

LEGEND
 — PROPOSED
 - - - EXISTING
 - - - FUTURE

- ① ANALYZERS AND SAMPLE PUMPS TO BE LOCATED IN TPS 2. SEE SHEET C-M-504.
- ② ANALYZER AND SAMPLE PUMP TO BE LOCATED IN TPS 3. SEE SHEET C-M-504.
- ③ SEE DWG C-N-803 FOR FURTHER INSTRUMENT DETAILS ON THE VAULT.

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY.



NO.	DATE	REVISION	APPROV.
4			
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EAST SIDE WTP 540 MGD EXPANSION - PART B
 BASE - NE & SE CLEARWELLS & FLUMES
 ALTERNATE - NW & SW CLEARWELLS

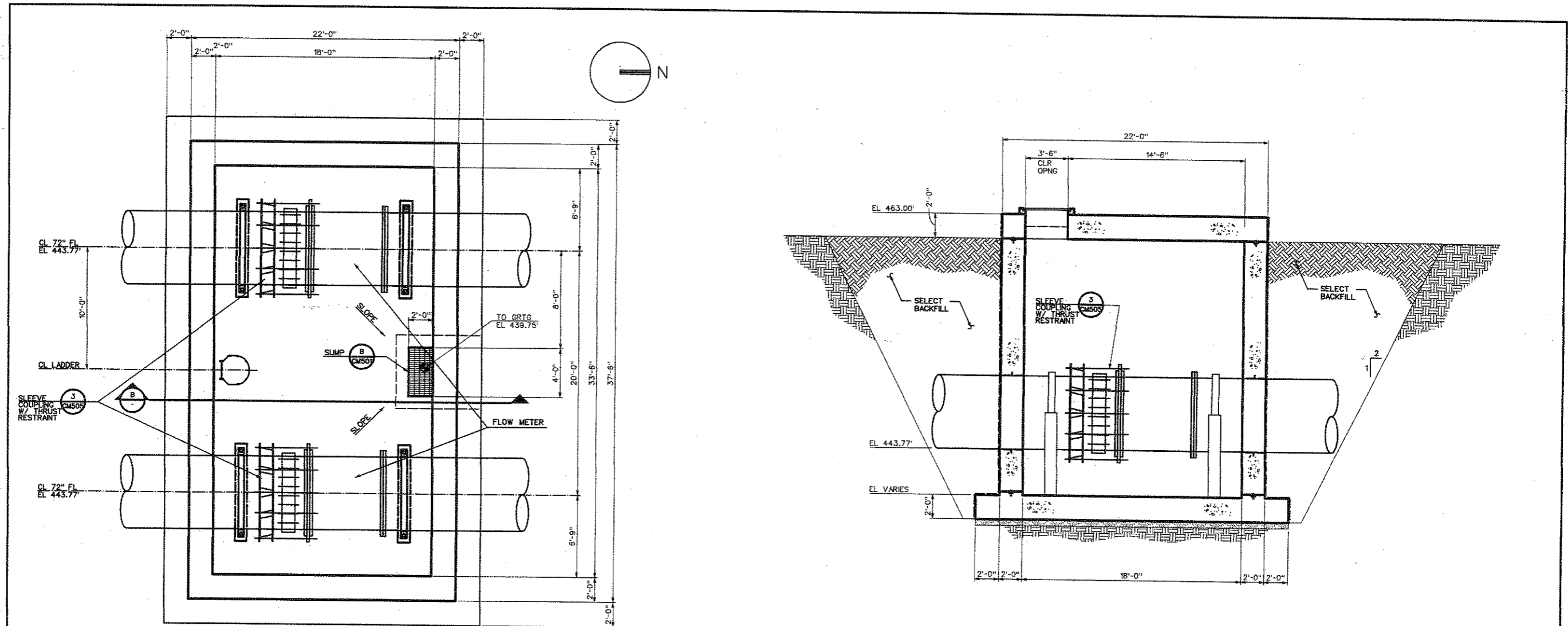
PM&ID
 YARD PIPING

DALLAS WATER UTILITIES
 CITY OF DALLAS, TEXAS

TCB AECOM

TCB INC.
 17300 DALLAS PARKWAY, SUITE 1000
 DALLAS, TEXAS 75248-1157
 WWW.TCB.AECOM.COM

DESIGN	RO	CONTRACT NO.	DWG. NO.
DRAWN	REZ/IAS	08-155	C-M-001
CHECKED	LS	FILE NO.	
APPROVED	SO	620Q-400R.3	138 OF 210
DATE	APRIL 2008		

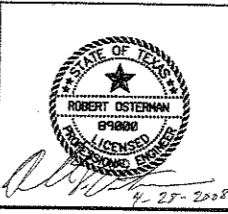


1 METER VAULT PLAN @ EL. 450.00
1/4" = 1'-0"

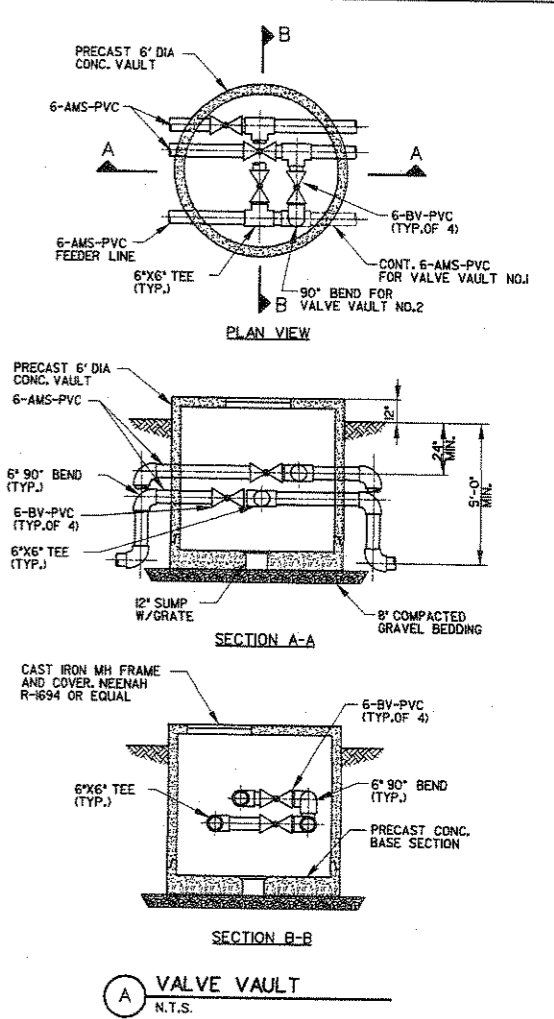
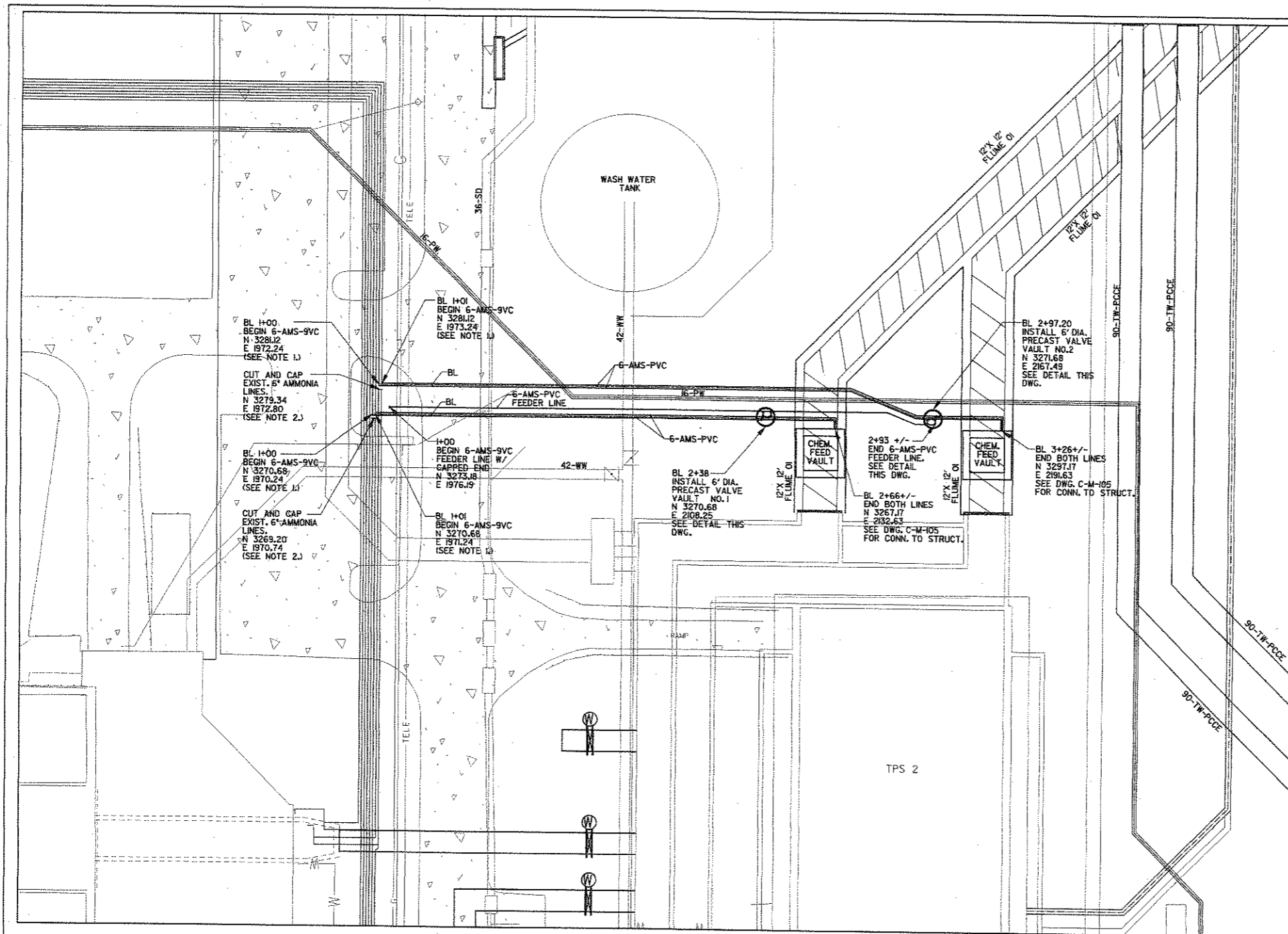
B SECTION
1/4" = 1'-0"

JUL 2002 10:00 AM 0207A.GADWY.Sheet A CONTRACT - N.E.S.M.C.-C.M.-20.500

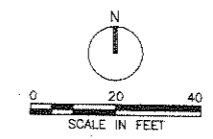
BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY



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NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS METER VAULT PLAN & SECTION			
DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS			
TCB AECOM		TCB INC. 17300 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1167 WWW.TCB-AECOM.COM	
DESIGN	RC	CONTRACT NO.	DRG. NO.
DRAWN	RE/TAS	08-155	C-M-120
CHECKED	US	FILE NO.	140 of 210
APPROVED	RO	620Q-400R.3	
DATE	APR. 2008		



- NOTES:
- REFER TO SPECIFICATION 1503 FOR PVC PIPING INSTALLATION.
 - CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND ELEVATION OF THE EXISTING AMMONIA PIPELINES. CONTRACTOR SHALL VERIFY PIPE LOCATIONS PRIOR TO CUTTING THE PIPES FOR CONNECTION OF NEW PIPING.
 - AMMONIA AND AMMONIA FEEDER PIPE AND FITTINGS SHALL BE PVC SCHEDULE 80.

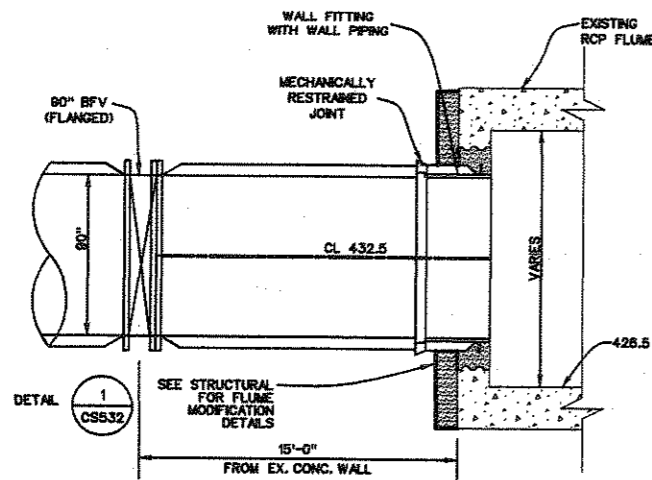


Mehta West Brashear Group LLC
Consulting Engineers

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY.

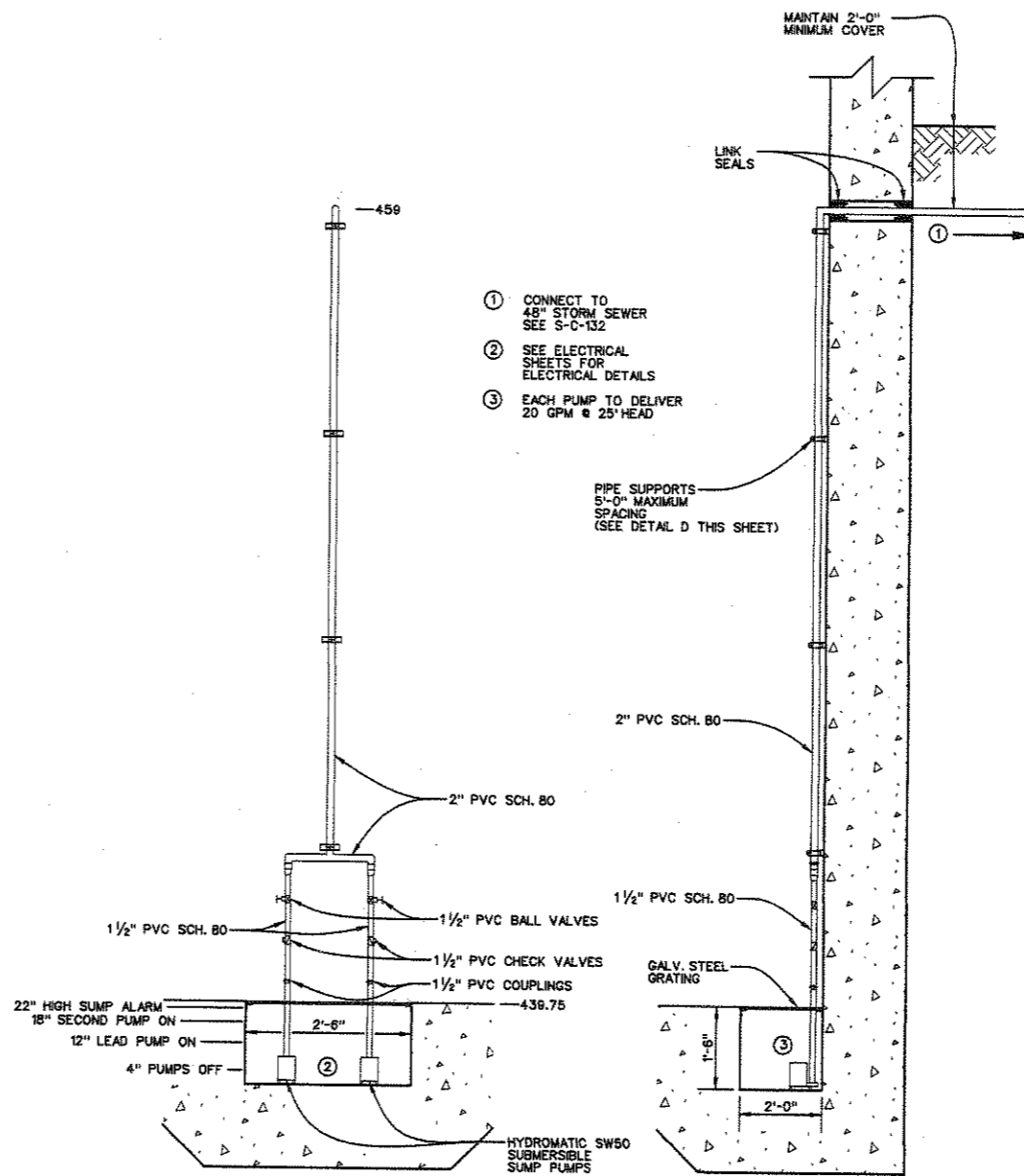


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NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS			
AMMONIA PIPING PLAN			
DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS			
TCB AECOM		TCB INC. 17369 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1157 WWW.TCB.AECOM.COM	
DESIGN	CRM	CONTRACT NO.	DWG. NO.
DRAWN	CRM	08-155	C-M-130
CHECKED	RO	FILE NO.	
APPROVED	APB, 2/20/08	6200-400R.3	14-1 OF 210
DATE			



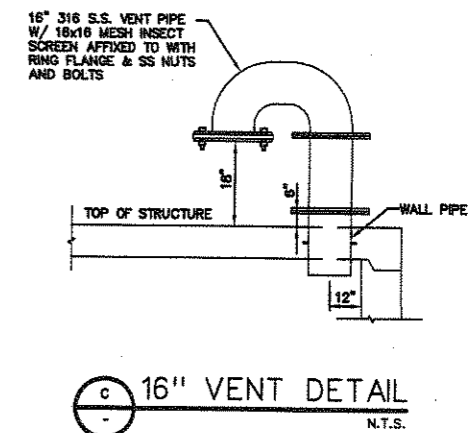
WEST BYPASS FLUME WALL CONNECTION
DETAIL LINES 1A, 3, 5

1/4" = 1'-0"

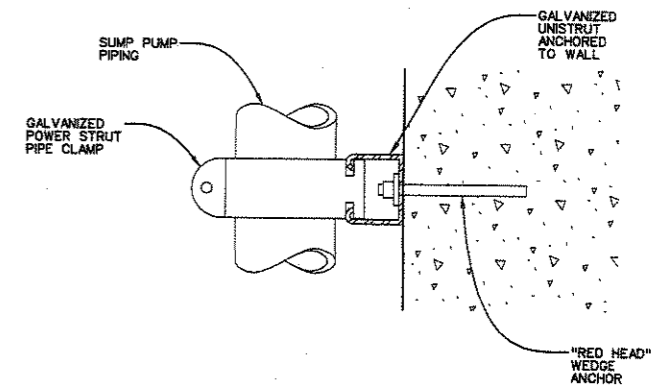


- ① CONNECT TO 48" STORM SEWER SEE S-C-132
- ② SEE ELECTRICAL SHEETS FOR ELECTRICAL DETAILS
- ③ EACH PUMP TO DELIVER 20 GPM @ 25' HEAD

SUMP PUMP DETAIL
N.T.S.



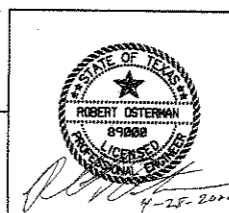
16" VENT DETAIL
N.T.S.



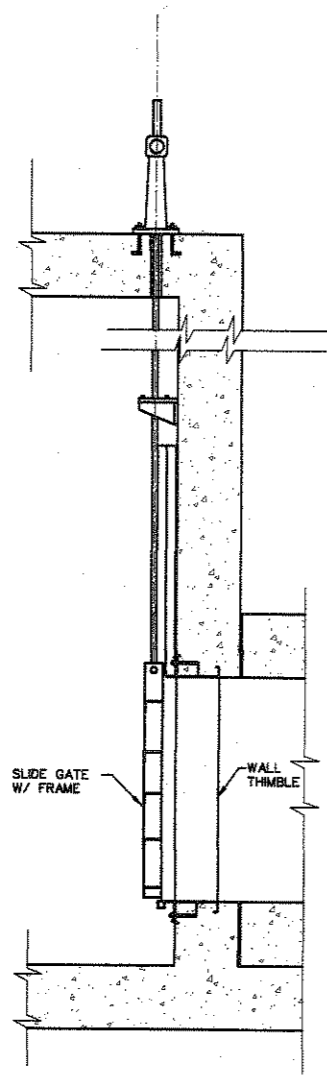
PIPE SUPPORT DETAIL
N.T.S.

S:\2002\384\0207\A\DWG\Sheet\CONTRACT_VES\SW-C-M-501.dwg

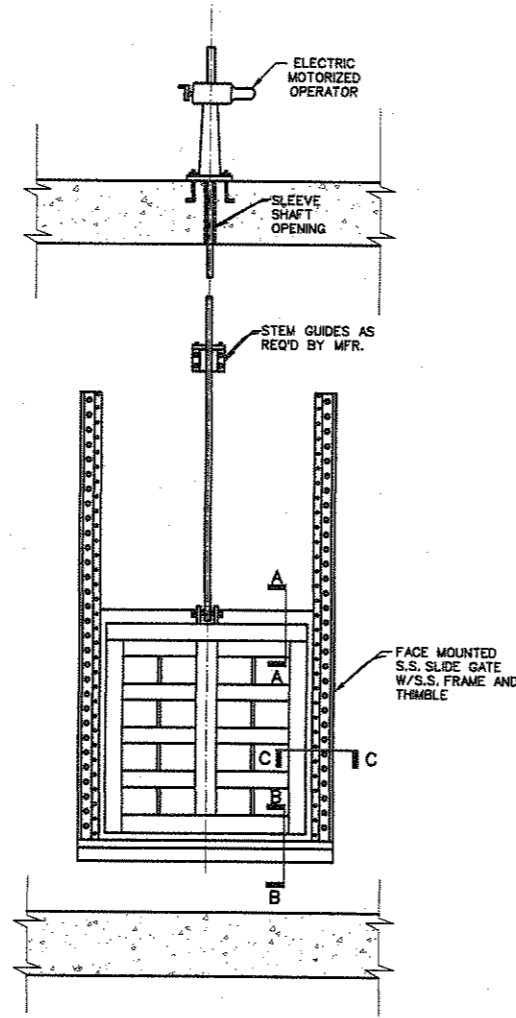
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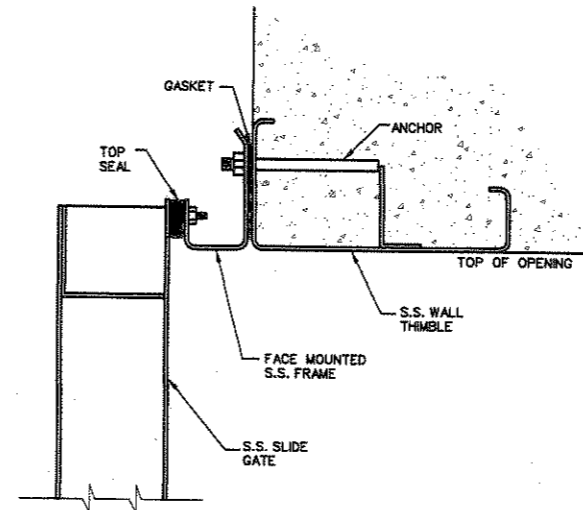
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NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS			
DETAILS - 1			
DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS			
TCB AECOM		TCB INC. 17900 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1157 WWW.TCB.AECOM.COM	
DESIGN	RO	CONTRACT NO.	DRG. NO.
DRAWN	RE/TAS	08-155	C-M-501
CHECKED	US	FILE NO.	143 OF 210
APPROVED	RO	620Q-400R.3	
DATE	APR. 2008		



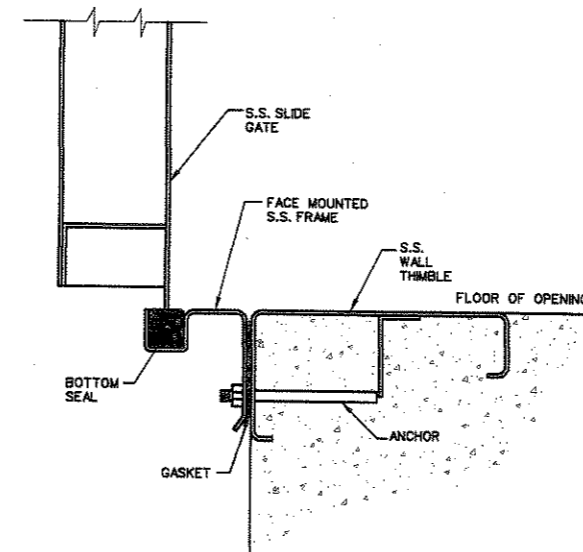
SLIDE GATE ELEVATION



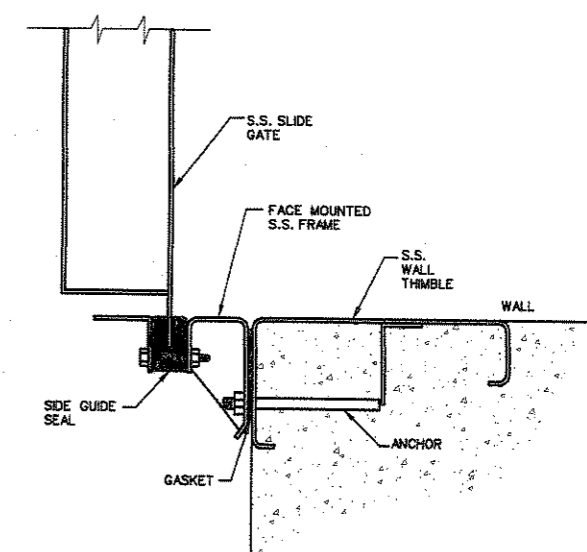
SLIDE GATE FRONT VIEW



SECTION A-A
TOP FRAME SECTION



SECTION B-B
BOTTOM FRAME SECTION

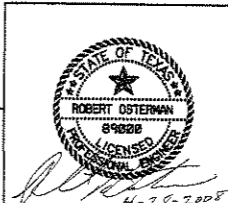


SECTION C-C
SIDE FRAME SECTION

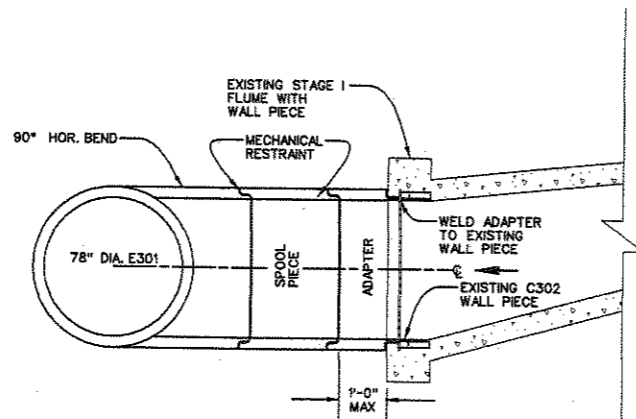
SLIDE GATE DETAILS
N.T.S.

IN 2002, AECOM AND TCB INC. WERE AWARDED A CONTRACT BY THE CITY OF DALLAS FOR THE DESIGN AND CONSTRUCTION OF THE EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS.

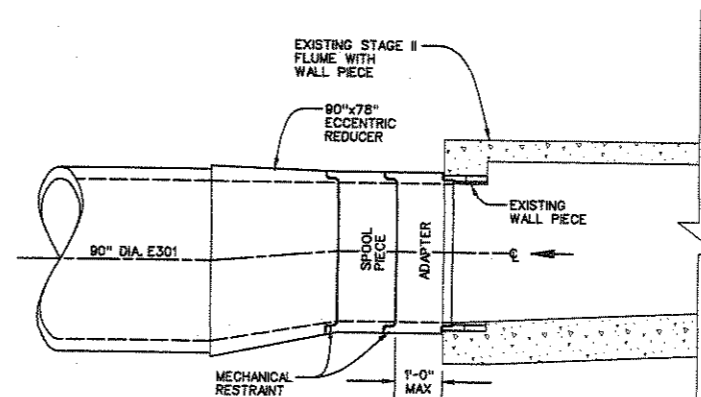
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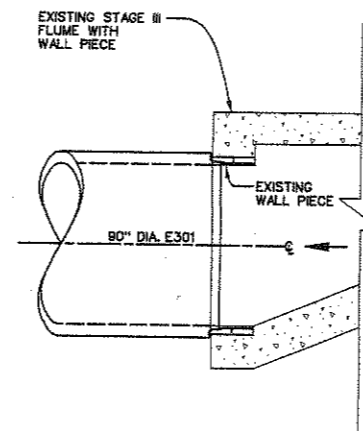
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NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS DETAILS - 2			
DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS			
TCB AECOM		TCB INC. 17890 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1167 WWW.TCB.AECOM.COM	
DESIGN	RC	CONTRACT NO.	DRG. NO.
DRAWN	RE/TAS	08-155	C-M-502
CHECKED	US	FILE NO.	
APPROVED	RC	620Q-400R.3	144 of 210
DATE	APR. 2008		



LINE 1A (STAGE I)



LINE 2 (STAGE II)

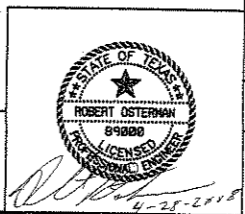


LINE 3 (STAGE III)

A FILTER EFFLUENT FLUME WALL CONNECTION DETAIL
N.T.S.

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BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY



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NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 840 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS DETAILS - 3			
DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS			
TCB AECOM		TCB INC. 17800 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1167 WWW.TCB.AECOM.COM	
DESIGN	RO	CONTRACT NO.	08-155
DRAWN	RE/TAS	FILE NO.	620Q-400R.3
CHECKED	US	DATE	APR. 2008
APPROVED	RO		
DATE			

DIMENSIONS OF JOINT HARNESS TIE BOLTS OR ROD AND LUGS

ROD DIAMETER	T	TYPE	A	Y	W	X	HB	E	HF	HOLE DIAMETER
5/8	3/8	P	5	5	1 3/8	5	3 7/8	3	2	3/4
3/4	3/8	P	5	5	1 1/2	5	4 1/8	3 1/8	2	7/8
7/8	1/2	P	5 1/2	5	1 5/8	5	4 1/4	3 1/8	2	1
1	1/2	RR	5 3/4	RING	1 3/4	RING	4 1/2	3 1/4	2	1 1/8
1 1/8	1/2	RR	7	RING	1 7/8	RING	4 3/4	3 5/8	2 1/2	1 1/4
1 1/4	5/8	RR	7 1/2	RING	2	RING	5	3 3/4	2 1/2	1 3/8
1 3/8	5/8	RR	8 3/4	RING	2 1/8	RING	5 3/8	3 3/4	2 1/2	1 1/2
1 1/2	3/4	RR	10	RING	2 1/4	RING	5 1/2	3 7/8	2 1/2	1 5/8
1 5/8	3/4	RR	10 3/4	RING	2 3/8	RING	5 5/8	3 7/8	2 1/2	1 3/4
1 3/4	7/8	RR	12	RING	2 1/2	RING	5 7/8	4	2 1/2	1 7/8
1 7/8	7/8	RR	13	RING	2 5/8	RING	6	4	2 1/2	2
2	1	RR	14	RING	2 3/4	RING	6 1/4	4 1/4	2 1/2	2 1/8
2 1/4	1	RR	15 3/4	RING	3	RING	6 3/4	4 5/8	2 1/2	2 3/8

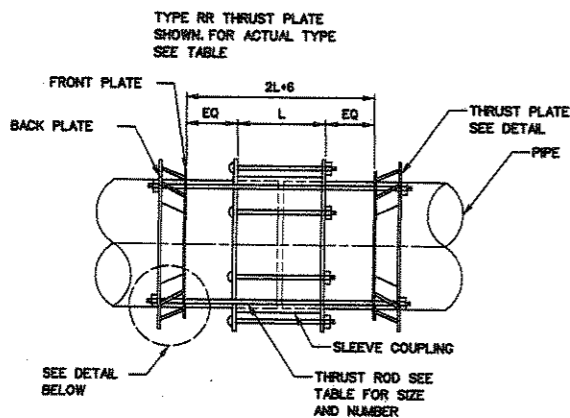
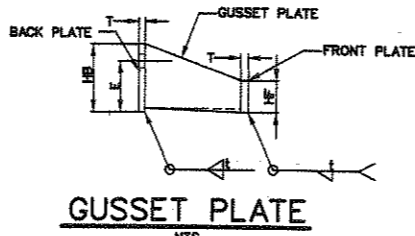
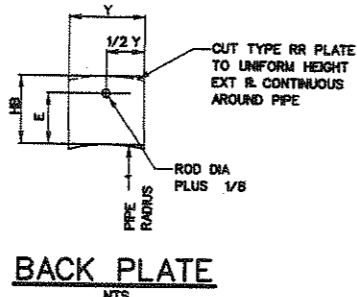
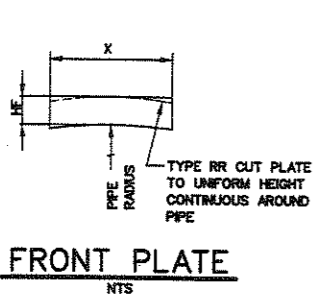
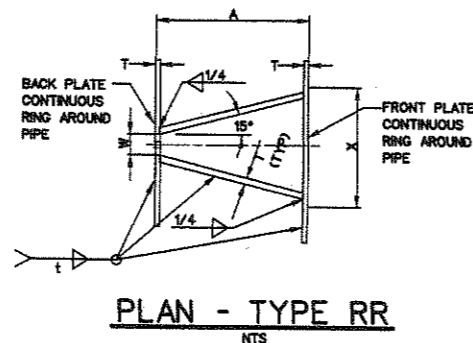
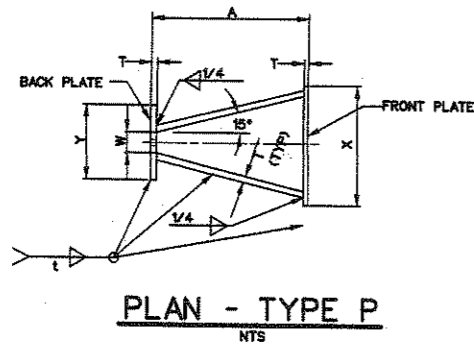
NOTE:
ALL ROD DIAMETERS ARE BASED ON AWWA M11.

ROD DIAMETER 'D' (IN.)	RANGE OF TORQUE (FT.-LBS.)
5/8	50 - 80
3/4	85 - 100
1	100 - 120
1 1/4 & 1 1/2	120 - 150
2 & 2 1/4	150 - 180

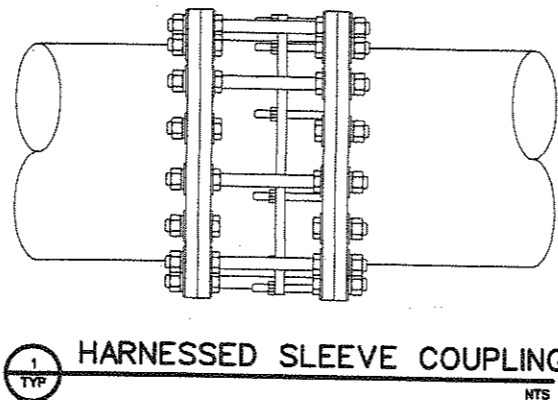
- NOTES:
- INSTALL THE ROD ASSEMBLIES SUCH THAT ALL RODS ARE EQUALLY SPACED AND SYMMETRICAL AROUND FLANGE.
 - DURING INSTALLATION OF THRUST HARNESS, HAND TIGHTEN THE NUT AND LOCKWASHER GRADUALLY AND EQUALLY AT OPPOSITE SIDES UNTIL SQUID TO PREVENT MISALIGNMENT AND ENSURE ALL RODS CARRY EQUAL LOADS. THEN TIGHTEN BOLTS WITH TORQUE MEASURING WRENCHES TO THE TORQUE LISTED. THE THREADS OF THE RODS SHALL PROTRUDE A MINIMUM OF 1/2" FROM NUT.

HARNESS RODS

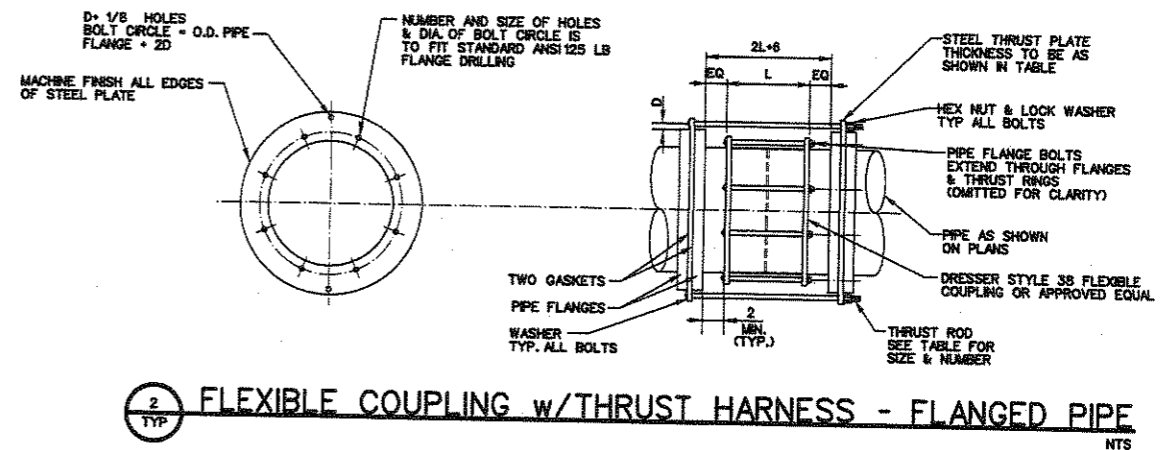
PIPE SIZE (INCH)	PRESSURE = 50 psi		PRESSURE = 100 psi		PRESSURE = 150 psi		PRESSURE = 200 psi		PRESSURE = 250 psi	
	NO. RODS	SIZE RODS	NO. RODS	SIZE RODS	NO. RODS	SIZE RODS	NO. RODS	SIZE RODS	NO. RODS	SIZE RODS
3	4	1/2	4	1/2	4	1/2	4	1/2	4	1/2
4	4	1/2	4	1/2	4	1/2	4	1/2	4	1/2
6	4	1/2	4	1/2	4	1/2	4	1/2	4	1/2
8	4	1/2	4	1/2	4	1/2	4	1/2	4	1/2
10	4	1/2	4	1/2	4	5/8	4	5/8	4	5/8
12	4	1/2	4	1/2	4	3/4	4	3/4	4	3/4
14	4	1/2	4	5/8	4	3/4	4	3/4	4	7/8
16	4	1/2	4	5/8	4	7/8	4	7/8	4	1
18	4	1/2	4	3/4	4	7/8	4	1	4	1
20	4	1/2	4	3/4	4	7/8	4	1	4	1
24	4	5/8	6	3/4	4	7/8	4	1 1/4	4	1 3/8
30	6	3/4	6	1	6	1 1/8	6	1 1/4	6	1 3/8
36	6	7/8	6	1 1/8	6	1 1/4	6	1 1/2	6	1 5/8
42	6	1	6	1 1/4	6	1 1/2	6	1 1/2	6	1 5/8
48	6	1	6	1 3/8	6	1 5/8	6	1 3/4	6	1 3/4
54	6	1 1/8	6	1 1/2	6	1 5/8	6	2	6	2 1/8
60	6	1 1/4	6	1 5/8	6	1 3/4	6	2	6	2 1/4
66	6	1 3/8	6	1 3/4	6	1 3/4	10	2	12	2 1/4
72	6	1 1/2	6	1 3/4	6	2	12	2	14	2 1/4



- NOTES:
- t = PIPE WALL THICKNESS
 - T = THICKNESS OF HARNESS PLATES
 - TYPE P HAS PLATES FOR EACH ROD
 - TYPE RR HAS CONTINUOUS RINGS

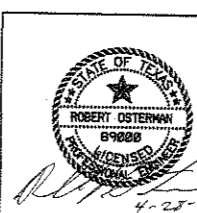


- NOTES:
- SEE SPEC SECTION 15121 FOR RESTRAINED AND UNRESTRAINED SLEEVE COUPLING AND ADAPTER REQUIREMENTS.



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NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS			
DETAILS - 5			
DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS			
TCB AECOM		TCB INC. 1780 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1167 WWW.TCB.AECOM.COM	
DESIGN	RO	CONTRACT NO.	08-155
DRAWN	RE/TAS	FILE NO.	620Q-400R.3
CHECKED	US	DATE	APR. 2008
APPROVED	RO		
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			DWG. NO. C-M-505
			147 of 210