

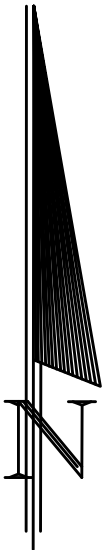
ORANGEBROOK MOBILE HOME ESTATES

HOLLYWOOD

BROWARD COUNTY, FLORIDA

LEGAL DESCRIPTION:

A PORTION OF THE SOUTHWEST ONE-QUARTER (SW1/4) OF THE SOUTHWEST ONE-QUARTER (SW1/4) OF THE NORTHEAST ONE-QUARTER (NE1/4) OF SECTION 20, TOWNSHIP 51 SOUTH, RANGE 42 EAST, DESCRIBED AS FOLLOWS:  
COMMENCE AT THE SOUTHWEST CORNER OF THE NORTHEAST ONE-QUARTER OF SAID SECTION 20; THENCE NORTH 02°01'53" WEST ALONG THE WEST LINE OF SAID NORTHEAST ONE-QUARTER (NE1/4), A DISTANCE OF 50.00 FEET; THENCE NORTH 87°32'11" EAST ALONG A LINE LYING 50.00 FEET NORTH OF AND PARALLEL WITH, WHEN MEASURED AT RIGHT ANGLES TO, THE SOUTH LINE OF SAID NORTHEAST ONE-QUARTER (NE1/4), A DISTANCE OF 333.55 FEET TO THE POINT OF BEGINNING; THENCE NORTH 02°55'04" WEST ALONG THE WEST BOUNDARY OF THAT CERTAIN PARCEL OF LAND AS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 18777, PAGE 244 OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA, A DISTANCE OF 146.12 FEET; THENCE NORTH 87°38'19" EAST ALONG A NORTH BOUNDARY OF SAID PARCEL OF LAND AND ITS WESTERLY EXTENSION, A DISTANCE OF 251.14 FEET; THENCE NORTH 02°01'11" WEST, A DISTANCE OF 9.48 FEET; THENCE NORTH 87°38'19" EAST, A DISTANCE OF 84.22 FEET TO A POINT ON THE EAST LINE OF THE SOUTHWEST ONE-QUARTER (SW1/4) OF THE SOUTHWEST ONE-QUARTER (SW1/4) OF THE NORTHEAST ONE-QUARTER (NE1/4) OF SAID SECTION 20, THE LAST TWO (2) COURSES LYING ALONG THE NORTH BOUNDARY OF SAID PARCEL OF LAND; THENCE SOUTH 02°00'04" EAST ALONG SAID EAST LINE, A DISTANCE OF 155.00 FEET; THENCE SOUTH 87°32'11" WEST ALONG A LINE LYING 50.00 FEET NORTH OF AND PARALLEL WITH, WHEN MEASURED AT RIGHT ANGLES TO, SAID SOUTH LINE, A DISTANCE OF 333.03 FEET TO THE POINT OF BEGINNING.  
SAID LANDS LYING IN THE CITY OF HOLLYWOOD, BROWARD COUNTY, FLORIDA, AND CONTAINING 49,529 SQUARE FEET (1.137 ACRES) MORE OR LESS.



LOCATION MAP PROJECT LOCATION  
SECTION 20, TOWNSHIP 51 SOUTH, RANGE 42 EAST

ENGINEERING PLANS

PREPARED FOR:

CPI ORANGEBROOK OWNER, LLC

SHEET INDEX		
SHEET NO.	DESCRIPTION	REV
C-1	COVER SHEET	
C-2	GENERAL NOTES & SPECIFICATIONS	
C-3	DEMOLITION PLAN	
C-4	EROSION CONTROL PLAN	
C-5	PAVING, GRADING, & DRAINAGE PLAN	
C-6	WATER & SEWER PLAN	
C-7	PAVEMENT, MARKING, AND SIGNAGE PLAN	
C-8	PAVING, GRADING, AND DRAINAGE DETAILS	
C-9	PAVING, GRADING, AND DRAINAGE DETAILS	
C-10	TYPICAL SECTIONS	
C-11	WATER AND SEWER DETAILS	
C-12	WATER AND SEWER DETAILS	
C-13	WATER AND SEWER DETAILS	
C-14	WATER AND SEWER DETAILS	
C-15	WATER AND SEWER DETAILS	
C-16	WATER AND SEWER DETAILS	
C-17	WATER AND SEWER DETAILS	

REV. #	DESCRIPTION	DATE
--------	-------------	------



CRAVEN • THOMPSON AND ASSOCIATES, INC.  
ENGINEERS • PLANNERS • SURVEYORS

3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309  
FAX: (954) 739-6409 TEL.: (954) 739-6400

FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271  
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

Chad Everett Edwards  
Florida P.E. No. 59306  
April 23, 2021

SHEET C-1  
APRIL 2021  
CTA PROJECT NUMBER: 19-0039-001-03

VERTICAL INFORMATION HEREON IS RELATIVE TO  
THE NORTH AMERICAN VERTICAL DATUM (NAVD88).

MATERIAL SHOWN HEREON IS THE PROPERTY OF CRAVEN THOMPSON & ASSOCIATES, INC. AND SHALL NOT  
BE REPRODUCED IN WHOLE OR IN PART WITHOUT PERMISSION OF CRAVEN THOMPSON & ASSOCIATES, INC.  
WRITING CRAVEN THOMPSON & ASSOCIATES, INC. COPYRIGHT ©2021



R:\Engineering\2019\19-0039 Orange Brook Drawings\19-0039-001-03-SPEC.dwg [C-2] Apr 13, 2021 10:22am ZCAMEL

I. APPLICABLE CODES

- A. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF CITY OF HOLLYWOOD & ALL OTHER LOCAL, STATE AND NATIONAL CODES WHERE APPLICABLE.
- B. ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER AND IN STRICT COMPLIANCE WITH ALL THE REQUIREMENTS OF THE FEDERAL, OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA), AND ALL STATE AND LOCAL SAFETY AND HEALTH REGULATIONS.
- C. ALL ELEVATIONS SHOWN ON THE CONSTRUCTION DRAWINGS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D.).
- D. WITHIN THE CITY OF HOLLYWOOD JURISDICTIONAL RIGHT-OF-WAY, ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH CITY OF HOLLYWOOD ENGINEERING STANDARDS AND DETAILS.
- E. TRENCH SAFETY ACT
1. ALL TRENCH EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 90-96 OF THE LAWS OF FLORIDA (THE TRENCH SAFETY ACT).
2. ALL TRENCH EXCAVATION IN EXCESS OF 5 FEET IN DEPTH SHALL BE UNDERTAKEN IN ACCORDANCE WITH O.S.H.A. STANDARD 29 CFR. SECTION 1926.650 SUBPART P.
3. A TRENCH SAFETY SYSTEM, IF REQUIRED, SHALL BE DESIGNED BY THE CONTRACTOR.
- F. ASBESTOS CEMENT PIPE (ACP), AND TRANSITE PIPE, CONTAIN ASBESTOS MATERIAL. ALL ASBESTOS CONTAINING MATERIALS SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH THE CURRENT LOCAL, STATE AND FEDERAL REGULATIONS. THIS INCLUDES THE CUTTING, PLUGGING AND DISPOSAL OF EXISTING ACP OR TRANSITE WATER MAIN PIPES.
- G. ALL HANDICAP ACCESSIBLE AREAS TO CONFORM WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT, LATEST EDITION.
- H. IN THE EVENT OF A CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND THE REQUIREMENTS OF ANY JURISDICTIONAL AUTHORITIES, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

II. PRECONSTRUCTION RESPONSIBILITIES

- A. FOR WORK WITHIN CITY OF HOLLYWOOD JURISDICTIONAL RIGHT-OF-WAY, PLAN APPROVAL, CITY COMMISSION APPROVAL AND PERMIT ISSUANCE ARE REQUIRED PRIOR TO SCHEDULING PRE-CONSTRUCTION CONFERENCE.
- B. UPON THE RECEIPT OF THE "NOTICE TO PROCEED", THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER OF RECORD AND ARRANGE A PRECONSTRUCTION CONFERENCE TO INCLUDE ALL INVOLVED GOVERNMENTAL AGENCIES, UTILITY OWNERS AND THE ENGINEER OF RECORD.
- C. THE CONTRACTOR SHALL OBTAIN A SUNSHINE STATE ONE CALL CERTIFICATION NUMBER AND FIELD MARKINGS AT LEAST 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION, CALL 811.
- D. LOCATION OF EXISTING FACILITIES AS SHOWN ON CONSTRUCTION DRAWINGS ARE DRAWN FROM AVAILABLE RECORDS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE EXISTING FACILITIES SHOWN OR FOR ANY EXISTING FACILITY NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING FACILITIES USING METHODS, THE ELEVATIONS AND LOCATIONS OF EXISTING FACILITIES PRIOR TO CONSTRUCTION. IF AN EXISTING FACILITY IS FOUND TO CONFLICT WITH THE PROPOSED CONSTRUCTION UPON EXCAVATION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF RECORD SO THAT APPROPRIATE MEASURES CAN BE TAKEN TO RESOLVE THE ISSUE.
- E. THE CONTRACTOR SHALL COORDINATE W/ OTHER UTILITY OWNERS TO LOCATE, IDENTIFY OR RELOCATE EXISTING UTILITIES AS REQUIRED. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THIS WORK. IT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- F. FOR STREET EXCAVATION OR CLOSING OR FOR ALTERATION OF ACCESS TO PUBLIC OR PRIVATE PROPERTY, INFORM:
1. LOCAL POLICE TRAFFIC SERGEANT
2. LOCAL FIRE DEPARTMENT DISPATCH
3. WEST PALM BEACH PUBLIC SERVICES DEPARTMENT
- G. THE CONTRACTOR SHALL USE EXTREME CAUTION WORKING UNDER, OVER AND AROUND EXISTING ELECTRIC LINES. THE CONTRACTOR SHALL CONTACT THE CITY OF WEST PALM BEACH ELECTRIC UTILITY DEPARTMENT TO VERIFY LOCATIONS, VOLTAGE AND REQUIRED CLEARANCES, ONSITE, IN RIGHT-OF-WAYS AND IN EASEMENTS, PRIOR TO ANY CONSTRUCTION IN THE VICINITY OF EXISTING LINES.
- H. ALL UTILITY / ACCESS EASEMENTS TO BE SECURED PRIOR TO CONSTRUCTION.
- I. NO CONSTRUCTION MAY COMMENCE UNTIL THE APPROPRIATE PERMITS HAVE BEEN OBTAINED FROM ALL LOCAL, STATE, AND FEDERAL AGENCIES.
- J. ALL REQUIRED GOVERNMENTAL AGENCY BUILDING AND RIGHT OF WAY PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION ACTIVITY.
- K. CONTRACTOR TO COORDINATE CONSTRUCTION SCHEDULING FOR CONNECTION TO THE EXISTING WATER AND SEWER LINES WITH THE CITY OF WEST PALM BEACH WATER UTILITY DEPARTMENT.
- L. NO CONNECTIONS TO EXISTING LINES SHALL BE MADE UNTIL APPLICABLE TESTS HAVE BEEN PERFORMED AND PASSED AND THE SYSTEM IS APPROVED BY APPLICABLE REGULATORY AGENCIES, INCLUDING THE PALM BEACH COUNTY HEALTH DEPARTMENT.

III. INSPECTIONS

- A. THE CONTRACTOR SHALL NOTIFY THE CITY OF HOLLYWOOD PUBLIC UTILITY DEPARTMENT, THE ENGINEER OF RECORD, AND ANY OTHER GOVERNMENTAL AGENCIES HAVING JURISDICTION AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION AND 24 HOUR ADVANCE NOTICE PRIOR TO THE INSPECTION OF THE FOLLOWING ITEMS, WHERE APPLICABLE:
1. CLEARING AND FILLING
2. STORM DRAINAGE SYSTEM (INSTALLATION & TESTING)
3. WATER DISTRIBUTION SYSTEM (INSTALLATION & TESTING)
4. SEWER COLLECTION SYSTEM (INSTALLATION & TESTING)
5. SUBGRADE
6. LIMEROCK BASE
7. ASPHALTIC CONCRETE
8. SIDEWALK
9. LANDSCAPING
10. FINAL

IV. SHOP DRAWINGS

- A. PRIOR TO THEIR CONSTRUCTION OR INSTALLATION, SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER OF RECORD FOR THE FOLLOWING: LIFT / PUMP STATION EQUIPMENT, SANITARY MAINTENANCE ACCESS STRUCTURES, CATCH BASINS, FIRE HYDRANTS, VALVES, PIPE MATERIAL, AND ALL REQUIRED ACCESSORIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL OTHER AGENCY APPROVALS IF REQUIRED.

V. EARTH WORK

- A. CONTRACTOR SHALL FOLLOW ALL RECOMMENDATIONS OF GEOTECHNICAL REPORT FOR DEVELOPMENT OF PROPERTY PREPARED BY CONESTOGA-ROVERS & ASSOCIATES FOR THE PROPERTY DATED JUNE 2014 AS IT PERTAINS TO EARTHWORK. CONTRACTOR SHALL ALSO REMOVE UNSUITABLE MATERIAL UP TO 3 FEET BELOW PROPOSED DRY DETENTION BOTTOM. ALL EXISTING AND EXPOSED CLEAN SAND MATERIAL AS FILL IN PROPOSED DRY DETENTION AREAS BELOW 500 OF BOTTOM AREA.

VI. TEMPORARY FACILITIES

- A. GENERAL:
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES AND ELECTRICITY.
- B. TRAFFIC REGULATION:
1. MAINTENANCE OF TRAFFIC IN THE PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.). CONTRACTOR IS RESPONSIBLE TO PREPARE AND PROCESS A MAINTENANCE OF TRAFFIC PLAN AND OBTAIN APPROVAL FROM CITY OF HOLLYWOOD PUBLIC UTILITY DEPARTMENT AND BROWARD COUNTY TRAFFIC ENGINEERING AND FOOT WHERE APPLICABLE PRIOR TO THE START OF CONSTRUCTION.
2. ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAYS OR WALKWAYS SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
3. NO TRENCHES OR HOLES NEAR WALKWAYS, IN ROADWAYS OR ON SHOULDER ARE TO BE LEFT OPEN DURING NIGHTTIME HOURS. UNLESS IN ACCORDANCE WITH METHODS APPROVED BY THE ENGINEER OF RECORD AND THE CITY OF HOLLYWOOD PUBLIC UTILITY DEPARTMENT.
4. THE SAFE WALK ROUTE FOR ALL SCHOOLS WITHIN THE VICINITY OF THE CONSTRUCTION ZONE SHALL BE MAINTAINED DURING THE ARRIVAL AND DEPARTURE OF SCHOOL.
- IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR FOR ANY NECESSARY CONSTRUCTION, PAVEMENT MARKING AND SIGNAGE OR ANY PEDESTRIAN SIGNALIZATION AND/OR ROADWAY MODIFICATION TO ACCOMMODATE AN ALTERNATE SAFE WALK ROUTE.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL TRAFFIC CONTROL DEVICES DURING CONSTRUCTION. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO NEW OR MODIFIED CITY OF HOLLYWOOD PUBLIC UTILITY DEPARTMENT STANDARDS.

VII. STORM DRAINAGE

- A. GENERAL:
1. CATCH BASIN, YARD DRAIN/LINE DRAIN & STORM MANHOLE GRATES AND RIM ELEVATIONS AS SHOWN ON PLANS SHALL BE ADJUSTED TO CONFORM TO NEW OR EXISTING GRADINGS.
2. DISTANCES AND LENGTHS SHOWN ON PLANS AND PROFILE DRAWINGS ARE REFERENCED TO THE CENTER OF STRUCTURES.
- B. MATERIALS:
1. REINFORCED CONCRETE PIPE (R.C.P.) SHALL MEET THE REQUIREMENTS OF ASTM C-76, CLASS III, LATEST REVISION. RUBBER GASKETS OF OTHER MANUFACTURER SUPPLIED. JOINT SEALER SHALL BE USED.
2. ALL DRAINAGE CATCH BASINS AND STRUCTURES SHALL BE PRECAST CONCRETE AND SHALL MEET THE REQUIREMENTS OF A.S.T.M. SPECIFICATION C-478 AND ALL UNITS OTHERWISE NOTED IN THE PLANS. THE MINIMUM WALL THICKNESS SHALL BE 6 INCHES AND MINIMUM SLAB THICKNESS SHALL BE 8 INCHES. THE MINIMUM REINFORCING SHALL BE GRADE 60 NO. 4 BARS AT 12 INCHES EACH WAY UNLESS OTHERWISE INDICATED. CONCRETE SHALL BE MINIMUM OF f<sub>c</sub>=4000 PSI AT 28 DAYS.
- C. INSTALLATION
1. PIPE BEDDING MATERIAL SHALL CONSIST OF IN-SITU GRANULAR MATERIAL OR WASHED AND GRADED LIMEROCK 3/8"-7/8" SIZING. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS, AND LARGER ROCK SHALL BE REMOVED. BEDDING MATERIAL SHALL BE COMPACTED IN 6" MAXIMUM LAYERS TO ACHIEVE 98% OF THE MAXIMUM DENSITY PER ASTM D-1585, WITH WELL TAMPED LAYERS NOT TO EXCEED 6" TO A HEIGHT 12" ABOVE PIPE. REFER TO UTILITY TRENCH DETAIL WITHIN PLAN SHEETS.
2. BACKFILL MATERIAL SHALL BE WELL GRADED GRANULAR MATERIAL (2" MAX. SIZE), PLACED TO ACHIEVE 98% OF THE MAXIMUM DENSITY PER ASTM D-1585, WITH WELL TAMPED LAYERS NOT TO EXCEED 6" TO A HEIGHT 12" ABOVE PIPE. REFER TO UTILITY TRENCH DETAIL WITHIN PLAN SHEETS.
3. PROVIDE A MINIMUM PROTECTIVE COVER OF 18 INCHES OF COVER OVER STORM SEWER PIPE AND AVOID UNNECESSARY CROSSING BY HEAVY CONSTRUCTION VEHICLES DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL NOTIFY CITY OF HOLLYWOOD ENGINEERING & UTILITY DEPARTMENT AT LEAST 7 DAYS PRIOR TO THE START OF THE CONSTRUCTION AND INSPECTION.

VIII. WATER DISTRIBUTION SYSTEM:

- A. SEPARATION OF WATER AND SEWER MAINS:
- FOR THE PURPOSE OF THIS SECTION, THE PHRASE "WATER MAINS" SHALL MEAN MAINS, INCLUDING TREATMENT PLANT PROCESS PIPING, CONVEYING EITHER RAW, PARTIALLY TREATED, OR FINISHED DRINKING WATER, FIRE HYDRANT LEADS, AND SERVICE LINES THAT ARE UNDER THE CONTROL OF A PUBLIC WATER SYSTEM AND THAT HAVE AN INSIDE DIAMETER OF THREE INCHES OR GREATER.
- HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATERMAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES AND ON SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.
1. NEW OR RELOCATED UNDERGROUND WATERMAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX INCHES BETWEEN THE OUTSIDE OF ANY EXISTING OR PROPOSED SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATERMAINS AND GRAVITY TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATERMAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
2. NEW OR RELOCATED UNDERGROUND WATERMAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATERMAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED ON SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM AS DEFINED IN SECTION 361.006(2), F.S. AND RULE 64C-6.002, F.A.C.

VIII. WATER DISTRIBUTION SYSTEM (continued):

- VERTICAL SEPARATION BETWEEN UNDERGROUND WATERMAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCEMAINS, AND RECLAIMED WATER PIPELINES.
1. NEW OR RELOCATED UNDERGROUND WATERMAINS CROSSING EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPE LINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATERMAIN IS AT LEAST SIX INCHES, AND PREFERABLY TWELVE INCHES ABOVE THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATERMAIN ABOVE THE OTHER PIPELINE.
2. NEW OR RELOCATED UNDERGROUND WATERMAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPE LINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATERMAIN IS AT LEAST TWELVE INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATERMAIN ABOVE THE OTHER PIPELINE.
3. AT THE UTILITY CROSSING DESCRIBED IN PARAGRAPH 1 AND 2 ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATERMAIN JOINTS SHALL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE.
4. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATERMAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM TYPE SANITARY SEWER, STORM SEWER, WASTEWATER OR PIPELINE, OR PIPELINES CONVEYING RECLAIMED WATER. PIPES SHALL BE WHITE OR LIGHT GRAY. PIPES SHALL BE AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWERS, WASTEWATER FORCEMAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
4. WHERE 12" VERTICAL SEPARATION BETWEEN POTABLE WATER MAINS AND SANITARY OR STORM SEWERS CANNOT BE MAINTAINED, THE WATERMAIN SHALL BE INSTALLED ON CENTER OVER THE CONFLICT.

- B. MATERIALS:
1. ALL WATER MAIN PIPE, INCLUDING FITTINGS, SHALL BE COLOR CODED OR MARKED BLUE AS A PREDOMINANT COLOR TO DIFFERENTIATE DRINKING WATER FROM RECLAIMED OR OTHER WATER. UNDERGROUND PLASTIC PIPE SHALL BE SOLID-WALL BLUE PIPE. SHALL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN, OR SHALL BE WHITE OR LIGHT GRAY PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL; AND UNDERGROUND METAL OR CONCRETE PIPE SHALL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPES DURING MANUFACTURING OF THE PIPE SHALL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE. THAT ARE WHITE OR LIGHT GRAY. THE 90 DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED FOR PIPE MARKING DURING INSTALLATION OF PIPE, THE TAPE OR PAINT SHALL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE. IF TAPE OR PAINT IS USED FOR MARKING OF THE PIPE, FOR PIPES WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT SHALL BE APPLIED IN A CONTINUOUS LINE ALONG EACH SIDE OF THE PIPE, AS WELL AS ALONG THE TOP OF THE PIPE.
2. DUCTILE IRON PIPE FOR WATER DISTRIBUTION MAINS SHALL BE CLASS 52 CONFORMING TO ANSI/AWWA STANDARD C150/A21.50-08 AND C151/A21.51-09, "DUCTILE IRON PIPE CENTRIFUGALLY CAST IN METAL MOLDS OR "SAND-LINED MOLDS". DUCTILE IRON PIPE SHALL BE CEMENT LINED AND SEAL COATED IN ACCORDANCE WITH ANSI/AWWA STANDARD C104/A21.3-08. APPROVED MANUFACTURERS: AMERICAN, CLOW, U.S. PIPE, MCWANE, & GRIFFIN.
3. POLYVINYL CHLORIDE (PVC) PRESSURE PIPE SHALL BE C-900 (4"-12") AND C-905 (OVER 12") CONFORMING TO ANSI/AWWA STANDARD C900-07 OR LATEST REVISION. PVC PRESSURE PIPE SHALL BE CEMENT LINED AND SEAL COATED; POLYETHYLENE (PE) ENCASED. PVC PRESSURE PIPE SHALL BE MADE FROM CLASS 12454-A OR CLASS 12454-B VIRGIN MATERIAL, MINIMUM WALL THICKNESS SHALL BE THICKNESS OF DR SERIES 18. ULTRA VIOLET DEGRADATION OR SUN BLEACHED PIPE WILL BE CAUSE FOR REJECTION. JOINTS FOR PVC PRESSURE PIPE SHALL BE BELL AND SPIGOT PUSH ON RUBBER GASKET TYPE ONLY. NO SOLVENT WELD OR THREADED JOINTS PERMITTED.
4. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY THE ENGINEER.
5. DUCTILE IRON FITTINGS FOR WATER DISTRIBUTION MAINS SHALL CONFORM TO ANSI/AWWA STANDARD C153/A21.53-11. FITTINGS 4" AND LARGER SHALL BE CEMENT LINED AND SEAL COATED IN ACCORDANCE WITH ANSI/AWWA STANDARD C104/A21.3-08.
6. ALL WATER MAIN INSTALLATIONS SHALL COMPLY WITH THE REQUIREMENTS OF CHAPTER 62-555.320, FLORIDA ADMINISTRATIVE CODE.
7. JOINTS FOR BELL AND SPIGOT DUCTILE IRON PIPE AND FITTINGS SHALL CONFORM TO ANSI/AWWA STANDARD C111/A21.11-12 OR LATEST REVISION. MECHANICAL JOINT RESTRAINT SHALL BE EBAA IRON/MEGALUG.
8. WATER DISTRIBUTION VALVES SHALL BE GATE VALVES (4"-16") CONFORMING TO ANSI/AWWA C509-09 OR LATEST REVISION. THEY SHALL BE RESILIENT SEAT AND BI-DIRECTIONAL FLOW ONLY. MAXIMUM WORKING PRESSURE OF 200 PSI AND TESTED AT 400 PSI. GATE VALVES SHALL BE MUELLER, AMERICAN DARLING OR AVK.
9. TAPPING VALVES SHALL BE RESILIENT WEDGE TYPE AND MANUFACTURED BY MUELLER, AMERICAN DARLING, OR AVK.
10. TAPPING SLEEVES SHALL BE MUELLER H-615 (4"-24"), MUELLER H-616(10"-24"), OR AMERICAN DARLING 2800C (4"-12" AND 16").
11. TAPPING CROSS SHALL BE MUELLER H-715.
12. FIRE HYDRANTS SHALL BE MUELLER SUPER CENTURION A-423, 5 1/4" PLUGGED DRAIN OR AMERICAN DARLING 5 1/4" B-64-B-5, PUMPER NOZZLE TO BE 18" MIN. AND 24" MAX. FROM FINISHED GRADE. ALL HYDRANTS SHALL HAVE A TOP COAT OF TNEMC SERIES 66 YELLOW.
13. VALVE BOXES WITHIN PAVED AREAS SHALL BE CAST IRON ADJUSTABLE VALVE BOX (INSIDE SCREW TYPE). VALVE BOXES WITHIN GRASSSED AREAS, RISER PIPE MAY BE AWWA C900 PIPE. OUTSIDE BOX AND OUTSIDE BOX BE UNITED STATES FOUNDARY NO. 7630 WITH FD UL MARKED "WATER". 30"x30"x8" CONCRETE COLLAR INSTALLED WITH NON-PAVED AREAS ONLY.

VIII. WATER DISTRIBUTION SYSTEM (continued):

- C. SERVICE CONNECTION:
1. DOUBLE STRAP SERVICE SADDLES (CC THREADS) SHALL BE JCM 402 OR 404 (3/4"-2"). JCM 313 MAY ALSO BE USED FOR 1" AND 2" DOUBLE STRAP SERVICE SADDLES (CC THREADS). ALL SERVICE SADDLES SHALL CONFORM TO ANSI/AWWA C111/A21.11-12 AND ASTM A-588.
2. DOUBLE STRAP TAPPING SADDLES (CC THREADS) SHALL BE McDONALD 3826 (3/4"-2").
3. WATER SERVICE LINES SHALL BE ENDOT ENDOTRACE POLYETHYLENE (3408) TUBING (BLUE IN COLOR), 200 PSI RATED, AND CONFORM TO AWWA C901-08 WITH A SDR OF 9. PIPE JOINTS SHALL BE OF THE COMPRESSION TYPE TOTALLY CONFINED GRIP SEAL AND COUPLING NUT.
4. WATER SERVICE FITTINGS SHALL BE THE FOLLOWING: 3/4"-2": McDONALD 747531, McDONALD 74753-22, McDONALD 747581, McDONALD 74758-22, McDONALD 747541, McDONALD 74754-22, MUELLER H-15428N, MUELLER H-15403N, MUELLER H-15451N
5. DUAL WATER SERVICE FITTING/ U BRANCH CONNECTION SHALL BE THE FOLLOWING: 1" 3/4" x 6 1/2": McDONALD 70808R OR MUELLER H-15365N
6. CORROPTION STOPS SHALL BE THE FOLLOWING: 1" ONLY: MUELLER H-15028N 2" ONLY: MUELLER B-20045N AND McDONALD 73148B 1" AND 2": MUELLER B-25008N, MUELLER H-15028N, McDONALD 747018T, AND McDONALD 747018-22
7. CURB STOPS SHALL BE THE FOLLOWING: UP TO 2": MUELLER B-25170, McDONALD 76102WT, McDONALD 76101W, McDONALD 74606B-22, McDONALD 74606B, McDONALD 4704B-22
8. METER COUPLINGS SHALL BE MUELLER H-10890 (3/4" AND 1").
9. BALL STYLE METER STOP SHALL BE McDONALD 74604B (3/4" ONLY).
10. GROUND KNOG ANGLE METER STOP SHALL BE MUELLER H-14265N (5/8"x 3/4" x 3/4").
11. METER FLANGE SHALL BE McDONALD 610F (2" ONLY).
12. METER BOXES SHALL BE OLDCASTLE CASTORON HEAVYWALL 11188CF. DUCTILE IRON MAY VIEW COVER DUCTILE IRON W/READER LID (FOR 3/4" OR 1" METERS). METER BOXES SHALL BE OLDCASTLE PRECAST N.36 BOX W/ B.36E LID (FOR 1 1/2" & 2" METERS).
- D. INSTALLATION:
1. ALL WATER AND FORCE MAINS SHALL BE LAID WITH A MINIMUM 36" COVER FOR PVC AND 30" FOR DIP.
2. ALL DIP SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600-10.
3. PIPE DEFLECTION SHALL NOT EXCEED 75% OF THE MAXIMUM DEFLECTION RECOMMENDED BY THE MANUFACTURER.
4. NO CONNECTIONS TO EXISTING LINES SHALL BE MADE UNTIL PRESSURE TESTS & BACTERIOLOGICAL TESTS HAVE BEEN PERFORMED AND PASSED. ALL CONNECTIONS SHALL BE CITY OF HOLLYWOOD PUBLIC UTILITY DEPARTMENT AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.
5. PIPE BEDDING MATERIAL SHALL CONSIST OF IN-SITU GRANULAR MATERIAL OR WASHED AND GRADED LIMEROCK 3/8"-7/8" SIZING. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS, AND LARGER ROCK SHALL BE REMOVED. BEDDING MATERIAL SHALL BE COMPACTED IN 6" MAXIMUM LAYERS TO ACHIEVE 98% OF THE MAXIMUM DENSITY PER ASTM D-1585, WITH WELL TAMPED LAYERS NOT TO EXCEED 6" TO A HEIGHT 12" ABOVE PIPE. REFER TO UTILITY TRENCH DETAIL WITHIN PLAN SHEETS.
6. BACKFILL MATERIAL SHALL BE WELL GRADED GRANULAR MATERIAL (2" MAX. SIZE), PLACED TO ACHIEVE 98% OF THE MAXIMUM DENSITY PER ASTM D-1585, WITH WELL TAMPED LAYERS NOT TO EXCEED 6" TO A HEIGHT 12" ABOVE PIPE. REFER TO UTILITY TRENCH DETAIL WITHIN PLAN SHEETS.
- E. TESTING:
1. BEFORE ANY PHYSICAL CONNECTIONS TO THE EXISTING WATER MAINS ARE MADE, THE COMPLETE WATER SYSTEM SHALL BE PRESSURE TESTED, DISINFECTED, AND CLEARED BY DEPARTMENT OF HEALTH.
2. HYDROSTATIC TESTING OF NEW WATER AND FORCE MAINS SHALL BE PERFORMED AT A MINIMUM STARTING PRESSURE OF 150 PSI (200 PSI MIN. FOR FIRELINES) FOR TWO HOURS IN ACCORDANCE WITH ANSI/AWWA C600-05 OR LATEST REVISION. THE PRESSURE TEST SHALL NOT VARY MORE THAN 5 PSI DURING THE TEST. THE PRESSURE TEST SHALL BE WITNESSED BY A REPRESENTATIVE OF THE CITY OF HOLLYWOOD ENGINEERING & UTILITY DEPARTMENT AND THE ENGINEER OF RECORD.
3. BEFORE ACCEPTANCE FOR OPERATION, THE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH THE ANSI/AWWA C681-05; METER RECONNECTIONS MAY BE MADE IN NEW LINES AFTER TWO CONSECUTIVE DAYS OF BACTERIOLOGICAL SAMPLES HAVE PASSED, AND COPIES OF RESULTS HAVE BEEN RECEIVED AND ACCEPTED BY THE ENGINEER, CITY OF HOLLYWOOD ENGINEERING & UTILITY DEPARTMENT, AND FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.
4. BACTERIOLOGICAL TESTS THAT MUST BE SUBMITTED TO DEPARTMENT OF HEALTH WITH THE FINAL WATER MAIN CERTIFICATION PACKAGE EXPIRE AFTER 60 DAYS (FROM THE DATE TESTS WERE PERFORMED). CONTRACTOR WILL BE REQUIRED TO PROVIDE NEW BACTERIOLOGICAL TESTS (AT CONTRACTORS EXPENSE) IF THEY SHOULD EXPIRE.
5. SAMPLING POINTS SHALL BE PROVIDED AT THE LOCATIONS SHOWN ON THE PLANS.
6. THE ALLOWABLE LEAKAGE SHALL BE LESS THAN THE NUMBER OF GALLONS PER HOUR AS DETERMINED BY THE FORMULA:
- L = S.D.P.<sub>90</sub> / 148000
- IN WHICH L EQUALS THE ALLOWABLE LEAKAGE IN GALLONS PER HOUR, S EQUALS LENGTH OF PIPE (LINEAR FEET), D EQUALS NOMINAL DIAMETER OF PIPE (INCHES) AND P EQUALS THE MINIMUM TEST PRESSURE (POUNDS PER SQUARE INCH).

IX. PAVING

- A. GENERAL:
1. ALL UNDERGROUND UTILITIES SHALL BE COMPLETED AND TESTED PRIOR TO FINISHED GRADING AND COMPACTION OF SUBGRADE.
2. ALL EXISTING PAVEMENT, CUT OR DAMAGED BY CONSTRUCTION, SHALL BE PROPERLY RESTORED AT THE CONTRACTOR'S EXPENSE.
3. WHERE ANY PROPOSED PAVEMENT IS TO BE CONNECTED TO EXISTING PAVEMENT, THE EXISTING EDGE OF PAVEMENT SHALL BE CLEANLY SAW CUT TO ENSURE A PROPER JOINT.
- B. MATERIALS:
1. LIMEROCK BASE MATERIAL SHALL BE CRUSHED LIMEROCK MAMU OULITE WITH A MINIMUM OF 70% CARBONATES OF CALCIUM AND MAGNESIUM (80% FOR LOCAL STREETS, DRIVEWAYS AND PARKING AREAS).
2. ASPHALT SURFACES FOR ROADWAYS SHALL CONFORM WITH THE FOLLOWING:
- ONSITE: 1 1/2" TYPE S-III ASPHALT (TWO 3/4" LIFTS) BOTTOM COURSE: 3/4" LIFT OF TYPE S-III ASPHALTIC CONCRETE PAVEMENT FOLLOWED BY 3/4" LIFT OF TYPE S-III ASPHALTIC CONCRETE PAVEMENT. TACK COAT PER FOOT SECTION 300 BETWEEN LIFTS. NEW MATERIAL ONLY. NO RECYCLED ASPHALT (HEAVING CRACKS).
- OFFSITE: ASPHALT, BASE, AND SUB GRADE PER AGENCY STANDARD FOR PARTICULAR ROADWAY.
3. REINFORCED CONCRETE SLABS SHALL BE UNCONSISTED OF CLASS I CONCRETE WITH A MINIMUM STRENGTH OF 3,000 PSI EXCEPT WHERE OTHERWISE SHOWN ON THE PLANS.
4. SIDEWALK CONSTRUCTION SHALL BE CLASS I CONCRETE AND MINIMUM 3,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. SAWCUT CONSTRUCTION JOINTS 5 FEET O.C. WITHIN 48 HOURS OF PLACING. SIDEWALK THICKNESS SHALL BE 4" THICK WITHIN RESIDENTIAL AREAS. SIDEWALK THICKNESS SHALL BE 6" THICK WITHIN 10' OF CROSS STREETS/INTERSECTIONS, AT DRIVEWAYS, AND WITHIN ALL AREAS SUBJECT TO VEHICULAR TRAFFIC.
5. CURBS - CONCRETE 3000 PSI COMPRESSIVE STRENGTH AT 28 DAYS, SAWCUT CONSTRUCTION JOINTS AT 10 FOOT (O.C.) MAX. SPACING (NO SECTION SHALL BE LESS THAN 4 FEET) WITHIN 48 HOURS OF PLACING.
- C. INSTALLATION:
1. STABILIZED SUBGRADE FOR ROADWAYS SHALL BE COMPACTED TO 98% OF MAXIMUM DENSITY PER ASTM D-1585 AND HAVE A MIN. L.B.R. OF 40.
2. LIMEROCK BASE COURSE FOR PAVED AREAS SHALL BE COMPACTED TO 98% OF MAXIMUM DRY DENSITY AS PER ASTM D-1585, HAVE A L.B.R. OF 100, AND CONFORM WITH THE FOLLOWING:
- ONSITE: A MINIMUM THICKNESS OF 8" & SHALL BE CONSTRUCTED IN TWO FOUR INCH LIFTS OR 10" CRUSHED CONCRETE, PRIME & TACK COAT PER FOOT SECTION 300.
- OFFSITE: ASPHALT, BASE, AND SUB GRADE PER AGENCY STANDARD FOR PARTICULAR ROADWAY.
3. INSTALLATION OF THE BASE COURSE AND WEARING COURSE SHALL CONFORM WITH THE REQUIREMENTS OF THE F.D.O.T. STANDARD SPECIFICATIONS FOR TYPE "S" ASPHALTIC CONCRETE OR THE LATEST REVISION.
4. WHERE ROADWAY OR DEBRIS HAS WASHED OR FLOWED INTO OR HAS BEEN PLACED IN WATER COURSES, DITCHES, DRAINS, CATCH BASINS, OR ELEVATIONS, SUCH MATERIAL OR DEBRIS SHALL BE REMOVED AND SATISFACTORILY DISPOSED OF DURING THE PROGRESS OF THE WORK AND THE AREA KEPT IN A CLEAN AND NEAT CONDITION.
4. ALL PROPERTY MONUMENTS OR PERMANENT REFERENCES, REMOVED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED BY A STATE OF FLORIDA REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
5. ALL UNPAVED SURFACES DISTURBED AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED BEFORE THE CONSTRUCTION.
6. DENSITY TESTS SHALL BE TAKEN BY AN INDEPENDENT TESTING LABORATORY CERTIFIED BY THE STATE OF FLORIDA.
7. ALL TESTING COSTS (PAVING) SHALL BE PAID FOR BY THE CONTRACTOR.
8. DENSITY TESTS ON THE STABILIZED SUBGRADE SHALL BE SUPPLIED TO THE ENGINEER OF RECORD, AND APPROVED BEFORE ANY ASPHALT PAVEMENT IS CONSTRUCTED, INCLUDING AS-BUILTS ON PAVED SWALES AND DRIVEWAYS.
9. DENSITY TESTS AND AS-BUILTS ON THE FINISHED LIMEROCK BASE SHALL BE SUPPLIED TO THE ENGINEER OF RECORD (E.O.R.) AND APPROVED BEFORE ANY ASPHALT PAVEMENT IS CONSTRUCTED, INCLUDING AS-BUILTS ON PAVED SWALES AND DRIVEWAYS.

X. PAVEMENT MARKING & SIGNAGE

- A. ALL PAVEMENT MARKINGS AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION, AND CITY OF WEST PALM BEACH DESIGNATION POINT COORDINATES (LATEST EDITION), AND IN ACCORDANCE WITH PALM BEACH COUNTY TYPICAL 1-P-13.

XI. DE-WATERING

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING IF DEWATERING PERMIT IS REQUIRED FOR ANY OF THE PROPOSED CONSTRUCTION ACTIVITIES. IF A DEWATERING PERMIT IS REQUIRED, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PREPARE AND SUBMIT A DEWATERING REPORT APPLICATION (PREPARED BY A STATE OF FLORIDA LICENSED ENGINEER OR A REGISTERED PROFESSIONAL GEOLOGIST) TO ALL APPLICABLE AGENCIES FOR PERMIT APPROVAL. THE CONTRACTOR MAY BE REQUIRED TO PROVIDE TESTING AND MONITORING OF THE DEWATERING OPERATIONS AND WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH MEANS AND METHODS OF DEWATERING WHICH WILL BE SET FORTH BY THE DEWATERING PERMIT(S) OBTAINED BY THE CONTRACTOR.
- THE CONTRACTOR WILL BE REQUIRED TO PROVIDE TESTING AND MONITORING OF THE DEWATERING OPERATIONS AND WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH MEANS AND METHODS OF DEWATERING WHICH WILL BE SET FORTH BY THE DEWATERING PERMIT(S) OBTAINED BY THE CONTRACTOR.

XII. NPDES REQUIREMENT

- A. AT LEAST TWO (2) DAYS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A COP "NOTICE OF INTENT (N.O.I.) TO USE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES THAT DISTURB ONE OR MORE ACRES OF LAND" FORM (DEP FORM 62-621.300A(16)) TO DEPT. OF ENVIRONMENT. THE CONTRACTOR WILL BE RESPONSIBLE FOR (AT THE CONTRACTORS EXPENSE) (1) ASSISTING THE OWNER(S) OF THE PROPERTY DAMAGED BY HIS WORKING, AND N.O.I. TO DEPT (2) PREPARING A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (REQUIRED PRIOR TO THE N.O. SUBMITTAL), (3) IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) THAT WAS REQUIRED TO BE DEVELOPED PRIOR TO THE N.O. SUBMITTAL, AND (4) RETENTION OF RECORDS. RECORDS WILL BE REQUIRED BY THE DEPT. RETENTION OF A COPY OF THE SWPPP AT THE PROJECT SITE. THE CONTRACTOR SHALL BE REQUIRED TO INITIATION TO THE DATE OF FINAL SITE STABILIZATION. A "NOTICE OF TERMINATION (N.O.T.) OF GENERIC PERMIT COVERAGE" FORM (DEP FORM 62-621.300(6)) MUST BE SUBMITTED TO DEPT. TO DISCONTINUE PERMIT COVERAGE. SUBSEQUENT TO COMPLETION OF CONSTRUCTION, FOR ADDITIONAL INFORMATION SEE DEP WEBSITE: <http://www.dep.state.fl.us/water/stormwater/npdes.asp> AS OF MARCH, 2003 THRESHOLD WILL BE REDUCED TO PROJECTS ONE ACRE OR MORE.

XIII. PROJECT CLOSE-OUT

- A. CLEAN-UP:
1. DURING CONSTRUCTION, THE PROJECT SITE AND ALL ADJACENT AREAS SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AND UPON FINAL CLEAN-UP, THE PROJECT SITE SHALL BE LEFT CLEAN AND FREE OF OBSTRUCTIONS, MATERIAL, OR TRASH. THE PAVED AREAS SHALL BE SWEEP BROOM CLEAN.
2. THE CONTRACTOR SHALL RESTORE OR REPLACE, WHEN AND AS DIRECTED, ANY PUBLIC OR PRIVATE PROPERTY DAMAGED BY HIS WORKING EQUIPMENT, OR EMPLOYEES, TO A CONDITION AT LEAST EQUAL TO THAT WHICH EXISTED PRIOR TO THE BEGINNING OF OPERATIONS. TO THAT END, THE CONTRACTOR SHALL DO, AS REQUIRED, ALL NECESSARY WORK, INCLUDING WALK AND LANDSCAPING WORK. SUITABLE MATERIALS AND METHODS SHALL BE USED FOR EACH RESTORATION.
3. WHERE ROADWAY OR DEBRIS HAS WASHED OR FLOWED INTO OR HAS BEEN PLACED IN WATER COURSES, DITCHES, DRAINS, CATCH BASINS, OR ELEVATIONS, SUCH MATERIAL OR DEBRIS SHALL BE REMOVED AND SATISFACTORILY DISPOSED OF DURING THE PROGRESS OF THE WORK AND THE AREA KEPT IN A CLEAN AND NEAT CONDITION.
4. ALL PROPERTY MONUMENTS OR PERMANENT REFERENCES, REMOVED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED BY A STATE OF FLORIDA REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
5. ALL UNPAVED SURFACES DISTURBED AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED BEFORE THE CONSTRUCTION.
- B. PROJECT RECORD DOCUMENTS:
1. DURING THE DAILY PROGRESS OF THE JOB, THE CONTRACTOR SHALL RECORD ON HIS SET OF CONSTRUCTION DRAWINGS THE EXACT LOCATION, LENGTH, MATERIAL AND ELEVATION OF ANY FACILITY NOT BUILT EXACTLY ACCORDING TO PLANS.
2. UPON COMPLETION OF DRAINAGE IMPROVEMENTS AND LIMEROCK BASE CONSTRUCTION (AND BEFORE PLACING ASPHALT PAVEMENT) THE CONTRACTOR SHALL FURNISH THE ENGINEER OF RECORD "AS-BUILT" PLANS FOR THESE IMPROVEMENTS. SEE ENGINEERS AS-BUILT REQUIREMENTS. ALL "AS-BUILT" INFORMATION SHALL BE CERTIFIED BY A FLORIDA REGISTERED LAND SURVEYOR.
3. UPON COMPLETION OF THE WATER SYSTEMS AND DRAINAGE IMPROVEMENTS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER OF RECORD ONE COMPLETE SET OF ALL "AS-BUILT" CONTRACT DRAWINGS FOR REVIEW AND APPROVAL. THESE DRAWINGS SHALL BE MARKED TO SHOW "AS-BUILT" CONSTRUCTION CHANGES AND DIMENSIONS, LOCATIONS, AND ELEVATIONS OF ALL IMPROVEMENTS. ALSO SEE ENGINEERS AS-BUILT REQUIREMENTS.
4. ALL "AS-BUILT" INFORMATION SHALL BE CERTIFIED BY A FLORIDA REGISTERED LAND SURVEYOR.

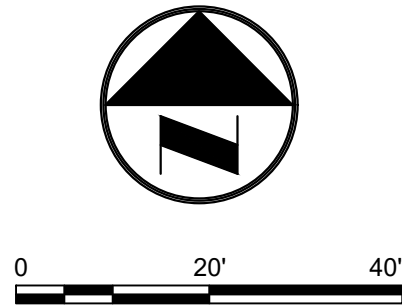
XIV. ENGINEER'S AS-BUILT REQUIREMENTS

- A. ALL AS-BUILT LOCATIONS MENTIONED BELOW SHALL PROVIDE COORDINATES (NORTHING AND EASTING) SPATIALLY LOCATED WITHIN STATE PLANE COORDINATES. ALL LOCATIONS (NORTHING AND EASTING) SHALL BE PROVIDED TO THE NEAREST TENTH OF A FOOT. ALL AS-BUILT LOCATION POINT COORDINATES SHALL BE PROVIDED AT THE CORRESPONDING NORTHING AND EASTING IN AN AUTOCAD FILE.
- B. IN ORDER TO ORGANIZE ITS PRESENTATION AND MAKE DRAWINGS READABLE, THE WATER AND SANITARY SEWERS/WASTEWATER AS-BUILTS SHALL BE PROVIDED ON SEPARATE SHEETS.
- C. EASEMENT LOCATIONS (NORTHING AND EASTINGS) SHALL BE PROVIDED ON AS-BUILTS.
- D. INDICATE PIPE JOINT LOCATIONS WHERE WATER AND WASTEWATER OR RECLAIMED WATER PIPING CROSSES.
- E. SHOWING THE EXTENTS OF D.I.P. WATER MAIN OVER WATER CONFLICTS.
- F. SHOW ALL ABANDONED IN PLACE FACILITIES INCLUDING THE EXTENT AND METHOD OF ABANDONMENT.
- G. AS-BUILTS OF WATER AND FIRE LINES SHALL INCLUDE THE FOLLOWING INFORMATION:
1. TOP OF PIPE ELEVATIONS SHALL BE PROVIDED AT VERTICAL DEFLECTION POINTS, EVERY 50 LINEAR FEET AND TO THE NEAREST TENTH OF A FOOT.
2. LOCATIONS AND TOP OF PIPE ELEVATIONS OF ALL FITTINGS INCLUDING BENDS, TEES, CHECK VALVES, GATE VALVES, DOUBLE DETECTOR CHECK VALVES, FIRE HYDRANTS, ETC.
3. ALL TIE INS TO EXISTING LINES SHALL PROVIDE LOCATION AND TOP OF PIPE ELEVATION.
4. LOCATION AND TOP OF PIPE ELEVATION AT THE ENDS OF ALL WATER SERVICES AT THE BUILDINGS OR WHERE THE WATER SERVICE TERMINATES.
5. CROSSING INFORMATION BETWEEN PROPOSED WATER MAIN, PIPING AND EXISTING AND PROPOSED SEWER MAIN, FORCE MAIN, DRAINAGE, WATER MAIN, UTILITIES, ETC.
6. THE ENDS OF ALL WATER SERVICES AT THE BUILDINGS OR HOMES SHALL BE AS-BUILT OR WHERE THE WATER SERVICE TERMINATES.
- H. DRAINAGE AS-BUILTS SHALL BE PROVIDED SHOWING OF ALL DRAINAGE PIPING AND STRUCTURES WHICH SHALL INCLUDE THE FOLLOWING INFORMATION:
1. LOCATION, RIM ELEVATION, INVERTS, BOTTOM OF STRUCTURE, BOTTOM OF POLLUTION RETARDANT BATTLE, AND WEIR ELEVATIONS (IF APPLICABLE) ON DRAINAGE STRUCTURES.
2. LENGTH AND SIZE OF THE PIPING BETWEEN STRUCTURES, SIZE OF THE PIPING SHALL BE VERIFIED BY THE SURVEY CREW AT THE TIME OF AS-BUILT.
3. LENGTH AND SIZE OF EXFILTRATION TRENCH BETWEEN STRUCTURES, LENGTH, SIZE, TOP OF AND BOTTOM OF EXFILTRATION TRENCH, LENGTH, SIZE, TOP OF AND BOTTOM OF EXFILTRATION TRENCH SHALL BE VERIFIED BY THE SURVEY CREW AT THE TIME OF AS-BUILT.
4. CONTROL STRUCTURE AS-BUILT SHALL INCLUDE, BUT NOT BE LIMITED TO, RIM ELEVATIONS, WEIR ELEVATIONS, BOTTOM ELEVATION OF THE STRUCTURES, BOTTOM ELEVATION OF POLLUTION RETARDANT BATTLE, AND INVERTS ELEVATIONS OF PIPING.
5. CROSSING INFORMATION BETWEEN PROPOSED DRAINAGE PIPING AND EXISTING AND PROPOSED SEWER MAIN, FORCE MAIN, DRAINAGE, WATER MAIN, UTILITIES, ETC.

- I. ROCK AS-BUILTS SHALL BE PROVIDED FOR ROADWAYS AND DRIVEWAYS AREAS WHICH SHALL CONSIST OF THE FOLLOWING:
1. ROCK ELEVATIONS AT ALL HIGH AND LOW POINTS, AND AT ENOUGH INTERMEDIATE POINTS TO CONFIRM SLOPE CONSISTENCY.
2. ROCK AS-BUILTS AND LIP OF CURB AS-BUILT ELEVATIONS SHALL BE TAKEN AT ALL LOCATIONS WHERE THERE IS A FINISH GRADE ELEVATION SHOWN ON THE DESIGN PLANS.
3. ALL CATCH BASIN AND MANHOLE RIM ELEVATIONS SHALL BE SHOWN.
4. ELEVATIONS AROUND ISLAND AREAS WILL ALSO BE REQUIRED.
5. WHERE CONCRETE IS TO BE USED AS A FINISHED PRODUCT FOR THE ROADWAY, ROADWAY ROCK AS-BUILTS WILL BE REQUIRED AS INDICATED ABOVE AS WELL AS AS-BUILTS ON THE FINISHED CONCRETE AT LOCATIONS WHERE THERE IS A FINISH GRADE ELEVATION SHOWN ON THE DESIGN PLANS.
6. AS-BUILTS SHALL BE TAKEN ON ALL PAVED AND UNPAVED SWALES. PRIOR TO PLACEMENT OF ASPHALT OR TOPSOIL, 3200, AT ENOUGH INTERMEDIATE POINTS TO CONFIRM SLOPE CONSISTENCY AND CONFORMANCE TO THE PLAN DETAILS.
- J. SIDEWALK AS-BUILTS SHALL BE PROVIDED CONSISTING OF THE FOLLOWING: LOCATION REFERENCED TO RIGHT OF WAY AND AS-BUILT ELEVATIONS PROVIDED AT BACK AND FRONT OF SIDEWALK EVERY 50 LF AND AT THE PC AND PT ALONG CURVES.
- K. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PREPARE RECORD DRAWINGS AND "AS-BUILTS", ON FULL SIZE, 24" X 36" REPRODUCIBLE MATERIAL, EIGHT (8) SETS OF THESE RECORD DRAWINGS AND "AS-BUILTS" SHALL BE SIGNED AND SEALED BY A FLORIDA REGISTERED PROFESSIONAL LAND SURVEYOR. ADDITIONALLY, AN ELECTRONIC COPY OF THESE RECORD DRAWINGS AND "AS-BUILTS" SHALL BE SUBMITTED TO THE ENGINEER OF RECORD IN BOTH PDF AND AUTOCAD (VERSION 20



R:\Engineering\2019\19-0039 Orange Brook\Drawings\19-0039-001-03-DEMO.dwg [C-3] Apr 13, 2021 10:30am ZCABLE



DEMOLITION LEGEND:

- X STRUCTURAL REMOVAL
- ASPHALT PAVEMENT REMOVAL
- CONCRETE PAVEMENT REMOVAL
- LIMITS OF CLEARING AND GRUBBING
- LIMITS OF REMOVAL
- LIMITS OF PIPE REMOVAL

1. THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO STARTING DEMOLITION.
2. THE CONTRACTOR SHALL NOTIFY THE TOWN PRIOR TO START OF DEMOLITION.
3. REFER TO TREE DISPOSITION PLAN FOR TREES THAT ARE TO BE RELOCATED OR REMOVED, OR TO REMAIN.
4. ANY EXCAVATED MATERIAL OR DEMOLITION DEBRIS SHALL BE STOCKPILED PROPERLY IN ORDER TO NOT CREATE ANY RAIN WATER RUN-OFF FLOOD DAMAGE TO THE PROPOSED STRUCTURE OR ANY SURROUNDING PROPERTIES.
5. ALL EROSION AND SILTATION CONTROL METHODS SHALL BE IMPLEMENTED PRIOR TO THE START OF THE DEMOLITION AND MAINTAINED UNTIL CONSTRUCTION IS COMPLETED.
6. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.
7. DEMOLITION INCLUDES REMOVAL FROM SITE AND PROPER DISPOSAL.
8. PHASING OF DEMOLITION SHALL BE COORDINATED WITH ENGINEER, CITY, AND PERMITTING AGENCIES TO ENSURE CONTINUOUS OPERATIONS AND COMPLIANCE WITH PERMIT REQUIREMENTS.
9. MAINTENANCE OF TRAFFIC TO MEET ALL M.U.T.C.D. STANDARDS WHERE APPLICABLE.
10. FURNISH AND INSTALL TEMPORARY CONSTRUCTION CHAIN LINK FENCE WITH WINDSCREEN TO PROTECT DEMOLITION SITE AREA.
11. CONTRACTOR RESPONSIBLE FOR OBTAINING APPLICABLE PERMITS AND PROPER COORDINATION PRIOR TO DEMOLITION.
12. PROPER CARE SHALL BE GIVEN TO PROTECT EXISTING FEATURES TO REMAIN. DAMAGED UTILITIES AND STRUCTURES SHALL BE REPAIRED TO ORIGINAL CONDITION.
13. EXISTING SIGNS WITHIN DEMOLITION LIMITS SHALL BE REMOVED AND DISPOSED OF.
14. SEE TREE DISPOSITION PLAN FOR REMOVAL AND RELOCATION OF TREES REQUIRED. CONTRACTOR SHALL REMOVE TREES AND SHALL DO SO IN ACCORDANCE WITH THE TREE DISPOSITION PLANS.
15. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING ITEMS REQUIRED TO CONSTRUCT PROPOSED PROJECT INCLUDING BUT NOT LIMITED TO ASPHALT PAVEMENT SECTION, CONCRETE PAVEMENT SECTION, CURBING, LIGHTING, SIGNAGE, UTILITIES OF ALL TYPES, CONDUITS, TRANSFORMERS, ETC.. THE CONTRACTOR SHALL PERFORM THIS DEMOLITION AND DISPOSAL WITH CARE AS TO NOT INTERRUPT OR DAMAGE ANY UTILITY SERVICES TO THE EXISTING BUILDING OR SITE LIGHTING TO REMAIN IN OPERATION THROUGHOUT THE DURATION OF CONSTRUCTION. DEMOLITION OF EXISTING LIGHTING AND ELECTRICAL SHALL BE COORDINATED BETWEEN THE CONTRACTOR, THE ELECTRICAL CONSULTING ENGINEER(S) OF RECORD, AND THE FLORIDA POWER AND LIGHT COMPANY.

ORANGEBROOK MOBILE HOME ESTATES  
3318 ORANGE STREET  
HOLLYWOOD, FLORIDA 33021

PREPARED FOR:  
CPI ORANGEBROOK OWNER, LLC

DEMOLITION PLAN

CRAVEN • THOMPSON AND ASSOCIATES, INC.  
ENGINEERS • PLANNERS • SURVEYORS  
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309  
TEL: (954) 739-6409  
FAX: (954) 739-6409  
FLORIDA LICENSED ENGINEERS, SURVEYORS & MAPPING BUSINESS NO. 271  
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. C00014

MATERIAL SHOWN HEREIN IS THE PROPERTY OF CRAVEN THOMPSON & ASSOCIATES, INC. AND SHALL NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF CRAVEN THOMPSON & ASSOCIATES, INC. COPYRIGHT © 2019

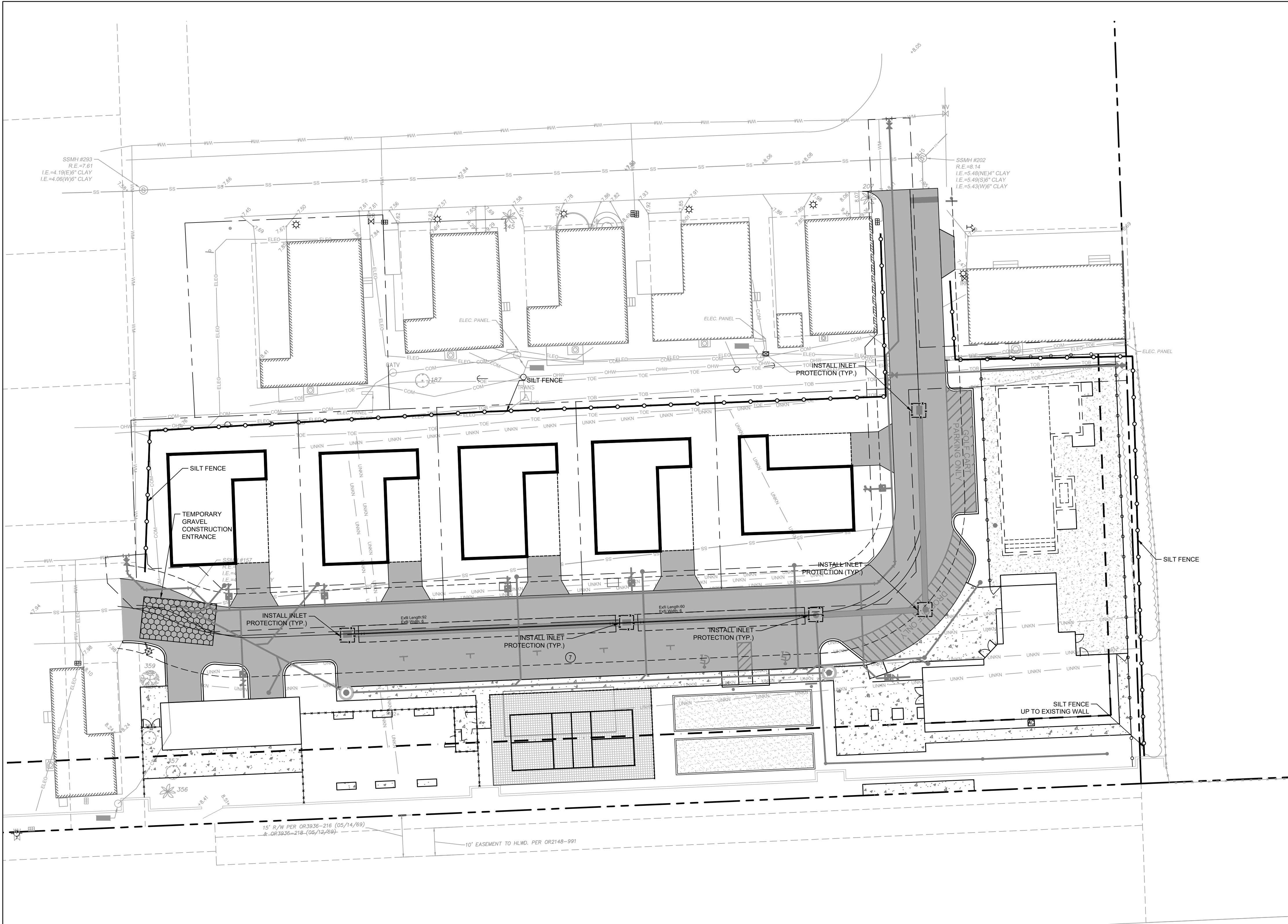
Chad Everett Edwards  
Florida P.E. No. 59306  
April 23, 2021

PROJECT NO.  
19-0039

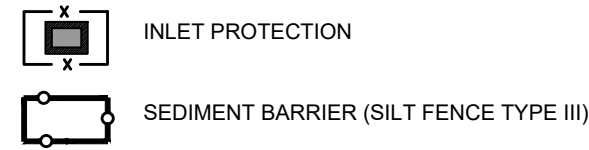
C-3  
SHEET 3 OF 17



R:\Engineering\2019\19-0039 Orange Brook Drawings\19-0039-001-03-ECF.dwg [C-4] Apr. 13, 2021 10:31am ZGAMBLE

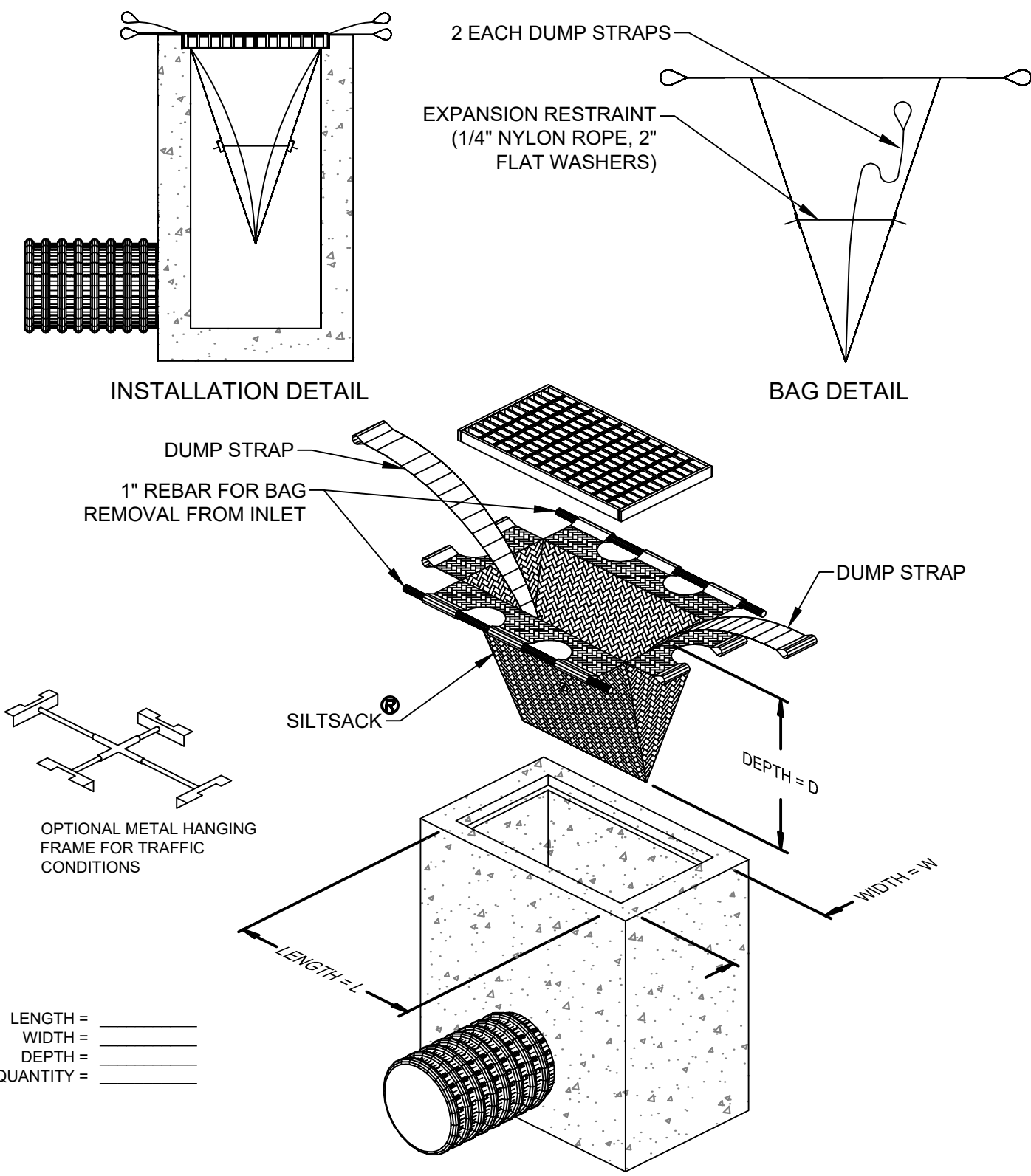


LEGEND



NOTES:

- 1.) CONTRACTOR SHALL ASSUME ANY AND ALL RESPONSIBILITIES FOR ANY WATER CONTROL VIOLATIONS RESULTING FROM FAILURE TO ELIMINATE AND/OR CONTROL TURBID RUNOFF FROM LEAVING THE SITE AS ISSUED BY ANY AGENCY HAVING JURISDICTION.
- 2.) CONTRACTOR SHALL PROVIDE TEMPORARY DEWATERING AREA(S) PRIOR TO ANY EXCAVATION FOR PIPE INSTALLATION. DEWATERING AREA(S) SHALL BE PROTECTED WITH SILT SCREENS. ALL DEWATERING OPERATIONS SHALL DISCHARGE INTO TANKER TRUCKS AND NO DIRECT DISCHARGE INTO THE EXISTING OR NEW DITCHES, STORM DRAINS, AND/OR PUBLIC RIGHT OF WAY WILL BE ALLOWED.
- 3.) CONTRACTOR SHALL MAINTAIN A POLLUTION PREVENTION CONTROL LOG AND CONDUCT WEEKLY INSPECTIONS AND WITHIN 24 HOURS OF A 0.25" STORM EVENT.
- 4.) CONTRACTOR TO EMPLOY BEST MANAGEMENT PRACTICES THROUGHOUT CONSTRUCTION IN ORDER TO ENSURE POLLUTION PREVENTION. CONTRACTOR TO COMPLY WITH ALL LOCAL, STATE, AND OTHER LOCAL GOVERNMENTAL ENVIRONMENTAL REGULATIONS THROUGHOUT CONSTRUCTION.
- 5.) DURING CONSTRUCTION, ALL CATCH BASINS TO BE EQUIPPED WITH FILTER FABRIC AND HAY BALES OVER GRATES.
- 6.) ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED WITHIN A REASONABLE PERIOD OF TIME TO ASSURE MINIMUM EROSION OF SOILS.
- 7.) NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- 8.) ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY. ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED AT CONTRACTORS EXPENSE.
- 9.) CONTRACTOR SHALL CLEAN ANY DEBRIS, DIRT OR MATERIAL FROM HIATUS ROAD ON A DAILY BASIS.

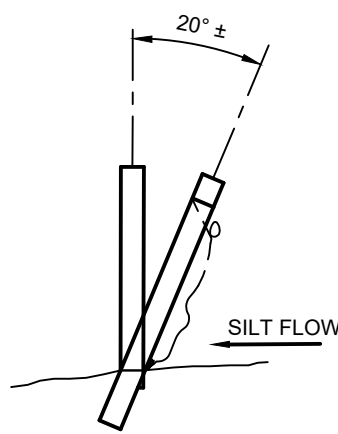


INLET SEDIMENT CONTROL DEVICE  
N.T.S.

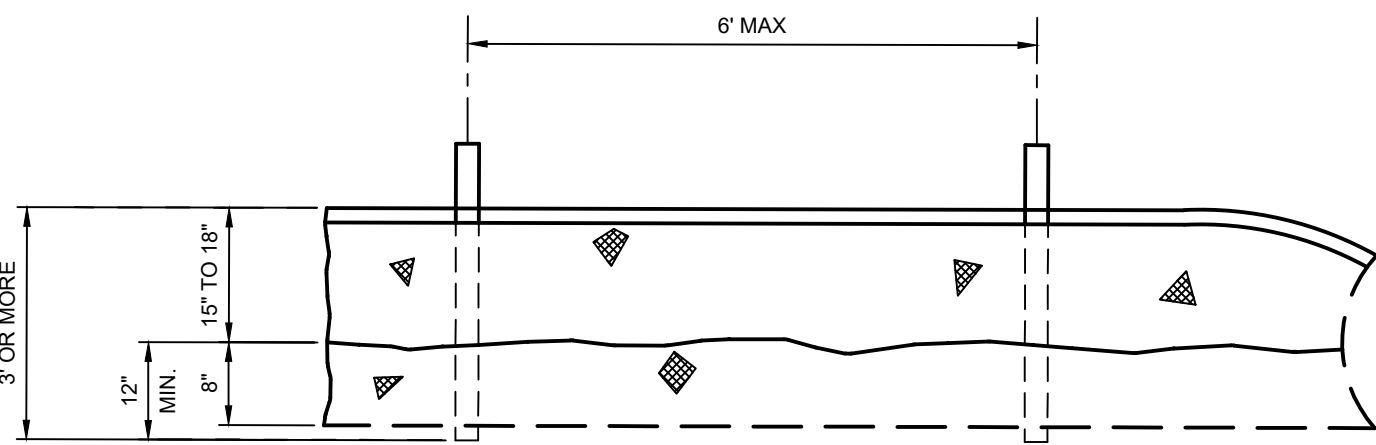
PEMBROKE ROAD (SR.824)

ALL ELEVATIONS SHOWN  
ARE IN NAVD 1988 DATUM

DATUM CONVERSION  
NGVD 1929 = (NAVD 1988 + 1.50')




SECTION



TYPE III SILT FENCE  
N.T.S.

DATE:	03/10/20	BY:	
SCALE:	1"=20'	DESCRIPTION:	
DESIGN BY:	L2G		
DRAWN BY:	L2G		
CHECKED BY:	CE		
APPROVED BY:	CE		



Craven Thompson and Associates, Inc.  
Engineers • Planners • Surveyors  
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309  
TEL: (954) 739-6409  
FAX: (954) 739-6409  
FLORIDA LICENSED ENGINEERS, SURVEYORS & MAPPING BUSINESS NO. 271  
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. C00014

PREPARED FOR:  
CPI ORANGEBROOK OWNER, LLC

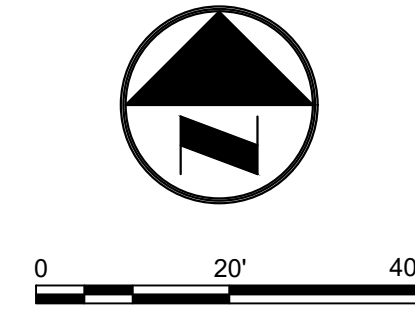
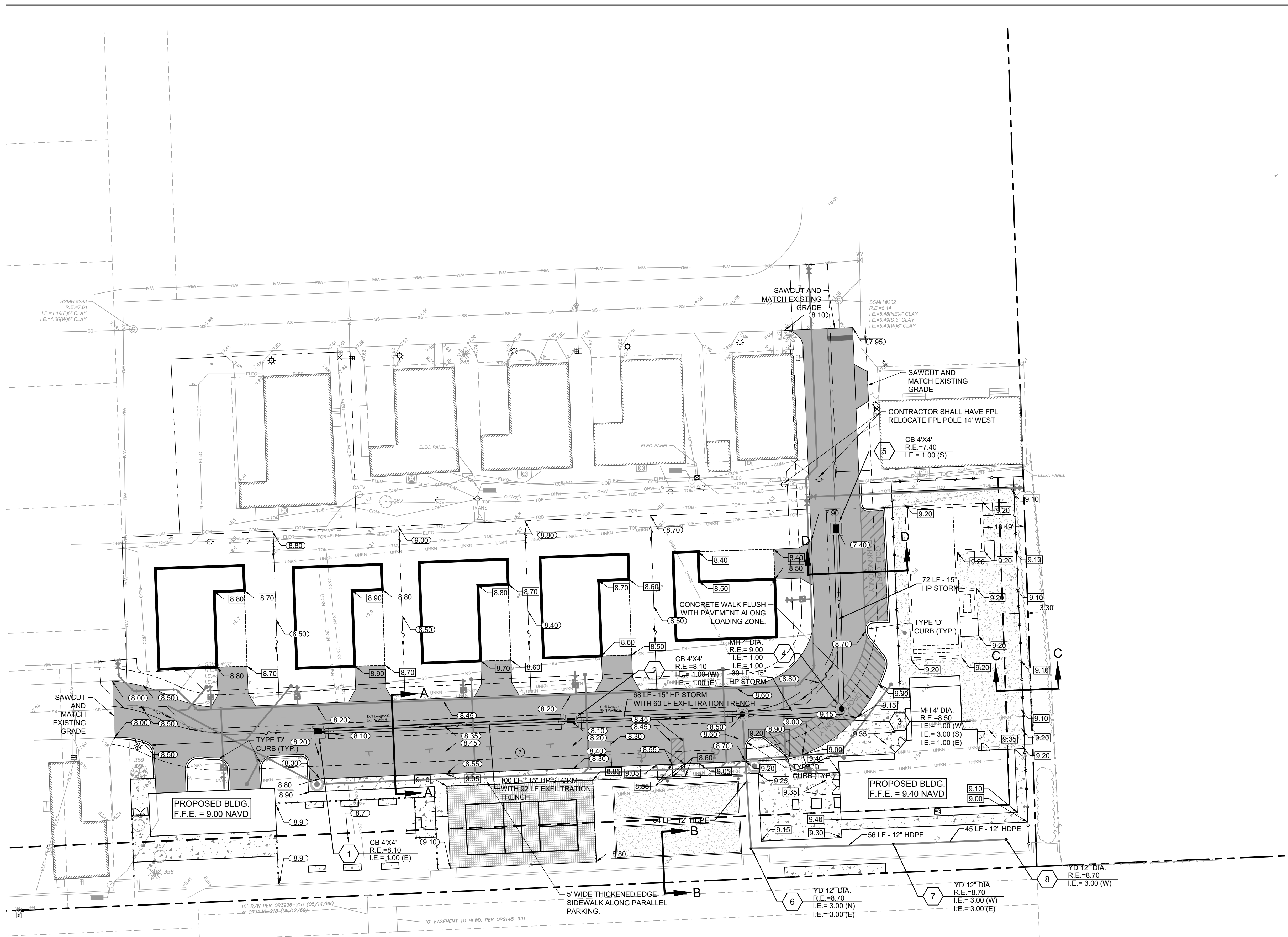
ORANGEBROOK MOBILE HOME ESTATES  
3318 ORANGE STREET  
HOLLYWOOD, FLORIDA 33021

CHAD EVERETT EDWARDS  
Florida P.E. No. 59306  
April 23, 2021

PROJECT NO.  
19-0039

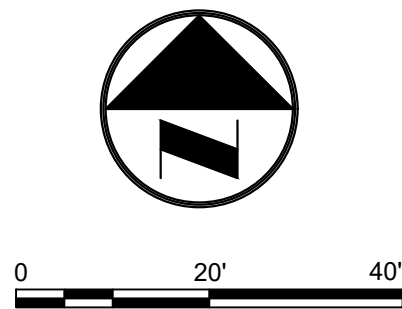
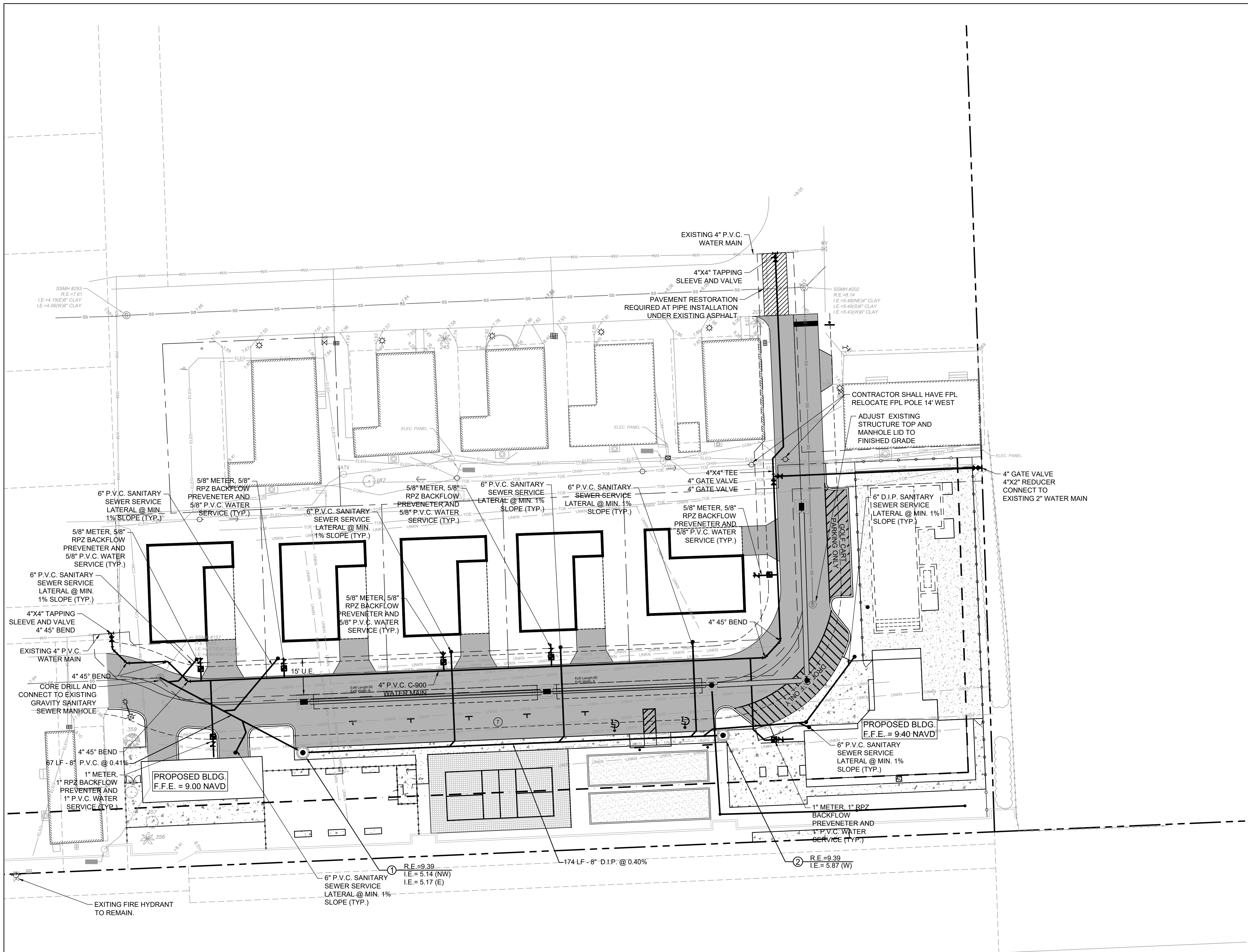
C-4  
SHEET 4 OF 17







R:\Engineering\2019\19-0039 Orange Brook Drawings\19-0039-001-03-WS.dwg (C-6) Apr 13, 2021 10:39am ZCABLE

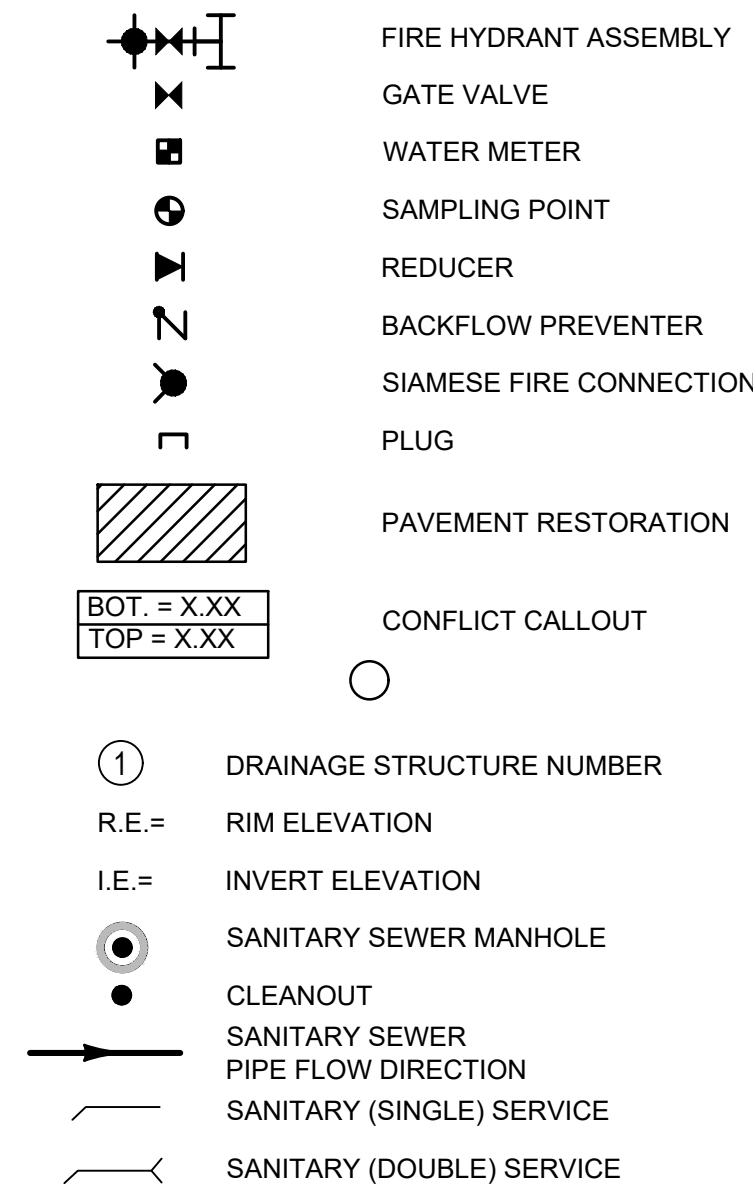


ESTIMATED FLOW FOR TRAILERS  
ASSUME 300 GPD PER LOT  
300 GPD X 5 LOTS =1,500 GPD ADF.

ESTIMATED FLOW FOR CLUBHOUSE  
ASSUME 0.2 GPD/SF  
0.2 GPD X 2,026 SF =406 GPD ADF

ESTIMATED FLOW FOR MAINTENANCE BUILDING  
ASSUME 0.2 GPD/SF  
0.2 GPD X 850 SF =90 GPD ADF

PROPOSED WATER AND SEWER LEGEND:



NOTES:

- CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- ALL WATER MAIN PIPES 4" AND LARGER SHALL BE CLASS 52 MECHANICAL JOINT AND CEMENT MORTAR LINED. ALL D.I.P. SHALL BE POLY WRAPPED IN ACCORDANCE WITH C105/A21.5-05.
- ALL WATER MAIN PIPE, INCLUDING FITTINGS, SHALL BE COLOR CODED OR MARKED BLUE AS A PREDOMINANT COLOR TO DIFFERENTIATE DRINKING WATER FROM RECLAIMED OR OTHER WATER. ALL FITTINGS AND PIPING FLANGED BOLTS, NUTS, AND WASHERS SHALL BE MADE OF A-316 STAINLESS STEEL.

DUCTILE IRON PIPE FITTINGS PROTECTION

- ENCASEMENT SHALL BE FURNISHED, MARKED AND INSTALLED IN ACCORDANCE WITH C105/A21.5-05. POLYETHYLENE ENCASEMENT OF DUCTILE-IRON PIPE SYSTEMS LATEST REVISION, FOR ALL CASTINGS, FITTINGS, VALVES, AND COUPLINGS FOR THE ENTIRE PORTION OF DIRECT-BURIED DUCTILE IRON APPURTENANCE. THE POLYETHYLENE ENCASEMENT SHALL PREVENT CONTACT BETWEEN THE PIPE, GROUND WATER, AND THE SURROUNDING BACKFILL AND BEDDING MATERIAL.
- TUBE WITH APPROVED POLYETHYLENE ADHESIVE TAPE.
- MATERIAL: LINEAR LOW DENSITY POLYETHYLENE (P.E.) FILM OF 0.008-INCH (0.20-MM) MINIMUM THICKNESS, OR HIGH-DENSITY, CROSS LAMINATED P.E. FILM OF 0.004-INCH (0.10-MM) MINIMUM THICKNESS.
- BLACK, WEATHER RESISTANT.

ALL ELEVATIONS SHOWN  
ARE IN NAVD 1988 DATUM

DATUM CONVERSION  
NGVD 1929 = (NAVD 1988 + 1.50')

CRAVEN · THOMPSON AND ASSOCIATES, INC.  
ENGINEERS · PLANNERS · SURVEYORS  
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309  
TEL: (954) 739-6409  
FAX: (954) 739-6409  
FLORIDA LICENSED ENGINEERS, SURVEYORS & MAPPING BUSINESS NO. 271  
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. C00014  
MATERIAL SHOWN HEREIN IS THE PROPERTY OF CRAVEN · THOMPSON & ASSOCIATES, INC. AND SHALL NOT BE REPRODUCED OR IN PART WITHOUT WRITTEN PERMISSION OF CRAVEN · THOMPSON & ASSOCIATES, INC. COPYRIGHT © 2019

ORANGEBROOK MOBILE HOME ESTATES  
3318 ORANGE STREET  
HOLLYWOOD, FLORIDA 33021

PREPARED FOR:

CPI ORANGEBROOK OWNER, LLC

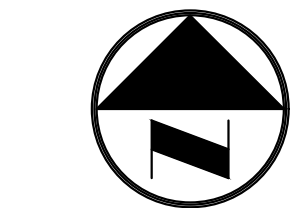
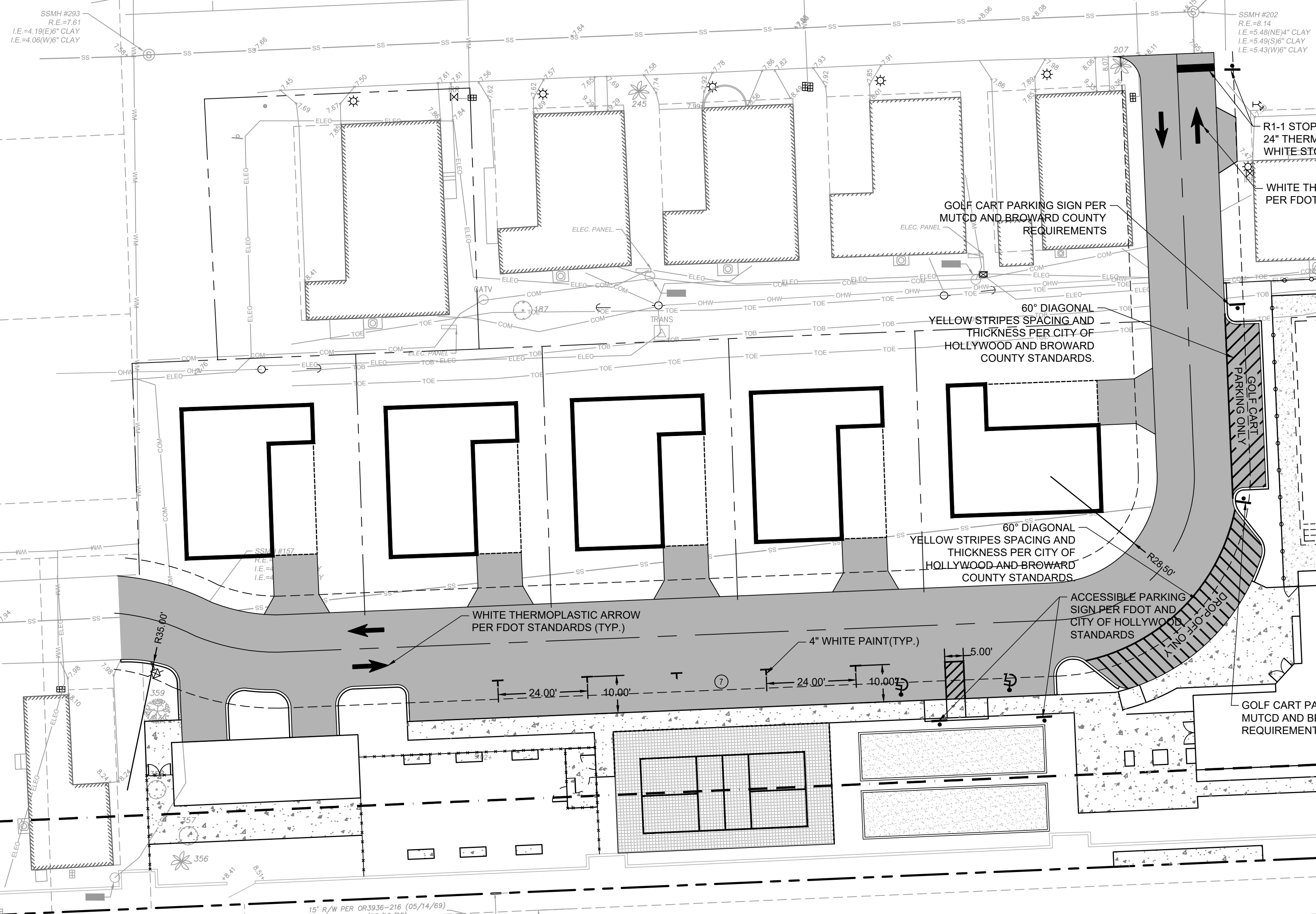
PRELIMINARY WATER AND SEWER PLAN

Chad Everett Edwards  
Florida P.E. No. 59306  
April 23, 2021

PROJECT NO.  
19-0039

C-6  
SHEET 6 OF 17






## NOTES:

1. ALL SIGNS TO BE REMOVED AND REPLACED AT THE END OF THE PROJECT. CONTRACTOR TO MAINTAIN ALL SIGNS DURING CONSTRUCTION, UNLESS OTHERWISE NOTED.
2. EXISTING BUS STOP SIGNAGE ALONG TYLER STREET SHALL REMAIN UNTIL TEMPORARY BUS STOP RELOCATION IS CONSTRUCTED AND OPERATIONAL.
3. ALL EXISTING PAVEMENT MARKINGS AND SIGNING DISTURBED DUE TO PROPOSED CONSTRUCTION ACTIVITIES SHALL BE REPLACED.
4. PAVEMENT MARKINGS ON PAVERS SHALL BE 3M 207/271 TAPE AND APPLIED WITH SURFACE PREPARATION ADHESIVE P-50 AS PER MANUFACTURERS SPECIFICATIONS.
5. ALL PAVEMENT MARKINGS AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", LATEST EDITION, AND BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS (LATEST EDITION.)
6. ALL PAVEMENT MARKINGS SHALL BE ALKYL BASED THERMOPLASTIC AND FULLY RETROREFLECTORIZED.
7. ALL PAVEMENT MARKING REFLECTIVITY SHALL BE 250 MILLICANDELLAS FOR WHITE AND 175 MILLICANDELLAS FOR YELLOW.
8. FDOT APPROVED SEALER SHALL BE USED WHEN APPLYING MARKINGS ON CONCRETE.
9. ALL STOP SIGNS SHALL BE 30"x30" DIAMOND GRADE VIP REFLECTIVE MATERIAL.
10. RAISED PAVEMENT MARKERS (RPM'S) SHALL BE CLASS "B" OR EQUAL, APPLIED WITH EPOXY OR BITUMINOUS ADHESIVE.
11. EXISTING MARKINGS SHALL BE REMOVED BY WATER BLASTING OR SANDBLASTING ONLY.
12. ALL STOP BARS TO BE 4' BEHIND CROSSWALK OR SIDEWALK.
13. ALL EXISTING SIGNAL LOOPS AND OTHER APPURTENANCES DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AND COORDINATED WITH B.C.H.C.E.D.
14. TRAFFIC SIGNALS, SCHOOL FLASHERS, ETC. TO REMAIN FUNCTIONAL THROUGHOUT CONSTRUCTION CONTRACTOR SHALL COORDINATE ALL WORK WITH B.C.H.C.E.D.

*PEMBROKE ROAD (SR.824)*

<p><b>ORANGEBROOK MOBILE HOME ESTATES</b>  <b>3318 ORANGE STREET</b>  <b>HOLLYWOOD, FLORIDA 33021</b></p> <p>PREPARED FOR:  <b>CPI ORANGEBROOK OWNER, LLC</b></p> <p><b>PRELIMINARY PAVEMENT MARKING &amp; SIGNAGE PLAN</b></p>	 <p><b>Craven &amp; Thompson and Associates, Inc.</b>  <b>ENGINEERS • PLANNERS • SURVEYORS</b>          3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309          TEL: (954) 739-6409          FAX: (954) 739-6409</p> <p>FLORIDA LICENSED ENGINEERS, SURVEYING &amp; MAPPING BUSINESS No. 271          FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. G000114</p> <p><small>MATERIAL SHOWN HEREIN IS THE PROPERTY OF CRAVEN THOMPSON &amp; ASSOCIATES, INC. AND SHALL NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION OF CRAVEN THOMPSON &amp; ASSOCIATES, INC. COPYRIGHT © 2019</small></p>	DATE:	03/10/20
		SCALE:	1"=20'
		DRAWN BY:	LZG
		CHECKED BY:	CE
		APPROVED BY:	CE
		DESCRIPTION:	
		BY:	DATE:

Chad Everett Edwards  
 Florida P. E. No. 59306  
 April 23, 2021

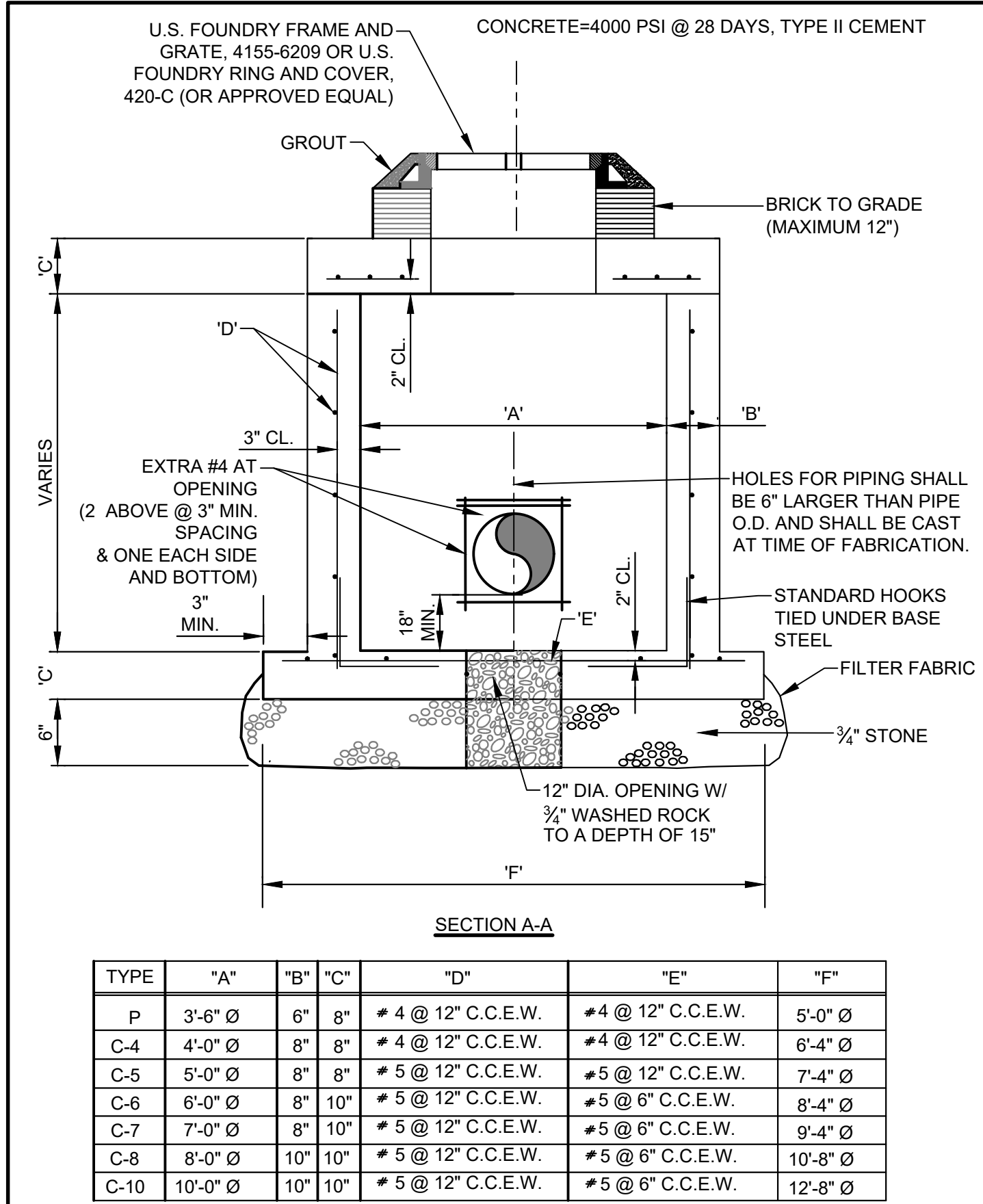
PROJECT NO.  
**19-0039**

**C-7**

SHEET 7 OF 17

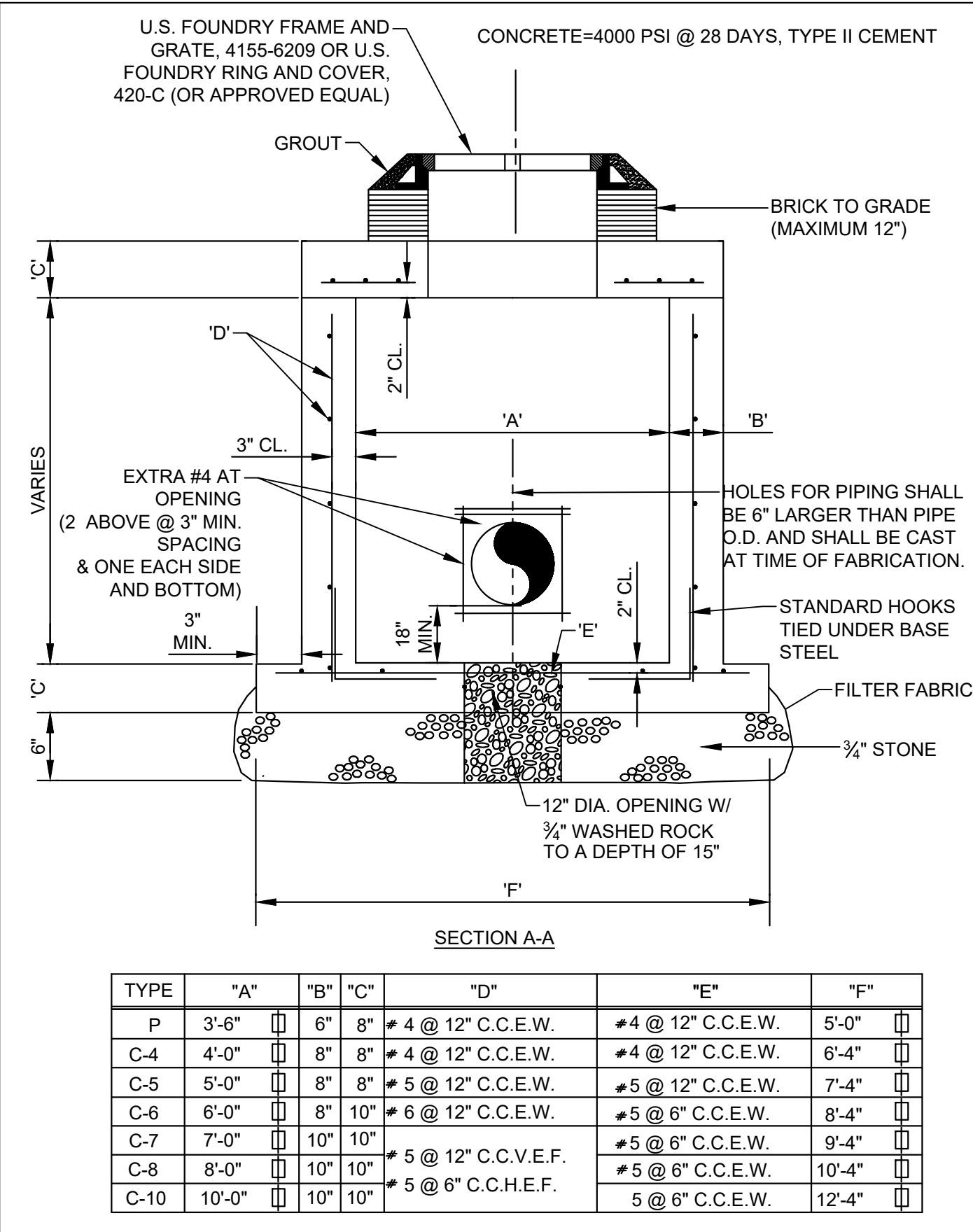


R:\Engineering\2019\19-0039 Orange Brook\Drawings\19-0039-001-03-PCDD.dwg [C-8] Apr 13, 2021 10:43am ZCAMELE



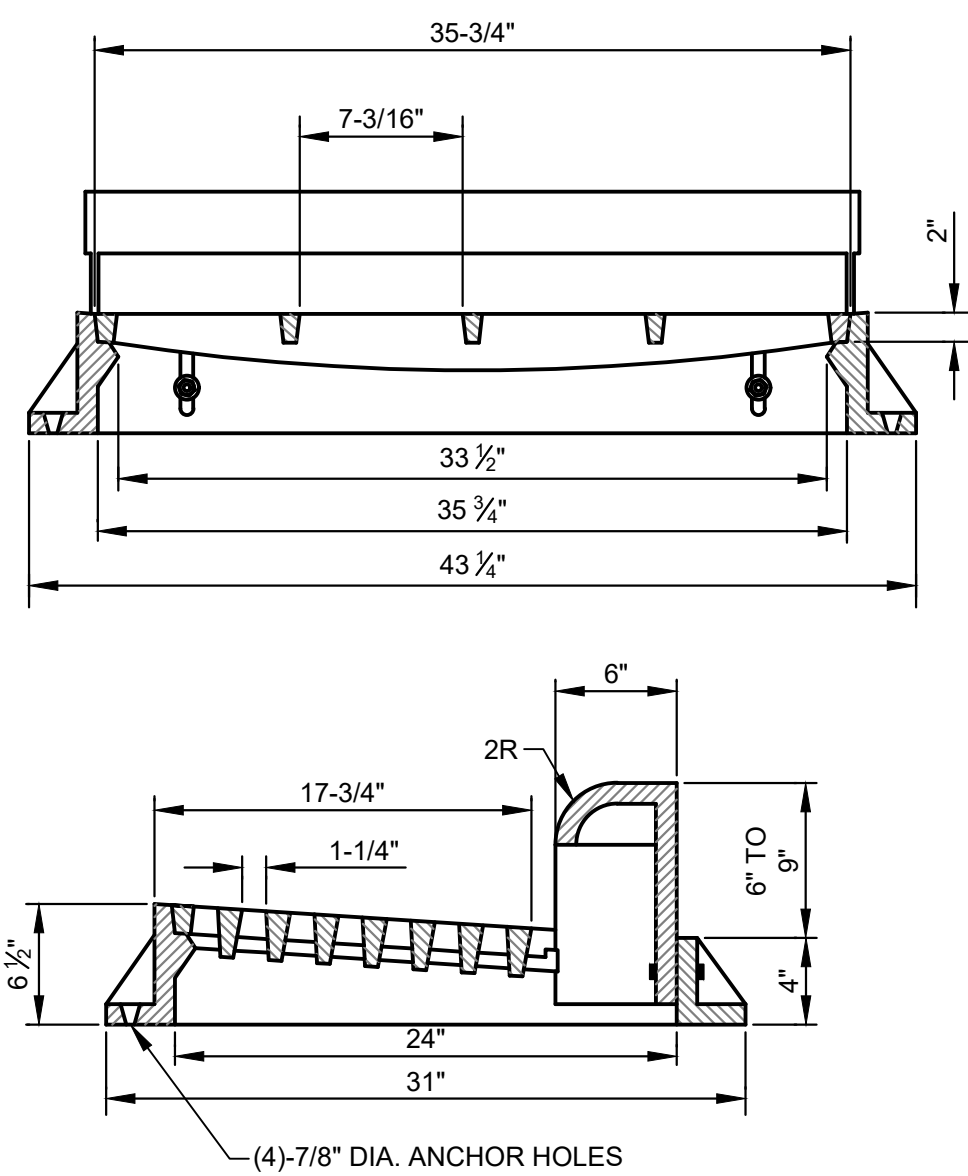
### PRECAST CIRCULAR DRAINAGE STRUCTURES

SCALE: N.T.S.



### PRECAST SQUARE DRAINAGE STRUCTURES

SCALE: N.T.S.

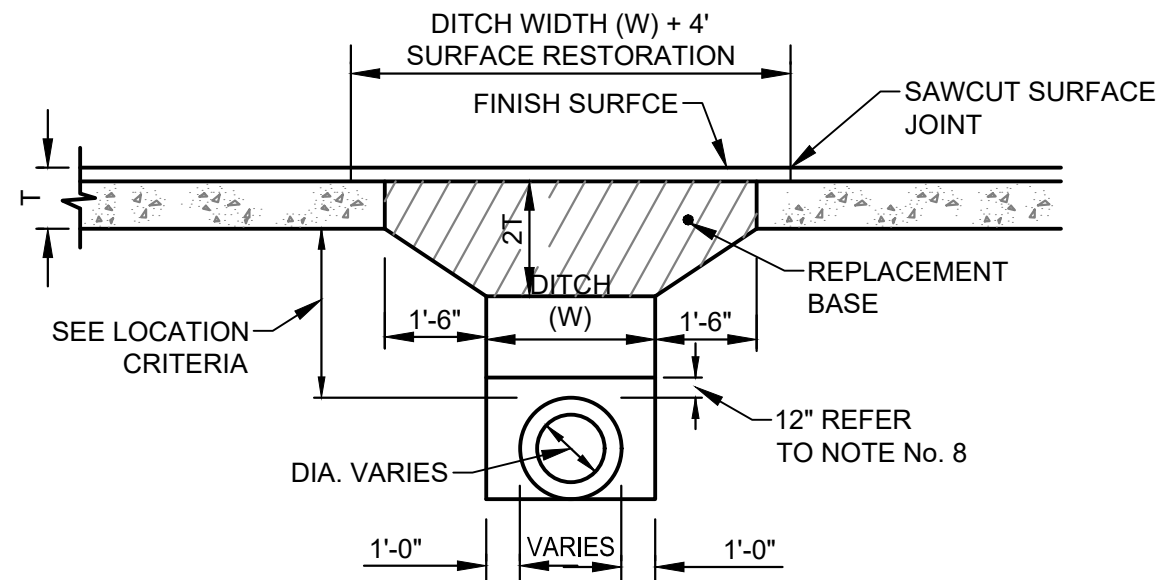


#### NOTE:

1. CURB INLET TO BE TYPE USF 5130-6168.

### USF 5130 CURB & GUTTER INLET FRAME, HOOD AND GRATE SERIES

SCALE: N.T.S.



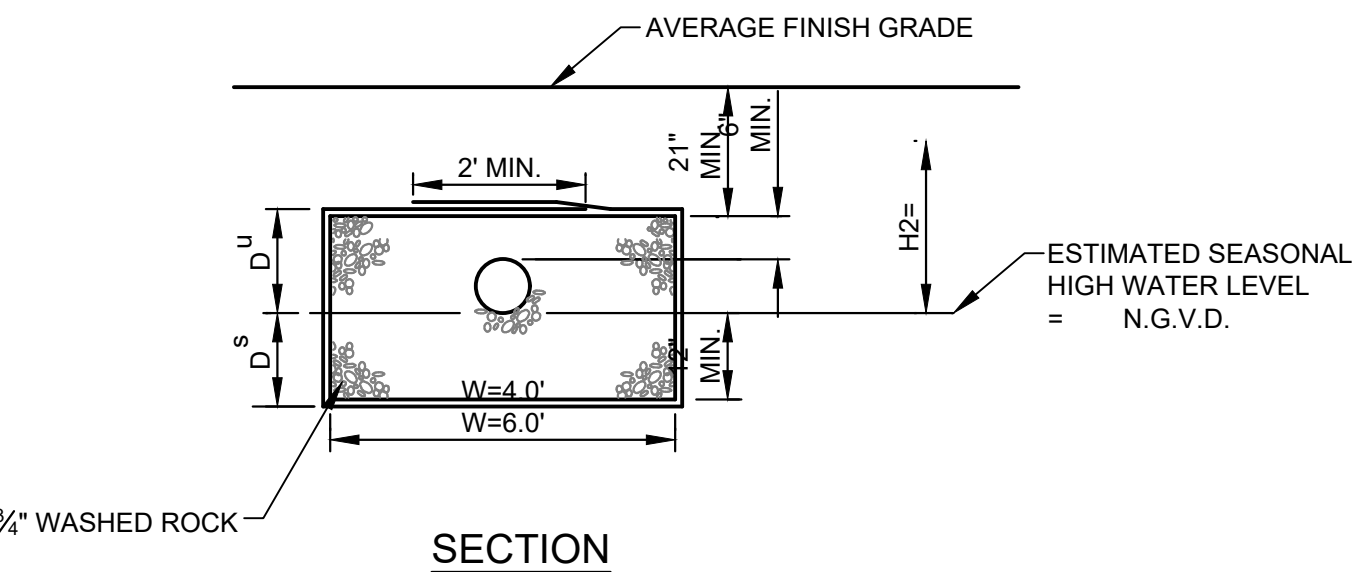
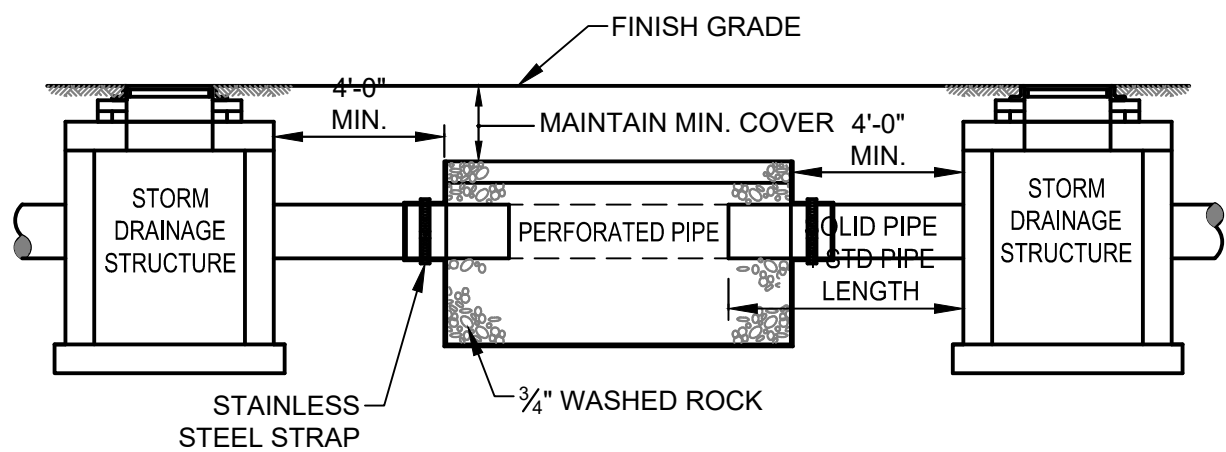
#### GENERAL NOTES:

1. REPLACE BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE. MINIMUM 12", MAXIMUM 18", MINIMUM LBR 100.
2. BASE MATERIAL SHALL BE PLACED IN 6" MAXIMUM (LOOSE MEASUREMENT) LAYERS AND EACH LAYER THOROUGHLY ROLLED AND TAMPED TO 98% OF MAXIMUM DENSITY, PER A.A.S.H.T.O. T-180.
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
4. ALL EDGES AND SURFACES SHALL BE TACK COATED.
5. SURFACE MATERIAL SHALL BE CONSISTENT WITH THE EXISTING SURFACE.
6. BASE MATERIAL SHALL BE CONSISTENT WITH THE EXISTING BASE.
7. IF THE DITCH IS FILLED TEMPORARILY IT SHALL BE COVERED WITH A 2" ASPHALTIC CONCRETE/PATCH TO KEEP THE FILL MATERIAL FROM RAVELING UNTIL REPLACED WITH PERMANENT PATCH.
8. MECHANICAL COMPACTION NOT ALLOWED BELOW THIS LEVEL. .
9. COMPACTION PERCENTAGES SHOWN REFER TO A.A.S.H.T.O. T-180.

### TRENCH DETAIL

SCALE: N.T.S.

(PAVED AREAS)

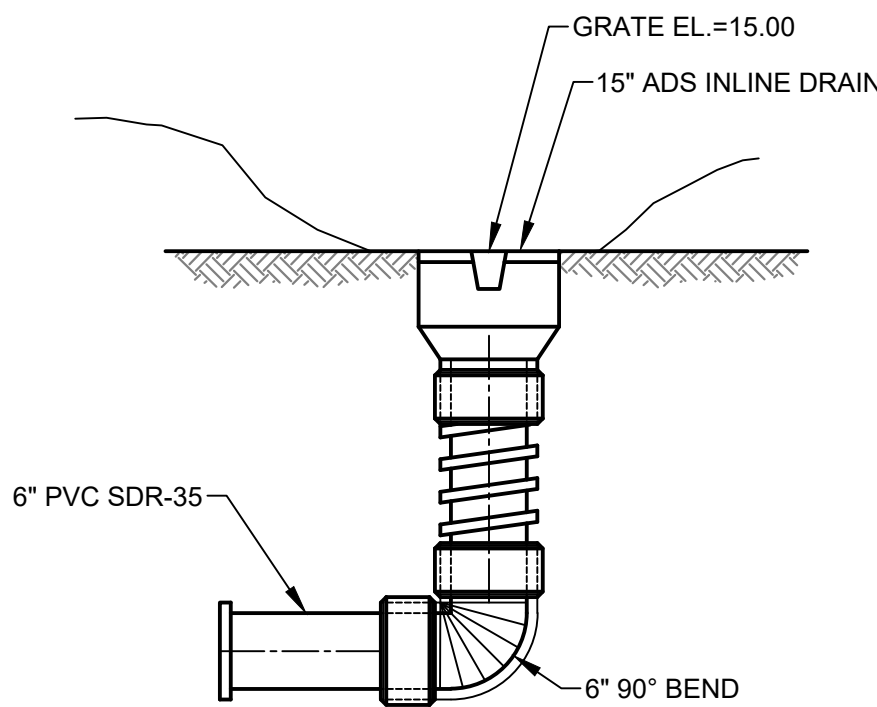


#### NOTES:

1. PIPES SHALL CONNECT TO ADDITIONAL CATCH BASINS AS REQUIRED.
2. BALLAST ROCK SHALL BE FROM FRESH WATER WASHED FREE OF DELETERIOUS MATTER.
3. TRENCH TO BE LINED WITH AMOCO PROPEX 4545 OR APPROVED EQUIVALENT TYPE FILTER FABRIC. OVERLAP TRENCH LINING MATERIAL A MINIMUM OF 2' AT TOP OF TRENCH. CLOSE ENDS AND STRAP AROUND PIPE.
4. BIO-BARRIER SHALL BE INSTALLED ADJACENT TO EXFILTRATION TRENCH WHEN EXISTING OR PROPOSED TREES ARE LOCATED WITHIN 10.0' OF CENTERLINE OF PIPE. INSTALLATION OF BIO-BARRIER SHALL BE IN ACCORDANCE WITH BIO-BARRIER DETAIL (SEE LANDSCAPE DRAWING DETAILS).

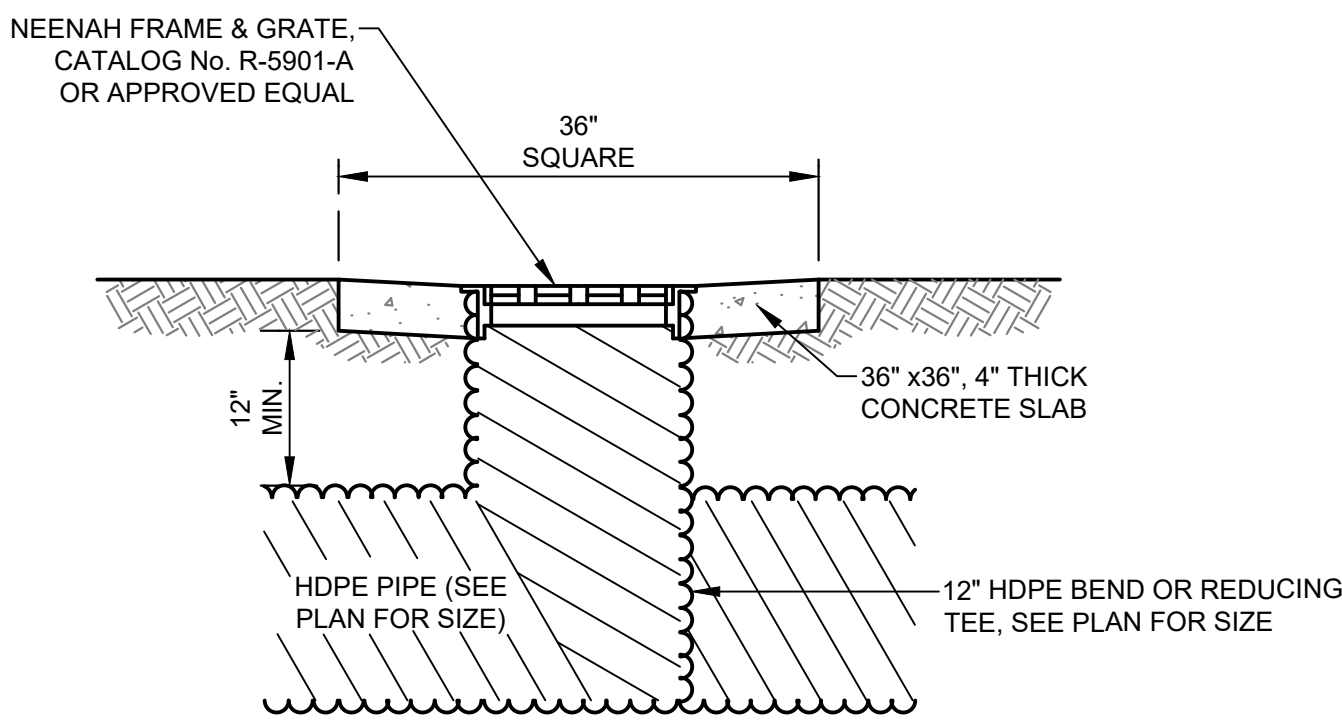
### EXFILTRATION TRENCH DETAIL

SCALE: N.T.S.



### TYPICAL INLINE DRAIN SECTION

SCALE: N.T.S.



### YARD DRAIN DETAIL

SCALE: N.T.S.

DATE:	03/10/20
SCALE:	1"=20'
DESIGN BY:	LZG
DRAWN BY:	LZG
CHECKED BY:	CE
APPROVED BY:	CE
BY:	
DATE:	

CRAVEN • THOMPSON AND ASSOCIATES, INC.  
ENGINEERS • PLANNERS • SURVEYORS  
35653 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309  
FAX: (954) 739-6409 TEL: (954) 739-6400  
FLORIDA LICENSED ENGINEERS, SURVEYORS & MAPPING BUSINESS NO. 271  
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. C00014  
MATERIAL SHOWN HEREIN IS THE PROPERTY OF CRAVEN, THOMPSON & ASSOCIATES, INC. AND SHALL NOT BE REPRODUCED OR IN PART WITHOUT WRITTEN PERMISSION OF CRAVEN-THOMPSON & ASSOCIATES, INC. COPYRIGHT © 2019

ORANGEBROOK MOBILE HOME ESTATES  
3318 ORANGE STREET  
HOLLYWOOD, FLORIDA 33021

PREPARED FOR:  
CPI ORANGEBROOK OWNER, LLC

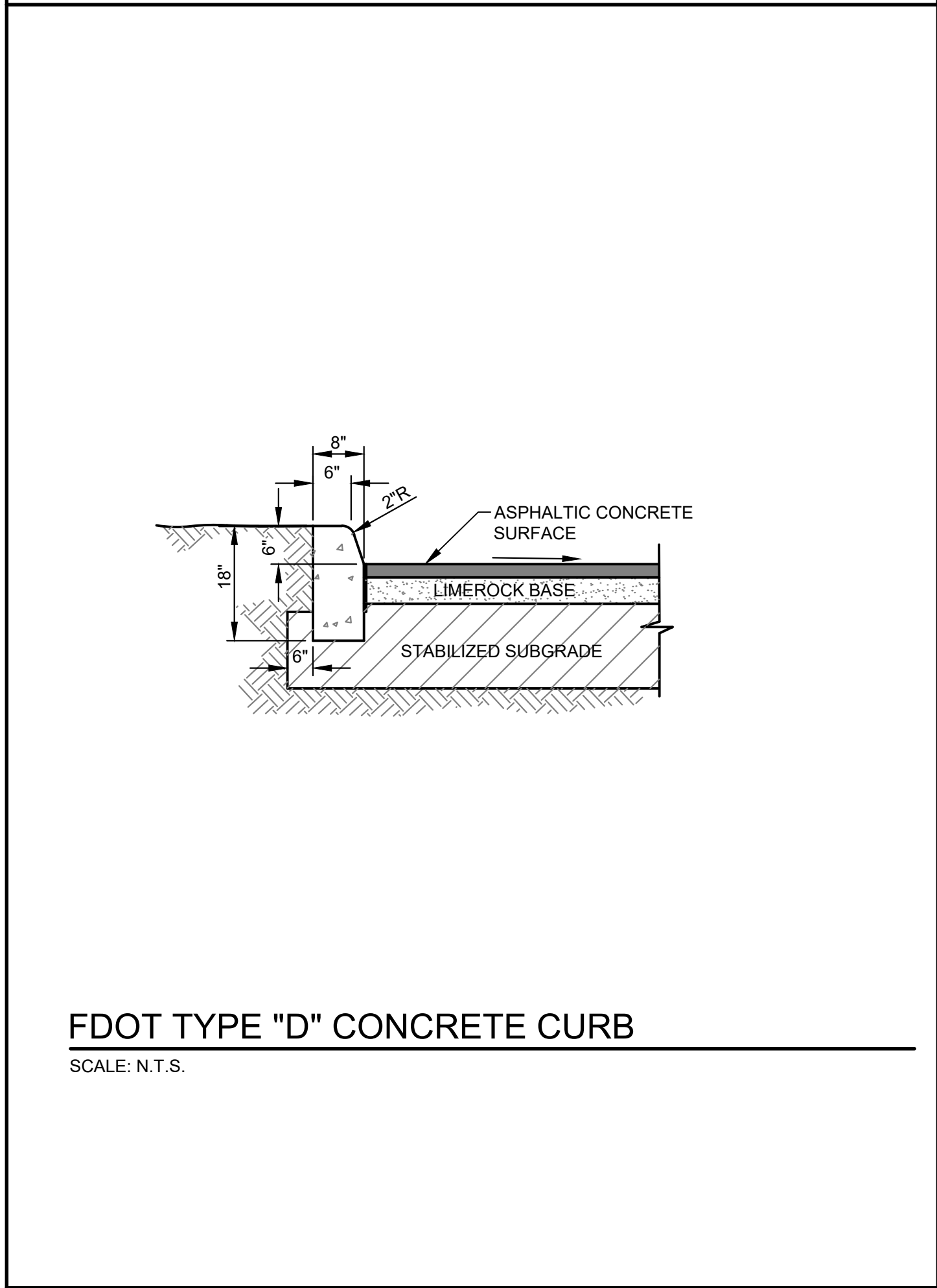
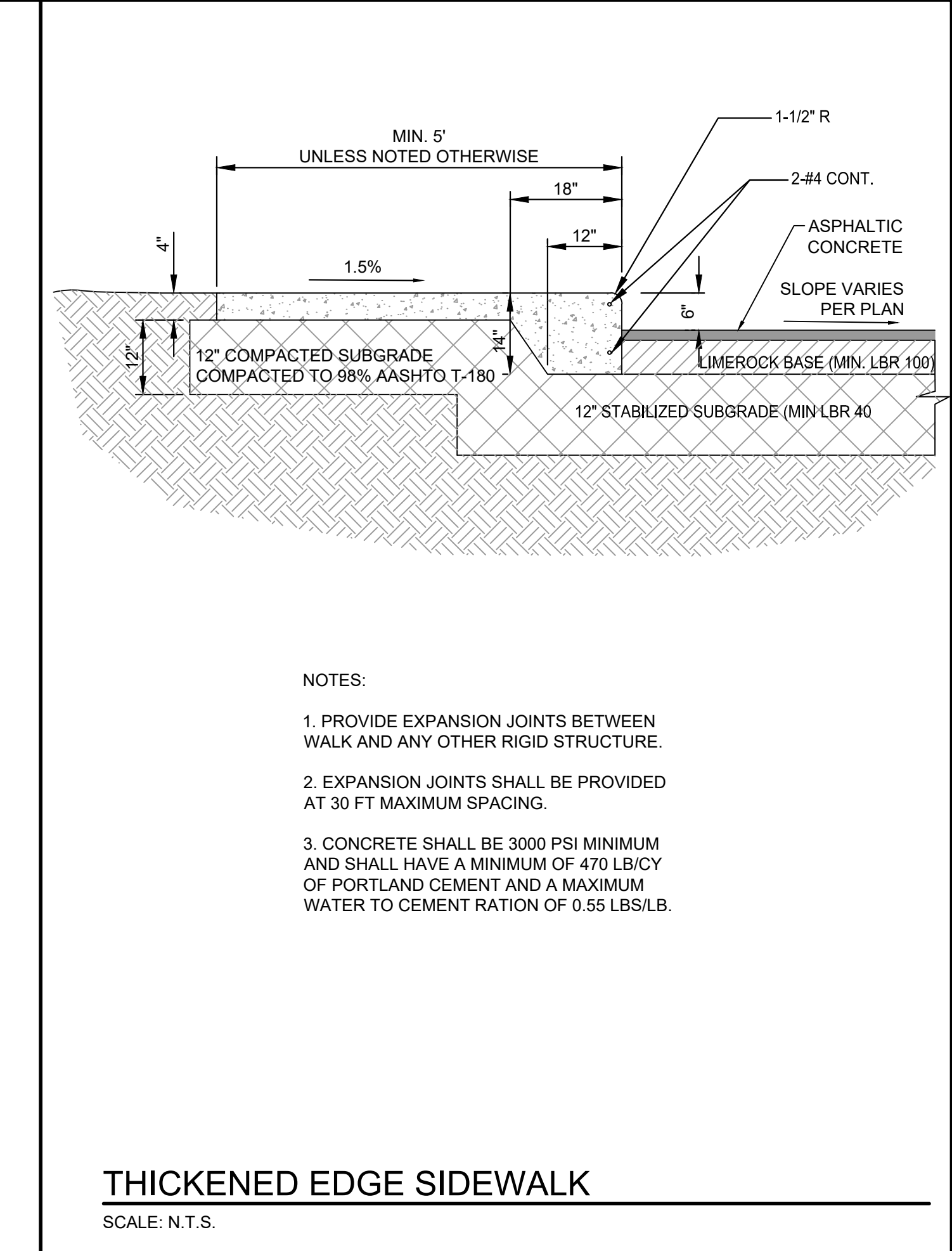
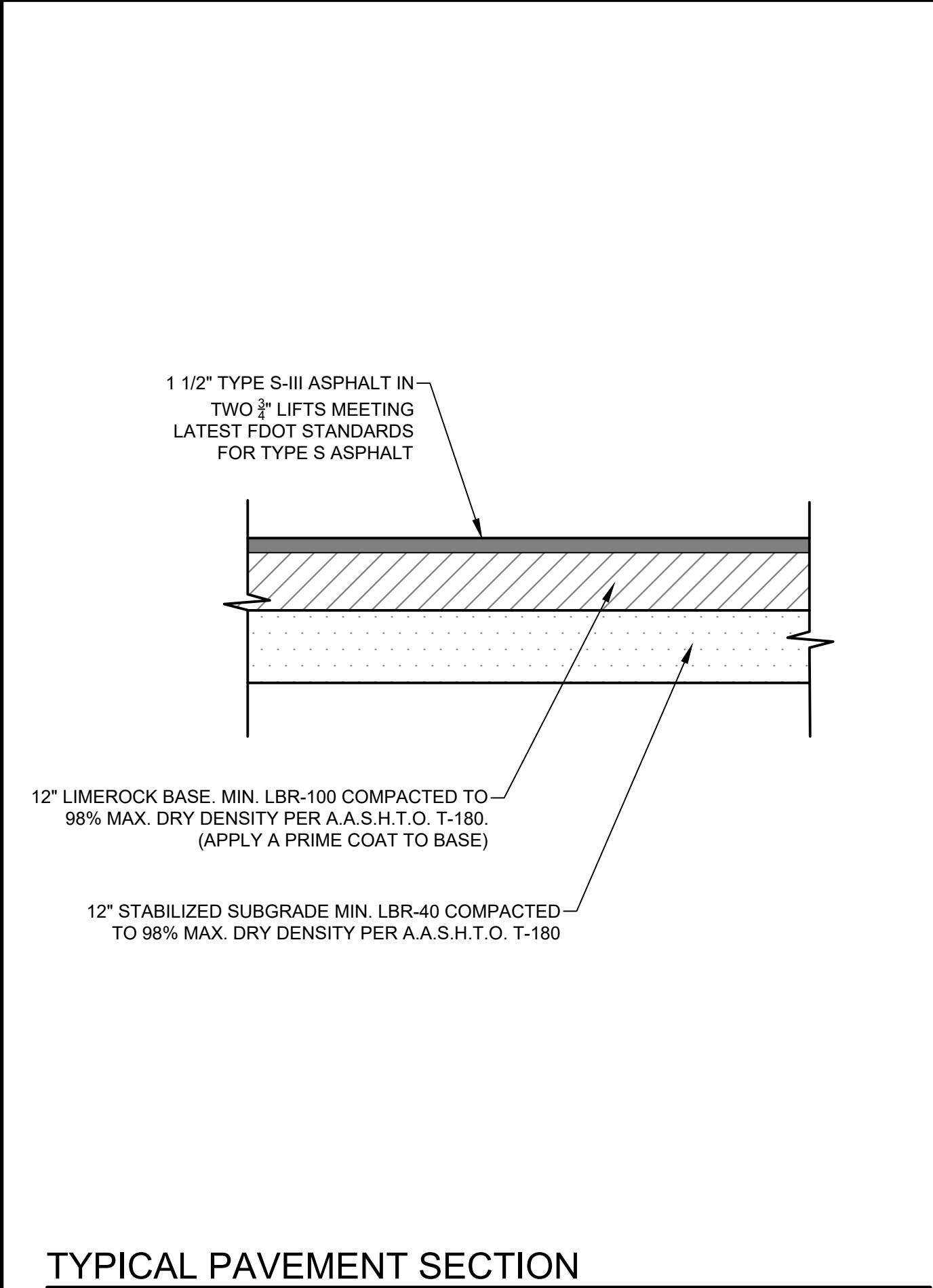
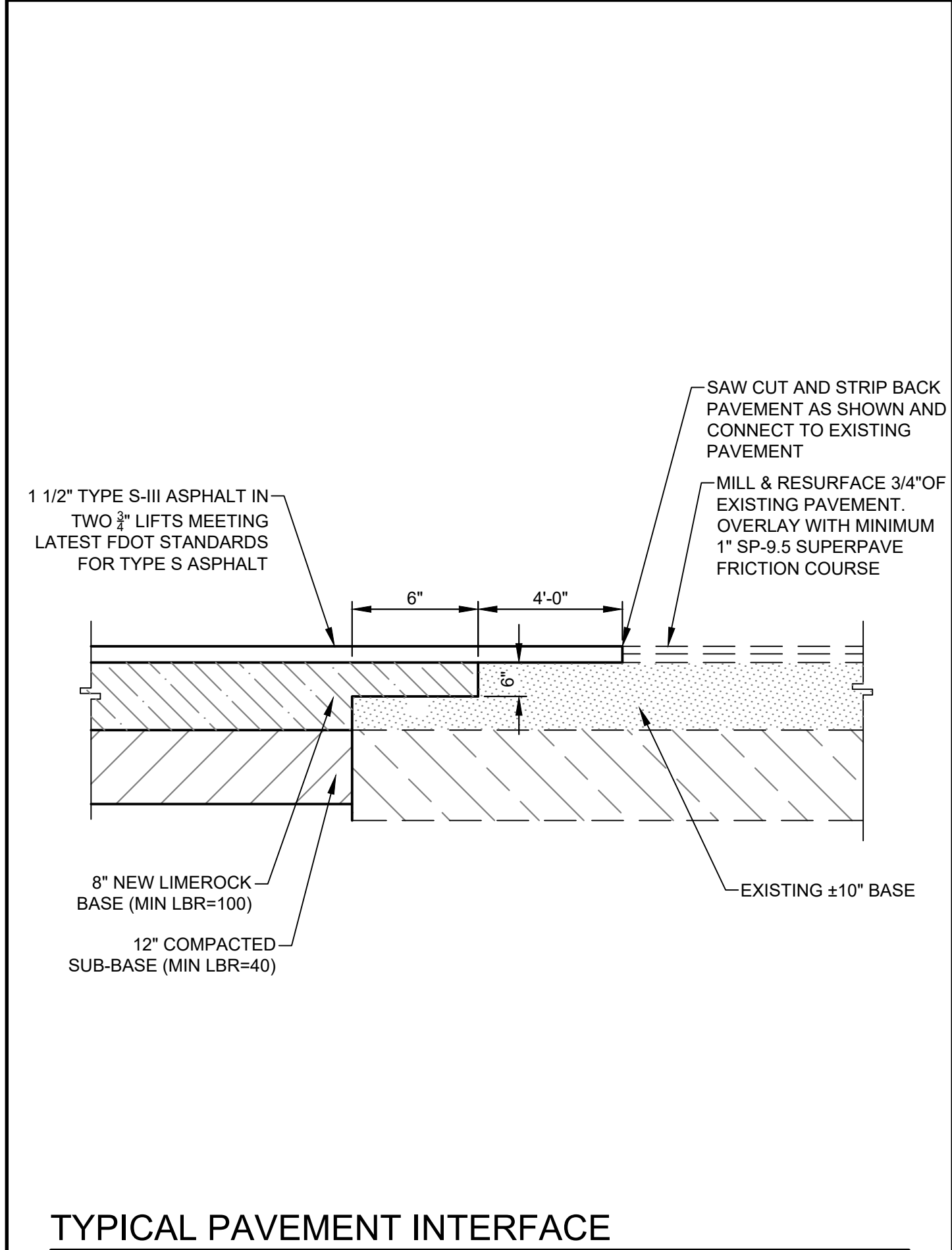
PAVING, GRADING, & DRAINAGE DETAILS

Chad Everett Edwards  
Florida P.E. No. 59306  
April 23, 2021

PROJECT NO.  
19-0039



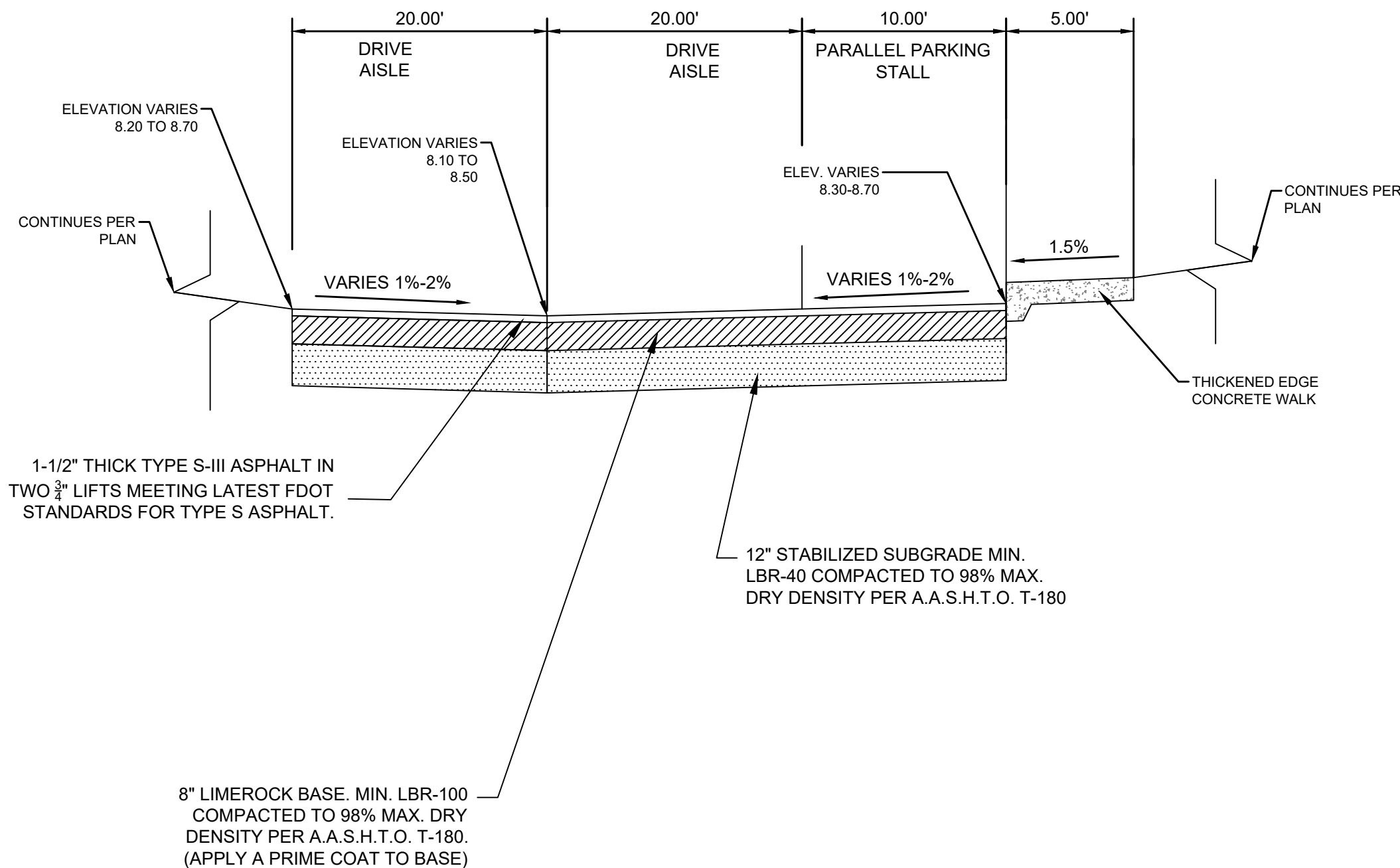
R:\Engineering\2019\19-0039 Orange Brook\Drawings\19-0039-001-03-FGDD.dwg [C-9] Apr 13, 2021 10:44am ZCABLE



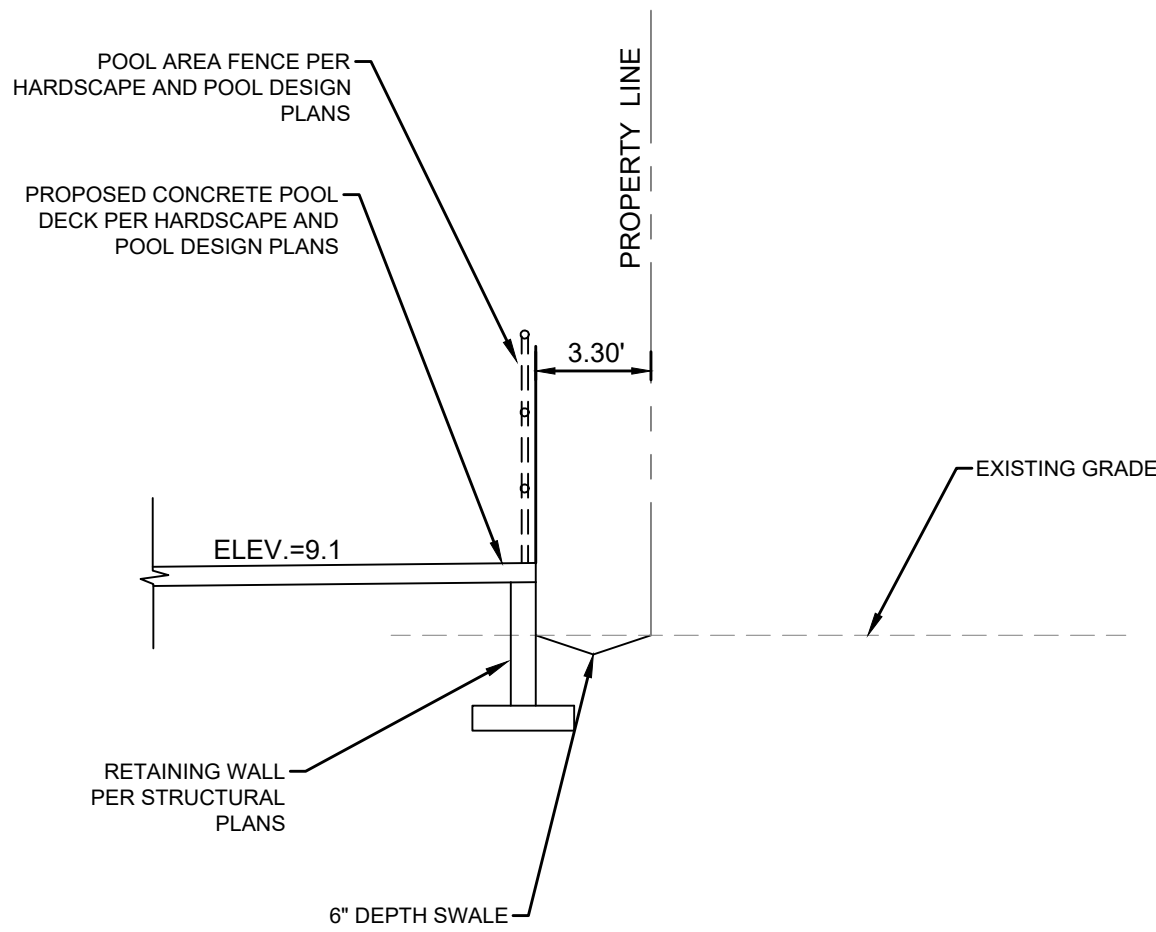
DATE:	03/10/20	BY:	DATE:
SCALE:	1"=20'	BY:	DATE:
DESIGN BY:	LZG	BY:	DATE:
DRAWN BY:	LZG	BY:	DATE:
CHECKED BY:	CE	BY:	DATE:
APPROVED BY:	CE	BY:	DATE:
DESCRIPTION:			
CRAVEN • THOMPSON AND ASSOCIATES, INC. ENGINEERS • PLANNERS • SURVEYORS 3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309 FAX: (954) 739-6409 TEL.: (954) 739-6400 FLORIDA LICENSED ENGINEERS, SURVEYORS & MAPPING BUSINESS NO. 271 FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. C00014 INC. COPYRIGHT © 2019 MATERIAL SHOWN HEREIN IS THE PROPERTY OF CRAVEN THOMPSON & ASSOCIATES, INC. AND SHALL NOT BE REPRODUCED OR IN PART WITHOUT WRITTEN PERMISSION OF CRAVEN THOMPSON & ASSOCIATES.			
ORANGEBROOK MOBILE HOME ESTATES 3318 ORANGE STREET HOLLYWOOD, FLORIDA 33021 PREPARED FOR: CPI ORANGEBROOK OWNER, LLC PAVING, GRADING, & DRAINAGE DETAILS			
Chad Everett Edwards Florida P.E. No. 59306 April 23, 2021 PROJECT NO. 19-0039			
C-9 SHEET 9 OF 17			



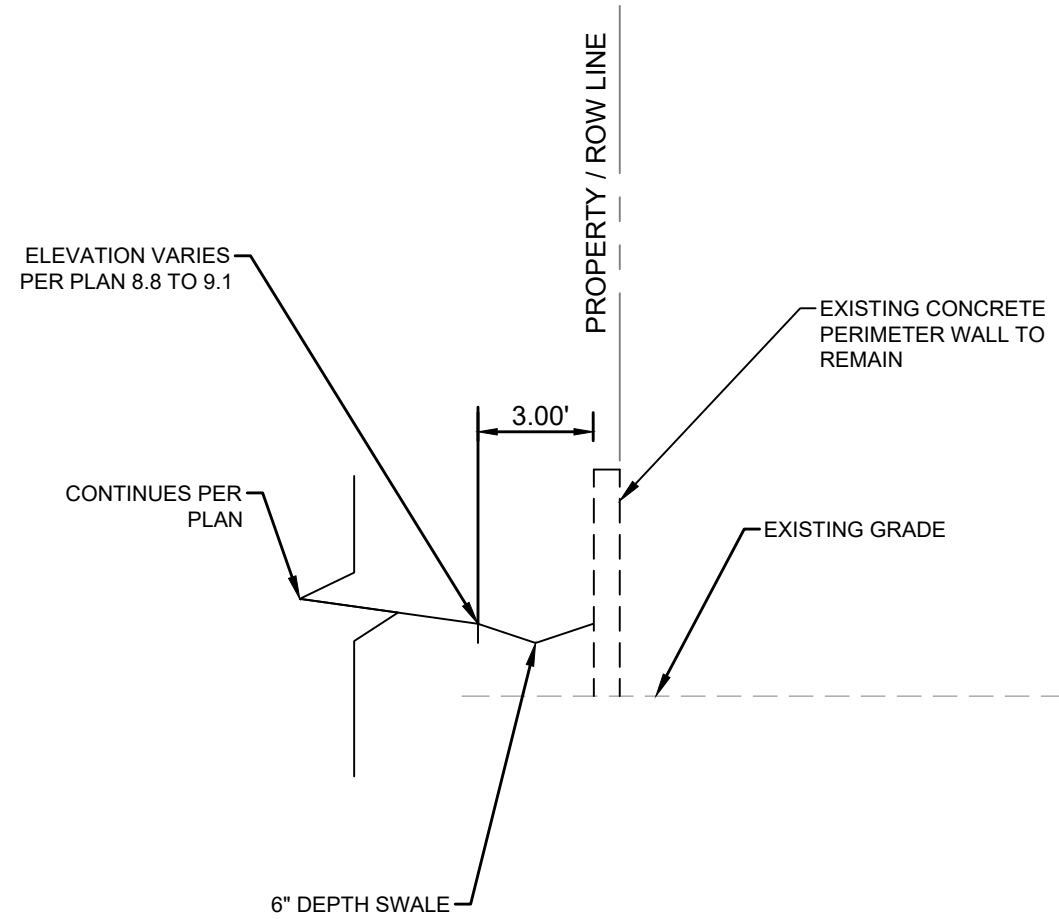
R:\Engineering\2019\19-0039 Orange Brook\Drawings\19-0039-001-03-SEC.dwg [C-10] Apr. 23, 2021 8:18am ZGAMBLE



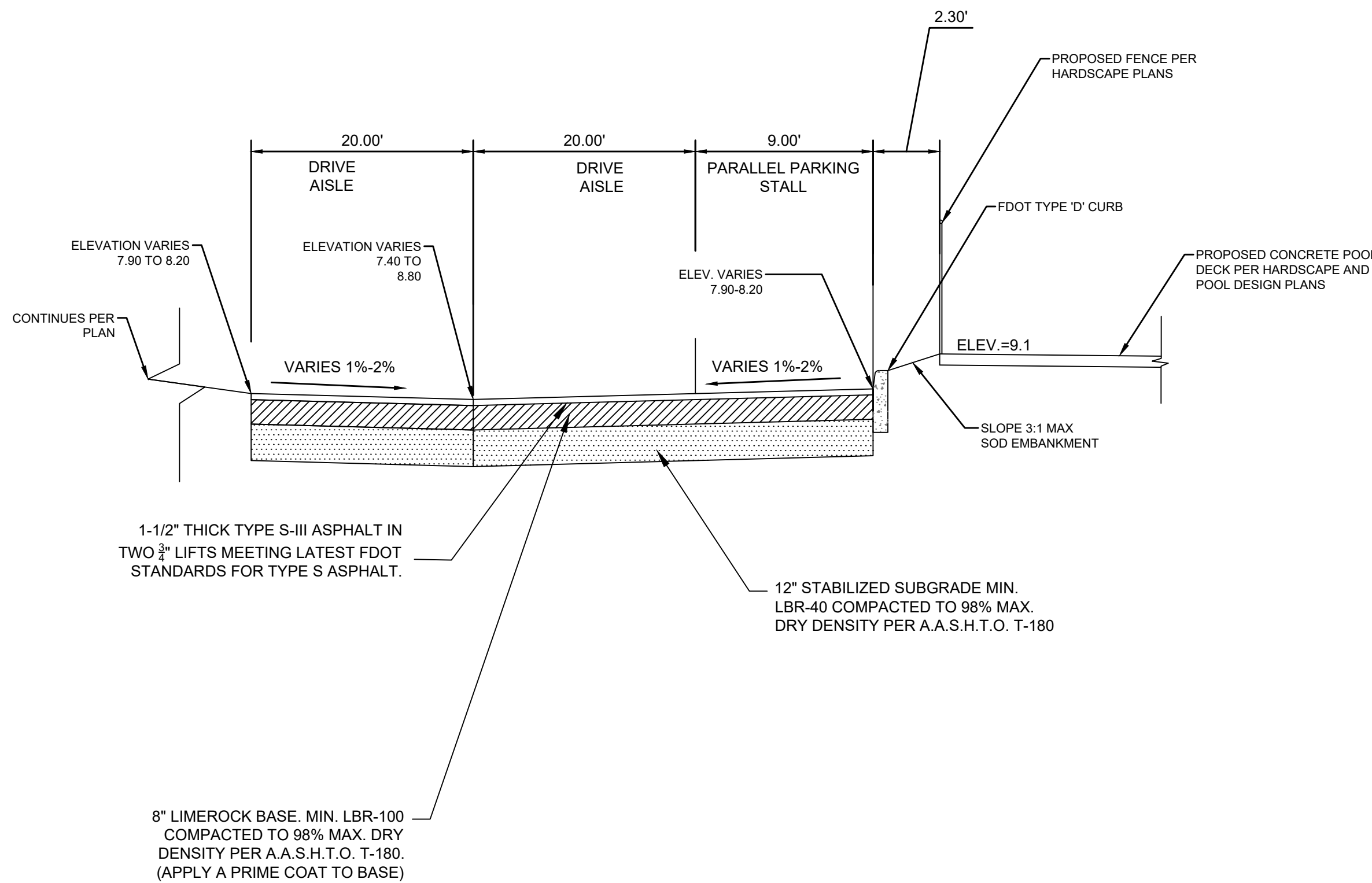
SECTION A-A  
N.T.S.



SECTION C-C  
N.T.S.



SECTION B-B  
N.T.S.



SECTION D-D  
N.T.S.


DATE:	03/10/20	DATE:		DATE:	
SCALE:	1"=20'	SCALE:		SCALE:	
DESIGN BY:	LZG	DESIGN BY:		DESIGN BY:	
DRAWN BY:	LZG	DRAWN BY:		DRAWN BY:	
CHECKED BY:	CE	CHECKED BY:		CHECKED BY:	
APPROVED BY:	CE	APPROVED BY:		APPROVED BY:	
DESCRIPTION:					
BY:					
CRAVEN - THOMPSON AND ASSOCIATES, INC. ENGINEERS • PLANNERS • SURVEYORS 3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309 FAX: (954) 739-6409 TEL: (954) 739-6400 FLORIDA LICENSED ENGINEERS, SURVEYORS & MAPPING BUSINESS NO. 271 FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. C00014 MATERIAL SHOWN HEREIN IS THE PROPERTY OF CRAVEN THOMPSON & ASSOCIATES, INC. AND SHALL NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT WRITTEN PERMISSION OF CRAVEN-THOMPSON & ASSOCIATES. © 2019					
ORANGEBROOK MOBILE HOME ESTATES 3318 ORANGE STREET HOLLYWOOD, FLORIDA 33021 PREPARED FOR: CPI ORANGEBROOK OWNER, LLC TYPICAL SECTIONS					
Chad Everett Edwards Florida P.E. No. 59306 April 23, 2021					
PROJECT NO. 19-0039					
C-10 SHEET 10 OF 17					



R:\Engineering\2019\19-0039 Orange Brook\Drawings\19-0039-001-03-WSD.dwg [C-17] Apr 13, 2021 10:46am ZCABLE


GENERAL NOTES:

1. THE INFORMATION PROVIDED IN THESE DRAWINGS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH WILL BE ENCOUNTERED DURING THE COURSE OF THE WORK. THE CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSION REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH BIDS WILL BE BASED.
2. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO APPLICABLE STANDARDS AND SPECIFICATIONS OF THE CITY OF HOLLYWOOD DEPARTMENT OF PUBLIC UTILITIES, ENGINEERING AND CONSTRUCTION SERVICES DIVISION (ECS), AND ALL OTHER LOCAL, STATE AND NATIONAL CODES, WHERE APPLICABLE.
3. LOCATIONS, ELEVATIONS, SIZES, MATERIALS, ALIGNMENTS, AND DIMENSIONS OF EXISTING FACILITIES, UTILITIES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS; AND DO NOT PURPORT TO BE ABSOLUTELY CORRECT. ALSO, THERE MAY HAVE BEEN OTHER IMPROVEMENTS, UTILITIES, ETC., WITHIN THE PROJECT AREA WHICH WERE CONSTRUCTED AFTER THE PREPARATION OF THESE PLANS AND/OR THE ORIGINAL SITE SURVEY. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND OTHER FEATURES AFFECTING HIS/HER WORK PRIOR TO CONSTRUCTION, AND NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICT BETWEEN DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ANY FACILITIES SHOWN OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL WORK AS NEEDED TO AVOID CONFLICT WITH EXISTING UTILITIES (NO ADDITIONAL COST SHALL BE PAID FOR THIS WORK). EXISTING UTILITIES SHALL BE MAINTAINED IN SERVICE DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE RESPECTIVE UTILITY OWNER.
4. THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITIES TO ARRANGE FOR THE RELOCATION AND TEMPORARY SUPPORT OF UTILITY FEATURES, ETC. AS NECESSARY TO COMPLETE THE WORK.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ANY AND ALL EXISTING UTILITIES ON THIS PROJECT, AND TO ENSURE THAT EXISTING UTILITIES ARE MAINTAINED IN SERVICE DURING CONSTRUCTION UNLESS APPROVED OTHERWISE BY THE UTILITY OWNER.
6. CONTRACTOR SHALL ADJUST ALL EXISTING UTILITY CASTINGS INCLUDING VALVE BOXES, MANHOLES, HAND-HOLES, PULL-BOXES, STORMWATER INLETS, AND SIMILAR STRUCTURES IN CONSTRUCTION AREA TO BE OVERLAID WITH ASPHALT PAVEMENT.
7. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL APPLICABLE CONSTRUCTION AND ENVIRONMENTAL PERMITS PRIOR TO THE START OF CONSTRUCTION.
8. THE CONTRACTOR SHALL NOTIFY ECS AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
9. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND INSTALLATION OF THE PROPOSED IMPROVEMENTS, SHOP DRAWINGS SHALL BE SUBMITTED TO ECS IN ACCORDANCE WITH THE CONTRACT DOCUMENT'S REQUIREMENTS, FOR APPROVAL. IN ADDITION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY OTHER AGENCY SHOP DRAWING APPROVAL, IF REQUIRED.
10. THE CONTRACTOR SHALL NOTIFY ECS IMMEDIATELY FOR ANY CONFLICT ARISING DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THESE DRAWINGS. THIS WORK BY THE CONTRACTOR SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
11. ELEVATIONS SHOWN ARE IN FEET AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL  GENERAL NOTES	REVISED: 06/08/2014 DRAWING NO. G-00
---	---	---	---


GENERAL NOTES (CONTINUED):

12. CITY OF HOLLYWOOD SHALL NOT PROVIDE STAGING / STORAGE AREA. CONTRACTOR SHALL SECURE STAGING / STORAGE AREA AS NECESSARY FOR CONSTRUCTION WORK.
13. CONTRACTOR SHALL Haul AWAY EXCESSIVE STOCKPILE OF SOIL FOR DISPOSAL EVERY DAY. NO STOCKPILE SOIL IS ALLOWED TO BE LEFT ON THE CONSTRUCTION SITE OVER NIGHT.
14. CONTRACTOR SHALL CLEAN / SWEEP THE ROAD AT LEAST ONCE DAY OR AS REQUIRED BY THE ENGINEER.
15. CONTRACTOR SHALL PROTECT CATCH BASINS WITHIN / ADJACENT TO THE CONSTRUCTION SITE AS REQUIRED BY NPDES REGULATIONS.
16. THE CITY OF HOLLYWOOD HAS A NOISE ORDINANCE (CHAPTER 100) WHICH PROHIBITS EXCAVATION AND CONSTRUCTION BEFORE 8:00 A.M. AND AFTER 6:00 P.M., MONDAY THROUGH SATURDAY AND ALL DAY SUNDAY.
17. SUITABLE EXCAVATED MATERIAL SHALL BE USED IN FILL AREAS. NO SEPARATE PAY ITEM FOR THIS WORK, INCLUDE COST IN OTHER ITEMS.
18. ALL ROAD CROSSINGS ARE OPEN CUT AS PER THE REQUIREMENTS OF THE ECS UNLESS OTHERWISE NOTED ON THE DRAWINGS.
19. THE CONTRACTOR SHALL REPLACE ALL PAVING, STABILIZING EARTH, DRIVEWAYS, PARKING LOTS, SIDEWALKS, ETC. TO SATISFY THE INSTALLATION OF THE PROPOSED IMPROVEMENTS WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION OR AS DIRECTED BY ECS FIELD ENGINEER.
20. THE CONTRACTOR SHALL NOT ENCRDACH INTO PRIVATE PROPERTY WITH PERSONNEL, MATERIAL OR EQUIPMENT. IN CASE WORK ON PRIVATE PROPERTY IS NEEDED, A CITY OF HOLLYWOOD "RIGHT OF ENTRY" FORM MUST BE SIGNED BY PROPERTY OWNER AND THE DIRECTOR OF PUBLIC UTILITIES. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ACCESS AT ALL TIMES TO PRIVATE HOMES/BUSINESSES.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE, REMOVAL OR MODIFICATION, CAUSED TO ANY IRRIGATION SYSTEM (PRIVATE OR PUBLIC) ACCIDENTALLY OR PURPOSELY. THE CONTRACTOR SHALL REPLACE ANY DAMAGED, REMOVED OR MODIFIED IRRIGATION PIPES, SPRINKLER HEADS OR OTHER PERTINENT APPURTENANCES TO MATCH OR EXCEED EXISTING CONDITIONS AT NO ADDITIONAL COST TO THE CITY.
22. MAIL BOXES, FENCES OR OTHER PRIVATE PROPERTY DAMAGED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE REPLACED TO MATCH OR EXCEED EXISTING CONDITION.
23. CONTRACTOR SHALL PROVIDE MAINTENANCE OF TRAFFIC IN ACCORDANCE WITH FDOT STANDARDS AND CITY OF HOLLYWOOD DEPARTMENT OF PUBLIC UTILITIES STANDARDS.
24. NO TREES ARE TO BE REMOVED OR RELOCATED WITHOUT PRIOR APPROVAL FROM THE ECS FIELD ENGINEER.
25. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE NECESSARY TREE REMOVAL OR RELOCATION PERMITS FROM THE CITY OF HOLLYWOOD BUILDING DEPARTMENT FOR TREES LOCATED IN THE PUBLIC RIGHT OF WAY.
26. IT IS THE INTENT OF THESE PLANS TO BE IN ACCORDANCE WITH APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. ANY DISCREPANCIES BETWEEN THESE PLANS AND APPLICABLE REGULATORY STANDARDS / REQUIREMENTS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF ECS.

	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL  GENERAL NOTES (CONTINUED)	REVISED: 11/06/2017 DRAWING NO. G-00.1
---	---	---	---


GENERAL NOTES (CONTINUED):

27. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF AND MAKING THE REPAIRS TO EXISTING PAVEMENT, SIDEWALKS, PIPES, CONDUITS, CURBS, CABLES, ETC., WHETHER OR NOT SHOWN ON THE PLANS DAMAGED AS A RESULT OF THE CONTRACTORS OPERATIONS AND/OR THOSE OF HIS SUBCONTRACTORS, AND SHALL RESTORE THEM PROMPTLY AT NO ADDITIONAL EXPENSE TO THE OWNER. CONTRACTOR SHALL REPORT ANY DAMAGE TO SIDEWALK, DRIVEWAY, ETC., PRIOR TO BEGINNING WORK IN ANY AREA.
28. WHERE NEW PAVEMENT MEETS EXISTING, CONNECTION SHALL BE MADE IN A NEAT STRAIGHT LINE AND FLUSH WITH EXISTING PAVEMENT TO MATCH EXISTING CONDITIONS.
29. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR LEAVE EXCAVATED TRENCHES, OR PARTS OF, EXPOSED OR OPENED AT THE END OF THE WORKING DAY, WEEKENDS, HOLIDAYS OR OTHER TIMES, WHEN THE CONTRACTOR IS NOT WORKING, UNLESS OTHERWISE DIRECTED. ALL TRENCHES SHALL BE COVERED, FIRMLY SECURED AND MARKED ACCORDINGLY FOR PEDESTRIAN / VEHICULAR TRAFFIC.
30. ALL EXCAVATED MATERIAL REMOVED FROM THIS PROJECT SHALL BE DISPOSED OF OFF THE PROPERTY BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
31. ALL DUCTILE IRON PRODUCTS SHALL BE DOMESTIC MADE HEAVY DUTY CLASSIFICATION SUITABLE FOR HIGHWAY TRAFFIC LOADS, OR 20,000 LB.
32. ALL GRASSED AREAS AFFECTED BY CONSTRUCTION SHALL BE RE-SODDED.
33. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION, INSTALLATION AND MAINTENANCE OF ALL TRAFFIC CONTROL AND SAFETY DEVICES, IN ACCORDANCE WITH SPECIFICATIONS OF THE LATEST REVISION OF FDOT DESIGN STANDARDS. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR THE RESETTling OF ALL TRAFFIC CONTROL AND INFORMATION SIGNAGE REMOVED DURING THE CONSTRUCTION PERIOD.
34. EXCAVATED OR OTHER MATERIAL STORED ADJACENT TO OR PARTIALLY UPON A ROADWAY PAVEMENT SHALL BE ADEQUATELY MARKED FOR TRAFFIC SAFETY AT ALL TIMES.
35. TEMPORARY PATCH MATERIAL MUST BE ON THE JOB SITE WHENEVER PAVEMENT IS CUT, OR THE CITY'S INSPECTOR WILL SHUT THE JOB DOWN.
36. CONTRACTOR MUST PROVIDE FLASHER ARROW SIGNAL FOR ANY LANE THAT IS CLOSED OR DIVERTED.
37. CONTRACTOR SHALL NOTIFY LAW ENFORCEMENT AND FIRE PROTECTION SERVICES TWENTY-FOUR (24) HOURS IN ADVANCE OF TRAFFIC DETOUR IN ACCORDANCE WITH SECTION 336.07 OF FLORIDA STATUTES.
38. CONTRACTOR TO RESTORE PAVEMENT TO ORIGINAL CONDITION AS REQUIRED.
39. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DEWATERING PER SPECIFICATION SECTION 02140 DEWATERING.

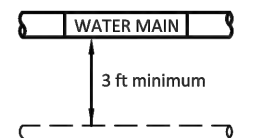
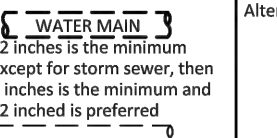
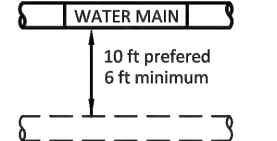
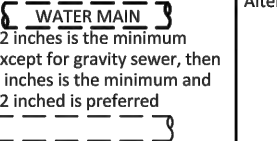
	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL  GENERAL NOTES (CONTINUED)	REVISED: 11/06/2017 DRAWING NO. G-00.2
---	---	---	---

GENERAL NOTES (CONTINUED):


40. THE CONTRACTOR SHALL GIVE AT LEAST 48 HOURS NOTICE TO UTILITY COMPANIES TO PROVIDE FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES IN ADVANCE OF CONSTRUCTION. CONTACT UTILITIES NOTIFICATION CENTER AT 811 OR 1-800-432-4770 (SUNSHINE ONE-CALL OF FLORIDA).
- 
41. WHEN PVC PIPE IS USED, A METALLIZED MARKER TAPE SHALL BE INSTALLED CONTINUOUSLY 18" ABOVE THE PIPE. THE MARKER TAPE SHOULD BE IMPRINTED WITH A WARNING THAT THERE IS BURIED PIPE BELOW. THE TAPE SHALL BE MAGNA TEC, AS MANUFACTURED BY THOR ENTERPRISES INC. OR APPROVED EQUAL.
  42. ALL CONNECTIONS TO EXISTING MAINS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WATER CONNECTIONS SHALL BE METERED, AND THE COST OF WATER AND TEMPORARY METER SHALL BE BORNE BY THE CONTRACTOR.
  43. A COMPLETE AS-BUILT SURVEY SHALL BE ACCURATELY RECORDED OF THE UTILITY SYSTEM DURING CONSTRUCTION. AS-BUILT SURVEY SHALL BE SUBMITTED TO ECS SIGNED AND SEALED BY A FLORIDA REGISTERED SURVEYOR PRIOR TO FINAL INSPECTION AND ACCEPTANCE OF PROJECT. THE COST OF SIGNED AND SEALED AS-BUILTS SHALL BE COVERED IN OVERALL BID. THE AS-BUILT SURVEY SHALL INCLUDE:
    - a. PLAN VIEW SHOWING THE HORIZONTAL LOCATIONS OF EACH MANHOLE, INLET, VALVE, FITTING, BEND AND HORIZONTAL PIPE DEFLECTIONS WITH COORDINATES AND IN REFERENCE TO A SURVEY BASELINE OR RIGHT-OF-WAY CENTERLINE.
    - b. THE PLAN VIEW SHALL ALSO SHOW SPOT ELEVATIONS OF THE TOP OF THE MAIN (WATER MAIN AND FORCE MAIN) OR PIPE INVERTS (GRAVITY MAINS) AT INTERVALS NOT TO EXCEED 100 FEET AS MEASURED ALONG MAIN. THE PLAN VIEW SHALL ALSO INCLUDE SPOT ELEVATIONS AT EACH MANHOLE, INLET, VALVE, FITTING, BEND AND VERTICAL PIPE DEFLECTION.
    - c. THE PLAN VIEW SHALL ALSO SHOW THE HORIZONTAL SEPARATION FROM UNDERGROUND UTILITIES IMMEDIATELY ADJACENT OR PARALLEL TO THE NEW MAIN.
    - d. PROFILE VIEW WITH SPOT ELEVATIONS OF THE TOP OF THE MAIN (WATER MAIN AND FORCE MAIN) OR PIPE INVERT (GRAVITY MAIN) AND OF THE FINISHED GRADE OR MANHOLE RIM DIRECTLY ABOVE THE MAIN AT INTERVALS NOT TO EXCEED 100 FEET AS MEASURED ALONG THE MAIN. THE PROFILE VIEW SHALL ALSO INCLUDE SPOT ELEVATIONS AT EACH MANHOLE, INLET, VALVE, FITTING, BEND AND VERTICAL PIPE DEFLECTION.
    - e. THE PROFILE VIEW SHALL SHOW ALL UNDERGROUND UTILITIES CROSSING THE NEW MAIN AND THE VERTICAL SEPARATION PROVIDED BETWEEN THAT UNDERGROUND UTILITY AND THE NEW MAIN.
    - f. ALL CADD FILES MUST BE CREATED FOLLOWING THE CITY OF HOLLYWOOD "SURVEY / AS-BUILT CADD DRAWING STANDARDS"

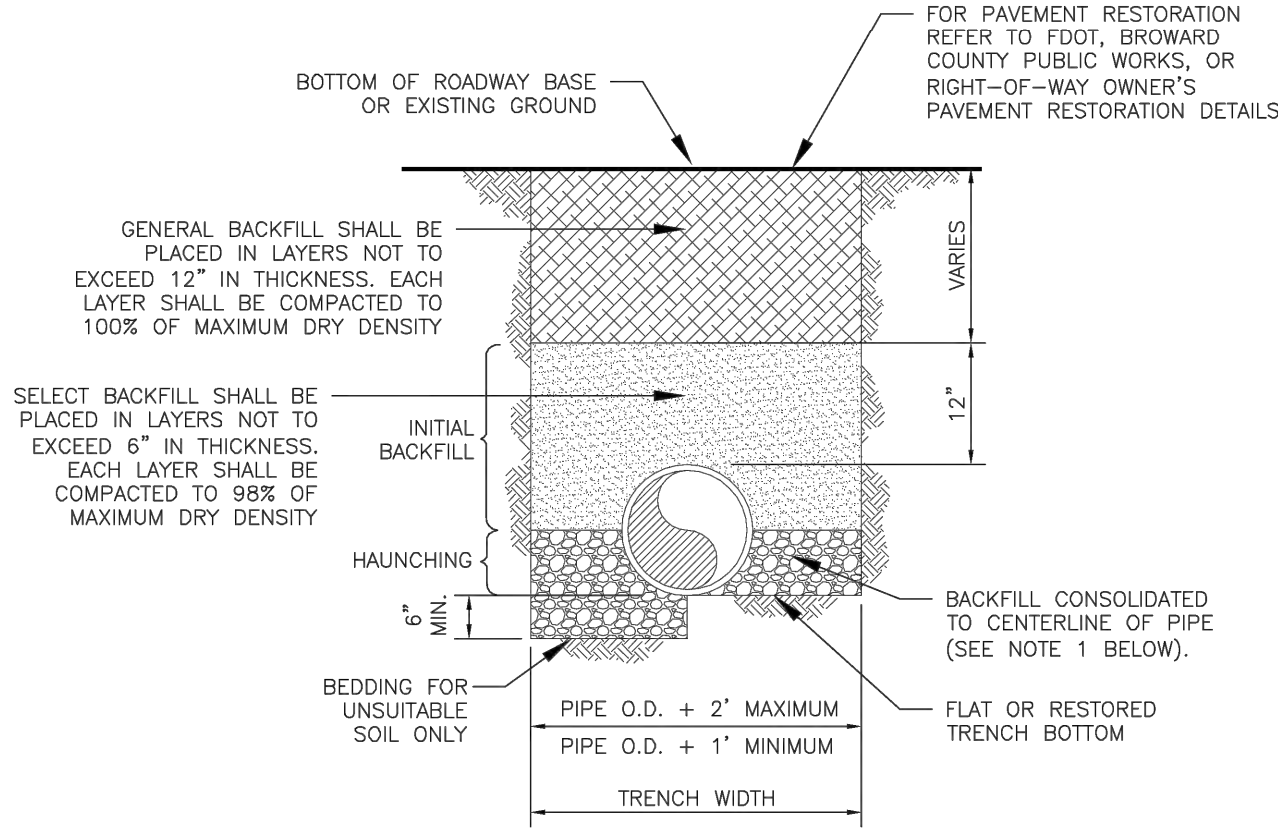
	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL  GENERAL NOTES (CONTINUED)	REVISED: 11/06/2017 DRAWING NO. G-00.3
---	---	---	---

WATER MAIN SEPARATION IN ACCORDANCE WITH F.A.C. RULE 62-555.314

OTHER PIPE	HORIZONTAL SEPARATION	CROSSING (1), (4)	JOINT SPACING @ CROSSING (FULL JOINT CENTERED) (8)
STORM SEWER, RECLAIMED WATER FORCE MAIN, RECLAIMED WATER (2)			Alternate 3 ft minimum
GRAVITY SANITARY SEWER, (3) SANITARY SEWER FORCE MAIN, RECLAIMED WATER			Alternate 6 ft minimum
ON-SITE SEWAGE TREATMENT & DISPOSAL SYSTEM	10 ft minimum		


1. WATER MAIN SHOULD CROSS ABOVE OTHER PIPE, WHEN WATER MAIN MUST BE BELOW OTHER PIPE, THE MINIMUM SEPARATION IS 12 INCHES.
2. RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
3. 3 FT. FOR GRAVITY SANITARY SEWER WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST 6 INCHES ABOVE THE TOP OF THE GRAVITY SANITARY SEWER.
4. 18" VERTICAL MINIMUM SEPARATION REQUIRED BY CITY OF HOLLYWOOD, UNLESS OTHERWISE APPROVED.
5. A MINIMUM 6 FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
6. IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
7. WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 36 INCHES IN A PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SANITARY SEWER OR FORCE MAIN SHALL BE CONSTRUCTED OF DIP WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).
8. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED.

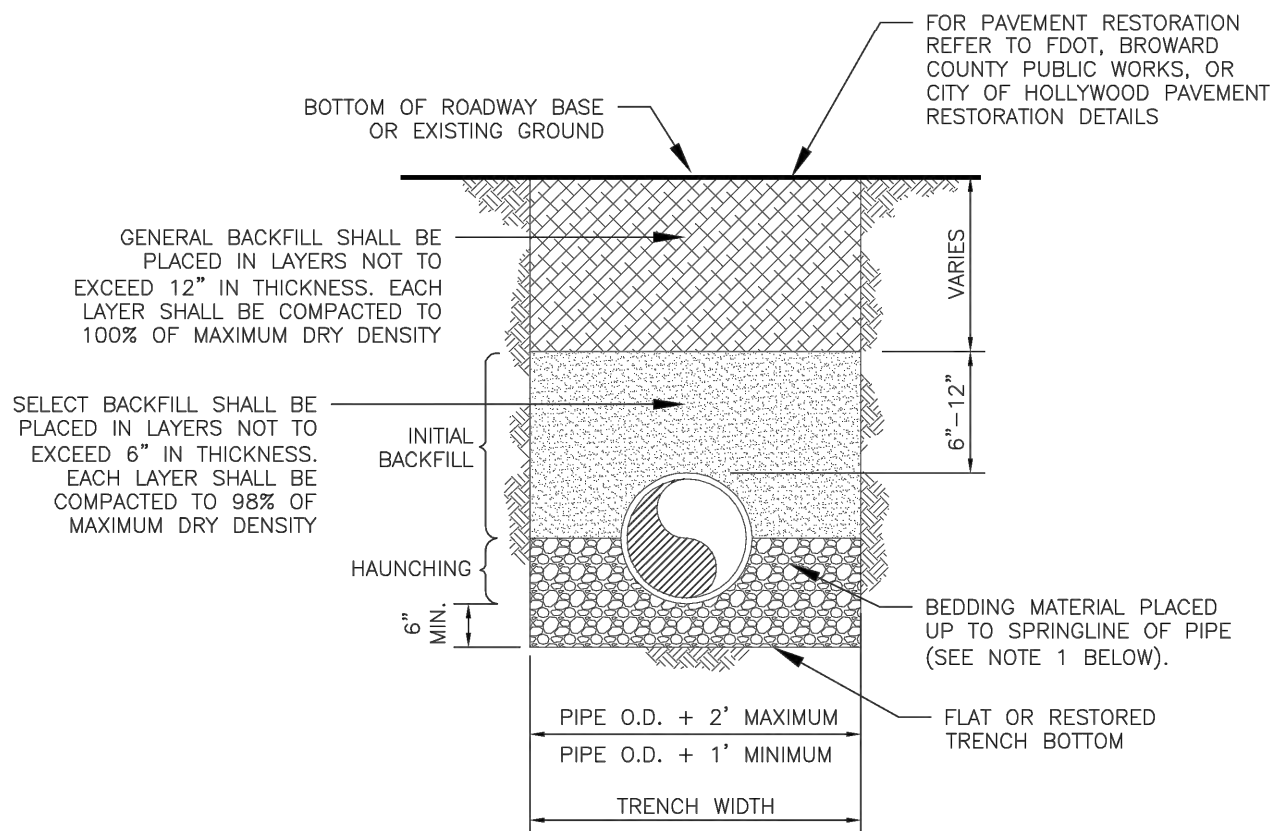
	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL  SEPARATION REQUIREMENTS OF F.D.E.P.	REVISED: 11/06/2017 DRAWING NO. G-01.1
---	---	---	---



NOTES:


1. WHEN PIPE INSTALLATION IS ABOVE THE GROUND WATER TABLE ELEVATION, OR WHENEVER BEDDING COPPER PIPE UNDER ANY CONDITION, BEDDING MATERIAL SHALL BE CLEAN SANDY SOIL IF AVAILABLE WITHIN THE LIMITS OF CONSTRUCTION. IMPORTED BEDDING SHALL BE WELL GRADED, WASHED CRUSHED STONE (OR DRAINFIELD LIMEROCK). CRUSHED STONE SHALL CONSIST OF HARD, DURABLE, SUB-ANGULAR PARTICLES OF PROPER SIZE AND GRADATION, AND SHALL BE FREE FROM ORGANIC MATERIAL, WOOD, TRASH, SAND, LOAM, CLAY, EXCESS FINES, AND OTHER DELETERIOUS MATERIALS.
2. ALL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY BEFORE ANY PIPE IS LAID. FOR ADDITIONAL MATERIAL SPECIFICATIONS REFER TO SPECIFICATION SECTION 02222, "EXCAVATION AND BACKFILL FOR UTILITIES".
3. DENSITY TESTING SHALL BE IN ACCORDANCE WITH AASHTO T-180 AND ASTM D-3017.
4. BACKFILL TO COMPLY WITH FDOT DESIGN STANDARDS 125-8.

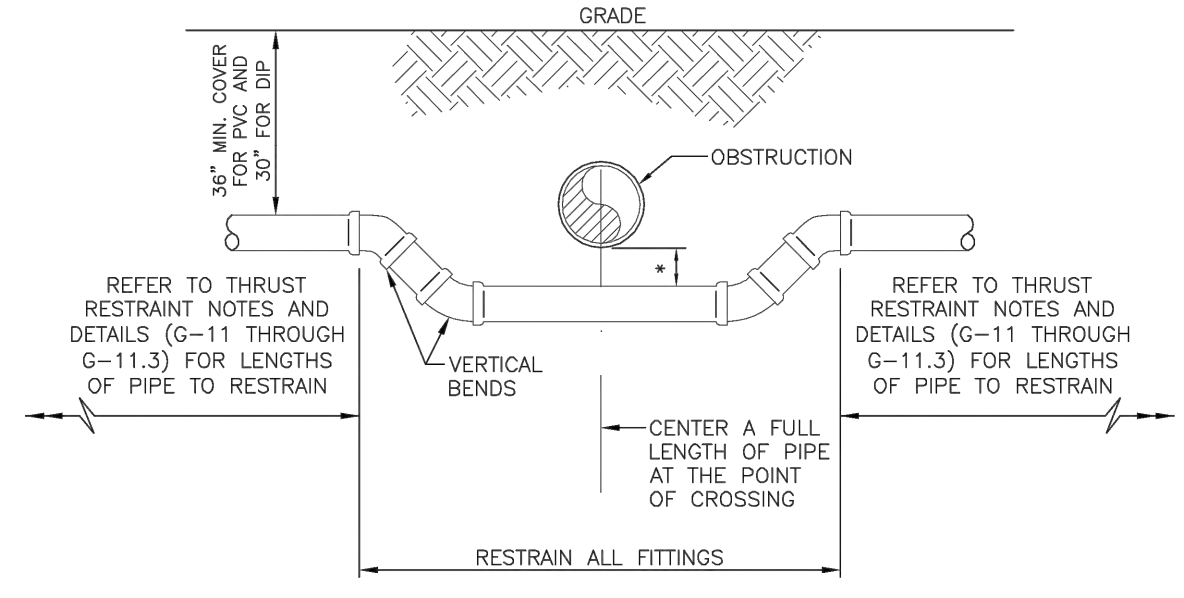
	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL  PIPE LAYING CONDITION TYPICAL SECTION (D.I.P.)	REVISED: 06/08/2014 DRAWING NO. G-02
---	---	--	---



NOTES:

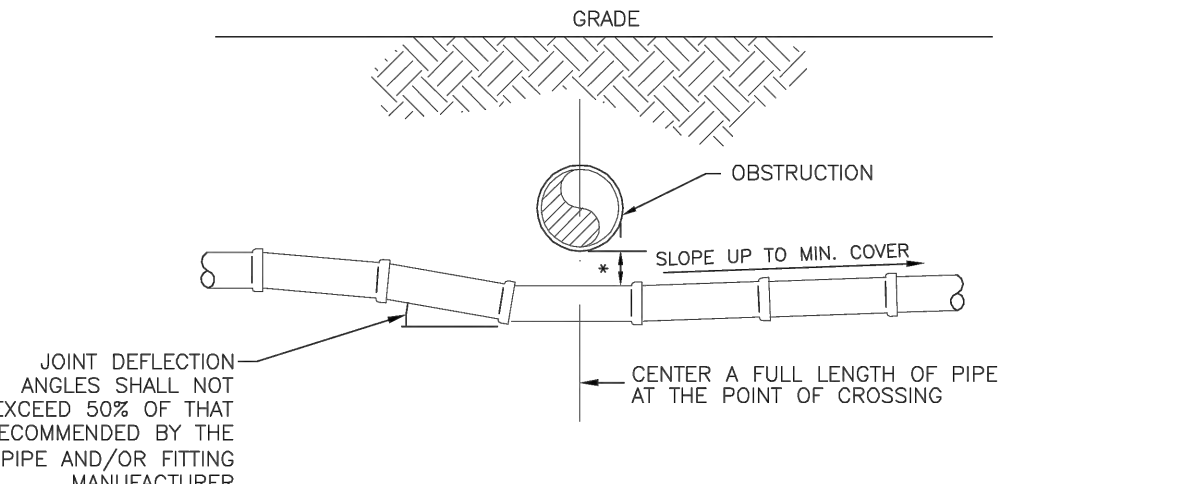
1. WHEN PIPE INSTALLATION IS ABOVE THE GROUND WATER TABLE ELEVATION, OR WHENEVER BEDDING COPPER PIPE UNDER ANY CONDITION, BEDDING MATERIAL SHALL BE CLEAN SANDY SOIL IF AVAILABLE WITHIN THE LIMITS OF CONSTRUCTION. IMPORTED BEDDING SHALL BE WELL GRADED, WASHED CRUSHED STONE (OR DRAINFIELD LIMEROCK). CRUSHED STONE SHALL CONSIST OF HARD, DURABLE, SUB-ANGULAR PARTICLES OF PROPER SIZE AND GRADATION, AND SHALL BE FREE FROM ORGANIC MATERIAL, WOOD, TRASH, SAND, LOAM, CLAY, EXCESS FINES, AND OTHER DELETERIOUS MATERIALS.
2. ALL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY BEFORE ANY PIPE IS LAID. FOR ADDITIONAL MATERIAL SPECIFICATIONS REFER TO SPECIFICATION SECTION 02222, "EXCAVATION AND BACKFILL FOR UTILITIES".
3. DENSITY TESTING SHALL BE IN ACCORDANCE WITH AASHTO T-180 AND ASTM D-3017.
4. BACKFILL TO COMPLY WITH FDOT DESIGN STANDARD 125-8.

	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL  PIPE LAYING CONDITION TYPICAL SECTION (P.V.C.)	REVISED: 06/08/2014 DRAWING NO. G-03
---	---	--	---




UTILITY CROSSING USING FITTINGS

- \* REFER TO STANDARD DETAIL G-01.1, "SEPARATION REQUIREMENTS", FOR FDEP AND HEALTH DEPARTMENT SEPARATION REQUIREMENTS.



UTILITY CROSSING USING JOINT DEFLECTIONS

- \* REFER TO STANDARD DETAIL G-01.1, "SEPARATION REQUIREMENTS", FOR FDEP AND HEALTH DEPARTMENT SEPARATION REQUIREMENTS.

	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL  UTILITY CROSSING DETAIL	REVISED: 06/08/2014 DRAWING NO. G-04
---	---	---	---

ORANGE BROOK MOBILE HOME ESTATES  
3318 ORANGE STREET  
HOLLYWOOD, FLORIDA 33021

PREPARED FOR:  
CPI ORANGE BROOK OWNER, LLC  
WATER AND SEWER DETAILS

Chad Everett Edwards  
Florida P.E. No. 59306  
April 23, 2021  
PROJECT NO.  
19-0039




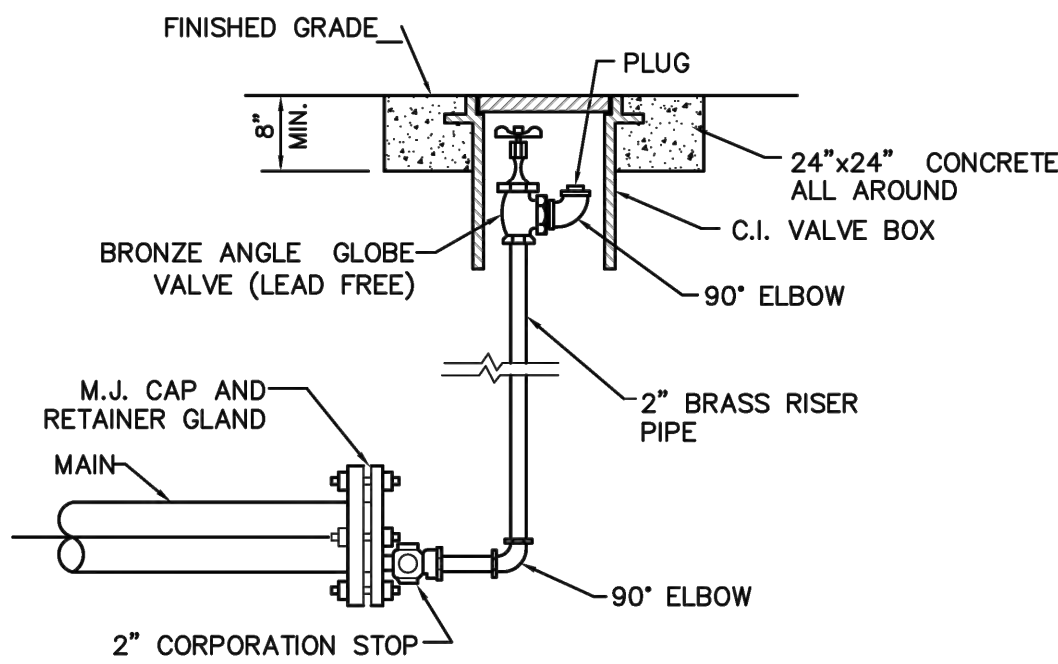
R:\Engineering\2019\19-0039-Orange Brook\Drawings\19-0039-001-03-WSD.dwg [C-12] Apr 13, 2021 10:47am ZCABLE

#### RESILIENT SEATED GATE VALVE SPECIFICATIONS:

4" THROUGH 12" SIZE  
(WATER AND FORCE MAIN)

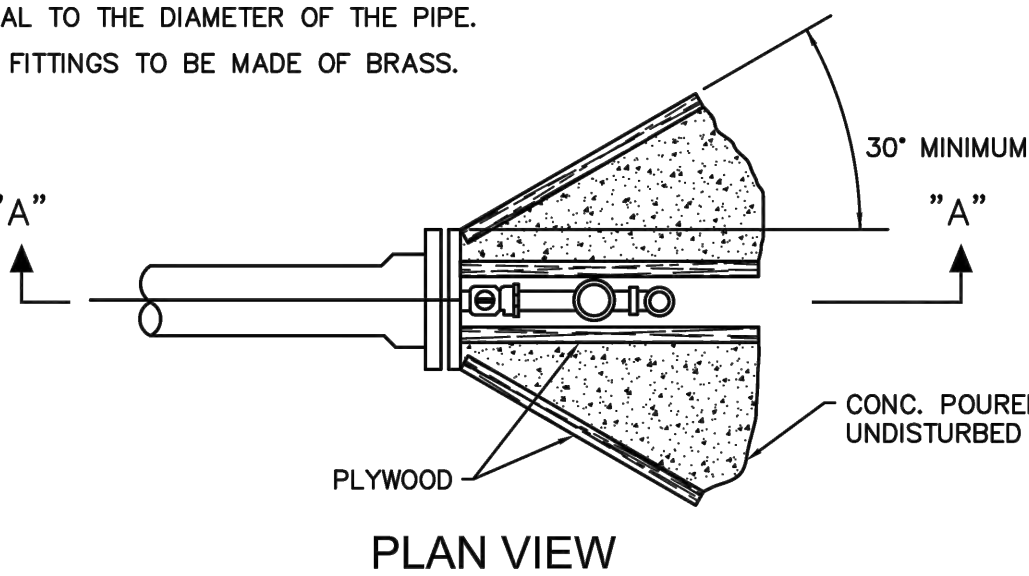
- GATE VALVES SHALL BE RESILIENT SEATED, MANUFACTURED TO MEET OR EXCEED THE REQUIREMENTS OF AWWA C509 (LATEST REVISION) AND IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:
  - VALVES SHALL HAVE AN UNOBSTRUCTED WATERWAY EQUAL TO OR GREATER THAN THE FULL NOMINAL DIAMETER OF THE VALVE.
  - THE VALVES ARE TO BE NON-RISING STEM WITH THE STEM MADE OF CAST, FORGED OR ROLLED BRONZE SHOWN IN AWWA C509. TWO STEM SEALS SHALL BE PROVIDED AND SHALL BE OF THE O-RING TYPE, ONE ABOVE AND ONE BELOW THE THRUST COLLAR WITH LUBRICANT BETWEEN O-RING.
  - THE STEM NUT, ALSO MADE OF BRONZE, MAY BE INDEPENDENT OF THE GATE OR CAST INTEGRALLY WITH THE GATE. IF THE STEM NUT IS CAST INTEGRALLY, THE THREADS SHALL BE STRAIGHT AND TRUE WITH THE AXIS OF THE STEM TO AVOID BINDING DURING THE OPENING OR CLOSING CYCLE.
  - THE SEALING MECHANISM SHALL CONSIST OF A CAST IRON GATE HAVING A VULCANIZED SYNTHETIC RUBBER COATING OR A RUBBER SEAT MECHANICALLY RETAINED ON THE GATE, THE RESILIENT SEALING MECHANISM SHALL PROVIDE ZERO LEAKAGE AT THE WATER WORKING PRESSURE WHEN INSTALLED WITH THE LINE FLOW IN EITHER DIRECTION.
  - A 2-INCH SQUARE WRENCH NUT SHALL BE PROVIDED FOR OPERATING THE VALVE.
  - ALL VALVES ARE TO BE SUPPLIED COMPLETE AND READY FOR INSTALLATION INCLUDING, BUT NOT LIMITED TO ALL NUTS, BOLTS RINGS AND RUBBERS.
  - ALL VALVES ARE TO BE TESTED IN STRICT ACCORDANCE WITH AWWA C509 LATEST REVISION).


	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	APPROVED: XXX	RESILIENT SEATED GATE VALVE SPECIFICATIONS	DRAWING NO. G-07.1

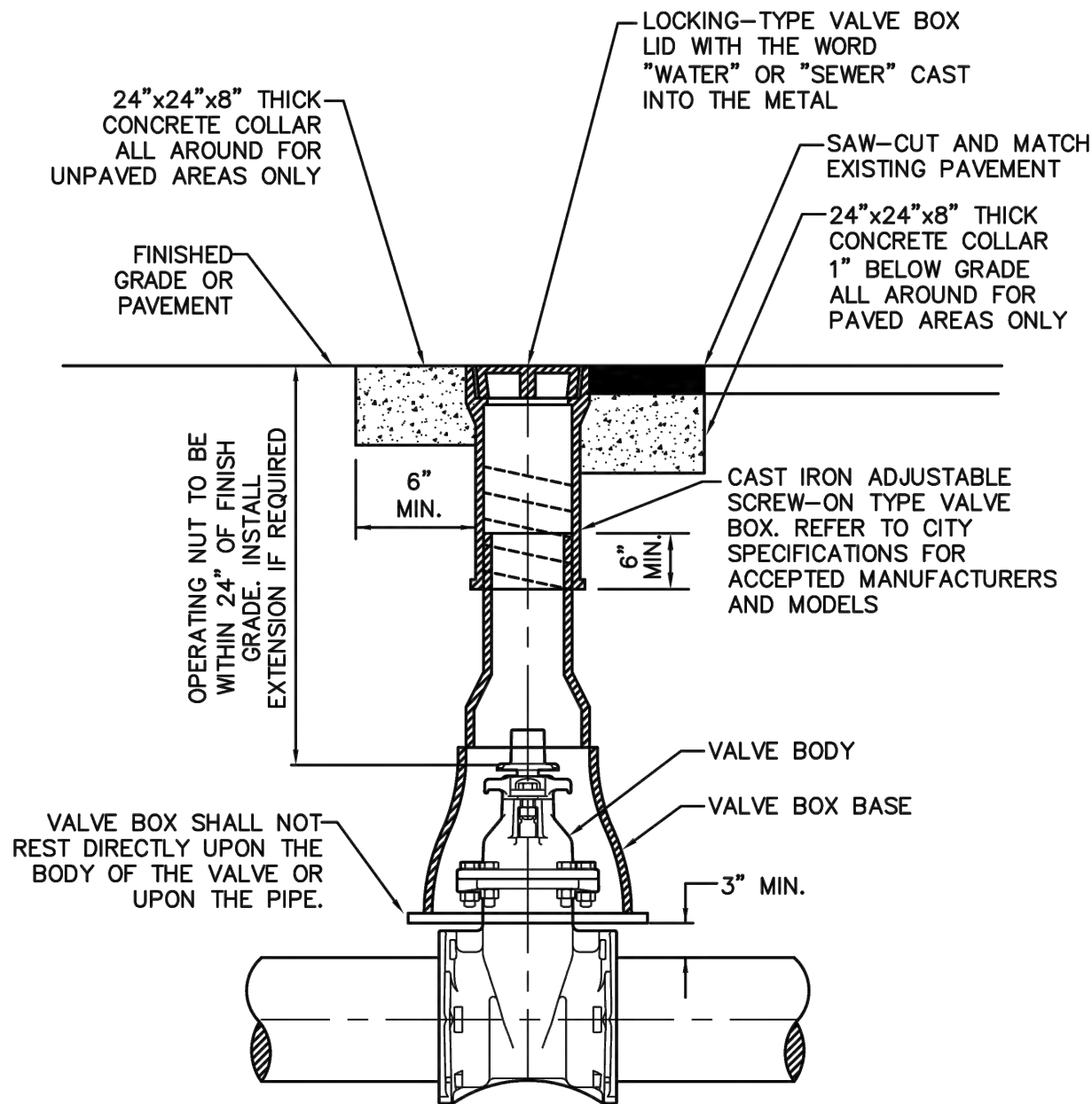



#### NOTES:

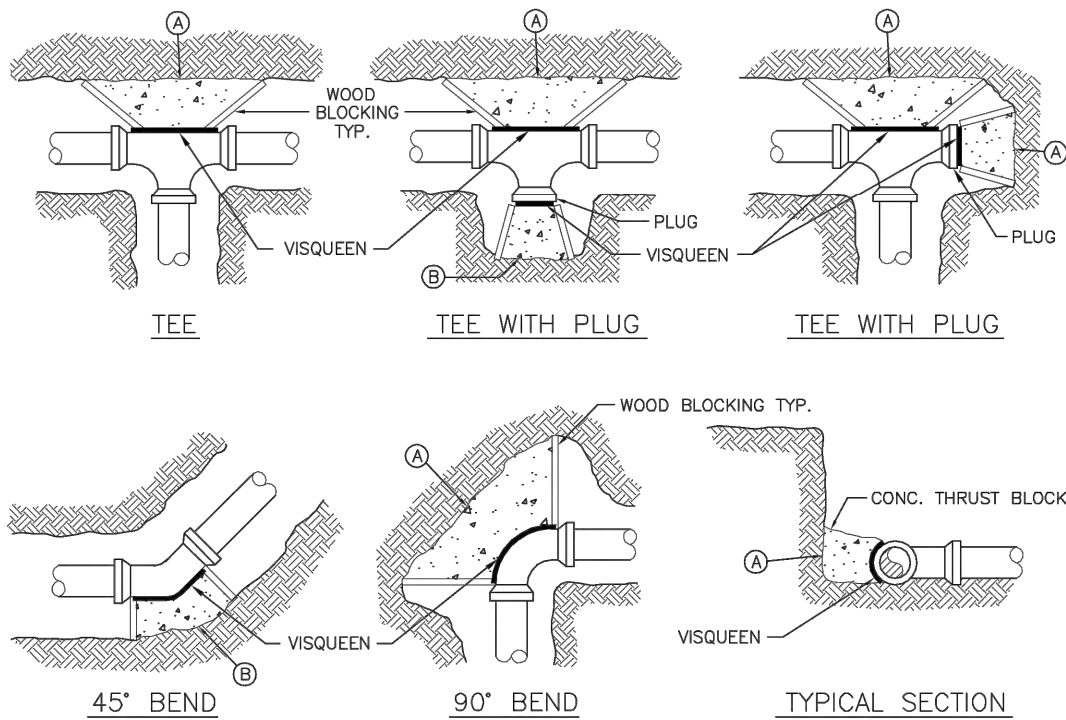
- PIPE JOINT COMPOUND SHALL BE APPLIED TO MALE THREADS ONLY.
- 2" TAP IN BOTTOM OF CAP ON MAIN.
- PLYWOOD AND CONCRETE TO HAVE A HEIGHT EQUAL TO THE DIAMETER OF THE PIPE.
- ALL FITTINGS TO BE MADE OF BRASS.



	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017
DRAWN: EAM	APPROVED: XXX	TERMINAL BLOW-OFF DETAIL	DRAWING NO. G-09




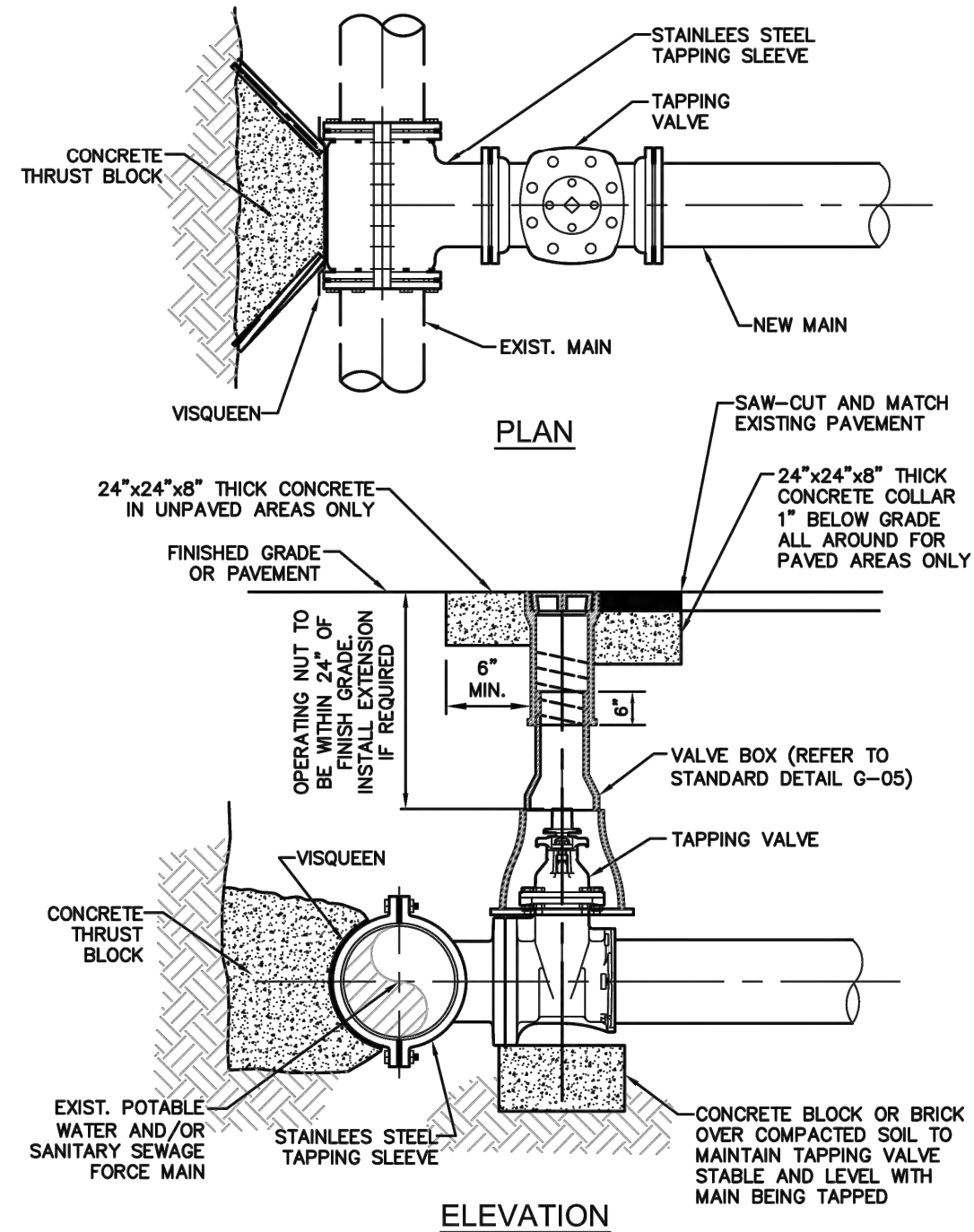
	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	APPROVED: XXX	TYPICAL VALVE BOX SETTING	DRAWING NO. G-05



#### NOTES:


- THRUST BLOCKS ARE TO BE USED IN COMBINATION WITH, AND NOT IN LIEU OF, MECHANICAL JOINT RESTRAINTS AS REQUIRED BY THE CITY. REFER TO THRUST RESTRAINT DESIGN TABLE IN STANDARD DETAIL G-10.
- THE AREAS IN THE TABLE ARE BASED ON \_\_\_\_\_ POUNDS PER SQUARE FOOT SOIL BEARING AGAINST THE UNDISTURBED TRENCH WALL AND ARE TO REPRESENT THE MINIMUM VERTICAL PROJECTED AREA AT THE THRUST BLOCK IN A PLANE PERPENDICULAR TO THE LINE BISECTING THE INCLUDING ANGLE OF THE FITTING.
- POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EVACUATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL.
- ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
- DO NOT COVER COUPLING OR JOINTS WITH CONCRETE.
- CONCRETE TO BE 2500 P.S.I. MINIMUM 28 DAY STRENGTH.
- TABLE TO BE COMPLETED BY DESIGN ENGINEER.

	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	APPROVED: XXX	THRUST BLOCK DESIGN	DRAWING NO. G-10




#### NOTES:

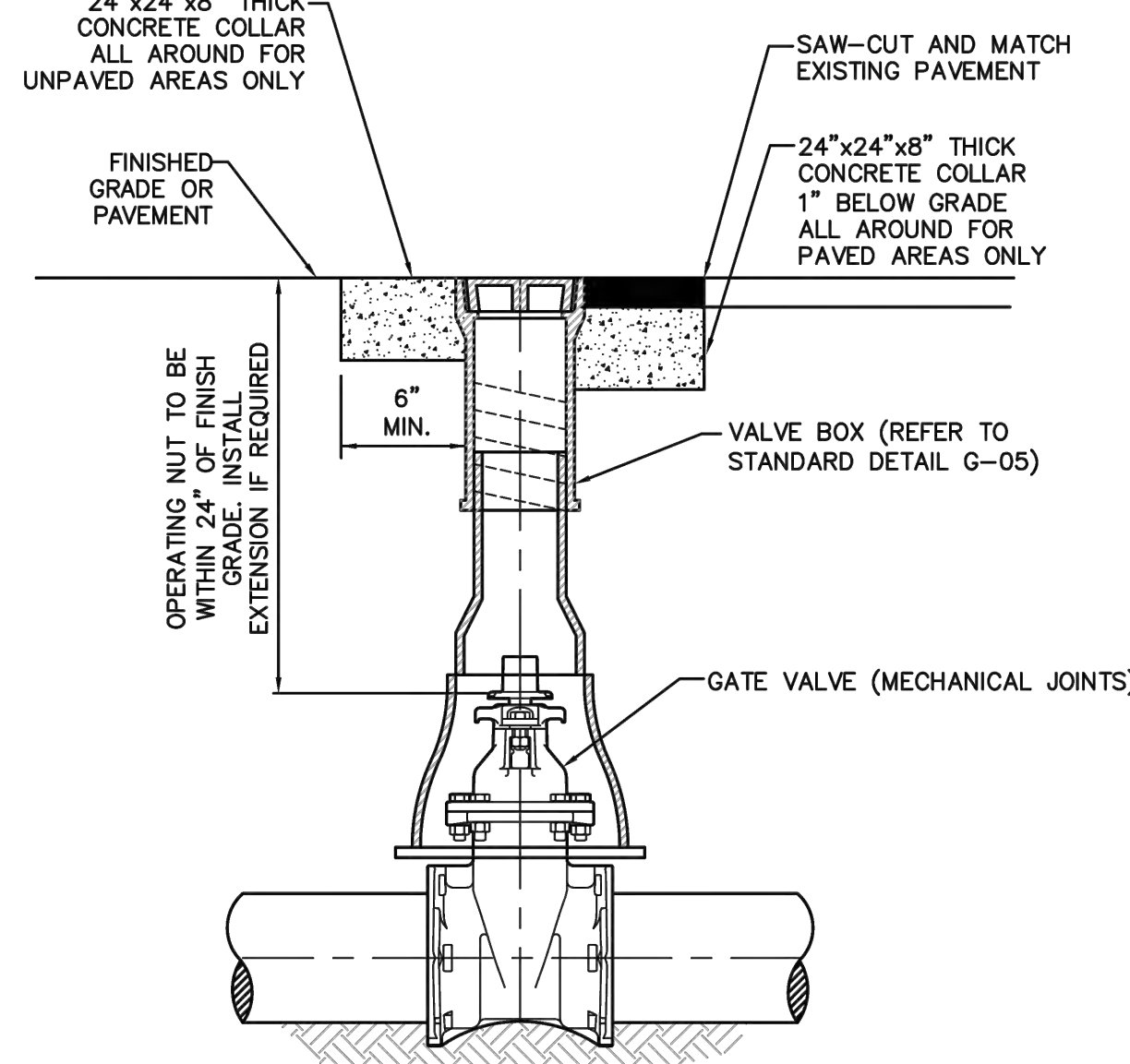
- NOTIFY THE CITY OF HOLLYWOOD 48 HOURS IN ADVANCE OF PROPOSED TAP.
- TAPPING MUST BE DONE IN THE PRESENCE OF AN AUTHORIZED CITY REPRESENTATIVE.
- TEMPORARY THRUST BLOCKS TO BE INSTALLED AND REMAIN IN PLACE DURING TAPPING OPERATIONS.
- FOR SEWAGE FORCE MAINS, REFER TO DETAIL OF PRIVATE FORCE MAIN TIE-IN AT PROPERTY LINE.
- FOR WATER MAINS, A GATE VALVE OF SAME DIAMETER SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF THE TAPPING VALVE.


	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	APPROVED: XXX	TYPICAL TAPPING SLEEVE AND VALVE SETTING	DRAWING NO. G-06

#### THRUST RESTRAINT NOTES:

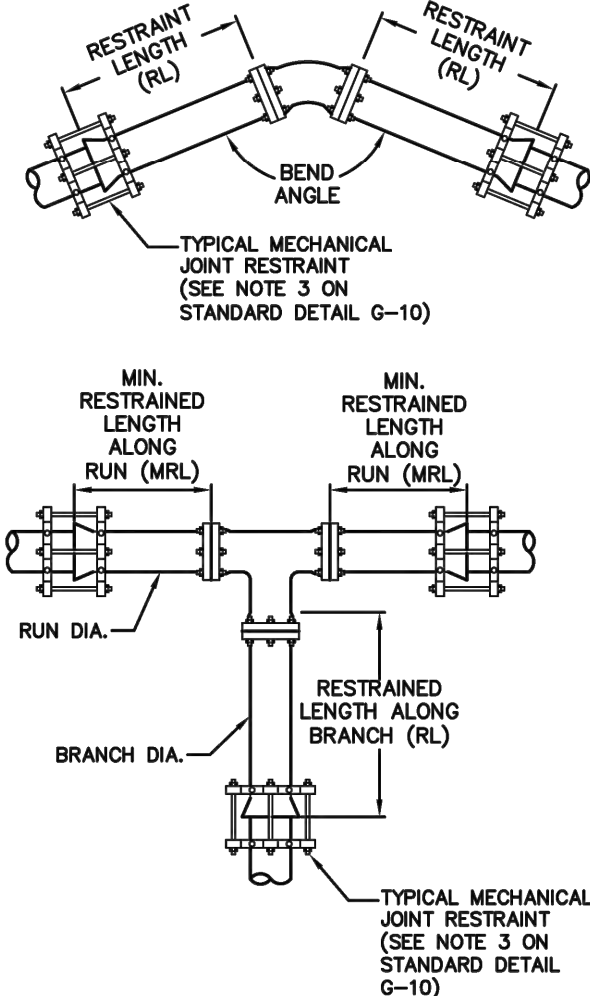
- ALL JOINTS BETWEEN BENDS AT HORIZONTAL & VERTICAL OFFSETS SHALL BE RESTRAINED.
- MECHANICAL THRUST RESTRAINTS FOR D.I.P. FITTINGS ON D.I.P. OR P.V.C. PIPE SHALL BE MEGALUG AS MANUFACTURED BY EBAA IRON, INC., OR APPROVED EQUAL.
- DUCTILE IRON FITTINGS UP TO 20-INCHES IN DIAMETER SHALL BE RESTRAINED BY MECHANICAL MEANS, I.E., MEGALUGS OR APPROVED EQUAL.
- DUCTILE IRON FITTINGS 24-INCH IN DIAMETER AND ABOVE SHALL BE RESTRAINED BY MECHANICAL MEANS, I.E., MEGALUGS OR APPROVED EQUAL, WITH THE ADDITION OF THRUST BLOCKS AND CONCRETE ANCHORS AT THE DISCRETION OF THE ENGINEER OF RECORD.
- ANY THRUST BLOCKS AND ANCHORS ARE TO BE DESIGNED BY THE ENGINEER OF RECORD. SIGNED AND SEALED CALCULATIONS SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO INSTALLATION.
- THRUST BLOCKS CONSISTING OF POURED-IN-PLACE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AFTER 28 DAYS.

	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	APPROVED: XXX	JOINT RESTRAINT DESIGN FOR PVC AND DIP THRUST RESTRAINT NOTES	DRAWING NO. G-11




	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	APPROVED: XXX	TYPICAL GATE VALVE AND VALVE BOX SETTING	DRAWING NO. G-07

HORIZONTAL BENDS			
PIPE DIA. (INCHES)	BEND (ANGLE)	RESTRAINED LENGTH (RL) (FT)	
		PVC	*DIP
24	11 1/2	-	-
	22 1/2	-	-
	45	-	-
16	11 1/2	-	-
	22 1/2	-	-
	45	-	-
12	11 1/2	-	-
	22 1/2	-	-
	45	-	-
8	11 1/2	-	-
	22 1/2	-	-
	45	-	-
6	11 1/2	-	-
	22 1/2	-	-
	45	-	-
4	11 1/2	-	-
	22 1/2	-	-
	45	-	-



TEES AND TAPPING SLEEVES							
RUN DIA. (INCHES)	BRANCH DIA. (INCHES)	MINIMUM RESTRAINED LENGTH ALONG RUN (FT.)		RUN DIA. (INCHES)	BRANCH DIA. (INCHES)	MINIMUM RESTRAINED LENGTH ALONG BRANCH (FT.)	
		PVC	*DIP			PVC	*DIP
24"	24"	-	-	12"	12"	-	-
	16"	-	-		8"	-	-
	12"	-	-		6"	-	-
	8"	-	-		4"	-	-
	6"	-	-		3"	-	-
16"	16"	-	-	8"	8"	-	-
	12"	-	-		6"	-	-
	8"	-	-		4"	-	-
	6"	-	-		3"	-	-
	4"	-	-		2"	-	-

\*ALL JOINT RESTRAINT CALCULATIONS ASSUME THE PIPE WILL BE WRAPPED IN POLYETHYLENE ENCASUREMENT

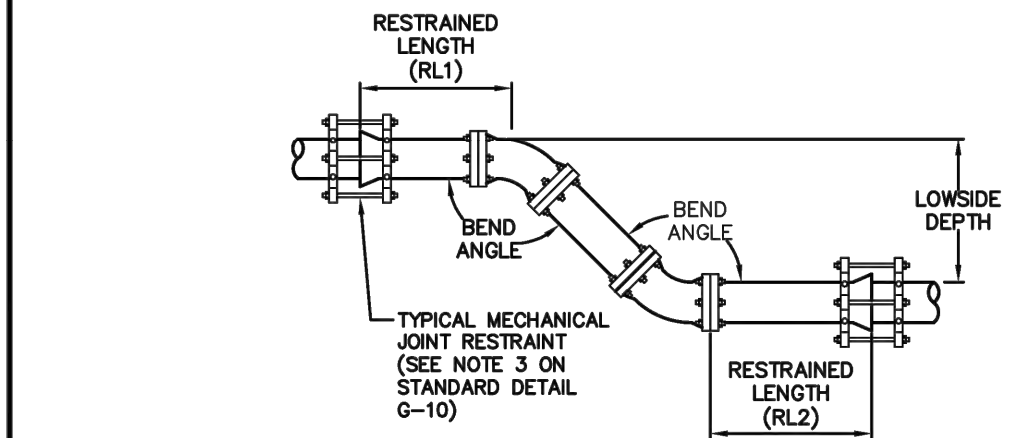
	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	APPROVED: XXX	JOINT RESTRAINT DESIGN FOR PVC AND DIP HORIZONTAL BENDS AND TEES	DRAWING NO. G-11.1

CRAVEN • THOMPSON AND ASSOCIATES, INC.  
ENGINEERS • PLANNERS • SURVEYORS  
3963 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309  
FAX: (954) 739-6409 TEL: (954) 739-6400  
FLORIDA LICENSED ENGINEERS, SURVEYORS & MAPPING BUSINESS NO. 271  
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. C00014  
MATERIAL SHOWN HEREIN IS THE PROPERTY OF CRAVEN THOMPSON & ASSOCIATES, INC. AND SHALL NOT BE REPRODUCED OR IN PART WITHOUT WRITTEN PERMISSION OF CRAVEN THOMPSON & ASSOCIATES, INC. COPYRIGHT © 2015

ORANGEBROOK MOBILE HOME ESTATES  
3318 ORANGE STREET  
HOLLYWOOD, FLORIDA 33021  
PREPARED FOR:  
CPI ORANGEBROOK OWNER, LLC  
WATER AND SEWER DETAILS


Chad Everett Edwards  
Florida P.E. No. 59306  
April 23, 2021  
PROJECT NO.  
19-0039

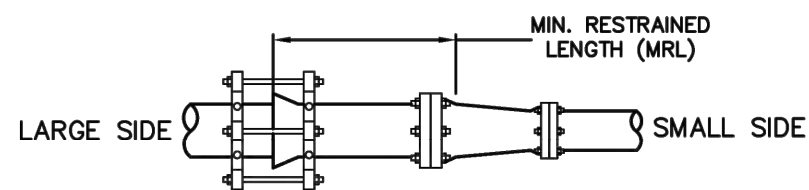




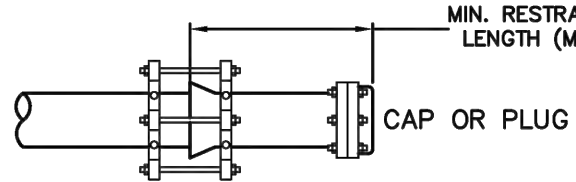
VERTICAL OFFSETS						
PIPE DIA. (INCHES)	BEND (ANGLE)	LOWSIDE DEPTH (FT.)	PVC		*DIP	
			RESTRAINED LENGTH RL1 (FT.)	RL2 (FT.)	RESTRAINED LENGTH RL1 (FT.)	RL2 (FT.)
24	45	4	-	-	-	-
		5	-	-	-	-
		6	-	-	-	-
		7	-	-	-	-
16	45	4	-	-	-	-
		5	-	-	-	-
		6	-	-	-	-
		7	-	-	-	-
12	45	4	-	-	-	-
		5	-	-	-	-
		6	-	-	-	-
		7	-	-	-	-
8	45	4	-	-	-	-
		5	-	-	-	-
		6	-	-	-	-
		7	-	-	-	-
6	45	4	-	-	-	-
		5	-	-	-	-
		6	-	-	-	-
		7	-	-	-	-
4	45	4	-	-	-	-
		5	-	-	-	-
		6	-	-	-	-
		7	-	-	-	-

\*ALL DIP JOINT-RESTRAINT CALCULATIONS ASSUME THE PIPE WILL BE WRAPPED IN POLYETHYLENE ENCASUREMENT

	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	JOINT RESTRAINT DESIGN FOR PVC AND DIP VERTICAL OFFSETS		
APPROVED: XXX	DRAWING NO. G-11.2		




REDUCERS					
LARGE SIDE	SMALL SIDE	MINIMUM LENGTH TO RESTRAIN ON LARGE SIDE (FT)		LARGE SIDE	SMALL SIDE
		PVC	*DIP		
24"	16"	-	-	12"	8"
	12"	-	-		6"
	8"	-	-		4"
	6"	-	-		2"
16"	12"	-	-	8"	4"
	8"	-	-		2"
	6"	-	-		2"
	4"	-	-		2"




DEAD ENDS		
PIPE DIA. (INCHES)	MIN. RESTRAINED LENGTH (FT)	
	PVC	*DIP
24"	-	-
16"	-	-
12"	-	-
8"	-	-
6"	-	-
4"	-	-

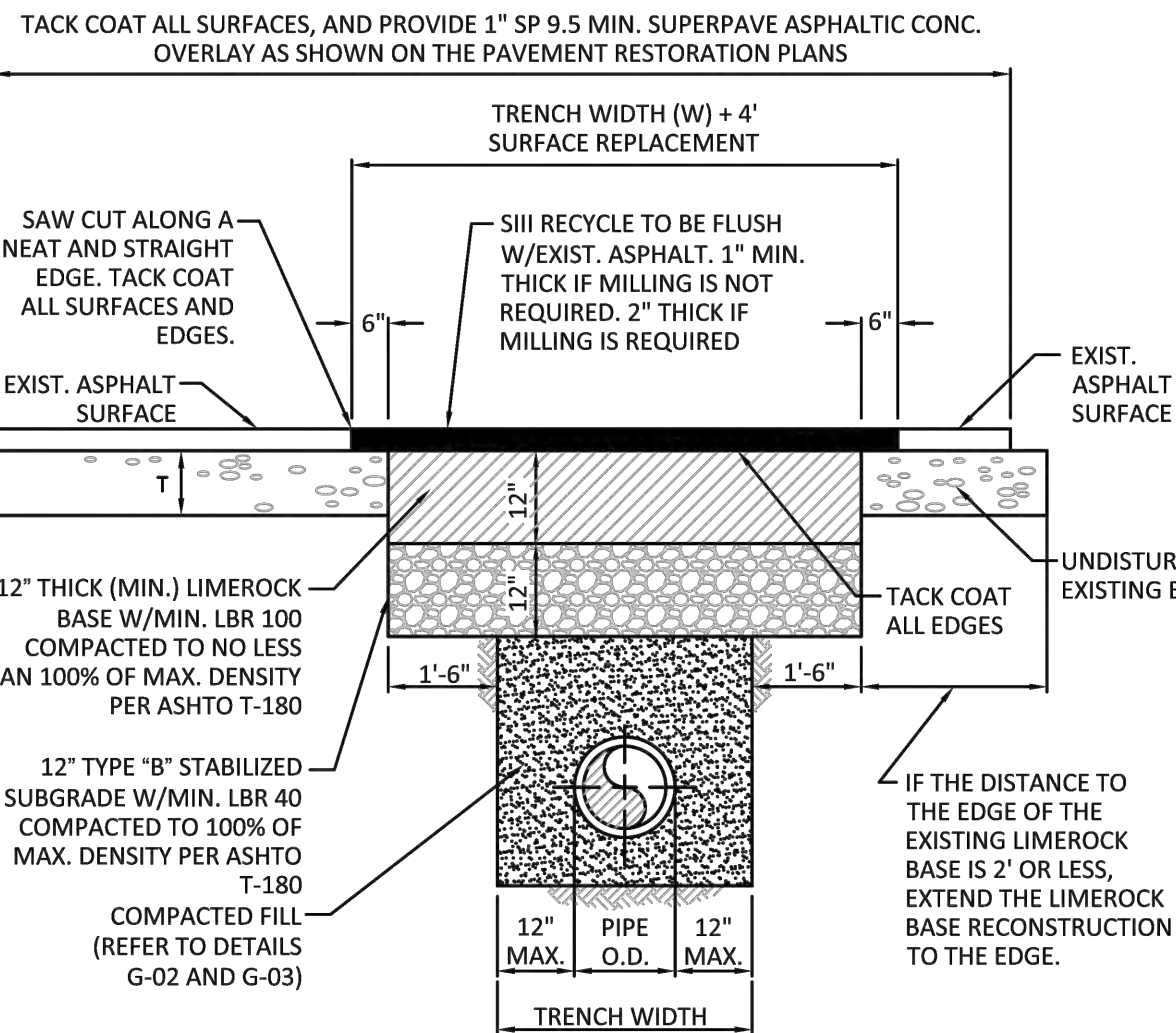
\*ALL DIP JOINT-RESTRAINT CALCULATIONS ASSUME THE PIPE WILL BE WRAPPED IN POLYETHYLENE ENCASUREMENT


	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	JOINT RESTRAINT DESIGN FOR PVC AND DIP REDUCERS AND DEAD ENDS		
APPROVED: XXX	DRAWING NO. G-11.3		

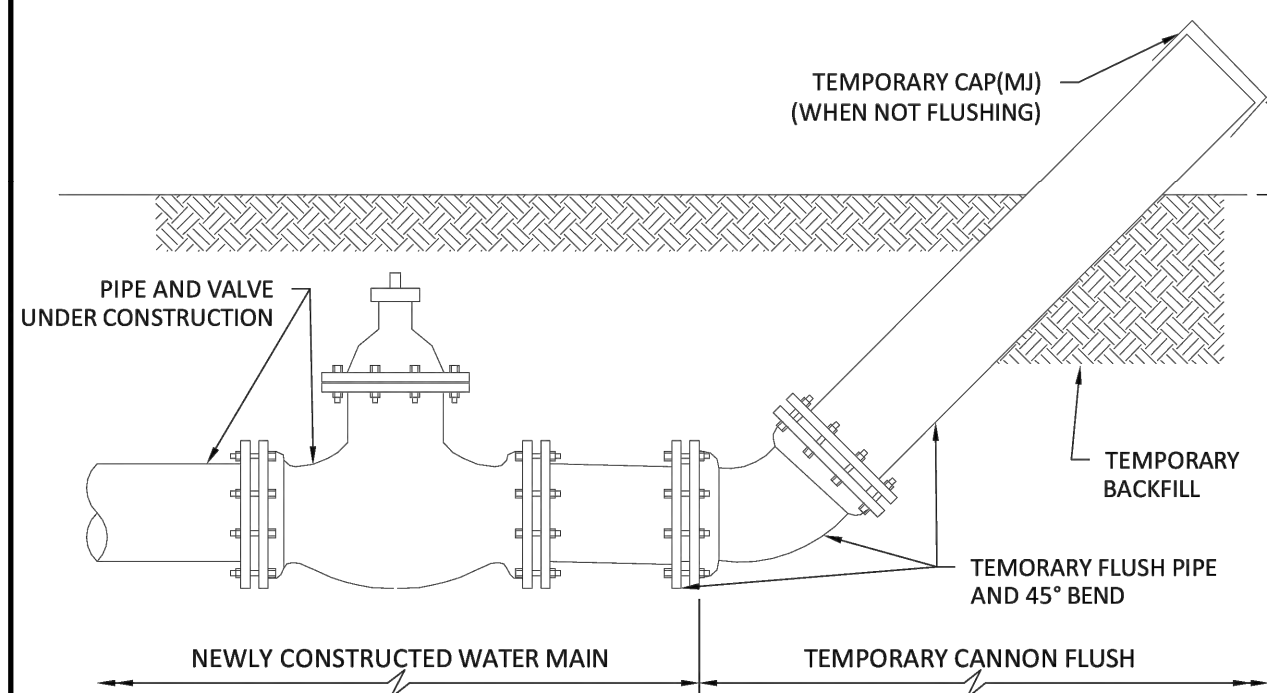
#### FLEXIBLE PAVEMENT RESTORATION NOTES:

- THE ABOVE DETAILS APPLY ONLY TO ASPHALT PAVEMENT RESTORATION OVER UTILITY TRENCHES CUT WITHIN CITY OF HOLLYWOOD RIGHTS-OF-WAY. FOR PAVEMENT RESTORATION WITHIN BROWARD COUNTY OR FDOT RIGHTS-OF-WAY REFER TO THE CORRESPONDING DETAILS FOR THOSE AGENCIES.
- LIMEROCK BASE MATERIAL SHALL HAVE A MINIMUM L.B.R. OF 100 AND A MINIMUM CARBONATE CONTENT OF 70%. REPLACED BASE MATERIAL OVER TRENCH SHALL BE A MINIMUM OF 12" THICK.
- LIMEROCK BASE MATERIAL SHALL BE PLACED IN 12" MAXIMUM (LOOSE MEASUREMENT) THICKNESS LAYERS WITH EACH LAYER THOROUGHLY ROLLED OR TAMPED AND COMPACTED TO 100% OF MAXIMUM DENSITY, PER AASHTO T-180, PRIOR TO THE PLACEMENT OF THE SUCCEEDING LAYERS.
- STABILIZED SUBGRADE MATERIAL SHALL BE GRANULAR AND SHALL HAVE A MINIMUM L.B.R. OF 40.
- BACKFILL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH THE PIPE LAYING CONDITION TYPICAL SECTIONS IN DETAILS G-02 AND G-03, AND THE SPECIFICATIONS, BUT TESTING WILL BEGIN 12" ABOVE THE INSTALLED FACILITY.
- ALL EDGES AND JOINTS OF EXISTING ASPHALT PAVEMENT SHALL BE SAW CUT TO STRAIGHT LINES, PARALLEL TO OR PERPENDICULAR TO THE ROADWAY, PRIOR TO THE RESURFACING.
- RESURFACING MATERIAL SHALL BE FDOT SUPERPAVE, AND SHALL BE APPLIED A MINIMUM OF TWO INCH IN THICKNESS.
- MILL AND BUTT JOINT TO EXISTING PAVEMENT.
- IF THE TRENCH IS FILLED TEMPORARILY, IT SHALL BE COVERED WITH A 2" ASPHALTIC CONCRETE PATCH TO KEEP THE FILL MATERIAL FROM RAVELING UNTIL REPLACED WITH A PERMANENT PATCH.
- REFER TO SPECIFICATIONS FOR DETAILED PROCEDURES.
- WHERE THE UTILITY TRENCH CROSSES EXISTING ASPHALT DRIVEWAYS, THE LIMEROCK BASE THICKNESS MAY BE A MINIMUM OF 6 INCHES THICK, REGARDLESS OF THE EXTENT OF IMPACT, THE ENTIRE DRIVEWAY SURFACE BETWEEN THE EDGE OF THE ROADWAY PAVEMENT AND PROPERTY LINE OR FRONT OF SIDEWALK SHALL BE OVERLAID USING 2-INCH THICK MINIMUM ASPHALTIC CONCRETE SURFACE COURSE WHERE INDICATED ON THE PLANS OR AS DIRECTED BY THE CITY/ENGINEER.

	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017
DRAWN: EAM	FLEXIBLE PAVEMENT RESTORATION NOTES		
APPROVED: XXX	DRAWING NO. G-12		




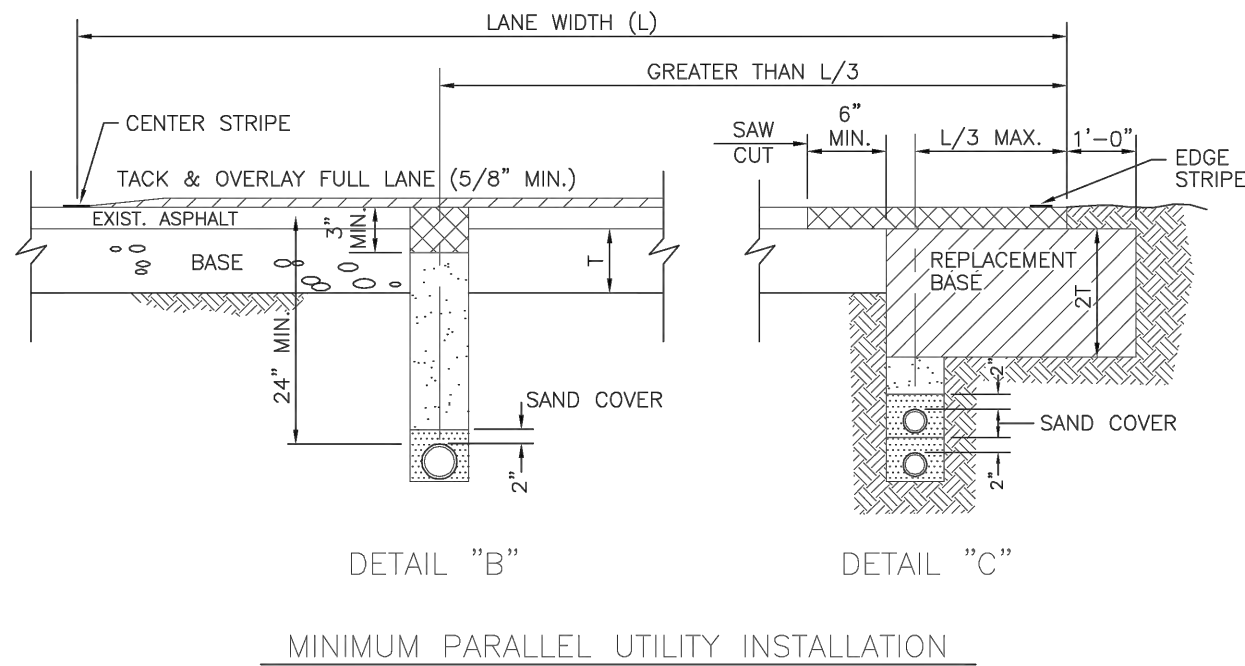
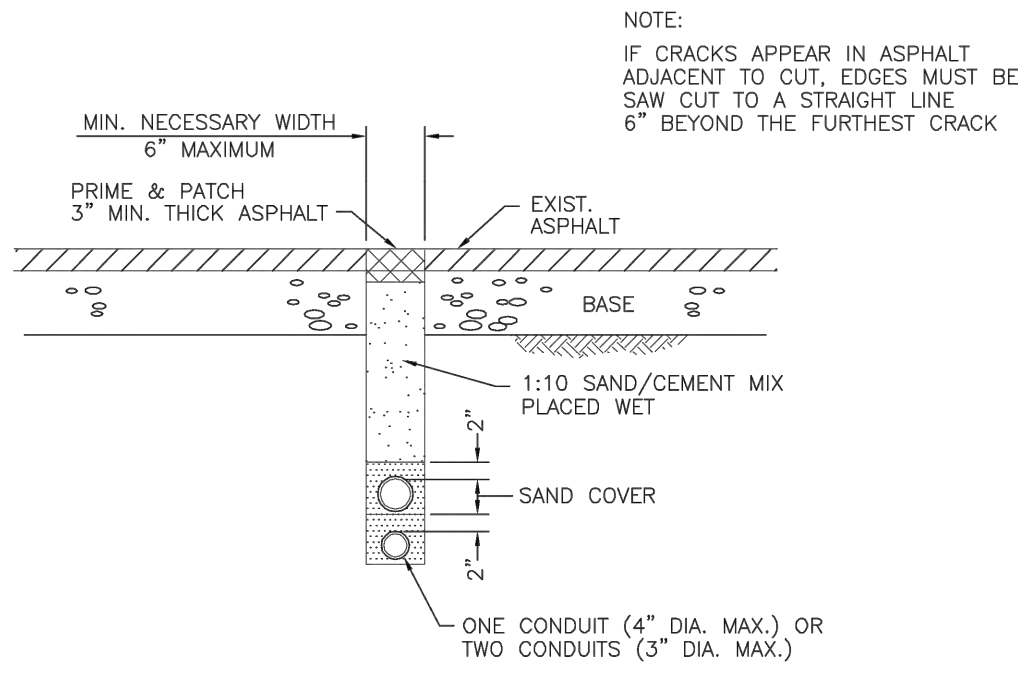
	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017
DRAWN: EAM	FLEXIBLE PAVEMENT RESTORATION FOR TRENCHES CUT PERPENDICULAR AND PARALLEL TO THE ROADWAY		
APPROVED: XXX	DRAWING NO. G-12.1		



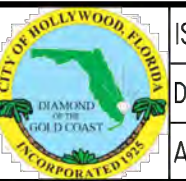
#### GENERAL NOTES:

- FLUSHING LOCATIONS ARE TO BE PROPOSED BY CONTRACTOR AND APPROVED BY CITY.
- UPON COMPLETION OF THE PIPE INSTALLATION FOR ANY SECTION, THE MAIN SHALL BE CANNON FLUSHED TO REMOVE DIRT AND ANY OTHER FOREIGN MATTER.
- INSTALL A TEMPORARY 45° BEND AND ASSOCIATED TEMPORARY PIPING AS SHOWN TO DIRECT THE FLUSHING WATER AWAY FROM THE IMMEDIATE WORK AREA AND EXERCISE DUE CARE SO AS TO ENSURE THAT THE WATER USED IN FLUSHING DOES NOT CAUSE A NUISANCE OR INFLECT PROPERTY DAMAGE.
- BENDS AND PIPING SHALL BE THE SAME SIZE OR LARGER AS THE LINE BEING FLUSHED.
- PRIOR TO THE ACTUAL LINE FLUSHING OPERATION THE CONTRACTOR SHALL PROPERLY NOTIFY CITY INSPECTOR OF SUCH INTENDED WATER USE.
- NO EXISTING VALVE SHALL BE OPERATED, EXCEPT BY AUTHORIZED CITY PERSONNEL.
- FLUSHING SHALL NOT BE ACCOMPLISHED WITHOUT THE ACTUAL PRESENCE OF THE CITY INSPECTOR.
- AFTER THE LINE UNDER CONSTRUCTION HAS BEEN SUCCESSFULLY FLUSHED, THE CONTRACTOR SHALL REMOVE THE TEMPORARY PIPING ARRANGEMENT AND PROCEED WITH THE REMAINING CONSTRUCTION AS SPECIFIED.
- ALL PIPING SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH CITY STANDARDS.
- IF REQUIRED BY CITY, WATER MAINS SHALL BE CLEANED BY PIGGING.
- CONTRACTOR WILL INSTALL A PRESSURE GAUGE AT OR NEAR THE FILL AND FLUSH LOCATION AND MAINTAIN A MINIMUM PRESSURE OF 40 PSI AT ALL TIMES. THE FILL VALVE WILL BE OPENED AND CLOSED SLOWLY TO AVOID RAPID PRESSURE CHANGES IN THE WATER SYSTEM.
- CONTRACTOR IS CAUTIONED THAT GOVERNING AGENCIES OR UTILITIES MAY HAVE REGULATIONS LIMITING OR PROHIBITING DISCHARGE INTO SEWERS, SURFACE WATERS, CANALS, DITCHES AND OTHER CONVEYANCES/RETENTION AREA. ALL COMPLIANCE WITH GOVERNING AGENCIES REQUIREMENTS (INCLUDING PERMITTING, IF REQUIRED) IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- CANNON FLUSHING TO PROCEED AFTER HEALTH DEPARTMENT CLEARANCE IS RECEIVED.

	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	CANNON FLUSHING		
APPROVED: XXX	DRAWING NO. G-13		



NOTE:  
DETAILS NOT SHOWN  
SHALL BE AS PER DETAIL "A"

	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	FLEXIBLE PAVEMENT RESTORATION FOR CONDUIT		
APPROVED: XXX	DRAWING NO. G-12.2		

CRAVEN • THOMPSON AND ASSOCIATES, INC.  
ENGINEERS • PLANNERS • SURVEYORS  
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309  
FAX: (954) 739-6409  
FLORIDA LICENSED ENGINEERS, SURVEYORS & PLANNERS BUSINESS NO. 271  
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. C00014  
MATERIAL SHOWN HEREIN IS THE PROPERTY OF CRAVEN THOMPSON & ASSOCIATES, INC. AND SHALL NOT BE REPRODUCED OR IN PART WITHOUT WRITTEN PERMISSION OF CRAVEN THOMPSON & ASSOCIATES, INC. COPYRIGHT © 2015

ORANGEBROOK MOBILE HOME ESTATES  
3318 ORANGE STREET  
HOLLYWOOD, FLORIDA 33021  
PREPARED FOR:  
CPI ORANGEBROOK OWNER, LLC  
WATER AND SEWER DETAILS


Chad Everett Edwards  
Florida P.E. No. 59306  
April 23, 2021  
PROJECT NO.  
19-0039  
C-13  
SHEET 13 OF 17

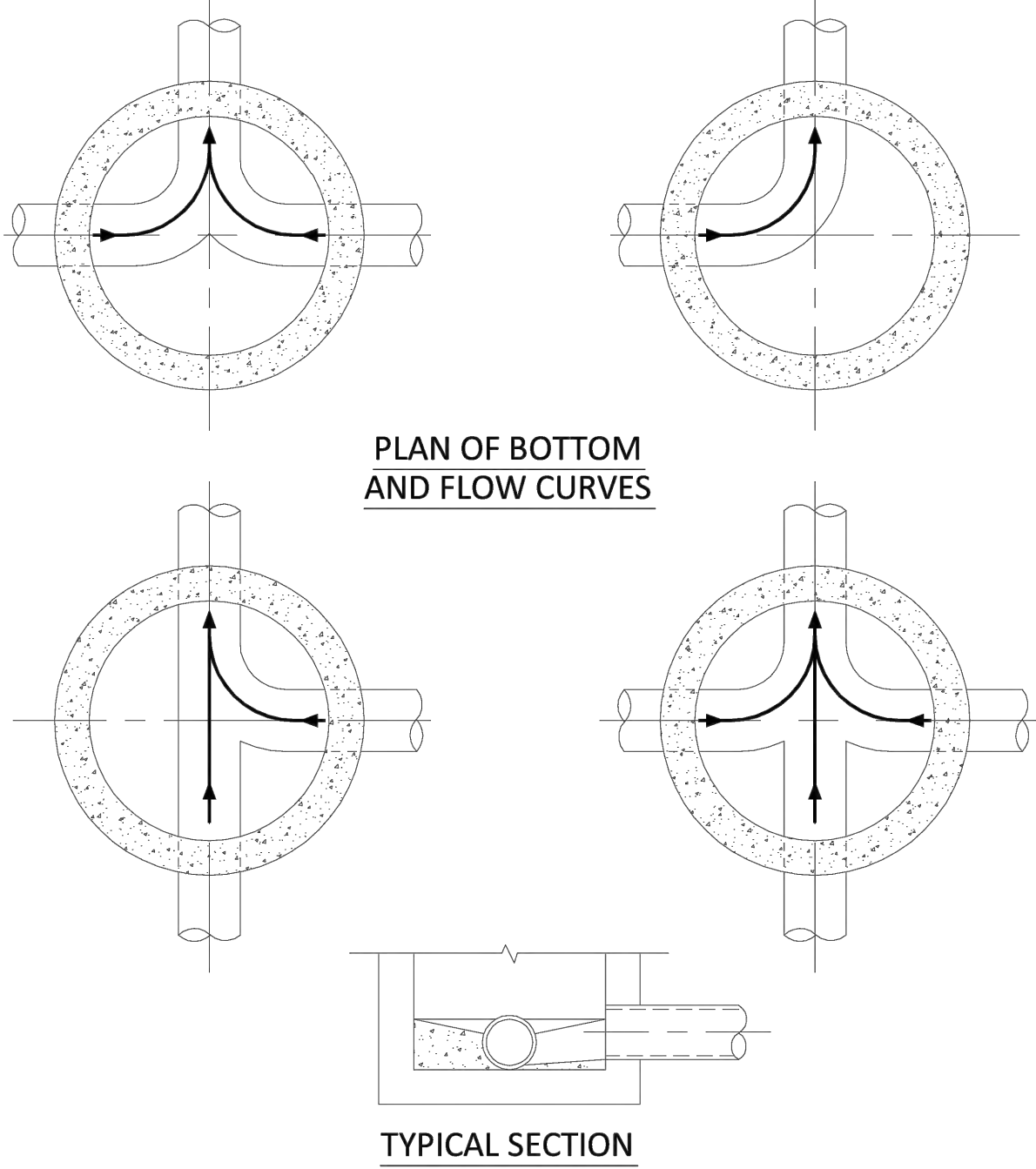


SEWER NOTES:

- THE MINIMUM DEPTH OF COVER OVER D.I.P. SANITARY SEWER GRAVITY OR FORCE MAINS IS 30". THE MINIMUM DEPTH OF COVER OVER PVC SANITARY SEWER OR FORCE MAINS IS 36".
- ALL CONNECTIONS TO EXISTING MAINS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- LEAKAGE TESTS AND ALIGNMENT (LAMPING) TESTS SHALL BE PERFORMED ON ALL NEW SEWER LINES UP TO THE CONNECTION POINT WITH THE EXISTING SEWER SYSTEM. THESE TESTS SHALL BE REQUESTED AND PAID FOR BY THE CONTRACTOR.
- LAMPING TESTS SHALL BE PERFORMED ON GRAVITY SEWERS FROM MANHOLE TO MANHOLE UP TO AND INCLUDING THE POINT OF CONNECTION TO THE EXISTING SEWER SYSTEM.
- LEAKAGE TESTS SHALL BE PERFORMED ON ALL SEGMENTS OF A GRAVITY SEWER SYSTEM, INCLUDING SERVICE LATERALS AND MANHOLES, FOR A CONTINUOUS PERIOD OF NO LESS THAN 2 HOURS. AT THE END OF THE TEST, THE TOTAL MEASURED LEAKAGE SHALL NOT EXCEED 100 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM, WITH ZERO ALLOWABLE LEAKAGE FOR LATERALS AND MANHOLES. AN EXFILTRATION OR INFILTRATION TEST SHALL BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET ON THE SECTION BEING TESTED.
- FORCE MAINS SHALL BE PRESSURE-TESTED IN ACCORDANCE WITH RULE 62-555.330 (FAC). THE PRESSURE TEST SHALL CONSIST OF HOLDING A TEST PRESSURE OF 150 PSI ON THE PIPELINE FOR A CONTINUOUS PERIOD OF 2 HOURS THE MAXIMUM ALLOWABLE LEAKAGE SHALL BE DETERMINED BY THE FOLLOWING FORMULA:  
$$L = \frac{S \times D \times \sqrt{P}}{148,000}$$


WHERE:  
L = ALLOWABLE LEAKAGE FOR SYSTEM IN GALLONS PER HOUR  
D = PIPE DIAMETER IN INCHES  
S = LENGTH OF LINES IN LINEAL FEET  
P = AVERAGE TEST PRESSURE IN PSI
- CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING CONFLICTS WITH FORCE MAINS PLACED AT MINIMUM COVER. IN CASE OF CONFLICT, FORCE MAIN SHALL BE LOWERED TO PASS UNDER CONFLICTS WITH 12" MINIMUM SEPARATION FROM WATER MAINS AND 6" MINIMUM SEPARATION FROM OTHER UTILITIES. NO ADDITIONAL PAYMENT SHALL BE DUE TO CONTRACTOR FOR LOWERING THE MAIN OR THE ADDITIONAL FITTINGS USED THEREON.
- WHENEVER IT IS NECESSARY, IN THE INTEREST OF SAFETY, TO BRACE THE SIDES OF A TRENCH, THE CONTRACTOR SHALL FURNISH, PUT IN PLACE AND MAINTAIN SUCH SHEETING OR BRACING AS MAY BE NECESSARY TO SUPPORT THE SIDES OF THE EXCAVATION TO ENSURE PERSONNEL SAFETY, AND TO PREVENT MOVEMENT WHICH CAN IN ANY WAY DAMAGE THE WORK OR ENDANGER ADJACENT STRUCTURES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SEQUENCE, METHODS AND MEANS OF CONSTRUCTION, AND FOR THE IMPLEMENTATION OF ALL OSHA AND OTHER SAFETY REQUIREMENTS.

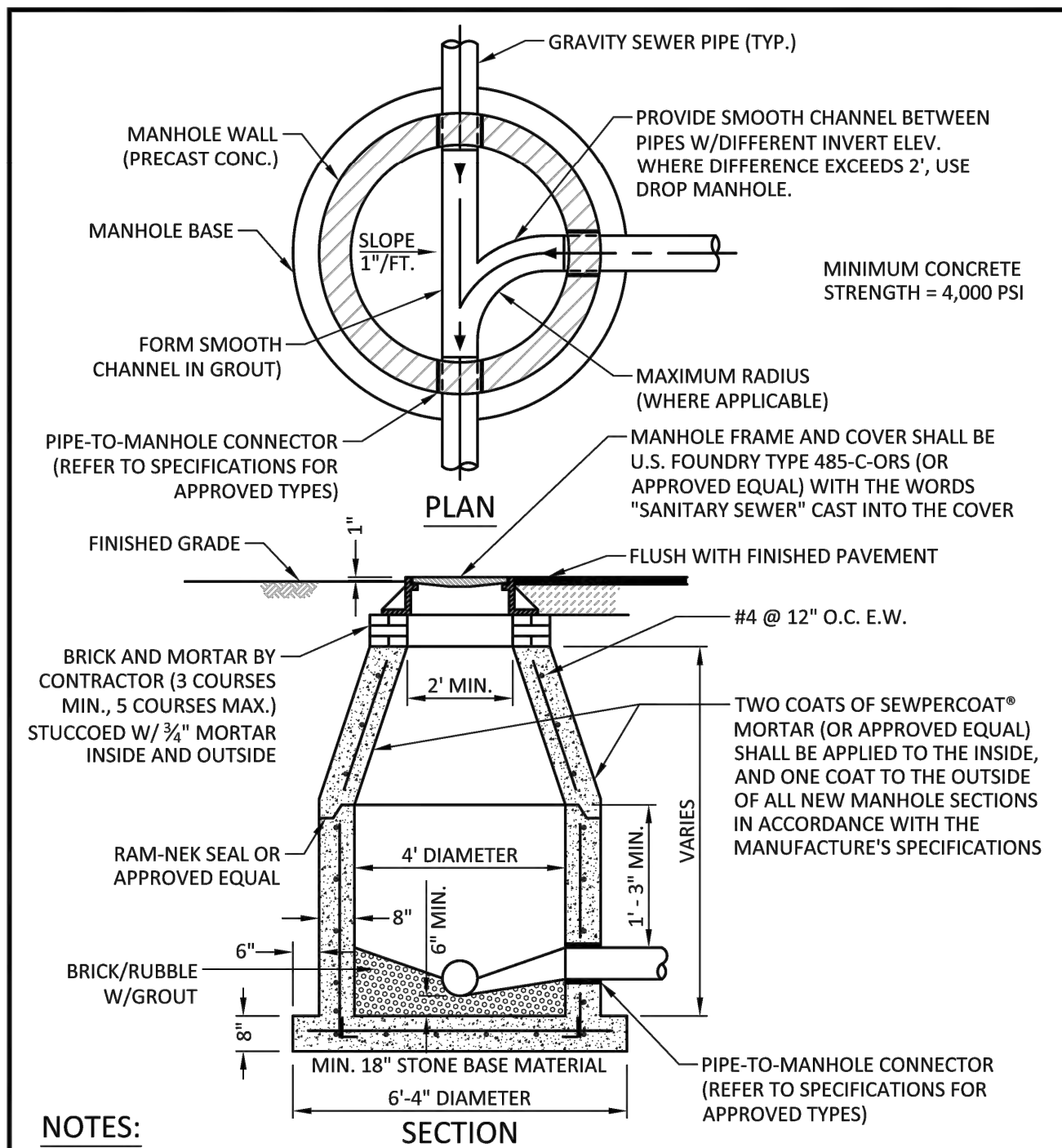
	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	SANITARY SEWER MAIN CONSTRUCTION NOTES		DRAWING NO. S-01
APPROVED: XXX			



NOTES:


- INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
- SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING SMOOTH FLOWS.
- CHANNELS FOR FUTURE CONNECTIONS (STUBS) SHALL BE CONSTRUCTED FILLED WITH SAND & COVERED WITH 1" OF MORTAR.
- WHEN FLOW LINE DEFLECTS MORE THAN 45°, A DROP OF 0.10' IS REQUIRED.

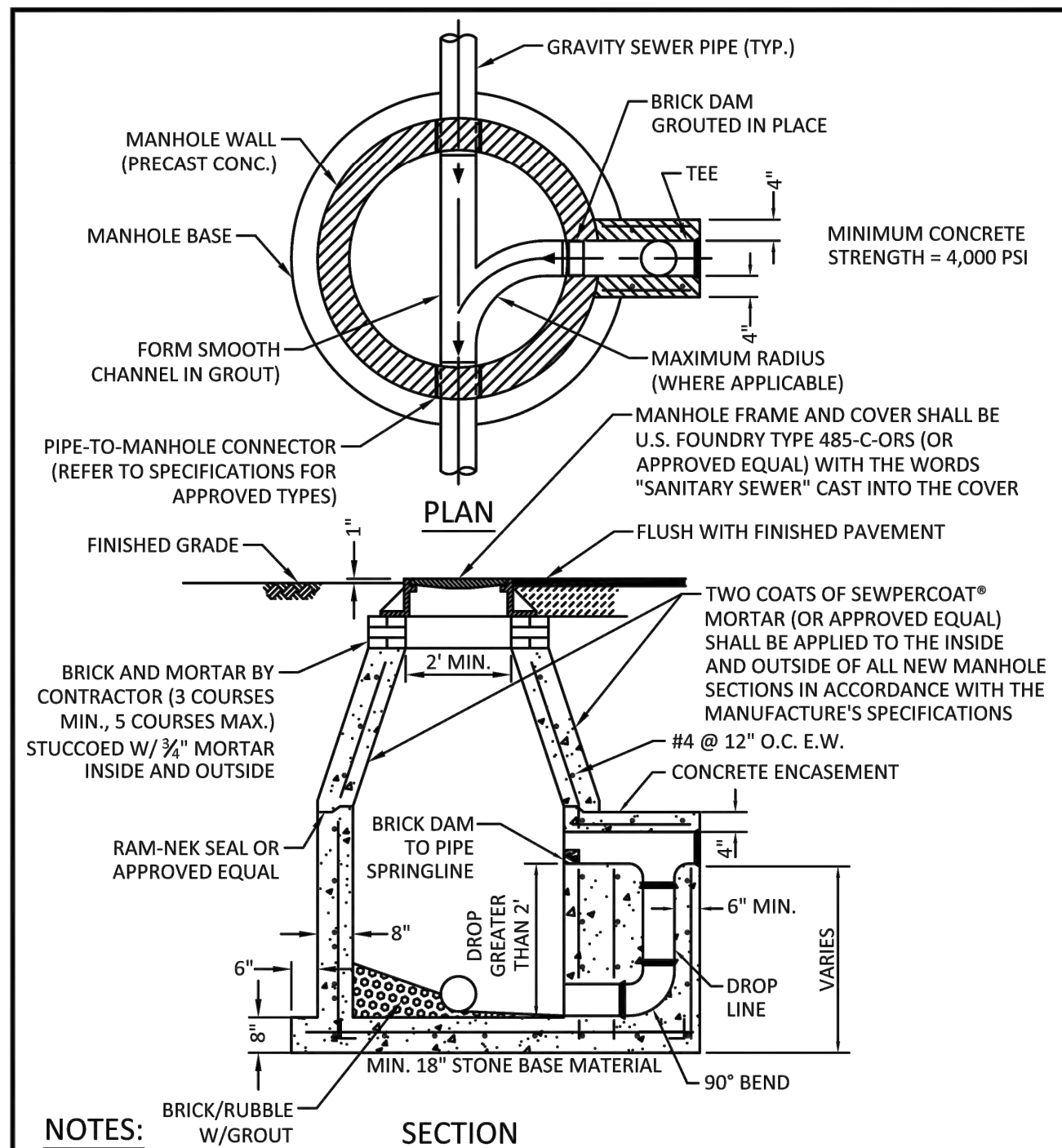
	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	MANHOLE FLOW PATTERNS		DRAWING NO. S-02
APPROVED: XXX			



NOTES:


- SHOP DRAWINGS SHOWING ALL DIMENSIONS, INCLUDING CONCRETE REINFORCEMENT AND BUOYANCY, SHALL BE SUBMITTED TO THE CITY PRIOR TO INSTALLATION.
- THE BOTTOM SLAB SHALL BE CAST MONOLITHICALLY WITH THE LOWER WALL SECTION TO A MINIMUM OF 3' ABOVE SLAB BASE.
- NO CONSTRUCTION JOINTS ARE ALLOWED BELOW ELEVATION +2.00 NAVD. ABOVE ELEVATION +2.00 NAVD CONSTRUCTION JOINTS ARE ALLOWED, IF ADEQUATE JOINTS WITH KEY-WAYS AND WATER STOPS ARE PROVIDED. SUBMIT SHOP DRAWINGS OF JOINT DETAILS TO THE ENGINEER FOR APPROVAL.

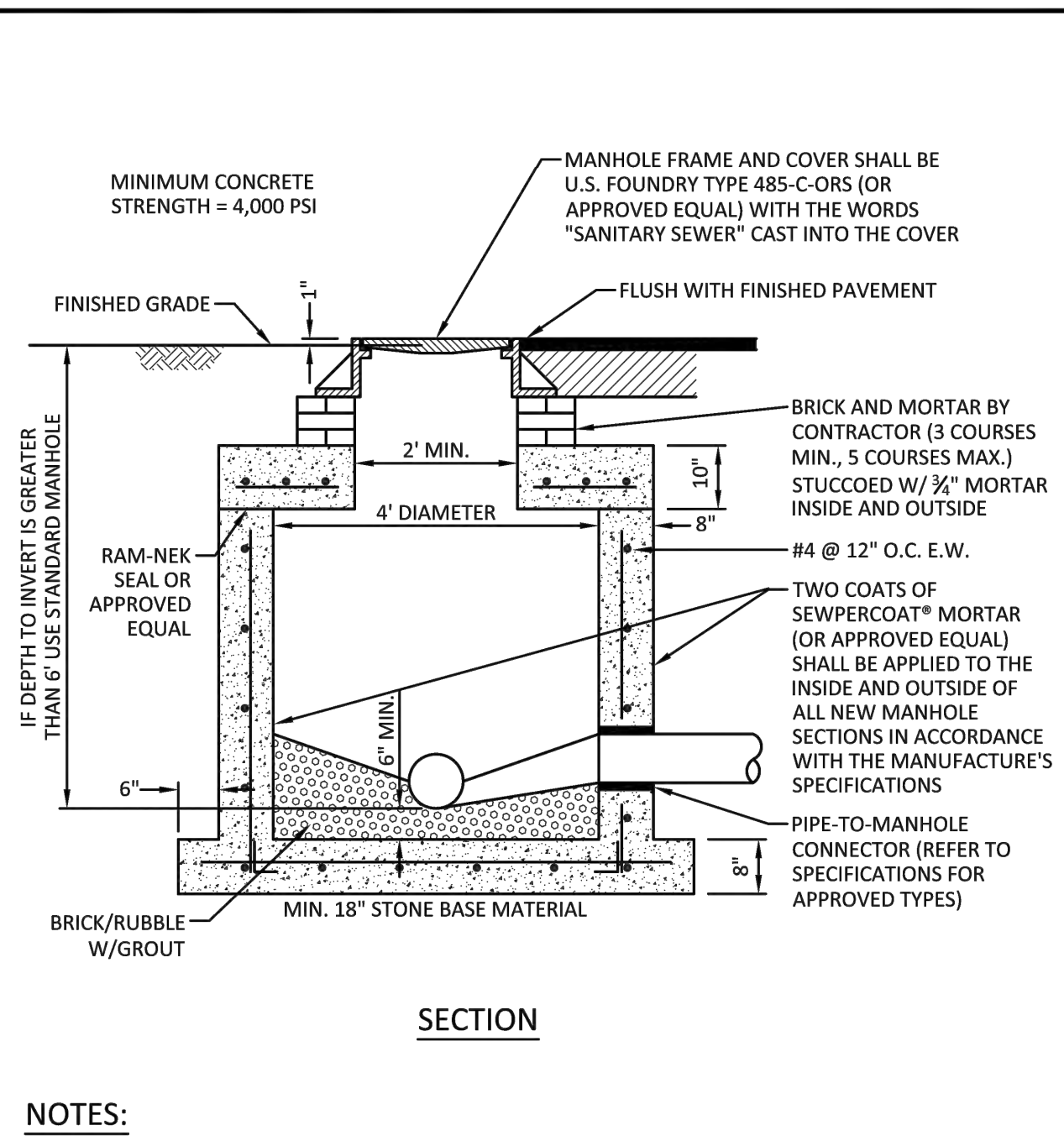
	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 07/18/2018
DRAWN: EAM	STANDARD PRECAST MANHOLE		DRAWING NO. S-03
APPROVED: XXX			



NOTES:


- SHOP DRAWINGS SHOWING ALL DIMENSIONS, INCLUDING CONCRETE REINFORCEMENT AND BUOYANCY, SHALL BE SUBMITTED TO THE CITY PRIOR TO INSTALLATION.
- THE BOTTOM SLAB SHALL BE CAST MONOLITHICALLY WITH THE LOWER WALL SECTION TO A MINIMUM OF 3' ABOVE SLAB BASE.
- NO CONSTRUCTION JOINTS ARE ALLOWED BELOW ELEVATION +2.00 NAVD. ABOVE ELEVATION +2.00 NAVD CONSTRUCTION JOINTS ARE ALLOWED, IF ADEQUATE JOINTS WITH KEY-WAYS AND WATER STOPS ARE PROVIDED. SUBMIT SHOP DRAWINGS OF JOINT DETAILS TO THE ENGINEER FOR APPROVAL.

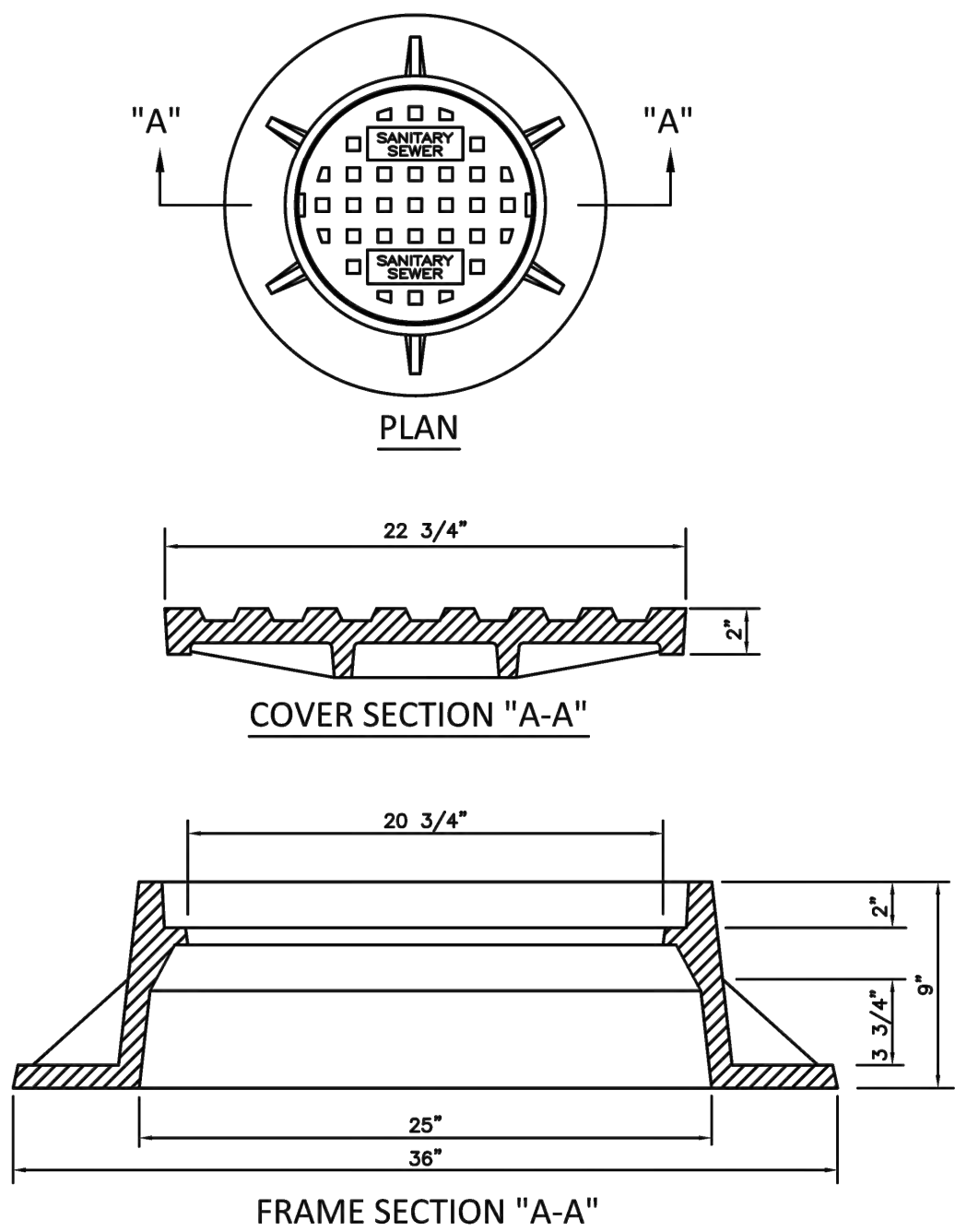
	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 07/18/2018
DRAWN: EAM	DROP MANHOLE		DRAWING NO. S-04
APPROVED: XXX			



NOTES:


- SHOP DRAWINGS SHOWING ALL DIMENSIONS, INCLUDING CONCRETE REINFORCEMENT AND BUOYANCY, SHALL BE SUBMITTED TO THE CITY PRIOR TO INSTALLATION.
- THE BOTTOM SLAB SHALL BE CAST MONOLITHICALLY WITH THE LOWER WALL SECTION TO A MINIMUM OF 3' ABOVE SLAB BASE.
- NO CONSTRUCTION JOINTS ARE ALLOWED BELOW ELEVATION +2.00 NAVD. ABOVE ELEVATION +2.00 NAVD CONSTRUCTION JOINTS ARE ALLOWED, IF ADEQUATE JOINTS WITH KEY-WAYS AND WATER STOPS ARE PROVIDED. SUBMIT SHOP DRAWINGS OF JOINT DETAILS TO THE ENGINEER FOR APPROVAL.

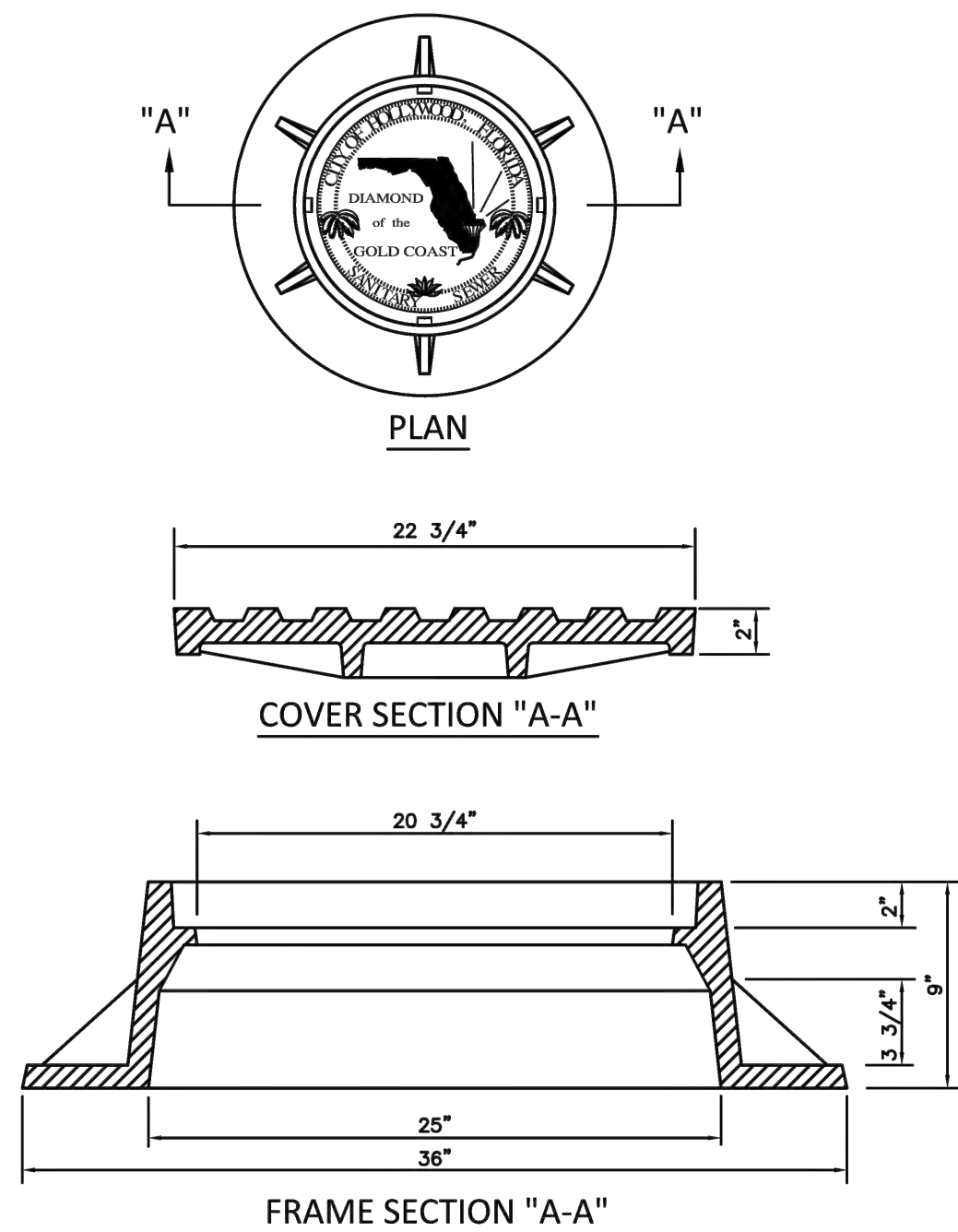
	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 07/18/2018
DRAWN: EAM	SHALLOW MANHOLE		DRAWING NO. S-05
APPROVED: XXX			



NOTES:


- LETTERS ON COVER TO BE 3/8" HIGH, 1/4" TO 5/16" THICK AND FLUSH WITH TOP OF COVER.
- ALL BEARING SURFACES TO BE MACHINED.
- MINIMUM WEIGHTS: COVER - 160 LBS., TOTAL - 400 LBS.
- MANHOLE FRAME AND COVER SHALL BE U.S. FOUNDRY 485-C-ORS WITH THE WORDS "SANITARY SEWER" CAST INTO THE COVER.

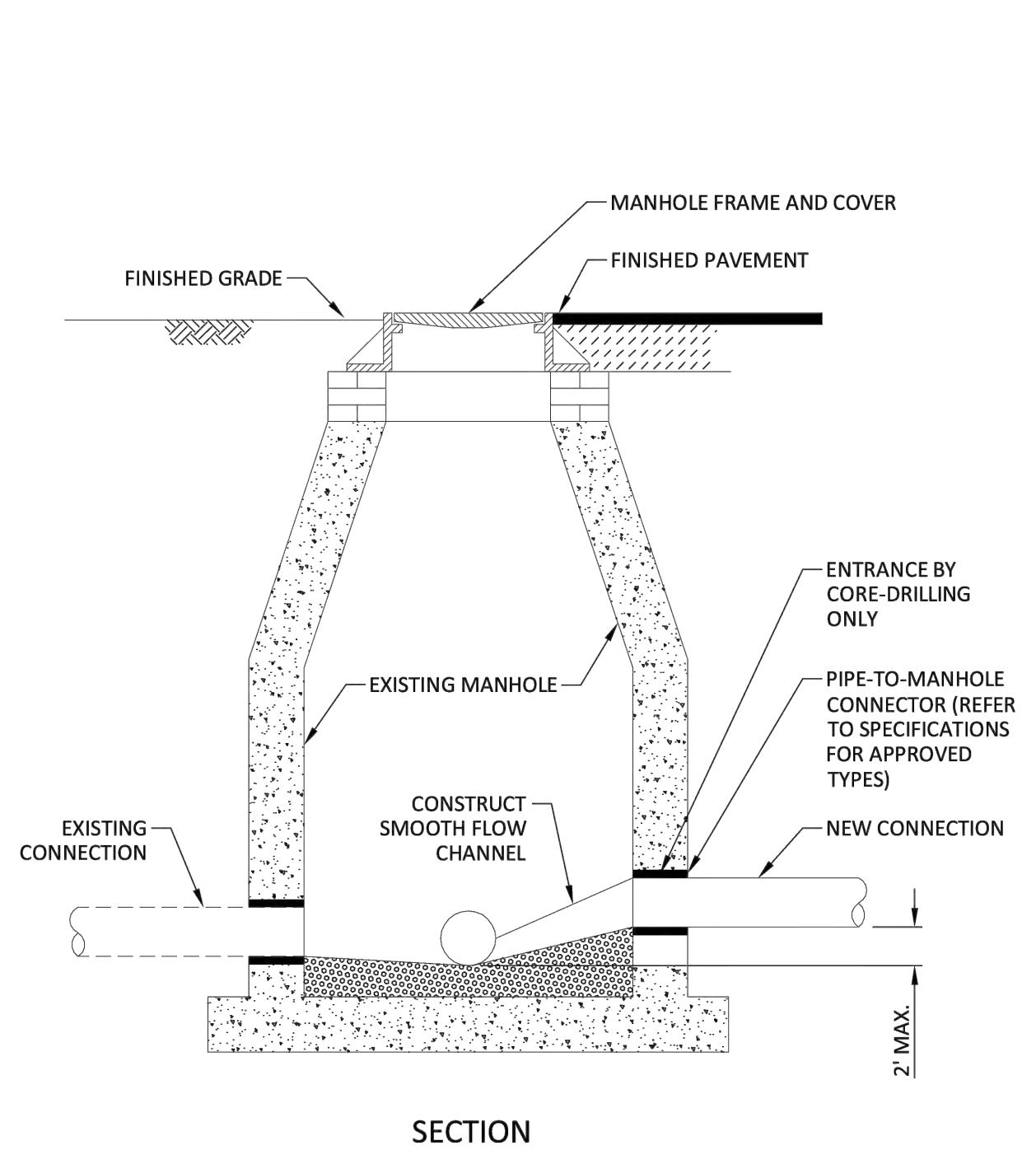
	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	MANHOLE FRAME AND COVER		DRAWING NO. S-06
APPROVED: XXX			



NOTES:

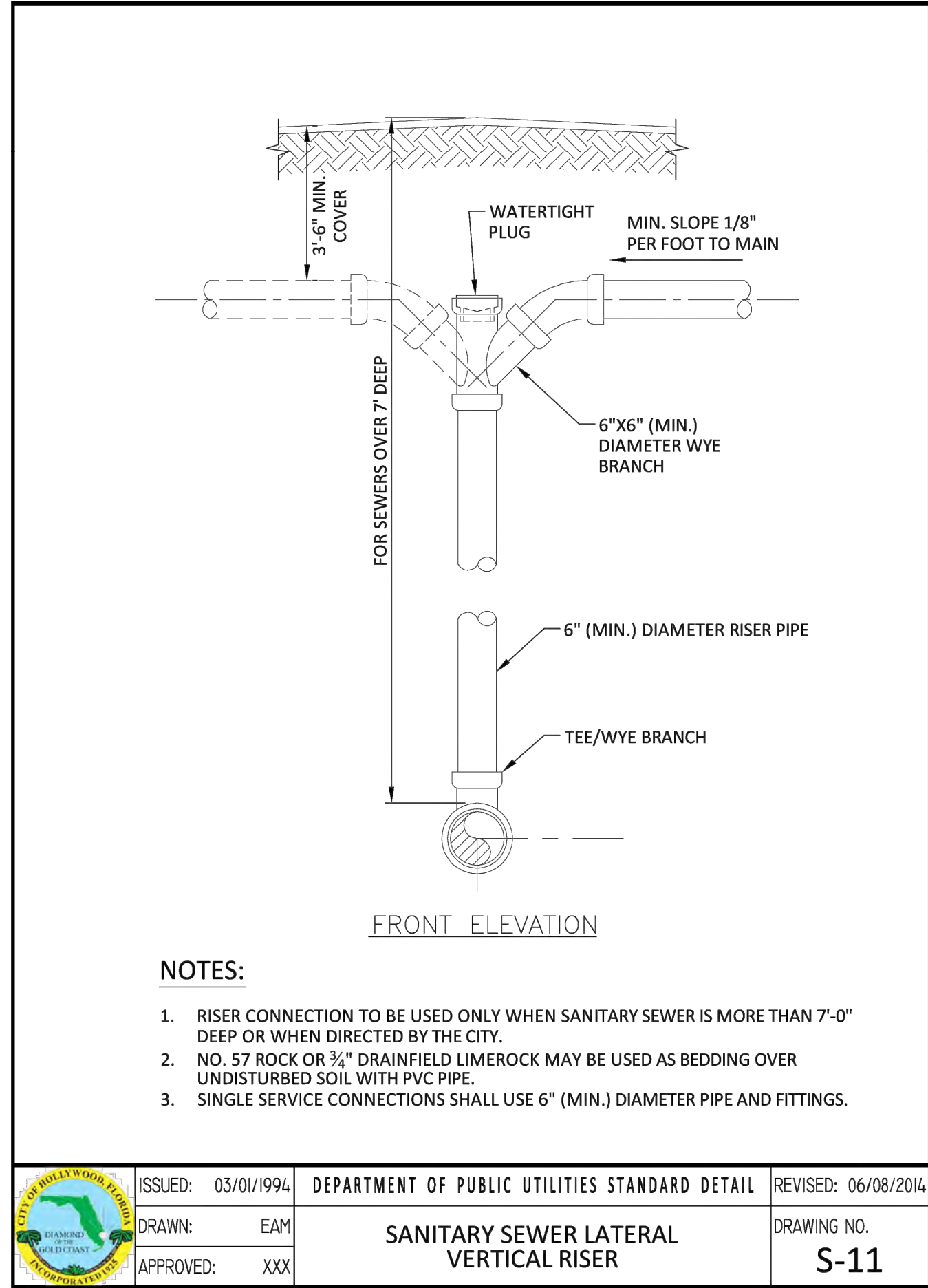
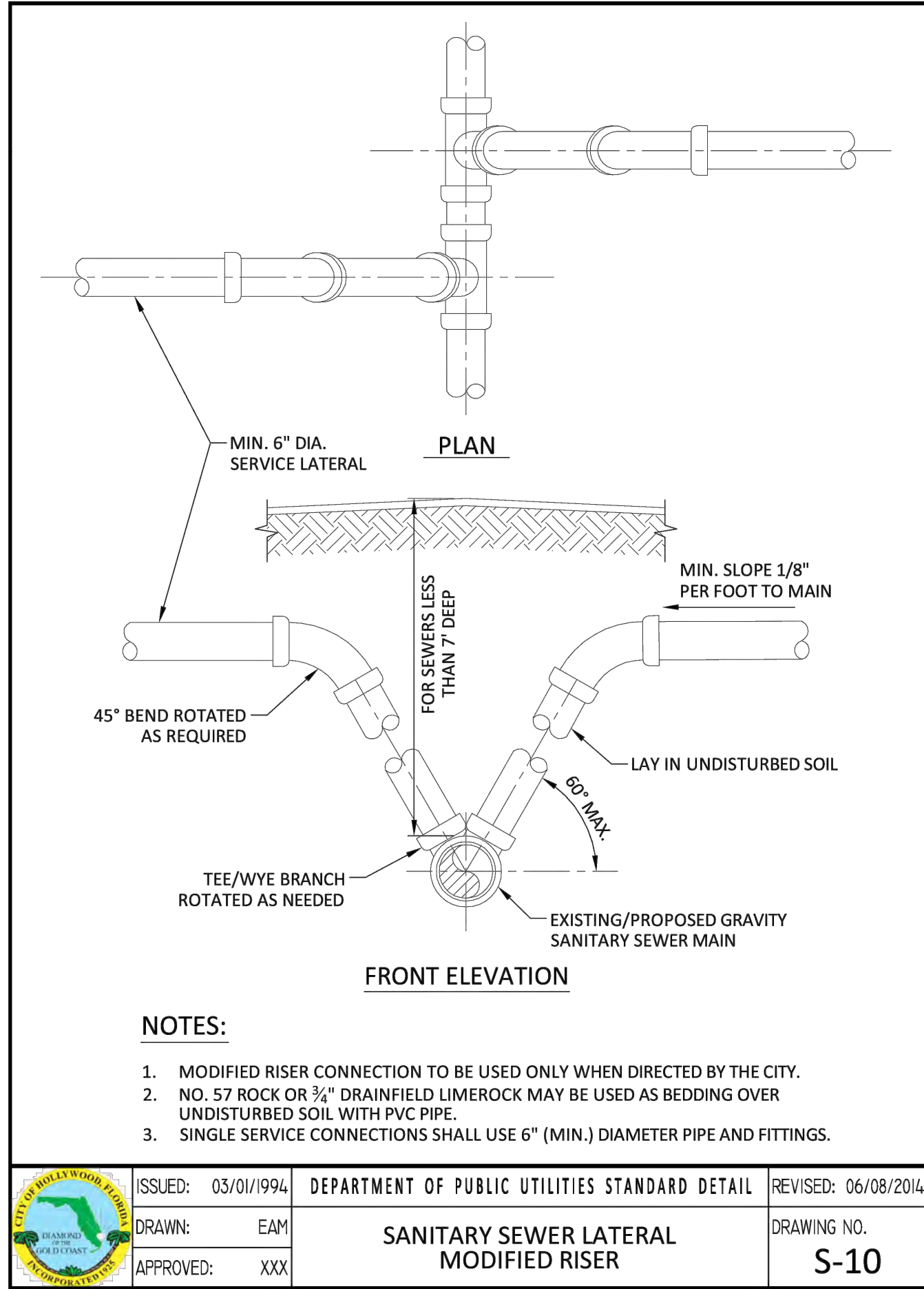
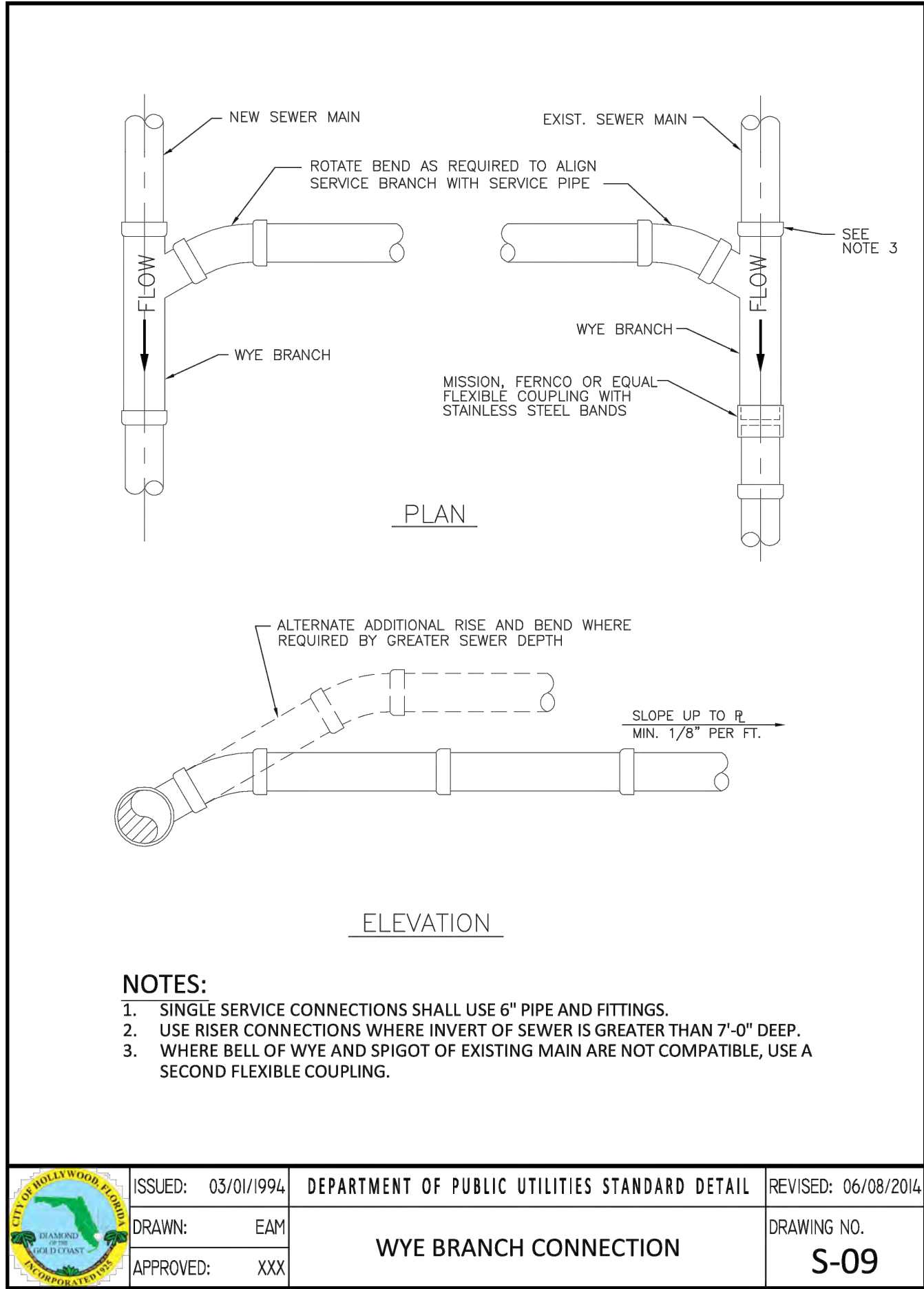
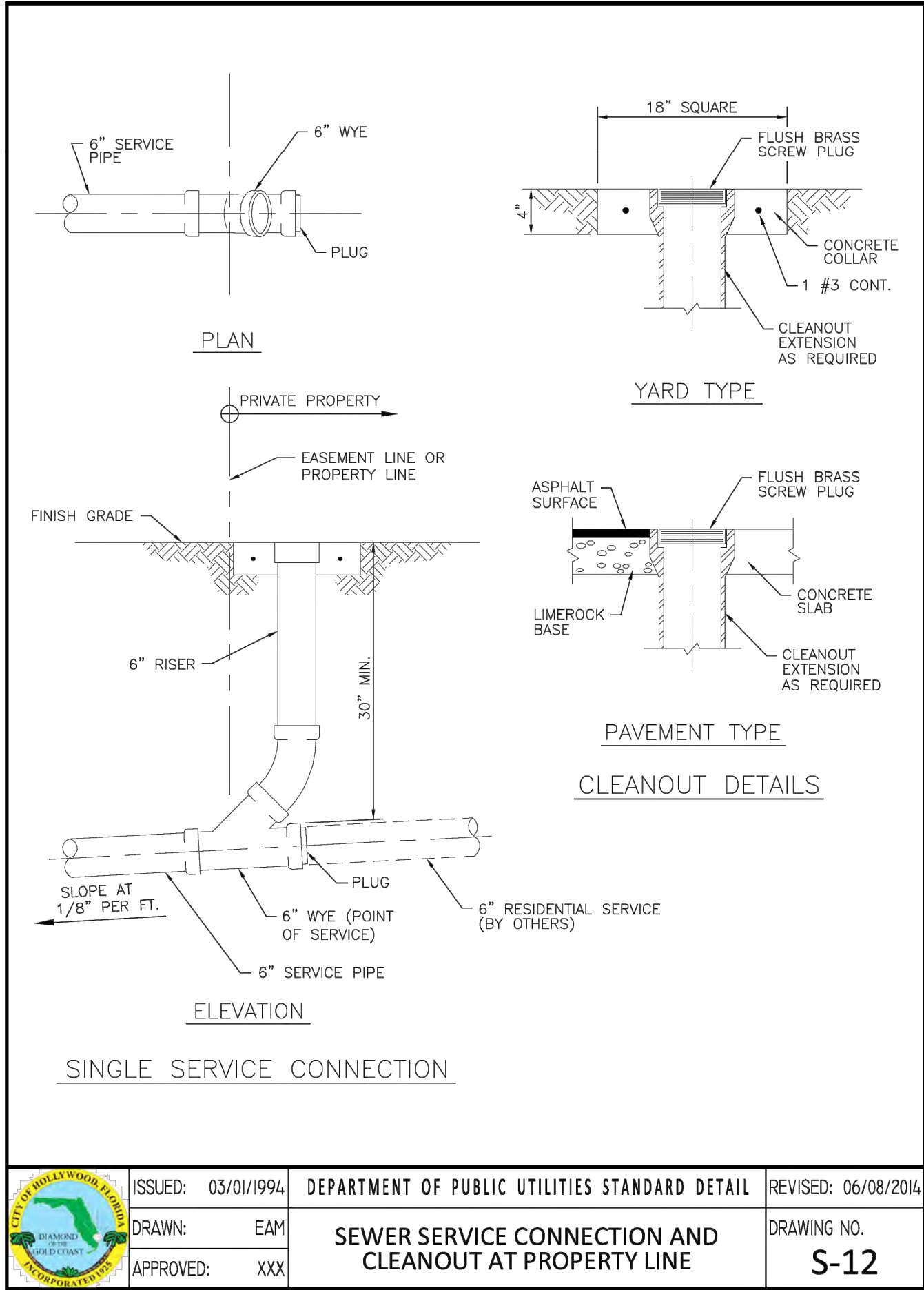
- LETTERS ON COVER TO BE 3/8" HIGH, 1/4" TO 5/16" THICK AND FLUSH WITH TOP OF COVER.
- ALL BEARING SURFACES TO BE MACHINED.
- MINIMUM WEIGHTS: COVER - 160 LBS., TOTAL - 400 LBS.
- MANHOLE FRAME AND COVER SHALL BE U.S. FOUNDRY 485-C-ORS TYPE EL WITH THE WORDS "SANITARY SEWER" CAST INTO THE COVER.

	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	MANHOLE FRAME AND COVER CITY OF HOLLYWOOD		DRAWING NO. S-06.1
APPROVED: XXX			



	ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	NEW CONNECTION TO EXISTING MANHOLE		DRAWING NO. S-07
APPROVED: XXX			





ORANGEBROOK MOBILE HOME ESTATES  
3318 ORANGE STREET  
HOLLYWOOD, FLORIDA 33021

PREPARED FOR:  
CPI ORANGEBROOK OWNER, LLC

WATER AND SEWER DETAILS

Chad Everett Edwards  
Florida P.E. No. 59306  
April 23, 2021  
PROJECT NO.  
19-0039

C-15  
SHEET 15 OF 17


CRAVEN - THOMPSON AND ASSOCIATES, INC.  
ENGINEERS • PLANNERS • SURVEYORS  
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309  
TEL: (954) 739-6409  
FAX: (954) 739-6409  
FLORIDA LICENSED ENGINEERS, SURVEYORS & LANDSCAPE ARCHITECTS NO. 271  
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. C00014  
INC. COPYRIGHT © 2019  
MATERIAL SHOWN HEREIN IS THE PROPERTY OF CRAVEN THOMPSON & ASSOCIATES, INC. AND SHALL NOT  
BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL,  
INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM,  
WITHOUT THE WRITTEN PERMISSION OF CRAVEN THOMPSON & ASSOCIATES, INC.

DATE:	03/10/20	BY:	DATE:
SCALE:	1"=20'	BY:	DATE:
DESIGN BY:	LZG	BY:	DATE:
DRAWN BY:	LZG	BY:	DATE:
CHECKED BY:	CE	BY:	DATE:
APPROVED BY:	CE	BY:	DATE:




WATER SYSTEM NOTES:

- NEW OR RELOCATED UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT THAT WILL CROSS ANY EXISTING OR PROPOSED GRAVITY OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 12 INCHES BELOW THE OTHER PIPELINE.
- NEW OR RELOCATED UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT THAT WILL CROSS ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OTHER PIPELINE. [FAC 62-555.314(2); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)].
- AT ALL UTILITY CROSSINGS DESCRIBED ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE, OR THE PIPES WILL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORM WATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. [FAC 62-555.314(2); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)].
- NEW UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT TO BE DUCTILE IRON PIPE (D.I.P.) WHEN CROSSING BELOW SANITARY SEWER MAINS.
- POLYETHYLENE ENCASUREMENT MATERIAL SHALL BE USED TO ENCASE ALL BURIED DUCTILE IRON PIPE, FITTINGS, VALVES, RODS, AND APPURTENANCES IN ACCORDANCE WITH AWWA C105, METHOD A. THE POLYETHYLENE TUBING SHALL BE CUT TWO FEET LONGER THAN THE PIPE SECTION AND SHALL OVERLAP THE ENDS OF THE PIPE BY ONE FOOT. THE POLYETHYLENE TUBING SHALL BE GATHERED AND HUNG TO PROVIDE A SNUG FIT AND SHALL BE SECURED AT QUARTER POINTS WITH POLYETHYLENE TAPE. EACH END OF THE POLYETHYLENE TUBING SHALL BE SECURED WITH A WRAP OF POLYETHYLENE TAPE.
- THE POLYETHYLENE TUBING SHALL PREVENT CONTACT BETWEEN THE PIPE AND BEDDING MATERIAL, BUT IS NOT INTENDED TO BE A COMPLETELY AIRTIGHT AND WATERTIGHT ENCLOSURE. DAMAGED POLYETHYLENE TUBING SHALL BE REPAIRED IN A WORKMANLIKE MANNER USING POLYETHYLENE TAPE, OR THE DAMAGED SECTION SHALL BE REPLACED. POLY WRAP WILL NOT BE PAID FOR AS A SEPARATE BID ITEM. IT SHALL BE CONSIDERED TO BE A PART OF THE PRICE BID FOR WATER MAINS.
- FIRE HYDRANT BARRELS SHALL BE ENCASED IN POLY WRAP UP TO THE GROUND SURFACE AND THE WEEP HOLES SHALL NOT BE COVERED BY THE POLY WRAP.
- GATE VALVES FOR USE WITH PIPE LESS THAN THREE INCHES (3") IN DIAMETER SHALL BE RATED FOR TWO HUNDRED (200) PSI WORKING PRESSURE, NON-SHOCK, BLOCK PATTERN, SCREWED BONNET, NON-RISING STEM, BRASS BODY, AND SOLID WEDGE. THE SHALL BE STANDARD THREADED FOR PVC PIPE AND HAVE A MALLEABLE IRON HANDWHEEL. GATE VALVES 3" THROUGH 16" IN DIAMETER SHALL BE RESILIENT SEAT AND BIDIRECTIONAL FLOW ONLY. VALVES FOR SPECIAL APPLICATIONS WILL REQUIRE CITY UTILITY APPROVAL.
- VALVE BOXES AND COVERS FOR ALL SIZE VALVES SHALL BE OF CAST IRON CONSTRUCTION AND ADJUSTABLE SCREW-ON TYPE. THE LID SHALL HAVE CAST IN THE METAL THE WORD "WATER" FOR THE WATER LINES. ALL VALVE BOXES SHALL BE SIX INCH (6") NOMINAL DIAMETER AND SHALL BE SUITABLE FOR DEPTHS OF THE PARTICULAR VALVE. THE STEM OF THE BURIED VALVE SHALL BE WITHIN TWENTY-FOUR INCHES (24") OF THE FINISHED GRADE UNLESS OTHERWISE APPROVED BY THE CITY.
- ALL WATER MAIN INSTALLATIONS SHALL COMPLY WITH THE COLOR CODING REQUIREMENTS OF CHAPTER 62-555.320 F.A.C.

	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014	DRAWING NO. <b>W-01</b>
WATER SYSTEM NOTES				

WATER SYSTEM NOTES (CONTINUED):

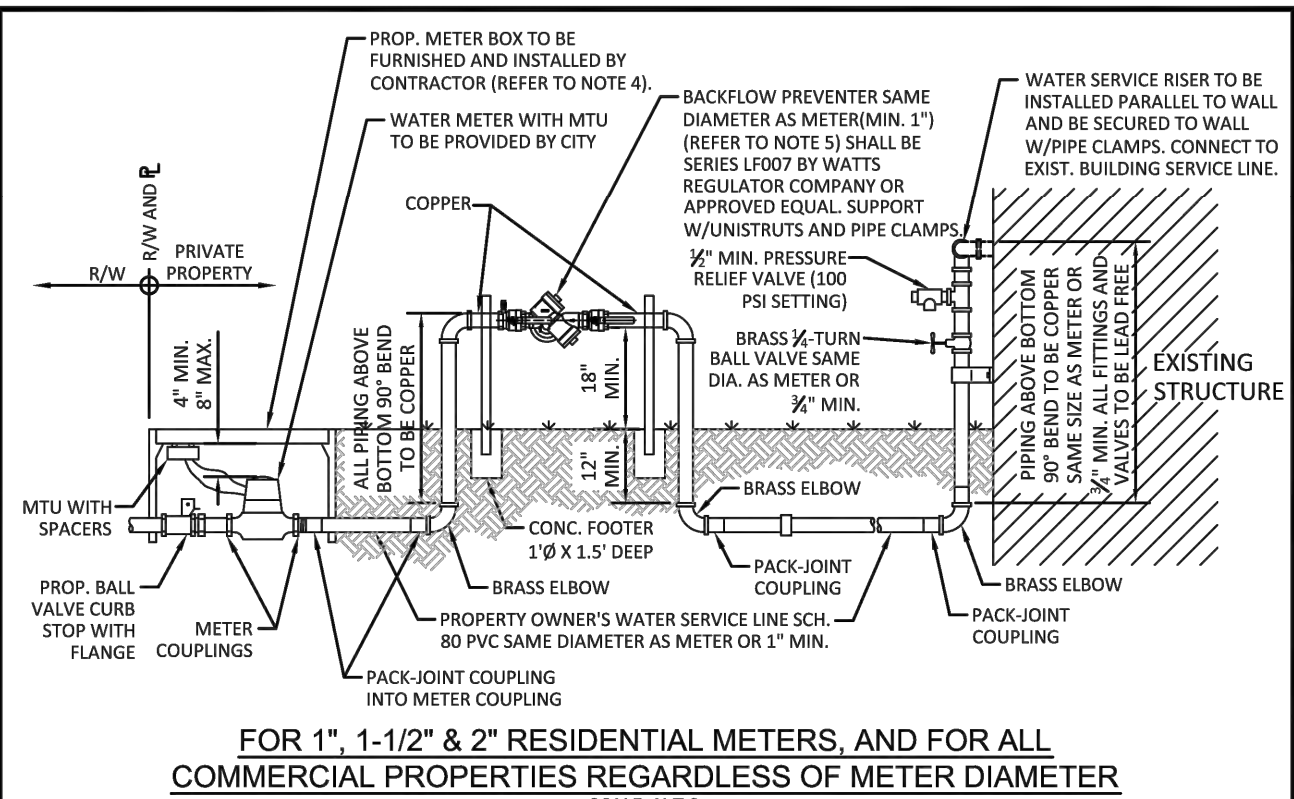
- ALL WATER MAIN INSTALLATIONS SHALL COMPLY WITH THE COLOR CODING REQUIREMENTS OF CHAPTER 62-555.320 F.A.C.
- ALL PVC PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C900 LATEST REVISION AND CLASS DR 18. ALL DIP WATER MAINS SHALL BE DUCTILE IRON PRESSURE CLASS 350, WITH WALL THICKNESS COMPLYING WITH CLASS 52. ALL DUCTILE IRON PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C153/A21.51-02 AND BE CEMENT LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-03.
- FITTINGS SHALL BE DUCTILE IRON, MEETING ANSI/AWWA C153/A21.53-00 SPECIFICATIONS, WITH 350 PSI MINIMUM WORKING PRESSURE. FITTINGS MUST BE CEMENT LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-03. ALL DUCTILE IRON PIPE AND FITTINGS MUST BE MANUFACTURED IN THE UNITED STATES OF AMERICA.
- ALL DUCTILE IRON PIPE TO BE MECHANICAL JOINTS, WRAPPED IN POLY. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY DESIGN.
- PAVEMENT RESTORATION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY.
- ALL TRENCHING, PIPE LAYING, BACKFILL, PRESSURE TESTING, AND DISINFECTING MUST COMPLY WITH THE CITY OF HOLLYWOOD SPECIFICATIONS.
- THE MINIMUM DEPTH OF COVER OVER WATER MAINS IS 30" (DIP) OR 36" (PVC).
- MINIMUM HORIZONTAL SEPARATION BETWEEN STORM STRUCTURES AND WATER MAINS SHALL BE 3'.
- MAXIMUM DEFLECTION PER EACH JOINT SHALL BE 50% OF MANUFACTURES RECOMMENDATION (MAXIMUM) WHERE DEFLECTION IS REQUIRED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING CONFLICTS WITH WATER MAINS PLACED AT MINIMUM COVER. IN CASE OF CONFLICT, WATER MAIN SHALL BE LOWERED TO PASS UNDER CONFLICTS WITH 18" MINIMUM VERTICAL SEPARATION. NO ADDITIONAL PAYMENT SHALL BE DUE TO CONTRACTOR FOR LOWERING THE MAIN OR THE ADDITIONAL FITTINGS USED THEREON.
- PIPE JOINT RESTRAINT SHALL BE PROVIDED BY THE USE OF DUCTILE IRON FOLLOWER GLANDS MANUFACTURED TO ASTM A 536-80. TWIST-OFF NUTS SHALL BE USED TO ENSURE PROPER ACTUATING OF THE RESTRAINING DEVICES. THE MECHANICAL JOINT RESTRAINING DEVICES SHALL HAVE A WORKING PRESSURE OF 250 PSI MINIMUM, WITH A MINIMUM SAFETY FACTOR OF 2:1, AND SHALL BE EBAA IRON INC., MEGALUG OR APPROVED EQUAL. JOINT RESTRAINTS SHALL BE PROVIDED AT A MINIMUM OF THREE JOINTS (60 FEET) FROM ANY FITTING.
- WHENEVER IT IS NECESSARY, IN THE INTEREST OF SAFETY, TO BRACE THE SIDES OF A TRENCH, THE CONTRACTOR SHALL FURNISH, PUT IN PLACE AND MAINTAIN SUCH SHEETING OR BRACING AS MAY BE NECESSARY TO SUPPORT THE SIDES OF THE EXCAVATION TO ENSURE PERSONNEL SAFETY, AND TO PREVENT MOVEMENT WHICH CAN IN ANY WAY DAMAGE THE WORK OR ENDANGER ADJACENT STRUCTURES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SEQUENCE, METHODS AND MEANS OF CONSTRUCTION, AND FOR THE IMPLEMENTATION OF ALL OSHA AND OTHER SAFETY REQUIREMENTS.

	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014	DRAWING NO. <b>W-02</b>
WATER SYSTEM NOTES				

WATER METER SERVICE NOTES:

- SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED NOT LESS THAN 18" ON CENTER.
- P.E. TUBING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C901, "POLYETHYLENE (PE) PRESSURE PIPE AND TUBING, 1/2 IN. (13mm) THROUGH 3 IN. (76 mm), FOR WATER SERVICE".
- MINIMUM SERVICE PIPE DIAMETER SHALL BE 1" FOR SINGLE OR DUAL 3/4" OR SINGLE 1" DIAMETER METERS.
- MINIMUM SERVICE PIPE DIAMETER SHALL BE 2" FOR SINGLE OR DUAL 1-1/2" OR SINGLE 2" DIAMETER METERS.
- FOR METER DIAMETERS LARGER THAN 2", THE MINIMUM SERVICE PIPE DIAMETER SHALL BE THE SAME AS THE METER DIAMETER.
- APPROVED COPPER TUBING MAY BE USED AT THE CITY'S DISCRETION.
- FOR NEW METER INSTALLATIONS, ALL SADDLES, VALVES, PIPING, FITTINGS, CURB STOPS, METER VALVES, METER COUPLINGS, METER VAULTS AND COVERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE EXISTING WATER METER WILL BE PROVIDED AND INSTALLED BY THE CITY OF HOLLYWOOD (NEW ACCOUNTS).
- FOR METER RELOCATIONS, ALL SADDLES, VALVES, PIPING, FITTINGS, CURB STOPS, METER VALVES, METER COUPLINGS, METER VAULTS AND COVERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE EXISTING WATER METER TO BE RELOCATED AND INSTALLED BY CONTRACTOR.
- FOR EXISTING METERS ABUTTING THE RIGHT-OF-WAY THAT ARE BEING DISCONNECTED FROM EXISTING MAINS AND RECONNECTED TO NEW MAINS, THE CONTRACTOR SHALL:
  - CUT AND PLUG THE EXISTING SERVICE LINE AT THE MAIN AND AT THE METER, AND REMOVE THE EXISTING BALL VALVE CURB STOP.
  - FURNISH AND INSTALL SERVICE SADDLE, CORPORATION STOP OR SERVICE VALVE AND VALVE BOX, PIPING AND FITTINGS UP TO AND INCLUDING THE BALL VALVE CURB STOP.
- THE ELEVATION AT THE TOP OF THE METER BOX SHALL MATCH THE ELEVATION OF THE BACK OF SIDEWALK, WHENEVER PRACTICAL.
- AS PART OF THE SERVICE INSTALLATION, THE CONTRACTOR SHALL RESTORE THE RIGHT-OF-WAY TO MATCH EXISTING CONDITIONS, INCLUDING ROADWAY PAVEMENT, PAVEMENT MARKINGS AND RPMs, CONCRETE CURBS, SIDEWALKS, RAMPS (INCLUDING DETECTABLE WARNING SURFACE), SODDING, AND ALL OTHER IMPROVEMENTS REMOVED OR DAMAGED DURING THE SERVICE INSTALLATION.
- FOR UNPAVED AREAS, THE MINIMUM GROUND COVER ACCEPTED BY THE CITY IS SODDING.

	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017	DRAWING NO. <b>W-07</b>
WATER METER SERVICE NOTES FOR 5/8" THROUGH 2" METERS				



SCALE: N.T.S.

Technical drawing showing the connection of a water service line from a meter to a structure. The drawing includes labels for various components and dimensions:


- Top Left:** "R/W AND E" and "PRIVATE PROPERTY" with a line indicating the property boundary.
- Water Meter:** "WATER METER WITH MUTI TO BE PROVIDED BY CITY". Dimensions: "3\"/>

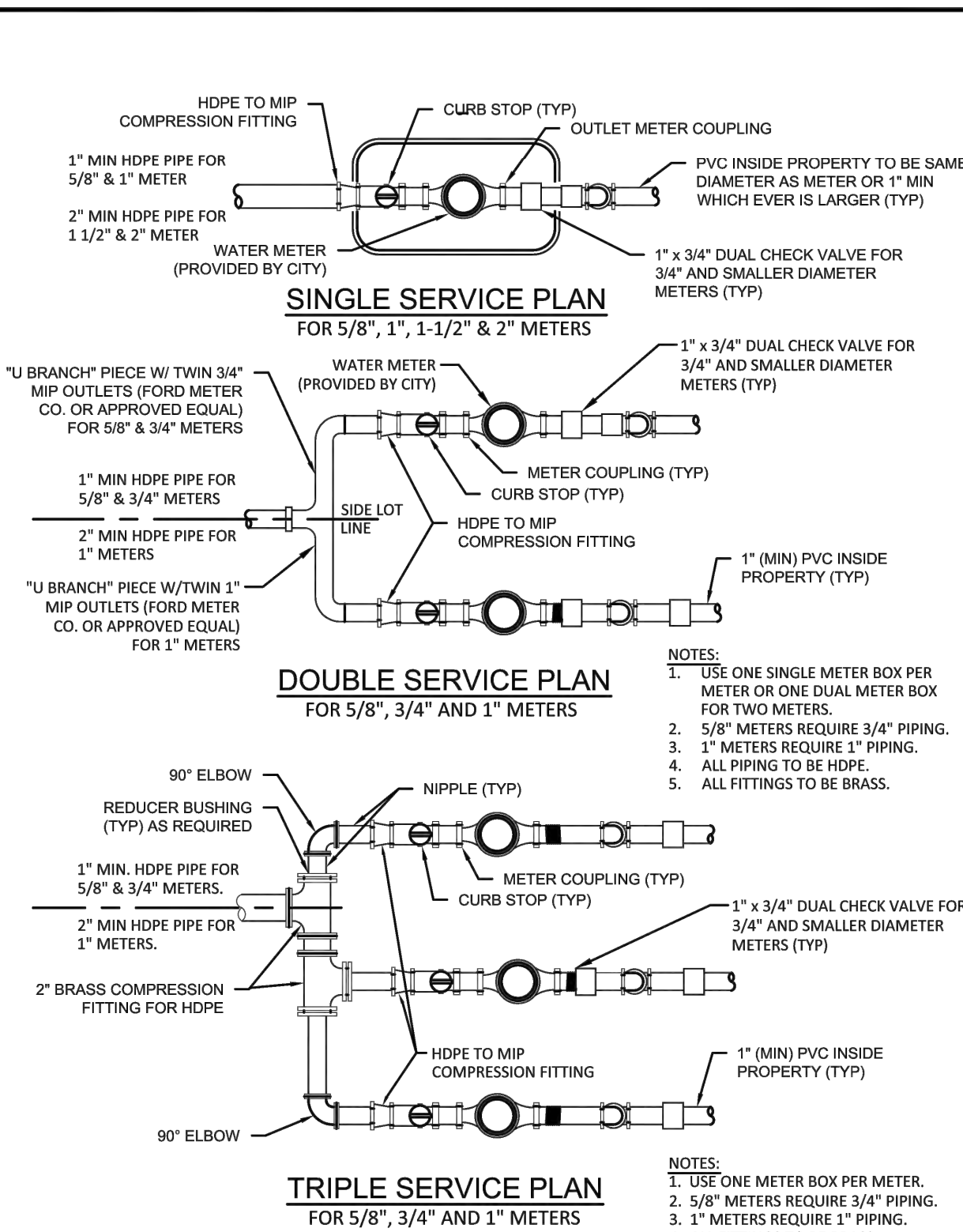
**FOR 5/8" RESIDENTIAL METERS ONLY**


SCALE: N.T.S.

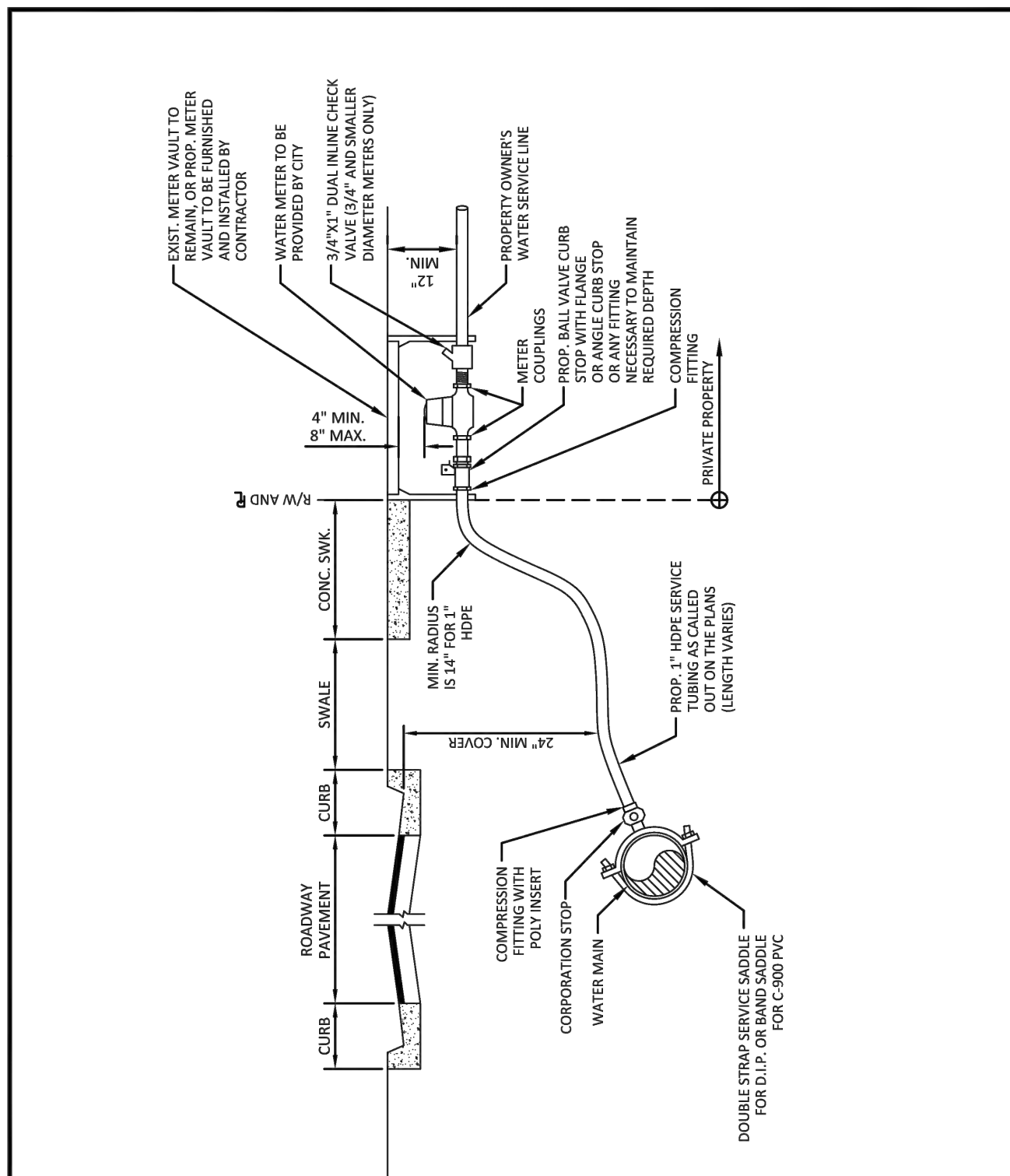
**NOTES FOR ALL SERVICES:**


1. IF EXISTING HOSE BIB IS REMOVED, DAMAGED, OR NO HOSE BIB EXISTS, ONE MUST BE INSTALLED; A HOSE BIB VACUUM BREAKER MUST BE INSTALLED AS REQUIRED TO COMPLY WITH THE LATEST REVISION OF THE FLORIDA BUILDING CODE.
2. THREADED PVC FITTINGS (MALE OR FEMALE) NOT ALLOWED; ALL TRANSITIONS FROM PVC TO METAL PIPING/FITTINGS SHALL USE COMPRESSION PACK-JOINT COUPLINGS; THIS INCLUDES PVC CONNECTIONS TO INLINE CHECK VALVE AND BACKFLOW PREVENTER.
3. PIPE CLAMPS FOR ATTACHING WATER SERVICE RISER TO WALL SHALL BE HOT-DIPPED GALVANIZED, WITH ISOLATION MATERIAL BETWEEN THE PIPE AND GALVANIZED METAL.
4. IF EXISTING CONCRETE METER BOX IS IN ACCEPTABLE CONDITION (AS DETERMINED BY ECSI) IT MAY BE RE-USED.
5. IF BACKFLOW PREVENTER IS DETERMINED TO BE IN ACCEPTABLE CONDITION IT MAY BE RE-USED PROVIDED IT IS RE-CERTIFIED.
6. ALL PRIVATE SERVICE LINE INSTALLATIONS SHALL COMPLY WITH THE LATEST REVISION OF THE FLORIDA BUILDING CODE.
7. ALL FITTINGS TO BE BRASS.

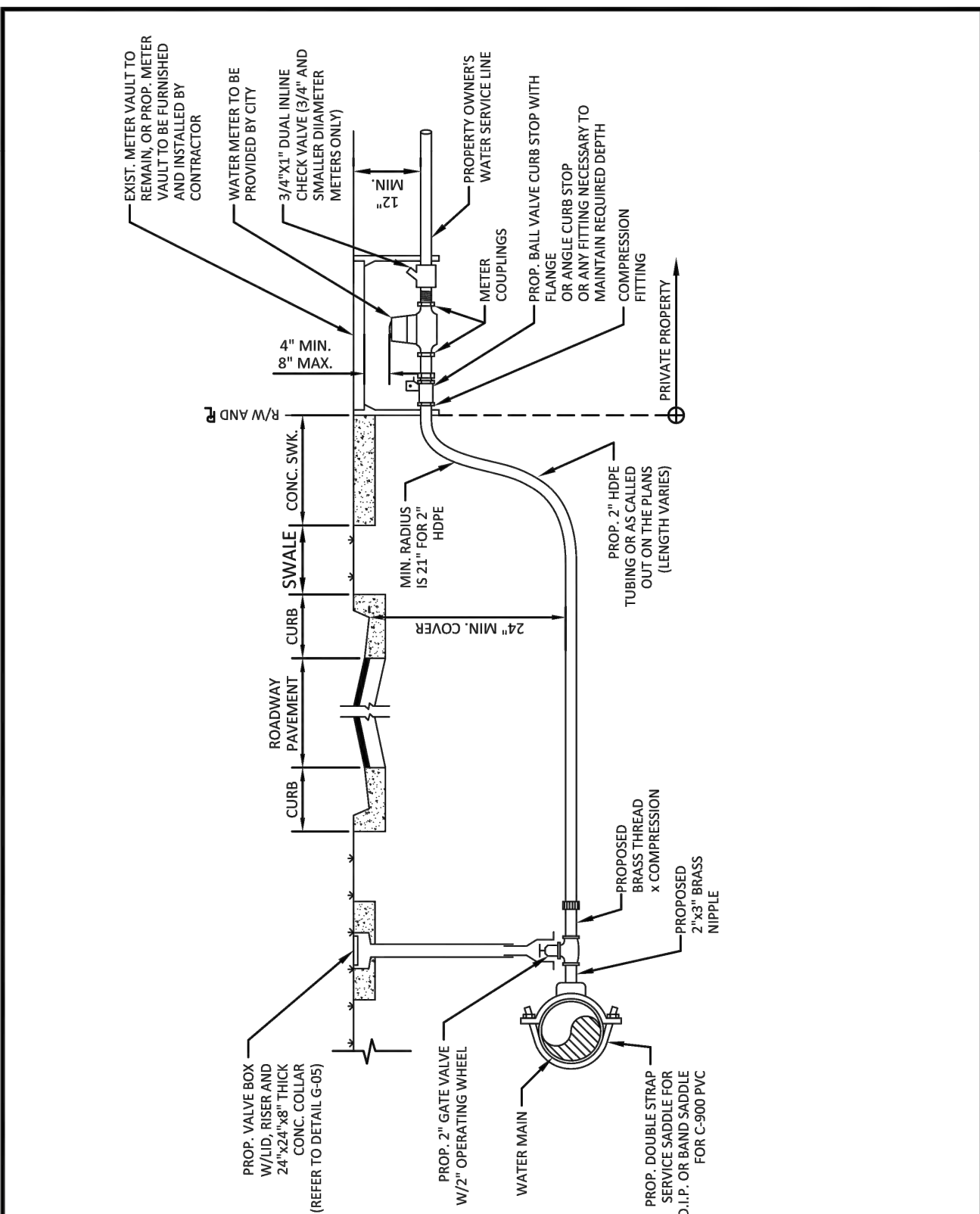
	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	<b>DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL</b>  <b>TYPICAL WATER SERVICE FROM METER TO STRUCTURE FOR 5/8" THROUGH 2" METERS</b>	REVISED: 02/14/2018  DRAWING NO. <b>W-10</b>
--	---	--	---




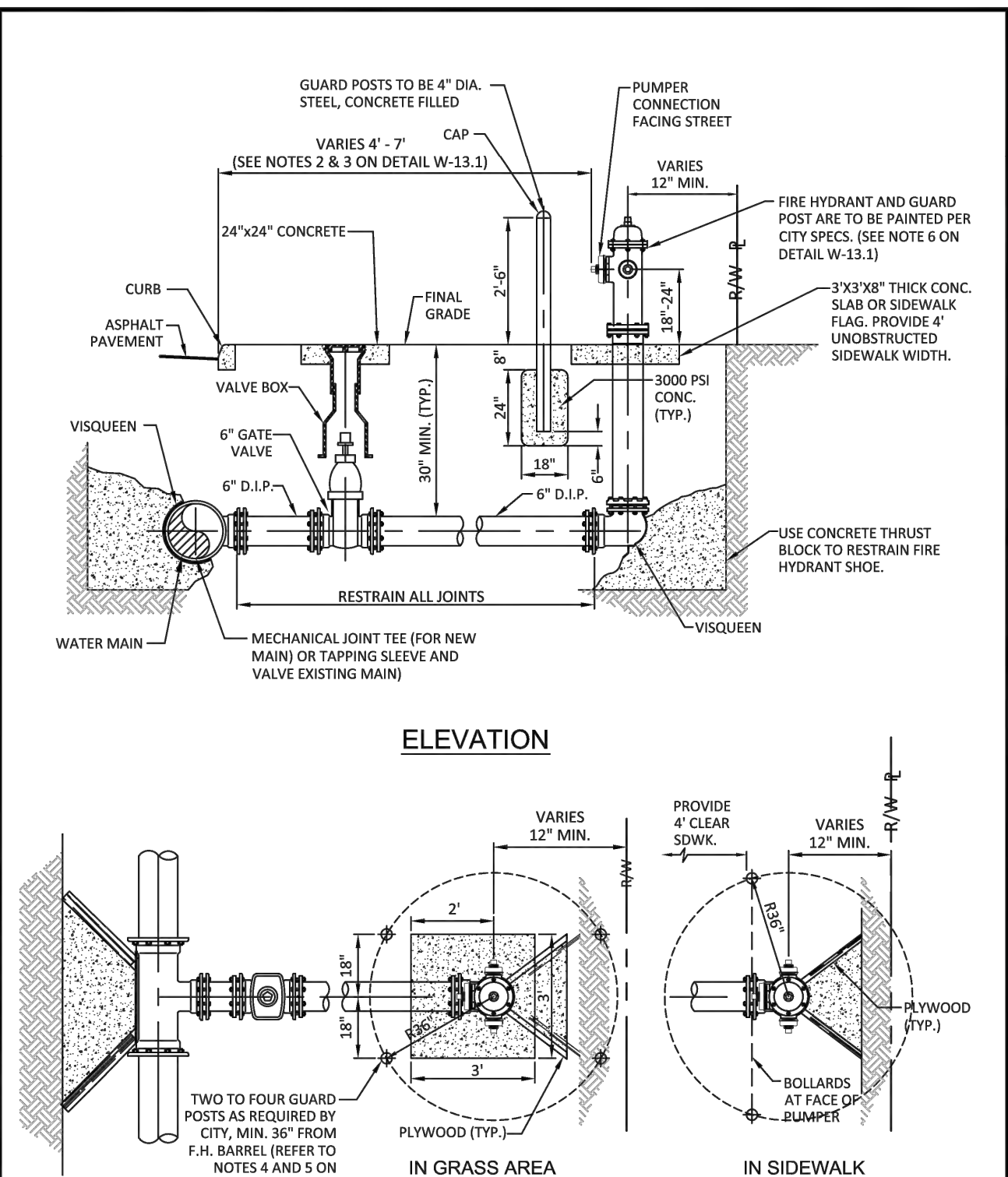
	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017	DRAWING NO. <b>W-06</b>
TYPICAL 5/8\", 1\", 1-1/2\"/>				




	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017	DRAWING NO. <b>W-08</b>
TYPICAL 1\"/>				



	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017	DRAWING NO. <b>W-09</b>
TYPICAL 2-INCH HDPE WATER SERVICE FOR SINGLE/DUAL 5/8\"/>				



	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 03/05/2019	DRAWING NO. <b>W-13</b>
TYPICAL FIRE HYDRANT INSTALLATION				

CRAVEN • THOMPSON AND ASSOCIATES, INC.  
ENGINEERS • PLANNERS • SURVEYORS

3963 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309  
TEL: (954) 739-6400

FLORIDA LICENSED ENGINEERS, SURVEYORS & MAPPING BUSINESS NO. 271  
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. C00014

MATERIAL SHOWN HEREIN IS THE PROPERTY OF CRAVEN THOMPSON & ASSOCIATES, INC. AND SHALL NOT BE REPRODUCED OR IN PART WITHOUT WRITTEN PERMISSION OF CRAVEN THOMPSON & ASSOCIATES, INC. COPYRIGHT © 2019

ORANGEBROOK MOBILE HOME ESTATES  
3318 ORANGE STREET  
HOLLYWOOD, FLORIDA 33021

PREPARED FOR:  
CPI ORANGEBROOK OWNER, LLC

WATER AND SEWER DETAILS

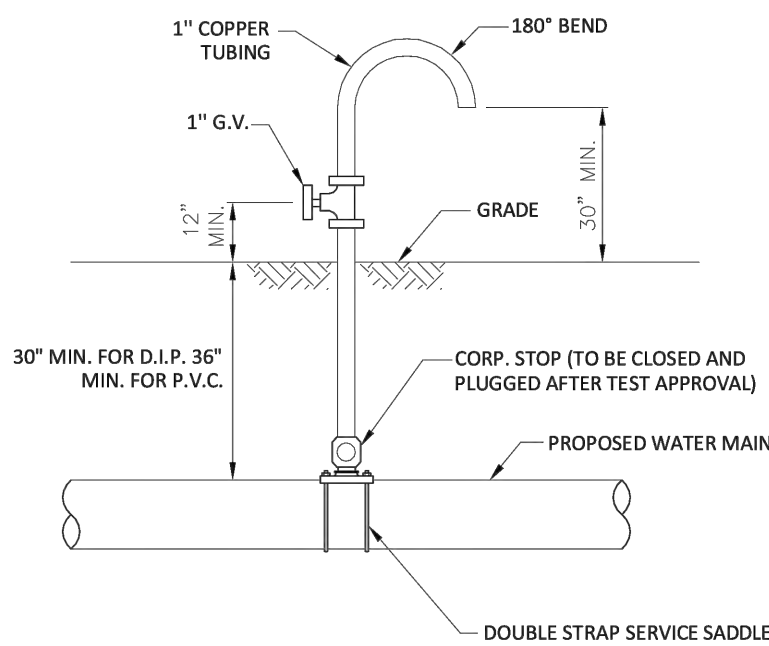
Chad Everett Edwards  
Florida P.E. No. 59306  
April 23, 2021  
PROJECT NO.  
19-0039

C-16  
SHEET 16 OF 17



- NOTES:
1. IN ALL CASES, PROVIDE 4' UNOBSTRUCTED SIDEWALK CLEAR OF THE FIRE HYDRANT AND BOLLARDS.
  2. FIRE HYDRANTS SHALL BE LOCATED BETWEEN 4' AND 7' FROM THE FACE OF CURB.
  3. FIRE HYDRANTS SHALL NOT BE LOCATED WITHIN A RADIUS OR WITHIN FDOT CLEAR DRIVING ZONE.
  4. GUARD POSTS SHALL BE INSTALLED AS REQUIRED FOR SAFETY OR AS APPROVED BY THE DEPT. OF PUBLIC UTILITIES. IN SIDEWALK, LOCATE GUARD POSTS AT THE FACE OF THE PUMPER AND 2'-6" LEFT/RIGHT OF  $\phi_c$  OF THE FIRE HYDRANT.EXTRA POSTS MAY BE REQUIRED IN INDUSTRIAL AND CONGESTED TRAFFIC AREAS. (4 POSTS MAX.)
  5. FIRE HYDRANT CONCRETE SLAB AND CONCRETE GUARD POST FOOTINGS SHALL BE DIFFERENT POURS.
  6. THE FIRE HYDRANT BONNET, OPERATING NUT, HOLD-DOWN NUT, PUMPER CAP AND HOSE CAPS SHALL BE PAINTED GREEN, AND THE HYDRANT UPPER BARREL SHALL BE PAINTED SILVER IN ACCORDANCE WITH CITY SPECIFICATIONS.

	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL  TYPICAL FIRE HYDRANT NOTES	REVISED: 06/08/2014  DRAWING NO. W-13.1
---	---	--	--



NOTES:  
SAMPLING POINT SHALL NOT BE REMOVED UNTIL APPROVAL IS OBTAINED FROM BROWARD COUNTY HEALTH DEPARTMENT.

	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL  SAMPLING POINT DETAIL	REVISED: 06/08/2014  DRAWING NO. W-16
---	---	---	--

#### WATER MAIN TESTING AND DISINFECTION NOTES:

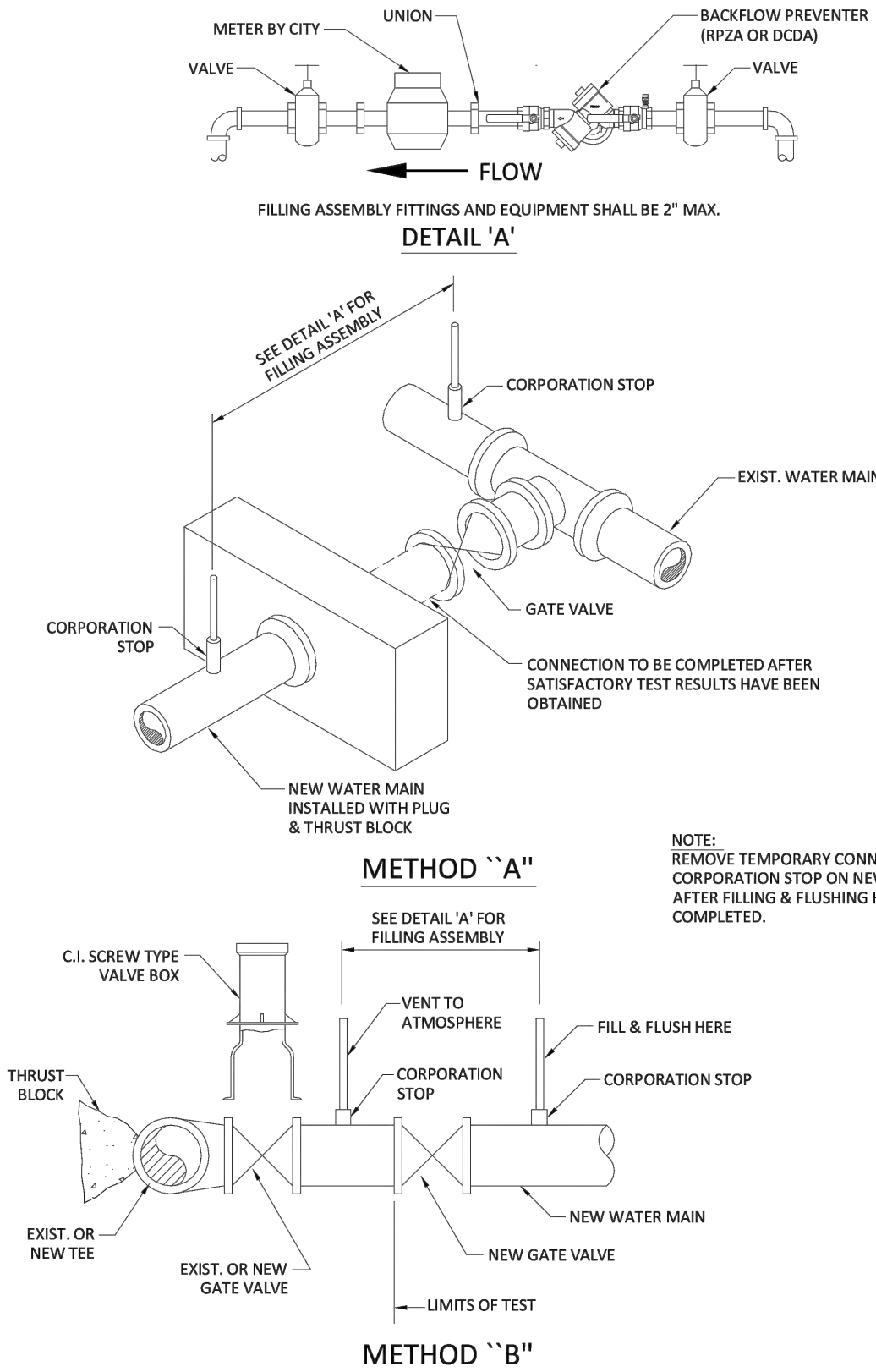
1. NO CONNECTIONS TO THE EXISTING LINES SHALL BE MADE UNTIL THE PRESSURE AND BACTERIOLOGICAL TESTS HAVE BEEN PERFORMED ON THE PROPOSED WATER MAINS AND THE SYSTEM HAS BEEN APPROVED BY THE CITY OF HOLLYWOOD AND THE BROWARD COUNTY HEALTH DEPARTMENT.
2. THE PRESSURE TEST SHALL BE PERFORMED FOR 2 HOURS AT A CONSTANT PRESSURE OF 150 PSI AND IN ACCORDANCE WITH RULE 62-555.330 (FAC) C600 AWWA LATEST REVISION, EXCEPT AS OTHERWISE SPECIFIED HEREIN AND IN SPECIFICATION SECTION 15995, "PIPELINE TESTING AND DISINFECTION". PRESSURE TEST SHALL BE WITNESSED BY THE CITY OF HOLLYWOOD. THE ALLOWABLE LEAKAGE SHALL BE LESS THAN THE NUMBER OF GALLONS PER HOUR AS DETERMINED BY THE FORMULA:

$$L = \frac{S \times D \times \sqrt{P}}{148,000}$$

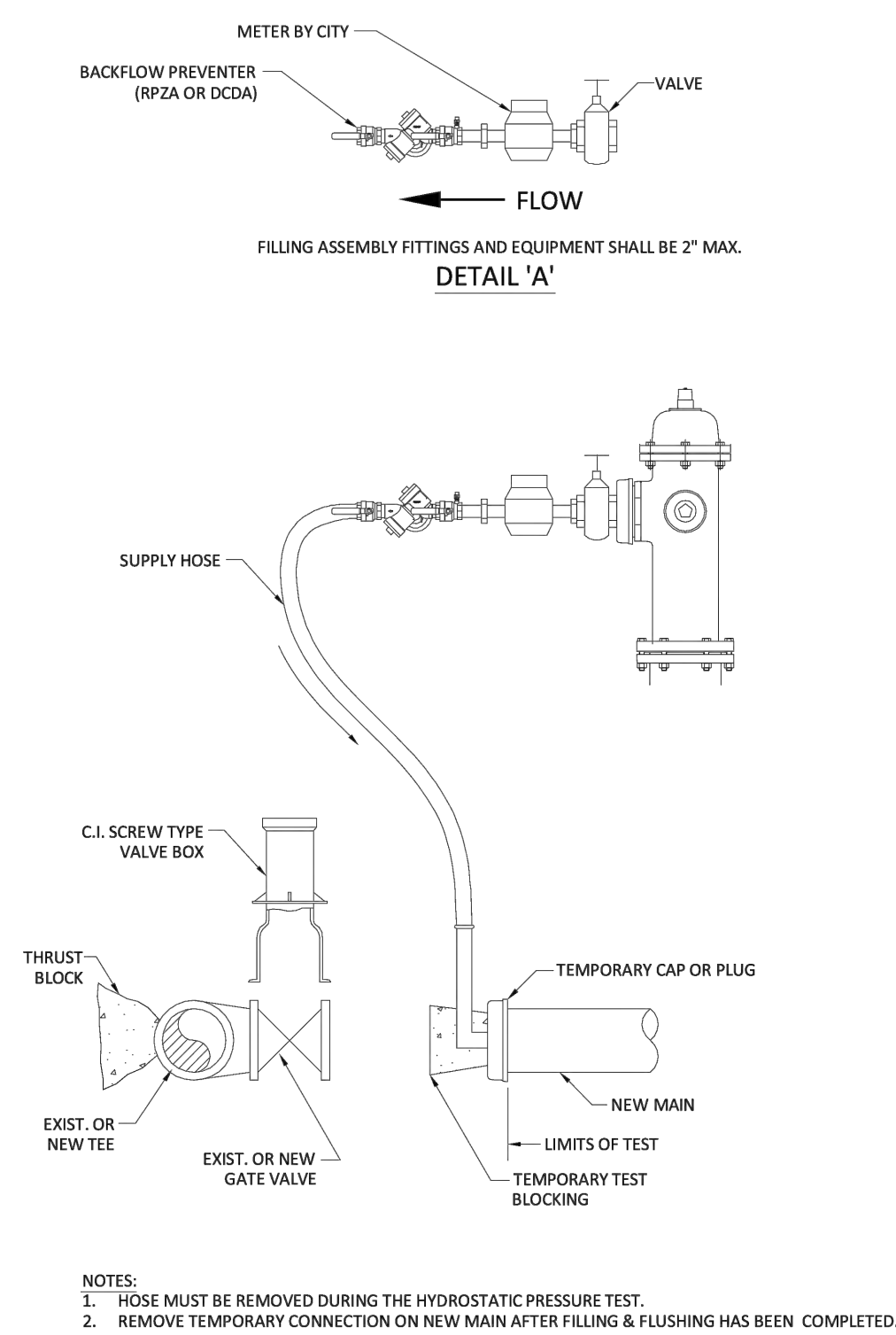
L = THE ALLOWABLE LEAKAGE IN GALLONS PER HOUR.  
S = THE LENGTH OF PIPE BEING TESTED.  
D = THE NOMINAL DIAMETER OF THE PIPE BEING TESTED.  
P = THE AVERAGE TEST PRESSURE IN POUNDS PER SQUARE INCH.


3. THE COMPLETE LENGTH OF THE PROPOSED WATER MAIN SHALL BE TESTED, IN LENGTHS NOT TO EXCEED 2,000 FEET PER TEST.
4. PROPOSED WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH THE LATEST EDITION OF ANSI/AWWA STANDARD C651 AND BACTERIOLOGICAL TESTED FOR TWO CONSECUTIVE DAYS IN ACCORDANCE WITH SPECIFICATION SECTION 15995, "PIPELINE TESTING AND DISINFECTION".
5. BACTERIOLOGICAL TESTS SHALL BE REQUESTED AND PAID FOR BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL DIRECTLY HIRE A TESTING LABORATORY CERTIFIED BY THE FLORIDA DEPARTMENT OF HEALTH IN ORDER TO COLLECT AND TEST WATER SAMPLES FROM THE WATER DISTRIBUTION SYSTEM TO BE PLACED INTO SERVICE. SAMPLE COLLECTION AND BACTERIOLOGICAL ANALYSES SHALL BE PERFORMED IN ACCORDANCE WITH RULES 62-555.315(6), 62-555.340 AND 62-555.330 (FAC), AS WELL AS ALL REQUIREMENTS OF THE BROWARD COUNTY HEALTH DEPARTMENT PERMIT.
7. THE WATER DISTRIBUTION SYSTEM SHALL NOT BE CONSIDERED COMPLETE AND READY FOR FINAL INSPECTION UNTIL SUCCESSFUL TEST RESULTS ARE OBTAINED FOR ALL TESTS DESCRIBED ABOVE.

	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL  WATER MAIN TESTING AND DISINFECTION NOTES	REVISED: 06/08/2014  DRAWING NO. W-14
---	---	---	--



	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL  FILLING AND FLUSHING DETAILS	REVISED: 06/08/2014  DRAWING NO. W-15
---	---	--	--



	ISSUED: 03/01/1994 DRAWN: EAM APPROVED: XXX	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL  CROSS CONNECTION FILLING AND FLUSHING DETAILS	REVISED: 06/08/2014  DRAWING NO. W-15.1
---	---	---	--

ORANGEBROOK MOBILE HOME ESTATES  
3318 ORANGE STREET  
HOLLYWOOD, FLORIDA 33021

PREPARED FOR:

CPI ORANGEBROOK OWNER, LLC

WATER AND SEWER DETAILS

Chad Everett Edwards  
Florida P.E. No. 59306  
April 23, 2021

PROJECT NO.  
19-0039

C-17  
SHEET 17 OF 17

CRAVEN - THOMPSON AND ASSOCIATES, INC.

ENGINEERS • PLANNERS • SURVEYORS

3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309

TEL.: (954) 739-6409

FAX: (954) 739-6409

FLORIDA LICENSED ENGINEERS, SURVEYORS & MAPPING BUSINESS NO. 271

FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. C00014



MATERIAL SHOWN HEREIN IS THE PROPERTY OF CRAVEN THOMPSON & ASSOCIATES, INC. AND SHALL NOT BE REPRODUCED OR IN PART WITHOUT WRITTEN PERMISSION OF CRAVEN THOMPSON & ASSOCIATES, INC. COPYRIGHT © 2019

DATE:	03/10/20	DATE:	
SCALE:	1"=20'	SCALE:	
DESIGN BY:	LZG	DESIGN BY:	
DRAWN BY:	LZG	DRAWN BY:	
CHECKED BY:	CE	CHECKED BY:	
APPROVED BY:		APPROVED BY:	
BY:		BY:	
DESCRIPTION:		DESCRIPTION:	