

**NOTES:**

- CUSTOMER SHALL FURNISH & INSTALL VAULT, INCLUDING ALL APERTURES EXCEPT AS NOTED BELOW.
- VAULT CONSTRUCTION MATERIALS SHALL BE 8"x8"x16" CMU, OR PRECAST, OR CAST-IN-PLACE CONCRETE AT CUSTOMER'S SELECTION.
- INSIDE DIMENSIONS PER DRAWING NOTES. VAULT TO BE SET LENGTHWISE WITH SERVICE.
- TOP OF VAULT TO BE CONCRETE, AT LEAST 4" THICK WITH REINFORCING SUITABLE FOR ANTICIPATED LOADING. WHEN VAULT IS CONSTRUCTED IN PAVED AREAS, PAVEMENT IS TO BE LEVEL WITH TOP OF VAULT, AND THE TOP REINFORCED AS REQUIRED TO SUPPORT TRAFFIC LOADS (E.G. H-20 WHEEL LOADS). WHEN VAULT IS CONSTRUCTED IN GRASS PLOT, TOP OF VAULT SHALL BE 3" ABOVE FINISHED GRADE.
- BOTTOM OF VAULT TO BE EITHER A MINIMUM OF 6" OF CRUSHED STONE OR 4" CONCRETE PER FIRE DEPARTMENT'S REQUIREMENT. MINIMUM CLEARANCE OF 12" BELOW BOTTOM OF FIRE SERVICE AND DOMESTIC SERVICE LINES IS REQUIRED.
- DOUBLE CHECK DETECTOR ASSEMBLY SHALL BE A MODEL APPROVED BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, WITH FLANGED OS&Y GATE VALVE ON INLET & OUTLET SIDES. DETECTOR METER IS FURNISHED BY UTILITY AND INSTALLED BY CUSTOMER. STAINLESS STEEL BOLTS ARE REQUIRED.
- ACCESS HATCH IN TOP OF VAULT SHALL BE 30"x30" ALUMINUM BILCO J-2AL, BILCO PCH-2, HALLIDAY WISDOM OR EQUAL. ACCESS HATCH SHALL HAVE SAME OR GREATER LOADING CAPACITY AS VAULT LID. PIPE HATCH FRAME DRAIN TO VAULT FLOOR OR SUMP, AS APPLICABLE. IF THE LOCAL FIRE DEPARTMENT REQUIRES A SUMP PUMP IN THE VAULT, ELECTRICAL DISCONNECT IS REQUIRED ON TOP OF VAULT, INSTALLED ABOVE GRADE, PER LOCAL ELECTRICAL CODE.
- A COMBINATION VAULT CAN BE USED ONLY IF METER IS LARGER THAN 2".
  - METERS TO BE LOCATED A MAXIMUM 18" FROM HINGE SIDE OF HATCH.
  - A 2" TEST PLUG SHALL BE INSTALLED AT LEAST 2 PIPE DIAMETERS DOWNSTREAM OF 3" OR LARGER METERS.
- AS DIRECTED BY LOCAL OPERATIONS, ADDITIONAL PIPE SUPPORTS MAY BE REQUIRED.
- THE LID AND RING THAT WILL BE REQUIRED IS FORD AS3-TT OR FORD AS3-T. THE AS3-TT WILL BE USED FOR ALL VAULTS WITH THE DOMESTIC METER INSIDE. THE AS3-T WITH BE USED FOR ALL VAULTS WITH THE DCSA ONLY LOCATED INSIDE THE VAULT.

**LEGEND**

(A)	NOT USED	(F)	FIRE LINE	(M)	DOMESTIC SERVICE METER (SEE NOTE 8)	(P)	SUMP PUMP LID
(B)	RJDI TEE	(G)	DOMESTIC SERVICE (SEE NOTE 8)	(N)	FLANGED TEE	(Q)	FLANGED OS&Y VALVE WITH PTT TYPE POST INDICATOR
(C)	NOT USED	(H)	2" TEST PLUG (SEE NOTE 8)	(O)	DETECTOR METER (SEE NOTE 8)		
(D)	DOUBLE CHECK DETECTOR ASSEMBLY	(I)	TAPPING SLEEVE W/ TAPPING VALVE & BOX (COORDINATE W/ LOCAL UTILITY SUPERINTENDENT/MANAGER)	(R)	METER PIT		
(E)	FLANGED OS & Y VALVE	(J)	RJDI GATE VALVE				

**INDIANA AMERICAN WATER**  
ENGINEERING DEPARTMENT  
153 N. EMERSON AVENUE  
GREENWOOD, INDIANA 46143

**LONG SIDE VAULT DETAIL**  
STANDARD FOR COMBINED FIRE SERVICE & METER VAULT FOR 3" AND LARGER SINGLE METER CONFIGURATION

DATE: JANUARY, 2018 DRAWN BY: S. FORD  
LATEST REV: JULY, 2018 APP'D BY: E.N.

**STANDARD DETAIL**  
**GATE VALVE (12" AND SMALLER)**

**INDIANA AMERICAN WATER**  
ENGINEERING DEPARTMENT  
153 N. EMERSON AVENUE  
GREENWOOD, INDIANA 46143

DATE: JANUARY, 2018 DRAWN BY: S. FORD  
LATEST REV: JANUARY, 2018 APP'D BY: E.N.

**STANDARD DETAIL**  
**FIRE HYDRANT INSTALLATION DETAILS**

**INDIANA AMERICAN WATER**  
ENGINEERING DEPARTMENT  
153 N. EMERSON AVENUE  
GREENWOOD, INDIANA 46143

DATE: JANUARY, 2018 DRAWN BY: S. FORD  
LATEST REV: JULY, 2018 APP'D BY: E.N.

**STANDARD DETAIL**  
**SEWER SEPARATION**

**INDIANA AMERICAN WATER**  
ENGINEERING DEPARTMENT  
153 N. EMERSON AVENUE  
GREENWOOD, INDIANA 46143

DATE: JANUARY, 2018 DRAWN BY: S. FORD  
LATEST REV: JULY, 2018 APP'D BY: E.N.

**STANDARD DETAIL**  
**THRUST BLOCKS**

**INDIANA AMERICAN WATER**  
ENGINEERING DEPARTMENT  
153 N. EMERSON AVENUE  
GREENWOOD, INDIANA 46143

DATE: JANUARY, 2018 DRAWN BY: S. FORD  
LATEST REV: JANUARY, 2018 APP'D BY: E.N.

**STANDARD DETAIL**  
**TEMPORARY DEAD-END FIRE HYDRANT DETAIL**

**INDIANA AMERICAN WATER**  
ENGINEERING DEPARTMENT  
153 N. EMERSON AVENUE  
GREENWOOD, INDIANA 46143

DATE: JANUARY, 2018 DRAWN BY: S. FORD  
LATEST REV: JULY, 2018 APP'D BY: E.N.

**STANDARD DETAIL**  
**FIRE HYDRANT DETAIL**

**INDIANA AMERICAN WATER**  
ENGINEERING DEPARTMENT  
153 N. EMERSON AVENUE  
GREENWOOD, INDIANA 46143

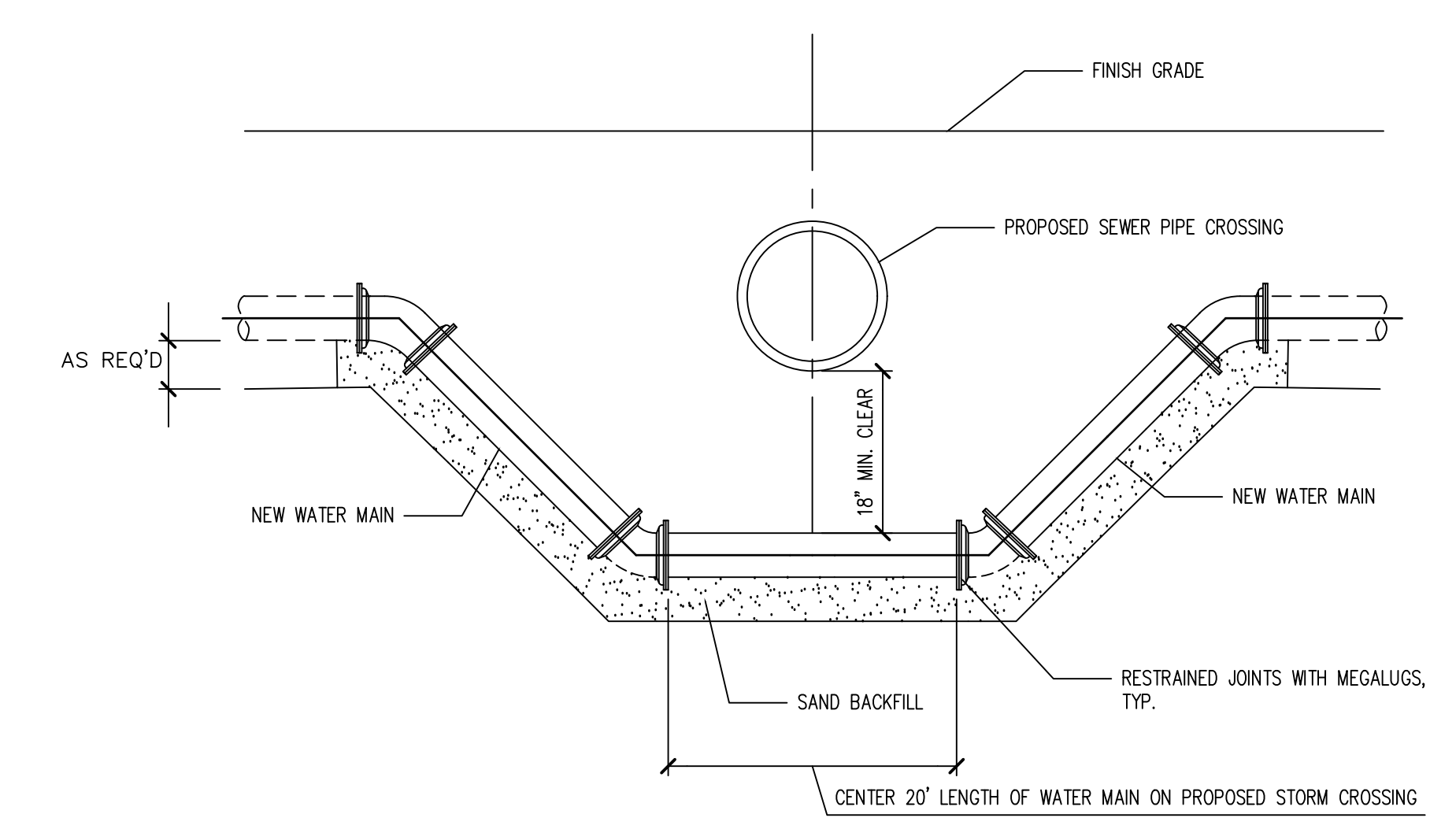
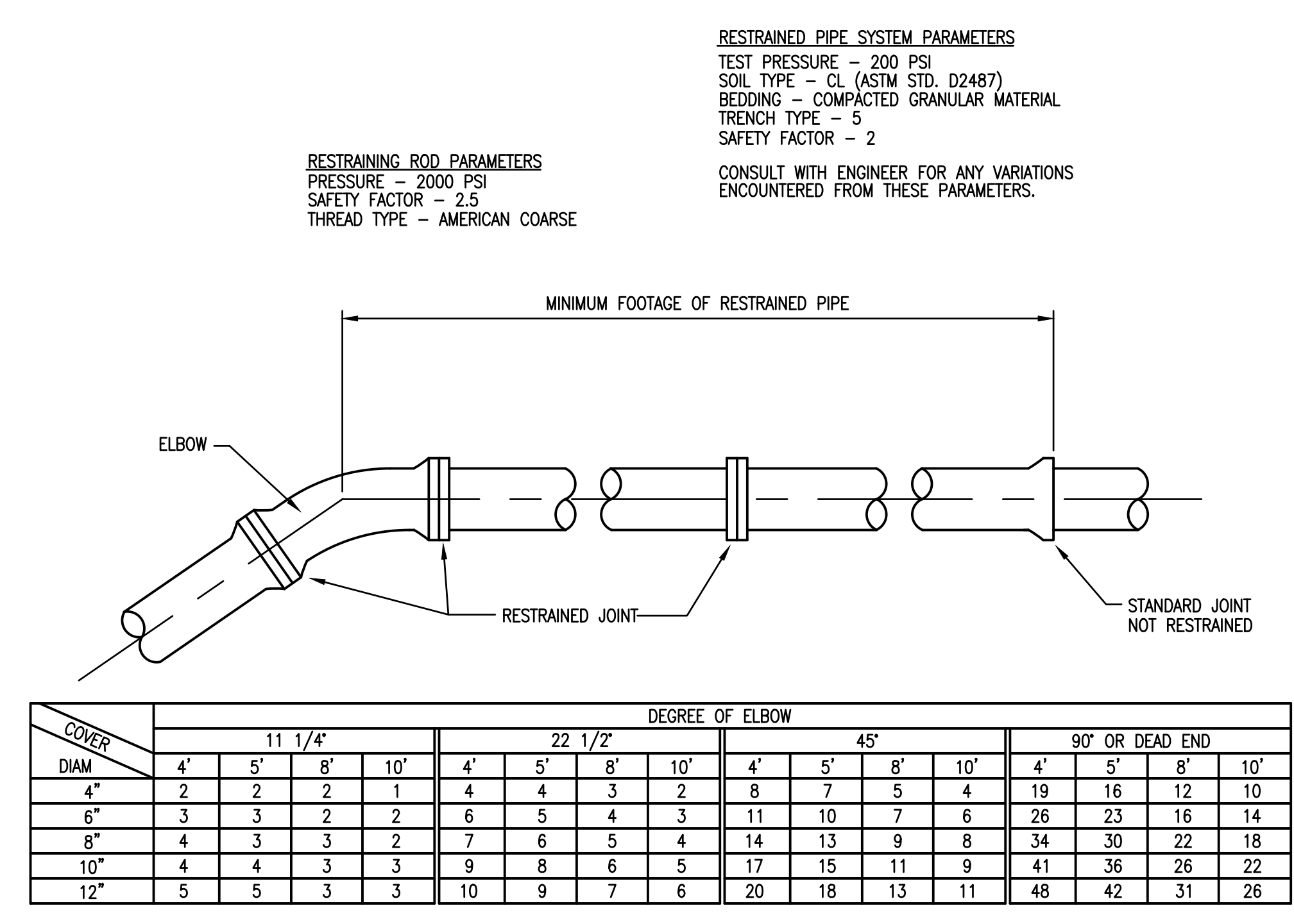
DATE: JANUARY, 2018 DRAWN BY: S. FORD  
LATEST REV: JULY, 2018 APP'D BY: E.N.

DATE	
REVISION	
NO.	
DRAWN BY: BTM	CHD: JEL
DESIGNED BY: BTM	APPROVED BY: BTM
DATE: MAY 1, 2024	
PROJECT NUMBER	2363-1096-90
DRAWING NUMBER	SD4.11
SITE DEVELOPMENT	

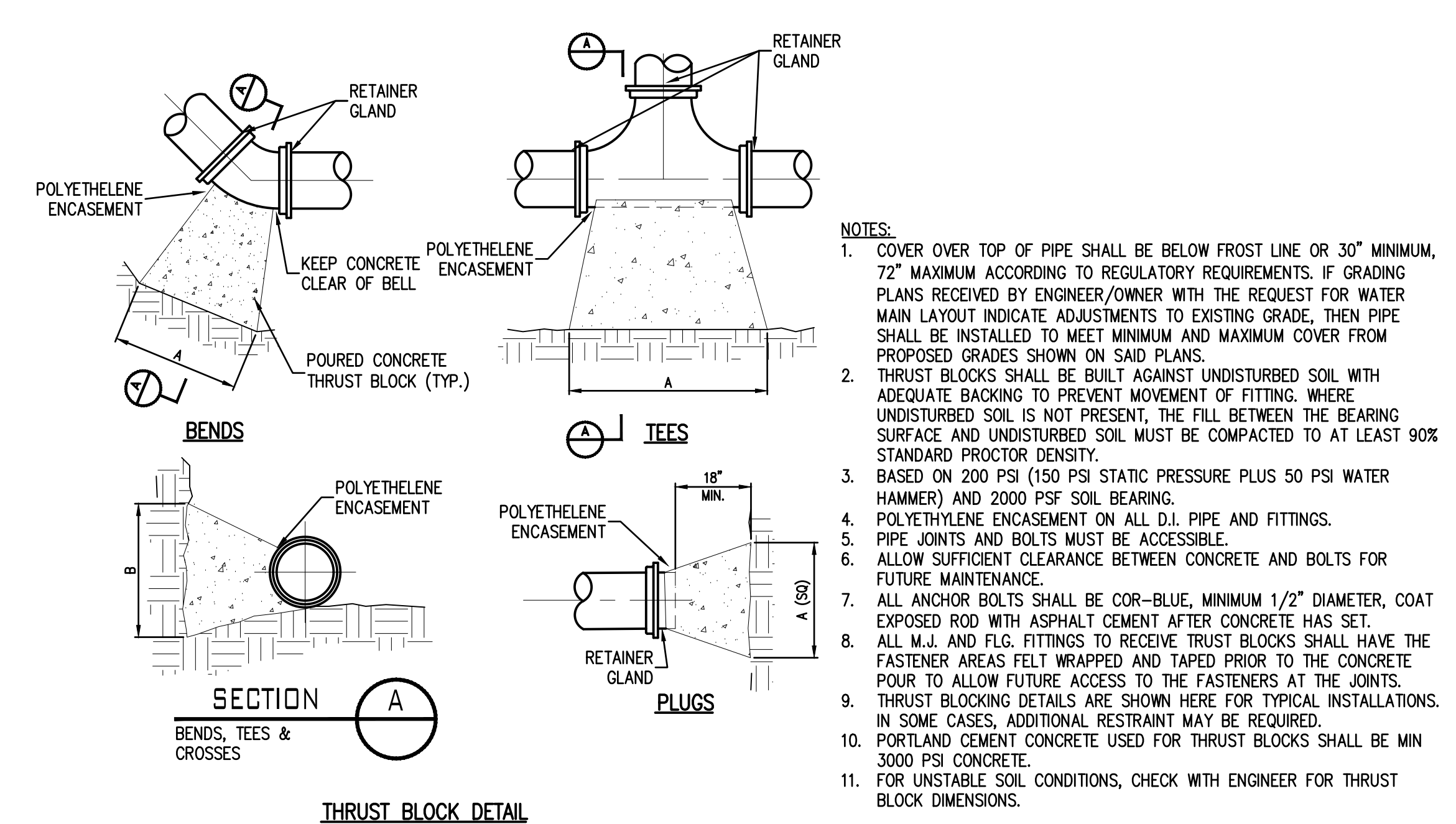
**HAMILTON COUNTY**  
**PUBLIC SAFETY CENTER**  
18291 PRESLEY DRIVE NOBLESVILLE, INDIANA



**WATER MAIN DETAILS**



**4 RESTRAINED JOINT DETAIL**  
SCALE - N.T.S.

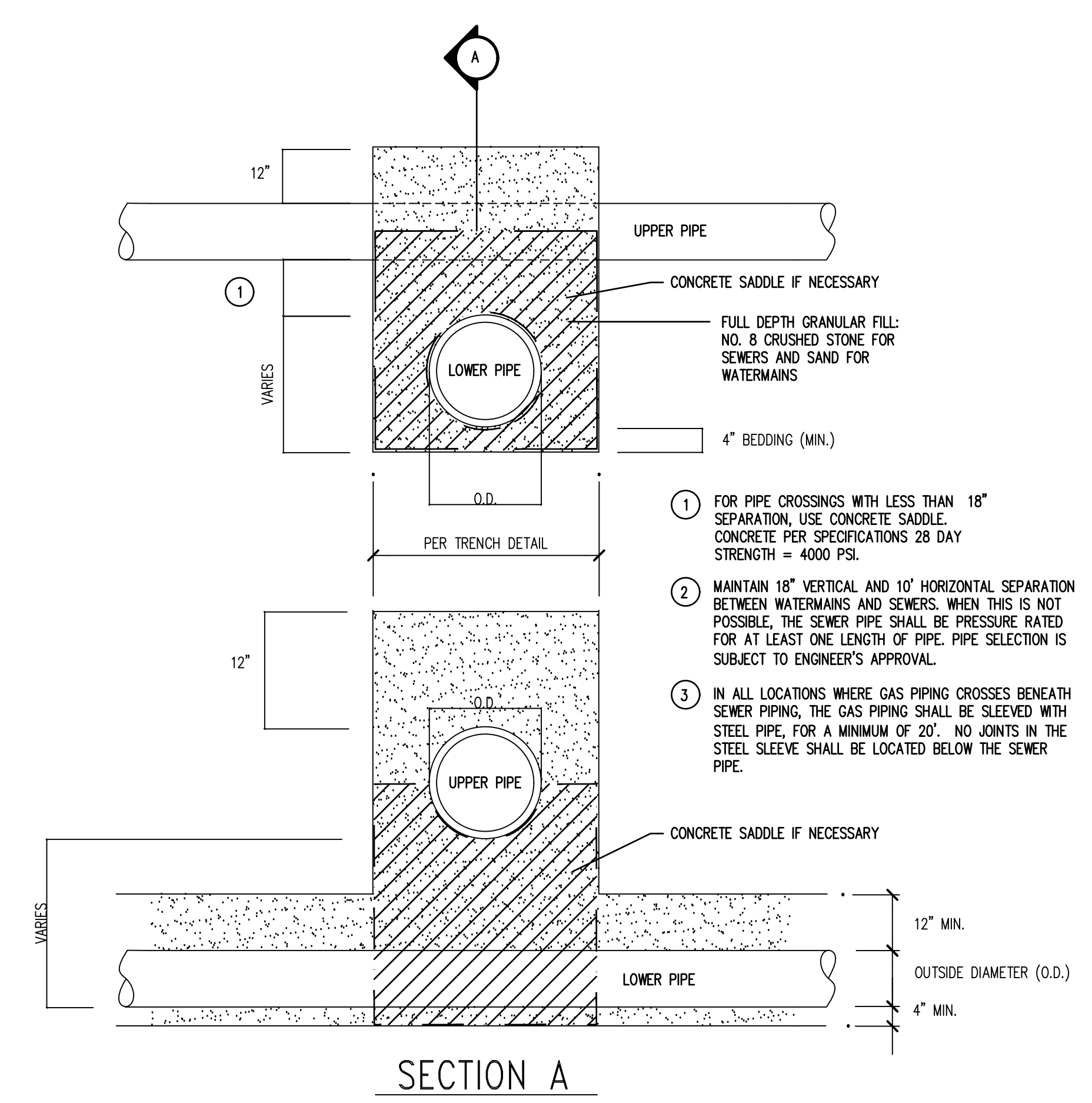


**THRUST BLOCK DETAIL**  
N.T.S.

PIPE SIZE	90 DEGREE BENDS	45 DEGREE BENDS	11.25 DEGREE BENDS	22.5 DEGREE BENDS	TEES/PLUGS
	AREA (sq ft)	AREA (sq ft)	AREA (sq ft)	AREA (sq ft)	
4	1.0	0.54	0.14	0.28	1.41
6	2.2	1.22	0.31	0.62	3.18
8	4.0	2.16	0.55	1.10	5.65
10	6.2	3.38	0.87	1.72	8.84
12	9.0	4.87	1.25	2.48	12.72
14	12.2	6.63	1.70	3.38	17.32
16	16.0	8.66	2.22	4.41	22.62
20	25.0	13.53	3.46	6.90	35.34
24	36.0	19.48	4.99	9.93	50.89

**3 HORIZONTAL THRUST BLOCK DETAIL**  
SCALE - N.T.S.

**2 WATERMAIN UNDER SEWER DETAIL**  
SCALE - N.T.S.



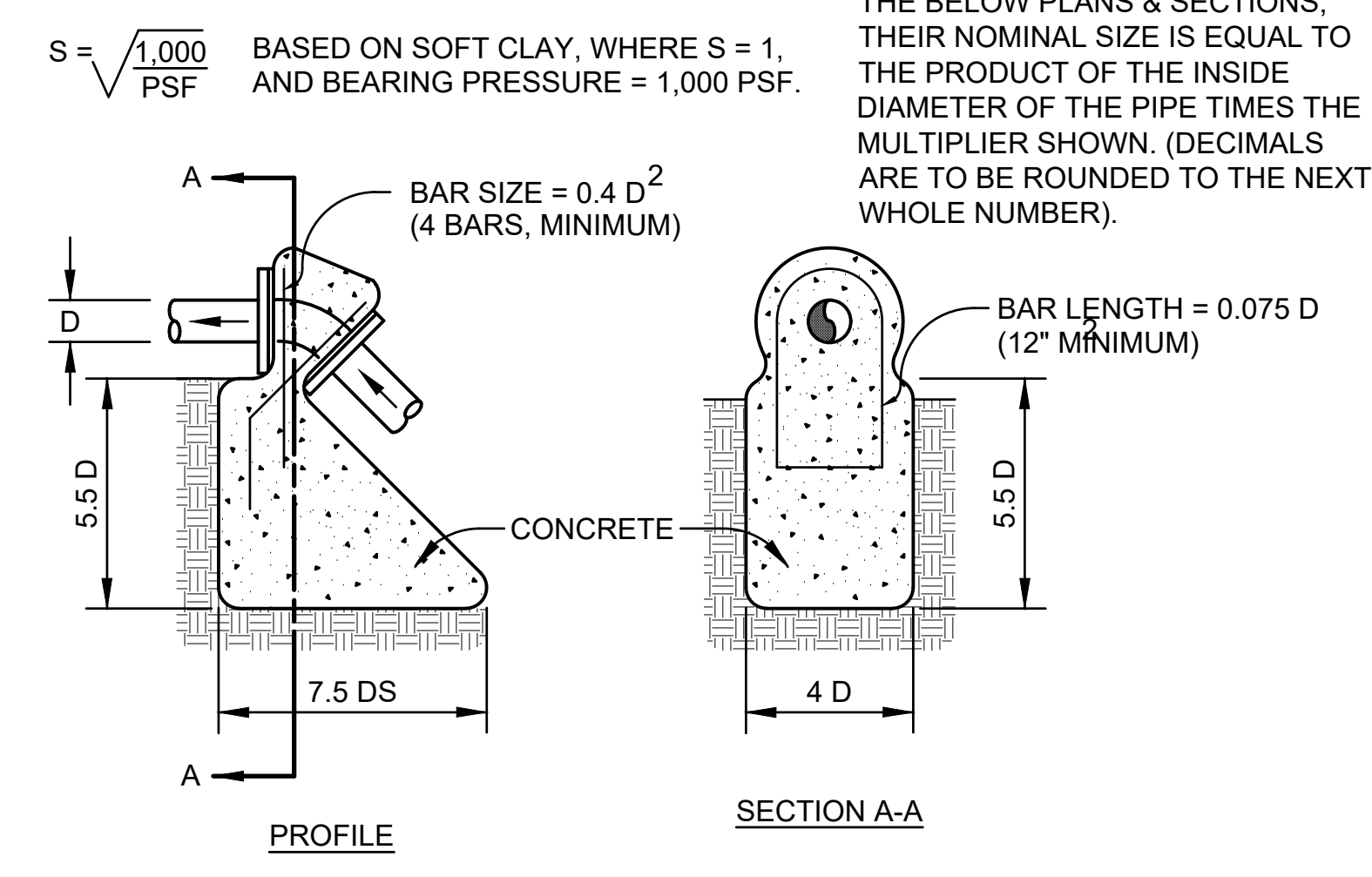
**1 UTILITY CROSSING DETAIL**  
SCALE - N.T.S.

**SOIL FACTOR TABLE**

SOIL TYPE	BRG. CAPACITY PSF	FACTOR (S)
MUCK	0	
SOFT CLAY	1,000	1.00
STIFF CLAY	3,000	.58
HARD CLAY	6,000	.41
LOOSE SAND	3,000	.58
MEDIUM COMPACT SAND	4,000	.50
VERY COMPACT SAND	6,000	.41
LOOSE GRAVEL SAND MIX	6,000	.41
MEDIUM COMPACT MIX	9,000	.33
VERY COMPACT MIX	12,000	.29

**NOTES:**

- "D" INSIDE DIAMETER OF PIPE "S" (SEE "SOIL FACTOR TABLE")
- TRENCH SIDES AND BOTTOMS ARE TO BE OF UNDISTURBED EARTH. NO FILL IS PERMITTED BEHIND THE THRUST BLOCK.
- ALL CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 2500 PSI MINIMUM.
- WITH RESPECT TO THE REINFORCING BARS SHOWN ON THE BELOW PLANS & SECTIONS, THEIR NOMINAL SIZE IS EQUAL TO THE PRODUCT OF THE INSIDE DIAMETER OF THE PIPE TIMES THE MULTIPLIER SHOWN. (DECIMALS ARE TO BE ROUNDED TO THE NEXT WHOLE NUMBER).



**5 VERTICAL THRUST BLOCK DETAIL**  
SCALE - N.T.S.

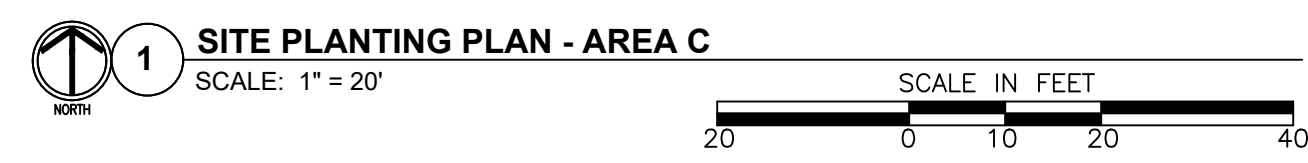
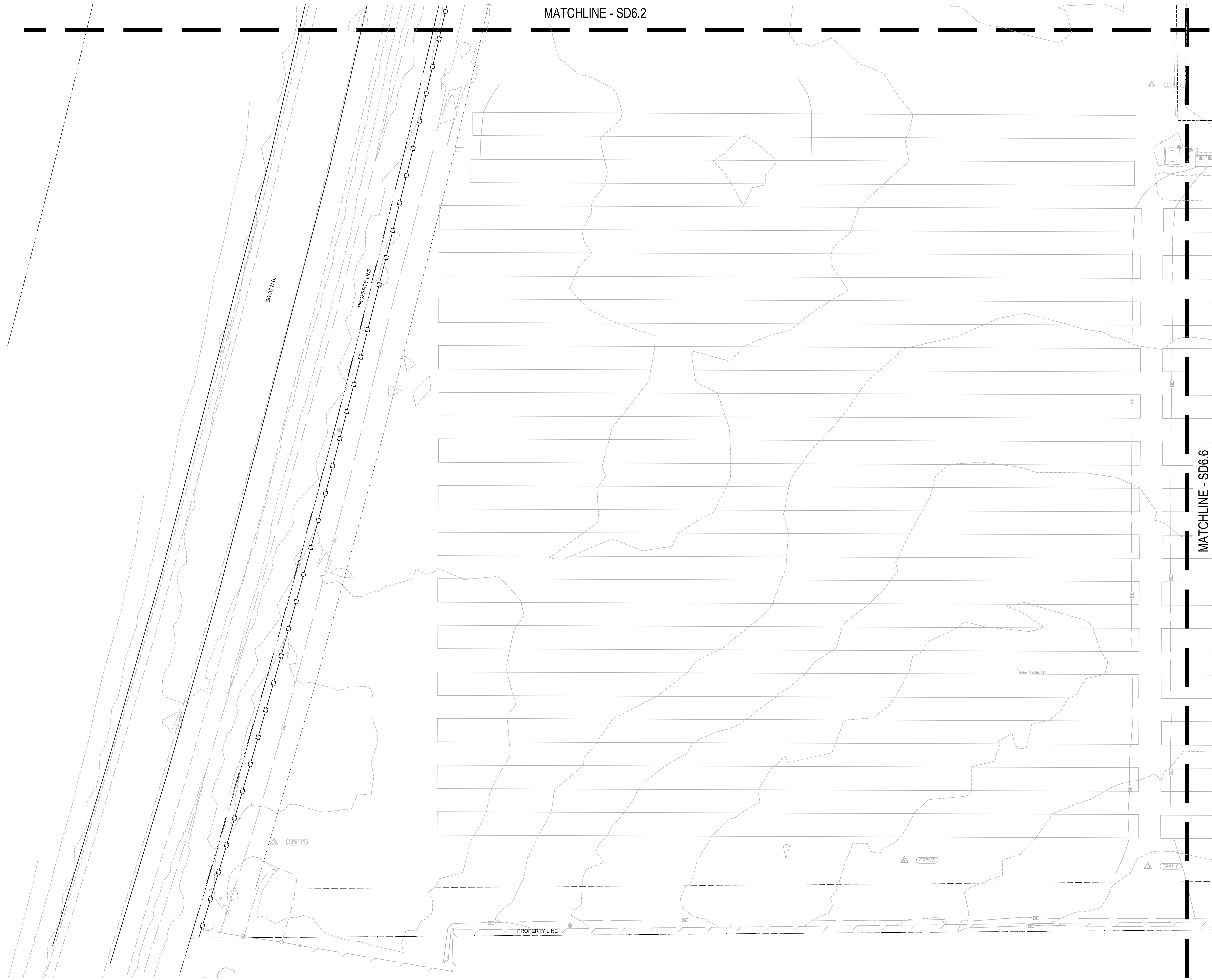




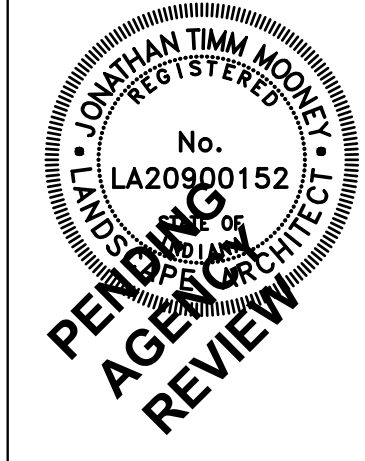
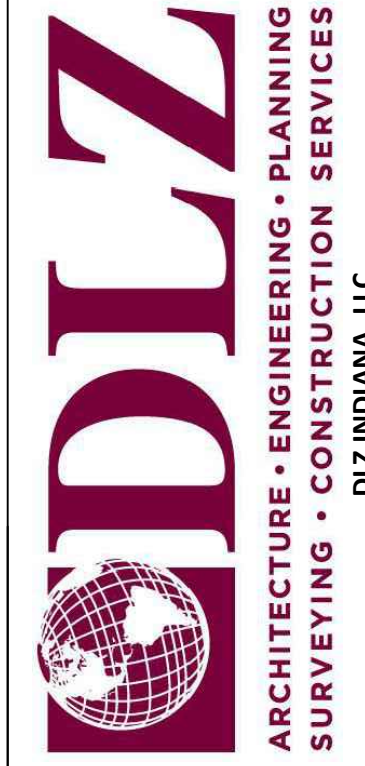
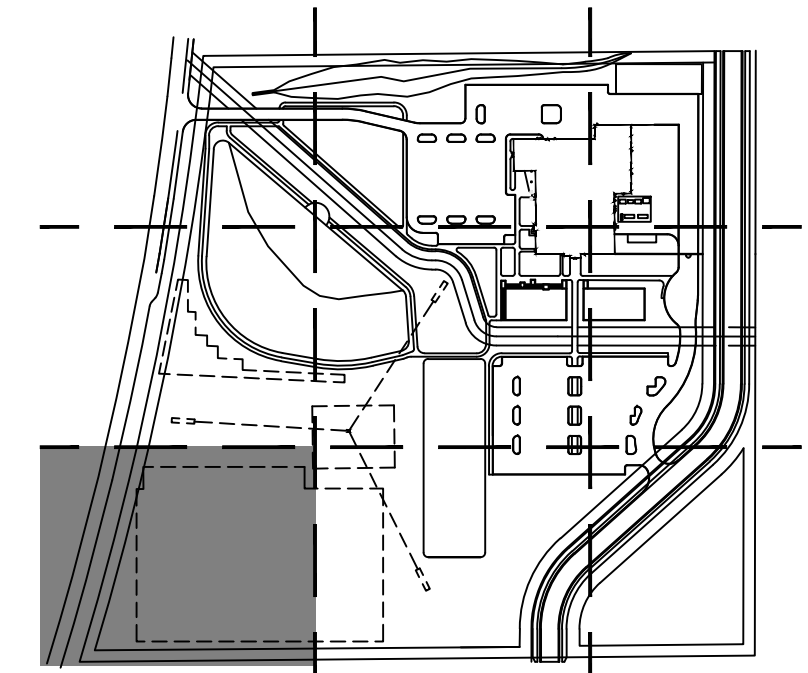




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KEY MAP



NO.	REVISION	DATE

DRAWN: JTM    CHKD: JHM  
 DESIGNED: JTM    APPROVD: JHM  
 DATE: MAY 2, 2024  
 PROJECT NUMBER: 2363-1096-90  
**HAMILTON COUNTY PUBLIC SAFETY CENTER**  
 18291 PRESLEY DRIVE NOBLESVILLE, INDIANA  
**SITE PLANTING PLAN - AREA C**  
 DRAWING NUMBER: **SD6.3**  
 SITE DEVELOPMENT

