

**SPECIFICATIONS FOR CONCRETE WORK
SALINA, KANSAS
(REVISED SEPTEMBER 2015)**

CONCRETE

Cement Content	-	6.5 sacks / cubic yard
Water, maximum	-	5.8 gallons / sack
Aggregate	-	30% crushed rock – 70% sand
Strength, minimum	-	4,000 p.s.i. in 28 days
Finish	-	Light broom finish
Curing time	-	3 days for pedestrian traffic 7 days for vehicular traffic
Reinforcing		
Approaches / Sidewalks	-	6x6-W1.4xW1.4 weighing 21 lb/ft ² welded wire fabric (driveway section only)
Curb & Gutter	-	#4 re-bars, 30” center to center, tied to concrete pavement

All construction shall be subject for inspection by the City Engineering Office shall be notified at least (4) hours prior to work. Concrete shall be protected by means of damp mats, burlap or use of an approved white (water or oil based) curing compound.

DRIVEWAY APPROACHES

Driveways shall be six (6) inches in thickness and constructed at right angles to the street. No driveway serving a commercial or industrial tract shall be permitted which necessitates backing of a vehicle onto the street.

On arterial, collector, residential streets where “No Parking” is marked, less than 22’ (may be allowed) between driveway ends of returns for residential homes upon the approval of the Engineer. No more than two (2) driveway approaches for a single tract shall be constructed on an arterial street.

Before placing concrete, the subgrade shall be thoroughly moistened. Concrete may not be deposited on frozen or muddy subgrade or when the ambient temperature is 40° F. or less without adequate frost protection. Concrete shall then be deposited between the forms in its full course and in one continuous operation. It shall then be thoroughly consolidated between the forms by means of vibrating screeds or internal vibrators, after which it shall be struck off and given an approved finish. All edges and expansion joints shall be edged with an edging tool. The use of a “Jitterbug” or similar device shall be prohibited.

Preformed expansion joint material, one-half inch thickness, shall be placed according to City of Salina Standard Details.

SIDEWALKS

All sidewalks shall be four (4) inches in thickness except through driveways where the thickness shall be increased to six (6) inches. All sidewalk sections that are six (6) inches in thickness, shall be reinforced with wire welded fabric. The wire shall be No. 10 wire in a size six (6) by six-(6) inch pattern (6x6-W1.4xW1.4) weighing 21 pounds per hundred (100) square feet. The sidewalk sections shall slope toward the top of the curb at a rate not to exceed one-quarter (1/4) inch per foot.

Expansion joints one-half (1/2) inch in thickness shall be placed at each side of each driveway, at distances not to exceed one hundred (100) feet, where new work joins old sidewalk, or other rigid structures of any kind.

No sidewalk may be removed from any property without being replaced by new sidewalk.

The width of proposed sidewalk shall match the existing sidewalk (minimum four (4) feet) width located within the block.

Any sidewalk that abuts and is parallel with a driveway approach must be constructed with a curb or other barrier to effectively separate the sidewalk from the driveway approach.

Control joints shall be formed at intervals not to exceed five (5) feet. Cutting entirely through the fresh concrete shall form the control joints (with a trowel after the initial set.) All control, construction and expansion joints shall be rounded with an edging tool (1/4" to 3/8".)

All sidewalk construction located on public right-of-way shall be accessible to the physically handicapped and shall be in compliance with the American Disability Act.

CURB & GUTTER

Preformed expansion joint material, one inch thickness, shall be placed wherever new work joins existing work, at the ends of all driveway, alley, and street returns where returns meet existing construction, and at intervals not to exceed one hundred and fifty (150) feet for all "straight runs." Expansion joint material shall be placed prior to placing of concrete and shall not protrude above finished grade. Unless directed by the Engineer, all control joints shall be at five (5) feet intervals.

All curb and gutter work located on public right-of-way at street intersections, driveways, etc. adjacent to a public sidewalk shall be constructed to provide an accessible route for the physically handicapped.

Along asphaltic pavement the existing toe shall be saw cut prior to removal to provide a clean match for new concrete work.

All street repairs shall be thoroughly consolidated by means of internal vibrators. For repair of concrete pavement, the repair shall be the same thickness as the existing pavement (min. six (6) inches.) For repair of asphalt street surface, the concrete shall be placed two (2) inches below the top of the existing pavement. The top two (2) inches shall then be covered with a compacted hot asphaltic concrete rolled to form a smooth surface. Concrete shall not be placed at ambient temperature of 40° F. or less without adequate frost protection.

The Contractor shall notify the City Engineering office at least four (4) hours prior to placing any concrete for street repairs.

QUESTIONS & ANSWERS

Can I do my own work in the street right-of-way and do I need a permit? If you wish to place your own drive, sidewalk or curb and gutter in the City right-of-way, you must obtain a contractor or tradesman registration through the City Clerk's Office. A permit for each project is required through the Public Works Department, Engineering Division. The fee for the permit is found in the current City of Salina Comprehensive Fee Schedule. Once you have set your forms for placement of concrete, you need to call the Engineering Division for an inspection at least four (4) hours before placement. After your work is approved, you will be able to place and cure your concrete.

How do I cure my freshly placed concrete? Rolling or spraying of white or clear pigmented cure is acceptable.

Where is my sidewalk located on my property? If the sidewalk is a property line sidewalk, it should be located in the street right of way. The backside of the sidewalk should be located approximately one (1') inside the street right-of-way. If you live on a street with a 33' street (back to back) and have a road right-of-way of 60', the property line will be approx. 13' - 6" from the back of curb, the backside of the sidewalk will set approx. at 12' - 6".

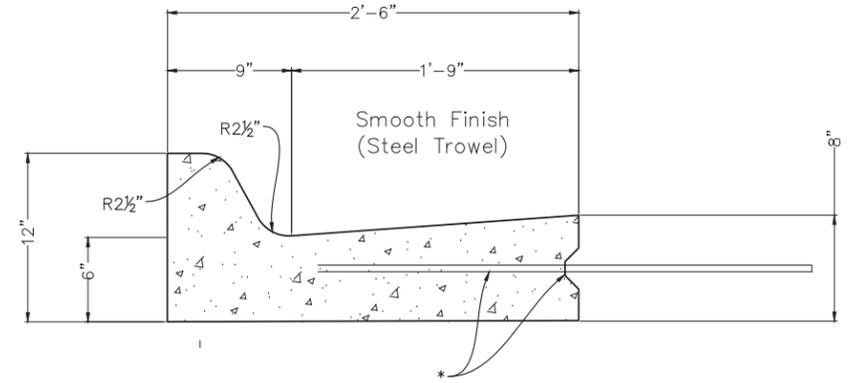
My street has been asphalt overlaid into the existing curb and gutter. Should the toe of my new curb and gutter match the top of the asphalt or the old curb and gutter toe? Match the top of the asphalt; this will give you much smoother ride into the drive.

Why should I wet my subgrade before I place my concrete? Wetting the subgrade before placement of concrete will keep the newly placed concrete from losing the moisture it has into the dry subgrade. With the concrete moisture gone, it will weaken the concrete.

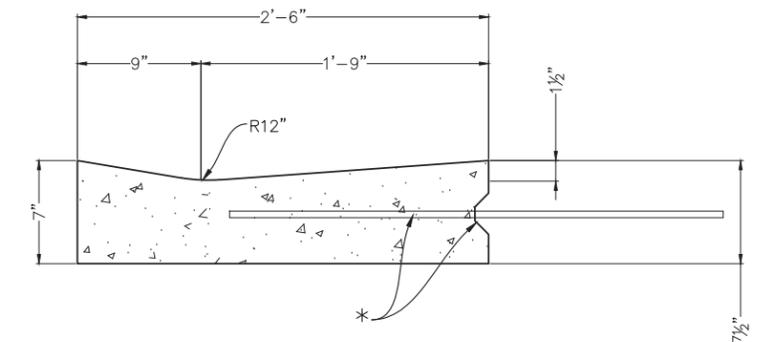
Should I provide barricades if I remove my curb and gutter, approach or sidewalk? Providing barricades will not only protect you against a law suit but will protect others from walking or driving into freshly placed concrete or the forms before placement.

Do I need to provide a sidewalk section through my drive if I live in a Cul-de-sac? No, due to the limited right-of-way in the cul-de-sac.

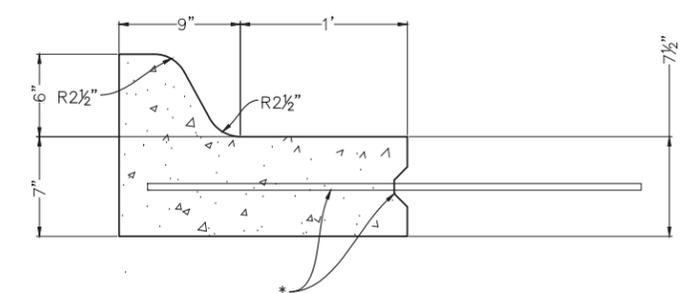
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COMBINED CURB & GUTTER (TYPE I)
Scale: N.T.S.

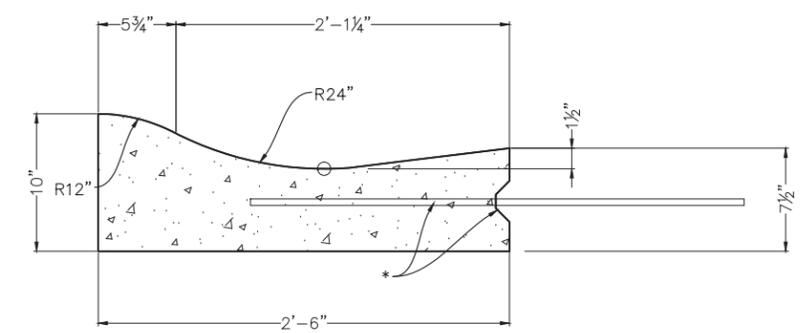


COMBINED CURB & GUTTER (TYPE II)
Scale: N.T.S.

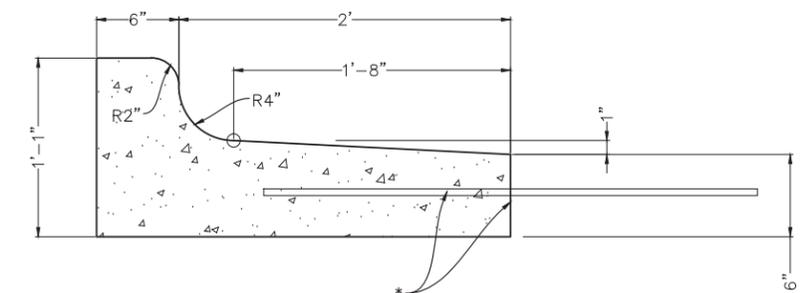


COMBINED CURB & GUTTER (TYPE III)
Scale: N.T.S.

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



ROLLED CURB
Scale: N.T.S.



SPILL CURB
Scale: N.T.S.

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.

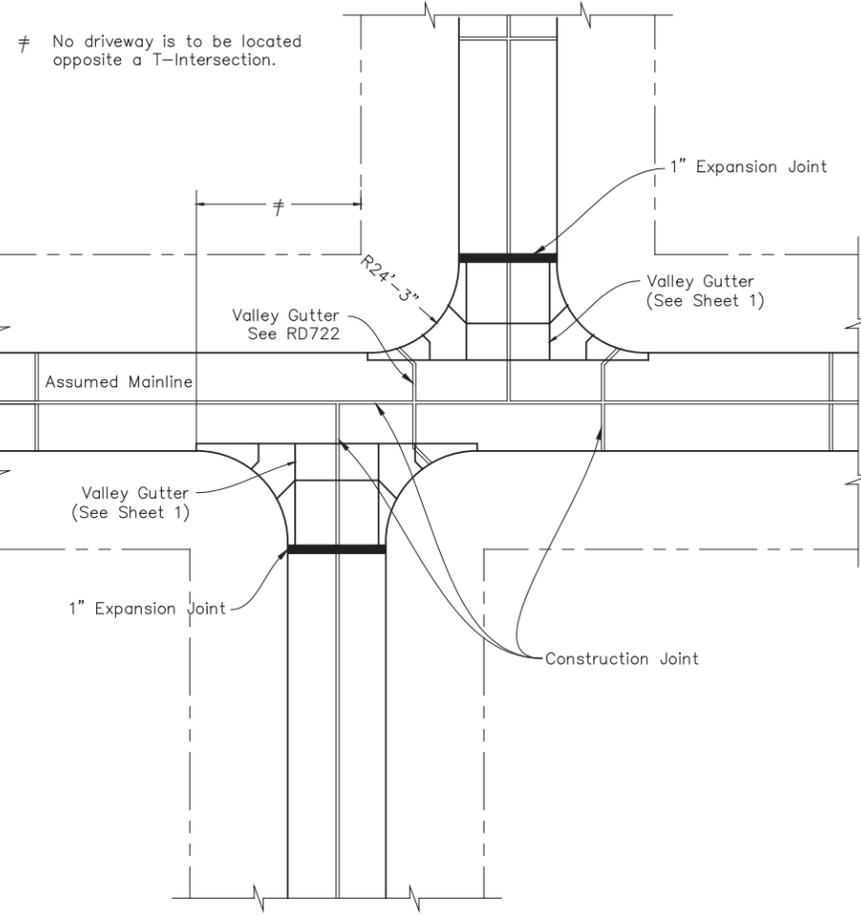
Where combined curb and gutter or gutter does not abut concrete pavement or concrete base course, omit tie bars and place a 1" Preformed Expansion Joint Filler (Type B) cut to the dimensions of the combined curb and gutter or gutter, at a spacing not to exceed 250' and at the ends of curb returns. Planes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

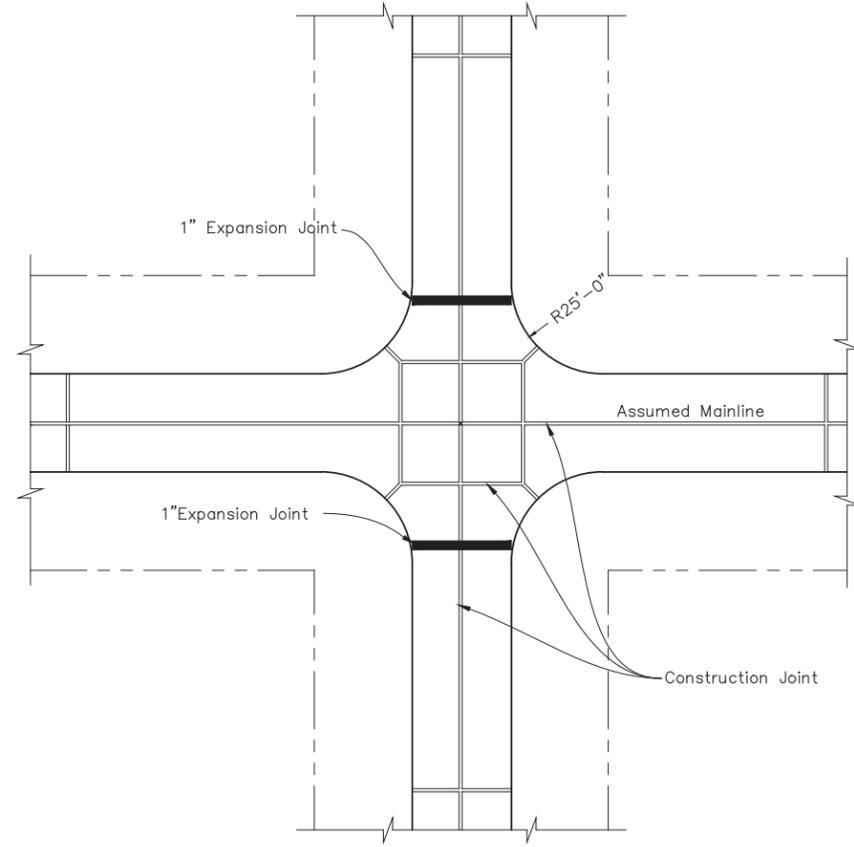
Where pressure relief joint is placed across the pavement, and gutter or curb and gutter is continued on for more than 10', use 4"x4" membrane sealant installed with bonding adhesive through gutter section, shaped to fit gutter or curb and gutter. See Std. Drawing RD712 for expansion joint treatment 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.

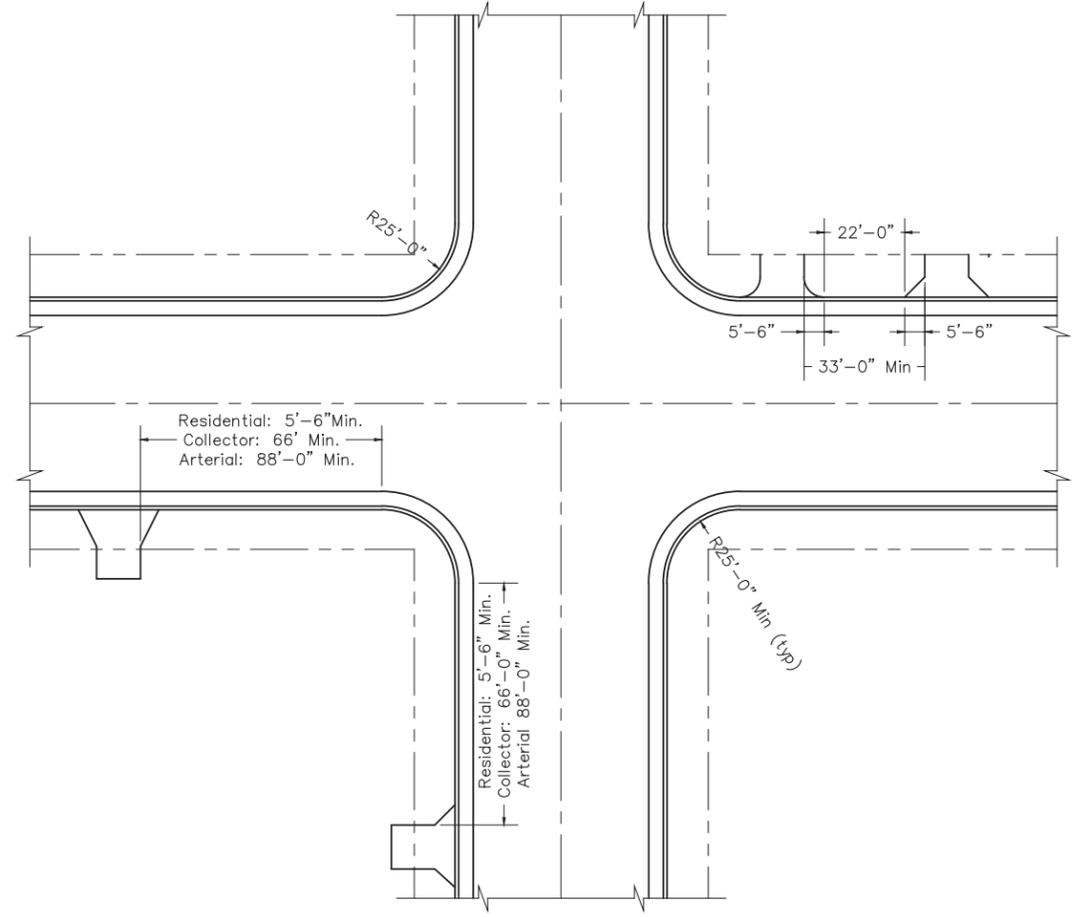
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TYPICAL INTERSECTION PLAN



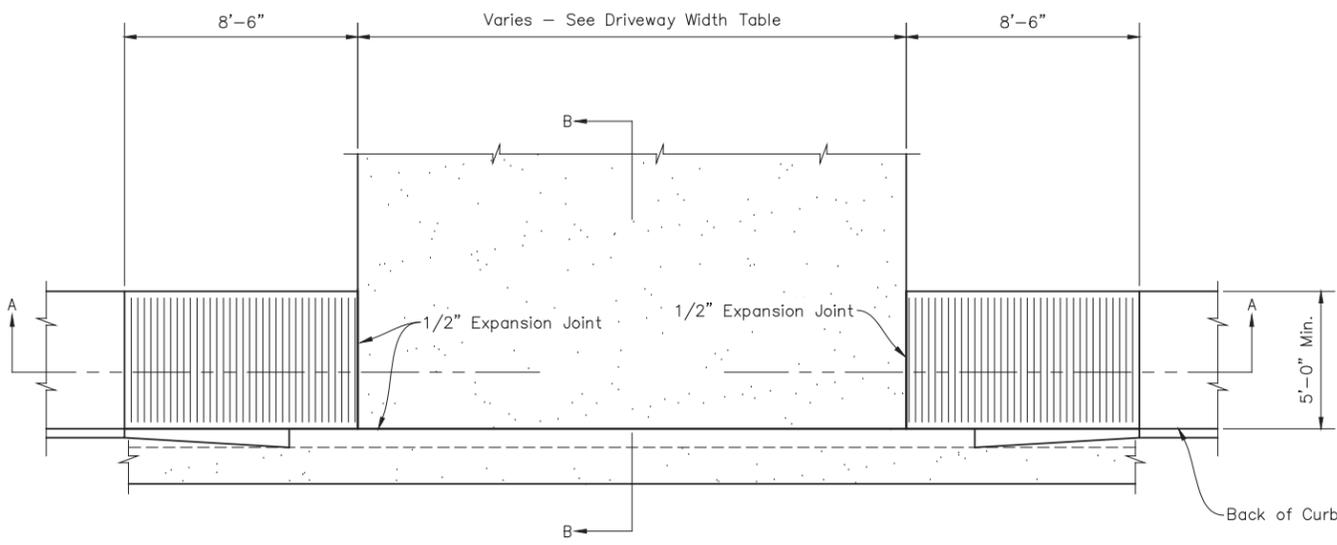
TYPICAL INTERSECTION PLAN



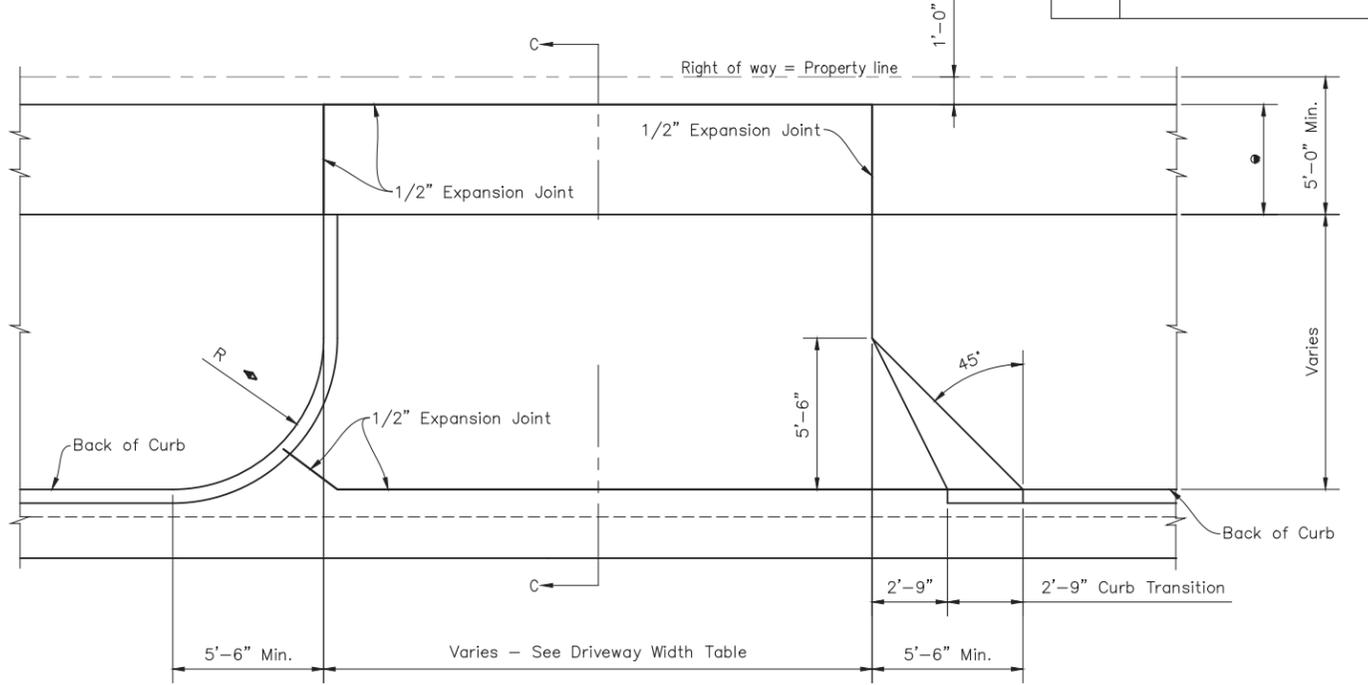
TYPICAL DRIVEWAY LAYOUT

NOTES:
 Construction Joints Shall Have Tie Bars On 2'-6" Centers
 All Joints Not Otherwise Designated are Butt Construction Joints (See Sheet 1)

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TYPICAL DRIVEWAY w/ CURBSIDE SIDEWALK DETAIL



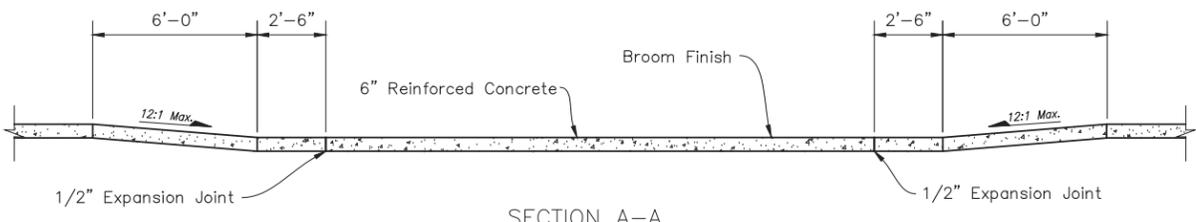
WITH RADIUS

WITH 45° WING

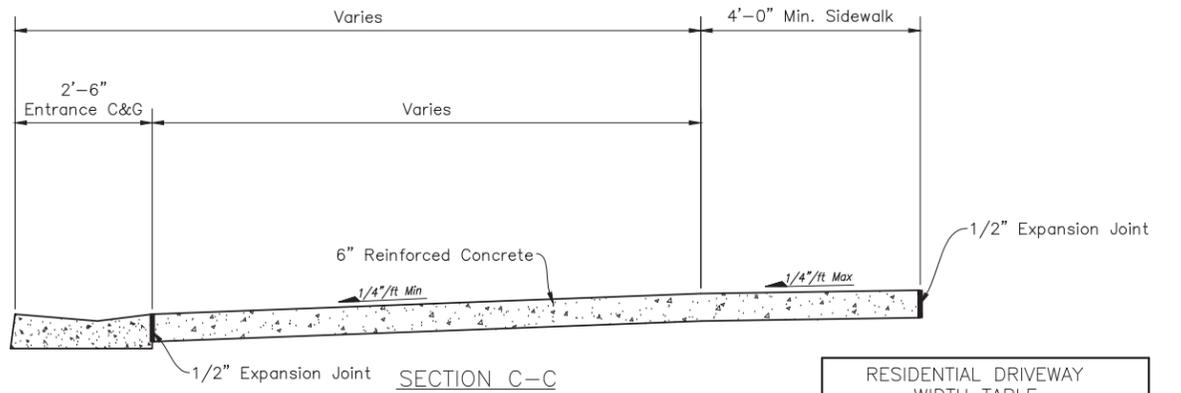
TYPICAL DRIVEWAY w/ PROPERTY LINE SIDEWALK DETAIL

Match adjacent sidewalk width

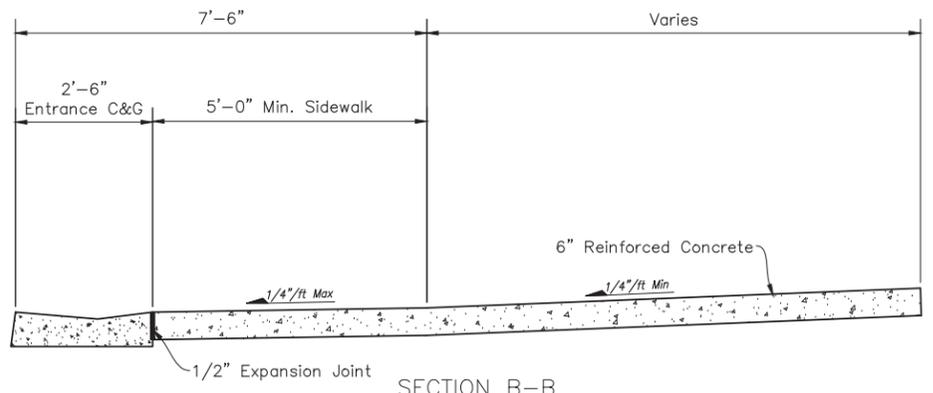
Driveway Type	Radius
Commercial	15' min.
Single Residential	5.5' min.
Double Residential	3' min.



SECTION A-A



SECTION C-C



SECTION B-B

GENERAL NOTES:

- All driveway approach construction shall be subject to City inspection at all times by the City Engineer or his representative.
- All driveway approach construction shall be placed normal to center line of roadway in a true and neat manner.
- All driveway approach construction shall be no less than 5'-6" from adjacent property unless with written consent from adjacent property owner.
- 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.
- 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).

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

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

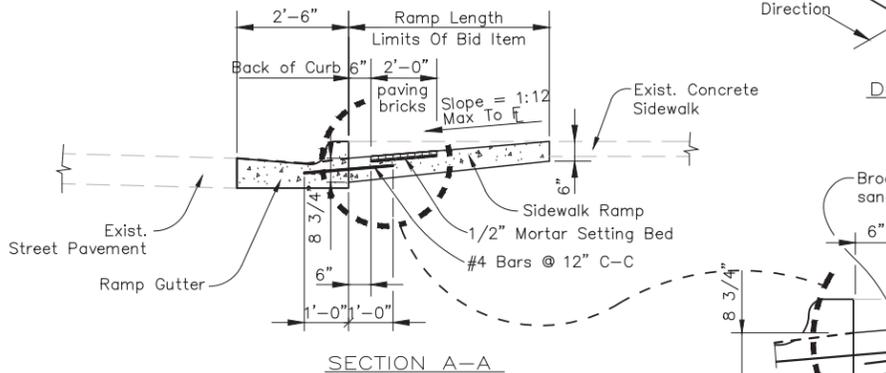
Minimum Driveway Width = 8'-0"

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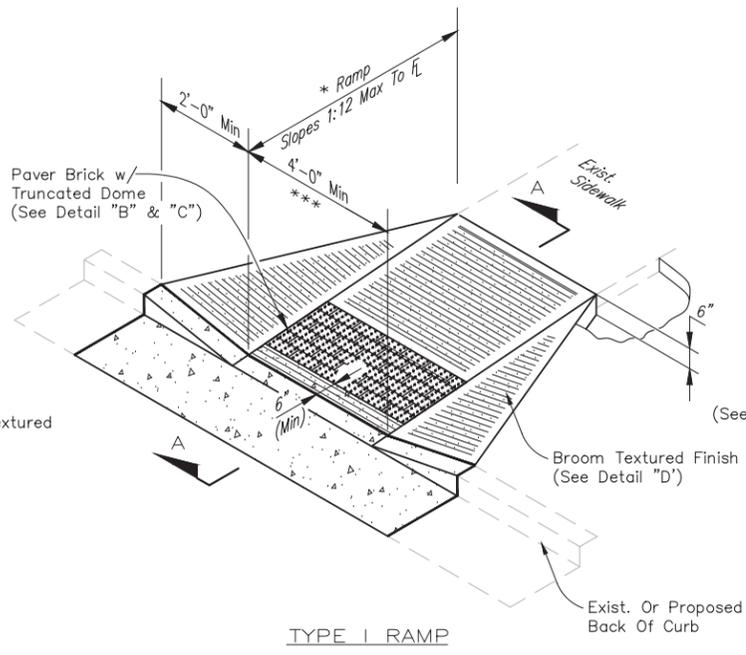
GENERAL NOTES:

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 parallel 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 1/4 to 3/8 inch radius edging tool except when joints are sawed.

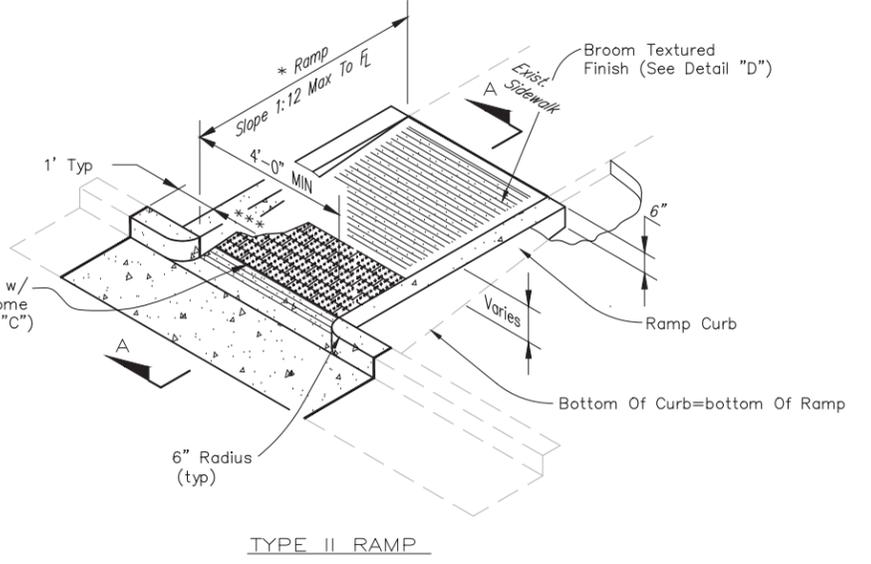
- * Ramp Length Will Be Determined By Slope Grade
 - ** Ramp & Curb Transition Will Be Determined By Slope Grade
 - *** Ramp Width To Be Same Width As Exist Sidewalk With a 4' Min Width
- These Dimensions Are Nominal



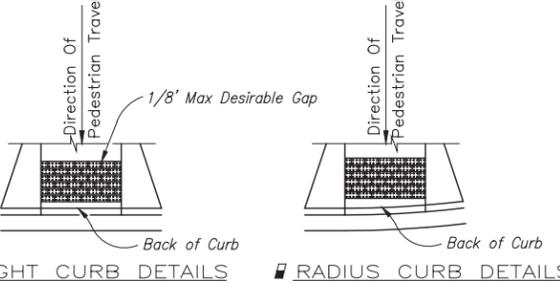
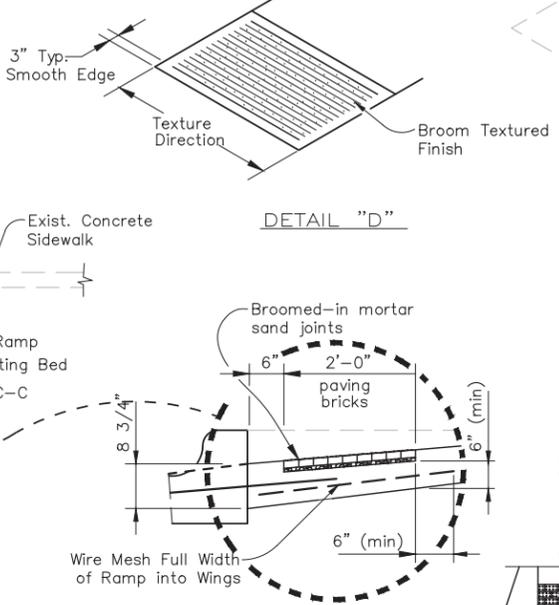
DETAIL "D"



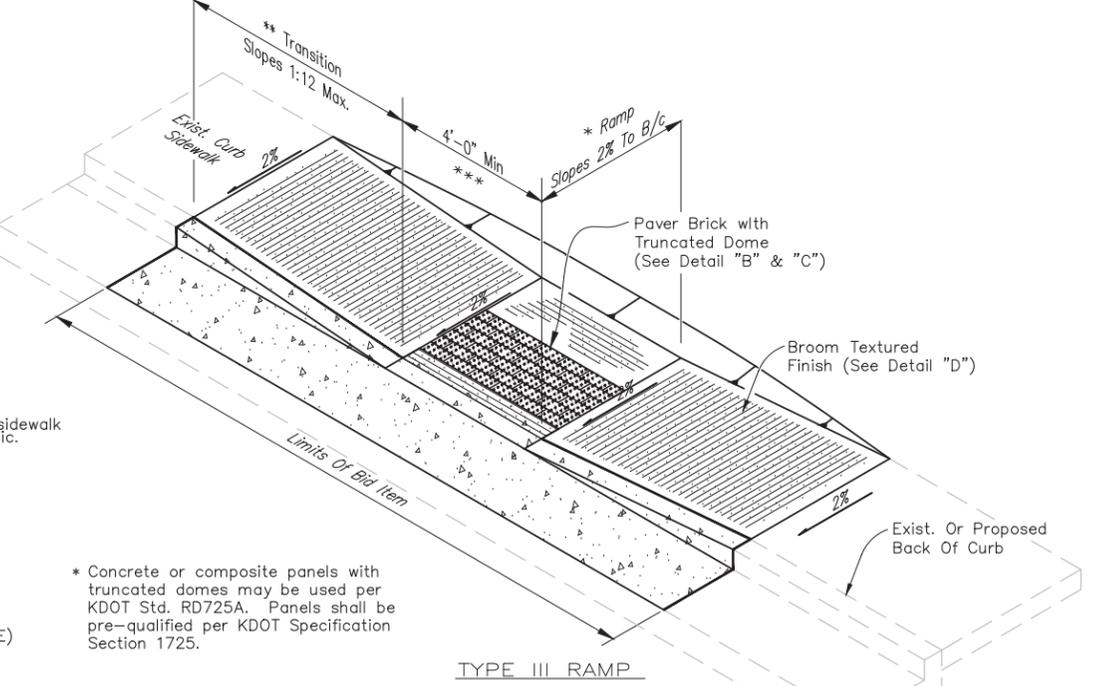
TYPE I RAMP



TYPE II RAMP

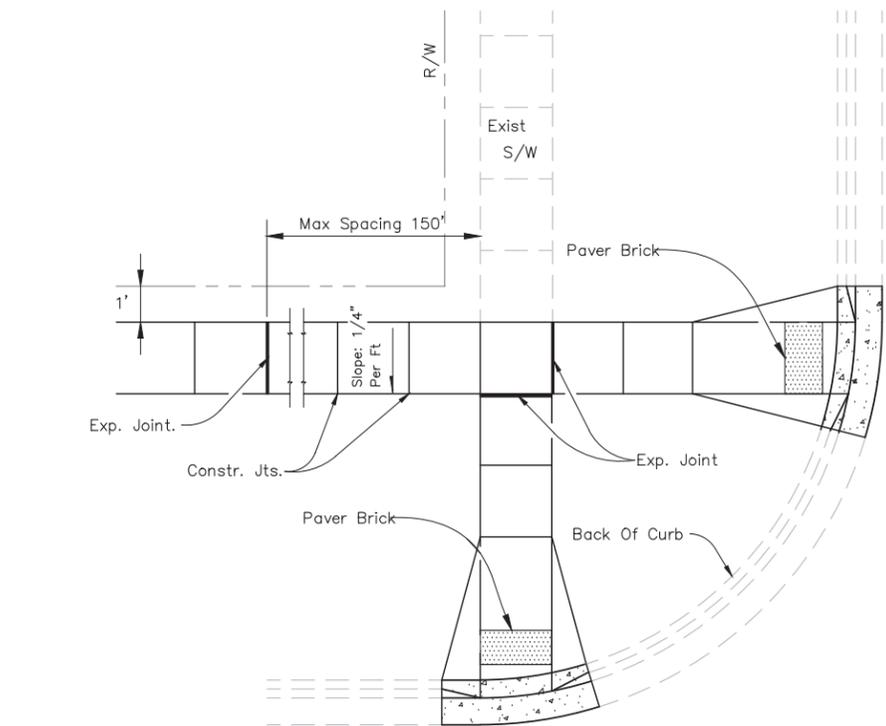


STRAIGHT CURB DETAILS RADIUS CURB DETAILS

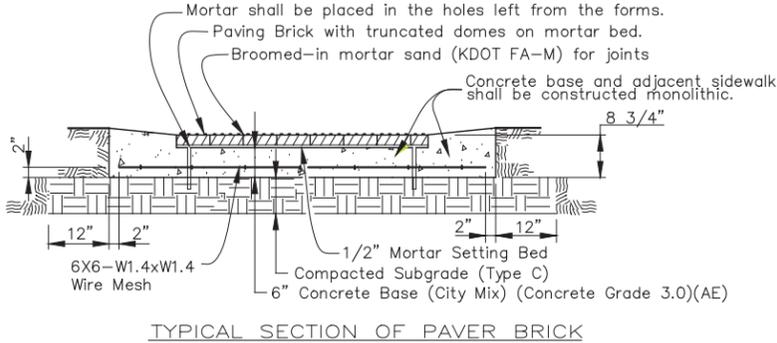


TYPE III RAMP

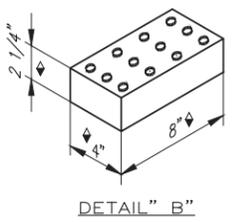
* Concrete or composite panels with truncated domes may be used per KDOT Std. RD725A. Panels shall be pre-qualified per KDOT Specification Section 1725.



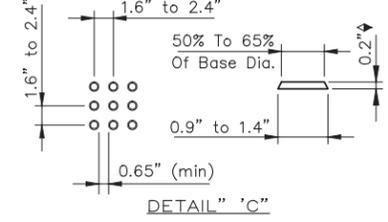
SIDEWALK DETAILS



TYPICAL SECTION OF PAVER BRICK



DETAIL "B"



DETAIL "C"

ASTM C 936 PAVER BRICK WITH TRUNCATED DOME SURFACE

TRUNCATED DOME DIMENSIONS for SQUARE PATTERN

♦ Nominal Dimensions

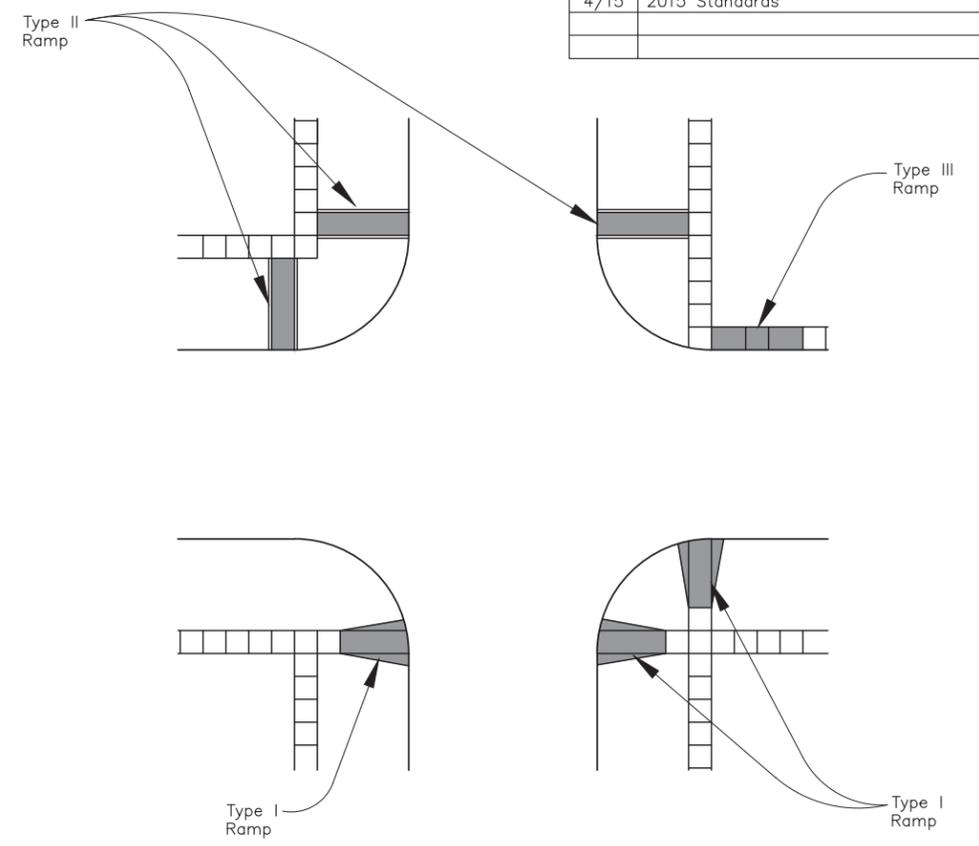
SIDEWALK THICKNESS	
WIDTH/LOCATION	THICKNESS
≤ 8 FT	4 IN
8-10 FT	5 IN
DRIVEWAYS	6 IN

CITY OF SALINA, KANSAS
PUBLIC WORKS - ENGINEERING - UTILITIES

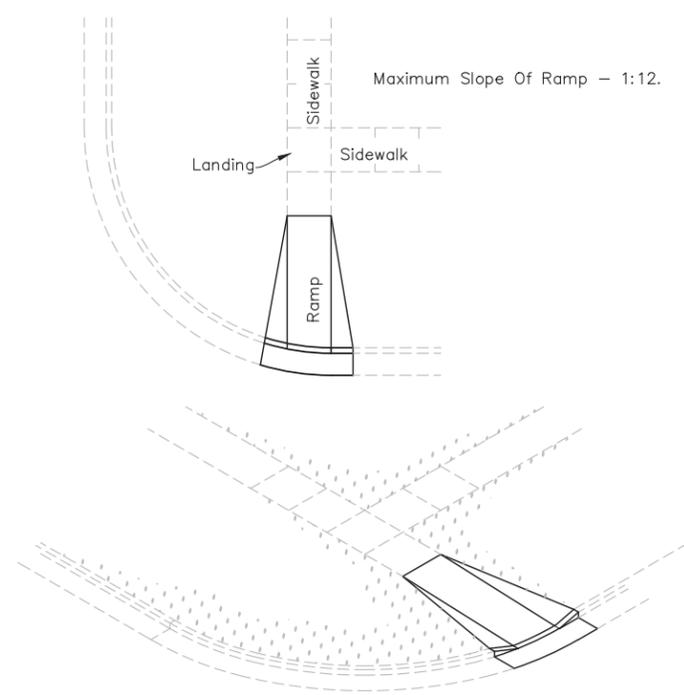
STANDARD DETAILS
SIDEWALK & ADA RAMP

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

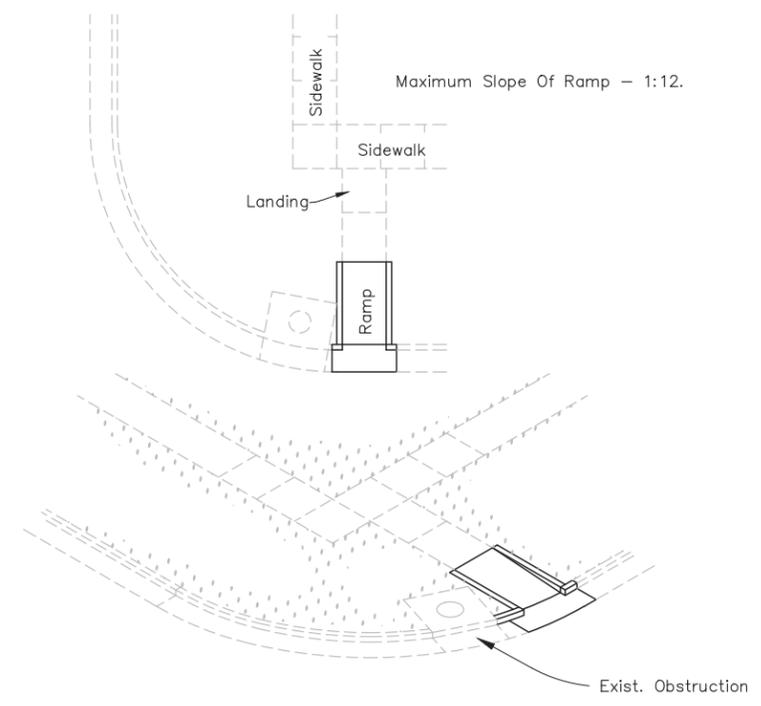
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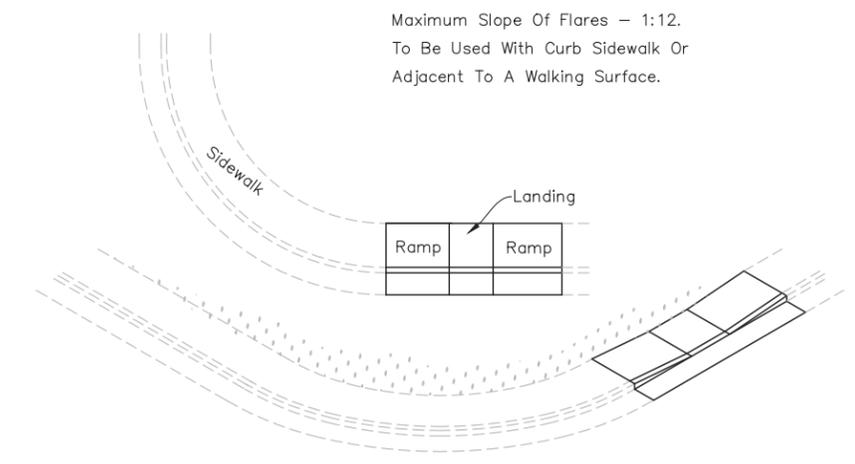
POSSIBLE SIDEWALK COMBINATIONS.



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