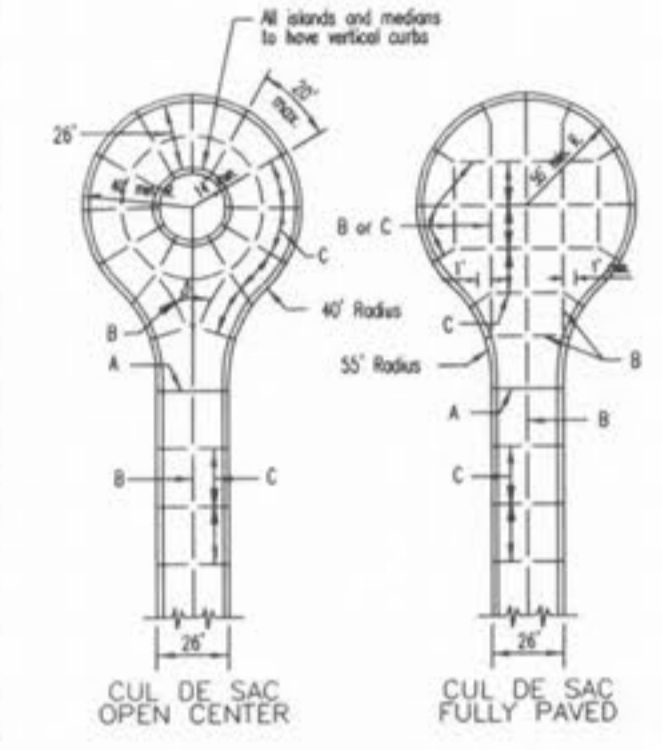
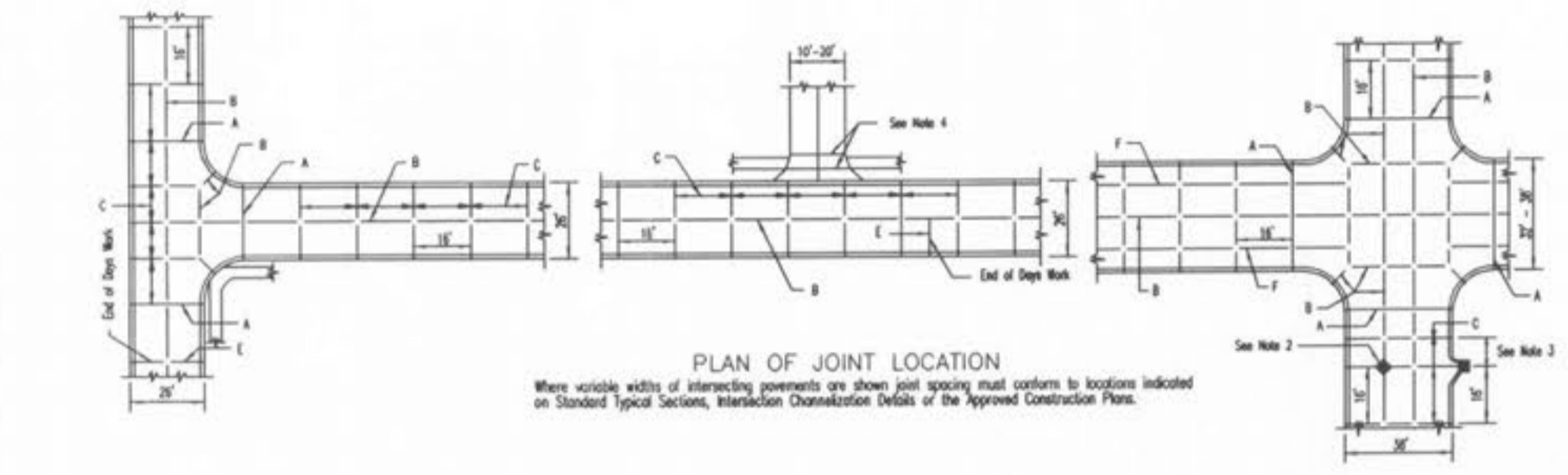
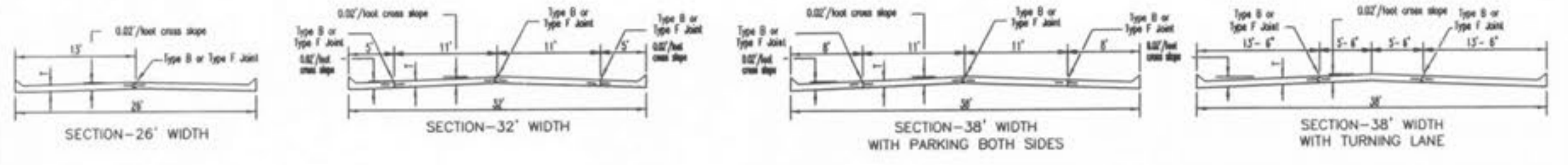


INTEGRAL ROLLED CURB AND CONCRETE PAVEMENT TYPICAL SECTIONS AND DETAILS

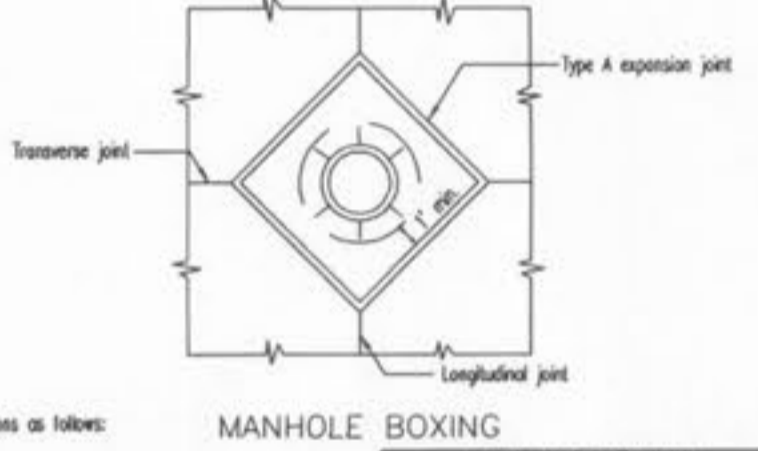


STREET	JOINT TYPE	JOINT AND BAR REQUIREMENTS
3 LANE RESIDENTIAL 32'-36' wide pavement	Transverse	TYPE C no steel bars
	Longitudinal	TYPE B When a joint falls within 5ft. of, or contacts inlets, manholes, or other structures, shorten one or more panels either side of opening to permit joint to fall on round structures and at or between corners of rectangular structures.
	Expansion	TYPE A no steel bars
7' thick concrete RESIDENTIAL 2 LANE	Transverse	TYPE C no steel bars
	Longitudinal	TYPE B Full Width Construction: TYPE B modified with 1/2" φ deformed tie bars 18" @ 30' cts. Half Width Construction: TYPE B modified with 1/2" φ deformed tie bars 30" @ 30' cts.
	Expansion	TYPE A no steel bars

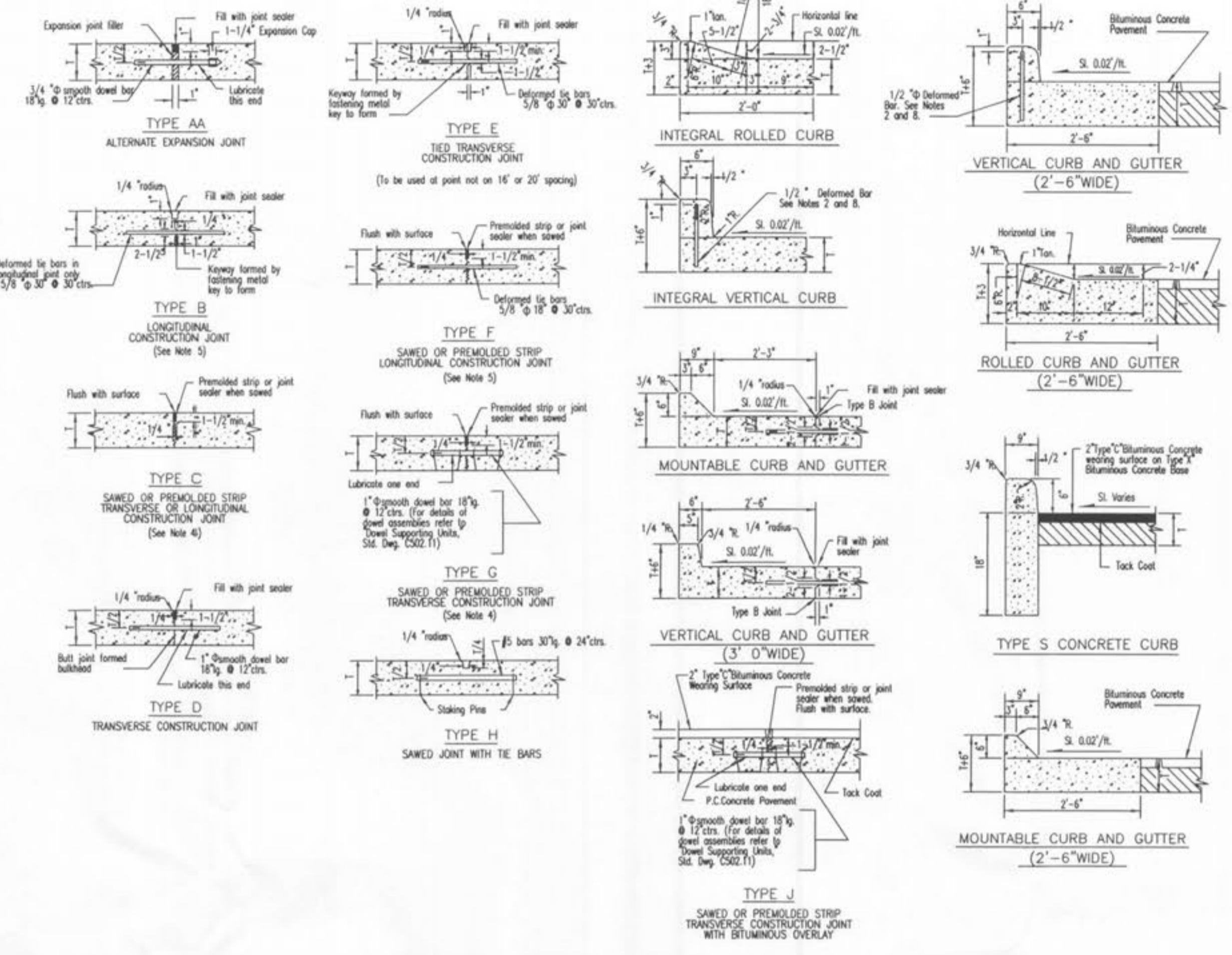
NOTE
Joint filler material shall meet ASTM designations as follows:
Bituminous type ASTM D-994-53
Non extruding & resilient bituminous type (fiber) ASTM D-1751-60T
Non extruding & resilient non bituminous type (rubber) ASTM D-5249

NOTE
Joint sealant material shall meet ASTM and AGHD designations as follows:
ASTM D-3405.....AGHD M-301 or
ASTM D-1190-74.....AGHD M-173-84 or latest revisions thereof.

- GENERAL NOTES**
- Do not scale drawing. Follow dimensions.
 - All street lines shall be separated from the pavement and curb by expansion joint material extending completely through curb and slab. Manhole coating within the pavement limits shall be boxed as shown.
 - When a joint falls within 5ft. of, or contacts inlets, manholes, or other structures, shorten one or more panels either side of opening to permit joint to fall on round structures and at or between corners of rectangular structures.
 - Driveway configurations are shown in the "Entrance Construction Details".
 - Construction joints and tie bars may be omitted when curb is poured monolithic with pavement.
 - Minimum Thickness for Pavement as: SEE TYPICAL PAVEMENT SECTION
 - For joint and bar requirements refer to the Pavement Construction Details for "Joints and Curbs". Slit. Dep. CS02.01 and CS02.03. Note that the width and location may change the type of joint required.
 - Transverse or longitudinal construction joints in slip formed pavements may be made with a groover or tool, if such device has been approved in advance by the Department.
 - The locations of the Type B longitudinal construction joints in the sections may be interchanged for the different widths of construction if approved by the Department.

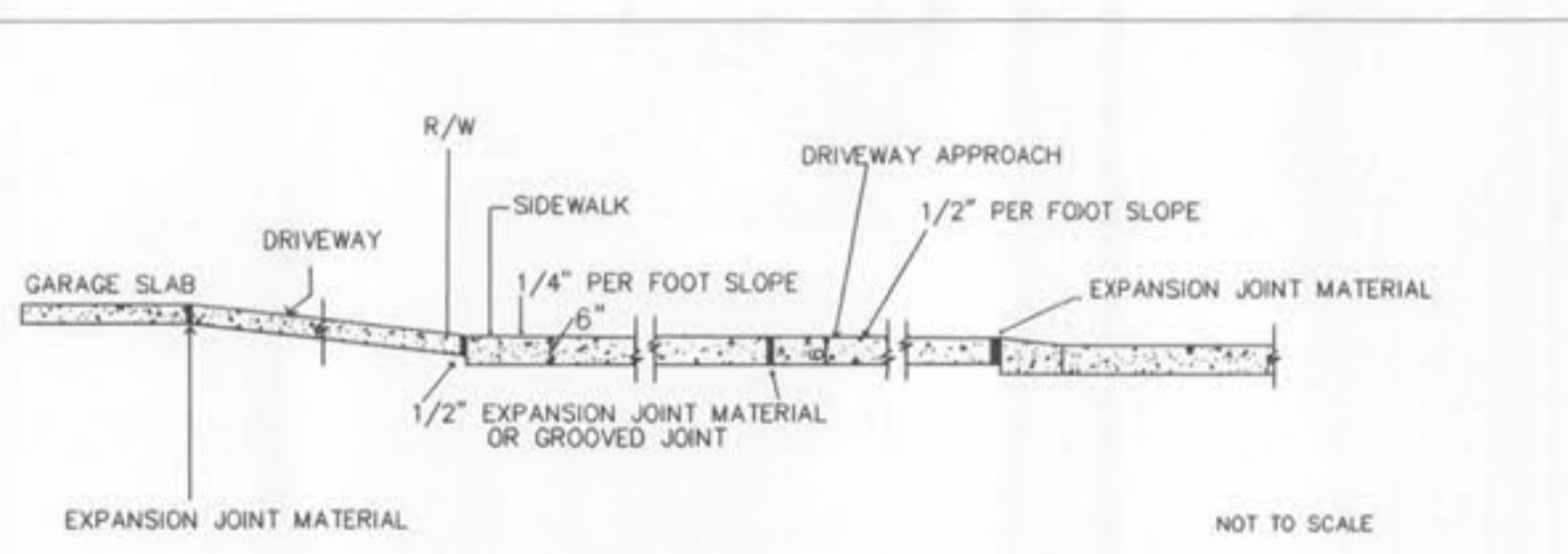


SAINT CHARLES COUNTY HIGHWAY DEPARTMENT ST. CHARLES, MISSOURI
PAVEMENT CONSTRUCTION DETAILS
INTEGRAL ROLLED CURB AND CONCRETE PAVEMENT TYPICAL SECTIONS AND DETAILS
DATE: October, 2002 DRAWING CS02.02



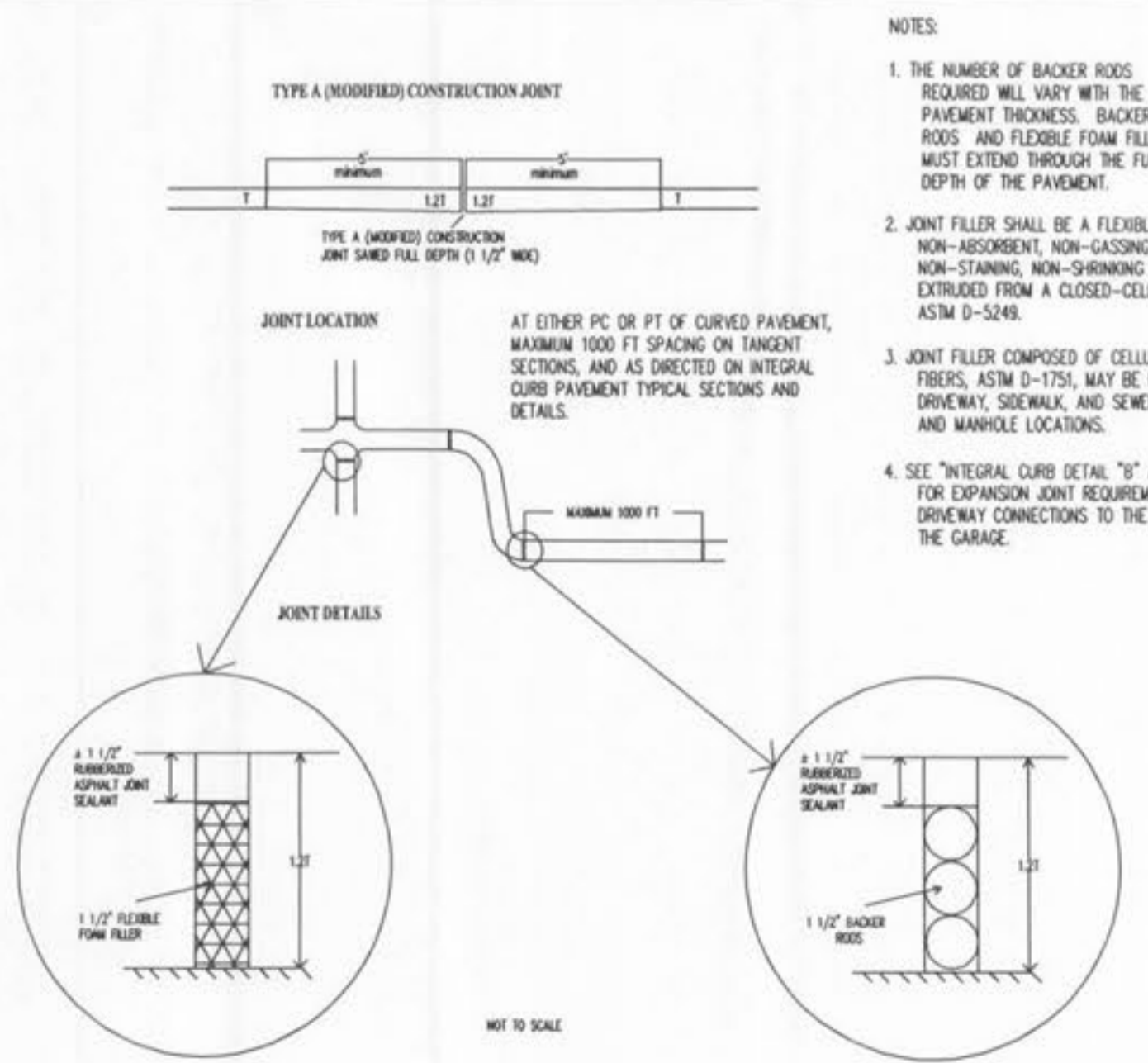
- GENERAL NOTES**
- Do not scale drawing. Follow dimensions.
 - Construction joint and tie bars may be omitted when curb is poured integral with pavement.
 - Minimum Thickness for Pavement as: Bituminous Concrete Pavement Thickness = (I) Concrete Pavement Thickness = (II)
 - All Residential Minor and Local Streets: 6" 7-1/2" Residential Collector and Non-Residential Streets: 7" 9-1/2" All Arterial Streets: 8" 12"
 - Type "U" Transverse Joint is required for Arterial and Non-Residential streets. Use Type "U" Transverse Joint for all others.
 - For Subdivision or Minor Streets having 6" concrete pavement, 1/2" φ deformed tie bars 30" long at 30' centers shall be used for Type "U" Longitudinal Joints and 1/2" φ deformed tie bars 18" long at 30' centers shall be used for Type "U" Longitudinal Joints.
 - Refer to Pavement Construction Details for Integral Vertical Curb and Concrete Pavement Typical Sections and Details, Slit. Dep. CS02.01 and CS02.03 for joint and bar requirements for different street classifications. Note that width and location of each poured portion of the pavement may change the type and location of joint required.
 - All deformed bars for joints and curbs shall be 180° Steel Bars conforming to A.S.T.M.615-73, Grade 40.
 - Length of the tie bars shall equal the thickness of pavement plus the height of curb less 3". Tie bars shall be placed at 24 centers.
 - Transverse or longitudinal construction joints in slip formed pavements may be made with a groover or tool, if such device has been approved in advance by the Department.
 - The free end of the deformed bar for a length of at least 11 inches shall be coated with an approved graphite grease.
 - All deformed bars 18" φ @ 12' cts. shall be epoxy coated.

SAINT CHARLES COUNTY HIGHWAY DEPARTMENT ST. CHARLES, MISSOURI
PAVEMENT CONSTRUCTION DETAILS
JOINTS AND CURBS
DATE: September, 2002 DRAWING CS02.03



- NOTES:**
- A 1" JOINT IS REQUIRED AT THE CURB AND GARAGE FOR ALL DRIVEWAYS LOCATED ON THE OUTER EDGE OF CURVED PAVEMENT, UNLESS GROOVED JOINTS ARE USED AT SIDEWALK. THEN A 2" JOINT IS REQUIRED AT CURB.
 - A 1/2" JOINT IS REQUIRED AT THE CURB AND GARAGE FOR ALL DRIVEWAYS LOCATED ON TANGENT SECTIONS OF PAVEMENT OR ON THE INNER EDGE OF CURVED PAVEMENT.
 - EXPANSION JOINT MATERIAL MUST EXTEND THROUGH THE FULL DEPTH OF THE PAVEMENT.
 - SIDEWALK THICKNESS SHALL BE A MINIMUM OF 7" THROUGH COMMERCIAL DRIVEWAYS.

SAINT CHARLES COUNTY HIGHWAY DEPARTMENT ST. CHARLES, MISSOURI
PAVEMENT CONSTRUCTION DETAILS
Integral Curb Detail "T" at Driveway
DATE: No. 2002 DRAWING CS02.04



- NOTES:**
- THE NUMBER OF BACKER RODS REQUIRED WILL VARY WITH THE PAVEMENT THICKNESS. BACKER RODS AND FLEXIBLE FOAM FILLER MUST EXTEND THROUGH THE FULL DEPTH OF THE PAVEMENT.
 - JOINT FILLER SHALL BE A FLEXIBLE, NON-ABSORBENT, NON-GASSING, NON-STAINING, NON-SHRINKING MATERIAL, EXTRUDED FROM A CLOSED-CELL POLYMER, ASTM D-5249.
 - JOINT FILLER COMPOSED OF CELLULAR FIBERS, ASTM D-1751, MAY BE USED AT DRIVEWAY, SIDEWALK, AND SEWER INLET AND MANHOLE LOCATIONS.
 - SEE "INTEGRAL CURB DETAIL "B" AT DRIVEWAYS" FOR EXPANSION JOINT REQUIREMENTS AT DRIVEWAY CONNECTIONS TO THE STREET AND THE GARAGE.

SAINT CHARLES COUNTY HIGHWAY DEPARTMENT ST. CHARLES, MISSOURI
PAVEMENT CONSTRUCTION DETAILS
Type "A" Expansion Joint
DATE: No. 2002 DRAWING CS02.04

IMPROVEMENT PLANS
BELLEAU CROSSING
PAVEMENT DETAILS

ST. CHARLES ENGINEERING & SURVEYING, INC.
801 S. FIFTH STREET, SUITE 202
ST. CHARLES, MO 63301
TEL:(636) 947-0607 FAX:(636) 947-2448

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