

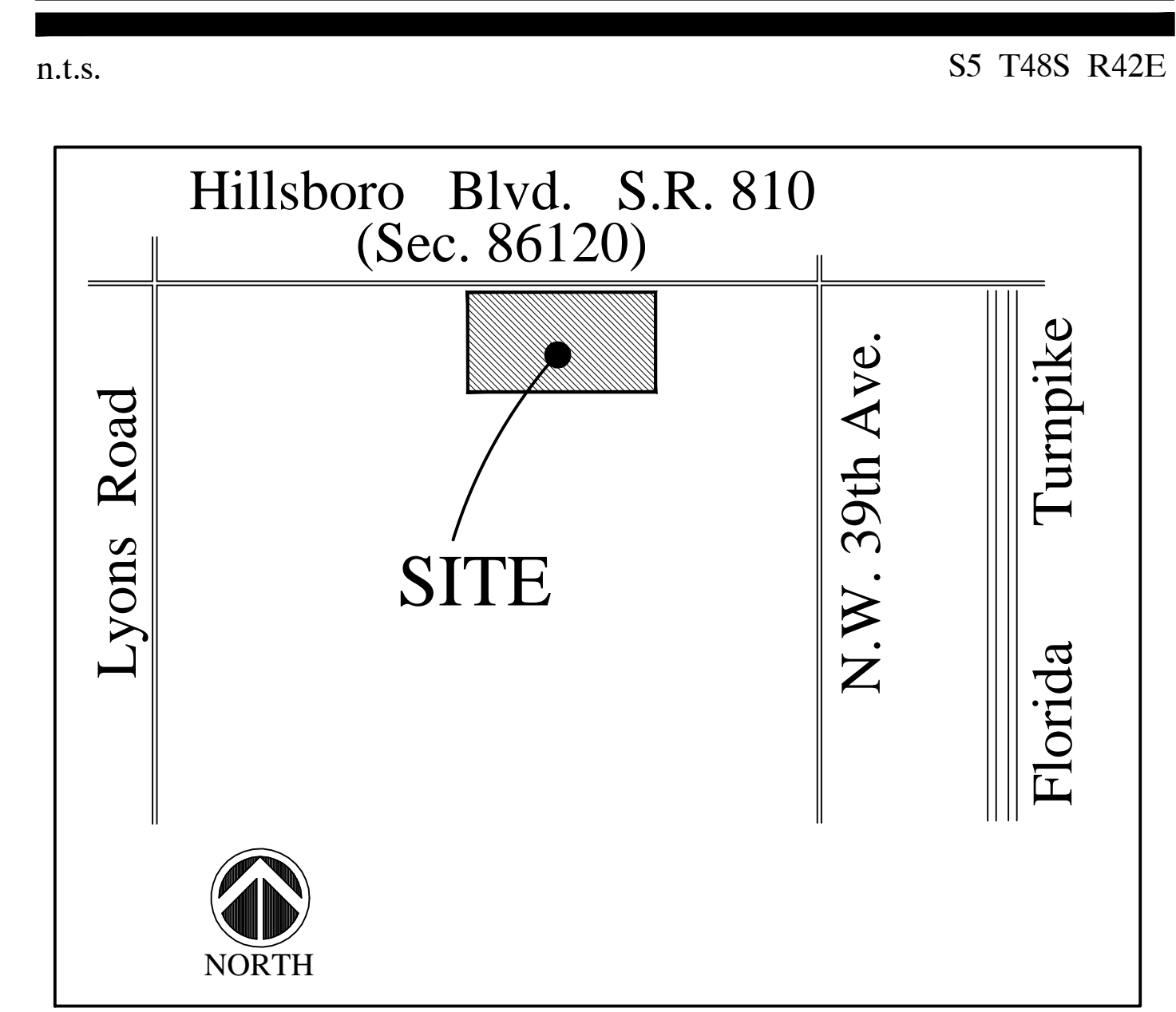
DATUM: NAVD 1988
CONVERSION TO NGVD 1929 (+1.56)

Simonton

Coconut Creek, Florida

PAVING, GRADING & DRAINAGE,
WATER DISTRIBUTION & SANITARY SEWER PLANS

LOCATION MAP



SHEETS	DESCRIPTION
CV1	COVER SHEET
PD1	POLLUTION PREVENTION PLAN
PD2	PAVING, GRADING, AND DRAINAGE PLAN
PD3	PAVEMENT MARKING AND SIGNAGE PLAN
PD4-PD6	PAVING, GRADING, AND DRAINAGE DETAILS
WS1	WATER DISTRIBUTION AND SANITARY SEWER PLAN
WS2-WS3	SANITARY SEWER PROFILES
WS4-WS6	WATER DISTRIBUTION AND SANITARY SEWER DETAILS

PERMIT SET
MUST BE ON JOB SITE AT ALL TIMES DURING CONSTRUCTION

ALL MATERIALS USED AND INSTALLATIONS WITHIN THE PUBLIC RIGHT OF WAY OR EASEMENTS SHALL BE IN ACCORDANCE WITH BROWARD COUNTY HIGHWAY CONSTRUCTION AND ENGINEERING DIVISION SPECIFICATIONS.

NOTE:
APPROVAL OF THIS PLAN DOES NOT CONSTITUTE A PERMIT FOR CONSTRUCTION.

NOTICE
INSPECTION REQUIRED
24 HRS. PRIOR TO COMMENCING ANY WORK IN THE PUBLIC R/W CONTACT THE BROWARD COUNTY HIGHWAY CONSTRUCTION AND ENGINEERING DIVISION AT 954-577-4600 FOR INSPECTION.

FILE NAME	4633ENG
REVISIONS	
DATE	
BY	

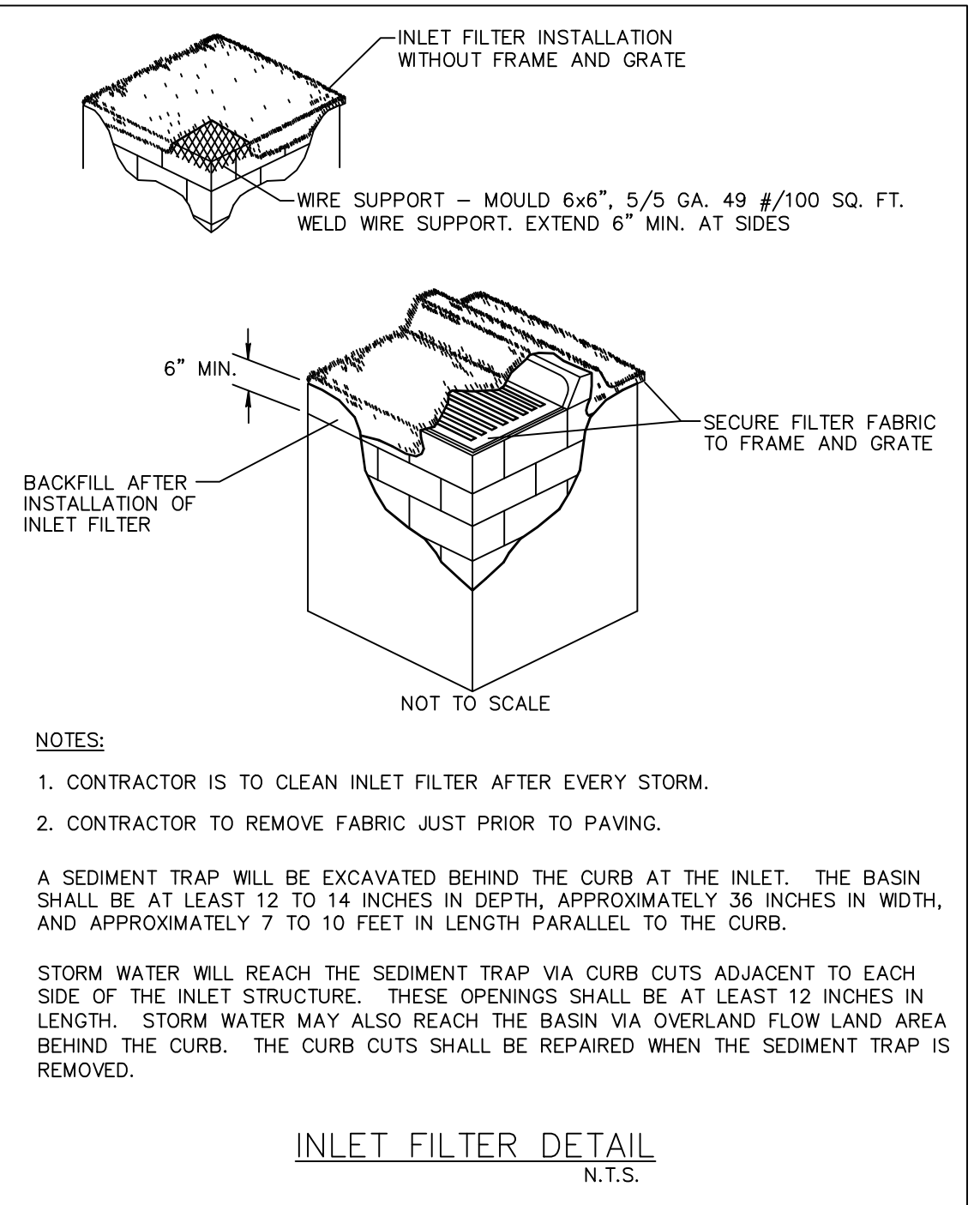
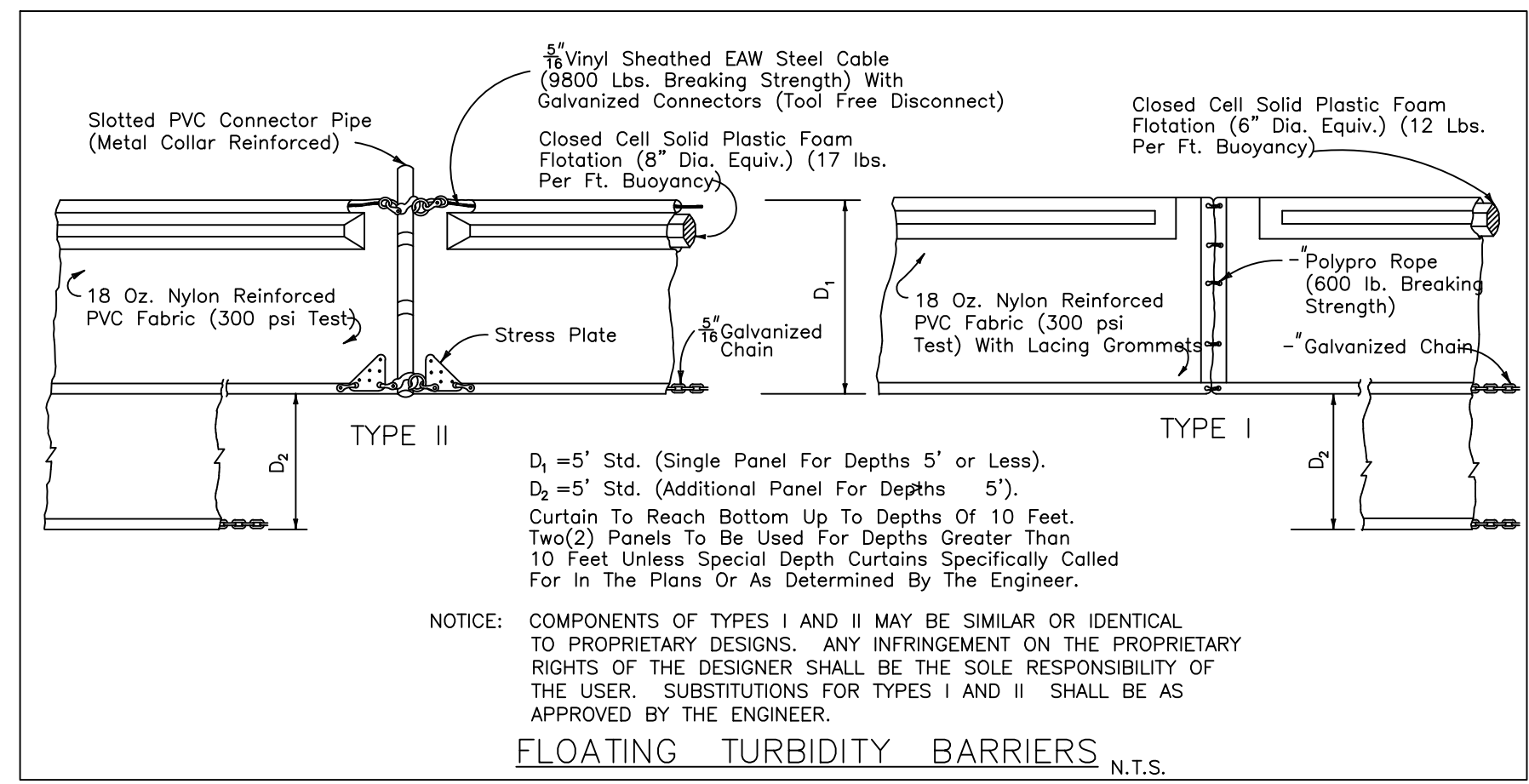
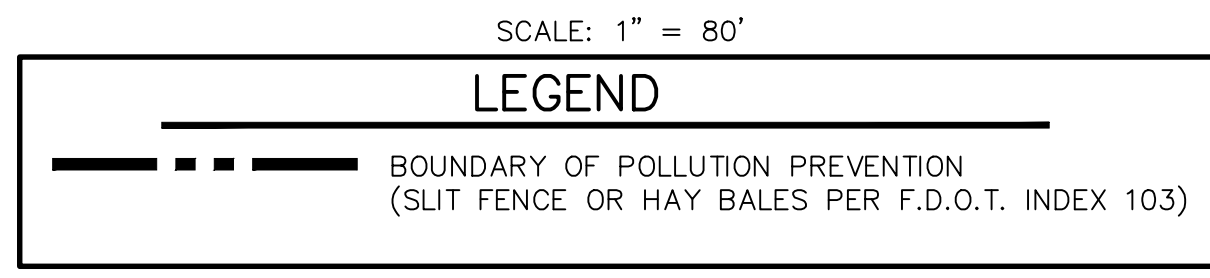
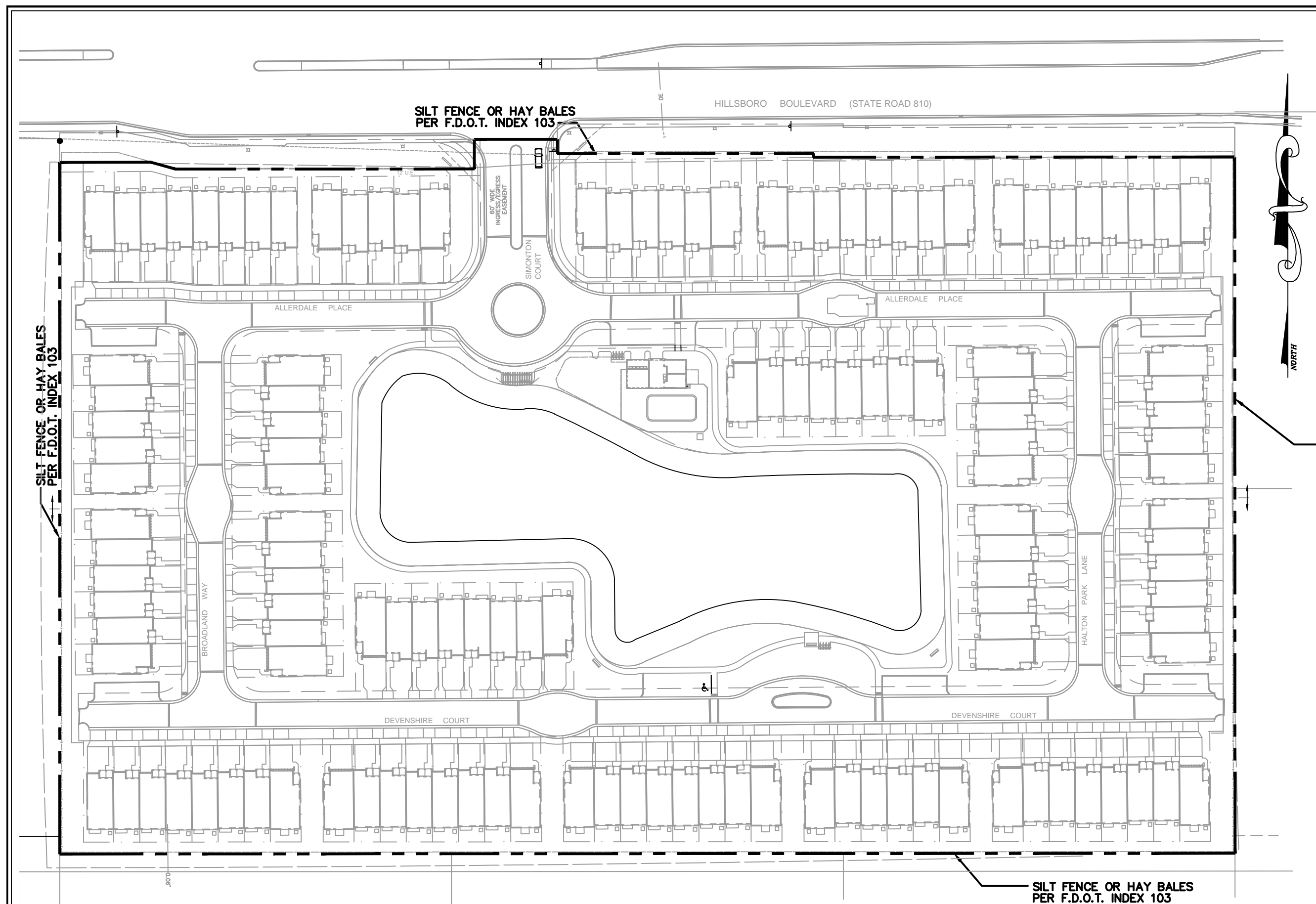
CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING - LAND PLANNING
LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561) 392-1991 / FAX (561) 750-1452

Cover Sheet
Simonton
FLORIDA
COCONUT CREEK

DATE	8-26-14
DRAWN BY	BR
F.B./ PG.	n/a
SCALE	NA

JOHN F. WHEELER
PROFESSIONAL ENGINEER
LICENSE NO. 25478
STATE OF FLORIDA
ENG. NO. EB-0003591
DATE

JOB # 4633
SHT. NO.
CV1
OF 13 SHEETS

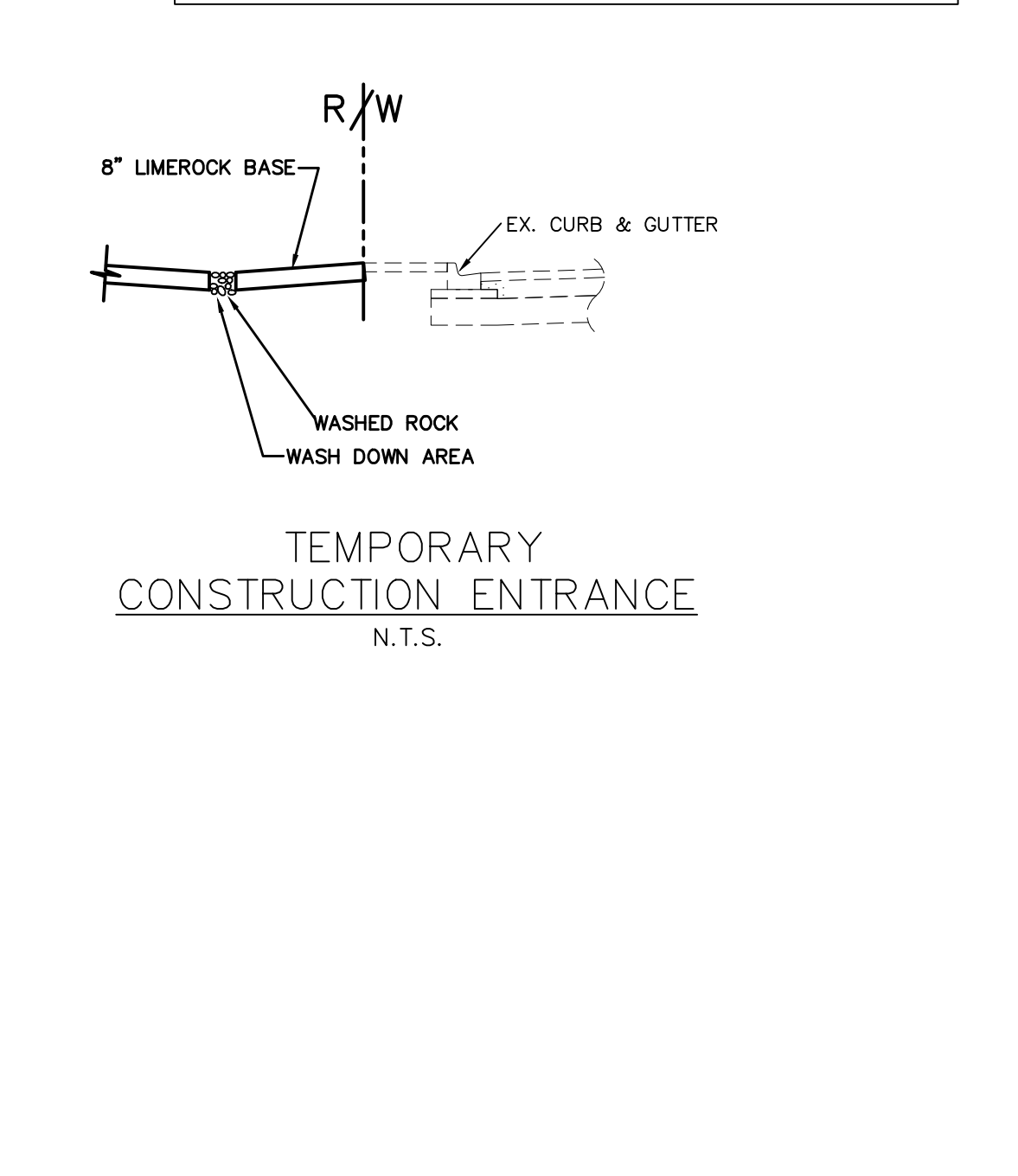
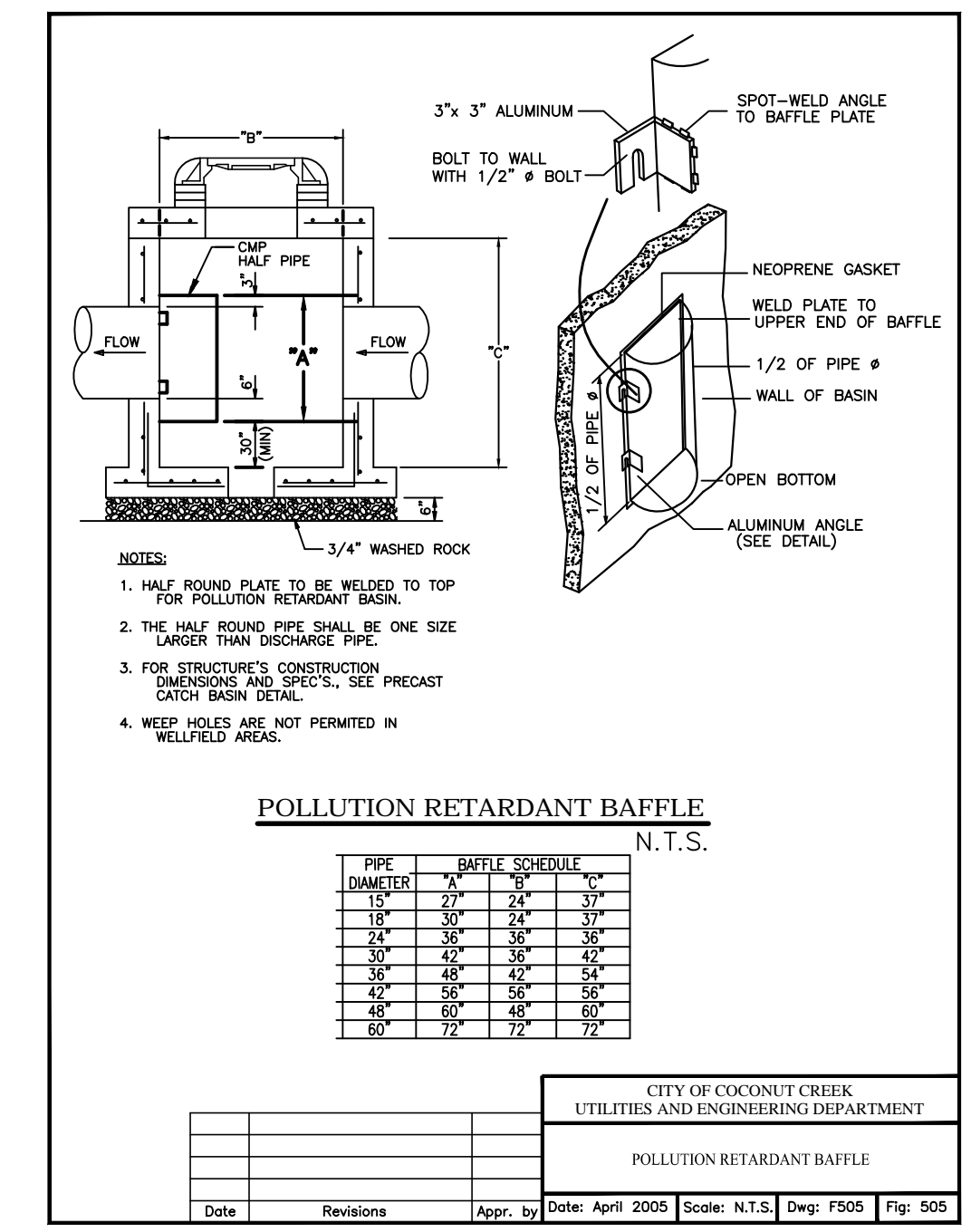
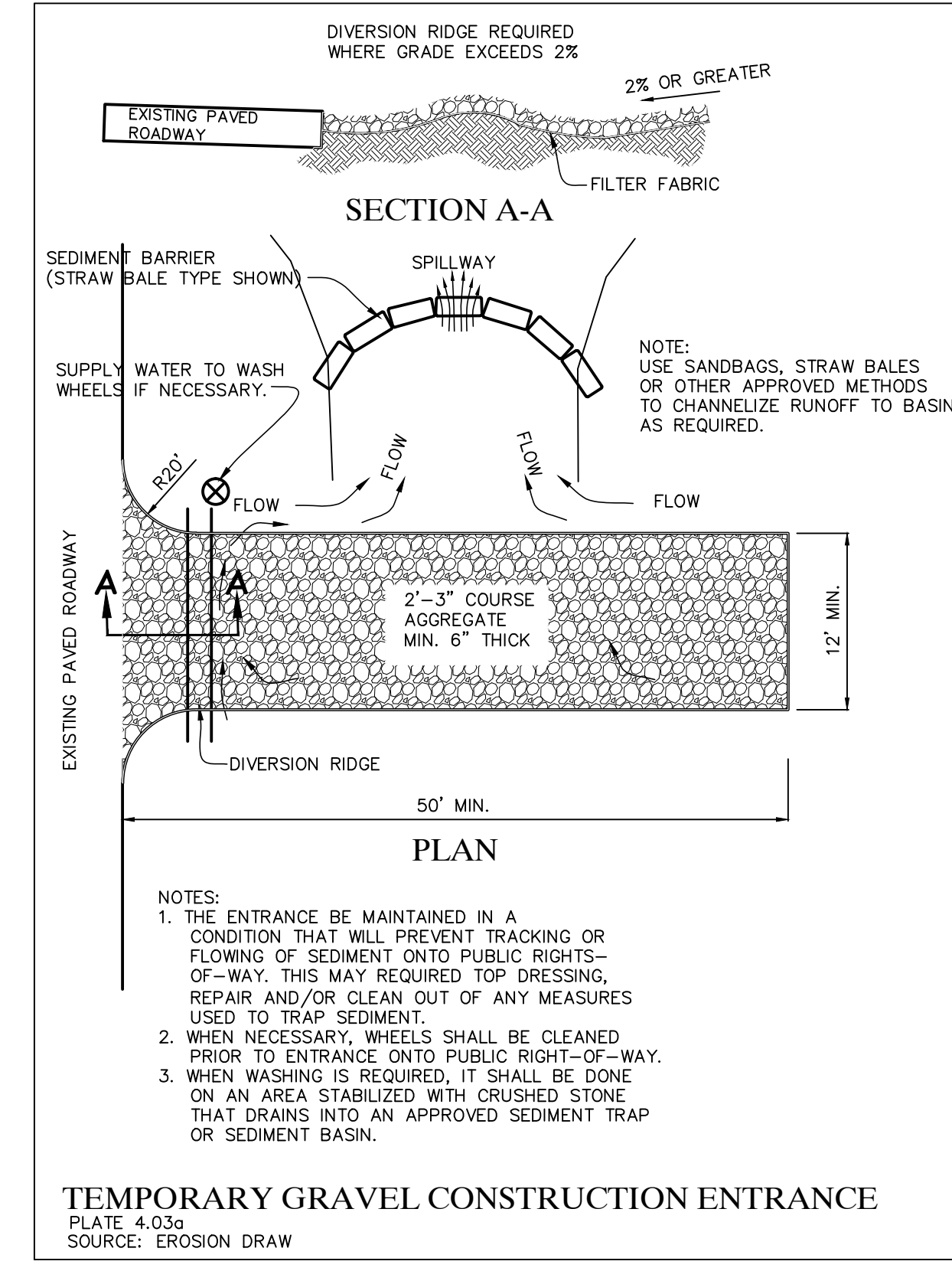
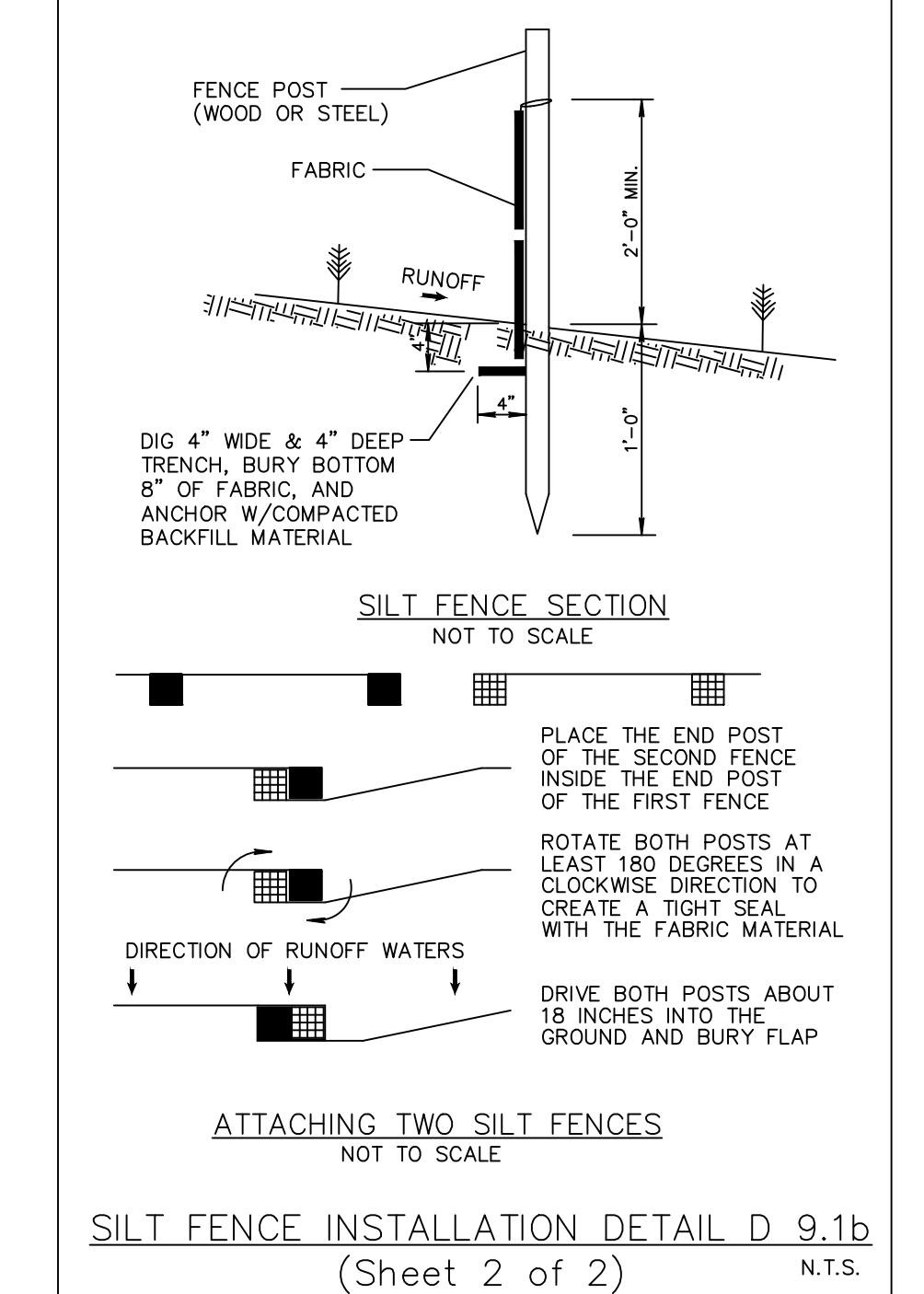
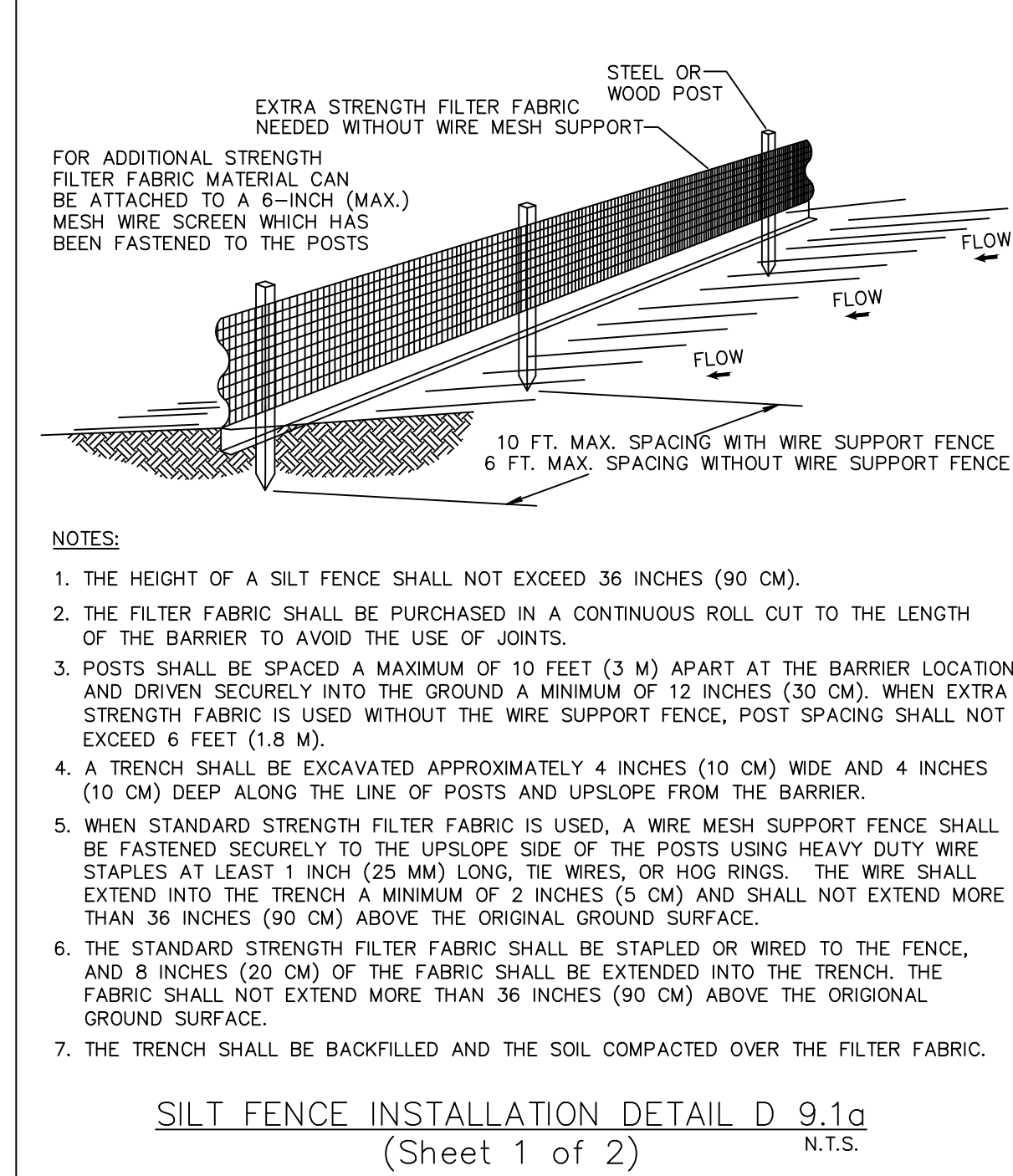


POLLUTION PREVENTION DETAIL

- NOTES:**
- THE 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.
 - CONTRACTOR SHALL CONSTRUCT A TEMPORARY DEWATERING AREA PRIOR TO ANY EXCAVATION FOR PIPE INSTALLATION. SAID DEWATERING AREA SHALL BE PROTECTED WITH SILT SCREENS. NOTE THAT ALL DEWATERING OPERATIONS WILL DISCHARGE INTO THE TEMPORARY DEWATERING AREA AND NO DIRECT DISCHARGE INTO THE EXISTING OR NEW DITCHES, STORM DRAINS, AND/OR PUBLIC RIGHT OF WAY WILL BE ALLOWED.
 - CONTRACTOR TO MAINTAIN A POLLUTION MAINTENANCE LOG AND TO CONDUCT WEEKLY INSPECTIONS AND WITHIN 24 HOURS OF A 0.5" STORM EVENT.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS OF ALL OTHER UTILITY FACILITIES.
 - CONTRACTOR SHALL SCHEDULE INSPECTIONS AND TESTS WITH THE CITY A MINIMUM OF 48 HOURS IN ADVANCE.
 - CONTRACTOR SHALL NOT DISTURB EXISTING CITY MAINS OR STRUCTURES WITHOUT THE PRESENCE OF A CITY INSPECTOR. CITY UTILITY SYSTEM VALVES AND APPURTENANCES MAY ONLY BE OPERATED BY CITY PERSONNEL.
 - FACILITIES PROPOSED HEREIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS. DEVIATIONS FROM THE APPROVED PLANS MUST BE APPROVED IN ADVANCE BY THE CITY.
 - UPON COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE OF THE WORK, A FINAL INSPECTION SHALL VERIFY PROPER ADHERENCE TO ALL FACETS OF THE PLANS AND SPECIFICATIONS.
 - PAVING, DRAINAGE AND TRAFFIC CONSTRUCTION SHALL CONFORM TO FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND DESIGN STANDARDS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND BROWARD COUNTY, F.D.O.T., CITY OF COCONUT CREEK REQUIREMENTS TYPICAL No. T-P-99-001 (LATEST REVISION) UNLESS SHOWN OTHERWISE.
 - AS-BUILT DRAWINGS SHALL BE PREPARED BY A REGISTERED LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, AND SUBMITTED BY THE CONTRACTOR TO THE CITY.

- GENERAL NOTES**
- DEFINITIONS**
- CITY - THE CITY OF COCONUT CREEK
 - CONTRACTOR - UTILITY CONTRACTOR AND ALL UTILITY SUBCONTRACTORS
 - ENGINEER - ENGINEER RESPONSIBLE FOR INSPECTION AND CERTIFICATION
- PROCEDURE**
- A PRE-CONSTRUCTION MEETING IS TO BE HELD PRIOR TO DELIVERY OF MATERIALS AND INITIATION OF ANY WATER AND SEWER CONSTRUCTION. THE MEETING SHALL BE ATTENDED BY THE CITY, CONTRACTOR, SUBCONTRACTORS, ENGINEER AND OTHER INTERESTED PARTIES.
 - ANY REVISIONS TO THE APPROVED PLANS MUST BE APPROVED BY THE CITY PRIOR TO THE PRE-CONSTRUCTION MEETING.
 - A MINIMUM OF THREE (3) COPIES OF THE CURRENT APPROVED PRODUCT LIST AND ALL NECESSARY SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO SCHEDULING THE PRE-CONSTRUCTION MEETING. ALL PIPE MANUFACTURERS SHALL SUBMIT THREE (3) COPIES OF AN AFFIDAVIT THAT THE PIPE AND COATINGS WERE MANUFACTURED IN ACCORDANCE WITH AWWA C151/A21-91.
 - ALL APPLICABLE PERMITS MUST BE OBTAINED WITH COPIES PROVIDED TO THE CITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - THE CONTRACTOR SHALL MAINTAIN A CURRENT APPROVED SET OF CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES.
 - ALL MATERIALS SUPPLIED SHALL CONFORM TO CONSTRUCTION. ALL REQUESTS FOR MATERIAL SUBSTITUTION SHALL BE APPROVED PRIOR TO DELIVERY OF THESE MATERIALS TO THE JOB SITE.
 - THE LOCATION OF THE EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF OTHER UTILITIES (NOT SHOWN ON THE PLAN) EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE UTILITY CONFLICTS, THE CONTRACTOR SHALL INFORM THE CITY AND NOTIFY THE RESPECTIVE UTILITY OWNER TO RESOLVE THE UTILITY CONFLICTS AND THE UTILITY ADJUSTMENTS AS REQUIRED.
 - THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY, AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.

27. SITE INFORMATION BASED ON A SURVEY PREPARED BY:
28. THE EXTENT OF ROAD CONSTRUCTION WORK TO BE COMPLETED BY THE CONTRACTOR, WITHIN THE RAILROAD RIGHT-OF-WAY SHALL BE DETERMINED BY THE CITY AND COORDINATED WITH THE FLORIDA EAST COAST RAILWAY COMPANY AT THE TIME OF CONSTRUCTION.
29. RELOCATION OF UTILITY POLES AND GAS PIPE LINES SHALL BE COORDINATED BY THE CONTRACTOR WITH FLORIDA POWER AND LIGHT, AND FLORIDA PUBLIC UTILITIES, RESPECTIVELY. EACH UTILITY HAS BEEN NOTIFIED THAT THEY WILL BE REQUIRED TO RELOCATE THEIR UTILITIES.



BY	
DATE	
REVISIONS	
FILE NAME	463JNG

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

Pollution Prevention Plan & Details

Simonton

FLORIDA
 COCONUT CREEK

DATE	8-26-14
DRAWN BY	BR
F.B./ P.C.	n/a
SCALE	N.T.S.

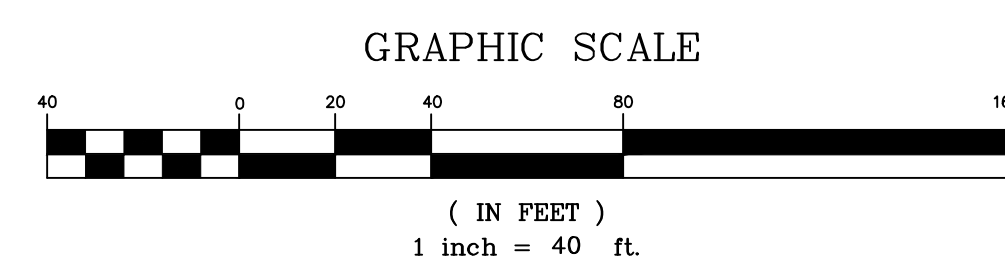
JOHN F. WHEELER
 PROFESSIONAL ENGINEER
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 STATE OF FLORIDA
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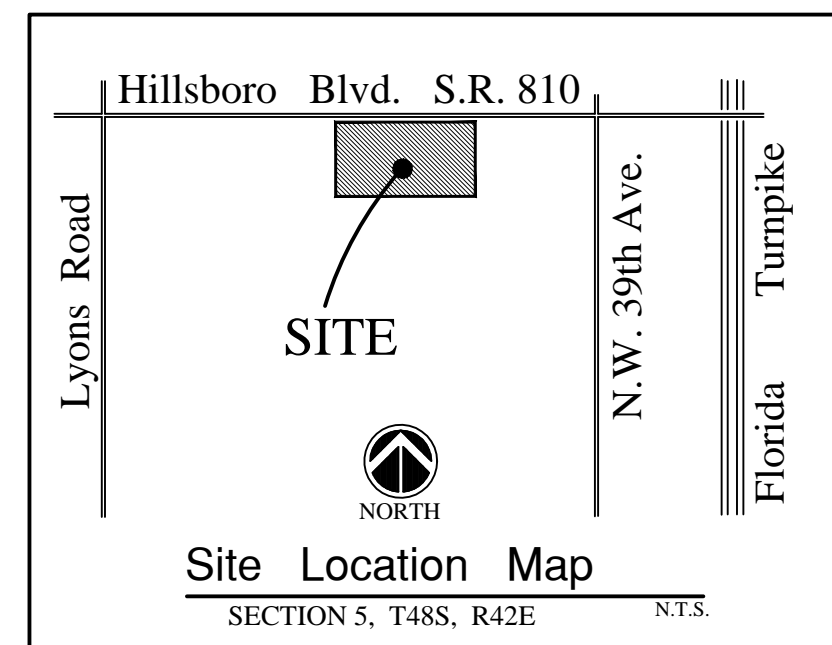
PROPOSED:
 A. PAVERS (3 1/8") AND 1" SAND LEVELING COURSE
 OR:
 A. 3/4" LIFT TYPE S-III, APPLIED OVER EXISTING 3/4" LIFT, FOR TOTAL 1-1/2" ASPHALTIC CONCRETE SURFACE COURSE, TACK COAT BETWEEN PAVING COURSES
 EXISTING:
 B. 8" COMPACTED LIME ROCK BASE, COMPACTED TO A MINIMUM OF 98% OF MAX. DENSITY PER AASHTO T-180; MIN % CARBONATE = 70%; AND LBR OF 100.
 C. 12" STABILIZED SUBGRADE TO LBR OF 40, COMPACTED TO A MINIMUM OF 98% OF MAX. DENSITY PER AASHTO T-180.
 D. CONCRETE SIDEWALK - 4" THICK; 6" THICK AT DRIVEWAYS. SUBGRADE SHALL BE COMPACTED TO 100% OF MAXIMUM DRY DENSITY PER AASHTO T-99

PAVEMENT SPECIFICATIONS

SFWMD & BCPD CRITERIA
 MINIMUM FINISHED FLOOR = 15.25
 MINIMUM ROADWAY CENTERLINE = 12.44
 CONTROL WATER ELEVATION = 9.44

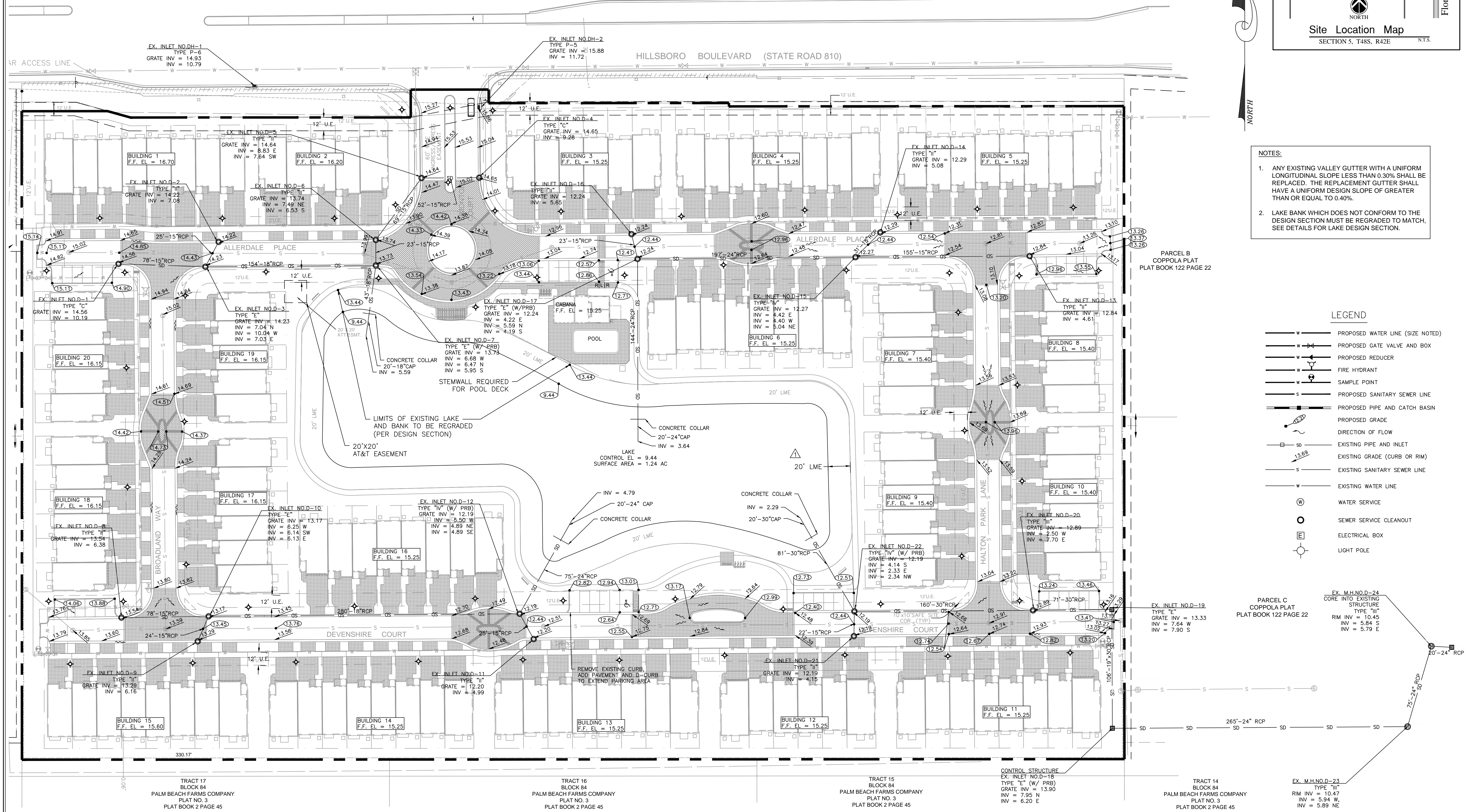


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- NOTES:**
- ANY EXISTING VALLEY GUTTER WITH A UNIFORM LONGITUDINAL SLOPE LESS THAN 0.30% SHALL BE REPLACED. THE REPLACEMENT GUTTER SHALL HAVE A UNIFORM DESIGN SLOPE OF GREATER THAN OR EQUAL TO 0.40%.
 - LAKE BANK WHICH DOES NOT CONFORM TO THE DESIGN SECTION MUST BE REGRADED TO MATCH. SEE DETAILS FOR LAKE DESIGN SECTION.

- LEGEND**
- PROPOSED WATER LINE (SIZE NOTED)
 - PROPOSED GATE VALVE AND BOX
 - PROPOSED REDUCER
 - FIRE HYDRANT
 - SAMPLE POINT
 - PROPOSED SANITARY SEWER LINE
 - PROPOSED PIPE AND CATCH BASIN
 - PROPOSED GRADE
 - DIRECTION OF FLOW
 - EXISTING PIPE AND INLET
 - EXISTING GRADE (CURB OR RIM)
 - EXISTING SANITARY SEWER LINE
 - EXISTING WATER LINE
 - WATER SERVICE
 - SEWER SERVICE CLEANOUT
 - ELECTRICAL BOX
 - LIGHT POLE



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Paving, Grading, & Drainage Plan
Simonton
 FLORIDA
 COCONUT CREEK

DATE 8-26-14
 DRAWN BY BR
 F.B./ PG. n/a
 SCALE 1" = 40'

JOHN F. WHEELER
 PROFESSIONAL ENGINEER
 LICENSE NO. 25478
 STATE OF FLORIDA
 ENG. NO. EB-0003591
 DATE

JOB # 4633
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PD2
 OF 13 SHEETS

GENERAL NOTES PAVING, GRADING & DRAINAGE

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

CLEARING AND GRUBBING:

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

SUBGRADE:

- UTILIZATION OF MATERIAL IN SUBGRADE CONSTRUCTION SHALL BE IN ACCORDANCE WITH PLAN DETAILS OR AS DIRECTED BY THE ENGINEER.
- A PROCTOR TEST SHALL BE PERFORMED ON THE PROPOSED SUBGRADE MATERIAL TO DETERMINE THE OPTIMUM MOISTURE CONTENT AND MAXIMUM DENSITY OF THE MATERIAL. IN-PLACE DENSITY TESTS OF THE FINISH SUBGRADE SHALL BE PERFORMED AT A FREQUENCY OF AT LEAST ONE TEST FOR EVERY 5,000 SQ.FT. OF PROPOSED PAVEMENT AREA TO DETERMINE COMPLIANCE WITH THE DESIGN SPECIFICATIONS OF 100% OF MAX. DENSITY PER AASHTO T-99 TESTING METHODS.
- STABILIZED SUBGRADE SHALL HAVE A MINIMUM LIMEROCK BEARING RATIO (LBR) OF 40. THE COMPACTED SUBGRADE SHALL CONFORM TO THE LINES, GRADES, AND CROSS-SECTIONS SHOWN ON THE PLANS. ALL ROOTS, STUMPS, OR OBJECTIONABLE MATERIAL PRESENT ON, UNDER, OR PROTRUDING THROUGH THE SURFACE SHALL BE COMPLETELY REMOVED FROM THE SUBGRADE. THE FINISHED SURFACE OF THE SUBGRADE SHALL BE STRING-LINED PRIOR TO PLACEMENT OF ROCK BASE TO VERIFY THAT THE SUBGRADE HAS BEEN CONSTRUCTED TO THE PROPER LINES, CROSS-SECTIONS, AND ELEVATIONS WITHIN AN ALLOWABLE TOLERANCE OF 1/2" OF THE PROPOSED FINISH SUBGRADE ELEVATIONS.

BASE:

- LIMEROCK COMPOSITION - THE FOLLOWING TESTS ARE REQUIRED ON THE LIMEROCK MATERIAL:
 - CHEMICAL COMPOSITION TEST TO DETERMINE THAT MATERIAL HAS A MINIMUM PERCENT CARBONATES OF 70%.
 - LIMEROCK BEARING RATIO TEST TO DETERMINE THAT MATERIAL CAN ACHIEVE AN LBR OF 100.
 - SIEVE ANALYSIS TO INSURE THAT AT LEAST 97% (BY WEIGHT) OF THE MATERIAL SHALL PASS A 3-1/2" SIEVE AND MATERIAL SHALL BE GRADUALLY UNIFORMLY DOWN TO DUST. THE FINE MATERIAL SHALL CONSIST ENTIRELY OF DUST OR FRACTURE. ALL CRUSHING OR BREAKING-UP WHICH MIGHT BE NECESSARY IN ORDER TO MEET SUCH SIZE REQUIREMENTS SHALL BE DONE BEFORE THE MATERIAL IS PLACED ON THE ROAD.
 - LIMEROCK MATERIAL SHALL BE IN COMFORMANCE WITH CITY'S REQUIREMENTS.

- A PROCTOR TEST SHALL BE PERFORMED ON THE PROPOSED LIMEROCK MATERIAL TO DETERMINE THE MAXIMUM DENSITY OF THE MATERIAL. IN-PLACE DENSITY TESTS SHALL BE TAKEN AT A FREQUENCY OF AT LEAST ONE TEST FOR EVERY 2,400 SQ.FT. OF PROPOSED PAVEMENT TO DETERMINE COMPLIANCE WITH THE DESIGN SPECIFICATIONS OF 98% OF MAX. DENSITY PER AASHTO T-180 TESTING METHODS.
 - THE COMPACTED BASE SHALL CONFORM TO THE LINES, GRADES, AND CROSS-SECTION SHOWN ON THE PLANS. THE FINISH BASE SURFACE SHALL BE STRINGLINED OR CHECKED WITH A TEMPLATE TO VERIFY CONFORMANCE WITH THE PLAN GRADES WITHIN AN ALLOWABLE TOLERANCE OF 1/4" OF THE PROPOSED BASE ELEVATIONS. PRIME COAT SHALL BE APPLIED AT A RATE OF 0.25 GALLONS PER SQUARE YARD.
- ### ASPHALTIC CONCRETE SURFACE COURSE:
- TACK COAT
 - PRIOR TO INSTALLATION OF THE OVERLAY, THE SURFACE OF THE EXISTING ASPHALT SHALL BE BROOMED TO REMOVE ALL LOOSE MATERIAL WHICH MIGHT INTERFERE WITH THE ADHESION OF THE EXISTING ASPHALT AND OVERLAY.
 - A TACK COAT SHALL BE APPLIED TO THE TOP OF THE CLEAN ASPHALT SURFACE AT A RATE OF 0.10 GALLONS/SQ.FT. IN THE PRESENCE OF THE ENGINEER'S REPRESENTATIVE.
 - PRIME COAT SHALL BE APPLIED AT A RATE OF 0.25 GALLONS PER SQUARE YARD. PRIME AND TACK COAT FOR BASE SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF SECTION 300-1 THROUGH 300-7 OF F.D.O.T. STANDARDS SPECIFICATIONS.
 - ASPHALTIC CONCRETE SHALL CONFORM TO FLORIDA D.O.T. REQUIREMENTS OF TYPE S-1 AND S-3. CERTIFICATIONS OF THE ASPHALT MIX SHALL BE SUBMITTED BY THE ASPHALT PLANT TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
 - THE TEMPERATURE OF THE ASPHALT SHALL BE AT LEAST 230 DEGREES F. DURING THE LAYING OPERATION.
 - THE THICKNESS OF THE FINISHED SURFACE COURSE SHALL BE CHECKED AT VARIOUS INTERVALS TO INSURE THE CONSTRUCTED SURFACE COURSE IS WITHIN 1/8" OF THE DESIGN THICKNESS (NO NEGATIVE TOLERANCE WILL BE ACCEPTABLE).
 - THE FINISHED SURFACE OF THE ASPHALT SHALL BE CHECKED WITH A STRAIGHT EDGE TO INSURE THAT THE LINE, GRADE, AND CROSS-SECTION OF THE FINISHED PAVEMENT SECTION IS IN CONFORMANCE WITH THE DESIGN PLANS. THE FINISHED SURFACE SHALL BE OF UNIFORM TEXTURE AND COMPACTION. THE SURFACE SHALL HAVE NO PULLED, TORN, OR LOOSENED PORTIONS AND SHALL BE FREE OF SEGREGATION, SAND, STREAKS, SAND SPOTS, OR RIPPLES. ALL AREAS OF THE SURFACE WHICH DOES NOT MEET THE FOREGOING REQUIREMENTS SHALL BE CORRECTED TO THE ENGINEER'S SATISFACTION.
 - ALL REPAIRS TO EXISTING PAVEMENT SHALL RECEIVE SAWCUT EDGE PRIOR TO RELAYING ASPHALT. UNDER PAVEMENT UTILITY PIPING OR WIRING LESS THAN FOUR (4) INCHES IN DIAMETER REQUIRES A SCHEDULE 40 PVC CASING PIPE WITH SAND BACKFILLS.
 - ALL PERMANENT CONTROL POINTS AND/OR REFERENCE MARKERS SHOWN ON PLAT SHALL BE RAISED TO FINAL GRADE IF LOCATED IN PAVEMENT OR CONCRETE. THESE POINTS AND REFERENCE MARKERS SHALL BE LOCATED AND NOTED ON THE PLAT.

NOTIFICATION, TESTING

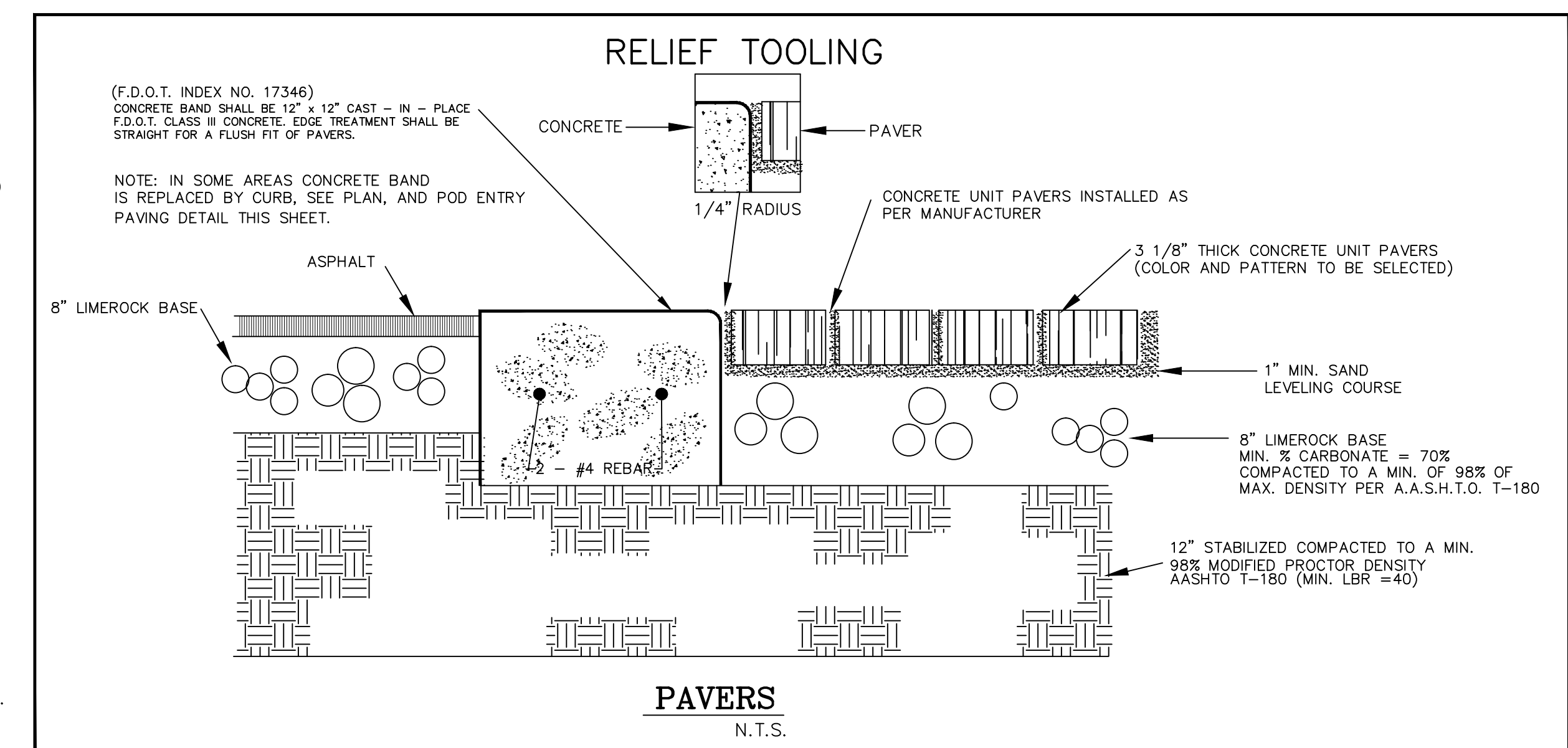
- NOTIFICATION - THE CONTRACTOR SHALL NOTIFY THE ENGINEER, THE CITY AND UTILITIES 48 HOURS PRIOR TO SCHEDULING FIELD OBSERVATIONS AND SHALL SUPPLY ALL EQUIPMENT NECESSARY TO TEST THE COMPLETED WORK. CALL U.N.C.L.E. PRIOR TO ANY EXCAVATION.
- ALL DRAINAGE SYSTEMS SHALL BE PUMPED DOWN TO BELOW 1/3 OF THE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

SODDING:

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

GENERAL:

- RECORD DRAWINGS TO INCLUDE ALL PERTINENT DRAINAGE AND PAVING INFORMATION.
- SUBMITTAL OF AN AutoCAD DIGITAL FILE CONTAINING ALL PERTINENT AS-BUILT INFORMATION (INCLUDING WATER, SEWER, PAVING, AND DRAINAGE). FILE TO BE SPATIALLY LOCATED WITHIN THE STATE PLANE COORDINATES.
- ENGINEER SHALL COMPLY WITH ANY OTHER APPLICABLE AS-BUILT PLAN REQUIREMENTS.



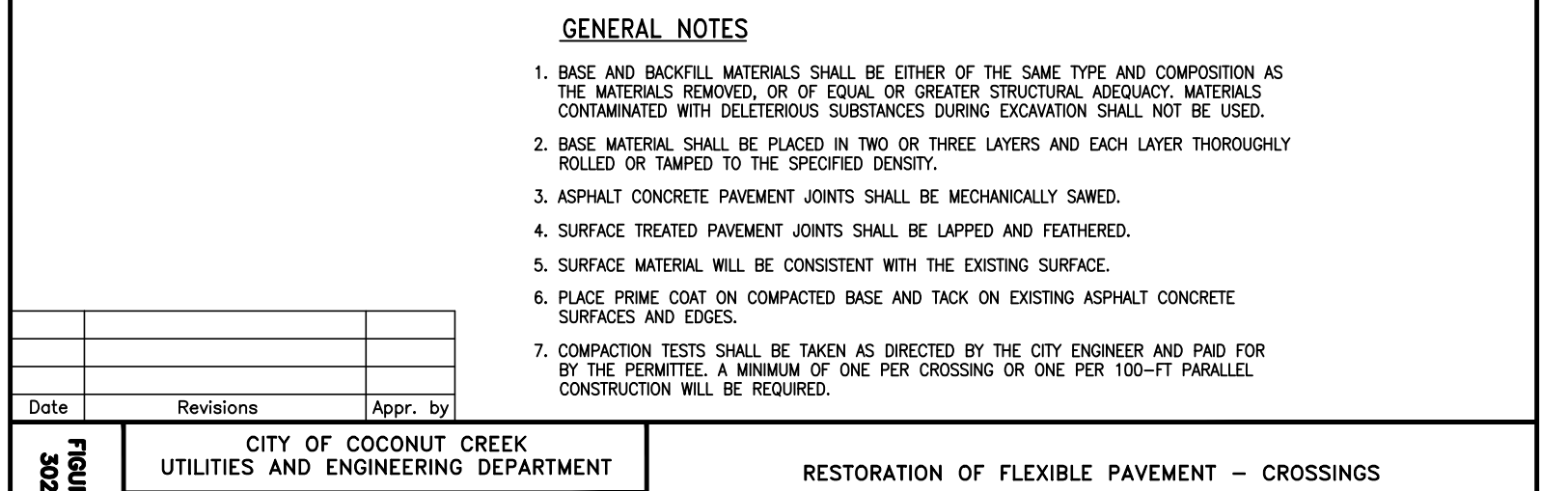
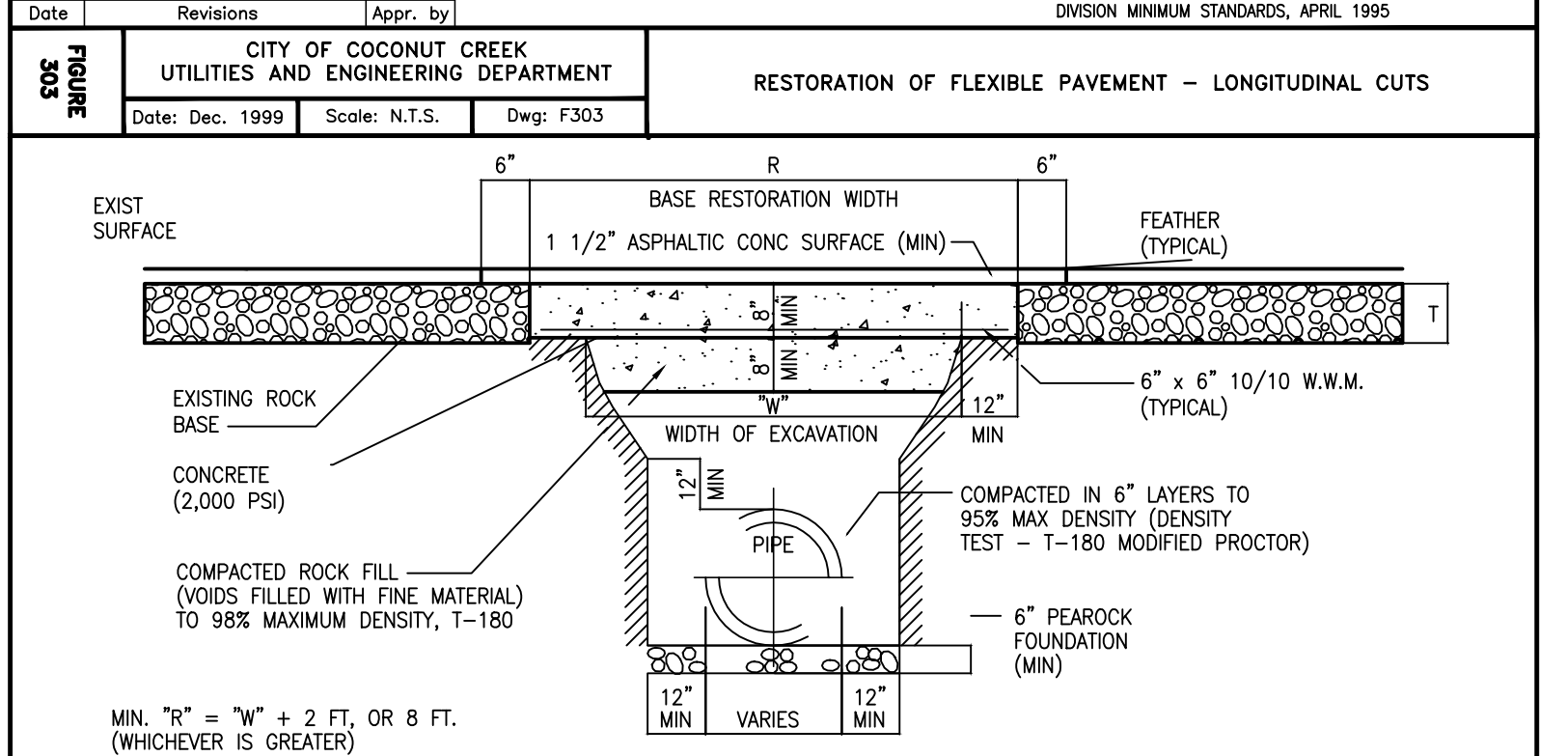
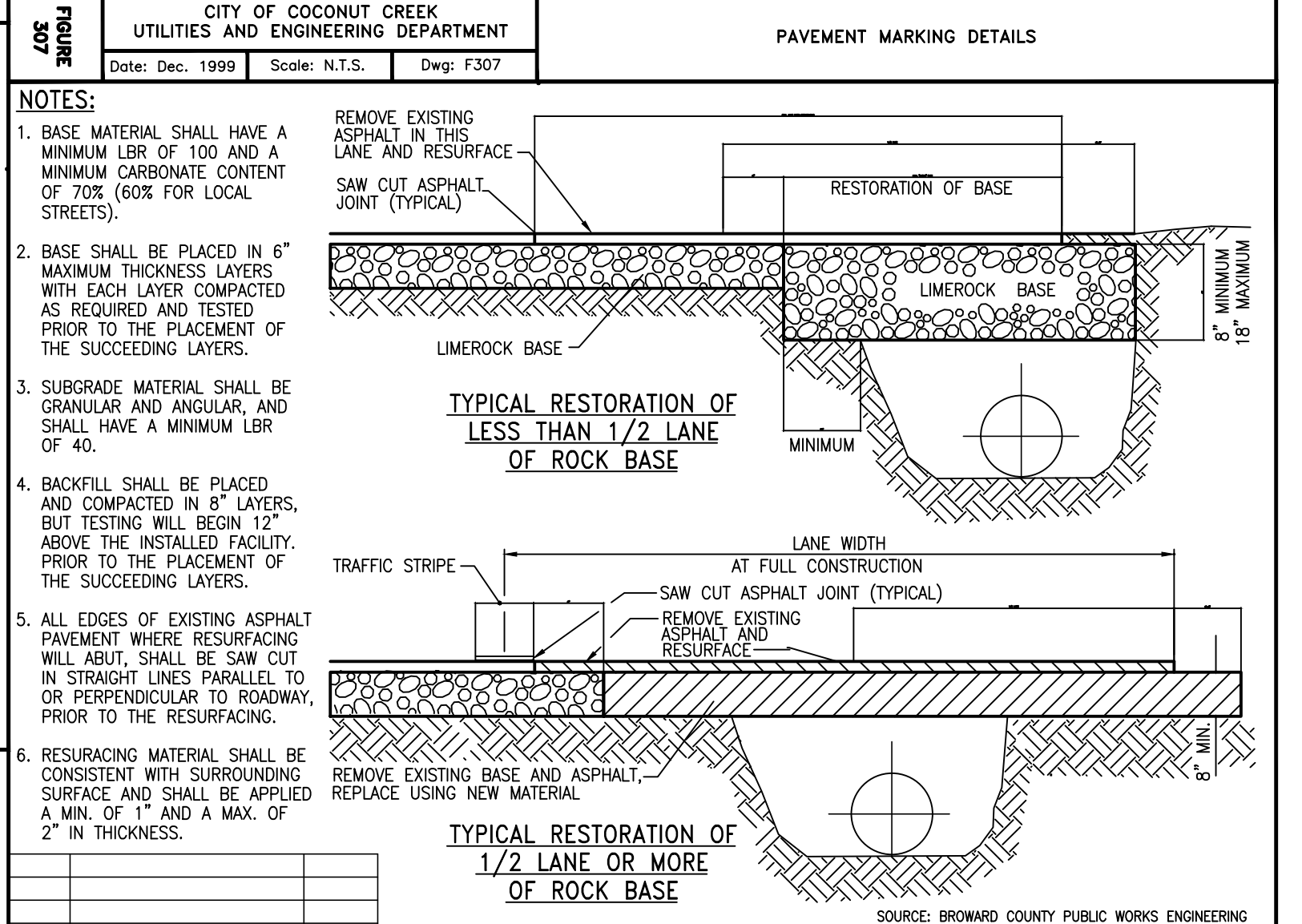
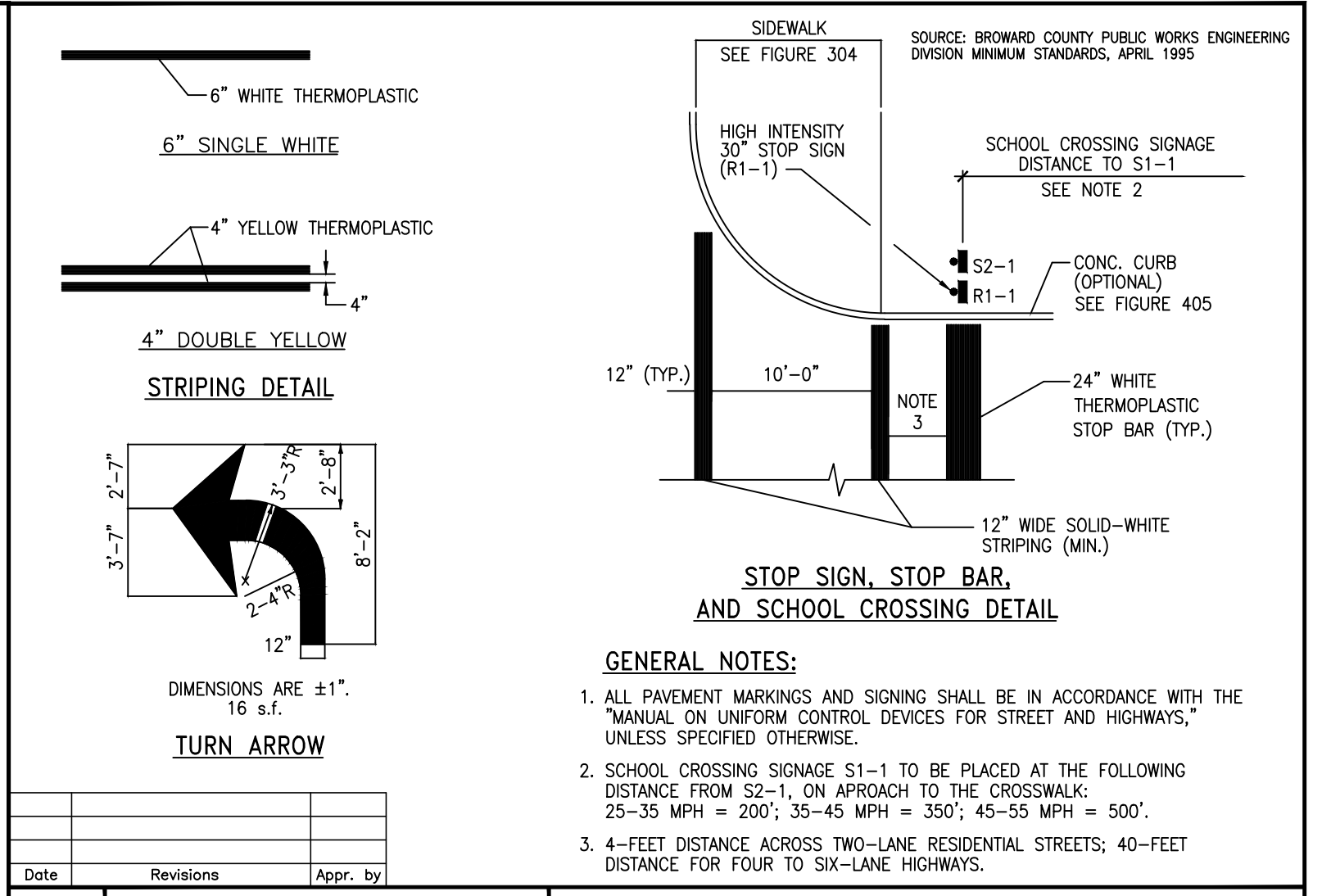
INSPECTIONS:

THE CONTRACTOR SHALL CONTACT THE CITY OF COCONUT CREEK AT LEAST 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION AND PRIOR TO THE INSPECTION OF THE FOLLOWING ITEMS:

- CLEARING AND FILLING.
- STORM DRAINAGE SYSTEM LAMPING.
- SUBGRADE (DENSITY TESTS SHALL BE APPROVED PRIOR TO THE PLACEMENT OF LIMEROCK.
- LIMEROCK BASE (DENSITY TEST AND AS-BUILTS MUST BE SUBMITTED WITH A CERTIFIED LETTER FROM THE ENGINEER OF RECORD INDICATING THEY CONFORM WITH THE APPROVED PLAN PRIOR TO THE PLACEMENT OF ASPHALT.
- ASPHALTIC CONCRETE.
- FINAL.
- THE CONTRACTOR SHALL NOTIFY THE CITY AND THE ENGINEER OF RECORD AT LEAST 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION AND IN ADVANCE OF REQUIRED INSPECTIONS. TESTING WILL BE REQUIRED FOR THE FOLLOWING TASKS.
 - STORM DRAINAGE
 - WATER DISTRIBUTION SYSTEM
 - SANITARY SEWER SYSTEM
 - ROAD SUBGRADE
 - FINISHED LIMEROCK BASE
 - ASPHALTIC CONCRETE
 - PIPE BACKFILL
- ALL TESTING WILL BE WITNESSED BY THE CITY OF COCONUT CREEK. THE ENGINEER OF RECORD WILL PROVIDE CONSTRUCTION OBSERVATION SERVICES AND COPY REPORTS TO THE CITY ENGINEER ON A BI-WEEKLY BASIS. FINAL SITE GRADING WORK SHALL BE INSPECTED BY THE ENGINEER OF RECORD. EMERGENCY SITUATIONS AND CHANGE OF PLANS SHALL BE REPORTED AT THE TIME OF EACH OCCURRENCE.
- THE CITY OF COCONUT CREEK INSPECTION PROCEDURES SHALL SUPERSEDE ANY OTHER INSPECTION PROCURES AND/OR IN CASE OF DISCREPANCIES, THE CITY OF COCONUT CREEK INSPECTION PROCURES WILL BE OBSERVED.

PAVEMENT MARKING SPECIFICATIONS		TEMPORARY MARKINGS	
All Pavement markings to be installed per these typicals, plans and specifications, and as directed by the City Engineer and shall conform to the requirements of F.D.O.T. and "The Manual on Uniform Traffic Control Devices", Broward County.		Temporary markings may be used only as specified in this section, or as approved or directed by the City Engineer.	
PERMANENT MARKINGS		Final Pavement Surface:	
Installation:		- Only full backed marking tape is allowed.	
- All markings shall be installed by the extruded method.		- All tape shall be totally removed concurrent with permanent marking placement.	
- Markings shall be free of weaves, bows, drips, drags, and other degrading items.		Other Pavement Surfaces:	
- Chalk shall be used for all layout markings		- Intermediate pavement surfaces may be marked with FDOT approved materials, designs, and specifications.	
Materials:		ALL PAVEMENT MARKINGS	
- All materials shall be alkyl thermoplastic meeting all State specifications.		All paved surfaces shall be properly marked prior to the hours of darkness.	
Thickness:		RAISED PAVEMENT MARKERS	
- All markings shall be installed to yield 90 mils of material measured above the pavement surface.		- R.P.M.s shall be installed on all lane lines and centerlines, spaced at 20' or 40'.	
Beads:		- R.P.M.s shall be a 4 x 4 type class "B" marker meeting FDOT specifications and shall be approved by the City Engineer prior to use.	
- Reflective beads are to be installed per FDOT specifications on all markings.		- R.P.M.s shall be installed using alkyl thermoplastic on asphalt and epoxy on concrete.	
Alternate Material:		- It is recommended that marking layout be inspected by the City Engineer prior to the placement of final markings.	
- STAYMARK marking tape, or equivalent may be used, as approved or directed by the city engineer.			
Layout:			
- Layout shall be made using marking chalk.			

PAVEMENT MARKING SPECIFICATION



DATE	8-26-14
BY	BR
REVISIONS	
FILE NAME	4632015.dwg

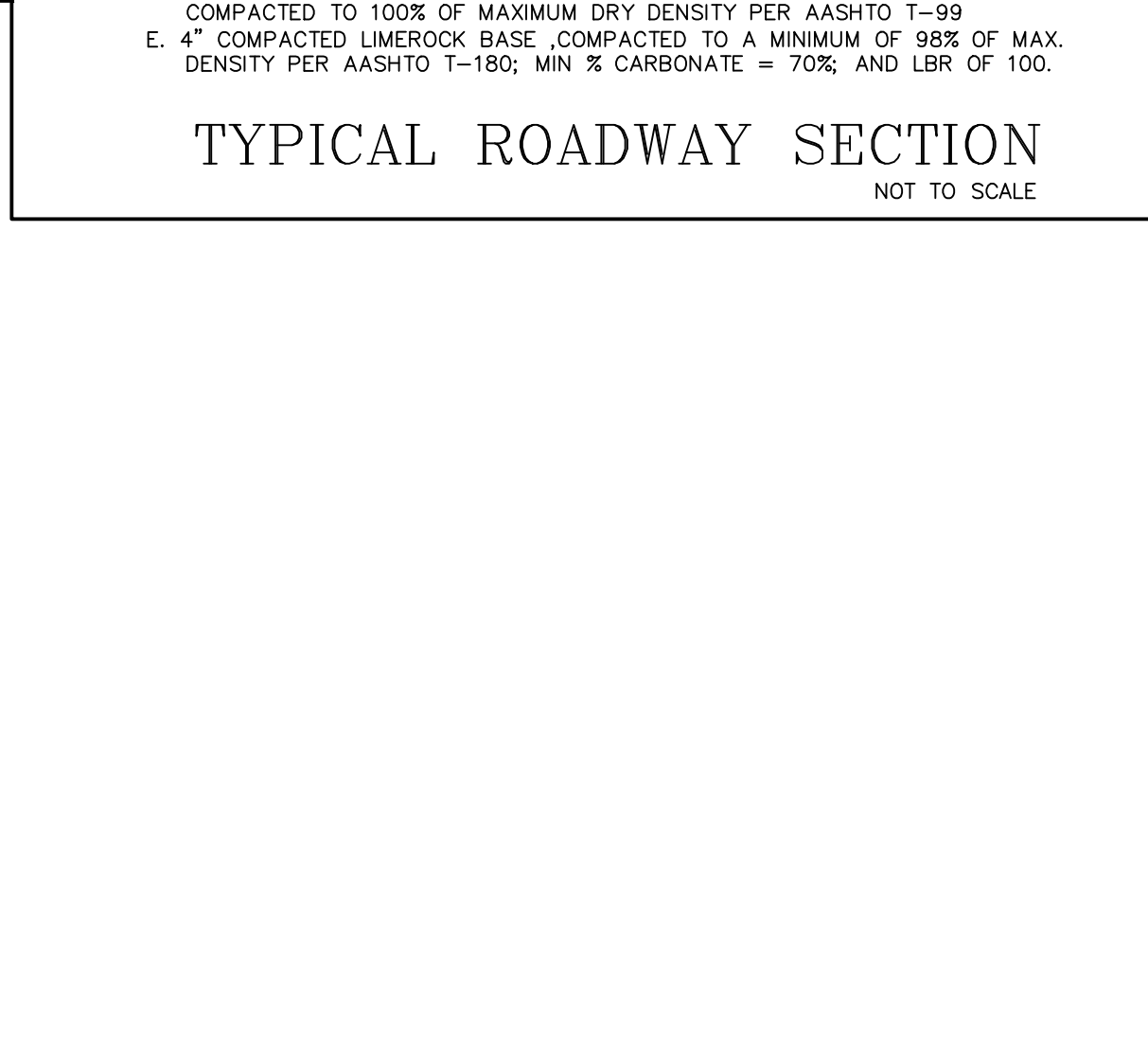
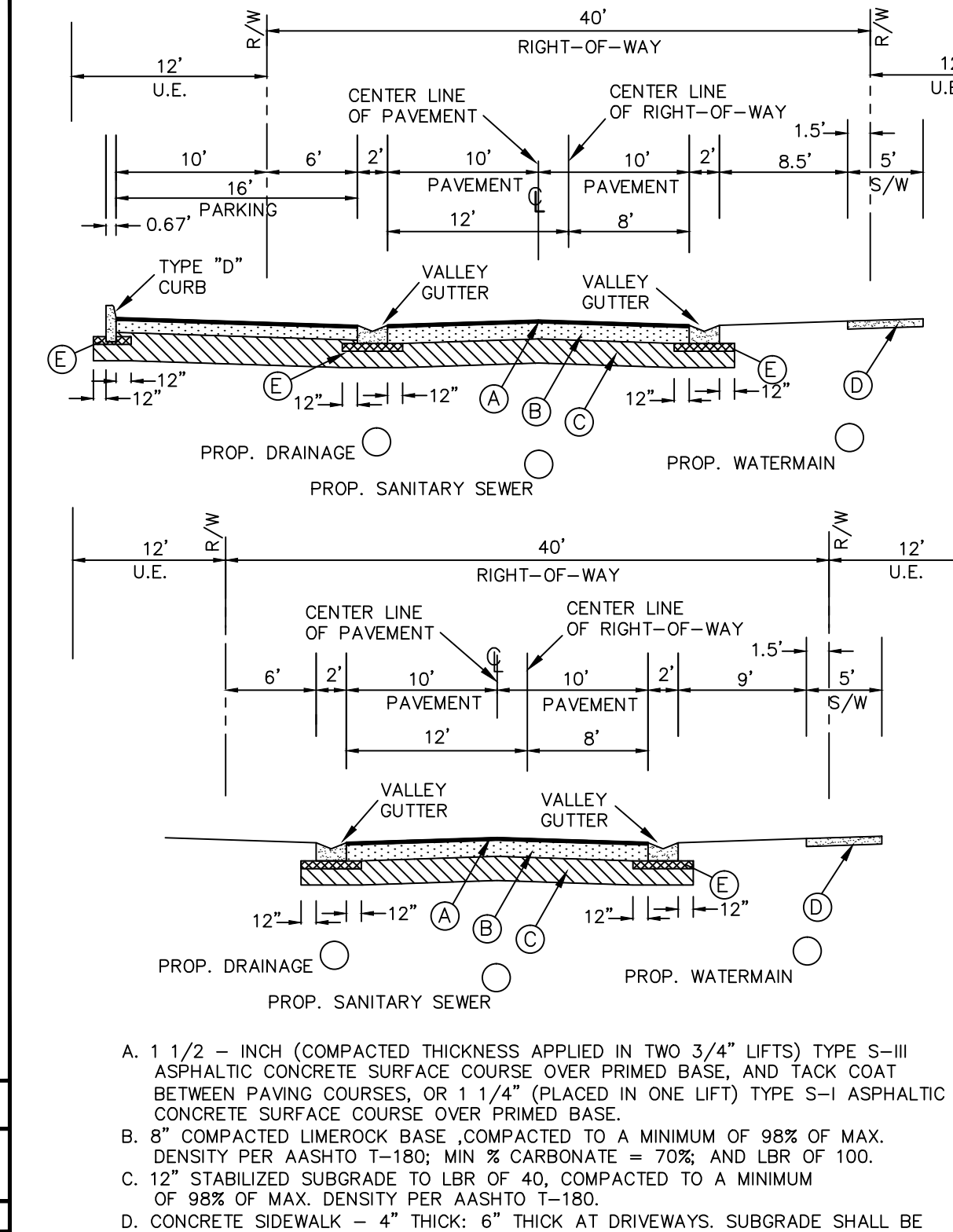
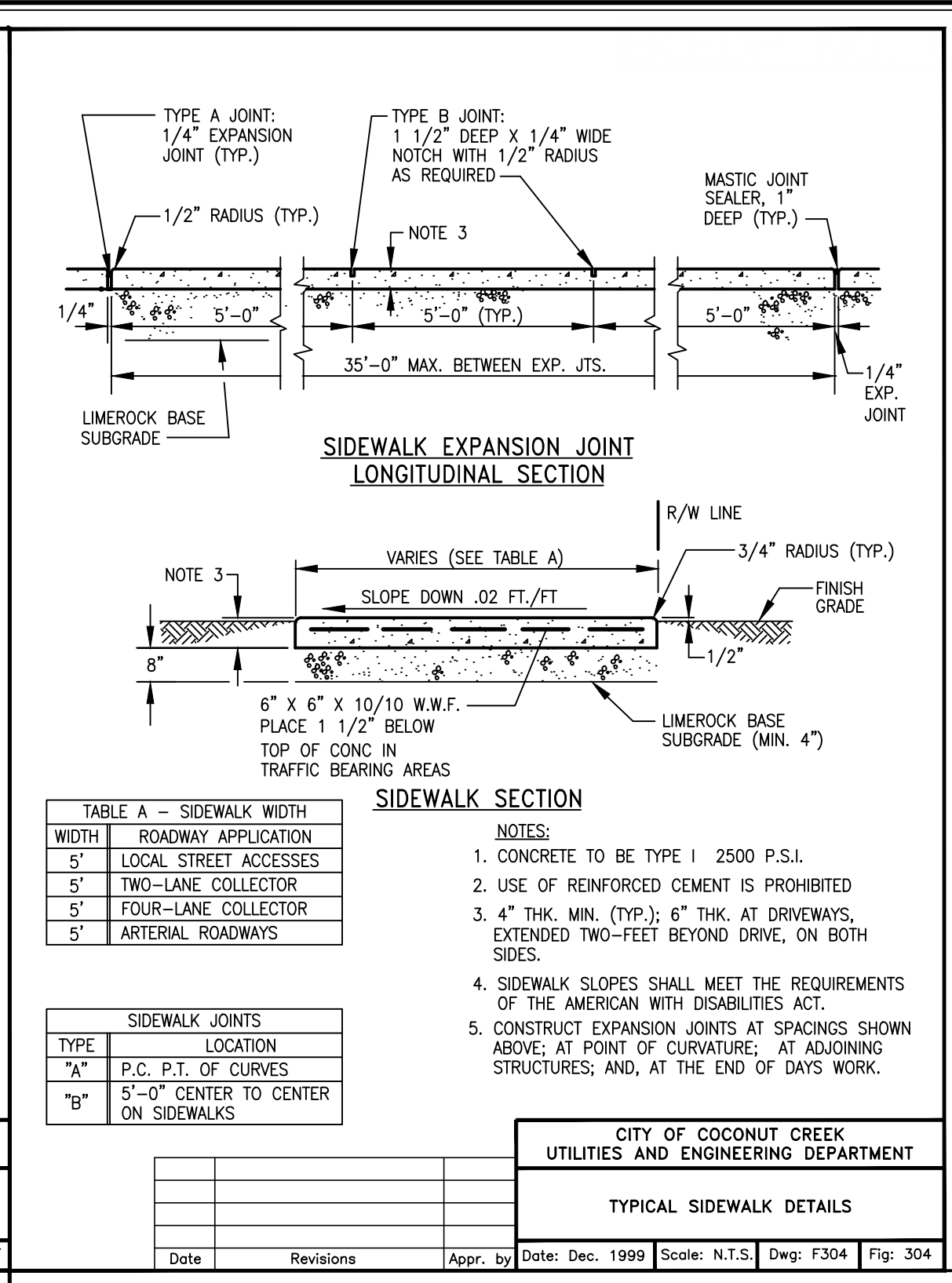
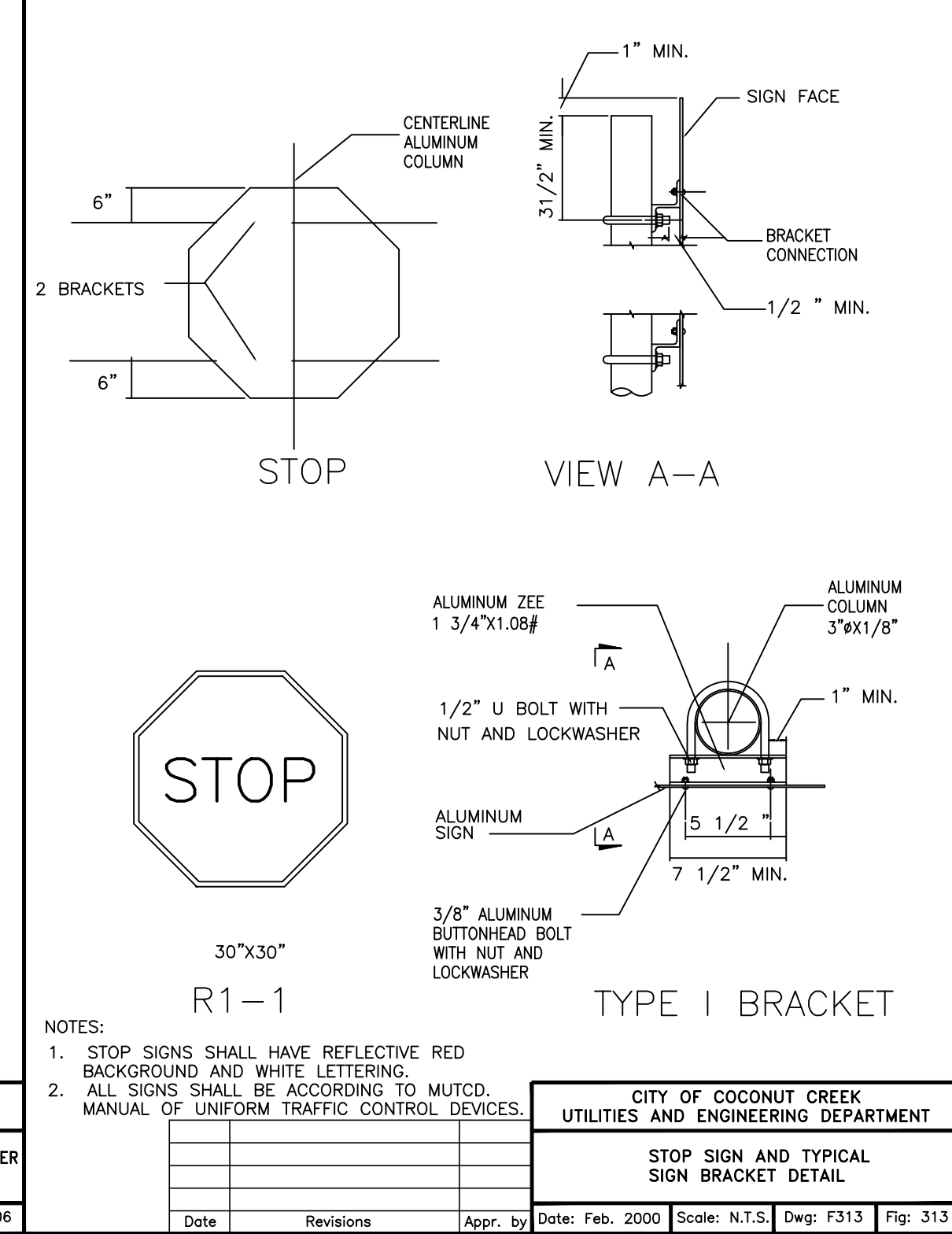
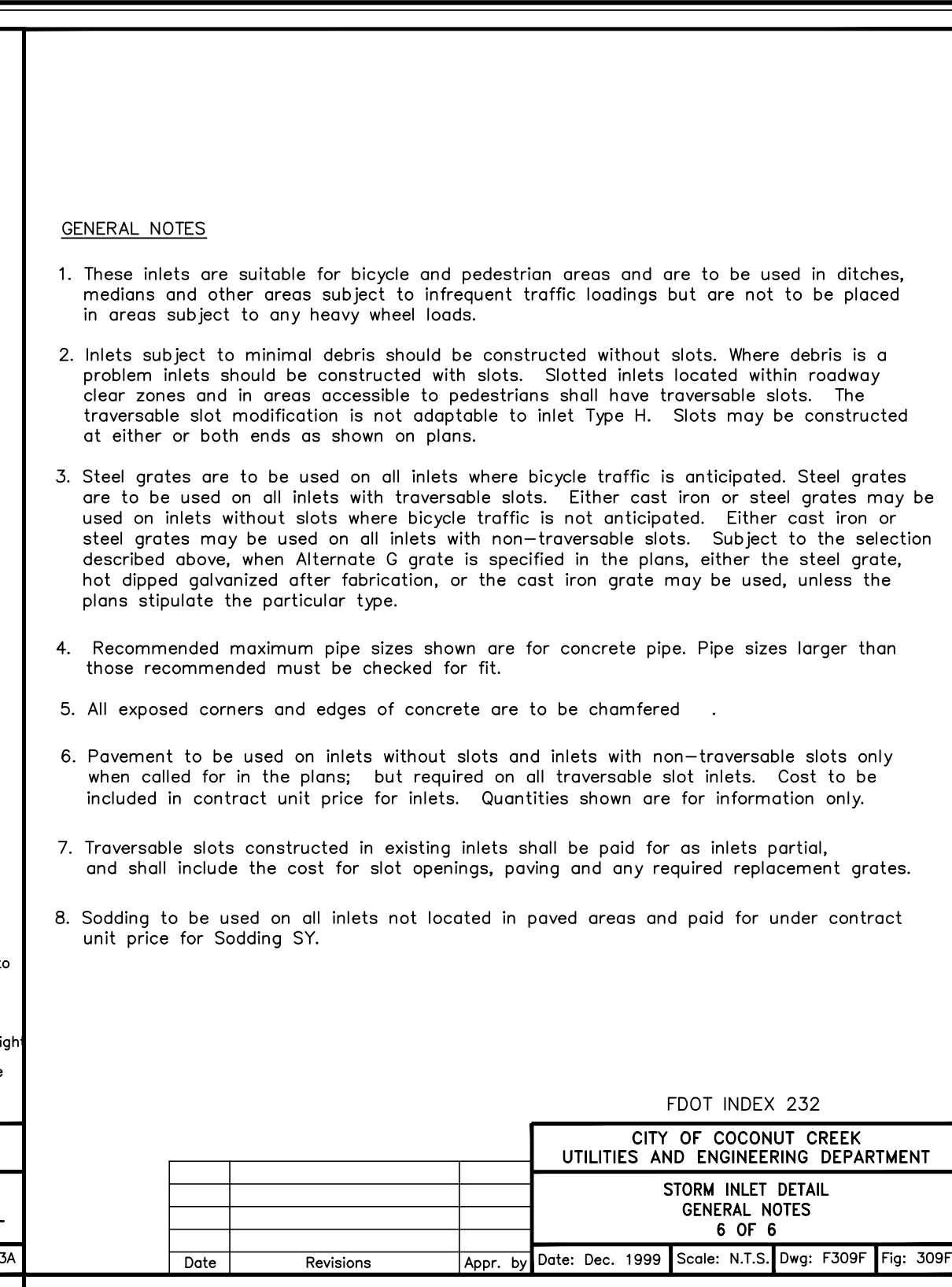
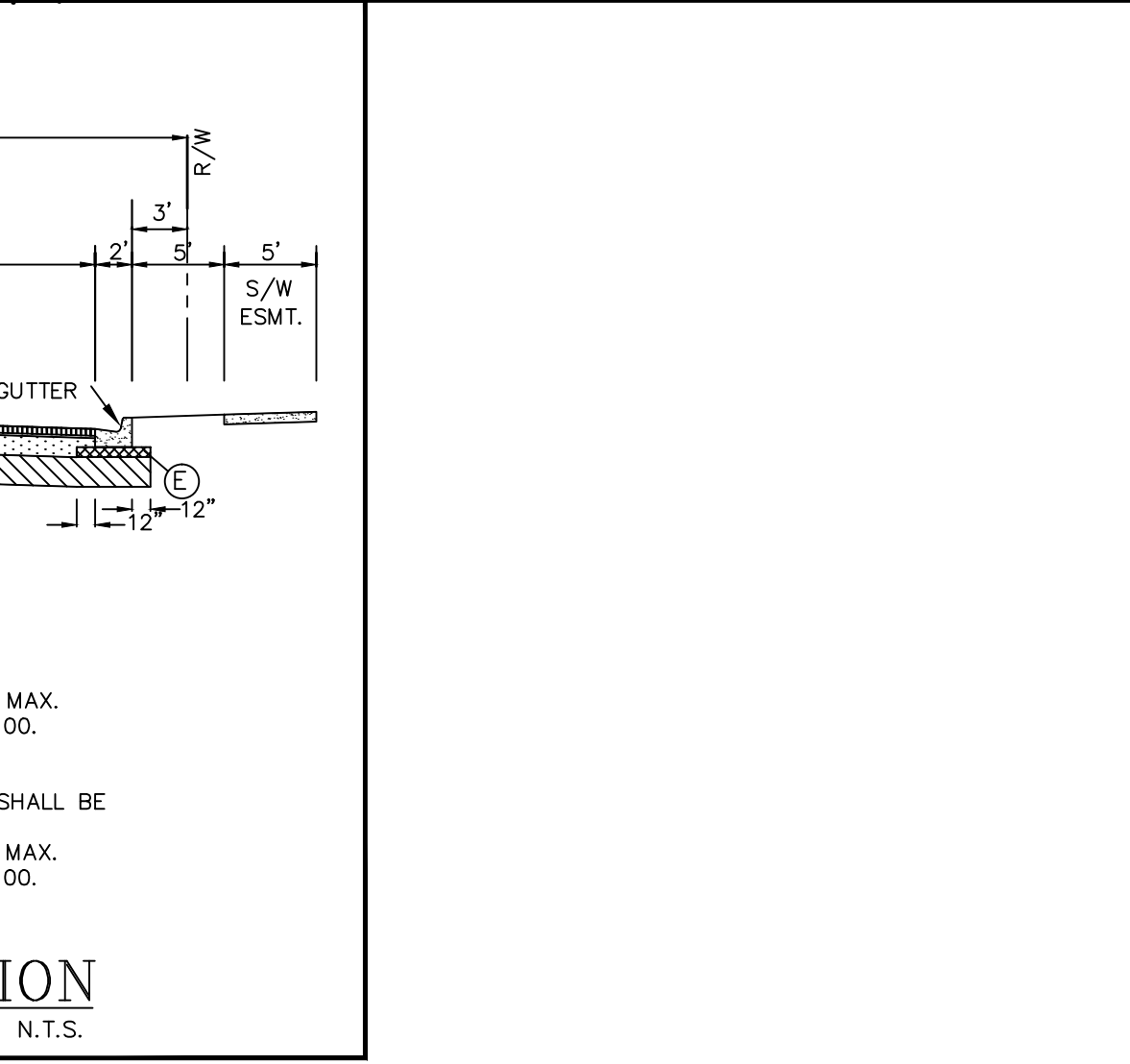
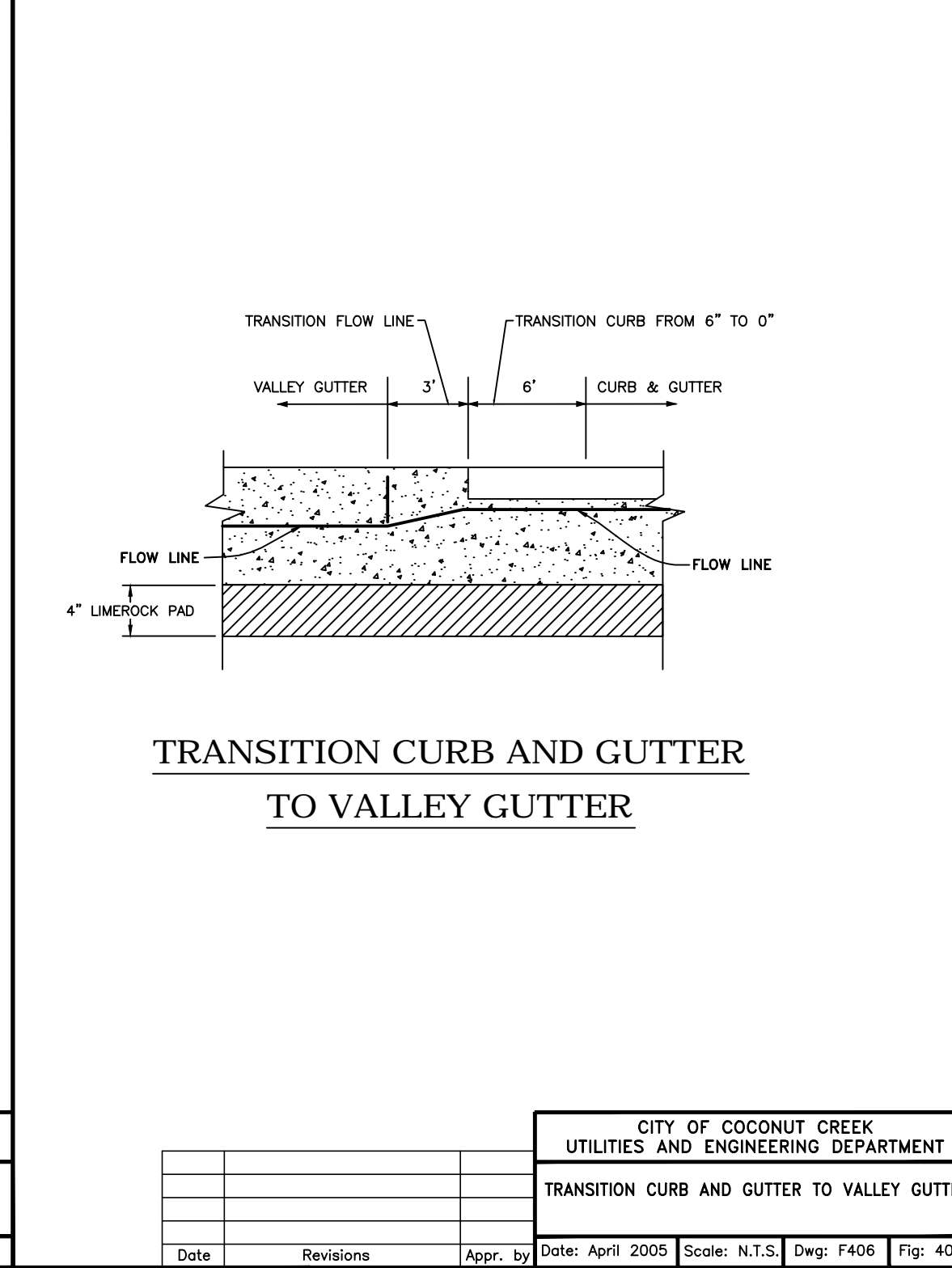
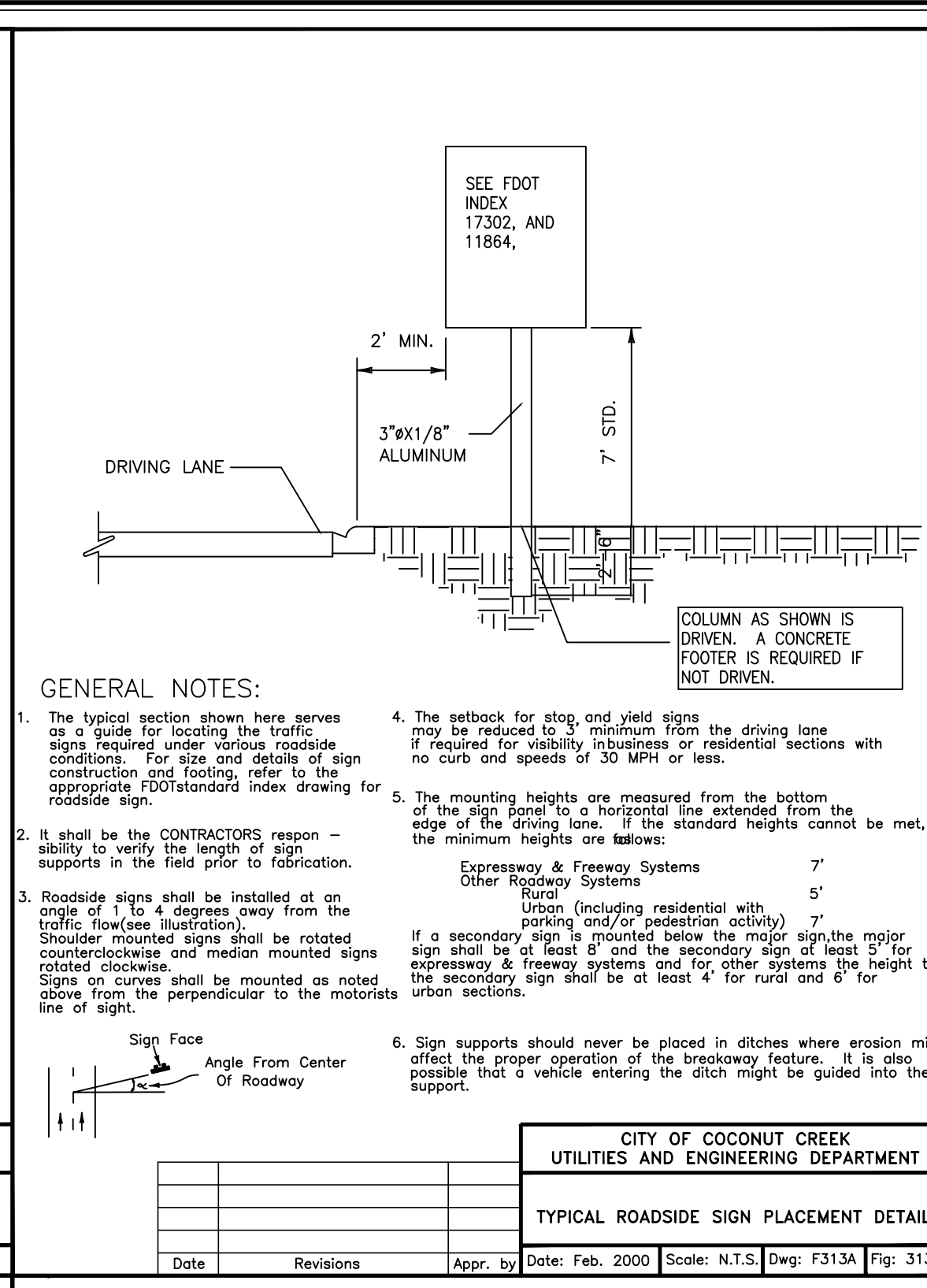
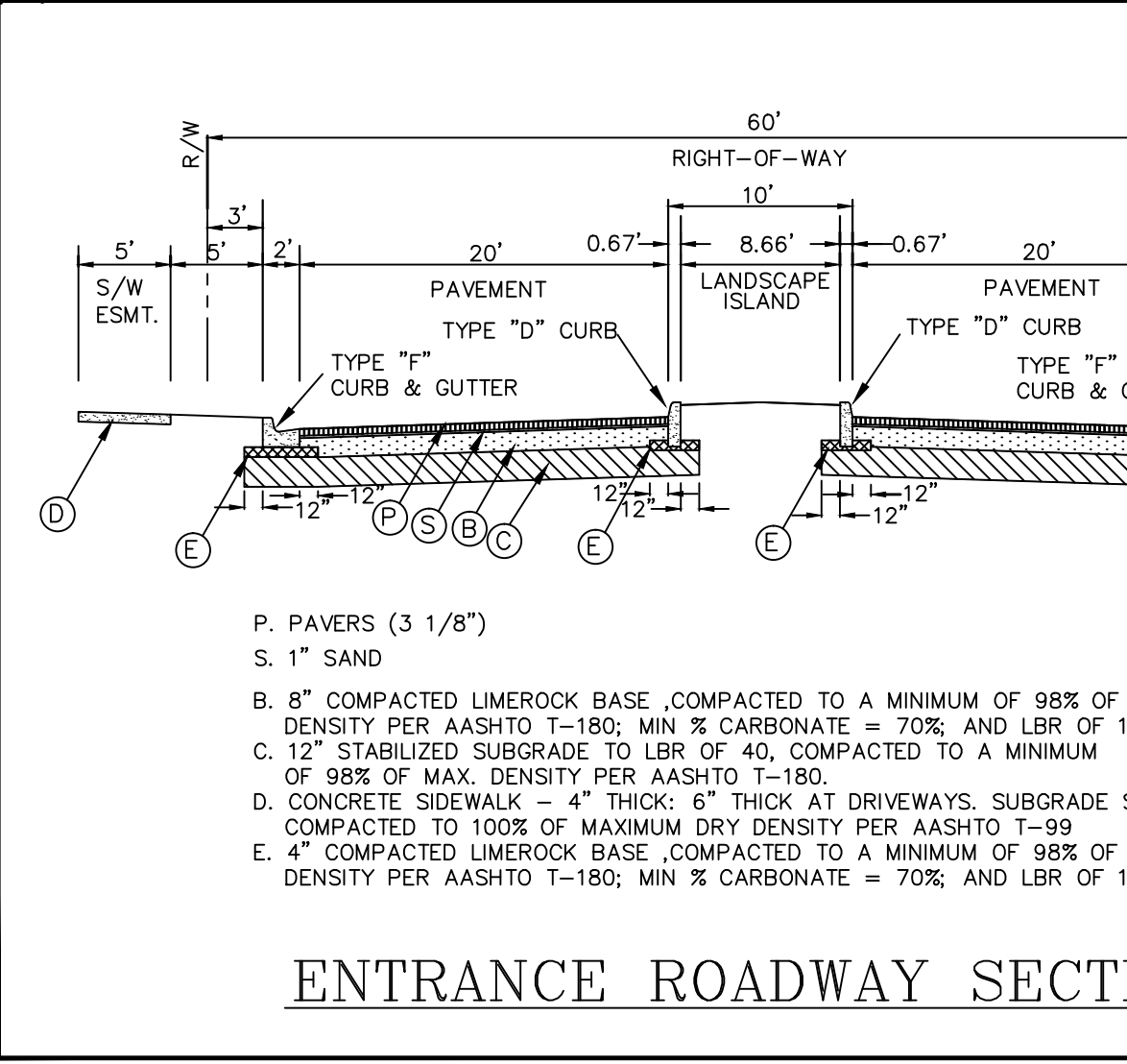
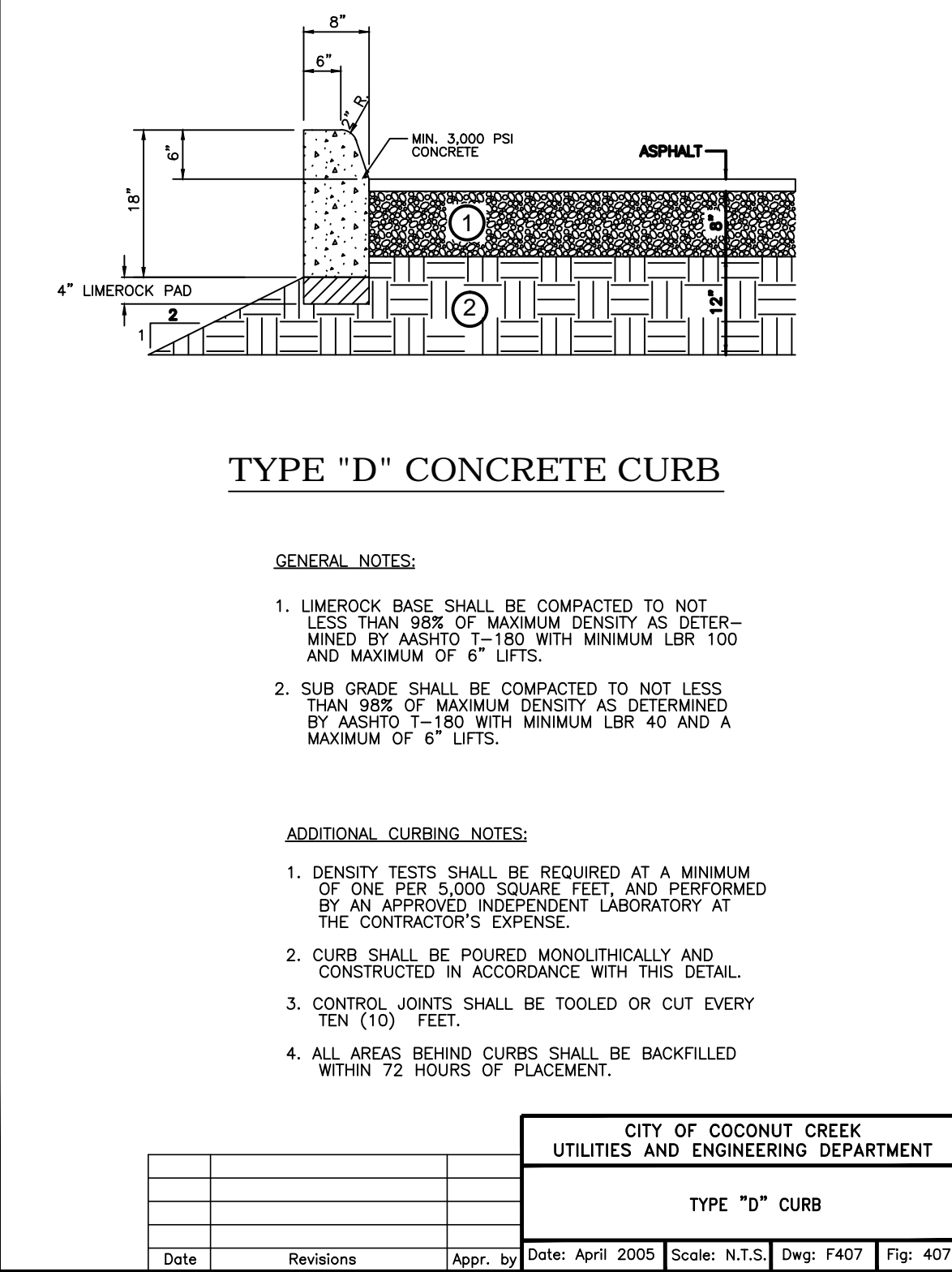
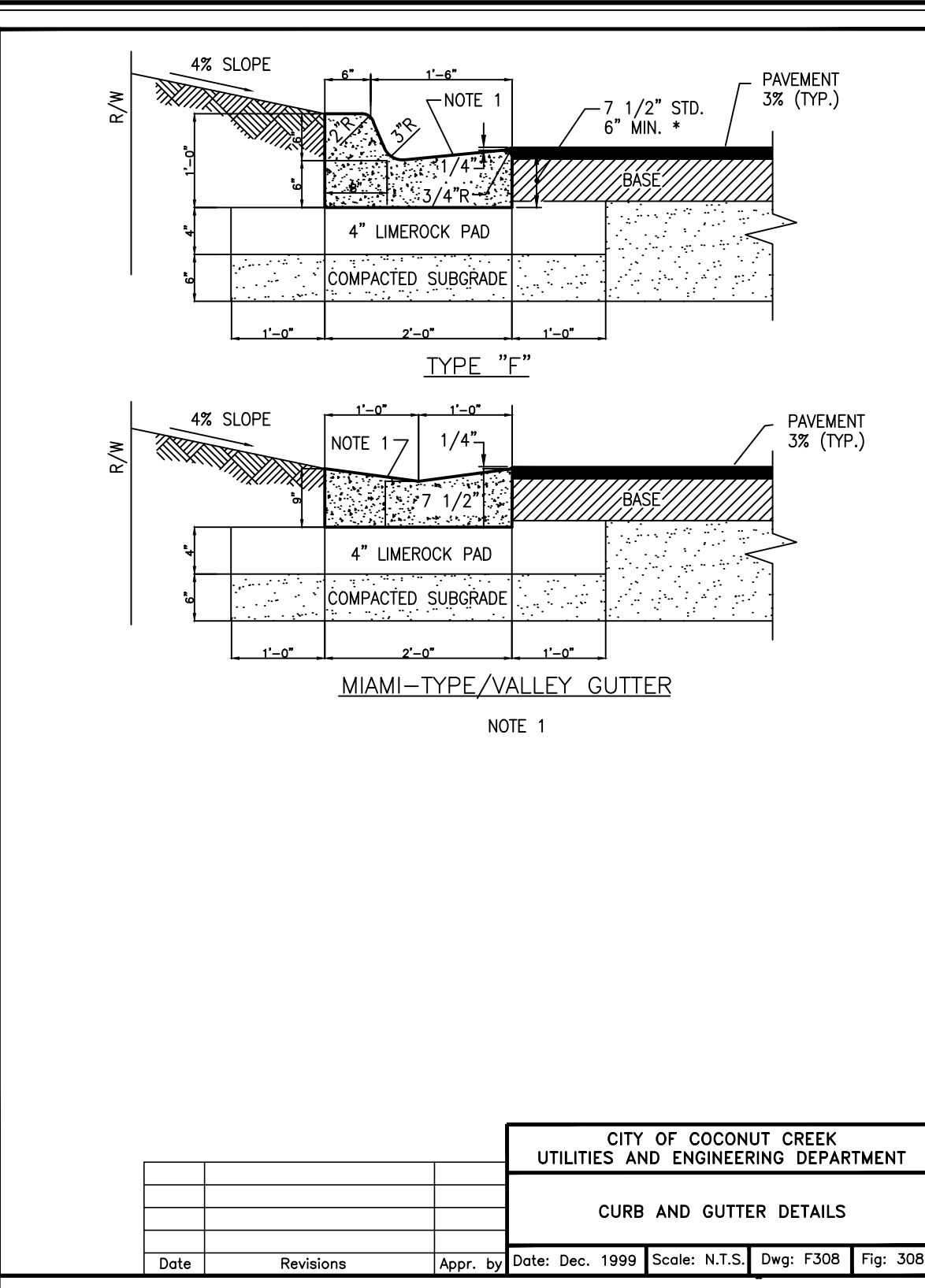
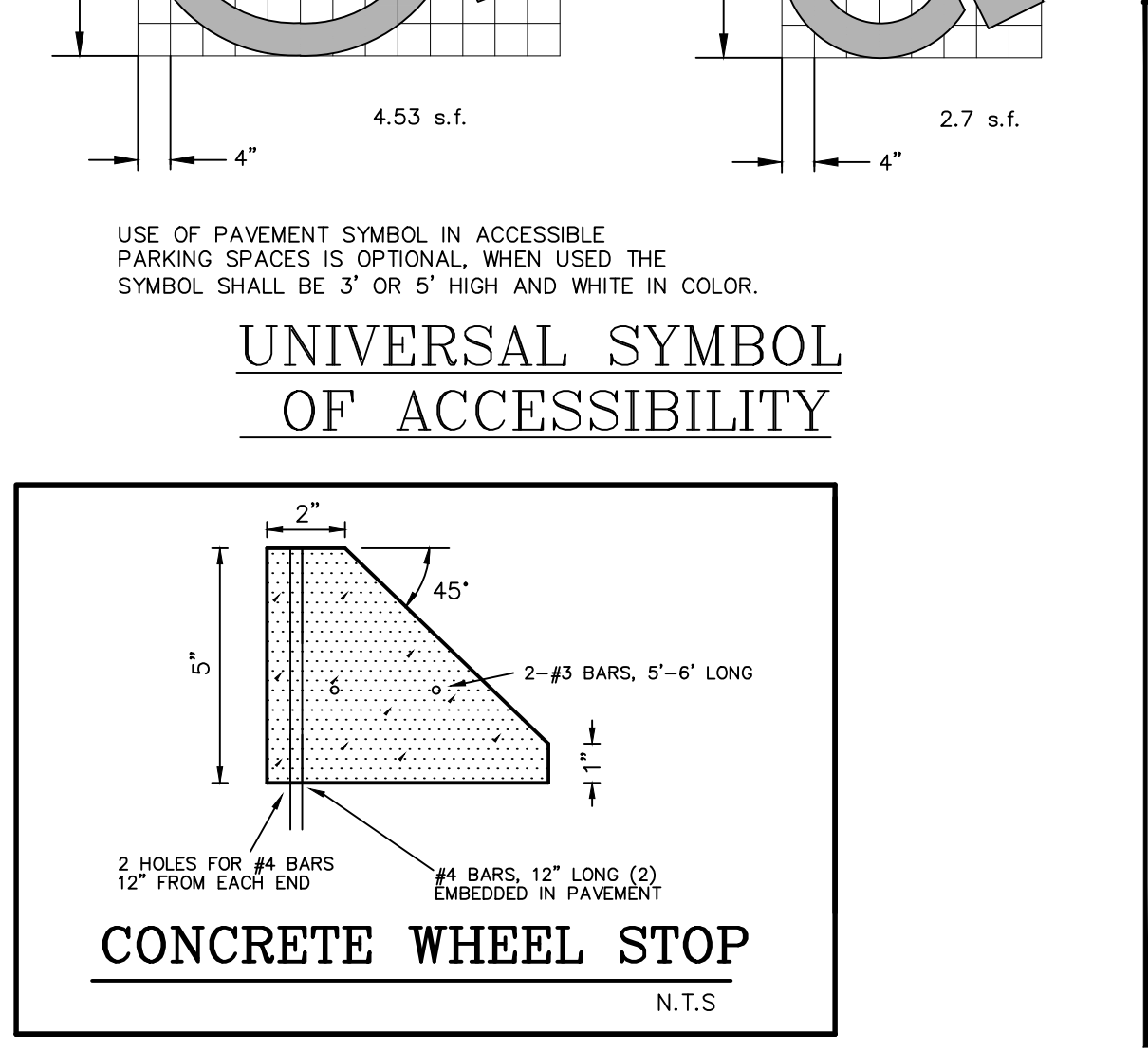
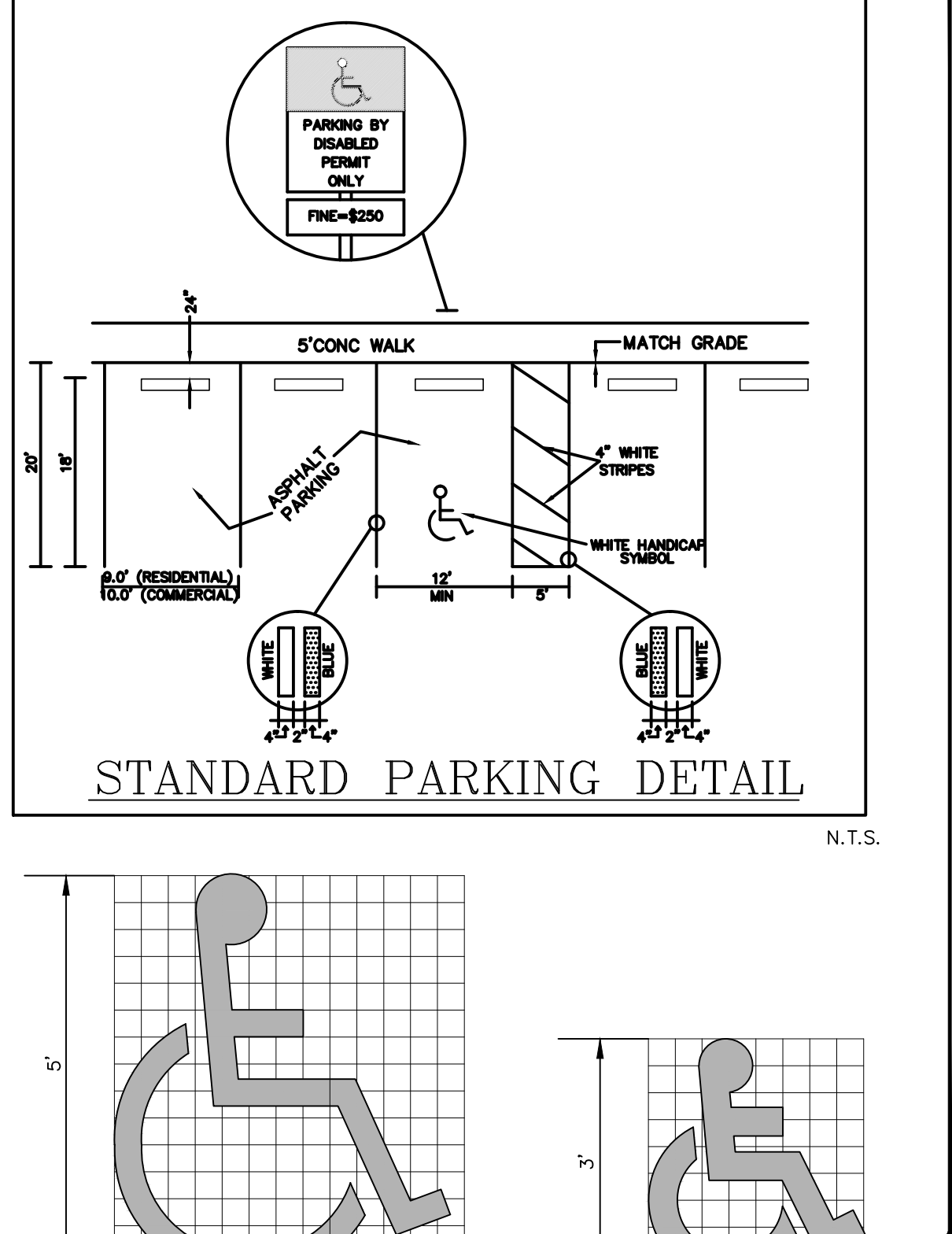
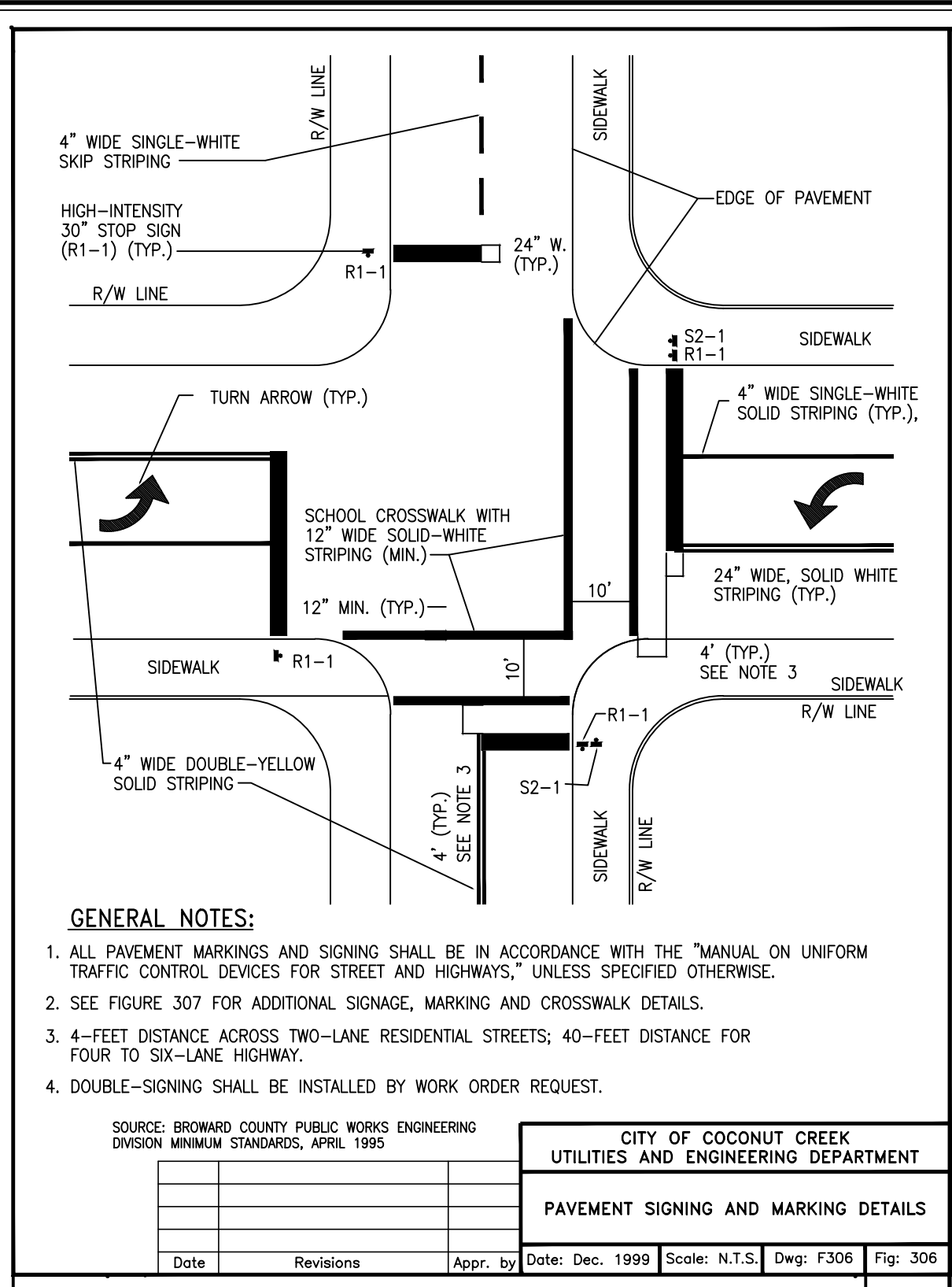
CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING - LAND PLANNING
LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561)392-1991 / FAX (561)750-4452

Paving, Drainage & Drainage Details
Simonton
FLORIDA
COCONUT CREEK

DATE	8-26-14
DRAWN BY	BR
F.B./ PG.	N/A
SCALE	N.T.S.

JOHN F. WHEELER
PROFESSIONAL ENGINEER
I.C. NO. 25478
STATE OF FLORIDA
ENG. NO. EB-0003591
DATE

JOB #	4633
SHT. NO.	PD5
OF 13 SHEETS	



REVISIONS	DATE	BY

CAULFIELD & WHEELER, INC.
 CIVIL ENGINEERING - LAND PLANNING
 LANDSCAPE ARCHITECTURE - SURVEYING
 7900 GLADES ROAD - SUITE 100
 BOCA RATON, FLORIDA 33434
 PHONE (561) 392-1991 / FAX (561) 750-4452

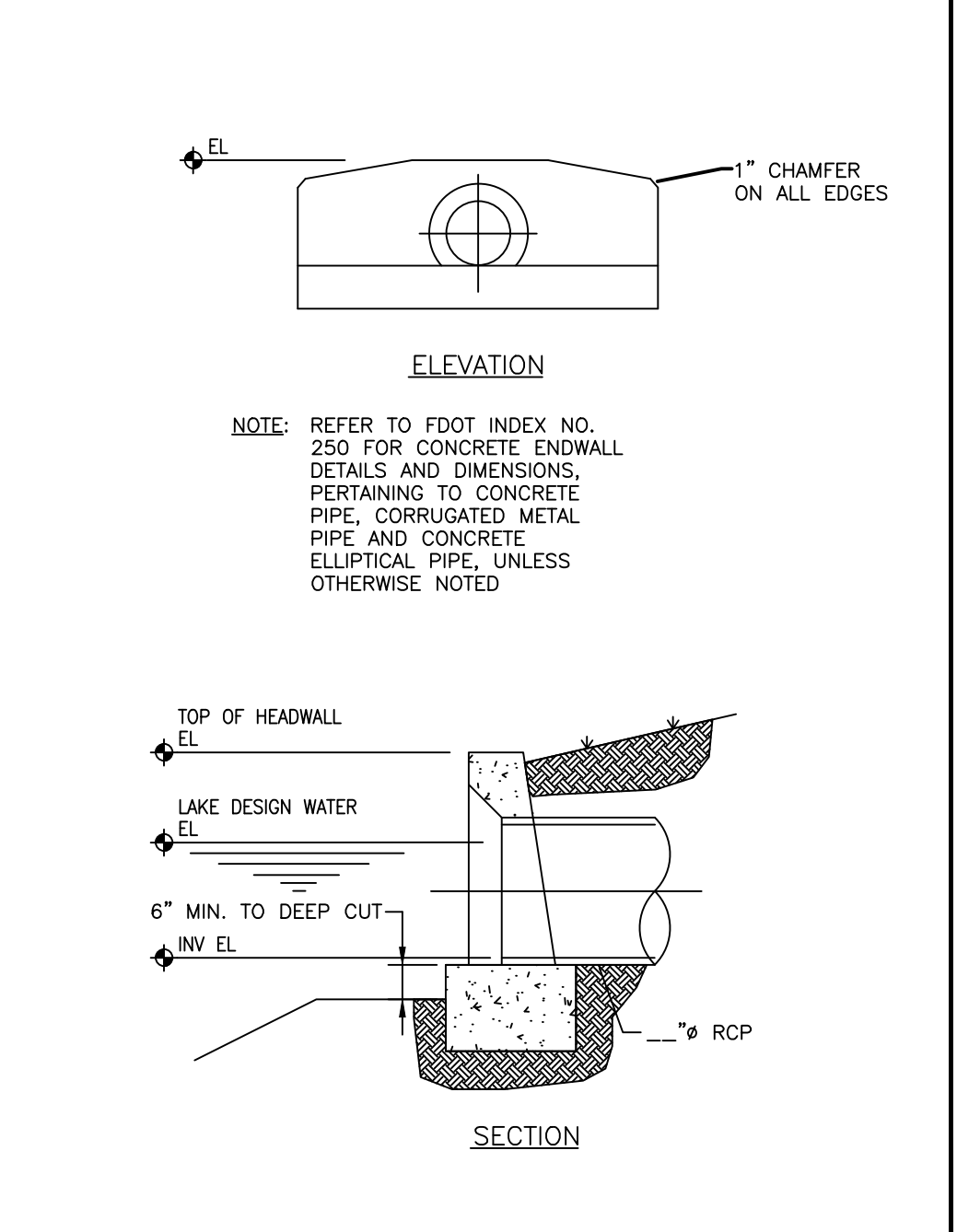
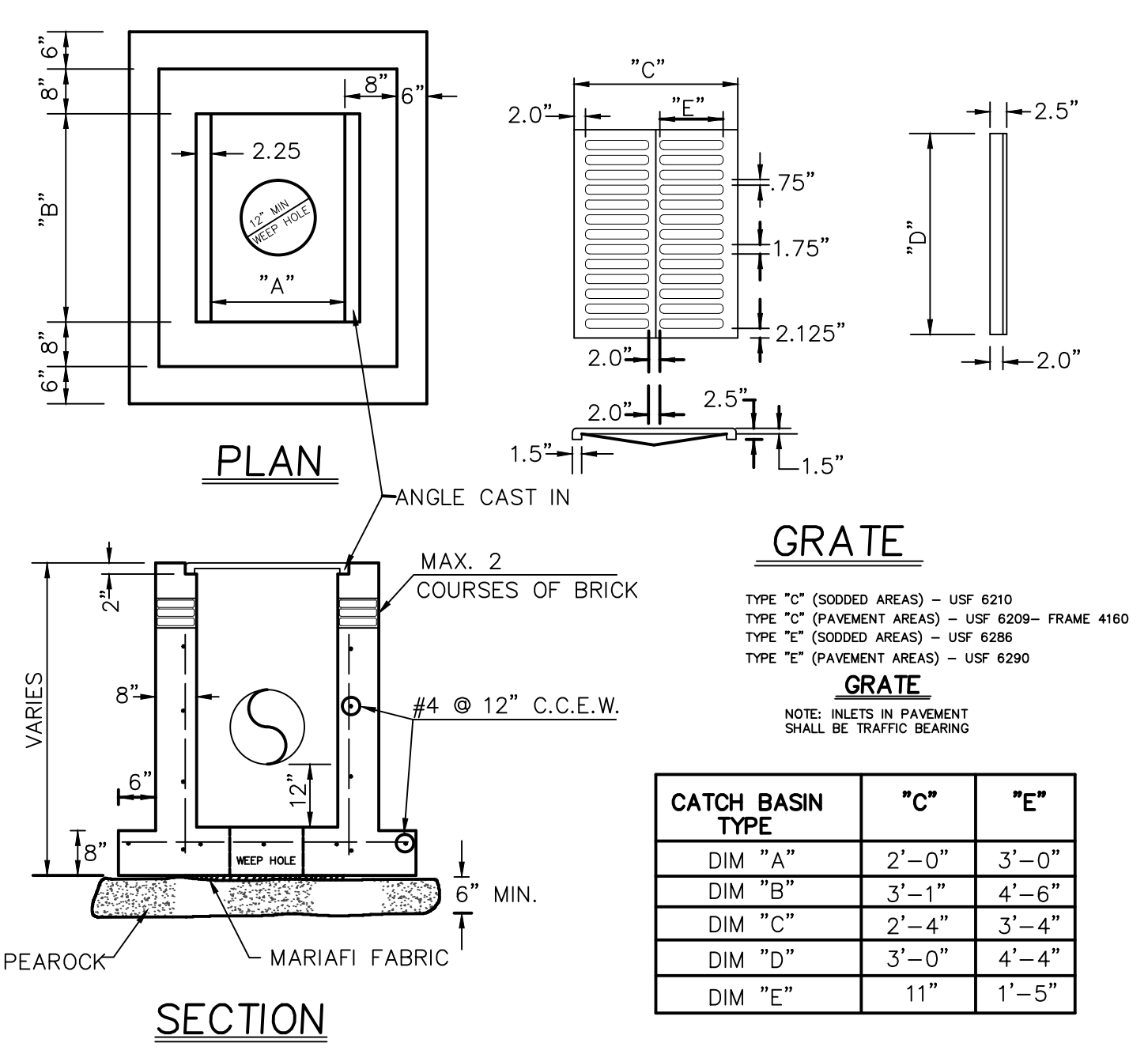
Paving, Drainage & Drainage Details
Simonton
 COCONUT CREEK, FLORIDA

DATE 8-26-14
 DRAWN BY BR
 F.B./ PG. N/A
 SCALE N.T.S.

JOHN F. WHEELER
 PROFESSIONAL ENGINEER
 I.C. NO. 25478
 STATE OF FLORIDA
 ENG. NO. EB-0003591
 DATE

JOB # 4633
 SHT. NO.
PD6
 OF 13 SHEETS

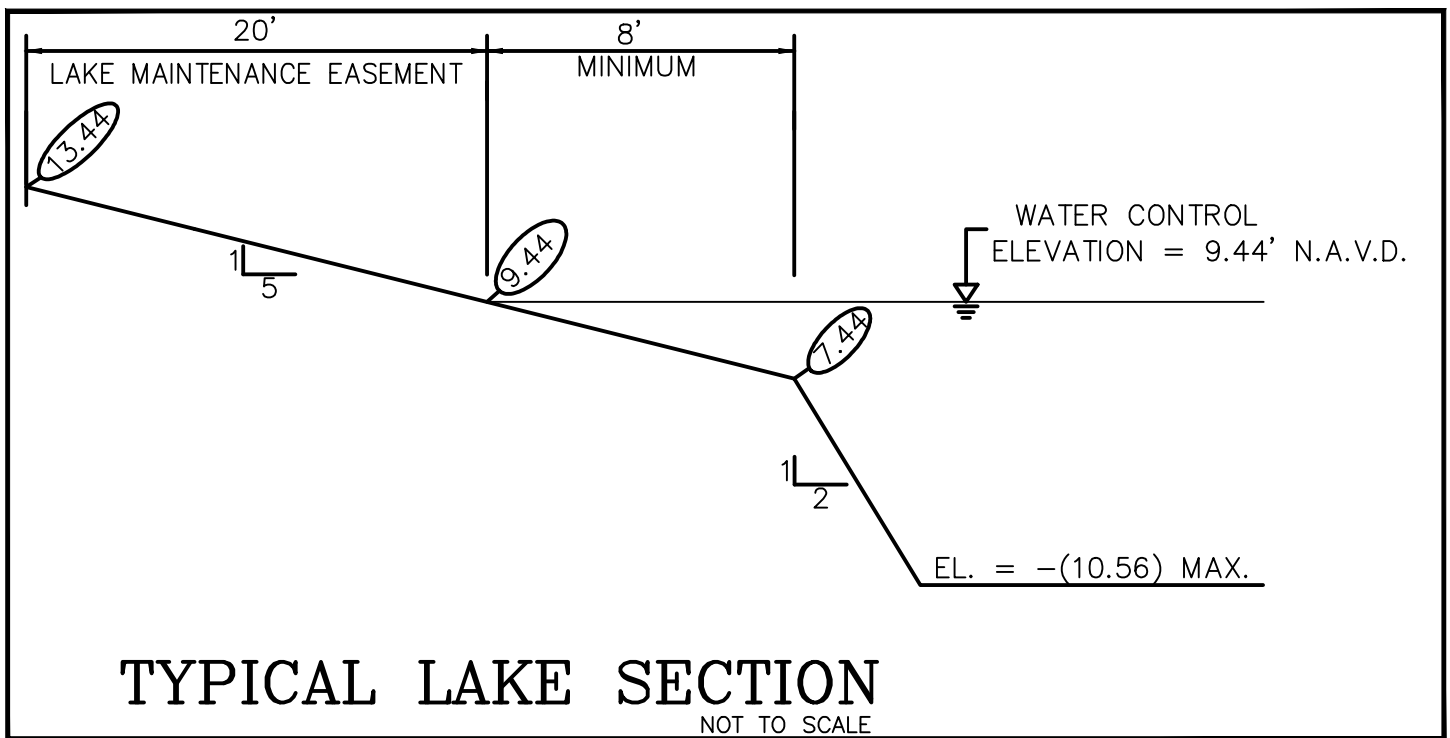
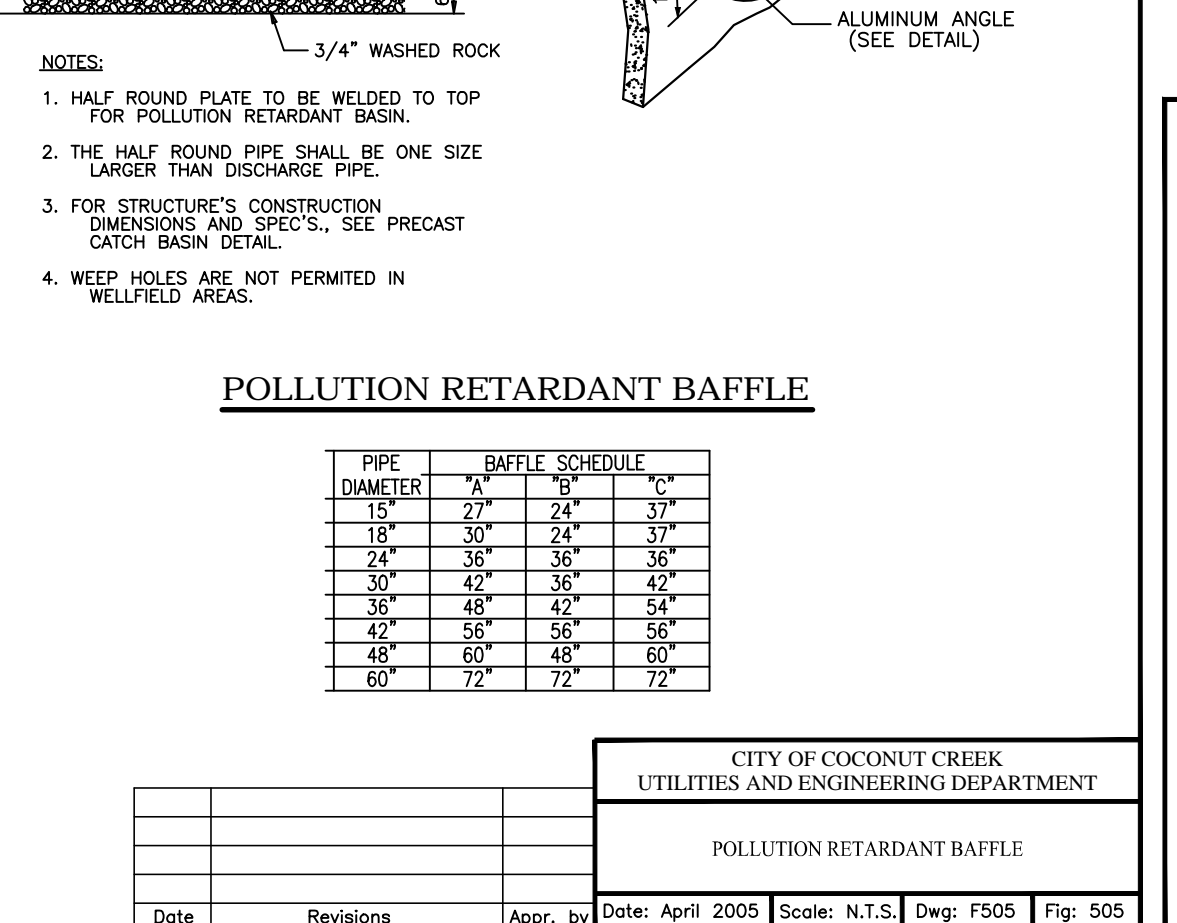
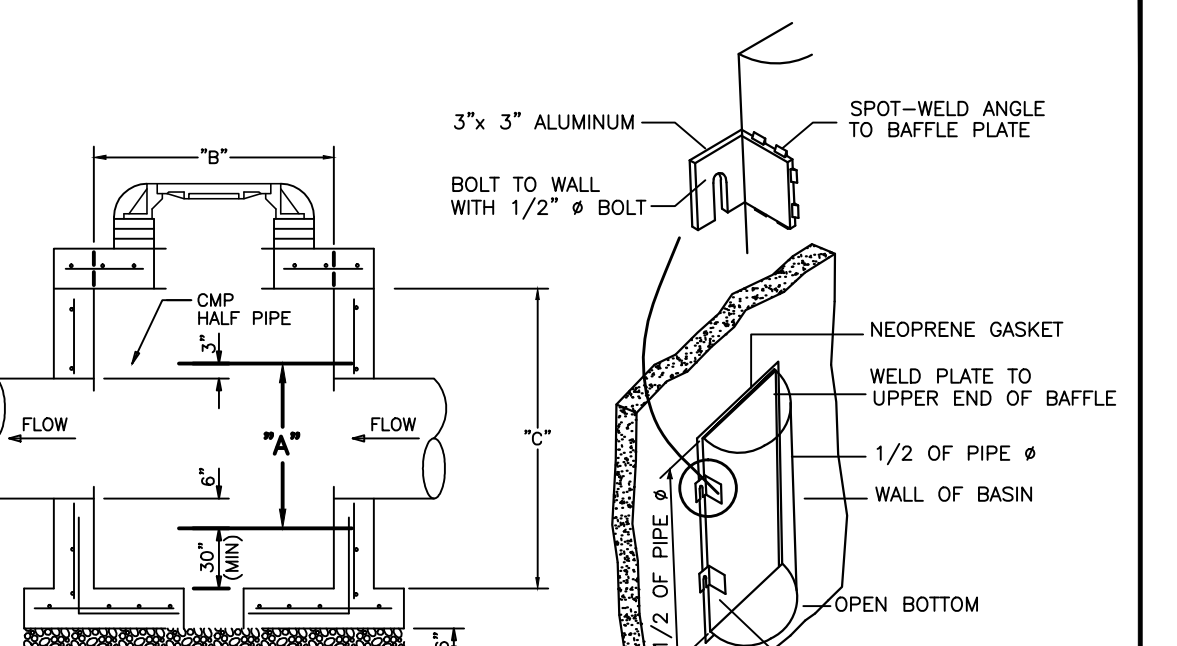
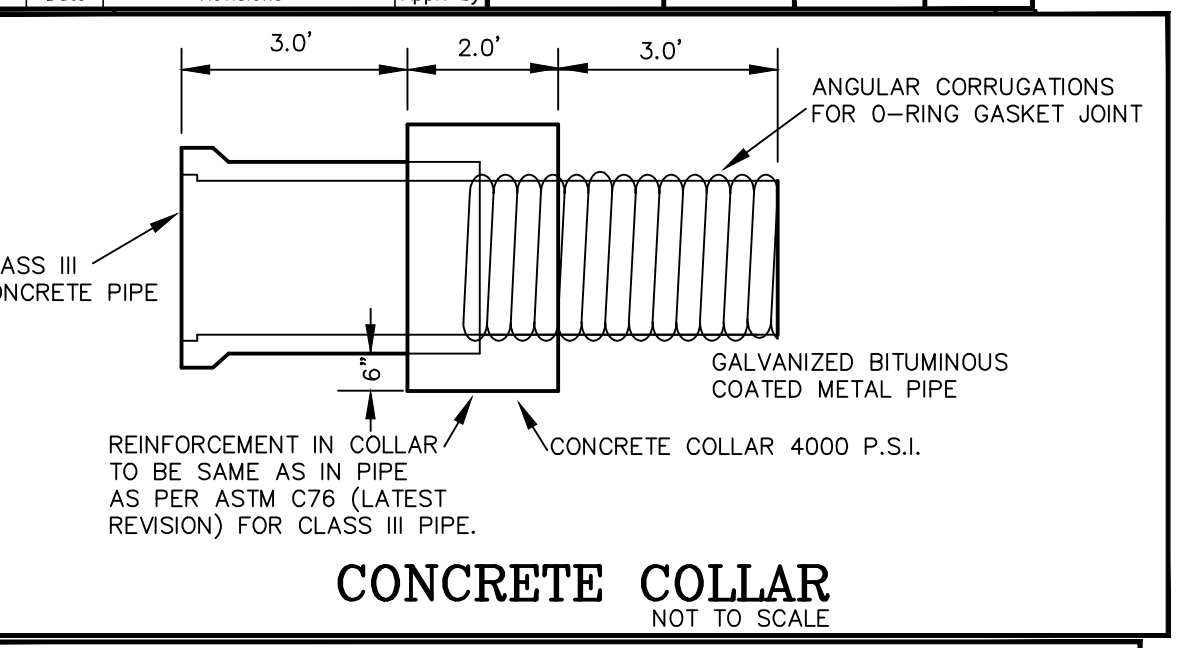
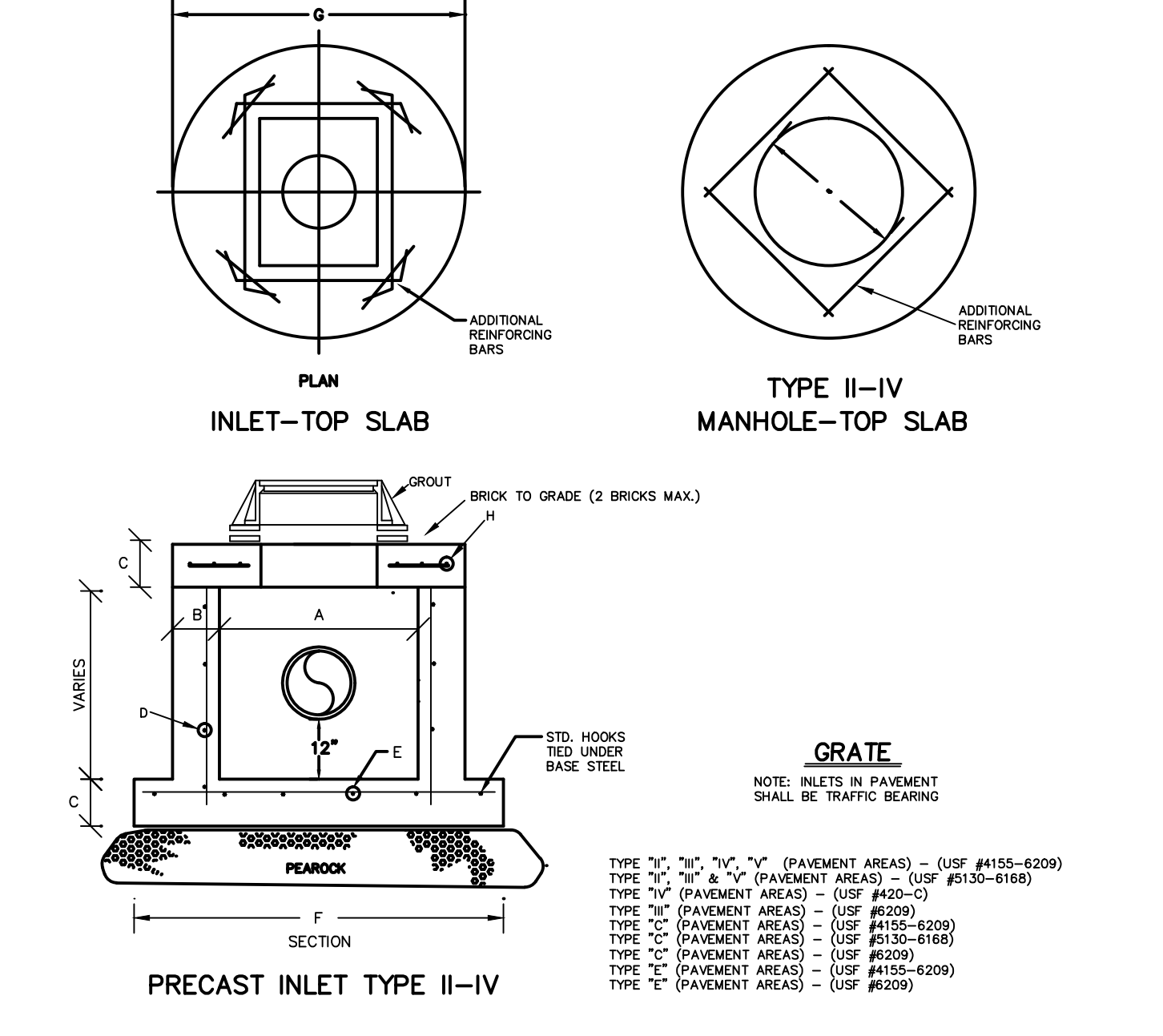
DATUM: NAVD 1988
CONVERSION TO NGVD 1929 (+1.56)



CITY OF COCONUT CREEK
UTILITIES AND ENGINEERING DEPARTMENT

CONCRETE HEADWALL DETAIL

Date	Revisions	Appr. by	Date: Dec. 1999	Scale: N.T.S.	Dwg: F310	Fig: 310



GENERAL NOTES:

- RECORD DRAWINGS SHALL INCLUDE ALL PERTINENT DRAINAGE AND PAVING INFORMATION.
- AN AutoCAD DIGITAL FILE CONTAINING ALL PERTINENT AS-BUILT INFORMATION (INCLUDING WATER, SEWER, PAVING, AND DRAINAGE) SHALL BE SUBMITTED TO CITY BY ENGINEER. FILE TO BE SPATIALLY LOCATED WITHIN THE STATE PLANE COORDINATES.
- ENGINEER SHALL COMPLY WITH ANY OTHER APPLICABLE AS-BUILT PLAN REQUIREMENTS.

CITY OF COCONUT CREEK
UTILITIES AND ENGINEERING DEPARTMENT

POLLUTION RETARDANT BAFFLE

Date	Revisions	Appr. by	Date: April 2005	Scale: N.T.S.	Dwg: F505	Fig: 505

NO.	DATE	BY

FILE NAME: 4633ENG

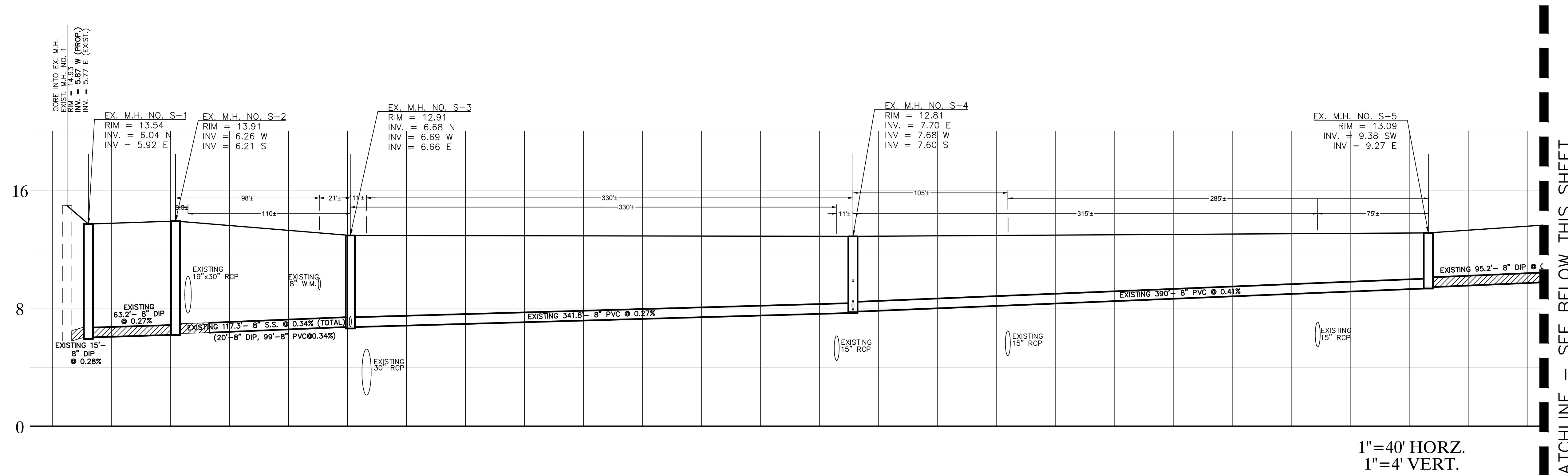
CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING - LAND PLANNING
LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561) 392-1991 / FAX (561) 750-1452

Paving, Drainage &
Drainage Details
Simonton
COCONUT CREEK
FLORIDA

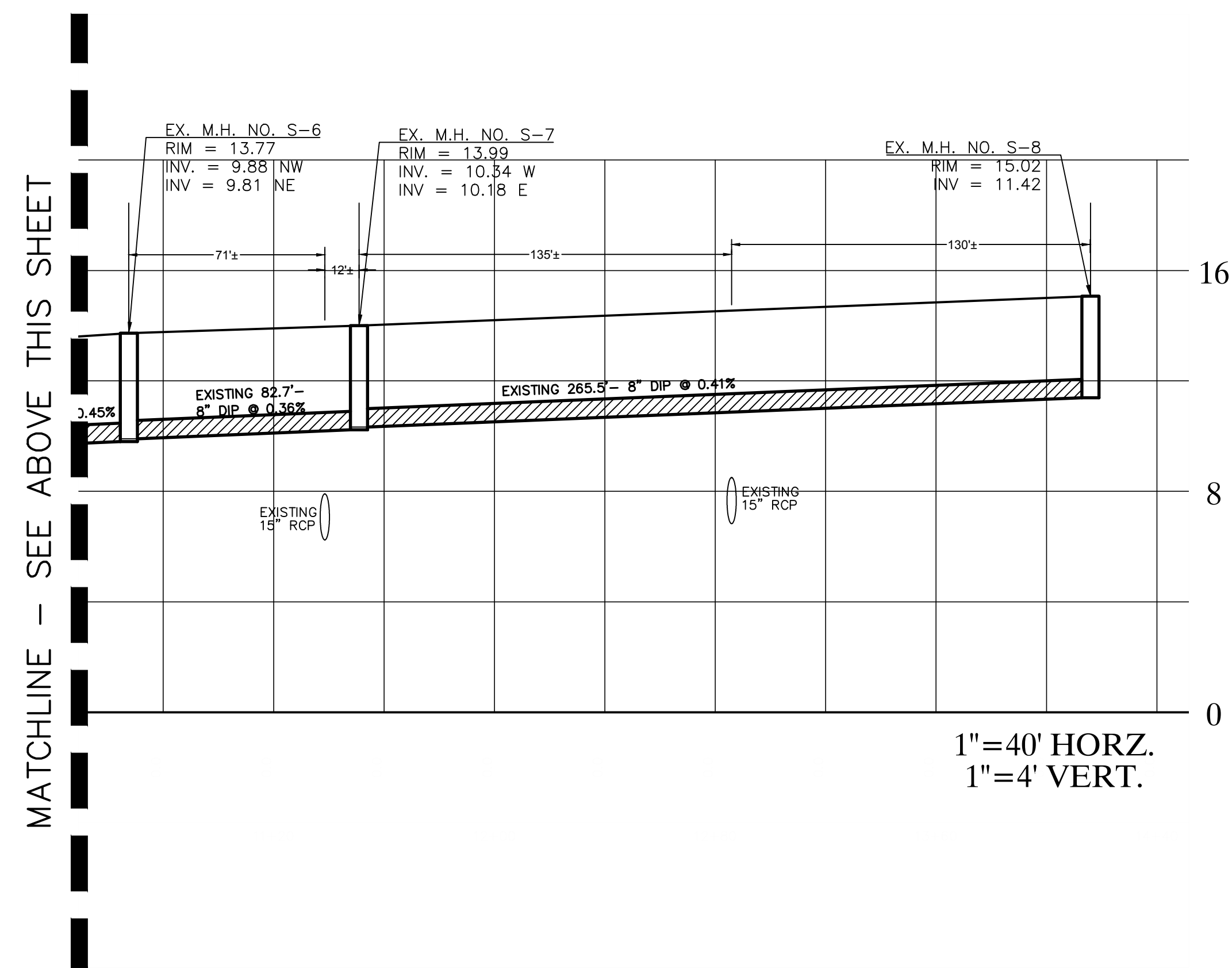
DATE 8-26-14
DRAWN BY BR
F.B./ PG. n/a
SCALE n/a

JOHN F. WHEELER
PROFESSIONAL ENGINEER
LICENSE NO. 25478
STATE OF FLORIDA
ENG. NO. EB-0003591
DATE

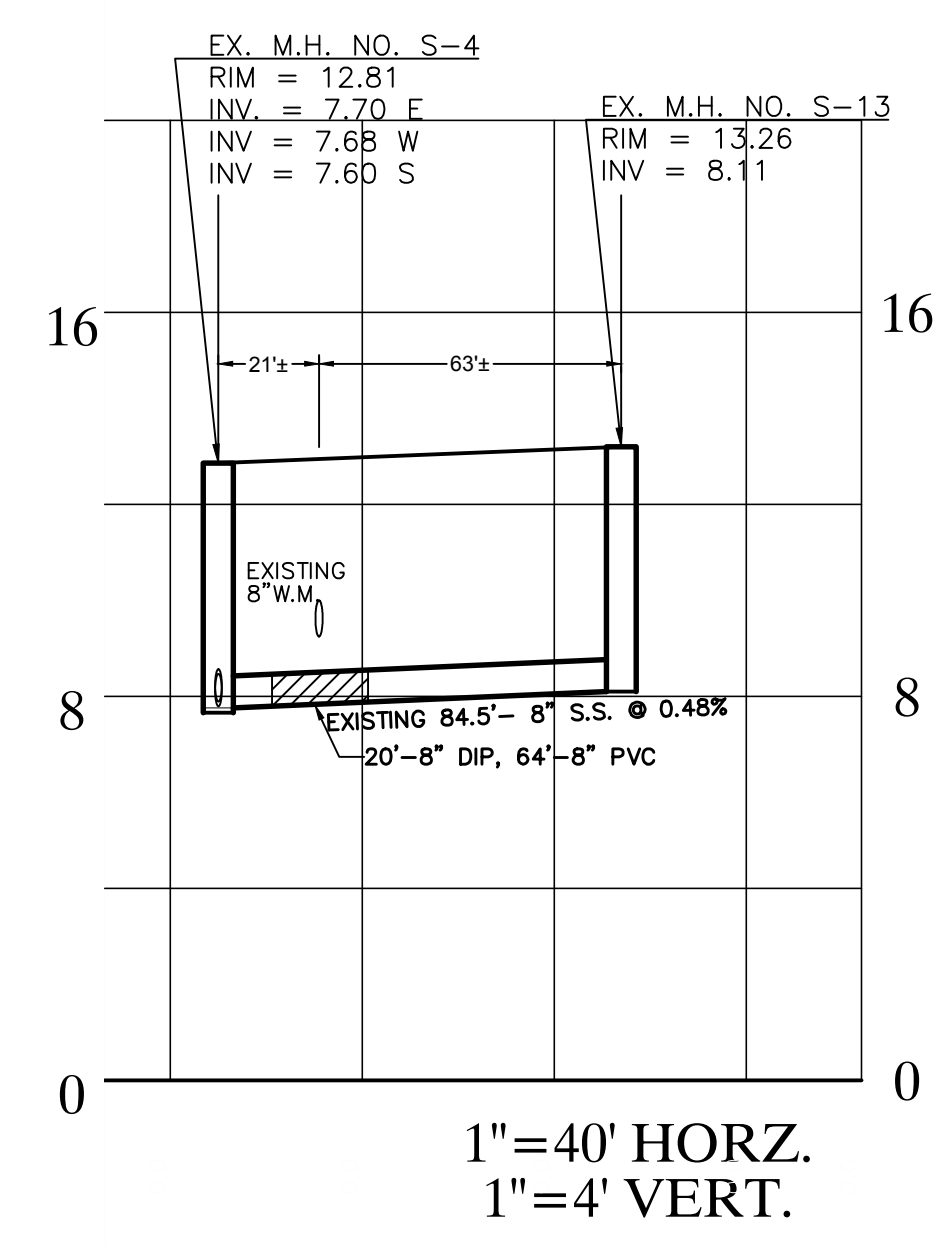
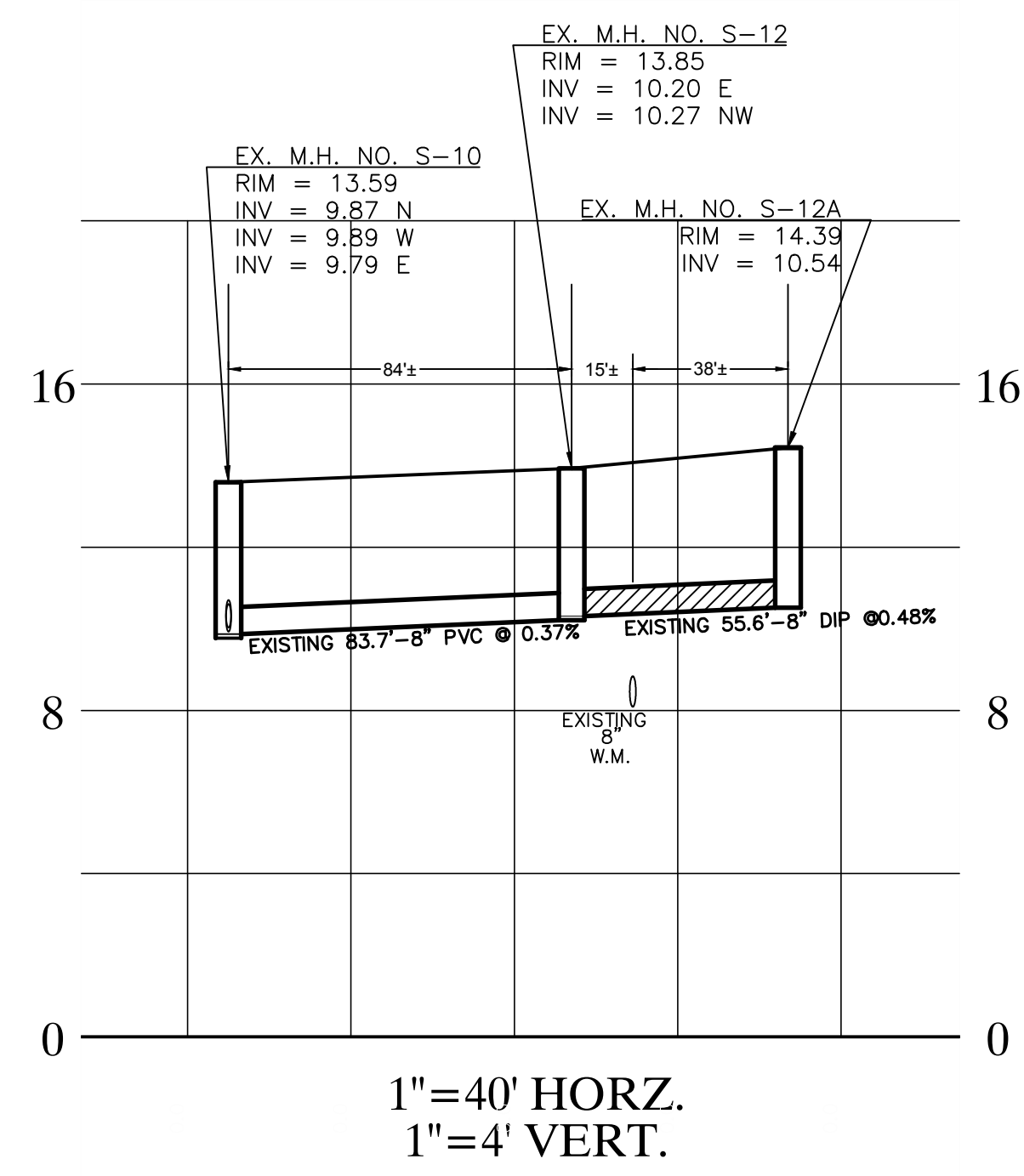
JOB # 4633
SHT. NO.
PD4
OF 13 SHEETS



MATCHLINE - SEE BELOW THIS SHEET



MATCHLINE - SEE ABOVE THIS SHEET



NO.	DATE	BY

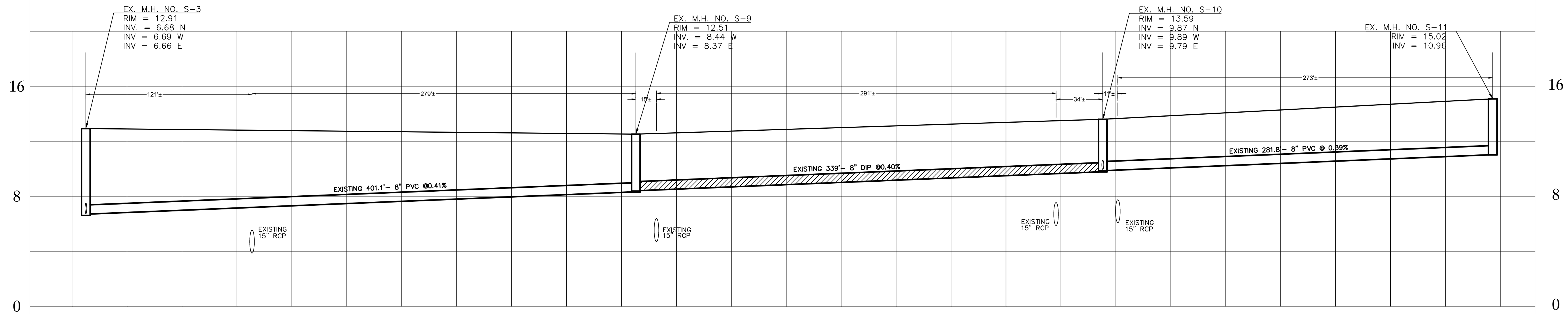
CAULFIELD & WHEELER, INC.
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 BOCA RATON, FLORIDA 33434
 PHONE (561) 392-1991 / FAX (561) 750-1452

Sanitary Sewer Profiles
Simonton
 COCONUT CREEK FLORIDA

DATE 8-26-14
 DRAWN BY BR
 F.B./ PG. n/a
 1"=40' HORZ.
 SCALE 1"=4' VERT.

JOHN F. WHEELER
 PROFESSIONAL ENGINEER
 LICENSE NO. 25478
 STATE OF FLORIDA
 ENG. NO. EB-0003591
 DATE

JOB # 4633
 SHT. NO.
WS2
 OF 13 SHEETS



1"=40' HORZ.
1"=4' VERT.

NO.	DATE	BY
1	11/30/05	EFE
REVISIONS		
REVISED PER CITY OF COCONUT CREEK	DATE	BY
FILE NAME: 4633ENG		

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 LANDSCAPE ARCHITECTURE - SURVEYING
 7900 GLADES ROAD - SUITE 100
 BOCA RATON, FLORIDA 33434
 PHONE (561) 392-1991 / FAX (561) 750-1452

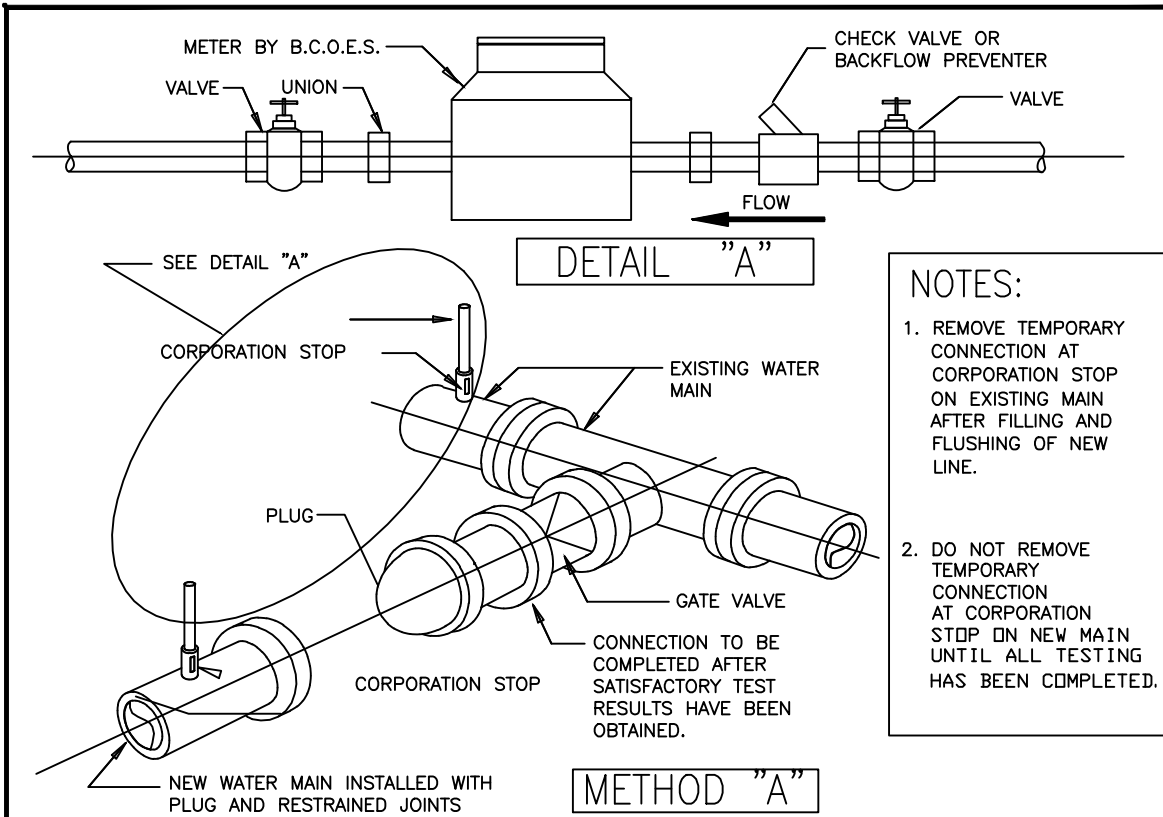


Sanitary Sewer Profiles
Simonton
 COCONUT CREEK FLORIDA

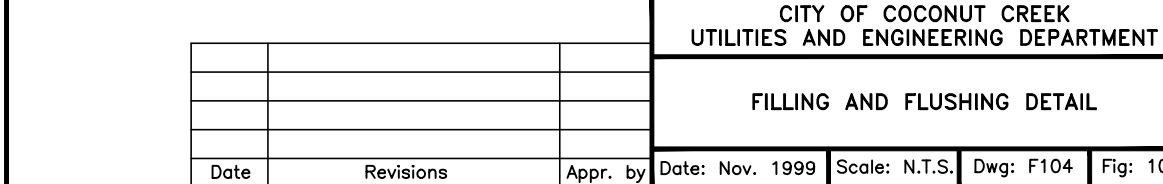
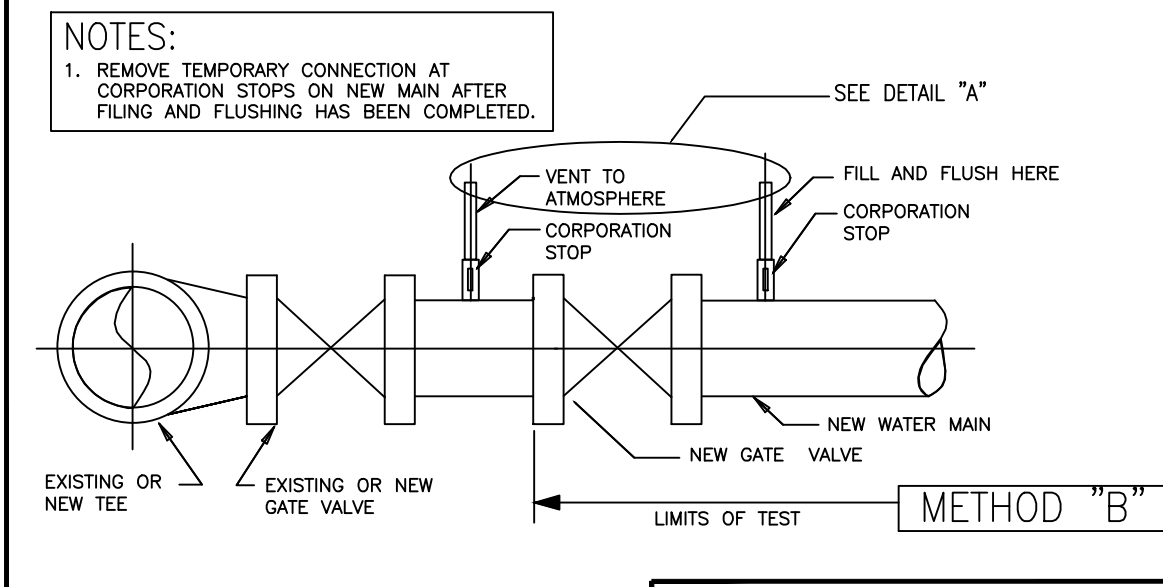
DATE 8-26-14
 DRAWN BY BR
 F.B./ PG. n/a
 SCALE 1"=40' HORZ
 1"=4' VERT.

JOHN F. WHEELER
 PROFESSIONAL ENGINEER
 LICENSE NO. 25478
 STATE OF FLORIDA
 ENG. NO. EB-0003591
 DATE

JOB # 4633
 SH.T. NO.
WS3
 OF 13 SHEETS

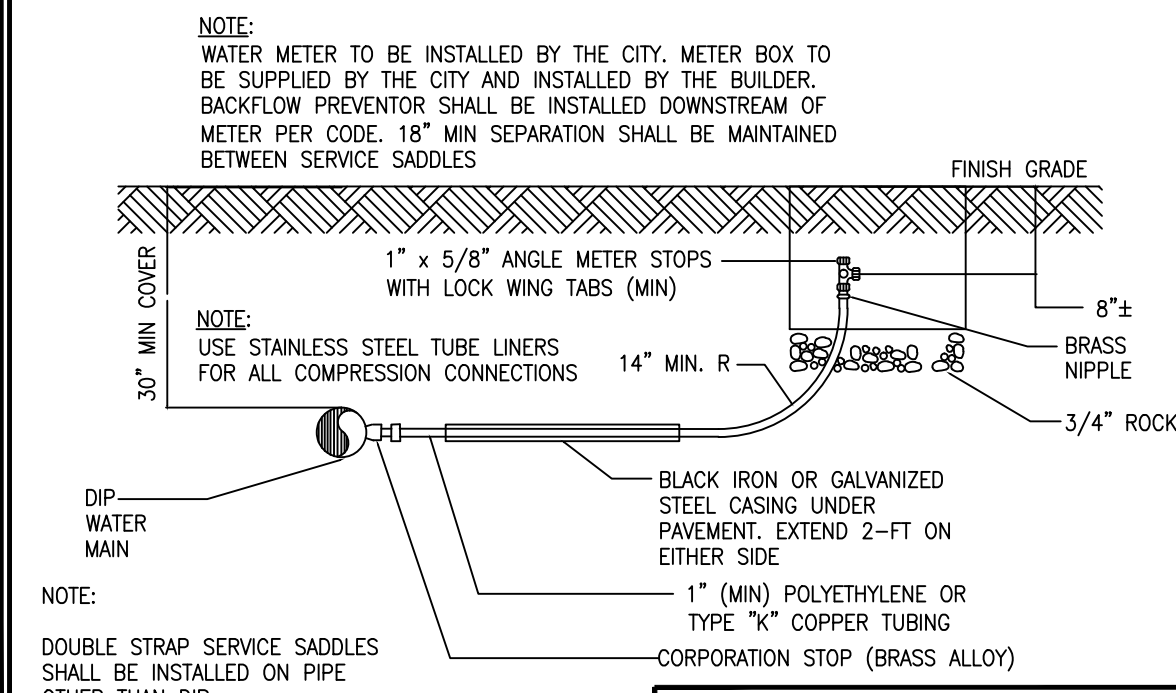
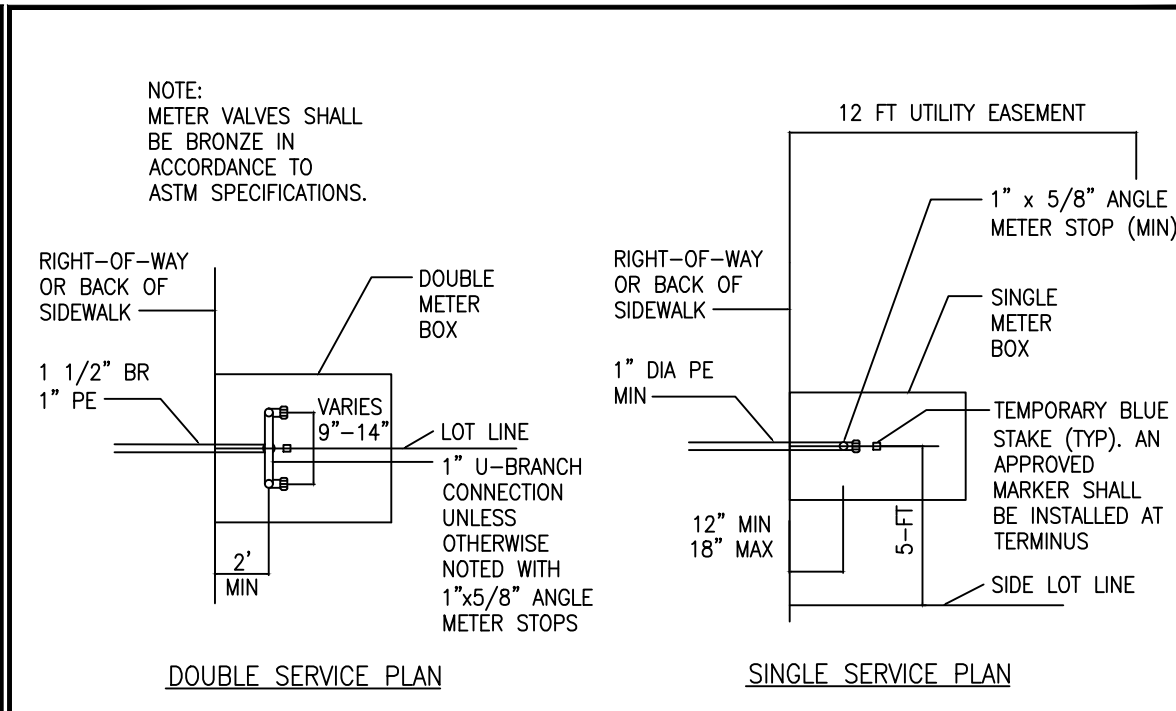


NOTES:
 1. REMOVE TEMPORARY CONNECTION AT CORPORATION STOP ON EXISTING MAIN AFTER FILLING AND FLUSHING OF NEW LINE.
 2. DO NOT REMOVE TEMPORARY CONNECTION AT CORPORATION STOP IN NEW MAIN UNTIL ALL TESTING HAS BEEN COMPLETED.



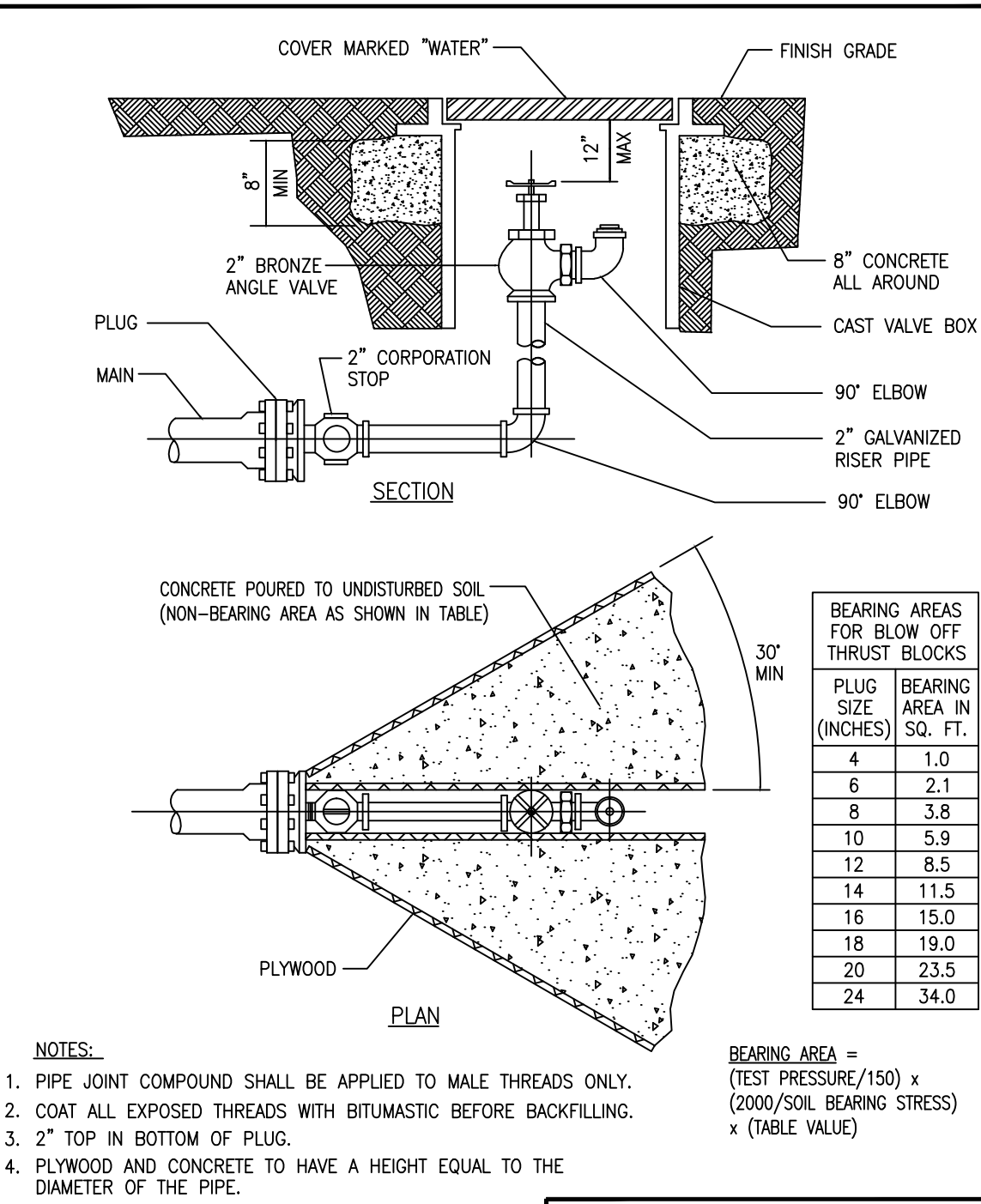
CITY OF COCONUT CREEK
 UTILITIES AND ENGINEERING DEPARTMENT
FILLING AND FLUSHING DETAIL

Date	Revisions	Appr. by	Date	Nov. 1999	Scale: N.T.S.	Dwg: F104	Fig: 104
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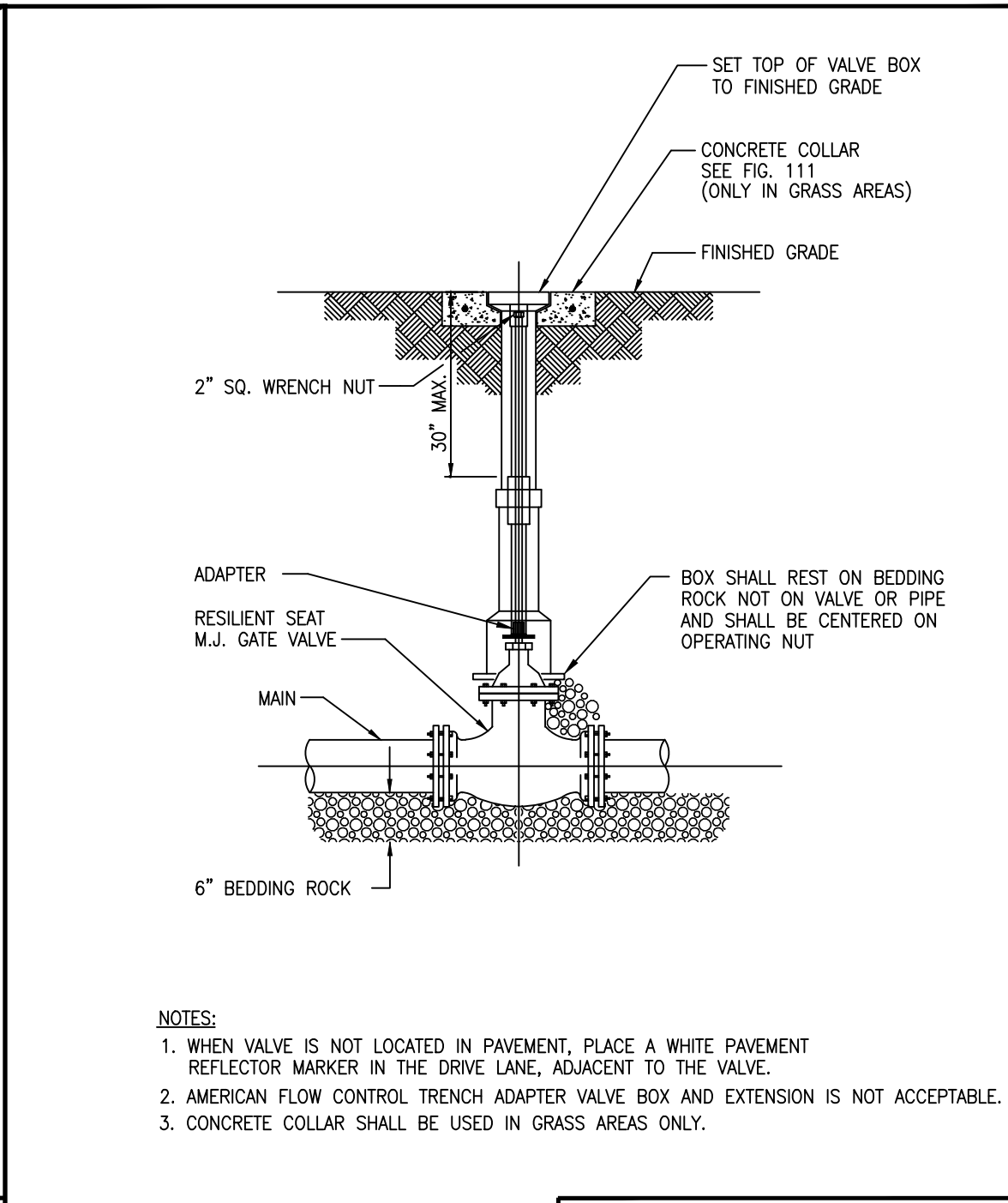
CITY OF COCONUT CREEK
 UTILITIES AND ENGINEERING DEPARTMENT
WATER SERVICE CONNECTION DETAILS

Date	Revisions	Appr. by	Date	Nov. 1999	Scale: N.T.S.	Dwg: F119	Fig: 119
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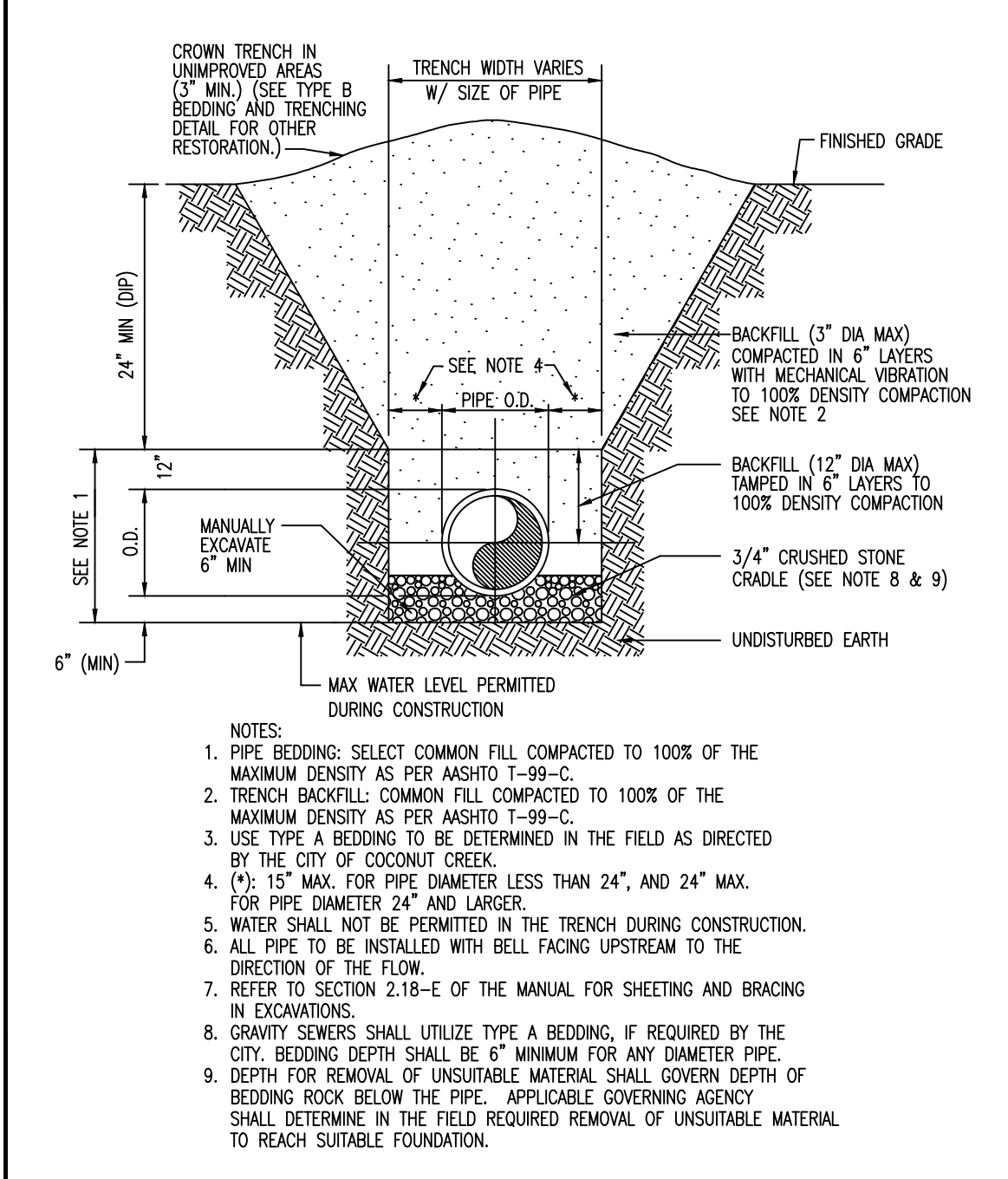
CITY OF COCONUT CREEK
 UTILITIES AND ENGINEERING DEPARTMENT
BLOW OFF VALVE DETAIL

Date	Revisions	Appr. by	Date	Nov. 1999	Scale: N.T.S.	Dwg: F117	Fig: 117
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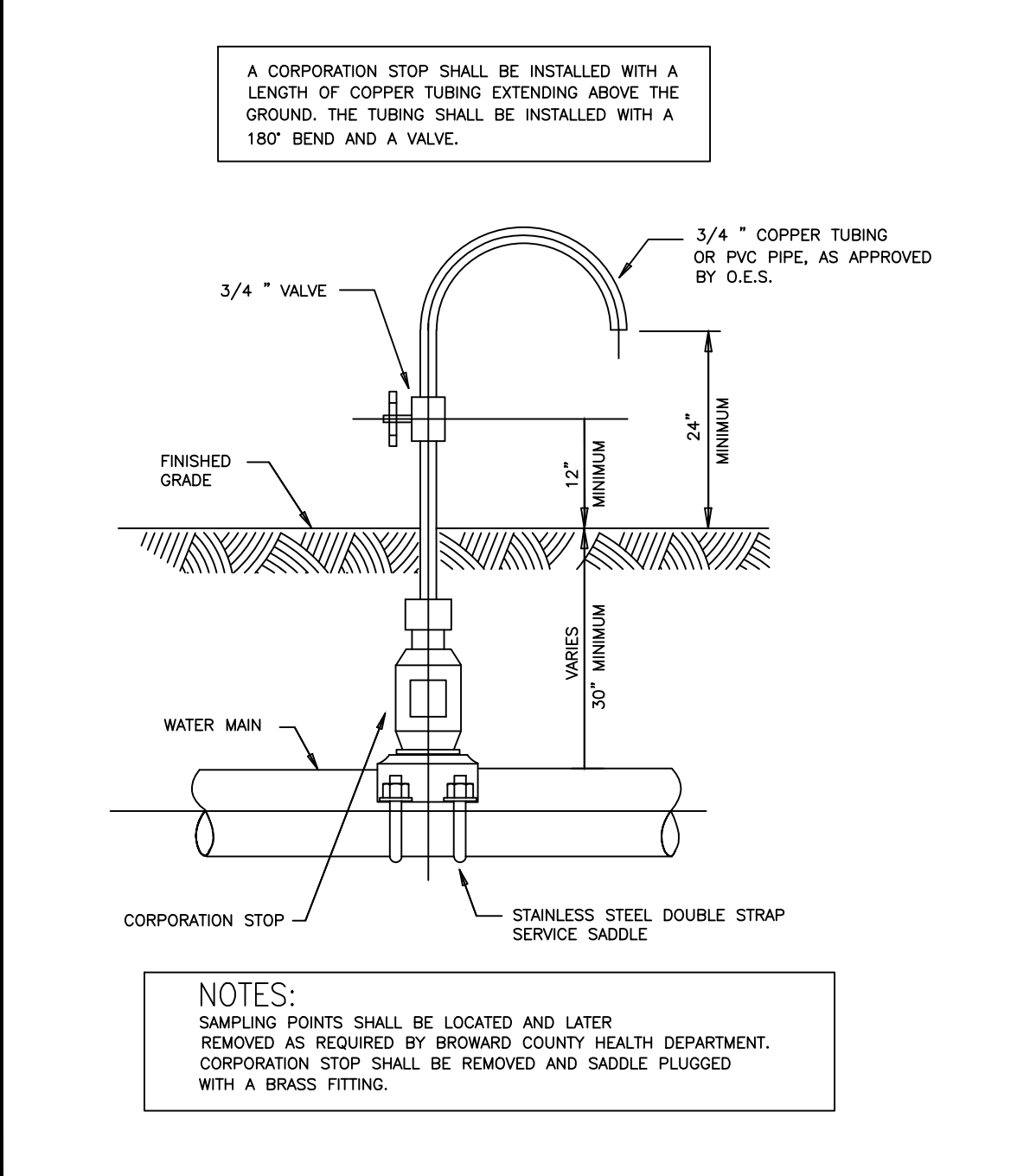
CITY OF COCONUT CREEK
 UTILITIES AND ENGINEERING DEPARTMENT
GATE VALVE AND BOX DETAIL

Date	Revisions	Appr. by	Date	Nov. 1999	Scale: N.T.S.	Dwg: F115	Fig: 115
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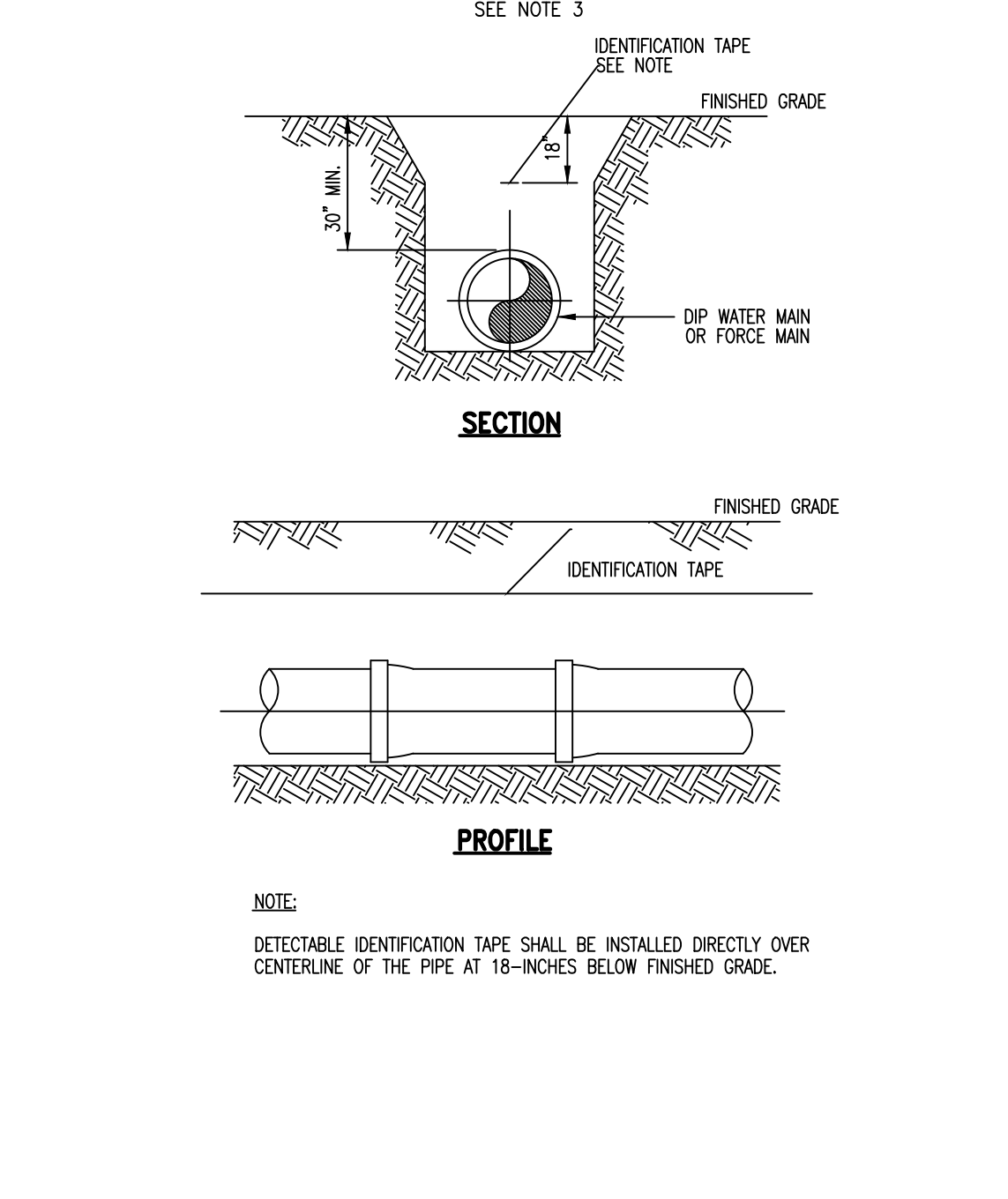
CITY OF COCONUT CREEK
 UTILITIES AND ENGINEERING DEPARTMENT
TYPE A BEDDING AND TRENCHING DETAIL

Date	Revisions	Appr. by	Date	Nov. 1999	Scale: N.T.S.	Dwg: F020	Fig: 020
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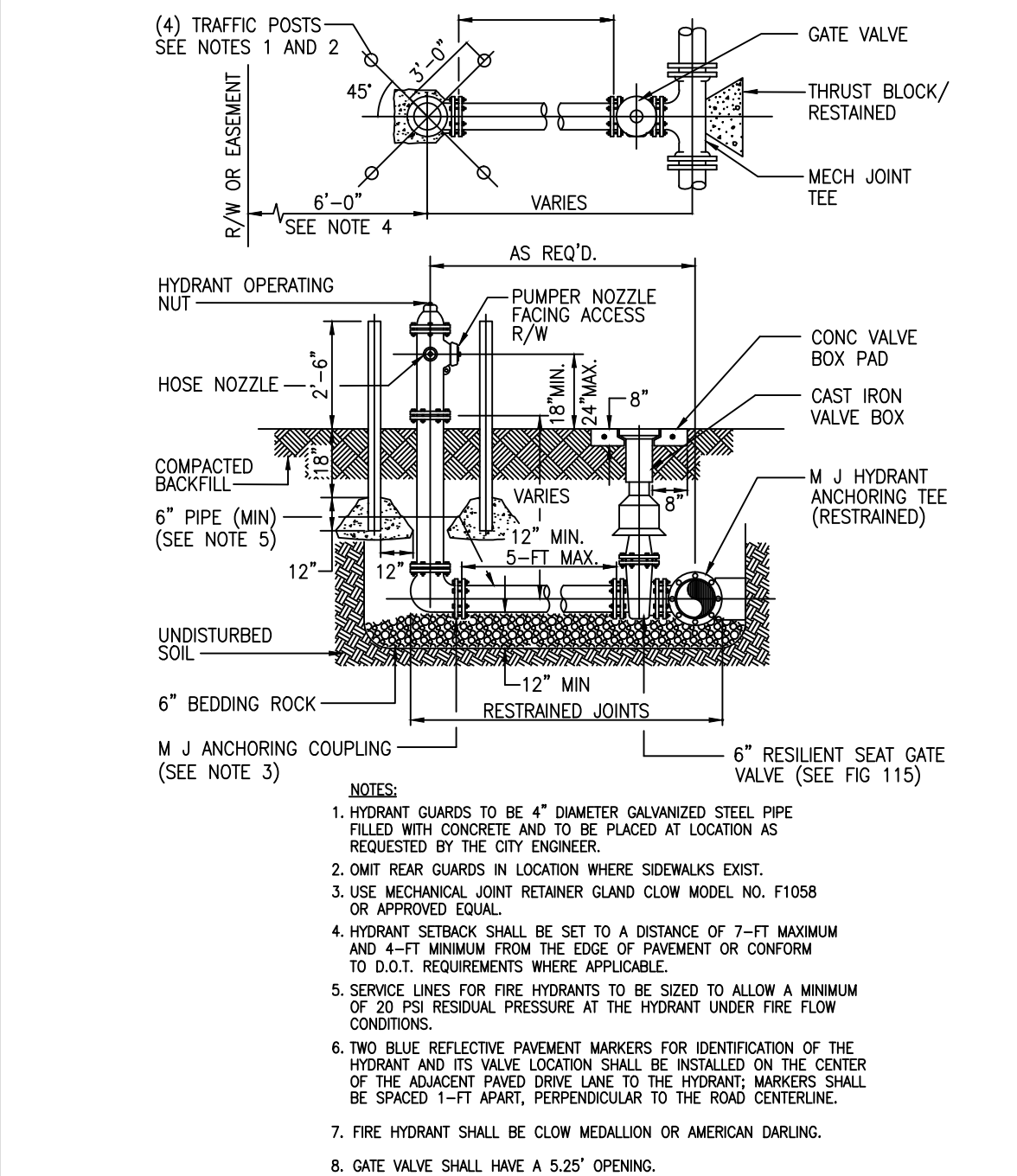
CITY OF COCONUT CREEK
 UTILITIES AND ENGINEERING DEPARTMENT
BACTERIOLOGICAL DETAIL

Date	Revisions	Appr. by	Date	Nov. 1999	Scale: N.T.S.	Dwg: F106	Fig: 106
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CITY OF COCONUT CREEK
 UTILITIES DEPARTMENT
LOCATING TAPE DETAIL

Date	Revisions	Appr. by	Date	Nov. 1999	Scale: N.T.S.	Dwg: F112	Fig: 112
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CITY OF COCONUT CREEK
 UTILITIES AND ENGINEERING DEPARTMENT
FIRE HYDRANT ASSEMBLY DETAIL

Date	Revisions	Appr. by	Date	Nov. 1999	Scale: N.T.S.	Dwg: F103	Fig: 103
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PRESSURE PIPE NOTES

- THERE SHALL BE 30" MINIMUM COVER FROM FINISHED GRADE TO TOP OF PIPE, AND 24" MINIMUM FOR WATER SERVICE LINE.
- DUCTILE IRON PIPE (DIP) THICKNESS SHALL CONFORM TO THE DEPARTMENT'S APPROVED MATERIAL LIST. POTABLE WATER DIP SHALL BE CEMENT LINED. FORCE MAIN DIP SHALL BE CERAMIC EPOXY LINING.
- ALL FITTINGS SHALL BE DUCTILE IRON WITH MECHANICAL JOINTS AND CEMENT OR CERAMIC EPOXY LINING.
- POTABLE WATER VALVES 10 INCHES AND SMALLER SHALL BE RESILIENT SEAT GATE VALVES AND SHALL BE IN CONFORMANCE WITH CITY OF COCONUT CREEK REQUIREMENTS. (ECCENTRIC PLUG VALVES, POTABLE WATER)
- ALL TRENCHING, PIPE-LAYING, BACKFILL, PRESSURE TESTING, AND DISINFECTION MUST COMPLY WITH ALL APPLICABLE FEDERAL, STATE, COUNTY AND HEALTH DEPARTMENT STANDARDS AND REGULATIONS.

NOTE:
 1. FIRE HYDRANT AND GATE VALVES RPM'S SHALL BE REPLACED IF DAMAGED (AS NEEDED).
 2. FIRE HYDRANT DETAIL SHALL HAVE A 5.25" OPENING.

REVISIONS	DATE	BY

CAULFIELD & WHEELER, INC.
 CIVIL ENGINEERING - LAND PLANNING
 LANDSCAPE ARCHITECTURE - SURVEYING
 7900 GLADES ROAD - SUITE 100
 BOCA RATON, FLORIDA 33434
 PHONE (561) 392-1991 / FAX (561) 750-4452

Water Distribution Details
Simonton
 COCONUT CREEK FLORIDA

DATE 8-26-14
 DRAWN BY BR
 F.B./PG. N/A
 SCALE N.T.S.

JOHN F. WHEELER
 PROFESSIONAL ENGINEER
 I.C. NO. 25478
 STATE OF FLORIDA
 ENG. NO. EB-0003591
 DATE

JOB # 4633
 SH.T.NO.
WS4
 OF 13 SHEETS

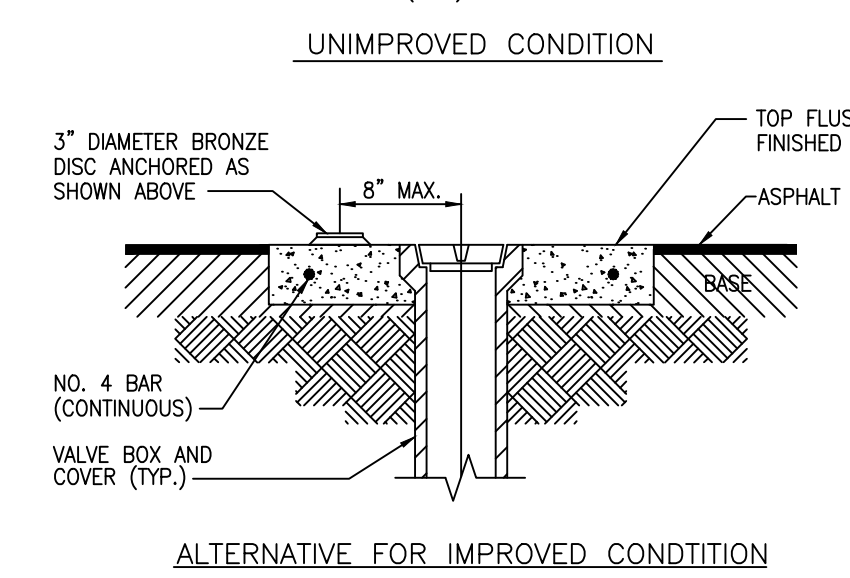
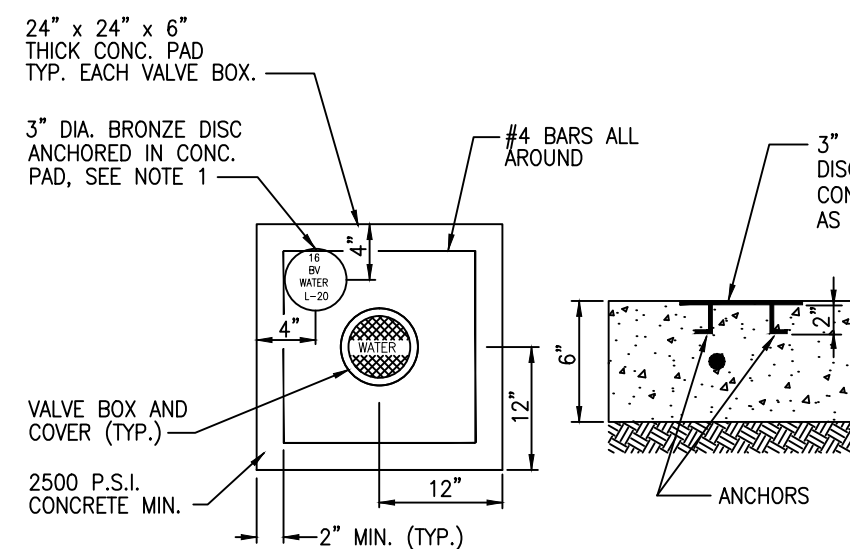
WATER DISTRIBUTION SYSTEM

GENERAL NOTES

- All work shall be done in accordance with the City of Coconut Creek Specifications and Requirements.
- No construction should be undertaken until it is assured that all required agency permits have been obtained, and that these plans conform to the requirements of such permits.
- Contractor shall notify owners of all existing utilities and obtain locations prior to construction.
- The location and depth of existing utilities shown on the approved plans are to be verified in the field by the Contractor. Any discrepancy in or variation from the approved plans is to be brought to the attention of the Engineer prior to construction of the water system.
- A pre-construction meeting is to be held prior to delivery of materials and initiation of any water and sewer construction. The meeting shall be attended by the City, Contractor, Engineer and other interested parties.
- Six (6) copies of all necessary shop drawings shall be submitted to the Engineer for approval prior to scheduling of the pre-construction meeting.
- All materials supplied by the project shall conform to the shop drawings as approved prior to construction. Substitute materials will not be approved after delivery to the job site. All requests for material substitution shall be approved prior to delivery of these materials to the job site.
- The Contractor shall be responsible at all times throughout the duration of construction for the protection of existing and newly installed utilities from damage or disruption of service. The Contractor shall be responsible for taking such measures as necessary to protect the health, safety and welfare of those persons having access to the work site.
- The Contractor shall schedule inspections and tests and notify Engineer a minimum of 24-48 hours in advance.
- If unsuitable material is encountered as determined by the Engineer, it shall be completely removed from the trench area and replaced with acceptable granular material.
- Upon completion of construction, a final inspection shall be done to verify proper adherence to all facets of the contract documents.
- Water Mains - Install AWWA/ANSI C151/A21 51-96 Ductile Iron Pipe, Class 51 cement lined and bituminous sealed and coated in accordance with AWWA/ANSI C104/A21 4-95.
- Minimum cover over water mains shall be thirty (30) inches, unless otherwise noted.
- Water Service - Install Polyethylene Plastic Tubing (ASTM-D2737) Class 160 SDR 9.0, and AWWA C901-96 service line to be pressure tested at 100 psi with no visible leakage.
- The end of the water service shall be marked by the contractor with 2" x 2" stake and electronic marker as manufactured by Automated Products Corp. of Austin, Texas, or approved equal.

- Hydrostatic and leakage tests shall be performed on water mains in accordance with AWWA C600-99. Length of test shall be 2 hours and test pressure shall be 150 psi. Allowable leakage shall not be greater than:

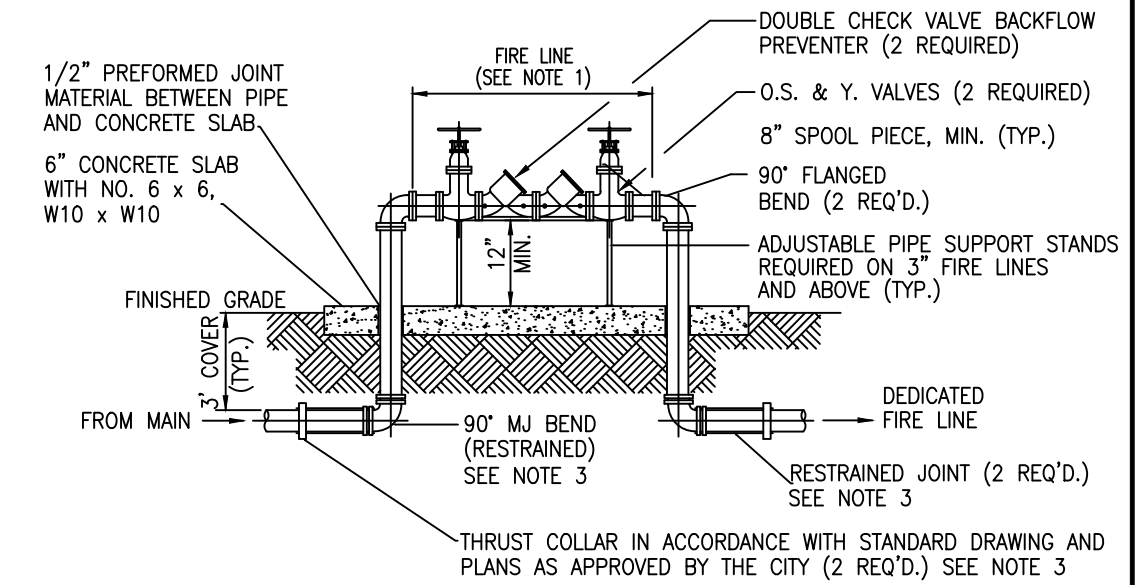
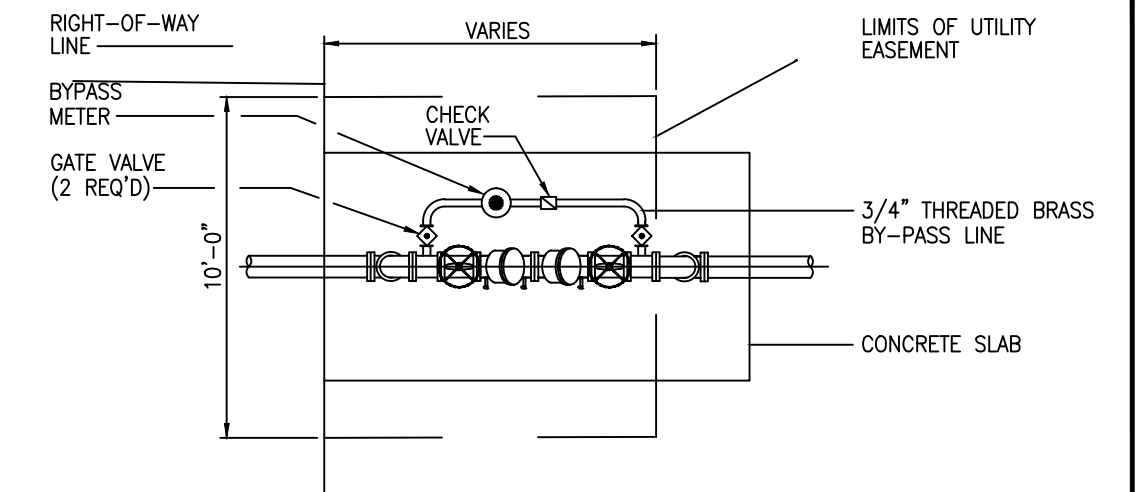
$$L = \frac{(S)(D)(P)}{133,200}$$
 Where L = Allowable Leakage (Gal/Hr)
 S = Length of Pipe Tested (Feet)
 D = Nominal Pipe Diameter (Inches)
 P = Average Test Pressure (P.S.I.G.)
- Disinfection of water main shall be in accordance with AWWA C651-99. Mains shall not be put into domestic service until the necessary bacteriological samples have been approved by the Broward County Health Department. Maximum distance between sample points shall be 1000'.
- Gate valves 4" and larger shall comply with AWWA Standard C500-93, have a maximum working pressure of 200 psi and be tested at 400 psi; and City requirements.
- Storm and sanitary sewers crossing under water mains shall be laid to provide a minimum vertical distance of eighteen (18) inches between the invert of the upper pipe and the crown of the lower pipe. Where this minimum separation cannot be maintained, the crossing shall be arranged so that the sewer pipe joints and water main joints are equidistant from the point of crossing with no less than ten (10) feet between any two joints and both pipes shall be D.I.P. Where there is not alternative to sewer pipes crossing over a water main, the criteria for minimum separation between lines and joints in the above shall be required and both pipes shall be D.I.P. irrespective of separation. D.I.P. is not required for storm sewer.
- Maintain ten (10) feet horizontal distance between water main and storm or sanitary sewer main, as a minimum.
- Force main crossing water main shall be laid to provide a minimum vertical distance of eighteen (18) inches between the outside of the force main and outside of the water main with water main crossing over the force main.
- The contractor shall guarantee to the satisfaction of the City of Coconut Creek, Florida all materials and workmanship for one year from the date of acceptance.
- Hydrostatic Testing shall be maximum 2000 feet of pipe.
- Corporation stops for all 2 inch or less service connection shall be brass alloy type ASTM B-62 latest revision.
- Service line shall be tested at 100 psi with no visible leaks.
- Service lines shall be less than 2".
- The contractor shall be responsible for obtaining locations from all other utility facilities, prior to construction.
- All applicable permits must be obtained prior to commencement of construction (DOT, Health Department, County Engineer, etc.).
- No connection to or any other construction shall be performed on an existing department owned or maintained main or structure without the presence of a department inspector.
- Facilities proposed herein shall be constructed in accordance with the approved plans and the department's minimum standards. Conflicts between the preceding documents should be called to the attention of the department for resolution. Deviations from the approved plans must be approved in advance by the department.
- Upon completion of construction, a final inspection shall verify proper adherence to all facets of the plans and specifications.



NOTES:

- BRONZE DISC TO BE SUPPLIED BY CITY.
- AMERICAN FLOW CONTROL TRENCH ADAPTER VALVE BOX AND EXTENSION IS NOT ACCEPTABLE.
- CONCRETE COLLAR SHALL BE USED IN GRASS AREAS ONLY.

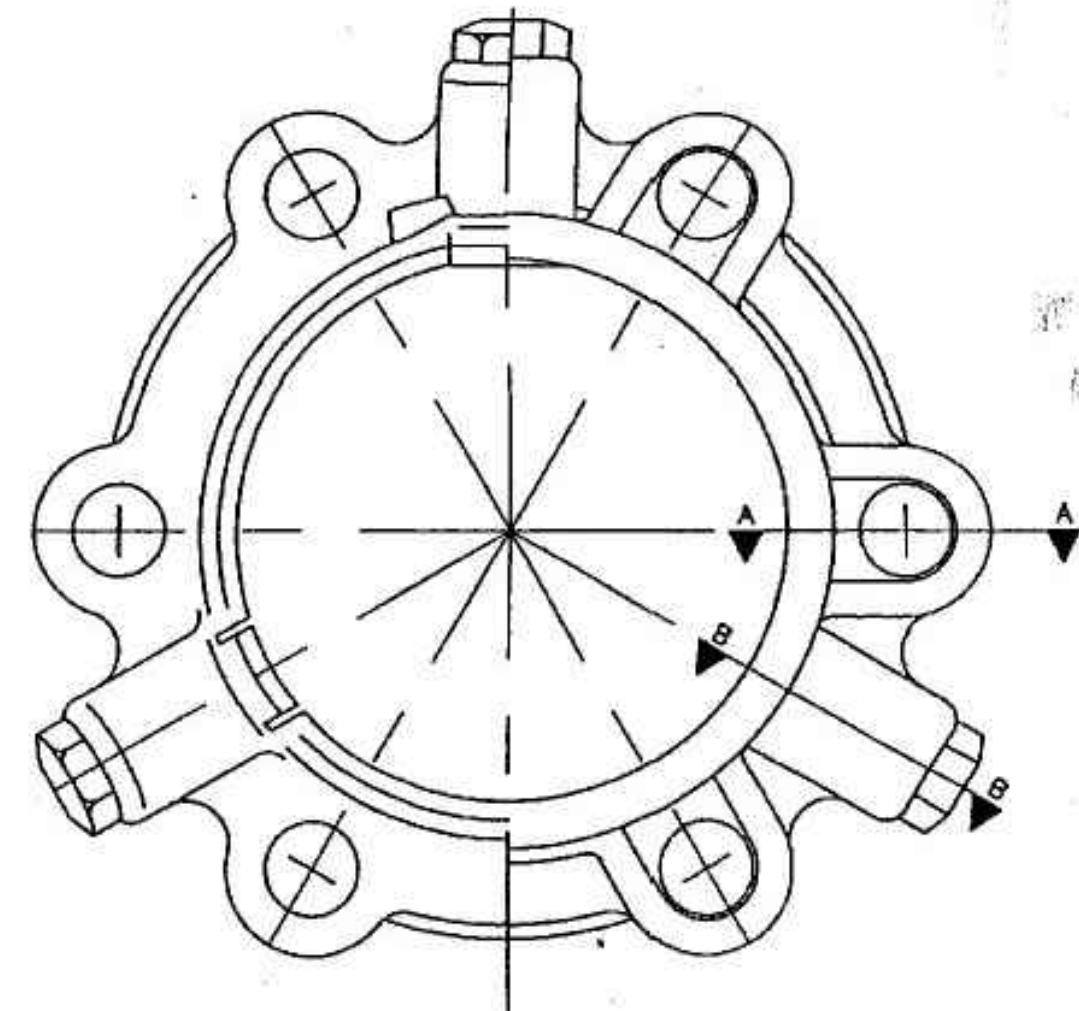
Date		Revisions		Appr. by		Date: Nov. 1999		Scale: N.T.S.		Dwg: F111		Fig: 111	
CITY OF COCONUT CREEK UTILITIES AND ENGINEERING DEPARTMENT VALVE COLLAR DETAIL													



NOTES:

- ALL PIPE AND FITTINGS 2" AND SMALLER SHALL BE THREADED BRASS.
- ALL PIPE FITTINGS 4" DIA. AND LARGER SHALL BE CEMENT-LINED DUCTILE IRON WITH FLANGED FITTINGS FOR ABOVEGROUND USE. MECHANICAL JOINT FITTINGS SHALL BE USED UNDERGROUND.
- MEGALUGS, OR EQUAL, CAN BE USED IN PLACE OF RESTRAINED JOINTS ON ALL UNDERGROUND PIPING.
- PAINT ALL ABOVEGROUND DUCTILE PIPING, FITTINGS AND VALVES.

Date		Revisions		Appr. by		Date: Nov. 1999		Scale: N.T.S.		Dwg: F121		Fig: 121	
CITY OF COCONUT CREEK UTILITIES AND ENGINEERING DEPARTMENT FIRELINE DOUBLE DETECTOR CHECK VALVE ASSEMBLY													



MEGALUG SPECIFICATIONS AND DATA

LISTINGS AND APPROVALS FOR SERIES 1100 MEGALUG SIZES 3" THROUGH 24" ARE LISTED BY UNDERWATER'S LABORATORIES, INC., CATEGORY HJKF "FITTINGS, RETAINER TYPE," WITH A DEFLECTION ANGLE OF 5'. THE LISTING FILE NUMBER IS EX2836. SIZES 3" THROUGH 12" ARE FACTORY MUTUAL APPROVED.

MECHANICAL JOINT RESTRAINT SHALL BE INCORPORATED IN THE DESIGN OF THE FOLLOWER GLAND AND SHALL INCLUDE A RESTRAINING MECHANISM WHICH, WHEN ACTUATED, IMPARTS MULTIPLE WEDGING ACTION AGAINST THE PIPE, INCREASING ITS RESISTANCE AS THE PRESSURE INCREASES. FLEXIBILITY OF THE JOINT SHALL BE MAINTAINED AFTER BURIAL. GLANDS SHALL BE MANUFACTURED OF DUCTILE IRON CONFORMING TO ASTM A 536-90. RESTRAINING DEVICES SHALL BE OF DUCTILE IRON HEAT TREATED TO A MINIMUM HARDNESS OF 370 BHN. DIMENSIONS OF THE GLAND SHALL BE SUCH THAT IT CAN BE USED WITH THE STANDARDIZED MECHANICAL JOINT BELL AND TEE-HEAD BOLTS CONFORMING TO AHS/AWWA A21.1 AND AHS/AWWA C153/A21.53 OF LATEST REVISION. TWIST-OFF NUTS SHALL BE USED TO INSURE PROPER ACTUATING OF THE RESTRAINING DEVICES. THE MECHANICAL JOINT RESTRAINT DEVICE SHALL HAVE A WORKING PRESSURE OF AT LEAST 250 PSI WITH A MINIMUM SAFETY FACTOR OF 2:1 AND SHALL BE EBAA IRON, INC., MEGALUG OR EQUAL.

FOR TEST PRESSURES ABOVE THE RATED PRESSURES SHOWN, CONSULT THE ENGINEERING DEPARTMENT OF EBAA IRON, INC., FOR RECOMMENDATIONS. EBAA-SEAL GASKETS ARE PROVIDED WITH THE 30" THROUGH 48" MEGALUGS. ALSO PROVIDED WITH THE 42" AND 48" SIZES ARE EXTRA LENGTH T-BOLTS. THE GASKETS AND BOLTS ARE PROVIDED TO FACILITATE EASIER ASSEMBLY OF THE MECHANICAL JOINT AND ARE REQUIRED ON THE ABOVE REFERENCED SIZES TO OBTAIN THE PRESSURE RATINGS AND SAFETY FACTORS SHOWN. FOR PROJECTS USING LARGE DIAMETER RESTRAINTS, PLEASE CONTACT THIS OFFICE FOR OUR DESIGN RECOMMENDATIONS.

SERIES	C	D	F	J	M	X	NO. OF WEDGES	NO. OF BOLTS	P	W/NUTS TWISTED OFF	K ₂
1103	4.84	2.27	4.06	6.18	0.62	3/4	2	4	9.36	9.06	7.69
1104	5.92	2.27	4.90	7.50	0.75	3/4	2	4	10.20	9.80	8.12
1106	6.02	2.27	7.00	9.50	0.88	3/4	3	8	12.30	12.00	11.12
1108	10.17	2.31	9.15	11.75	1.00	3/4	4	8	14.45	14.15	13.37
1110	12.22	2.37	11.20	14.00	1.00	3/4	8	8	16.50	16.20	15.82
1112	14.32	2.37	13.30	16.25	1.00	3/4	8	8	18.60	18.30	17.89
1114	16.40	2.69	15.44	18.75	1.50	3/4	10	10	20.64	20.34	20.26
1116	18.50	2.69	17.54	21.00	1.56	3/4	12	12	22.80	22.50	22.50
1118	20.60	2.69	19.84	23.25	1.83	3/4	12	12	24.70	24.40	24.78
1120	22.70	2.69	21.74	25.50	1.69	3/4	14	14	26.80	27.10	27.00
1124	26.90	2.72	25.94	30.00	1.81	3/4	16	16	32.94	32.64	31.50
1130	33.29	3.38	32.17	36.88	2.25	1 1/4	20	20	39.17	38.87	39.12
1136	39.59	3.38	38.47	43.75	2.25	1 1/4	24	24	45.47	45.17	45.00
1142	45.79	4.56	44.87	50.62	3.00	1 1/2	28	28	55.87	55.57	55.60
1148	52.09	4.56	50.97	57.50	3.00	1 1/2	32	32	62.17	61.87	60.38

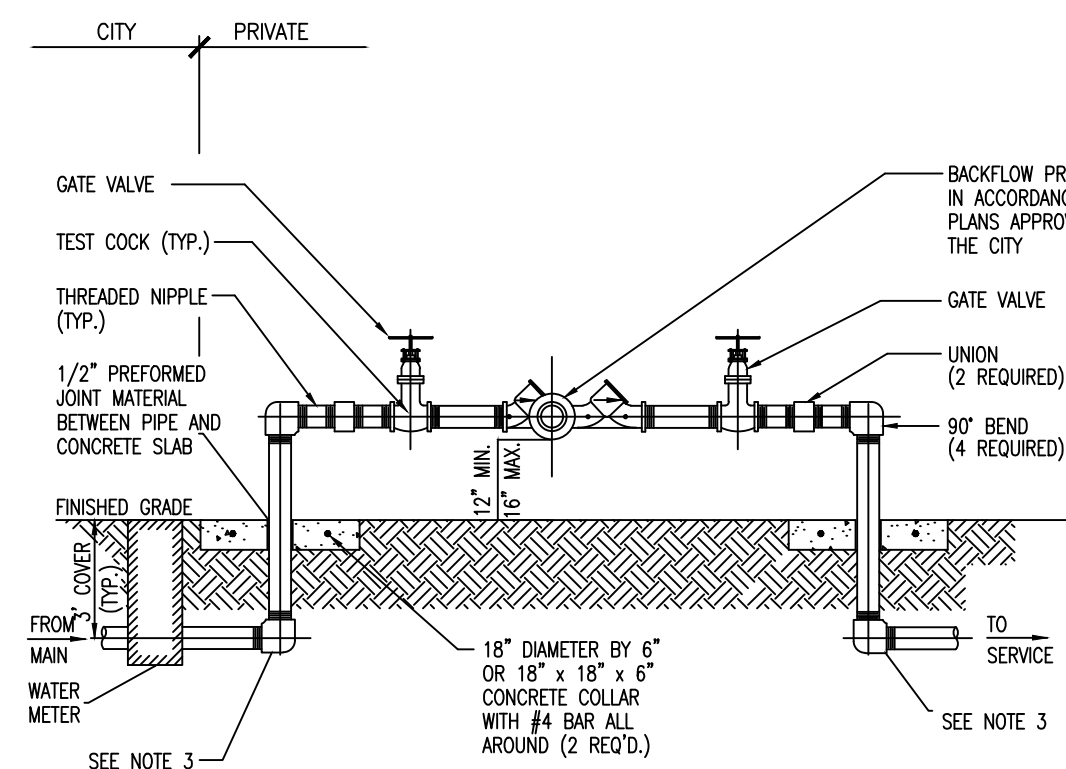
ALL DIMENSIONS ARE IN INCHES AND ARE SUBJECT TO CHANGE WITHOUT NOTICE

	MINIMUM LENGTH (FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S) *										
	6"	8"	10"	12"	16"	20"	24"	30"	36"		
90° BEND	54"	54"	54"	72"	72"	90"	90"	90"	90"		
45° BEND	54"	54"	54"	72"	72"	90"	90"	90"	90"		
22-1/2° BEND	36"	36"	36"	54"	54"	54"	54"	54"	54"		
11-1/4° BEND	36"	36"	36"	54"	54"	54"	54"	54"	54"		
TEE	54"	54"	54"	72"	72"	90"	90"	90"	90"		
DEAD END	72"	72"	108"	108"	154"	154"	172"	180"	270"		

NOTES:

- FITTINGS SHALL BE RESTRAINED JOINTS UNLESS OTHERWISE INDICATED.
- INSTALL FULL LENGTH JOINTS WITH TOTAL LENGTH EQUAL TO OR GREATER THAN SHOWN IN THE TABLE.
- WHERE TWO OR MORE FITTINGS ARE TOGETHER, USE FITTING WHICH YIELDS GREATEST LENGTH OF RESTRAINED PIPE.
- IN LINE VALVES AND THROUGH RUN OF TEES OUTSIDE LIMITS OF RESTRAINED JOINTS FROM OTHER FITTINGS NEED NOT BE RESTRAINED UNLESS OTHERWISE INDICATED.
- LENGTHS SHOWN IN THE TABLE HAVE BEEN CALCULATED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE AS PUBLISHED BY DIPRA, WITH THE FOLLOWING ASSUMPTIONS:
 WORKING PRESSURE: 150 P.S.I.
 SOIL DESIGNATION: GOOD SAND
 LAYING CONDITIONS: TYPE 2
- FOR PIPE ENCASED IN POLYETHYLENE, USE VALUES GIVEN IN PARENTHESES OR INCREASE THE GIVEN VALUE BY A FACTOR OF 1.5.

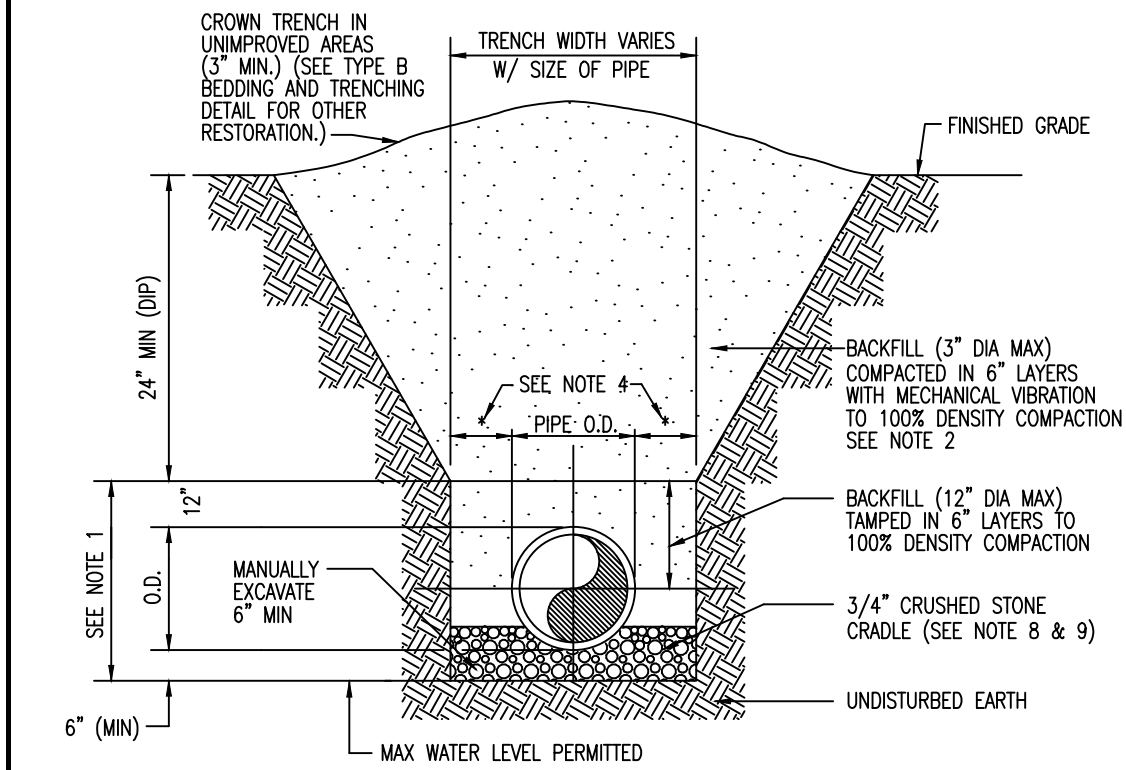
Date		Revisions		Appr. by		Date: Nov. 1999		Scale: N.T.S.		Dwg: F108		Fig: 108	
CITY OF COCONUT CREEK UTILITIES AND ENGINEERING DEPARTMENT RESTRAINED PIPE DETAIL													



NOTES:

- ALL PIPE AND FITTINGS 2" AND SMALLER SHALL BE THREADED BRASS, AS SHOWN. ALL 3" PIPE TO BE GALVANIZED STEEL.
- ALL PIPE FITTINGS LARGER THAN 4" SHALL BE CEMENT-LINED DUCTILE IRON WITH FLANGED FITTINGS FOR ABOVEGROUND USE. MECHANICAL JOINT FITTINGS SHALL BE USED UNDERGROUND WITH RESTRAINED JOINTS AND THRUST COLLARS.
- MEGALUGS, OR EQUAL, CAN BE USED IN PLACE OF RESTRAINED JOINTS ON ALL UNDERGROUND DUCTILE IRON PIPING (4" AND LARGER).
- PAINT ALL ABOVEGROUND DUCTILE PIPING, FITTINGS AND VALVES.
- METER VALVES SHALL BE BRONZE IN ACCORDANCE TO ASTM SPECIFICATIONS.

Date		Revisions		Appr. by		Date: Nov. 1999		Scale: N.T.S.		Dwg: F120		Fig: 120	
CITY OF COCONUT CREEK UTILITIES AND ENGINEERING DEPARTMENT REDUCED PRESSURE BACKFLOW PREVENTER													



NOTES:

- PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 100% OF THE MAXIMUM DENSITY AS PER ASTM D-99-C.
- TRENCH BACKFILL: COMMON FILL COMPACTED TO 100% OF THE MAXIMUM DENSITY AS PER ASTM D-99-C.
- USE TYPE A BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CITY OF COCONUT CREEK.
- 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
- WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
- ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
- REFER TO SECTION 2.18-E OF THE MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.
- GRAVITY SEWERS SHALL UTILIZE TYPE A BEDDING, IF REQUIRED BY THE CITY. BEDDING DEPTH SHALL BE 6" MINIMUM FOR ANY DIAMETER PIPE.
- DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. APPLICABLE GOVERNING AGENCY SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.

Date		Revisions		Appr. by		Date: Nov. 1999		Scale: N.T.S.		Dwg: FO20		Fig: 020	
CITY OF COCONUT CREEK UTILITIES AND ENGINEERING DEPARTMENT TYPE A BEDDING AND TRENCHING DETAIL													

DATE	8-26-14
BY	BR
PG.	N/A
SCALE	N.T.S.

CAULFIELD & WHEELER, INC.
 CIVIL ENGINEERING - LAND PLANNING
 LANDSCAPE ARCHITECTURE - SURVEYING
 7900 GLADES ROAD - SUITE 100
 BOCA RATON, FLORIDA 33434
 PHONE (561)-392-1991 / FAX (561)-750-4452

Water Distribution Details
 Simonton
 COCONUT CREEK
 FLORIDA

DATE	8-26-14
BY	BR
PG.	N/A
SCALE	N.T.S.

JOHN F. WHEELER
 PROFESSIONAL ENGINEER
 I.C. NO. 25478
 STATE OF FLORIDA
 ENG. NO. EB-0003591
 DATE

JOB # 4633
 SHT. NO.
 WS5
 OF 13 SHEETS

