

TYPICAL CONCRETE SECTION (CURB AND GUTTER)

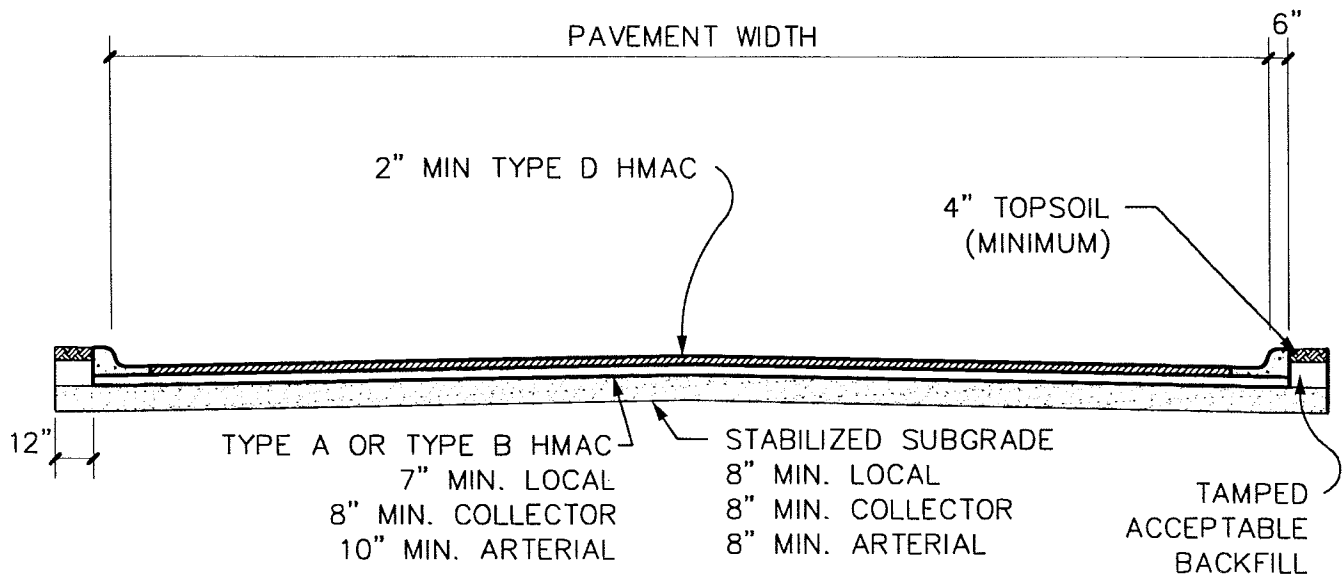
NOTE: LOCAL - #3 BARS ON 18" C-C
COLLECTOR/ARTERIAL - #4 BARS ON 18" C-C



PAVING CONSTRUCTION DETAILS CONCRETE STREET SECTIONS

REVISION DATE:
APRIL 14, 2000

SHEET: P-1A



TYPICAL ASPHALT SECTION (CURB AND GUTTER)

STREET CLASSIFICATION

LOCAL
 CUL-DE-SAC
 MINOR COLLECTOR
 MAJOR COLLECTOR (2-LANE)
 MAJOR COLLECTOR (4-LANE)
 MINOR ARTERIAL
 MAJOR ARTERIAL
 PRIMARY ARTERIAL

PARABOLIC CROWN HEIGHT

6"
 6"
 7"
 7"
 7"
 7"
 7"
 8"

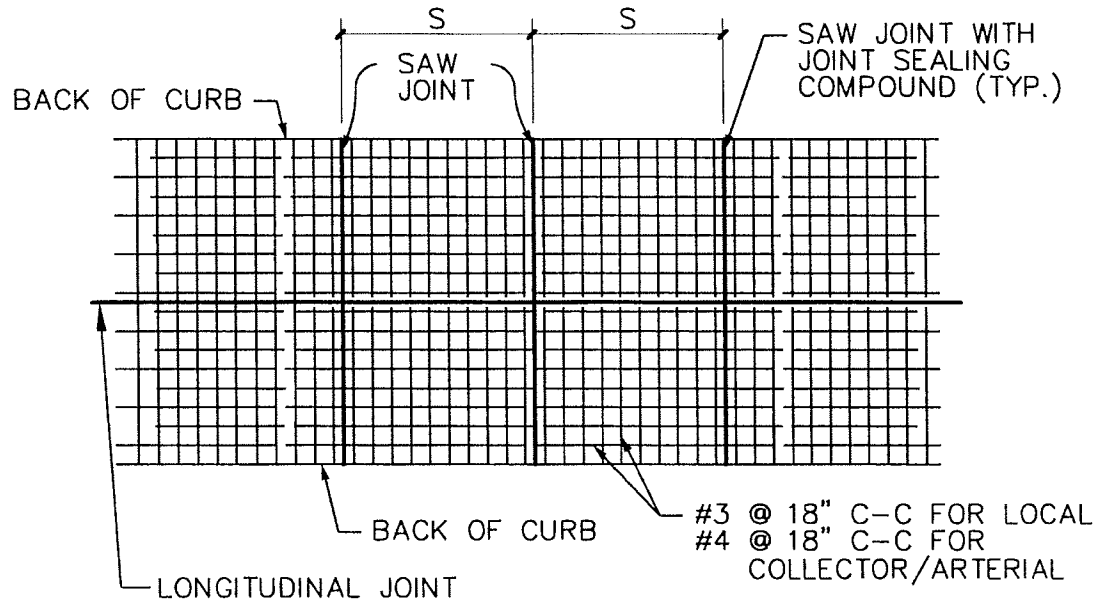


PAVING CONSTRUCTION DETAILS
 ASPHALT STREET SECTIONS

REVISION DATE:
 APRIL 14, 2000

SHEET: **P-1B**

PAVEMENT THICKNESS	MAX JOINT SPACING (S)	JOINT DEPTH
6"	15'	1.5"
8"	20'	2.0"



PLAN

NOTES:

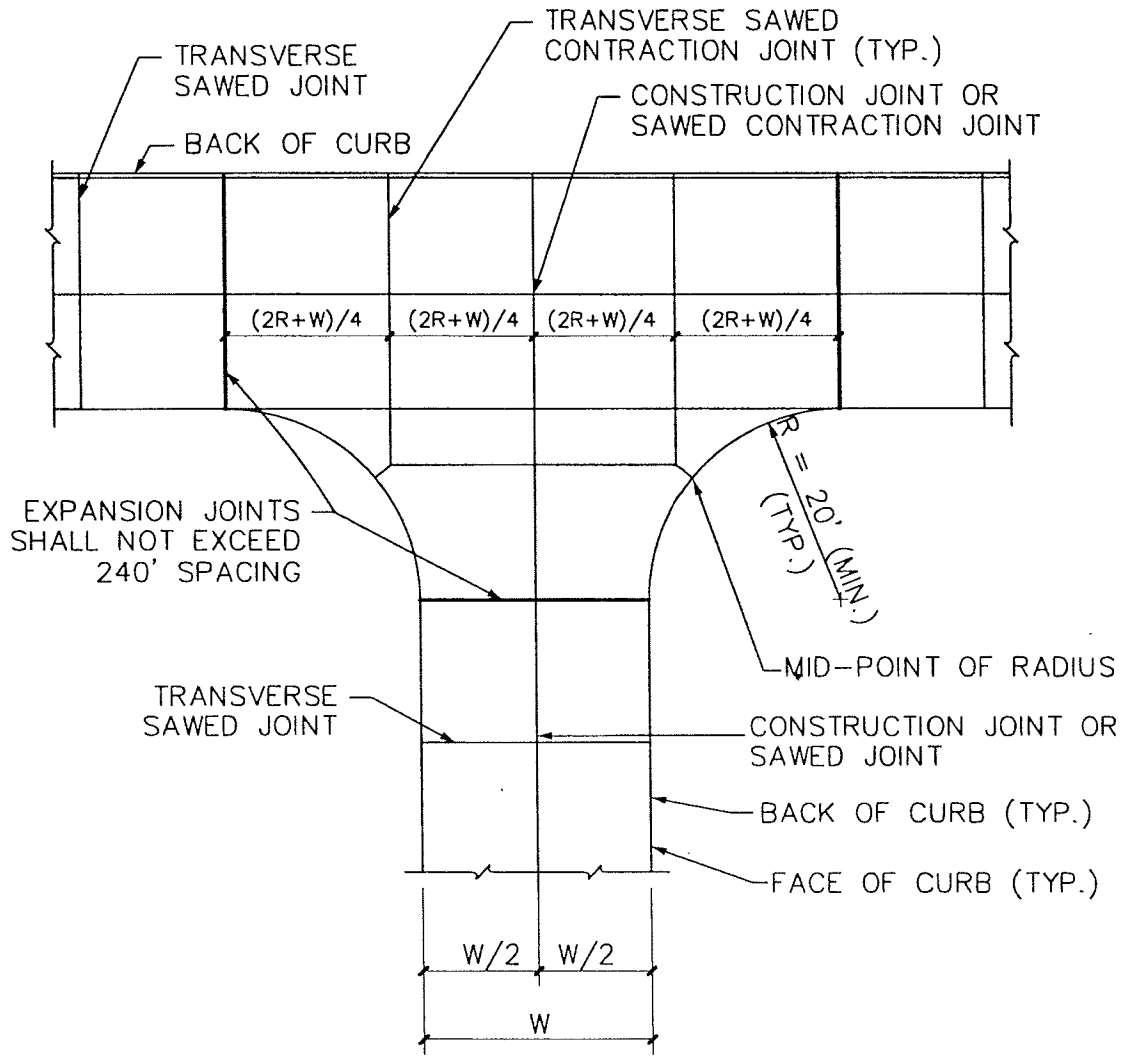
1. CONSTRUCT SAW JOINTS PER TABLE
2. EXPANSION JOINTS TO BE AT INTERSECTIONS, BRIDGES AND OTHER STRUCTURES.
3. EXPANSION JOINT SPACING SHALL NOT EXCEED 240'.
4. ALL JOINTS TO BE PROPERLY SEALED WITH JOINT SEALING COMPOUND CONSISTING OF HOT POURED RUBBER PER SPEC. ITEM 2.2.10, OR APPROVED EQUAL.
5. MONOLITHIC CURB SHALL BE USED WITH THIS TYPE OF PAVING.
6. LONGITUDINAL SAW JOINT REQUIRED FOR EACH LANE SEPARATION.



PAVING CONSTRUCTION DETAILS STEEL LAYOUT PLAN

REVISION DATE:
APRIL 14, 2000

SHEET: **P-2**



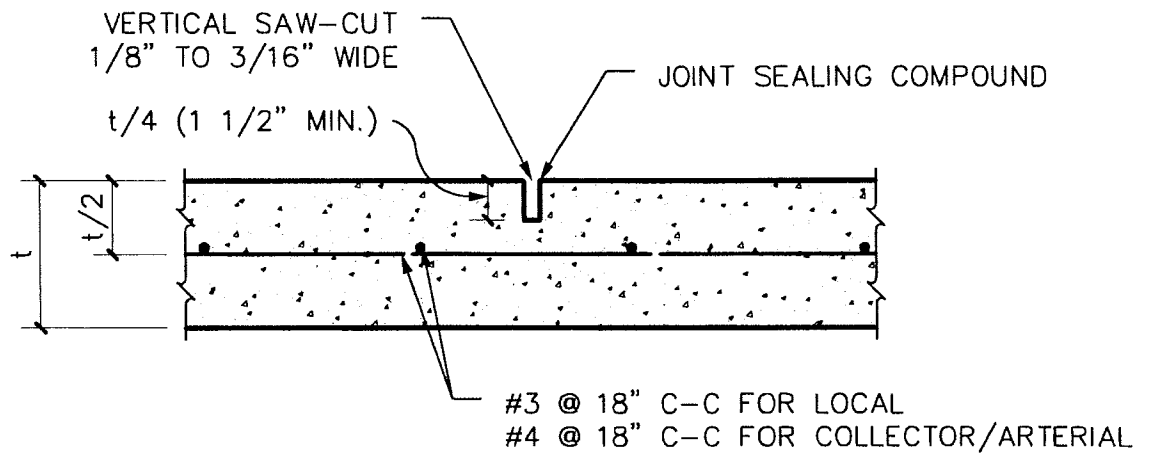
NOTE: TRANSVERSE SAWED JOINTS SHALL BE PLACED SO AS NOT TO EXCEED THE ALLOWED MAXIMUM JOINT SPACING. SEE DETAIL P-2 FOR JOINT SPACING REQUIREMENTS.



PAVING CONSTRUCTION DETAILS
INTERSECTION JOINT SPACING

REVISION DATE:
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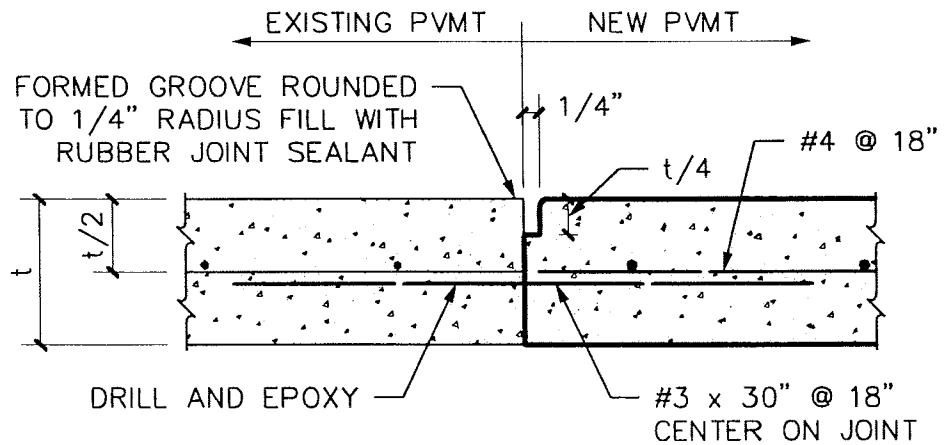
SHEET: P-3A



SAW JOINT

NOTE:

1. ALL DOWEL BARS SHALL BE INSTALLED PERPENDICULAR TO JOINT @ 18" SPACING.
2. ALL JOINTS TO BE PROPERLY SEALED WITH JOINT SEALING COMPOUND CONSISTING OF HOT POURED RUBBER PER SPEC. ITEM 2.2.10, OR APPROVED EQUAL.



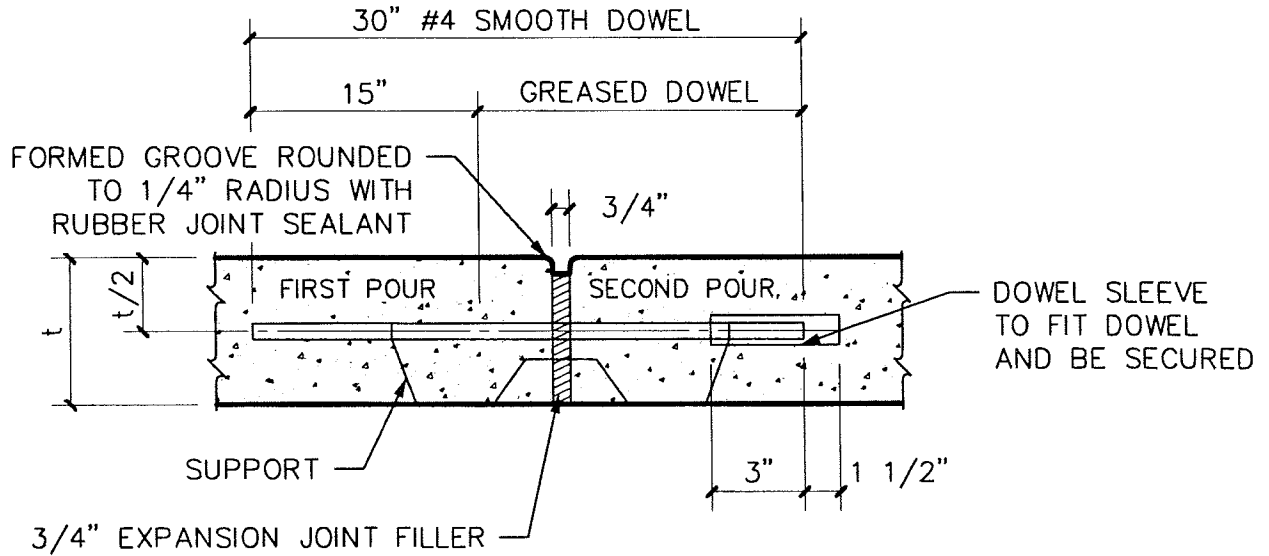
SAWED CONSTRUCTION JOINT



PAVING CONSTRUCTION DETAILS
CONCRETE PAVEMENT JOINTS

REVISION DATE:
APRIL 14, 2000

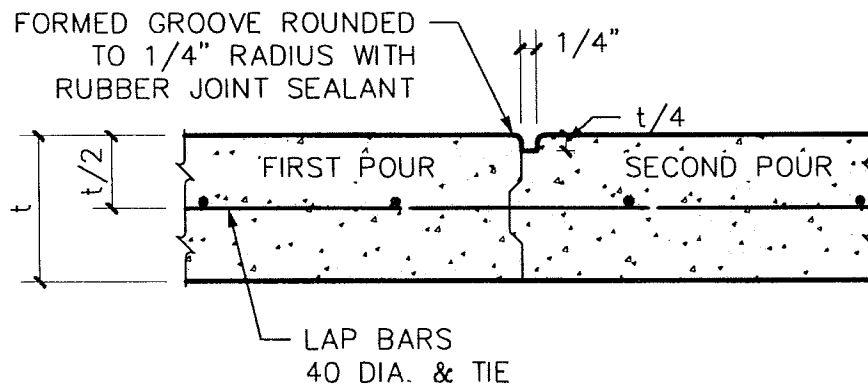
SHEET: **P-3B**



EXPANSION JOINT

NOTE:

1. ALL #4 SMOOTH DOWEL BARS SHALL BE INSTALLED PERPENDICULAR TO JOINT @ 18" SPACING.
2. ALL JOINTS TO BE PROPERLY SEALED WITH JOINT SEALING COMPOUND CONSISTING OF HOT POURED RUBBER PER SPEC. ITEM 2.2.10, OR APPROVED EQUAL.



CONSTRUCTION JOINT



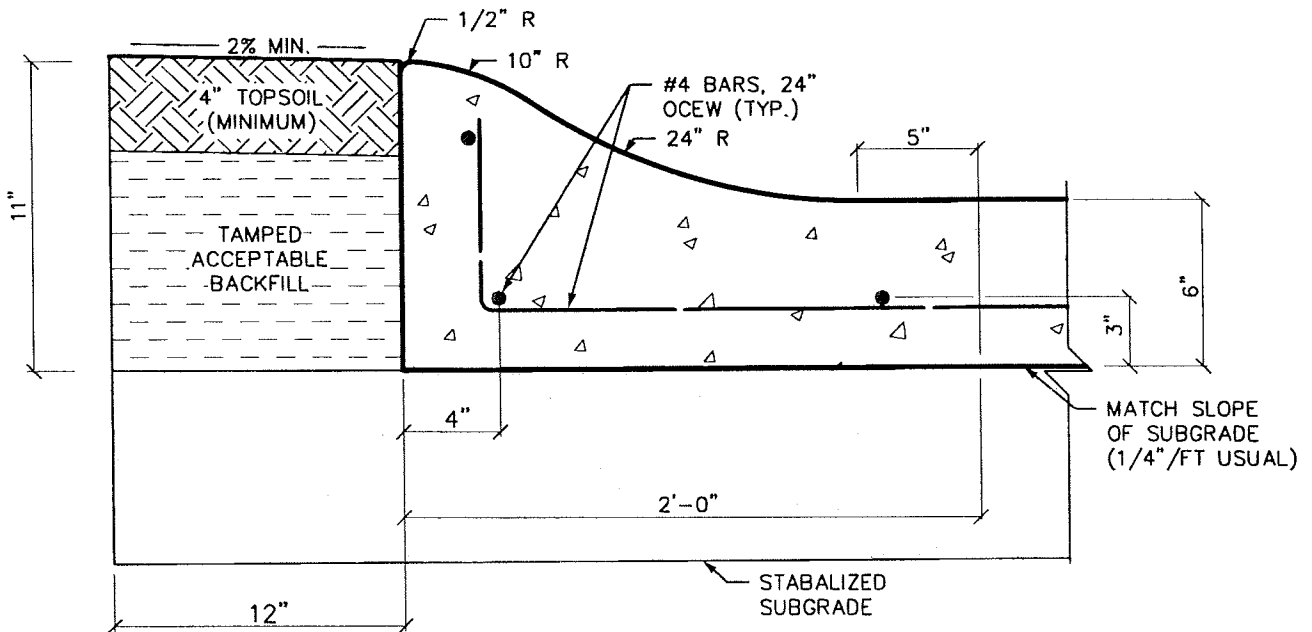
PAVING CONSTRUCTION DETAILS
CONCRETE PAVEMENT JOINTS

REVISION DATE:
APRIL 14, 2000

SHEET: **P-3C**

GENERAL NOTES:

1. 1/2" EXPANSION JOINTS WITH 5/8" DIA. SPACING x 2' SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWELS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 1" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. FIX DOWELS WITH BAR SUPPORTS.
4. ALL CONCRETE SHALL BE CLASS 'A' MIN. COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.



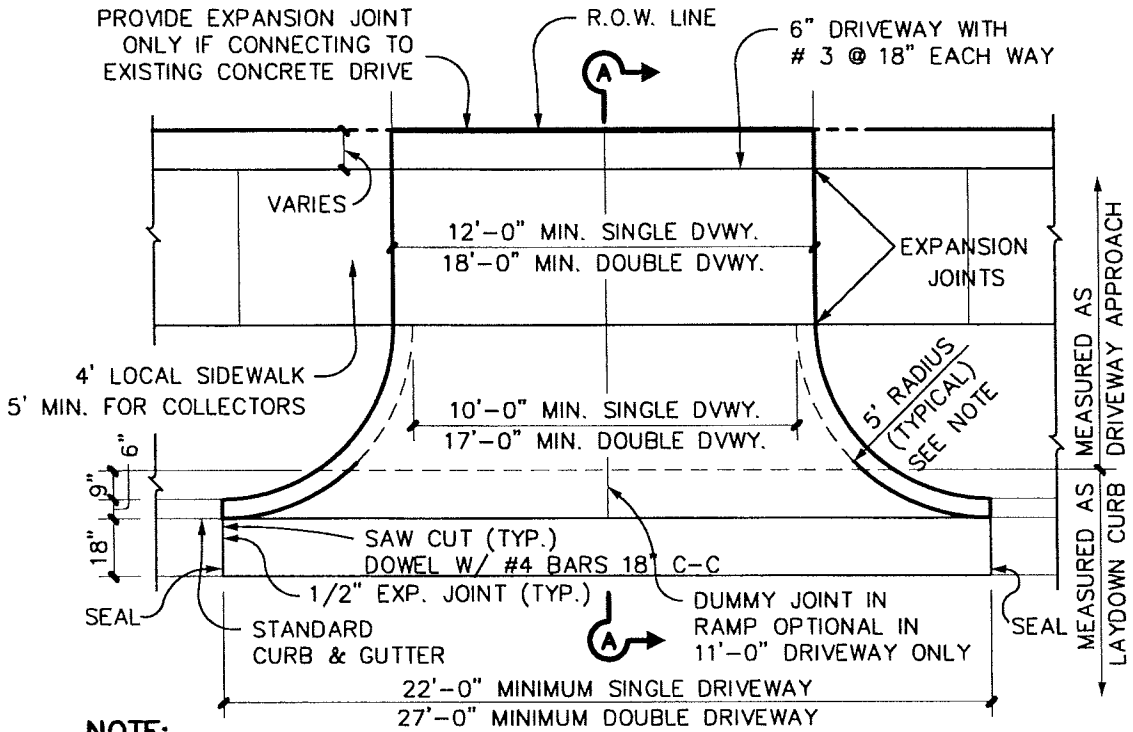
MOUNTABLE CURB DETAIL



PAVING CONSTRUCTION DETAILS
MOUNTABLE CURB AND GUTTER

REVISION DATE:
APRIL 14, 2000

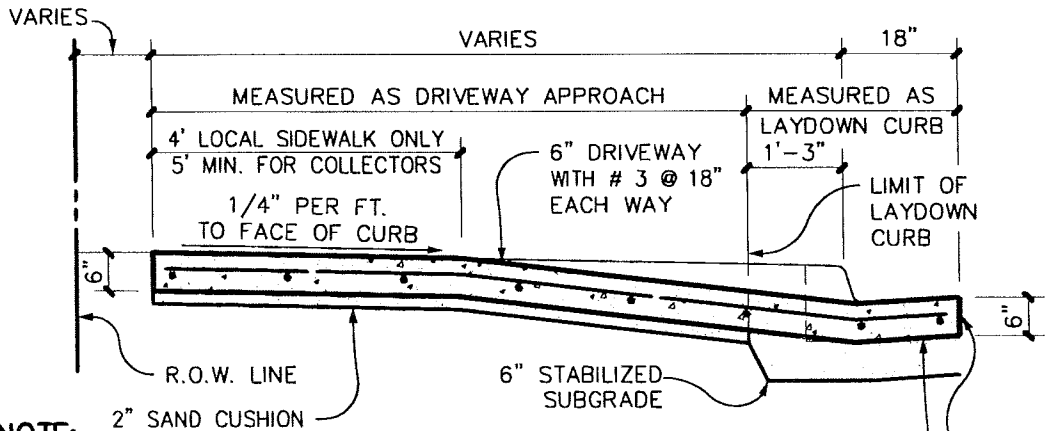
SHEET: **P-4B**



NOTE:

EXISTING CURB AND GUTTER, IF ANY, MUST BE SAW CUT AT THE CURB RETURN.
 5' RADIUS FOR LOCAL
 5'-10' RADIUS FOR COLLECTOR
 15' RADIUS FOR ARTERIAL

PLAN



NOTE:

SIDEWALK SECTION THRU DRIVEWAY SHALL BE POURED SAME THICKNESS AS DRIVEWAY APPROACH AND PAID FOR AS DRIVEWAY APPROACH (EXISTING SIDEWALK, IF ANY, SHALL BE REMOVED).

RE: STANDARD CURB AND GUTTER SECTION

DOWEL INTO CONCRETE STREET WITH #4 BARS 18" C-C

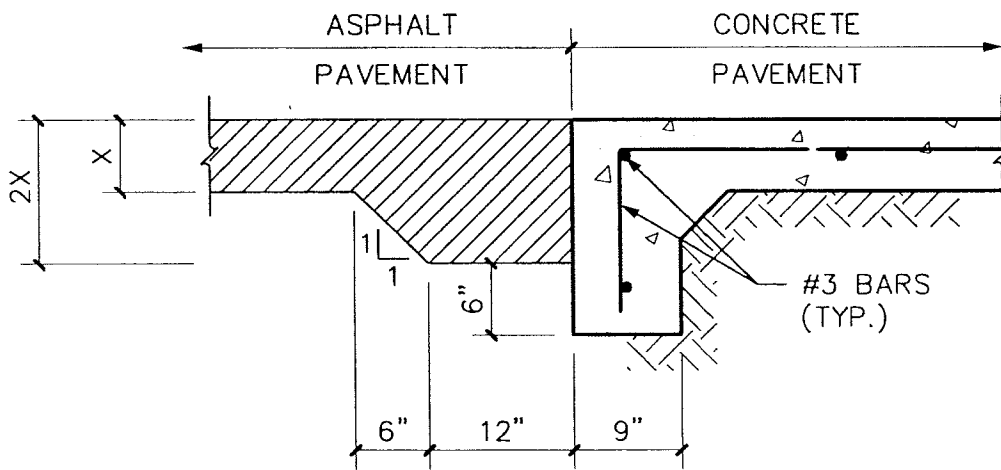
SECTION A-A



PAVING CONSTRUCTION DETAILS
 LAYDOWN CURB AND DRIVEWAY

REVISION DATE:
 APRIL 14, 2000

SHEET: P-5



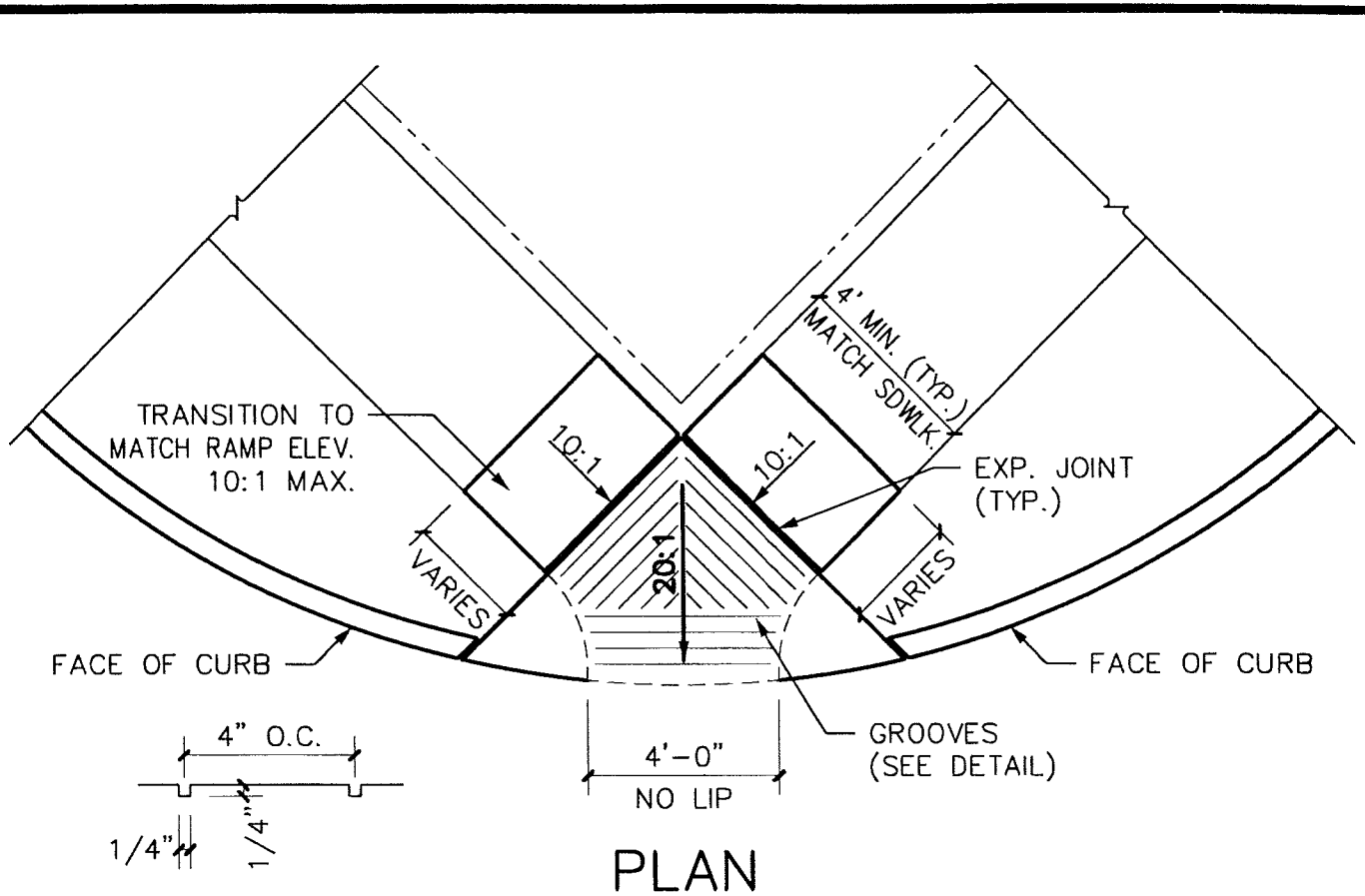
ASPHALT TO CONCRETE HEADER



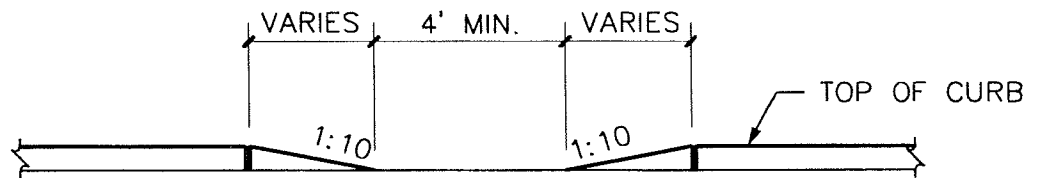
PAVING CONSTRUCTION DETAILS
STREET HEADER

REVISION DATE:
APRIL 14, 2000

SHEET: P-6



GROOVES SECTION



ELEVATION

NOTES:

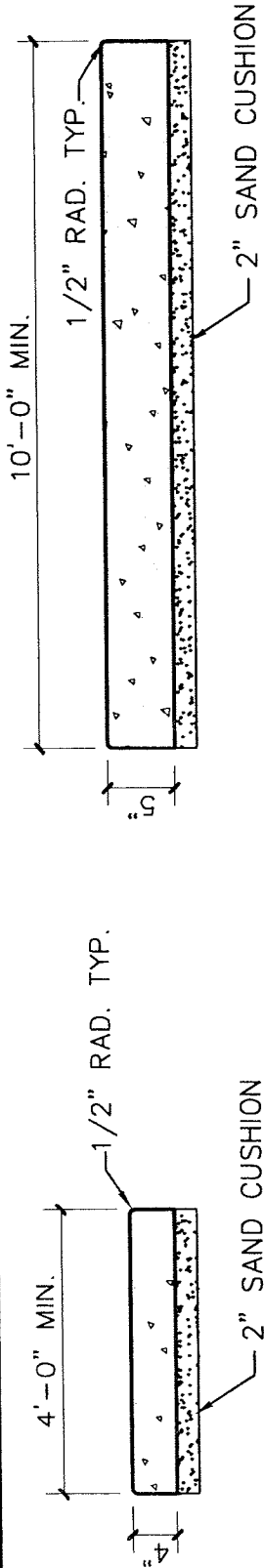
1. CONSTRUCT RAMP OF CLASS A CONCRETE.
2. REINFORCE WITH #3 BARS ON 18" CENTERS.
3. INSTALL 1/2" ϕ X 18" SMOOTH DOWELS @ 18" (GREASE ON ONE SIDE) THROUGH EXPANSION JOINTS.
4. 1:20 SLOPE ON WHEELCHAIR RAMP AND 1:10 SLOPE ON RAMP WINGS.
5. RAMPS SHALL HAVE A HEAVY BROOM FINISH WITH GROOVES ALIGNED PERPENDICULAR TO THE DIRECTION OF TRAVEL.
6. ALL RAMPS SHALL COMPLY WITH THE REQUIREMENTS OF THE ARCHITECTURAL BARRIERS ACT.



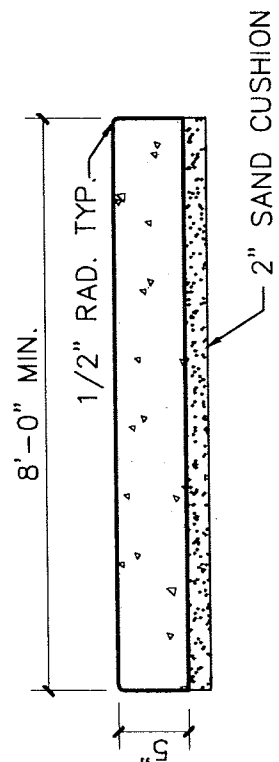
PAVING CONSTRUCTION DETAILS
WHEELCHAIR RAMP

REVISION DATE:
APRIL 14, 2000

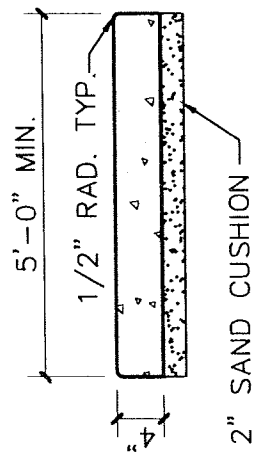
SHEET: P-7



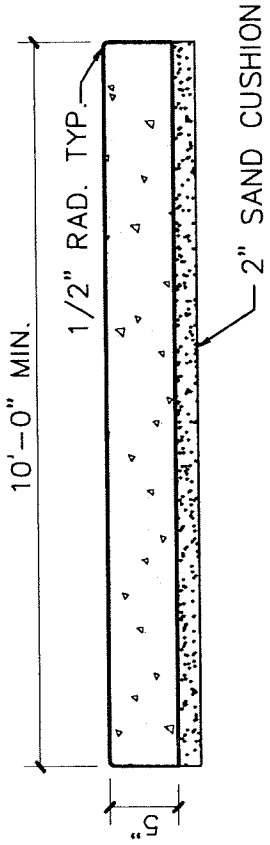
TYPE "A"



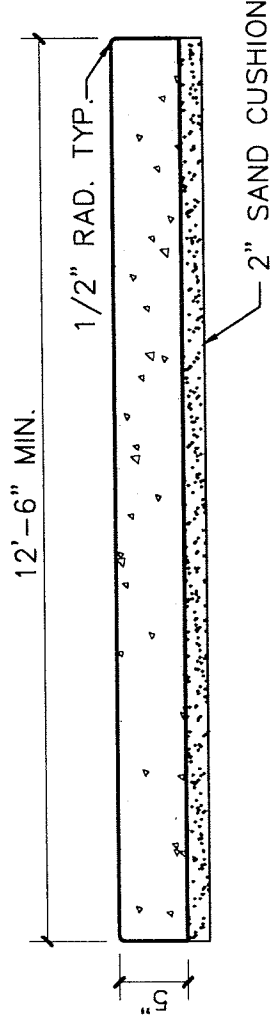
TYPE "C"



TYPE "B"



TYPE "D"



TYPE "E"

NOTES:

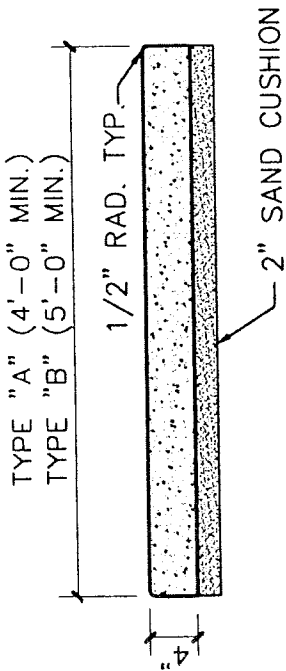
1. REFER TO THE COLLEYVILLE PATHWAYS PLAN FOR LOCATIONS OF TYPE "C" AND "D" PATHWAYS.
2. A 12' MINIMUM EASEMENT IS REQUIRED FOR TYPE "C" PATHWAYS WHEN NOT LOCATED WITHIN A RIGHT-OF-WAY.
3. A 12' MINIMUM EASEMENT IS REQUIRED FOR TYPE "C" PATHWAYS WHEN NOT LOCATED WITHIN A RIGHT-OF-WAY.
4. WHEN A TYPE "A" OR "B" SIDEWALK ABUTS A CURB, THE SIDEWALK SHALL BE A MIN. 6' WIDTH.
5. REINFORCEMENT TO BE #3 BARS @ 18" C-C OR WELDED WIRE FABRIC 6X6 - W4.0 X 4.0.



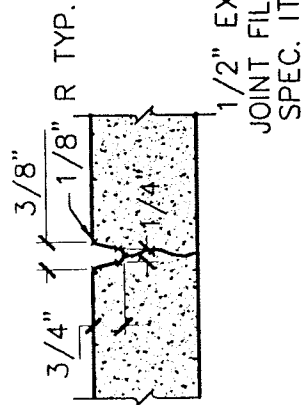
PAVING CONSTRUCTION DETAILS
SIDEWALK AND PATHWAY STANDARDS

REVISION DATE:
APRIL 14, 2000

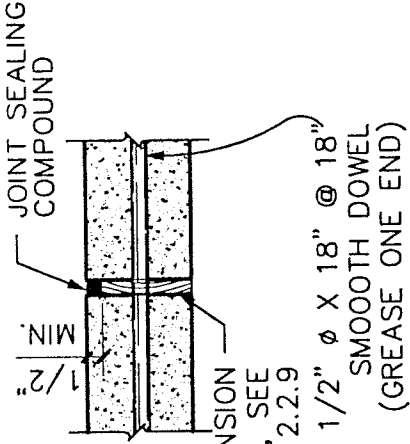
SHEET: **P-8A**



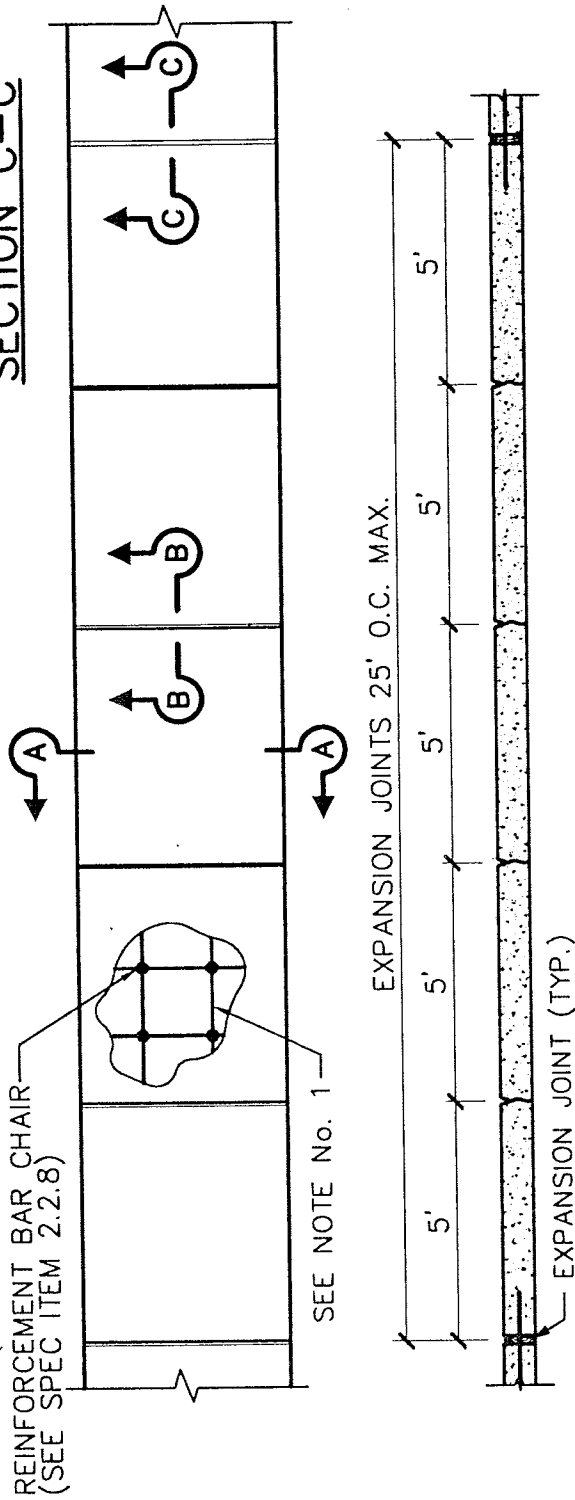
SECTION A-A



SECTION B-B



SECTION C-C



NOTE:

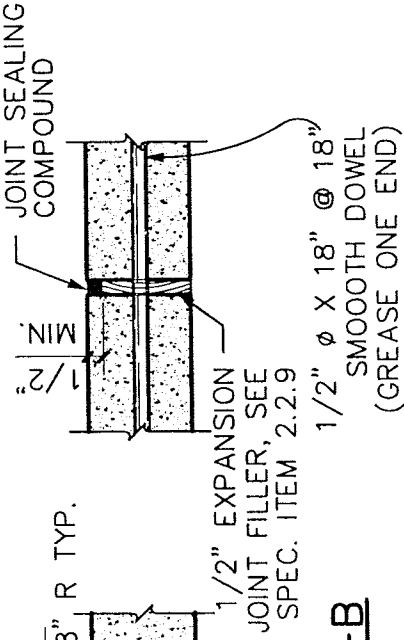
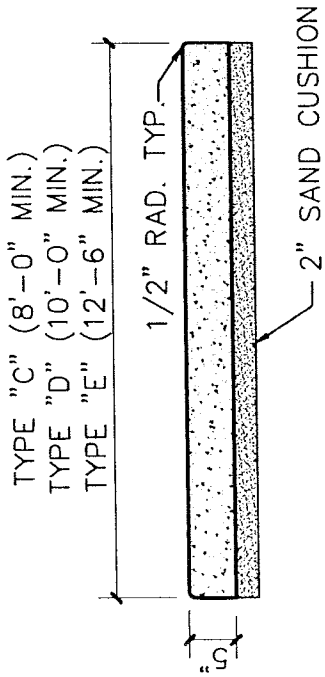
1. REINFORCEMENT TO BE #3 BARS AT 18" C-C
2. DOWEL WITH #4 BARS AT 18" C-C WHEN CONNECTING TO EXISTING SIDEWALKS, DRIVEWAYS, CURBS AND GUTTER.
3. INSTALL 1/2" ϕ X 18" SMOOTH DOWELS @ 18" (GREASE ONE END) THROUGH EXPANSION JOINTS.



PAVING CONSTRUCTION DETAILS
CONCRETE SIDEWALKS

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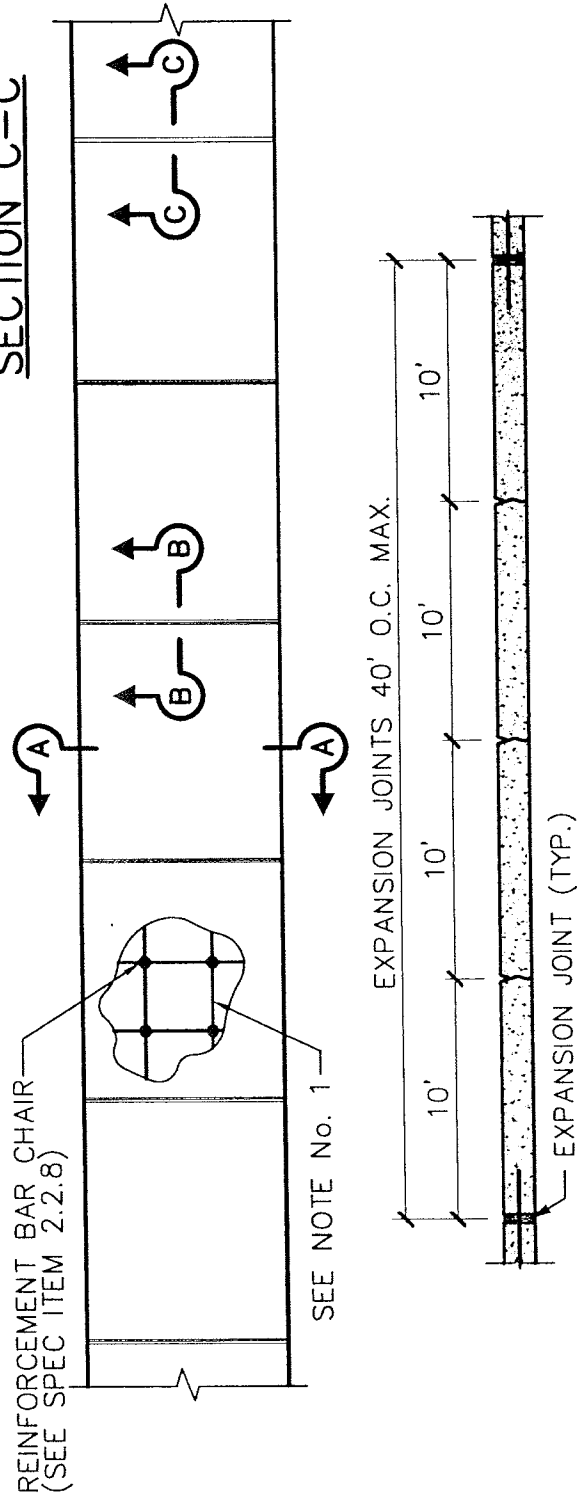
SHEET: P-8B



SECTION A-A

SECTION B-B

SECTION C-C



NOTE:

1. REINFORCEMENT TO BE #3 BARS AT 18" C-C OR WELDED WIRE FABRIC 6X6 - W4.0 X W4.0
2. DOWEL WITH #4 BARS AT 18" C-C WHEN CONNECTING TO EXISTING SIDEWALKS, DRIVEWAYS, CURBS AND GUTTER.
3. INSTALL 1/2" ϕ X 18" SMOOTH DOWELS @ 18" (GREASE ONE END) THROUGH EXPANSION JOINTS.

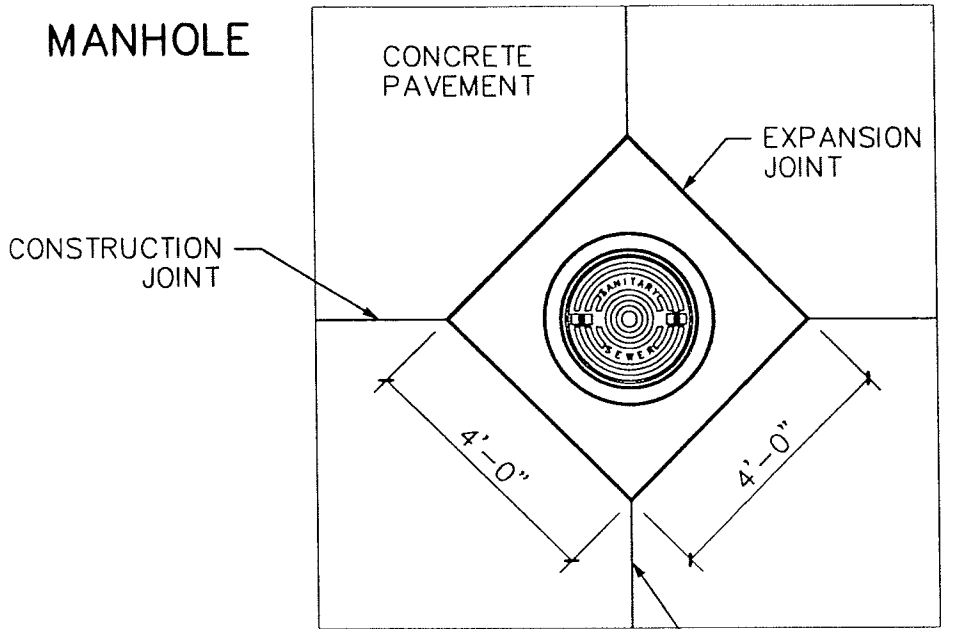


PAVING CONSTRUCTION DETAILS
 CONCRETE SIDEWALK

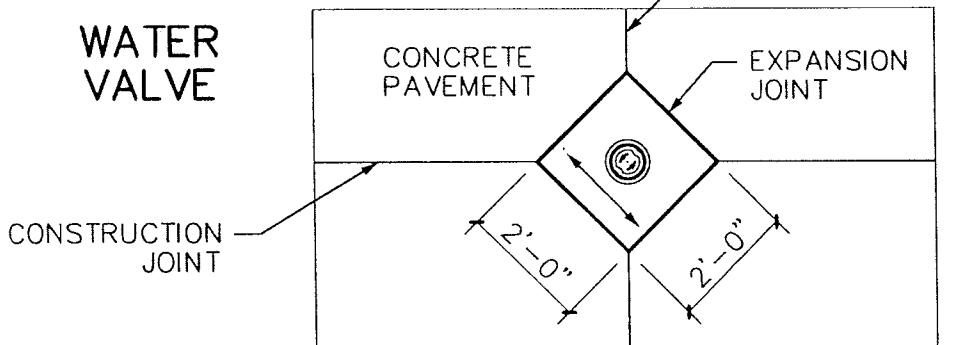
REVISION DATE:
 APRIL 14, 2000

SHEET: P-8C

MANHOLE



WATER VALVE



NOTES:

1. ALL CONCRETE PAVEMENT SHALL BE REMOVED ALONG NEAT SAW CUT LINES.
2. MANHOLE BOXOUT REQUIRED FOR ALL MANHOLES (STORM AND SANITARY) AND CLEANOUTS LOCATED IN THE STREET.
3. SEE SHEET P-3 FOR JOINT DETAILS.
4. SEE SHEET W-3 FOR WATER VALVE DETAIL.

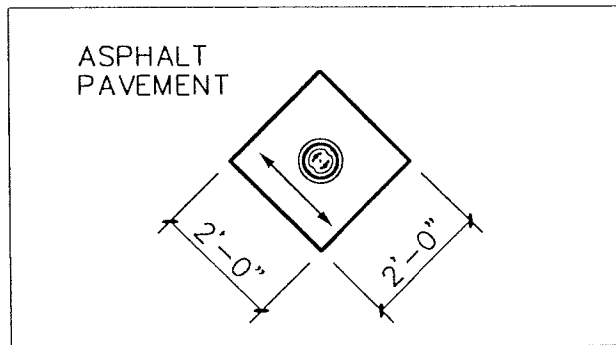


PAVING CONSTRUCTION DETAILS MANHOLE AND WATER VALVE BOXOUT

REVISION DATE:
APRIL 14, 2000

SHEET: **P-9A**

WATER VALVE



NOTES:

1. ALL ASPHALT PAVEMENT SHALL BE REMOVED ALONG NEAT SAW CUT LINES.
2. SEE SHEET W-3 FOR WATER VALVE DETAIL.

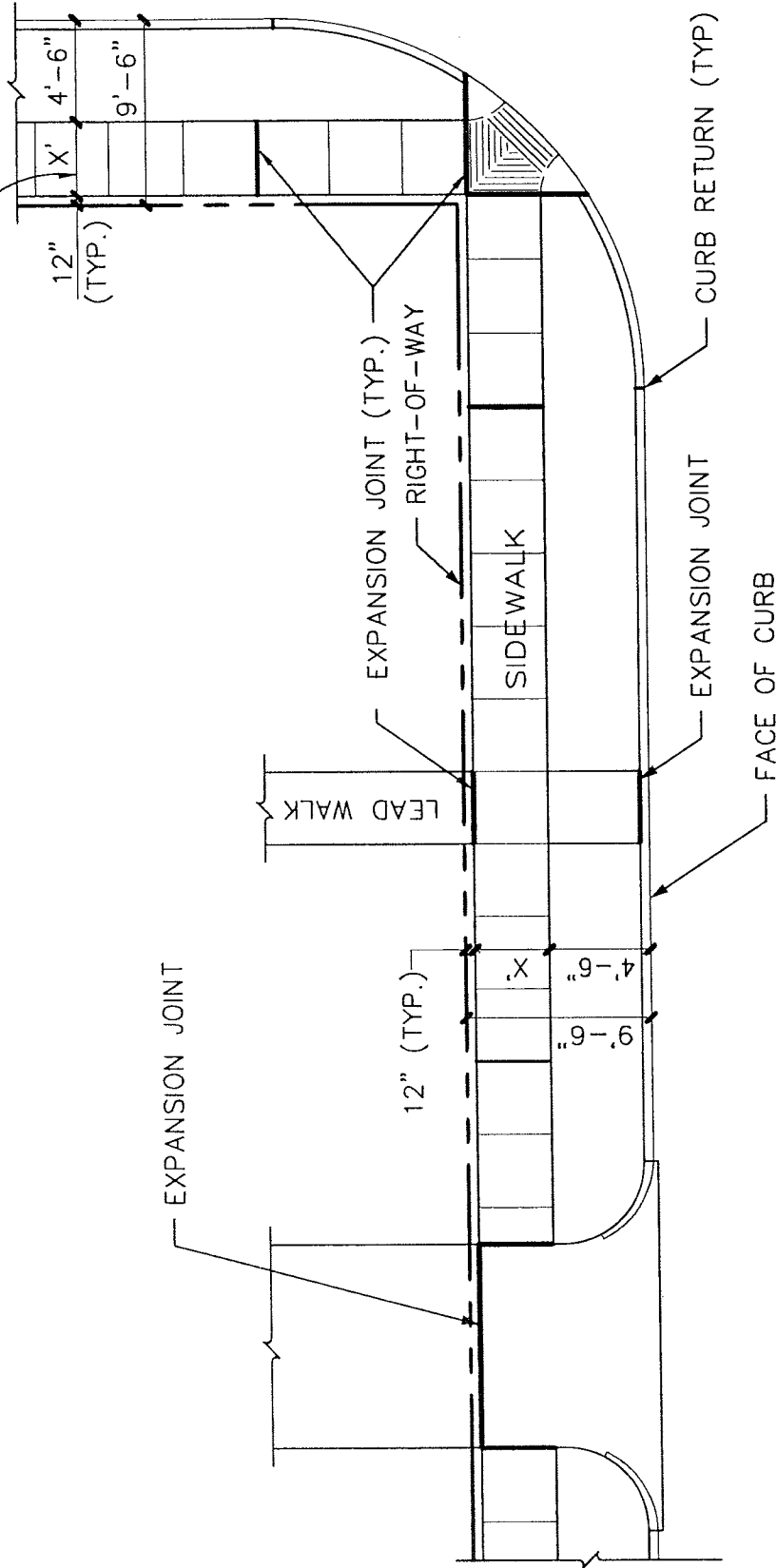


PAVING CONSTRUCTION DETAILS WATER VALVE BOXOUT - ASPHALT

REVISION DATE:
APRIL 14, 2000

SHEET: P-9B

SEE NOTE 5.



NOTES:

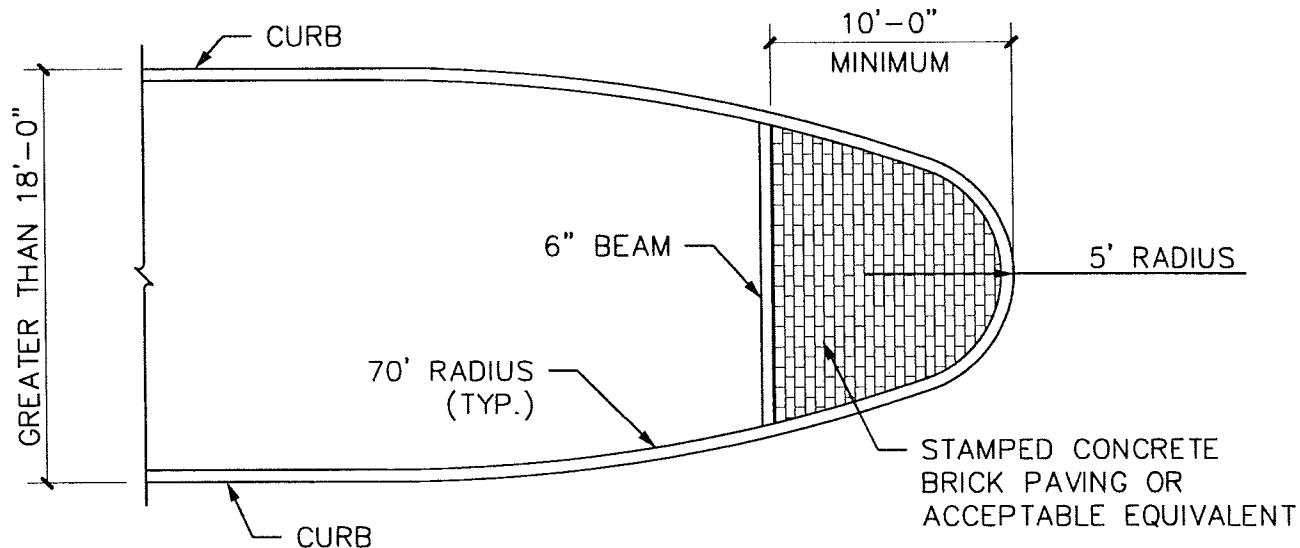
1. REINFORCE ALL SIDEWALKS WITH #3 BARS @ 18" C-C OR WELDED WIRE FABRIC 6 X 6 - W4.0 X W4.0
2. INSTALL #4 X 18" DOWELS @ 18" WHEN CONNECTING TO EXISTING CONCRETE.
3. INSTALL 1/2" Ø X 18" SMOOTH DOWELS @ 18" (GREASE ONE END) THROUGH EXPANSION JOINTS.
4. CURB AND GUTTER PLACED MONOLITHICALLY WITH PAVEMENT SHALL BE REINFORCED AND JOINTED IN ACCORDANCE WITH PAVEMENT DETAILS.
5. MINIMUM SIDEWALK WIDTH FOR LOCAL STREETS IS 4'. 5' MINIMUM SIDEWALK WIDTH FOR COLLECTORS. REFER TO COLLEYVILLE PATHWAY PLAN AND DETAILS 8A-8C.



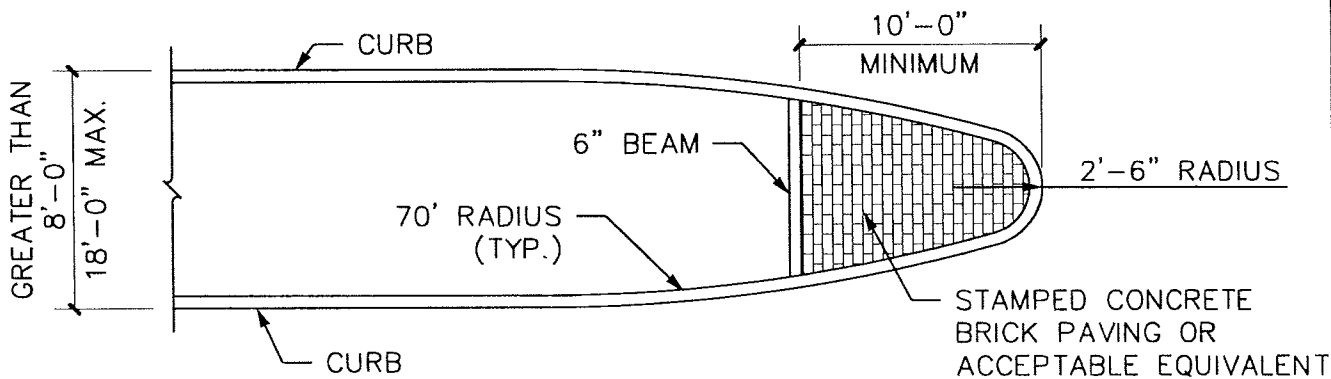
PAVING CONSTRUCTION DETAILS
CURB AND GUTTER, SIDEWALK, AND DRIVEWAY TYPICAL JOINT LAYOUT

REVISION DATE:
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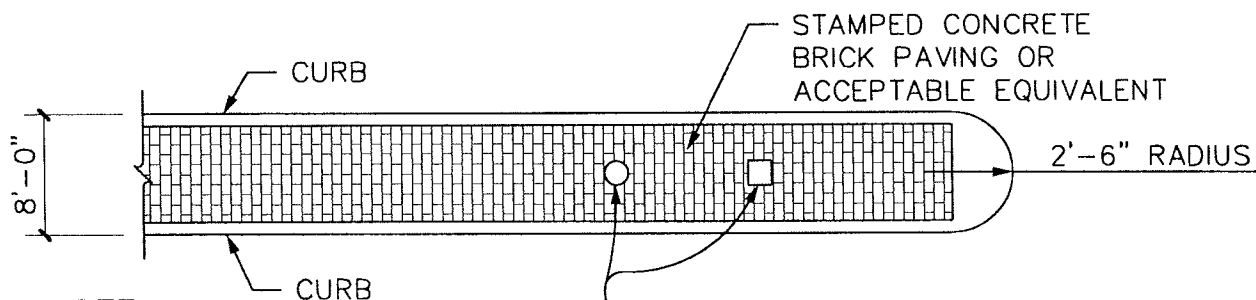
SHEET: **P-10**



MEDIAN NOSE TYPE "C"



MEDIAN NOSE TYPE "B"



NOTE:

1. PAVING IS TO BE EXTENDED TO THE P.R.C. OF THE MEDIAN IN LEFT TURN LANES.

BLOCKOUT MEDIAN PAVING FOR TRAFFIC SIGNAL BASE/FOUNDATION, PULL BOX, OR LUMINARY BASE (IF LOCATIONS ARE KNOWN AND NOT INSTALLED WITH PAVING)

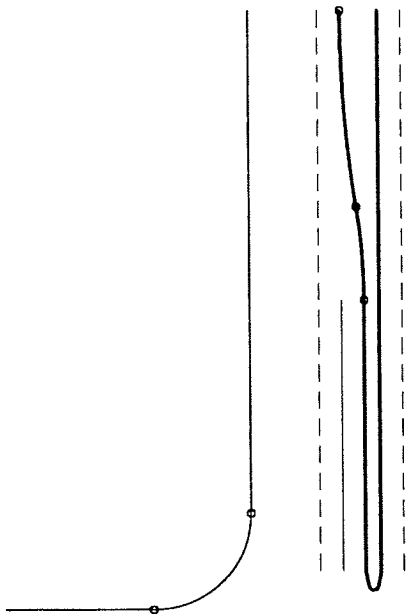
**MEDIAN NOSE TYPE "A"
(STANDARD LEFT TURN LANE MEDIAN)**



PAVING CONSTRUCTION DETAILS
MEDIAN NOSE

REVISION DATE:
APRIL 14, 2000

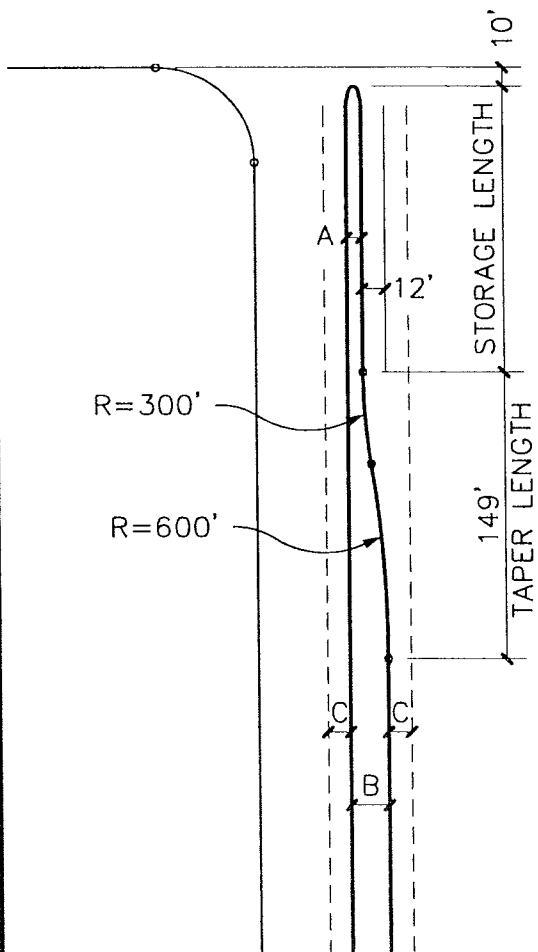
SHEET: **P-11**



NOTES:

1. ONLY ARTERIAL STREETS AND COLLECTORS WITH CENTER MEDIANS MAY USE MEDIANS FOR LEFT TURN LANES.
2. THE NUMBER OF LANES VARIES BY STREET CLASSIFICATION.
3. MINIMUM REQUIRED STORAGE LENGTH IS BASED ON CROSS STREET CLASSIFICATION.
4. MEDIAN NOSE SHALL BE IN ACCORDANCE WITH MEDIAN NOSE DETAIL SHEET P-12.
5. VARIANCES AS PROVIDED BY CITY APPROVED TRAFFIC IMPACT ANALYSIS.

CROSS STREET



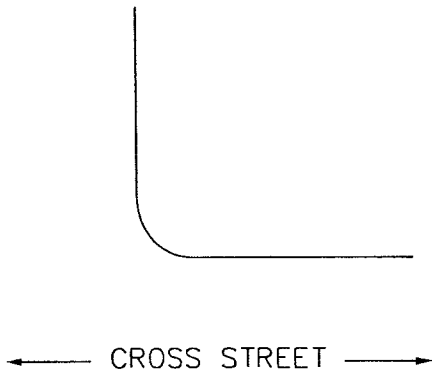
CROSS STREET	MINIMUM STORAGE LENGTH
MAJOR ARTERIAL	200'
MINOR ARTERIAL	150'
COLLECTOR	100'
LOCAL	60'



PAVING CONSTRUCTION DETAILS
LEFT TURN LANE IN MEDIAN

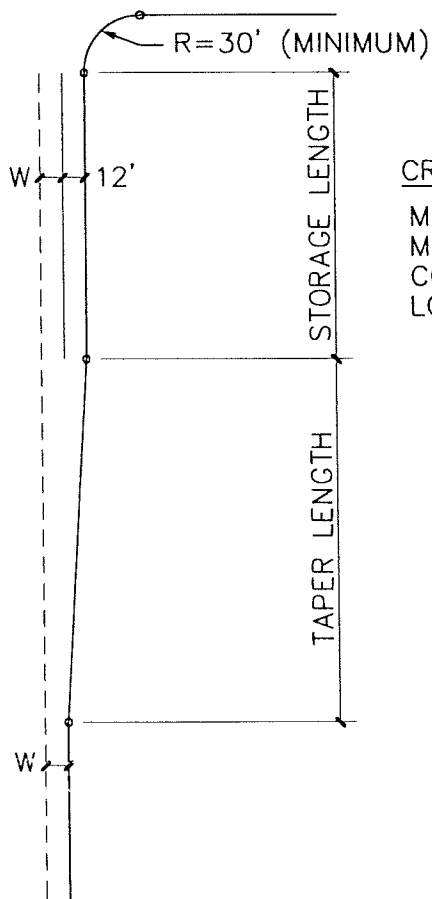
REVISION DATE:
APRIL 14, 2000

SHEET: P-12



NOTES:

1. ONLY ARTERIAL STREETS AND COLLECTORS MAY UTILIZE UNCHANNELIZED RIGHT TURN LANES.
2. THE NUMBER OF ADJACENT LANES VARIES WITH STREET CLASSIFICATION.
3. MINIMUM REQUIRED STORAGE LENGTH IS BASED ON CROSS STREET CLASSIFICATION.
4. VARIANCES AS PROVIDED BY CITY APPROVED TRAFFIC IMPACT ANALYSIS.



CROSS STREET

MAJOR ARTERIAL
 MINOR ARTERIAL
 COLLECTOR
 LOCAL

MIN. STORAGE LENGTH

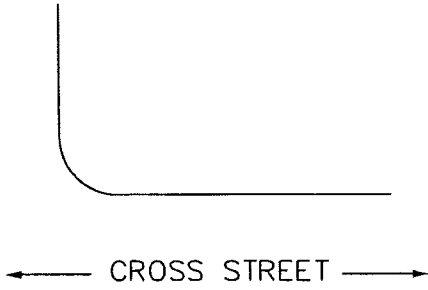
200'
 150'
 100'
 60'



PAVING CONSTRUCTION DETAILS
 RIGHT TURN LANE WITHOUT
 CHANNELIZATION

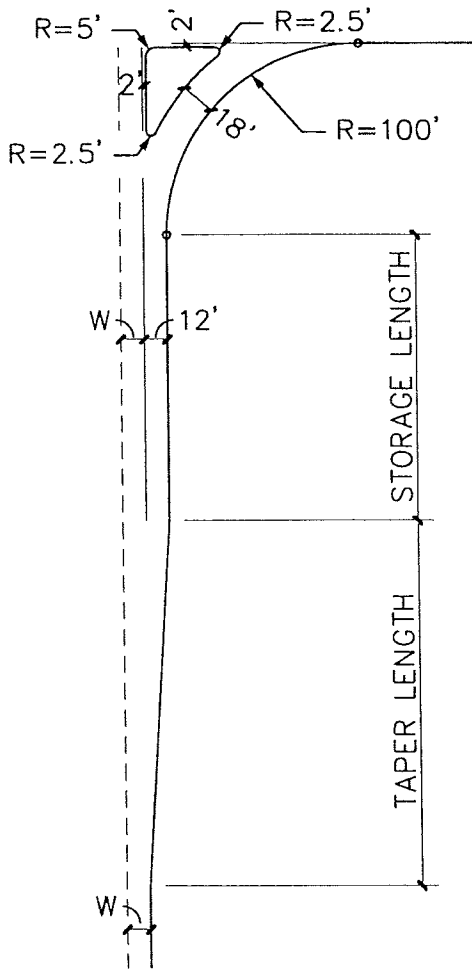
REVISION DATE:
 APRIL 14, 2000

SHEET: **P-13**



NOTES:

1. ONLY ARTERIAL STREETS AND COLLECTORS MAY UTILIZE CHANNELIZED RIGHT TURN LANES.
2. THE NUMBER OF ADJACENT LANES VARIES WITH STREET CLASSIFICATION.
3. MINIMUM REQUIRED STORAGE LENGTH IS BASED ON CROSS STREET CLASSIFICATION.
4. VARIANCES AS PROVIDED BY CITY APPROVED TRAFFIC IMPACT ANALYSIS.



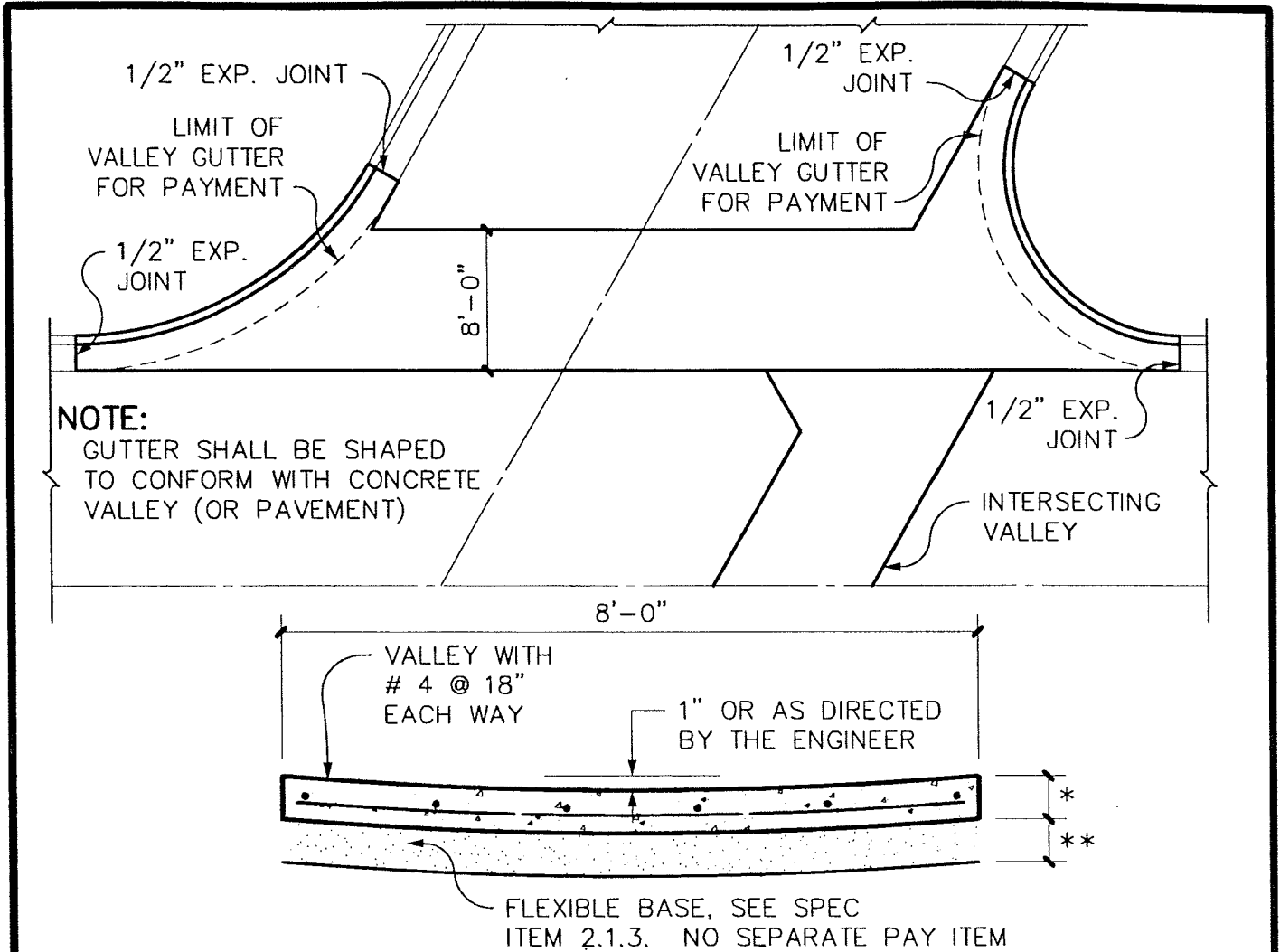
CROSS STREET	MINIMUM STORAGE LENGTH
MAJOR ARTERIAL	200'
MINOR ARTERIAL	150'
LOCAL	100'
COLLECTOR	60'



PAVING CONSTRUCTION DETAILS
 RIGHT TURN LANE WITH CHANNELIZATION

REVISION DATE:
 APRIL 14, 2000

SHEET: **P-14**



THE REINFORCED CONCRETE VALLEY SHALL REPLACE THE TOP OF THE PAVEMENT WITH THE REMAINING PORTION OF THE PAVEMENT TO BE CONSTRUCTED INCLUDING SUBGRADE TREATMENT, IN ACCORDANCE WITH THE TYPICAL PAVING SECTION. THE CONCRETE VALLEY WILL BE GOVERNED ACCORDING TO CITY STANDARDS FOR CONCRETE CURB AND GUTTER.

TRANSITION SECTION FOR VALLEYS CROSSING MAJOR STREETS	
DIST. FROM C OF DIP	CROWN
0 FT	0.000 FT
5 FT	0.041 FT
10 FT	0.083 FT
20 FT	0.208 FT
30 FT	0.333 FT
40 FT	0.458 FT
50 FT	0.500 FT

* 6" FOR LOCAL STREETS
7" FOR COLLECTOR STREETS
8" FOR ARTERIAL STREETS

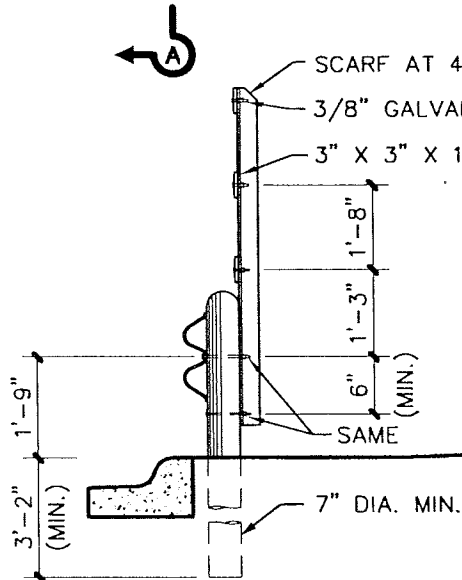
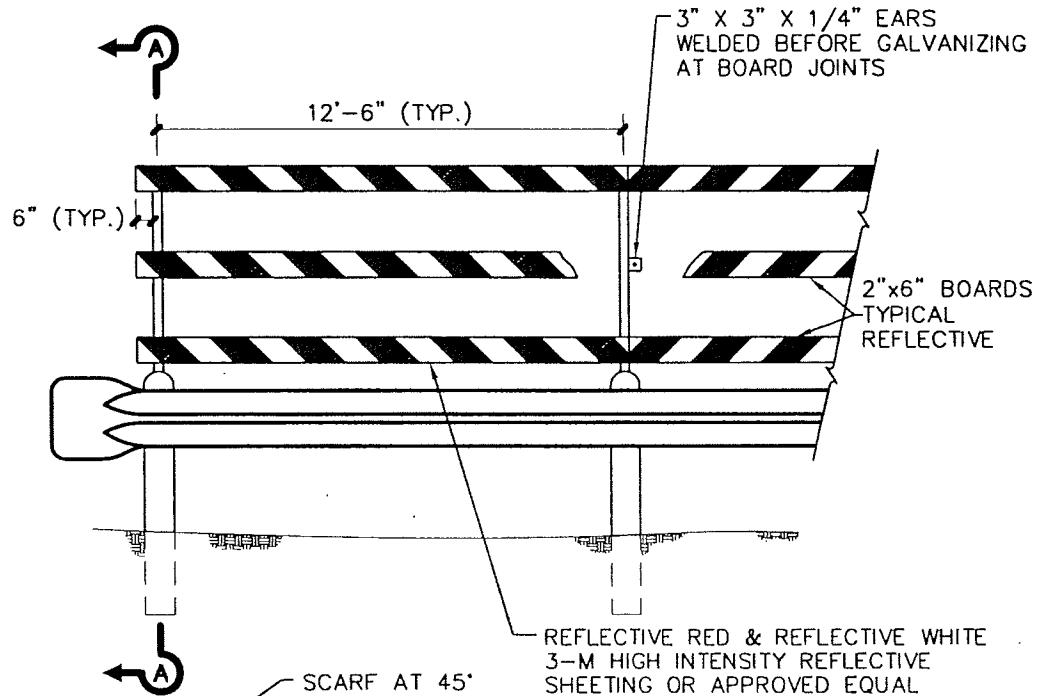
** 8" FOR LOCAL STREETS
10" FOR COLLECTOR STREETS
10" FOR ARTERIAL STREETS



PAVING CONSTRUCTION DETAILS
CONCRETE VALLEY

REVISION DATE:
APRIL 14, 2000

SHEET: P-15



SECTION A-A

NOTES:

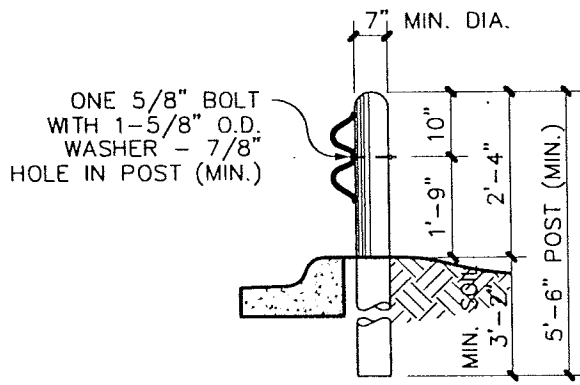
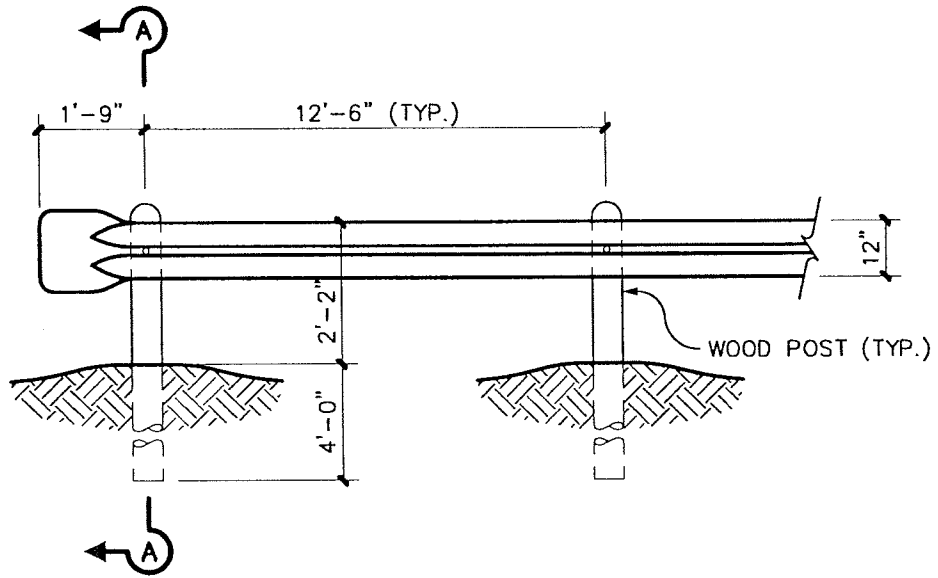
1. BARRICADE SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. METAL BEAM GUARD RAIL SHALL CONFORM TO THE TXDOT OPERATIONS AND PROCEDURES MANUAL (4-700)
3. LENGTH SHALL BE GIVEN ON PLANS, BUT NOT LESS THAN THE STREET WIDTH.
4. VERTICAL SUPPORTS MAY BE OF EQUAL ALTERNATE DESIGN APPROVED BY THE CITY ENGINEER.



PAVING CONSTRUCTION DETAILS
DEAD END BARRICADE

REVISION DATE:
APRIL 14, 2000

SHEET: **P-16**



SECTION A-A

NOTES:

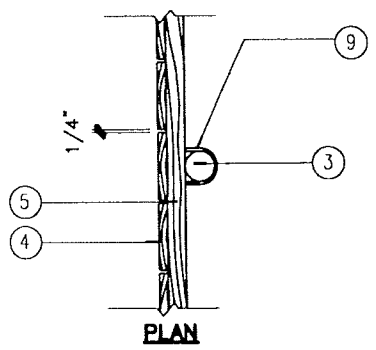
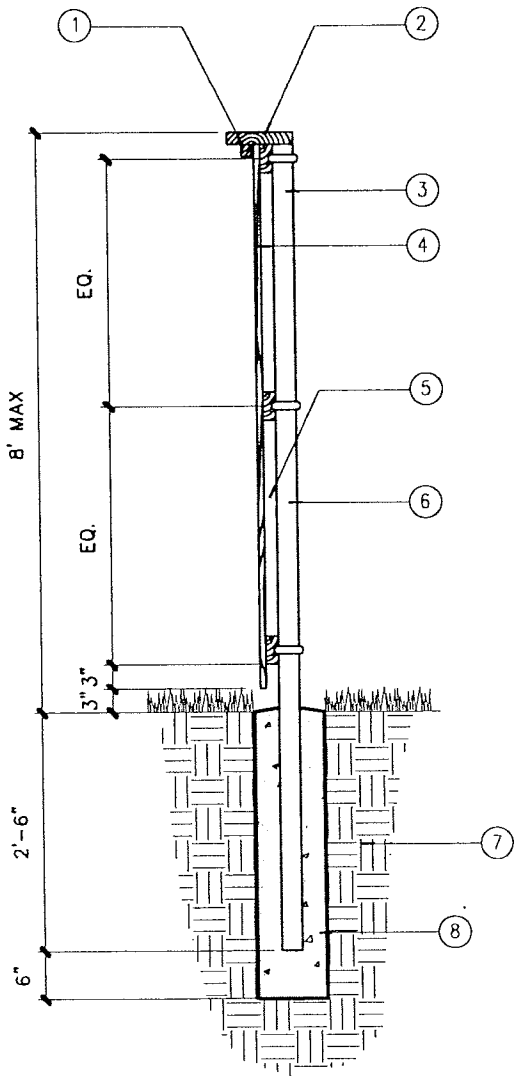
1. METAL BEAM GUARD RAIL SHALL CONFORM TO THE TxDOT OPERATIONS AND PROCEDURES MANUAL (4-700).
2. VERTICAL SUPPORTS MAY BE OF EQUAL ALTERNATE DESIGN APPROVED BY THE CITY ENGINEER.
3. END POST SHALL BE 8" DIA. INTERMEDIATE POST ARE 7" DIA.



PAVING CONSTRUCTION DETAILS
METAL BEAM GUARD RAIL

REVISION DATE:
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- ① 2"x2" TRIM
- ② 2"x8" CAP (TOP OF FENCE TO BE LEVEL)
- ③ 2" DIA. ~ S.S. 20 GALV. POST WITH CAP. POST SHALL BE FLUSH WITH BOTTOM OF 2"x6" CAP.
- ④ 1"x6" PICKET
NOTE: TO BE 3" ABOVE FINISH GRADE TYP.
- ⑤ (3) 2"x4" RAILS.
- ⑥ WACKER CLAMPS WITH COUNTER-SINK NUTS.
- ⑦ COMPACTED SOIL.
- ⑧ 12" DIA. CONCRETE FOOTING.
- ⑨ "U" BOLTS

COLUMN DESIGN:

1. BRICK COLUMNS SHALL BE SPACED @ 32' ON CENTER MAX.
2. BRICK COLUMNS SHALL BE PLACED ON 18" DIA. DRILLED PIERS REINFORCED WITH 4-#4 BARS (BARS ARE TO BE CONTINUOUS THROUGH BRICK COLUMN) #2 SPIRAL REINFORCING WITH 12" PITCH (PIERS ONLY).
3. COLUMN CAP SHALL BE PERMANENTLY ATTACHED TO THE BRICK COLUMN BY THE USE OF STANDARD MASONRY ANCHORS.

NOTES:

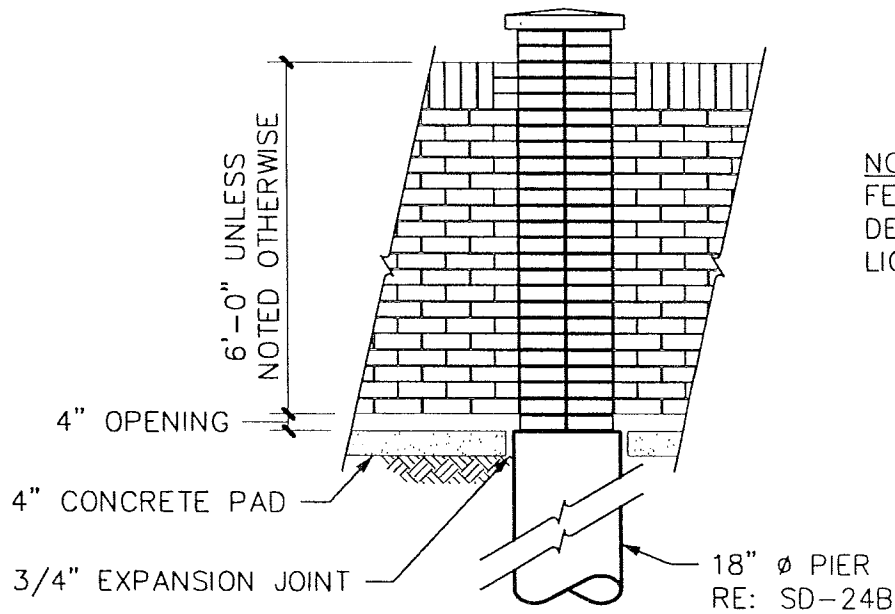
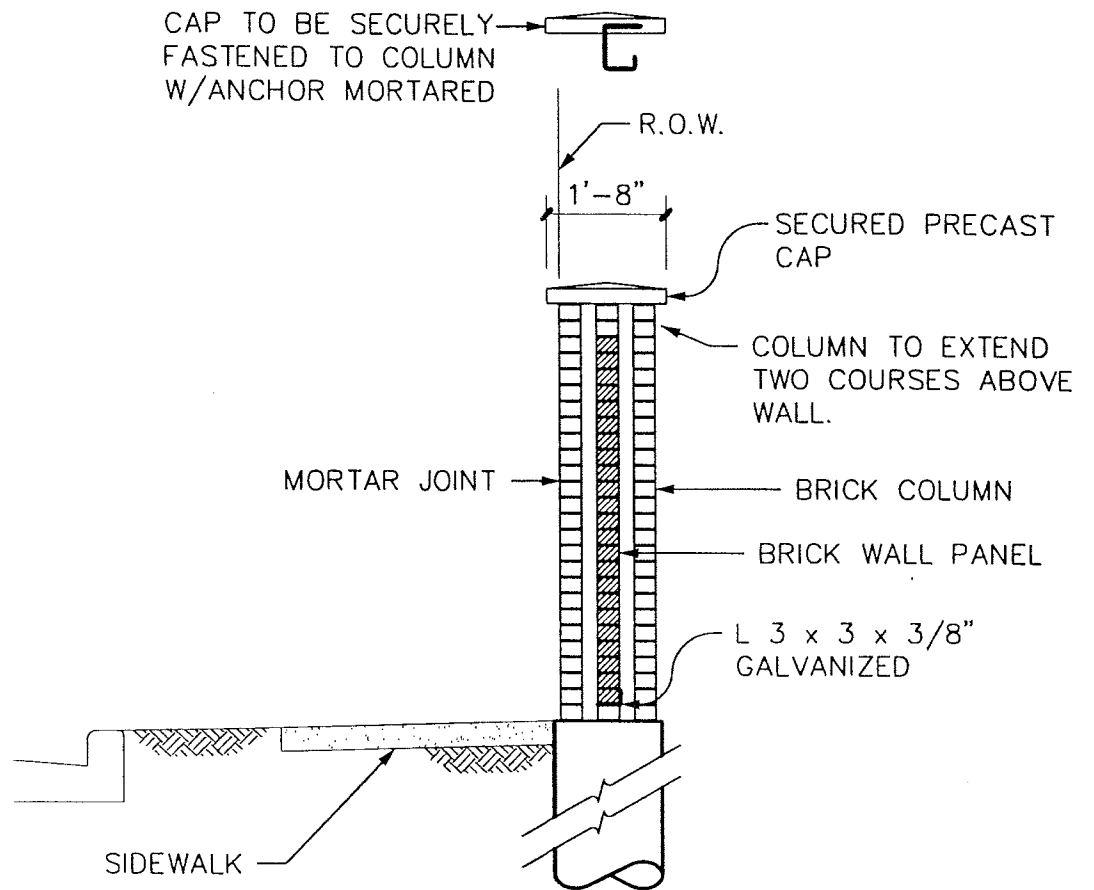
1. FENCE TO BE REDWOOD OR CEDAR
2. HARDWARE TO BE HOT DIPPED GALV.
3. FENCE STAIN TO BE DETERMINED.



PAVING CONSTRUCTION DETAILS
STANDARD WOODEN FENCE

REVISION DATE:
APRIL 14, 2000

SHEET: P-18



NOTE: ALL MASONRY FENCES SHALL BE DESIGNED BY A LICENSED ENGINEER.



PAVING CONSTRUCTION DETAILS
STANDARD MASONRY FENCE

REVISION DATE:
APRIL 14, 2000

SHEET: P-19