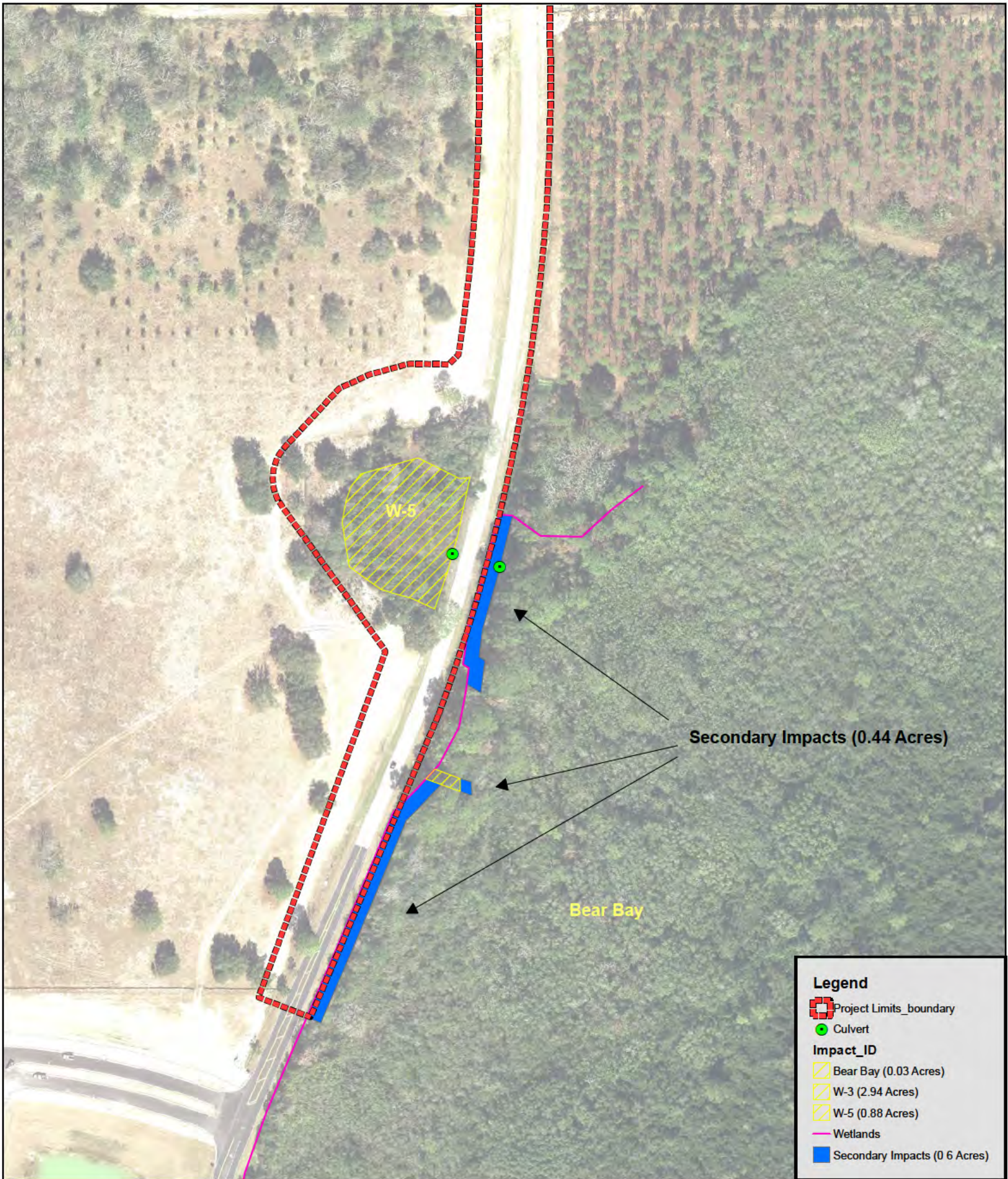


CR 545 Widening Project
 Orange County, Florida
 Figure 1
 Location Map

0 0.15 0.3 0.6 Miles



Project #:110-67
 Produced By:LPM
 Date: 6/16/2016



Legend

- Project Limits_boundary
- Culvert
- Impact_ID**
- Bear Bay (0.03 Acres)
- W-3 (2.94 Acres)
- W-5 (0.88 Acres)
- Wetlands
- Secondary Impacts (0.6 Acres)

CR 545 Widening
 Orange County, Florida
 Figure 9
 Wetland Impact Map

230
 Feet
 Project #:110-74
 Produced By: MEC
 Date: 7/4/2017

N

SHOP DRAWINGS TO BE SUBMITTED TO:

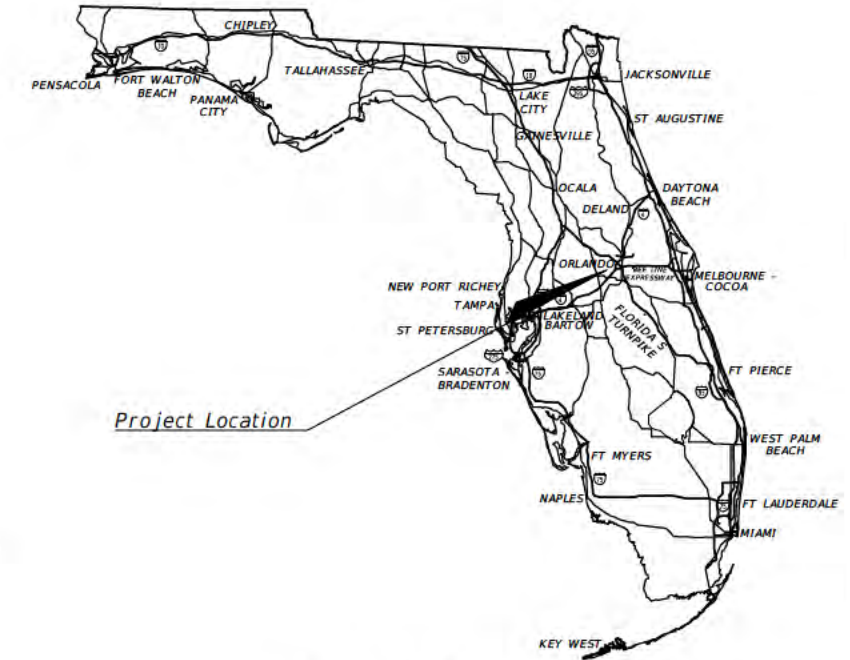
RYAN L VERDEL, P.E.
 VANASSE HANGEN BRUSTLIN, INC.
 225 E ROBINSON STREET, SUITE 300
 ORLANDO, FL 32801

PLANS PREPARED FOR

DR Horton, Inc.
 5850 T G Lee Boulevard, Suite 600
 Orlando, FL 32822
 (407) 850-5200

ORANGE COUNTY, FLORIDA

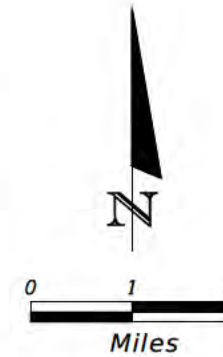
**AVALON ROAD (CR545)
 SEGMENT 4**



INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	DRAINAGE MAP
3-6	TYPICAL SECTION
7	GENERAL NOTES
8	PROJECT LAYOUT SHEET
9-19	ROADWAY PLAN & PROFILE
20	FLAMINGO CROSSINGS INTERSECTION LAYOUT
21-48	CROSS SECTIONS
49	STORMWATER POLLUTION PREVENTION PLAN
50	EROSION & SEDIMENT CONTROL DETAILS
51	POND GRADING PLAN AND DETAILS
52	POND CROSS SECTIONS
53	TEMPORARY TRAFFIC CONTROL PLANS
54-64	UTILITY ADJUSTMENTS
65-67	PLAN & PROFILE - WATERMAIN
68-72	OCU NOTES & DETAILS
GS-1 - GS-2	ROADWAY SOIL SURVEY
S-1	SIGNING AND PAVEMENT MARKING GENERAL NOTES
S-2 - S-12	SIGNING AND PAVEMENT MARKING PLANS

ROADWAY PLANS



Begin Avalon Road (CR545) Segment 4
 STA. 251+47.54

End Avalon Road (CR545) Segment 4
 STA. 295+15.76

PLANS PREPARED BY



Engineer
Vanasse Hangen Brustlin, Inc.
 Transportation, Land Development,
 Environmental Services
 225 E Robinson Street, Suite 300
 Orlando, FL 32801 (407)839-4006
 Certificate of Authorization # 3932

Surveyor
McIntosh Associates, Inc.
 2200 Park Avenue North
 Winter Park, FL 32789
 (407)664-4068

Environmental
Bio-Tech Consulting, Inc.
 2002 East Robinson Street
 Orlando, FL 32803
 (407)894-5969

Geotechnical
**Universal Engineering
 Sciences, Inc.**
 3532 Maggie Blvd
 Orlando, FL 32811
 (407)894-5969

NOTE THE SCALE OF THESE PLANS MAY
 HAVE CHANGED DUE TO REPRODUCTION

**100% PLAN SUBMITTAL
 DATE: Aug 5, 2016**

GOVERNING STANDARDS AND SPECIFICATIONS
 Florida Department of Transportation, JULY 2016-17
 Design Standards and revised Index Drawings as
 appended herein, and JULY 2016-17
 Standard Specifications for Road and Bridge
 Construction, as amended by Contract Documents

For Design Standards click on the "Design
 Standards" link at the following web site
<http://www.dot.state.fl.us/rddesign/>

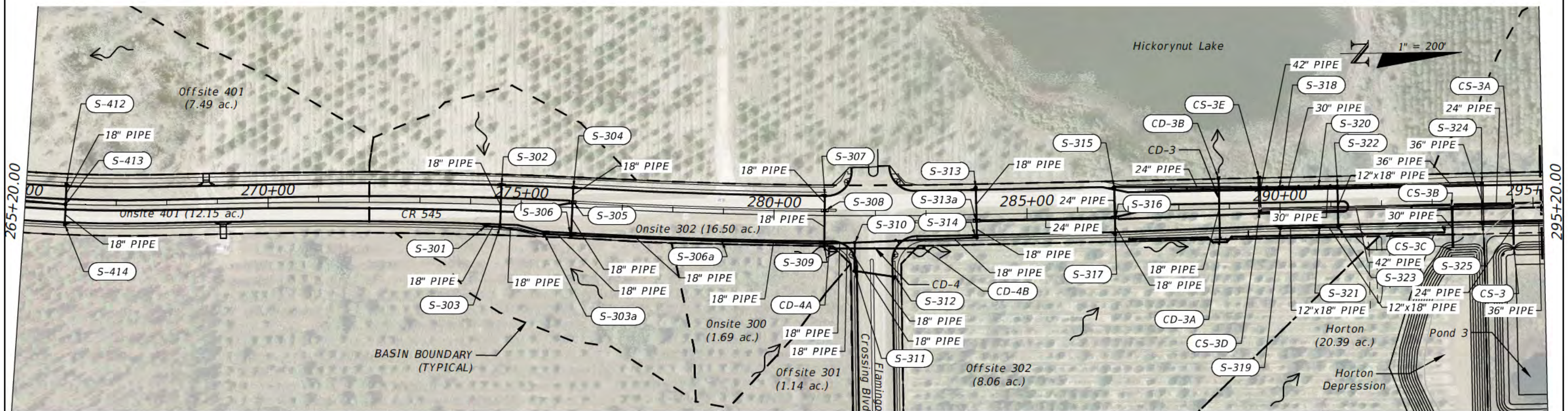
For the Standard Specifications for Road and
 Bridge Construction click on the "Specifications" link
 at the following web site
<http://www.dot.state.fl.us/specificationsoffice/>

PROJECT LENGTH IS BASED ON R OF SURVEY

LENGTH OF PROJECT		
	LINEAR FEET	MILES
ROADWAY	4,368.22	0.827
BRIDGES		
NET LENGTH OF PROJECT	4,368.22	0.827
EXCEPTIONS		
GROSS LENGTH OF PROJECT	4,368.22	0.827

ROADWAY PLANS	
ENGINEER OF RECORD	RYAN L VERDEL, P.E.
P.E. NO.	71478
DRAINAGE PLANS	
ENGINEER OF RECORD	BRUCE DOIG, P.E.
P.E. NO.	61018
SIGNING & PAVEMENT MARKING PLANS	
ENGINEER OF RECORD	KATHRYN L LEE, P.E.
P.E. NO.	62420

SHEET
 NO.
1



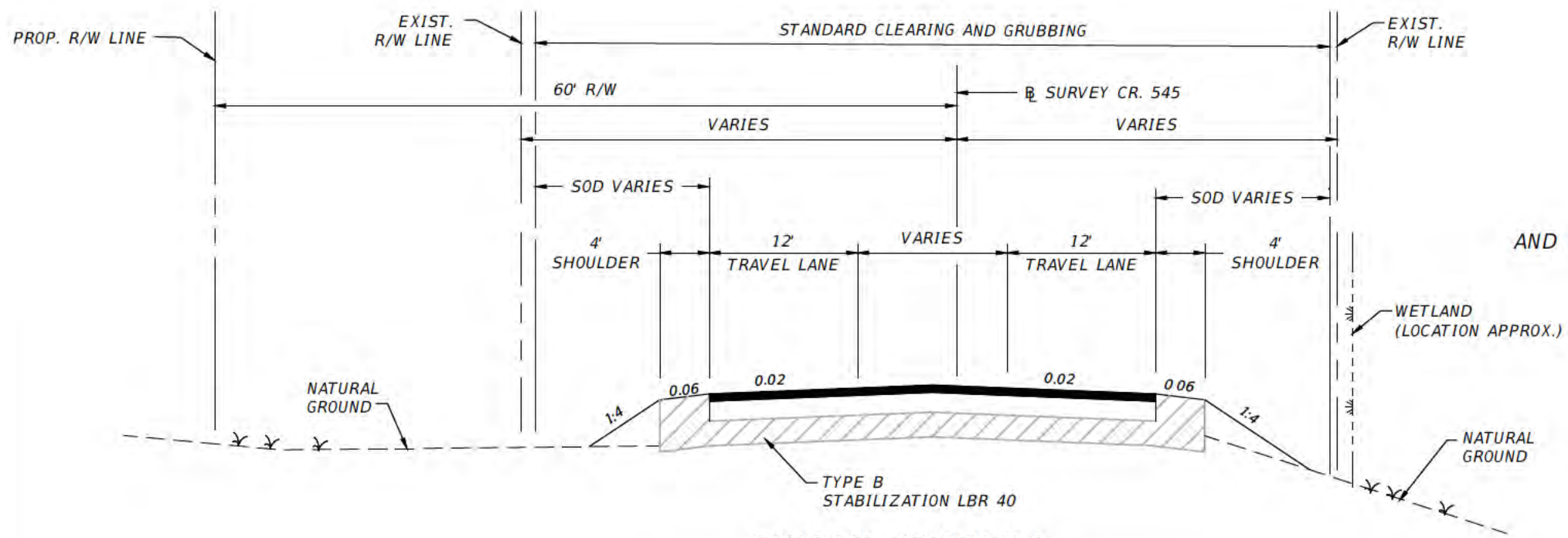
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION


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 Certificate of Authorization # 3932
 Bruce Doig, P.E.
 PE # 61018

**AVALON ROAD (CR545)
SEGMENT 4**

DRAINAGE MAP

SHEET NO
2



NEW CONSTRUCTION
 12 SOIL CEMENT (300 PSI.)
 TYPE SP STRUCTURAL COURSE (TRAFFIC C) (2.5")
 AND FRICTION COURSE FC-12.5 (TRAFFIC C) (1.5") PG 76-22 (PMA)

TYPICAL SECTION 1
 STA. 251+47.53 TO STA. 256+97.54

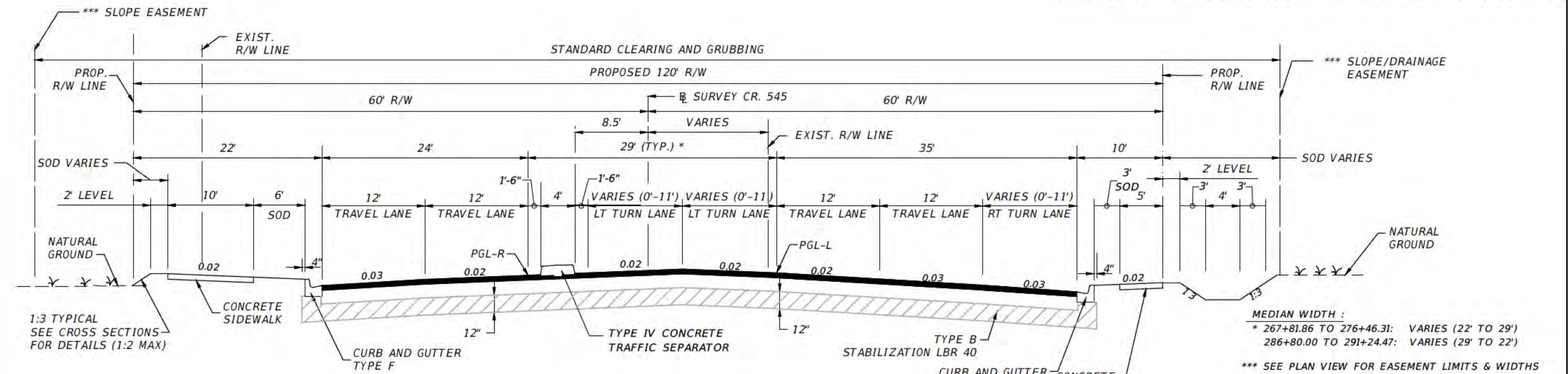
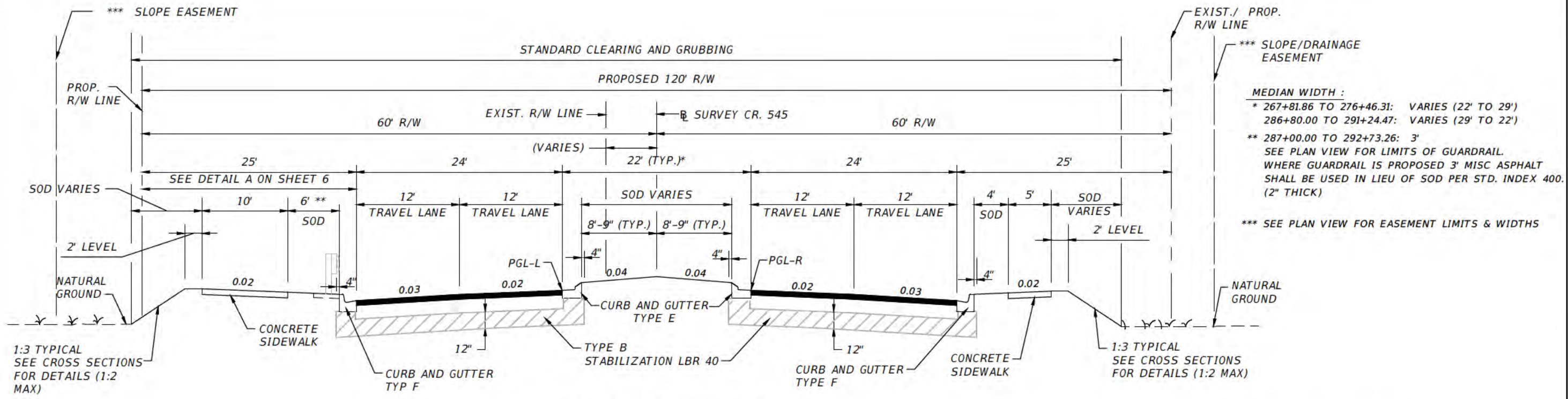
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

vhb
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 Ryan L. Verdel, P.E.
 PE # 71478

**AVALON ROAD (CR545)
 SEGMENT 4**

TYPICAL SECTIONS

SHEET
 NO
 3



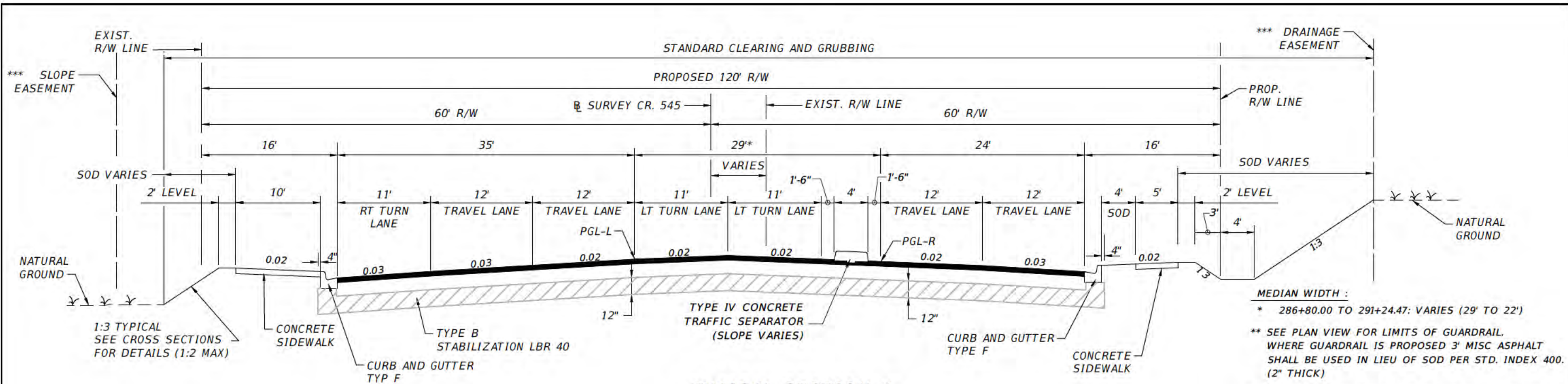
REVISIONS			
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**AVALON ROAD (CR545)
 SEGMENT 4**

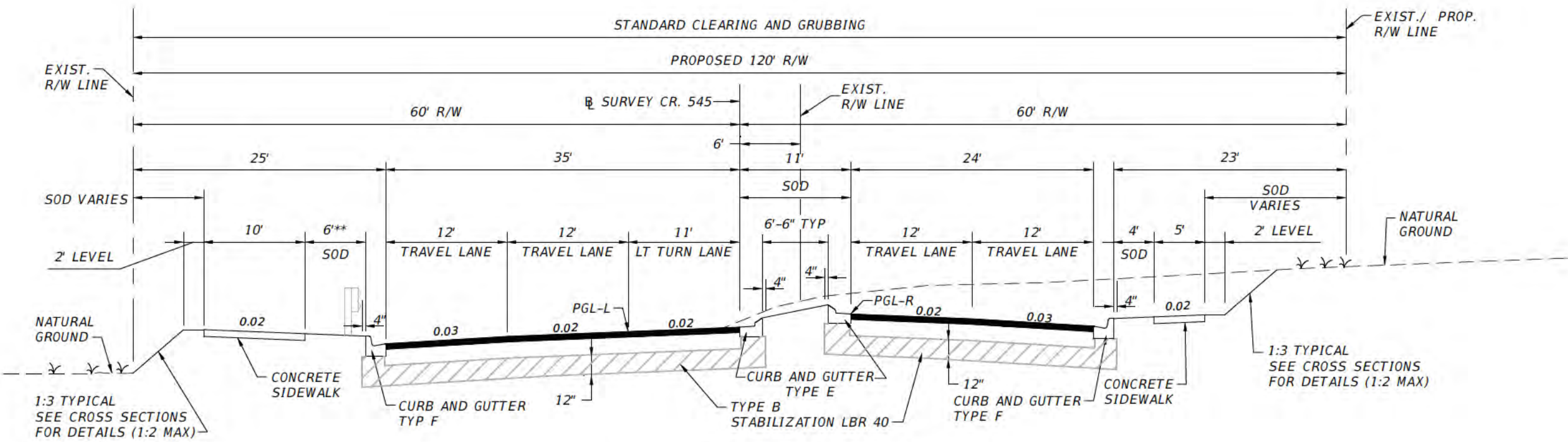
TYPICAL SECTIONS

SHEET NO
4



TYPICAL SECTION 4
STA. 282+00.00 TO STA. 287+80.00

NEW CONSTRUCTION
 12 SOIL CEMENT (300 PSI.)
 TYPE SP STRUCTURAL COURSE (TRAFFIC C) (2.5")
 AND FRICTION COURSE FC-12.5 (TRAFFIC C) (1.5") PG 76-22 (PMA)



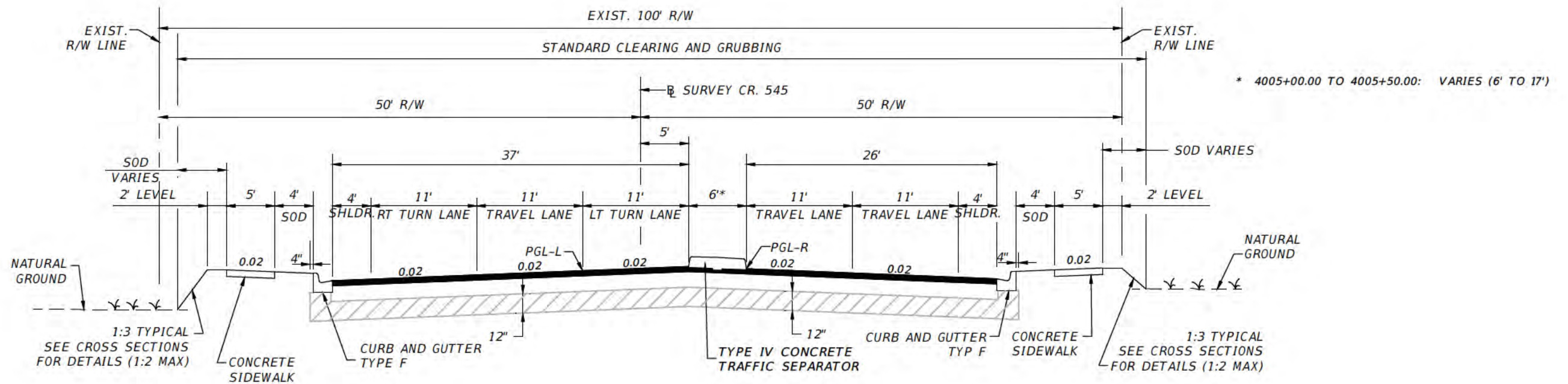
TYPICAL SECTION 5
STA. 292+00.00 TO STA. 295+15.76

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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 PE # 71478

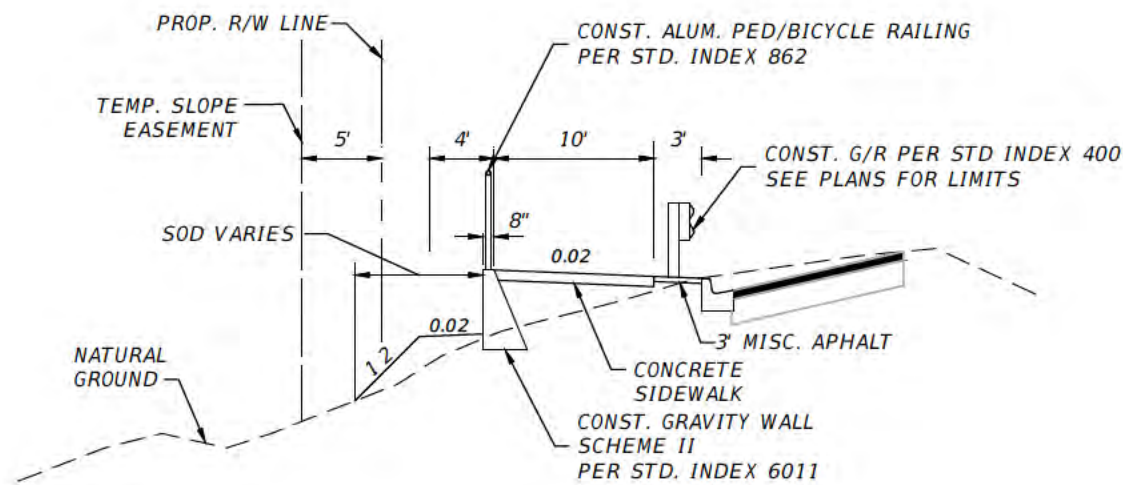
AVALON ROAD (CR545)
SEGMENT 4

TYPICAL SECTIONS



TYPICAL SECTION 6 (FLAMINGO CROSSING BLVD.)
STA. 4001+04.20 TO STA. 4008+00.00

NEW CONSTRUCTION
 12 SOIL CEMENT (300 PSI.)
 TYPE SP STRUCTURAL COURSE (TRAFFIC C) (2.5")
 AND FRICTION COURSE FC-12.5 (TRAFFIC C) (1.5") PG 76-22 (PMA)



GRAVITY WALL DETAIL (DETAIL A)
STA 287+50.00 TO 289+50.00 LT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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 Ryan L. Verdel, P.E.
 PE # 71478

AVALON ROAD (CR545)
SEGMENT 4

TYPICAL SECTIONS

SHEET NO
6

GENERAL NOTES

1. THE BENCHMARK DATUM SHOWN ON THE PLANS ARE BASED ON NAVD 88 VERTICAL DATUM.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH AND CONFORM TO THE MOST STRINGENT REQUIREMENT OF THE PROJECT SPECIFICATIONS, THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (FDOT), AND SUPPLEMENTS THERETO, AND ORANGE COUNTY ROAD CONSTRUCTION SPECIFICATIONS.
3. SUBSURFACE INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FOR USE IN ESTABLISHING DESIGN CRITERIA FOR THE PROJECT. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED AND IS NOT TO BE CONSTRUED AS PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INQUIRE OF THE ENGINEER IF ADDITIONAL INFORMATION IS AVAILABLE, TO MAKE ARRANGEMENTS TO REVIEW SAME PRIOR TO BIDDING, AND TO MAKE HIS OWN DETERMINATION AS TO ALL SUBSURFACE CONDITIONS.
4. ALL PERSONAL PROPERTY, EXCEPT MAILBOXES, WITHIN THE RIGHT-OF-WAY NOT RELOCATED BY THE PROPERTY OWNER SHALL BE REMOVED BY THE CONTRACTOR AS NECESSARY TO CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE PLANS. MAIL BOXES SHALL BE RELOCATED BY THE CONTRACTOR IN ACCORDANCE WITH FDOT STANDARD INDEX NO. 532. PAYMENT WILL BE INCLUDED IN CLEARING & GRUBBING (LS).
5. THE DISPOSAL OF EXCESS EARTHWORK MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. APPROVALS OF DISPOSAL SITES SHALL BE OBTAINED FROM ORANGE COUNTY PRIOR TO DISPOSAL. ALL EXCESS MATERIAL IS THE PROPERTY OF THE CONTRACTOR.
6. ALL EXISTING TREES WITHIN THE RIGHT-OF-WAY ARE TO BE REMOVED AS CLEARING AND GRUBBING UNLESS OTHERWISE DIRECTED.
7. SOD ALL DISTURBED AREAS UNLESS OTHERWISE DIRECTED. SOD SHALL MATCH EXISTING TYPE SOD UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
8. SAW CUT CONCRETE DRIVEWAYS AS REQUIRED FOR CONSTRUCTION.
9. FOR LIMITS OF STABILIZATION AT TURNOUTS AND DRIVEWAY CONNECTIONS SEE FDOT STANDARD INDEX NO. 515 AND TYPICAL SECTIONS FOR DEPTH AND LBR.
10. DRIVEWAY LOCATIONS AND WIDTHS SHOWN ARE APPROXIMATE AND MAY BE ADJUSTED AS NECESSARY AS DIRECTED BY THE ENGINEER.
11. THE CONTRACTOR SHALL PERFORM HIS WORK IN ACCORDANCE WITH REQUIREMENTS OF THE VARIOUS PERMITS INCLUDED IN THE BID SPECIFICATIONS. PAYMENT IS INCLUDED IN THE BID PRICE FOR ITEM NO. 104-14, "PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION (LS)", EXCLUDING ITEMS SPECIFIED ELSEWHERE. ENVIRONMENTAL CONTROLS SHALL BE USED AT LOCATIONS DESIGNATED IN THE PLANS AND/OR DESIGNATED BY THE ENGINEER.
12. ALL BUILDINGS WITHIN THE RIGHT-OF-WAY SHALL BE REMOVED, UNLESS OTHERWISE DIRECTED.
13. FOR PEDESTRIAN CURB CUT RAMP DETAILS, REFER TO FDOT STANDARD INDEX 304. NOMENCLATURE SHOWN IN THE PLANS REFERS TO THE RAMP TYPES IDENTIFIED IN INDEX 304.
14. FOR GUARDRAIL APPLICATIONS OVER DRAINAGE INLETS SEE STD. INDEX 400 FOR SPECIAL POSTS LOCATIONS.
15. THE CONTRACTOR SHALL RELOCATE EXISTING TRAFFIC SIGNS AS REQUIRED DURING CONSTRUCTION. SIGNS, WHICH ARE DAMAGED DURING CONSTRUCTION, SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE COUNTY. THE CONTRACTOR SHALL REMOVE AND STORE EXISTING TRAFFIC SIGNS AS SHOWN ON THE CONSTRUCTION PLANS. THE CONTRACTOR SHALL RE-INSTALL THE STORED SIGNS AS SHOWN ON THE SIGNING PLANS OR AS DIRECTED BY THE ENGINEER. SIGNS NOT TO BE RE-INSTALLED SHALL BE DELIVERED TO ORANGE COUNTY'S TRAFFIC SIGN SHOP. DAMAGED SIGNS SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO ORANGE COUNTY. COST OF RELOCATION, MAINTENANCE, REMOVAL AND LEFTOVER SHALL BE INCLUDED UNDER MAINTENANCE OF TRAFFIC.

16. ALL EXCAVATIONS SHALL BE REQUIRED TO CONFORM TO THE PROVISION OF PART IV OF CHAPTER 553.60, F.S., ALSO KNOWN AS THE "TRENCH SAFETY ACT", TO PROTECT EXISTING PAVEMENT, STRUCTURES, FOUNDATIONS, AND CONSTRUCTION PERSONNEL DURING CONSTRUCTION OF THE PROJECT.
17. CONTRACTOR IS TO MAINTAIN UNINTERRUPTED ACCESS TO ALL DRIVEWAYS AND SIDE STREETS AT ALL TIMES AND IS TO NOTIFY PROPERTY OWNERS 5 DAYS PRIOR TO CONSTRUCTION.
18. CONTRACTOR TO VIDEOTAPE AND PHOTOGRAPH PROJECT SITE PRIOR TO CONSTRUCTION AND GIVE A COPY TO THE COUNTY.
19. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION EXISTING. COST TO BE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION WILL BE ALLOWED.
20. ALL EXISTING FENCE WITHIN THE LIMITS OF CONSTRUCTION IS TO BE RELOCATED TO THE PROPOSED R/W UNLESS OTHERWISE NOTED.
21. PROVIDE PLASTIC EROSION MAT FOR SLOPES STEEPER THAT 1:3 FOR PERMANENT SLOPE PROTECTION. PAYMENT WILL BE INCLUDED IN ITEM NO. 571-1, PLASTIC EROSION MAT.
22. CONTRACTOR SHALL REFER TO THE COUNTY ROAD 545 IMPROVEMENTS FROM SCHOFIELD RD. TO VILLAGE H LOOP ROAD AND THE COUNTY ROAD 545 IMPROVEMENTS ADDITIONAL ROADWAY BORING AT INTERSECTING SIDE STREETS GEOTECHNICAL REPORTS ACCOMPANYING THESE PLANS FOR COMPLETE SOIL BORING INFORMATION.

SURVEY NOTES


1. ALL P.R.M.'s (IRONS AND MONUMENTS) SHOWN ON PLANS, OR FOUND, SHALL BE PRESERVED AT NO ADDITIONAL COST TO THE OWNER.
2. ANY U.S.C.&G.S. MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED IF IN DANGER OF DAMAGE, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, OR:


STATE GEODETIC ADVISOR, RONNIE TAYLOR
SUITE 309
3900 COMMONWEALTH BOULEVARD
TALLAHASSEE, FL
(850) 245-2606
3. PUBLIC LAND CORNERS WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED OR DISTURBED, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE COUNTY SURVEYOR, WITHOUT DELAY, BY TELEPHONE. THE CONTRACTOR SHALL PROVIDE WRITTEN FOLLOW UP CONFIRMATION WITHIN 48 HOURS OF TELEPHONE NOTIFICATION.
4. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO ORANGE COUNTY PUBLIC WORKS ENGINEERING A SET OF FIELD NOTES VERIFYING THE BENCHMARK ELEVATIONS AND THE REFERENCE POINT TIES SHOWN ON THE PROJECT LAYOUT SHEET, AND/OR A SET OF FIELD NOTES FOR ALL ADDITIONAL BENCHMARK AND REFERENCE POINT TIES PROPOSED TO BE USED IN CONSTRUCTING THE PROJECT WITH THEIR LOCATION, DESCRIPTION AND ELEVATION, BASED ON ORANGE COUNTY DATUM. ALL SUBMITTALS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA.
5. WITHIN 21 CALENDAR DAYS AFTER NOTICE TO PROCEED, THE CONTRACTOR SHALL STAKE THE RIGHT-OF-WAY AT 100 FOOT INTERVALS AND AT RIGHT-OF-WAY BREAKS WITH STATIONING SHOWN ON THE STAKES. NO INVOICE FOR PAYMENT WILL BE PROCESSED UNTIL THE RIGHT-OF-WAY HAS BEEN STAKED TO THE SATISFACTION OF THE ENGINEER. PAYMENT IS INCLUDED IN THE PRICE BID FOR ITEM NO. 101-1, "MOBILIZATION (LS)".

DRAINAGE NOTES

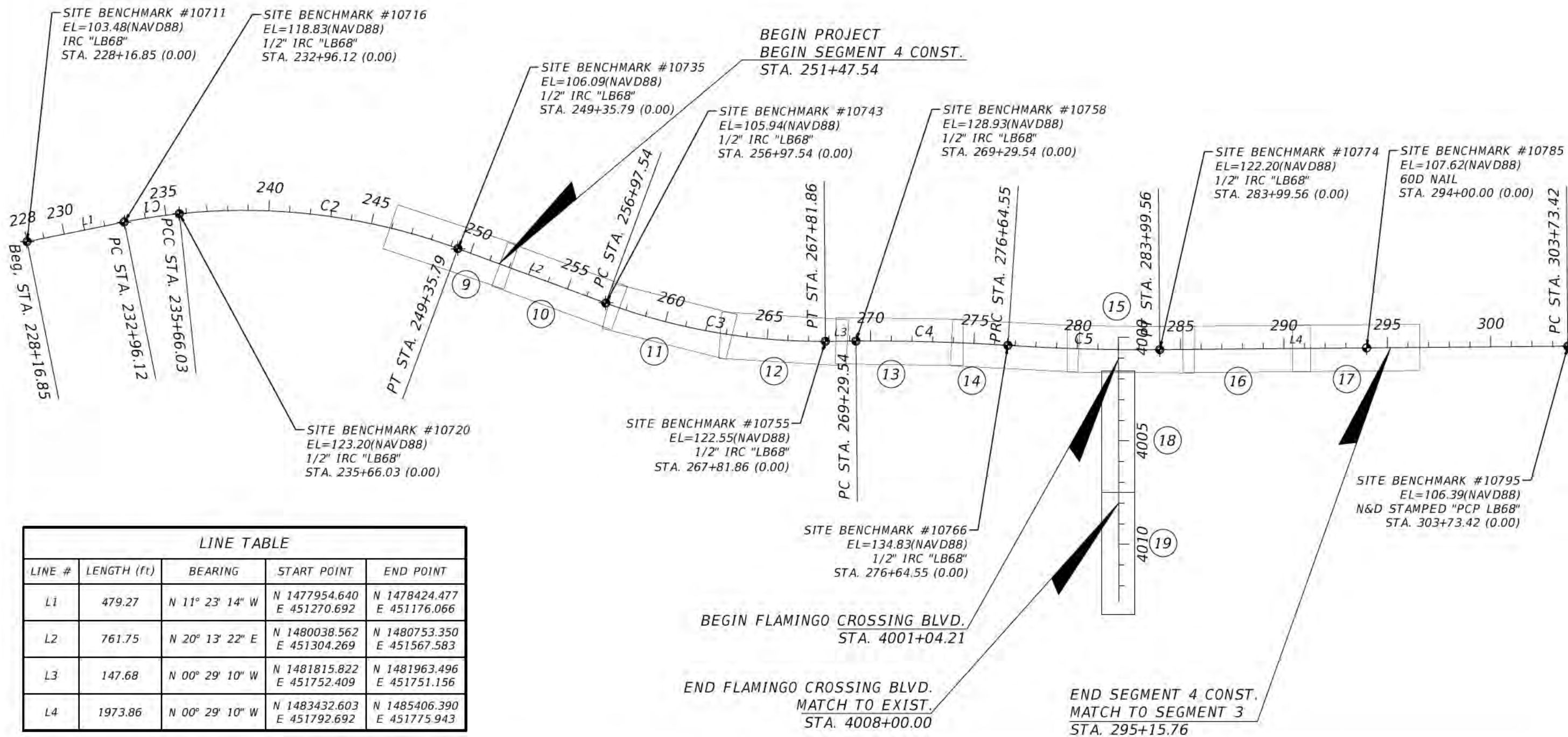
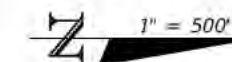
1. ALL DRAINAGE PIPES SHALL BE STEEL REINFORCED CONCRETE PIPE, CLASS III, UNLESS OTHERWISE NOTED.
2. MEASUREMENT OF DRAINAGE PIPE FOR PAYMENT SHALL BE DETERMINED FROM ACTUAL LENGTHS INSTALLED.
3. ALL EXISTING DRAINAGE STRUCTURES AND PIPES TO BE ABANDONED WITHIN THE RIGHT-OF-WAY SHALL BE REMOVED, UNLESS OTHERWISE DIRECTED. ALL EXISTING SIDEWALKS WITHIN THE R.O.W SHALL BE REMOVED, UNLESS OTHERWISE DIRECTED.
4. ALL INLET/MANHOLE - PIPE JOINTS SHALL BE FILLED WITH NON-SHRINK GROUT, COVERED WITH AN ASPHALTIC MASTIC COATING, AND WRAPPED WITH A FILTER FABRIC MATERIAL PER SECTION 13.03.03 OF THE ORANGE COUNTY ROAD CONSTRUCTION SPECIFICATIONS. ALL PIPE JOINTS IN THIS PROJECT SHALL BE WRAPPED PER FDOT STANDARD INDEX NO. 280 OR AS DIRECTED BY THE ENGINEER. COST TO BE INCLUDED IN THE COST OF THE PIPE CULVERT.
5. ALL CURB INLETS, DITCH BOTTOM INLETS, AND MANHOLES SHALL HAVE TRAFFIC BEARING FRAMES AND COVERS OR GRATES MEETING HS-20 LOADING REQUIREMENTS.
6. CHANGES OF PIPE INVERTS NOT EXCEEDING PLUS OR MINUS 1 FOOT WILL NOT BE CONSIDERED AS A BASIS FOR ADDITIONAL COMPENSATION FOR THE PERTINENT PIPE BID ITEM OR FOR MODIFICATION OF PRECAST STRUCTURES.
7. DRAINAGE STRUCTURE INLET ELEVATIONS REFER TO THE ELEVATION AT THE EDGE OF PAVEMENT FOR CURB INLETS AND THE RIM OR GRATE ELEVATION FOR MANHOLES AND DITCH BOTTOM INLETS. ELEVATIONS FOR THE RETENTION POND CONTROL STRUCTURES ARE SHOWN ON THE CONTROL STRUCTURE DETAIL SHEETS.
8. STATION AND OFFSET FOR CURB INLETS REFERS TO THE LOCATION IDENTIFIED AS "C/L INLET" IN FDOT STANDARD INDEX 210 (CENTER OF MANHOLE). STATION AND OFFSET FOR MITERED END SECTIONS REFERS TO THE LOCATION IDENTIFIED AS "LOCATION REFERENCE" IN FDOT STANDARD INDEXES 272 AND 273. STATION AND OFFSET FOR MANHOLES AND DITCH BOTTOM INLETS REFERS TO THE CENTER OF THE STRUCTURE.

LEGEND

- SE = SLOPE EASEMENT
- TCE = TEMPORARY CONSTRUCTION EASEMENT
- DE = DRAINAGE EASEMENT
-  = DETECTABLE WARNING DEVICE
- SHWL = SEASONAL HIGH WATER LEVEL
- OWL = OBSERVED WATER LEVEL

REVISIONS				 Engineers Scientists Planners Designers 225 E. Robinson Street, Suite 300 Orlando, FL 32801 (407)839-4006 Certificate of Authorization # 3932 Ryan L. Verdell, P.E. PE # 71478	AVALON ROAD (CR545) SEGMENT 4	GENERAL NOTES	SHEET NO 7
DATE	DESCRIPTION	DATE	DESCRIPTION				

CURVE DATA C1	CURVE DATA C2	CURVE DATA C3	CURVE DATA C4	CURVE DATA C5
PI STA. = 234+31.18	PI STA. = 242+63.06	PI STA. = 262+45.68	PI STA. = 272+97.21	PI STA. = 280+32.22
DELTA = 5.4496	DELTA = 26.1604	DELTA = 20.7090	DELTA = 4.2113	DELTA = 4.2113
D = 2°01'09"	D = 1°54'35"	D = 1°54'35"	D = 0°34'23"	D = 0°34'23"
T = 135.06	T = 697.03	T = 548.14	T = 367.67	T = 367.67
L = 269.91	L = 1369.76	L = 1084.32	L = 735.01	L = 735.01
R = 2837.79	R = 3000.00	R = 3000.00	R = 10000.00	R = 10000.00
PC STA. = 232+96.12	PC STA. = 235+66.03	PC STA. = 256+97.54	PC STA. = 269+29.54	PC STA. = 276+64.55
PT STA. = 235+66.03	PT STA. = 249+35.79	PT STA. = 267+81.86	PT STA. = 276+64.55	PT STA. = 283+99.56
e = NC	e = NC	e = NC	e = NC	e = NC



LINE #	LENGTH (ft)	BEARING	START POINT	END POINT
L1	479.27	N 11° 23' 14" W	N 1477954.640 E 451270.692	N 1478424.477 E 451176.066
L2	761.75	N 20° 13' 22" E	N 1480038.562 E 451304.269	N 1480753.350 E 451567.583
L3	147.68	N 00° 29' 10" W	N 1481815.822 E 451752.409	N 1481963.496 E 451751.156
L4	1973.86	N 00° 29' 10" W	N 1483432.603 E 451792.692	N 1485406.390 E 451775.943

DATE	DESCRIPTION	DATE	DESCRIPTION

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Planners | Designers
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Orlando, FL 32801 (407)839-4006
Certificate of Authorization # 3932
Ryan L. Verdel, P.E.
PE # 71478

AVALON ROAD (CR545) SEGMENT 4

PROJECT LAYOUT

SHEET NO
8

SWPPP / EROSION CONTROL PLAN

PROJECT NAME: AVALON ROAD (CR 545) DRAINAGE IMPROVEMENTS

I SITE DESCRIPTION:

SITE LOCATED IN ORANGE COUNTY AND BEGINS JUST NORTH OF SPRINGHILL ROAD AND ENDS JUST SOUTH OF SCHOFIELD ROAD.

- a. DESCRIBE THE NATURE OF THE CONSTRUCTION ACTIVITY:
THIS PROPOSED PROJECT INCLUDES ROADWAY RECONSTRUCTION ALONG CR 545 AND ROADWAY IMPROVEMENTS ALONG PHIL RITSON WAY, OLD YMCA ROAD, SEIDEL ROAD, FLAMINGO CROSSING BOULEVARD. CH INCLUDES NEW BRICK PAVERS AND ASPHALT PAVING, NEW CURB AND GUTTER AND AN IMPROVED STORMWATER COLLECTION SYSTEM WITH NEW INLETS AND PIPES.
- b. DESCRIBE THE INTENDED SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:
 1. ALL EROSION CONTROL DEVICES FOR THE PROJECT ARE TO BE INSTALLED PRIOR TO BEGINNING WORK.
 2. INSTALL SILT FENCE AND TURBIDITY WHERE LISTED ON THE EROSION CONTROL PLAN.
 3. CONTRACTOR RESPONSIBLE FOR DEVELOPING A DEWATERING PLAN IF NEEDED.
 4. DEMOLITION AND REMOVAL OF EXISTING PAVEMENT AND SUBBASE. ALL EXISTING BRICK PAVERS WILL BE SAVED FOR RE-INSTALLATION.
 5. INSTALLATION OF ALL STORMWATER AND UTILITY PIPES.
 6. INSTALL SUBBASE FOR ROADWAY STABILIZATION.
 7. INSTALL CURB AND GUTTER ALL THE ROADWAY.
 6. INSTALL BASE FOR ROADWAY STABILIZATION.
 6. INSTALL PAVEMENT AND EXISTING BRICK PAVERS.
 7. CLEAN NEW PIPES AND STRUCTURES AFTER CONSTRUCTION IS COMPLETED.
 8. COVER OR STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE.
 9. REMOVE PERIMETER CONTROLS AFTER AREAS ARE FULLY STABILIZED AND PERMANENT GRASSING IS ESTABLISHED.
- c. THE SOIL WITHIN THE PROJECT LIMITS IS SANDLER SANDS WHICH ARE CLASSIFIED AS GENTLY SLOPING AND WELL DRAINED SOILS.
- d. EXISTING DATA DESCRIBING THE SOIL: SOIL DATA IS SUMMARIZED IN THE STORMWATER DISCHARGE FROM THE SITE.
- e. EXISTING DATA DESCRIBING THE SOIL OR QUALITY OF ANY STORMWATER DISCHARGE FROM THE SITE:
- f. TOTAL AREA OF THE SITE:
45 ACRES
- g. TOTAL AREA OF THE SITE TO BE DISTURBED:
45 ACRES
- h. ESTIMATE THE DRAINAGE AREA SIZE FOR EACH DISCHARGE POINT:
HICKORY NUT LAKE = 75.21 ACRES
BEAR BAY = 19.64 ACRES
- i. LATITUDE AND LONGITUDE OF EACH DISCHARGE POINT AND IDENTIFY THE RECEIVING WATER OR MS4 FOR EACH DISCHARGE POINT:
 - 42 INCH RCP TO HICKORY NUT LAKE
LAT 28°24'53" N
LONG 81°38'10" W
 - 24 INCH RCP TO BEAR BAY
LAT 28°24'23" N
LONG 81°38'10" W


II EROSION AND SEDIMENT CONTROLS:

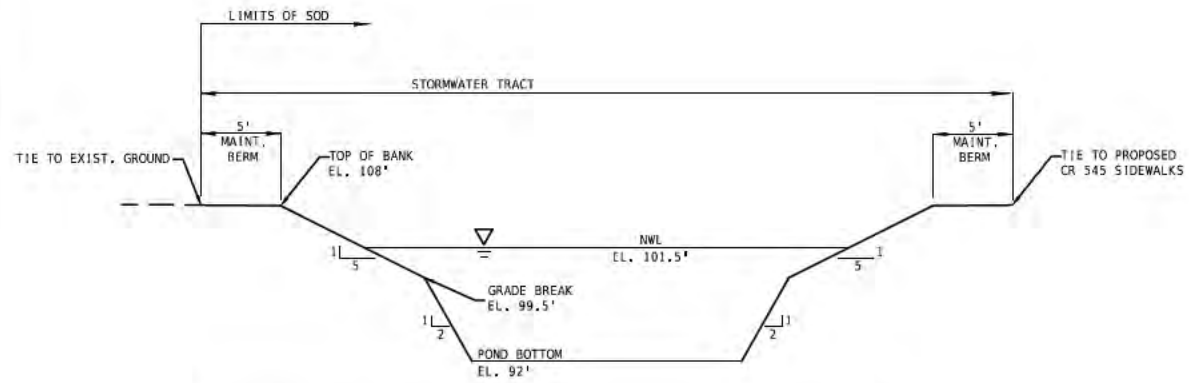
- a. GIVE A DETAILED DESCRIPTION OF ALL CONTROLS, BEST MANAGEMENT PRACTICES (BMPs) AND MEASURES THAT WILL BE IMPLEMENTED AT THE CONSTRUCTION SITE FOR EACH ACTIVITY IDENTIFIED IN THE INTENDED SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES SECTION. PROVIDE TIME FRAMES IN WHICH THE CONTROLS WILL BE IMPLEMENTED.
NOTE: ALL CONTROLS SHALL BE CONSISTENT WITH PERFORMANCE STANDARDS FOR EROSION AND SEDIMENT CONTROL AND STORMWATER TREATMENT SET FORTH IN S. 62-40.432, F.A.C., THE APPLICABLE STORMWATER OR ENVIRONMENTAL RESOURCE PERMITTING REQUIREMENTS OF THE DEPARTMENT OR A WATER MANAGEMENT DISTRICT, AND THE GUIDELINES CONTAINED IN THE FLORIDA DEVELOPMENT MANUAL: A GUIDE TO SOUND LAND AND WATER MANAGEMENT (DEP, 1998) AND ANY SUBSEQUENT AMENDMENTS.
ALL EROSION PROTECTION TO BE INSTALLED PRIOR TO THE INITIATION OF CONSTRUCTION. SILT FENCE TO BE INSTALLED AS SHOWN ON THE SWPPP. ALL INLETS SHALL BE PROTECTED BEFORE CONSTRUCTION, AND REMOVED WHEN THE PROJECT IS COMPLETED, ACCORDING TO DETAILS AND SITE PLAN. ALL OFFSITE TRACKING SHALL BE REMOVED AFTER EACH WORKING DAY. THE CONTRACTOR WILL BE RESPONSIBLE FOR DEWATERING DURING CONSTRUCTION AND UTILIZING A DEWATERING BEST MANAGEMENT PRACTICE IF NECESSARY. WELL POINTS, HORIZONTAL SOCK DRAINS OR ANY OTHER METHOD THAT WILL PREVENT DISCHARGE OF TURBID WATER ABOVE 29 NTU FROM THE CONSTRUCTION SITE OR INTO LAKE LANCASTER. CONTRACTOR CANNOT PUMP TURBID WATER INTO STORMSEWER, PONDS, OR LAKES. NO HAY BALES SHALL BE USED FOR INLET PROTECTION IN ROADS. ONLY SYNTHETIC BALES OR OTHER TYPES OF INLET PROTECTION SHALL NOT BE PLACED IN SUCH A WAY THAT IS CAUSES FLOODING.
- b. DESCRIBE ALL TEMPORARY AND PERMANENT STABILIZATION PRACTICES. STABILIZATION PRACTICES INCLUDE TEMPORARY SEEDING, MULCHING, PERMANENT SEEDING, GEOTEXTILES, SOD STABILIZATION, VEGETATIVE BUFFER STRIPS, PROTECTION OF TREES, VEGETATIVE PRESERVATIONS, ETC. THE DISTURBED AREA SHALL HAVE EROSION CONTROL NET AND HAY BLANKETS INSTALLED. THE DISTURBED AREA (TRENCH) WILL HAVE VERTICAL STABILIZATION AS SPECIFIED BY THE CONTRACTOR. THE DISTURBED AREA WILL BE SEEDED AND MULCHED WITHIN SEVEN DAYS OF FINAL GRADING. STOCK PILES (IF USED) WILL BE STABILIZED IF THEY REMAIN FOR A TIME PERIOD OF MORE THAN 21 DAYS BY TEMPORARY SEEDING AND MULCHING, OR OTHER COVERING. THE EMBANKMENT OF HICKORY NUT LAKE AND BEAR BAY SHALL BE STABILIZED UTILIZING CLOSED CELL BLOCK ARMORFLEX (OR APPROVED EQUIVALENT).
- c. DESCRIBE ALL STRUCTURAL CONTROLS TO BE IMPLEMENTED TO DIVERT STORMWATER FLOW FROM EXPOSED SOILS AND STRUCTURAL PRACTICES TO STORE FLOWS, RETAIN SEDIMENT ON-SITE OR IN ANY OTHER WAY LIMIT STORMWATER RUNOFF. THESE CONTROLS INCLUDE SILT FENCES, EARTH DIKES, DIVERSIONS, SWALES, SEDIMENT TRAPS, CHECK DAMS, SUBSURFACE DRAINS, PIPE SLOPE DRAINS, LEVEL SPREADERS, STORM DRAIN INLET PROTECTION, ROCK OUTLET PROTECTION, REINFORCED SOIL RETAINING SYSTEMS, GABIONS, COAGULATING AGENTS AND TEMPORARY OR PERMANENT SEDIMENT BASINS. SILT FENCES WILL BE PLACED ALONG THE LIMITS OF THE PROJECT AS SHOWN IN THE SWPPP. THE OUTLET TO HICKORY NUT LAKE AND BEAR BAY WILL BE PROTECTED WITH FLOATING TURBIDITY BARRIER AS SHOWN IN THE SWPPP.
- d. DESCRIBE ALL SEDIMENT BASINS TO BE IMPLEMENTED FOR AREAS THAT WILL DISTURB 10 OR MORE ACRES AT ONE TIME. THE SEDIMENT BASINS (OR AN EQUIVALENT ALTERNATIVE) SHOULD BE ABLE TO PROVIDE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE DRAINED. TEMPORARY SEDIMENT BASINS (OR AN EQUIVALENT ALTERNATIVE) ARE RECOMMENDED FOR DRAINAGE AREAS UNDER 10 ACRES.
NOT APPLICABLE
- e. DESCRIBE ALL PERMANENT STORMWATER MANAGEMENT CONTROLS SUCH AS, BUT NOT LIMITED TO, DETENTION OR RETENTION SYSTEMS OR VEGETATED SWALES THAT WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS.
THREE WET DETENTION PONDS (CORE GOLF POND, POND 3, AND POND 4) WILL BE INSTALLED DURING CONSTRUCTION. TWO DEPRESSIONAL AREAS (HORTON DEPRESSION AND REEDY DEPRESSION) WILL ALSO BE INSTALLED.

III EROSION AND SEDIMENT CONTROLS:

- a. WASTE DISPOSAL. THIS MAY INCLUDE CONSTRUCTION DEBRIS, CHEMICALS, LITTER, AND SANITARY WASTES:
 1. ALL WASTE MATERIALS WILL BE DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE LAWS.
 2. THE CONTRACTOR WILL PROVIDE LITTER CONTROL AND COLLECTION WITHIN THE PROJECT BOUNDARIES DURING CONSTRUCTION ACTIVITIES.
 3. ALL FERTILIZER AND CHEMICAL CONTAINERS SHALL BE DISPOSED OF BY THE CONTRACTOR ACCORDING TO EPA'S STANDARD PRACTICES AS DETAILED BY THE MANUFACTURER.
 4. NO SOLID MATERIALS, INCLUDING BUILDING AND CONSTRUCTION MATERIALS, SHALL BE DISCHARGED TO WETLANDS OR BURIED ON-SITE.
 5. ALL SANITARY WASTE WILL BE COLLECTED FROM PORTABLE UNITS BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY STATE REGULATIONS.
 - b. OFFSITE VEHICLE TRACKING FROM CONSTRUCTION ENTRANCES/ EXITS:
ALL OFFSITE TRACKING WILL BE REMOVED AFTER EACH WORKING DAY.
 - c. THE PROPER APPLICATION RATES OF ALL FERTILIZERS, HERBICIDES AND PESTICIDES USED AT THE CONSTRUCTION SITE:
NOT APPLICABLE
 - d. THE STORAGE, APPLICATION, GENERATION AND MIGRATION OF ALL TOXIC SUBSTANCES:
NO FUEL WILL BE STORED ON SITE. FUEL SPILLS AND LEAKS FROM EQUIPMENT AND VEHICLES WILL BE PREVENTED AND IMMEDIATELY CLEANED UP, SHOULD THEY OCCUR.
- IV PROVIDE A DETAILED DESCRIPTION OF THE MAINTENANCE PLAN FOR ALL STRUCTURAL AND NON-STRUCTURAL CONTROLS TO ASSURE THAT THEY REMAIN IN GOOD AND EFFECTIVE OPERATING CONDITION.**
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIRS OF EROSION AND SEDIMENT CONTROL DEVICES, AND REMOVAL OF EROSION AND SEDIMENT CONTROL DEVICES WHEN NOTICE OF TERMINATION IS MAILED.

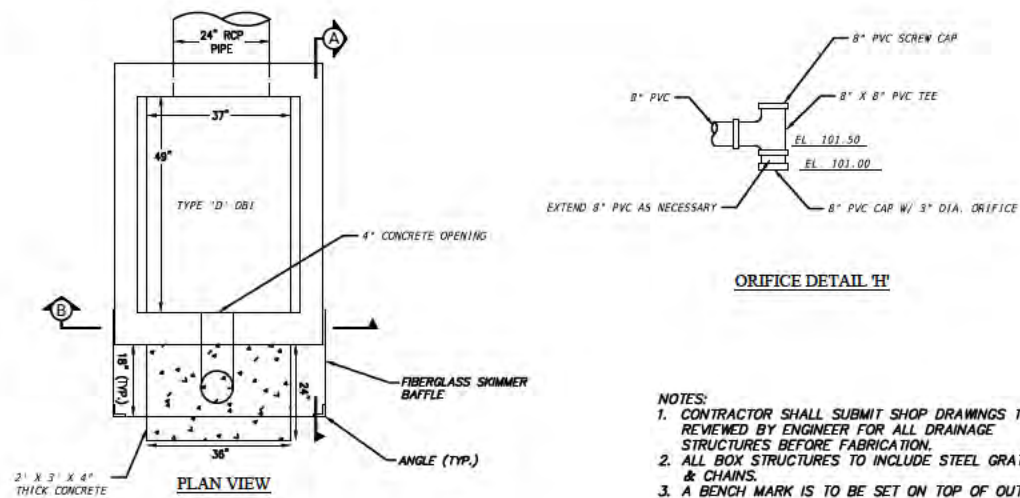
2. INSTALLATION, MAINTENANCE, REPAIR AND REMOVAL REQUIRED FOR THE CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION SHALL BE INCLUDED IN THE INDIVIDUAL COSTS OF THE EROSION CONTROL DEVICES.
 3. THE FOLLOWING PRACTICES WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS: GENERAL - ALL CONTROL MEASURES WILL BE MAINTAINED DAILY BY THE CONTRACTOR. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT WILL BE INITIATED IMMEDIATELY.
 4. STRUCTURAL PRACTICES - BUILD UP SEDIMENT WILL BE REMOVED FROM SILT FENCE AND STAKED TURBIDITY BARRIERS WHEN IT HAS REACHED ONE-HALF OF THE HEIGHT OF THE FENCE. SODDING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH. SYNTHETIC BALES SHALL BE REPLACED EVERY THREE (3) MONTHS OR WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE. STABILIZED CONSTRUCTION ENTRANCES SHALL BE MAINTAINED TO PREVENT CLOGGING OF ROCK BEDDING WHICH MAY IMPEDE THE USEFULNESS OF THE STRUCTURE.
- V INSPECTIONS: DESCRIBE THE INSPECTION AND INSPECTION DOCUMENTATION PROCEDURES, AS REQUIRED BY PART V.D.4. OF THE PERMIT. INSPECTIONS MUST OCCUR AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT IS 0.50 INCHES OR GREATER.**
1. THE CONTRACTOR SHALL INSTALL AND MAINTAIN RAIN GAUGES ON THE PROJECT SITE AND RECORD WEEKLY RAINFALL IN ACCORDANCE WITH THE NPDES. ALL CONTROL MEASURES WILL BE MAINTAINED DAILY BY THE CONTRACTOR.
 2. ALL EROSION AND WATER POLLUTION ABATEMENT AND CONTROL MEASURES WILL BE INSPECTED DAILY BY CONTRACTOR'S PERSONNEL WHO ARE F.D.E.P. CERTIFIED STORMWATER MANAGEMENT INSPECTORS.
 3. THE CONTRACTOR SHALL COMPLETE ALL SWPPP INSPECTION REPORT FORMS REQUIRED FOR THE NPDES PERMIT.
 4. QUALIFIED PERSONAL SHALL INSPECT THE PROJECT SITE AT LEAST ONCE EVERY (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT IS 0.50 INCHES OR GREATER
 5. ORANGE COUNTY SHALL ALSO DOCUMENT INSPECTIONS WEEKLY AND AFTER 1/2" RAIN EVENT.
- VI IDENTIFY AND DESCRIBE ALL SOURCES OF NON-STORMWATER DISCHARGES AS ALLOWED IN PART IV.A.3 OF THE PERMIT. FLOW FROM FIREFIGHTING ACTIVITIES DO NOT HAVE TO BE LISTED OR DESCRIBED.**
NOT APPLICABLE

REVISIONS				 Engineers Scientists Planners Designers 225 E. Robinson Street, Suite 300 Orlando, FL 32801 (407)839-4006 Certificate of Authorization # 3932 Bruce Doig, P.E. PE # 61018	<h3 style="margin: 0;">AVALON ROAD (CR545) SEGMENT 4</h3>	<h3 style="margin: 0;">STORMWATER POLLUTION PREVENTION PLAN</h3>	SHEET NO
DATE	DESCRIPTION	DATE	DESCRIPTION				49

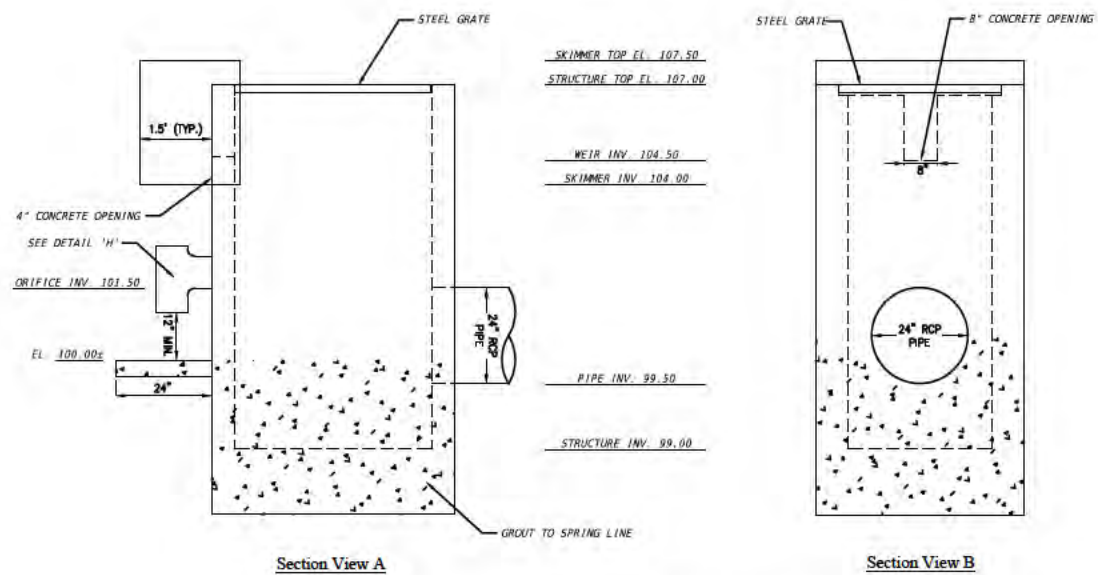


Typical Grading Detail - Pond 4

NTS

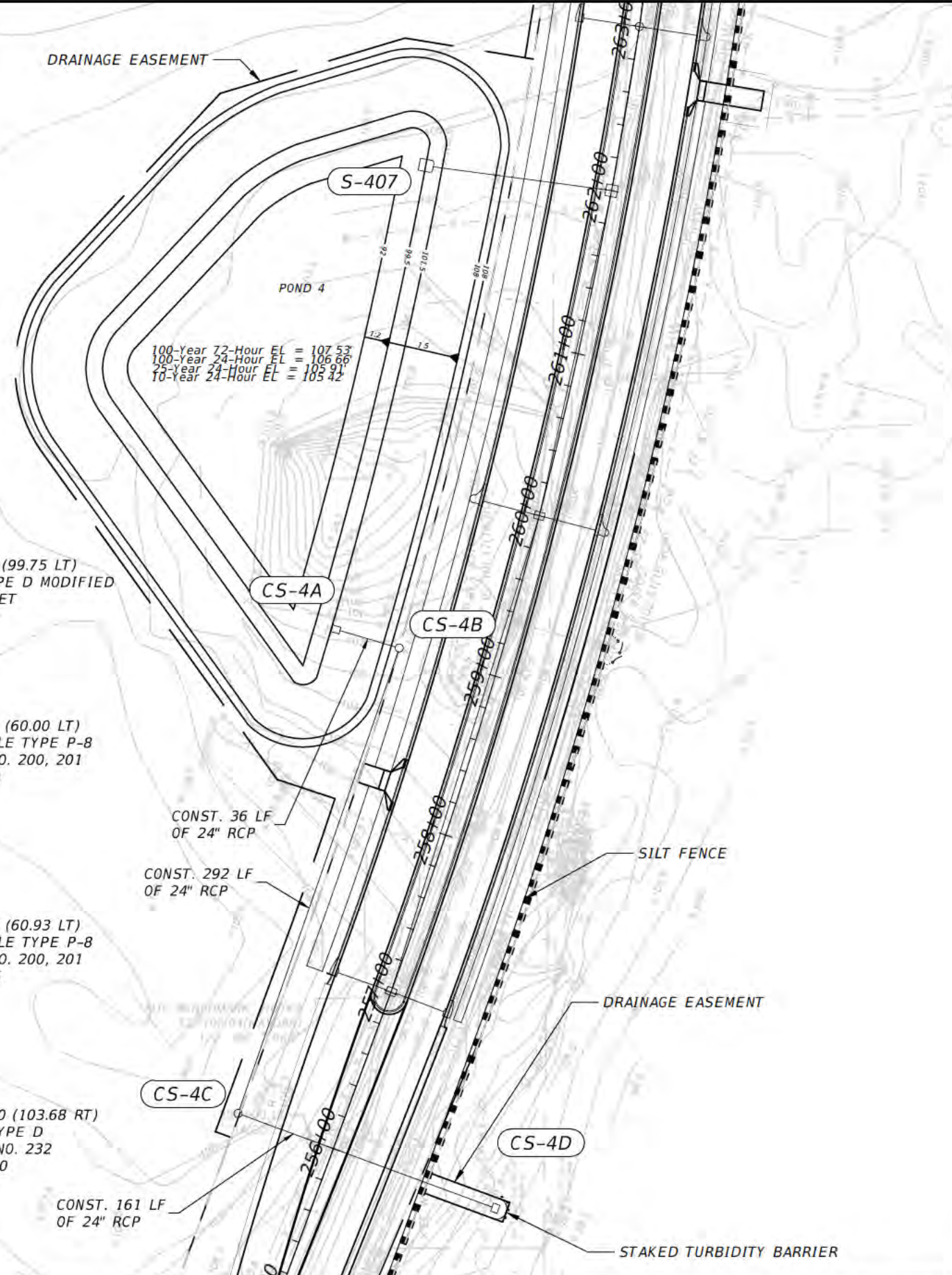
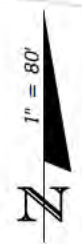


- NOTES:**
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO BE REVIEWED BY ENGINEER FOR ALL DRAINAGE STRUCTURES BEFORE FABRICATION.
 2. ALL BOX STRUCTURES TO INCLUDE STEEL GRATES & CHAINS.
 3. A BENCH MARK IS TO BE SET ON TOP OF OUTFALL STRUCTURE.
 4. SKIMMER TO BE MOUNTED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.



Outfall Control Structure Detail For Pond 4 (CS-4a)

NTS



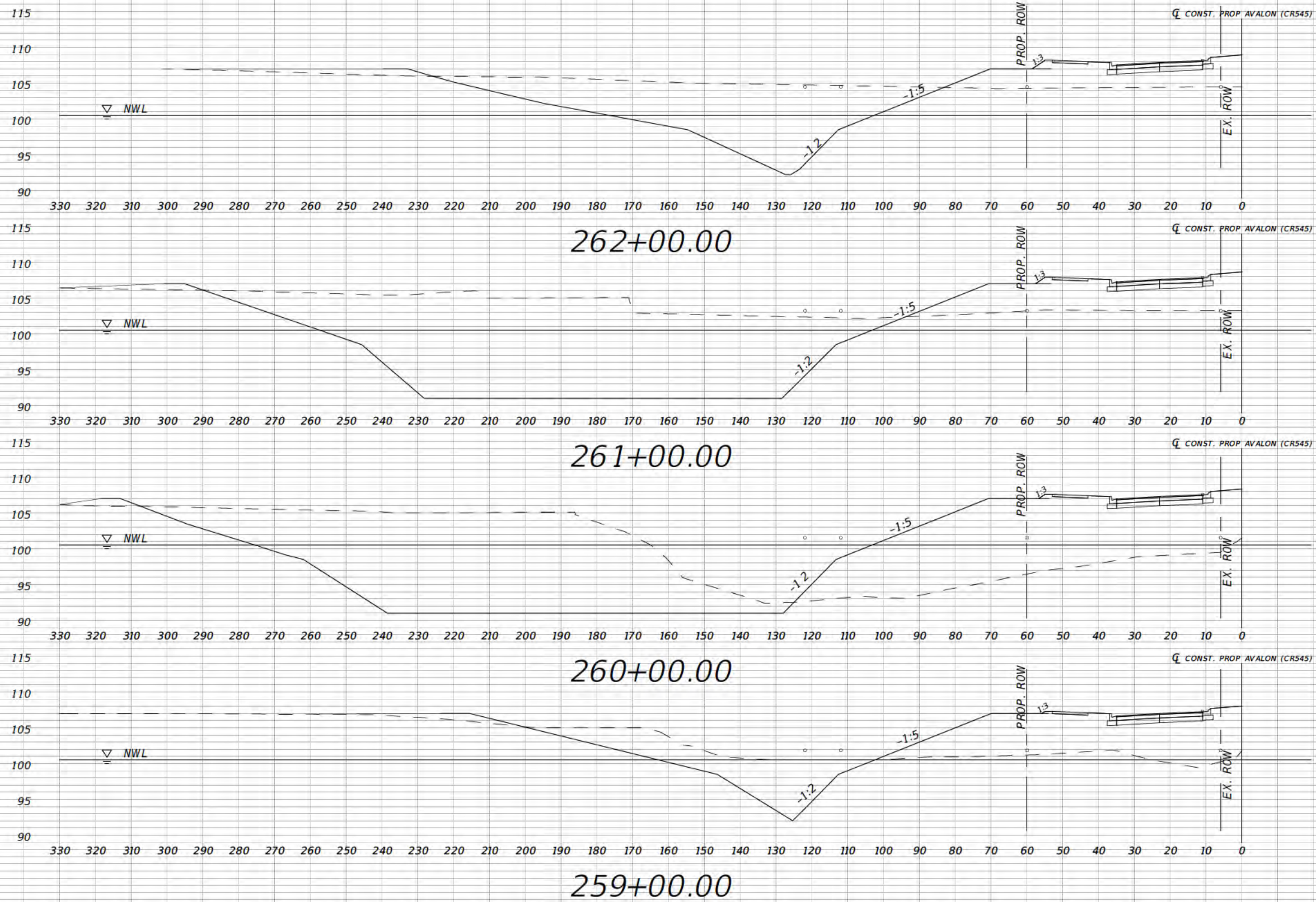
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Bruce Doig, P.E.
PE # 61018

**AVALON ROAD (CR545)
SEGMENT 4**

**POND GRADING PLAN
AND DETAILS**

SHEET NO
51



1" = 30' Horizontal
1" = 15' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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PROFESSIONAL OF RECORD:
NAME ,P.E.# LICENSENUMBER
DISTRICT DISTRICT #
ADDRESS
CITY, STATE ZIP

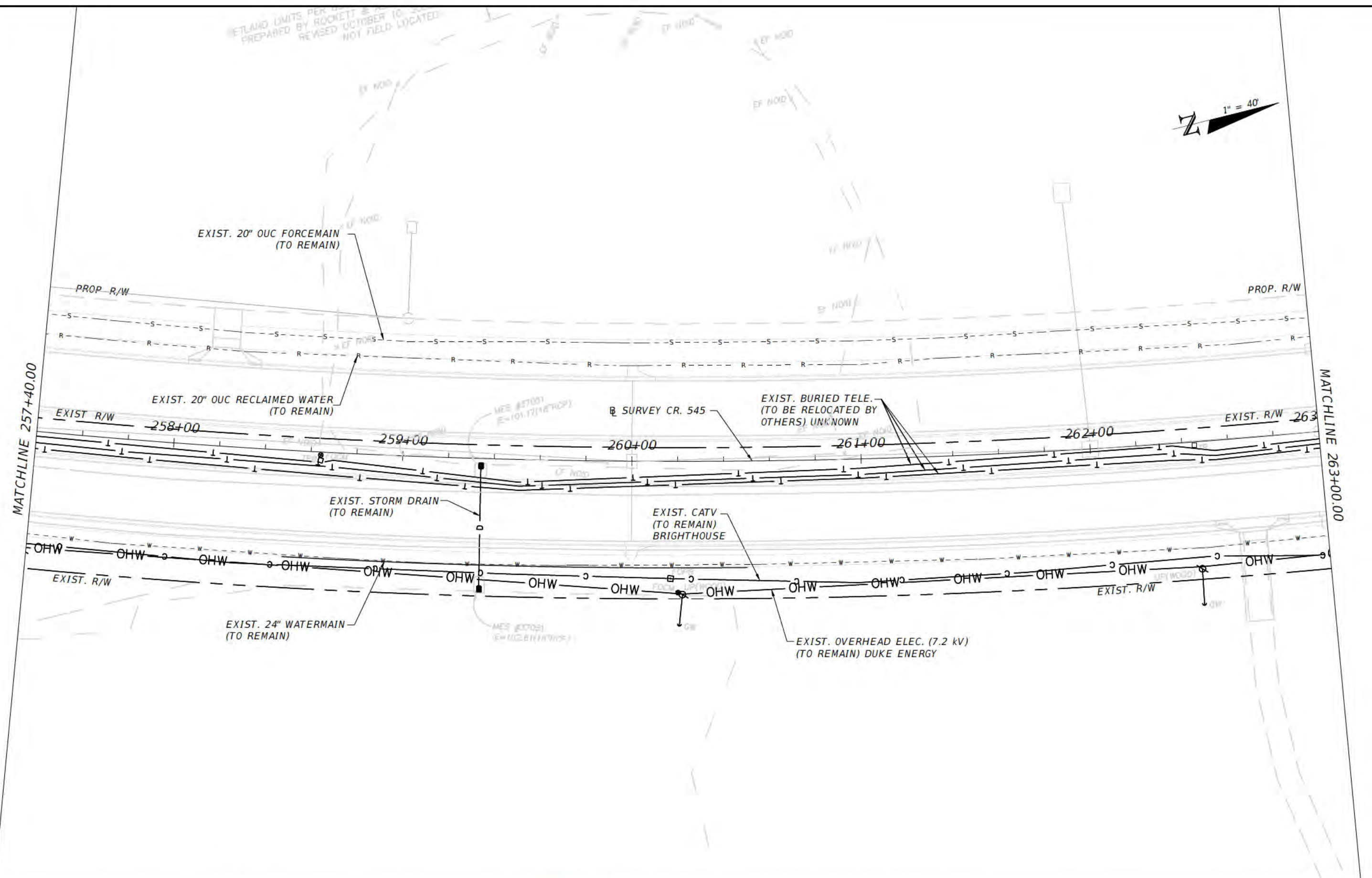
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO	COUNTY	FINANCIAL PROJECT ID
ROADNUMBER	COUNTY COUNTY COUNTY	<FPID1>

POND CROSS SECTIONS

SHEET NO
52

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

ETLAND LIMITS PER...
 PREPARED BY ROCKETT...
 REVISED OCTOBER 10...
 NOT FIELD LOCATED



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

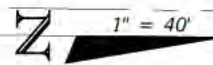


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 PE # 71478

**AVALON ROAD (CR545)
 SEGMENT 4**

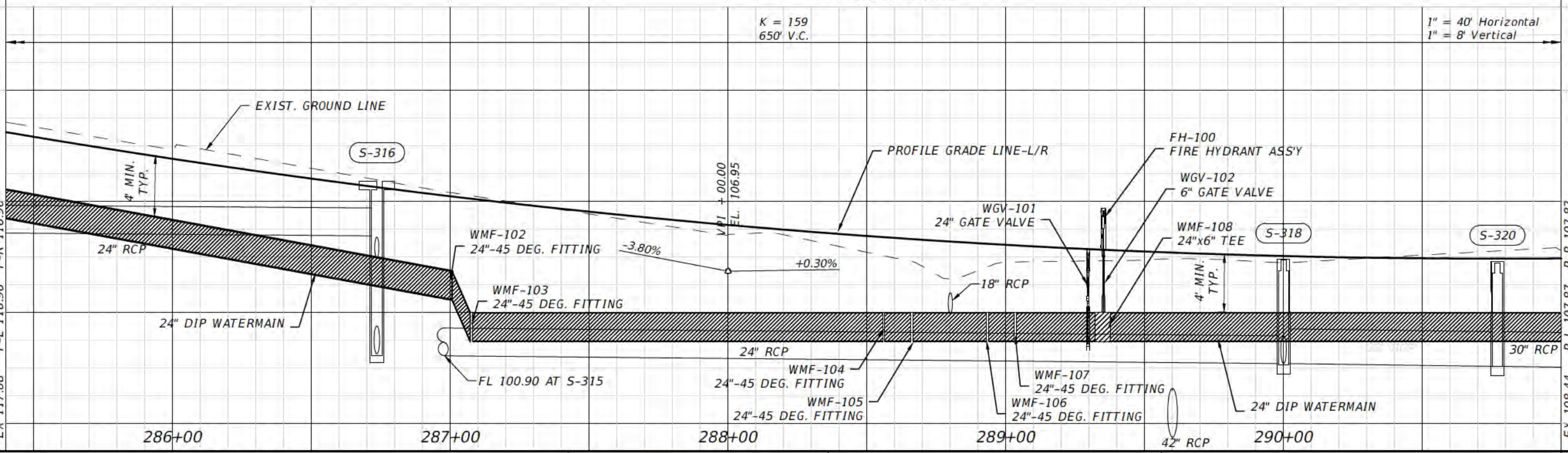
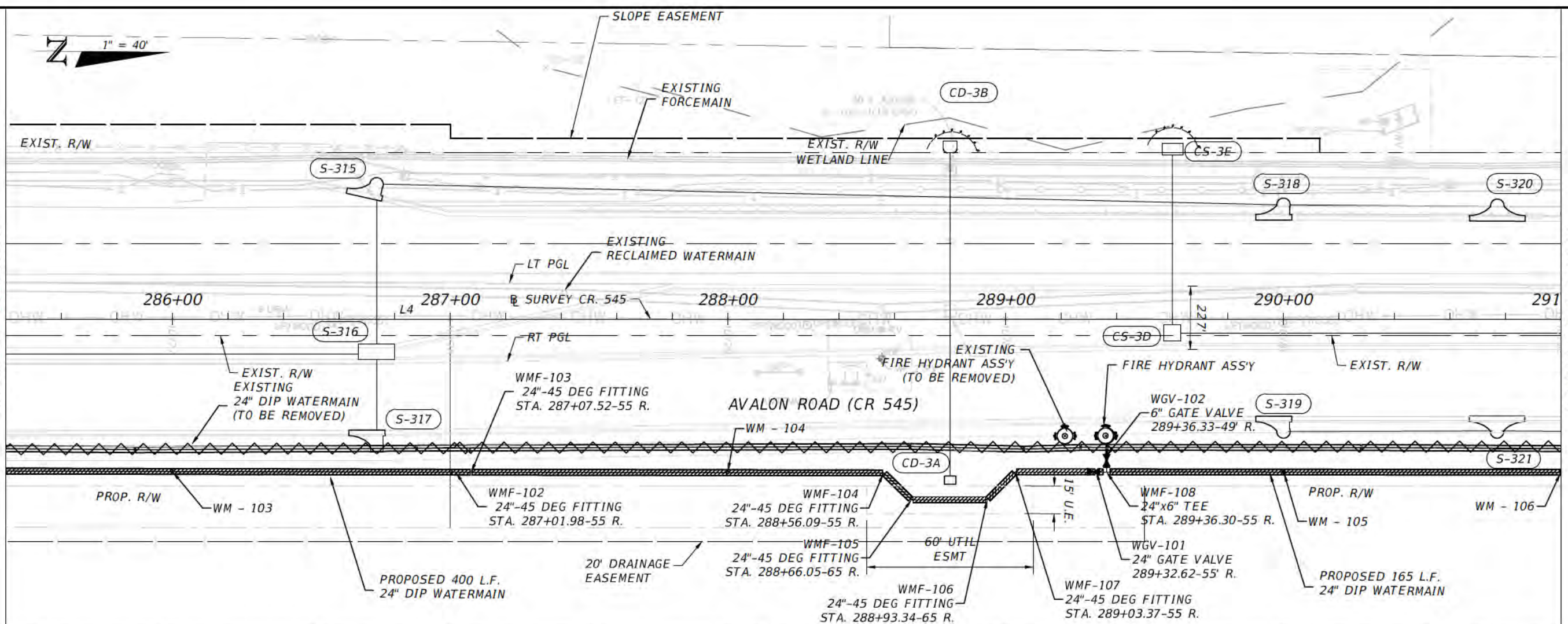
UTILITY ADJUSTMENTS

SHEET NO
 56



MATCHLINE 285+40.00

MATCHLINE 291+00.00



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 PE # 59469

**AVALON ROAD (CR545)
SEGMENT 4**
**CR545 SEGMENT 4 PLAN & PROFILE
- WATERMAIN RELOCATION**

SHEET
NO
66

GENERAL CONSTRUCTION NOTES

ALL WORK AND REQUIREMENTS FROM THE NOTES IN THIS PAGE SHALL BE A REQUIREMENT OF THE CONTRACT AND EXECUTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO ORANGE COUNTY.

1. USE EXTREME CAUTION WHEN EXCAVATING OR CONNECTING TO ASBESTOS CEMENT PIPE. THE CONTRACTOR WILL BE REQUIRED TO SUPPLY TRUCKS CAPABLE OF PUMPING OUT ALL AFFECTED PUMP STATION UPSTREAM FROM BREAKS OR CONNECTION POINT. WHEN CONNECTING TO ASBESTOS CEMENT WATER MAIN OR FORCE MAIN THE CONTRACTOR IS REQUIRED TO REPLACE ANY DAMAGED LENGTHS OF PIPE. THE AMOUNT OF REPLACED PIPE WILL BE DETERMINED BY THE ORANGE COUNTY UTILITIES INSPECTOR.

2. ALL ASBESTOS CEMENT PIPE TO BE TAKEN OUT OF SERVICE WILL BE REMOVED UNLESS OTHERWISE NOTED ON PLANS. GROUT PIPE WHERE INDICATED ON PLANS. ALL ASBESTOS CEMENT PIPE TO BE REMOVED SHALL BE REMOVED AND DISPOSED OF ACCORDING TO STATE AND FEDERAL ORDINANCES AND REGULATIONS.

3. ALL UTILITIES FACILITIES CONSTRUCTION CONNECTING TO THE ORANGE COUNTY PUBLIC UTILITIES SYSTEM SHALL CONFORM TO THE ORANGE COUNTY UTILITIES STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL, LATEST EDITION, AND BE ONE OF THE APPROVED PRODUCTS LISTED IN APPENDIX 'D' OF THE MANUAL, UNLESS OTHERWISE NOTED.

4. THE UTILITIES IMPROVEMENTS AND ADJUSTMENT SHOWN ON THESE DRAWINGS ARE INTENDED TO MAINTAIN THE INTEGRITY OF THE ORANGE COUNTY WATER, WASTEWATER, AND REUSE WATER SYSTEMS. ALL MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH ORANGE COUNTY STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL. THE DRAWINGS DO NOT INCLUDE WORK PERFORMED ON, OR FOR UTILITY SYSTEMS OWNED BY OTHERS.

5. LOCATIONS OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTENCE AND LOCATION OF ALL ABOVEGROUND AND UNDERGROUND UTILITIES. CONTRACTOR SHALL CONTACT UTILITY OWNERS AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION AND A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

6. ALL EXISTING AND NEW ORANGE COUNTY WATER AND SEWER VALVES, VALVE BOXES, AND MANHOLES SHALL BE PROTECTED AND ADJUSTED TO FINISHED GRADE AS SHOWN ON THE DRAWINGS. VALVE AND VALVE BOXES SHALL REMAIN ACCESSIBLE AT ALL TIMES. ANY VALVES THAT MIGHT BE COVERED DURING CONSTRUCTION SHALL BE MARKED WITH A MARKER (GREEN FOR SEWER AND BLUE FOR WATER), A MINIMUM OF FOUR (4) FEET ABOVE GRADE. ALL VALVES UNDER CONSTRUCTION ARE TO REMAIN CLOSED DURING CONSTRUCTION.

7. SEE DETAIL SHEET FOR SEPARATION REQUIREMENTS BETWEEN WATER MAINS, SEWER MAINS AND OTHER PIPELINES AND MAINS. NO CONCRETE ENCASEMENT OF PIPES WILL BE PERMITTED.

8. ALL PVC WATER AND SEWER MAIN SHALL CONFORM TO AWWA C900, DR 18, OR C905, DR 18. PE PRESSURE PIPES MUST BE IN ACCORDANCE WITH STANDARD REQUIREMENTS OF AWWA C906. GRAVITY MAINS SHALL BE PVC ASTM D3034 (6"-15") DR 35. ALL DUCTILE IRON WATER MAIN PIPE SHALL CONFORM TO ANSI/AWWA A21.51/C151. ALL PVC PRESSURE PIPE SHALL USE DUCTILE IRON FITTINGS. FITTINGS FOR SERVICES SHALL BE BRASS.

9. ALL PIPE, PIPE FITTINGS AND APPURTENANCES INSTALLED UNDER THIS PROJECT WILL BE COLOR CODED OR MARKED IN ACCORDANCE WITH SUBPARAGRAPH 62- 555.320 (21) (b) 3, FAS, USING BLUE AS A PREDOMINANT COLOR FOR WATER; GREEN FOR WASTEWATER; PURPLE FOR REUSE WATER.

10. ALL BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DRY DENSITY AS MEASURED BY AASHTO T-180 METHOD 'D' TEST (MODIFIED PROCTOR) IN OPEN AREAS AND TO NOT LESS THAN 98% MAXIMUM DRY DENSITY AS MEASURED BY AASHTO T-180 METHOD 'D' TEST (MODIFIED PROCTOR) UNDER ASPHALT OR CONCRETE PAVEMENT AND WITHIN 3 FT OF THE EDGE OF PAVEMENT. ALL SOIL TESTING TO BE CONDUCTED BY THE COUNTY. THE CONTRACTOR SHALL PROVIDE ALL REASONABLE ASSISTANCE DURING SOIL TESTING.

11. PIPE LENGTHS SHOWN ON PLANS ARE APPROXIMATE. ACTUAL LENGTHS ARE TO BE DETERMINED DURING CONSTRUCTION.

12. NOTIFY FIBER OPTICS COMPANIES SEVEN (7) DAYS PRIOR TO ANY CONSTRUCTION. EXTREME CAUTION SHALL BE EXERCISED IN THE AREAS OF FIBER OPTICS.

13. ALL STATIONS AND OFFSETS REFER TO BASELINE OF STATIONING.

14. MAINTAIN EMERGENCY VEHICLE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES.

15. LOCAL RESIDENTIAL AND BUSINESS ACCESS SHALL BE MAINTAINED AT ALL TIMES. PROVIDE WRITTEN NOTIFICATION TO RESIDENTS SEVEN (7) DAYS PRIOR TO IMPLEMENTING ANY ROADWAY OR DRIVEWAY CLOSURE.

16. SUPPORT & PROTECT ALL EXISTING UTILITIES. CONTRACTOR SHALL CONTACT UTILITY OWNERS FOR LOCATION OF ALL EXISTING FACILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH UTILITY OWNERS AND BE RESPONSIBLE FOR PROVIDING TEMPORARY SUPPORT FOR UTILITY POLES AND ALL OTHER UTILITIES.

17. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING IN PROXIMITY OF WATER MAINS, WASTEWATER FORCE MAINS, GRAVITY MAINS, AND RECLAIMED WATER MAINS. MAIN LOCATIONS SHOWN ON PLANS ARE NOT EXACT OR GUARANTEED. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING UTILITY LOCATIONS. FOR LOCATIONS CALL SUNSHINE ONE-CALL 811.

18. ALL MAINS SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS. A MINIMUM COVER OF 36 INCHES SHALL BE MAINTAINED ON ALL MAINS, WHERE IT IS NOT OTHERWISE SPECIFIED ON PLANS OR DIRECTED BY THE ENGINEER. A MINIMUM COVER OF 48" SHALL BE MAINTAINED FOR MAINS 16 INCHES IN DIAMETER OR GREATER (SEE TABLE 2210-1 OCU STANDARDS AND CONSTRUCTION SPECIFICATION MANUAL). ALL DIRECTION CHANGES IN THE PIPE BOTH HORIZONTAL AND VERTICAL SHALL BE BY JOINT DEFLECTION UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER. JOINT DEFLECTION SHALL NOT EXCEED 50% OF THE MANUFACTURER'S RECOMMENDED DEFLECTION FOR DUCTILE IRON PIPE. NO JOINT DEFLECTIONS OR BENDING IS ALLOWED IN PVC PIPE. ALIGNMENT CHANGE FOR PVC PIPE SHALL BE MADE ONLY WITH FITTINGS.

19. ALL PIPES SHALL BE RESTRAINED IN ACCORDANCE WITH THE RESTRAINT TABLES SHOWN ON THE DETAIL SHEETS. IN ADDITION, ALL FITTINGS SHALL BE MECHANICAL JOINT RESTRAINED. NO THRUST BLOCKS SHALL BE PERMITTED. RESTRAIN EXISTING PIPE WHERE REQUIRED IN ACCORDANCE WITH THE RESTRAINT TABLES AT ALL NEW CONNECTIONS TO EXISTING PIPE.

20. COMPLETE ALL CONSTRUCTION WITHIN RIGHT OF WAY LIMITS AND EASEMENT LIMITS, UNLESS OTHERWISE NOTED.

21. PIPE SIZES SHOWN ON PLANS ARE MINIMUM INSIDE DIAMETER.

22. WHERE MINIMUM SEPARATION BETWEEN UTILITIES OR STORM SEWERS IS REQUIRED, THE DISTANCE IS MEASURED FROM THE OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE.

23. RESTORE ALL EXISTING IMPROVEMENTS AND DISTURBED AREAS TO ORIGINAL CONDITION. PAVEMENT TO BE RESTORED IN ACCORDANCE WITH THE PAVEMENT RESTORATION DETAILS SHOWN ON SHEET U-3.

24. KEEP VALVES ON ALL WET TAPS CLOSED UNTIL CLEARED BY FDEP. DO NOT CONNECT ANY PROPOSED WATER MAIN TO ANY EXISTING WATER MAIN UNLESS CLEARED BY FDEP.

25. ALL CONNECTIONS TO EXISTING MAINS SHALL BE MADE BY THE CONTRACTOR ONLY AFTER THE PROPOSED CONNECTION PROCEDURE AND WORK SCHEDULE HAVE BEEN REVIEWED AND ACCEPTED BY THE OWNER. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE OWNER A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO SCHEDULING ANY CONNECTIONS. THE REQUEST SHALL REFERENCE THE PROFESSIONAL LAND SURVEYOR CERTIFIED COMPLETED AS-BUILT RECORD DRAWINGS PREVIOUSLY SUBMITTED AND SHALL OUTLINE THE FOLLOWING:


a. POINTS OF CONNECTION, FITTINGS TO BE USED, METHODS OF FLUSHING AND DISINFECTION AND VERIFICATION OF RESTRAINT ON EXISTING PIPE.

b. ESTIMATED CONSTRUCTION TIME FOR THE CONNECTIONS.

THE OWNER SHALL REVIEW THE SUBMITTAL WITHIN FIVE (5) WORKING DAYS AFTER RECEIVING IT AND INFORM THE CONTRACTOR REGARDING APPROVAL OR DENIAL OF THE REQUEST. IF THE OWNER REJECTS THE REQUEST, THE CONTRACTOR SHALL RESUBMIT THE REQUEST MODIFYING IT IN A MANNER ACCEPTABLE TO THE OWNER. ALL CONNECTIONS SHALL ONLY BE MADE ON THE AGREED UPON DATE AND TIME. SHOULD THE CONTRACTOR NOT INITIATE AND COMPLETE THE CONNECTION WORK IN THE AGREED UPON MANNER, HE SHALL BE REQUIRED TO RESCHEDULE THE CONNECTION BY FOLLOWING THE PROCEDURE OUTLINED ABOVE. THE CONTRACTOR SHALL NOT OPERATE ANY VALVES IN THE SYSTEM. MAINS SHALL NOT BE PLACED IN SERVICE UNTIL CLEARANCE IS RECEIVED FROM FDEP. AS-BUILT DRAWINGS MUST BE COMPLETED AND SUBMITTED PRIOR TO WATER MAIN CHLORINATION.

26. PROTECT EXISTING IMPROVEMENTS TO THE MAXIMUM EXTENT POSSIBLE. ALL DAMAGED SIDEWALK, ROADWAY PAVEMENT AND OTHER IMPROVEMENTS SHALL BE RESTORED TO ORIGINAL CONDITION.

27. ALL COUNTY ROADS TO BE OPEN CUT SHALL BE APPROVED BY ORANGE COUNTY PUBLIC WORKS PRIOR TO OPEN-CUTS. CONTRACTOR TO SUBMIT A MAINTENANCE OF TRAFFIC (MOT) PLAN CONFORMING TO ORANGE COUNTY RIGHT-OF-WAY UTILIZATION REGULATIONS TO ORANGE COUNTY PUBLIC WORKS A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO ANY WORK WITHIN COUNTY RIGHT-OF-WAY. A COPY OF THIS PLAN SHALL ALSO BE SUBMITTED TO THE ENGINEER AND UTILITY COUNTY INSPECTOR. NOTIFY THE COUNTY ENGINEER 24 HOURS PRIOR TO ANY OPEN CUT OF ROADWAYS OR JACK AND BORE OPERATIONS WITHIN THE COUNTY RIGHT-OF-WAY. TWO WAY TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING THE COURSE OF CONSTRUCTION. MAINTAIN A SET OF COUNTY APPROVED CONSTRUCTION PLANS AND MOT PLANS AT THE CONSTRUCTION SITE AT ALL TIMES WHEN WORKING WITHIN THE COUNTY RIGHT-OF-WAY.

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DATE	DESCRIPTION	DATE	DESCRIPTION				

28. INSTALL AIR RELEASE VALVES (ARV) AT ALL HIGH POINTS IN THE SYSTEM WHERE AIR CAN ACCUMULATE AS SHOWN ON PLANS OR AS DIRECTED BY OCU RPR. AIR RELEASE VALVES AND PURTENANCES SHALL BE COLOR CODED BLUE FOR WATER, GREEN FOR SEWER, AND PURPLE FOR RECLAIMED. STATIONING FOR AIR RELEASE VALVES IS APPROXIMATE.

29. WATER AND SEWER LINE MARKERS SHALL BE PLACED EVERY 1,000 FT AND AT ALL VALVE AND DIRECTIONAL CHANGES. SEE VALVE AND PIPING MARKING DETAILS. NO MARKERS ARE REQUIRED AT VALVES ADJACENT TO FIRE HYDRANTS, OR IN RESIDENTIAL SUBDIVISIONS.

30. BENCHMARK LOCATIONS AND ELEVATION ARE SHOWN IN THE PLANS AS REPRESENTED BY SURVEYOR AT THE TIME OF SURVEY. CONTRACTOR SHALL VERIFY ITS CORRECTNESS AT THE TIME OF CONSTRUCTION AND INSTALL HIS OWN TEMPORARY BENCHMARKS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ORANGE COUNTY UTILITIES INSPECTOR.

31. IMMEDIATELY AT ONSET OF CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES CRITICAL TO COMPLETING THE PROJECT (INCLUDING WATER, SEWER, POWER, TELEPHONE, GAS, AND CABLE TV) AND SHALL EVALUATE POTENTIAL CONFLICTS IN A WRITTEN REPORT. ANY CONFLICTS SHALL BE REPORTED TO ENGINEER/OWNER IMMEDIATELY UPON DISCOVERY AND RETAILED IN THE REPORT.

32. NO VALVE BOXES, METERS, PORTIONS OF MANHOLES, OR OTHER APPURTENANCES OF ANY KIND RELATING TO ANY UNDERGROUND UTILITIES SHALL BE LOCATED IN ANY PORTION OF A CURB-AND-GUTTER SECTION. CONTRACTOR SHALL ADVISE ENGINEER IMMEDIATELY UPON DISCOVERY OF A POTENTIAL CONFLICT.

33. WHERE REQUIRED, AT NO ADDITIONAL COST TO THE COUNTY, THE CONTRACTOR SHALL USE TEMPORARY SHEETING OR TRENCH BOXES TO MINIMIZE THE SIZE OF EXCAVATIONS AND PROTECT EXISTING ROADWAYS, UTILITIES AND OTHER FACILITIES. CONTRACTOR TO COMPLY WITH OSHA TRENCH SAFETY REQUIREMENTS AT ALL TIMES.

34. CONTRACTOR TO PROVIDE DETAILED AS-BUILT DRAWINGS OF ALL UTILITIES UNCOVERED IN TRENCHES MONTHLY WITH PAY REQUEST AND SCHEDULE. THE AS BUILT SHALL RECORD LOCATION, SIZE, TYPE, ELEVATION AND OWNER OF ALL UTILITY FACILITIES UNCOVERED.

35. CONTRACTOR SHALL COORDINATE WITH ALL OTHER UTILITY OWNERS FOR RESOLUTION OF CONFLICTS. CONTRACTOR SHALL HAVE 48 HOURS TO DETERMINE THE RESOLUTION OF ANY UNKNOWN OR UNFORESEEN CONFLICTS. COSTS INCURRED SHALL BE BORNE BY THE UTILITY OWNER AND/OR CONTRACTOR AND NO CLAIMS MAY BE MADE AGAINST ORANGE COUNTY OR THE ENGINEER FOR THESE CONFLICTS. NO ADDITIONAL COMPENSATION SHALL BE MADE FORTHE PERIOD OF TIME TO RESOLVE ANY CONFLICTS.

36. ALL EXISTING MAINS SHALL REMAIN IN SERVICE UNTIL THE PROPOSED MAIN (S) ARE ACCEPTED FOR SERVICE AND ALL SERVICES ARE TRANSFERRED TO THE MAIN (S)

37. COORDINATION AND COMMUNICATIONS WITH ORANGE COUNTY STAFF SHALL BE MADE THROUGH THE ORANGE COUNTY UTILITIES CONSTRUCTION DIVISION INSPECTOR.

38. THE ORANGE COUNTY UTILITIES CONSTRUCTION DIVISION SHALL BE NOTIFIED AT LEAST SEVEN (7) DAYS PRIOR TO ANY CONSTRUCTION ACTIVITY, OR PRIOR TO ANY ACTIVITY REQUIRING THE PRESENCE OF OR AN ACTION BY UTILITIES STAFF SUCH AS SCHEDULING VALVE OPERATION, PRESSURE TESTING, PIPE CONNECTION, PUMP STATION OPERATIONS OR SHUTDOWNS, ETC. THE CONTRACTOR SHALL PROVIDE FOR ALL BYPASSING AND/OR HAULING OF WASTEWATER DURING ALL INTERRUPTIONS OF FLOWS AND/OR CONNECTIONS TO THE EXISTING WASTEWATER SYSTEM.

39. WATER, WASTEWATER AND REUSE VALVES, PUMP STATIONS OR OTHER UTILITY INFRASTRUCTURE ARE TO BE OPERATED ONLY BY ORANGE COUNTY UTILITIES PERSONNEL. ALL VALVES BEING INSTALLED ARE TO REMAIN CLOSED DURING CONSTRUCTION.

40. ALL NEW INSTALLED DUCTILE IRON PIPE FOR WATER AND RECLAIMED WATER MAIN SHALL HAVE POLYETHYLENE ENCASEMENT (POLYWRAP) IN ACCORDANCE WITH ANSI/AWWA A21.51/C105 AND AWWA C105 WITH WRAPPING COLORS TO BE BLUE FOR WATER AND PANTONE PURPLE FOR RECLAIMED. POLY WRAP TAPE ONLY.


41. THE CONTRACTOR SHALL SUBMIT TO THE COUNTY A COMPREHENSIVE WRITTEN PLAN FOR APPROVAL AND ACCEPTANCE BY THE COUNTY THAT DESCRIBES THE METHODS AND EQUIPMENT FOR INSTALLING UTILITY LINES PROPOSED WITHIN A THREE (3) FOOT PROXIMITY TO THE OUTSIDE DIAMETER OF AN EXISTING UTILITY MAIN GREATER THAN 6" DIAMETER IN SIZE. THE PLAN SHALL BE CONSISTENT WITH THE SUBMITTED BYPASS PLAN AND SHALL DETAIL THE METHODS FOR AVOIDING UNNECESSARY DELAY, INJURY, DAMAGE OR DESTRUCTION OF EXISTING PUBLIC UTILITY SERVICES.

42. CONTRACTOR TO PERFORM PRELIMINARY LOCATOR WIRE CHECK PRIOR TO OCU INSPECTION.

43. CONTRACTOR RESPONSIBLE TO PERFORM FINAL WALK THROUGH INSPECTION WITH OCU INSPECTORS.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION



Engineers | Scientists
Planners | Designers
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**AVALON ROAD (CR545)
SEGMENT 4**

**CR545 SEGMENT 4
OCU NOTES**

SHEET
NO

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