14. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL LOCATOR BALLS AT 100' INTERVALS ALONG STRAIGHT RECLAIM WATER MAIN RUNS (EVERY 20' ON DEFLECTED RUNS), AND EVERY 5' ON BRANCH FITTINGS OR INTERSECTIONS. LOCATOR BALLS MUST ALSO BE PLACED AT EVERY BRANCH, TURN, VALVE, TAP, OUTLET, END, AND METER BOX IN THE SYSTEM. ASBUILT DRAWINGS SHALL REFLECT THE PRECISE LOCATIONS OF EACH OF THESE BALLS EXPRESSED IN X-Y COORDINATES PER FLORIDA 0901 EASTERN ZONE (1983 SURVEY FEET). LOCATOR BALLS SHALL BE PURPLE 3-M 1400 SERIES (ELECTRONIC MARKER SYSTEMS), 1428-XR/ID EXTENDED RANGE 5' DEPTH BALL MARKER FOR GENERAL PURPOSE / RECLAIMED WATER APPLICATION. SEE DRAWING FOR MORE DETAIL.

15. ALL CONSTRUCTION OF THE RECLAIM WATER DISTRIBUTION SYSTEM SHALL MEET CURRENT REQUIREMENTS OF FDEP, AWWA, CITY OF ORLANDO AND ORLANDO UTILITIES COMMISSION FOR MATERIALS OF CONSTRUCTION, DESIGN, AND INSTALLATION.

16. MATERIALS, DESIGN AND CONSTRUCTION METHODS FOR STREETS AND STORM DRAINAGE CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE CITY OF ORLANDO, ORANGE COUNTY, AASHTO, FDOT, AND ALL OTHER AGENCIES THAT MAY EXERT JURISDICTION.

17. THE CONTRACTOR SHALL USE THE CITY OF ORLANDO ROADWAY AND TRAFFIC DESIGN STANDARDS, 1991 ADDITION, ENGINEERING STANDARDS MANUAL & DETAILS, AND FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS LATEST EDITION, FOR CONSTRUCTION ITEM DETAILS, UNLESS A SPECIFIC DETAIL IS PROVIDED HEREIN. ANY REFERENCE TO THE ESM SHALL REFER TO THE CITY OF ORLANDO ENGINEERING STANDARDS MANUAL AND DRAWINGS AVAILABLE AT THE CITY OF ORLANDO WEBSITE.

18. ALL EXISTING UNDERGROUND UTILITIES THAT ARE ACTIVE SHALL REMAIN IN PLACE UNTIL THE NEW FACILITIES ARE OPERATIONAL.

19. UNDER NO CIRCUMSTANCES SHALL THE ACTIVITIES OF THE CONTRACTOR OR HIS SUBCONTRACTORS CAUSE ANY INTERRUPTIONS TO THE SERVICE OPERATION OF EXISTING UTILITIES WITHOUT WRITTEN AUTHORIZATION FROM THE AUTHORIZED REPRESENTATIVE.

20. RESIDENT AND BUSINESS ACCESS SHALL BE MAINTAINED AT ALL TIMES. IF UNABLE TO DO SO, THE CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION TO THE AFFECTED BUSINESSES AND RESIDENTS A MINIMUM OF (1) ONE WEEK IN ADVANCE TO COORDINATE ALTERNATIVE ACCESS ARRANGEMENTS.

21. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION OF THESE UTILITIES, WITH THE OWNER OF THE UTILITY, PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL ENSURE THAT THE UTILITY OWNERS AND THE CITY OF ORLANDO PROJECT MANAGER ARE PROPERLY NOTIFIED OF ANY TEMPORARY DISRUPTION OF SERVICE AT LEAST 1 WEEK IN ADVANCE.

22. BEFORE CONSTRUCTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL UTILITY LOCATIONS, POSITIONS, ELEVATIONS AND DIMENSIONS BY UTILIZING EXPLORATORY (HAND) EXCAVATION WHICH SHALL BE MADE 48 HOURS OR 1,000 FEET IN ADVANCE OF THE WORK, WHICHEVER IS GREATER. IF THERE IS A POTENTIAL CONFLICT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. ANY DAMAGE TO UTILITIES, STRUCTURES AND /OR SERVICES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE IN A MANNER APPROVED BY AND COORDINATED WITH THE UTILITY OWNER.

23. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THESE PLANS OR FIELD LOCATED. ALL UTILITIES WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BY THE RESPECTIVE UTILITY COMPANIES AND THE CONTRACTOR SHALL COOPERATE WITH THEM DURING THE RELOCATION OPERATIONS. ANY DELAYS, COSTS OR INCONVENIENCE OF THE VARIOUS UTILITY CONFLICTS SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COSTS WILL BE CHARGED TO THE CITY.

24. FOR CONNECTIONS TO AN EXISTING PIPE, THE CONTRACTOR SHALL EXCAVATE THE CONNECTION SITE TO VERIFY THE PIPE TYPE, SIZE AND CONDITION, AND CHECK FOR OBSTRUCTIONS AND JOINT LOCATIONS PRIOR TO ORDERING MATERIALS AND INSTALLATION OF THE NEW PIPELINE.

25. THE CONTRACTOR HAS THE OPTION TO MOVE/RELOCATE THE ALIGNMENT (HORIZONTAL OR VERTICAL) TO AVOID CONFLICT WITH EXISTING UTILITIES OR FOR EASE OF WORK, SUBJECT TO APPROVAL FROM THE CITY. IF THE CONTRACTOR CHANGES THE VERTICAL ALIGNMENT, THE CONTRACTOR SHALL INSTALL ALL NECESSARY AIR RELEASE VALVES AND FITTINGS AT HIS EXPENSE.

RECLAIMED WATER CONSTRUCTION SPECIFICATIONS

RGN-2

1. IN ADDITION TO THE REQUIREMENTS STATED HEREIN, THE RECLAIMED WATER MAINS IN THE VICINITY OF STORM OR SANITARY SEWERS, FORCE MAINS OR POTABLE WATER LINES SHALL COMPLY WITH THE APPLICABLE PROVISIONS OF CHAPTER 62-604. F.A.C., CHAPTER 62-610, F.A.C., THE REQUIREMENTS OF THE WATER PURVEYOR OR OTHER APPROVED STANDARDS.

2. THERE SHALL BE NO PHYSICAL CONNECTIONS BETWEEN A PUBLIC OR PRIVATE POTABLE WATER SUPPLY SYSTEM AND THE RECLAIMED WATER SYSTEM. OR ANY OTHER RECLAIMED WATER PIPE OR APPURTENANCE, WHICH WOULD PERMIT THE PASSAGE OF ANY RECLAIMED WATER, POLLUTED WATER, WASTEWATER OR ANY OTHER WATER INTO THE POTABLE WATER SUPPLY. NO RECLAIMED WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF A SANITARY SEWER OR STORM WATER MANHOLE.

3. CROSS CONNECTION CONTROL SHALL BE IN ACCORDANCE WITH RULES AND REQUIREMENTS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION IN CHAPTER 62-555, F.A.C., "PERMITTING AND CONSTRUCTION OF PUBLIC WATER SYSTEMS".

4. THE RECLAIMED WATER MAIN SHALL BE ON THE OPPOSITE SIDE OF THE STREET OR AS FAR AWAY FROM THE POTABLE WATER MAIN AS PRACTICAL.

5. A MINIMUM DISTANCE OF AT LEAST 3 FEET HORIZONTALLY SHALL SEPARATE ALL RECLAIMED WATER MAINS FROM POTABLE, SANITARY, AND STORM WATER PIPES. THE DISTANCE SHALL BE MEASURED FROM OUTSIDE EDGE TO OUTSIDE EDGE. IF IT IS NOT PRACTICAL TO MAINTAIN A 3 FOOT HORIZONTAL SEPARATION DISTANCE BETWEEN A POTABLE LINE AND A RECLAIM LINE, THEN THE RECLAIM WATER MAIN SHALL BE LAID IN A SEPARATE TRENCH OR ON A SHELF OF UNDISTURBED EARTH AT LEAST 18 INCHES ABOVE THE TOP OF SEWER PIPES AND 18" BELOW POTABLE WATER PIPES. WHEN A RECLAIM WATER MAIN PARALLELS A SEWER PIPE, AND A SEPARATION OF AT LEAST 3' CANNOT BE MAINTAINED, ALTERNATE CONSTRUCTION METHODS OR MATERIALS MAY BE USED WITH APPROVAL OF FDEP. AND THE CITY OF ORLANDO.

6. PIPES SHALL NOT CROSS ANY OTHER PIPES OR UTILITIES AT AN ANGLE LESS THAN 60 DEGREES.

7. WHERE RECLAIM WATER PIPES CROSS WATER OR SEWER PIPES, A MINIMUM VERTICAL SEPARATION OF 18 INCHES SHALL BE MAINTAINED BETWEEN THE BOTTOM OF THE UPPER PIPE AND THE TOP OF THE LOWER PIPE, WITH THE CLEANER WATER ON TOP. THE CROSSING SHALL BE ARRANGED SUCH THAT THE PIPE JOINT SHALL BE EQUIDISTANT AND CENTERED ON THE CROSSING. WHERE A RECLAIMED WATER MAIN PASSES UNDER A SANITARY SEWER OR STORM WATER SEWER, ADEQUATE STRUCTURAL SUPPORTS SHALL BE PROVIDED FOR THE SEWER PIPE TO MAINTAIN LINE AND GRADE. WHERE THE 18" SEPARATION IS NOT PRACTICAL, ALTERNATE CONSTRUCTION METHODS OR MATERIALS MAY BE USED WITH APPROVAL OF FDEP AND THE CITY OF ORLANDO.

8. WHERE A RECLAIM WATER PIPE CONFLICTS WITH AN EXISTING POTABLE WATER PIPE WITH LESS THAN 18 INCHES VERTICAL CLEARANCE, THEN THE RECLAIM WATER PIPE SHALL BE DUCTILE IRON PIPE (DIP) AND THE RECLAIM WATER PIPE SHALL BE ARRANGED TO MEET THE CROSSING REQUIREMENTS DESCRIBED ABOVE.

9. WHERE A RECLAIM WATER PIPE CROSSES AN EXISTING SEWER PIPE WITH LESS THAN 18 INCHES VERTICAL CLEARANCE, THEN THE RECLAIM WATER PIPE SHALL BE DUCTILE IRON PIPE (DIP) AND THE SEWER PIPE SHALL BE ENCASED IN CONCRETE.

10. ALL RECLAIM WATER DISTRIBUTION SYSTEM PIPE SHALL HAVE A MINIMUM OF THIRTY-SIX (36) INCHES OF COVER, UNLESS OTHERWISE DIRECTED BY THE CITY OF ORLANDO PROJECT MANAGER OR THEIR REPRESENTATIVE.

11. A PRE-CONSTRUCTION MEETING FOR THE INSTALLATION OF RECLAIM WATER FACILITIES IS REQUIRED. CONTACT: CITY OF ORLANDO WASTEWATER DIVISION, ENVIRONMENTAL CONTROL SECTION @ 407-246-2664.

12. THE CONTRACTOR SHALL CALL "SUNSHINE ONE CALL" AT 1-800-432-4770 TWO (2) WORKING DAYS BEFORE EXCAVATING IN THE CONSTRUCTION AREA.

13. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR TO ENSURE THAT ALL REQUIRED PERMITS ARE IN-HAND BEFORE BEGINNING ANY CONSTRUCTION.

RECLAIMED WATER CONSTRUCTION SPECIFICATIONS

RGN-1

26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RELOCATION OF ANY EXISTING IRRIGATION SYSTEM OR PRIVATE UTILITY APPURTENANCES WHICH CANNOT BE ADEQUATELY PROTECTED DURING CONSTRUCTION OF THE RECLAIM WATER PIPING.

27. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION EXISTING BEFORE COMMENCING CONSTRUCTION WORK.

28. WHEN ENCOUNTERED, UNSUITABLE MATERIALS SHALL BE REMOVED FROM THE EXCAVATED MATERIALS AND BACK FILLED WITH SUITABLE MATERIALS. UNSUITABLE MATERIALS SHALL BE REMOVED FROM THE JOB SITE AND DISPOSED OF IN A TIMELY AND LEGAL MANNER AND APPROVED BY THE CITY.

29. INLETS AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENT UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS. EROSION CONTROL AT ALL INLET DRAINAGE STRUCTURES DURING CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH DRAWINGS R-30(A-H).

30. PRIOR TO BEGINNING ANY CLEARING ACTIVITIES ON CITY PROPERTY, THE CONTRACTOR SHALL GET APPROVAL FROM PARKS DEPARTMENT FOR TREE REMOVAL, THEN CLEARLY MARK WITH FLAGGING TAPE OR OTHER APPROVED METHOD, ALL EXISTING TREES TO REMAIN ON THE PROJECT SITE. ALL TREES TO BE REMOVED SHALL BE MARKED WITH SPRAY PAINT OR OTHER APPROVED METHOD SO THAT DURING CLEARING, THERE ARE NO MISUNDERSTANDING AS TO WHICH TREES ARE TO BE REMOVED AND WHICH ARE TO REMAIN.

31. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF DAMAGED TREES WITH TREES OF SIMILAR QUALITIES,SIZE AND SPECIES AT NO COST TO THE CITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF NEWLY PLANTED GRASS OR VEGETATION UNTIL THE WORK HAS BEEN ACCEPTED BY THE CITY.

32. DEWATERING SYSTEM SHALL BE UTILIZED BY THE CONTRACTOR IN ACCORDANCE WITH GOOD STANDARD PRACTICES AND MUST BE SUFFICIENT ENOUGH TO LOWER THE WATER LEVEL IN ADVANCE OF EXCAVATION TO KEEP THE TRENCH BOTTOM AND SIDES FIRM AND DRY, AT LEAST 2' MINIMUM BELOW THE TRENCH BOTTOM. POLLUTED WATER SHALL NOT BE DISCHARGED INTO SANITARY SEWER, STORM SYSTEM, OR BODIES OF WATER. ANY DISCHARGE INTO SANITARY SEWER SYSTEM SHALL BE PRE-APPROVED BY THE WASTEWATER DIVISION.

33. EXCAVATIONS SHALL CONFORM TO THE REQUIREMENTS OF THE TRENCH SAFETY ACT. THE DISPOSAL OF EXCESS EARTHWORK MATERIALS SHALL BE THE RESPONSIBILITY/PROPERTY OF THE CONTRACTOR.

34. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF EMBANKMENTS AND SHALL REPLACE ANY PORTION WHICH HAS BECOME DISPLACED DUE TO EROSION OR DUE TO CARELESSNESS OR NEGLIGENCE ON THE PART OF THE CONTRACTOR.

35. TEMPORARY DRAINAGE SHALL BE PROVIDED DURING CONSTRUCTION TO ELIMINATE ANY FLOODING OF PRIVATE PROPERTY AND EXISTING ROADWAYS CAUSED BY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL PROVIDE ADDITIONAL DRAINAGE AT NO EXTRA COST TO THE OWNER.

36. HYDROSTATIC PRESSURE AND LEAKAGE TESTS SHALL BE CONDUCTED ONLY FOR INSTALLED FACILITIES. ALL TEST SHALL BE COMPLETED AND ACCEPTED BY THE CITY ENGINEER BEFORE ANY PAVEMENT IS PUT IN PLACE.

37. ALL PIPING SHALL BE CLEAN AND FREE OF ALL DIRT, DEBRIS, AND BIOLOGY. BEFORE PRESSURE TESTING.

38. LEAKAGE TESTS SHALL BE CONDUCTED FOR A MINIMUM OF 2 HOURS AT A MINIMUM PRESSURE OF 150 PSI. ANY DISCERNIBLE PRESSURE DROP OVER THE FOUR HOUR TEST PERIOD SHALL CONSTITUTE FAILURE OF THE PRESSURE TEST. PRESSURE TEST MUST BE WITNESSED BY A CITY OF ORLANDO PROJECT MANAGER OR HIS APPOINTED REPRESENTATIVE.

39. ISOLATE THE MAINS PRIOR TO TESTING. AVOID ANY CROSS-CONNECTIONS WITH THE POTABLE WATER SYSTEMS DURING TESTING. NEW FACILITIES MAY BE CONNECTED TO THE EXISTING RECLAIMED WATER LINES ONLY FOLLOWING COMPLETION AND APPROVAL OF TESTING.

40. OPEN VENT AT THE HIGH POINTS OF THE INSTALLATION TO PURGE ALL AIR FROM THE SYSTEM WHILE BEING FILLED WITH WATER.

RECLAIMED WATER CONSTRUCTION SPECIFICATIONS

RGN-3

41. IF LEAKAGE IS INDICATED BY ANY DISCERNIBLE PRESSURE DROP OVER THE TWO HOUR TEST PERIOD, LOCATE THE CAUSE OF THE LEAKS, REPAIR COMPONENTS AND REPEAT THE LEAKAGE TEST. ALL LEAKAGE SHALL BE ELIMINATED.

42. ALL HYDROSTATIC TESTING SHALL BE IN ACCORDANCE WITH ANSI/AWWA C600-93 SECTION 4 FOR D.I. PIPE AND ANSI/AWWA C605 SECTION 7 FOR PVC PIPE. TEST PRESSURE SHALL BE 200 PSI.

43. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A MAINTENANCE OF TRAFFIC (MOT) PLAN TO THE CITY OF ORLANDO FOR APPROVAL, THAT IS SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA WHO SPECIALIZES IN TRAFFIC ENGINEERING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE TRAFFIC CONTROL DEVICES AND BARRIERS, FOR THE PROTECTION OF PEDESTRIANS AND THE WORKERS.

44. PUBLIC ROADS AND PAVED DRIVE CROSSINGS SHALL BE BACK-FILLED WITH GRANULAR MATERIAL AND TOPPED WITH 12" THICK OF LIME ROCK BASE COURSE MATERIAL. BACKFILL SHALL BE COMPACTED TO 99% MODIFIED PROCTOR OF THE MINIMUM DRY DENSITY PER AASHTO T-801, OR ASTM D1557. ALL EDGES OF REPAIR AREAS SHALL SAW CUT STRAIGHT AND NEAT.

45. EXISTING PAVEMENT MARKINGS AND MESSAGES SHALL BE INVENTORIED AND REPLACED BY THE CONTRACTOR, UNLESS OTHERWISE SPECIFIED IN THE PLANS OR LATEST DESIGN STANDARDS. ALL PERMANENT PAVEMENT MARKINGS SHALL BE ALKYD THERMOPLASTIC. TEMPORARY MARKINGS SHALL BE TAPED AND ALL CONFLICTING MARKINGS SHALL BE COMPLETELY REMOVED.

46. CONCRETE FORMS SHALL BE CONSTRUCTED FROM SOUND WOOD, METAL OR OTHER APPROVED MATERIALS. FORMS SHALL BE SUITABLE TO PROVIDE A FLAT, UNIFORM SURFACE AND TO WITHSTAND CONSTRUCTION LOADS WITHOUT SAGGING OR DEFLECTING. WOOD FORMS IN CONTACT WITH THE CONCRETE SHALL BE COATED WITH A EFFECTIVE RELEASE AGENT. FORMS SHALL REMAIN IN PLACE PER ACI 301 AND ACI 347. FORMS SHALL REMAIN STRAIGHT, LEVEL, PLUMB AND TRUE TO SHAPE TO WITHIN ¼" PER 10'.

47. MOLDING, BEVELS OR OTHER TYPES OF CHAMFER STRIPS SHALL BE PLACED TO PRODUCE A 3/4-INCH CHAMFER AT ALL HORIZONTAL AND VERTICAL PROJECTION CORNERS AND FOR BLOCKOUTS.

48. CONCRETE REINFORCEMENT SHALL BE NEW, RUST FREE STEEL BARS THAT CONFORM TO ASTM A615, GRADE 60. TIE WIRE SHALL BE A MINIMUM OF 16-GAUGE, BLACK ANNEALED WIRE. CHAIRS SHALL BE PROVIDED AS NECESSARY TO PREVENT DISPLACEMENT DURING POUR.

49. SYNTHETIC REINFORCING FIBER MAY USED IN LIEU OF STEEL REINFORCEMENT BARS FOR SMALL (LESS THAN 50 SQ.FT.) SLAB ON GRADE CONSTRUCTION. FIBERS SHALL BE 100% POLYPROPYLENE THAT ARE COLLATED AND FIBRILLATED AS MANUFACTURED BY FIBERMESH COMPANY OF SYNTHETIC INDUSTRIES. FIBER LENGTH AND QUANTITY SHALL BE IN COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND SOILS MUST BE COMPACTED TO 95% DRY DENSITY.

50. MINIMUM REINFORCEMENT STEEL AND CONCRETE COVER SHALL BE IN ACCORDANCE WITH ACI-318

51. CONCRETE SHALL BE 3000 PSI STRENGTH, AND SHALL BE PRODUCED AND PLACED IN ACCORDANCE WITH ACI STANDARDS AND MUST MEET THE 28-DAY STRENGTH REQUIREMENTS.

52. ALL RECLAIM WATER PIPING SHALL BE DESIGNED, RATED, INSTALLED AND RESTRAINED TO WITHSTAND 150 PSI CONTINUOUS PRESSURE UPSTREAM OF THE PRESSURE REDUCING VALVE. PVC PIPE IS ALLOWED ONLY FOR 8" DIAMETER PIPING AND SMALLER. DUCTILE IRON PIPE MUST BE USED FOR ALL SIZES GREATER THAN 8" DIAMETER.

RECLAIMED WATER CONSTRUCTION SPECIFICATIONS

RGN-4

53. THRUST BLOCKS SHALL NOT BE USED FOR PRESSURE OR MOMENTUM RESTRAINT, EXCEPT WHERE IT CAN BE PROVEN THAT NO OTHER MEANS EXIST TO RESTRAIN AGAINST THE REQUIRED 200 PSI LINE PRESSURE. IN SUCH INSTANCES, THRUST BLOCKS WILL BE USED IN CONJUNCTION WITH MECHANICAL TYPE RESTRAINT SYSTEMS TO SUPPLEMENT THE CAPACITY OF THE MECHANICAL RESTRAINT SYSTEM.

54. A COMPLETE SET OF AS BUILT DRAWINGS (36" X 24" HARD COPY & AutoCAD FILE), AND ALL INSPECTION AND TEST RECORDS MUST BE SUBMITTED TO THE CITY OF ORLANDO AND APPROVED BEFORE THE NEW RECLAIM WATER SYSTEM IS ALLOWED TO BE PUT INTO SERVICE. THE DRAWINGS MUST INCLUDE ACCURATE LAYOUT, SIZING, PROJECTED FLOWS, AND STATE PLANE COORDINATES FOR ALL VALVES, PIPING BENDS, BRANCHES, ENDS, OUTLETS, CONNECTION POINTS, METER BOXES AND LOCATOR BALLS, OR ANY ITEM LISTED ABOVE.

55. ALL SERVICE LINES WILL BE LAID OUT AND CONSTRUCTED 90 DEGREES FROM THE RECLAIM WATER MAIN AND ROUTED IN A STRAIGHT PATH FROM THE MAIN TO THE METER BOX.

56. ALL RECLAIM WATER PIPING AND VALVE BOX COVERS AND LIDS SHALL BE COLORED PANTONE 522C PURPLE.

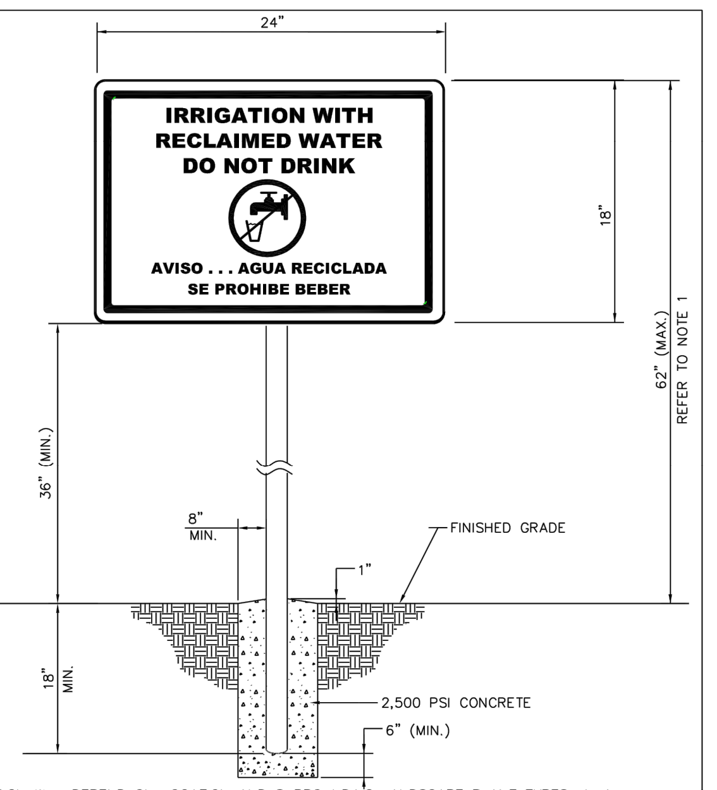
57. ALL SERVICE SADDLES SHALL BE NON-STRAP TYPE. BANDED CLAMP TYPE SADDLES ARE ALLOWED PROVIDED THEY ARE SINGLE PIECE FULL WIDTH BANDS OR CLAMPING SHELL EQUAL TO OR GREATER THAN THE WIDEST DIMENSION OF THE SERVICE SIDE OF THE ASSEMBLY.

58. ALL MAIN TAPS SHALL BE CONSTRUCTED USING A FLANGED, FULL IRON BODY SPLIT TEE, FUSION BONDED EPOXY STEEL TAPPING SLEEVE, OR A 304 STAINLESS STEEL TAPPING SLEEVE. .

59. HORIZONTAL DIRECTIONAL DRILLS SHALL BE PERFORMED BY LICENSED UNDERGROUND CONTRACTORS WITH NO LESS THAN 5 YEARS OF EXPERIENCE WITH PULLS OF SIMILAR LENGTH AND DIAMETER. SELECTION OF MATERIALS AND ROUTE SHALL BE CARRIED OUT BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA, BASED ON A SITE SPECIFIC GEOTECHNICAL ANALYSIS. ALL UTILITIES AND STRUCTURES CROSSING THE PATH OR WITHIN 25 FEET OF THE HDD SHALL BE POSITIVELY LOCATED AND IDENTIFIED BEFORE AND DURING THE PERFORMANCE OF THE HDD.

RECLAIMED WATER CONSTRUCTION SPECIFICATIONS

RGN-5


24"
IRRIGATION WITH RECLAIMED WATER DO NOT DRINK
AVISO . . . AGUA RECICLADA SE PROHIBE BEBER
18"
62" (MAX.) REFER TO NOTE 1
36" (MIN.)
8" MIN.
1"
FINISHED GRADE
18" MIN.
2,500 PSI CONCRETE
6" (MIN.)

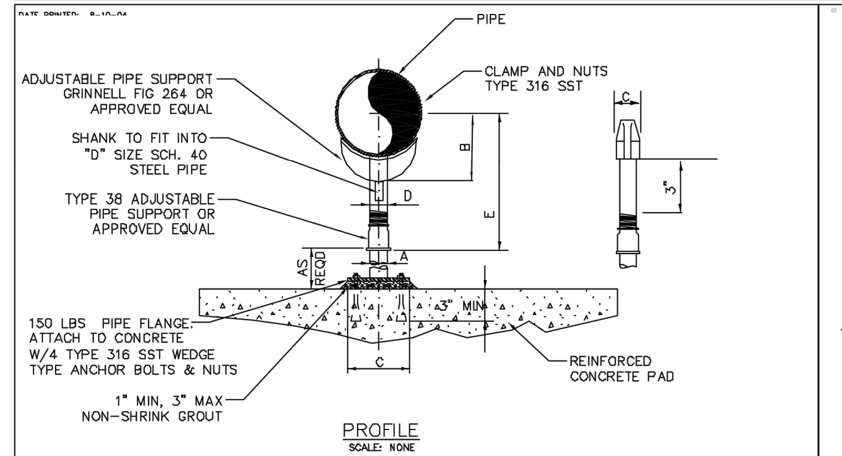
NOTES:

1. HEIGHT OF SIGN WILL DEPEND ON LOCATION AND SURROUNDING LANDSCAPE PLANT TYPES. IN ALL CASES, THE SIGN SHALL BE CLEARLY VISIBLE TO THE PUBLIC.(IN ACCORDANCE W/62.6210 POLICY)
2. POST SHALL BE 2⅜" OD, SEAMLESS, EXTRUDED, SCHEDULE 80 ALUMINUM PIPE. POST SHALL BE 6061-T6 ALLOY AND CONFORM TO ASTM B429. POST SHALL HAVE A MILL FINISH.
3. MOUNTING HARDWARE SHALL BE TYPE 316 STAINLESS STEEL OR ALUMINUM.
4. SIGN POST SHALL BE PLACED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS OR AS APPROVED BY THE CITY. SIGN POST SHALL BE INSTALLED PLUMB AND LEVEL.
5. BACKGROUND OF SIGN SHALL BE PANTONE PURPLE 522C, BORDER AND LETTERS SHALL BE BLACK HEVETICA, SWISS 721 COREL OR APPROVED EQUAL .
6. ENGINEERING GRADE REFLECTIVE MATERIALS SHALL BE USED.
7. SIGN MATERIAL SHALL BE OF 14 GAUGE ANODIZED ALUMINUM.

SIGN POST INSTALLATION

R-01

DATE PRINTED: 8-10-04


PIPE
ADJUSTABLE PIPE SUPPORT GRINNELL FIG 264 OR APPROVED EQUAL
CLAMP AND NUTS TYPE 316 SST
SHANK TO FIT INTO "D" SIZE SCH. 40 STEEL PIPE
TYPE 38 ADJUSTABLE PIPE SUPPORT OR APPROVED EQUAL
AS REQD
A
C
3" MIN
150 LBS PIPE FLANGE. ATTACH TO CONCRETE W/4 TYPE 316 SST WEDGE TYPE ANCHOR BOLTS & NUTS
1" MIN, 3" MAX NON-SHRINK GROUT
REINFORCED CONCRETE PAD
PROFILE
SCALE: NONE

NOTES:

1. ALL MATERIALS OF CONSTRUCTION SHALL BE 304 OR 316 STAINLESS STEEL.
2. MASON TYPE "W" OR KORFUND KORPAD 40, UNDER SUPPORT FOOT WHEN PIPING IS TO BE ISOLATED OR FIRST SUPPORT ADJACENT TO MECHANICAL EQUIPMENT.
3. FOR BASE, HEIGHT, AND FLANGE DIMENSION, REFER TO TABLE.
4. PIPE SUPPORTS NOT REQUIRED FOR 2" & SMALLER WITH LESS THAN 4' SPAN BETWEEN INLET & OUTLET PIPES.

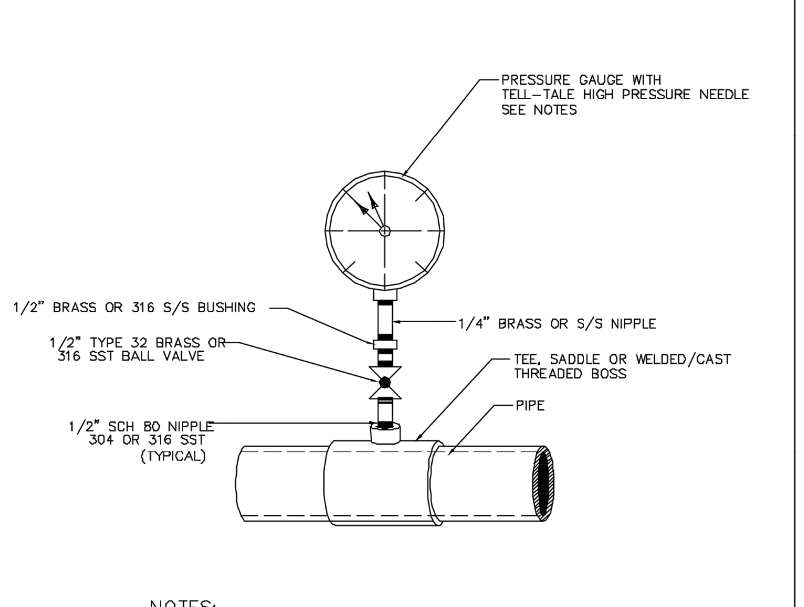
Fig 264: Loads (lbs) * Weight (lbs) * Dimensions (in)

Pipe Size	Weight		A	B	D	E		Width C
	Complete	Saddle Only				Min	Max	
2.5	9.0	4.8	2.5	3.5	1.5	8	13	3
3	9.2	5.0		3.75		8.25	13.25	
3.5	9.4	5.2		4		8.5	13.5	
4	15.0	7.6	3	4.25	2.5	9.25	14	3.625
5	16.7	8.3		8.875		10	14.75	
6	17.7	10.3		5.5		10.5	15.25	
8	20.2	12.8		6.875		11.75	16.5	
10	25.2	17.8		8.5		13.5	18.25	
12	29.0	21.6		9.9375		15	19.75	
14	40.2	38.0	4	10.9375	3	16.25	20.75	4.625
16	53.2	42.0		12.375		17.75	22.25	
18	70.8	51.0	6	13.875	3.5	19.5	24	
20	104.8	85.0		15.375		21	25.5	6.75
24	137.0	110.0		17.9375	4	23.75	28.25	
30	170.0	150.0		21.3125		27	31.5	
32	181.0	161.1		22.5		28.25	32.75	8.75
36	249.0	229.0		24.5		30.25	34.75	

* The special cast iron reducer may be furnished with a hexed shaped smaller end.

PIPE SUPPORTS

R-07


PRESSURE GAUGE WITH TELL-TALE HIGH PRESSURE NEEDLE SEE NOTES
1/2" BRASS OR 316 S/S BUSHING
1/4" BRASS OR S/S NIPPLE
1/2" TYPE 32 BRASS OR 316 SST BALL VALVE
TEE, SADDLE OR WELDED/CAST THREADED BOSS
PIPE
1/2" SCH 80 NIPPLE 304 OR 316 SST (TYPICAL)

NOTES:

1. USE 2.5" DIA.S/S LIQUID FILLED WEATHER PROOF (PSI RANGE 0 – 160) PRESSURE GAUGES FOR PIPE SIZES LESS THAN 4" DIAMETER W/ MAXIMUM POINTER NEEDLE & 1/4" NPT LOWER MOUNT
2. USE 4.5" DIA. S/S LIQUID FILLED WEATHER PROOF PRESSURE GAUGES FOR PIPE SIZES 4" DIAMETER OR GREATER. W/ MAXIMUM POINTER NEEDLE & 1/2" NPT LOWER MOUNT.

PROFILE
SCALE: NONE

PRESSURE GAUGE INSTALLATION

R-08

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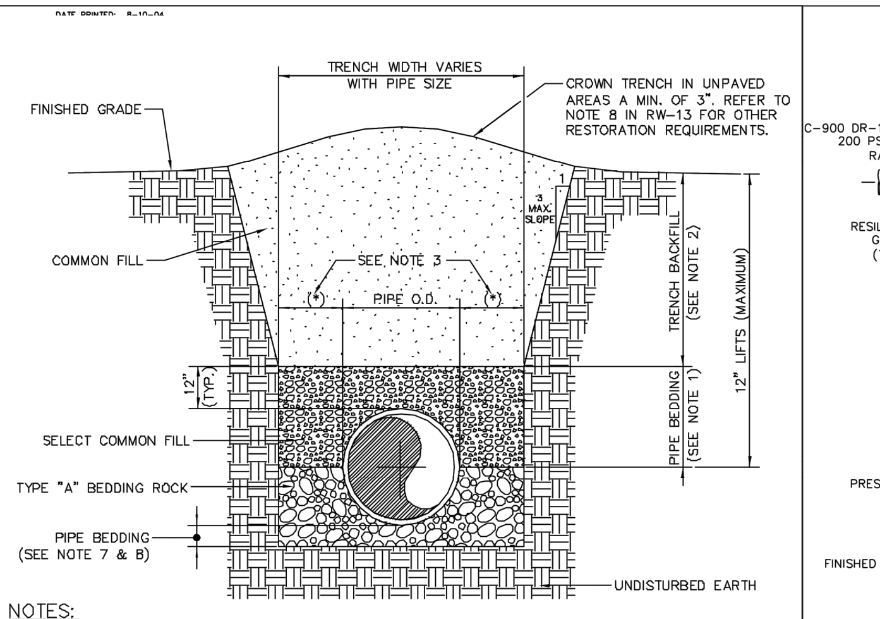

TRENCH WIDTH VARIES WITH PIPE SIZE
CROWN TRENCH IN UNPAVED AREAS A MIN. OF 3". REFER TO NOTE 8 IN RW-13 FOR OTHER RESTORATION REQUIREMENTS.
FINISHED GRADE
COMMON FILL
SEE NOTE 3
PIPE O.D.
TRENCH BACKFILL (SEE NOTE 2)
12" LIFTS (MAXIMUM)
12" (TYP.)
PIPE BEDDING (SEE NOTE 1)
SELECT COMMON FILL
TYPE "A" BEDDING ROCK
PIPE BEDDING (SEE NOTE 7 & 8)
UNDISTURBED EARTH

NOTES:

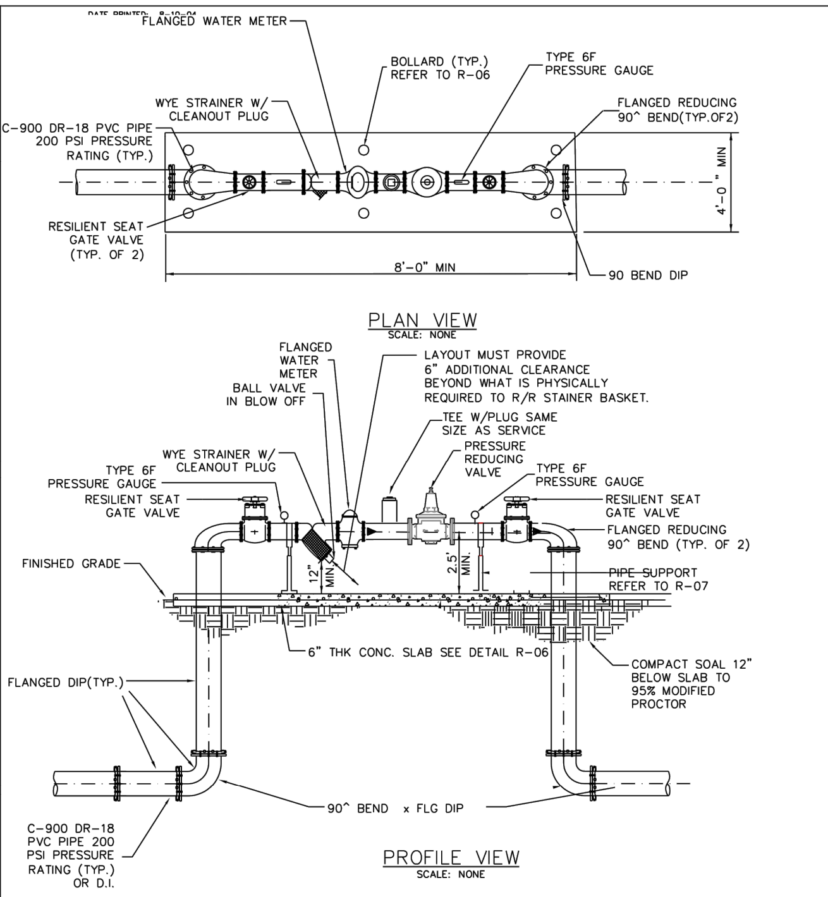
1. PIPE BEDDING: SELECT COMMON FILL ABOVE PIPE HAUNCHING SHALL BE COMPACTED TO MIN 95 % OF THE MAXIMUM DENSITY PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL SHALL BE COMPACTED TO MIN. 95% OF THE MAXIMUM DENSITY PER AASHTO T-180.
3. AN ASTERISK (*) INDICATES 15" MAXIMUM FOR A PIPE DIAMETER LESS THAN 24", AND 24" MAXIMUM FOR A PIPE DIAMETER 24" AND LARGER.
4. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
5. PIPE SHALL BE INSTALLED WITH THE BELL FACING UPSTREAM IN THE DIRECTION OF FLOW.
6. TRENCH WALLS SHALL BE SHEETED IN AREAS WHERE SIDE SLOPES WOULD INTERFERE WITH EXISTING UTILITIES IMPROVEMENTS, OR EXTEND BEYOND THE EASEMENT OR RIGHT-OF-WAY LIMITS. EXCAVATION AND SHEETING AND BRACING SHALL BE DONE IN ACCORDANCE WITH THE TRENCH SAFETY ACT, AS AMENDED, (90-96 OF THE FLORIDA STATUTES) AND THE LATEST EDITION OF THE FDOT CONSTRUCTION MANUAL.
7. BEDDING ROCK DEPTH SHALL BE 4" MINIMUM FOR A PIPE DIAMETER LESS THAN 15", AND 6" MINIMUM FOR A PIPE DIAMETER 16" AND LARGER.
8. DEPTH OF REMOVAL FOR UNSUITABLE MATERIAL SHALL GOVERN THE DEPTH OF BEDDING ROCK BENEATH THE PIPE. UNSUITABLE MATERIAL SHALL BE REMOVED UNTIL A SUITABLE FOUNDATION IS ACHIEVED.

SCALE: NONE

TRENCHING WITH TYPE A BEDDING

R-09

DATE PRINTED: 8-10-04

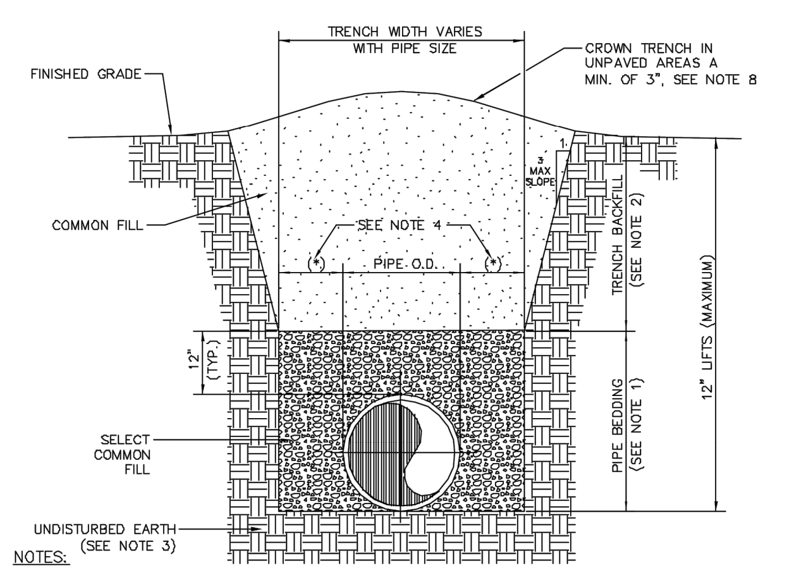

FLANGED WATER METER
BOLLARD (TYP.) REFER TO R-06
TYPE 6F PRESSURE GAUGE
WYE STRAINER W/ CLEANOUT PLUG
FLANGED REDUCING 90^ BEND(TYP.OF2)
C-900 DR-18 PVC PIPE 200 PSI PRESSURE RATING (TYP.)
RESILIENT SEAT GATE VALVE (TYP. OF 2)
8'-0" MIN
90 BEND DIP
PLAN VIEW
SCALE: NONE
FLANGED WATER METER
BALL VALVE IN BLOW OFF
LAYOUT MUST PROVIDE 6" ADDITIONAL CLEARANCE BEYOND WHAT IS PHYSICALLY REQUIRED TO R/R STAINER BASKET.
TEE W/PLUG SAME SIZE AS SERVICE
PRESSURE REDUCING VALVE
TYPE 6F PRESSURE GAUGE
RESILIENT SEAT GATE VALVE
FLANGED REDUCING 90^ BEND (TYP. OF 2)
FINISHED GRADE
12" MIN.
2.5' MIN.
PIPE SUPPORT REFER TO R-07
6" THK CONC. SLAB SEE DETAIL R-06
COMPACT SOAL 12" BELOW SLAB TO 95% MODIFIED PROCTOR
FLANGED DIP(TYP.)
90^ BEND x FLG DIP
C-900 DR-18 PVC PIPE 200 PSI PRESSURE RATING (TYP.) OR D.I.
PROFILE VIEW
SCALE: NONE

NOTES:

1. ABOVE GROUND PIPE SHALL BE PAINTED WITH TWO COATS OF PANTONE 522C CARBOLINE CARBOTHANE 134 HB, OR APPROVED EQUAL.

COMMERCIAL SERVICE CONNECTION ABOVE-GRADE 2" OR SMALLER

R-05A


TRENCH WIDTH VARIES WITH PIPE SIZE
CROWN TRENCH IN UNPAVED AREAS A MIN. OF 3", SEE NOTE 8
FINISHED GRADE
COMMON FILL
SEE NOTE 4
PIPE O.D.
TRENCH BACKFILL (SEE NOTE 2)
12" LIFTS (MAXIMUM)
12" (TYP.)
SELECT COMMON FILL
PIPE BEDDING (SEE NOTE 1)
UNDISTURBED EARTH (SEE NOTE 3)

NOTES:

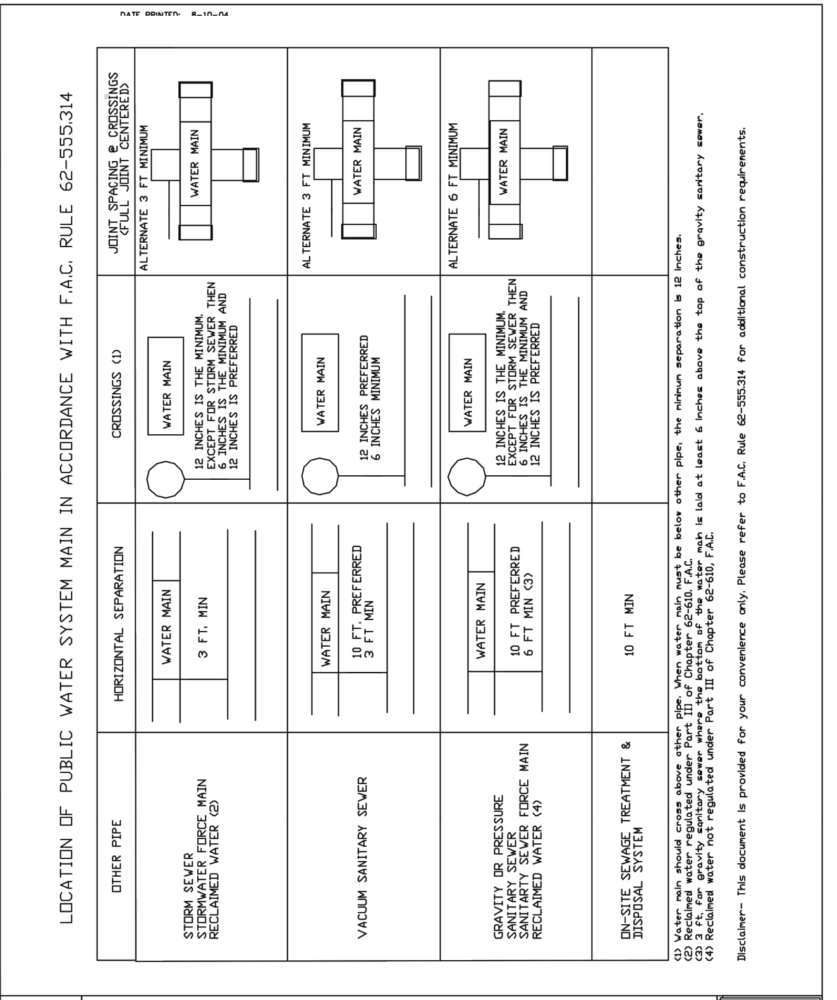
1. PIPE BEDDING: SELECT COMMON FILL ABOVE PIPE HAUNCHING SHALL BE COMPACTED TO MIN. 95% OF THE MAXIMUM DENSITY PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY PER AASHTO T-180.
3. PIPE BEDDING UTILIZING SELECT COMMON FILL MAY REQUIRE TYPE A BEDDING ROCK IN ACCORDANCE WITH RW-09
4. AN ASTERISK (*) INDICATES 15" MAXIMUM FOR PIPE A DIAMETER LESS THAN 24"; AND 24" MAXIMUM FOR A PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION. MAINTAIN WATERLINE 2" BELOW TRENCH BOX.
6. PIPE SHALL BE INSTALLED WITH THE BELL FACING UPSTREAM WITH THE DIRECTION OF FLOW.
7. TRENCH WALLS SHALL BE SHEETED IN AREAS WHERE SIDE SLOPES WOULD INTERFERE WITH EXISTING UTILITIES IMPROVEMENTS, OR EXTEND BEYOND THE EASEMENT OR RIGHT-OF-WAY LIMITS. EXCAVATION AND SHEETING AND BRACING SHALL BE DONE IN ACCORDANCE WITH THE TRENCH SAFETY ACT, AS AMENDED, (90-96 OF THE FLORIDA STATUTES) AND THE LATEST EDITION OF THE FDOT CONSTRUCTION MANUAL.
8. SITE RESTORATION SHALL COMPLY WITH APPLICABLE RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS. DISTURBED AREAS THAT ARE CREATED BY CONSTRUCTION SHALL BE RESTORED TO, OR BETTER THAN, PRE-EXISTING SITE CONDITIONS.

SCALE: NONE

TRENCHING WITH TYPE B BEDDING

R-10

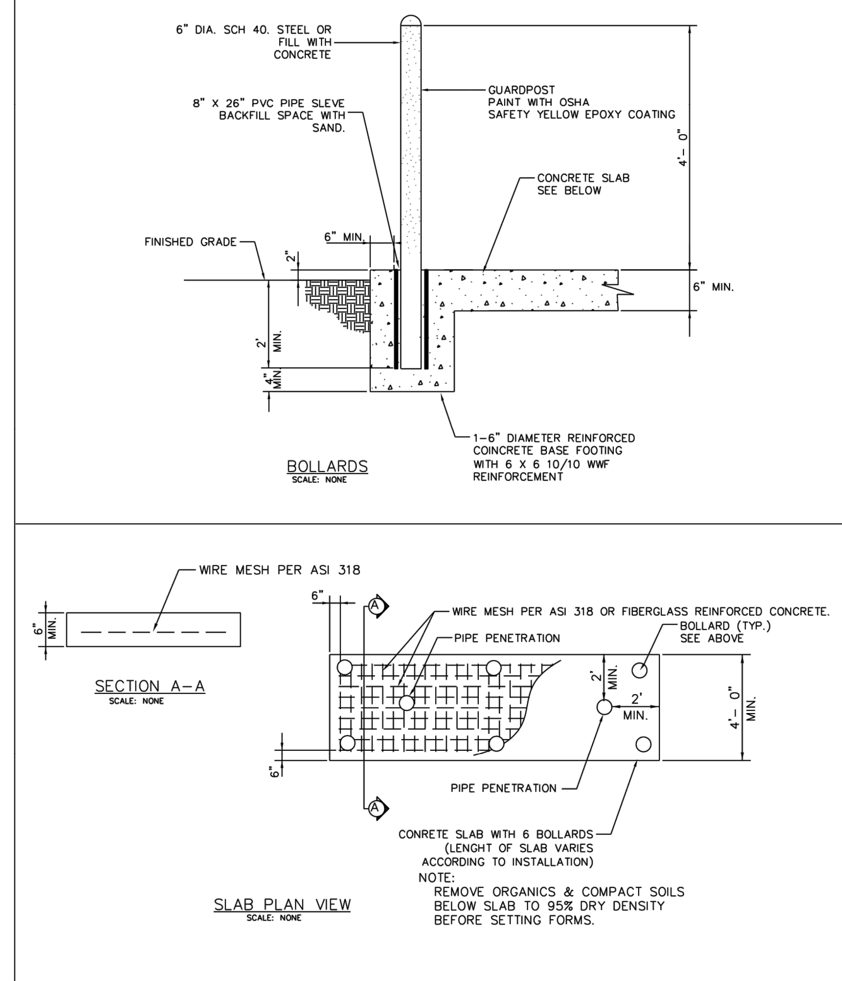
DATE PRINTED: 8-10-04


LOCATION OF PUBLIC WATER SYSTEM MAIN IN ACCORDANCE WITH F.A.C. RULE 62-555.314
OTHER PIPE
HORIZONTAL SEPARATION
CROSSINGS (1)
JOINT SPACING @ CROSSINGS (FULL JOINT CENTERED)
STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER
VACUUM SANITARY SEWER
GRAVITY OR PRESSURE SANITARY SEWER, SANITARY SEWER FORCE MAIN, RECLAIMED WATER
ON-SITE SEWAGE TREATMENT & DISPOSAL SYSTEM
WATER MAIN
ALTERNATE 3 FT MINIMUM
ALTERNATE 6 FT MINIMUM

HORIZONTAL SEPARTION REQUIREMENTS (F.A.C. Rule 62-555.314)

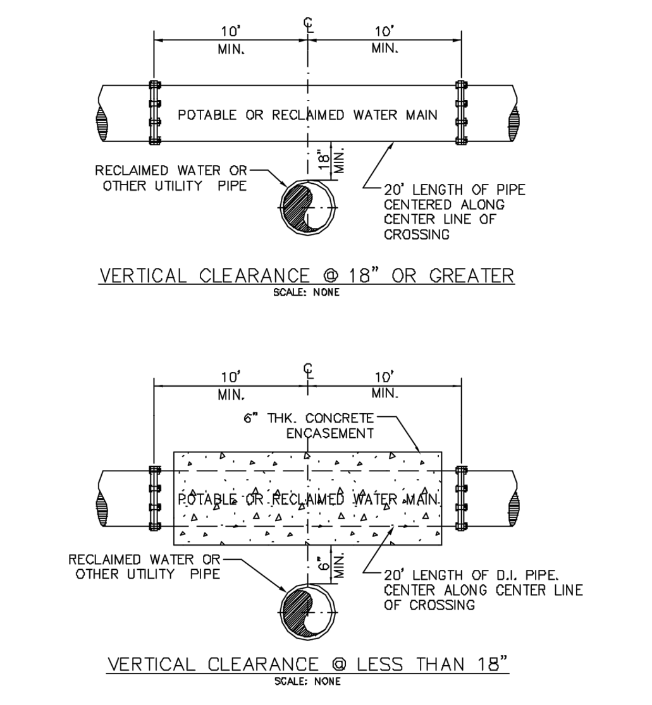
R-15

DATE PRINTED: 8-10-04


6" DIA. SCH 40. STEEL OR FILL WITH CONCRETE
8" X 26" PVC PIPE SLEVE BACKFILL SPACE WITH SAND
GUARDPOST PAINT WITH OSHA SAFETY YELLOW EPOXY COATING
CONCRETE SLAB SEE BELOW
FINISHED GRADE
1'-6" DIAMETER REINFORCED CONCRETE BASE FOOTING WITH 6 X 6 10/10 WWF REINFORCEMENT
BOLLARDS
WIRE MESH PER ASI 318
WIRE MESH PER AS 318 OR FIBERGLASS REINFORCED CONCRETE
PIPE PENETRATION
BOLLARD (TYP.) SEE ABOVE
SECTION A-A
PIPE PENETRATION
ACCESS ROAD
NOTE: SLAB SHALL BE 6 BOLLARDS - (LENGHT OF SLAB VARIES ACCORDING TO SERVICE)
REMOVE ORGANICS & COMPACT SOILS BELOW SLAB TO 95% DRY DENSITY BEFORE SETTING FORMS.
SLAB PLAN VIEW

GENERAL SLAB DESIGN & BOLLARDS

R-06


10' MIN.
10' MIN.
POTABLE OR RECLAIMED WATER MAIN
RECLAIMED WATER OR OTHER UTILITY PIPE
20' LENGTH OF PIPE CENTERED ALONG CENTER LINE OF CROSSING
VERTICAL CLEARANCE @ 18" OR GREATER
6" THK CONCRETE ENCASEMENT
RECLAIMED WATER OR OTHER UTILITY PIPE
20' LENGTH OF D.I. PIPE, CENTER ALONG CENTER LINE OF CROSSING
VERTICAL CLEARANCE @ LESS THAN 18"

NOTES:

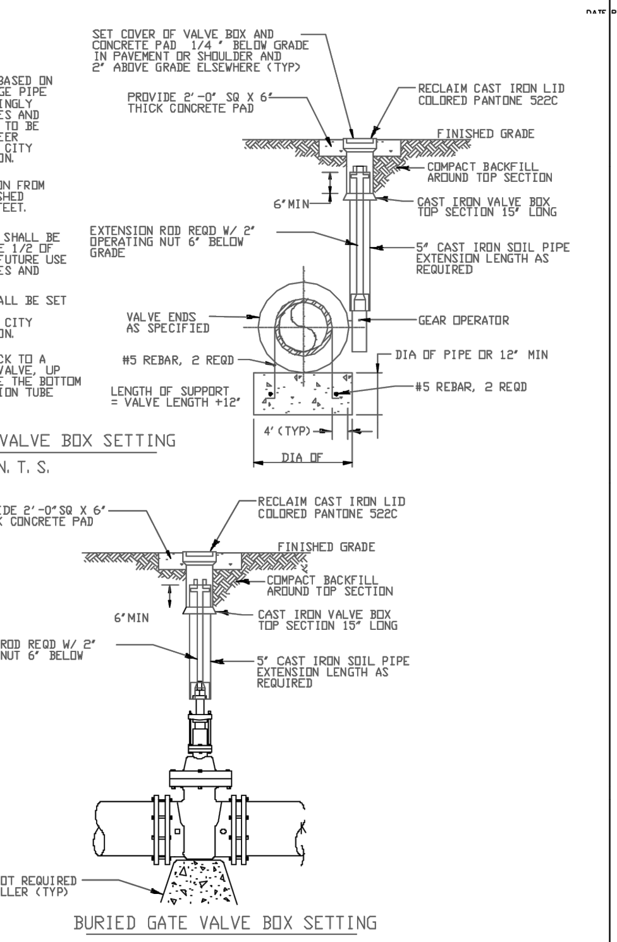
1. ALL JOINTS SHALL BE MECHANICALLY RESTRAINED WITHIN 20' OF EACH SIDE OF THE CROSSING.
2. DISTANCE BETWEEN JOINTS SHALL BE CENTERED AT POINT OF CROSSING.

VERTICAL SEPARATION REQUIREMENTS

R-16

NOTES:

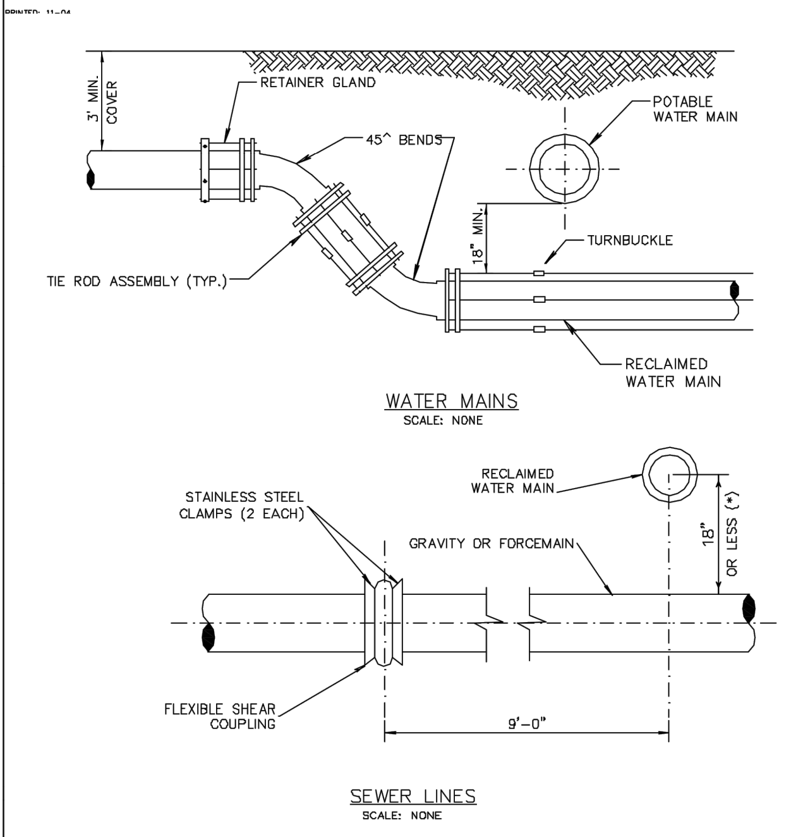
1. VALVE DETAILS ARE BASED ON 4' PLUG VALVE. CHANGE PIPE AND FITTINGS ACCORDINGLY FOR OTHER VALVE SIZES AND TYPES. VALVE SIZES TO BE DETERMINED BY ENGINEER AND APPROVED BY THE CITY PRIOR TO INSTALLATION.
2. THE MINIMUM DIMENSION FROM TOP OF PIPE TO FINISHED GRADE SHALL BE 3.0 FEET.
3. EXTENSION VALVE BOX SHALL BE SET SO AS TO RESERVE 1/2 OF THE ADJUSTMENT FOR FUTURE USE FOR OTHER VALVE SIZES AND
4. 2' OPERATING NUT SHALL BE SET AT 6' BELOW GRADE AND APPROVED BY THE CITY PRIOR TO INSTALLATION.
5. INSTALL DRAINAGE ROCK TO A DEPTH OF 12' BELOW VALVE, UP TO A POINT 6'' ABOVE THE BOTTOM OF VALVE BOX EXTENSION TUBE


SET COVER OF VALVE BOX AND CONCRETE PAD 1/4 ' BELOW GRADE IN PAVEMENT OR SHOULDER AND 2' ABOVE GRADE ELSEWHERE (TYP)
PROVIDE 2'-0' SQ X 6' THICK CONCRETE PAD
RECLAIM CAST IRON LID COLORED PANTONE 522C
FINISHED GRADE
COMPACT BACKFILL AROUND TOP SECTION
6'MIN
CAST IRON VALVE BOX TOP SECTION 15' LONG
EXTENSION ROD REQD W/ 2' OPERATING NUT 6' BELOW GRADE
5' CAST IRON SOIL PIPE EXTENSION LENGTH AS REQUIRED
VALVE ENDS AS SPECIFIED
GEAR OPERATOR
#5 REBAR, 2 REQD
DIA OF PIPE OR 12' MIN
LENGTH OF SUPPORT = VALVE LENGTH +12'
#5 REBAR, 2 REQD
4' (TYP)
DIA OF
BURIED PLUG VALVE BOX SETTING
N. T. S.
PROVIDE 2'-0'SQ X 6' THICK CONCRETE PAD
RECLAIM CAST IRON LID COLORED PANTONE 522C
FINISHED GRADE
COMPACT BACKFILL AROUND TOP SECTION
6'MIN
CAST IRON VALVE BOX TOP SECTION 15' LONG
EXTENSION ROD REQD W/ 2' OPERATING NUT 6' BELOW GRADE
5' CAST IRON SOIL PIPE EXTENSION LENGTH AS REQUIRED
NOTE: CONCRETE BASE NOT REQUIRED FOR VALVES 18' OR SMALLER (TYP)
BURIED GATE VALVE BOX SETTING
N. T. S.

BURIED VALVE BOX SETTING

R-21

DATE PRINTED: 8-10-04

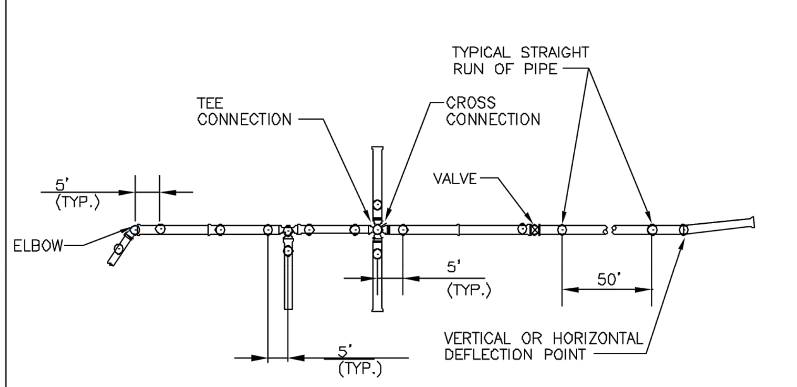


(*) IF THE VERTICAL CLEARANCE IS LESS THAN 18", THEN THE PIPE SHALL BE DUCTILE IRON AND ENCASED WITH A MINIMUM OF 6" OF CONCRETE.

UTILITY CONFLICTS

R-18

DATE PRINTED: 8-10-04



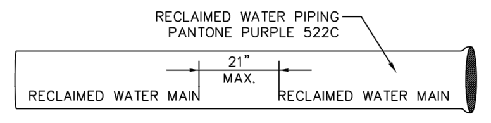
1. ⊙=TYPICAL LOCATIONS.(2' BELOW GRADE)
2. BALL/PLATE EVERY 100 FT.– ALSO VERTICAL AND HORIZONTAL DEFLECTION POINTS.
3. OTHER LOCATIONS AS DIRECTED BY THE OWNER
4. WARNING TAPE SHOULD BE 18" ABOVE PIPE

DETECTOR BALL LOCATION DETAIL

R-23

DATE PRINTED: 8-10-04

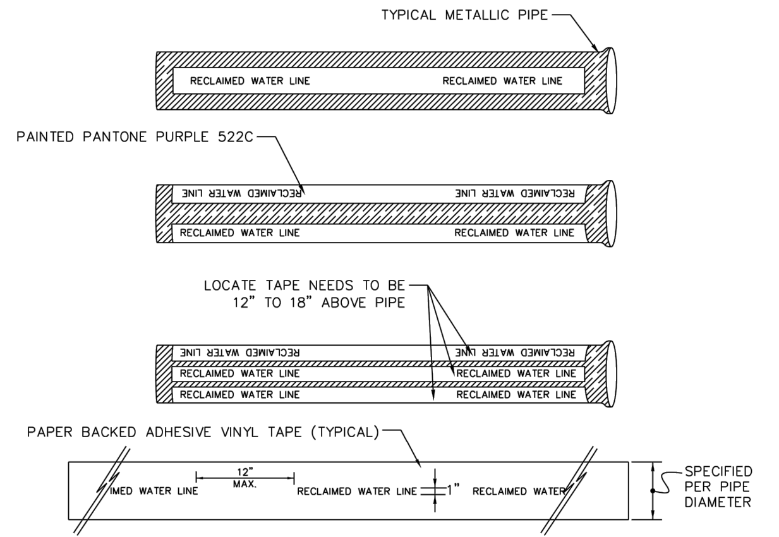
NONMETALLIC PIPE
SCALE: NONE



NOTES:

1. PIPE IDENTIFICATION: RECLAIMED WATER MAIN OR RECLAIMED WATER LINE.
2. THE LETTERING SHALL APPEAR ON A MINIMUM OF 3 SIDES OF THE PIPE AND SHALL RUN THE ENTIRE LENGTH OF THE PIPE.
3. LETTERING SHALL BE A MINIMUM OF ¾" HIGH AND SHALL APPEAR AT INTERVALS NOT LESS THAN ONCE EVERY 21 INCHES, LETTERING SHALL RUN THE ENTIRE LENGTH OF THE PIPE.
4. LETTERING SHALL BE PERMANENTLY IMPREGNATED INTO THE PVC WITH INDELIBLE INK DURING THE PIPE MANUFACTURING PROCESS. STENCILING ON THE PIPE SURFACE IS STRICTLY PROHIBITED.

METALLIC PIPE
SCALE: NONE


TYPICAL METALLIC PIPE
RECLAIMED WATER LINE
PAINTED PANTONE PURPLE 522C
LOCATE TAPE NEEDS TO BE 12" TO 18" ABOVE PIPE
PAPER BACKED ADHESIVE VINYL TAPE (TYPICAL)
12" MAX.
1"
SPECIFIED PER PIPE DIAMETER
PLAN VIEW
SCALE: NONE

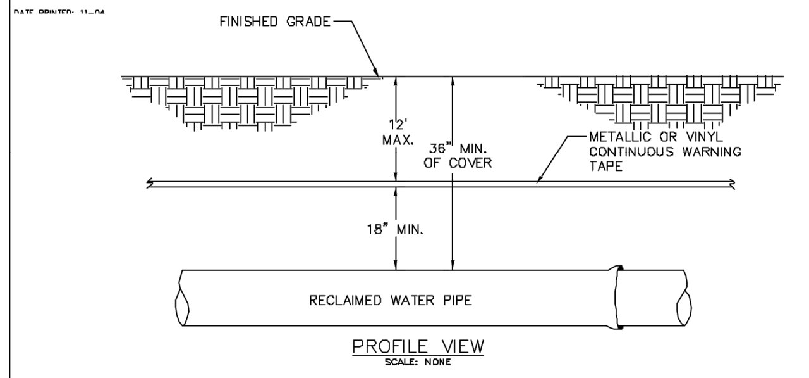
NOTES:

1. TAPE SHALL RUN FROM JOINT TO JOINT ALONG THE ENTIRE LENGTH OF THE PIPE.
2. PIPE IDENTIFICATION LETTERING SHALL BE AS DESCRIBED ABOVE.
3. TAPE SHALL BE PURPLE PANTONE 522C WITH BLACK LETTERING.

PIPE IDENTIFICATION

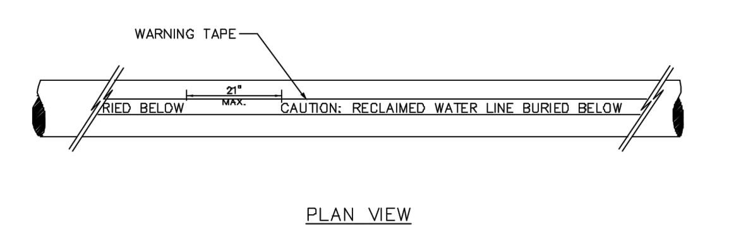
R-24

DATE PRINTED: 11-04



NOTES:

1. ALL RECLAIMED WATER MAINS OR LINES SHALL BE INSTALLED WITH A CONTINUOUS METALLIC OR VINYL WARNING TAPE. THE WARNING TAPE SHALL BE BURIED NEARLY LEVEL ABOVE THE PIPE AND SHALL RUN CONTINUOUSLY OVER THE ENTIRE LENGTH OF PIPE. THE WARNING TAPE SHALL BE PURPLE (PANTONE 522C) WITH TYPICALLY SILVER/PURPLE W/BLACK 3" LETTERING, AND SHALL READ "CAUTION RECLAIMED WATER LINE BURIED BELOW" OR OTHER APPROVED WORDING.



PIPE WARNING TAPE

R-25

1

PLANEING INC

Board of Professional Engineers
Certificate of Authorization
No. 26432

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Issue / Revisions
1, 8-3-26, Revised per City of Orlando staff review comments.

Scale
NTS

Deuk Spine of Orlando

Millenia Place Dr., Orlando, Florida

JAY M. GILL
No. 60879

Date

Reviewed by
JMG/RMO

Plan Description
Details

Sheet No.
C9-b

2026-04290RLcom C9b - Details.dwg
CAD date 8/5/2026