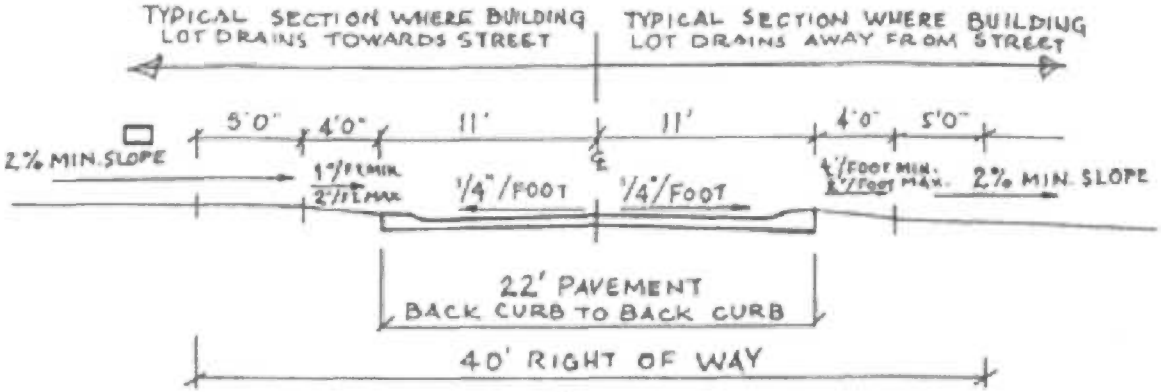
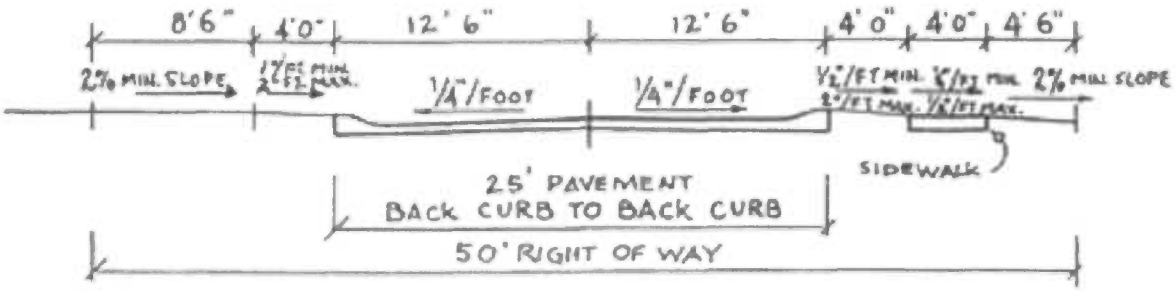
APPENDIX "C"

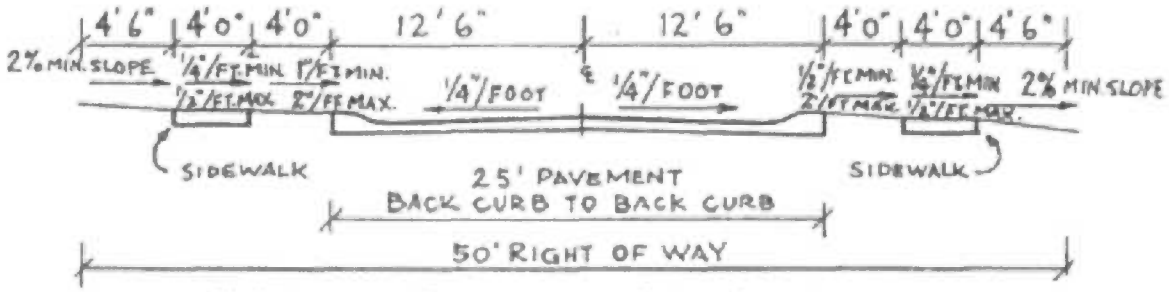
STANDARD CONSTRUCTION REQUIREMENTS AND DETAILS FOR STREETS, SIDEWALKS, DRIVEWAYS, EROSION CONTROL, AND STORM DRAINAGE SYSTEMS



TYPICAL SECTION - COURTS - DEADEND

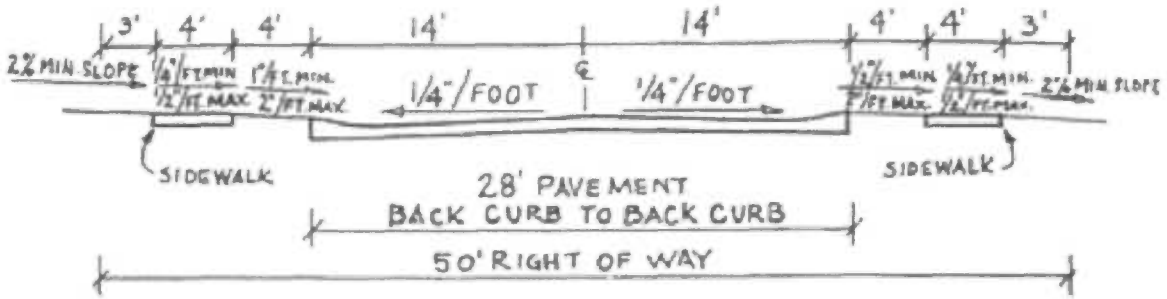


TYPICAL SECTION - CUL-DE-SACS - DEADEND

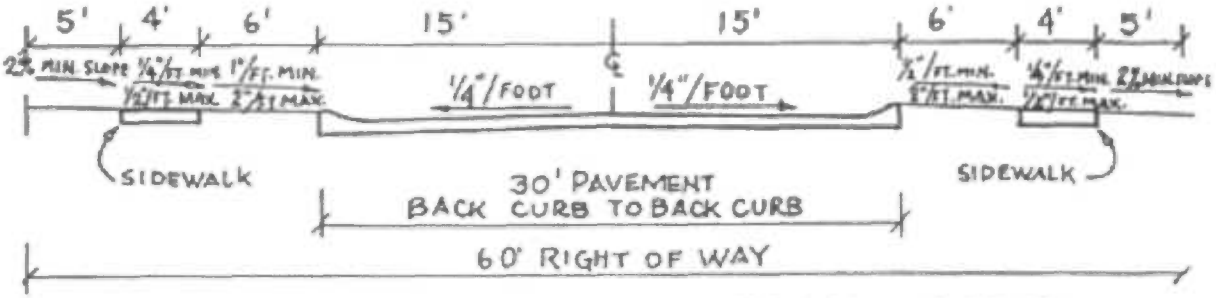


TYPICAL SECTION - LOCAL STREETS

NOTE: SLOPES OUTSIDE OF STREET PAVEMENT ARE MINIMUM STANDARD EXCEPT FOR AREAS IN TRANSITION FROM UPWARD TO DOWNWARD SLOPES ALONG SAME SIDE OF STREETS.

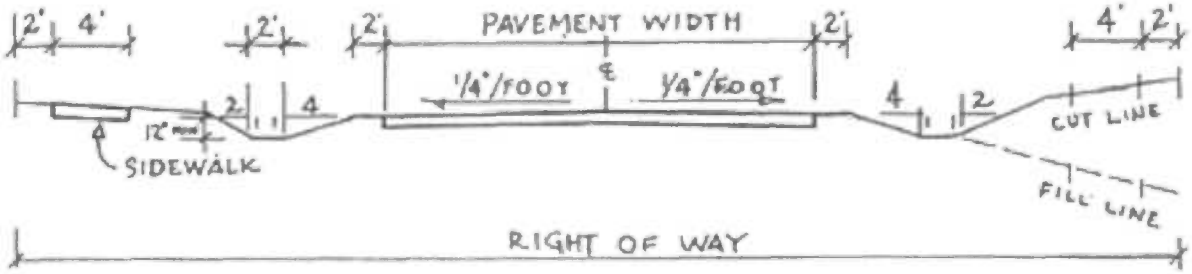


TYPICAL SECTION - SUBCOLLECTOR STREETS



TYPICAL SECTION ~ COLLECTOR STREETS

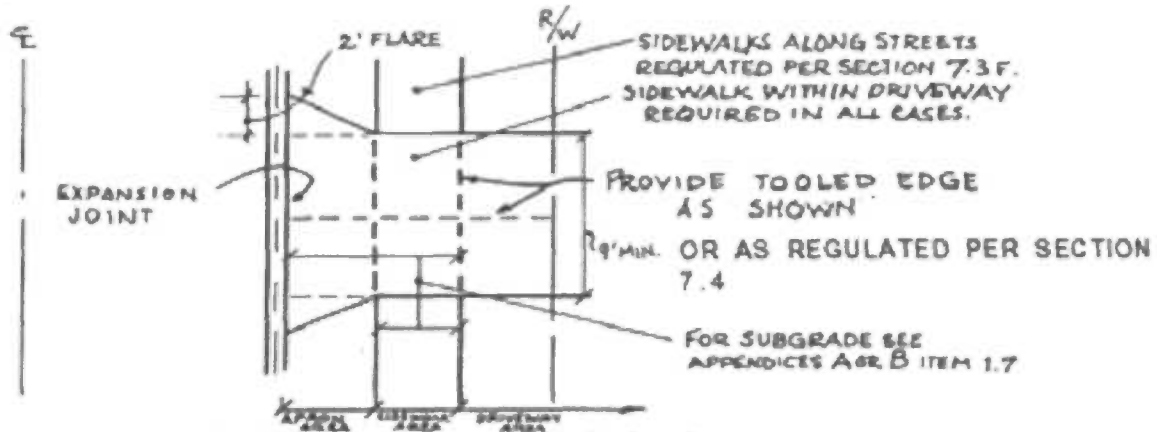
NOTE: SLOPES OUTSIDE OF STREET PAVEMENTS ARE MINIMUM STANDARD EXCEPT FOR AREAS IN TRANSITION FROM UPWARD TO DOWNWARD SLOPES SAME SIDE OF STREETS.



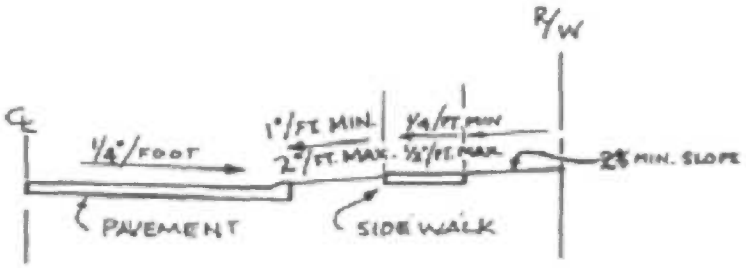
TYPICAL SHOULDER AND DITCH DETAIL

OPTION TO CURB AND GUTTER - ALL STREETS
FRONT YARD DEPTH - 50' MIN. LOT WIDTH - 100' MIN.

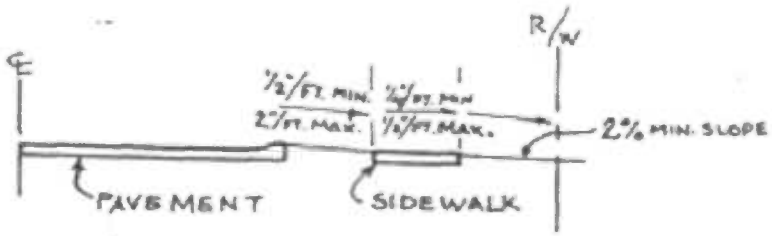
RESIDENTIAL DRIVEWAY APRON DETAILS



APRON PLAN VIEW



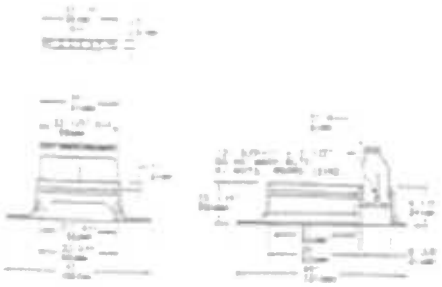
APRON GRADE WHERE LOTS DRAIN TO STREET



APRON GRADE WHERE LOTS DRAIN AWAY FROM STREET

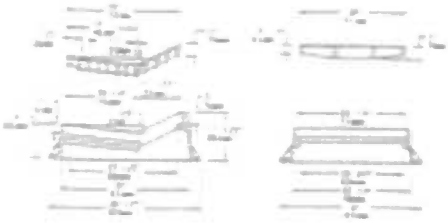
NOTE: SLOPES OUTSIDE OF STREET PAVEMENTS ARE MINIMUM STANDARD EXCEPT FOR AREAS IN TRANSITION FROM UPWARD TO DOWNWARD SLOPES ON SAME SIDE OF STREETS.

7380 Catch Basin Curb Inlet

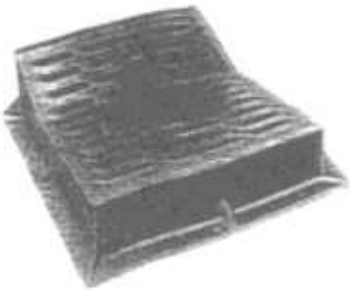


Heavy Duty
770 pounds (349kg) total weight
Approx. 160 sq. in.
of opening

7390 Catch Basin Curb Inlet

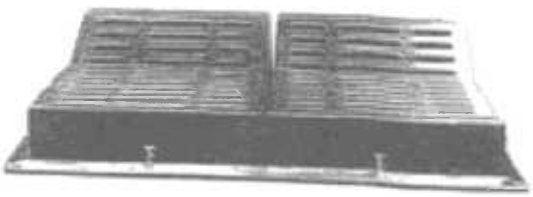


Heavy Duty
635 pounds (288kg)
total weight
Approx. 360 sq. in.
of opening

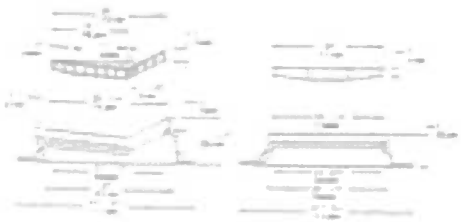


7391 Catch Basin Curb Inlet

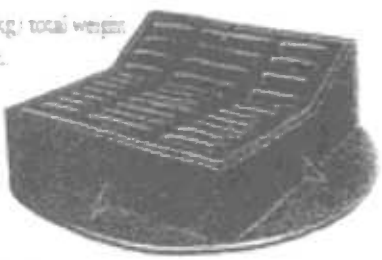
Heavy Duty
1180 pounds (535kg) total weight
Approx. 720 sq. in. of opening
Multiple Curb Inlet



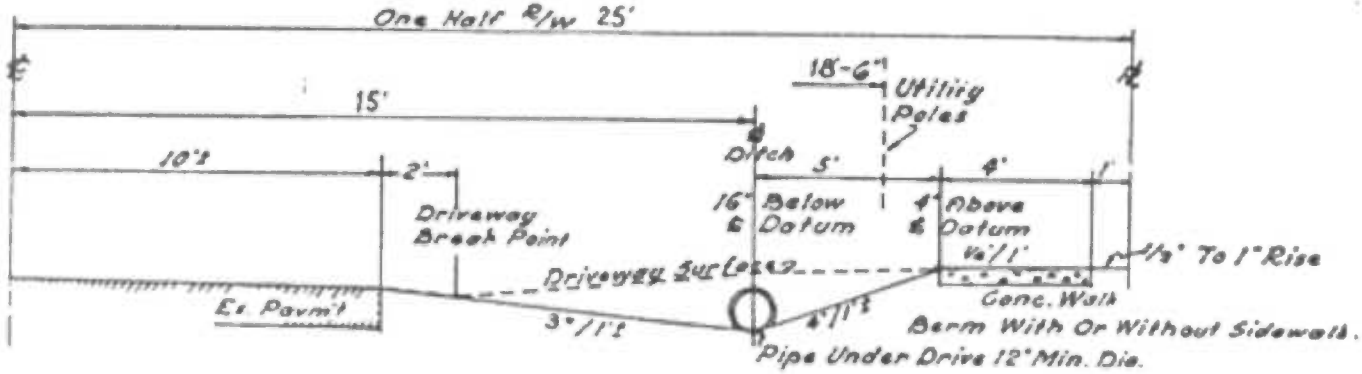
7395 Catch Basin Curb Inlet



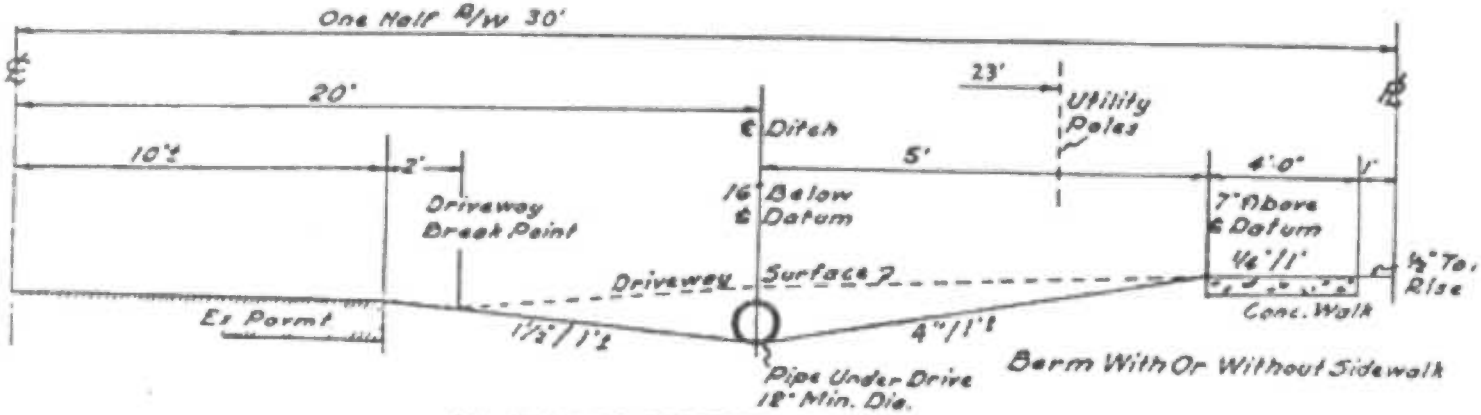
Heavy Duty
660 pounds (299kg) total weight
Approx. 360 sq. in.
of opening



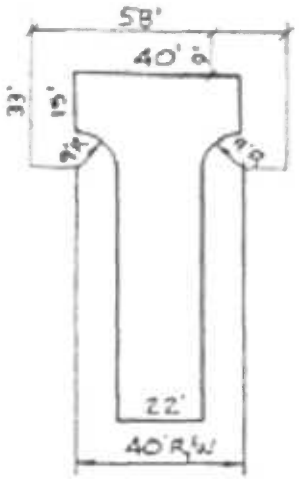
TYPICAL SECTION–SIDE DITCH DRAINAGE AT DRIVEWAY



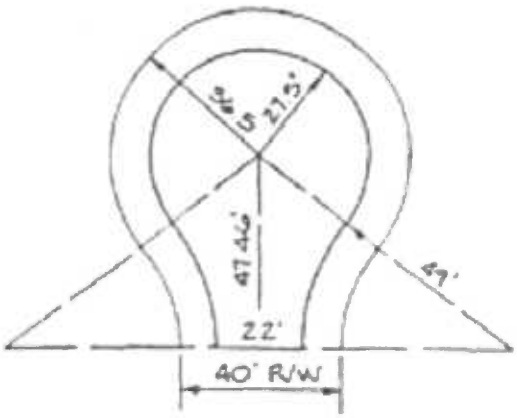
50 FOOT RIGHT OF WAYS



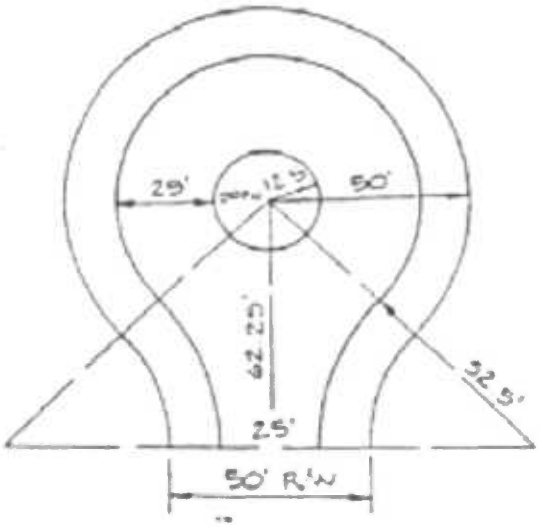
60 FOOT RIGHT OF WAYS



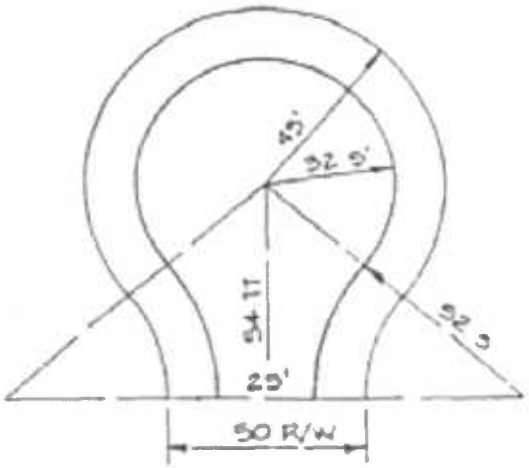
COURT
ALTERNATE T-TYPE



COURT

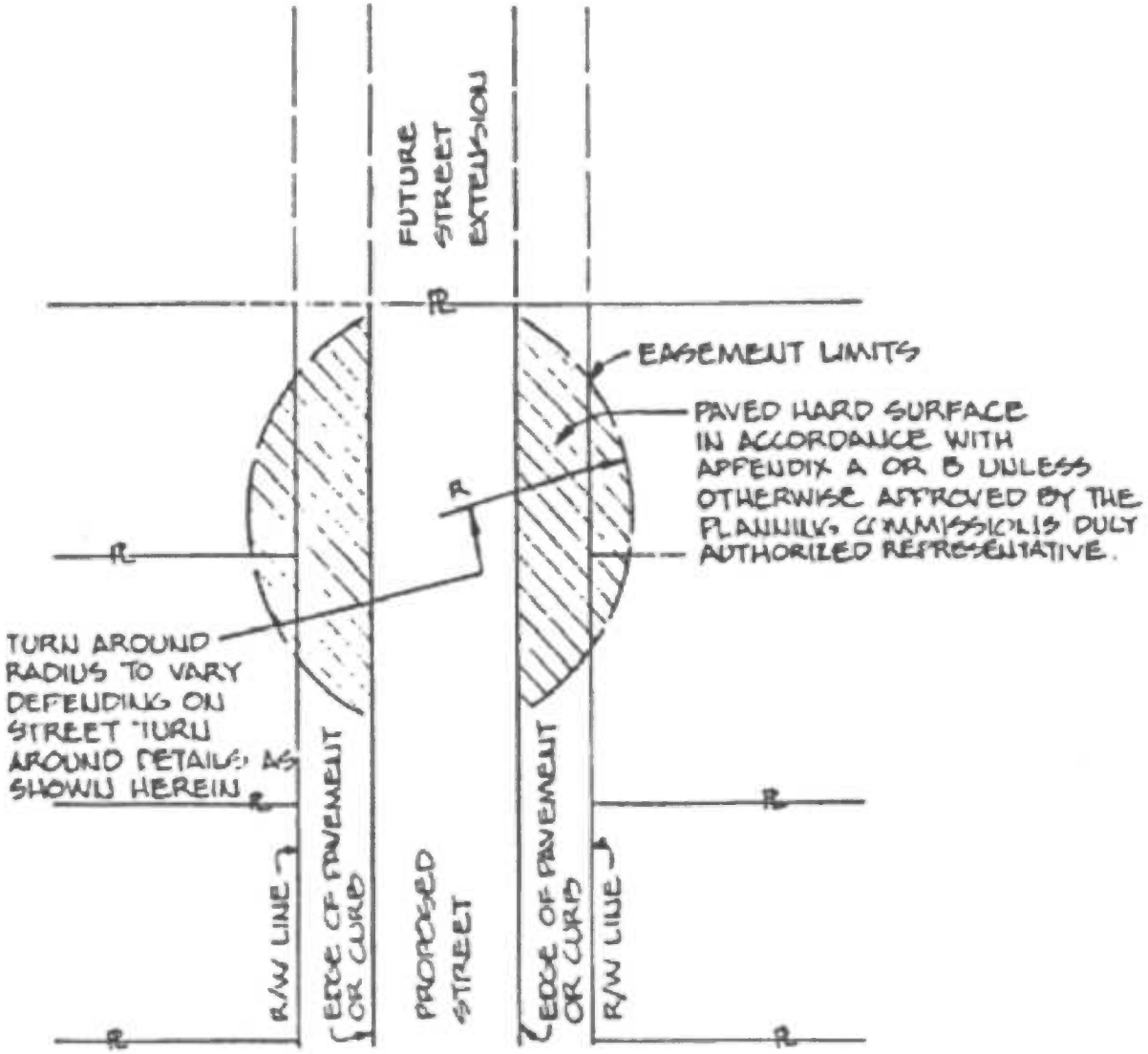


LOCAL



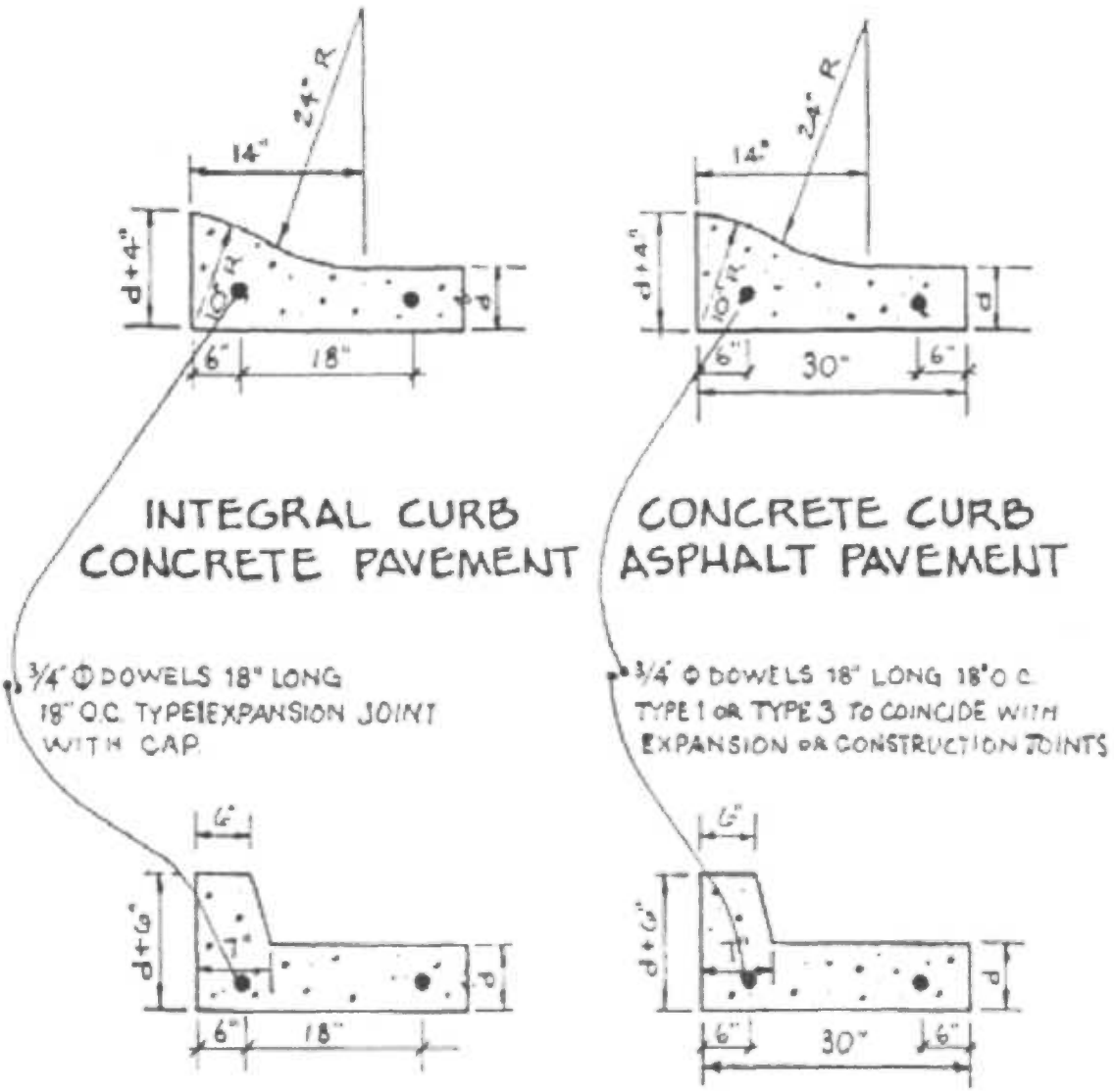
CUL-DE-SAC

TURN AROUND DETAILS
FOR DEADEND STREETS

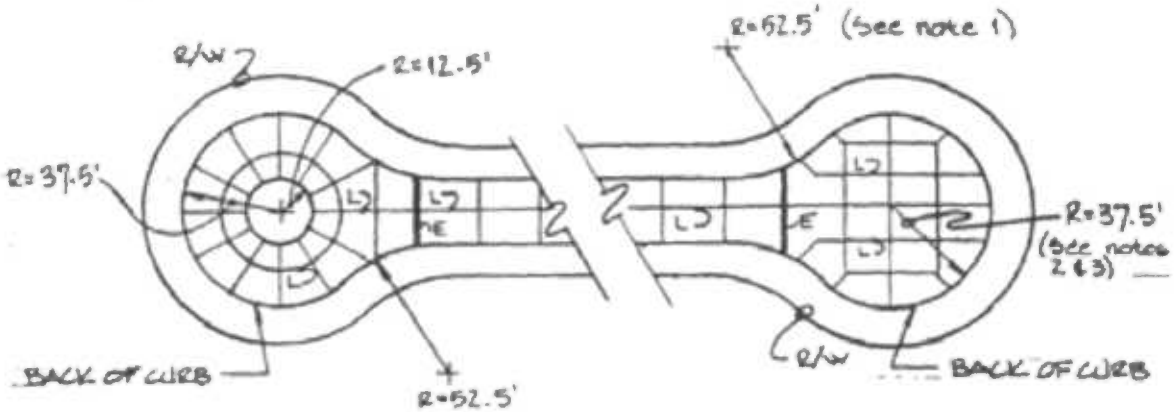


DETAIL OF TEMPORARY TURNAROUND FOR FUTURE STREET EXTENSION

CURB AND GUTTER DETAILS



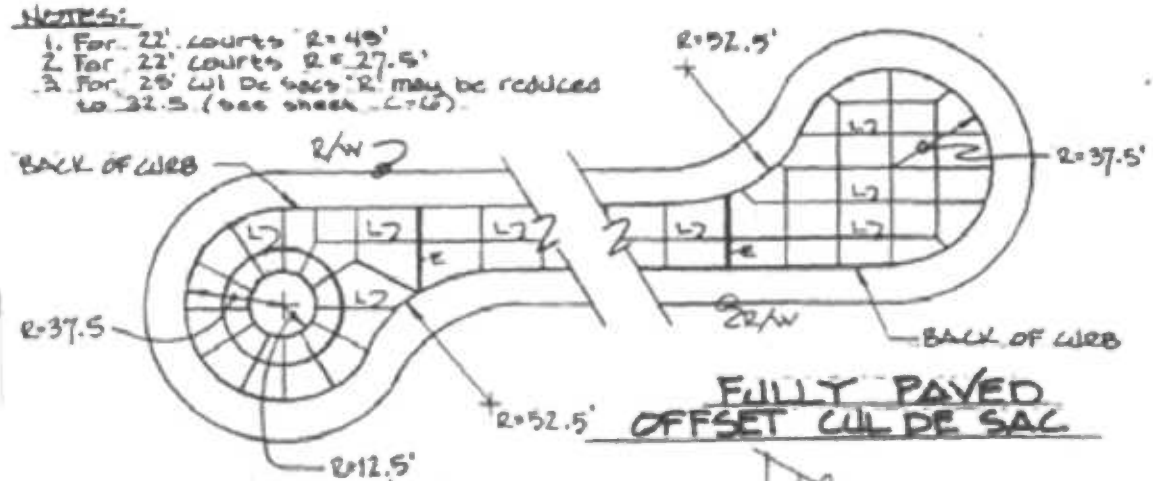
Note: Transverse expansion, contraction, and construction joints shall conform to these regulations



OPEN CENTER CUL DE SAC

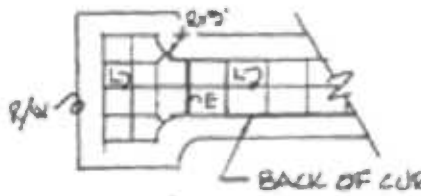
FULLY PAVED CUL DE SAC

NOTES:
1. For 22' courts R=49'
2. For 22' courts R=27.5'
3. For 28' cul de sacs 'R' may be reduced to 32.5 (see sheet C-16)

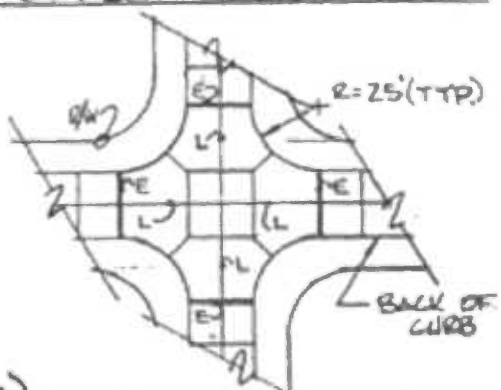


OPEN CENTER OFFSET CUL DE SAC

FULLY PAVED OFFSET CUL DE SAC



ALTERNATE T-TYPE (courts)

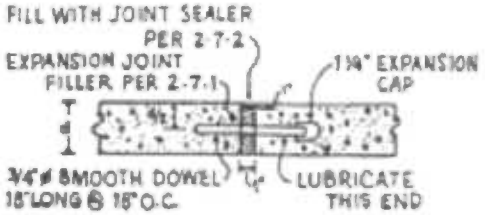


INTERSECTION

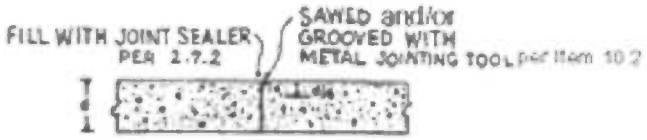
KEY:
E = Expansion Joints L = Longitudinal Joint
Unmarked joints are to be contraction joints

TYPICAL CONCRETE JOINTING PLAN

JOINT DETAILS

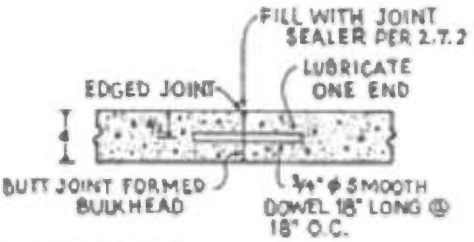


TYPE 1–Expansion Joint



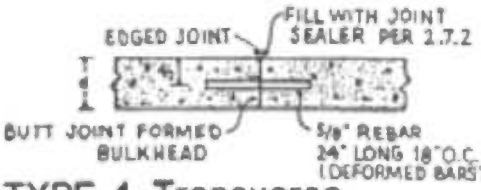
TYPE 2–Transverse Contraction Joint

(sawed or grooved joint)



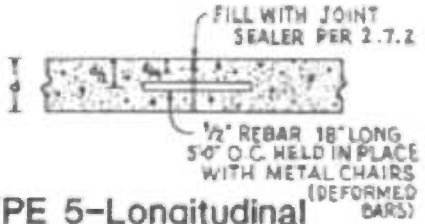
TYPE 3–Transverse Construction Joint

(planned–coincide with contraction joint)

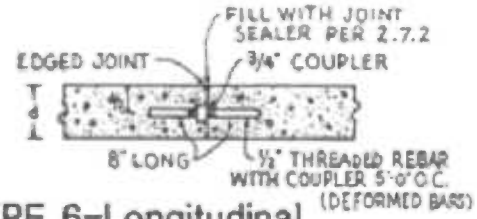


TYPE 4–Transverse Construction Joint

(emergency–not coincide with contraction joint)

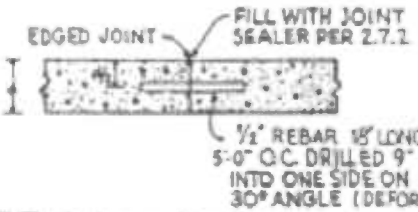


TYPE 5–Longitudinal Sawed Joint



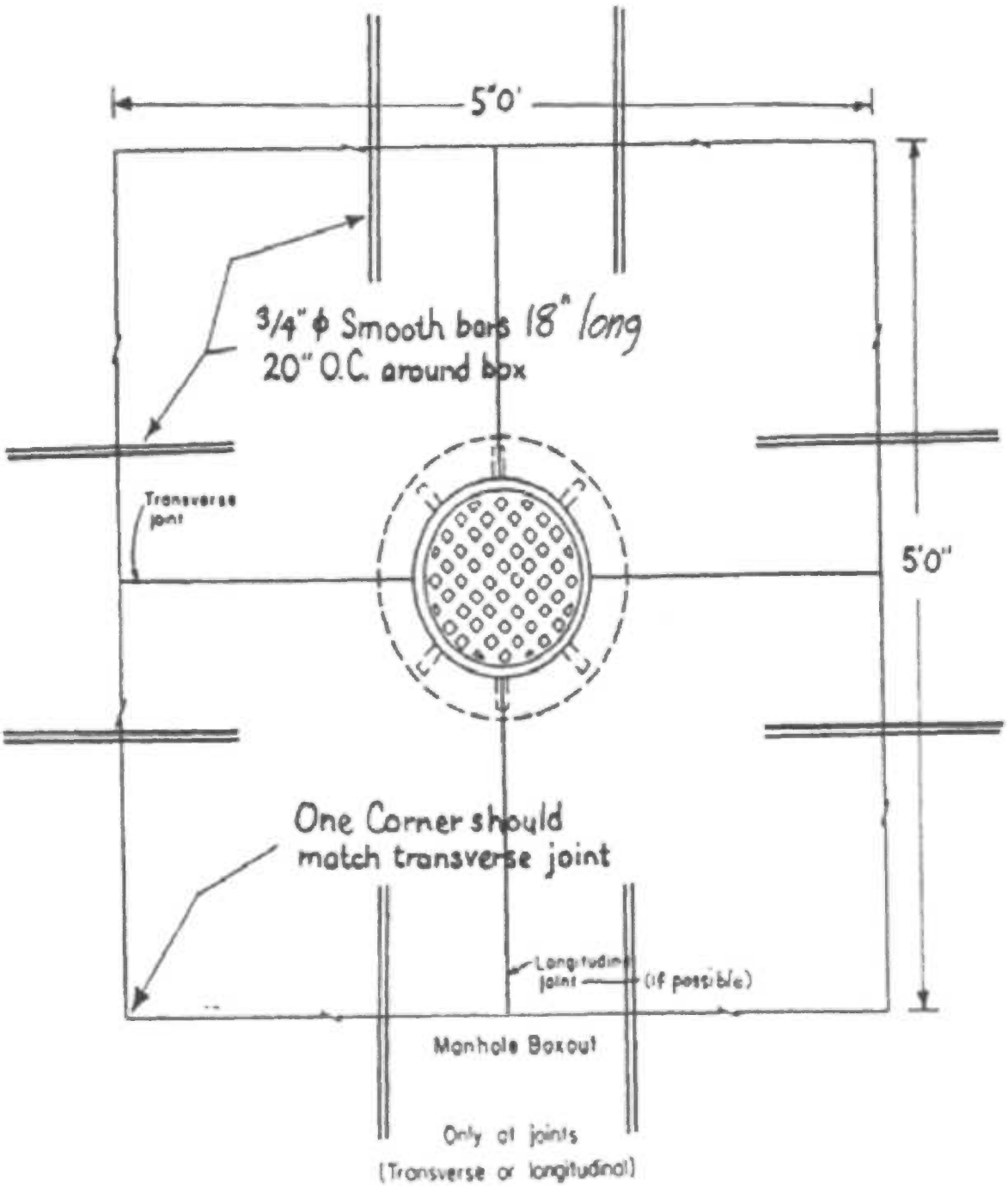
TYPE 6–Longitudinal Construction Joint

(threaded rebar)

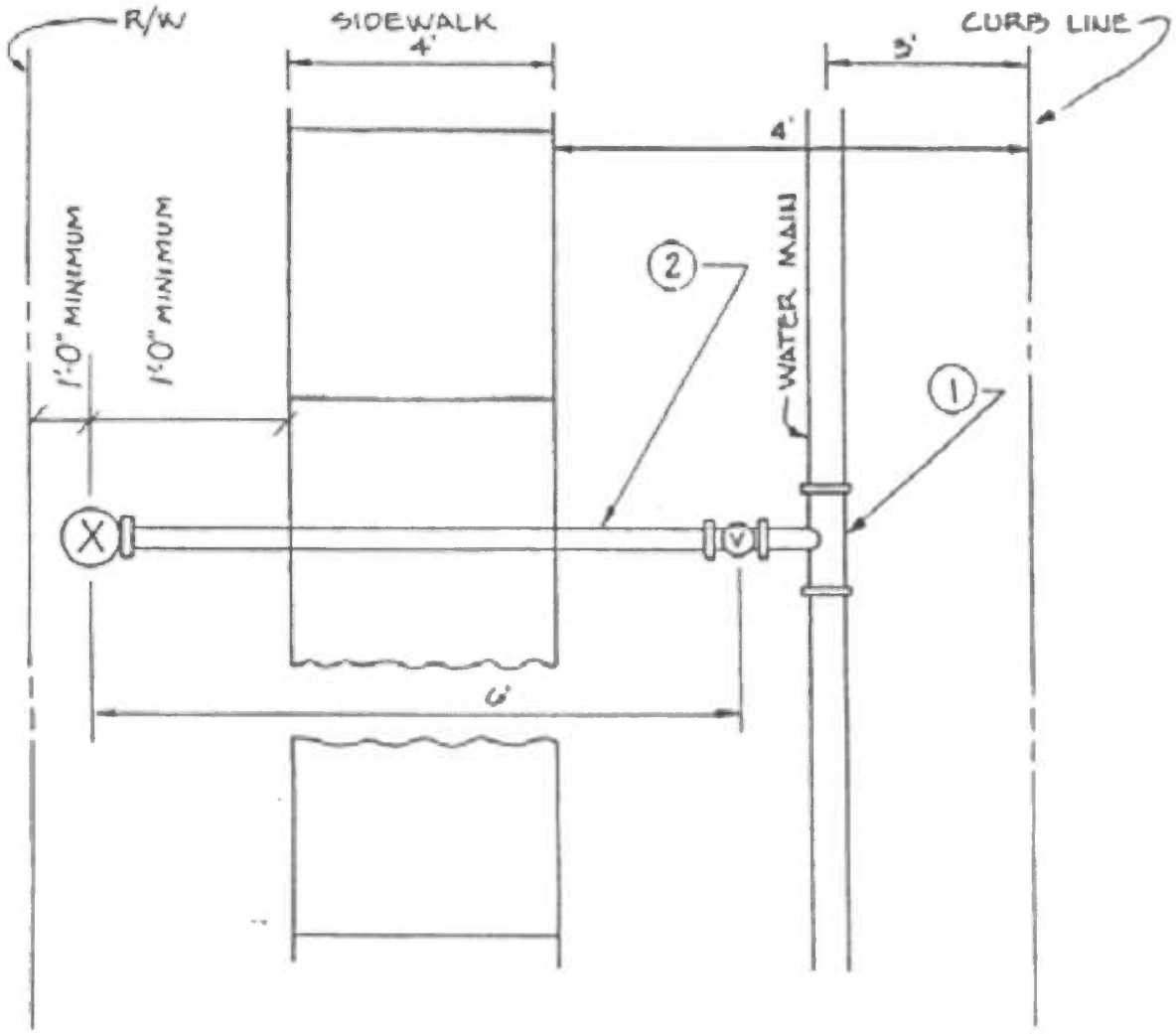


TYPE 7–Longitudinal Construction Joint Alt. **(drilled)** or per Item 10.4

MANHOLE DETAIL
IN CONCRETE PAVEMENT

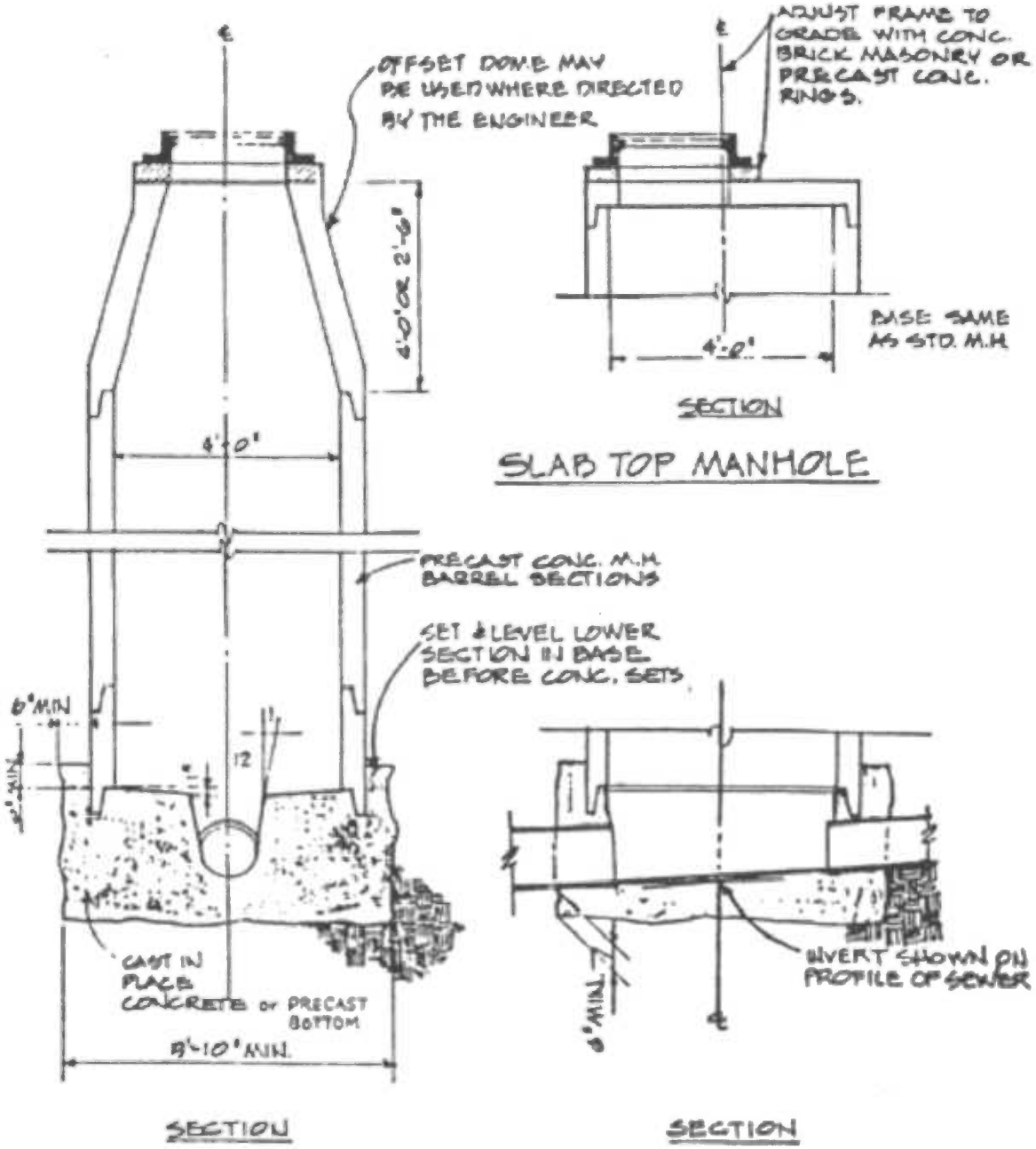


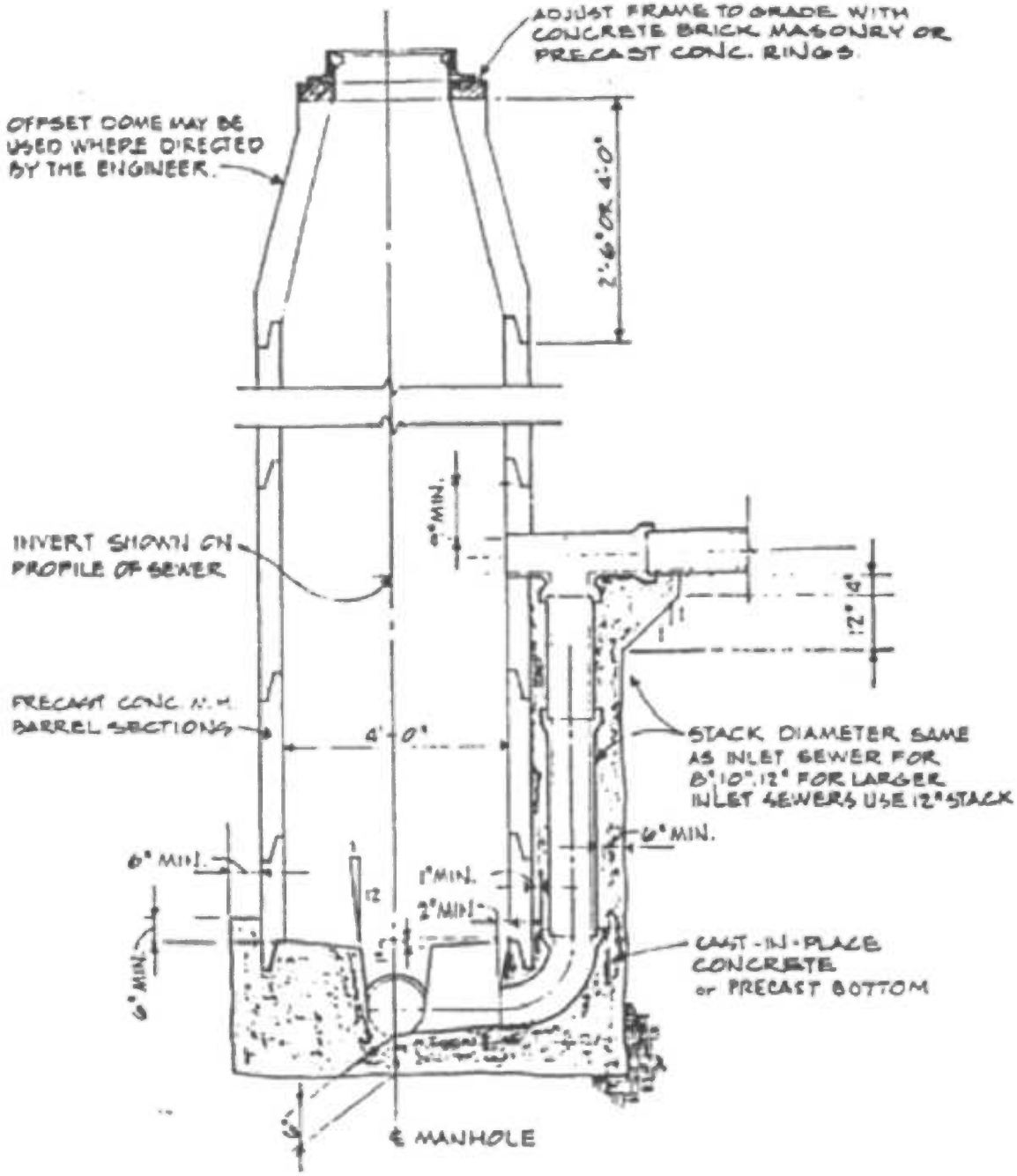
TYPICAL WATER MAIN AND FIRE HYDRANT ASSEMBLY LOCATION FOR ALL STREETS



(1) - ANCHORING TEE - CLOW FAIRT NO. F-1217 OR APPROVED EQUAL

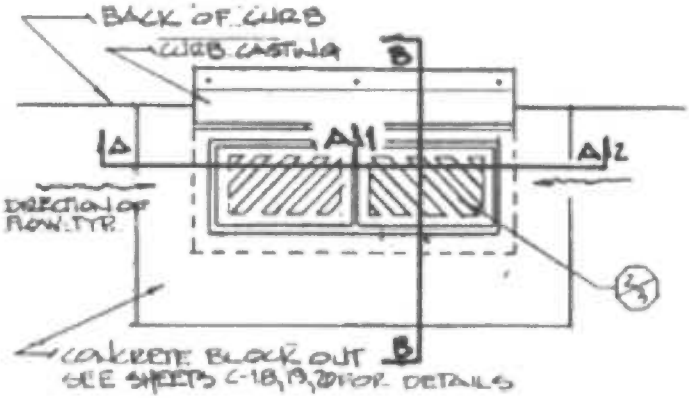
(2) - HYDRANT ADAPTER - WILL BE SOLID X SWIVEL CLOW FAIRT NO F-1211MS OR APPROVED EQUAL


OFFSET DOME MAY BE USED WHERE DIRECTED BY THE ENGINEER
4'-0" OR 2'-6"
4'-0"
PRECAST CONC. M.H. BARREL SECTIONS
SET & LEVEL LOWER SECTION IN BASE BEFORE CONC. SETS
6" MIN
12
CAST IN PLACE CONCRETE or PRECAST BOTTOM
8'-10" MIN.
SECTION
ADJUST FRAME TO GRADE WITH CONC. BRICK MASONRY OR PRECAST CONC. RINGS.
BASE SAME AS STD. M.H.
4'-0"
SECTION
SLAB TOP MANHOLE
INVERT SHOWN ON PROFILE OF SEWER
SECTION
STANDARD MANHOLE

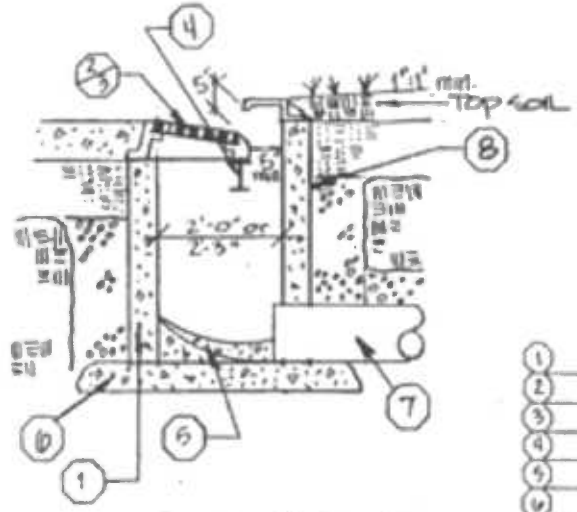


SECTION

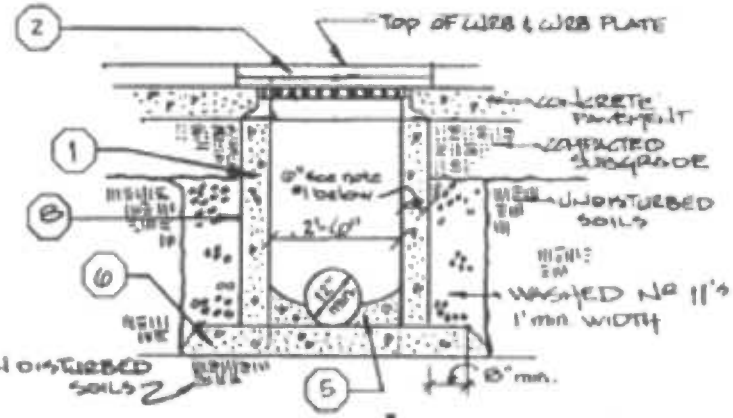
STANDARD DROP MANHOLE



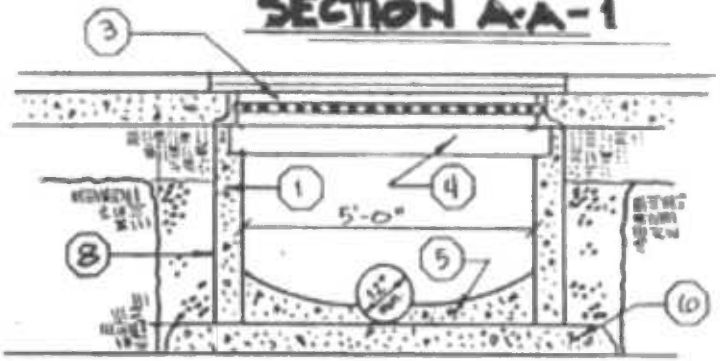
PLAN OF CATCH BASIN



SECTION B-B



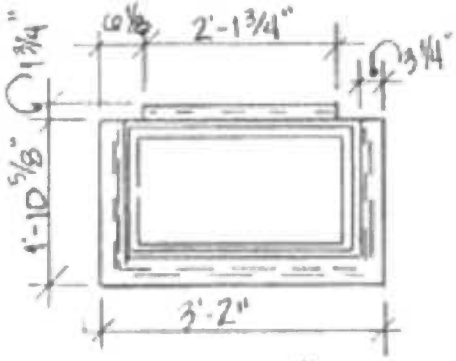
SECTION A-A-1



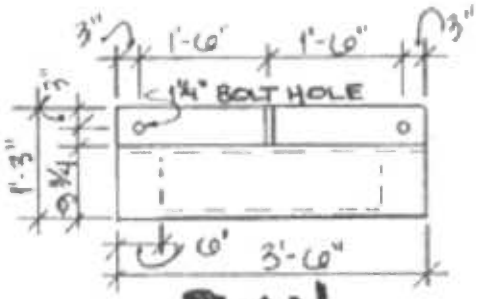
SECTION A-A-2

1. CONCRETE BRICK OR SLAB BLOCK MAY BE USED IN PLACE OF PRECAST OR CAST-IN-PLACE CONCRETE. SIDEWALLS SHALL BE 8" MINIMUM THICKNESS UNREINFORCED MONOLITHIC CONCRETE.
2. DOUBLE INLET 1 FRAME, GRATE AND GRATE PLATE — NEENAH R-3280 OR APPROVED EQUAL
3. DOUBLE INLET 1 FRAME, GRATE AND GRATE PLATE — NEENAH R-3286 OR APPROVED EQUAL
4. 5"x12.5"x6" STEEL BEAM (TYP. WITH SEPARATE OR BOLTED INLETS)
5. 12" MIN. DEPTH 4000 psi AE CONCRETE WITH SCRIBED INVERT
6. 12" MIN. DEPTH 4000 psi AE CONCRETE EXTENDED MIN. 8" BEYOND EXTERIOR OF BOX
7. 12" MIN. DIA. PIPE (SEE ALL PIPE TYPES AND SIZES SEE SECTION 7.0)
8. UPPER SIDES AND JOINTS SHALL NOT YIELD AN OPENING GREATER THAN THE SIZE OF AGGREGATE BACKFILL

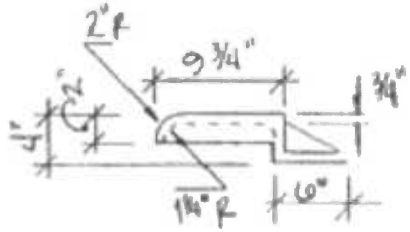
CATCH BASIN - DETAILS



PLAN

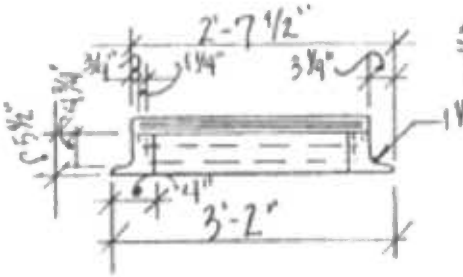


PLAN

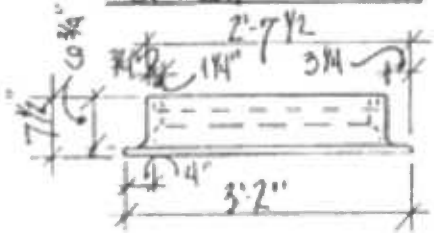


SIDE

CURB PLATE

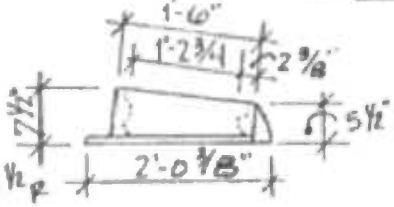


BACK VIEW



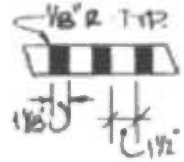
FRONT VIEW

FRAME



SIDE VIEW

FRAME



SECTION A-A

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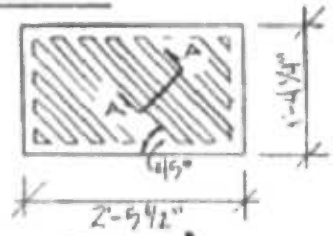
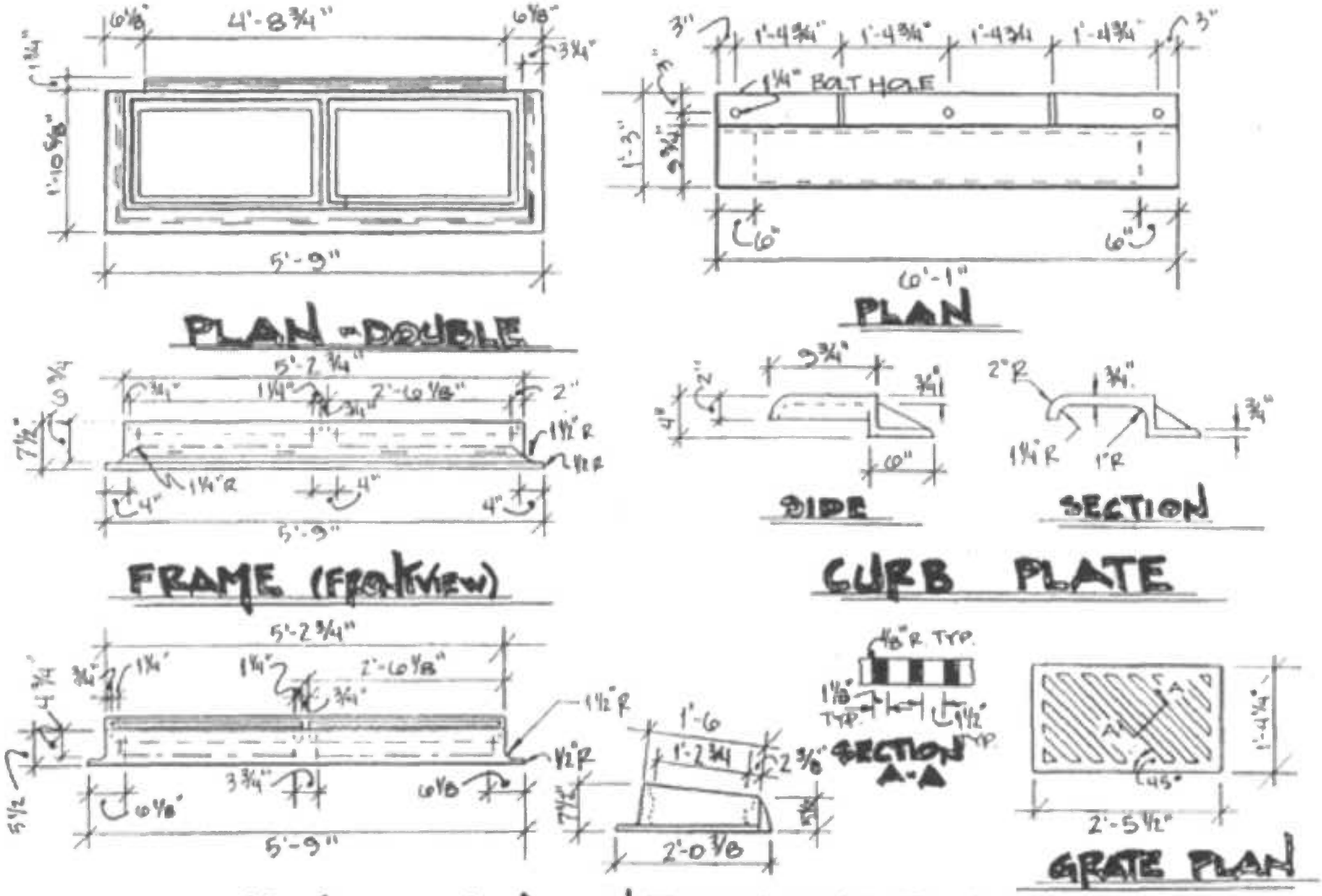


PLAN

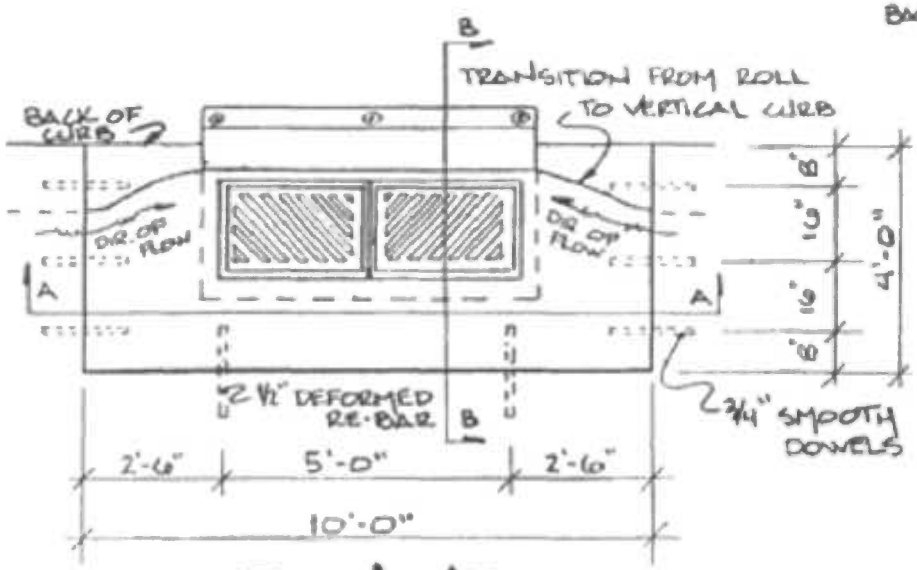
GRATE

- GRATE TYPE SHALL BE AS SHOWN IN THE PLAN VIEW AND SHALL BE PLACED SO THE DIAGONAL BARS DIRECT THE DRAINAGE FLOW TOWARD THE CURB (MUST SPECIFY DL or DR)
- CASTING DESIGNS SHALL BE ESSENTIALLY THE SAME AND EQUALLY AS STRONG AS THOSE SHOWN HEREON OR INCLUDED WITH IN SHEET C-17 . MINIMUM TOTAL WEIGHTS: SINGLE INLET (NEENAH R-3288-C) 690 POUNDS DOUBLE INLET (NEENAH R-3288-E2) 1325 lbs.
- BEARING AREAS OF FRAME AND GRATE SHALL BE SO FITTED AND FINISHED, WITHOUT PROJECTIONS, AS TO PROVIDE A FIRM AND EVEN SEAT FOR ALL PORTIONS OF THE GRATE IN THE FRAME WITHOUT ROCKING
- CURB PLATE SHALL BE SECURELY FASTENED WITH 3/4 INCH STAINLESS STEEL BOLTS

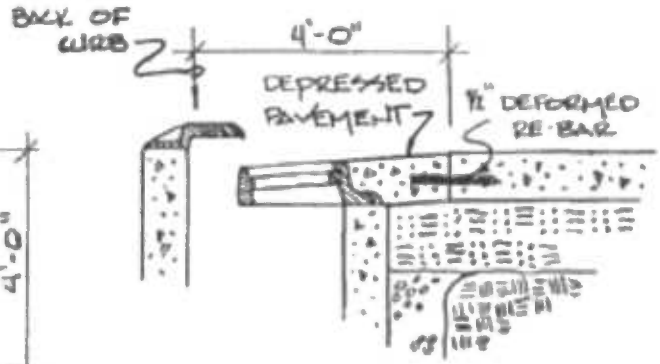
CB CASTINGS DETAILS - SINGLE



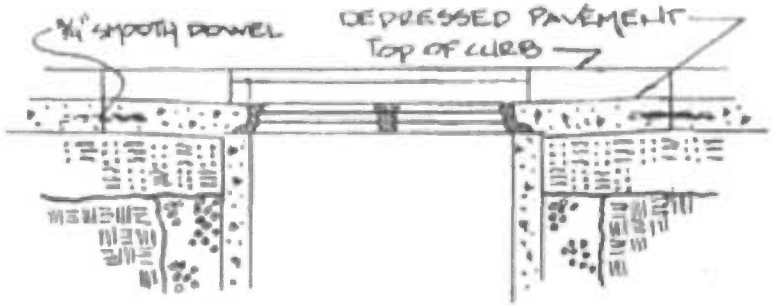
CB CASTINGS DETAILS - DOUBLE



PLAN VIEW



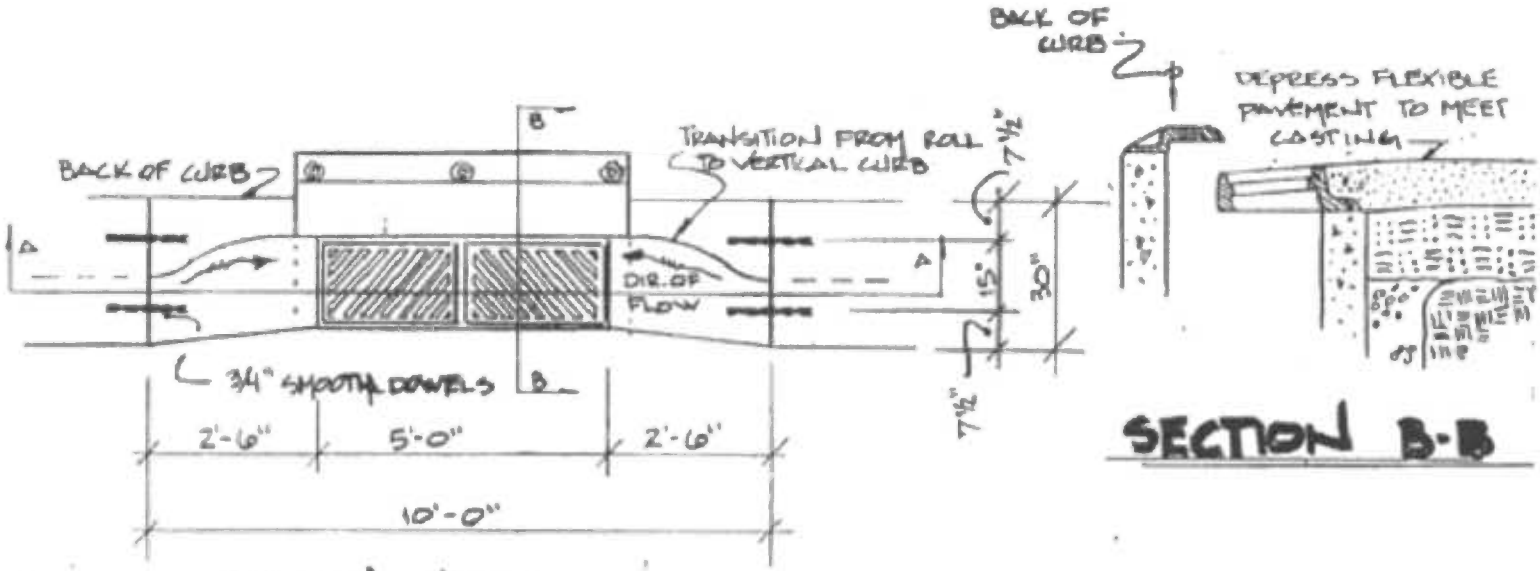
SECTION B-B



SECTION A-A

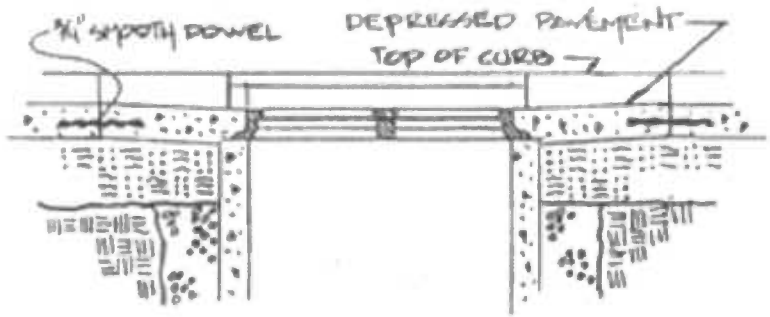
- BLOCKOUTS SHALL BE FILLED WITH 4000 PSI AIR ENTRAINED PORTLAND CEMENT CONCRETE
- BLOCKOUTS FOR SINGLE INLET CATCH BASINS SHALL BEAR THE SAME DIMENSIONS AS THE DOUBLE INLET CATCH BASIN
- ¾ x 18" DOWELS ARE REQUIRED FOR CONCRETE PAVEMENT OR GUTTER BLOCKOUT - SEE SHEET C-10 FOR DOWEL DETAILS.
- TWO ½" x 18" PIECES OF DEFORMED RE-BAR ARE REQUIRED ALONG BUTT JOINT OF ISOLATION AREA
- PAVEMENT THICKNESS SHALL CONFORM TO THE RELATED STREET CLASSIFICATIONS PER SECTION 7 - TABLE 3 OF THESE REGULATIONS

RIGID PAVEMENT BLOCKOUT DETAIL



PLAN VIEW

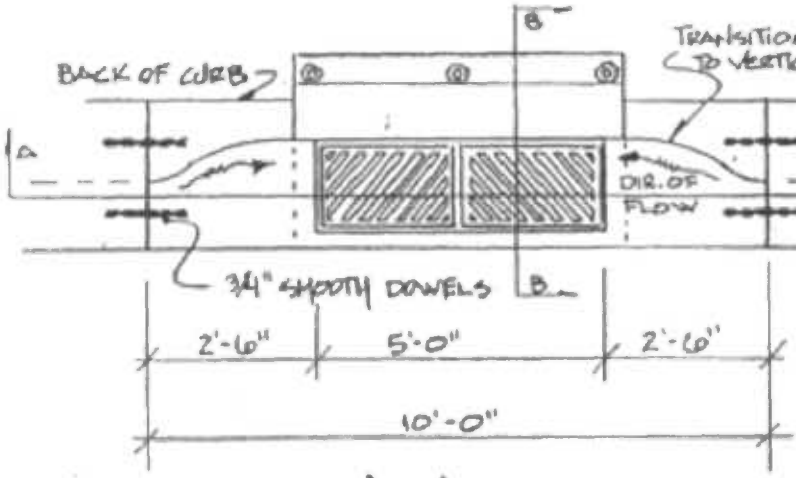
SECTION B-B



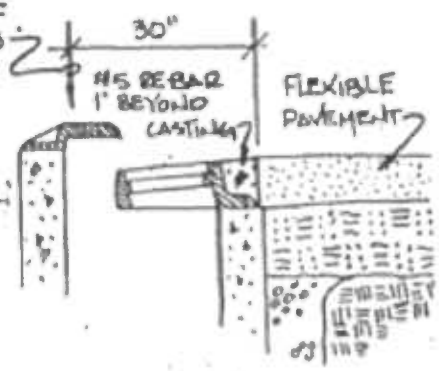
SECTION A-A

- BLOCKOUTS SHALL BE POURED WITH 4000 psi AIR ENTRAINED PORTLAND CEMENT CONCRETE
- BLOCKOUTS FOR SINGLE INLET CATCH BASINS SHALL BEAR THE SAME DIMENSIONS AS THE DOUBLE INLET CATCH BASIN
- ¾ x 18" DOWELS ARE REQUIRED FOR CONCRETE PAVEMENT OR GUTTER BLOCKOUT - SEE SHEET C-10 FOR DOWEL DETAILS.
- PAVEMENT THICKNESS SHALL CONFORM TO THE RELATED STREET CLASSIFICATIONS PER SECTION 7 - TABLE 3 OF THESE REGULATIONS

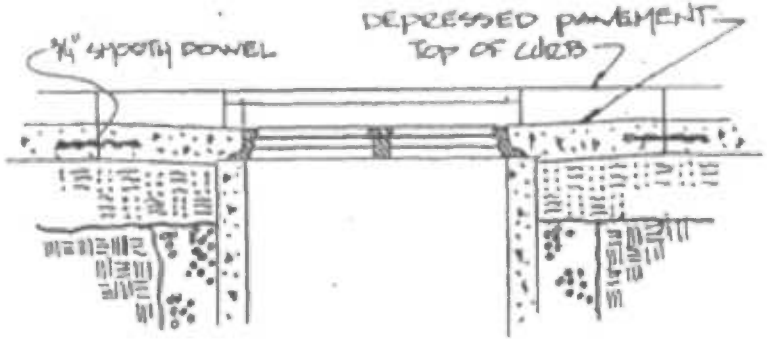
ALTERNATIVE - A
FLEXIBLE PAVEMENT BLOCKOUT DETAIL



PLAN VIEW



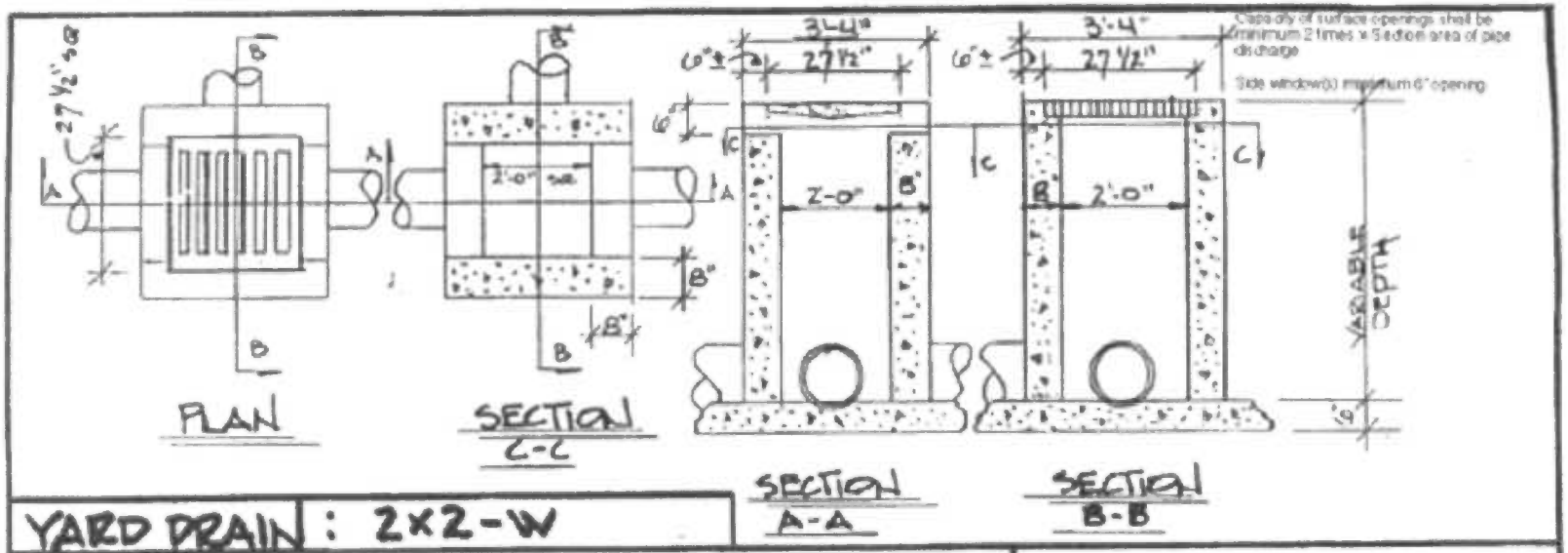
SECTION B-B



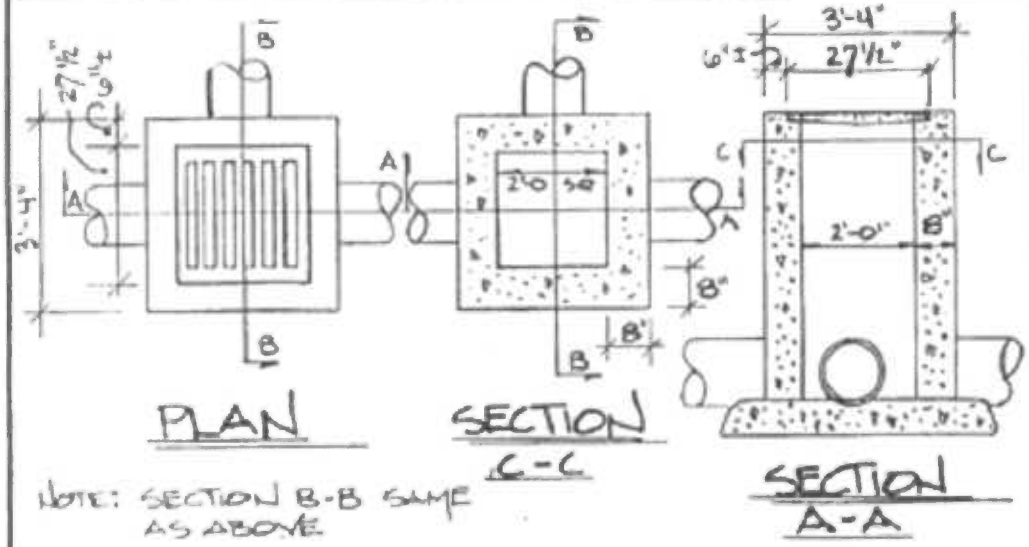
SECTION A-A

- BLOCKOUTS SHALL BE POURED WITH 4000 PSI AIR ENTRAINED PORTLAND CEMENT CONCRETE
- BLOCKOUTS FOR SINGLE INLET CATCH BASINS SHALL BEAR THE SAME DIMENSIONS AS THE DOUBLE INLET CATCH BASIN
- 3/4 x 18" DOWELS ARE REQUIRED FOR CONCRETE PAVEMENT OR GUTTER BLOCKOUT - SEE SHEET C-10 FOR DOWEL DETAILS.
- PAVEMENT THICKNESS SHALL CONFORM TO THE RELATED STREET CLASSIFICATIONS PER SECTION 7 - TABLE 3 OF THESE REGULATIONS

ALTERNATIVE - B
FLEXIBLE PAVEMENT BLOCKOUT DETAIL



YARD DRAIN : 2x2-W



NOTE: SECTION B-B SAME AS ABOVE

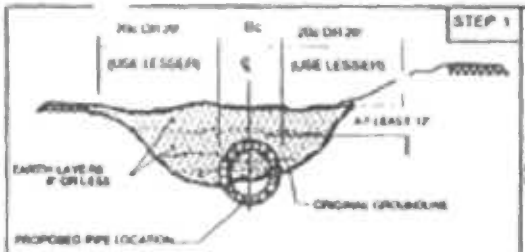
YARD DRAIN: 2x2-S

- GRATE AND FRAME SHALL BE ESSENTIALLY THE SAME AND EQUALLY AS STRONG AS SHOWN HERE ON (NEENAH R-4871-A OR R-4899-C OR APPROVED EQUAL)
- 2x2-W SIDE INLETS TO BE PLACED 4-6 INCHES BELOW NORMAL ELEVATION OF DITCH FLOW LINE RETURNING TO NORMAL 10 FEET EACH SIDE OF YARD DRAIN
- 2x2-W MAY HAVE SIDE INLET ON UPSTREAM SIDE ONLY WHERE DITCH HAS A CONTINUOUS DOWN GRADE PAST THE YARD DRAIN
- 2x2-S GRATE ELEVATION SHALL BE PLACED 4-6 INCHES BELOW NORMAL DITCH FLOW LINE RETURNING 10 FEET EACH SIDE OF YARD DRAIN
- NOTES 1, 5, 6, 7 and 8 OF CATCH BASIN DETAILS (SHEET C-15) SHALL APPLY TO DETAILS SHOWN HEREON

Maximum Dimension of any surface Inlet/Window opening shall be such that a sphere with a diameter of 6 inches cannot pass through any opening

YARD DRAIN - DETAILS

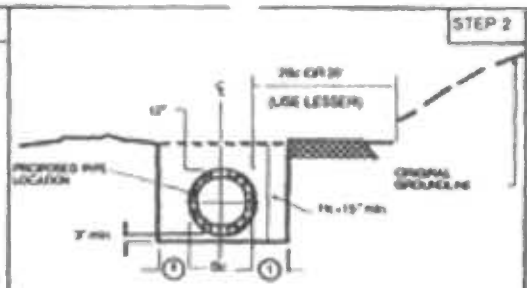
STEP 1



a. IF THE ORIGINAL GROUNDLINE IS AT LEAST 12" ABOVE TOP OF PROPOSED PIPE FOR WIDTH OF 2Bc OR 20' (WHICHEVER IS LESS) ON EACH SIDE OF THE PIPE, GO DIRECTLY TO "STEP 2"

b. IF ORIGINAL GROUNDLINE IS NOT AT LEAST 12" ABOVE TOP OF PROPOSED PIPE, COMPACT EMBANKMENT IN LAYERS 6" OR LESS TO ELEVATION AND WIDTH SHOWN. ☐ MEET DENSITY REQUIREMENTS FOR PROPOSED EMBANKMENT

STEP 2



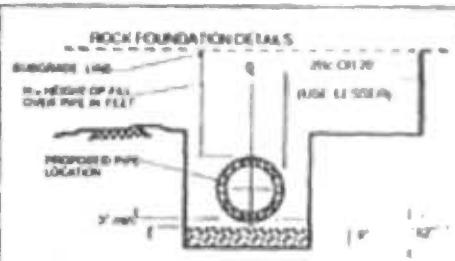
a. EXCAVATE TO WITHIN 12" ABOVE TOP OF PROPOSED PIPE A WIDTH OF 2 Bc OR 20' (USE LESSER) ON EACH SIDE OF PIPE

b. EXCAVATE TRENCH TO WIDTH AND DEPTH SHOWN

(1) AT LEAST 12"

STEP 3

ROCK FOUNDATION DETAILS



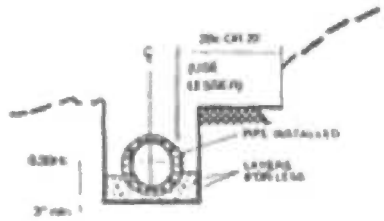
a. IF ROCK FOUNDATION IS NOT ENCOUNTERED, GO DIRECTLY TO "STEP 4"

b. IF ROCK FOUNDATION IS ENCOUNTERED, EXCAVATE TRENCH ADDITIONAL DEPTH ☒ TO AT LEAST 9" FOR A TOTAL OF 12" FOR ALL PIPE DIAMETERS.

c. BACKFILL ADDITIONAL EXCAVATION AREA WITH EARTH CUSHION OF FIRMLY COMPACTED FINE SOILS, SAND OR NO. 10 COURSE AGGREGATE IN LAYERS 6" OR LESS.

☒ MEET DENSITY REQUIREMENTS FOR PROPOSED EMBANKMENT

STEP 4

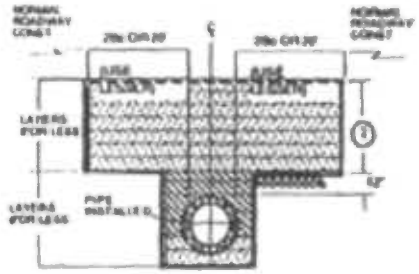


a. COMPACT SAND OR NO. 10 COURSE AGGREGATE IN TRENCH IN LAYERS 6" OR LESS TO WIDTH AND ELEVATION SHOWN ☒ MEET DENSITY REQUIREMENTS FOR PROPOSED EMBANKMENT

b. EXCAVATE GROOVE IN THE COMPACTED SAND OR AGGREGATE TO CONFORM TO THE OUTSIDE OF THE PIPE. AFTER EXCAVATION OF THE GROOVE, APPROXIMATELY 3" OF SAND SHOULD REMAIN BELOW THE OUTSIDE INVERT OF THE PIPE. THE CHASE SHALL BE GAGED FOR SHAPE AND SLOPE BY STRIKING OR DRAWING A TEMPLATE THROUGH THE GROOVE IMMEDIATELY BEFORE PLACING EACH SECTION OF PIPE.

c. INSTALL PIPE AT CORRECT ALIGNMENT AND ELEVATION. RECOMPACT ANY LOOSE SAND DISTURBED DURING INSTALLATION.

STEP 5

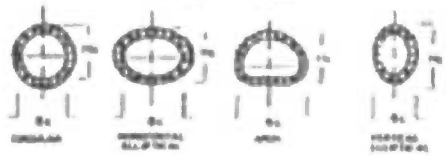


(1) 48" REQUIRED IF FILL HEIGHT PERMITS

a. COMPACT, SAND OR NO. 10 COURSE AGGREGATE IN LAYERS 6" OR LESS TO A POINT 12" ABOVE TOP OF THE PIPE. ☒ MEET DENSITY REQUIREMENTS FOR PROPOSED EMBANKMENT. COMPACT SELECTED FINE SOIL TO ELEVATION (2) ABOVE TOP OF PIPE ☐ MEET DENSITY REQUIREMENTS FOR ADJACENT EMBANKMENTS.

b. PROCEED WITH NORMAL ROADWAY CONSTRUCTION

PIPE SHAPES



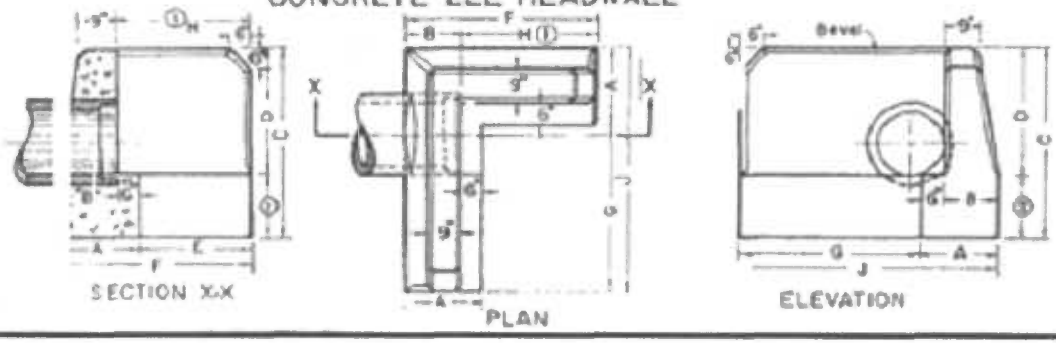
PIPE BEDDING/TRENCHING FOR CULVERTS, SEWERS, STORM DRAINS AND THEIR COMBINATION

STANDARD SPECS AND CONST. DETAILS	APPENDIX C - 22	NOVEMBER 1984

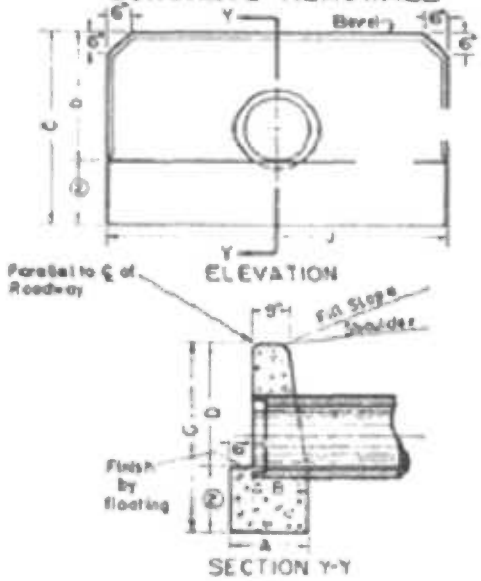
ENSIONS AND QUANTITIES

HEADWALL TYPE	DIAMETER OF PIPE	HEADWALL DIMENSIONS A	B	C	D	E	F	G	H ①	J	CUBIC YARDS CONCRETE FOR ONE HEADWALL ② EARTH	ROCK
STANDARD	12"	1'-8"	1'-2"	4'-0"	2'-6"	—	—	—	—	6'-0"	1.05	0.87
	15"	1'-8½"	1'-2½"	4'-3"	2'-9"	—	—	—	—	6'-9"	1.25	1.03
	18"	1'-9"	1'-3"	4'-6"	3'-0"	—	—	—	—	7'-6"	1.48	1.23
	21"	1'-9½"	1'-3½"	4'-9"	3'-3"	—	—	—	—	8'-3"	1.73	1.46
	24"	1'-10"	1'-4"	5'-0"	3'-6"	—	—	—	—	9'-0"	1.99	1.69
	27"	1'-10½"	1'-4½"	5'-3"	3'-9"	—	—	—	—	9'-9"	2.27	1.93
RAISED	12"	1'-8"	1'-2"	4'-6"	3'-0"	—	—	—	—	7'-6"	1.45	1.23
	15"	1'-8½"	1'-2½"	4'-9"	3'-3"	—	—	—	—	8'-3"	1.69	1.43
	18"	1'-9"	1'-3"	5'-0"	3'-6"	—	—	—	—	9'-0"	1.96	1.67
	21"	1'-9½"	1'-3½"	5'-3"	3'-9"	—	—	—	—	9'-9"	2.25	1.93
	24"	1'-10"	1'-4"	5'-6"	4'-0"	—	—	—	—	10'-6"	2.54	2.19
	27"	1'-10½"	1'-4½"	5'-9"	4'-3"	—	—	—	—	11'-3"	2.88	2.49
STANDARD ELL	12"	1'-8"	1'-2"	4'-0"	2'-6"	2'-0"	3'-8"	3'-0"	2'-6"	4'-8"	1.19	0.99
	15"	1'-8½"	1'-2½"	4'-3"	2'-9"	2'-3"	3'-11½"	3'-6"	2'-9"	5'-2½"	1.42	1.19
	18"	1'-9"	1'-3"	4'-6"	3'-0"	2'-6"	4'-3"	4'-0"	3'-0"	5'-9"	1.67	1.41
	21"	1'-9½"	1'-3½"	4'-9"	3'-3"	2'-9"	4'-6½"	4'-6"	3'-3"	6'-3½"	1.93	1.63
	24"	1'-10"	1'-4"	5'-0"	3'-6"	3'-0"	4'-10"	5'-0"	3'-6"	6'-10"	2.22	1.89
	27"	1'-10½"	1'-4½"	5'-3"	3'-9"	3'-3"	5'-1½"	5'-6"	3'-9"	7'-4½"	2.52	2.15
RAISED ELL	12"	1'-8"	1'-2"	4'-6"	3'-0"	2'-9"	4'-5"	3'-9"	3'-3"	5'-5"	1.62	1.37
	15"	1'-8½"	1'-2½"	4'-9"	3'-3"	3'-0"	4'-8½"	4'-3"	3'-6"	5'-11½"	1.88	1.59
	18"	1'-9"	1'-3"	5'-0"	3'-6"	3'-3"	5'-0"	4'-9"	3'-9"	6'-6"	2.16	1.85
	21"	1'-9½"	1'-3½"	5'-3"	3'-9"	3'-6"	5'-3½"	5'-3"	4'-0"	7'-0½"	2.47	2.12
	24"	1'-10"	1'-4"	5'-6"	4'-0"	3'-9"	5'-7"	5'-9"	4'-3"	7'-7"	2.79	2.41
	27"	1'-10½"	1'-4½"	5'-9"	4'-3"	4'-0"	5'-10½"	6'-3"	4'-6"	8'-1½"	3.14	2.72

CONCRETE ELL HEADWALL



CONCRETE HEADWALL



NOTES

Circular Pipe includes slightly elliptical concrete pipe with circular reinforcement

Volume displaced by barrel of pipe has been computed using inside dimension of pipe

① The dimension and/or the angle of intersection between the walls may be varied on construction

② Volume based on values of 18" for earth, 12" for rock

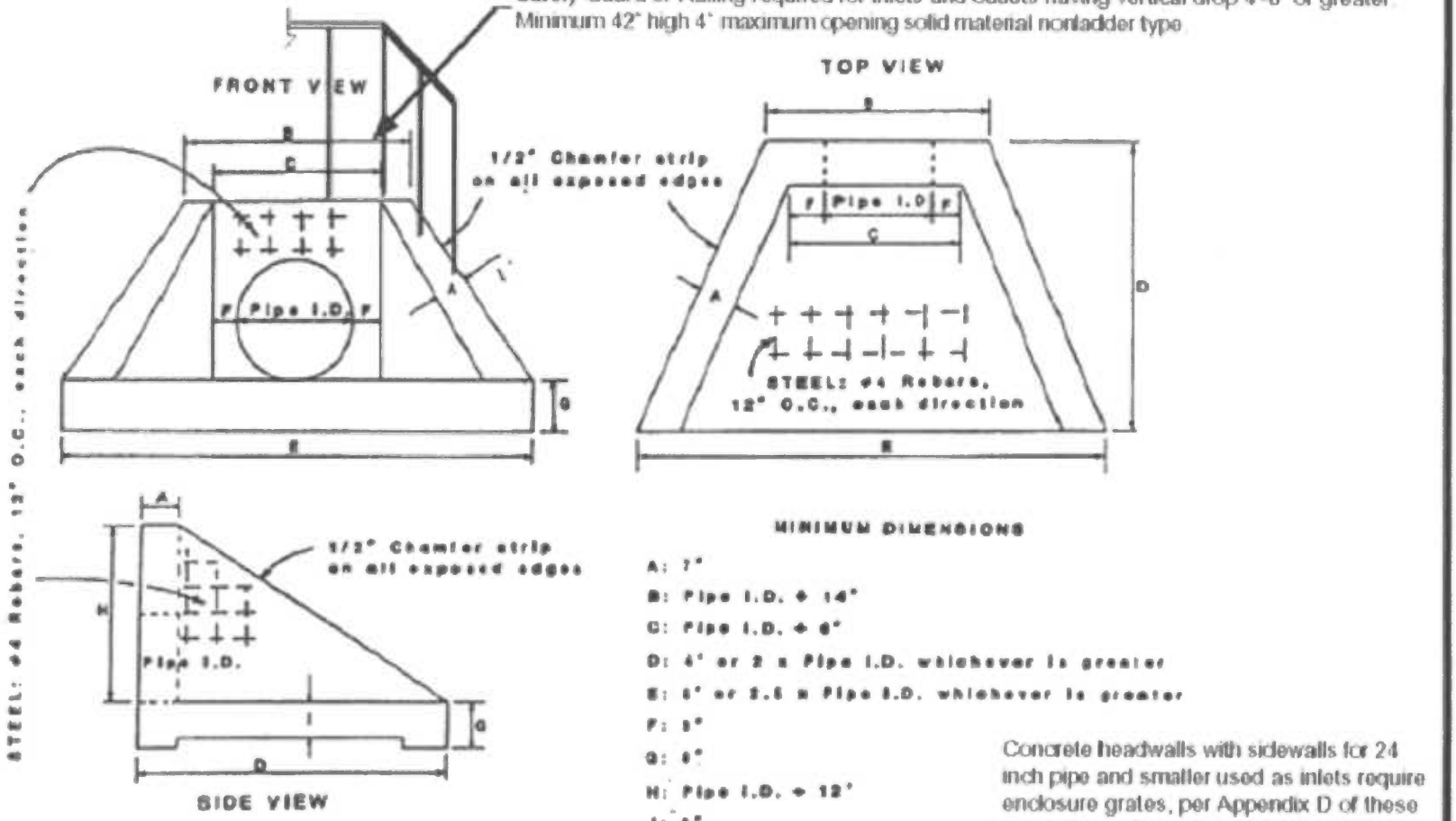
Straight face Headwalls for 24 inch pipe and smaller used as inlets are prohibited

Safety Guards or Railings may be required

KENTUCKY BUREAU OF HIGHWAYS

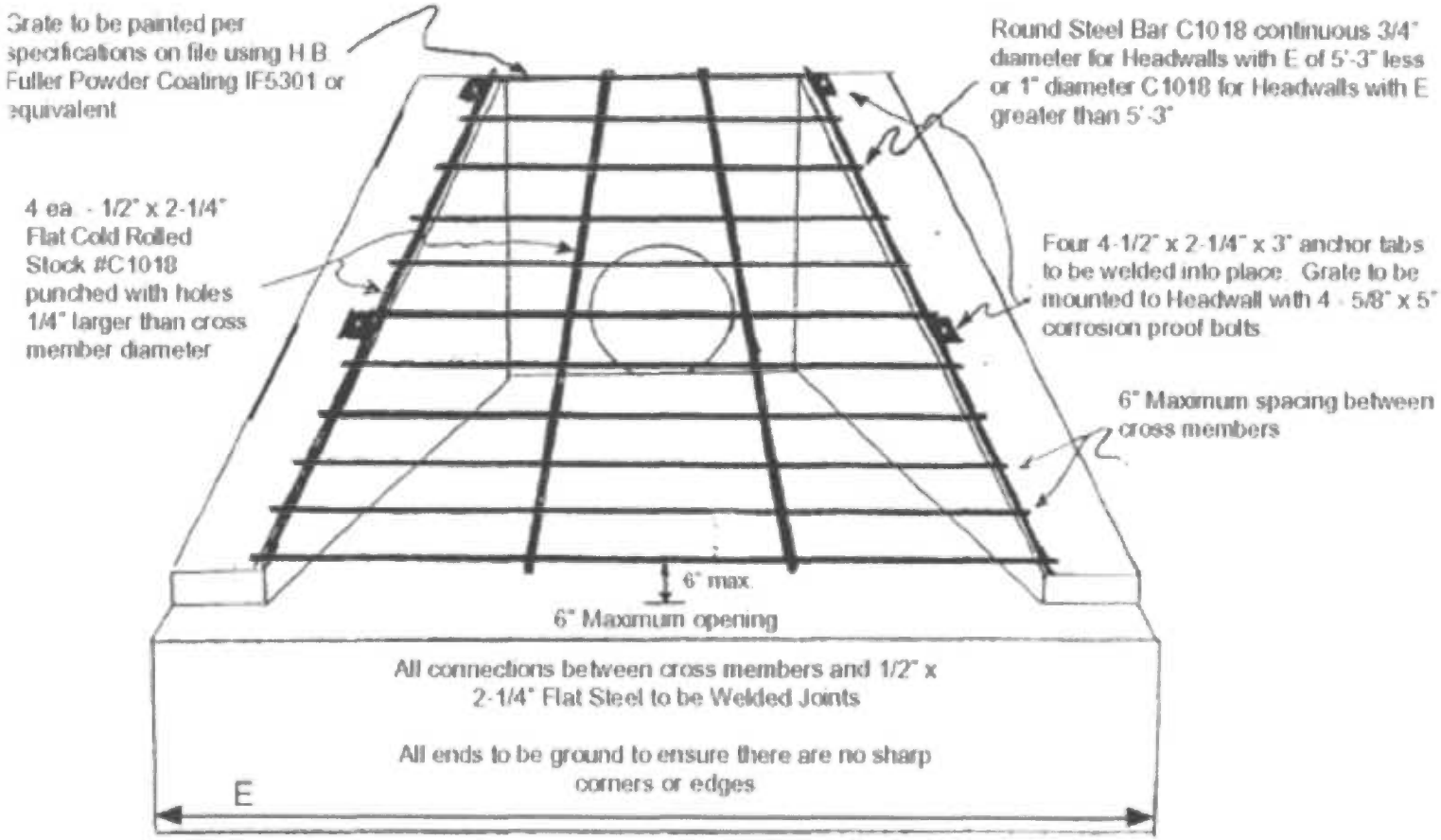
CONCRETE HEADWALLS FOR 12"-27" CIRCULAR PIPE CULVERTS

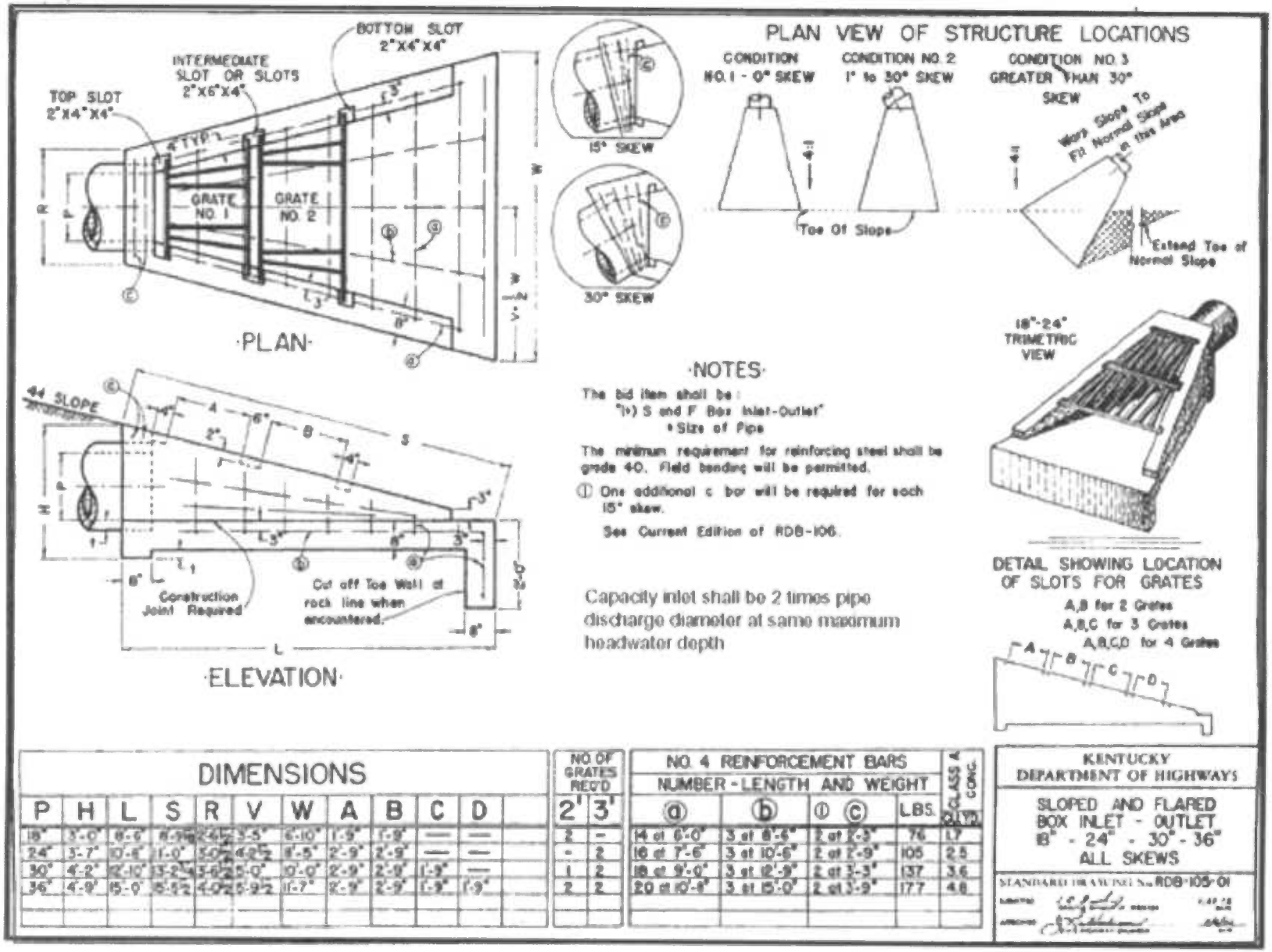
STANDARD DRAWING No. RDH-005



HEADWALL DETAIL for 12" thru 36" I.D. Pipe

ENCLOSURE GRATE FOR INLET HEADWALL
24" DIAMETER PIPE OR LESS





DIMENSIONS

P	H	L	S	R	V	W	A	B	C	D
18"	3'-0"	8'-6"	8'-9½"	2'-6"	3'-5"	6'-10"	1'-9"	1'-9"	—	—
24"	3'-7"	10'-6"	11'-0"	3'-0"	4'-2½"	8'-5"	2'-9"	2'-9"	—	—
30"	4'-2"	12'-10"	13'-2½"	3'-6"	5'-0"	10'-0"	2'-9"	2'-9"	1'-9"	—
36"	4'-9"	15'-0"	15'-5½"	4'-0"	5'-9½"	11'-7"	2'-9"	2'-9"	1'-9"	1'-9"

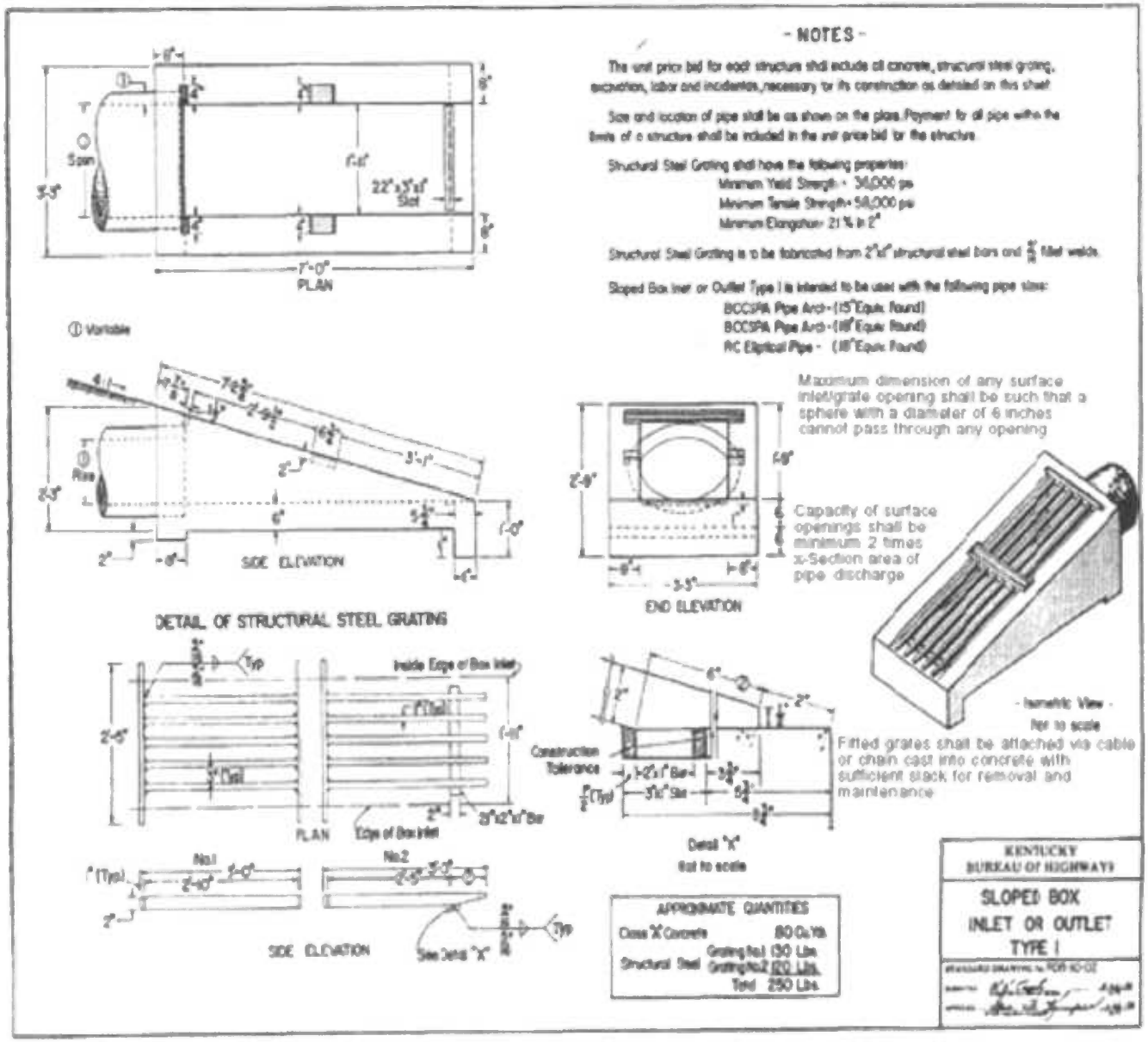
NO. OF GRATES REQ'D	
2'	3'
2	—
—	2
1	2
2	2

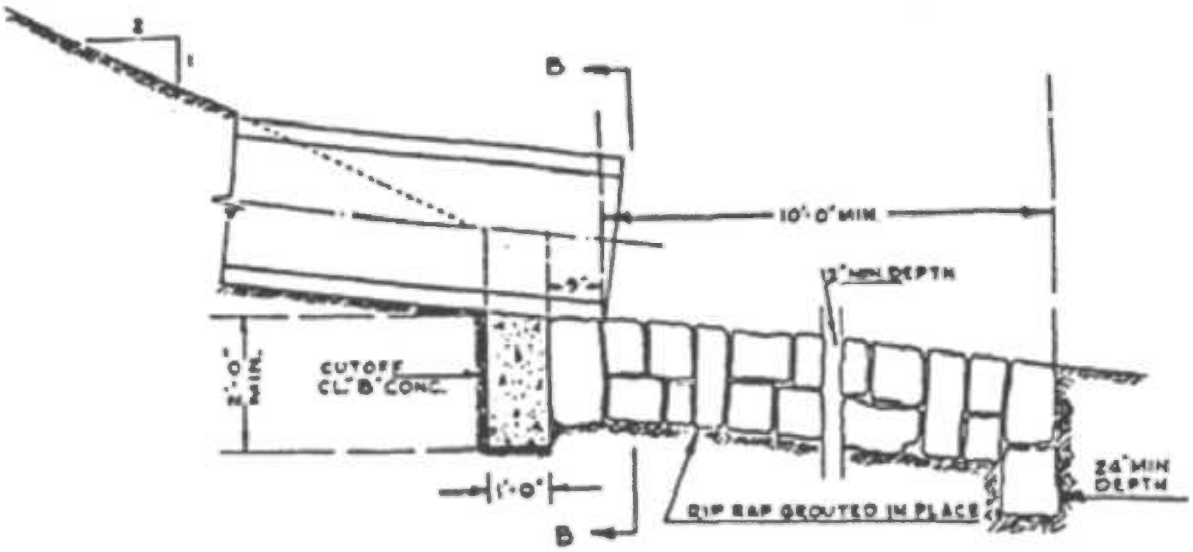
NO. 4 REINFORCEMENT BARS NUMBER - LENGTH AND WEIGHT				CLASS A CONC.
ⓐ	ⓑ	① ⓒ	LBS.	C.Y.
14 at 6'-0"	3 at 8'-6"	2 at 2'-3"	76	1.7
16 at 7'-6"	3 at 10'-6"	2 at 2'-9"	105	2.5
18 at 9'-0"	3 at 12'-9"	2 at 3'-3"	137	3.6
20 at 10'-6"	3 at 15'-0"	2 at 3'-9"	177	4.8

KENTUCKY
DEPARTMENT OF HIGHWAYS

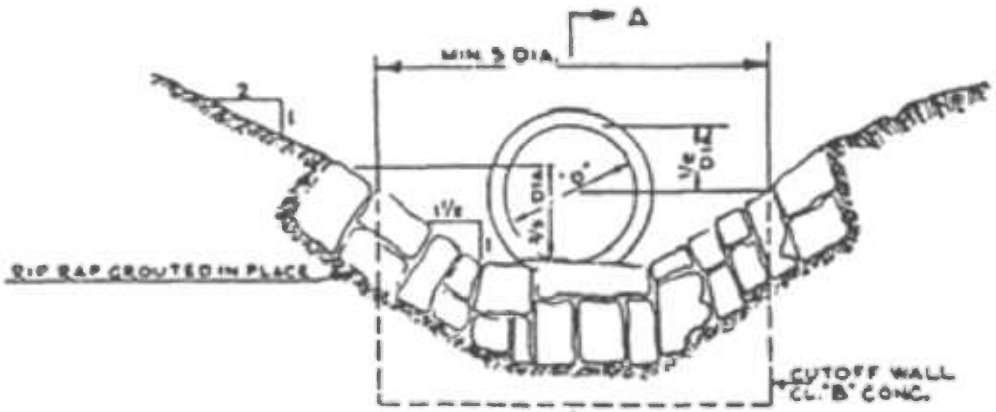
SLOPED AND FLARED
BOX INLET - OUTLET
18" - 24" - 30" - 36"
ALL SKEWS

STANDARD DRAWING No. RDB-105-01


- NOTES -
The unit price bid for each structure shall include all concrete, structural steel grating, excavation, labor and incidentals necessary for its construction as detailed on this sheet
Size and location of pipe shall be as shown on the plans. Payment for all pipe within the limits of a structure shall be included in the unit price bid for the structure
Structural Steel Grating shall have the following properties:
Minimum Yield Strength - 36,000 psi
Minimum Tensile Strength - 58,000 psi
Minimum Elongation - 21 % in 2"
Structural Steel Grating is to be fabricated from 2"x1/4" structural steel bars and 5/16" fillet welds
Sloped Box Inlet or Outlet Type I is intended to be used with the following pipe sizes:
RCCSPA Pipe Arch - (15" Equiv. Round)
RCCSPA Pipe Arch - (18" Equiv. Round)
RC Elliptical Pipe - (18" Equiv. Round)
Span
Rise
Variable
PLAN
SIDE ELEVATION
DETAIL OF STRUCTURAL STEEL GRATING
Inside Edge of Box Inlet
Edge of Box Inlet
PLAN
No.1
No.2
SIDE ELEVATION
Saw Joints "X"
Maximum dimension of any surface inlet/grate opening shall be such that a sphere with a diameter of 6 inches cannot pass through any opening
Capacity of surface openings shall be minimum 2 times x-Section area of pipe discharge
END ELEVATION
- Isometric View -
Not to scale
Construction Tolerance
Detail "X"
Not to scale
Fitted grates shall be attached via cable or chain cast into concrete with sufficient slack for removal and maintenance
APPROXIMATE QUANTITIES
Class "X" Concrete 80 Cu.Yds.
Structural Steel Grating No.1 150 Lbs.
Grating No.2 100 Lbs.
Total 250 Lbs.
KENTUCKY
BUREAU OF HIGHWAYS
SLOPED BOX
INLET OR OUTLET
TYPE I



SECTION A-A

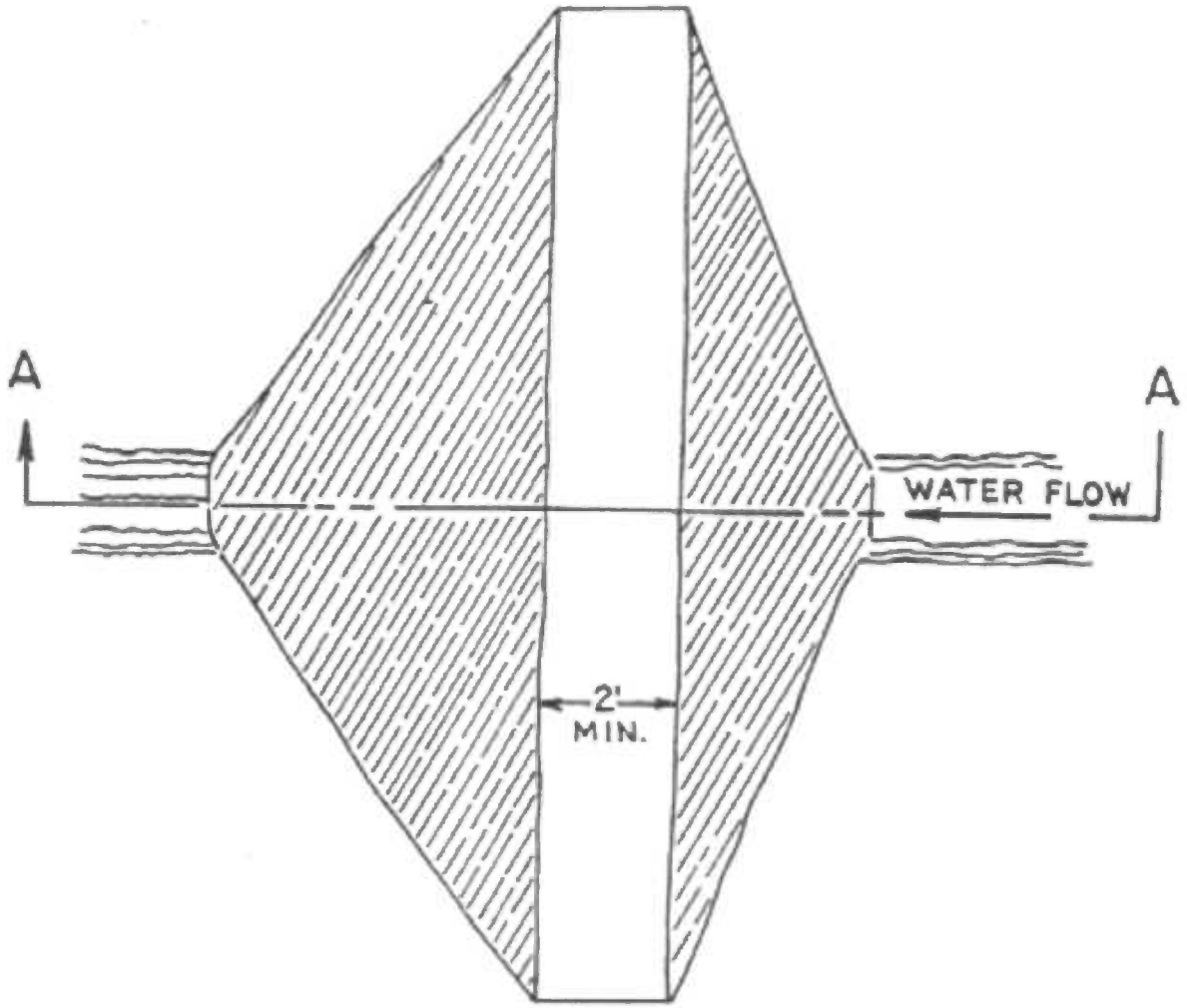


SECTION B-B

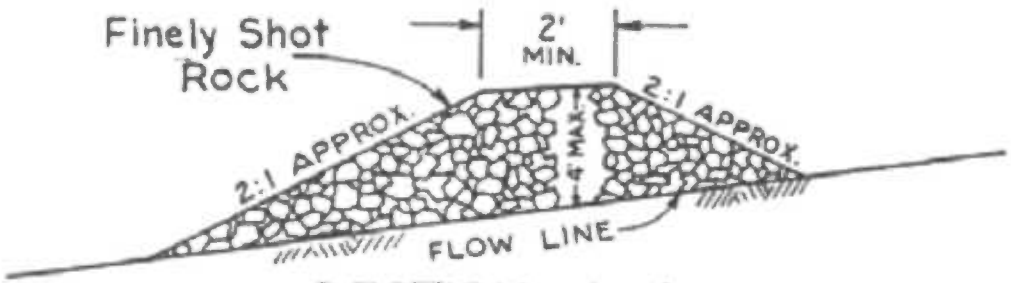
TO BE USED WHERE RIP RAP APRON IS CALLED FOR ON PLANS AND NO DETAIL IS PROVIDED.

RIP RAP APRON AND CUTOFF WALL

SILT CHECK

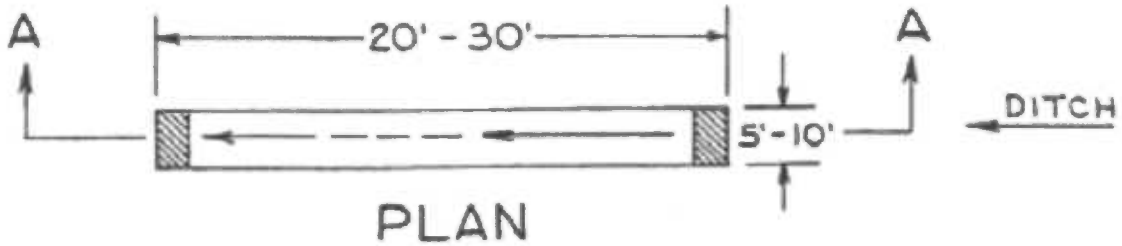


PLAN

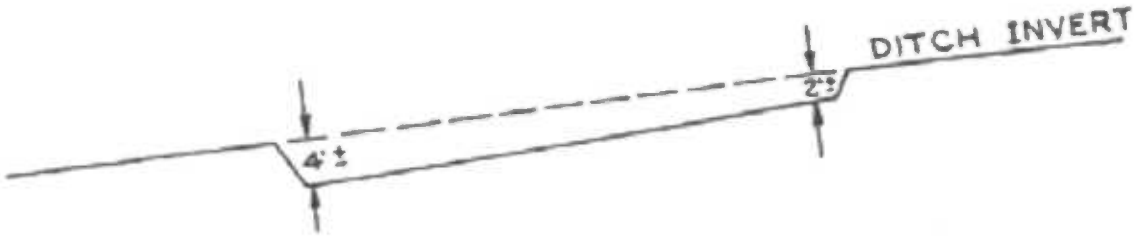


SECTION A-A

SILT TRAP TYPE A



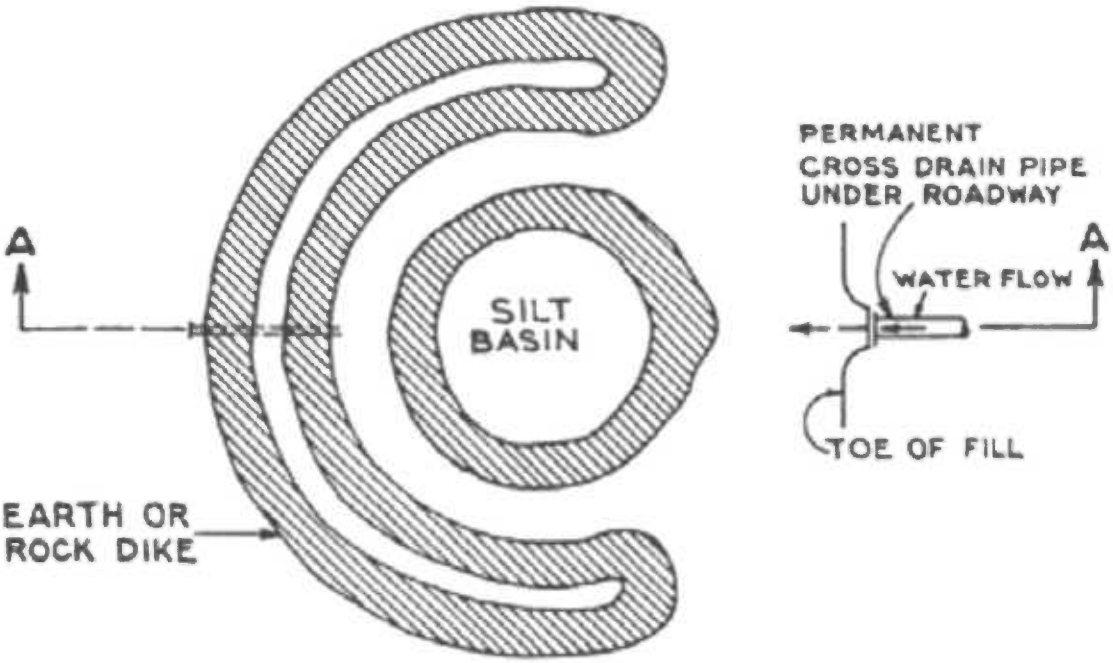
PLAN



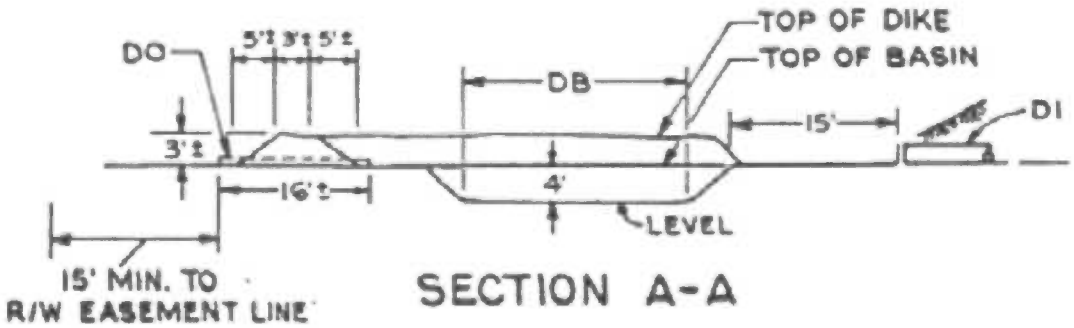
SECTION A-A

NOTE: SILT TRAP TO BE CLEANED WHEN IT IS APPROXIMATELY 50% FILLED WITH SEDIMENT. SILT TRAPS TO BE PLACED IN SURFACE DRAIN DITCHES AND SIDE DITCHES JUST BEFORE THE WATER (RUNOFF) LEAVES THE RIGHT OF WAY, ENTERS A WATER COURSE, AND AT THE END OF CUT SECTIONS, AND IMMEDIATELY PRECEDING DITCH INLETS. LOCATION OF TRAP AND SIZE (OTHER THAN AS SHOWN) TO BE AS DIRECTED BY THE ENGINEER WHO SHALL REVISE SIDE IF AND AS MAY BE REQUIRED. DIMENSIONS ARE APPROXIMATE.

SILT TRAP TYPE B



PLAN

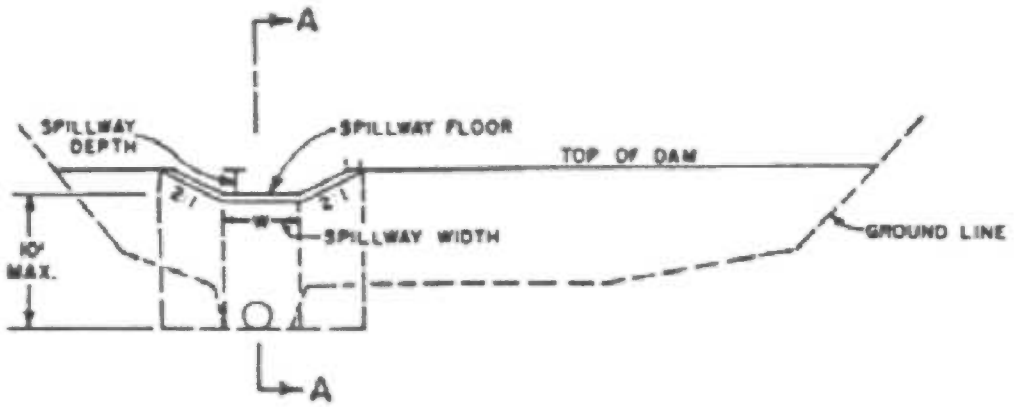


SECTION A-A

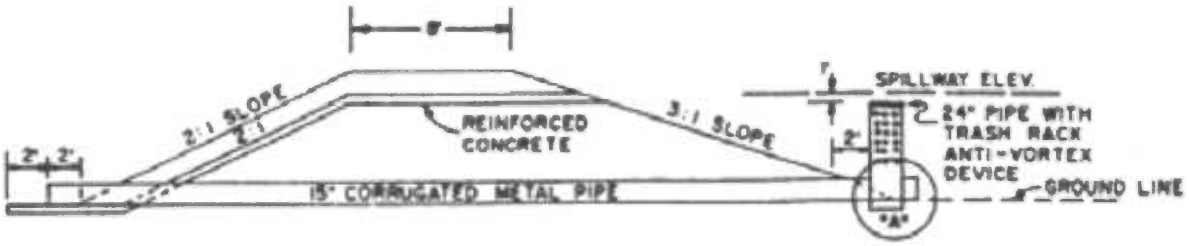
NOTE: ALL DIMENSIONS OF BASIN AND DIKE WILL NOT REQUIRE CONSTRUCTION TO NEAT LINES. THE PLAIN VIEW ABOVE INDICATES THE SILT BASIN IS ROUND, HOWEVER, IT IS DRAWIN IN THIS MANNER FOR ILLUSTRATION PURPOSES ONLY. THE BASIN MAY BE CONSTRUCTED AS LONG AS THE AREA AND DEPTH OF THE BASIN IS AT LEAST AS LARGE AS INDICATED. DIKES MAY BE CONSTRUCTED OF EARTH OR BROKEN ROCK. EARTH DIKE MUST BE CONSTRUCTED WITH A PIPE AS SHOWN, HOWEVER, BROKEN ROCK DIKES MAY NOT NEED A PIPE.

	DI	DB	DO
SDB	18"	15'	6"
SDB	24"	20'	8"

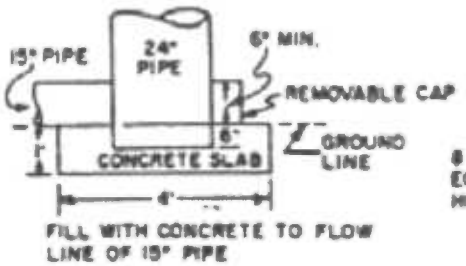
TYPICAL DETAILS FOR SEDIMENTATION BASIN



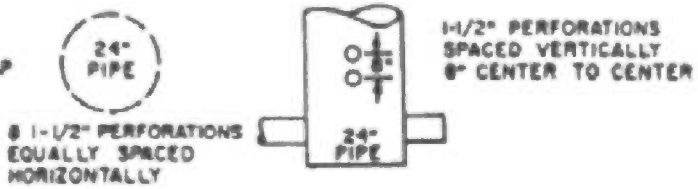
ELEVATION



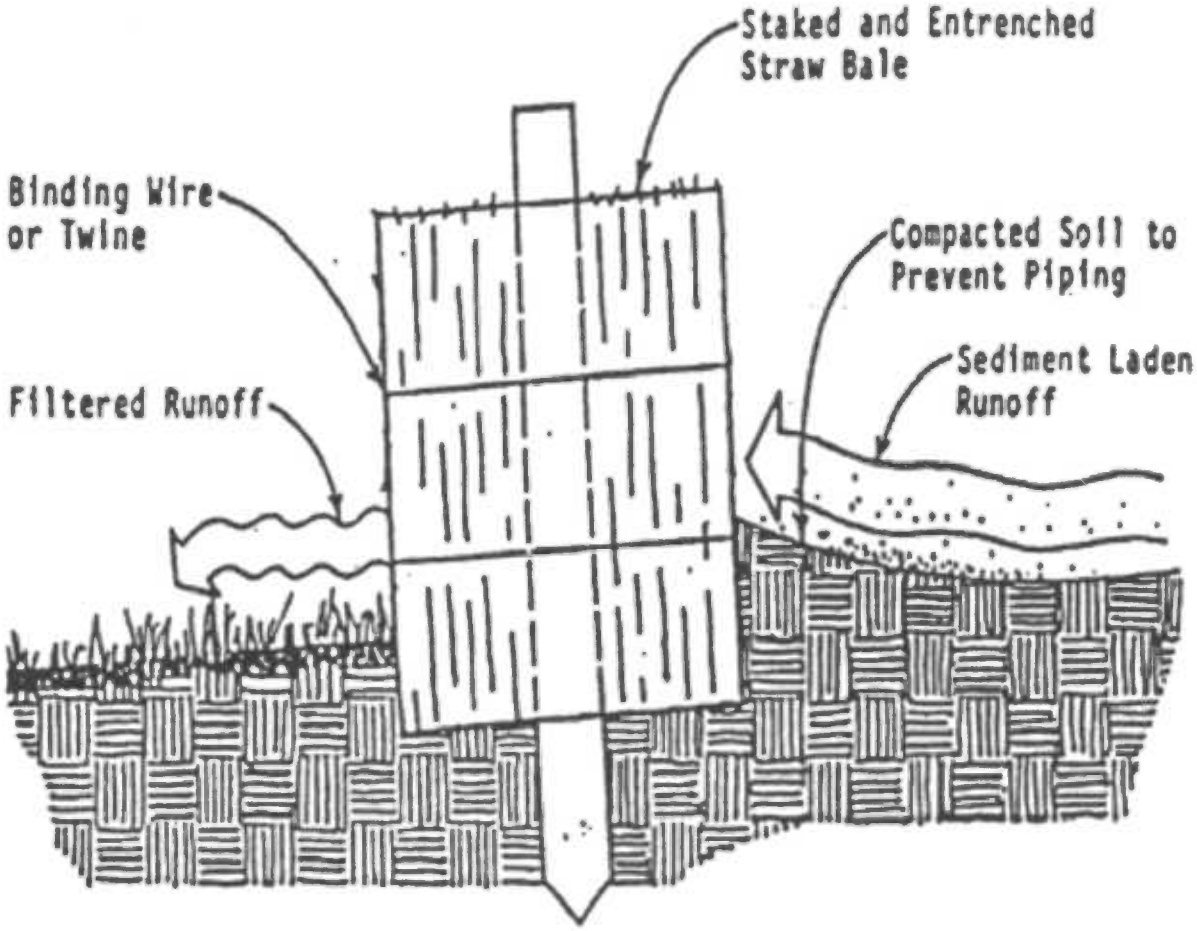
SECTION A-A

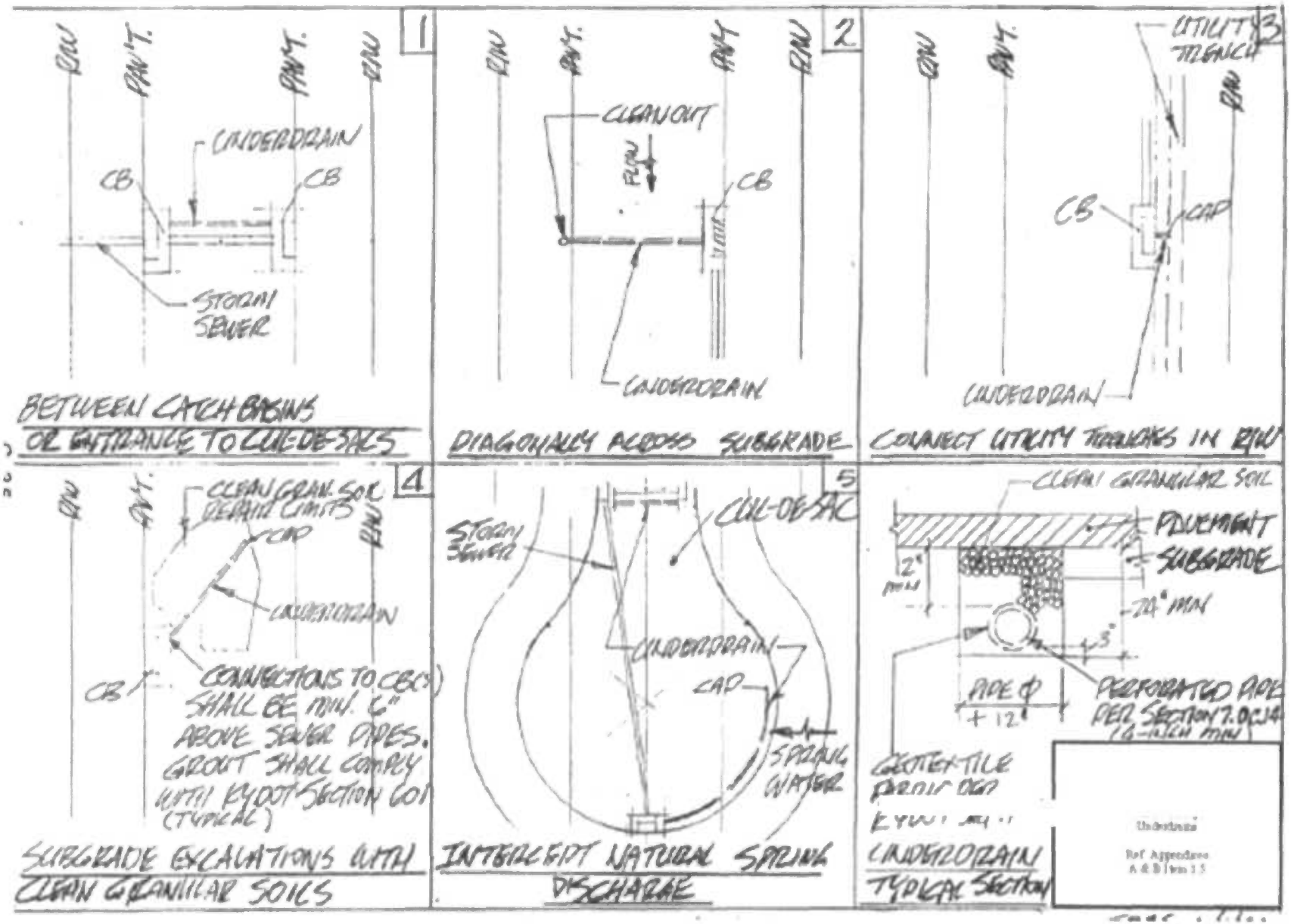


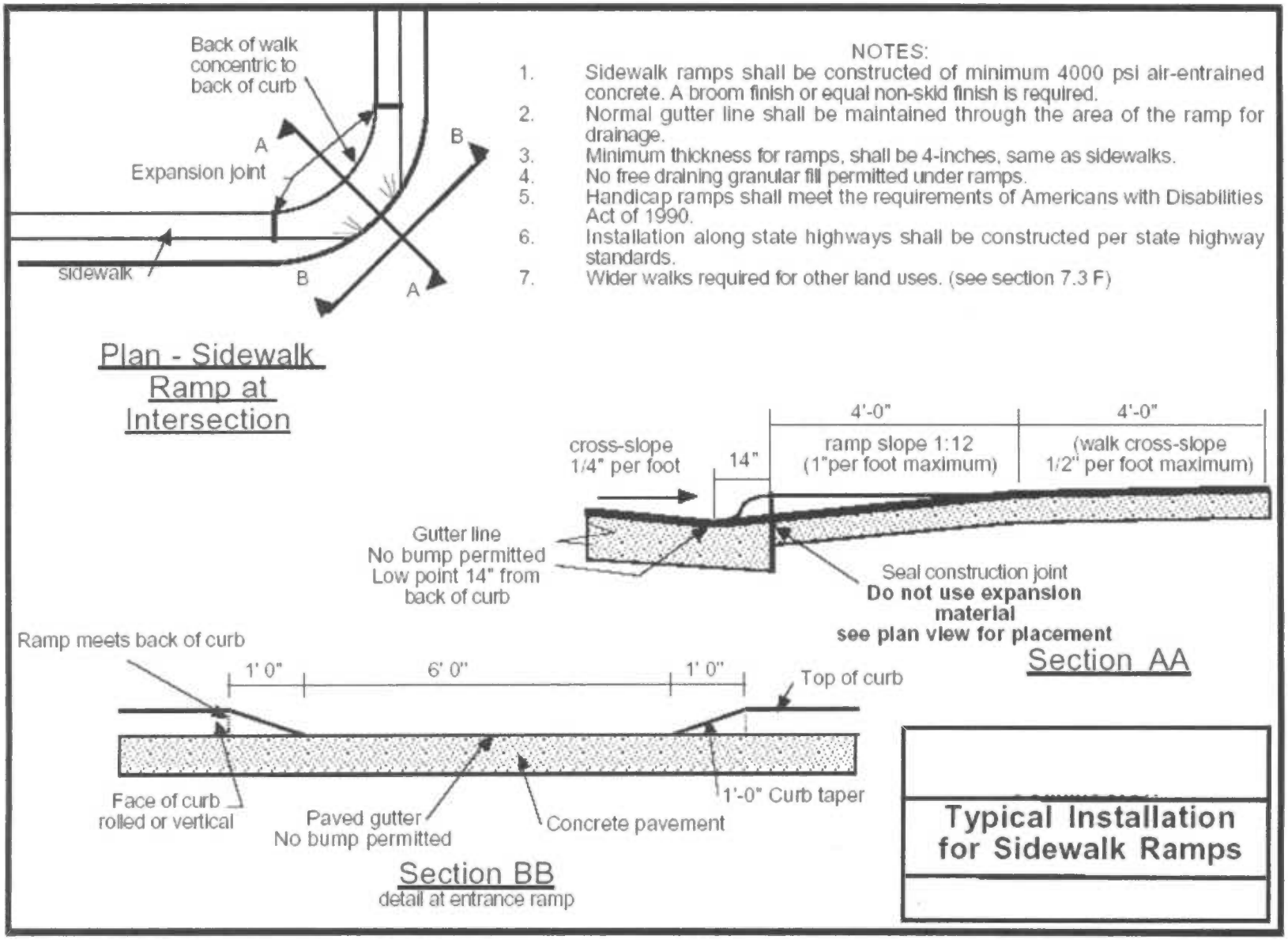
DETAIL "A"



DETAIL SHOWING LOCATION OF PERFORATIONS IN 24" PIPE


Staked and Entrenched
Straw Bale
Binding Wire
or Twine
Compacted Soil to
Prevent Piping
Sediment Laden
Runoff
Filtered Runoff


1
CB
CB
CULVERT DRAIN
STORM SEWER
BETWEEN CATCH BASINS OR BATTERANCE TO CUL-DE-SACS
2
CLEAN OUT
CB
CULVERT DRAIN
DIAGONALLY ACROSS SUBGRADE
3
UTILITY TRENCH
CB
CAP
CULVERT DRAIN
CONNECT UTILITY TRENCHES IN R/W
4
CLEAN GRAN. SOIL BEYOND LIMITS
CAP
CULVERT DRAIN
CB
CONNECTIONS TO CB(S) SHALL BE MIN. 6" ABOVE SEWER PIPES. GROUT SHALL COMPLY WITH KYDOT SECTION 601 (TYPICAL)
SUBGRADE EXCAVATIONS WITH CLEAN GRANULAR SOILS
5
CUL-DE-SAC
STORM SEWER
CULVERT DRAIN
CAP
SPRING WATER
INTERCEPT NATURAL SPRING DISCHARGE
CLEAN GRANULAR SOIL
PAVEMENT
SUBGRADE
2" MIN
24" MIN
45°
PIPE ϕ
+ 12"
PERFORATED PIPE PER SECTION 7.0 (3/4 INCH MIN)
GEOTEXTILE FABRIC PER
CULVERT DRAIN TYPICAL SECTION


Back of walk concentric to back of curb
A
B
Expansion joint
sidewalk
B
A
NOTES:
1. Sidewalk ramps shall be constructed of minimum 4000 psi air-entrained concrete. A broom finish or equal non-skid finish is required.
2. Normal gutter line shall be maintained through the area of the ramp for drainage.
3. Minimum thickness for ramps, shall be 4-inches, same as sidewalks.
4. No free draining granular fill permitted under ramps.
5. Handicap ramps shall meet the requirements of Americans with Disabilities Act of 1990.
6. Installation along state highways shall be constructed per state highway standards.
7. Wider walks required for other land uses. (see section 7.3 F)
Plan - Sidewalk Ramp at Intersection
4'-0"
4'-0"
cross-slope 1/4" per foot
14"
ramp slope 1:12 (1"per foot maximum)
(walk cross-slope 1/2" per foot maximum)
Gutter line No bump permitted Low point 14" from back of curb
Seal construction joint
Do not use expansion material
see plan view for placement
Section AA
Ramp meets back of curb
1' 0"
6' 0"
1' 0"
Top of curb
Face of curb rolled or vertical
Paved gutter No bump permitted
Concrete pavement
1'-0" Curb taper
Section BB
detail at entrance ramp
Typical Installation for Sidewalk Ramps