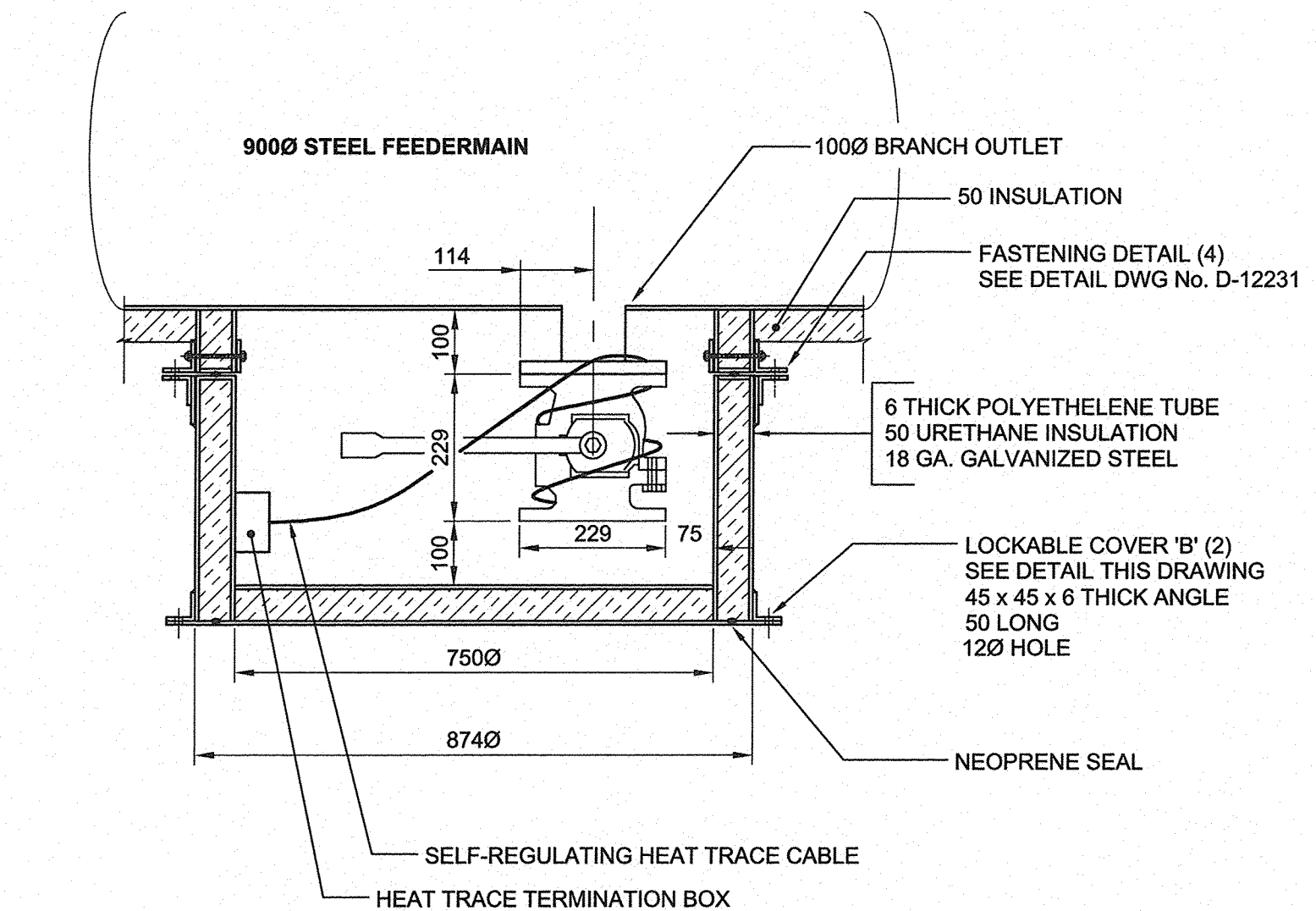


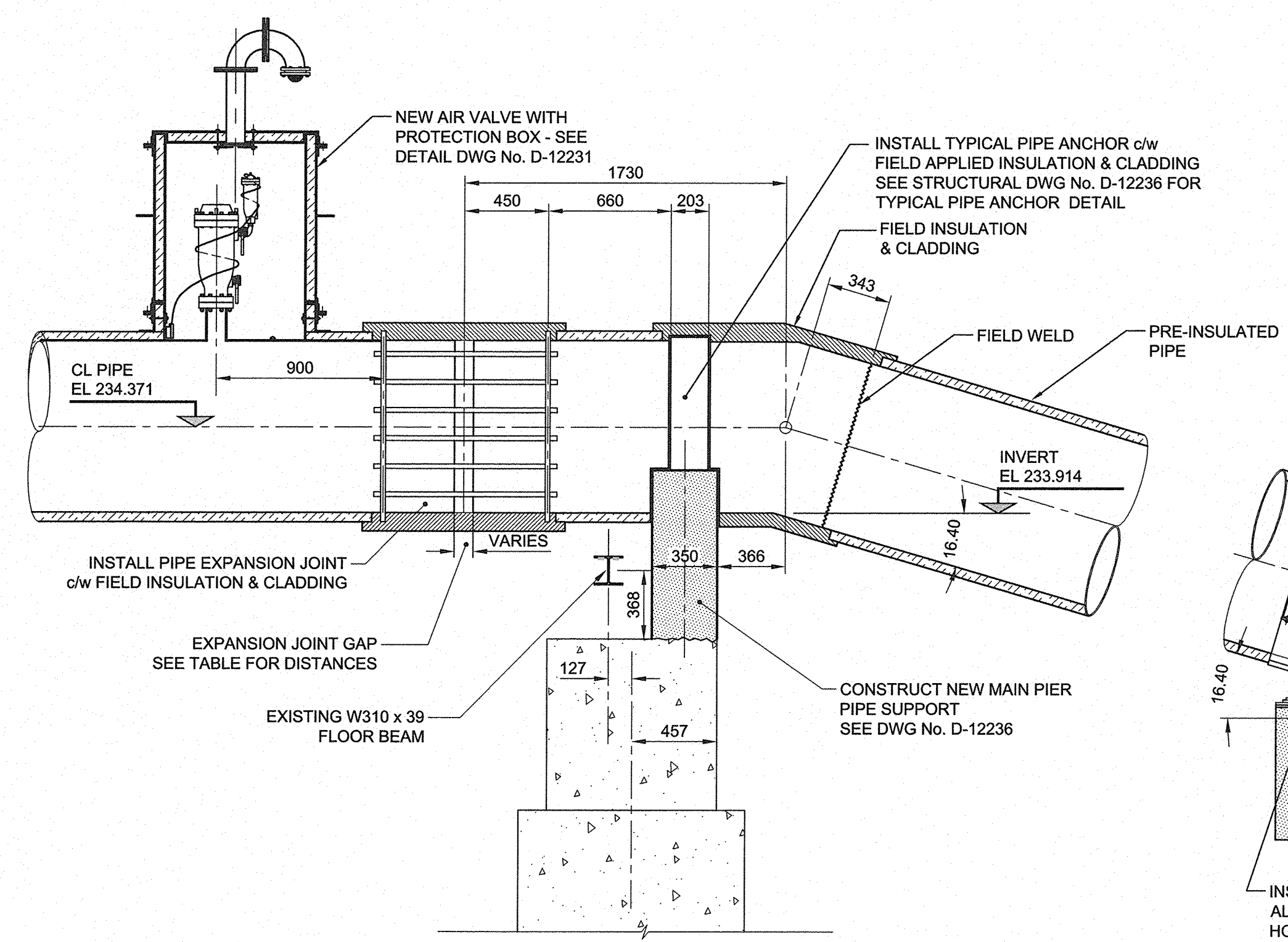
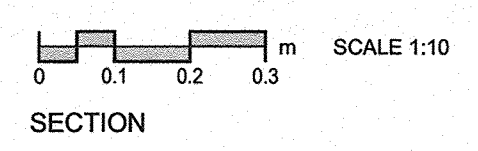
D SIZE 22" x 34" (559mm x 864mm)

PLOT: 10/18/2012 9:21:05 AM

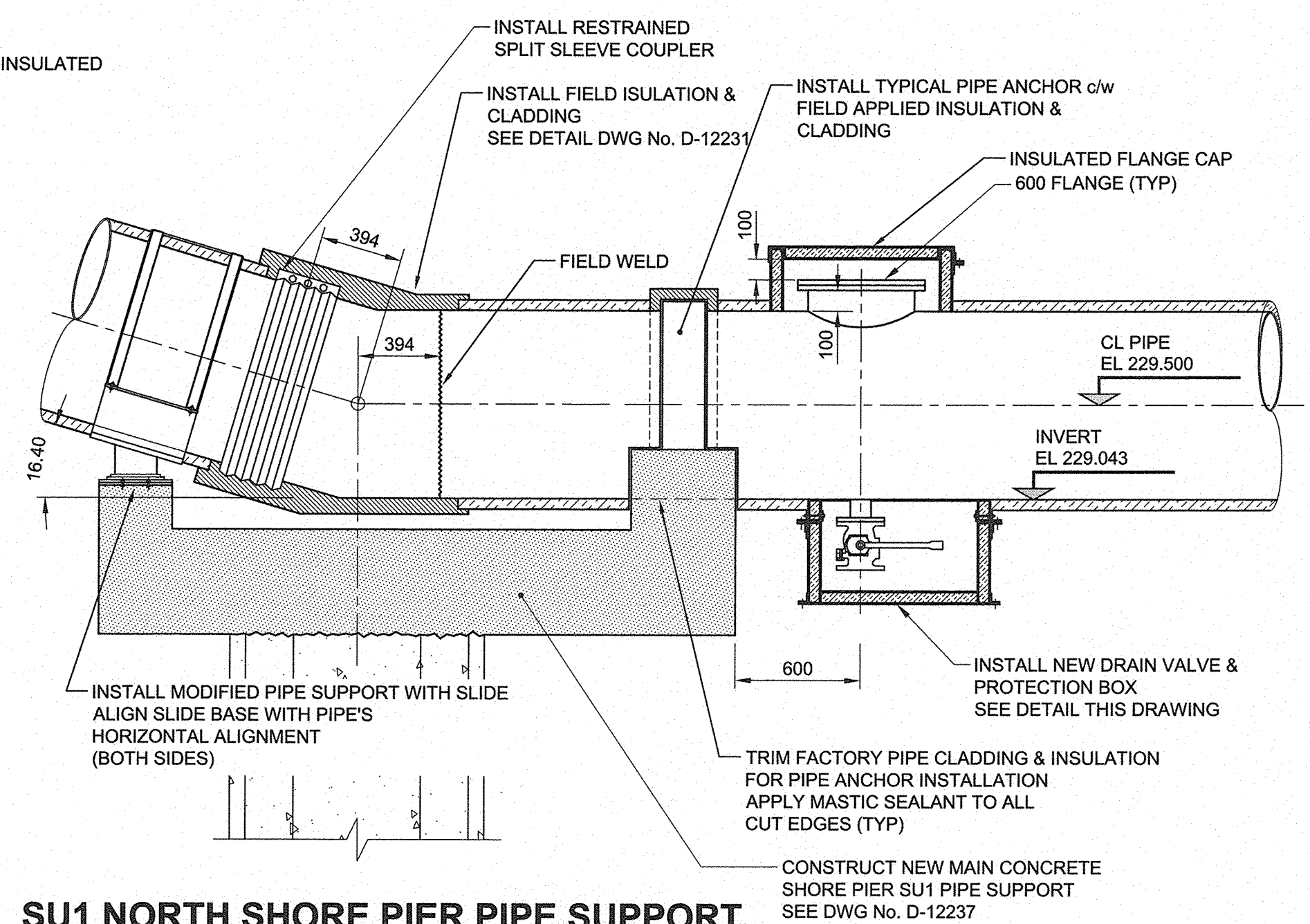
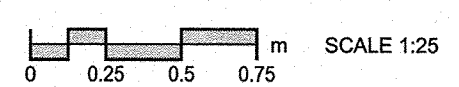
AECOM REVIEW DRFT CHK  
AECOM FILE NAME: D265-230-02\_01-C-4001\_RX.dwg Saved By: jbr/tdm



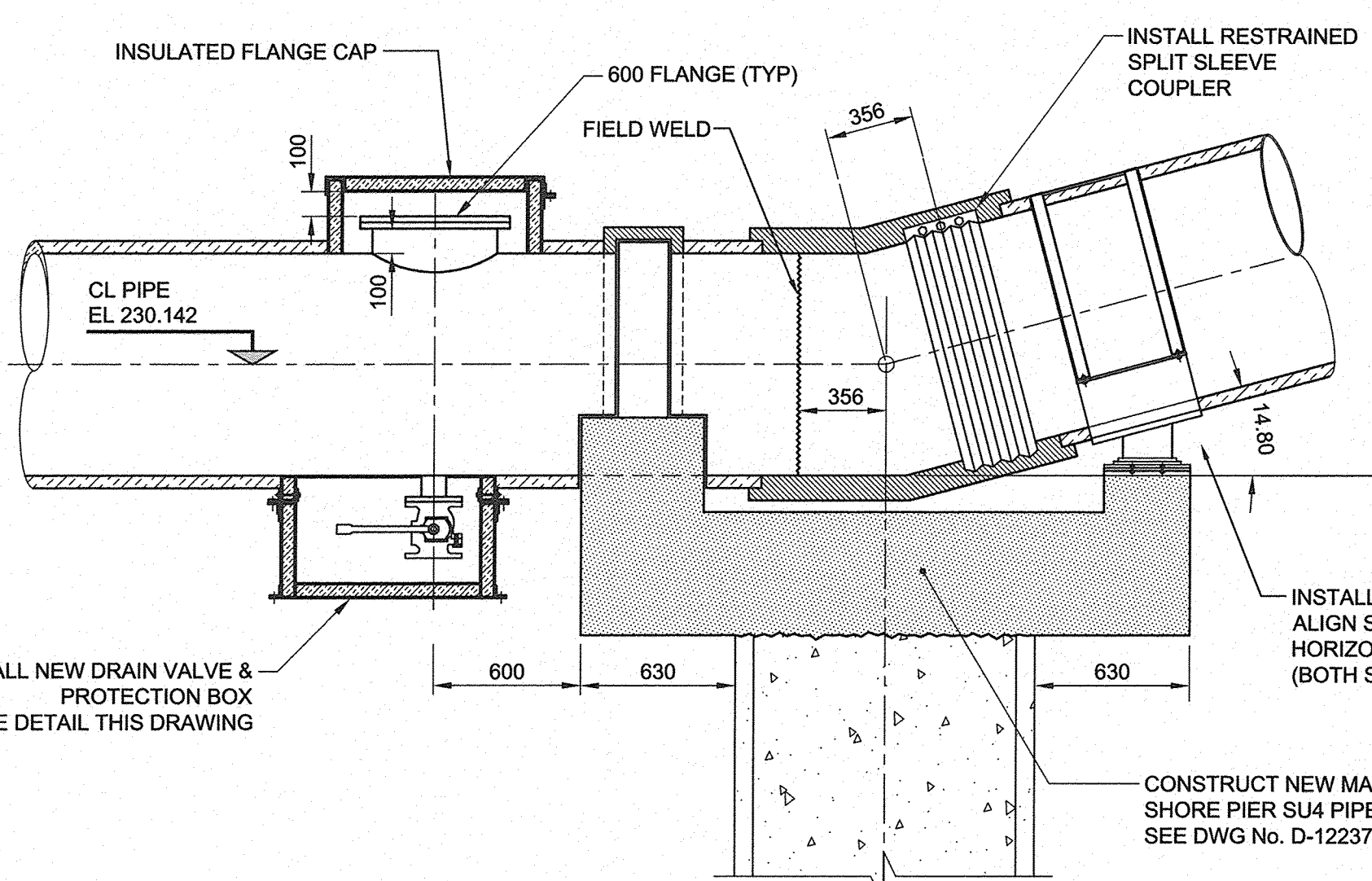
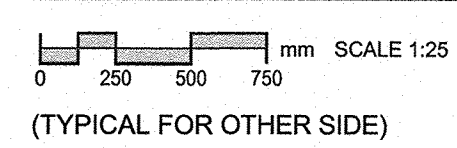
**NEW DRAIN VALVE & DRAIN VALVE PROTECTION BOX**



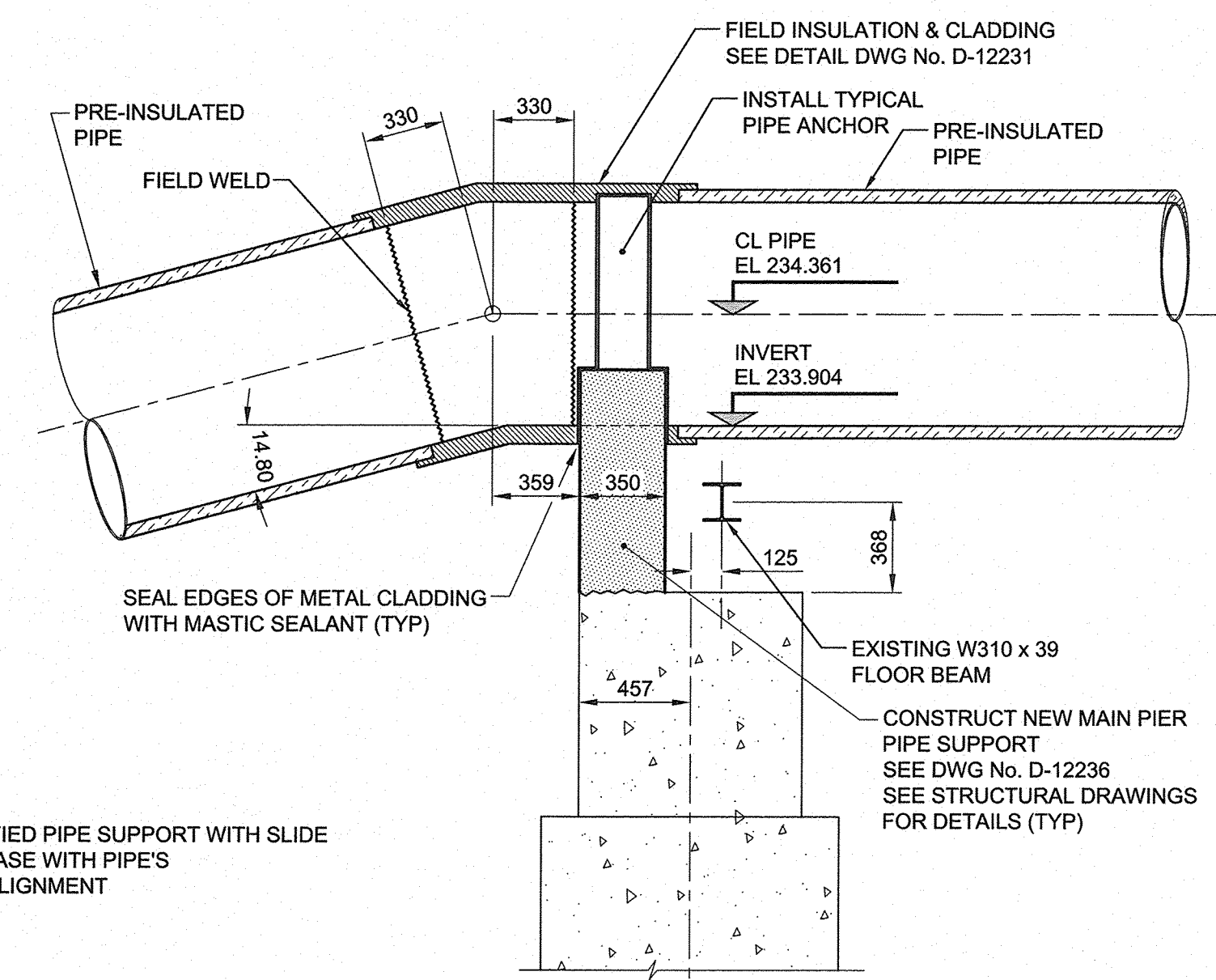
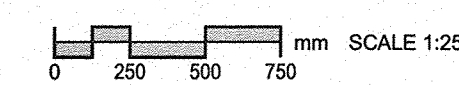
**SU2 - NORTH BRIDGE PIER INSTALLATION DETAIL**



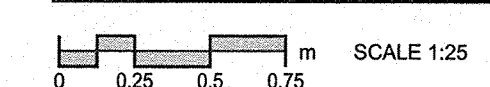
**SU1 NORTH SHORE PIER PIPE SUPPORT**



**SU4 SOUTH SHORE PIER PIPE SUPPORT**



**SU3 - SOUTH BRIDGE PIER INSTALLATION DETAIL**



**EXPANSION JOINT TABLE**

Installation Temperature [°C]	Installed Joint Gap		Overall Length of Expansion Joint	
	[mm]	[in]	[mm]	[in]
15	80	3.16	787	30.97
10	94	3.68	800	31.49
5	107	4.21	813	32.02
0	120	4.74	827	32.55
-5	134	5.26	840	33.07
-10	147	5.79	853	33.60
-15	160	6.32	867	34.13
-20	174	6.84	880	34.65
-25	187	7.37	894	35.18
-30	201	7.89	907	35.70
-35	214	8.42	920	36.23
-40	227	8.95	934	36.76
-45	241	9.47	947	37.28
-50	254	10.00	960	37.81

**LOCATION APPROVED**  
UNDERGROUND STRUCTURES

SUPR. U/G STRUCTURES COMMITTEE 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.	REVISIONS	DATE	BY
1	RE-ISSUED FOR CONSTRUCTION	12/01/18	Wjd
0	ISSUED FOR CONSTRUCTION	11/05/09	Wjd
		YYMMDD	

**AECOM**

DESIGNED BY: MGM  
CHECKED BY: C.C.  
DRAWN BY: Wjd  
APPROVED BY: [Signature]  
HOR. SCALE: AS NOTED  
VERT. SCALE: AS NOTED  
DATE: \_\_\_\_\_

**APEGM**  
Certificate of Authorization  
AECOM Canada Ltd.  
No. 4671 Date: 01 Nov 2012

PROFESSIONAL'S SEAL  
PROVINCE OF MANITOBA  
01 Nov 2012  
C. C. MACEY  
REGISTERED ENGINEER  
CONSULTANT DRAWING NO.  
D265-230-02\_01-C-4001\_RX.dwg

**THE CITY OF WINNIPEG**  
Winnipeg  
**WATER AND WASTE DEPARTMENT**

**REHABILITATION / REPLACEMENT OF THE MID TOWN FEEDERMAIN AT THE ASSINIBOINE RIVER**

CIVIL  
**PIPE SECTIONS & DETAILS**  
South & North Connections

SHEET 4 OF 19  
CITY DRAWING NUMBER  
REV  
**D-12230** 1

BID OPPORTUNITY NO. 830-2012