

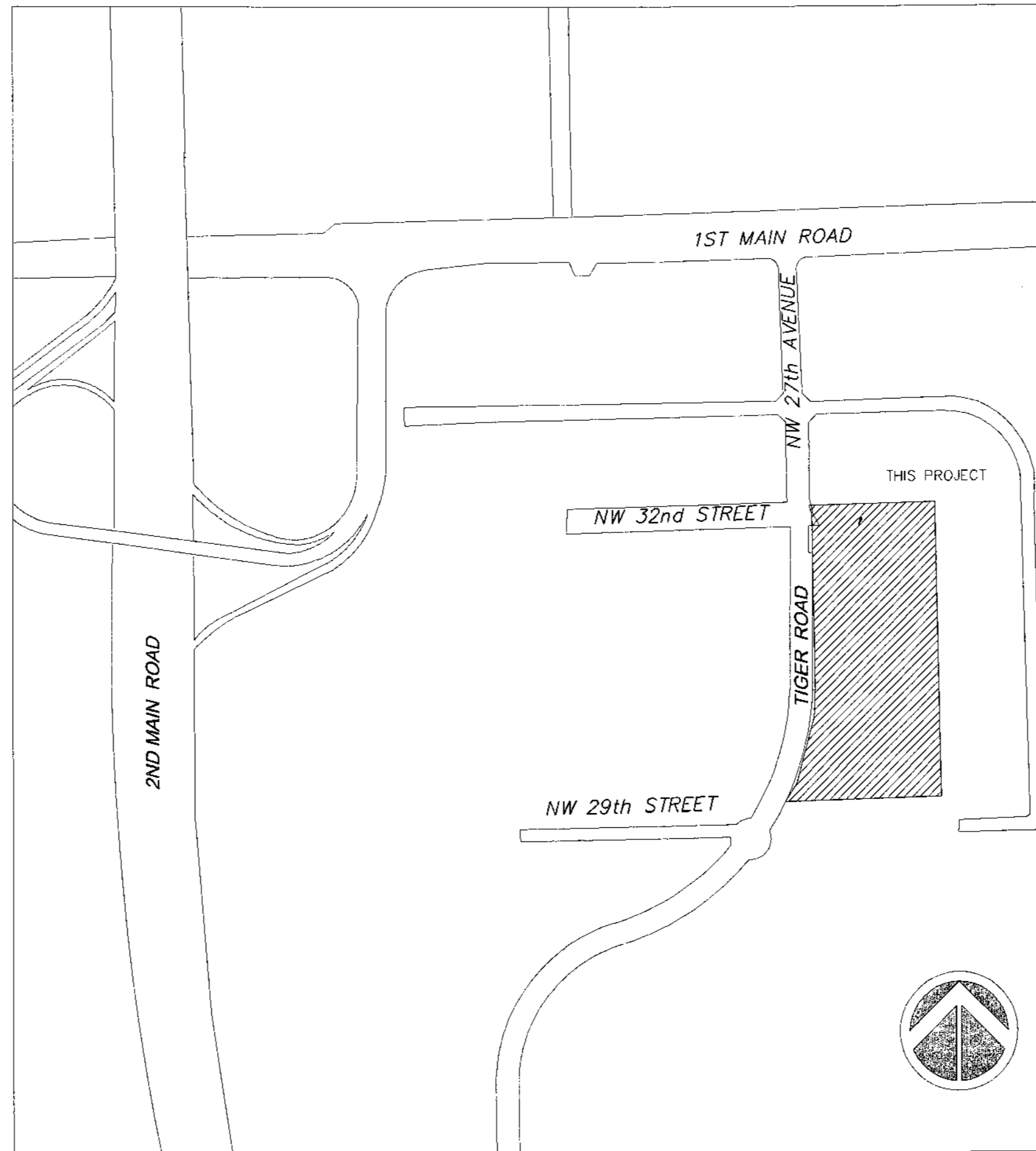
NAME OF THE PROJECT
 ADDRESS
 CITY
 DATE

WATER ERU TALLY					
Type of Use	Unit of Measure	Number of Units	ERUs per Unit	Number of ERUs	ERU Reference Code
Building One					
Warehouse (bulk storage)	1000 SF	22,619	0.177	4,004	C07
Building Two					
Warehouse (bulk storage)	1000 SF	23,187	0.177	4,104	C07
Building Three					
Warehouse (bulk storage)	1000 SF	25,481	0.177	4,510	C07
Building Four					
Warehouse (bulk storage)	1000 SF	25,481	0.177	4,510	C07
Building Five					
Warehouse (bulk storage)	1000 SF	25,481	0.177	4,510	C07
Building Six					
Warehouse (bulk storage)	1000 SF	25,481	0.177	4,510	C07
Rental Apartments					
Apartments	Per unit	20,000	0.805	16,100	R03
Townhomes					
Single Family Home	Per Unit	5,000	1.000	5,000	R01
Irrigation Townhomes & apartments	1000 SF	9,000	0.759	6,831	R02
Homes					
Single Family Home	EPer Unit	6,000	1.000	6,000	R01
				Irrigation credit Townhomes & apartments	(5,275)
				WATER TOTAL	54,804

SEWER ERU TALLY					
Type of Use	Unit of Measure	Number of Units	ERUs per Unit	Number of ERUs	ERU Reference Code
Building One					
Warehouse (bulk storage)	1000 SF	22,619	0.177	4,004	C07
Building Two					
Warehouse (bulk storage)	1000 SF	23,187	0.177	4,104	C07
Building Three					
Warehouse (bulk storage)	1000 SF	25,481	0.177	4,510	C07
Building Four					
Warehouse (bulk storage)	1000 SF	25,481	0.177	4,510	C07
Building Five					
Warehouse (bulk storage)	1000 SF	25,481	0.177	4,510	C07
Building Six					
Warehouse (bulk storage)	1000 SF	25,481	0.177	4,510	C07
Rental Apartments					
Apartments	Per unit	20,000	0.805	16,100	R03
Townhomes					
Single Family Home	Per Unit	5,000	1.000	5,000	R01
Homes					
Single Family Home	Per Unit	6,000	1.000	6,000	R01
				SEWER TOTAL	53,248

WATER METER TALLY				
SIZE	5/8"	1"	2"	
DOMESTIC	12		1	
COMMERCIAL		6		
DDCVA		3		

The clubhouse meter is not charged any ERU's because it is covered by the ERU's from the apartments.



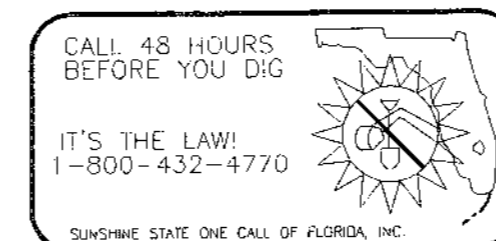
PROJECT LOCATION
 TOWNSHIP: 00 RANGE: 00 SECTION: 00

LEGAL DESCRIPTION:
 XXXXXXXX

- INDEX DRAWING:
- CO --- COVERSHEET
 - WS1 --- WATER AND SEWER PLAN
 - WS2 --- WATER AND SEWER PLAN
 - WS3 --- SEWER PROFILE
 - WS4 --- WATER AND SEWER DETAILS
 - WS5 --- WATER AND SEWER DETAILS
 - WS6 --- WATER AND SEWER DETAILS

- SPECIAL NOTE:
1. THIS PROJECT HAS BEEN APPROVED CONTAINING A SINGLE FIRE SERVICE AND SINGLE WATER METER FOR MULTIPLE UNITS. THIS MAY SEVERELY LIMIT THE ABILITY TO SELL PORTIONS OF THOSE PROPERTIES IN THE FUTURE. ALL DOUBLE DETECTOR, BYPASS METERS AND WATER METER MUST BE IN THE NAME OF ONE ENTITY THAT IS RESPONSIBLE FOR MAINTAINING THE FIRE, WATER AND SEWER SYSTEMS ON THE PROPERTIES.

- NOTES:
1. CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH WATER AND WASTEWATER SERVICES STANDARDS AND SPECIFICATIONS.
 2. PLANS ARE IN ACCORDANCE WITH WWS MINIMUM DRAWING REQUIREMENTS DATED APRIL 12, 2004.
 3. STATE PLAN COORDINATES WILL BE SUPPLIES FOR THE DESIGN AND RECORD DRAWINGS.



Company and/or Engineer Information

Engineers Name
 License # 0000
 Phone # 000-0000
 Fax # (561) 000-0001
 Address
 City, State, Zip Code
 C.O.A. # 0000000
 E-mail, email address

REVISIONS

PROJECT NAME
 FLORIDA
 CITY NAME
 COVERSHEET

DATE:
 OCTOBER 2005

SCALE:
 NTS

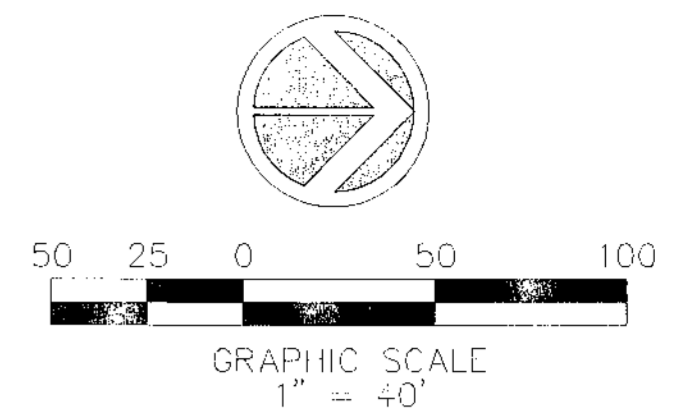
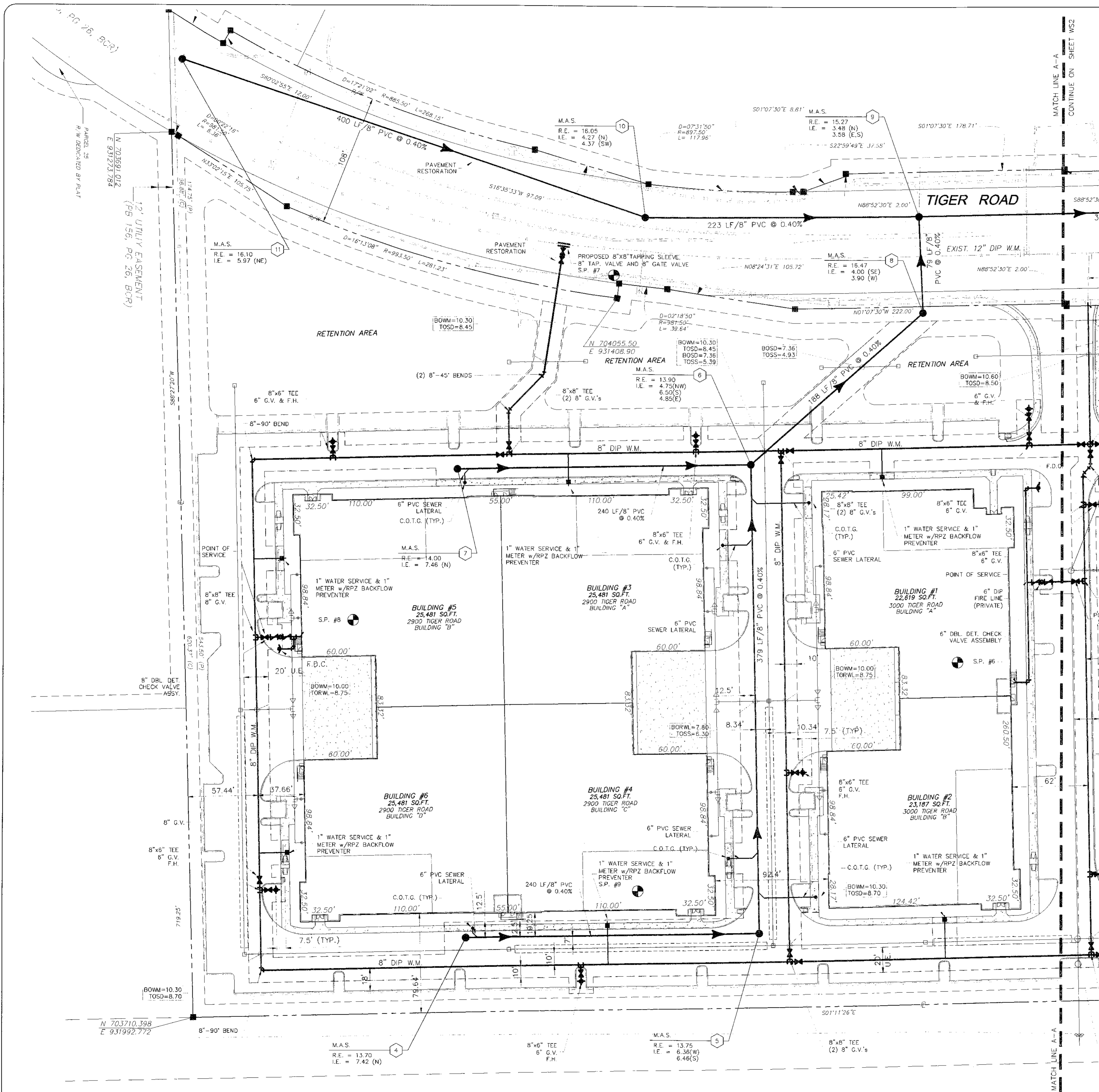
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DRAWN BY:

JOB NUMBER
 0000

SHEET No.
 CO

SEAL



Company and/or Engineer Information

Engineers Name
 License # 0000
 Phone (954) 000-0000
 Fax: (954) 000-0001

Address
 City, State Zip Code
 C.S.A. # 0000000
 E-Mail: email address

REVISIONS

No.	Description

PROJECT NAME

FLORIDA

WATER AND SEWER PLAN

CITY NAME

DATE:
OCTOBER 2005

SCALE:
1"=40'

DESIGNED BY:

DRAWN BY:

JOB NUMBER
0000

SHEET No.
WS1

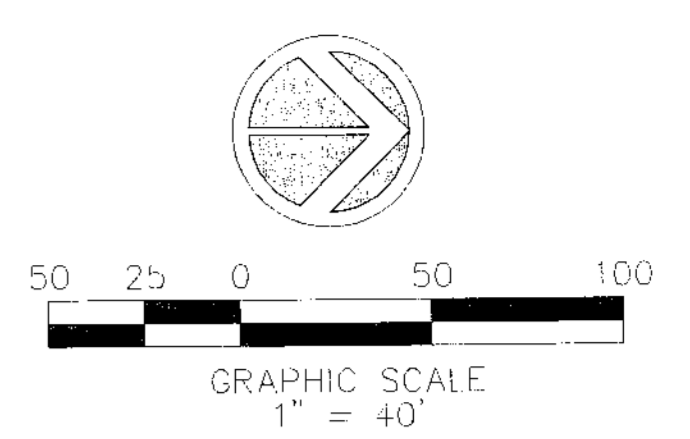
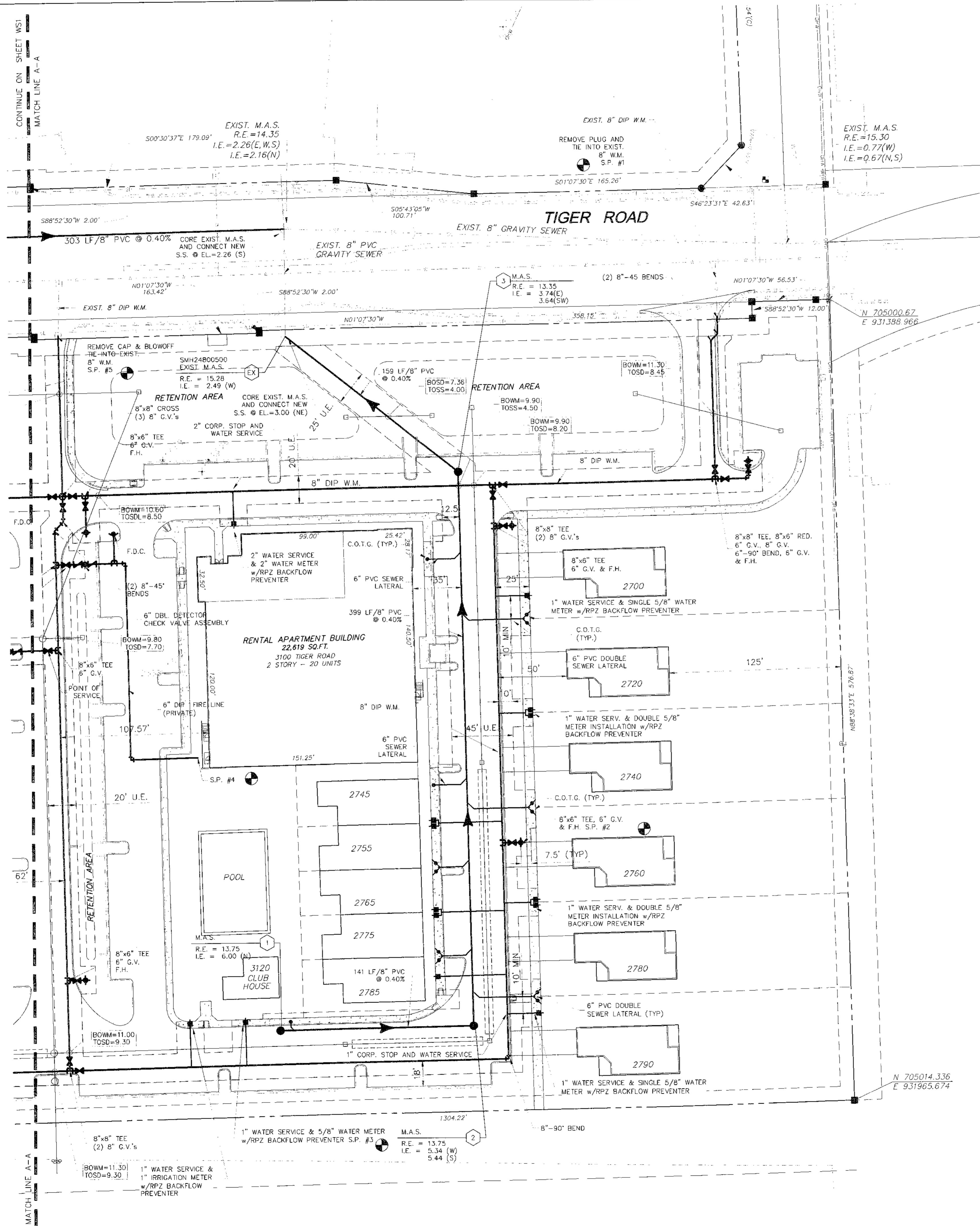
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ABBREVIATIONS:

- BOWM - BOTTOM OF WATER MAIN
- TOSD - TOP OF STORM DRAINAGE
- TOSDL - TOP OF STORM DRAINAGE LEADER
- TORWL - TOP OF RAIN WATER LEADER
- COTG - CLEAN OUT TO GROUND

LEGEND:

- PROPOSED MAINTENANCE ACCESS STRUCTURE
- PROPOSED DOUBLE SEWER LATERAL
- PROPOSED SINGLE SEWER LATERAL
- PROPOSED DOUBLE METER INSTALLATION
- PROPOSED SINGLE METER INSTALLATION
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE
- PROPOSED DOUBLE DETECTOR CHECK VALVE
- EXISTING SANITARY GRAVITY SEWER
- EXISTING MAINTENANCE ACCESS STRUCTURE
- EXISTING WATER MAIN
- EXISTING GATE VALVE
- RETENTION AREA
- PROPOSED EASEMENT



Company and/or Engineer Information

Engineers Name
 License # 0000
 Address
 City, State Zip Code
 C.O.A. # 0000000
 E-Mail: email address
 Fax: (654) 000-0001

REVISIONS

NO.	DATE	DESCRIPTION

PROJECT NAME

FLORIDA

WATER AND SEWER PLAN

CITY NAME

DATE:
OCTOBER 2005

SCALE:
1"=40'

DESIGNED BY:

DRAWN BY:

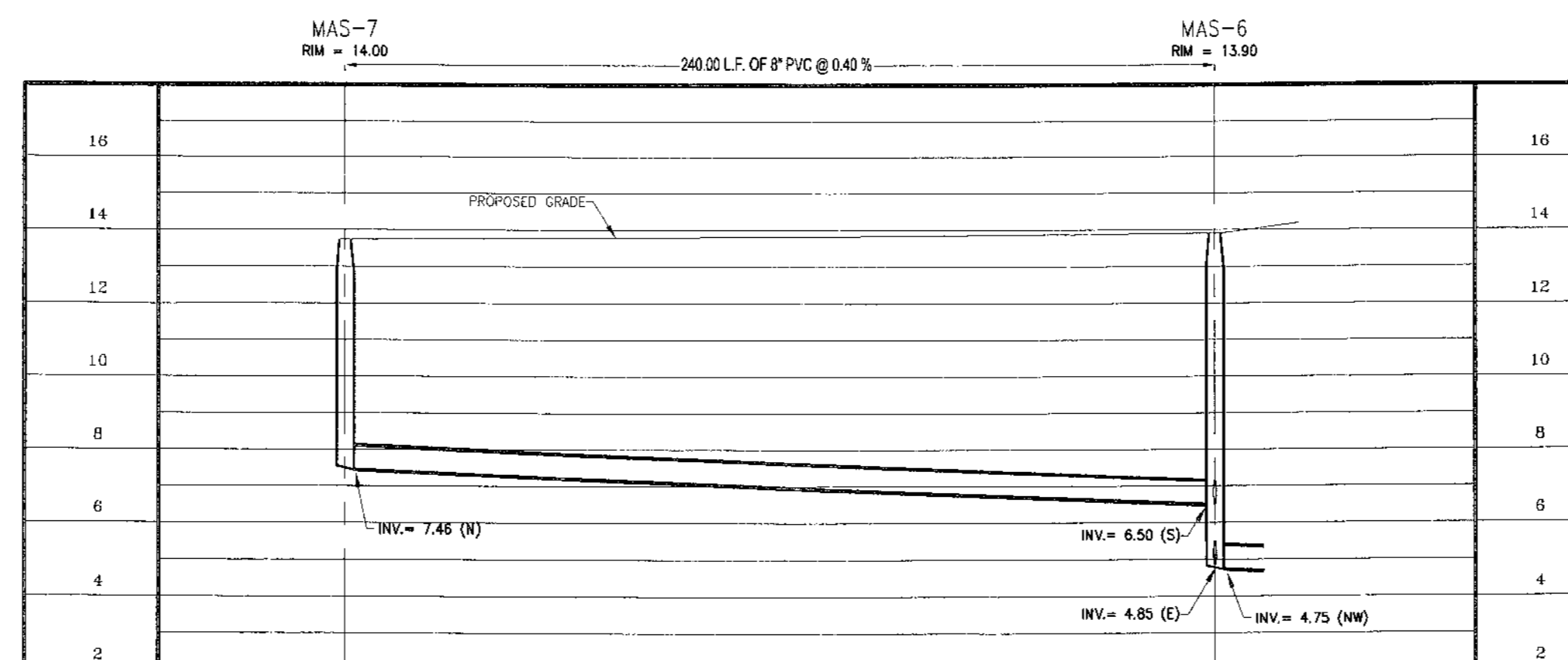
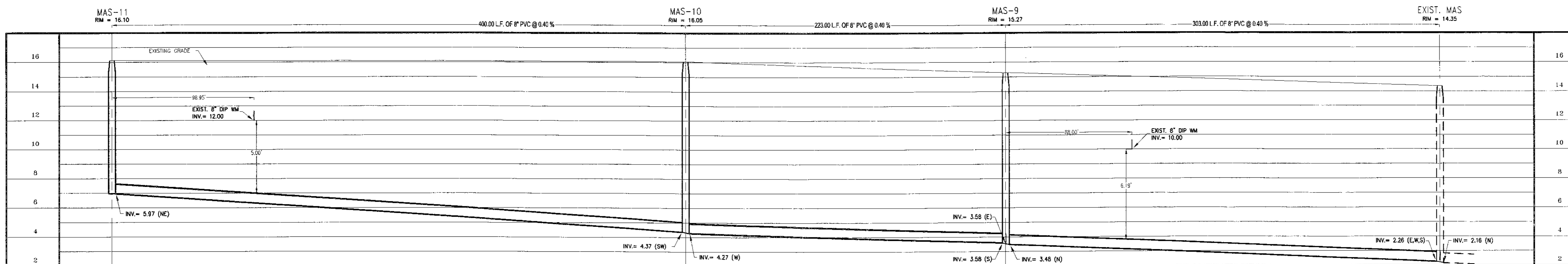
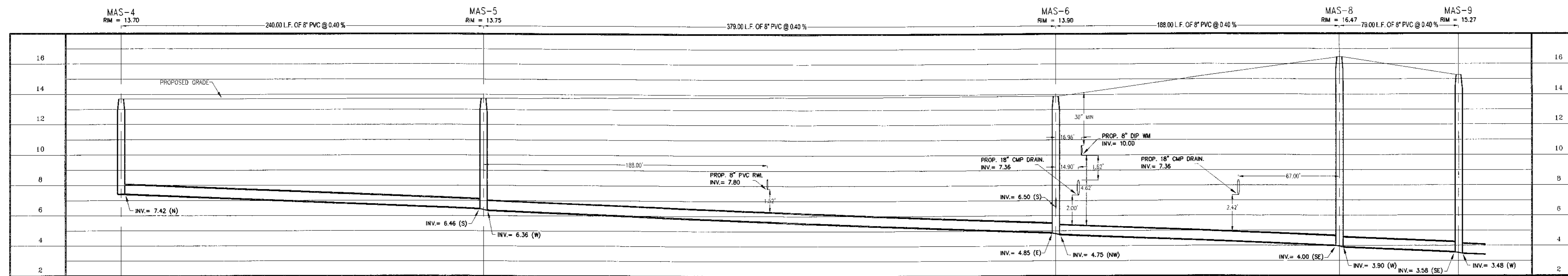
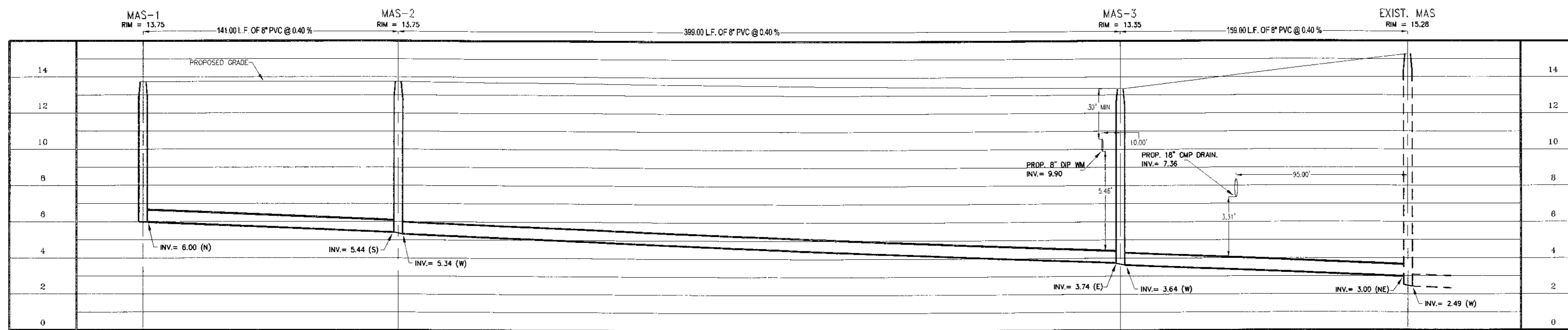
JOB NUMBER
0000

SHEET No.
WS2

SEAL

- ABBREVIATIONS:**
- BOWM - BOTTOM OF WATER MAIN
 - TOSD - TOP OF STORM DRAINAGE
 - TOSDL - TOP OF STORM DRAINAGE LEADER
 - TORWL - TOP OF RAIN WATER LEADER
 - COTG - CLEAN OUT TO GROUND

- LEGEND:**
- PROPOSED MAINTENANCE ACCESS STRUCTURE
 - PROPOSED DOUBLE SEWER LATERAL
 - PROPOSED SINGLE SEWER LATERAL
 - PROPOSED DOUBLE METER INSTALLATION
 - PROPOSED SINGLE METER INSTALLATION
 - PROPOSED FIRE HYDRANT
 - PROPOSED GATE VALVE
 - PROPOSED DOUBLE DETECTOR CHECK VALVE
 - EXISTING SANITARY GRAVITY SEWER
 - EXISTING MAINTENANCE ACCESS STRUCTURE
 - EXISTING WATER MAIN
 - EXISTING GATE VALVE
 - RETENTION AREA
 - PROPOSED EASEMENT



REVISIONS

NO.	DATE	DESCRIPTION

PROJECT NAME
 FLORIDA
 CITY NAME
 SEWER PROFILES

DATE:
 OCTOBER 2005

SCALE:
 H: 1:40 V: 1:4

DESIGNED BY:

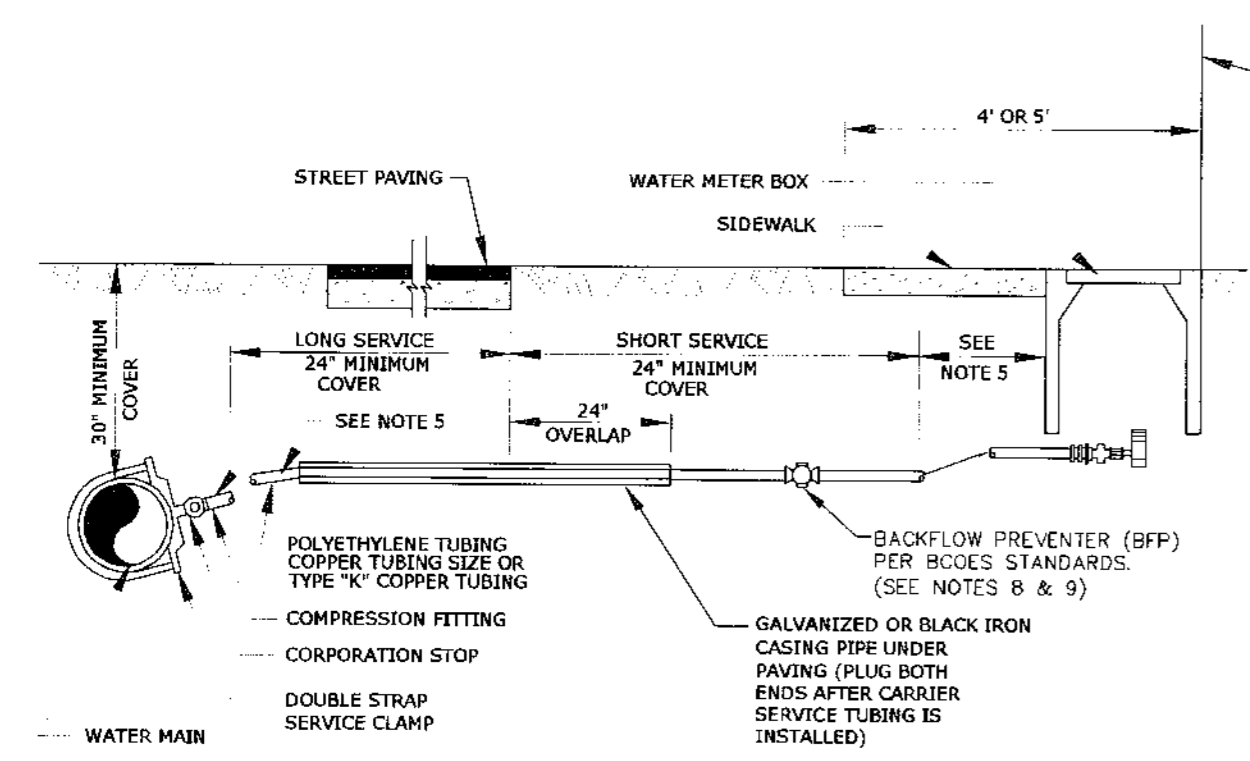
DRAWN BY:

JOB NUMBER
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SHEET No.
 WS3

SEAL

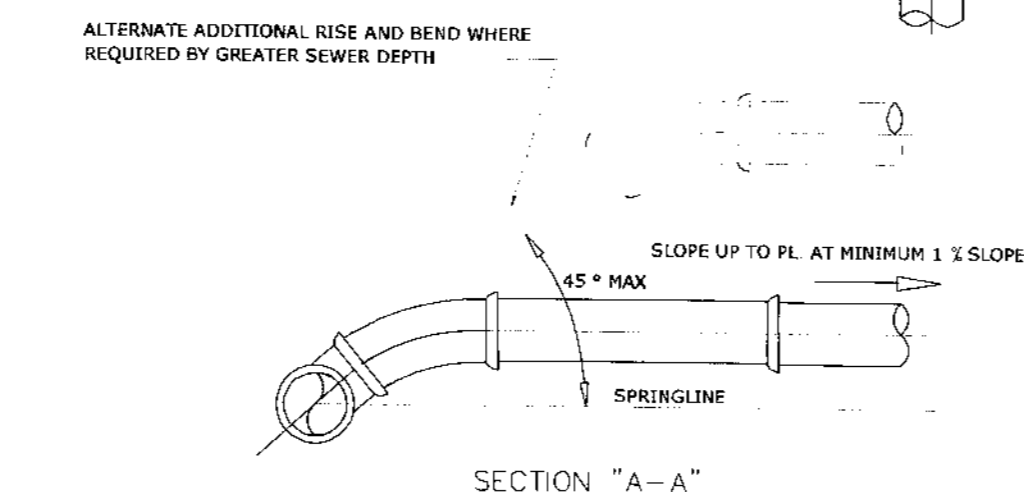
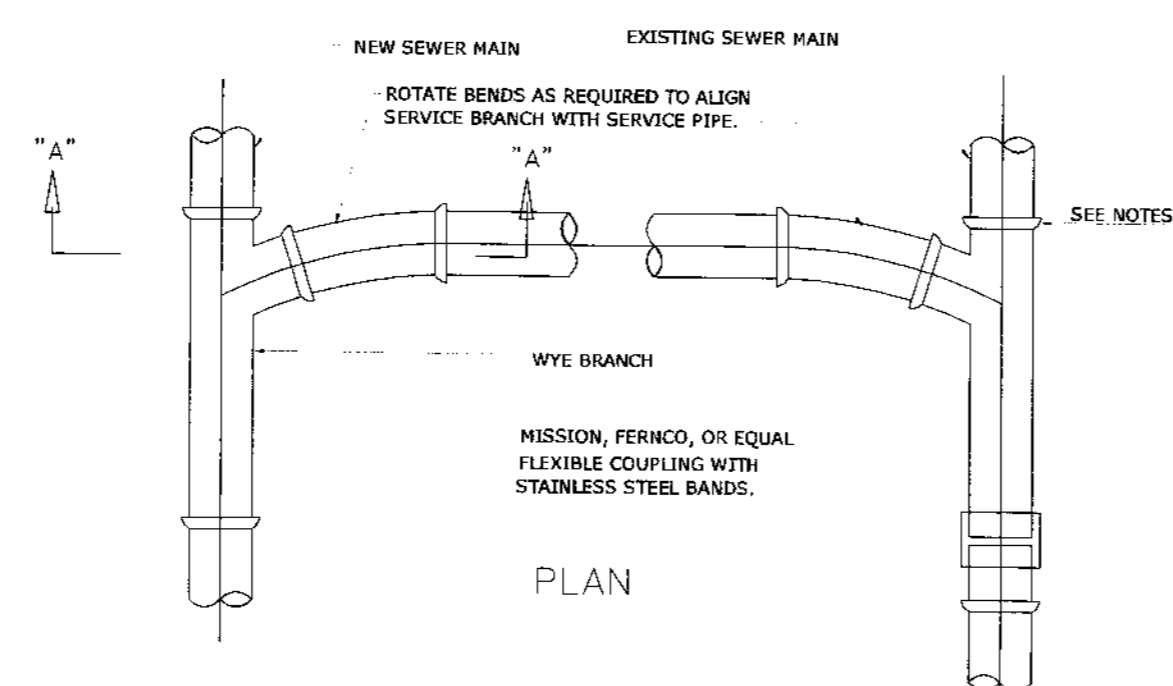
Company and/or Engineer Information
 Address
 City, State, Zip Code
 C.o.A. # 00000000
 E-Mail: email address
 Engineers Name
 License # 0000
 Phone # (954) 000-0000
 Fax # (954) 000-0001



- NOTES:
- SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED NOT LESS THAN 18" ON CENTER. NO TAPS SHALL BE CLOSER THAN 18" TO A JOINT.
 - SERVICES REQUIRE A 1 1/2" MINIMUM INSIDE DIAMETER CASING PIPE.
 - SERVICES REQUIRE A 2" MINIMUM INSIDE DIAMETER CASING PIPE.
 - ALL CASING PIPE SHALL EXTEND A MINIMUM OF 2' BEYOND THE EDGE OF PAVED STREETS.
 - FOR 2" SERVICE LINES THE MINIMUM RADIUS SHALL BE 14" FOR 3" SERVICE LINES THE MINIMUM RADIUS SHALL BE 21".
 - ALL CASING PIPE ENDS SHALL BE FILED SMOOTH WITH NO BURRS AND SEALED BY APPROVED METHODS.
 - THE POLYETHYLENE OR COPPER TUBING SHALL BE ONE CONTINUOUS PIECE FROM THE CORPORATION STOP TO THE METER VALVE. NO JOINTS WILL BE PERMITTED BETWEEN THESE POINTS.
 - THE BFP IS TO BE INSTALLED 3 FEET BEFORE THE METER VALVE.
 - THE BFP SHALL BE VALVE PART NUMBERS H511-444 (1" SERVICES) AND H511-777 (2" SERVICES) AS MANUFACTURED BY FORD METER BOX CO. OR APPROVED EQUAL.

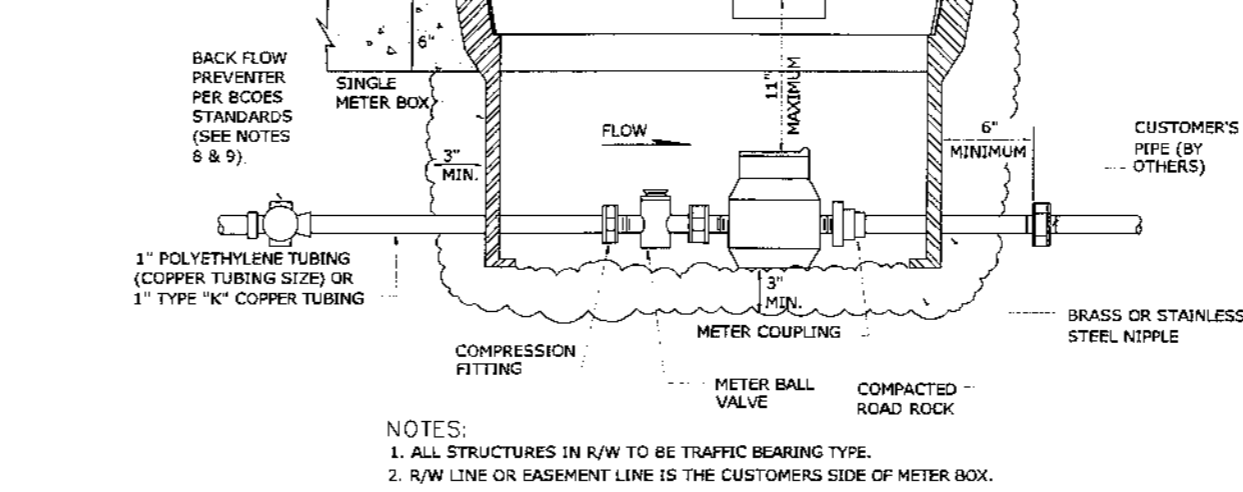
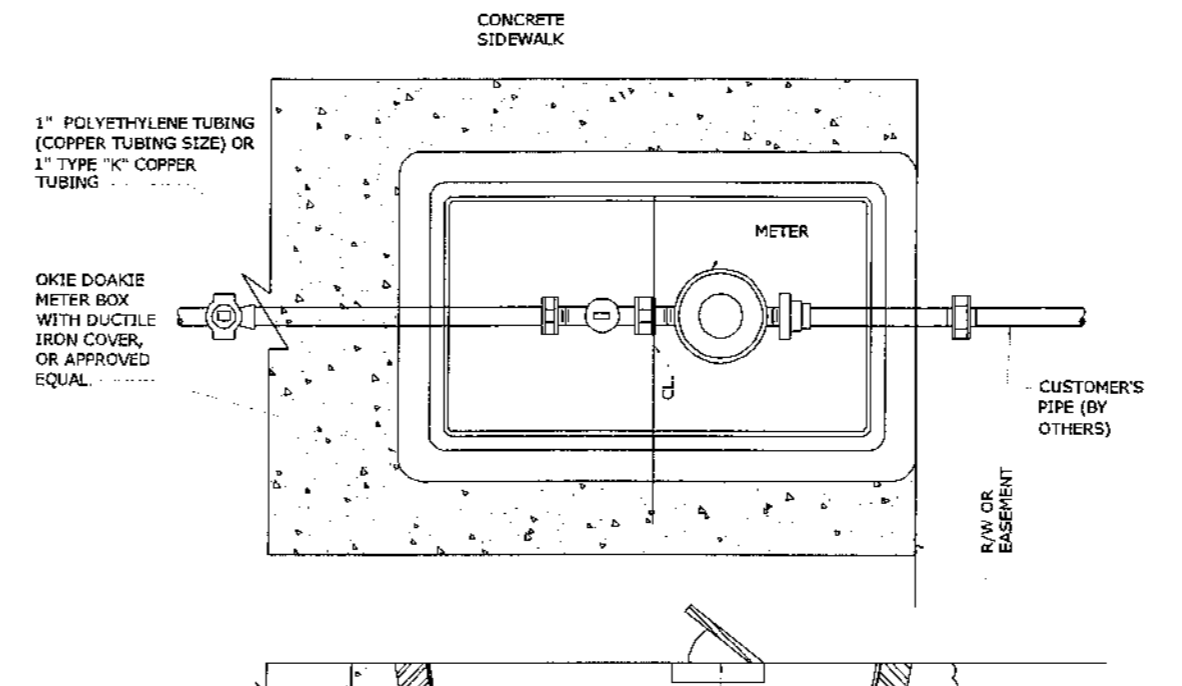
THIS DETAIL APPLIES ONLY TO COUNTY RESIDENTIAL ROADS WITH LESS THAN 70' R.O.W. (NO MEDIAN)

BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES NOT TO SCALE REVISED JAN 2004 STANDARD DETAIL TYPE 1 WATER SERVICE CONNECTION 1A



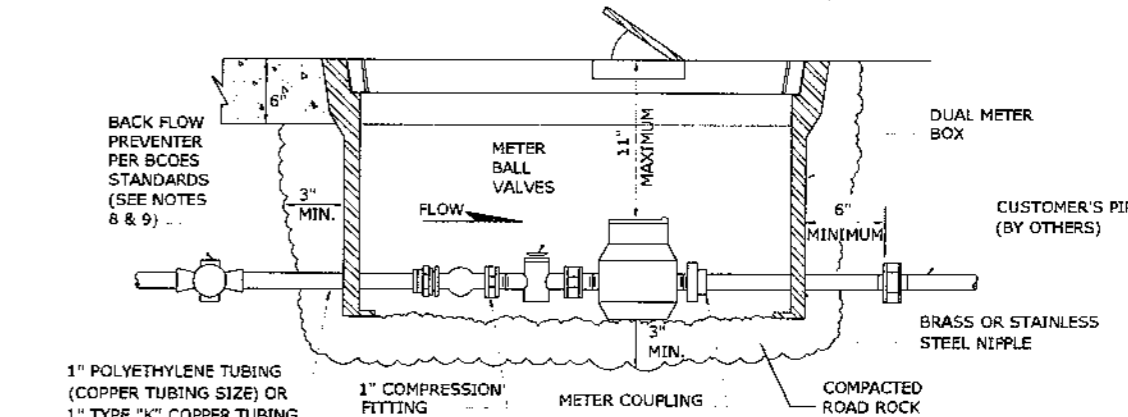
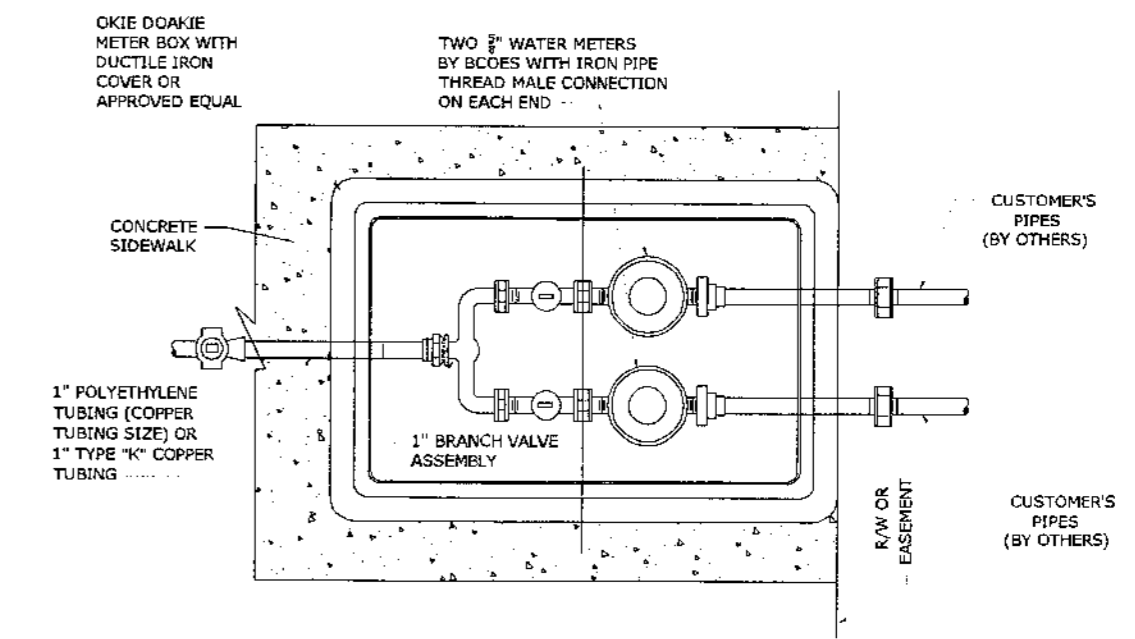
- NOTES:
- SINGLE SERVICE CONNECTIONS SHALL USE 6" PIPE AND FITTINGS.
 - USE RISER CONNECTIONS WHERE INVERT OF SEWER IS MORE THAN 7'-0" DEEP.
 - WHERE BELL OF WYE AND SPIGOT OF EXISTING MAIN ARE NOT COMPATIBLE, USE A SECOND FLEXIBLE COUPLING.
 - RIGID COUPLINGS ARE ALSO ACCEPTABLE.

BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES NOT TO SCALE REVISED JAN 2004 STANDARD DETAIL WYE SEWER SERVICE CONNECTION 2A



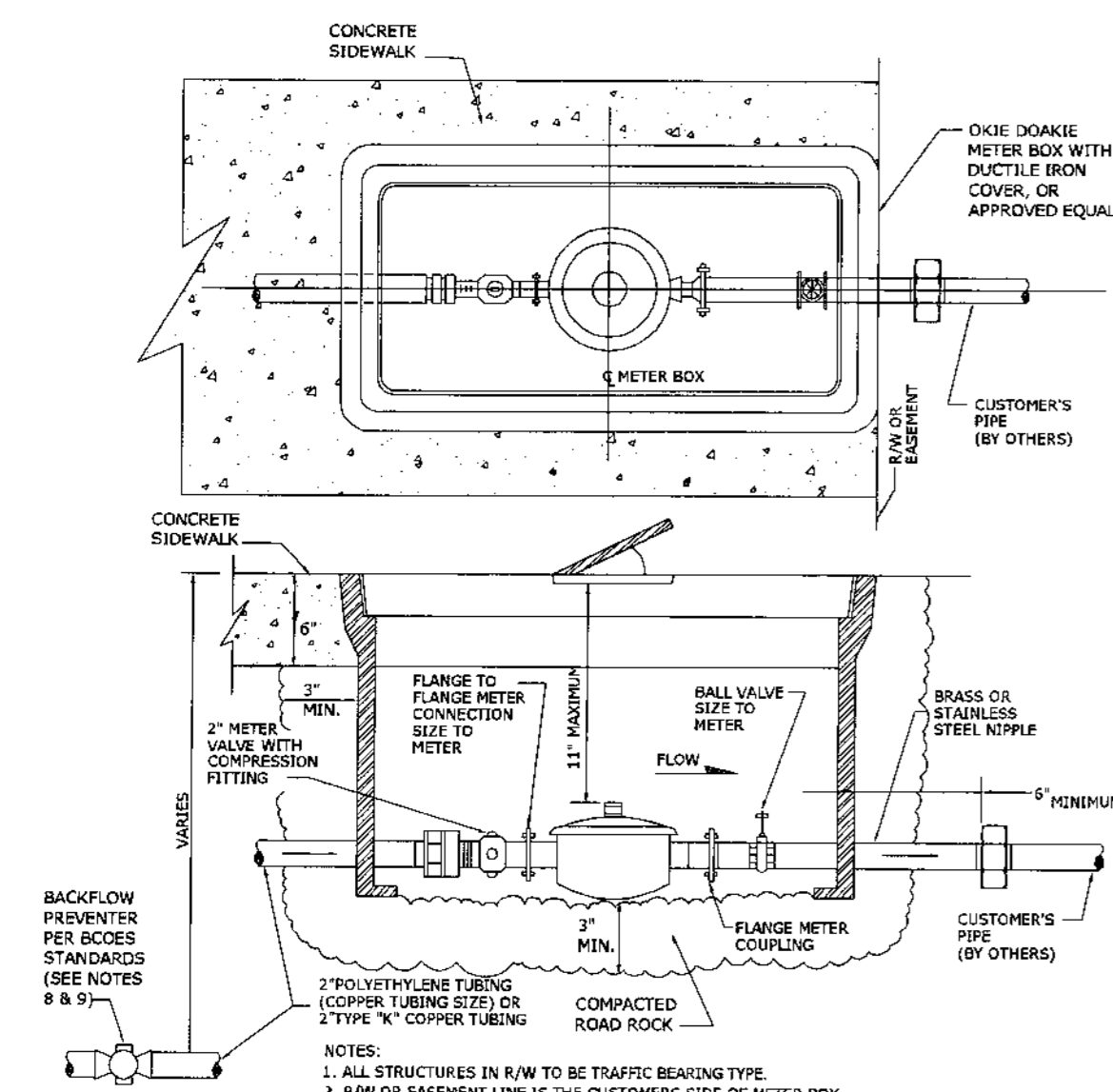
- NOTES:
- ALL STRUCTURES IN R/W TO BE TRAFFIC BEARING TYPE.
 - R/W LINE OR EASEMENT LINE IS THE CUSTOMER'S SIDE OF METER BOX.
 - B.C.O.E.S. RESPONSIBILITY ENDS AT THE CUSTOMER'S SIDE OF METER.
 - CURVE IN SERVICE LINE SHALL BE AS CLOSE TO METER BOX AS PRACTICAL AND MINIMUM RADIUS SHALL BE 14" FOR 1" TUBING.
 - ALL METERS WILL BE SUPPLIED AND INSTALLED BY B.C.O.E.S. METERS SHALL HAVE IRON PIPE THREAD MALE CONNECTION ON EACH END.
 - WHEN SIDEWALKS ARE PRESENT, OR PLANNED FOR IN THE R/W, THE BACK EDGE OF THE METER BOX SHALL LINE UP WITH THE BACK EDGE OF THE SIDEWALK.
 - METER SHALL BE CENTERED IN BOX DIRECTLY UNDER THE ACCESS LID.
 - THE BFP IS TO BE INSTALLED 3 FEET BEFORE THE METER VALVE.
 - THE BFP SHALL BE VALVE PART NUMBERS H511-444 (1" SERVICES) AND H511-777 (2" SERVICES) AS MANUFACTURED BY FORD METER BOX CO. OR APPROVED EQUAL.

BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES NOT TO SCALE REVISED JAN 2004 STANDARD DETAIL WATER METER INSTALLATION FOR 5/8" AND 1" METERS 3A



- NOTES:
- ALL STRUCTURES IN R/W TO BE TRAFFIC BEARING TYPE.
 - R/W LINE OR EASEMENT LINE IS THE CUSTOMER'S SIDE OF METER BOX.
 - B.C.O.E.S. RESPONSIBILITY ENDS AT THE CUSTOMER'S SIDE OF METER.
 - CURVE IN SERVICE LINE SHALL BE AS CLOSE TO METER BOX AS PRACTICAL AND MINIMUM RADIUS SHALL BE 14" FOR 1" TUBING.
 - ALL METERS WILL BE SUPPLIED AND INSTALLED BY B.C.O.E.S. METERS SHALL HAVE IRON PIPE THREAD MALE CONNECTION ON EACH END.
 - WHEN SIDEWALKS ARE PRESENT, OR PLANNED FOR IN THE R/W, THE BACK EDGE OF THE METER BOX SHALL LINE UP WITH THE BACK EDGE OF THE SIDEWALK.
 - METERS SHALL BE CENTERED IN BOX DIRECTLY UNDER THE ACCESS LID.
 - THE BFP IS TO BE INSTALLED 3 FEET BEFORE THE METER VALVE.
 - THE BFP SHALL BE VALVE PART NUMBERS H511-444 (1" SERVICES) AND H511-777 (2" SERVICES) AS MANUFACTURED BY FORD METER BOX CO. OR APPROVED EQUAL.

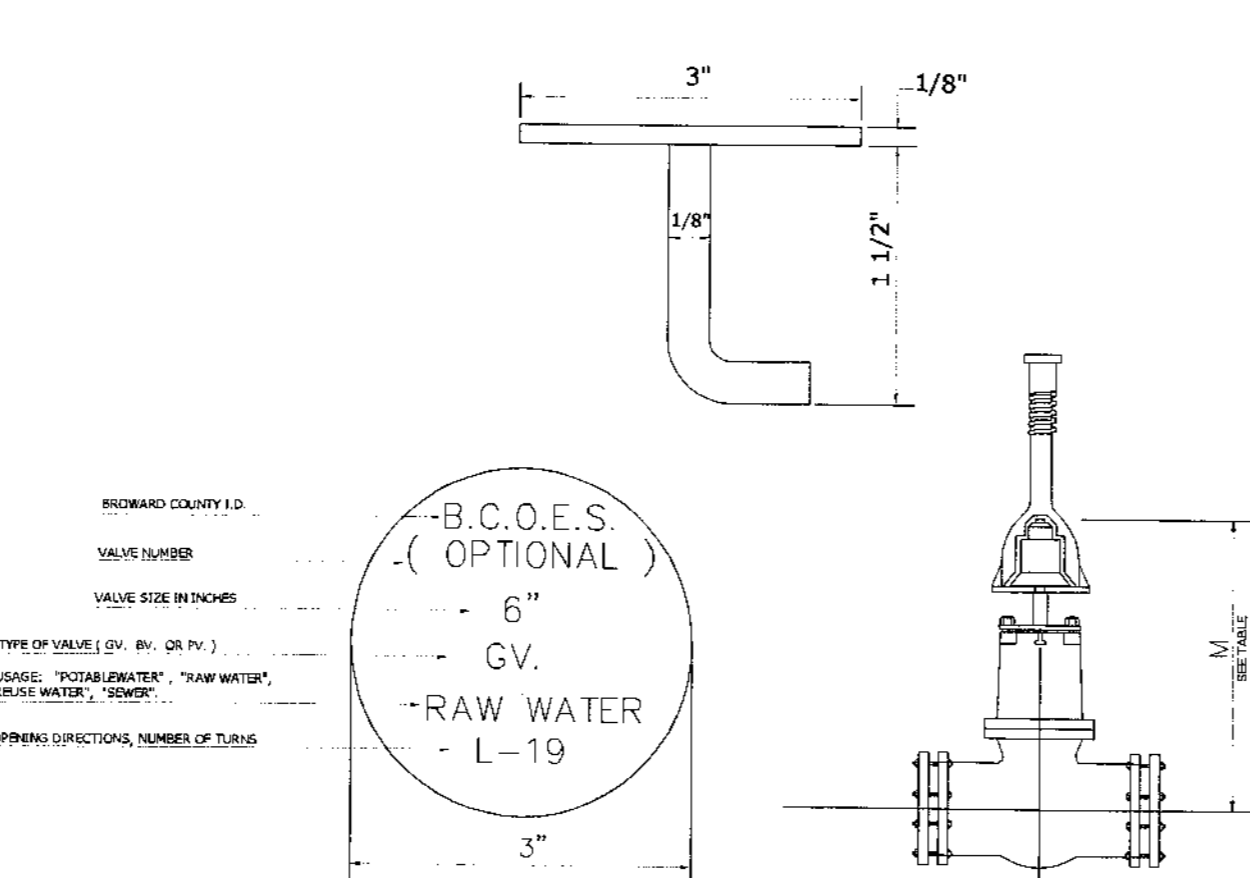
BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES NOT TO SCALE REVISED JAN 2004 STANDARD DETAIL DOUBLE METER INSTALLATION FOR TWO 5/8" METERS 3B



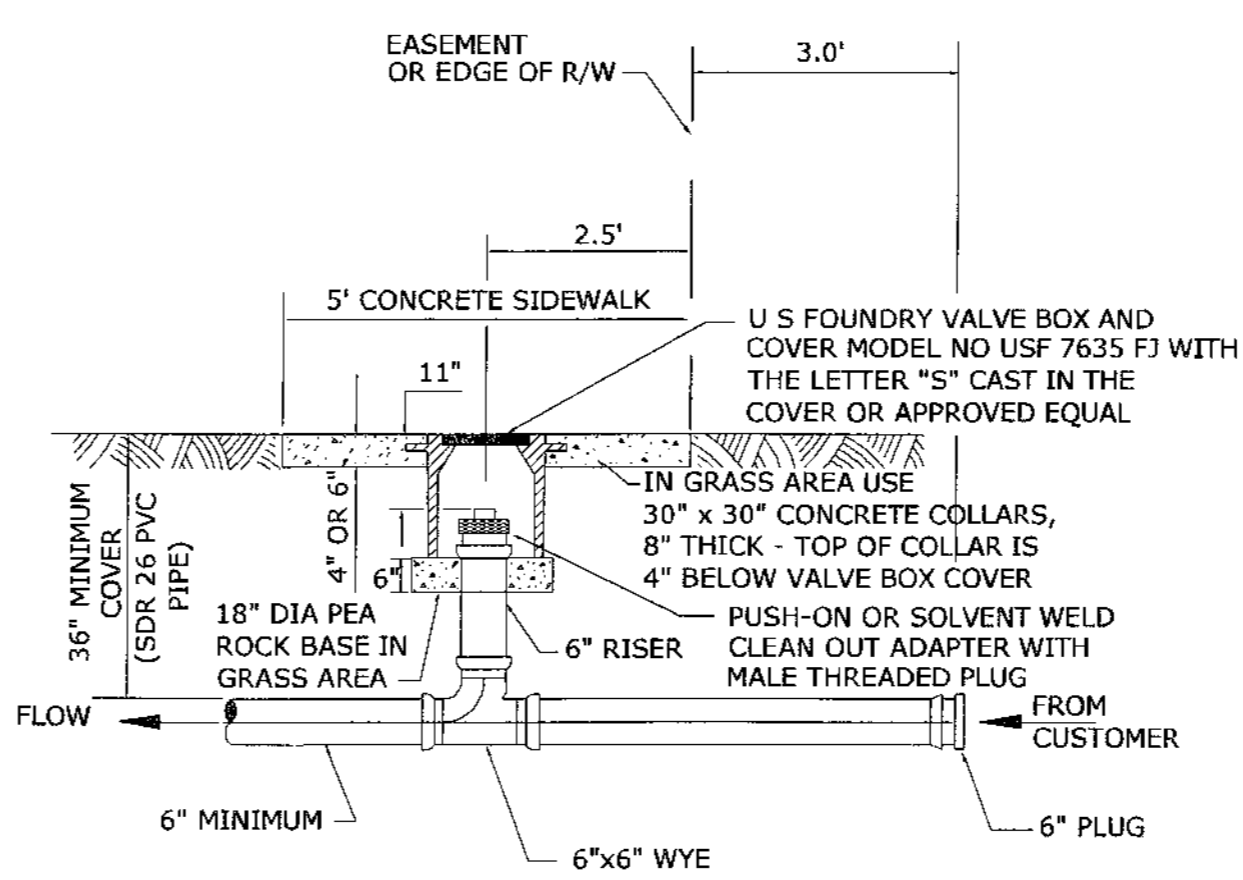
- NOTES:
- ALL STRUCTURES IN R/W TO BE TRAFFIC BEARING TYPE.
 - R/W OR EASEMENT LINE IS THE CUSTOMER'S SIDE OF METER BOX.
 - B.C.O.E.S. RESPONSIBILITY ENDS AT THE CUSTOMER'S SIDE OF METER BOX.
 - CURVE IN SERVICE LINE SHALL BE AS CLOSE TO METER BOX AS PRACTICAL AND MINIMUM RADIUS SHALL BE 21" FOR 2" TUBING.
 - ALL METERS WILL BE SUPPLIED AND INSTALLED BY B.C.O.E.S.
 - WHEN SIDEWALKS ARE PRESENT, OR PLANNED FOR IN THE R/W, THE BACK EDGE OF THE METER BOX SHALL LINE UP WITH THE BACK EDGE OF THE SIDEWALK.
 - METER SHALL BE CENTERED IN BOX DIRECTLY UNDER THE ACCESS LID.
 - THE BFP IS TO BE INSTALLED 3 FEET FROM THE METER VALVE.
 - THE BFP SHALL BE VALVE PART NUMBERS H511-444 (1" SERVICES) AND H511-777 (2" SERVICES) AS MANUFACTURED BY FORD METER BOX CO. OR APPROVED EQUAL.

BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES NOT TO SCALE REVISED JAN 2004 STANDARD DETAIL METER INSTALLATION FOR 1 1/2" OR 2" METERS 3C

VALVE SIZE (INCHES)	MIN. TOP TO GROUND (INCHES)	MIN. TOP TO WATER (INCHES)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
2 1/2	24	18	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
3	24	18	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
4	24	18	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
6	24	18	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
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36	24	18	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
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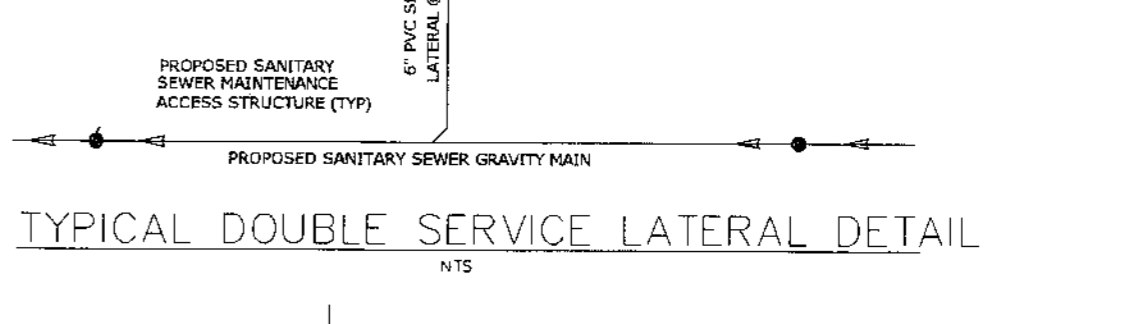
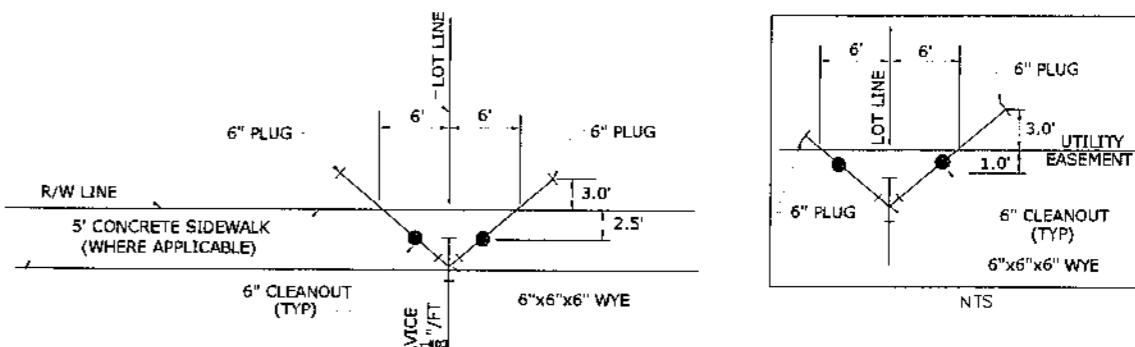


BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES NOT TO SCALE REVISED JAN 2004 STANDARD DETAIL VALVE BOX ADJUSTMENT (IN PAVEMENT) 3E



- NOTES:
- THE CLEAN OUT SHALL BE INSTALLED IN THE MIDDLE OF THE SIDEWALK. THIS DIMENSION WILL VARY DEPENDING UPON THE WIDTH OF THE SIDEWALK. 2.5' APPLIES TO A 5' SIDEWALK WIDTH. IF SIDEWALKS DO NOT EXIST, THE CLEAN OUT SHALL BE INSTALLED 2.5' FROM THE RIGHT OF WAY LINE.
 - A NEW SECTION OF SIDEWALK SHALL BE POURED AROUND THE VALVE BOX WHEN WORKING IN AN AREA WITH EXISTING SIDEWALKS.

BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES NOT TO SCALE REVISED JAN 2004 STANDARD DETAIL SEWER SERVICE CONNECTION AT PROPERTY LINE OR EASEMENT LINE 4A



BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES NOT TO SCALE REVISED JAN 2004 STANDARD DETAIL SEWER SERVICE CONNECTION AT PROPERTY LINE OR EASEMENT LINE 4B

Company and/or Engineer Information
Engineers Name
License # 0000
Phone (954) 000-0000
City State Zip Code
C.o.A. # 000000
E-Mail: email address

NO.	DATE	DESCRIPTION

PROJECT NAME
CITY NAME
FLORIDA
WATER AND SEWER DETAILS

DATE:
OCTOBER 2005

SCALE:
NTS

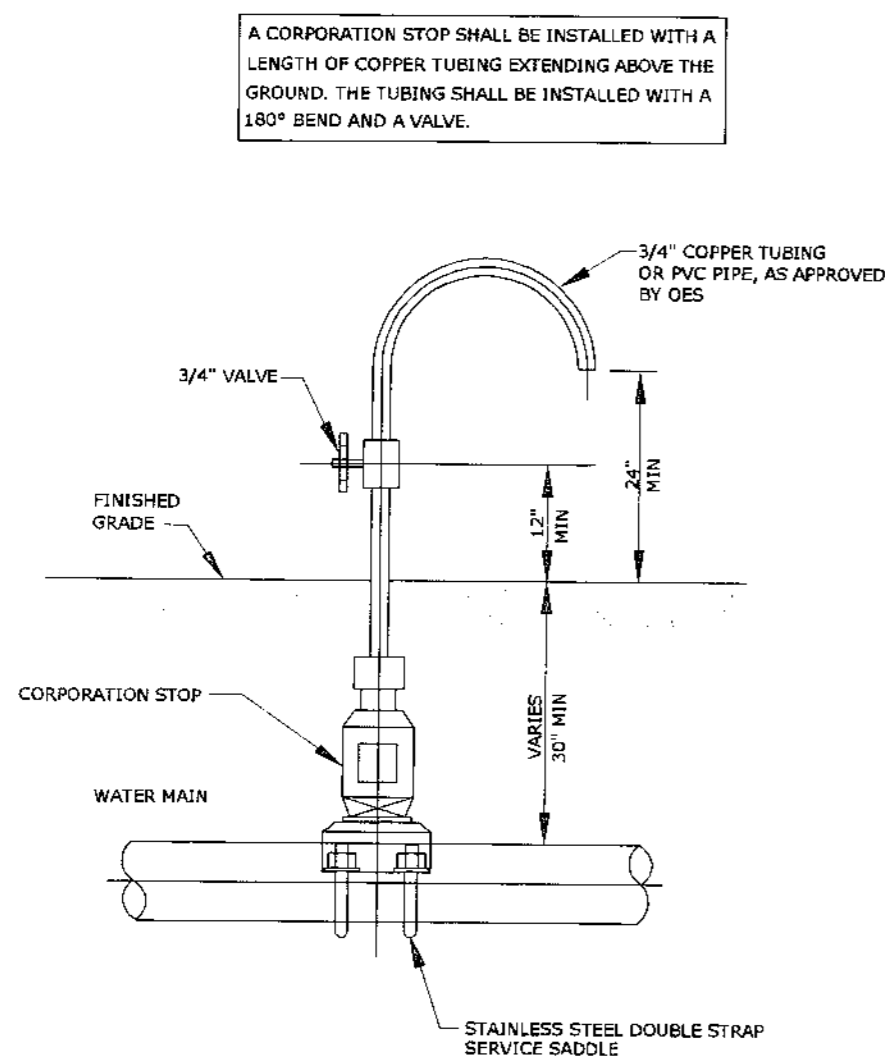
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DRAWN BY:

JOB NUMBER
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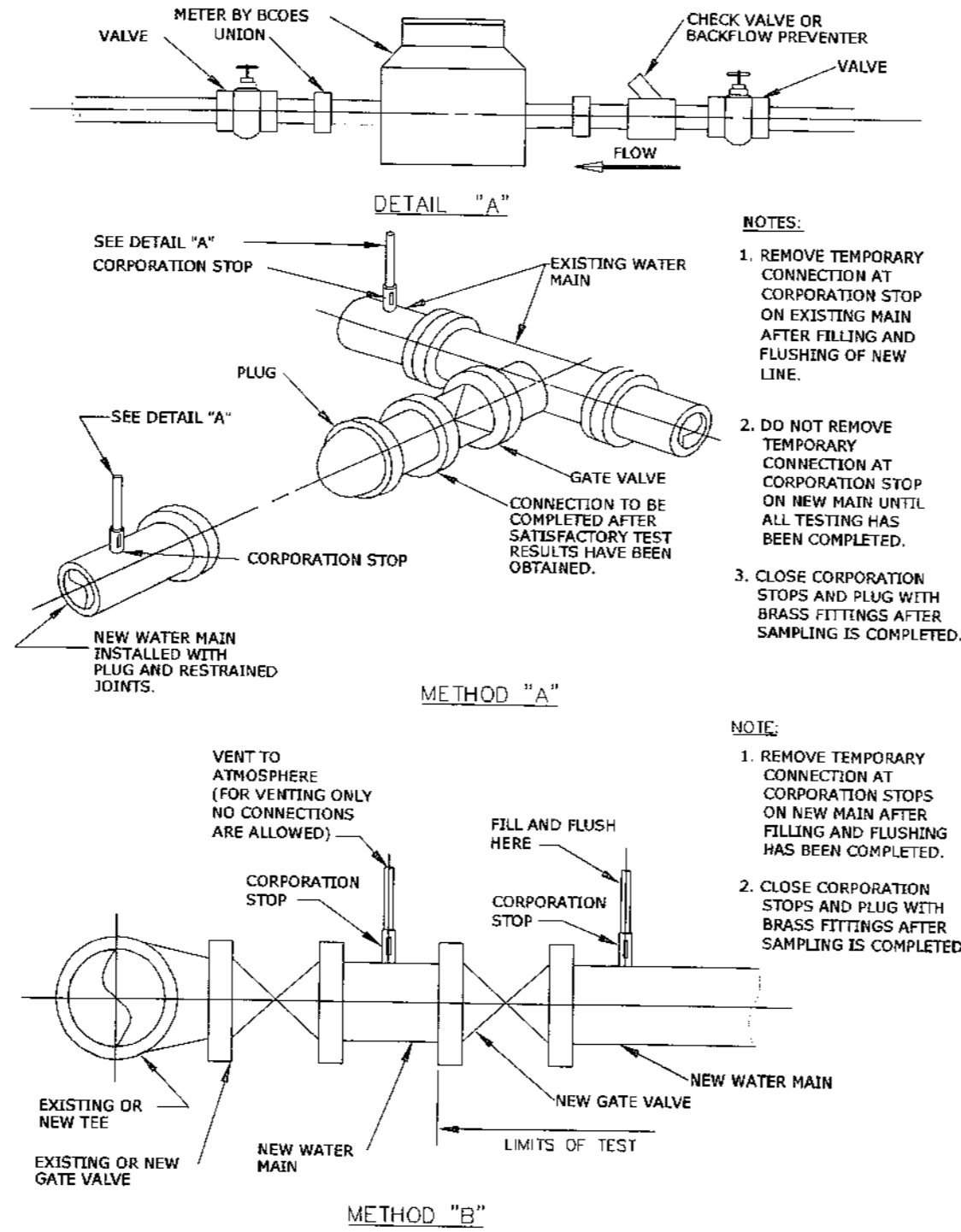
SHEET No.
WS4

SEAL

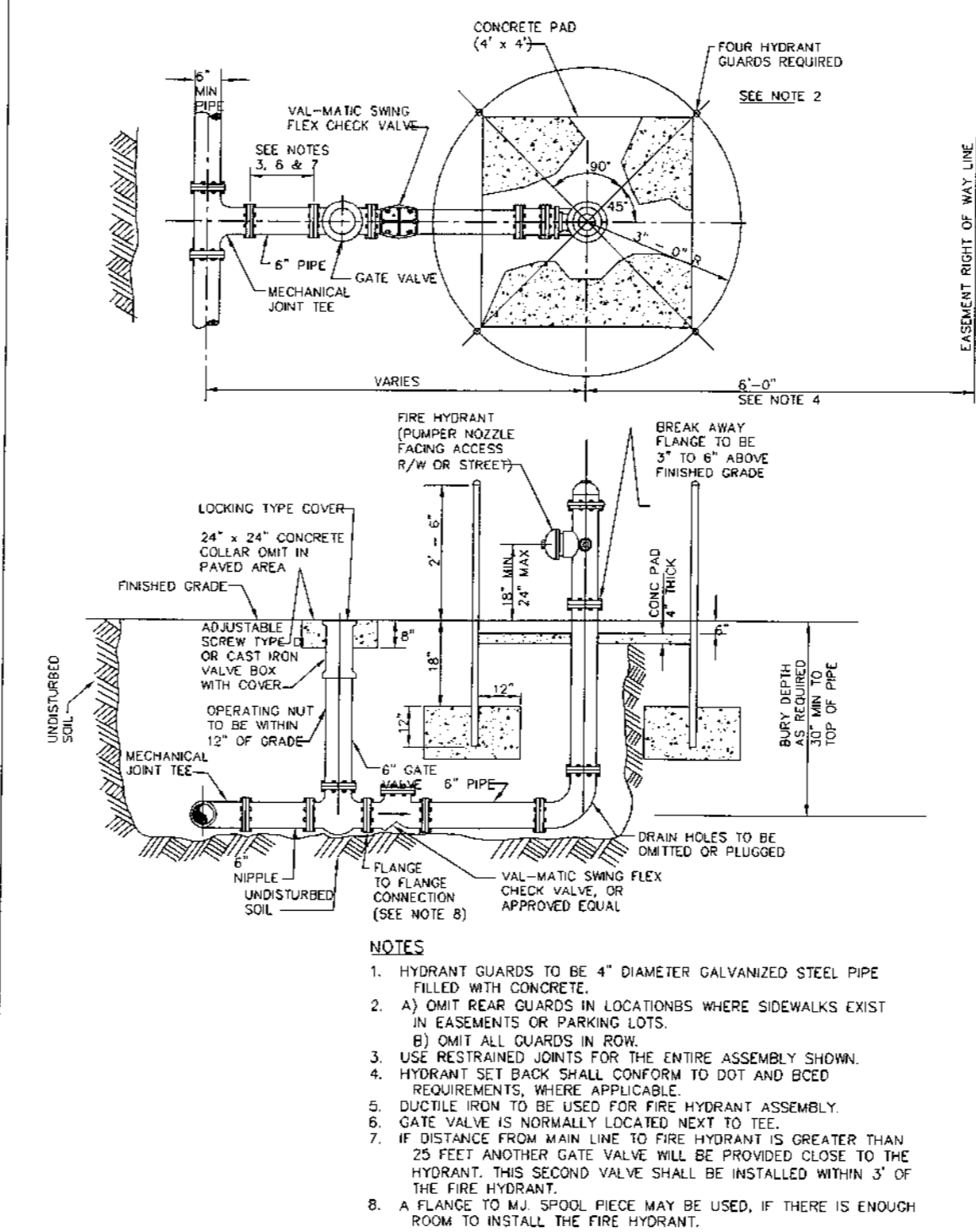


- NOTES:**
1. SAMPLING JOINTS SHALL BE LOCATED AND LATER REMOVED AS REQUIRED BY BROWARD COUNTY HEALTH DEPARTMENT.
 2. CORPORATION STOP SHALL BE CLOSED AND PLUGGED WITH A BRASS FITTING AFTER SAMPLING IS COMPLETED.
 3. SAMPLING JOINTS MAY BE PLACED AT THE ENDS OF WATER SERVICES BEFORE THE METERS AND ON BLOW OFFS FOR TERMINAL WATER MAINS, WHERE SERVICES AND BLOW OFFS ARE REQUIRED BY THE PLANS.

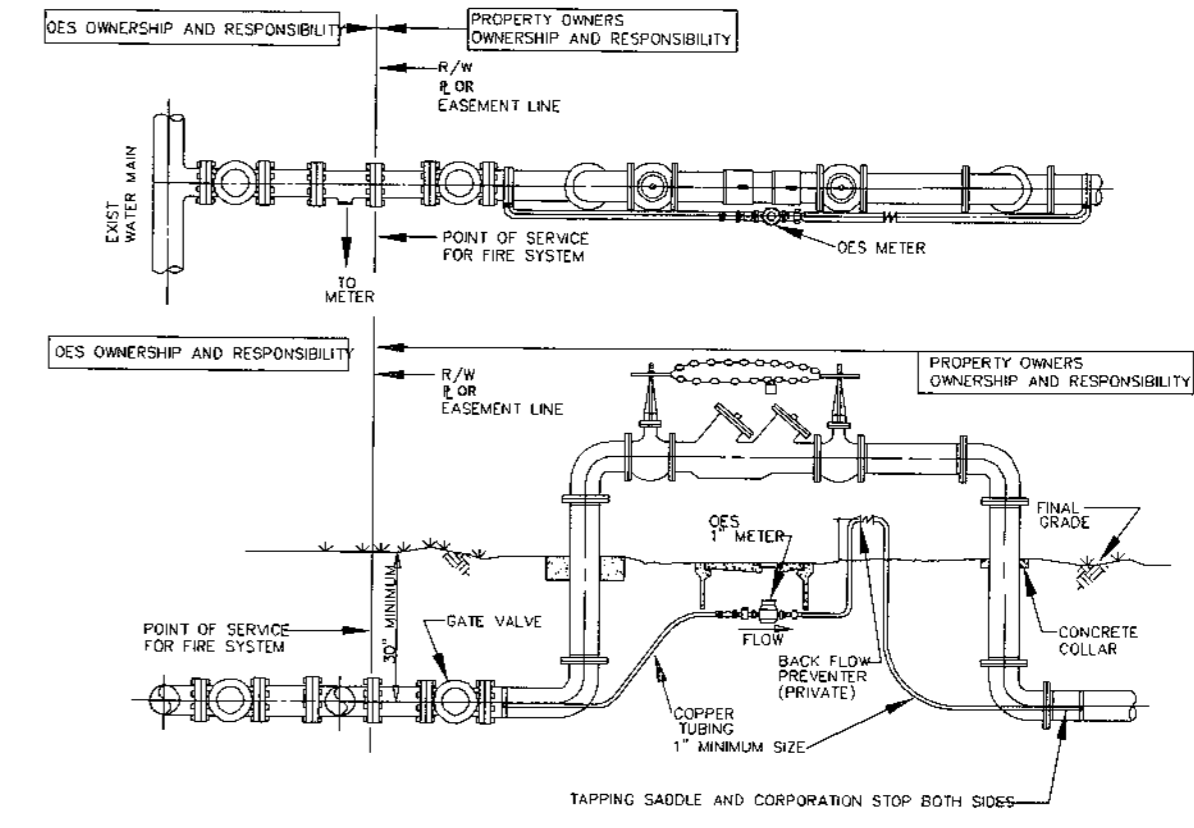
BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES	NOT TO SCALE REVISED JAN 2004	STANDARD DETAIL SAMPLING POINT	6
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BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES	NOT TO SCALE REVISED JAN 2004	STANDARD DETAIL FILLING AND FLUSHING CONNECTION	7
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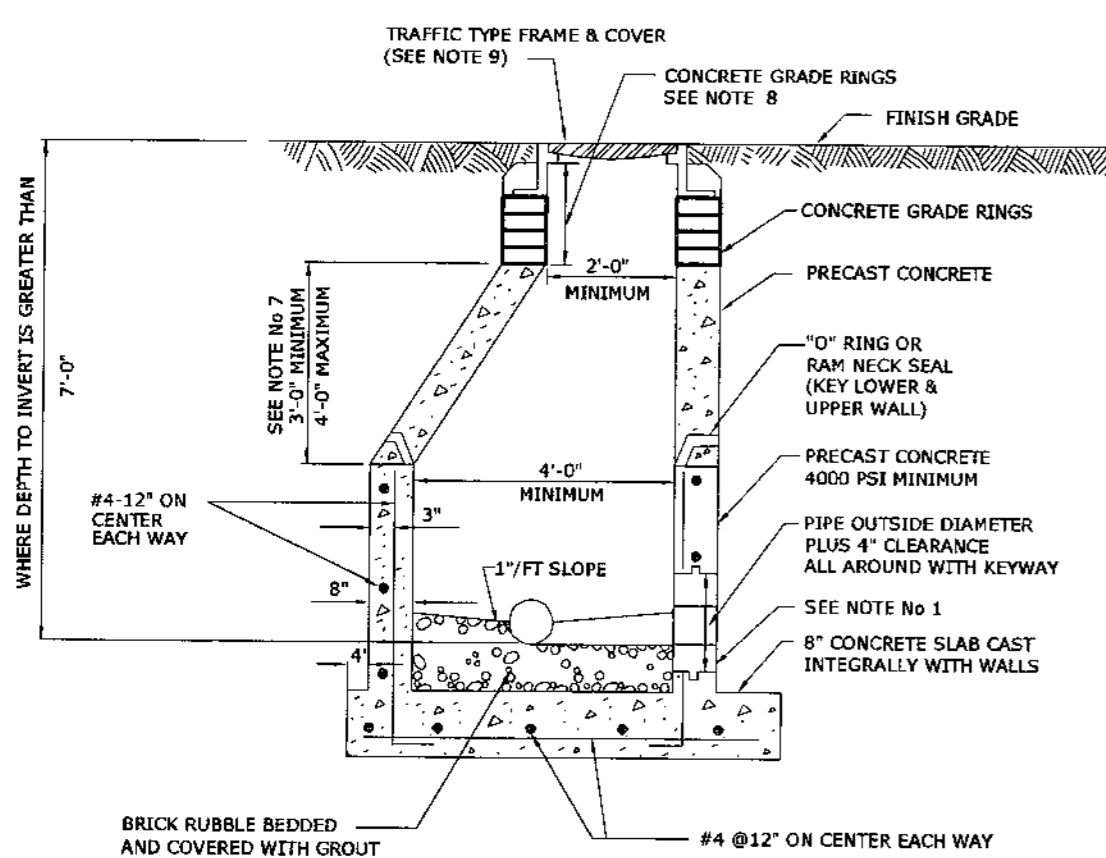


BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICE	NOT TO SCALE REVISED JAN 2004	STANDARD DETAIL FIRE HYDRANT INSTALLATION	8
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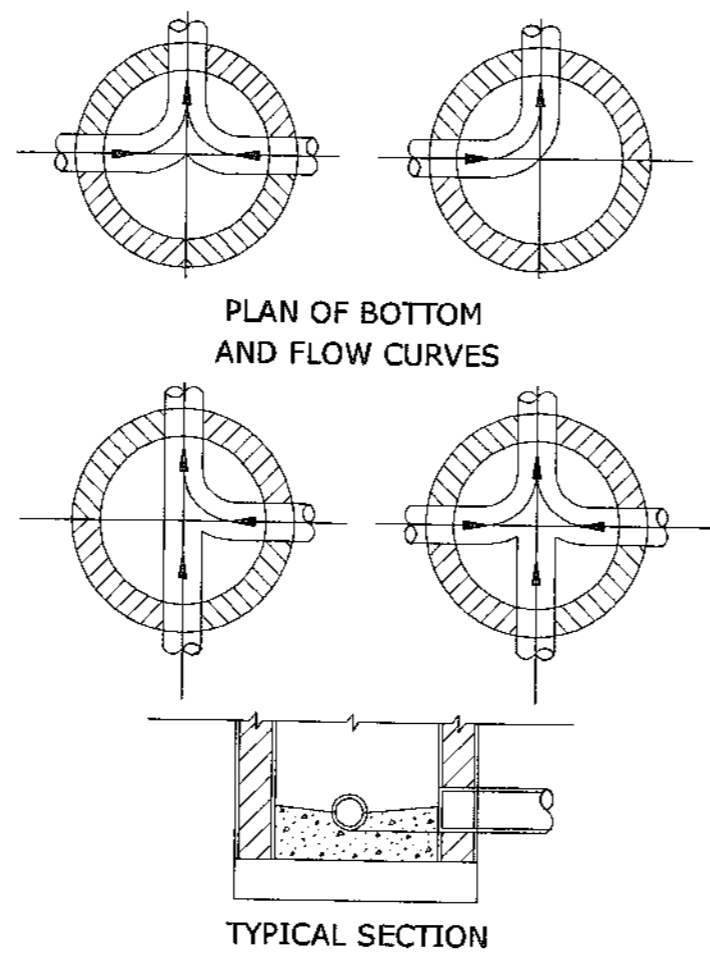
- NOTES:**
1. THE DOUBLE DETECTION CHECK SHALL BE PRIVATELY OWNED BY THE PROPERTY OWNER.
 2. RES RESPONSIBILITY IS LIMITED TO BY PASS METER ASSEMBLY ONLY. (DOES NOT INCLUDE 1\"/>

BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES	NOT TO SCALE REVISED JAN 2004	STANDARD DETAIL TYPE 1 PRIVATE FIRE PROTECTION	9A
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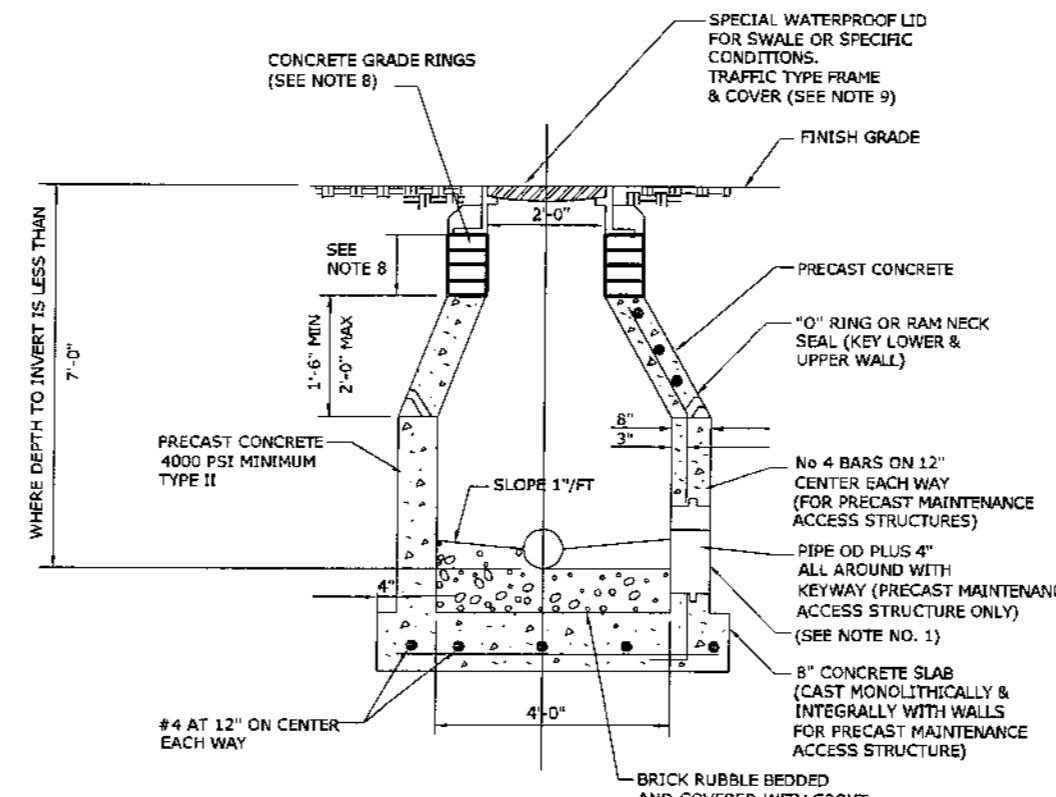
- NOTES:**
1. MAINTENANCE ACCESS STRUCTURE ADAPTOR COUPLING OR APPROVED EQUAL ARE REQUIRED FOR ALL PIPE MATERIAL OR AS APPROVED BY ENGINEER.
 2. MAINTENANCE ACCESS STRUCTURE WALLS TO BE SEAL COATED INSIDE & OUTSIDE WITH 16 MIL THICKNESS OF APPROVED COATING.
 3. LIFT HOLES THROUGH PRECAST SECTIONS PERMITTED PER OSHA REQUIREMENTS.
 4. SEE TECHNICAL SPECIFICATIONS FOR PLACEMENT OF CONSTRUCTION JOINTS ONLY.
 5. ALL OPENINGS SHALL BE SEALED WITH A WATERPROOF, EXPANDING GROUT.
 6. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MAINTENANCE ACCESS STRUCTURE TO DIRECT INFLUENT INTO FLOW STRAM.
 7. 4-#6 PLACED DIAGONALLY AROUND OPENING & 6-#5\"/>

BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES	NOT TO SCALE REVISED JAN 2004	STANDARD DETAIL PRECAST MAINTENANCE ACCESS STRUCTURE	13A
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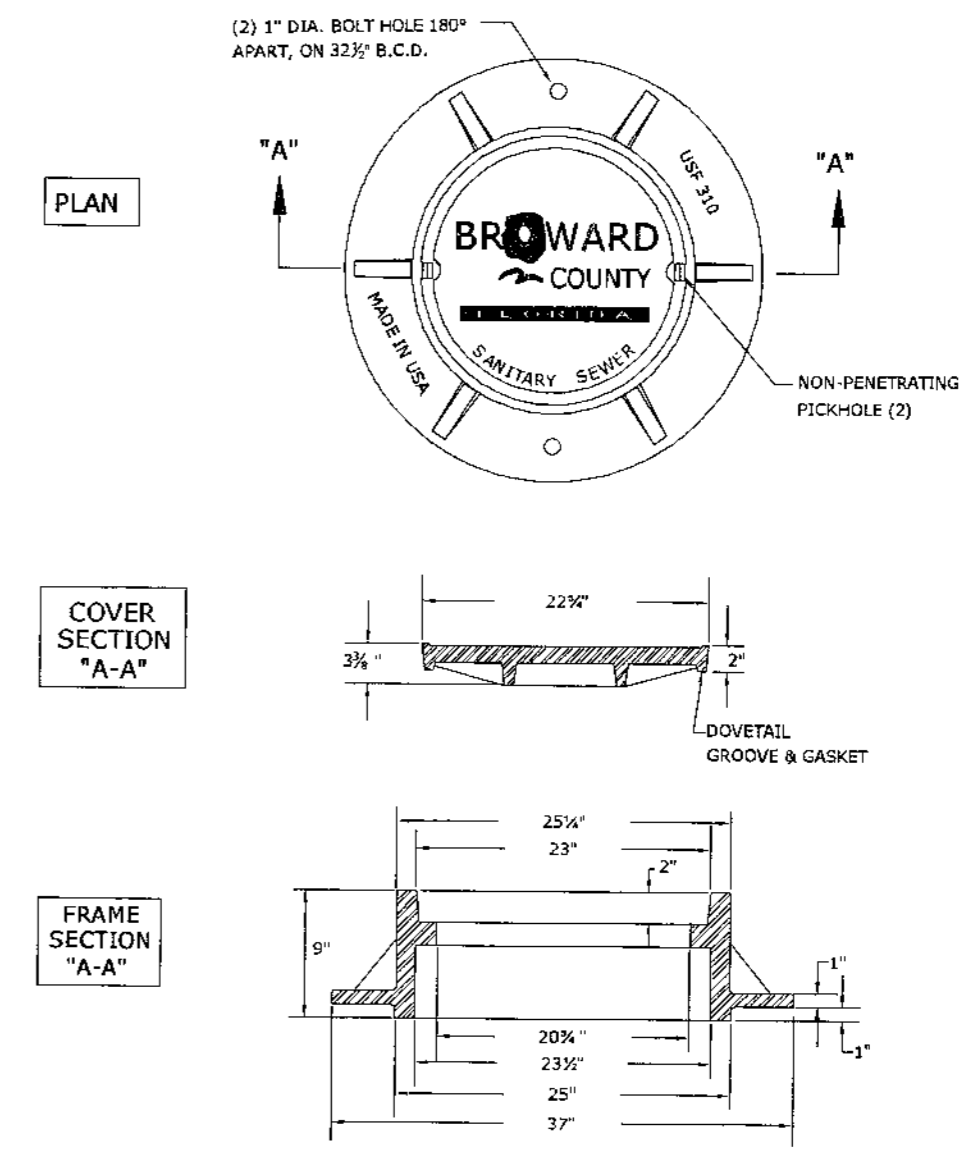
- NOTES:**
1. PROVIDE SPILLWAY FOR SMOOTH FLOW BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS.
 2. SLOPE MAINTENANCE ACCESS STRUCTURE SHELF WITH 1\"/>

BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES	NOT TO SCALE REVISED JAN 2004	STANDARD DETAIL INVERT CHANNEL FLOW DIRECTIONS	13B
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- NOTES:**
1. MAINTENANCE ACCESS STRUCTURE ADAPTOR COUPLING OR APPROVED EQUAL ARE REQUIRED FOR ALL PIPE MATERIAL OR AS APPROVED BY ENGINEER.
 2. MAINTENANCE ACCESS STRUCTURE WALLS TO BE COATED INSIDE AND OUTSIDE WITH 16 MIL THICKNESS OF APPROVED COATING.
 3. LIFT HOLES THROUGH PRECAST SECTIONS PERMITTED PER OSHA REQUIREMENTS ONLY.
 4. SEE TECHNICAL SPECIFICATIONS FOR PLACEMENT OF CONSTRUCTION JOINTS.
 5. ALL OPENINGS SHALL BE SEALED WITH WATERPROOF, EXPANDING GROUT.
 6. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MAINTENANCE ACCESS STRUCTURE TO DIRECT INFLUENT INTO FLOW STRAM.
 7. ALL CONCRETE SHALL USE TYPE II CEMENT ONLY. MUST MEET LATEST ASTM REQUIREMENTS AND CONTAIN LABORATORY CERTIFICATION ON PRECAST STRUCTURES.
 8. THE CHIMNEY AREA SHALL BE MINIMUM OF 4\"/>

BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES	NOT TO SCALE REVISED JAN 2004	STANDARD DETAIL SHALLOW MAINTENANCE ACCESS STRUCTURE	13D
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- NOTES:**
1. ALL BEARING SURFACES TO BE MACHINED.
 2. MINIMUM WEIGHTS: COVER 165 LBS, FRAME 365 LBS.
 3. COVERS SHALL BE WATER TIGHT.
 4. MATERIAL: ASTM A48 CLASS 30B GRAY IRON.

BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES	NOT TO SCALE REVISED JAN 2004	STANDARD DETAIL MAINTENANCE ACCESS STRUCTURE, FRAME AND COVER	15A
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Company and/or Engineer Information

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City, State, Zip Code
Phone (650) 000-0000
E-Mail address
Fax (650) 000-0001

NO.	DATE	DESCRIPTION

PROJECT NAME

FLORIDA
CITY NAME
WATER AND SEWER DETAILS

DATE:
OCTOBER 2005

SCALE:
NTS

DESIGNED BY:

DRAWN BY:

JOB NUMBER
0000

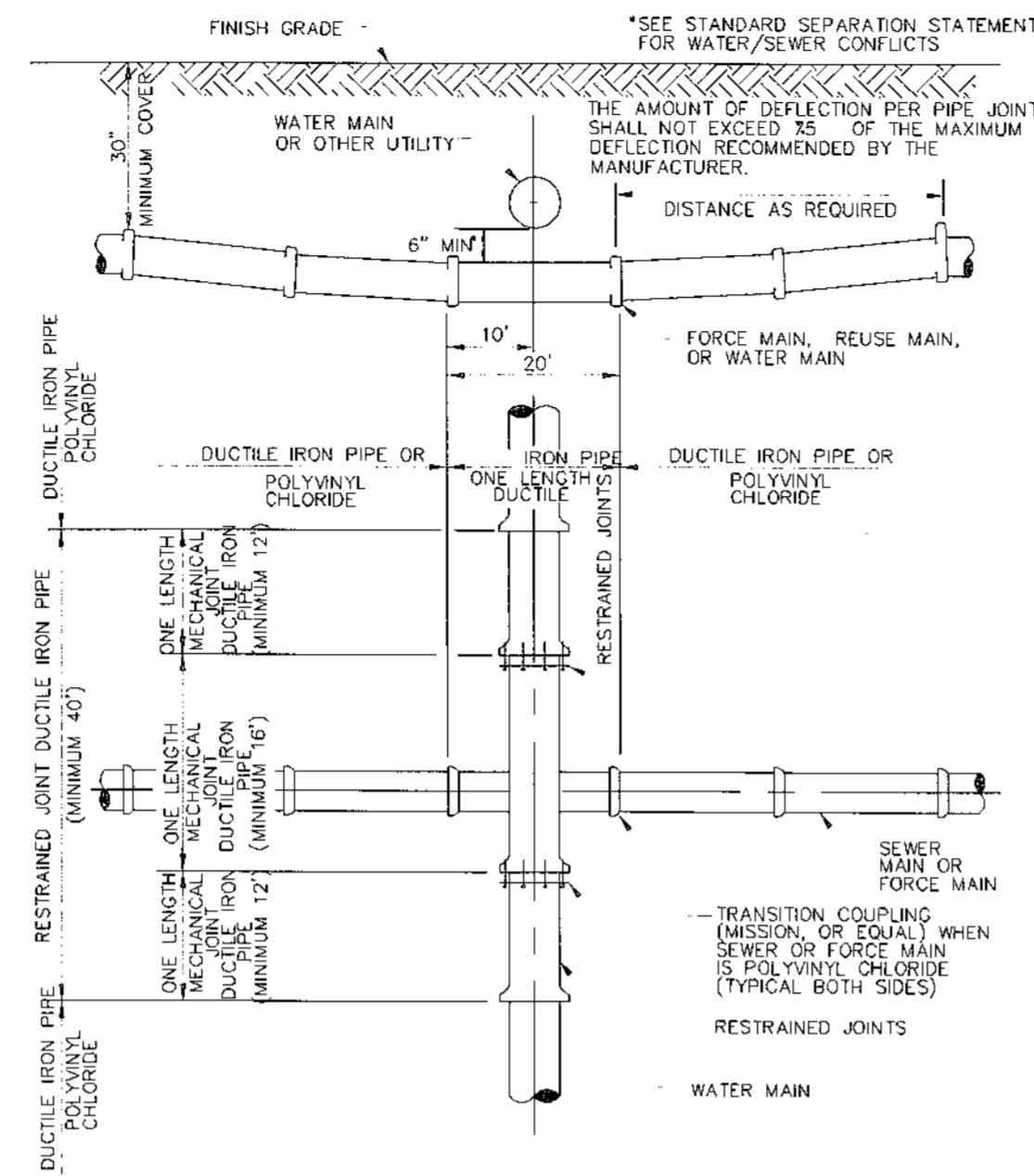
SHEET No.
WS5

SEAL

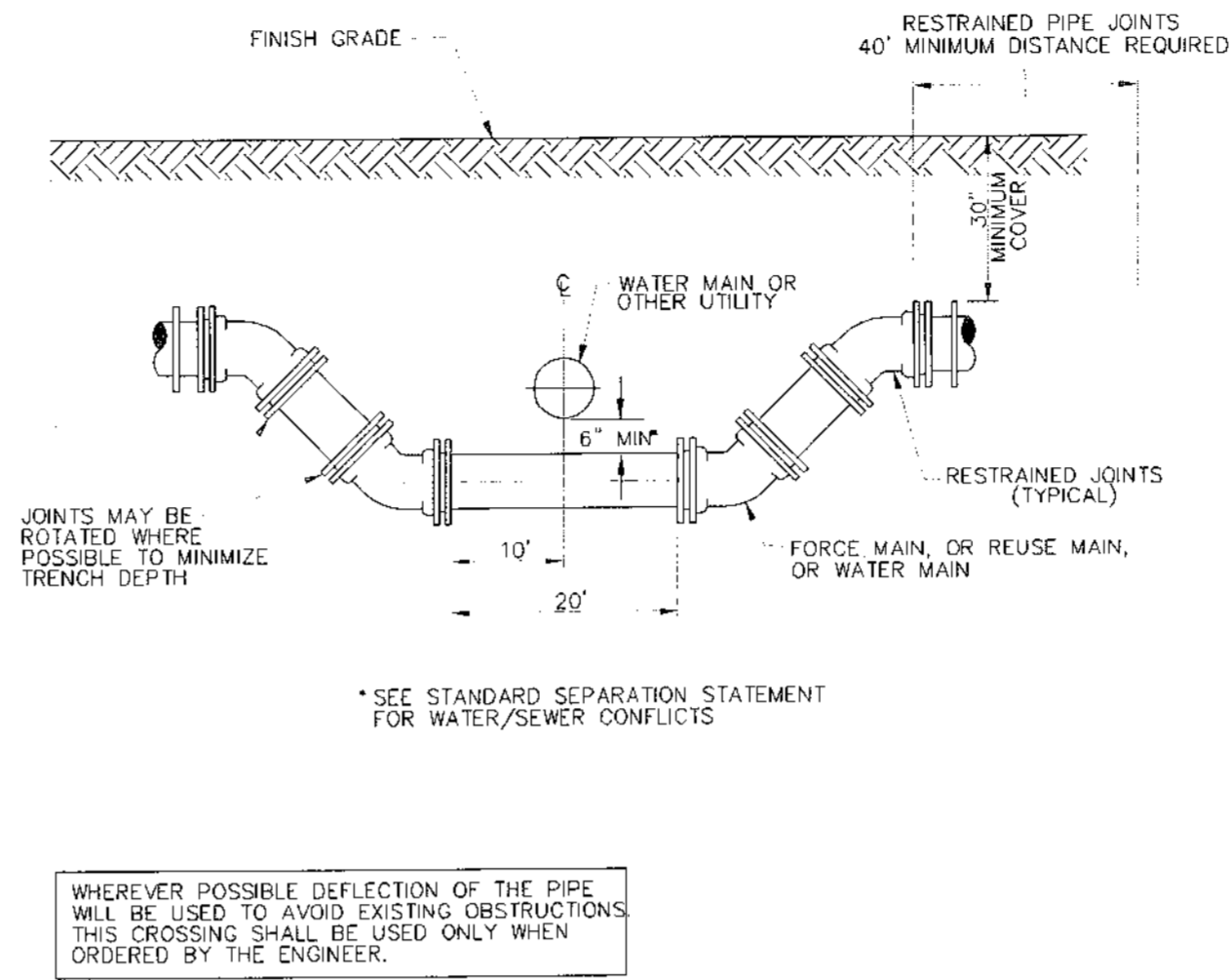
POTABLE WATER-SEWER SYSTEM-REUSE WATER
SEPARATION NOTES

- SANITARY SEWER SYSTEMS AND/OR REUSE WATER MAINS SHOULD CROSS UNDER POTABLE WATER MAINS WHENEVER PHYSICALLY POSSIBLE. SANITARY SEWER SYSTEMS AND/OR REUSE WATER MAINS CROSSING POTABLE WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL SEPARATION DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE.
- WHERE SANITARY SEWER SYSTEMS AND/OR REUSE WATER MAINS MUST CROSS UNDER A POTABLE WATER MAIN WITH LESS THAN THE REQUIRED MINIMUM OF 18 INCHES VERTICAL SEPARATION DISTANCE, OR MUST CROSS OVER THE WATER MAIN, REGARDLESS OF THE VERTICAL SEPARATION DISTANCE, THEN THE SEWER SYSTEM AND/OR THE REUSE WATER AND THE POTABLE WATER MAIN PIPING MATERIAL MUST BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING (SEE 1B).
 - SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN TWO JOINTS. ALL CROSSINGS SHALL ALWAYS BE ARRANGED SO THAT THE SEWER SYSTEM AND/OR REUSE WATER MAIN PIPE JOINTS AND THE POTABLE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON CROSSING). A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS. ADDITIONALLY, ALL JOINTS ON THE POTABLE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED.
- A MINIMUM OF A 10 FOOT HORIZONTAL SEPARATION DISTANCE SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER SYSTEM AND POTABLE WATER MAIN PARALLEL INSTALLATIONS WHENEVER PHYSICALLY POSSIBLE. THE MINIMUM HORIZONTAL SEPARATION FOR A REUSE WATER MAIN IN REFERENCE TO A POTABLE WATER MAIN OR A SANITARY SYSTEM IS 5 FEET ON CENTER, OR 3 FEET OUTSIDE TO OUTSIDE OF PIPE, WHICHEVER IS GREATER, IN SOME CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN THE HORIZONTAL SEPARATION, THEN THE POTABLE WATER MAIN MAY BE LAID, AT THE MAXIMUM HORIZONTAL SEPARATION DISTANCE POSSIBLE, IN A SEPARATE TRENCH, OR, ON AN UNDISTURBED EARTH SHEL, BUT AT SUCH AN ELEVATION AS THAT THE BOTTOM OF THE WATER MAIN IS AT A MINIMUM OF 18 INCHES OR MORE ABOVE THE TOP OF THE SEWER SYSTEM AND/OR REUSE WATER MAIN, THUS CONFORMING TO THE MINIMUM CROSSING STANDARDS. WHENEVER THE MINIMUM STANDARDS CANNOT BE MAINTAINED, THEN BOTH OF THE SEWER SYSTEM AND/OR THE REUSE WATER MAIN AND THE POTABLE WATER MAIN PIPING MATERIAL MUST BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) (SEE 1B).
- ALL DIP SHALL BE CLASS 50 OR HIGHER. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY THE DESIGN.

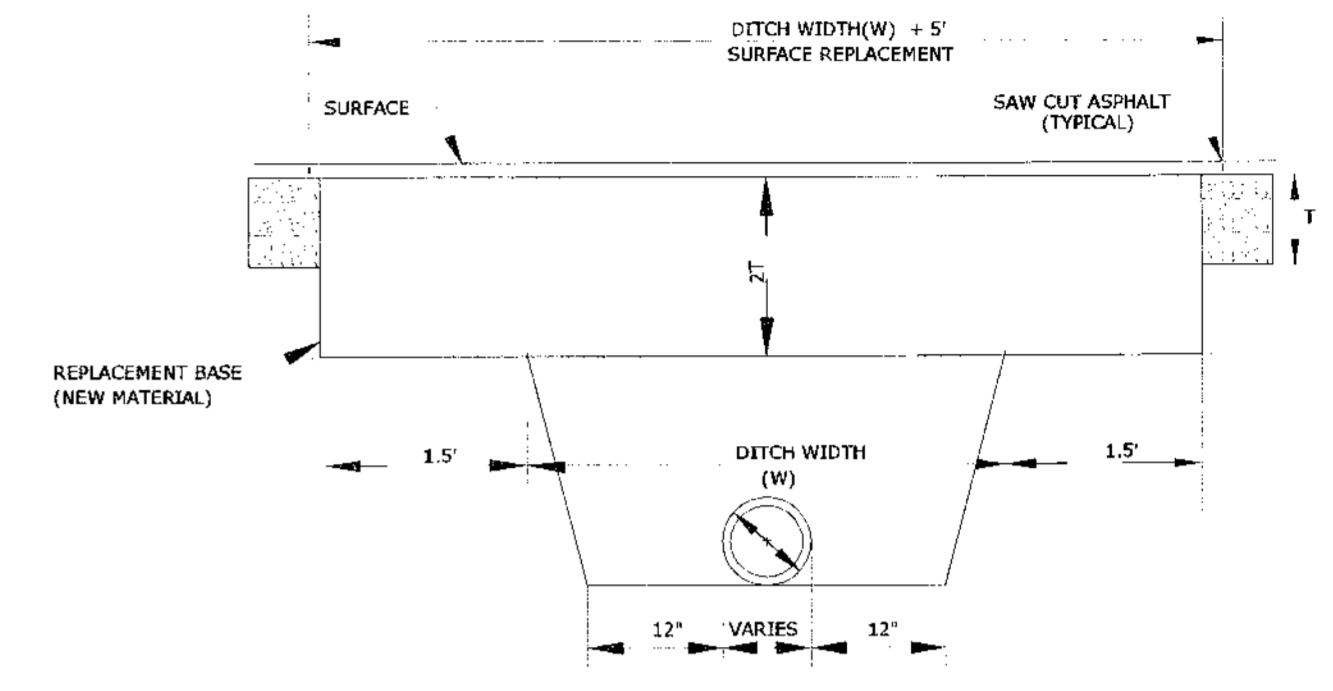
BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICE	NOT TO SCALE REVISED JAN 2004	STANDARD DETAIL STATEMENT FOR WATER SEWER CONFLICT	16A
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BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICE	NOT TO SCALE REVISED JAN 2004	STANDARD DETAIL STANDARD UTILITY CROSSING	16B
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BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICE	NOT TO SCALE REVISED JAN 2004	STANDARD SERVICE SPECIAL UTILITIES CROSSING	16C
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- GENERAL NOTES
- REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE. MINIMUM 8", MAXIMUM 18"
 - BASE MATERIAL SHALL BE PLACED IN 8" MAXIMUM (LOOSE MEASUREMENT) LAYERS AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO 95% OF MAXIMUM DENSITY, PER AASHTO T-190
 - ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
 - SURFACE MATERIAL SHALL BE CONSISTENT WITH THE SURROUNDING SURFACE MATERIAL
 - BASE MATERIAL SHALL HAVE A MINIMUM LBR OF 100 AND A MINIMUM CARBONATE CONTENT OF 70% (60% FOR LOCAL STREETS)
 - SUBGRADE SHALL BE TAMPED/COMPACTED TO 100% MAXIMUM DENSITY PER AASHTO T-99
 - IF THE DITCH IS FILLED TEMPORARILY, IT SHALL BE COVERED WITH A 2" THICK ASPHALTIC CONCRETE PATCH TO KEEP THE FILL MATERIAL FROM RAVELING, UNTIL REPLACED WITH A PERMANENT PAVEMENT PATCH.

BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICE	NOT TO SCALE REVISED JAN 2004	STANDARD DETAIL RESTORATION OF ROAD CUT FOR UTILITY CROSSING	19B
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Company and/or Engineer Information

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Phone (954) 000-0000
E-Mail: email address

NO.	DATE	DESCRIPTION

PROJECT NAME
FLORIDA
WATER AND SEWER DETAILS

DATE:
OCTOBER 2005

SCALE:
NTS

DESIGNED BY:

DRAWN BY:

JOB NUMBER
0000

SHEET No.
WS6

SEAL