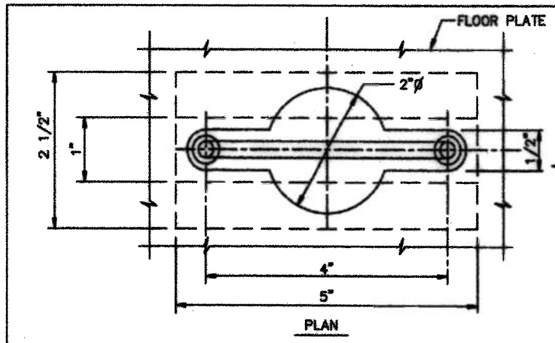
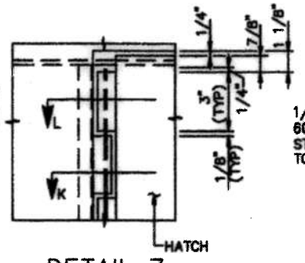
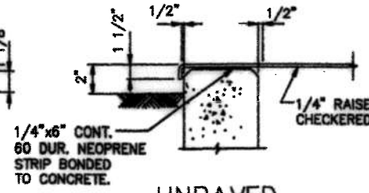


PLAN

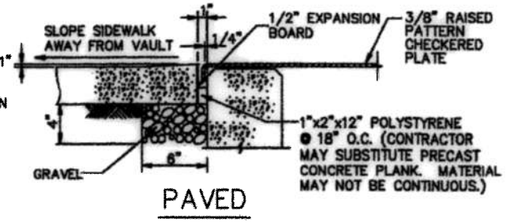


DETAIL 7

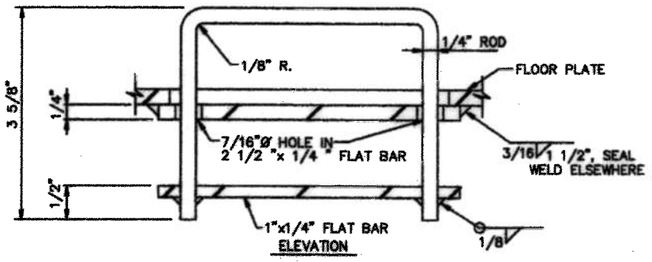


UNPAVED

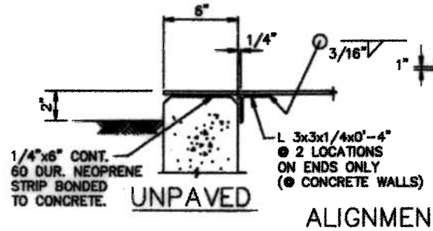
SECTION D–D



PAVED



LIFTING DEVICE
FOR REMOVABLE PLATES
DETAIL 6



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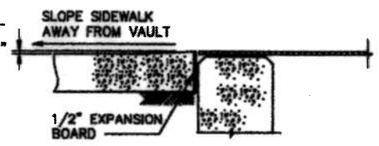
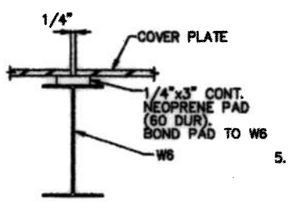
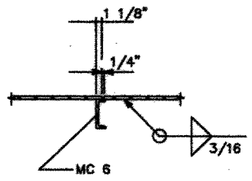


PAVED

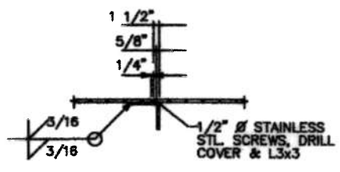
ALIGNMENT DETAIL
SECTION E–E



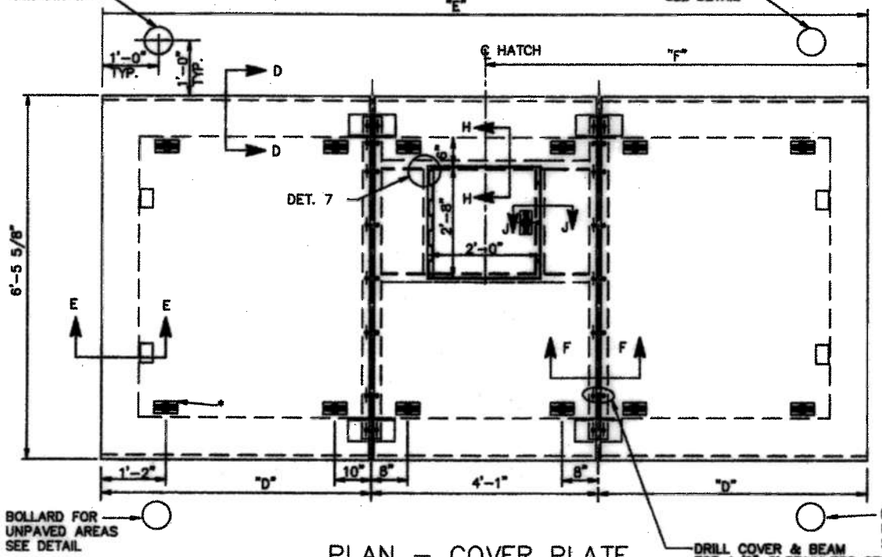
SECTION F–F



SECTION H–H



SECTION J–J



PLAN – COVER PLATE

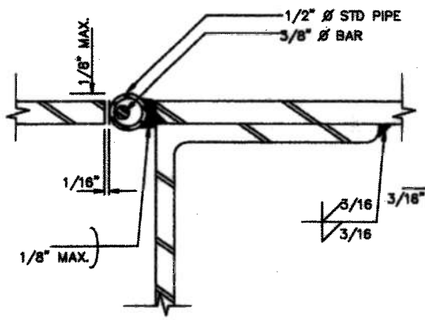
3/4"=1'-0"

* LIFTING HANDLE SEE DETAIL 6 THIS SHEET.

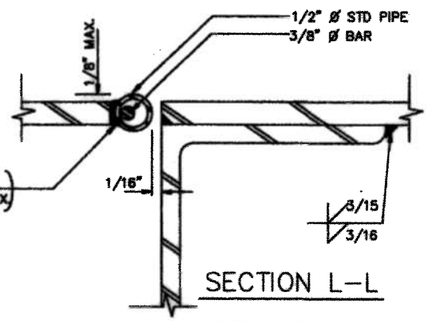
NOTE:
1. COVER PLATE TO BE 3/8" RAISED PATTERN (CHECKERED PLATE) FLOOR PLATE FOR PAVED AREAS AND 1/4" RAISED PATTERN (CHECKERED PLATE) FOR UNPAVED AREAS FLOOR PLATE
2. COVER IS DESIGNED FOR 50 PSF.
3. IF ALTERNATE PIPING ARRANGEMENT IS USED, PLAN WILL BE MIRRORED BY MOVING THE ACCESS DOOR TOWARD THE BOTTOM OF THIS PLAN. (SEE PIPING ARRANGEMENT SHEETS)

PIPE DIA. (IN.)	"D"	"E"	"F"
3	2' 5 1/2"	9'	4' 6"
4	2' 5 1/2"	9'	4' 6"
6	4' 10 1/2"	13' 10"	6' 6 1/2"
8	4' 10 1/2"	13' 10"	6' 6 1/2"
10	*	15' 10"	6' 8"

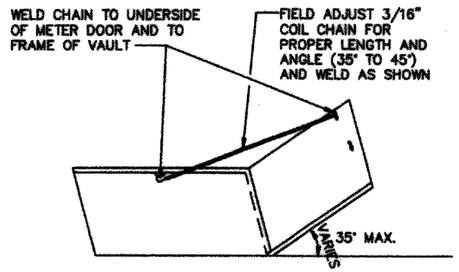
* D LEFT=2 @ 3'-5 1/2",D RIGHT=4'-10"



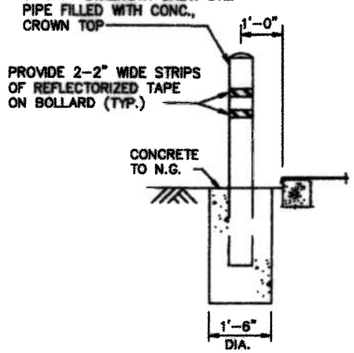
SECTION K–K



SECTION L–L



CHAIN ADJUSTMENT DETAIL



BOLLARD DETAIL FOR
UNPAVED AREA

GENERAL NOTES:

VAULT

1. VAULTS SHALL BE CAST-IN-PLACE OR FABRICATED FROM PRECAST UNITS USING NORMAL WEIGHT CONCRETE WITH THE FOLLOWING REQUIREMENTS:
   A. F'C @ 28 DAYS – 4,000 PSI
   B. MAXIMUM WATER/CEMENT RATIO = .45
   C. FY = 60,000 PSI
2. ALL LIFTING HOLES SHALL BE PLUGGED WITH A NONSHRINK GROUT.
3. NONSHRINK GROUT SHALL CONFORM TO ASTM C1107.
4. WATERSTOP SHALL BE A FLEXIBLE STRIP OF BENTONITE COMPOUND SUCH AS WATERSTOP-RX AS MANUFACTURED BY AMERICAN COLLOID COMPANY.
   DIMENSIONS 1" X 3/4"
   CHEMICAL COMPOSITION: (% BY WEIGHT)

BUTYL RUBBER-HYDROCARBON (ASTM D297)	24.9
BENTONITE (SS-S-210-A)	75.0

5. THIS METER VAULT DESIGN IS PROVIDED FOR THE CONVENIENCE OF THE PUBLIC, ANY USAGE OF THIS DRAWING DOES NOT RELEASE THE OWNER OR HIS DESIGNER FROM THE LIABILITY OF THE STRUCTURAL INTEGRITY OF METER VAULT.

EXCAVATION

1. EXCAVATE FOR THE VAULT AFTER THE FINISHED GRADE OF THE TOP HAS BEEN DETERMINED AND THE VAULT HAS BEEN FABRICATED. THE EXCAVATION FOR THE VAULT SHALL NOT BE LEFT OPEN FOR MORE THAN ONE DAY. BACKFILL IMMEDIATELY AROUND THE VAULT EXCEPT AS REQUIRED TO PLACE THE PIPE. SHOULD EXCAVATION BECOME MUDDY OR THE EXISTING BOTTOM IS SOFT, THEN EXCAVATE TO SOUND BOTTOM AND BRING BACK TO GRADE WITH GRAVEL OR CRUSHED LIMESTONE. ANY OVER EXCAVATION SHALL ALSO BE RETURNED TO PROPER GRADE WITH GRAVEL OR CRUSHED LIMESTONE. (NO PARTICLES LARGER THEN 1").
2. BACKFILL AROUND WALLS SHALL BE PLACED IN 8" LIFTS AND COMPACTED WITH POWER-DRIVEN HAND TAMPERS.
3. USE EXCESS EXCAVATION MATERIAL IN SITE GRADING WHERE POSSIBLE. IF NOT, THEN DISPOSE OF EXCESS OFF THE JOB SITE IN A LEGAL MANNER.
4. THE METER VAULT SHALL BE LOCATED SO THAT THE DRAINAGE IS AWAY FROM THE METER.

STEEL NOTES

1. ALL ITEMS UNLESS ENCASED IN CONCRETE SHALL BE HOT-DIP GALVANIZED. ANCHOR BOLTS SHALL CONFORM TO ASTM A307. PROVIDE SUITABLE GALVANIZED NUTS.
2. ALL MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36.

LOADS

1. STEEL COVER DESIGNED FOR 50 PSF. VAULT IS DESIGNED FOR EQUIVALENT FLUID PRESSURE OF 70 PCF AND 2 FOOT OF SURCHARGE.
2. THIS VAULT IS NOT DESIGNED FOR ROADWAY USAGE, A VAULT SUBJECT TO TRAFFIC WILL REQUIRE A SPECIAL DESIGN.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STRUCTURAL DETAILS
TURBINE / COMBINE METER
STANDARD SERVICE
(NOT FOR TRAFFIC LOADING)
(NOT TO SCALE)

APPROVED BY
CITY ENGINEER

APPROVED BY
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010

DWG NO: 02526-12

GDN