

**LOCATION MAP**  
N.T.S.



**LEGEND:**

- PROPERTY LINE
- SECTION IDENTIFIER  
PLAN PAGE    DETAIL PAGE
- PROPOSED ELEVATION
- DIRECTION OF FLOW
- EXISTING ELEVATION
- PROPOSED GEORGE BUSH BLVD ELEVATIONS - BY OTHERS
- DENOTES AREA OF PROPOSED CONCRETE PAVING
- DENOTES AREA OF PROPOSED PERVIOUS CONCRETE
- DENOTES AREA OF PROPOSED ASPHALT PAVING
- PROPOSED CATCH BASIN
- DENOTES 12" PERF HDPE PIPE IN 8' WIDE X 4' DEEP ROCK TRENCH (BOTTOM EL = 8.5)
- |        |                       |
|--------|-----------------------|
| NYLO-1 | STRUCTURE TYPE-NUMBER |
| 6.00   | RIM ELEVATION         |
| 3.50   | INVERT ELEVATION      |
- NYLO NYLOPLAST YARD DRAIN OR APPROVED EQUAL
- IL INLINE YARD DRAIN
- HDPE HIGH-DENSITY POLYETHYLENE PIPE
- PROPOSED WATER METER
- PROPOSED WATER METER WITH BACKFLOW PREVENTER
- SINGLE SANITARY SERVICE WITH CLEANER GATE VALVE
- EXISTING GATE VALVE
- EXISTING MANHOLE
- SANITARY SEWER CLEANOUT
- EXISTING MANHOLE RIM ELEVATION
- INV EL & DIRECTION
- INV EL & DIRECTION

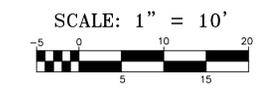
**NOTE: CONTRACTOR TO FIELD VERIFY EXACT LOCATION, SIZE, AND ELEVATION OF ALL IMPROVEMENTS AT TIME OF CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENVIRODESIGN ASSOCIATES, INC.**

**"NOT FOR CONSTRUCTION"**

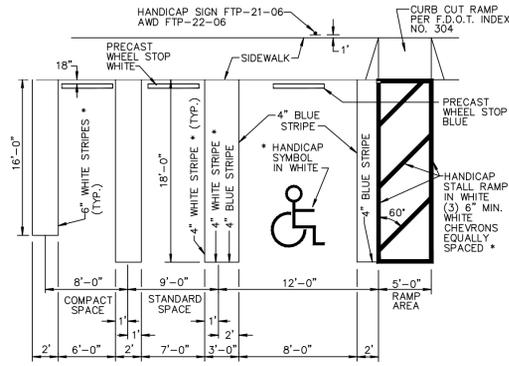
BY: BAB	REVISIONS:	DATE: 7/31/20	NO. $\Delta$
NOT VALID WITHOUT ENGINEER'S SEAL			
JOSEPH A. PIKE, P.E. FL REG # 42696			
<b>CIVIL SITE IMPROVEMENTS PLAN FOR:</b>			
<b>THE GEORGE</b>			
<b>655 GEORGE BUSH BLVD</b>			
<b>DELRAY BEACH, FLORIDA</b>			
<b>ENGINEERS • ENVIRONMENTAL CONSULTANTS</b>			
EnviroDesign Associates, Inc. FLORIDA CERTIFICATE OF AUTHORIZATION No. 6506 298 Pineapple Grove Way Delray Beach, Florida 33444 Phone: (561) 274-8550    Fax: (561) 274-8558			
<b>DRAWN: B.A.B.</b>			
<b>CHECKED: J.A.P.</b>			
<b>DATE: 11/24/20</b>			
<b>JOB NO. 20011-ENG</b>			
<b>SHEET NO. 1 OF 7</b>			



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- NOTES:**
- ON LIGHT COLORED SURFACE I.E. CONCRETE ALL HANDICAP MARKINGS SHALL BE BLUE AND STANDARD PARKING STRIPING SHALL BE 3" WHITE WITH 1" BLACK BORDER.
  - ALL STRIPING WITHIN PUBLIC RIGHT-OF-WAY SHALL BE 6 INCHES.
  - ALL MEASUREMENTS ARE FROM CENTER LINE.
  - ALL COMPACT SPACES MUST HAVE "COMPACT" STENOILED WITH BLACK PAINT ON WHEEL STOP.
  - BLUE STRIPE & H/C SYMBOL AND WALKWAY ON CONCRETE
  - 24" STOP BAR BETWEEN ALL PARKING LOTS AND PUBLIC R/W SHALL BE THERMOPLASTIC AND PER FDOT SPECIFICATIONS AND STOP SIGN R1-1

**PARKING STALL DIMENSIONS:**

STANDARD	9' x 18'
COMPACT	8' x 16'
HANDICAP	12' x 18' PLUS 5' RAMP AREA

**PAVEMENT MARKING SPECIFICATIONS**

All Pavement markings to be installed per these typicals, plans and specifications, and as directed by the City Engineer and shall conform to the requirements of F.D.O.T. and the manual on uniform traffic control devices, (MUTCD).

**PERMANENT MARKINGS**

- Installation:**
- All markings shall be installed by the extruded method.
  - Markings shall be free of weaves, bows, drips, drags, and other degrading items.
  - Chalk shall be used for all layout markings.
- Materials:**
- All materials shall be alkyl or hydrocarbon thermoplastic meeting all FDOT specifications.
- Thickness:**
- All markings shall be installed to yield 90 mils of material measured above the pavement surface.
- Spheres:**
- Reflective glass spheres are to be applied to all stripes and markings per FDOT specifications.
- Alternate Material:**
- STAYMARK marking tape, or equivalent may be used, as approved or directed by the City Engineer.
- Layout:**
- Layout shall be made using marking chalk.
  - It is recommended that marking layout be inspected by the City Engineer prior to the placement of final markings.

**TEMPORARY MARKINGS**

Temporary markings may be used only as specified in this section, or as approved or directed by the City Engineer.

- Final Pavement Surface:**
- Only foil backed marking tape is allowed.
  - All tape shall be totally removed concurrent with permanent marking placement.
- Other Pavement Surfaces:**
- Intermediate pavement surfaces may be marked with FDOT approved materials, designs, and specifications.

PAVEMENT MARKING SPECIFICATIONS RT 8.1a  
(Sheet 1 of 2)

**ALL PAVEMENT MARKINGS**

All paved surfaces shall be properly marked prior to the hours of darkness.

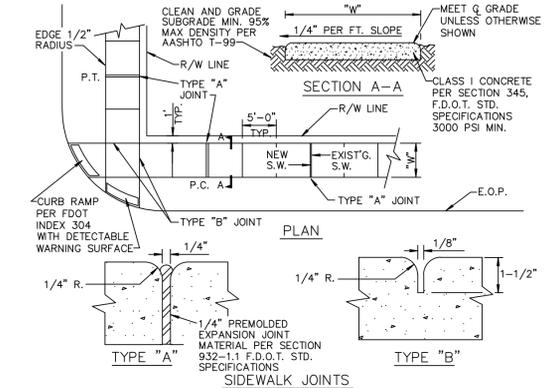
**RAISED PAVEMENT MARKERS**

- R.P.M.s shall be installed on all lane lines and centerlines, spaced at 20' or 40'.
- R.P.M.s shall be a 4 x 4 type class "B" marker meeting F.D.O.T. specifications and shall be approved by the City Engineer prior to use.
- R.P.M.'s shall be installed using alkyl thermoplastic on asphalt and epoxy on concrete.

**OTHER NOTES**

- All Materials within right-of-way shall be thermoplastic and per F.D.O.T. specifications.
- Pavement marking within private parking lots may be painted according to F.D.O.T. specifications, except for all stop bars adjacent to public right-of-way.

PAVEMENT MARKING SPECIFICATIONS RT 8.1b  
(Sheet 2 of 2)



- NOTE:**
- ALL SIDEWALKS SHALL BE CONSTRUCTED THRU DRIVEWAYS.
  - ALL SIDEWALKS SHALL INCLUDE ADA COMPLIANT RAMP @ INTERSECTIONS.
  - ALL SIDEWALKS SHALL INCLUDE CROSS SLOPE AND RUNNING SLOPE IN ACCORDANCE WITH ADA REQUIREMENTS.
  - CURB RAMP DETECTABLE WARNING SURFACE SHALL EXTEND THE FULL WIDTH OF THE RAMP AND 24" DEEP

**TABLE OF SIDEWALK THICKNESS - "T"**

RESIDENTIAL AREAS	4"
WITHIN 10' OF CROSS-STREETS, AT DRIVEWAYS & OTHER AREAS	6", 9" @ E.O.P.

**TABLE OF SIDEWALK WIDTHS - "W"**

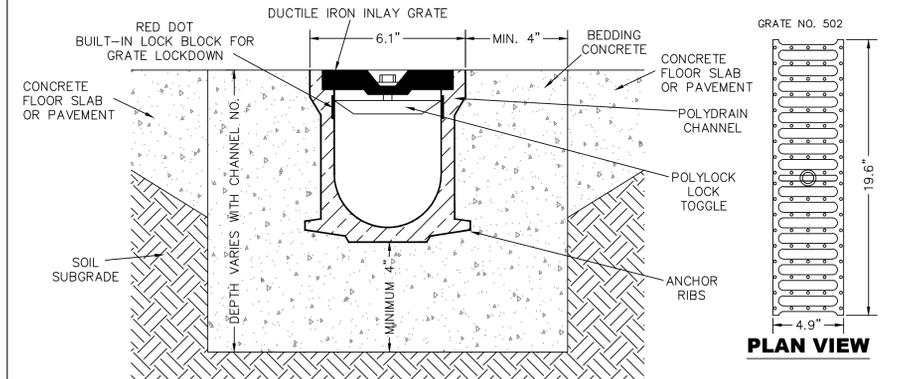
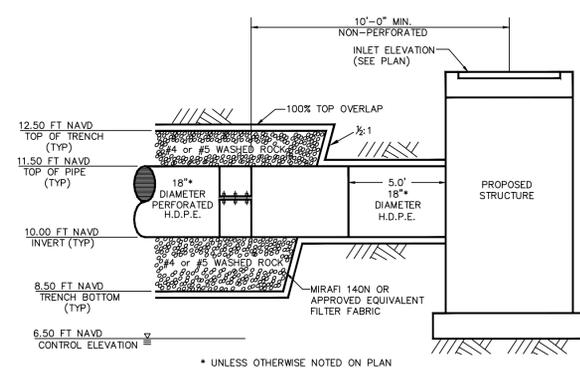
SINGLE-FAMILY AREAS	5'
MULTI-FAMILY AREAS	5'

OTHER AREAS AS SPECIFIED BY THE CITY ENGINEER.

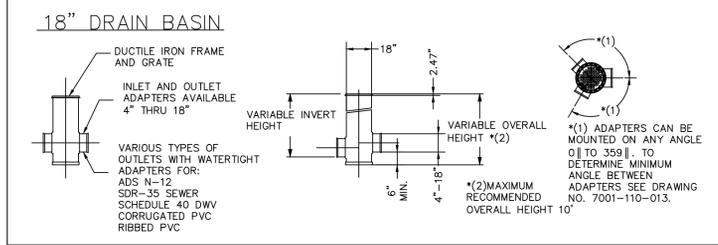
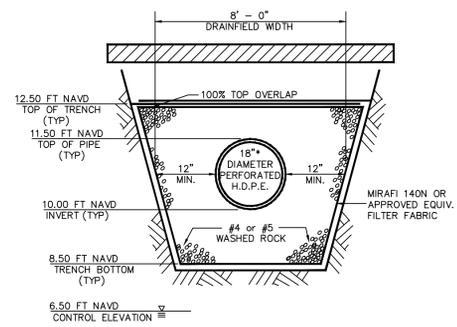
**TABLE OF SIDEWALK JOINTS**

TYPE	LOCATION
"A"	P.C. AND P.T. OF CURVES JUNCTION OF EXISTING & NEW SIDEWALKS & EVERY 30'
"B"	5'-0" CENTER TO CENTER ON SIDEWALKS SCORED DURING PLACEMENT OR SAWCUT WITHIN 24 HOURS OF PLACEMENT.
"A"	WHERE SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAYS, AND SIMILAR STRUCTURES.

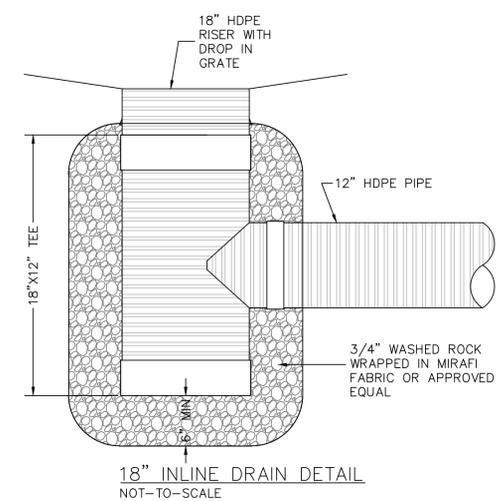
SIDEWALK CONSTRUCTION RT 5.1



ABT, INC. P.O. Box 837/259 Murdock Road/Troutman, N.C. 28166  
800-438-6057 (U.S., Canada and Mexico ) or (704) 528-9806  
Fax: (704) 528-5478



18" DRAIN BASIN  
N.T.S.



**"NOT FOR CONSTRUCTION"**

PAVING & DRAINAGE DETAILS FOR:  
**THE GEORGE**  
655 GEORGE BUSH BLVD  
DELRAY BEACH, FLORIDA

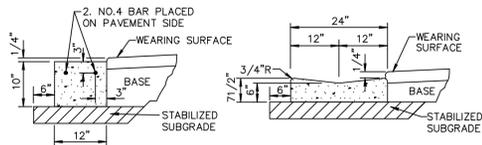
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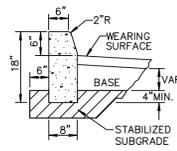
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**CONCRETE  
HEADER CURB**  
NOT TO SCALE

NOTE: SAWCUTS REQUIRED  
AT 10' CENTERS.



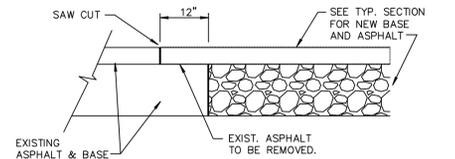
**CONCRETE CURB**  
NOT TO SCALE

NOTE: WHEN USED ON HIGH SIDE OF ROADWAYS,  
CROSS SLOPE OF THE GUTTER SHALL MATCH  
THE CROSS SLOPE OF THE ADJACENT  
PAVEMENT AND THE THICKNESS OF THE  
LIP SHALL BE 6" MIN.

**CONCRETE CURB AND GUTTER**  
NOT TO SCALE

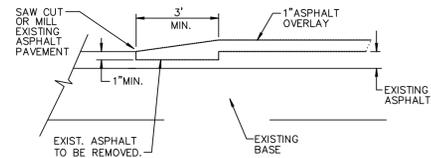
NOTES: 1. ROADWAY SUBGRADE SHALL IN ALL CASES EXTEND BELOW CURBING.  
2. SAWCUTS AT 10' CENTERS SHALL BE MADE WITHIN 24 HOURS  
OF CONCRETE PLACEMENT.

**CURB AND GUTTER SECTIONS RT 6.1**



**NEW CONSTRUCTION PAVEMENT JOINT**

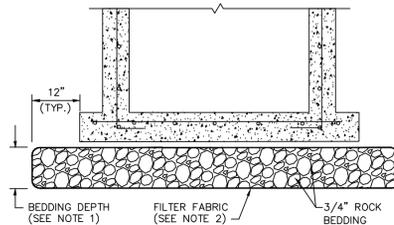
NOTE:  
THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY  
APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT  
AND BASE WILL BE CONNECTED TO EXISTING PAVEMENT AND  
BASE.



**NEW OVERLAY PAVEMENT JOINT**

NOTE:  
THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY  
APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT  
WILL BE CONNECTED TO EXISTING PAVEMENT.

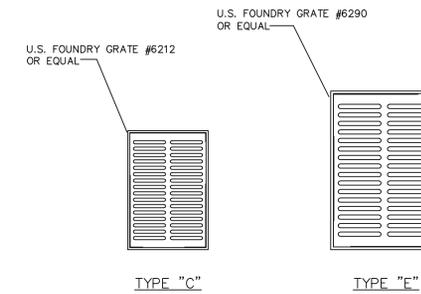
**PAVEMENT JOINT DETAIL RT 7.1**



NOTES:  
1. BEDDING DEPTH SHALL BE 10" UNDER DRAINAGE  
STRUCTURES AND 18" UNDER SANITARY STRUCTURES.  
2. ROCK SHALL BE WRAPPED IN FILTER FABRIC  
THAT MEETS THE REQUIREMENTS OF F.D.O.T.  
SPECIFICATION SECTION 985.

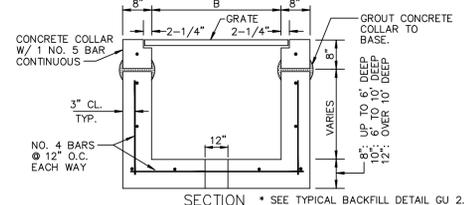
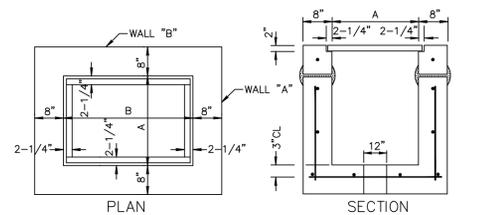
**STANDARD BEDDING D 3.1**

INLET TYPE	DIMENSIONS		GRATE TYPE	MAX. PIPE SIZE	
	A	B		WALL A	WALL B
'C'	2'-0"	3'-1"	U.S. FOUNDRY No. 6212	15" R.C.P.	24" R.C.P.
'E'	3'-0"	4'-5"	U.S. FOUNDRY No. 6290	24" R.C.P.	36" R.C.P.



NOTES:  
1. ALL GRATES SHALL BE SUITABLE  
FOR H-20 LOADING  
(HIGHWAY TRAFFIC LOADS)  
2. WHEN INSTALLED IN PAVEMENT  
OR WITHIN 6' OF PAVEMENT  
USE U.S.F. 4160-6210

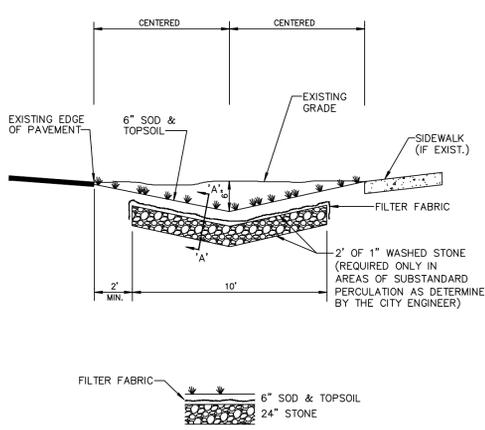
**TYPE C & E INLET GRATE DETAIL D 6.1**



INLET TYPE	DIMENSIONS		GRATE TYPE	MAX. PIPE SIZE	
	A	B		WALL A	WALL B
'C'	2'-0"	3'-1"	U.S. FOUNDRY No. 6212	15" R.C.P.	24" R.C.P.
'E'	3'-0"	4'-6"	U.S. FOUNDRY No. 6290	24" R.C.P.	36" R.C.P.

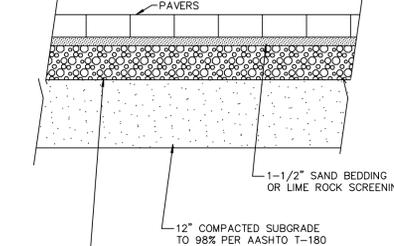
NOTES:  
1. INLET TO BE PRECAST WITH CLASS 'A' 4000 P.S.I. CONCRETE.  
2. ALL EXPOSED CORNERS AND EDGES TO BE CHAMFERED 3/4".  
3. 12" DIA. WEEP HOLE REQUIRED ON ALL STRUCTURES WHICH  
HAVE A BOTTOM ELEVATION ABOVE THE WATER TABLE EXCEPT  
IN WELLFIELDS.  
4. 18" SUMP REQUIRED IN ALL DRAINAGE STRUCTURES.  
5. SEE BEDDING DETAIL D 3.1  
6. ALL STRUCTURES TO BE 4 SIDED ANGLE SHOULDERS.

**TYPE C & E INLET DETAIL D 7.1**



NOTE:  
1. CONTRACTOR TO REPLACE ALL IRRIGATION, TREES & SHRUBBERY  
IN SWALES DAMAGED DURING CONSTRUCTION.

**SWALE REPLACEMENT DETAIL D10.1**



NOTES:  
IF CITY APPROVES PAVERS TO BE USED IN LIEU OF CONC.  
SIDEWALK, PAVES SHALL BE HOLLAND-STONE, 45' HERRING  
BONE, RED/CHARCOAL, COLOR MIX #2.

**PAVER BRICK SECTION  
DETAIL RT 10.1a**

NOT FOR CONSTRUCTION

PAVING & DRAINAGE DETAILS FOR:  
**THE GEORGE**  
655 GEORGE BUSH BLVD  
DELRAY BEACH, FLORIDA

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PAVING, GRADING AND DRAINAGE NOTES

- ALL PAVING AND DRAINAGE WORK IN THE PALM BEACH COUNTY (PBC) RIGHT-OF-WAY SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE PBC LATEST STANDARDS. ALL PAVING AND DRAINAGE WORK IN THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) RIGHT-OF-WAY SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE FDOT LATEST STANDARDS.
- COMPACTED SUBGRADE SHALL BE COMPACTED AND MEET THE DENSITY REQUIREMENTS AS DETERMINED BY THE AASHTO T-180 SPECIFICATIONS. SUBGRADE SHALL EXTEND 12 INCHES BEYOND THE PROPOSED EDGE OF PAVEMENT AND/OR 6" BEYOND VALLEY GUTTER, TYPE "F" CURB & GUTTER, OR TYPE "D" CURB. SUBGRADE SHALL BE 12 INCHES THICK COMPACTED TO 98% ACCORDING TO AASHTO T-180. ALL MUCK, STUMPS, ROOTS OR OTHER DELETERIOUS MATTER ENCOUNTERED IN THE PREPARATION OF THE SUBGRADE SHALL BE REMOVED COMPLETELY FROM THE CENTERLINE OF THE ROADWAY TO A WIDTH OF TEN FEET BEYOND THE EDGE OF PAVEMENT. IF SUBGRADE IS REQUIRED TO BE STABILIZED, THE REQUIRED BEARING VALUE DETERMINATIONS SHALL BE MADE BY THE FLORIDA BEARING TEST, TEST METHOD "C" OF AASHTO T-180 SPECIFICATIONS.
- SHELLROCK BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 250 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE THICKNESS OF THE SHELLROCK BASE SHALL BE AS SHOWN ON THE DETAIL DRAWINGS AND SHALL BE COMPACTED TO A DENSITY OF 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. THE SHELLROCK SHALL HAVE A MINIMUM OF 40% CARBONATES OF CALCIUM AND MAGNESIUM IN THE MATERIAL.
- LIMEROCK BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 200 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE THICKNESS OF THE LIMEROCK BASE SHALL BE AS SHOWN ON THE DETAILED DRAWINGS AND SHALL BE COMPACTED TO A DENSITY OF 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.
- MUCK AND PEAT - IF MUCK AND/OR PEAT ARE ENCOUNTERED IN THE ROAD OR PARKING AREA, THEY WILL BE REMOVED COMPLETELY TO A WIDTH OF TEN FEET BEYOND THE EDGE OF PAVEMENT AND SHALL BE BACKFILLED WITH GRANULAR MATERIAL. IF HAROPAN IS ENCOUNTERED IN THE SWALE AREA, IT WILL BE REMOVED TO A WIDTH OF TWO FEET AT THE SWALE INVERT AND REPLACED WITH GRANULAR MATERIAL.
- WHERE SOD IS DESIRED, LOWER THE GRADE 2 INCHES BELOW THE FINISHED GRADE TO ALLOW FOR THE THICKNESS OF THE SOD.
- CLEARING AND GRUBBING - WITHIN THE LIMITS OF CONSTRUCTION ALL VEGETATION AND ROOT MATERIAL SHALL BE REMOVED.
- GUMBO - WHERE GUMBO OR OTHER PLASTIC CLAYS ARE ENCOUNTERED, THEY SHALL BE REMOVED WITHIN THE ROADWAY AND PARKING AREAS ONE FOOT BELOW THE SUBGRADE EXTENDING HORIZONTALLY TO THE OUTSIDE EDGE OF THE SHOULDER AREA.
- PRIME COAT SHALL BE IN ACCORDANCE WITH SECTION 300 OF THE FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. PRIME COAT SHALL BE RC-70 OR ASPHALT EMULSION PRIME (AEP). PRIME COAT SHALL BE APPLIED AT A RATE OF APPLICATION NOT LESS THAN 0.10 GALLONS PER SQUARE YARD FOR LIMEROCK BASES AND NOT LESS THAN 0.15 GALLONS PER SQUARE YARD FOR SHELL ROCK OR COQUINA SHELL BASES.
- TACK COAT - BITUMINOUS TACK COAT SHALL CONFORM WITH THE REQUIREMENTS OF THE FDOT SPECIFICATIONS, LATEST EDITION AND SHALL BE APPLIED AT THE RATE OF 0.08 GALLONS PER SQUARE YARD, UNLESS A VARIATION IS APPROVED BY THE ENGINEER.
- ASPHALTIC CONCRETE SURFACE COURSE SHALL BE IN ACCORDANCE WITH SECTION 334 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE THICKNESS OF THE SURFACE COURSE SHALL BE AS SHOWN ON THE DETAILED DRAWINGS.
- ALL CONCRETE SHALL DEVELOP 2500 p.s.i. (MINIMUM) 28 DAY COMPRESSIVE STRENGTH OR GREATER WHERE NOTED ON PLANS. CLASS I CONCRETE SHALL CONFORM WITH THE FDOT SPECIFICATIONS, LATEST EDITION. CLASS I CONCRETE USED AS PAVING SHALL DEVELOP 3000 p.s.i. (MINIMUM) 28 DAYS COMPRESSIVE STRENGTH.
- PAVEMENT TRAFFIC STRIPES AND MARKINGS SHALL BE IN ACCORDANCE WITH CITY OF DELRAY BEACH CURRENT STANDARDS AND/OR MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND/OR PALM BEACH COUNTY TRAFFIC DEPARTMENT TYPICAL T-P-17, WHERE APPLICABLE.
- SEQUENCE OF CONSTRUCTION - THE SEQUENCE OF CONSTRUCTION SHALL BE SUCH THAT ALL UNDERGROUND INSTALLATIONS OF EVERY KIND THAT ARE BENEATH THE PAVEMENT, SHALL BE IN PLACE AND HAVE PROPER DENSITY PRIOR TO THE CONSTRUCTION AND COMPACTION OF THE SUBGRADE.
- INLETS AND MANHOLES - ALL INLETS AND MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FDOT SPECIFICATIONS, LATEST EDITION, AND ROADWAY AND TRAFFIC DESIGN STANDARDS, LATEST EDITION, AND PBC STANDARDS LATEST EDITION, WHERE APPLICABLE.
- GRATE ELEVATIONS REFER TO THE FLOWLINE OF THE GRATE.
- GRADES SHOWN ARE FINISHED GRADES.
- MINIMUM ROAD CROWN ELEVATION SHALL BE EL. 13.25' N.A.V.D.
- REINFORCED CONCRETE PIPE - THE PIPE SHALL CONFORM WITH THE REQUIREMENTS OF CLASS III OF ASTM C-76 AND WITH THE FDOT SPECIFICATIONS, LATEST EDITION. THE FIRST JOINT OF PIPE ENTERING OR LEAVING A MANHOLE OR INLET SHALL BE WRAPPED WITH FILTER FABRIC PER FDOT SPECIFICATIONS.
- CORRUGATED ALUMINUM PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M196 AND SECTIONS 125, 430 AND 943 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
- MEASUREMENT OF THE LENGTH OF PIPE SHALL BE FROM THE CENTER OF THE STRUCTURE TO THE CENTER OF THE STRUCTURE.
- PIPE BACKFILL - REQUIREMENTS FOR PIPE BACKFILL CROSSING ROADS OR PARKING AREAS SHALL BE DEFINED IN THE FDOT SPECIFICATIONS, LATEST EDITION. PIPELINE BACKFILL SHALL BE PLACED IN SIX INCH LIFTS AND COMPACTED TO 100% OF THE STANDARD PROCTOR (AASHTO) T-99 SPECIFICATIONS.
- THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THREE (3) CERTIFIED COPIES OF A CHEMICAL AND SIEVE ANALYSIS OF THE SHELL ROCK BY A STATE OF FLORIDA CERTIFIED LAB WHEN CONSTRUCTING A SHELL ROCK BASE FOR ROADWAY.
- PRIOR TO CERTIFICATION OF THE DRAINAGE SYSTEM, THE CONTRACTOR MUST PUMP DOWN AND LAMP THE DRAINAGE SYSTEM FOR INSPECTION BY THE ENGINEER AFTER FINISHED ROCK FOR THE ROADWAYS HAS BEEN INSTALLED.

GENERAL NOTES

- CONTRACTOR SHALL PROTECT ALL PERMANENT REFERENCE MONUMENTS AND TAKE ALL PRECAUTIONS NECESSARY TO AVOID SURVEY MARKERS DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF PERMANENT REFERENCE MONUMENTS DISTURBED DURING CONSTRUCTION, AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UNDERGROUND UTILITIES WHETHER OR NOT SHOWN ON THE PLANS. UTILITIES SHOWN ON THE PLANS ARE FOR REFERENCE ONLY AND MAY NOT DEPICT ACTUAL LOCATIONS. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES FOR LOCATION AND DEPTH OF THEIR LINES PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PAY FOR THE DEENERGIZING OF POWER LINES AND/OR HOLDING POWER POLES DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PAY FOR THE REPLACEMENT OF TRAFFIC LOOPS IF DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
- ALL ELEVATIONS REFER TO N.A.V.D. 1988. MINIMUM FINISHED FLOOR ELEVATION FOR ANY RESIDENTIAL STRUCTURE SHALL BE SET AT OR ABOVE ELEVATION 15.50 (WHICH IS ABOVE THE 100-YEAR FREQUENCY STORM).
- SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION OR INSTALLATION AS REQUIRED BY THE ENGINEER OR BY THE APPROPRIATE GOVERNING AGENCIES.
- CONTRACTOR SHALL BE RESPONSIBLE TO SECURE AND PAY FOR, AT NO ADDITIONAL COST TO THE OWNER, ALL NECESSARY PERMITS, FEES AND LICENSES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR GIVING THE REQUIRED NOTICES AND COMPLYING WITH ALL PERMIT(S) CONDITIONS.
- CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PAY FOR THE HOLDING OF OTHER UTILITY POLES DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
- ALL CONCRETE SHALL DEVELOP 2500 p.s.i. (MINIMUM) 28 DAY COMPRESSIVE STRENGTH OR GREATER WHERE NOTED ON PLANS. CLASS I CONCRETE SHALL CONFORM WITH THE FDOT SPECIFICATIONS, LATEST EDITION. CLASS I CONCRETE USED AS PAVING SHALL DEVELOP 3000 p.s.i. (MINIMUM) 28 DAYS COMPRESSIVE STRENGTH.
- ALL UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL UTILITY.
- ENVIRODESIGN ASSOC. INC. SHALL NOT BE RESPONSIBLE FOR THE SAFETY OF THE WORKERS OR THE GENERAL PUBLIC. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFETY TO THE WORKERS IN ACCORDANCE WITH OCCUPATIONAL SAFETY & HEALTH ADMINISTRATIONS (OSHA) REQUIREMENTS AND THE SAFETY OF THE GENERAL PUBLIC.
- ALL MATERIALS AND WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LOCAL UTILITY STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL CALL SUNSHINE 1-800-432-4770 48 HOURS BEFORE DIGGING FOR FIELD LOCATIONS OF UNDERGROUND UTILITIES.
- CORRUGATED ALUMINUM PIPE USED BENEATH PAVEMENT SHALL BE IN CONFORMANCE WITH SEC. 8.24.E.5.1
- ALL CONSTRUCTION ACTIVITY, INCLUDING TRENCHING, IS TO BE A MINIMUM OF SIX FEET FROM THE BASE OF ANY TREE THAT IS DESIGNATED TO REMAIN.
- ALL LIMEROCK AND BASE MATERIALS SHALL BE REMOVED FROM THE PLANTER AREAS/ISLANDS AND REPLACED WITH APPROPRIATE PLANTING SOIL PRIOR TO THE LANDSCAPING OF THE SITE.
- THE REMOVAL OF ANY TREE ON THE SITE IS PROHIBITED WITHOUT THE REQUIRED PERMITS.
- ALL MATERIALS AND CONSTRUCTION WITHIN THE FDOT RIGHT-OF-WAY SHALL CONFORM TO THE FDOT DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM (LATEST ED.).
- LANE CLOSURES WITHIN THE FDOT RIGHT-OF-WAY SHALL BE LIMITED TO THE HOURS OF 9AM-3PM, MONDAY-FRIDAY EXCLUDING GOVERNMENTAL HOLIDAYS. MAINTENANCE OF TRAFFIC SHALL BE PROVIDED IN ACCORDANCE WITH INDEX 613 OF THE FDOT DESIGN STANDARDS (LATEST ED.)

CITY OF DELRAY BEACH GENERAL NOTES

- DEFINITIONS
- CITY - THE CITY OF DELRAY BEACH
  - CONTRACTOR - UTILITY CONTRACTOR AND ALL UTILITY SUBCONTRACTORS
  - ENGINEER - ENGINEER RESPONSIBLE FOR INSPECTION AND CERTIFICATION
- PROCEDURE
- A PRE-CONSTRUCTION MEETING IS TO BE HELD PRIOR TO DELIVERY OF MATERIALS AND INITIATION OF ANY WATER AND SEWER CONSTRUCTION. THE MEETING SHALL BE ATTENDED BY THE CITY, CONTRACTOR, SUBCONTRACTORS, ENGINEER AND OTHER INTERESTED PARTIES.
  - ANY REVISIONS TO THE APPROVED PLANS MUST BE APPROVED BY THE CITY PRIOR TO THE PRE-CONSTRUCTION MEETING.
  - A MINIMUM OF THREE (3) COPIES OF THE CURRENT APPROVED PRODUCT LIST AND ALL NECESSARY SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO SCHEDULING THE PRE-CONSTRUCTION MEETING. ALL PIPE MANUFACTURERS SHALL SUBMIT THREE (3) COPIES OF AN AFFIDAVIT THAT THE PIPE AND COATINGS WERE MANUFACTURED IN ACCORDANCE WITH AWWA C151/A21.51-91.
  - ALL APPLICABLE PERMITS MUST BE OBTAINED WITH COPIES PROVIDED TO THE CITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
  - THE CONTRACTOR SHALL MAINTAIN A CURRENT APPROVED SET OF CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES.
  - ALL MATERIALS SUPPLIED SHALL CONFORM TO PRODUCT LIST AND SHOP DRAWINGS AS APPROVED BY THE CITY PRIOR TO CONSTRUCTION. ALL REQUESTS FOR MATERIAL SUBSTITUTION SHALL BE APPROVED PRIOR TO DELIVERY OF THESE MATERIALS TO THE JOB SITE.
  - THE LOCATION OF THE EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF OTHER UTILITIES (NOT SHOWN ON THE PLAN) EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE UTILITY CONFLICTS, THE CONTRACTOR SHALL INFORM THE CITY AND NOTIFY THE RESPECTIVE UTILITY OWNER TO RESOLVE THE UTILITY CONFLICTS AND THE UTILITY ADJUSTMENTS AS REQUIRED.
  - THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY, AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS OF ALL OTHER UTILITY FACILITIES.
  - THE CONTRACTOR SHALL SCHEDULE INSPECTIONS AND TESTS WITH THE CITY A MINIMUM OF 24 HOURS IN ADVANCE.
  - CONTRACTOR SHALL NOT DISTURB EXISTING CITY MAINS OR STRUCTURES WITHOUT THE PRESENCE OF A CITY INSPECTOR. CITY UTILITY SYSTEM VALVES AND APPURTENANCES MAY ONLY BE OPERATED BY CITY PERSONNEL.
  - FACILITIES PROPOSED HEREIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS. DEVIATIONS FROM THE APPROVED PLANS MUST BE APPROVED IN ADVANCE BY THE CITY.
  - UPON COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE OF THE WORK, A FINAL INSPECTION SHALL VERIFY PROPER ADHERENCE TO ALL FACETS OF THE PLANS AND SPECIFICATIONS.
  - PAVING, DRAINAGE AND TRAFFIC CONSTRUCTION SHALL CONFORM TO FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND DESIGN STANDARDS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND PALM BEACH COUNTY TYPICAL T-P-17 (LATEST REVISION) UNLESS SHOWN OTHERWISE.
  - AS-BUILT DRAWINGS SHALL BE PREPARED BY A REGISTERED LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, AND SUBMITTED BY THE CONTRACTOR TO THE CITY.
  - PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 553-851 FOR PROTECTION OF UNDERGROUND GAS PIPE LINES.
  - CONTRACTOR SHALL NOTIFY SUNSHINE STATE ONE (1-800-432-4770) 48 HOURS IN ADVANCE OF CONSTRUCTION.
  - GRADES SHOWN ON PLANS ARE FINISHED GRADES. THE CONTRACTOR SHALL BE REQUIRED TO ADJUST EXISTING SANITARY SEWER MANHOLE TOPS AND VALVE BOX COVERS TO FINISHED GRADE.
  - CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES DURING CONSTRUCTION AND SHALL BE REQUIRED TO PROVIDE ALL BARRICADES, LIGHTING, SIGNAGE AND FLAGMEN AS NECESSARY TO PROVIDE FOR THE SAFETY OF THE PUBLIC IN THE WORK AREA. THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC MAINTENANCE PLAN PRIOR TO CONSTRUCTION.
  - EXISTING BASE MATERIAL THAT IS REMOVED DURING CONSTRUCTION SHALL NOT BE USED IN THE CONSTRUCTION OF NEW LIMEROCK BASE.
  - ALL VEGETATION, DEBRIS, CONCRETE OR OTHER UNSUITABLE MATERIAL SHALL BE LEGALLY DISPOSED OF OFF-SITE IN AN AREA AT THE CONTRACTORS EXPENSE.
  - CONTRACTOR SHALL UTILIZE CONSTRUCTION METHODS AND DEVICES, SUCH AS TURBIDITY SCREENS, CURTAINS AND FLOATING SILT BARRIERS WHERE NECESSARY IN ORDER TO COMPLY WITH ALL STATE AND LOCAL WATER QUALITY STANDARDS.
  - ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE CLASS III, UNLESS OTHERWISE NOTED.
  - ALL PAVED SURFACES SHALL BE PROPERLY MARKED PRIOR TO HOURS OF DARKNESS. PERMANENT PAVEMENT MARKING STALLS SHALL BE LAID OUT USING MARKING CHALK. LAYOUT TO BE REVIEWED BY THE CITY PRIOR TO PLACEMENT OF FINAL MARKING.
  - EMBANKMENT (FILL) AND EXCESS MATERIAL REQUIRED FOR ROADWAY RECONSTRUCTION AND UTILITY INSTALLATIONS SHALL BE SUPPLIED AND/OR DISPOSED OF BY THE CONTRACTOR. ALL COSTS ASSOCIATED WITH EARTHWORK REQUIREMENTS TO COMPLETE THE ROADWAY RECONSTRUCTION AND UTILITY IMPROVEMENTS SHALL BE INCLUDED IN THE COSTS OF OTHER APPROPRIATE PAY ITEMS.
  - CONTINUITY OF WATER AND SEWER SERVICE TO CITY UTILITY CUSTOMERS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS PROJECT. IF A BREAK IN SERVICE IS UNAVOIDABLE TO ACCOMMODATE CONNECTION OF NEW FACILITIES, IT SHALL BE SCHEDULED FOR OFF PEAK HOURS WITHIN THE CITY. DETERMINATION OF SERVICE BREAK REQUIREMENT WILL BE MADE BY THE CITY.
  - SITE INFORMATION BASED ON A SURVEY PREPARED BY: PAUL DAVIS SURVEY
  - THE EXTENT OF ROAD CONSTRUCTION WORK TO BE COMPLETED BY THE CONTRACTOR, WITHIN THE RAILROAD RIGHT-OF-WAY SHALL BE DETERMINED BY THE CITY AND COORDINATED WITH THE FLORIDA EAST COAST RAILWAY COMPANY AT THE TIME OF CONSTRUCTION.
  - RELOCATION OF UTILITY POLES AND GAS PIPE LINES SHALL BE COORDINATED BY THE CONTRACTOR WITH FLORIDA POWER AND LIGHT, AND FLORIDA PUBLIC UTILITIES, RESPECTIVELY. EACH UTILITY HAS BEEN NOTIFIED THAT THEY WILL BE REQUIRED TO RELOCATE THEIR UTILITIES.
  - ALL CITY OF DELRAY BEACH STANDARD DETAILS INCLUDED IN THE CIVIL PLANS PREPARED BY ENVIRODESIGN ASSOCIATES, INC. HAVE NOT BEEN MODIFIED FROM THEIR ORIGINAL CONTENT.
  - CONTRACTOR TO FIELD VERIFY EXACT LOCATION, SIZE, AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENVIRODESIGN ASSOCIATES, INC.
  - NO PROPOSED IMPROVEMENTS, BUILDINGS OR ANY KIND OF CONSTRUCTION CAN BE PLACED ON OR WITHIN ANY WATER, SEWER OR DRAINAGE EASEMENTS, UNLESS APPROVED BY THE CITY OF DELRAY BEACH CITY ENGINEER.
  - NO PROPOSED STRUCTURES SHALL BE INSTALLED WITHIN A HORIZONTAL DISTANCE OF 10- FEET FROM ANY EXISTING OR PROPOSED WATER, SEWER OR DRAINAGE FACILITIES, UNLESS APPROVED BY THE CITY OF DELRAY BEACH CITY ENGINEER.
  - NOTE: ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER OR DRAINAGE EASEMENTS, THEY SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS; LD 1.1 & LD 1.2
  - ALL SIDEWALKS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA REQUIREMENTS. ALL SIDEWALKS NOT TO EXCEED 1:48 CROSS-SLOPE AND 1:20 RUNNING SLOPES. ALL RAMPS NOT TO EXCEED 1:48 CROSS-SLOPE AND 1:12 RUNNING SLOPES WITH MAXIMUM RISE AND RUNS PER ADA REQUIREMENTS WITH RAILINGS WHERE NEEDED. LANDINGS WITH 1:48 CROSS- AND RUNNING-SLOPES ARE TO BE PROVIDED AT TOPS AND BOTTOMS OF ALL RAMPS.
  - CITY OF DELRAY BEACH UTILITY DIVISION MUST BE CONTACTED AT LEAST 48 HOURS PRIOR TO ANY SHUTDOWN AND/OR REMOVAL OF EXISTING WATER MAIN OR SANITARY SEWER LINES AT 561-243-7312.
  - THE EXISTING SANITARY SEWER LINE MUST BE TELEVIEWED PRIOR TO AND AFTER ANY SANITARY SEWER SERVICE CONNECTION, REMOVAL AND/OR ABANDONMENT.
  - UPON APPROVAL AND RECEIPT OF PERMIT, THE CONTRACTOR SHALL CONTACT THE CITY OF DELRAY BEACH DEPUTY DIRECTOR OF CONSTRUCTION AT 561-243-7320 TO SCHEDULE A PRECONSTRUCTION MEETING PRIOR TO STARTING ANY SITE WORK.
  - ALL WATER METER SIZES TO BE DETERMINED BY PLUMBING ENGINEERING OF RECORD AND SHALL BE CHECKED AND AUTHORIZED BY CITY OF DELRAY BEACH UTILITIES DIVISION.
  - ALL CITY OF DELRAY BEACH 2016 STANDARD DETAILS INCLUDED IN THIS SET OF PLANS AND DETAILS HAVE NOT BEEN MODIFIED FROM THEIR ORIGINAL CONTENT.

"NOT FOR CONSTRUCTION"

GENERAL NOTES FOR:

THE GEORGE  
655 GEORGE BUSH BLVD  
DELRAY BEACH, FLORIDA


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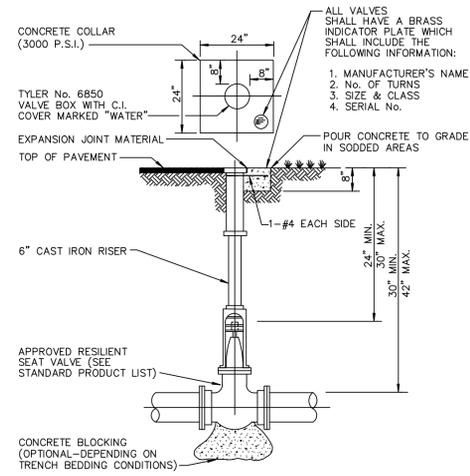
<b>DRAWN:</b> B.A.B.
<b>CHECKED:</b> J.A.P.
<b>DATE:</b> 10/16/20
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<b>SHEET NO.</b> 4 OF 7



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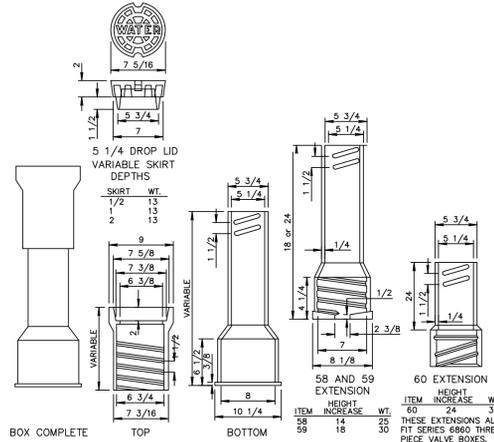
**NOTES:**

1. WHEN VALVE IS DEEPER THAN 30" AN EXTENSION WITH UNIVERSAL JOINT SHALL BE REQUIRED TO BRING OPERATING NUT 24"-30" BELOW FINISHED GRADE. EXTENSION BOLTS & NUTS SHALL BE 316 STAINLESS STEEL. A 316 STAINLESS STEEL CENTERING PLATE SHALL ALSO BE REQUIRED.
2. AT DEAD END OR WHERE MAIN LINES CHANGE DIRECTION, VALVES SHALL BE RESTRAINED USING MECHANICAL JOINT RESTRAINTS, TIEDORS, OR OTHER APPROVED RESTRAINT.

TYPICAL GATE VALVE DETAIL  
4" THRU 12" PW 3.1

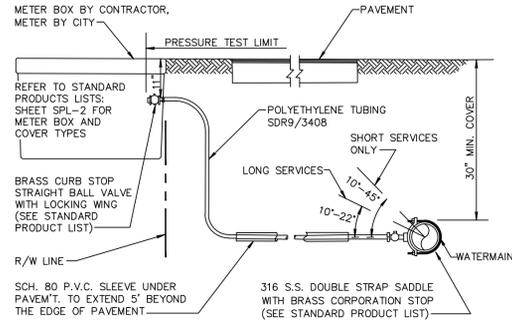
ITEM	BOX COMPLETE EXTENSION IN INCHES	WT.	TOP SECTION W/LID		BOTTOM		PIECES PER PKG.
			LENGTH	WT.	LENGTH	WT.	
441-S	18-22	60	10	35	15	25	..
442-S	27-32	70	10	35	24	35	..
443-S	29-33	80	10	45	24	40	..
563-S	33-43	85	16	45	30	40	20
564-S	39-50	90	16	45	30	40	20
662-S	36-52	100	26	65	30	45	20
664-S	39-60	110	26	65	36	45	20
666-S	51-71	135	26	65	48	70	20
668-S	62-82	145	26	65	60	80	20

\*MAY BE FURNISHED IN TWO PIECES SCREWED TOGETHER TO MAKE THE LENGTH REQUIRED.



NOTE: LOCKING LIDS WILL NOT BE ACCEPTED.

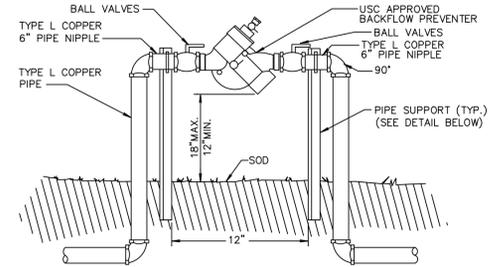
CAST IRON VALVE BOXES, TWO-PIECE PW 3.2



**NOTES:**

1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" ON CENTER.
2. SERVICE LINES SHALL NOT BE PLACED UNDER DRIVEWAYS.
3. ALL METERS REQUIRE A LOCKING BRASS CURB STOP WITH LOCK WING (1" MIN.).
4. NO FITTINGS BETWEEN CORPORATION STOP AND BRANCH ASSEMBLY.
5. MAXIMUM SERVICE LENGTH IS 100' TO METER.
6. CASING PIPE I.D. SHALL BE SERVICE O.D. PLUS 1" MINIMUM.
7. MINIMUM BEND RADIUS ON SERVICES SHALL BE 14" ON ALL SERVICES BEHIND METER.
8. METER SIZE WILL BE DETERMINED BY PUBLIC UTILITIES DEPT. UPON APPLICATION FOR SERVICE.
9. ALL VALVES TO BE BALL VALVES.
10. METER BOX SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR.
11. ALL SERVICES UNDER ROADWAYS ARE TO BE INSTALLED BY TRENCHLESS METHOD, UNLESS OTHERWISE APPROVED.
12. ALL EXISTING SERVICES TO BE FIELD VERIFIED BY BUILDER/CONTRACTOR/DEVELOPER; IF EXISTING SERVICE IS GALVANIZED, BUILDER/CONTRACTOR/DEVELOPER SHALL REPLACE WITH POLYETHYLENE PIPING FROM MAIN TO THE METER.

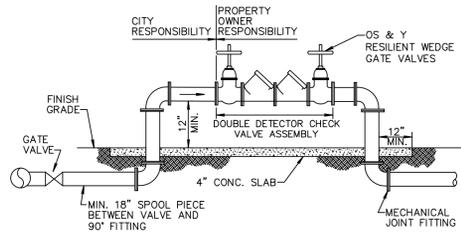
TYPICAL SERVICE CONNECTION PW 9.1a



**NOTES:**

1. FOR ALL SERVICES LESS THAN OR EQUAL TO 2" DIA.
2. ABOVE GRADE PIPING SHALL BE BRASS OR TYPE "L" COPPER TUBING.
3. ALL COPPER JOINTS SHALL BE MADE WITH 95/5 SOLDER.
4. RPZ BACKFLOW PREVENTER IS REQUIRED IN ACCORDANCE WITH CITY OF DELRAY BEACH CODE OF ORDINANCES TITLE V, CHAPTER 52.80.
5. USE OF OTHER PIPE MATERIALS WITH APPROVAL OF DEPUTY DIRECTOR OF UTILITIES.
6. RPZ BACKFLOW PREVENTER IS REQUIRED FOR ALL COMMERCIAL PROPERTIES AND ALL RESIDENTIAL PROPERTIES WITH FIRE SPRINKLER SYSTEMS.

REDUCED PRESSURE ZONE BACKFLOW PREVENTER PW 10.2



**NOTES:**

1. FOR ALL SERVICES GREATER THAN 2" DIA.
2. ALL PIPE AND FITTINGS SHALL BE CLASS 52 DUCTILE IRON CEMENT LINED WITH CEMENT LINED DUCTILE IRON FLANGE FITTINGS FOR ABOVE GROUND USE. MECHANICAL JOINT SHALL BE USED UNDERGROUND IN ACCORDANCE WITH AWWA STANDARDS.
3. THE DOUBLE DETECTOR CHECK VALVE ASSEMBLY SHALL MEET AWWA M14 AND AWWA C511-89, AND APPROVAL OF ENVIRONMENTAL SERVICES DEPARTMENT.
4. CERTIFICATION OF PROPER INSTALLATION AND OPERATION WILL BE REQUIRED FROM A CERTIFIED BACKFLOW PREVENTION TECHNICIAN PRIOR TO WATER MAIN ACCEPTANCE BY THE CITY OF DELRAY BEACH.
5. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE PROPER OPERATION, MAINTENANCE AND TESTING OF THE DOUBLE DETECTOR CHECK VALVE ASSEMBLY.
6. BOLLARDS TO BE USED IF THE ASSEMBLY IS WITHIN 5' OF THE PAVEMENT, REFER TO BOLLARD DETAIL PW 5.2.
7. ALL TWO INCH DOUBLE DETECTOR CHECK VALVE, SHALL BE BRASS OR TYPE "L" COPPER TUBING
8. USE OF OTHER PIPE MATERIALS WITH APPROVAL OF WATER SEWER MANAGER.
9. CITY MAINTAINS UP TO THE FIRST O S & Y VALVE.

DOUBLE DETECTOR CHECK VALVE PW 10.1

"NOT FOR CONSTRUCTION"

WATER & WASTEWATER DETAILS FOR:

THE GEORGE  
655 GEORGE BUSH BLVD  
DELRAY BEACH, FLORIDA

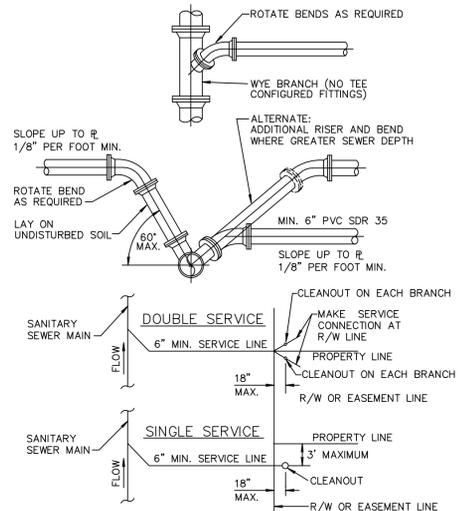

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**SHEET NO.**  
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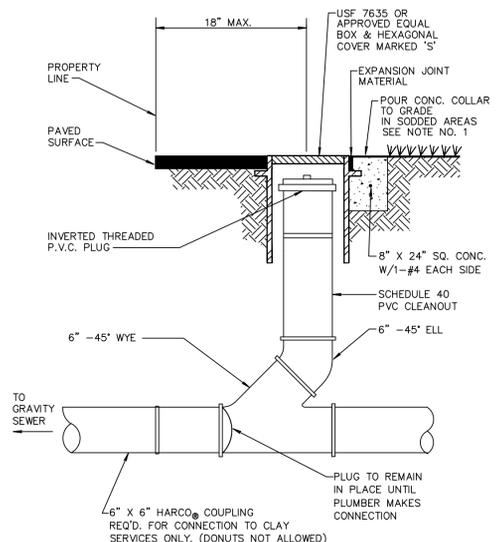
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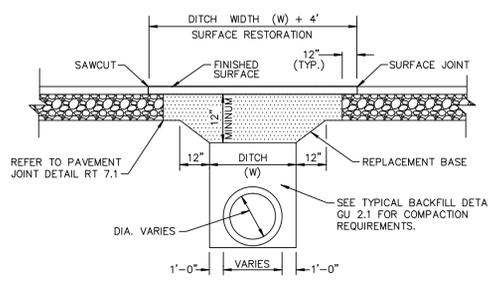
- NOTE:**
- SERVICE LATERALS SHALL TERMINATE INSIDE PROPERTY LINE A DEPTH OF 3 FEET AND MARKED WITH A 2" X 4" TREATED STAKE.
  - CLEANOUT INSTALLATION SHALL BE PROPERTY OWNERS RESPONSIBILITY AND SHALL BE INSTALLED BY LICENSED PLUMBER.
  - SEE DETAIL PW 2.1 FOR SEPARATION REQUIREMENTS.

SEWER SERVICE CONNECTIONS WW 4.1



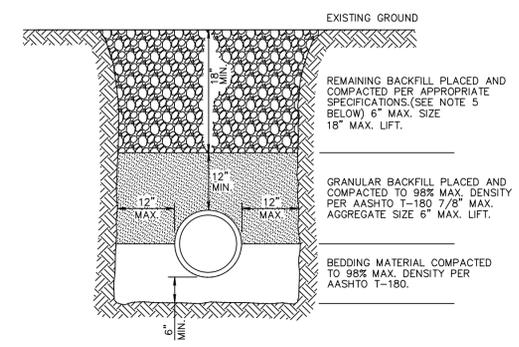
- NOTE:**
- INVERTED BRASS CAP SHALL BE USED IN GRASS AREAS IN LIEU OF CASTING AND CONE COLLAR.
  - MINIMUM DEPTH OF SERVICE LATERAL SHALL BE 3 FEET.

TYPICAL COMMERCIAL CLEANOUT WW 5.2



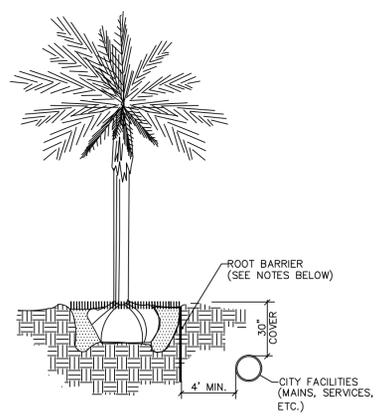
- REPLACEMENT BASE TO BE AT MIN. 12" THICK.
- BASE MATERIAL SHALL BE PLACED IN TWO LIFTS AND EACH LIFT COMPACTED TO 98% MAXIMUM DENSITY PER AASHTO T-180 (MAX. LIFT THICKNESS = 6").
- 12" EXCAVATABLE FLOWABLE FILL MIN. 100 P.S.I. MAY BE USED IN LIEU OF 12" BASE.
- ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWS.
- ALL DISTURBED PAVEMENT MARKINGS SHALL BE RESTORED IN ACCORDANCE WITH CITY STANDARDS.
- SURFACE MATERIAL SHALL BE F.D.O.T. TYPE S-I OR S-III ASPHALTIC CONC. (MIN. THICKNESS 1 1/2").

PAVEMENT REPAIR DETAIL GU 1.1



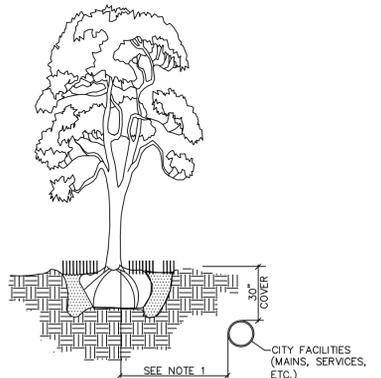
- NOTES:**
- UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGE ROCKS SHALL BE REMOVED; BEDDING MATERIAL AND BACKFILL CONSISTING OF WASHED AND GRADED LIMEROCK 3/8" - 7/8" SIZING.
  - THE PIPE AND/OR STRUCTURE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
  - THE PIPE AND/OR STRUCTURE SHALL BE PLACED IN A DRY TRENCH.
  - BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGE ROCK, MUCK, AND DEBRIS.
  - COMPACT BACKFILL TO 98% DENSITY UNDER PAVEMENT AND TO 95% DENSITY ELSEWHERE (AASHTO T-180)
  - COMPACTION AND DENSITY TESTS SHALL BE COMPLETED DURING BACKFILL OPERATIONS, CONTRACTORS NOT FOLLOWING THIS PROCEDURE, FOR WHATEVER REASONS, SHALL BE REQUIRED TO RE-EXCAVATE THE AREA IN QUESTION, DOWN TO THE BEDDING MATERIAL, THEN BACKFILL FOLLOWING THE ABOVE PROCEDURES.

TYPICAL BACKFILL DETAIL GU 2.1



- NOTES:**
- ALL ROOT BARRIERS SHALL BE 4" MINIMUM FROM ALL CITY FACILITIES.
  - THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH CITY AND INSPECTED BY CITY PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
  - ROOT BARRIERS SHALL BE MINIMUM 36" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT" AND "ROOT SOLUTIONS". FLEXIBLE BARRIERS SHALL BE 36" PANELS MANUFACTURED BY BIOSBARRIER.
  - ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

TYPICAL TREE WITH ROOT BARRIER LD 1.1



- NOTES:**
- THIS DISTANCE SHALL BE 10' MINIMUM FROM ALL CITY FACILITIES IF NO ROOT BARRIER IS USED.

TYPICAL TREE WITHOUT ROOT BARRIER LD 1.2

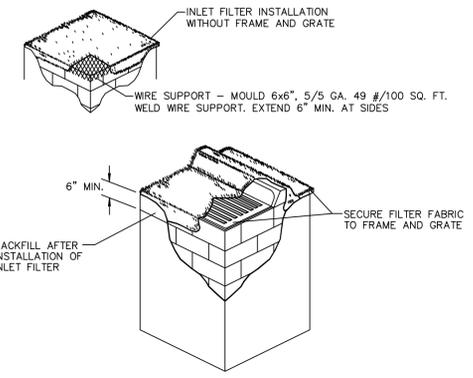
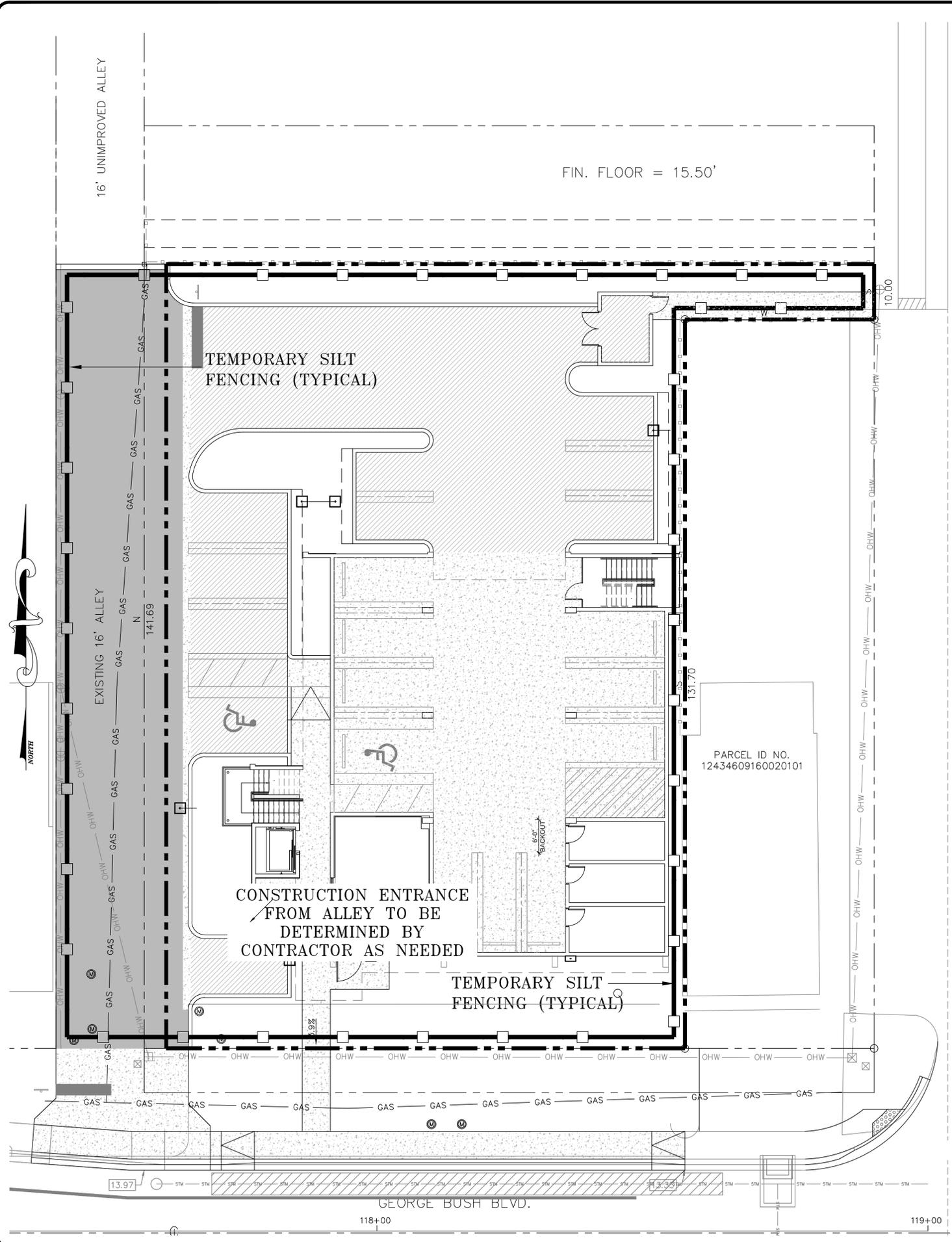
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BY:	
DATE:	
REVISIONS:	
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JOSEPH A. PIKE, P.E. FL REG # 42696	
<b>WATER &amp; WASTEWATER DETAILS FOR:</b>	
<b>THE GEORGE</b>	
<b>655 GEORGE BUSH BLVD</b>	
<b>DELRAY BEACH, FLORIDA</b>	
<b>EnviroDesign Associates Inc.</b> www.envirodesign.com	<b>ENGINEERS • ENVIRONMENTAL CONSULTANTS</b>
FLORIDA CERTIFICATE OF AUTHORIZATION No. 6506 298 Pineapple Grove Way Delray Beach, Florida 33444 Phone: (561) 274-6500 Fax: (561) 274-8558	
<b>DRAWN:</b> B.A.B.	<b>CHECKED:</b> J.A.P.
<b>DATE:</b> 10/16/20	<b>JOB NO.</b> 20011-DTL
<b>SHEET NO.</b> 6 OF 7	



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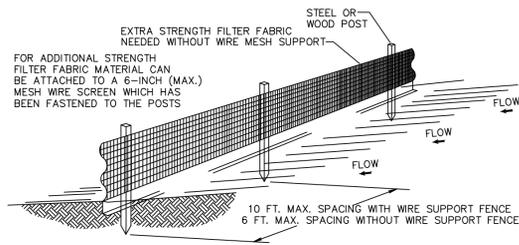
**NOTES:**

1. CONTRACTOR IS TO CLEAN INLET FILTER AFTER EVERY STORM.
2. CONTRACTOR TO REMOVE FABRIC JUST PRIOR TO PAVING.

A SEDIMENT TRAP WILL BE EXCAVATED BEHIND THE CURB AT THE INLET. THE BASIN SHALL BE AT LEAST 12 TO 14 INCHES IN DEPTH, APPROXIMATELY 36 INCHES IN WIDTH, AND APPROXIMATELY 7 TO 10 FEET IN LENGTH PARALLEL TO THE CURB.

STORM WATER WILL REACH THE SEDIMENT TRAP VIA CURB CUTS ADJACENT TO EACH SIDE OF THE INLET STRUCTURE. THESE OPENINGS SHALL BE AT LEAST 12 INCHES IN LENGTH. STORM WATER MAY ALSO REACH THE BASIN VIA OVERLAND FLOW LAND AREA BEHIND THE CURB. THE CURB CUTS SHALL BE REPAIRED WHEN THE SEDIMENT TRAP IS REMOVED.

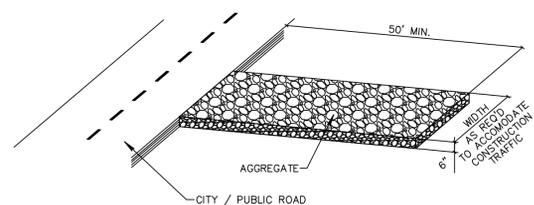
**INLET FILTER DETAIL D 8.1**



**NOTES:**

1. THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES (90 CM).
2. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS.
3. POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET (3 M) APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 12 INCHES (30 CM). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET (1.8 M).
4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES (10 CM) WIDE AND 4 INCHES (10 CM) DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
5. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH (25 MM) LONG, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES (5 CM) AND SHALL NOT EXTEND MORE THAN 36 INCHES (90 CM) ABOVE THE ORIGINAL GROUND SURFACE.
6. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES (20 CM) OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES (90 CM) ABOVE THE ORIGINAL GROUND SURFACE.
7. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
8. ALL PROJECTS REQUIRE SUBMITTAL OF POLLUTION PREVENTION PLAN (PPP).
9. ALL PROJECTS 1 AC. OR MORE MUST SUBMIT NOTICE OF INTENT (NOI) TO FDP.

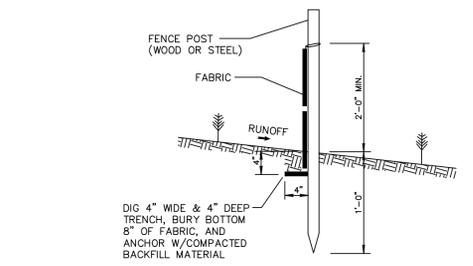
**SILT FENCE INSTALLATION DETAIL D 9.1a**  
Sheet 1 of 2



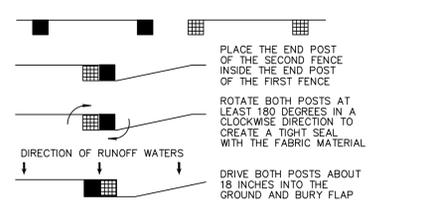
**STABILIZED CONSTRUCTION ENTRANCE DETAIL D9.1C**

1. THE INTENT OF EROSION CONTROL MEASURES INDICATED GRAPHICALLY ON PLANS IS TO PROVIDE A BARRIER TO CONTAIN SILT AND SEDIMENT ON THE PROJECT SITE. THIS REPRESENTATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE TEST OF EROSION CONTROL EFFECTIVENESS IS NOT TO BE DETERMINED BY ADHERENCE TO THE REPRESENTATION SET FORTH ON THE DRAWINGS AND SPECIFICATIONS, BUT BY MEETING THE REGULATIONS SET FORTH BY THE AUTHORITY HAVING JURISDICTION OVER WATER QUALITY CONTROL AND OTHER SEDIMENTATION RESTRICTION REQUIREMENTS IN THE REGION.
2. APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRADING, EXCAVATION, FILLING, OR OTHER LAND DISTURBANCE ACTIVITIES, EXCEPT THOSE OPERATIONS NEEDED TO INSTALL SUCH MEASURES.
3. INSPECTION OF ALL EROSION CONTROL MEASURES SHALL BE CONDUCTED WEEKLY, OR AFTER EACH RAINFALL EVENT, REPAIR, AND/OR REPLACEMENT OF SUCH MEASURES SHALL BE MADE PROMPTLY, AS NEEDED.
4. KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE MEANS.
5. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED IF DEEMED NECESSARY BY ONSITE INSPECTION.
6. FAILURE TO PROPERLY INSTALL AND MAINTAIN EROSION CONTROL PRACTICES SHALL RESULT IN CONSTRUCTION BEING HALTED.
7. DRAINAGE INLETS SHALL BE PROTECTED BY FILTER AND GRADED ROCK AS PER INLET PROTECTION DETAIL.
8. ANY ACCESS ROUTES TO SITE SHALL BE BASED WITH CRUSHED STONE, WHERE PRACTICAL.
9. EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
10. WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED.
11. ALL WORK IS TO BE IN COMPLIANCE WITH THE RULES AND REGULATIONS SET FORTH BY THE STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE CITY OF DELRAY BEACH.
12. DISCHARGE FROM DEWATERING OPERATIONS SHALL BE RETAINED ONSITE IN A CONTAINMENT AREA.

**EROSION CONTROL NOTES DETAIL D9.1**



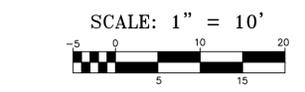
**SILT FENCE SECTION**  
NOT TO SCALE



**ATTACHING TWO SILT FENCES**  
NOT TO SCALE

**SILT FENCE INSTALLATION DETAIL D 9.1b**  
Sheet 2 of 2

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DATE:	7/31/20
REVISIONS:	REVISE PER CITY COMMENTS
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JOSEPH A. PIKE, P.E.	FL REG # 42696

**POLLUTION PREVENTION PLAN FOR:**  
**THE GEORGE**  
**655 GEORGE BUSH BLVD**  
**DELRAY BEACH, FLORIDA**

**EnviroDesign Associates Inc.**  
www.envirodesign.com  
**ENGINEERS • ENVIRONMENTAL CONSULTANTS**  
FLORIDA CERTIFICATE OF AUTHORIZATION No. 6506  
33444  
298 Pineapple Grove Way Delray Beach, Florida 33444  
Phone: (561) 274-6500 Fax: (561) 274-8558

**DRAWN:**  
B.A.B.

**CHECKED:**  
J.A.P.

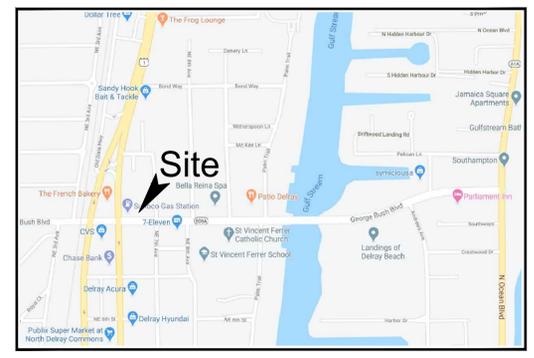
**DATE:**  
11/24/20

**JOB NO.**  
20011-ENG

**SHEET NO.**  
7 OF 7



FIN. FLOOR = 15.50'

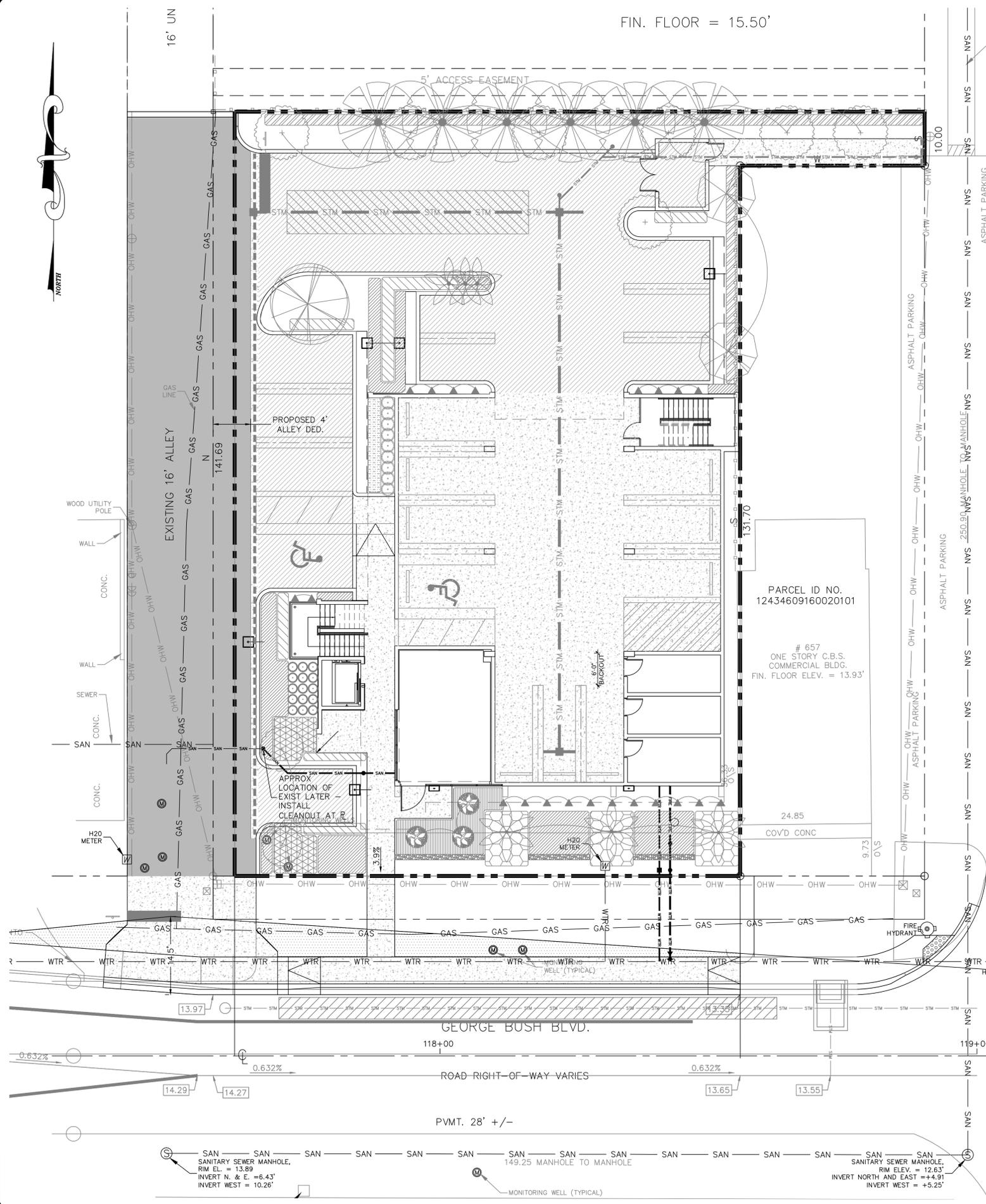


LOCATION MAP  
N.T.S.

LEGEND:

- PROPERTY LINE
- STM --- PROPOSED STORM LINE
- SAN --- PROPOSED SANITARY SEWER LINE
- WTR --- PROPOSED WATER LINE
- EUG --- PROPOSED ELECTRIC UNDERGROUND LINE
- GAS --- PROPOSED GAS LINE
- STM --- EXISTING STORM LINE
- SAN --- EXISTING SANITARY SEWER LINE
- WTR --- EXISTING WATER LINE
- OHW --- EXISTING OVERHEAD LINES
- GAS --- EXISTING GAS LINES

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NOTE: CONTRACTOR TO FIELD VERIFY EXACT LOCATION, SIZE, AND ELEVATION OF ALL IMPROVEMENTS AT TIME OF CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENVIRODESIGN ASSOCIATES, INC.

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SCALE: 1" = 10'  
0 5 10 15 20

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COMPOSITE UTILITY PLAN FOR:  
**THE GEORGE**  
655 GEORGE BUSH BLVD  
DELRAY BEACH, FLORIDA

**EnviroDesign Associates Inc.**  
www.envirodesign.com  
**ENGINEERS • ENVIRONMENTAL CONSULTANTS**  
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Phone: (561) 274-6500 Fax: (561) 274-8558

DRAWN: B.A.B.  
CHECKED: J.A.P.  
DATE: 11/24/20  
JOB NO. 20011-ENG  
SHEET NO. 1 OF 1

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1	7/31/20	REVISE PER CITY COMMENTS	BAB
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