RECORD SURVEY

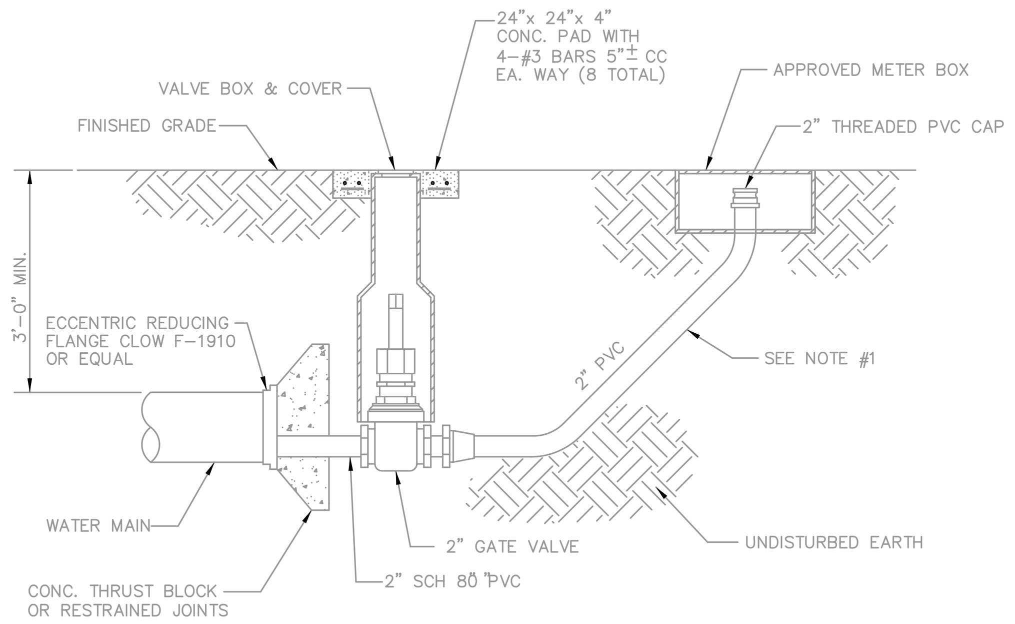
MSB SURVEYING, INC. GEOMATICS
40 SARASOTA CENTER BOULEVARD, UNIT H
SARASOTA, FLORIDA 34240
PHONE NO.: (941) 341-9935
CERTIFICATE OF AUTHORIZATION NO. L.B. 7044

REPORT OF SURVEY

ACCURACY:
VERTICAL; FIELD–MEASURED CONTROL FOR VERTICAL DATA SHOWN HEREON ARE BASED ON A LEVEL LOOP. CLOSURE IN FEET EXCEEDS A STANDARD OF PLUS OR MINUS 0.05 TIMES THE SQUARE ROOT OF THE DISTANCE IN MILES.

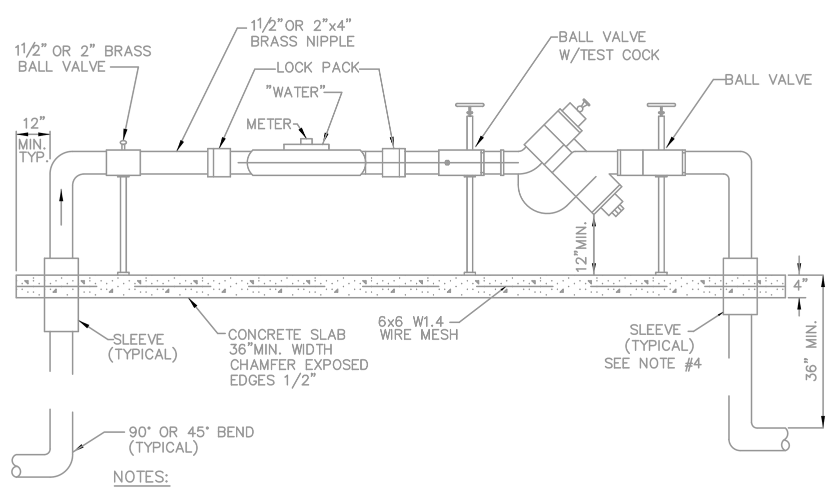
DATA SOURCE:
1. CONSTRUCTION PLANS IN AUTOCAD FORMAT FURNISHED BY CONSUL–TECH DEVELOPMENT SERVICES INC..
2. BOUNDARY SURVEY BY MSB SURVEYING INC..
3. NO OTHER INFORMATION WAS RESEARCHED OR FURNISHED.

NOTES:
1. THIS MAP REPRESENTS A UTILITY RECORD SURVEY RELATIVE TO THE CONSTRUCTION PLAN FOR POSITANO, BY CONSUL–TECH DEVELOPMENT SERVICES, INC. RECORD DATA IS OVERLAID ONTO CONSTRUCTION PLANS IN AUTOCAD FORMAT. ALL GRAY SCALE DATA IS FOR REFERENCE ONLY & IS NOT A PART OF THIS SURVEY.
2. ELEVATIONS SHOWN HEREON ARE IN FEET AND DECIMALS REFERENCED TO NGVD 1929 AND ARE BASED ON DNR (SURVEY MARK) MONUMENT R–62A (RESET 1985) PUBLISHED ELEVATION=8.82 N.G.V.D. 1929.
3. UTILITY RECORD SURVEY IS NOT VALID UNLESS ALL SHEETS AS DICTATED BY THE COVER SHEET ARE PRESENT.



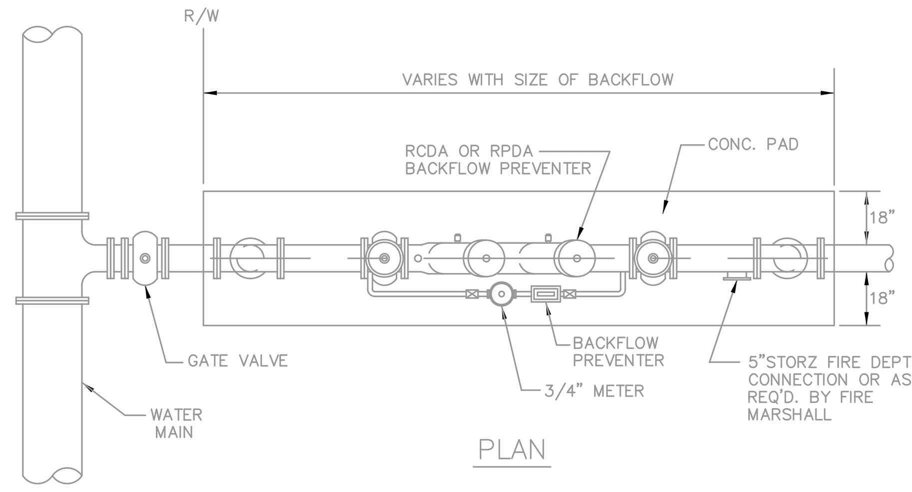
NOTES:
1. THIS DETAIL TO BE USED FOR ALL WATER MAINS 10" DIA. OR SMALLER

END OF LINE 2" BLOW–OFF ASSEMBLY

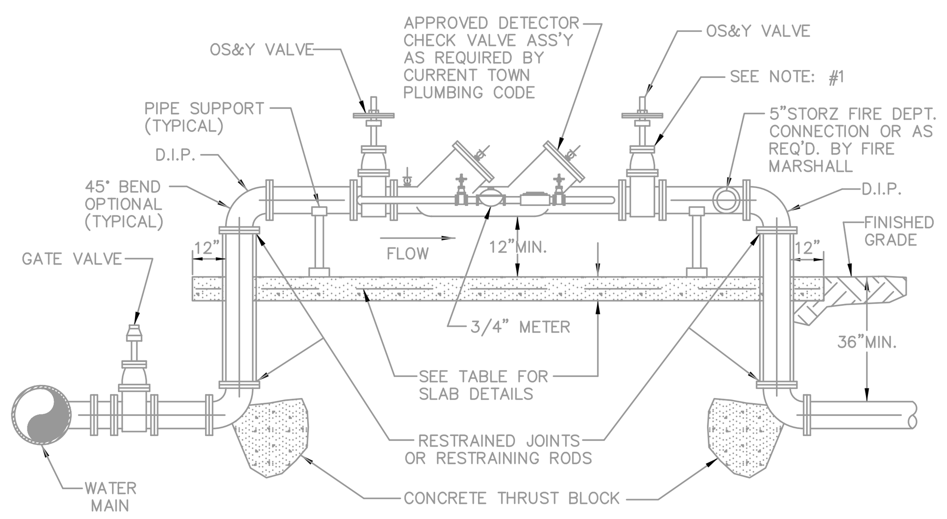


NOTES:
1. BOTTOM OF BACKFLOW DEVICE MUST BE 18" ABOVE FINISHED GRADE.
2. BACKFLOW DEVICE MUST BE INSTALLED DOWNSTREAM OF METER, AS CLOSE TO METER AS POSSIBLE.
3. COPPER PIPE TYPE "L" OR "K" OR BRASS PIPE MINIMUM SCHEDULE 40 SHALL BE USED TO A MINIMUM DEPTH OF 36" BELOW GRADE.
4. PIPES PASSING THROUGH OR ENCASED IN CONCRETE MUST BE PROPERLY PROTECTED AND SLEEVED.
5. THE SYSTEM MUST MEET ALL REQUIREMENTS OF THE TOWN OF LONGBOAT KEY PLUMBING CODE.
6. ALL PIPING FROM BACKFLOW DEVICE TO THE FIRST ATMOSPHERIC OPENING OR TO EACH BRANCH VALVE, MUST BE COLOR CODED BLUE.
7. FOR USE WHERE BACKFLOW PREVENTER IS REQUIRED WITH METER.

1–1/2" & 2" METER & BACKFLOW PREVENTOR DETAIL



PLAN



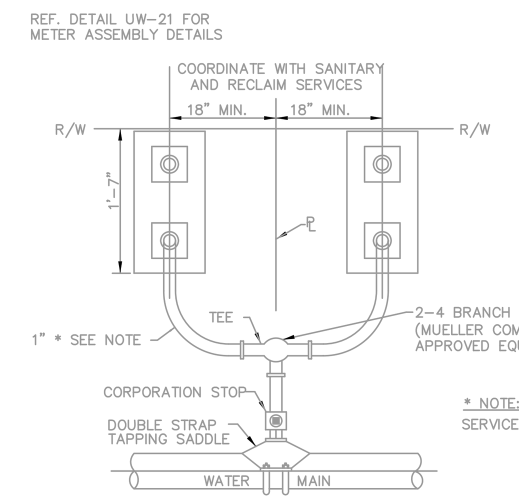
SECTION

NOTES:
1. WHEN PRESSURE TESTING FIRE LINE, TEST AGAINST DOWNSTREAM GATE VALVE.
2. THE SYSTEM MUST MEET ALL REQUIREMENTS OF THE TOWN OF LONGBOAT KEY PLUMBING CODE AND THE TOWN OF LONGBOAT KEY COUNTY FIRE MARSHALL REQUIREMENTS.
3. PAINT BACKFLOW ASSEMBLY RED.
4. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE 1/2" CHAMFER.

SLAB DETAILS

PIPE DIAMETER	SLAB THICKNESS	REINFORCEMENT
3" TO 10"	4"	6x6 W1.4 WIRE MESH
12" TO 18"	4"	6x6 W3 WIRE MESH

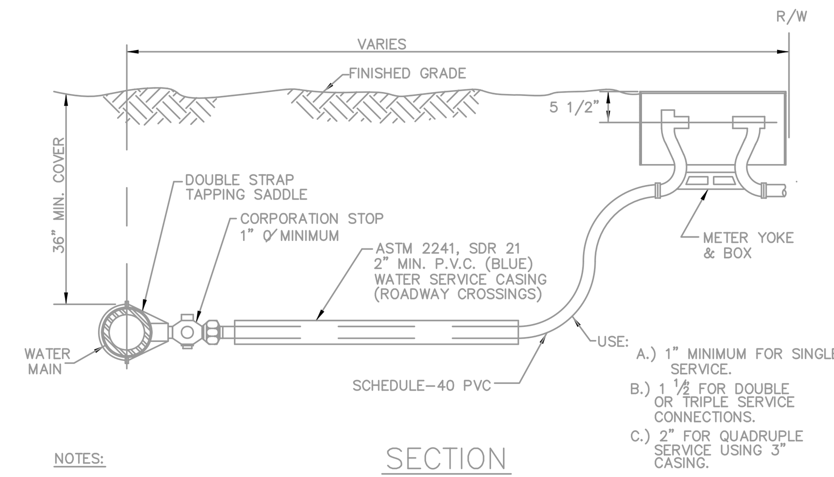
3" AND ABOVE FIRE LINES BACKFLOW PREVENTER



PLAN

NOTES:
1.) METER BOXES & YOKE ARE TO BE INSTALLED BY THE INFRASTRUCTURE CONTRACTOR AND SHALL NOT BE SET IN DRAINAGE SWALES, EASEMENTS OR SIDEWALKS.
2.) SERVICES TO BE MARKED IN CURB WITH A BLUE DISC THAT HAS THE FOOTAGE FROM THE BACK OF CURB TO THE CENTER OF THE METER BOX OR IF NO CURB, A BLUE DISC IN THE EDGE OF PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE CENTER OF THE METER BOX.

* NOTE:
SERVICE CONNECTION SHALL BE SCHEDULE–40 PVC



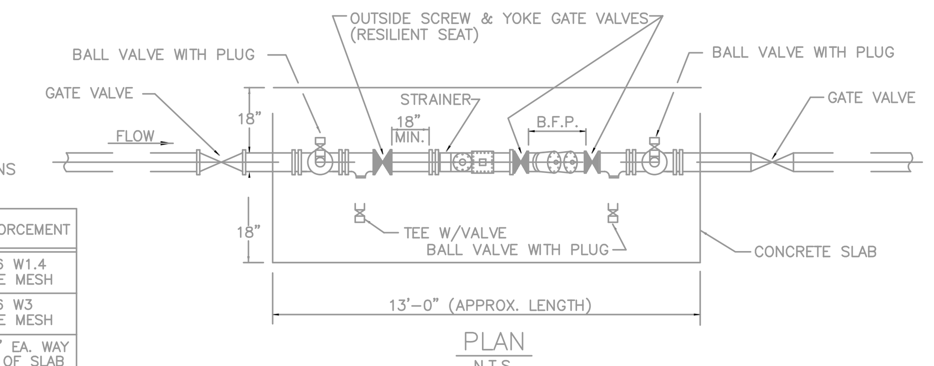
SECTION

NOTES:
1. ALL SERVICE TAPS TO BE LOCATED IN FIELD. TAPS SHALL BE NO CLOSER THAN 2'–0" STAGGERED INTERVALS OR WITHIN 2'–0" FROM BELL OR SPIGOT ENDS.
2. METER YOKE AND BOX TO BE FURNISHED AND INSTALLED BY THE INFRASTRUCTURE CONTRACTOR.

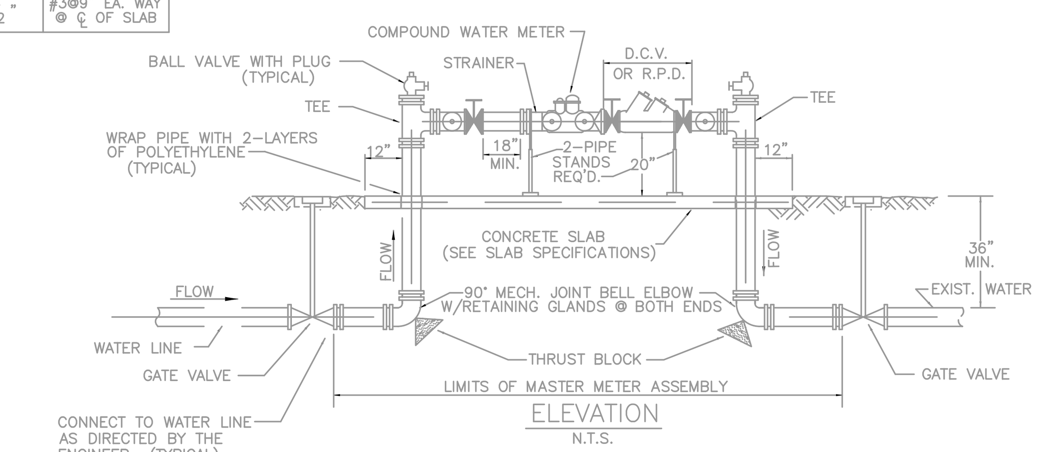
TYPICAL WATER SERVICE CONNECTION

SLAB SPECIFICATIONS

PIPE DIAMETER	SLAB THICKNESS	REINFORCEMENT
3" TO 10"	4"	6x6 W1.4 WIRE MESH
12" TO 18"	4"	6x6 W3 WIRE MESH
20" TO 36"	5 ½ "	#3@9" EA. WAY @ ℄ OF SLAB
42" TO 48"	7 ½ "	#3@9" EA. WAY @ ℄ OF SLAB



PLAN
N.T.S.

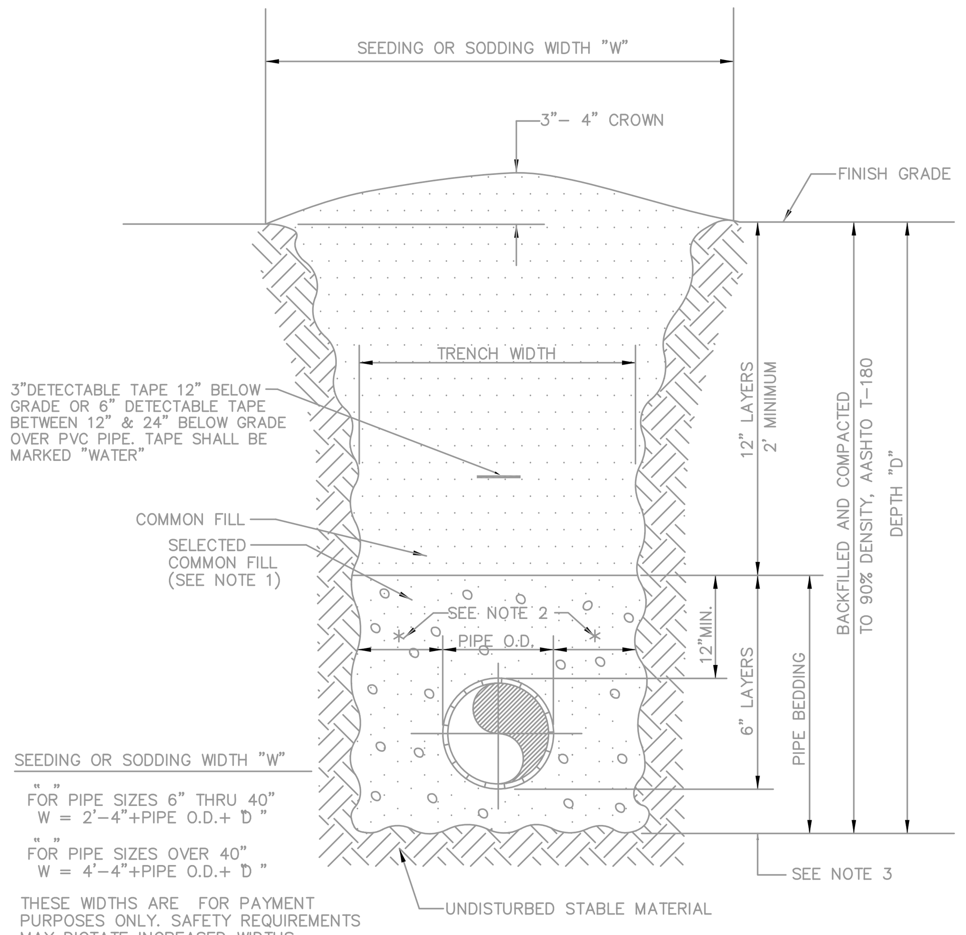


ELEVATION
N.T.S.

NOTES:
1. ABOVE GROUND PIPING TO BE PAINTED BLUE.
2. DEVICES MUST BE INSTALLED LEVEL.
3. ALL JOINTS SHALL BE FLANGED UNLESS OTHERWISE NOTED.
4. ▶◀ DENOTES OUTSIDE SCREW & YOKE GATE VALVE.
5. ALL BELOW GROUND D.I. PIPE AND FITTINGS SHALL BE POLYETHELENE WRAPPED.
6. TEE BETWEEN METER AND BACKFLOW IS REQUIRED ON TURBINE METERS. TEE IS NOT REQUIRED ON COMPOUND METERS.
7. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE 1/2" CHAMFER.

3" AND ABOVE MASTER METER DETAIL

NOTES:
1.) USE OF TYPE A–2 AND A–3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
2.) 10" MAX. FOR PIPE DIAMETER LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.
3.) 4" MAX. FOR PIPE 16" DIAMETER & LESS; 6" MAX. FOR PIPE 18" TO 36" DIAMETER; AND 9" MAX FOR PIPE 42" DIAMETER AND LARGER.
4.) INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.



SEEDING OR SODDING WIDTH "W"
" " FOR PIPE SIZES 6" THRU 40" W = 2'–4"+PIPE O.D.+ D "
" " FOR PIPE SIZES OVER 40" W = 4'–4"+PIPE O.D.+ D "
THESE WIDTHS ARE FOR PAYMENT PURPOSES ONLY. SAFETY REQUIREMENTS MAY DICTATE INCREASED WIDTHS.

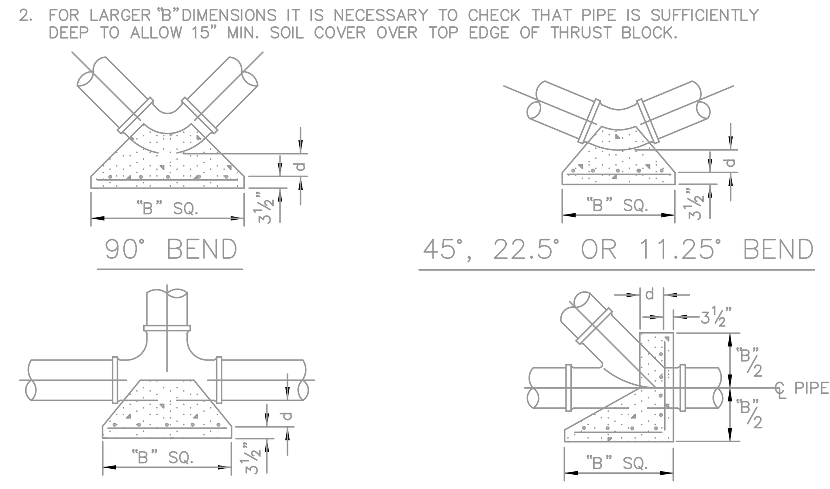
TRENCH DETAIL TYPE A–1 PIPE BEDDING UNIMPROVED SURFACE

THRUST BLOCK DIMENSIONS B ft. x d inches

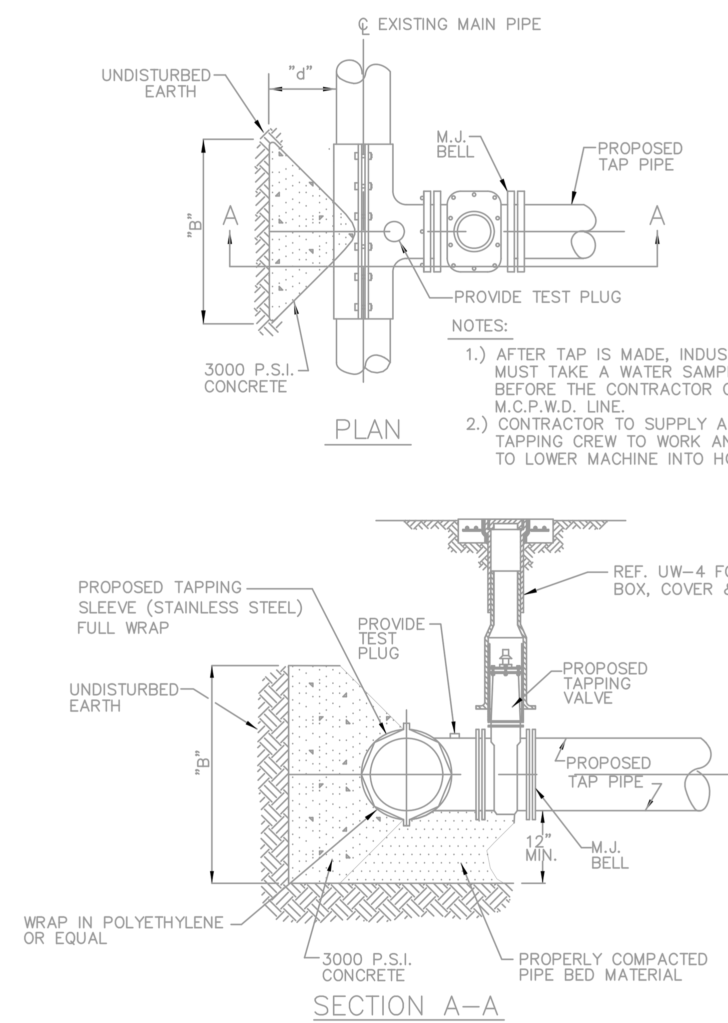
PIPE SIZE (IN.)	90°BEND B	90°BEND d	45°BEND B	45°BEND d	22.5°BEND B	22.5°BEND d	11.25°BEND B	11.25°BEND d	DEAD END & TEE B	DEAD END & TEE d	45° WYE B	45° WYE d
4	1.3	3½	1.0	3½	0.7	3½	0.6	3½	1.1	3½	1.0	3½
6	1.9	4½	1.5	3¾	1.1	3½	0.8	3½	1.6	4	1.5	3¾
8	2.6	6¼	1.9	4¾	1.4	3½	1.0	3½	2.2	5½	1.8	4½
10	3.2	7¾	2.4	6	1.7	4¼	1.2	3½	2.7	6½	2.3	5½
12	3.8	9¼	2.8	6¾	2.0	5	1.5	3¾	3.2	7¾	2.7	6½
14	4.5	11	3.3	8	2.4	6	1.7	4¼	3.8	9¼	3.2	7¾
16	5.1	12¼	3.8	9¼	2.7	6½	1.9	4¾	4.3	10½	3.6	8¾
18	5.7	13¾	4.2	10¼	3.0	7¼	2.2	5½	4.8	11¾	4.1	10
20	6.4	15½	4.7	11½	3.4	8¼	2.4	6	5.4	13	4.5	11
24	7.6	18¼	5.6	13½	4.0	9¾	2.9	7	6.4	15½	5.4	13
30	9.5	23	7.0	17	5.0	12	3.6	8¾	8.0	19¼	6.7	16
36	11.4	27½	8.4	20¼	6.0	14½	4.3	10½	9.6	23	8.1	19½

REINFORCEMENT MAT SCHEDULE
FOR DIM. "B" BETWEEN 5.75' & 11.5' USE #4 @ 8" EACH WAY
FOR DIM. "B" LESS THAN 5.75' USE #3 @ 8" EACH WAY

NOTES:
1. THIS TABLE IS BASED ON WATER PRESSURE=180 PSI WITH AN ALLOWABLE SOIL BEARING PRESSURE=2000 PSF, CONCRETE STRENGTH fc=3000 PSI, REINFORCEMENT fy=60.0 KSI THRUST BLOCK CAST AGAINST FIRM UNDISTURBED OR COMPACTED SOIL.
2. FOR LARGER "B" DIMENSIONS IT IS NECESSARY TO CHECK THAT PIPE IS SUFFICIENTLY DEEP TO ALLOW 15" MIN. SOIL COVER OVER TOP EDGE OF THRUST BLOCK.



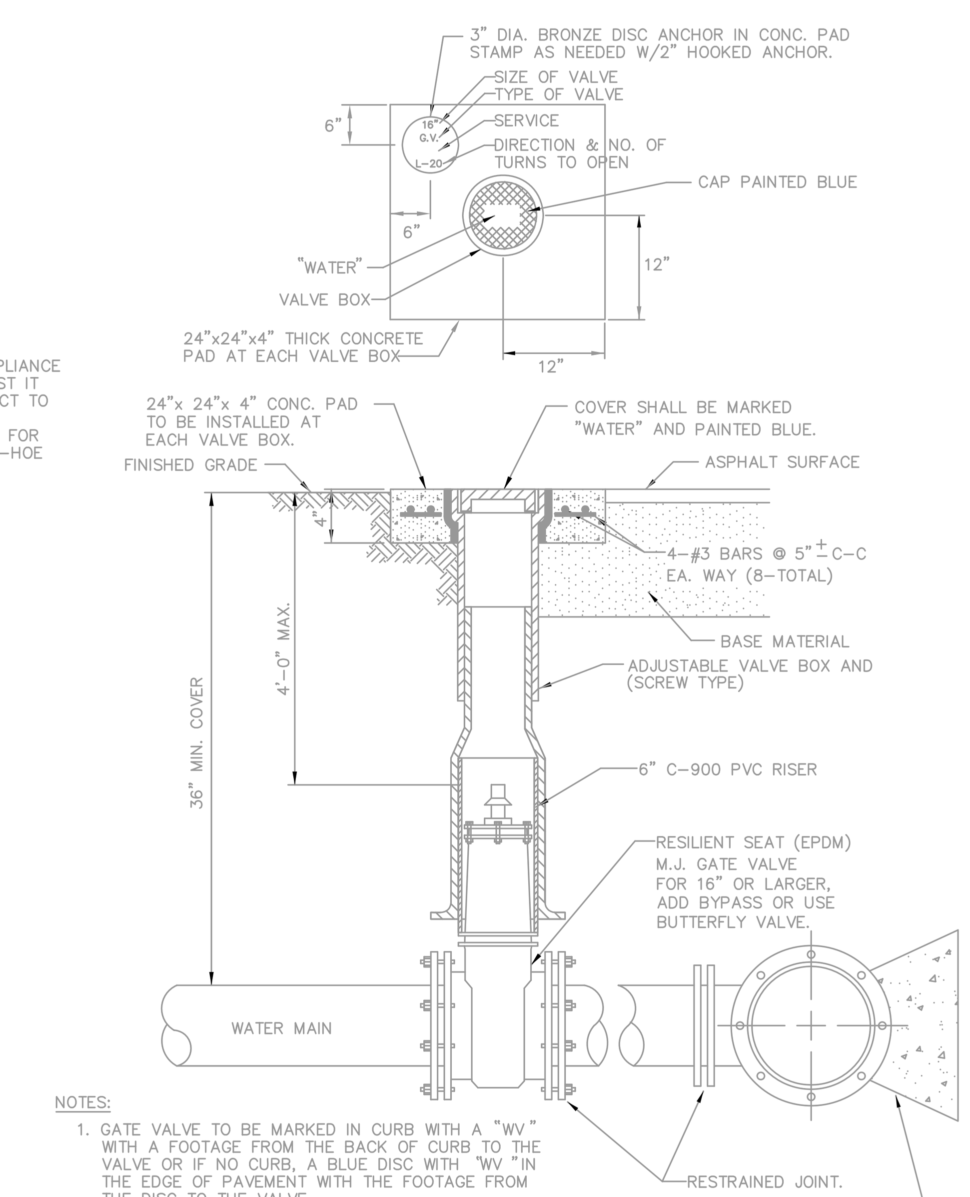
THRUST BLOCK DETAILS



NOTES:
1.) AFTER TAP IS MADE, INDUSTRIAL COMPLIANCE MUST TAKE A WATER SAMPLE AND TEST IT BEFORE THE CONTRACTOR CAN CONNECT TO M.C.P.W.D. LINE.
2.) CONTRACTOR TO SUPPLY A DRY HOLE FOR TAPPING CREW TO WORK AND A BACK–HOE TO LOWER MACHINE INTO HOLE.

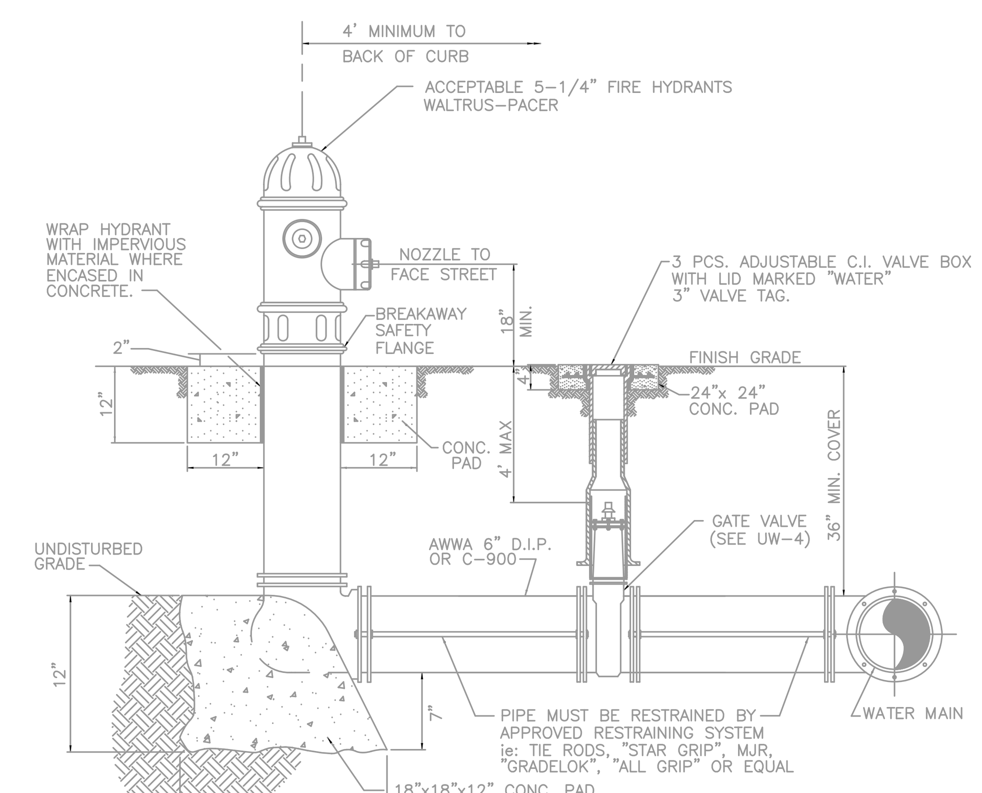
NOTES:
1.) NO CUTS SHALL BE MADE BEFORE:
(A) A TEST OF 180 P.S.I. FOR 60 MINUTES IS MADE.
(B) ALL FITTINGS TO BE WRAPPED WITH 20 MIL VISQUEEN AT THRUST BLOCK.
(C) ALL TAPS TO BE MADE BY M.C.P.W.D. AND MATERIAL TO BE FURNISHED BY THE INFRASTRUCTURE CONTRACTOR.
2.) ALL TAPS MUST BE OF A SMALLER SIZE THAN THE MAIN BEING TAPPED & PLACED NO CLOSER THAN 30" OR A DISTANCE EQUAL TO (1) MAIN PIPE DIAMETER PLUS (2) TAP PIPE DIAMETERS (WHICHEVER IS LARGER) FROM A JOINT OR FITTING.

TAPPING SLEEVE & VALVE BLOCKING DETAIL



NOTES:
1. GATE VALVE TO BE MARKED IN CURB WITH A "WV" WITH A FOOTAGE FROM THE BACK OF CURB TO THE VALVE OR IF NO CURB, A BLUE DISC WITH "WV" IN THE EDGE OF PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE VALVE.
2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS ESTABLISHED IN THE FIELD.
3. WATER VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS.
4. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".

GATE VALVE, BOX, COVER AND TAG



NOTES:
1. WEEPHOLES TO BE PLUGGED WITH BRASS PLUGS.
2. FIRE HYDRANTS SHALL BE A MINIMUM OF 6'–0" OFF EDGE OF PAVEMENT AND 10'–0" MAX. FROM BACK OF CURB WHERE POSSIBLE AND WHERE SIDEWALK IS TO BE INSTALLED, SHALL BE LOCATED BETWEEN THE SIDEWALK AND EDGE OF ROAD.
3. HYDRANTS SHALL BE PAINTED SAFETY YELLOW. HYDRANT SHALL BE ALL CAST IRON CONSTRUCTION.
4. PAY ITEMS FOR FIRE HYDRANT ASSEMBLIES SHALL INCLUDE HYDRANT, VALVE, PIPING, MAINLINE TEE & HARNESSING, VALVE BOX & CONCRETE ENCASEMENTS.
5. FIRE HYDRANTS SHALL BE PREFERABLY PLACED SO THAT STORM WATER FLOWS AWAY FROM & NOT TOWARDS THE HYDRANT.
6. FIRE HYDRANTS SHALL BE CONSTRUCTED WITH "GROUND LINE" SET TO FINISHED GRADES AS ESTABLISHED IN THE FIELD. NORMAL BURY IS 3 FEET OF COVER FOR WATER LINES. IF EXTENSIONS ARE REQUIRED, THE COST SHALL BE INCLUDED IN THE PRICE BID.
7. FIRE HYDRANTS MAY BE CONSTRUCTED WITH "GRADELOK" OFFSET FITTING.
8. RAISED REFLECTIVE PAVEMENT MARKER (BLUE) SHALL BE INSTALLED AT CENTERLINE OF PAVEMENT ADJACENT TO EACH HYDRANT.
9. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE 1/2" CHAMFER.

TYPICAL FIRE HYDRANT ASSEMBLY

DATE	REVISIONS:
1 9/22/03	REVISE PER TOWN OF LONGBOAT KEY PUBLIC WORKS REVIEW
2 06/14/04	REVISED PER OWNERS COMMENTS
3 06/14/04	ISSUED FOR CONSTRUCTION
4	
5	
6	

POSITANO
Project No. 03020440
LONGBOAT KEY, FLORIDA
SECTION 36, TOWNSHIP 35 S., RANGE 16 E.

WATER DETAILS

ConsulTech DEVELOPMENT SERVICES, INC.
CIVIL ENGINEERING • PLANNING • TRANSPORTATION • CONSTRUCTION MANAGEMENT • ENVIRONMENTAL
9015 Town Center Parkway, Suite 112, Sarasota Florida 34208, Phone: 941-907-8822, Fax: 941-907-8821

NOTE: The undersigned and CONSUL-TECH DEVELOPMENT SERVICES, INC. make no representations or guarantees as to the completeness of the information reflected hereon pertaining to easements, right of way, setback lines, reservations, agreements or other matters of record. This instrument is intended to reflect or set forth only those items shown in the references above. CONSUL-TECH DEVELOPMENT SERVICES, INC. did not research the public records for matters affecting the lands shown.
NOTE: This instrument is the property of CONSUL-TECH DEVELOPMENT SERVICES, INC. and shall not be reproduced in whole or in part without written permission of CONSUL-TECH DEVELOPMENT SERVICES, INC.

DESIGN BY: RJF
DRAWN BY: RJF
CHECKED BY: RWE
DATE: 06/13/03

SCALE: AS SHOWN
CAD FILE: S-002
DWG NO: S-002-DETAILS
C116