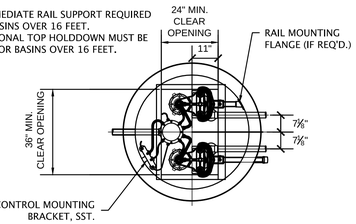
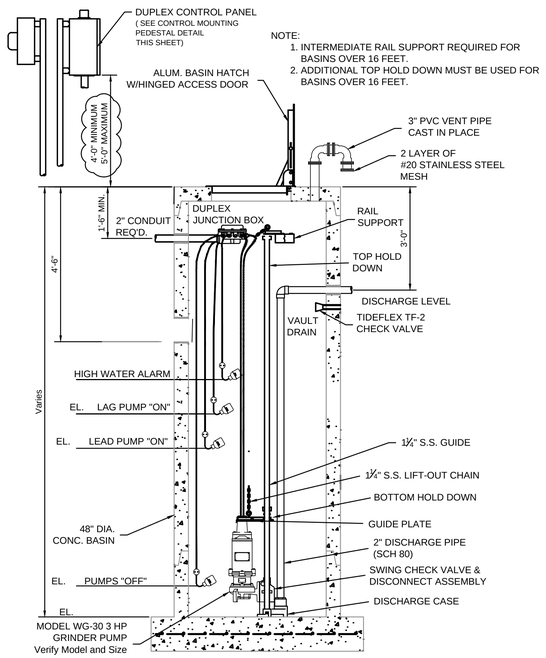
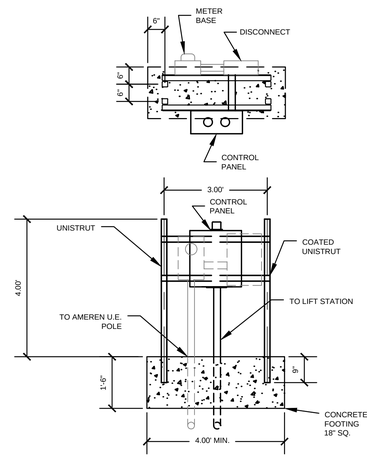
NOTE: 1. INTERMEDIATE RAIL SUPPORT REQUIRED FOR BASINS OVER 16 FEET.
2. ADDITIONAL TOP HOLDDOWN MUST BE USED FOR BASINS OVER 16 FEET.





DUPLEX LIFT STATION DETAIL

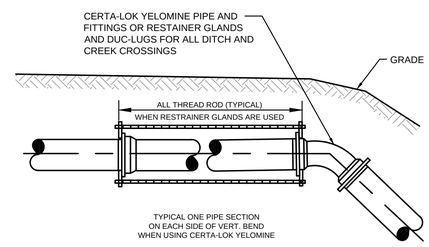
SCALE: 1/2" = 1'-0"



CONTROL PANEL MOUNTING ASSEMBLY ON UNISTRUT FRAME

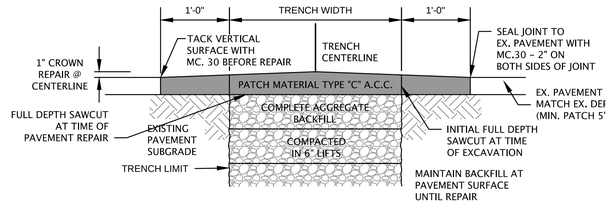
CONTROL PANEL MOUNTING ASSEMBLY

SCALE: ½" = 1'-0"



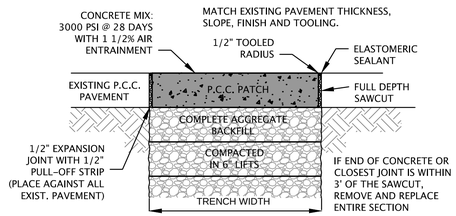
VERTICAL BEND

NOT TO SCALE



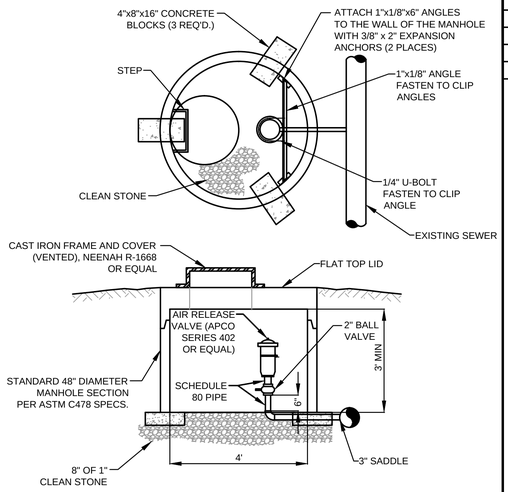
ASPHALTIC CEMENT CONCRETE REPAIR

SCALE: 1" = 1'-0"



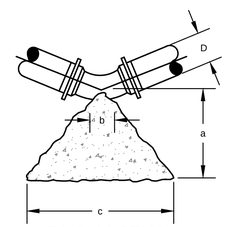
PORTLAND CEMENT CONCRETE REPAIR

SCALE: 1" = 1'-0"



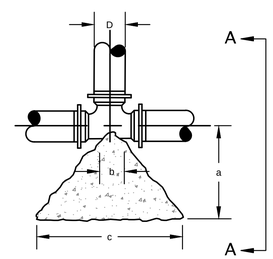
AIR/VACUUM RELEASE VALVE

SCALE: 1/2" = 1'-0"



PLAN VIEW

45° BEND
22 1/2° BEND
11 1/2° BEND

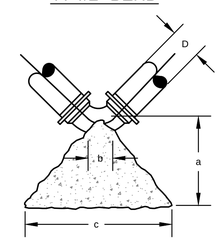


PLAN VIEW
TEE OR WYE BRANCH

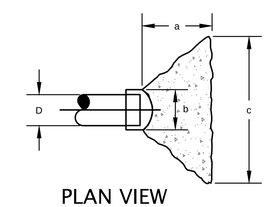
SEWER MAIN SHALL HAVE 3'-0" MINIMUM COVER AT ALL LOCATIONS

THRUST BLOCK DIMENSIONS (INCHES)

PIPE SIZE			TEE-WYE END CAP		22 1/2° BEND		45° BEND		90° BEND	
D	a	b	c	h	c	h	c	h	c	h
4	14	4	26	13	16	8	24	12	30	15
6	22	6	36	18	24	12	32	16	44	22
8	29	8	50	25	30	15	42	21	58	29
10	37	10	62	31	40	20	55	27	74	37
12	44	12	74	37	46	23	65	33	88	44
14	52	14	86	43	54	27	76	38	103	52
16	58	15	98	49	60	30	86	43	118	58
18	66	16	112	56	70	35	98	49	134	66



PLAN VIEW
90° BEND



PLAN VIEW
END CAP OR PLUG

GENERAL NOTES:

THESE STANDARD DETAILS ARE TO BE CONSIDERED THE GRAPHIC PRESENTATION OF INFORMATION CONTAINED IN THE DISTRICT STANDARD SPECIFICATIONS, ESPECIALLY SECTION 02221-TRENCHING, BACKFILLING AND COMPACTION, AND SECTION 015150-SANITARY SEWERS FORCE MAIN. USE OF THIS DRAWING WITHOUT THE REFERENCED SPECIFICATIONS MAY CAUSE THE CONTRACTOR DELAY AND ADDITIONAL EXPENSE.

THE ENGINEER SHALL PROVIDE THE DISTRICT "AS CONSTRUCTED DRAWINGS" AFTER THE COMPLETION OF THE PROJECT, INCLUDING ALL SERVICE CONNECTION LOCATIONS.

TESTING NOTES:

ALL TESTING MUST BE PERFORMED IN THE PRESENCE OF AN AUTHORIZED REPRESENTATIVE OF THE DISTRICT.

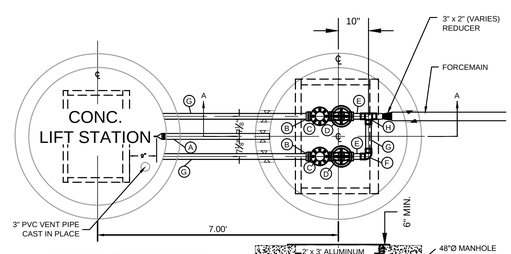
THE ENTIRE LENGTH OF THE INSTALLATION SHALL BE PRESSURE TESTED. TEST THE INSTALLATION FOR LEAKAGE AS SPECIFIED IN ANSI/AWWA C600 AND AS AMENDED BY THE FOLLOWING.

MINIMUM TEST PRESSURE SHALL BE 220% OF THE SHUT-OFF HEAD PRESSURE OF THE GRINDER PUMP OR 100 PSI.

THE TEST SECTION SHALL BE SLOWLY FILLED WITH WATER, PRESSURIZED TO THE TEST PRESSURE AND HELD FOR ONE (1) HOUR.

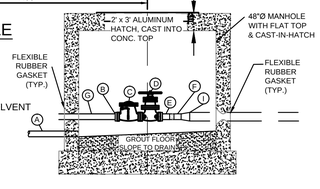
ALLOWABLE LEAKAGE IN GALLONS DURING THE ONE HOUR TEST IS BASED UPON THE PRODUCT OF THE PRESSURIZED SEWER LENGTH IN FEET MULTIPLIED BY A FACTOR "K" RELATIVE TO THE PIPE SIZE OF THE TEST SECTION.

PIPE SIZE	"K" FACTOR	ALLOWABLE LEAKAGE PER 100 FEET
1½"	0.00013	0.013 GALLONS OR 1.66 OUNCES
1½"	0.00016	0.016 GALLONS OR 2.00 OUNCES
2"	0.00021	0.021 GALLONS OR 2.66 OUNCES
2½"	0.00026	0.026 GALLONS OR 3.33 OUNCES



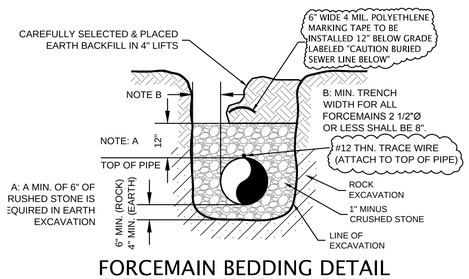
PIPING SCHEDULE

- (A) 2" SCH. 80 PVC DRAIN
- (B) VAN STONE FLANGE FOR 2" PVC SCH. 80 PIPE
- (C) CHECK VALVE, FL x FL
- (D) GATE OR PLUG VALVE, FL x FL
- (E) 2" PVC SCH. 80 PIPE WITH ONE SOLVENT WELDED FLANGE FL x PE
- (F) 2"-90° SOLVENT WELD FITTING
- (G) 2" PVC, SCH 80 PIPE
- (H) 2 x 2 x 2 TEE SOLVENT WELD
- (I) 3" x 2" REDUCER (VARIES)



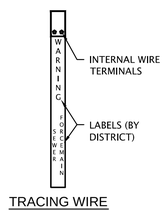
VALVE VAULT

SCALE: 1/2" = 1'-0"



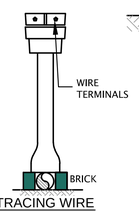
FORCEMAIN BEDDING DETAIL

SCALE: 1/2" = 1'-0"



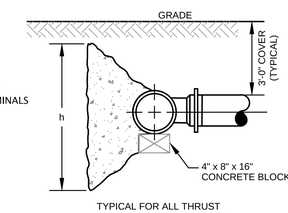
TRACING WIRE STATION

RHINO TRIVIEW FLEX (MB-70427) OR EQUAL {INSTALL EVERY 400'}



TRACING WIRE ACESS BOX

RHINO TRIVIEW FLEX (MB-22408) OR EQUAL {INSTALL EVERY 400'} [FOR PAVEMENT APPLICATIONS]



TYPICAL FOR ALL THRUST BLOCKS EXCEPT AS NOTED

SECTION A-A

Date	Revision	Mark

DUPLEX LIFT STATION AND FORCE MAIN STANDARDS

NORTHEAST PUBLIC SEWER DISTRICT

JEFFERSON COUNTY MISSOURI

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FENTON, MO 63026
(636) 343-5090
Fax (636) 343-7904
Email: Eng@NortheastSewer.org

npsd

APPROVED:

DATE:	08/23/2011
DESIGNED BY:	TBS
DRAWN BY:	TBS
CHECKED BY:	PJB

Sheet 1 OF 1

SCALE: AS SHOWN