

TOTAL SHEETS PROJECT STATE OF SOUTH 410A389 26 DAKOTA Plotting Date: 01/08/2020

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STORM WATER PERMIT

None Required

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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GENERAL QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E0300	Remove Concrete Curb and/or Gutter	1,257	Ft
110E0600	Remove Fence	920	Ft
110E1140	Remove Concrete Sidewalk	541.0	SqYd
320E1200	Asphalt Concrete Composite	15.0	Ton
380E6110	Insert Steel Bar in PCC Pavement	52	Each
620E0300	Special Right-of-Way Fence	870	Ft
632E1320	2.0"x2.0" Perforated Tube Post	10.0	Ft
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
650E0080	Type B68 Concrete Curb and Gutter	1,257	Ft
651E0050	5" Concrete Sidewalk	2,500	SqFt
651E0150	5" Reinforced Concrete Sidewalk	2,380	SqFt
651E5000	Sidewalk Drain	21.0	Ft

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 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 B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B4: BALD EAGLE

Bald eagles are known to occur in this area.

Action Taken/Required:

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

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

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

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor 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.

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.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor 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.

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COORDINATION OF WORK

Vending machines near the entrance of the building will need to be moved prior to completing the removal and replacement of concrete sidewalk. The contact information for the company responsible for them is as follows:

Chesterman Coca-Cola 2301 S. Minnesota Avew Sioux Falls, SD 57101 Phone: 800-761-5944

Email: siouxfalls.sales@chesterman.com

GENERAL NOTES

The buildings and information sign will be protected during construction. The Contractor will be responsible for any damage to the buildings and information sign.

Any item (garbage containers, newspaper racks, etc.) moved to complete the work shall be replaced in its original location prior to completion.

There is a sprinkler system in place at the Rest Area. The Contractor is responsible for ensuring that any damage occurring during construction is repaired and the system is in working condition upon completion of work.

Any granular material needed for the curb and gutter installation shall be incidental to the contract unit price per foot for TYPE B68 CONCRETE CURB AND GUTTER.

Any area disturbed during the removal and replacement of the concrete sidewalk shall be replanted with Kentucky Bluegrass after the new sidewalk has been installed. Payment for this work will be incidental to the various contract bid items.

Prior to the removal of the Dump Station concrete, the water towers for washing out tanks as well as the refilling the tanks shall be removed and reset after placement of new concrete and curb and gutter. Anchor bolts must be approved by the Engineer. In addition to the water towers, the sewer dump inlet and metal cover will also need to be salvaged and reset in the new concrete. Payment for the removal and resetting of the water towers shall be incidental to the various contract removal and concrete bid items.

TRAFFIC CONTROL - GENERAL NOTES

The Contractor shall be allowed to close the Rest Area for up to 21 calendar days to allow for the replacement of the Sidewalk and Curb & Gutter. The Contractor shall notify the SDDOT Watertown Area office two weeks prior to start of construction to allow for closure of the Rest Area.

Barricades (6) shall be placed across the entrance of the Rest Area along with two road closed signs (R11-2, 48"x30") while the work is underway and until all work is completed. "Closed" tabs will be added to the sings on the interstate by Aberdeen Region Traffic staff to alert the traveling public that the Rest Area will be closed.

Payment for these Contractor furnished barricades, signs and tabs shall be incidental to the contract unit price for TRAFFIC CONTROL, MISCELLANEOUS.

SIGNING

All signs in the concrete sidewalk removal area shall be reset on telspar posts and a sidewalk blockout will be required. There is a total of 5 signs that will require this work. Payment for this work will be paid for by the contract unit price per foot for 2.0"x2.0" PERFORATED TUBE POST.

Holes remaining from the removal of 4"x6" wood posts shall be backfilled and compacted with material placed in layers not to exceed 6 inches in depth.

The Contractor shall furnish and install new square tube anchor sleeve as follows:

2.5" x 18", 12 Gauge square tube anchor sleeve, (or equivalent components as approved by the Engineer).

A 2.25" x 2.25" x 4' perforated tube post (12 Gauge) shall be used as the anchor post for installation with the square tube anchor sleeve.

On concrete surfaces a core shall be drilled out for sign installation. The core diameter shall be sized accordingly depending on post size. Concrete surrounding the core shall not be cracked or damaged. Another option would be to use a PVC sleeve in the concrete sidewalk.

Sign	Work Required	Quantity
Handicap Parking	Remove & Reset	1
Handicap Parking	Remove & Reset	1
Video Surveillance	Remove & Reset	1
Unsafe Water	Replace Post & Reset	5'
Tank Disposal Instructions	Replace Post & Reset	5'

ADJUSTMENT OF MANHOLES

The Contractor will adjust manholes to the extent necessary on this project. Adjusting the manholes may consist of removing the upper course of brick or removing the concrete walls, replacing the removed materials with brick or Class M6 concrete, placing adjusting rings if necessary, and resetting the manhole frame and lid. The elevation of the lid will be set at the same elevation of the adjacent new pavement or surrounding ground. All manhole frames, lids, and rings that are cracked or broken due to carelessness of the Contractor will be replaced with new manhole frames, lids, and rings that conform with the Specifications at the Contractor's expense. Manholes will be adjusted to the satisfaction of the Engineer. All costs involved in adjusting the manholes will be incidental to the various contract bid items.

SIDEWALK DRAINS

Drainage from the main building will be carried through the sidewalk to the gutter. The sidewalk drain will be a Neenah R-4996-A8 trench system with a Type P cover. The piece closest to the curb must be full length. Field cutting adjustments must be made to the drain and cover to allow the building downspout to fit inside the trench drain system.

Epoxy from steel tie bar installation shall be used to fasten the cover lid to the rest of the trench system. Any excess epoxy that oozes out of the top of the seam shall be cleaned off so as not to create a tripping hazard. Epoxy resin adhesive shall conform to the requirements of ASTM C881, Type IV, Grade 3. Payment for Epoxy is incidental to the contract unit price per foot for SIDEWALK DRAIN.

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INSERT STEEL BAR IN PCC PAVEMENT

Placement of dowel bars in concrete pavement shall be required in any location where existing concrete can be doweled into to prevent movement of new concrete. Bars doweled into the main building will be spaced 30" center to center. Everywhere else spacing will be 48" as indicated on Standard Plate 380.11.

REMOVE ASPHALT CONCRETE PAVEMENT

Along the truck parking, a 1' wide strip of asphalt concrete pavement shall be removed and replaced with the curb and gutter. Under the asphalt concrete pavement is PCC Pavement. Removal will require a full depth sawcut. Payment for the sawcut, removal and disposal of Asphalt Concrete and PCC Pavement shall be incidental to the contract unit price for REMOVE ASPHALT CONCRETE PAVEMENT.

ASPHALT CONCRETE COMPOSITE

5" of Asphalt Concrete Composite shall be placed adjacent to the new Curb & Gutter in the truck parking area where the Asphalt Concrete and PCC Pavement were removed.

SPECIAL RIGHT-OF-WAY FENCE

Installation of Special Right-of-Way Fence shall be cedar split rail fencing. Details for the installation of the fence can be found on the Cedar Split Rail Fence Detail sheet in these plans.

The split rail fence shall be made of Western Red Cedar. The rails shall be approximately 2" x 4.5" with a minimum girth of 12". The posts shall measure approximately 4.5" x 5" and be a minimum of 5.5' in length. Minimum girth of the post should measure 18" between the mortise openings.

Payment for the Cedar Split Rail Fence shall be paid for by the contract unit price per foot for SPECIAL RIGHT-OF-WAY FENCE.

TYPE 3 CURB RAMP

Curb ramps will be installed as per Standard Plate 651.03 with the exception of the detectable warning. Detectable warnings will not be required for this installation.

SIDEWALK

Existing granular material beneath the removed sidewalk shall be scarified, watered and re-compacted to the satisfaction of the Engineer. Scarifying of smaller removal areas may be waived by the Engineer. Cost of this work, including any additional cushion material shall be incidental to the contract unit price per square foot for 5" CONCRETE SIDEWALK.

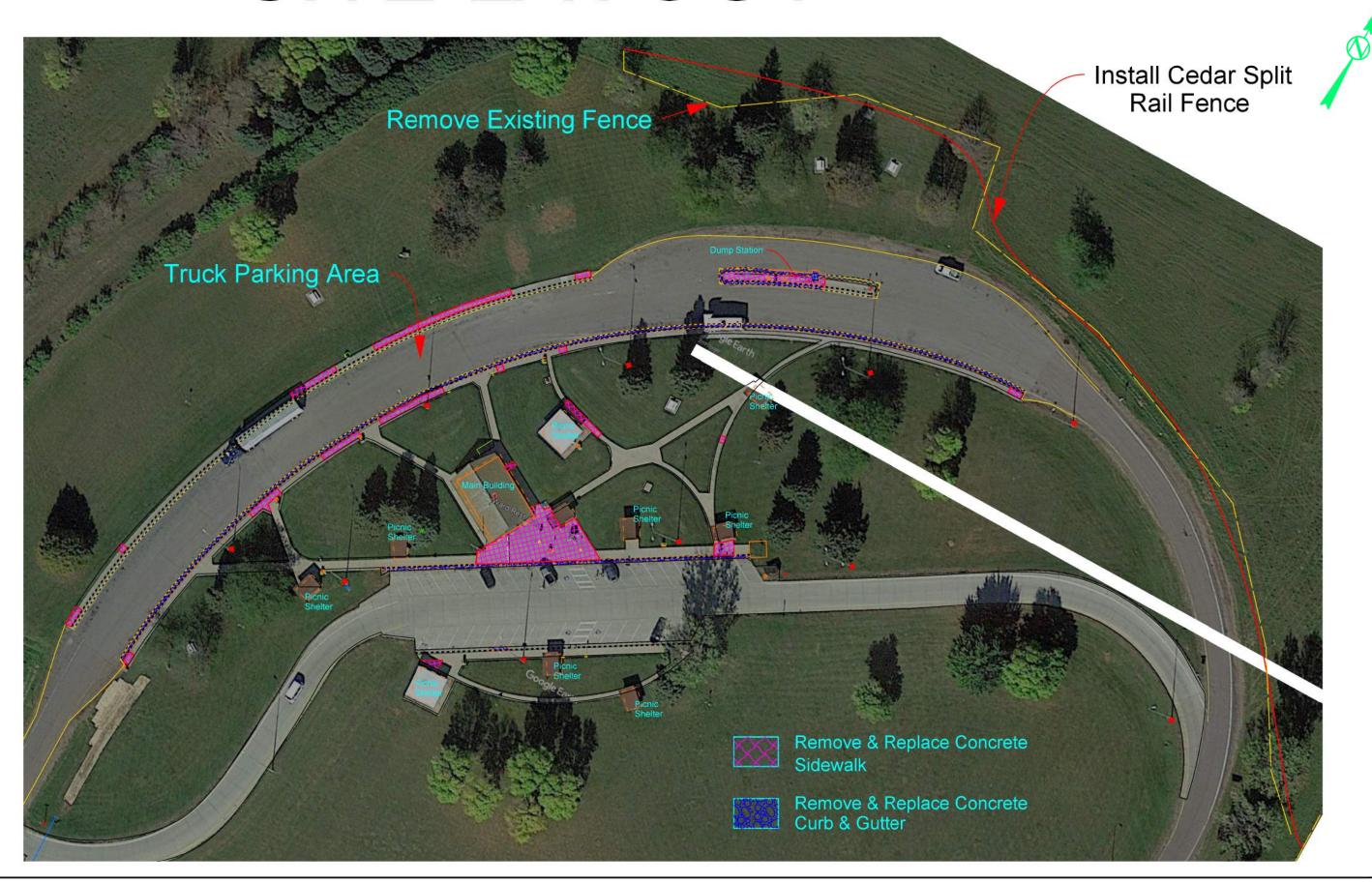
FIBER MESH REINFORCEMENT

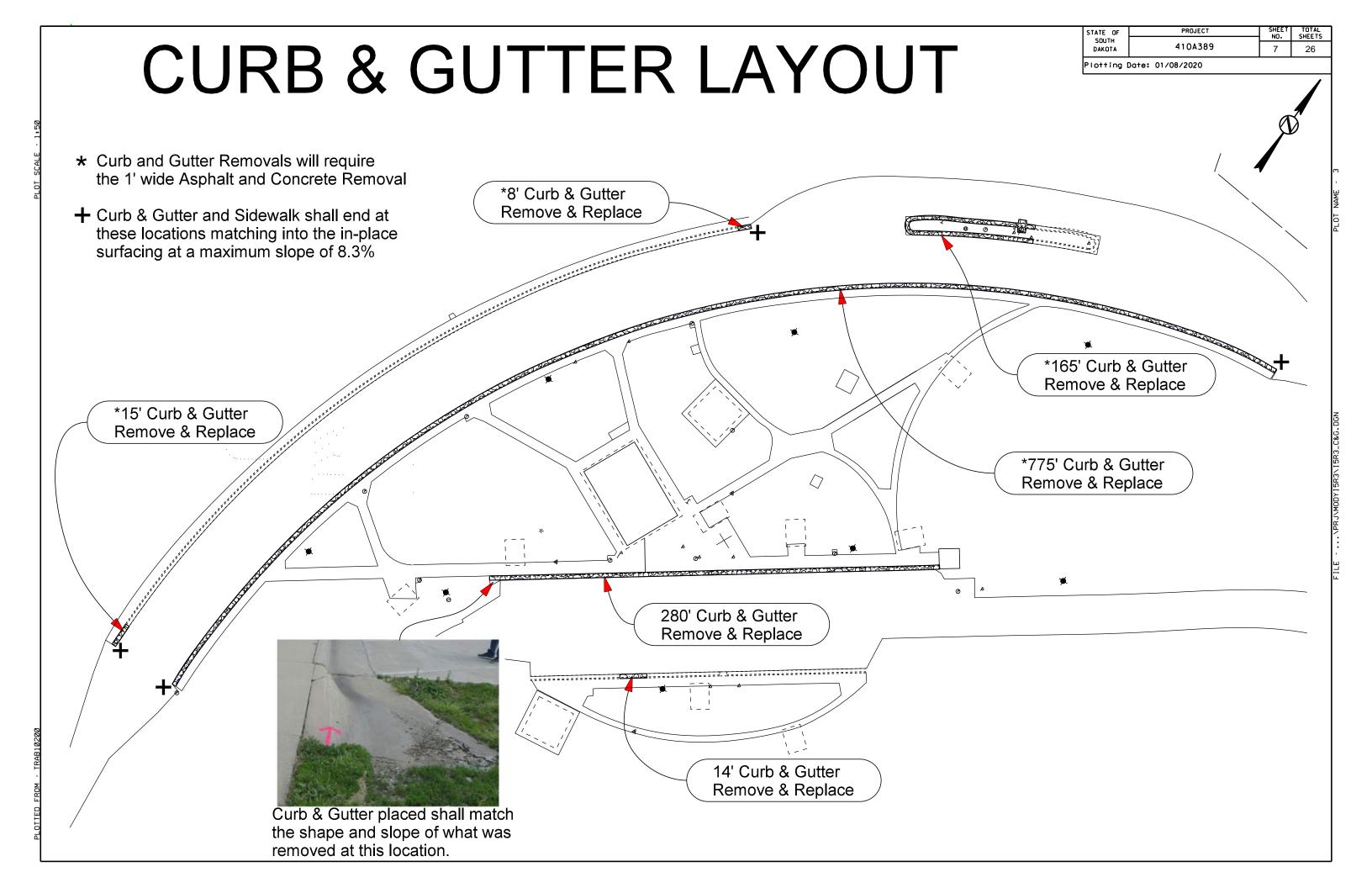
Fiber mesh reinforcing shall be used on the concrete sidewalk in front of the main building only. The fiber mesh shall be added at the rate of 1 bag per cubic yard or as otherwise recommended by the manufacturer. The fiber shall be added directly to the truck at the time of mixing. The synthetic fiber reinforcement shall have the following specifications:

- Material: 100% virgin homopolymer polypropylene multifilament fibers, containing no reprocessed olefin materials.
- Conformance: ASTM C 1116, Type III.
- Fire Classifications: UL Report File No. R8534-11 and Southwest Certification Services (SWCS), Omega Point Laboratories No. 8662-1.
- Fiber Length: Single-cut lengths.
- Alkali Resistance: Alkali proof.
- Absorption: Nil.
- Specific Gravity: 0.91.
- Melt Point: 324 degrees F (162 degrees C).

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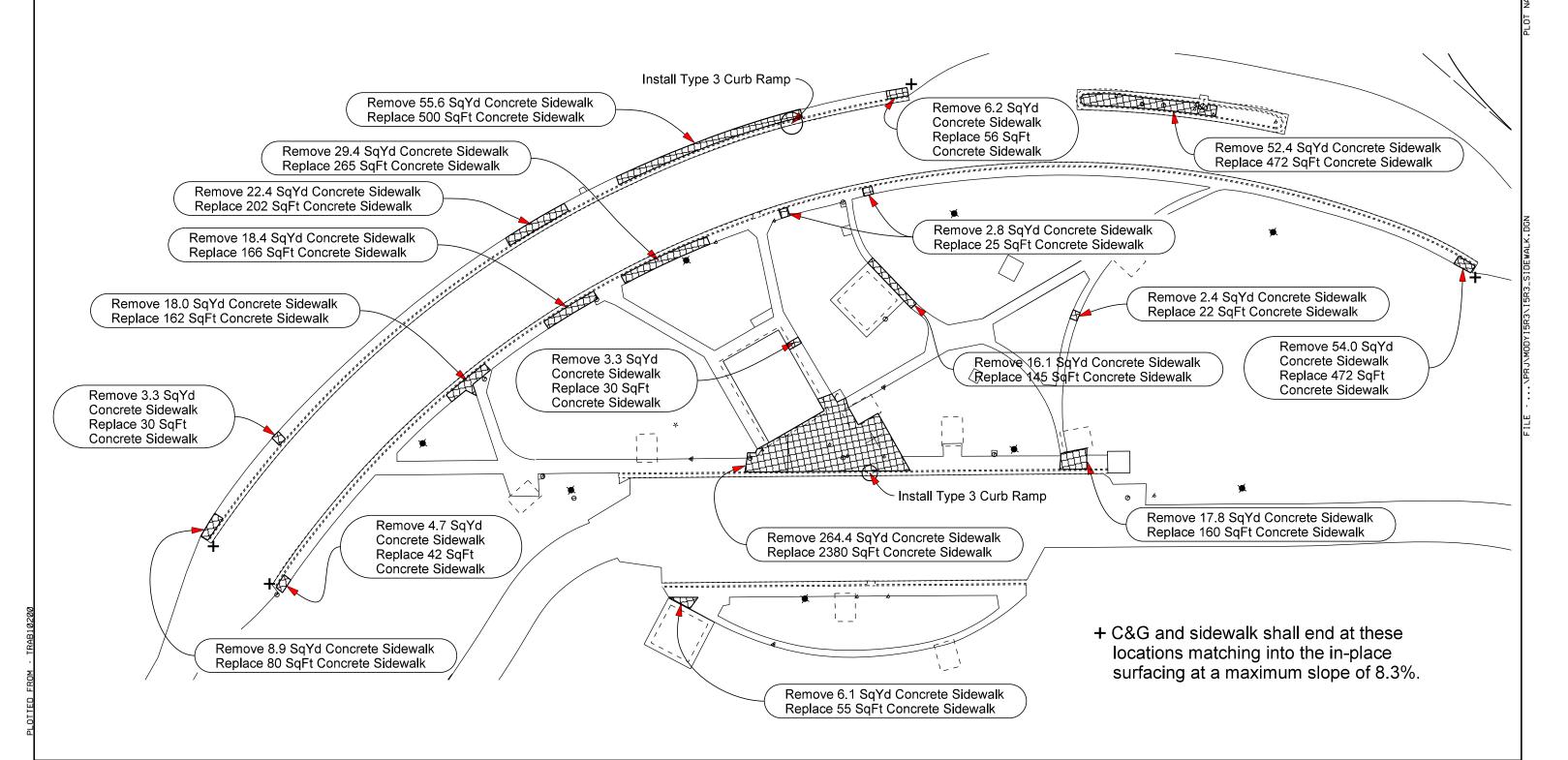


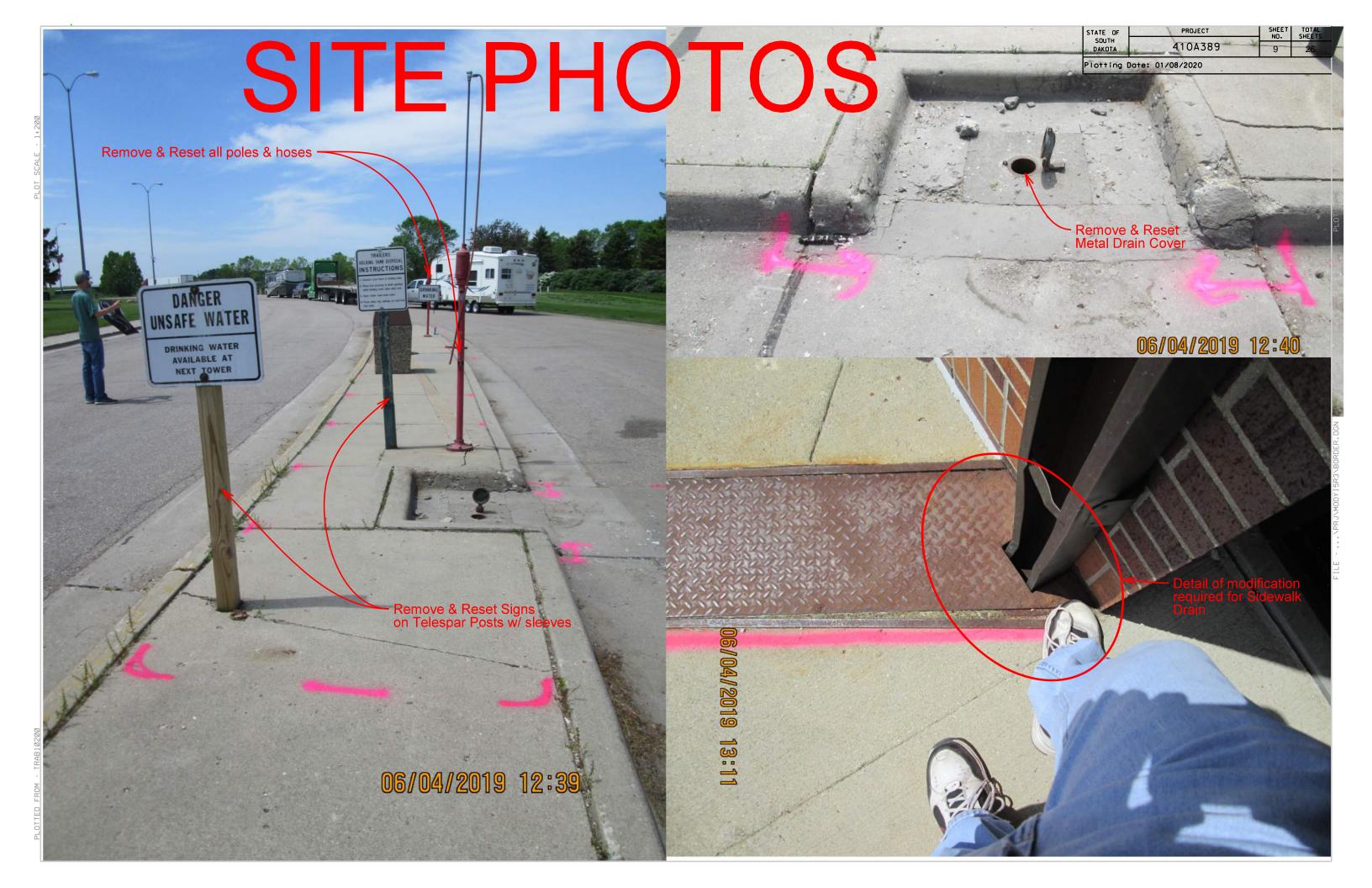


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SITE PHOTOS

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Protect Buildings & keep clean



PLOTTED FROM - TRABINONA

SHEET NO.

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PROJECT

410A389

STATE OF SOUTH

DAKOTA

90

212

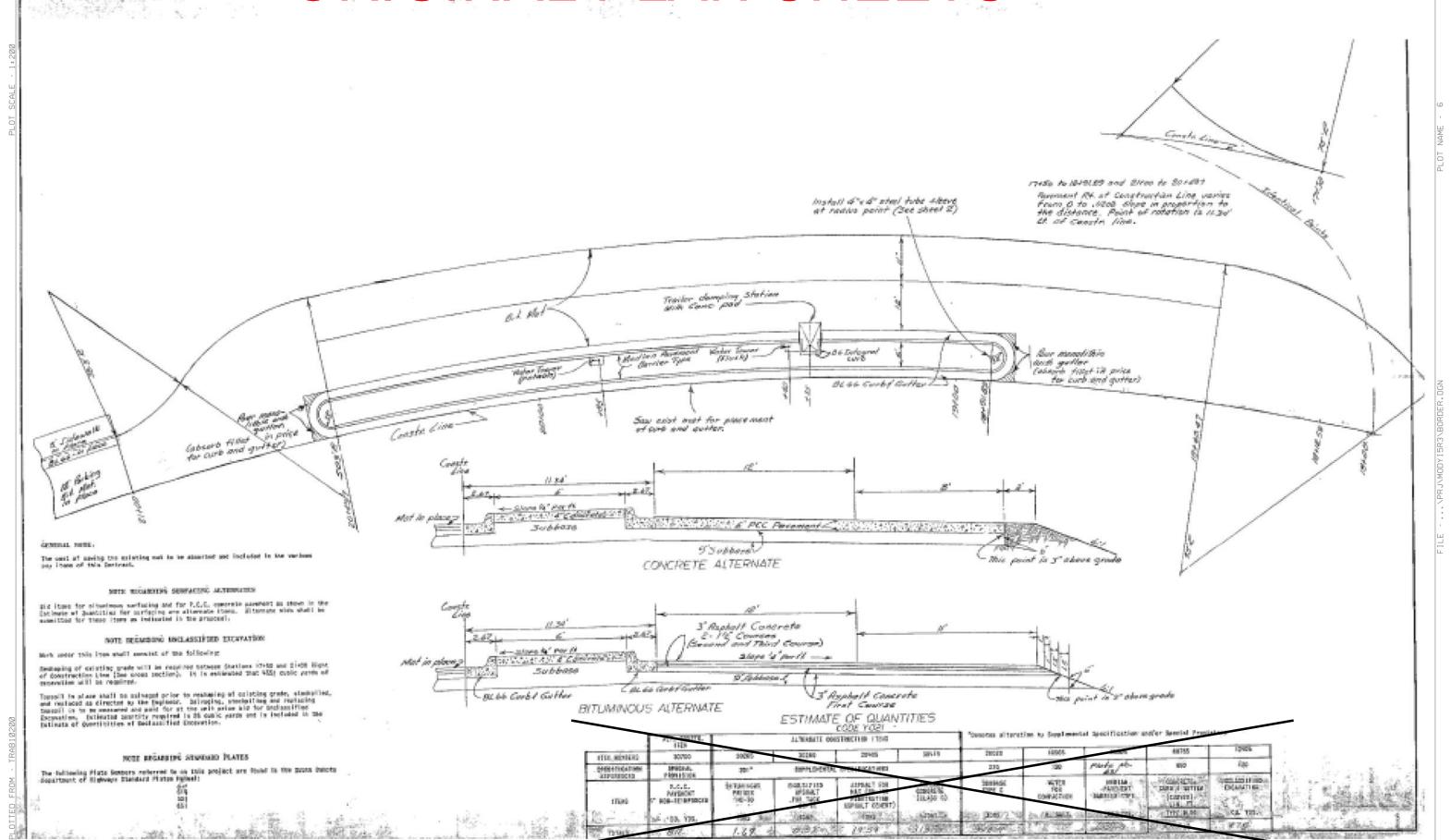
TOTAL SHEETS

26

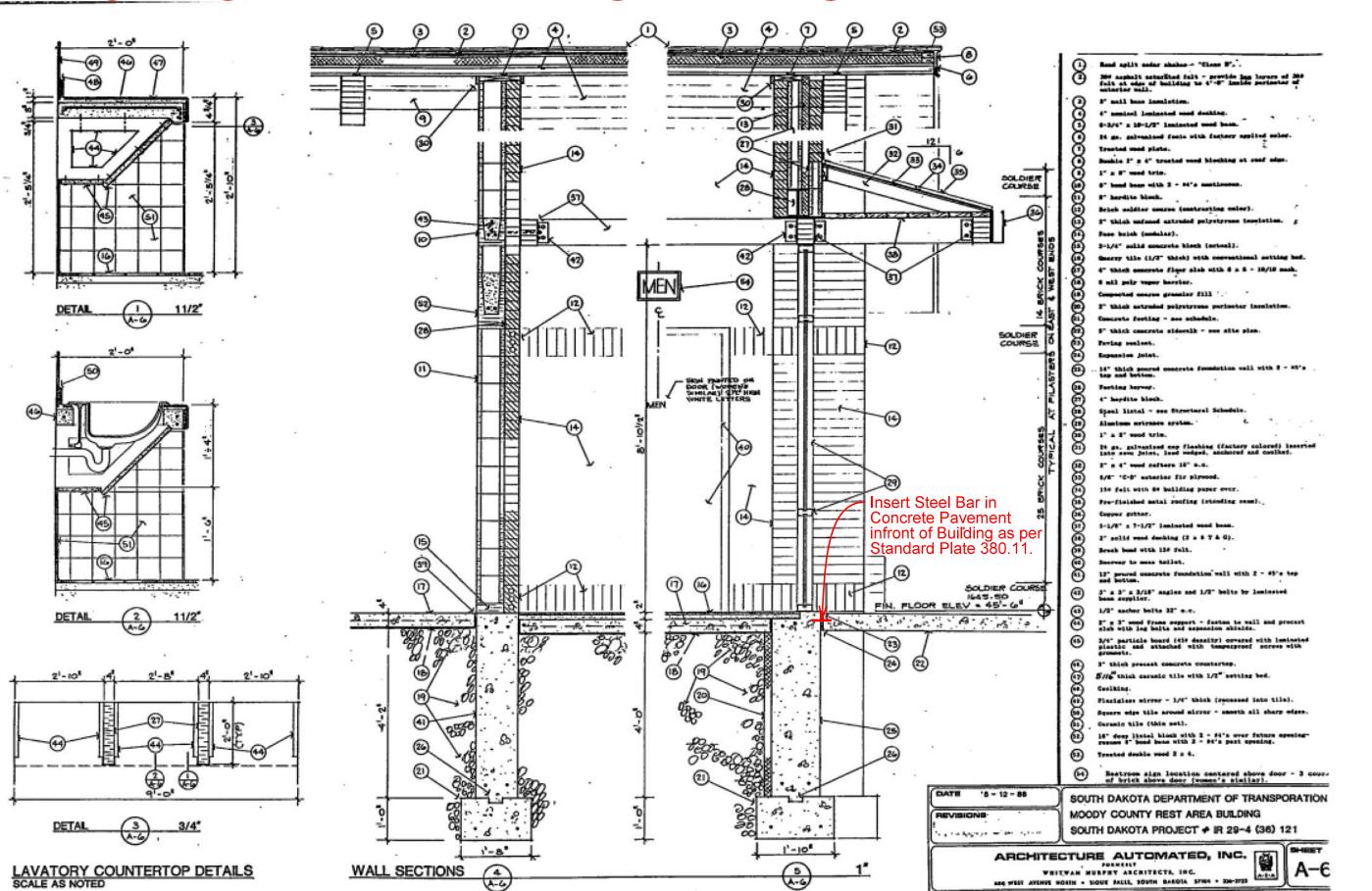
ORIGINAL PLAN SHEETS

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ORIGINAL PLAN SHEETS

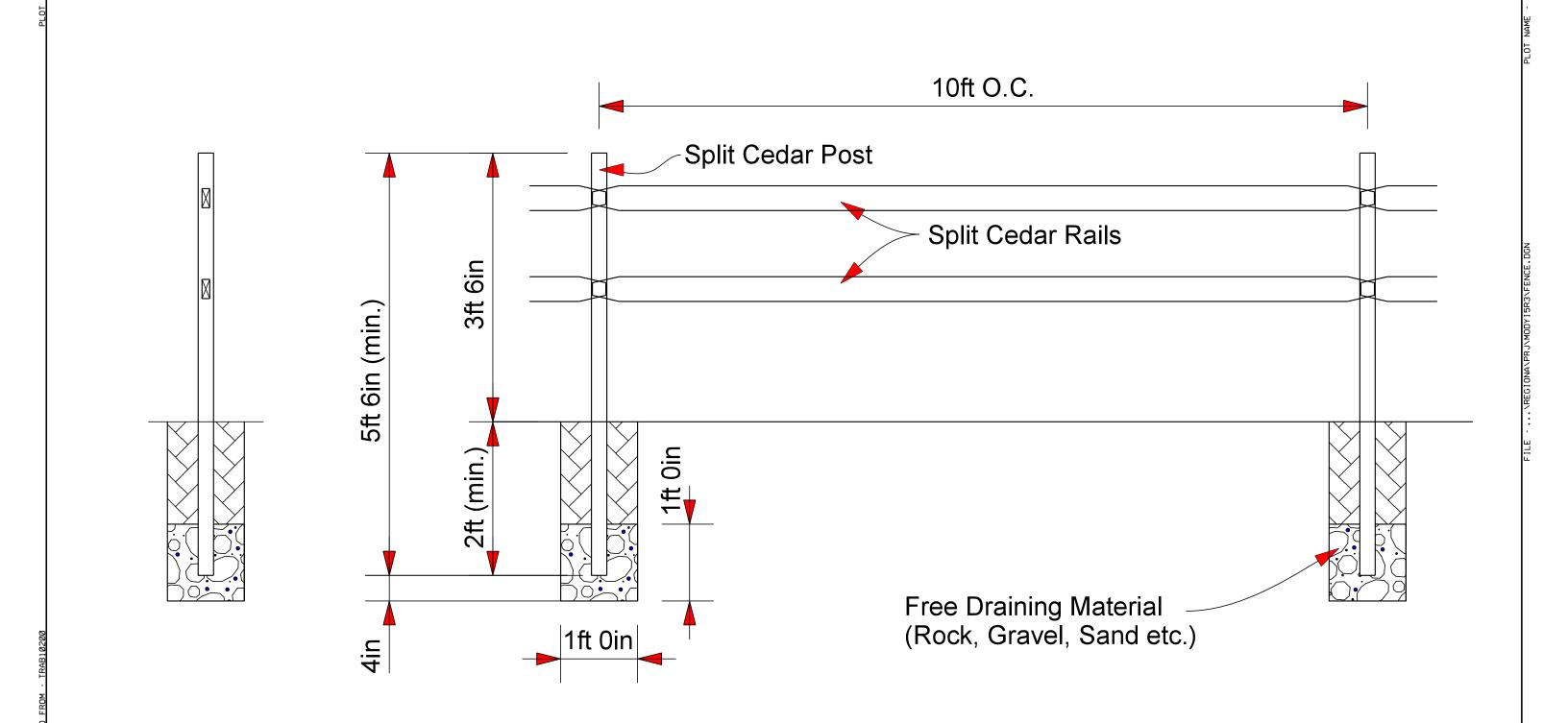


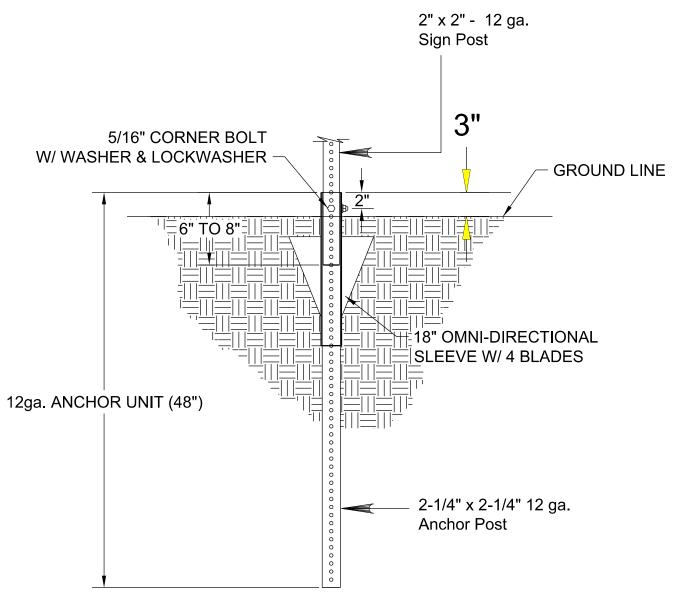
SC PLOYOF WOOD OFF

CEDAR SPLIT RAIL FENCE DETAIL

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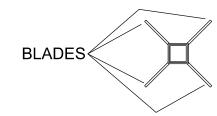




2-1/2" x 18" OMNI-ANCHOR SLEEVE FOR SOIL STABILIZATION.

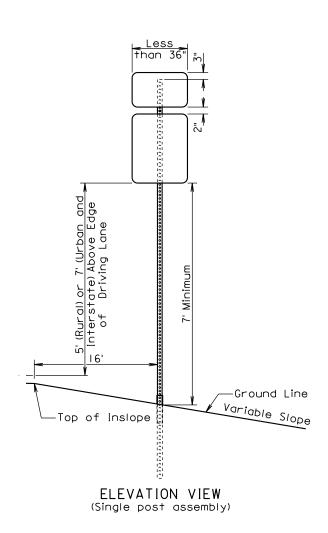
ANCHOR SLEEVE TOP VIEW

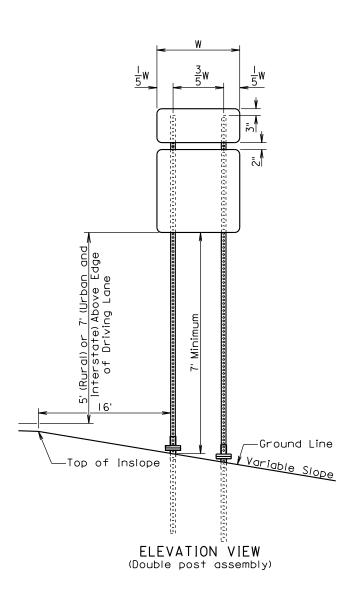
2-1/2" x 18" 12 ga. Omni-Sleeve

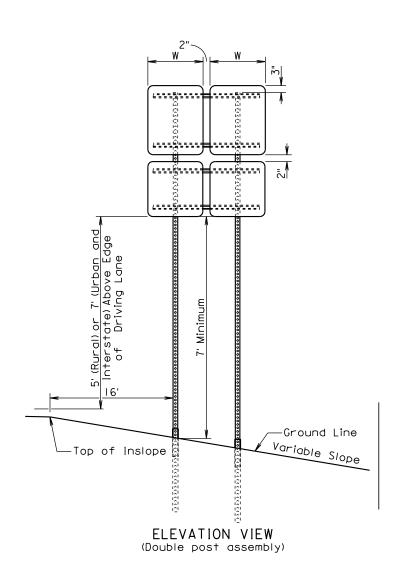


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INSTALLATION DETAILS FOR MULTIPLE SIGN ASSEMBLIES







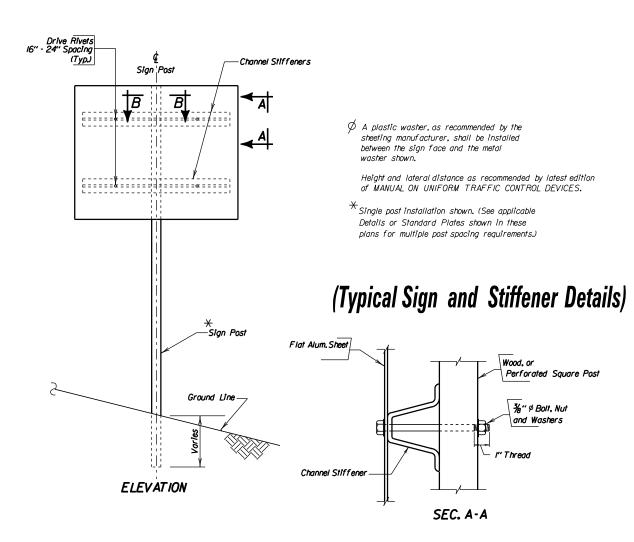
GENERAL NOTES:

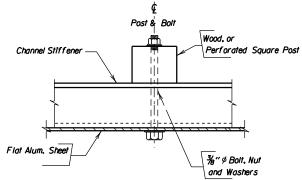
The sign posts and bases shown are for illustrative purpose. The post type required shall be the type specified in the plans.

All breakaway sign supports shall comply with NCHRP 350 or MASH crash testing requirements. The Contractor shall provide post installation details at the preconstruction meeting for all breakaway sign support assemblies.

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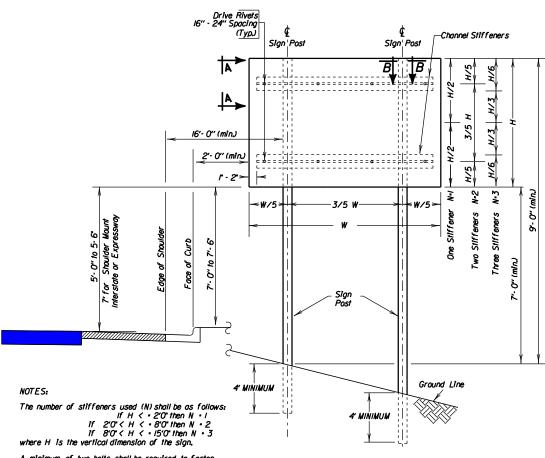
ONE POST BREAKAWAY SIGN SUPPORTS





SEC. B - B

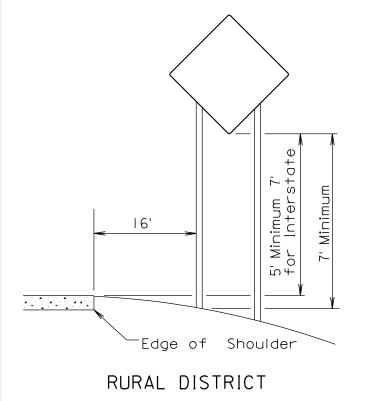
TWO POST BREAKAWAY SIGN SUPPORTS

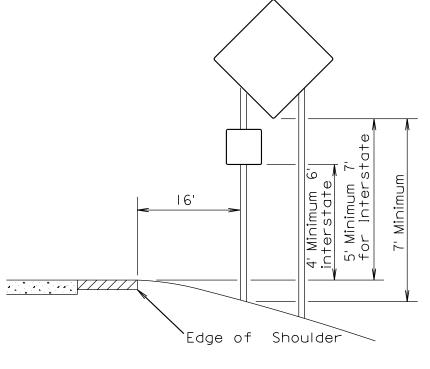


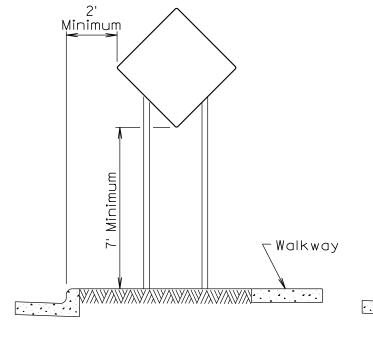
A minimum of two bolts shall be required to fasten the sign to each post.

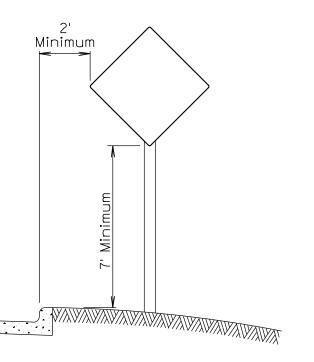
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SIGN SUPPORTS (Lateral Offsets & Mounting Heights)







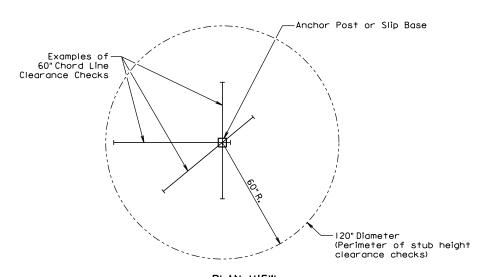


RURAL DISTRICT WITH SUPPLEMENTAL PLATE

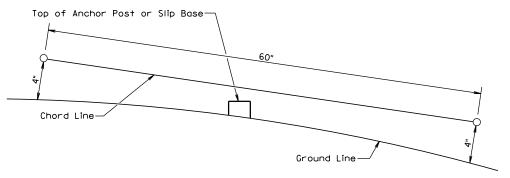
URBAN DISTRICT

URBAN DISTRICT

BREAKAWAY SUPPORT STUB CLEARANCE



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

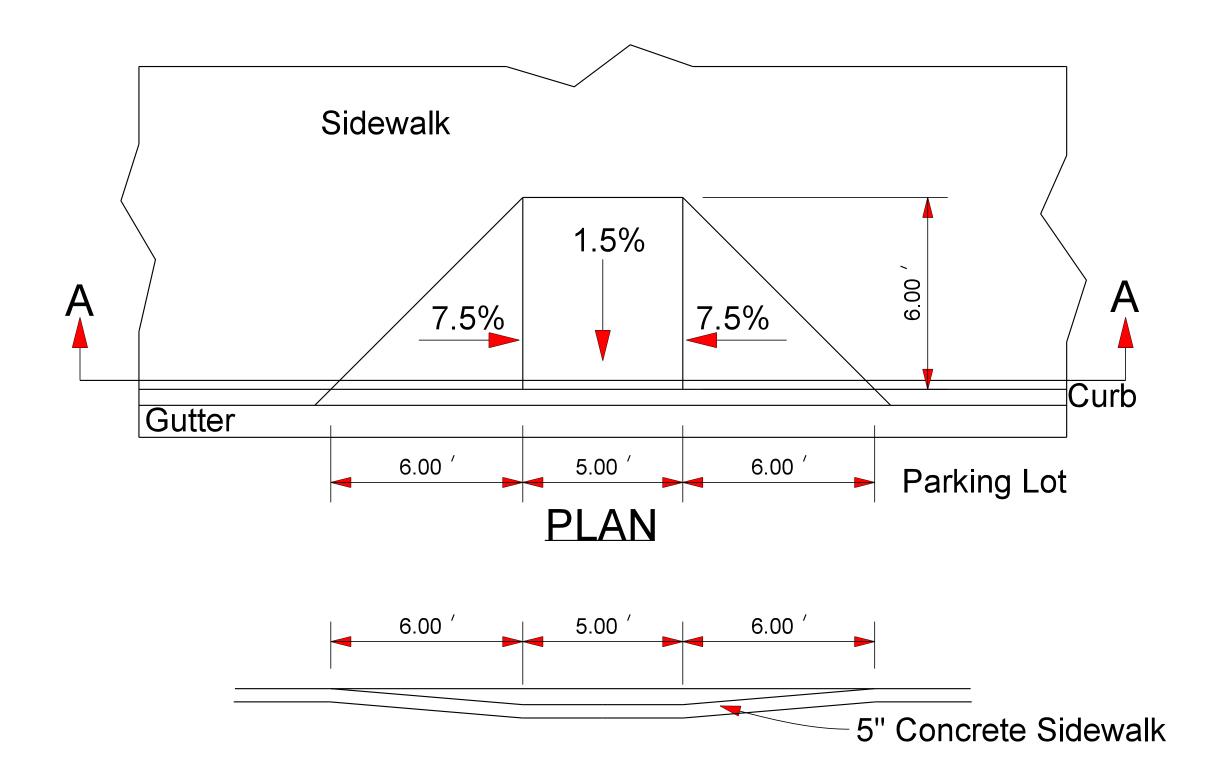
The top of anchor posts and slip bases SHALL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height shall be a maximum of 4"above the ground line at the localized area adjacent to the breakaway support stub.

CURB RAMP DETAIL

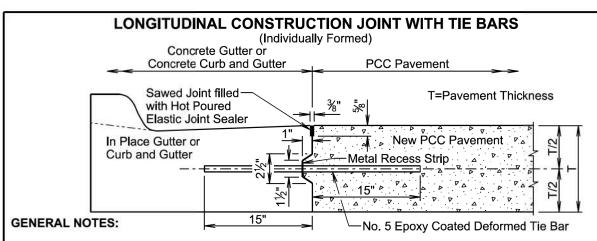
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SECTION AA

TED FROM - TRAB10200



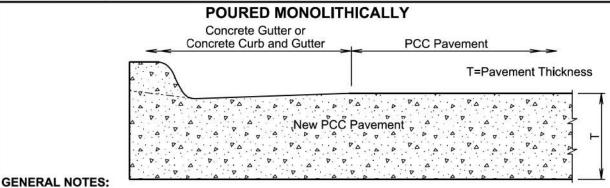
No. 5 epoxy coated deformed tie bars will be spaced 48 inches center to center. The keyway shown above is a female keyway.

The tie bars will be placed a minimum of 15 inches from existing transverse contraction joints.

The keyway is optional and is not required. When concrete pavement is formed and a keyway is provided, a metal recess strip will be used. When concrete pavement is slip formed, a metal recess strip is not required.

The transverse contraction joints in the concrete gutter or concrete curb and gutter will be placed at each mainline PCC pavement transverse contraction joint. The transverse contraction joints in the concrete gutter or the concrete curb and gutter will be 1½ inches deep if formed in fresh concrete using a suitable grooving tool. If a saw is used to cut the transverse contraction joints, then the depth of the joint will be at least ¼ the thickness of the concrete gutter or concrete curb and gutter.

The term "In Place Gutter or Curb and Gutter" in the above drawing indicates that the in place concrete gutter and concrete curb and gutter was placed on the current project.



The mainline curb and gutter may be placed monolithically with the PCC pavement if the mainline lane width is less than or equal to 12 feet. If this method of construction is used, the tie bars and the sawed joint between the curb and gutter and the PCC pavement will be eliminated.

The gutter or curb and gutter will be sawed transversely at each mainline transverse contraction joint. The transverse contraction joints in the gutter or curb and gutter will be sawed and sealed same as the transverse contraction joints in the PCC pavement.

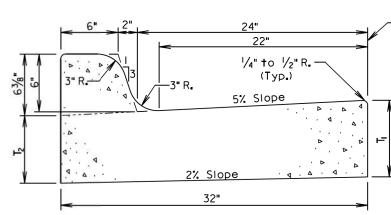
The slope of the gutter will be the slope designated for the type of gutter or curb and gutter to be constructed. The bottom slope of the gutter or curb and gutter will be constructed at the same slope as the mainline concrete pavement. June 26, 2019

S D D PCC PAVEMENT LONGITUDINAL CONSTRUCTION JOINTS WITH CONCRETE GUTTER OR 0 CONCRETE CURB AND GUTTER Published Date: 4th Qtr. 2019

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

Туре	T _i (Inches)	T ₂ (Inches)	Cu. Yd. Per Lin. Ft.	Lin.Ft. Per Cu.Yd.
B66	6	51/16	0.057	17.7
B67	7	61/16	0.065	15.4
B68	8	71/16	0.073	13.7
B68.5	8.5	7%	0.077	13.0
B69	9	81/16	0.081	12.3
B69 . 5	9.5	8%	0.085	11.7
B610	10	91/16	0.090	11.2
B610.5	10.5	9%	0.094	10.7
B611	П	101/16	0.098	10.2
B611.5	11.5	10%	0.102	9.8
B612	12	111/16	0.106	9.4

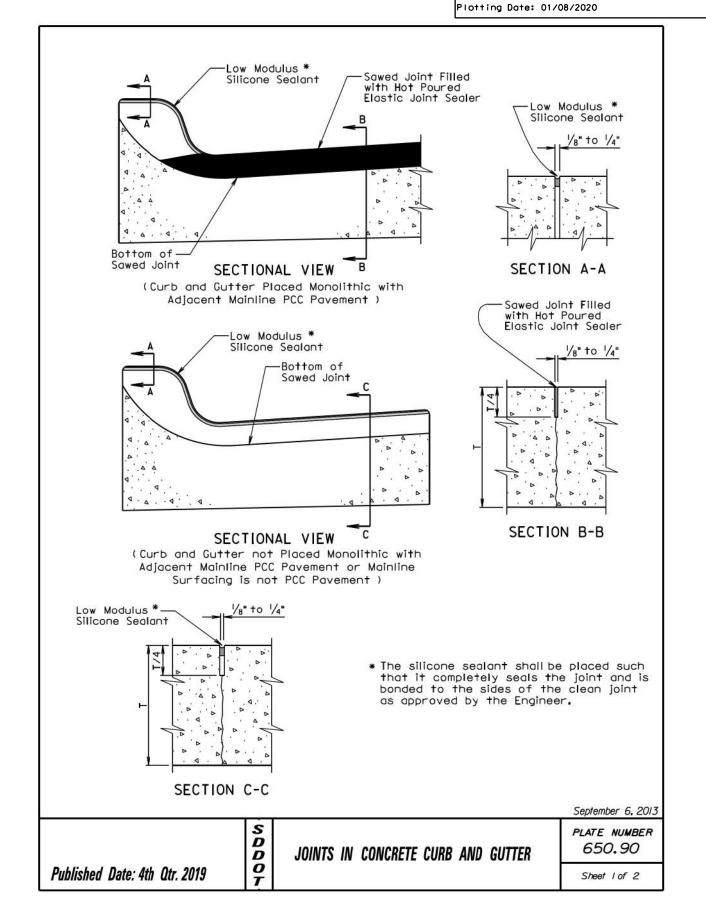
GENERAL NOTES:

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

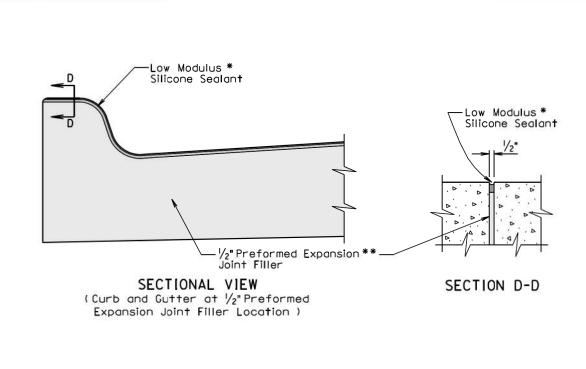
See Standard Plate 650.90 for expansion and contraction joints in the curb and gutter.

September 6, 2008

	S D D O T	TYPE B CONCRETE CURB AND GUTTER	PLATE NUMBER 650.01
Published Date: 4th Qtr. 2019			Sheet I of I



יוסטר מרדדם



* The silicone sealant shall be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.

GENERAL NOTES:

Published Date: 4th Qtr. 2019

For illustrative reason, only the type B curb and gutter is shown.

- ** A $\frac{1}{2}$ " preformed expansion joint filler shall be placed transversely in the curb and gutter at the following locations:
 - I. At each junction between the radius return of curb and gutter and curb and gutter which is parallel to the project centerline.
 - 2. At each junction between new curb and gutter and existing curb and gutter.

Transverse contraction joints shall be constructed at 10' intervals in the concrete curb and gutter except when the concrete curb and gutter is constructed adjacent to mainline PCC pavement. When concrete curb and gutter is constructed adjacent to mainline PCC pavement, a transverse contraction joint shall be constructed in the concrete curb and gutter at each mainline PCC pavement transverse contraction joint location.

When concrete curb and gutter is not placed monolithically with the mainline PCC pavement or when the adjacent mainline surfacing is not PCC concrete, the transverse contraction joints in the concrete curb and gutter shall be $1\frac{1}{2}$ inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint shall be at least $\frac{1}{4}$ the thickness of the concrete and the joint shall be sealed in accordance with the details shown above.

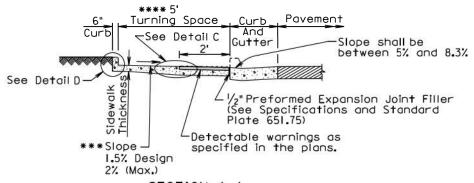
September 6, 2013

PLATE NUMBER DDOT 650.90 JOINTS IN CONCRETE CURB AND GUTTER

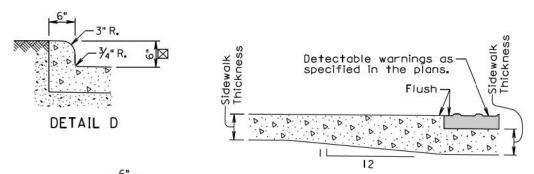
Sheet 2 of 2

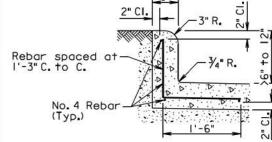
Transition from concrete curb edge to concrete sidewalk edge. Sawed or Tooled Joint					
B Curbon Reference point for location of curb ramp as shown in the plans. (With Curved Curb and Gutter)	gutter type e straight.				
Transition from concrete curb edge to concrete sidewalk edge. Sawed or Tooled Joint sidewalk edge. Syecifications and Standard Plate 65I **Ramp **Ramp **Ramp **Ramp **Slope **Tooled Joint standard Exposition and Standard Plate 65I **Curb Transition ****5' **Curb Transition ****5' **Curb Transition	1				
Reference point for location of curb—Opening ramp as shown in the plans. PLAN VIEW (With Straight Curb and Gutter) September 6, 2015 Published Date: 4th Qtr. 2019 TYPE 3 CURB RAMP (PARALLEL CURB RAMP) Sheet 1 of 3					

- *The curb transition slope shall match the curb ramp slope. Curb ramp slopes are designed at 7.5% unless stated otherwise in the plans. The curb ramp may have a maximum slope of 8.3% at any location of the curb ramp and shall not exceed 15' in length unless stated otherwise in the plans. The curb transitions and curb ramp lengths shall be adjusted as necessary to meet all slope and length requirements based on field geometrics.
- ** The cross slope of the ramp shall not be steeper than 2% and the ramp width is 5' unless stated otherwise in the plans. Plans are designed using a 1.5% cross slope for the ramp unless stated otherwise in the plans.
- *** The slope in the turning space shall not be steeper than 2% in any direction of pedestrian travel. Plans are designed using a 1.5% slope unless stated otherwise
- **** The turning space is 5' x 5' unless stated otherwise in the plans.
- In the curb height shall be 6" unless stated otherwise in the plans.



SECTION A-A



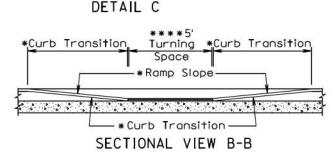


DETAIL D (Use this detail when the curb height is greater than 6" and less than 12")

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D

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September 6, 2015

PLATE NUMBER 651.03

Published Date: 4th Qtr. 2019

TYPE 3 CURB RAMP (PARALLEL CURB RAMP)

Published Date: 4th Qtr. 2019 Sheet 2 of 3

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TYPE 3 CURB RAMP (PARALLEL CURB RAMP) PLATE NUMBER 651.03

September 6, 2015

PROJECT

410A389

STATE OF SOUTH

DAKOTA

Plotting Date: 01/08/2020

SHEE NO.

25

TOTAL SHEETS

26

Sheet 3 of 3

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 or with curb and gutter.

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

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

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

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

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

Joints shall be sawed 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

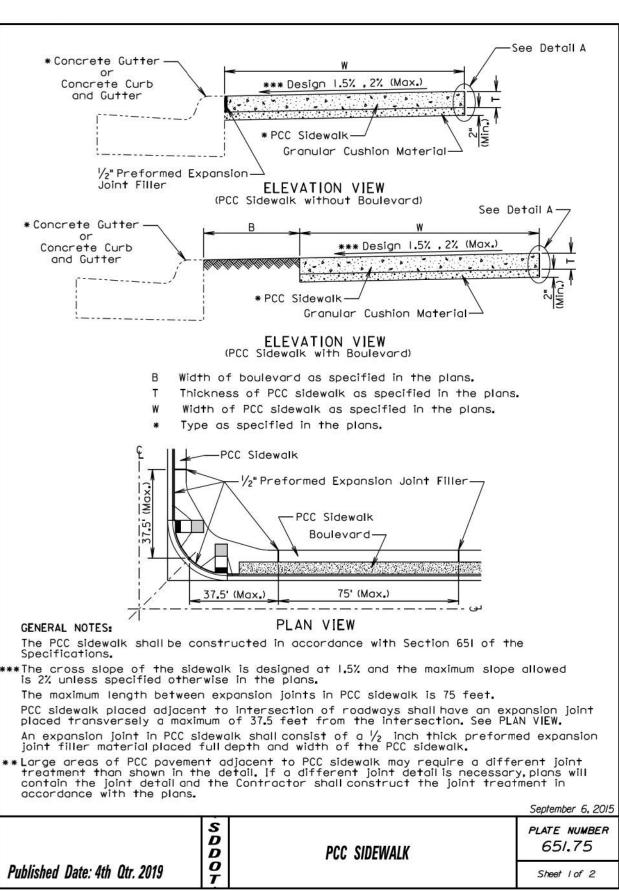
There will be no separate payment for curb ramps. The curb ramp shall be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk bid item. The square foot area of the detectable warnings and the curb along the short radius shall be included in the measured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





STATE OF PROJECT SHEET TOTAL NO. SHEETS
DAKOTA 410A389 26 26

