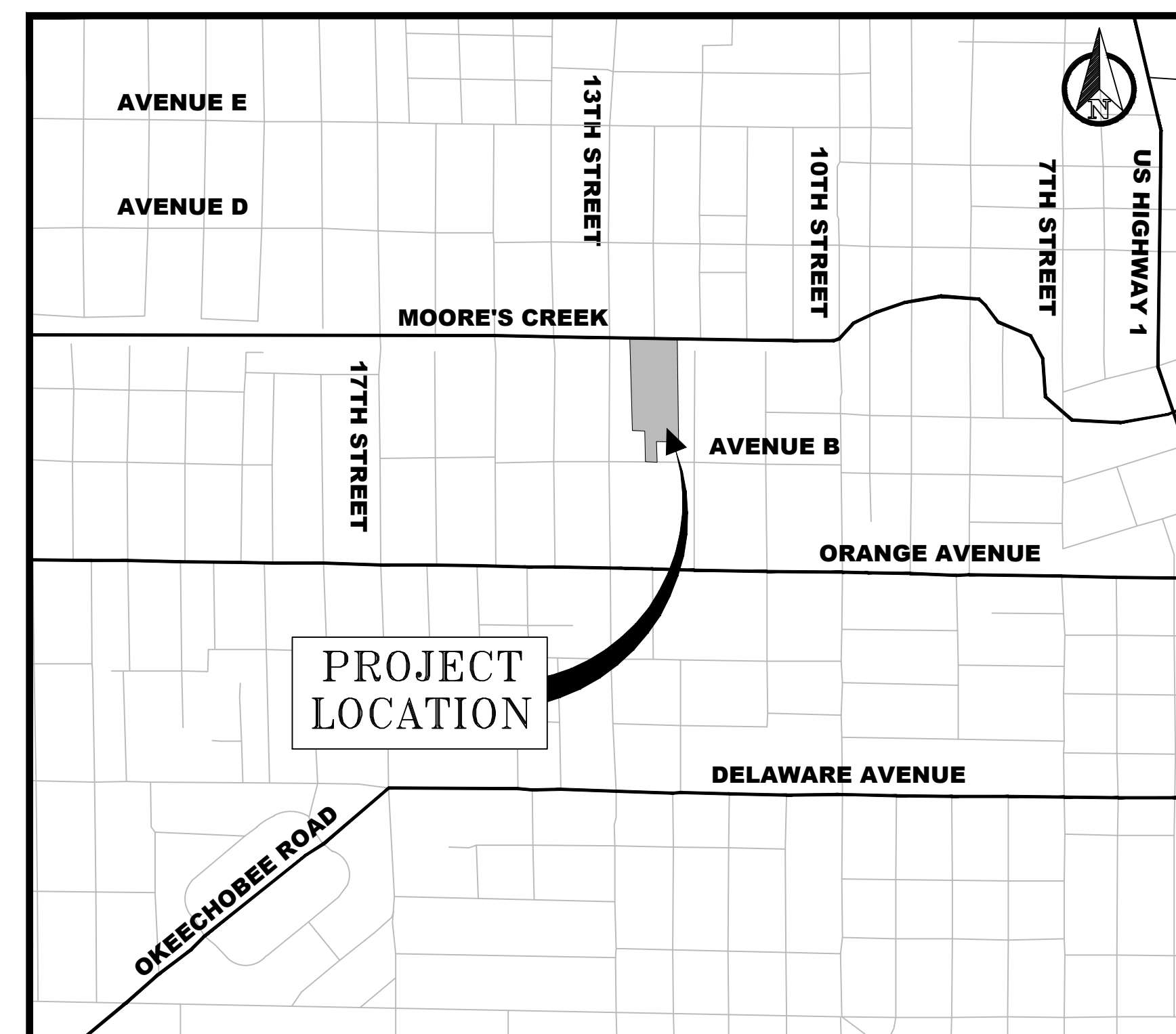
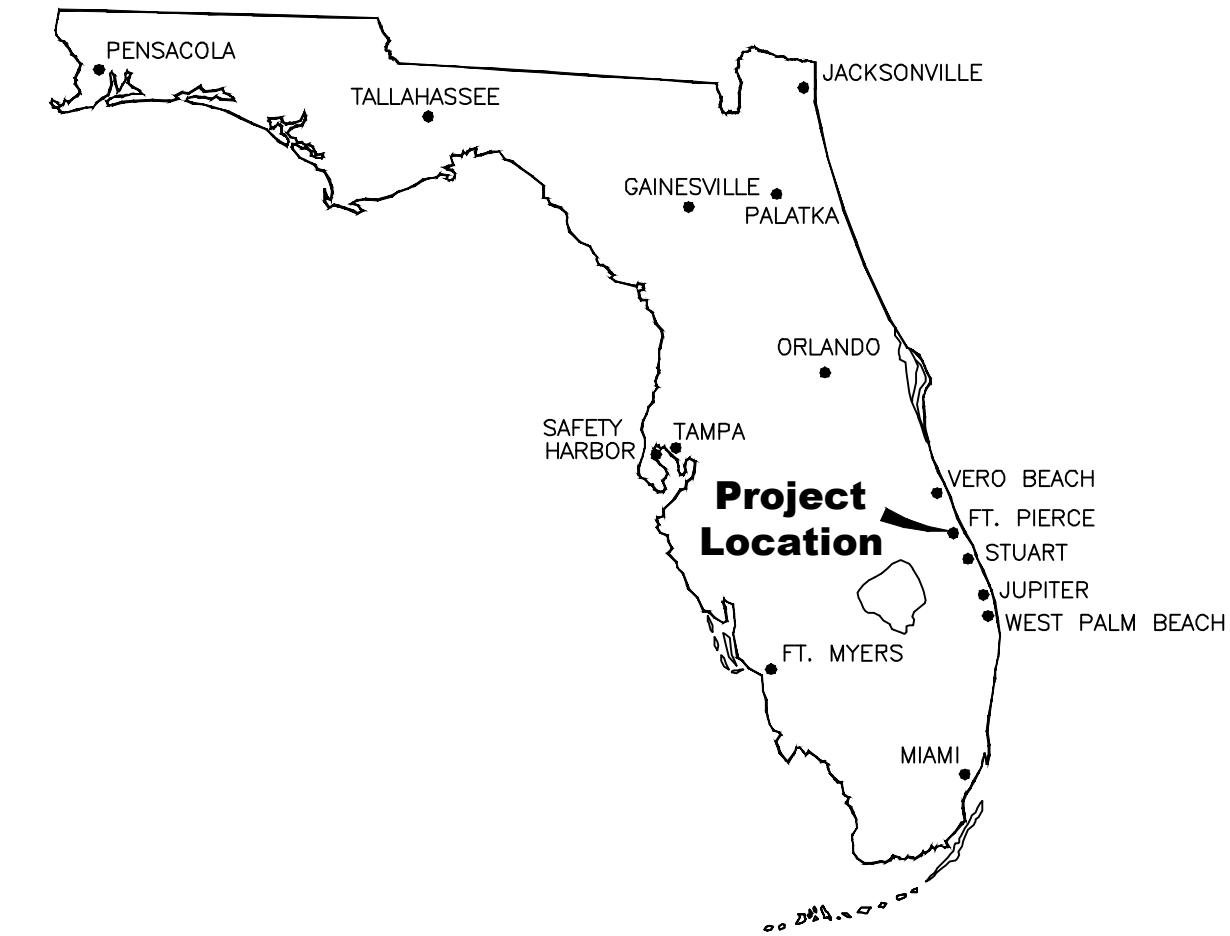


CITY OF FORT PIERCE

THE OAKS AT MOORE'S CREEK PHASE II INFRASTRUCTURE IMPROVEMENTS

DEPARTMENT OF ENGINEERING



PROJECT LOCATION MAP
SECTION 9, TOWNSHIP 35 SOUTH, RANGE 40 EAST

INDEX OF SHEETS

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- 4 OF 9 GRADING, PAVING, & DRAINAGE PLAN
- 5 OF 9 STORMWATER POLLUTION PREVENTION PLAN & DETAILS
- 6 OF 9 GRADING, PAVING, & DRAINAGE DETAILS
- 7 OF 9 GRADING, PAVING, & DRAINAGE DETAILS
- 8 OF 9 GRADING, PAVING, & DRAINAGE DETAILS
- 9 OF 9 LANDSCAPE PLAN

ATTACHMENT: WATER / WASTEWATER PLANS
SHEETS 1 THRU 5

THE OAKS AT MOORE'S CREEK PHASE II
INFRASTRUCTURE IMPROVEMENTS

No.	DATE	BY	REVISIONS



CITY OF FORT PIERCE
DEPARTMENT OF ENGINEERING
100 NORTH U.S. 1 P.O. BOX 1480
FORT PIERCE FLORIDA, 34954

DATE: OCT. 25, 2022
SURVEY BY:
DESIGNED BY: T. TELLE
SCALE: N.T.S.
DRAWN BY: D. SUMNER
APPROVED BY: J. ANDREWS

SHEET No.
1 OF 9

GENERAL NOTES

1. Bidders, before submitting Bid, must examine the Contract Documents thoroughly, including plans, specifications and quantities and must familiarize himself/herself with the site, existing project conditions, and all federal, state and local laws, ordinances, rules, regulations and policies that may affect cost, progress or performance of the Project work required by the Contract Documents and study and carefully correlate Bidder's observations with the Contract Documents, including the contract quantities, and make written requests for interpretation to the City Engineer promptly after discovering any conflicts, errors, ambiguities or inconsistencies.

2. Quantities of work and material in the Bid Form or in the plans are approximate only and for the purpose of providing Bidder with information that he (she) may use as a general guidance for his or her own quantity take-off during computation of the unit price Bid and to provide unit prices to compute for the interim Applications for Payments, and additions/deletions to the Contract.

3. Project Superintendent: The contractor shall provide a qualified Superintendent to remain on the job site at all times when work is being performed. The Superintendent shall be present at the pre- construction meeting. The contractor shall notify the local utility company by letter prior to the preconstruction meeting appointing the Superintendent for this project including a formal resume showing qualifications.

4. Bidder or Contractor must familiarize himself (herself) with the Instructions to Bidders and General Conditions that are a part of the Contract Documents prior to the submittal of the Unit Price Bid.

5. Bidder is required, before submitting bid and prior to starting of the work, familiarize himself with utilities, easements, ect. that may affect the contract work. Though considerable effort has been made by the FPUA and the City to accurately locate existing drainage and utility lines and any appurtenances prior to design, locations, elevations, dimensions and conditions are approximate and must be confirmed prior to construction.

6. It is the responsibility of the Bidder or Contractor to verify elevations, locations and conditions prior to Bid submittal or starting of the work. Any damage to utilities, structures or services shall be repaired or replaced at the contractors expense in a manner that will be approved by the City Engineer.

7. All elevations shown on the Contract Documents are referenced to National American Vertical Datum (NAVD).

8. It is the responsibility of the Contractor to notify all utility companies two working days prior to excavation, as required by Chapter 77-153 F.S.. Contractor is responsible for the coordination of utility relocation, temporary services, or any disruption of said services.

9. Asphalt shall be sawcut, removed and replaced in accordance with the open cut details shown on plans. Asphalt edges shall be smooth and on a straight line.

10. All excess material, including, but not limited to, pipe, earthwork material, structures, etc., shall be the property of the City of Ft. Pierce. The City Engineer or his designee shall determine what or how much of the excess material shall be disposed of by Contractor. Cost of disposal of all excess material shall be included in the Bid.

11. Contractor shall remove and replace all pipes, culverts, structures and appurtenances damaged during construction at no expense to the City of Ft. Pierce.

12. The limits of construction shown on the approved drawings are the maximum limit for which items will be paid by the City. Any removals or replacements beyond the construction limits without the authorization of the City Engineer, shall not be paid to Contractor.

13. Two sets of As-built drawings, and one copy of a digital format disc prepared by a PLS must be submitted with the final payment request.

14. Whenever Contractor needs to remove existing storm sewers to facilitate the placement of new facilities indicated in drawings, he (she) shall replace pipes with material of reinforced concrete pipe. Replacement of storm sewers that have been disturbed must be determined jointly by the Contractor and the City Engineer. Replacement of pipe joints may be accomplished by the use of concrete collar, per FDOT Specifications.

15. The "Trench Safety Act" shall be incorporated into this contract as enacted by the Legislature of the State of Florida to be in effect as of October 1, 1990.

16. All inlets and pipe shall be protected during construction to prevent siltation in the drainage systems by way of temporary plugs and plywood or plastic covers over the inlets. The entire drainage systems shall be cleaned of all debris prior to final acceptance. All concrete shall be a minimum 3,000 PSI.

17. All proposed elevations refer to finished grades.

18. The contractor must obtain a water use permit prior to construction dewatering unless the work qualifies for a general permit pursuant to subsection 40E-20.302(4), F.A.C.

19. All construction must comply with the City of FT. Pierce Code of Ordinances and the FDOT Roadway and Traffic Design Standards, latest edition.

20. All disturbed areas shall be sodded upon completion of grading after as-built grade elevations are approved by the Engineer.

21. Backfill to be compacted in no greater than one (1) foot lifts to the density of the undisturbed adjacent soils.

22. There is to be no off-site hauling without prior approval and all excavated material shall be used on-site.

23. A stable permanent and accessible elevation reference shall be established on or within one hundred feet (100') of all permitted discharge structures no later than the submission of the certification to the water management district. The location of the elevation reference must be note on or within the certification report.

24. Pipe culverts and storm sewers shall be constructed and installed in accordance with section 430 F.D.O.T. Standard Specifications for Road and Bridge Construction, latest edition and City of Fort Pierce Specifications.

25. Erosion control measures shall be taken by contractor during construction as per FDOT Standard Index No. 102:

- A. Silt Fence shall be installed along the entire perimeter of the project adjacent to any soil disturbing activities.
- B. All drainage structures are to be protected during construction as per FDOT Index Standard No. 102.
- C. All fencing, grading, signing, and sodding shall be maintained during the contract life. All damaged work shall be restored at no cost to the City.

26. No trees are to be removed or relocated without prior approval from the City of Fort Pierce field engineer (City permit required for any tree removal).

27. Complete "As-Built" information relative to location, size and depth of new pipes, manholes, inlets, etc. Shall be accurately recorded by the contractor and submitted (signed and sealed by a Florida certified P.L.S.) to the City of Fort Pierce, Engineering Department prior to final acceptance of the work. All record information on existing utility crossings encountered during construction, including but not limited to pipes, inlets, manholes, etc. Shall be recorded by a Florida registered surveyor and shown on the record drawings. The cost of signed and sealed as-builts shall be included in overall bid and no additional compensation will be allowed.

28. All drainage pipes shall be approved by City of Fort Pierce Engineering Department. The contractor shall construct a filter fabric jacket at all proposed storm sewer joints as per FDOT Index 280. Cost of the filter fabric jacket shall be included in unit pipe costs.

29. No existing base material removed in excavation shall be reused as proposed base material.

30. Staging and material storage shall not be conducted on abutting private property without written approval from the owner. Staging and storage shall be conducted within public R/W and /or construction easements (access license agreements).

**THE OAKS AT MOORE'S CREEK PHASE II
GENERAL NOTES**

NO.	DATE	BY	REVISIONS



CITY OF FORT PIERCE
DEPARTMENT OF ENGINEERING
100 NORTH U.S. 1 P.O. BOX 1480
FORT PIERCE FLORIDA, 34954

DATE:
OCT. 25, 2022

SURVEY BY:

DESIGNED BY:
T. TELLE

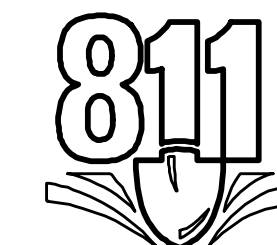
SCALE:
N.T.S.

DRAWN BY:
D. SUMNER

APPROVED BY:
J. ANDREWS

SHEET No.
2 OF 9

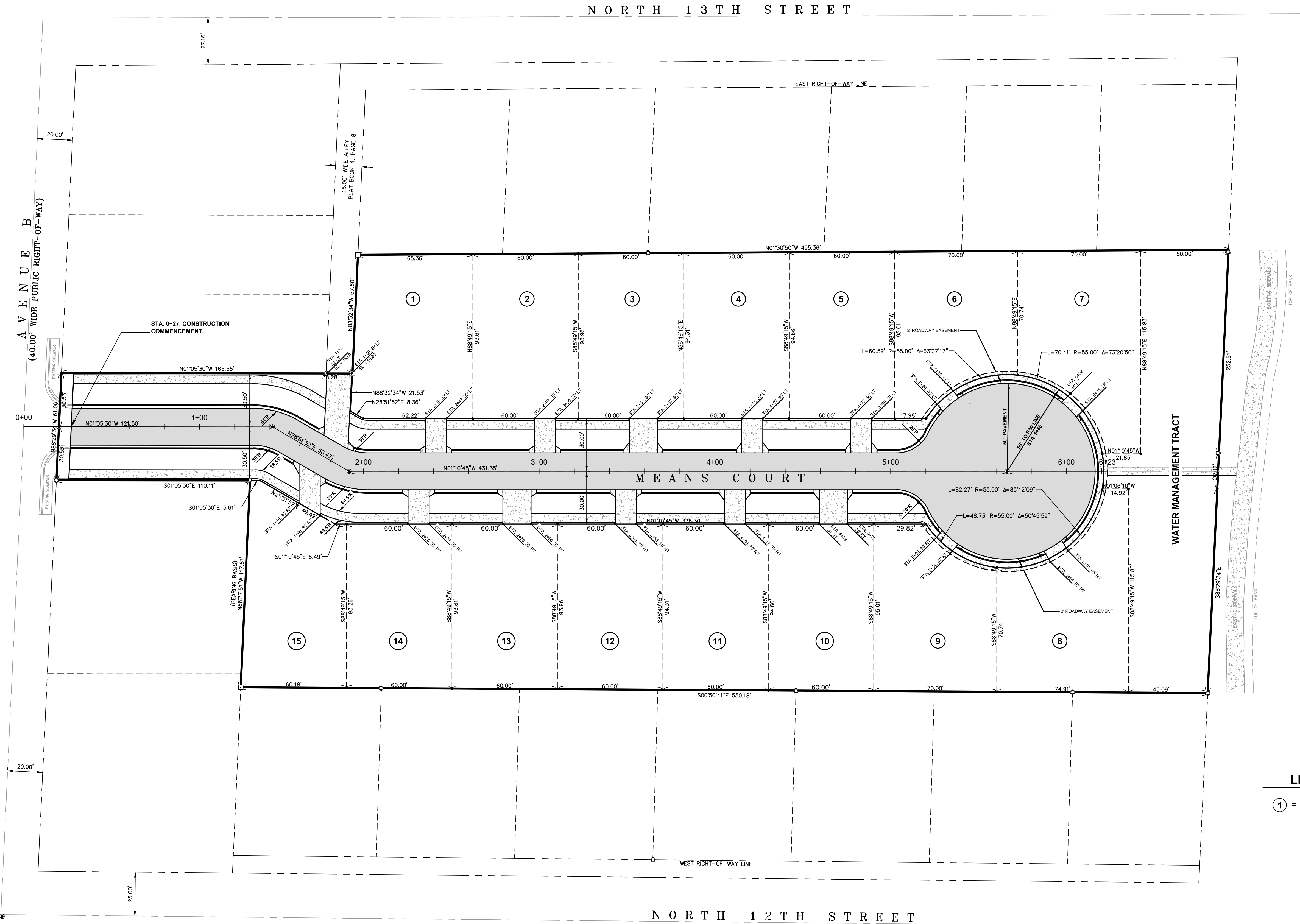
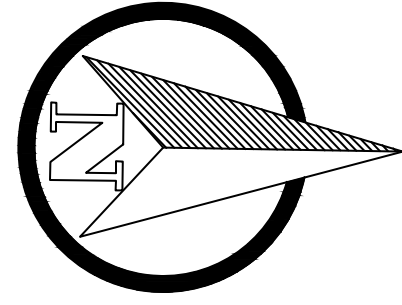
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ROCKVILLE, MD 30852
PHONE: (301)443-8631



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LEGEND
 ① = LOT NUMBER

THE OAKS AT MOORE'S CREEK PHASE II
 HORIZONTAL CONTROL PLAN

No.	DATE	BY	REVISIONS



CITY OF FORT PIERCE
 DEPARTMENT OF ENGINEERING
 100 NORTH U.S. 1 P.O. BOX 1480
 FORT PIERCE FLORIDA, 34954

DATE:
 OCT. 25, 2022

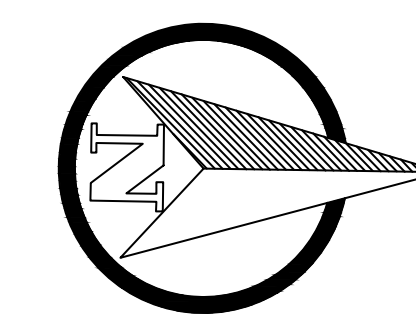
DESIGNED BY:
 T. TELLE

SCALE:
 1" = 30'

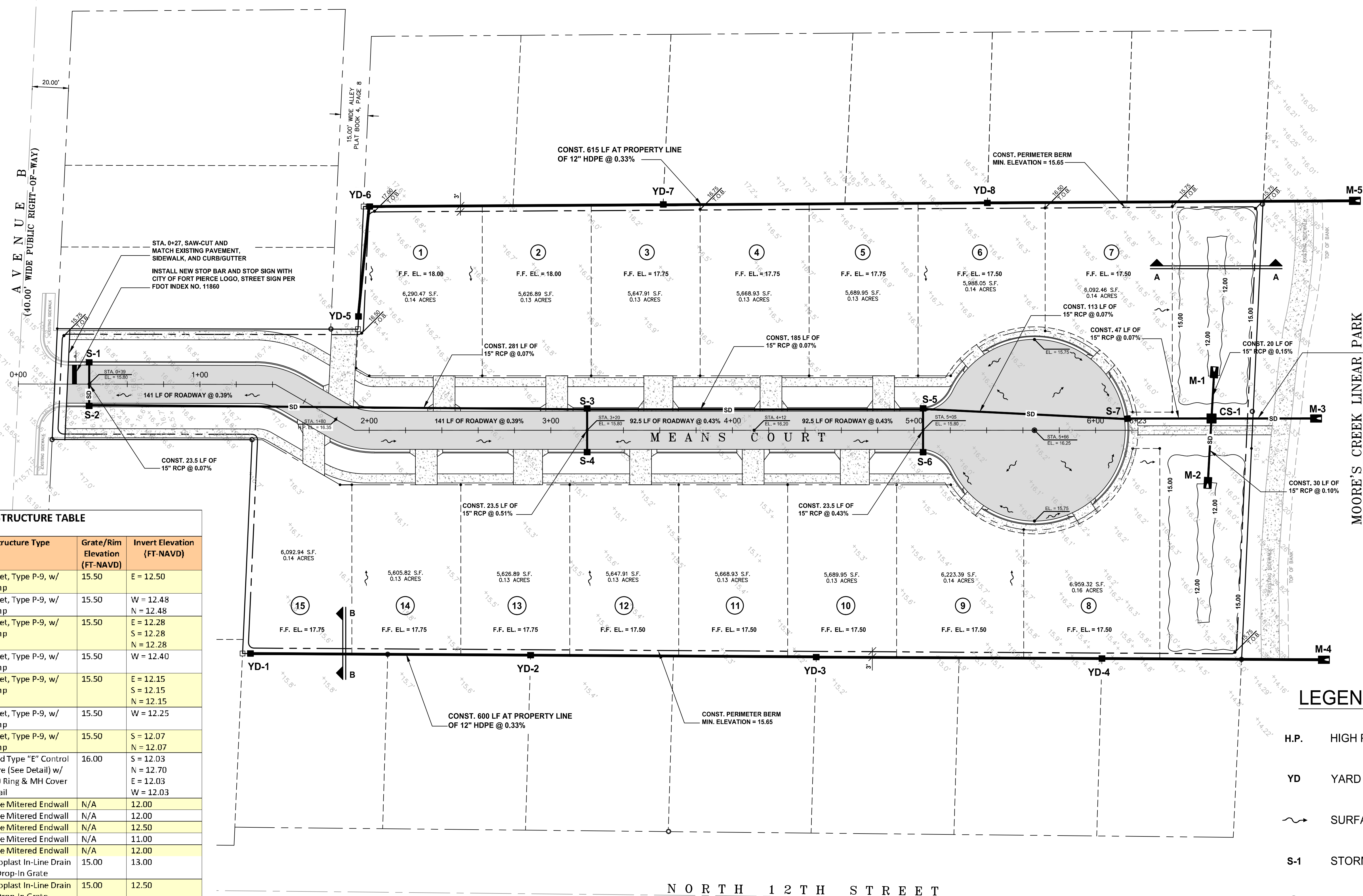
DRAWN BY:
 D. SUMNER

APPROVED BY:
 J. ANDREWS

SHEET No.
3 OF 9



NORTH 13TH STREET



DRAINAGE STRUCTURE TABLE

Structure No.	Station	Structure Type	Grate/Rim Elevation (FT-NAVD)	Invert Elevation (FT-NAVD)
S-1	0+39, 11.75' LT.	Curb Inlet, Type P-9, w/ 12" Sump	15.50	E = 12.50
S-2	0+39, 11.75' RT.	Curb Inlet, Type P-9, w/ 12" Sump	15.50	W = 12.48 N = 12.48
S-3	3+20, 11.75' LT.	Curb Inlet, Type P-9, w/ 12" Sump	15.50	E = 12.28 S = 12.28 N = 12.28
S-4	3+20, 11.75' RT.	Curb Inlet, Type P-9, w/ 12" Sump	15.50	W = 12.40
S-5	5+05, 11.75' LT.	Curb Inlet, Type P-9, w/ 12" Sump	15.50	E = 12.15 S = 12.15 N = 12.15
S-6	5+05, 11.75' RT.	Curb Inlet, Type P-9, w/ 12" Sump	15.50	W = 12.25
S-7	6+18, 5.5' LT.	Curb Inlet, Type P-9, w/ 12" Sump	15.50	S = 12.07 N = 12.07
CS-1	6+65, 8' LT.	Modified Type "E" Control Structure (See Detail) w/ USF 170 Ring & MH Cover per Detail	16.00	S = 12.03 N = 12.70 E = 12.03 W = 12.03
M-1	6+65, 22' LT.	Concrete Mitered Endwall	N/A	12.00
M-2	6+65, 18' RT.	Concrete Mitered Endwall	N/A	12.00
M-3	Field Locate	Concrete Mitered Endwall	N/A	12.50
M-4	Field Locate	Concrete Mitered Endwall	N/A	11.00
M-5	Field Locate	Concrete Mitered Endwall	N/A	12.00
YD-1	See Plan	12" Nyloplast In-Line Drain w/12" Drop-In Grate	15.00	13.00
YD-2	See Plan	12" Nyloplast In-Line Drain w/12" Drop-In Grate	15.00	12.50
YD-3	See Plan	12" Nyloplast In-Line Drain w/12" Drop-In Grate	15.00	12.00
YD-4	See Plan	12" Nyloplast In-Line Drain w/12" Drop-In Grate	15.00	11.50
YD-5	See Plan	12" Nyloplast In-Line Drain w/12" Drop-In Grate	16.25	14.00
YD-6	See Plan	12" Nyloplast In-Line Drain w/12" Drop-In Grate	16.75	13.80
YD-7	See Plan	12" Nyloplast In-Line Drain w/12" Drop-In Grate	16.25	13.25
YD-8	See Plan	12" Nyloplast In-Line Drain w/12" Drop-In Grate	16.25	12.70

LEGEND

- H.P. HIGH POINT
- YD YARD DRAIN
- ~> SURFACE FLOW
- S-1 STORM STRUCTURE NUMBER
- ① LOT NUMBER
- 19.00' EXISTING GRADE
- 19.00' PROPOSED GRADE
- SD — STORM DRAIN
- T.O.B. TOP OF BERM

THE OAKS AT MOORE'S CREEK PHASE II
GRADING, PAVING, DRAINAGE PLAN

No.	DATE	BY	REVISIONS



CITY OF FORT PIERCE
DEPARTMENT OF ENGINEERING
100 NORTH U.S. 1 P.O. BOX 1480
FORT PIERCE FLORIDA, 34954

DATE:
OCT. 25, 2022

DESIGNED BY:
T. TELLE

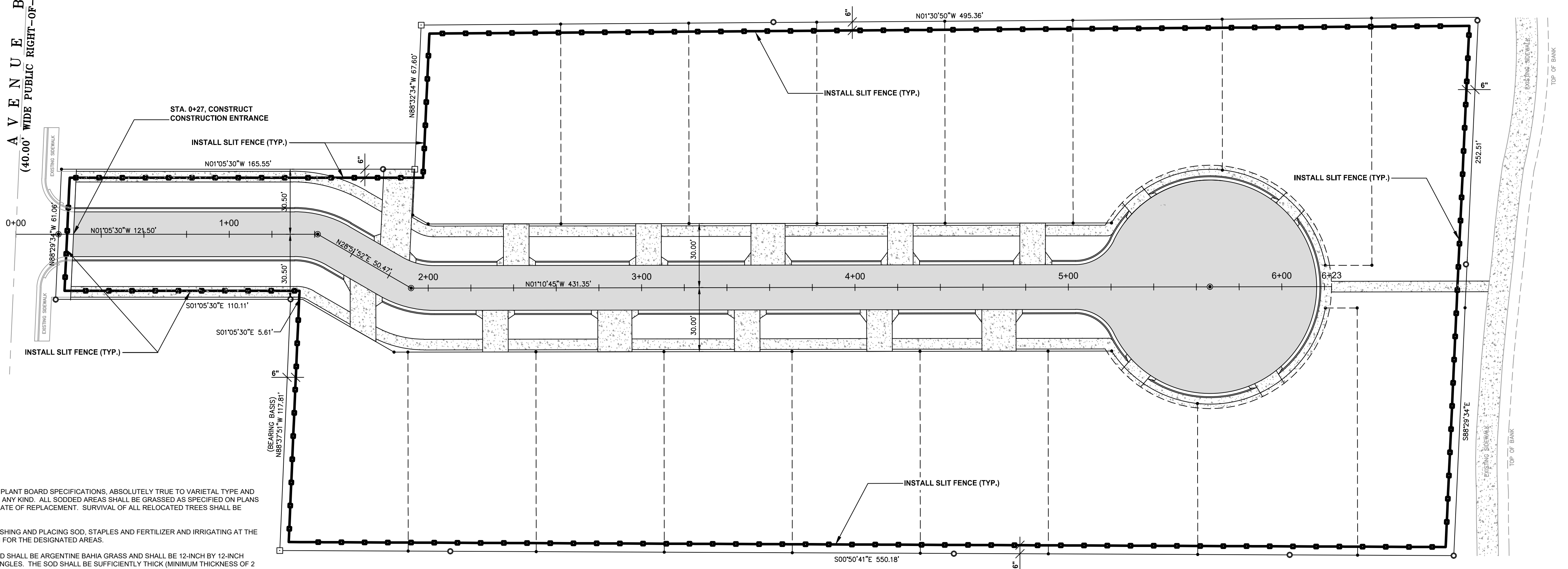
SCALE:
1" = 30'

DRAWN BY:
D. SUMNER

APPROVED BY:
J. ANDREWS

SHEET No.
4 OF 9

A V E N U E B
(40.00' WIDE PUBLIC RIGHT-OF-WAY)



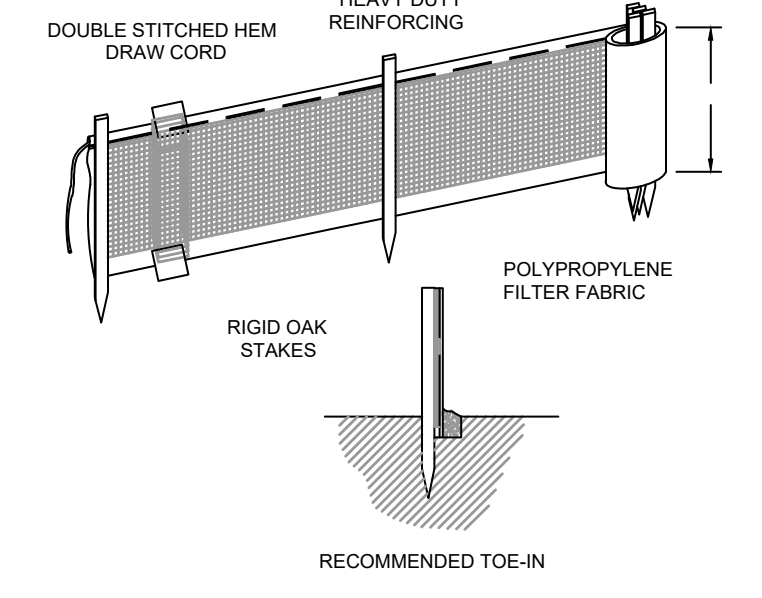
MOORE'S CREEK LINEAR PARK

- SOD**
1. THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETAL TYPE AND FREE FROM WEEDS, FUNGUS, INSECTS AND DISEASE OF ANY KIND. ALL SODDED AREAS SHALL BE GRASSED AS SPECIFIED ON PLANS AND SURVIVAL GUARANTEED FOR NINETY DAYS FROM DATE OF REPLACEMENT. SURVIVAL OF ALL RELOCATED TREES SHALL BE GUARANTEED FOR 1 YEAR AFTER TRANSPLANTING.
 2. SODDING SHALL CONSIST OF SITE PREPARATION, FURNISHING AND PLACING SOD, STAPLES AND FERTILIZER AND IRRIGATING AT THE RATES AND MANNER DESCRIBED IN THIS SPECIFICATION FOR THE DESIGNATED AREAS.
 3. UNLESS NOTED OTHERWISE ON LANDSCAPE PLANS, SOD SHALL BE ARGENTINE BAHIA GRASS AND SHALL BE 12-INCH BY 12-INCH SQUARES OR OTHER COMMERCIALY AVAILABLE RECTANGLES. THE SOD SHALL BE SUFFICIENTLY THICK (MINIMUM THICKNESS OF 2 INCHES) TO PROVIDE A DENSE STAND OF LIVE GRASS. THE SOD SHALL HAVE BEEN GROWN ON MINERAL SOIL. SOD SHALL BE LIVE, FRESH, AND UNINJURED AT THE TIME OF PLANTING AND SHALL BE PROTECTED FROM DRYING OUT BY SHADING AND WATERING FROM THE TIME IT IS DUG UNTIL PLANTING.
 4. FERTILIZER SHALL BE EITHER IN THE LIQUID OR DRY FORM. FERTILIZER SHALL BE UNIFORM IN COMPOSITION, FREE-FLOWING AND SUITABLE FOR APPLICATION WITH STANDARD EQUIPMENT. THE FERTILIZER SHALL CONFORM TO THE FLORIDA FERTILIZER LAWS IN EFFECT ON THE DATE OF IT BEING PLACED AND SHALL BE DELIVERED IN BAGS, BOTTLES, DRUMS, OR OTHER CONVENIENT CONTAINERS, EACH FULLY LABELED AND BEARING THE NAME, TRADEMARK, ANALYSIS, AND WARRANTY OF THE PRODUCT. FERTILIZER SHALL HAVE AN AVAILABLE PLANT FOOD ANALYSIS OF 15-0-10 OR EQUIVALENT PLANT FOOD VALUE AND SHALL BE MIXED WITH THE TOP 3 TO 4 INCHES OF SOIL. FERTILIZER SHALL BE APPLIED AT THE RATE OF 1 POUND PER 1,000 SQ. FT. NOT TO EXCEED 2.4 LBS. PER YEAR. ALL FERTILIZERS MUST BE AT LEAST 50% SLOW RELEASE NITROGEN AND CONTAIN NO PHOSPHORUS UNLESS THE SITE HAS BEEN TESTED AND VERIFIED AS PHOSPHORUS DEFICIENT BY THE UF-IFAS EXTENSION OFFICE. ALL FERTILIZER APPLICATION SHALL BE IN ACCORDANCE WITH CITY OF FORT PIERCE ORDINANCES.

- SOIL EROSION PLAN**
1. NO POLLUTION OR EROSION CAUSED BY THIS PROJECT WILL BE ALLOWED IN THE STORMWATER DRAINAGE SYSTEM. THE CONTRACTOR SHALL INSTALL ANY DEVICES NECESSARY TO PREVENT POLLUTION OR EROSION. THE COST OF POLLUTION AND EROSION CONTROL SHALL BE INCIDENTAL TO THE COST OF THE CONSTRUCTION.
 2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC SOIL EROSION CONTROL PLAN. IN GENERAL, THE SOIL EROSION CONTROL PLAN SHALL REQUIRE THAT ALL ON-SITE SOILS WILL REMAIN ON-SITE AND WILL NOT ERODE INTO THE ADJACENT ROADSIDE SWALES, ADJACENT PROPERTIES OR RETENTION DITCHES. ALL EXISTING SWALES SHALL REMAIN SODDED DURING CONSTRUCTION. THE CONTRACTOR SHALL SCARIFY ONLY AS NECESSARY TO CONSTRUCT THE PROJECT. THE CONTRACTOR SHALL SCARIFY AREAS TO PLACE VARIOUS PIPE WORK. AFTER PLACEMENT OF THE PIPE, THESE TRENCHES SHALL BE BACKFILLED AND COMPACTED TO 98% MODIFIED PROCTOR AASHTO T-180. PRIOR TO DISCHARGE FROM THE SITE, SILTATION BARRIERS SHALL BE UTILIZED AS PER THE MOST RECENT FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL. THE DRAINAGE WHICH OUTFALLS TO THE RETENTION AREAS SHALL BE STABILIZED AND SODDED IMMEDIATELY UPON COMPLETION OF CONSTRUCTION. ANY DEWATERING OR PUMPING OF WATER INTO THE ROADSIDE SWALES OR RETENTION SWALES SHALL BE STAKED WITH SILTATION FENCES AS PER THE MOST RECENT FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL TO AVOID FILLING THESE AREAS. UPON COMPLETION OF THE SITE WORK, ALL AREAS SHALL BE SODDED TO AVOID EROSION. CONTRACTOR IS REQUIRED TO COMPLY WITH ALL STATE WATER QUALITY CRITERIA. SPECIFICALLY, NO OFF-SITE DISCHARGES WILL BE ALLOWED WHICH EXCEED THE STATE TURBIDITY CRITERIA.

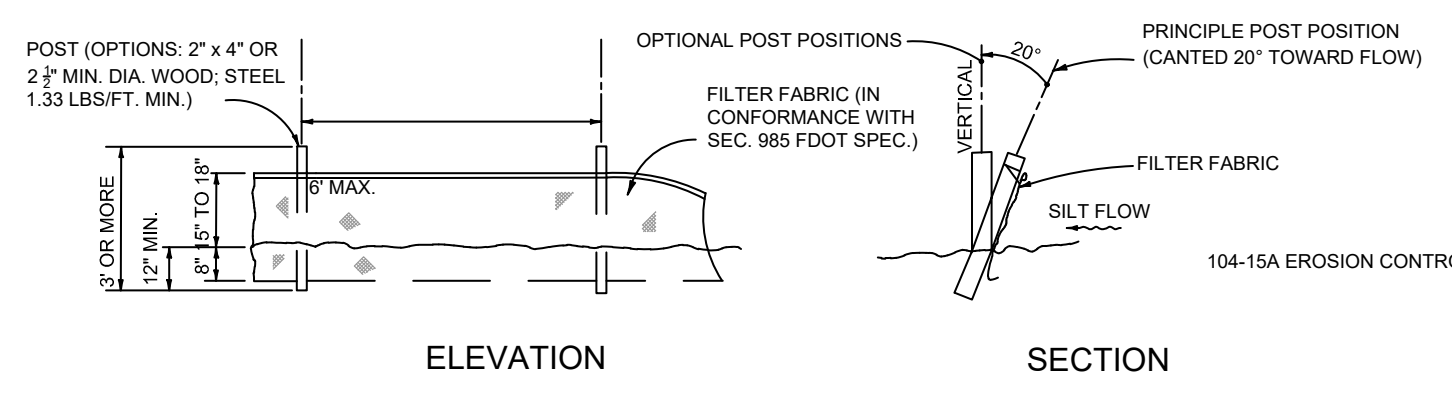
- WATER QUALITY NOTES**
1. THE CONTRACTOR MUST MAINTAIN A COPY OF THE LATEST LOCAL WATER MANAGEMENT DISTRICT SURFACE WATER PERMIT, COMPLETE WITH ALL CONDITIONS, ATTACHMENTS, EXHIBITS AND PERMIT MODIFICATIONS IN GOOD CONDITION AT THE CONSTRUCTION SITE. THE COMPLETE PERMIT MUST BE AVAILABLE FOR REVIEW UPON REQUEST BY DISTRICT REPRESENTATIVES. THE CONTRACTOR SHALL REVIEW THE COMPLETE PERMIT PRIOR TO COMMENCEMENT OF THE ACTIVITY AUTHORIZED BY THE PERMIT.
 2. ALL ACTIVITIES SHALL BE IMPLEMENTED AS SET FORTH IN THE PLANS, SPECIFICATIONS AND PERFORMANCE CRITERIA AS APPROVED BY LOCAL SURFACE WATER PERMIT. ANY DEVIATION FROM THE PERMITTED ACTIVITY AND THE CONDITIONS FOR UNDERTAKING THAT ACTIVITY SHALL BE CONSIDERED A VIOLATION OF THE PERMIT. PRIOR TO ANY WORK COVERED BY A PERMIT FROM SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD), A NOTICE OF CONSTRUCTION COMMENCEMENT (FORM 0960) MUST BE SUBMITTED TO SFWMD BY THE PERMITTEE OR AUTHORIZED AGENT.
 3. PRIOR TO AND DURING CONSTRUCTION, THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES (BEST MANAGEMENT PRACTICES) REQUIRED TO RETAIN SEDIMENT ON-SITE AND TO PREVENT VIOLATIONS OF STATE WATER QUALITY STANDARDS. ALL PRACTICES MUST BE IN ACCORDANCE WITH THE GUIDELINES AND SPECIFICATIONS IN CHAPTER 6 OF THE FLORIDA LAND DEVELOPMENT MANUAL: A GUIDE TO SOUND LAND AND WATER MANAGEMENT (FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATIONS 1988) WHICH ARE HEREBY INCORPORATED BY REFERENCE, UNLESS A PROJECT'S SPECIFIC EROSION AND SEDIMENT CONTROL PLAN IS APPROVED AS PART OF THE SFWMD PERMIT, IN WHICH CASE THE PRACTICES MUST BE IN ACCORDANCE WITH THE PLAN. IF SITE'S SPECIFIC CONDITIONS REQUIRE ADDITIONAL MEASURES DURING ANY PHASE OF CONSTRUCTION OR OPERATION TO PREVENT EROSION OR CONTROL SEDIMENT, BEYOND THOSE SPECIFIED IN THE EROSION AND SEDIMENT CONTROL PLAN, THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL BEST MANAGEMENT PRACTICES AS NECESSARY, IN ACCORDANCE WITH THE SPECIFICATIONS IN CHAPTER 6 OF THE FLORIDA LAND DEVELOPMENT MANUAL: A GUIDE TO SOUND LAND AND WATER MANAGEMENT (FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATIONS 1988). THE CONTRACTOR SHALL CORRECT ANY EROSION OR SHOALING THAT CAUSES ADVERSE IMPACTS TO THE WATER RESOURCES AT NO ADDITIONAL COST TO OWNER.
 4. STABILIZATION MEASURES SHALL BE INITIATED FOR EROSION AND SEDIMENT CONTROL ON DISTURBED AREAS AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.

- CLEAN-UP**
1. THE CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A NEAT CONDITION AT ALL TIMES AND SHALL RESTORE / REPAIR ALL DRIVEWAYS, SIDEWALKS, UTILITIES, LANDSCAPING, IRRIGATION SYSTEMS, ETC., AFFECTED BY CONSTRUCTION ACTIVITIES.
 2. THE CONTRACTOR SHALL REMOVE ALL EXCESS MATERIALS, DEBRIS, EQUIPMENT, ETC., FROM THE JOBSITE IMMEDIATELY AFTER COMPLETION OF CONSTRUCTION OPERATIONS.
 3. FOR FURTHER SITE MAINTENANCE REQUIREMENTS THE CONTRACTOR IS REFERRED TO THE "AGREEMENT BETWEEN OWNER AND CONTRACTOR".
 4. UNLESS OTHERWISE SPECIFIED OR NOTED, ALL DISTURBED AREAS TO BE RESTORED BY CONTRACTOR TO PRE-CONSTRUCTION CONDITION OR BETTER PRIOR TO ACCEPTANCE BY THE OWNER OR LOCAL APPROVING AUTHORITY.

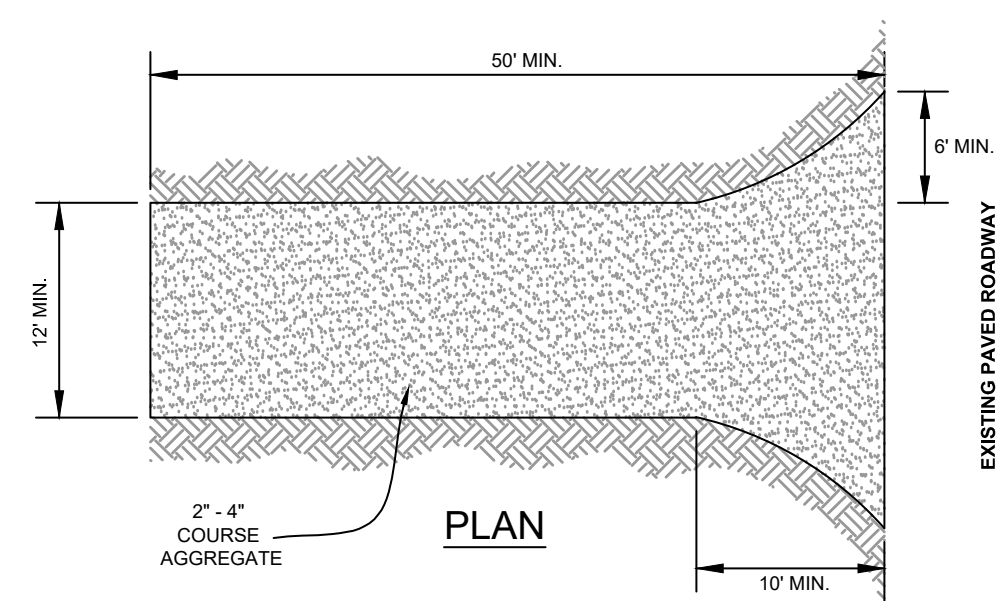


- NOTES:**
1. SILT FENCE SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL CONSTRUCTION IS COMPLETE.
 2. THE CONTRACTOR SHALL INSPECT AND REPAIR THE SILT FENCE AFTER EACH RAIN EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
 3. REMOVED SEDIMENT SHALL BE DEPOSITED IN AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFFSITE AND CAN BE PERMANENTLY STABILIZED.
 4. THE SILT FENCE SHALL BE PLACED ON SLOPE CONTOUR TO MAXIMIZE ITS PONDING EFFICIENCY.

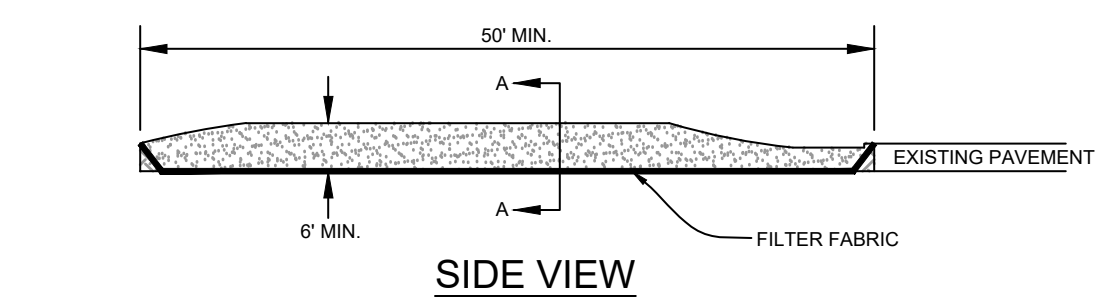
SILT FENCE DETAIL
N.T.S.



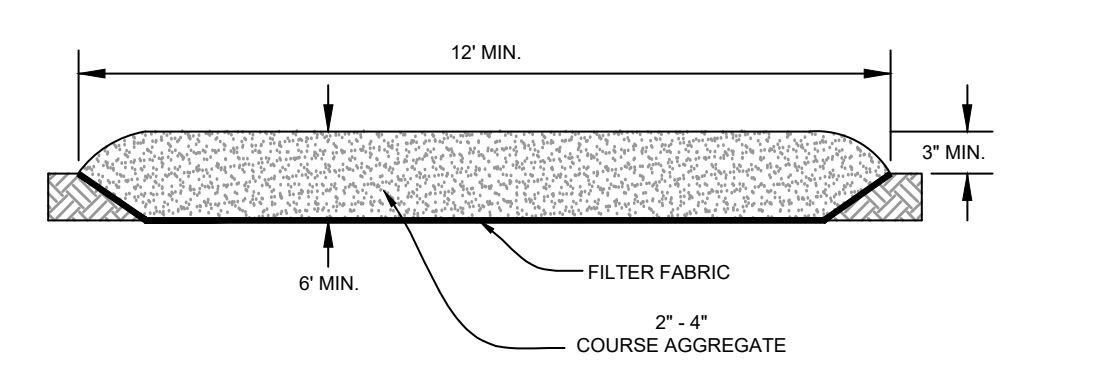
ELEVATION SECTION



PLAN



SIDE VIEW



SECTION A-A

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
N.T.S.

**THE OAKS AT MOORE'S CREEK PHASE II
STORMWATER POLLUTION PREVENTION
PLAN & DETAILS**

No.	DATE	BY	REVISIONS



CITY OF FORT PIERCE
DEPARTMENT OF ENGINEERING
100 NORTH U.S. 1 P.O. BOX 1480
FORT PIERCE FLORIDA, 34954

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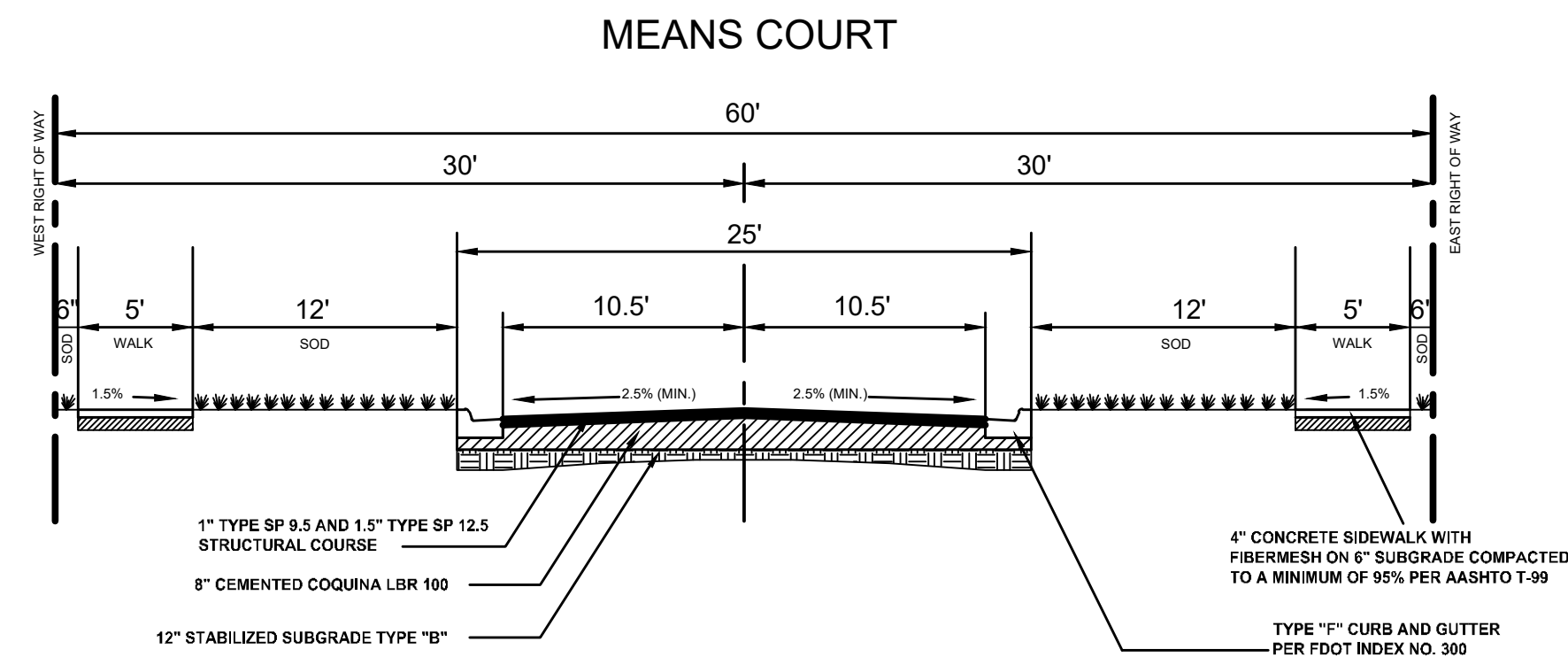
DESIGNED BY:
T. TELLE

SCALE:
1" = 30'

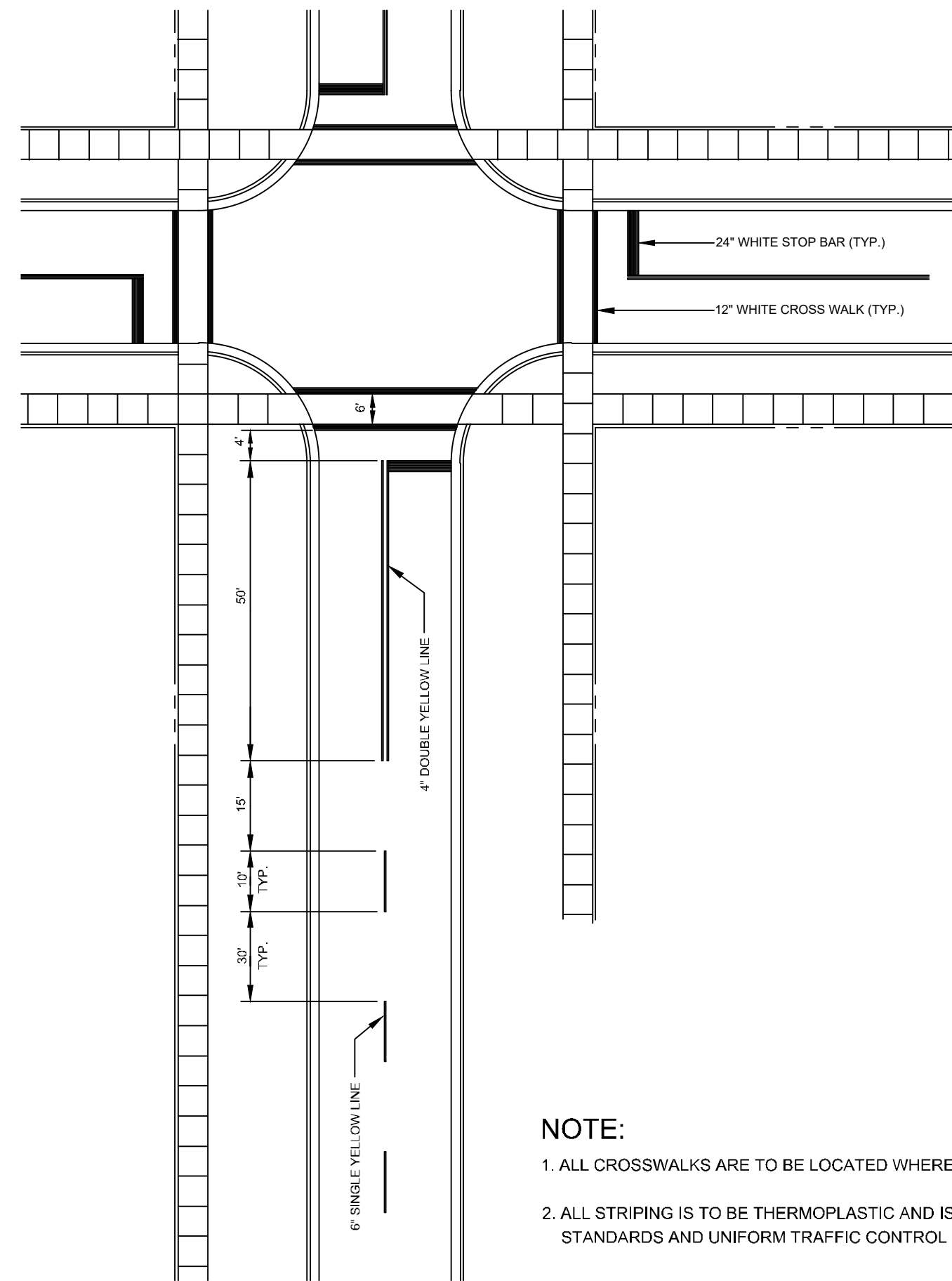
DRAWN BY:
D. SUMNER

APPROVED BY:
J. ANDREWS

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5 OF 9

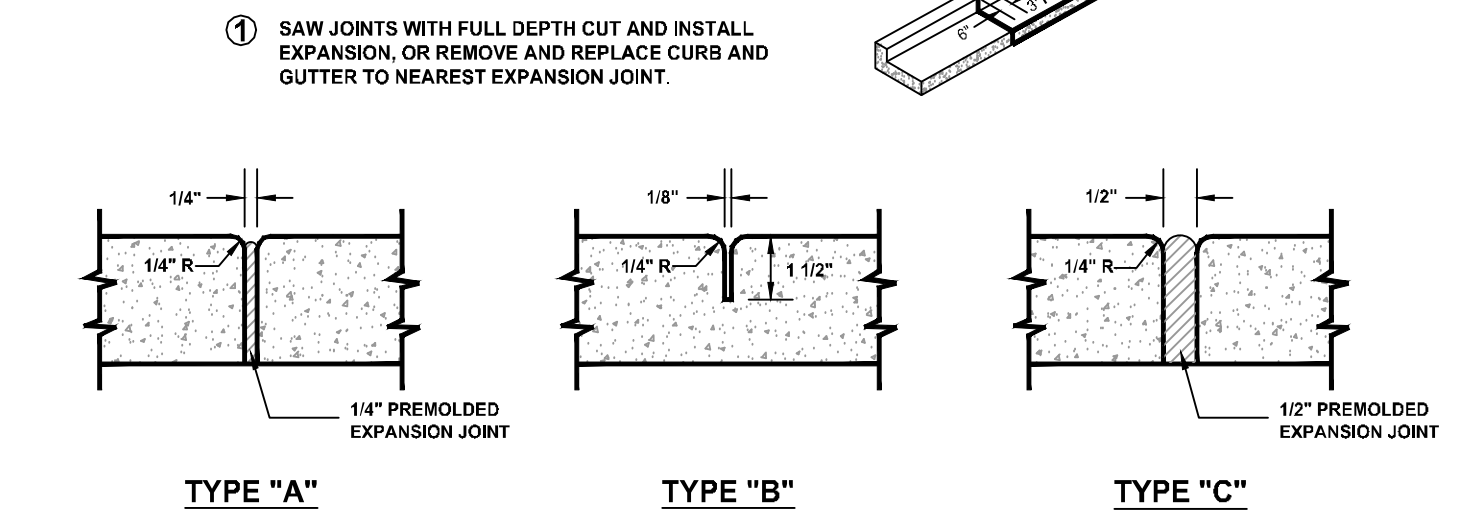
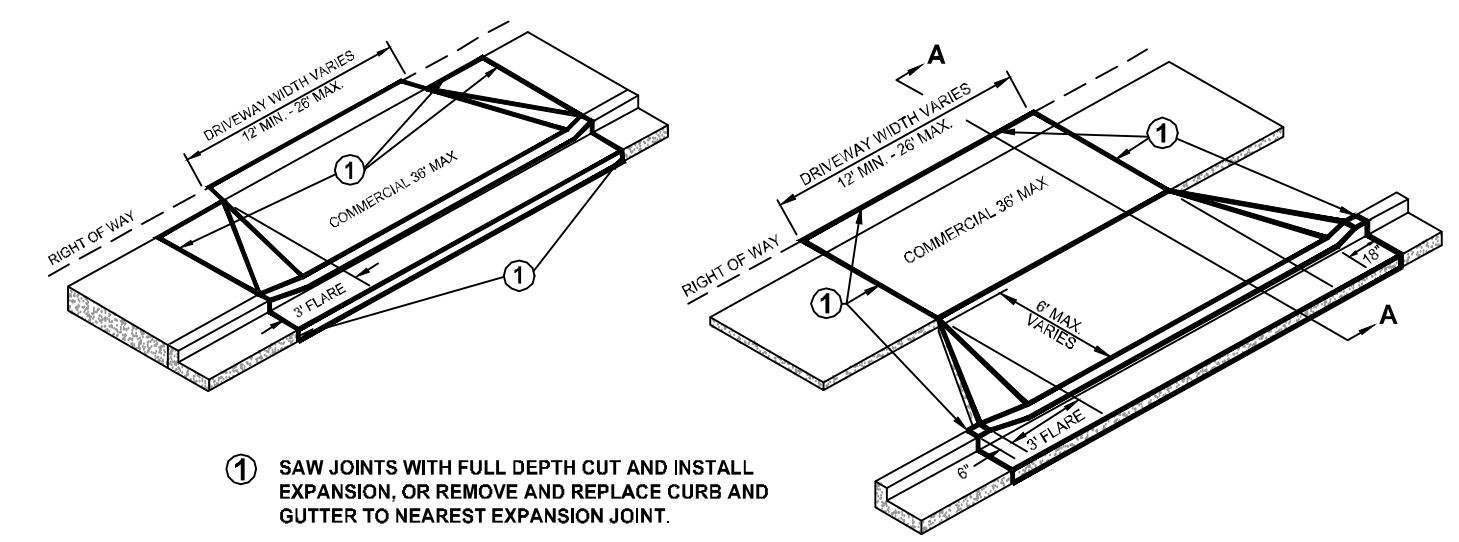


TYPICAL ROADWAY SECTION

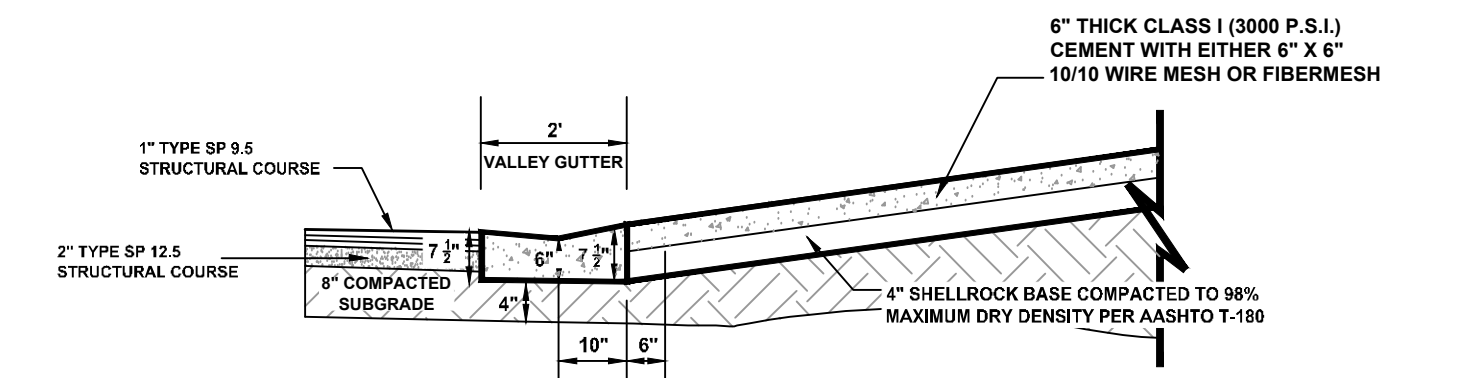


NOTE:
 1. ALL CROSSWALKS ARE TO BE LOCATED WHERE THERE IS SIDEWALK ONLY.
 2. ALL STRIPING IS TO BE THERMOPLASTIC AND IS TO CONFORM TO F.D.O.T. STANDARDS AND UNIFORM TRAFFIC CONTROL DEVICES.

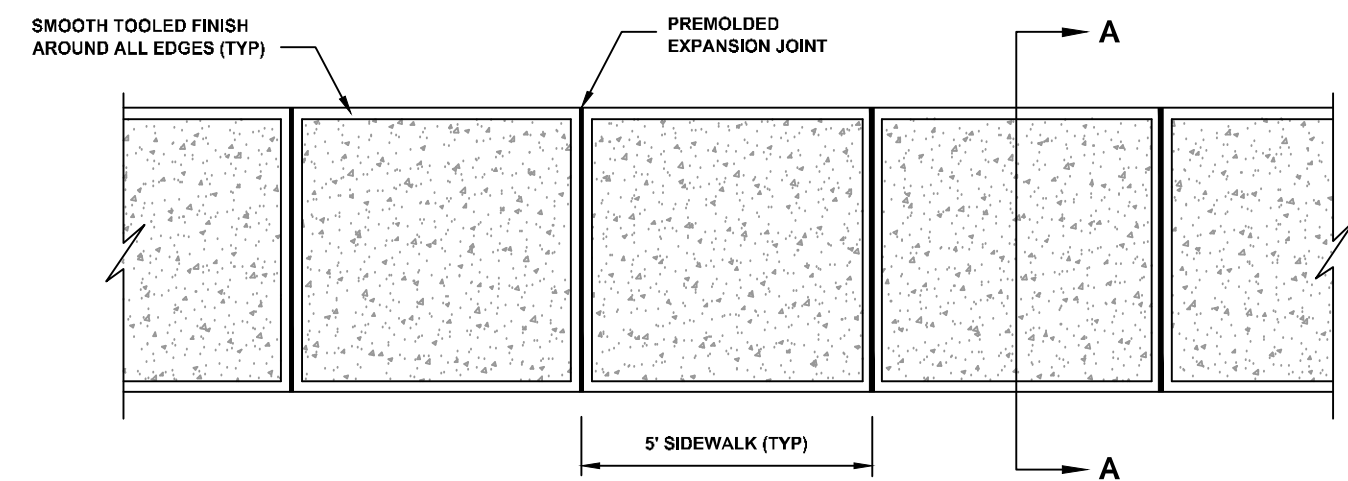
TYPICAL STREET STRIPING DETAIL



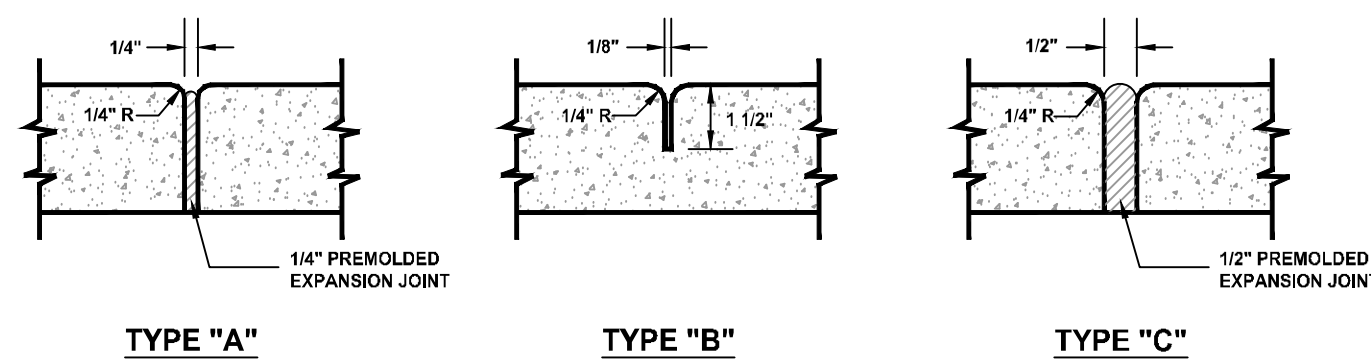
GENERAL CONSTRUCTION NOTES
 "A" AT P.C. & P.T. OF CURVES AND AT JUNCTION OF EXISTING AND NEW SIDEWALKS.
 "B" 5' CENTER TO CENTER ON NEW SIDEWALKS AND 10' CENTER TO CENTER ON NEW CURB AND GUTTER.
 "C" WHERE NEW SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAY AND SIMILAR STRUCTURES.



CONCRETE DRIVEWAY EXPANSION JOINT DETAIL

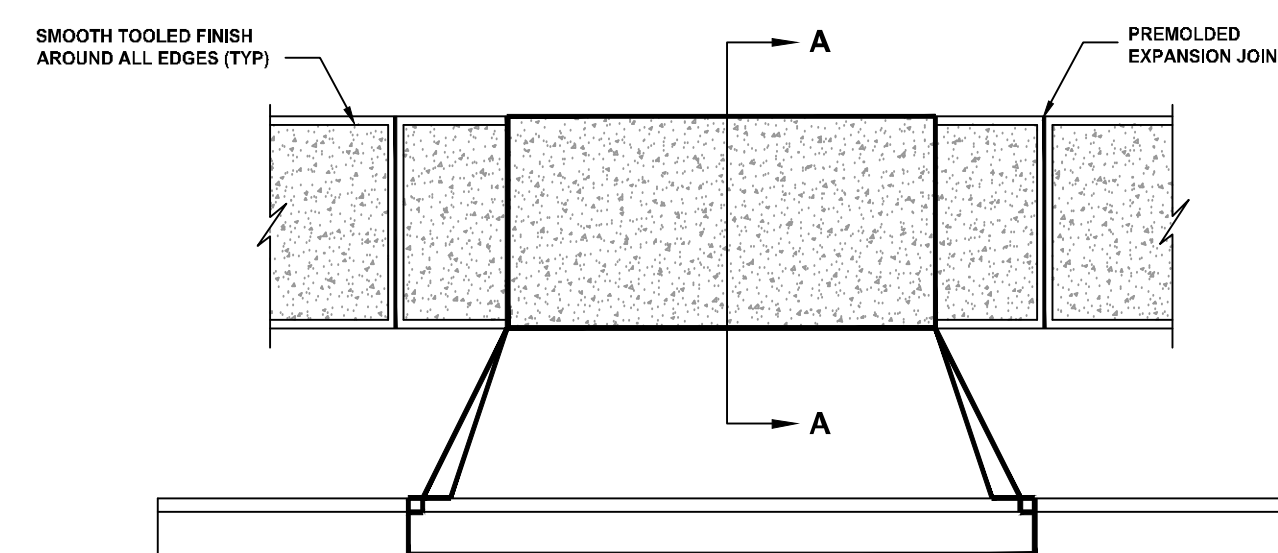


- CONCRETE STRENGTH TO BE 3000 P.S.I. AT 28 DAYS.
- TOOLED DUMMY CONTRACTION JOINTS EVERY 5' (TYPE 'B' JOINTS)
- EXPANSION JOINTS WITH PREMOLDED FILLER AT 100' O/C (TYPE 'C' JOINTS)
- BASE TO BE COMPACTED 98% MAXIMUM DRY DENSITY PER AASHTO T-180
- THE CONCRETE SHALL BE GIVEN A BROOM FINISH AND THE EDGE OF THE SIDEWALK SHALL BE FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2 INCH

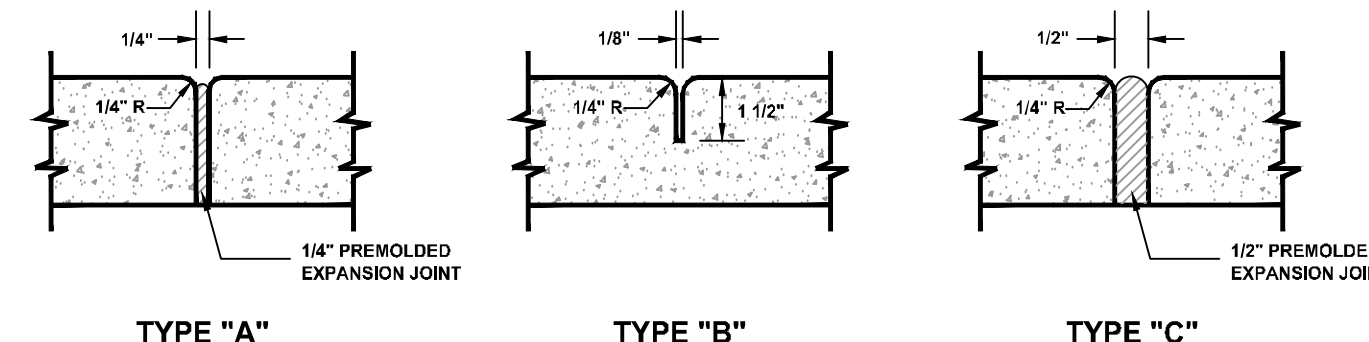


GENERAL CONSTRUCTION NOTES
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 "B" 5' CENTER TO CENTER ON NEW SIDEWALKS AND 10' CENTER TO CENTER ON NEW CURB AND GUTTER.
 "C" WHERE NEW SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAY AND SIMILAR STRUCTURES.

STANDARD SIDEWALK DETAIL

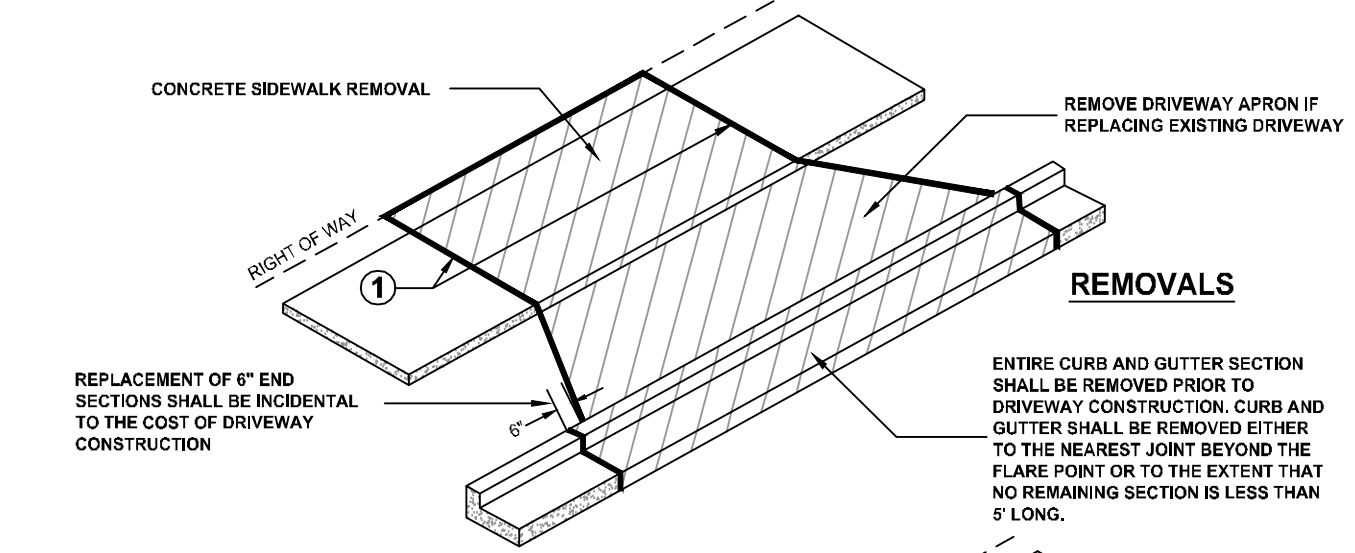


- CONCRETE STRENGTH TO BE 3000 P.S.I. AT 28 DAYS.
- TOOLED DUMMY CONTRACTION JOINTS EVERY 5' (TYPE 'B' JOINTS)
- EXPANSION JOINTS WITH PREMOLDED FILLER AT 100' O/C (TYPE 'C' JOINTS)
- BASE TO BE COMPACTED 98% MAXIMUM DRY DENSITY PER AASHTO T-180
- THE CONCRETE SHALL BE GIVEN A BROOM FINISH AND THE EDGE OF THE SIDEWALK SHALL BE FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2 INCH



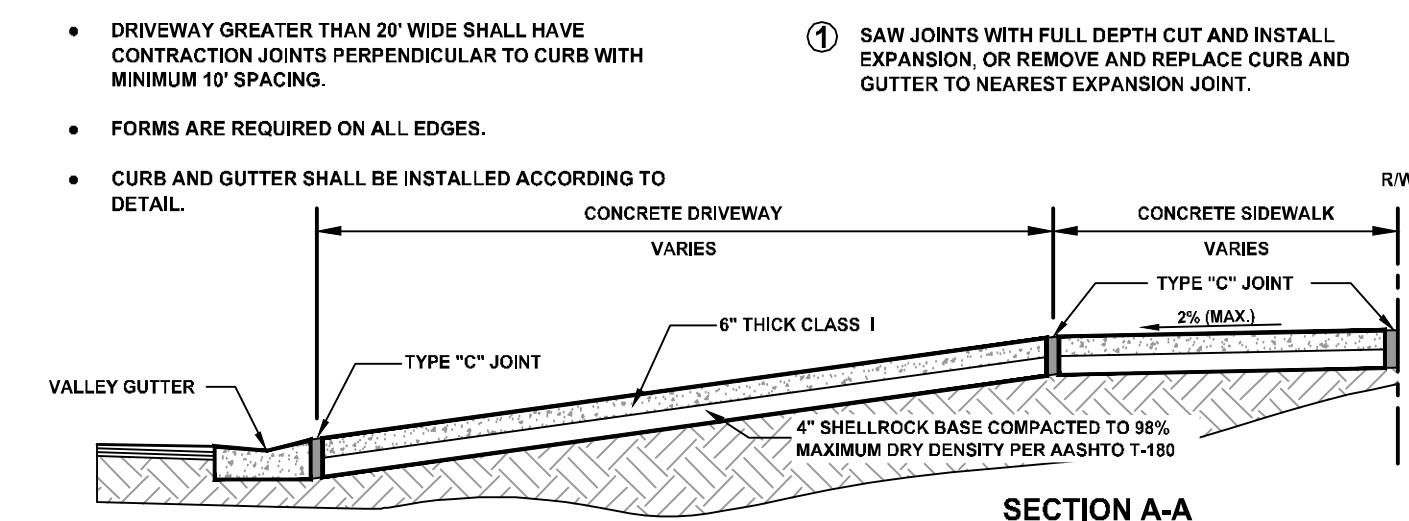
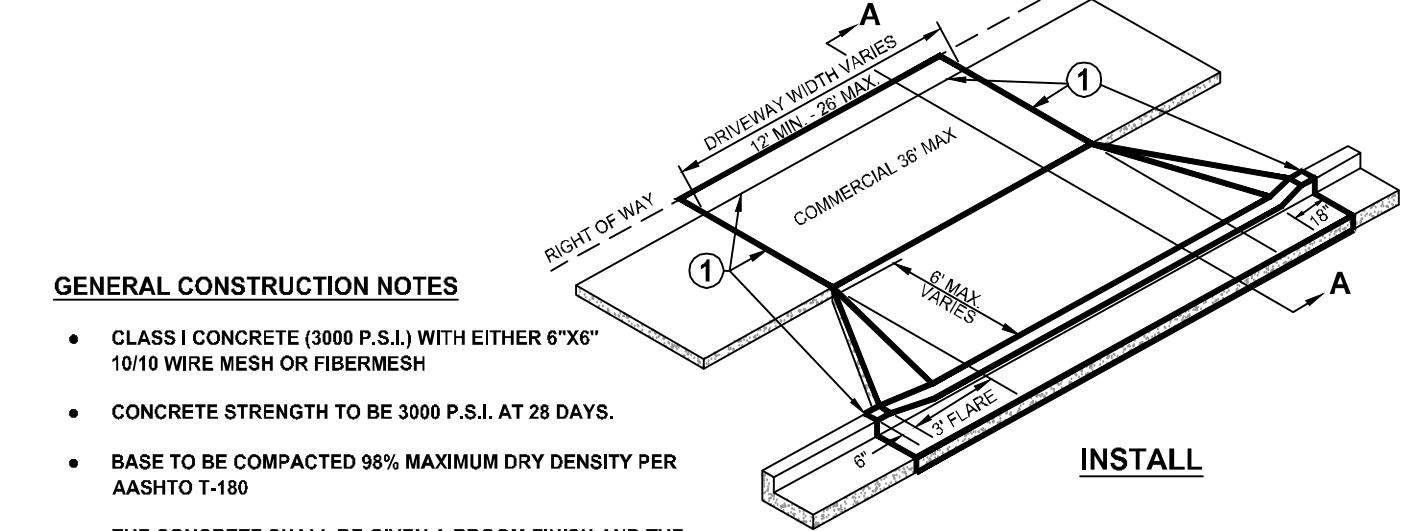
GENERAL CONSTRUCTION NOTES
 "A" AT P.C. & P.T. OF CURVES AND AT JUNCTION OF EXISTING AND NEW SIDEWALKS.
 "B" 5' CENTER TO CENTER ON NEW SIDEWALKS AND 10' CENTER TO CENTER ON NEW CURB AND GUTTER.
 "C" WHERE NEW SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAY AND SIMILAR STRUCTURES.

DRIVEWAY SIDEWALK DETAIL



GENERAL CONSTRUCTION NOTES

- CLASS I CONCRETE (3000 P.S.I.) WITH EITHER 6"x6" 10/10 WIRE MESH OR FIBERMESH
- CONCRETE STRENGTH TO BE 3000 P.S.I. AT 28 DAYS.
- BASE TO BE COMPACTED 98% MAXIMUM DRY DENSITY PER AASHTO T-180
- THE CONCRETE SHALL BE GIVEN A BROOM FINISH AND THE EDGE OF THE SIDEWALK SHALL BE FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2 INCH.
- DRIVEWAY GREATER THAN 20' WIDE SHALL HAVE CONTRACTION JOINTS PERPENDICULAR TO CURB WITH MINIMUM 10' SPACING.
- FORMS ARE REQUIRED ON ALL EDGES.
- CURB AND GUTTER SHALL BE INSTALLED ACCORDING TO DETAIL.



DRIVEWAY WITH SIDEWALK AND UTILITY STRIP DETAIL

**THE OAKS AT MOORE'S CREEK PHASE II
 GRADING, PAVING, & DRAINAGE DETAILS**

NO.	DATE	BY	REVISIONS



CITY OF FORT PIERCE
 DEPARTMENT OF ENGINEERING
 100 NORTH U.S. 1 P.O. BOX 1480
 FORT PIERCE FLORIDA, 34954

DATE:
 OCT. 25, 2022

DESIGNED BY:
 T. TELLE

SCALE:
 N.T.S.

DRAWN BY:
 D. SUMNER

APPROVED BY:
 J. ANDREWS

SHEET No.
 6 OF 9

No.	DATE	BY	REVISIONS



CITY OF FORT PIERCE
DEPARTMENT OF ENGINEERING
100 NORTH U.S. 1 P.O. BOX 1480
FORT PIERCE FLORIDA, 34954

DATE:
OCT. 25, 2022

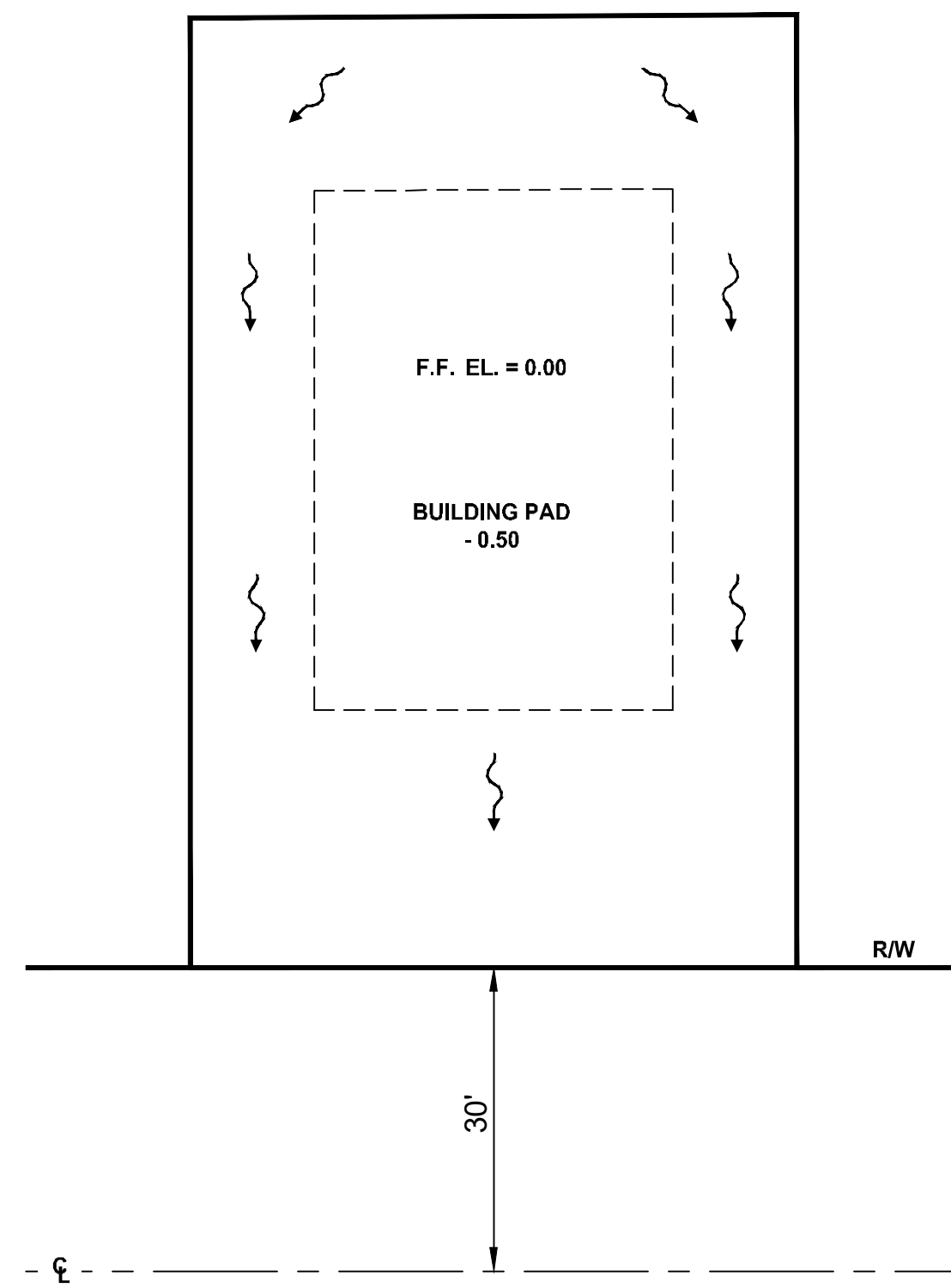
DESIGNED BY:
T. TELLE

SCALE:
N.T.S.

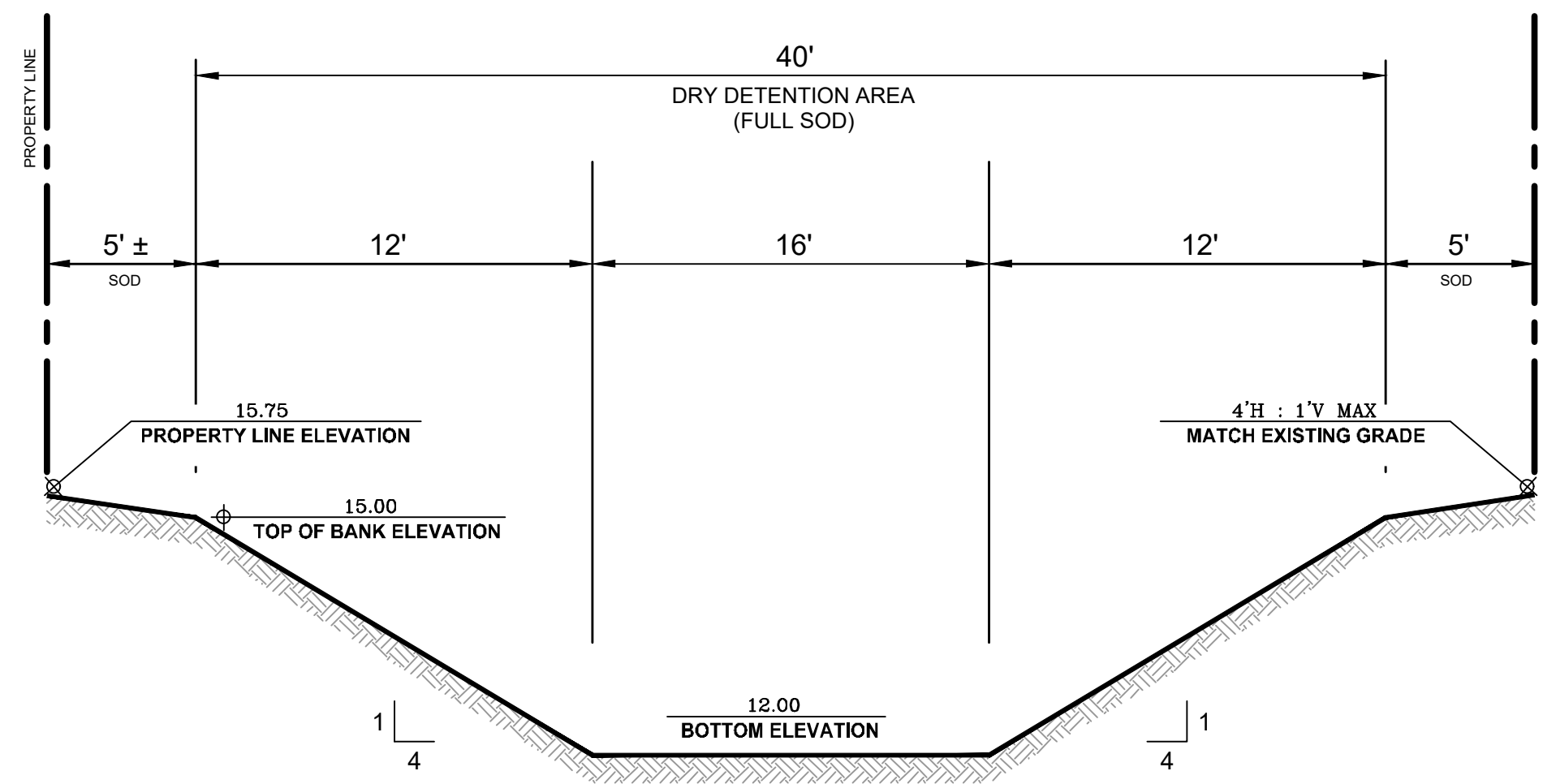
DRAWN BY:
D. SUMNER

APPROVED BY:
J. ANDREWS

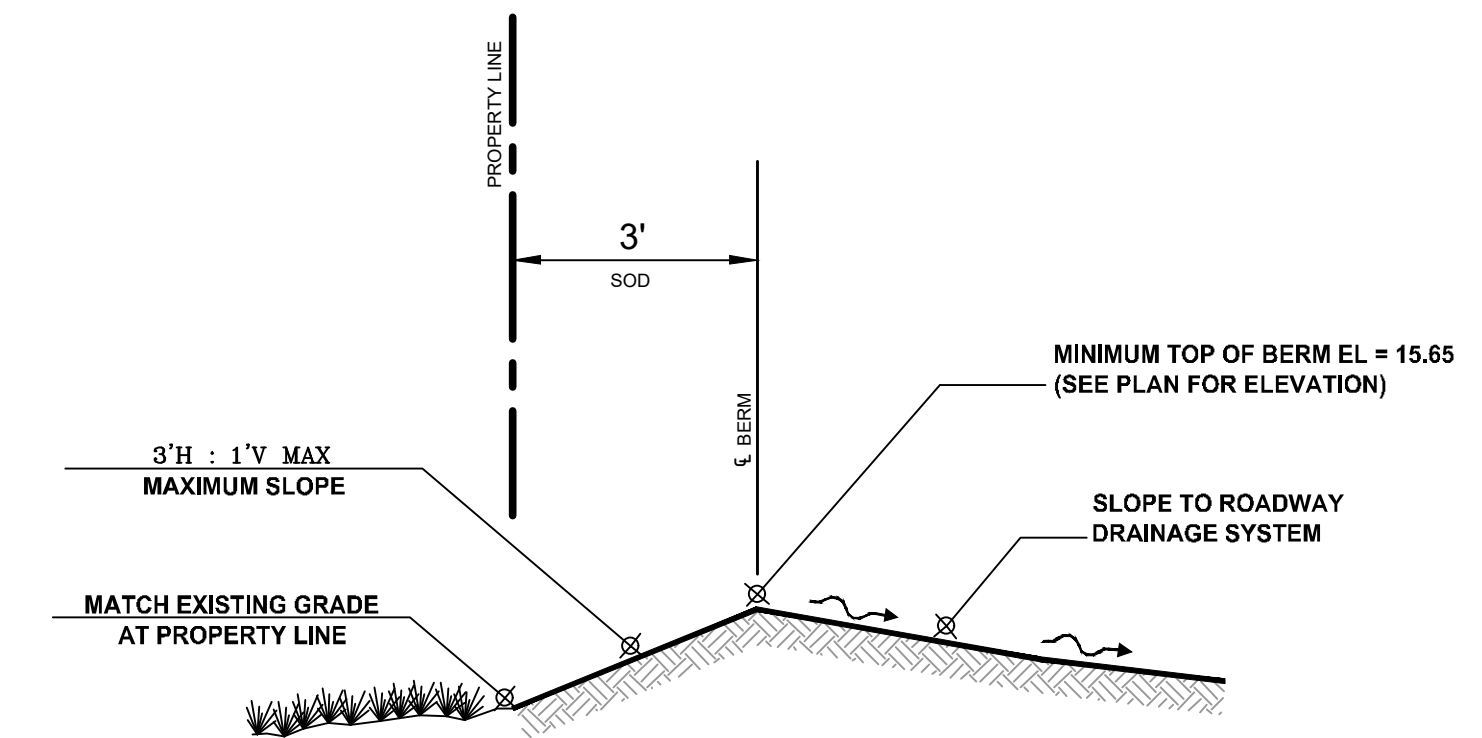
SHEET No.
8 OF 9



TYPICAL LOT GRADING DETAIL

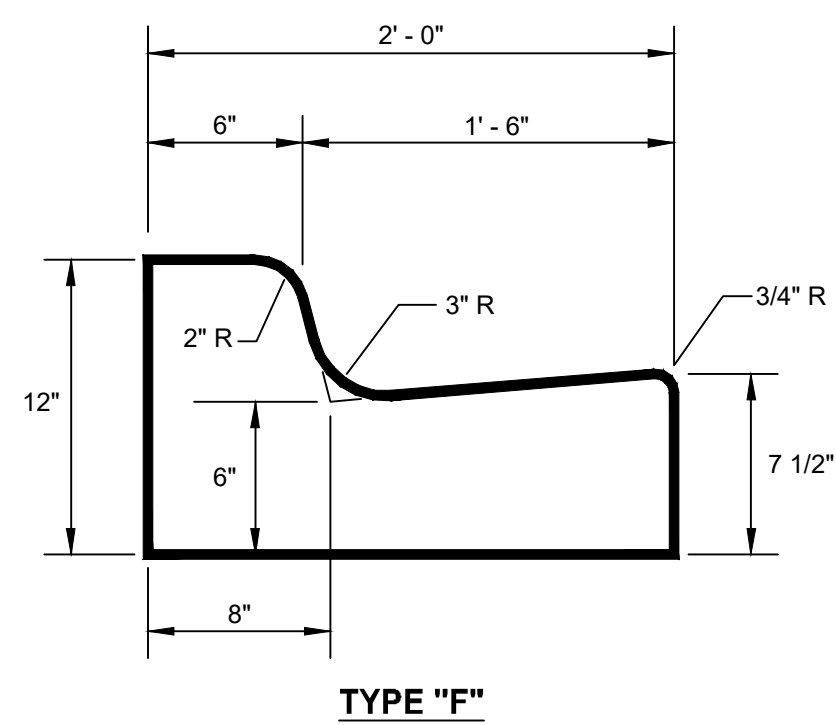


TYPICAL CROSS SECTION "A-A"

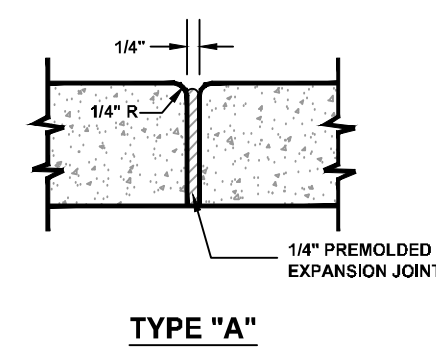


TYPICAL PERIMETER BERM DETAIL

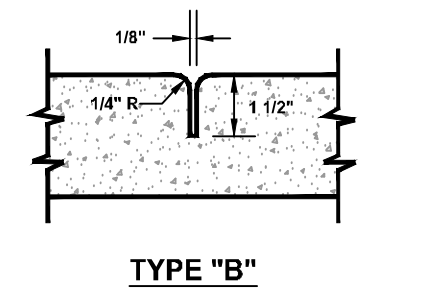
- GENERAL CONSTRUCTION NOTES**
- FOR CURB, GUTTER, CURB AND GUTTER AND TRAFFIC SEPARATORS PROVIDE 1/8" - 1/4" CONTRACTION JOINTS AT 10' CENTERS (MAX.). CONTRACTION JOINTS ADJACENT TO CONCRETE PAVEMENT ON TANGENTS AND FLAT CURVES ARE TO MATCH THE PAVEMENT JOINTS, WITH INTERMEDIATE JOINTS NOT TO EXCEED 10' CENTERS.
 - ENDS OF CURBS TYPE B AND D SHALL TRANSITION FROM FULL TO ZERO HEIGHTS IN 3 FEET.
 - CONCRETE SHALL BE 3000 P.S.I. WITH FIBERMESH



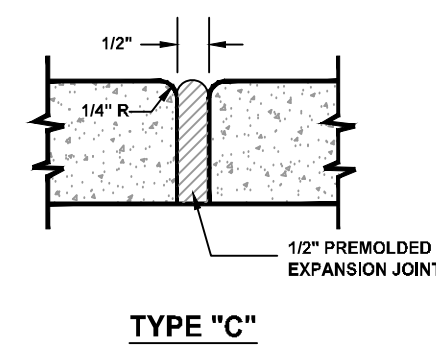
TYPE "F"



TYPE "A"



TYPE "B"

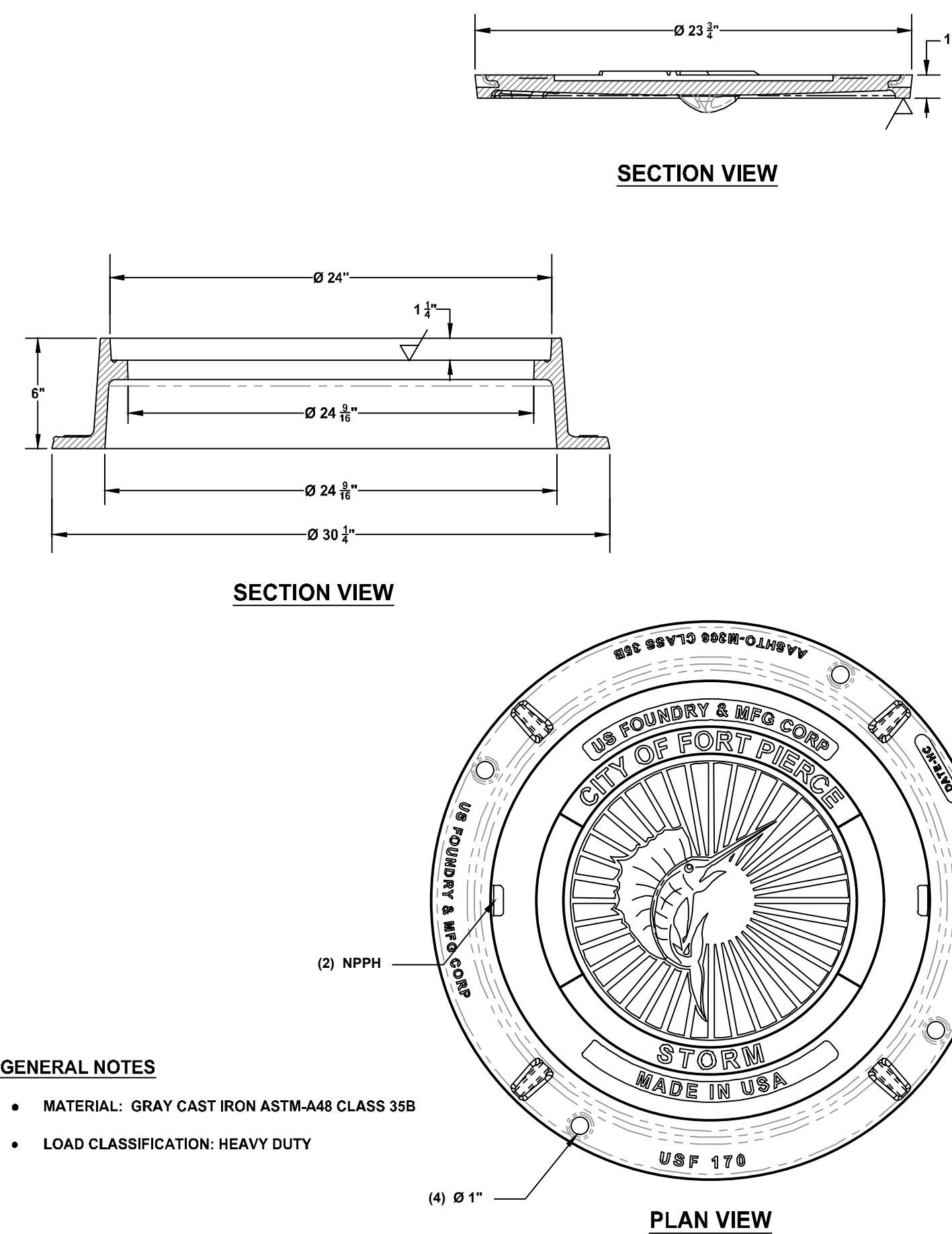


TYPE "C"

NOTE:

- FOR USE ADJACENT TO CONCRETE OR FLEXIBLE PAVEMENT, CONCRETE SHOWN. EXPANSION JOINT, PREFORMED JOINT FILLER AND JOINT SEAL ARE REQUIRED ON CONCRETE PAVEMENT ONLY.

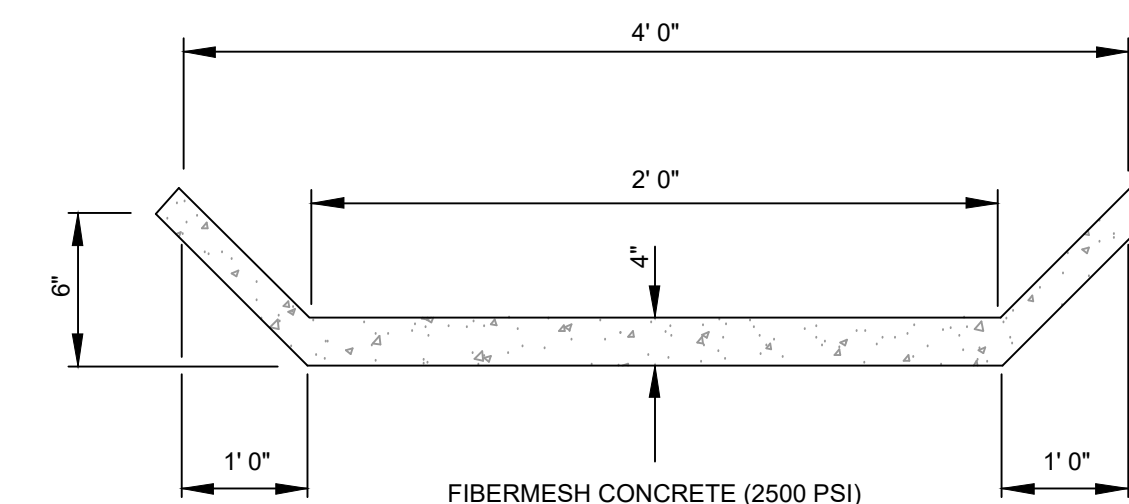
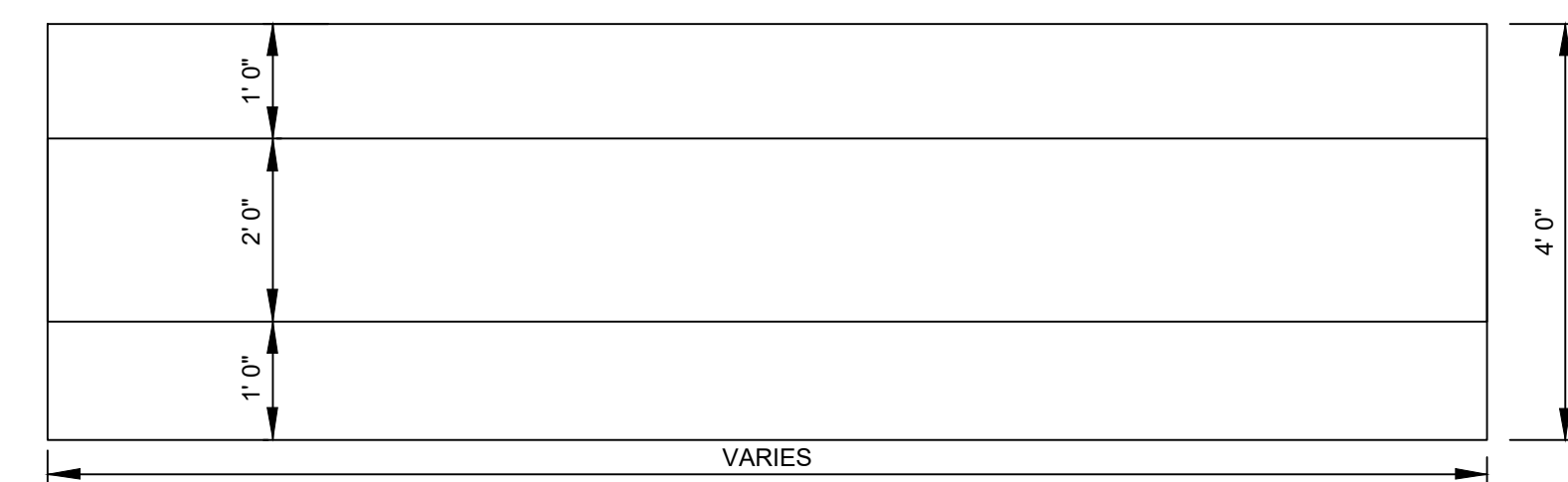
TYPE "F" CURB AND GUTTER DETAIL



GENERAL NOTES

- MATERIAL: GRAY CAST IRON ASTM-A48 CLASS 35B
- LOAD CLASSIFICATION: HEAVY DUTY

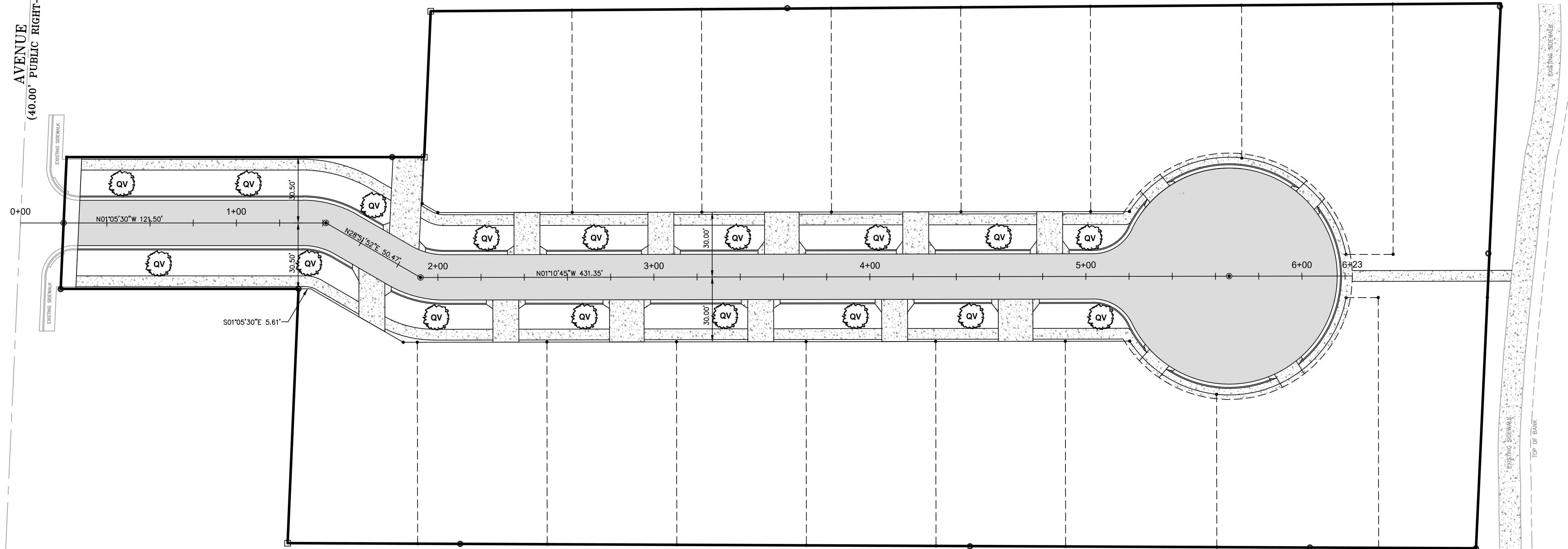
MANHOLE COVER DETAIL



- NOTE:** CONCRETE SHALL BE 4" MIN. THICKNESS, 3000 PSI, WITH FIBERMESH REINFORCING. LENGTH OF FLUME TO BE DETERMINED IN THE FIELD BY THE CITY ENGINEER AND/OR HIS REPRESENTATIVE.

TYPICAL FLUME DETAIL

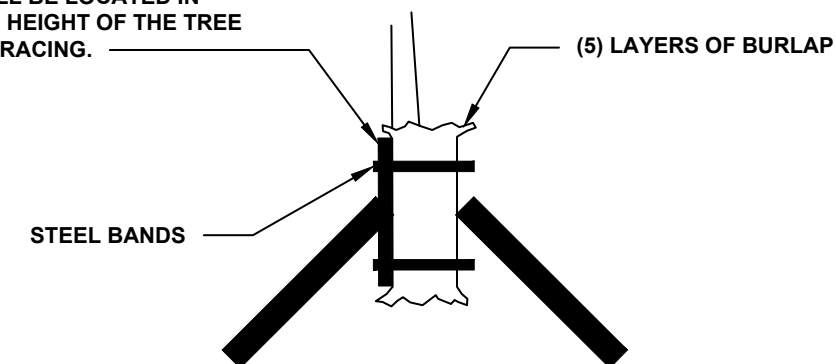
AVENUE B
(40.00' PUBLIC RIGHT-OF-WAY)



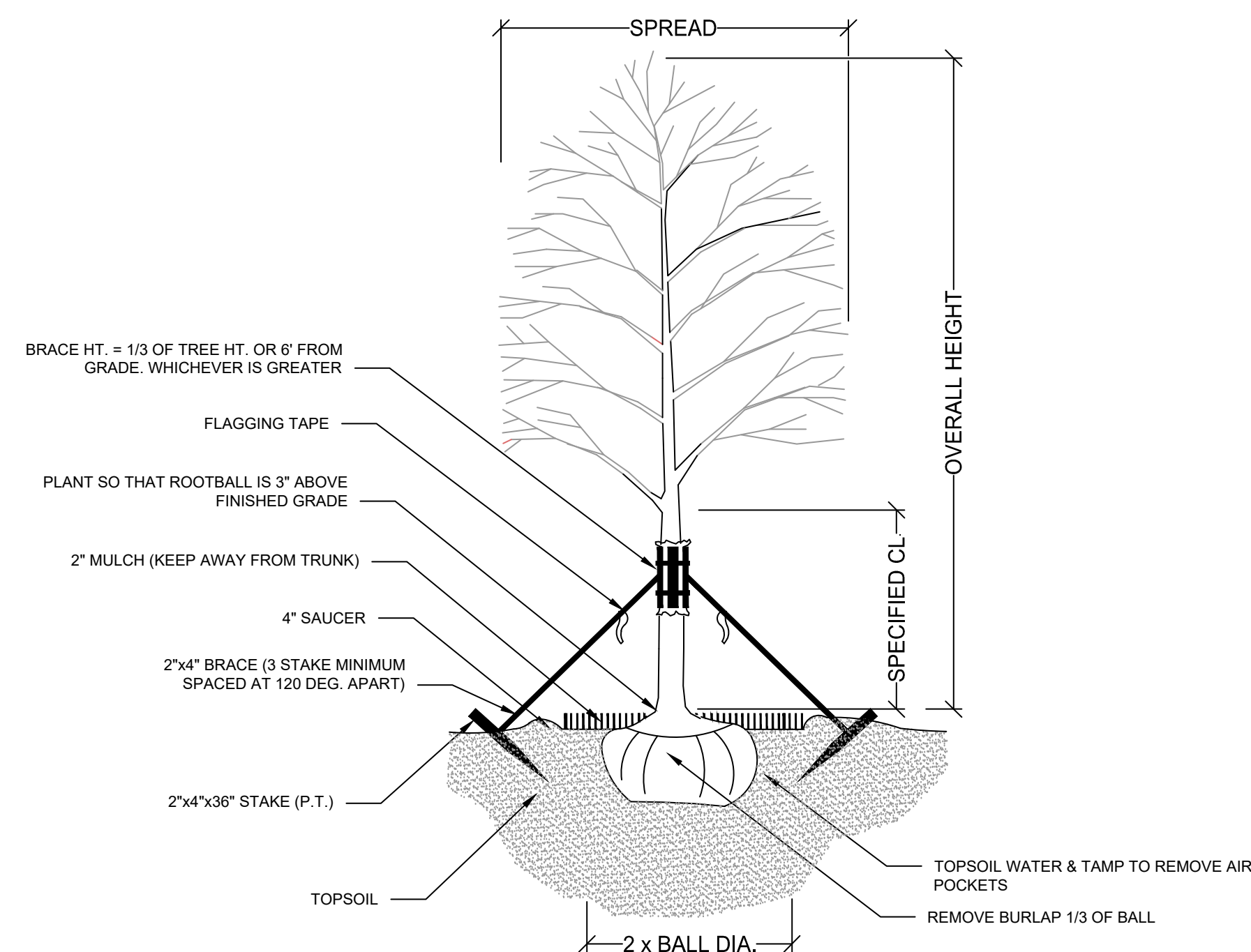
MOORE'S CREEK LINEAR PARK

NOTE:
ALL TREES SHALL BE WARRANTED FOR A PERIOD OF 12 - MONTHS. IT IS THE CONTRACTOR'S RESPONSIBILITY FOR ENSURING ADEQUATE WATERING AND FERTILIZATION ARE PROVIDED DURING THIS TIMEFRAME

(5) 2x4x16" WOOD BATTENS. SECURE BATTENS W/ (2) 3/4" HIGH CARBON STEEL BANDS TO HOLD BATTENS IN PLACE DURING PLANTING PROJECT. DO NOT NAIL BATTENS TO TRUNK. HEIGHT OF BATTENS SHALL BE LOCATED IN RELATION TO THE HEIGHT OF THE TREE FOR ADEQUATE BRACING.



BRACING DETAIL



TREE PLANTING & STAKING
NOT TO SCALE

TREE SCHEDULE			
TREES	QUANTITY	BOTANICAL NAME / COMMON NAME	SIZE
QV	17	QUERCUS VIRGINIANA / LIVE OAK	12' X 5' ; 2.5" D.B.H; FULL CANOPY, 5' C.T. MIN.

NOTE:
D.B.H. IS MEASURED AT 4.5' ABOVE GRADE

REVISIONS
BY
DATE
No.



CITY OF FORT PIERCE
DEPARTMENT OF ENGINEERING
100 NORTH U.S. 1 P.O. BOX 1480
FORT PIERCE FLORIDA, 34954

DATE:
OCT. 25, 2022

DESIGNED BY:
T. TELLE

SCALE:
1" = 30'

DRAWN BY:
D. SUMNER

APPROVED BY:
J. ANDREWS

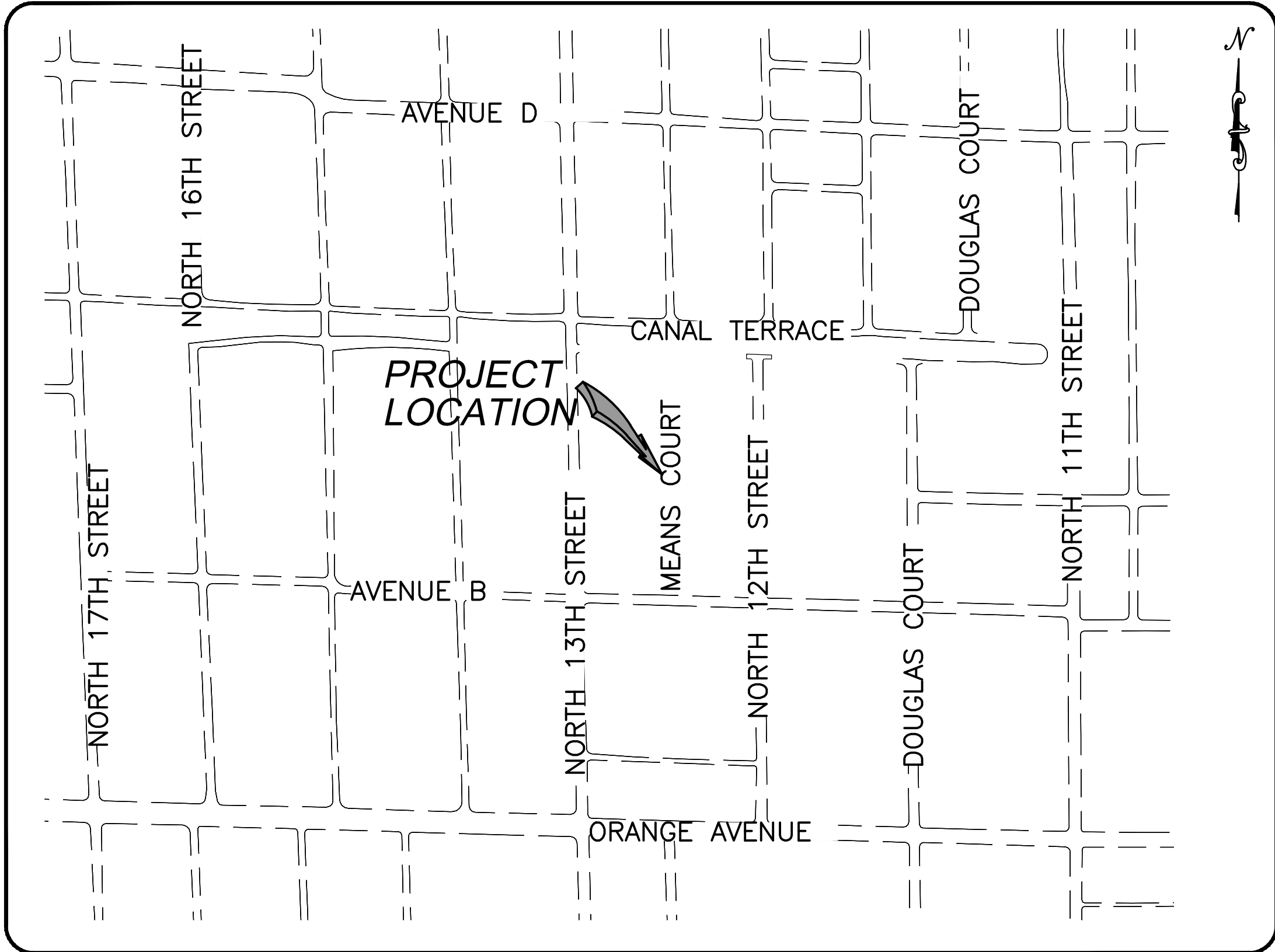
SHEET No.
9 OF 9

OAKS AT MOORES CREEK PHASE II

WATER/WASTEWATER EXPANSION

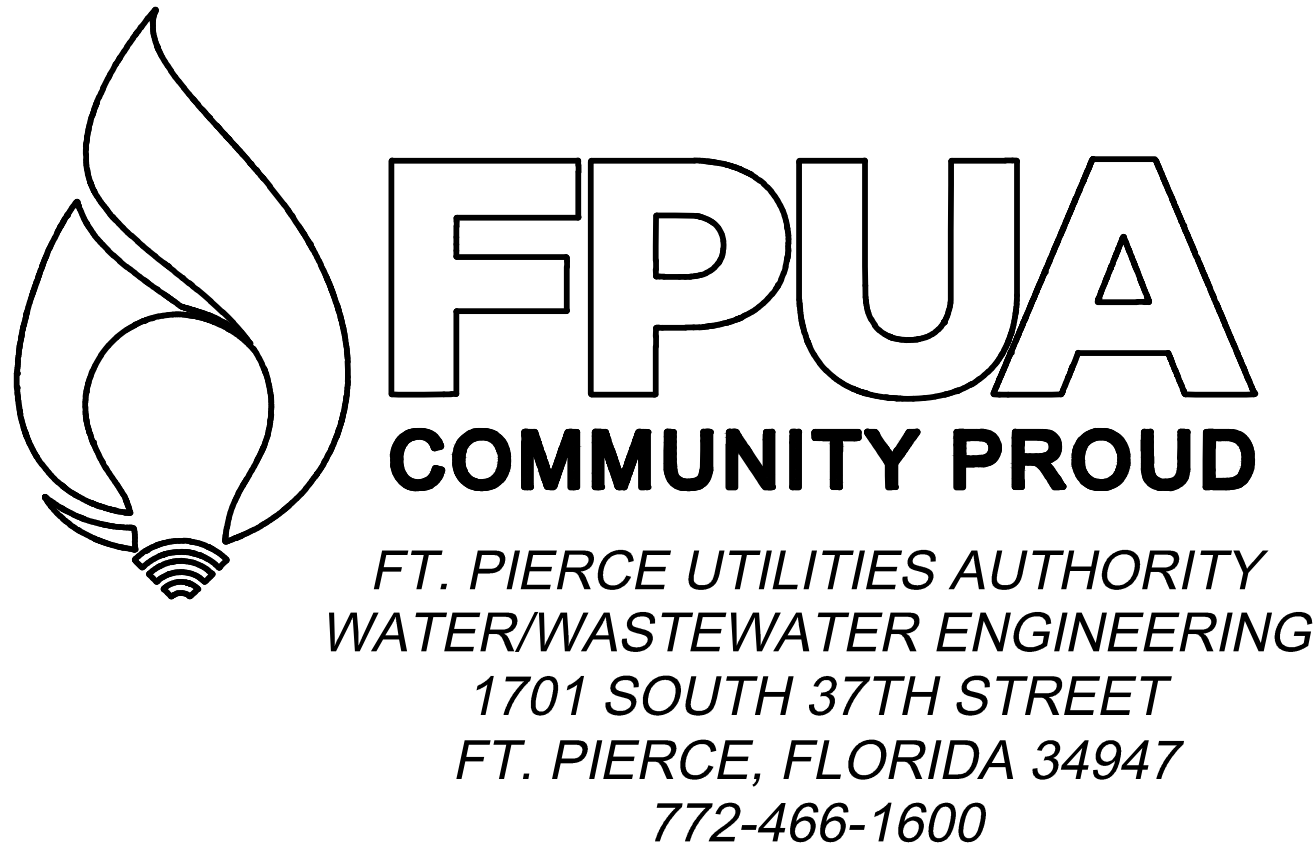
MEANS COURT

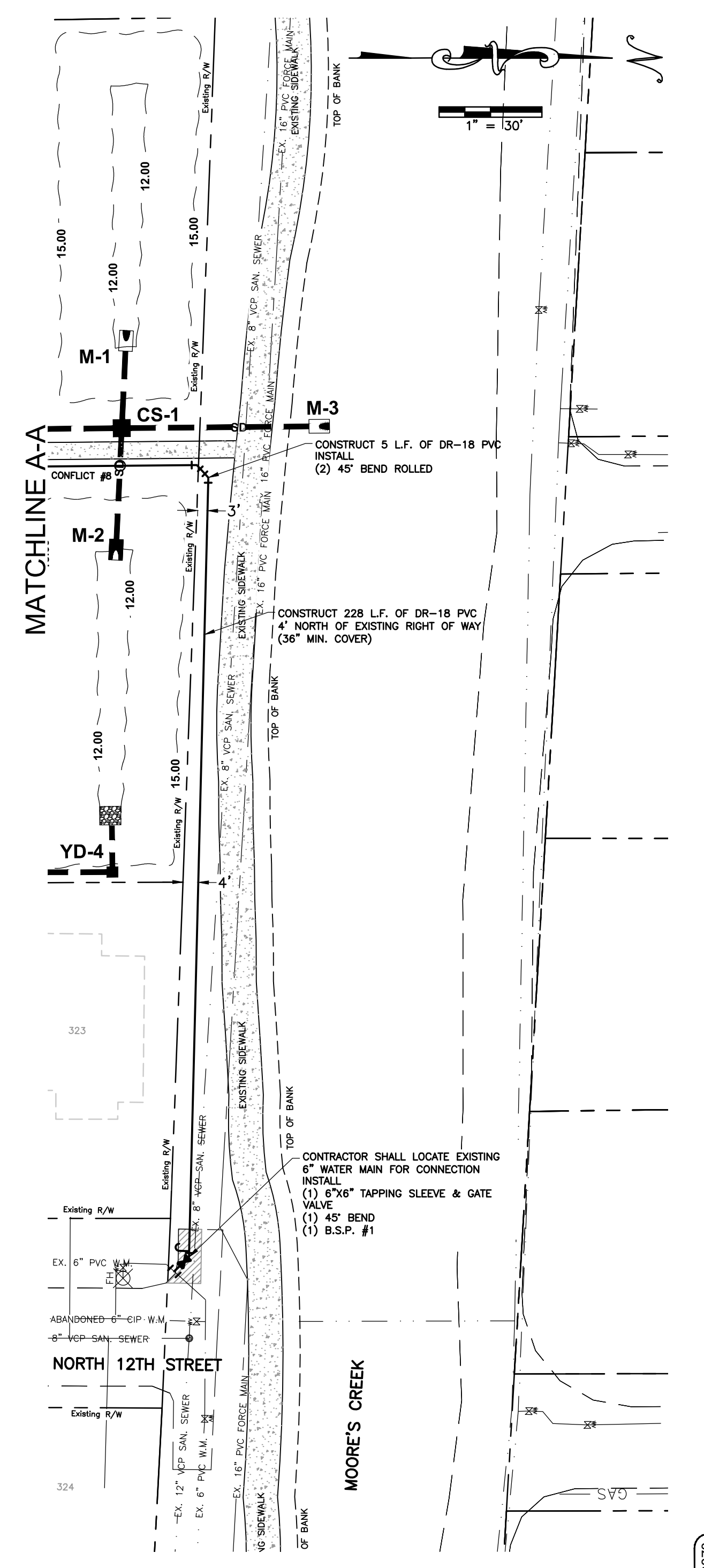
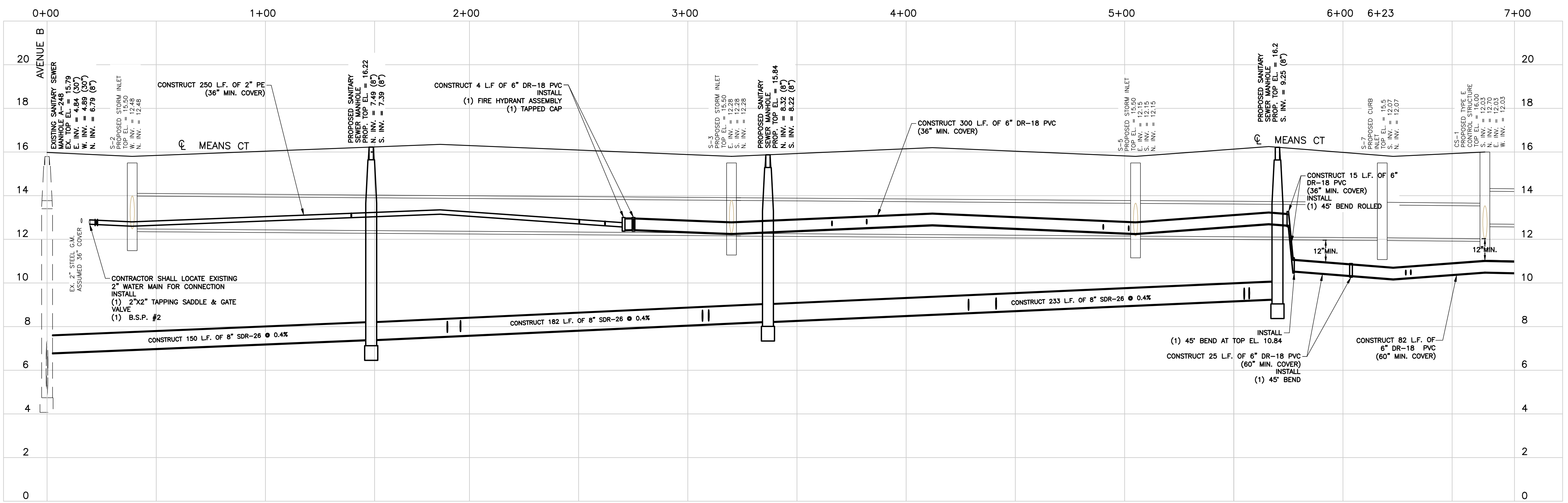
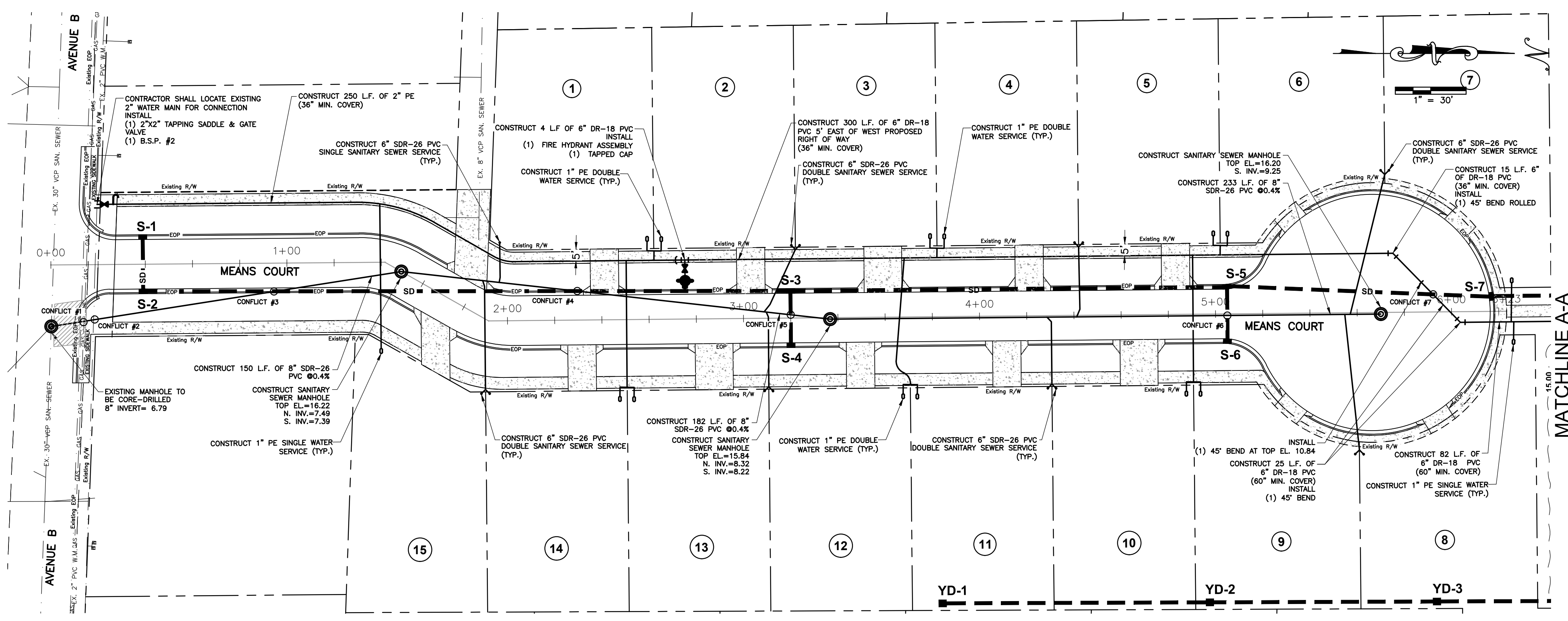
LOCATION MAP



INDEX OF SHEETS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	COVER SHEET
2	PLAN & PROFILE
3-5	FPUA DETAILS



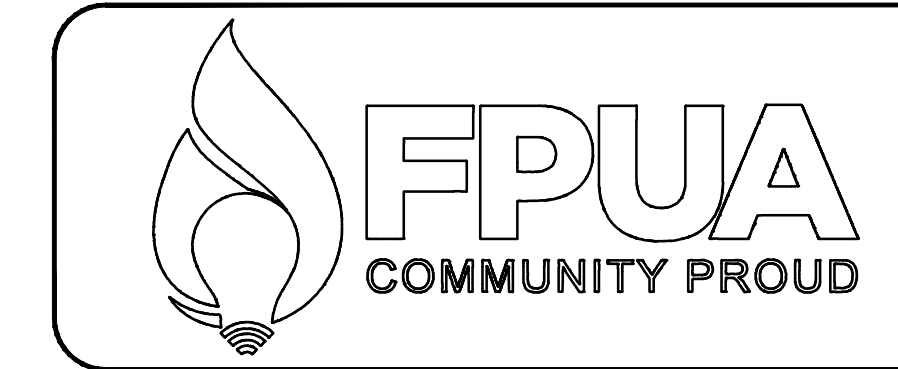


- CONFLICT 1**
8" PVC SEWER MAIN UNDER 2" STEEL GAS MAIN. (12" MIN. SEPARATION)
- CONFLICT 2**
8" PVC SEWER MAIN UNDER 2" WATER MAIN. (12" MIN. SEPARATION)
- CONFLICT 3**
8" PVC SEWER MAIN UNDER 15" RCP STORM. (12" MIN. SEPARATION)
- CONFLICT 4**
8" PVC SEWER MAIN UNDER 15" RCP STORM. (12" MIN. SEPARATION)
- CONFLICT 5**
8" PVC SEWER MAIN UNDER 15" RCP STORM. (12" MIN. SEPARATION)
- CONFLICT 6**
8" PVC SEWER MAIN UNDER 15" RCP STORM. (12" MIN. SEPARATION)
- CONFLICT 7**
6" PVC WATER MAIN UNDER 15" RCP STORM. (12" MIN. SEPARATION)
- CONFLICT 8**
6" PVC WATER MAIN UNDER 15" RCP STORM. (12" MIN. SEPARATION)

- S-1**
PROPOSED STORM INLET
TOP EL. = 15.50
E. INV. = 12.50
- M-1**
PROPOSED STORM
TOP EL. = N/A
E. INV. = 12.00
- S-4**
PROPOSED STORM INLET
TOP EL. = 15.50
W. INV. = 12.40
- M-2**
PROPOSED STORM
TOP EL. = N/A
W. INV. = 12.00
- S-6**
PROPOSED STORM INLET
TOP EL. = 15.50
W. INV. = 12.25
- M-3**
PROPOSED STORM
TOP EL. = N/A
S. INV. = 12.50

ASPHALT PATCH

NOTE: ROOT BARRIER TO BE INSTALLED ON EASTERN SIDE OF WATER MAIN 2+70 TO 5+20.



DATE: _____		REVISION: _____		BY: _____		APPD: _____	
DESIGNED: _____				DRAWING FILENAME: _____			
DRAWN BY: _____				SCALE: _____			
APPROVED: _____				DATE: _____			
OAKS AT MOORES CREEK MEANS COURT WATERWASTEWATER ENGINEERING FT. PIERCE UTILITIES AUTHORITY 1701 SOUTH 37TH STREET FT. PIERCE, FLORIDA 34947 (772) 466-1500 / FAX (772) 468-2414							
SHEET TYPE						SHEET #	
PLAN / PROFILE						2 OF 5	

Bowdon G. Hutchinson, P.E. PE# 70578
1701 S. 37th Street
Fort Pierce, FL 34947

**FORT PIERCE UTILITIES AUTHORITY
WATER DISTRIBUTION NOTES**

1. ALL CONSTRUCTION MATERIAL, INSTALLATION AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE FORT PIERCE UTILITIES AUTHORITY.
2. WATER MAINS WHERE SPECIFIED AS POLYETHYLENE GLYCOL (PE) SHALL CONFORM TO ANRW C-900 OR C-905, PRESSURE CLASS 150, DR (10). WATER MAINS WHERE SPECIFIED AS POLYETHYLENE (PE) SHALL CONFORM TO ANRW C-901 OR C-906, STANDARD CODE DESIGNATION PEH08, PIPE CLASS 200, DIMENSION RATIO (DR) 17 FOR DIRECT BURY, (DR) 11 FOR DIRECTIONAL BORING, AND (DR) 9 FOR 2 INCH AND SMALLER PIPELINES.
3. WATER MAINS WHERE SPECIFIED AS DUCTILE IRON PIPE, SHALL CONFORM TO ANS/ANRW C115/A21.10 AND SHALL BE PRESSURE CLASS 250 (MINIMUM).
4. POLYETHYLENE GLYCOL WATER MAIN SHALL BE BLUE IN COLOR OR WHITE IN COLOR WITH BLUE STRIPES. THE USE OF IDENTIFICATION TAPE ATTACHED TO THE TOP OF THE PIPE MAY BE USED IN LIEU OF MARKING ON THE PIPE. ALSO DIP PIPE SHALL REQUIRE THE USE OF IDENTIFICATION TAPE.
5. FITTINGS SHALL BE DUCTILE IRON CONFORMING TO ANS/ANRW C-110/A21.10, CLASS 250 MIN. CEMENT LINED AND FACTORY COATED.
6. GATE VALVES SHALL BE MUELLER RESILIENT SEAT, KENNEY KED-SEAL, AMERICAN OR APPROVED EQUAL. VALVES SHALL CONFORM TO ANRW C-509.
7. WATER LINES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH FPUA DESIGN AND CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SUBMIT CERTIFIED DENSITY TESTS AS REQUIRED BY FPUA ENGINEERING AND THE CITY/COUNTY, EXCEPT IN CASES WHERE PAVED AREAS FALL WITHIN THE JURISDICTION OF LOCAL OR STATE AGENCIES. THE COMPACTON REQUIREMENTS SHALL NOT BE LESS THAN THE MINIMUM REQUIRED BY THE APPROPRIATE RESPONSIBLE AGENCY.
8. NO FIELD CHANGES OR DEVIATIONS FROM THE DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE FPUA ENGINEER AND CITY/COUNTY/FOOT ENGINEER.
9. THE CONTRACTOR SHALL NOTIFY FPUA ENGINEERING AND CITY/COUNTY/FOOT ENGINEERING 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
10. A PRE-CONSTRUCTION CONFERENCE BETWEEN THE ENGINEER, THE CONTRACTOR, FPUA AND CITY/COUNTY/FOOT ENGINEER SHALL BE MANDATORY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
11. TRAFFIC CONTROL, BARRIAGES, ETC. SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS AND APPROVED BY THE CITY ENGINEER.
12. MINIMUM COVER SHALL BE 36 INCHES EXCEPT AS APPROVED BY THE UTILITIES ENGINEER AND CITY/COUNTY/FOOT ENGINEER. PIPES WITH COVER LESS THAN 30 INCHES SHALL BE CONSTRUCTED OF DUCTILE IRON OR IN PVC CASING.
13. DISTURBED AREAS SHALL BE RESTORED IN CONFORMANCE WITH THE APPLICABLE GOVERNING AGENCY REQUIREMENTS.
14. EXISTING UTILITIES AND DRAINAGE SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION AND PROTECTED BY THE CONTRACTOR.
15. WATER MAINS SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH THE APPLICABLE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ANRW C-651 FOR DISINFECTION.

**FORT PIERCE UTILITIES AUTHORITY
WATER DISTRIBUTION NOTES
CONTINUED**

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING UTILITIES AND DRAINAGE.
17. THE CONTRACTOR SHALL FURNISH RECORD DRAWING INFORMATION TO THE ENGINEER INCLUDING LOCATIONS OF VALVES, FITTINGS, SERVICE CONNECTIONS, BLOWOUTS, AIR RELEASE VALVES, AND ANY OTHER PERTINENT INFORMATION NECESSARY TO LOCATE LINES CONSTRUCTED UNDER THIS PROJECT, AS REQUIRED BY THE UTILITIES ENGINEER.
18. THE CONTRACTOR SHALL TAP EXISTING LINES UNDER THE SUPERVISION OF THE FORT PIERCE UTILITIES AUTHORITY ONLY AFTER TESTING AND DISINFECTION HAS BEEN COMPLETED AND APPROVED ON THE TAPPING VALVE AND SLEEVE.
19. WATER MAIN SHALL BE MARKED BY THE USE OF CONTINUOUS 10 GAUGE THIN MULTI STRANDED WIRE (BLUE IN COLOR) AND IDENTIFICATION TAPE WITH "WATER" MARKED ON TAPE, PERMANENTLY ATTACHED TO THE TOP OF THE WATER MAIN IN ACCORDANCE WITH THE FORT PIERCE UTILITIES AUTHORITY SPECIFICATIONS.
20. SERVICE TAPS SHALL BE PLACED APPROXIMATELY TEN FEET AWAY FROM GATE VALVES, AS SHOWN FOR TESTING. FOLLOWING TESTING AND STERILIZATION OF WATER LINE, CONTRACTOR SHALL PLACE A BRASS PLUG IN CORPORATION STOPS AND CURB STOPS SHALL BE REMOVED FROM TESTING LOCATIONS.
21. MECHANICAL RESTRAINTS TO BE USED ON ALL FITTINGS AND PLACED IN ACCORDANCE WITH MANUFACTURER'S OR ENGINEER'S RECOMMENDATIONS (WHICHEVER IS MORE STRINGENT) AND FPUA REQUIREMENTS.
22. ALL MAINS SHALL BE TESTED AT A MINIMUM OF 150 PSI. TESTING METHODS SHALL CONFORM TO ANRW C-600, - 2 H MINIMUM TEST.
 - L = SDR³ / 12
 - F = 14000
 - L = LEAKAGE IN GPH
 - S = LENGTH OF PIPE IN FEET
 - D = PIPE DIAMETER IN INCHES
 - P = TESTING PRESSURE IN PSI
23. PRIOR TO ANY TESTING, ALL MAINS 6" IN DIA. AND LARGER SHALL HAVE A SWAB PASSED THRU THE ENTIRE LENGTH OF THE LINE. NOTE: SWAB SHOULD BE PLACED IN THE JOINT OF NEW LINE. END OF MAIN SHOULD BE "TURNED UP" AT 45° AND EXTENDED SO THAT DRAINING AND A FULL BORE FLUSH CAN BE ACCOMPLISHED. BLOW-OFF ASSESS CAN THEN BE PLACED WHERE LINES BRANCH. SWABS WILL BE PLACED IN BRANCH LINES AND SEQUENTIALLY DOWNED AND FLUSHED.
24. A MINIMUM SIX FEET AND PREFERABLY TEN FEET HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND ANY WASTEWATER LINES. 6 INCHES MINIMUM VERTICAL SEPARATION IF WATER MAIN IS OVER WASTEWATER AND 12 INCHES IF WATER MAIN IS UNDER SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND ANY WASTEWATER LINES. THE DISTANCE SHALL BE MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE OR STRUCTURE. WHERE THE MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE WASTEWATER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING, AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
25. WHERE A WATER MAIN IS TO BE INSTALLED BELOW A STORM DRAIN PIPE, A MINIMUM OF 6 INCHES OF VERTICAL CLEARANCE BETWEEN PIPES SHALL BE CONSTRUCTED OF DIP AT THE CROSSING, AND SHALL BE MECHANICALLY RESTRAINED WITHIN 20 FEET OF THE CROSSING.
26. CONTRACTOR SHALL COMPLY WITH FLORIDA TRENCH SAFETY ACT REQUIREMENTS.

FORT PIERCE UTILITIES AUTHORITY WASTEWATER CONSTRUCTION NOTES

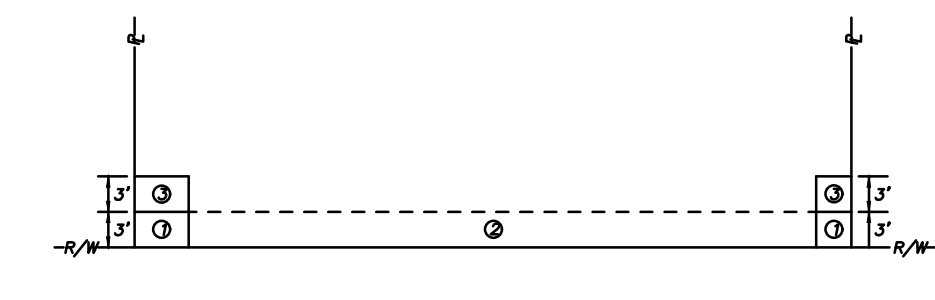
1. ALL CONSTRUCTION MATERIAL, INSTALLATION AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE FORT PIERCE UTILITIES AUTHORITY.
2. GRAVITY SEWER MAIN SHALL BE POLYETHYLENE GLYCOL (PE) OR WHITE IN COLOR. GRAVITY SEWER MAINS SHALL HAVE LOCATOR TAPE WITH "SEWER" MARKED ON TAPE AND SHALL CONFORM TO ASTM D-3035.
3. THE MANHOLE BASE SHALL BE SET ON A FIRM, DRY AND STABLE OR COMPACTED BASE FOUNDATION. IF NECESSARY, THE CONTRACTOR SHALL UTILIZE ROCK TO PROVIDE A FIRM AND SUITABLE MANHOLE BASE FOUNDATION.
4. WASTEWATER LINES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH FPUA DESIGN AND CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SUBMIT CERTIFIED DENSITY TESTS AS REQUIRED BY FPUA ENGINEERING AND THE CITY ENGINEERING DEPARTMENT. IN CASES WHERE PAVED AREAS FALL WITHIN THE JURISDICTION OF LOCAL OR STATE AGENCIES, THE COMPACTON REQUIREMENTS SHALL NOT BE LESS THAN THE MINIMUM REQUIRED BY THE APPROPRIATE RESPONSIBLE AGENCY.
5. A 1% MINIMUM SLOPE SHALL BE MAINTAINED ON ALL SANITARY SERVICE LATERALS.
6. THE CONTRACTOR SHALL FURNISH RECORD DRAWING INFORMATION TO THE ENGINEER CONSISTING OF PIPE SIZES, LOCATION OF SERVICES, PIPE DIAMETER OF SERVICES, LOCATION OF ANY FITTINGS, FINAL FIN AND INVERT ELEVATION OF ALL MANHOLES AND ANY OTHER PERTINENT INFORMATION NECESSARY TO LOCATE LINES CONSTRUCTED UNDER THIS PROJECT.
7. MAINTAIN SIX FEET AND PREFERABLY 10 FEET HORIZONTAL SEPARATION BETWEEN WATER MAINS AND SEWER MAINS AS A MINIMUM.
8. WASTEWATER FORCE MAINS, WASTEWATER COLLECTION LINES, AND STORM SEWERS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. A MINIMUM VERTICAL DISTANCE OF 12 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE SHALL BE PROVIDED WHENEVER POSSIBLE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE WASTEWATER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING, AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
9. A PRE-CONSTRUCTION CONFERENCE BETWEEN THE ENGINEER, THE CONTRACTOR, AND FPUA/CITY/COUNTY/FOOT SHALL BE MANDATORY PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
10. NO FIELD CHANGES OR DEVIATIONS FROM THE DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL OF FPUA/CITY/COUNTY/FOOT ENGINEER.
11. TRAFFIC CONTROL, BARRIAGES, ETC. SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.
12. CONTRACTOR SHALL NOTIFY FORT PIERCE UTILITIES AUTHORITY 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
13. WASTEWATER FORCE MAIN SHALL BE POLYETHYLENE GLYCOL CONFORMING TO ANRW C-900.
14. WASTEWATER FORCE MAIN SHALL BE GREEN IN COLOR.
15. FITTINGS SHALL BE DUCTILE IRON, CONFORMING TO ANS/ANRW C-110/A21.10 CLASS 250 MIN. AND INTERIOR SPOUT COATED.
16. WASTEWATER FORCE MAIN SHALL BE MARKED BY THE USE OF CONTINUOUS 10 GAUGE THIN WIRE (GREEN IN COLOR) PERMANENTLY ATTACHED TO THE TOP OF THE FORCE MAIN WITH LOCATOR TAPE MARKED "SEWER" ON TAPE IN ACCORDANCE WITH FPUA SPECIFICATIONS.
17. MINIMUM COVER SHALL BE 36 INCHES. PIPES WITH COVER LESS THAN 30 INCHES SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
18. EACH SERVICE LATERAL WILL BE MARKED WITH A LOCATOR BALL AS MANUFACTURED BY JM CORPORATION, OR APPROVED EQUAL AS REQUIRED BY FPUA ENGINEER.
19. ALL MANHOLES SHALL HAVE SEWER MAN GUARDS INSTALLED AS REQUIRED BY FPUA ENGINEER.
20. THE CONTRACTOR SHALL COMPLY WITH THE FLORIDA TRENCH SAFETY ACT REQUIREMENTS.

**STANDARD SEPARATION STATEMENT FOR
WATER / SEWER CONNECTIONS**

1. SANITARY SEWER, FORCE MAINS, AND STORM SEWERS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWERS, FORCE MAINS AND STORM SEWERS CROSSING UNDER WATER MAINS SHALL BE LAD TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 6 INCHES, PREFERABLY 12 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHEN ABOVE, AND AT LEAST 12 INCHES OF SEPARATION WHEN THE WATER MAIN IS BELOW.
- WHERE SANITARY SEWER, FORCE MAINS, STORM SEWERS MUST CROSS A WATER MAIN WITH LESS THAN 6 INCHES VERTICAL SEPARATION, BOTH THE SEWER AND WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) CENTERED ON THE CROSSING. (DIP IS NOT REQUIRED FOR STORM SEWERS). SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED.
- ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING). AT SUCH CROSSINGS PIPES SHALL BE RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-1610, 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 62-1610, F.A.C.
- WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN 6 INCHES VERTICAL CLEARANCE, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP (EXCEPT STORM SEWERS) AND NEW PIPES SHALL BE ARRANGED TO MEET THE CROSSING REQUIREMENTS ABOVE.
2. A MINIMUM 3'-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF STORM SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
- A MINIMUM 10'-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN VACUUM TYPE SANITARY SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
- A MINIMUM 10'-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN "ON-SITE" SEWAGE TREATMENT AND DISPOSAL SYSTEMS AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
- A MINIMUM 6'-FOOT, AND PREFERABLY 10'-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN GRAVITY OR PRESSURE TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE. A MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO 3 FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAD AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
- IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10-FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAD IN A SEPARATE TRENCH OR ON A 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 6 INCHES ABOVE THE TOP OF THE SEWER.
- WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 6 INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP (EXCEPT STORM SEWER) 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).
3. ALL DIP SHALL BE PRESSURE CLASS 250 MIN. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY THE DESIGN ENGINEER.

GENERAL POLICY

WHERE COST JUSTIFIED AND OPERATIONALLY FEASIBLE, IT IS THE GENERAL POLICY OF THE F.P.U.A. TO PROVIDE WATER, ELECTRIC, SEWER AND GAS SERVICE FROM THE STREET SIDE OF A PIECE OF PROPERTY. DEPENDS ON FACTORS SUCH AS LOCATION OF EXISTING SUPPLY SOURCE FACILITIES, REAR OR SIDE LOT LINE SUPPLY MAY BE AUTHORIZED, BUT ONLY WITH PRIOR APPROVAL FROM THE F.P.U.A.



- NOTES:**
1. THE PREFERRED POINT OF CONNECTION TO THE F.P.U.A. WATER METER, AREA (A) SHALL BE LOCATED IN THE CORNER OF THE PROPERTY SELECTED BY THE F.P.U.A. AS THE BEST LOCATION FOR THE WATER METER. EVERY EFFORT WILL BE MADE TO SELECT THE CORNER WHERE TWO WATER SERVICES AND METERS CAN BE CONNECTED.
 2. IF PHYSICAL BARRIERS OR OTHER OBSTACLES PREVENT THE CONNECTION OF THE BUILDING SERVICE LINE TO THE F.P.U.A. WATER SERVICE, WITHIN AREA (A), THE F.P.U.A. ENGINEERING DEPARTMENT MAY AUTHORIZE THE CONNECTION ALONG THE PORTION OF THE R/W LINE MARKED AREA (B), OR ALONG THE PROPERTY LINES MARKED AREA (C).
 3. HORIZONTAL SEPARATION OF WATER AND WASTEWATER SERVICES SHOULD BE A MINIMUM OF 6 FEET AND PREFERABLY 10 FEET.
 4. ALL METERS SHALL BE INSTALLED IN AN UNRESTRICTED AREA FOLLOWING EASE OF ACCESS AND PROVIDING ADEQUATE PROTECTION.
 5. THE F.P.U.A. SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF THE WATER LATERAL WITHIN THE EASEMENT OR RIGHT-OF-WAY, UP TO THE POINT OF CONNECTION.

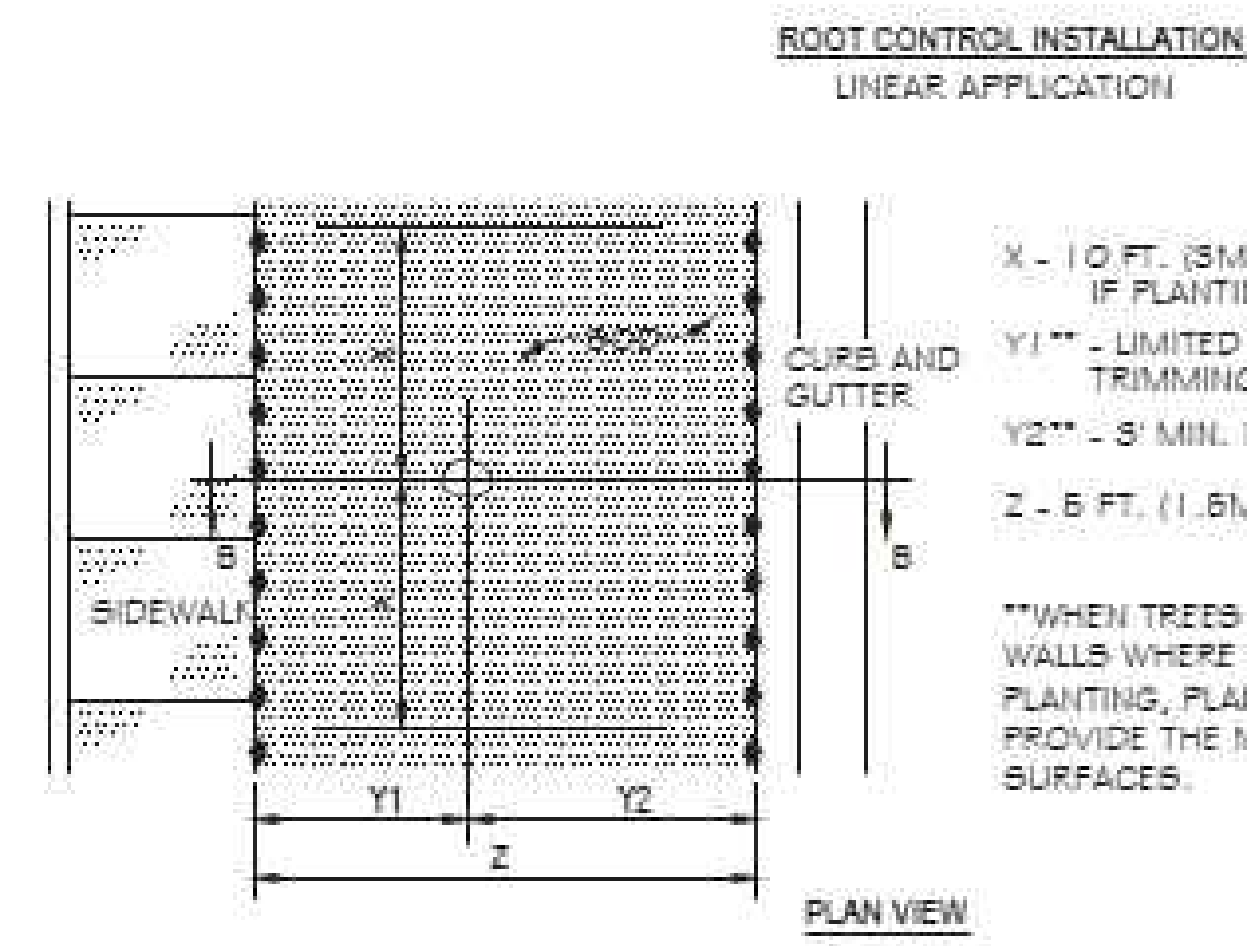
**WATER METER PLACEMENT
(N.T.S.)**



FIBERWEB
70 OLD HICKORY BLVD.
OLD HICKORY, TN 37138-3651
TOLL FREE: 800-284-2780 ext. 7137
PHONE: (615) 847-7137
FAX: (615) 847-7068
www.biobarrier.com

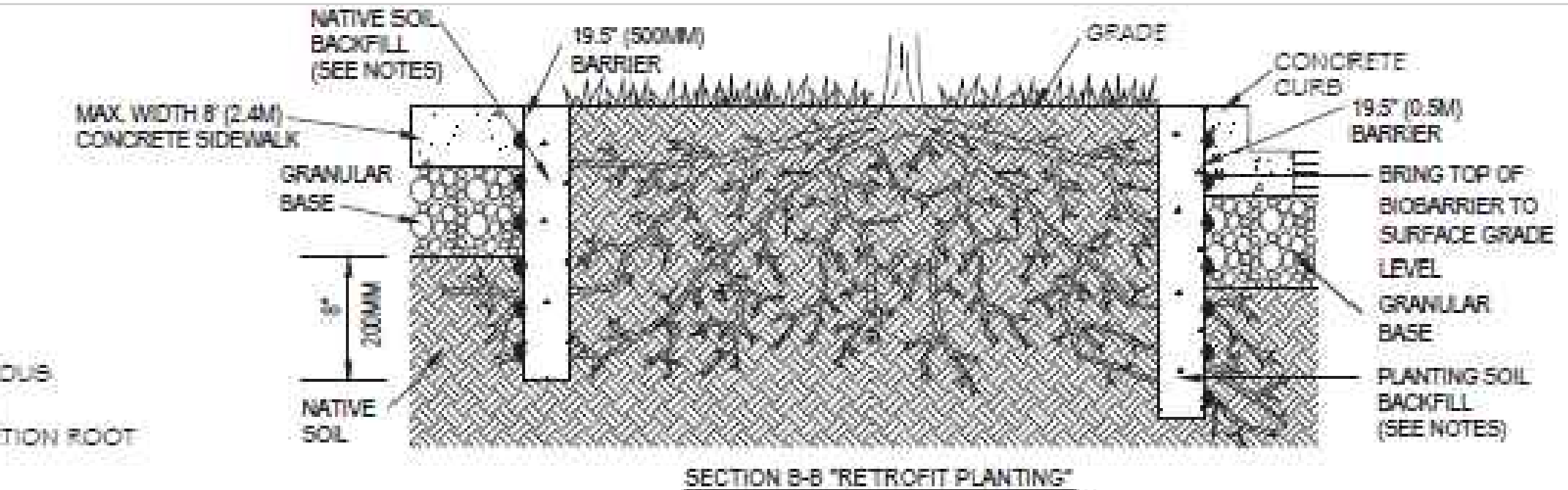
BIO-BARRIER NOTES:

1. CONTRACTOR SHALL UTILIZE BIO-BARRIER ROOT PROTECTION (OR EQUAL, AS APPROVED BY ENGINEER) IN ALL AREAS WHERE PLANT MATERIAL IS INSTALLED 10' OR LESS TO ANY UTILITY LINE, CURB, ROADWAY, PAVED SURFACE (CONC. UNIT PAVEMENT OR CONCRETE). REFER TO DETAILS ON THIS SHEET AND MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR ADDITIONAL NOTES, DETAILS AND METHODS.
2. CONTRACTOR SHALL INSTALL BIO-BARRIER PER MANUFACTURER'S RECOMMENDATIONS.
3. BIO-BARRIER SHALL BE INSTALLED FOLLOWING THE CURING OF THE CONCRETE CURB/WALK/CONC. FOOTER BELOW PAVERS WHILE TRENCHES ARE STILL OPEN. BIO-BARRIER # IRRIGATION PIPES ADJACENT TO BIO-BARRIER LOCATIONS SHALL BE PERFORMED CONCURRENTLY.
4. CONTRACTOR TO FOLLOW ALL SAFETY RECOMMENDATIONS AND ADHERE TO ALL WARNINGS, PER PRODUCT MANUFACTURER.
5. CONTRACTOR TO STORE BIO-BARRIER PRODUCT IN ORIGINAL CONTAINER & KEEP DRY UNTIL INSTALLATION. BIO-BARRIER SHALL BE PROTECTED FROM DIRECT SUNLIGHT DURING ALL PHASES OF CONSTRUCTION.
6. CONTRACTOR SHALL REMOVE FROM SITE ALL UNUSED PORTIONS OF BIO-BARRIER AND DISPOSE OF PER STATE AND LOCAL CODES.
7. IF CONC. UNIT PAVERS ARE INSTALLED WITH A SLOPPY EDGE, THE PAVERS SHALL BE INSTALLED AS A BACKING FOR THE BIO-BARRIER.
8. CONTRACTOR SHALL REPORT ALL DISCREPANCIES/CONFLICTS TO ENGINEER PRIOR TO INSTALLATION.



**ROOT CONTROL INSTALLATION
LINEAR APPLICATION**

- X - 10 FT. (3M) RECOMMENDED OR CONTINUOUS IF PLANTINGS ARE < 20 FT. (6M) APART
 - Y1** - LIMITED ONLY WITH RETROFIT INSTALLATION ROOT TRIMMING (TREE STABILITY)
 - Y2** - 8" MIN. FROM BACK OF CURB
 - Z - 6 FT. (1.8M) MINIMUM
- **WHEN TREES ARE BETWEEN TWO PAVEMENT AREAS OR WALLS WHERE THERE IS LESS THAN 10' CLEAR FOR PLANTING, PLANT MATERIAL SHALL BE CENTERED AS TO PROVIDE THE MAXIMUM DISTANCE FROM SUCH SURFACES.

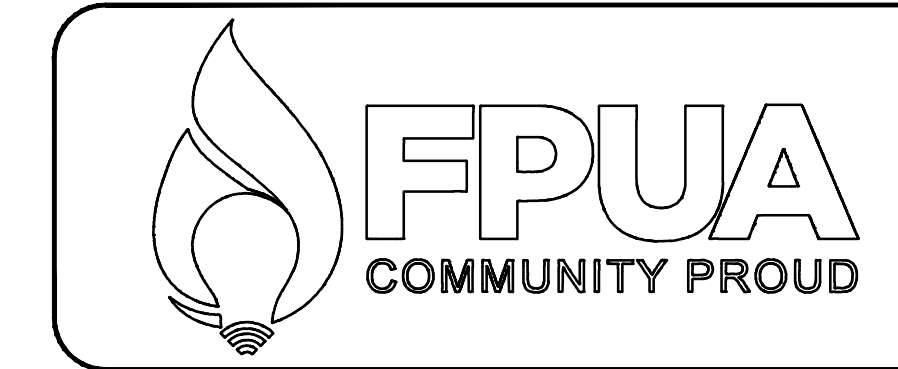


SECTION B-B "RETROFIT PLANTING"

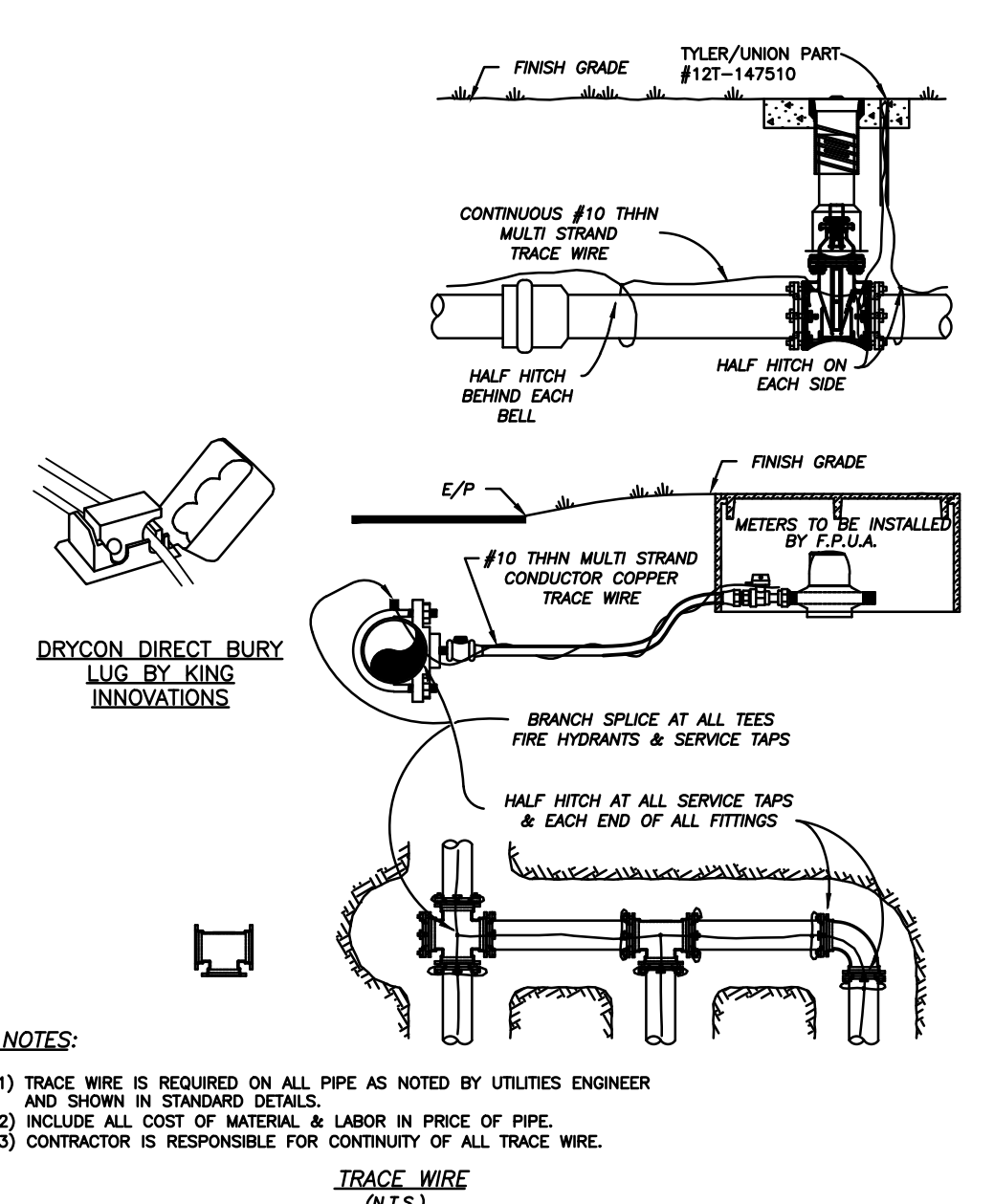
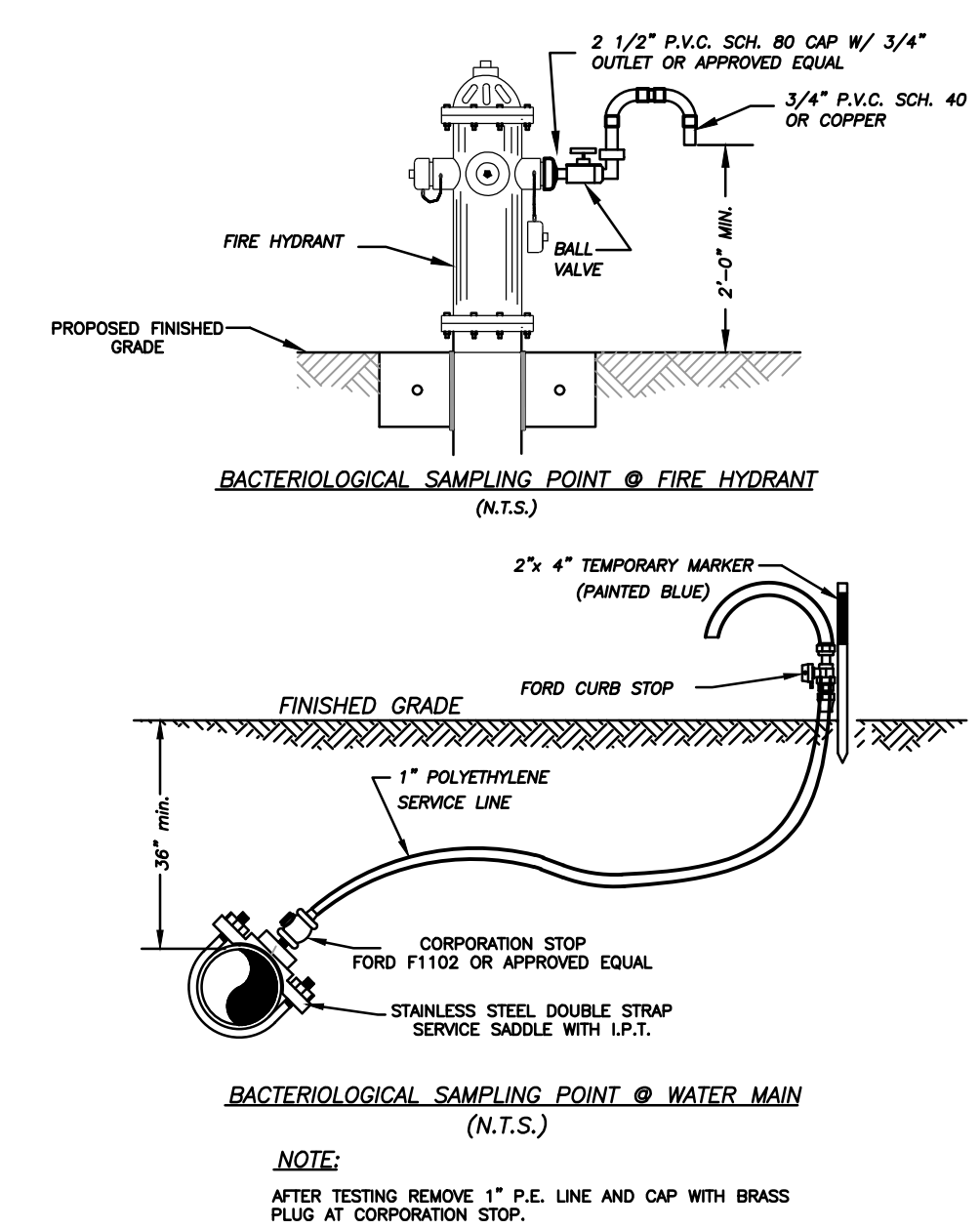
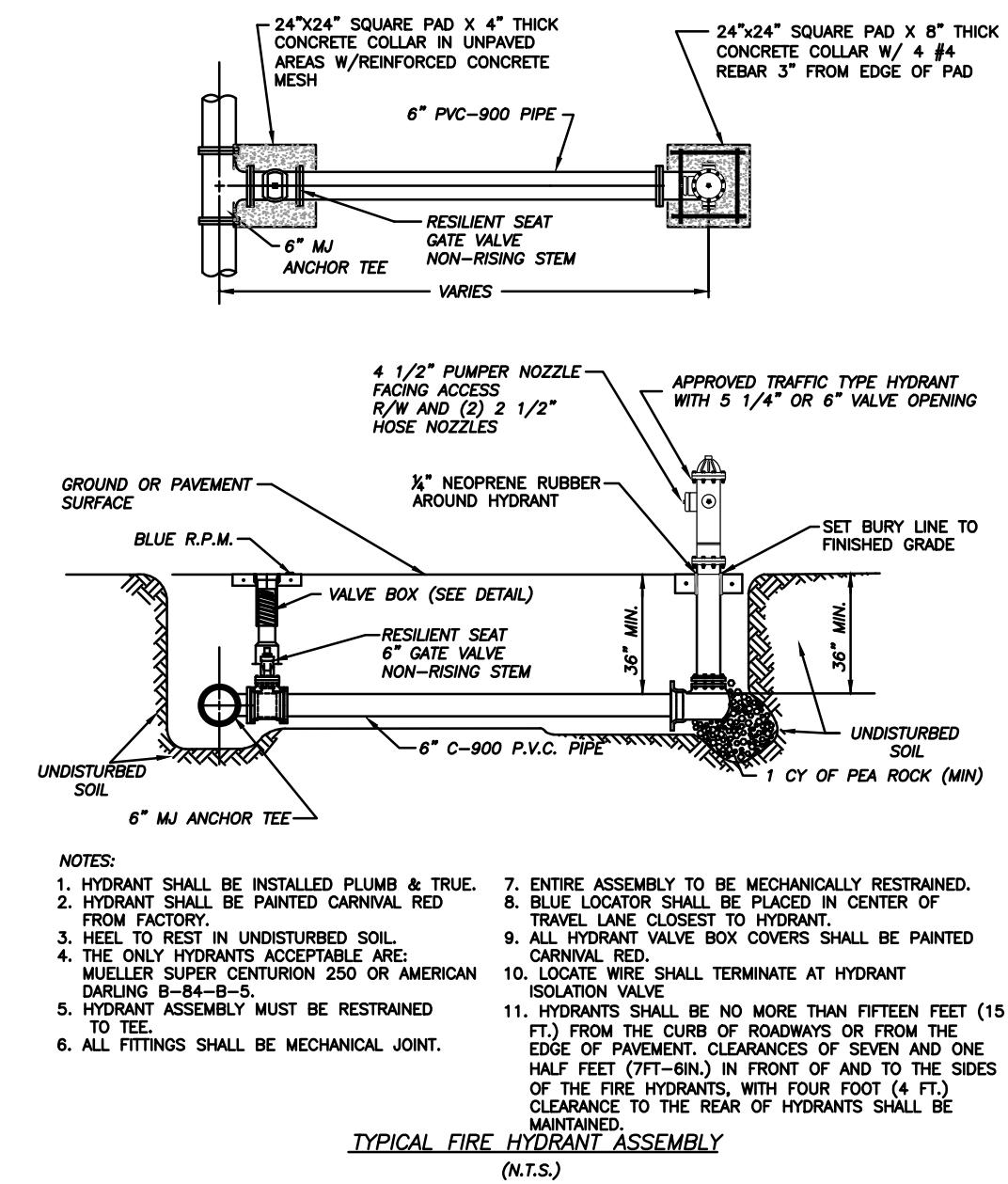
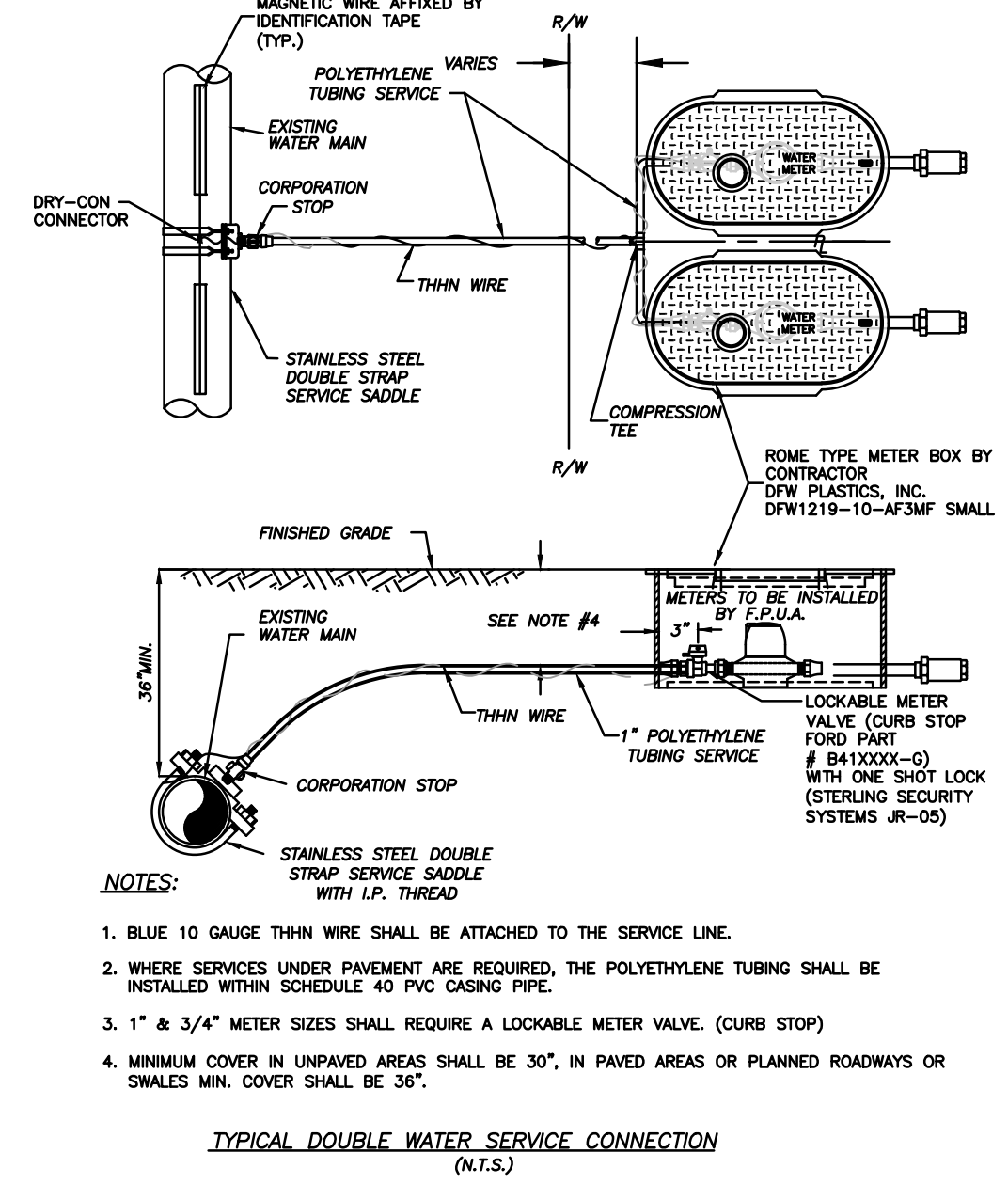
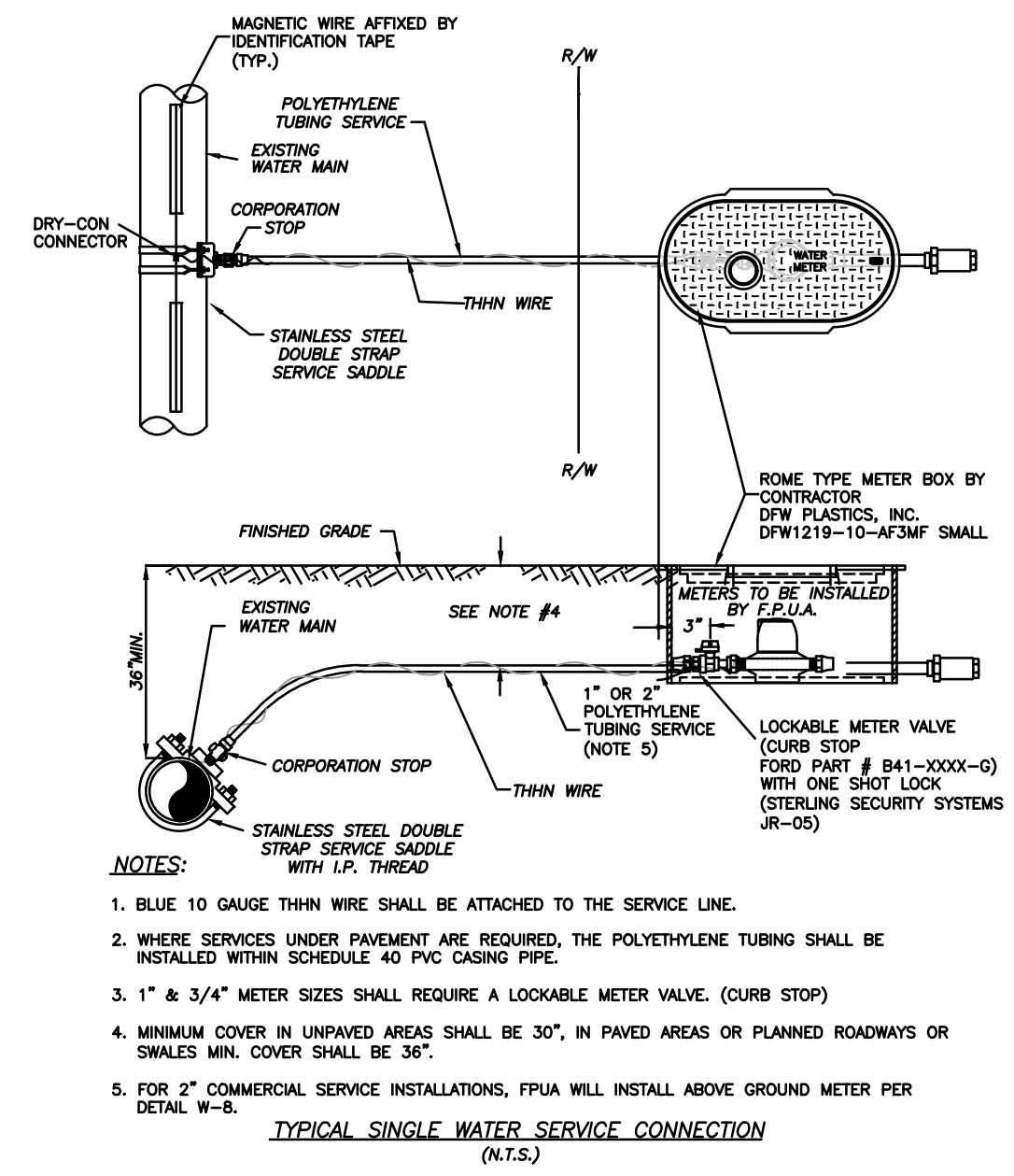
- NOTES:**
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 2. DO NOT SCALE DRAWINGS.
 3. SEE PLANTING DETAILS FOR MORE INFORMATION.
 4. AN ARBORIST SHOULD BE CONTACTED BEFORE EXTENSIVE CUTTING OF ROOTS.
 5. FOR MAXIMUM PROTECTION IN HIGH ORGANIC SOILS (> 10%), WITH AGGRESSIVE ROOT SPECIES (ESPECIALLY A RETROFIT INSTALLATION) AND/OR IN CLOSE PROXIMITY TO OLEFIN PLASTICS, SPRAY STAUERATE TRENCH WALLS WITH LIQUID TRIFLURALIN. MIX OR FILL TRENCH WITH SAND OR GRAVEL.
 6. REPORT ALL DISCREPANCIES TO CONSULTANT PRIOR TO INSTALLATION.
 7. CONTRACTORS NOTE: FOR PRODUCT AND PURCHASING INFORMATION VISIT www.CADDdetails.com/info REFERENCE NUMBER S60-002

S60-002
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www.CADDdetails.com

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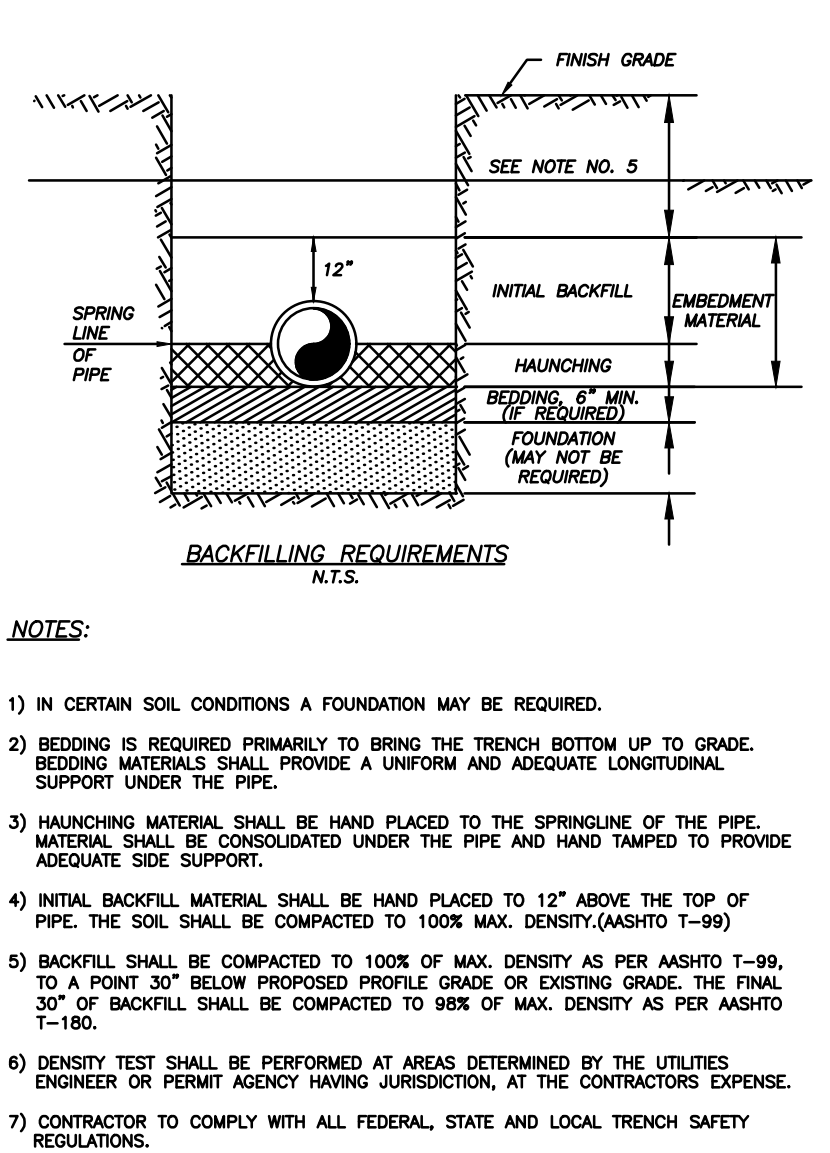
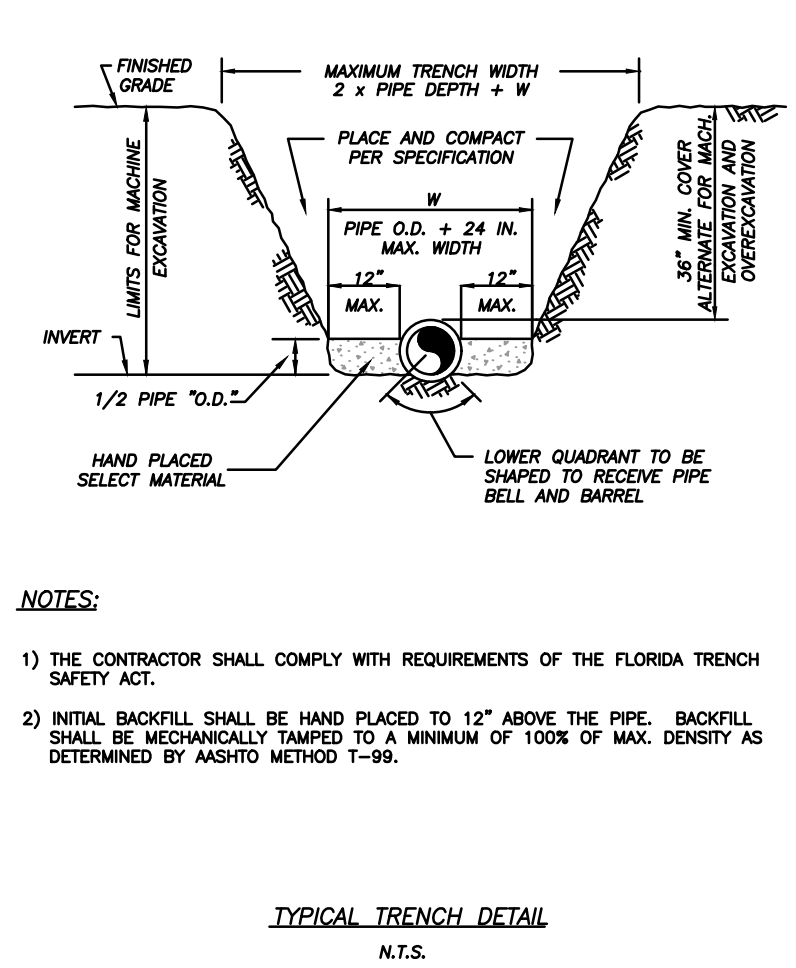
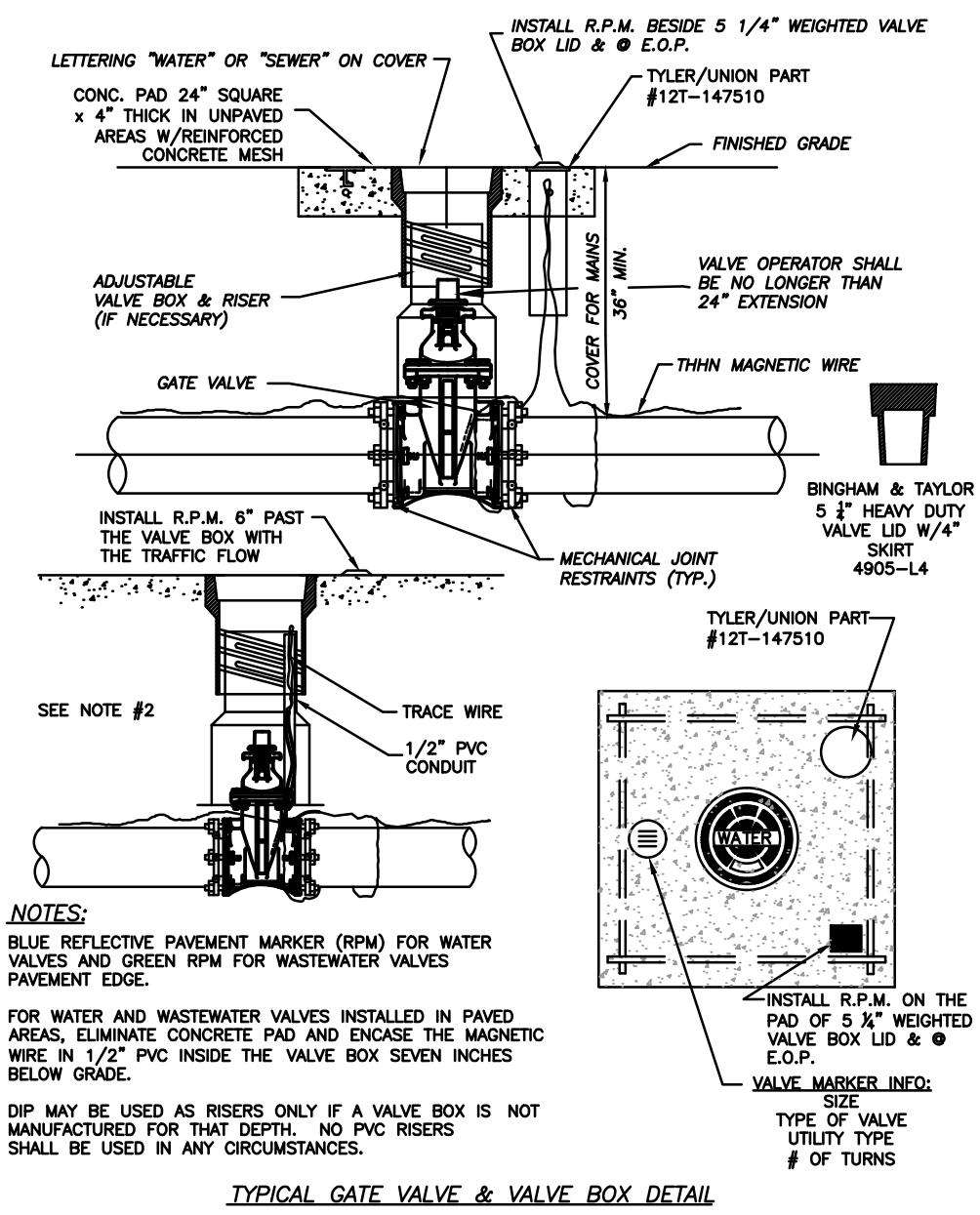
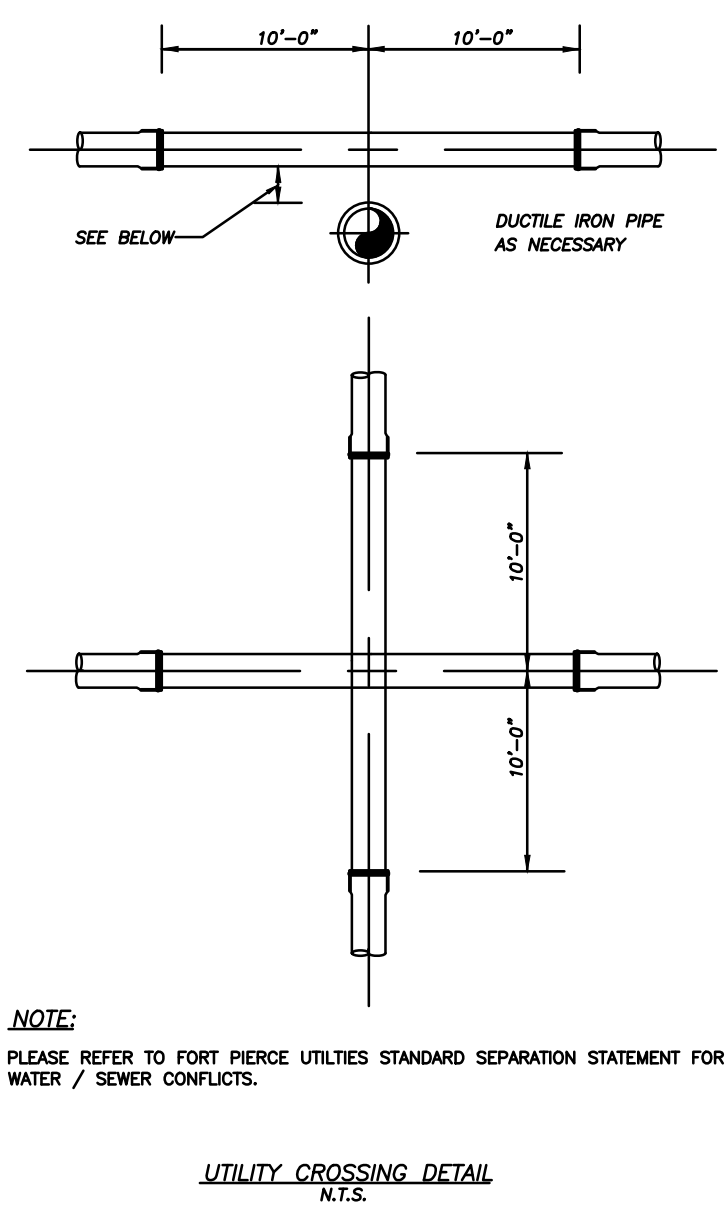
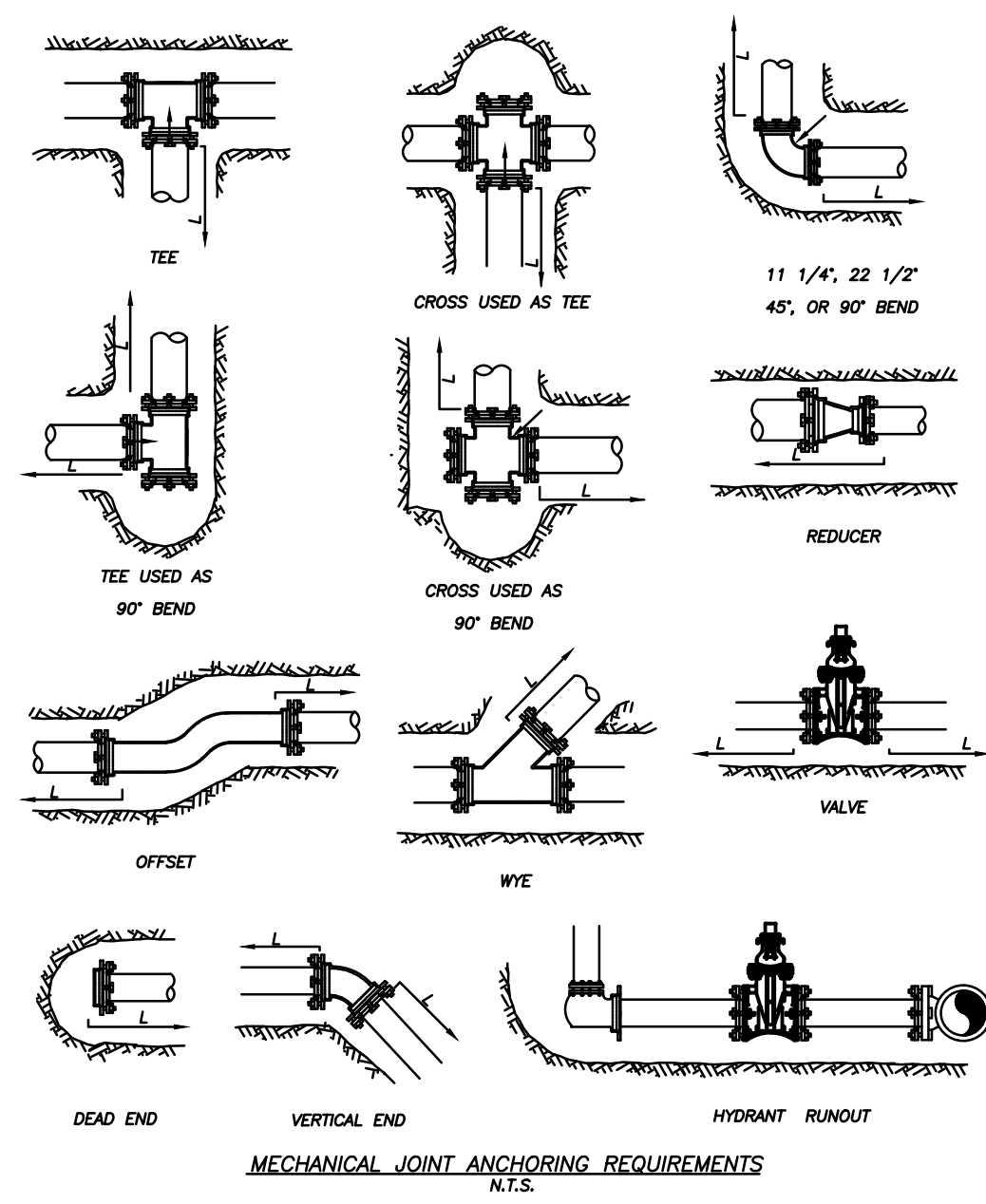


OAKS AT MOORES CREEK MEANS COURT	
WATER/WASTEWATER ENGINEERING	
FT. PIERCE UTILITIES AUTHORITY 1701 SOUTH 37TH STREET FT. PIERCE, FLORIDA 34947 (772) 468-1600 / FAX (772) 468-2414	
DATE: _____	REVISION: _____
BY: _____	APPD: _____
DESIGNED: SO	DRAWING FILENAME: _____
DRAWN BY: GT	SCALE: _____
APPROVED: BH	DATE: _____
SHEET TYPE: DETAILS	SHEET # 3 OF 5



MECHANICAL JOINT RESTRAINT NOTES

- NOTES:**
- THE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE REQUIRED LENGTH TO BE RESTRAINED BASED UPON THE PROJECT AREA SOIL TYPE, PROPOSED TRENCH CONDITIONS AND DEPTH, PRESSURE OF 150 PSI AND A SAFETY FACTOR OF TWO (2). A DRAWING OF EVERY TYPICAL FITTING ASSEMBLY WITHIN THE PROJECT SHALL BE SUBMITTED WHICH REFLECTS THE RESTRAINT DETAIL PROPOSED FOR USE, INCLUDING LENGTH OF PIPE RESTRAINT.
 - REQUIRED RESTRAINED LENGTH CALCULATIONS SHALL ALSO CONSIDER THE CONDITIONS OF OTHER BENDS OR FITTINGS THAT WILL BE LOCATED WITHIN THE CALCULATED RESTRAINED LENGTH (L) OF THE BEND OR FITTING IN QUESTION.
 - EVERY JOINT OR FITTING MUST BE RESTRAINED ON BOTH SIDES OF THE BEND AND FOR TEES ALONG THE BEND ALSO.

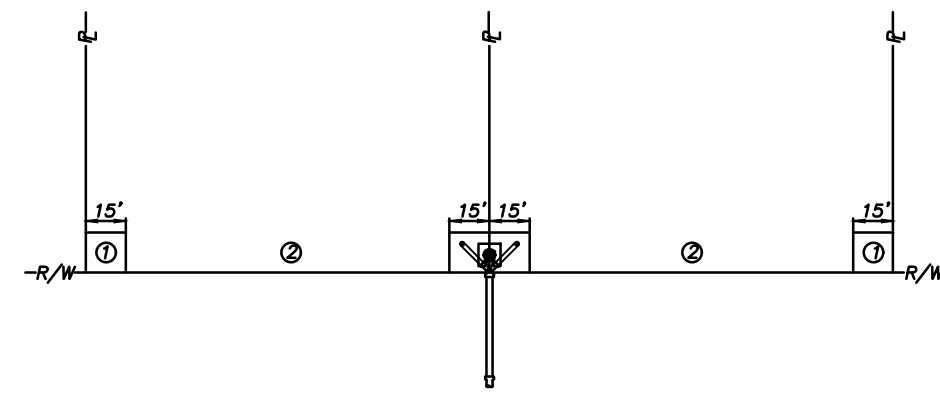


DESIGNED: SO	DRAWING FILENAME	OAKS AT MOORES CREEK MEANS COURT	
DRAWN BY: GT	SCALE: N.T.S.	WATER/WASTEWATER ENGINEERING	
APPROVED: BH	DATE:	FT. PIERCE UTILITIES AUTHORITY 1701 SOUTH 37TH STREET FT. PIERCE, FLORIDA 34947 (772) 466-1500 / FAX (772) 468-2414	
DATE:		SHEET TYPE: DETAILS	SHEET # 4 OF 5

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1701 S. 37th Street
Fort Pierce, FL 34947

GENERAL POLICY

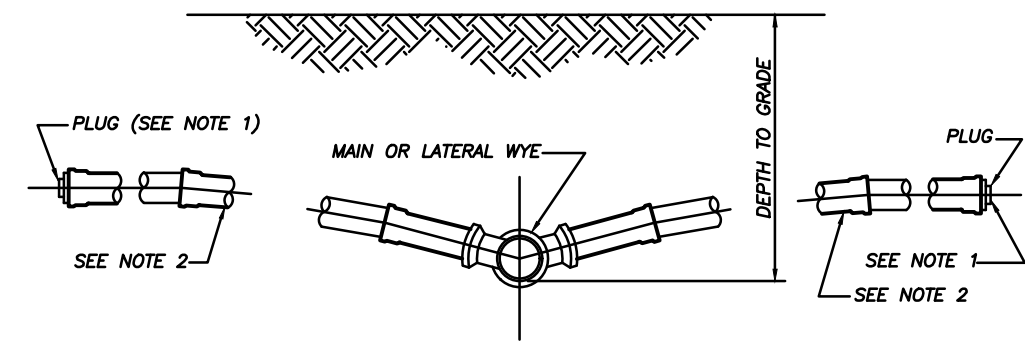
WHERE COST JUSTIFIED AND OPERATIONALLY FEASIBLE, IT IS THE GENERAL POLICY OF THE F.P.U.A. TO PROVIDE WATER, ELECTRIC, SEWER AND GAS SERVICE FROM THE STREET SIDE OF A PIECE OF PROPERTY, DEPENDING ON FACTORS SUCH AS LOCATION OF EXISTING SUPPLY SOURCES, FACILITIES, ROAD OR SIDE LOT LINE SUPPLY MAY BE AUTHORIZED, BUT ONLY WITH PRIOR APPROVAL FROM THE F.P.U.A.



NOTES:

1. THE PREFERRED POINT OF CONNECTION TO THE F.P.U.A. SEWER LATERAL AREA (1) SHALL BE LOCATED IN THE CORNER OF THE PROPERTY SELECTED BY THE F.P.U.A. AS THE BEST LOCATION FOR THE LATERAL. EVERY EFFORT WILL BE MADE TO SELECT THE CORNER WHERE TWO LATERALS CAN BE CONNECTED IN A "Y" CONFIGURATION AS SHOWN.
2. IF PHYSICAL BARRIERS OR OTHER OBSTACLES PREVENT THE CONNECTION OF THE BUILDING SERVICE LINE TO THE F.P.U.A. SEWER LATERAL WITHIN AREA (1), THE F.P.U.A. ENGINEERING DEPARTMENT MAY AUTHORIZE THE CONNECTION ALONG THE PORTION OF THE R/W LINE MARKED AREA (2).
3. HORIZONTAL SEPARATION OF WATER AND WASTEWATER SERVICES SHOULD BE A MINIMUM OF SIX FEET AND PREFERABLY TO FEET.
4. THE WASTEWATER LATERAL SHALL BE LOCATED WITHIN RIGHT-OF-WAY AND TERMINATE AT THE PROPERTY LINE.
5. THE F.P.U.A. SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF THIS WASTEWATER LATERAL WITHIN THE EASEMENT OR RIGHT-OF-WAY, UP TO THE POINT OF CONNECTION.

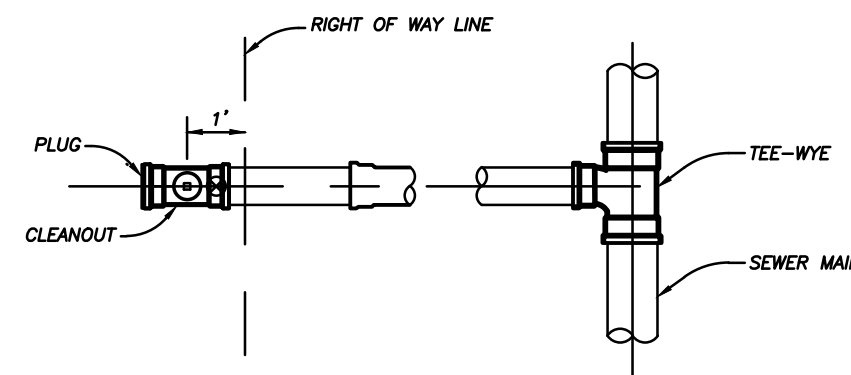
WASTEWATER SERVICE PLACEMENT (N.T.S.)



NOTES:

- 1) BALL TYPE WASTEWATER LOCATOR BY 3M CORP. OR APPROVED EQUAL.
- 2) MINIMUM SLOPE OF 1/8" PER FOOT, USE GREATER SLOPE WHERE POSSIBLE.
- 3) SERVICE LATERAL SHALL TERMINATE WITH A CLEANOUT.
- 4) INSTALL CLEANOUT AT THE PROPERTY LINE. REFER TO DETAIL S-1 FOR SPECIFIC PROPERTY LAYOUT.

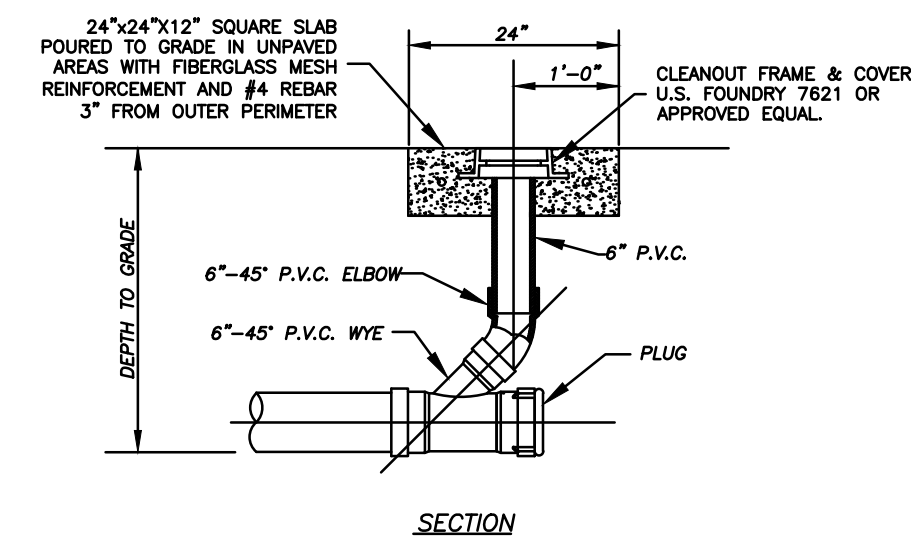
SERVICE CONNECTION (N.T.S.)



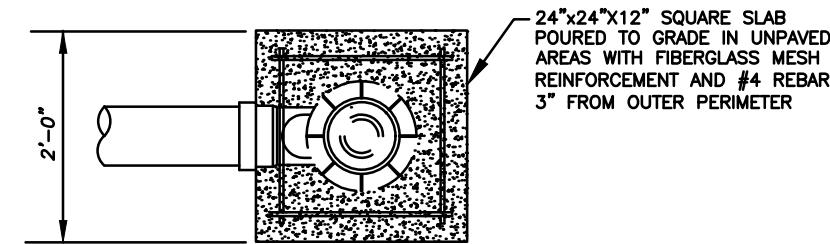
SINGLE SERVICE LATERAL CONNECTION

- BALL TYPE WASTEWATER LOCATOR INSTALLED ABOVE THIS POINT BALL BY 3M CORP. OR APPROVED EQUAL SERVICE LATERAL SHALL TERMINATE WITH A CLEANOUT

SERVICE CONNECTION (N.T.S.)



SECTION

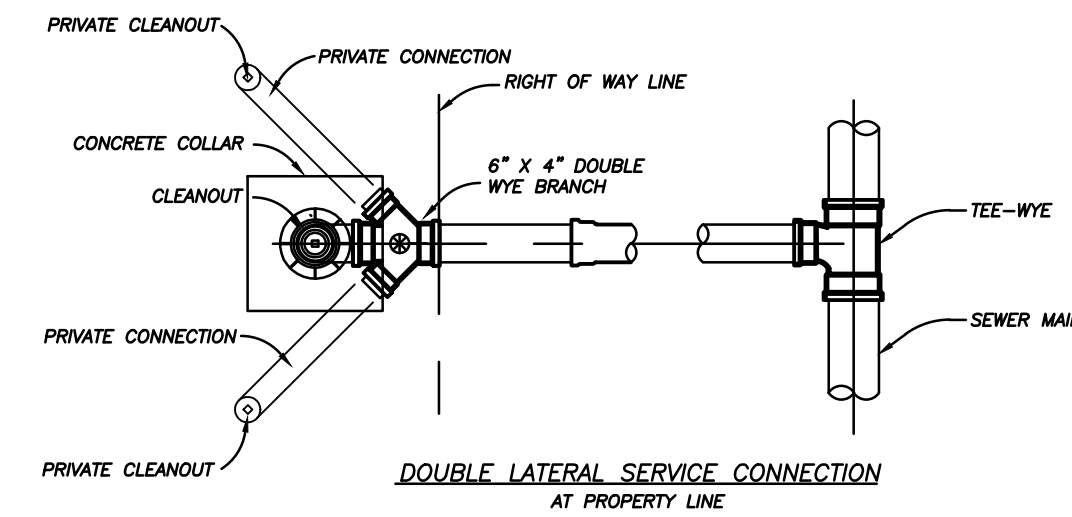


PLAN

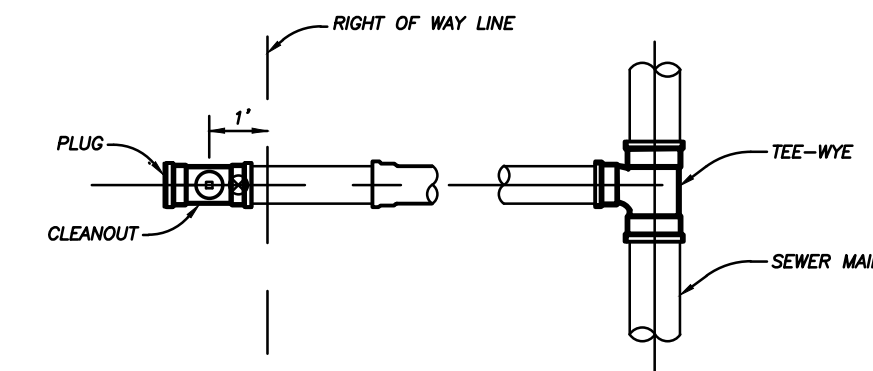
NOTES:

- 1) SEE DETAIL S-3 FOR DOUBLE SERVICE CONNECTION.

RESIDENTIAL CLEANOUT DETAIL (N.T.S.)



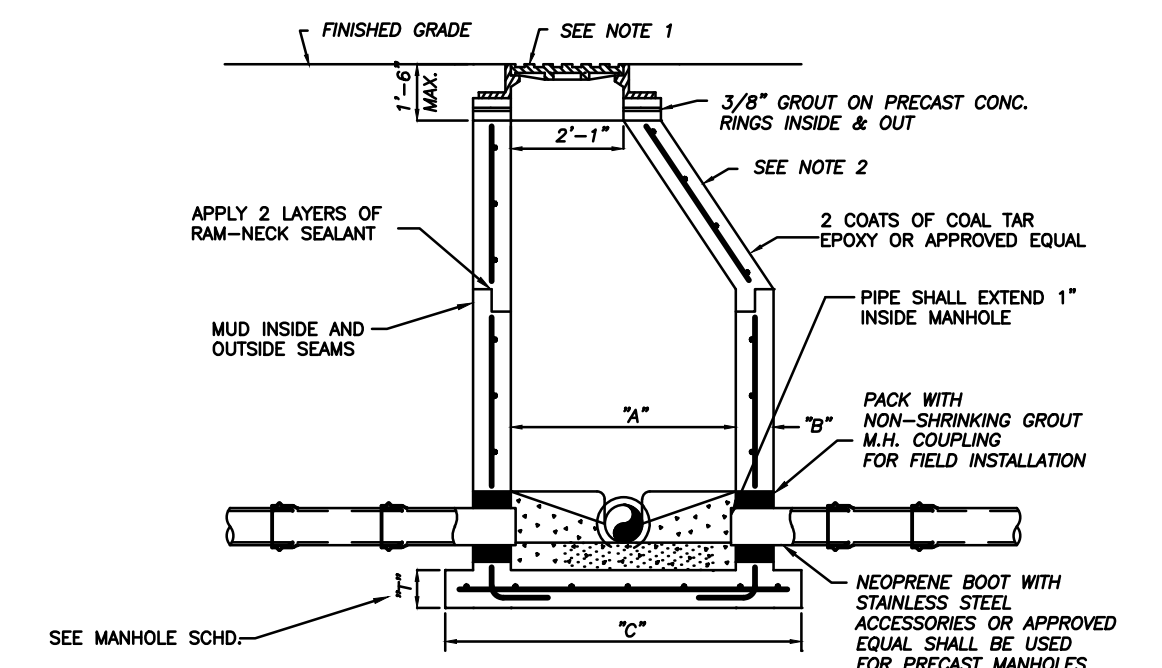
DOUBLE LATERAL SERVICE CONNECTION AT PROPERTY LINE



SINGLE SERVICE LATERAL CONNECTION

- BALL TYPE WASTEWATER LOCATOR INSTALLED ABOVE THIS POINT BALL BY 3M CORP. OR APPROVED EQUAL SERVICE LATERAL SHALL TERMINATE WITH A CLEANOUT

SERVICE CONNECTION (N.T.S.)



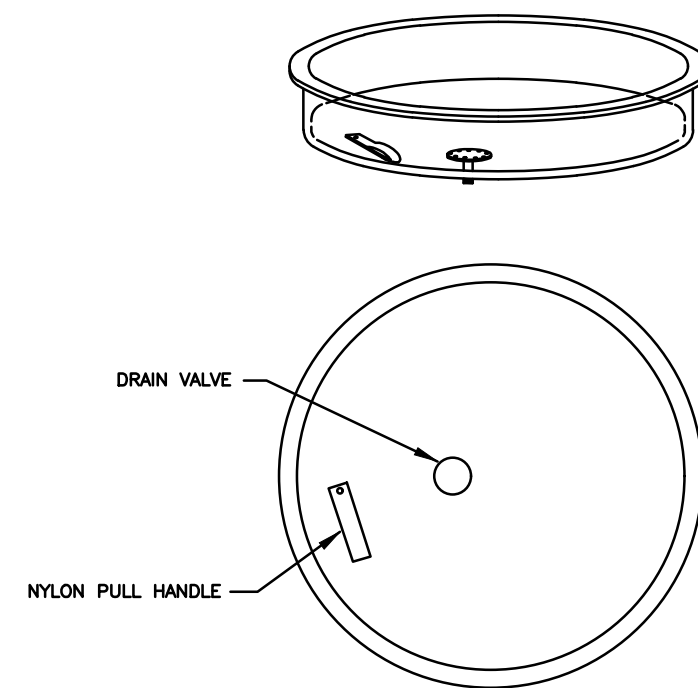
PIPE DIA.	"A"	"B"	"C"	BOT. SLAB "T"
8"-24"	4'-0"	76"	76"	8"
30"-36"	5'-0"	76"	88"	10"
42"-48"	6'-0"	76"	100"	12"

TYPICAL MANHOLE DIMENSIONS

NOTES:

- 1) MANHOLE FRAME & COVER WITH THE WORDS "SANITARY SEWER" CAST IN THE COVER. U.S. FOUNDRY 170 OR APPROVED EQUAL.
- 2) ALL CONCRETE MANHOLES TO BE 4000 P.S.I. TO MEET OR EXCEED ASTM C478 ALL CEMENT TO BE TYPE I ACID RESISTANT. REINFORCING AREA OF 0.02 SQ. IN/FT FOR WALL SECTION MIN. TO MEET OR EXCEED ASTM A 185.
- 3) A MAXIMUM OF 2 LAYERS OF PRECAST CONCRETE RINGS, IF REQUIRED.
- 4) RAIN GUARDS SHALL BE INSTALLED IN MANHOLES THAT HAVE GRAVITY MAINS 12" OR LESS.

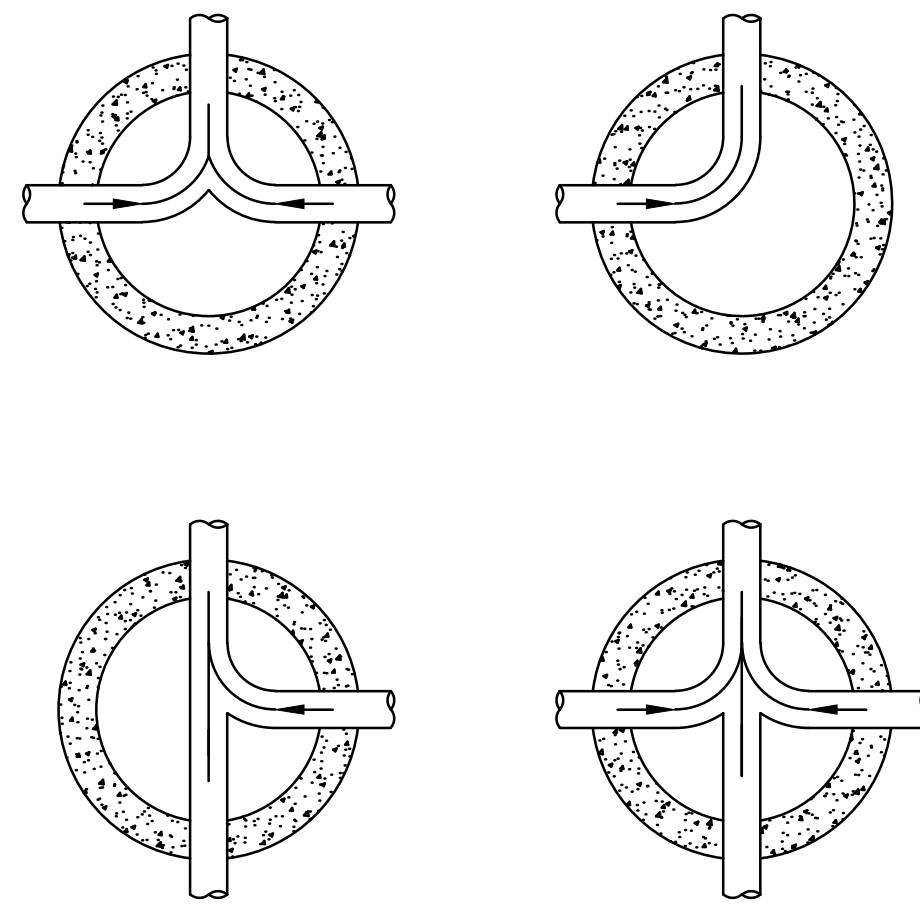
STANDARD MANHOLE (N.T.S.)



NOTES:

- 1) SEWER RAIN GUARDS SHALL BE INSTALLED ON ALL MANHOLES WHERE GRAVITY MAINS ARE 12" OR LESS AND IN AREAS DESIGNATED BY ENGINEER TO BE IN A FLOOD AREA.
- 2) SEWER RAIN GUARDS SHALL BE MANUFACTURED BY PARSON ENVIRONMENTAL PRODUCTS, INC., PART # PM-235 (PARSON MANHOLE INSERTS) WITH DOUBLE VALVING, OR APPROVED EQUAL.
- 3) RAINGUARDS MUST BE "SNUG" FIT.

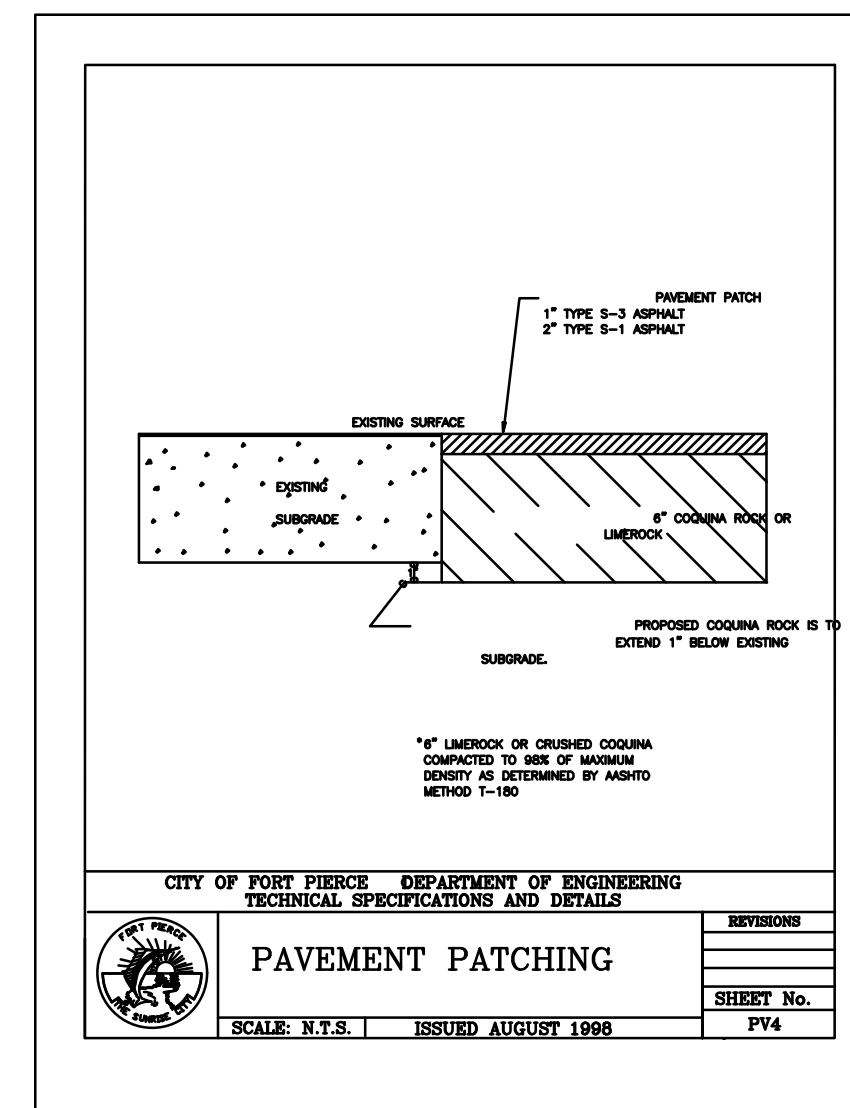
RAINGUARD DETAIL (N.T.S.)



NOTES:

- 1) INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
- 2) SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOWS.

FLOW PATTERNS FOR INVERT CHANNELS (N.T.S.)

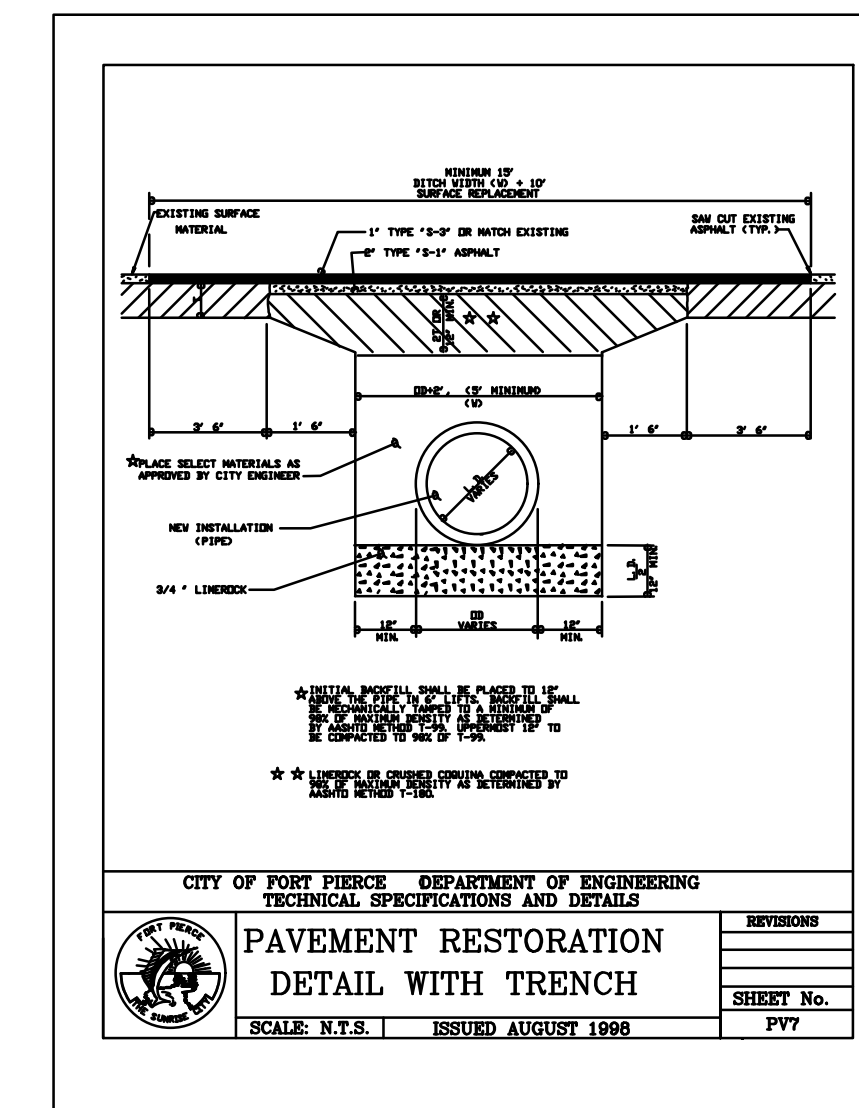


CITY OF FORT PIERCE DEPARTMENT OF ENGINEERING
TECHNICAL SPECIFICATIONS AND DETAILS

PAVEMENT PATCHING

SCALE: N.T.S. | ISSUED AUGUST 1999

REVISIONS	
SHEET No.	PV4



CITY OF FORT PIERCE DEPARTMENT OF ENGINEERING
TECHNICAL SPECIFICATIONS AND DETAILS

PAVEMENT RESTORATION DETAIL WITH TRENCH

SCALE: N.T.S. | ISSUED AUGUST 1999

REVISIONS	
SHEET No.	PV7

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Fort Pierce, FL 34947



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OAKS AT MOORES CREEK MEANS COURT

WATER/WASTEWATER ENGINEERING

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SHEET TYPE	SHEET #
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