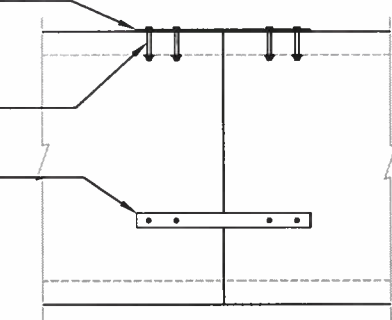


1 PRECAST STRAIGHT WALL PIPE
N.T.S.

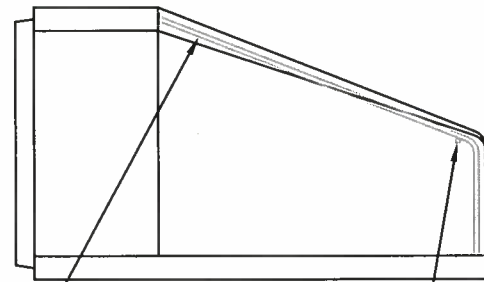
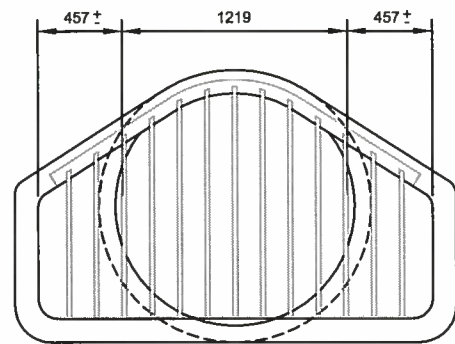
INSTALL 3 RESTRAINT BARS.
1 AT TOP, 2 AT LOWER 1/3 POINTS.
FOR LAST 3 SECTIONS OF PIPE
INCLUDING CONNECTION FLARED END
(3 LOCATIONS).

20 # THRU BOLTS, WASHERS & NUTS, S.S.

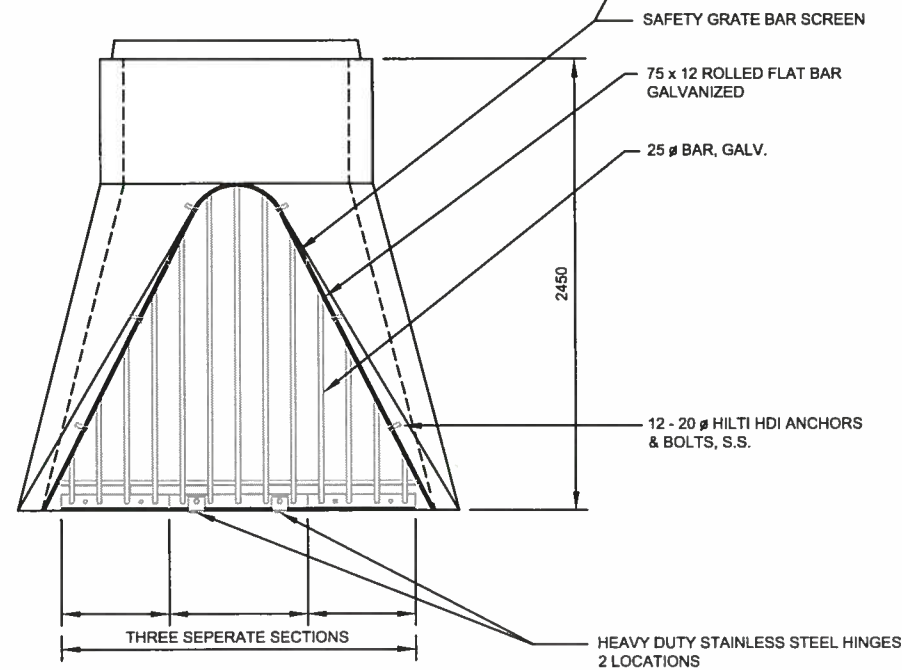
75 x 12 x 950 LONG FLAT BAR, GALV.



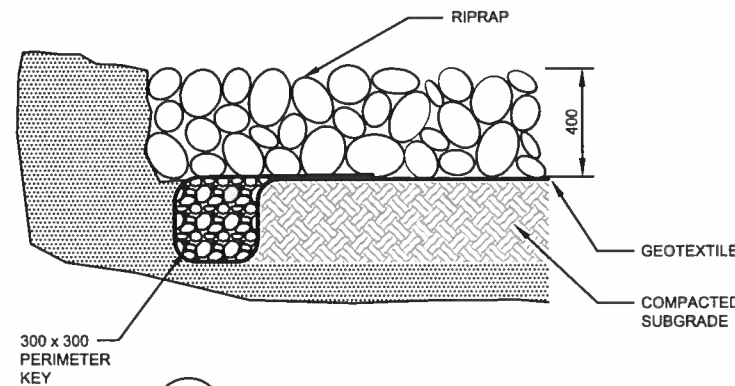
3 JOINT RESTRAINT BARS
N.T.S.



25 # BAR, GALV.



2 PRECAST FLARED END
SHOWN WITH SPIGOT END



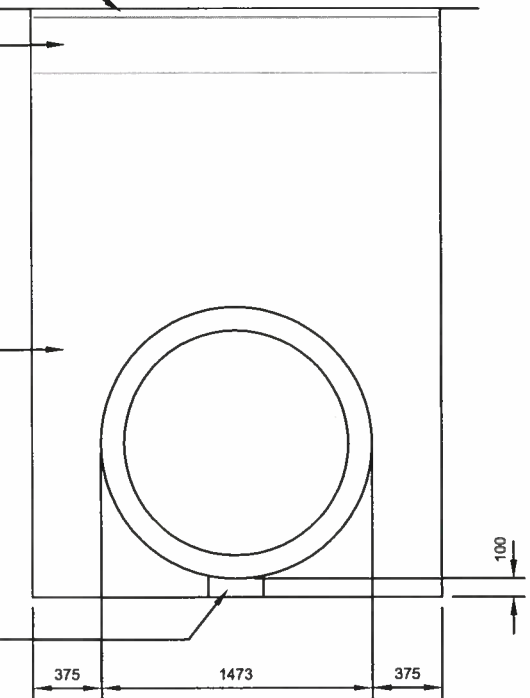
4 RIPRAP KEY
N.T.S.

TOPSOIL & SOD SURFACE RESTORATION

300 COMPACTED SUITABLE EXCAVATED MATERIAL (CLAY)

CW 2030 TYPE 2 BEDDING COMPACTED IN LIFTS OF 300 mm TO 95% OF S.P.D.

MATERIAL IN MIDDLE THIRD OF PIPE TO BE LOOSELY PLACED & UNCOMPACTED



5 BEDDING & BACKFILL FOR PIPE LAID IN OPEN CUT
N.T.S.

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPR. U/G STRUCTURES DATE

NOTE:

LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	REVISION	DATE	BY
1	ISSUED FOR ADDENDUM	16/09/11	M.T.
0	ISSUED FOR TENDER	02/09/11	M.T.

DESIGNED BY: D.N.B.
DRAWN BY: M.R.T.
CHECKED BY: D.N.B.
APPROVED BY: D.N.B.
AUTHORISED BY: *[Signature]*
D.N. BURNEY
BRIDGE MAINTENANCE ENGINEER

ENGINEER'S SEAL
[Seal]
D.N. BURNEY
PROFESSIONAL ENGINEER

CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

PORTAGE AVENUE AT TRURO CREEK
CULVERT TWINNING

SECTIONS & DETAILS

SHEET 3 OF 3
HORIZONTAL: N.T.S.
VERTICAL: N.T.S.
CITY DRAWING NUMBER: C307-11-03

BID OPPORTUNITY NO.: 40-2011