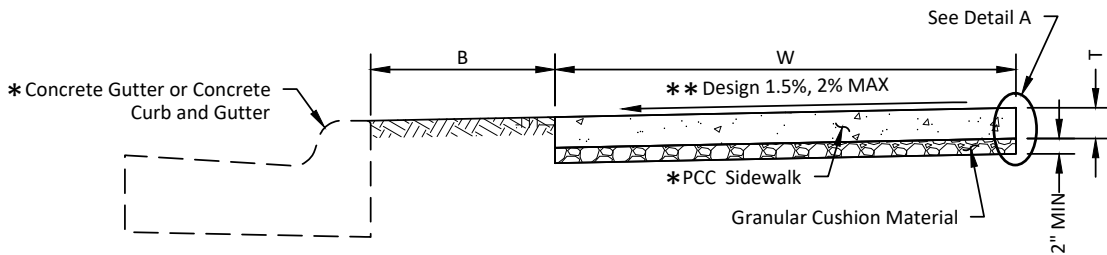
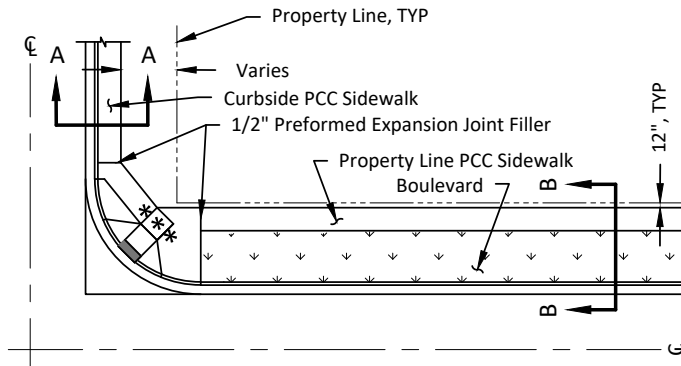


SECTION A-A
(Curbside PCC Sidewalk)



SECTION B-B
(Property Line PCC Sidewalk)

B=Width of Boulevard, Per Plans
T=Thickness of PCC Sidewalk, Per Plans
W=Width of PCC Sidewalk, Per Plans
*=Type, Per Plans



PLAN VIEW

Notes:

1. The PCC sidewalk will be constructed in accordance per Standard Specifications, Section 61.
- ** The cross slope of the sidewalk is designed at 1.5% and the maximum slope allowed is 2% unless specified otherwise in the plans.
2. An expansion joint in the PCC sidewalk will consist of a 1/2 -inch thick preformed expansion joint filler material placed full depth and width of the PCC sidewalk. The maximum length between expansion joints in the PCC sidewalk is 100'.
- ** * For curb ramps with detectable warning surfaces see Details 61-2, 61-3, 61-4.
3. Sidewalks adjacent to driveways shall be 5' wide minimum through the entire width of the driveway opening.
4. Tooled or sawed joints spaced to match sidewalk width. Curb side sidewalk joints to match curb and gutter joints where possible.

N.T.S.

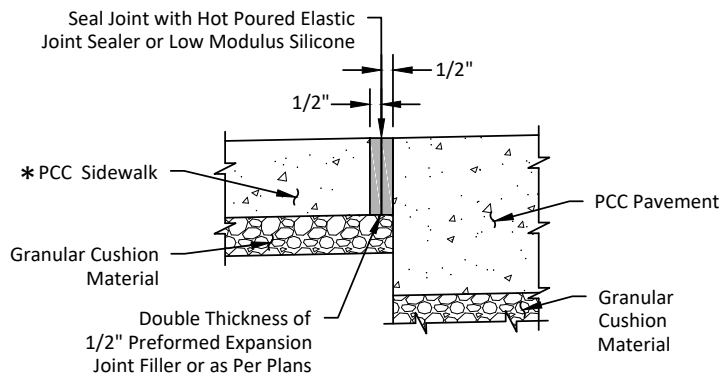
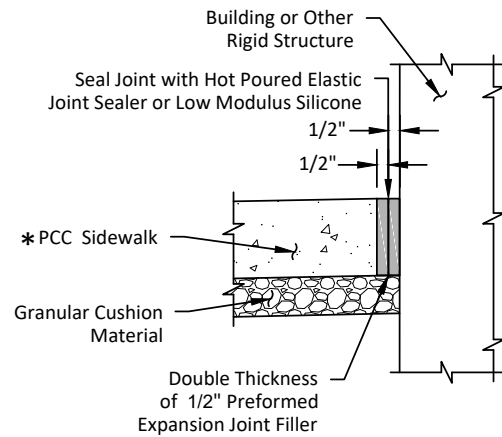
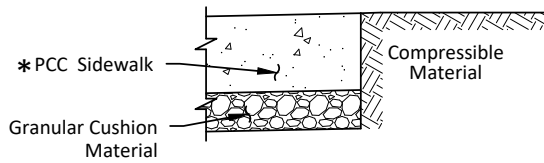
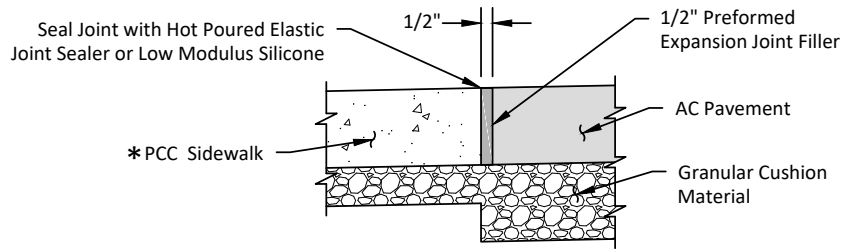
CITY OF RAPID CITY

PUBLIC WORKS DEPARTMENT

SIDEWALKS

DATE: 8-19-22

Sec. - Sht.
61-1a



N.T.S.

CITY OF RAPID CITY

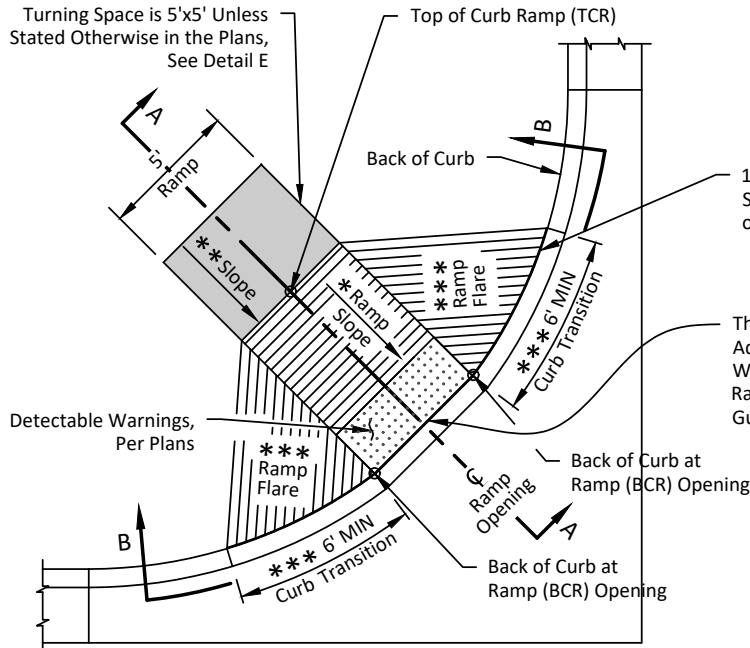
PUBLIC WORKS DEPARTMENT

SIDEWALKS

DATE: 8-19-22

Sec. - Sht.
61-1b

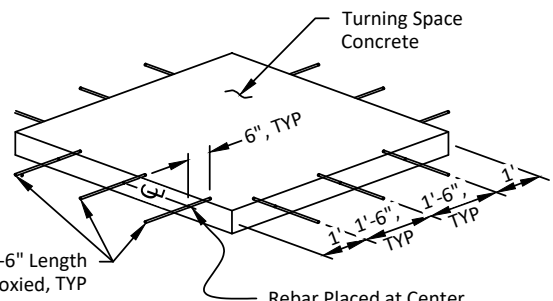
Turning Space is 5'x5' Unless Stated Otherwise in the Plans, See Detail E



PLAN VIEW
(With Curb Transition)

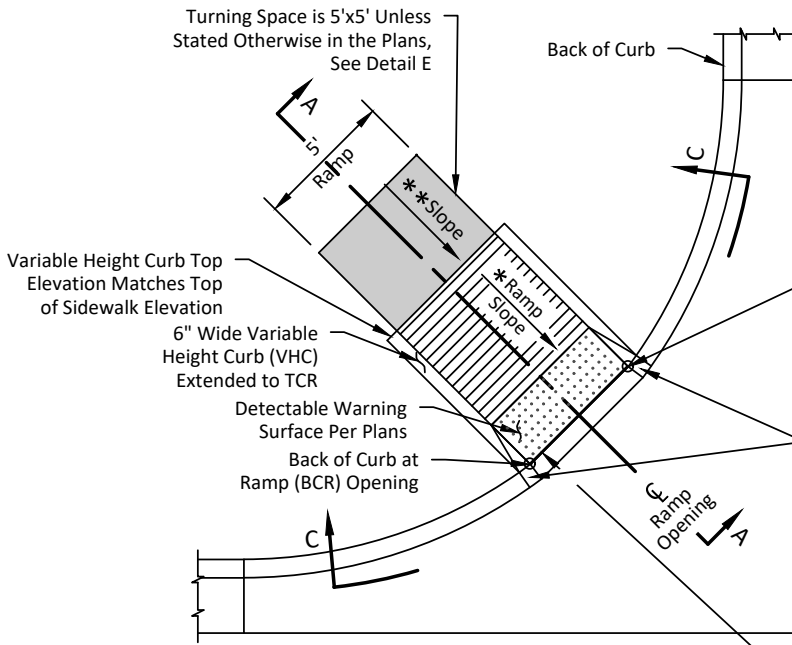
1/2" Preformed Expansion Joint Filler Sealed with Low Modulus Silicone Sealant or Hot Poured Elastic Joint Sealer

The Edge of Curb and Gutter Concrete Adjacent to Detectable Warning Surface Will Be Straight on Curb Radii 25' and Greater, Radii Less than 25' Adjacent Curb and Gutter May Be Curved



DETAIL E
ISOMETRIC VIEW
(If turning space concrete is placed monolithic with surrounding concrete, then this detail is not necessary.)

Turning Space is 5'x5' Unless Stated Otherwise in the Plans, See Detail E



PLAN VIEW
(Without Curb Transition)

N.T.S.

1/2" Preformed Expansion Joint Filler Sealed with Low Modulus Silicone Sealant or Hot Poured Elastic Joint Sealer

Note:
Curb ramp style as per plans or as directed by the Engineer.

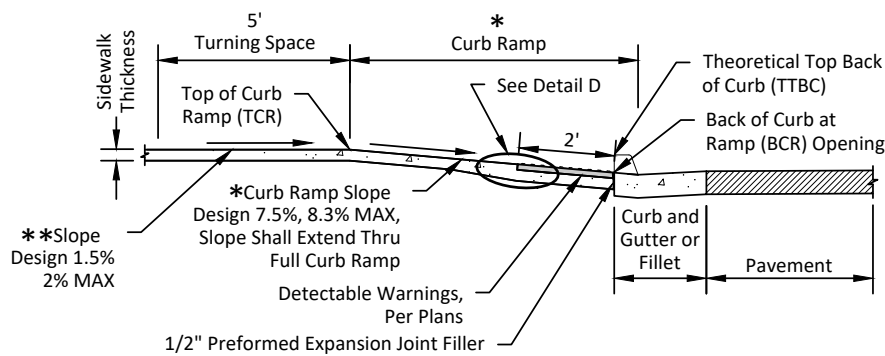
Curb ramp slopes are designed at 7.5% unless stated otherwise in the plans. The curb ramp may have a maximum slope of 8.3% and will not exceed 15' in length unless stated otherwise in the plans.

* The curb ramp length may be computed based on the intersection of a continuous 1.5% theoretical slope from theoretical top of curb (TTOC) with the curb ramp using a continuous 7.5% curb ramp slope. The elevation of point top of curb ramp (TCR) will always be higher than the elevation of point TTOC unless specified otherwise in the plans.

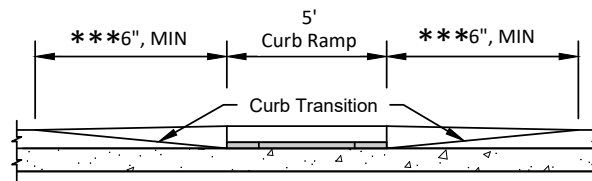
The cross slope of the ramp will not be steeper than 2%. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

** The slope in the turning space will not be steeper than 2% in any direction of pedestrian travel. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

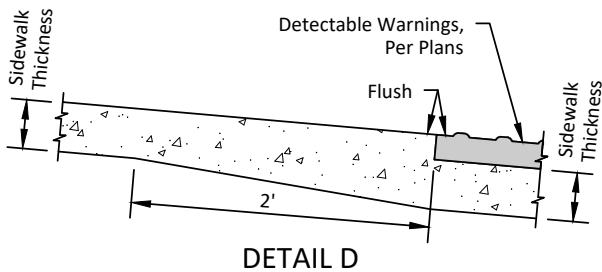
*** The curb transition will be a minimum of 6' long, a maximum of 10' long, and the curb transition slope will not be steeper than 10% unless stated otherwise in the plans. The ramp flare adjacent to the curb transition shall not be steeper than 10%. The curb transition length will be adjusted as necessary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



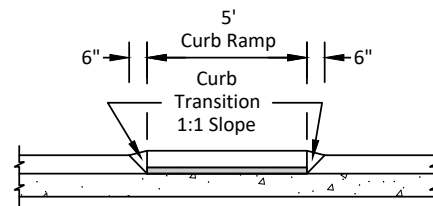
SECTION A-A



SECTION B-B



DETAIL D

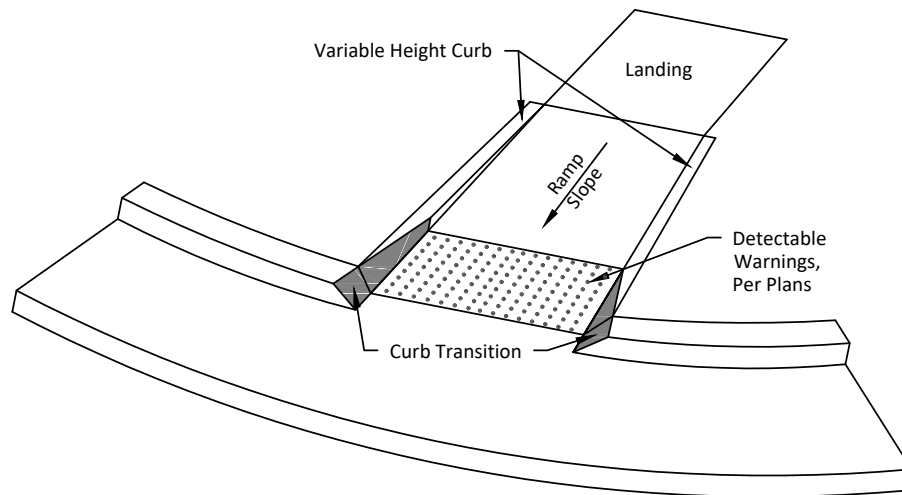


SECTION C-C

N.T.S.

Notes:

1. 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 or curb and gutter.
2. For illustrative purpose only, the curb ramp location is shown at the center of a PCC fillet section. The curb ramp will be placed at the location stated in the plans.
- * 3. Care will be taken to ensure a uniform grade on the curb ramp, free of sags and short grade changes.
4. Surface texture of the curb ramp will be obtained by brooming transverse to the slope of the curb ramp.
5. Joints will be sawed or tooled into the concrete adjacent to the detectable warnings to alleviate possible corner cracking.
6. Care will be taken to ensure that the surface of the detectable warning surface is clean and maintains a uniform color.
7. There will be no separate payment for curb ramps. The curb ramp will be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk contract item. The square foot area of concrete beneath the detectable warnings will be included in the measured and paid for quantity of sidewalk.
8. If rebar is placed in the turning space as depicted in detail E, the cost of the materials, labor, and equipment to furnish and install the rebar will be incidental to the contract unit price per square foot for the corresponding concrete sidewalk contract item.
9. The curb transitions and ramp opening will be measured and paid for at the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used. The curb transitions and ramp opening will be measured and paid for at the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.
10. Detectable warning surface will be measured to the nearest square foot. All costs for furnishing and installing the detectable warning surface including labor, equipment, materials, and incidentals will be paid for at the contract unit price per square foot for "Detectable Warning".



ISOMETRIC VIEW
(Without Curb Transition)

N.T.S.

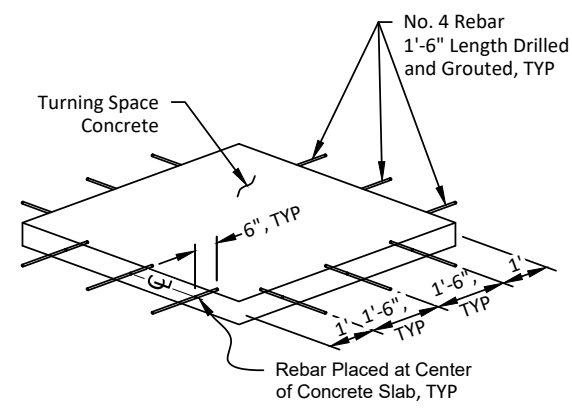
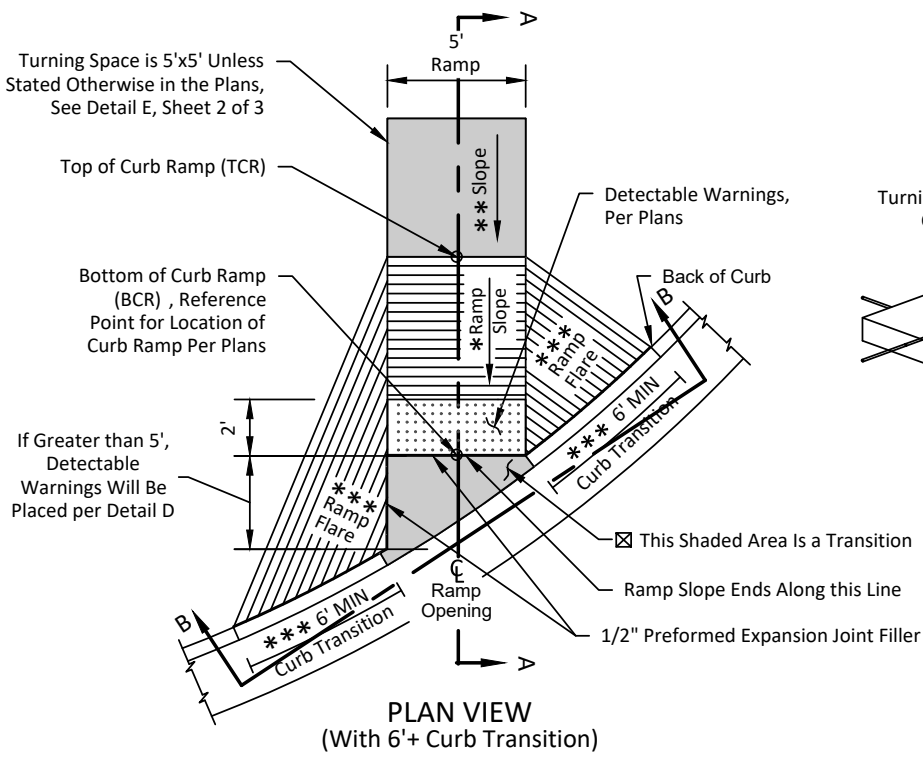
CITY OF RAPID CITY

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TYPE 1 PERPENDICULAR CURB RAMP

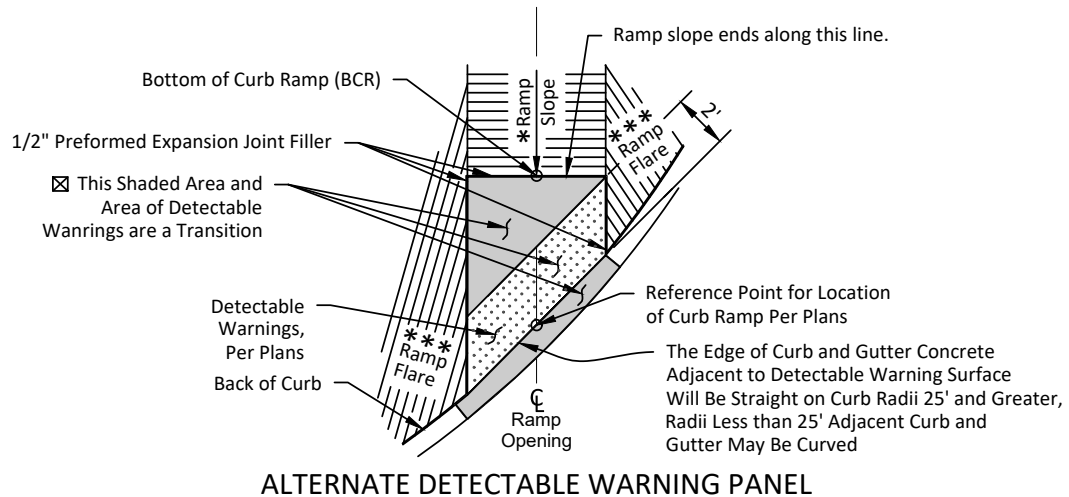
DATE: 8-19-22

Sec. - Sht.
61-2c



DETAIL E
ISOMETRIC VIEW
(If turning space concrete is placed monolithic with surrounding concrete, then this detail is not necessary.)

- ☒ The slope within the transition area will not be steeper than 5%. The concrete within the transition will be placed monolithic with the curb and gutter or fillet section concrete. The concrete thickness within the transition will be the same as the curb and gutter or fillet section concrete thickness.
- *** The curb transition will be a minimum of 6' long, a maximum of 10' long, and the curb transition slope will not be steeper than 10% unless stated otherwise in the plans. The curb transition length will be adjusted as necessary to meet slope and length requirements based on field geometrics.

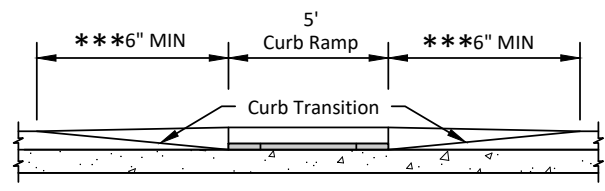
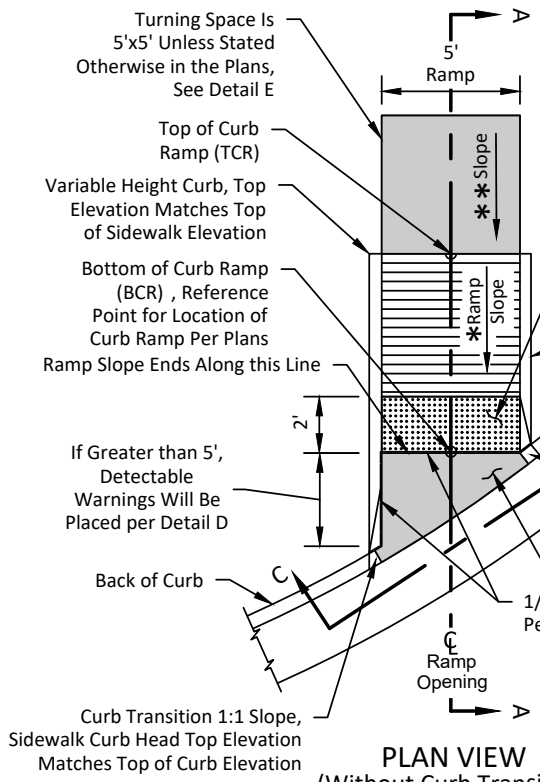


N.T.S.

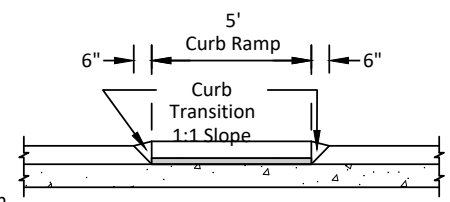
DATE: 8-19-22

TYPE 2 DIRECTIONAL CURB RAMP

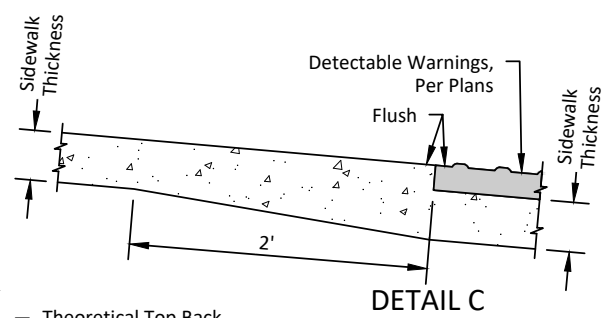
Sec. - Sht.
61-3a



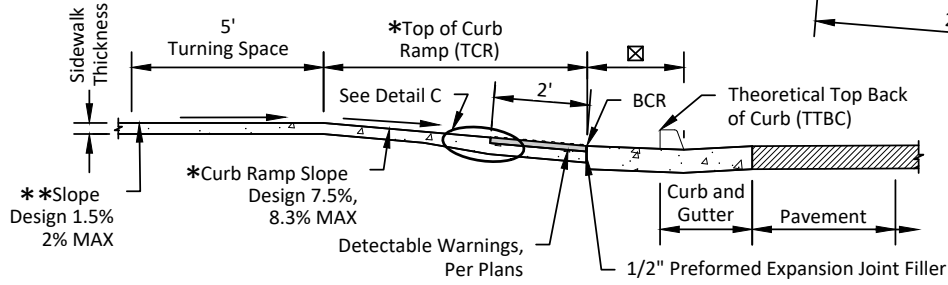
SECTION B-B



SECTION C-C



DETAIL C



SECTION A-A

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% and will not exceed 15' in length unless stated otherwise in the plans.

* The elevation of point TCR will always be higher than the elevation of point TTBC unless specified otherwise in the plans. The curb ramp length dimension as shown in the plans will be adjusted as necessary to meet all slope and length requirements based on field geometrics.

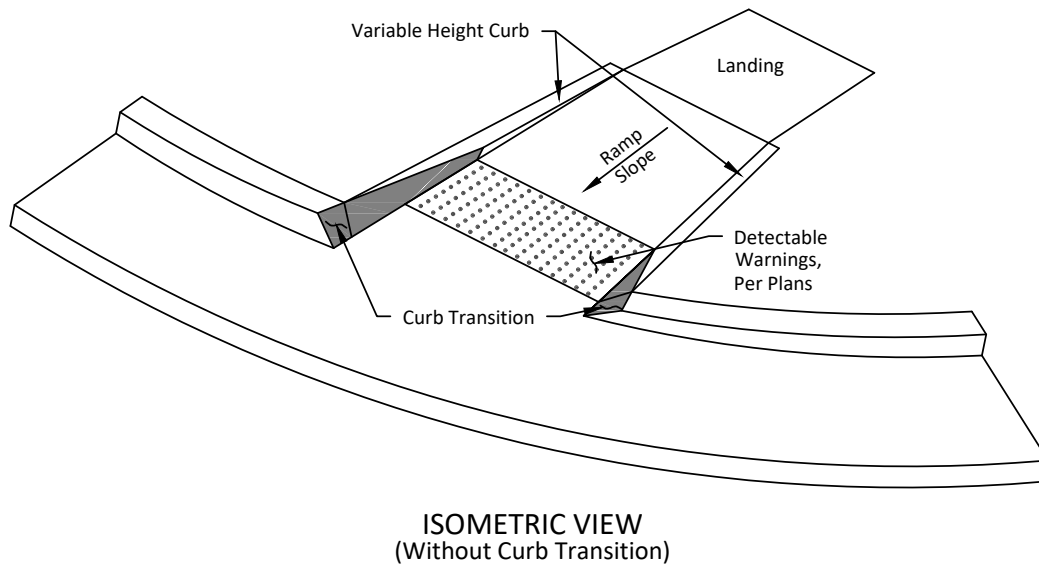
The cross slope of the ramp will not be steeper than 2%. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

** The slope in the turning space will not be steeper than 2% in any direction of pedestrian travel. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

N.T.S.

Notes:

1. The curb ramp depicted on this Standard Detail may be used with a PCC fillet section or curb and gutter. The curb ramp will be placed at the location stated in the plans.
- * Care will be taken to ensure a uniform grade on the curb ramp, free of sags and short grade changes.
2. Surface texture of the curb ramp will be obtained by coarse brooming transverse to the slope of the curb ramp.
3. The normal gutter line profile will be maintained through the area of the ramp opening.
4. Joints will be sawed or tooled into the concrete adjacent to the detectable warnings to alleviate possible corner cracking.
5. Care will be taken to ensure that the surface of the detectable warnings are clean and maintains a uniform color.
6. The detectable warnings will be cut as necessary to fit the plan specified limits of the detectable warnings. Cost for cutting the detectable warnings will be incidental to the corresponding detectable warning contract item.
7. There will be no separate payment for curb ramps. The curb ramp will be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk contract item. The square foot area of concrete beneath the detectable warnings will be included in the measured and paid for quantity of sidewalk.
8. If rebar is placed in the Turning Space as depicted in DETAIL E, the cost of the materials, labor, and equipment to furnish and install the rebar will be incidental to the contract unit price per square foot for the corresponding concrete sidewalk contract item.
9. The curb transitions and ramp opening will be measured and paid for at the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used. The curb transitions and ramp opening will be measured and paid for at the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.
10. All costs for furnishing and installing the transition area at the base of the curb ramp will be incidental to the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used and will be incidental to the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.
11. The detectable warning surface will be measured to the nearest square foot. All costs for furnishing and installing the detectable warning surface including labor, equipment, materials, and incidentals will be paid for at the contract unit price per square foot for "Detectable Warning".



N.T.S.

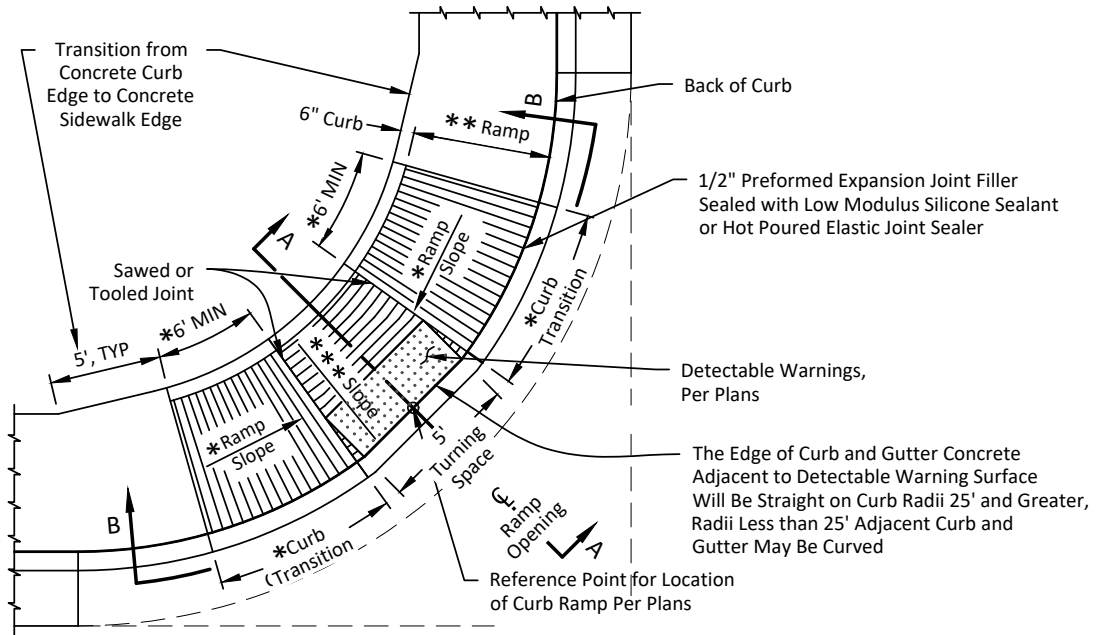
CITY OF RAPID CITY

PUBLIC WORKS DEPARTMENT

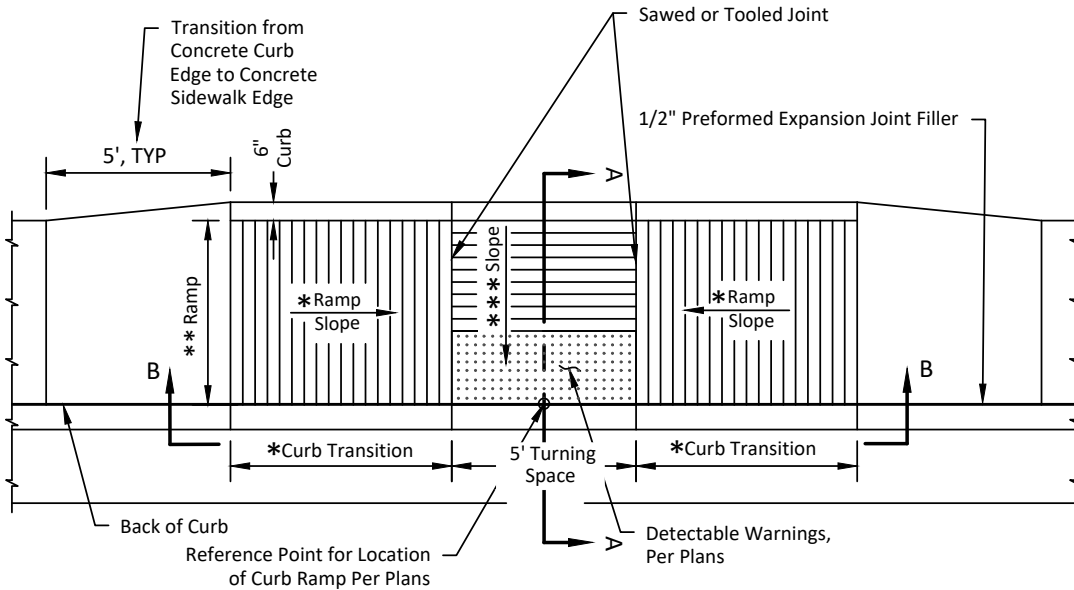
TYPE 2 DIRECTIONAL CURB RAMP

DATE: 8-19-22

Sec. - Sht.
61-3c



PLAN VIEW
(With Curved Curb and Gutter)

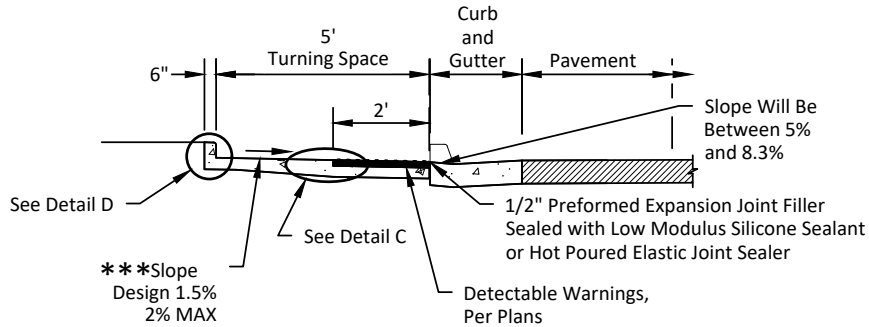


PLAN VIEW
(With Straight Curb and Gutter)

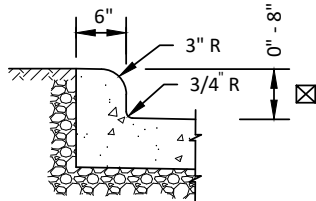
N.T.S.

TYPE 3 PARALLEL CURB RAMP

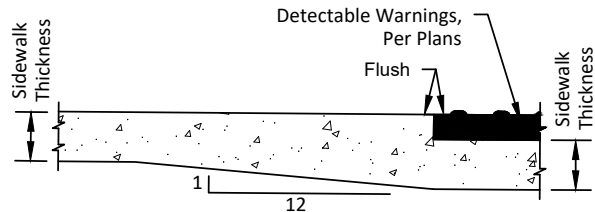
- * The curb transition slope will match the curb ramp slope. Curb ramp slopes are designed at 7.5% unless stated otherwise in the plans. The curb ramp may have a maximum slope of 8.3% at any location of the curb ramp and will not exceed 15' in length unless stated otherwise in the plans. The curb transitions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



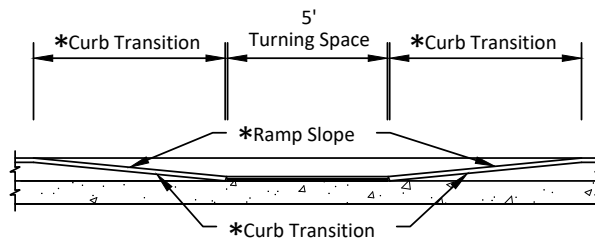
SECTION A-A
(With 6'+ Curb Transition)



DETAIL D
(Use this detail when the curb height is less than 8". Curb heights greater than 8" see Type "C" retaining wall details.)



DETAIL C



N.T.S.

Notes:

1. 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.
2. The curb ramp will be placed at the location stated in the plans.
3. Sidewalk adjacent to the curb ramp will be as shown in the plans.
- * 4. Care will be taken to ensure a uniform grade on the curb ramp, free of sags and short grade changes.
5. Surface texture of the curb ramp will be obtained by coarse brooming transverse to the slope of the curb ramp.
6. The normal gutter line profile will be maintained through the area of the ramp opening.
7. Joints will be sawed or tooled into the concrete adjacent to the detectable warnings to alleviate possible corner cracking.
8. Care will be taken to ensure that the surface of the detectable warnings are clean and maintains a uniform color.
9. The detectable warnings will be cut as necessary to fit the plan specified limits of the detectable warnings. Cost for cutting the detectable warnings will be incidental to the corresponding detectable warning contract item.
10. There will be no separate payment for curb ramps. The curb ramp will be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk contract item. The square foot area of the detectable warnings and the curb along the short radius will be included in the measured and paid for quantity of sidewalk.
11. The curb transitions and ramp opening will be measured and paid for at the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used. The curb transitions and ramp opening will be measured and paid for at the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.
12. Detectable warning surface will be measured to the nearest square foot. All costs for furnishing and installing the detectable warning surface including labor, equipment, materials, and incidentals will be paid for at the contract unit price per square foot for "Detectable Warning".

N.T.S.

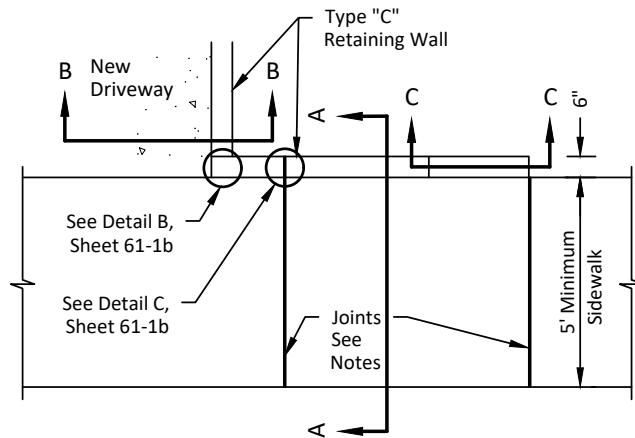
CITY OF RAPID CITY

PUBLIC WORKS DEPARTMENT

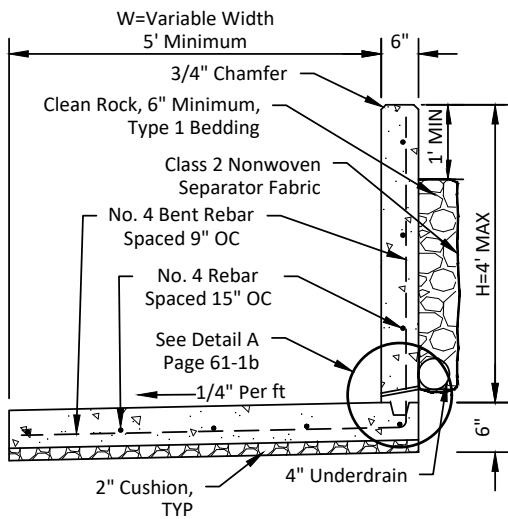
TYPE 3 PARALLEL CURB RAMP

DATE: 8-19-22

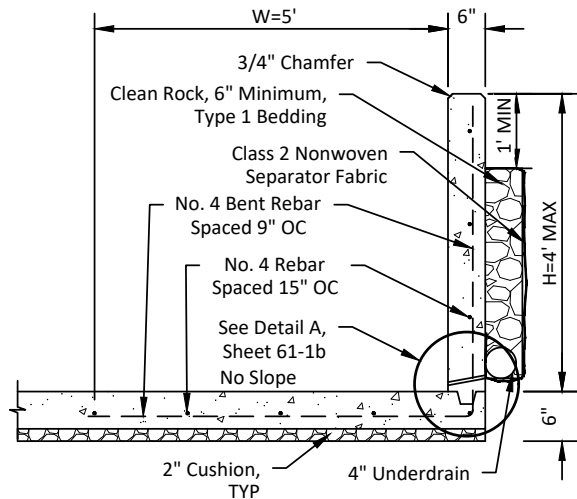
Sec. - Sht.
61-4c



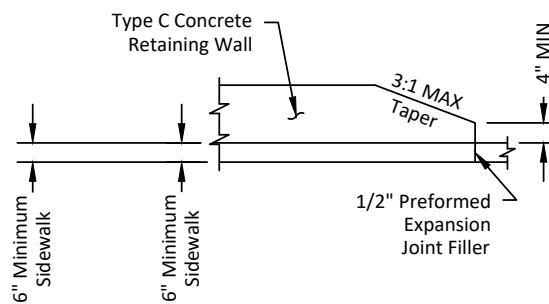
PLAN VIEW



SECTION A-A

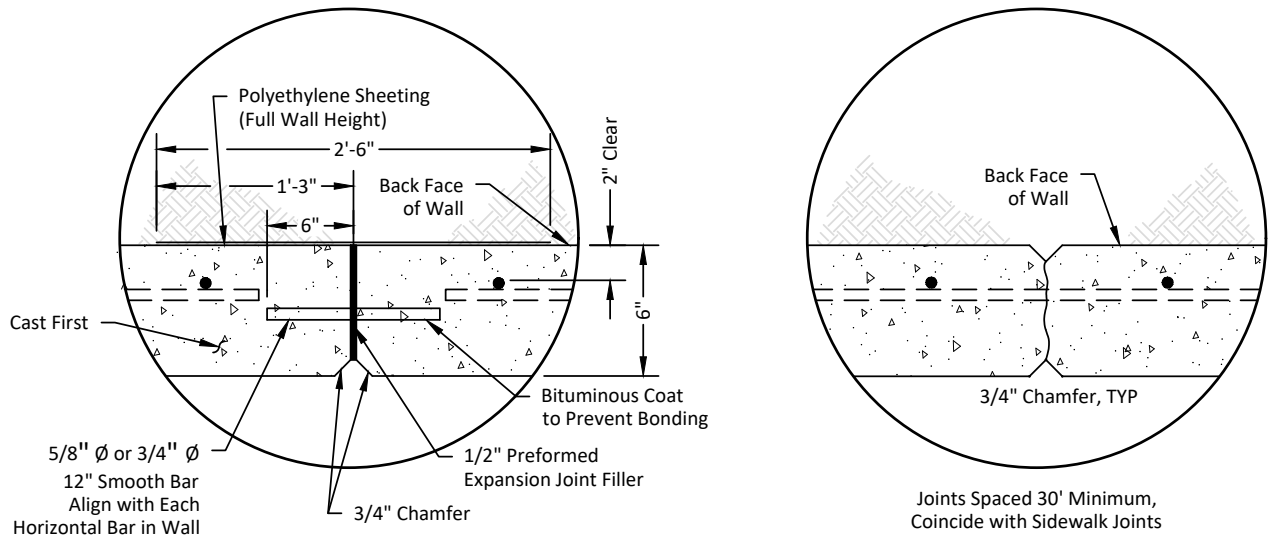
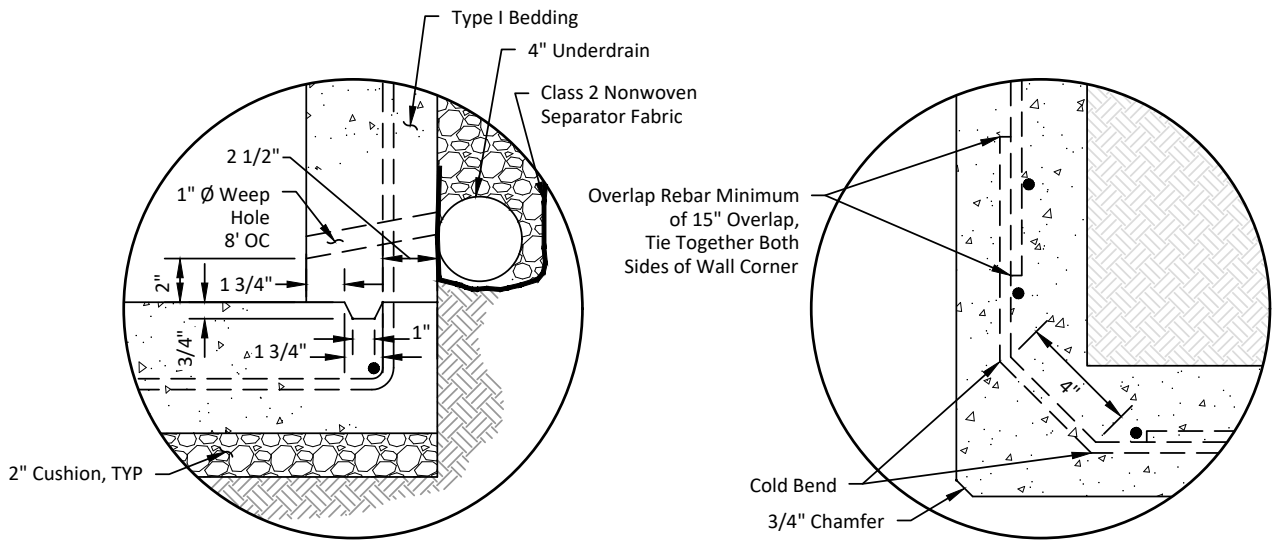


SECTION B-B



SECTION C-C

N.T.S.



N.T.S.

CITY OF RAPID CITY

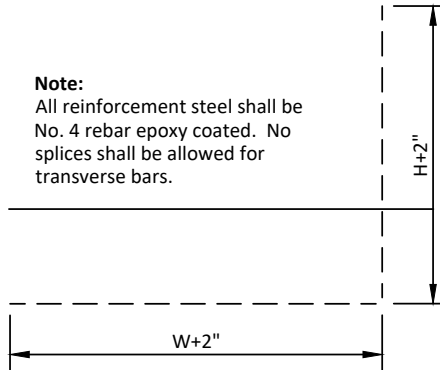
PUBLIC WORKS DEPARTMENT

TYPE "C" RETAINING WALL

DATE: 8-19-22

Sec. - Sht.
61-5b

Note:
 All reinforcement steel shall be No. 4 rebar epoxy coated. No splices shall be allowed for transverse bars.



Notes:

1. The Type C concrete retaining wall will be placed as per detailed plans.
- * 2. The sidewalk width of the Type C concrete retaining wall will not be narrower than 5'. See plans for specified width.
3. A 2-inch thickness of cushion material will be placed and compacted beneath the Type C retaining wall. The cushion material will conform to the Standard Specifications, Section 117.
4. All concrete will be class M6 and conform to the Standard Specifications, Section 56.
5. All reinforcing steel will be epoxy coated and will conform to ASTM A615, grade 60. The smooth bar may conform to ASTM A615, grade 40. The epoxy coating will conform to ASTM A775.
6. All steel shall be placed 2" from the back and bottom of the retaining wall and slab.
7. The top horizontal bar shall be placed 3" from the top of wall.
8. For variable height walls, the top horizontal bar will be placed parallel to the top of the wall.
9. Horizontal bars shall be overlapped a minimum of 12" at each splice.
10. A 3/4-inch chamfer will be provided on all exposed retaining wall edges.
11. The maximum expansion joint spacing will be 90' and the maximum contraction joint spacing will be 30' or as detailed in the plans. The contraction and expansion joints will be placed to match curb joints or sidewalk.
12. The exposed retaining wall surfaces will receive a rubbed finish in accordance with the Standard Specifications, Section 55, unless otherwise specified in the plans. The exposed surface of the retaining wall footing, when used as a sidewalk, will receive a broom finish.

N.T.S.

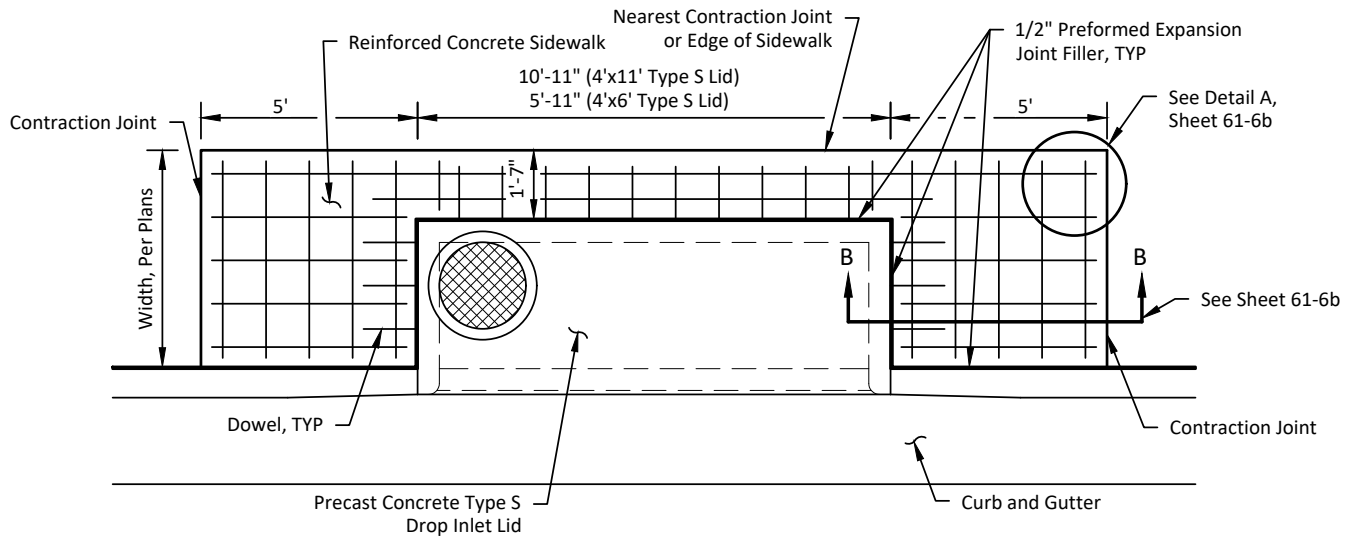
CITY OF RAPID CITY

PUBLIC WORKS DEPARTMENT

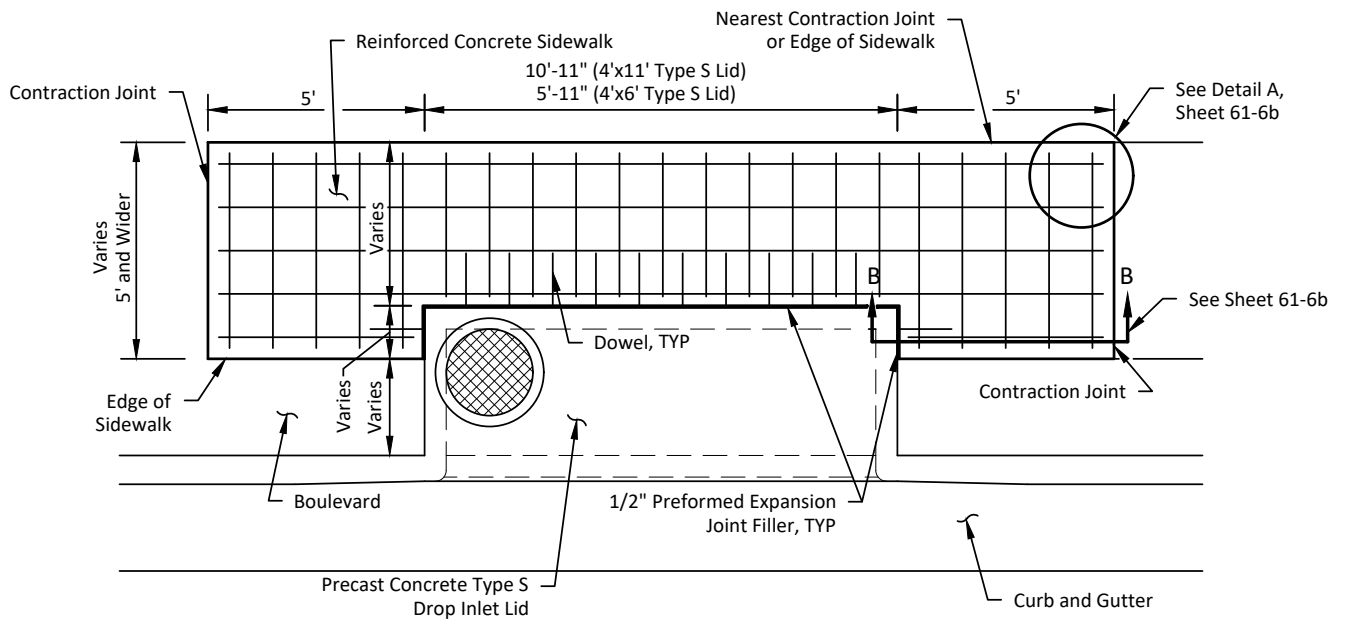
TYPE C CONCRETE RETAINING WALL

DATE: 8-19-22

Sec. - Sht.
61-5c



PLAN VIEW
(Curbside Reinforced Concrete Sidewalk)



PLAN VIEW
(Reinforced Concrete Sidewalk With Boulevard)

N.T.S.

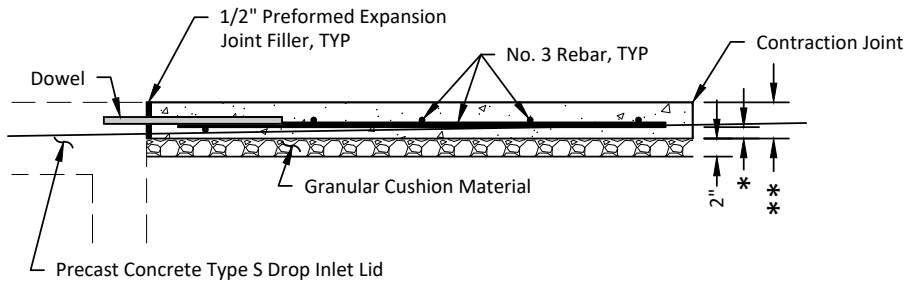
CITY OF RAPID CITY

PUBLIC WORKS DEPARTMENT

REINFORCED CONCRETE SIDEWALK ADJACENT
TO PRECAST CONCRETE TYPE S DROP INLET LID

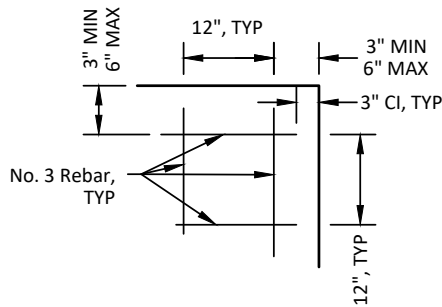
DATE: 8-19-22

Sec. - Sht.
61-6a



SECTION B - B

- ** 4", 5", or 6" Per Plans
- * 1 5/8" for 4" Sidewalk,
2 1/8" for 5" Sidewalk,
and 2 5/8" for 6" Sidewalk

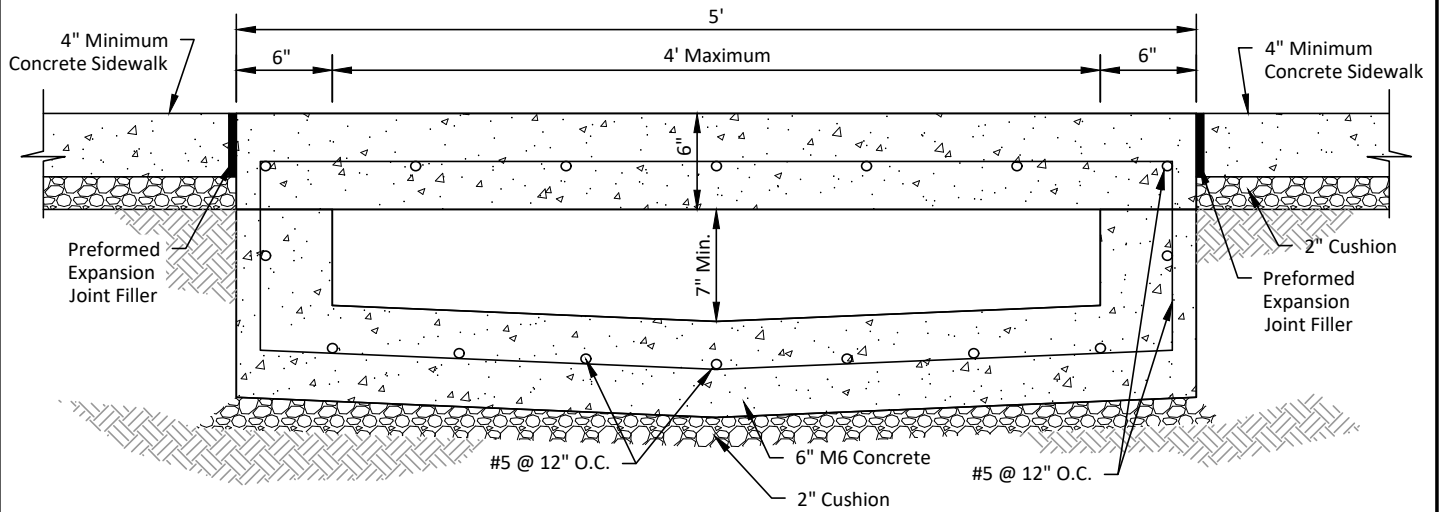


DETAIL A

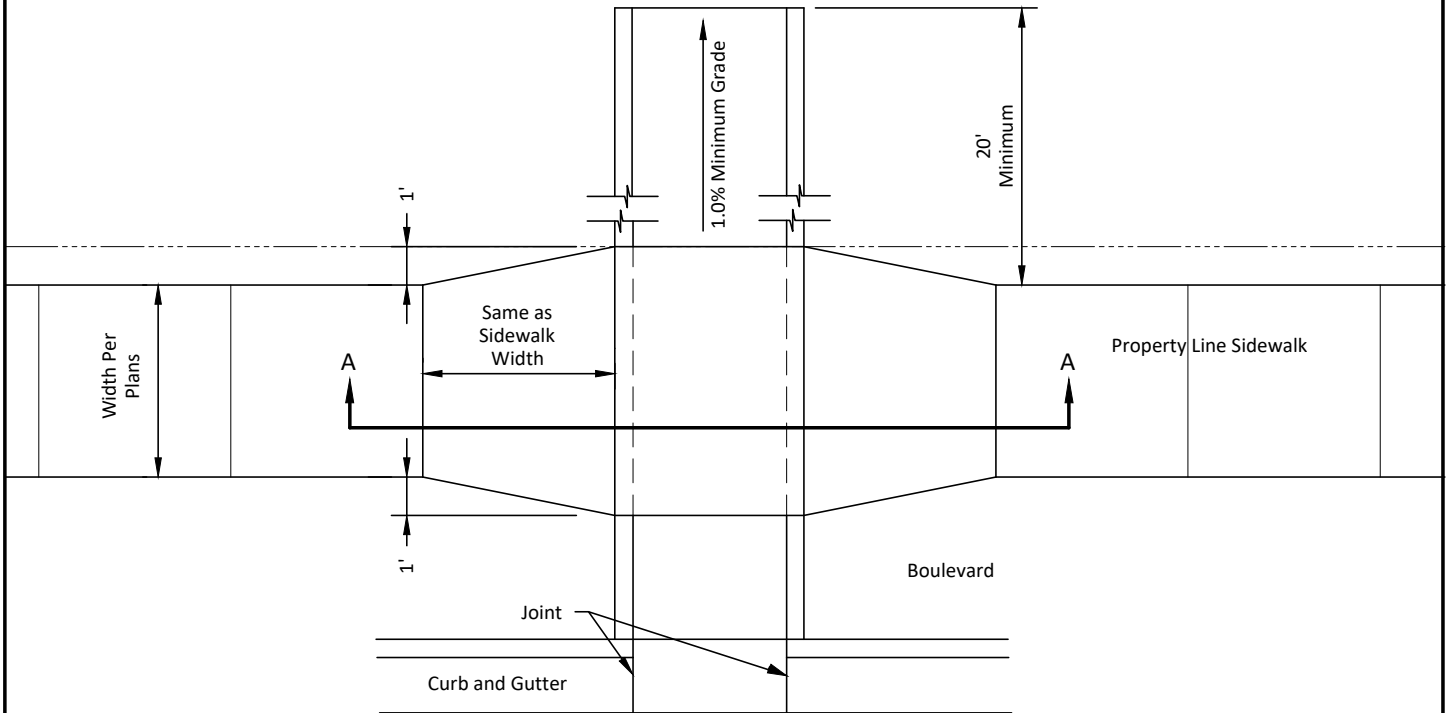
Notes:

1. The precast concrete Type S lids shown are 4'x11' for illustrative purpose.
2. The cross slope of the sidewalk and precast concrete Type S drop inlet lid will be as specified elsewhere in the plans, but no greater than 2% across the pedestrian access route.
3. All rebar shall be ASTM A615 grade 60, epoxy coated per ASTM A775 and conform with the Standard Specifications, Section 57 and 123.
4. When lapping of reinforcing steel is necessary, the No. 3 rebar will be lapped 12".
5. The reinforced concrete sidewalk will conform to the requirements of the Standard Specifications, Section 61.
6. Reinforced concrete sidewalk adjacent to precast concrete Type S drop inlets shall be incidental to the contract unit price for "Sidewalk".

N.T.S.



SECTION A-A



PLAN VIEW

N.T.S.

CITY OF RAPID CITY

PUBLIC WORKS DEPARTMENT

SIDEWALK BRIDGE

DATE: 8-19-22

Sec. - Sht.
61-7