PLANS

OF THE

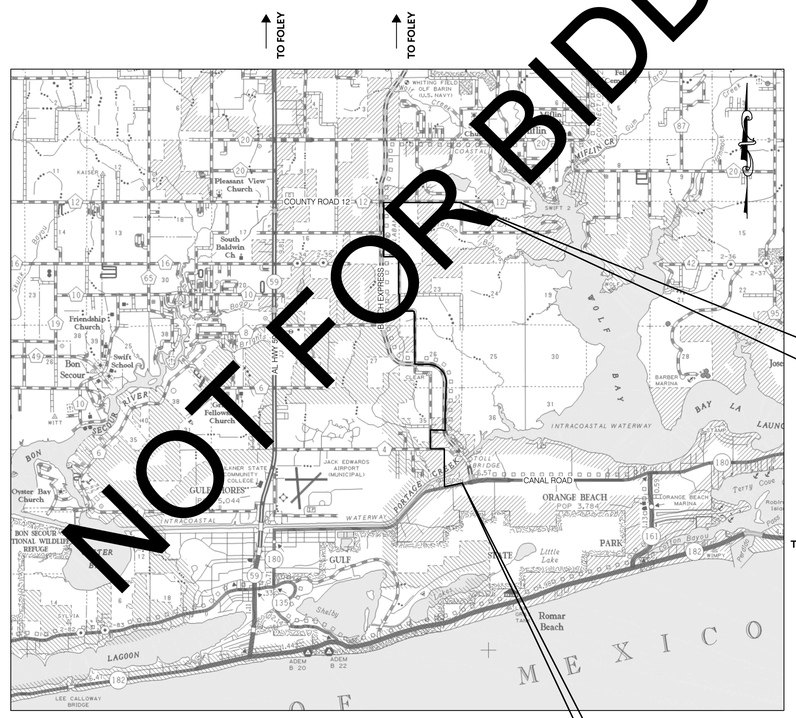
NEW SEWER FORCE MAIN
CANAL ROAD TO COUNTY ROAD 12

CITY OF ORANGE BEACH, ALABAMA

GOODWYN | MILLS | CAWOOD PROJECT NO. CMOB190340
SEPTEMBER 2021

NOT FOR BIDDING

LOCATION MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

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GMC

BUILDING COMMUNITIES

ALABAMA LICENSED NO. 32817 PROFESSIONAL ENGINEER DERRICK ROBERT SIMMONS 9/17/21

ALABAMA LICENSED NO. 35222 PROFESSIONAL ENGINEER MATTHEW STEPHEN WALKER 9.17.2021

GMC
2039 Main Street
Daphne, AL 36526
T 251.626.2626
GMCNETWORK.COM

ISSUE	DATE
Bid Set	09.17.2021

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NEW SEWER FORCE MAIN
CANAL RD. TO CR 12
ORANGE BEACH, ALABAMA

GMC No. CMOB190340

TITLE SHEET, VICINITY MAP & DRAWING INDEX

C-1.01
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UTILITY CONTACTS

GOODWYN, MILLS & CAWOOD
ROBBIE STROM, PE, PROJECT MANAGER
MATT WALKER, PE, PROJECT ENGINEER
PHONE: (251) 460-4006

CITY OF ORANGE BEACH
GARY MCMILLAN, ENGINEER
PHONE: (251)747-0869

BALDWIN COUNTY
JOSH CHIASSON, INSPECTOR
PHONE: (251) 423-0339

ORANGE BEACH WATER AUTHORITY
RANDY JOHNSTON, SUPERINTENDENT
PHONE: (251) 981-4233

BALDWIN COUNTY EMC
KEN PIMPERL
PHONE: (251) 989-6247 OR (800) 837-3374

CENTURY LINK
JEFF CREW
PHONE: (251) 968-8800

RIVIERA UTILITIES
JASON SHELTON
PHONE: (251) 943-5001

MEDIACOM - GULF SHORES
JOE BRISTER
PHONE: (205) 356-1188

CLARKE-MOBILE GAS
JEFF WHITE
PHONE: (251) 974-5432

POWERSOUTH
ABB RILEY
PHONE: (334) 427-3000

NOTE:
THIS LIST IS NOT ALL INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITIES FOR LINE LOCATIONS & INFORMATION.

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
℄	CENTERLINE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
CY	CUBIC YARD
DIA	DIAMETER
DI	DUCTILE IRON
EA	EACH
EL	ELEVATIONS
EX.	EXISTING
GV	GATE VALVE
LF	LINEAR FEET
MAX	MAXIMUM
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
N.T.S.	NOT TO SCALE
PP	POWER POLE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RED	REDUCER
REQ'D	REQUIRED
RJDI	RESTRAINED JOINT DUCTILE IRON
SHT	SHEET
SPECS	SPECIFICATIONS
STD	STANDARD
SY	SQUARE YARD
TYP	TYPICAL
W/	WITH
W/O	WITHOUT
WM	WATER METER
WV	WATER VALVE

EXISTING UTILITY LEGEND

EXISTING BENDS	
EXISTING CONCRETE MONUMENT	
EXISTING IRON PIN	
EXISTING CULVERT	
EXISTING ELECTRICAL: UNDERGROUND	UGE UGE
EXISTING ELECTRICAL: OVERHEAD	OHE OHE
EXISTING FENCE: BARB WIRE	X X X
EXISTING FIRE HYDRANT ASSEMBLY	
EXISTING FIBER OPTIC MARKER	F
EXISTING GUY WIRE	
EXISTING POWER POLE	
EXISTING R.O.W.	
EXISTING SEWER FORCE MAIN	FM FM
EXISTING SEWER GRAVITY MAIN	SS SS
EXISTING SEWER MANHOLE	S
EXISTING SIGN	
EXISTING TELEPHONE PEDESTAL	T
EXISTING COMMUNICATION BOX	C
EXISTING WATER MAIN	W W
EXISTING WATER VALVE	
EXISTING WATER MARKER	W
EXISTING GAS MAIN	GAS GAS
EXISTING EASEMENT	
EXISTING LIGHT POLE	
EXISTING GUARDRAIL	

REQUIRED UTILITY LEGEND

REQUIRED BENDS/FITTINGS	
REQUIRED GATE VALVE	
REQUIRED REDUCER	
REQUIRED SILT FENCE	
REQUIRED EROSION EEL / WATTLE	
REQUIRED INLET PROTECTION	
REQUIRED SEWER FORCE MAIN	FM FM

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ALABAMA LICENSED No. 35222 PROFESSIONAL ENGINEER MATTHEW STEPHEN MILLER
9.17.2021

PLAN LEGENDS & ABBREVIATIONS

C-2.01
sheet 2 of 29

DRAWING FILE: T:\Mobile\CMOB Proj\Orange Beach, City of\CMOB190340 - New Sanitary Force Main with ICW bore pe\0 DWG\C2.01 - NOTES & LEGEND.dwg

PROJECT NOTES

1. ALL FLUSHING, PRESSURE TESTING AND DISINFECTION SHALL BE IN ACCORDANCE WITH ALDOT, OSHA, AND CITY OF ORANGE BEACH SPECIFICATIONS AND LATEST ADEM REGULATIONS. A CHART RECORDING WILL BE REQUIRED FOR PRESSURE TESTING.
2. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING WATER FOR FLUSHING AND PRESSURE TESTING. WATER CAN BE PURCHASED FROM THE ORANGE BEACH WATER AUTHORITY AT THE CURRENT RATE. THE COST FOR THIS SHALL BE A SUBSIDIARY OBLIGATION OF THE FORCE MAIN ITEMS.
3. THE ENGINEER AND OWNER REQUIRE A 7 BUSINESS DAY NOTIFICATION PRIOR TO BEGINNING WORK.
4. ALL SEWER LINES SHALL BE INSTALLED TO A DEPTH OF COVER OF NOT LESS THAN 36", EXCEPT WHERE DEEPER COVER IS REQUIRED BY CONFLICT WITH EXISTING UTILITIES. 48" MINIMUM COVER IS REQUIRED UNDER ROADWAY CROSSINGS.
5. CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR EXISTING UTILITIES.
6. ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR ONE YEAR AFTER ACCEPTANCE BY THE OWNER.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE AND REPLACE FENCING TO ORIGINAL CONDITION OR BETTER WHERE REQUIRED. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE TOTAL PRICE BID.
8. SITE SECURITY WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. PROPERTY INFORMATION SHOWN IS FOR GENERAL INFORMATION ONLY AND MAY NOT BE THE MOST RECENT OWNERSHIP ON RECORD.
10. THIS PROJECT IS BASED ON A UNIT PRICE CONTRACT. ALL WORK DESCRIBED, SHOWN, REFERENCED, OR OTHERWISE INDICATED IN OR ON THE DRAWINGS, PROPOSAL, ADVERTISEMENT AND SPECIFICATIONS ARE TO BE COMPLETED IN-PLACE AND SERVICEABLE ACCORDING TO THE PLANS INSTRUCTIONS, SPECIFICATIONS, LINES AND GRADES INDICATED ON THE PLANS AND ALL APPLICABLE STATE, FEDERAL, AND MUNICIPAL CODES AN STANDARDS. INDIVIDUAL ITEMS OF WORK THAT ARE NECESSARY TO COMPLETE THE PROJECT TO THE LINES AND GRADES, WHETHER SHOWN O DESCRIBED IN THE PLANS AND SPECIFICATIONS, ARE TO BE CONSIDERED INCIDENTAL AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.
11. ALL STORM DRAINAGE INLETS, JUNCTION BOXES & PIPES ARE TO BE PROTECTED FROM SEDIMENT AT ALL TIMES.
12. A 4" LAYER OF TOPSOIL SHALL BE PLACED ON ALL DISTURBED AREAS TO BE VEGETATED.
13. THE CONTRACTOR SHALL PROTECT ALL EXISTING SIGNS, MAILBOXES, MARKER POSTS, ETC. DURING CONSTRUCTION. ANY OF THESE ITEMS THAT ARE DAMAGED OR MUST BE REMOVED TO ALLOW FOR INSTALLATION OF THE PROPOSED IMPROVEMENTS SHALL BE REPLACED TO A PRE-CONSTRUCTION OR BETTER CONDITION. ALL COSTS FOR THIS REMOVAL AND REPLACEMENT SHALL BE INCLUDED IN THE TOTAL PRICE BID.
14. THE BIDDER IS EXPECTED TO CAREFULLY EXAMINE THE PLANS, PROPOSAL AND SITE OF THE WORK. THEREFORE, IT WILL BE ASSUMED THAT THE BIDDER HAS SATISFIED HIMSELF AS TO THE CONDITIONS TO BE ENCOUNTERED IN REGARDS TO THE CHARACTER, QUALITY, AND QUANTITIES OF WORK TO BE PERFORMED AND MATERIALS TO BE FURNISHED, AND AS TO THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS, SPECIAL PROVISION AND CONTRACT. THE SUBMISSION OF A PROPOSAL BY A BIDDER WILL BE CONSIDERED PRIMA FACIE EVIDENCE THAT THE BIDDER HAS MADE SUCH A EXAMINATION.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO PUBLIC ROADS CAUSED BY HIS ACTIVITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MEET WITH THE GOVERNING AUTHORITY TO AGREE UPON AND RECORD THE CONDITIONS OF THE ROADS BEFORE CONSTRUCTION COMMENCES.
16. SAFETY PRECAUTIONS INSTITUTED ALONG ALDOT, BALDWIN COUNTY, CITY OF ORANGE BEACH, AND CITY OF FOLEY RIGHT-OF-WAYS SHALL CONFORM TO THE GOVERNING DEPARTMENT AT ALL TIMES.
17. THE CONTRACTOR IS REQUIRED TO DEVELOP AN ASBUILT SET OF DRAWINGS AS CONSTRUCTION PROGRESSES. THE COMPLETE ASBUILT PLANS SHALL CONTAIN ALL INSTALLED LINES, VALVES, METERS, AND CONNECTIONS WITH REFERENCE DISTANCES TO PERMANENT ABOVE-GROUND STRUCTURES.
18. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY OWNERS AND HAVE ALL EXISTING UTILITIES LOCATED BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES.
19. AIR RELEASE VALVE (ARV) ASSEMBLIES SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF THE ARV ASSEMBLIES WITH THE OWNER'S FIELD REPRESENTATIVE DURING CONSTRUCTION.
20. THE CONTRACTOR SHALL INSTALL THE MINIMUM LENGTHS OF RESTRAINTS SHOWN IN THE TABLE ON PLAN SHEET C-4.01 FOR EACH DIRECTION OF FITTINGS USING EXTERNAL BELL RESTRAINT HARNESSES. ALL JOINTS WITHIN THE CALCULATED LENGTH MUST BE RESTRAINED. IF THE LENGTH BETWEEN FITTINGS IS LESS THAN OR EQUAL TO THE MINIMUM RESTRAINT LENGTH, THEN ALL JOINTS BETWEEN THE FITTINGS MUST BE RESTRAINED. THE COST FOR THESE RESTRAINTS SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS BELL RESTRAINT HARNESS BID ITEMS.
21. ALL DUCTILE IRON WATER MAIN INSTALLED SHALL BE ENCLOSED IN POLYWRAP. ALL COST FOR POLYWRAP INSTALLATION SHALL BE A SUBSIDIARY OBLIGATION OF THE DUCTILE IRON PIPE PAY ITEM.

ALDOT NOTES

1. ALL METERS SHALL BE INSTALLED OFF OF ALDOT RIGHT-OF-WAY.
2. ALL MANHOLES, VALVE BOXES, AND HAND HOLES SHOULD BE FLUSH WITH EXISTING GROUND.
3. APPLICANT SHALL CONTACT THE DISTRICT ADMINISTRATOR 48 HOURS PRIOR TO BEGINNING WORK ON ALDOT RIGHT-OF-WAY. THE DISTRICT ADMINISTRATOR IS DAVID M. STYRON II, P.E. (251) 937-2086
4. THE ENGINEER OF RECORD SHALL PROMPTLY WRITE AN AS-BUILT CERTIFICATION LETTER TO THE DISTRICT ADMINISTRATOR REQUESTING AN INSPECTION UPON COMPLETION OF THE PERMITTED WORK. ANY PUNCH LISTS SHALL BE COMPLETED PRIOR TO PROVISIONAL ACCEPTANCE OF WORK.
5. BONDS SUBMITTED FOR PERMITS SHALL BE HELD FOR A (1) ONE-YEAR MAINTENANCE PERIOD WHICH BEGINS ON THE PROVISIONAL ACCEPTANCE DATE ISSUED BY THE DEPARTMENT. DURING THIS TIME ANY FAILURES, DEFICIENCIES, OR MAINTENANCE CARE SHALL BE THE RESPONSIBILITY OF THE APPLICANT. AT THE END OF THE MAINTENANCE PERIOD THE APPLICANT OR ENGINEER OF RECORD SHALL SUBMIT A BOND RELEASE REQUEST LETTER TO THE DISTRICT ADMINISTRATOR, BONDS ARE NOT RELEASED WITHOUT REQUEST.
6. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH PART 6 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2009 EDITION. (IF PROJECT NECESSITATES LANE OR FOUR LANE CLOSURE MUST BE MADE PART OF THE PERMIT.)
7. ONSITE REPRESENTATIVE CONTACT INFORMATION: JASON PIERCE (334) 368-0061
8. ONSITE REPRESENTATIVE WILL HAVE ON HAND, AT ALL TIMES: (1) APPROVED PERMIT AND PLANS STAMPED BY THE REGION ENGINEER, (2) TRAFFIC CONTROL PLANS, (3) EROSION CONTROL PLANS.
9. ALL DISTURBED AREAS ON ROW SHALL RECEIVE 4" OF TOPSOIL AND BE SODDED OR SEEDED AS DIRECTED BY THE DEPARTMENT.
10. ALL WORK ON THE ROW WILL BE IN CONFORMANCE WITH THE LATEST EDITION OF ALDOT STANDARD SPECIFICATIONS.
11. A BEST MANAGEMENT PLAN SHALL AT MINIMUM RETURN ALL EXPOSED AREAS TO ORIGINAL OR BETTER CONDITION AND REQUIRED STAND OF GRASS AND PRIOR TO ACCEPTANCE. SILT FENCE AND ANY OTHER EROSION CONTROL ITEMS NEEDED SHALL BE USED TO PREVENT EROSION. (NO HAYBALES ARE ALLOWED IN ROW)
12. ALL TREES OVER 4" DBH SHALL NOT BE CUT/REMOVED WITHOUT WRITTEN PERMISSION FROM ALDOT.
13. ABSOLUTELY NO BORE PITS SHALL BE ALLOWED TO BE UNFILLED AND/OR UNCOVERED OVERNIGHT UNLESS PROTECTED. (BORE PITS HAVE A MAXIMUM OF 72 HOURS TO BE OPEN BEFORE FILLED.)
14. UPON COMPLETION & ANY TIME THEREAFTER, ALDOT RETAINS THE RIGHT TO REQUEST AN AS-BUILT PLAN OF ANY PERMITTED WORK IN SAID DEPARTMENT'S RIGHTS-OF-WAY (ROW).
15. WARNING: DO NOT DISTURB SURVEY MARKERS LOCATED ON ALDOT RIGHT-OF-WAY. ANY PROPERTY MARKERS DISTURBED DURING CONSTRUCTION SHALL BE RE-ESTABLISHED BY AN ALABAMA LICENSED PROFESSIONAL LAND SURVEYOR AT THE EXPENSE OF THE PERMIT APPLICANT.
16. THE TOTAL AREA TO BE DISTURBED DURING CONSTRUCTION OF THIS PERMIT: 45.4 ACRE(S)
17. WATER LINES SHALL CONFORM TO THE CURRENTLY APPLICABLE STANDARDS OF THE *AMERICAN WATER WORKS ASSOCIATION.*
18. PRESSURE PIPE LINES SHALL CONFORM TO THE CURRENTLY APPLICABLE SECTIONS OF *AMERICAN NATIONAL STANDARDS INSTITUTE* (ANSI).
19. AS REQUIRED BY ALABAMA ACT 94-487: CALL TWO WORKING DAYS BEFORE EXCAVATION 1-800-292-8525, ALABAMA LINE LOCATION CENTER, INC.
20. ANY ORNAMENTAL VEGETATIVE LANDSCAPING (SHRUBS, FLOWERS, ORNAMENTAL GRASS, ETC.) DISTURBED DURING CONSTRUCTION SHALL BE REPLACED, TRANSPLANTED OR SODDED BY THE APPLICANT AS DIRECTED BY THE ALABAMA DEPARTMENT OF TRANSPORTATION DISTRICT ADMINISTRATOR.
21. ALL FILL MATERIAL OR ONSITE DEBRIS DEPOSITED IN THE RIGHT-OF-WAY SHALL BE REMOVED PRIOR TO ISSUANCE OF FINAL ACCEPTANCE TO BEGIN THE ONE-YEAR MAINTENANCE PERIOD OF THE PERMIT CONTRACT.
22. THE APPLICANT SHALL SEE THAT ALL SOLID WASTE (I.E., WOOD, STUMPS, ETC.) IS DISPOSED OF IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM).
23. PROPERTY OBSTRUCTIONS WHICH ARE TO REMAIN IN PLACE, SUCH AS HISTORICAL STRUCTURES, TREES, DRAINS, WATER OR GAS PIPES, POLES, WALL, ETC., ARE NOT TO BE DISTURBED UNLESS NOTED AND APPROVED BY SHPO, ALDOT, ADEM, EPA, ETC.
24. THE APPLICANT IS RESPONSIBLE TO SEE THAT STREETS ARE CLEANED IMMEDIATELY AFTER CONCRETE OR OTHER DELIVERY TRUCKS LEAVE THE SITE. MUD AND DEBRIS ARE TO BE KEPT OFF STREETS, AND OUT OF INLETS, DITCHES, ETC.
25. FUEL TANKS SHALL NOT BE STORED ON THE RIGHT-OF-WAY OVERNIGHT. VEHICLES TRANSPORTING FUEL, CHEMICALS, FERTILIZERS, ETC. ONTO RIGHT-OF-WAY SHALL NOT BE LEFT UNATTENDED.
26. THE APPLICANT OR ENGINEER OF RECORD SHALL PROMPTLY NOTIFY ALDOT OF ANY PERCEIVED CONFLICTS, AMBIGUOUS ITEMS OR DEFICIENCIES IN THE PLANS, SPECIFICATIONS, GENERAL NOTES OR RELATED CONTRACT DOCUMENTS.

HDD NOTES

1. THE CONTRACTOR SHALL FURNISH ALL SERVICES, EQUIPMENT, MATERIALS, TOOLS AND LABOR REQUIRED FOR COMPLETE AND PROPER INSTALLATION AND TESTING OF PVC PIPE USING HORIZONTAL DIRECTIONAL DRILLING (HDD) METHODS AT THE LOCATIONS SHOWN ON THE DRAWINGS.
2. ALL HDD ACTIVITIES SHALL CONFORM TO THE REQUIREMENTS OF ASTM F1962 AND CHAPTER 12 OF THE PPI HANDBOOK.
3. ALL DEPTHS FOR DRILLING SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL MAINTAIN THE REQUIRED MINIMUM VERTICAL CLEARANCES AS SHOWN ON THE PLANS.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL DUCTILE IRON FITTINGS AS REQUIRED TO CONNECT THE DRILLED PIPE TO THE REST OF THE PIPELINE ALIGNMENT AT THE PROPER DEPTH AT EACH END OF THE BORE.
5. THE CONTRACTOR SHALL SUBMIT A WORK PLAN TO THE ENGINEER WITHIN 2 WEEKS OF THE NOTICE TO PROCEED CONTAINING THE FOLLOWING:
   a. A COMPLETE LIST OF CONSTRUCTION MATERIALS, EQUIPMENT AND SUPPLIES INCLUDING PIPE FITTINGS, DRILLING MUD, AND DRILLING FLUID ADDITIVES.
   b. SPECIFICATIONS ON TYPE OF DRILLING EQUIPMENT INCLUDING DRILLING RIG, MUD SYSTEM, MUD MOTORS, DOWN-HOLE TOOLS, GUIDANCE SYSTEM, AND SAFETY SYSTEMS.
   c. WORK PLAN CONSISTING OF A DETAILED PROCEDURE AND SCHEDULE TO BE USED, LIST OF PERSONNEL AND THEIR QUALIFICATIONS, LIST OF SUBCONTRACTORS, A SAFETY PLAN (INCLUDING MSDS OF ANY POTENTIALLY HAZARD SUBSTANCES), THE METHOD OF DRILLING FLUID DISPOSAL AND AN ENVIRONMENTAL PROTECTION PLAN.
   d. BORE PLAN CONSISTING OF A SCALED DRAWING OF THE PILOT BORE PLAN FOR REVIEW. SHOW FINISHED GRADE, DEFLECTION RADII OF THE PILOT BORE, ALL EXISTING UTILITIES WITH MINIMUM VERTICAL AND HORIZONTAL CLEARANCES. ADDRESS THE LOCATION OF THE DRILL RIG SETUPS, THE LENGTHS OF EACH BORE BASED ON SOIL CONDITIONS, EQUIPMENT USED, TOPOGRAPHY, ETC. THE PROPOSED VERTICAL AND HORIZONTAL CLEARANCES BETWEEN THE BORED PIPE AND ANY EXISTING/ PROPOSED CONFLICTING PIPES, CONDUITS OR OBSTRUCTIONS SHALL BE AT LEAST TWO TIMES THE GUIDANCE SYSTEM ACCURACY TOLERANCE.
   e. SUBMIT SUPPORTING CALCULATIONS, CERTIFICATIONS OR MATERIALS DEMONSTRATING THE STRENGTH OF THE PRODUCT PIPES ARE ABLE TO WITHSTAND THE DESIGN AND CONSTRUCTION STRESSES AND PRESSURES.
6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING FIVE DAYS PRIOR TO THE COMMENCEMENT OF DRILLING ACTIVITIES AND 24 HOURS PRIOR TO THE START OF DRILLING INCLUDING PILOT HOLE DRILLING, PRE-REAMING OR HOLE ENLARGEMENT, BACK PULLING, AND TESTING ACTIVITIES.
7. THE CONTRACTOR SHALL SECURE INFORMATION CONCERNING THE LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IN PROXIMITY TO THE PIPELINE ALIGNMENT, PRIOR TO THE START OF DRILLING AND CONFIRM THE ALIGNMENT OF ALL CRITICAL UTILITIES, USING VACUUM EXCAVATION OR OTHER SUITABLE EXCAVATION METHOD, FOR FURTHER DETAILED CONFIRMATIONS AS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.
8. TEST DIRECTIONAL DRILLING PIPE AFTER PULLBACK PER AWWA C605.
9. IF, AS A RESULT OF THE HYDROSTATIC TEST, THE ENGINEER DETERMINES THAT THE PIPE IS NOT ACCEPTABLE, THE DRILLER WILL ABANDON THE LINE IN PLACE BY INSTALLING A CAP ON BOTH ENDS OF THE PVC CARRIER PIPE AND FILLING THE FLOWABLE GROUT AND REPLACE THE LINE AT NO ADDITIONAL COST TO THE OWNER.
10. THE CONTRACTOR SHALL CONTAIN AND CONVEY ALL USED DRILLING FLUID AND DRILLING FLUID SPILLED DURING OPERATIONS TO THE DRILLING FLUID RECYCLING SYSTEM OR REMOVE BY VACUUM TRUCKS OR OTHER METHODS ACCEPTABLE TO THE OWNER.
11. TAKE ALL NECESSARY MEASURES TO ELIMINATE THE DISCHARGE OF WATER, DRILLING MUD, AND CUTTINGS TO NEARBY WATERWAYS DURING THE MUD WORK.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF ANY DAMAGE CAUSED BY HEAVING, SETTLEMENT, SEPARATION OF PAVEMENT, OR ESCAPE OF DRILLING FLUID FROM THE HDD OPERATION.
13. AT THE COMPLETION OF THE HDD, THE CONTRACTOR SHALL SUBMIT RECORD DRAWINGS TO THE ENGINEER NOTING ALL DEVIATIONS FROM THE PLANS THAT RESULT IN A CHANGE OF LOCATION, MATERIAL, TYPE OR SIZE OF WORK.
14. UPON ACCEPTANCE OF THE PIPE INSTALLATION, THE CONTRACTOR SHALL REMOVE ALL OF HIS/HER EQUIPMENT, MATERIALS AND SUPPLIES FOR THE SITE, FILL IN ALL HOLES OR EXCAVATIONS WITH EXCAVATED MATERIAL, FREE FROM DEBRIS AND ORGANIC MATTER, GRADE THE SITE TO PRE-CONSTRUCTION ELEVATIONS, AND RESTORE SURFACES TO EQUAL TO OR BETTER THAN THE CONDITION PRIOR TO START OF WORK.

FRAC-OUT CONTINGENCY PLAN NOTES

1. DIRECTIONAL DRILLING ACTIVITIES UTILIZE A BENTONITE CLAY AND WATER SLURRY FOR LUBRICATION OF THE DRILL PATH, AND THE SIGNIFICANT HYDRAULIC PRESSURES THAT ARE REQUIRED PRODUCE THE POTENTIAL FOR THE SLURRY TO "FRAC-OUT" TO THE GROUND SURFACE OR AN ENVIRONMENTALLY SENSITIVE WATERWAY. THEREFORE, IN ANTICIPATION OF DIRECTIONAL DRILLING ACTIVITIES FOR THIS PROJECT, THE FOLLOWING PLAN SHALL BE IMPLEMENTED BY THE CONTRACTOR.

   ALL PERSONNEL ON SITE DURING DIRECTIONAL DRILLING OPERATIONS SHALL BE TRAINED TO DETECT AND RESPOND TO A FRAC-OUT CONDITION, AND ALL NECESSARY DRILLING EQUIPMENT SHALL BE INSPECTED DAILY FOR LEAKS OR DEFECTS THAT COULD RESULT IN SPILLAGE OF DRILLING MUD, THIS IS THE SITE FOREMAN'S RESPONSIBILITY. PRIOR TO THE COMMENCEMENT OF ANY DRILLING OPERATIONS, CONTAINMENT AND CLEANUP PROVISIONS (SAND BAGS, STRAW BALES, SPILL BOOMS, PORTABLE PUMPS, VAC TRUCKS, ETC.) SHALL BE ON SITE OR NEARBY, READY FOR DEPLOYMENT WITHIN 15 MINUTES. BASED ON PAST DRILLING EXPERIENCE IN SIMILAR CONDITIONS, SELECT DRILLING PRESSURES AND DEPTHS THAT MINIMIZE THE POTENTIAL FOR FRAC-OUT.
3. DURING DRILLING OPERATIONS, PERSONNEL SHALL BE ACTIVELY LOOKING FOR ANY SURFACING OF DRILLING MUD, AND THE DRILL RIG OPERATOR SHALL CONTINUOUSLY MONITOR THE DRILLING MUD PRESSURE, LOOKING FOR SUDDEN DROPS THAT COULD INDICATE A FRAC-OUT. ALL DRILLING WORK SHALL CEASE IMMEDIATELY UPON DISCOVERY OF A FRAC-OUT CONDITION, AND SYSTEM PRESSURE SHALL BE RELIEVED TO PREVENT CONTINUED SPILLAGE.
4. UPON DISCOVERY OF A FRAC-OUT, ISOLATE THE AFFECTED AREA WITH APPROPRIATE MEASURES, DEPENDING ON WHETHER THE FRAC-OUT OCCURRED ON LAND OR IN A WATERWAY. INSTALL SILT FENCE, STRAW BALES, FIBER LOGS, OR EQUIVALENT MEASURES AROUND A SPILL ON LAND TO COMPLETELY CONTAIN THE SPILL AND PREVENT ITS TRANSPORT TO WATERWAYS. FOR A FRAC-OUT IN WATER, ISOLATE THE AFFECTED AREA AS RAPIDLY AS POSSIBLE WITH SAND BAGS, SPILL BOOM, CURTAINS, OR THEIR EQUIVALENTS. UTILIZE ANIONIC POLYMERS WITHIN A CONTAINED SPILL IN WATERWAYS TO ASSIST IN FLOCCULATION AND REMOVAL. SITE FOREMAN IS TO IMMEDIATELY NOTIFY PROJECT INSPECTOR AND/OR ENGINEER WHO WILL CONTACT SYSTEM OPERATIONS TO ISSUE AN ENVIRONMENTAL ALERT.
5. FOR MINOR SPILLS THAT HAVE BEEN SUCCESSFULLY CONTAINED, THE SITE FOREMAN SHALL BE RESPONSIBLE TO DETERMINE WHETHER THE LEAK CAN BE STOPPED SUCH THAT DRILLING OPERATIONS CAN BE RESTARTED OR WHETHER THE BORE PATH OR INSTALLATION METHOD MUST BE ABANDONED FOR AN ALTERNATE.
6. COMPLETELY REMOVE THE SPILLED MATERIAL, EITHER MANUALLY OR WITH A VAC-TRUCK. AFTER DRILLING OPERATIONS HAVE BEEN COMPLETED OR ABANDONED, REMOVE ANY INSTALLED CONTAINMENT MEASURES, AND RETURN THE SITE TO ITS PRECONSTRUCTION CONTOURS AND CONDITIONS. DISPOSE OF ANY SPILLED MATERIALS AT AN APPROVED FACILITY IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

BEST MANAGEMENT PRACTICES NOTES

1. THE OWNER HAS OBTAINED THE ADEM NPDES CONSTRUCTION GENERAL PERMIT AND A CBMP PLAN HAS BEEN COMPLETED FOR THIS PROJECT. THE PERMIT WILL BE TRANSFERRED TO THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL AND BEST MANAGEMENT PRACTICES REQUIRED BY ADEM. CITY OF ORANGE BEACH, BALDWIN COUNTY, AND THE CITY OF FOLEY. COSTS FOR THE PERMIT TRANSFER, PERIODIC INSPECTIONS, AND PERMIT TERMINATION SHALL BE INCLUDED IN THE TOTAL PRICE BID.
2. THE CONTRACTOR SHALL BE REQUIRED TO, AT A MINIMUM, RETURN ALL EXPOSED AREAS TO ORIGINAL OR BETTER CONDITION WITH A GOOD STAND OF GRASS OR SOD. SILT FENCE, HAY BALES, WATTLES AND ANY OTHER EROSION CONTROL ITEMS NEEDED SHALL BE USED TO PREVENT EROSION.
3. ALL EROSION CONTROL MEASURES SHALL BE CHECKED, AND REPAIRED AS NECESSARY, MONTHLY IN DRY PERIODS, AND WITHIN 24 HOURS AFTER ANY RAINFALL AT THE SITE OF 0.75 INCHES OR GREATER. DURING PROLONGED RAINFALLS, DAILY CHECKING AND, IF NECESSARY, REPAIRING SHALL BE DONE. THE CONTRACTOR SHALL MAINTAIN WRITTEN RECORDS OF SUCH CHECKS AND REPAIRS ON SITE AT ALL TIMES, AND RECORDS SHALL BE SUBJECT TO INSPECTION AT ANY REASONABLE TIME.
4. THE CONTRACTOR SHALL FREQUENTLY REMOVE ANY AND ALL SILT/SEDIMENTATION FROM THE SILT FENCE, DITCHES, CHECK DAMS AND RETENTION AREAS. AT THE END OF CONSTRUCTION THESE AREAS SHALL BE COMPLETELY FREE OF SILT/SEDIMENTATION AND SHALL BE STABILIZED AS STATED IN THE PLANS AND SPECIFICATIONS.
5. ALL BMPS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORM WATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS, LOCAL STANDARDS FOR EROSION CONTROL AND THE PLANS AND SPECIFICATIONS. IF CONFLICTS ARISE BETWEEN THESE REQUIREMENTS, THE MORE STRINGENT SHALL APPLY.
6. CONTRACTOR IS RESPONSIBLE FOR WHATEVER MEASURES ARE NECESSARY TO PRODUCE AND MAINTAIN AN ACCEPTABLE STAND OF VEGETATION. SAID MEASURES TO INCLUDE, BUT NOT LIMITED TO, WATERING, RE-PLANTING, RE-GRADING ERODED AREAS, ETC.
7. ALL HAZARDOUS SUBSTANCES USED FOR THIS PROJECT, INCLUDING BUT NOT LIMITED TO, PAINT, OIL, GREASE AND OTHER PETROLEUM PRODUCTS SHALL BE STORED IN ACCORDANCE WITH SPCC REGULATIONS. THESE SUBSTANCES SHALL BE STORED AWAY FROM STORM DRAINS, DITCHES, AND GUTTERS IN WATERTIGHT CONTAINERS. DISPOSAL OF THESE SUBSTANCES SHALL BE IN ACCORDANCE WITH ADEM REGULATIONS. CONTRACTOR SHALL PROVIDE ADEQUATE TRASH CONTAINERS ON SITE FOR THE DISPOSAL OF CONSTRUCTION MATERIALS WASTE. CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY TRASH OR OTHER POLLUTANTS FROM ENTERING STORM DRAINS.
8. CONTRACTOR IS RESPONSIBLE FOR KEEPING MUD AND DEBRIS OFF ALL STREETS AND RIGHTS-OF-WAY. CLEANUP IS REQUIRED DAILY.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TEMPORARY MEASURES ONCE ACCEPTABLE PERMANENT STABILIZATION IS ACHIEVED. THE OWNER AND ENGINEER SHALL DETERMINE IF THE PERMANENT STABILIZATION IS ACCEPTABLE.
10. COMBINATIONS OF SILT FENCING, WATTLES AND HAY BALES SHALL BE USED AS PROJECT CONDITIONS WARRANT TO PREVENT SEDIMENT RUNOFF FROM REACHING CREEKS, STREAMS, AND OTHER SURFACE WATER ADJACENT TO AND WITHIN THE PROJECT AREA. ALL HAY SHALL BE FREE OF COGONGRASS.
11. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY TEMPORARY DIVERSION OF RUNOFF WATER, AS REQUIRED TO FACILITATE CONSTRUCTION OR AS DIRECTED THE ENGINEER. THIS TEMPORARY DRAINAGE OF RUNOFF IS CONSIDERED INCIDENTAL TO THE BID.

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GMC No. CMOB190340

ALABAMA LICENSED No. 35222 PROFESSIONAL ENGINEER MATTHEW STEPHEN MALER
9.17.2021

PROJECT NOTES

C-2.02
sheet 3 of 29

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OVERALL PROJECT MAP

C-3.01

sheet 4 of 29

ALABAMA LICENSED PROFESSIONAL ENGINEER STEPHEN A. WALKER

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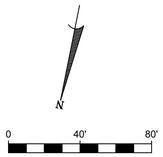
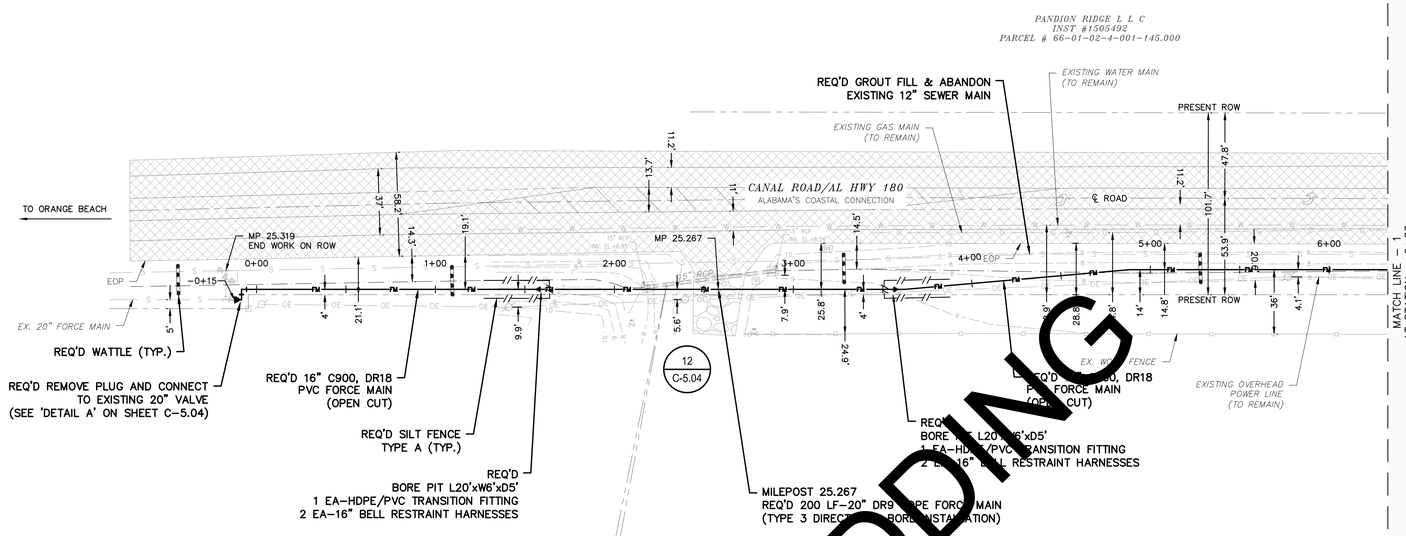
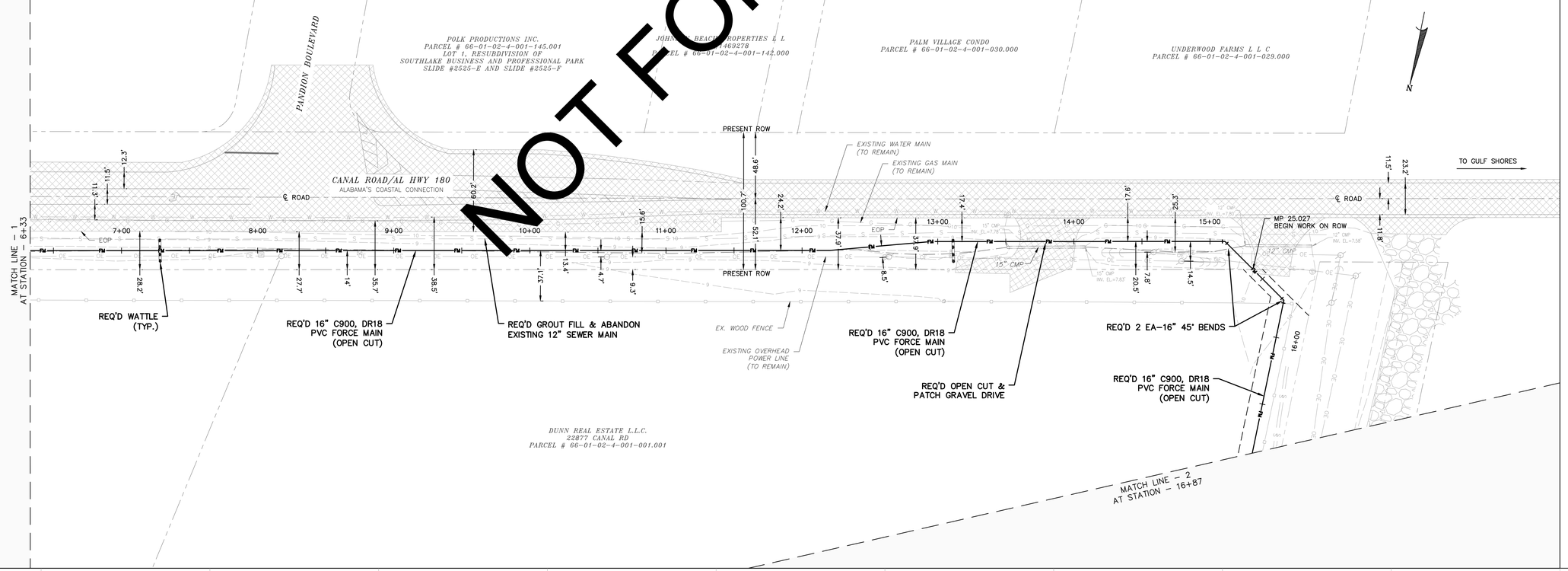


MINIMUM RESTRAINT LENGTH FOR FITTINGS	
FITTING SIZE & TYPE	RESTRAINT LENGTH
12" 22.5° BEND	15' E.W.
12" 45° BEND	31' E.W.
14" 22.5° BEND	17' E.W.
14" 45° BEND	35' E.W.
16" 22.5° BEND	20' E.W.
16" 45° BEND	40' E.W.
16" 90° BEND	60' E.W.

Notes:
1. All joints within the calculated length must be restrained.
2. If the length between fittings is less than or equal to the minimum restraint length, then all joints between the fittings must be restrained.





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FORCE MAIN PLAN

C-4.01
sheet 5 of 29

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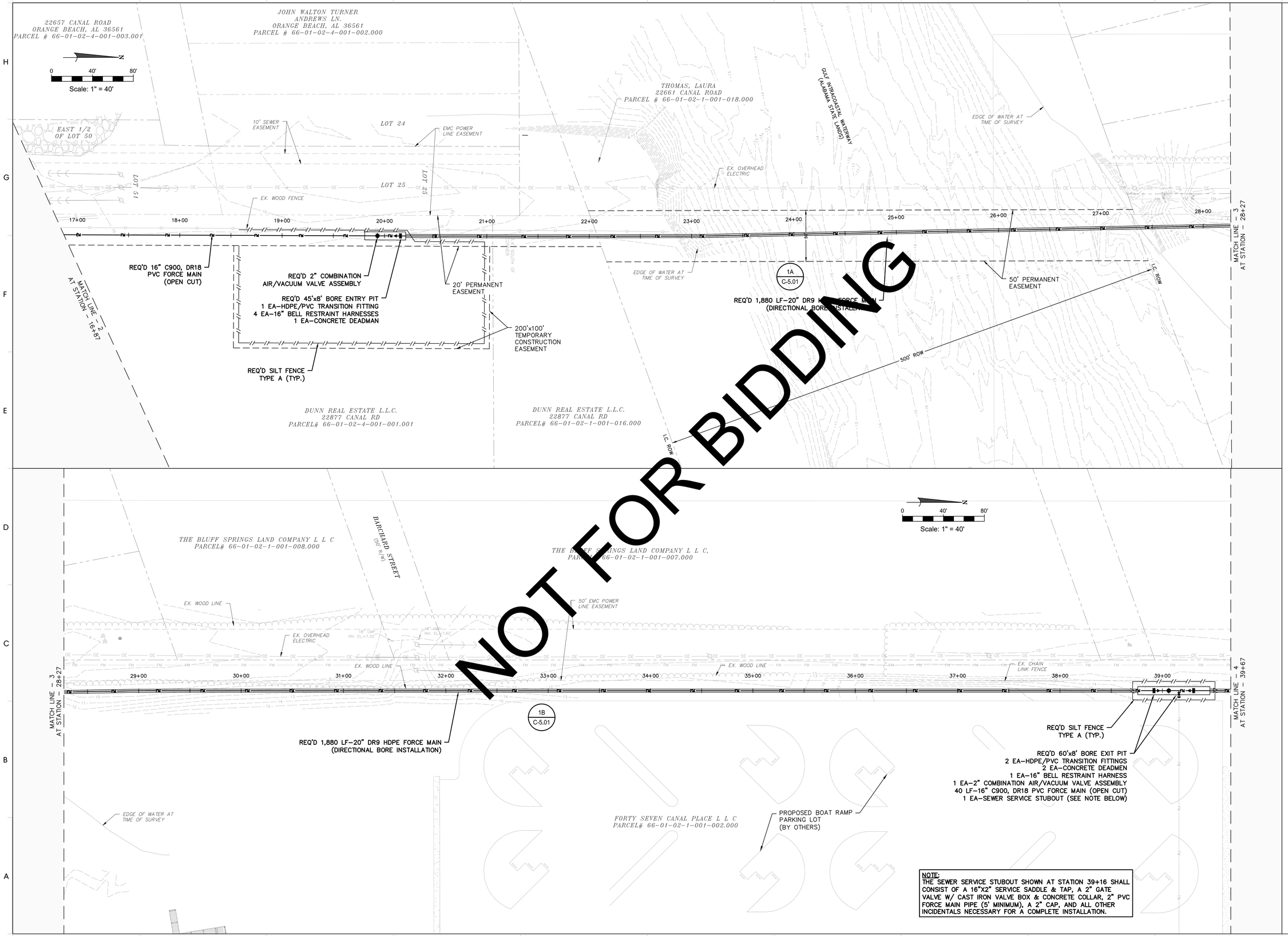

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C-4.02
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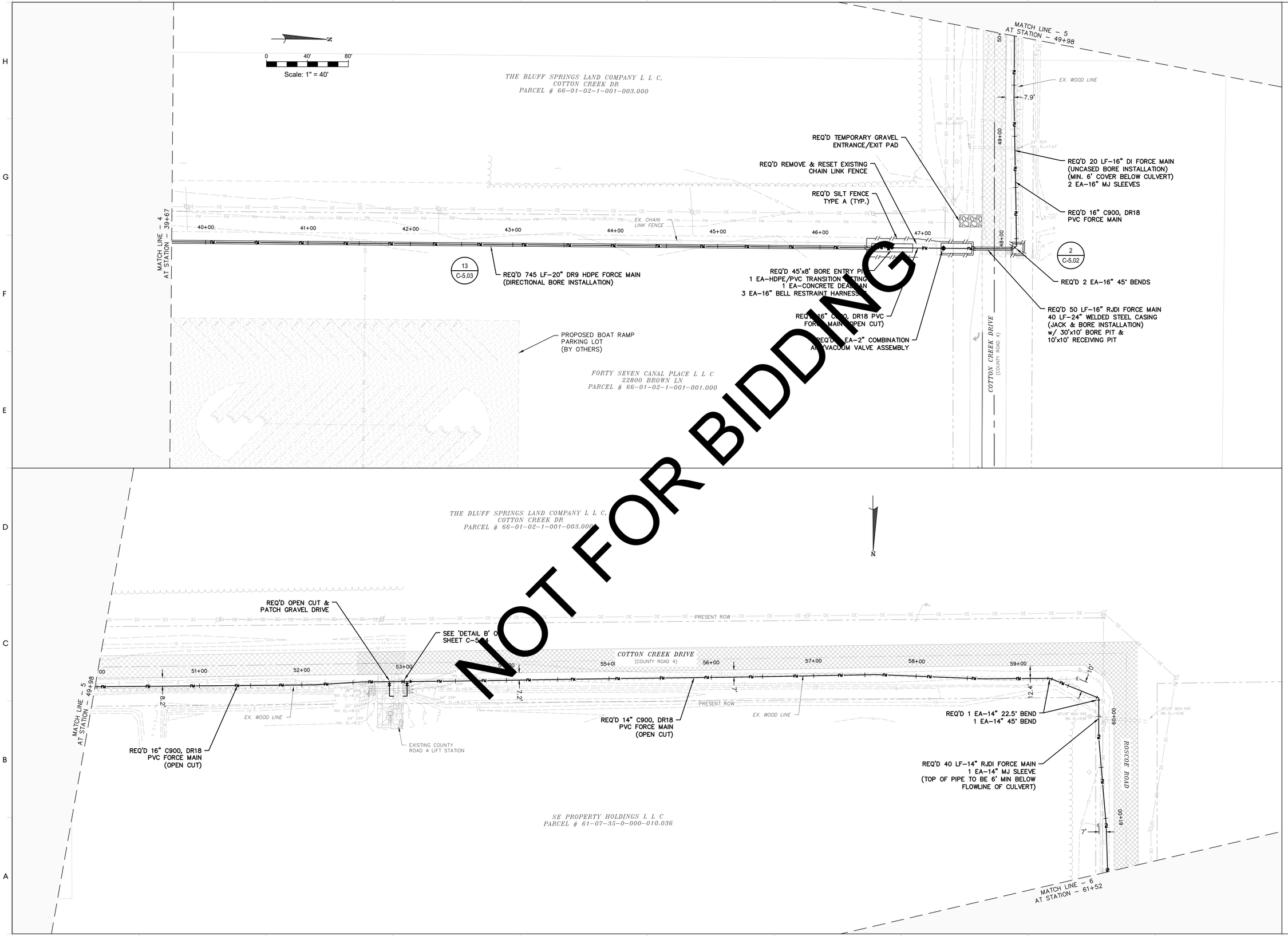

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C-4.03

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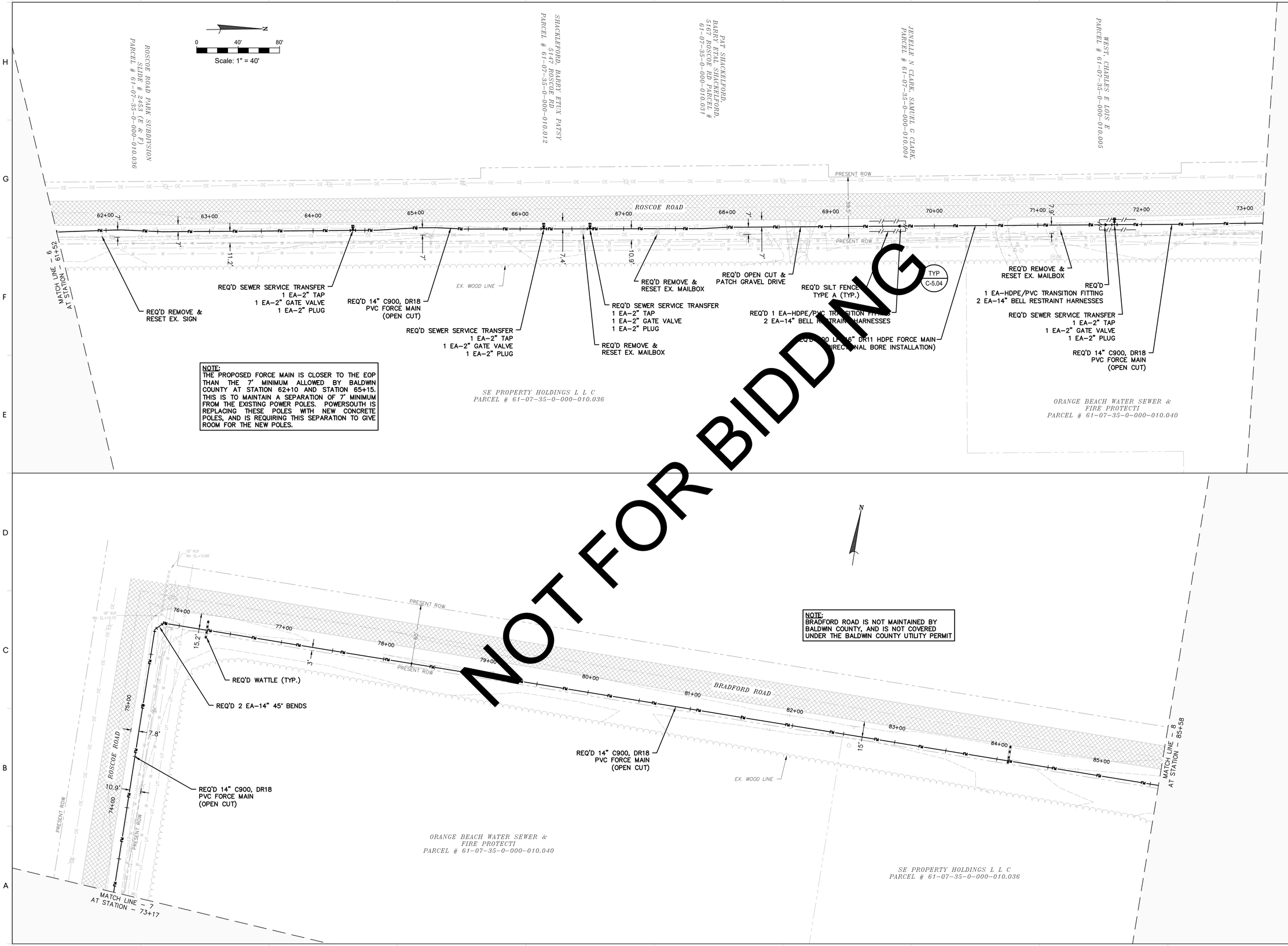

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C-4.04

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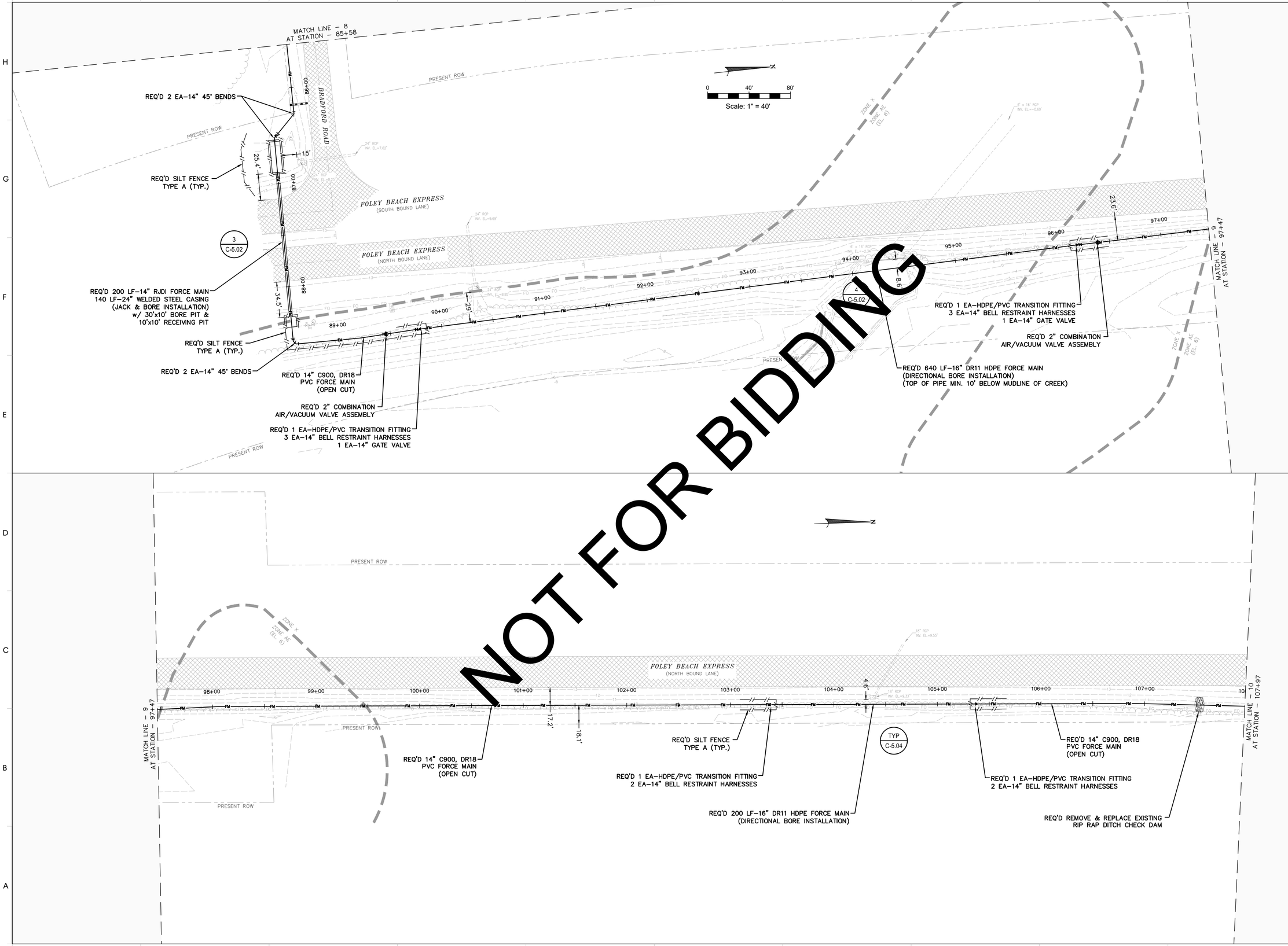

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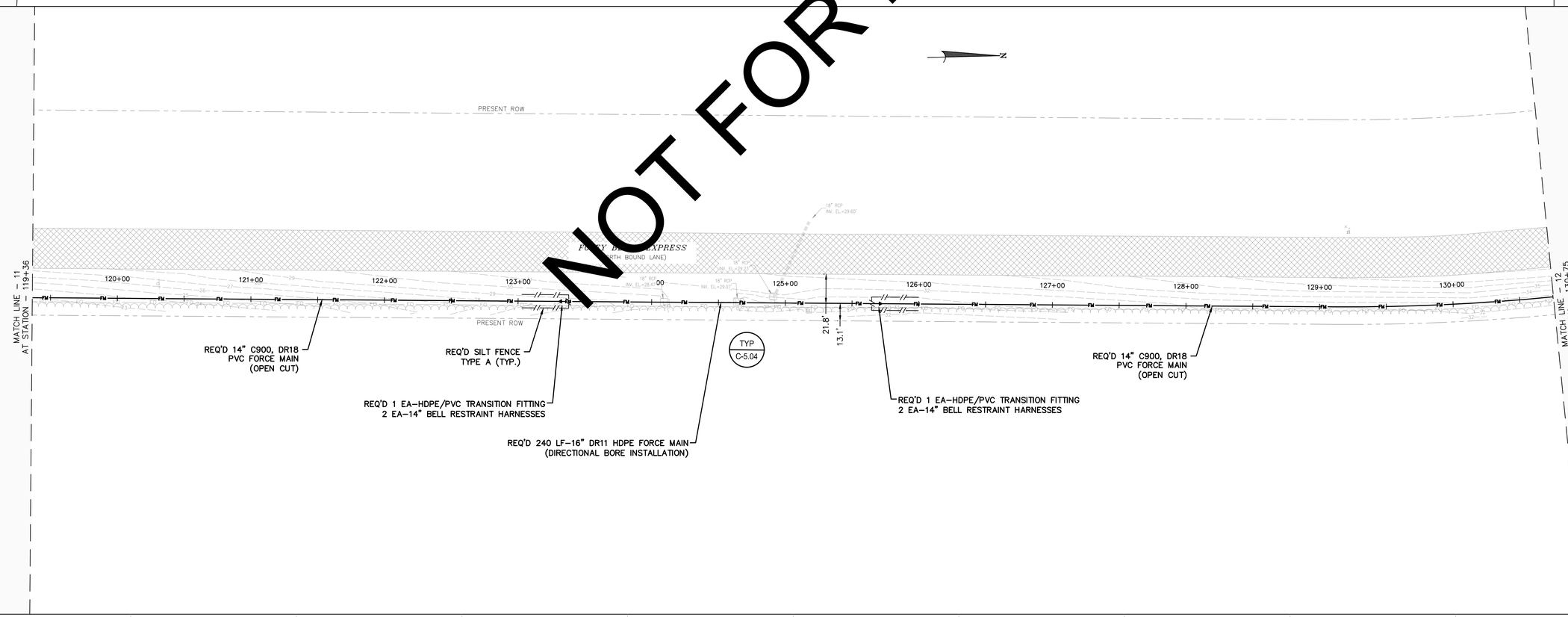

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C-4.06

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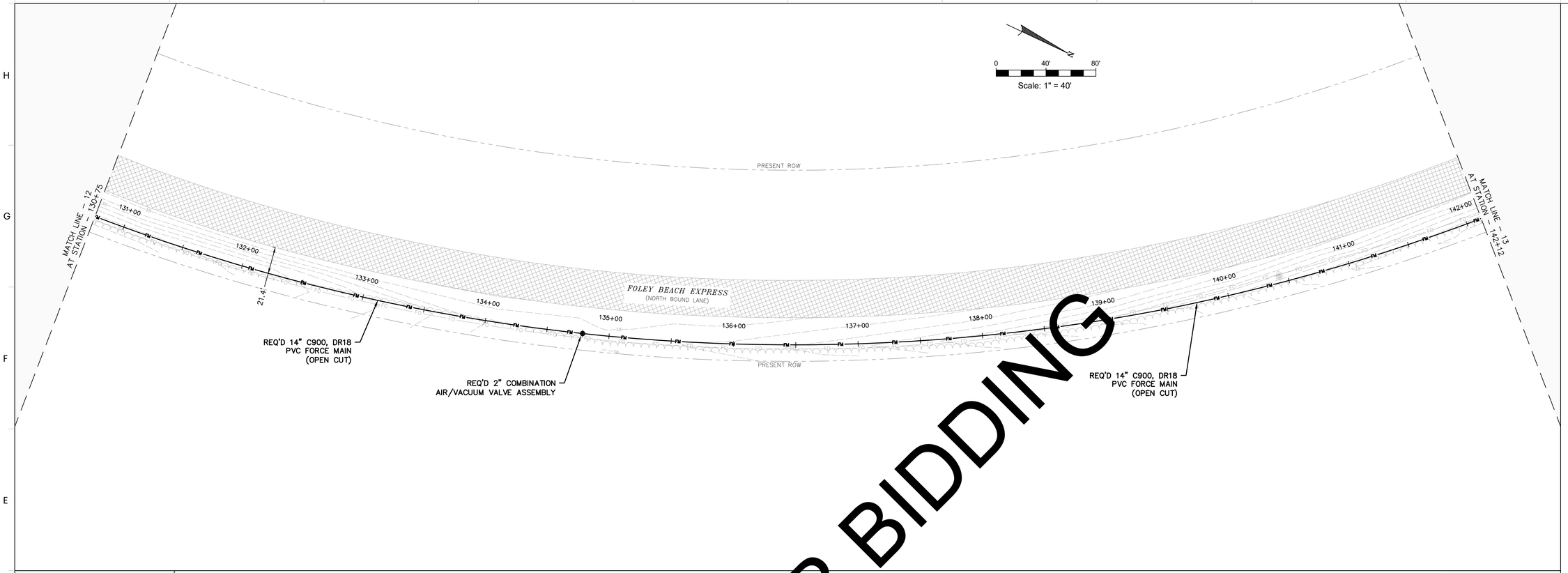

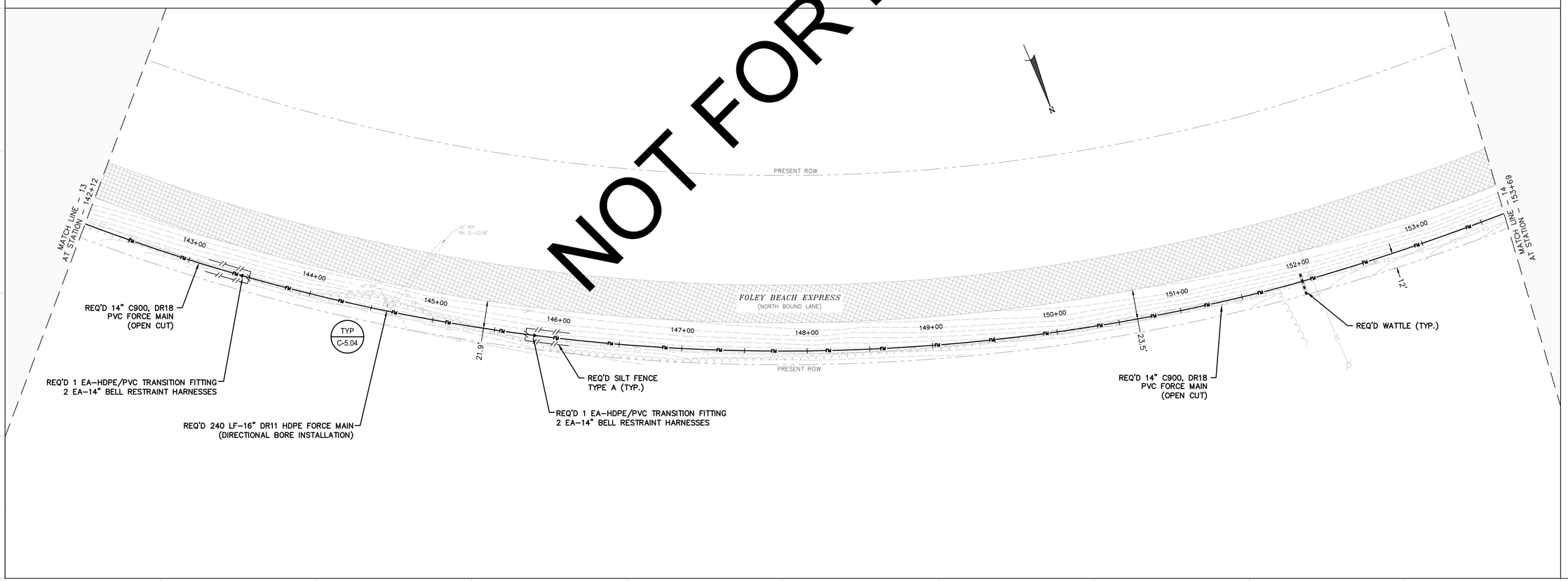

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C-4.07
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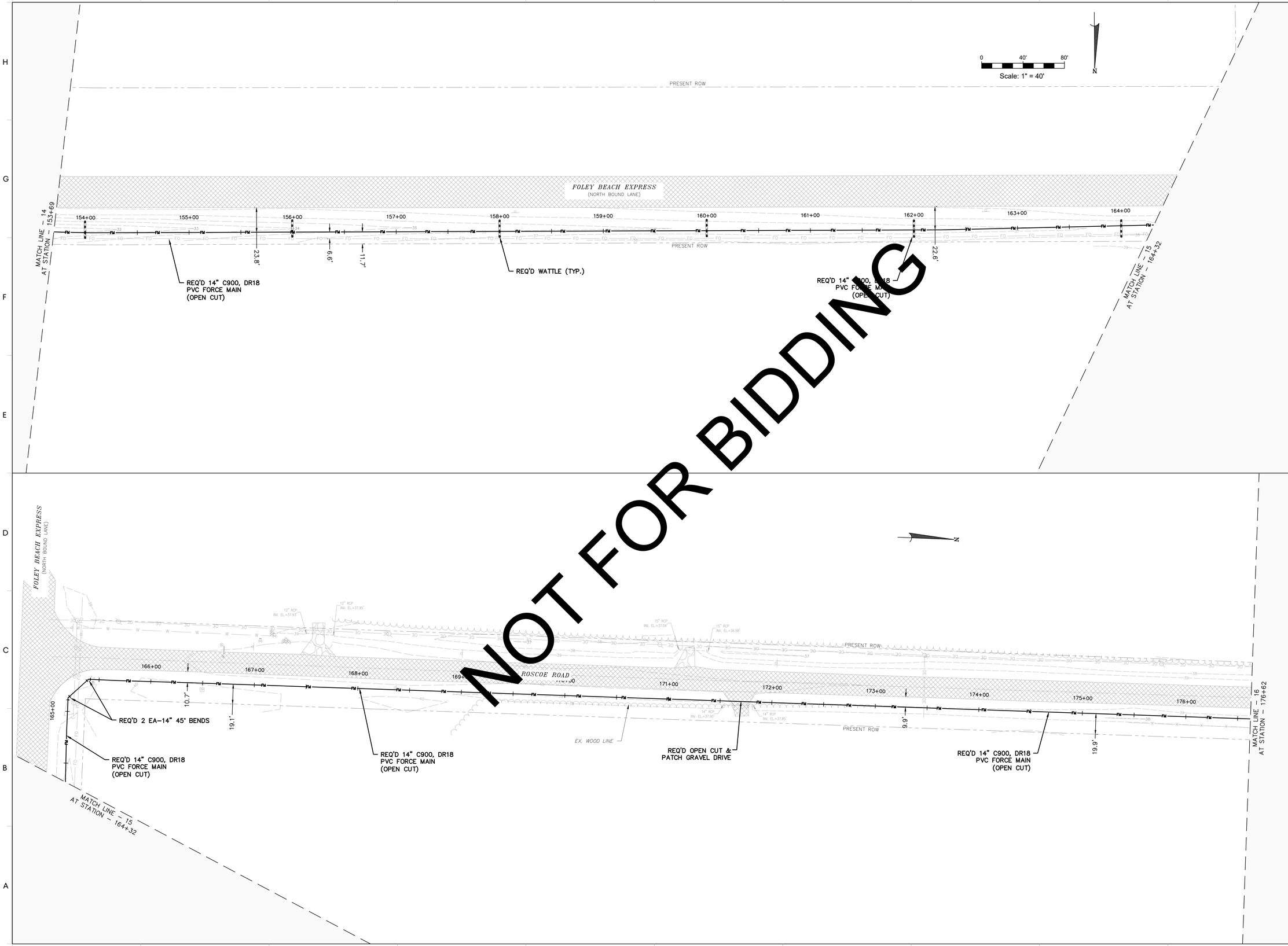

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C-4.08

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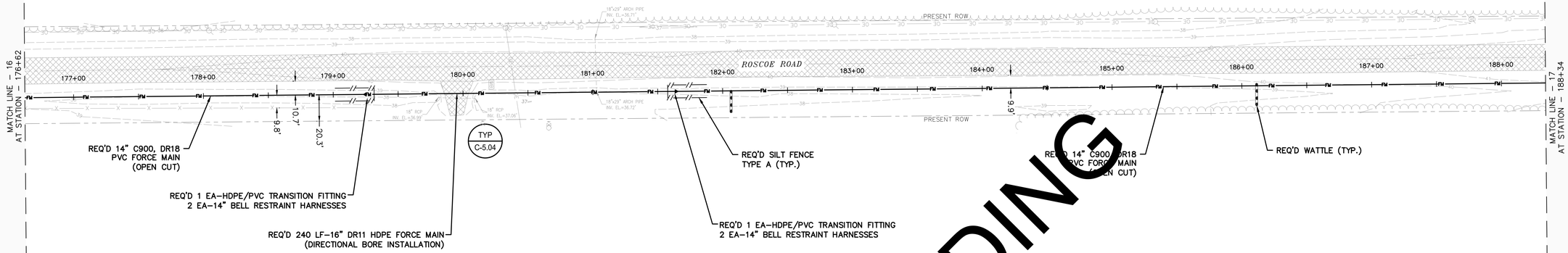

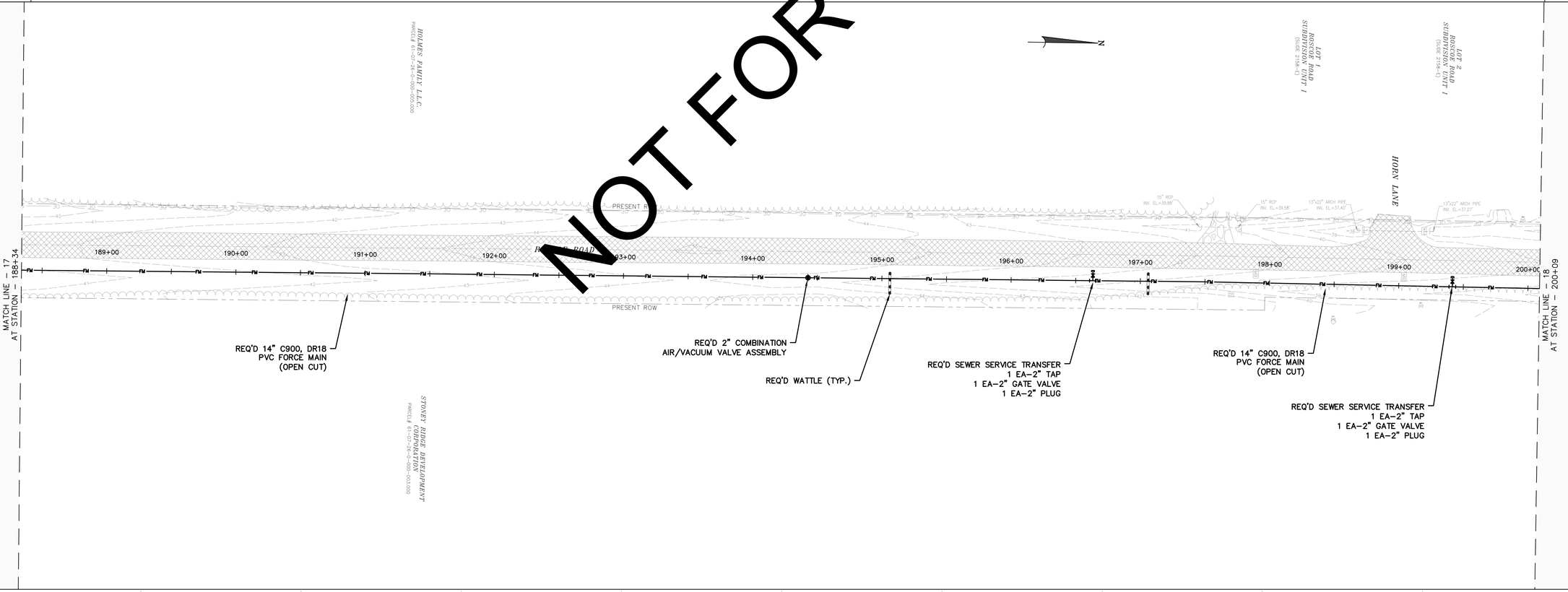

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FORCE MAIN PLAN

C-4.09

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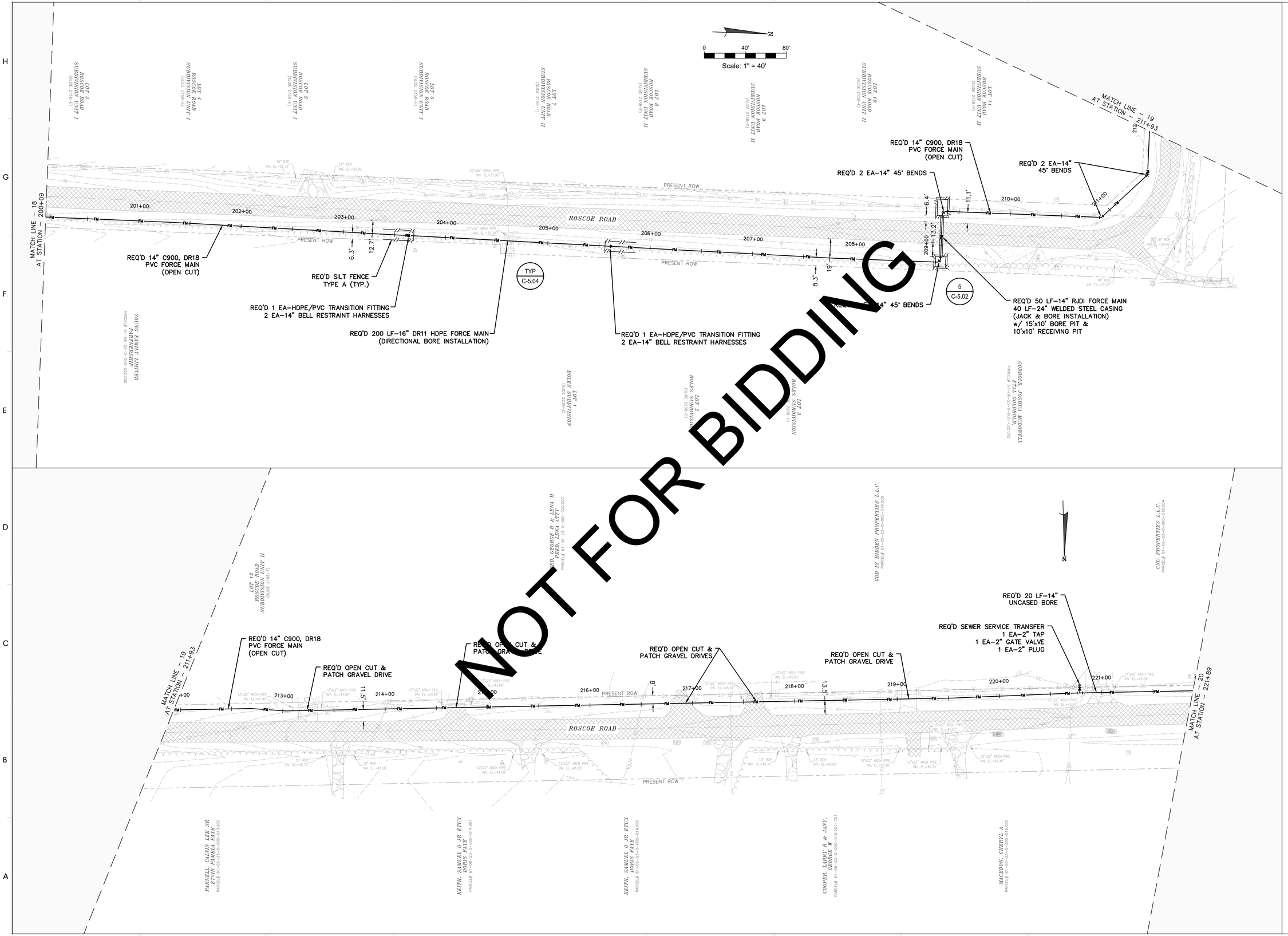

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FORCE MAIN PLAN

C-4.10

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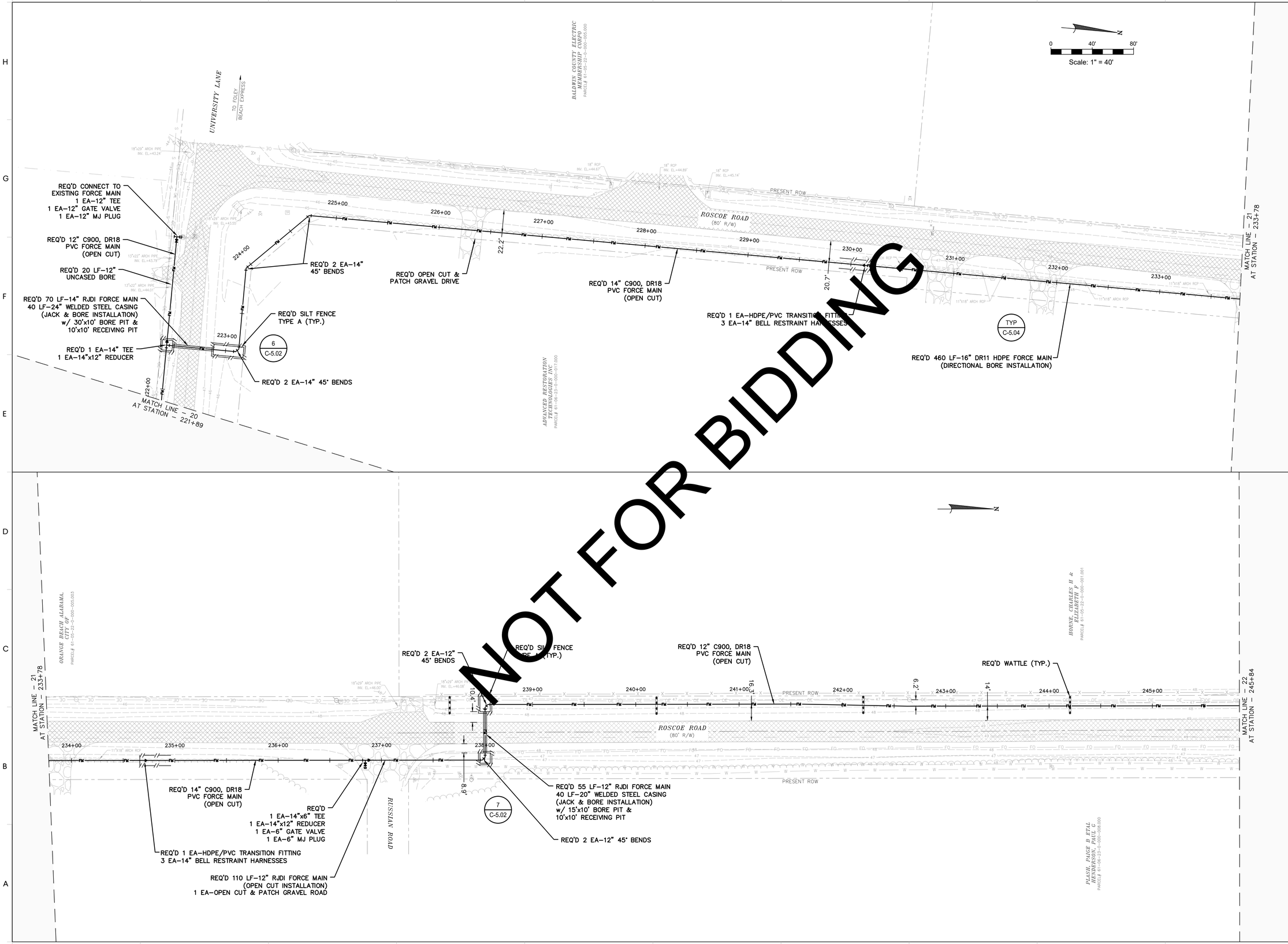

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FORCE MAIN PLAN

C-4.11
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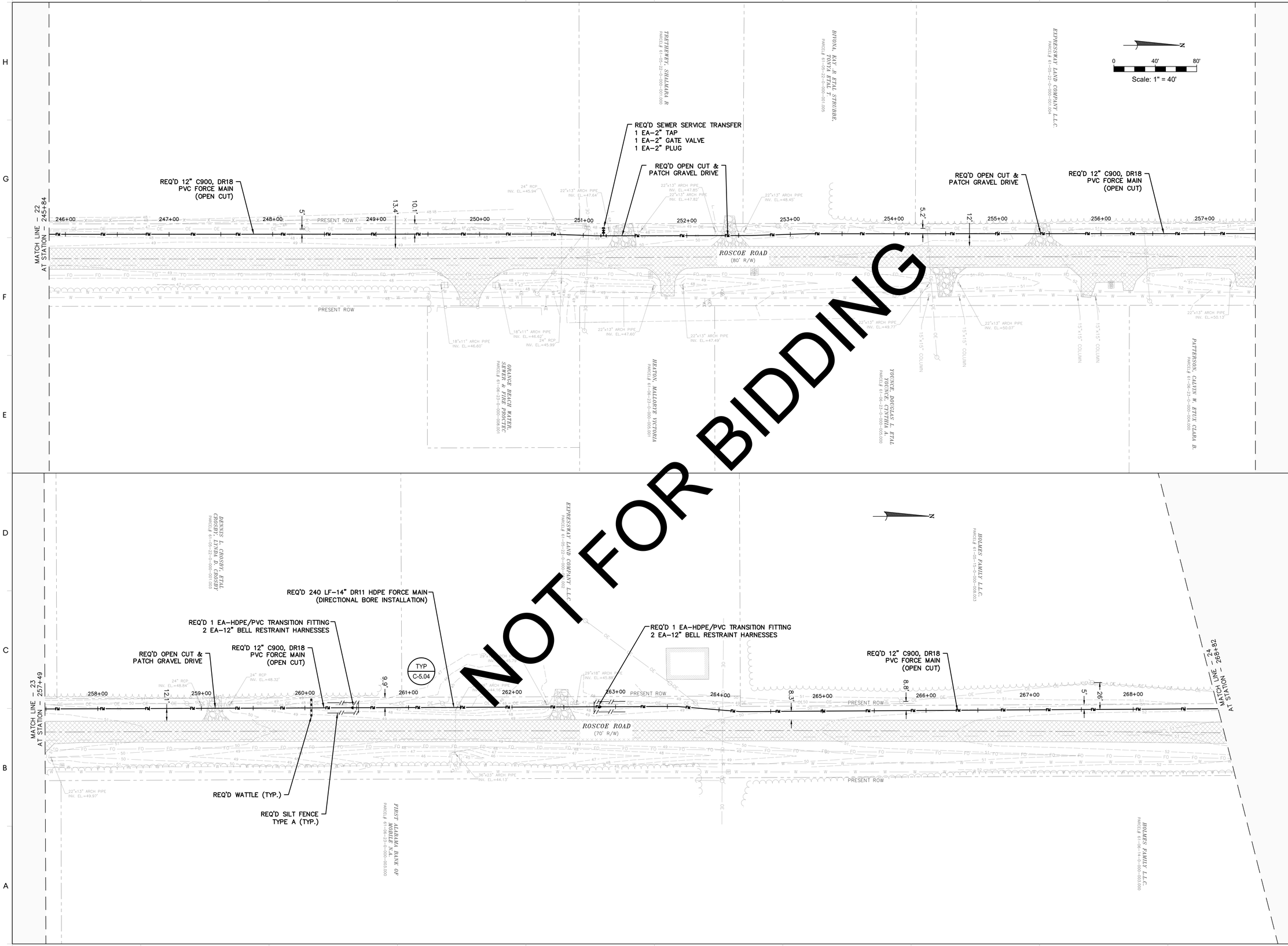

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FORCE MAIN PLAN

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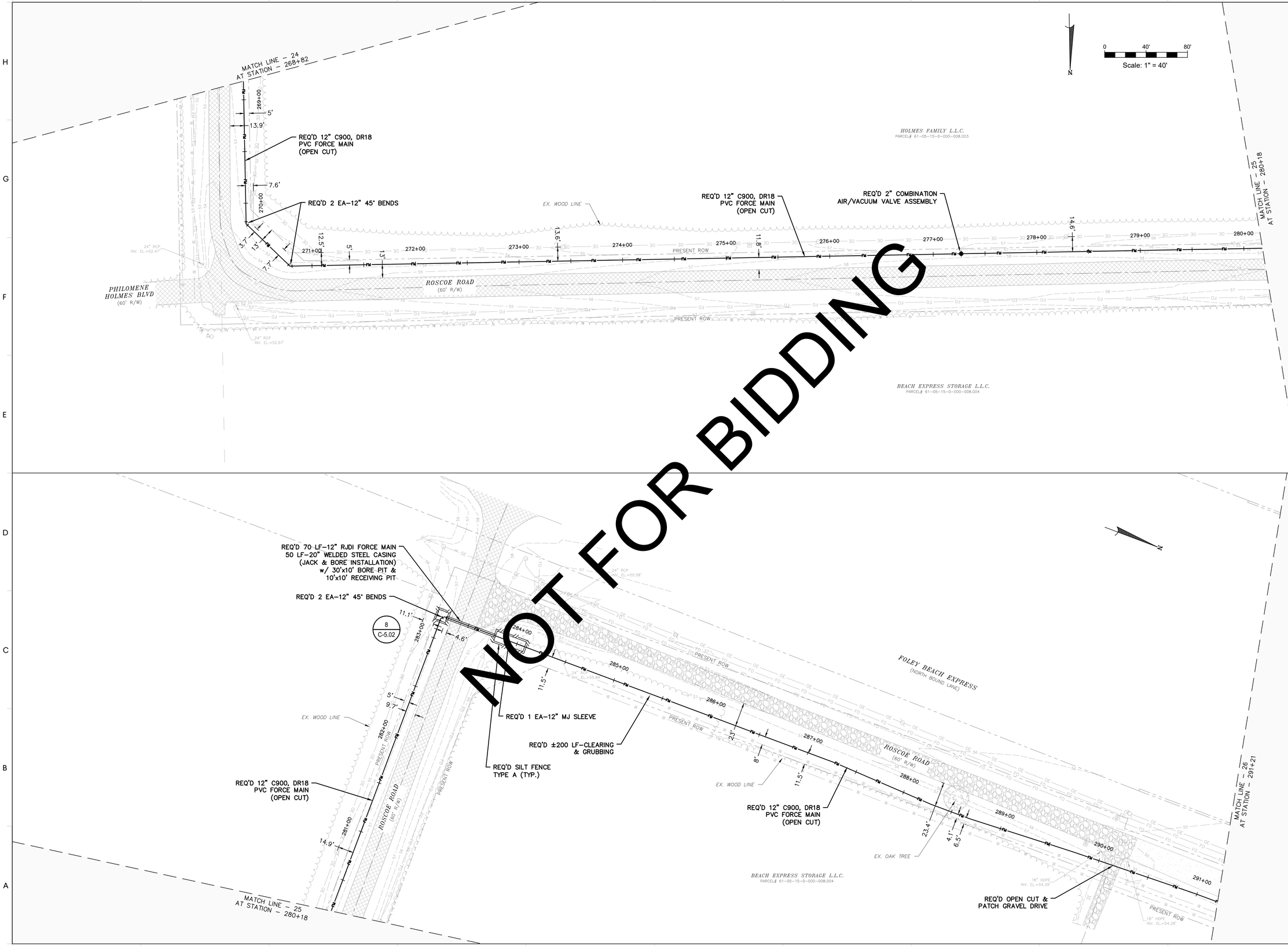

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FORCE MAIN PLAN

C-4.13
sheet 17 of 29

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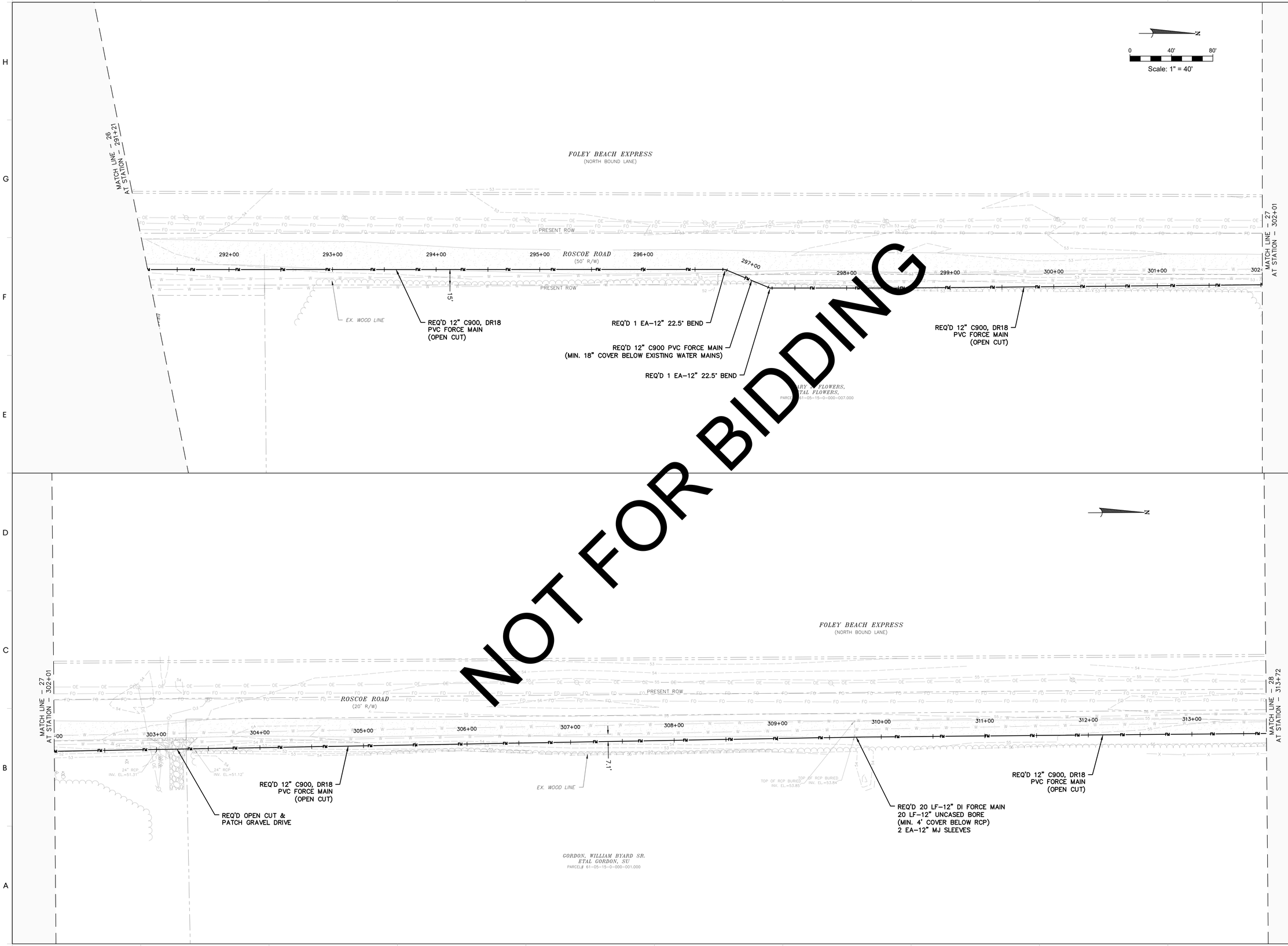

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FORCE MAIN PLAN

C-4.14
sheet 18 of 29

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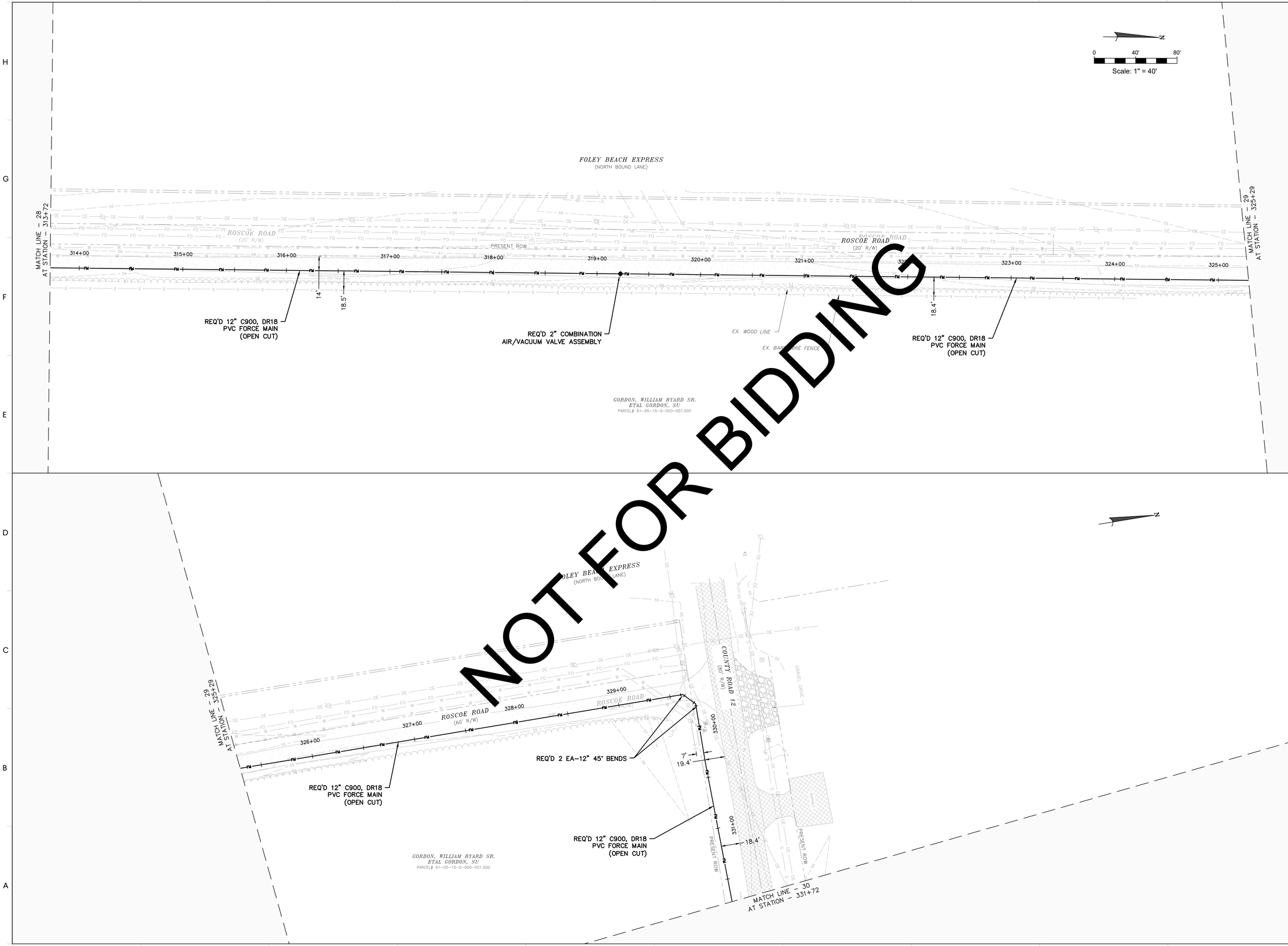

NOT FOR BIDDING

GMC

2039 Main Street
Daphne, AL 36526
T 251.626.2626
GMCNETWORK.COM

ISSUE	DATE
Bid Set	09.17.2021

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NEW SEWER FORCE MAIN
CANAL RD. TO CR 12
ORANGE BEACH, ALABAMA

GMC No. CMOB190340

ALABAMA LICENSED No. 35222 PROFESSIONAL ENGINEER MATTHEW STEPHEN MILLER
9.17.2021

FORCE MAIN PLAN

C-4.15
sheet 19 of 29

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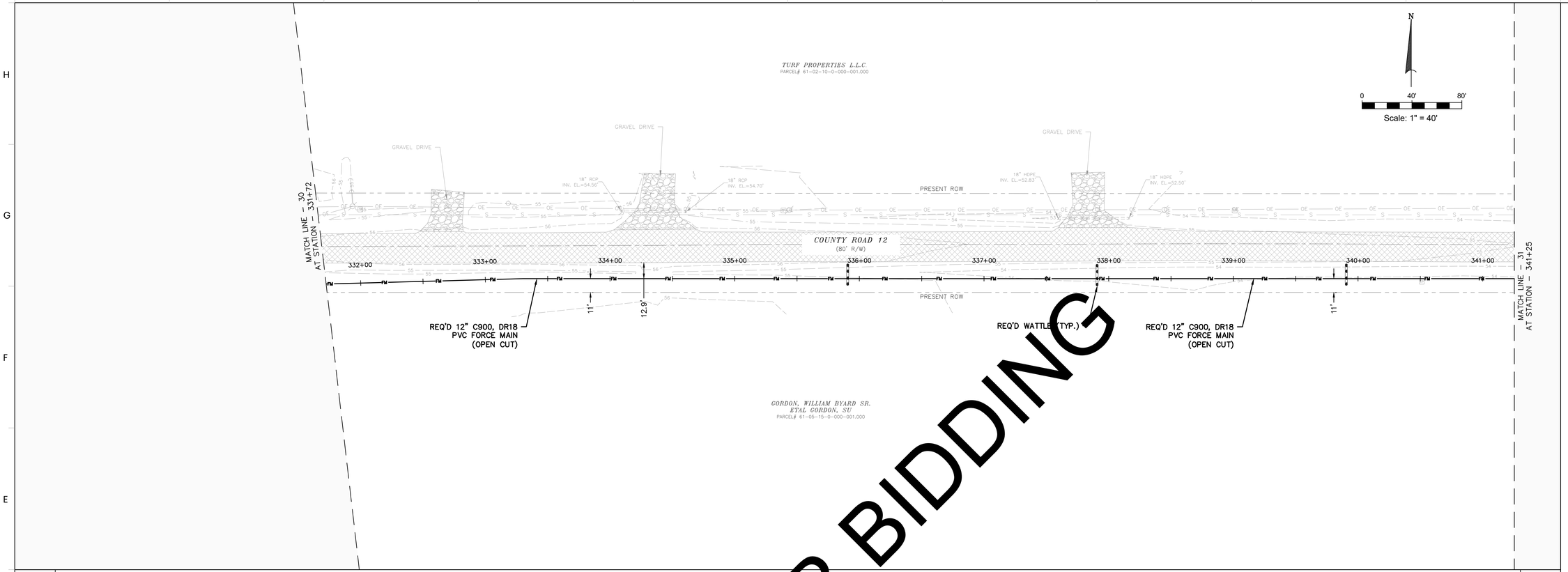

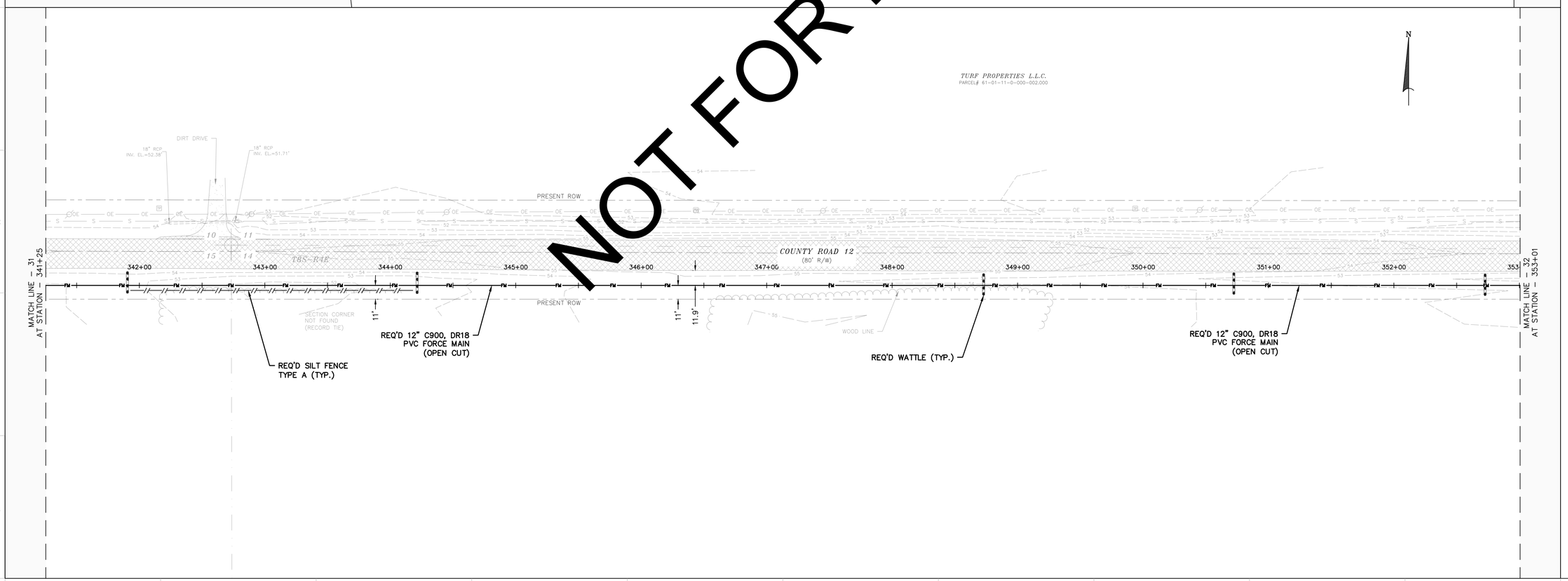

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Bid Set	09.17.2021

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NEW SEWER FORCE MAIN
CANAL RD. TO CR 12
ORANGE BEACH, ALABAMA

GMC No. CMOB190340

ALABAMA LICENSED No. 35222 PROFESSIONAL ENGINEER STEPHEN MILLER
9.17.2021

FORCE MAIN PLAN

C-4.16
sheet 20 of 29

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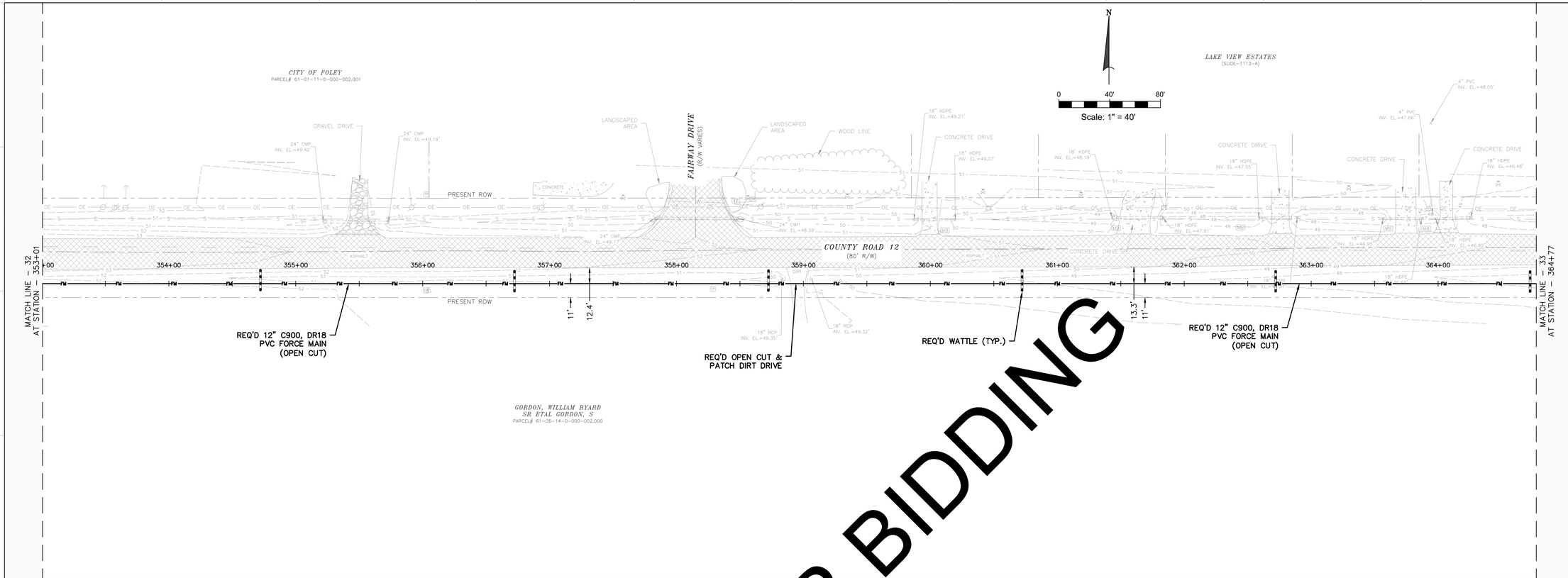

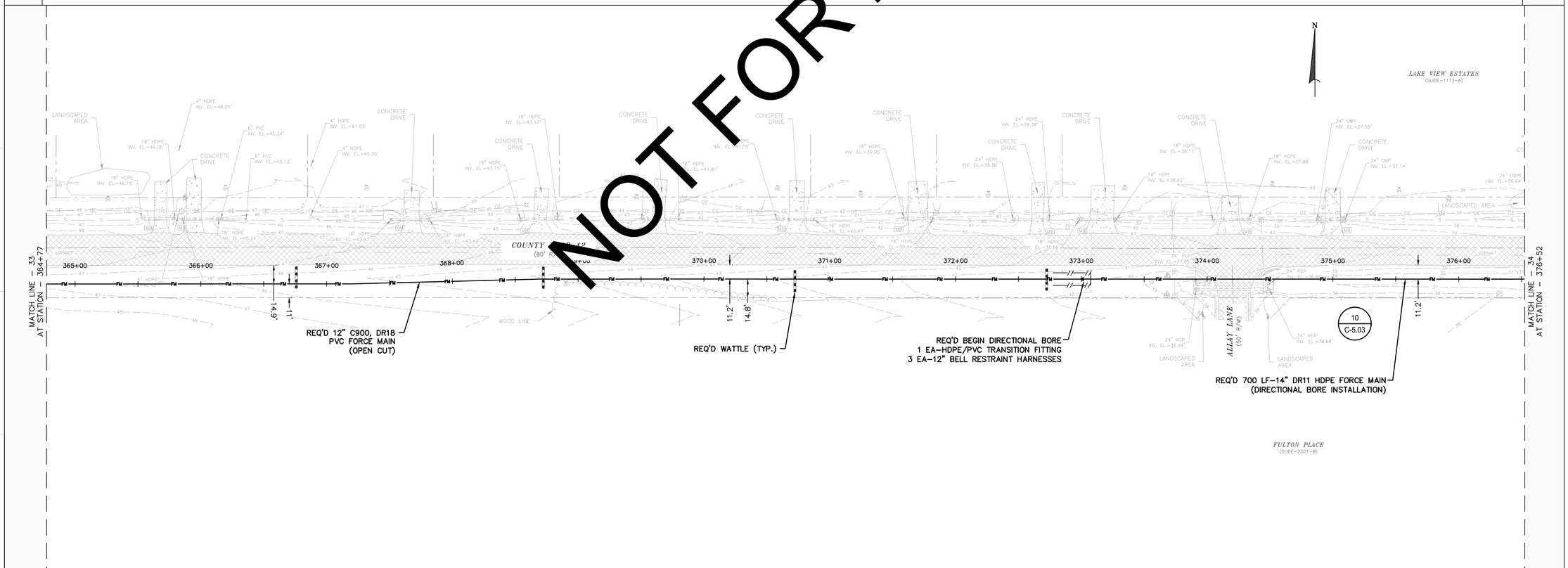

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NEW SEWER FORCE MAIN
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ORANGE BEACH, ALABAMA

GMC No. CMOB190340

ALABAMA LICENSED No. 35222 PROFESSIONAL ENGINEER MATTHEW STEPHEN MALLER
9.17.2021

FORCE MAIN PLAN

C-4.17
sheet 21 of 29

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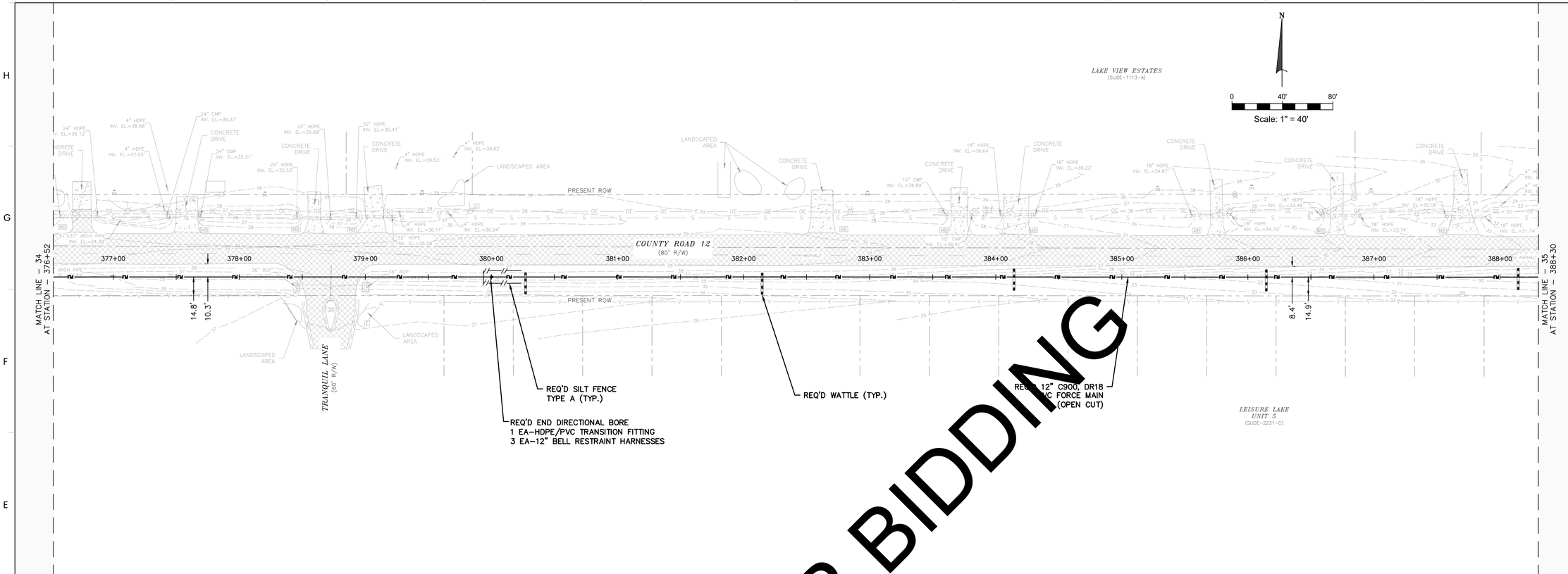

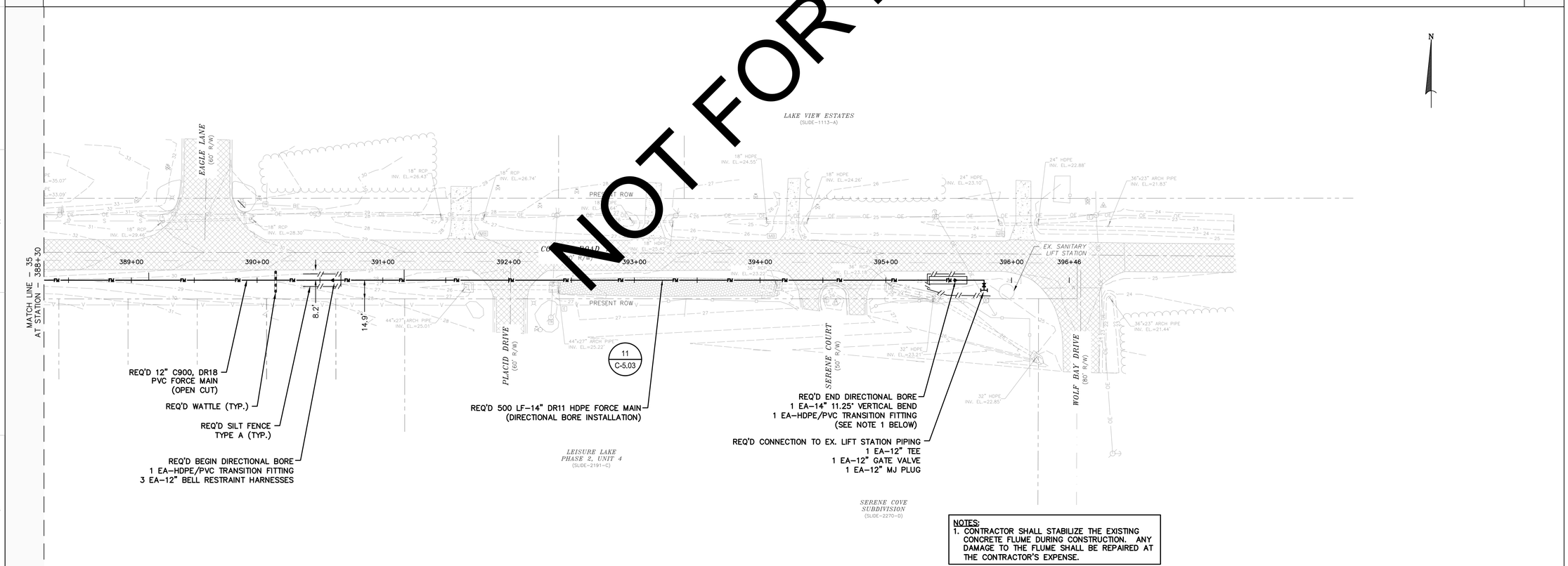

NOTES:
1. CONTRACTOR SHALL STABILIZE THE EXISTING CONCRETE FLUME DURING CONSTRUCTION. ANY DAMAGE TO THE FLUME SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

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Daphne, AL 36526
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ISSUE	DATE
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NEW SEWER FORCE MAIN
CANAL RD. TO CR 12
ORANGE BEACH, ALABAMA

GMC No. CMOB190340

ALABAMA LICENSED No. 35222 PROFESSIONAL ENGINEER MATTHEW STEPHEN MALLER
9.17.2021

FORCE MAIN PLAN

C-4.18
sheet 22 of 29

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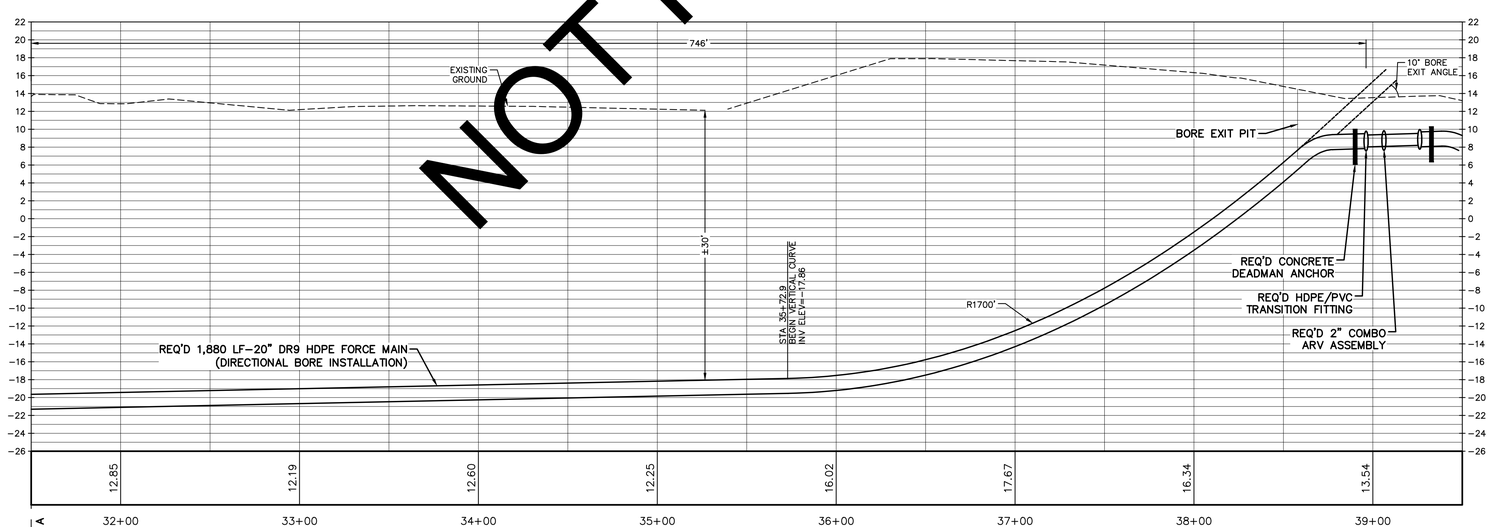
1A
C-4.02

PROPOSED FORCE MAIN BORE
INTERCOASTAL CANAL
STA 19+50 TO 31+50
FACING WEST

SCALE: 1"=40'H
1"=8'V



1B
C-4.02

PROPOSED FORCE MAIN BORE
INTERCOASTAL CANAL
STA 31+50 TO 39+50
FACING WEST

SCALE: 1"=40'H
1"=8'V

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NEW SEWER FORCE MAIN
CANAL RD. TO CR 12
ORANGE BEACH, ALABAMA

GMC No. CMOB190340

ALABAMA LICENSED No. 35222 PROFESSIONAL ENGINEER MATTHEW STEPHEN MALVER
9.17.2021

FORCE MAIN
BORE PROFILES

C-5.01
sheet 23 of 29

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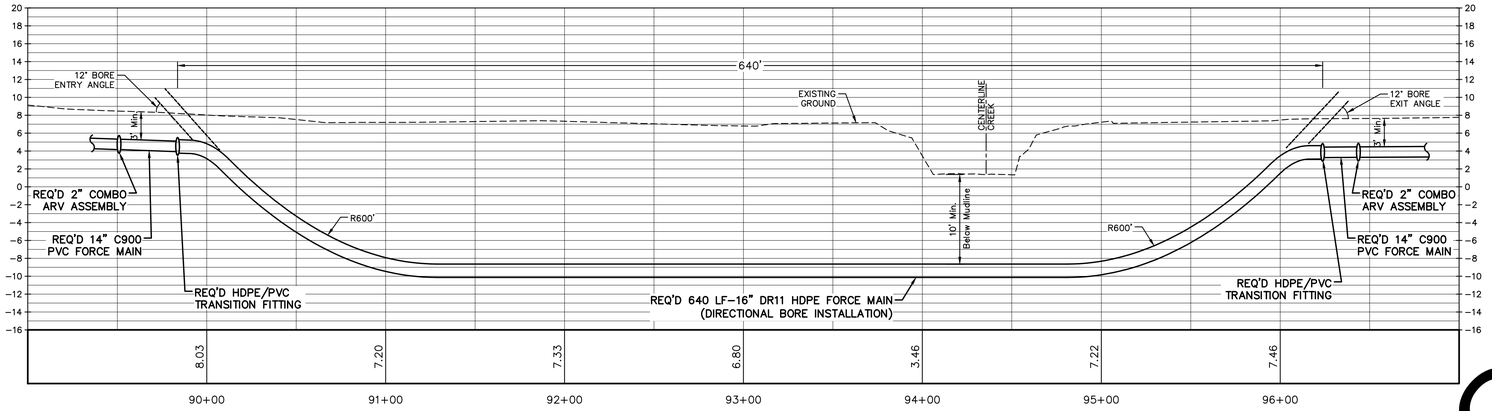
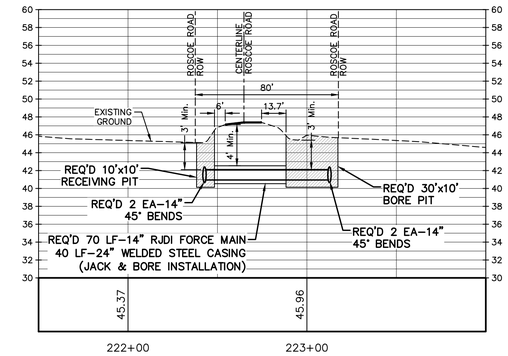


4 C-4.05

PROPOSED FORCE MAIN BORE
FOLEY BEACH EXPRESS
STA 89+00 TO 97+00
FACING WEST

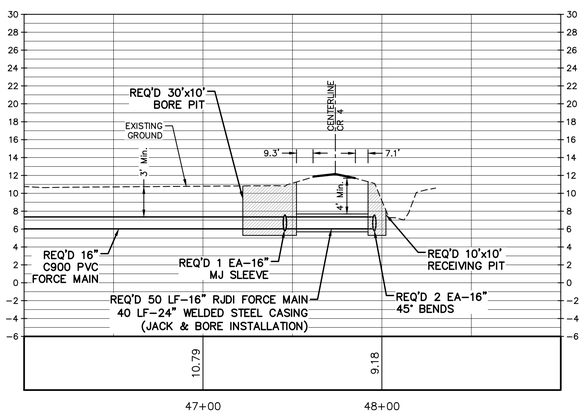
SCALE: 1"=40'H
1"=8'V



6 C-4.11

PROPOSED FORCE MAIN BORE
ROSCOE ROAD
STA 221+50 TO 224+00
FACING WEST

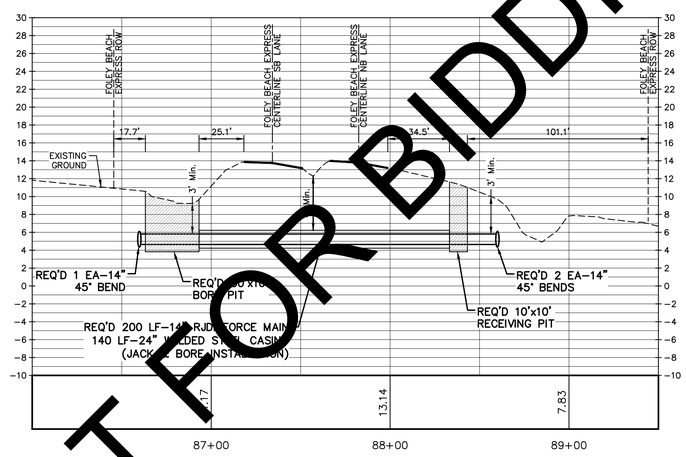
SCALE: 1"=40'H
1"=8'V



2 C-4.03

PROPOSED FORCE MAIN BORE
COUNTY ROAD 4
STA 46+00 TO 49+00
FACING WEST

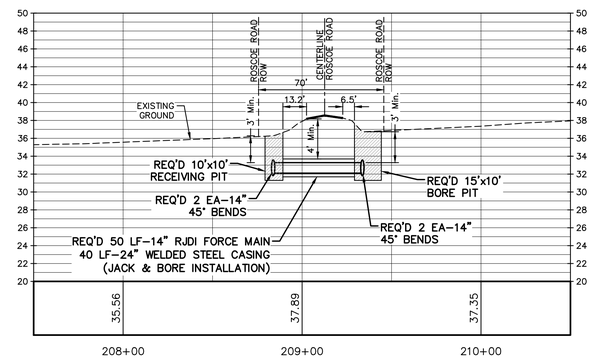
SCALE: 1"=40'H
1"=8'V



C-4.05

PROPOSED FORCE MAIN BORE
FOLEY BEACH EXPRESS
STA 86+00 TO 89+50
FACING NORTH

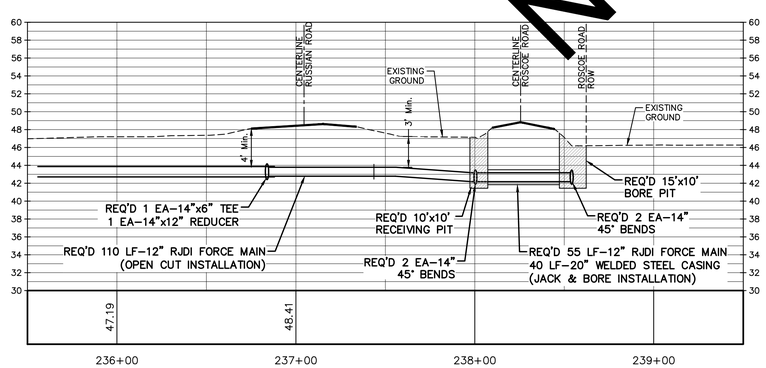
SCALE: 1"=40'H
1"=8'V



5 C-4.10

PROPOSED FORCE MAIN BORE
ROSCOE ROAD
STA 207+50 TO 210+50
FACING SOUTH

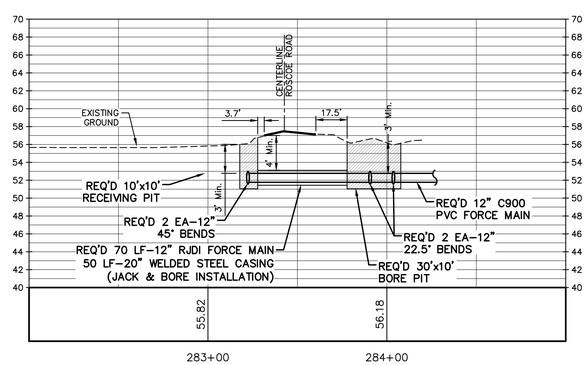
SCALE: 1"=40'H
1"=8'V



7 C-4.11

PROPOSED FORCE MAIN BORE
RUSSIAN ROAD & ROSCOE ROAD
STA 235+50 TO 239+50
FACING WEST & SOUTH

SCALE: 1"=40'H
1"=8'V



8 C-4.13

PROPOSED FORCE MAIN BORE
ROSCOE ROAD
STA 282+00 – 285+00
FACING WEST

SCALE: 1"=40'H
1"=8'V

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NEW SEWER FORCE MAIN
CANAL RD. TO CR 12
ORANGE BEACH, ALABAMA

GMC No. CMOB190340

ALABAMA LICENSED No. 33222 PROFESSIONAL ENGINEER MATTHEW STEPHEN MALLER
9.17.2021

FORCE MAIN
BORE PROFILES

C-5.02
sheet 24 of 29

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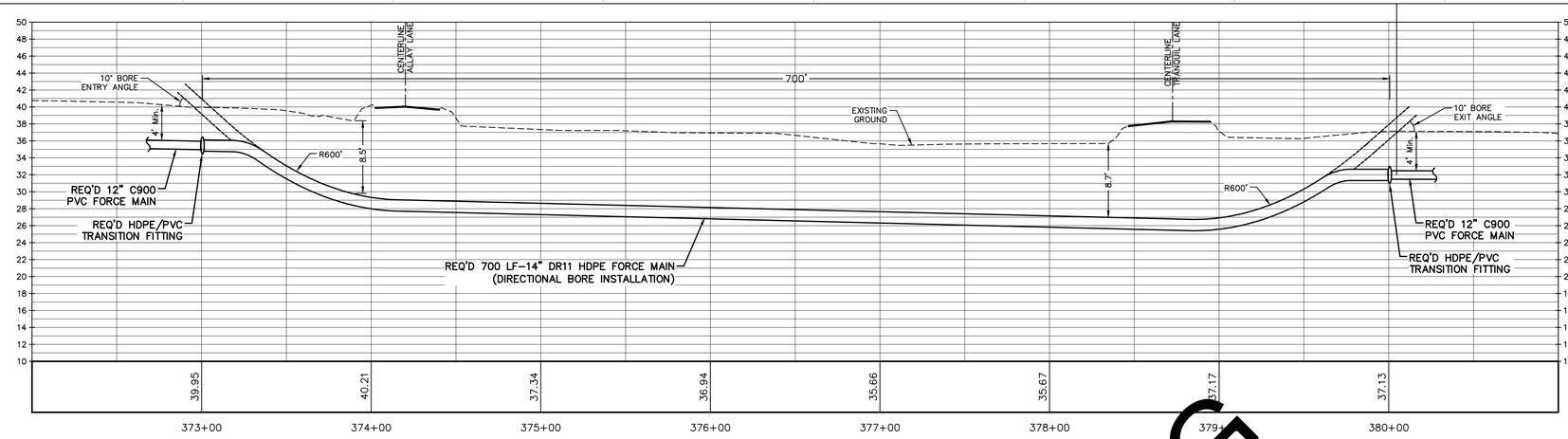
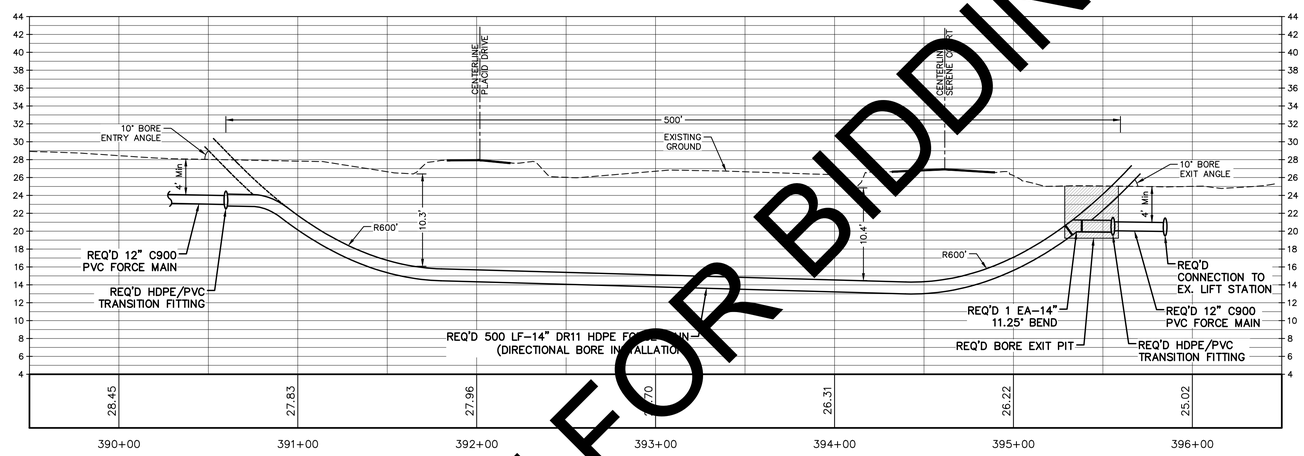


10
C-4.17

PROPOSED FORCE MAIN BORE
COUNTY ROAD 12
STA 372+00 – 381+00
FACING NORTH

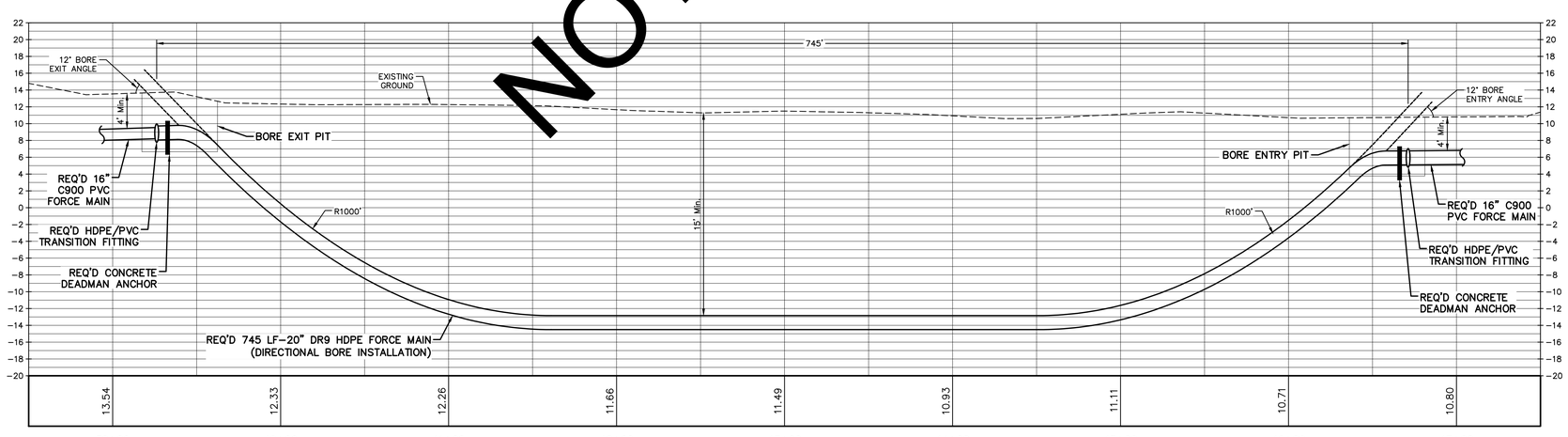
SCALE: 1"=40'H
1"=8'V



11
C-4.18

PROPOSED FORCE MAIN BORE
COUNTY ROAD 12
STA 389+50 – 396+50
FACING NORTH

SCALE: 1"=40'H
1"=8'V



13
C-4.03

PROPOSED FORCE MAIN BORE
NORTH OF INTERCOASTAL CANAL
STA 38+50 TO 47+50
FACING WEST

SCALE: 1"=40'H
1"=8'V

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NEW SEWER FORCE MAIN
CANAL RD. TO CR 12
ORANGE BEACH, ALABAMA

GMC No. CMOB190340

ALABAMA LICENSED No. 35222 PROFESSIONAL ENGINEER MATTHEW STEPHEN MALLER
9.17.2021

FORCE MAIN BORE PROFILES

C-5.03

sheet 25 of 29

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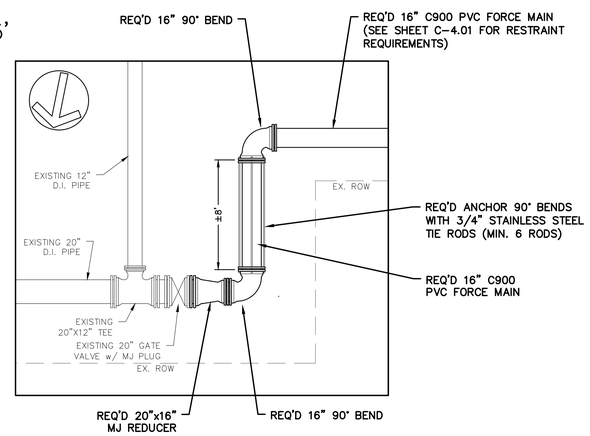
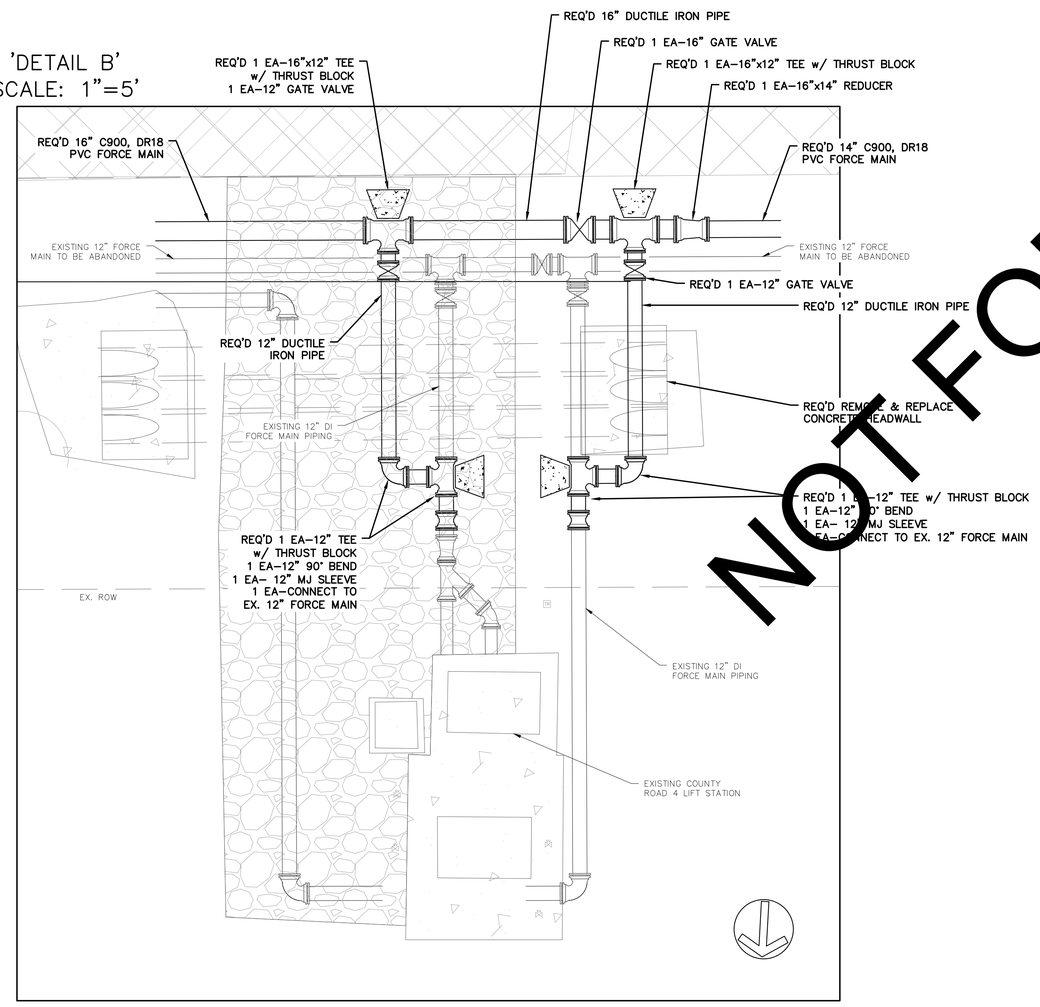
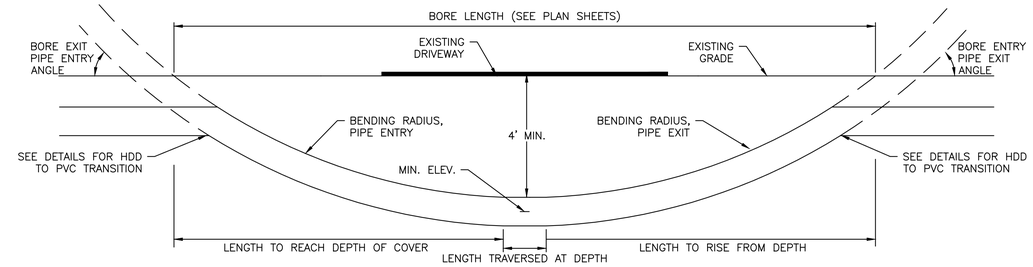
'DETAIL A'
SCALE: 1"=5'



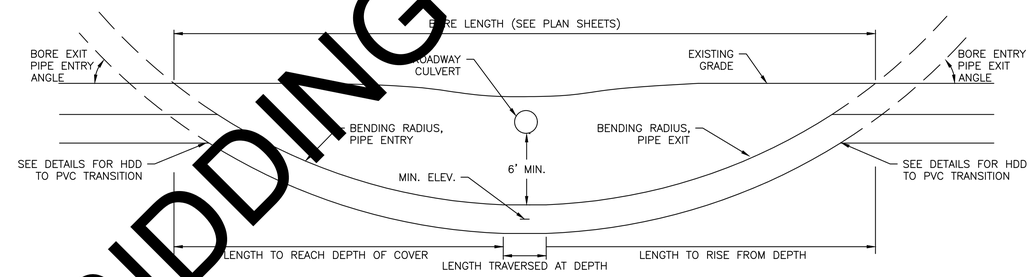
'DETAIL B'
SCALE: 1"=5'





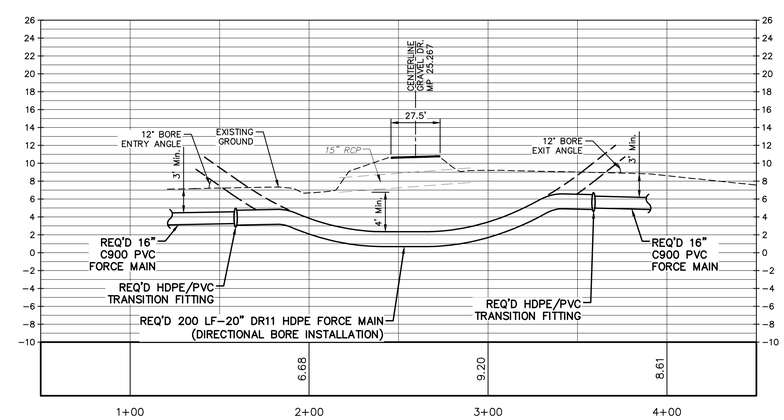
DETAIL - TYPICAL HDD PROFILE UNDER DRIVEWAY

SCALE: NOT TO SCALE



DETAIL - TYPICAL HDD PROFILE UNDER CULVERT

SCALE: NOT TO SCALE



12
C-4.01

PROPOSED FORCE MAIN BORE
CANAL ROAD – MILEPOST 25.267
STA 0+50 TO 4+50
FACING SOUTH

SCALE: 1"=40'H
1"=8'V

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NEW SEWER FORCE MAIN
CANAL RD. TO CR 12
ORANGE BEACH, ALABAMA

GMC No. CMOB190340

ALABAMA LICENSED No. 35222 PROFESSIONAL ENGINEER MATTHEW STEPHEN MALLER
9.17.2021

FORCE MAIN BORE PROFILES

C-5.04
sheet 26 of 29

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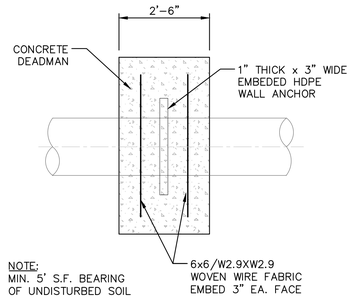
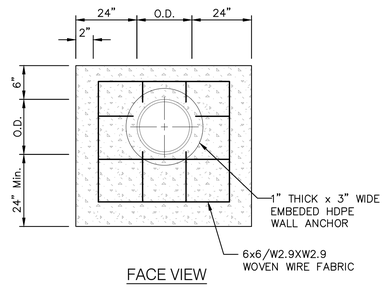


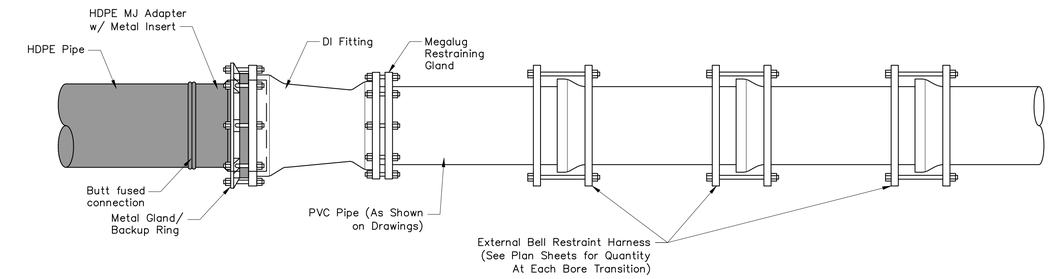
PLAN VIEW



FACE VIEW

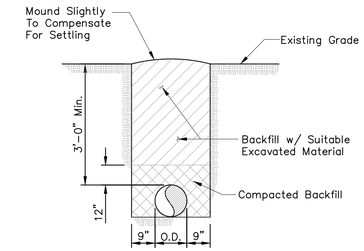
CONCRETE DEADMAN DETAIL FOR HDPE

NOT TO SCALE



HDD TRANSITION FITTING DETAIL (HDPE)

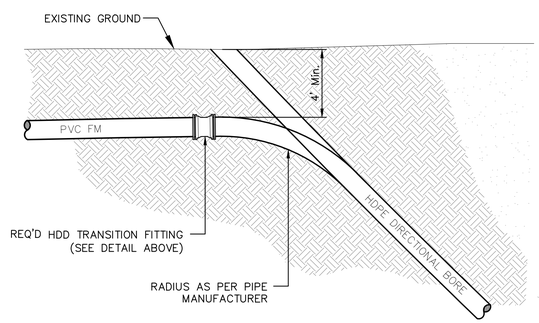
NOT TO SCALE



Force Main

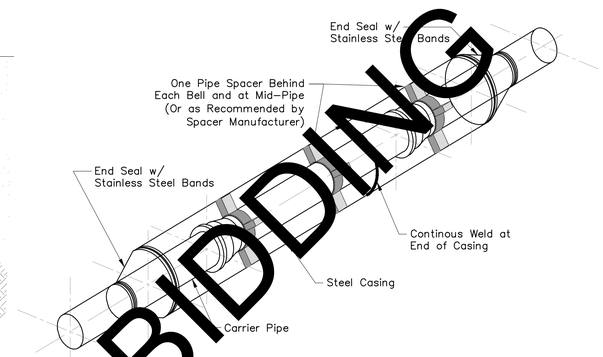
EARTH TRENCH

NOT TO SCALE



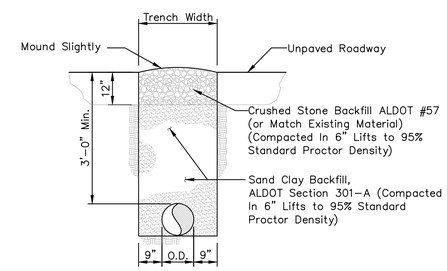
DIRECTIONAL BORE DETAILS

NOT TO SCALE



STEEL ENCASEMENT PIPE

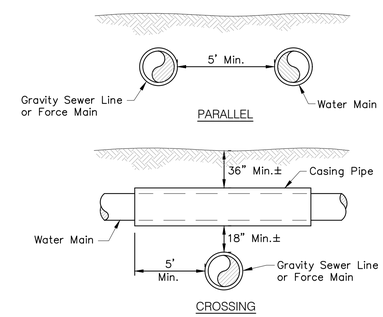
NOT TO SCALE



Force Main

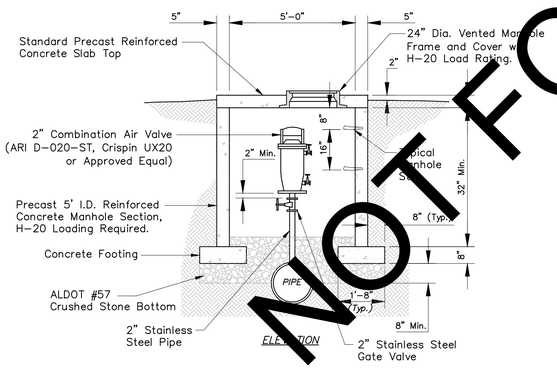
UNPAVED ROAD PATCH

NOT TO SCALE



DETAILS OF UTILITY SEPARATION

NOT TO SCALE



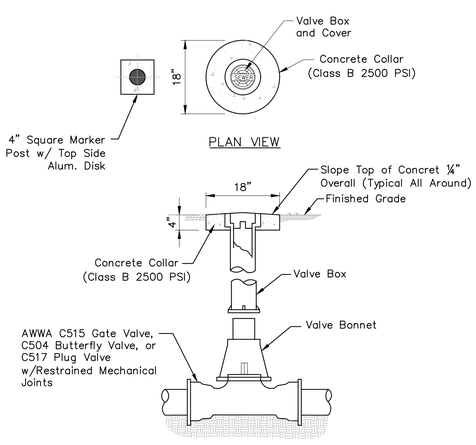
ELEVATION

Bearing Area of Thrust Blocks In Sq. Ft. (Horizontal Bends)							
Fitting Size	Tee, Wye Plug or Cap	90°Bend Plugged Cross	Tee Plugged on Run		Bend Angle		
			A1	A2	45°	22 1/2°	11 1/4°
4	1.0	1.4	1.9	1.4	1.0	–	–
6	2.1	3.0	4.3	3.0	1.6	1.0	–
8	3.8	5.3	7.6	5.4	2.9	1.5	1.0
10	5.9	8.4	11.8	8.4	4.6	2.4	1.2
12	8.5	12.0	17.0	12.0	6.6	3.4	1.7
14	11.5	16.3	23.0	16.3	8.9	4.6	2.3
16	15.0	21.3	30.0	21.3	11.6	6.0	3.0
18	19.0	27.0	38.0	27.0	14.6	7.6	3.8
20	23.5	33.3	47.0	33.3	18.1	9.4	4.7
24	34.0	48.0	68.0	48.0	26.2	13.6	6.8

Volume of Thrust Block In Cubic Yards Vertical Bends			
Fitting Size	Bend Angle		
	45°	22 1/2°	11 1/2°
4	1.1	0.4	0.2
6	2.7	1.0	0.4
8	4.0	1.5	0.6
10	6.0	2.3	0.9
12	8.5	3.2	1.3
14	11.5	4.3	1.8
16	14.5	5.6	2.3

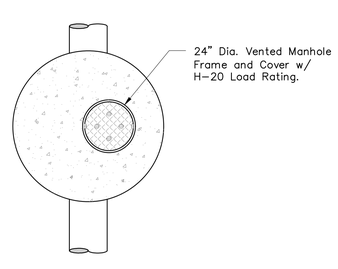
Fitting Size	Embedment
12" and Less	30"
14" – 15"	36"

Note:
All concrete collars, thrust block, Etc. shall be formed and poured in place. Concrete shall Meet requirements of class C 2500 PSI concrete in accordance with general specifications for reinforced concrete.



VALVE AND VALVE BOX DETAIL

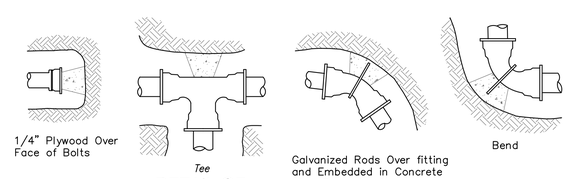
NOT TO SCALE



TOP VIEW

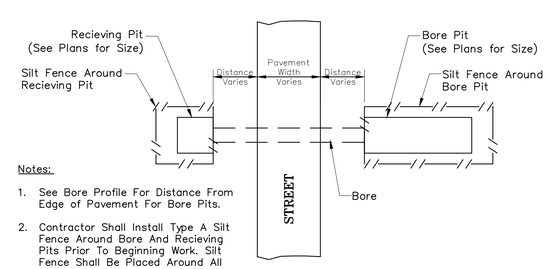
COMBINATION AIR AND VACUUM VALVE DETAIL

NOT TO SCALE



DETAIL OF THRUST BLOCKS

NOT TO SCALE



Notes:

1. See Bore Profile For Distance From Edge of Pavement For Bore Pits.
2. Contractor Shall Install Type A Silt Fence Around Bore And Recieving Pits Prior To Beginning Work. Silt Fence Shall Be Placed Around All Disturbed Work Required for the Pits.

TYPICAL BORE DETAIL

NOT TO SCALE

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NEW SEWER FORCE MAIN
CANAL RD. TO CR 12
ORANGE BEACH, ALABAMA

GMC No. CMOB190340

ALABAMA LICENSED No. 35222 PROFESSIONAL ENGINEER MATTHEW STEPHEN MALLER
9.17.2021

SEWER DETAILS

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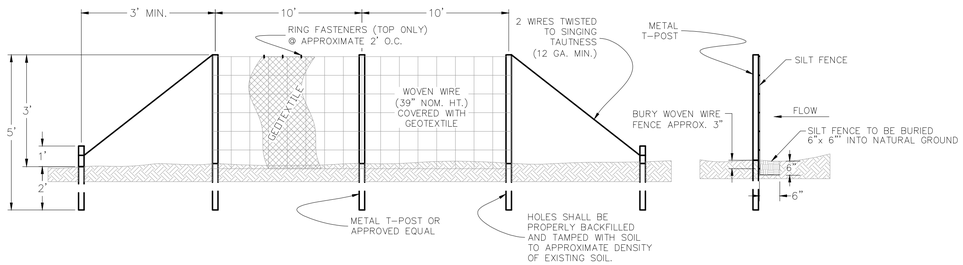
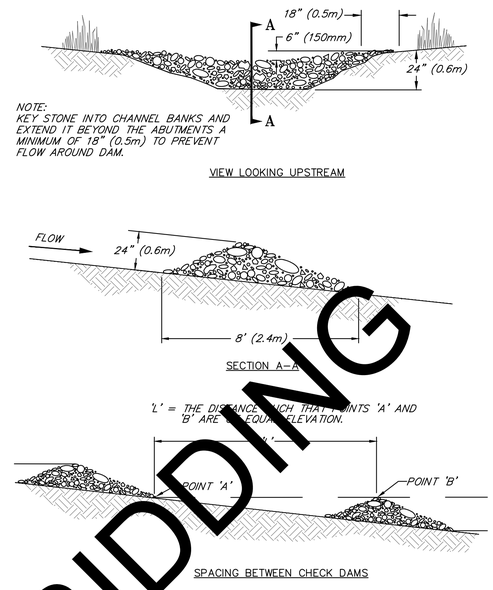


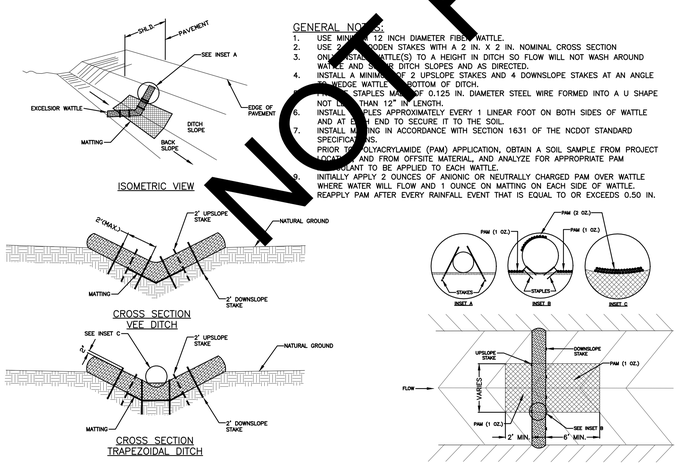
TYPE "A" SILT FENCE & INSTALLATION

N.T.S.



ROCK CHECK DAM

NOT TO SCALE



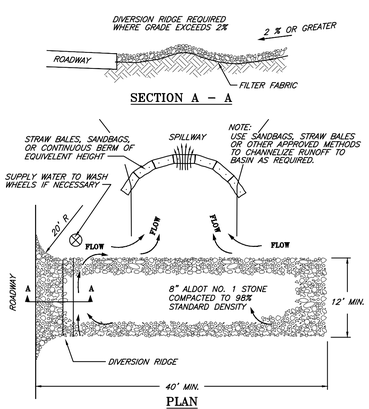
GENERAL NOTES:

1. USE MINIMUM 12 INCH DIAMETER FIBER WATTLE.
2. USE 24" WOODEN STAKES WITH A 2 IN. X 2 IN. NOMINAL CROSS SECTION
3. ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SHORT DITCH SLOPES AND AS DIRECTED.
4. INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE IN BOTTOM OF DITCH.
5. USE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
6. INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
7. INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE NCDOT STANDARD SPECIFICATIONS.
8. PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT ACQUIRED AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM ACCEPTABLE TO BE APPLIED TO EACH WATTLE.
9. INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

APPROVED DATE: 07/2010

TEMPORARY WATTLE CHECK DAM WITH MATTING AND OPTIONAL PAM

NOT TO SCALE



NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY GRAVEL CONSTUCTION ENTRANCE/EXIT PAD

NOT TO SCALE

ZONE 3	
Baldwin	Marengo
Barbour	Mobile
Butler	Monroe
Choctaw	Pike
Clarke	Washington
Coffee	Wilcox
Conecuh	
Covington	
Crenshaw	
Dale	
Escambia	
Geneva	
Henry	
Houston	

TEMPORARY SEEDING	
September through December	
Annual Ryegrass	25 pounds per acre
Kentucky 31 Fescue	30 pounds per acre
Reseeding Crimson Clover	10 pounds per acre
January through April 15	
Kentucky 31 Fescue	30 pounds per acre
Resseeding Crimson Clover	30 pounds per acre
Annual Ryegrass	15 pounds per acre
April 16 through August	
Brown Top Millet	30 pounds per acre
Kentucky 31 Fescue	30 pounds per acre
Hulled Bermuda Grass	10 pounds per acre

ZONE 3 - AREAS SUBJECT TO FREQUENT MOWING
REQUIRED POUNDS PER ACRE OF PURE LIVE SEED

Date of Planting	Sept. 1 to Feb. 29		Mar. 1 to Aug. 31	Mar. 1 to Aug. 31
Annual Ryegrass	10	25		
Hulled Bermudagrass			18	
Unhulled Bermudagrass	30		12	12
Annual Lespedeza (Kobe)			38	24
Pensacola Bahia Grass				47
Reseeding Crimson Clover	5			
Notes	1	2	3	3
Required Permanent Plant	Bermudagrass			

1. During this season Ryegrass, Bermudagrass and Clover are required where vegetation must be established within an area no further than 15 feet from the edge of mainline pavement.
(This is usually required for short duration work that is done on pavement resurfacing projects.)
2. Annual Ryegrass is required where vegetation must be established within an area that extends further than 15 feet form the edge of mainline pavement. Seeding in Stubble for the establishment of permanent vegitation is required during the following month of March.
3. Bermudagrass will be required as the permanent plant if it is not shown on the plans that Pensacola Bahia Grass will be required as the permanent plant.

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NEW SEWER FORCE MAIN
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GMC No. CMOB190340

ALABAMA LICENSED No. 35222 PROFESSIONAL ENGINEER MATTHEW STEPHEN MALLER
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EROSION CONTROL DETAILS

C-6.02
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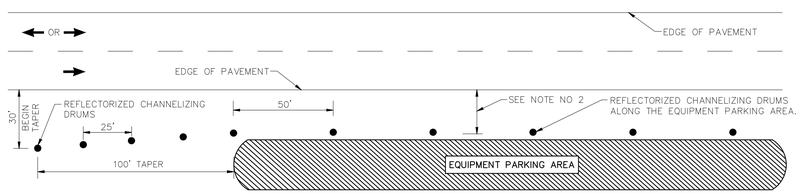
DELINEATING DETAIL FOR EQUIPMENT PARKING OR STORING AREA



NOTES:

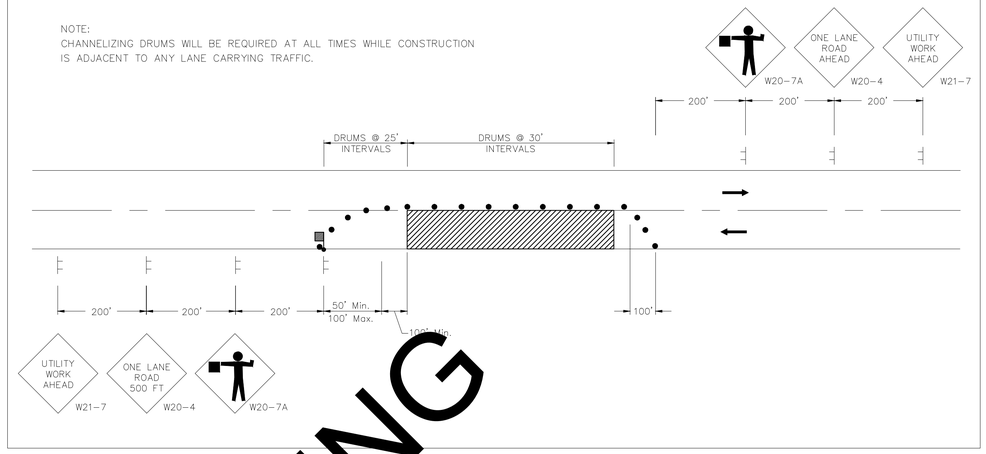
1. SEE ALDOT'S GENERAL TRAFFIC CONTROL PLAN NOTE NO. 702.

2. DRUMS TO BE AS FAR AS PRACTICAL FROM EDGE OF PAVEMENT, MINIMUM DESIRABLE DISTANCE IS 15 FEET FOR FREEWAY TYPE FACILITIES AND 10 FEET FOR OTHER FACILITIES. FOR UNUSUAL CONDITIONS, SUCH AS SPECIAL EQUIPMENT OR LIMITED AVAILABLE SPACE, DIMENSIONS LESS THAN DESIRABLE SHALL BE AS DIRECTED BY THE ENGINEER.

3. ALL DEVICES TO BE FURNISHED BY THE CONTRACTOR WITHOUT COST TO THE ALDOT.

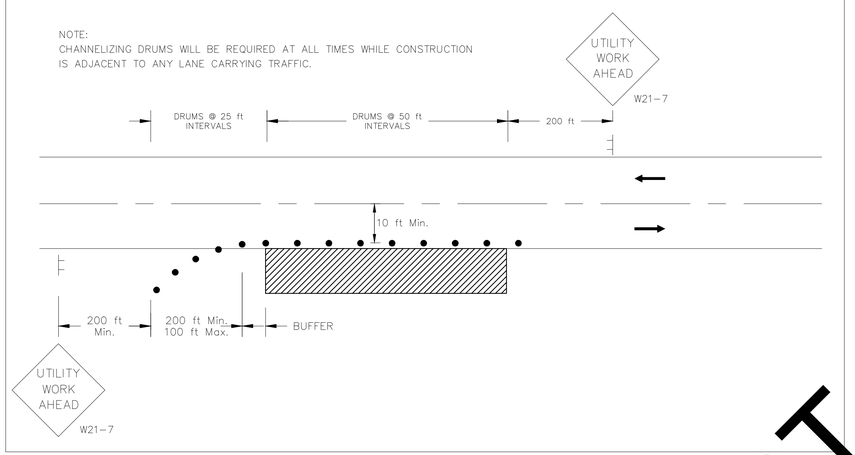
TYPICAL APPLICATION – LANE CLOSURE FOR ONE LANE–TWO WAY TRAFFIC CONTROL

NOTE:
CHANNELIZING DRUMS WILL BE REQUIRED AT ALL TIMES WHILE CONSTRUCTION IS ADJACENT TO ANY LANE CARRYING TRAFFIC.



TYPICAL APPLICATION – SHOULDER WORK WITH MINOR ENCROACHMENT

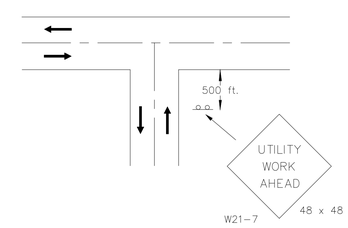
NOTE:
CHANNELIZING DRUMS WILL BE REQUIRED AT ALL TIMES WHILE CONSTRUCTION IS ADJACENT TO ANY LANE CARRYING TRAFFIC.



LEGEND

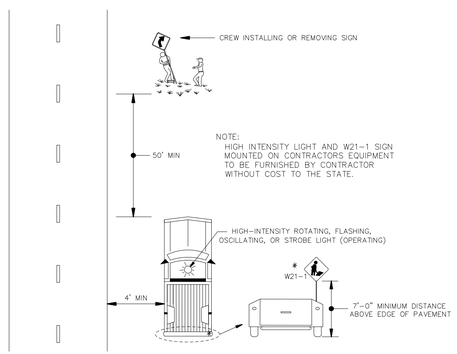
- SIGN, POST MOUNT
- TEMPORARY MOUNT
- ZONE
- WORK AREA
- FLAGGER STATION
- CHANNELIZING DRUM

TYPICAL APPLICATION – TYPICAL AT INTERSECTING STREETS

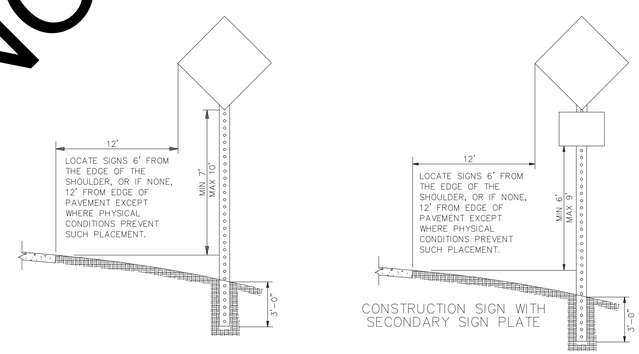


CONSTRUCTION SIGNS

SIGN	DESCRIPTION	SIZE	MOUNT	STANDARD DWG. NO.
W21–7	UTILITY WORK AHEAD	48" x 48"	TEMP	SHS–30
W20–4	ONE LANE ROAD AHEAD	48" x 48"	TEMP	SHS–29
W20–7	FLAGGER	48" x 48"	TEMP	SHS–29



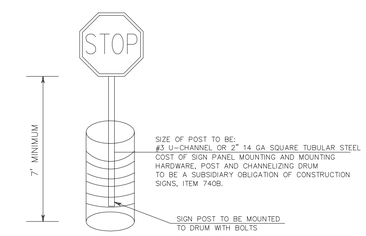
TYPICAL METHOD FOR INSTALLING OR REMOVING CONSTRUCTION SIGNS



CONSTRUCTION SIGN WITH SECONDARY SIGN PLATE

NOTE : IF THE CONTRACTOR CHOOSES TO SPLICE THE POSTS FOR THE REQUIRED POST MOUNTED CONSTRUCTION SIGNS, THEY SHALL BE SPLICED AS SHOWN ON DRAWING IHS–710–23.

HEIGHT AND LATERAL LOCATION OF POST MOUNTED CONSTRUCTION SIGNS



DETAIL FOR DRUM MOUNTED CONSTRUCTION SIGNS

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GMC No. CMOB190340

ALABAMA LICENSED No. 36272 PROFESSIONAL ENGINEER MATTHEW STEPHEN WALLER
9.17.2021

TRAFFIC CONTROL DETAILS

C–6.03

sheet 29 of 29

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