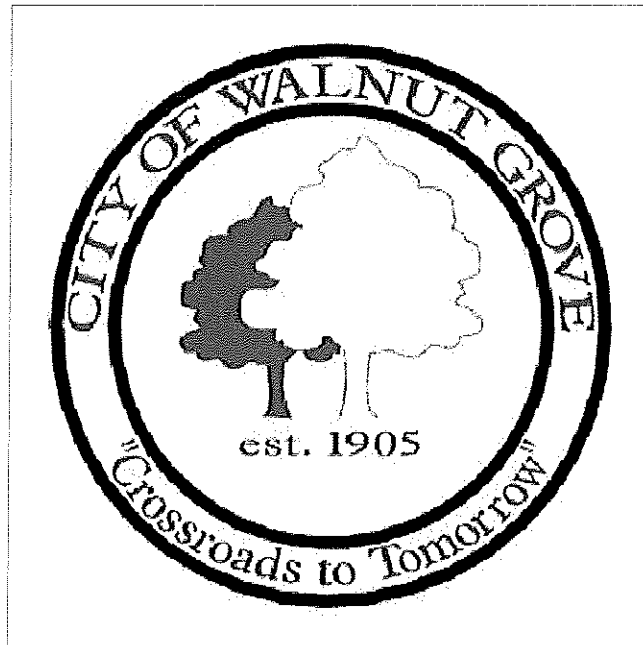
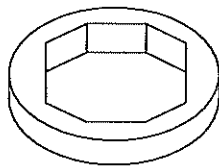
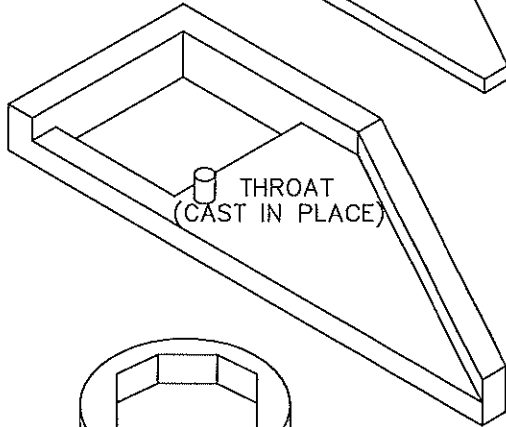
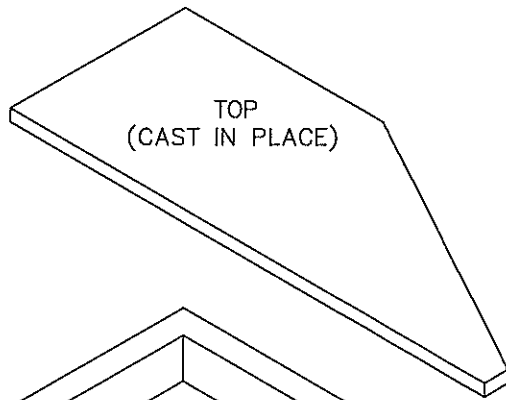


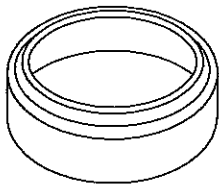
DIVISION 2

DRAINAGE SYSTEM IMPROVEMENTS

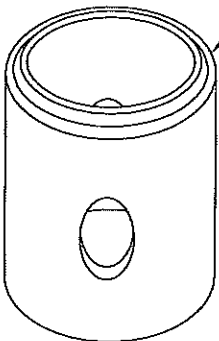




SQUARE TO ROUND ADAPTER



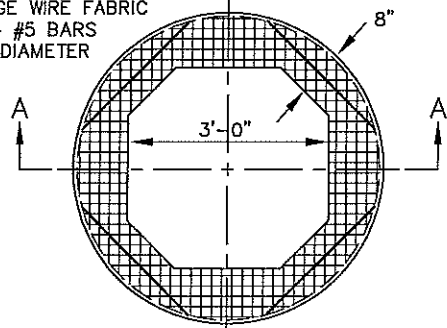
RISER SECTION (IF REQ'D.)
GROUT ALL JOINTS



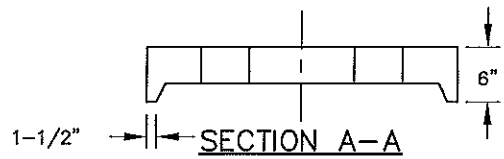
PROVIDE STEPS IF
DEPTH > 3 FEET

MONOLITHIC BASE
HOLES MUST BE
PRECAST

REINFORCING TO BE
2/2 6X6 WELDED
10 GAGE WIRE FABRIC
WITH 4 #5 BARS
4'-8" DIAMETER



PLAN



SECTION A-A

ROUND TO SQUARE ADAPTER

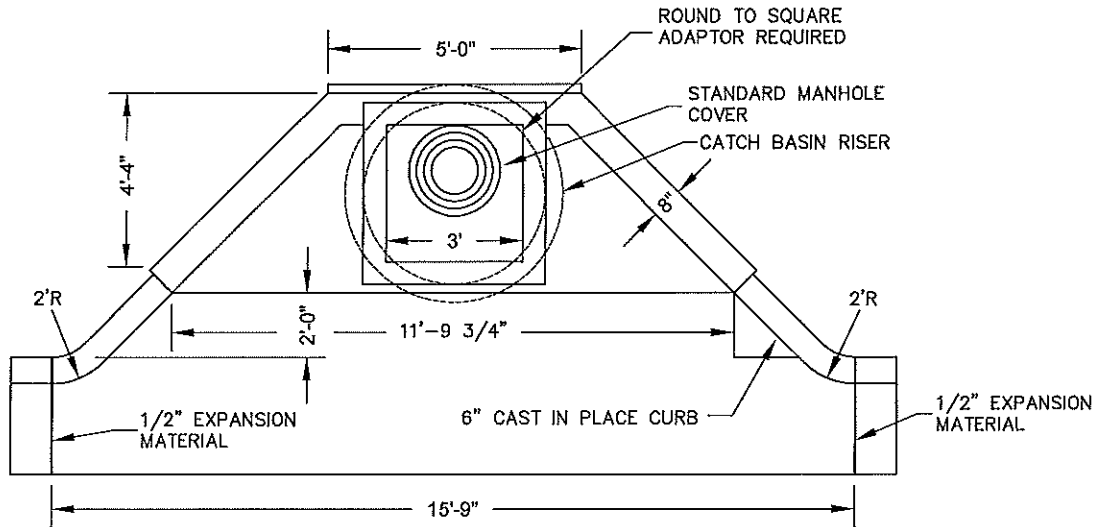


CITY OF
WALNUT GROVE

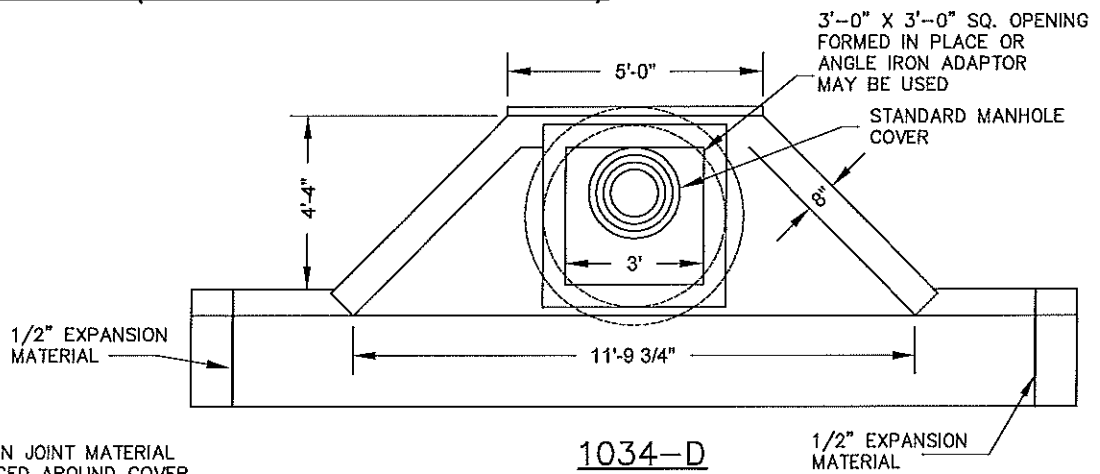
STANDARD DESIGN &
CONSTRUCTION DETAILS

PRECAST CONCRETE
CATCH BASINS

2.01



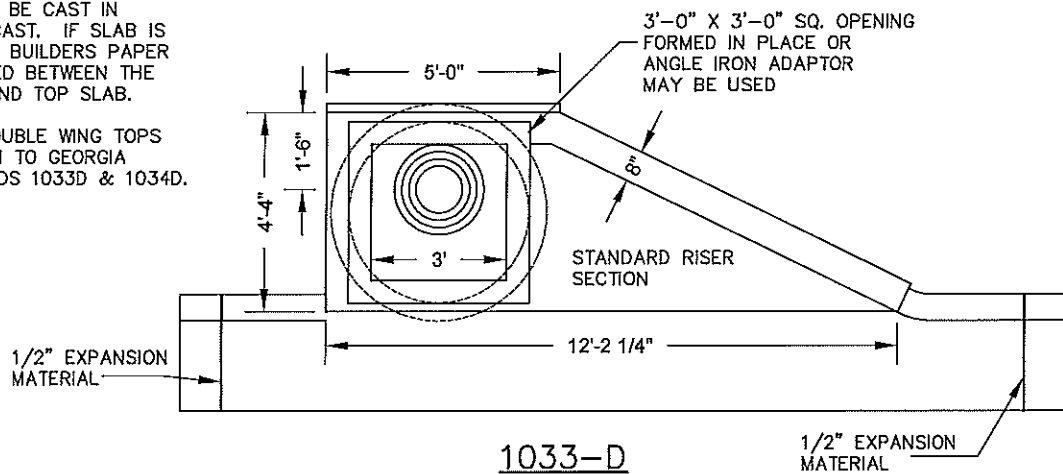
1034-F (LOCAL CUL-DE-SAC ONLY)



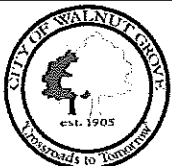
1034-D

NOTES:

1. 1/2' EXPANSION JOINT MATERIAL SHALL BE PLACED AROUND COVER WHERE SIDEWALK IS PLACED ADJACENT TO CATCH BASIN.
2. TOP SLAB MAY BE CAST IN PLACE OR PRECAST. IF SLAB IS CAST IN PLACE, BUILDERS PAPER IS TO BE PLACED BETWEEN THE CATCH BASIN AND TOP SLAB.
3. SINGLE AND DOUBLE WING TOPS SHALL CONFORM TO GEORGIA D.O.T. STANDARDS 1033D & 1034D.



1033-D



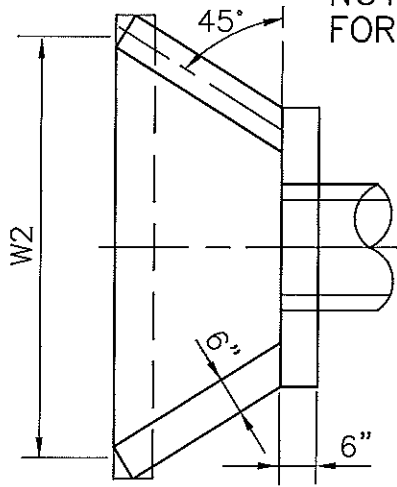
**CITY OF
WALNUT GROVE**

**STANDARD DESIGN &
CONSTRUCTION DETAILS**

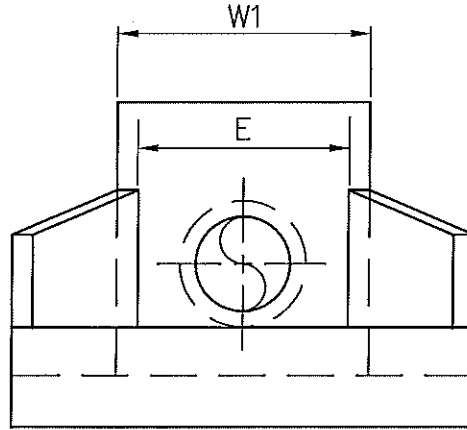
**STANDARD
CATCH BASIN INLETS**

2.02

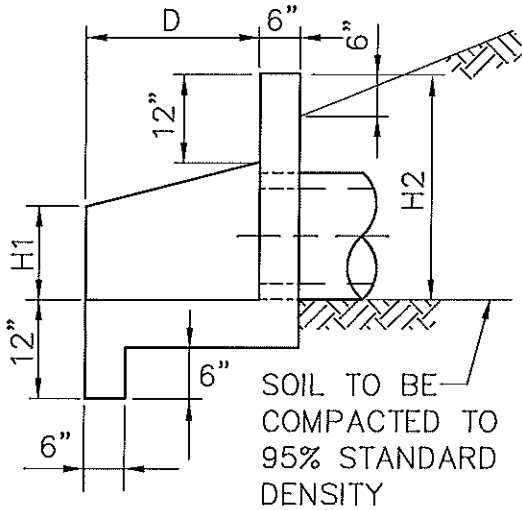
NOTE: SEE 2.04 FOR DIMENSIONS.



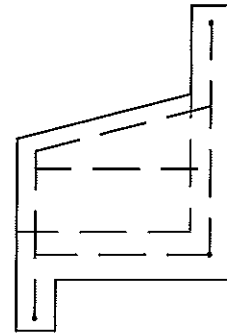
PLAN



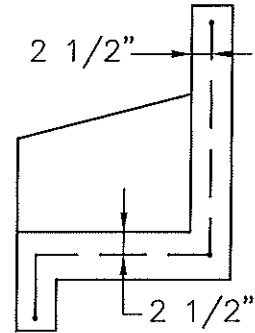
FRONT ELEVATION



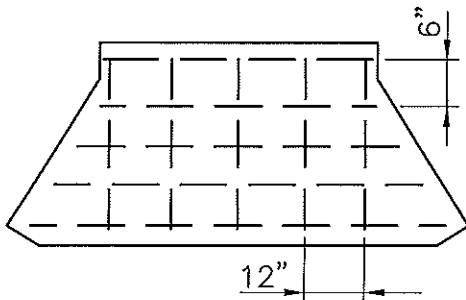
SIDE



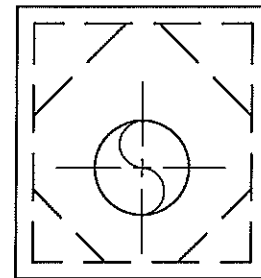
WING SECTION



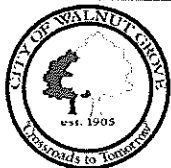
BASE & WALL SECTION



BASE SECTION



WALL SECTION



CITY OF WALNUT GROVE

STANDARD DESIGN & CONSTRUCTION DETAILS

PRECAST CONCRETE HEADWALLS

2.03

HEADWALL DIMENSIONS (METAL PIPE)

USE NEXT LARGEST SIZE FOR CONCRETE PIPE

PIPE INSIDE DIA.	W1	W2	H1	H2	D	E	WT.	SQ. FT. BASE AREA
12", 15", 18"	3'-2"	4'-10"	1'-3"	3'-2"	1'-3"	1'-9"	1550	7.34
21", 24"	3'-8"	6'-1"	1'-9"	3'-8"	1'-6"	2'-3"	2100	9.90
30"	4'-2"	7'-2"	2'-0"	4'-2"	1'-10"	2'-9"	2850	13.50
36"	4'-8"	8'-4"	2'-4"	4'-8"	2'-2"	3'-3"	3700	17.65
42", 48"	5'-8"	10'-10"	3'-3"	5'-8"	2'-11"	4'-3"	5600	28.60
54", 60"	6'-8"	11'-11"	3'-8"	6'-8"	3'-4"	5'-3"	7500	35.60

NOTES:

1. ALL CONCRETE SHALL BE CLASS A
2. REINFORCEMENT STEEL SHALL BE 1/2" DIA. OF INTERMEDIATE GRADE.
3. CHAMFER ALL EXPOSED EDGES 3/4".

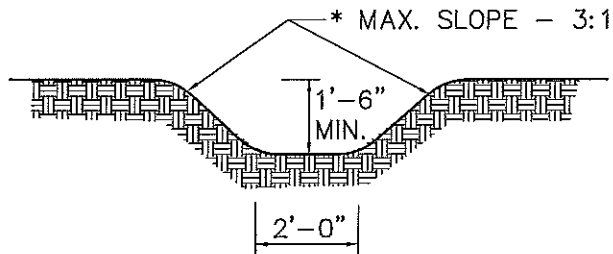


CITY OF
WALNUT GROVE

STANDARD DESIGN &
CONSTRUCTION DETAILS

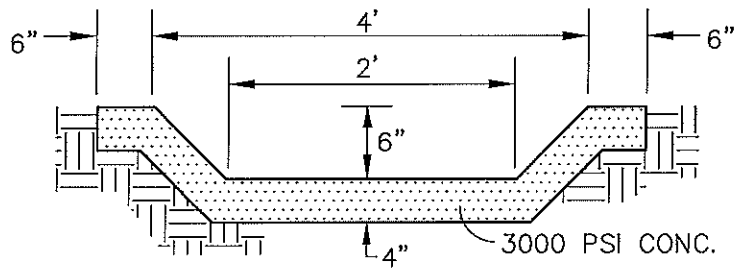
HEADWALL
DIMENSIONS

2.04

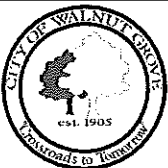


* STEEPER SLOPE TO BE REVIEWED AND APPROVED BY CITY ENGINEER

GRASSED SWALE



CONCRETE FLUME DETAIL

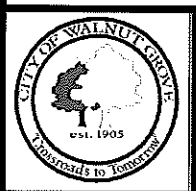


CITY OF
WALNUT GROVE

STANDARD DESIGN &
CONSTRUCTION DETAILS

DRAINAGE CHANNELS
AND FLUMES

2.06

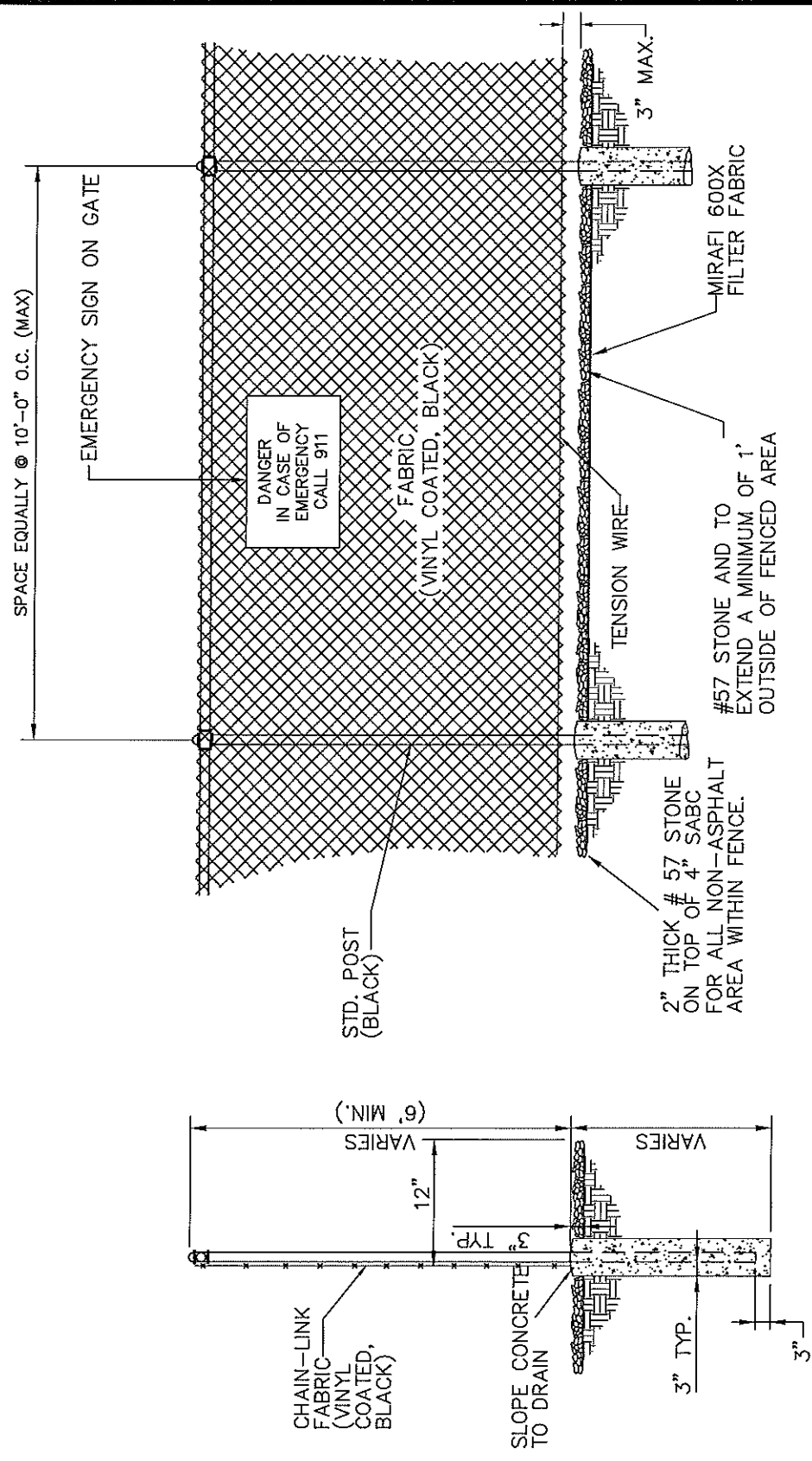


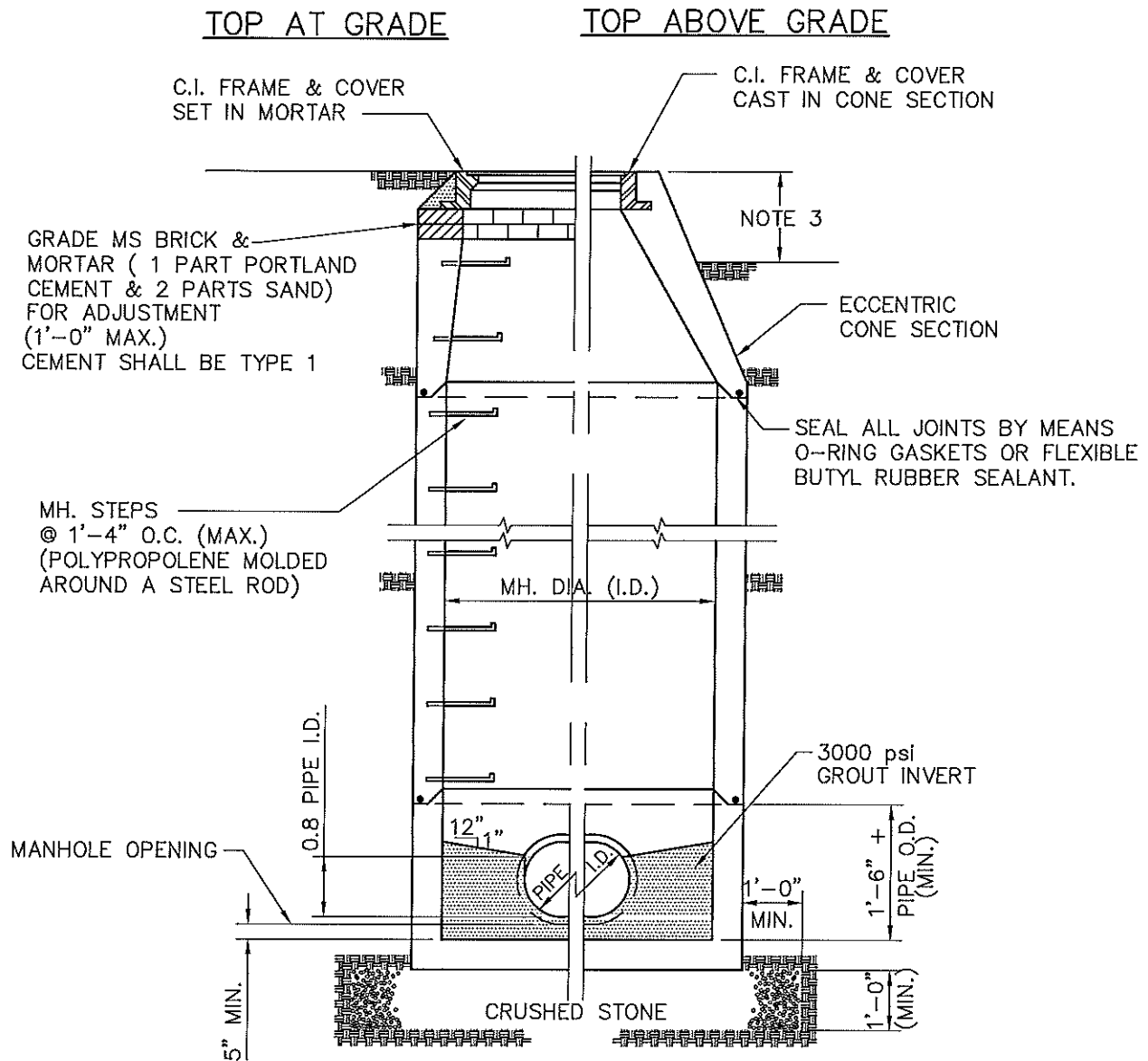
**CITY OF
WALNUT GROVE**

**STANDARD DESIGN &
CONSTRUCTION DETAILS**

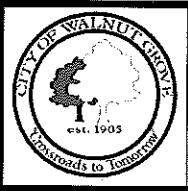
**STORMWATER MANAGEMENT
FACILITIES—SECURITY FENCING**

2.07





- NOTES:
1. CONSTRUCT MANHOLES AS SHOWN ON DRAWINGS.
 2. PRECAST CONCRETE SECTIONS SHALL MEET THE REQUIREMENTS OF ASTM C 478. MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE IN PRECAST SECTIONS SHALL BE 4000 PSI.
 3. BUILD MANHOLES OUTSIDE OF PAVED AREAS TO 12" ABOVE GRADE UNLESS OTHERWISE SHOWN ON THE DRAWINGS OR DIRECTED BY THE CITY.
 4. SEAL ALL JOINTS AND LIFT HOLES, BOTH INSIDE AND OUT, WITH GROUT. THIS IS IN ADDITION TO JOINT SEALANT BETWEEN SECTIONS.
 5. PROVIDE UNIFORM BEDDING OF THE BOTTOM TO PREVENT UNEVEN LOADING.

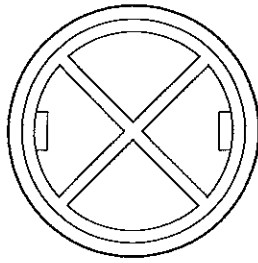


**CITY OF
WALNUT GROVE**

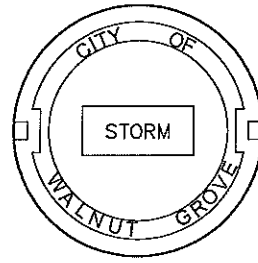
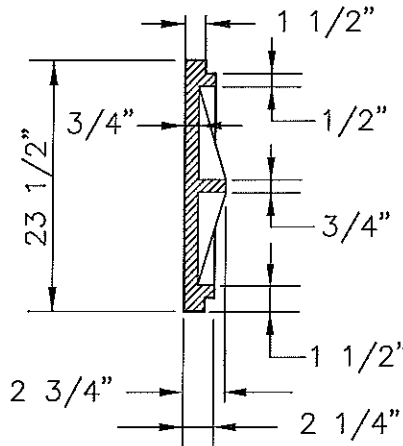
**STANDARD DESIGN &
CONSTRUCTION DETAILS**

**STANDARD PRECAST
CONCRETE MANHOLE**

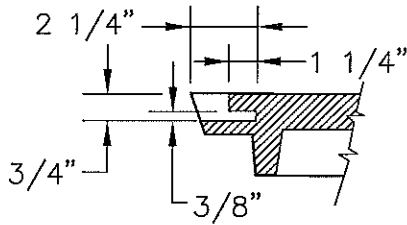
2.08



COVER BACK

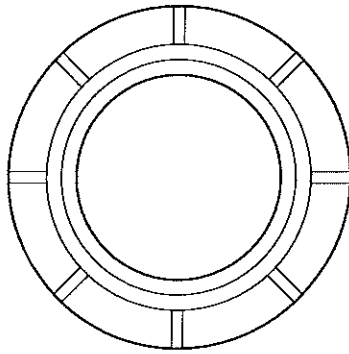


COVER FACE

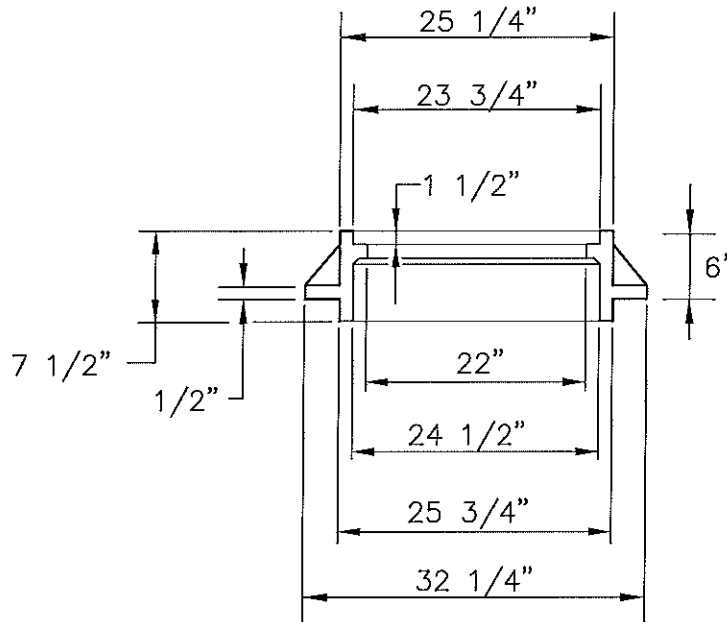


(2) TYPE TWO NON-PENETRATING PICKHOLES

PICKHOLE DETAIL



FRAME PLAN



FRAME SECTION

NOTE:

COVER SHALL BE VULCAN V-1349, NEENAH R-1642, OR APPROVED EQUAL.



**CITY OF
WALNUT GROVE**

**STANDARD DESIGN &
CONSTRUCTION DETAILS**

**MANHOLE FRAME AND
COVER - JUNCTION BOX**

2.09



**CITY OF
WALNUT GROVE**

**STANDARD DESIGN &
CONSTRUCTION DETAILS**

2.10

**CITY OF WALNUT GROVE
SELECTION GUIDELINES FOR STORM SEWER PIPING**

TYPE OF PIPE INSTALLATION	REINFORCED CONCRETE PIPE (RCP)	CORRUGATED STEEL AASHTO M-36		CORRUGATED ALUMINUM AASHTO M-196	PLASTIC AASHTO M-294	REINFORCED CONCRETE BOX CULVERT
		ALUMINIZED TYPE II CMP	BITUMINOUS COATED CMP	ALUMINUM ALLOY CMP	CORR. HIGH DENSITY POLY-ETHYLENE SMOOTH LINED	PER GA. DOT STANDARDS
LONGITUDINAL GRADE LESS THAN 10%	YES	YES	YES	YES	YES	
LONGITUDINAL GRADE OVER 10%	NO	YES	YES	YES	YES	
CROSS DRAIN LESS THAN 250 ADT	YES	YES	YES	YES	(1)	
CROSS DRAIN GREATER THAN 250 ADT	YES	NO	NO	NO	NO	
CROSS DRAIN FLOWING STREAM APPL.	YES	(3)	NO	YES	(1)	
CROSS DRAIN 25 YR FLOW > 200 CFS FILL DEPTH > 18 FEET	(2)	(2),(3)	NO	(2)	NO	YES

CONDITIONAL USES:

1. Corrugated high density poly-ethylene pipe, smooth line type "S", must be manufactured and installed in strict compliance with Georgia DOT standard 1030-P. HDPE applications shall not exceed 36" diameter.
2. Reinforced concrete box culverts are required under excessive flow and/or fill depth conditions. Approved pipe materials may be utilized in some instances, based on the City's assessment of existing conditions and future maintenance requirements.
3. The addition of type "A" fill bituminous coating, with paved invert, is required for this application. (AASHTO M-190)