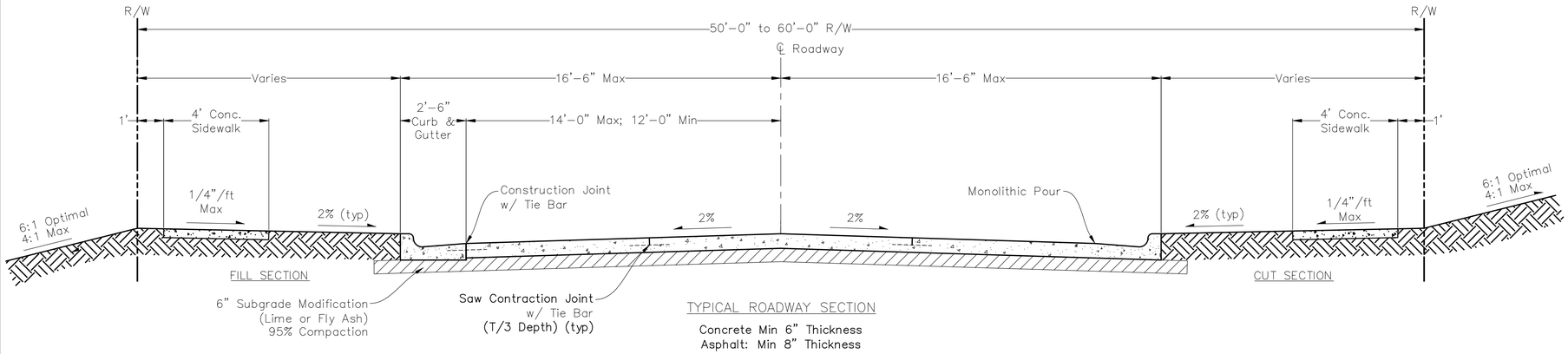
DEPATMENT OF PUBLIC WORKS
STANDARD DETAIL SHEETS

SHEET	TITLE
1	LOCAL RESIDENTIAL STREET
2	CURB AND GUTTER
3 A-E	STREET DETAILS—FUNCTIONAL CLASS—ARTERIAL 1, ARTERIAL 2, COLLECTOR 1, COLLECTOR 2 AND LOCAL
3	TYPICAL INTERSECTION LAYOUTS
4	RESIDENTIAL DRIVEWAY
5	SIDEWALK AND ADA RAMP
6	TYPICAL SIDEWALK RAMP LAYOUTS
7	CURB INLET
8	AREA INLET 1
9	AREA INLET 2
10	TOEWALL / JUNCTION BOX CONCRETE COLLAR
11	TRENCHING AND STREET REPAIR
12	SANITARY AND STORM SEWER MANHOLE
13	WATER DISTRIBUTION
14	WATER SERVICE
15	FORCE MAIN
16	TEMPORARY CONSTRUCTION ENTRANCE
17	TEMPORARY CHECK DAM
18	SEDIMENT FENCE
19	SEDIMENT FENCE (REINFORCED)
20	STANDARD EROSION CONTROL
21	EROSION CONTROL BLANKET 1 OF 3
22	EROSION CONTROL BLANKET 2 OF 3
23	EROSION CONTROL BLANKET 3 OF 3
24	SIGNING

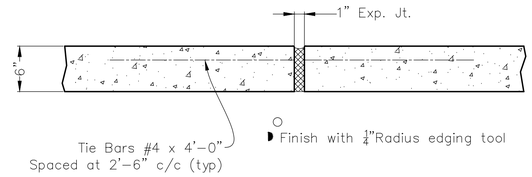
Revised: 2015-08-31

DATE	REVISIONS
4/2015	2015 Standards

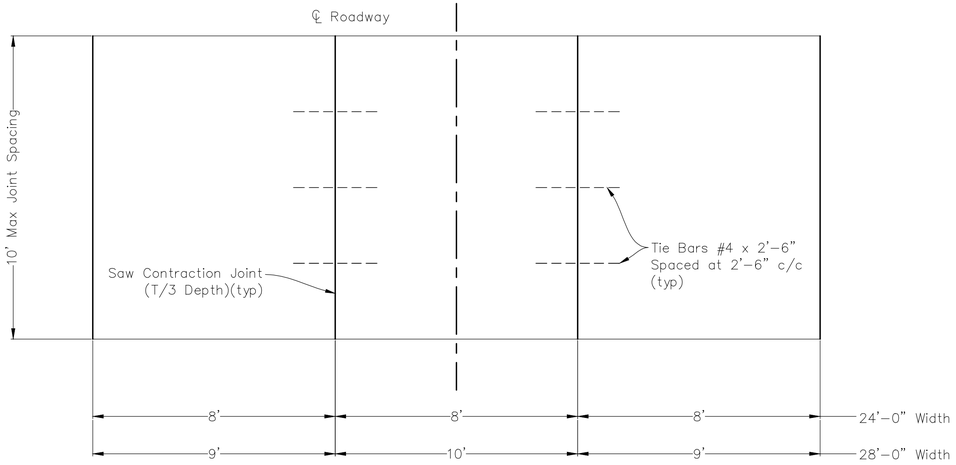


TYPICAL ROADWAY SECTION

Concrete Min 6" Thickness
Asphalt: Min 8" Thickness

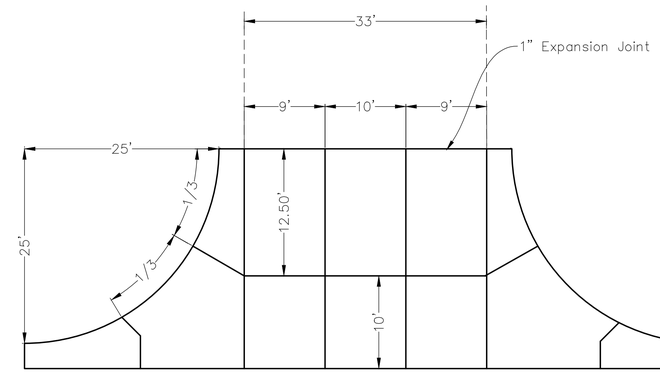


1" EXPANSION JOINT DETAIL
Scale: N.T.S.

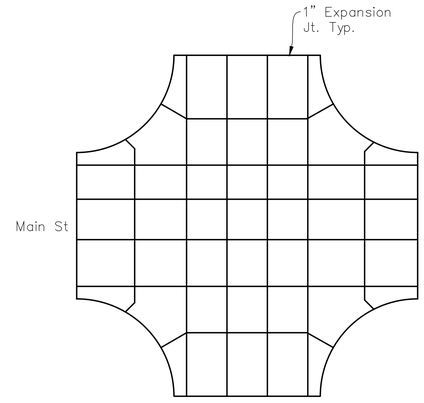


24'–0" WIDTH ROADWAY

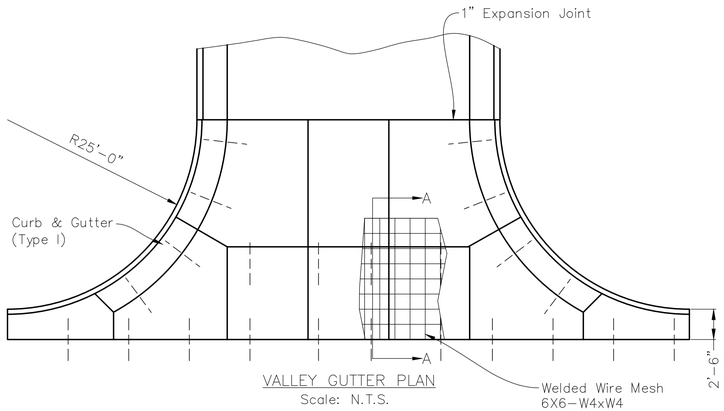
NON–REINFORCED JOINTED PAVEMENT PLAN VIEW



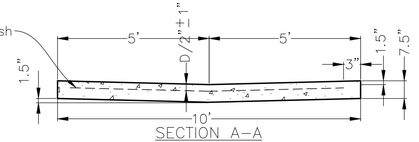
REINFORCED CONCRETE VALLEY GUTTER PLAN
Scale: N.T.S.



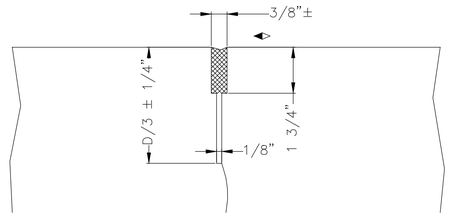
TYPICAL EXPAN. JT. PLAN
Scale: N.T.S.



VALLEY GUTTER PLAN
Scale: N.T.S.



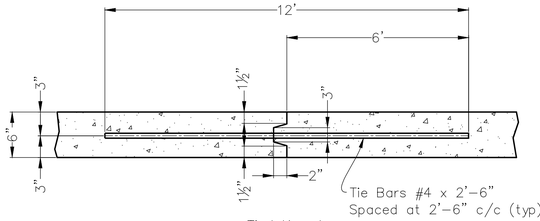
SECTION A–A



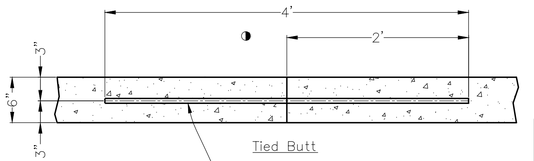
SAW CUT CONTRACTION JOINT DETAIL
Scale: N.T.S.

The ⅛" saw cut D/3 ± ¼" depth shall be cut initially; the ⅜" saw cut shall be accomplished in a separate operation after concrete has gained sufficient strength to avoid spalling as determined by the Engineer.

◂▸ All sawed joints on this project shall be filled in accordance with the Standard Specifications.



Tied Keyed



Tied Butt

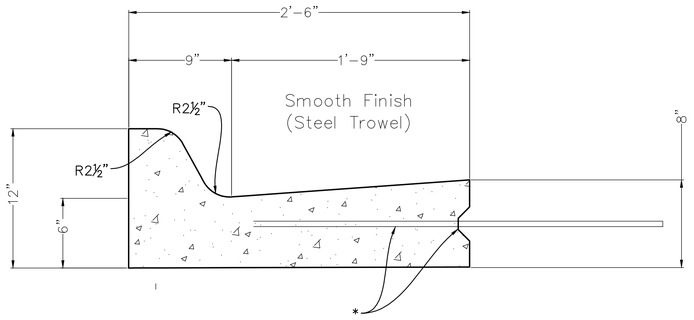
JOINT DETAIL
Scale: N.T.S.

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
LOCAL RESIDENTIAL STREET

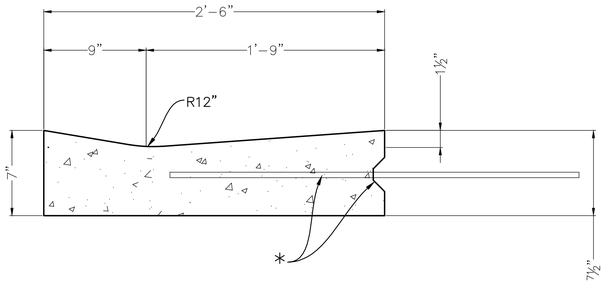
PROJ NO:	DATE:	SHEET:
FILENAME: 1_Local_Residential_Street_Details.dwg	BY:	1

DATE	REVISIONS
4/2015	2015 Standards



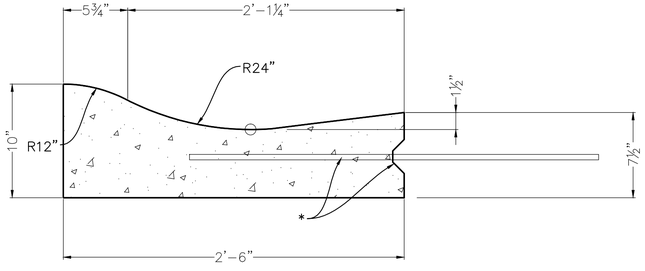
COMBINED CURB & GUTTER (TYPE I)

Scale: N.T.S.



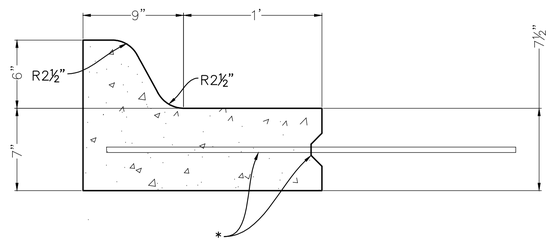
COMBINED CURB & GUTTER (TYPE II)

Scale: N.T.S.



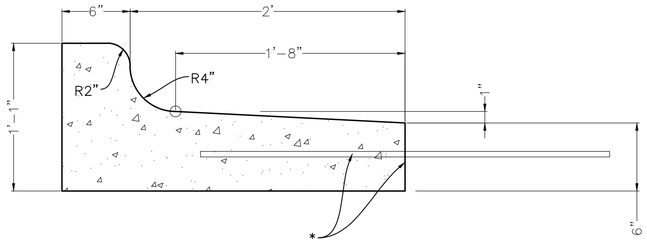
ROLLED CURB

Scale: N.T.S.



COMBINED CURB & GUTTER (TYPE III)

Scale: N.T.S.



SPILL CURB

Scale: N.T.S.

* Longitudinal construction joint and #4 x 3'-0" bars @ 2'-6" Centers. In monolithic construction the longitudinal joint is not necessary

Note: All exposed edges shall be finished with an edging tool. Place a 1" Preformed Expansion Joint Filler (Nonextruding, Type B) at a spacing not to exceed 250'

GENERAL NOTE

Combined curb and gutter or gutter adjoining concrete pavement may, at the contractor's option, be constructed either monolithically or separately, using either the mix used in the concrete pavement or Concrete Grade 3.0 (AE). The combined curb and gutter or gutter shall have the same section as shown on the plans. If constructed monolithically, the longitudinal joint and dowel bars shall be omitted from the combined curb and gutter or gutter. Pavement Joints shall be continued through curb or gutter and no other planes of weakness will be required. Joints in the combined curb and gutter or gutter are to be filled with the same material as used for the pavement joints.

Expansion joints in the combined curb and gutter are to be placed opposite expansion joints in the pavement.

Where combined curb and gutter or gutter does not abut concrete pavement or concrete base course, omit tie bars and place a 1" Preformed Expansion Joint Filler (Type B) cut to the dimensions of the combined curb and gutter or gutter, at a spacing not to exceed 250' and at the ends of curb returns. Planes of weakness shall be constructed at 10'-0" intervals.

A 4' length of transition from normal gutter section to the tapered gutter section shall be used at the ends of each run of gutter except where the gutter abuts a curb, such as at the end of a bridge. Inlets shall be located so as not to fall within this transition section.

Where pressure relief joint is placed across the pavement, and gutter or curb and gutter is continued on for more than 10', use 4"x4" membrane sealant installed with bonding adhesive through gutter section, shaped to fit gutter or curb and gutter. See Std. Drawing RD712 for expansion joint treatment where combined curb and gutter or gutter abuts a bridge wing on a U-type abutment – see bridge drawings.

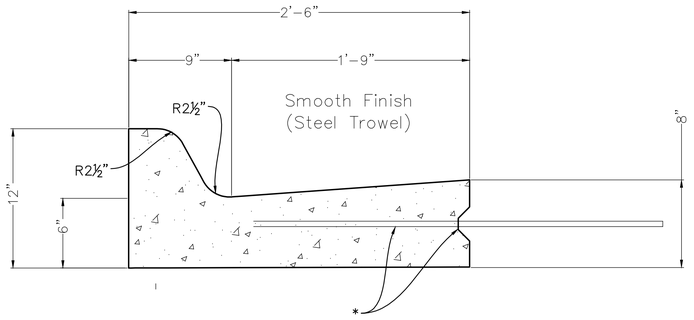
Longitudinal joints shall be sawed and sealed with joint sealant, see Standard Specifications. If constructed monolithically, the longitudinal joint is not required.

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
CURB & GUTTER

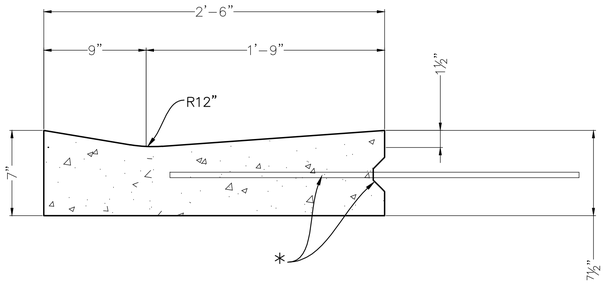
PROJ NO:	DATE:	SHEET:
FILENAME: 2_Curb_Gutter_Details.dwg	BY:	2

DATE	REVISIONS
4/2015	2015 Standards



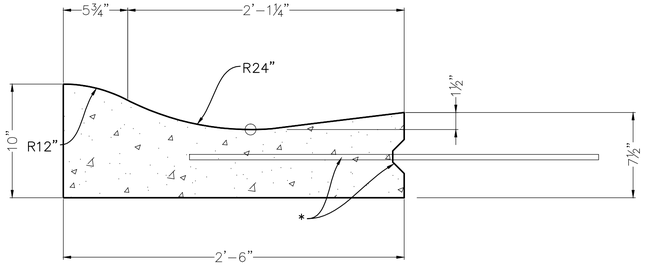
COMBINED CURB & GUTTER (TYPE I)

Scale: N.T.S.



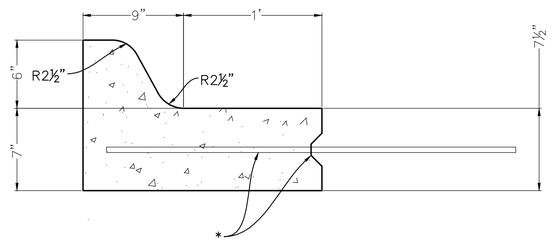
COMBINED CURB & GUTTER (TYPE II)

Scale: N.T.S.



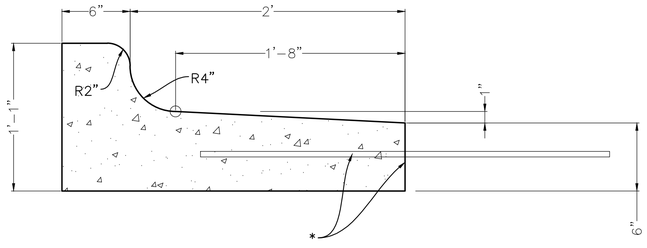
ROLLED CURB

Scale: N.T.S.



COMBINED CURB & GUTTER (TYPE III)

Scale: N.T.S.



SPILL CURB

Scale: N.T.S.

* Longitudinal construction joint and #4 x 3'-0" bars @ 2'-6" Centers. In monolithic construction the longitudinal joint is not necessary

Note: All exposed edges shall be finished with an edging tool. Place a 1" Preformed Expansion Joint Filler (Nonextruding, Type B) at a spacing not to exceed 250'

GENERAL NOTE

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Expansion joints in the combined curb and gutter are to be placed opposite expansion joints in the pavement.

Where combined curb and gutter or gutter does not abut concrete pavement or concrete base course, omit tie bars and place a 1" Preformed Expansion Joint Filler (Type B) cut to the dimensions of the combined curb and gutter or gutter, at a spacing not to exceed 250' and at the ends of curb returns. Planes of weakness shall be constructed at 10'-0" intervals.

A 4' length of transition from normal gutter section to the tapered gutter section shall be used at the ends of each run of gutter except where the gutter abuts a curb, such as at the end of a bridge. Inlets shall be located so as not to fall within this transition section.

Where pressure relief joint is placed across the pavement, and gutter or curb and gutter is continued on for more than 10', use 4"x4" membrane sealant installed with bonding adhesive through gutter section, shaped to fit gutter or curb and gutter. See Std. Drawing RD712 for expansion joint treatment where combined curb and gutter or gutter abuts a bridge wing on a U-type abutment – see bridge drawings.

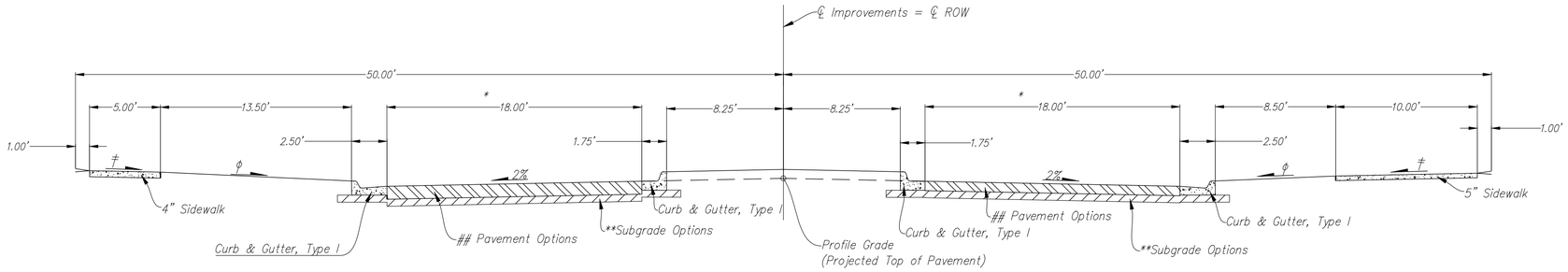
Longitudinal joints shall be sawed and sealed with joint sealant, see Standard Specifications. If constructed monolithically, the longitudinal joint is not required.

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
CURB & GUTTER

PROJ NO:	DATE:	SHEET:
FILENAME: 2_Curb_Gutter_Details.dwg	BY:	2

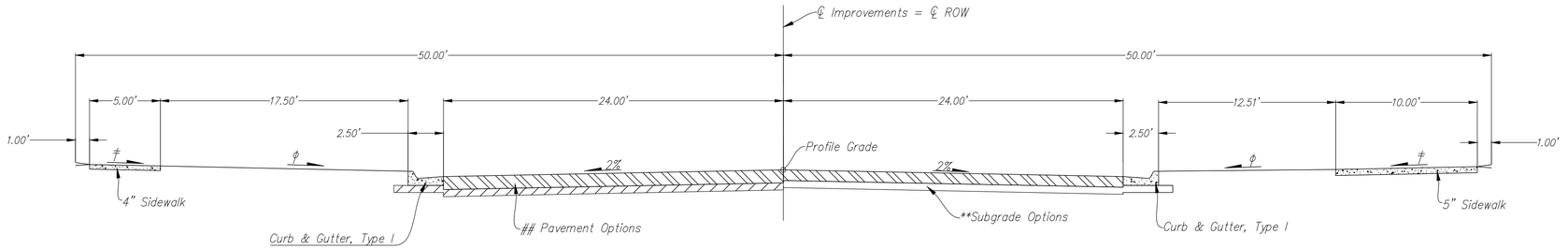
DATE	REVISIONS
4/15	2015 Standards



2–LANE DIVIDED

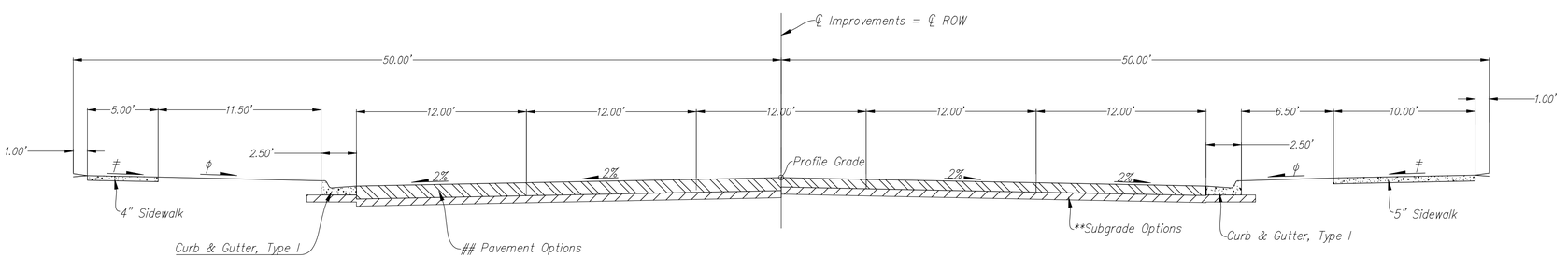
COMPLETE STREET WITH 100' ROW

*Minimum lane width is 18.00' to allow emergency vehicles to pass stopped traffic per Fire Department



4–LANE UNDIVIDED

COMPLETE STREET WITH 100' ROW



5–LANE UNDIVIDED

COMPLETE STREET WITH 100' ROW

ϕ 2% to 4%

ǂ 1% Preferred, 2% Maximum

ARTERIAL STREET DESIGN STANDARDS

PER SALINA CITY CODE SEC. 36–74.1

NUMBER OF LANES	5	4
MINIMUM ROW WIDTH (FT)	100	80
MINIMUM PAVEMENT WIDTH (FT)	65	53
MINIMUM CURVE RADIUS (FT)	500	500
MINIMUM TANGENT BETWEEN CURVES (FT)	200	200
MINIMUM LONGITUDINAL SLOPE (FT/FT)	0.003	0.003

ADT	FUNCTIONAL CLASS	PAVEMENT THICKNESS (IN)	
		CONCRETE	ASPHALT
<10,000	ARTERIAL	9	12
>10,000		10	13.5

Note: Concrete pavement joint spacing ideally shall not exceed 1.30T and in no case shall exceed 1.6T.

** Contractor has the option of using:
8" Lime Treated
8" Fly Ash Treated
6"AB–3, or
6" Recycled Crushed Concrete subgrade.

Earthware computations are based on pavement thickness and 8" treated subgrade thickness. Adjustments in the earthwork as a result of using other pavement and base options shall be subsidiary to the pavement and subgrade bid items.

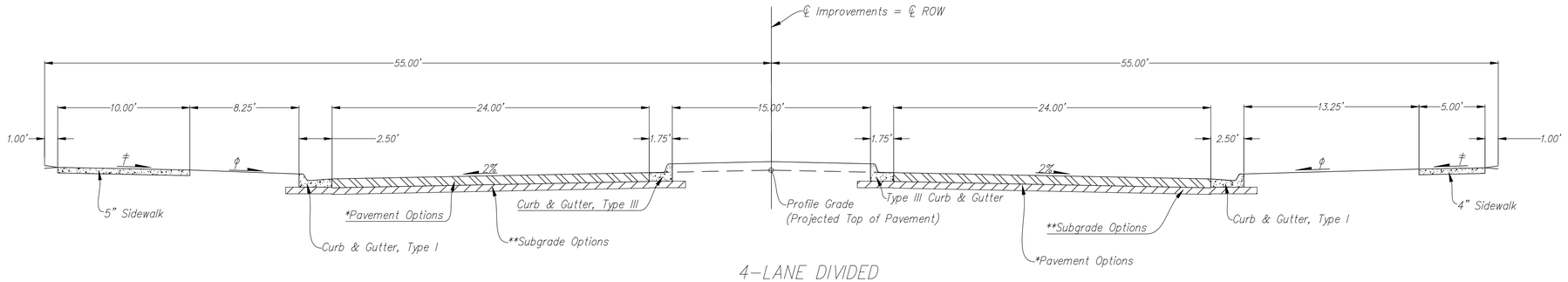
CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS

FUNCTIONAL CLASS ARTERIAL 1

PROJ NO:	DATE:	SHEET:
FILENAME: 3A–E_Street Details.dwg	BY:	3A

DATE	REVISIONS
4/15	2015 Standards



4-LANE DIVIDED

RECOMMENDED ROW = 110'

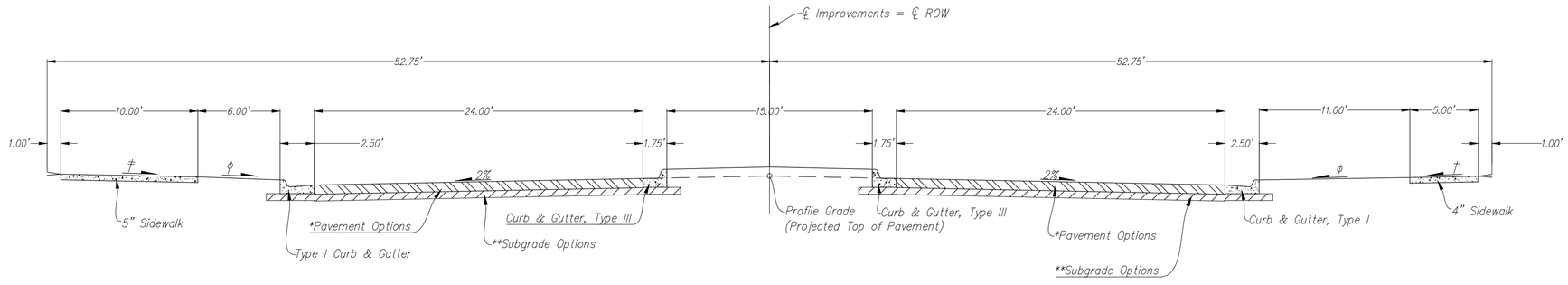
ARTERIAL STREET DESIGN STANDARDS PER SALINA CITY CODE SEC. 36-74.1		
NUMBER OF LANES	5	4
MINIMUM ROW WIDTH (FT)	100	80
MINIMUM PAVEMENT WIDTH (FT)	65	53
MINIMUM CURVE RADIUS (FT)	500	500
MINIMUM TANGENT BETWEEN CURVES (FT)	200	200
MINIMUM LONGITUDINAL SLOPE (FT/FT)	0.003	0.003

ADT	FUNCTIONAL CLASS	PAVEMENT THICKNESS (IN)	
		CONCRETE	ASPHALT
10,000	ARTERIAL	9	12
10,000		10	13.5

Note: Concrete pavement joint spacing ideally shall not exceed 1.30T and in no case shall exceed 1.6T.

** Contractor has the option of using:
8" Lime Treated
8" Fly Ash Treated
6"AB-3, or
6" Recycled Crushed Concrete subgrade.

Earthware computations are based on pavement thickness and 8" treated subgrade thickness. Adjustments in the earthwork as a result of using other pavement and base options shall be subsidiary to the pavement and subgrade bid items.



4-LANE DIVIDED

COMPLETE STREET WITH 100' ROW

ϕ 2% to 4%

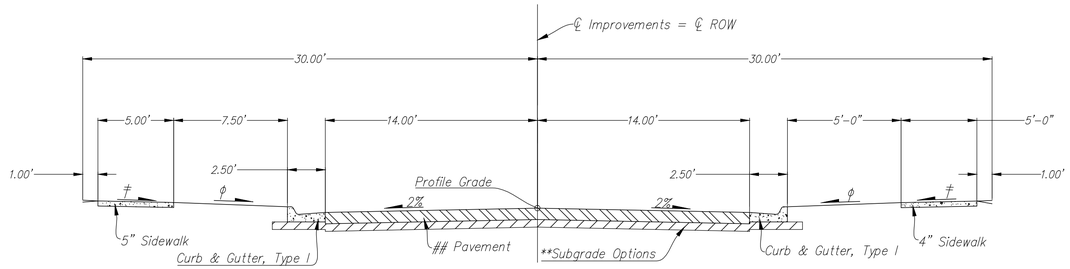
≠ 1% Preferred, 2% Maximum

CITY OF SALINA, KANSAS
PUBLIC WORKS - ENGINEERING - UTILITIES

STANDARD DETAILS
FUNCTIONAL CLASS ARTERIAL 2

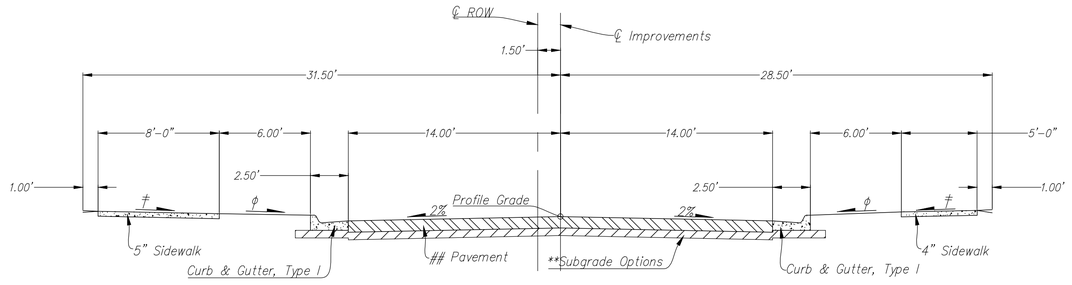
PROJ NO:	DATE:	SHEET:
FILENAME: 3A-F_Street Details.dwg	BY:	3B

DATE	REVISIONS
4/15	2015 Standards



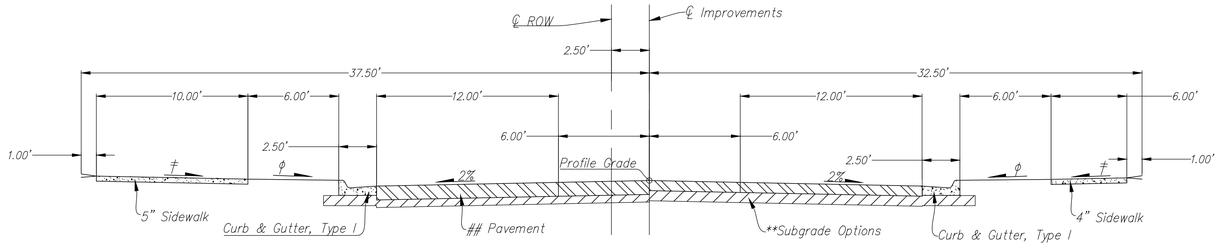
2–LANE – 33' PAVEMENT WIDTH

INCOMPLETE STREET WITH 60' ROW



2–LANE – 33' PAVEMENT WIDTH

COMPLETE STREET WITH 60' ROW
(Improvements Not Centered on ROW)



3–LANE – 41' PAVEMENT WIDTH

COMPLETE STREET WITH 70' ROW
Improvements Not Centered on ROW

ϕ 2% to 4%

ǂ 1% Preferred, 2% Maximum

COLLECTOR STREET DESIGN STANDARDS PER SALINA CITY CODE SEC. 36-74.1		
NUMBER OF LANES	3	2
MINIMUM ROW WIDTH (FT)	70	60
MINIMUM PAVEMENT WIDTH (FT)	41	29, 33#
MINIMUM CURVE RADIUS (FT)	300	300
MINIMUM TANGENT BETWEEN CURVES (FT)	150	150
MINIMUM LONGITUDINAL SLOPE (FT/FT)	0.003	.003

City Engineer may approve a reduction in paving width on a two lane collector street from 33' to 29' (back of curb to back of curb) when on–street parking is prohibited.

##

FUNCTIONAL CLASS	PAVEMENT THICKNESS (IN)	
	CONCRETE	ASPHALT
COLLECTOR	8	10.5

Note: Concrete pavement joint spacing ideally shall not exceed 1.30T and in no case shall exceed 1.6T.

** Contractor has the option of using:
8" Lime Treated
8" Fly Ash Treated
6"AB–3, or
6" Recycled Crushed Concrete subgrade.

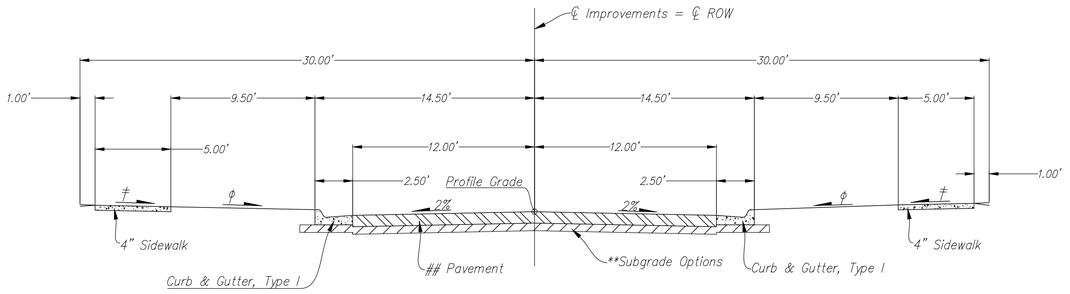
Earthware computations are based on pavement thickness and 8" treated subgrade thickness. Adjustments in the earthwork as a result of using other pavement and base options shall be subsidiary to the pavement and subgrade bid items.

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
FUNCTIONAL CLASS COLLECTOR 1

PROJ NO:	DATE:	SHEET:
FILENAME: 3A-E_Street Details.dwg	BY:	3C

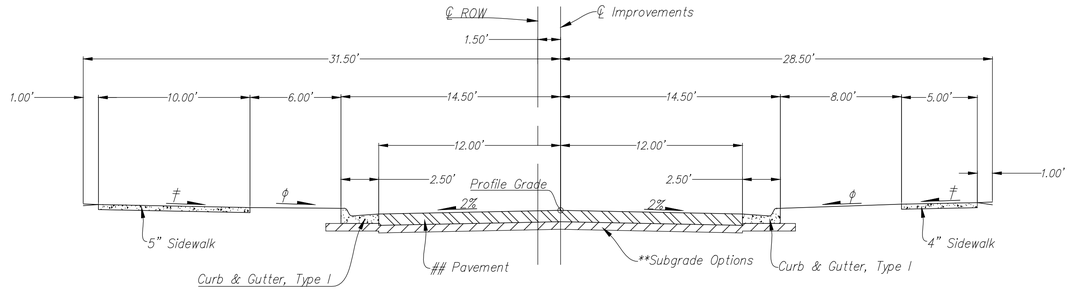
DATE	REVISIONS
4/15	2015 Standards



2-LANE-29' REDUCED PAVEMENT WIDTH

COLLECTOR STREET DESIGN STANDARDS PER SALINA CITY CODE SEC. 36-74.1		
NUMBER OF LANES	3	2
MINIMUM ROW WIDTH (FT)	70	60
MINIMUM PAVEMENT WIDTH (FT)	41	29, 33#
MINIMUM CURVE RADIUS (FT)	300	300
MINIMUM TANGENT BETWEEN CURVES (FT)	150	150
MINIMUM LONGITUDINAL SLOPE (FT/FT)	0.003	.003

City Engineer may approve a reduction in paving width on a two lane collector street from 33' to 29' (back of curb to back of curb) when on-street parking is prohibited.



2-LANE-29' PAVEMENT WIDTH

COMPLETE STREET WITH 60' ROW
(Improvements Not Centered on ROW)

ϕ 2% to 4%

ǂ 1% Preferred, 2% Maximum

##

FUNCTIONAL CLASS	PAVEMENT THICKNESS (IN)	
	CONCRETE	ASPHALT
COLLECTOR	8	10.5

Note: Concrete pavement joint spacing ideally shall not exceed 1.30T and in no case shall exceed 1.6T.

** Contractor has the option of using:
8" Lime Treated
8" Fly Ash Treated
6"AB-3, or
6" Recycled Crushed Concrete subgrade.

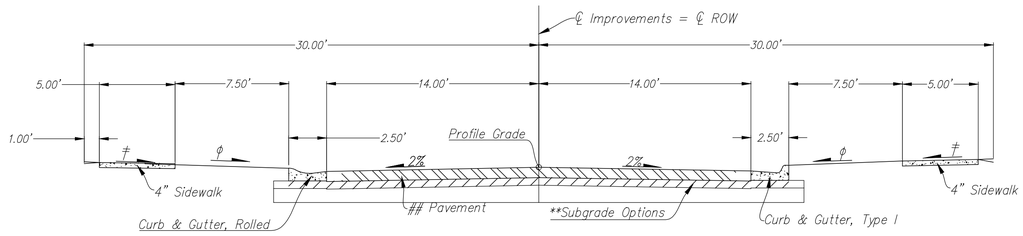
Earthware computations are based on pavement thickness and 8" treated subgrade thickness. Adjustments in the earthwork as a result of using other pavement and base options shall be subsidiary to the pavement and subgrade bid items.

CITY OF SALINA, KANSAS
PUBLIC WORKS - ENGINEERING - UTILITIES

STANDARD DETAILS
FUNCTIONAL CLASS 2

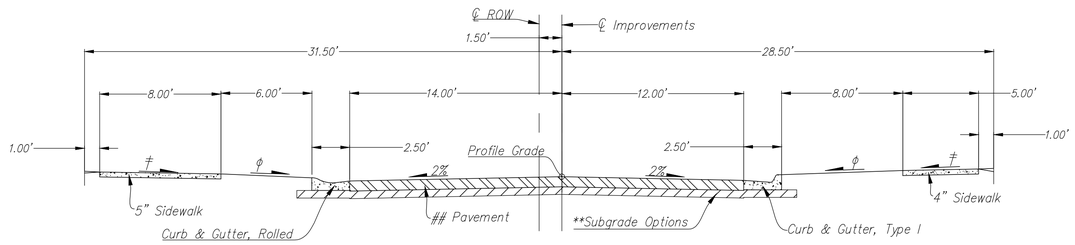
PROJ NO:	DATE:	SHEET:
FILENAME: 3A-E_Street Details.dwg	BY:	3D

DATE	REVISIONS
4/15	2015 Standards



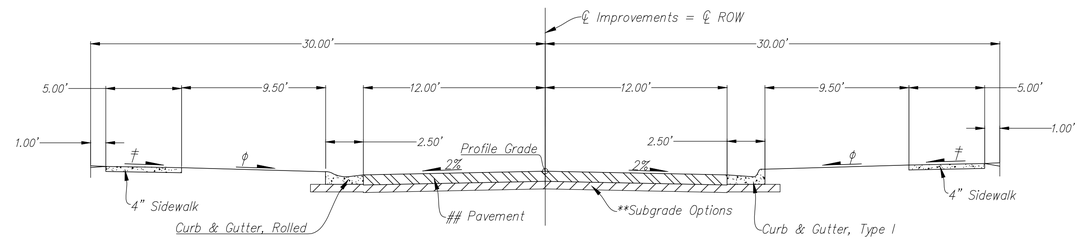
2-LANE UNDIVIDED 33' WIDTH

INCOMPLETE STREET WITH 60' ROW



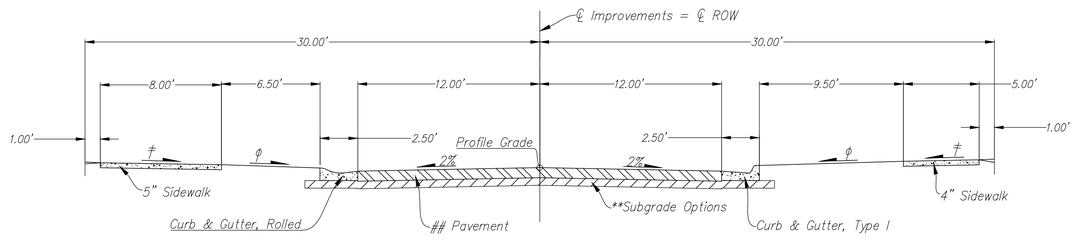
2-LANE UNDIVIDED 33' WIDTH

COMPLETE STREET WITH 60' ROW
(Improvements Not Centered on ROW)



2-LANE UNDIVIDED, 24' WIDTH

INCOMPLETE STREET WITH 60' ROW



2-LANE UNDIVIDED

COMPLETE STREET WITH 60' ROW

ϕ 2% to 4%

† 1% Preferred, 2% Maximum

LOCAL STREET DESIGN STANDARDS PER SALINA CITY CODE SEC. 36-74.1	
NUMBER OF LANES	2
MINIMUM ROW WIDTH (FT)	60
MINIMUM PAVEMENT WIDTH (FT)	29, 33#
MINIMUM CURVE RADIUS (FT)	150
MINIMUM TANGENT BETWEEN CURVES (FT)	100
MINIMUM LONGITUDINAL SLOPE (FT/FT)	.003

City Engineer may require a 33' pavement width on local streets that serve as through streets or major entry points into subdivisions.

##

FUNCTIONAL CLASS	PAVEMENT THICKNESS (IN)	
	CONCRETE	ASPHALT
LOCAL	6	8

Note: Concrete pavement joint spacing ideally shall not exceed 1.30T and in no case shall exceed 1.6T.

** Contractor has the option of using:
8" Lime Treated
8" Fly Ash Treated
6"AB-3, or
6" Recycled Crushed Concrete subgrade.

Earthware computations are based on pavement thickness and 8" treated subgrade thickness. Adjustments in the earthwork as a result of using other pavement and base options shall be subsidiary to the pavement and subgrade bid items.

60' ROW is required on dead end streets that exceed 600' in length. (City Code Section 36-74.1)

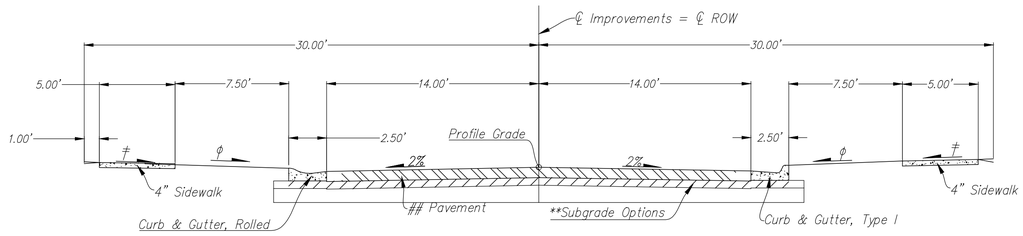
Local streets should complement complete street designs by providing sufficient connectivity and facilities to link the modes accomodated to the adjacent collector and arterial network.

CITY OF SALINA, KANSAS
PUBLIC WORKS - ENGINEERING - UTILITIES

STANDARD DETAILS
FUNCTIONAL CLASS LOCAL

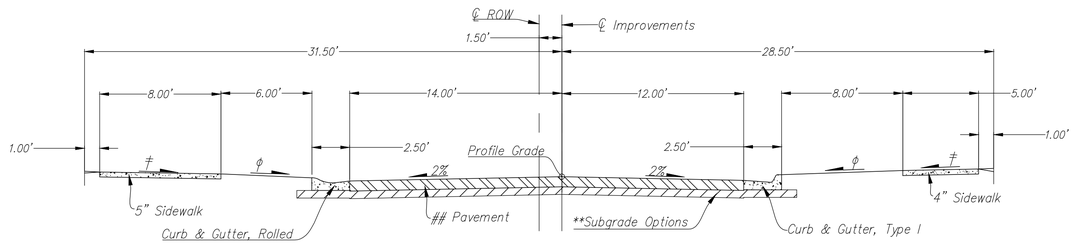
PROJ NO:	DATE:	SHEET:
FILENAME: 3A-E_Street Details.dwg	BY:	3E

DATE	REVISIONS
4/15	2015 Standards



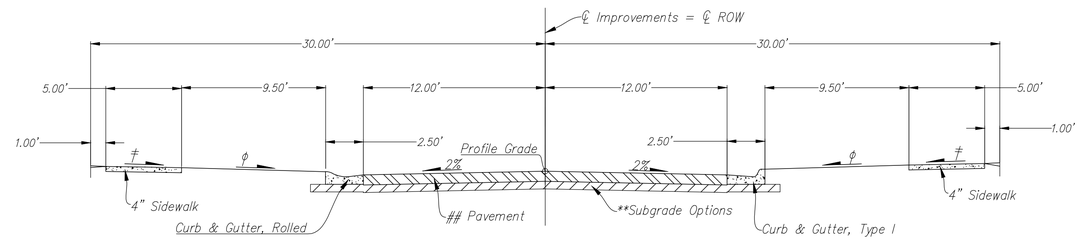
2-LANE UNDIVIDED 33' WIDTH

INCOMPLETE STREET WITH 60' ROW



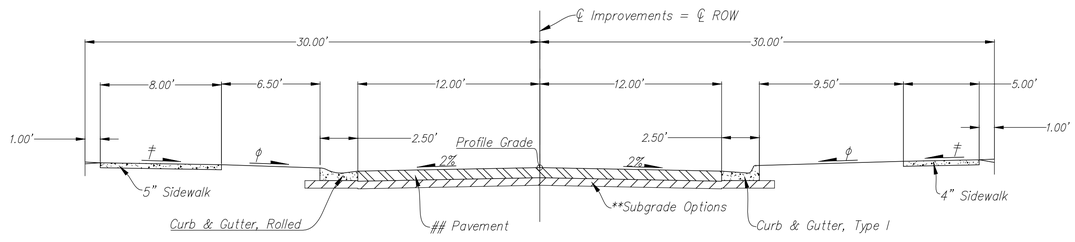
2-LANE UNDIVIDED 33' WIDTH

COMPLETE STREET WITH 60' ROW
(Improvements Not Centered on ROW)



2-LANE UNDIVIDED, 24' WIDTH

INCOMPLETE STREET WITH 60' ROW



2-LANE UNDIVIDED

COMPLETE STREET WITH 60' ROW

ϕ 2% to 4%

† 1% Preferred, 2% Maximum

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##

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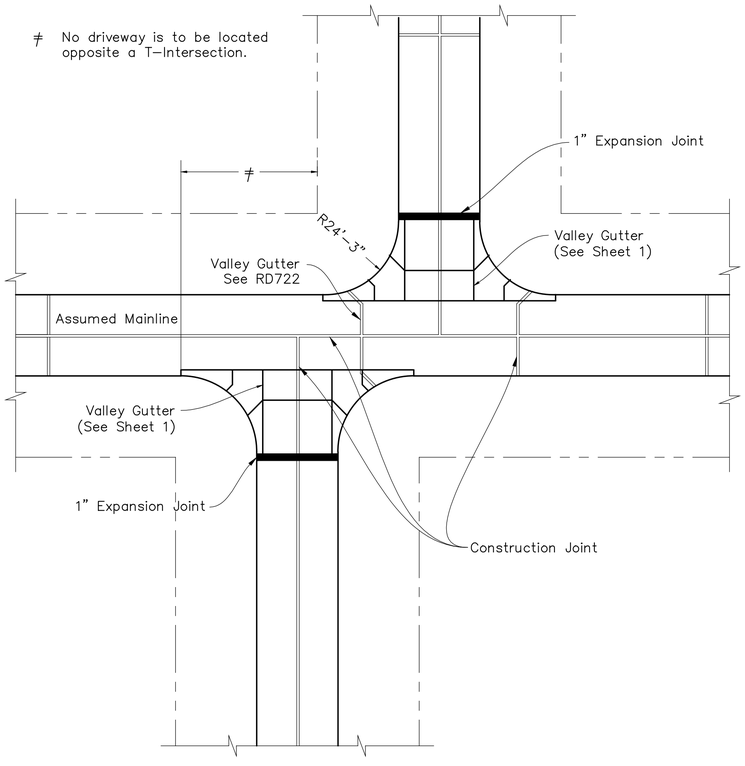
CITY OF SALINA, KANSAS
PUBLIC WORKS - ENGINEERING - UTILITIES

STANDARD DETAILS
FUNCTIONAL CLASS LOCAL

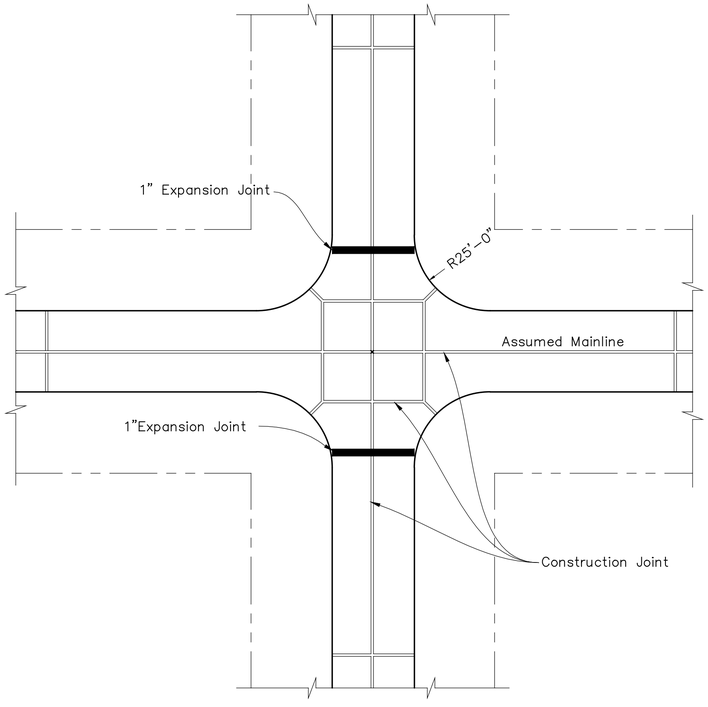
PROJ NO:	DATE:	SHEET:
FILENAME: 3A-E_Street Details.dwg	BY:	3E

DATE	REVISIONS
4/2015	2015 Standards

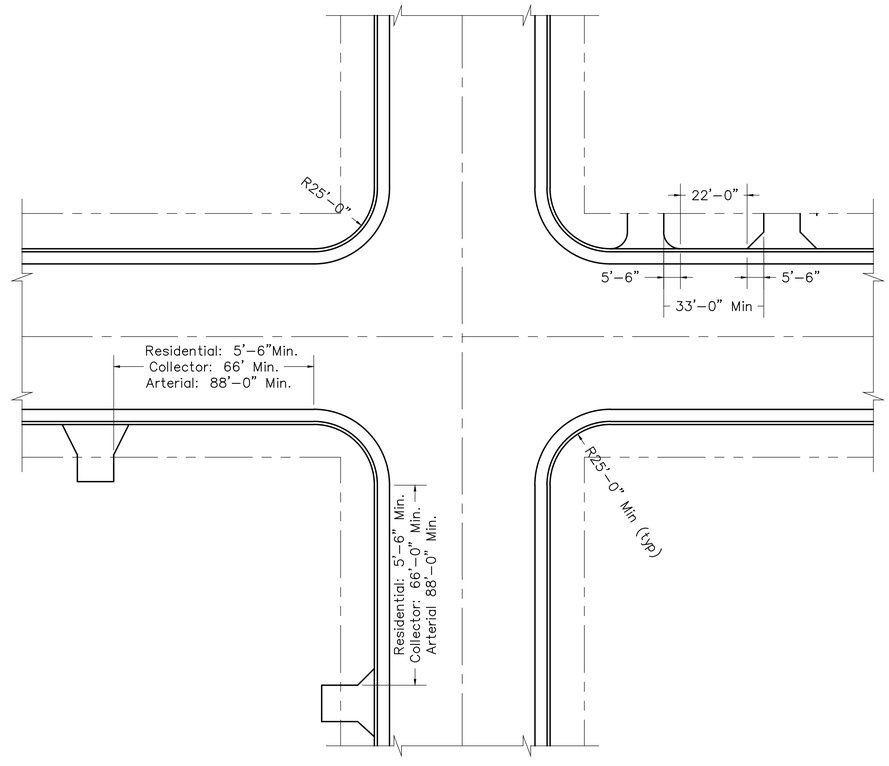
≠ No driveway is to be located opposite a T–Intersection.



TYPICAL INTERSECTION PLAN



TYPICAL INTERSECTION PLAN



TYPICAL DRIVEWAY LAYOUT

NOTES:

Construction Joints Shall Have Tie Bars On 2'–6" Centers

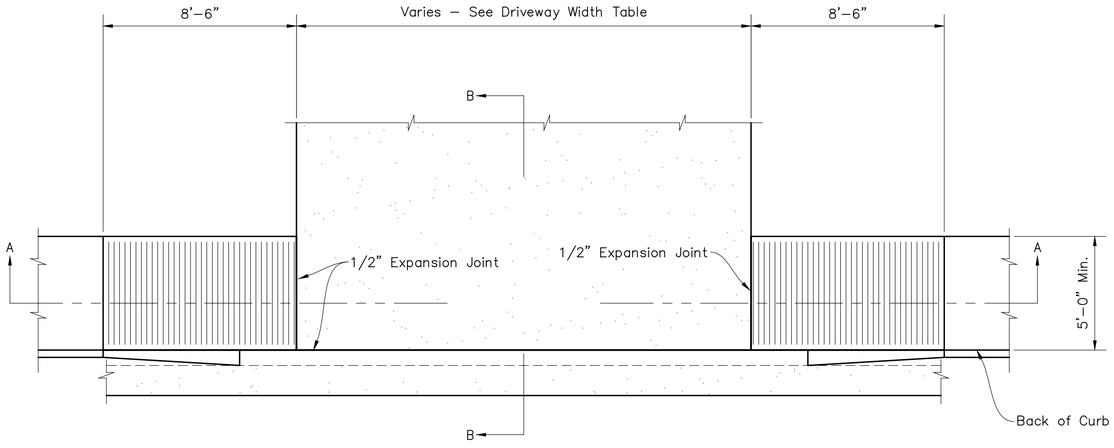
All Joints Not Otherwise Designated are Butt Construction Joints (See Sheet 1)

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

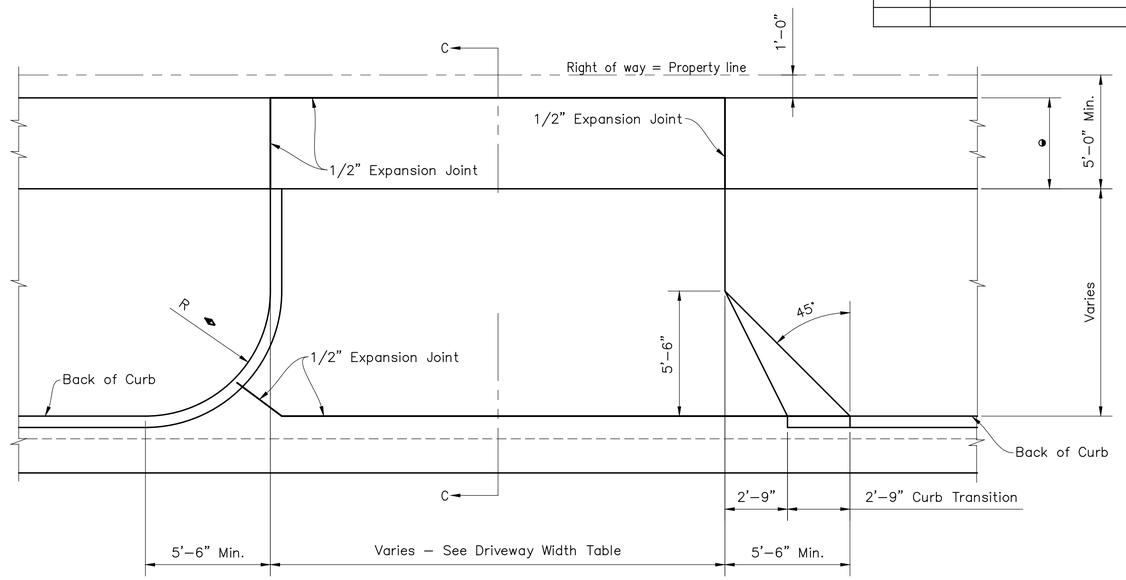
STANDARD DETAILS
TYPICAL INTERSECTION LAYOUTS

PROJ NO:	DATE:	SHEET:
FILENAME: 3_Typical_Intersection_Layouts.dwg	BY:	3

DATE	REVISIONS
9/2015	2015 Standards



TYPICAL DRIVEWAY w/ CURBSIDE SIDEWALK DETAIL



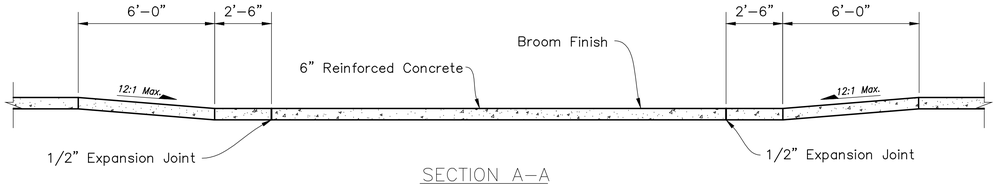
WITH RADIUS WITH 45° WING

TYPICAL DRIVEWAY w/ PROPERTY LINE SIDEWALK DETAIL

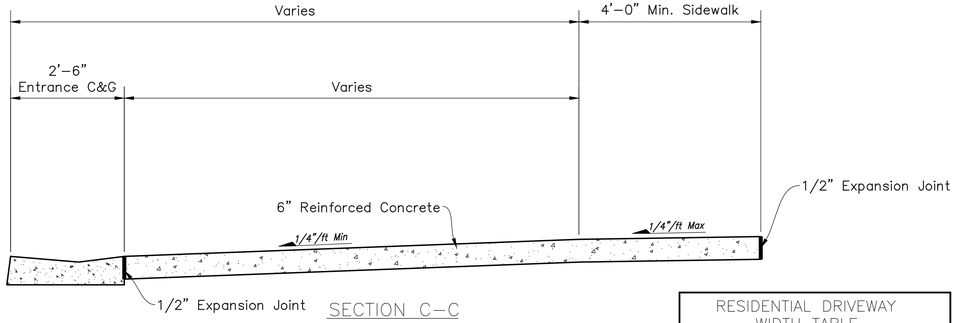
◑ Match adjacent sidewalk width

◆

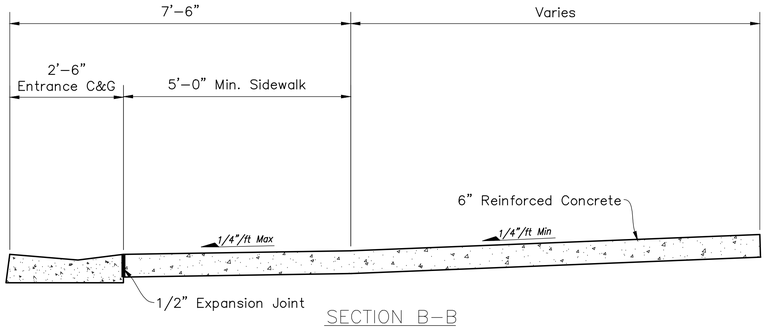
Driveway Type	Radius
Commercial	15' min.
Single Residential	5.5' min
Double Residential	3' min.



SECTION A–A



SECTION C–C



SECTION B–B

GENERAL NOTES:

1. All driveway approach construction shall be subject to City inspection at all times by the City Engineer or his representative.

2. All driveway approach construction shall be placed normal to center line of roadway in a true and neat manner.

3. All driveway approach construction shall be no less than 5'–6" from adjacent property unless with written consent from adjacent property owner.

4. Before placement of concrete, the subgrade shall be thoroughly moistened. Concrete may not be placed on frozen or muddy subgrade or when ambient air temperature is 40° F. or less without adequate frost protection.

5. All concrete within the right–of–way shall be placed with a minimum 4,000 psi concrete mix design "(Grade 3.0 (AE))". Upon placement of concrete, the surface shall be broom finished and protected against premature drying with white pigmented curing compound for a period no less than seven (7) days. (When the ambient air temperature is expected to remain at or below 40° F, the white pigmented curing compound will be substituted with thermal blankets).

6. Entrance and driveway pavements shall have a uniform thickness of 6", and reinforced with a minimum 6X6– W1.4xW1.4 welded wire reinforcement. (Approximate weight of welded wire mesh = 21 lbs. per 100 sq. ft.)

Expansion joints will be that of a preformed material, one half (1/2") thickness, and shall be placed wherever new work joins existing work; at ends of all driveway, alley and street returns where returns meet existing construction; and at intervals not to exceed one hundred fifty (150') feet for all straight runs.

7. Concrete Pavement shall be jointed w/ 1/8" wide, T/3 depth, contraction joints not to exceed 10' x 10' slabs.

RESIDENTIAL DRIVEWAY WIDTH TABLE

LOT WIDTH	MAXIMUM DRIVEWAY
50 ft or Less	20 ft
51 ft to 60 ft	24 ft
61 ft' to 74 ft	30 ft
75 ft or Greater	30 ft
*with front facing attached 3 car garage or carport	36 ft
Minimum Driveway Width = 8'–0"	

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
RESIDENTIAL DRIVEWAY

PROJ NO:	DATE:	SHEET:
		4
FILENAME: 4_Driveway_Details.dwg	BY:	

DATE	REVISIONS
9/15	2015 Standards

GENERAL NOTES:

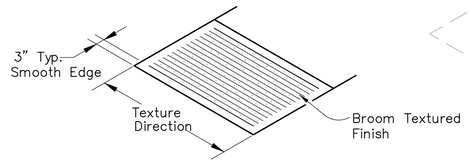
1. Surface texture of the ramp shall be broomed finished to the slope of the ramp.
2. Mortar shall be placed in the holes left from frames.
3. The truncated dome surface shall be a contrasting color to the adjacent surfaces.
4. The bricks shall be saw cut only and any brick shall not be less than 25% of a full brick.
5. The installation pattern shown for the detectable warning paving bricks is running bond. Other patterns may be used upon the approval of the Engineer. The truncated domes on the bricks shall be placed in a parellel alignment for the direction of pedestrian travel as shown. The running bond pattern may be rotated 90° to reduce the spacing between bricks for radius installations. The spacing between bricks for radius curb installations may vary for each site. This spacing shall be kept to a minimum upon review and approval of the Engineer.
6. All formed edges, contraction joints and expansion joints shall be rounded with a $\frac{1}{4}$ to $\frac{3}{8}$ inch radius edging tool except when joints are sawed.

* Ramp Length Will Be Determined By Slope Grade

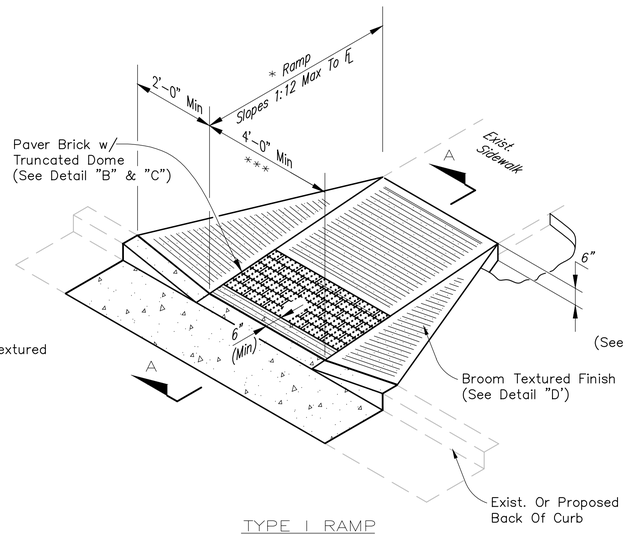
** Ramp & Curb Transition Will Be Determined By Slope Grade

*** Ramp Width To Be Same Width As Exist Sidewalk With a 4' Min Width

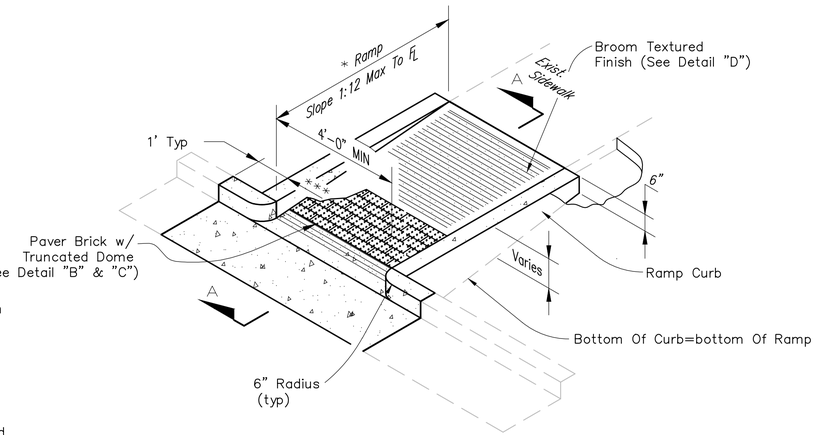
These Dimensions Are Nominal



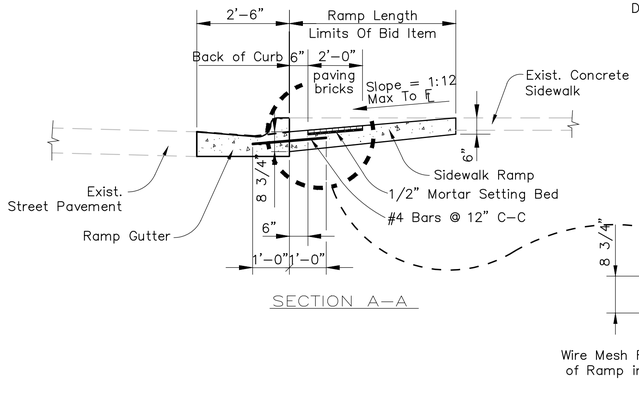
DETAIL "D"



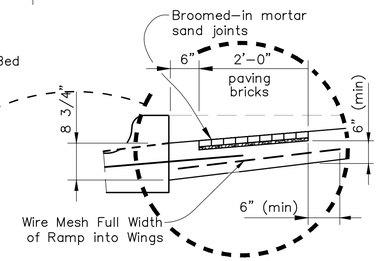
TYPE I RAMP

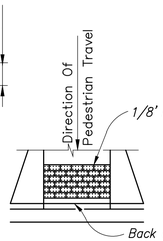


TYPE II RAMP

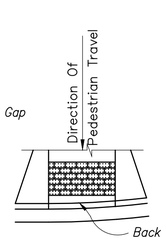


SECTION A-A

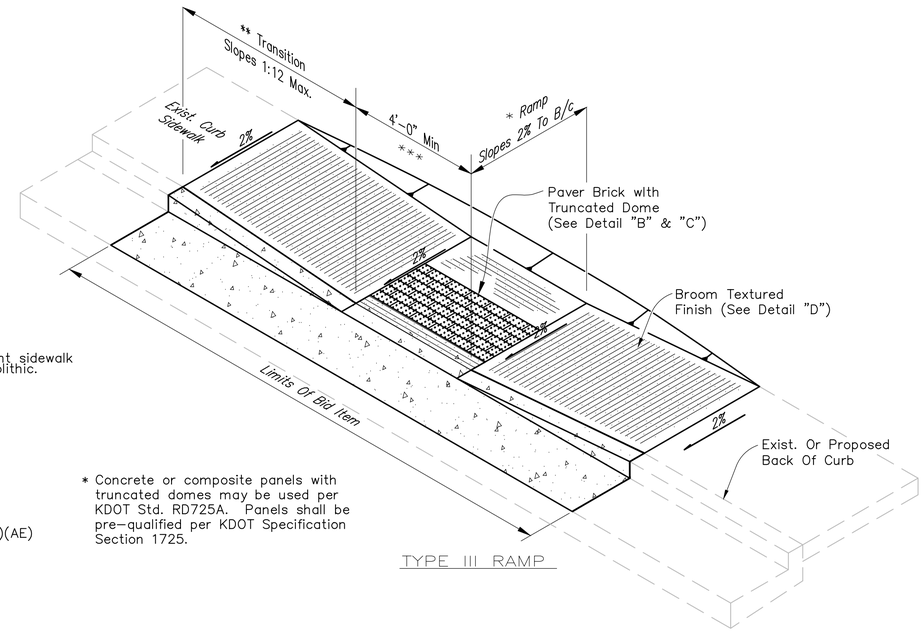




STRAIGHT CURB DETAILS

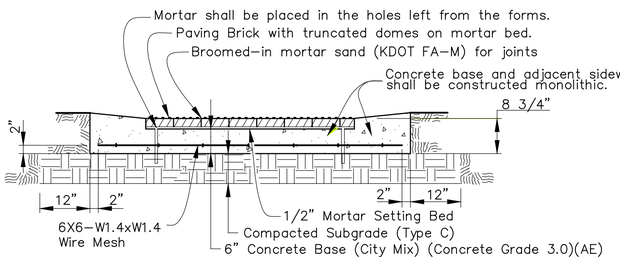


RADIUS CURB DETAILS

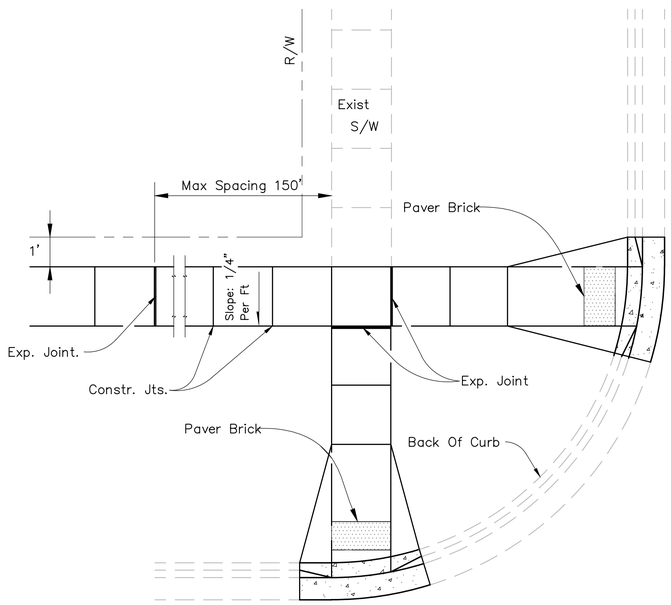


* Concrete or composite panels with truncated domes may be used per KDOT Std. RD725A. Panels shall be pre-qualified per KDOT Specification Section 1725.

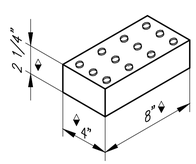
TYPE III RAMP



TYPICAL SECTION OF PAVER BRICK

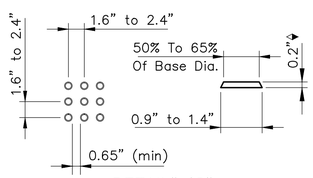


SIDEWALK DETAILS



DETAIL" B"

ASTM C 936 PAVER BRICK WITH TRUNCATED DOME SURFACE



DETAIL" 'C"

TRUNCATED DOME DIMENSIONS for SQUARE PATTERN

♦ Nominal Dimensions

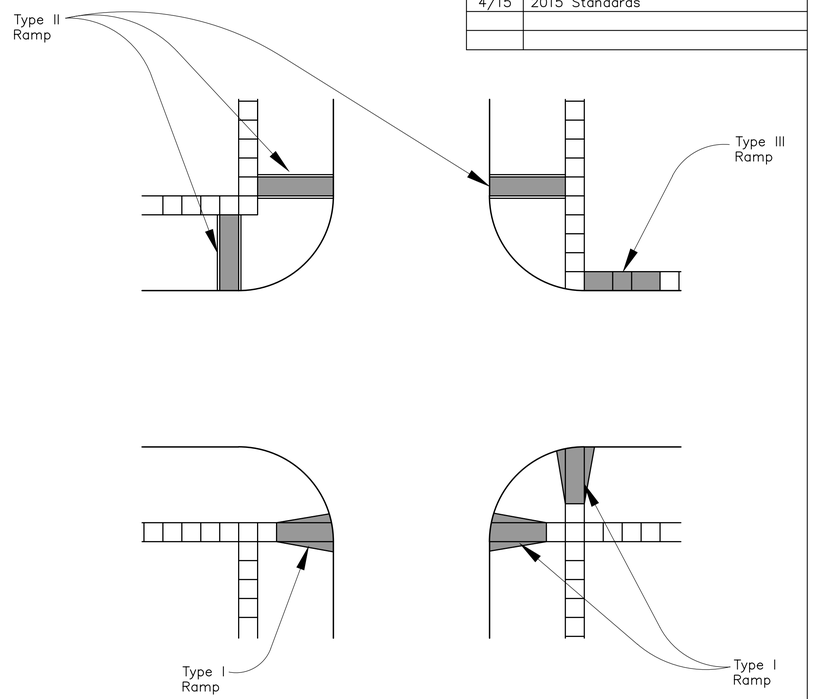
SIDEWALK THICKNESS	
WIDTH/LOCATION	THICKNESS
≤ 8 FT	4 IN
8-10 FT	5 IN
DRIVEWAYS	6 IN

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

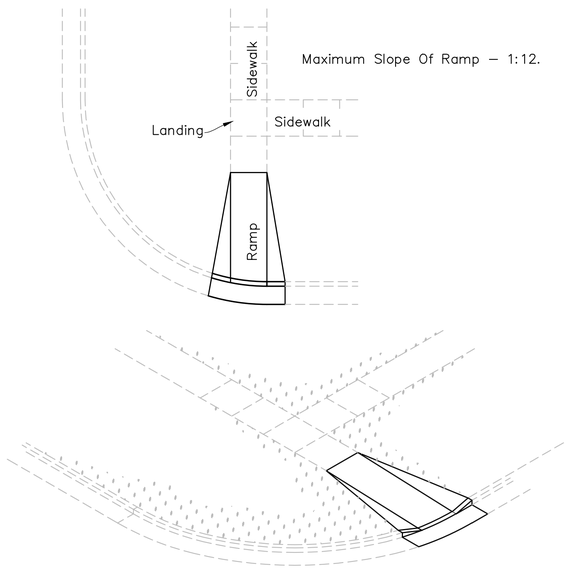
STANDARD DETAILS
SIDEWALK & ADA RAMP

PROJ NO:	DATE:	SHEET:
		5
FILENAME: 5_Sidewalk_Ramp_Details.dwg	BY:	

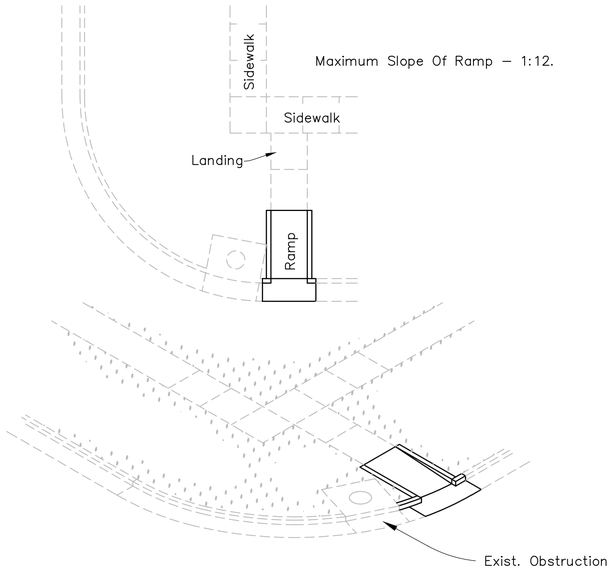
DATE	REVISIONS
4/15	2015 Standards



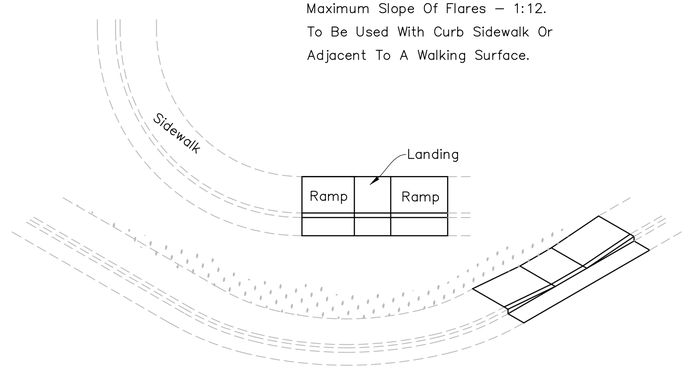
POSSIBLE SIDEWALK COMBINATIONS



TYPE I RAMP



TYPE II RAMP



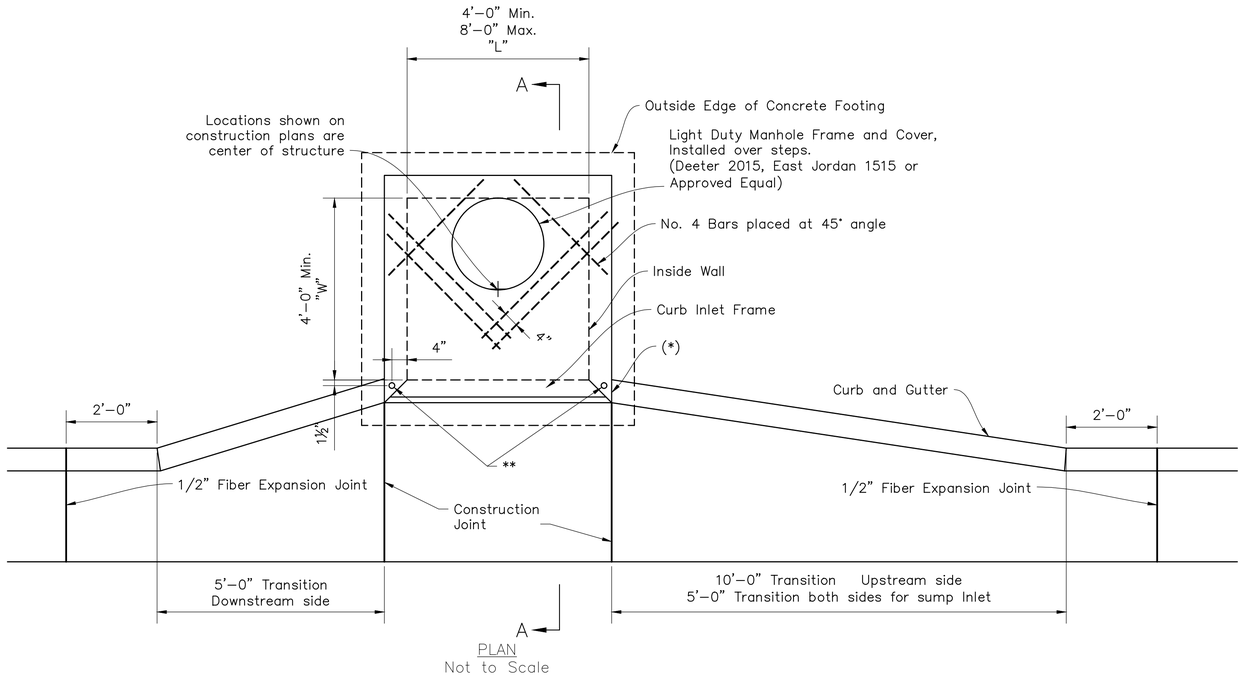
TYPE III RAMP

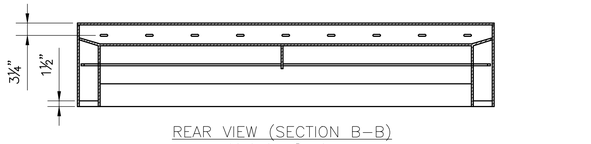
CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

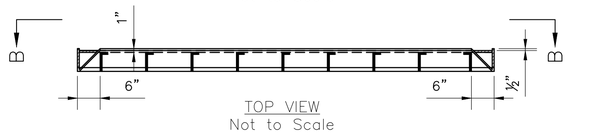
STANDARD DETAILS
TYPICAL SIDEWALK LAYOUTS

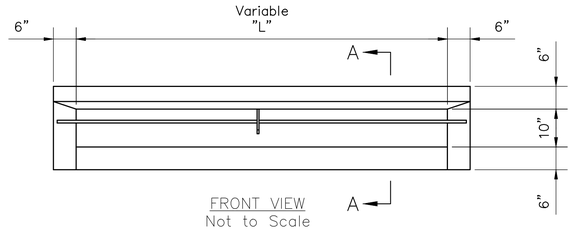
PROJ NO:	DATE:	SHEET:
FILENAME: 6_Typical_Sidewalk_Ramp_Layouts.dwg	BY: JPB	6

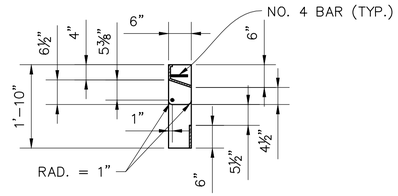
DATE	REVISIONS
4/15	2015 Standards





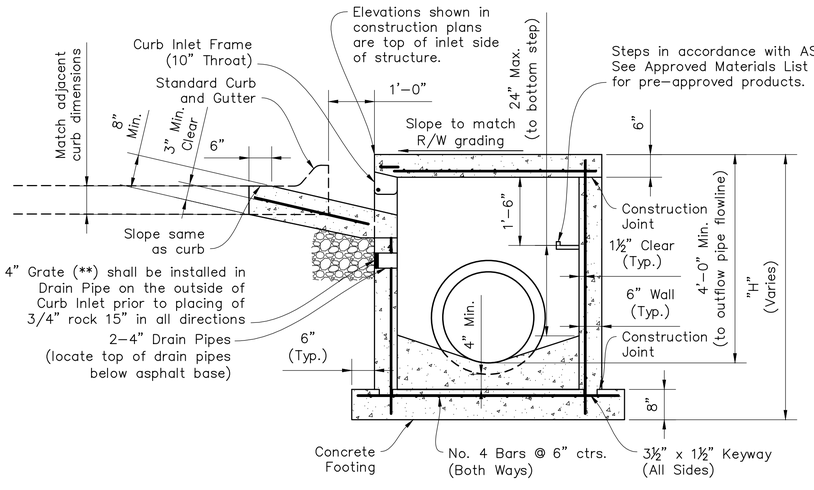






(*) – Curb and Gutter Transition Section shall be Isolated from Curb Inlet at all points of Contact. Isolation Material shall be 30 lb. Roofing Felt or approved equal.

(**) – No. 4 Vertical Bars shall be placed in Wall 1½" clear from finished top of slab.



(*) – Curb and Gutter Transition Section shall be Isolated from Curb Inlet at all points of contact. Isolated materials shall be 30 lb. Roofing Felt or approved equal.

(**) – The materials of the grate shall match the material of the pipe and shall be as follows:

a) PVC Pipe – 4" schedule 40 PVC meeting ASTM D–1785
Grate – 4" PVC Snap–in Drain – meets ASTM D–2665, with Stainless Steel (Type 304) Cover, mounted with two 18–8 Stainless Steel Screws: Maximum opening size ¼".

b) HDPE: Pipe – 4" HDPE meeting AASHTO M252, Type S;
Grate – 4" HDPE – meets ASTM D–3350; Maximum opening size ¼".

INLET DATA

INLET NO.																
STATION																
SIDE																
℄ ELEV.																
T.C. ELEV.																
TYPE																
RADIUS																
"H"																
"W"																
"D"																

NOTES:

General

1. All storm sewer structures shall be pre–cast or cast in place. If pre–cast is used, the tops shall be poured in place and the wall steel shall be left exposed to a height 2 below the finish top elevation, or as directed by the Engineer.
2. Pre–cast shop drawings are to be approved by the Engineer for publicly financed or administered projects. Pre–cast shop drawings for privately financed projects are to be submitted to the Engineering Division of the Public Works Department.
3. Do not scale these drawings for dimensions or clearances. Any questions regarding dimensions shall be brought to the attention of the Engineer prior to construction.
4. On–grade inlets shall conform to the street grade and sump inlets shall be level.
5. The first dimension listed in the construction notes is the L dimension. The second dimension is the W dimension. The concrete thickness and reinforcement shown is for boxes with (L + H) and (W + H) less than or equal to 20. For boxes with either of these calculations greater than 20, a special design is required.

Concrete

6. Concrete used in this work shall comply to all composition, quality, product control, and handling (stockpile) requirements from the latest version of Section 401 of the Kansas Department of Transportation Standards Specifications, and shall meet the requirements of the City of Salina Specifications.
7. Inlet floors shall be shaped with non–reinforced concrete inverts to provide smooth flow.
8. Bevel all exposed edges with ¾" triangular molding.

Reinforcing Steel

9. Reinforcing Steel shall be new billet, minimum Grade 40 as per ASTM A615M, and shall be bent cold.
10. All dimensions relative to reinforcing steel are to centerline of bars. 2 clearance shall be provided throughout unless noted otherwise. Tolerance of +/–⅛" shall be permitted.
11. All lap splices not shown shall be a minimum of 40 bar diameters in length.
12. All reinforcing steel shall be supported on fabricated steel bar supports @ 3'–0 maximum spacing.
13. All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sticking of dowels into fresh or partially hardened concrete will not be acceptable.

Construction

14. The bottom slab shall be at least 24 hours old before placing sidewall concrete. All sidewall forms shall remain in place a minimum of 24 hours after sidewalls are poured before removal, and after removal shall be immediately treated with membrane curing compound.
15. All curb inlet tops are to be constructed after final curb string line has been approved by the Engineer and prior to curb construction, or as directed by the Engineer.
16. Pipe connectors to pre–cast structures shall have a minimum of 6 concrete around the entire pipe within 2' of the structure.
17. Tamped backfill shall be used around structures, except under paved areas. Tamped backfill shall be finely divided job excavated material free from debris, organic material and stones, compacted to 95% maximum density as determined by AASHTO STANDARD, Method T–99. Removable Flowable Fill is required under any portion of paved right of way, including the area within existing of future public street pavement and under existing of future curb and gutter, median, asphalt path, or concrete sidewalk.

Curb Inlet Frame Notes

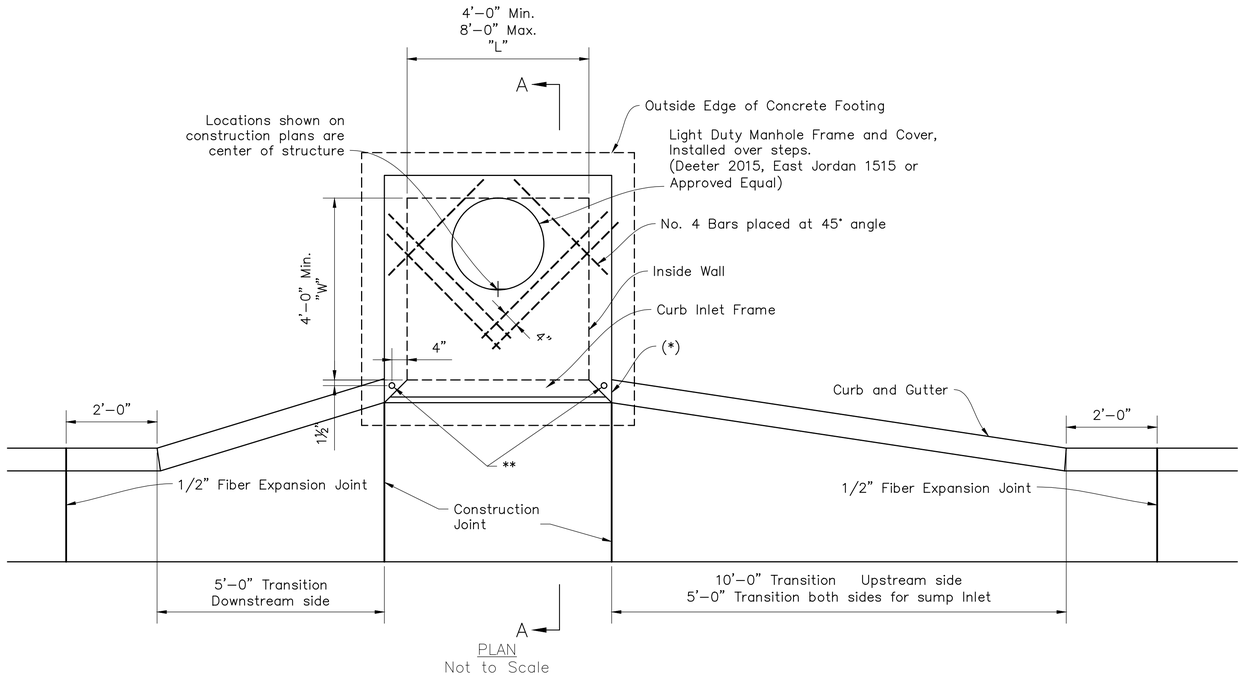
1. All welds shall be performed in accordance with appropriate AWS Specifications and Procedures.
2. All welds on exposed surfaces shall be dressed so as to provide a pleasing finish appearance.
3. All flat steel shall be 7 Gage or 3⁄16" thick.
4. The entire frame shall be hot dip zinc coated in accordance with ASTM A–123.

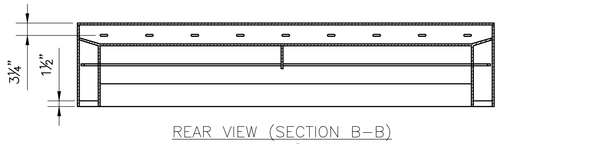
CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

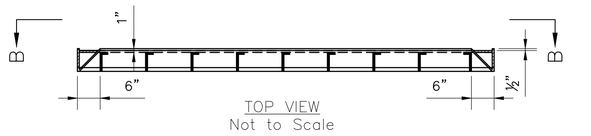
STANDARD DETAILS
CURB INLET

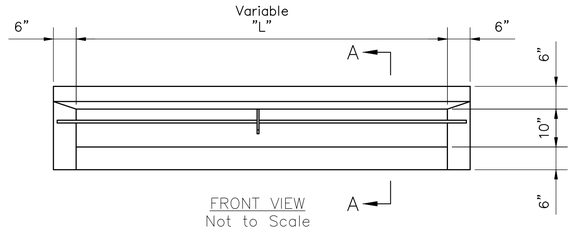
PROJ NO:	DATE:	SHEET:
		7
FILENAME: 7_Curb_Inlet_Details.dwg	BY:	

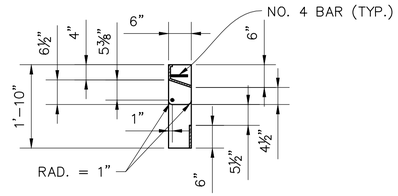
DATE	REVISIONS
4/15	2015 Standards





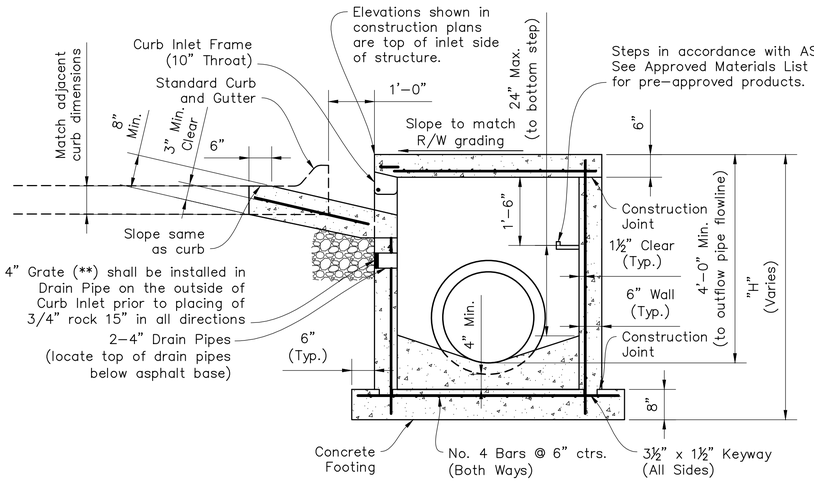






(*) – Curb and Gutter Transition Section shall be Isolated from Curb Inlet at all points of Contact. Isolation Material shall be 30 lb. Roofing Felt or approved equal.

(**) – No. 4 Vertical Bars shall be placed in Wall 1½" clear from finished top of slab.



(*) – Curb and Gutter Transition Section shall be Isolated from Curb Inlet at all points of contact. Isolated materials shall be 30 lb. Roofing Felt or approved equal.

(**) – The materials of the grate shall match the material of the pipe and shall be as follows:

a) PVC Pipe – 4" schedule 40 PVC meeting ASTM D–1785
Grate – 4" PVC Snap–in Drain – meets ASTM D–2665, with Stainless Steel (Type 304) Cover, mounted with two 18–8 Stainless Steel Screws: Maximum opening size ¼".

b) HDPE: Pipe – 4" HDPE meeting AASHTO M252, Type S;
Grate – 4" HDPE – meets ASTM D–3350; Maximum opening size ¼".

INLET DATA

INLET NO.																
STATION																
SIDE																
℄ ELEV.																
T.C. ELEV.																
TYPE																
RADIUS																
"H"																
"W"																
"D"																

NOTES:

General

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4. On–grade inlets shall conform to the street grade and sump inlets shall be level.
5. The first dimension listed in the construction notes is the L dimension. The second dimension is the W dimension. The concrete thickness and reinforcement shown is for boxes with (L + H) and (W + H) less than or equal to 20. For boxes with either of these calculations greater than 20, a special design is required.

Concrete

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7. Inlet floors shall be shaped with non–reinforced concrete inverts to provide smooth flow.
8. Bevel all exposed edges with ¾" triangular molding.

Reinforcing Steel

9. Reinforcing Steel shall be new billet, minimum Grade 40 as per ASTM A615M, and shall be bent cold.
10. All dimensions relative to reinforcing steel are to centerline of bars. 2 clearance shall be provided throughout unless noted otherwise. Tolerance of +/–⅛" shall be permitted.
11. All lap splices not shown shall be a minimum of 40 bar diameters in length.
12. All reinforcing steel shall be supported on fabricated steel bar supports @ 3'–0 maximum spacing.
13. All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sticking of dowels into fresh or partially hardened concrete will not be acceptable.

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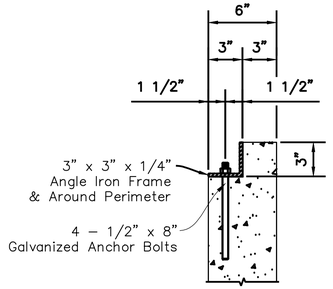
CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

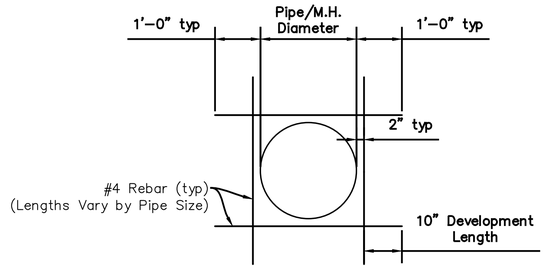
STANDARD DETAILS
CURB INLET

PROJ NO:	DATE:	SHEET:
		7
FILENAME: 7_Curb_Inlet_Details.dwg	BY:	

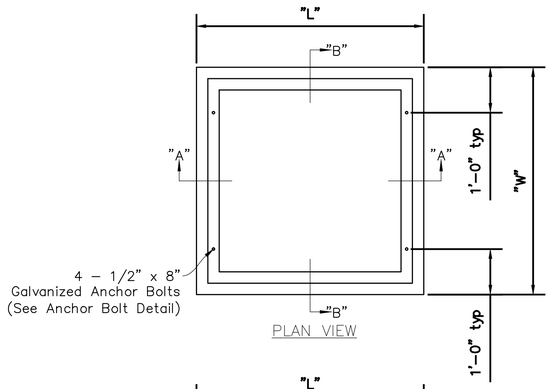
DATE	REVISIONS
4/15	2015 Standards



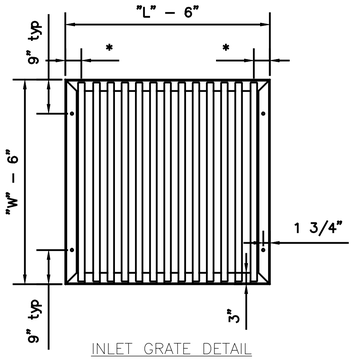
ANCHOR BOLT DETAIL



BLOCKOUT REINFORCING DETAIL
Typical

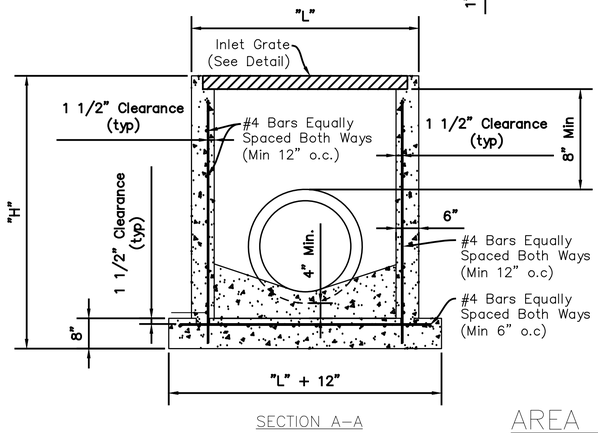


PLAN VIEW

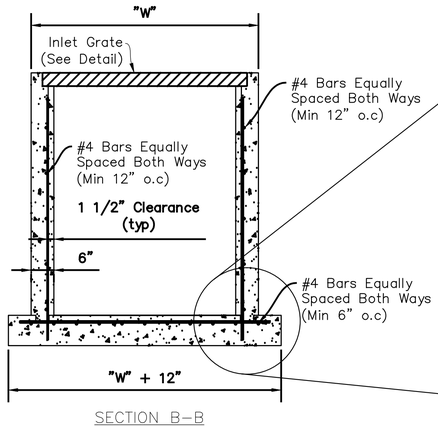


INLET GRATE DETAIL

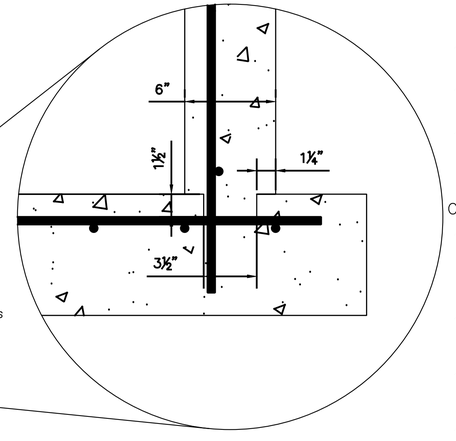
INLET GRATE PIPE DIMENSIONS AND SPACING			
L x W	NO. OF BARS	DIA. x LENGTH x SPACING	*
7'–6"x4'–6"	13	2½ϕ x 3'–10¼" PIPES @ 6"CTRS.	6"
5'–6"x4'–6"	10	2½ϕ x 3'–10¼" PIPES @ 5½"CTRS.	5¼"
4'–6"x4'–6"	8	2½ϕ x 3'–10¼" PIPES @ 5½"CTRS.	4¾"
4'–0"x4'–0"	7	2½ϕ x 3'–4¼" PIPES @ 5½"CTRS.	4½"



SECTION A–A



SECTION B–B



KEYWAY DETAIL

AREA INLET DETAILS

INLET DATA

INLET NO.																
STATION																
SIDE																
℄ ELEV.																
T.C. ELEV.																
TYPE																
RADIUS																
"H"																
"W"																
"D"																

NOTES:

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15. Pipe collars to pre–cast structures shall have a minimum of 6 concrete around the entire pipe within 2' of the structure.

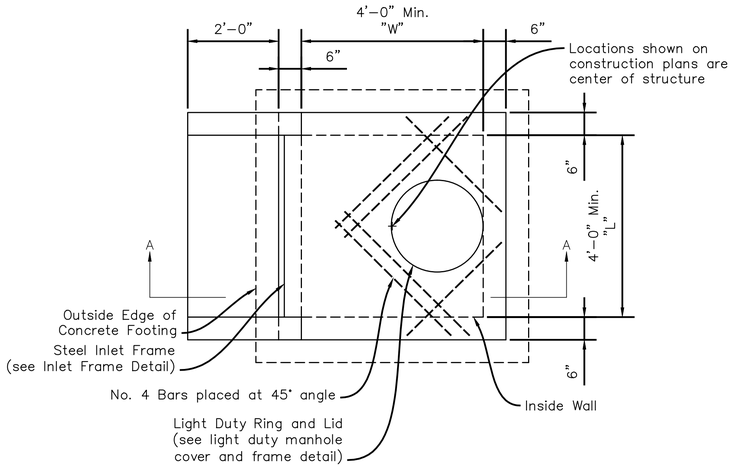
16. Material selection and compaction requirements for backfill around structures shall be as specified in the project specifications.

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
AREA INLET 1

PROJ NO:	DATE:	SHEET:
		8
FILENAME: 8_Area_Inlet_1_Details.dwg	BY:	

DATE	REVISIONS
4/15	2015 Standards



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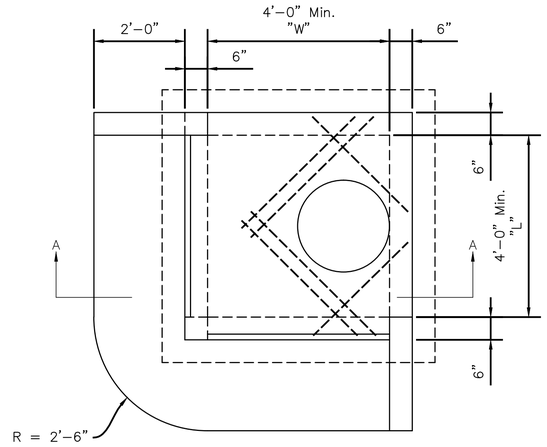
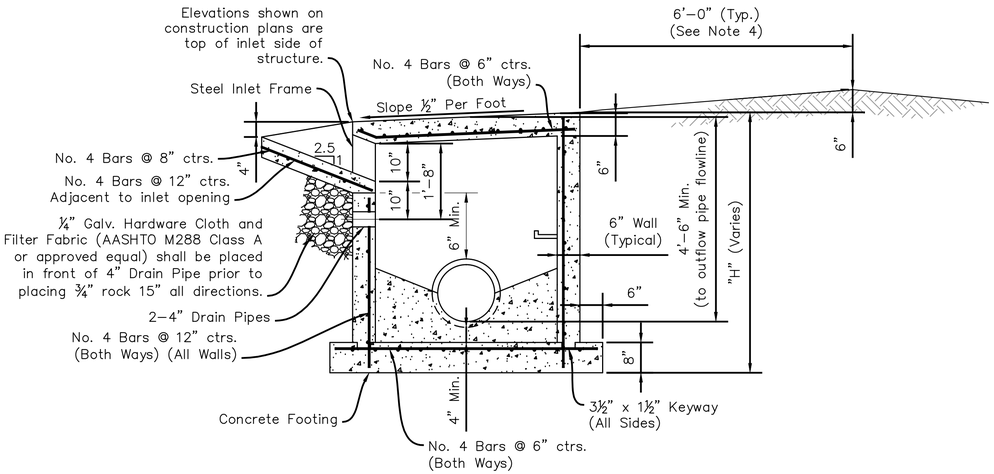
Not to Scale



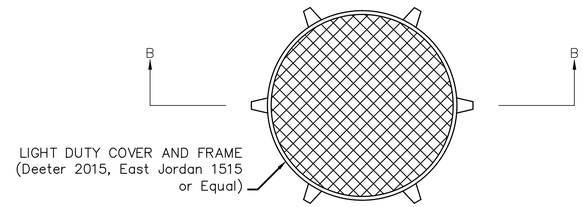
PLAN
(w/ 2 ADJACENT OPENINGS)
Not to Scale

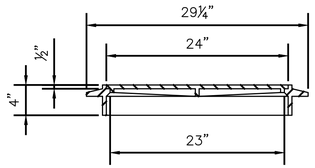
CURB INLET DETAILS

(Not to Scale)



SECTION A–A





SECTION B–B

LIGHT DUTY MANHOLE COVER AND FRAME DETAILS

(Not to Scale)

INLET DATA

INLET NO.																	
STATION																	
SIDE																	
FL ELEV.																	
T.C. ELEV.																	
TYPE																	
RADIUS																	
"H"																	
"W"																	
"D"																	

NOTES:

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4. Berm location and elevation may vary. See grading plan for exact location.

5. On–grade inlets shall conform to the street grade and sump inlets shall be level.

6. The first dimension listed in the construction notes is the L dimension. The second dimension is the W dimension. The concrete thickness and reinforcement shown is for boxes with (L + W) and (W + H) less than or equal to 20. For boxes with either of these calculations greater than 20, a special design is required.

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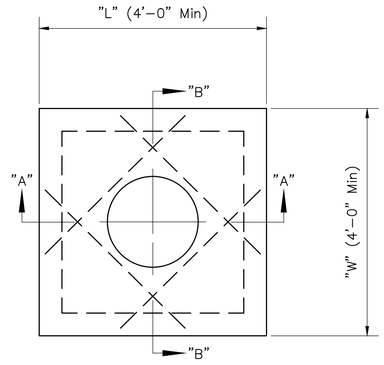
CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
AREA INLET 2

PROJ NO:	DATE:	SHEET:
		9
FILENAME: 7A_Area_Inlet_2_Details.dwg	BY:	

DATE	REVISIONS
4/15	2015 Standards



PLAN VIEW
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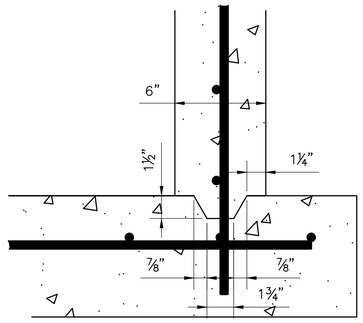

KEYWAY DETAIL
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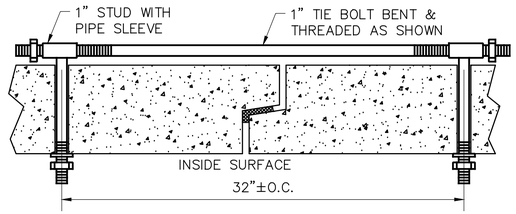

THROUGH HOLE TIE BOLT DETAIL
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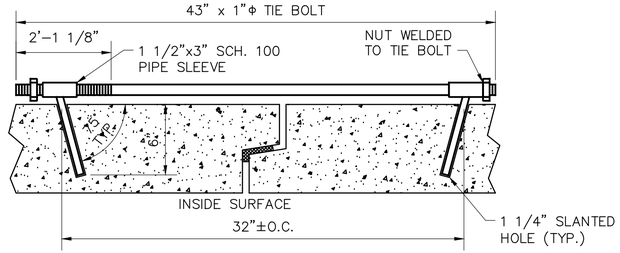
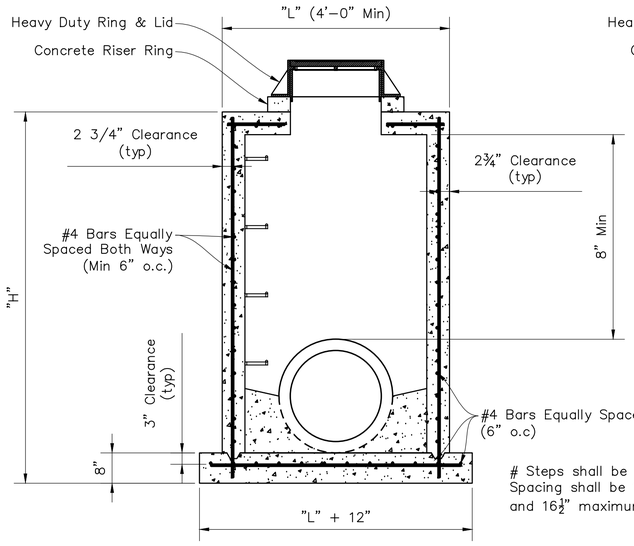


ADJUSTABLE HIDDEN TIE BOLT DETAIL
(NOT TO SCALE)



SECTION A–A
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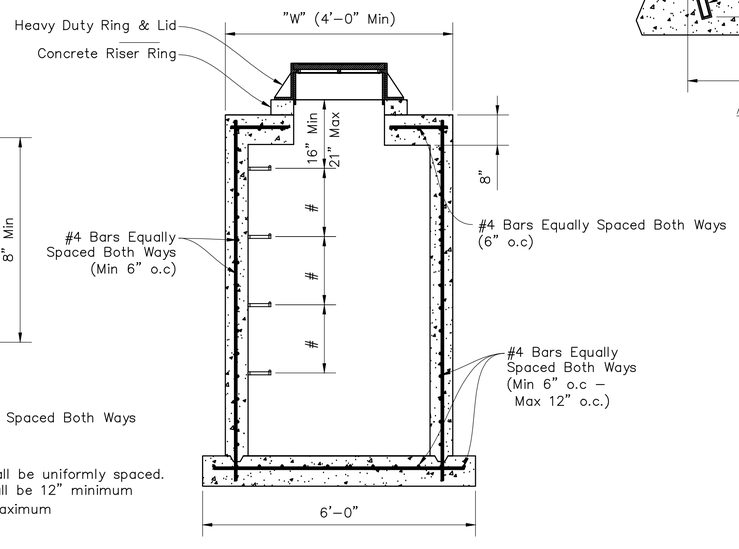
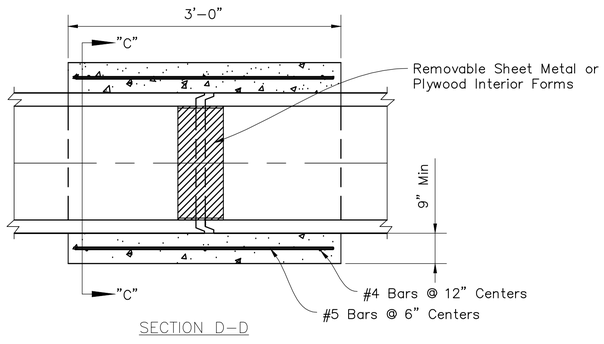
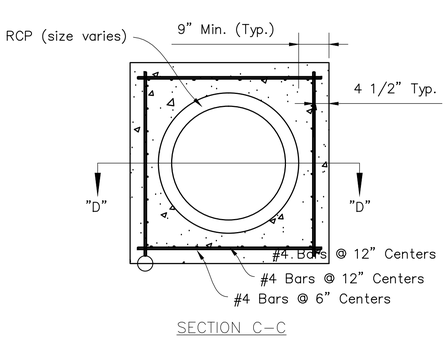


SECTION B–B
(NOT TO SCALE)

JUNCTION BOX DETAILS
(NOT TO SCALE)

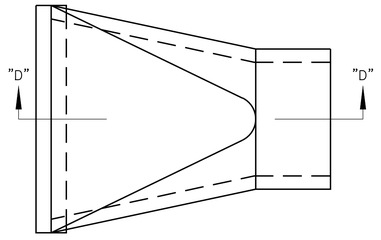


SECTION D–D

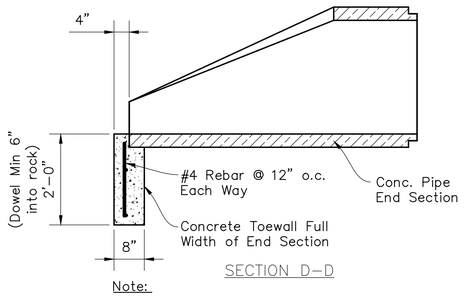


SECTION C–C

CONCRETE COLLAR DETAILS



PLAN VIEW



SECTION D–D

Note:

The last three joints of RCP, including the end section, shall be mechanically restrained where discharging into unimproved systems

END SECTION TOEWALL DETAILS
(NOT TO SCALE)

NOTES:

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5. The first dimension listed in the construction notes is the L dimension. The second dimension is the W dimension. The concrete thickness and reinforcement shown is for boxes with (L + W) and (W + H) less than or equal to 20. For boxes with either of these calculations greater than 20, a special design is required.

Concrete

6. Concrete used in this work shall comply to all composition, quality, product control, and handling (stockpile) requirements from the latest version of Section 401 of the Kansas Department of Transportation Standards Specifications, and shall meet the requirements of the City of Salina Specifications.

7. Concrete construction shall meet the applicable requirements of the Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, latest edition, except as modified in the City of Salina code.

8. Inlet floors shall be shaped with non–reinforced concrete inverts to provide smooth flow.

9. Bevel all exposed edges with 3/4 triangular molding.

Reinforcing Steel

10. Reinforcing Steel shall be new billet, minimum Grade 60 as per ASTM A615M, and shall be bent cold.

11. All dimensions relative to reinforcing steel are to centerline of bars. 2 clearance shall be provided throughout unless noted otherwise. Tolerance of +/– 1/8 shall be permitted.

12. All lap splices not shown shall be a minimum of 40 bar diameters in length.

13. All reinforcing steel shall be supported on fabricated steel bar supports @ 3'–0 maximum spacing.

14. All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sticking of dowels into fresh or partially hardened concrete will not be acceptable.

Construction

15. The bottom slab shall be at least 24 hours old before placing sidewall concrete. All sidewall forms shall remain in place a minimum of 24 hours after sidewalls are poured before removal, and after removal shall be immediately treated with membrane curing compound.

16. All curb inlet tops are to be constructed after final curb string line has been approved by the Engineer and prior to curb construction, or as directed by the Engineer.

17. Pipe connections to pre–cast structures shall have a minimum of 6 concrete around the entire pipe within 2 of the structure.

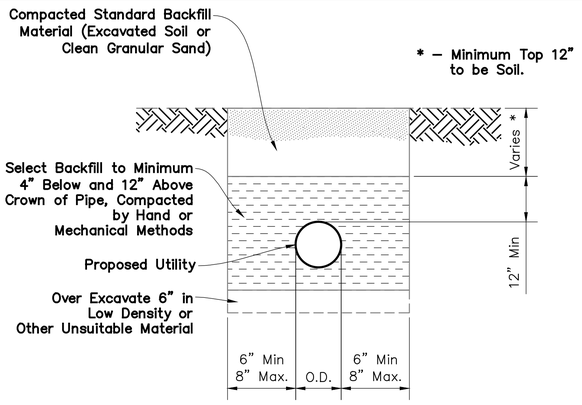
18. Material selection and compaction requirements for backfill around structures shall be as specified in the project specifications.

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

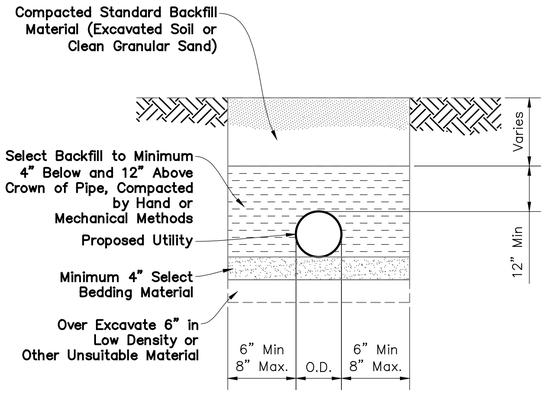
STANDARD DETAILS
TOEWALL/JUNCTION BOX/CONCRETE COLLAR

PROJ NO:	DATE:	SHEET:
		10
FILENAME: 10_Storm_Toewall_Junction _Box_Details.dwg	BY:	

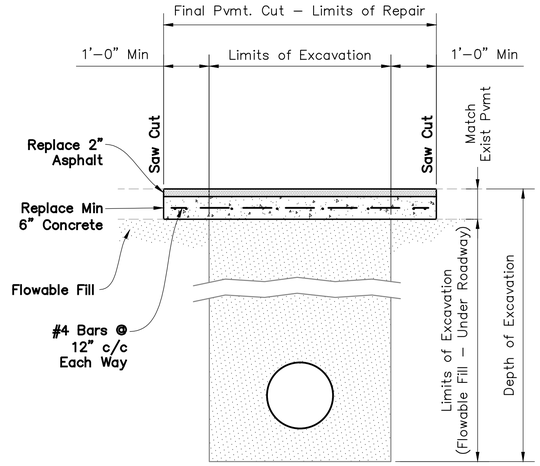
DATE	REVISIONS
4/15	2015 Standards



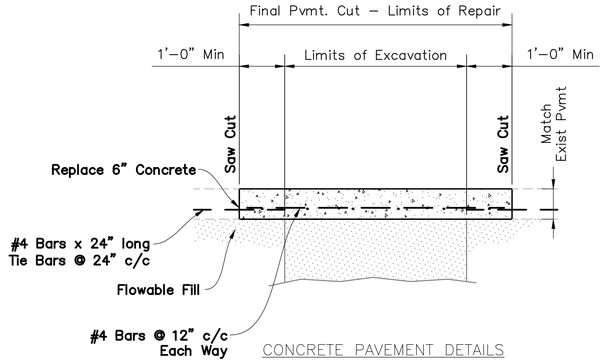
TRENCHING FOR PVC
SEWER FORCE MAIN & WATER PIPE



TRENCHING FOR PVC
GRAVITY SEWER PIPE



ASPHALT PAVEMENT DETAILS



CONCRETE PAVEMENT DETAILS

TRENCHING FOR CLAY GRAVITY SEWER,
DUCTILE IRON WATER, AND DUCTILE
IRON SEWER

TRENCHING FOR CLAY
GRAVITY SEWER PIPE OVER 20' DEEP

BRICK PAVEMENT DETAILS

AGGREGATE PAVEMENT DETAILS

UTILITY PATCH DETAILS

TYPICAL TRENCHING DETAILS
(NOT UNDER PAVEMENT)

HORIZONTAL MINIMUM CLEARANCES
Not to Scale

HDD installation Notes:

1. City of Salina Code, Engineering Standards and Specifications are incorporated except as otherwise directed.
2. The permittee shall be responsible for notification of one-call services and coordination of all utilities prior to construction.
3. Drilling fluids shall be contained and removed immediately upon bore completion.
4. All construction materials shall be removd from the site prior to restoration of disturbed areas.
5. All restoration shall be maintained for 24 months following its completion.
6. Excavations under paved surfaces shall be restored in compliance with City of Salina standard details for utility patches.

VERTICAL MINIMUM CLEARANCES
Not to Scale

HORIZONTAL DIRECTIONAL DRILLING INSTALLATION

Note:
If Damage to the Edge of Pavement Occurs during Removal of Curb & Gutter, the Contractor will be Directed to Saw Cut 3"–4" in Depth to Provide Adequate Bridging and Compaction

PAVEMENT REPAIR

General Notes:

Any excavation left open overnight in any roadway shall be securely plated. Plates shall be properly anchored and all edges of the plate shall be ramped with asphalt surface mix to prevent rattling.

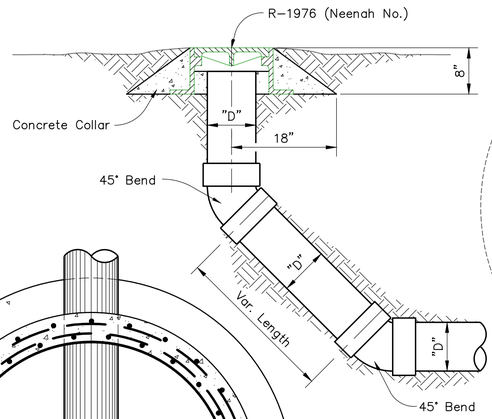
Permanent pavement markings shall be replaced with like materials within fourteen days after pavement surface has been replaced, unless authorized by the City Engineer.

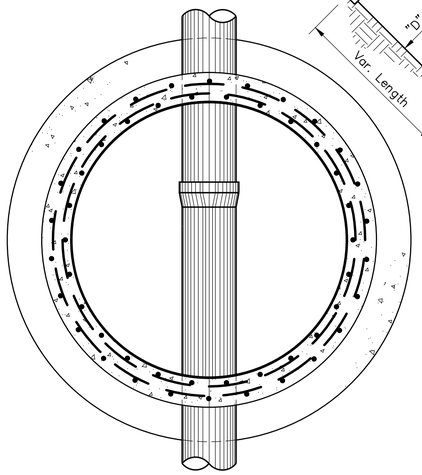
CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
TRENCHING AND STREET REPAIR

PROJ NO:	DATE:	SHEET:
FILENAME: 11_Trenching_Street_Repair_Details.dwg	BY:	11

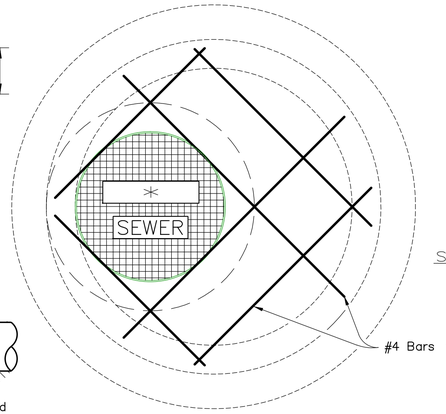
DATE	REVISIONS
4/15	2015 Standards





SECTION A–A

TEMPORARY SANITARY SEWER CLEANOUT



PLAN

STREET MANHOLE RING & COVER:

DEETER 1266 OR APPROVED EQUAL

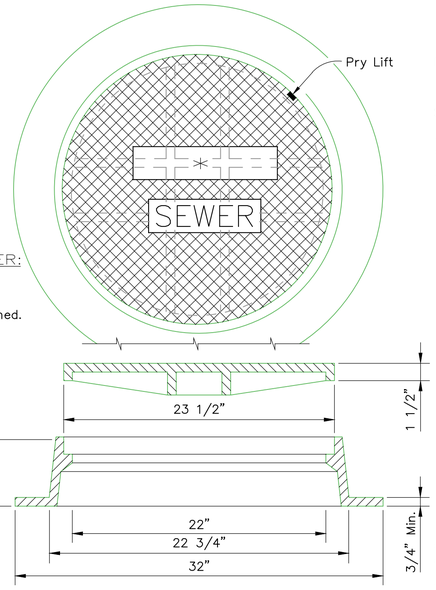
Street MH Ring & Cover 290 Lb. Min.

Street Manhole Ring & Cover to be Machined.

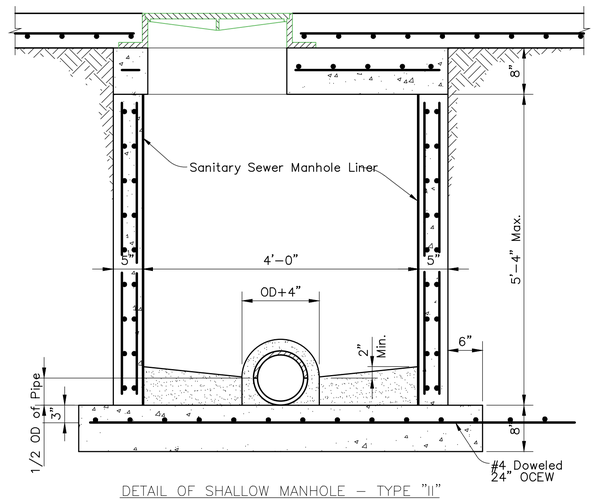
GENERAL NOTE:

Precast Manholes Shall Conform to ASTM Specification C 478, with Revisions.

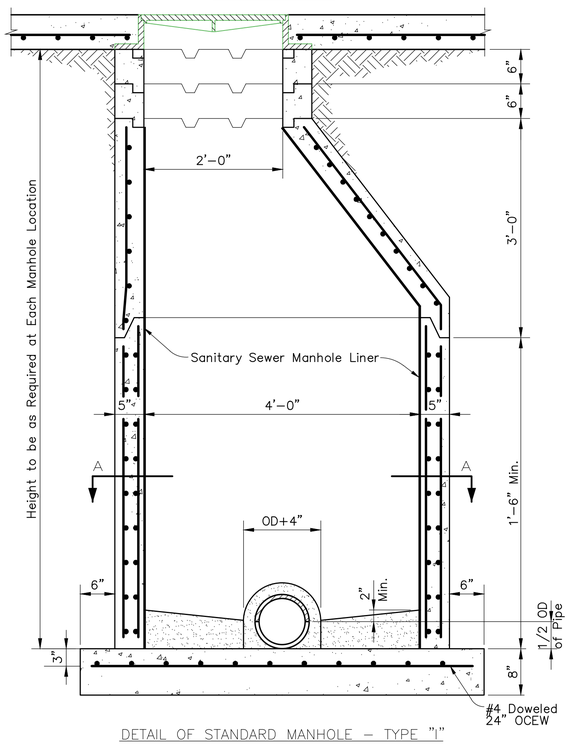
* SANITARY OR STORM SEWER



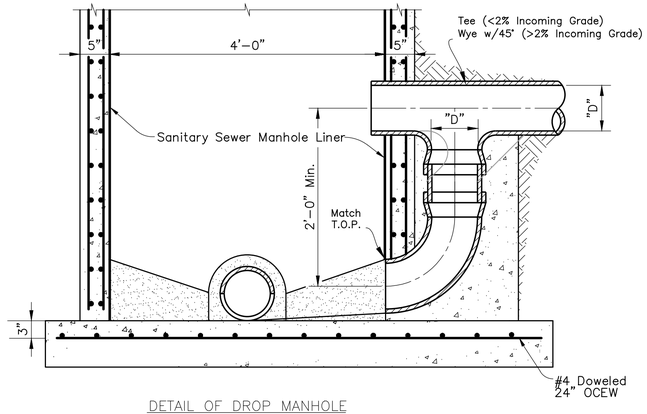
STANDARD MANHOLE RING & COVER



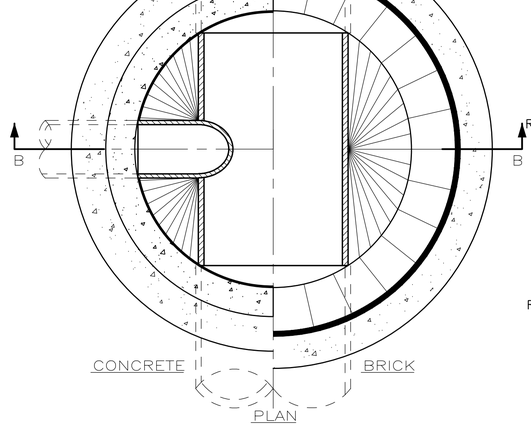
DETAIL OF SHALLOW MANHOLE – TYPE "II"



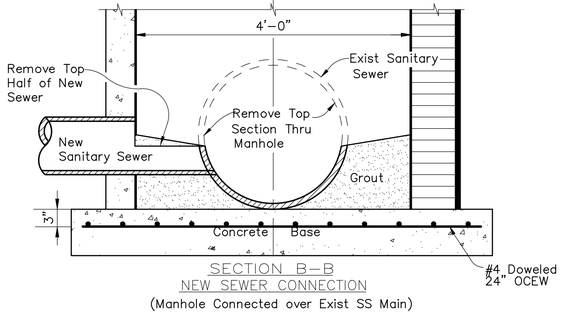
DETAIL OF STANDARD MANHOLE – TYPE "I"



DETAIL OF DROP MANHOLE

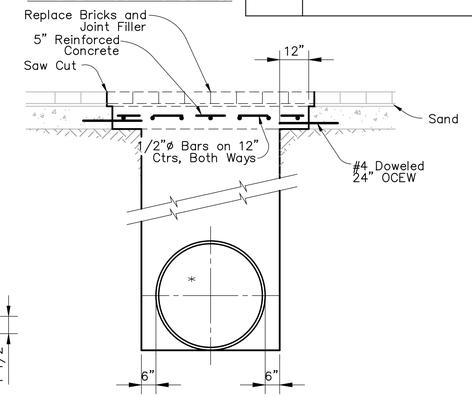


PLAN

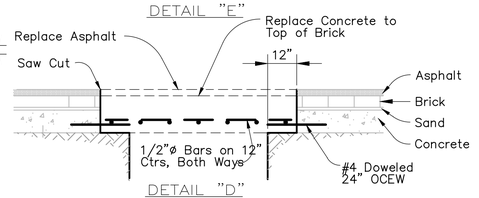


SECTION B–B
NEW SEWER CONNECTION
(Manhole Connected over Exist SS Main)

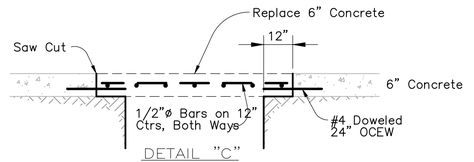
PAVEMENT CUTTING DETAILS



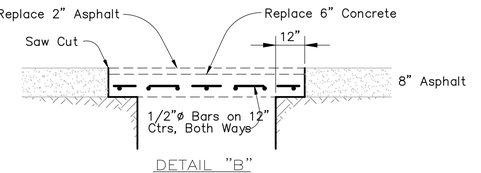
DETAIL "E"



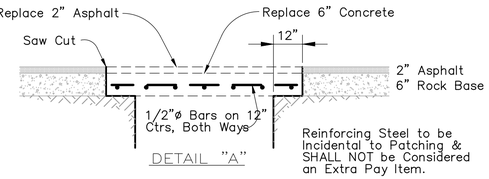
DETAIL "D"



DETAIL "C"



DETAIL "B"



DETAIL "A"

Reinforcing Steel to be Incidental to Patching & SHALL NOT be Considered an Extra Pay Item.

GENERAL NOTES:

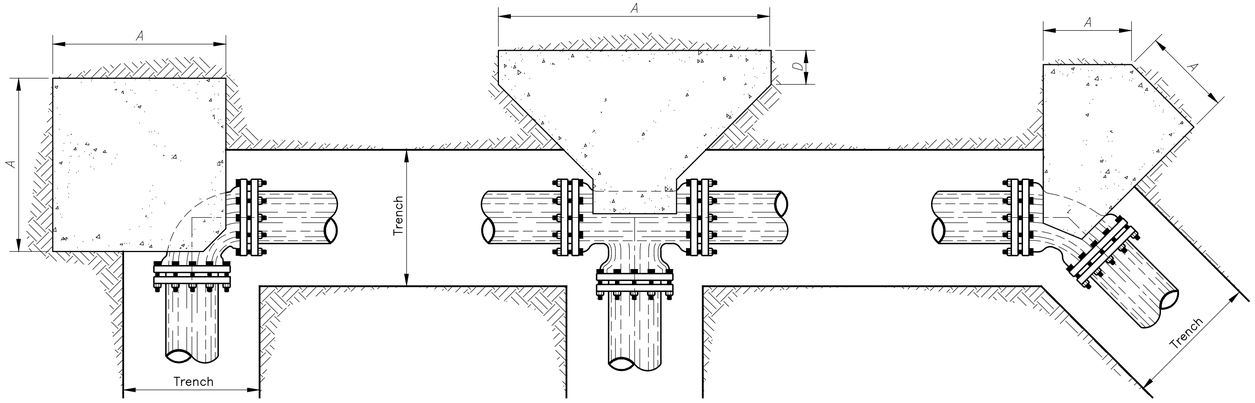
1. All Utility Patches Within Roadway Shall be Backfilled With:
   A. Excavatable flowable fill mix or,
   B. Suitable material compacted to a density equal to or greater than 95% of the maximum density of the soil obtained by testing method of ASTM D–698–66T or latest revision.

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

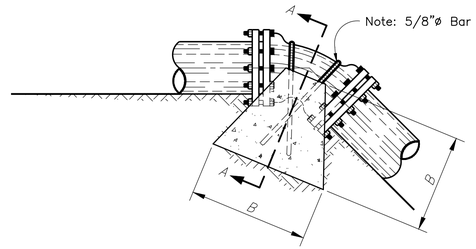
STANDARD DETAILS
SANITARY AND STORM SEWER

PROJ NO:	DATE:	SHEET:
FILENAME: 12_Sanitary_Sewer_Details.dwg	BY:	12

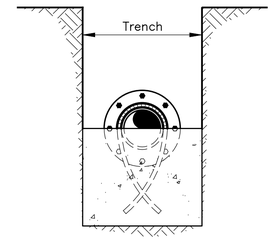
DATE	REVISIONS
4/15	2015 Standards



PLAN

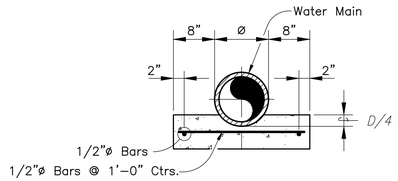


ELEVATION



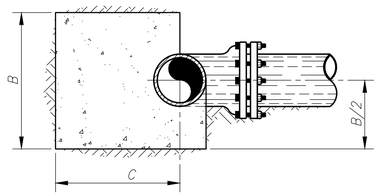
SECTION A–A

VERTICAL BLOCKING DETAILS

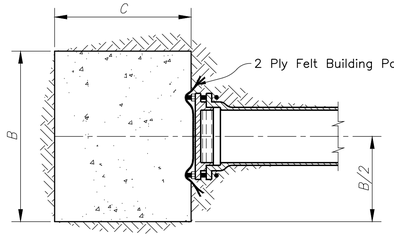


Note: All Dimensions Are Minimum.

TYPICAL CONCRETE PIPE CRADLE

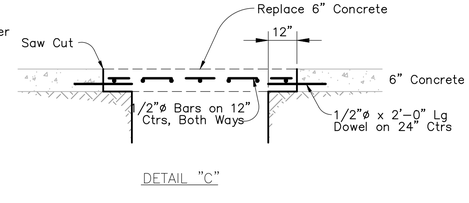


SECTION

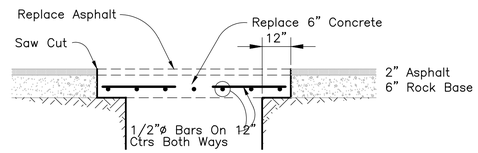


TYPICAL BLOCKING FOR CAST IRON PLUG

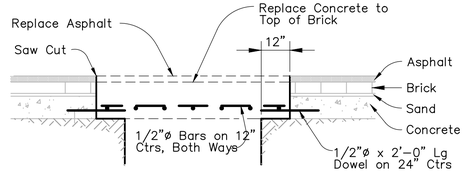
TYPICAL BLOCKING DETAILS



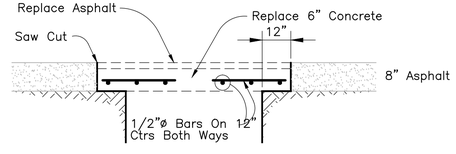
DETAIL "C"



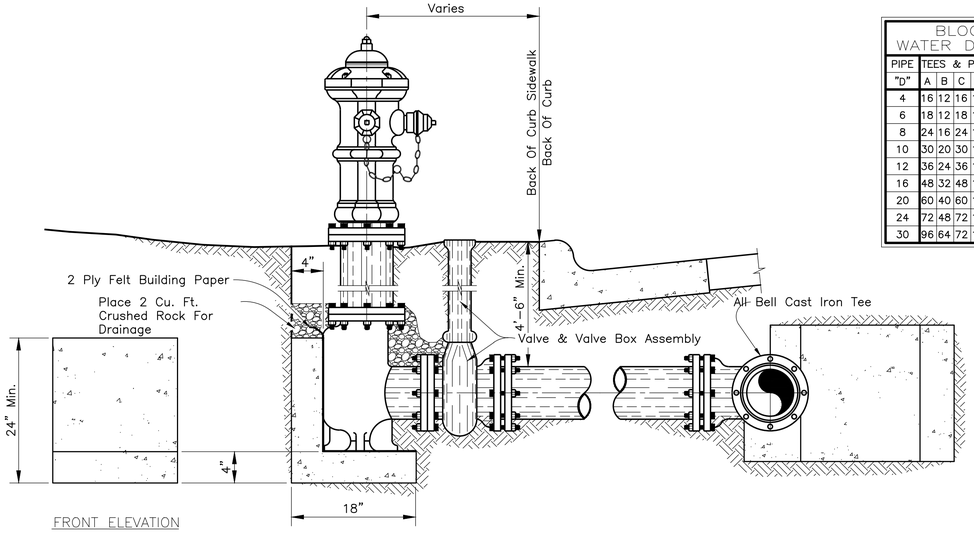
DETAIL "A"



DETAIL "D"



DETAIL "B"

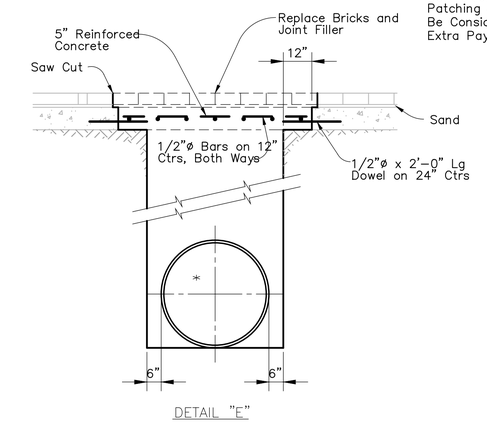


FRONT ELEVATION

FIRE HYDRANT SETTING DETAILS

BLOCKING SCHEDULE
WATER DISTRIBUTION FITTINGS

PIPE	TEES & PLUGS				90°			45°			22.5°		
"D"	A	B	C	D	A	B	C	A	B	C	A	B	C
4	16	12	16	12	16	12	16	16	12	16	16	12	16
6	18	12	18	16	18	12	18	18	12	18	18	12	18
8	24	16	24	16	24	16	24	24	16	24	24	16	24
10	30	20	30	16	30	20	30	30	20	30	30	20	30
12	36	24	36	18	36	24	36	36	24	36	36	24	36
16	48	32	48	18	48	32	48	48	32	48	48	32	48
20	60	40	60	18	60	40	60	60	40	60	60	40	60
24	72	48	72	18	72	48	72	72	48	72	72	48	72
30	96	64	72	18	96	64	72	96	64	72	96	64	72



DETAIL "E"

PAVEMENT CUTTING DETAILS

Reinforcing Steel To Be Incidental To Patching & Shall Not Be Considered An Extra Pay Item.

GENERAL NOTES

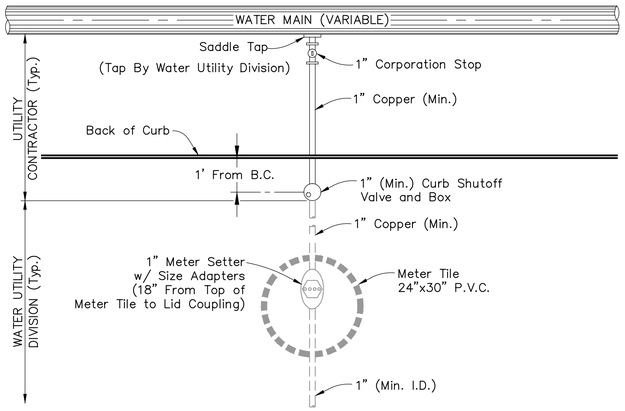
1. Water Lines Shall Have A Minimum Cover Of 4'–6" Or More As Shown On Profiles.
2. All Valves On Mains & Fire Hydrant Leads Shall Be Installed With Valve Box Assemblies.
3. The Size Of Valve Box Assembly To Be Installed Shall Be Determined By The Type And Size Of Valve.
4. Valve Box Caps Shall Have The Word "water" Cast In The Top.
5. All Utility Patches Within Roadway Shall be Backfilled With:
   A. Excavatable flowable fill mix or,
   B. Suitable material compacted to a density equal to or greater than 95% of the maximum density of the soil obtained by testing method of ASTM D–698–66T or latest revision.

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

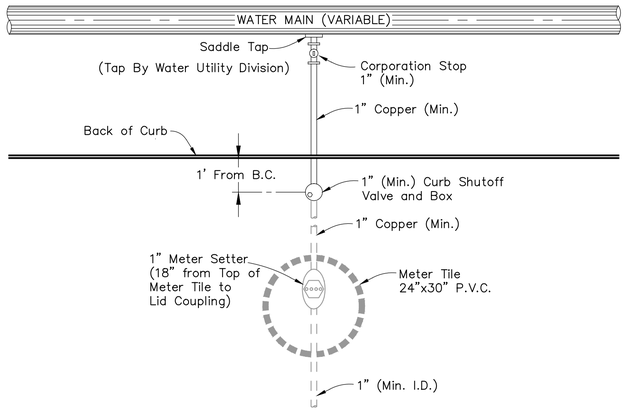
STANDARD DETAILS
WATER DISTRIBUTION

PROJ NO:	DATE:	SHEET:
FILENAME: 11_Water_Distribution_Details.dwg	BY:	13

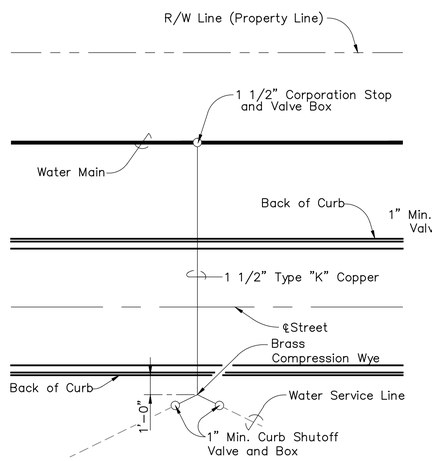
DATE	REVISIONS
4/15	2015 Standards



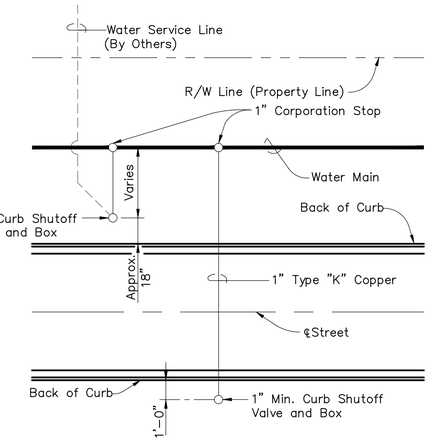
STANDARD FOR 5/8" & 3/4" METER SETTINGS
Not to Scale



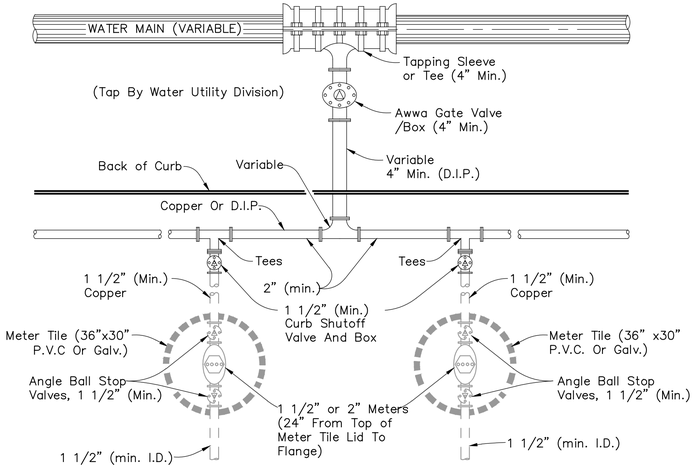
STANDARD FOR 1" METER SETTINGS
Not to Scale



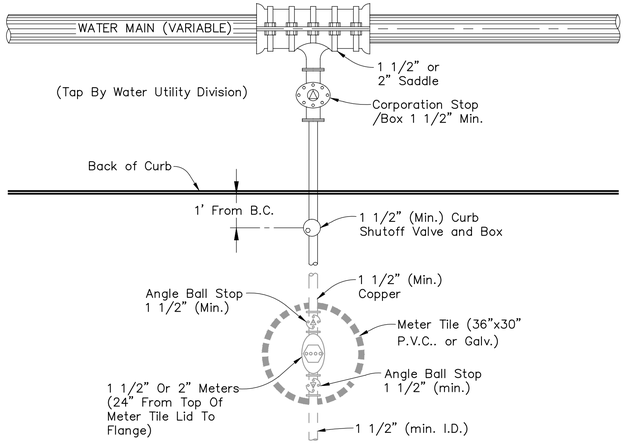
TYPICAL 1 1/2" WATER SERVICE
Not to Scale



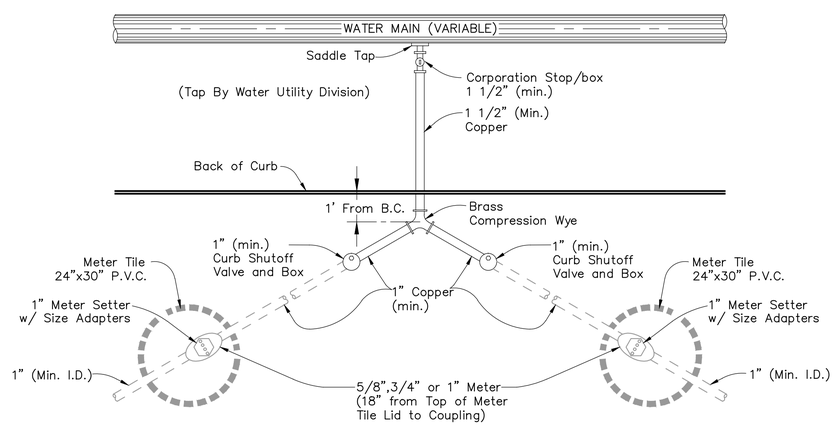
TYPICAL 1" WATER SERVICE
Not to Scale



STANDARD FOR 1 1/2" AND 2" MULTIPLE METER SETTINGS
Not to Scale



STANDARD FOR 1 1/2" AND 2" METER SETTINGS
Not to Scale



STANDARD FOR "Y" BRANCH 5/8", 3/4", & 1" MULTIPLE METER SETTINGS
Not to Scale

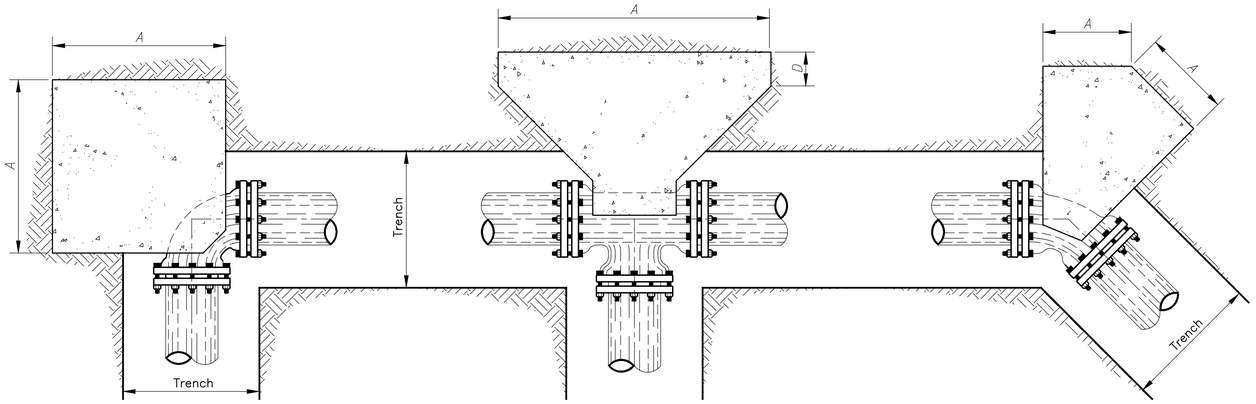
Note: All curb shut-off valves shall be one of the following: Mueller Cat. No. H-15201 or H-15176.

CITY OF SALINA, KANSAS
PUBLIC WORKS - ENGINEERING - UTILITIES

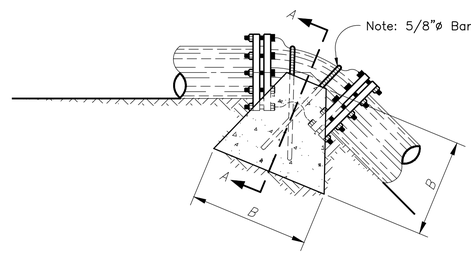
STANDARD DETAILS
WATER SERVICE

PROJ NO:	DATE:	SHEET:
		14
FILENAME: 12_Water_Service_Details.dwg	BY:	

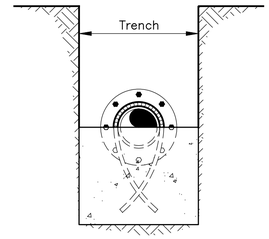
DATE	REVISIONS
4/15	2015 Standards



PLAN

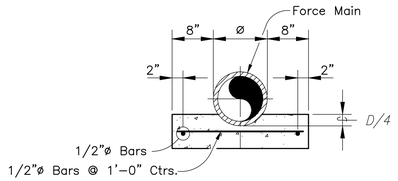


ELEVATION



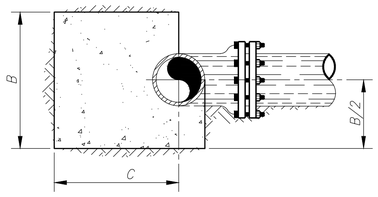
SECTION A–A

VERTICAL BLOCKING DETAILS



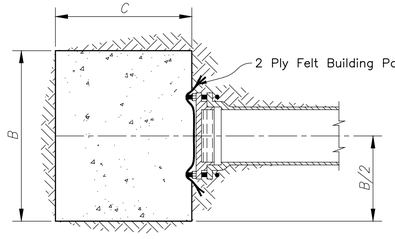
Note: All Dimensions Are Minimum.

TYPICAL CONCRETE PIPE CRADLE



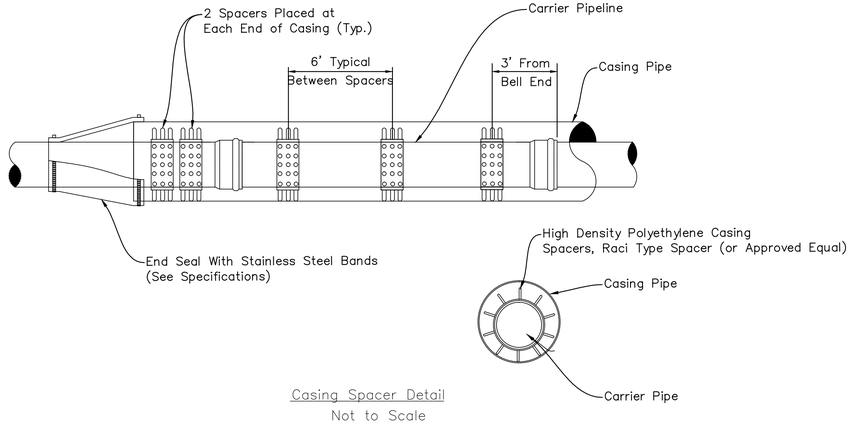
SECTION

TYPICAL BLOCKING DETAILS



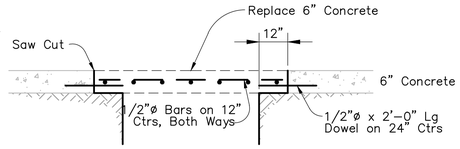
TYPICAL BLOCKING FOR CAST IRON PLUG

BLOCKING SCHEDULE FITTINGS																	
PIPE	TEES & PLUGS					90°			45°			22.5°		
"D"	A	B	C	D		A	B	C	A	B	C	A	B	C
4	16	12	16	12		16	12	16	16	12	16	16	12	16
6	18	12	18	16		18	12	18	18	12	18	18	12	18
8	24	16	24	16		24	16	24	24	16	24	24	16	24
10	30	20	30	16		30	20	30	30	20	30	30	20	30
12	36	24	36	18		36	24	36	36	24	36	36	24	36
16	48	32	48	18		48	32	48	48	32	48	48	32	48
20	60	40	60	18		60	40	60	60	40	60	60	40	60
24	72	48	72	18		72	48	72	72	48	72	72	48	72
30	96	64	72	18		96	64	72	96	64	72	96	64	72

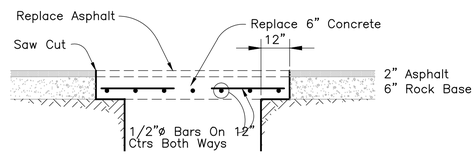


Casing Spacer Detail

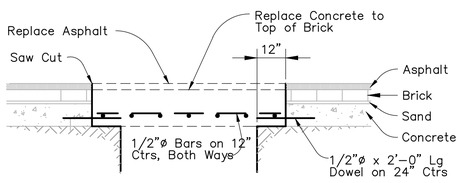
Not to Scale



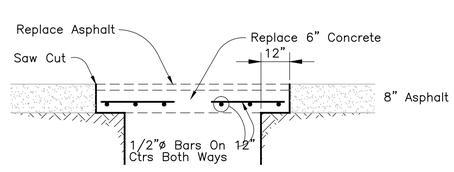
DETAIL "C"



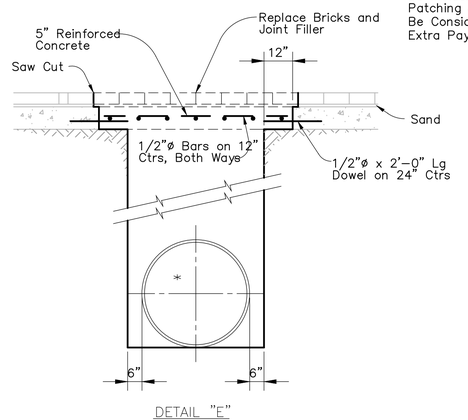
DETAIL "A"



DETAIL "D"



DETAIL "B"



DETAIL "E"

PAVEMENT CUTTING DETAILS

Reinforcing Steel To Be Incidental To Patching & Shall Not Be Considered An Extra Pay Item.

GENERAL NOTES

1. All Utility Patches Within Roadway Shall be Backfilled With:
   A. Excavatable flowable fill mix or,
   B. Suitable material compacted to a density equal to or greater than 95% of the maximum density of the soil obtained by testing method of ASTM D–698–66T or latest revision.

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
FORCE MAIN

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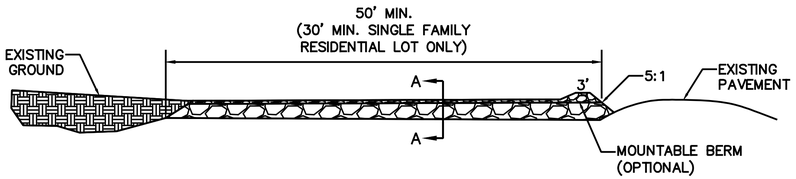
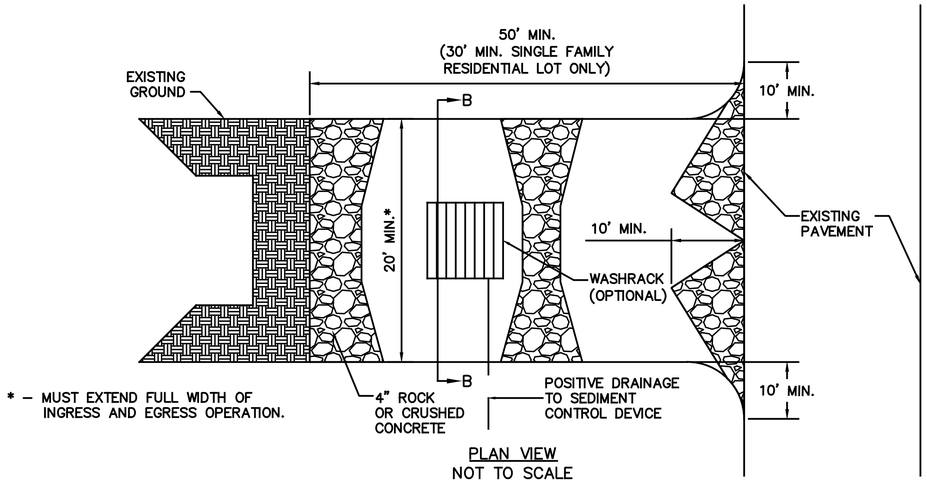
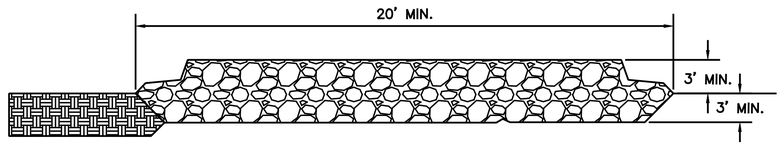
TEMPORARY CONSTRUCTION ENTRANCE



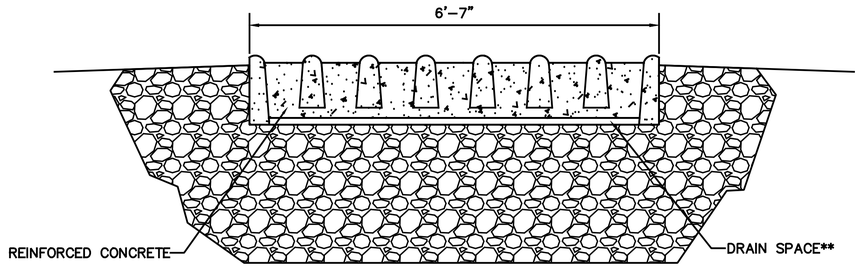
SIDE ELEVATION
NOT TO SCALE



PLAN VIEW
NOT TO SCALE



SECTION A–A
NOT TO SCALE



SECTION B–B
NOT TO SCALE

TEMPORARY CONSTRUCTION ENTRANCE PAD NOTES:

A) INSTALLATION:

1. AVOID LOCATION ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS, IF POSSIBLE, LOCATE WHERE PERMANENT ROADS WILL EVENTUALLY BE CONSTRUCTED.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. IF SLOPE TOWARDS THE PUBLIC ROAD EXCEEDS 2%, CONSTRUCT A 6 TO 8–INCH HIGH RIDGE WITH 3H:1V SIDE SLOPES ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE EDGE OF THE PUBLIC ROAD TO DIVERT RUNOFF.
4. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES ALONG PUBLIC ROADS.
5. PLACE ROCK OR CRUSHED CONCRETE TO DIMENSIONS AND GRADE AS SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPED FOR DRAINAGE.
6. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE.
7. CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED SIMULTANEOUSLY WITH THE RECEIVING SEDIMENT CONTROL DEVICE.
8. SEE ESC 3–STANDARD SPECIFICATION, SUBSECTION 4.13 (STABILIZED PAD)

B) TROUBLESHOOTING:

1. CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL IF ANY OF THE FOLLOWING OCCUR:
   a. INADEQUATE RUNOFF CONTROL TO THE EXTENT THAT SEDIMENT WASHES ONTO PUBLIC ROAD – INSTALL DIVERSIONS OR OTHER RUNOFF CONTROL MEASURES.

   b. SMALL ROCK OR CRUSHED CONCRETE, THIN PAD, OR ABSENCE OF GEOTEXTILE FABRIC RESULTS IN RUTS AND MUDDY CONDITIONS AS ROCK OR CRUSHED CONCRETE IS PRESSED INTO SOIL – INCREASE ROCK OR CRUSHED CONCRETE SIZE OR PAD THICKNESS OR ADD GEOTEXTILE FABRIC.

   c. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC – EXTEND PAD BEYOND THE MINIMUM 50–FOOT LENGTH AS NECESSARY.

C) INSPECTION AND MAINTENANCE:

1. INSPECT ROCK PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER 1/2–INCH OR GREATER STORM EVENTS.
2. RESHAPE PAD AS NEEDED FOR PROPER DRAINAGE AND RUNOFF CONTROL.
3. TOPDRESS WITH CLEAN 4–INCH ROCK OR CRUSHED CONCRETE AS NEEDED.
4. IMMEDIATELY REMOVE MUD OR SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROAD. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.
5. REMOVE ALL TEMPORARY ROAD MATERIALS FROM AREAS WHERE PERMANENT VEGETATION WILL BE ESTABLISHED.

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
TEMPORARY CONSTRUCTION ENTRANCE

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FILENAME: 16_Temporary_Construction_Entrance.dwg	BY:	16

DATE	REVISIONS
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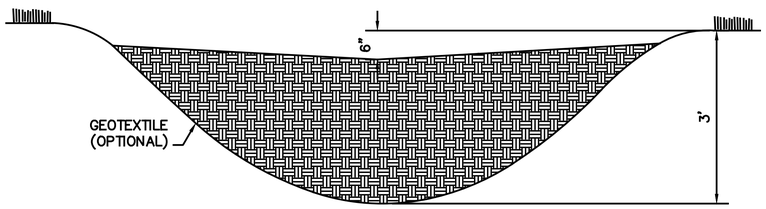
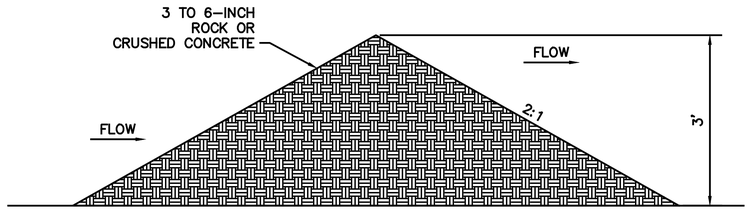
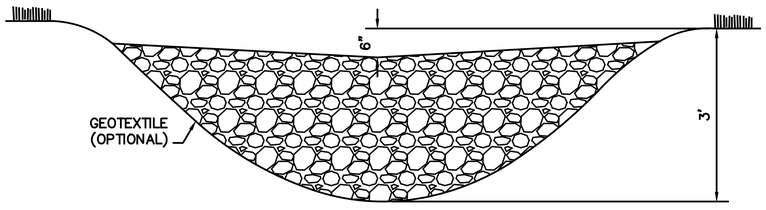
TEMPORARY CHECK DAM



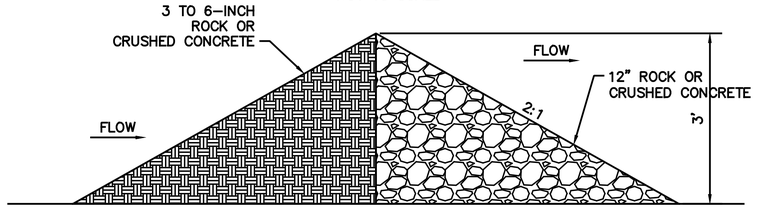
2 ACRES OR LESS OF DRAINAGE AREA
NOT TO SCALE



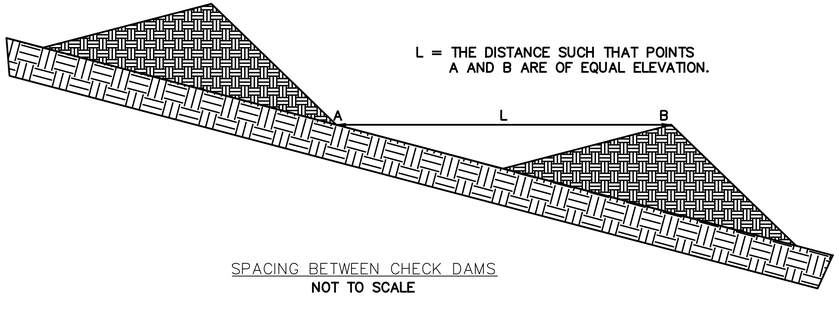
(SIDE VIEW)
NOT TO SCALE



2–10 ACRES OR LESS OF DRAINAGE AREA
NOT TO SCALE



(SIDE VIEW)
NOT TO SCALE



SPACING BETWEEN CHECK DAMS
NOT TO SCALE

TEMPORARY CHECK DAM NOTES:

A) CONSTRUCTION:

1. THE DRAINAGE AREA OF THE DITCH OR SWALE BEING PROTECTED SHALL NOT EXCEED 2 ACRES WHEN 3 TO 6 INCHES OF MATERIAL IS USED ALONE AND SHALL NOT EXCEED 10 ACRES WHEN A COMBINATION OF 12" MATERIAL AND 3 TO 6 INCH MATERIAL IS USED. AN EFFORT SHOULD BE MADE TO EXTEND THE MATERIAL TO THE TOP OF CHANNEL BANKS.
2. THE MAXIMUM HEIGHT OF THE DAM SHALL BE 3 FEET. THE CENTER OF THE CHECK DAM IS AT THE SAME ELEVATION AS THE TOP OF THE OUTER EDGES.
3. FOR ADDED STABILITY, THE BASE OF THE CHECK DAM CAN BE KEYED INTO THE SOIL APPROXIMATELY 6 INCHES.
4. THE MAXIMUM SPACING BETWEEN THE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM DAM.
5. MATERIAL SHOULD BE PLACED ACCORDING TO THE CONFIGURATION TO THE LEFT. HAND OR MECHANICAL PLACEMENT WILL BE NECESSARY TO ACHIEVE COMPLETE COVERAGE OF THE DITCH OR SWALE AND TO ENSURE THAT THE CENTER OF THE DAM IS LOWER THAT THE EDGES.
6. GEOTEXTILE MAY BE USED UNDER THE ROCK OR CRUSHED CONCRETE TO PROVIDED A STABLE FOUNDATION AND TO FACILITATE REMOVAL OF THE MATERIAL.

B) INSPECTION AND MAINTENANCE:

1. CHECK DAMS SHOULD BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EACH STORM EVENT OF THE 1/2–INCH OR GREATER. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES ONE HALF OF THE ORIGINAL HEIGHT OF THE DAM.
2. REGULAR INSPECTIONS SHOULD BE MADE TO ENSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES. EROSION CAUSED BY HIGH FLOWS AROUND THE EDGES OF THE DAM SHOULD BE CORRECTED.
3. SEE ESC 3–STANDARD SPECIFICATION, SUBSECTION 4.3 FOR THE SEDIMENT REMOVAL AND DISPOSAL REQUIREMENTS.

C) REMOVAL OF PRACTICE:

1. ALTERNATE CHECK DAM MATERIAL INCLUDES SEDIMENT FENCE (REINFORCED).
2. SEDIMENT FENCE OR STRAW BALE BARRIER MAY BE USED WHEN CONTRIBUTING DRAINAGE AREA IS 1 ACRE OR LESS, OR AS APPROVED BY THE CITY.

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
TEMPORARY CHECK DAM

PROJ NO:	DATE:	SHEET:
FILENAME: 17_Temporary_Check_Dam.dwg	BY:	17

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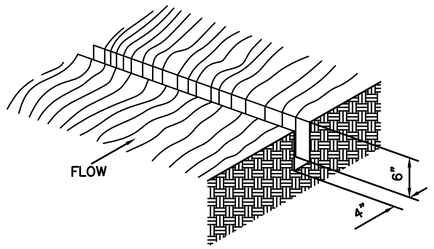
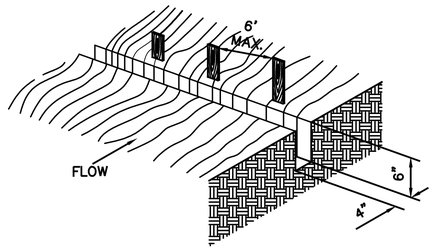
SEDIMENT FENCE

1. EXCAVATE A 6"x4" TRENCH.

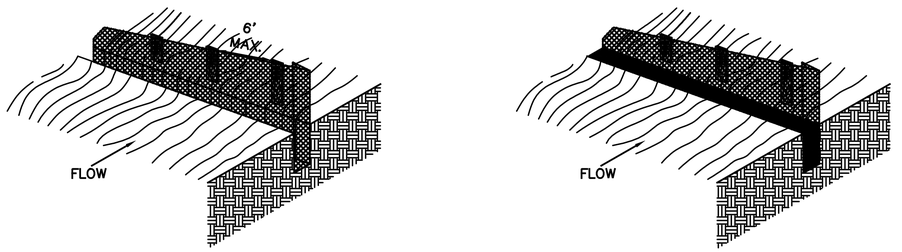


2. SET THE STAKES ALONG THE DOWN SLOPE SIDE OF THE TRENCH.

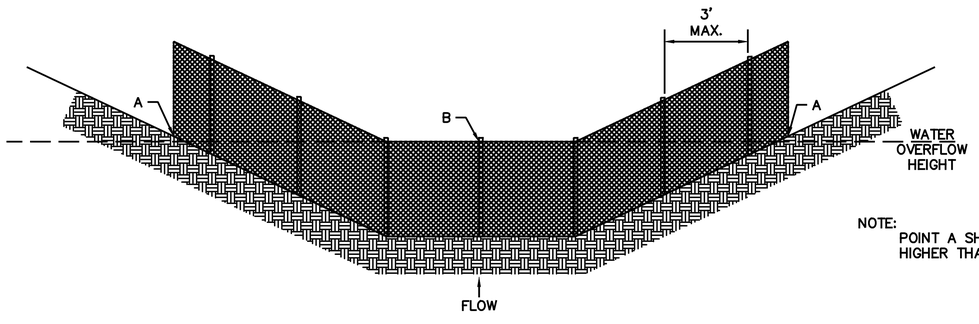


3. STAPLE GEOTEXTILE MATERIAL TO STAKES AND EXTEND IT INTO AND AROUND THE BOTTOM OF THE TRENCH.

4. BACKFILL AND COMPACT THE EXCAVATION SOIL OVER THE GEOTEXTILE IN THE TRENCH.



SHEET FLOW INSTALLATION
(PERSPECTIVE VIEW)
NOT TO SCALE



NOTE:
POINT A SHOULD BE HIGHER THAN POINT B.

DRAINAGEWAY INSTALLATION
(FRONT VIEW)
NOT TO SCALE

SEDIMENT FENCE NOTES:

A) INSTALLATION:

1. THE HEIGHT OF SEDIMENT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE AND SHALL EXCEED 34 INCHES ABOVE THE GROUND SURFACE.
2. THE FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL OUT OF THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE UNAVOIDABLE, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POSTS, WITH A MIN. 6–INCH OVERLAP.
3. DIG A TRENCH AT LEAST 6 INCHES DEEP AND 4 INCHES WIDE ALONG TRENCH ALIGNMENT.
4. DRIVE POSTS AT LEAST 24 INCHES INTO THE GROUND ON THE DOWNSLOPE SIDE OF THE TRENCH. SPACE POSTS A MAXIMUM OF 6 FEET APART.
5. EXTRA–STRENGTH SEDIMENT FENCE FABRIC SHALL BE USED. POSTS FOR THIS TYPE OF FABRIC SHALL BE PLACED A MAXIMUM OF 6 FEET APART. THE SEDIMENT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING A MAXIMUM OF ONE INCH LONG, HEAVY–DUTY WIRE STAPLES OR TIE WRAPS, AND EIGHT INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. PLACE THE BOTTOM 1 FOOT OF FABRIC IN THE MINIMUM–OF–6–INCH DEEP TRENCH, LAPPING TOWARD THE UPSLOPE SIDE. BACKFILL WITH COMPACTED EARTH OR GRAVEL.
7. IF A SEDIMENT FENCE IS TO BE CONSTRUCTED ACROSS A DITCH LINE OR SWALE, IT MUST BE OF SUFFICIENT LENGTH TO ELIMINATE ENDFLOW, AND THE PLAN CONFIGURATION SHALL RESEMBLE AN ARC OR HORSESHOE WITH THE ENDS ORIENTED UPSLOPE. EXTRA–STRENGTH FILTER FABRIC SHALL BE USED FOR THIS APPLICATION WITH A MAXIMUM OF 3–FOOT SPACING OF POSTS.
8. TO REDUCE MAINTENANCE, EXCAVATE A SHALLOW SEDIMENT STORAGE AREA IN THE UPSLOPE SIDE OF THE FENCE. PROVIDE GOOD ACCESS IN AREAS OF HEAVY SEDIMENTATION FOR CLEAN OUT AND MAINTENANCE.
9. SEDIMENT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS ESTABLISHED PERMANENT VEGETATION.
10. SEE ESC 3–STANDARD SPECIFICATION, SUBSECTION 4.4 (SEDIMENT FENCE).

B) TROUBLESHOOTING:

1. DETERMINE THE EXACT LOCATION OF THE UNDERGROUND UTILITIES, BEFORE FENCE INSTALLATION SO UTILITIES ARE NOT DISTURBED.
2. GRADE ALIGNMENT OF FENCE AS NEEDED TO PROVIDE A BROAD, NEARLY LEVEL AREA UPSTREAM OF FENCE TO ALLOW SEDIMENT COLLECTION AREA.

C) INSPECTION AND MAINTENANCE:

1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AS DIRECTED BY ENGINEER TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. AVOID DAMAGING OR UNDERMINING THE FENCE DURING CLEANOUT. SEDIMENT ACCUMULATION SHOULD NOT EXCEED 1/2 THE HEIGHT OF THE FENCE.
4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, AND BEING THE AREA TO GRADE AND STABILIZE IT AFTER THE THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY AND COMPLETELY STABILIZED.
5. MATERIAL REMOVED FROM BMP'S SHALL BE WASTED ON SITES APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE, AND SITE LOCATION. DISPOSAL SITES SHALL ALSO BE ACCEPTABLE TO KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT, KANSAS DIVISION OF WATER RESOURCES, AND US ARMY CORP OF ENGINEERS.
6. SEE ESC 3–STANDARD SPECIFICATION, SUBSECTION 4.3 FOR SEDIMENT REMOVAL AND DISPOSAL REQUIREMENTS.

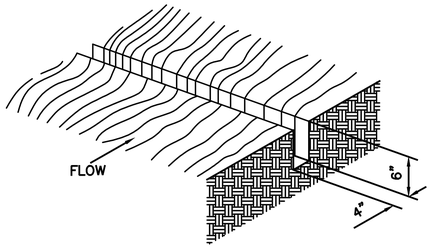
CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
SEDIMENT FENCE

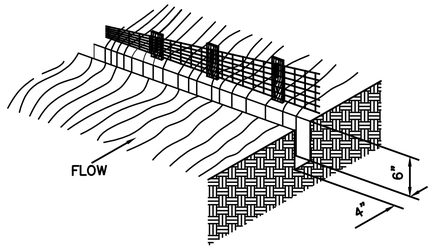
PROJ NO:	DATE:	SHEET:
FILENAME: 16_Sediment_Fence_Details.dwg	BY:	18

SEDIMENT FENCE (REINFORCED)

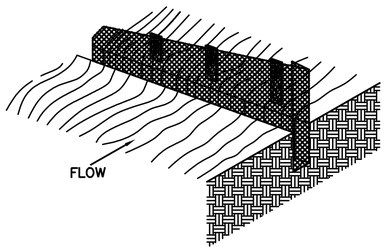
1. EXCAVATE A 6"x4" TRENCH.



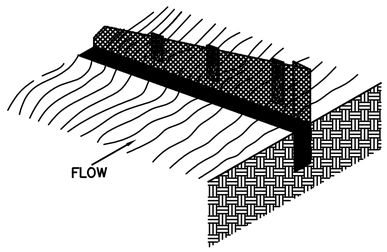
2. SET THE METAL T–POSTS OR FENCE POSTS ALONG THE DOWNSLOPE SIDE OF THE TRENCH. SECURE WIRE FENCING ON THE POSTS.



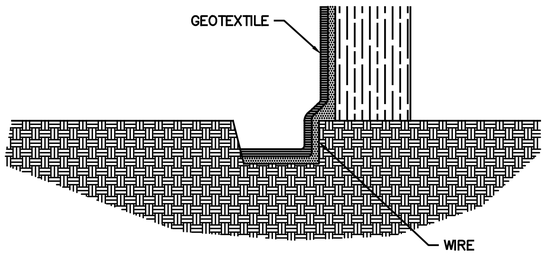
3. ATTACH THE GEOTEXTILE FABRIC TO THE WIRE FENCE AND EXTEND IT INTO AND AROUND THE BOTTOM OF THE TRENCH.



4. BACKFILL AND COMPACT THE EXCAVATION SOIL.



EXTENSION OF FABRIC AND WIRE INTO THE TRENCH
NOT TO SCALE



SECTIONAL FENCE ANCHOR DETAIL
NOT TO SCALE

DATE	REVISIONS
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SEDIMENT FENCE (REINFORCED) NOTES:

A) INSTALLATION:

1. FENCING SHALL BE 42–INCHES IN HEIGHT.
2. WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES AND STAPLES. THE LOWER TENSION EIRE, BRACE, AND TRUSS RODS. DRIVE ANCHORS, AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.
3. SEDIMENT FENCE SHALL BE FASTENED SECURELY TO THE WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID–SECTION.
4. SEDIMENT FENCE AND WIRE SHALL BE EMBEDDED A MINIMUM OF 8–INCHES INTO THE GROUND.
5. WHEN TWO SECTIONS OF THE GEOTEXTILE FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6–INCHES AND FOLDED.
6. WIRE FENCE WILL BE BETWEEN 9 AND 14 GAUGE AND SHALL HAVE A MAXIMUM MESH SPACING OF 6–INCHES.
7. SEDIMENT FENCE SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:. ADDITIONAL SPECIFICATIONS ARE FOUND IN ASTM 6461.

SEDIMENT FENCE REQUIREMENTS

TENSION STRENGTH	50 LB/IN OR MORE	ASTM 4632
TENSION MODULES	20 LB/IN OR MORE	ASTM 4632
FLOW RATE	0.3 GAL/FT^2/MINUTE OR LESS	ASTM 5141
FILTERING EFFICIENCY	75% OR MORE	ASTM 5141

B) INSTALLATION:

1. THE HEIGHT OF SEDIMENT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE AND SHALL EXCEED 34 INCHES ABOVE THE GROUND SURFACE.
2. THE FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL OUT OF THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE UNAVOIDABLE, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POSTS, WITH A MIN. 6–INCH OVERLAP, AND SECURELY SEALED.
3. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 6 INCHES DEEP ON THE UPSLOPE SIDE OF THE PROPOSED LOCATION OF THE FENCE.
4. WHEN WIRE SUPPORT IS USED, STANDARD–STRENGTH FILTER CLOTH MAY BE USED. POSTS FOR THIS TYPE OF INSTALLATION SHALL BE PLACED A MAXIMUM OF 10 FEET APART. THE WIRE MESH FENCE MUST BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MAXIMUM OF 2 INCHES AND SHALL NOT EXTEND MORE THAN 34 INCHES ABOVE THE ORIGINAL GROUND SURFACE. THE STANDARD–STRENGTH FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
5. IF A SEDIMENT FENCE IS TO BE CONSTRUCTED ACROSS A DITCH LINE OR SWALE, IT MUST BE OF SUFFICIENT LENGTH TO ELIMINATE ENDFLOW, AND THE PLAN CONFIGURATION SHALL RESEMBLE AN ARC OR HORSESHOE WITH THE ENDS ORIENTED UPSLOPE. EXTRA–STRENGTH FILTER FABRIC SHALL BE USED FOR THIS APPLICATION WITH A MAXIMUM OF 3–FOOT SPACING OF POSTS.
6. THE 4 INCH BY 6 INCH TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
7. SEE ESC 3–STANDARD SPECIFICATION, SUBSECTION 4.4 (SEDIMENT FENCE).

C) INSPECTION AND MAINTENANCE:

1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. MAINTENANCE SHALL BE PREFORMED AS DIRECTED BY ENGINEER AND SEDIMENT BUILD–UPS REMOVED WHEN BULGES DEVELOP IN THE SEDIMENT FENCE OR WHEN SEDIMENT REACHES 50% OF THE FENCE HEIGHT. AVOID DAMAGING OR UNDERMINING THE FENCE DURING CLEAN OUT.
4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, AND BEING THE AREA TO GRADE AND STABILIZE IT AFTER THE THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY AND COMPLETELY STABILIZED.
5. MATERIAL REMOVED FROM BMP'S SHALL BE WASTED ON SITES APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE, AND SITE LOCATION. DISPOSAL SITES SHALL ALSO BE ACCEPTABLE TO KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT, KANSAS DIVISION OF WATER RESOURCES, AND US ARMY CORP OF ENGINEERS.
6. SEE ESC 3–STANDARD SPECIFICATION, SUBSECTION 4.3 FOR SEDIMENT REMOVAL AND DISPOSAL REQUIREMENTS.

CITY OF SALINA, KANSAS
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STANDARD DETAILS
SEDIMENT FENCE (REINFORCED)

PROJ NO:	DATE:	SHEET:
FILENAME: 19_Sediment_Fence_(Reinforced)_Details.dwg	BY:	19

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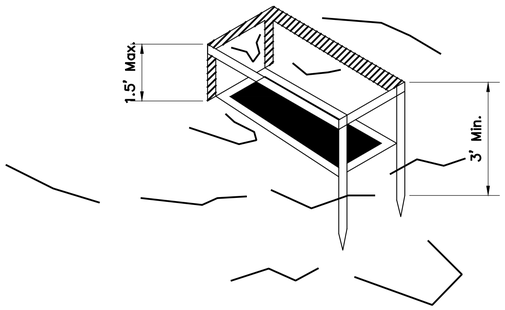
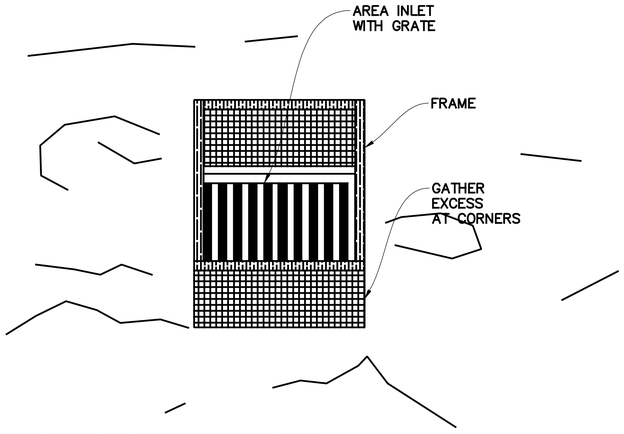
SEDIMENT FENCE AREA INLET PROTECTION

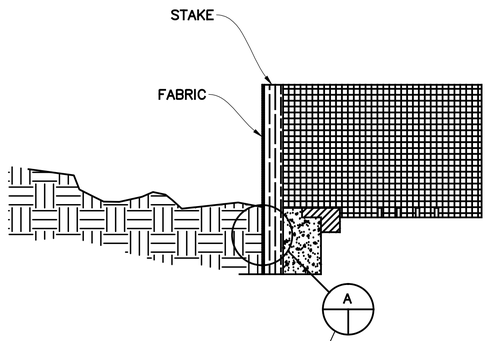
2'x4' WOOD FRAME

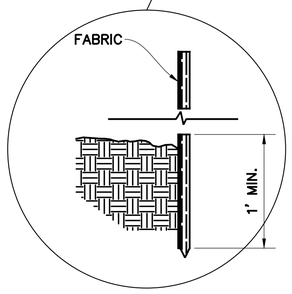




PERSPECTIVE VIEWS
NOT TO SCALE

ELEVATION OF STAKE AND FABRIC ORIENTATION





DETAIL A
NOT TO SCALE

SEDIMENT FENCE AREA INLET PROTECTION NOTES:

A) CONSTRUCTION SPECIFICATIONS:

1. SEDIMENT FENCE SHALL CONFORM TO THE CONSTRUCTION SPECIFICATIONS FOR EXTRA STRENGTH FOUND IN THE TABLE BELOW AND SHALL BE CUT FROM A CONTINUOUS ROLL TO AVOID JOINTS.

PHYSICAL PROPERTIES OF FABRIC IN SEDIMENT FENCE:

PHYSICAL PROPERTY	TEST	REQUIREMENTS
FILTERING EFFICIENCY	ASTM 5141	75%
TENSILE STRENGTH AT 20% (MAX.) ELONGATION	ASTM 4632 AASHTO M288-96	EXTRA STRENGTH-50LBS./LINEAR INCH
FLOW RATE	ASTM 5141	.3GAL./SQ.FT/ MINUTE**
ULTRAVIOLET RADIATION STABILITY %	ASTM D 4355	90%

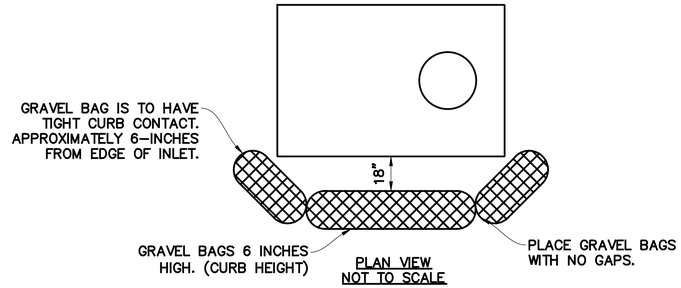
*REQUIREMENTS R
** HIGH POROSITY FABRIC MAY BE ADDED, IF NECESSARY.

2. FOR STAKES, USE 2x4 WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET.
3.SPACE STAKES EVENLY AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART, AND SECURELY DRIVE THEM INTO THE GROUND, APPROXIMATELY 18 INCHES DEEP.
4. TO PROVIDE NEEDED STABILITY TO THE INSTALLATION, FRAME WITH 2X4 WOOD STRIPS AROUND THE CREST OF THE OVERFLOW AREA AT A MAXIMUM OF 1.5 FEET ABOVE THE AREA INLET CREST.
5. PLACE THE BOTTOM 12 INCHES OF THE FABRIC IN A TRENCH AND BACKFILL THE TRENCH WITH 12 INCHES OF COMPACTED SOIL.
6. FASTEN FABRIC SECURELY BY STAPLES, OR WIRE IT TO THE STAKES AND FRAME. JOINTS MUST BE OVERLAPPED TO THE NEXT STAKE.
7. IT MAY BE NECESSARY TO BUILD A TEMPORARY DIKE ON THE DOWNSLOPE SIDE OF THE STRUCTURE TO PREVENT BYPASS FLOW.
8. SEE STANDARD SPECIFICATION, SECTION 4.4, USE REQUIREMENTS ON THIS DRAWING IF CONFLICTING REQUIREMENTS EXIST.

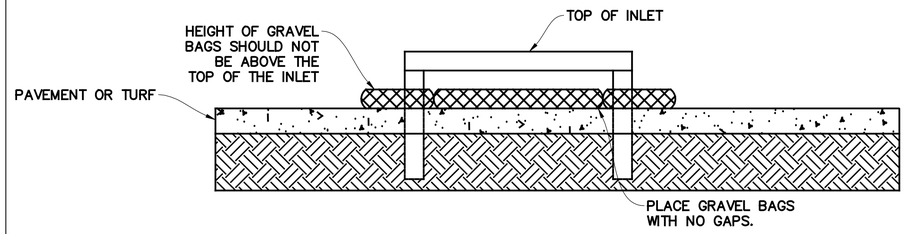
B) INSPECTION AND MAINTENANCE:

1. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT OF ½ INCH OR GREATER AND REPAIRS MADE AS NEEDED.
2. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP.
3. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAG AREA HAS BEEN PROPERLY STABILIZED.
4. SEE STANDARD SPECIFICATION, SECTION 4.3 FOR SEDIMENT REMOVAL AND DISPOSAL REQUIREMENTS. USE REQUIREMENTS ON THIS DRAWING IF CONFLICTING REQUIREMENTS EXIST.

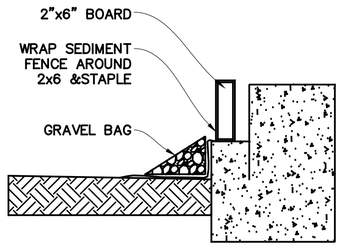
CURB INLET PROTECTION USE WITH SUMP INLETS ONLY



PLAN VIEW
NOT TO SCALE



FRONT VIEW
NOT TO SCALE



FOR PROTECTION PRIOR TO POURING THROAT

DETAIL A
NOT TO SCALE

GENERAL NOTES:
1. CONTRACTORS TO ENSURE THAT GRAVEL IS WELL GRADED GRAVEL WITH AT LEAST 20% PASSING A NO. 4 SIEVE.

CURB INLET PROTECTION NOTES:

A) INSTALLATION:

1. SEE STANDARD SPECIFICATION, SECTION 4.12 (INLET PROTECTION AND SECTION 4.9 (GRAVEL BAGS).
2. IMMEDIATELY FOLLOWING INLET CONSTRUCTION AND PRIOR TO CONSTRUCTION OF CURB AND INLET THROAT, PROTECT INLET OPENING BY INSTALLING 2"x 6" BOARD AND SEDIMENT FENCING ACROSS INLET OPENING IN ACCORDANCE WITH DETAIL A.

B) INSPECTION AND MAINTENANCE:

1. CONTRACTOR TO CLEAN OUT SEDIMENT AFTER EACH SIGNIFICANT RAINFALL. ANY SEDIMENT DEPOSITED INTO INLET SHALL BE PROMPTLY REMOVED.
2. DURING CONSTRUCTION OF RESIDENTIAL SUBDIVISIONS, THE FILTER BAG SHALL BE REPLACED BEFORE BAG MATERIAL BECOMES DEGRADED. ANY GRAVEL DEPOSITED INTO THE INLET SHALL BE PROMPTLY REMOVED.
3. SEE STANDARD SPECIFICATION, SECTION 4.3 FOR SEDIMENT REMOVAL AND DISPOSAL REQUIREMENTS.

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
STANDARD EROSION CONTROL

PROJ NO:	DATE:	SHEET:
FILENAME: 20_Erosion_Control_Detail.dwg	BY:	20

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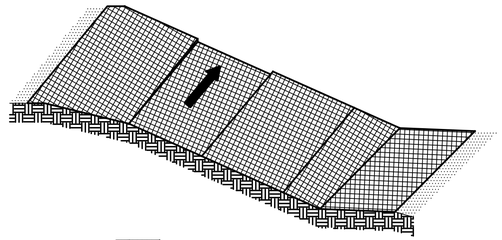
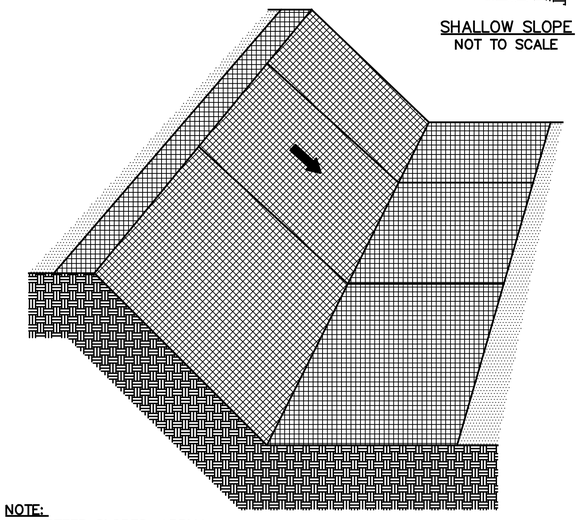
EROSION CONTROL BLANKET (1)



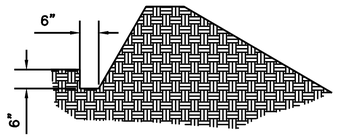
NOTE:
ON SHALLOW SLOPES, PROTECTIVE EROSION CONTROL BLANKETS MAY BE APPLIED ACROSS THE SLOPE.

SHALLOW SLOPE
NOT TO SCALE



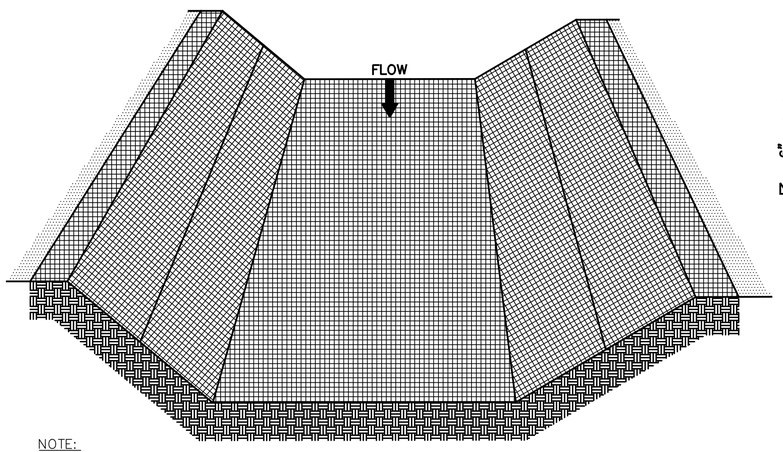
NOTE:
ON STEEP SLOPES, APPLY PROTECTIVE BLANKET PERPENDICULAR TO THE DIRECTION OF FLOW AND ANCHOR SECURELY.

STEEP SLOPE
NOT TO SCALE



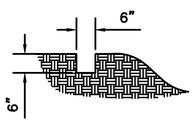
NOTE:
WHEN THERE IS A BERM AT THE TOP OF THE SLOPE, BRING THE MATERIAL OVER THE BERM AND ANCHOR IT BEHIND THE BERM.

SLOPE BERM
NOT TO SCALE



NOTE:
IN DITCHES, APPLY PROTECTIVE COVERING PARALLEL, TO THE DIRECTION OF FLOW. USE CHECK SLOTS AS REQUIRED. AVOID JOINING MATERIALS IN THE CENTER OF THE DITCH IF AT ALL POSSIBLE. FOLLOW BLANKET MANUFACTURER'S RECOMMENDATIONS FOR ALLOWABLE VELOCITY AND SHEAR STRESS.

DITCH
NOT TO SCALE



NOTE:
BRING MATERIAL DOWN TO A LEVEL AREA BEFORE TERMINATING THE INSTALLATION.

TOP OF SLOPE BLANKET
ANCHOR SLOT
NOT TO SCALE

EROSION CONTROL BLANKET NOTES (1):

A) SITE PREPARATION:

AFTER SITE HAS BEEN SHAPED AND GRADED, PREPARE A FRIABLE SEEDBED RELATIVELY FREE FROM CLODS AND ROCKS MORE THAN 1 1/2 INCHES IN DIAMETER AND ANY FOREIGN MATERIAL THAT WILL PREVENT UNIFORM CONTACT OF THE PROTECTIVE COVERING WITH THE SOIL SURFACE.

B) PLANTING:

LIME, FERTILIZE, AND SEED IN ACCORDANCE WITH SEEDING OR PLANTING PLAN. WHEN USING JUTE MESH ON A SEEDED AREA, APPLY APPROXIMATELY ONE HALF THE SEED AFTER LAYING THE MAT. THE PROTECTIVE COVERING CAN BE LAID OVER SPRIGGED AREAS WHERE SMALL GRASS PLANTS HAVE BEEN INSERTED INTO THE SOIL. WHERE GROUND COVERS ARE TO BE PLANTED, LAY THE PROTECTIVE COVERING FIRST AND THEN PLANT THROUGH THE MATERIAL AS PER PLANTING PLAN.

C) LAYING AND STAPLING:

IF INSTRUCTIONS HAVE BEEN FOLLOWED, ALL NEEDED CHECK SLOTS WILL HAVE BEEN INSTALLED, AND THE PROTECTIVE COVERING WILL BE LAID ON A FRIABLE SEEDBED FREE FROM CLODS, ROCKS, ROOTS, ETC. THAT MIGHT IMPEDE GOOD CONTACT.

1. START LAYING THE PROTECTIVE COVERING FROM THE TOP OF THE CHANNEL OR SLOPE AND UNROLL DOWN-GRADE. ALLOW TO LAY LOOSELY ON SOIL, DO NOT STRETCH.
2. UPSLOPE ENDS OF THE BLANKET SHOULD BE BURIED IN THE ANCHOR SLOT NO LESS THAN 6-INCHES DEEP. TAMP EARTH.
3. FIRMLY OVER THE MATERIAL, WHEN TOP IS RELATIVELY FLAT, EXTEND BLANKET ABOUT 40 INCHES AWAY FROM THE SLOPE, STAPLE THE MATERIAL AT A MINIMUM OF EVERY 12 INCHES ACROSS THE TOP END.
4. EDGES OVER THE MATERIAL SHALL BE STAPLED EVERY 3 FEET. WHERE MULTIPLE WIDTHS ARE LAID SIDE BY SIDE, THE ADJACENT EDGES SHALL BE OVERLAPPED A MINIMUM OF 6 INCHES AND STAPLED TOGETHER.
5. STAPLES SHALL BE PLACED DOWN THE CENTER, STAGGERED WITH THE EDGES AT 3 FOOT INTERVALS.
6. SEE ESC STANDARD SPECIFICATION, SUBSECTION 3.8 (EROSION CONTROL BLANKETS).

D) TROUBLESHOOTING:

CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL, IF ANY OF THE FOLLOWING OCCUR:

1. MOVEMENT OF THE BLANKET OR EROSION UNDER THE BLANKET IS OBSERVED.
2. VARIATIONS IN TOPOGRAPHY ON THE SITE INDICATE EROSION CONTROL MAT WILL NOT FUNCTION AS INTENDED, CHANGES IN PLAN MAY BE NEEDED, OR A BLANKET WITH A SHORTER OR LONGER LIFE MAY BE NEEDED.
3. DESIGN SPECIFICATIONS FOR SEED VARIETY, SEEDING DATES, OR EROSION CONTROL MATERIALS CANNOT BE MET, SUBSTITUTION MAY BE REQUIRED, UNAPPROVED SUBSTITUTIONS COULD RESULT IN FAILURE TO ESTABLISH VEGETATION.

E) MAINTENANCE AND INSPECTION:

INSPECTION CONTROLS AFTER EACH RAIN EVENT OF 1/2 INCH OR GREATER, AND EVERY 7 DAYS UNTIL VEGETATION IS ESTABLISHED, FOR EROSION OR UNDERMINING BENEATH THE NETTING, BLANKETS, OR MATS. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE MATERIAL, ADD SOIL, TAMP DOWN, AND RESEED; RESECURE THE MATERIAL IN PLACE, IF NETTING, BLANKETS OR MATS BECOME DISLOCATED OR DAMAGED, REPAIR OR REPLACE AND RESECURE IMMEDIATELY.

NOTE:
REFER TO ESC-16.1, EROSION CONTROL BLANKETS (2), FOR MORE EROSION CONTROL APPLICATIONS AND NOTES.

CITY OF SALINA, KANSAS
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STANDARD DETAILS
EROSION CONTROL BLANKET 1 OF 3

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FILENAME: 21_Erosion_Control_Blanket_1.dwg	BY:	21

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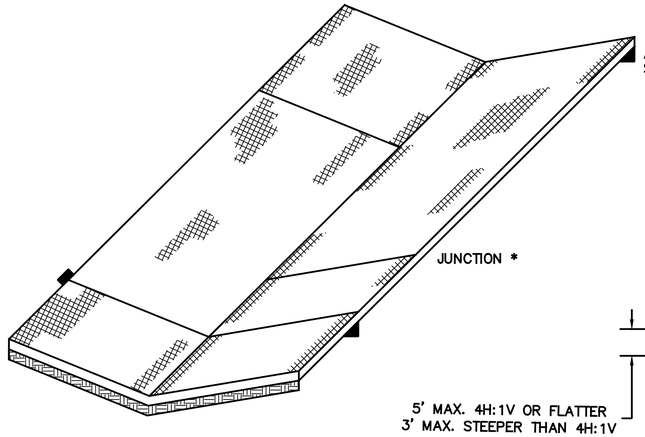
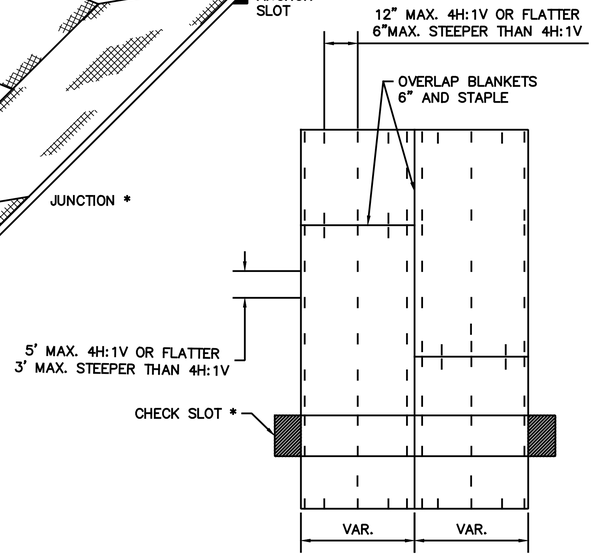


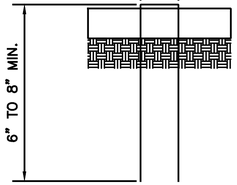
NOTE:
* JUNCTION OVERLAP TOP BLANKET 6 INCHES MINIMUM AND STAPLE EVERY 6 INCHES ACROSS.

ISOMETRIC VIEW
NOT TO SCALE



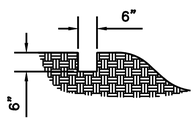
PLAN VIEW
STAPLING DIAGRAM
NOT TO SCALE

NOTE:
* CHECK SLOTS AT 50' INTERVALS: NOT REQUIRED WITH ALL COMBINATION BLANKETS.



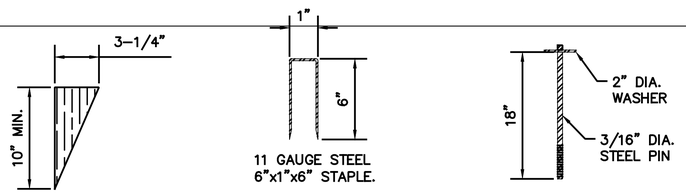
NOTE:
STAPLE FORMED FROM NO. 11 STEEL WIRE.
MIN. 8" STAPLE LENGTH FOR SANDY SOIL.
MIN. 6" STAPLE LENGTH FOR OTHER SOIL.

STAPLE
NOT TO SCALE



ANCHOR SLOT
NOT TO SCALE

EROSION CONTROL BLANKET
INSTALLATION FOR CHANNELS



1. STAKE
SEE NOTE 1

2. STAPLE
SEE NOTE 2

3. PIN
SEE NOTE 3

STAKES, STAPLES, AND PINS FOR
INSTALLATION OF ROLLED EROSION
CONTROL PRODUCTS
NOT TO SCALE

EROSION CONTROL BLANKET NOTES (2):

F) STAPLES:

STAPLES FOR ANCHORING BLANKET SHALL BE NO. 11–GAUGE WIRE OR HEAVIER. THEIR LENGTH SHALL BE A MINIMUM OF 6 INCHES. A LARGER STAPLE WITH A LENGTH OF UP TO 12 INCHES SHALL BE USED ON LOOSE, SANDY, OR UNSTABLE SOILS.

G) JOINING PROTECTIVE COVERINGS:

OVERLAP THE END PREVIOUS ROLL A MINIMUM OF 6 INCHES AND STAPLE ACROSS THE END OF THE ROLL JUST BELOW THE ANCHOR SLOT AND ACROSS THE MATERIAL EVERY 6 INCHES.

H) TERMINAL END:

AT THE POINT AT WHICH THE MATERIAL IS DISCONNECTED, OR WHERE THE PROTECTIVE COVERING MEETS A STRUCTURE OR SOME TYPE, STAPLE A MINIMUM OF EVERY 12 INCHES.

I) FINAL CHECK:

THIS INSTALLATION CRITERIA MUST BE ADHERED TO:
1. ALL DISTURBED ARE ARE SEEDED.
2. PROTECTIVE BLANKET IS IN UNIFORM CONTACT WITH THE SOIL.
3. ALL LAP JOINTS ARE SECURE.
4. ALL STAPLES ARE DRIVEN FLUSH WITH THE GROUND.

NOTE:

NOTE:

APPROXIMATELY 200 STAPLES ARE REQUIRED PER 100 SQ. YDS. OF MATERIAL ROLL. ANCHOR SLOTS, JUNCTION SLOTS, AND CHECK SLOTS TO BE BURIED 6" TO 12" DEEP.

STAKES, STAPLES, AND PINS NOTES:
GENERAL NOTES:

1. STAKES SHALL BE 1x4 TRIANGULAR SURVEY STAKES A MINIMUM OF 10" LONG.
2. STAPLES SHALL BE 11–GAUGE STEEL A MINIMUM OF 1" WIDE BY 6" LONG. A 2"x8" STAKE MAY BE REQUIRED IN CERTAIN SOIL CONDITIONS.
3. STEEL PINS SHALL BE 3/16 DIAMETER BY 18" LONG WITH A 2" DIAMETER WASHER ON TOP (SEE ILLUSTRATIONS).
4. ANCHORING METHODS AND RECOMMENDATIONS VARY BY MANUFACTURERS. THE EXPECTATION OF HIGH VELOCITIES SHOULD DICTATE THE USE OF MORE SUBSTANTIAL ANCHORING.

CITY OF SALINA, KANSAS
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STANDARD DETAILS
EROSION CONTROL BLANKET 2 OF 3

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FILENAME: 22_Erosion_Control_Blanket_2.dwg	BY:	22

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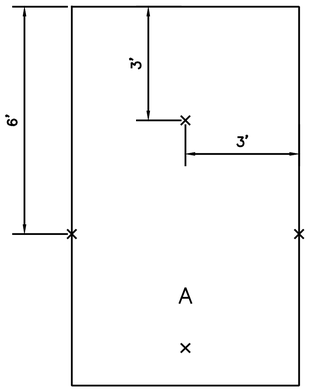
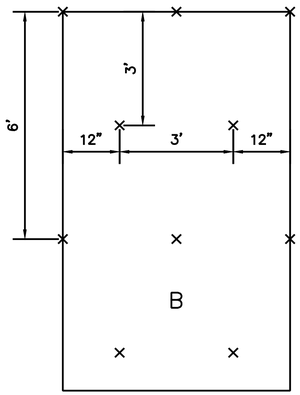
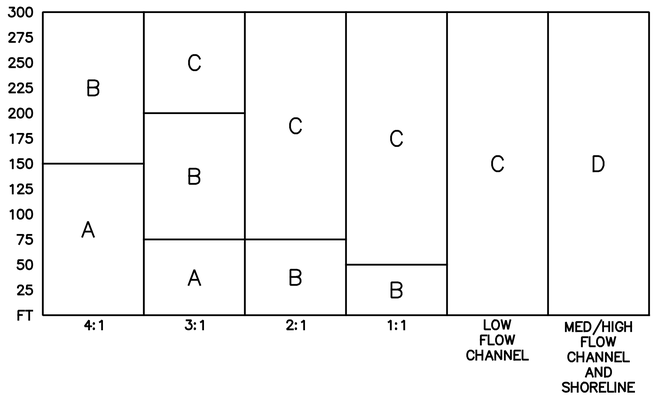
STAPLE PATTERNS FOR ROLLED EROSION CONTROL PRODUCTS



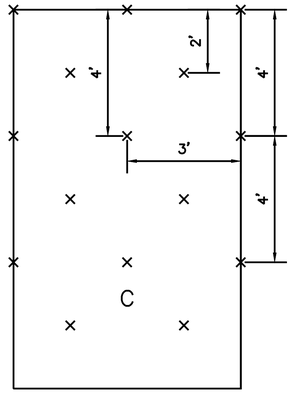
1 STAPLE PER SQ. YD.



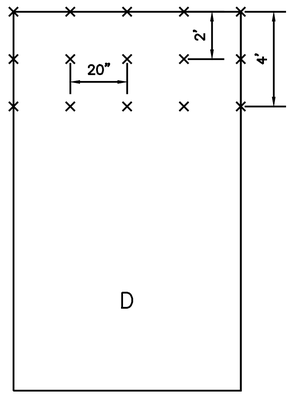
1 1/2 STAPLE PER SQ. YD.



GENERAL STAPLE PATTERN
GUIDE AND RECOMMENDATIONS
FOR ROLLED EROSION CONTROL PRODUCTS
NOT TO SCALE



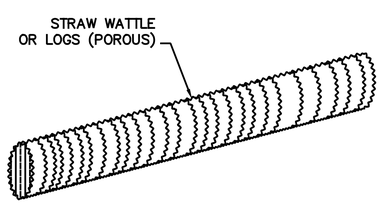
2 STAPLE PER SQ. YD.



3 1/2 STAPLE PER SQ. YD.

A) NOTES:

1. FOR OPTIMUM RESULTS, THESE RECOMMENDED STAPLE PATTERN GUIDES MUST BE FOLLOWED UNLESS OTHERWISE DICTATED BY THE MANUFACTURER. SUGGESTED ANCHORING METHODS VARY BY MANUFACTURER. THIS CHART SHOWS HOW SLOPE LENGTHS AND GRADIENTS AFFECT STAPLING PATTERNS.



STRAW WATTLES OR LOGS
NOT TO SCALE

A) NOTES:

1. STRAW WATTLES OR LOGS MUST BE USED FOR LOW SURFACE FLOWS ONLY.
2. PRODUCTS MUST BE INSTALLED AS PER MANUFACTURE'S RECOMMENDATIONS WITH CARE TAKEN TO TIGHTLY BUTT ENDS OF ADJOINING WATTLES TOGETHER. DO NOT OVERLAP.
3. ENDS OF WATTLES SHALL BE TURN UPHILL TO POND RUNOFF.
4. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE HEIGHT OF THE WATTLE.
5. WATTLES MUST BE REPLACED WHEN TORN, COLLAPSED, OR DAMAGED.

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
EROSION CONTROL BLANKET 3 OF 3

PROJ NO:	DATE:	SHEET:
FILENAME: 23_Erosion_Control_Blanket_3.dwg	BY:	23

DATE	REVISIONS
4/15	2015 Standards

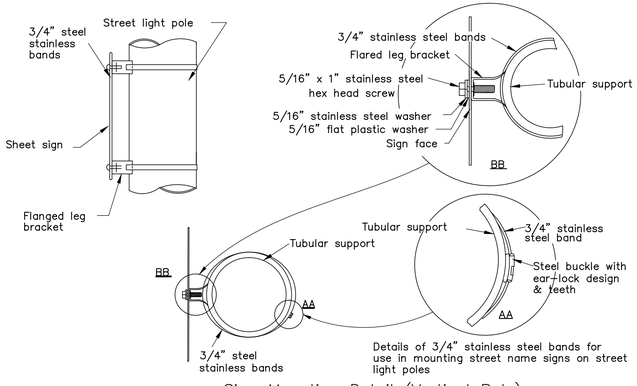
Permenant Signing General Notes

1. All permanent signing shall be provided and installed by the contractor as indicated in the plans and specifications, and according to the City of Salina standard details.
2. All letter, number and symbol sizes, spacing and sign colors shall conform to the current Manual on Uniform Traffic Ccontrol Devices (MUTCD).
3. All school signing shall have a fluorescent yellow–green background with a black legend and border. All other warning signs shall have a standard yellow background.
4. The contractor is responsible for avoiding any and all utilities when setting sign posts and will be required to coordinate his activities with all utility companies, including the City of Salina, for street light, traffic signage, water and wastewater, fiber optic facilities whether their facilities is indicated on the plans or not.
5. All new signs shall be located within public right–of–way.
6. All sign sheeting shall be a minimum of High Intensity Prismatic Type III or per ASTM D4956 (unless otherwise indicated in the plans or specifications).
7. All sign blank material shall be made of 0.08" aluminum except all overhead street name signs shall be made of 0.125" aluminum.
8. Existing street name signs in the way of construction:
   The street name signs shall be relocated out of the way of construction but in a conspicuous location for the driving public and emergency providers. The street name signs shall be reinstalled in their proper location as soon as possible unless otherwise indicated. The removal and re–installation of existing signs will be considered subsidiary to other bid items.
9. Signs shown to be installed on the side of poles shall be mounted by stainless steel mounting bands as detailed in the plans. All R10 series signs installed on a traffic signal mast arm shall be mounted with astro brackets as specified.
10. All post mounted signs shall be mounted on breakaway sign posts according to the standard details.
11. All signs and posts shown in the plans shall be new unless otherwise indicated in the plans or by the City Engineer.
12. All existing regulatory signs and warning signs street name signs will be used in place during construction and protected from damage unless otherwise indicated in the plans. If the contractor damages any existing sign or posts during construction, he shall be required to reinstall new signs and posts of the same type to replace the damaged equipment.
13. Any existing permanent signs removed by the contractor for construction purposes other than stop signs, yield signs or street name signs shall be stockpiled in one location and delivered to the Public Works/Traffic Control Facility. Contact Dennis DeWitt at 309–5750 to arrange for the delivery of the stockpiled signs. At least 24–hour advance notice shall be provided. The contractor shall be responsible for removing and stockpiling equipment in good condition and is fully responsible for the equipment until they are delivered to the maintenance facility.
14. All stop, yield, warning signs, and street name signs shall be maintained in a conspicuous location for the driving public. All stop and yield signs removed for construction purposes can be temporarily erected in reflectorized drums (no less than 7 feet vertical from grade) until they can be re–installed. any temporary stop or yield sign installation to be left in place overnight will require prior approval from the City Engineer.
15. All existing signs, other than stop, yield, warning signs, or street name signs, shown to be used in place shall be protected from damage by the contractor. The contractor may temporarily remove the sign and post to prevent damage at the approval of the City Engineer. Storage of the signs & posts is the responsibility of the contractor.

Instructions for Disassembly and Return of Traffic Sign Equipment

The following is a list of traffic sign equipment which shall be salvaged and returned to the City of Salina, unless otherwise instructed by the City Engineer. The city maintains first right of refusal of any of the equipment listed. The project inspector will make an on–site assessment to determine if the equipment should be salvaged or disposed. Any equipment that will not be salvaged shall become property of the contractor.

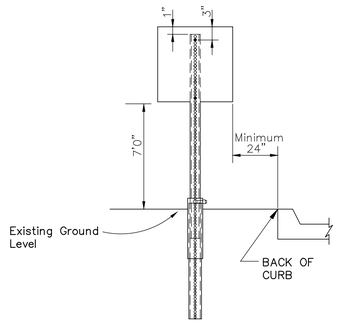
1. All traffic signs shall be removed from sign posts, signal poles or street light poles and be returned.
2. All astro brackets shall be removed from the tubular support and returned. Do not cut the astro bracket cable.
3. All traffic sign posts shall be removed and returned unless it is bent. If the sign post or pole was mounted in concrete, the post or pole shall be discarded upon removal.
4. Any hardware (i.e. bolts, bandit material, ect.) involved in mounting the sign must be discarded.
5. All flashing beacon assemblies shall be returned, including solar panels, poles, cabinet and internal components. Solar panels and signs shall be removed prior to returning. Screw–in foundations shall be cleaned of dirt and debris and returned with bolt and anchor studs.
6. All traffic sign equipment to be returned shall be returned in the same condition as it was prior to removal. Disassembly of equipment shall be done prior to returing the equipment to the Public Works/Traffic Control Facility 412 E. Ash.



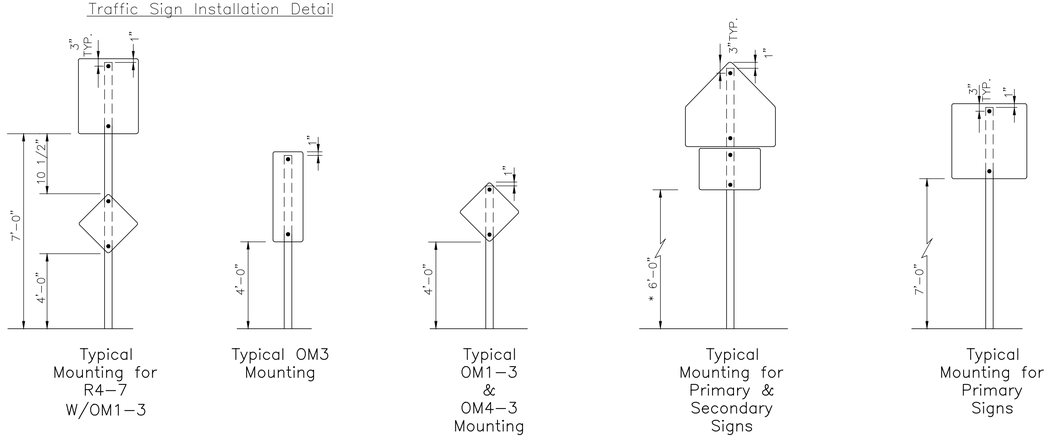
Sign Mounting Detail (Vertical Pole)

Notes:

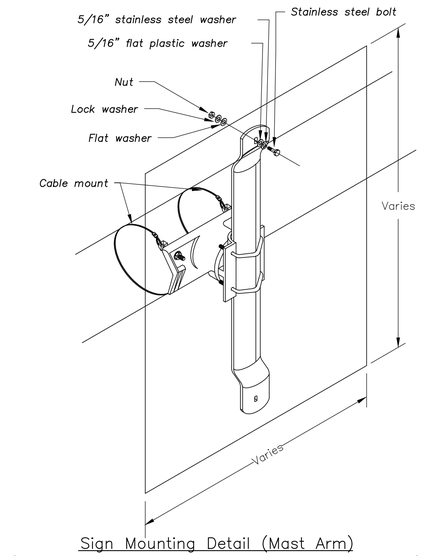
1. Signs on tubular supports shall be attached with two (2) brackets and stainless steel bands.
2. Holes in sign for attachment to the mounting brackets shall be offset a minimum of 2" from the edge of sign.
3. Holes in sign shall be located such that the sign is level.
4. Signs installed on mast arms shall be mounted with astro brackets as specified.



Traffic Sign Installation Detail



Sign Mounting Details



Sign Mounting Detail (Mast Arm)
(Does not apply to overhead street name signs)

Pavement Installation Sequence

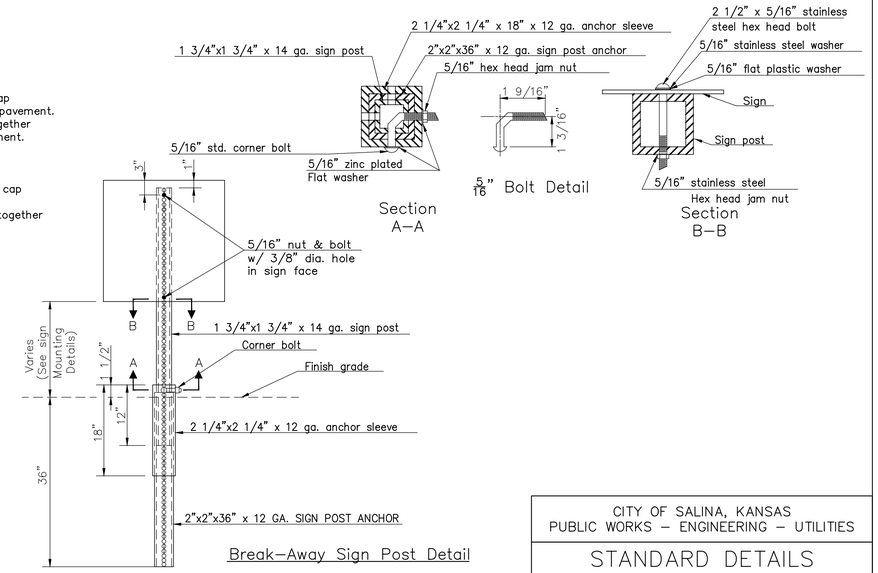
1. Sign post anchor driven partially into subgrade using a drive cap with sledge or power equipment prior to the placement of the pavement.
2. Anchor sleeve slipped over anchor and driven into subgrade together with the sign post anchor prior to the placement of the pavement.
3. Insert sign post into the post anchor and bolt in place.

Ground Installation Sequence

1. Sign post anchor driven partially into the ground using a drive cap with sledge or power equipment.
2. Anchor sleeve slipped over anchor and driven into the ground together with the sign post anchor.
3. Insert sign post into the post anchor and bolt in place.

NOTE: In all installations the first hole above the finished grade level in all three units must be in line for insertion of the corner bolt.

All corner bolts and nuts for fastening the signs and sign post assembly and all washers shall comply with appropriate sections of the standard specifications (latest edition) and shall be a subsidary item.



Break–Away Sign Post Detail

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
SIGNING GENERAL NOTES

PROJ NO:	DATE:	SHEET:
FILENAME: 24_Sign_detail_sheet.dwg	BY:	24