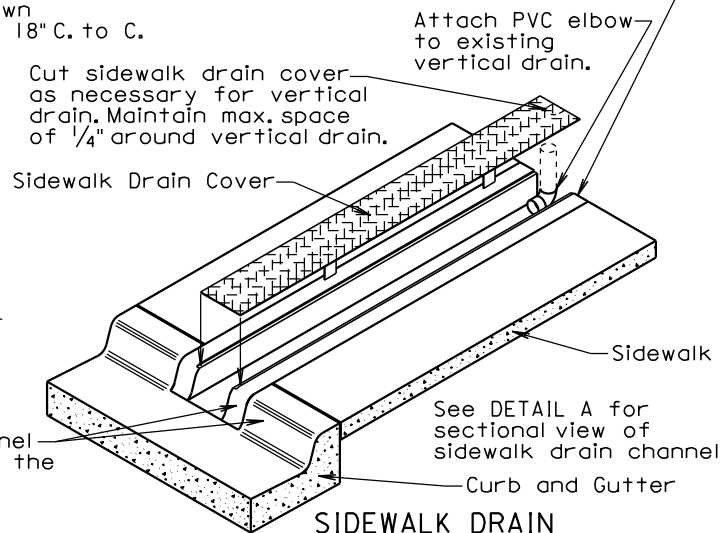
A double thickness (1" total) of Preformed Expansion Joint Filler shall be placed between the drain and the building.

#3 Rebar (Typ.) 3' Long
Bend as shown
Bars spaced 18" C. to C.



DETAIL A

The end of the drain channel shall be the same shape as the adjacent curb face.



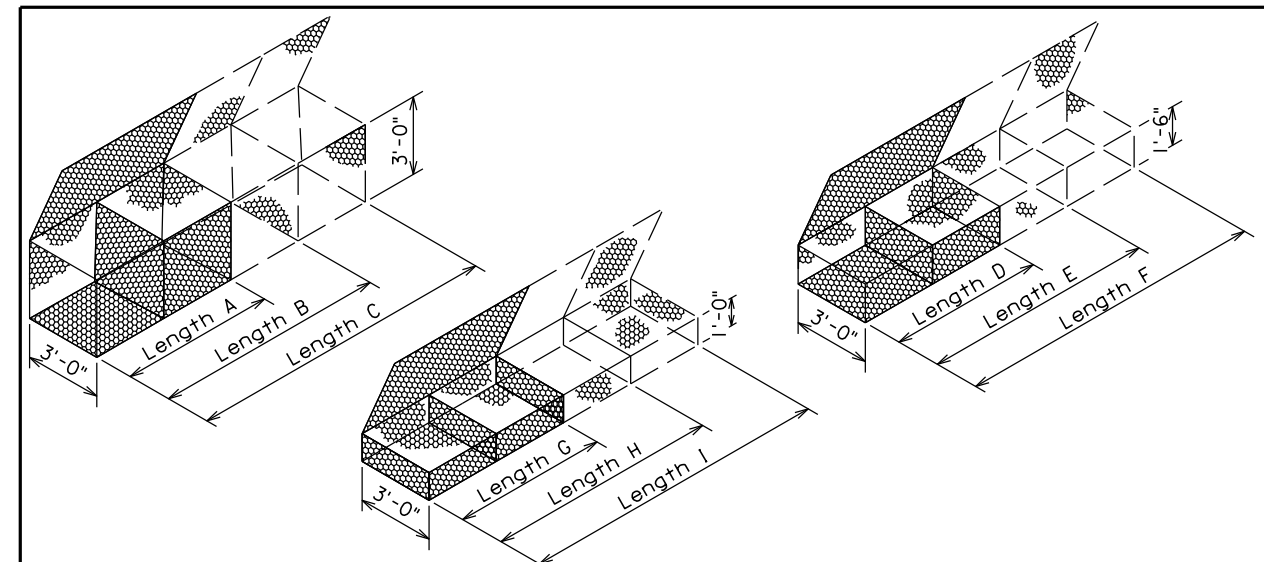
SIDEWALK DRAIN

GENERAL NOTES:

- Concrete shall be Class M6 in accordance with Section 462 of the Specifications.
- Reinforcing steel shall conform to ASTM A615, Grade 60.
- Structural Steel shall conform to ASTM A36. The sidewalk drain cover shall conform to ASTM A786.
- Welding and weld inspection shall be in conformance with the current edition of the AWS D1.1 Structural Welding Code-Steel.
- The cover plate assembly shall be galvanized after fabrication. Galvanizing shall be in accordance with ASTM A123.
- All costs associated for providing the required curb cut shall be incidental to the contract unit price per foot for the corresponding curb and gutter bid item.
- The sidewalk drain shall be measured and paid for to the nearest tenth of a foot. The length of the drain shall be measured from the gutter to the necessary end location adjacent to the building. All costs associated with furnishing and installing the sidewalk drain channel and cover including the attachment to the vertical drain shall be incidental to the contract unit price per foot for "Sidewalk Drain".

June 26, 2015

Published Date: 2nd Qtr. 2018	S D D O T	SIDEWALK DRAIN	PLATE NUMBER 651.50
			Sheet 1 of 1



**GABION DETAILS
STANDARD SIZES**

SIZE	LENGTH	WIDTH	HEIGHT	NUMBER OF CELLS	CAPACITY, Cu. Yd.
A	6'-0"	3'-0"	3'-0"	2	2.0
B	9'-0"	3'-0"	3'-0"	3	3.0
C	12'-0"	3'-0"	3'-0"	4	4.0
D	6'-0"	3'-0"	1'-6"	2	1.0
E	9'-0"	3'-0"	1'-6"	3	1.5
F	12'-0"	3'-0"	1'-6"	4	2.0
G	6'-0"	3'-0"	1'-0"	2	0.7
H	9'-0"	3'-0"	1'-0"	3	1.0
I	12'-0"	3'-0"	1'-0"	4	1.3

Above Dimensions subject to mill tolerances.

GENERAL NOTES:

- Lacing and internal connecting wire shall be 0.0866 inch diameter steel wire ASTM A641 Class 3 soft temper measured after galvanizing and for PVC coated gabions shall be 0.0866 inch diameter steel wire measured after galvanizing but before PVC coating.
- The lacing procedure is as follows:
 - Cut a length of lacing wire approximately 1 1/2 times the distance to be laced but not exceeding 5 feet.
 - Secure the wire terminal at the corner by looping and twisting.
 - Proceed lacing with alternating single and double loops at a spacing not to exceed 6 inches.
 - Securely fasten the other lacing wire terminal.
- Wire lacing or interlocking type fasteners shall be used for gabion assembly and final construction of gabion structures. Interlocking fasteners for galvanized gabions shall be high tensile 0.120 inch diameter galvanized steel wire measured after galvanizing. The galvanizing shall conform to ASTM A641-92 Class 3 coating. Fasteners shall also be in accordance with ASTM A764, Class II, Type III.
- Interlocking fasteners for PVC coated gabions shall be high tensile 0.120 inch diameter stainless steel wire conforming to ASTM A313, Type 302, Class I. The spacing of the interlocking fasteners during all phases of assembly and construction shall not exceed 6 inches. All fasteners shall be placed where the mesh weaves around the selvage wire at the vertical and horizontal joints.

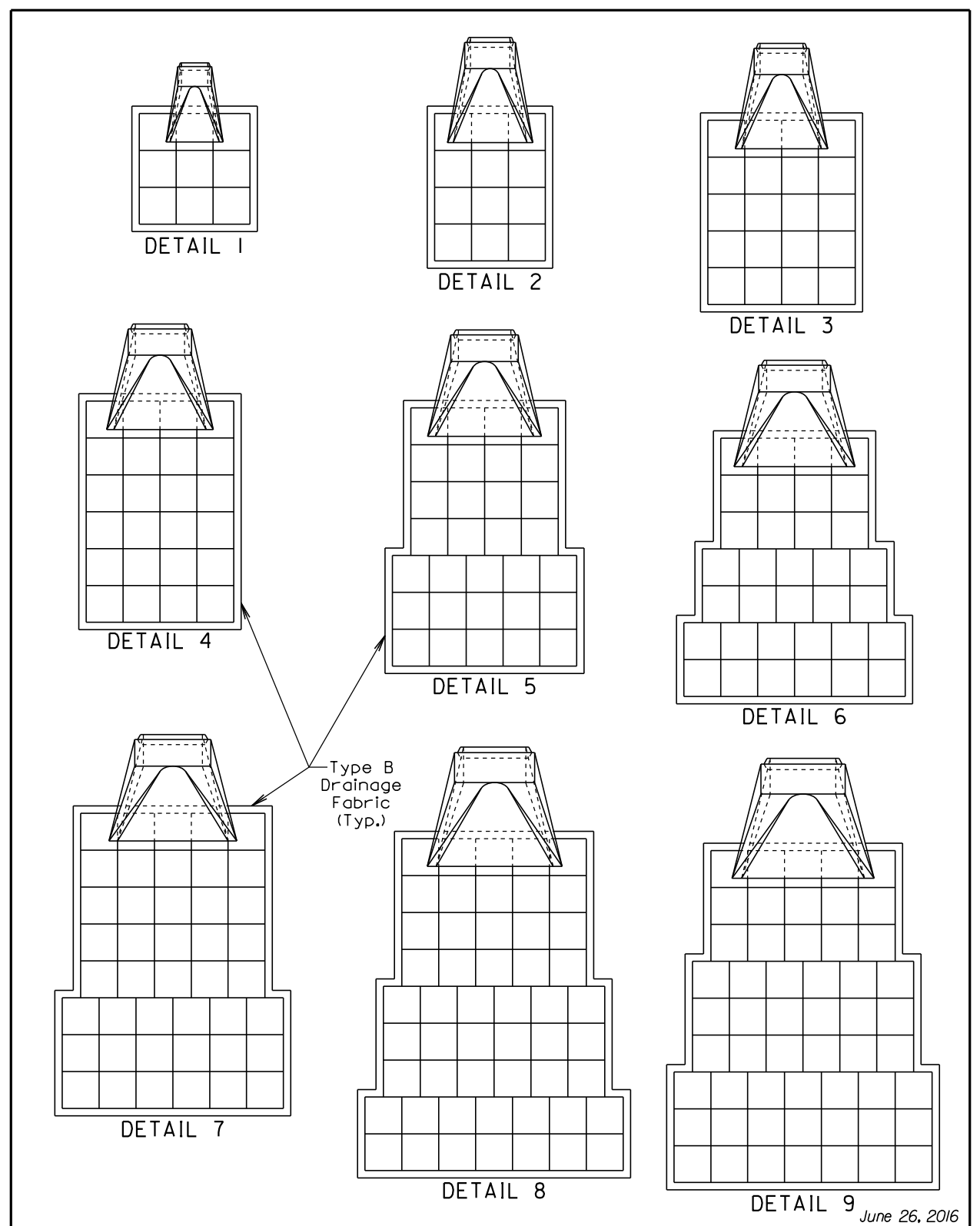
June 26, 2001

Published Date: 2nd Qtr. 2018	S D D O T	BANK AND CHANNEL PROTECTION GABIONS	PLATE NUMBER 720.01
			Sheet 1 of 1

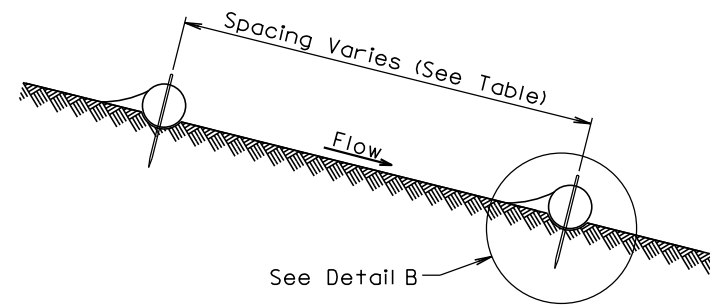
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PLOT NAME - 2

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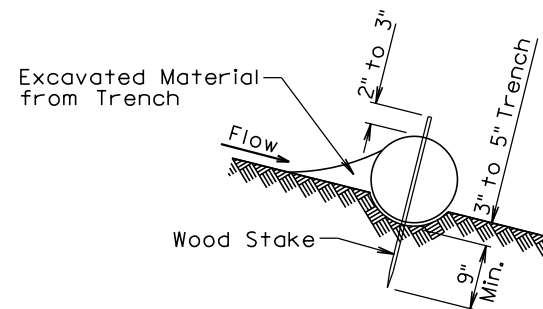


Published Date: 2nd Qtr. 2018	S D D O T	BANK AND CHANNEL PROTECTION GABION PLACEMENT UNDER PIPE END SECTIONS	PLATE NUMBER 720.03
			Sheet 1 of 2

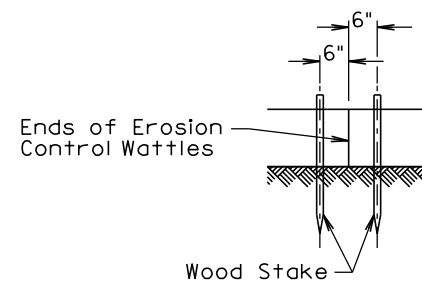


CUT OR FILL SLOPE INSTALLATION	
Slope	Spacing (Ft)
1:1	10
2:1	20
3:1	30
4:1	40

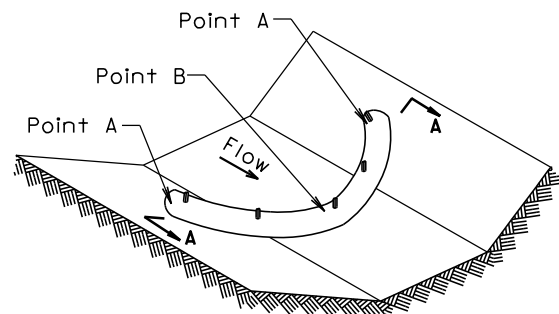
ELEVATION VIEW
CUT OR FILL SLOPE INSTALLATION



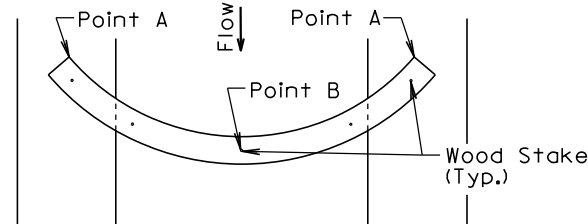
DETAIL B
(TYPICAL OF ALL INSTALLATIONS)



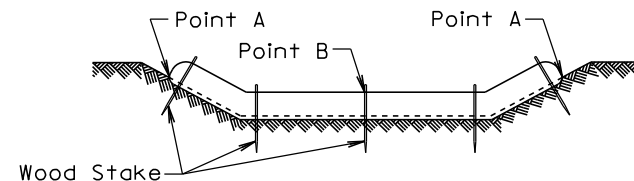
DETAIL C



ISOMETRIC VIEW
DITCH INSTALLATION



PLAN VIEW
DITCH INSTALLATION



SECTION A-A

DITCH INSTALLATION	
Grade	Spacing (Ft)
2%	150
3%	100
4%	75
5%	50

December 23, 2004

Published Date: 2nd Qtr. 2018	S D D O T	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 1 of 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 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 Sediment".

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

Published Date: 2nd Qtr. 2018	S D D O T	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
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