

POLK COUNTY UTILITIES, FLORIDA

UTILITIES COMMUNITY INVESTMENT PROJECT DEESON ROAD LIFT STATION AND FORCE MAIN IMPROVEMENTS 100% SUBMITTAL FEBRUARY 2024

PARCEL ID #23-27-30-000000-033060
PCU PROJECT #2021-8-30-0
ORACLE # 6843022
WRIGHT PIERCE PROJECT #21136



RESERVED FOR
COUNTY APPROVALS

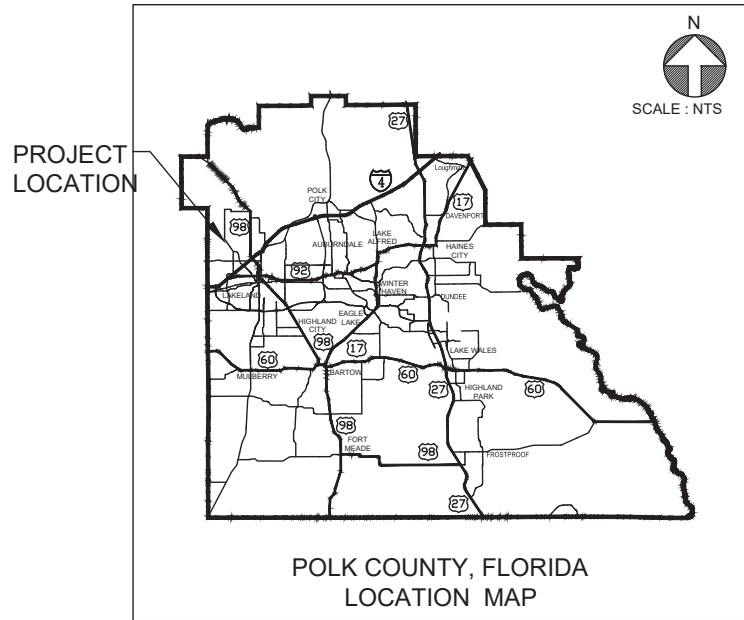
DEP WATER PERMIT	#	_____
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FDOT PERMIT	#	_____
FDOT R/W PERMIT	#	_____
FDOT UTILITY PERMIT	#	_____
COUNTY R/W PERMIT	#	_____
COUNTY BLDG PERMIT	#	_____
WMD PERMIT	#	_____
NPDES PERMIT	#	_____

Plotted: 2/01/24 5:51pm russell.scammon

LAST SAVED: 2/1/2024 10:51 AM RUSSELL-SCAMMON

WRIGHT PIERCE PROJECT #21136

PCU PROJECT #2021-8-30-0



GENERAL:

G-1 COVER

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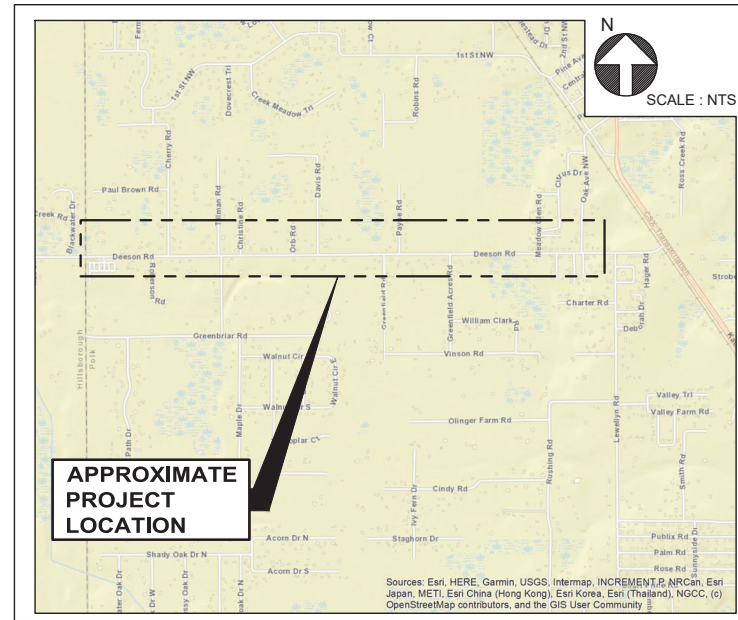
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888.621.8156 | www.wright-pierce.com

PROJECT MANAGER :

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BOARD OF COUNTY COMMISSIONERS

DISTRICT ONE:	GEORGE LINDSEY III
DISTRICT TWO:	RICK WILSON
DISTRICT THREE:	BILL BRASWELL
DISTRICT FOUR:	MARTHA SANTIAGO
* DISTRICT FIVE:	NEIL COMBEE
*DISTRICT IN WHICH PROJECT IS LOCATED	
COUNTY MANAGER:	BILL BEASLEY
UTILITIES DIRECTOR:	TAMARA RICHARDSON, PE

CALL 48 HOURS BEFORE YOU DIG

IT'S THE LAW!
DIAL 811

811

Know what's below.
Call before you dig.

SUNSHINE STATE ONE CALL OF FLORIDA, INC.

CONSTRUCTION DRAWING
 RECORD DRAWING

ENGINEER CHRISTOPHER C. BAGGETT, P.E.
print name

LICENSE # 56047

ENGINEER Christopher C Baggett
signature

DATE _____

PROFESSIONAL ENGINEER LICENSE No. 56047 STATE OF FLORIDA

DEESON ROAD LIFT STATION AND FORCE MAIN IMPROVEMENTS

POLK COUNTY UTILITIES GENERAL NOTES

- 1. 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.
2. THE PCU BASE-1 DISPATCH OPERATOR (863-534-7351) SHALL BE NOTIFIED BY THE CONTRACTOR FOR PIPE EMERGENCIES.
3. ALL EXISTING WATER, FORCE, GRAVITY AND RECLAIMED WATER MAINS AND OTHER FACILITIES WITHIN THE LIMITS OF THE PROJECT SHALL BE SUPPORTED AND PROTECTED AGAINST DAMAGE DURING CONSTRUCTION.
4. ALL EXISTING AND NEW PCU VALVES, VALVE BOXES, ARV'S, FIRE HYDRANTS AND MANHOLES SHALL BE PROTECTED AND ADJUSTED TO FINISHED GRADE AS REQUIRED.
5. PCU SHALL BE NOTIFIED AT LEAST FIVE (5) DAYS PRIOR TO ANY CONSTRUCTION ACTIVITY WITHIN PROXIMITY OF ITS FACILITIES.
6. THE CONTRACTOR SHALL IMMEDIATELY CONTACT PCU AND REPAIR ALL DAMAGES TO PCU'S MAINS AND FACILITIES AT THE CONTRACTOR'S EXPENSE. IF THE REPAIR IS NOT MADE IN A TIMELY MANNER, AS DETERMINED BY PCU, PCU MAY PERFORM REQUIRED REPAIRS AND CLEANUP. THE CONTRACTOR WILL BE CHARGED FOR ALL EXPENSES ASSOCIATED WITH THE REPAIR.
7. ONLY PCU STAFF SHALL OPERATE WATER, WASTEWATER, AND RECLAIMED WATER VALVES. THE CONTRACTOR SHALL COORDINATE VALVE OPERATION WITH THE COUNTY CONSTRUCTION SITE REPRESENTATIVE & OPERATIONS.
8. THE CONTRACTOR SHALL COORDINATE ALL LIFT STATION OPERATION AND SHUT DOWN CONTROL WITH THE PCU CONSTRUCTION SITE REPRESENTATIVE & OPERATIONS. THE CONTRACTOR SHALL PROVIDE FOR BYPASSING AND/OR HAULING OF WASTEWATER DURING THE INTERRUPTION OF FLOWS AND CONNECTIONS WITH EXISTING WASTEWATER SYSTEMS.
9. ALL NEW VALVES BEING INSTALLED SHALL REMAIN CLOSED DURING CONSTRUCTION. KEEP VALVES ON ALL WET TAPS CLOSED UNTIL CLEARED BY FDEP/FDOH.
10. THE UTILITY IMPROVEMENTS AND ADJUSTMENTS SHOWN ON THESE PLANS ARE INTENDED TO MAINTAIN THE INTEGRITY OF THE PCU WATER, WASTEWATER AND RECLAIMED WATER SYSTEMS. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE UTILITIES STANDARDS AND SPECIFICATIONS MANUAL. THE PLANS DO NOT INCLUDE WORK PERFORMED ON OR FOR UTILITY SYSTEMS OWNED BY OTHERS, UNLESS STATED OTHERWISE ON THE PLANS.
11. DO NOT OPEN ANY VALVES THAT DIRECTLY CONNECTS ANY PROPOSED WATER MAINS TO ANY EXISTING MAINS UNLESS CLEARED BY BOTH FDEP/FDOH & PCU.
12. CONTRACTOR TO PROVIDE UTILITY MARKERS ON ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH PROJECT SPECIFICATIONS.

GENERAL NOTES

- 1. THE OWNER WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS LISTED IN THE CONTRACT DOCUMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL OBTAINED PERMITS ARE AVAILABLE FOR REVIEW FROM THE OWNER. ALL OTHER PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE W/ POLK COUNTY UTILITIES USSM (LATEST VERSION), EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE IN THE SPECIFICATION SECTION 00800. WHERE CONFLICTS ARISE, THE POLK COUNTY UTILITIES USSM (LATEST VERSION) SHALL APPLY, EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE IN THE SPECIFICATION SECTION 00800.
3. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
4. CONTRACTOR SHALL COMPLY WITH THE COORDINATION REQUIREMENTS AND RELATED COSTS, IF ANY, AS SPECIFIED IN THE CONTRACT DOCUMENTS.
5. CONTRACTOR SHALL NOTE THAT, IN GENERAL, ALL EXISTING CONDITION INFORMATION ON THE DRAWINGS ARE SHOWN WITH A LIGHTER LINE WEIGHT AND WITH A SLANTED TYPE TEXT.
6. PRIOR TO BEGINNING WORK WITHIN THE DEESON ROAD LIFT STATION EASEMENT, THE CONTRACTOR SHALL VERIFY THAT ANY SURFACE IMPROVEMENTS, TRAILERS, CONCRETE SLABS, TREES, ITEMS THAT WILL NOT BE USED BY PCU AS PART OF THIS PROJECT, AND BURIED UTILITIES, STRUCTURES, AND FEATURES WITHIN THE EASEMENT HAVE BEEN DEMOLISHED AND REMOVED BY THE MOBILE HOME PARK OWNER'S CONTRACTOR. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH WORK BEING PERFORMED BY THE MOBILE HOME PARK OWNER'S CONTRACTOR.

EXISTING SITE CONDITIONS

- 1. THE LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES, AS SHOWN ON THE DRAWINGS, ARE APPROXIMATE AND MAY NOT BE COMPLETE. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE BASED ON PREVIOUS CONSTRUCTION DESIGN PLANS, WHICH ARE AVAILABLE FOR INSPECTION AT THE ENGINEER'S OFFICE. NO GUARANTEE IS MADE THAT UTILITIES OR STRUCTURES WILL BE ENCOUNTERED WHERE SHOWN, OR THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. ALL LOCATIONS AND SIZES OF EXISTING UTILITIES AND STRUCTURES AND ROUNDNESS OF BURIED PIPING TO WHICH CONNECTIONS WILL BE MADE SHALL BE VERIFIED IN THE FIELD AS REQUIRED PRIOR TO PREPARATION OF SHOP DRAWINGS. THE CONTRACTOR WILL REALIGN NEW PIPE LOCATIONS AS REQUIRED TO CONFORM TO EXISTING LINES AND AS APPROVED BY THE ENGINEER.
2. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING UTILITIES IN THE FIELD WITH THE RESPECTIVE UTILITY COMPANY REPRESENTATIVE PRIOR TO COMMENCING WORK. ADDITIONAL TEST HOLE LOCATIONS, BEYOND THOSE SHOWN, MAY BE REQUIRED. UTILITY CONTACTS ARE AS FOLLOWS:
CABLE: CHARTER COMMUNICATIONS 863-333-4764
TELEPHONE/INTERNET: AT&T (SDT SOLUTIONS, LLC) 813-888-8300 X203
FRONTIER COMMUNICATIONS 863-669-8806
ELECTRIC: CITY OF LAKELAND 863-834-6486
DUKE ENERGY 888-778-9140
WATER/SEWER: POLK COUNTY UTILITIES - NW REGION RYAN BENSCH 863-298-4193
3. ALL HANDLING AND DISPOSAL OF HAZARDOUS MATERIALS OR WORK WITHIN HAZARDOUS ENVIRONMENTS SHALL BE CONDUCTED IN ACCORDANCE WITH OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
4. PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL CONTACT SUNSHINE 811 TO VERIFY

LOCATIONS OF EXISTING UNDERGROUND UTILITIES.

CLEARING, GRUBBING AND GRADING

- 1. CONTRACTOR SHALL MINIMIZE CLEARING OPERATIONS. CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. CLEARING LIMITS SHALL BE AS INDICATED ON THE DRAWINGS, BUT AT ALL TIMES WITHIN EXISTING ROAD RIGHTS-OF-WAY AND PROPERTY LINES ON STATE OR COUNTY-OWNED PROPERTY OR EASEMENTS. ALL CLEARING AND GRUBBING MATERIAL SHALL BE THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT A SITE PROVIDED BY THE CONTRACTOR IN COMPLIANCE WITH ALL STATE AND LOCAL LAWS.
2. THE CONTRACTOR SHALL FOLLOW ALL THREATENED OR ENDANGERED SPECIES ACT 4(D) RULES INCLUDING ALL APPLICABLE GUIDELINES FOR GOPHER TORTOISE AND MITIGATION.
3. CONTRACTOR SHALL CONTROL DUST ON THE CONSTRUCTION SITE TO A REASONABLE LIMIT AS OUTLINED IN THE CONTRACT DOCUMENTS.
4. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH, DEBRIS OR OTHER CONSTRUCTION MATERIAL OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE ASSOCIATED CLEAN UP.
5. ALL CATCH BASINS, MANHOLES, VALVE PITS, VALVE BOXES AND OTHER BURIED FACILITIES WITH SURFACE ACCESS SHALL BE ADJUSTED TO MATCH FINAL GRADES, UNLESS OTHERWISE INDICATED.
6. THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY IN ANY MATERIALS TAKEN FROM ANY EXCAVATION. SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED IN THE PROJECT, WITH EXCESS MATERIAL DISPOSED OF AT A LOCATION PROVIDED BY THE CONTRACTOR. THESE PROVISIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF OBLIGATIONS TO PROPERLY DISPOSE OF AND REPLACE ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING. THE CONTRACTOR SHALL DISPOSE OF UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CONTRACT DOCUMENTS.
7. CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, TO THE SATISFACTION OF THE OWNER AND ENGINEER.
8. ALL NON-ROADWAY AREAS THAT ARE EXCAVATED, FILLED, OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE GRADED, LIMED, FERTILIZED, AND SODDED, IN ACCORDANCE WITH PCU STANDARDS, UNLESS OTHERWISE NOTED.
9. CONTRACTOR SHALL TEMPORARILY REMOVE, PROTECT, AND RESTORE ALL MAILBOXES AND SIGNS IN THE PATH OF CONSTRUCTION TO THEIR ORIGINAL LOCATION, TO THE SATISFACTION OF THE OWNER AND ENGINEER.

CIVIL SITE LAYOUT

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THIS PROVIDED LAYOUT INFORMATION THROUGHOUT THE COURSE OF CONSTRUCTION. REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
2. REFER TO THE DRAWINGS FOR ADDITIONAL LAYOUT INFORMATION.
3. THE CONTRACTOR SHALL PERFORM ALL WORK WITHIN THE EASEMENT AREAS SHOWN ON THE DRAWINGS. IF REQUIRED, THE CONTRACTOR SHALL COORDINATE WITH AND OBTAIN PERMISSION FROM PROPERTY OWNERS FOR TEMPORARY EASEMENT AREAS AT HIS OWN EXPENSE TO PERFORM THE WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING AND RESETING ALL EXISTING PROPERTY MONUMENTATION DISTURBED BY CONSTRUCTION. THIS WORK SHALL BE DONE BY A LAND SURVEYOR REGISTERED IN THE STATE OF FL, AT NO ADDITIONAL COST TO THE OWNER.
5. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
6. BOLLARD LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE BOLLARD LOCATIONS WITH THE ENGINEER. REFER TO THE CIVIL DETAIL DRAWINGS.
7. ALL ELEVATIONS REFER TO THE NAVD 88 DATUM. HORIZONTAL DATUM IS REFERENCED TO GRID NORTH, NORTH AMERICAN DATUM OF 1983(2011), FLORIDA STATE PLANE, WEST ZONE, US-FOOT. CONTRACTOR SHALL VERIFY BENCHMARK ELEVATIONS PRIOR TO USING IN CONSTRUCTION.
8. EXISTING CONDITIONS DEVELOPED FROM CIVLSURV DESIGN GROUP, INC. DATED OCTOBER 9, 2020, AND EXISTING RECORD DRAWING INFORMATION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING POWER/TELEPHONE COMPANIES AND ARRANGING TO HAVE UTILITY POLES HELD AND/OR GUY WIRES REMOVED AND REPLACED.

PIPING

- 1. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING PIPING AND UTILITIES AND ROUNDNESS OF BURIED PIPING TO WHICH CONNECTIONS WILL BE MADE IN THE FIELD BY TEST HOLE EXCAVATION PRIOR TO PREPARATION OF SHOP DRAWINGS. WHERE NEW PIPE CONNECTS TO EXISTING PIPING OR STRUCTURAL PENETRATION, CONTRACTOR SHALL VERIFY ELEVATION BY TEST HOLE, AS REQUIRED, PRIOR TO INSTALLATION OF ANY OF THE ASSOCIATED/AFFECTED NEW PIPING. IDENTIFIED CONFLICTS WITH EXISTING PIPING AND UTILITIES WILL BE REVIEWED WITH THE ENGINEER PRIOR TO COMMENCING INSTALLATION. THE HORIZONTAL ALIGNMENT OF NEW PIPING MAY BE ADJUSTED IN THE FIELD SUBJECT TO PRIOR REVIEW AND ACCEPTANCE OF THE ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT OF ALL PROPOSED WORK AS SHOWN ON THE DRAWINGS AND REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
2. ALL BURIED CONNECTIONS TO STRUCTURES SHALL HAVE SLEEVE TYPE FLEXIBLE CONNECTIONS APPROXIMATELY 4- FEET FROM THE STRUCTURES. ALL SLEEVE TYPE COUPLINGS ON PRESSURE LINES SHALL BE RESTRAINED (SOLID SLEEVE).
3. REFER TO THE CONTRACT DOCUMENTS FOR PIPE AND STRUCTURE BEDDING AND BACKFILL REQUIREMENTS.
4. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPE AS REQUIRED TO COMPLETE THE CONNECTION. CONTRACTOR SHALL VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. TEST HOLES SHALL BE EXCAVATED AS REQUIRED.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL DEMOLITION MATERIALS.
6. VERTICAL AND HORIZONTAL SEPARATION REQUIREMENTS FOR UTILITIES BEING INSTALLED ARE SHOWN IN THE CIVIL DETAILS DRAWINGS.
7. ELECTRICAL CONDUIT RUNS ARE INDICATED ON THE ELECTRICAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION, EXCAVATION AND BACKFILLING REQUIRED FOR THE ELECTRICAL CONDUITS, AND SHALL FURNISH AND INSTALL ELECTRICAL MANHOLES AND HANDHOLES. COORDINATE THE LOCATION OF THE ELECTRICAL MANHOLES AND HANDHOLES, AND THE REQUIRED OPENING SIZES, WITH THE ELECTRICAL CONTRACTOR.

CIVIL ABBREVIATIONS

Table listing civil abbreviations such as & DIA, #, NO, APP'D, BLDG, BWV, BWWR, CB, CEN, CD MES, CFS, CL, CI, CMP, CO, CONC, COR, CY, DEMO, DMH, DI, DR, DWG, EL, EMH, ERCP, FDOT, FM, FT, G, HYD, IN, INF, INV, LBS, MAX, MEG, MH, MIN, ML, MW, N, NGVD, N/A, NTS, OD, PC, PSF, PSI, PT, PVC, RAS, RCP, RD, REQ'D, RS, RW, S, SC, SD, SE, SF, SMH, SPI, SQ, SS, STA, T, XFMR, TBM, THK, TOS, TYP, UD, UG, UGE, VC, W/, W, WAS.

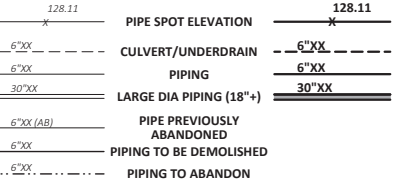
EXISTING



LEGEND

Legend table with columns for PROPERTY/ROW LINE, EASEMENT LINE, CENTERLINE, EDGE OF PAVEMENT, CURBING, EDGE OF GRAVEL, EDGE OF CONCRETE, CONTOUR, BUILDING, STONEWALL, TREELINE, CHAIN LINK FENCE, STOCKADE FENCE, BARB WIRE FENCE, RETAINING WALL, GUARDRAIL, SEWER, SEWER FORCE MAIN, GAS, WATER, STORM DRAIN, UNDERDRAIN, CULVERT, UNDERGROUND ELECTRIC, OVERHEAD ELECTRIC, UNDERGROUND TELEPHONE, UNDERGROUND CABLE TV, IRON PIPE/REBAR, DRILLHOLE, MONUMENT, SURVEY CONTROL POINT, SPOT ELEVATION, SEWER MANHOLE, DRAINAGE MANHOLE, CATCH BASIN, ELECTRIC MANHOLE, TELEPHONE MANHOLE, SHUTOFF VALVE, YARD HYDRANT, HYDRANT, GAS SERVICE SHUTOFF, GAS GATE VALVE, UTILITY POLE, UTILITY POLE W/ GUY, UTILITY POLE W/ LIGHT, LIGHT POLE, BOLLARD, CONIFEROUS TREE, DECIDUOUS TREE, SHRUB, WETLAND FLAG, EDGE OF WATER, STREAM, EDGE OF WETLANDS, FLOODPLAIN, WETLANDS, DRAINAGE FLOW, DRAINAGE SWALE, PAVEMENT MARKINGS, SIGN, MAILBOX, TEMPORARY BENCH MARK, TEST PIT, TEST BORING, TEST PROBE, MONITORING WELL, LIMIT OF WORK, SILT FENCE, RIPRAP, RAILROAD, MATCHLINE, ROCK OUTCROP.

WWTP PIPE STYLES



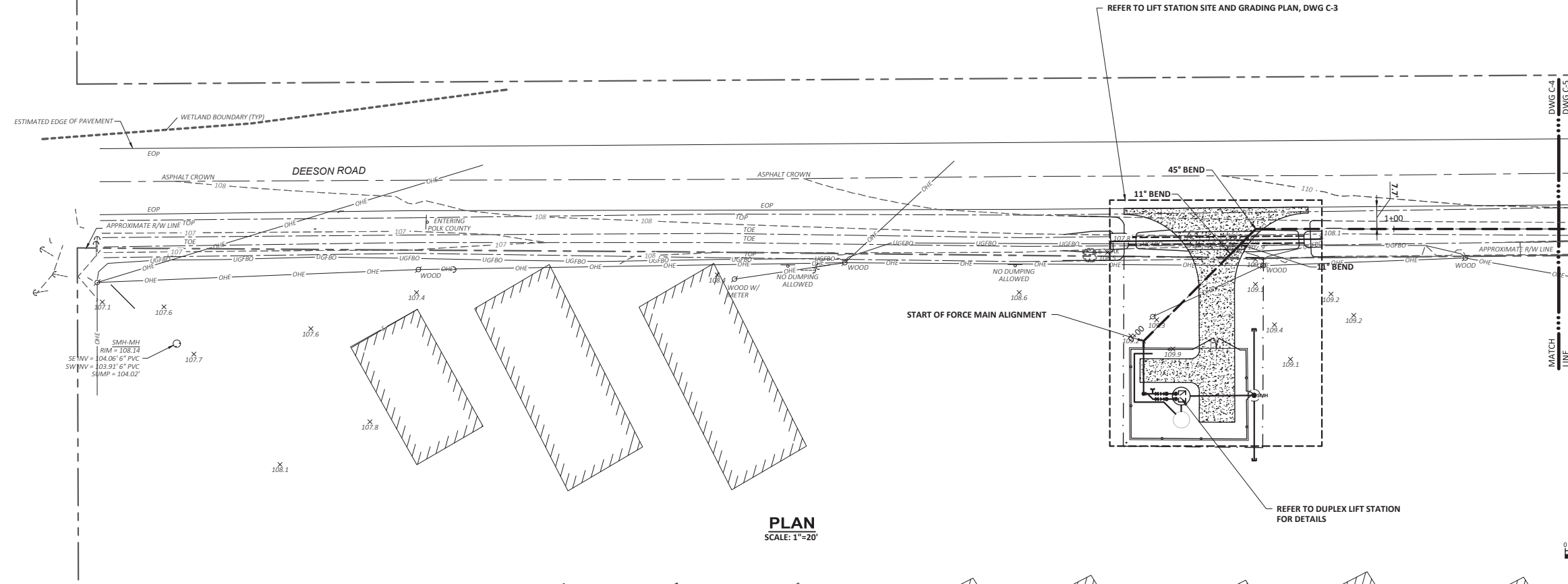
"XX" DENOTES PIPE DESCRIPTION

SEE LIST OF CIVIL ABBREVIATIONS FOR PIPE DESCRIPTIONS

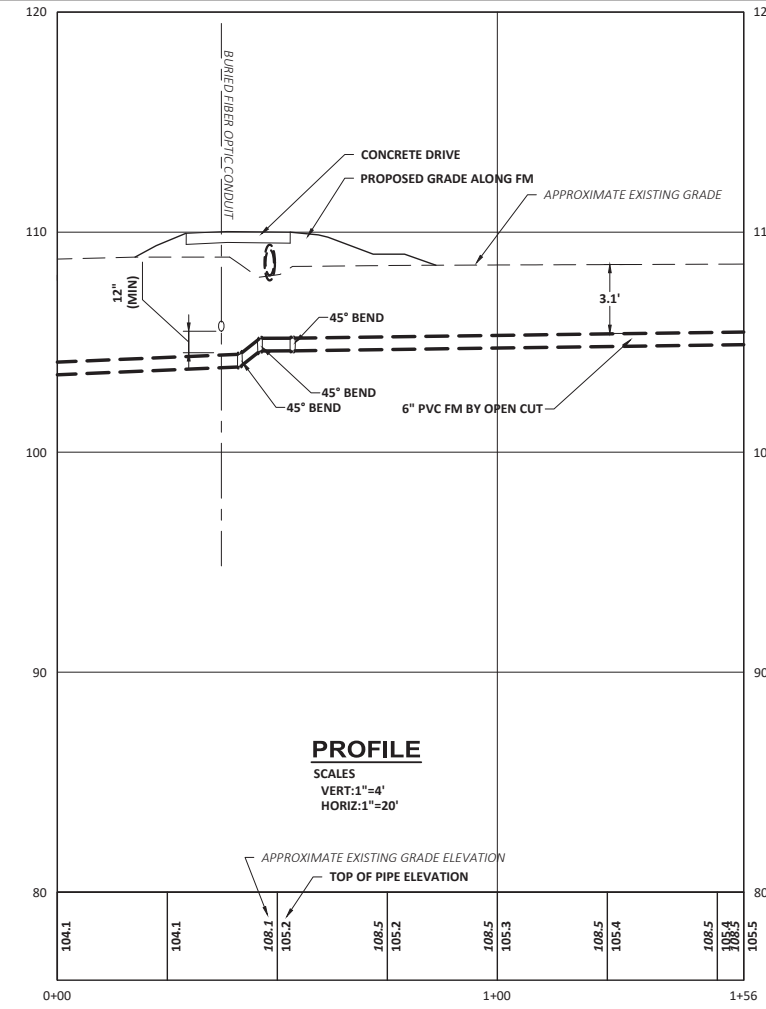
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POLK COUNTY, FLORIDA DEESON ROAD LIFT STATION AND FORCE MAIN IMPROVEMENTS		WRIGHT-PIERCE 800.422.1095 www.wright-pierce.com 122 E MAIN STREET, LAKELAND, FL 33801				PROJECT NO: 21136 DESIGNED: C BAGGETT CAD COORD: D SAVAGE CAD: R SCAMMON CHECKED: B BDOZ DATE: 02/01/24 APPROVED: C BAGGETT DATE: 02/02/24 SUBMISSION: 100% SUBMITTAL		REVISIONS <table border="1"> <tr> <th>NO</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>		NO	DESCRIPTION	DATE												
NO	DESCRIPTION	DATE																						
DRAWING C-2		KEY MAP		Christopher C Baggett PROFESSIONAL ENGINEER No. 56047 STATE OF FLORIDA		THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF WRIGHT-PIERCE AND SHALL REMAIN THE PROPERTY OF THE CLIENT. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF WRIGHT-PIERCE. Christopher C Baggett PROFESSIONAL ENGINEER No. 56047 STATE OF FLORIDA 02/02/24 11:28:25-0510																		



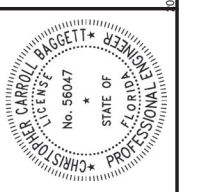
PLAN
SCALE: 1"=20'



PROFILE
SCALES
VERT: 1"=4'
HORIZ: 1"=20'

NO	REVISIONS	APPD	DATE

PROJECT NO: 21136	DESIGNED: C. BAGGETT	CAD COORD: D. SAVAGE	CAD: R. SCAMMON	CHECKED: B. BOOZ	DATE: 02/01/24	APPROVED: C. BAGGETT	DATE: 02/01/24	SUBMISSION: 100% SUBMITTAL
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 800.422.1095 | www.wright-pierce.com
 122 E MAIN STREET, LAKELAND, FL 33801

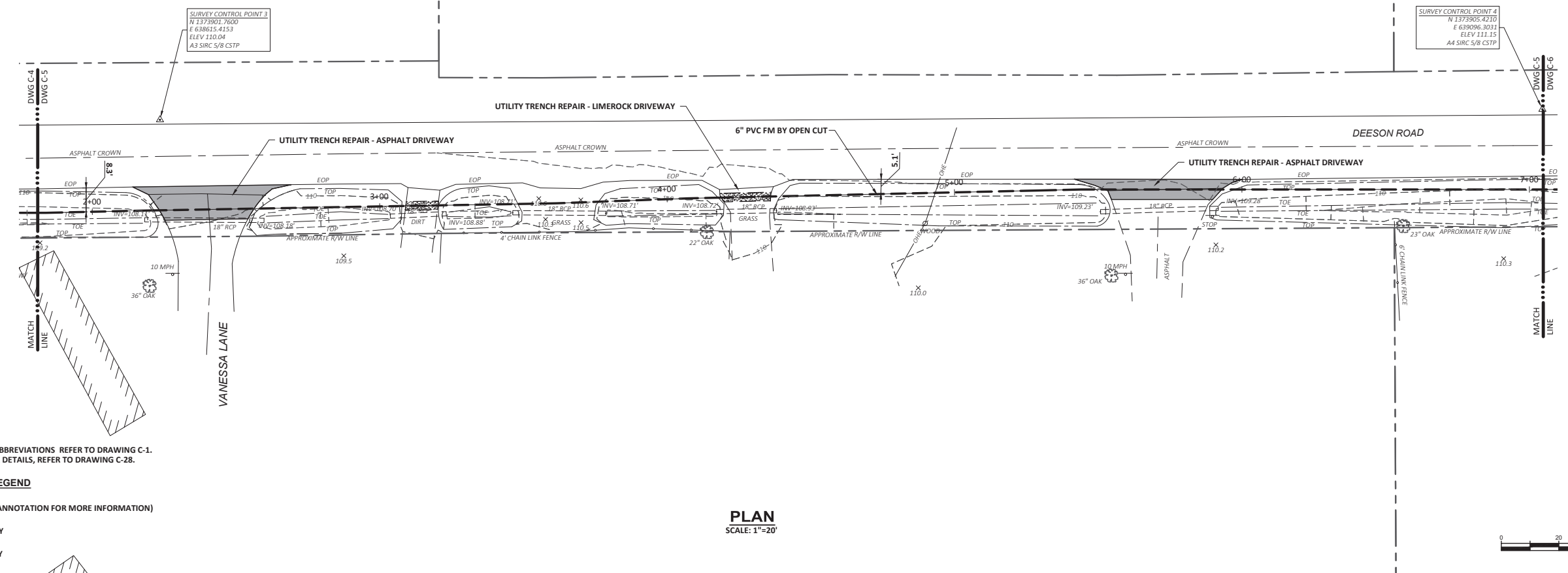
**POLK COUNTY, FLORIDA
 DEESON ROAD LIFT STATION
 AND FORCE MAIN IMPROVEMENTS**

FORCE MAIN PLAN AND PROFILE

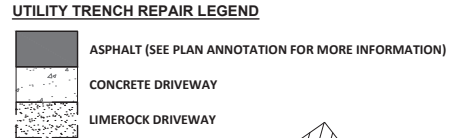
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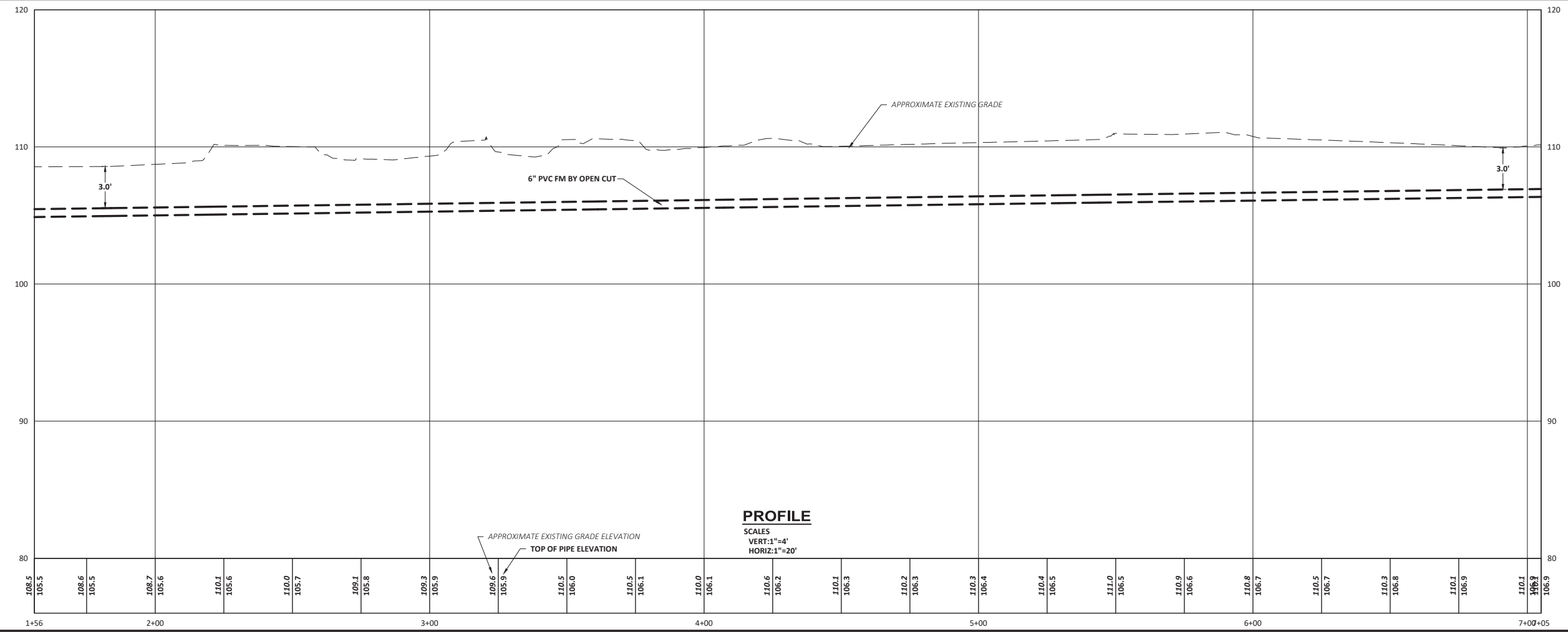
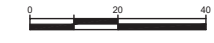
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- GENERAL NOTES:**
- FOR NOTES, LEGEND, AND ABBREVIATIONS REFER TO DRAWING C-1.
 - FOR UTILITY TRENCH REPAIR DETAILS, REFER TO DRAWING C-28.



PLAN
SCALE: 1"=20'



PROFILE
SCALE:
VERT: 1"=4'
HORIZ: 1"=20'

NO	REVISIONS	APPD	DATE

PROJECT NO: 21136
 DESIGNED: C.BAGGETT
 CAD COORD: D.SAVAGE
 CAD: R.SCAMMON
 CHECKED: B.BDOZ
 DATE: 02/01/24
 APPROVED: C.BAGGETT
 DATE: 02/01/24
 SUBMISSION: 100% SUBMITTAL

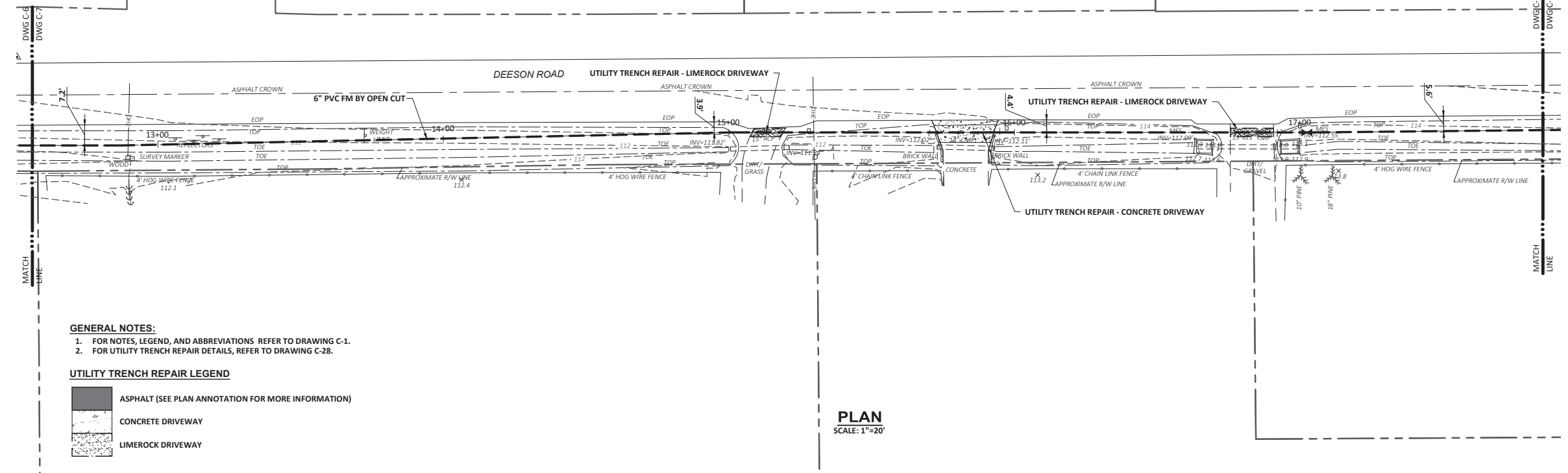


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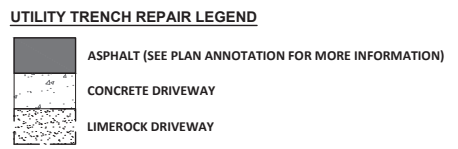
POLK COUNTY, FLORIDA
 DEESON ROAD LIFT STATION
 AND FORCE MAIN IMPROVEMENTS

FORCE MAIN PLAN AND PROFILE

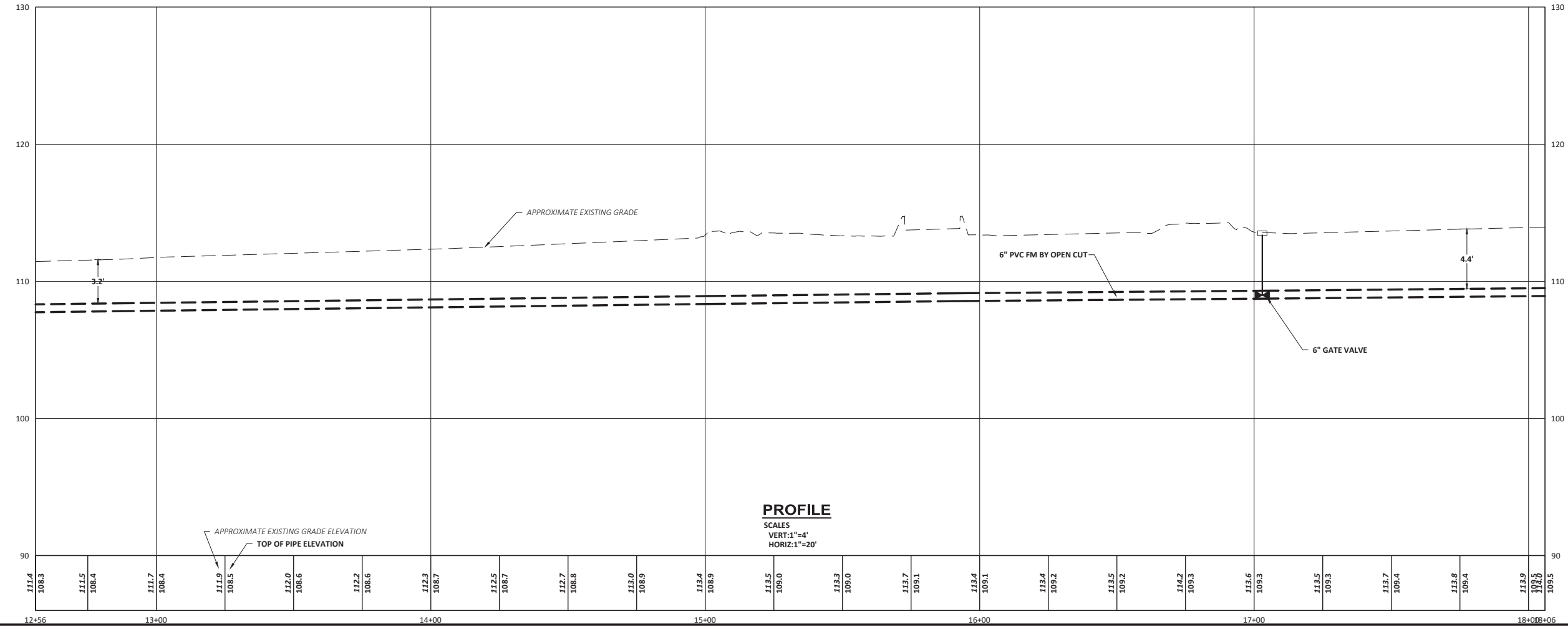
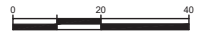
DRAWING
C-5



- GENERAL NOTES:**
- FOR NOTES, LEGEND, AND ABBREVIATIONS REFER TO DRAWING C-1.
 - FOR UTILITY TRENCH REPAIR DETAILS, REFER TO DRAWING C-28.



PLAN
SCALE: 1"=20'



PROFILE
SCALE:
VERT: 1"=4'
HORIZ: 1"=20'

NO	REVISIONS	APPD	DATE

PROJECT NO: 21136
 DESIGNED: C. BRAGGETT
 CAD COORD: D. S. VANCE
 CAD: R. SCAMMON
 CHECKED: B. BOOZ
 DATE: 02/01/24
 APPROVED: C. BRAGGETT
 DATE: 02/01/24
 SUBMISSION: 100% SUBMITTAL

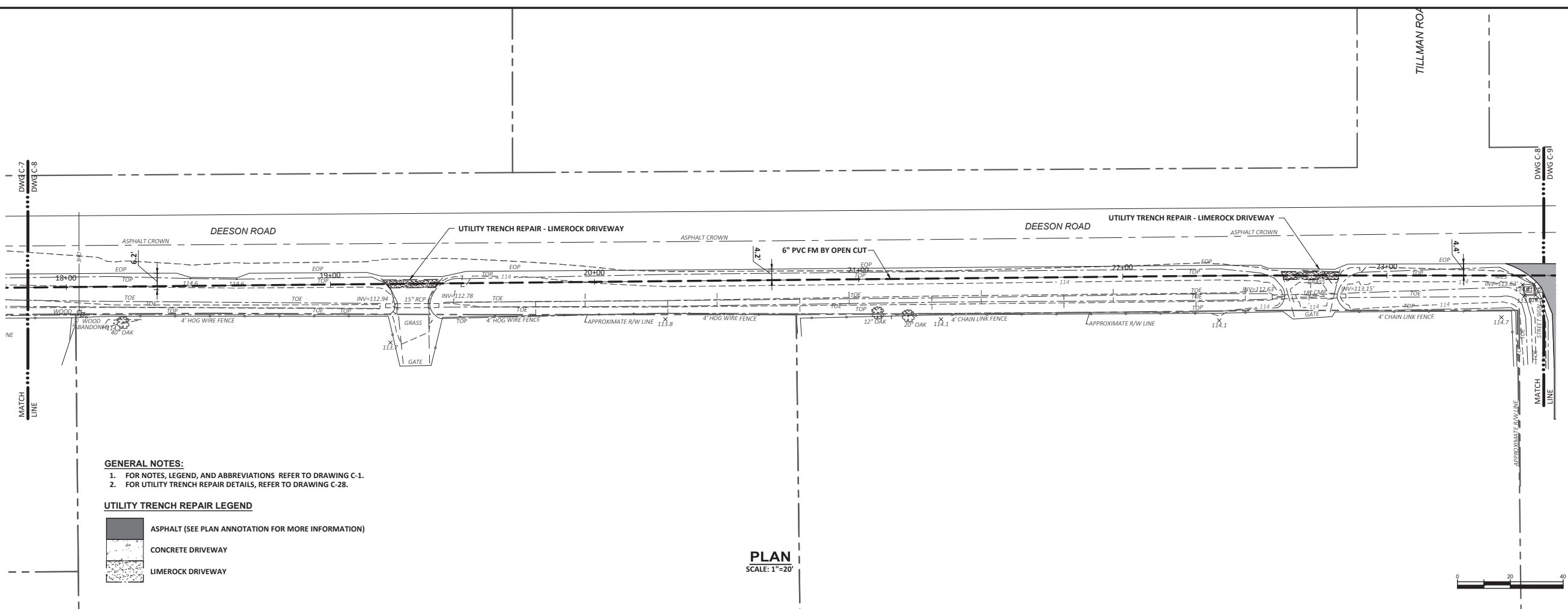


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POLK COUNTY, FLORIDA
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 AND FORCE MAIN IMPROVEMENTS

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DRAWING
C-7

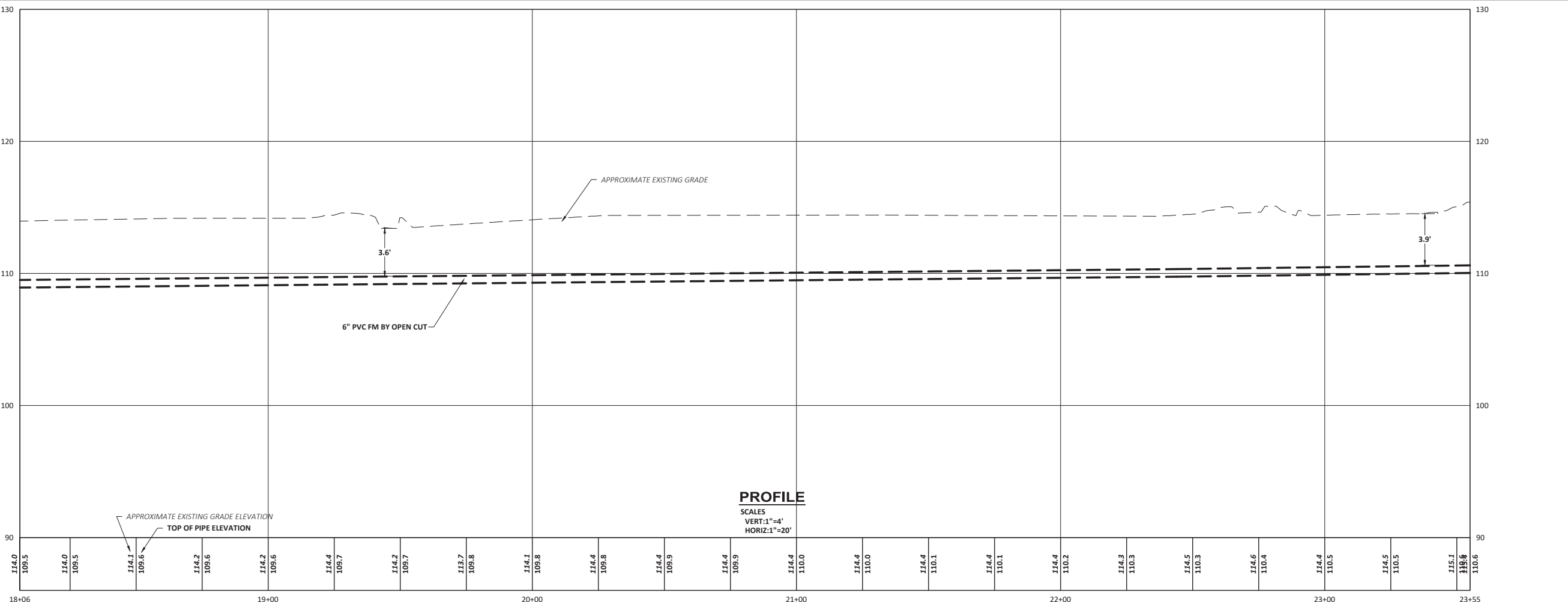


- GENERAL NOTES:**
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 - FOR UTILITY TRENCH REPAIR DETAILS, REFER TO DRAWING C-28.

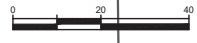
UTILITY TRENCH REPAIR LEGEND

- ASPHALT (SEE PLAN ANNOTATION FOR MORE INFORMATION)
- CONCRETE DRIVEWAY
- LIMEROCK DRIVEWAY

PLAN
SCALE: 1"=20'



PROFILE
SCALES
VERT: 1"=4'
HORIZ: 1"=20'

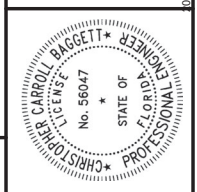


NO	REVISIONS	APPD	DATE

PROJECT NO: 21136
 DESIGNED: C. BRAGGETT
 CAD COORD: D. S. VANCE
 CAD: R. SCAMMON
 CHECKED: B. BOOZ
 DATE: 02/01/24
 APPROVED: C. BRAGGETT
 DATE: 02/01/24
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Christopher C. Braggett
 PROFESSIONAL ENGINEER
 No. 56047
 STATE OF FLORIDA



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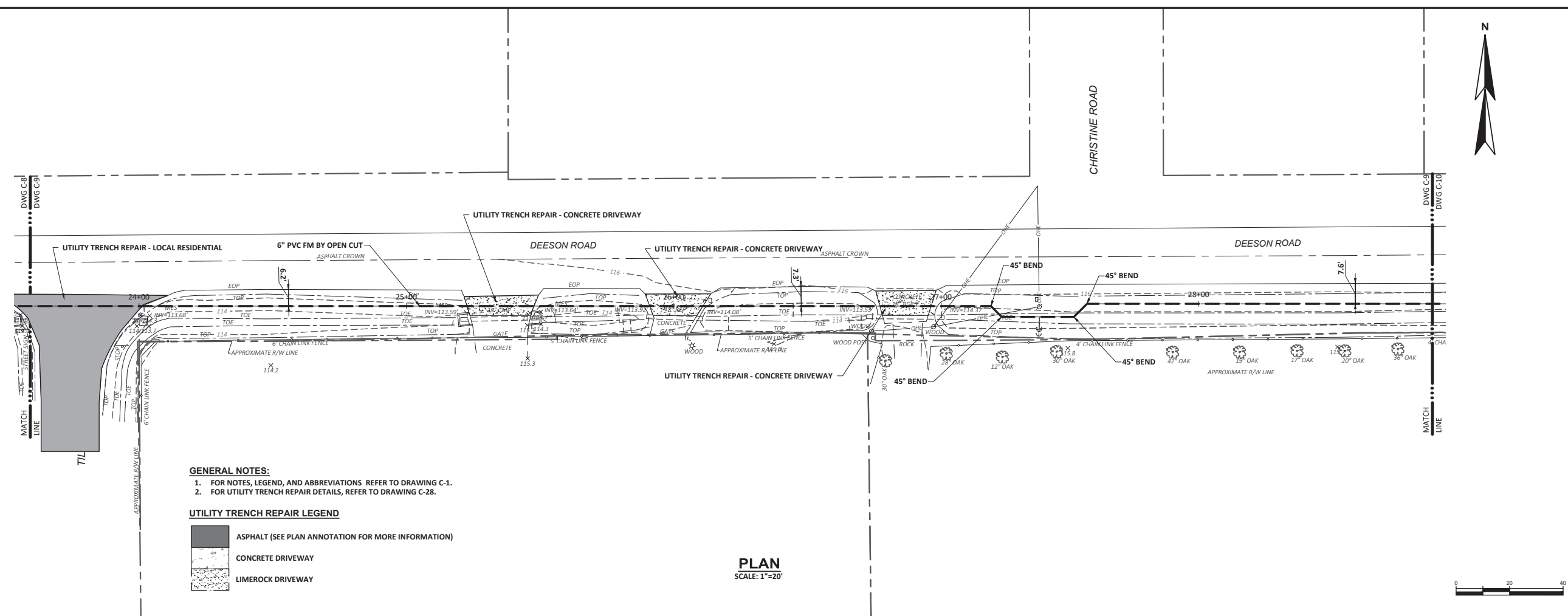
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POLK COUNTY, FLORIDA
DEESON ROAD LIFT STATION
AND FORCE MAIN IMPROVEMENTS

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DRAWING
C-8

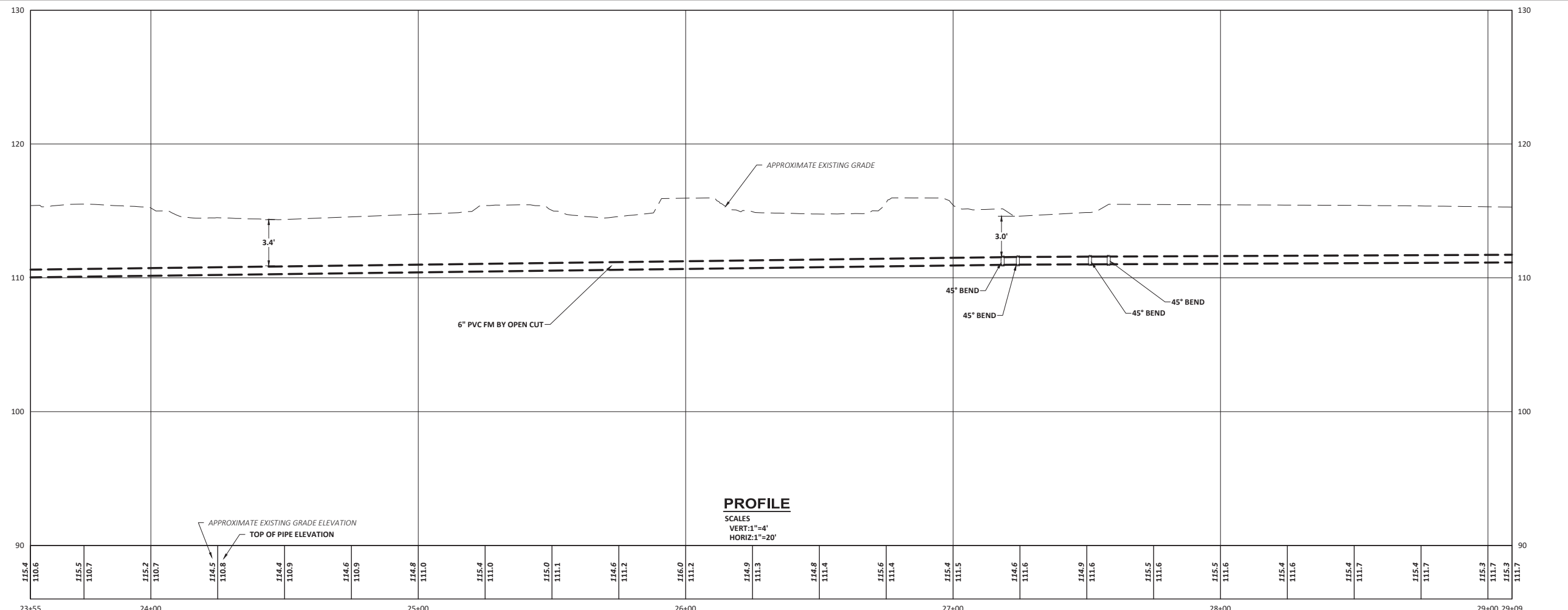


- GENERAL NOTES:**
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 - FOR UTILITY TRENCH REPAIR DETAILS, REFER TO DRAWING C-28.

UTILITY TRENCH REPAIR LEGEND

- ASPHALT (SEE PLAN ANNOTATION FOR MORE INFORMATION)
- CONCRETE DRIVEWAY
- LIMEROCK DRIVEWAY

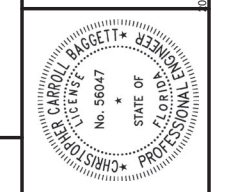
PLAN
SCALE: 1"=20'



PROFILE
SCALE:
VERT: 1"=4'
HORIZ: 1"=20'

NO	REVISIONS	APPD	DATE

PROJECT NO: 21136
 DESIGNED: C. BAGGETT
 CAD COORD: D. SARGE
 CAD: R. SCAMMON
 CHECKED: B. BOOZ
 DATE: 02/01/24
 APPROVED: C. BAGGETT
 DATE: 02/01/24
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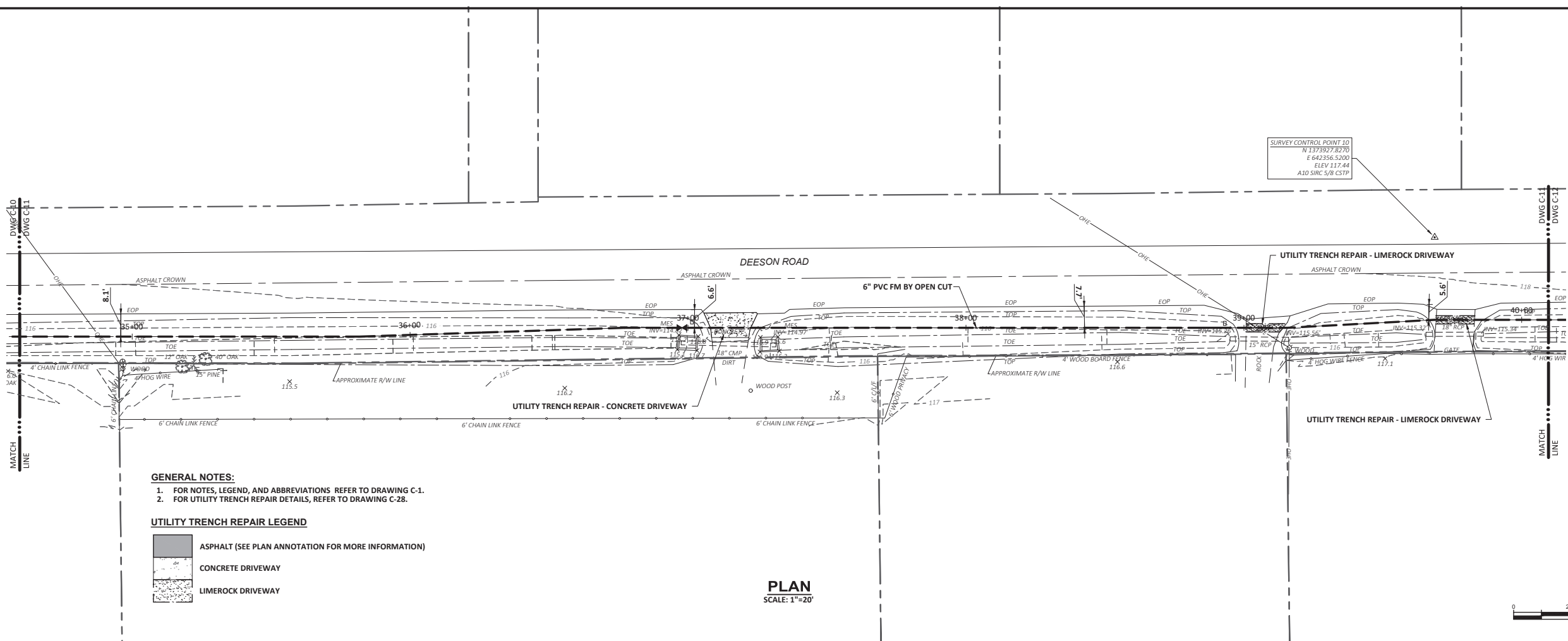


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 AND FORCE MAIN IMPROVEMENTS

FORCE MAIN PLAN AND PROFILE

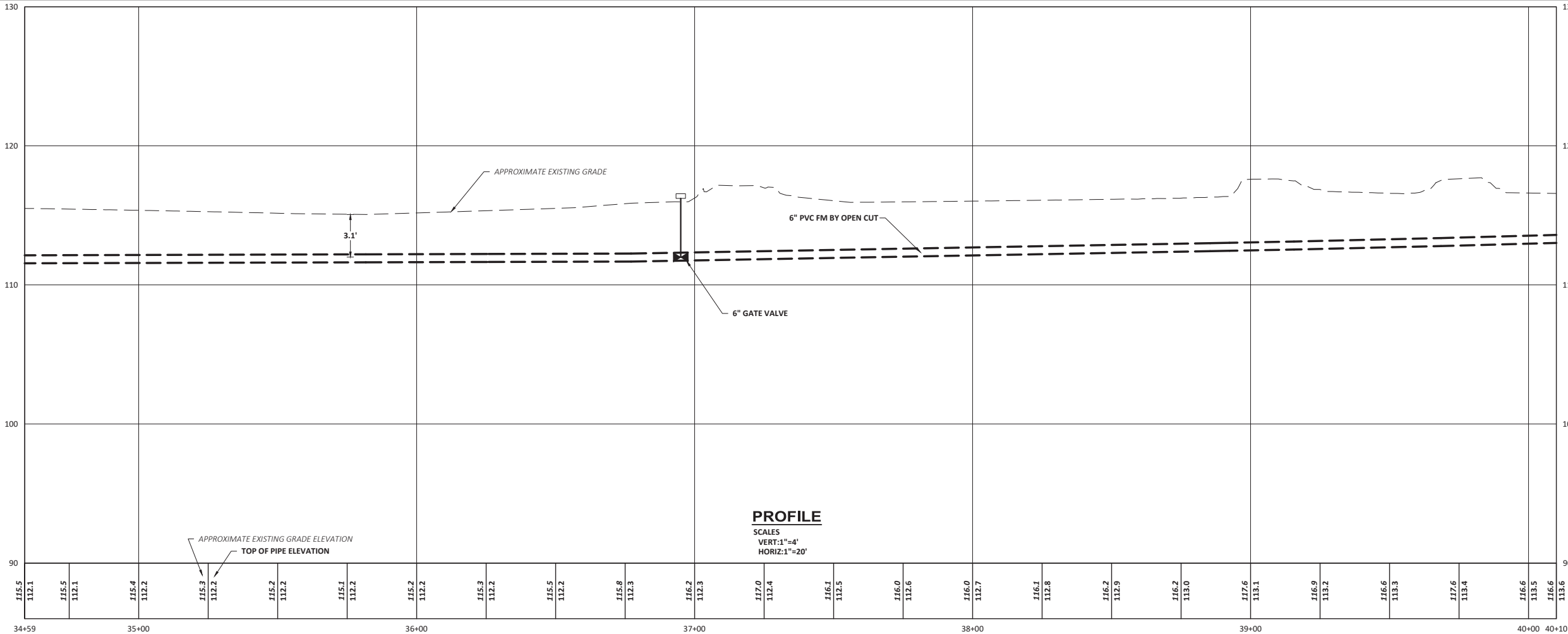
DRAWING
C-9



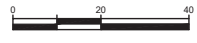
GENERAL NOTES:
 1. FOR NOTES, LEGEND, AND ABBREVIATIONS REFER TO DRAWING C-1.
 2. FOR UTILITY TRENCH REPAIR DETAILS, REFER TO DRAWING C-28.

UTILITY TRENCH REPAIR LEGEND

	ASPHALT (SEE PLAN ANNOTATION FOR MORE INFORMATION)
	CONCRETE DRIVEWAY
	LIMEROCK DRIVEWAY



PROFILE
 SCALES
 VERT: 1"=4'
 HORIZ: 1"=20'

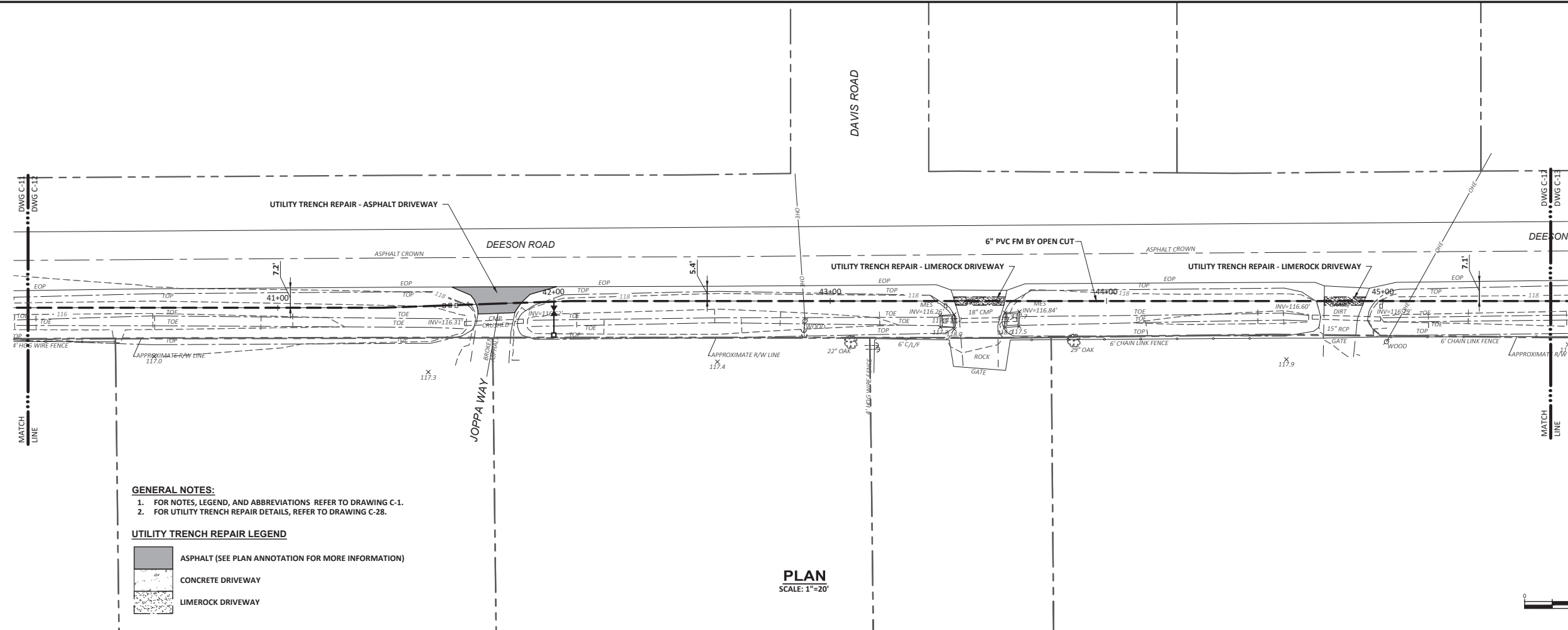


REVISIONS		APPD	DATE
NO	DESCRIPTION		

PROJECT NO: 21136	DESIGNED: C. BAGGETT	CAD COORD: D. SAVAGE	CAD: R. SCAMMON
CHECKED: B. BOOZ	DATE: 02/01/24	APPROVED: C. BAGGETT	DATE: 02/01/24
SUBMISSION: 100% SUBMITTAL			DATE: 02/01/24

THESE PLANS AND SPECIFICATIONS HAVE BEEN PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF THEY COMPLY WITH ALL CITY, STATE AND FEDERAL REQUIREMENTS AND I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA.	Christopher C. Baggett PROFESSIONAL ENGINEER No. 56047 STATE OF FLORIDA
--	--

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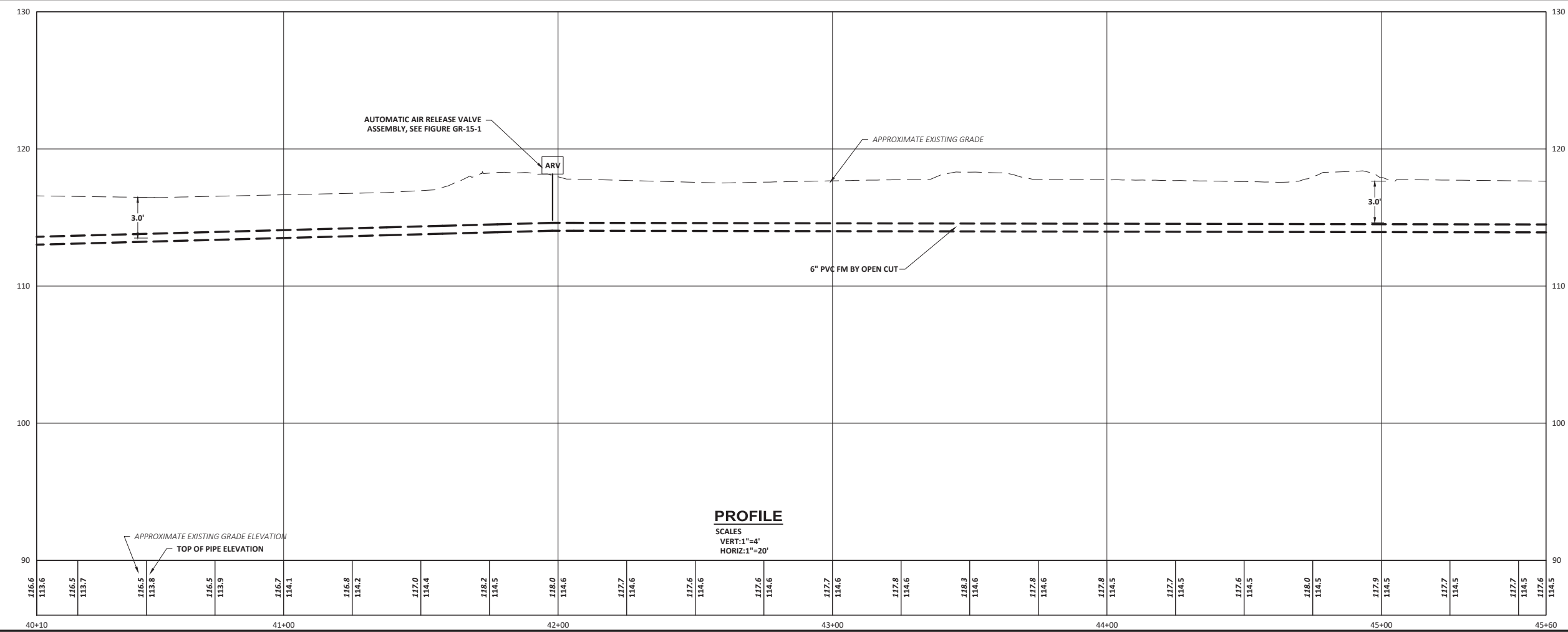
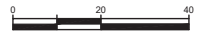


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UTILITY TRENCH REPAIR LEGEND

	ASPHALT (SEE PLAN ANNOTATION FOR MORE INFORMATION)
	CONCRETE DRIVEWAY
	LIMEROCK DRIVEWAY

PLAN
 SCALE: 1"=20'



PROFILE
 SCALES
 VERT: 1"=4'
 HORIZ: 1"=20'

NO	REVISIONS	APPD	DATE

PROJECT NO: 21136
 DESIGNED: C. BRAGGETT
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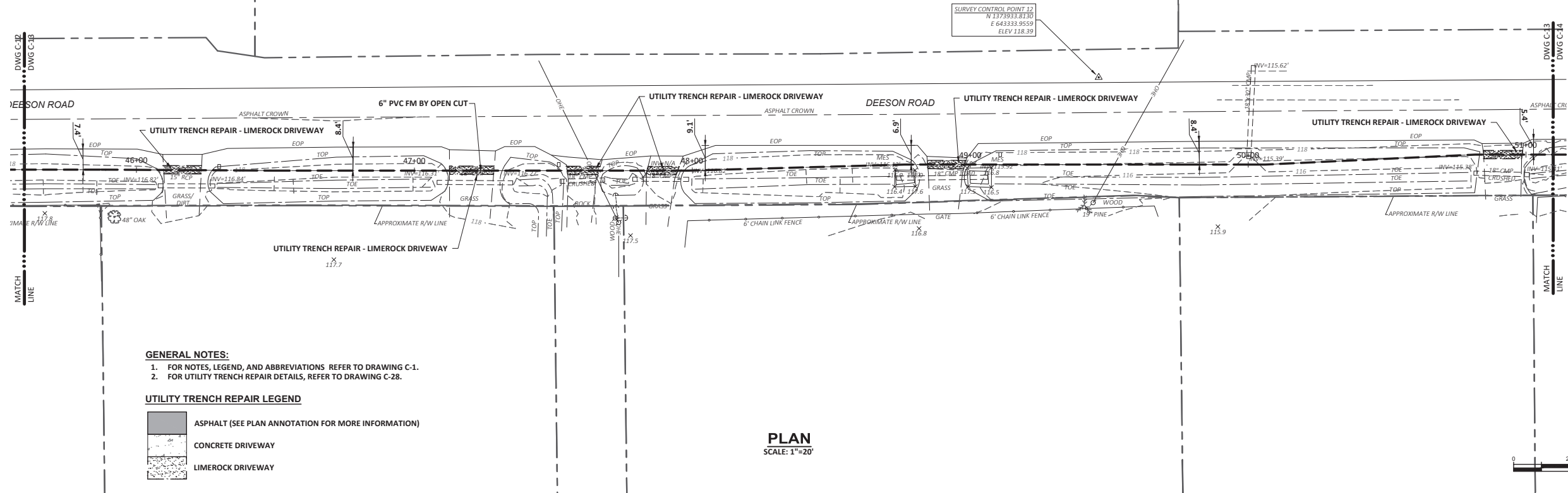


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 AND FORCE MAIN IMPROVEMENTS

FORCE MAIN PLAN AND PROFILE

DRAWING
C-12

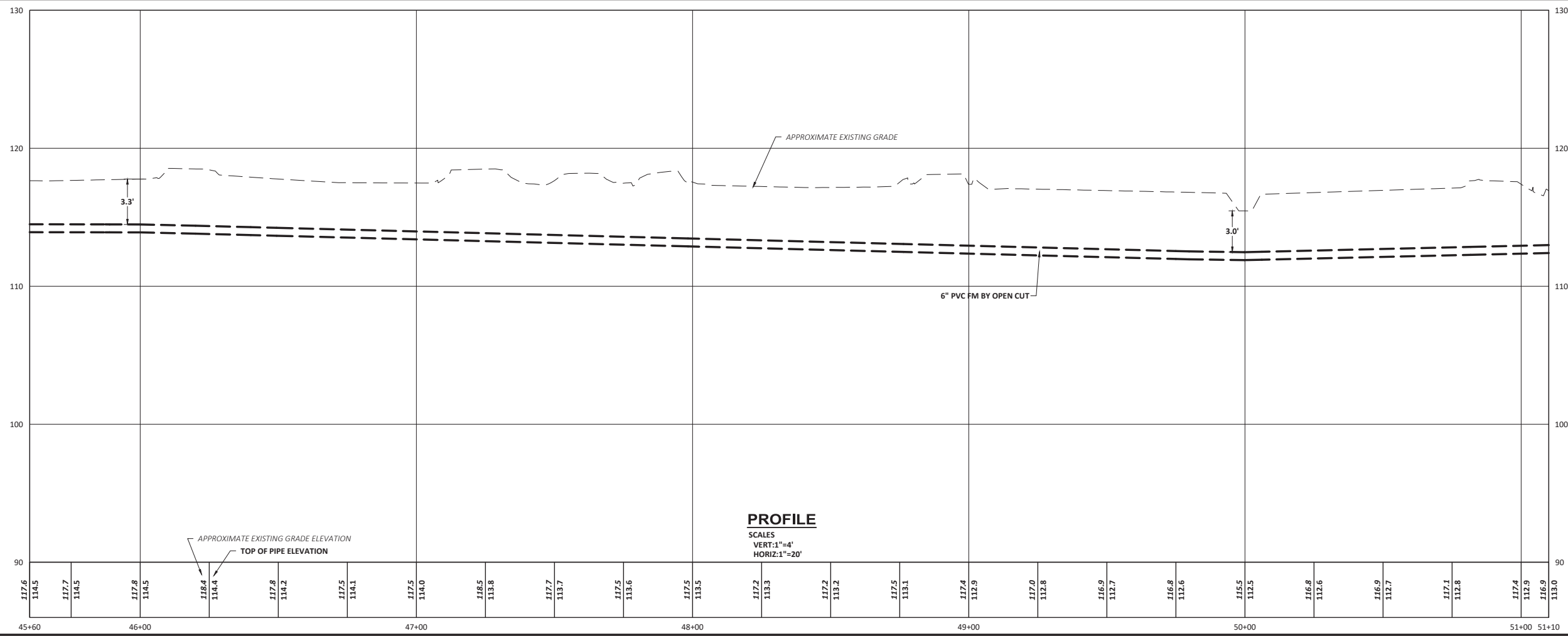


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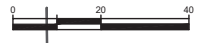
UTILITY TRENCH REPAIR LEGEND

	ASPHALT (SEE PLAN ANNOTATION FOR MORE INFORMATION)
	CONCRETE DRIVEWAY
	LIMEROCK DRIVEWAY

PLAN
SCALE: 1"=20'

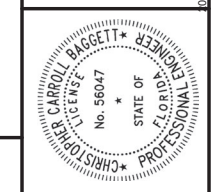


PROFILE
SCALE:
VERT: 1"=4'
HORIZ: 1"=20'



NO	REVISIONS	APPD	DATE

PROJECT NO: 21136
 DESIGNED: C. BRAGGETT
 CAD COORD: D. SAVAGE
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 SUBMISSION: 100% SUBMITTAL

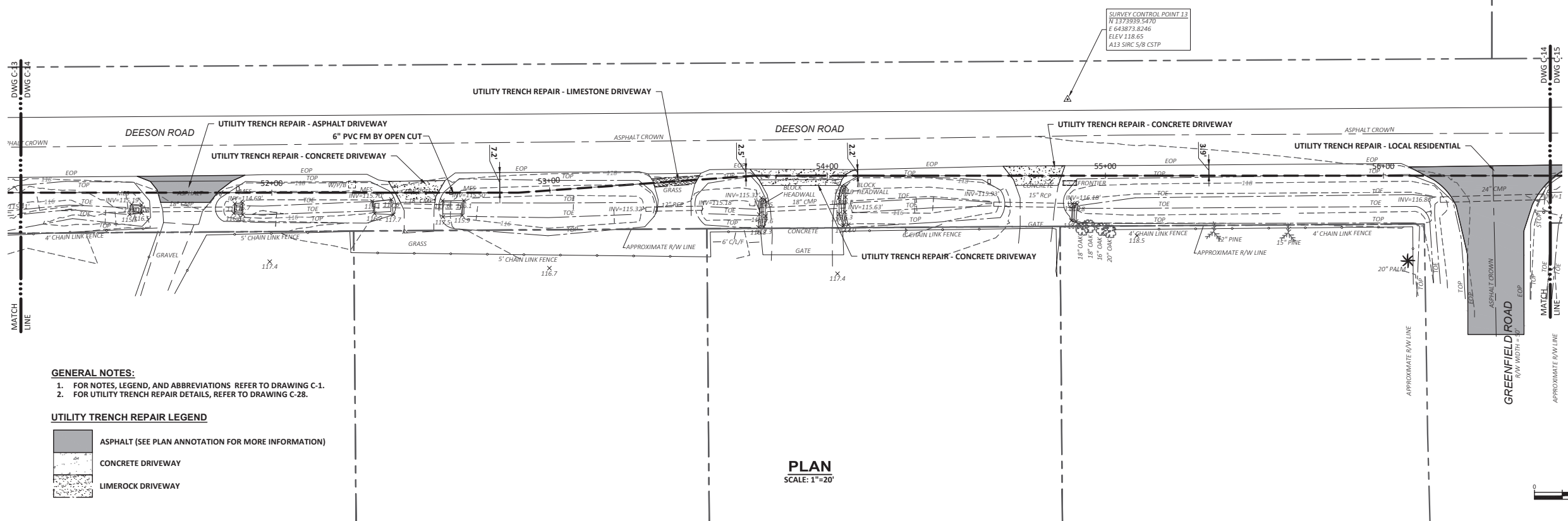


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AND FORCE MAIN IMPROVEMENTS

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DRAWING
C-13

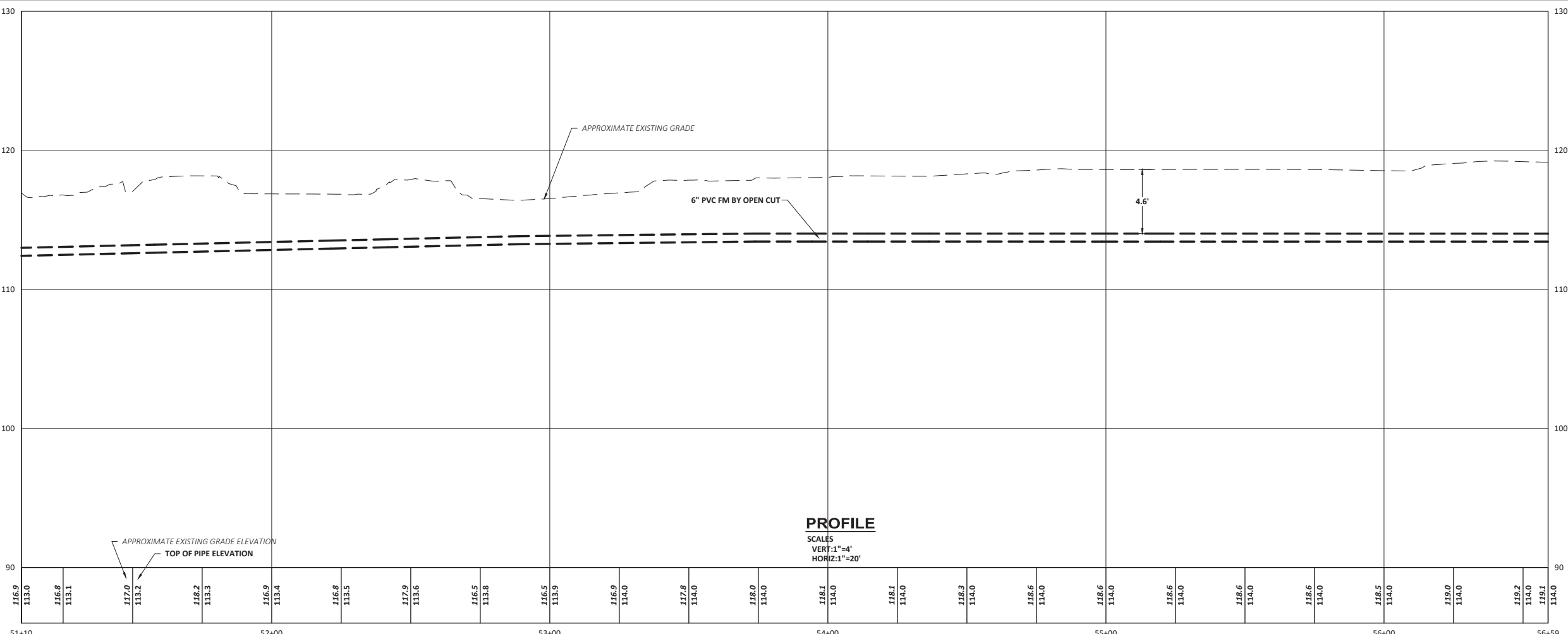


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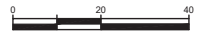
UTILITY TRENCH REPAIR LEGEND

- ASPHALT (SEE PLAN ANNOTATION FOR MORE INFORMATION)
- CONCRETE DRIVEWAY
- LIMEROCK DRIVEWAY

PLAN
SCALE: 1"=20'



PROFILE
SCALES
VERT: 1"=4'
HORIZ: 1"=20'



NO	REVISIONS	APPD	DATE

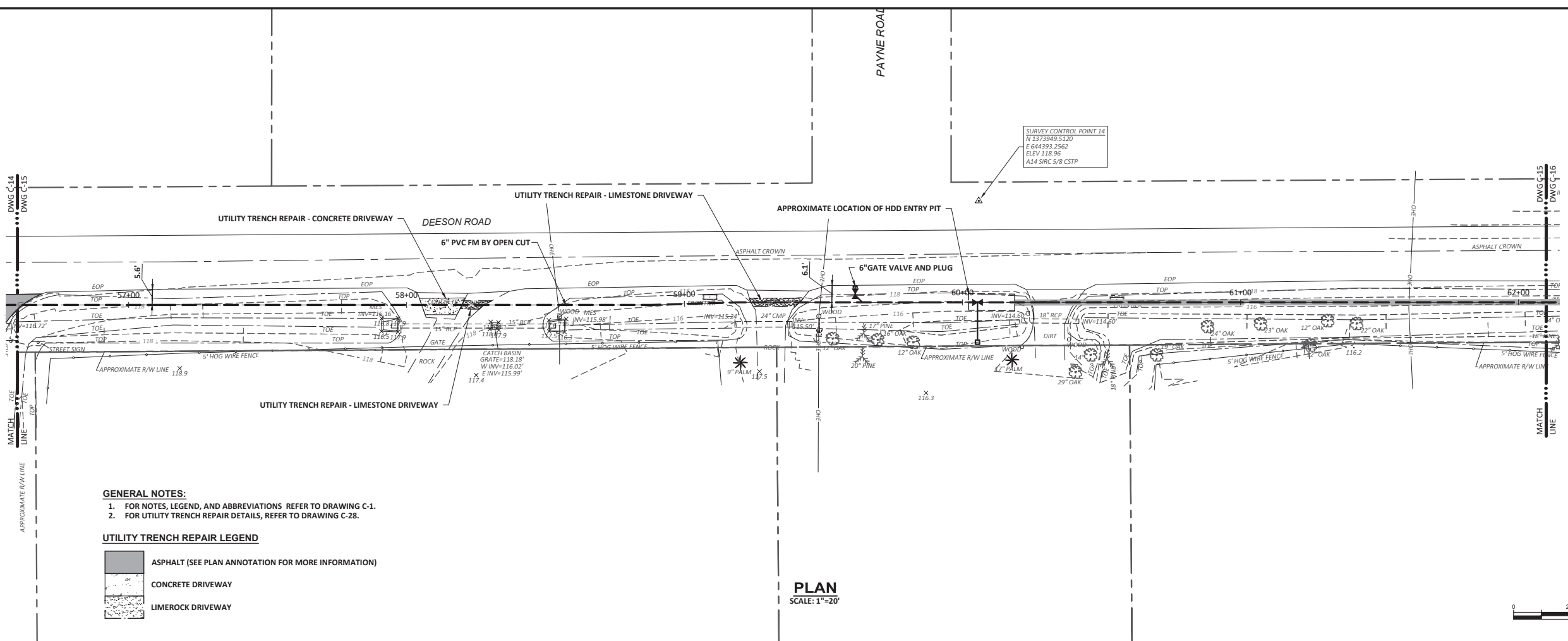
PROJECT NO: 21136
 DESIGNED: C. BRAGGETT
 CAD COORD: D. SAVAGE
 CAD: R. SCAMMON
 CHECKED: B. BOOZ
 DATE: 02/01/24
 APPROVED: C. BRAGGETT
 DATE: 02/01/24
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AND FORCE MAIN IMPROVEMENTS

DRAWING
C-14
 FORCE MAIN PLAN AND PROFILE

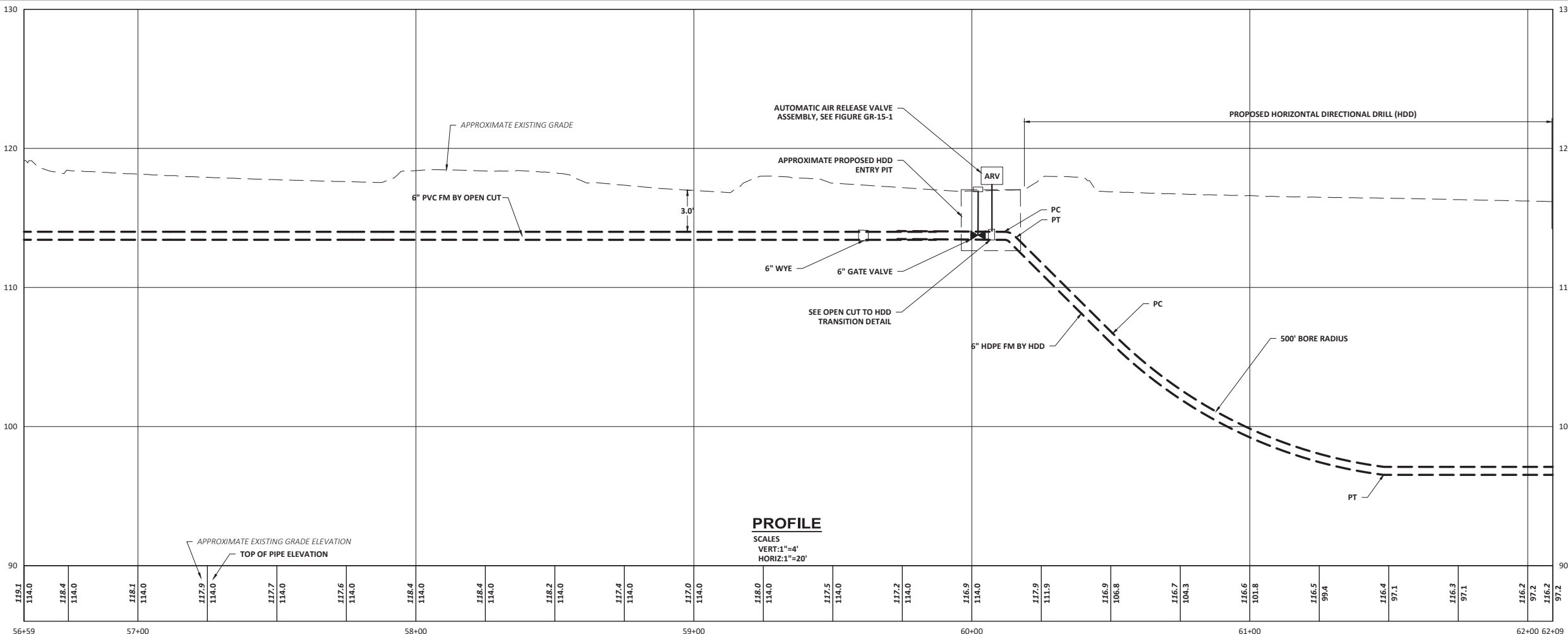
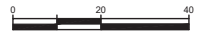


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UTILITY TRENCH REPAIR LEGEND

- ASPHALT (SEE PLAN ANNOTATION FOR MORE INFORMATION)
- CONCRETE DRIVEWAY
- LIMEROCK DRIVEWAY

PLAN
SCALE: 1"=20'



PROFILE
SCALES
VERT: 1"=4'
HORIZ: 1"=20'



SURVEY CONTROL POINT 14
N 1378949.5120
E 644393.2562
ELEV 118.96
A145IRC 5/8 CSTP

NO	REVISIONS	APPD	DATE

PROJECT NO: 21136
DESIGNED: C BRAGGETT
CAD COORD: D SAVAGE
CAD: R SCAMMON
CHECKED: B BOOZ
DATE: 02/01/24
APPROVED: C BRAGGETT
DATE: 02/01/24
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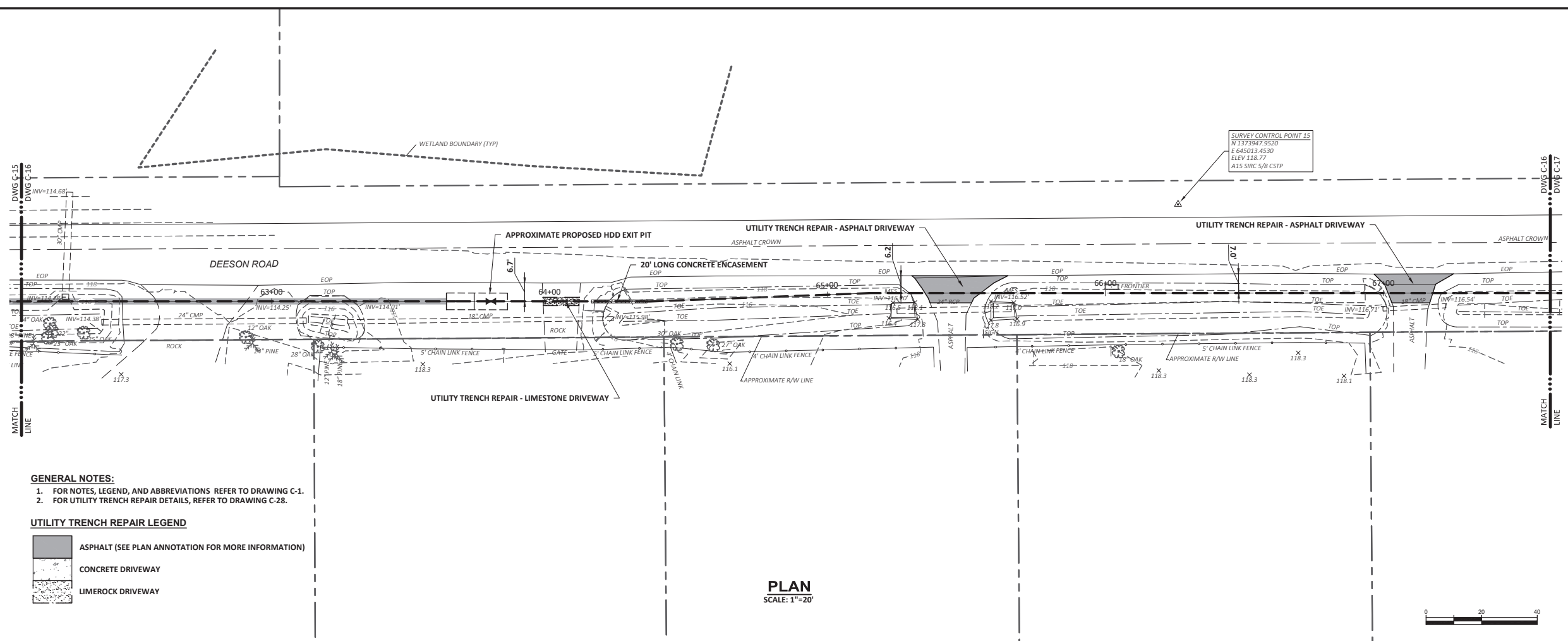
Christopher C Braggett
Professional Engineer
No. 56047
STATE OF FLORIDA
Professional Engineer

02/02/24 11:37:20-0510



POLK COUNTY, FLORIDA
DEESON ROAD LIFT STATION
AND FORCE MAIN IMPROVEMENTS

DRAWING
C-15
FORCE MAIN PLAN AND PROFILE

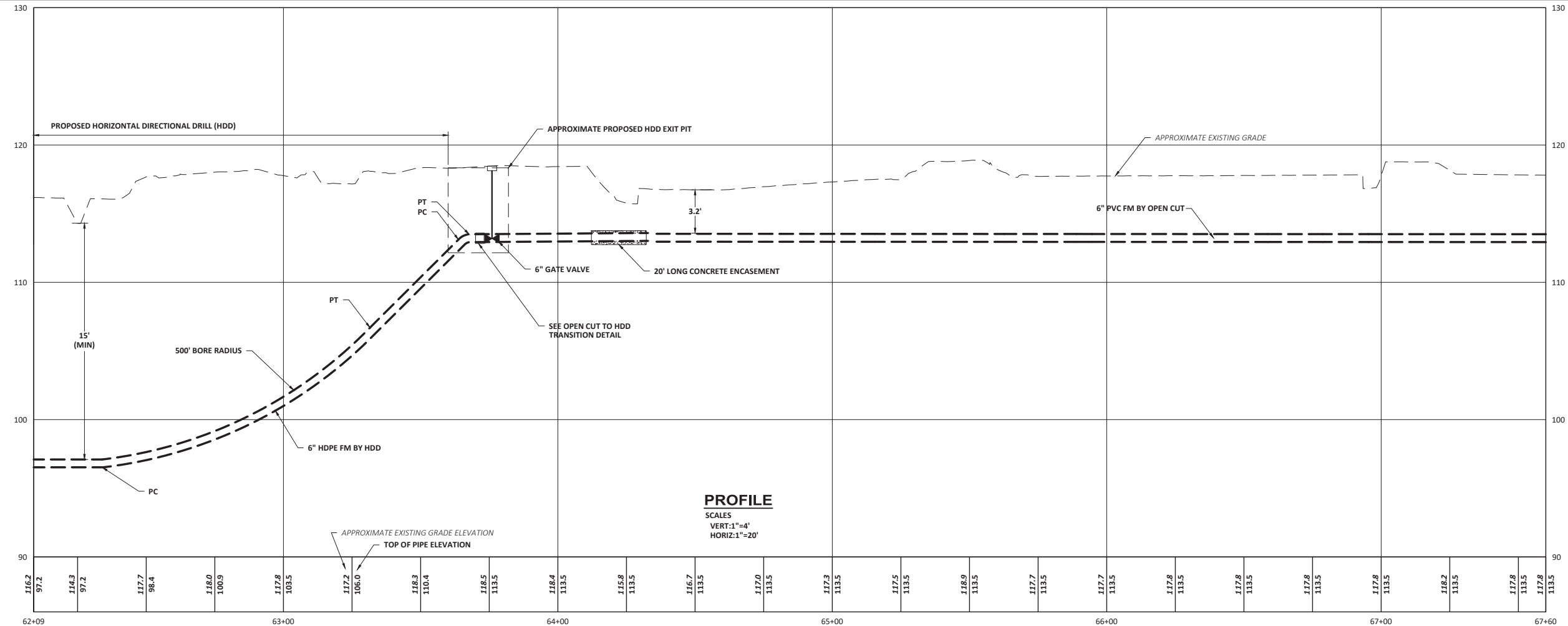


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UTILITY TRENCH REPAIR LEGEND

	ASPHALT (SEE PLAN ANNOTATION FOR MORE INFORMATION)
	CONCRETE DRIVEWAY
	LIMEROCK DRIVEWAY

PLAN
SCALE: 1"=20'



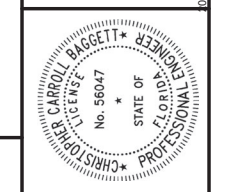
PROFILE
SCALES
VERT: 1"=4'
HORIZ: 1"=20'



NO	REVISIONS	APPD	DATE

PROJECT NO: 21136
 DESIGNED: C BRAGGETT
 CAD COORD: D SAVAGE
 CAD: R SCAMMON
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 DATE: 02/01/24
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 DATE: 02/01/24
 SUBMISSION: 100% SUBMITTAL

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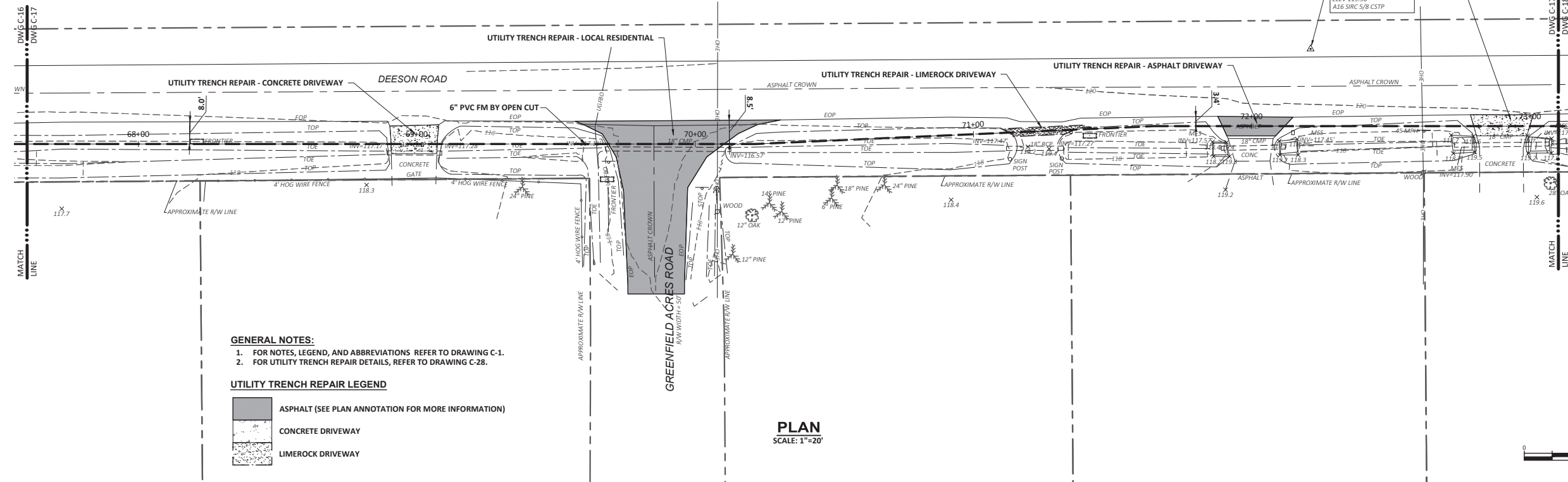


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AND FORCE MAIN IMPROVEMENTS

FORCE MAIN PLAN AND PROFILE

DRAWING
C-16

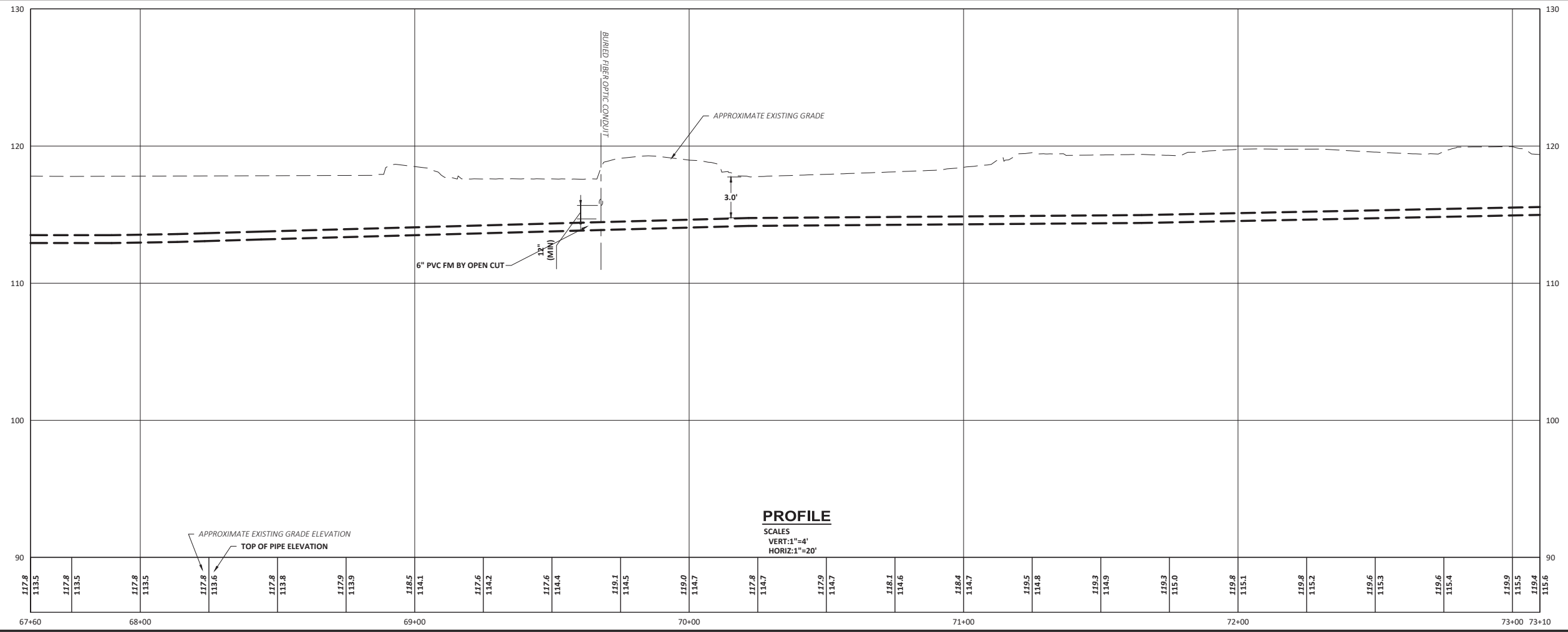
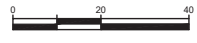


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UTILITY TRENCH REPAIR LEGEND

- ASPHALT (SEE PLAN ANNOTATION FOR MORE INFORMATION)
- CONCRETE DRIVEWAY
- LIMEROCK DRIVEWAY

PLAN
SCALE: 1"=20'



PROFILE
SCALES
VERT: 1"=4'
HORIZ: 1"=20'

NO	REVISIONS	APPD	DATE

PROJECT NO: 21136
 DESIGNED: C. BAGGETT
 CAD COORD: D. SAVAGE
 CAD: R. SCAMMON
 CHECKED: B. BOOZ
 DATE: 02/01/24
 APPROVED: C. BAGGETT
 DATE: 02/01/24
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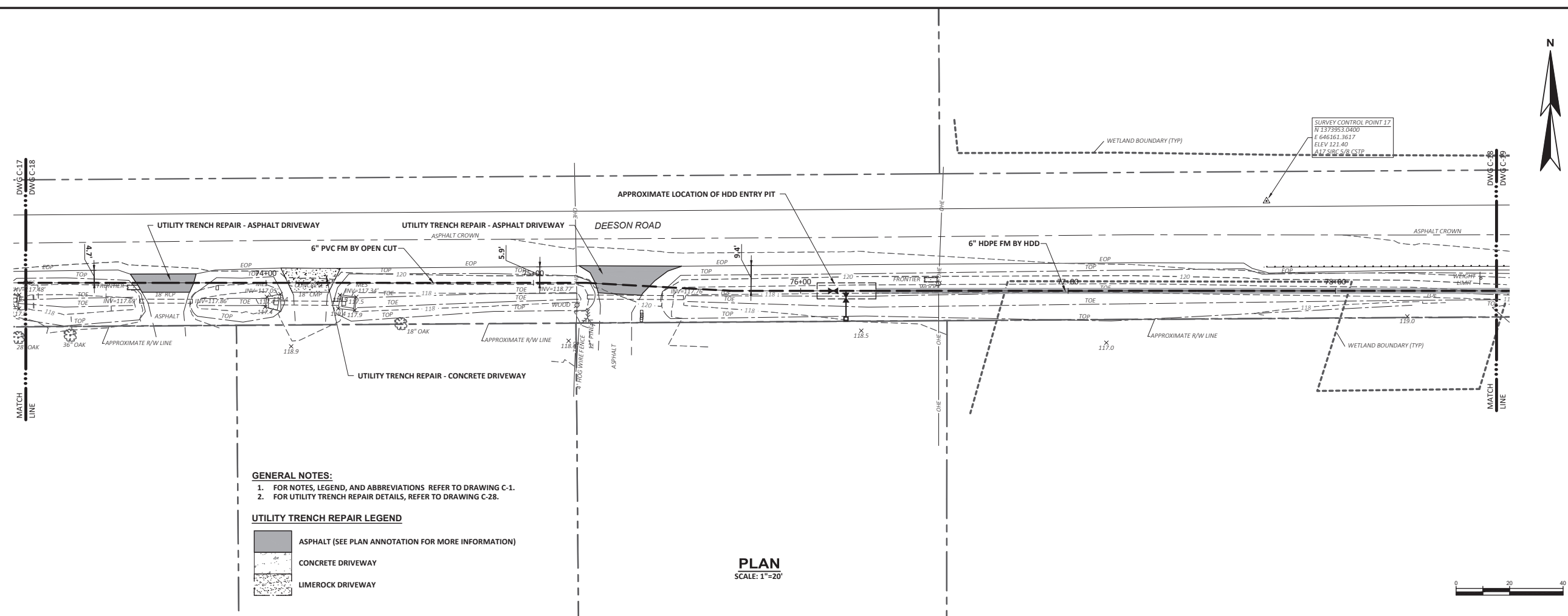


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POLK COUNTY, FLORIDA
DEESON ROAD LIFT STATION
AND FORCE MAIN IMPROVEMENTS

FORCE MAIN PLAN AND PROFILE

DRAWING
C-17

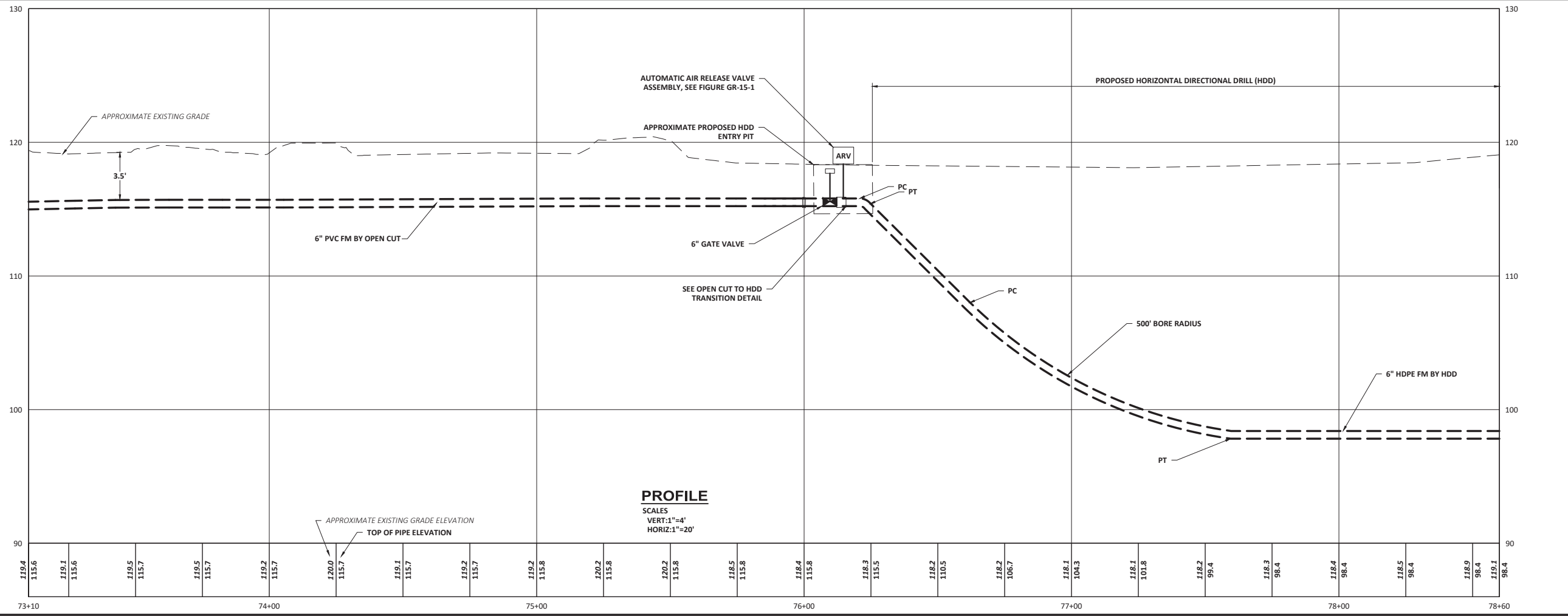
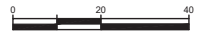


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UTILITY TRENCH REPAIR LEGEND

- ASPHALT (SEE PLAN ANNOTATION FOR MORE INFORMATION)
- CONCRETE DRIVEWAY
- LIMEROCK DRIVEWAY

PLAN
SCALE: 1"=20'



PROFILE
SCALE:
VERT: 1"=4'
HORIZ: 1"=20'

NO	REVISIONS	APPD	DATE

PROJECT NO: 21136
 DESIGNED: C.BAGGETT
 CAD COORD: D.SAVAGE
 CAD: R.SCAMMON
 CHECKED: B.BOOD
 DATE: 02/07/24
 APPROVED: C.BAGGETT
 DATE: 02/07/24
 SUBMISSION: 100% SUBMITTAL

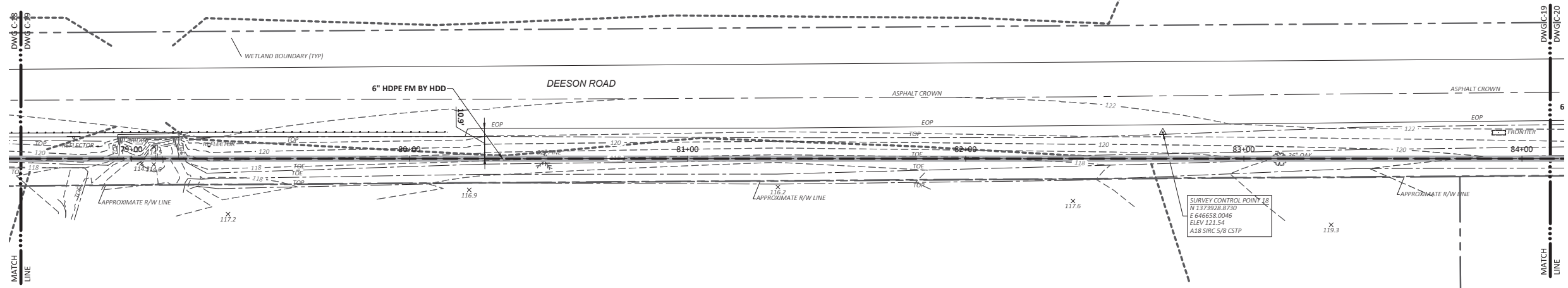


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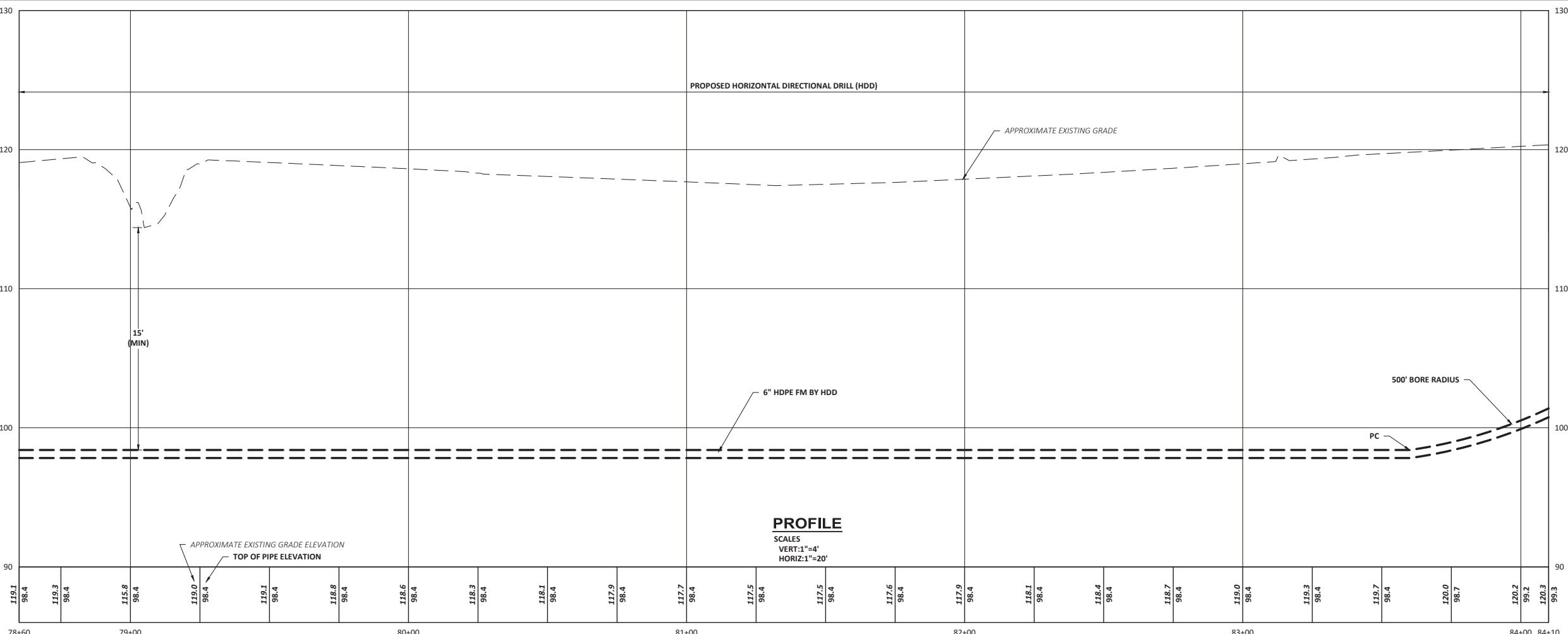
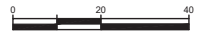
FORCE MAIN PLAN AND PROFILE

DRAWING
C-18



GENERAL NOTES:
1. FOR NOTES, LEGEND, AND ABBREVIATIONS REFER TO DRAWING C-1.

PLAN
SCALE: 1"=20'



NO	REVISIONS	APPD	DATE

PROJECT NO: 21136
DESIGNED: C. BRAGGETT
CAD COORD: D. SAVAGE
CAD: R. SCAMMON
CHECKED: B. BOOZ
DATE: 02/01/24
APPROVED: C. BRAGGETT
DATE: 02/01/24
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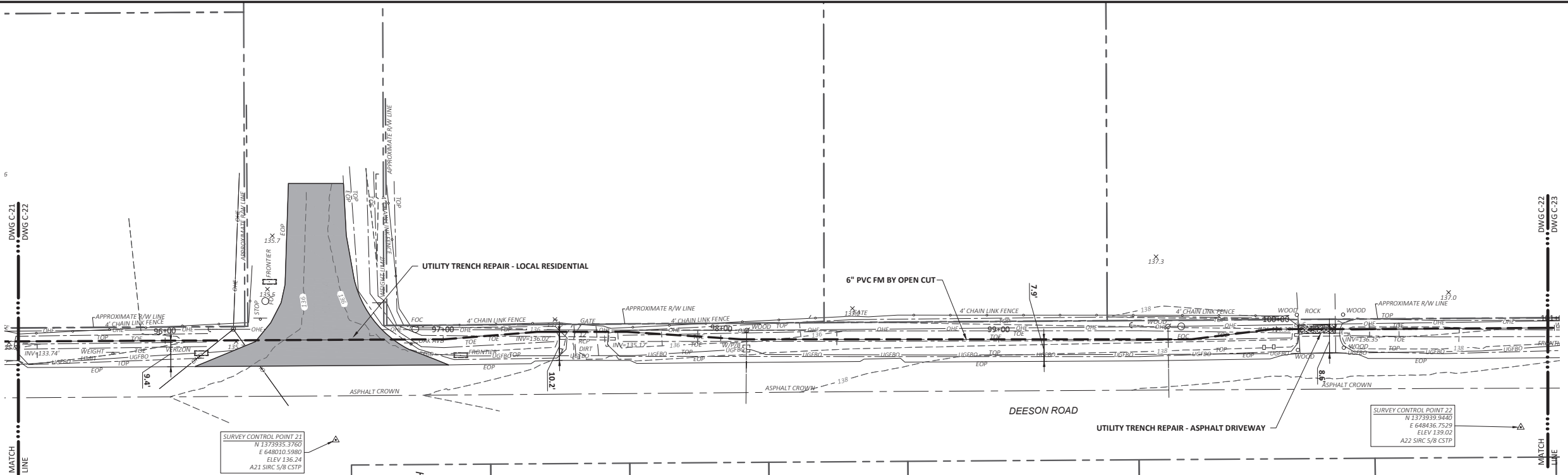
CHRISTOPHER CARROLL BRAGGETT
Professional Engineer
No. 56047
STATE OF FLORIDA
Professional Engineer

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FORCE MAIN PLAN AND PROFILE

DRAWING
C-19

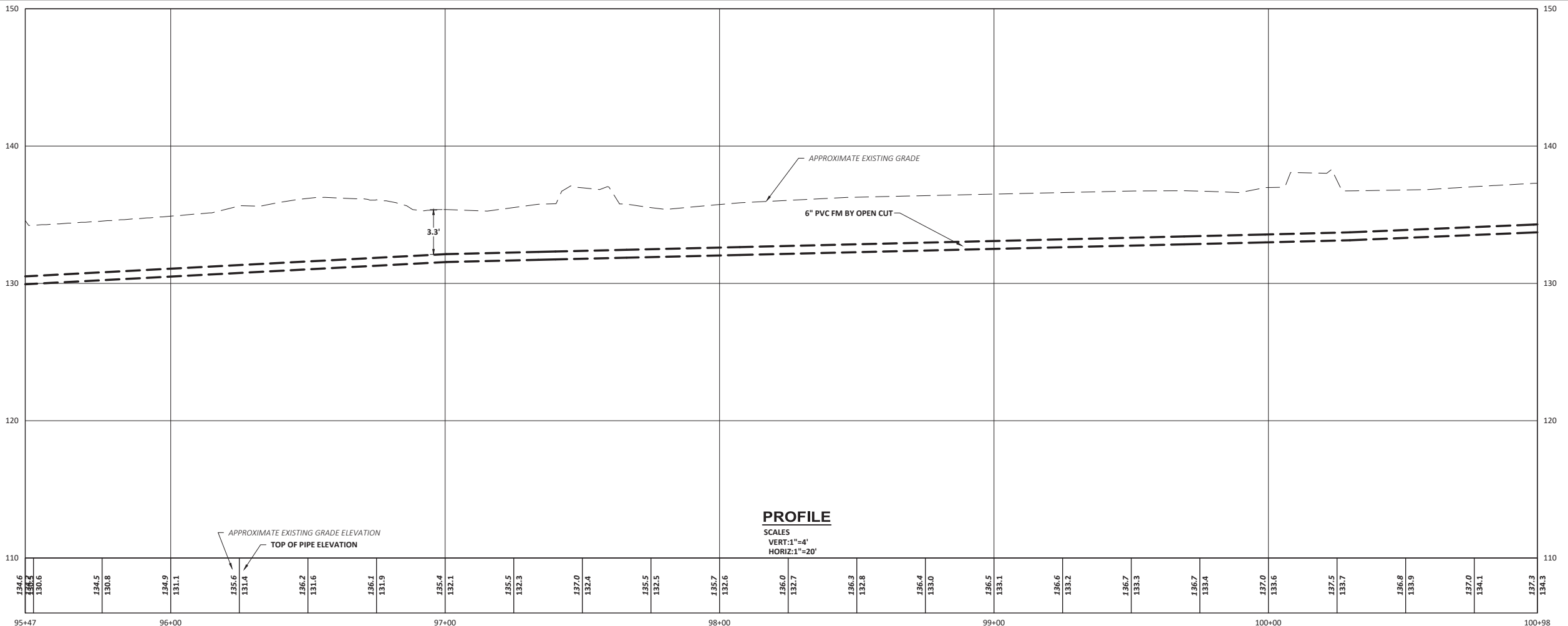


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UTILITY TRENCH REPAIR LEGEND

- ASPHALT (SEE PLAN ANNOTATION FOR MORE INFORMATION)
- CONCRETE DRIVEWAY
- LIMEROCK DRIVEWAY

PLAN
SCALE: 1"=20'



PROFILE
SCALE:
VERT: 1"=4'
HORIZ: 1"=20'

NO.	REVISIONS	APPD.	DATE

PROJECT NO: 21136
 DESIGNED: C. BAGGETT
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 CAD: R. SCAMMON
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 DATE: 02/01/24
 SUBMISSION: 100% SUBMITTAL

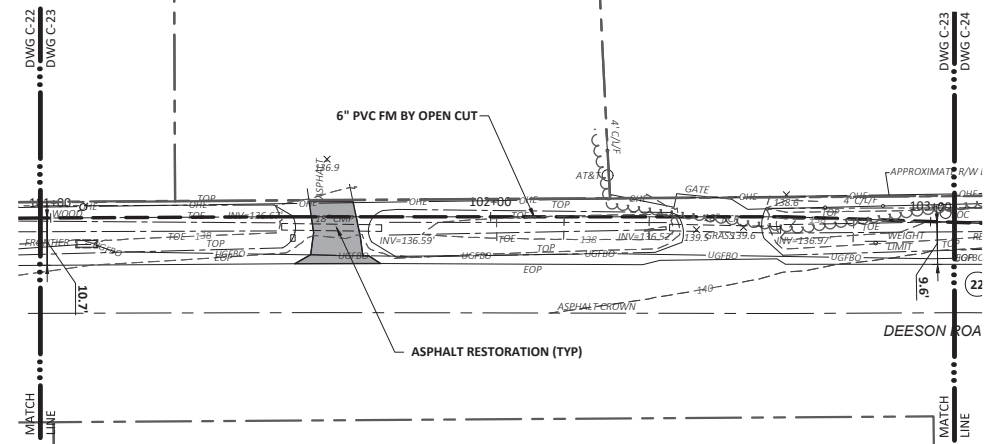


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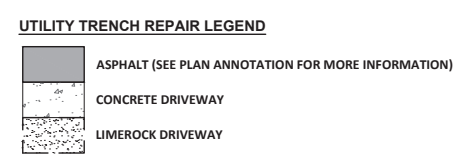
POLK COUNTY, FLORIDA
 DEESON ROAD LIFT STATION
 AND FORCE MAIN IMPROVEMENTS

FORCE MAIN PLAN AND PROFILE

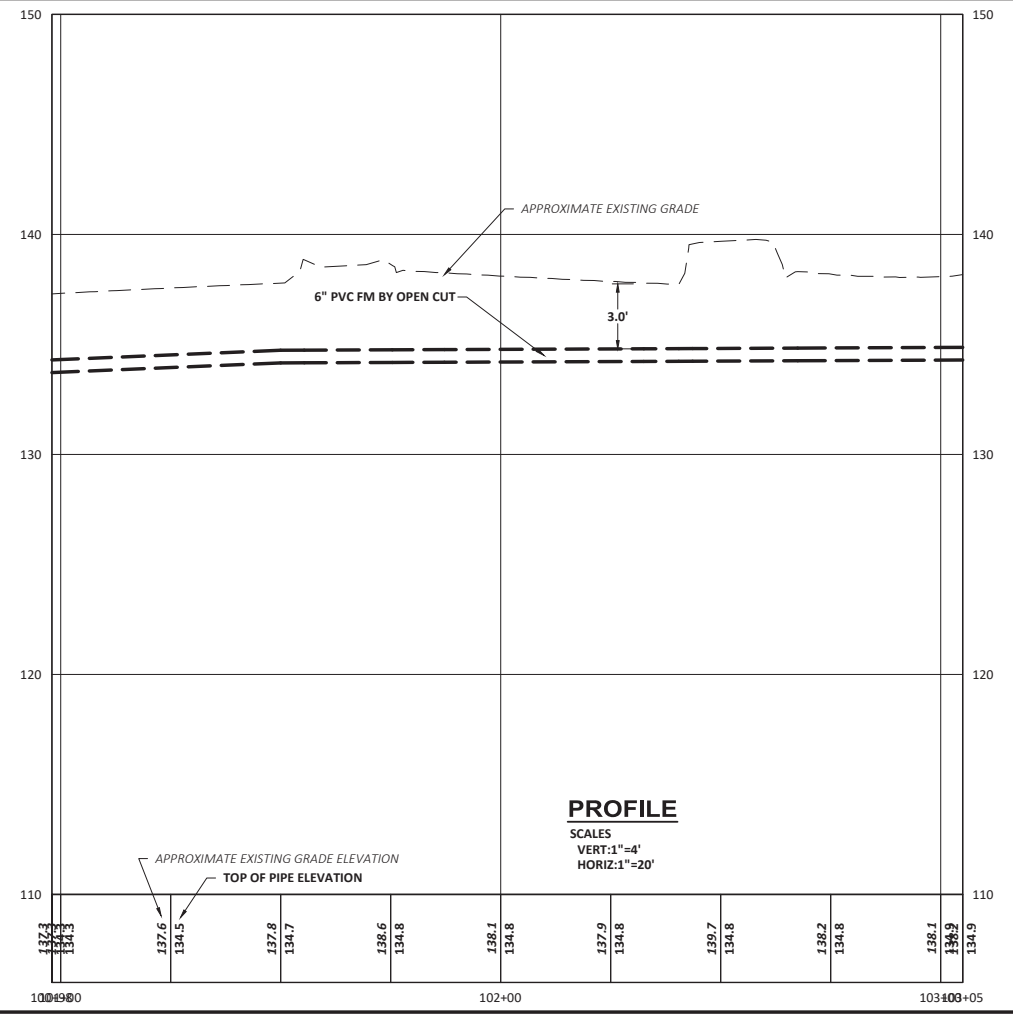
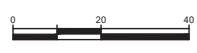
DRAWING
C-22



- GENERAL NOTES:**
- FOR NOTES, LEGEND, AND ABBREVIATIONS REFER TO DRAWING C-1.
 - FOR UTILITY TRENCH REPAIR DETAILS, REFER TO DRAWING C-28.



PLAN
SCALE: 1"=20'



PROFILE
SCALES
VERT: 1"=4'
HORIZ: 1"=20'

NO	REVISIONS	APPD	DATE
1			
2			
3			
4			
5			

PROJECT NO: 21136
 DESIGNED: C. BRAGGETT
 CAD COORD: D. S. VANCE
 CAD: R. SCAMMON
 CHECKED: B. BOOZ
 DATE: 02/01/24
 APPROVED: C. BRAGGETT
 DATE: 02/01/24
 SUBMISSION: 100% SUBMITTAL

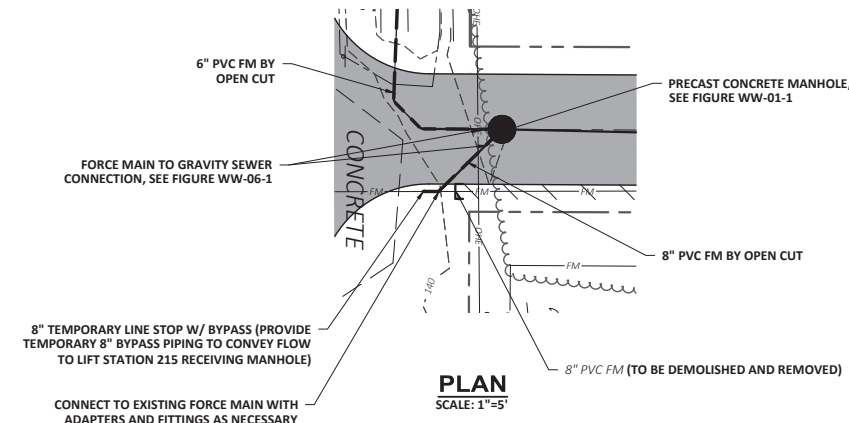
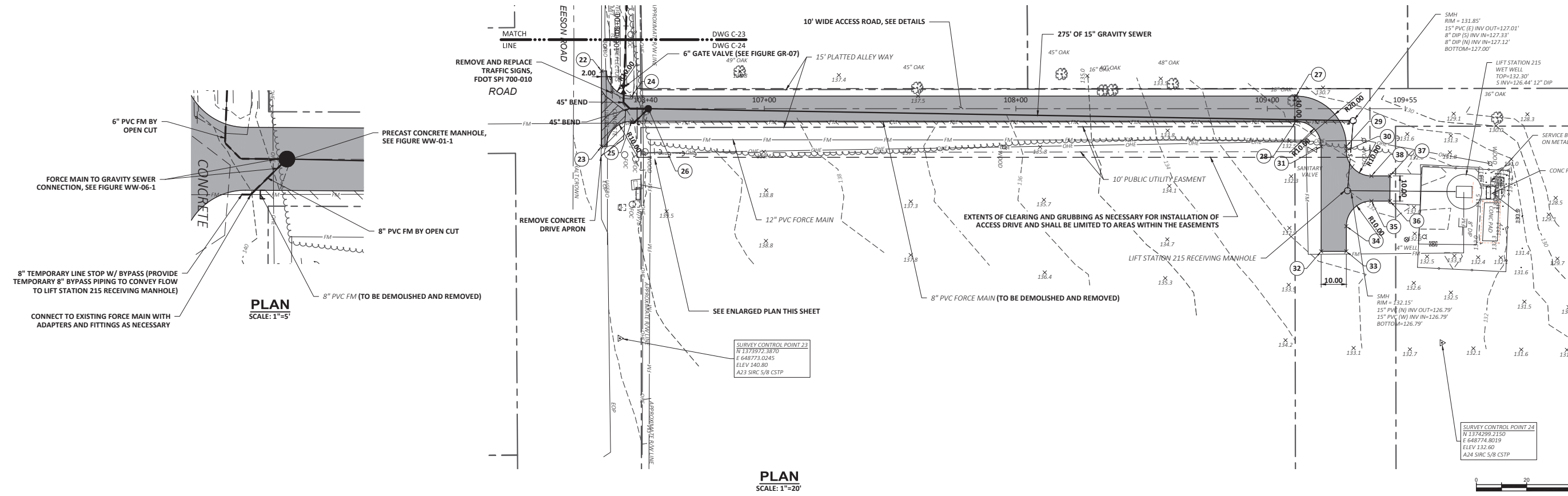


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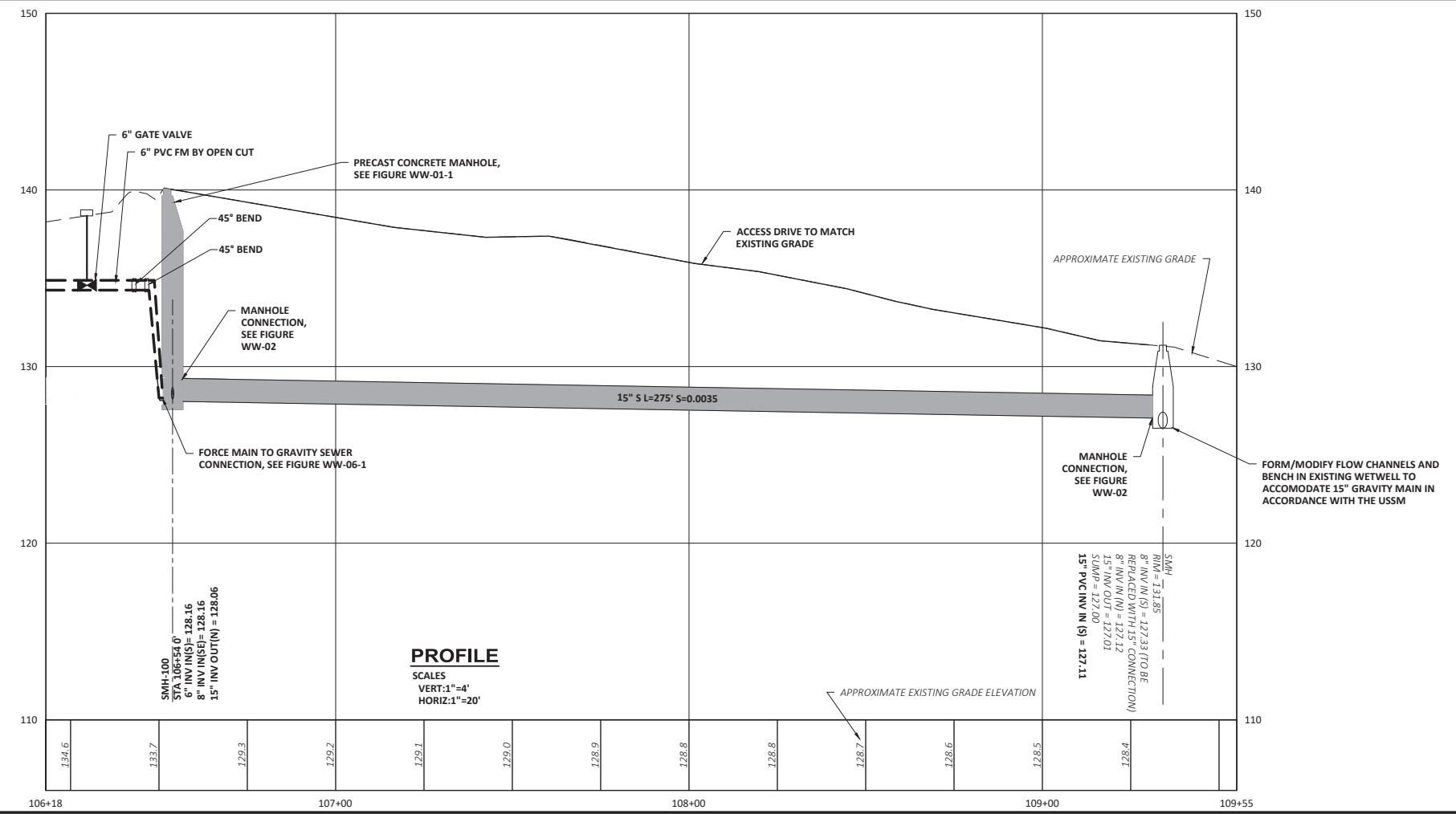
POLK COUNTY, FLORIDA
 DEESON ROAD LIFT STATION
 AND FORCE MAIN IMPROVEMENTS

FORCE MAIN PLAN AND PROFILE

DRAWING
C-23



Point #	DESCRIPTION	NORTHING	EASTING
22	DRIVEWAY EDGE	1373965.1023	648666.7058
23	DRIVEWAY EDGE	1373965.1023	648696.7058
24	DRIVEWAY EDGE	1373977.1023	648676.7058
25	DRIVEWAY EDGE	1373977.1023	648686.7058
26	SANITARY SEWER MANHOLE	1373983.6858	648681.7058
27	DRIVEWAY EDGE	1374241.2115	648676.7058
28	DRIVEWAY EDGE	1374241.2115	648686.7058
29	DRIVEWAY EDGE	1374261.2115	648696.7058
30	DRIVEWAY EDGE	1374261.2115	648698.4407
31	DRIVEWAY EDGE	1374251.2115	648696.7058
32	DRIVEWAY EDGE	1374251.2115	648738.4407
33	DRIVEWAY EDGE	1374261.2115	648738.4407
34	DRIVEWAY EDGE	1374261.2115	648728.4407
35	DRIVEWAY EDGE	1374271.2115	648718.4407
36	DRIVEWAY EDGE	1374278.5590	648718.4407
37	DRIVEWAY EDGE	1374278.5590	648708.4407
38	DRIVEWAY EDGE	1374271.2115	648708.4407



APPD DATE

REVISIONS

NO

PROJECT NO: 21136
 DESIGNED: C. BAGGETT
 CAD COORD: D. SARGE
 CAD: R. SCAMMON
 CHECKED: B. BOZ
 DATE: 02/01/24
 APPROVED: C. BAGGETT
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 SUBMISSION: 100% SUBMITTAL

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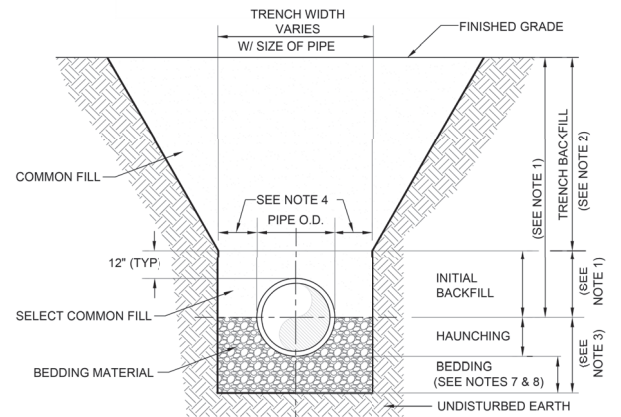
CHRISTOPHER C. BAGGETT
 PROFESSIONAL ENGINEER
 No. 56047
 STATE OF FLORIDA

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**POLK COUNTY, FLORIDA
 DEESON ROAD LIFT STATION
 AND FORCE MAIN IMPROVEMENTS**

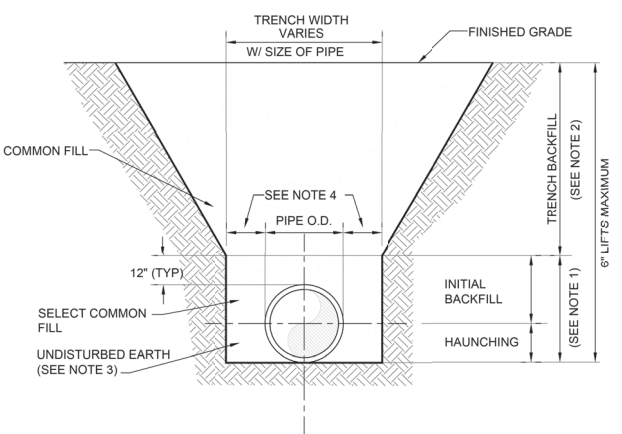
FORCE MAIN PLAN AND PROFILE

DRAWING
C-24



- NOTES:
1. SELECT COMMON FILL UNDER & WITHIN 6 FEET OF THE EDGE OF ANY PAVED SURFACE SHALL BE PLACED IN 6" COMPACTED LIFTS TO TOP OF PIPE, THEN 12" COMPACTED LIFTS THEREAFTER, AND COMPACTED TO 100% OF MAX DENSITY PER AASHTO T-99. BACKFILL IN AREAS OUTSIDE THE ROADWAY SHALL BE PLACED IN 6" COMPACTED LIFTS TO TOP OF PIPE THEN 12" COMPACTED LIFTS THEREAFTER AND COMPACTED TO 95% MAX DENSITY PER AASHTO T-180.
 2. TRENCH BACKFILL/BACKFILL COMPACTION SHALL BE IN ACCORDANCE WITH THE REGULATIONS OF THE GOVERNING AGENCY HAVING JURISDICTION OVER THE WORK SITE.
 3. TYPE A BEDDING MATERIAL SHALL CONFORM TO FDOT NO. 57 AGGREGATE.
 4. 15" MAX. (12" MIN.) FOR PIPE DIAMETER LESS THAN 24" AND 24" MAX (18" MIN) FOR PIPE DIAMETER 24" AND LARGER.
 5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
 6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
 7. BEDDING DEPTH SHALL BE 4" MINIMUM FOR PIPE DIAMETER UP TO 12" AND 6" MINIMUM FOR PIPE DIAMETER 16" AND LARGER.
 8. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. PCU SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.
 9. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF THE GOVERNING AGENCY HAVING JURISDICTION OVER THE WORK SITE. SURFACE RESTORATION WITHIN COUNTY RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF POLK COUNTY.

BEDDING AND TRENCHING TYPE A
FIGURE GR-01
 POLK COUNTY UTILITIES, FLORIDA
 DECEMBER, 2010



- NOTES:
1. SELECT COMMON FILL UNDER & WITHIN 6 FEET OF THE EDGE OF ANY PAVED SURFACE SHALL BE PLACED IN 6" COMPACTED LIFTS TO TOP OF PIPE, THEN 12" COMPACTED LIFTS THEREAFTER, AND COMPACTED TO 100% OF MAX DENSITY PER AASHTO T-99. BACKFILL IN AREAS OUTSIDE THE ROADWAY SHALL BE PLACED IN 6" COMPACTED LIFTS TO TOP OF PIPE THEN 12" COMPACTED LIFTS THEREAFTER AND COMPACTED TO 95% MAX DENSITY PER AASHTO T-180.
 2. TRENCH BACKFILL/BACKFILL COMPACTION: SHALL BE IN ACCORDANCE WITH THE REGULATIONS OF THE GOVERNING AGENCY HAVING JURISDICTION OVER THE WORK SITE.
 3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE A BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY PCU.
 4. 15" MAX. (12" MIN.) FOR PIPE DIAMETER LESS THAN 24" AND 24" MAX (12" MIN) FOR PIPE DIAMETER 24" AND LARGER.
 5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
 6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
 7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF THE GOVERNING AGENCY HAVING JURISDICTION OVER THE WORK SITE. SURFACE RESTORATION WITHIN COUNTY RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF POLK COUNTY.

BEDDING AND TRENCHING TYPE B
FIGURE GR-02
 POLK COUNTY UTILITIES, FLORIDA
 DECEMBER, 2010

MINIMUM LENGTH (FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S)

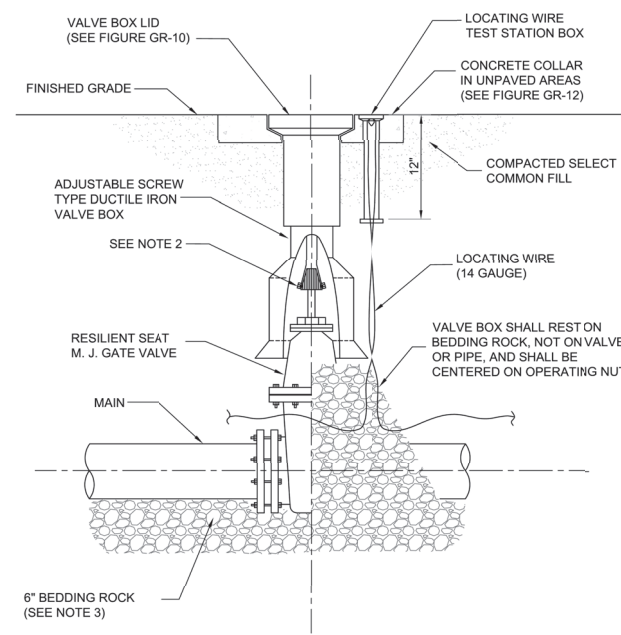
TYPE	D.I.P. PIPE SIZE											
	4"	6"	8"	10"	12"	16"	20"	24"	30"	36"	42"	48"
90° BEND OR BRANCH OF TEE	20	29	37	44	51	65	77	89	105	120	132	144
45° BEND	8	12	15	18	21	27	32	37	44	50	55	60
22-1/2° BEND	4	6	7	9	10	13	15	18	21	24	27	29
11-1/4° BEND	2	3	4	5	6	7	8	9	10	12	13	15
PLUG OR CAP	42	59	77	93	108	138	166	194	231	275	328	391
POINT OF CONNECTION WITH HDPE PIPE	40	40	40	40	40	40	40	40	40	60	60	60

MINIMUM LENGTH (FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S)

TYPE	PVC OR HDPE PIPE SIZE											
	4"	6"	8"	10"	12"	16"	20"	24"	30"	36"	42"	48"
90° BEND OR BRANCH OF TEE	25	37	47	55	64	82	97	112	132	156	172	188
45° BEND	10	15	19	23	27	34	40	47	55	65	72	78
22-1/2° BEND	5	8	9	12	13	17	19	23	27	32	35	38
11-1/4° BEND	3	4	5	7	8	9	10	12	13	16	17	19
PLUG OR CAP	53	74	97	117	135	173	208	243	289	344	410	488
POINT OF CONNECTION WITH HDPE PIPE	40	40	40	40	40	40	40	40	40	60	60	60

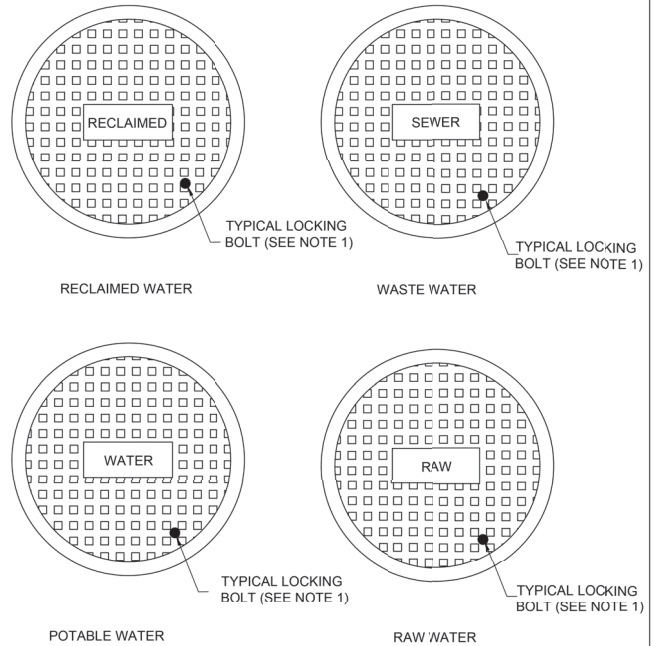
- NOTES:
1. FITTINGS SHALL BE RESTRAINED JOINTS UNLESS OTHERWISE INDICATED.
 2. INSTALL FULL LENGTH JOINTS WITH TOTAL LENGTH EQUAL TO OR GREATER THAN SHOWN IN THE TABLE.
 3. WHERE TWO OR MORE FITTINGS ARE TOGETHER, USE FITTING WHICH YIELDS GREATEST LENGTH OF RESTRAINED PIPE.
 4. ALL LINE VALVES AND THROUGH RUN OF TEES SHALL HAVE MJ RESTRAINTS.
 5. LENGTHS SHOWN IN THE TABLE HAVE BEEN CALCULATED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" AS PUBLISHED BY DIPRA, WITH THE FOLLOWING ASSUMPTIONS:
 WORKING PRESSURE: 150 PSI
 SOIL DESIGNATION: SM (SANDSILT)
 LAYING CONDITIONS: 3
 6. THE ENGINEER SHALL VERIFY THESE MINIMUM DESIGN ASSUMPTIONS AND INCREASE LENGTHS WITH THE APPROVAL OF PCU.
 7. DI PIPE WRAPPED WITH OR ENCASED IN POLYETHYLENE SHALL BE RESTRAINED SIMILAR TO PVC PIPE.

RESTRAINED PIPE TABLE
FIGURE GR-04
 POLK COUNTY UTILITIES, FLORIDA
 OCTOBER, 2015



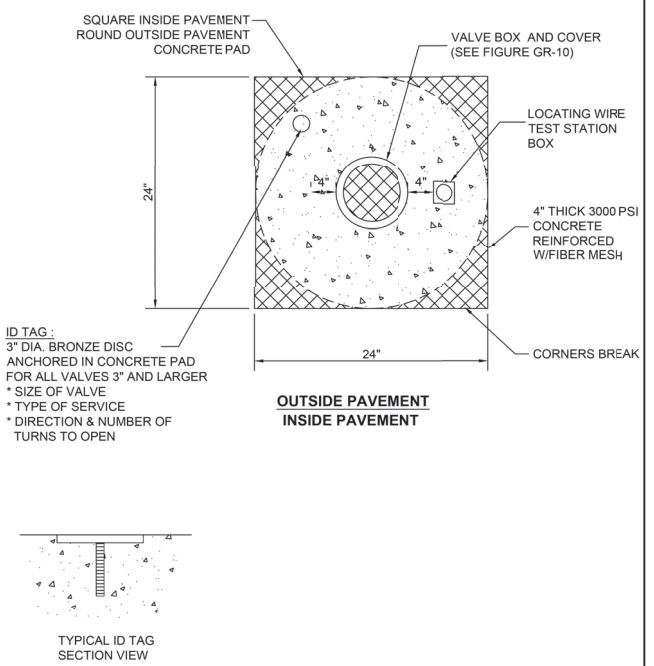
- NOTES:
1. PVC PIPE OR DUCTILE IRON PIPE EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION IN PAVED AREAS.
 2. THE VALVE ACTUATING NUT SHALL BE EXTENDED TO BE WITHIN 3" OF FINISHED GRADE.
 3. BEDDING MATERIAL SHALL CONFORM TO FDOT NO. 57 AGGREGATE.
 4. WIRE SHALL TERMINATE AT THE TOP OF THE TEST STATION BOX WITH 12" OF COILED EXCESS LENGTH.
 5. REFER TO FIGURE GR-11 FOR INSTALLATIONS AT A DEPTH OF 6' OR GREATER.

GATE VALVE AND BOX (SHALLOW)
FIGURE GR-07
 POLK COUNTY UTILITIES, FLORIDA
 SEPTEMBER, 2014



- NOTE:
1. LOCKING LIDS ARE REQUIRED ON ALL VALVE BOXES LOCATED IN ROADWAYS WITH SPEED LIMITS ABOVE 30 MPH OR ON MAINS THAT ARE 16 INCHES IN DIAMETER OR LARGER.

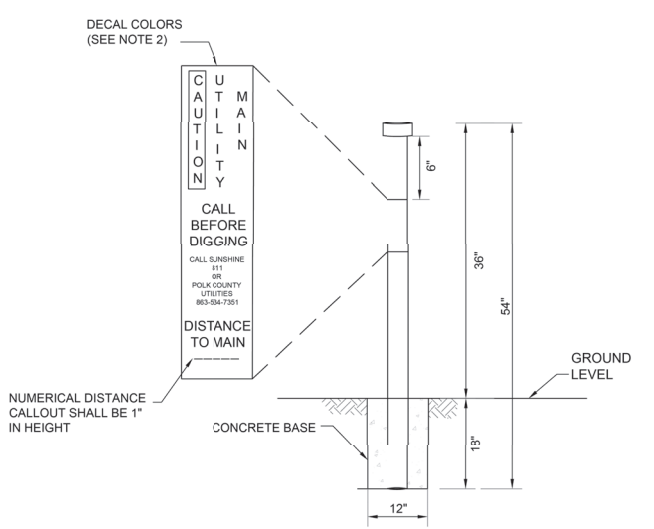
TYPICAL VALVE BOX COVER
FIGURE GR-10
 POLK COUNTY UTILITIES, FLORIDA
 DECEMBER, 2010



ID TAG:
 3" DIA. BRONZE DISC ANCHORED IN CONCRETE PAD FOR ALL VALVES 3" AND LARGER
 * SIZE OF VALVE
 * TYPE OF SERVICE
 * DIRECTION & NUMBER OF TURNS TO OPEN

- NOTES:
1. BRASS IDENTIFICATION DISC AND VALVE COLLAR SHALL BE REQUIRED FOR ALL VALVES LOCATED OUTSIDE OF PAVEMENT.

VALVE COLLAR
FIGURE GR-12
 POLK COUNTY UTILITIES, FLORIDA
 APRIL, 2017



- NOTES:
1. MARKERS SHALL BE 4" DIAMETER SCH 80 PVC OR HDPE PIPE WITH GLUED CAP OR PCU APPROVED EQUAL.
 2. BACKGROUND COLORS FOR DECALS SHALL BE BLUE FOR POTABLE WATER, WHITE FOR RAW WATER, GREEN FOR WASTEWATER, AND PANTONE PURPLE 522C FOR RECLAIMED WATER WITH BLACK OR WHITE LETTERING TO CONTRAST BACKGROUND COLOR.
 3. MARKERS SHALL BE PLACED EVERY 1000' AND AT VALVES (EXCEPT WATER VALVES NEAR FIRE HYDRANTS)
 4. MARKERS SHALL NOT BE USED ALONG LOCAL RESIDENTIAL STREETS.

PIPE LINE MARKER (TYPICAL)
FIGURE GR-13
 POLK COUNTY UTILITIES, FLORIDA
 DECEMBER, 2010

NO	REVISIONS	APPD	DATE

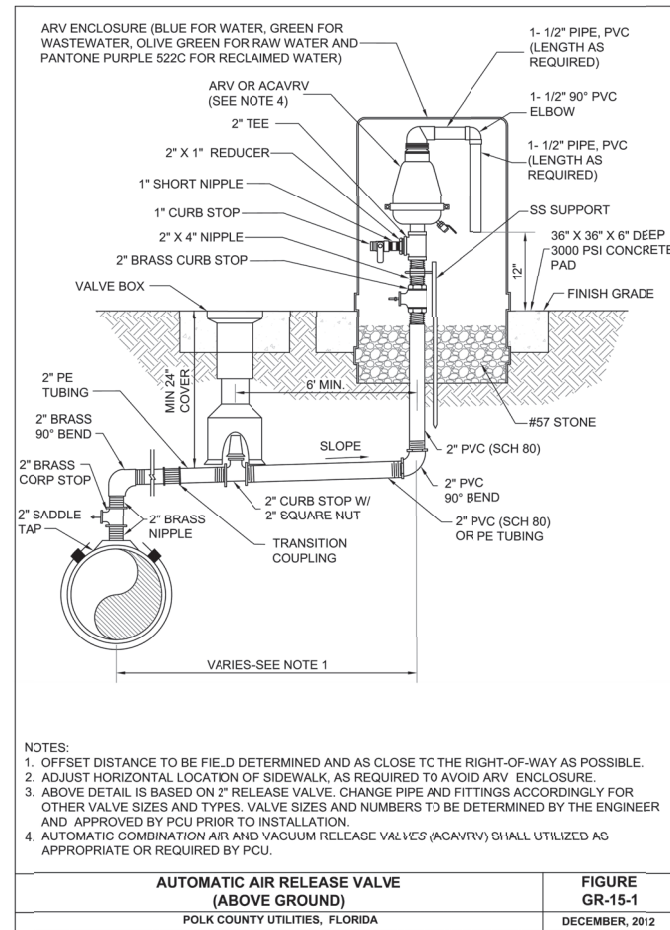
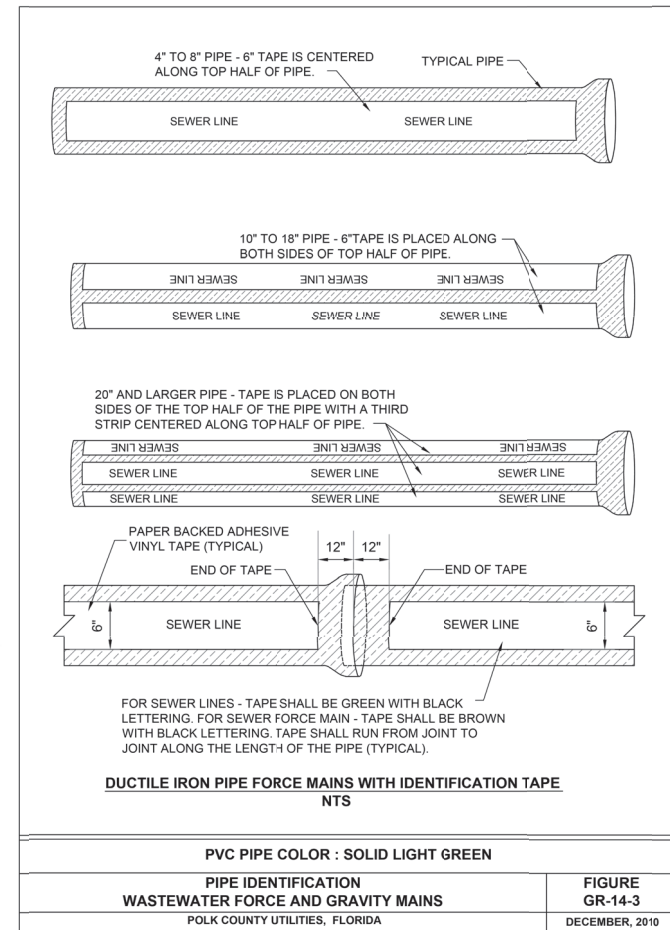
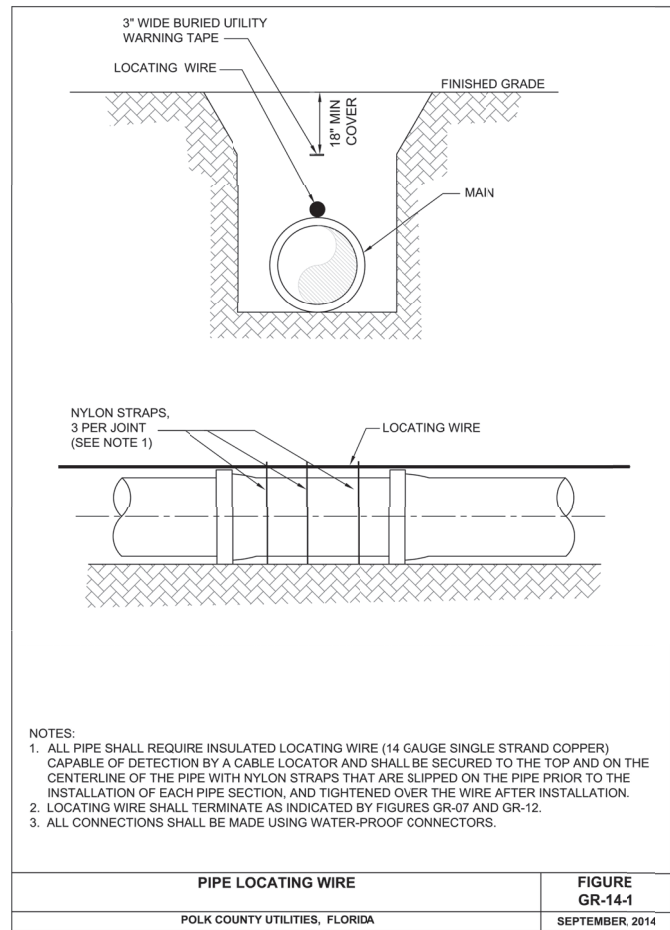
PROJECT NO: 21136
 DESIGNED: CRAIGETT
 CAD COORD: D. S. VANCE
 CHECKED: R. B. BOZ
 DATE: 02/01/24
 APPROVED: CRAIGETT
 DATE: 02/01/24
 SUBMISSION: 100% SUBMITTAL



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**POLK COUNTY, FLORIDA
 DEON ROAD LIFT STATION
 AND FORCE MAIN IMPROVEMENTS**

DETAILS 1



PROPOSED UTILITY	HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS								ACCEPTABLE VARIANCES
	POTABLE WATER (PW)		RECLAIMED WATER (RW)		SAN SEWER (SS) GRAVITY & FM)		STORM SEWER		
	HORIZ	VERT	HORIZ	VERT	HORIZ	VERT	HORIZ	VERT	
POTABLE WATER	3'	12"	3'	12"	6'	12"	3'	12"	REFER TO GENERAL NOTE #4
RECLAIMED WATER	3'	12"	3'	12"	3'	12"	3'	12"	
SANITARY SEWER	6'	12"	3'	12"	3'	12"	3'	12"	

MINIMUM SEPARATION REQUIREMENTS

FIGURE GR-16-1

POLK COUNTY UTILITIES, FLORIDA

JULY, 2018

GENERAL NOTES:

- HORIZONTAL AND VERTICAL SEPARATION SHALL BE IN ACCORDANCE WITH CH. 62-555.314 F.A.C.
- FOR THE PURPOSE OF THIS TABLE, RECLAIMED WATER SHALL MEAN UNRESTRICTED PUBLIC ACCESS RECLAIMED WATER AS DEFINED BY F.A.C. 62-610. RAW WATER AND OTHER TYPES OF RECLAIMED WATER SHALL BE CONSIDERED RAW SEWAGE AND SEPARATION LISTED FOR SANITARY SEWER SHALL APPLY.
- ALL SEPARATION DISTANCES ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
- ACCEPTABLE VARIANCES:
 - WHERE HORIZONTAL SEPARATION IS NOT ATTAINABLE FOR NEW INSTALLATIONS OF PW AND SS, THE PIPES WILL BE INSTALLED IN SEPARATE TRENCHES AND THE BOTTOM OF THE PW MAIN WILL BE 12" HIGHER THAN THE TOP OF THE SS.
 - WHERE HORIZONTAL SEPARATION IS NOT ATTAINABLE FOR NEW SS AND A NEW OR EXISTING PW MAIN, THE SS WILL BE UPGRADED TO A DR OF 18.
 - WHERE INSTALLATION OF A NEW PW MAIN IS IN CONFLICT WITH EXISTING SS, THE FOLLOWING SHALL BE MAINTAINED:
 - VERTICAL CONFLICT: DEFLECT NEW PW MAIN 12" ABOVE THE EXISTING SS WITH SUFFICIENT COVER FOR THE PW OR 12" BELOW THE EXISTING SS. WHERE DEFLECTION IS NOT POSSIBLE OR MINIMUM COVER NOT MET, THE PW MAIN SHALL BE UPGRADED TO DIP AND CENTERED AT CROSSING.
 - HORIZONTAL CONFLICT: PW MAIN SHALL BE INSTALLED 18" HIGHER THAN THE EXISTING SS WITH SUFFICIENT COVER OR THE PW WILL BE DIP.
 - SEPARATION REQUIREMENTS BETWEEN PW AND STORM SEWER ARE THE SAME AS WITH PW AND SS. SPECIAL SUPPORT MAY BE REQUIRED.
 - WHERE VERTICAL AND HORIZONTAL SEPARATIONS ARE NOT ATTAINABLE FOR PW AND FM, THE FOLLOWING SHALL BE MAINTAINED:
 - FM UPGRADED TO DR 14 (12" DIA AND UNDER) AND DR 18 (14" DIA AND OVER). WHERE FM IS EXISTING, PW SHALL BE UPGRADED TO DIP.
 - STAGGER THE LOCATION OF JOINTS FOR EACH PIPE.
- NO POTABLE WATER MAIN SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SANITARY OR STORM WATER MANHOLE OR STRUCTURE.

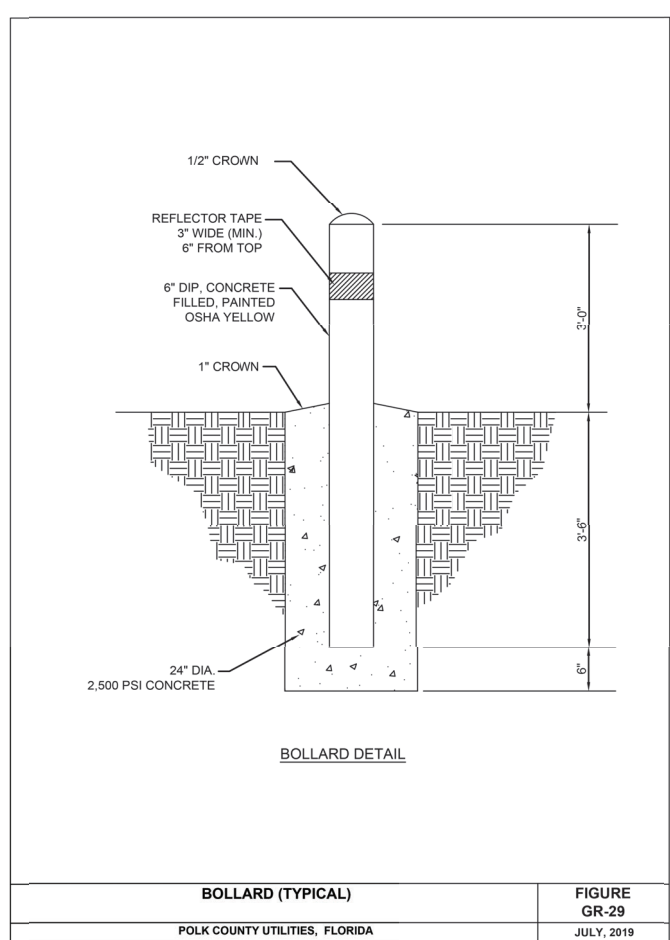
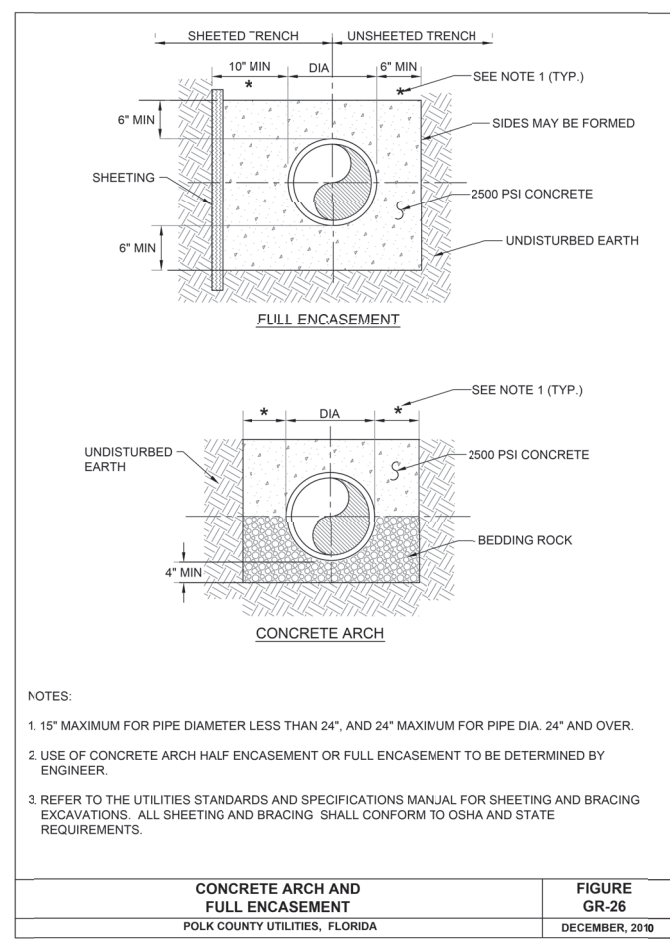
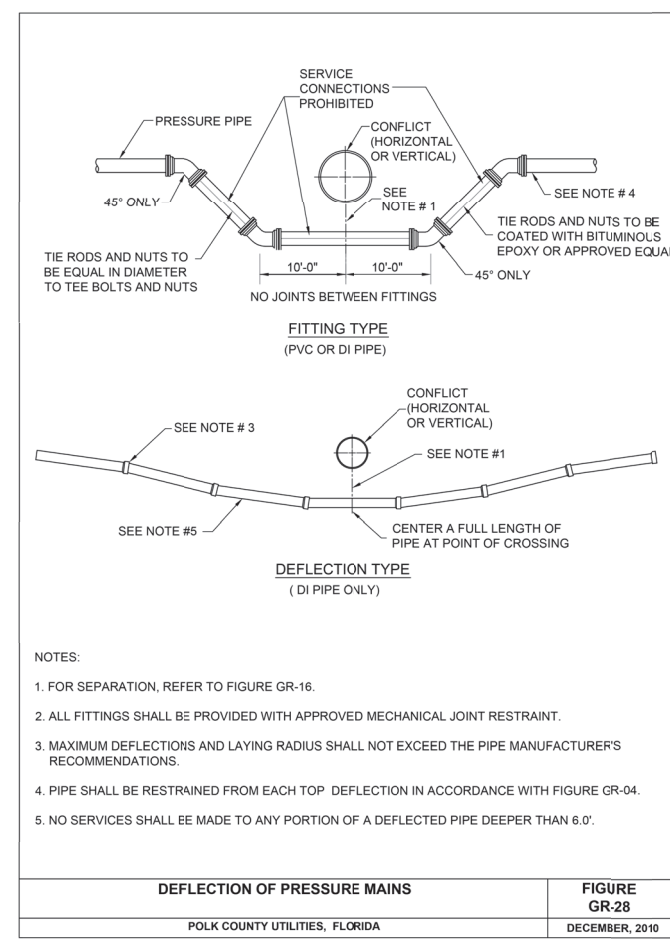
REVISIONS

NO	DATE	DESCRIPTION

PROJECT NO: 21138
 DESIGNED: C. BAGGETT
 CAD COORD: D. SARGE
 CHECKED: R. BOOZ
 DATE: 02/01/24
 APPROVED: C. BAGGETT
 DATE: 02/01/24
 SUBMISSION: 100% SUBMITTAL

THESE PLANS HAVE BEEN REVIEWED AND APPROVED FOR CONSTRUCTION BY THE POLK COUNTY ENGINEER. ANY CHANGES TO THESE PLANS MUST BE MADE BY THE ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.

CHRISTOPHER C. BAGGETT
 POLK COUNTY ENGINEER
 No. 56047
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER



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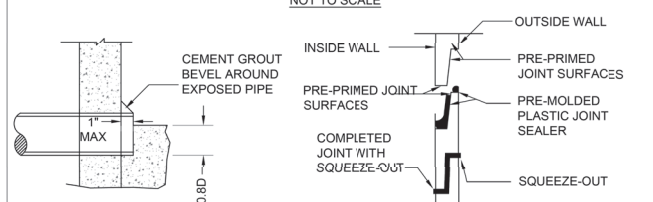
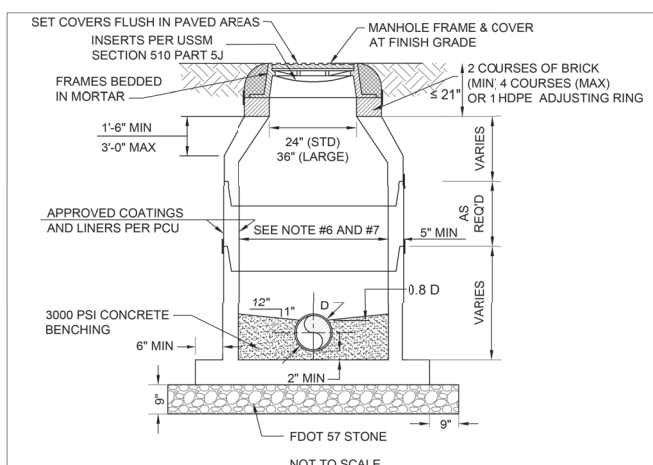
POLK COUNTY, FLORIDA
 DEESON ROAD LIFT STATION
 AND FORCE MAIN IMPROVEMENTS

DETAILS II

DRAWING

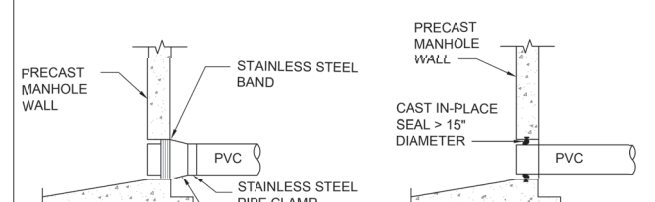
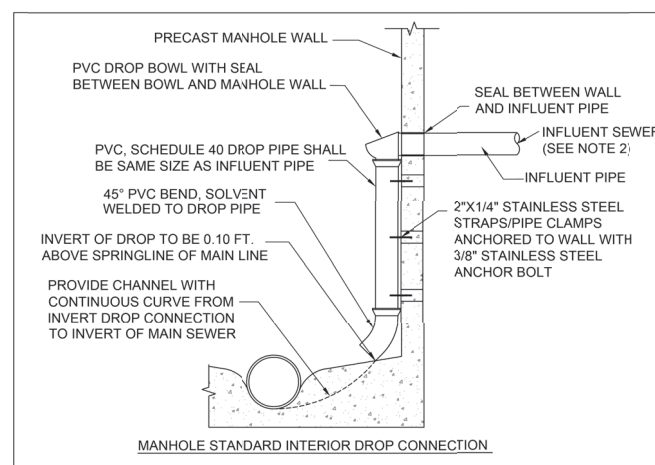
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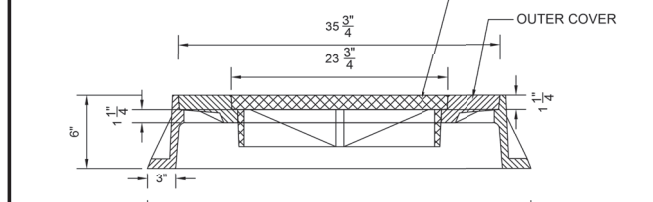
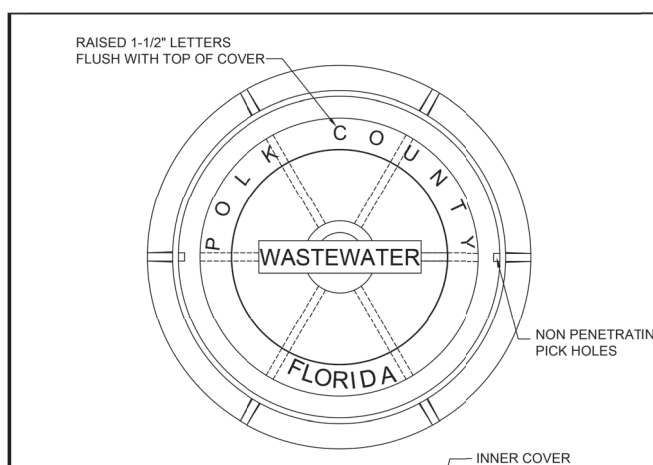
NOTES:
 1. INTERIOR DROP CONNECTIONS ARE REQUIRED WHENEVER THE INVERT OF THE INFLUENT SEWER IS 24" OR MORE ABOVE THE INVERT OF THE MANHOLE. THE DIAMETER OF THE DROP MANHOLE SHALL BE 5'-0"
 2. ECCENTRIC CONE DESIGN MAY BE USED AS AN ALTERNATIVE, AS APPROVED.
 3. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM.
 4. LIFT HOLES THROUGH STRUCTURE ARE NOT PERMITTED.
 5. HDPE ADJUSTING RINGS MAY BE SUBSTITUTED FOR BRICK RISERS.
 6. MASTER MANHOLES SHALL BE 5'-0" DIAMETER.
 7. MANHOLE DIAMETER SHALL BE 4'-0" MIN FOR MAINS 8" TO 24" (STD), 5'-0" MIN FOR MAINS 24" TO 36" AND 6'-0" MIN FOR SEWER 36" AND LARGER.
 8. TOP OF CONE TO TOP OF COVER SHALL BE 21" OR LESS.

PRECAST CONCRETE MANHOLE TYPICAL **FIGURE WW-01-1**
 POLK COUNTY UTILITIES, FLORIDA **APRIL, 2017**



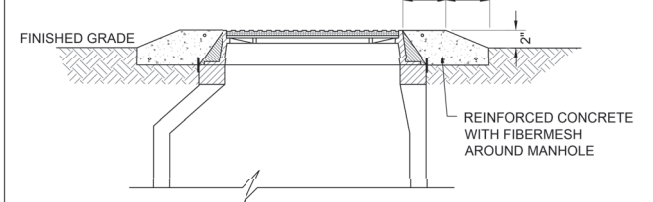
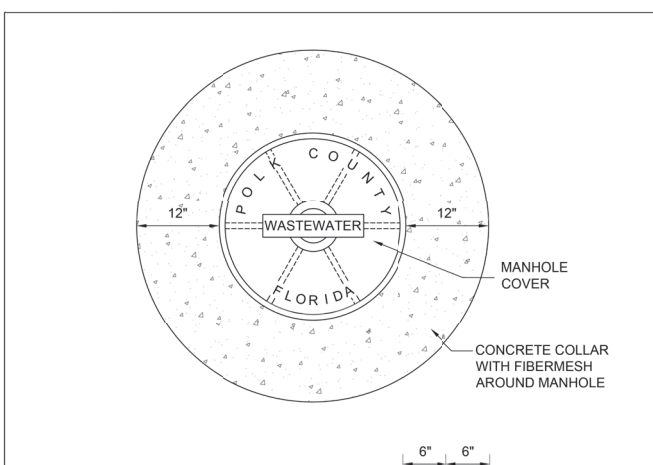
NOTES:
 1. DROP PIPE AND FITTINGS SHALL BE OF EQUAL SIZE AS THE INFLUENT SEWER.
 2. INSIDE DROP CONNECTIONS SHALL BE REQUIRED FOR ALL INFLUENT LINES WHICH HAVE AN INVERT 2' OR MORE ABOVE THE MANHOLE INVERT.
 3. ALTERNATE WATER TIGHT CONNECTION DETAILS FOR CONNECTION OF 24" DIAMETER PIPES AND LARGER MUST BE APPROVED BY PCU.

MANHOLE CONNECTION **FIGURE WW-02**
 POLK COUNTY UTILITIES, FLORIDA **DECEMBER, 2010**



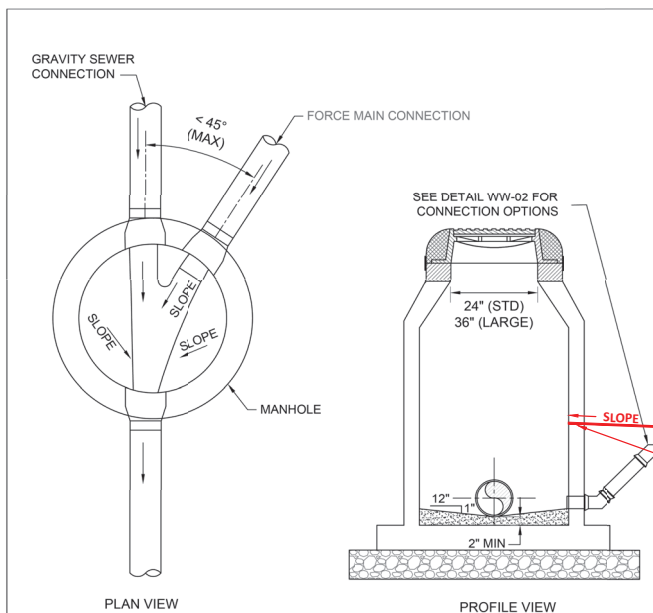
NOTES:
 1. THE WORDS 'POLK COUNTY' SHALL NOT BE USED ON PRIVATE MANHOLES.
 2. RING SHALL RECEIVE 2 COATS OF BITUMINOUS (COAL TAR) EPOXY PRIOR TO INSTALLATION.
 3. ALL MH COVERS AND FRAME SETS SHALL INCLUDE AN APPROPRIATE SIZED INSERT.
 4. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE APPROVED MATERIALS CHECKLIST.

LARGE MANHOLE FRAME AND COVER SET (LARGE MANHOLES - FIVE FOOT AND LARGER INSIDE DIAMETER) **FIGURE WW-03-2**
 POLK COUNTY UTILITIES, FLORIDA **APRIL, 2017**



NOTES:
 1. THE WORDS 'POLK COUNTY' SHALL NOT APPEAR ON PRIVATE MANHOLES.
 2. AREAS SUPPORTING CONCRETE COLLAR SHALL BE PROPERLY COMPACTED, TO 95% MAXIMUM DENSITY PER AASHTO T-180 FOR FIRST 6" UNDER THE COLLAR AREA.

MANHOLE IN NON-PAVED AREA **FIGURE WW-04**
 POLK COUNTY UTILITIES, FLORIDA **DECEMBER, 2010**



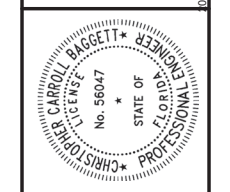
NOTES:
 1. FORCE MAIN SHALL BE ORIENTED NORMALLY 45° OR LESS TO FLOW TO FACILITATE FLOW AND SHALL ENTER MANHOLE AT THE FLOW LINE.
 2. PROVIDE BENCHING AS REQUIRED FOR FORCE MAIN.
 3. MANHOLE RECEIVING FORCE MAIN SHALL BE COATED WITH SPECIALIZED COATING OR FACTORY INSTALLED LINING.
 4. FORCE MAIN CONNECTION DESIGN SHALL BE AS APPROVED BY PCU.

FORCE MAIN TO GRAVITY SEWER MANHOLE CONNECTION (TYPICAL) (MODIFIED AS SHOWN) **FIGURE WW-06-1**
 POLK COUNTY UTILITIES, FLORIDA **JULY, 2019**

2" PVC (SCH 80)
 2" SADDLE TAP WITH BRASS NIPPLES, BRASS CORP STOP, BRASS 90° BENDS, AND TRANSITION COUPLINGS SIMILAR TO FIGURE GR-15-1
 SLEEVE WITH LINK COMPRESSION SEAL

NO	REVISIONS	APPD	DATE

PROJECT NO: 21136	DESIGNED: CRAIGETT	CAD COORD: D. S. VANCE	CHECKED: R. BOOZ	DATE: 02/01/24	APPROVED: CRAIGETT	DATE: 02/01/24	SUBMISSION: 100% SUBMITTAL



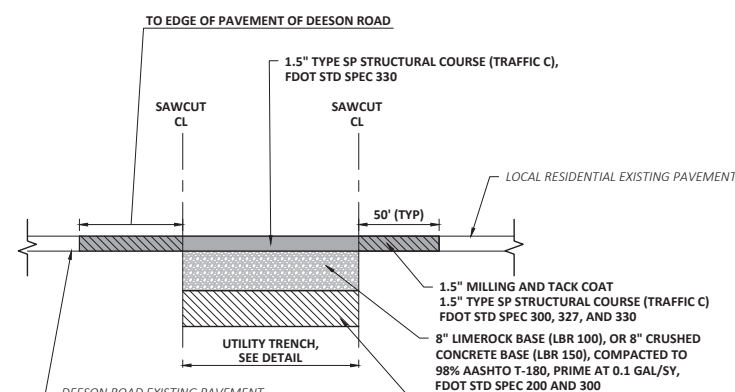
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**POLK COUNTY, FLORIDA
 DEESON ROAD LIFT STATION
 AND FORCE MAIN IMPROVEMENTS**

DETAILS III

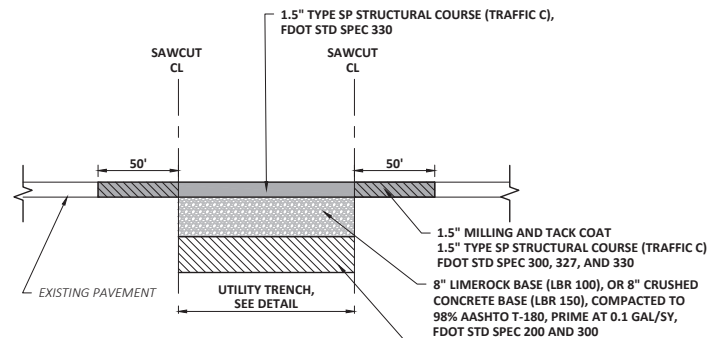
J:\ENGINE\POLK\COUNTY\21136-DEESON ROAD PUMP STATION AND FORCE MAIN\DRAWINGS\CV\21136-CS-DETAILS.DWG | Details III | 2/1/2024 5:57:54 PM | RUSSELLSCAMMON

UTILITY TRENCH REPAIR DETAILS



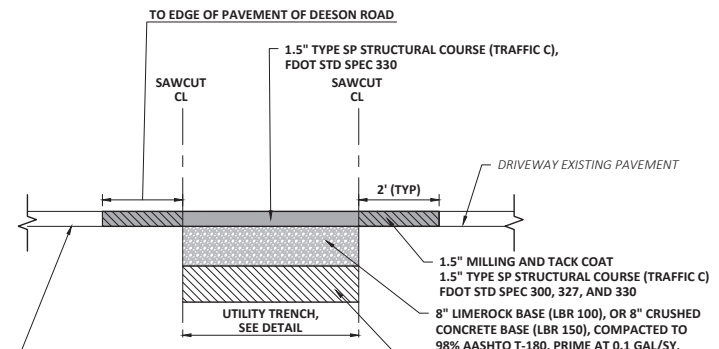
NOTE:
MILLED SURFACE SHALL BE PROTECTED FROM TRAFFIC AND RAIN. IN ADDITION, THE PLACEMENT OF THE FIRST LIFT OF STRUCTURAL COURSE SHALL OCCUR NO LATER THAN THE DAY AFTER THE SURFACE IS MILLED.

LOCAL RESIDENTIAL
SCALE: "NTS"



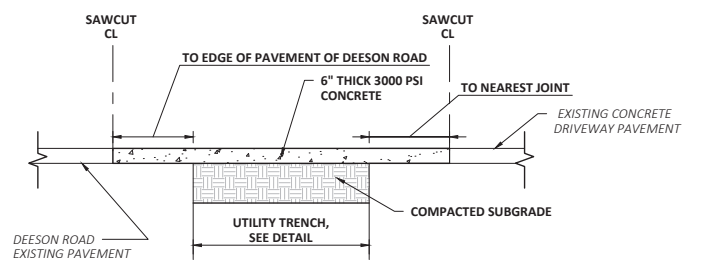
NOTE:
MILLED SURFACE SHALL BE PROTECTED FROM TRAFFIC AND RAIN. IN ADDITION, THE PLACEMENT OF THE FIRST LIFT OF STRUCTURAL COURSE SHALL OCCUR NO LATER THAN THE DAY AFTER THE SURFACE IS MILLED.

URBAN COLLECTOR
SCALE: "NTS"



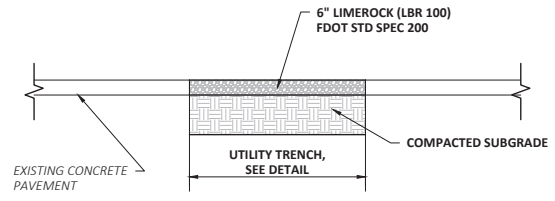
NOTE:
MILLED SURFACE SHALL BE PROTECTED FROM TRAFFIC AND RAIN. IN ADDITION, THE PLACEMENT OF THE FIRST LIFT OF STRUCTURAL COURSE SHALL OCCUR NO LATER THAN THE DAY AFTER THE SURFACE IS MILLED.

ASPHALT DRIVEWAY
SCALE: "NTS"



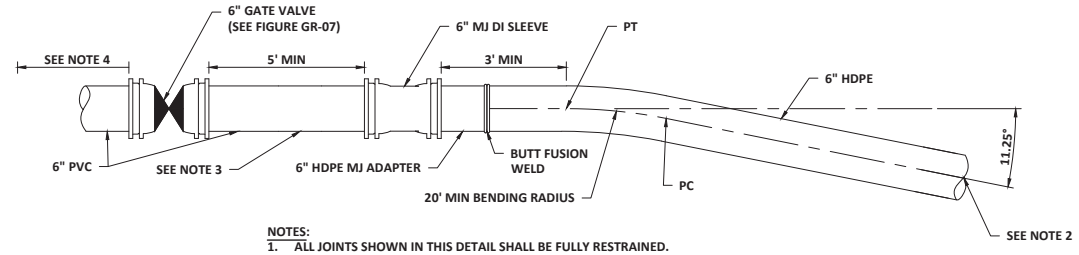
NOTES:
1. CONCRETE TO HAVE A 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.
2. USE 1/2" EXPANSION JOINT (PERFORMED JOINT FILLER) BETWEEN CONCRETE AND ALL OTHER FIXED OBJECTS.

CONCRETE DRIVEWAY
SCALE: "NTS"



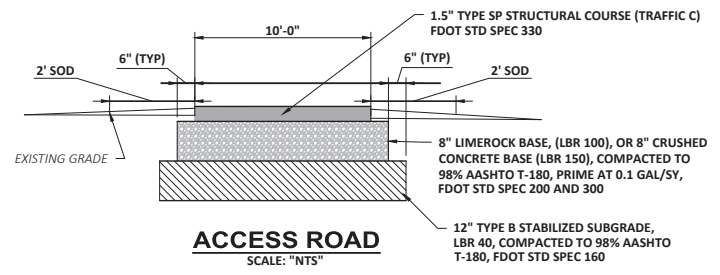
NOTES:
1. MATCH EXISTING WIDTH AND GRADES.

LIMEROCK DRIVEWAY
SCALE: "NTS"



NOTES:
1. ALL JOINTS SHOWN IN THIS DETAIL SHALL BE FULLY RESTRAINED.
2. CONSTRUCT THE HDD PATH AND PROFILE IN ACCORDANCE WITH THE DRAWINGS.
3. INSTALL AN AIR RELEASE VALVE ASSEMBLY WHERE SHOWN ON THE DRAWINGS.
4. RESTRAIN PIPING IN ACCORDANCE WITH THE RESTRAINED PIPE TABLE, FIGURE GR-04. TREAT THE GATE VALVE AS A "PLUG OR CAP".

OPEN CUT TO HDD TRANSITION DETAIL
SCALE: "NTS"



ACCESS ROAD
SCALE: "NTS"

NO	REVISIONS	DATE

PROJECT NO: 21136	DESIGNED: CRAIGETT	CAD COORD: D. SAVAIGE	CHECKED: R. SCAMMON	DATE: 02/01/24	APPROVED: CRAIGETT	DATE: 02/01/24	SUBMISSION: 100% SUBMITTAL
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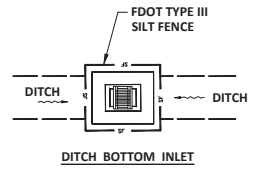
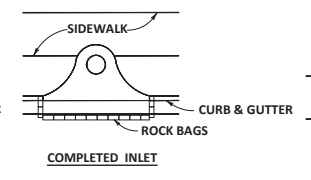
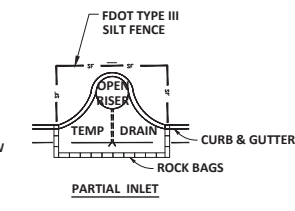
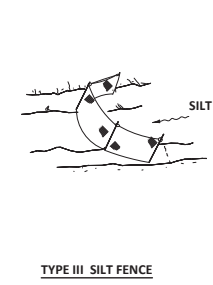
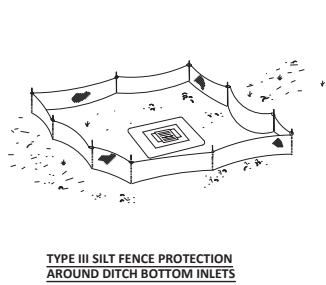
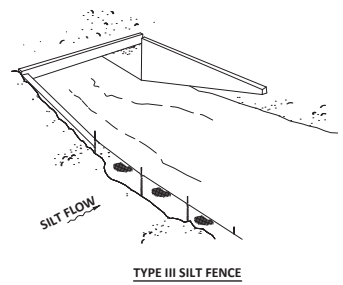


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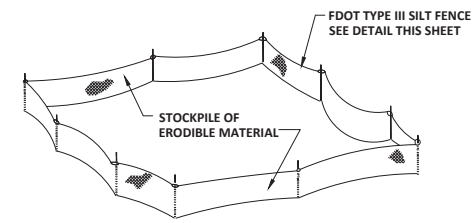
POLK COUNTY, FLORIDA
 DEESON ROAD LIFT STATION
 AND FORCE MAIN IMPROVEMENTS
 DRAWING
C-28
 DETAILS IV

GENERAL NOTES FOR SOIL EROSION, SEDIMENT CONTROL, AND TREE PROTECTION:

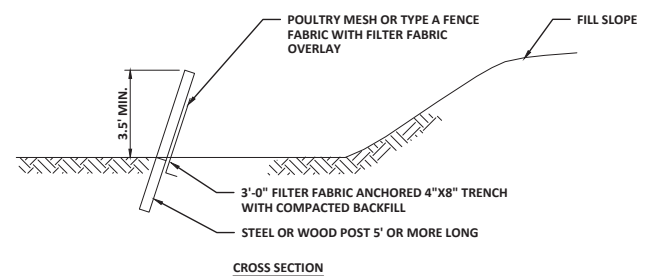
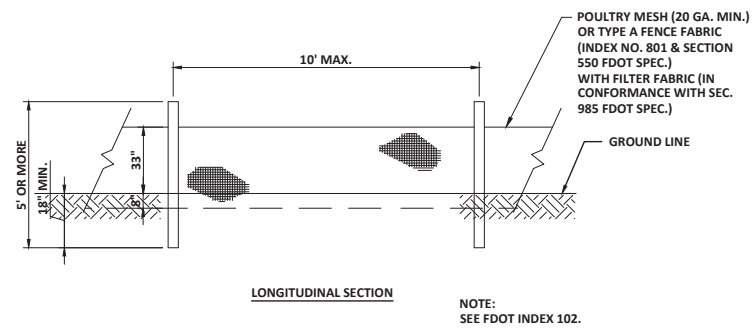
- ALL EROSION AND SEDIMENT CONTROL PRACTICES TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 30 DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
- PERMANENT VEGETATION TO BE SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER GRADING.
- ALL WORK AND MATERIALS TO BE IN ACCORDANCE WITH THE FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION, SECTIONS 104, 570, 575 AND 980 TO 986.
- UNFILTERED DEWATERING IS NOT PERMITTED. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER.
- SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATION COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED IN ACCORDANCE WITH STATE STANDARDS FOR EROSION CONTROL.
- ALL SOIL WASHED, DROPPED, SPILLED OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHTS-OF-WAY WILL BE REMOVED IMMEDIATELY.
- ANY AREAS USED FOR THE CONTRACTOR'S STAGING, INCLUDING BUT NOT LIMITED TO, TEMPORARY STORAGE OF STOCKPILED MATERIALS (E.G. CRUSHED STONE, QUARRY PROCESS STONE, SELECT FILL, EXCAVATED MATERIALS, ETC.), SHALL BE ENTIRELY PROTECTED BY A SILT FENCE ALONG THE LOW ELEVATION SIDE TO CONTROL SEDIMENT RUNOFF.
- THE EROSION AND SEDIMENTATION CONTROLS SHOWN ON THE PLANS ARE THE MINIMUM REQUIRED. ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED, DURING CONSTRUCTION.
- THE CONTRACTOR SHALL ENSURE THAT A FOREMAN OR SUPERVISOR WHO HAS BEEN CERTIFIED UNDER FLORIDA STORMWATER, EROSION AND SEDIMENTATION CONTROL INSPECTOR TRAINING PROGRAM IS AVAILABLE IN PERSON OR BY PHONE AT ALL TIMES DURING THE CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL DESIGNATE THAT PERSON OR PERSONS AT THE PRE-CONSTRUCTION MEETING AND THAT PERSON OR PERSONS MUST ATTEND THE PRE-CONSTRUCTION MEETING.
- EROSION CONTROL MEASURES DEPICTED IN THE PLANS ARE LIMITED TO INLET PROTECTION AND SILT FENCES. THE INLET PROTECTION SHALL BE LIMITED TO INLETS WITHIN THE ACTIVE CONSTRUCTION LIMITS AND A MINIMUM OF TWO INLETS DOWNSTREAM OF THE ACTIVE CONSTRUCTION LIMITS. THE CONTRACTOR SHALL MONITOR THE EFFECTIVENESS OF SUCH INLET PROTECTION AND PROVIDE ADDITIONAL PROTECTION IF WARRANTED. NO SEDIMENTS ARE INTENDED TO ENTER THE CURB INLETS. THE CONTRACTOR SHALL CONDUCT AND MAINTAIN THE WORK IN SUCH CONDITION TO PROVIDE ADEQUATE DRAINAGE AT ALL TIMES AND SHALL MONITOR THE PERFORMANCE OF THE STORM WATER INLETS WHILE IMPEDED BY THE INLET PROTECTION. STREET FLOODING IS NOT TO BE INTRODUCED AS A RESULT OF THE INLET PROTECTION. SAFETY OF THE TRAVELING PUBLIC, AS RELATED TO THE ADEQUACY OF THE DRIVING SURFACE AS A RESULT OF STANDING STORMWATER RUNOFF CREATED BY THE INTRODUCTION OF INLET PROTECTION, IS THE RESPONSIBILITY OF THE CONTRACTOR.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN A CLEAN WORK ZONE TO LIMIT THE RELEASE OF SEDIMENTS INTO STORMWATER COLLECTION SYSTEMS AND TO LIMIT THE TRACKING OF MATERIALS BEYOND THE ACTIVE WORK LIMITS. THE CONTRACTOR IS REQUIRED TO MECHANICALLY SWEEP THE ACTIVE CONSTRUCTION LIMITS TO REMOVE SEDIMENTS AND LIKE MATERIALS FROM THE CORRIDOR AT THE END OF EACH WORKDAY. ADDITIONAL OR MORE FREQUENT SWEEPING MAY BE REQUIRED TO MAINTAIN A CLEAN WORK ZONE AND LIMIT THE TRACKING OF MATERIALS BEYOND THE CONSTRUCTION LIMITS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL TREES AND LANDSCAPING ON ADJACENT PROPERTIES, AND WILL BE SOLELY LIABLE FOR DAMAGE TO VEGETATION ON PROPERTIES ADJACENT TO CONSTRUCTION WORK ZONES. ALL TREES WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED UNLESS SPECIFICALLY IDENTIFIED ON THE PLANS TO BE REMOVED. ALL TREES OUTSIDE THE CONSTRUCTION WORK ZONE ARE TO BE PROTECTED TO THE MAXIMUM EXTENT PRACTICABLE. TREE BARRICADES WILL BE INSTALLED AND MAINTAINED AROUND ALL TREES TO BE PROTECTED. THE CONTRACTOR SHALL EMPLOY A CERTIFIED ARBORIST TO MITIGATE IMPACTS TO TREES AS A RESULT OF CONSTRUCTION ACTIVITIES AND SHALL COORDINATE THESE TREE-RELATED ISSUES WITH THE COUNTY. NO TRENCHING OR EXCAVATION SHALL BE ALLOWED WITHIN THE CRITICAL PROTECTION ZONE OF ANY PROTECTED TREE. ANY TREE-RELATED DAMAGE DUE TO CONSTRUCTION SHALL BE PAID FOR BY THE CONTRACTOR.
- ALL DISTURBED AREAS, EXCEPT FOR AREAS THAT ARE PAVED OR OTHERWISE DESIGNATED, ARE TO BE SODDED. EXISTING GRASSED AREAS THAT ARE DISTURBED WILL BE SODDED WITH THE SAME GRASS TYPE AS EXISTING, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. WHERE SOD IS PLACED ON SLOPES OF 2:1 OR STEEPER, AN EROSION MAT WILL BE INSTALLED BENEATH THE SOD, AND THE SOD WILL BE STAKED. AREAS THAT ARE SODDED SHALL BE FERTILIZED AT AN APPLICATION RATE OF 450 LBS. /AC AND WILL BE WATERED AT A RATE OF 5,000 GAL/AC. NO SEPARATE PAYMENT WILL BE MADE AND ALL COSTS FOR FERTILIZING, WATERING, STAKING, AND FURNISHING AND INSTALLING EROSION MAT SHALL BE CONSIDERED INCIDENTAL TO OTHER PAY ITEMS IN THE CONTRACT.
- A DEWATERING PLAN SHALL BE SUBMITTED FOR INFORMATIONAL PURPOSES TO DETAIL THE MEASURES TO BE EMPLOYED TO LOWER THE GROUNDWATER TABLE AND/OR TO DIVERT SURFACE WATER DURING EXCAVATION AND CONSTRUCTION INCLUDING THE INSTALLATION AND MAINTENANCE OF ALL DEVICES TO BE USED DURING CONSTRUCTION TO CONTROL EROSION AND THE TRANSPORTATION OF ERODED MATERIALS OFF SITE. TRENCH SHEETING AND BRACING SHALL BE ADEQUATE TO PREVENT CAVE-IN OF TRENCH WALLS, SUBSIDENCE OF AREAS ADJACENT TO THE TRENCH, DAMAGE TO UTILITIES, AND SLOUGHING OF THE BASE OF THE EXCAVATION DUE TO WATER SEEPAGE. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT ALL DEWATERING ACTIVITIES ADHERE TO ALL LOCAL, STATE AND FEDERAL REGULATIONS. IT IS THE CONTRACTORS RESPONSIBILITY FOR THE ADEQUACY OF ANY SHEETING AND BRACING. THE COST OF DEWATERING, SHEETING AND BRACING IS CONSIDERED INCIDENTAL TO THE PAY ITEMS IN THE CONTRACT. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.
- PAYMENT FOR PREPARING AND SUBMITTING THE DEWATERING PLAN IS CONSIDERED INCIDENTAL TO THE PAY ITEMS IN THE CONTRACT. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.



DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.



NOTE:
THE STORAGE OF ALL MATERIAL SHALL BE OUTSIDE THE 100-YEAR FLOOD PLAIN.



NO	REVISIONS	APPD	DATE

PROJECT NO: 21136	DESIGNED: CRAIGETT	CAD COORD: D. SAVAIGE	CAD: R. SCAMMON	CHECKED: B. BOOZ	DATE: 02/01/24	APPROVED: CRAIGETT	DATE: 02/01/24	SUBMISSION: 100% SUBMITTAL
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POLK COUNTY, FLORIDA
 DEESON ROAD LIFT STATION
 AND FORCE MAIN IMPROVEMENTS

EROSION CONTROL, NOTES, AND DETAILS

DRAWING
C-29

POLK COUNTY UTILITIES WASTEWATER NOTES:

- ALL INTERIOR METAL SURFACES SHALL BE PAINTED WITH 2 COATS OF BITUMINOUS EPOXY PAINT.
- ALL HARDWARE TO BE 316 STAINLESS STEEL UNLESS OTHERWISE NOTED.
- 4" PLUG VALVES MAY HAVE LEVERS, ALL OTHERS SHALL HAVE GEARBOX W/ HAND WHEELS
- CHECK VALVE ARM SHALL BE LOCATED WITH THE SAME ORIENTATION (i.e. ALL ARMS ON THE LEFT SIDE OF VALVE).
- ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE "APPROVED MATERIALS CHECKLIST".

PROCESS GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- ALL EQUIPMENT AND PIPING LAYOUT DIMENSIONS SHALL BE FIELD VERIFIED AND COORDINATED WITH EQUIPMENT SUPPLIER, AND/OR EXISTING CONDITIONS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AS REQUIRED PRIOR TO BEGINNING CONSTRUCTION OF NEW FACILITIES, EQUIPMENT OR PIPING THAT MAY BE AFFECTED. THIS DOES NOT HOWEVER, LIMIT THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND COORDINATE ALL NECESSARY INFORMATION FOR CONSTRUCTION.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DIMENSIONS, LAYOUT OR ELEVATION CHANGES REQUIRED TO SUIT THE SPECIFIC EQUIPMENT BEING PROVIDED UNDER THIS CONTRACT.
- ALL PIPING INSTALLED BELOW SLABS SHALL BE ENCASED IN CONCRETE. PROCESS DRAWINGS DO NOT SHOW CONCRETE ENCASEMENT FOR CLARITY. SEE CIVIL DRAWINGS FOR CONCRETE ENCASEMENT DETAIL.
- PROVIDE CAST OR DUCTILE IRON WALL CASTINGS, OR GALVANIZED STEEL PIPE SLEEVES, FOR ALL PIPE PENETRATIONS MADE THROUGH CONCRETE FOUNDATIONS, WALLS AND SLABS, UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL SLEEVES AND CASTINGS SHALL HAVE SEALING/ANCHORING COLLARS. SEE PROCESS DRAWINGS FOR LOCATIONS OF PENETRATIONS. NEW PENETRATIONS THROUGH EXISTING STRUCTURE WALLS SHALL BE BY CORING MACHINE AND LINK TYPE COMPRESSION SEALS, UNLESS OTHERWISE INDICATED. OPENINGS TO BE COMPATIBLE WITH REQUIRED PIPING AND STANDARD LINK SEAL SIZES.
- AFTER INSTALLATION, ALL PIPELINES SHALL BE PRESSURE TESTED FOR TIGHTNESS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALL LEAKS SHALL BE CORRECTED AND RETESTED UNTIL PRESSURE TEST IS SATISFACTORILY COMPLETED.
- ALL PENETRATIONS BETWEEN CLASS 1, DIVISION 1 AREAS AND UNCLASSIFIED AREAS SHALL BE GAS TIGHT.
- ALL STAINLESS STEEL FASTENERS FOR PIPING, EQUIPMENT, SUPPORTS, ETC., SHALL BE HAND TIGHTENED IN ORDER TO LIMIT THE POTENTIAL FOR GALLING.
- CONTRACTOR TO NOTE THAT EXISTING INFORMATION ON THE DRAWINGS IS SHOWN WITH A LIGHTER LINE WEIGHT AND INDICATED WITH A SLANTED TYPE TEXT.
- CONTRACTOR SHALL COORDINATE INSTRUMENTATION MOUNTING DETAILS WITH THE INSTRUMENTATION SUPPLIER AND THE ELECTRICAL CONTRACTOR. REFER TO DETAILS ON THE DRAWINGS, AND/OR EQUIPMENT MANUFACTURER MOUNT DETAILS AND REQUIREMENTS.
- DO NOT SCALE DISTANCES OR DIMENSIONS FROM THE DRAWINGS. WRITTEN DIMENSIONS SHALL PREVAIL. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

PROCESS ABBREVIATIONS - GENERAL

AE	ANALYZING ELEMENT	EXP	EXPANSION	LE	LEVEL ELEMENT	PVC	POLYVINYL CHLORIDE
AL	ALUMINUM	FC	FLUSHING CONNECTION	LR	LONG RADIUS	RCP	REINFORCED CONCRETE PIPE
ALT	ALTERNATE	FD	FLOOR DRAIN	MAX	MAXIMUM	RED	REDUCER
BF	BLIND FLANGE	FE	FLOW ELEMENT	MECH	MECHANICAL	RES	RESIDUALS
BLDG	BUILDING	FFE	FINISHED FLOOR ELEVATION	MFG	MANUFACTURER	REQ'D	REQUIRED
BOT	BOTTOM	FLG	FLANGE	MH	MANHOLE	RD	ROOF DRAIN
CAR	CARRIER PIPE	FLR	FLOOR	MIN	MINIMUM	SAM	SAMPLE LINE
CI	CAST IRON	FOT	FLAT ON TOP	MJ	MECHANICAL JOINT	SCH	SCHEDULE
CIP	CLEAN-IN-PLACE	FP	FIRE PROTECTION	MTD	MOUNTED	SECT	SECTION
CO	CLEANOUT	FPHB	FROST PROOF HOSE BIBB	NIC	NOT IN CONTRACT	SHT	SHEET
CON	CONTAINMENT PIPE	FRP	FIBERGLASS REINFORCED PLASTIC	NO	NUMBER	SMH	SANITARY SEWER MANHOLE
CONC	CONCRETE	FS	FLOW SWITCH	NPT	NATIONAL PIPE THREAD	SP	SUMP PUMP
CONT	CONTINUED	FW	FIXED WEIR (WW)	NTS	NOT TO SCALE	SPD	SUMP PUMP DISCHARGE
CPL	COUPLING	GA	GAUGE	NV	NEEDLE VALVE	SQ	SQUARE
DN	DOWN	GAC	GRANULAR ACTIVATED CARBON	OC	ON CENTER	SS	STAINLESS STEEL
DI	DUCTILE IRON	GAL	GALLON	OD	OUTSIDE DIAMETER	STD	STANDARD
DIA (Ø)	DIAMETER	GALV	GALVANIZED	ODOR	ODOR CONTROL DUCT	STL	STEEL
DIM	DIMENSION	GR	GREASE	OH	OVERHEAD	THK	THICKNESS
DMH	DRAIN MANHOLE	HB	HOSE BIBB	OUT	OUTLET	TK	TANK
DN	DOWN	HDPPE	HIGH DENSITY POLYETHYLENE	PAC	POWDER ACTIVATED CARBON	TYP	TYPICAL
DWG	DRAWING	HP	HIGH POINT	PCCP	PRESTRESSED CONCRETE CYLINDER PIPE	UV	ULTRAVIOLET
ECC	ECCENTRIC	HYD	HYDRANT	PE	POLYETHYLENE OR PRESSURE ELEMENT	VERT	VERTICAL
EL (ELEV)	ELEVATION	ID	INSIDE DIAMETER	PP	POLYPROPYLENE	WSE	WATER SURFACE ELEVATION
ELL	ELBOW	INL	INLET	PS	PRESSURE SWITCH	XP	EXPLOSION PROOF
EQUIP	EQUIPMENT	INV	INVERT			YH	YARD HYDRANT
EXIST (EX)	EXISTING	IT	JOINT				

VALVES

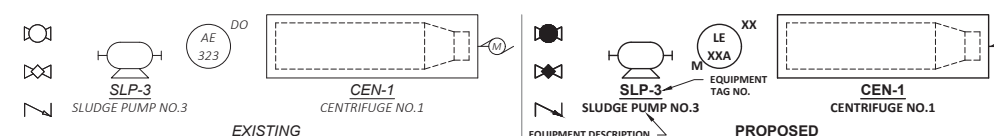
	SCHEMATIC	ORTHOGRAPHIC
3-WAY VALVE		
BACKPRESSURE VALVE (BPV)		
BALL VALVE (BV)		
BALL CHECK VALVE (BCV)		
BUTTERFLY VALVE (BFV)		
CHECK VALVE (CKV)		
DIAPHRAGM VALVE		
DOUBLE DISC CHECK VALVE		
DUCKBILL CHECK VALVE		
GATE VALVE (GV)		
GLOBE VALVE		
KNIFE GATE VALVE (KV)		
MUD VALVE		
NEEDLE VALVE (NV)		
PINCH VALVE		
PLUG VALVE (PV)		
PRESSURE REDUCING VALVE (PRV)		
PRESSURE SAFETY (RELIEF) VALVE (PSV)		
SURGE ANTICIPATION VALVE (SAV)		
SURGE RELIEF VALVE (SRV)		
TELESCOPING VALVE		
VACUUM RELIEF VALVE		
VOLUME DAMPER		
SLEEVE COUPLING		

LINETYPES

	EXISTING	NEW
AIR - COMPRESSED		
AIR - LOW PRESSURE		
EQUIPMENT/PIPING		
FUTURE EQUIPMENT/PIPING		
HYDRAULIC		
STORAGE/BYPASS FLOW		
STRUCTURES		
WASTEWATER		

AS IDENTIFIED IN THE PROCESS GENERAL NOTES, CONTRACTOR TO NOTE THAT ALL EXISTING INFORMATION ON THE DRAWINGS IS SHOWN WITH A LIGHTER LINE WEIGHT AND INDICATED WITH A SLANTED TYPE TEXT. EXISTING VALVES DO NOT HAVE A FILL ASSOCIATED WITH THEM. REFER TO EXAMPLES IN THIS BOX.

EXISTING VS. PROPOSED IDENTIFICATION



NO	REVISIONS	APPD	DATE

PROJECT NO: 21136
 DESIGNED: CRAIGETT
 CAD COORD: D. SAVAGE
 CAD: R. SCAMMON
 CHECKED: R. BOOZ
 DATE: 02/01/24
 APPROVED: CRAIGETT
 DATE: 02/02/24
 SUBMISSION: 100% SUBMITTAL

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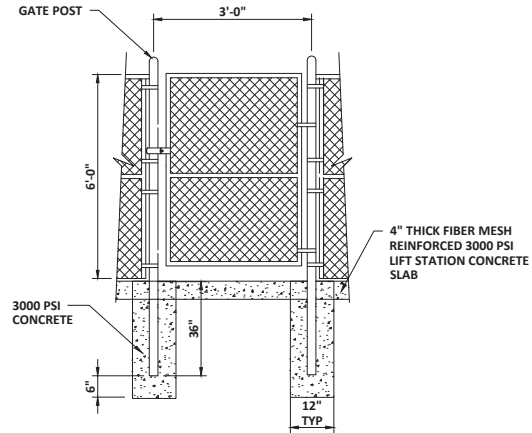
Christopher C. Baggett
 PROFESSIONAL ENGINEER
 No. 56047
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

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POLK COUNTY, FLORIDA
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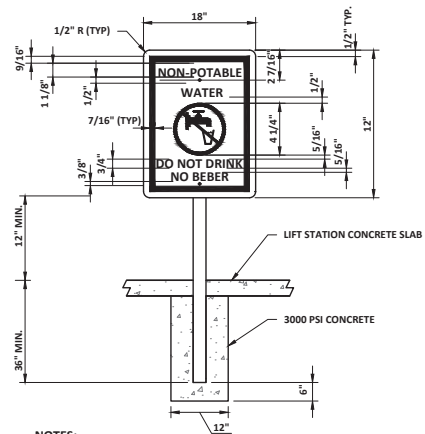
GENERAL NOTES, LEGEND, AND ABBREVIATIONS

DRAWING
PR-1



- NOTES:**
- FENCING SHALL BE BLACK, FACTORY APPLIED VINYL CLAD. THREE STRANDS OF BARBED WIRE SHALL BE INSTALLED ON TOP ONLY IF APPROVED BY PCU. 2' FENCE AND GATE POST EXTENSION SHALL BE INCORPORATED INTO FENCE AND/OR GATE DESIGN ACCORDINGLY. BARBED WIRE SHALL BE INSTALLED VERTICALLY AT GATE.

CHAIN LINK PEDESTRIAN GATE
SCALE: NTS



- NOTES:**
- SIGN TO BE PROVIDED BY CONTRACTOR.
 - SIGN SHALL BE LOCATED WHERE DIRECTED IN THE FIELD BY PCU.
 - BACKGROUND SHALL BE WHITE. LETTERS AND BORDER SHALL BE BLACK (HELVETICA, SWISS 721 COREL OR ACCEPTABLE EQUAL).
 - ENGINEERING GRADE REFLECTIVE MATERIALS SHALL BE USED.
 - SIGN MATERIAL SHALL BE OF 0.040 GAUGE ALUMINUM.
 - POST SHALL BE 2-3/8" OD ALUMINUM PIPE, HOT DIP GALVANIZED PER ASTM A-123. POST TO BE PROVIDED BY CONTRACTOR. PAINT PORTION OF POST SET IN CONCRETE TO 1 INCH ABOVE CONCRETE WITH 2 COATS OF BITUMINOUS EPOXY.
 - MOUNTING HARDWARE SHALL BE STAINLESS STEEL.

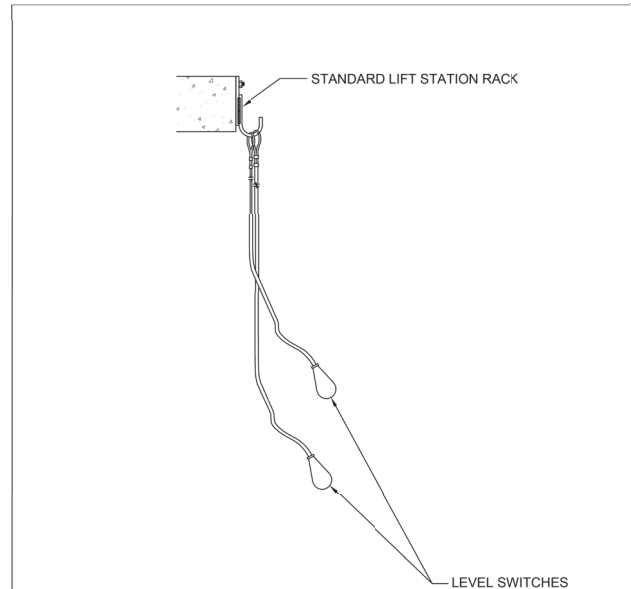
NON-POTABLE WATER SIGNAGE "DO NOT DRINK" DETAIL
SCALE: NTS

DESCRIPTION	SYMBOL	DIMENSION	ELEVATION
THICKNESS OF WALL (8" MIN.)	A	8" MIN.	—
DIAMETER OF WET WELL (6" MIN.)	B	6"	—
WIDTH OF BOTTOM FILLET	C	SEE NOTE 1	—
C/L TO C/L OF PUMPS	D	SEE NOTE 1	—
LENGTH OF PUMP ACCESS OPENING	E	SEE NOTE 1	—
WIDTH OF PUMP ACCESS OPENING	F	SEE NOTE 1	—
BASE ELBOW TO EDGE OF PIT	G	SEE NOTE 1	—
TOP OF WET WELL	T	109.9	—
FINISHED GRADE	U	VARIES	—
INVERT OF GRAVITY PIPE	P	96.0	—
FLOOR OF WET WELL	Z	86.65	—
SEASONAL HIGH WATER ELEVATION (SEE NOTE 3)	SH	109.9	—

- NOTE:**
- PER PUMP MANUFACTURER'S REQUIREMENTS
 - TOP OF PUMP STATION SHALL BE NO LOWER THAN THE 25 YEAR FLOOD 24 HOUR ELEVATION. THE BOTTOM OF STATION CONTROL AND ELECTRICAL BOXES SHALL BE NO LOWER THAN THE 100 YEAR 24-HOUR FLOOD ELEVATION.
 - SEASONAL HIGH GROUND WATER ELEVATION 'SH' SHALL BE CONSIDERED THE SAME AS THE TOP OF WET WELL ELEVATION.

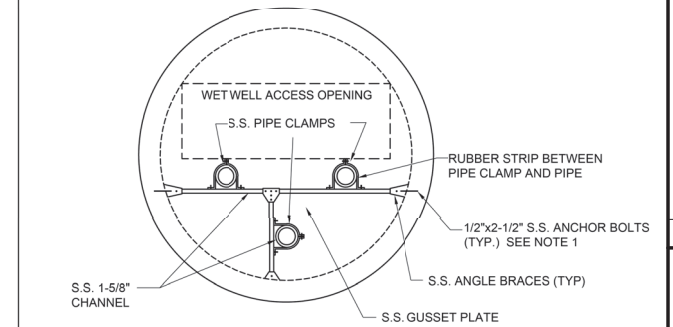
DESCRIPTION	SYMBOL	TRANSMITTER ELEVATION	FLOAT ELEVATION
VALVE HIGH-HIGH LEVEL ALARM	I	96.0	96.0
HIGH LEVEL ALARM	J	95.5	95.5
LAG PUMP ON	L	95.0	---
LEAD PUMP ON	M	94.5	---
BOTH PUMPS OFF	N	93.15	---
LOW LEVEL ALARM	O	92.65	92.65

DUPLEX LIFT STATION DIMENSIONS AND ELEVATIONS TABLE
POLK COUNTY UTILITIES, FLORIDA
FIGURE WW-12-3
OCTOBER, 2015



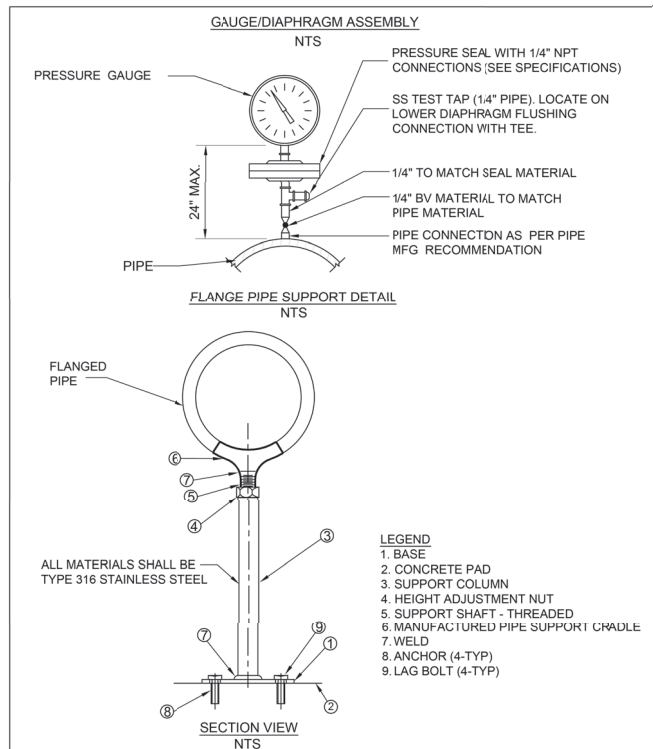
- NOTES:**
- HANG FROM STANDARD LIFT STATION RACK

TYPICAL FLOAT TYPE LEVEL SWITCH INSTALLATION
POLK COUNTY UTILITIES, FLORIDA
FIGURE WW-12-4
SEPTEMBER, 2019



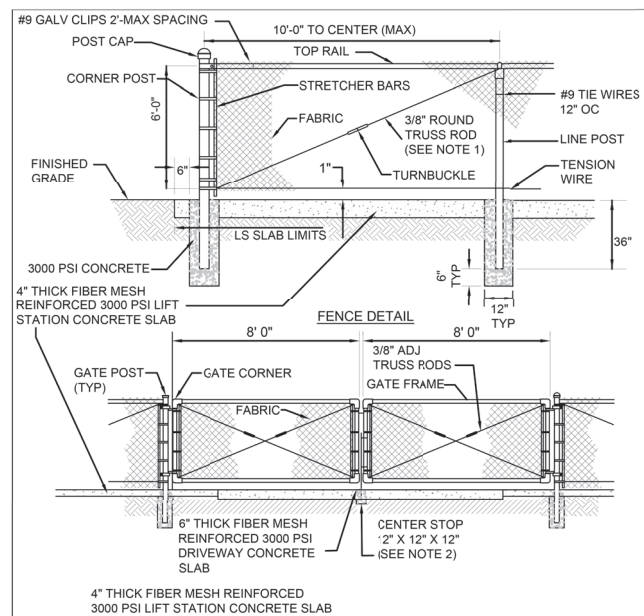
- NOTE:**
- BOND ANCHOR BOLTS USING HIGH STRENGTH ANCHORING EPOXY FOR CONCRETE.

TYPICAL LIFT STATION HDPE PIPE BRACING
POLK COUNTY UTILITIES, FLORIDA
FIGURE WW-12-5
OCTOBER, 2015



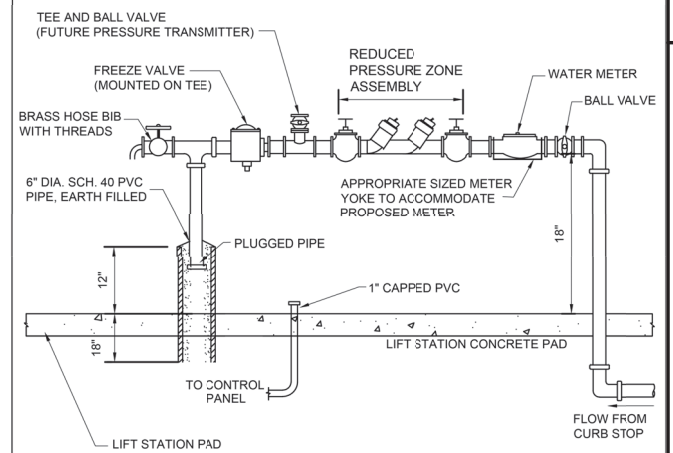
- LEGEND**
- BASE
 - CONCRETE PAD
 - SUPPORT COLUMN
 - HEIGHT ADJUSTMENT NUT
 - SUPPORT SHAFT - THREADED
 - MANUFACTURED PIPE SUPPORT CHADLE
 - WELD
 - ANCHOR (4-TYP)
 - LAG BOLT (4-TYP)

PIPE SUPPORT AND GAUGE / DIAPHRAGM ASSEMBLY (TYPICAL)
POLK COUNTY UTILITIES, FLORIDA
FIGURE WW-15
DECEMBER, 2010



- NOTES:**
- TRUSS RODS ARE REQUIRED FOR EACH GATE SECTION AND THE FIRST SPAN ON EACH SIDE OF A GATE AND EACH SIDE OF A CORNER POST ONLY.
 - GATE SHALL BE CAPABLE OF BEING LOCKED SECURELY WITH MINIMUM SPACE BETWEEN GATES.
 - FENCING SHALL BE BLACK, FACTORY APPLIED VINYL CLAD.
 - THREE STRANDS OF BARBED WIRE SHALL BE INSTALLED ON TOP ONLY IF APPROVED BY PCU. 2' FENCE AND GATE POST CAP EXTENSION SHALL BE INCORPORATED INTO FENCE AND/OR GATE DESIGN ACCORDINGLY. BARBED WIRE SHALL BE INSTALLED VERTICALLY AT GATE.
 - MINIMUM 15' COMPLETELY CLEAR OPENING REQUIRED TO ACCOMMODATE HEAVY EQUIPMENT AND/OR EMERGENCY VEHICLES.

CHAIN LINK FENCE (TYPICAL)
POLK COUNTY UTILITIES, FLORIDA
FIGURE WW-16
JULY, 2019



- NOTES:**
- ALL ABOVE GROUND PIPING AND APPURTENANCES SHALL BE 3/4" SCH 40 BRASS PIPE.
 - AN APPROVED REDUCED PRESSURE ZONE ASSEMBLY SHALL BE SELECTED IN ACCORDANCE WITH PCU'S * APPROVED CROSS CONNECTION CONTROL ASSEMBLY LIST*
 - UNDERGROUND PIPING SHALL CONFORM TO POTABLE WATER SERVICE LATERAL SPECIFICATIONS FOR PE PIPE.
 - ALL ABOVE GRADE PIPING SHALL RECEIVE TWO COATS OF BLUE EPOXY PAINT.
 - METER SHALL BE FURNISHED AND INSTALLED BY PCU.
 - THE CONTRACTOR SHALL FURNISH AND INSTALL ENTIRE ASSEMBLY, INCLUDING METER YOKE.

LIFT STATION WASH DOWN ASSEMBLY (TYPICAL)
POLK COUNTY UTILITIES, FLORIDA
FIGURE WW-18
SEPTEMBER, 2016

NO	REVISIONS	DATE

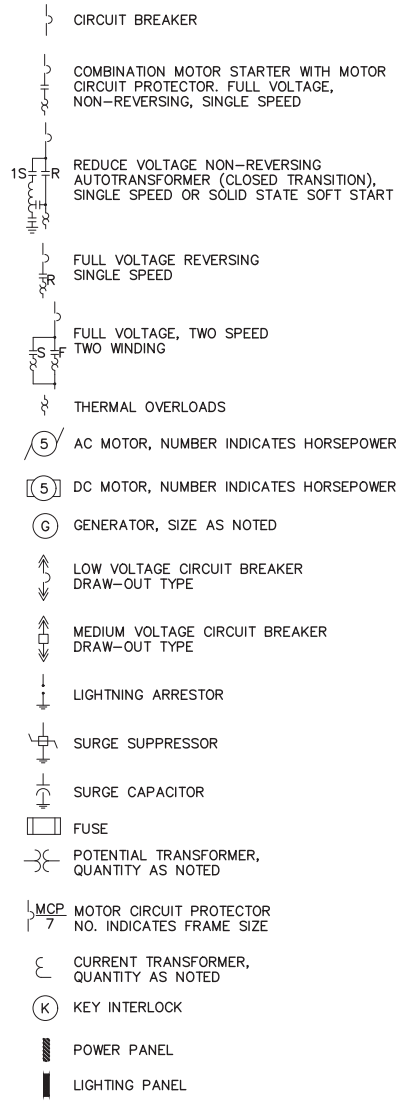
PROJECT NO: 21136
DESIGNED: CRAIGETT
CAD: D. S. VANCE
CAD COORD: R. SCAMMON
CHECKED: B. BOOZ
DATE: 02/01/24
APPROVED: CRAIGETT
DATE: 02/01/24
SUBMISSION: 100% SUBMITTAL



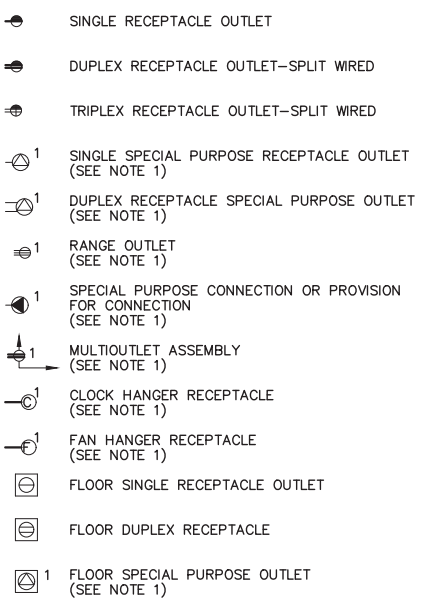
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POLK COUNTY, FLORIDA DESON ROAD LIFT STATION AND FORCE MAIN IMPROVEMENTS
DETAILS 1

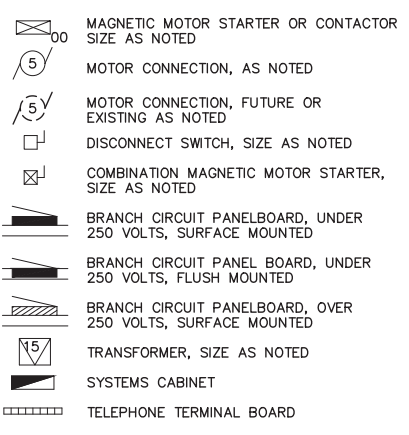
SINGLE LINE POWER DIAGRAM SYMBOLS



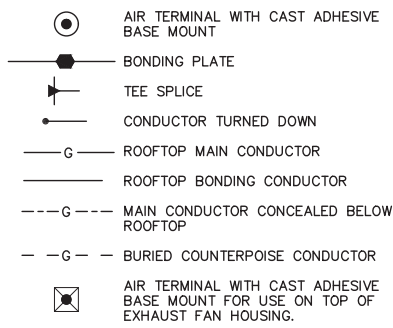
RECEPTACLE OUTLET SYMBOLS



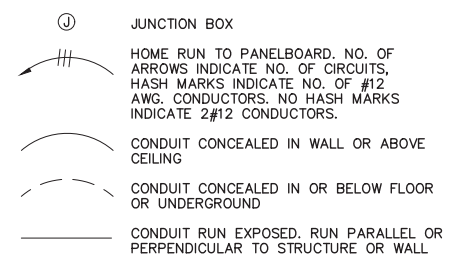
SERVICE AND DISTRIBUTION



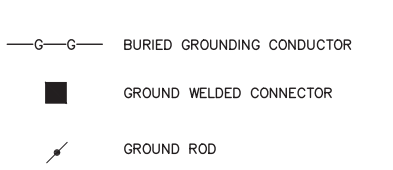
LIGHTNING PROTECTION SYSTEM



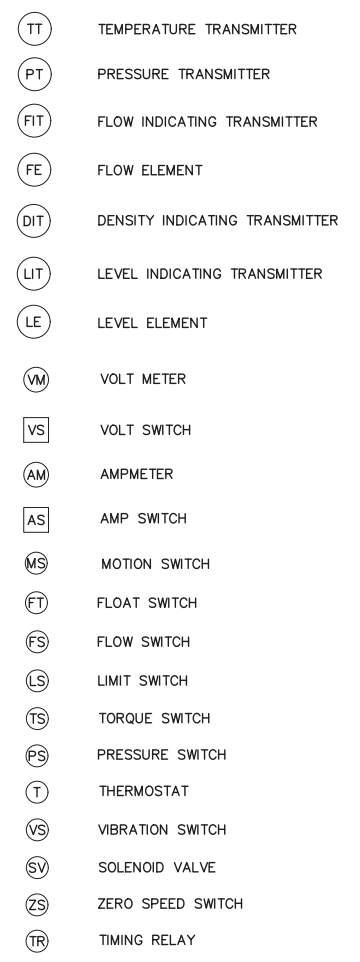
RACEWAY SYSTEM



GROUNDING SYSTEM



PLAN SYMBOLS



ABBREVIATIONS

A	AMBER, AMPERE, ALARM	I/O	INPUT/OUTPUT	T	THERMOSTAT, TIMER, OR TOTALIZER
AC	ALTERNATING CURRENT	IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS	TACH	TACHOMETER
ACB	AIR COOLED CONDENSING UNIT	IES	ILLUMINATING ENGINEERING SOCIETY	TB	TERMINAL BLOCK
ACCU	AMPERE FRAME	INST	INSTRUMENTATION	TC	TIMER CLUTCH OR TIME CLOCK
AF	ABOVE FINISHED FLOOR	ISO	ISOLATION	TD	TIME DELAY RELAY
AFF	ABOVE FINISHED GRADE	J	JUNCTION BOX	TEL	TELEPHONE
AFG	AMPS INTERRUPTING CAPACITY	K	KEY INTERLOCK	TEMP	TEMPERATURE
AHU	ANNUNCIATOR	KV	KILOVOLT	TM	TIMER MOTOR
AIC	AMERICAN NATIONAL STANDARDS INSTITUTE	KVA	KILOVOLT AMPERE	TQ	TORQUE
ALUM	ALUMINUM	KVAR	KILOVAR	TTB	TELEPHONE TERMINAL BOX OR BOARD
AM	AMMETER	KW	KILOWATT	TTC	TELEPHONE TERMINAL CABINET
ANN	ANNUNCIATOR	KWH	KILOWATT HOUR	TYP	TYPICAL
ANSI	AMERICAN STANDARDS ASSOCIATION	L	LOW, LEVEL	UL	UNDERWRITERS LABORATORIES
AR	ALARM RELAY	LA	LIGHTNING-ARRESTED	UG	UNDERGROUND
ASA	AMMETER SWITCH	LC	LOCAL-OFF-REMOTE	UN	UNLESS OTHERWISE NOTED
AS	AMMETER SWITCH	LOR	LOCAL-OFF-REMOTE	UV	UNDER VOLTAGE
AT	AMPERE TRIP	LS	LIMIT OR LEVEL SWITCH	UPS	UNINTERRUPTIBLE POWER SUPPLY
ATS	AUTOMATIC TRANSFER SWITCH	LT	LIGHTING	V	VOLTS
AUX	AUXILIARY	LTG	LIGHTING	VA	VOLT AMPERE
AWG	AMERICAN WIRE GAGE	LWCO	LOW WATER CUTOFF	VAR	VARMETER
B	BLUE	M	MAGNETIC MOTOR STARTER	VFD	VARIABLE FREQUENCY DRIVE
BC	BARE COPPER OR BATTERY CHARGER	MA	MILLIAMPERE	VLS	VALVE LIMIT SWITCH
BIL	BASIC IMPULSE LEVEL	MAX	MAXIMUM	VM	VOLTMETER
BKR	BREAKER	MCB	MAIN CIRCUIT BREAKER	VPI	VALVE POSITION INDICATOR
BLDG	BUILDING	MCC	MOTOR CONTROL CENTER	VS	VOLTMETER SWITCH
BR	BRAKE	MCM	THOUSAND CIRCULAR MIL	VSC	VARIABLE SPEED CONTROLLER
BT	BEARING TEMPERATURE	MCP	MOTOR CIRCUIT PROTECTOR	VSD	VARIABLE SPEED DRIVE
C	CLOSE, COUNTER, CONTACTOR OR CONDUIT	MD	MOISTURE DETECTOR	W	WHITE, WATTS OR WIRE
C°	DEGREES CENTIGRADE	MFM	MAGNETIC FLOW METER	WH	WATTHOUR METER
CAB	CABINET	MFR	MANUFACTURER	WM	WATT METER
CAP	CAPACITOR	MH	MANHOLE, MOUNTING HEIGHT	WP	WEATHER PROOF
CB	CIRCUIT BREAKER	MIN	MINIMUM	WT	WATER TIGHT
CB*A	CIRCUIT BREAKER AUXILIARY CONTACT (OPEN WHEN BREAKER IS OPEN AND CLOSED WHEN BREAKER IS CLOSED OR TRIPPED)	MLO	MAIN LUGS ONLY	X	AUXILIARY RELAY
CB*B	CIRCUIT BREAKER AUXILIARY CONTACT (CLOSED WHEN BREAKER IS OPEN AND OPEN WHEN BREAKER IS CLOSED OR TRIPPED)	MOV	MOTOR OPERATED VALVE	XFMR	TRANSFORMER
CB**	CERTIFIED BALLAST MANUFACTURERS CELL INTERLOCK	MPR	MOTOR PROTECTION RELAY	XTMR	TRANSFORMER
CBM	CIRCUIT BREAKER	MS	MANUAL MOTOR STARTER	Y	YELLOW
CI	CIRCUIT BREAKER	MSH	MOTOR SPACE HEATER	ZS	POSITION SWITCH
CKT	CIRCUIT	MTD	MOUNTED	Ø	PHASE
CL2	CIRCUIT	MTS	MANUAL TRANSFER SWITCH		
CLG	CEILING	MV	MILLIVOLT OR MERCURY VAPOR		
CONC	CONCRETE	MVA	MEGA VOLT AMPERE		
COND	CONDUCTOR	N	NEUTRAL		
CONN	CONNECTION	NC	NORMALLY CLOSED		
COS	CABLE OPERATED SWITCH	NECA	NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION		
CP	CONTROL PANEL	NEC	NATIONAL ELECTRICAL CODE		
CPT	CONTROL POWER TRANSFORMER	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION		
CR	CURRENT OR CONTROL RELAY	NF	NON-FUSED		
CS	CONTROL STATION	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION		
CT	CYCLE TIMER OR CURRENT TRANSFORMER	NIC	NOT IN CONTRACT		
CTC	CYCLE TIMER CLUTCH	NO	NORMALLY OPEN, NUMBER		
CTM	CYCLE TIMER MOTOR	NTS	NOT TO SCALE		
CU	COPPER	O	OPEN		
CWP	COLD WATER PIPE	OC	ON CENTER		
DC	DIRECT CURRENT	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED		
DIA	DIAMETER	OH	OVERHEAD		
DI	DOOR INTERLOCK	OL	OVERLOAD		
DM	DAMPER MOTOR OR DEMAND METER	OLS	OVERLOADS		
DN	DOWN	OSHA	OCCUPATIONAL SAFETY AND HEALTH ACT		
DO	DRAW OUT	P	POLE		
DPDT	DOUBLE POLE DOUBLE THROW	PB	PUSH BUTTON OR PULL BOX		
DPR	DOUBLE POLE SINGLE THROW	PC	PHOTO CONTROL		
DPS	DIFFERENTIAL PRESSURE REGULATOR	PLC	PROGRAMMABLE LOGIC CONTROLLER		
DS	DISCONNECT SWITCH	PF	POWER FACTOR		
DVLS	DISCHARGE VALVE LIMIT SWITCH	PH	PHASE, CHEMICAL TERM		
EC	EMPTY CONDUIT	PNL	PANEL		
EF	EXHAUST FAN	PR	PAIR		
ELEC	ELECTRICAL	PRGS	PVC COATED RIGID GALVANIZED STEEL		
ELR	ELEVATION	PRI	PRIMARY		
EM	EMERGENCY LOCKOUT RELAY	PRS	PROXIMITY SWITCH		
EMH	EMERGENCY	R	RED, RAISE, RELAY OR REVERSE		
EMT	ELECTRICAL MANHOLE	RECP	RECEPTACLE		
ENCL	ELECTRICAL METALLIC TUBING	RES	RESISTOR		
EO	ENCLOSURE	RGS	RIGID GALVANIZED STEEL		
EP	ELECTRICALLY OPERATED	RMS	ROOT-MEAN-SQUARE		
ER	EXPLOSION PROOF	RS	RAPID START		
ESB	ELECTRODE RELAY	RT	REPEATING TIMER		
ES	END SWITCH	RTD	RESISTANCE TYPE TEMP DETECTOR		
ETM	ENERGY SAVING BALLAST	RTU	REMOTE TERMINAL UNIT		
EUH	ELAPSED TIME METER	SCH	SCHEDULE		
EVA	ELECTRIC UNIT HEATER	SEC	SECONDARY		
EWC	ELECTRIC VALVE ACTUATOR	SH	SPACE HEATER OR SHIELD		
EWH	ELECTRIC WATER COOLER	SN	SOLID NEUTRAL		
EXH	ELECTRIC WATER HEATER	SP	SINGLE POLE		
EXIST	EXISTING	SPDT	SINGLE POLE DOUBLE THROW		
F	FORWARD	SPST	SINGLE POLE SINGLE THROW		
F°	DEGREES FAHRENHEIT	SS	SELECTOR SWITCH OR STAINLESS STEEL		
FAAP	FIRE ALARM ANNUNCIATION PANEL	ST	STATION TIE BREAKER		
FACP	FIRE ALARM CONTROL PANEL	SSS	SOLID STATE STARTER		
FIT	FLOW INDICATING TRANSMITTER	SUPV	SUPERVISORY CONTROL		
FLA	FULL LOAD AMPERES	SV	SOLENOID VALVE		
FM	FACTORY MANUAL	SW	SWITCH		
FS	FACTORY MANUAL FLOW SWITCH	SWBD	SWITCHBOARD		
FT	FEET	SWGR	SWITCHGEAR		
GALV	GALVANIZED				
GB	GENERATOR BREAKER				
GD	GROUND DETECTOR				
GEN	GENERATOR				
GFI	GROUND FAULT INTERRUPTER				
GND	GROUND				
GFR	GROUND FAULT RELAY				
H	HIGH OR HUMIDISTAT				
HC	HOT CIRCUIT				
HMT	HANDHOLE				
HNT	HIGH MOTOR TEMPERATURE				
HOA	HAND-OFF-AUTO				
HOR	HAND-OFF-REMOTE				
HP	HORSE POWER				
HPS	HIGH PRESSURE SODIUM				
HR	HOUR				
HWCO	HIGH WATER CUTOFF				
HZ	HERTZ (CYCLE)				

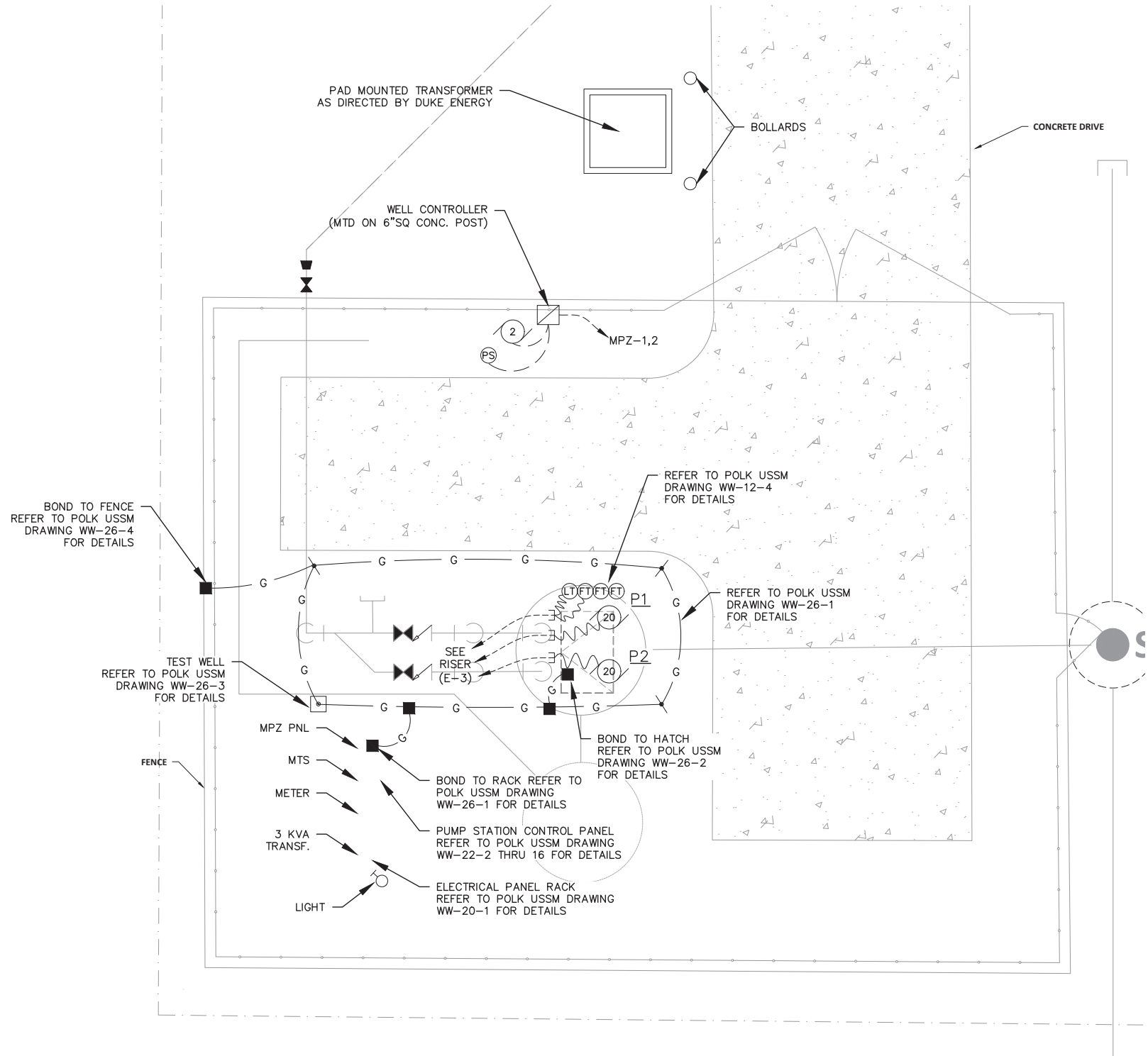


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<p>WRIGHT-PIERCE</p> <p>800.422.1095 www.wright-pierce.com</p> <p>122 E MAIN STREET, LAKELAND, FL 33801</p>							
<p>POLK COUNTY, FLORIDA</p> <p>DESON ROAD LIFT STATION</p> <p>AND FORCE MAIN IMPROVEMENTS</p>							
<p>SYMBOLS AND ABBREVIATIONS</p>							
<p>DRAWING</p> <p>E-1</p>							



PLAN
SCALE: 3/8"=1



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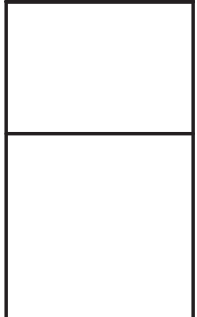
Willard C Hoanshelt

Digitally signed by Willard C Hoanshelt
DN: cn=Willard C Hoanshelt,
o=POLK COUNTY, ou=POLK COUNTY, email=willard.hoanshelt@polkcountyfl.gov, c=US

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NO	REVISIONS	APPD	DATE

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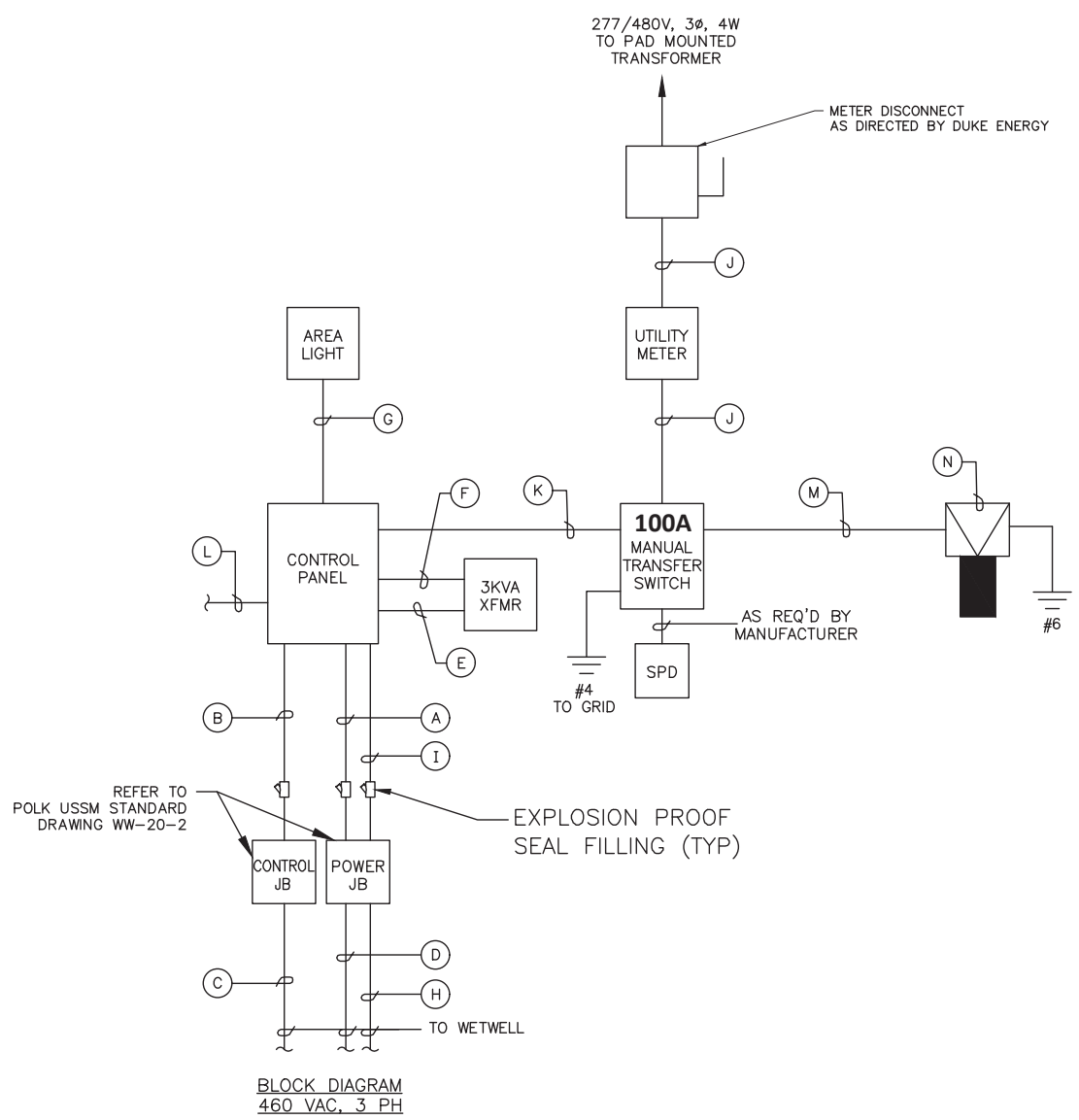


POLK COUNTY, FLORIDA
DEESON ROAD LIFT STATION
AND FORCE MAIN IMPROVEMENTS

DRAWING
E-2

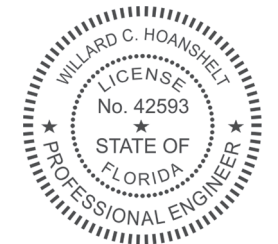
SITE PLAN

CONDUIT/CABLE SCHEDULE				
CABLE NO.	CONDUIT TYPE/SIZE	CABLE TYPE, SIZE	FROM	TO
A	1" RIGID ALUMINUM	2 SHIELDED TWISTED PAIR, #16 AWG USED FOR MOTOR SEALS AND 4-#16 AWG, FOR MOTOR THERMALS AND 2-#16 AWG SPARES	POWER JB	CONTROL PANEL
B	2" RIGID ALUMINUM	6-#14 FOR FLOATS, SINGLE SHIELDED TWISTED PAIR (#16 AWG) FOR LEVEL TRANSMITTER AND 2-#14 SPARES	CONTROL JB	CONTROL PANEL
C	2" SCH 80 PVC	NEW CONTROL CONDUCTORS FOR FLOATS AND LEVEL TRANSMITTERS	LIFT STATION	CONTROL JB
D	2" SCH 80 PVC	120V CONTROL CONDUCTORS FOR PUMP MOTOR SEALS AND THERMAL	MOTOR SEAL AND THERMAL	POWER JB
E	1" RIGID ALUMINUM	2 #12 (PH), 1 #12 AWG (GND) THW	CONTROL PANEL	3 KVA TRANSFORMER
F	1" RIGID ALUMINUM	1-#10 (PH), 1-#10 (NEUT), 1-#10 AWG (GND) THW	3 KVA TRANSFORMER	CONTROL PANEL
G	2" RIGID ALUMINUM	1-#12 (PH), 1-#12 (NEUT), 1-#12 AWG (GND) THW	CONTROL PANEL	AREA LIGHT
H	2" SCH 80 PVC	PUMP MOTOR FEEDER CONDUCTORS FOR 460 VAC, 3 PH (CABLE FURNISHED BY PUMP MFR)	PUMP MOTOR	POWER JB
I	2" RIGID ALUMINUM	FOR 460 VAC APPLICATION 3-# 8 (PH), 1-#10 (GND) AWG FOR 20HP PUMP MOTORS	POWER JB	CONTROL PANEL
J	2" RIGID ALUMINUM	FOR 460 VAC APPLICATION - POWER CONDUCTORS, 3-#2 (PH), 1-#2 (N), FOR PUMP MOTOR RATINGS 20HP	UTILITY METER	MANUAL TRANSFER SWITCH
K	2" RIGID ALUMINUM	FOR 460 VAC APPLICATION - POWER CONDUCTORS, 3-#2 (PH), 1-#2 (N), & 1-#4 (GND) FOR PUMP MOTOR RATINGS 20HP	MANUAL TRANSFER SWITCH	CONTROL PANEL
L	1" SCH 80 PVC	EMPTY CONDUIT STUBBED UP AND CAPPED FOR FUTURE PRESSURE TRANSMITTER	CONTROL PANEL	WASH DOWN ASSEMBLY
M	1" SCH 80 PVC	1-12# (PH), 1#12 AWG (GND) THW	MANUAL TRANSFER SWITCH	MINI POWER ZONE
N		MINI POWER ZONE, 3KVA, 480V-120/240V, 1Ø, 3W, 316 SST WITH: (1)-2P, 30A (WATER SUPPLY WELL)		



BLOCK DIAGRAM
460 VAC, 3 PH

- NOTES:
- FOR MOTORS LARGER THAN 15HP SIZE CONDUCTORS AND CONDUIT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) NFPA-70.
 - INSTALL ADDITIONAL CONDUIT AND CONDUCTORS FOR ADDITIONAL PUMPS AS REQUIRED.
 - ALUMINUM IN CONTACT WITH CONCRETE OR EARTH SHALL BE COATED.



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<p>WRIGHT-PIERCE 800.422.1095 www.wright-pierce.com 122 E MAIN STREET, LAKELAND, FL 33801</p>		<p>POLK COUNTY, FLORIDA DEESON ROAD LIFT STATION AND FORCE MAIN IMPROVEMENTS</p>		
DRAWING		POWER RISER		
E-3				