

State of Florida



Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: June 13, 2022

TO: Adam J. Teitzman, Commission Clerk, Office of Commission Clerk

FROM: Clayton K. Lewis, Utilities System/Engineering Specialist, Division of Engineering *CL MR LK*

RE: Docket 20220026-WU -Application for staff-assisted rate case in Marion County, and request for interim rate increase, by Leighton Estates Utilities, LLC.

Please file the attached "Leighton Estates' Maps," provided by the Utility in response to staff's first data request, in the above mentioned docket file.

CL/jp

Attachments

R-3
R-4

NOT
SERVICED
= DRAINAGE
CONNECTIONS



SCALE: 1" = 100'
PREPARED BY
HAYWARD COUNTY ENGINEERING
314 NORTH ROAD ST. SEASIDE, CALIF. 95576
FEBRUARY, 1984

★ NEXT TO H.
3121 SW 97th ST. - 1 inch meter.
3135 SW 97th ST. - 1 inch meter.

All other Meters 3/4 inch.
NO VACANT LOTS

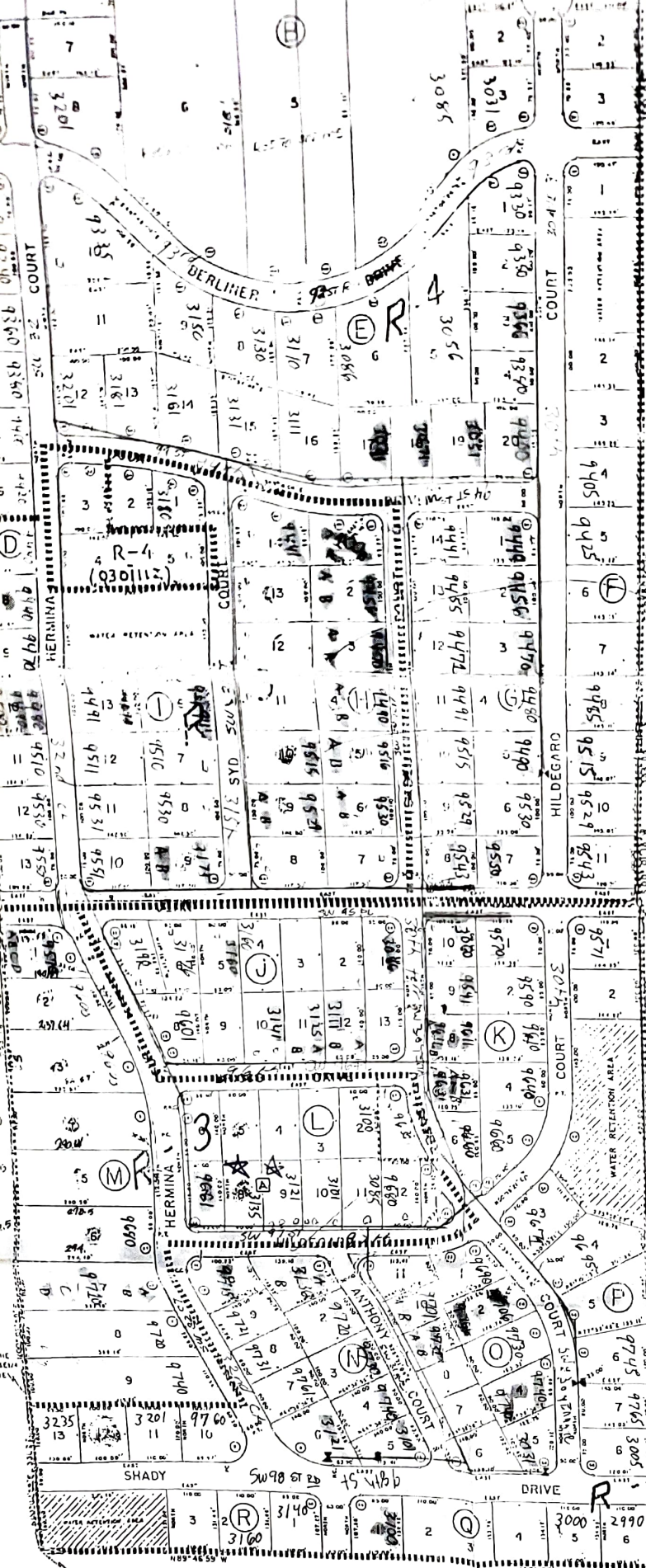


QUARTIC SCALE
1" = 100'

U.S. COURTESY OF THE
STATE OF CALIFORNIA
RECORDS, TITLE, & ERE

U.S. COURTESY OF THE
STATE OF CALIFORNIA
RECORDS, TITLE, & ERE

U.S. COURTESY OF THE
STATE OF CALIFORNIA
RECORDS, TITLE, & ERE



R-4
R-3

not a separate
Set of
General
Comments

100.

NO VACANT LOTS
ALL OTHER METERS 3/4 INCH
NEXT TO H.
3121 SW 97th ST. - 1 INCH METER.
3135 SW 97th ST - 1 INCH METER.

N

SCALE: 1" = 100'
PREPARED BY
VADON ENGINEERING & SURVEYERS, INC.
314 NORTH POND ST. OCALA, FLORIDA
32065-1944

S.W. CORNER OF THE
1/2 OF THE 1/2 OF THE
SE 1/4 OF THE SE 1/4 OF
SEC. 23, T16S, R21E

S.E. CORNER OF THE
1/2 OF THE 1/2 OF THE
SW 1/4 OF THE SE 1/4 OF
SEC. 23, T16S, R21E

GRAPHIC SCALE

General Notes:

- REPRODUCTIONS OF THIS SKETCH ARE NOT VALID UNLESS SEALED WITH AN EMBOSSED ENGINEER'S SEAL.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MARION COUNTY LAND DEVELOPMENT CODE AND THIS PLAN.
- NO CHANGE TO THE WORK AS SHOWN ON THIS PLAN SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE PROJECT ENGINEERS.
- UNDERGROUND IMPROVEMENTS AND UTILITIES, IF ANY, WERE NOT LOCATED, EXCEPT AS SHOWN.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES AND REPORT ANY DISCREPANCIES (IF ANY) TO THE PROJECT ENGINEER.
- ALL NON-CONDUCTIVE UNDERGROUND PIPING SHALL HAVE LOCATOR WIRE.
- THE SITE SHALL REMAIN FREE OF EXCESS DUST AND DEBRIS AT ALL TIMES. ANY INCIDENCE OF EROSION, SEDIMENTATION, DUST OR DEBRIS OCCURRING OFF-SITE AS A RESULT OF CONSTRUCTION ACTIVITIES ON THIS DEVELOPMENT SHALL BE CORRECTED BY THE CONTRACTOR WITHIN 48 HOURS OF EACH OCCURRENCE.
- PER SECTION 8.2.13.0 OF THE MARION COUNTY LAND DEVELOPMENT CODE, ANY WORK DONE WITHIN THE COUNTY RIGHT OF WAY REQUIRES A PERMIT WHICH CAN BE OBTAINED FROM THE MARION COUNTY ENGINEERING DEPARTMENT.
- ALL AREAS DISTURBED IN THE R/W DURING CONSTRUCTION SHALL BE RESTORED AND SODDED. ALLOW FOR SOD WITH A 1-1/2" UNDERCUT. OTHER AREAS DISTURBED AFTER CONSTRUCTION SHALL BE GRASSED & MULCHED UNLESS SOD IS SPECIFICALLY PROPOSED.
- ANY DAMAGE TO STATE, COUNTY, OR LOCAL ROADS CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE COUNTY.

- THE GROUND WATER ELEVATION WITHIN THE PROJECT IS WELL BELOW THE ELEVATION OF THE PROPOSED DISTRIBUTION SYSTEM. GROUND WATER LEVEL IS NOT EXPECTED TO RISE ABOVE ANY OF THE SYSTEM PIPING.
- THERE ARE NO AGGRESSIVE SOILS OR SOILS CONTAMINATED BY LOW-MOLECULAR-WEIGHT PETROLEUM PRODUCTS OR ORGANIC SOLVENTS WHERE WATER MAINS WILL BE INSTALLED. SOILS ARE WELL-DRAINED, SANDY SOILS.

WATER DISTRIBUTION SYSTEM CONSTRUCTION NOTES

- ALL 4" WATER MAINS SHALL BE A MINIMUM OF C900/DR25 PVC PIPE, COLOR BLUE. ALL 4" VALVES AND APPURTENANCES SHALL BE DUCTILE IRON PIPE (DIP).
- AT ALL POINTS WHERE 4" WATER MAINS CROSS PAVED COUNTY ROADWAYS (AND EXTENDING 8' BEYOND THE PAVEMENT ON EACH END), MAINS SHALL BE C900, DR18, SLEEVED IN 8" HDPE SLEEVES, BE BURIED TO A DEPTH OF 48", AND UTILIZE MECHANICALLY RESTRAINED JOINTS OR "MEGA LUGS". INSTALLATION SHALL BE BY MEANS OF DIRECTIONAL BORING, OR JACK AND BORING WHERE NECESSARY.
- AT ALL POINTS WHERE 2" WATER LINES CROSS PAVED COUNTY ROADWAYS (AND EXTENDING 8' BEYOND THE PAVEMENT ON EACH END), LINES SHALL BE CONSTRUCTED BY MEANS OF DIRECTIONAL BORING AND INSTALLED IN 4" HDPE SLEEVES.
- ALL 1" POLYETHYLENE WATER SERVICE LINES THAT REQUIRE CROSSING OF PAVED COUNTY ROADWAYS SHALL BE CONSTRUCTED BY MEANS OF DIRECTIONAL BORING, AND INSTALLED IN A 2" PVC SLEEVE.
- ALL 2" WATER MAINS SHALL BE PVC SCHEDULE 40 MANUFACTURED IN ACCORDANCE WITH ASTM D1745 AND SHALL BEAR THE NSF LOGO.
- ALL PIPE, PIPE FITTINGS, PIPE JOINT PACKING AND JOINTING MATERIALS, VALVES, AND METERS INSTALLED SHALL CONFORM TO APPLICABLE AWWA STANDARDS.
- ALL PUBLIC WATER SYSTEM COMPONENTS THAT WILL COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF INTERNATIONAL STANDARD 61.
- ALL PIPE AND PIPE FITTINGS SHALL CONTAIN NO MORE THAN 8.0% LEAD, AND ANY SOLDER OR FLUX USED SHALL CONTAIN NO MORE THAN .2% LEAD.
- ALL PIPE AND PIPE FITTINGS SHALL BE COLOR CODED OR MARKED AS FOLLOWS, USING BLUE AS A PREDOMINANT COLOR. UNDERGROUND PLASTIC PIPE SHALL BE SOLID-WALL BLUE PIPE SHALL HAVE EXTRUDED BLUE EXTERNAL SKIN, OR SHALL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL. AND UNDERGROUND METAL OR CONCRETE PIPE WILL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPES DURING MANUFACTURING WILL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION, THE TAPE OR PAINT WILL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE. FOR PIPE WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT WILL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE. ABOVEGROUND PIPE WILL BE PAINTED BLUE OR WILL BE COLOR CODED OR MARKED LIKE UNDERGROUND PIPE.

- ALL WATER MAINS, MINOR LINES, AND SERVICE LINES SHALL BE BURIED TO A DEPTH OF 36" FROM THE TOP OF THE PIPE TO THE FINISHED GRADE ELEVATION ABOVE THE PIPE. MAINS SHALL BE BURIED WITH 48" OF COVER WHEN CROSSING UNDER COUNTY ROADWAYS.
- ANY FITTINGS REQUIRED SHALL BE MECHANICAL JOINT DUCTILE IRON OR GRAY IRON CONFORMING TO ANSI/AWWA A21.10/C110, 250 PSI MINIMUM PRESSURE RATING OR DUCTILE IRON COMPACT FITTINGS IN ACCORDANCE WITH ANSI/AWWA A21.53/C153.
- ALL SERVICE LINES SHALL BE ONE INCH, ONE AND ONE-HALF INCH, OR TWO INCH POLYETHYLENE TUBING CONFORMING TO SPECIFICATIONS IN AWWA C800 AND AWWA C901.
- ALL VALVES SHALL BE DIP RESILIENT SEAT GATE VALVES MANUFACTURED TO MEET OR EXCEED THE REQUIREMENTS OF AWWA C509. THE VALVE BODY, BONNET, AND BONNET COVER SHALL BE CAST IRON ASTM A126, CLASS B. A 2" WRENCH NUT SHALL BE PROVIDED FOR OPERATING THE VALVE.
- ALL PARTS OF THE DISTRIBUTION SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651.
- ALL PVC WATER MAINS SHALL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C605.
- PHYSICAL SEPARATION BETWEEN THE WATER PLANT PIPING AND THE PROPOSED WATER DISTRIBUTION SYSTEM SHALL BE MAINTAINED, WITH THE EXCEPTION OF THE TEMPORARY JUMPER CONNECTION, UNTIL A LETTER OF CLEARANCE HAS BEEN RECEIVED FROM DEP.

WATER/SEWER LINE CLEARANCE REQUIREMENTS

NO SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER LINES, OR ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS ARE PROPOSED NOR ARE ANY KNOWN TO EXIST WITHIN THE PROJECT AREA. HOWEVER, SHOULD ANY OF THE ABOVE MENTIONED SANITARY HAZARDS BE ENCOUNTERED, CLEARANCE BETWEEN THE EXISTING SANITARY HAZARD AND THE PROPOSED POTABLE WATER MAIN SHALL BE IN ACCORDANCE WITH SECTION 62-555.314 OF THE FLORIDA ADMINISTRATIVE CODE.

IN GENERAL, WATER LINES SHOULD MAINTAIN 10' HORIZONTAL AND 18" VERTICAL CLEARANCES WITH THE WATER LINES PLACED VERTICALLY ABOVE THE SANITARY HAZARD.

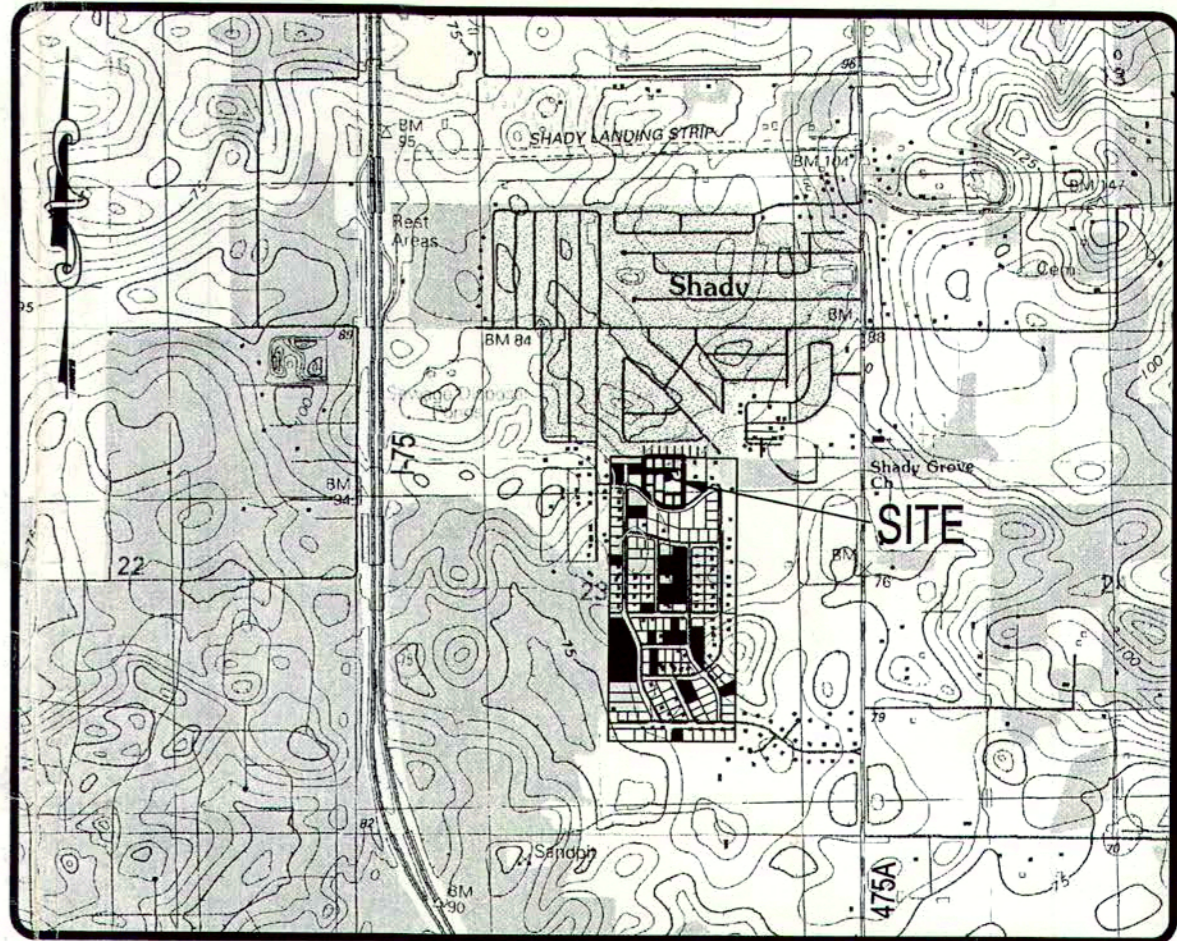
IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THEY ARE USING THE LATEST APPROVED AND PERMITTED PLANS PRIOR TO BEGINNING CONSTRUCTION.

Site Information:

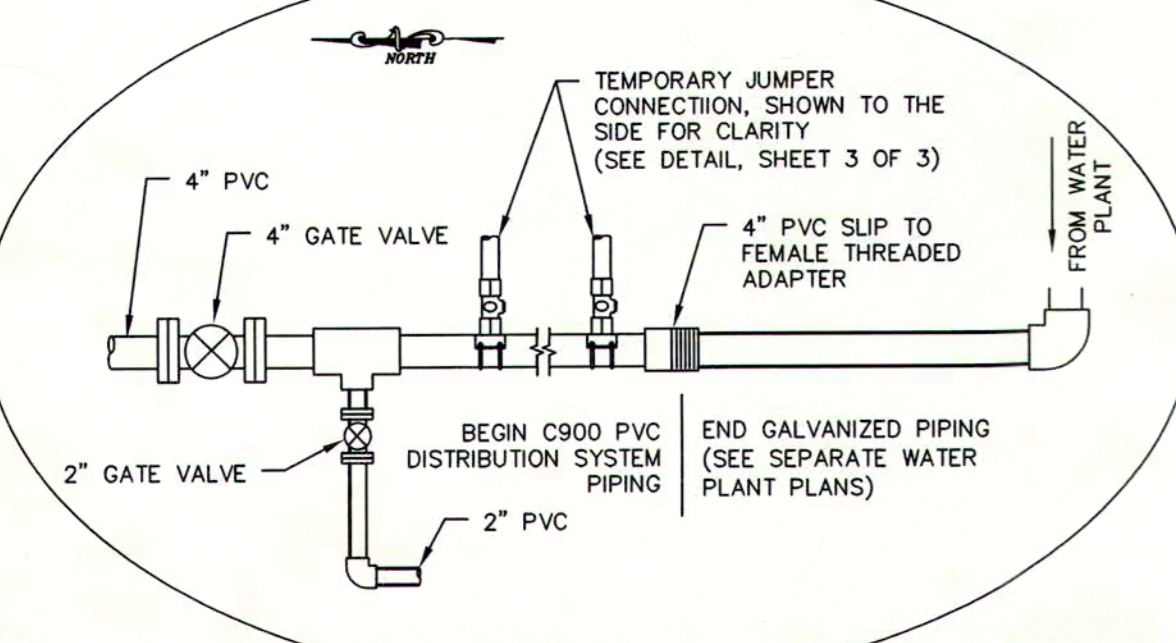
PROJECT NAME: LEIGHTON ESTATES
 PROJECT LOCATION: LEIGHTON ESTATES SUBDIVISION, MARION COUNTY, FL
 CONTACT: BRUCE WILSON
 ADDRESS: 720 SE 3rd St, Ocala, FL 3447
 TELEPHONE: (352) 690-9606
 PARCEL NUMBERS: 3570-002-005, 3570-002-006

Legend:

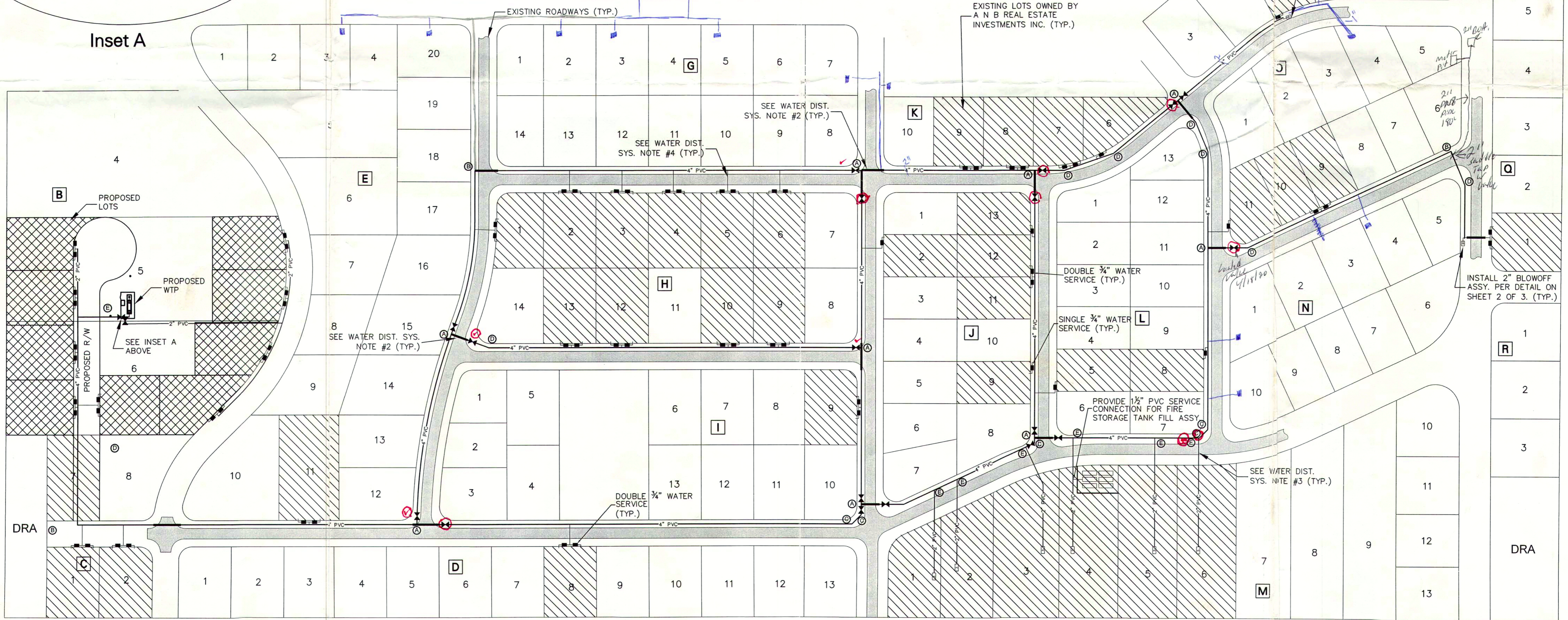
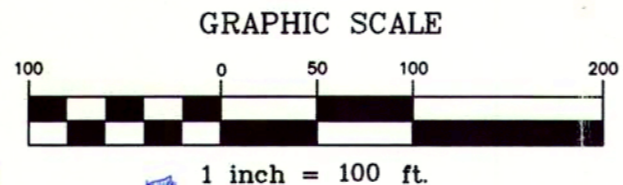
- [A] = BLOCK IDENTIFICATION
- 2 = TYPICAL LOT NUMBER
- D.R.A. = DRAINAGE RETENTION AREA
- [X] = PROPOSED GATE VALVE
- [D] = PROPOSED DOUBLE 3/4" WATER SERVICE
- [S] = PROPOSED SINGLE 3/4" WATER SERVICE
- [W] = PROPOSED 4" WTR MAIN
- [B] = 2" BLOWOFF ASSEMBLY
- [M] = WATER METER BANK (# INDICATES METERS IN THE BANK)
- [T] = PROPOSED 4" PVC TEE
- [90] = PROPOSED 4" 90° BEND
- [45] = PROPOSED 4" 45° BEND
- [22.5] = PROPOSED 4" 22.5° BEND
- [T] = PROPOSED 4"x4"x2" TEE



SECTION 23, TOWNSHIP 16 SOUTH, RANGE 21 EAST
 MARION COUNTY, FLORIDA
 SCALE: 1" = 2000'



Inset A



Date:	3-10-05	By:	CAG	Added New Lots:	
Revised:	5-4-05	By:	CAG	Revised Per DEP Comments:	

Scale:	1" = 100'
Project:	2004-49
Drawn:	CAG
Checked:	MWR/CAG
Date:	3-2-05
File:	2004-49 WATER PLANT

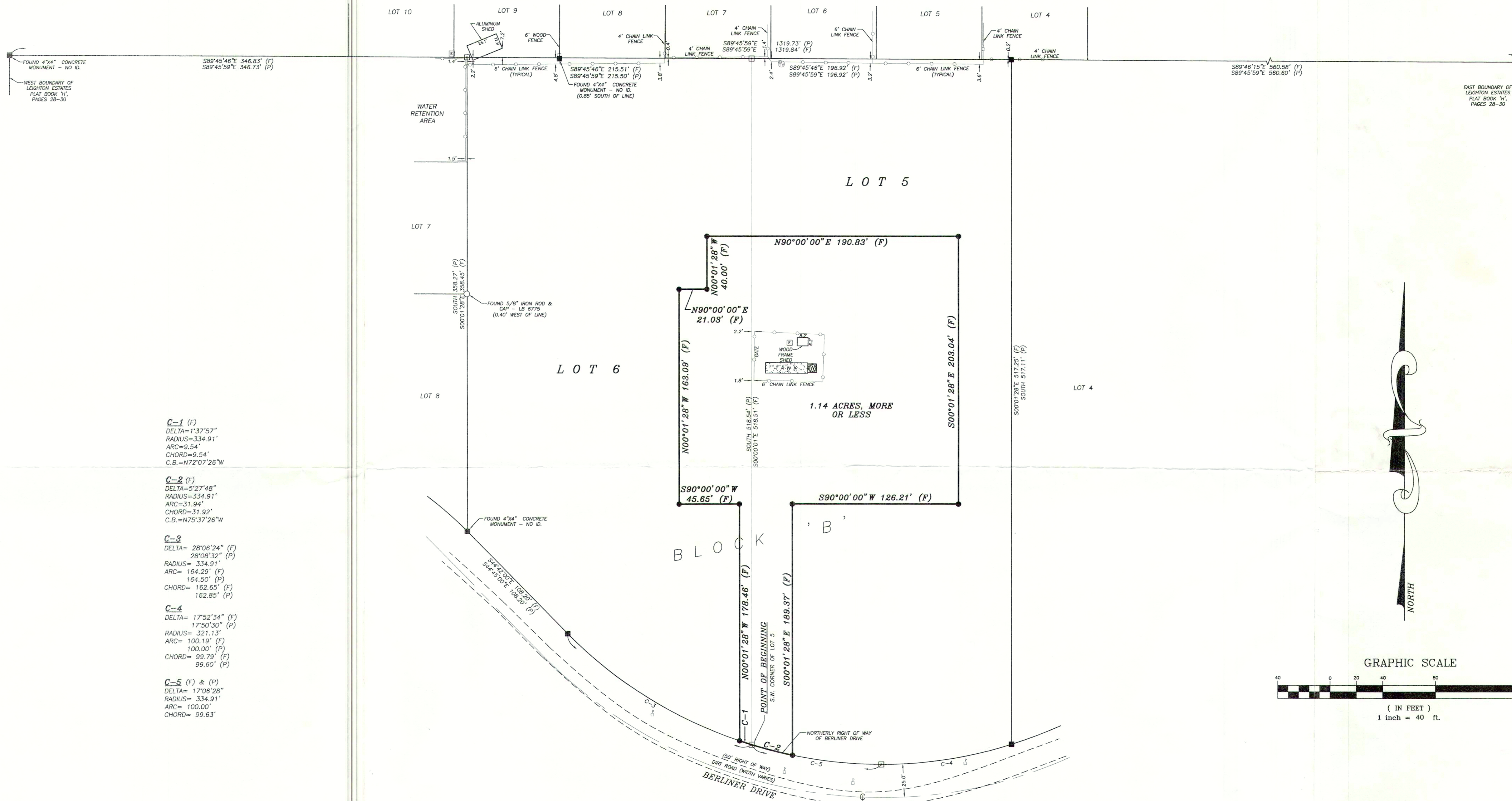
MICHAEL W. RADCLIFFE ENGINEERING, INC.
 2611 S.E. Lake Weir Avenue
 Ocala, FL 32309-5500
 (352) 629-5500
 FAX (352) 629-1010
 Certificate No. EB-0006198

**Leighton Estates
 Water Distribution System**

Sheet No.
1 of 3

SECTION 23, TOWNSHIP 16 SOUTH, RANGE 21 EAST
MARION COUNTY, FLORIDA

SOUTHGATE
MOBILE MANOR
PLAT BOOK UNR, PAGE 72



C-1 (F)
DELTA=1°37'57"
RADIUS=334.91'
ARC=9.54'
CHORD=9.54'
C.B.=N72°07'26"W

C-2 (F)
DELTA=5°27'48"
RADIUS=334.91'
ARC=31.94'
CHORD=31.92'
C.B.=N75°37'26"W

C-3
DELTA=28°06'24" (F)
28°08'32" (P)
RADIUS=334.91'
ARC=164.29' (F)
164.50' (P)
CHORD=162.65' (F)
162.85' (P)

C-4
DELTA=17°52'34" (F)
17°50'30" (P)
RADIUS=321.13'
ARC=100.19' (F)
100.00' (P)
CHORD=99.79' (F)
99.60' (P)

C-5 (F) & (P)
DELTA=17°06'28"
RADIUS=334.91'
ARC=100.00'
CHORD=99.63'

LEGEND UNLESS OTHERWISE NOTED

- ☐ = CENTERLINE OF RIGHT OF WAY
- c.b. = CHORD BEARING
- = SET 5/8" IRON ROD & CAP - LB 5091
- = FOUND 4" x 4" CONCRETE MONUMENT - MARION ENGINEERING ASSOCIATES
- = SET 4" x 4" CONCRETE MONUMENT - LB 5091
- = FOUND 5/8" IRON ROD & CAP - LB 6775
- (C) = CALCULATED DIMENSION
- (P) = PLAT DIMENSION
- (F) = FIELD MEASUREMENT
- δ = MAILBOX
- ⊕ = ELECTRIC BOX
- ⊖ = CABLE BOX
- ⊙ = 6" WELL
- ⚡ = AERIAL ELECTRIC
- - - = BROKEN LINE; NOT DRAWN TO SCALE
- = DENOTES CONCRETE

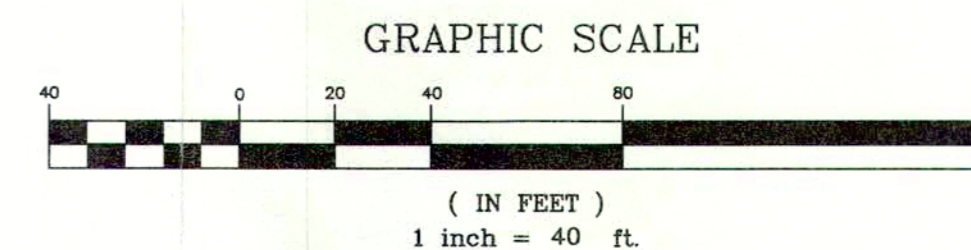
NOTES:

1. DATE OF FIELD SURVEY: AUGUST 13, 2009.
2. SUBJECT TO RIGHTS OF WAY, RESTRICTIONS, EASEMENTS AND RESERVATIONS OF RECORD.
3. UNLESS OTHERWISE SHOWN, UNDERGROUND IMPROVEMENTS NOT LOCATED.
4. PUBLIC RECORDS NOT SEARCHED BY R.M. BARRINEAU & ASSOCIATES, INC.
5. BEARINGS ARE ASSUMED BASED ON THE NORTH BOUNDARY OF LEIGHTON ESTATES AS BEING S89°45'59"E.
6. ORIENTATION FOR THE IMPROVEMENTS SHOWN HEREON SHOULD NOT BE USED TO RECONSTRUCT BOUNDARY LINES.
7. ADDITIONS OR DELETIONS TO SURVEY MAPS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
8. THIS SURVEY DEPICTS THE PROPERTY AS IT EXISTED ON THE SURVEY DATE, NOT NECESSARILY THE SIGNATURE DATE.
9. THIS SURVEY HAS BEEN PREPARED FOR THE EXCLUSIVE BENEFIT OF THE PARTY(IES) NAMED HEREON, AND SHALL NOT BE DUPLICATED OR RELIED UPON BY ANY OTHER INDIVIDUAL OR ENTITY WITHOUT AUTHORIZATION FROM R.M. BARRINEAU & ASSOCIATES, INC.

DESCRIPTION:

A PORTION OF LOTS 5 AND 6, BLOCK 'B' OF "LEIGHTON ESTATES" AS PER PLAT THEREOF, RECORDED IN PLAT BOOK 'H', PAGES 28 THROUGH 30 INCLUSIVE, OF THE PUBLIC RECORDS OF MARION COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHWEST CORNER OF SAID LOT 5, SAID POINT BEING ON A NON-TANGENT CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 334.91 FEET, A CENTRAL ANGLE OF 01°37'57", AND A CHORD BEARING AND DISTANCE OF N.72°07'26"W, 9.54 FEET; THENCE ALONG THE ARC OF SAID CURVE AND THE NORTHERLY RIGHT OF WAY OF BERLINER DRIVE (HAVING A 50' RIGHT OF WAY), A DISTANCE OF 9.54 FEET TO THE END OF SAID CURVE; THENCE DEPARTING SAID NORTHERLY RIGHT OF WAY, N.00°01'28"W, A DISTANCE OF 178.46 FEET; THENCE S.90°00'00"W, A DISTANCE OF 45.65 FEET; THENCE N.00°01'28"W, A DISTANCE OF 163.09 FEET; THENCE N.90°00'00"E, A DISTANCE OF 21.03 FEET; THENCE N.00°01'28"W, A DISTANCE OF 40.00 FEET; THENCE N.90°00'00"E, A DISTANCE OF 190.83 FEET; THENCE S.00°01'28"E, A DISTANCE OF 203.04 FEET; THENCE S.90°00'00"W, A DISTANCE OF 126.21 FEET; THENCE S.00°01'28"E, A DISTANCE OF 189.37 FEET TO THE BEGINNING OF A NON-TANGENT CURVE NORTHERLY, HAVING A RADIUS OF 334.91 FEET, A CENTRAL ANGLE OF 05°27'48", AND A CHORD BEARING AND DISTANCE OF N.75°37'26"W, 31.92 FEET; THENCE WESTERLY ALONG THE ARC OF SAID CURVE AND SAID NORTHERLY RIGHT OF WAY OF BERLINER DRIVE, A DISTANCE OF 31.94 FEET TO THE POINT OF BEGINNING. SAID LANDS CONTAINING 1.14 ACRES, MORE OR LESS.



SURVEYOR'S CERTIFICATION:

I HEREBY CERTIFY THAT THE SURVEY REPRESENTED HEREON MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

10/2/09
OF R.M. BARRINEAU & ASSOCIATES, INC.

NO.	REVISIONS	BY	DATE
1.	REVISED CALL ON BOUNDARY	CJH	10/12/09

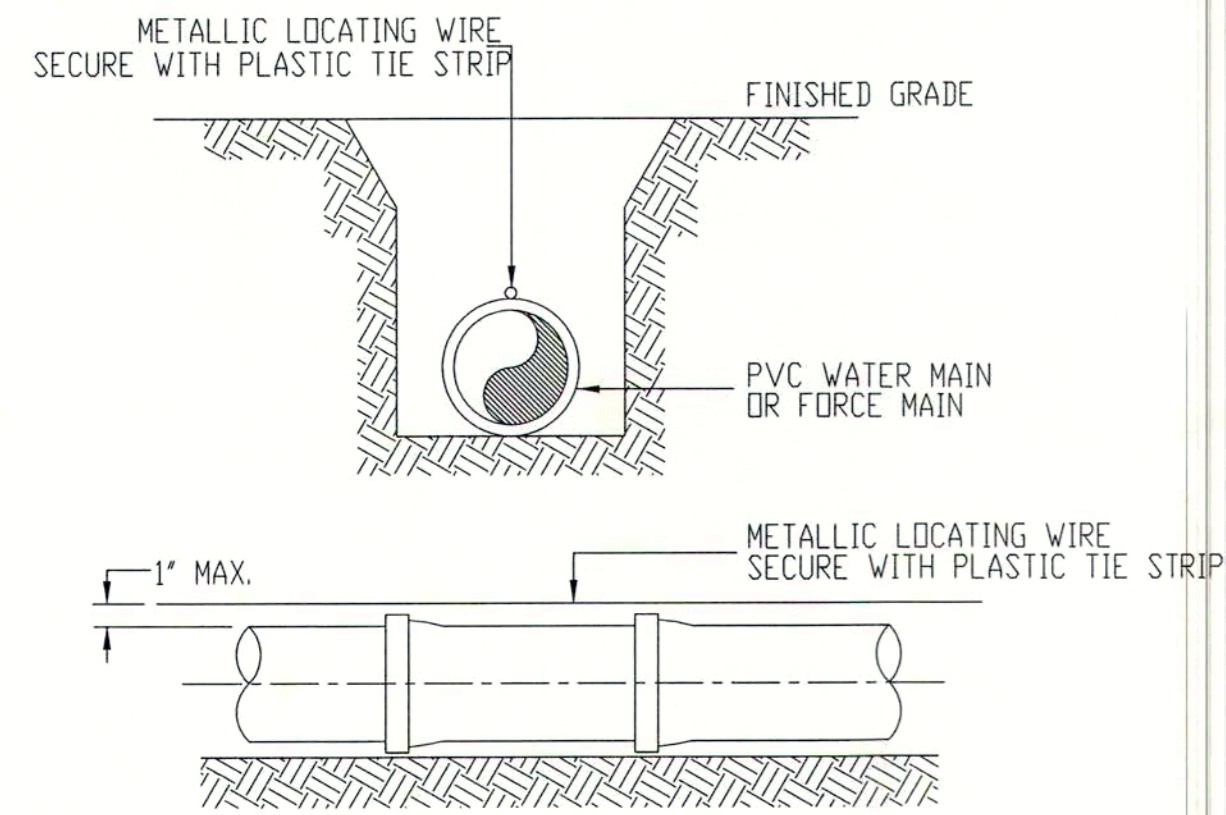
T.A.C.	
DRAWN:	
REVISED:	
CHECKED:	C.J.H.
APPROVED:	C.J.H.
SCALE:	1" = 40'

R.M. BARRINEAU & ASSOCIATES, INC.
PROFESSIONAL SURVEYORS & MAPPERS
1909 S.E. 25TH LOOP, SUITE 100
OCALA, FLORIDA 34471
PHONE (352) 622-3133
FAX (352) 369-3771
REGARD W. BARRINEAU, P.S.M. - FOUNDER
CERTIFICATE OF AUTHORIZATION NO. LB 5091
THOMAS P. BARRINEAU, S.I.T. JAMES L. TINKLER, JR., S.I.T.
MAJORITY BUSINESS ENTERPRISE

BOUNDARY SURVEY FOR:
ARMA WATER SERVICE, LLC

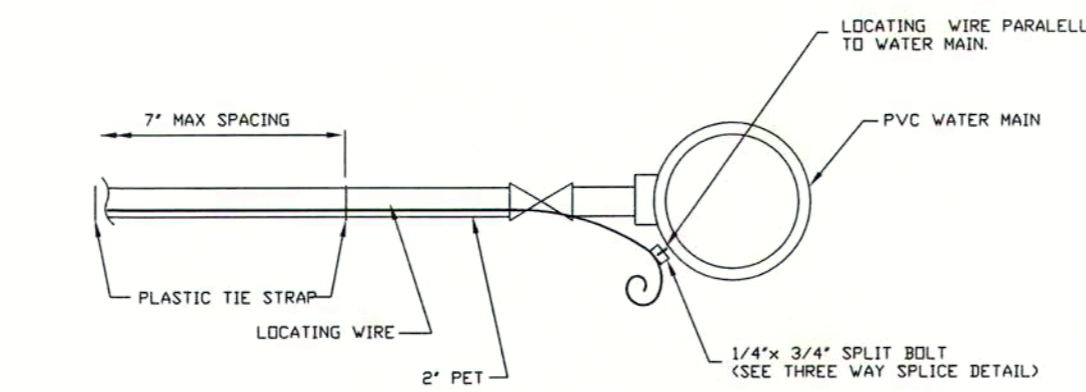
REFERENCES:	68
F.B. 379,	
F.B. 472,	PGS. 56-57
FILE:	LEIGHTON ESTATES

J.O.# 09112
DWG.# 09112R
SHT 1 OF 1

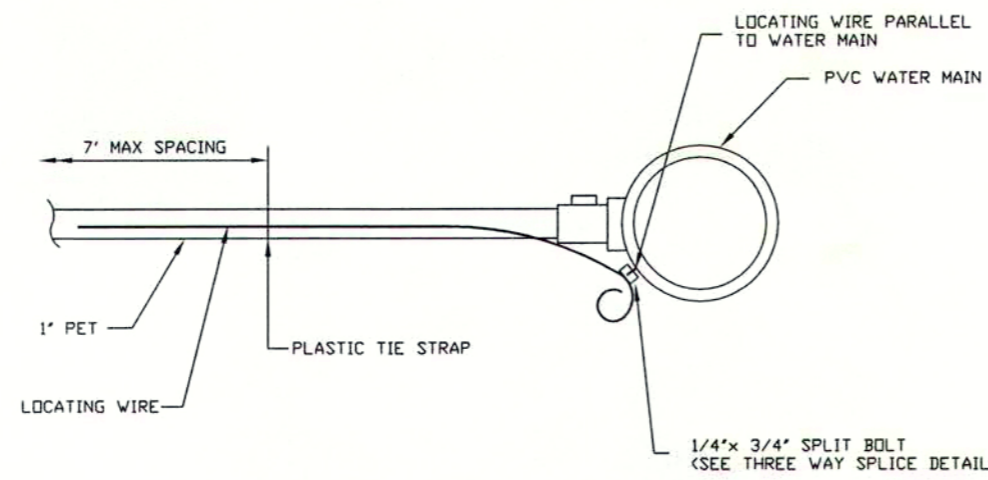


- NOTES:
- PVC PIPE SHALL REQUIRE INSULATED METALLIC LOCATING WIRE (14 GAUGE COPPER) CAPABLE OF DETECTION BY A CABLE LOCATOR AND SHALL BE BURIED DIRECTLY ABOVE THE CENTERLINE OF THE PIPE.
 - LOCATING WIRE SHALL TERMINATE AT EACH VALVE BOX AND BE CAPABLE OF EXTENDING 12" ABOVE TOP OF BOX IN SUCH A MANNER SO AS NOT TO INTERFERE WITH VALVE OPERATION.
 - USE DUCT TAPE AS NECESSARY TO HOLD WIRE DIRECTLY ON THE TOP OF THE PIPE.
 - ALL WIRE CONNECTIONS IN VALVE BOXES SHALL BE SPLICED TOGETHER AND TAPED.

SPECIFICATION REVISIONS	DETAIL W-9
MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B PVC PIPE LOCATING WIRE DETAIL MC105.DWG

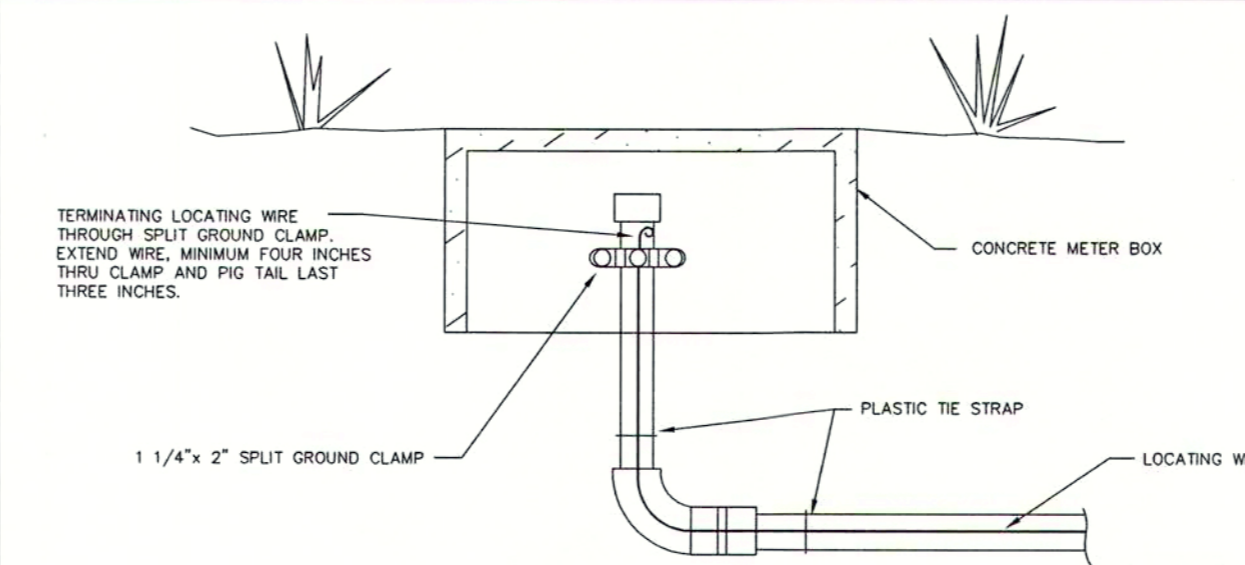


CONNECTION TO PVC WATER MAIN
MULTI FAMILY WATER SERVICE

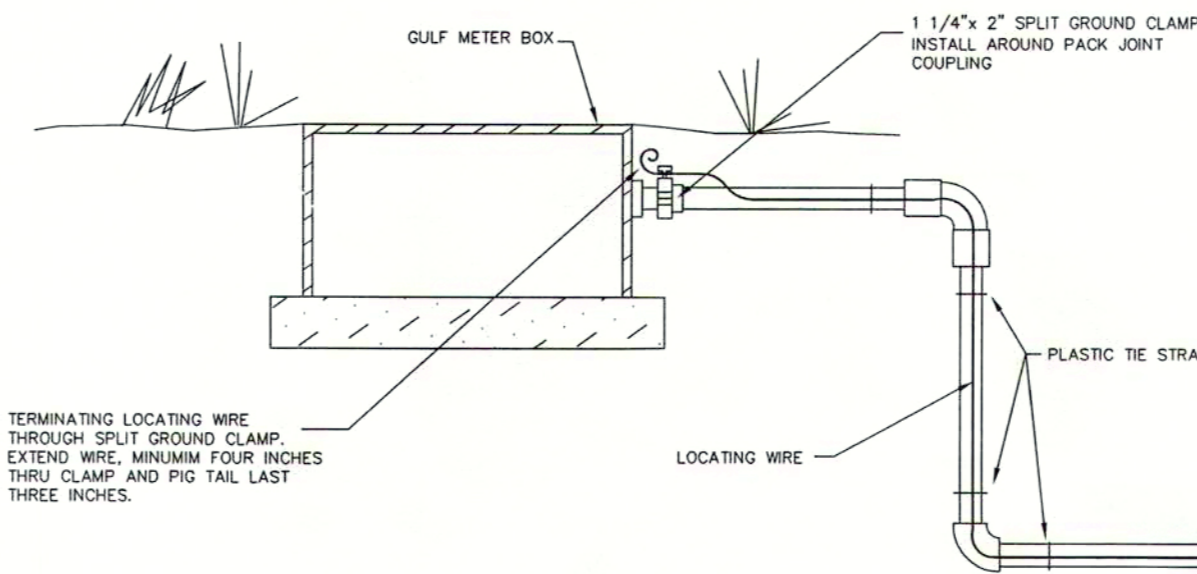


CONNECTION TO PVC WATER MAIN
SINGLE FAMILY WATER SERVICE

SPECIFICATION REVISIONS	DETAIL W-16
MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B LOCATING WIRE CONNECTION TO PVC MAIN MC216.DWG

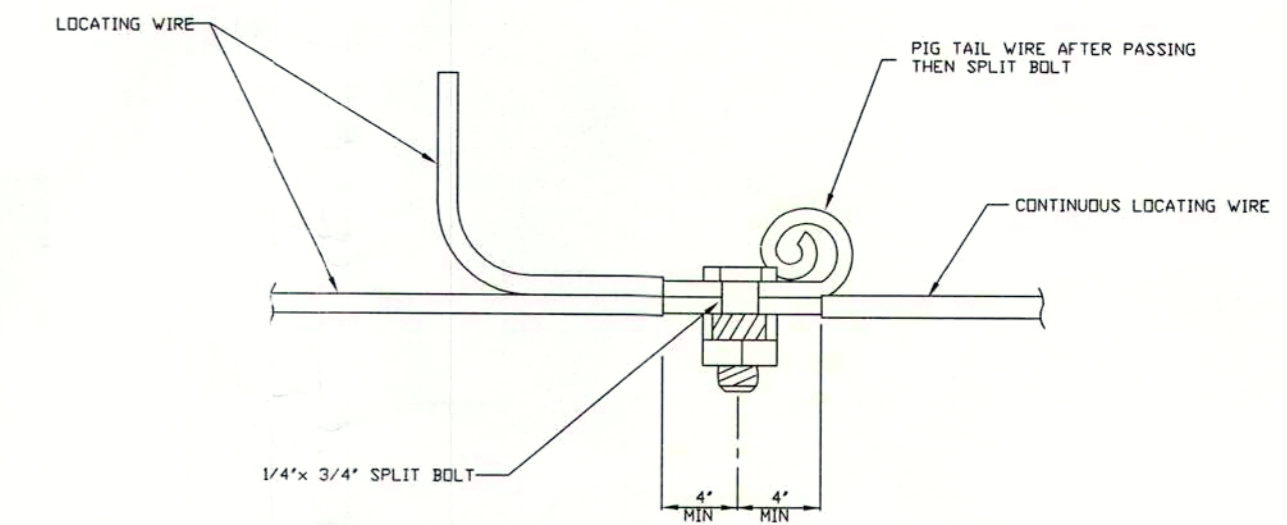


TERMINATION AT METER BOX
2" WATER SERVICE

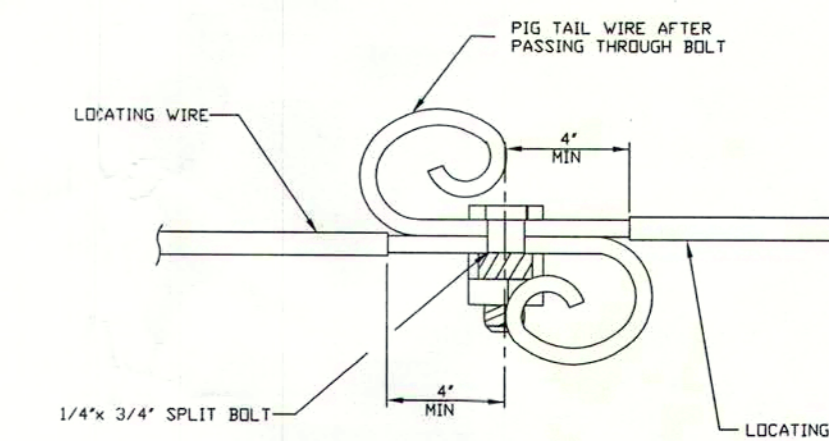


TERMINATION AT METER BOX
3/4" WATER SERVICE

SPECIFICATION REVISIONS	DETAIL W-17
MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B LOCATING WIRE TERMINATION AT METER BOX MC217.DWG

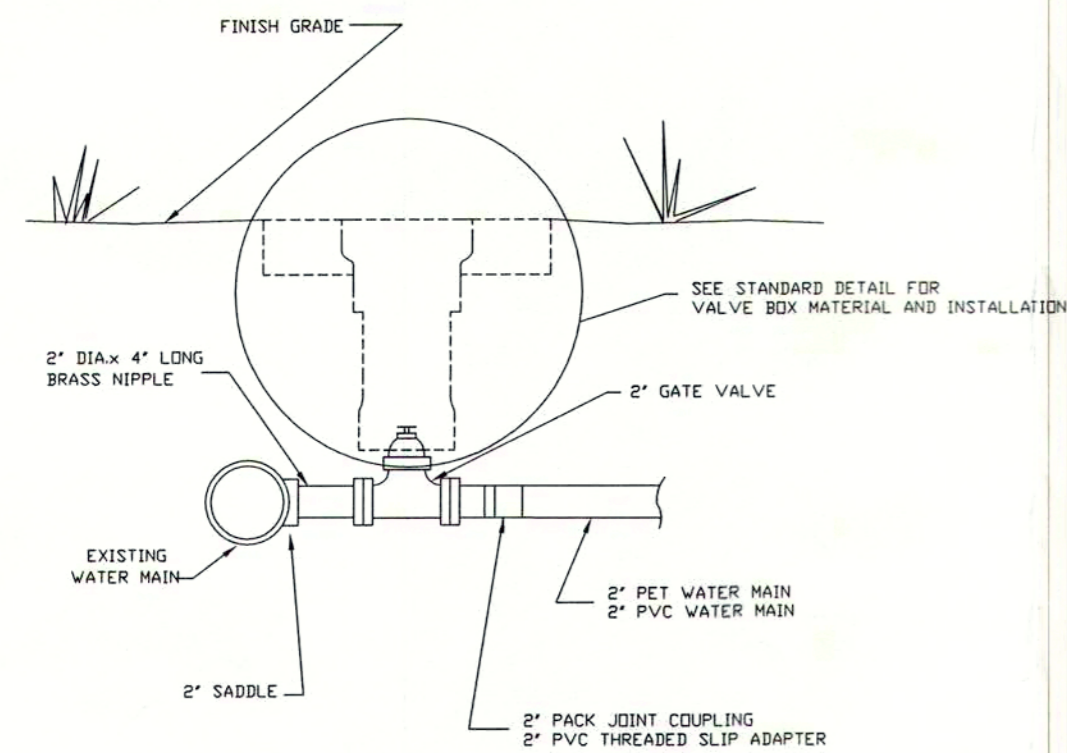


THREE WAY SPLICE

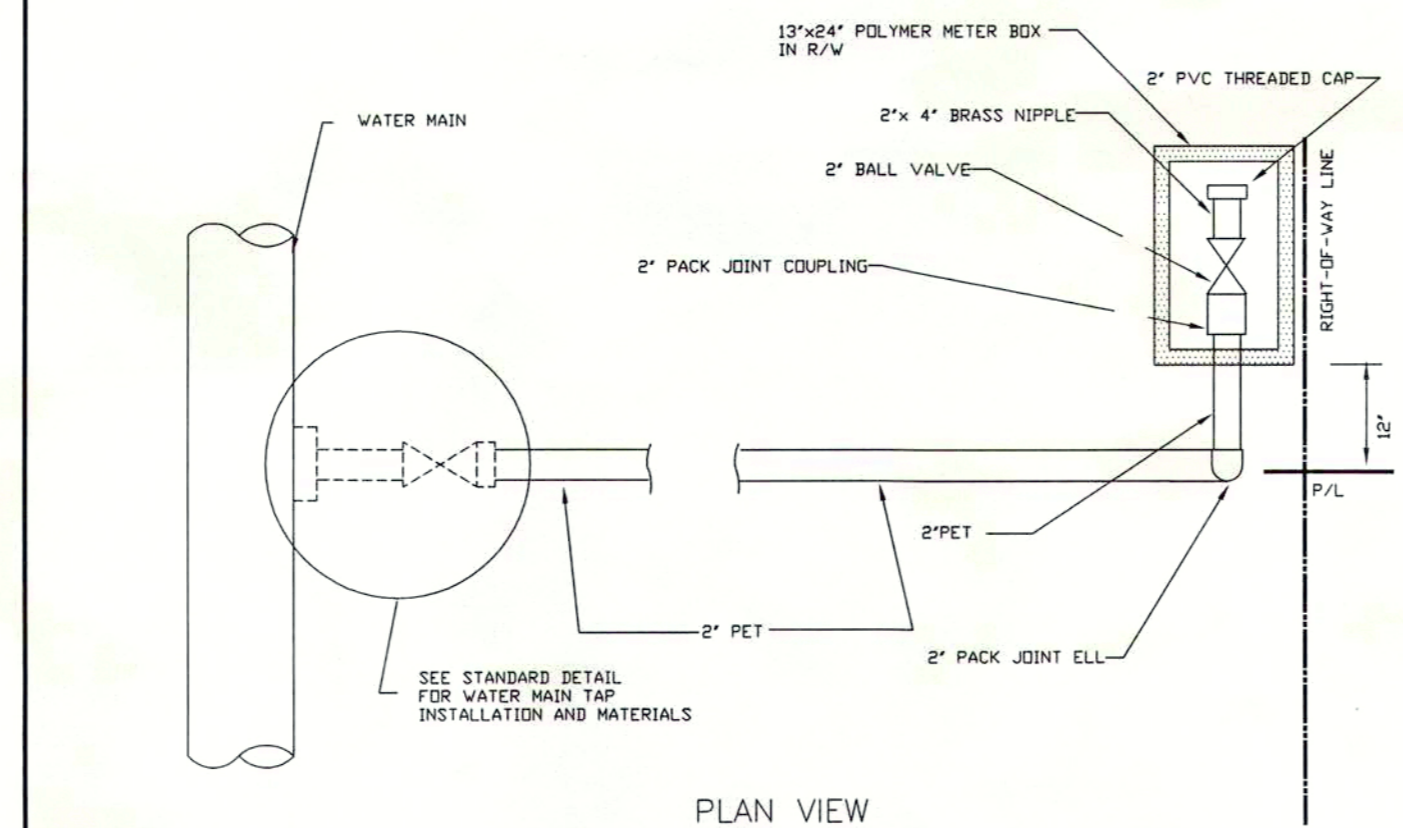


SINGLE SPLICE

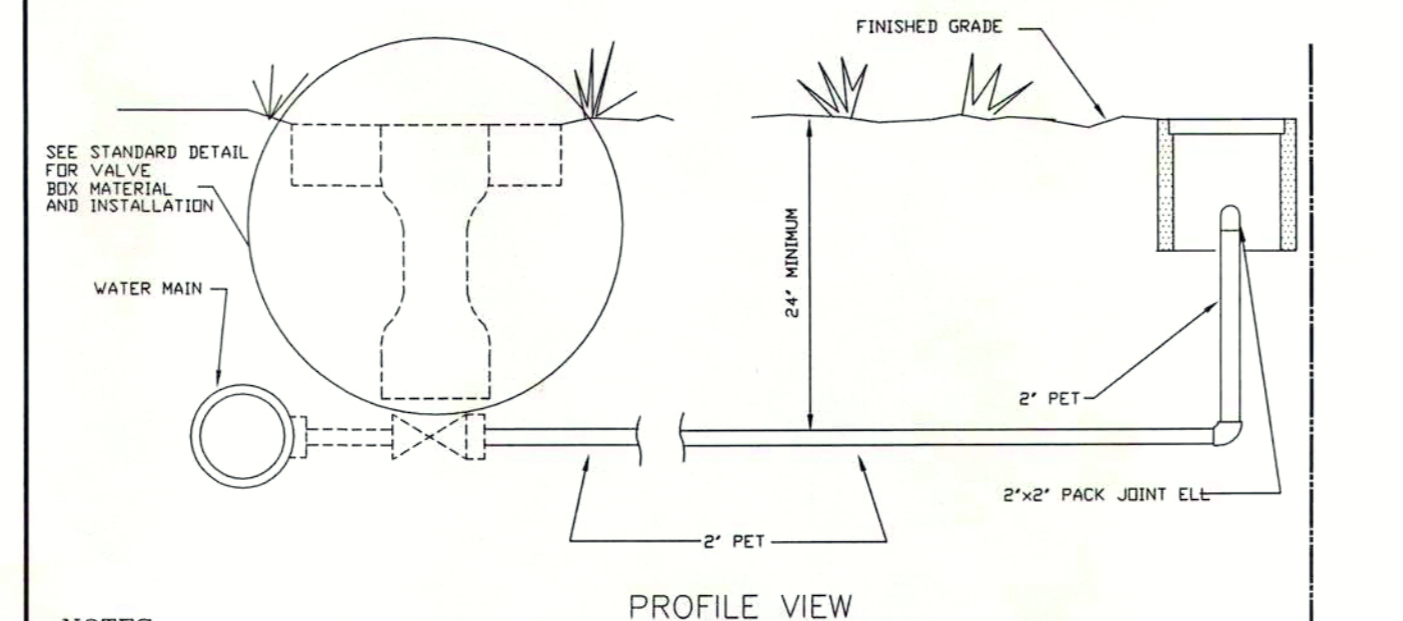
SPECIFICATION REVISIONS	DETAIL W-18
MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B LOCATING WIRE SPLICE DETAIL MC218.DWG



FOR 2" P.V.C. / P.E.T.



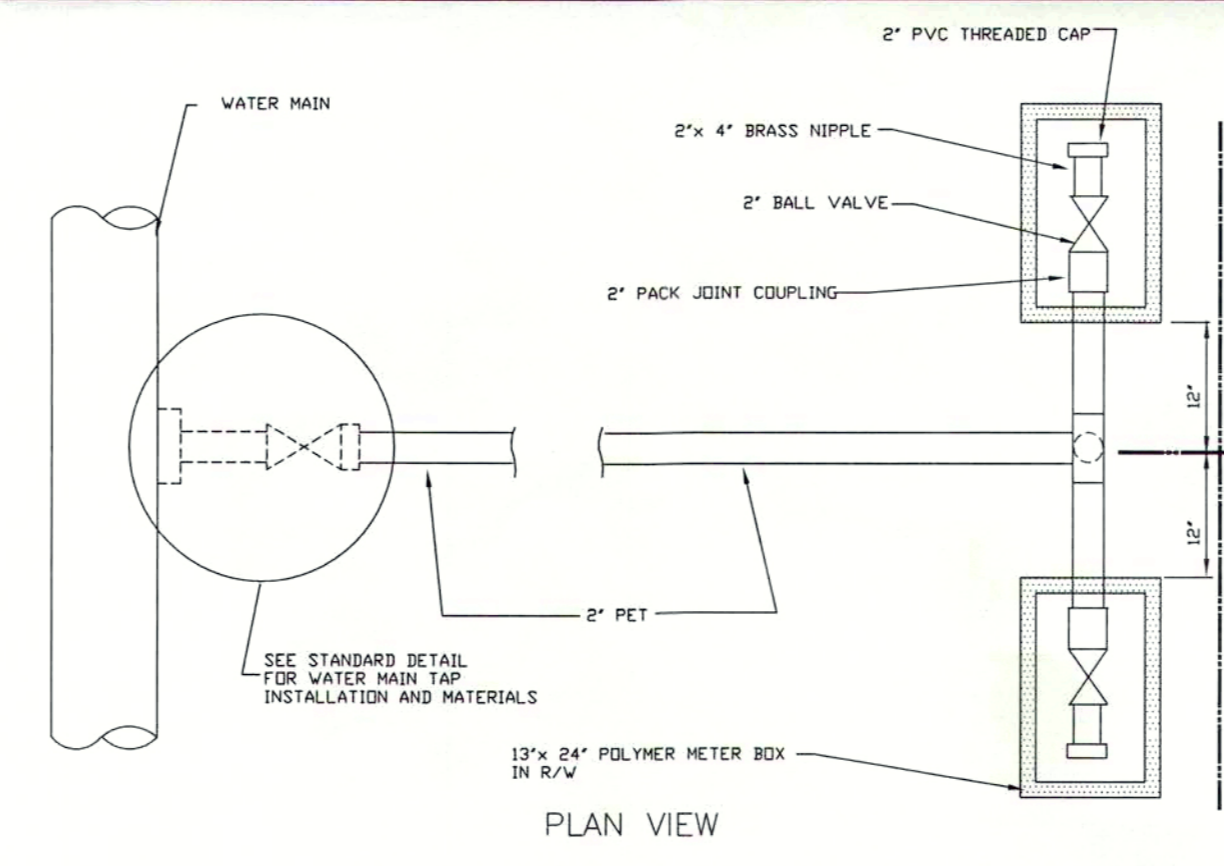
PLAN VIEW



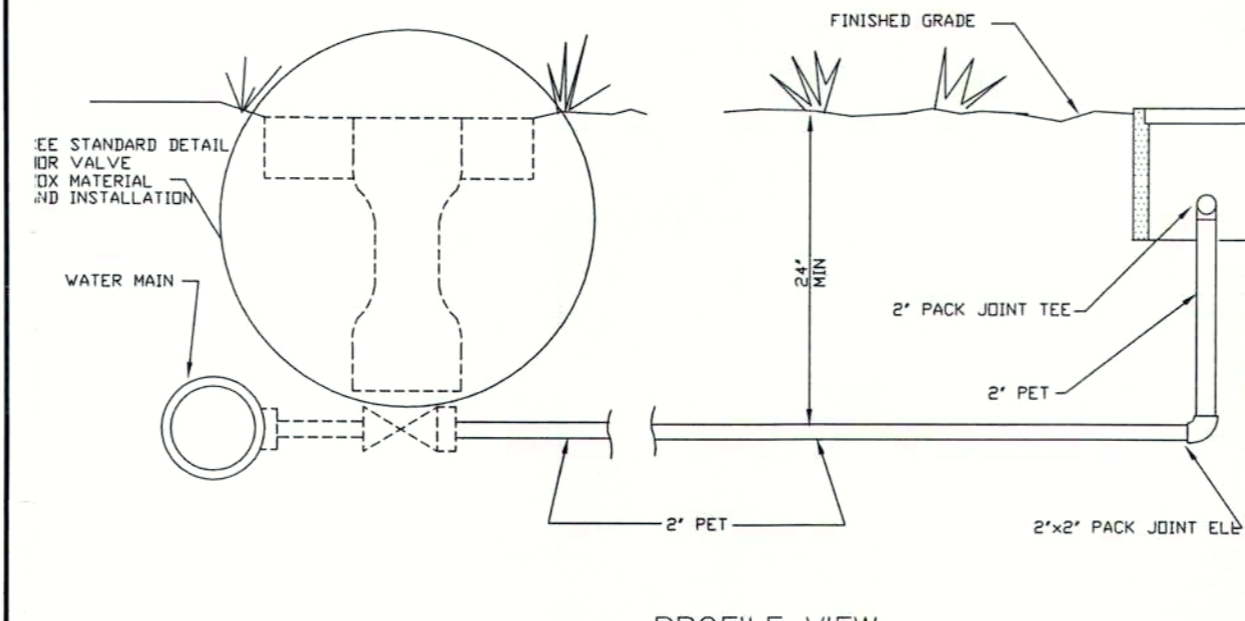
PROFILE VIEW

- NOTES
- WATER SERVICE TO BE INSTALLED WITH A SOLID COPPER LOCATING WIRE SEE STANDARD DETAIL FOR LOCATING WIRE INSTALLATION.
 - ROAD CROSSINGS NEED TO BE SLEEVED ON SERVICE CONNECTIONS.
 - INSTALLATION TO INCLUDE APL MAGNETIC MARKER.

SPECIFICATION REVISIONS	DETAIL W-9
MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B WATER SERVICE SINGLE 2" WATER SERVICE MC209.DWG



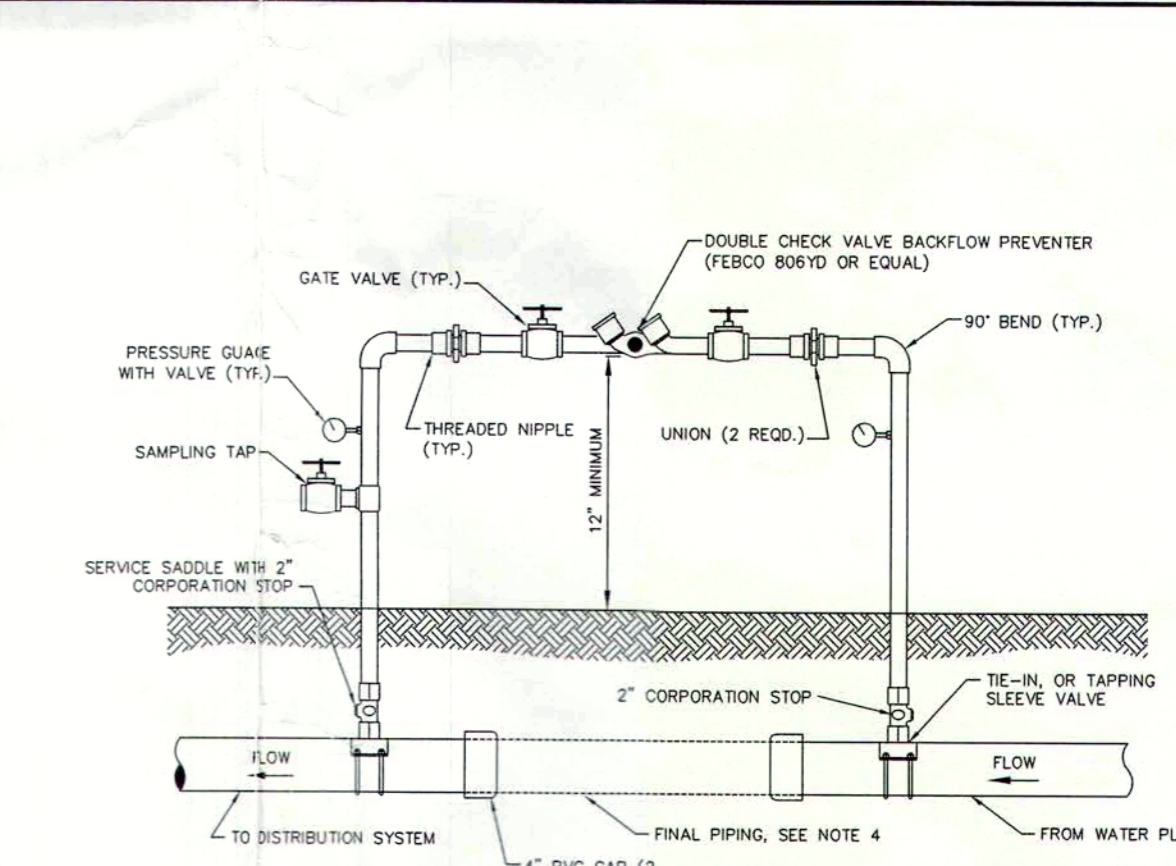
PLAN VIEW



PROFILE VIEW

- NOTES
- WATER SERVICE TO BE INSTALLED WITH A SOLID COPPER LOCATING WIRE SEE STANDARD DETAIL FOR LOCATING WIRE INSTALLATION.
 - ROAD CROSSINGS NEED TO BE SLEEVED ON SERVICE CONNECTIONS.
 - INSTALLATION TO INCLUDE APL MAGNETIC MARKER.

SPECIFICATION REVISIONS	DETAIL W-10
MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B WATER SERVICE DOUBLE 2" WATER SERVICE MC210.DWG



NOTES:

- A TEMPORARY JUMPER CONNECTION IS REQUIRED AT ALL CONNECTIONS BETWEEN EXISTING ACTIVE WATER MAINS AND PROPOSED WATER MAIN IMPROVEMENTS.
- THE TEMPORARY JUMPER CONNECTION SHALL BE CONSTRUCTED AS DETAILED. THE JUMPER CONNECTION SHALL BE USED FOR FLUSHING ANY NEW WATER MAIN AND FOR FLUSHING OF NEW MAINS UP TO 48" DIAMETER (2.5 FPS MINIMUM VELOCITY) AND FOR BACTERIOLOGICAL SAMPLING OF THE NEW MAIN AS REQUIRED BY THE FDP PERMIT. AT THE END OF THE PROPOSED MAIN THE JUMPER CONNECTION SHALL BE MAINTAINED UNTIL AFTER FLUSHING, TESTING, AND DISINFECTION OF THE PROPOSED MAIN HAS BEEN SUCCESSFULLY COMPLETED AND CLEARANCE FOR USE FROM THE FDP HAS BEEN RECEIVED. THIS JUMPER CONNECTION SHALL ALSO BE USED TO MAINTAIN A MINIMUM PRESSURE OF 20 PSIG IN THE PROPOSED MAINS AFTER DISINFECTION AND UNTIL THE FDP CLEARANCE LETTER IS OBTAINED.
- THE CONTRACTOR SHALL PROVIDE DOCUMENTATION DEMONSTRATING THAT THE DOUBLE CHECK VALVE BACKFLOW PREVENTER DEVICE HAS BEEN TESTED AND IS IN GOOD WORKING ORDER AT THE TIME OF INSTALLATION.
- CAPS MAY NOT BE REMOVED, AND FINAL PIPING INSTALLED UNTIL AUTHORIZED PHYSICAL SEPARATION MUST BE MAINTAINED BETWEEN THE EXISTING MAIN LINE AND THE PROPOSED NEW MAIN UNTIL THE FDP CLEARANCE LETTER IS OBTAINED.
- UPON RECEIPT OF CLEARANCE FOR USE FROM FDP, THE CONTRACTOR SHALL REMOVE THE TEMPORARY JUMPER CONNECTION. STOPS ARE TO BE CLOSED AND PLUGGED WITH 2" BRASS PLUGS.
- ALL INSTALLATION AND MAINTENANCE OF THE TEMPORARY JUMPER CONNECTION AND ASSOCIATED BACKFLOW PREVENTION DEVICE, FITTINGS, VALVE, ETC. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SPECIFICATION REVISIONS	DETAIL
MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B TEMPORARY JUMPER CONNECTION MC211.DWG

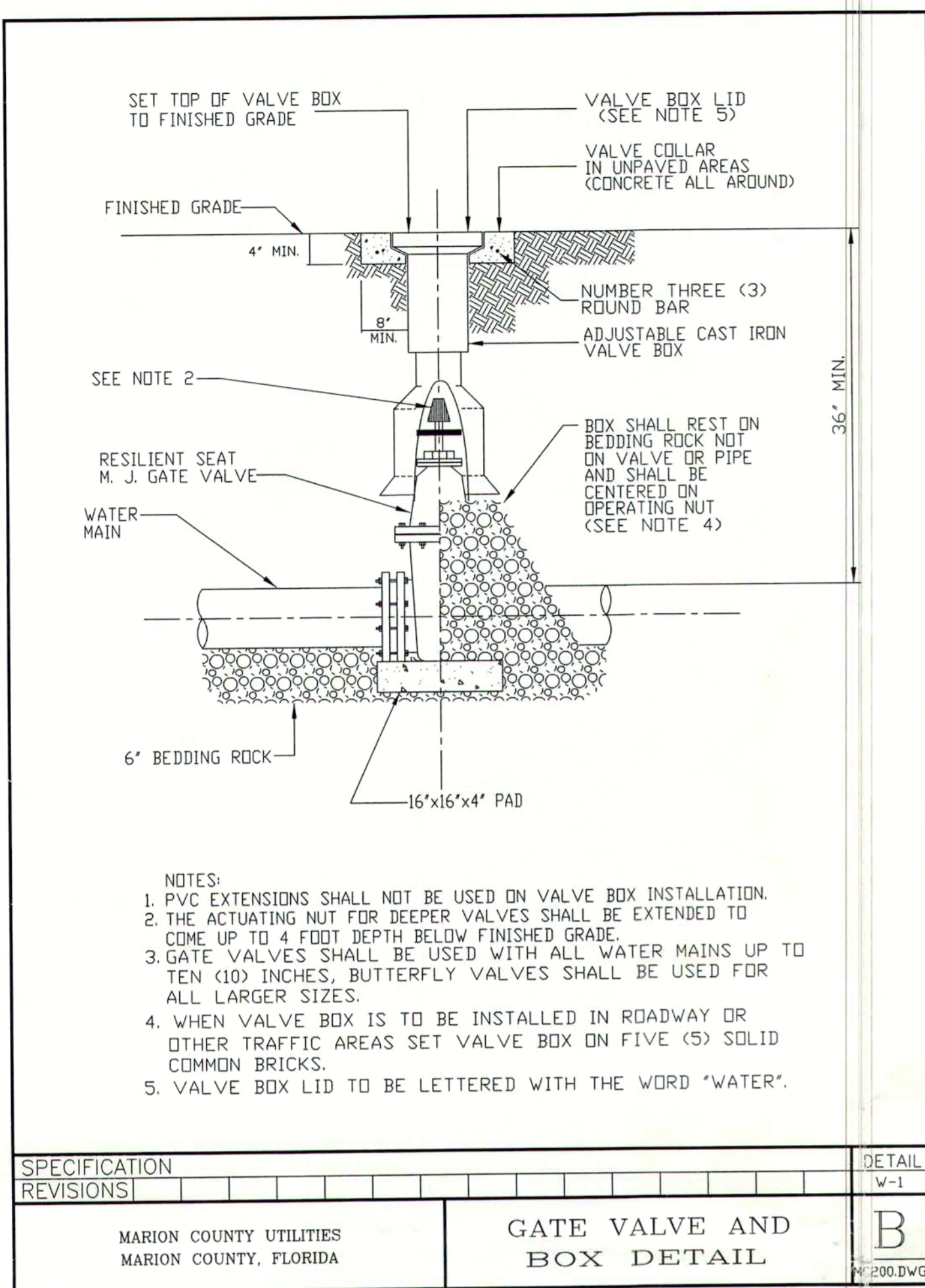
Project Name: **Leighton Estates Water Distribution System Details**

5/10/05

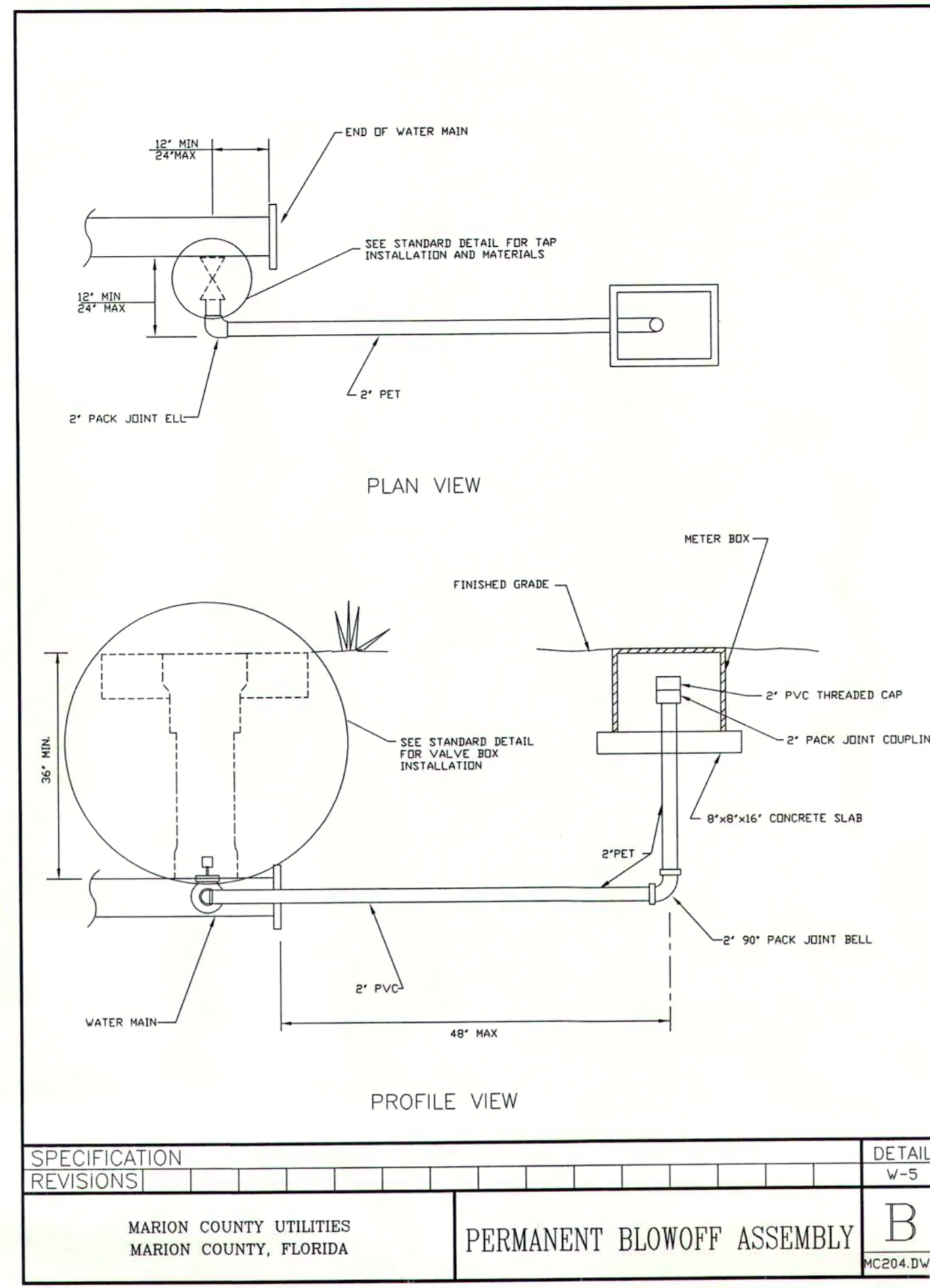
Sheet No. **3 of 3**

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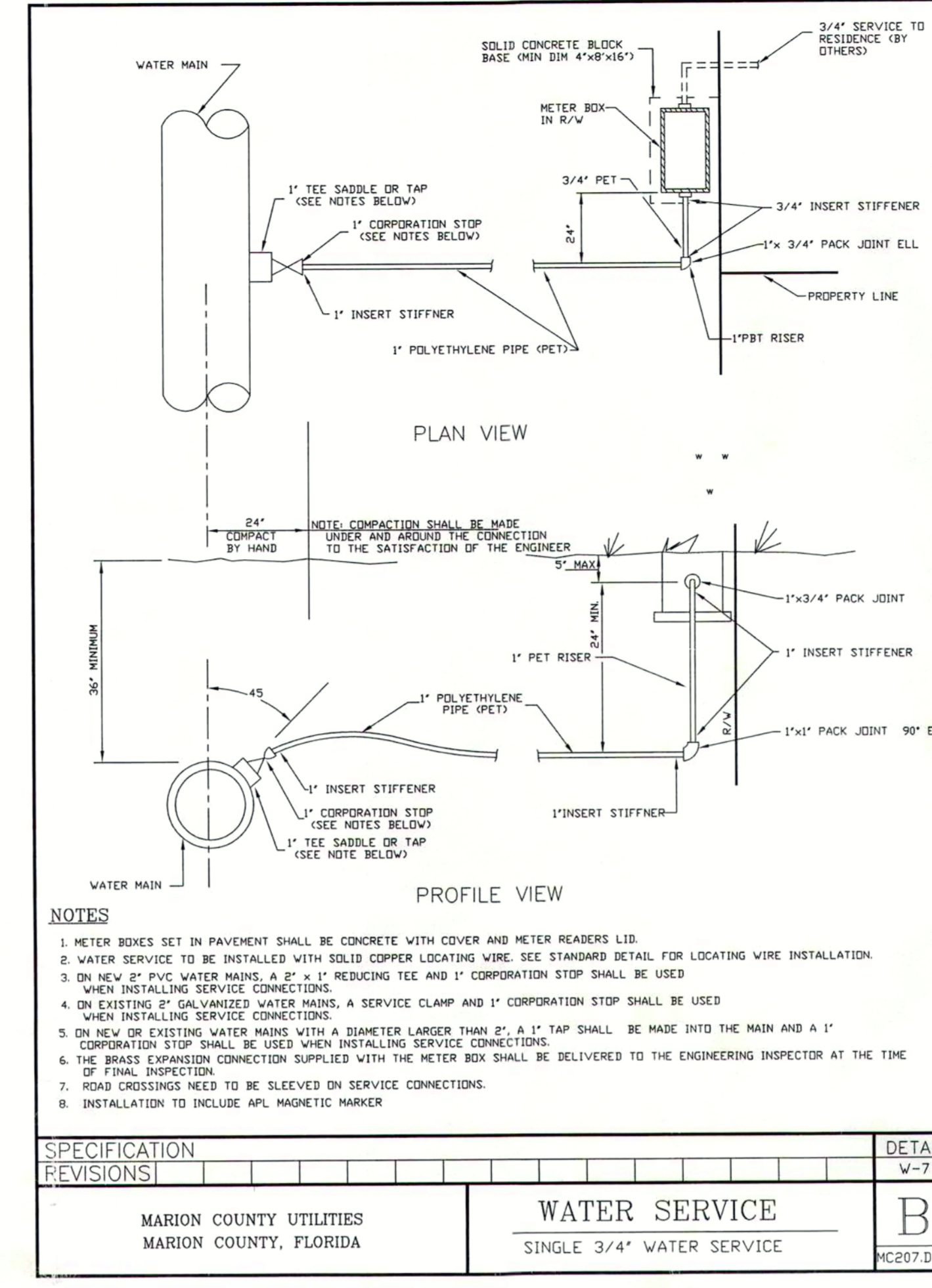
Scale: 1" = 100'
Project: 2004-49
Date: 2-2-05
Designed: MWR/CAC
Drawn: CAC
Checked: MWR/CAC
File: 2004-49 WATER PLANT



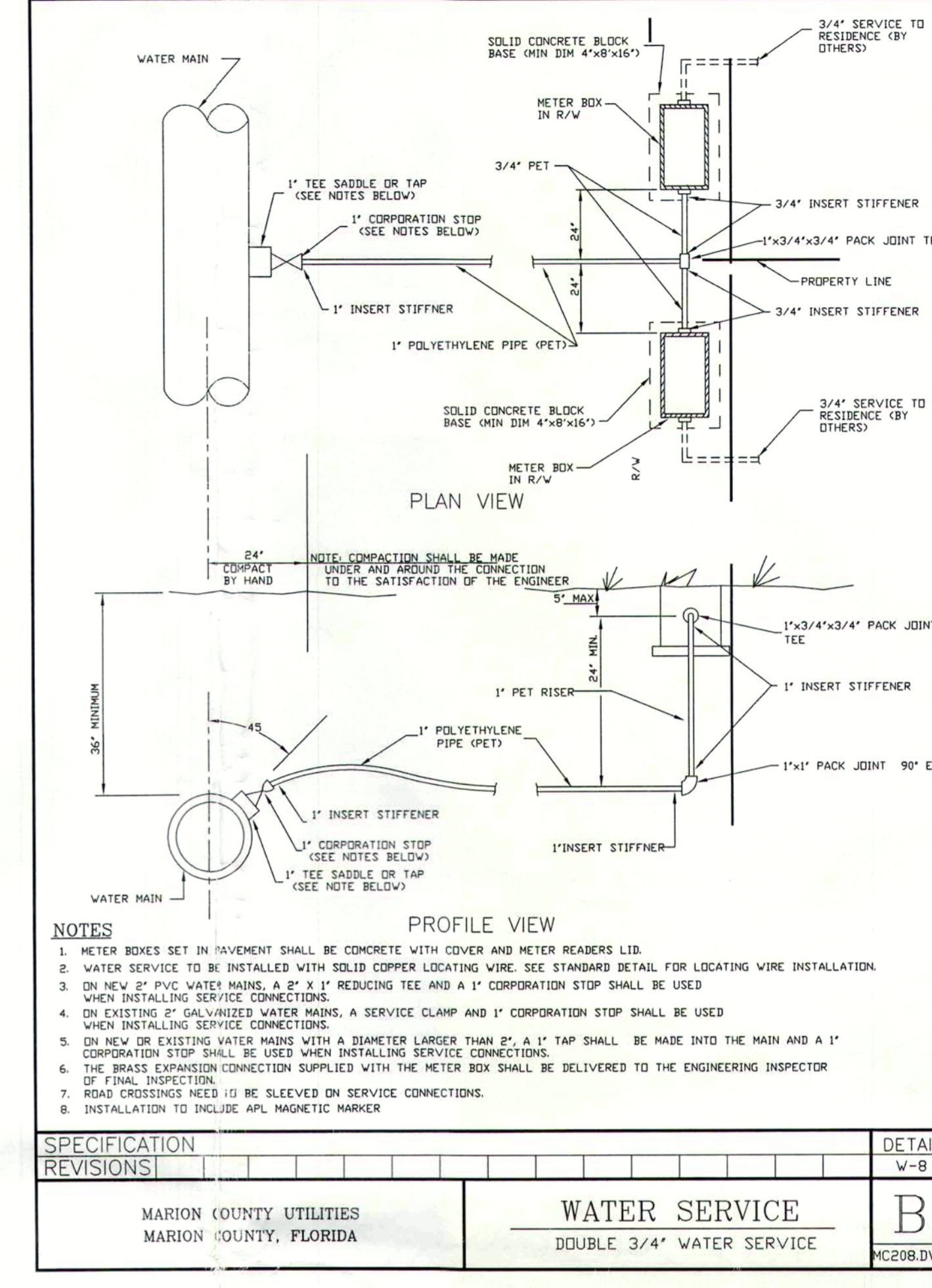
SPECIFICATION REVISIONS	DETAIL W-1
MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B MC200.DWG



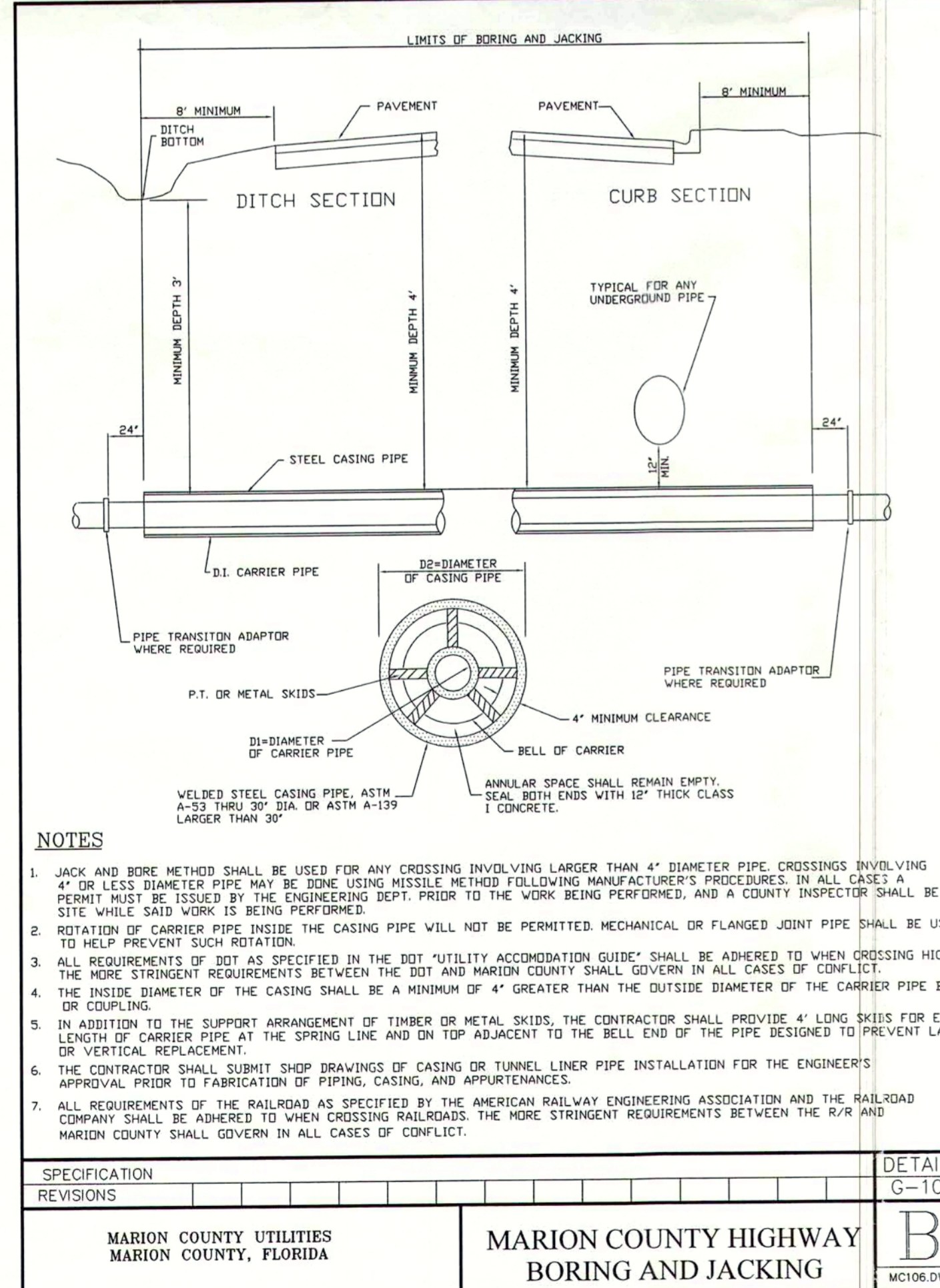
SPECIFICATION REVISIONS	DETAIL W-5
MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B MC204.DWG



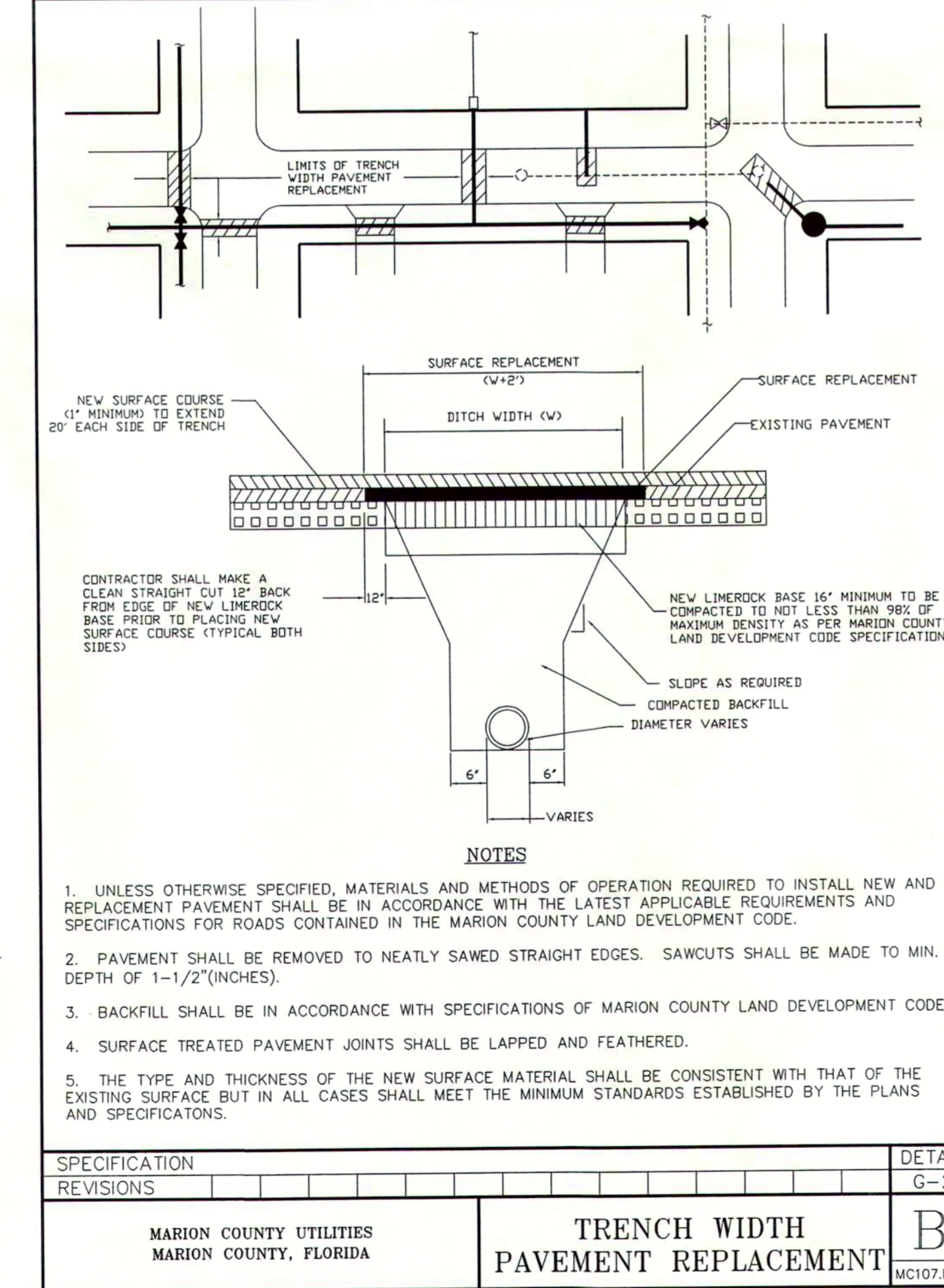
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MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B MC207.DWG



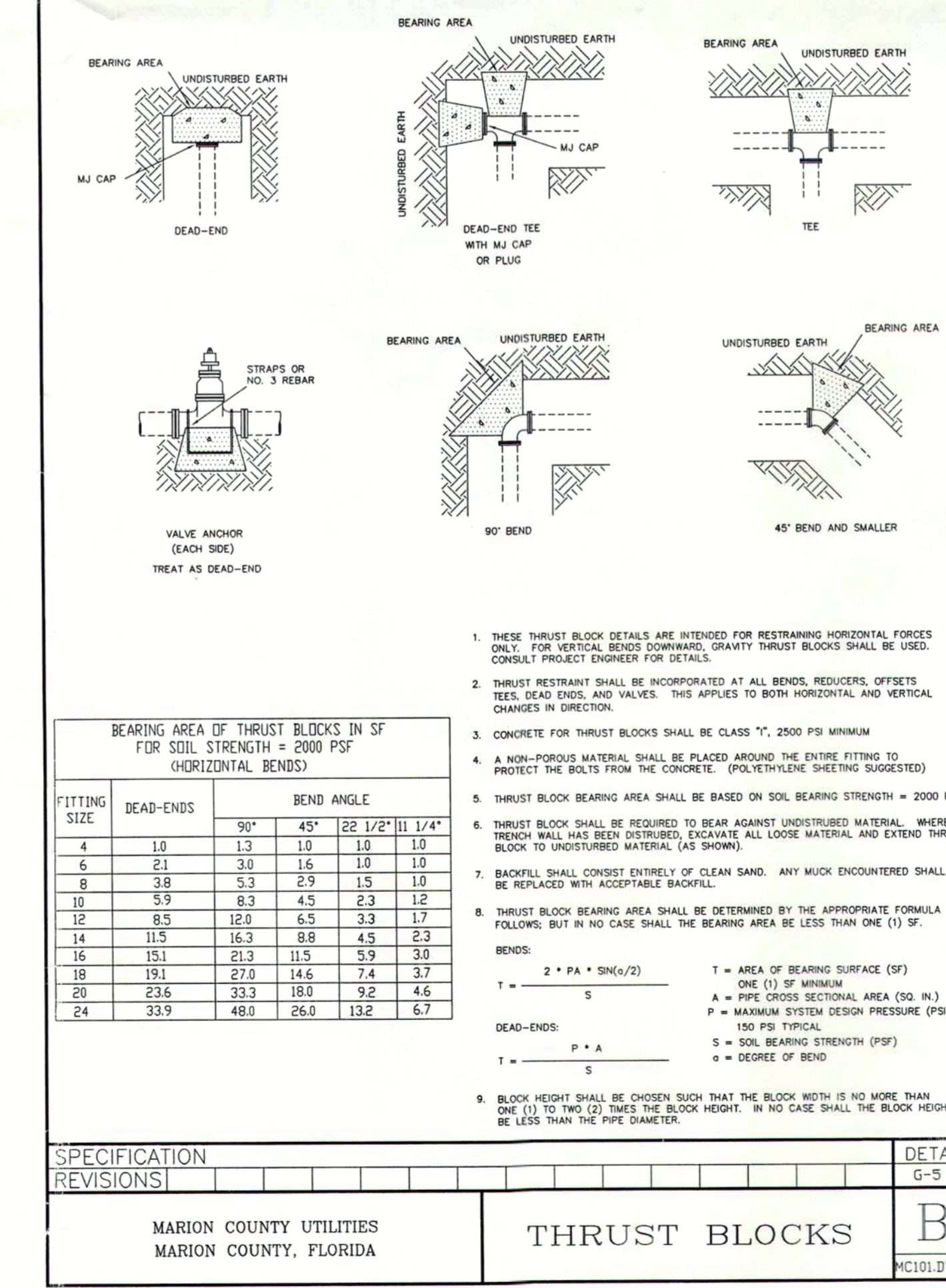
SPECIFICATION REVISIONS	DETAIL W-8
MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B MC208.DWG



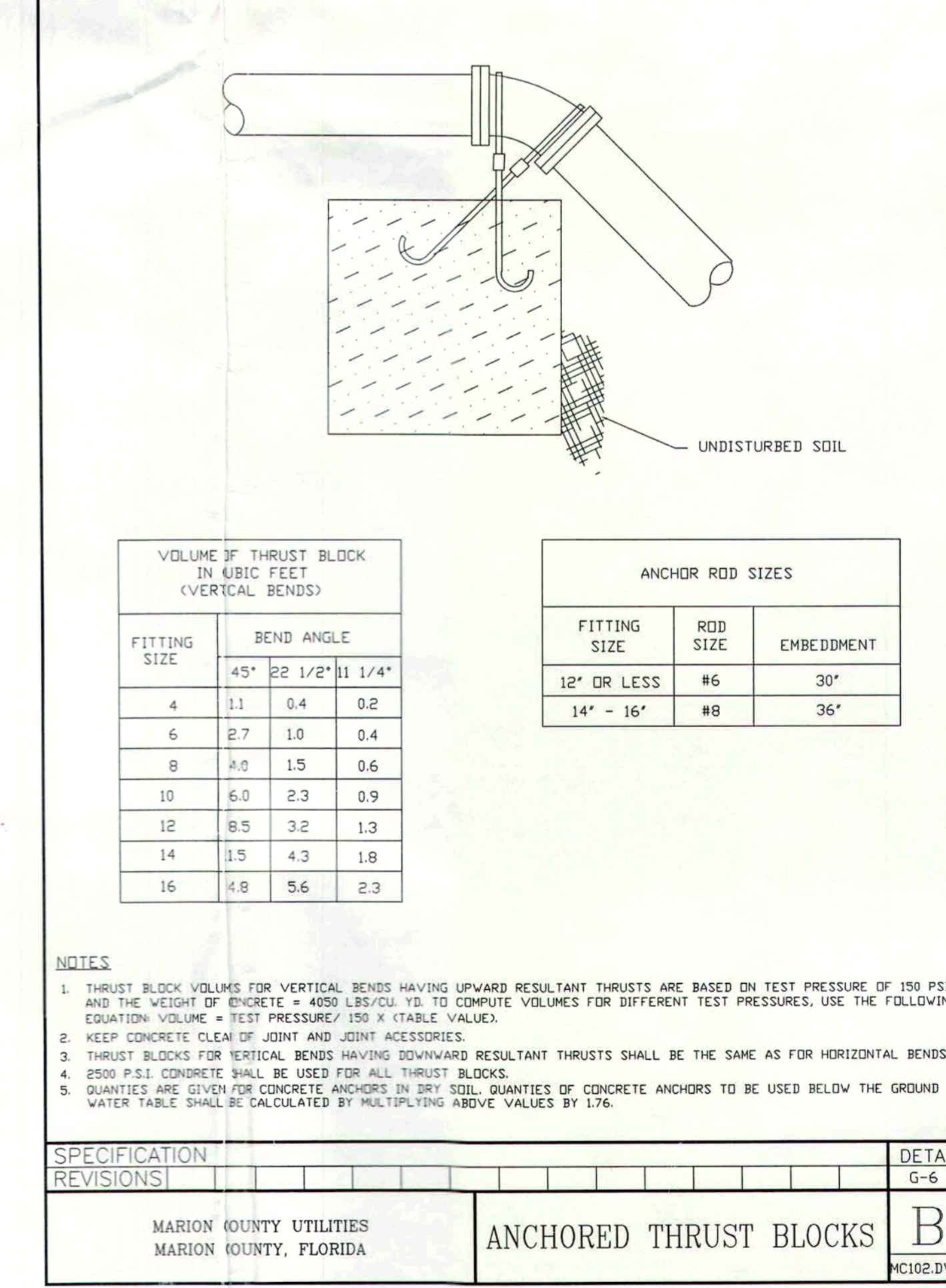
SPECIFICATION REVISIONS	DETAIL G-10
MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B MC107.DWG



SPECIFICATION REVISIONS	DETAIL G-2
MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B MC107.DWG



SPECIFICATION REVISIONS	DETAIL G-5
MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B MC101.DWG



SPECIFICATION REVISIONS	DETAIL G-6
MARION COUNTY UTILITIES MARION COUNTY, FLORIDA	B MC102.DWG

Project Name: **Leighton Estates Water Distribution System Details**
 Scale: 1" = 10'
 Project: 2004-49
 Date: 2-2-05
 Designer: MWR/CAG
 Checker: MWR/CAG
 Date: 2-2-05
 File: 2004-49 WATER PLAN
 MICHAEL W. RADCLIFFE ENGINEERING, INC.
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NOTES

- REPRODUCTIONS OF THIS SKETCH ARE NOT VALID UNLESS SEALED WITH AN EMBOSSED ENGINEER'S SEAL.
- NO CHANGE TO THE WORK AS SHOWN ON THESE PLANS SHALL BE MADE WITHOUT PRIOR NOTIFICATION TO THE PROJECT ENGINEER.
- EQUIPMENT BUILDING SHALL BE COVERED. AT A MINIMUM, A WALL SHALL BE CONSTRUCTED ON THE OUTER SIDE (FACING PUBLIC). THE REMAINDER OF THE BUILDING MAY BE LEFT OPEN AS DETERMINED BY THE OWNER PROVIDED HOWEVER, THAT ALL ELECTRICAL COMPONENTS HOUSED IN THE BUILDING ARE PROTECTED FROM RAIN, AND ALL CHLORINATION COMPONENTS ARE PROTECTED FROM SUNLIGHT.
- CHLORINE METERING PUMP (HYPOCHLORINATOR) SHALL BE A 30 GPD POSITIVE DISPLACEMENT TYPE PUMP SET AT 52% OF CAPACITY. THE METERING PUMP SHALL FEED FROM A CHLORINE SOLUTION "DAY TANK" MIXED AT APPROXIMATELY 2% CHLORINE SOLUTION. THE METERING PUMP SHALL BE DIRECTLY INTERCONNECTED SUCH THAT IT RUNS CONCURRENTLY WITH THE WELL PUMP.
- ALL PUBLIC WATER SYSTEM COMPONENTS THAT WILL COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF INTERNATIONAL STANDARD 61.
- ALL ABOVE GROUND WATER PLANT PIPING SHALL BE COLOR CODED PER FDEP REQUIREMENTS AS FOLLOWS:

RAW WATER LINES	OLIVE GREEN
FINISHED OR POTABLE WATER	DARK BLUE
CHLORINE SOLUTION	YELLOW
COMPRESSED AIR	DARK GREEN
- THE WATER LINE CONTRACTOR SHALL MAKE PRESSURE TESTS TO AWWA STANDARD M23, SHALL DISINFECT TO AWWA STANDARD C-651, AND SHALL OBTAIN SATISFACTORY BACTERIOLOGICAL SAMPLES ON TWO CONSECUTIVE DAYS FROM LOCATIONS DESIGNATED IN THE F.D.E.P. PERMIT OR AS SPECIFIED BY THE PROJECT ENGINEER.
- THE PLANS AND SPECIFICATIONS FOR THIS PROJECT REQUIRE THAT ALL NEW AND RELOCATED PROJECT COMPONENTS THAT WILL COME INTO CONTACT WITH DRINKING WATER OR DRINKING WATER TREATMENT CHEMICALS BE IN CONFORMANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)/NSF INTERNATIONAL (NSF) STANDARD 61. ALSO, THE PLANS AND SPECIFICATIONS FOR THIS PROJECT REQUIRE THAT ALL DRINKING WATER TREATMENT CHEMICALS SUPPLIED UNDER THIS PROJECT BE IN CONFORMANCE WITH ANSI/NSF STANDARD 60.
- ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODE.
- THE HYPOCHLORITE SOLUTION TANK SHALL HAVE A LID OR COVER, A VALVED DRAIN LINE, AND SHALL BE SCALE MOUNTED OR HAVE A MEANS FOR MEASURING THE LIQUID LEVEL IN THE TANK.
- ALL PROPOSED PLANT PIPING AND PIPE FITTINGS SHALL BE GALVANIZED IRON.

5,150 GAL. HYDROPNEUMATIC TANK
 (25" X 72" DIA. HORIZONTAL STEEL TANK, ASME CERTIFIED, RATED TO 125 PSI, WITH 2 COAT NSF EPOXY INTERIOR LINING.)

PLAN VIEW

1" = 2'

LEGEND TO PLANT COMPONENTS

(ALL PLANT PIPING AND PIPE FITTINGS SHALL BE GALVANIZED IRON)

- | | | | |
|--|---------------------------------|---|--|
| 1 36"x8"x6" CONCRETE PAD | 13 CHLORINE METERING PUMP | 24 4" TEE | 32 3" PVC SCH. 40 DRAIN PIPE |
| 2 AIR VOLUME CONTROL | 14 4" GALVANIZED BY-PASS | 25 3"x 2" REDUCER | 33 3" THREADED CAP |
| 3 ELECTRIC SERVICE PANEL | 15 CHLORINE INJECTION POINT | 26 4" UNION (UNIONS TO BE FIELD LOCATED WHERE NECESSARY BY INSTALLER) | 34 3 PHASE TRANSFORMER |
| 4 3/4" HOSE BIB | 16 4" - 45° BEND | 27 4" - 90° BEND | 35 SIGHT GLASS |
| 5 PRESSURE SWITCH | 17 3" - 90° BEND | 28 4"x3" REDUCER | 36 PRESSURE RELIEF VALVE SET NO GREATER THAN 125 PSI |
| 6 3/4" WATER SAMPLING TAP W/ THREADLESS, SMOOTH OUTLET | 18 WELL CASING VENT WITH SCREEN | 29 50 GALLON CHLORINATING SOLUTION "DAY TANK" | 37 4" SLIP TO FEMALE THREADED ADAPTER |
| 7 PRESSURE GAUGE | 19 3" UNION | 30 4" GATE VALVE | 38 TEMPORARY BACKFLOW PREVENTOR ASSEMBLY (SEE DETAIL, SHEET 1) |
| 8 3" DRAIN | 20 1" TEE | 31 STAINLESS STEEL EYE/FACE WASH STATION AND EMERGENCY SIGN (ANSI Z358.1 COMPLIANT) | 39 3" 1/4 TURN BALL VALVE |
| 9 3" GATE VALVE | 21 2 x 1" REDUCER | | |
| 10 3" TEE | 22 POP OFF VALVE | | |
| 11 4" TOTALIZING FLOW METER | 23 3" CHECK VALVE | | |
| 12 5" POTABLE WELL & SEAL W/ A 7-1/2 H.P. SUBMERSIBLE PUMP (SEE WELL PROFILE FOR MORE INFORMATION) | | | |

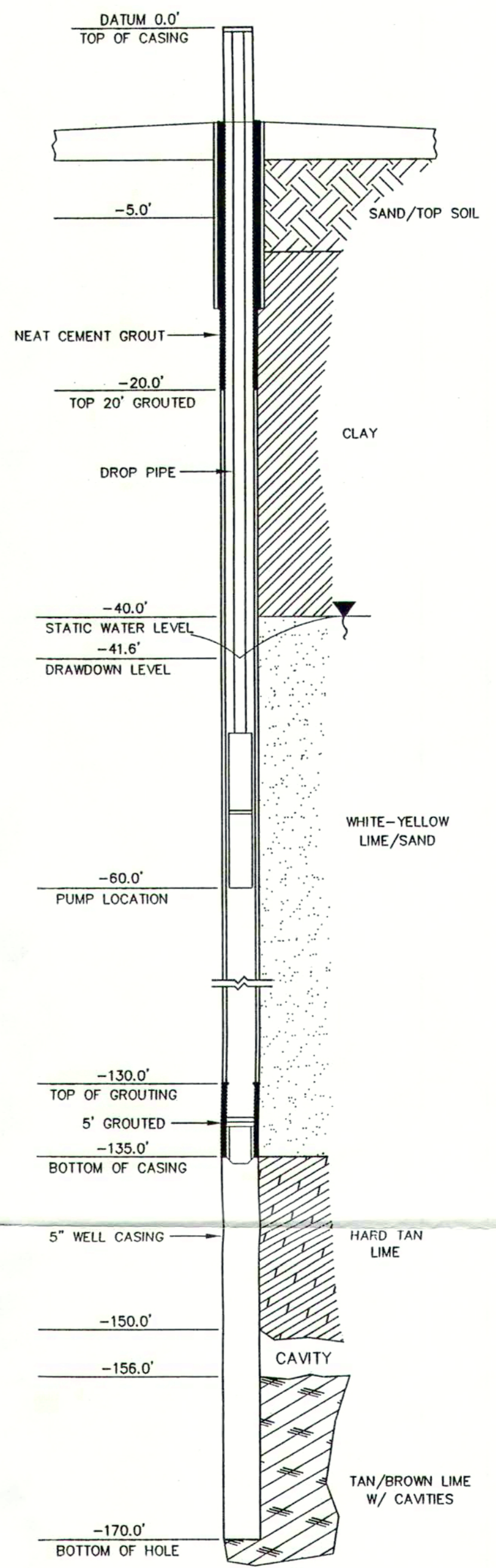
PROFILE VIEW

1" = 2'

5,150 GAL. HYDROPNEUMATIC TANK
 (25" X 72" DIA. HORIZONTAL STEEL TANK, ASME CERTIFIED, RATED TO 125 PSI, WITH 2 COAT NSF EPOXY INTERIOR LINING.)

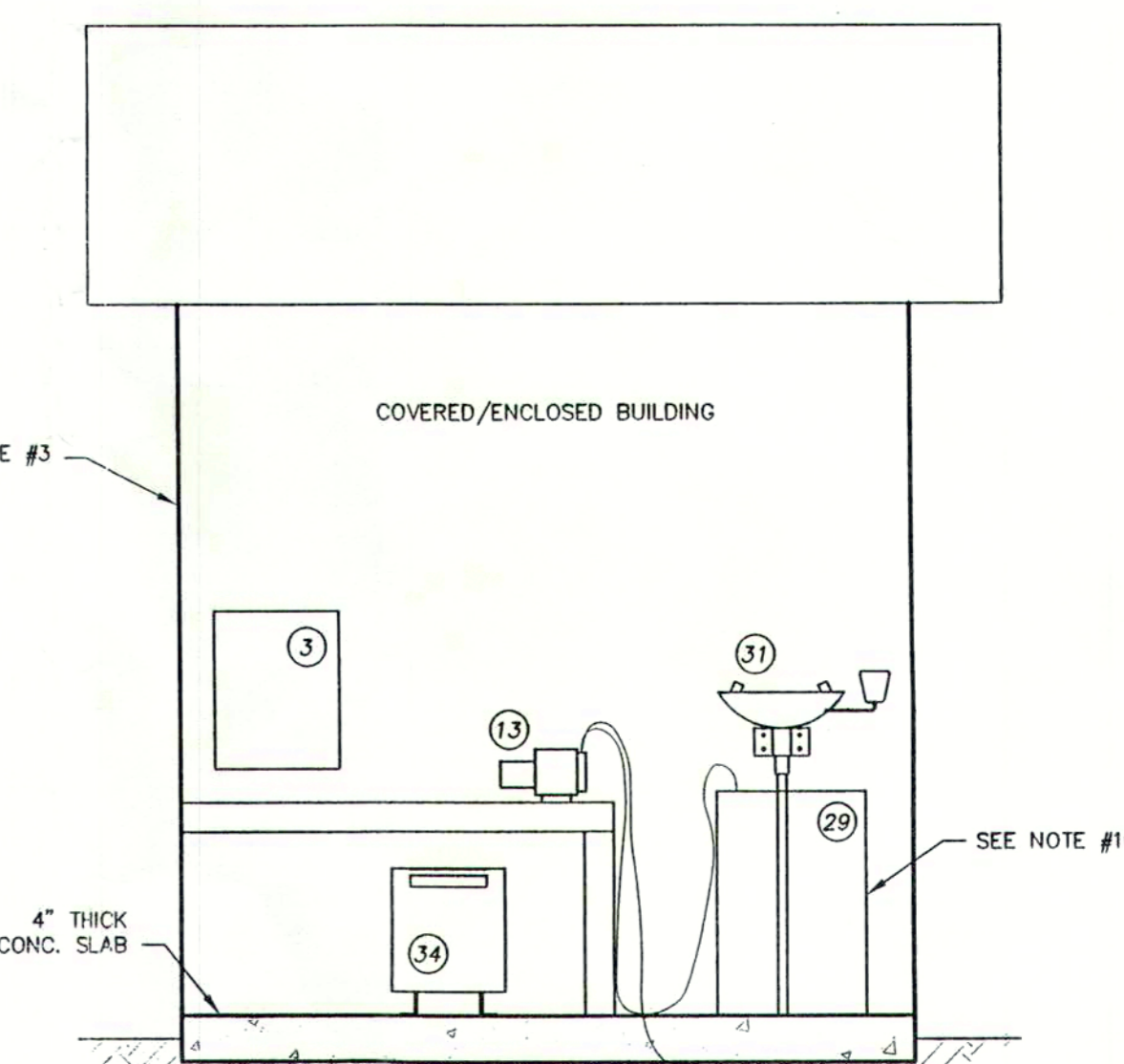
WELL PROFILE

N.T.S.



BUILDING PROFILE

N.T.S.



AS BUILT INFORMATION
 * = IMPROVEMENTS CONSTRUCTED AS SHOWN
 (XX) = REVISED AS-BUILT INFORMATION

Revision	By	Date
1	MMR/CAG	5-4-05
2	CAG	7-25-05
REVISIONS PER FDEP COMMENTS AS BUILT REVISIONS		

Scale	1" = 2'
Project	2004-49
Drawn	CAG
Checked	MMR/CAG
Date	3-10-05
File	2004-49 WATER PLANT

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Leighton Estates Water Treatment Plant Record Drawings