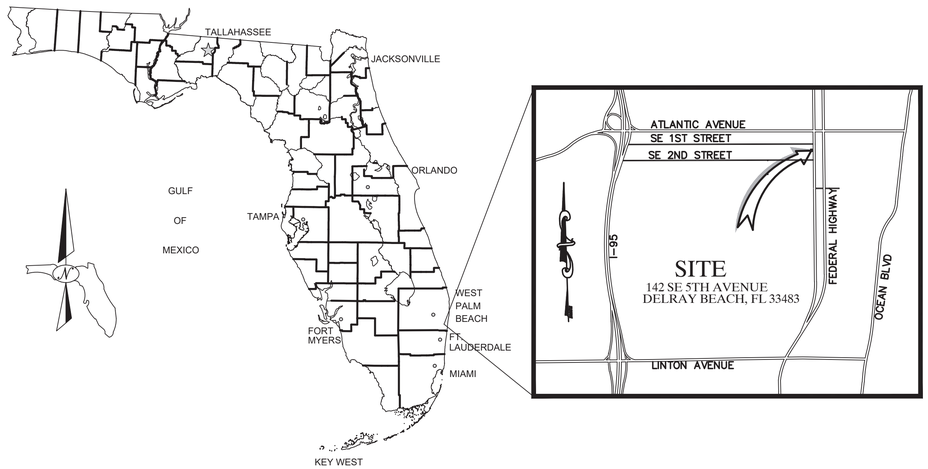
FIFTH AVENUE TOWNHOMES

142 SE 5TH AVENUE
DELRAY BEACH, FLORIDA 33483
PROPOSED TOWNHOMES
CIVIL SITE PLAN PACKAGE



SHEET	DESCRIPTION
CS	Cover Sheet
PP-1	Pollution Prevention Plan
PD-1	General Notes Plan
PD-1A	Demolition Plan
PD-2	Paving & Grading Plan
PD-2A	Drainage Plan
PD-3	Pavement, Marking & Signage Plan
PD-4 to PD-6	Paving & Grading & Drainage Details
WS-1	Water Distribution, Sanitary Sewer and Utility Plan
WS-2,WS-3	Water Distribution, & Sanitary Sewer Details
WS-4	Composite Utility Plan

REVISIONS	DATE	BY
REV PER CITY COMMENTS	09/05/24	MVK
REV PER CITY COMMENTS	08/29/24	JRH
REV PER CITY COMMENTS	07/18/24	JRH

FILE NAME: 10577ENG.dwg

CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING - SURVEYING
LANDSCAPE ARCHITECTURE
7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

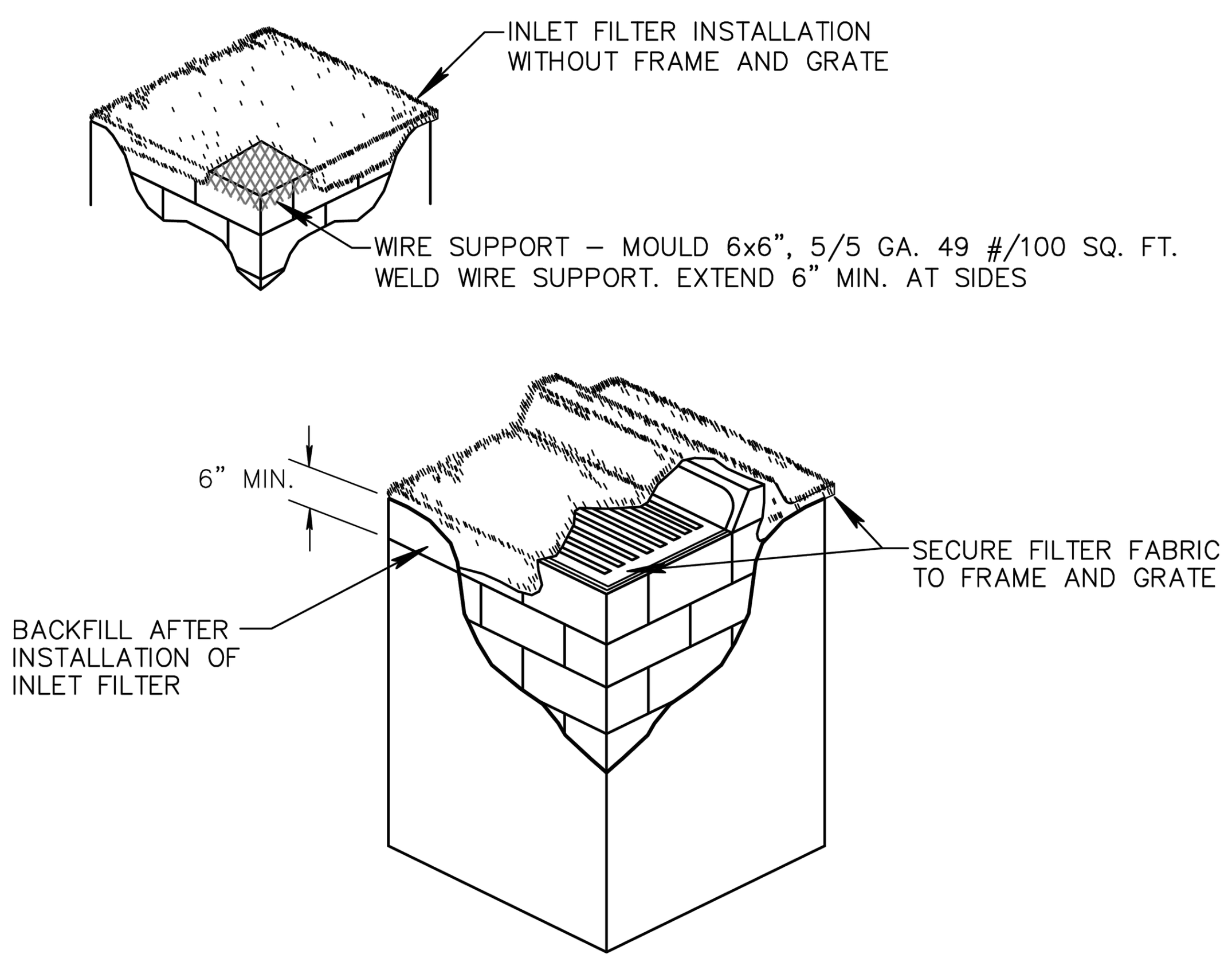
FIFTH AVENUE TOWNHOMES
PROPOSED TOWNHOMES
COVER SHEET
142 SE 5TH AVE, DELRAY BEACH, FL 33483

DATE 10/18/23
DRAWN BY JJB
F.B./ PG. ----
SCALE NTS

Originally signed by Matthew V. Kahn
Date: 2024.09.05 14:53:14 -04'00'
Adobe Acrobat version: 2024.002.20687

MATTHEW V. KAHN
PROFESSIONAL ENGINEER
LICENSE NO. 82227
STATE OF FLORIDA
- FOR THE FIRM -
DATE

JOB # 10577
SHT.NO.
CS
OF 14 SHEETS



NOT TO SCALE

NOTES:

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

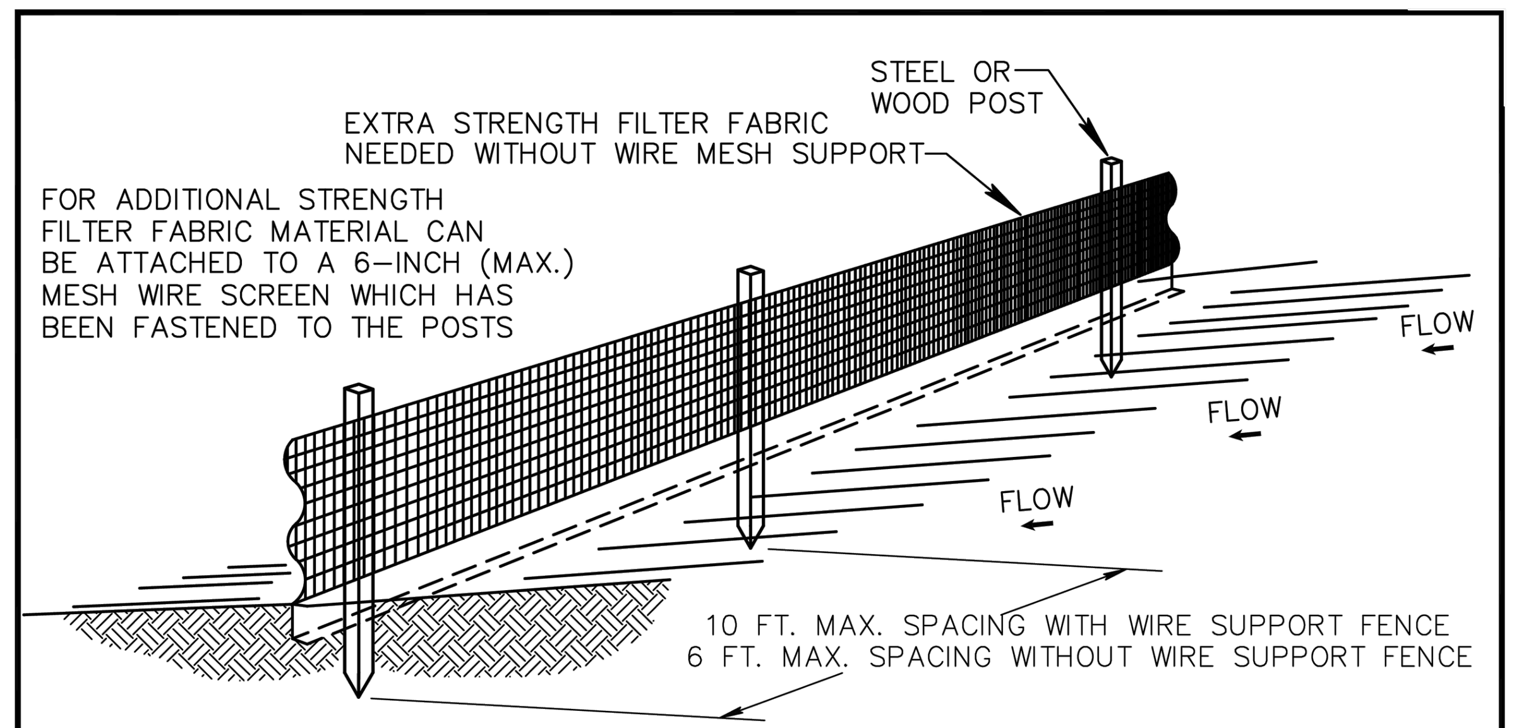
A SEDIMENT TRAP WILL BE EXCAVATED BEHIND THE CURB AT THE INLET. THE BASIN SHALL BE AT LEAST 12 TO 14 INCHES IN DEPTH, APPROXIMATELY 36 INCHES IN WIDTH, AND APPROXIMATELY 7 TO 10 FEET IN LENGTH PARALLEL TO THE CURB.

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.

CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444	INLET FILTER DETAIL	DATE: 09-15-2021 D10.0

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 REPRESENT 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.

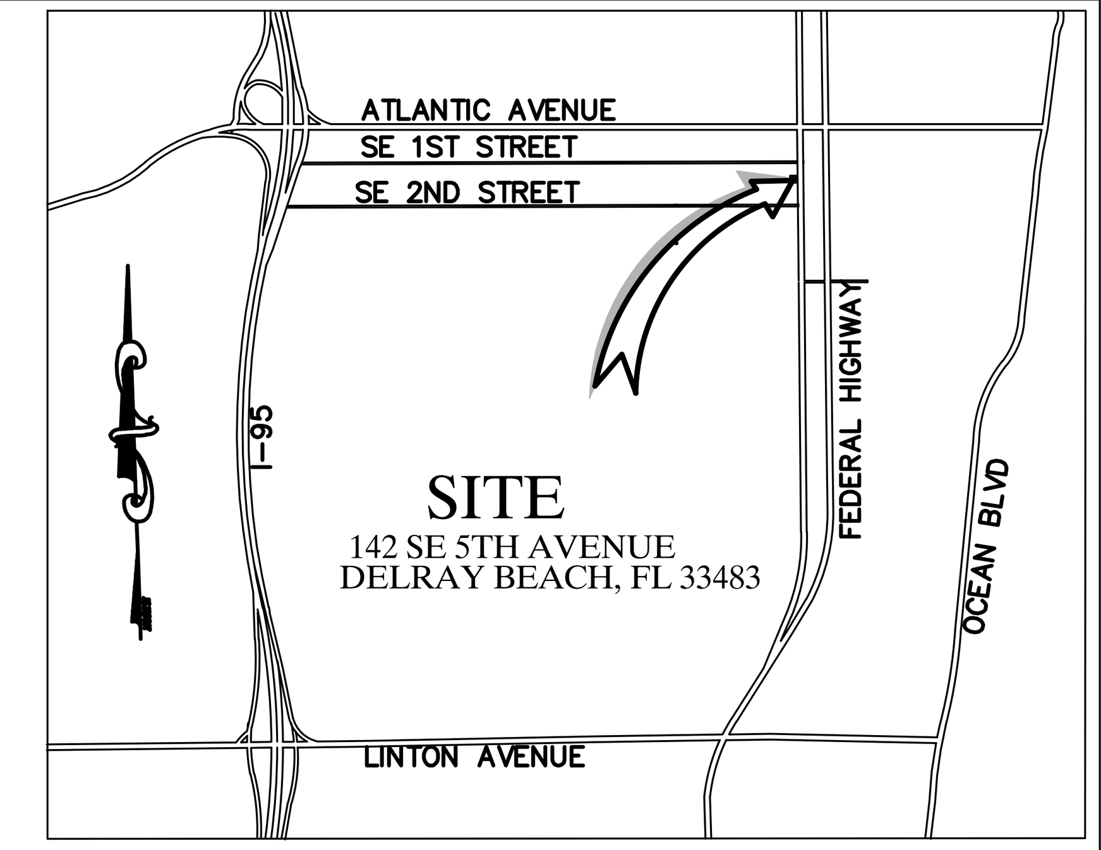
CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444	EROSION CONTROL NOTES DETAIL	DATE: 09-15-2021 D 11.0



NOTES:

1. THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES.
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 APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 12 INCHES. WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET.
4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES 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 LONG, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
6. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES 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 FDEP.

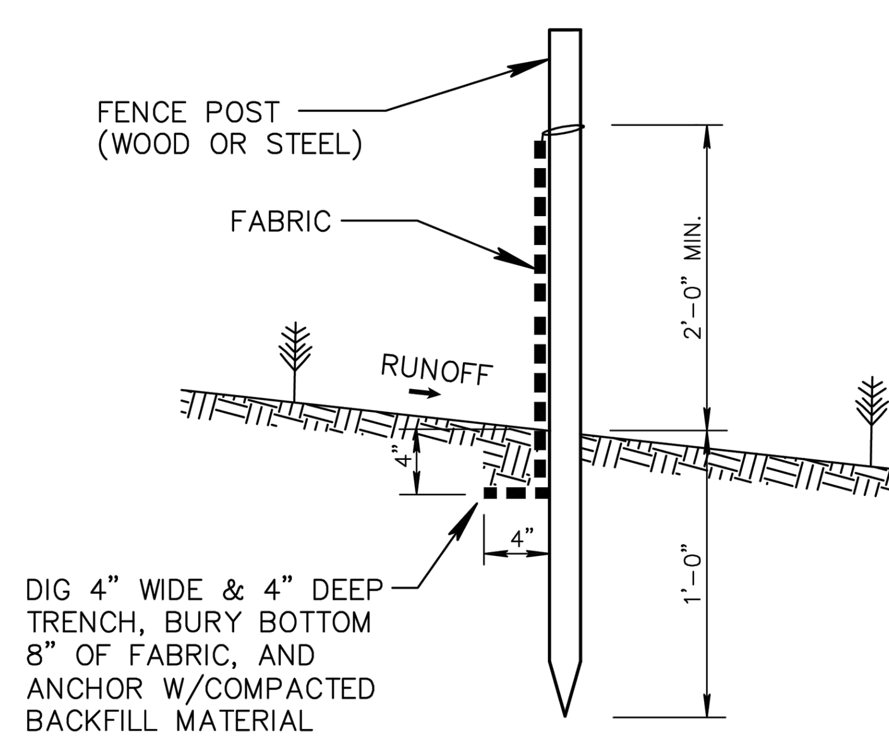
CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444	SILT FENCE INSTALLATION DETAIL (SHEET 1 of 2)	DATE: 09-15-2021 D12.0



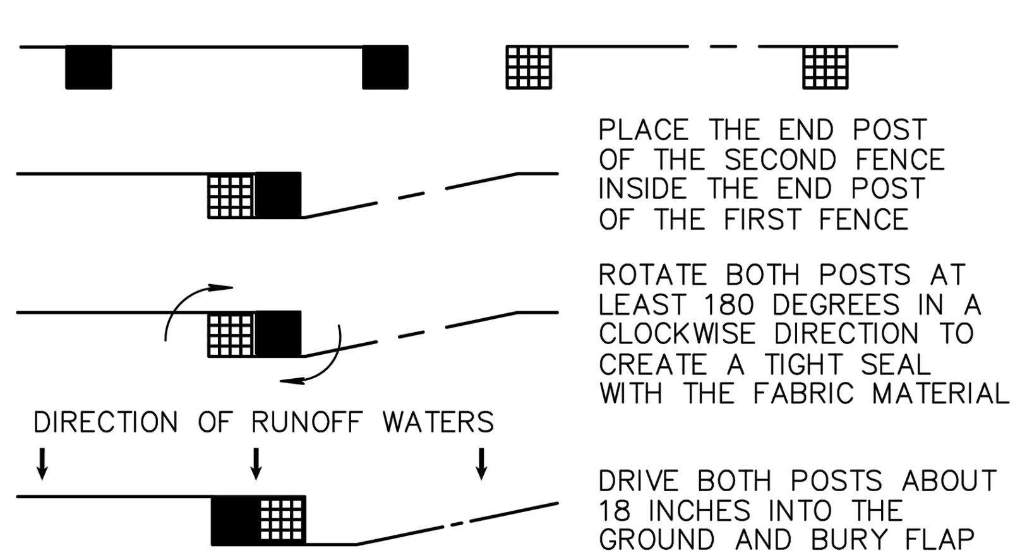
LEGEND

(solid line)	BOUNDARY OF POLLUTION PREVENTION (SLIT FENCE OR HAY BALES PER F.D.O.T. INDEX 103)
(circle)	INLET FILTER (REQUIRED FOR ALL INLETS DOWNSTREAM OF DISTURBED AREAS)

Call 48 hours before you dig
It's the Law!
1-800-432-4770
Sunshine State One Call of Florida, Inc.

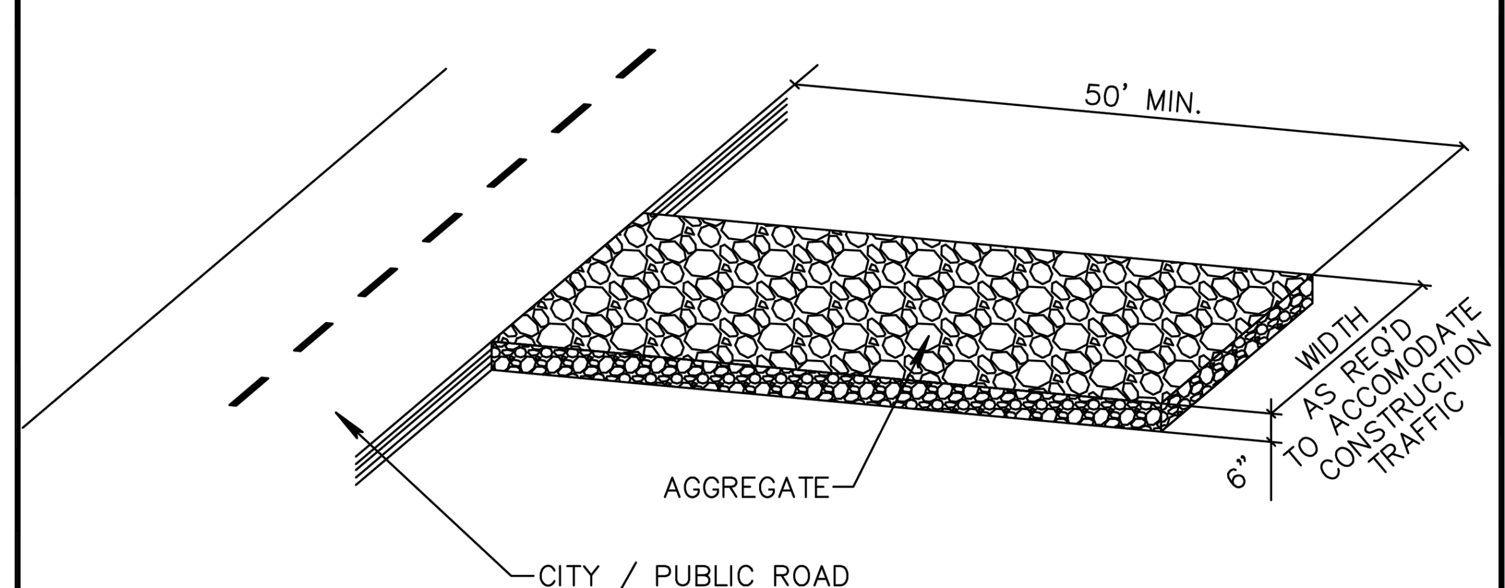


SILT FENCE SECTION
NOT TO SCALE



ATTACHING TWO SILT FENCES
NOT TO SCALE

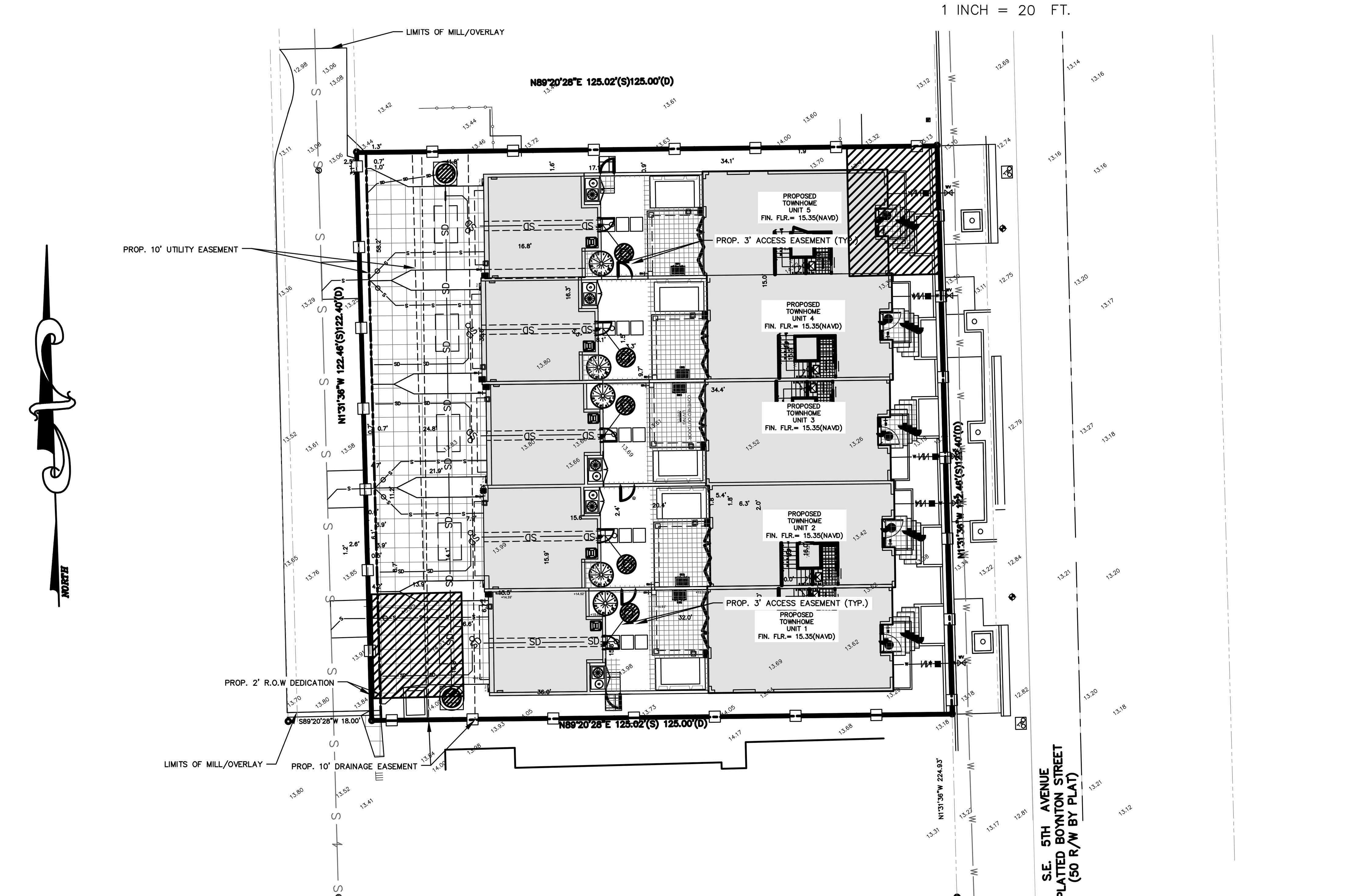
CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444	SILT FENCE INSTALLATION DETAIL (SHEET 2 OF 2)	DATE: 09-15-2021 D 12.1



NOTE:
A CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AND CONTAIN AN AGGREGATE LAYER (FDOT AGGREGATE NO.1), AT LEAST 6-INCHES THINK. IT MUST EXTEND TO THE WIDTH OF THE VEHICULAR INGRESS AND EGRESS AREA.

CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444	STABILIZED CONSTRUCTION ENTRANCE DETAIL	DATE: 09-15-2021 D 13.0

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 INCH = 20 FT.



POLLUTION PREVENTION DETAIL

REV PER CITY COMMENTS	09/05/24	MVK
REV PER CITY COMMENTS	08/29/24	JRH
REV PER CITY COMMENTS	07/18/24	JRH
REVISIONS	DATE	BY

FILE NAME 10577ENG.dwg

CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE – SURVEYING
7900 GLADES ROAD – SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

FIFTH AVENUE TOWNHOMES
PROPOSED TOWNHOMES
PROPOSED
POLLUTION PREVENTION PLAN AND DETAILS
142 SE 5TH AVE, DELRAY BEACH, FL 33483

DATE 10/18/23
DRAWN BY JJB
F.B./ PG. ----
SCALE 1"= 20'

MATTHEW V. KAHN
PROFESSIONAL ENGINEER
LICENSE NO. 82227
STATE OF FLORIDA
– FOR THE FIRM –
DATE

JOB # 10577
SHT.NO.
PP–1
OF 14 SHEETS

GENERAL NOTES
PAVING, GRADING & DRAINAGE

1. ALL DIMENSIONS SHOWN ON THESE DRAWINGS ARE SCALED DISTANCES. THE CONTRACTOR SHALL CONFIRM ALL MEASUREMENTS IN THE FIELD AND NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCY PRIOR TO PERFORMING THE WORK. ALL QUANTITIES SHALL BE PAID ON THE BASIS OF FIELD MEASUREMENTS OF COMPLETED WORK.
2. REINFORCED CONCRETE PIPE (R.C.P.) SHALL BE IN ACCORDANCE WITH F.D.O.T. STANDARDS SPECIFICATIONS SEC. 941. CORRUGATED ALUMINUM PIPE (C.A.P.) SHALL BE IN ACCORDANCE WITH F.D.O.T. STANDARDS SPECIFICATIONS SEC. 945.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE SUCH EXAMINATION OF THE SITE OF THE WORK, AND OF ANY MATERIAL SOURCES INDICATED IN THE PLANS, AS MAY BE NECESSARY TO INFORM HIMSELF OF THE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED.
4. PROPOSED GRADES SHOWN IN PAVED AREAS REFER TO FINISH PAVEMENT GRADES.
5. PAVEMENT MARKING AND GEOMETRICS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND PALM BEACH COUNTY TYPICAL NO. T-P-17.
6. ALL LOTS, ROADWAYS AND BORROW AREAS SHALL BE STRIPPED OF ALL DELETERIOUS (UNSUITABLE) MATERIALS AND MATERIALS SHALL BE DISPOSED WITHIN THE SITE.
7. ALL GRADING OF STREETS, INCLUDING THE REMOVAL OF ALL MATERIALS AND THE FINISHING OF ALL SHOULDERS, SUBGRADE PREPARATION, SWALES AND BACKSLOPES, IN ACCORDANCE WITH THE TYPICAL SECTIONS SHOWN HEREON SHALL BE INCLUDED IN THE BID PRICE FOR PAVING.
8. ANY EXISTING ROADWAY AND/OR UTILITY THAT IS DAMAGED BY THE CONTRACTOR SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER, AND UTILITY.
9. THE FULL DEPTH OF ALL EXISTING ORGANIC AND DELETERIOUS MATERIALS WITHIN THE RIGHT -OF- WAY AND UTILITIES AND DRAINAGE EASEMENT SHALL BE COMPLETE REMOVED. NO MATERIALS OF F.D.O.T. CLASS A-5, A-7, OR A-8 SHALL BE ALLOWED.
10. ANY MUCK POCKETS OR GUMBO ENCOUNTERED SHALL BE REMOVED WITHIN THE ROADWAY TO 1.0' BELOW SUBGRADE AND TO OUTSIDE EDGE OF BOTH SHOULDERS.
11. ALL PAVING AND DRAINAGE WORK TO BE CONSTRUCTED IN FULL ACCORDANCE WITH PALM BEACH COUNTY STANDARDS AND SPECIFICATIONS.
12. THE SEQUENCE OF CONSTRUCTION SHALL BE SUCH THAT ALL UNDERGROUND INSTALLATIONS OF EVERY KIND THAT WILL BE BENEATH THE PAVEMENT CURRENTLY TO BE CONSTRUCTED SHALL BE INSTALLED PRIOR TO THE COMPACTION OF SUBGRADE.
13. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER AND COUNTY ON ALL PIPE, PIPE BANDS, DRAINAGE STRUCTURES, GRATES, FRAMES AND COVERS.
14. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF EXISTING UTILITIES WHETHER SHOWN OR NOT SHOWN ON THESE DRAWINGS AND SHALL VERIFY ALL ELEVATIONS BEFORE STARTING CONSTRUCTION. ALL EXISTING UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO EXISTING OR BETTER CONDITIONS BY CONTRACTOR AT NO EXPENSE TO OWNER.
15. WHERE CONNECTIONS TO AN EXISTING DRAINAGE SYSTEM ARE PROPOSED, SAID EXISTING DRAINAGE STRUCTURES AND LINES SHALL BE PURGED OF ALL SILT AND DEBRIS PRIOR TO SAID CONNECTION, AND WHERE EXISTING DRAINAGE SYSTEM INCLUDES DITCHES, SAID DITCHES SHALL BE CLEARED AND REWORKED, AS NECESSARY, TO RESTORE THEM TO THEIR APPROVED DESIGN SECTION.
16. ALL PIPE JOINTS ARE TO BE INSPECTED BY A REPRESENTATIVE OF THE ENGINEER PRIOR TO BACKFILLING. ALL INSPECTIONS SHOULD BE ARRANGED NO LESS THAN 48 HOURS IN ADVANCE.
17. ALL CATCH BASIN GRATES MUST HAVE LOCKING CHAINS IN ACCORDANCE WITH FDOT INDEX 201.

CLEARING AND GRUBBING:

18. WORK SHALL CONSIST OF THE COMPLETE REMOVAL AND DISPOSAL OF ALL BUILDINGS, TIMBER, BRUSH, STUMPS, ROOTS, RUBBISH, AND DEBRIS AND ALL OTHER OBSTRUCTIONS RESTING ON OR PROTRUDING THROUGH THE SURFACE OF THE EXISTING GROUND AND THE SURFACE OF EXCAVATED AREAS, AND OF ALL OTHER STRUCTURES AND OBSTRUCTIONS NECESSARY TO BE REMOVED, INCLUDING SEPTIC TANKS, BUILDING FOUNDATIONS, AND PIPES.
19. ROOTS AND OTHER DEBRIS SHALL BE REMOVED TO A DEPTH OF AT LEAST ONE FOOT BELOW THE GROUND SURFACE. ALL STUMPS WITHIN THE CONSTRUCTION AREA SHALL BE COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR.
20. EXISTING TREES TO REMAIN WHERE SO DIRECTED BY THE ENGINEER, SHALL BE TRIMMED, PROTECTED AND LEFT STANDING.
21. PROPERTY OBSTRUCTIONS WHICH ARE TO REMAIN IN PLACE, SUCH AS BUILDINGS, SEWERS, DRAINS, WATER OR GAS PIPES, CONDUITS, POLES, WALLS, POSTS, BRIDGES, ETC. ARE TO BE CAREFULLY PROTECTED FROM INJURY AND ARE NOT TO BE DISPLACED.
22. CLEARING AND GRUBBING MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR IN LOCATIONS AND BY METHODS APPROVED BY THE ENGINEER.

SUBGRADE:

23. UTILIZATION OF MATERIAL IN SUBGRADE CONSTRUCTION SHALL BE IN ACCORDANCE WITH PLAN DETAILS OR AS DIRECTED BY THE ENGINEER.
24. A PROCTOR TEST SHALL BE PERFORMED ON THE PROPOSED SUBGRADE MATERIAL TO DETERMINE THE OPTIMUM MOISTURE CONTENT AND MAXIMUM DENSITY OF THE MATERIAL. IN-PLACE DENSITY TESTS OF THE FINISH SUBGRADE SHALL BE PERFORMED AT A FREQUENCY OF AT LEAST ONE TEST FOR EVERY 7,000 SQ.FT. OF PORPOSED PAVEMENT AREA TO DETERMINE COMPLIANCE WITH THE DESIGN SPECIFICATIONS OF 100% OF MAX. DENSITY PER AASHTO T-99 TESTING METHODS.
25. STABILIZED SUBGRADE SHALL HAVE A MINIMUM LIMEROCK BEARING RATIO (LBR) OF 40. THE COMPACTED SUBGRADE SHALL CONFORM TO THE LINES, GRADES, AND CROSS-SECTIONS SHOWN ON THE PLANS. ALL ROOTS, STUMPS, OR OBJECTIONABLE MATERIAL PRESENT ON, UNDER, OR PROTRUDING THROUGH THE SURFACE SHALL BE COMPLETELY REMOVED FROM THE SUBGRADE. THE FINISHED SURFACE OF THE SUBGRADE SHALL BE STRING-LINED PRIOR TO PLACEMENT OF ROCK BASE TO VERIFY THAT THE SUBGRADE HAS BEEN CONSTRUCTED TO THE PROPER LINES, CROSS-SECTIONS, AND ELEVATIONS WITHIN AN ALLOWABLE TOLERANCE OF 1/2" OF THE PROPOSED FINISH SUBGRADE ELEVATIONS.

PBC ROAD AND BRIDGE STANDARD NOTES:

1. IF DURING THE PROPOSED CONSTRUCTION/CROSSING ANY EXISTING PB COUNTY STORM DRAIN PIPE/STRUCTURES ARE AFFECTED IN ANY WAY PB COUNTY R&B REQUIRES FULL RESTORATION OF THE AFFECTED SYSTEM TO LIKE OR BETTER THEN LIKE CONDITION AND TO PB COUNTY/FDOT STANDARDS.
2. ALL AFFECTED ROADWAYS ARE TO BE RESTORED FROM EOP TO EOP, LANE WIDTH MIN, AND 50' IN EITHER DIRECTION.(THOROUGHFARE) AND 25' MIN. RESTORATION (NON-THOROUGHFARE).
3. IF ANY ADDITIONAL LANES ARE AFFECTED FOR ANY REASON DURING CONSTRUCTION, PB COUNTY R&B WILL REQUIRE THE ADDITIONAL LANES BE RESTORED TO LIKE OR BETTER THEN LIKE CONDITION AND TO EQUAL DIMENSIONS AS THE ADJACENT LANES.
4. IF PB COUNTY SIDEWALK / PATHWAY / C&G / AND OR ADA FACILITIES ARE AFFECTED PB COUNTY R&B WILL REQUIRE RESTORATION OF A MINIMUM OF 10' AND TO BE LIKE OR BETTER THEN LIKE CONDITION PER / FDOT / PB COUNTY STANDARDS.
5. SIDEWALKS WILL BE RESTORED BY REPLACING: TWO FLAGS IF THE POINT OF CONSTRUCTION IS LOCATED AT A CONTROL JOINT AND THREE FLAGS IF THE POINT OF CONSTRUCTION IS LOCATED BETWEEN CONTROL JOINTS. NO PARTIAL JOINTS ACCEPTED. (PER SITUATION)

PBC TRAFFIC STANDARD NOTES:

1. CONTACT HAROLD REED AT 561 681-4326 BEFORE STARTING CONSTRUCTION PBC-TRAFFIC ITS WILL REMOVE FIBER OPTIC CABLES FROM UNDERGROUND AND OVERHEAD FACILITIES PRIOR CONSTRUCTION. PLEASE PROVIDE 2 WEEKS ADVANCE NOTICE TO REMOVE FIBER OPTIC CABLE.
2. CONTRACTOR SHALL CONTACT PALM BEACH COUNTY TRAFFIC OPERATIONS AT 561-233-3900 FORTY-EIGHT(48) HOURS PRIOR TO CONSTRUCTION IF WORK IS BEING DONE WITHIN 10 FEET OF ANY SIGNAL EQUIPMENT.
3. DAMAGES TO LOOPS OR ANY SIGNAL EQUIPMENT CAUSED BY CONSTRUCTION OF THIS PROJECT MUST BE REPAIRED OR REPLACED TO ORIGINAL OR BETTER CONDITION AT NO COST TO PALM BEACH COUNTY.
4. NO EXCAVATION AROUND PBC SIGNAL POLES WITHIN 6 FT. RADIUS FROM CENTER OF POLE. PLEASE SEE PBC SIGNAL TYPICAL PAGE T-5.3 (SHEET 8 OF 23).

BASE:

26. LIMEROCK COMPOSITION - THE FOLLOWING TESTS ARE REQUIRED ON THE LIMEROCK MATERIAL:
    A. CHEMICAL COMPOSITION TEST TO DETERMINE THAT MATERIAL HAS A MINIMUM PERCENT CARBONATES OF 60%.
    B. LIMEROCK BEARING RATIO TEST TO DETERMINE THAT MATERIAL CAN ACHIEVE AN LBR OF 100.
    C. SIEVE ANALYSIS TO INSURE THAT AT LEAST 97% (BY WEIGHT) OF THE MATERIAL SHALL PASS A 3-1/2" SIEVE AND MATERIAL SHALL BE GRADED UNIFORMLY DOWN TO DUST. THE FINE MATERIAL SHALL CONSIST ENTIRELY OF DUST OF FRACTURE. ALL CRUSHING OR BREAK-UP WHICH MIGHT BE NECESSARY IN ORDER TO MEET SUCH SIZE REQUIREMENTS SHALL BE DONE BEFORE THE MATERIAL IS PLACED ON THE ROAD.
26. A PROCTOR TEST SHALL BE PERFORMED ON THE PROPOSED LIMEROCK MATERIAL TO DETERMINE THE MAXIMUM DENSITY OF THE MATERIAL. IN-PLACE DENSITY TESTS SHALL BE TAKEN AT A FREQUENCY OF AT LEAST ONE TEST FOR EVERY 7,000 SQ.FT. OF PROPOSED PAVEMENT TO DETERMINE COMPLIANCE WITH THE DESIGN SPECIFICATIONS OF 98% OF MAX. DENSITY PER AASHTO T-180 TESTING METHODS.
27. THE COMPACTED BASE SHALL CONFORM TO THE LINES, GRADES, AND CROSS-SECTION SHOWN ON THE PLANS. THE FINISH BASE SURFACE SHALL BE STRINGLINED OR CHECKED WITH A TEMPLATE TO VERIFY CONFORMANCE WITH THE PLAN GRADES WITHIN AN ALLOWABLE TOLERANCE OF 1/4" OF THE PROPOSED BASE ELEVATIONS. PRIME COAT SHALL BE APPLIED AT A RATE OF 0.25 GALLONS PER SQUARE YARD.

ASPHALTIC CONCRETE SURFACE COURSE:

28. TACK COAT
    A. PRIOR TO INSTALLATION OF THE OVERLAY, THE SURFACE OF THE EXISTING ASPHALT SHALL BE BROOMED TO REMOVE ALL LOOSE MATERIAL WHICH MIGHT INTERFERE WITH THE ADHESION OF THE EXISTING ASPHALT AND OVERLAY.
    B. A TACK COAT SHALL BE APPLIED TO THE TOP OF THE CLEAN ASPHALT SURFACE AT A RATE OF 0.10 GALLONS/SQ.FT. IN THE PRESENCE OF THE ENGINEER'S REPRESENTATIVE.
29. PRIME COAT SHALL BE APPLIED AT A RATE OF 0.25 GALLONS PER SQUARE YARD. PRIME AND TACK COAT FOR BASE SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF SECTION 300-1 THROUGH 300-7 OF F.D.O.T. STANDARDS SPECIFICATIONS.
30. ASPHALTIC CONCRETE SHALL CONFORM TO FLORIDA D.O.T. REQUIREMENTS OF TYPE S-1 AND S-3. CERTIFICATIONS OF THE ASPHALT MIX SHALL BE SUBMITTED BY THE ASPHALT PLANT TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
31. THE TEMPERATURE OF THE ASPHALT SHALL BE AT LEAST 230 DEGREES F. DURING THE LAYING OPERATION.
32. THE THICKNESS OF THE FINISHED SURFACE COURSE SHALL BE CHECKED AT VARIOUS INTERVALS TO INSURE THE CONSTRUCTED SURFACE COURSE IS WITHIN 1/8" OF THE DESIGN THICKNESS (NO NEGATIVE TOLERANCE WILL BE ACCEPTABLE).
33. THE FINISHED SURFACE OF THE ASPHALT SHALL BE CHECKED WITH A STRAIGHT EDGE TO INSURE THAT THE LINE, GRADE, AND CROSS-SECTION OF THE FINISHED PAVEMENT SECTION IS IN CONFORMANCE WITH THE DESIGN PLANS. THE FINISHED SURFACE SHALL BE OF UNIFORM TEXTURE AND COMPACTION. THE SURFACE SHALL HAVE NO PULLED, TORN, OR LOOSENED AREAS AND SHALL BE FREE OF SEGREGATION, SAND, STREAKS, SAND SPOTS, OR RIPPLES. ALL AREAS OF THE SURFACE WHICH DOES NOT MEET THE FOREGOING REQUIREMENTS SHALL BE CORRECTED TO THE ENGINEER'S SATISFACTION.
34. ALL REPAIRS TO EXISTING PAVEMENT SHALL RECEIVE SAWCUT EDGE PRIOR TO RELAYING ASPHALT. UNDER PAVEMENT UTILITY PIPING OR WIRING LESS THAN FOUR (4) INCHES IN DIAMETER REQUIRES A SCHEDULE 40 PVC CASING PIPE WITH SAND BACKFILLS.
35. ALL PERMANENT CONTROL POINTS AND/OR REFERENCE MARKERS SHOWN ON PLAT SHALL BE RAISED TO FINAL GRADE IF LOCATED IN PAVEMENT OR CONCRETE. THESE POINTS AND REFERENCE MARKERS SHALL BE LOCATED AND NOTED ON THE PLAT.

NOTIFICATION, TESTING

36. NOTIFICATION - THE CONTRACTOR SHALL NOTIFY THE ENGINEER, THE COUNTY AND UTILITIES 48 HOURS PRIOR TO SCHEDULING FIELD OBSERVATIONS AND SHALL SUPPLY ALL EQUIPMENT NECESSARY TO TEST THE COMPLETED WORK. CALL U.N.C.L.E. PRIOR TO ANY EXCAVATION.
37. ALL DRAINAGE SYSTEMS SHALL BE PUMPED DOWN TO BELOW 1/3 OF THE DIAMETER OF THE PIPE (FROM THE INVERT) AND LAMPED AS A REQUIREMENT OF THE FINAL DRAINAGE INSPECTION.
38. GRATE AND RIM ELEVATION ARE BASED ON PROPOSED FINISHED GRADE. ADJUSTMENTS MAY BE NECESSARY DUE TO FIELD CONDITIONS. ADJUSTMENTS ARE TO BE MADE BY THE CONTRACTOR WHEN THE BASE COURSE IS IN PLACE OR SITE GRADING IS COMPLETE. COST OF ADJUSTING RIMS AND GRATES IS TO BE INCLUDED IN BASE BID.

SODDING:

39. WORK CONSISTS OF THE ESTABLISHING OF A STAND OF GRASS WITHIN THE AREAS CALLED FOR BY THE FURNISHING AND PLACING OF GRASS SOD AND FERTILIZING, WATERING, AND MAINTAINING SODDED AREAS SUCH AS TO ASSURE A HEALTHY STAND OF GRASS.
40. THE AREA OVER WHICH THE SOD IS TO BE PLACED SHALL BE SCARIFIED OR LOOSENED TO SUITABLE DEPTH. THE SOD SHALL BE PLACED ON THE PREPARED SURFACE WITH EDGES IN CLOSE CONTACT AND SHALL BE FIRMLY AND SMOOTHLY EMBEDDED BY LIGHT TAMPING WITH APPROPRIATE TOOLS. ON AREAS WHERE THE SOD MAY SLIDE DUE TO HEIGHT AND SLOPE, THE ENGINEER MAY DIRECT THAT THE SOD BE PEGGED WITH PEGS DRIVEN THROUGH THE SOD BLOCKS INTO FIRM EARTH AT SUITABLE INTERVALS.

NOTES:

1) MAINTENANCE OF TRAFFIC M.O.T. FOR THIS PROJECT WILL COMPLY WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION F.D.O.T. DESIGN STANDARD INDEX 611, 612, 613, AND 660.
2) ALL SALVAGEABLE MATERIAL (FILL DIRT, PIPE, SIGNS, ETC.) BELONGS TO THE F.D.O.T. AND SHALL BE TRANSPORTED TO THE LOCAL OPERATIONS CENTER, AT THE PERMITTEE'S EXPENSE.
3.) ALL UTILITY RELOCATIONS WITHIN THE DEPARTMENT'S RIGHT OF WAY NEED TO OBTAIN THE PROPER PERMITS.

NOTES:

LOCAL MEDIA SHALL BE CONTACTED A WEEK PRIOR TO ANY LANE CLOSURES ON THE STATE ROAD SYSTEM AS IT WILL OCCUR DURING PEAK HOURS OR OVER THE SPAN OF MORE THAN ONE DAY. CONTACT BARBARA KELLEHER, FDOT PUBLIC INFORMATION OFFICE AT 954-777-4090 FOR GUIDANCE ON WHO TO CONTACT. PROVIDE A COPY OF THE PRESS RELEASE TO:

FLORIDA DEPARTMENT OF TRANSPORTATION
PUBLIC INFORMATION OFFICE
3400 WEST COMMERCIAL BLVD.
FORT LAUDERDALE, FLORIDA 33309

SOLID CONCRETE INTERLOCKING PAVING STONE SPECIFICATIONS

1. DESCRIPTION:
1.1 GENERAL:
   A. Scope of Work:
      1. Furnish and place sand bedding course.
      2. Furnish and install concrete interlocking paving stones in the quality, shape, thickness and a color as specified.
      3. Furnish and install all accessory items as required by the contract.
   B. Related Work:
      1. Furnish and install subgrade per Table 100.6 of the Palm Beach County Land Development Design Standards Manual.
      2. Furnish and install base per Table 100.6 of the Palm Beach County Land Development Design Standards Manual.
   C. Product Handling:
      1. Paving stones shall be delivered and unloaded at jobsite in such a manner that no damage occurs during shipping, handling and storage.
   D. References:
      1. Solid concrete interlocking paving stones shall meet or exceed the requirements in ASTM C-936 Standard Specifications for Solid Concrete Interlocking Paving Units.

II. MATERIALS:
2.1 SOLID CONCRETE INTERLOCKING PAVING STONES
   A. Thickness, Color and Pattern:
      1. Paving stone thickness shall be between 3-1/8" min - 4" max..
      2. All paving stones shall be colored through the full depth of paver and not just the surface.
      3. A multi-colored paving stone pattern shall be used.
   B. Cementitious Materials:
      1. Portland cements shall conform to ASTM C-150.
   C. Aggregates:
      1. Aggregates shall conform to ASTM C-33 for normal weight concrete except that grading requirements shall not necessarily apply.
   D. Other Materials:
      1. Coloring pigments, air entraining agents, integral water repellents, finely ground silica, etc., shall conform to ASTM standard where applicable or shall be previously established as suitable for use in concrete.
   E. Compressive Strength:
      1. At the time of delivery to the work site, the average compressive strength shall not be less than 8,000 psi with no individual unit strength less than 7,200 psi, with testing procedures in accordance with ASTM C-140.
   F. Absorption:
      1. The average absorption shall not be greater than 5% with no individual unit absorption greater than 7%.
   G. Proven Field Performance:
      1. Satisfying field performance is indicated when paving stones similar in composition, and made with the same manufacturing equipment as those supplied to the purchaser, do not exhibit deterioration after one year.
   H. Visual Inspection:
      1. All paving stones shall be sound and free of defects that would interfere with the proper placement of the paving stone or impair the strength or permanence of the construction.
      2. Minor cracks incidental to the usual methods of manufacture, or chipping resulting from customary methods of handling in shipment and delivery, shall not be deemed grounds for rejection.
   I. Sampling and Testing:
      1. The purchaser shall be accorded proper facilities to inspect and sample the paving stones at the place of manufacture from lots ready for delivery.
      2. Paving stones will be sampled and tested in accordance with ASTM C-140.
   J. Rejection:
      1. If the shipment fails to conform to the specified requirements, the manufacturer may sort it, and new test paving stones shall be selected at random by the purchaser from the retained lot and tested at the expense of the manufacturer. If the second set of test paving stones fail to conform to the specified requirements, the entire lot shall be rejected.

2.2 BEDDING COURSE:
   A. The bedding course shall be a well graded, clean, washed sand with 100% passing a 3/8" sieve size and a maximum of 3% passing a No. 200 sieve size. The use of mason sand shall not be approved.
   B. The bedding course shall be the responsibility of the paving stone installer.
2.3 EDGE RESTRAINT:
   A. All edges of the installed paving stones shall be restrained. The type of edge restraint, shall be approved at locations and to details noted on plans.

III. CONSTRUCTION METHODS:
3.1 PREPARATION OF THE BASE COURSE:
   A. A suitable base shall be prepared as specified in Section B.2. of this specification.
   B. The base course shall be shaped to grade and cross section with allowable tolerance of ¼".
3.2 CONSTRUCTION OF THE BEDDING COURSE:
   A. The finished base course shall be approved before the placement of the bedding course.
   B. The sand bedding course shall be spread evenly over the area to receive the paving stones and the screeded level to produce a 1" thickness when the paving stones have been placed and vibrated.
   C. The final elevation of paving stones should be nominally ¼" to 3/8" higher than the adjacent curb, gutter, etc., to allow for free drainage from chamfers on paving stone edges.
   D. The bedding course shall not be disturbed, once screeded and leveled to the desired elevation.
3.3 INSTALLATION OF PAVING STONES:
   A. The paving stones shall be placed as shown on the drawings.
   B. The paving stones shall be placed in such a manner that the desired pattern is maintained and that no intentional space is left between the stones for maximum interlock.
   C. String lines should be used to hold all patterns true.
   D. The gaps at the edge of the paving stone surface shall be filled with standard edge stone or with stones cut to fit. Cutting of concrete paving stone shall be accomplished to leave a clean edge to the traffic surface using a double-headed breaker or a masonry saw. Whenever possible, no cut should result with a paving stone less than 1/3 of original dimension.
   E. Paving stones shall be vibrated into the bedding course using a plat vibrator capable of 3000 to 5000 pounds compaction force with the surface clean and the joints open.
   F. After vibration, clean, sharp sand containing at least 30% of 1/8" particles shall be spread over the paving stone surface, allowed to dry and vibrated into the joints with additional plate vibrator passes and brushing so as to completely fill the joints.
   G. Surplus material shall then be swept from the surface or left on the surface during construction to insure complete filling of joints during initial use.
   H. Upon completion of work covered in this section, the Contractor shall clean up all work areas by removing all debris, surplus material and equipment from the site.

1. Paver brick shall conform with Palm Beach County Land Development Design Standards Manual with the following exceptions:
   A) Under II Material 2.1 # A.1, Paving stone thickness shall be 3 1/8" (min.) to 4" (max.)
   b) Under II Material 2.1 # A.3, The coloring shall be throughout the entire brick with the white and yellow conforming with FDOT. Standard Specifications for Road and Bridge Construction (latest edition) section 710-4.7
2. Glass spheres to meet the requirements of sections 971-1 and 971-14 with retroflectivity to be not less than 300 mincandles.
3. When header curb is used to outline a crosswalk the curb shall be white concrete with glass beads in the white concrete.
4. The brick shall be pre-approved per project before installation by the Palm Beach County Traffic Engineering Division.

FDOT STANDARD NOTES

All materials and construction within the FDOT right-of-way shall conform to the FDOT Roadway and Traffic Design Standards (Latest Edition). Standard Specifications (Latest Edition) and the supplements thereto

Pavement Markings must be thermoplastic and be installed per FDOT Design Standard Index 17346 and Raised Pavement Markings (RPM's) per FDOT Design Standard Index 17352.

The applicant's engineer responsible for construction inspection shall insure that the Maintenance Of Traffic M.O.T. for this project will comply with the Florida Department of Transportation F.D.O.T. Design Standard Index 611, 612, 613, and 660. and these documents: The latest Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) and revisions will be in accordance with (U. S. Department of Transportation, FHWA regulations). All MOT lane closure signs shall be covered when lanes are not closed. No lanes are to be closed except at times prescribed by the Department.

Restricted hours of operation will be from 9:00am to 3:30 pm, (Monday-Friday), unless otherwise approved by the Operations Engineer, or designee.

It is the Permittee's responsibility to obtain final acceptance of permitted work (completed) and the restoration of the Right-of-Way from the Department prior to usage.

Permittee will provide the necessary densities in accordance with the Department's latest edition of the Standard Specifications for Road & Bridge Construction prior to final acceptance by the Department.

Permittee will restore the Right of Way as a minimum, to its original condition or better in accordance w/ Florida Department of Transportation's latest Standard Specifications for Road & Bridge Construction or as directed by the Resident Operations Engineer.

During the removal/installation of any curb and gutter section, the permittee will be responsible for any damage done to the abutting asphalt. The damaged asphalt repair will be in accordance with the current specifications and/or as directed by the Resident Operations Engineer.

Permittee will provide the Producers Certification for the CLASS 1 CONCRETE prior to final acceptance by the DEPARTMENT. The certification must bear the original signature of a legally responsible person from the producer and is provided on the producer's letterhead.

At the end of each work period, any drop-off in the area adjacent to the travel way of the State Road shall be backfilled in accordance with Standard Index 600 or shall be otherwise protected with temporary barrier wall at the contractor's expense.

If the permitted work is on a roadway that has been selected as a hurricane or disaster evacuation route, the applicant, at the pre-construction conference is required to present, as part of the work plan, an emergency functional restoration plan to address eventualities such as hurricanes.

The contractor must call the appropriate county traffic engineering division, having jurisdiction over the project at least 48 hours, before any excavation within the FDOT right-of-way to determine the location of the existing traffic signal interconnect cable.

The location of existing utilities shown is approximate only. The contractor shall determine the exact location during construction. Relocation of utilities shall be coordinated with utility companies after identification of conflict by contractor. Contractor will notify engineer in advance before any relocation.

Permittee will coordinate all work with the Palm Beach Operations Permits Department using fax # 561-370-1236. Coordination will include a Pre-Construction meeting.

The applicant at the earliest convenient time shall notify in writing all right-of-way users affected by the construction of this project.

The pavement specification should read: Match existing type and depth of asphalt to 4 3/4" maximum including friction course.

Limerock base shall be a minimum of 10" of Optional Base Group 9 and compacted to 98% maximum density according to AASHTO-T180. Construction to conform to section 200 and standard index 514. Base to be primed after compaction.

Stabilized Subgrade - minimum 12" thick and compacted to 98% maximum density according to AASHTO-180. Material to have minimum L.B.R. of 40 and conform to section 160.

Ownership of all suitable excavated materials, as determined by the Department, shall remain in the Department until a final acceptance of the permitted project is fulfilled. Excavated materials shall be hauled by the Permittee, at their cost & expense from the site to the Palm Beach Operations Center or stockpiled in those areas as directed by the Department, including asphalt millings.

Remove all muck, overburden, and root material to the right-of-way line, and backfill to the required subgrade with clean, granular material in maximum 6" lifts compacted to 100% of maximum density in accordance with AASHTO T99-C specifications, and each lift tested before placing next lift.

Sodded areas will be in accordance with Standard Index 105 and sections 162, 575, 981, 982, 983, 987 of the Department's Standard Specifications for Road and Bridge Construction, latest edition. All disturbed areas will be sodded within one (1) week of installation of said permitted work.

All curb cut ramps must face in the direction of pedestrian travel.

Specify the alphanumeric identification for the curb cut ramps per Standard Index 304. A copy of the appropriate detail(s) must be shown on the plans.

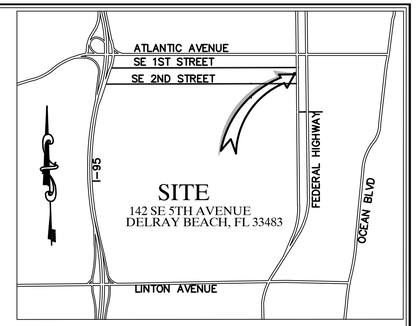
FLAGGERS MUST BE PRESENT DURING THE INGRESS AND EGRESS OF CONSTRUCTION VEHICLES TO AND FROM THE PROJECT SITE. WARNING SIGNS MUST BE ERECTED ADVISING MOTORIST OF TRUCKS ENTERING THE HIGHWAY.

PERMIT IS VALID FOR ONE YEAR FROM DATE OF ISSUE.

Permittee will provide the Department with certified "As-Built" plans prior to final acceptance of the permitted work.

Permittee's contractors that are performing permitted work activities shall provide the Department (Permits Office) proof of a proper state contractor's license and certificate of liability insurance prior to any commencement of permitted work.

Removal/installation of sidewalk will be in accordance with FDOT Standard Index 310.



REVISIONS	DATE	BY
REV PER CITY COMMENTS	09/05/24	MJK
REV PER CITY COMMENTS	08/29/24	JRH
REV PER CITY COMMENTS	07/19/24	JRH

FILE NAME 10577ENG.dwg

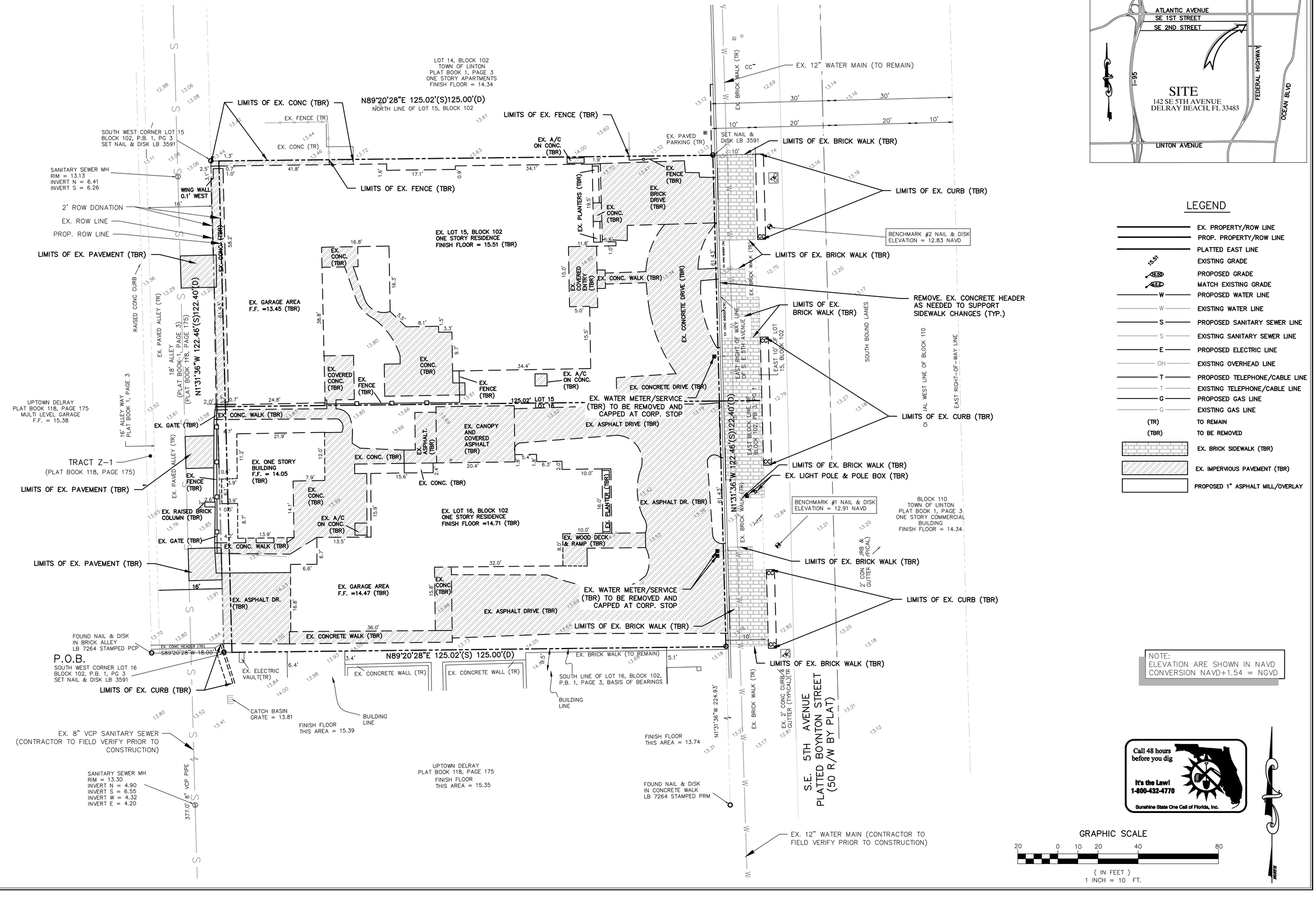
CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING SURVEYING
LANDSCAPE ARCHITECTURE SUITE 100
7900 GLADES ROAD
BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

FIFTH AVENUE TOWNHOMES
PROPOSED TOWNHOMES
PROPOSED
GENERAL NOTES PLAN
142 SE 5TH AVE, DELRAY BEACH, FL 33483

DATE 10/18/23
DRAWN BY JJB
F.B./ PG. ----
SCALE NTS

MATTHEW V. KAHN
PROFESSIONAL ENGINEER
LICENSE NO. 82227
STATE OF FLORIDA
- FOR THE FIRM -
DATE

JOB # 10577
SHT.NO.
PD-1
OF 14 SHEETS



LEGEND

- EX. PROPERTY/ROW LINE
- PROP. PROPERTY/ROW LINE
- PLATTED EAST LINE
- 15.51 EXISTING GRADE
- 16.50 PROPOSED GRADE
- M.F.F. MATCH EXISTING GRADE
- W PROPOSED WATER LINE
- W EXISTING WATER LINE
- S PROPOSED SANITARY SEWER LINE
- S EXISTING SANITARY SEWER LINE
- E PROPOSED ELECTRIC LINE
- OH EXISTING OVERHEAD LINE
- T PROPOSED TELEPHONE/CABLE LINE
- T EXISTING TELEPHONE/CABLE LINE
- G PROPOSED GAS LINE
- G EXISTING GAS LINE
- (TR) TO REMAIN
- (TBR) TO BE REMOVED
- EX. BRICK SIDEWALK (TBR)
- EX. IMPERVIOUS PAVEMENT (TBR)
- PROPOSED 1" ASPHALT MILL/OVERLAY

Call 48 hours before you dig
It's the Law!
1-800-432-4770
Sunshine State One Call of Florida, Inc.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 INCH = 10 FT.

REVISIONS	DATE	BY
REV PER CITY COMMENTS	09/05/24	MVK
REV PER CITY COMMENTS	08/29/24	JRH
REV PER CITY COMMENTS	07/15/24	JRH

FILE NAME: 10577ENG.dwg

CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING SURVEYING
LANDSCAPE ARCHITECTURE
7900 GLADES ROAD SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

FIFTH AVENUE TOWNHOMES
PROPOSED TOWNHOMES
PROPOSED DEMOLITION PLAN
142 SE 5TH AVE, DELRAY BEACH, FL 33483

DATE	10/18/23
DRAWN BY	JJB
F.B./ PG.	----
SCALE	1"= 10'

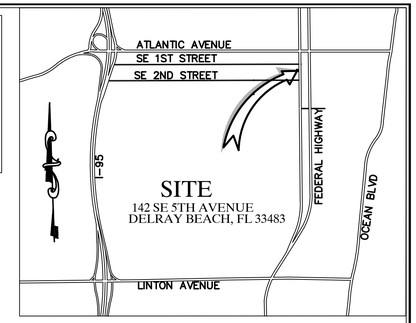
MATTHEW V. KAHN
PROFESSIONAL ENGINEER
LICENSE NO. 82227
STATE OF FLORIDA
- FOR THE FIRM -
DATE

JOB # 10577
SHT.NO.
PD-1A
OF 14 SHEETS

NOTE: CONTRACTOR IS REQUIRED TO ASBUILT WATER, SEWER, DRAINAGE AND FINAL GRADING ELEVATIONS PER THE REQUIREMENTS OF FDOT/CITY OF DELRAY BEACH

DRAINAGE CRITERIA

CONTROL WATER ELEV. = 2.50' NAVD
MIN. ROAD ELEV. = 13.15' NAVD
100-YR-3DAY FLOOD (0 DISCHARGE) ELEV. = 14.39' NAVD
MIN. FINISH FLOOR ELEV. = 15.35' NAVD
MIN. PERIMETER BERM ELEV. EQUAL TO OR GREATER THAN 25 YR.-3 DAY STAGE ELEVATION= 11.38' NAVD



LEGEND

- EX. PROPERTY/ROW LINE
- PROP. PROPERTY/ROW LINE
- PLATTED EAST LINE
- PROPOSED DRAINAGE PIPE
- PROPOSED YARD DRAIN
- EXISTING GRADE
- PROPOSED GRADE
- MATCH EXISTING GRADE
- W — PROPOSED WATER LINE
- W — EXISTING WATER LINE
- S — PROPOSED SANITARY SEWER LINE
- S — EXISTING SANITARY SEWER LINE
- E — PROPOSED ELECTRIC LINE
- OH — EXISTING OVERHEAD LINE
- T — PROPOSED TELEPHONE/CABLE LINE
- T — EXISTING TELEPHONE/CABLE LINE
- G — PROPOSED GAS LINE
- G — EXISTING GAS LINE
- PROPOSED BUILDING
- PROPOSED ASPHALT REPLACEMENT (SEE DETAIL RT 1.0)
- PROPOSED ROW BRICK WALK (SEE DETAIL RT 26.0)
- PROPOSED ONSITE PEDESTRIAN PAVERS (SEE ARCH PLANS FOR DETAILS)
- PROPOSED PAVER DRIVEWAY (SEE DETAIL RT 28.0)
- PROPOSED TURF (SEE ARCH PLANS FOR DETAILS)
- PROPOSED 1" ASPHALT MILL/OVERLAY
- PROPOSED LIGHT POLE (SEE LANDSCAPE PLANS FOR DETAILS)
- PROPOSED BOLLARD LIGHT (SEE LANDSCAPE PLANS FOR DETAILS)

Call 48 hours before you dig
It's the Law!
1-800-432-4770
Sunshine State One Call of Florida, Inc.

NOTE:
ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER OR DRAINAGE EASMENTS SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS: LD 1.0 & 2.0

NOTE:
ELEVATION ARE SHOWN IN NAVD CONVERSION NAVD+1.54 = NGVD

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 INCH = 10 FT.

REVISIONS	DATE	BY
REV. PER CITY COMMENTS	09/05/24	MVK
REV. PER CITY COMMENTS	08/29/24	JRH
REV. PER CITY COMMENTS	07/15/24	JRH

FILE NAME: 10577ENG.dwg

CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING SURVEYING
LANDSCAPE ARCHITECTURE SUITE 100
7900 GLADES ROAD BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

FIFTH AVENUE TOWNHOMES
PROPOSED TOWNHOMES
PROPOSED PAVING
& GRADING PLAN
142 SE 5TH AVE, DELRAY BEACH, FL 33483

DATE	10/18/23
DRAWN BY	JJB
F.B./ PG.	----
SCALE	1"= 10'

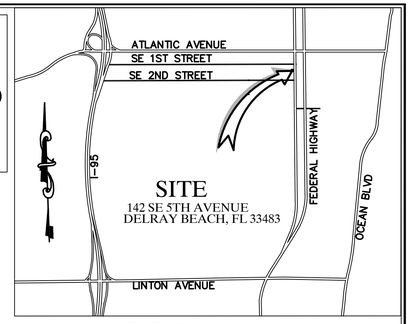
MATTHEW V. KAHN
PROFESSIONAL ENGINEER
LICENSE NO. 82227
STATE OF FLORIDA
– FOR THE FIRM –
DATE

JOB # 10577
SHT.NO.
PD-2
OF 14 SHEETS

NOTE: CONTRACTOR IS REQUIRED TO ASBUILT WATER, SEWER, DRAINAGE AND FINAL GRADING ELEVATIONS PER THE REQUIREMENTS OF FDOT/CITY OF DELRAY BEACH

DRAINAGE CRITERIA

CONTROL WATER ELEV. = 2.50' NAVD
MIN. ROAD ELEV. = 13.15' NAVD
100-YR-3DAY FLOOD (0 DISCHARGE) ELEV. = 14.39' NAVD
MIN. FINISH FLOOR ELEV. = 15.35' NAVD
MIN. PERIMETER BERM ELEV. EQUAL TO OR GREATER THAN 25 YR.-3 DAY STAGE ELEVATION= 11.38' NAVD



LIMITS OF MILL/OVERLAY

LOT 14, BLOCK 102
TOWN OF LINTON
PLAT BOOK 1, PAGE 3
ONE STORY APARTMENTS
FINISH FLOOR = 14.34

N89°20'28"E 125.02'(S)125.00'(D)
NORTH LINE OF LOT 15, BLOCK 102

EX. 12" WATER MAIN (TO REMAIN)

EX. FENCE (TR)

PROP. INLET D-01
TYPE 'II'
GRATE EL = 13.30
S INV EL = 9.35**

YARD DRAIN D-07
12" ADS YARD DRAIN
GRATE EL = 14.85
S INV EL = 11.85

SOUTH WEST CORNER LOT 15
BLOCK 102, P.B. 1, PG 3
SET NAIL & DISK LB 3591

EX. CONC (TR)

EX. PAVED PARKING (TR)

SET NAIL & DISK LB 3591

EX. BRICK WALK (TR)

SANITARY SEWER MH
RIM = 13.13
INVERT N = 6.41
INVERT S = 6.26

2' ROW DONATION
EX. ROW LINE
PROP. ROW LINE
PROP. 10' UTILITY EASEMENT

INV EL = 9.25'

PROPOSED TOWNHOME UNIT 5
FIN. FLR.= 15.35(NAVD)

PROP. 3' ACCESS EASEMENT (TYP.)

BENCHMARK #2 NAIL & DISK
ELEVATION = 12.83 NAVD

PROP. CLEANOUT (TYP.)

PROPOSED TOWNHOME UNIT 4
FIN. FLR.= 15.35(NAVD)

PROP. 47 LF 8" PVC STORM (2' MIN. COVER + 1% MIN SLOPE.)

PROP. 113 (45') LF 15" HDPE 'HP STORM' DRN.

YARD DRAIN D-06
12" ADS YARD DRAIN
GRATE EL = 14.85
S INV EL = 11.85

PROP. 48 LF 8" PVC STORM (2' MIN. COVER + 1% MIN SLOPE.)
PROP. 48 LF 8" PVC STORM (2' MIN. COVER + 1% MIN SLOPE.)

PROPOSED TOWNHOME UNIT 3
FIN. FLR.= 15.35(NAVD)

YARD DRAIN D-05
12" ADS YARD DRAIN
GRATE EL = 14.85
N INV EL = 11.85

UPTOWN DELRAY
PLAT BOOK 118, PAGE 175
MULTI LEVEL GARAGE
F.F. = 15.38

PROP. 6" TRAFFIC RATED TRENCH DRAIN W/6" PVC CONNECTION TO ADJACENT 15" HDPE AS SHOWN OR DRAINAGE STRUCTURE

YARD DRAIN D-04
12" ADS YARD DRAIN
GRATE EL = 14.85
S INV EL = 11.85

TRACT Z-1
(PLAT BOOK 118, PAGE 175)

PROPOSED TOWNHOME UNIT 2
FIN. FLR.= 15.35(NAVD)

PROP. PVC SLEEVE WHERE DRAIN LINE CROSSES UNDER BUILDING FOUNDATIONS (TYP)

PROP. 47 LF 8" PVC STORM (2' MIN. COVER + 1% MIN SLOPE.)

PROP. 3' ACCESS EASEMENT (TYP.)

PROPOSED TOWNHOME UNIT 1
FIN. FLR.= 15.35(NAVD)

YARD DRAIN D-03
12" ADS YARD DRAIN
GRATE EL = 14.85
N INV EL = 11.85

PROP. 2' R.O.W DEDICATION

FOUND NAIL & DISK IN BRICK ALLEY LB 7264 STAMPED PCP

EX. CONC HEADER (TR)

S89°20'28"W 18.00'

P.O.B.
SOUTH WEST CORNER LOT 16
BLOCK 102, P.B. 1, PG 3
SET NAIL & DISK LB 3591

LIMITS OF MILL/OVERLAY

N89°20'28"E 125.02'(S) 125.00'(D)

EX. BRICK WALK (TO REMAIN)

EX. ELECTRIC VAULT(TR)

EX. CONCRETE WALL (TR)

EX. CONCRETE WALL (TR)

SOUTH LINE OF LOT 16, BLOCK 102, P.B. 1, PAGE 3, BASIS OF BEARINGS

BUILDING LINE

PROP. 10' DRAINAGE EASEMENT

CATCH BASIN GRATE = 13.81

FINISH FLOOR THIS AREA = 15.39

BUILDING LINE

PROP. PLUNGE POOL (SEE POOL DESIGNER PLANS FOR DETAILS)

PROP. INLET D-02
TYPE 'II'
GRATE EL = 13.30
N INV EL = 9.35**

EX. 8" VCP SANITARY SEWER (CONTRACTOR TO FIELD VERIFY PRIOR TO CONSTRUCTION)

SANITARY SEWER MH
RIM = 13.30
INVERT N = 4.90
INVERT S = 6.55
INVERT W = 4.32
INVERT E = 4.20

377.0' 8" VCP PIPE

UPTOWN DELRAY
PLAT BOOK 118, PAGE 175
FINISH FLOOR
THIS AREA = 15.35

FINISH FLOOR
THIS AREA = 13.74

FOUND NAIL & DISK
IN CONCRETE WALK
LB 7264 STAMPED PRM

N1°31'36"W 224.93'

S.E. 5TH AVENUE
PLATTED BOYNTON STREET
(50 R/W BY PLAT)

N1°31'36"W 122.46'(S)122.40'(D)

EAST BLOCK LINE OF BLOCK 102, P.B. 1, PG 3

EAST RIGHT OF WAY LINE OF S.E. 5TH AVENUE

EAST 10' OF LOT 15, BLOCK 102

SOUTH BOUND LANES

ORIGINAL WEST LINE OF BLOCK 110

EAST RIGHT-OF-WAY LINE

BENCHMARK #1 NAIL & DISK
ELEVATION = 12.91 NAVD

BLOCK 110
TOWN OF LINTON
PLAT BOOK 1, PAGE 3
ONE STORY COMMERCIAL BUILDING
FINISH FLOOR = 14.34

2' CONC CURB & GUTTER (TYPICAL)

EX. 2' CONC CURB & GUTTER (TYPICAL)(TR)

EX. BRICK WALK (TR)

EX. BRICK WALK (TR)

EX. PAVED ALLEY (TR)

EX. PAVED ALLEY (TR)

18' ALLEY (PLAT BOOK 1, PAGE 3) (PLAT BOOK 118, PAGE 175)

ALLEY WAY BOOK 1, PA

RAISED CURB

LEGEND

- EX. PROPERTY/ROW LINE
- PROP. PROPERTY/ROW LINE
- PLATTED EAST LINE
- PROPOSED DRAINAGE PIPE
- PROPOSED YARD DRAIN
- 15.51 EXISTING GRADE
- 15.50 PROPOSED GRADE
- M.F.G. MATCH EXISTING GRADE
- W PROPOSED WATER LINE
- W EXISTING WATER LINE
- S PROPOSED SANITARY SEWER LINE
- S EXISTING SANITARY SEWER LINE
- E PROPOSED ELECTRIC LINE
- OH EXISTING OVERHEAD LINE
- T PROPOSED TELEPHONE/CABLE LINE
- T EXISTING TELEPHONE/CABLE LINE
- G PROPOSED GAS LINE
- G EXISTING GAS LINE
- PROPOSED BUILDING
- PROPOSED ASPHALT REPLACEMENT (SEE DETAIL RT 1.0)
- PROPOSED ROW BRICK WALK (SEE DETAIL RT 26.0)
- PROPOSED ONSITE PEDESTRIAN PAVERS (SEE ARCH PLANS FOR DETAILS)
- PROPOSED PAVER DRIVEWAY (SEE DETAIL RT 28.0)
- PROPOSED TURF (SEE ARCH PLANS FOR DETAILS)
- PROPOSED 1" ASPHALT MILL/OVERLAY
- PROPOSED LIGHT POLE (SEE LANDSCAPE PLANS FOR DETAILS)
- PROPOSED BOLLARD LIGHT (SEE LANDSCAPE PLANS FOR DETAILS)

NOTE:
ELEVATION ARE SHOWN IN NAVD
CONVERSION NAVD+1.54 = NGVD

NOTE:
ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER OR DRAINAGE EASMENTS SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS: LD 1.0 & 2.0

Call 48 hours before you dig
It's the Law!
1-800-432-4770
Sunshine State One Call of Florida, Inc.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 INCH = 10 FT.

	09/05/24	MVK
REV PER CITY COMMENTS	08/29/24	JRH
REV PER CITY COMMENTS	07/15/24	JRH
REVISIONS	DATE	BY
FILE NAME 10577ENG.dwg		

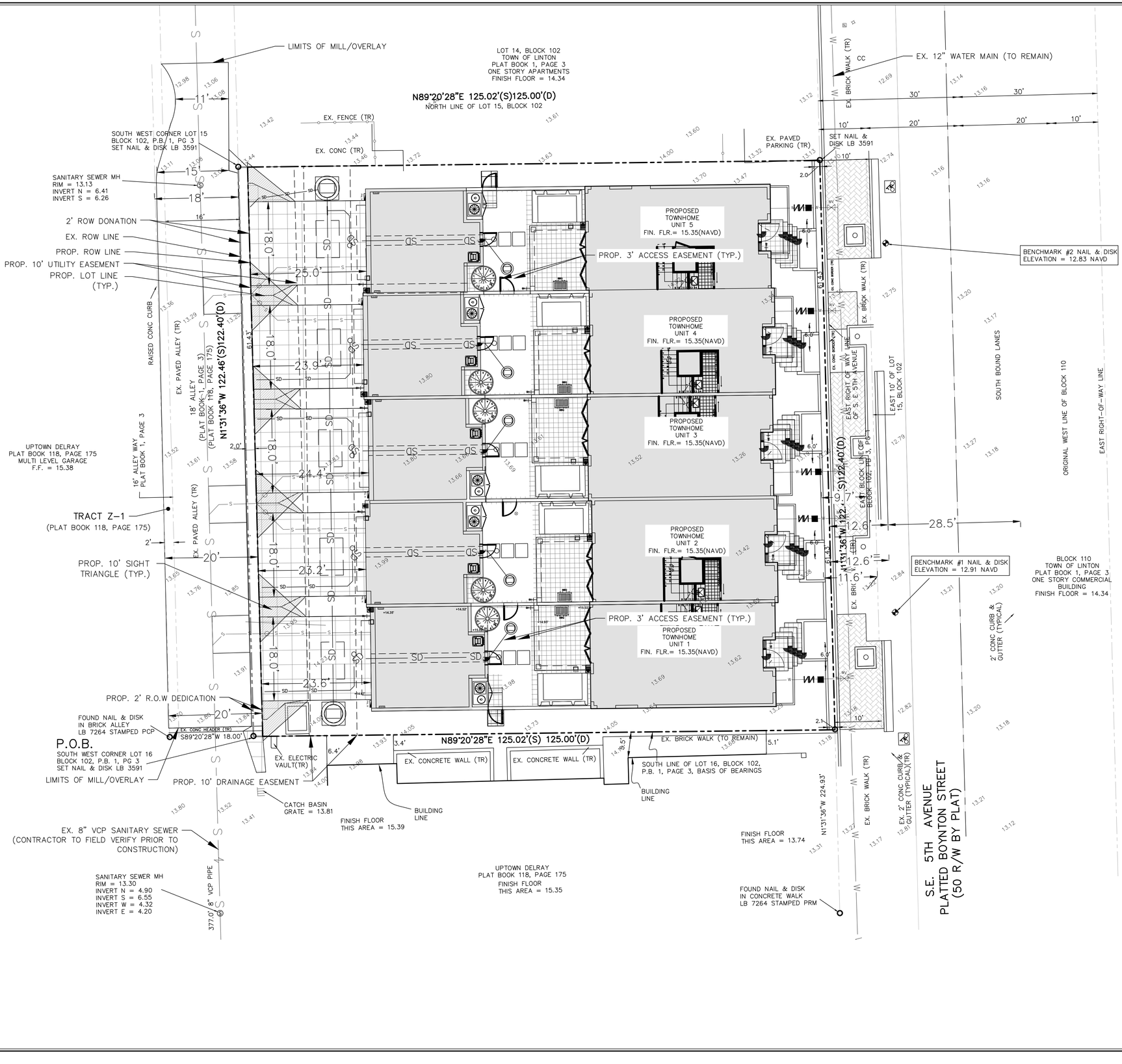
CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING SURVEYING
LANDSCAPE ARCHITECTURE SUITE 100
7900 GLADES ROAD 33434
BOCA RATON, FLORIDA
PHONE (561)-392-1991 / FAX (561)-750-1452

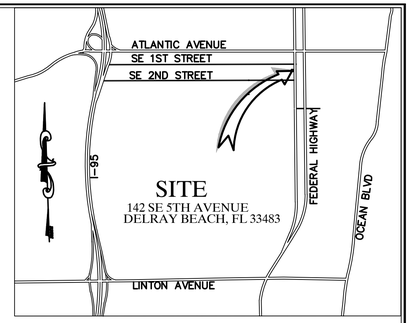
FIFTH AVENUE TOWNHOMES
PROPOSED TOWNHOMES
PROPOSED
DRAINAGE PLAN
142 SE 5TH AVE, DELRAY BEACH, FL 33483

DATE	10/18/23
DRAWN BY	JJB
F.B./ PG.	----
SCALE	1"= 10'

MATTHEW V. KAHN
PROFESSIONAL ENGINEER
LICENSE NO. 82227
STATE OF FLORIDA
- FOR THE FIRM -
DATE

JOB # 10577
SHT.NO.
PD-2A
OF 14 SHEETS





LEGEND

- EX. PROPERTY/ROW LINE
- PROP. PROPERTY/ROW LINE
- PLATTED EAST LINE
- PROPOSED DRAINAGE PIPE
- PROPOSED YARD DRAIN
- 15.51 EXISTING GRADE
- 16.50 PROPOSED GRADE
- MATCH EXISTING GRADE
- W PROPOSED WATER LINE
- W EXISTING WATER LINE
- S PROPOSED SANITARY SEWER LINE
- S EXISTING SANITARY SEWER LINE
- E PROPOSED ELECTRIC LINE
- OH EXISTING OVERHEAD LINE
- T PROPOSED TELEPHONE/CABLE LINE
- T EXISTING TELEPHONE/CABLE LINE
- G PROPOSED GAS LINE
- G EXISTING GAS LINE
- PROPOSED BUILDING
- PROPOSED ASPHALT REPLACEMENT (SEE DETAIL RT 1.0)
- PROPOSED ROW BRICK WALK (SEE DETAIL RT 26.0)
- PROPOSED ONSITE PEDESTRIAN PAVERS (SEE ARCH PLANS FOR DETAILS)
- PROPOSED PAVER DRIVEWAY (SEE DETAIL RT 28.0)
- PROPOSED TURF (SEE ARCH PLANS FOR DETAILS)
- PROPOSED 1" ASPHALT MILL/OVERLAY
- PROPOSED LIGHT POLE (SEE LANDSCAPE PLANS FOR DETAILS)
- PROPOSED BOLLARD LIGHT (SEE LANDSCAPE PLANS FOR DETAILS)

NOTE:
ELEVATION ARE SHOWN IN NAVD CONVERSION NAVD+1.54 = NGVD

NOTE:
ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER OR DRAINAGE EASMENTS SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS: LD 1.0 & 2.0

NOTE:
ALL SIGNAGE TO MATCH LATEST FDOT/MUTCD STANDARDS.

Call 48 hours before you dig
It's the Law!
1-800-432-4770
Sunshine State One Call of Florida, Inc.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 INCH = 10 FT.

NORTH

REVISIONS	DATE	BY
REV PER CITY COMMENTS	09/05/24	MVK
REV PER CITY COMMENTS	08/29/24	JRH
REV PER CITY COMMENTS	07/15/24	JRH

FILE NAME: 10577ENG.dwg

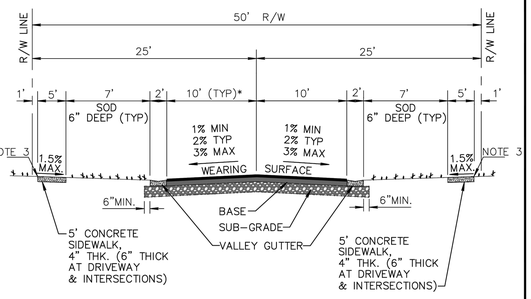
CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE SURVEYING
7900 GLADES ROAD SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

FIFTH AVENUE TOWNHOMES
PROPOSED TOWNHOMES
PROPOSED
PAVEMENT, MARKING & SIGNAGE PLAN
142 SE 5TH AVE, DELRAY BEACH, FL 33483

DATE 10/18/23
DRAWN BY JJB
F.B./ PG. ----
SCALE 1"= 10'

MATTHEW V. KAHN
PROFESSIONAL ENGINEER
LICENSE NO. 82227
STATE OF FLORIDA
– FOR THE FIRM –
DATE

JOB # 10577
SHT.NO.
PD–3
OF 14 SHEETS



PAVEMENT SPECIFICATIONS	
WEARING SURFACE	3" TYPE S-III (2 LIFTS) AFTER COMPACTION SEE NOTE 2
BASE	8" LIMEROCK OR 10" CRUSHED CONCRETE COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180. PRIME & TACK COAT PER FDOT SECTION 300.
SUBGRADE	12" STABILIZED (75 P.S.I. FBV) AND COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180.

NOTE:

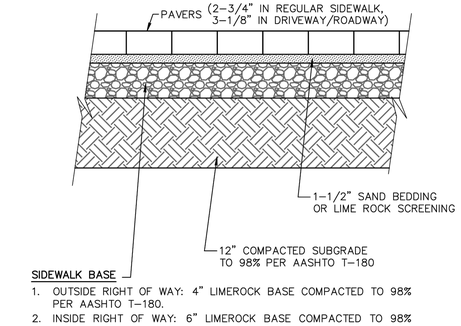
1. VARIATION FROM MATERIAL SPECIFICATIONS WILL BE CONSIDERED ON A CASE BY CASE BASIS BY THE CITY ENGINEER.
2. 2ND LIFT SHALL NOT BE PAVED UNTIL CONSTRUCTION VEHICLES AND EQUIPMENT HAVE COMPLETED WORK.
3. IN UNDEVELOPED LOCATION, ELEVATION TO BE SET EQUAL TO ROADWAY CROWN. IN PREVIOUSLY DEVELOPED AREAS, MATCH EXISTING GRADES.

* LANE WIDTHS MUST BE APPROVED BY CITY ENGINEERING PRIOR TO DESIGN.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL 50' R/W SECTION WITH VALLEY GUTTER

DATE: 09-15-2021
RT 1.0

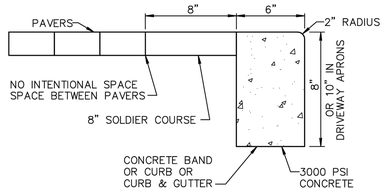


SIDEWALK BASE

1. OUTSIDE RIGHT OF WAY: 4" LIMEROCK BASE COMPACTED TO 98% PER AASHTO T-180.
2. INSIDE RIGHT OF WAY: 6" LIMEROCK BASE COMPACTED TO 98% PER AASHTO T-180 OR 4" FLOW-ABLE FILL (100 P.S.I. MIN.)

ROADWAY BASE

LIMEROCK BASE COMPACTED TO 98% PER AASHTO T-180 OR 6" FLOW-ABLE FILL (100 P.S.I. MIN.)



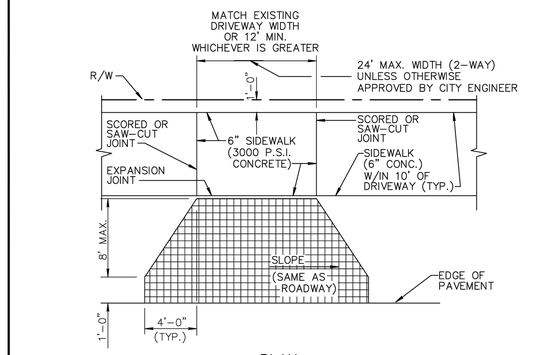
NOTE:

IF CITY APPROVES PAVERS TO BE USED IN LIEU OF CONCRETE SIDEWALK, PAVER SHALL BE HOLLAND-STONE, 45° HERRING BONE, RED/CHARCOAL, COLOR MIX #2.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

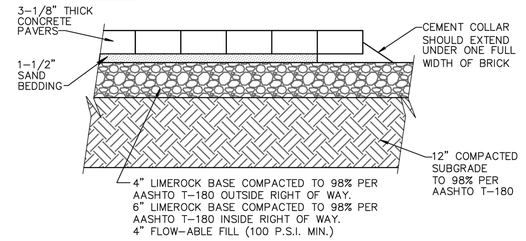
PAVER BRICK SECTION

DATE: 09-15-2021
RT 26.0



PLAN

NOTE: SIDEWALK SHALL BE CONSTRUCTED THROUGH DRIVEWAY.

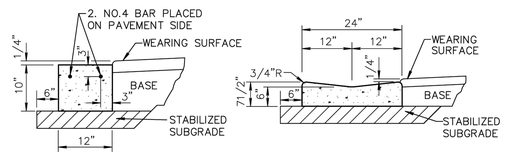


SECTION

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PAVER BRICK DRIVEWAY APRON

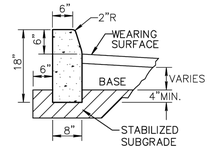
DATE: 09-15-2021
RT 28.0



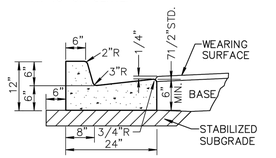
CONCRETE HEADER CURB
NOT TO SCALE

VALLEY GUTTER
NOT TO SCALE

NOTE: SAWCUTS REQUIRED AT 10' ON CENTER.



F.D.O.T. TYPE "D" 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.

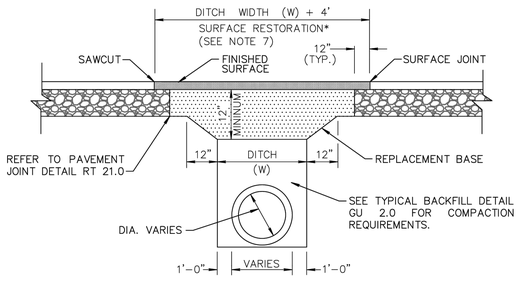
F.D.O.T. TYPE "F" CONCRETE CURB AND GUTTER
NOT TO SCALE

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

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

CURB AND GUTTER SECTIONS

DATE: 9-15-2021
RT 19.0



1. REPLACEMENT BASE TO BE AT MIN. 12" THICK.

2a. BASE MATERIAL SHALL BE PLACED IN TWO LIFTS AND EACH LIFT COMPACTED TO 98% MAXIMUM DENSITY PER AASHTO T-180 (MAX. LIFT THICKNESS = 6").

2b. 24" EXCAVATABLE FLOWABLE FILL MIN. 100 P.S.I. MAY BE USED IN LIEU OF 12" BASE.

3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.

4. ALL DISTURBED PAVEMENT MARKINGS SHALL BE RESTORED IN ACCORDANCE WITH CITY STANDARDS.

5. SURFACE MATERIAL SHALL BE S-III ASPHALTIC CONCRETE (THICKNESS SHOULD BE TWICE THE THICKNESS OF THE ADJACENT EXISTING ASPHALT).

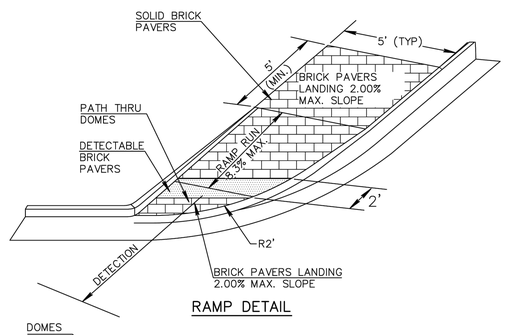
6. ANY PAVEMENT CUTS SHALL BE COLD PATCHED AT END OF EACH WORKING DAY TO FACILITATE UNHINDERED TRAFFIC FLOW.

7. ROADWAYS SHALL BE MILLED AND RESURFACED 50' IN EACH DIRECTION AT TIME OF PAVEMENT REPAIR THE SURFACE RESTORATION SHALL EXTEND 50' IN EACH DIRECTION.

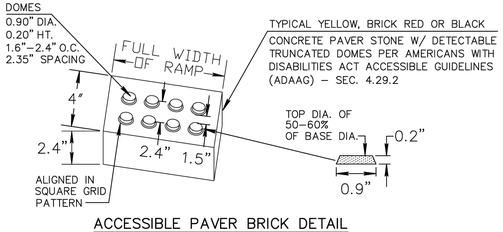
CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PAVEMENT REPAIR DETAIL

DATE: 09-15-2021
GU 1.0



RAMP DETAIL



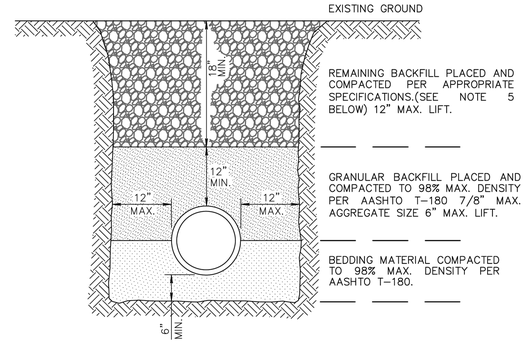
ACCESSIBLE PAVER BRICK DETAIL

1. IN ADDITION TO CURB RAMPS TRUNCATED DOMES ARE REQUIRED AT ALL AREAS OF PERIL. NOT REQUIRED AT RESIDENTIAL DRIVEWAYS CROSSINGS OR CUT-THROUGH REFUGE ISLANDS LESS THAN 6' IN LENGTH.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

DETECTABLE WARNING RAMP IN PAVER SIDEWALK TYPICAL DETAIL

DATE: 09-15-2021
RT 29.0



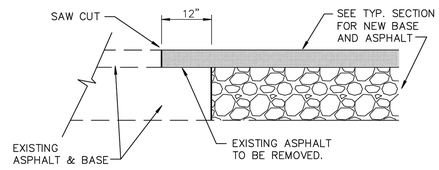
NOTES:

1. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGE ROCKS SHALL BE REMOVED OFF SITE AND DISPOSED IN A PROPER LANDFILL; BEDDING MATERIAL AND BACKFILL CONSISTING OF WASHED AND GRADED LIMEROCK 3/8" -7/8" SIZING.
2. THE PIPE AND/OR STRUCTURE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
3. THE PIPE AND/OR STRUCTURE SHALL BE PLACED IN A DRY TRENCH.
4. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGE ROCK, MUCK, AND DEBRIS.
5. COMPACT BACKFILL TO 98% DENSITY UNDER PAVEMENT AND TO 95% DENSITY ELSEWHERE.(AASHTO T-180)
6. 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.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL BACKFILL DETAIL

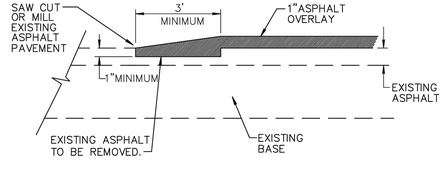
DATE: 09-15-2021
GU 2.0



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.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PAVEMENT JOINT DETAIL

DATE: 09-15-2021
RT 21.0

	DATE	BY
REV PER CITY COMMENTS	09/05/24	MVK
REV PER CITY COMMENTS	08/29/24	JRH
REV PER CITY COMMENTS	07/18/24	JRH
REVISIONS	DATE	BY

FILE NAME: 10577ENG.dwg

CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

FIFTH AVENUE TOWNHOMES
PROPOSED TOWNHOMES
PROPOSED PAVING, GRADING & DRAINAGE DETAILS
142 SE 5TH AVE, DELRAY BEACH, FL 33483

DATE	10/18/23
DRAWN BY	JJB
F.B./ PG.	----
SCALE	N/A

MATTHEW V. KAHN
PROFESSIONAL ENGINEER
LICENSE NO. 82227
STATE OF FLORIDA
- FOR THE FIRM -
DATE

JOB # 10577
SHT.NO.
PD-4
OF 14 SHEETS

Drawing: P:\10577-00-00-00\drawings\dwg\details\10577DETAILS-PSD_DELRAY.dwg VPS5-DETAILS_SHT-PD-4

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 alkyd 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 sheres 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.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PAVEMENT MARKING SPECIFICATIONS (SHEET 1 OF 2)

DATE: 09-15-2021
RT 22.0

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 alkyd thermoplastic on asphalt and epoxy on concrete.

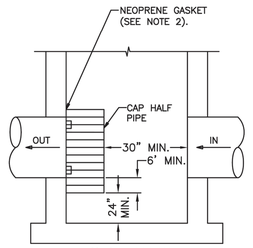
OTHER NOTES

- 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.

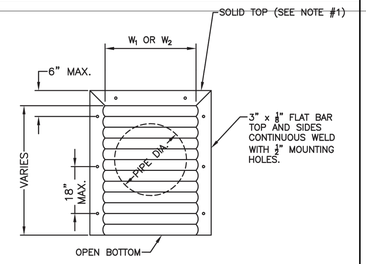
CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PAVEMENT MARKING SPECIFICATIONS (SHEET 2 OF 2)

DATE: 09-15-2021
RT 22.1



SIDE VIEW

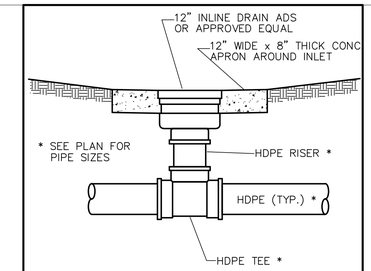


FRONT VIEW

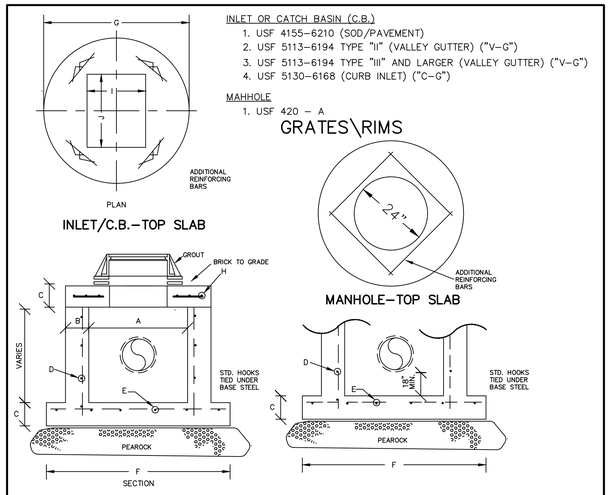
DISCHARGE PIPE DIAMETER	WEIR DIAMETER (W_1)	WEIR DIAMETER (W_2)	GAUGE (T)
15"	21"	21"	16
18"	24"	24"	16
24"	30"	36"	16
30"	36"	42"	14
36"	42"	48"	14
42"	48"	54"	14
48"	54"	60"	14
54"	60"	66"	14

NOTES:
1. ALUMINUM SHEET OF SAME THICKNESS (GAUGE) AS PIPE SHALL BE WELDED TO CLOSE THE OPENING AT THE TOP.
2. NEOPRENE ADHESIVE BACKED GASKET, OR APPROVED EQUAL (1"x3") SHALL BE INSTALLED ON THE SIDES AND TOP OF ALL BAFFLES.
3. POLLUTION RETARDANT BAFFLE TO BE FASTENED IN PLACE WITH 3/16"x4" STAINLESS STEEL "RED HEADS," OR APPROVED EQUAL.
4. MOUNTING BRACKETS MAY BE ADDED TO FLAT BARS TO EASE INSTALLATION IN ROUND STRUCTURES. SPACING TO MATCH HOLES IN FLAT BARS.

POLLUTANT RETARDANT BAFFLE DETAIL N.T.S.



YARD INLET DETAIL



INLET OR CATCH BASIN (C.B.)
1. USF 4155-6210 (SOD/PAVEMENT)
2. USF 5113-6194 TYPE "II" (VALLEY GUTTER) ("V-G")
3. USF 5113-6194 TYPE "III" AND LARGER (VALLEY GUTTER) ("V-G")
4. USF 5130-6168 (CURB INLET) ("C-G")

MAHHOLE
1. USF 420 - A

INLET/C.B.-TOP SLAB

GRATES\RIMS

MANHOLE-TOP SLAB

PRECAST INLET TYPE II-IV

PRECAST CATCH BASIN TYPE II-IV

PIPE DIA.	TYPE	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"
15"-24"	II	4'-0" Φ	8"	8"	#4 @ 12" C.C.E.W.	#4 @ 12" C.C.E.W.	6'-4"Φ	5'-4"Φ	#4 @ 6" C.C.E.W.	22"	22"
30"-36"	III	5'-0" Φ	8"	8"	#5 @ 12" C.C.E.W.	#5 @ 12" C.C.E.W.	7'-4"Φ	6'-4"Φ	#5 @ 8" C.C.E.W.	22"	46"
42"-48"	IV	6'-0" Φ	8"	10"	#5 @ 12" C.C.E.W.	#5 @ 6" C.C.E.W.	8'-4"Φ	7'-4"Φ	#5 @ 6" C.C.E.W.	22"	46"
54"	V	8'-0" Φ	10"	10"	2-W.W.M. W/4 12" C.C. VERT.	#5 @ 6" C.C.E.W.	10'-8"Φ	9'-8"Φ	#5 @ 6" C.C.E.W.	22"	46"

REV PER CITY COMMENTS	09/05/24	MVK
REV PER CITY COMMENTS	08/29/24	JRH
REV PER CITY COMMENTS	07/18/24	JRH
REVISIONS	DATE	BY

FILE NAME: 10577ENG.dwg

CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

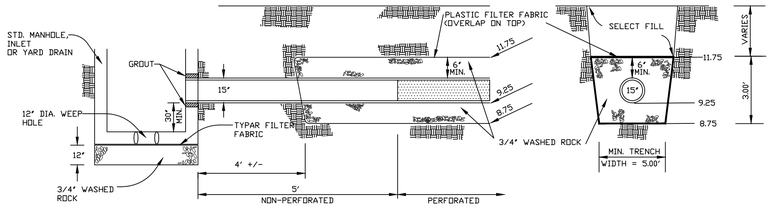
FIFTH AVENUE TOWNHOMES
PROPOSED TOWNHOMES
PROPOSED PAVING,
GRADING & DRAINAGE DETAILS
142 SE 5TH AVE, DELRAY BEACH, FL 33483

DATE	10/18/23
DRAWN BY	JJB
F.B./ PG.	----
SCALE	N/A

MATTHEW V. KAHN
PROFESSIONAL ENGINEER
LICENSE NO. 82227
STATE OF FLORIDA
- FOR THE FIRM -
DATE

JOB # 10577
SHT.NO.
PD-5
OF 14 SHEETS

Drawing: P:\10577-00-00\Drawings\sheets\10577DETAILS-PSD_DELRAY.dwg\PSD-DETAILS_SHT-PD-5



LONGITUDINAL VIEW CROSS - SECTION

NOTES:

1. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT CONTAMINATION OF THE TRENCH BY SAND, SILT, OR OTHER MATERIAL.
2. THE CONTRACTOR SHALL INSTALL
   A. PERFORATED RCP IN ACCORDANCE WITH F.DO.T. REQUIREMENTS.
   B. 'HP STORM' IN ACCORDANCE WITH F.DO.T. REQUIREMENTS.
3. NO PIPE PERFORATIONS FOR THE FIRST 5 FEET FROM THE INLET OR MANHOLE.
4. PIPE PERFORATIONS SHALL BE PER FDOT REQUIREMENTS
5. SEE DETAILS OF MANHOLE AND/OR INLET FOR CONSTRUCTION DETAILS OF SAME.
6. PLASTIC FILTER FABRIC SHALL CONFORM TO D.O.T. SECTION 985 OR APPROVED EQUAL.
7. PRIOR TO BACKFILLING ANY DRAINAGE STRUCTURES, THE CITY ENGINEERING DEPARTMENT SHALL BE GIVEN 24 HOURS NOTICE IN ORDER TO SCHEDULE AN INSPECTION OF THE FACILITY.

FRENCH DRAIN DETAIL

N.T.S.

REVISIONS	DATE	BY
REV PER CITY COMMENTS	09/05/24	MVK
REV PER CITY COMMENTS	08/29/24	JRH
REV PER CITY COMMENTS	07/18/24	JRH

FILE NAME: 10577-ENG.dwg

CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

FIFTH AVENUE TOWNHOMES
PROPOSED TOWNHOMES
PROPOSED PAVING,
GRADING & DRAINAGE DETAILS
142 SE 5TH AVE, DELRAY BEACH, FL 33483

DATE	10/18/23
DRAWN BY	JJB
F.B./ PG.	----
SCALE	N/A

MATTHEW V. KAHN
PROFESSIONAL ENGINEER
LICENSE NO. 82227
STATE OF FLORIDA
- FOR THE FIRM -
DATE

JOB # 10577
SHT.NO.
PD-6
OF 14 SHEETS

NOTE: CONTRACTOR IS REQUIRED TO ASBUILT WATER, SEWER, DRAINAGE AND FINAL GRADING ELEVATIONS PER THE REQUIREMENTS OF FDOT/CITY OF DELRAY BEACH

LIMITS OF MILL/OVERLAY

LOT 14, BLOCK 102
TOWN OF LINTON
PLAT BOOK 1, PAGE 3
ONE STORY APARTMENTS
FINISH FLOOR = 14.34

N89°20'28"E 125.02'(S)125.00'(D)
NORTH LINE OF LOT 15, BLOCK 102

SOUTH WEST CORNER LOT 15
BLOCK 102, P.B.1, PG 3
SET NAIL & DISK LB 3591

EX. FENCE (TR)

EX. CONC (TR)

EX. PAVED PARKING (TR)

SET NAIL & DISK LB 3591

EX. 12" WATER MAIN (TO REMAIN)

EX. BRICK WALK (TR)

SANITARY SEWER MH
RIM = 13.13
INVERT N = 6.41
INVERT S = 6.26

2' ROW DONATION

EX. ROW LINE

PROP. ROW LINE

PROP. 10' UTILITY EASEMENT

PROP. 6" PVC SEWER LATERAL (TYP)
(1% MIN. SLOPE + 2' MIN. COVER)

TIE PROPOSED SEWER LINES TO
EXISTING SEWER MAIN (TYP.)
(COORDINATE WITH DELRAY UTILITIES)

RAISED CONC CURB

EX. PAVED ALLEY (TR)

18' ALLEY
(PLAT BOOK-1, PAGE 3)
(PLAT BOOK 118, PAGE 175)

N1°31'36"W 122.46'(S)122.40'(D)

61.43'

CONTRACTOR TO MAINTAIN 18"
MIN VERTICAL SEPARATION
BETWEEN UTILITIES (TYP.)

PROP. 3' ACCESS EASEMENT (TYP.)

PROPOSED
TOWNHOME
UNIT 5
FIN. FLR.= 15.35(NAVD)

PROP. CLEANOUT (END OF
CITY RESPONSIBILITY) (TYP.)
RIM ELEV.= 13.20'
INV.= 10.70'

PROP. CLEANOUT (END OF
CITY RESPONSIBILITY) (TYP.)
RIM ELEV.= 13.35'
INV.= 10.85'

PROPOSED
TOWNHOME
UNIT 4
FIN. FLR.= 15.35(NAVD)

EX. WATER METER/SERVICE
(TBR) TO BE REMOVED AND
CAPPED AT CORP. STOP

PROPOSED
TOWNHOME
UNIT 3
FIN. FLR.= 15.35(NAVD)

PROP. CLEANOUT (END OF
CITY RESPONSIBILITY) (TYP.)
RIM ELEV.=13.55'
INV.= 11.05'

PROP. CLEANOUT (END OF
CITY RESPONSIBILITY) (TYP.)
RIM ELEV.= 13.75'
INV.= 11.25'

PROPOSED
TOWNHOME
UNIT 2
FIN. FLR.= 15.35(NAVD)

EX. WATER METER/SERVICE
(TBR) TO BE REMOVED AND
CAPPED AT CORP. STOP

PROP. CLEANOUT (END OF
CITY RESPONSIBILITY) (TYP.)
RIM ELEV.=13.97'
INV.= 11.47'

PROP. 3' ACCESS EASEMENT (TYP.)

PROPOSED
TOWNHOME
UNIT 1
FIN. FLR.= 15.35(NAVD)

TIE PROPOSED ELECTRIC
LINES TO EXISTING
SERVICES (COORDINATE
WITH FPL)

PROP. 2" PE DOMESTIC WATER
SERVICE, 1.5" DOMESTIC W.M.
(END OF CITY RESPONSIBILITY)
W/ 2" CORP STOP & 2" RPZ

TIE PROPOSED WATER LINES TO
EXISTING WATER MAIN (TYP.)
(COORDINATE WITH DELRAY UTILITIES)

BENCHMARK #2 NAIL & DISK
ELEVATION = 12.83 NAVD

PROP. 2" PE DOMESTIC WATER
SERVICE, 1.5" DOMESTIC W.M.
(END OF CITY RESPONSIBILITY)
W/ 2" CORP STOP & 2" RPZ

TIE PROPOSED WATER LINES TO
EXISTING WATER MAIN (TYP.)
(COORDINATE WITH DELRAY UTILITIES)

EAST 10' OF LOT
15, BLOCK 102

SOUTH BOUND LA

EAST RIGHT-OF-WAY LINE
OF S. E 5TH AVENUE

EAST BLOCK LINE OF
BLOCK 102, P.B. 3, PG

ORIGINAL WEST LINE OF BLOCK 110

EAST RIGHT-OF-WAY LINE

PROP. 2" PE DOMESTIC WATER
SERVICE, 1.5" DOMESTIC W.M.
(END OF CITY RESPONSIBILITY)
W/ 2" CORP STOP & 2" RPZ

PROP. 2" PE DOMESTIC WATER
SERVICE, 1.5" DOMESTIC W.M.
(END OF CITY RESPONSIBILITY)
W/ 2" CORP STOP & 2" RPZ

BENCHMARK #1 NAIL & DISK
ELEVATION = 12.91 NAVD

BLOCK 110
TOWN OF LINTON
PLAT BOOK 1, PAGE 3
ONE STORY COMMERCIAL
BUILDING
FINISH FLOOR = 14.34

2' CONC CURB &
GUTTER (TYPICAL)

CONTRACTOR TO REPLACE IN
KIND EX. SIDEWALK &
PAVEMENT DAMAGED BY
UNDERGROUND WATER SERVICE
INSTALLATION (TYP.)

PROP. 2" PE DOMESTIC WATER
SERVICE, 1.5" DOMESTIC W.M.
(END OF CITY RESPONSIBILITY)
W/ 2" CORP STOP & 2" RPZ

EX. 2' CONC CURB &
GUTTER (TYPICAL)(TR)

S.E. 5TH AVENUE
PLATTED BOYNTON STREET
(50 R/W BY PLAT)

UPTOWN DELRAY
PLAT BOOK 118, PAGE 175
MULTI LEVEL GARAGE
F.F. = 15.38

16' ALLEY WAY
PLAT BOOK 1, PAGE 3

PROP. 6" PVC SEWER LATERAL (TYP)
(1% MIN. SLOPE + 2' MIN. COVER)

TRACT Z-1
(PLAT BOOK 118, PAGE 175)

TIE PROPOSED SEWER LINES TO
EXISTING SEWER MAIN (TYP.)
(COORDINATE WITH DELRAY UTILITIES)

EX. PAVED ALLEY (TR)

2'

PROP. 6" PVC SEWER LATERAL (TYP)
(1% MIN. SLOPE + 2' MIN. COVER)

TIE PROPOSED SEWER LINES TO
EXISTING SEWER MAIN (TYP.)
(COORDINATE WITH DELRAY UTILITIES)

TIE PROPOSED TELECOM LINES TO
EXISTING SERVICES (COORDINATE
WITH TELECOM PROVIDER)

PROP. 2' R.O.W DEDICATION

FOUND NAIL & DISK
IN BRICK ALLEY
LB 7264 STAMPED PCP

EX. CONC HEADER (TR)

S89°20'28"W 18.00'

P.O.B.
SOUTH WEST CORNER LOT 16
BLOCK 102, P.B. 1, PG 3
SET NAIL & DISK LB 3591

LIMITS OF MILL/OVERLAY

PROP. TRANSFORMER
(PER FPL STANDARDS)

EX. ELECTRIC
VAULT(TR)

PROP. 10' DRAINAGE EASEMENT

N89°20'28"E 125.02'(S) 125.00'(D)

EX. CONCRETE WALL (TR)

EX. CONCRETE WALL (TR)

EX. BRICK WALK (TO REMAIN)

SOUTH LINE OF LOT 16, BLOCK 102,
P.B. 1, PAGE 3, BASIS OF BEARINGS

BUILDING
LINE

CATCH BASIN
GRATE = 13.81

FINISH FLOOR
THIS AREA = 15.39

BUILDING
LINE

EX. 8" VCP SANITARY SEWER
(CONTRACTOR TO FIELD VERIFY PRIOR TO
CONSTRUCTION)

SANITARY SEWER MH
RIM = 13.30
INVERT N = 4.90
INVERT S = 6.55
INVERT W = 4.32
INVERT E = 4.20

377'-0" 8" VCP PIPE

UPTOWN DELRAY
PLAT BOOK 118, PAGE 175
FINISH FLOOR
THIS AREA = 15.35

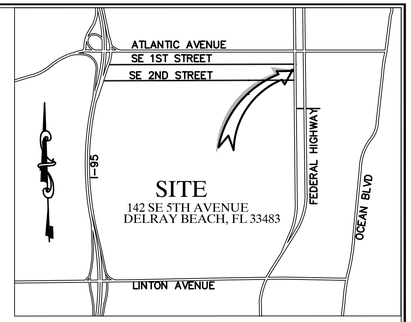
FINISH FLOOR
THIS AREA = 13.74

N1°31'36"W 224.93'

FOUND NAIL & DISK
IN CONCRETE WALK
LB 7264 STAMPED PRM

NOTE:
ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER OR DRAINAGE EASMENTS SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS: LD 1.0 & 2.0

NOTE:
ELEVATION ARE SHOWN IN NAVD
CONVERSION NAVD+1.54 = NGVD



NOTE: WM SIZES SHALL BE DESIGNED BY E.O.R. AND SHALL BE CHECKED AND AUTHORIZED BY THE CITY OF DELRAY BEACH UTILITIES DIVISION

LEGEND

- EX. PROPERTY/ROW LINE
- PROP. PROPERTY/ROW LINE
- PLATTED EAST LINE
- PROPOSED DRAINAGE PIPE
- PROPOSED YARD DRAIN
- 15.55 EXISTING GRADE
- 16.50 PROPOSED GRADE
- 17.25 MATCH EXISTING GRADE
- W PROPOSED WATER LINE
- W EXISTING WATER LINE
- S PROPOSED SANITARY SEWER LINE
- S EXISTING SANITARY SEWER LINE
- E PROPOSED ELECTRIC LINE
- OH EXISTING OVERHEAD LINE
- T PROPOSED TELEPHONE/CABLE LINE
- T EXISTING TELEPHONE/CABLE LINE
- G PROPOSED GAS LINE
- G EXISTING GAS LINE
- PROPOSED BUILDING
- PROPOSED ASPHALT REPLACEMENT (SEE DETAIL RT 1.0)
- PROPOSED ROW BRICK WALK (SEE DETAIL RT 26.0)
- PROPOSED ONSITE PEDESTRIAN PAVERS (SEE ARCH PLANS FOR DETAILS)
- PROPOSED PAVER DRIVEWAY (SEE DETAIL RT 28.0)
- PROPOSED TURF (SEE ARCH PLANS FOR DETAILS)
- PROPOSED 1" ASPHALT MILL/OVERLAY
- PROPOSED LIGHT POLE (SEE LANDSCAPE PLANS FOR DETAILS)
- PROPOSED BOLLARD LIGHT (SEE LANDSCAPE PLANS FOR DETAILS)

Call 48 hours before you dig
It's the Law!
1-800-432-4770
Sunshine State One Call of Florida, Inc.

FDOT OPEN CUT RESTORATION REQUIREMENTS:

1. BASE MATERIAL (LIME ROCK ONLY) IS 15-1/2" IN DEPTH AND SHALL BE STEP-CUT AT 8" V : 12" H, AFTER FIRST LIFT.
2. ENSURE BASE ROCK TOP LIFT IS BLENDED WITH EXISTING BASE MATERIAL; AND ASPHALT IS STRAIGHT CUT A MINIMUM OF 18" FROM BLENDED BASE ROCK (ALONG PERIMETER).
3. REPLACE STRUCTURAL ASPHALT (MATCH EXISTING THICKNESS BUT NO LESS THAN 3") WITH SP 12.5 TLC (WITH RUBBER).
4. RUN TRAFFIC ON PERMANENT PATCH FOR 30 DAYS PRIOR TO MILLING AFFECTED LANES AND INSTALL TEMPORARY PAINT STRIPES, MARKINGS AND RPM'S, IF APPLICABLE.
5. MILL (1-5/8") 50' EITHER SIDE OF THE PERMANENT ASPHALT PATCH AND REPLACE WITH FC-12.5 TLC (WITH RUBBER) OF THE AFFECTED LANE(S).
6. RETURN MILLINGS TO PB OPERATION YARD, AT PERMITTEE'S EXPENSE OR AS DIRECTED BY THE LOCAL RESIDENT OPERATIONS ENGINEER OR DESIGNEE.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 INCH = 10 FT.

REVISIONS	DATE	BY
REV. PER CITY COMMENTS	09/05/24	MVK
REV. PER CITY COMMENTS	08/29/24	JRH
REV. PER CITY COMMENTS	07/15/24	JRH

FILE NAME: 10577ENG.dwg

CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING SURVEYING
LANDSCAPE ARCHITECTURE SUITE 100
7900 GLADES ROAD BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

FIFTH AVENUE TOWNHOMES
PROPOSED WATER DISTRUBUTION, PROPOSED TOWNHOMES
SANITARY SEWER & UTILITY PLAN
142 SE 5TH AVE, DELRAY BEACH, FL 33483

DATE 10/18/23
DRAWN BY JJB
F.B./ PG. ----
SCALE 1"= 10'

MATTHEW V. KAHN
PROFESSIONAL ENGINEER
LICENSE NO. 82227
STATE OF FLORIDA
- FOR THE FIRM -
DATE

JOB # 10577
SHT.NO.
WS-1
OF 14 SHEETS

PRESSURE PIPE NOTES:

1. FOR PIPE SIZES 4"–8" THERE SHALL BE 30" MINIMUM COVER FROM FINISHED GRADE TO TOP OF PIPE. FOR PIPE SIZE 10" AND LARGER THERE SHALL BE 36" MINIMUM COVER.

2.a. DUCTILE IRON PIPE (DIP) FOR FORCE MAINS SHALL BE CLASS 350 WITH 401 EPOXY LINED IN ACCORDANCE WITH AWWA C550.

2.b. DUCTILE IRON PIPE (DIP) FOR WATER MAINS SHALL BE CLASS 350 IN ACCORDANCE WITH AWWA C151 (ANSI A21.51), AND SHALL HAVE AN INTERNAL LINING OF CEMENT MORTAR IN ACCORDANCE WITH AWWA C104/ A21.4.

3. C-900 PVC PRESSURE PIPE MAY BE USED IN LIEU OF DIP WATER MAIN WITH METAL TAPE AND WIRE ABOVE THE PIPE.

4. ALL FITTINGS FOR FORCE MAIN SHALL BE CLASS 350 DUCTILE IRON WITH MECHANICAL JOINTS AND 401 EPOXY LINING.

5. WATER MAIN VALVES 12 INCHES AND SMALLER SHALL BE RESILIENT–SEAL WEDGE GATE VALVES IN ACCORDANCE WITH AWWA C509. WATER MAIN VALVES LARGER THAN 12 INCHES SHALL BE BUTTERFLY VALVES IN ACCORDANCE WITH AWWA C504. SEWAGE FORCE MAIN VALVES SHALL BE RESILIENT–SEAL PLUG VALVES IN ACCORDANCE WITH AWWA C517.

6. ALL TRENCHING, PIPE–LAYING, BACKFILL, PRESSURE TESTING, AND DISINFECTION MUST COMPLY WITH CITY AND LOCAL GOVERNMENTAL REGULATIONS AND STANDARDS.

7. WATER AND FORCE MAINS SHALL BE PIGGED A MINIMUM OF TWO TIMES, AND ADDITIONALLY, IF REQUIRED BY ENGINEER OF RECORD, AS WELL AS, PRESSURE TESTED FOR A PERIOD OF NOT LESS THAN TWO HOURS AT 150 PSI IN ACCORDANCE WITH ANSI/AWWA C600 LATEST STANDARDS. ALLOWABLE LEAKAGE SHALL BE DETERMINED AS FOLLOWS:

$$L = \frac{SD\sqrt{P}}{148{,}000}$$

WHERE:

L = ALLOWABLE LEAKAGE (GALLONS PER HOUR)
S = PIPE LENGTH (FEET)
D = NOMINAL DIAMETER OF PIPE (INCHES)
P = AVERAGE TEST PRESSURE (PSI)

8. RESTRAINTS SHALL BE PROVIDED AT ALL FITTINGS AS SHOWN ON PP 2.0 AND 2.1

9. PRIOR TO ANY TESTING UNDER FUTURE PAVEMENT, ROCK SHALL BE FINISHED & PRIMED OR 1ST LIFT OF ASPHALT PLACED.

10. PIG SIZE SHALL BE PIPE DIAMETER PLUS 2" OR NEXT LARGER DIAMETER.

11. NO PROPOSED STRUCTURES SHALL BE INSTALLED WITHIN A HORIZONTAL DISTANCE OF 10–FEET FROM ANY EXISTING OR PROPOSED WATER OR FORCE MAINS.

12. LINE STOPS SHALL BE INSTALLED A MINIMUM OF 3 PIPE LENGTHS FROM LOCATION OF PIPE REMOVED AND PROVIDE NECESSARY JOINT RESTRAINTS.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PRESSURE PIPE NOTES

DATE: 09–15–2021
PP 1.0

MINIMUM LENGTHS OF PIPE (FT) TO BE RESTRAINED

FITTING TYPE		PIPE SIZE 4"	6"	8"	10"	12"	16"	20"	24"
90° HORIZ. BEND		14	20	25	30	35	45	54	62
45° HORIZ. BEND		6	8	11	13	15	19	22	26
22.5° HORIZ. BEND		3	4	5	6	7	9	11	12
11.25° HORIZ. BEND		1	2	3	3	4	4	5	6
90° VERT. OFFSET	UPPER BEND	55	79	103	125	147	189	228	266
	LOWER BEND	22	38	49	59	69	88	106	123
45° VERT. OFFSET	UPPER BEND	22	32	42	51	60	77	93	109
	LOWER BEND	10	14	19	23	28	35	43	50
22.5° VERT. OFFSET	UPPER BEND	7	12	17	21	26	34	42	49
	LOWER BEND	2	4	6	8	10	14	17	21
11.25° VERT. OFFSET	UPPER BEND	3	4	6	9	11	15	19	22
	LOWER BEND	1	1	1	2	3	5	7	8
PLUG (DEAD END)		32	45	59	70	83	107	129	151
INLINE VALVE		32	45	59	70	83	107	129	151
TEE (BRANCH RESTRAINT)	4" X ø"	23							
	6" X ø"	21	35						
	8" X ø"	18	34	47					
	10" X ø"	16	32	46	58				
	12" X ø"	13	30	44	57	69			
	16" X ø"	7	26	41	55	67	90		
	20" X ø"	1	21	38	52	65	88	109	
	24" X ø"	1	16	34	49	62	86	108	129
REDUCER (LARGER PIPE RESTRAINT)	6" X ø"	23							
	8" X ø"	38	25						
	10" X ø"	57	43	24					
	12" X ø"	72	60	44	41				
	16" X ø"	99	90	78	75	45			
	20" X ø"	123	116	107	105	81	45		
	24" X ø"	146	140	132	131	111	82	45	

RESTRAIN PIPE ONE BELL PAST MINIMUM DISTANCE

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PIPE RESTRAINT TABLE
PRESSURE PIPE
(SHEET 1 OF 2)

DATE: 09–15–2021
PP 2.0

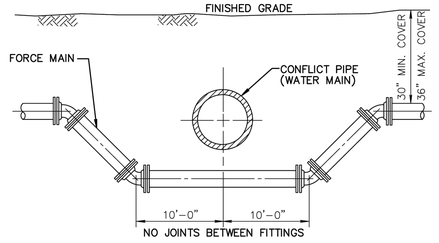
NOTES:

1. THE DATA IN THE PREVIOUS TABLE IS BASED UPON THE FOLLOWING INSTALLATION CONDITIONS:
   SOIL TYPE .....SAND
   TEST PRESSURE .....150 PSI, 200 PSI FOR PIPES LARGER THAN 24"
   DEPTH OF BURY .....3'
   TRENCH TYPE 3
   SAFETY FACTOR 1.5
   VERTICAL OFF–SET .....3'
   MINIMUM PIPE LENGTHS
   ALONG TEE RUN .....5'
2. THE RESTRAINED PIPE LENGTHS APPLY TO DUCTILE IRON PIPE AND PVC PIPE.
3. ALL JOINTS BETWEEN UPPER AND LOWER BENDS SHALL BE RESTRAINED.
4. RESTRAINED PIPE LENGTHS FOR VALVES APPLY TO PIPE ON BOTH SIDES OF VALVES
5. THE PREVIOUS TABLE SHALL SERVE AS A GENERAL DESIGN GUIDE ONLY. IT IS THE ENGINEER OF RECORD'S RESPONSIBILITY TO JUSTIFY AND DOCUMENT ANY DEVIATIONS FROM THE PIPE LENGTHS SPECIFIED IN THE PREVIOUS TABLE.
6. SOURCES: EBAA IRON RESTRAINT LENGTH CALCULATION PROGRAM FOR PVC PIPE, RELEASE 3.1 (LATEST EDITION) AND DIPRA RESTRAINT FOR DUCTILE IRON PIPE, RELEASE 3.2 (LATEST EDITION).
7. RESTRAINED JOINTS SHALL EXTEND ONE JOINT BEYOND MINIMUM LENGTH REQUIRED.

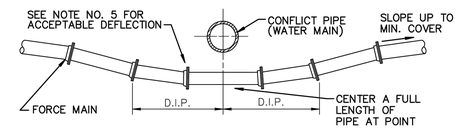
CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PIPE RESTRAINT TABLE
PRESSURE PIPE
(SHEET 2 OF 2)

DATE: 09–15–2021
PP 2.1



FITTING TYPE



DEFLECTION TYPE

NOTES:

1. THERE SHALL BE IN ALL CASES A MINIMUM OF 18" VERTICAL SEPARATION BETWEEN WATER MAINS AND FORCE MAINS.
2. WHEREVER POSSIBLE WATER MAINS SHALL PASS OVER FORCE MAINS OR STORM SEWERS.
3. FITTINGS SHALL BE RESTRAINED WITH MECHANICAL JOINT RESTRAINTS.
4. THE DEFLECTION TYPE CROSSING IS PREFERRED.
5. DO NOT EXCEED 75% OF MANUFACTURERS RECOMMENDED MAXIMUM JOINT DEFLECTION.
6. REFER TO TYPICAL RESTRAINING DETAIL PP 2.0 AND 2.1

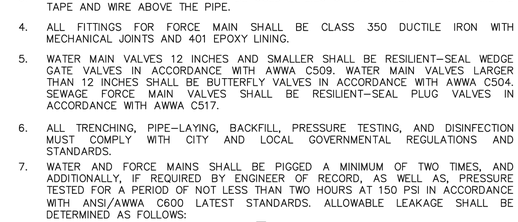
CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PRESSURE PIPE CONFLICT TABLE

DATE: 09–15–2021
PP 3.0

REV PER CITY COMMENTS	09/05/24 MVK
REV PER CITY COMMENTS	08/29/24 JRH
REV PER CITY COMMENTS	07/18/24 JRH
REVISIONS	DATE BY
FILE NAME: 10577ENG.dwg	

CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE – SURVEYING
7900 GLADES ROAD – SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452



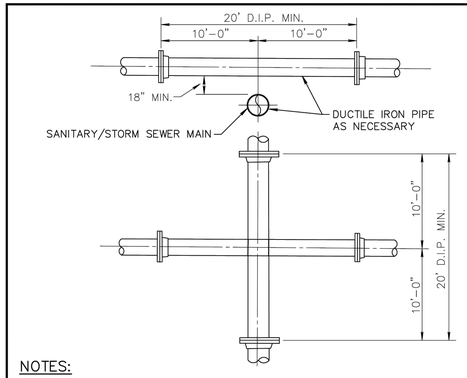
NOTES:

1. BOTH VALVES SHALL BE KEPT CLOSED UNTIL FILLING, FLUSHING, AND BACTERIOLOGICAL TESTING IS COMPLETED AND APPROVED.
2. GAUGE AND RISER TO BE REMOVED AFTER PRESSURE TEST.
3. CITY SHALL BE NOTIFIED BEFORE FILLING AND FLUSHING.
4. AFTER RELEASE FROM THE HEALTH DEPARTMENT, BOTH VALVES TO BE LEFT OPEN WITH VALVE BOX INSTALLED ON BOTH VALVES.
5. PRESSURE TEST PUMP MAY CONNECT TO SERVICE LINE, FIRE HYDRANTS OR BLOWOFF. NO EXTRA TAPS ARE PERMITTED SOLELY FOR TESTING PURPOSES UNLESS PRECEEDING ARE NOT PRESENT IN TEST SECTION.
6. TAPPING SADDLE OR SLEEVE (PER CURRENT CITY PRODUCT LIST) IS REQUIRED ON EXISTING MAIN.
7. SETUP FOR ALL DOUBLE VALVE CONNECTIONS TO INCLUDE ATMOSPHERE VENTS AS SHOWN ABOVE.
8. OUTLET ON VENT TO ATMOSPHERE A MINIMUM 24" ABOVE EXISTING GRADE.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

FILL & FLUSH DETAIL

DATE: 09–15–2021
PW 1.0



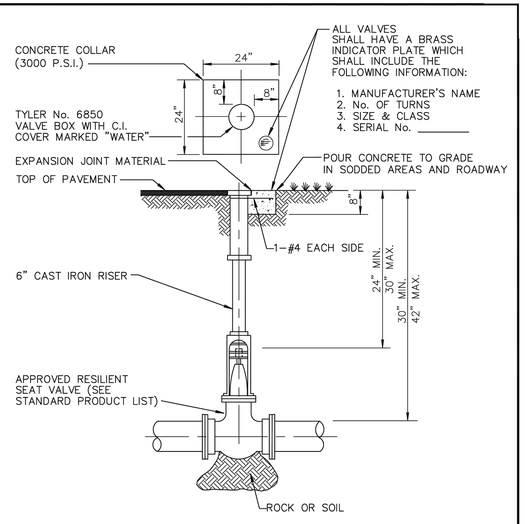
NOTES:

1. STORM AND SANITARY SEWERS CROSSING UNDER 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. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND WATER MAIN JOINTS ARE EQUIDISTANT FROM POINT OF CROSSING WITH NO LESS THAN (10) FEET BETWEEN ANY TWO JOINTS AND BOTH PIPES SHALL BE D.I.P., AND THE MINIMUM VERTICAL SEPARATION SHALL BE 6 INCHES. WHERE THERE IS NO ALTERNATIVE TO SEWER PIPES CROSSING OVER A WATER MAIN, THE CRITERIA FOR MINIMUM 18" VERTICAL SEPARATION BETWEEN LINES AND JOINT ARRANGEMENT, AS STARTED ABOVE, SHALL BE REQUIRED AND BOTH PIPES SHALL BE CLASS 350 D.I.P. IRRESPECTIVE OF SEPARATION. D.I.P. IS NOT REQUIRED FOR STORM SEWERS.
2. MAINTAIN (10) FEET HORIZONTAL DISTANCE BETWEEN WATER MAIN AND STORM OR SANITARY SEWER MAIN, AS A MINIMUM.
3. FORCE MAIN CROSSING WATER MAIN SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE FORCE MAIN AND THE OUTSIDE OF THE WATER MAIN WITH WATER MAIN CROSSING OVER FORCE MAIN.
4. SEWER SERVICE LATERALS SHALL CROSS UNDER WATERMAINS WITH A MINIMUM VERTICAL SEPARATION OF EIGHTEEN (18) INCHES. IF EIGHTEEN (18) INCHES VERTICAL SEPARATION CANNOT BE MAINTAINED, THEN THE WATERMAIN SHALL BE D.I.P. AND THE SANITARY LATERAL C–900 SDR18 OR BETTER AND THE MINIMUM SEPARATION SHALL BE SIX (6) INCHES.
5. WHEN IT IS NOT POSSIBLE FOR THE WATER MAIN TO CROSS OVER THE SEWER SERVICE LATERAL A MINIMUM VERTICAL SEPARATION OF AT LEAST TWELVE (12) INCHES MUST BE MAINTAINED. THE WATERMAIN SHALL BE D.I.P. AND THE SEWER LATERAL SHALL BE C–900 SDR–18 OR BETTER.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

WATER MAIN & SEWER CONFLICTS

DATE: 09–15–2021
PW 2.0



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, TIE RODS, OR OTHER RESTRAINT APPROVED BY UTILITIES DEPARTMENT (NO THRUST BLOCKS ALLOWED).

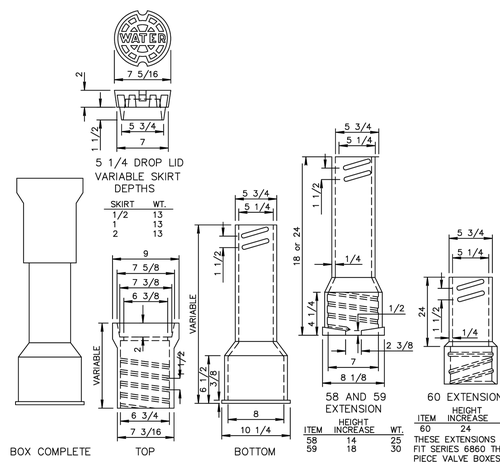
CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL GATE VALVE DETAIL
4" THRU 12"

DATE: 09–15–2021
PW 3.0

ITEM	BOX COMPLETE EXTENSION IN INCHES	WT.	TOP SECTION W/LID LENGTH	WT.	BOTTOM LENGTH	WT.	PIECES PER PKG.
461–S	19–22	60	10	35	15	25	..
462–S	27–32	70	10	35	24	35	..
562–S	27–37	80	16	45	24	35	20
563–S	33–43	85	16	45	30	40	20
564–S	39–50	90	16	45	36	45	20
662–S	36–52	105	26	65	30	40	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.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

CAST IRON VALVE BOXES FOR TEMPORARY DEADENDS TWO PIECE

DATE: 09–15–2021
PW 4.0

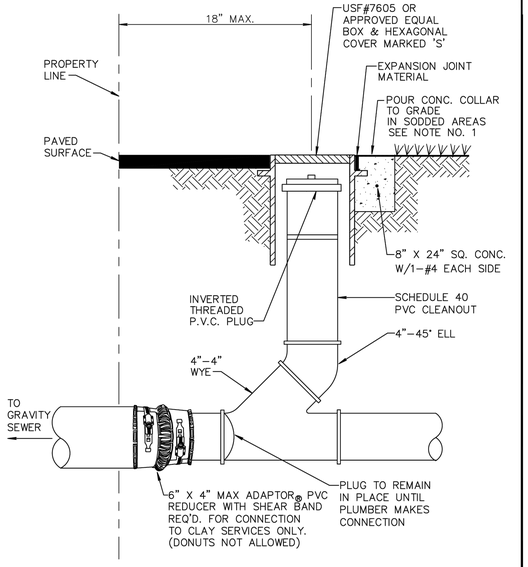
FIFTH AVENUE TOWNHOMES
PROPOSED TOWNHOMES
PROPOSED WATER DISTRIBUTION & SANITARY SEWER DETAILS
142 SE 5TH AVE, DELRAY BEACH, FL 33483

DATE	10/18/23
DRAWN BY	JJB
F.B./ PG.	----
SCALE	N/A

MATTHEW V. KAHN
PROFESSIONAL ENGINEER
LICENSE NO. 82227
STATE OF FLORIDA
– FOR THE FIRM –
DATE

JOB # 10577
SHT.NO.
WS–2
OF 14 SHEETS

Drawing: P:\10577–00–00\Drawings\dwg\details\10577DETAILS–WS_DELRAY.dwg\WS–DETAILS_SHT–WS–2



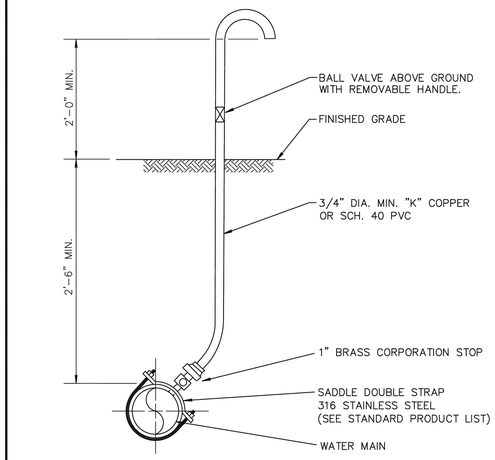
NOTE:

1. INVERTED BRASS CAP SHALL BE USED IN GRASS AREAS IN LIEU OF CASTING AND CONE COLLAR.
2. MINIMUM DEPTH OF SERVICE LATERAL SHALL BE 3 FEET.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL RESIDENTIAL CLEANOUT

DATE: 09-15-2021
WW 9.0



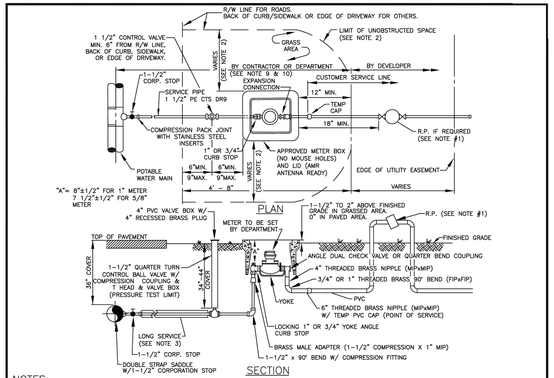
NOTES:

1. SAMPLE POINT SHOULD BE AT SERVICE LINE OR FIRE HYDRANT IF POSSIBLE.
2. IF SAMPLE POINT IS NOT AT SERVICE LINE OR FIRE HYDRANT, CORP. STOP SHALL BE SHUT OFF AT MAIN AND ALL TUBING SHALL BE REMOVED, AND CORP. STOP SHALL HAVE A BRASS PLUG OR CAP INSTALLED AFTER RELEASE OF WATER MAIN BY PALM BEACH COUNTY HEALTH DEPARTMENT.
3. IF AT ALL POSSIBLE SAMPLE POINT SHALL NOT BE LOCATED IN A TRAFFIC AREA.
4. SAMPLE POINTS SHALL KEEP RUNNING UNTIL PALM BEACH COUNTY HEALTH DEPARTMENT RELEASE AND ALL MAIN LINE VALVES ARE OPENED.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL SAMPLE POINT

DATE: 09-15-2021
PW 10.0



NOTES:

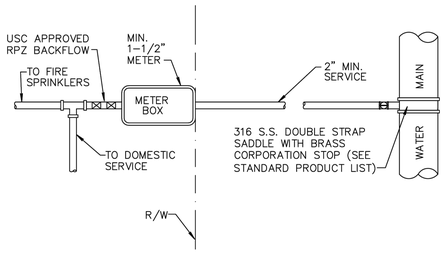
1. ALL NON-RESIDENTIAL SERVICES SHALL HAVE AN APPROVED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY (R.P.). THE R.P. SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE POINT OF SERVICE NOT TO EXCEED 48" WITHOUT PRIOR DEPARTMENT APPROVAL.
2. LIMIT OF UNOBSTRUCTED SPACE FROM SIDE OF WATER METER BOX SHALL BE 36" MINIMUM FOR SHRUBS AND SIMILAR OBSTRUCTIONS WITH 60" MINIMUM FOR TREES, WALLS, AND OTHER SIMILAR OBSTRUCTIONS.
3. FOR INSTALLATION OF SERVICES UNDER DRIVEWAYS AND ROADWAYS USE MIN. 3" DIAMETER BLACK IRON, PVC SCH 40 OR HDPE SDR 9 CASING. CASING SHALL EXTEND MIN. 24" BEYOND EDGE OF PAVEMENT. END OF CASING TO BE SEALED WITH FOAM SEALANT. CASING SHALL BE COLOR-CODED BLACK, WHITE, BLUE, OR BLUE STRIPED.
4. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" APART. TAPS ON SAME SIDE OF A PVC PIPE SECTION SHALL BE MIN. 10' APART
5. METER SHALL NOT BE PLACED IN SIDEWALK OR DRIVEWAY AREAS. WATER SERVICE LINES AND TAPS SHALL NOT BE PLACED UNDER DRIVEWAYS WHENEVER POSSIBLE AND IF REQUIRED, ONLY WITH PRIOR DEPARTMENT APPROVAL.
6. MAXIMUM SERVICE LENGTH IS 100' TO METER.
7. BEDDING (MIN. 4") AND COVER (MIN. 4") OVER SERVICE LINE OR CASING SHALL CONSIST OF FINE GRANULAR MATERIAL UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGER ROCKS SHALL BE REMOVED WITH 2" MAXIMUM SIZE.
8. METER/SERVICE WILL NOT BE INSTALLED/ACTIVATED UNTIL:
   A. ALL FORM BOARDS FOR DRIVEWAY AND/OR SIDEWALK MUST BE COMPLETELY INSTALLED OR THE DRIVEWAY AND/OR SIDEWALK MUST HAVE BEEN INSTALLED.
   B. "MINIMUM UNOBSTRUCTED SPACE" AS SHOWN IN NOTE 2 AND ON THE PLAN VIEW IS PROVIDED WITH 12" MINIMUM VERTICAL SEPARATION REQUIRED TO ALL OTHER UTILITIES.
   C. THE REQUIRED BACKFLOW PREVENTION ASSEMBLY/DEVICE IS INSTALLED AND HAS PASSED INITIAL TEST.
9. METER TO BE INSTALLED BY DEPARTMENT. THE PIPING BEYOND THE CONTROL VALVE TO BE INSTALLED BY THE DEVELOPER OR THE DEPARTMENT DEPENDING ON THE TYPE OF SERVICE INSTALLATION REQUIRED.
10. THE DEVELOPER/PROPERTY OWNER OR ASSIGNEE SHALL BE RESPONSIBLE FOR INSTALLATION OF SERVICES BEYOND PRESSURE TEST LIMITS AS SPECIFIED BY THE DEPARTMENT.
11. THREADED AREAS OF CORPORATION STOP AND OTHER FITTINGS SHALL BE SPIRAL WRAPPED WITH TWO (2) WRAPS OF TEFLON TAPE.
12. METER BOXES IN NON-GRASS AREAS SHALL HAVE TRAFFIC RATED LIDS.
13. A 12" THICK COMPACTED 3/4" ROCK BASE IS REQUIRED FOR METER BOXES OUTSIDE OF GRASS AREA. THE BASE SHALL EXTEND MIN. 12" BEYOND THE METER BOX PERIMETER.
14. STAINLESS STEEL INSERTS ARE REQUIRED FOR ALL COMPRESSION FITTINGS.
15. PVC SHALL BE SCHEDULE 40 PIPE WITH SCHEDULE 80 FITTINGS. ALL BRASS FITTINGS SHALL BE "LEAD FREE".

REVISED

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

POTABLE WATER SERVICE SINGLE 1" METER INSTALLATION DETAIL

DATE: 01-25-2021
PW 12.0



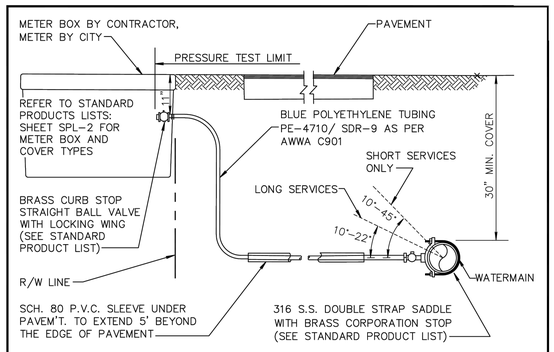
NOTES:

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 SERVICE LINES 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. ALL VALVES TO BE BALL VALVES.
9. METER BOX SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR.
10. 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 METER.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL FIRE SERVICE CONNECTION

DATE: 09-15-2021
PW 14.0



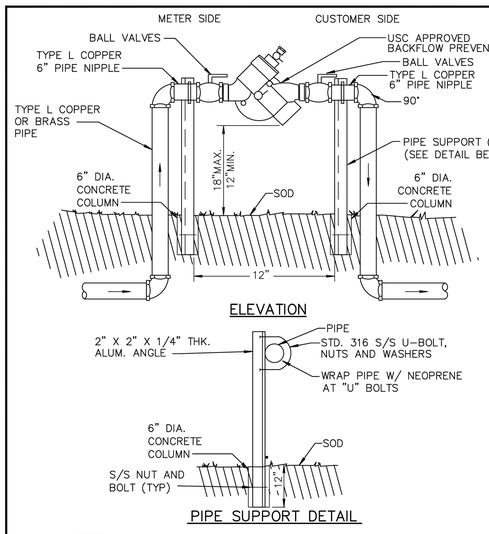
NOTES:

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.
13. ALL COMMERCIAL WATER SERVICE SHALL BE A MINIMUM OF 2".
14. WATER METERS SHALL BE LOCATED OUTSIDE ANY DRIVEWAYS BY 2'

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL URBAN/REDEVELOPMENT AREA SERVICE CONNECTION IN DRIVEWAYS

DATE: 09-15-2021
PW 13.0



NOTES:

1. FOR ALL SERVICES LESS THAN OR EQUAL TO 2" DIA.
2. ABOVE GRADE PIPING SHALL BE BRASS OR TYPE "L" COPPER OR BRASS TUBING.
3. ALL COPPER JOINTS SHALL BE MADE WITH 95/5 SOLDER.
4. USC APPROVED RPZ BACKFLOW PREVENTER IS REQUIRED IN ACCORDANCE WITH CITY OF DELRAY BEACH CODE OF ORDINANCES TITLE V, CHAPTER 52.83.
5. USC APPROVED RPZ BACKFLOW PREVENTER IS REQUIRED FOR ALL COMMERCIAL PROPERTIES AND ALL RESIDENTIAL PROPERTIES WITH FIRE SPRINKLER SYSTEMS.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

REDUCED PRESSURE ZONE BACKFLOW PREVENTER

DATE: 09-15-2021
PW 17.0

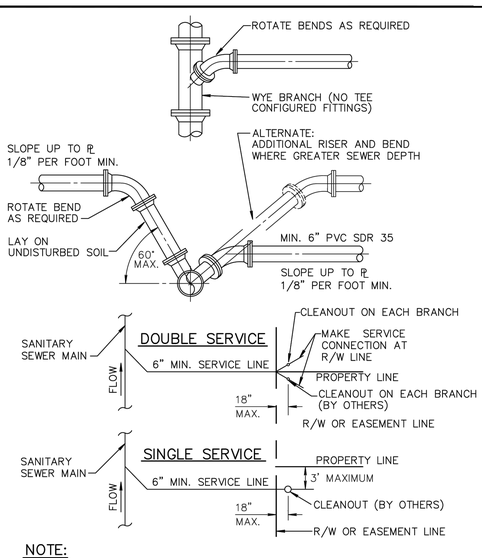
GRAVITY SEWER NOTES

1. MANHOLES SHALL BE INSPECTED BY THE ENGINEER BEFORE PLACEMENT AND SURFACE TREATMENT.
2. ALL OPENINGS IN PRECAST MANHOLES SHALL BE CAST AT TIME OF MANUFACTURE. CONNECTIONS TO EXISTING MANHOLES SHALL BE CORE ENTRY ONLY.
3. ALL MANHOLES SHALL BE SET PLUMB TO LINE AND GRADE.
4. (PVC) GRAVITY SEWER PIPE SHALL CONFORM TO ASTM D 3034, SDR 35, LATEST REVISIONS, WITH PUSH ON RUBBER GASKET JOINTS.
5. (DIP) GRAVITY SEWER PIPE SHALL BE CLASS 350, 401 EPOXY LINED OR AS OTHERWISE APPROVED BY UTILITIES DEPARTMENT.
6. NO SERVICE CONNECTIONS, WYES, SERVICES OR VALVES WILL BE PERMITTED IN RESIDENTIAL DRIVEWAYS.
7. MANHOLE FRAMES SHALL BE ATTACHED TO THE PRECAST STRUCTURE WITH A MINIMUM OF TWO 3/4" 316 STAINLESS STEEL BOLTS, NUTS AND WASHERS. FRAMES SHALL BE SEALED WITH A MINIMUM OF TWO 1/2" BEADS OF RAM-NEK CAULKING.
8. TRENCHES SHALL BE DE-WATERED TO ENABLE PIPE AND APPURTENANCES TO BE INSTALLED FREE OF WATER ON UNDISTURBED SOIL. IF UNSUITABLE SUBSURFACE MATERIAL IS ENCOUNTERED, EXCAVATE EXTRA 6" AND BACKFILL WITH 3/4" GRAVEL.
9. PVC SHALL BE LAID IN STRICT CONFORMANCE TO MANUFACTURER'S SPEC (JOHNS MANVILLE RING TITE PVC PIPE INSTALLATION GUIDE OR EQUAL). BACKFILLING OF UTILITY TRENCHES WILL NOT BE ALLOWED UNTIL INSPECTED BY THE ENGINEER.
10. BACKFILL MATERIAL FOR SEWER MAIN AND LINES SHALL BE NON-COHESIVE, NON PLASTIC MATERIAL FREE OF ALL DEBRIS , LUMPS AND ORGANIC MATTER. BACKFILL MATERIAL PLACED WITHIN ONE (1) FOOT OF PIPING AND APPURTENANCES SHALL NOT CONTAIN ANY STONES LARGER THAN TWO (2) INCHES IN DIAMETER (1" FOR PVC PIPE) AND NO STONES LARGER THAN SIX (6) INCHES IN DIAMETER WILL BE PERMITTED IN ANY BACKFILL.
11. ALL EXCAVATION IN EXISTING RIGHT OF WAY SHALL BE BACKFILLED AND STABILIZED AT THE END OF EACH DAY TO PERMIT PEDESTRIAN AND VEHICULAR TRAFFIC PRIOR TO THE CONTRACTOR LEAVING THE SITE.
12. WHERE SEWER IS NOT WITHIN PUBLIC R/W, IT IS TO BE LOCATED IN A 12' UTILITY EASEMENT. CITY MAINTENANCE RESPONSIBILITY IS MANHOLE TO MANHOLE ONLY.
13. UPON COMPLETION OF THE WORK AND PRIOR TO PLACEMENT OF ASPHALT A VISUAL INSPECTION BY THE ENGINEER SHALL BE MADE OF THE COMPLETED SYSTEM ALONG WITH A LOW PRESSURE AIR TEST, AFTER ROCK BASE FINISHED & PRIMED, OR 1ST LIFT OF ASPHALT PLACED. AFTER ALL OTHER TESTING HAS BEEN COMPLETED, A CD VIDEO RECORDING SHALL BE MADE BY THE CONTRACTOR AND APPROVED BY THE ENGINEER, BEFORE THE LENGTHS ARE ACCEPTED FOR MAINTENANCE.
14. EACH LINE SEGMENT SHALL BE LAMPED TO DETERMINE PROPER ROUNDNESS.
15. COMPLETE "AS BUILT" INFORMATION RELATIVE TO MANHOLES, VALVES, SERVICES FITTINGS, PIPE LENGTHS, INVERTS AND SLOPES SHALL BE ACCURATELY RECORDED & SUBMITTED TO THE ENGINEER CITY SIGNED AND SEALED BY A REGISTERED LAND SURVEYOR.
16. AT THE END OF THE ONE (1) YEAR WARRANTY PERIOD THE DEVELOPER/CONTRACTOR WILL T.V. INSPECT, AIR TEST EVERY JOINT, AND CHECK MANHOLE JOINTS AND CONNECTIONS TO DETERMINE IF REPAIRS ARE NECESSARY BEFORE THE WARRANTY BOND IS RELEASED.
17. NO PROPOSED STRUCTURES SHALL BE INSTALLED WITHIN A HORIZONTAL DISTANCE OF 10-FEET FROM ANY EXISTING OR PROPOSED SANITARY SEWER FACILITY.
18. ANY PIPE INTRODUCED INTO AN EXISTING MANHOLE MUST HAVE CARBOLINE BITUMASTIC 300M OR APPROVED EQUAL APPLIED EXTERNALLY WITHIN A MINIMUM 2-FOOT RADIUS OF OPENING AND THE ENTIRE MANHOLE MUST HAVE SEWPER COAT OR APPROVED EQUAL APPLIED INTERNALLY.
19. ANY REHABILITATION TO AN EXISTING MANHOLE MUST BE INTERNALLY STRIPPED AND LINED WITH SEWPER COAT OR APPROVED EQUAL.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

GRAVITY SEWER NOTES

DATE: 09-15-2021
WW 1.0



NOTE:

1. SERVICE LATERALS SHALL TERMINATE INSIDE PROPERTY LINE A DEPTH OF 3 FEET AND MARKED WITH A 2"X 4" TREATED STAKE.
2. CLEANOUT INSTALLATION SHALL BE PROPERTY OWNERS RESPONSIBILITY AND SHALL BE INSTALLED BY LICENSED PLUMBER.
3. SEE DETAIL PW 2.0 FOR SEPARATION REQUIREMENTS.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

SEWER SERVICE CONNECTION

DATE: 09-15-2021
WW 8.0

REVISIONS	DATE	BY
REV PER CITY COMMENTS	09/05/24	MVK
REV PER CITY COMMENTS	08/29/24	JRH
REV PER CITY COMMENTS	07/18/24	JRH

FILE NAME: 10577ENG.dwg

CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

FIFTH AVENUE TOWNHOMES
PROPOSED TOWNHOMES
PROPOSED WATER DISTRIBUTION & SANITARY SEWER DETAILS
142 SE 5TH AVE, DELRAY BEACH, FL 33483

DATE	10/18/23
DRAWN BY	JJB
F.B./ PG.	----
SCALE	N/A

MATTHEW V. KAHN
PROFESSIONAL ENGINEER
LICENSE NO. 82227
STATE OF FLORIDA
– FOR THE FIRM –
DATE

JOB # 10577
SHT NO. WS-3
OF 14 SHEETS

NOTE: CONTRACTOR IS REQUIRED TO ASBUILT WATER, SEWER, DRAINAGE AND FINAL GRADING ELEVATIONS PER THE REQUIREMENTS OF FDOT/CITY OF DELRAY BEACH

LOT 14, BLOCK 102
TOWN OF LINTON
PLAT BOOK 1, PAGE 3
ONE STORY APARTMENTS
FINISH FLOOR = 14.34

N89°20'28"E 125.02'(S)125.00'(D)
NORTH LINE OF LOT 15, BLOCK 102

LIMITS OF MILL/OVERLAY

SOUTH WEST CORNER LOT 15
BLOCK 102, P.B.1, PG 3
SET NAIL & DISK LB 3591

SANITARY SEWER MH
RIM = 13.13
INVERT N = 6.41
INVERT S = 6.26

2' ROW DONATION
EX. ROW LINE
PROP. ROW LINE
PROP. 10' UTILITY EASEMENT
PROP. 6" PVC SEWER LATERAL (TYP)
(1% MIN. SLOPE + 2' MIN. COVER)
TIE PROPOSED SEWER LINES TO
EXISTING SEWER MAIN (TYP.)
(COORDINATE WITH DELRAY UTILITIES)

EX. FENCE (TR)
EX. CONC (TR)
RAISED CONC CURB
EX. PAVED ALLEY (TR)
18' ALLEY
(PLAT BOOK 1, PAGE 3)
(PLAT BOOK 118, PAGE 175)
N1°31'36"W 122.46'(S)122.40'(D)
61.43'

UPTOWN DELRAY
PLAT BOOK 118, PAGE 175
MULTI LEVEL GARAGE
F.F. = 15.38

16' ALLEY WAY
PLAT BOOK 1, PAGE 3

PROP. 6" PVC SEWER LATERAL (TYP)
(1% MIN. SLOPE + 2' MIN. COVER)
TRACT Z-1
(PLAT BOOK 118, PAGE 175)
TIE PROPOSED SEWER LINES TO
EXISTING SEWER MAIN (TYP.)
(COORDINATE WITH DELRAY UTILITIES)

PROP. 6" PVC SEWER LATERAL (TYP)
(1% MIN. SLOPE + 2' MIN. COVER)
TIE PROPOSED SEWER LINES TO
EXISTING SEWER MAIN (TYP.)
(COORDINATE WITH DELRAY UTILITIES)
TIE PROPOSED TELECOM LINES TO
EXISTING SERVICES (COORDINATE
WITH TELECOM PROVIDER)
PROP. 2' R.O.W DEDICATION

FOUND NAIL & DISK
IN BRICK ALLEY
LB 7264 STAMPED PCP
EX. CONC HEADER (TR)
S89°20'28"W 18.00'
P.O.B.
SOUTH WEST CORNER LOT 16
BLOCK 102, P.B. 1, PG 3
SET NAIL & DISK LB 3591
LIMITS OF MILL/OVERLAY

PROP. TRANSFORMER
(PER FPL STANDARDS)
EX. ELECTRIC
VAULT(TR)
PROP. 10' DRAINAGE EASEMENT

EX. 8" VCP SANITARY SEWER
(CONTRACTOR TO FIELD VERIFY PRIOR TO
CONSTRUCTION)

SANITARY SEWER MH
RIM = 13.30
INVERT N = 4.90
INVERT S = 6.55
INVERT W = 4.32
INVERT E = 4.20
377.0' 8" VCP PIPE

CONTRACTOR TO MAINTAIN 18"
MIN VERTICAL SEPARATION
BETWEEN UTILITIES (TYP.)
PROP. 3' ACCESS EASEMENT (TYP.)

PROP. CLEANOUT (END OF
CITY RESPONSIBILITY) (TYP.)
RIM ELEV.= 13.20'
INV.= 10.70'
PROP. CLEANOUT (END OF
CITY RESPONSIBILITY) (TYP.)
RIM ELEV.= 13.35'
INV.= 10.85'

PROPOSED
TOWNHOME
UNIT 5
FIN. FLR.= 15.35(NAVD)
PROPOSED
TOWNHOME
UNIT 4
FIN. FLR.= 15.35(NAVD)
EX. WATER METER/SERVICE
(TBR) TO BE REMOVED AND
CAPPED AT CORP. STOP
PROPOSED
TOWNHOME
UNIT 3
FIN. FLR.= 15.35(NAVD)

PROP. CLEANOUT (END OF
CITY RESPONSIBILITY) (TYP.)
RIM ELEV.=13.55'
INV.= 11.05'
PROP. CLEANOUT (END OF
CITY RESPONSIBILITY) (TYP.)
RIM ELEV.= 13.75'
INV.= 11.25'

PROPOSED
TOWNHOME
UNIT 2
FIN. FLR.= 15.35(NAVD)
EX. WATER METER/SERVICE
(TBR) TO BE REMOVED AND
CAPPED AT CORP. STOP
PROP. 3' ACCESS EASEMENT (TYP.)

PROP. CLEANOUT (END OF
CITY RESPONSIBILITY) (TYP.)
RIM ELEV.=13.97'
INV.= 11.47'

PROPOSED
TOWNHOME
UNIT 1
FIN. FLR.= 15.35(NAVD)

TIE PROPOSED ELECTRIC
LINES TO EXISTING
SERVICES (COORDINATE
WITH FPL)

N89°20'28"E 125.02'(S) 125.00'(D)
EX. CONCRETE WALL (TR)
EX. CONCRETE WALL (TR)
EX. BRICK WALK (TO REMAIN)
SOUTH LINE OF LOT 16, BLOCK 102,
P.B. 1, PAGE 3, BASIS OF BEARINGS
BUILDING
LINE
CATCH BASIN
GRATE = 13.81
FINISH FLOOR
THIS AREA = 15.39

FINISH FLOOR
THIS AREA = 13.74
FOUND NAIL & DISK
IN CONCRETE WALK
LB 7264 STAMPED PRM

UPTOWN DELRAY
PLAT BOOK 118, PAGE 175
FINISH FLOOR
THIS AREA = 15.35

EX. 12" WATER MAIN (TO REMAIN)
EX. BRICK WALK (TR)
EX. PAVED PARKING (TR)
SET NAIL &
DISK LB 3591

PROP. 2" PE DOMESTIC WATER
SERVICE, 1.5" DOMESTIC W.M.
(END OF CITY RESPONSIBILITY)
W/ 2" CORP STOP & 2" RPZ
TIE PROPOSED WATER LINES TO
EXISTING WATER MAIN (TYP.)
(COORDINATE WITH DELRAY UTILITIES)

BENCHMARK #2 NAI
ELEVATION = 12.83

PROP. 2" PE DOMESTIC WATER
SERVICE, 1.5" DOMESTIC W.M.
(END OF CITY RESPONSIBILITY)
W/ 2" CORP STOP & 2" RPZ
TIE PROPOSED WATER LINES TO
EXISTING WATER MAIN (TYP.)
(COORDINATE WITH DELRAY UTILITIES)

EAST RIGHT OF WAY LINE
OF S. E. 5TH AVENUE
EAST BLOCK LINE OF
BLOCK 102, P.B. 1, PG 3
EAST 10' OF LOT
15, BLOCK 102
SOUTH BOUND LA
ORIGINAL WEST LINE OF BLOCK 110

PROP. 2" PE DOMESTIC WATER
SERVICE, 1.5" DOMESTIC W.M.
(END OF CITY RESPONSIBILITY)
W/ 2" CORP STOP & 2" RPZ
N1°31'36"W 122.46'(S)122.40'(D)
PROP. 2" PE DOMESTIC WATER
SERVICE, 1.5" DOMESTIC W.M.
(END OF CITY RESPONSIBILITY)
W/ 2" CORP STOP & 2" RPZ

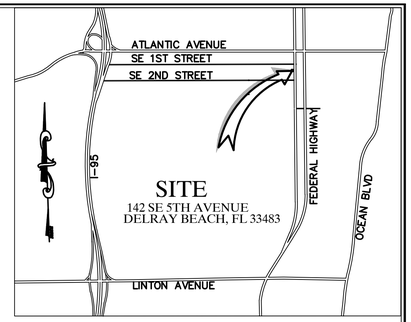
BENCHMARK #1 NAIL & DISK
ELEVATION = 12.91 NAVD
BLOCK 11
TOWN OF LIN
PLAT BOOK 1, P
ONE STORY COMM
BUILDING
FINISH FLOOR =
2' CONC CURB &
GUTTER (TYPICAL)

CONTRACTOR TO REPLACE IN
KIND EX. SIDEWALK &
PAVEMENT DAMAGED BY
UNDERGROUND WATER SERVICE
INSTALLATION (TYP.)
PROP. 2" PE DOMESTIC WATER
SERVICE, 1.5" DOMESTIC W.M.
(END OF CITY RESPONSIBILITY)
W/ 2" CORP STOP & 2" RPZ

N1°31'36"W 224.93'
EX. BRICK WALK (TR)
EX. 2' CONC CURB &
GUTTER (TYPICAL)(TR)
S.E. 5TH AVENUE
PLATTED BOYNTON STREET
(50 R/W BY PLAT)

FDOT OPEN CUT RESTORATION REQUIREMENTS:

1. BASE MATERIAL (LIME ROCK ONLY) IS 15-1/2" IN DEPTH AND SHALL BE STEP-CUT AT 8" V : 12" H, AFTER FIRST LIFT.
2. ENSURE BASE ROCK TOP LIFT IS BLENDED WITH EXISTING BASE MATERIAL; AND ASPHALT IS STRAIGHT CUT A MINIMUM OF 18" FROM BLENDED BASE ROCK (ALONG PERIMETER).
3. REPLACE STRUCTURAL ASPHALT (MATCH EXISTING THICKNESS BUT NO LESS THAN 3") WITH SP 12.5 TLC (WITH RUBBER).
4. RUN TRAFFIC ON PERMANENT PATCH FOR 30 DAYS PRIOR TO MILLING AFFECTED LANES AND INSTALL TEMPORARY PAINT STRIPES, MARKINGS AND RPM'S, IF APPLICABLE.
5. MILL (1-5/8") 50' EITHER SIDE OF THE PERMANENT ASPHALT PATCH AND REPLACE WITH FC-12.5 TLC (WITH RUBBER) OF THE AFFECTED LANE(S).
6. RETURN MILLINGS TO PB OPERATION YARD, AT PERMITTEE'S EXPENSE OR AS DIRECTED BY THE LOCAL RESIDENT OPERATIONS ENGINEER OR DESIGNEE.



LEGEND

- EX. PROPERTY/ROW LINE
- PROP. PROPERTY/ROW LINE
- PLATTED EAST LINE
- PROPOSED DRAINAGE PIPE
- PROPOSED YARD DRAIN
- 15.51 EXISTING GRADE
- 15.50 PROPOSED GRADE
- M.E.P. MATCH EXISTING GRADE
- W PROPOSED WATER LINE
- W EXISTING WATER LINE
- S PROPOSED SANITARY SEWER LINE
- S EXISTING SANITARY SEWER LINE
- E PROPOSED ELECTRIC LINE
- OH EXISTING OVERHEAD LINE
- T PROPOSED TELEPHONE/CABLE LINE
- T EXISTING TELEPHONE/CABLE LINE
- G PROPOSED GAS LINE
- G EXISTING GAS LINE
- PROPOSED BUILDING
- PROPOSED ASPHALT REPLACEMENT (SEE DETAIL RT 1.0)
- PROPOSED ROW BRICK WALK (SEE DETAIL RT 26.0)
- PROPOSED ONSITE PEDESTRIAN PAVERS (SEE ARCH PLANS FOR DETAILS)
- PROPOSED PAVER DRIVEWAY (SEE DETAIL RT 28.0)
- PROPOSED TURF (SEE ARCH PLANS FOR DETAILS)
- PROPOSED 1" ASPHALT MILL/OVERLAY
- PROPOSED LIGHT POLE (SEE LANDSCAPE PLANS FOR DETAILS)
- PROPOSED BOLLARD LIGHT (SEE LANDSCAPE PLANS FOR DETAILS)

NOTE:
ELEVATION ARE SHOWN IN NAVD
CONVERSION NAVD+1.54 = NGVD

NOTE:
ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER OR DRAINAGE EASMENTS SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS: LD 1.0 & 2.0

NOTE: WM SIZES SHALL BE DESIGNED BY E.O.R. AND SHALL BE CHECKED AND AUTHORIZED BY THE CITY OF DELRAY BEACH UTILITIES DIVISION

Call 48 hours before you dig
It's the Law!
1-800-432-4770
Sunshine State One Call of Florida, Inc.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 INCH = 10 FT.

REVISIONS	DATE	BY
REV. PER CITY COMMENTS	09/05/24	MVK
REV. PER CITY COMMENTS	08/29/24	JRH
REV. PER CITY COMMENTS	07/15/24	JRH

FILE NAME 10577ENG.dwg

CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING SURVEYING
LANDSCAPE ARCHITECTURE SUITE 100
7900 GLADES ROAD BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

FIFTH AVENUE TOWNHOMES
PROPOSED TOWNHOMES
PROPOSED COMPOSITE
UTILITY PLAN
142 SE 5TH AVE, DELRAY BEACH, FL 33483

DATE	10/18/23
DRAWN BY	JJB
F.B./ PG.	----
SCALE	1"= 10'

MATTHEW V. KAHN
PROFESSIONAL ENGINEER
LICENSE NO. 82227
STATE OF FLORIDA
- FOR THE FIRM -
DATE

JOB # 10577
SHT.NO.
WS-4
OF 14 SHEETS