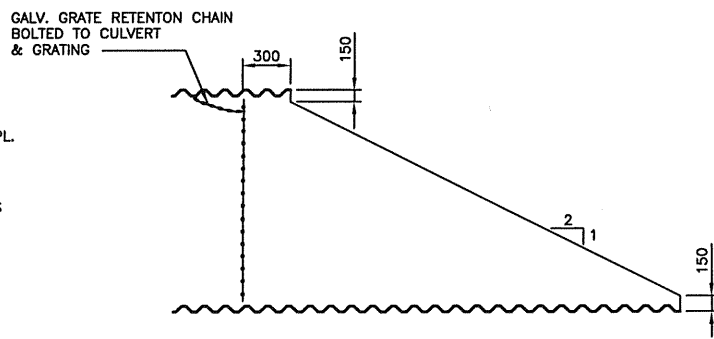
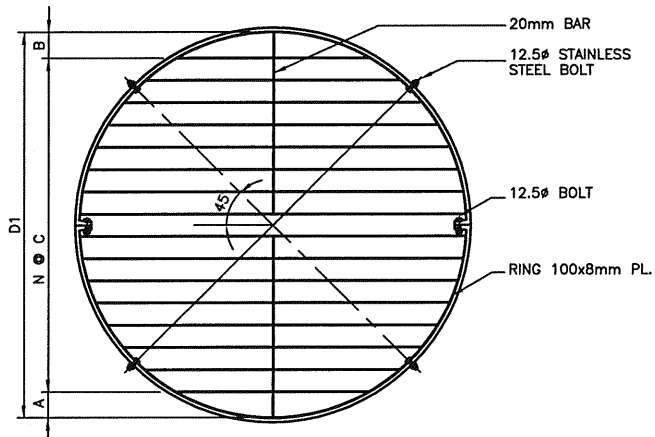


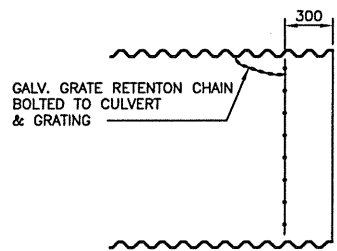
GRATING TYPE 'X'
SCALE: N.T.S.



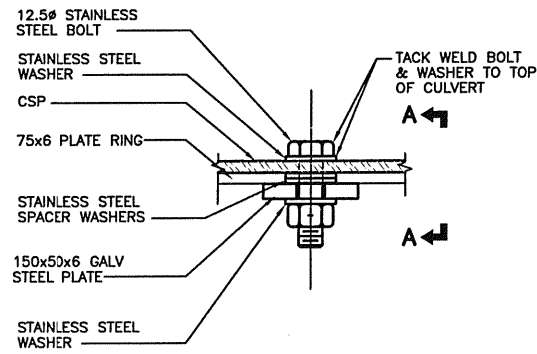
END CONDITION '1'
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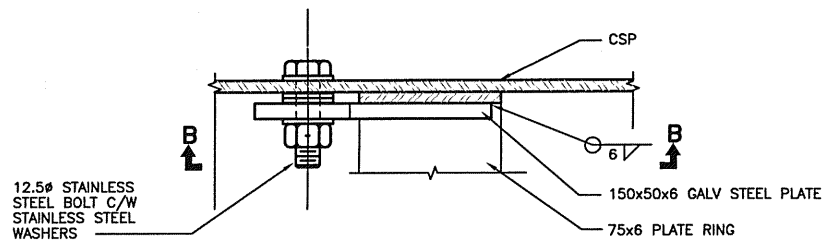
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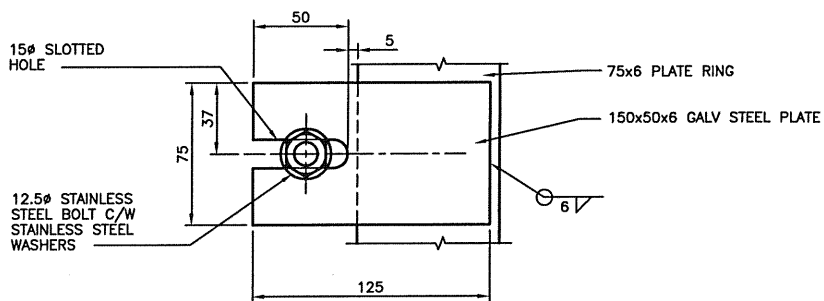
END CONDITION '2'
SCALE: N.T.S.



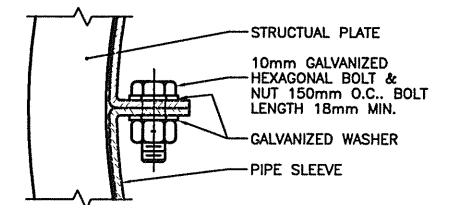
1 DETAIL
SCALE: 1:2



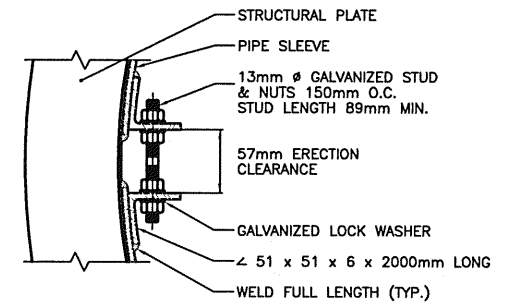
SECTION A-A
SCALE: 1:2



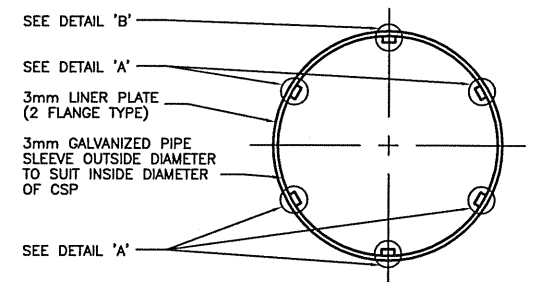
SECTION B-B
SCALE: 1:2



DETAIL 'A'



DETAIL 'B'



ELEVATION

INTERNAL SLIP JOINT DETAILS
SCALE: NTS

OUTFALL DEBRIS GRATING											
LOCATION	PIPE		END CONDITION	GRATING							WEIGHT (lbs)
	DIAMETER D	MATERIAL		DIAMETER D1	TYPE	BAR DIA	A	B	C	N	
KENNEDY ST. (AS-91)	750	CSP	1	735±	X	15	150	90	135	3	25
HARGRAVE ST. (AS-93)	750	CSP	1	735±	X	15	150	90	135	3	25
CLOUTIER DR. (RR-7)	1200	CSP	1	1185±	X	20	145	150	130	7	72
MOORE AVE. (RR-25)	1100	CSP	2	1085±	X	20	150	155	130	6	64
DOWKER AVE. (RR-28)	900	CSP	2	885±	X	20	150	75	165	4	42

- NOTE:**
1. ALL PLATES AND BARS ARE CSA G40.21-300W.
 2. ALL COMPONENTS ARE GALVANIZED.
 3. ALL BOLTS TO BE TYPE 316 STAINLESS STEEL CONFORMING TO ASTM A320 GRADE B8M

STANDARD GRATING AND END CONDITION DETAILS

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE	DATE	B.M. ELEV.

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.	REVISIONS	DATE	BY

KGS GROUP
CONSULTING ENGINEERS & PROJECT MANAGERS
WINNIPEG (204) 896-1209
THUNDER BAY (807) 345-2233

DESIGNED BY	CHECKED BY	APPROVED BY	DATE
RJH	RJH		
DW			

HOR. SCALE: AS NOTED
VERTICAL:

ENGINEER'S SEAL



CONSULTANT DRAWING NO. 05-107-11_09

THE CITY OF WINNIPEG
WATER & WASTE DEPARTMENT

OUTFALL REPAIRS
DEBRIS GRATE & MISCELLANEOUS DETAILS

SHEET	OF
09	10

CAD FILE DRAWING NUMBER 05-0107-11
CITY DRAWING NUMBER LD-3236