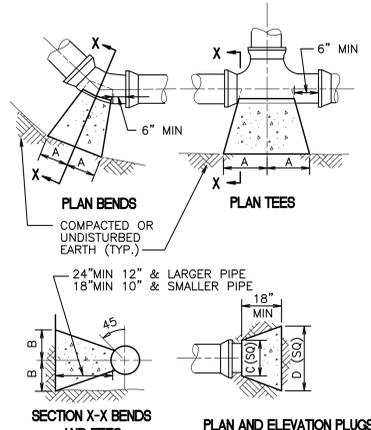
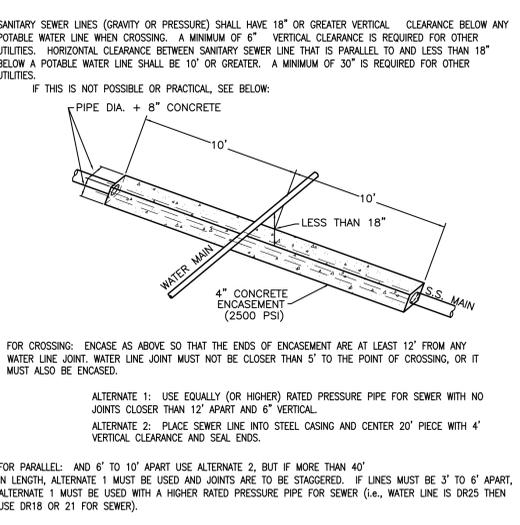
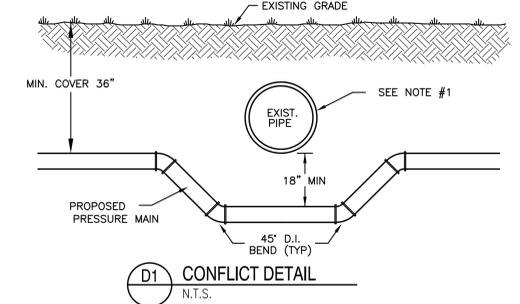
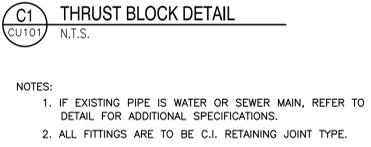


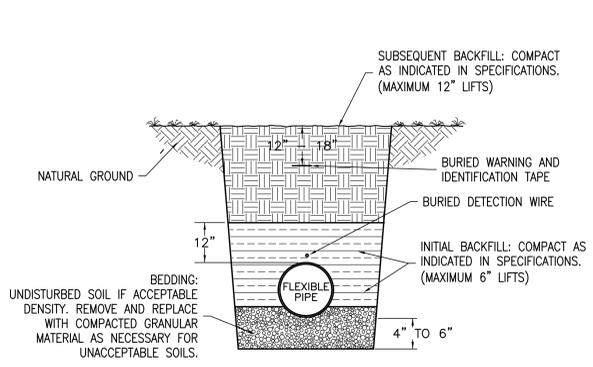
three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 one quarter inch = one foot  
 three eighths inch = one foot  
 one eighth inch = one foot  
 one eighth inch = one foot



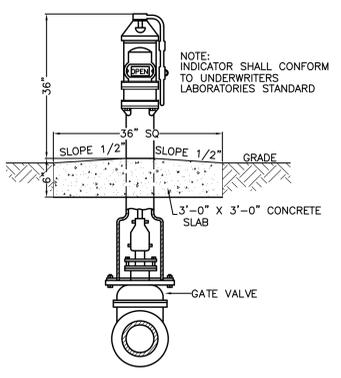
SIZE	1/4 BENDS		1/8 BENDS		1/16 BENDS		TEES		PLUGS	
	A	B	A	B	A	B	A	B	C	D
6"	16"	10"	9"	10"	6"	8"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
10"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"



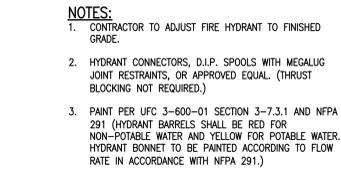
F1 SEWER-WATER SEPARATION & CLEARANCES DETAIL  
N.T.S.



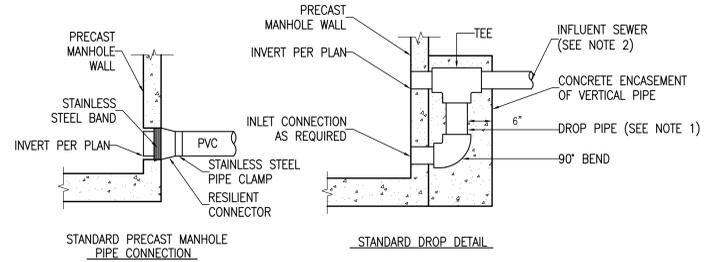
A3 FLEXIBLE PIPE BEDDING DETAIL  
N.T.S.



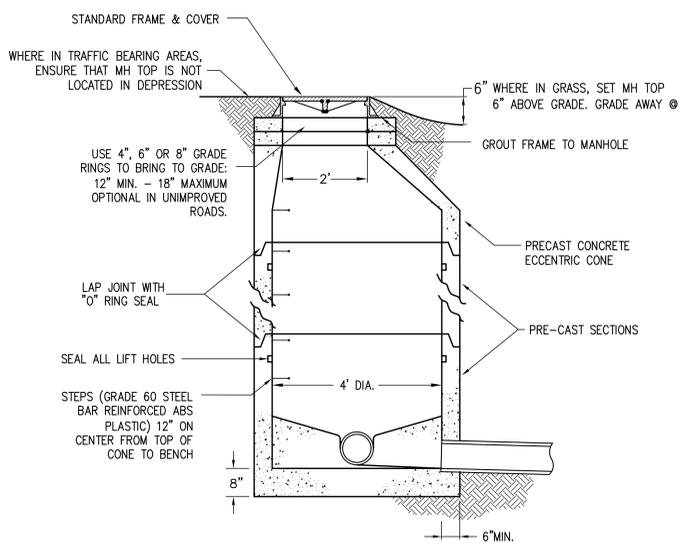
C3 POST INDICATOR VALVE DETAIL  
N.T.S.



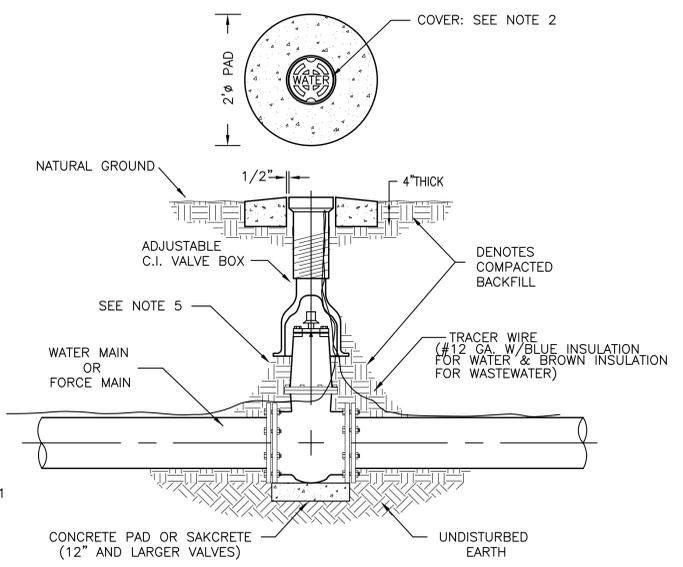
E3 TYPICAL FIRE HYDRANT INSTALLATION DETAIL  
N.T.S.



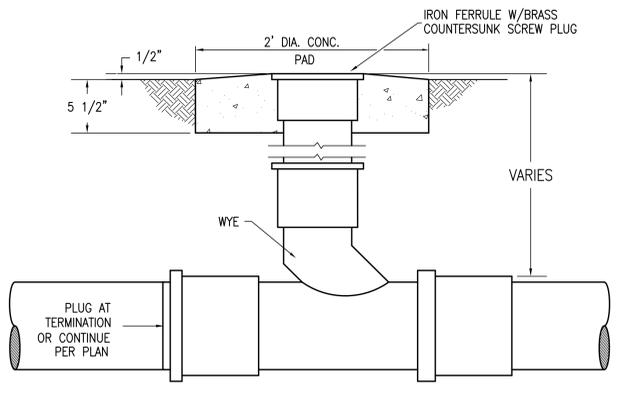
A6 SANITARY SEWER MANHOLE CONNECTIONS DETAIL  
N.T.S.



E6 SANITARY SEWER MANHOLE DETAIL  
N.T.S.



C8 TYPICAL VALVE & BOX INSTALLATION (WITHIN PROPERTY) DETAIL  
N.T.S.



E8 CLEAN-OUT DETAIL  
N.T.S.

- NOTES:
1. VALVE BOX AND BOOT SHALL BE CAST IRON.
  2. VALVE COVER SHALL BE MARKED "WATER" OR "SEWER" AS APPLICABLE.
  3. VALVE BOX TOP SHALL BE FLUSH WITH FINISHED GRADE OR 1/2" ABOVE NATURAL GROUND LEVEL.
  4. GATE VALVE SHALL BE RESILIENT SEAT WITH MECHANICAL JOINT ENDS OR APPROVED EQUAL.
  5. EARTH UNDER FLANGE OF VALVE BOX & COLLAR TO BE FIRM AND WELL TAMPED TO ENSURE AGAINST VALVE BOX SETTLING.

- NOTES:
1. DROP PIPE AND FITTINGS SHALL BE OF EQUAL SIZE AND MATERIAL AS THE INFLUENT SEWER.
  2. AN OUTSIDE DROP CONNECTION SHALL BE REQUIRED FOR ALL INFLUENT WHICH HAVE AN INVERT 2' OR MORE ABOVE THE MANHOLE INVERT.

- NOTES:
1. ALL SANITARY SEWER MANHOLES FOR THIS PROJECT SHALL BE 4' INSIDE DIAMETER.
  2. MANHOLE SHALL CONFORM TO A.S.T.M. C 478 SPECIFICATIONS.
  3. DIAMETER OF OPENING FOR PIPE SHALL BE 1" LARGER DIAMETER THAN BELL OF THE PIPE BEING USED.
  4. JOINTING COMPOUND SHALL BE RAM NECK, TYPE 1, ROPE FORM PLASTIC GASKET OR EQUAL.
  5. ALL PATCHING TO BE DONE WITH HYDRAULIC CEMENT. NO MORTAR REPAIRS PERMITTED.
  6. CONCRETE TO BE 2500 P.S.I., REINFORCING STEEL TO BE A.S.T.M. A 615 GRADE 60.
  7. SEAL WITH A-LOK, KORE-N-SEAL OR LOCK-JOINT PER SPECIFICATIONS.
  8. CAST IN PLACE MANHOLE MAY BE ALLOWED IN PRE-APPROVED LOCATIONS.
  9. ALL NEW LINE TIE-INS SHALL BE CORE-DRILLED WITH RUBBER BOOT ADDED.
  10. BITUMASTIC COATING SHALL BE FACTORY APPLIED.
  11. FRAME AND COVER SHALL BE VULCAN 1337-2 (ASTM SPEC. A-48, CLASS 30 CAST IRON) OR APPROVED EQUAL. REFER TO SPECIFICATIONS.
  12. ALL MANHOLE TOPS SHALL BE ADJUSTED TO WITHIN 0.1' OF FINISH GRADE.

<b>CONSULTANTS:</b> CIVIL: KENNETH HORNE & ASSOCIATES 7201 NORTH 9TH AVENUE, STE. 6 PENSACOLA, FLORIDA 32504 PH: (850) 471-9005 FX: (850) 471-0093 LANDSCAPE ARCHITECT: CSA GROUP, INC. 6300 PICCADILLY SQUARE DRIVE MOBILE, ALABAMA 36609 PH: (251) 344-4023 FX: (251) 344-4052		<b>COMM/DES:</b> SCHMIDT CONSULTING GROUP, INC. 40 S. PALAFOX PLACE, STE. 300 PENSACOLA, FLORIDA 32502 PH: (850) 438-0050 FX: (850) 432-8631		<b>SURVEYORS:</b> KCI TECHNOLOGIES, INC. 10401 HIGHLAND MANOR DRIVE, SUITE 120 TAMPA, FLORIDA 33610 PH: (813) 740-2300		<b>ARCHITECT/ENGINEERS:</b>  BES DESIGN/BUILD, LLC 766 Middle St, Fairhope, AL 36532 Phone: 251.990.5778 Fax: 251.990.3716		Drawing Title <b>UTILITY DETAILS</b> Approved Project Director		Project Title <b>PANAMA CITY JOINT OUTPATIENT CLINIC VA GULF COAST HEALTH CARE</b>		Project Number <b>520-326</b>		Office of Construction and Facilities Management	
Date <b>SEPTEMBER 5, 2012</b>		Checked <b>KCH</b>		Drawn <b>LFR</b>		Location <b>PANAMA CITY, FLORIDA</b>		Drawing Number <b>CU501</b>		Dwg 13 of 21					

FINAL SUBMISSION