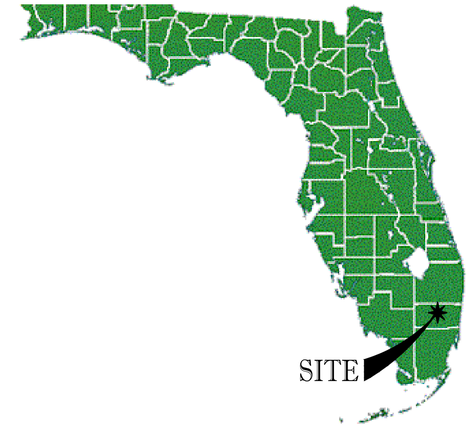
SITE DEVELOPMENT DRAWINGS FOR:

Cumberland FARMS

5485 WEST ATLANTIC BOULEVARD,

MARGATE, FL

SECTION 36, TOWNSHIP 48S, RANGE 41E

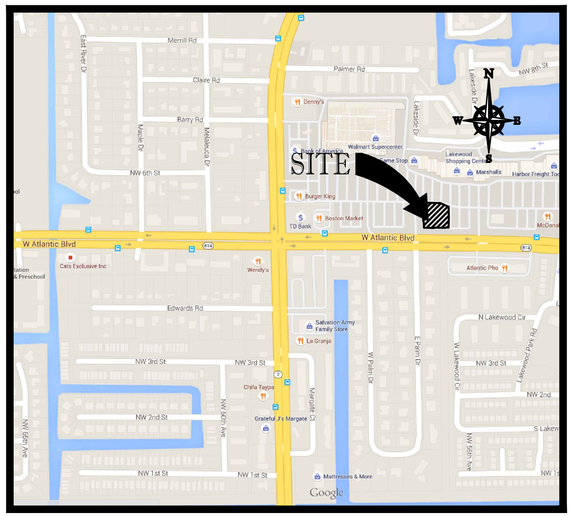


LOCATION MAP

1"=200'

VICINITY MAP

1"=500'



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LEGAL DESCRIPTION:

A PORTION OF TRACT 'A', 'LAKEWOOD COMMERCIAL', ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 120, PAGE 27, AND A PORTION OF THE SHOPPING CENTER, 'MARGATE REALTY No. 1', ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 42, PAGE 42, BOTH OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA.

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REVISIONS:

REV:	DATE:	COMMENT:	BY:

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PROJECT No.: F140147
DRAWN BY: JFV
CHECKED BY: MAT
CAD I.D.: F140147-COVER

PROJECT:

5485 WEST ATLANTIC BOULEVARD

FOR

Cumberland FARMS

MARGATE, FL

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December 13, 2016
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SHEET TITLE:

COVER SHEET

SHEET NUMBER:

CFG01.0

DATE: 12-01-2016

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GENERAL NOTES

CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE NOTES AND SPECIFICATIONS CONTAINED HEREIN. CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE CONFORMANCE TO THESE REQUIREMENTS BY ALL SUBCONTRACTORS.

1. THE FOLLOWING DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THIS SITE PLAN:

- TOPOGRAPHIC SURVEY - PULICE LAND SURVEYORS, INC.

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT HE/SHE HAS THE LATEST EDITION OF THE DOCUMENTS REFERENCED ABOVE.

2. ALL HANDICAPPED PARKING SPACES SHALL BE CONSTRUCTED TO MEET, AT A MINIMUM, THE MORE STRINGENT OF THE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT" (ADA) CODE (42 U.S.C. SEC. 12101 ET SEQ. AND 42 U.S.C. SEC. 4151 ET SEQ.) OR THE REQUIREMENTS OF THE JURISDICTION WHERE THIS PROJECT IS TO BE CONSTRUCTED.

3. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED THE COMMENTS TO ALL PLANS AND OTHER DOCUMENTS REVIEWED AND APPROVED BY THE PERMITTING AUTHORITIES. CONTRACTOR SHALL HAVE COPIES OF ALL PERMITS AND PPROVALS ON SITE AT ALL TIMES.

4. THE OWNER/CONTRACTOR SHALL BE FAMILIAR WITH AND RESPONSIBLE FOR THE PROCUREMENT OF ANY AND ALL CERTIFICATIONS REQUIRED FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

5. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE REQUIREMENTS AND STANDARDS OF ALL GOVERNMENTAL ENTITIES HAVING JURISDICTION OVER THIS PROJECT.

6. THE GEOTECHNICAL REPORT AND RECOMMENDATIONS SET FORTH HEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND, IN CASE OF CONFLICT, SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY SUCH DISCREPANCY BETWEEN THE GEOTECHNICAL REPORTS AND PLANS AND SPECIFICATIONS PRIOR TO PROCEEDING WITH ANY FURTHER WORK.

7. THE TOPOGRAPHIC SURVEY PREPARED BY PULICE LAND SURVEYORS, INC., SHALL BE CONSIDERED A PART OF THESE PLANS.

8. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO THOMAS ENGINEERING GROUP BY THE OWNER AND OTHERS PRIOR TO THE TIME OF PLAN PREPARATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY THOMAS ENGINEERING GROUP IF ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLAN, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OTHER SITE FEATURES.

9. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS PRIOR TO THE GIVING OF SUCH NOTIFICATION AND THE ENGINEER'S WRITTEN AUTHORIZATION OF SUCH ADDITIONAL WORK.

10. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL/BUILDING PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY LOCATIONS.

11. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE THE BUILDING LAYOUT BY CAREFUL REVIEW OF THE SITE PLAN AND LATEST ARCHITECTURAL PLANS (INCLUDING, BUT NOT LIMITED TO, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE SUPPRESSION PLAN, WHERE APPLICABLE). CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER, ARCHITECT AND SITE ENGINEER OF ANY DISCREPANCIES.

12. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE AND ALL UNSUITABLE EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ALL GOVERNMENTAL AUTHORITIES HAVING JURISDICTION OVER THIS PROJECT.

13. THE CONTRACTOR IS RESPONSIBLE FOR ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PRECAUTIONS TO BE TAKEN TO ASSURE THE STABILITY OF ADJACENT AND CONTIGUOUS STRUCTURES.

14. THE CONTRACTOR IS TO EXERCISE EXTREME CARE WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. WHICH ARE TO REMAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING THE APPROPRIATE MEASURES REQUIRED TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT, ETC. WHICH ARE TO REMAIN, AND TO PROVIDE A SAFE WORK AREA.

15. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO ANY NEW OR EXISTING CONSTRUCTION OR PROPERTY DURING THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REPLACE ALL SIGNAL INTERCONNECTION CABLE, WIRING CONDUITS, AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION. THE REPAIR OF ANY SUCH NEW OR EXISTING CONSTRUCTION OR PROPERTY SHALL RESTORE SUCH CONSTRUCTION OR PROPERTY TO A CONDITION EQUIVALENT TO OR BETTER THAN THE EXISTING CONDITIONS, AND IN CONFORMANCE WITH APPLICABLE CODES. CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL EXISTING DAMAGE AND NOTIFY THE OWNER AND THE CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.

16. ALL CONCRETE SHALL HAVE THE MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT.

17. THE ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION METHODS / MEANS FOR COMPLETION OF THE WORK DEPICTED NEITHER ON THESE PLANS, NOR FOR ANY CONFLICTS/SCOPE REVISIONS WHICH RESULT FROM SAME. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE METHODS/MEANS FOR COMPLETION OF THE WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

18. THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR JOB SITE SAFETY NOR HAS THE ENGINEER OF RECORD BEEN RETAINED FOR SUCH PURPOSES.

19. ALL CONTRACTORS MUST CARRY THE SPECIFIED STATUTORY WORKER'S COMPENSATION INSURANCE, EMPLOYER'S LIABILITY INSURANCE AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE (CGL). ALL CONTRACTORS MUST HAVE THEIR CGL POLICIES ENDORSED TO NAME THOMAS ENGINEERING GROUP, AND ITS SUB-CONSULTANTS AS ADDITIONAL NAMED INSURERS AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUFFICIENT TO INSURE THIS HOLD HARMLESS AND INDEMNITY OBLIGATIONS ASSUMED BY THE CONTRACTORS. ALL CONTRACTORS MUST FURNISH THOMAS ENGINEERING GROUP WITH CERTIFICATIONS OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE PRIOR TO COMMENCING WORK AND UPON RENEWAL OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION. IN ADDITION, ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS THOMAS ENGINEERING GROUP AND ITS SUB-CONSULTANTS FROM AND AGAINST ANY DAMAGES, LIABILITIES OR COSTS, INCLUDING REASONABLE ATTORNEYS' FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTORS.

20. THOMAS ENGINEERING GROUP WILL REVIEW AND APPROVE OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH THE DESIGN INTENT AND THE INFORMATION SHOWN IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONSTRUCTION MEANS AND/OR METHODS, COORDINATION OF THE WORK WITH OTHER TRADES, AND CONSTRUCTION SAFETY PRECAUTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THOMAS ENGINEERING GROUP'S SHOP DRAWING REVIEW WILL BE CONDUCTED WITH REASONABLE PROMPTNESS WHILE ALLOWING SUFFICIENT TIME TO PERMIT ADEQUATE REVIEW. REVIEW OF A SPECIFIC ITEM SHALL NOT INDICATE THAT THOMAS ENGINEERING GROUP HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. THOMAS ENGINEERING GROUP WILL NOT BE RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS NOT BROUGHT TO ITS ATTENTION, IN WRITING, BY THE CONTRACTOR. THOMAS ENGINEERING GROUP WILL NOT BE REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.

21. NEITHER THE PROFESSIONAL ACTIVITIES OF THOMAS ENGINEERING GROUP, NOR THE PRESENCE OF THOMAS ENGINEERING GROUP OR ITS EMPLOYEES AND SUB-CONSULTANTS AT A CONSTRUCTION / PROJECT SITE, SHALL RELIEVE THE GENERAL CONTRACTOR OF ITS OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. THOMAS ENGINEERING GROUP AND ITS PERSONNEL HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY HEALTH OR SAFETY PROGRAMS OR PROCEDURES. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY. THOMAS ENGINEERING GROUP SHALL BE INDEMNIFIED BY THE GENERAL CONTRACTOR AND SHALL BE NAMED AN ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR'S POLICIES OF GENERAL LIABILITY INSURANCE.

22. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED HEREIN, WITHOUT FIRST OBTAINING THE PRIOR WRITTEN AUTHORIZATION OF THE ENGINEER FOR SUCH DEVIATIONS, CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PAYMENT OF ALL COSTS INCURRED IN CORRECTING ANY WORK DONE WHICH DEVIATES FROM THE PLANS, ALL FINES AND/OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ALL SUCH COSTS RELATED TO SAME.

23. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND PROTECTION OF TRAFFIC PLAN FOR ALL WORK THAT AFFECTS PUBLIC TRAVEL EITHER IN THE R.O.W. OR ON SITE. THE COST FOR THIS ITEM SHOULD BE INCLUDED IN THE CONTRACTOR'S PRICE.

24. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED THEREON, WITHOUT FIRST OBTAINING PRIOR WRITTEN AUTHORIZATION FOR SUCH DEVIATIONS FROM THE OWNER AND ENGINEER, IT SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL COSTS TO CORRECT ANY WORK DONE, ALL FINES OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ALL SUCH COSTS TO CORRECT ANY SUCH WORK AND FROM ALL SUCH FINES AND PENALTIES, COMPENSATION AND PUNITIVE DAMAGES AND COSTS OF ANY NATURE RESULTING THEREFROM.

25. CONTRACTOR SHALL CONFIRM ADA ACCESSIBILITY PRIOR TO INSTALLING FINISHING COURSES OF SIDEWALKS AND PARKING AREAS.

26. UPON THE RECEIPT OF THE "NOTICE TO PROCEED", THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AND ARRANGE A RECONSTRUCTION CONFERENCE TO INCLUDE ALL INVOLVED GOVERNMENTAL AGENCIES, UTILITY OWNERS, THE OWNER AND THE ENGINEER OF RECORD.

27. ALL UTILITY EASEMENTS TO BE SECURED PRIOR TO CONSTRUCTION (IF REQUIRED) PRIOR TO CERTIFICATE OF OCCUPANCY. (THESE EASEMENTS SHALL BE SKETCHED, DESCRIBED, AND RECORDED AT THE SOLE COST OF THE CONTRACTOR).

28. CONTRACTOR SHALL PROVIDE MINIMUM 48 HOUR NOTICE TO ENGINEER AND APPLICABLE AGENCIES FOR SCHEDULING INSPECTIONS.

29. PRIOR TO THEIR CONSTRUCTION OR INSTALLATION, SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER OF RECORD AND CITY OF MARGATE FOR THE FOLLOWING: DRAINAGE PIPES, CATCH BASINS, FIRE HYDRANTS, VALVES, AND ALL REQUIRED ACCESSORIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL OTHER AGENCY APPROVALS IF REQUIRED.

30. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES AND ELECTRICITY.

31. MAINTENANCE OF TRAFFIC IN THE PUBLIC RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH M.U.T.C.D. AND APPROVED BY TOWN OF DAVIE AND BROWARD COUNTY WHERE APPLICABLE PRIOR TO IMPLEMENTATION.

32. ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAYS OR WALKWAYS SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.

33. NO TRENCHES OR HOLES NEAR WALKWAYS, IN ROADWAYS OR THEIR SHOULDERS ARE THE BE LEFT OPEN DURING NIGHTTIME HOURS WITHOUT EXPRESS PERMISSION FROM THE CITY OF WESTON.

34. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR FOR ANY NECESSARY CONSTRUCTION, PAVEMENT MARKING AND SIGNAGE OR ANY PEDESTRIAN SIGNALIZATION AND/OR SIGNAL MODIFICATION TO ACCOMMODATE AN ALTERNATE SAFE WALK ROUTE. ALL RESTORED TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE GOVERNING AGENCY'S TRAFFIC ENGINEERING STANDARDS.

SANITARY SEWER NOTES:

A. GENERAL:
1. DISTANCE AND LENGTHS SHOWN ON PLANS REFERENCE THE CENTER OF STRUCTURES.

B. MATERIALS:
1. ALL PVC SEWER PIPE AND FITTINGS SHALL BE NON-PRESSURE POLYVINYL CHLORIDE (PVC) PIPE CONFORMING TO ASTM D 3034, SDR 26, WITH PUSH-ON RUBBER GASKET JOINTS. (24" SHALL BE DR-25)
2. DUCTILE IRON PIPE (DIP) SHALL BE CEMENT OR POLYLINED INSIDE AND SHALL HAVE A COAL TAR EPOXY COATING, MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C151/A21.51-86 OR LATEST REVISION, MINIMUM WALL THICKNESS CLASS 52 (4"-12") & CLASS 51 (14"-20") (UNLESS OTHERWISE SPECIFIED).
3. ALL FITTINGS AND ACCESSORIES SHALL BE AS MANUFACTURED OR SUPPLIED BY THE PIPE MANUFACTURER OR APPROVED EQUAL.

C. INSTALLATION:
1. PIPE AND FITTINGS:
   a. SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, AND THE UNI-BELL PLASTICS PIPE ASSOCIATION'S 'RECOMMENDED PRACTICE FOR THE INSTALLATION OF PVC SEWER PIPE".
   b. D.I.P. SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600-93 OR LATEST REVISION.
   c. BEDDING AND INITIAL BACKFILL (12 INCHES) OVER SEWER MAINS AND SERVICES SHALL BE SAND WITH NO ROCK LARGER THAN 1" IN DIAMETER. PEA ROCK OR 3/4 " WASHED ROCK WILL BE USED IN WATER OR WHERE UNSUITABLE BEDDING EXISTS AT THE DISCRETION OF BROWARD COUNTY. ALL OTHER FILL SHALL NOT HAVE ROCK LARGER THAN 6" IN DIAMETER.

3. SERVICE:
   a. MINIMUM SLOPE OF ALL SERVICE LINES SHALL BE AS INDICATED IN THE FLORIDA BUILDING CODE.
   b. SERVICE LATERALS SHALL TERMINATE AT A DEPTH 30" BELOW FINISHED GRADE OR AS INDICATED ON PLUMBING PLAN.
   c. EACH SERVICE CONNECTION SHALL BE PLUGGED WATER-TIGHT WITH AN APPROVED PLUG.
   d. THE END OF EACH SERVICE CONNECTION SHALL BE MARKED WITH A 2"x4" TREATED STAKE PAINTED RED, EXTENDING 18"(MIN) ABOVE GRADE.
   e. CONTRACTOR SHALL ROUGH IN RISER TO 1 FOOT ABOVE FINISHED GRADE AND PLUG. AT PROJECT COMPLETION, CUT BACK TO FINISHED GRADE.
   f. CONNECTION OF SERVICES TO BUILDING'S PLUMBING SHALL BE COORDINATED WITH THE CITY'S BUILDING AND ZONING DEPARTMENT, PLUMBING SECTION.

D. TESTING:
1. AFTER CONSTRUCTION OF THE SEWER SYSTEM, THE ENGINEER MAY REQUIRE A VISUAL INFILTRATION AND/OR EXFILTRATION TEST TO BE PERFORMED ON THE ENTIRE SYSTEM OR ANY PART THEREOF.
2. AN AIR TEST MAY BE SUBSTITUTED FOR THE WATER EXFILTRATION TEST, UPON APPROVAL OF THE ENGINEER.
3. MANHOLE LEAKAGE TEST SHALL NOT EXCEED FOUR GALLONS PER DAY PER UNIT. NO VISIBILE LEAKAGE ALLOWED.
4. SEWER PIPE LEAKAGE ALLOWABLE SHALL NOT EXCEED 150 GALLONS PER DAY PER INCH DIAMETER PER MILE IN ATWO HOUR TEST PERIOD FOR ANY SECTION TESTED. NO VISIBLE LEAKAGE SHALL BE ALLOWED AND ALL LINES SHALL BE T.V. INSPECTED.
5. SANITARY SEWER SHALL BE TELEVISED AND LAMPED AT DEVELOPER'S EXPENSE, PRIOR TO FINAL ACCEPTANCE. OWNER / CONTRACTOR IS RESPONSIBLE FOR CORRECTING ANY DEFICIENCIES PRIOR TO CERTIFICATION TO ANY AGENCY.
6. VISIBLE INFILTRATION LEAKAGE INTO MANHOLES AND SEWER PIPE SHALL NOT BE PERMITTED.

WATER DISTRIBUTION AND/OR SANITARY SEWER FORCE MAIN SYSTEM

A. GENERAL:
1. NO CONNECTIONS TO THE EXISTING LINES SHALL BE MADE UNTIL PRESSURE TESTS, FOR THE WATER AND SEWER FORCE MAINS, AND BACTERIOLOGICAL TESTS HAVE BEEN PERFORMED AND THE SYSTEM IS ACCEPTABLE TO THE CITY OF MARGATE UTILITIES DEPARTMENT AND THE CITY OF MARGATE WATER & SEWER DEPARTMENT.
2. BEDDING AND INITIAL BACKFILL FOR MAINS SHALL BE SAND WITH NO ROCKS LARGER THAN 1" IN DIAMETER
3. USE "DETECTO' TAPE ON ALL PVC MAINS (18" ABOVE), AND USE "NON-DETECTO" TAPE ON ALL D.I.P. MAINS (18" ABOVE).
4. A THREE (3) FOOT HORIZONTAL SEPARATION IS REQUIRED BETWEEN WATER MAINS AND OBSTRUCTIONS (I.E. CATCH BASINS, POWER POLES, ETC.). FIVE (5) FOOT OF SEPARATION IS REQUIRED BETWEEN WATER MAINS AND TREES.

B. MATERIALS:
1. DUCTILE IRON PIPE (DIP) SHALL BE CLASS 52 UP TO 12" SIZE & CLASS 51 FOR 14" AND LARGER WITH INTERIOR CEMENT LINING AND BITUMINOUS COATED OUTSIDE, WATER MAIN & EPOXY LINED & COATED FORCE MAIN MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C151/A21.51-91 OR LATEST REVISION. THE PIPE SHALL WITHSTAND A WORKING PRESSURE OF 350 PSI. THE JOINTS SHALL BE BELL AND SPIGOT PUSH-ON TYPE UNLESS OTHERWISE NOTED ON THE PLANS.
2. ALL PVC MAINS SHALL BE SERIES 1120, CLASS 150 (DR 18) PRESSURE PIPE CONFORMING TO ANSI/AWWA C900-89 OR LATEST REVISION, AND SHALL HAVE PUSH-ON JOINTS, AND IRON PIPE O.D. (PVC ON-SITE ONLY)
3. FITTINGS FOR MAINS 4" AND LARGER SHALL BE DUCTILE IRON MECHANICAL JOINT CONFORMING TO ANSI/AWWA C110/A21.10-93 OR LATEST REVISION, COMPLETE WITH GLANDS, GASKETS, BOLTS AND NUTS. ALL FITTINGS SHALL BE CEMENT LINED AND SEAL COATED WITH THE SAME MATERIALS AS THE PIPE & USE MEGALUG SERIES 1100 RESTRAINED JOINT ADAPTERS.
4. VALVES SHALL BE GATE VALVES, IRON BODY, FULLY RESILIENT SEAT BRONZED MOUNTED NON-RISING STEM, RATED AT 200 PSI AND CONFORMING TO ANSI/AWWA C509-87 OR LATEST REVISION, AND SHALL HAVE MECHANICAL JOINTS.
   a. GATE VALVES 4" AND LARGER SHALL BE MUELLER A-2360-20, RESILIENT SEATED GATE VALVES SHALL BE AMERICAN 500/2500 LINE OR CLOW F-6100, CONFORMING TO ANSI/AWWA C509-87.
   b. TAPPING VALVES SHALL BE MUELLER H667 OR APPROVED EQUAL..
   c. GATE VALVES 3" OR LESS SHALL BE NIBCO T-133 OR T-136 WITH MALLEABLE HAND WHEELS. NO SUBSTITUTIONS ALLOWED.
5. TAPPING SLEEVES SHALL BE MUELLER H615 OR APPROVED EQUAL PER BROWARD COUNTY.
6. VALVE BOXES SHALL BE TYLER/UNION 461-S OR APPROVED EQUAL PER BROWARD COUNTY.
7. RETAINER GLANDS SHALL CONFORM TO ANSI/AWWA C111/A21.11-90 OR LATEST REVISION. ALL GLANDS SHALL BE MANUFACTURED FROM DUCTILE IRON AS LISTED BY UNDERWRITERS LABORATORIES FOR 250 PSI MINIMUM WATER PRESSURE RATING. CLOW CORPORATION MODEL F-1058 OR STANDARD FIRE PROTECTION EQUIPMENT COMPANY OR APPROVED EQUAL.
8. DRESSER COUPLINGS SHALL BE REGULAR BLACK COUPLINGS WITH PLAIN GASKETS FOR GALVANIZED STEEL PIPE. THEY SHALL BE DRESSER STYLE 90. NO SUBSTITUTIONS ALLOWED.
9. FIRE HYDRANTS SHALL HAVE A 5 1/4 " MAIN VALVE OPENING. PUMPER NOZZLE TO BE 18" FROM FINISH GRADE. ALL HYDRANTS TO BE INSTALLED WITH ANCHORING TEE AND CONTROL VALVE. FIRE HYDRANT SHALL COMPLY WITH ANSI/AWWA C502-85 (OR LATEST REVISION). HYDRANTS SHALL BE KENNEDY GUARDIAN K-81-4 OR APPROVED EQUAL. BLUE REFLECTIVE PAVEMENT MARKER REQUIRED IN CENTER OF NEAREST DRIVING LANE FOR FIRE HYDRANTS.

C. SERVICE CONNECTION:
1. CORPORATION STOPS SHALL BE MANUFACTURED OF BRASS ALLOY IN ACCORDANCE WITH ASTM B-62 WITH THREADED ENDS, AS MANUFACTURED BY MUELLER OR APPROVED EQUAL.
2. CURB STOPS SHALL BE MUELLER OR APPROVED EQUAL.
3. METER STOPS SHALL BE 90° LOCK WING TYPE AND SHALL BE OF BRONZE CONSTRUCTION IN ACCORDANCE WITH ASTM B-62. METER STOPS SHALL BE CLOSED BOTTOM DESIGN AND RESILIENT "0" RING SEALED AGAINST EXTERNAL LEAKAGE AT THE TOP. STOPS SHALL BE EQUIPPED WITH A METER COUPLING NUT ON THE OUTLET SIDES, AS MANUFACTURED BY MUELLER OR APPROVED EQUAL.
4. SERVICE PIPING SHALL BE TYPE 'K' DRAWN COPPER.

D. INSTALLATION:
1. GENERAL:
CONNECTION OF ALL NEW SYSTEMS TO EXISTING MAINS SHALL BE DONE BY USING ONE OF THE FOLLOWING METHODS:
   a. METHOD A PER BROWARD COUNTY PUBLIC HEALTH UNIT STANDARDS, WHICH INVOLVES A REDUCED SIZE TEMPORARY CONNECTION BETWEEN THE EXISTING MAIN AND THE NEW ONE.
   b. METHOD B PER BROWARD COUNTY PUBLIC HEALTH UNIT STANDARDS, WHICH INVOLVES A DIRECT CONNECTION BETWEEN THE NEW AND EXISTING MAINS USING TWO GATE VALVES SEPARATED BY A SLEEVE WITH A VENT PIPE.
   c. METHOD C APPROVED BY BROWARD COUNTY PUBLIC HEALTH UNIT, WHICH INVOLVES A TAP WITH ONE GATE VALVE REQUIRING DISINFECTION OF THE NEW SYSTEM PRIOR TO CONDUCTING THE PRESSURE TEST.

2.BEDDING:

BEDDING AND INITIAL BACKFILL (12 INCHES ABOVE PIPE) FOR All PIPE SHALL BE SAND WITH NO ROCK LARGER THAN 1" IN DIAMETER. PEA ROCK OR 3/4 " WASHED ROCK WILL BE USED IN WATER OR WHERE UNSUITABLE BEDDING EXISTS AT THE DISCRETION OF BROWARD COUNTY. ALL OTHER FILL SHALL NOT HAVE ROCK LARGER THAN 6" IN DIAMETER.

3. PVC PIPE:
   a. PVC PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE UNI-BELL PLASTIC PIPE ASSOCIATION'S GUIDE FOR INSTALLATION OF PVC PRESSURE PIPE FOR MUNICIPAL WATER DISTRIBUTION SYSTEMS.
   b. PVC PIPE SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER
   c. DETECTOR TAPE SHALL BE INSTALLED THE FULL LENGTH OF ALL PVC MAINS APPROXIMATELY 18" ABOVE THE PIPE, COLOR SIDE UP.
   d. ALL WATER MAIN PIPE, INCLUDING FITTINGS SHALL BE COLOR CODED OR MARKED USING BLUE AS A PREDOMINANT COLOR TO DIFFERENTIATE DRINKING WATER FROM RECLAIMED OR OTHER WATER, IN ACCORDANCE WITH F.A.C. 62-555.320(21) (B) (3).

4. DUCTILE PIPE:
   a. D.I.P. SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600-99 OR LATEST REVISION.
   b. D.I.P. SHALL BE INSTALLED WITH A MINIMUM OF 30" COVER.
   c. "NON-DETECTOR" TAPE SHALL BE INSTALLED THE FULL LENGTH OF ALL D.I.P. MAINS APPROXIMATELY 18" ABOVE THE MAIN COLOR SIDE UP

5. VALVES:
   a. ALL VALVES SHALL BE INSTALLED WITH ADJUSTABLE CAST IRON VALVE BOXES WITH THE WORD "WATER" OR "SEWER" CAST IN THE COVER. A BRASS DISK INDICATING, SIZE, TYPE, KIND & OPERATOR INSTRUCTIONS SHALL BE INSTALLED ADJACENT TO VALVE BOX.
   b. MAIN VALVES SHALL BE LOCATED ON AN EXTENSION OF THE RIGHT-OF-WAY LINE UNLESS DIMENSIONED OTHERWISE.
   c. MAIN VALVES SHALL BE INSTALLED AWAY FROM PARKING AREAS. IF THIS IS UNAVOIDABLE, PROPER MEASURES SHALL BE TAKEN TO AVOID THE PARKING OF VEHICLES OVER THE VALVES. HYDRANT VALVES SHALL BE INSTALLED AS CLOSE TO THE MAIN AS POSSIBLE. VALVES LOCATED IN NON-PAVED AREAS OR IN PARKING STALLS REQUIRE A REFLECTIVE PAVEMENT MARKER ON THE CENTER OF THE NEAREST LANE OF ROAD PAVEMENT. WHITE REFLECTORS FOR THE WATER MAIN VALVES, GREEN REFLECTORS FOR FORCE MAIN VALVES. d.THE DISTANCE FROM THE TOP OF THE VALVE ACTUATOR NUT TO FINAL GRADE SHALL BE A MINIMUM OF 12 INCHES AND A MAXIMUM OF 18 INCHES.

6.SERVICE:
   a. COVER OVER SERVICE LINES SHALL BE 18" MINIMUM, 36" MAXIMUM BELOW FINISHED GRADE AND 36" UNDER PAVEMENT.
   b. SERVICES UP TO 2" SHALL BE TYPE "K" COPPER PER BROWARD COUNTY.
   c. METER STOPS SHALL HAVE 8" TO 10" COVER AS REQUIRED FOR PROPER METER/BOX INSTALLATION.
   d. WATER SERVICES UNDER PAVEMENT SHALL BE ENCASED IN A SCHEDULE 80 PVC SLEEVE FOR THE FULL LENGTH OF THE PAVEMENT AND FOR 2' BEYOND THE EDGE. SLEEVE DIAMETER SHALL BE TWICE THE DIAMETER OF THE SERVICE PIPE.
   e. THE END OF EACH SERVICE CONNECTION SHALL BE MARKED WITH A 2"x4" TREATED STAKE, PAINTED BLUE EXTENDING 18" (MINIMUM) ABOVE GRADE UNLESS INDICATED OTHERWISE.

E. TESTING
1. BEFORE ANY PHYSICAL CONNECTIONS TO THE EXISTING WATER MAINS ARE MADE, THE COMPLETE WATER SYSTEM SHALL BE PRESSURE TESTED AND DISINFECTED.HYDROSTATIC TESTING OF NEW MAINS SHALL BE PERFORMED AT A MINIMUM STARTING PRESSURE OF 150 PSI FOR TWO HOURS IN ACCORDANCE WITH ANSI/AWWA C600-05 OR LATEST REVISION, THE PRESSURE TEST SHALL NOT VARY MORE THAN ±5 P.S.I. DURING THE TEST.
2. THE PRESSURE TEST SHALL BE WITNESSED BY A REPRESENTATIVE OF CITY OF MARGATE AND THE ENGINEER OF RECORD.
3. BEFORE ACCEPTANCE FOR OPERATION, THE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH THE ANSI/AWWA C651-05; 150 PSI MINIMUM STARTING TEST PRESSURE, WITH BACTERIOLOGICAL SAMPLES APPROVED BY THE BROWARD COUNTY PUBLIC HEALTH DEPARTMENT.
4. SAMPLING POINTS SHALL BE PROVIDED AT THE LOCATIONS SHOWN ON THE PLANS.IF NOT SPECIFIED, SAMPLING POINTS SHALL BE PROVIDED AT INTERVALS OF 1200' MAXIMUM FOR LINES GREATER THAN 1200' IN LENGTH.PROVIDE A MINIMUM OF TWO SAMPLING POINTS FOR ALL OTHER TEST SEGMENTS. SAMPLE POINTS MUST BE APPROVED BY BROWARD COUNTY PUBLIC HEALTH DEPARTMENT.
5. THE ALLOWABLE LEAKAGE SHALL BE LESS THAN THE NUMBER OF GALLONS PER HOUR AS DETERMINED BY THE FORMULA:

$$L = \frac{S\,D\,P^{0.5}}{148000}$$

IN WHICH:
L EQUALS THE ALLOWABLE LEAKAGE IN GALLONS PER HOUR.
S EQUALS LENGTH OF PIPE (LINEAR FEET),
D EQUALS NOMINAL DIAMETER OF PIPE (INCHES) AND
P EQUALS THE MINIMUM TEST PRESSURE (POUNDS PER SQUARE INCH).

SEPARATION OF WATER AND SEWER MAINS

A. SANITARY SEWERS, STORM SEWERS, AND FORCE MAINS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWERS, STORM SEWERS, AND FORCE MAINS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHENEVER POSSIBLE.

WHERE SANITARY SEWERS, STORM SEWERS, OR FORCE MAINS MUST CROSS A WATER MAIN WITH LESS THAN 18 INCHES VERTICAL DISTANCE, BOTH THE SEWER AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE

(DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.

ALL CROSSING SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING).

WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN 18 INCHES VERTICAL CLEARANCE, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP, AND THE CROSSING SHALL BE ARRANGED TO MEET THE REQUIREMENTS ABOVE.

B. A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.

WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 18 INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SANITARY SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).

C. ALL DIP SHALL BE CLASS 50 OR HIGHER. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY THE ENGINEER.

STORM DRAINAGE:

A. GENERAL:
1. CATCH BASIN GRATES AND RIM ELEVATIONS AS SHOWN ON PLANS SHALL BE ADJUSTED TO CONFORM TO NEW OR EXISTING GRADES.
2. DISTANCES AND LENGTHS SHOWN ON PLANS REFERENCE THE CENTER OF STRUCTURES.

B. MATERIALS:
1. ALL HIGH DENSITY POLYETHYLENE PIPE AND FITTINGS SHALL MEET THE REQUIREMENTS OF AASHTO M - 294 LATEST REVISIONS. ALL PIPING TO BE NON-PERFORATED TUBING.
2. ALL YARD DRAIN BASINS ARE TO BE HIGH DENSITY POLYETHYLENE PRODUCT AND SHALL MEET ASTM LATEST MINIMUM STANDARDS.
3. ALL DRAINAGE CATCH BASINS AND STRUCTURES SHALL BE PRECAST CONCRETE AND SHALL MEET THE REQUIREMENTS OF A.S.T.M. SPECIFICATION C-478 AND 64T UNLESS OTHERWISE NOTED IN THE PLANS. BLOCK CATCH BASINS WILL BE ALLOWED ONLY WITH APPROVAL OF THE ENGINEER. THE MINIMUM WALL AND SLAB THICKNESS SHALL BE 8 INCHES AND THE MINIMUM REINFORCING SHALL BE NO. 4 BARS AT 12 INCHES EACH WAY UNLESS OTHERWISE INDICATED. CONCRETE SHALL BE MINIMUM OF fc=3750 PSI AT 28 DAYS.

C. INSTALLATION
1. PIPE SHALL BE PLACED ON A MINIMUM OF 8" STABLE GRANULAR MATERIAL FREE OF ROCK FORMATION AND OTHER FOREIGN FORMATIONS, AND CONSTRUCTED TO A UNIFORM GRADE AND LINE.
2. BACKFILL MATERIAL SHALL BE WELL GRADED GRANULAR MATERIAL, WELL TAMPED IN LAYERS NOT TO EXCEED 6 INCHES TO A HEIGHT OF 12 INCHES ABOVE PIPE AS SHOWN ON THE PLANS
3. PROVIDE A MINIMUM PROTECTIVE COVER OF 18 INCHES OVER STORM SEWER AND AVOID UNNECESSARY CROSSING BY HEAVY CONSTRUCTION VEHICLES DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL NOTIFY BROWARD COUNTY ENGINEERING DEPARTMENT/ FDOT AND THE ENGINEER OF RECORD AT LEAST 7 DAYS PRIOR TO THE START OF THE CONSTRUCTION AND INSPECTION.

PAVING:

A. GENERAL:
1. ALL UNDERGROUND UTILITIES SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF LIMEROCK BASE.
2. ALL EXISTING PAVEMENT, CUT OR DAMAGED BY CONSTRUCTION SHALL BE PROPERLY RESTORED AT THE CONTRACTOR'S EXPENSE.
3. WHERE ANY PROPOSED PAVEMENT IS TO BE CONNECTED TO EXISTING PAVEMENT, THE EXISTING EDGE OF PAVEMENT SHALL BE SAW CUT TO ENSURE A PROPER JOINT.

B. MATERIALS:
1. LIMEROCK BASE: (ASPHALT,VEHICULAR PAVERS AREAS) LIME ROCK BASE COURSE MATERIAL FOR PAVED AREAS SHALL BE A MINIMUM 8" THICKNESS AND COMPACTED TO 98% MAXIMUM DRY DENSITY PER AASHTO T-180 (LBR 100). OTHER SUBSTITUTES SHALL BE PER FDOT SPECIFICATIONS AND PROVIDE EQUIVALENT STRUCTURAL NUMBER AS ABOVE (MIN LBR 100).
2. WEARING SURFACE (ASPHALT SURFACE ONLY) INSTALLATION OF 2 1/2" BITUMINOUS CONCRETE WHICH SHALL CONFORM WITH THE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
3. REINFORCED CONCRETE SLABS SHALL BE CONSTRUCTED OF CLASS I CONCRETE WITH A MINIMUM STRENGTH OF 3,000 PSI AND SHALL BE REINFORCED WITH A 6" x 6" NO. 6 GAUGE WIRE MESH, UNLESS NOTED OTHERWISE.

C. INSTALLATION:
1. SUB-BASE 12" STABILIZED SUB-BASE COMPACTED TO 98% OF MAX. DRY DENSITY PER AASHTO T-180 (MIN LBR 40).
2. BASE COURSE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
3. INSTALLATION OF THE WEARING SURFACE SHALL CONFORM WITH THE REQUIREMENTS OF THE D.O.T. STANDARD SPECIFICATIONS FOR TYPE SP 9.5 ASPHALTIC CONCRETE LATEST REVISION.

D. TESTING
1. THE FINISHED SURFACE OF THE BASE COURSE AND THAT OF THE WEARING SURFACE SHALL NOT VARY MORE THAN 1/4" FROM THE TEMPLATE. ANY IRREGULARITIES EXCEEDING THIS LIMIT SHALL BE CORRECTED.
2. DENSITY TESTS SHALL BE TAKEN BY AN INDEPENDENT TESTING LABORATORY CERTIFIED BY THE STATE OF FLORIDA, WHERE DIRECTED BY THE ENGINEER.
3. ALL TESTING COSTS (PAVING) SHALL BE PAID FOR BY THE CONTRACTOR.
4. DENSITY TESTS ON THE STABILIZED SUBGRADE SHALL BE SUPPLIED TO THE ENGINEER OF RECORD AND BROWARD COUNTY, AND APPROVED BEFORE ANY BASE IS CONSTRUCTED.
5. DENSITY TESTS AND "AS-BUILTS" ON THE FINISHED BASE SHALL BE SUPPLIED TO BROWARD COUNTY, AND APPROVED BEFORE ANY ASPHALT PAVEMENT IS CONSTRUCTED.

PAVEMENT MARKING & SIGNAGE:

A. ALL PAVEMENT MARKINGS AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) FOR STREETS AND HIGHWAYS," LATEST EDITION; AND BROWARD COUNTY ENGINEERING STANDARDS.

POLLUTION PREVENTION:

1. THE CONTRACTOR SHALL CONTINUOUSLY ENSURE THAT THE PERIMETER OF THE SITE, INCLUDING CONSTRUCTION ENTRANCES, IS SECURED FROM ALLOWING DEBRIS TO LEAVE THE SITE DUE TO CONSTRUCTION ACTIVITY OR RAINFALL EVENTS. A WEEKLY LOG SHALL BE UPDATED AND KEPT ON-SITE IN ACCORDANCE WITH THE NPDES PERMIT. BY BIDDING DOCUMENTS CONTRACTOR ACKNOWLEDGES HE/SHE IS AWARE OF NPDES GUIDELINES AND POLICIES AS WELL AS BEST MANAGEMENT PRACTICES AND ASSUMES SOLE RESPONSIBILITY FOR FINES IMPOSED BY GOVERMENTAL AGENCIES DUE TO VIOLATIONS.

PROJECT RECORD DOCUMENTS:

A. DURING THE DAILY PROGRESS OF THE JOB, THE CONTRACTOR SHALL RECORD ON HIS SET OF CONSTRUCTION DRAWINGS THE EXACT LOCATION, LENGTH AND ELEVATION OF ANY FACILITY NOT BUILT EXACTLY ACCORDING TO PLANS.

B. UPON COMPLETION OF DRAINAGE IMPROVEMENTS AND BASE CONSTRUCTION (AND BEFORE PLACING ASPHALT PAVEMENT) THE CONTRACTOR SHALL FURNISH THE ENGINEER OF RECORD "AS-BUILT" PLANS FOR THESE IMPROVEMENTS,SHOWING THE LOCATIONS AND APPLICABLE GRADES OF ALL DRAINAGE INSTALLATIONS AND THE FINISHED ROCK GRADES OF THE ROAD CROWN OR INVERT AND EDGES OF PAVEMENT AT 50 FOOT INTERVALS, INCLUDING LOCATIONS AND ELEVATIONS OF ALL HIGH AND LOW POINTS.

C. UPON COMPLETION OF CONSTRUCTION, AND PRIOR TO FINAL PAYMENT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER OF RECORD ONE COMPLETE SET OF ALL "AS-BUILT" CONTRACT DRAWINGS. THESE DRAWINGS SHALL BE MARKED TO SHOW "AS-BUILT" CONSTRUCTION CHANGES AND DIMENSIONS, LOCATIONS, AND ELEVATIONS OF ALL IMPROVEMENTS IN A FORMAT APPROVED BY BROWARD COUNTY PUBLIC UTILITIES / ENGINEERING DEPARTMENT.

D. "AS-BUILT" INFORMATION OF GRAVITY SEWERS MUST CONTAIN LOCATION OF SERVICE LATERALS. STATIONING OF BOTH THE WYE, CLEAN-OUTS, AND THE SERVICE END MUST ALSO BE INCLUDED.

E. "AS-BUILT" INFORMATION OF WATER DISTRIBUTION SYSTEMS MUST CONTAIN LOCATIONS OF ALL VALVES, FITTINGS, FIRE HYDRANTS, SERVICES AND APPURTENANCES. TOP OF PIPE ELEVATIONS ALONG THE WATER MAIN ARE REQUIRED AT INTERVALS OF 100 FEET (MAXIMUM).

F. ALL "AS-BUILT" INFORMATION ON ELEVATIONS SHALL BE CERTIFIED BY A FLORIDA PROFESSIONAL SURVEYOR & MAPPER

G. "AS-BUILTS" OF WATER LINES SHALL INCLUDE THE FOLLOWING INFORMATION:
1. TOP OF PIPE ELEVATIONS EVERY 100 LF.
2. LOCATIONS AND ELEVATIONS OF ALL FITTINGS INCLUDING BENDS, TEES, GATE VALVES, DOUBLE DETECTOR CHECK VALVES, FIRE HYDRANTS, ETC.
3. ALL TIE INS TO EXISTING LINES SHALL BE "AS-BUILT".
4. THE ENDS OF ALL WATER SERVICES AT THE BUILDINGS OR HOMES SHALL BE "AS-BUILT" OR WHERE THE WATER SERVICE TERMINATES.

H. "AS-BUILTS" OF ALL GRAVITY SANITARY SEWER LINES SHALL INCLUDE THE FOLLOWING INFORMATION:
1. RIMS, INVERTS AND LENGTH OF PIPING BETWEEN STRUCTURES AS WELL AS SLOPES.
2. THE STUB ENDS OF ALL SEWER LATERALS SHALL BE LOCATED, AND IF THERE ARE ANY CLEANOUTS INSTALLED ON THE SEWER LATERALS, THEN THE INVERT ELEVATION OF THESE CLEANOUTS NEED TO BE OBTAINED.
3. LIFT STATION "AS-BUILTS" SHALL CONSIST OF:
   A. TOP OF WET WELL ELEVATION
   B. INVERT ELEVATION OF THE INCOMING LINE
   C. BOTTOM OF THE WET WELL
   C. "AS-BUILTS" OF THE COMPOUND AREA.

I. FORCE MAIN "AS-BUILTS" SHALL BE PREPARED THE SAME AS THE WATER LINE "AS-BUILTS".

J. "AS-BUILTS" OF ALL DRAINAGE LINES SHALL INCLUDE THE FOLLOWING INFORMATION:
1. RIMS, INVERTS AND LENGTH OF PIPING BETWEEN STRUCTURES AND WEIR ELEVATIONS IF APPLICABLE.
2. THE SIZE OF THE PIPING SHALL BE VERIFIED BY THE SURVEY CREW AT THE TIME OF "AS-BUILT".
3. DRAINAGE WELL STRUCTURE "AS-BUILTS" SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP OF CASING ELEVATION, TOP AND BOTTOM ELEVATIONS OF THE BAFFLE WALLS, RIM ELEVATIONS AND INVERTS OF PIPING.

K. ALL ROCK "AS-BUILTS" FOR PARKING LOT AREAS SHALL CONSIST OF THE FOLLOWING:
1. ROCK ELEVATIONS AT ALL HIGH AND LOW POINTS, AND AT ENOUGH INTERMEDIATE POINTS TO CONFIRM SLOPE CONSISTENCY.
2. ROCK "AS-BUILTS" SHALL BE TAKEN AT ALL LOCATIONS WHERE THERE IS A FINISH GRADE ELEVATION SHOWN ON THE DESIGN PLANS.
3. ALL CATCH BASIN AND MANHOLE RIM ELEVATIONS SHALL BE SHOWN.
4. ELEVATIONS AROUND ISLAND AREAS WILL ALSO BE REQUIRED.
5. WHERE CONCRETE IS TO BE USED AS A FINISHED PRODUCT FOR THE ROADWAY OR PARKING LOT ROCK "AS-BUILTS" WILL BE REQUIRED AS INDICTED ABOVE, AS WELL AS "AS-BUILTS" ON THE FINISHED CONCRETE AT LOCATIONS WHERE THERE IS A FINISH GRADE ELEVATION SHOWN ON THE DESIGN PLANS.
6. "AS-BUILTS" SHALL BE TAKEN ON ALL PAVED AND UNPAVED SWALES, PRIOR TO PLACEMENT OF ASPHALT OR TOPSOIL/SOD, AT ENOUGH INTERMEDIATE POINTS TO CONFIRM SLOPE CONSISTENCY AND CONFORMANCE TO THE PLAN DETAILS.

L. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PREPARE RECORD DRAWINGS, "AS-BUILTS", ON FULL SIZE, 24" X 36" REPRODUCIBLE MATERIAL. WHERE WATER AND SEWER INFORMATION ARE ON THE SAME PAGE THE WATER LINE SHALL BE "AS-BUILT" BY STATION AND OFFSET UTILIZING THE SANITARY SEWER SYSTEM AS THE BASE LINE. IF IT IS NOT PRACTICAL TO UTILIZE THE SEWER SYSTEM AS A BASE LINE THEN THE SURVEYOR SHALL CONTACT THE ENGINEER OF RECORD SO THAT A SUBSTITUTE BASELINE MAY BE CHOSEN. ALL RECORD DRAWING, "AS-BUILT", INFORMATION SHALL BE PUT ON THE LATEST ENGINEERING DRAWINGS. ONE (1) SET OF REPRODUCIBLE RECORD DRAWINGS, "AS-BUILTS", SHALL BE SUBMITTED ALONG WITH EIGHT (8) SETS OF BLACKLINE AND ONE (1) MYLAR DRAWINGS . THESE DRAWINGS SHALL BE SIGNED AND SEALED BY A FLORIDA REGISTERED PROFESSIONAL LAND SURVEYOR. ADDITIONALLY, TWO (2) ELECTRONIC COPY OF THESE RECORD DRAWINGS, "AS-BUILTS", SHALL BE SUBMITTED TO THE ENGINEER OF RECORD ON A CD IN AUTOCAD, VERSION 2007 OR LATER.

PROJECT CLOSEOUT:

A. CLEANING UP:
1. DURING CONSTRUCTION, THE PROJECT SITE AND ALL ADJACENT AREAS SHALL BE MAINTAINED IN A NEAT AND CLEAN MANNER, AND UPON FINAL CLEAN-UP, THE PROJECT SITE SHALL BE LEFT CLEAR OF ALL SURPLUS MATERIAL OR TRASH. THE PAVED AREAS SHALL BE SWEPT BROOM CLEAN.
2. THE CONTRACTOR SHALL RESTORE OR REPLACE, WHEN AND AS DIRECTED, ANY PUBLIC OR PRIVATE PROPERTY DAMAGED BY HIS WORK, EQUIPMENT, OR EMPLOYEES, TO A CONDITION AT LEAST EQUAL TO THAT EXISTING IMMEDIATELY PRIOR TO THE BEGINNING OF OPERATIONS. TO THAT END, THE CONTRACTOR SHALL DO, AS REQUIRED, ALL NECESSARY HIGHWAY, DRIVEWAY, WALK AND LANDSCAPING WORK. SUITABLE MATERIALS AND METHODS SHALL BE USED FOR SUCH RESTORATION.
3. WHERE MATERIAL OR DEBRIS HAS WASHED OR FLOWED INTO OR HAS BEEN PLACED IN WATER COURSES, DITCHES, DRAINS, CATCH BASINS, OR ELSEWHERE AS A RESULT OF THE CONTRACTOR'S OPERATIONS, SUCH MATERIAL OR DEBRIS SHALL BE REMOVED AND SATISFACTORILY DISPOSED OF DURING THE PROGRESS OF THE WORK, AND THE AREA KEPT IN A CLEAN AND NEAT CONDITION.

B. ALL PROPERTY MONUMENTS OR PERMANENT REFERENCES, REMOVED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED BY A STATE OF FLORIDA REGISTERED LAND SURVEYOR AND MAPPER AT THE CONTRACTOR'S EXPENSE.

C. ALL PAVED & UNPAVED SURFACES DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED BEFORE THE CONSTRUCTION.

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PROJECT:

5485 WEST ATLANTIC BOULEVARD

FOR

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MARGATE, FL

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