

# CONSTRUCTION PLANS FOR AVELLANAS ESTATES

A PROPOSED 24 LOT PUBLIC RESIDENTIAL SUBDIVISION  
DEVELOPMENT SECTION 10, TOWNSHIP 1 SOUTH, RANGE 30 WEST  
ESCAMBIA COUNTY, FLORIDA  
ZONED: MDR FLU: MU-U

REVISED  
JANUARY 2019

OWNER/DEVELOPER:  
AERO TIDE INVESTMENTS LLC  
1795 DETROIT BLVD  
PENSACOLA, FL 32534  
P: (850)-607-4539

SURVEYOR:  
MERRILL PARKER SHAW, INC.  
4928 N. DAVIS HWY  
PENSACOLA, FL 32503  
P: (850)-478-4923

ENGINEER:  
HAMMOND ENGINEERING, INC.  
3802 NORTH "S" STREET  
PENSACOLA, FL 32505  
P: (850)-434-2603  
F: (850)-434-4650

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- EXISTING UTILITIES HAVE BEEN SHOWN ON PLANS FROM BEST AVAILABLE INFORMATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION & PROTECTING ALL UTILITIES INCLUDING THOSE NOT SHOWN.
- UTILITIES REQUIRING RELOCATION SHALL BE AT THE EXPENSE, & PERFORMED BY THE APPROPRIATE UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING UTILITY RELOCATION.
- GULF POWER CO. MANHOLES AND VAULTS, SOUTHERN BELL MANHOLES TO BE ADJUSTED BY THE APPROPRIATE UTILITY, AND THIS WORK SHALL BE COORDINATED BY THE CONTRACTOR.
- FLORIDA STATE STATUTE 553.851 REQUIRES THAT ALL EXCAVATORS NOTIFY GAS COMPANIES OF THEIR INTENTION TO PERFORM ANY EXCAVATION AT LEAST FORTY-EIGHT (48) HOURS (EXCLUDING SAT., SUN. & HOLIDAYS) PRIOR TO BEGINNING WORK.

- ALL DISTURBED AREAS WHICH ARE NOT PAVED ARE TO BE STABILIZED WITH SEEDING, FERTILIZER AND MULCH, HYDROSEED AND/OR SOD. PONDS AND SWALES TOPS AND SIDES SHALL BE SODDED. SEEDING AREAS SHALL INCLUDE A BAHIA MIX TO ENSURE GROWTH DURING WINTER MONTHS. SEED IN ACCORDANCE WITH FOOT SECTION 570 AND STANDARD INDEX 105.
- SEDIMENT SHALL BE RETAINED ON THE SITE OF DEVELOPMENT.
- CONTRACTOR SHALL CLEAN OUT ACCUMULATED SILT, AND STABILIZE POND(S) AT END OF CONSTRUCTION WHEN ALL DISTURBED AREAS HAVE BEEN STABILIZED.
- EROSION SHALL BE CONTROLLED BY THE USE OF SYNTHETIC (IN STATE R/W) HAY BALE BARRIER/SILT FENCE AS SHOWN ON PLANS AND SHALL BE SETUP PRIOR TO COMMENCING CONSTRUCTION. THE EROSION CONTROL BARRIER SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION BY THE CONTRACTOR. AFTER PLACEMENT OF THE EROSION CONTROL BARRIER, THE RETENTION AREA IS TO BE CLEANED OF SILT, STABILIZATION OF THE PROJECT, THE RETENTION AREA SHALL BE CLEANED OF SILT, STABILIZATION OF ALL DISTURBED AREAS SHALL BE ACCOMPLISHED, AND THE RETENTION AREA IS TO BE RECONFIGURED TO DESIGN CROSS-SECTION, AND GRASSED.

## GENERAL NOTES

- ALL WORK SHALL COMPLY WITH SPECIFICATIONS AND APPLICABLE STANDARDS ESTABLISHED BY ESCAMBIA COUNTY, ECUA AND FDEP. WHERE THESE SPECIFICATIONS AND COUNTY STANDARDS DEVIATE, THE MORE STRINGENT REQUIREMENTS SHALL PREVAIL UNLESS APPROVED BY THE ENGINEER.
- THE GENERAL CONTRACTOR SHALL COORDINATE THE WORK OF THE UTILITY SUBCONTRACTORS TO INSURE THAT ALL UTILITY INSTALLATIONS PROCEED IN A TIMELY MANNER AND TO PREVENT CONFLICTS IN THE INSTALLATION OF THE WATER, SEWER, GAS, ELECTRICAL POWER, CABLE, AND TELEPHONE LINES.
- ALL CONDITIONS AND STIPULATIONS OF THE CONSTRUCTION PERMITS AND APPROVALS ISSUED BY ESCAMBIA COUNTY, THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ECUA SHALL BE COMPLIED IN EVERY WAY.

## UTILITY WORK

- ALL WORK SHALL COMPLY WITH APPLICABLE STANDARDS AND CODES ESTABLISHED BY THE ECUA, ESCAMBIA COUNTY AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND WRITTEN SPECIFICATIONS.
- THE UTILITY CONTRACTOR SHALL MAKE CONNECTIONS TO THE SANITARY SEWER AND STORM DRAINAGE SYSTEM AS SHOWN AND SHALL VERIFY LOCATIONS AND ELEVATIONS OF ALL UTILITY LINES PRIOR TO BEGINNING WORK. THE UTILITY CONTRACTOR SHALL INCLUDE THE COST OF PROTECTION AND/OR RELOCATION OF OTHER UTILITIES IN HIS BID AND SHALL COORDINATE HIS WORK WITH OTHER UTILITY SUB-CONTRACTORS TO PREVENT CONFLICTS WITH OTHER UTILITY LINES.
- "AS-BUILT" DRAWINGS SHOWING WATERLINES AND FORCEMAINS, FITTINGS, VALVES, METERS, SERVICE LATERAL TAPS AND STUB-OUTS, MANHOLES, FIRE HYDRANTS, ETC. LOCATIONS WITH MEASUREMENTS IN ACCORDANCE WITH THE LATEST ECUA ENGINEERING MANUAL (SECTION 4000) SHALL BE FURNISHED TO THE ENGINEER PRIOR TO ACCEPTANCE.
- ECUA PERMIT SHALL BE REQUIRED PRIOR TO CP APPROVAL. THE USE OF THESE LOW PRESSURE SYSTEMS HAS TO BE APPROVED BY THE COUNTY ENGINEER.

- THE PROJECT ENGINEER (ENGINEER OF RECORD) SHALL PROVIDE TO ESCAMBIA COUNTY "AS-BUILT" RECORD DRAWINGS FOR VERIFICATION AND APPROVAL BY ESCAMBIA COUNTY ONE WEEK PRIOR TO REQUESTING A FINAL INSPECTION, AND PROVIDE "AS-BUILT" CERTIFICATION THAT THE PROJECT CONSTRUCTION ADHERES TO THE PERMITTED PLANS AND SPECIFICATIONS. THE "AS-BUILT" CERTIFICATION AND THE "AS-BUILT" RECORD DRAWINGS MUST BE SIGNED, SEALED AND DATED BY A REGISTERED FLORIDA PROFESSIONAL ENGINEER.

- THE DEVELOPER/CONTRACTOR SHALL INSTALL PRIOR TO THE START OF CONSTRUCTION AND MAINTAIN DURING CONSTRUCTION ALL SEDIMENT CONTROL MEASURES AS REQUIRED TO RETAIN ALL SEDIMENTS ON THE SITE. IMPROPER SEDIMENT CONTROL MEASURES MAY RESULT IN CODE ENFORCEMENT VIOLATION.

- RETENTION/DETENTION AREAS SHALL BE SUBSTANTIALLY COMPLETE PRIOR TO ANY CONSTRUCTION ACTIVITIES THAT MAY INCREASE STORMWATER RUNOFF RATES. THE CONTRACTOR SHALL CONTROL STORMWATER DURING ALL PHASES OF CONSTRUCTION AND TAKE ADEQUATE MEASURES TO PREVENT THE EXCAVATED POND FROM BLINDING DUE TO SEDIMENTS.

- DEVELOPER/CONTRACTOR/HOME OWNERS ASSOCIATION SHALL RESHAPE PER PLAN SPECIFICATIONS, CLEAN OUT ACCUMULATED SILT, AND STABILIZE POND(S) AT THE END OF CONSTRUCTION WHEN ALL DISTURBED AREAS HAVE BEEN STABILIZED AND AT THE END OF THE 2 YEAR WARRANTY PERIOD.

- CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS DURING CONSTRUCTION WHICH SHOW "AS-BUILT" CONDITIONS OF ALL WORK INCLUDING PIPING, DRAINAGE STRUCTURES, TOPO OF POND(S), OUTLET STRUCTURES, DIMENSIONS, ELEVATIONS, GRADING ETC. RECORD DRAWINGS SHALL BE PROVIDED TO THE ENGINEER OF RECORD PRIOR TO REQUESTING FINAL INSPECTION.

- THE OWNER OR HIS AGENT SHALL ARRANGE/SCHEDULE WITH THE COUNTY A FINAL INSPECTION OF THE DEVELOPMENT UPON COMPLETION AND ANY INTERMEDIATE INSPECTIONS AT (850) 595-3434. AS-BUILT CERTIFICATION IS REQUIRED PRIOR TO REQUEST FOR FINAL INSPECTION/APPROVAL.

- CONTRACTOR TO NOTIFY SUNSHINE ONE UTILITIES TWO FULL BUSINESS DAYS IN ADVANCE (EXCLUDING WEEKENDS AND HOLIDAYS) PRIOR TO DIGGING WITHIN R/W; 1-800-432-4770.

- ALL ASPECTS OF THE STORMWATER/DRAINAGE COMPONENTS AND/OR TRANSPORTATION COMPONENTS SHALL BE COMPLETED PRIOR TO REQUESTING A FINAL INSPECTION.

- NO DEVIATIONS OR REVISIONS FROM THESE PLANS BY THE CONTRACTOR SHALL BE ALLOWED WITHOUT PRIOR APPROVAL FROM BOTH THE DESIGN ENGINEER AND THE ESCAMBIA COUNTY. ANY DEVIATIONS MAY RESULT IN DELAYS IN COUNTY ACCEPTANCE OF IMPROVEMENTS.

- TO COMPLY WITH NPDES/NWFWMD REQUIREMENTS, ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AFTER EACH 1/2" RAINFALL EVENT OR AT LEAST WEEKLY. THE CONTRACTOR SHALL DOCUMENT SUCH INSPECTIONS AND EROSION CONTROL MAINTENANCE EFFORTS; INSPECTION RECORDS SHALL BE PROVIDED TO THE NPDES/NWFWMD PERMIT APPLICANT FOR PROPER REPORTING TO FDEP.

- CONTRACTOR IS REQUIRED TO VISIT THE SITE AND FAMILIARIZE HIM/HERSELF WITH THE PROJECT PRIOR TO BIDDING.

- CONTRACTOR BIDS SHOULD INCLUDE CLEARING AND GRUBBING OF THE PROPOSED R/W (AS WELL AS ANY OFFSITE AREAS NECESSARY FOR CONSTRUCTION OF PROPOSED IMPROVEMENTS) INCLUDING REMOVAL OF NON-HERITAGE TREES.

## SITE WORK

**ECUA Engineering Manual Reference Note\***  
\*Note shall be inserted in the lower right corner of the sheet  
\*Applicable only to ECUA infrastructure to be constructed in public R/W or utility easement not to be applied to private water/sewer facilities on private property (see Building Code)

**A. ECUA Engineering Manual Incorporated by Reference**  
The ECUA Engineering Manual, dated December 18, 2014, along with Update # 1 dated September 1, 2016 (hereinafter "Manual"), located at [www.ecua.org](http://www.ecua.org), is hereby incorporated by reference into this Project's official contract documents as if fully set forth therein. It is the Contractor's responsibility to be knowledgeable of the Manual's contents and to construct the Project in accordance with the Manual. The Contractor shall provide its employees access to the Manual at all times, via Project site or office, via digital or paper format. In the event of a conflict between the Manual and Plans, Contractor shall consult Engineer of Record for proper resolution.

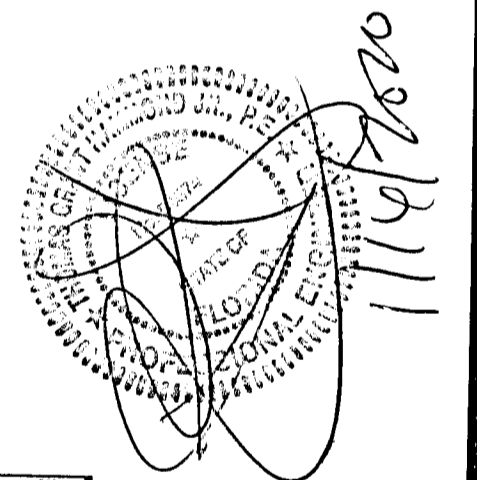
**B. Additional Documents to be completed by the Engineer of Record**  
Does this Project have additional technical specifications or construction details that supplement and/or supersede the Manual listed above? YES NOX If yes, Contractor shall construct Project in accordance with said documents as listed and located below:

Document Name	Document Type		Location	
	Specification	Detail	Plans	Project Manual*

\*Project Manuals used only with ECUA CIP Projects

**C. Engineer of Record Responsibilities**  
The Engineers of Record (EOs) that have affixed their seals and signatures on these plans warrant that the portions of the plans have been designed in accordance with the Manual (unless otherwise directed by the ECUA Project Engineer). The EOs shall be knowledgeable of the Manual's contents and shall assume responsibility for its use on this Project.

- CONTRACTOR SHALL NOTIFY THE ECUA, FDOT, NWFWMD, THE ESCAMBIA COUNTY ENGINEER AND PROJECT ENGINEER OF RECORD AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF THIS PROJECT.
- PROPERTY OBSTRUCTIONS WHICH ARE TO REMAIN IN PLACE, SUCH AS BUILDINGS, SEWER, STORM DRAINS, WATER OR GAS PIPES, ELECTRICAL CONDUITS, POLES, WALLS, POSTS, ETC., ARE TO BE CAREFULLY PROTECTED AND ARE NOT TO BE DISPLACED, UNLESS NOTED.
- THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENTS OF THE WATER, GAS, SEWER, CABLE TV, TELEPHONE AND POWER COMPANIES 10 DAYS IN ADVANCE, THAT HE INTENDS TO START WORK IN A SPECIFIC AREA. THE OWNER DISCLAIMS ANY RESPONSIBILITY FOR THE SUPPORT AND PROTECTION OF SEWERS, DRAINS, WATER PIPES, GAS PIPES, CONDUITS OF ANY KIND, UTILITIES OR OTHER STRUCTURES OWNED BY THE CITY, COUNTY, STATE OR BY PRIVATE OR PUBLIC UTILITIES LEGALLY OCCUPYING ANY STREET, ALLEY, PUBLIC PLACE OR RIGHT-OF-WAY.
- LOCATION OF EXISTING UTILITIES SHOWN ON PLANS ARE APPROXIMATE ONLY AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION BEFORE CONSTRUCTION. FAILURE OF THE CONTRACTOR FROM THE RESPONSIBILITY OF LOCATING, PRESERVING AND PROTECTING SAID UTILITY OR STRUCTURES.
- CONTRACTOR SHALL DISPOSE OF BY HAULING AWAY ALL EXCESS MATERIAL.
- CONTROL OF SEDIMENTATION AND EROSION SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- P.V.C. PIPE FOR WATER TO BE AWWA C 900, DR 25.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE SEEDING AND MULCHING AND/OR SODDING OF STREET AND ROAD SHOULDER AREAS IN ACCORDANCE WITH REQUIREMENTS OF FDOT SPECIFICATIONS AND APPLICABLE COUNTY STANDARDS.
- WATER SUPPLY FACILITIES, INCLUDING MAINS, SHALL BE INSTALLED, CLEANED, DISINFECTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST APPLICABLE AWWA STANDARDS AND COORDINATED WITH ECUA.
- CONTRACTOR SHALL BE RESPONSIBLE FOR AND COMPLY WITH ANY TESTING REQUIRED BY THE LOCAL GOVERNING AGENCY IN ADDITION TO THE TESTING REQUIREMENTS OUTLINED IN THE SPECIFICATIONS.
- GRADING AROUND TREES WHICH ARE TO REMAIN SHALL BE AWAY FROM THE TREE IN A MANNER TO CAUSE NO DAMAGE TO THE TREE.
- RELOCATION OF THE OBSTRUCTIONS OWNED BY PRIVATE PROPERTY OWNER, SUCH AS MAILBOXES, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WHO MUST COORDINATE WITH THE PROPERTY OWNER.
- AS PER ESCAMBIA COUNTY LDC DSM 2-1/6(d), NO STREETS OR ROADS UNDER THE TWO YEAR WARRANTY WILL BE ALLOWED TO BE OPEN CUT, OR JACK-AND-BORE. CONDUITS ARE TO BE INSTALLED FOR ALL UTILITY ROADWAY CROSSINGS PRIOR TO FINAL PLAT APPROVAL.

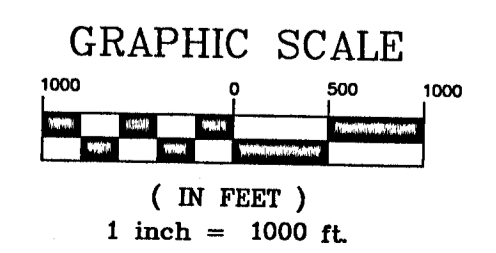


**DRAINAGE FEE**

Imperv. Surf. 14,381 Sq ft  
Stormwater Ret. .018 % (F)  
Total Drainage Fee \$ 129.43  
Pond Maint. Fee: MSBU

Approved: [Signature] 1/22/20  
Designee Date

This document has been reviewed in accordance with requirements of applicable Escambia County Regulations and Ordinances, and does not in any way relieve the submitting Architect, Engineer, Surveyor, or other signatory from responsibility of details as drawn.



PROJECT  
LOCATION





## Site Description

The proposed Avellanas Estates Subdivision is located at the 8900 block of Fowler Avenue. (on the west side of Fowler Ave.) in Escambia County, Florida. The site is in section 10, Township 1 South, Range 30 West, Escambia County, Florida.

The site is 4.72 acres in size and currently stands vacant and undeveloped. There are no jurisdictional wetlands located on the site. The area to be disturbed by the construction of this project encompasses the entire site. Currently, runoff flows south east across the site to the adjacent property. The approximate latitude and longitude of the site discharge point are: 30.5272° N, 87.284° W. The proposed improvements include the construction of paved roads, a stormwater pond, stormwater piping, potable water piping, and sanitary sewer improvements.

## Erosion and Sedimentation Controls

Erosion and sedimentation from the construction site shall be controlled at all times using Best Management Practices (BMPs). Perimeter controls shall be installed prior to clearing activities or any construction activity that disturbs soils. Installation of those controls may be staged to correspond with the clearing and construction schedule. Immediate after clearing activities appropriate controls shall be installed to limit and minimize the velocity of stormwater runoff over unprotected soils. Temporary BMPs shall be used as necessary inside the the perimeter controls as the construction progresses. Perimeter controls shall be actively maintained until final stabilization of those portions of the site uphill of the perimeter controls. Temporary controls shall be removed when stabilization is achieved or when necessary for the next stage of construction. Controls shall be consistent with the performance standards for erosion and sedimentation control as set forth in Section 62-40.432 F.A.C.

## Stabilization and Structural Practices

Stabilization practices may include, but not limited to, temporary seeding, mulching, geotextiles, permanent sod and preservation of existing vegetation. Preservation of the existing vegetation should always be the first choice BMP. Where disturbed soils are to remain for extended periods, temporary seeding should be considered prior to final sod stabilization. A record shall be maintained of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site and when stabilization measures are initiated. Stabilization measures shall be initiated as soon as practicable, but in no case more than 14 days, in those areas of the site where construction activities have temporarily or permanently ceased.

Structural practices shall divert flows from exposed soils, store flows, retain sediment on-site, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include, but not limited to, silt fences, earth dikes, diversion swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems and temporary or permanent sediment basins.

## Stormwater Management

A single row of type III silt fence shall be installed along the existing Fowler Avenue right of way, the proposed project right of way and boundary of stormwater pond parcels, prior to any activity that disturbs soils.

After clearing activities, silt fences and hay bales shall be installed, as necessary, uphill of the perimeter controls to reduce runoff velocities and the potential for excessive erosion. Prior to any major grading activity, the stormwater detention basin shall be constructed.

As the grading activities progress, a depressed area shall be constructed around inlets surrounded by hay bales for inlet protection. These depressed areas shall act as sediment basins. Runoff from uphill areas shall be directed to these inlets, where feasible, by diversion swales.

These swales may require temporary seeding and check dams to minimize velocities and avoid excessive erosion. As the construction progresses, each installed storm inlet shall be protected by hay bales.

Rip-rap or similar velocity control is to be used, as necessary, at the outfalls from the stormwater management system for velocity dissipation prior to discharge off-site. Silt fences, and haybales if necessary, shall be installed across the outfalls until final stabilization is achieved. Erosion control facilities shall actively maintained throughout the course of construction and shall remain until final stabilization is achieved and acceptance by the owner.

## Controls for Other Potential Pollutants

A materials management area shall be designated on-site for protected storage of chemicals, solvents, fertilizers and other potentially toxic materials. Storage areas can become a major source of risk due to possible mishandling of materials and accidental spills. An inventory should be compiled and maintained of the storage area and the site. Special care should be taken to identify any materials that have the potential to come into contact with stormwater.

Petroleum products such as oil gasoline, lubricants and asphaltic substances should be handled carefully to minimize their exposure to stormwater. These management practices should be used to reduce the risks of using petroleum products:

- \* Have equipment available to contain and clean up petroleum spills in fuel storage areas or on board maintenance and fueling vehicles.
- \* Where possible, store petroleum products and fuel vehicles in covered areas and construct dikes to contain any spills. \* Contain and clean up petroleum spills immediately.
- \* Perform preventative maintenance for on-site equipment to prevent leakage.
- \* Apply asphaltic substances properly according to the manufacturer's instructions.

Hazardous products including, but not limited to, paints, acids for cleaning masonry surfaces, cleaning solvents, chemical additives used for soil stabilization, and concrete curing compounds should be properly handled. These practices will help avoid pollution of stormwater by these materials:

- \* Keep equipment to contain and clean up spills of hazardous materials in the areas where the materials are stored.
- \* Contain and clean up spills immediately after they occur.
- \* Keep materials in a dry, covered area.
- \* Store materials in the original manufacturer's containers whenever possible, because special handling instructions usually are printed on the containers.

Pesticides include insecticides, rodenticides, and herbicides that are commonly used on construction sites. These management practices will reduce the amounts of pesticides that could contact stormwater:

- \* Handle pesticides as infrequently as possible.
- \* Store materials in the original manufacturer's containers whenever possible, because special handling instructions usually are printed on the containers.
- \* Observe all applicable federal, state and local regulations when using, handling, or disposing of pesticides.
- \* Store pesticides in a dry, covered area.
- \* Provide curbs or dikes to contain spills.
- \* Have measures on site to contain and clean up spills.
- \* Strictly follow recommended application rates and methods.

Fertilizers and detergents usually contain nutrients that can be a major source of pollution in stormwater. These practices should be used to reduce the risks of nutrient pollution:

- \* Limit the application of fertilizers to the minimum area and the minimum recommended amounts.
- \* Reduce exposure of nutrients to stormwater runoff by working the fertilizer into the soil to a depth of 4 to 6 inches.
- \* Apply fertilizer more frequently, but at lower application rates.
- \* Limit hydroseeding in which lime and fertilizers are applied to the ground surface in one application.
- \* Implement good erosion and sediment control to help reduce the amount of fertilizer lost as a result of erosion.
- \* Limit the use of detergents on the site. Wash water containing detergents should not be discharged to the stormwater management system.
- \* Apply fertilizer and use detergents only in the recommended manner and amounts.

Proper management and disposal of building materials and other construction site wastes are an essential part of pollution prevention. Construction wastes include surplus or refuse building materials as well as hazardous wastes. Management practices for these wastes include trash disposal, recycling, material handling, and spill prevention and clean up. These practices should provide for proper disposal of construction wastes:

- \* Designate a waste disposal area on the site.
- \* Provide an adequate number of containers with lids or covers that can be placed over the container prior to rainfall. Locate containers in covered areas, where possible.
- \* Arrange for scheduled waste pick up. Adjust waste collection schedule as necessary to prevent overflow of the containers.
- \* Ensure that construction waste is collected, removed, and disposed of only at authorized disposal areas in compliance with applicable State and/or local waste disposal regulations.

Offsite vehicle tracking of sediments and the geration of dust shall be minimized. A stabilized construction access road shall be utilized to reduce off-site tracking. Off-site sediment removal should be conducted at a frequency necessary to minimize impacts. Vehicle wash area should be considered if off-site tracking becomes excessive.

The construction site must have temporary sanitary sewer facilities for on-site personnel. Portable facilities may be utilized throughout the site. Licensed domestic waste haulers must be contracted to regularly remove the sanitary wastes and to maintain the facilities in good working order. The temporary construction trailer may have sanitary sewer facilities with a holding tank. A licensed domestic waste hauler shall also service this facility. An on-site septic system for the construction trailer is not allowed. Temporary sanitary sewer facilities shall be permitted by the local building department in accordance with applicable State and local regulations.

Controls of pollutants shall be maintained throughout construction period and until final stabilization is achieved. Qualified personnel shall inspect all points of discharge and all disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural controls, and locations where vehicles enter or exit the site at least once every seven calendar days and within 24 hours of the end of every storm event that produces at least 0.25 inches of rainfall. Where sites have been finally stabilized, such inspection shall be conducted at least once every month until a Notice of Termination has been submitted.

- \* Stabilization Measures – Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of or the potential for, pollutants leaving the site. The inspection should reveal whether the area was stabilized correctly, whether there has been damage to the area since it was stabilized, and what should be done to correct any problems.

- \* Structural Controls – Silt fences, hay bales and other erosion control measures shall be inspected regularly for proper positioning, anchoring, and effectiveness in trapping sediments. The inspection should reveal whether the control was installed correctly, whether there has been damage to the control since installation, and what should be done to correct any problems. Sediment should be removed from the uphill side of the silt fence and the fence should be reconstructed as necessary. Hay bales shall be added or replaced as necessary to provide effective control.

- \* Discharge Points – Discharge points shall be inspected to determine whether erosion control measures are effective in preventing significant amounts of pollutants from leaving the site. Silt fences and hay bales shall be maintained or replaced as necessary. The inspection should reveal whether the on-site BMPs are effective, and what should be done to increase the effectiveness.

- \* Construction Entrances – Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking. The inspection should reveal whether the stabilization of the construction entrance is effective, and what should be done to increase the effectiveness.

- \* Areas Used for Storage of exposed Materials – These are locations where construction materials (including excavated soils) are stored. The inspection should reveal the potential for excessive erosion and sedimentation, and what actions should be implemented to reduce the risks of pollution.

Based on the result of the inspection, all maintenance operations needed to assure proper function of all controls, BMPs, practices or measures identified in this Plan shall be done in a timely manner, but in no case later than 7 calendar days following the inspection.

A Report summarizing the scope of each inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations related to the implementation of the stormwater pollution prevention plan, and modifications to the stormwater pollution prevention plan shall be prepared and retained as part of the stormwater pollution prevention plan for at least three years from the date that the site is finally stabilized. Such report shall identify any incidence of non-compliance.

## Contractor Requirements

The contractor must have technical expertise in erosion prevention and sediment control. The contractor must at all time maintain erosion control methods that prevent any violation of the NPDES program.

## Faulty Installation and/or Poor Maintenance

Most noncompliance occurs because measures were not installed correctly or maintained properly, or both. Determining the reason why the measures are failing requires technical knowledge about the devices and how to construct them properly. Contractors failure to control erosion, sedimentation or turbidity both onsite and offsite is not acceptable. Failure to do so may result in possible fines and/or termination from the site without payment for construction progress.

## Compliance

Remember that the goal of the program is to prevent accelerated erosion and off-site sedimentation. As the contractor, you are the first person to determine if the performance standards and intent of the rule are being met. You are the key person in ensuring that the construction site is evaluated fairly and consistently and that you keep the site in compliance.

The erosion and sediment control rules are performance oriented. That is, the measures used at a construction site must be effective in controlling erosion and preventing off-site sedimentation for the site to be in compliance. Following an approved plan and installing the control measures may not be enough for a site to be in compliance with the rules. If erosion and off-site sedimentation occur, the contractor will be responsible for installing additional measures to correct any problem associated with compliance of the NPDES permit or any other permit required for the site construction. The contractor will also be completely responsible for any fines levied by any governing agency on the project during construction.

The rules are also flexible, allowing the contractor to decide the most economical and effective means of erosion control. This encourages the use of innovative techniques and specifically designed erosion control systems. The contractor is the key individual in making this kind of performance based rule work because the contractor is the first person to recognize performance failures and remedy the problems.

The contractor's job is to:

1. Determine that an erosion and sediment control plan for the site has been approved.
2. Determine that all specified practices have been installed and are being maintained according to the plan.
3. Determine that both on-site and off-site sedimentation, erosion or turbidity is being prevented. If the contractor finds deficiencies, appropriate action must be taken to attain compliance.

## Control of non-stormwater discharges

It is expected that the following non-stormwater discharges may occur from the site during construction period: water from water line flushing, pavement wash water (where no spills or leaks of toxic or hazardous materials have occurred), and uncontaminated groundwater (from dewatering excavation). If said discharges do occur, they will be directed to the temporary sediment basin prior to discharge. Turbid water from the stormwater pond shall not be pumped directly into either of the receiving waters. Any pumped water from the stormwater pond shall be treated so as to not allow a discharge of polluted stormwater. Treatment can include silt fences, settling ponds, the proper use of flocculating agents or other appropriate means.

NO.	DATE	REVISIONS
1.	10/24/2019	AS PER ESCAMBIA COUNTY DRC REVIEW
2.	10/24/2019	AS PER ECIA REVIEW COMMENTS
3.	10/31/2019	AS PER INFIMD RA
4.	11/7/2019	AS PER ECIA REVIEW COMMENTS
5.	1/15/2020	AS PER ESCAMBIA COUNTY DRC REVIEW

**HAMMOND ENGINEERING, INC.**  
FLORIDA AUTHORIZATION NO. 9130  
ALABAMA AUTHORIZATION NO. 3277  
3802 NORTH 6<sup>TH</sup> STREET  
PENSACOLA, FLORIDA 32505  
850 434-2603  
850 434-2650  
TOM@SELANDESIGN.COM

*[Handwritten Signature]*  
11/16/2019

CONSTRUCTION PLANS FOR AVELLANAS ESTATES EROSION CONTROL NOTES FLORIDA ESCAMBIA COUNTY

DRAWN BY: DYU/W	DESIGNED BY: TH
CHECKED BY: TH	DATE: 09-05-2019
SCALE: AS SHOWN	NOT RELEASED FOR CONSTRUCTION
BY:	DATE:

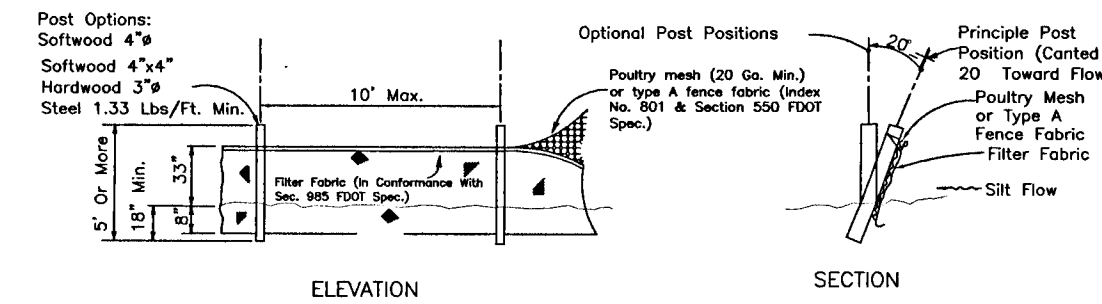
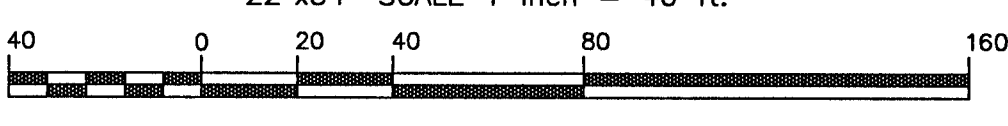
PROJECT NO: 19-013

SHEET: 04

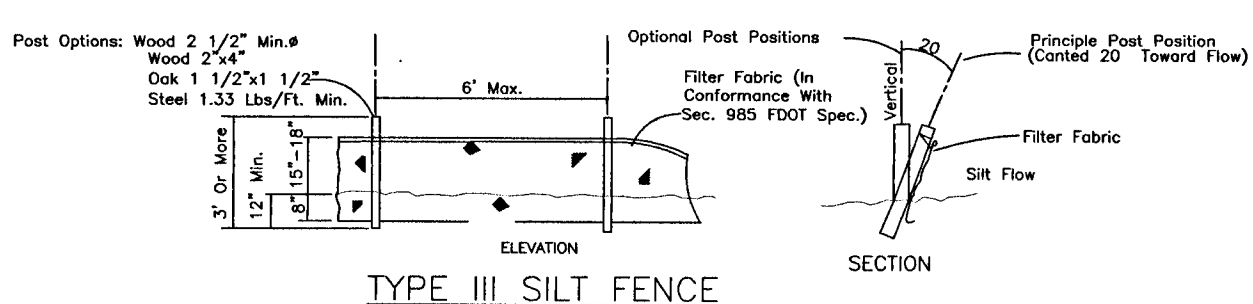
**GRAPHIC SCALE**

22"x34" SCALE 1 inch = 40 ft.

11"x17" SCALE 1 inch = 80 ft.



**TYPE IV SILT FENCE**  
NTS

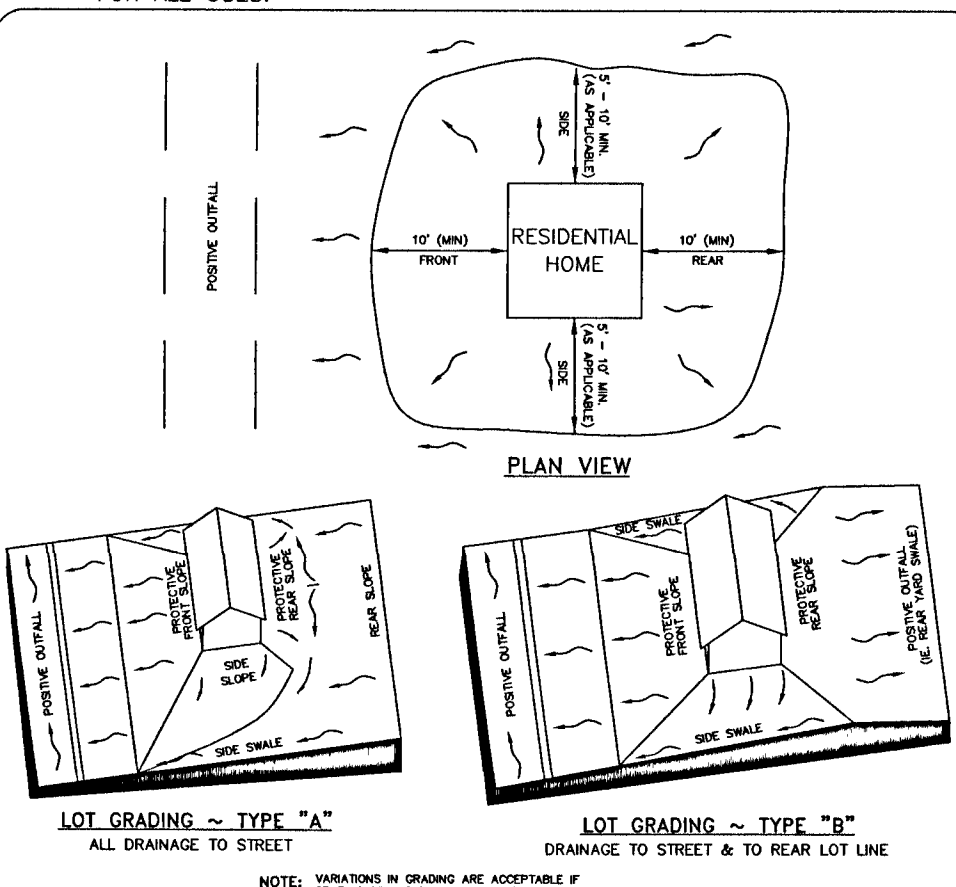


**TYPE III SILT FENCE**  
NTS

DRAINAGE STRUCTURES		STORMWATER INFRASTRUCTURE TABLE	
STRUCTURE #	DESCRIPTION	STRUCTURE #	DESCRIPTION
S-101	TYPE D INLET	S-101	STORMWATER PIPE
S-102	TYPE A CURB INLET W/ 4" DIA. BOTTOM	S-102	STORMWATER PIPE (OFFSITE)
S-103	TYPE A CURB INLET W/ 4" DIA. BOTTOM	S-103	STORMWATER CURB INLETS
S-103A	4" DIA. JUNCTION BOX	S-103A	STORMWATER JUNCTION BOX
S-104	TYPE C OVERFLOW STRUCTURE	S-104	STORMWATER TYPE 'D' INLETS
S-105	3" DIA. JUNCTION BOX	S-105	STORMWATER TYPE 'C' INLETS
S-106	TYPE 'D' INLET	S-106	STORMWATER TYPE 'D' INLETS
S-107	5" DIA. JUNCTION BOX	S-107	STORMWATER TYPE 'D' INLETS

IMPERVIOUS AREA	
ITEM	NET
LOTS (HOMES AND DRIVEWAYS, MAX OF 3000 EACH)	72,000 SF - 1.65 AC
ASPHALT ROADWAY AND CURBING	14,381 SF - 0.33 AC
<b>TOTAL IMPERVIOUS AREA</b>	<b>86,381 SF - 1.98 AC</b>

LOT COVERAGE: MINIMUM PERVIOUS LOT COVERAGE OF 30 PERCENT (70 PERCENT MAXIMUM SEMI-IMPERVIOUS AND IMPERVIOUS COVER) FOR ALL USES.



**GENERAL NOTES**

NOTE: FENCES SHALL BE INSTALLED NOT TO IMPED STORMWATER FLOW.

THE HOMEOWNER SHALL INSTALL PRIOR TO CONSTRUCTION AND MAINTAIN DURING CONSTRUCTION ALL SEDIMENT CONTROL MEASURES AS REQUIRED TO RETAIN ALL SEDIMENTS ON-SITE. IMPROPER SEDIMENT CONTROL MEASURES MAY RESULT IN CODE ENFORCEMENT VIOLATION.

ALL DAMAGE TO EXISTING ROADS DURING CONSTRUCTION WILL BE REPAIRED BY THE HOMEOWNER PRIOR TO FINAL "AS-BUILT" SIGN OFF FROM THE COUNTY.

ALL LOTS SHALL REQUIRE A CERTIFIED BOUNDARY SURVEY AT TIME OF PURCHASE.

ALL DISTURBED AREAS WHICH ARE NOT PAVED SHALL BE STABILIZED WITH SEEDING, FERTILIZER AND MULCH, HYDROSEED AND/OR SOO.

THE CONTRACTOR NOTIFY SUNSHINE ONE UTILITIES TWO FULL BUSINESS DAYS IN ADVANCE PRIOR TO DIGGING WITHIN THE R/W: 1-800-432-4770

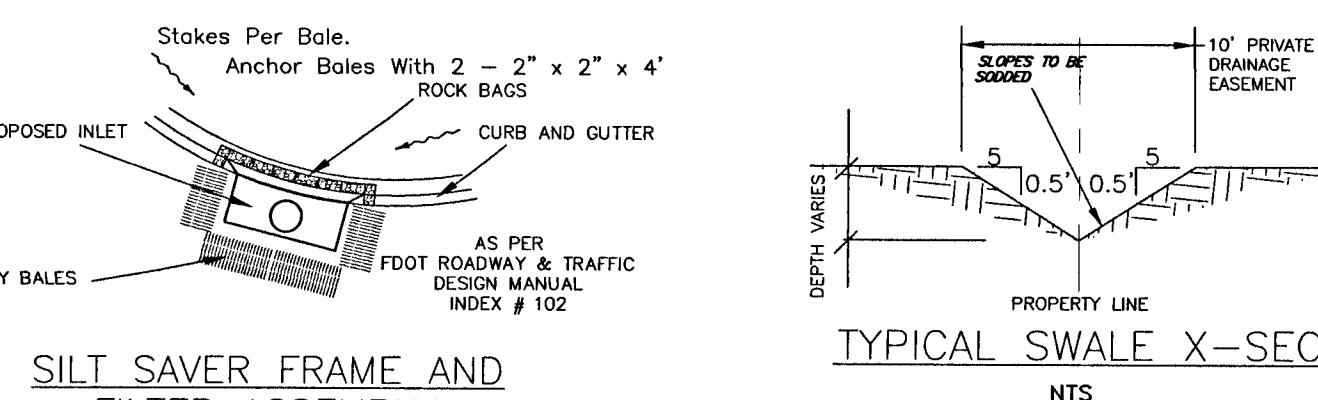
THE CONTRACTOR SHALL NOTIFY FDOT AT LEAST 48 HOURS IN ADVANCE PRIOR TO INITIATING ANY WORK IN THE STATE RIGHTS-OF-WAYS.

NO DEVIATIONS OR REVISIONS FROM THESE PLANS BY THE CONTRACTOR SHALL BE ALLOWED WITHOUT PRIOR APPROVAL FROM BOTH THE DESIGN ENGINEER AND ESCAMBIA COUNTY. ANY DEVIATIONS MAY RESULT IN DELAYS IN OBTAINING A CERTIFICATION OF OCCUPANCY.

HOMEOWNER SHALL CONTROL STORMWATER DURING ALL PHASES OF CONSTRUCTION.

HOME EQUIPMENT (L.E. AC UNITS) SHALL NOT HINDER THE PROPER INSTALLATION AND/OR FUNCTION OF SIDE YARD SWALES.

MITERED END SECTIONS TO BE INSTALLED IN ACCORDANCE WITH LATEST FDOT DESIGN STANDARDS INDEX NO. 273 AT 1:4 SLOPE. PIPE LENGTH (L) TO BE RCP AND SHOULD BE INCLUDED UNDER THE UNIT PRICE FOR THE MITERED END SECTION. CONCRETE COLLAR TO BE INSTALLED FOR HDPE/RCP CONNECTIONS.



**SILT SAVER FRAME AND FILTER ASSEMBLY**  
NTS

TYPICAL ALL ROADSIDE INLETS (DOUBLE A & TYPE A)

**TYPICAL SWALE X-SECTION**  
NTS

NOTE: DRAINAGE CONVEYANCE SWALES ARE TO BE BUILT BY THE CONTRACTOR. SIDE YARD SWALES ARE TO BE BUILT BY THE HOMEOWNER.

NOTE: PRIVATE SIDE YARD EASEMENTS SHALL NOT BE BLOCKED BY ANYTHING THAT MAY HINDER THE FLOW OF STORMWATER (1.4 A/C UNITS, ETC.).

**NOTE: DISTURBED RIGHT-OF-WAY AREAS** SHALL BE STABILIZED WITH A HEALTHY GROWTH OF GRASS PRIOR TO RECEIVING COUNTY ACCEPTANCE.

**NOTE: A MINIMUM ONE (1) FOOT** GROUND COVER IS REQUIRED FOR ALL UNDERGROUND PIPES.

**NOTE: AS PER ESCAMBIA COUNTY LDC** DSM 2-1.6(6), NO STREETS OR ROADS WILL BE ALLOWED TO BE OPEN CUT, OR JACK-AND-BORED. IT IS THE DEVELOPERS RESPONSIBILITY TO PROVIDE CONDUITS FOR ALL UTILITY CROSSINGS.

**NOTE: NO FENCES SHALL BE INSTALLED** WITHIN PRIVATE OR PUBLIC DRAINAGE/ACCESS EASEMENTS FOR CONVEYANCE SYSTEMS. THESE EASEMENTS SHALL BE ACCESSIBLE AT ALL TIMES.

**NOTE: LOT OWNERS WILL NOT BE ALLOWED** TO LOCATE FENCES OR OTHER STRUCTURES WITHIN DRAINAGE/ACCESS EASEMENTS FOR CONVEYANCE SYSTEMS. THESE EASEMENTS SHALL BE ACCESSIBLE AT ALL TIMES.

**NOTE: FENCES AND OTHER** STRUCTURES IN 10' PRIVATE DRAINAGE EASEMENTS ALONG EACH LOT PROPERTY LINES SHALL NOT IMPED STORMWATER FLOW.

**EROSION CONTROL NOTES**

A HEALTHY GROWTH OF GRASS WITHIN THE DISTURBED RIGHT-OF-WAY AREAS IS REQUIRED PRIOR TO COUNTY APPROVAL/ACCEPTANCE. IF TIME CONSTRAINTS EXIST DURING THE FINAL PLAT APPROVAL AND ACCEPTANCE PROCESS, A MINIMUM OF TWO STRIPS OF SOD (MINIMUM 2' WIDE) BEHIND THE BACK OF CURB WITH ALL OTHER DISTURBED AREAS SEEDED/MULCHED/FERTILIZED WILL BE ACCEPTABLE.

SAG FILTERS IN CURB THROATS ARE NOT AN ALLOWABLE SEDIMENT CONTROL METHOD.

**FLOOD ZONE DATA**

THE SUBJECT PROPERTY SHOWN HEREON IS LOCATED IN FLOOD ZONE X, (MINIMAL RISK AREAS OUTSIDE THE 1-PERCENT AND 2-PERCENT ANNUAL-CHANCE FLOODPLAINS. NO BFE'S OR BASE FLOOD DEPTHS ARE SHOWN WITHIN THESE ZONES) AND IN FLOOD ZONE AE, AS DETERMINED FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP OF ESCAMBIA COUNTY, FLORIDA, COMMUNITY NUMBER 120080, FIRM MAP PANEL NUMBER 12033C0295G, MAP REVISION DATED SEPTEMBER 29, 2006.

FLOOD ZONE(S)	NFP COMMUNITY NUMBER	MAP NUMBER	PANEL NUMBER(S)	SUFFIX	MAP REVISION DATE
X, AE	120080	12033C	0295	G	SEPTEMBER 29, 2006

**MINIMUM STANDARDS FOR TYPICAL RESIDENTIAL GRADING CONTROL PLAN**

**NOTES:**

- A POSITIVE DRAINAGE OUTLINE IS A CONVEYANCE SYSTEM (DRAINAGE CONDUIT) WITHIN A DRAINAGE SYSTEM - CURB & GUTTER OR DITCH WHICH CONTAINS CONTROLS AND TRANSFERS STORMWATER RUNOFF TO A DRAINAGE SYSTEM, SUCH AS A DRAINAGE DITCH, CULVERT, OR OTHER MEANS OF THE STATE, OR OTHERS OF THE UNITED STATES, OR TO ANY FLOODING ESCAMBIA COUNTY OR STATE DRAINAGE SYSTEM.
- FINISH FLOOR ELEVATION SHALL BE AS SPECIFIED BY BUILDING CODE.
- THESE ARE MINIMUM REQUIREMENTS AND DO NOT RELIEVE THE BUILDER FROM PROVIDING ADDITIONAL GRADING TO DRAIN STORMWATER TO A POSITIVE DRAINAGE SYSTEM AND EXISTING NEARBY TO ADJACENT LOTS AND PROPERTIES.
- DISTURBED LOT AREAS SHALL BE COMPLETELY STABILIZED WITH SOO. IF THE HOME IS CONSTRUCTED, STABILIZE THE FIRST 10' WITH SOO AND SOO HANDBOOK SEE THE REMAINDER OF THE LOT.
- THE HOMEOWNER SHALL COMPLY WITH STATE PERMITTING REQUIREMENTS FOR LARGE AND SMALL CONSTRUCTION SITES.
- FOR FULLY FINISHED HOMES WHICH REQUIRE A DETAILED STORMWATER POLLUTION PREVENTION PLAN (SWPPP) BEING AVAILABLE ON-SITE FOR REVIEW DURING ALL PHASES OF CONSTRUCTION.
- LOT CLEARING ACTIVITIES SHALL NOT PROCEED WITHOUT BUILDING PERMITS FOR THOSE LOTS EXCLUDING CLEARING REQUIRED FOR CONSTRUCTION OF CONVEYANCE SYSTEMS OR DRAINAGE AS THE DEVELOPER'S RESPONSIBILITY.
- ALL NEW RUNOFF, DOWNSPOUTS, AND GUTTERS SHALL BE ROUTED TO CARRY ALL STORMWATER TO THE ROADS OR SWALES THAT LEAD TO THE RESTRICTION PANS OR OTHER DRAINAGE SYSTEMS.
- PROVIDE EROSION CONTROL MEASURES TO ENSURE ALL SEDIMENTS SHALL BE RETAINED ON EACH INDIVIDUAL LOT.
- WETLANDS SHALL BE PROTECTED WITH FABRIC Silt Fencing AND BURIED HAYBALE SYSTEMS (DOUBLE ROWS AS NECESSARY).

**LEGEND:**

- FFE - FINISH HARBORABLE FLOOR ELEVATION
- FFE - FINISH GRADE ELEVATION
- ARROW - DRAINAGE DIRECTION
- GRASS SLOPE (MINIMUM)
- MINIMUM GRADE

**TYPICAL DRIVEWAY CONNECTION STANDARDS FOR EXISTING ROADWAY CONDITIONS**

**NOTES:**

- ALL MATERIALS AND LABOR FOR INSTALLATION WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.
- DRIVEWAYS ABUTTING PAVED ROADS SHALL BE 1-1/2" ASPHALT WITH 6" STABILIZED SUBGRADE OR 4" TO 6" CONCRETE WITH 4" STABILIZED SUBGRADE (MODIFIED PROCTOR) WITH LBR 40 BETWEEN EDGE OF ROADWAY AND R/W LINE.
- DRIVEWAYS ABUTTING A DIRT ROAD SHALL BE MILLED ASPHALT, GRADED AGGREGATE BASE, OR WASHED CONCRETE (4" IN DEPTH) ON THE COUNTY MAINTAINED PORTION OF DRIVEWAY.
- IF NECESSARY, REFER TO F.D.O.T. INDEX DETAILS AS REFERENCED BELOW.
- RADIUS OR FLARE IS ACCEPTABLE FOR TYPE II OR TYPE III CONNECTIONS.
- DRIVEWAYS WITHIN PROPERTY BOUNDARY SHALL PROVIDE A MINIMUM OF 2 PARKING SPACES.
- TYPICAL DRIVEWAY SECTIONS ARE TO BE 12" WIDE MINIMUM.

**TYPE I CURB CUT DRIVEWAY FOR COUNTY TYPE "B" LAYBACK CURBS.**

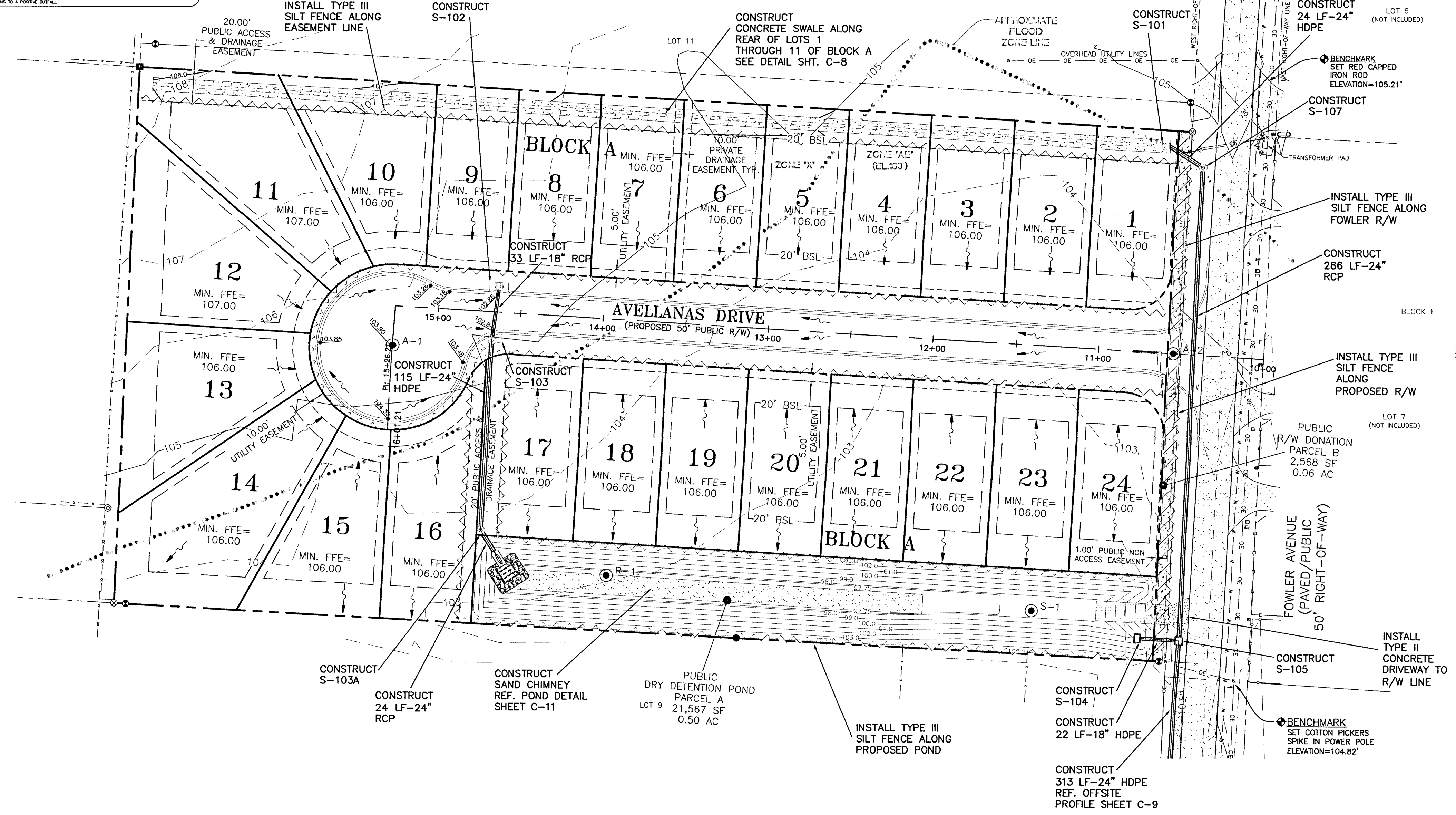
**NOTES:**

- SEE STANDARD COUNTY CURB DETAILS FOR REFERENCE.
- SEE F.D.O.T. INDEX NO. 515 FOR OTHER CONNECTIONS.
- FOR OTHER TYPE CURBS, DIMENSIONS MAY BE ADJUSTED TO FIT.

**NOTE:** LOTS 14 THRU 16: THE ENTIRE ROOF RUNOFFS SHALL BE ROUTED TO THE FRONT STREET. THE USE OF GUTTERS IS AN ACCEPTABLE METHOD TO COMPLETE THIS REQUIREMENT. ONLY SODDED BACKYARDS MAY BE DIRECTED TO THE REAR OF THESE LOTS.

**LEGEND:**

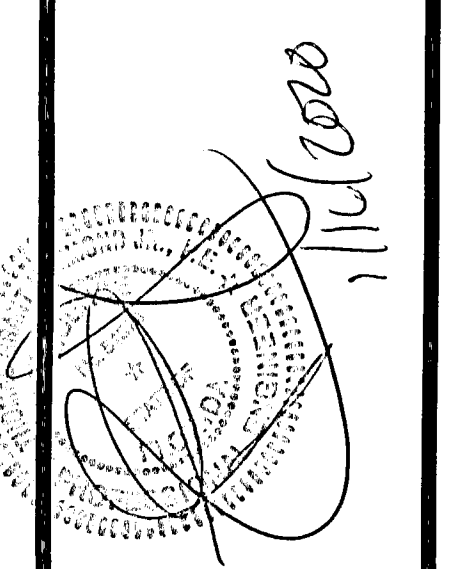
<ul style="list-style-type: none"> <li>4" x 4" CONCRETE MONUMENT, NUMBERED 2729 (FOUND)</li> <li>4" x 4" CONCRETE MONUMENT, UNNUMBERED (FOUND)</li> <li>3/4" IRON PIPE, UNNUMBERED (FOUND)</li> <li>1" IRON PIPE, UNNUMBERED (FOUND)</li> <li>1/2" CAPPED IRON ROD, NUMBERED 3286 (FOUND)</li> <li>1/2" CAPPED IRON ROD, NUMBERED 7174 (PLACED)</li> <li>1/2" IRON ROD, UNNUMBERED (FOUND)</li> <li>1/2" CAPPED IRON ROD, ILLEGIBLE (FOUND)</li> <li>POWERPOLE</li> <li>OVERHEAD ELECTRIC</li> <li>CHAIN LINK FENCE</li> <li>WIRE FENCE</li> <li>BURIED NATURAL GAS LINE WITNESS SIGN</li> <li>FIBEROPTIC CABLE WITNESS POST</li> <li>NATURAL GAS METER</li> <li>WATER METER</li> <li>BACKFLOW PREVENTER</li> <li>MAILBOX</li> <li>GRAVEL DRIVEWAY</li> </ul>	<p><b>ABBREVIATIONS:</b></p> <ul style="list-style-type: none"> <li>PSM - PROFESSIONAL SURVEYOR AND MAPPER</li> <li>L.B. - LICENSED BUSINESS</li> <li>R/W - RIGHT-OF-WAY</li> <li>ORB - OFFICIAL RECORDS BOOK</li> <li>PCB - PAGE</li> <li>D - DEED</li> <li>F - FIELD</li> <li>SPF - STATE PLANE FIELD</li> <li>PT - POINT OF TANGENCY</li> <li>PC - POINT OF CURVATURE</li> <li>PR - POINT OF REVERSE CURVE</li> <li>PR - POINT OF RADIUS</li> <li>NR - NON RADIAL</li> <li>R - RADIAL</li> </ul> <p> <ul style="list-style-type: none"> <li>PROPOSED CONCRETE</li> <li>DIRT DRIVEWAY</li> <li>EXIST. ASPHALT PAVEMENT</li> </ul> </p> <p> <ul style="list-style-type: none"> <li>DENOTES TYPE III SILT FENCE</li> <li>DENOTES FLOOD ZONE LINES</li> </ul> </p> <p>SOIL INFO: BONIFAY LOAMY SAND, 0 TO 5 PERCENT SLOPES</p>
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**REVISIONS**

NO.	DATE	DESCRIPTION
1.	10/24/2019	AS PER ESCAMBIA COUNTY DRC REVIEW
2.	10/24/2019	AS PER ECIA REVIEW COMMENTS
3.	10/31/2019	AS PER NWFWD RAI
4.	11/7/2019	AS PER ECIA REVIEW COMMENTS
5.	1/15/2020	AS PER ESCAMBIA COUNTY DRC REVIEW

**HAMMOND ENGINEERING, INC.**  
FLORIDA AUTHORIZATION NO. 9130  
ALABAMA AUTHORIZATION NO. 3277  
3802 NORTH 5<sup>TH</sup> STREET  
PENSACOLA, FLORIDA 32505  
850 434-2603  
FAX 850-434-2650  
TOM@SELANDDESIGN.COM



**CONSTRUCTION PLANS FOR**  
**AVELLANAS ESTATES**  
**GRADING PLAN**  
FLORIDA  
ESCAMBIA COUNTY

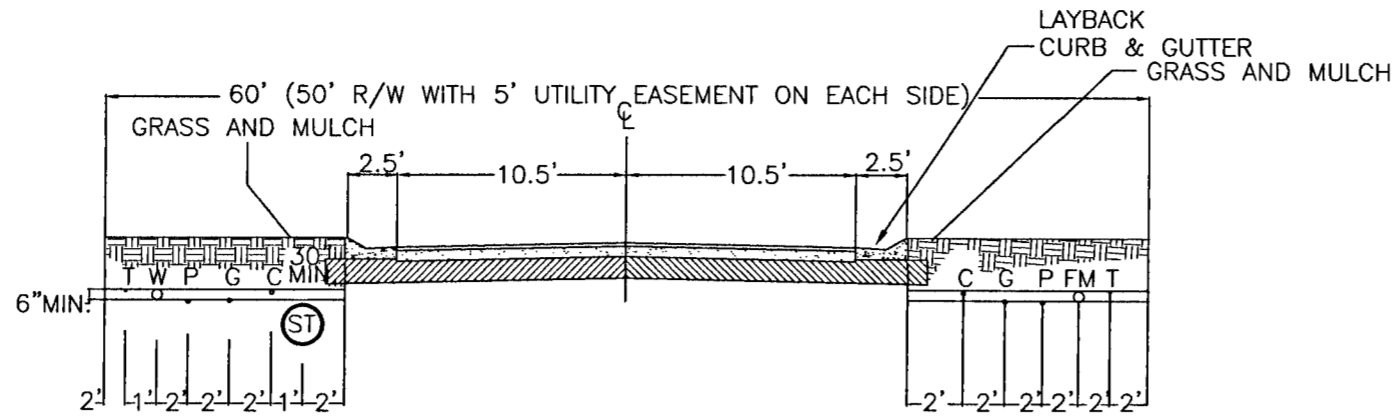
DRAWN BY: CYAW	DESIGNED BY: TH	CHECKED BY: TH	DATE: 09-05-2019	SCALE: AS SHOWN	NOT RECONSTRUCTED FOR CONSTRUCTION	BY: DATE:
PROJECT NO: 19-013						SHEET: C5

**GRAPHIC SCALE**

22"x34" SCALE 1 inch = 40 ft.



11"x17" SCALE 1 inch = 80 ft.



**COMMON TRENCH  
(50' R/W~21' ASPH.)**

**LOW PRESSURE RESIDENTIAL SEWER SERVICE:**  
RESIDENTIAL PUMP STATIONS TO HAVE 24" DIA. BASIN WITH HOMA PUMP MODEL GRP26/1/C

AS MANUFACTURED BY:

HOMA PUMP TECHNOLOGY  
390 BIRMINGHAM BLVD.  
ANSONIA, CT 06401  
P: 203-736-8890  
F: 800-452-4662  
F: 203-736-8899  
WWW.HOMAPUMP.COM  
OR APPROVED EQUAL

NOTE:

PRIVATE GRINDER PUMP STATIONS LOCATED ON EACH RESIDENTIAL LOT SHALL BE MAINTAINED BY THE HOMEOWNERS

**UTILITIES NARRATIVE:**

**POTABLE WATER:**

AFTER RECEIVING ERP, ECUA AND ESCAMBIA COUNTY APPROVALS, THE DEVELOPER PLANS TO CONNECT TO EXISTING, ADJACENT SYSTEM OF ECUA, CONSTRUCTING ALL NECESSARY UNDERGROUND WATER MAINS, VALVES AND FIRE HYDRANTS TO SERVE THIS DEVELOPMENT. UPON COMPLETION, THE ENTIRE SYSTEM WILL THEN BE TURNED OVER TO ECUA FOR ACCEPTANCE AND MAINTENANCE.

**SANITARY SEWER:**

AFTER RECEIVING ERP, ECUA AND ESCAMBIA COUNTY APPROVALS, THE DEVELOPER PLANS TO CONNECT TO THE EXISTING, ADJACENT SYSTEM OF ECUA, CONSTRUCTION OF PRIVATE LOW PRESSURE SYSTEMS TO SERVE THIS DEVELOPMENT. UPON COMPLETION, THE ENTIRE SYSTEM LOCATED WITHIN THE RIGHTS OF WAYS AND EASEMENTS WILL BE TURNED OVER TO ECUA FOR ACCEPTANCE AND MAINTENANCE.

PRIVATE GRINDER STATIONS SHALL BE MAINTAINED BY THE HOME OWNERS.

**STORM SEWER:**

AFTER RECEIVING ERP AND ESCAMBIA COUNTY APPROVALS, THE DEVELOPER PLANS TO CONSTRUCT ALL NECESSARY STORMWATER MANHOLES, PIPES AND STORMWATER PONDS TO SERVE THIS DEVELOPMENT. THE ENGINEER WILL DESIGN THE STORM DRAINAGE SYSTEM TO COMPLY WITH ESCAMBIA COUNTY SUBDIVISION AND STORMWATER ORDINANCES. UPON COMPLETION, THE ENTIRE SYSTEM WILL BE TURNED OVER TO THE COUNTY FOR OWNERSHIP AND MAINTENANCE INCLUDING THE DETENTION PONDS.

**ELECTRIC, GAS, TELEPHONE & TV CABLE:**

THESE SERVICES TO BE INSTALLED AND MAINTAINED BY THE APPROPRIATE UTILITY COMPANY.

**NOTES:**

ALL PROPOSED UNDERGROUND UTILITIES WITHIN R/W'S OR UTILITY CONDUIT FOR ROAD CROSSINGS SHALL BE INSTALLED PRIOR TO PAVING. NO STREETS OR ROADS UNDER THE TWO (2) YEAR WARRANTY SHALL BE ALLOWED TO BE OPEN-CUT, OR JACK-AND-BORED, UNLESS SPECIFICALLY APPROVED BY THE COUNTY ENGINEER. TO ACCOMPLISH THIS REQUIREMENT, COMMON TRENCHING IS REQUIRED WHENEVER POSSIBLE. IF COMMON TRENCHING IS NOT A FEASIBLE OPTION, THE DEVELOPER SHALL INSTALL CONDUIT FOR THE UTILITY NOT PARTICIPATING IN THE COMMON TRENCHING FOR ALL ROAD CROSSINGS AND THE UTILITY COMPANY WILL BE REQUIRED TO USE THE CONDUIT. THIS SHALL REQUIRE PLANNING BETWEEN THE DEVELOPER AND THE UTILITY.

ROUGH GRADE OF RIGHT-OF-WAY MUST BE ESTABLISHED PRIOR TO COMMON TRENCH UTILITY INSTALLATION TO ENSURE UTILITIES ARE INSTALLED AT MINIMUM AND MAXIMUM DEPTHS. A MINIMUM 30" OF COVER IS REQUIRED OVER ALL UTILITIES. THIS DIMENSION SHALL BE MEASURED FROM PROPOSED GRADE IF ROAD IS IN FILL AND MEASURED FROM TOP OF CURB IF ROAD IS IN CUT.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR RECORD AT LEAST TWO WEEKS PRIOR TO PLACEMENT OF BASE MATERIAL TO ASSIST IN THE COORDINATION OF ALL OTHER UNDERGROUND UTILITIES.

CONTRACTOR TO INSTALL WATER SERVICES FOR EACH LOT, OPPOSITE THE PROPERTY CORNER THAT GULF POWER HAS PROPOSED POWER TRANSFORMERS.

PROPOSED WATERLINES AND FORCE MAIN SHALL HAVE A MINIMUM COVER OF 30" AND A MAXIMUM COVER OF 36" BELOW PROPOSED FINISHED GRADE UNLESS NOTED OTHERWISE.

CONTRACTOR SHALL INSTALL EACH UTILITY SERVICE IN THE LOCATION AS SHOWN IN THE COMMON TRENCH DETAIL.

ELECTRIC/PHONE/CABLE/GAS STRUCTURES INSTALLED WITHIN DRAINAGE/ACCESS EASEMENTS SHALL BE LOCATED ALONG THE BOUNDARY OF THE EASEMENT TO MAXIMIZE CLEAR ACCESS FOR MAINTENANCE EQUIPMENT.

**NOTE:**

AS PER ESCAMBIA COUNTY LDC DSM 2-1/6(d), NO STREETS OR ROADS UNDER THE TWO YEAR WARRANTY WILL BE ALLOWED TO BE OPEN CUT, OR JACK-AND-BORE.

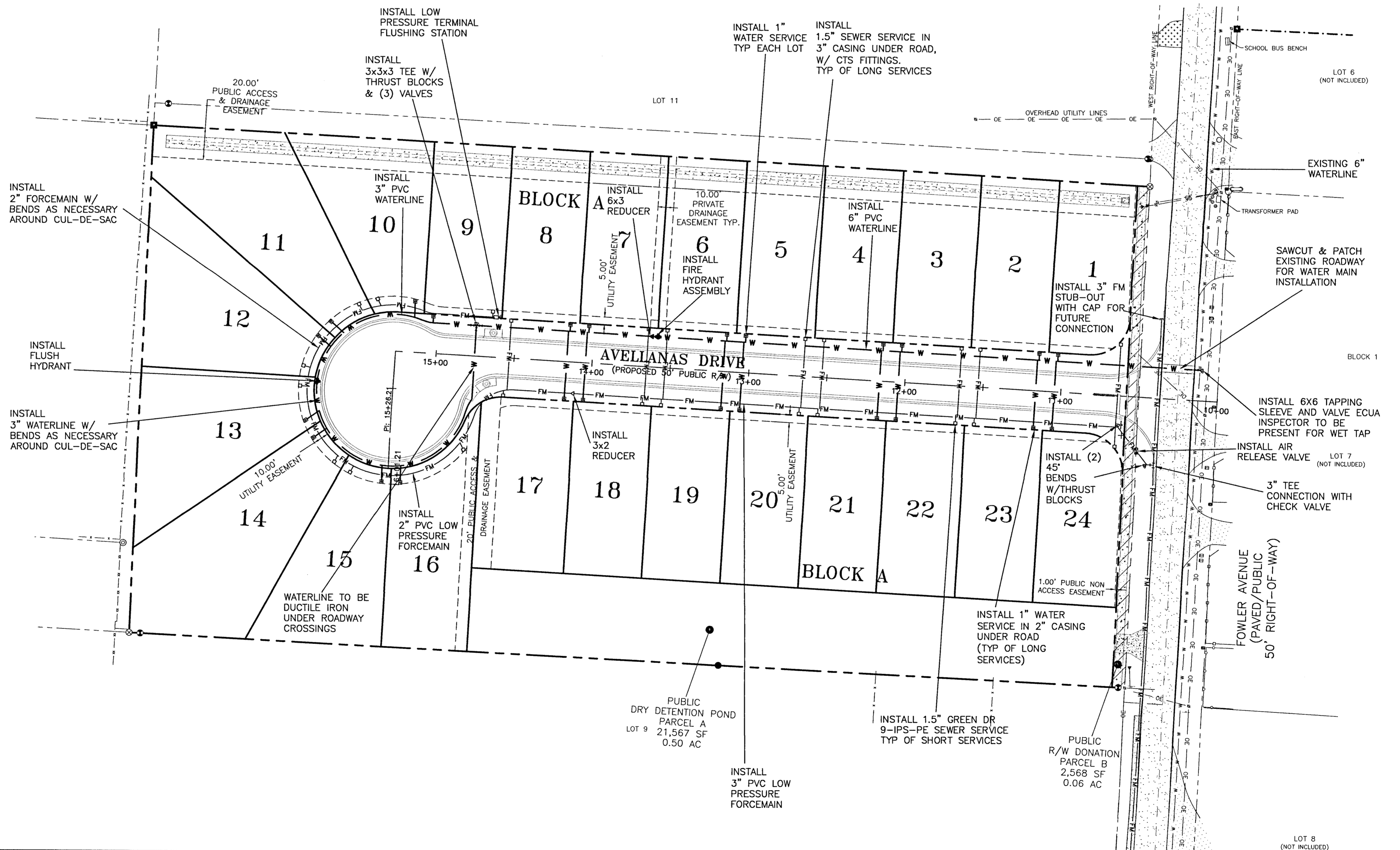
**NOTE:**

ALL EXISTING DRIVEWAYS TO BE DISTURBED SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.

**NOTE:**

CONTRACTOR TO INSTALL LOW PRESSURE FORCEMAIN SERVICES 3' OFF OF OPPOSITE LOT CORNER OF WATER SERVICES.

- LEGEND:**
- -4" x 4" CONCRETE MONUMENT, NUMBERED 2729 (FOUND)
  - -4" x 4" CONCRETE MONUMENT, UNNUMBERED (FOUND)
  - ⊙ -3/4" IRON PIPE, UNNUMBERED (FOUND)
  - -1" IRON PIPE, UNNUMBERED (FOUND)
  - ⊙ -1/2" CAPPED IRON ROD, NUMBERED 3288 (FOUND)
  - ⊙ -1/2" CAPPED IRON ROD, NUMBERED 7174 (PLACED)
  - ⊙ -3" CAPPED IRON PIPE, UNNUMBERED (FOUND)
  - ⊙ -1/2" IRON ROD, UNNUMBERED (FOUND)
  - ⊙ -1/2" CAPPED IRON ROD, ILLEGIBLE (FOUND)
  - ⊙ -POWERPOLE
  - ⊙ -OVERHEAD ELECTRIC
  - ⊙ -4" CHAIN LINK FENCE
  - ⊙ -4" WIRE FENCE
  - ⊙ -BURIED NATURAL GAS LINE WITNESS SIGN
  - ⊙ -FIBEROPTIC CABLE WITNESS POST
  - ⊙ -NATURAL GAS METER
  - ⊙ -WATER METER
  - ⊙ -BACKFLOW PREVENTER
  - ⊙ -MAILBOX
  - ⊙ -GRAVEL DRIVEWAY
- ABBREVIATIONS:**
- PSM -PROFESSIONAL SURVEYOR AND MAPPER
  - L.B. -LICENSED BUSINESS
  - R/W -RIGHT-OF-WAY
  - ORB -OFFICIAL RECORDS BOOK
  - PG. -PAGE
  - D -DEED
  - T -FIELD
  - SPF -STATE PLANE FIELD
  - PT -POINT OF TANGENCY
  - PC -POINT OF CURVATURE
  - PRC -POINT OF REVERSE CURVE
  - PI -POINT OF INTERSECTION
  - NR -NON RADIAL
  - R -RADIAL
  - ⊙ -PROPOSED CONCRETE
  - ⊙ -DIRT DRIVEWAY
  - ⊙ -EXIST. ASPHALT PAVEMENT



REVISIONS		AS PER ESCAMBIA COUNTY DRC REVIEW
NO.	DATE	AS PER ECUA REVIEW COMMENTS
1.	10/24/2019	AS PER ANFWMD RAI
2.	10/24/2019	AS PER ECUA REVIEW COMMENTS
3.	10/31/2019	AS PER ECUA REVIEW COMMENTS
4.	11/7/2019	AS PER ESCAMBIA COUNTY DRC REVIEW
5.	1/15/2020	AS PER ESCAMBIA COUNTY DRC REVIEW

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**HAMMOND ENGINEERING, INC.**  
FLORIDA AUTHORIZATION NO. 9130  
ALABAMA AUTHORIZATION NO. 3277  
3802 NORTH 15<sup>TH</sup> STREET  
PENSACOLA, FLORIDA 32505  
850 434-2603  
FAX 850-434-2650  
TOM@SELANDESIGN.COM

**CONSTRUCTION PLANS FOR AVELLANAS ESTATES UTILITY MASTER PLAN**  
FLORIDA  
ESCAMBIA COUNTY

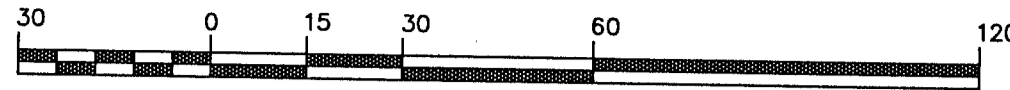
DRAWN BY: C/VJW	DESIGNED BY: TH
CHECKED BY: TH	DATE: 09-05-2019
SCALE: AS SHOWN	NOT RELEASED FOR CONSTRUCTION
BY:	DATE:

PROJECT NO: 19-013  
SHEET: 06

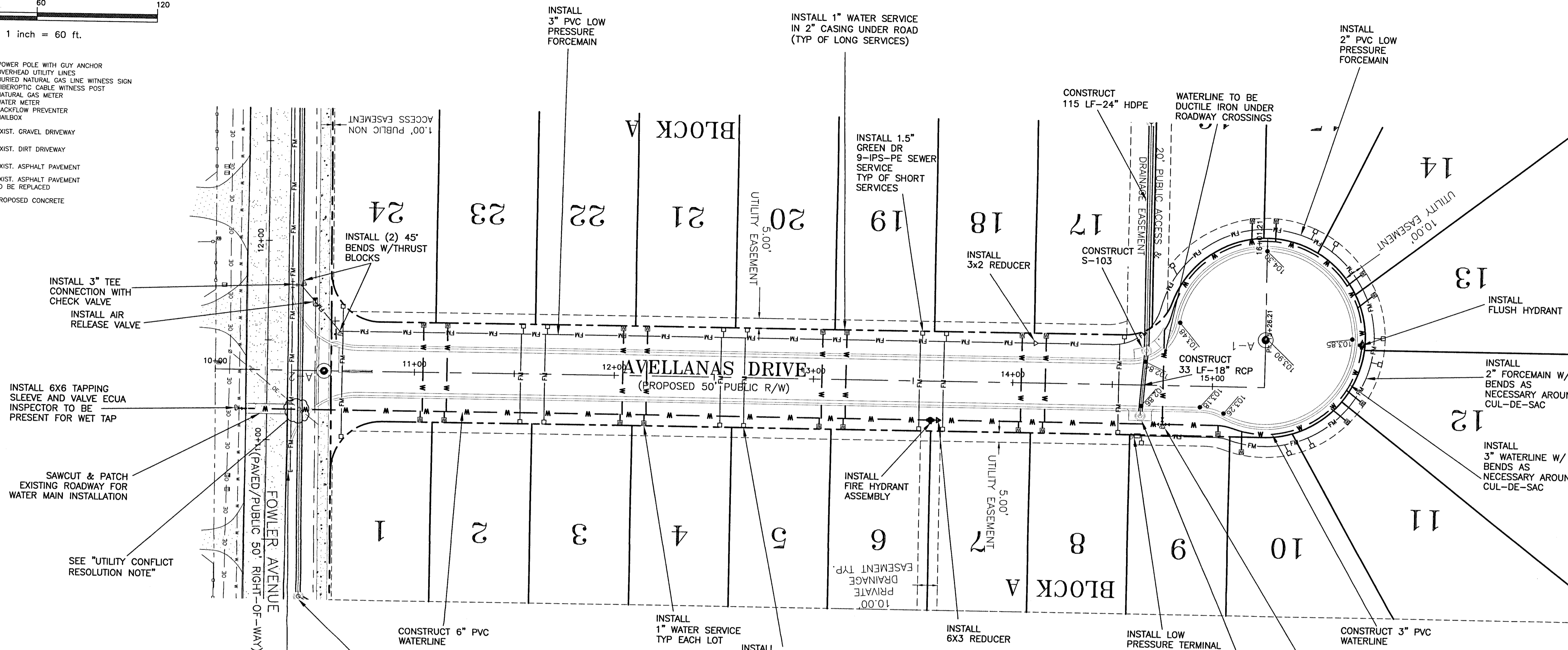
**GRAPHIC SCALE**

22"x34" SCALE 1 inch = 30 ft.

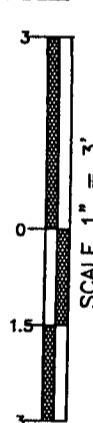
11"x17" SCALE 1 inch = 60 ft.



- POWER POLE WITH GUY ANCHOR
- OVERHEAD UTILITY LINES
- BURIED NATURAL GAS LINE WITNESS SIGN
- FIBEROPTIC CABLE WITNESS POST
- NATURAL GAS METER
- WATER METER
- BACKFLOW PREVENTER
- MAILBOX
- EXIST. GRAVEL DRIVEWAY
- EXIST. DIRT DRIVEWAY
- EXIST. ASPHALT PAVEMENT
- EXIST. ASPHALT PAVEMENT TO BE REPLACED
- PROPOSED CONCRETE



**VERTICAL SCALE**



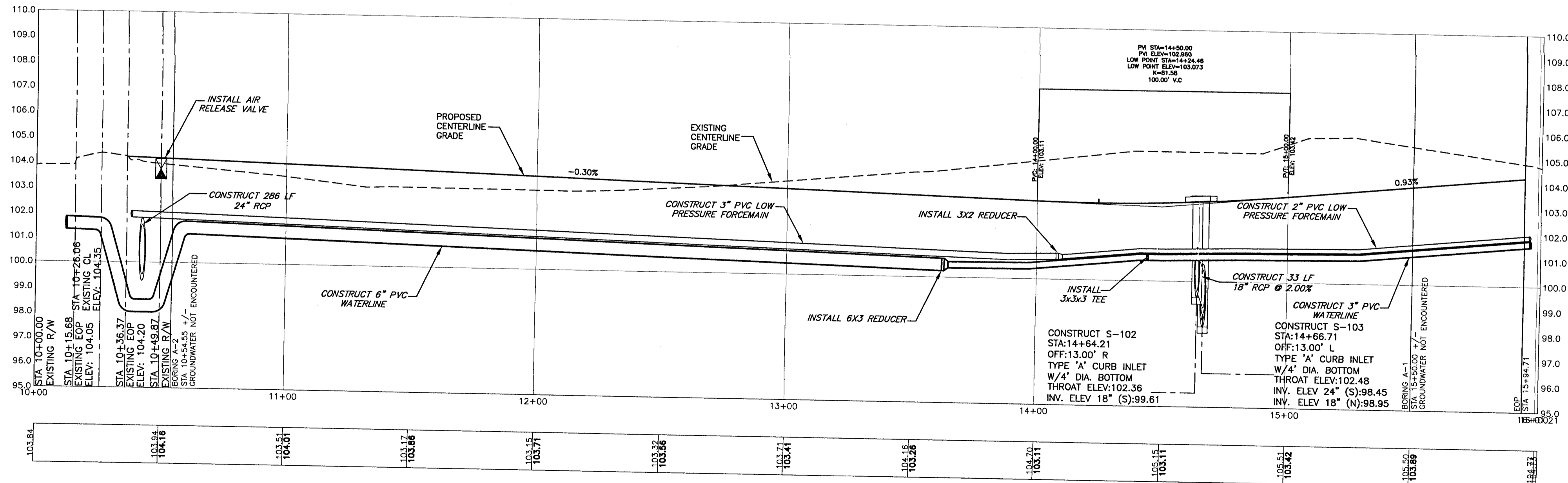
NOTE: ALL WORK SHALL BE DONE IN ACCORDANCE TO THE PROJECT SPECIFICATIONS. WATER AND SEWER TO BE DONE IN ACCORDANCE WITH ECUA SPECIFICATIONS

NOTE: ALL PROPOSED WATER SERVICES TO BE PLACED ON PROPERTY CORNER OPPOSITE POWER TRANSFORMER

NOTE: A MINIMUM OF TWO STRIPS OF SOD (MINIMUM 2' WIDE) ARE REQUIRED BEHIND THE BACK OF CURB WITH ALL OTHER DISTURBED AREAS SEEDED/MULCHED/FERTILIZED.

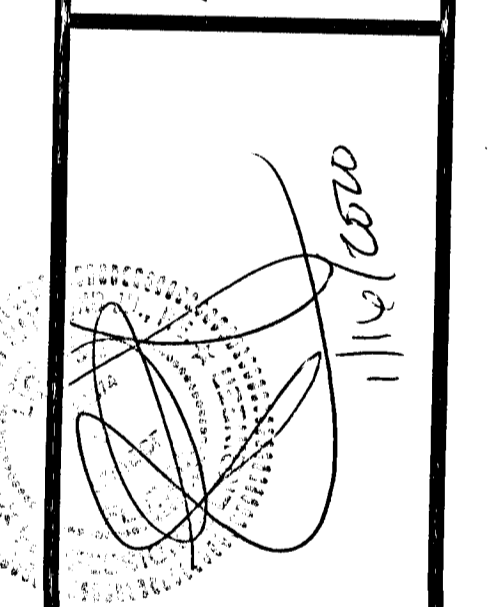
NOTE: ALL STORMWATER PIPING NOT CONSTRUCTED UNDER ROADWAYS OR CURBS SHALL BE HDPE. ALL STORMWATER PIPING CONSTRUCTED UNDER ROADWAYS OR CURBS SHALL BE RCP.

UTILITY CONFLICT RESOLUTION NOTE: AT LOCATIONS WHERE A WATER OR FORCE MAIN CROSSES AND CONFLICTS VERTICALLY WITH STORM PIPE, CONTRACTOR AND ECUA INSPECTOR SHALL SELECT ONE OF THE FOLLOWING CONFLICT RESOLUTIONS:  
 1. LOWER STORM PIPE TO ALLEVIATE CONFLICT.  
 2. GRADUALLY DECREASE APPROACHING WATER OR FORCE MAIN'S COVER SUCH THAT A SECTION OF DUCTILE IRON WATER MAIN, OR DR18 PVC FORCE MAIN, CAN BE INSTALLED OVER STORM PIPE SUCH THAT A MINIMUM OF 18" COVER OVER WATER OR FORCE MAIN IS PROVIDED, ALONG WITH MINIMUM 6" SEPARATION BETWEEN BOTTOM OF WATER OR FORCE MAIN AND TOP OF STORM PIPE.  
 3. IF COVER AND SEPARATION IN NUMBER 2 CANNOT BE OBTAINED, THEN INSTALL FITTINGS TO ROUTE WATER OR FORCE MAIN UNDER STORM PIPE



NO.	DATE	REVISIONS
1.	10/24/2019	AS PER ESCAMBIA COUNTY DRC REVIEW
2.	10/24/2019	AS PER ECUA REVIEW COMMENTS
3.	10/31/2019	AS PER WPMAD RAI
4.	11/7/2019	AS PER ECUA REVIEW COMMENTS
5.	1/15/2020	AS PER ESCAMBIA COUNTY DRC REVIEW

**HAMMOND ENGINEERING, INC.**  
 FLORIDA AUTHORIZATION NO. 9130  
 ALABAMA AUTHORIZATION NO. 3277  
 3802 NORTH "S" STREET  
 PENSACOLA, FLORIDA 32505  
 850 434-2603  
 FAX 850-434-2650  
 TOM@SELANDESIGN.COM



**CONSTRUCTION PLANS FOR**  
**AVELLANAS ESTATES**  
**PLAN AND PROFILE**  
 AVELLANAS DRIVE  
 ESCAMBIA COUNTY FLORIDA

DRAWN BY: EYUW  
 DESIGNED BY: TH  
 CHECKED BY: TH  
 DATE: 09-05-2019  
 SCALE: AS SHOWN  
 NOT RELEASED FOR CONSTRUCTION  
 BY: DATE:

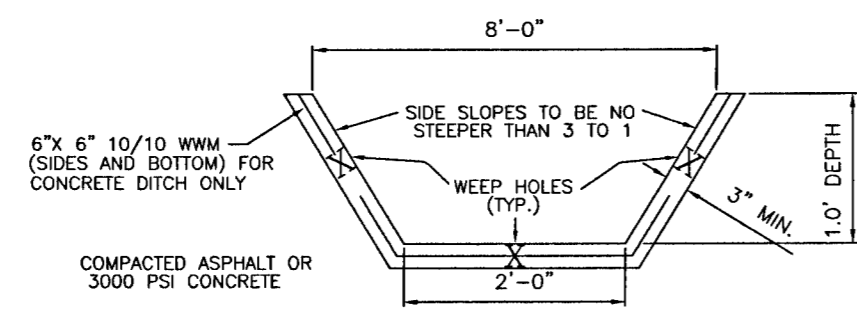
PROJECT NO: 19-013  
 SHEET: C7

**GRAPHIC SCALE**

22"x34" SCALE 1 inch = 30 ft.



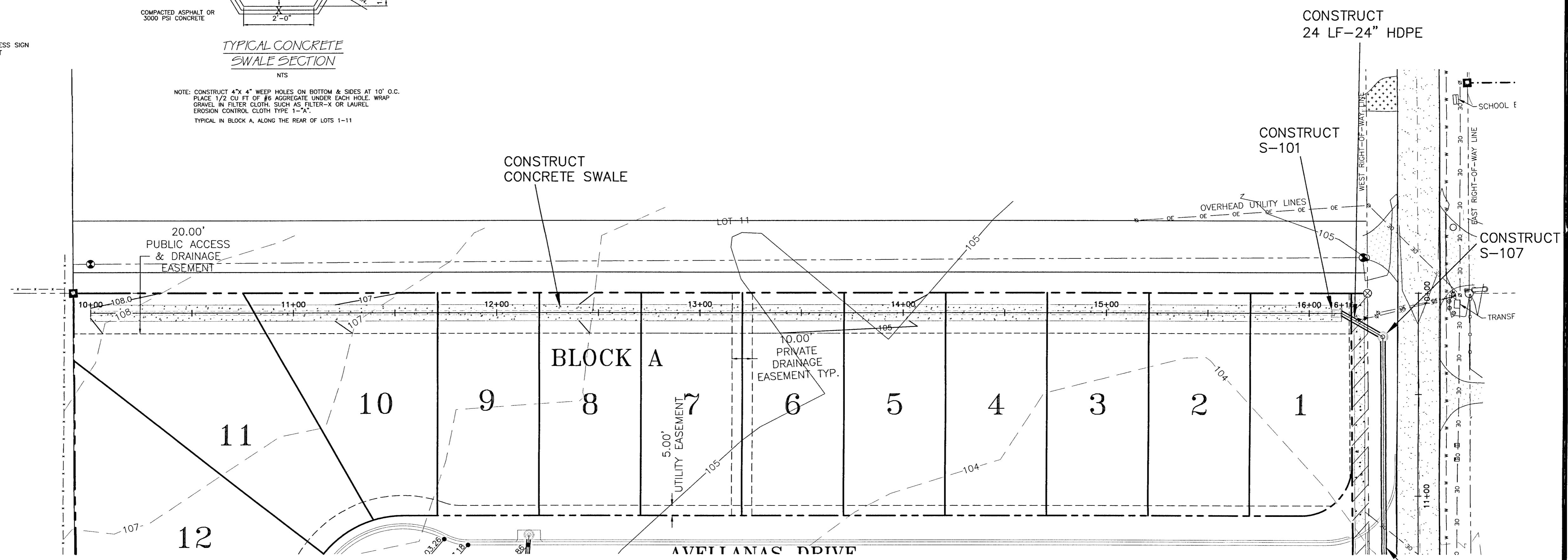
11"x17" SCALE 1 inch = 60 ft.



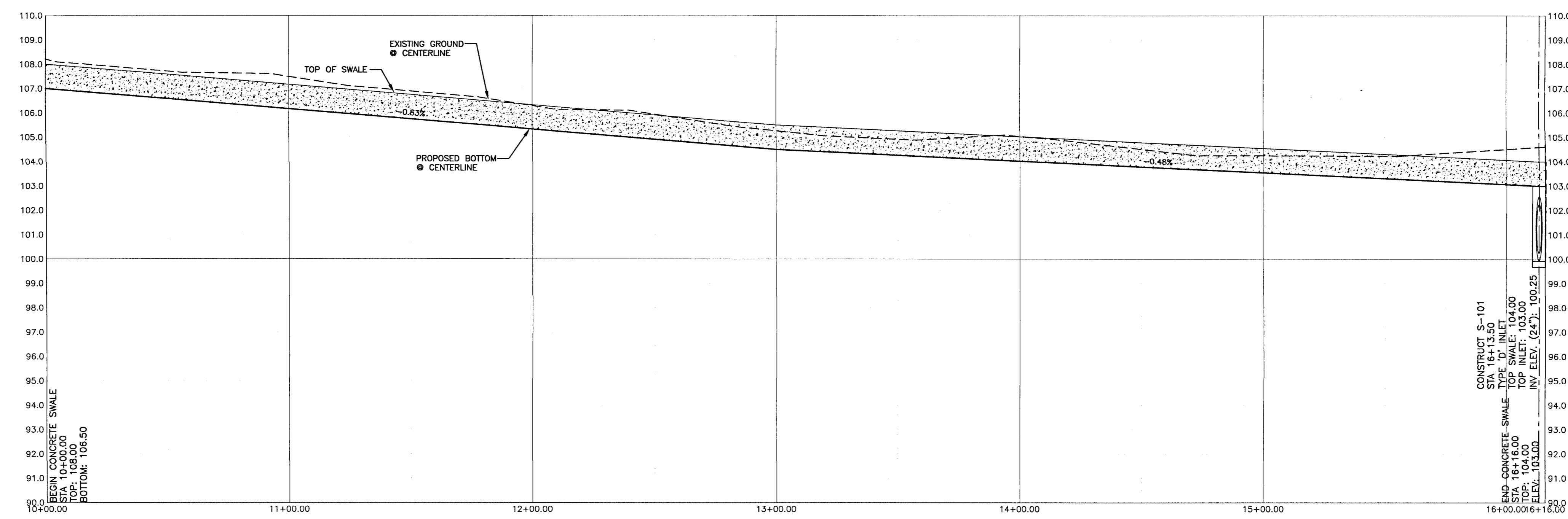
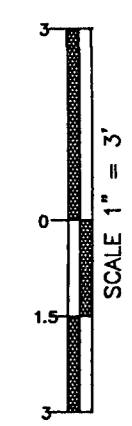
TYPICAL CONCRETE SWALE SECTION

NOTE: CONSTRUCT 4" x 4" WEEP HOLES ON BOTTOM & SIDES AT 10' O.C. PLACE 1/2 CU FT OF #6 AGGREGATE UNDER EACH HOLE. WRAP GRAVEL IN FILTER CLOTH, SUCH AS FILTER-X OR LAUREL EROSION CONTROL CLOTH TYPE 1-A.  
TYPICAL IN BLOCK A, ALONG THE REAR OF LOTS 1-11

- POWER POLE WITH GUY ANCHOR
- OVERHEAD UTILITY LINES
- BURIED NATURAL GAS LINE WITNESS SIGN
- FIBEROPTIC CABLE WITNESS POST
- NATURAL GAS METER
- WATER METER
- BACKFLOW PREVENTER
- MAILBOX
- EXIST. GRAVEL DRIVEWAY
- EXIST. DIRT DRIVEWAY
- EXIST. ASPHALT PAVEMENT
- EXIST. ASPHALT PAVEMENT TO BE REPLACED
- PROPOSED CONCRETE



**VERTICAL SCALE**



NOTE: ALL WORK SHALL BE DONE IN ACCORDANCE TO THE PROJECT SPECIFICATIONS. WATER AND SEWER TO BE DONE IN ACCORDANCE WITH ECUA SPECIFICATIONS

NOTE: ALL PROPOSED WATER SERVICES TO BE PLACED ON PROPERTY CORNER OPPOSITE POWER TRANSFORMER

NOTE: A MINIMUM OF TWO STRIPS OF SOD (MINIMUM 2' WIDE) ARE REQUIRED BEHIND THE BACK OF CURB WITH ALL OTHER DISTURBED AREAS SEEDED/MULCHED/FERTILIZED.

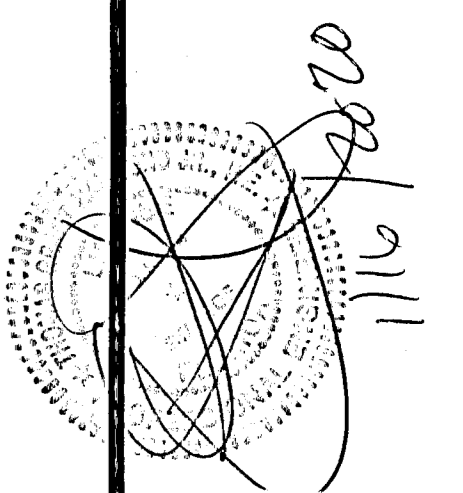
NOTE: ALL STORMWATER PIPING NOT CONSTRUCTED UNDER ROADWAYS OR CURBS SHALL BE HDPE. ALL STORMWATER PIPING CONSTRUCTED UNDER ROADWAYS OR CURBS SHALL BE RCP.

CONSTRUCT S-101  
STA 16+13.50  
TYPE 24" INLET  
TOP INLET: 104.00  
TOP INLET: 103.00  
INV. ELEV. (24"): 100.25

END CONCRETE SWALE  
STA 16+16.00  
TOP INLET: 103.00  
TOP INLET: 103.00  
ELEV.: 103.00

NO.	DATE	REVISIONS
1.	10/24/2019	AS PER ESCAMBIA COUNTY DRC REVIEW
2.	10/24/2019	AS PER ECUA REVIEW COMMENTS
3.	10/31/2019	AS PER NWPWD BA
4.	11/17/2019	AS PER ECUA REVIEW COMMENTS
5.	1/15/2020	AS PER ESCAMBIA COUNTY DRC REVIEW

**HAMMOND ENGINEERING, INC.**  
FLORIDA AUTHORIZATION NO. 9130  
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3802 NORTH "S" STREET  
PENSACOLA, FLORIDA 32505  
850-434-2603  
850-434-2650  
TOM@SELANDDESIGN.COM



**CONSTRUCTION PLANS FOR**  
**AVELLANAS ESTATES**  
**PLAN AND PROFILE**  
**CONCRETE SWALE**

ESCAMBIA COUNTY FLORIDA

DRAWN BY: CY/JW  
DESIGNED BY: TH  
CHECKED BY: TH  
DATE: 09-05-2019  
SCALE: AS SHOWN

NOT RELEASED FOR CONSTRUCTION  
BY: DATE:

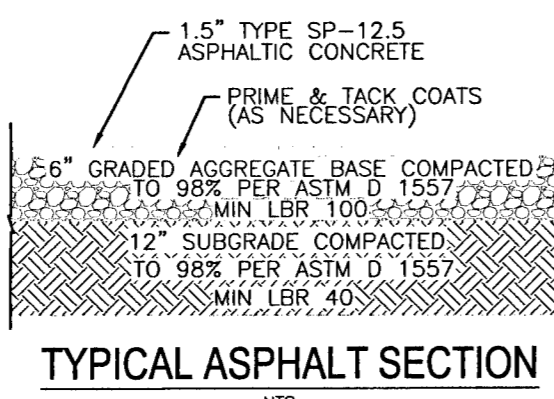
PROJECT NO: 19-013  
SHEET: CB

**GRAPHIC SCALE**

22"x34" SCALE 1 inch = 30 ft.

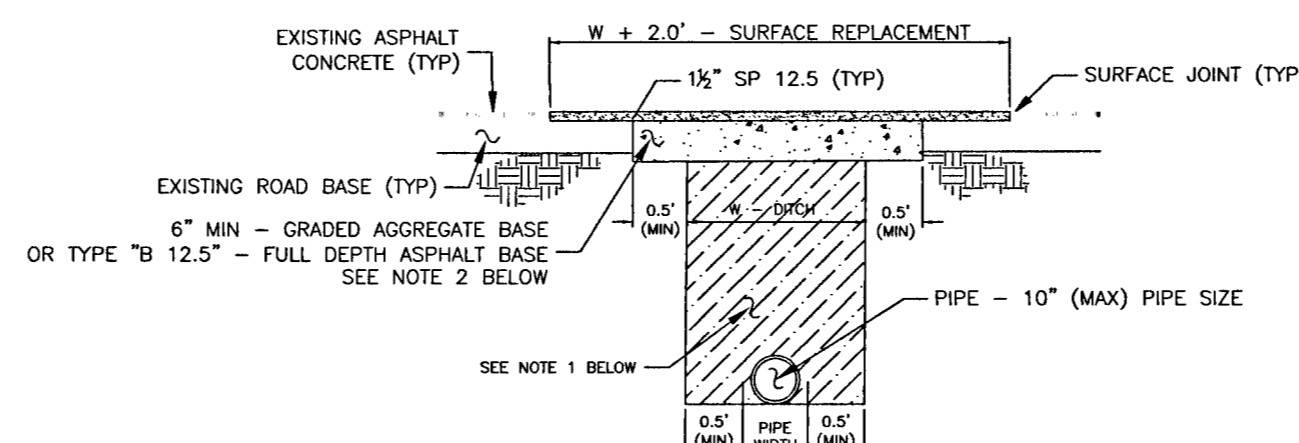


11"x17" SCALE 1 inch = 60 ft.



NOTE:

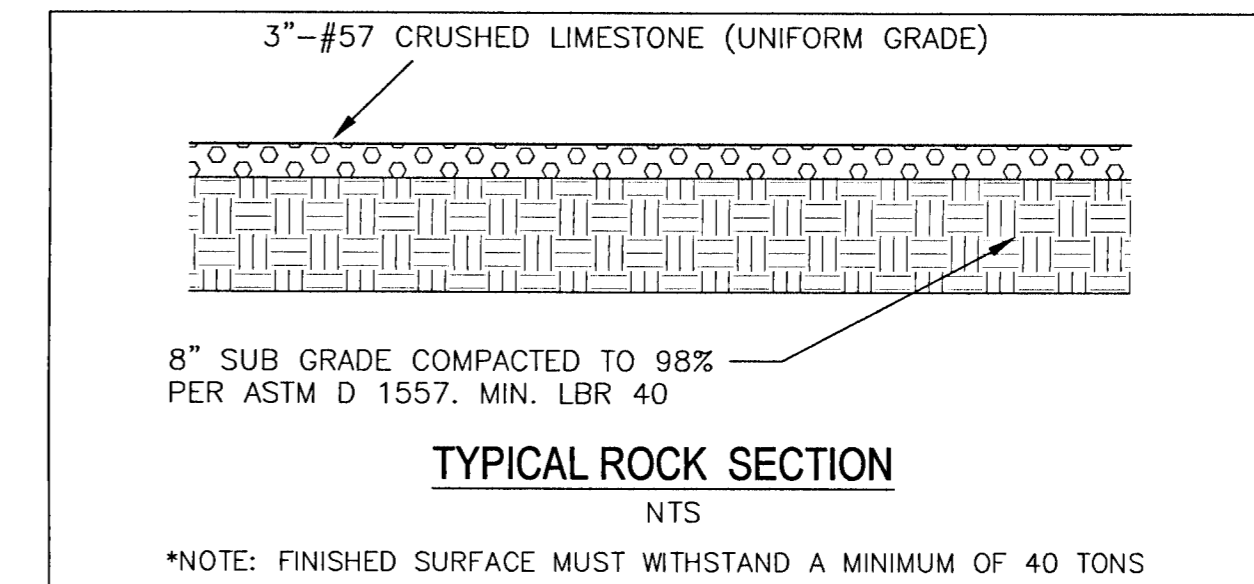
CONTRACTOR MUST PROVIDE ENGINEER OF RECORD WITH BASE AND SUBGRADE COMPACTION TESTING RESULTS PRIOR TO CONSTRUCTING ANY ASPHALT SURFACE. CONTRACTOR MUST PROVIDE ENGINEER OF RECORD WITH ASPHALT CORE TESTING RESULTS PRIOR TO FINAL "AS-BUILT" APPROVAL AND SUBMITTAL TO AHJ. CONTRACTOR TO COORDINATE WITH E.O.R. TO DETERMINE TEST LOCATIONS.



**PAVED ROAD PATCH DETAIL**

FOR PATCHES LESS THAN 24" WIDE

- NOTES:**
- DIRT ROAD PATCH WORK SUB-BASE MATERIAL SHALL BE PLACED IN NOT MORE THAN 8" LIFTS. EACH LAYER TO BE TAMPED TO A MINIMUM OF 40 LBR.
  - GRADED AGGREGATE BASE SHALL BE COMPACTED TO A MIN LBR 100.
  - ROAD CUTS SHALL BE MECHANICALLY SAW CUT TO FORM A SURFACE PAVEMENT JOINT AND TACK COATED ALONG THE FACE OF CUT.
  - LONGITUDINAL ROAD CUTS THAT AFFECT ONE TRAVEL LANE SHALL REQUIRE MILLING AND REPAVING OF THE AFFECTED TRAVEL LANE 5.0' BEYOND THE CUT AND PATCHED WITH THE SAME BASE MATERIAL. LONGITUDINAL ROAD CUTS THAT AFFECT BOTH TRAVEL LANES SHALL REQUIRE MILLING AND REPAVING OF THE ENTIRE ROADWAY 5.0' BEYOND THE CUT AND PATCHED WITH THE SAME BASE MATERIAL.



**TYPICAL ROCK SECTION**

\*NOTE: FINISHED SURFACE MUST WITHSTAND A MINIMUM OF 40 TONS

- POWER POLE WITH GUY ANCHOR
- OVERHEAD UTILITY LINES
- BURIED NATURAL GAS LINE WITNESS SIGN
- FIBEROPTIC CABLE WITNESS POST
- NATURAL GAS METER
- WATER METER
- BACKFLOW PREVENTER
- MAILBOX
- EXIST. GRAVEL DRIVEWAY
- EXIST. DIRT DRIVEWAY
- EXIST. ASPHALT PAVEMENT
- EXIST. ASPHALT PAVEMENT TO BE REPLACED
- PROPOSED CONCRETE

- NOTES:**
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  - THE MINIMUM HORIZONTAL AND VERTICAL SEPARATION REQUIREMENTS FOR THE WASTEWATER FORCE MAIN SYSTEM OR SEWER IMPROVEMENTS SHALL CONFORM TO THE LATEST ECUA AND FDEP RULES. THE MINIMUM HORIZONTAL SEPARATION REQUIREMENTS BETWEEN THE PROPOSED SEWER UTILITIES AND PONDS OR STRUCTURES SHALL CONFORM TO THE LATEST ECUA DESIGN STANDARDS.
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  - THE CONTRACTOR SHALL MINIMIZE SERVICE INTERRUPTIONS TO EXISTING ECUA CUSTOMERS. IF ECUA APPROVES A SERVICE INTERRUPTION, THEN THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING THE NOTIFICATION OF IMPACTED CUSTOMERS IN ACCORDANCE WITH THE LATEST ECUA RULES.
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  - CONTRACTOR TO COORDINATE DRIVEWAY CUT AND REPAIR WITH HOMEOWNER
  - ALL DISTURBED AREAS IN R/W TO BE SODDED.

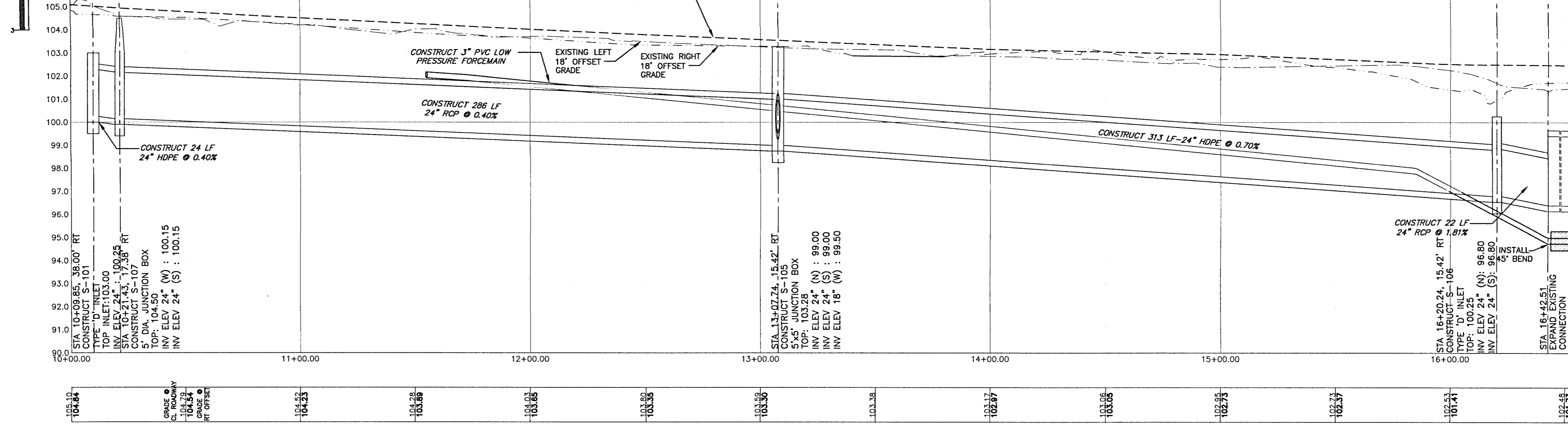
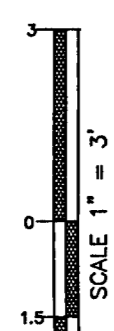
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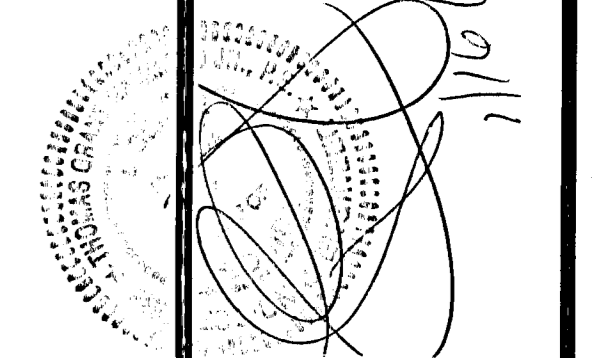
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**VERTICAL SCALE**



NO.	DATE	REVISIONS
1.	10/24/2019	AS PER ESCAMBIA COUNTY DRC REVIEW
2.	10/24/2019	AS PER ECUA REVIEW COMMENTS
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4.	11/17/2019	AS PER ECUA REVIEW COMMENTS
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**HAMMOND ENGINEERING, INC.**  
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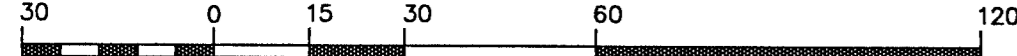
**CONSTRUCTION PLANS FOR**  
**AVELLANAS ESTATES**  
**PLAN AND PROFILE**  
**OFFSITE IMPROVEMENTS**  
FLORIDA  
ESCAMBIA COUNTY

DRAWN BY: CYN/AV  
DESIGNED BY: TH  
CHECKED BY: TH  
DATE: 09-05-2019  
SCALE: AS SHOWN  
NOT RELEASED FOR CONSTRUCTION  
BY:

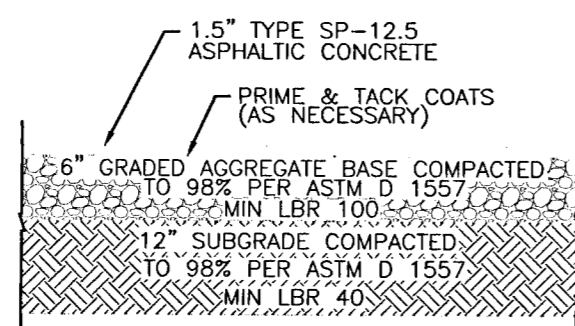
PROJECT NO: 19-013  
SHEET: C9

**GRAPHIC SCALE**

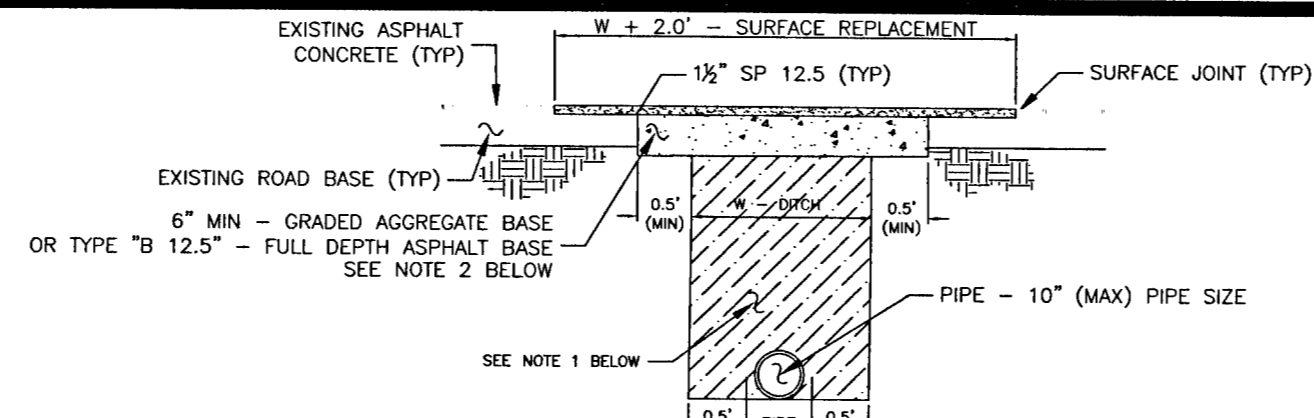
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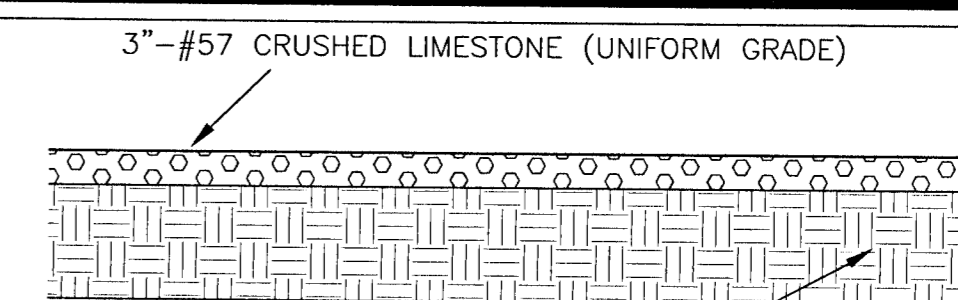
**TYPICAL ASPHALT SECTION**  
NTS



**PAVED ROAD PATCH DETAIL**  
FOR PATCHES LESS THAN 24" WIDE  
NOT TO SCALE

**NOTES:**

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**TYPICAL ROCK SECTION**  
NTS

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- MAILBOX
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- EXIST. ASPHALT PAVEMENT
- EXIST. ASPHALT PAVEMENT TO BE REPLACED
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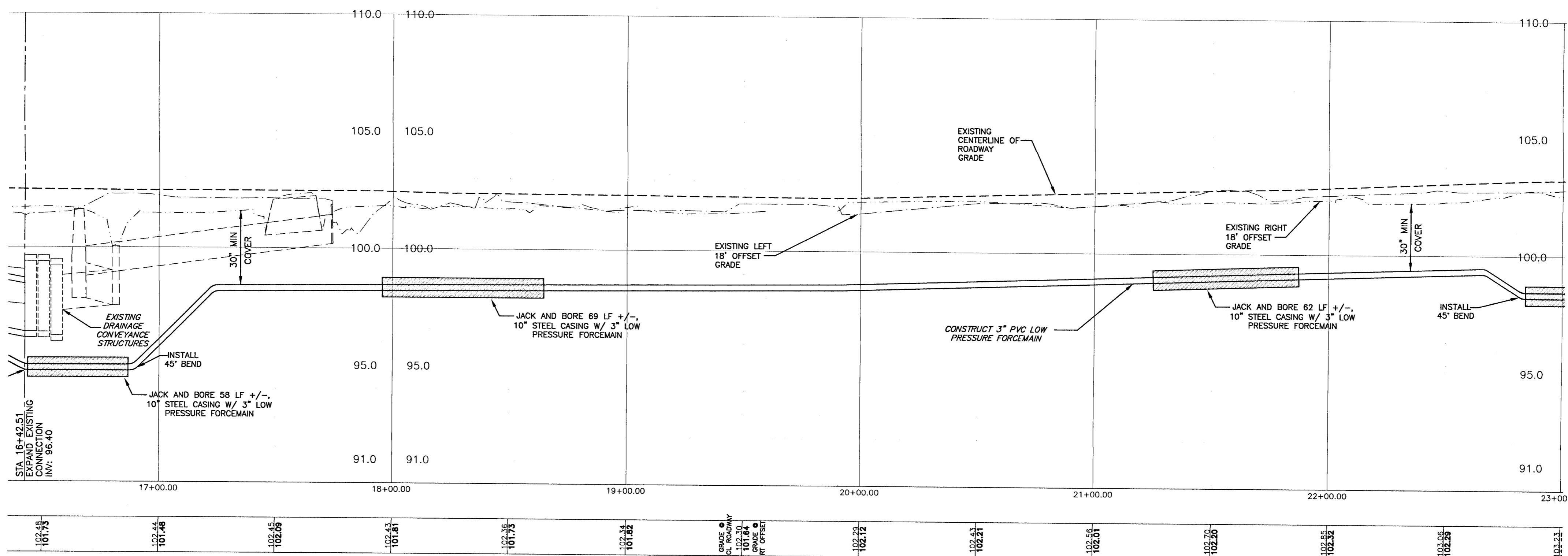
**NOTES:**

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**NOTE:**

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**VERTICAL SCALE**



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**CONSTRUCTION PLANS FOR**  
**AVELLAS ESTATES**  
**PLAN AND PROFILE**  
**OFFSITE IMPROVEMENTS**  
FLORIDA  
ESCAMBIA COUNTY

DRAWN BY: DTJ/JW  
DESIGNED BY: TH  
CHECKED BY: TH  
DATE: 09-05-2019  
SCALE: AS SHOWN  
NOT RELEASED FOR CONSTRUCTION  
BY: DATE:

PROJECT NO: 19-013  
SHEET: C10

**GRAPHIC SCALE**

22"x34" SCALE 1 inch = 30 ft.



11"x17" SCALE 1 inch = 60 ft.

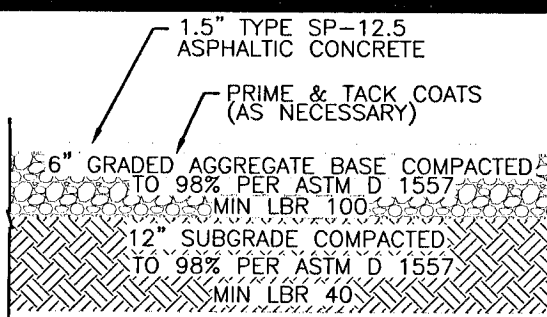
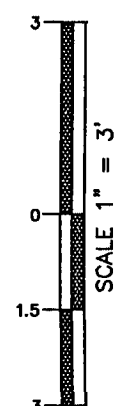


- ⊙ - POWER POLE WITH GUY ANCHOR
- OVERHEAD UTILITY LINES
- BURIED NATURAL GAS LINE WITNESS SIGN
- ⊙ - FIBEROPTIC CABLE WITNESS POST
- ⊙ - NATURAL GAS METER
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**VERTICAL SCALE**

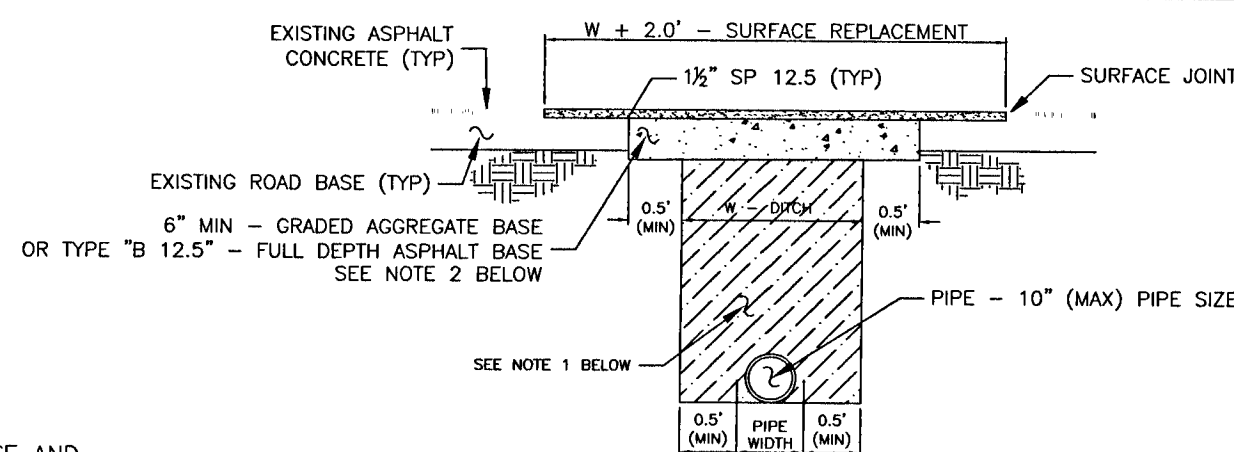
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ALL EXISTING DRIVEWAYS TO BE DISTURBED SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.



**TYPICAL ASPHALT SECTION**

NOTE:

CONTRACTOR MUST PROVIDE ENGINEER OF RECORD WITH BASE AND SUBGRADE COMPACTION TESTING RESULTS PRIOR TO CONSTRUCTING ANY ASPHALT SURFACE. CONTRACTOR MUST PROVIDE ENGINEER OF RECORD WITH ASPHALT CORE TESTING RESULTS PRIOR TO FINAL "AS-BUILT" APPROVAL AND SUBMITTAL TO A.H.J. CONTRACTOR TO COORDINATE WITH E.O.R. TO DETERMINE TEST LOCATIONS.



**PAVED ROAD PATCH DETAIL**

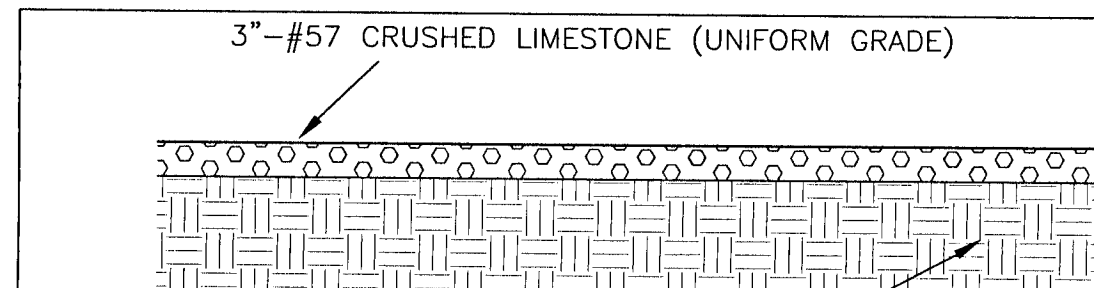
FOR PATCHES LESS THAN 24" WIDE

NOT TO SCALE

- NOTES:**
1. DIRT ROAD PATCH WORK SUB-BASE MATERIAL SHALL BE PLACED IN NOT MORE THAN 8" LIFTS. EACH LAYER TO BE TAMPED TO A MINIMUM OF 40 LBR.
  2. GRADED AGGREGATE BASE SHALL BE COMPACTED TO A MIN LBR 100.
  3. ROAD CUTS SHALL BE MECHANICALLY SAW CUT TO FORM A SURFACE PAVEMENT JOINT AND TACK COATED ALONG THE FACE OF CUT JOINTS PRIOR TO ASPHALT PLACEMENT.
  4. LONGITUDINAL ROAD CUTS THAT AFFECT ONE TRAVEL LANE SHALL REQUIRE MILLING AND REPAVING OF THE AFFECTED TRAVEL LANE 5.0' BEYOND THE CUT AND PATCHED WITH THE SAME BASE MATERIAL. LONGITUDINAL ROAD CUTS THAT AFFECT BOTH TRAVEL LANES SHALL REQUIRE MILLING AND REPAVING OF THE ENTIRE ROADWAY 5.0' BEYOND THE CUT AND PATCHED WITH THE SAME BASE MATERIAL.

**EROSION CONTROL NOTES:**

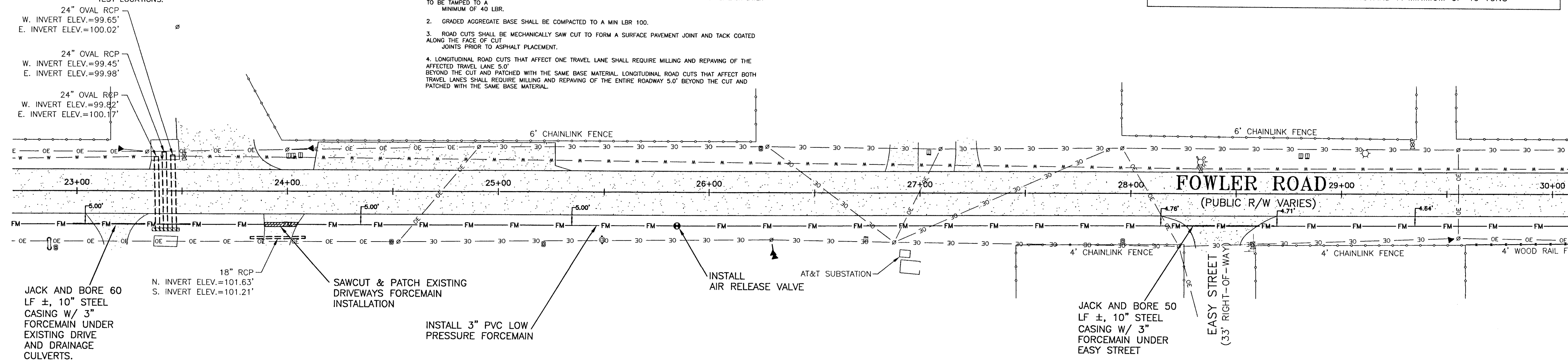
- CONTRACTOR TO IMPLEMENT BMPs AS NECESSARY THROUGHOUT CONSTRUCTION
- THE EROSION AND SEDIMENT CONTROL RULES ARE PERFORMANCE ORIENTED. THAT IS, THE MEASURES USED AT A CONSTRUCTION SITE MUST BE EFFECTIVE IN CONTROLLING EROSION AND PREVENTING OFF-SITE SEDIMENTATION FOR THE SITE TO BE IN COMPLIANCE. FOLLOWING AN APPROVED PLAN AND INSTALLING THE CONTROL MEASURES MAY NOT BE ENOUGH FOR A SITE TO BE IN COMPLIANCE WITH THE RULES. IF EROSION AND OFF-SITE SEDIMENTATION OCCUR, THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING ADDITIONAL MEASURES TO CORRECT ANY PROBLEM ASSOCIATED WITH COMPLIANCE OF THE NPDES PERMIT OR ANY OTHER PERMIT REQUIRED FOR THE SITE CONSTRUCTION. THE CONTRACTOR WILL ALSO BE COMPLETELY RESPONSIBLE FOR ANY FINES LEMVED BY ANY GOVERNING AGENCY ON THE PROJECT DURING CONSTRUCTION.



**TYPICAL ROCK SECTION**

NOTES:

\*NOTE: FINISHED SURFACE MUST WITHSTAND A MINIMUM OF 40 TONS



24" OVAL RCP  
W. INVERT ELEV.=99.65'  
E. INVERT ELEV.=100.02'

24" OVAL RCP  
W. INVERT ELEV.=99.45'  
E. INVERT ELEV.=99.98'

24" OVAL RCP  
W. INVERT ELEV.=99.82'  
E. INVERT ELEV.=100.17'

JACK AND BORE 60 LF ±, 10" STEEL CASING W/ 3" FORCEMAIN UNDER EXISTING DRIVE AND DRAINAGE CULVERTS.

18" RCP  
N. INVERT ELEV.=101.63'  
S. INVERT ELEV.=101.21'

SAWCUT & PATCH EXISTING DRIVEWAYS FORCEMAIN INSTALLATION

INSTALL 3" PVC LOW PRESSURE FORCEMAIN

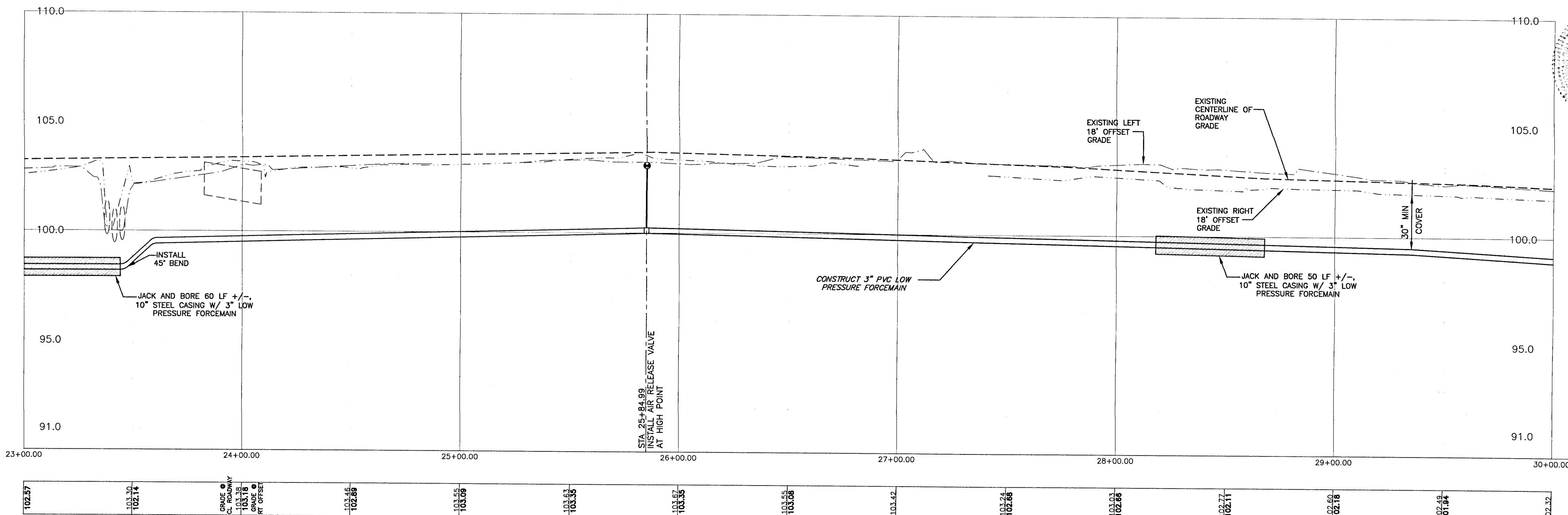
INSTALL AIR RELEASE VALVE

AT&T SUBSTATION

JACK AND BORE 50 LF ±, 10" STEEL CASING W/ 3" FORCEMAIN UNDER EASY STREET

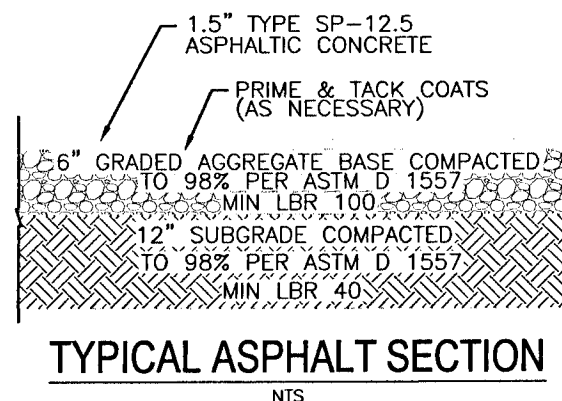
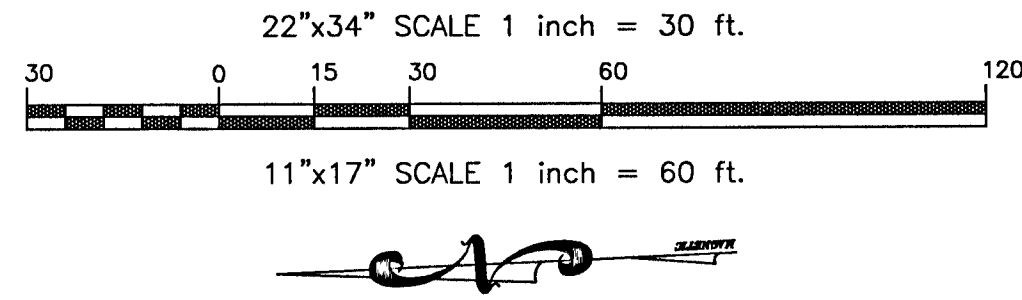
EASY STREET (33' RIGHT-OF-WAY)

WOOD RAIL FENCE



102.57	102.70	102.83	102.96	103.09	103.22	103.35	103.48	103.61	103.74	103.87	104.00	104.13	104.26	104.39	104.52	104.65	104.78	104.91	105.04	105.17	105.30	105.43	105.56	105.69	105.82	105.95	106.08	106.21	106.34	106.47	106.60	106.73	106.86	106.99	107.12	107.25	107.38	107.51	107.64	107.77	107.90	108.03	108.16	108.29	108.42	108.55	108.68	108.81	108.94	109.07	109.20	109.33	109.46	109.59	109.72	109.85	109.98	110.11	110.24	110.37	110.50	110.63	110.76	110.89	111.02	111.15	111.28	111.41	111.54	111.67	111.80	111.93	112.06	112.19	112.32	112.45	112.58	112.71	112.84	112.97	113.10	113.23	113.36	113.49	113.62	113.75	113.88	114.01	114.14	114.27	114.40	114.53	114.66	114.79	114.92	115.05	115.18	115.31	115.44	115.57	115.70	115.83	115.96	116.09	116.22	116.35	116.48	116.61	116.74	116.87	117.00	117.13	117.26	117.39	117.52	117.65	117.78	117.91	118.04	118.17	118.30	118.43	118.56	118.69	118.82	118.95	119.08	119.21	119.34	119.47	119.60	119.73	119.86	119.99	120.12	120.25	120.38	120.51	120.64	120.77	120.90	121.03	121.16	121.29	121.42	121.55	121.68	121.81	121.94	122.07	122.20	122.33	122.46	122.59	122.72	122.85	122.98	123.11	123.24	123.37	123.50	123.63	123.76	123.89	124.02	124.15	124.28	124.41	124.54	124.67	124.80	124.93	125.06	125.19	125.32	125.45	125.58	125.71	125.84	125.97	126.10	126.23	126.36	126.49	126.62	126.75	126.88	127.01	127.14	127.27	127.40	127.53	127.66	127.79	127.92	128.05	128.18	128.31	128.44	128.57	128.70	128.83	128.96	129.09	129.22	129.35	129.48	129.61	129.74	129.87	130.00	130.13	130.26	130.39	130.52	130.65	130.78	130.91	131.04	131.17	131.30	131.43	131.56	131.69	131.82	131.95	132.08	132.21	132.34	132.47	132.60	132.73	132.86	132.99	133.12	133.25	133.38	133.51	133.64	133.77	133.90	134.03	134.16	134.29	134.42	134.55	134.68	134.81	134.94	135.07	135.20	135.33	135.46	135.59	135.72	135.85	135.98	136.11	136.24	136.37	136.50	136.63	136.76	136.89	137.02	137.15	137.28	137.41	137.54	137.67	137.80	137.93	138.06	138.19	138.32	138.45	138.58	138.71	138.84	138.97	139.10	139.23	139.36	139.49	139.62	139.75	139.88	140.01	140.14	140.27	140.40	140.53	140.66	140.79	140.92	141.05	141.18	141.31	141.44	141.57	141.70	141.83	141.96	142.09	142.22	142.35	142.48	142.61	142.74	142.87	143.00	143.13	143.26	143.39	143.52	143.65	143.78	143.91	144.04	144.17	144.30	144.43	144.56	144.69	144.82	144.95	145.08	145.21	145.34	145.47	145.60	145.73	145.86	145.99	146.12	146.25	146.38	146.51	146.64	146.77	146.90	147.03	147.16	147.29	147.42	147.55	147.68	147.81	147.94	148.07	148.20	148.33	148.46	148.59	148.72	148.85	148.98	149.11	149.24	149.37	149.50	149.63	149.76	149.89	150.02	150.15	150.28	150.41	150.54	150.67	150.80	150.93	151.06	151.19	151.32	151.45	151.58	151.71	151.84	151.97	152.10	152.23	152.36	152.49	152.62	152.75	152.88	153.01	153.14	153.27	153.40	153.53	153.66	153.79	153.92	154.05	154.18	154.31	154.44	154.57	154.70	154.83	154.96	155.09	155.22	155.35	155.48	155.61	155.74	155.87	156.00	156.13	156.26	156.39	156.52	156.65	156.78	156.91	157.04	157.17	157.30	157.43	157.56	157.69	157.82	157.95	158.08	158.21	158.34	158.47	158.60	158.73	158.86	158.99	159.12	159.25	159.38	159.51	159.64	159.77	159.90	160.03	160.16	160.29	160.42	160.55	160.68	160.81	160.94	161.07	161.20	161.33	161.46	161.59	161.72	161.85	161.98	162.11	162.24	162.37	162.50	162.63	162.76	162.89	163.02	163.15	163.28	163.41	163.54	163.67	163.80	163.93	164.06	164.19	164.32	164.45	164.58	164.71	164.84	164.97	165.10	165.23	165.36	165.49	165.62	165.75	165.88	166.01	166.14	166.27	166.40	166.53	166.66	166.79	166.92	167.05	167.18	167.31	167.44	167.57	167.70	167.83	167.96	168.09	168.22	168.35	168.48	168.61	168.74	168.87	169.00	169.13	169.26	169.39	169.52	169.65	169.78	169.91	170.04	170.17	170.30	170.43	170.56	170.69	170.82	170.95	171.08	171.21	171.34	171.47	171.60	171.73	171.86	171.99	172.12	172.25	172.38	172.51	172.64	172.77	172.90	173.03	173.16	173.29	173.42	173.55	173.68	173.81	173.94	174.07	174.20	174.33	174.46	174.59	174.72	174.85	174.98	175.11	175.24	175.37	175.50	175.63	175.76	175.89	176.02	176.15	176.28	176.41	176.54	176.67	176.80	176.93	177.06	177.19	177.32	177.45	177.58	177.71	177.84	177.97	178.10	178.23	178.36	178.49	178.62	178.75	178.88	179.01	179.14	179.27	179.40	179.53	179.66	179.79	179.92	180.05	180.18	180.31	180.44	180.57	180.70	180.83	180.96	181.09	181.22	181.35	181.48	181.61	181.74	181.87	182.00	182.13	182.26	182.39	182.52	182.65	182.78	182.91	183.04	183.17	183.30	183.43	183.56	183.69	183.82	183.95	184.08	184.21	184.34	184.47	184.60	184.73	184.86	184.99	185.12	185.25	185.38	185.51	185.64	185.77	185.90	186.03	186.16	186.29	186.42	186.55	186.68	186.81	186.94	187.07	187.20	187.33	187.46	187.59	187.72	187.85	187.98	188.11	188.24	188.37	188.50	188.63	188.76	188.89	189.02	189.15	189.28	189.41	189.54	189.67	189.80	189.93	190.06	190.19	190.32	190.45	190.58	190.71	190.84	190.97	191.10	191.23	191.36	191.49	191.62	191.75	191.88	192.01	192.14	192.27	192.40	192.53	192.66	192.79	192.92	193.05	193.18	193.31	193.44	193.57	193.70	193.83	193.96	194.09	194.22	194.35	194.48	194.61	194.74	194.87	195.00	195.13</
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**GRAPHIC SCALE**



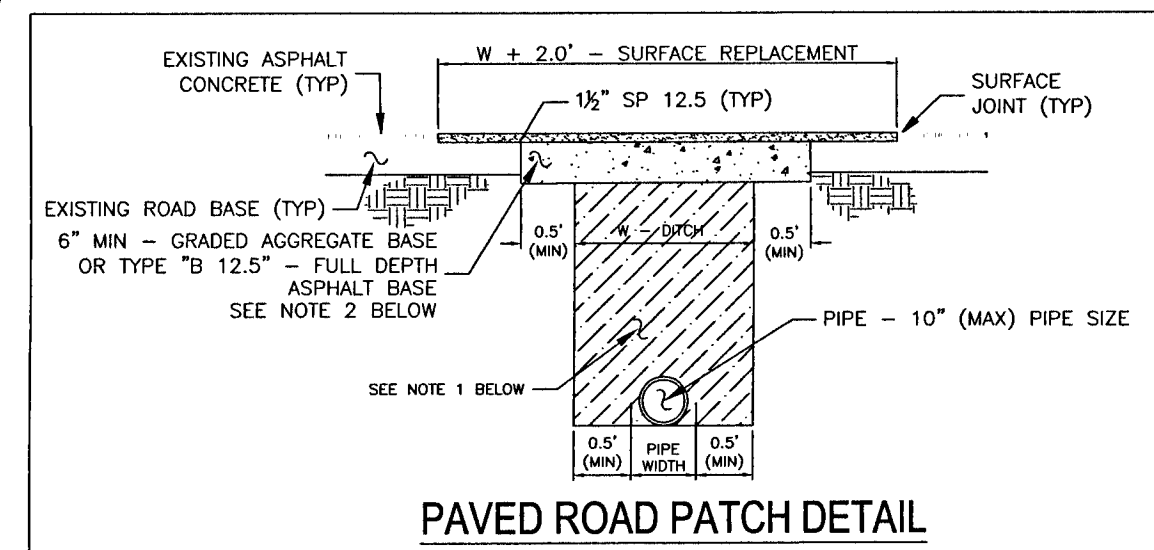
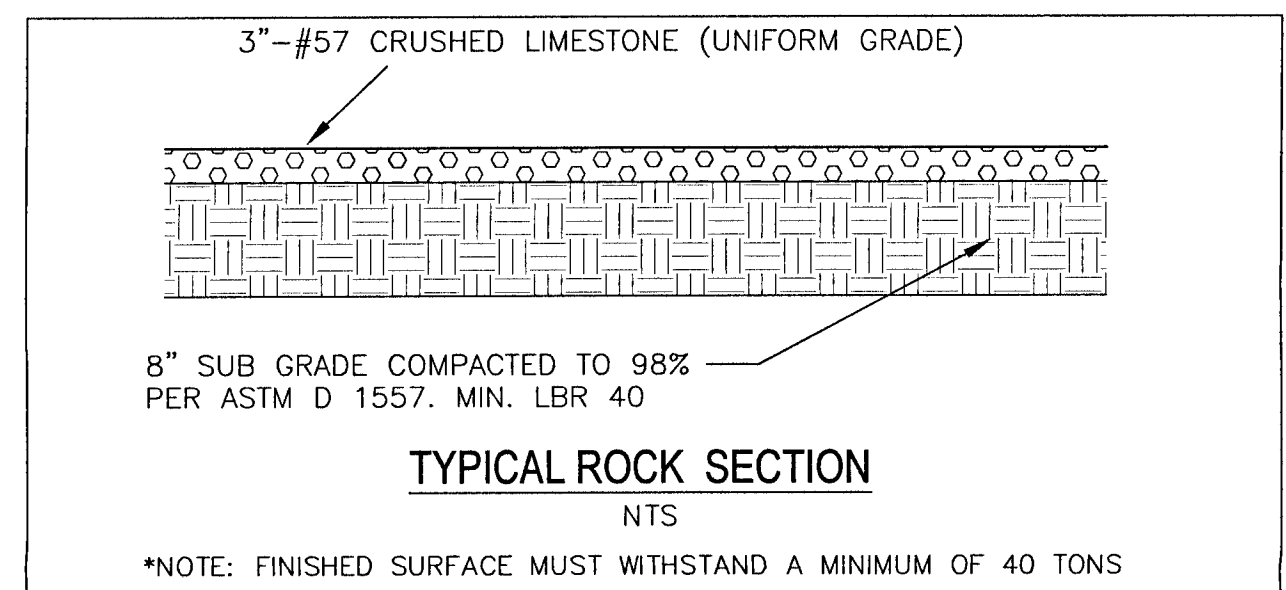
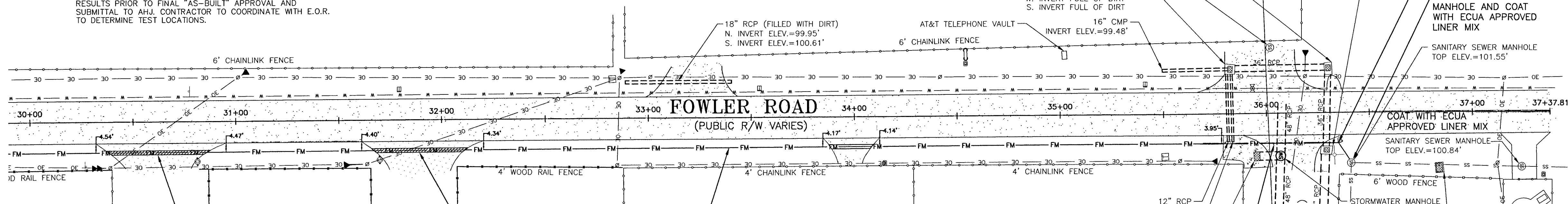
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**NOTE:**  
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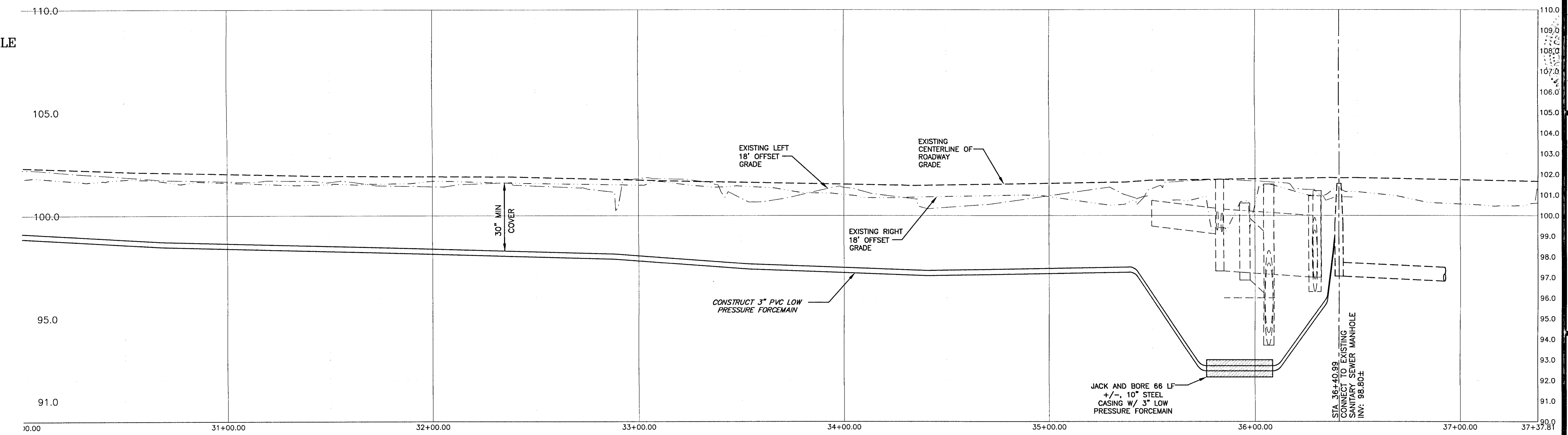
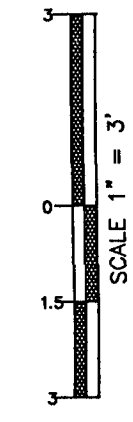
- POWER POLE WITH GUY ANCHOR
- OVERHEAD UTILITY LINES
- BURIED NATURAL GAS LINE WITNESS SIGN
- FIBEROPTIC CABLE WITNESS POST
- NATURAL GAS METER
- WATER METER
- BACKFLOW PREVENTER
- MAILBOX
- EXIST. GRAVEL DRIVEWAY
- EXIST. DIRT DRIVEWAY
- EXIST. ASPHALT PAVEMENT
- EXIST. ASPHALT PAVEMENT TO BE REPLACED
- EXIST. GRAVEL DRIVEWAY TO BE REPLACED

- NOTES:**
- ALL WASTEWATER FORCE MAIN SYSTEM WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST ECUA DESIGN STANDARDS. ALL APPLICABLE LOCAL AND STATE REGULATORY RULES AND REGULATIONS, AND OTHER APPLICABLE ECUA RULES.
  - ALL WASTEWATER FORCE MAIN SYSTEM CONSTRUCTION WORK SHALL BE PROVIDED BY A CONTRACTOR QUALIFIED AS REQUIRED UNDER THE CURRENT FLORIDA STATUTE OR BY AN UNDERGROUND UTILITY CONTRACTOR, LICENSED UNDER THE PROVISIONS OF CHAPTER 489 FS.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CITY OR COUNTY RIGHT-OF-WAY (R/W) PERMITS FOR WORK IN THE CITY R/W, COUNTY R/W OR A FDOT PERMIT FOR WORK IN THE FDOT R/W.
  - THE CONTRACTOR SHALL CONTACT ECUA'S FIELD INSPECTOR A MINIMUM 48 HOURS PRIOR TO INITIATING THE WASTEWATER FORCE MAIN SYSTEM WORK, INCLUDING ALL UTILITY MAIN TAPS BY THE CONTRACTOR.
  - THE MINIMUM HORIZONTAL AND VERTICAL SEPARATION REQUIREMENTS FOR THE WASTEWATER FORCE MAIN SYSTEM OR SEWER IMPROVEMENTS SHALL CONFORM TO THE LATEST ECUA AND FDEP RULES. THE MINIMUM HORIZONTAL SEPARATION REQUIREMENTS BETWEEN THE PROPOSED SEWER UTILITIES AND PONDS OR STRUCTURES SHALL CONFORM TO THE LATEST ECUA DESIGN STANDARDS.
  - WASTEWATER FORCE MAIN SYSTEM PIPES SHALL BE CONSTRUCTED WITH A MINIMUM OF 30 INCHES OF COVER IN UNPAVED AREAS AND A MINIMUM OF 36 INCHES OF COVER IN PAVED AREAS. THE MAXIMUM COVER FOR UTILITIES UTILIZING HORIZONTAL DIRECTIONAL DRILL METHODS SHALL COMPLY WITH THE LATEST ECUA DESIGN STANDARDS.
  - THE CONTRACTOR SHALL MINIMIZE SERVICE INTERRUPTIONS TO EXISTING ECUA CUSTOMERS. IF ECUA APPROVES A SERVICE INTERRUPTION, THEN THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING THE NOTIFICATION OF IMPACTED CUSTOMERS IN ACCORDANCE WITH THE LATEST ECUA RULES.
  - LANDSCAPING TO BE REPAIRED/REPLACED TO MATCH EXISTING CONDITIONS.
  - ALL DISTURBED EXISTING DRIVEWAYS AND OTHER STRUCTURES IN THE RIGHT OF WAY SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
  - CONTRACTOR TO COORDINATE DRIVEWAY CUT AND REPAIR WITH HOMEOWNER
  - ALL DISTURBED AREAS IN R/W TO BE SODDED.



- NOTES:**
- DIRT ROAD PATCH WORK SUB-BASE MATERIAL SHALL BE PLACED IN NOT MORE THAN 8" LIFTS. EACH LAYER TO BE TAMPED TO A MINIMUM OF 40 LBR.
  - GRADED AGGREGATE BASE SHALL BE COMPACTED TO A MIN LBR 100.
  - ROAD CUTS SHALL BE MECHANICALLY SAW CUT TO FORM A SURFACE PAVEMENT JOINT AND TACK COATED ALONG THE FACE OF CUT JOINTS PRIOR TO ASPHALT PLACEMENT.
  - LONGITUDINAL ROAD CUTS THAT AFFECT ONE TRAVEL LANE SHALL REQUIRE MILLING AND REPAVING OF THE AFFECTED TRAVEL LANE 5.0' BEYOND THE CUT AND PATCHED WITH THE SAME BASE MATERIAL. LONGITUDINAL ROAD CUTS THAT AFFECT BOTH TRAVEL LANES SHALL REQUIRE MILLING AND REPAVING OF THE ENTIRE ROADWAY 5.0' BEYOND THE CUT AND PATCHED WITH THE SAME BASE MATERIAL.

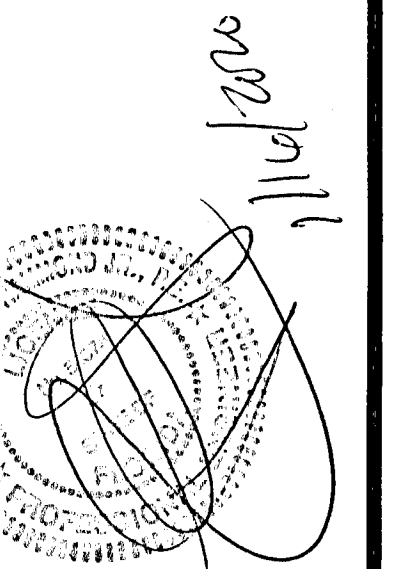
**VERTICAL SCALE**



STATION	10+77	10+83	10+90	10+97	11+04	11+11	11+18	11+25	11+32	11+39	11+46	11+53	11+60	11+67	11+74	11+81	11+88	11+95	12+02	12+09	12+16	12+23	12+30	12+37	12+44	12+51	12+58	12+65	12+72	12+79	12+86	12+93	13+00	13+07	13+14	13+21	13+28	13+35	13+42	13+49	13+56	13+63	13+70	13+77	13+84	13+91	13+98	14+05	14+12	14+19	14+26	14+33	14+40	14+47	14+54	14+61	14+68	14+75	14+82	14+89	14+96	15+03	15+10	15+17	15+24	15+31	15+38	15+45	15+52	15+59	15+66	15+73	15+80	15+87	15+94	16+01	16+08	16+15	16+22	16+29	16+36	16+43	16+50	16+57	16+64	16+71	16+78	16+85	16+92	16+99	17+06	17+13	17+20	17+27	17+34	17+41	17+48	17+55	17+62	17+69	17+76	17+83	17+90	17+97	18+04	18+11	18+18	18+25	18+32	18+39	18+46	18+53	18+60	18+67	18+74	18+81	18+88	18+95	19+02	19+09	19+16	19+23	19+30	19+37	19+44	19+51	19+58	19+65	19+72	19+79	19+86	19+93	19+00	19+07	19+14	19+21	19+28	19+35	19+42	19+49	19+56	19+63	19+70	19+77	19+84	19+91	19+98	20+05	20+12	20+19	20+26	20+33	20+40	20+47	20+54	20+61	20+68	20+75	20+82	20+89	20+96	21+03	21+10	21+17	21+24	21+31	21+38	21+45	21+52	21+59	21+66	21+73	21+80	21+87	21+94	22+01	22+08	22+15	22+22	22+29	22+36	22+43	22+50	22+57	22+64	22+71	22+78	22+85	22+92	22+99	23+06	23+13	23+20	23+27	23+34	23+41	23+48	23+55	23+62	23+69	23+76	23+83	23+90	23+97	24+04	24+11	24+18	24+25	24+32	24+39	24+46	24+53	24+60	24+67	24+74	24+81	24+88	24+95	25+02	25+09	25+16	25+23	25+30	25+37	25+44	25+51	25+58	25+65	25+72	25+79	25+86	25+93	26+00	26+07	26+14	26+21	26+28	26+35	26+42	26+49	26+56	26+63	26+70	26+77	26+84	26+91	26+98	27+05	27+12	27+19	27+26	27+33	27+40	27+47	27+54	27+61	27+68	27+75	27+82	27+89	27+96	28+03	28+10	28+17	28+24	28+31	28+38	28+45	28+52	28+59	28+66	28+73	28+80	28+87	28+94	29+01	29+08	29+15	29+22	29+29	29+36	29+43	29+50	29+57	29+64	29+71	29+78	29+85	29+92	29+99	30+06	30+13	30+20	30+27	30+34	30+41	30+48	30+55	30+62	30+69	30+76	30+83	30+90	30+97	31+04	31+11	31+18	31+25	31+32	31+39	31+46	31+53	31+60	31+67	31+74	31+81	31+88	31+95	32+02	32+09	32+16	32+23	32+30	32+37	32+44	32+51	32+58	32+65	32+72	32+79	32+86	32+93	33+00	33+07	33+14	33+21	33+28	33+35	33+42	33+49	33+56	33+63	33+70	33+77	33+84	33+91	33+98	34+05	34+12	34+19	34+26	34+33	34+40	34+47	34+54	34+61	34+68	34+75	34+82	34+89	34+96	35+03	35+10	35+17	35+24	35+31	35+38	35+45	35+52	35+59	35+66	35+73	35+80	35+87	35+94	36+01	36+08	36+15	36+22	36+29	36+36	36+43	36+50	36+57	36+64	36+71	36+78	36+85	36+92	37+00
GRADE	101.77	101.83	101.90	101.97	102.04	102.11	102.18	102.25	102.32	102.39	102.46	102.53	102.60	102.67	102.74	102.81	102.88	102.95	103.02	103.09	103.16	103.23	103.30	103.37	103.44	103.51	103.58	103.65	103.72	103.79	103.86	103.93	104.00	104.07	104.14	104.21	104.28	104.35	104.42	104.49	104.56	104.63	104.70	104.77	104.84	104.91	104.98	105.05	105.12	105.19	105.26	105.33	105.40	105.47	105.54	105.61	105.68	105.75	105.82	105.89	105.96	106.03	106.10	106.17	106.24	106.31	106.38	106.45	106.52	106.59	106.66	106.73	106.80	106.87	106.94	107.01	107.08	107.15	107.22	107.29	107.36	107.43	107.50	107.57	107.64	107.71	107.78	107.85	107.92	107.99	108.06	108.13	108.20	108.27	108.34	108.41	108.48	108.55	108.62	108.69	108.76	108.83	108.90	108.97	109.04	109.11	109.18	109.25	109.32	109.39	109.46	109.53	109.60	109.67	109.74	109.81	109.88	109.95	110.02	110.09	110.16	110.23	110.30	110.37	110.44	110.51	110.58	110.65	110.72	110.79	110.86	110.93	111.00																																																																																																																																																																																																																																																																	

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2.	10/24/2019	AS PER ECUA REVIEW COMMENTS
3.	10/31/2019	AS PER NFWMD RAI
4.	11/7/2019	AS PER ECUA REVIEW COMMENTS
5.	1/15/2020	AS PER ESCAMBIA COUNTY DIR REVIEW

**HAMMOND ENGINEERING, INC.**  
 FLORIDA AUTHORIZATION NO. 9130  
 ALABAMA AUTHORIZATION NO. 3277  
 3802 NORTH 'S' STREET  
 PENSACOLA, FLORIDA 32505  
 850 434-2603  
 FAX 850-434-2650  
 TOM@BELANDESIGN.COM



**CONSTRUCTION PLANS FOR AVELLANAS ESTATES PLAN AND PROFILE OFFSITE IMPROVEMENTS**  
 ESCAMBIA COUNTY FLORIDA

DRAWN BY: CYLW	DESIGNED BY: TH
CHECKED BY: TH	DATE: 09-05-2019
SCALE: AS SHOWN	NOT RELEASED FOR CONSTRUCTION
BY:	DATE:

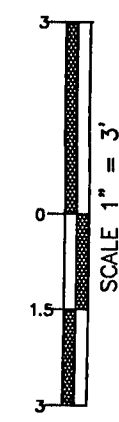
**GRAPHIC SCALE**

22"x34" SCALE 1 inch = 30 ft.

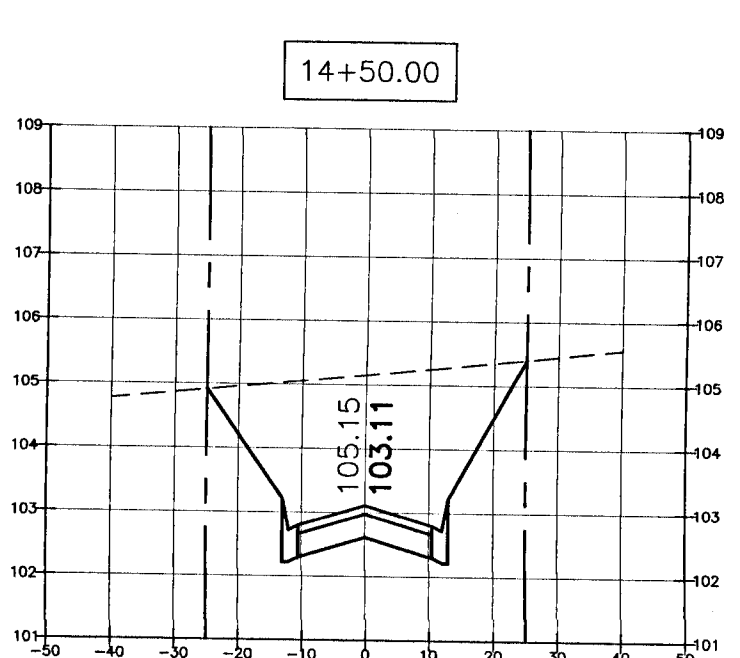
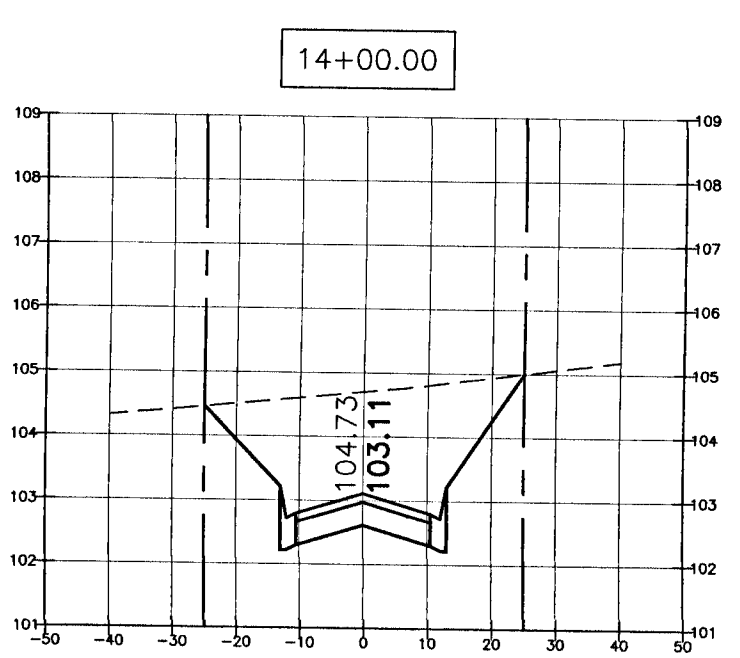
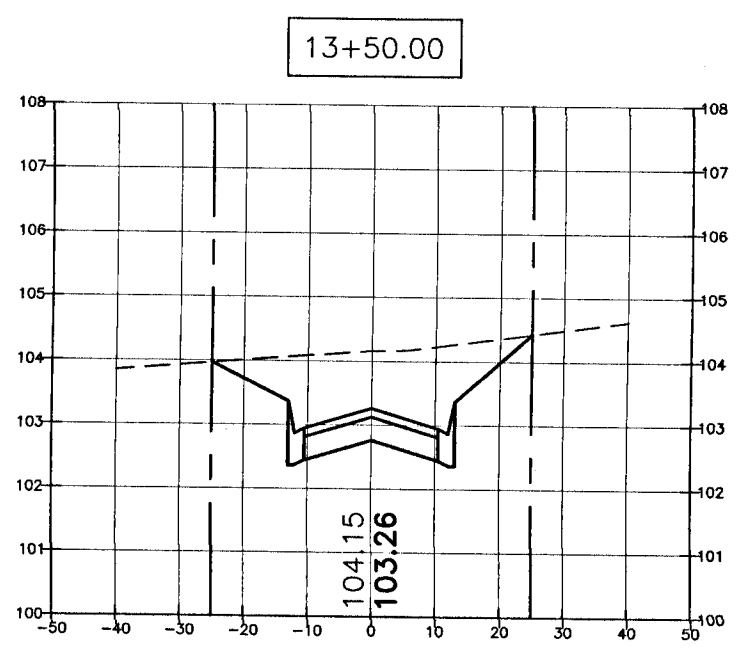
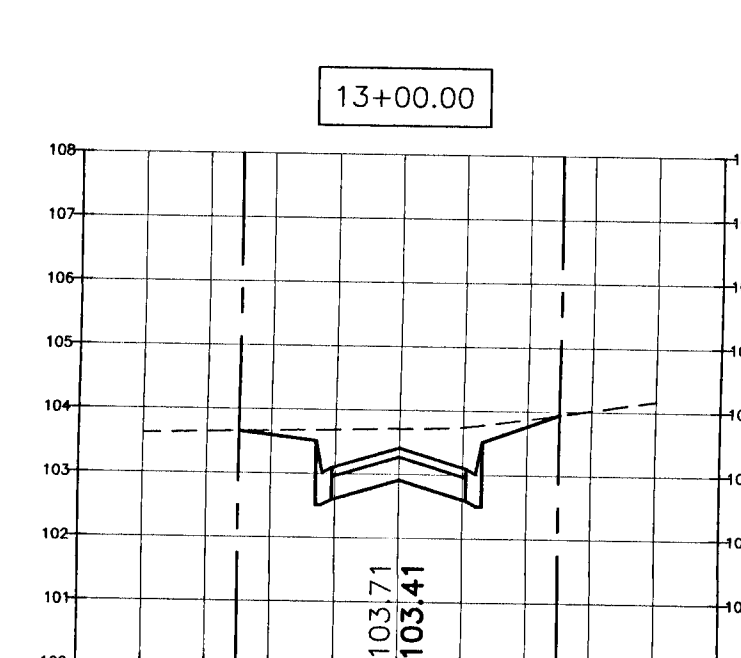
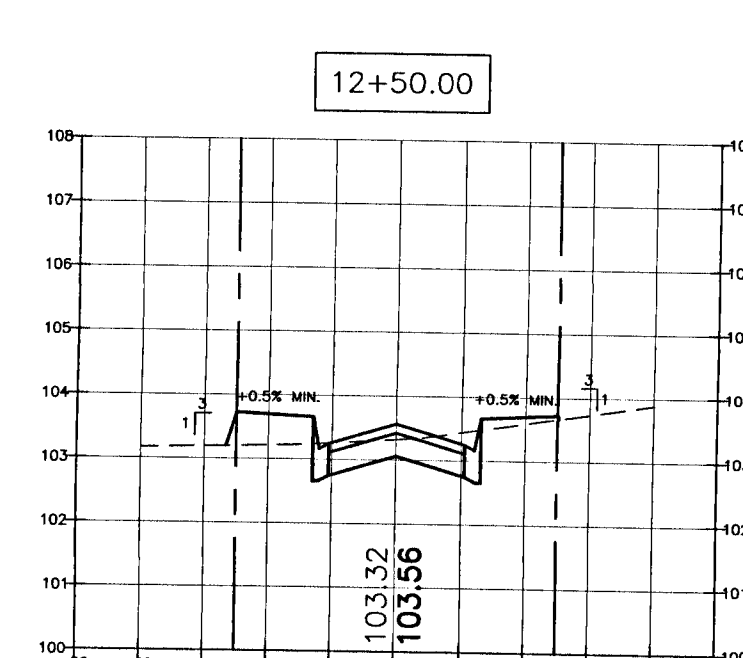
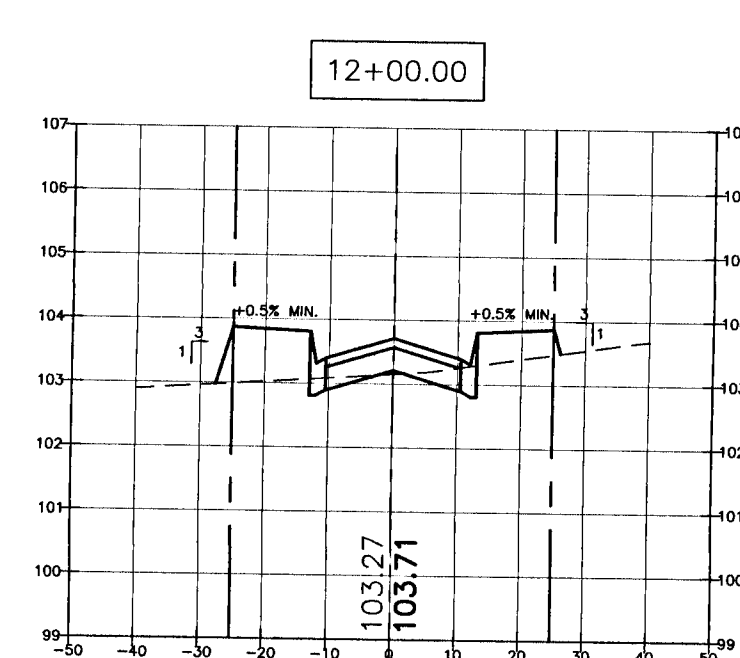
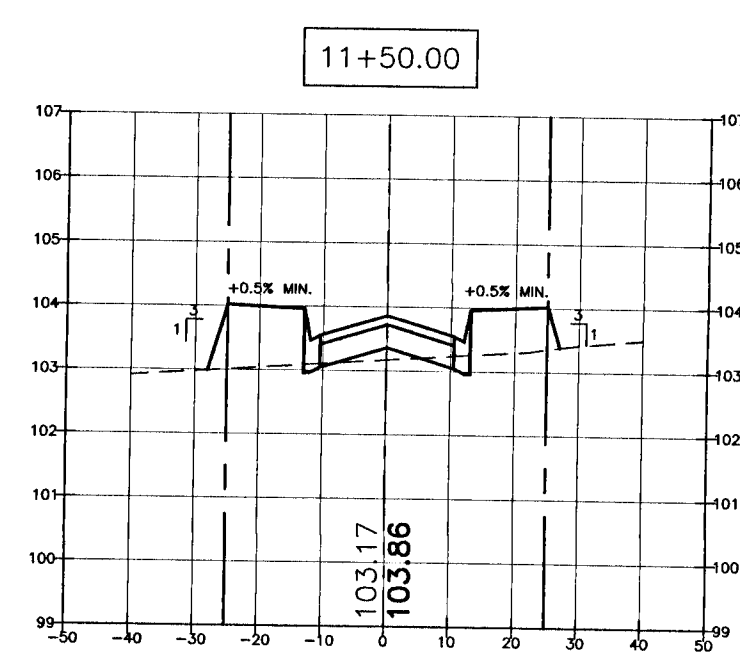
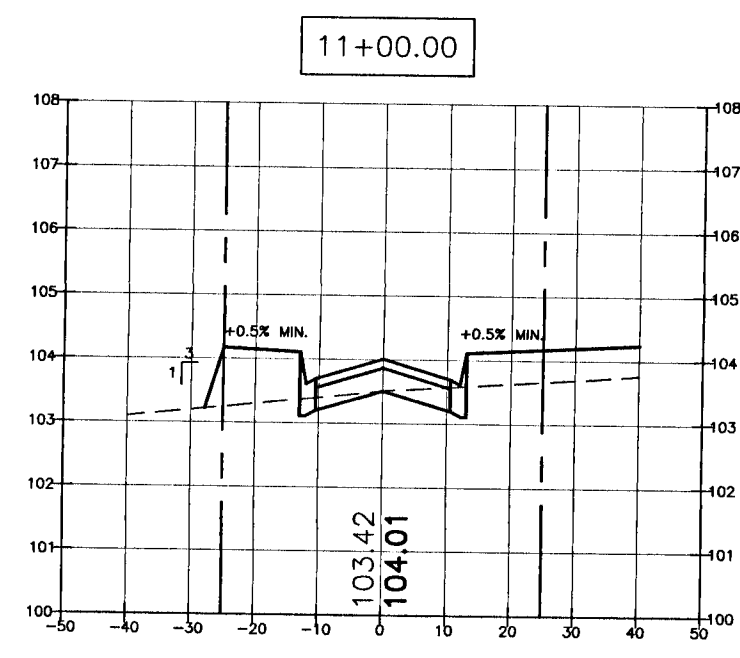
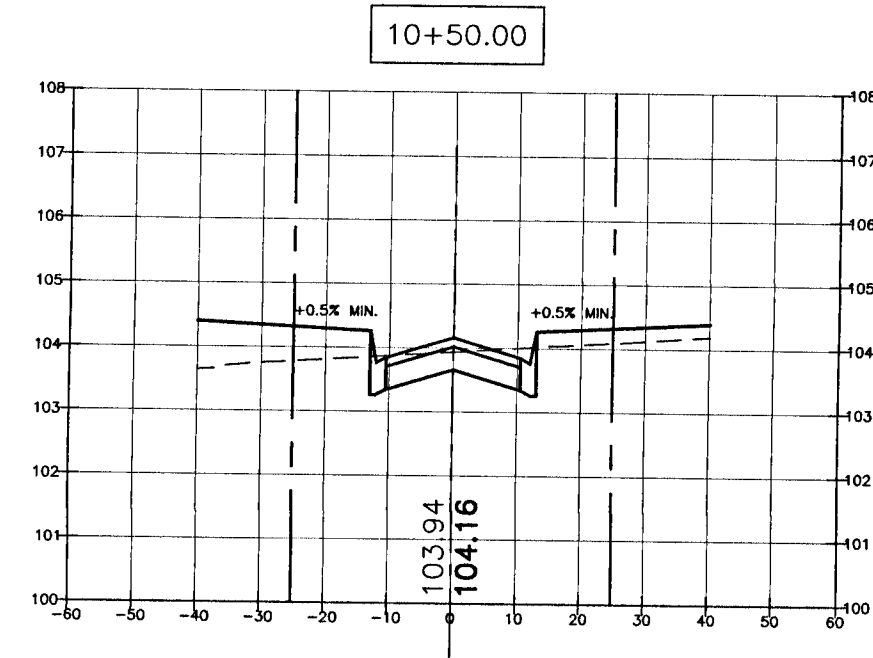


11"x17" SCALE 1 inch = 60 ft.

**VERTICAL SCALE**

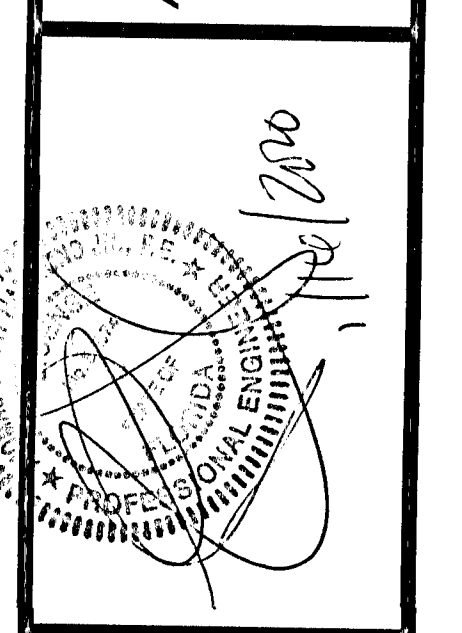


--- EXISTING GRADE  
 --- PROPOSED GRADE



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2.	10/24/2019	AS PER ECIA REVIEW COMMENTS
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4.	11/7/2019	AS PER ECIA REVIEW COMMENTS
5.	1/15/2020	AS PER ESCAMBIA COUNTY DRC REVIEW

**HAMMOND ENGINEERING, INC.**  
 FLORIDA AUTHORIZATION NO. 9130  
 ALABAMA AUTHORIZATION NO. 3277  
 3802 NORTH "S" STREET  
 PENSACOLA, FLORIDA 32505  
 850-434-2603  
 FAX 850-434-2650  
 TOM@SELANDESIGN.COM



**CONSTRUCTION PLANS FOR**  
**AVELLANAS ESTATES**  
**CROSS SECTIONS**  
 ESCAMBIA COUNTY FLORIDA

DRAWN BY: CY/JW  
 DESIGNED BY: TH  
 CHECKED BY: TH  
 DATE: 09-05-2019  
 SCALE: AS SHOWN  
 NOT RELEASED FOR CONSTRUCTION  
 BY: DATE:  
 PROJECT NO: 19-013  
 SHEET: C 13

THIS DRAWING IS THE PROPERTY OF HAMMOND ENGINEERING, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. WITHOUT THE WRITTEN PERMISSION OF HAMMOND ENGINEERING, INC. OTHER PROJECTS AND IS TO BE RETURNED UPON REQUEST.

GRAPHIC SCALE

22"x34" SCALE 1 inch = 20 ft.

11"x17" SCALE 1 inch = 40 ft.



CONSTRUCT  
S-103  
33 LF-18" RCP @ 2.00%

AVELLANAS DRIVE  
(PROPOSED 50' PUBLIC R/W)

CONSTRUCT  
115 LF-24" HDPE @ 0.50%

CONSTRUCT  
S-103A  
INV. ELEV 24" (N)=97.87  
INV. ELEV 24" (S)=97.87

CONSTRUCT  
24 LF-24" RCP @ 0.50%

CONSTRUCT  
24" MITERED END W/  
CONCRETE SPLASH  
PAD DAYLIGHT INV.  
ELEV.=97.75

INSTALL 900 LF-6'  
CHAINLINK FENCE  
AROUND POND TOP

CONSTRUCT  
3,000 SF SAND  
CHIMNEY

CONSTRUCT  
12' WIDE POND ACCESS  
RAMP. 6:1 MAX  
SLOPE-MIN. 5" THICK  
GRADED AGGREGATE  
COMPACTED TO 98%  
MODIFIED PROCTOR  
OVER GEOTEXTILE  
FABRIC. SEE DETAIL

INSTALL  
6'x14' DOUBLE  
CHAIN LINK SWING  
GATE, (TWO 7.0'  
GATES) AT ACCESS  
RAMP

1.00' PUBLIC NON  
ACCESS EASEMENT

CONSTRUCT  
S-105

CONSTRUCT  
EMERGENCY WEIR  
OVER TOP OF  
DISCHARGE PIPE

PLANT SHRUBS @ 3' O.C  
(INDIAN HAWTHORN OR  
APPROVED EQUAL)  
ALONG POND FRONTAGE  
TO PROVIDE SCREENING.  
TYPICAL OF 14

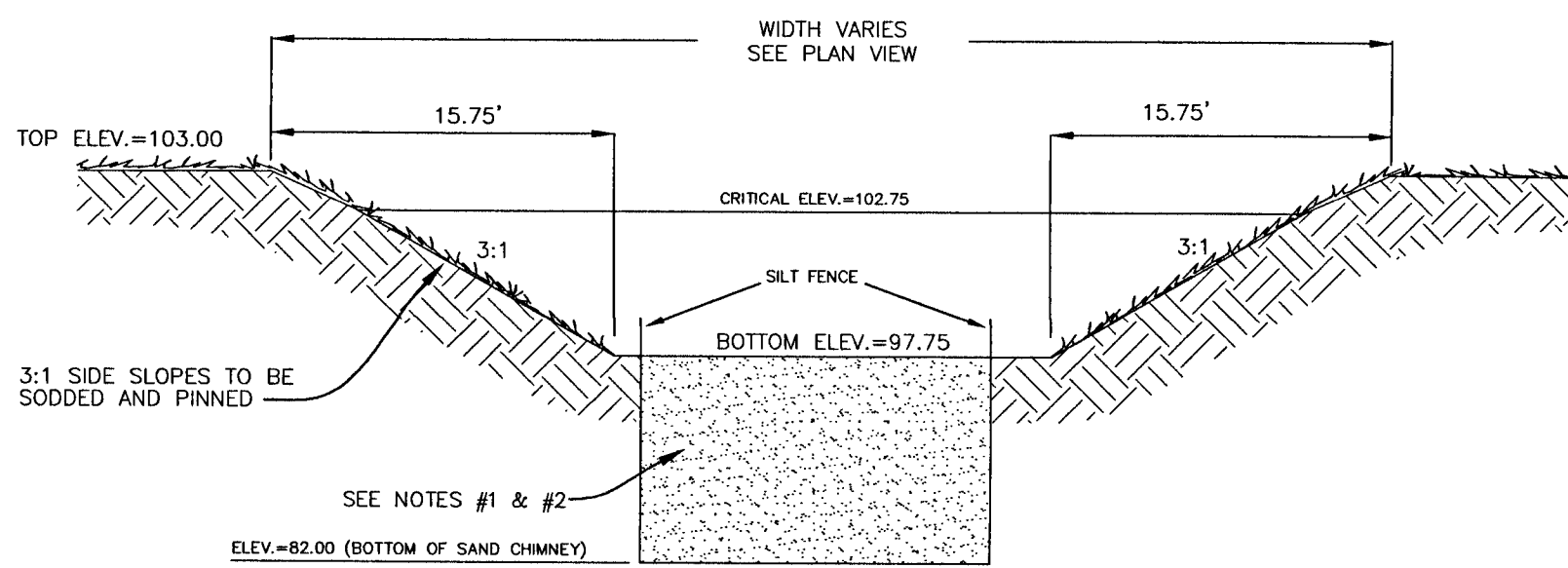
INSTALL DEPTH  
GAUGE. SEE DETAIL

CONSTRUCT  
S-104  
22 LF-18" HDPE  
@ 1.81%

INSTALL  
TYPE II  
CONCRETE  
DRIVEWAY  
TO R/W  
LINE

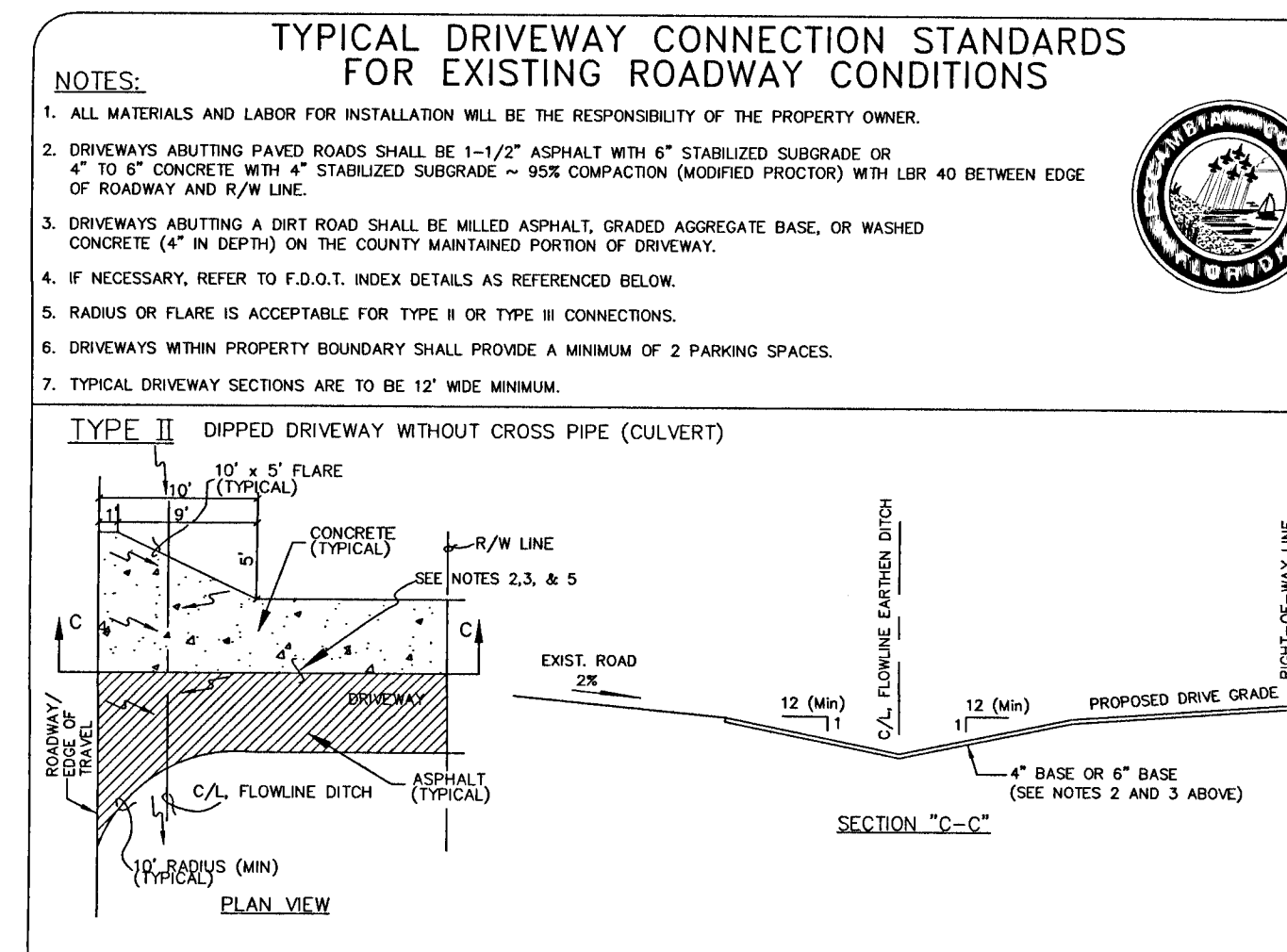
DETENTION BASIN CONSTRUCTION

- INITIALLY INSTALL ALL EROSION AND SEDIMENT CONTROL BMP'S AS ILLUSTRATED ON THE EROSION CONTROL PLAN PROVIDED AS PART OF THESE PLANS.
- CONSTRUCT THE DETENTION BASIN TO ROUGH GRADE BY UNDER-EXCAVATING THE BASIN BOTTOM AND SIDES BY ABOUT 6 INCHES.
- AFTER THE DRAINAGE AREA CONTRIBUTING TO THE BASIN HAS BEEN FULLY STABILIZED, THE INTERIOR SIDE SLOPES SHALL BE EXCAVATED TO FINAL DESIGN SPECIFICATIONS. THE EXCESS SOIL AND UNDESIRABLE MATERIAL MUST BE CAREFULLY EXCAVATED AND REMOVED FROM THE POND SO THAT ALL ACCUMULATED SILTS, CLAYS, ORGANICS, AND OTHER FINE SEDIMENT MATERIAL HAS BEEN REMOVED FROM THE POND AREA. THE EXCAVATED MATERIAL SHALL BE DISPOSED OF BEYOND THE LIMITS OF THE DRAINAGE AREA OF THE BASIN.
- ONCE THE BASIN HAS BEEN EXCAVATED TO FINAL GRADE, THE ENTIRE BASIN BOTTOM MUST BE DEEP RAKED AND LOOSENED FOR OPTIMAL FILTRATION.
- FINALLY, THE ENTIRE BANK SLOPE SHALL BE PERMANENTLY STABILIZED IN A MANNER THAT GUARANTEES HEALTHY GROWTH OF GRASS (FREE FROM NOXIOUS WEEDS) SUCH AS PANGALA, ARGENTINE BAHIA, BERMUDA, CENTIPEDE OR OTHER SUITABLE GRASS.



- NOTE 1: CONTRACTOR TO EXCAVATE SAND CHIMNEY TO ELEVATION 66.00. CONTACT ENGINEER OF RECORD BEFORE BACK FILL PROCEDURE W/CLEAN SAND HAVING A MINIMUM PERMEABILITY RATE OF 1x10 CM/SEC. AND CONTAINING LESS THAN 5% FINES.
- NOTE 2: A REGISTERED GEOTECHNICAL PROFESSIONAL MUST VERIFY ON-SITE THE REMOVAL OF THE EXISTING LESS PERMEABLE MATERIAL FOUND AT THE PROPOSED CHIMNEY BOTTOM AND THAT THE BOTTOM OF THE PROPOSED SAND CHIMNEY IS EXCAVATED TO THE SPECIFIED ELEVATION AND KEYS INTO THE MORE PERMEABLE STRATA LOCATED FROM ELEVATION 88.0 TO 100.0. BACKFILL PROCEDURES SHOULD NOT COMMENCE UNTIL SAID REGISTERED PROFESSIONAL HAS SIGNED OFF.
- NOTE 3: DO NOT SOD SAND CHIMNEY!!!

A REGISTERED GEOTECHNICAL PROFESSIONAL MUST VERIFY AND APPROVE THE MATERIAL UTILIZED FOR THE SAND CHIMNEY PRIOR TO INSTALLATION OF THE MATERIAL. A COPY OF THE TESTING RESULTS VERIFYING THE ABOVE REFERENCED SPECIFICATIONS MUST BE SENT TO THE ENGINEER OF RECORD



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2.	10/24/2019	AS PER ECUA REVIEW COMMENTS
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4.	11/7/2019	AS PER ECUA REVIEW COMMENTS
5.	1/15/2020	AS PER ESCAMBIA COUNTY DRC REVIEW

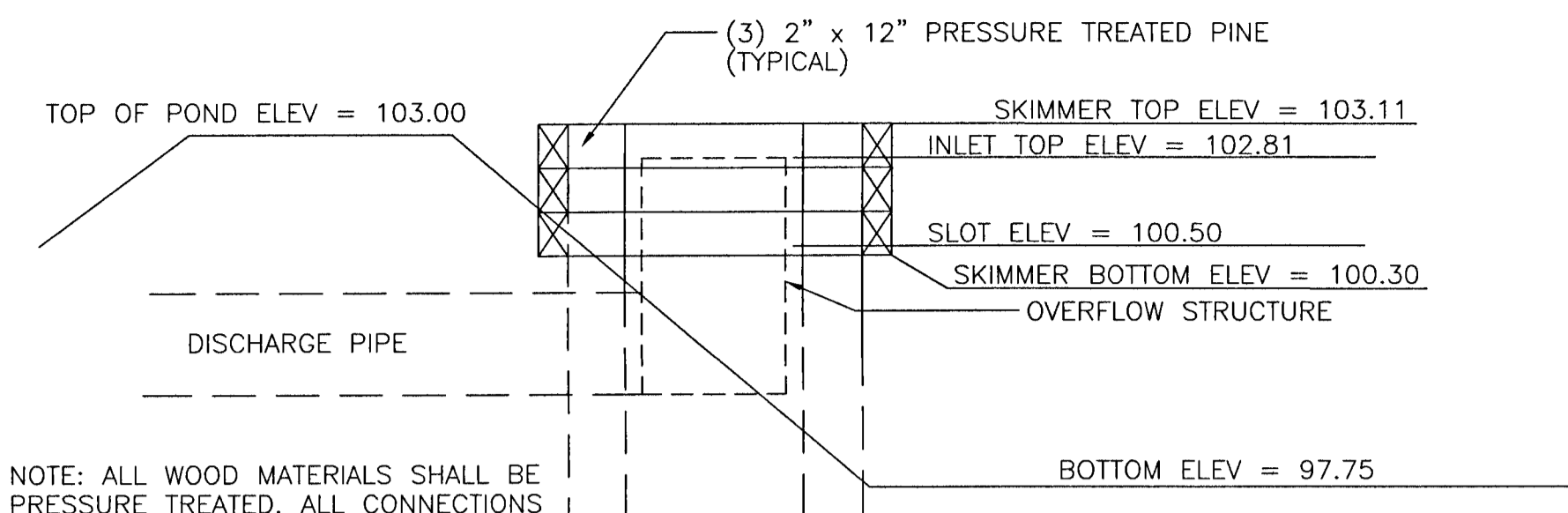
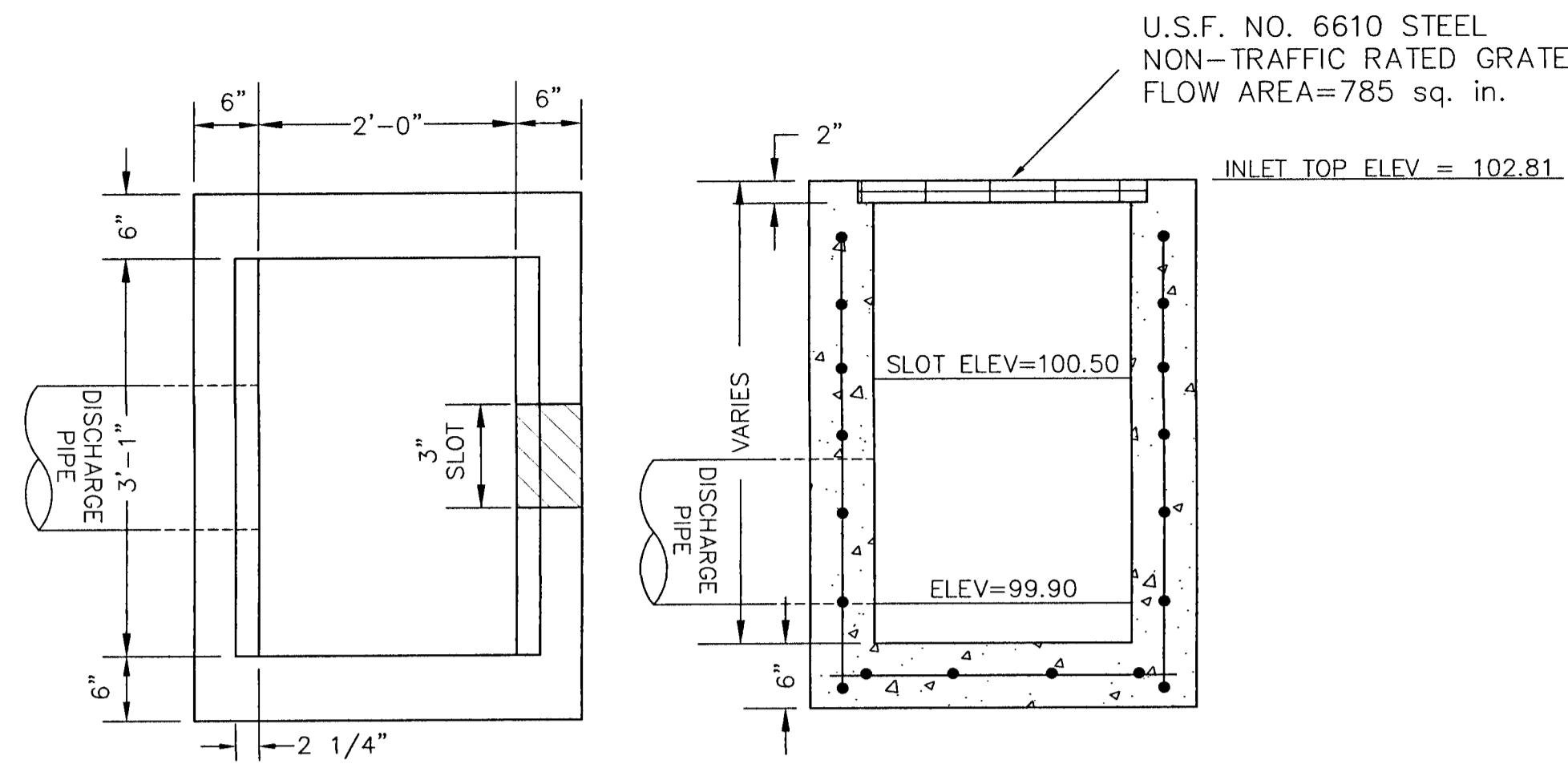
HAMMOND ENGINEERING, INC.  
FLORIDA AUTHORIZATION NO. 9130  
ALABAMA AUTHORIZATION NO. 3277  
3802 NORTH "S" STREET  
PENSACOLA, FLORIDA 32505  
850 434-2603  
850 434-2650  
TDM@SELANDDESIGN.COM

Professional Engineer Seal for TDM, License No. 116700

CONSTRUCTION PLANS FOR  
AVELLANAS ESTATES  
STORMWATER POND  
DETAILS  
FLORIDA  
ESCAMBIA COUNTY

DRAWN BY: CYJW  
DESIGNED BY: TH  
CHECKED BY: TH  
DATE: 09-05-2019  
SCALE: AS SHOWN  
NOT RELEASED FOR CONSTRUCTION  
BY: DATE:

PROJECT NO: 19-013  
SHEET: C14



NOTE: ALL WOOD MATERIALS SHALL BE PRESSURE TREATED. ALL CONNECTIONS WILL BE MADE WITH 5/8" GALVANIZED HARDWARE.

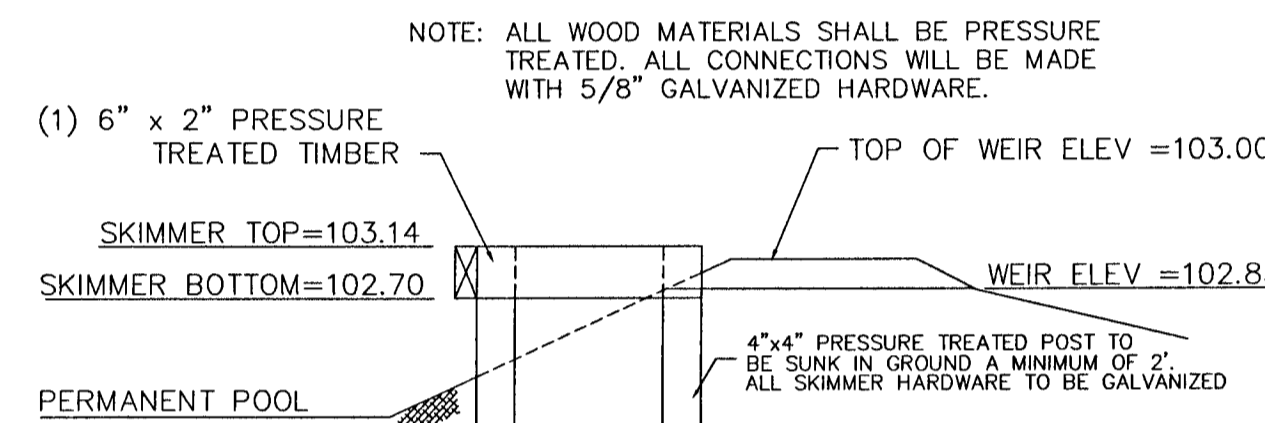
NOTE: SUPPORT POST FOR PVC TO BE INSTALLED IF PVC EXTENDS MORE THAN 1.5' FROM STRUCTURE.

SKIMMER DETAIL  
N.T.S.

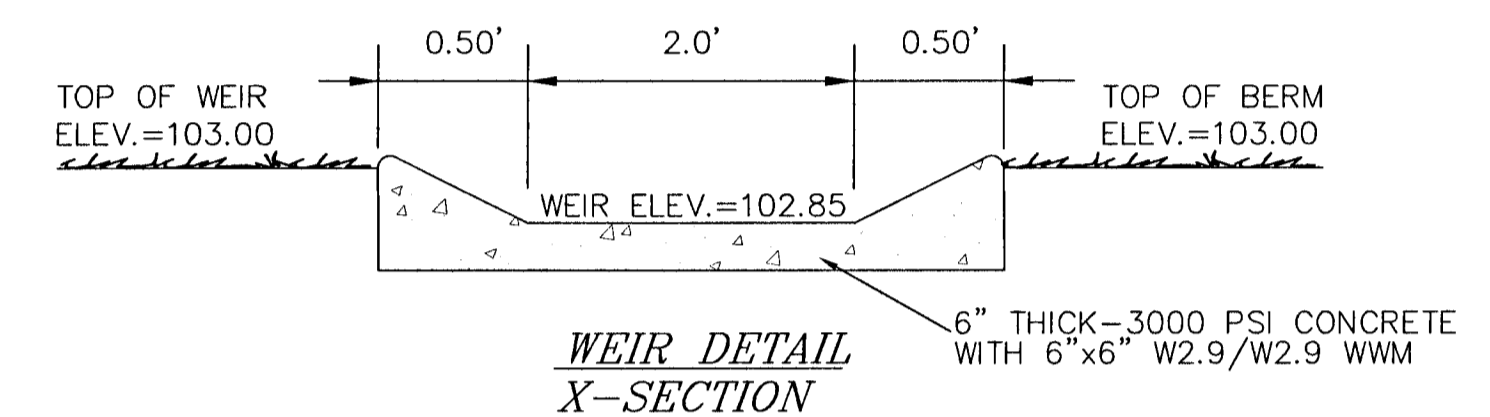
FDOT TYPE 'C' OVERFLOW STRUCTURE (S-104)

MATERIALS:  
CONCRETE: 4000 PSI, TYPE II CEMENT  
WALL REINFORCING: 3x4 W3.1/W4.1 WWF 65 K.S.I. (AS PER FDOT-INDEX 201)  
BOTTOM SLAB REINFORCING: #4 @ 12" C.C.E.W. \*

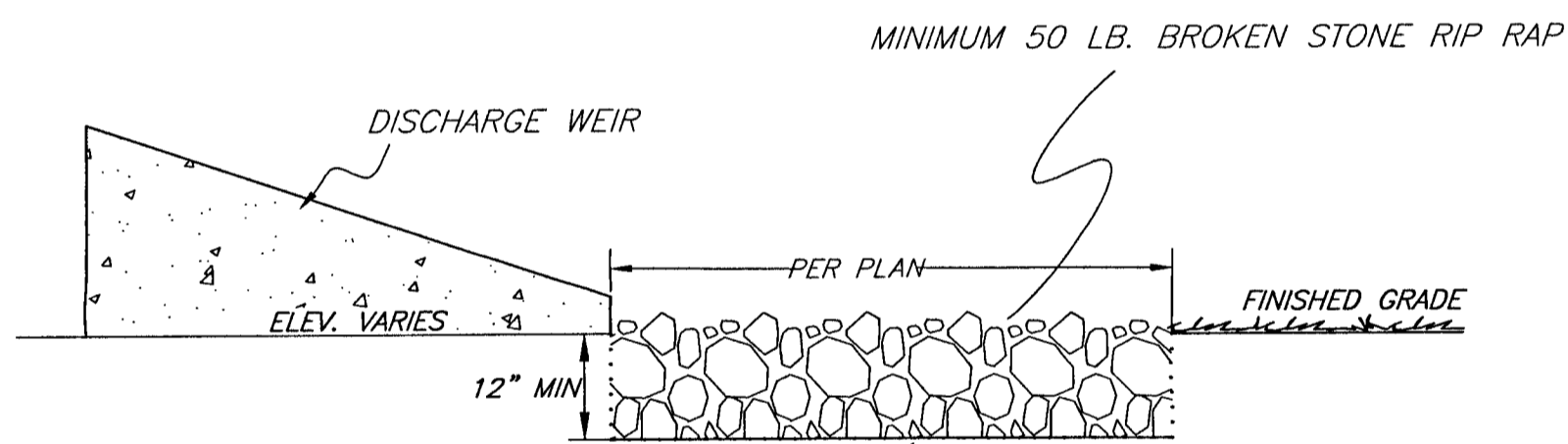
NOTE:  
ALL EXPOSED EDGES TO HAVE 3/4" CHAMFER.  
\* GRADE 40, OR EQUIVALENT WELDED WIRE MESH.



WEIR OIL SKIMMER DETAIL  
N.T.S.



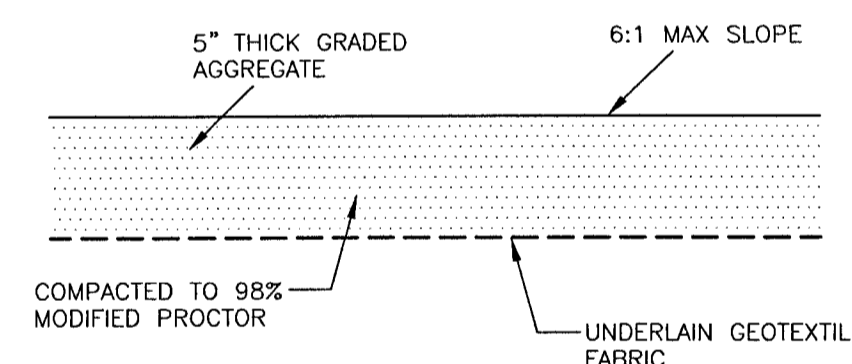
WEIR DETAIL  
X-SECTION



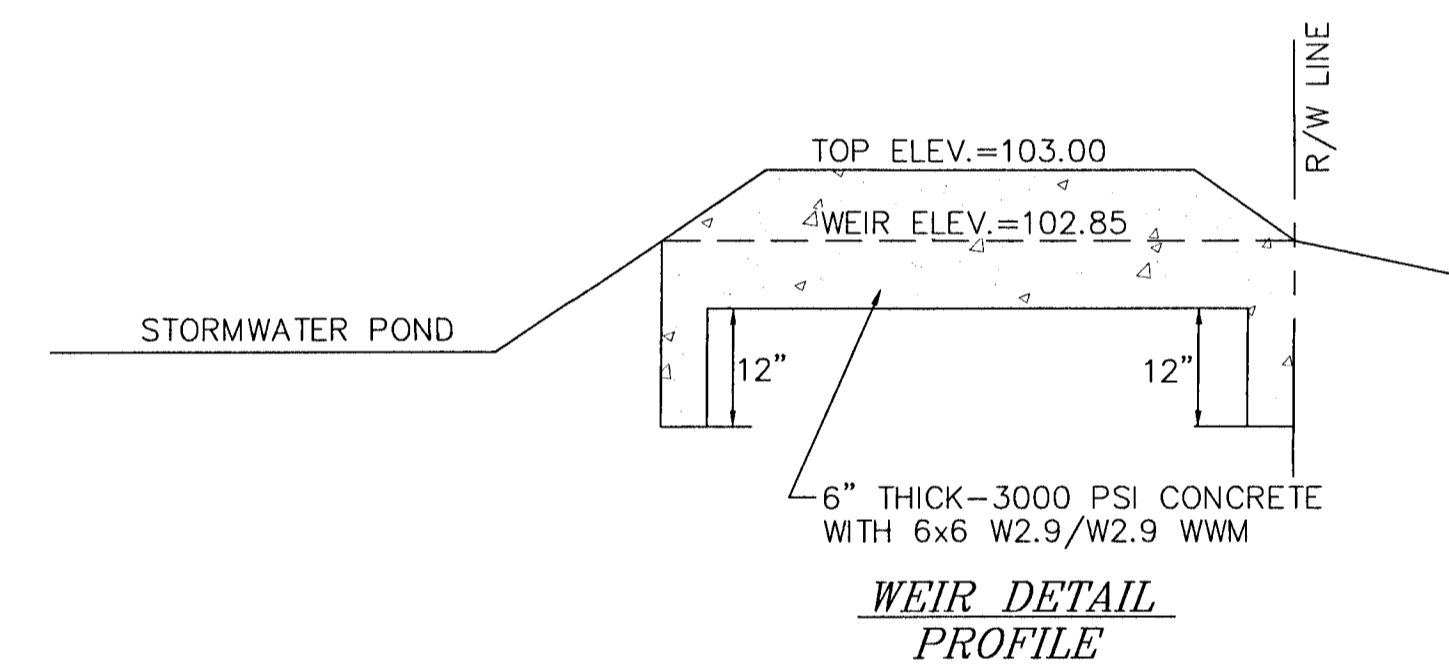
ONE (1) LAYER EROSION CONTROL ENGINEERING FABRIC TERRATEX GS-150 OR EQUAL FULL LENGTH AND WIDTH

NOTES: TOP OF RIP-RAP TO BE AT INVERT ELEVATION OF MITERED END SECTIONS OR WEIR. RIP-RAP TO BE MINIMUM 12" THICK. BROKEN STONE SHALL BE ROUGHLY ANGULAR AND FROM THIN OR ELONGATED PIECES.

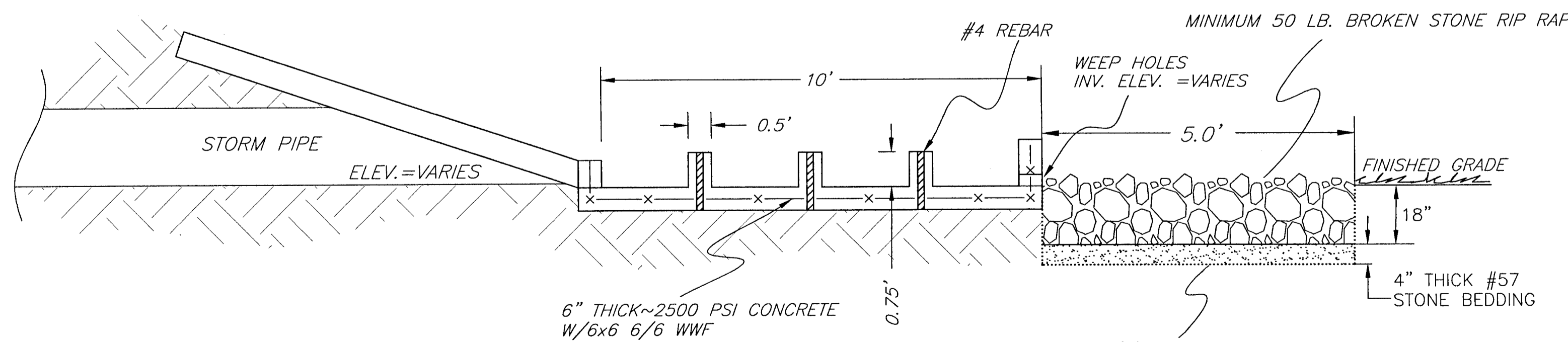
RIP RAP DETAIL  
X-SECTION VIEW  
NOT TO SCALE



TYPICAL GRAVEL POND ACCESS SECTION  
N.T.S.

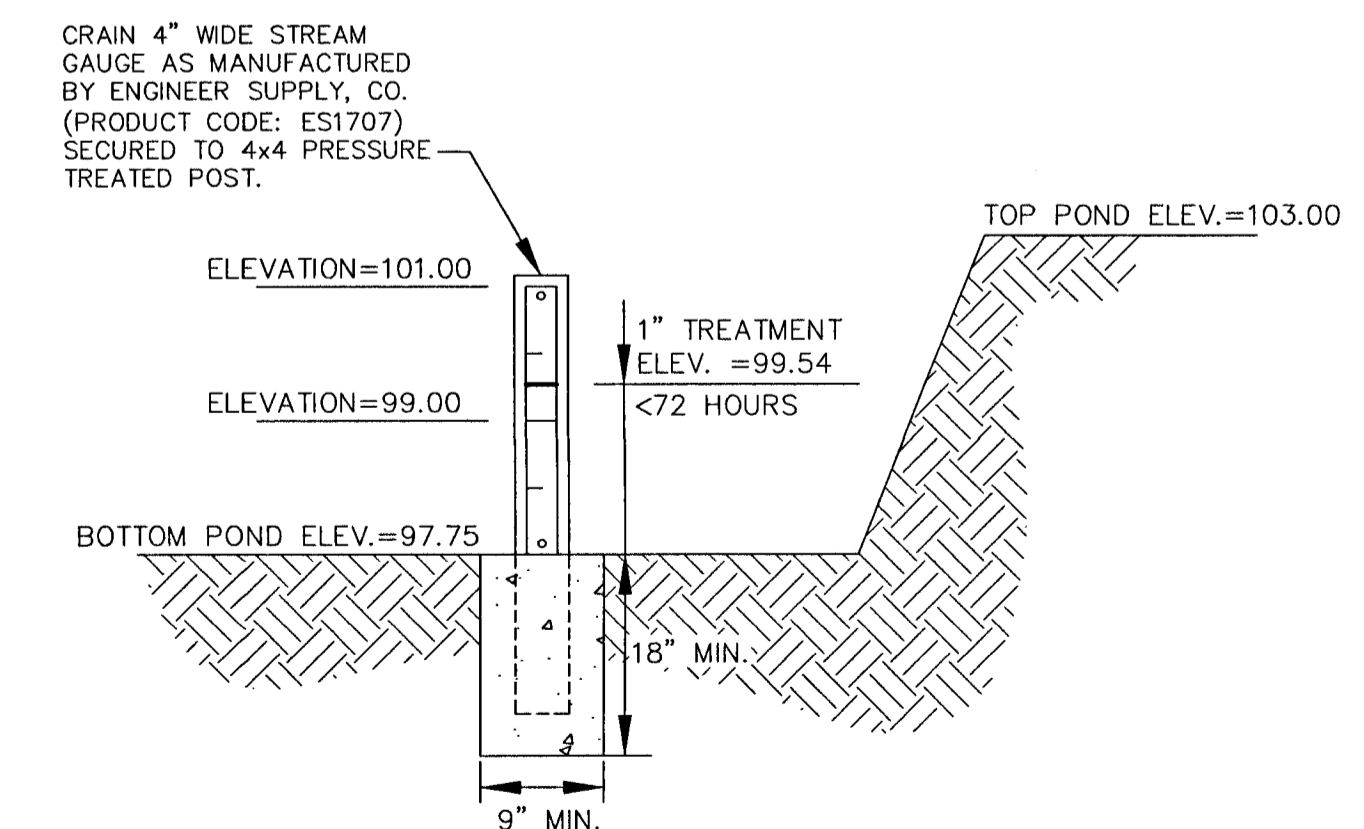


WEIR DETAIL  
PROFILE  
CONCRETE DISCHARGE WEIR  
N.T.S.



SPLASH PAD W/RIP RAP DETAIL  
X-SECTION VIEW  
NOT TO SCALE

ONE (1) LAYER EROSION CONTROL ENGINEERING FABRIC TERRATEX GS-150 OR EQUAL FULL LENGTH AND WIDTH

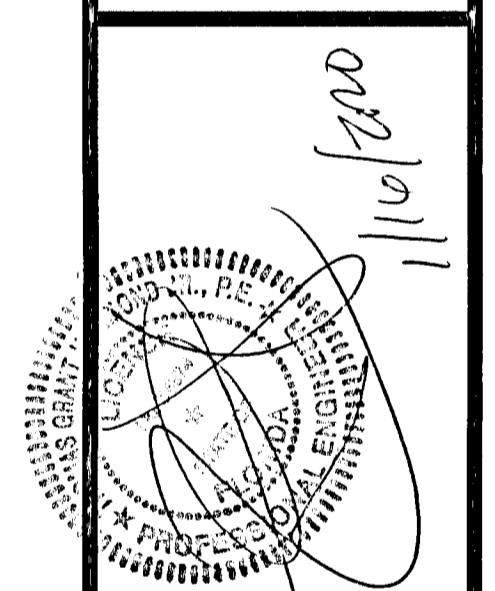


NOTE: DEPTH GAUGE (OR EQUIVALENT) SHALL BE INSTALLED AND MAINTAINED IN EACH FILTER POND. THE MINIMUM HEIGHT ABOVE THE GROUND SHALL BE THAT OF THE TREATMENT VOLUME. SHOULD THE GAUGE STAND HIGHER THAN THE TREATMENT ELEVATION, THE TREATMENT ELEVATION NEEDS TO BE CLEARLY MARKED ON THE GAUGE.

DEPTH GAUGE DETAIL  
N.T.S.

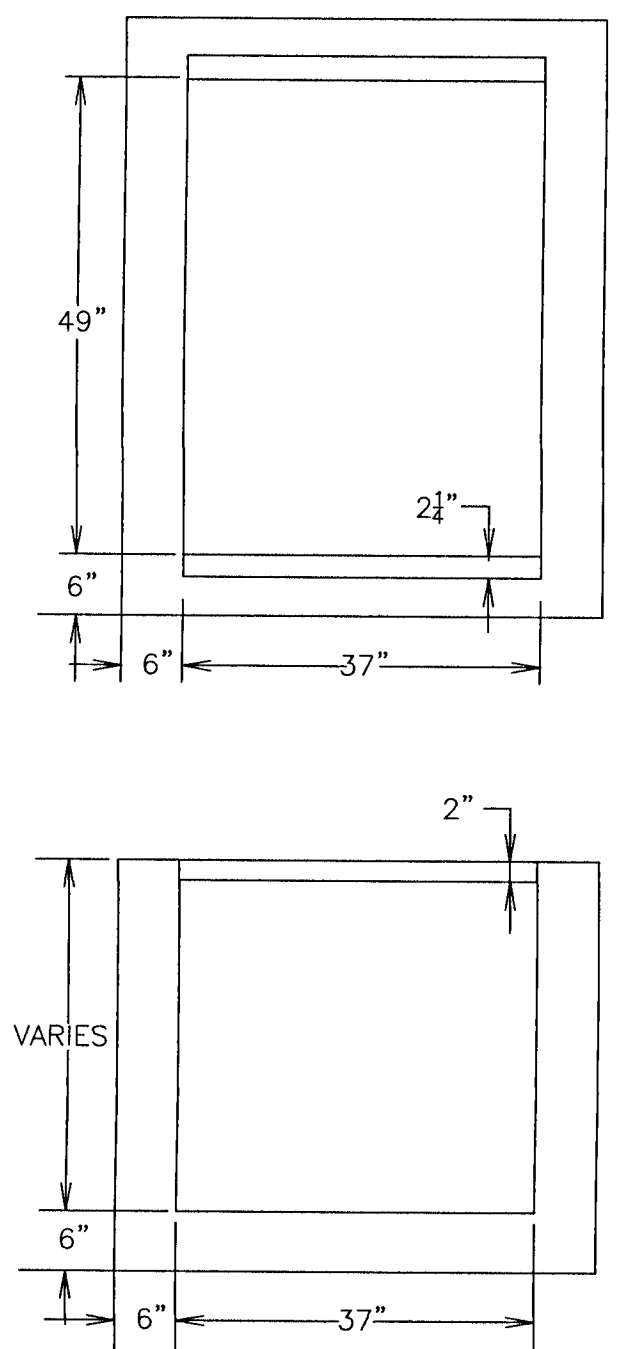
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850 434-2603  
850 434-2650  
TOM@BELANDESIGN.COM



CONSTRUCTION PLANS FOR  
AVELLANAS ESTATES  
STORMWATER POND DETAILS  
FLORIDA  
ESCAMBIA COUNTY

DRAWN BY: EYUW  
DESIGNED BY: TH  
CHECKED BY: TH  
DATE: 09-05-2019  
SCALE: AS SHOWN  
NOT RELEASED FOR CONSTRUCTION  
BY: DATE:



PREFERRED CASTINGS

STEEL GRATE (TRAFFIC RATED) USF 6626

STEEL GRATE (NON-TRAFFIC RATED) USF 6607

MAXIMUM ALLOWABLE PIPE SIZES (I.D.)

49" WALL - 36" PIPE (48" HOLE REQ.)

37" WALL - 24" PIPE (34" HOLE REQ.)

FORM SPECIFICATIONS

MAXIMUM HEIGHT PER SECTION: 72"

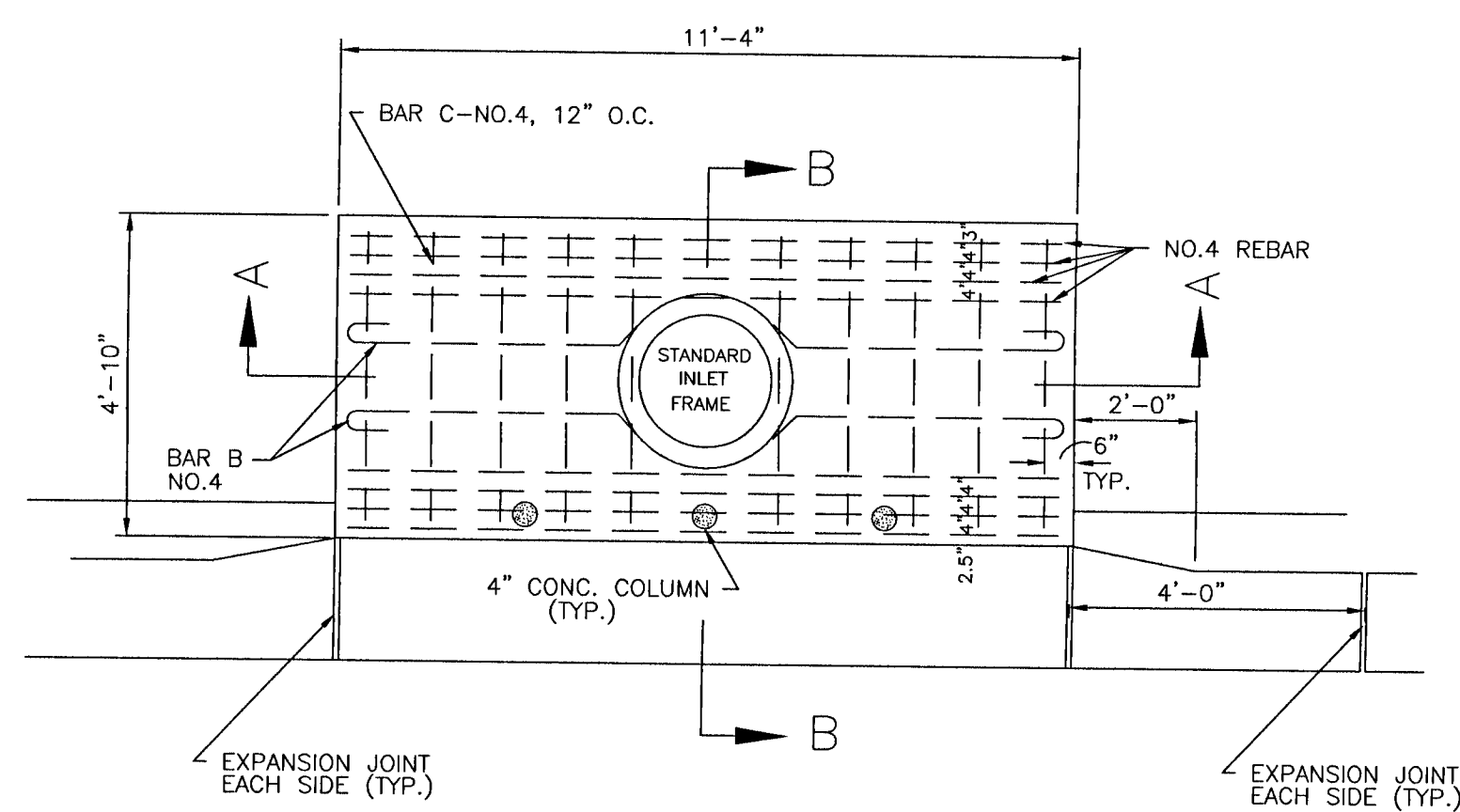
APPROX. WEIGHT PER VERT. INCH

100 lbs/in + 1,533 lb Bottom

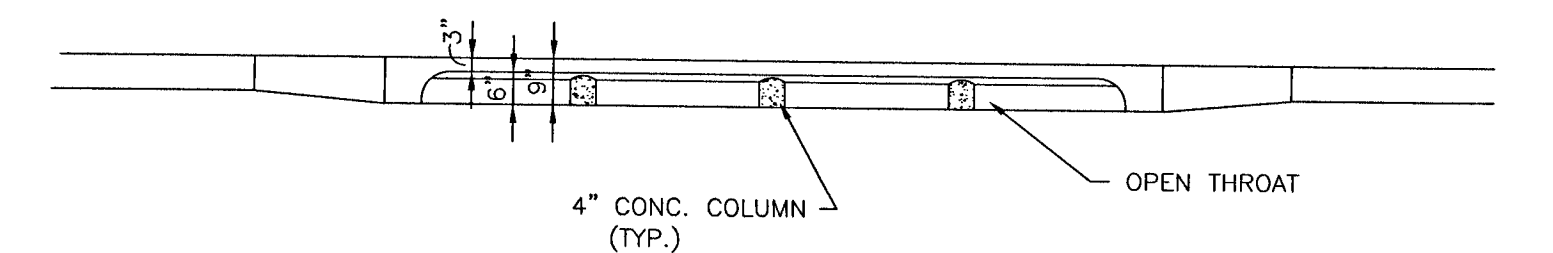
HORIZONTAL REINFORCEMENT 0.20 SQ IN PER FT.

VERTICAL REINFORCEMENT 0.20 SQ IN PER FT.

F.D.O.T. DITCH BOTTOM INLET  
TYPE "D"  
NTS



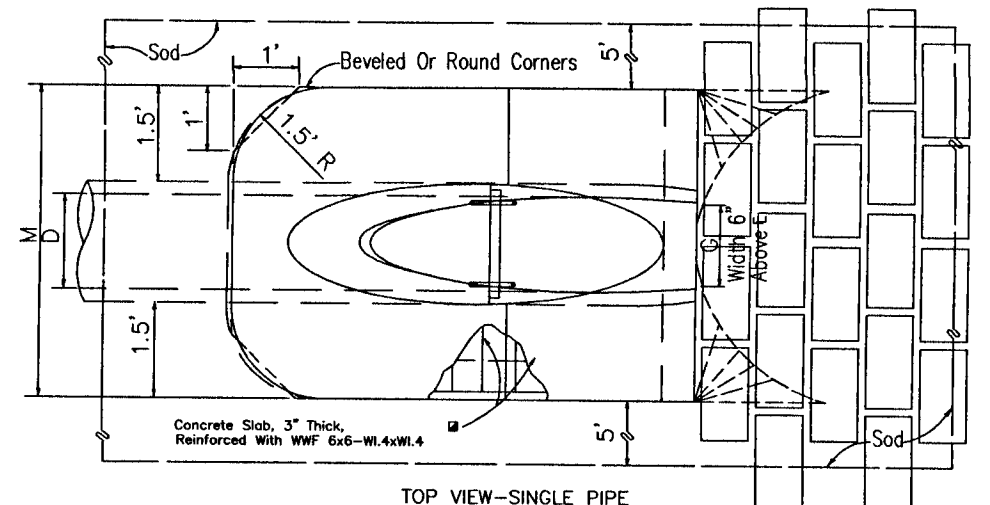
TYPE "A" DROP INLET DETAIL  
NTS



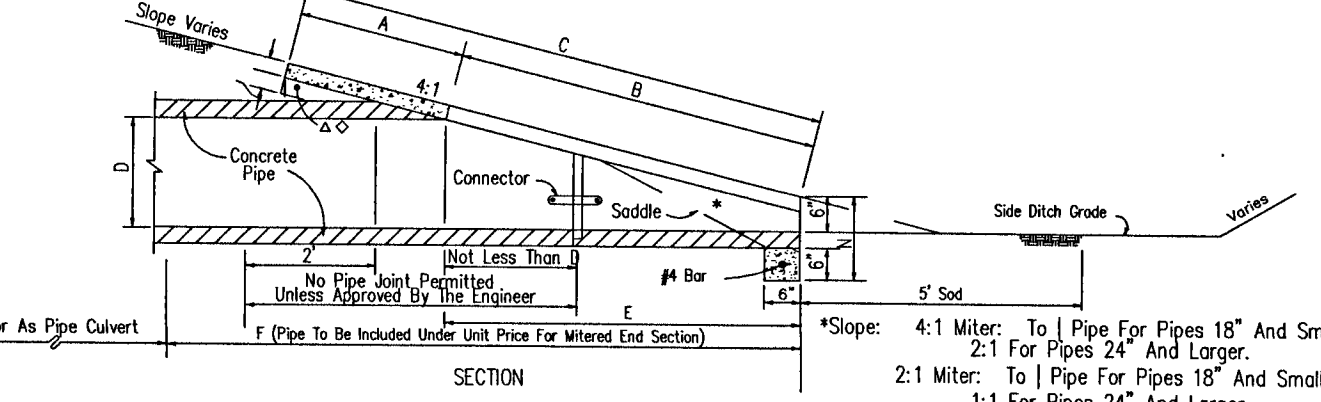
TYPE "A" DROP INLET ELEVATION  
N.T.S.

NOTE: MITERED END SECTIONS TO BE INSTALLED IN ACCORDANCE WITH LATEST FDOT DESIGN STANDARDS INDEX NO. 273 AT 1:4 SLOPE. PIPE LENGTH (F) TO BE RCP AND SHOULD BE INCLUDED UNDER THE UNIT PRICE FOR THE MITERED END SECTION. CONCRETE COLLAR TO BE INSTALLED FOR HDPE/RCP CONNECTIONS.

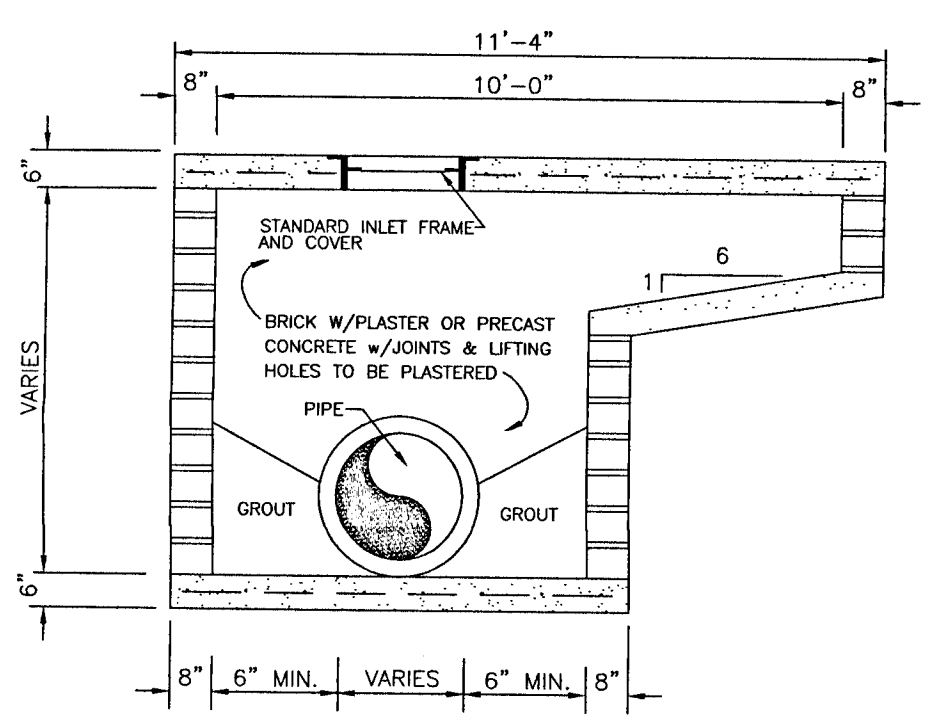
NOTE: ALL STORMWATER STRUCTURES DEEPER THAN 4' ARE TO HAVE STEPS 12" O.C. EXTENDING TO THE BOTTOM OF THE STRUCTURE.



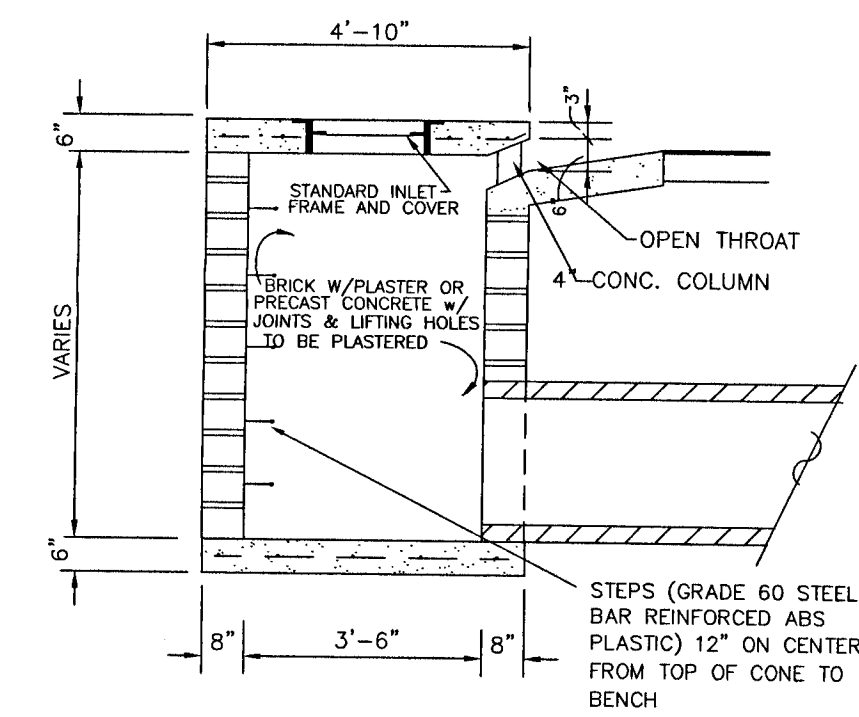
TOP VIEW-SINGLE PIPE



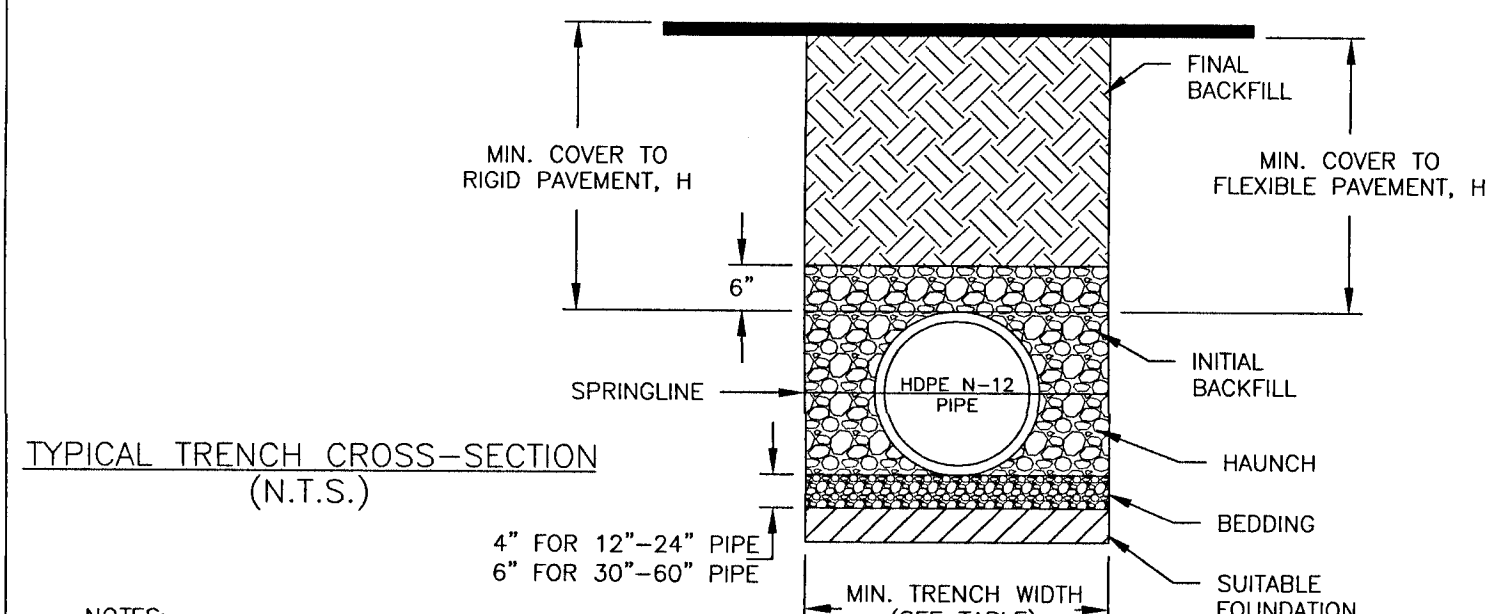
SECTION



SECTION A-A  
NTS



SECTION B-B  
NTS



- NOTES:
- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION
  - MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
  - FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
  - BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
  - INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
  - MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIA.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12"-48"	12"	48"
54"-60"	24"	60"

MINIMUM RECOMMENDED COVER BASED ON RAILWAY LOADING CONDITIONS

PIPE DIAM.	COOPER E-80**	
	UP TO 24"	30"-36"
42"-60"	24"	48"

\*\* COVER IS MEASURED FROM TOP OF PIPE TO BOTTOM OF RAILWAY TIE.

\*\*\* E-80 COVER REQUIREMENTS, ARE ONLY APPLICABLE TO ASTM F 2306 PIPE.

DIMENSIONS AND QUANTITIES

SLOPE	D	X	A	B	C	E	F	G	CONCRETE SLAB (CY)				SOILING (SQ YDS)								
									Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe					
4:1 Slope	18"	2'-10"	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.92'	7.75'	10.58'	13.42'	1.21'	0.47	0.69	0.91	1.14	25	28	31	35
4:1 Slope	24"	3'-5"	2.53'	7.18'	9.71'	7.03'	11'	1.73'	5.50'	8.92'	12.33'	15.75'	1.25'	0.60	0.90	1.21	1.52	28	32	36	40
4:1 Slope	30"	4'-3"	2.70'	9.25'	11.95'	9.03'	13'	2.00'	6.08'	10.33'	14.58'	18.83'	1.29'	0.76	1.19	1.63	2.07	31	36	41	46

CROSS DRAIN MITERED END SECTION

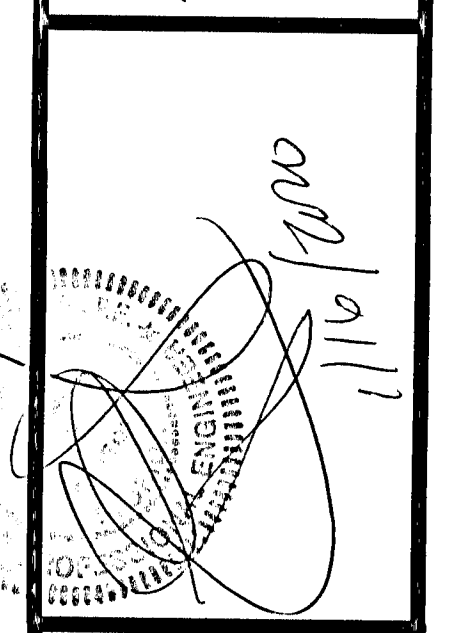
NTS

NOTE: MITERED END SECTIONS TO BE INSTALLED IN ACCORDANCE WITH LATEST FDOT DESIGN STANDARDS INDEX NO. 273 AT 1:4 SLOPE. PIPE LENGTH (F) TO BE RCP AND SHOULD BE INCLUDED UNDER THE UNIT PRICE FOR THE MITERED END SECTION. CONCRETE COLLAR TO BE INSTALLED FOR HDPE/RCP CONNECTIONS.

REVISIONS

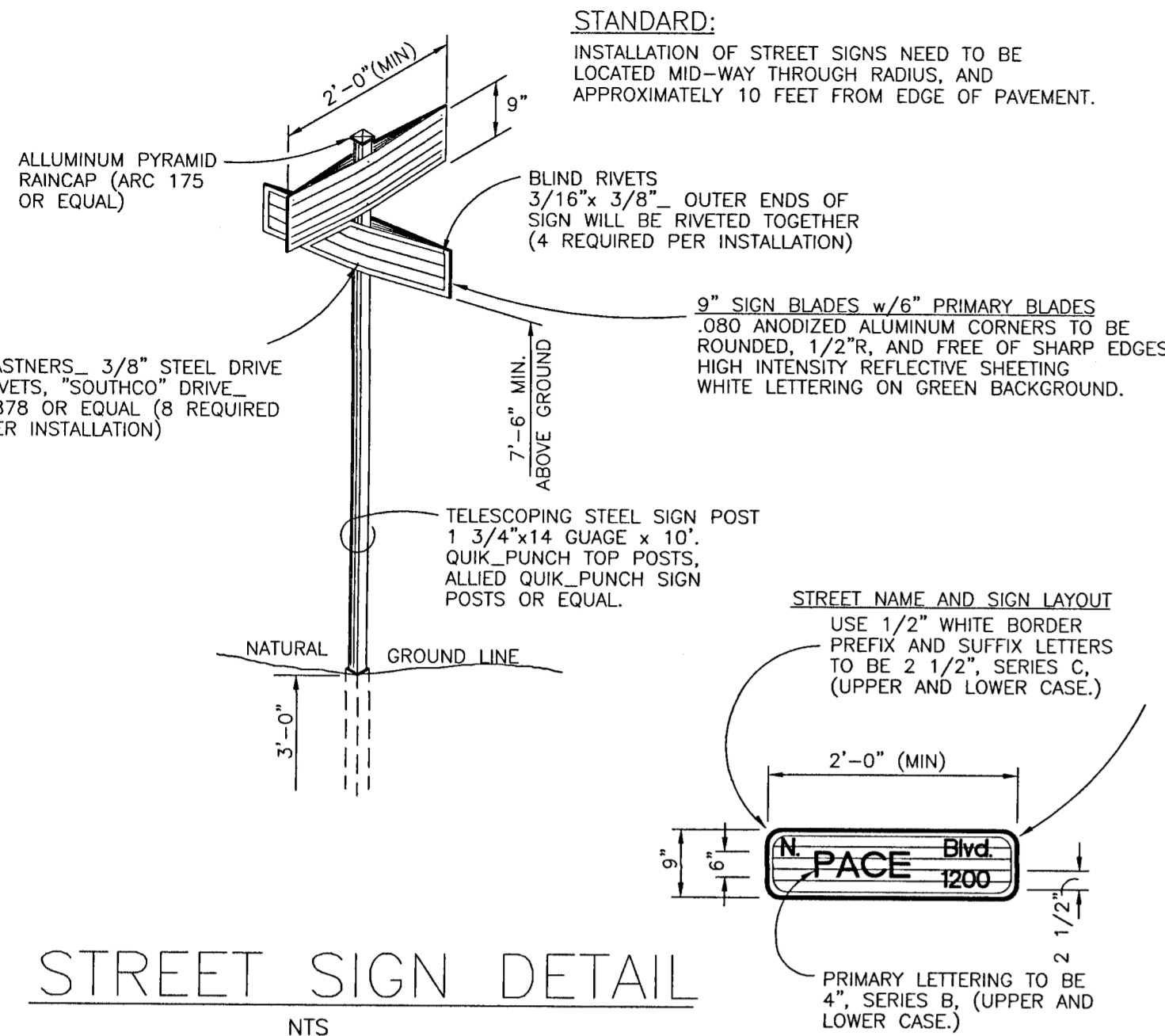
NO.	DATE	DESCRIPTION
1.	10/24/2019	AS PER ESCAMBIA COUNTY DRC REVIEW
2.	10/24/2019	AS PER ECJA REVIEW COMMENTS
3.	10/31/2019	AS PER NMFWD RAI
4.	11/7/2019	AS PER ECJA REVIEW COMMENTS
5.	1/15/2020	AS PER ESCAMBIA COUNTY DRC REVIEW

HAMMOND ENGINEERING, INC.  
FLORIDA AUTHORIZATION NO. 9130  
ALABAMA AUTHORIZATION NO. 3277  
3802 NORTH "S" STREET  
PENSACOLA, FLORIDA 32505  
850 434-2603  
850 434-2650  
TOM@SELANDESIGN.COM



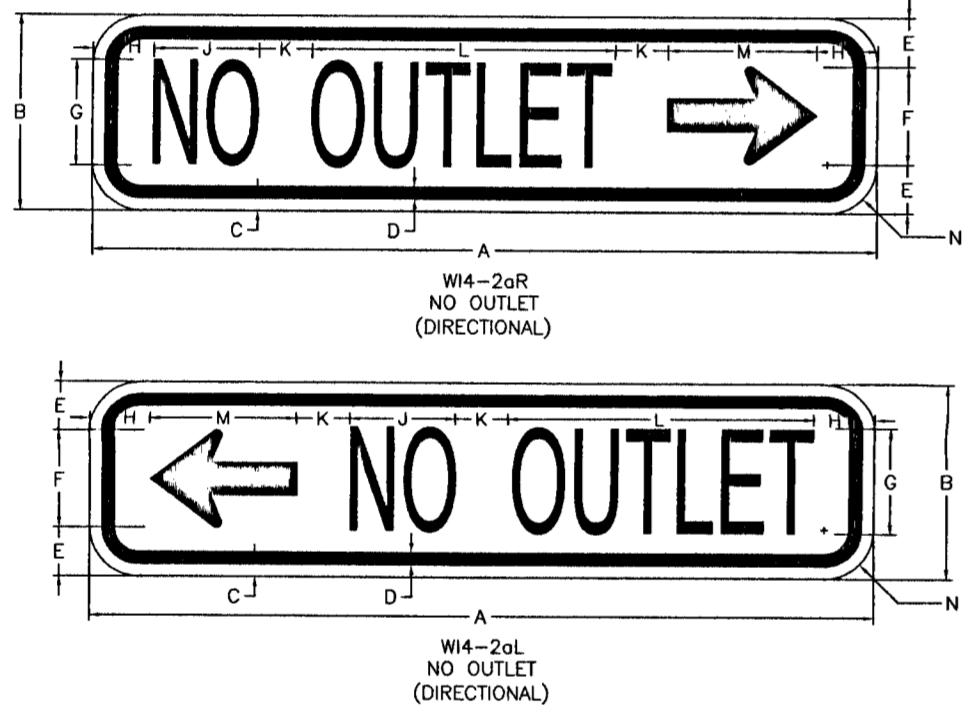
CONSTRUCTION PLANS FOR  
AVELLANAS ESTATES  
STORMWATER DETAILS  
FLORIDA  
ESCAMBIA COUNTY

DRAWN BY: EYJ/W  
DESIGNED BY: TH  
CHECKED BY: TH  
DATE: 09-05-2019  
SCALE: AS SHOWN  
NOT RELEASED FOR CONSTRUCTION  
BY: DATE:



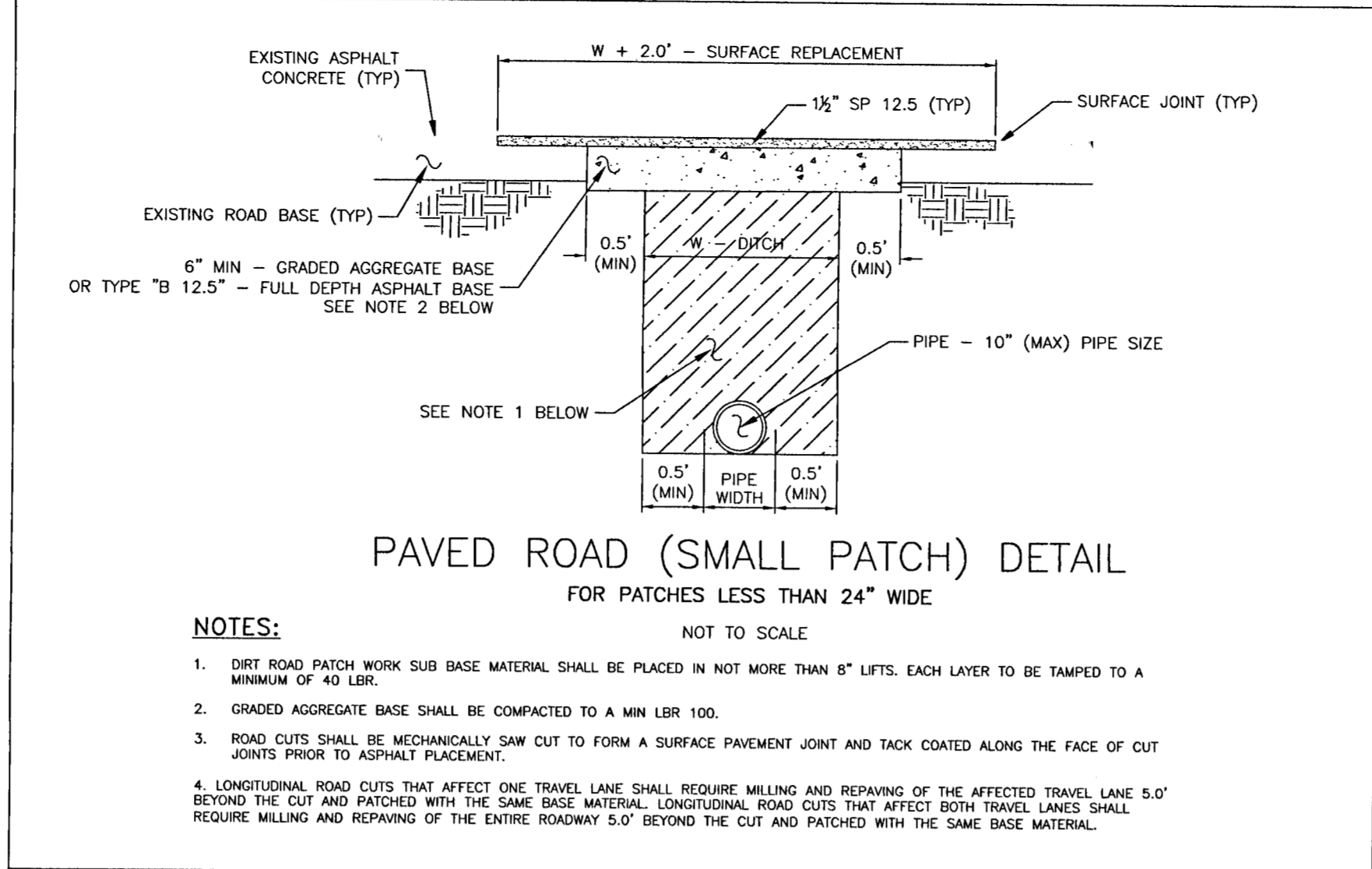
**STREET SIGN DETAIL**  
NTS

NOTE: STREET SIGN AT INTERSECTION OF FOWLER AVENUE AND AVELLANAS DRIVE TO HAVE CO-MOUNTED NO OUTLET (W14-2A) SIGN.

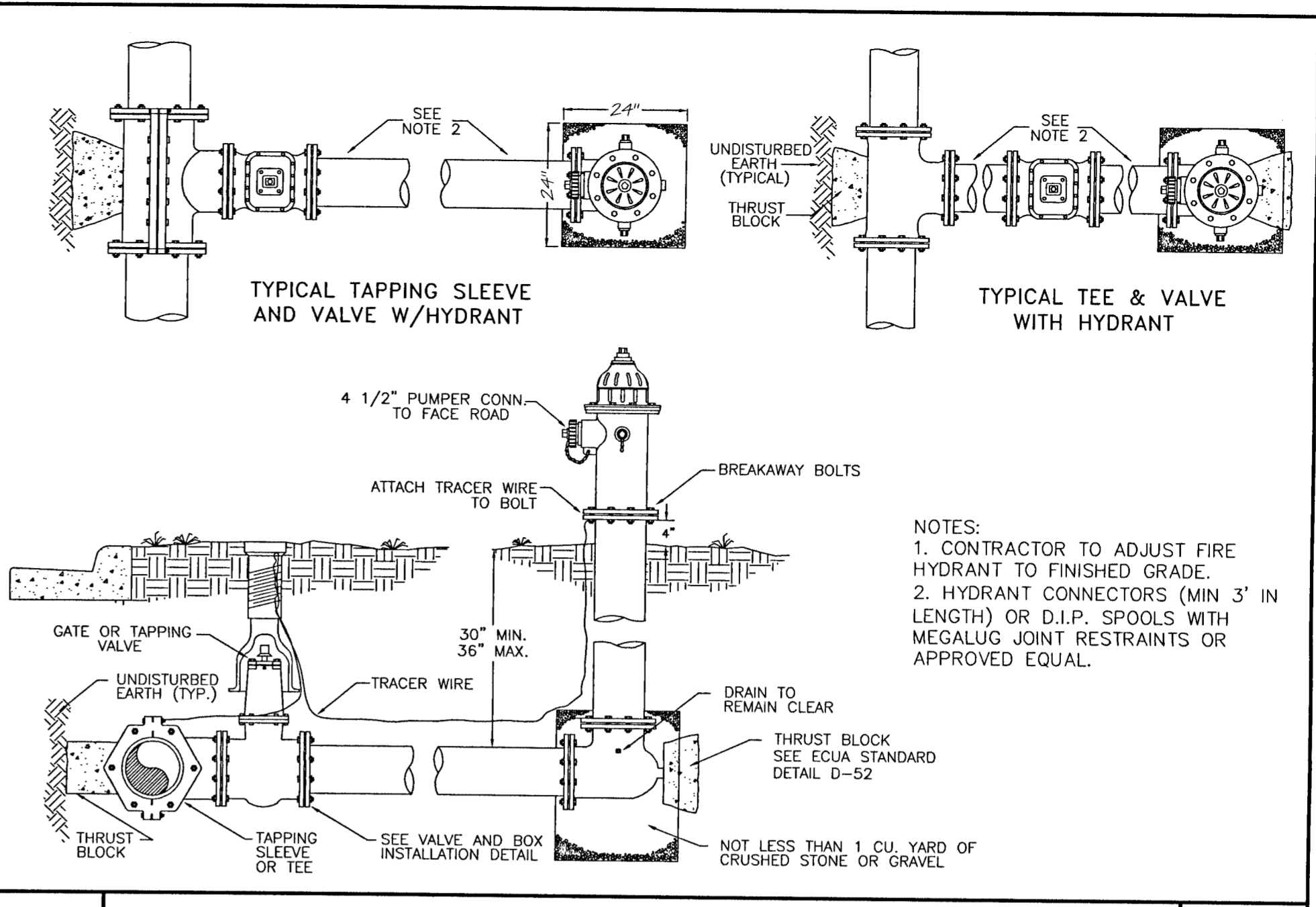
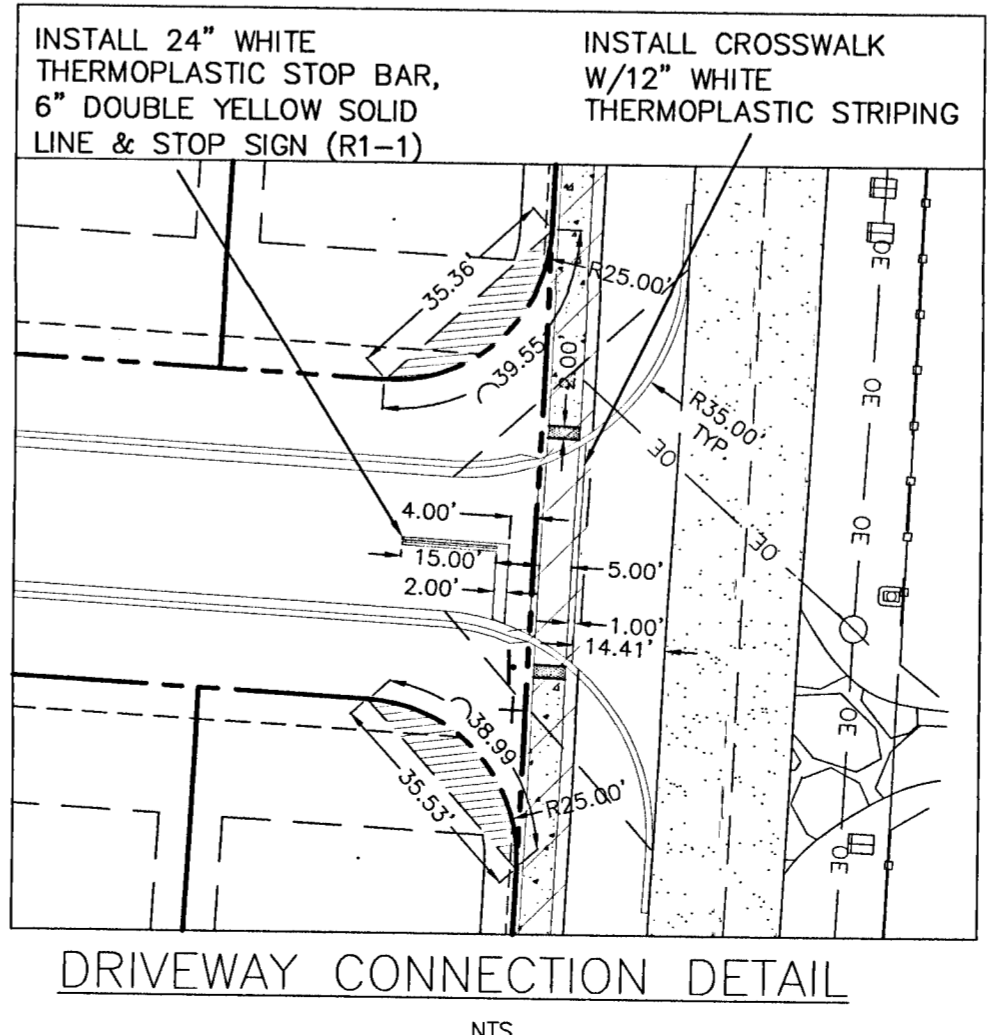
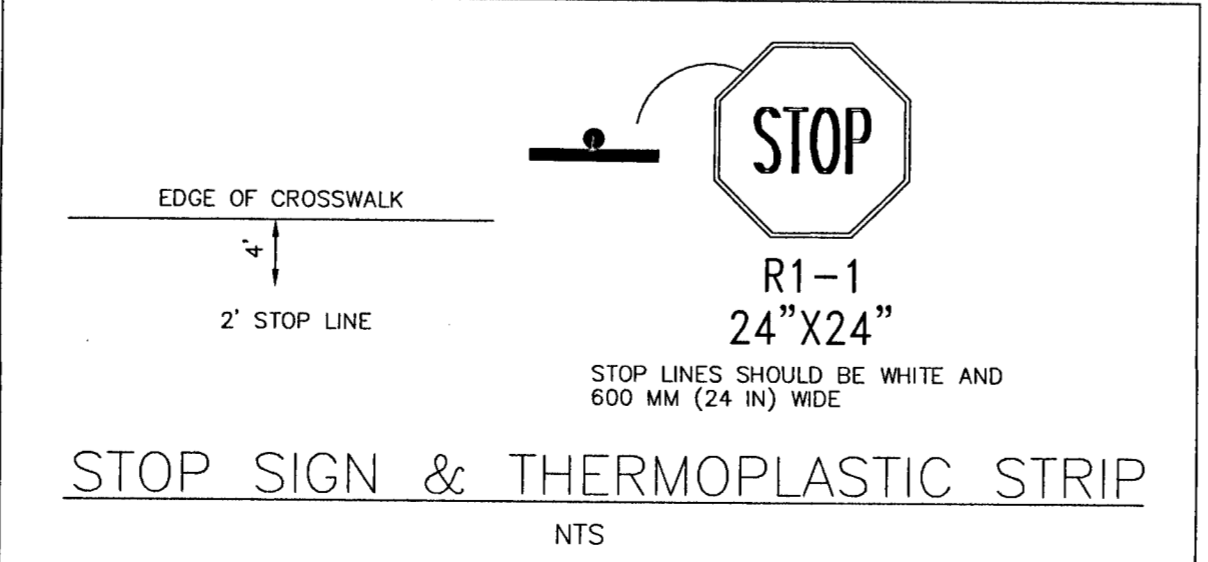
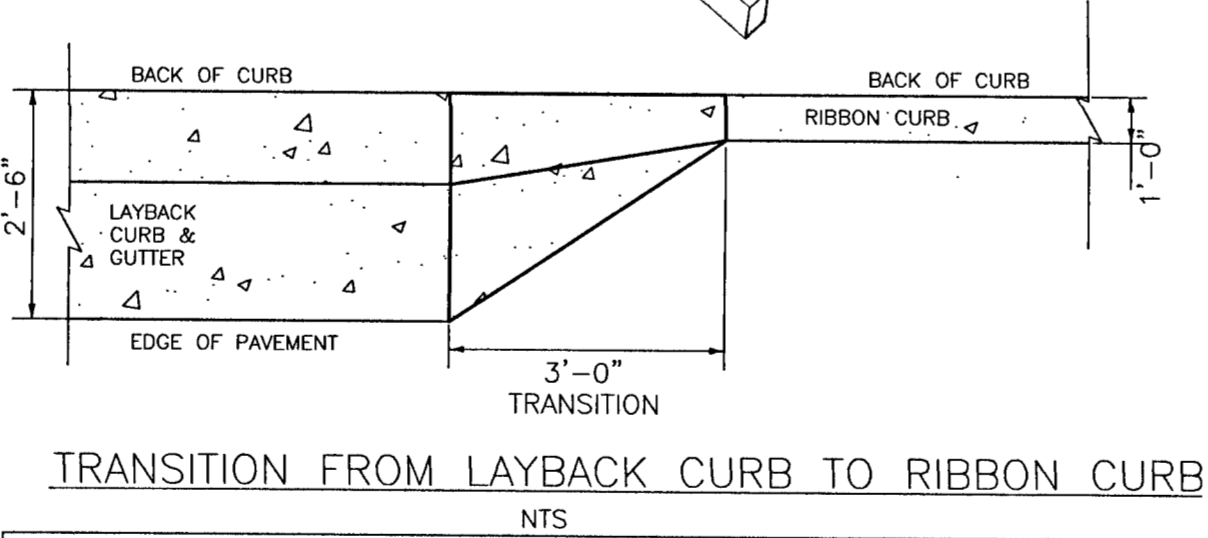
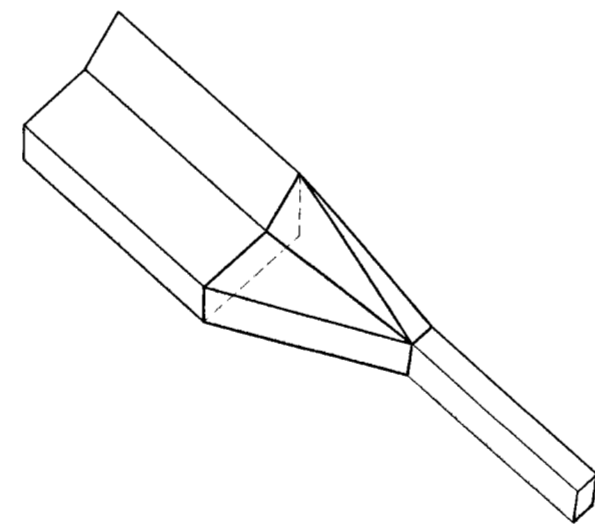
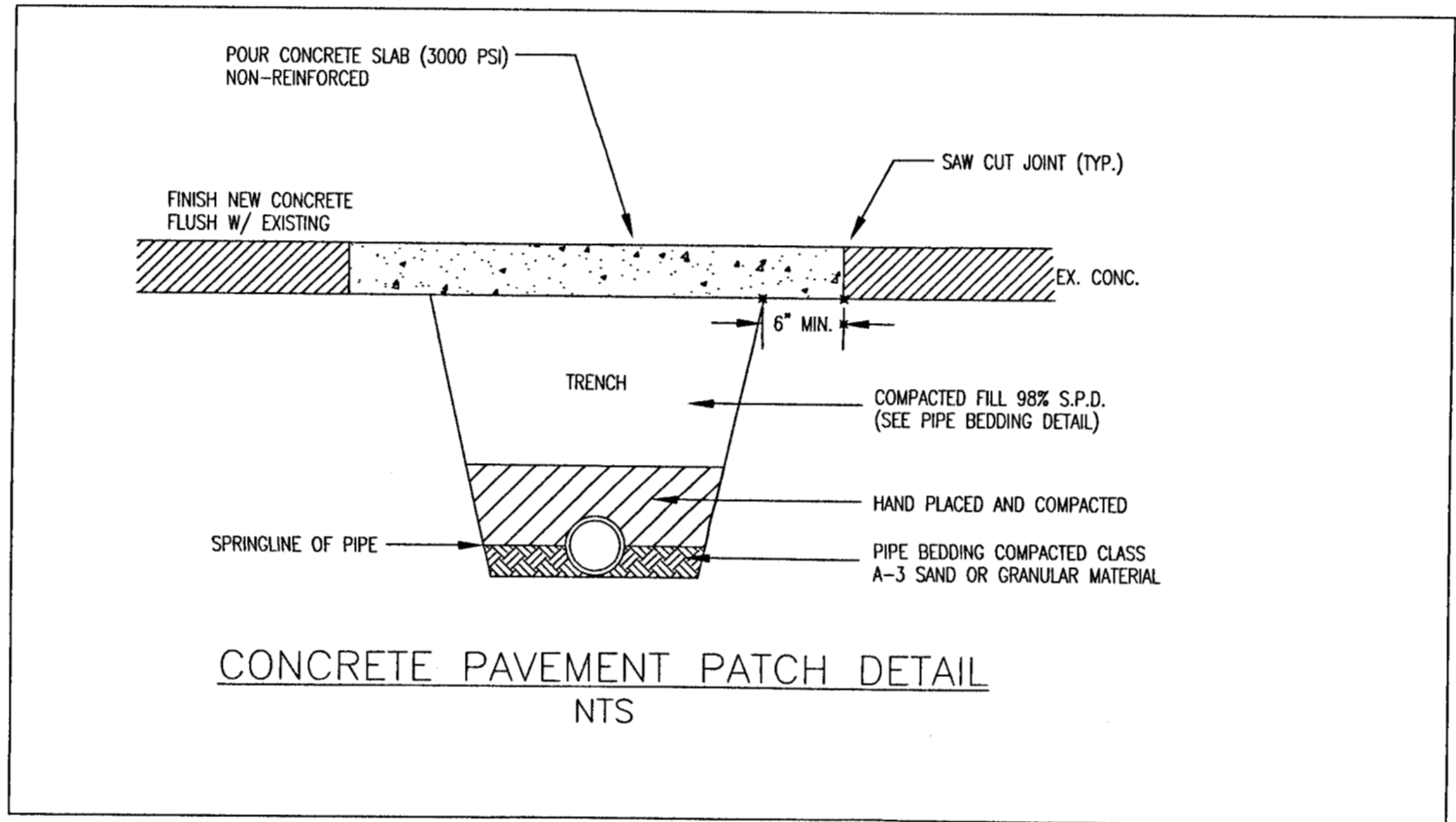


A	B	C	D	E	F	G	H	J	K	L	M	N
24	6	0.375(0.375)	1.5	3	3B	1.852(3.242)	1.625(9.305)	4.5	1.5			
36	8	0.375(0.375)	2	4	4C	2.246(5.402)	2.25(15.608)	6	1.5			

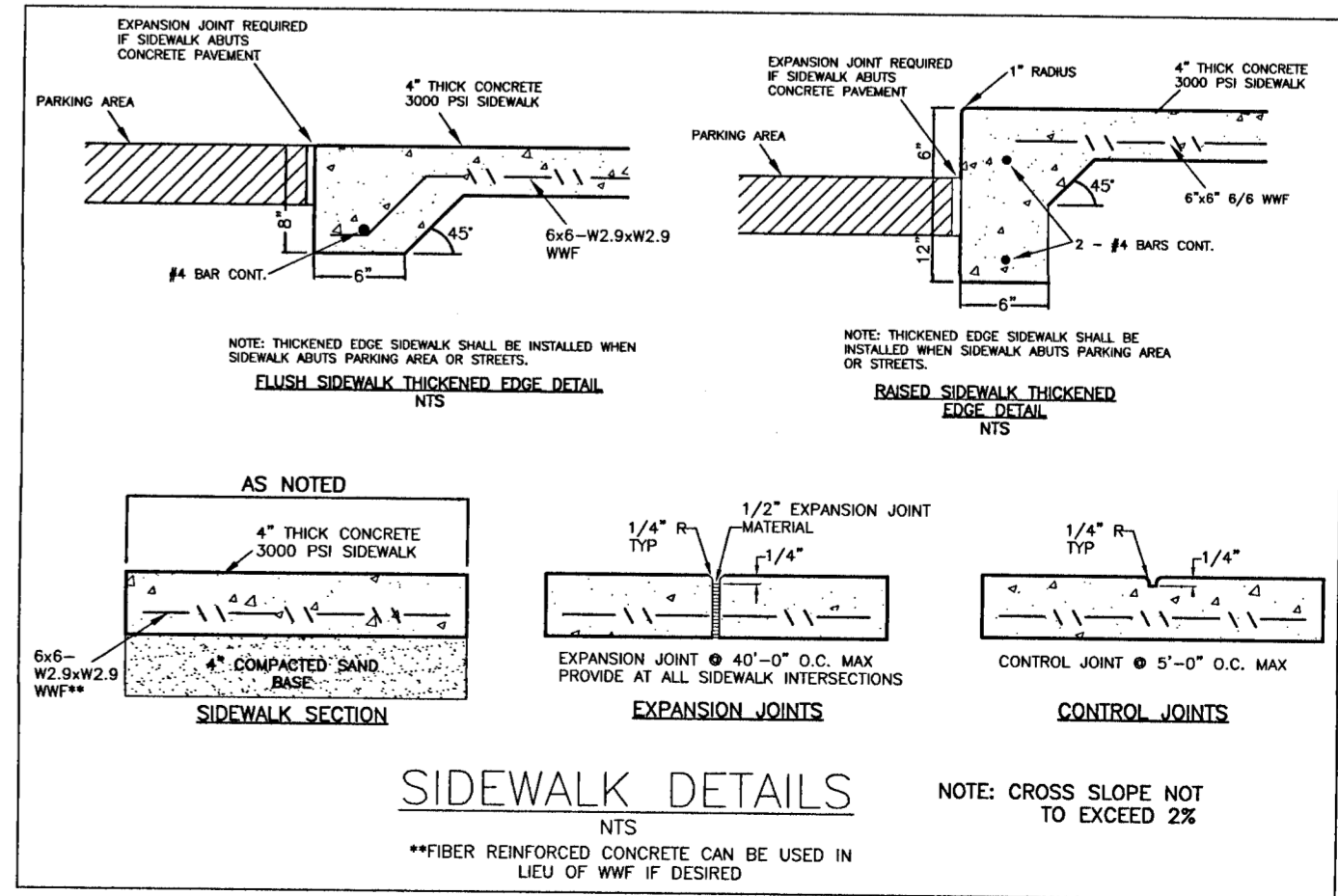
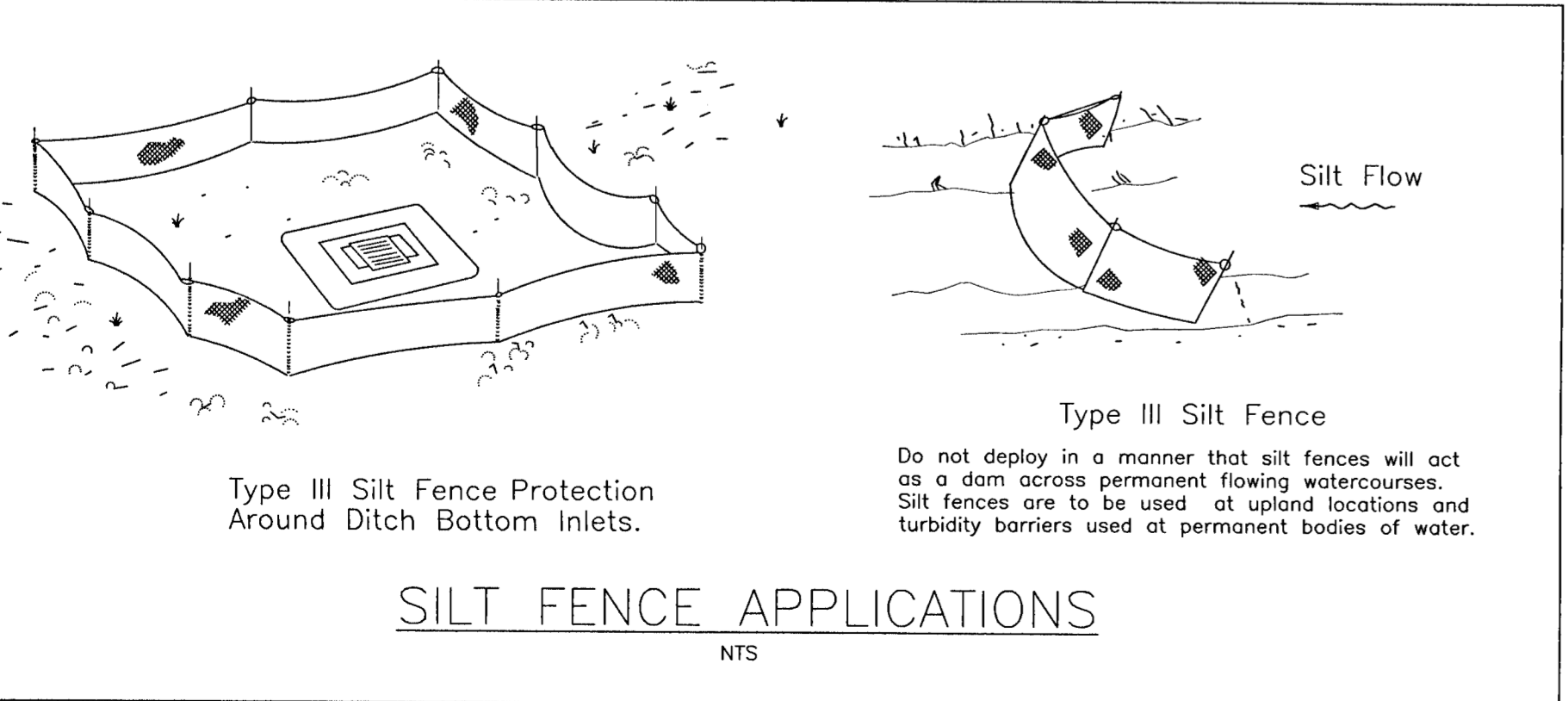
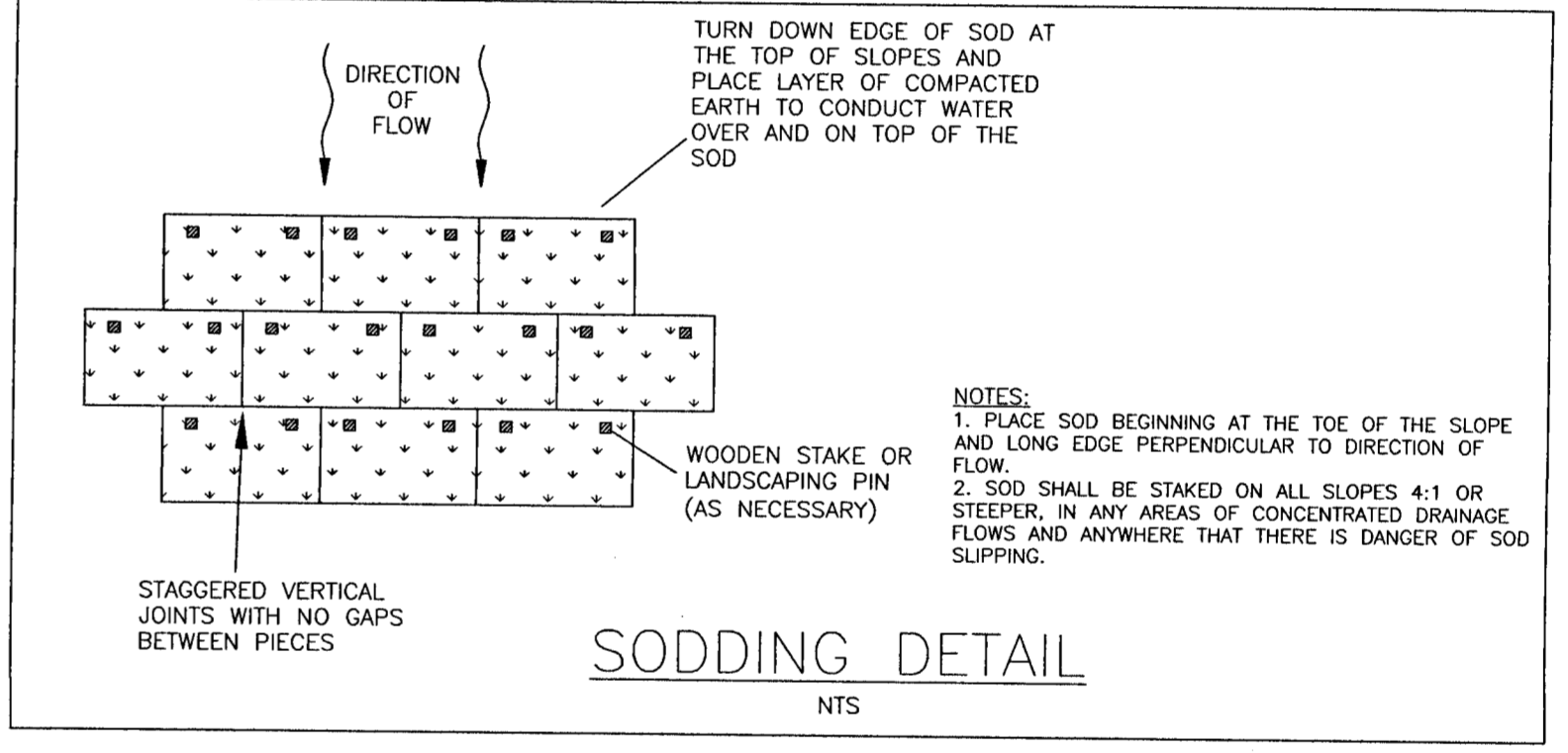
COLORS: LEGEND BORDER - BLACK  
BACKGROUND - YELLOW (RETROREFLECTIVE)



**PAVED ROAD (SMALL PATCH) DETAIL**  
FOR PATCHES LESS THAN 24" WIDE  
NOT TO SCALE



**TYPICAL FIRE HYDRANT INSTALLATION: TAPPING SLEEVE & VALVE and TEE CONNECTION**  
N.T.S.



REVISIONS

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**CONSTRUCTION PLANS FOR AVELLANAS ESTATES**  
CONSTRUCTION DETAILS  
FLORIDA  
ESCAMBIA COUNTY

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DESIGNED BY: TH  
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PROJECT NO: 19-013  
SHEET: C17