

09/08/99

9/9/2021 R:\Utilities\Engineering\UC\Proj\Pump Station\282\_001\_R5021\ut\_ps\_tsh\_UCP01\_psh.dgn

TIP PROJECT: R-5021

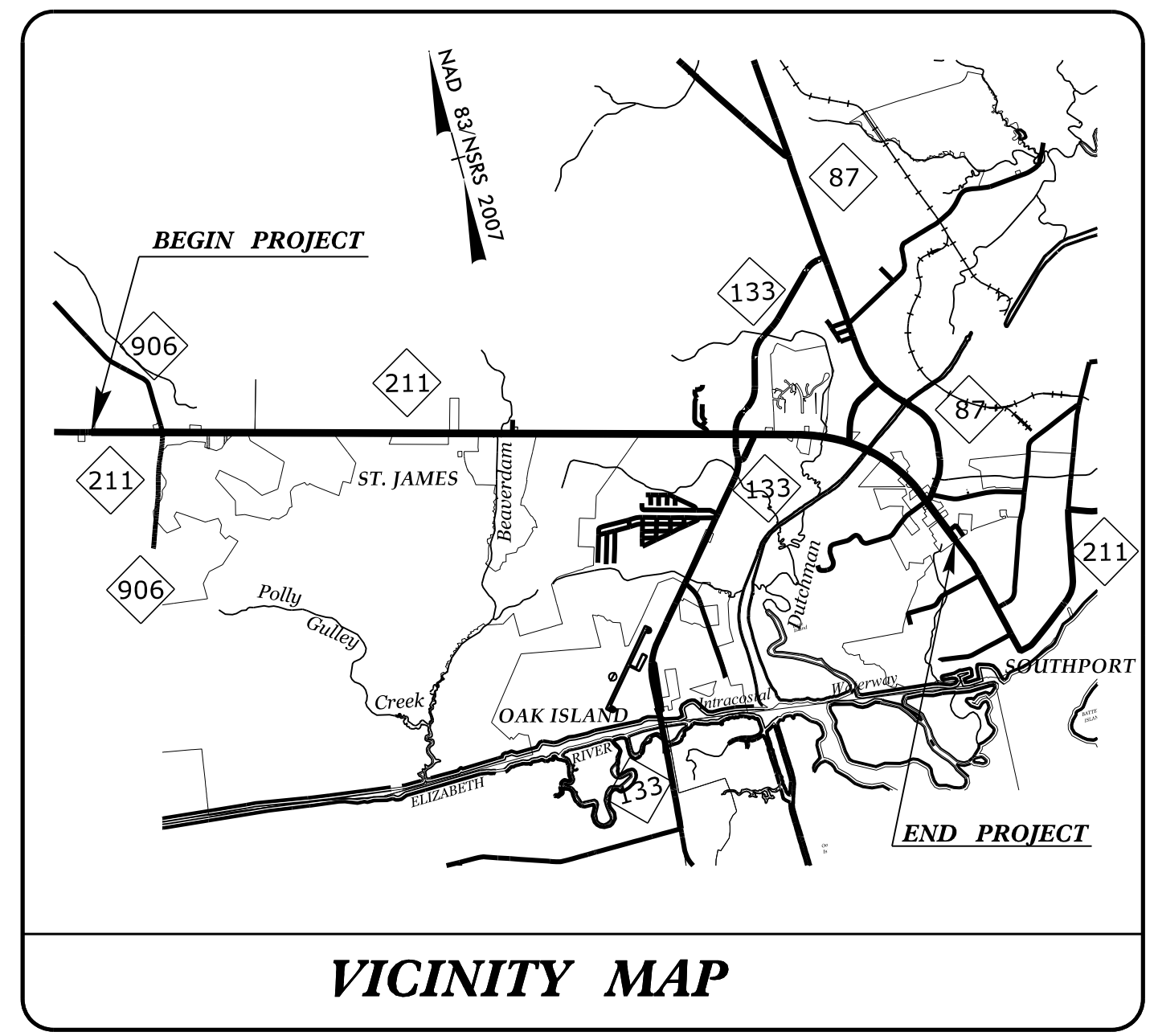
T.I.P. NO.	SHEET NO.
R-5021	UC-P1

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

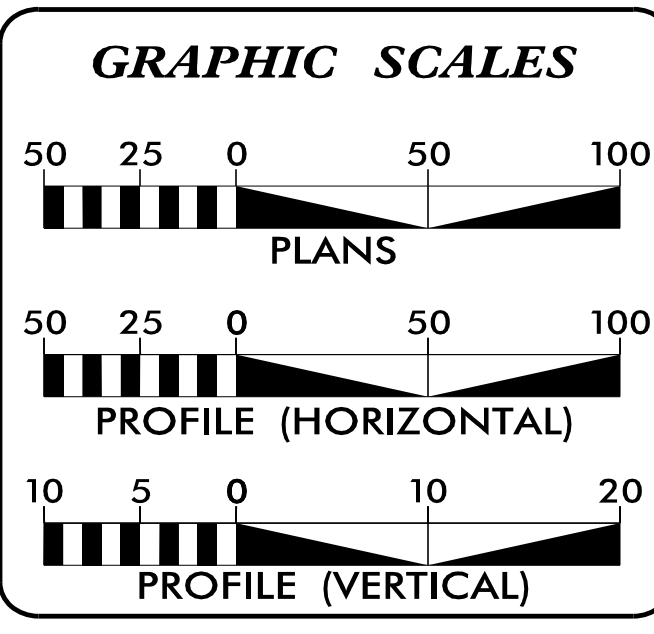
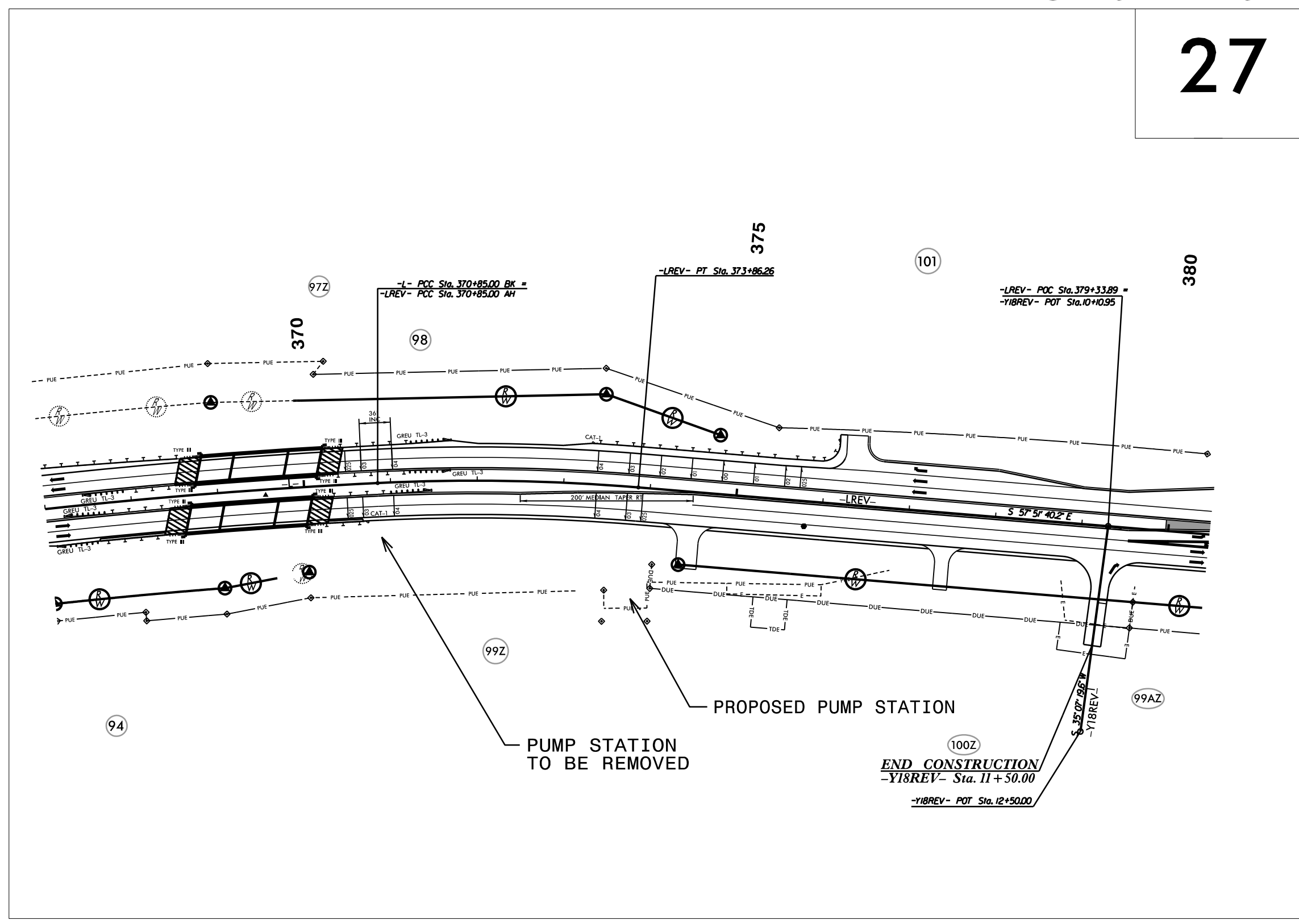
**UTILITY CONSTRUCTION  
PUMP STATION PLANS  
BRUNSWICK COUNTY**

LOCATION: NC 211 FROM WEST OF SR 1500 (MIDWAY ROAD)  
TO EAST OF NC 87  
TYPE OF WORK: PUMP STATION RELOCATION

UC-P5  
27



VICINITY MAP



INDEX OF SHEETS	
SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-P2	SYMBOL
UC-P3	NOTES
UC-P4 THRU UC-P11	PUMP STATION SHEETS
UC-P12 THRU UC-P16	ELECTRICAL SHEETS

**WATER AND SEWER OWNERS ON PROJECT**

(A) SANITARY SEWER - SE BRUNSWICK SANITARY DISTRICT

PREPARED IN THE OFFICE OF

**RK&K**  
RUMMEL, KLEPPER & KAHL, LLP  
8601 SIX FORKS ROAD, FORUM 1 SUITE 700  
RALEIGH, NORTH CAROLINA 27615-3960  
NC LICENSE NO. F-0112  
1-888-521-4455 OR 919-878-9560

Kevin Nash, PE CONSULTANT CONTACT #1  
Daniel Tichinel, PE CONSULTANT CONTACT #2  
Aaron Stullenbarger CONSULTANT CONTACT #3

SEAL

DocuSigned by:  
Kevin Nash  
04337F4B269542E

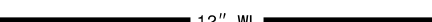

























**DIVISION OF HIGHWAYS UTILITIES UNIT**  
1555 MAIL SERVICES CENTER  
RALEIGH NC 27699-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

Lonny Sleeper UTILITIES DIVISION ENGINEER  
Michael Bass ENGINEERING TECHNICIAN ADVANCED  
Steve Davis UTILITY DIVISION COORDINATOR

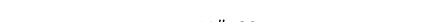

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

## UTILITIES PLAN SHEET SYMBOLS













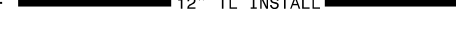


### PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11¼ Degree Bend	
22½ Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
Cross	
Reducer	
Gate Valve	
Butterfly Valve	
Tapping Valve	
Line Stop	
Line Stop with Bypass	
Blow Off	
Fire Hydrant	
Relocate Fire Hydrant	
Remove Fire Hydrant	
Water Meter	
Relocate Water Meter	
Remove Water Meter	
Water Pump Station	
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	


















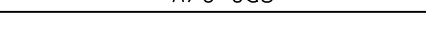



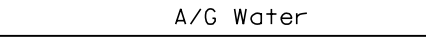

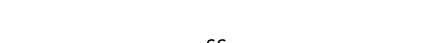















### PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	
Force Main Sewer Line (Sized as Shown)	
Manhole (Sized per Note)	
Sewer Pump Station	

### PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole		Thrust Block	
Telephone Pole		Air Release Valve	
Joint Use Pole		Utility Vault	
Telephone Pedestal		Concrete Pier	
Utility Line by Others (Type as Shown)		Steel Pier	
Trenchless Installation		Plan Note	
Encasement by Open Cut		Pay Item Note	
Encasement			

### EXISTING UTILITIES SYMBOLS

Power Pole		*Underground Power Line	
Telephone Pole		*Underground Telephone Cable	
Joint Use Pole		*Underground Telephone Conduit	
Utility Pole		*Underground Fiber Optics Telephone Cable	
Utility Pole with Base		*Underground TV Cable	
H-Frame Pole		*Underground Fiber Optics TV Cable	
Power Transmission Line Tower		*Underground Gas Pipeline	
Water Manhole		Aboveground Gas Pipeline	
Power Manhole		*Underground Water Line	
Telephone Manhole		Aboveground Water Line	
Sanitary Sewer Manhole		*Underground Gravity Sanitary Sewer Line	
Hand Hole for Cable		Aboveground Gravity Sanitary Sewer Line	
Power Transformer		*Underground SS Forced Main Line	
Telephone Pedestal		Underground Unknown Utility Line	
CATV Pedestal		SUE Test Hole	
Gas Valve		Water Meter	
Gas Meter		Water Valve	
Located Miscellaneous Utility Object		Fire Hydrant	
Abandoned According to Utility Records		Sanitary Sewer Cleanout	
End of Information			

\*For Existing Utilities  
 Utility Line Drawn from Record (Type as Shown)  
 Designated Utility Line (Type as Shown)

5/14/99  
 2/9/2012  
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 REV: 2/1/2012

5/14/99  
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# UTILITY CONSTRUCTION


## GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE MORE CONSERVATIVE REQUIREMENTS OF THE SOUTHEAST BRUNSWICK SANITARY DISTRICT "STANDARD SPECIFICATIONS AND DETAILS" DATED JUNE 2008, THE NCDOT 2018 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES", OR THE NCDOT PUMP STATION SPECIAL PROVISIONS.
2. THE EXISTING UTILITIES BELONG TO SOUTHEAST BRUNSWICK SANITARY DISTRICT. THE DISTRICT'S CONTACT PERSON IS BRYAN MCCABE, AND HE CAN BE CONTACTED BY PHONE AT 910-471-1057.
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
9. ALL UTILITY & PUMP STATION MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

## PROJECT SPECIFIC NOTES:


1. CONTRACTOR SHALL COORDINATE CLOSELY WITH NCDOT AND UTILITY OWNERS DURING INSTALLATION OF PUMP STATION & DEMOLITION OF EXISTING PUMP STATION FOR ANY NECESSARY SHUT DOWNS OR BY-PASS PUMPING. BY-PASS PUMPING IS THE CONTRACTOR'S RESPONSIBILITY.
2. NEW PUMP STATION SHALL BE IN SERVICE PRIOR TO DEMOLITION OF EXISTING PUMP STATION.
3. PUMPS, BASES, GUIDE RAILS, VALVES, AND ALL OTHER RELATED EQUIPMENT SHALL BE DELIVERED TO SOUTHEAST BRUNSWICK SANITARY DISTRICT WITH MINIMAL DAMAGE. COORDINATE DELIVERY WITH SOUTHEAST BRUNSWICK SANITARY DISTRICT. ITEMS THAT SOUTHEAST BRUNSWICK SANITARY DISTRICT DOES NOT WANT TO KEEP, SHALL BE DISPOSED OF BY THE CONTRACTOR.
4. ALL ELECTRICAL AND CONTROL EQUIPMENT SHALL BE DELIVERED TO SOUTHEAST BRUNSWICK SANITARY DISTRICT WITH MINIMAL DAMAGE. CONTRACTOR TO COORDINATE REMOVAL OF ELECTRICAL EQUIPMENT AND ELECTRIC SERVICE WITH THE POWER COMPANY.
5. SEWER PUMP STATION PLANS DESIGNED AND DRAWN AROUND THE FLYGT NP3153 HT PUMPS. CONTRACTOR IS RESPONSIBLE FOR ANY DESIGN CHANGES TO WET WELL, PUMP BASE PADS, PIPING, AND ANY OTHER RELATED PUMP STATION COMPONENTS IF CONTRACTOR CHOOSES TO USE AN APPROVED EQUAL.

PROJECT REFERENCE NO.	SHEET NO.
	UC-P3
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

## UTILITY CONSTRUCTION

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

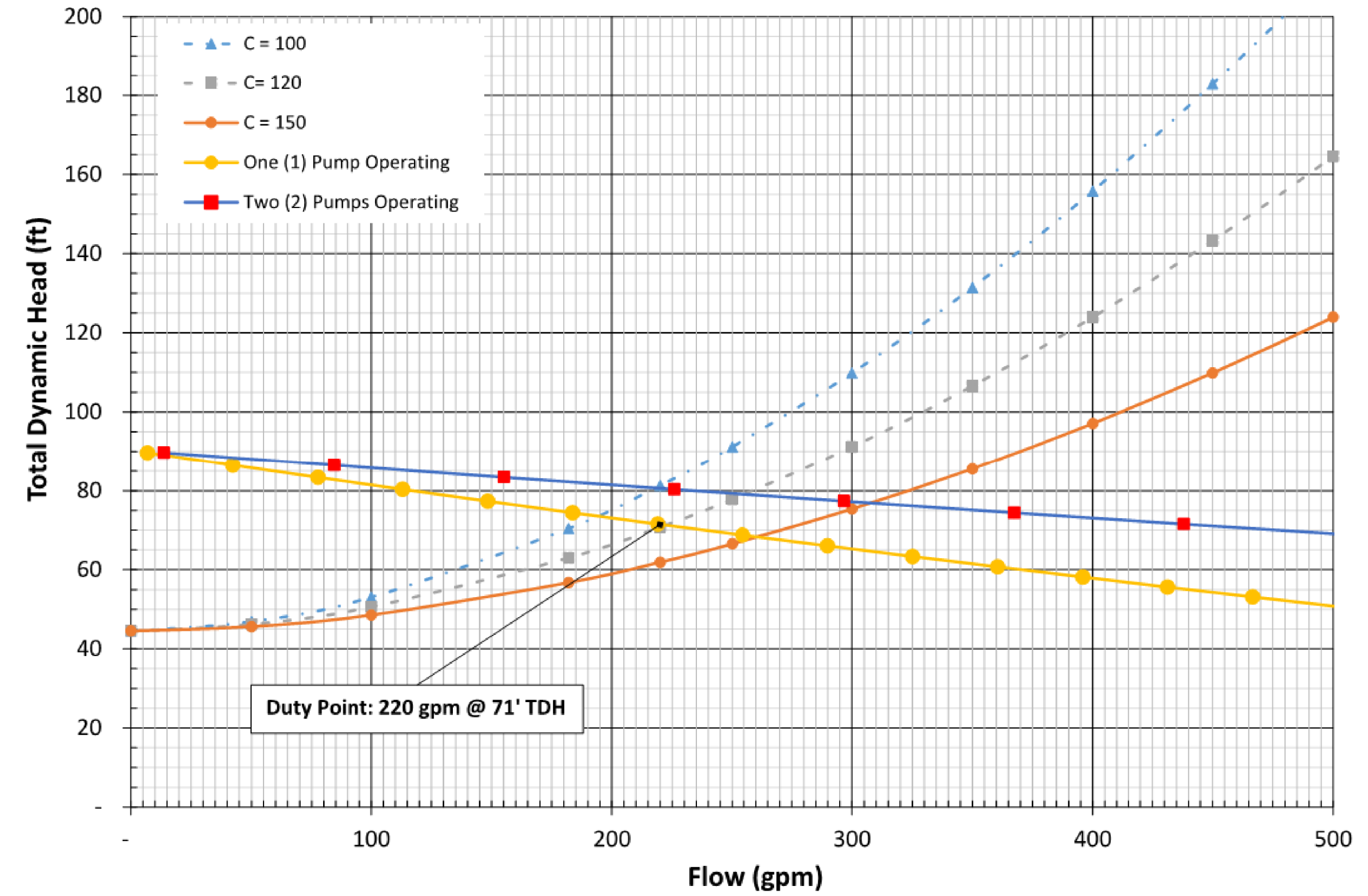
5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-5021	UC-P4
DESIGNED BY: DWT	
DRAWN BY: RAS	
CHECKED BY: JWC	
APPROVED BY: BMB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
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**Southeast Brunswick Sanitary District SPS #4 - System Head & Pump Curve**

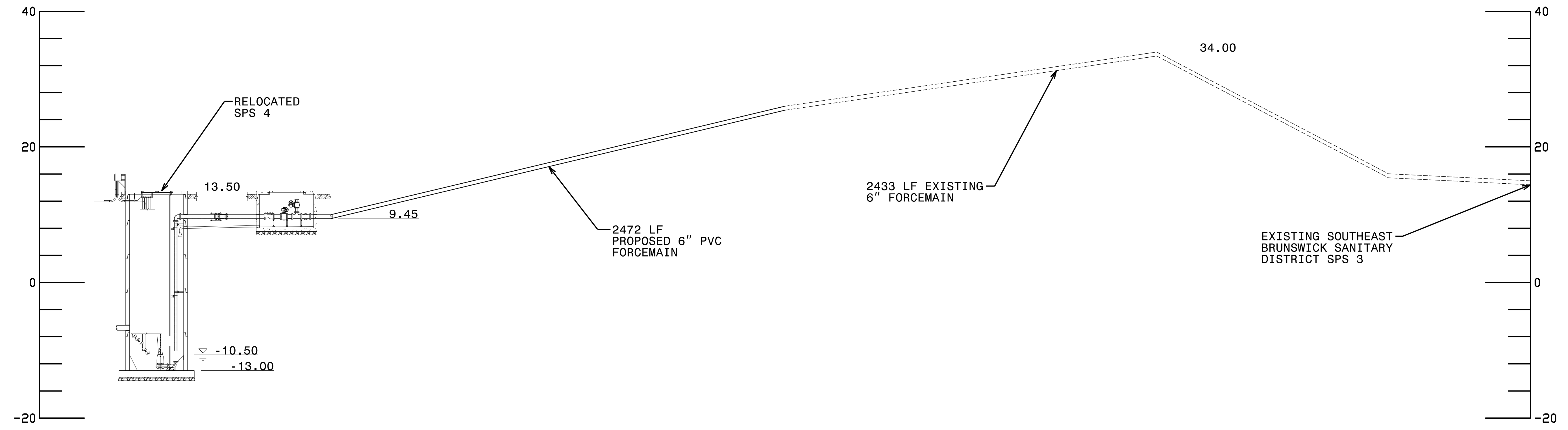
Hazen - Williams Method

Flygt Model NT 3153 HT, 230 mm Impeller



**UTILITY CONSTRUCTION**  
**DOCUMENT NOT CONSIDERED FINAL**  
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- NOTES:**
1. THIS PROFILE ONLY SHOWS THE MAIN SEWER PROCESS FLOW TO DEVELOP THE SYSTEM CURVE.
  2. EXISTING FACILITIES ARE SHOWN AS DASHED, WHEREAS PROPOSED FACILITIES ARE SHOWN AS BLACK.
  3. EXISTING FACILITIES SHOWN ARE BASED ON NC-DOT R-3324 UTILITY CONSTRUCTION PLANS DATED 12/6/2012.



**PUMP STATION HYDRAULIC PROFILE**


NO HORIZONTAL SCALE  
 VERTICAL SCALE AS SHOWN



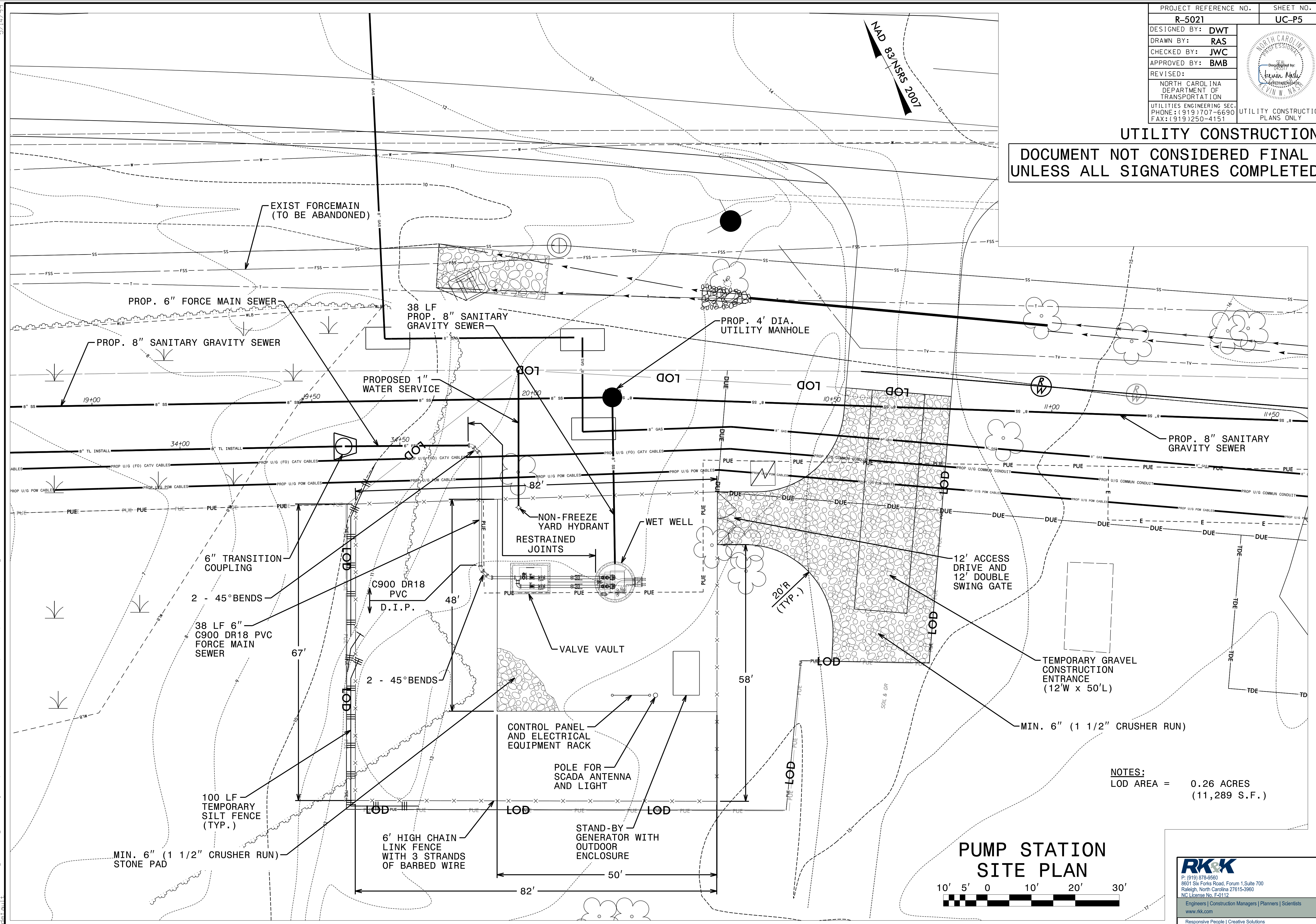
**RKK**  
 P: (919) 978-9560  
 8601 Six Forks Road, Forum 1, Suite 700  
 Raleigh, North Carolina 27615-3960  
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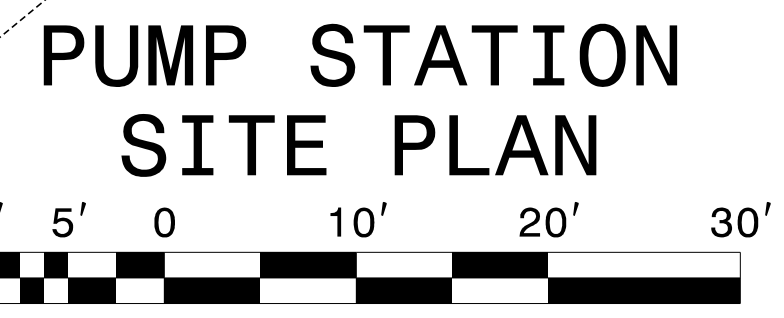
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DESIGNED BY: DWT	
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**NOTES:**  
LOD AREA = 0.26 ACRES  
(11,289 S.F.)



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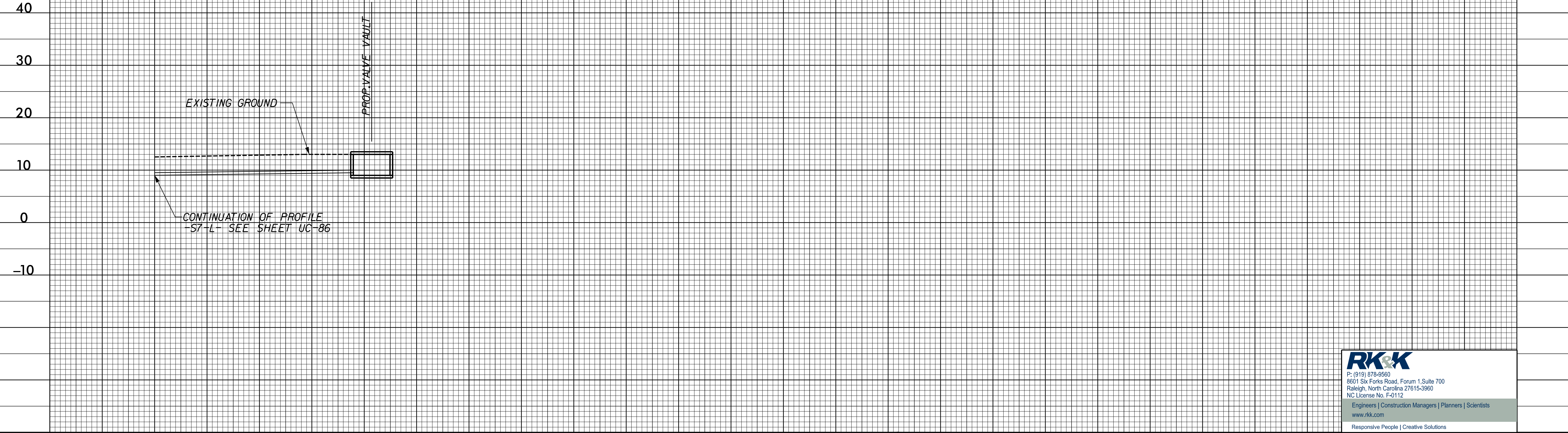
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### PS-1




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### PS-2



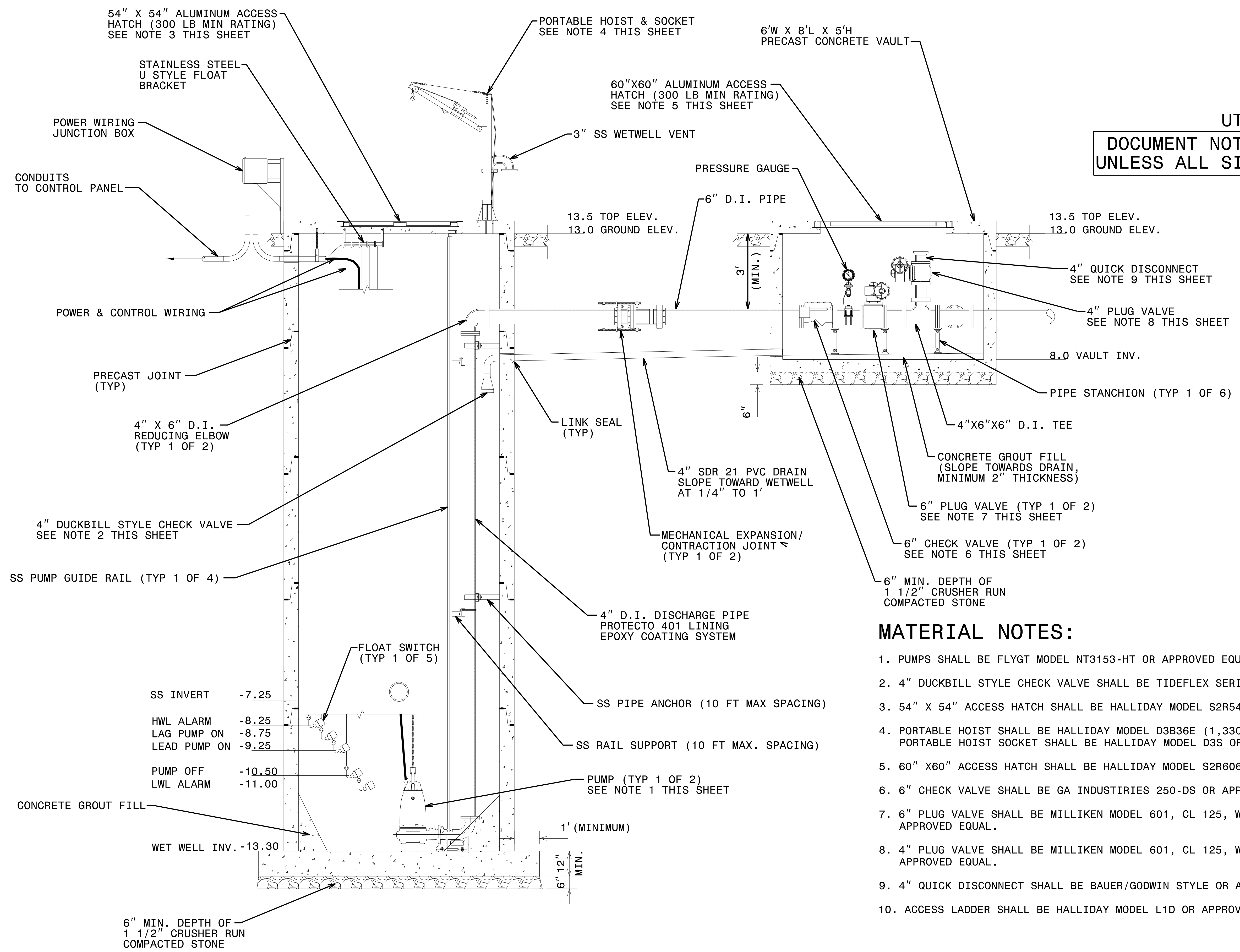

P: (919) 878-9580  
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R-5021	UC-P8
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DRAWN BY: RAS	
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APPROVED BY: BMB	
REVISED:	
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**UTILITY CONSTRUCTION**

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**MATERIAL NOTES:**

- PUMPS SHALL BE FLYGT MODEL NT3153-HT OR APPROVED EQUAL.
- 4" DUCKBILL STYLE CHECK VALVE SHALL BE TIDEFLEX SERIES TF2 OR APPROVED EQUAL.
- 54" X 54" ACCESS HATCH SHALL BE HALLIDAY MODEL S2R5454 OR APPROVED EQUAL.
- PORTABLE HOIST SHALL BE HALLIDAY MODEL D3B36E (1,330 LB RATING) OR APPROVED EQUAL. PORTABLE HOIST SOCKET SHALL BE HALLIDAY MODEL D3S OR APPROVED EQUAL.
- 60" X60" ACCESS HATCH SHALL BE HALLIDAY MODEL S2R6060 OR APPROVED EQUAL.
- 6" CHECK VALVE SHALL BE GA INDUSTRIES 250-DS OR APPROVED EQUAL.
- 6" PLUG VALVE SHALL BE MILLIKEN MODEL 601, CL 125, WITH HANDWHEEL OPERATOR OR APPROVED EQUAL.
- 4" PLUG VALVE SHALL BE MILLIKEN MODEL 601, CL 125, WITH HANDWHEEL OPERATOR OR APPROVED EQUAL.
- 4" QUICK DISCONNECT SHALL BE BAUER/GODWIN STYLE OR APPROVED EQUAL.
- ACCESS LADDER SHALL BE HALLIDAY MODEL L1D OR APPROVED EQUAL.

**PUMP STATION SECTION A-A**





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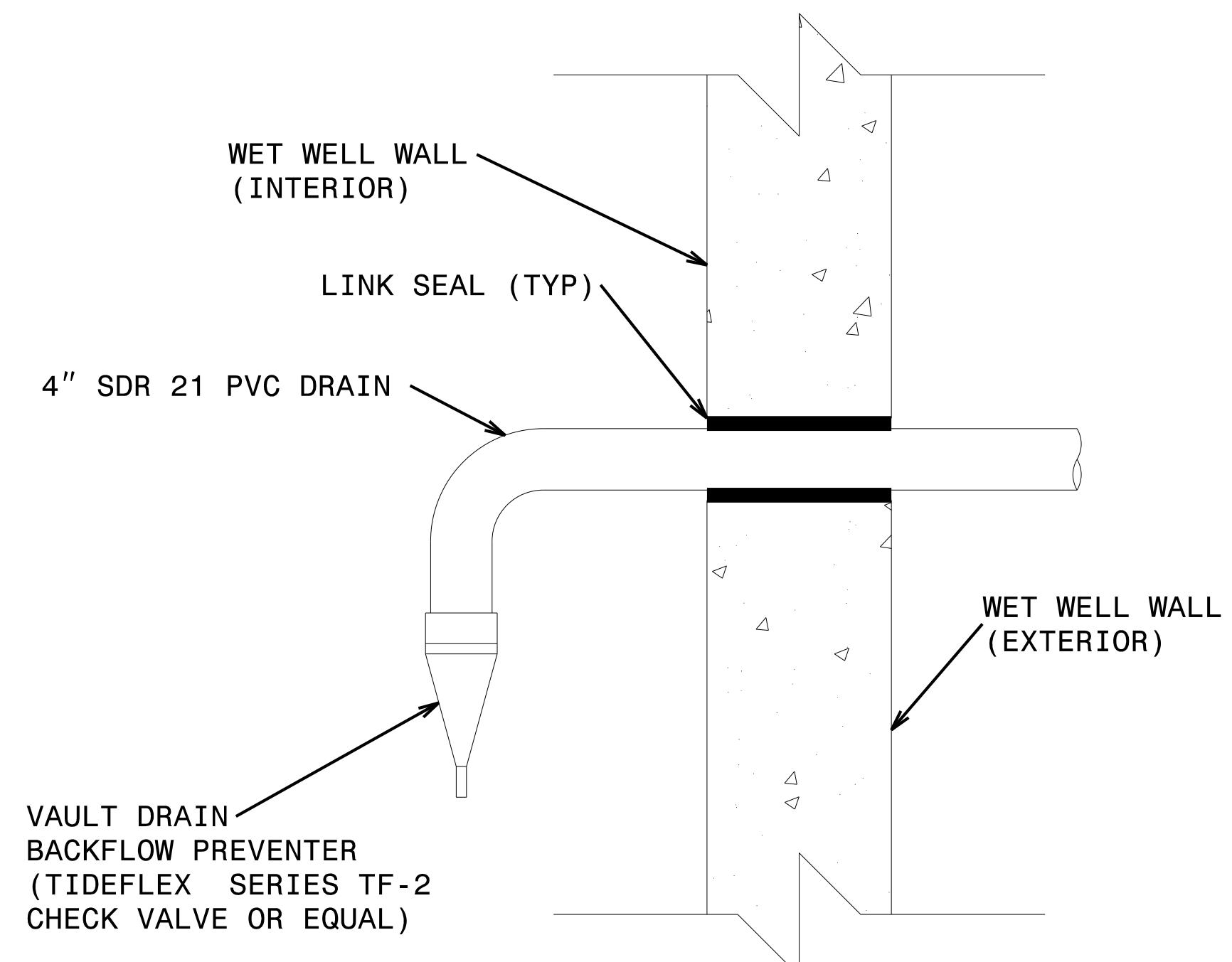


5/14/99

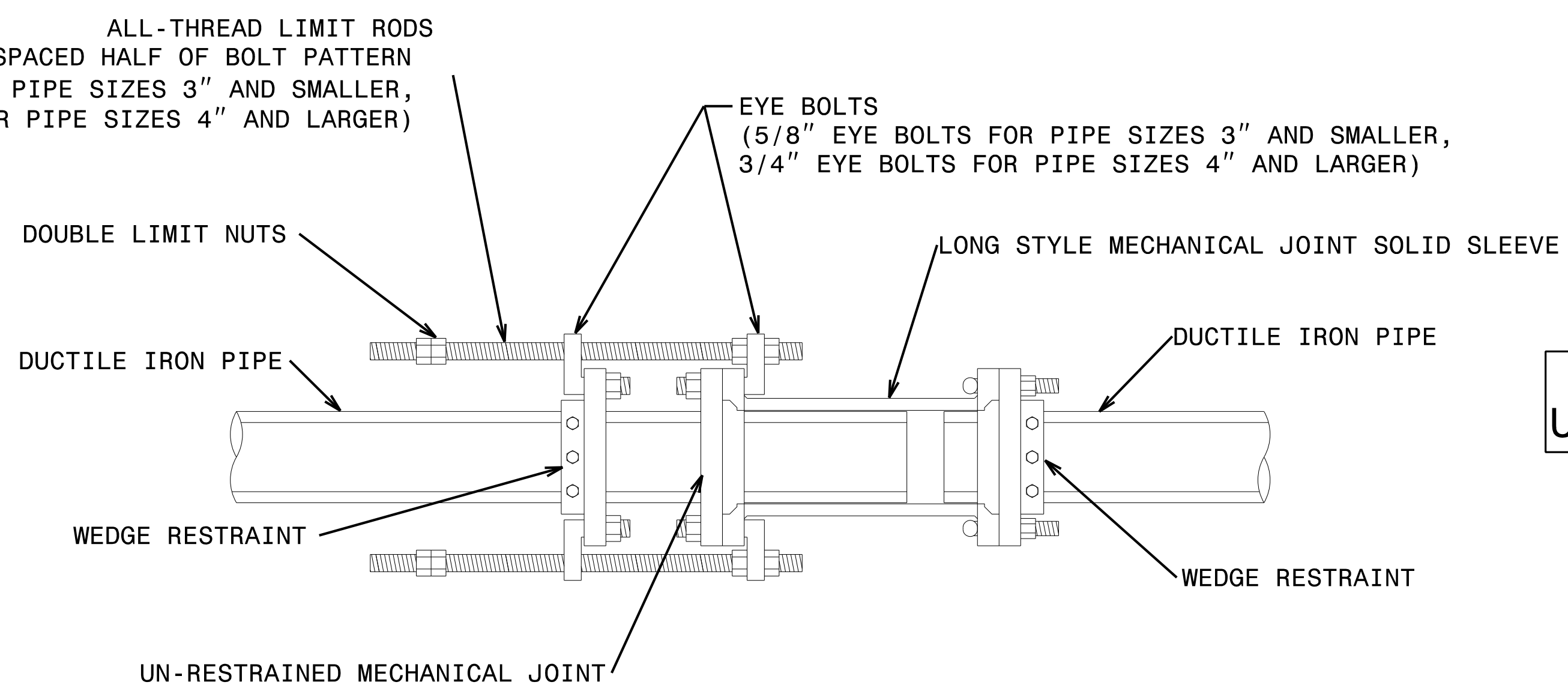
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R-5021	UC-P9
DESIGNED BY: DWT	
DRAWN BY: RAS	
CHECKED BY: JWC	
APPROVED BY: BMB	
REVISED:	
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UTILITY CONSTRUCTION PLANS ONLY	

**UTILITY CONSTRUCTION**

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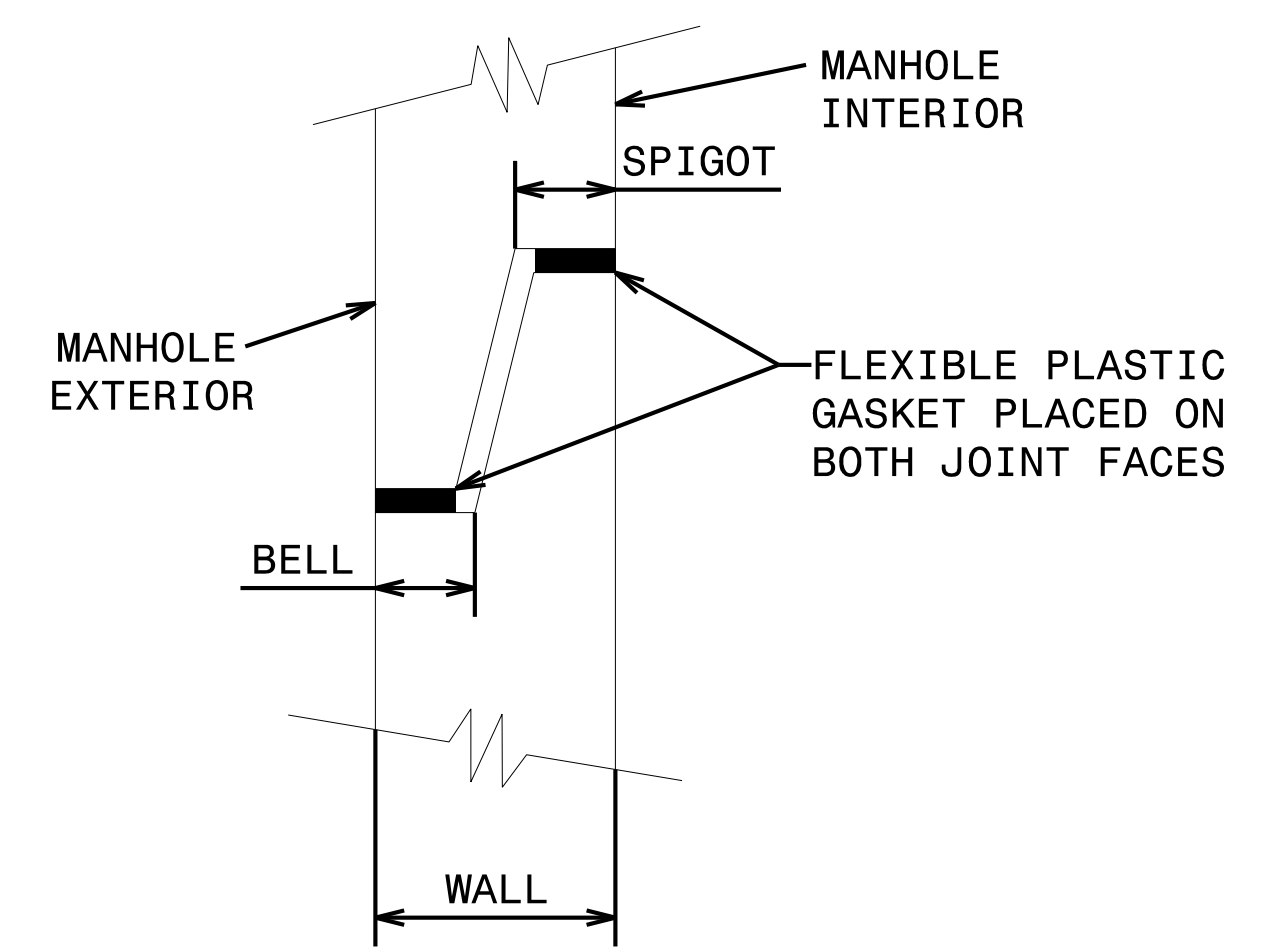


**VAULT DRAIN BACKFLOW PREVENTER DETAIL**  
NOT TO SCALE



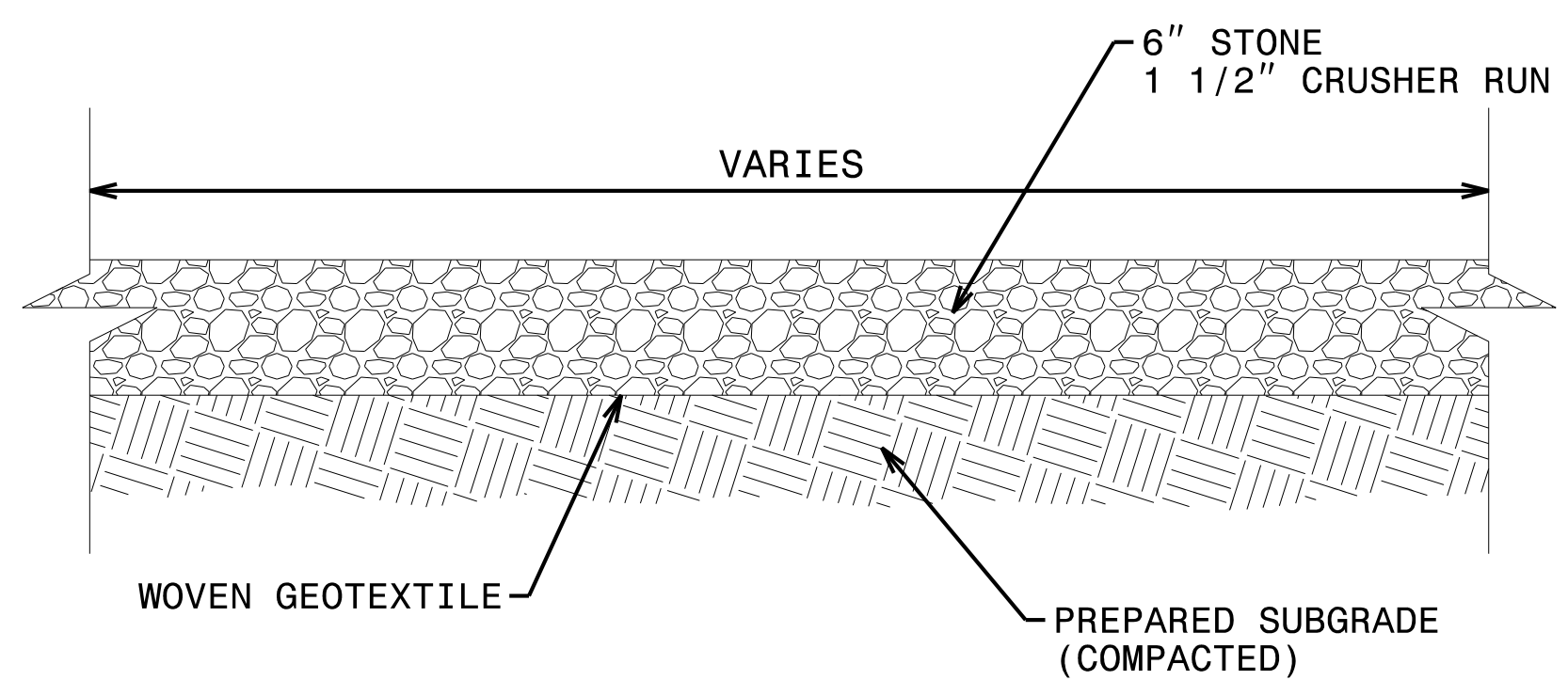
- NOTE :
1. CONTRACTOR MUST SET DOUBLE LIMIT NUTS AT A DISTANCE THAT DOES NOT ALLOW THE PIPE TO BE PULLED OUT OF THE SOLID SLEEVE DURING EXPANSION.
  2. ABOVE DETAIL DEPICTS EXPANSION/CONTRACTION JOINT FOR PIPE SIZES 3" AND LARGER. EXPANSION/CONTRACTION JOINT FOR 2" PVC PIPE IS SIMILAR AND UTILIZES SPLIT CLAMP-STYLE RESTRAINT RINGS. RESTRAINT RING FOR BELL END OF PIPE SHALL BE NON-SERRATED AND THE RESTRAINT RING FOR THE PLAIN END OF PIPE SHALL BE SERRATED.

**EXPANSION/CONTRACTION JOINT DETAIL**  
NOT TO SCALE

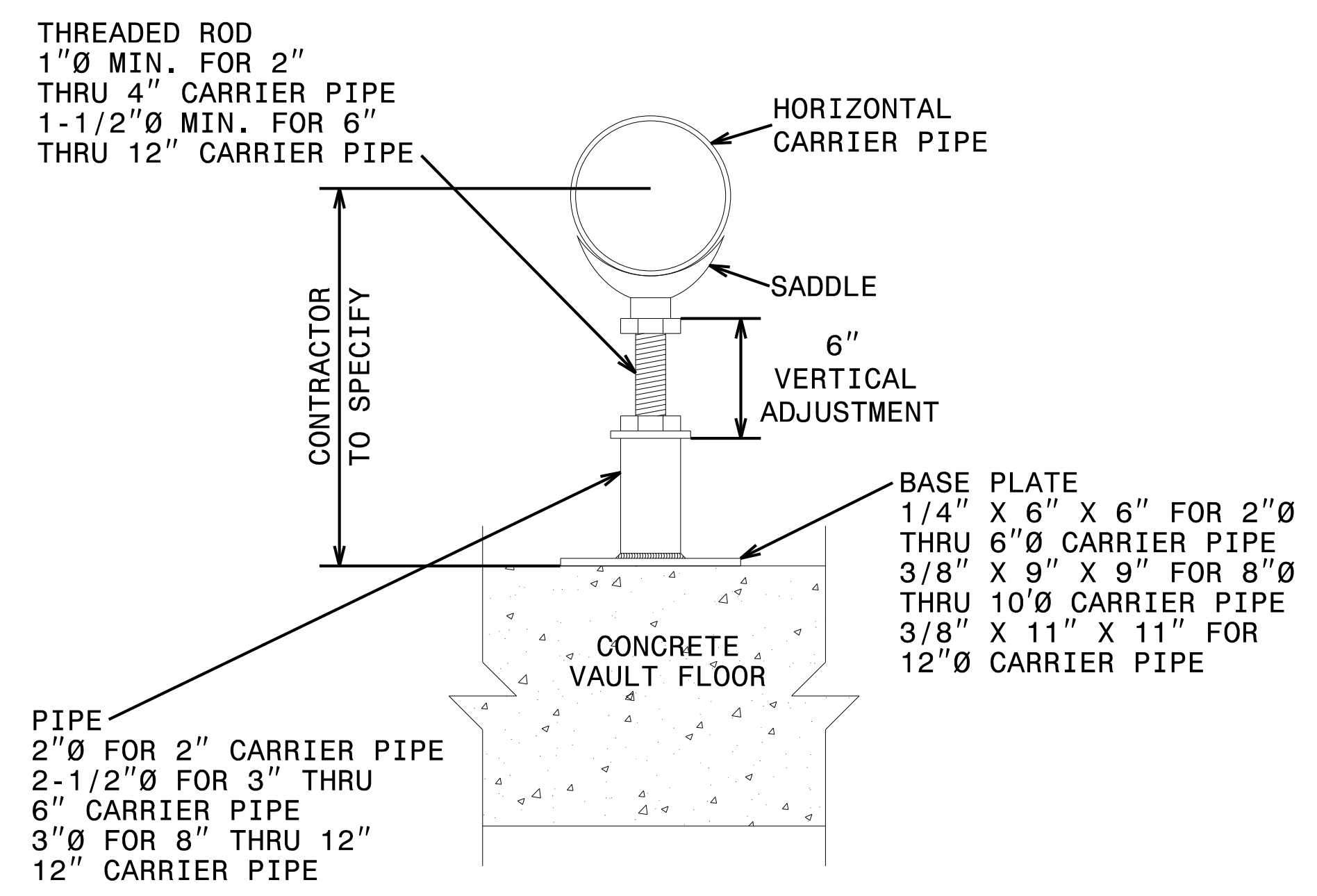


NOTE: CONTRACTOR SHALL COORDINATE JOINT LOCATIONS TO AVOID PIPE PENETRATIONS.

**PRECAST JOINT DETAIL**  
NOT TO SCALE



**PUMP STATION GRAVEL PAD / ENTRANCE TYPICAL SECTION**  
NOT TO SCALE




= PIPE STAND LOCATION ON PLAN VIEW DRAWINGS. STANCHION SHALL BE STAINLESS STEEL.

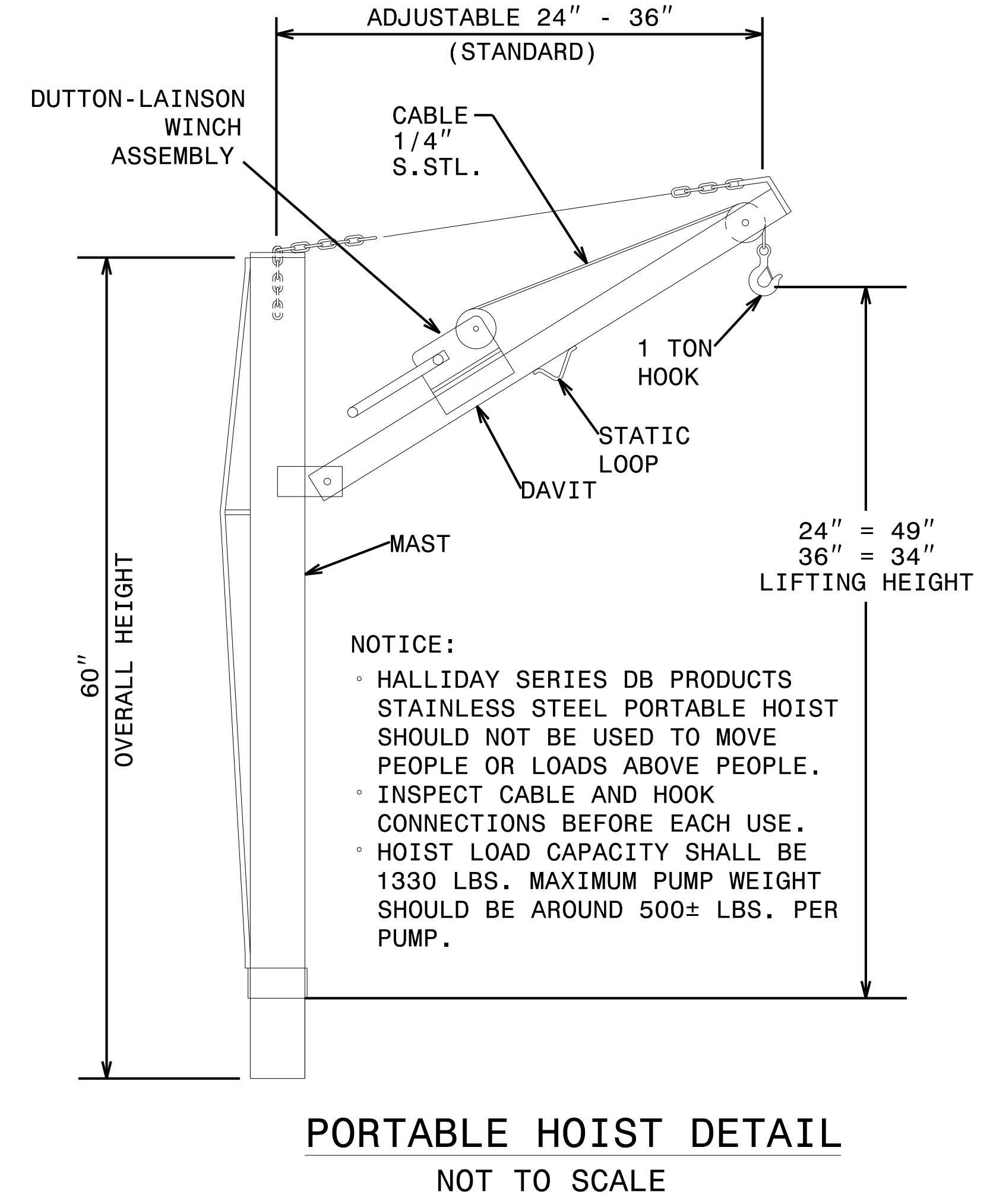
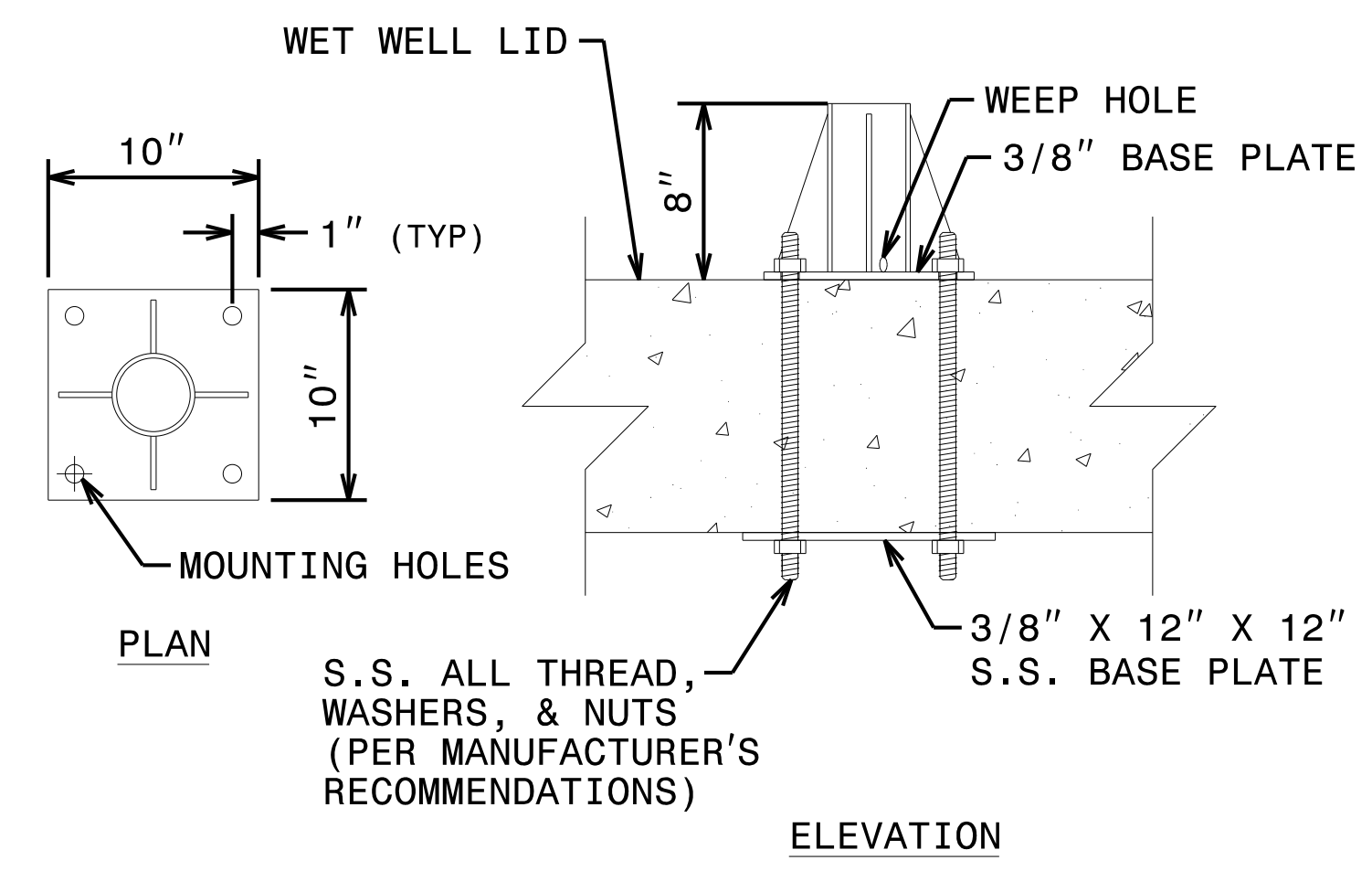
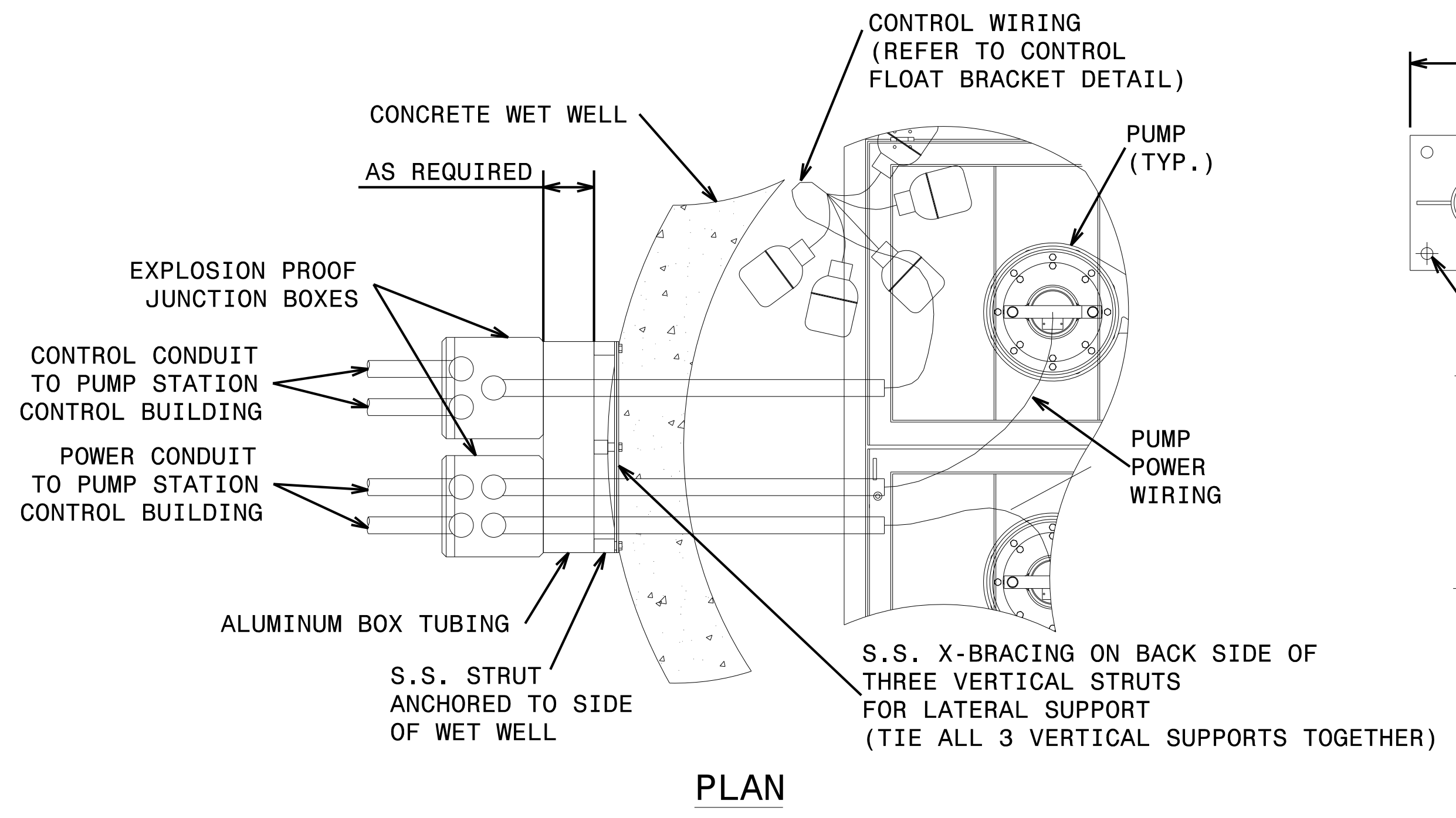
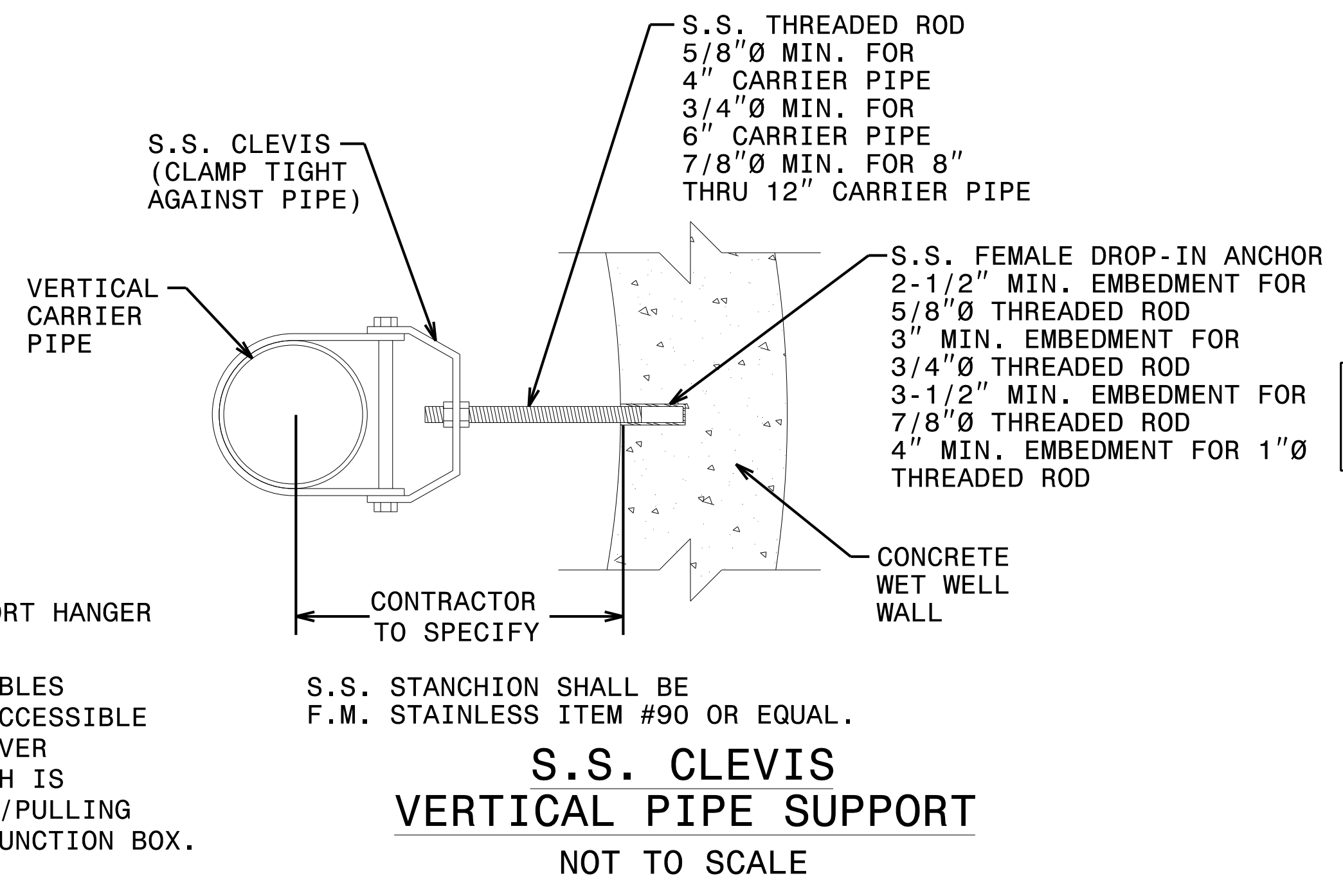
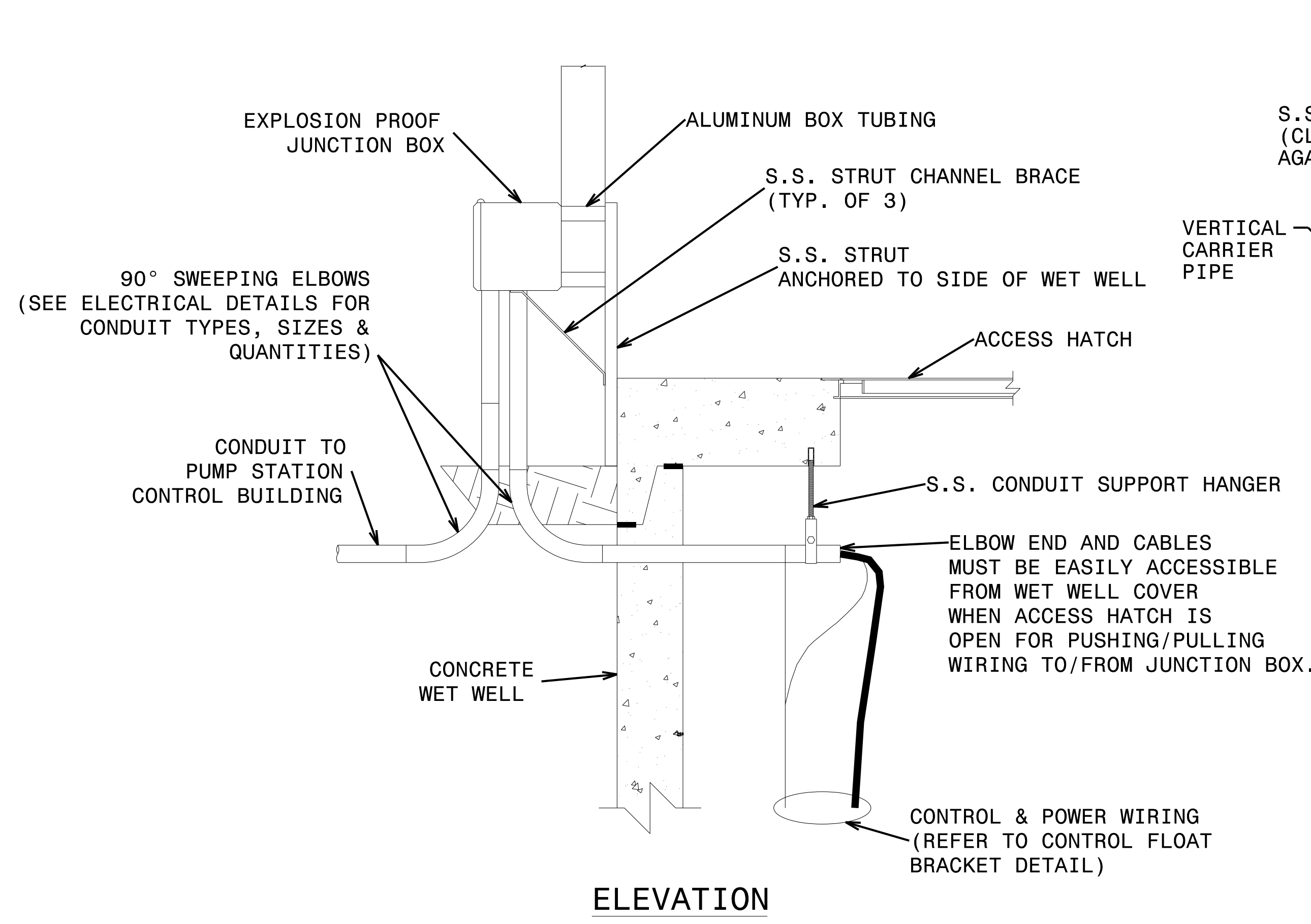
**STANCHION SADDLE HORIZONTAL PIPE SUPPORT**  
NOT TO SCALE

**PUMP STATION DETAILS**

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PROJECT REFERENCE NO.	SHEET NO.
R-5021	UC-P10
DESIGNED BY: DWT	
DRAWN BY: RAS	
CHECKED BY: JWC	
APPROVED BY: BMB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

**UTILITY CONSTRUCTION**  
**DOCUMENT NOT CONSIDERED FINAL**  
**UNLESS ALL SIGNATURES COMPLETED**




NOTE: REFER TO ELECTRICAL PLANS AND DETAILS FOR FURTHER INFORMATION.

**JUNCTION BOX ARRANGEMENT**  
**DETAIL**  
 NOT TO SCALE

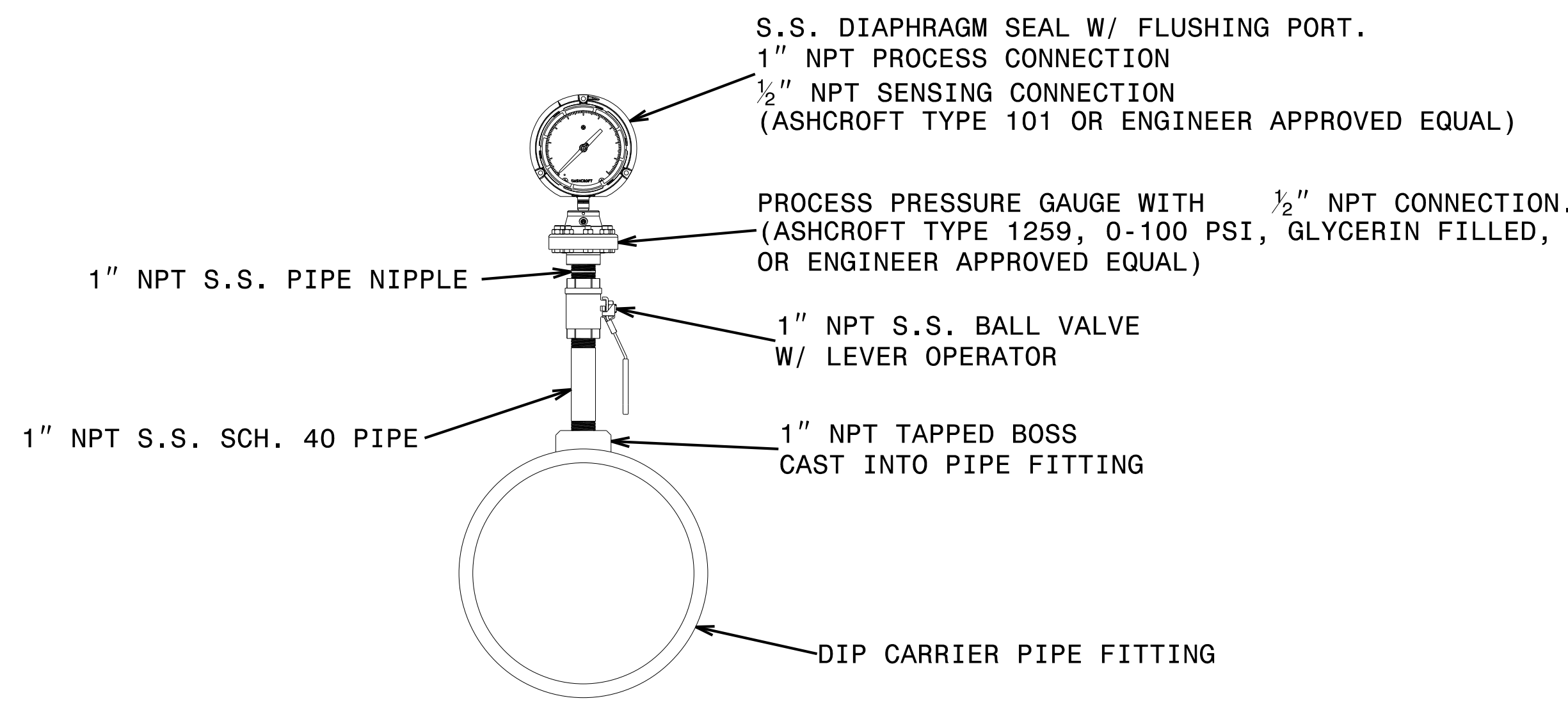
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5/14/99  
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PROJECT REFERENCE NO.	SHEET NO.
R-5021	UC-P11
DESIGNED BY: DWT	
DRAWN BY: RAS	
CHECKED BY: JWC	
APPROVED BY: BMB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

**UTILITY CONSTRUCTION**

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

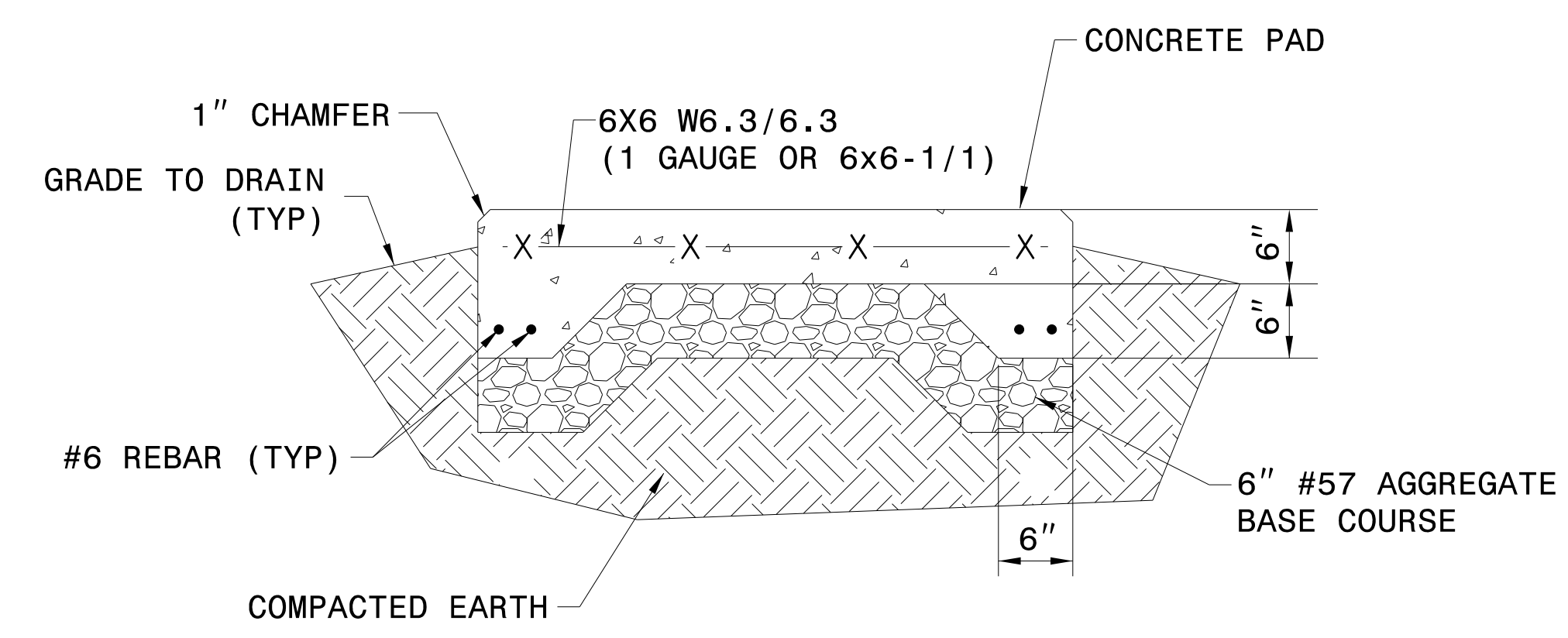


**PRESSURE GAUGE FOR SEWER APPLICATIONS**  
NOT TO SCALE

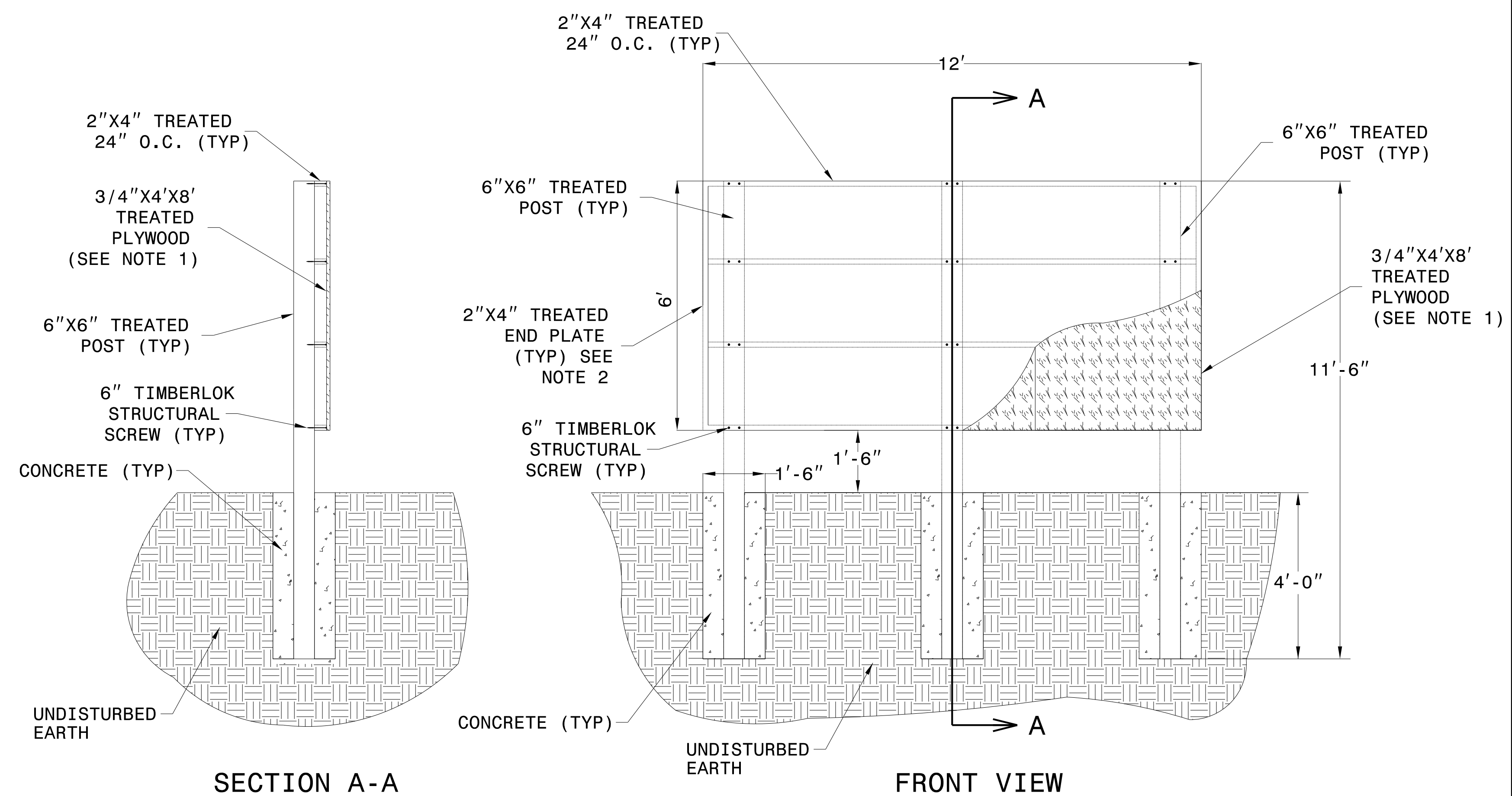
**ELECTRICAL BACKBOARD NOTES:**

- TREATED PLYWOOD SHALL BE ATTACHED TO 2X4 FRAME WITH 2-1/2" L EXTERIOR ACQ SCREWS @ 8" O.C.
- TREATED 2X4 END PLATES BE ATTACHED TO FRAME WITH 3 1/2" L EXTERIOR ACQ SCREWS.

**NOTE :** CONTRACTOR SHALL COORDINATE THE SIZE OF THE CONCRETE GENERATOR PAD WITH THE ACTUAL GENERATOR BEING FURNISHED. CONCRETE PAD SHALL EXTEND 6" BEYOND ALL SIDES OF THE GENERATOR.



**GENERATOR PAD DETAIL**  
NOT TO SCALE



**SECTION A-A**

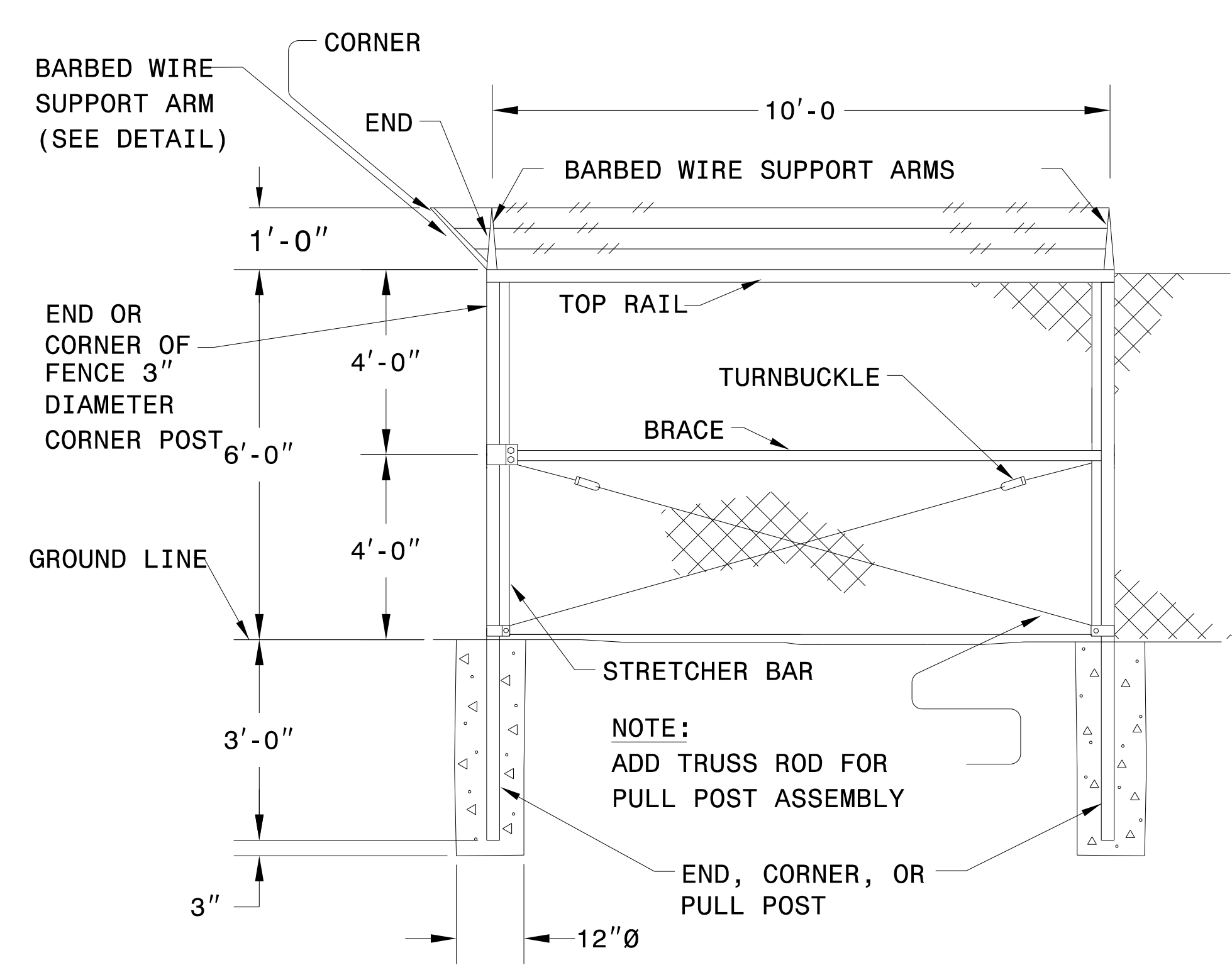
**FRONT VIEW**

**ELECTRICAL BACKBOARD DETAIL**  
NOT TO SCALE

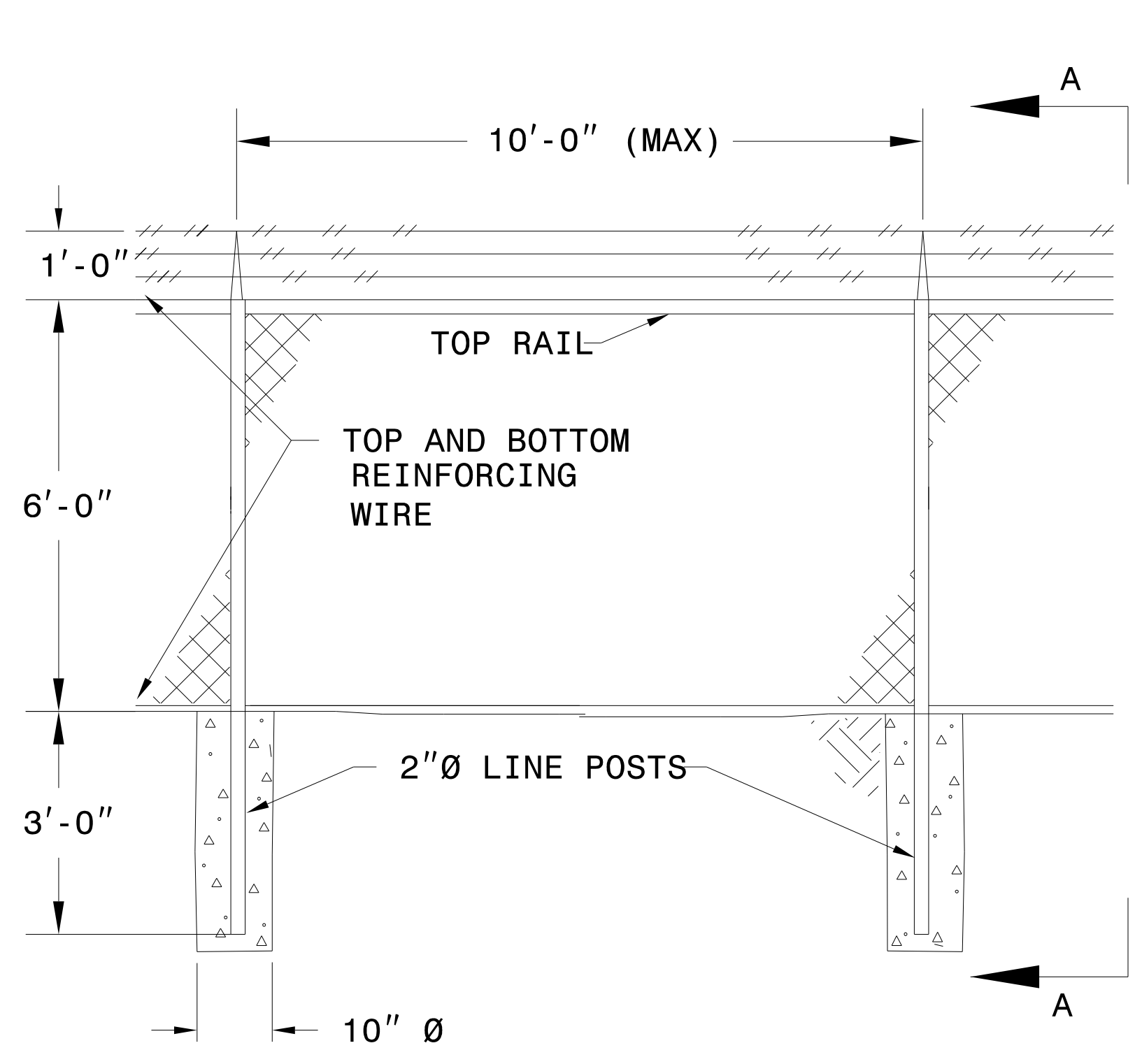
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PROJECT REFERENCE NO.	SHEET NO.
R-5021	UC-P12
DESIGNED BY: DWT	
DRAWN BY: RAS	
CHECKED BY: JWC	
APPROVED BY: BMB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

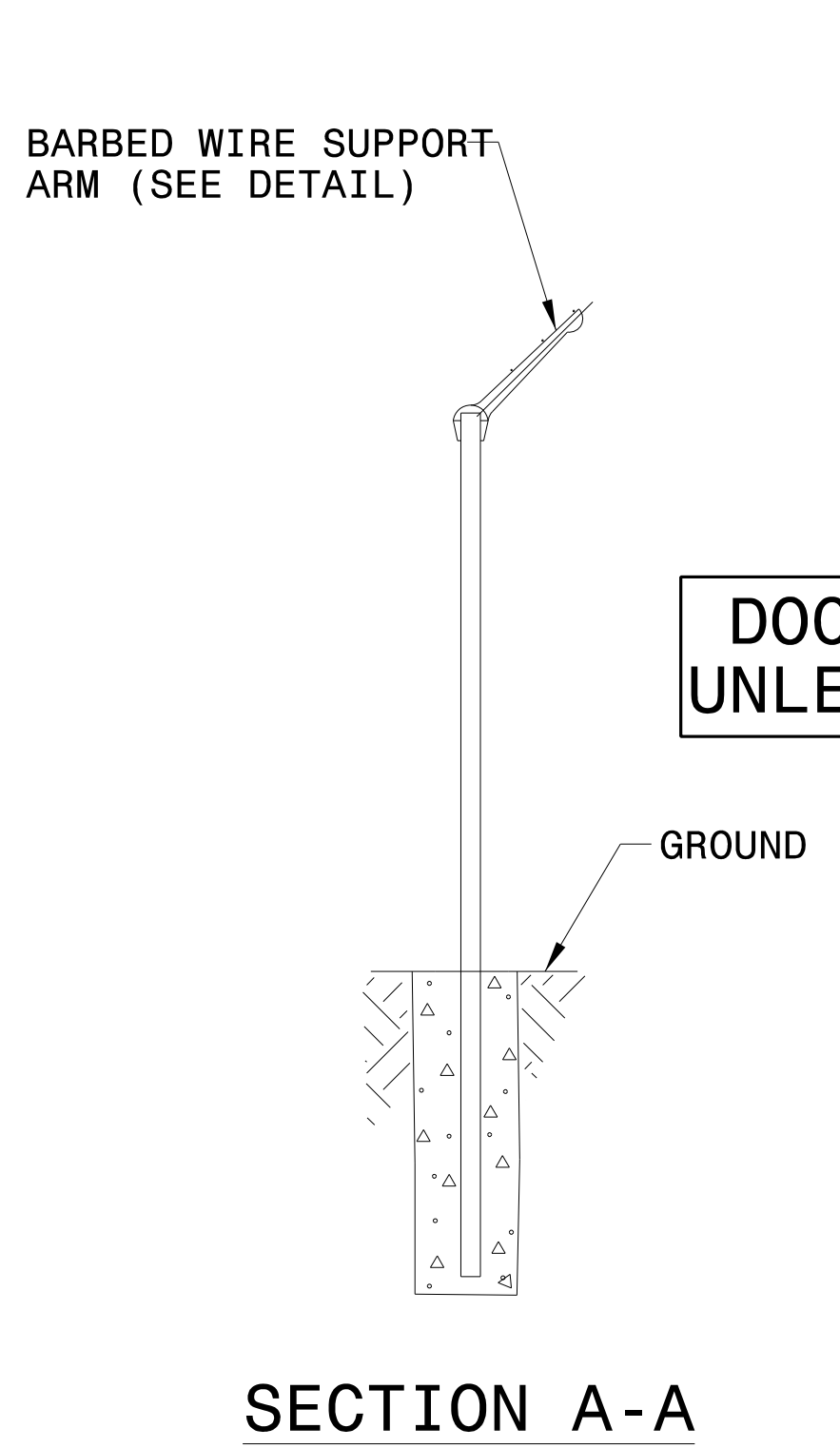
**UTILITY CONSTRUCTION**  
**DOCUMENT NOT CONSIDERED FINAL**  
**UNLESS ALL SIGNATURES COMPLETED**



**CORNER OR END PANEL ASS'Y**  
NOT TO SCALE

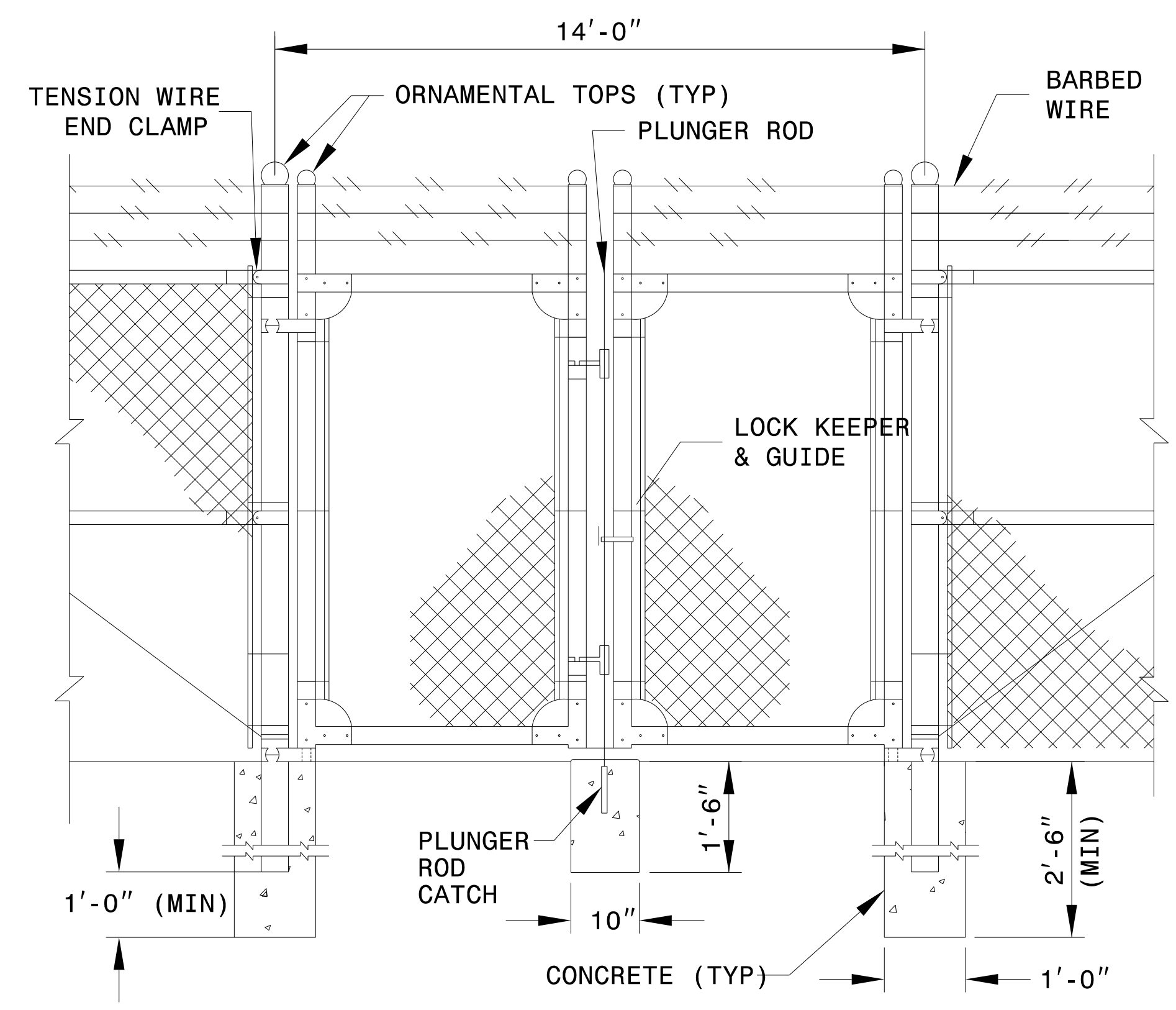


**TYPICAL LINE FENCE DETAIL**  
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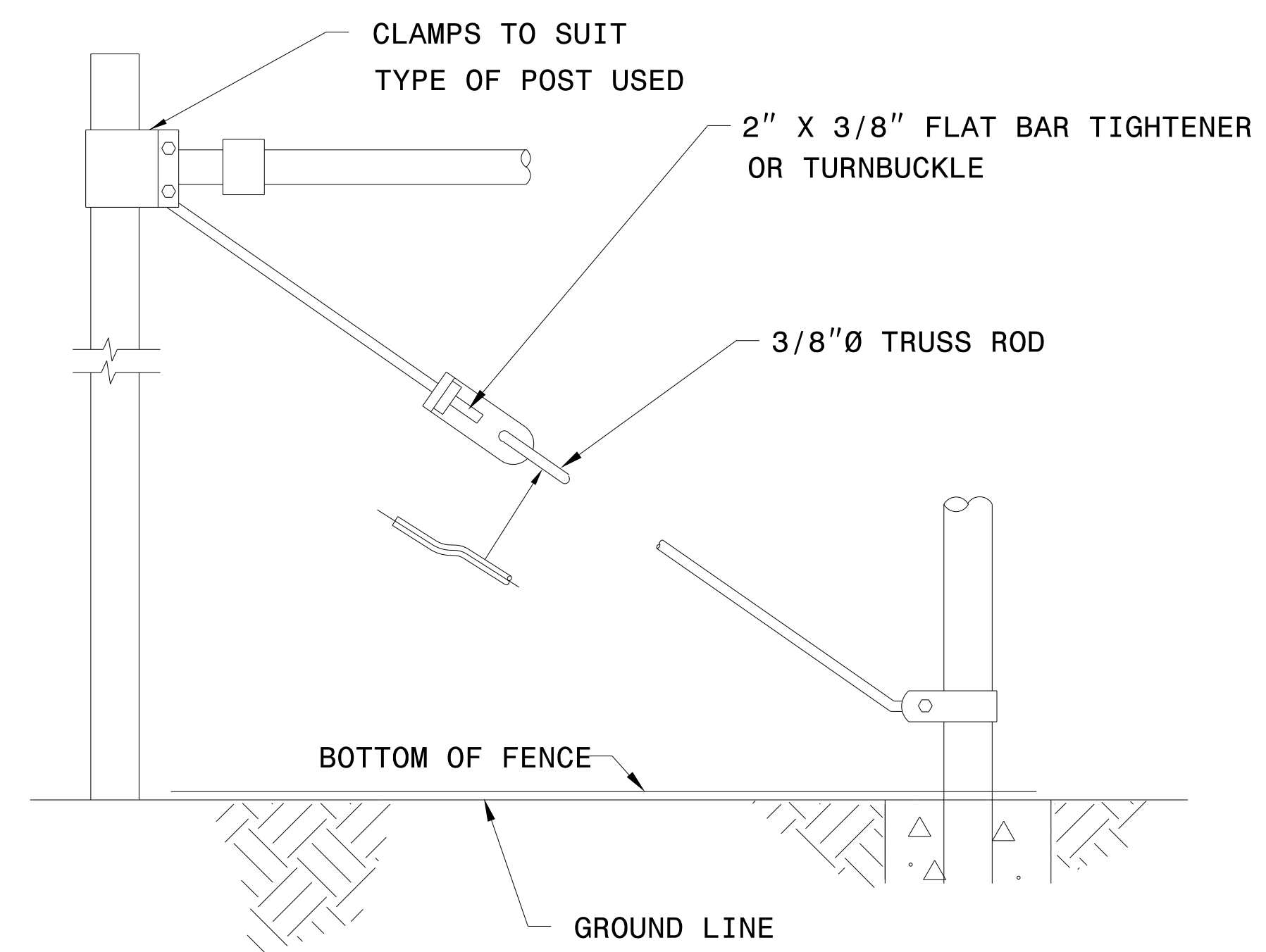


**SECTION A-A**

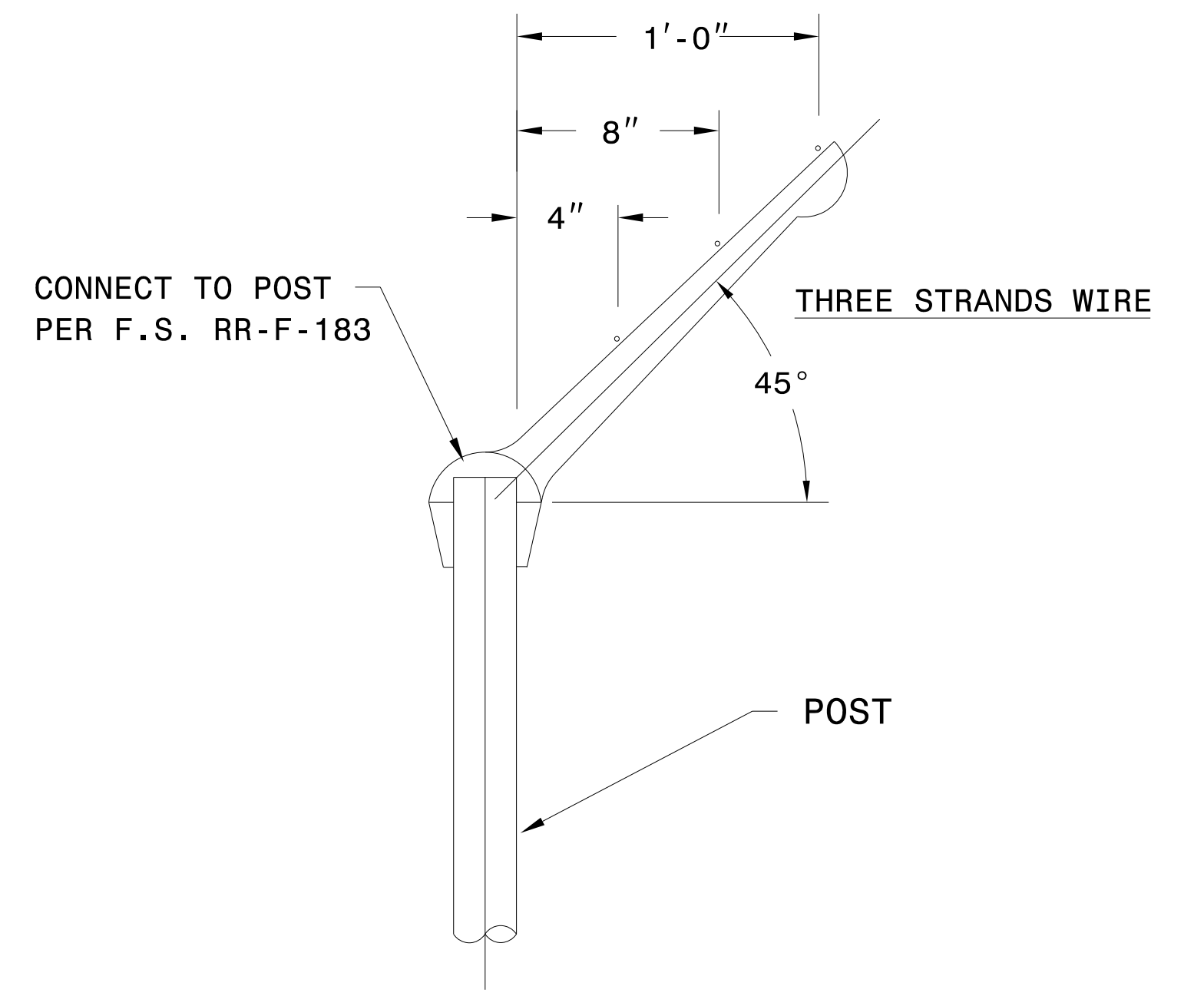
NOTE: TOP RAIL SHALL BE INSTALLED AT ALL LOCATIONS ON FENCE IN ACCORDANCE WITH SECTION 02820, PART 3.01B OF THE PROJECT SPECIFICATIONS.



**DOUBLE SWING CHAIN-LINK GATE DETAIL**  
NOT TO SCALE



**TRUSS ROD TIES TYPICAL DETAIL**  
NOT TO SCALE



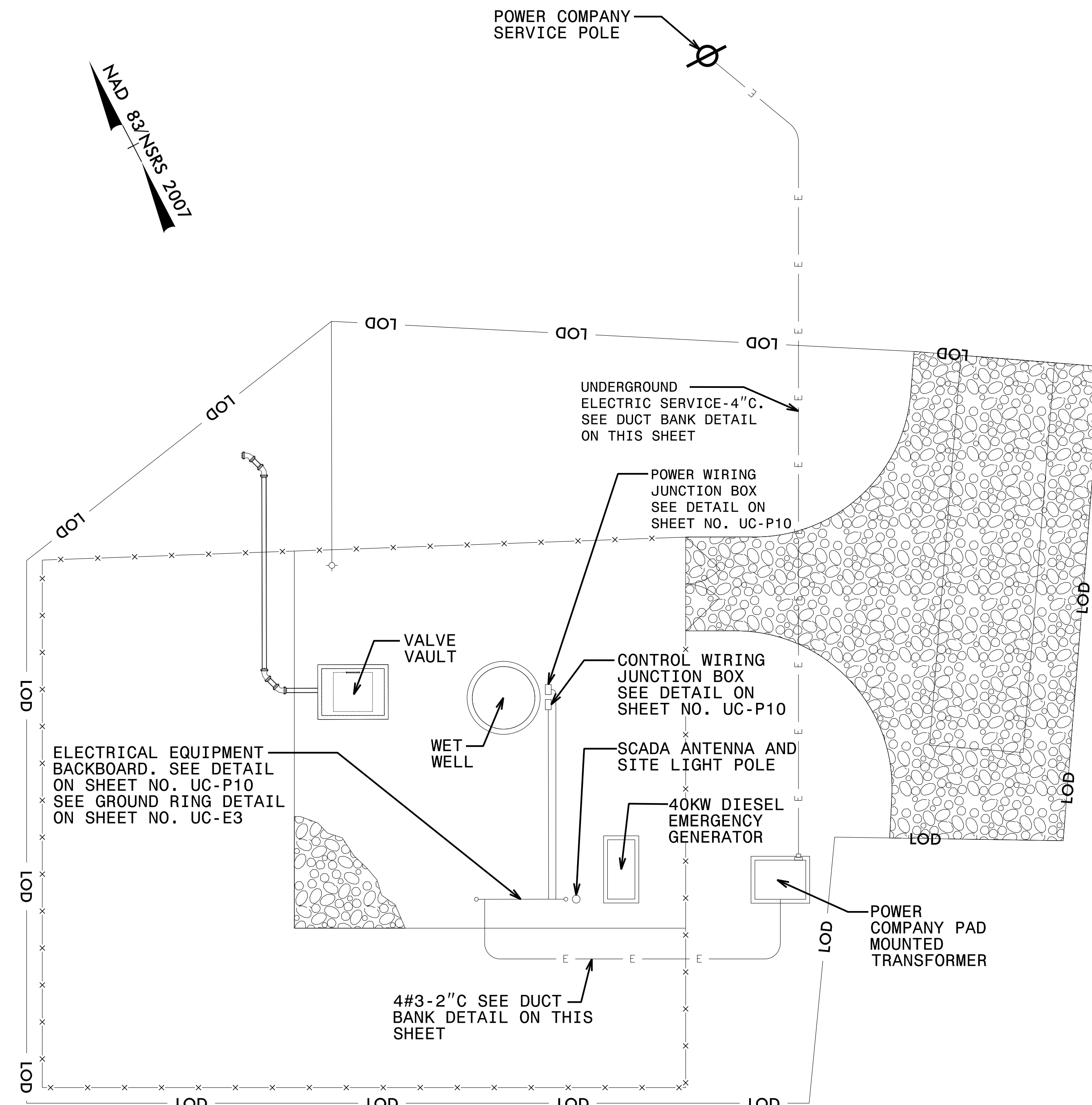
**BARBED WIRE SUPPORT ARM AND POST CAP**  
NOT TO SCALE

5/14/99  
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**UTILITY CONSTRUCTION**

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UNLESS ALL SIGNATURES COMPLETED**



ELECTRICAL EQUIPMENT BACKBOARD. SEE DETAIL ON SHEET NO. UC-P10  
SEE GROUND RING DETAIL ON SHEET NO. UC-E3

UNDERGROUND ELECTRIC SERVICE-4" C. SEE DUCT BANK DETAIL ON THIS SHEET

POWER WIRING JUNCTION BOX SEE DETAIL ON SHEET NO. UC-P10

CONTROL WIRING JUNCTION BOX SEE DETAIL ON SHEET NO. UC-P10

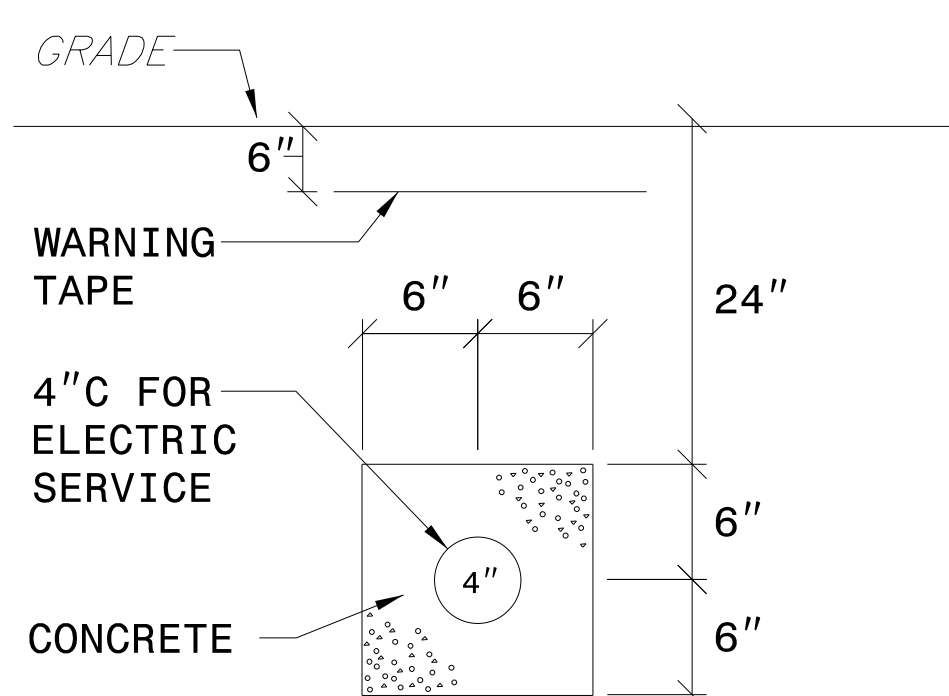
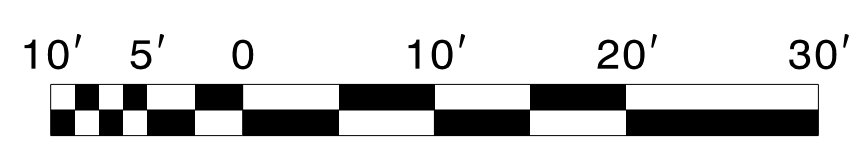
SCADA ANTENNA AND SITE LIGHT POLE

40KW DIESEL EMERGENCY GENERATOR

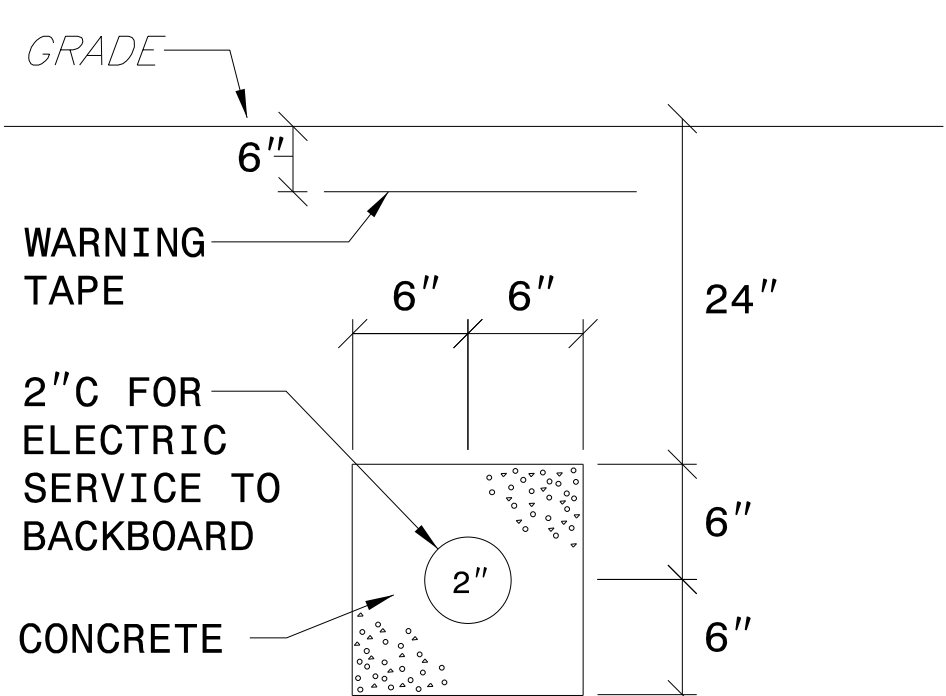
POWER COMPANY PAD MOUNTED TRANSFORMER

4#3-2" C SEE DUCT BANK DETAIL ON THIS SHEET

**ELECTRICAL SITE PLAN**



**ELECTRIC SERVICE CONDUIT DUCT BANK DETAIL**



**CONDUIT DUCT BANK DETAIL**

**GENERAL ELECTRICAL NOTES (APPLICABLE TO ALL DRAWINGS)**

1. ALL FASTENERS AND MOUNTING HARDWARE USED FOR THE INSTALLATION OF ALL ELECTRICAL ITEMS SHALL BE 316 STAINLESS STEEL.
2. ALL ALUMINUM IN CONTACT WITH CONCRETE SHALL BE COATED WITH TWO COATS OF ZINC CHROMATE PRIMER OR BITUMINOUS PAINT TO PREVENT A REACTION BETWEEN THE ALUMINUM AND CONCRETE.
3. CONTRACTOR SHALL FURNISH AND INSTALL A SEPARATE INSULATED GROUND CONDUCTOR IN ALL CONDUITS. ALL GROUND CONDUCTORS SHALL BE #12 UNLESS NOTED OTHERWISE ON DRAWINGS.
4. CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL UNDERGROUND CONDUITS TO AVOID INTERFERENCES WITH UNDERGROUND PIPING.
5. RIGID ALUMINUM CONDUIT MAY BE USED ABOVE GRADE TO AND ON THE ELECTRICAL BACKBOARD. CONDUITS WITHIN THE WET WELL AND BELOW GROUND SHALL BE PVC COATED RIGID STEEL.

**SITE PLAN NOTES**

1. COORDINATE INSTALLATION OF ELECTRIC SERVICE WITH THE POWER COMPANY.

**ELECTRICAL ABBREVIATIONS**

A	-	AMPERES	NO.	-	NUMBER
ALUM.	-	ALUMINUM	P	-	POLE
C	-	CONDUIT	PH	-	PHASE
DWG.	-	DRAWING	TYP.	-	TYPICAL
GRD	-	GROUND	V	-	VOLTS
HP	-	HORSEPOWER	W	-	WIRE, WATT, WIDE
KW	-	KILOWATT	WP	-	WEATHERPROOF
KVA	-	KILOVOLT AMPERES	XFMR	-	TRANSFORMER

**ELECTRICAL SYMBOL SCHEDULE**

	-	DISCONNECT SWITCH
	-	JUNCTION BOX
	-	TRANSFORMER
	-	HOME RUN TO PANEL
	-	TICKS INDICATE NUMBER OF WIRES - NOT INCLUDING GROUND CONDUCTOR
	-	CIRCUIT BREAKER

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**UTILITY CONSTRUCTION**

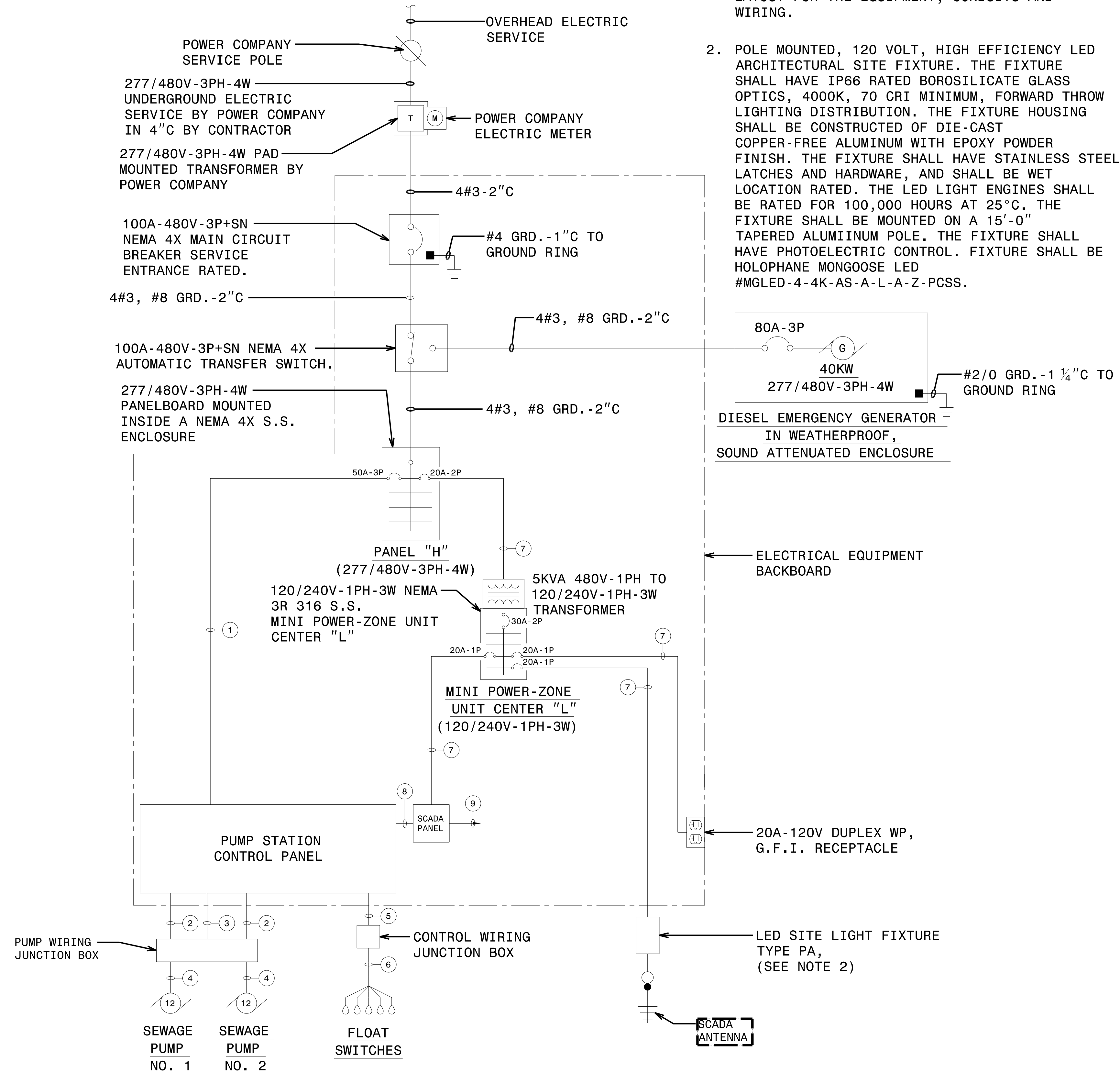
**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

**NOTES**

1. THE ARRANGEMENT OF CONTROL EQUIPMENT MOUNTED ON THE BACKBOARD SHALL BE DETERMINED BY THE CONTRACTOR. EQUIPMENT SHALL BE ARRANGED TO PROVIDE A CLEAN LAYOUT FOR THE EQUIPMENT, CONDUITS AND WIRING.
2. POLE MOUNTED, 120 VOLT, HIGH EFFICIENCY LED ARCHITECTURAL SITE FIXTURE. THE FIXTURE SHALL HAVE IP66 RATED BOROSILICATE GLASS OPTICS, 4000K, 70 CRI MINIMUM, FORWARD THROW LIGHTING DISTRIBUTION. THE FIXTURE HOUSING SHALL BE CONSTRUCTED OF DIE-CAST COPPER-FREE ALUMINUM WITH EPOXY POWDER FINISH. THE FIXTURE SHALL HAVE STAINLESS STEEL LATCHES AND HARDWARE, AND SHALL BE WET LOCATION RATED. THE LED LIGHT ENGINES SHALL BE RATED FOR 100,000 HOURS AT 25°C. THE FIXTURE SHALL BE MOUNTED ON A 15'-0" TAPERED ALUMINIUM POLE. THE FIXTURE SHALL HAVE PHOTOELECTRIC CONTROL. FIXTURE SHALL BE HOLOPHANE MONGOOSE LED #MGLED-4-4K-AS-A-L-A-Z-PCSS.

**WIRING LEGEND**

- 1 3#8, #10 GRD.-1"C
- 2 3#10, #10 GRD.-1"C
- 3 8#14, #12 GRD.-1"C
- 4 PUMP MOTOR AND SENSOR CABLES-2"C
- 6 FLOAT SWITCH CABLES-2"C
- 5 10#14, #12 GRD.-1"C
- 7 2#12, #12 GRD.-3/4"C
- 8 12#14, #12 GRD.-1"C
- 9 ANTENNA CABLE-1"C TO SCADA ANTENNA



**PUMP STATION ELECTRICAL ONE-LINE DIAGRAM**

**PANELBOARD "H" SCHEDULE**

VOLTAGE: 277/480V-3PH-4W	PANEL TYPE: ENCLOSURE MOUNTED, BREAKER
MAIN BUS BARS AND LUGS: 100A	MIN. A.I.C. RATING: 8,000
MAIN BREAKER: NONE	LOCATION: ELECTRICAL EQUIPMENT BACKBOARD

NOTES	HP	WATTS	LOCATION	POLE	AMP/TRIP	AMP/TRIP	POLE	LOCATION	WATTS	HP	NOTES
PUMP STATION CONTROL PANEL	24		ELECTRICAL BACKBOARD	3	50	1	2	ELECTRICAL BACKBOARD	5,000		TRANSFORMER FOR MINI POWER-ZONE CENTER "L"
SPARE						6					SPARE
SPARE						7	8	20	3		SPARE
SPARE						13	14				SPARE

**MINI POWER-ZONE UNIT CENTER "L" SCHEDULE**

VOLTAGE: 120/240V-1PH-3W	PANEL TYPE: SURFACE MOUNTED, BREAKER
MAIN BUS BARS AND LUGS: 100A	MIN. A.I.C. RATING: 8,000
MAIN BREAKER: 30A-2P	LOCATION: ELECTRICAL EQUIPMENT BACKBOARD

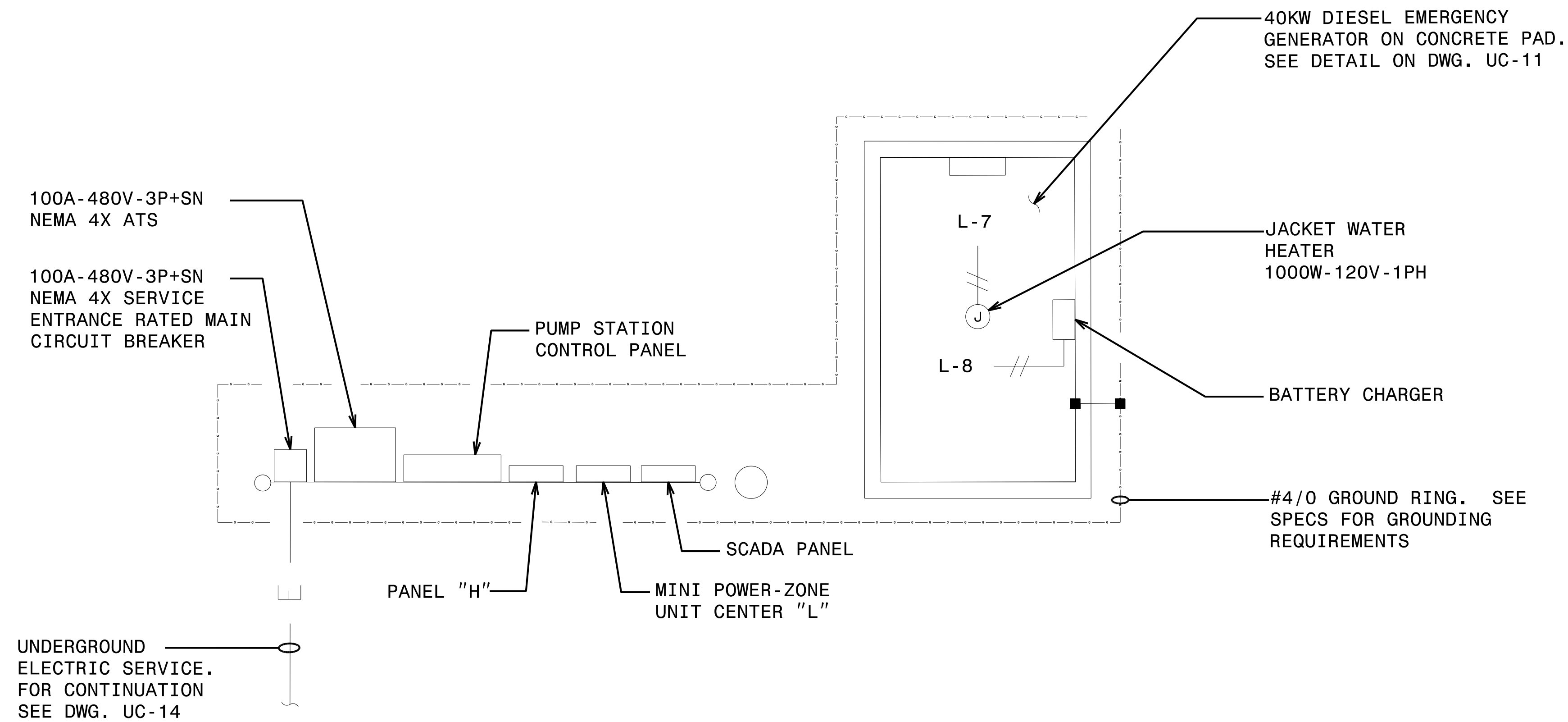
NOTES	HP	WATTS	LOCATION	POLE	AMP/TRIP	AMP/TRIP	POLE	LOCATION	WATTS	HP	NOTES	
SITE LIGHT		200	OUTSIDE	1	20	1	2	ELECTRICAL BACKBOARD	200		RECEPTACLE	
SPARE						3	4	20	1		SPARE	
SCADA PANEL		200	ELECTRICAL BACKBOARD	1	20	5	6	20	1		SPARE	
JACKET WATER HEATER		1000	GEN.	1	20	7	8	20	1	GEN.	200	BATTERY CHARGER
SPARE						9	10	20	1			SPARE

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PROJECT REFERENCE NO.	SHEET NO.
R-5021	UC-P16
DESIGNED BY: CMB	
DRAWN BY: CMB	
CHECKED BY: DTB	
APPROVED BY: DTB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

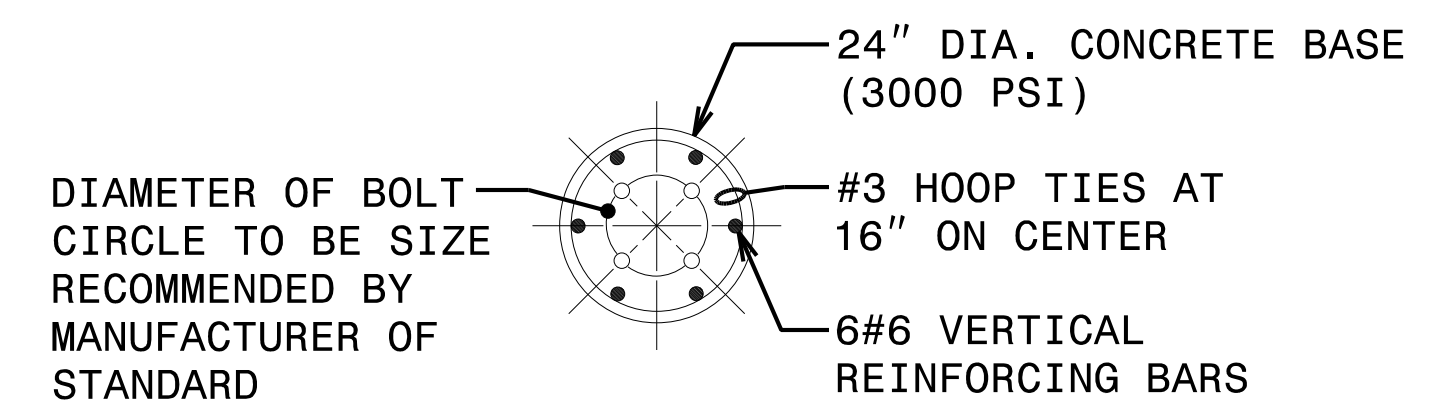
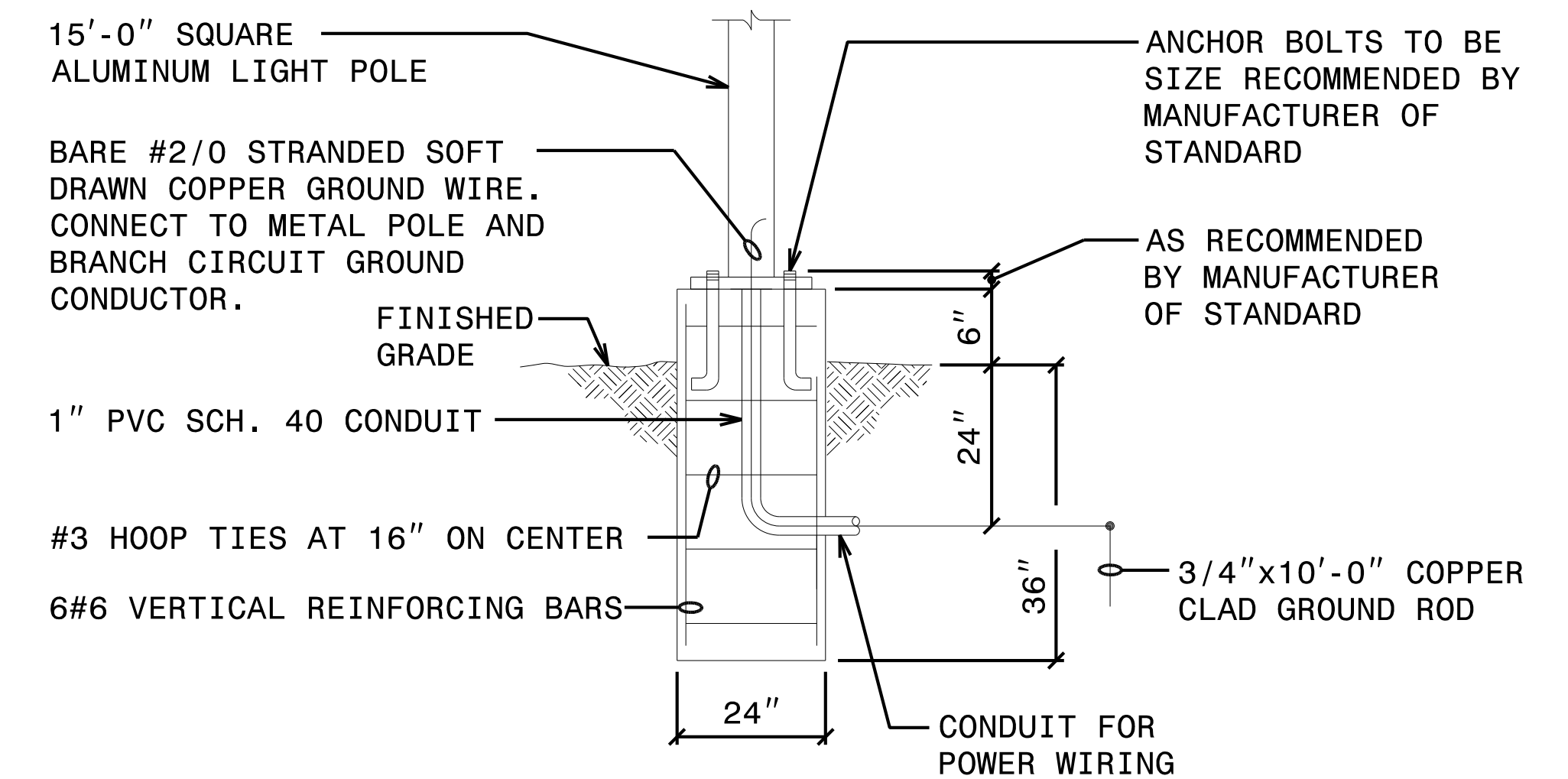
**UTILITY CONSTRUCTION**

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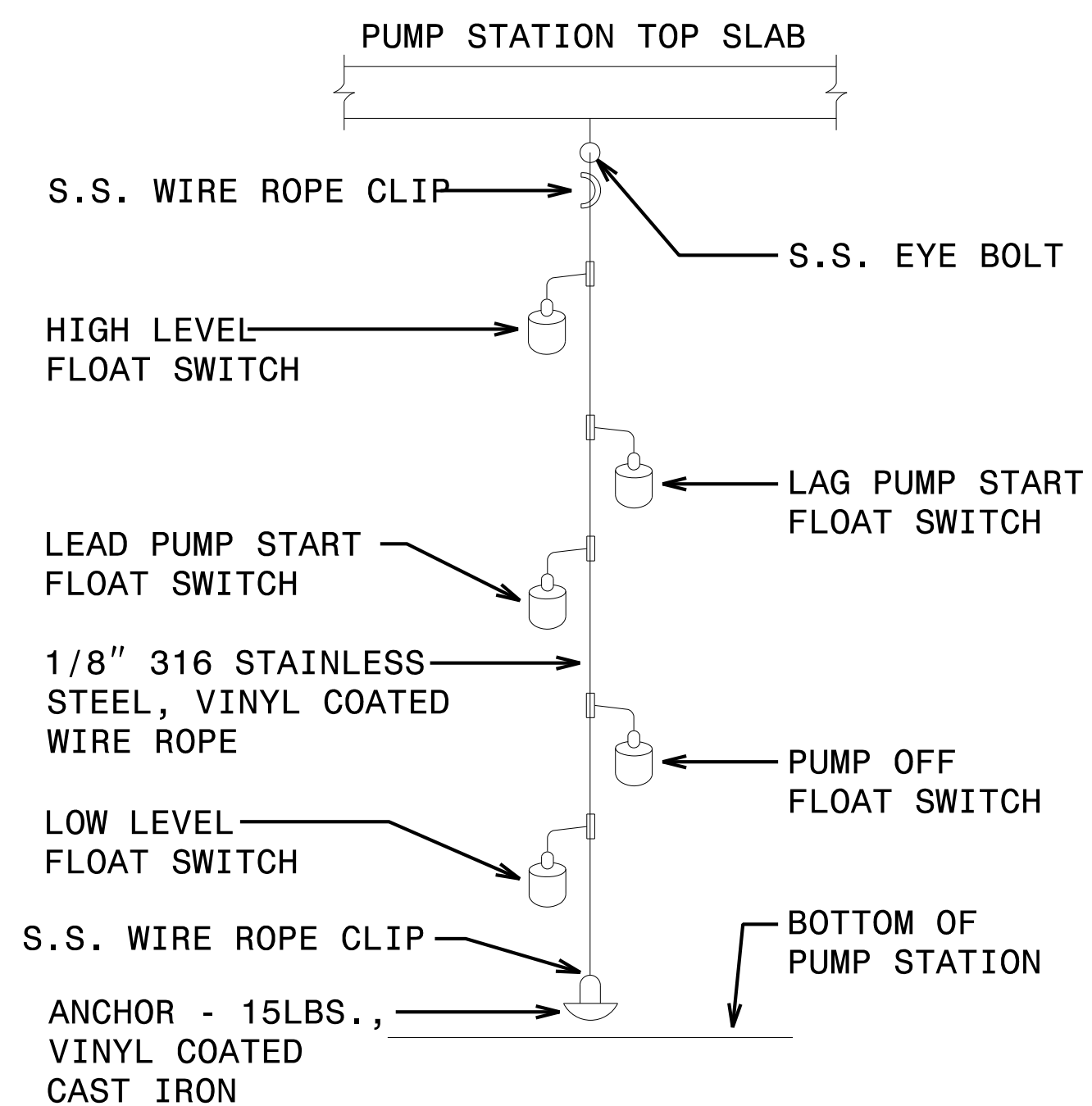
**ELECTRICAL EQUIPMENT LAYOUT**

NO SCALE



**SITE LIGHT FIXTURE AND SCADA ANTENNA POLE INSTALLATION DETAIL**

NO SCALE



**FLOAT SWITCH MOUNTING DETAIL**

NO SCALE

8/9/2021 Utilities\Engineering\UC\Proj\Pump Station\282\_031\_R-5021\_ut\_ps\_electrical\_UCP16\_psh.dgn



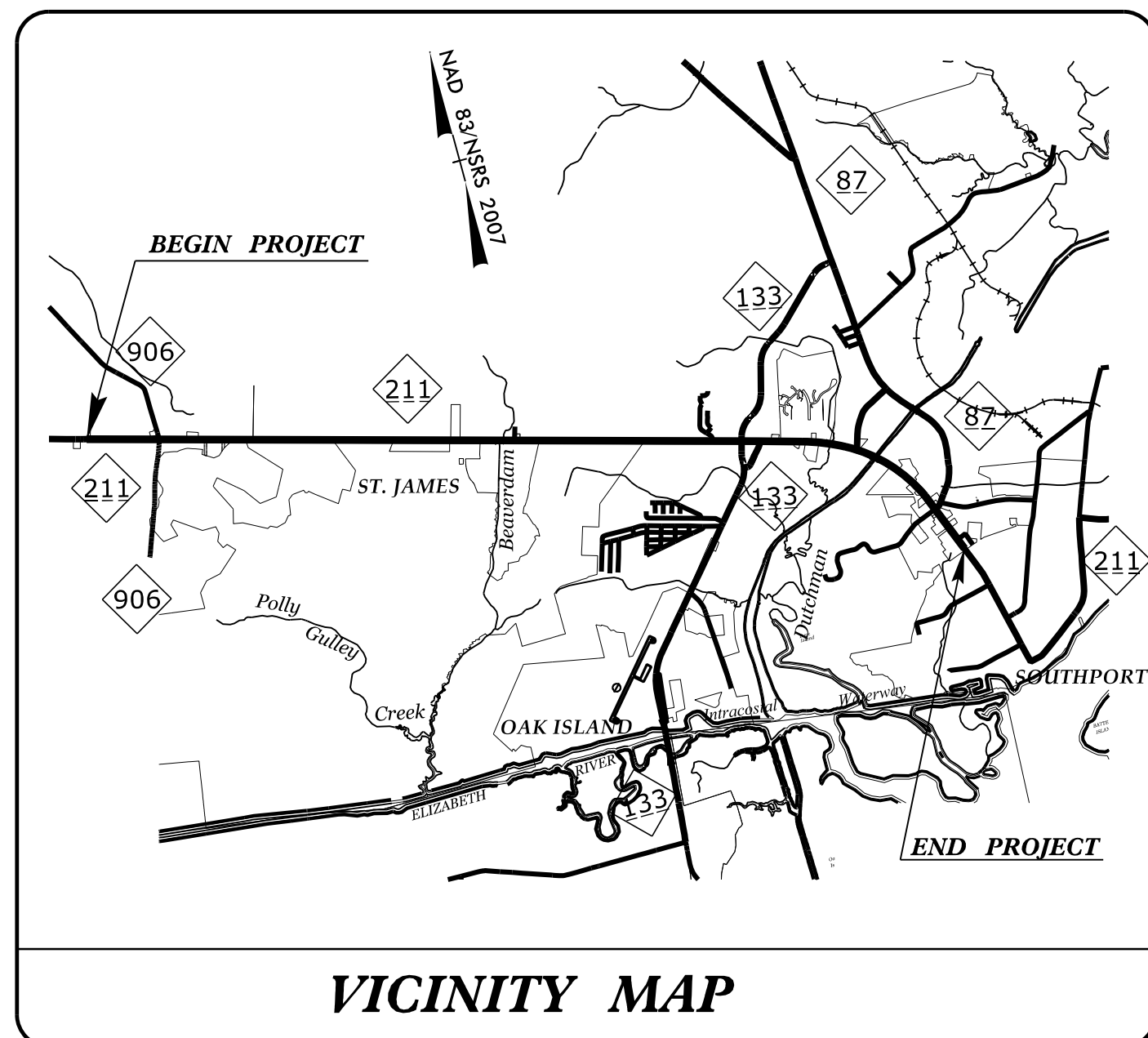
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**INDEX OF SHEETS  
BRUNSWICK COUNTY**

**LOCATION: NC 211 FROM WEST OF SR 1500 (MIDWAY ROAD)  
TO EAST OF NC 87**

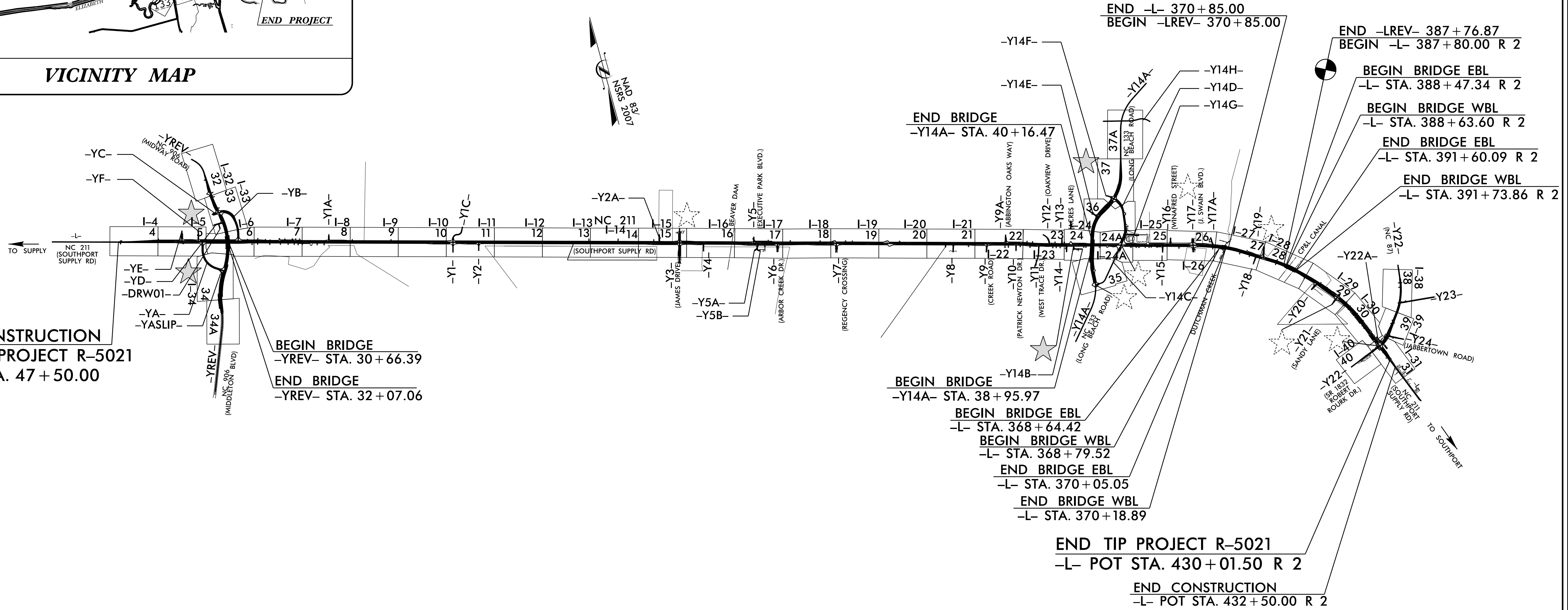
**TYPE OF WORK: WATER AND SEWER RELOCATION**

See Sheet 1A For Index of Sheets  
See Sheet 1B For Conventional Symbols



**TIP PROJECT: R-5021**

**CONTRACT: C204123**



**BEGIN CONSTRUCTION**  
**BEGIN TIP PROJECT R-5021**  
**-L- POT STA. 47+50.00**

**BEGIN BRIDGE**  
**-YREV- STA. 30+66.39**  
**END BRIDGE**  
**-YREV- STA. 32+07.06**

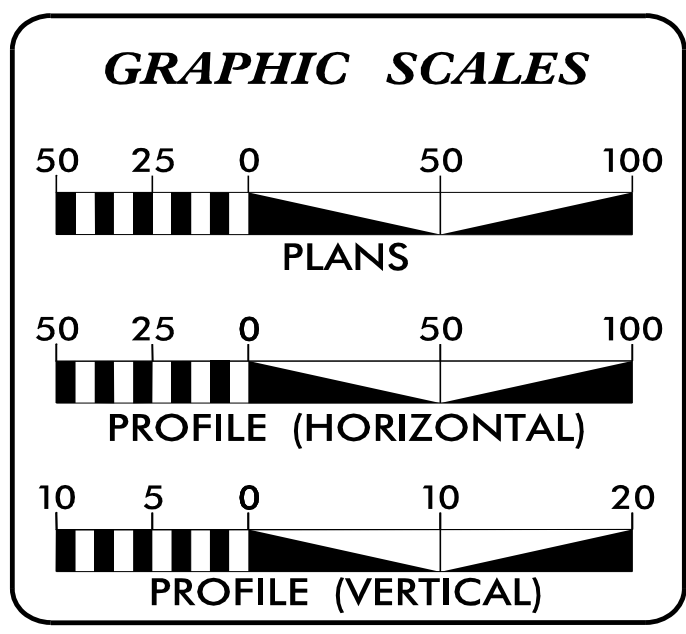
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**-Y14A- STA. 38+95.97**  
**BEGIN BRIDGE EBL**  
**-L- STA. 368+64.42**  
**BEGIN BRIDGE WBL**  
**-L- STA. 368+79.52**  
**END BRIDGE EBL**  
**-L- STA. 370+05.05**  
**END BRIDGE WBL**  
**-L- STA. 370+18.89**

**END TIP PROJECT R-5021**  
**-L- POT STA. 430+01.50 R 2**  
**END CONSTRUCTION**  
**-L- POT STA. 432+50.00 R 2**

**NOTES:**

1. THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.

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SHEET NO.:	DESCRIPTION:
I-1	TITLE SHEET
I-4 THRU I-34	PLAN SHEETS
I-38 THRU I-40	PLAN SHEETS

WATER AND SEWER OWNERS ON PROJECT
(A) WATER - BRUNSWICK COUNTY
(B) WATER - CITY OF SOUTHPORT
(C) SANITARY SEWER - BRUNSWICK COUNTY
(D) SANITARY SEWER - CITY OF SOUTHPORT
(E) SANITARY SEWER - SE BRUNSWICK SANITARY DISTRICT

PREPARED IN THE OFFICE OF

**RK&K**  
RUMMEL, KLEPPER & KAHL, LLP  
8601 SIX FORKS ROAD, FORUM 1 SUITE 700  
RALEIGH, NORTH CAROLINA 27615-3960  
NC LICENSE NO. F-0112  
1-888-921-4455 OR 919-876-9560

Howard Woodall, PE	CONSULTANT CONTACT #1
Bryan Badey, PE	CONSULTANT CONTACT #2
Jordan Lawrence	CONSULTANT CONTACT #3

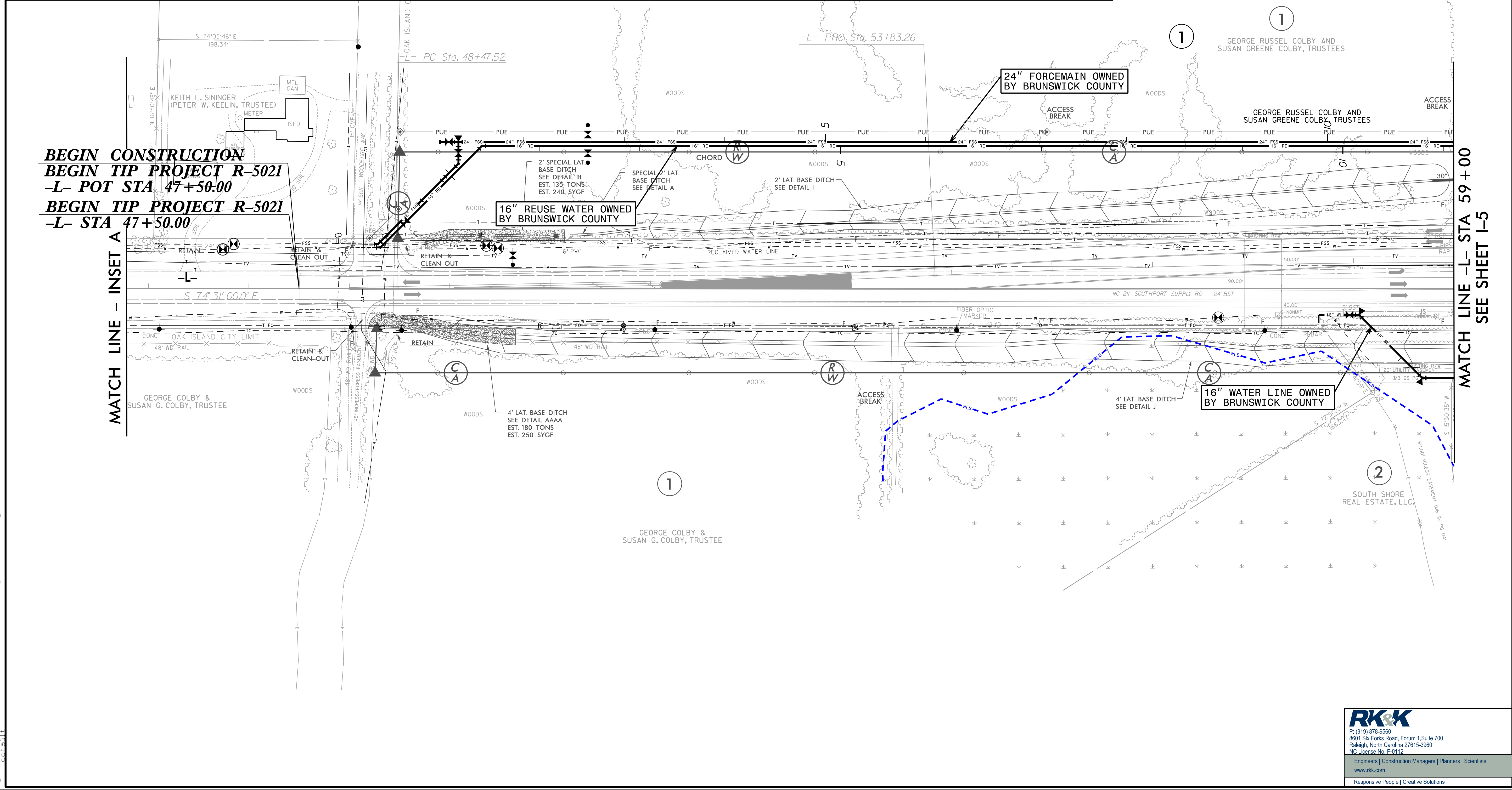
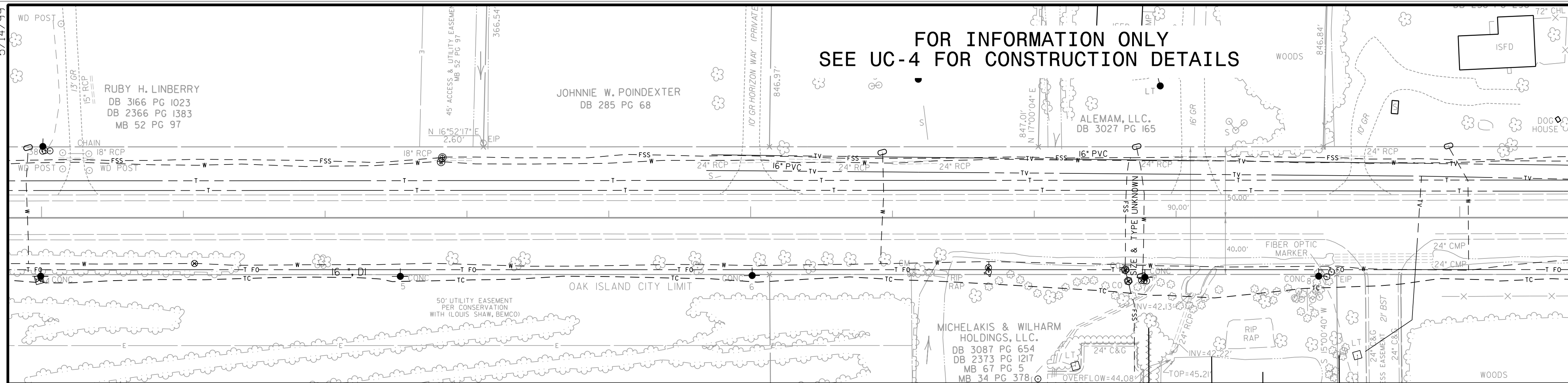
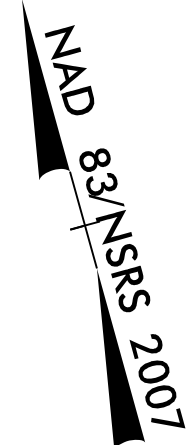
**DIVISION OF HIGHWAYS  
UTILITIES UNIT**  
1555 MAIL SERVICES CENTER  
RALEIGH, NC 27699-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

Lonny Sleeper	UTILITIES DIVISION ENGINEER
Michael Bass	ENGINEERING TECHNICIAN ADVANCED
Steve Davis	DIVISION UTILITY COORDINATOR

PROJECT REFERENCE NO.	SHEET NO.
R-5021	I-4
DESIGNED BY: JXL	UTILITY CONSTRUCTION PLANS ONLY
DRAWN BY: JXL	
CHECKED BY: BMB	
APPROVED BY: BMB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

FOR INFORMATION ONLY  
SEE UC-4 FOR CONSTRUCTION DETAILS

MATCH LINE - INSET A



**BEGIN CONSTRUCTION**  
**BEGIN TIP PROJECT R-5021**  
**-L- POT STA 47+50.00**  
**BEGIN TIP PROJECT R-5021**  
**-L- STA 47+50.00**

24" FORCEMAIN OWNED BY BRUNSWICK COUNTY

16" REUSE WATER OWNED BY BRUNSWICK COUNTY

16" WATER LINE OWNED BY BRUNSWICK COUNTY

MATCH LINE - INSET A

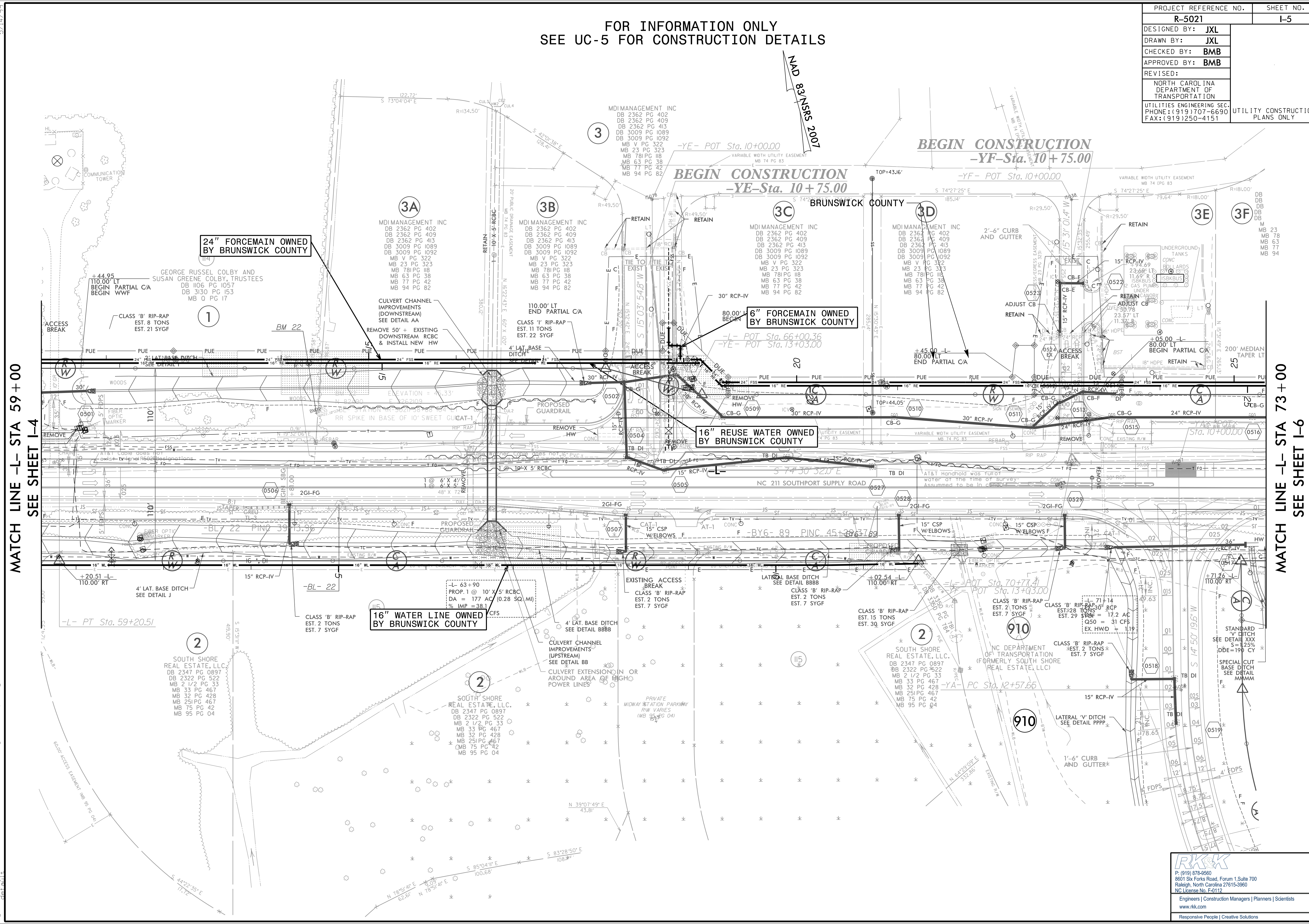
MATCH LINE -L- STA 59+00  
SEE SHEET I-5

9/22/2021 Index of UC Sheets\R-5021-ut-rdy04\_L0002.psh.dgn

**RK&K**  
P: (919) 878-9560  
8601 Six Forks Road, Forum 1, Suite 700  
Raleigh, North Carolina 27615-3960  
NC License No. F-0112  
Engineers | Construction Managers | Planners | Scientists  
www.rkk.com  
Responsive People | Creative Solutions

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PROJECT REFERENCE NO.	R-5021	SHEET NO.	I-5
DESIGNED BY:	JXL		
DRAWN BY:	JXL		
CHECKED BY:	BMB		
APPROVED BY:	BMB		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION			
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151			
			UTILITY CONSTRUCTION PLANS ONLY



MATCH LINE -L- STA 59+00  
SEE SHEET I-4

MATCH LINE -L- STA 73+00  
SEE SHEET I-6

**24" FORCEMAIN OWNED BY BRUNSWICK COUNTY**

**6" FORCEMAIN OWNED BY BRUNSWICK COUNTY**

**16" REUSE WATER OWNED BY BRUNSWICK COUNTY**

**16" WATER LINE OWNED BY BRUNSWICK COUNTY**

**RKKK**  
P: (919) 878-9560  
8601 Six Forks Road, Forum 1, Suite 700  
Raleigh, North Carolina 27615-3960  
NC License No. F-0112

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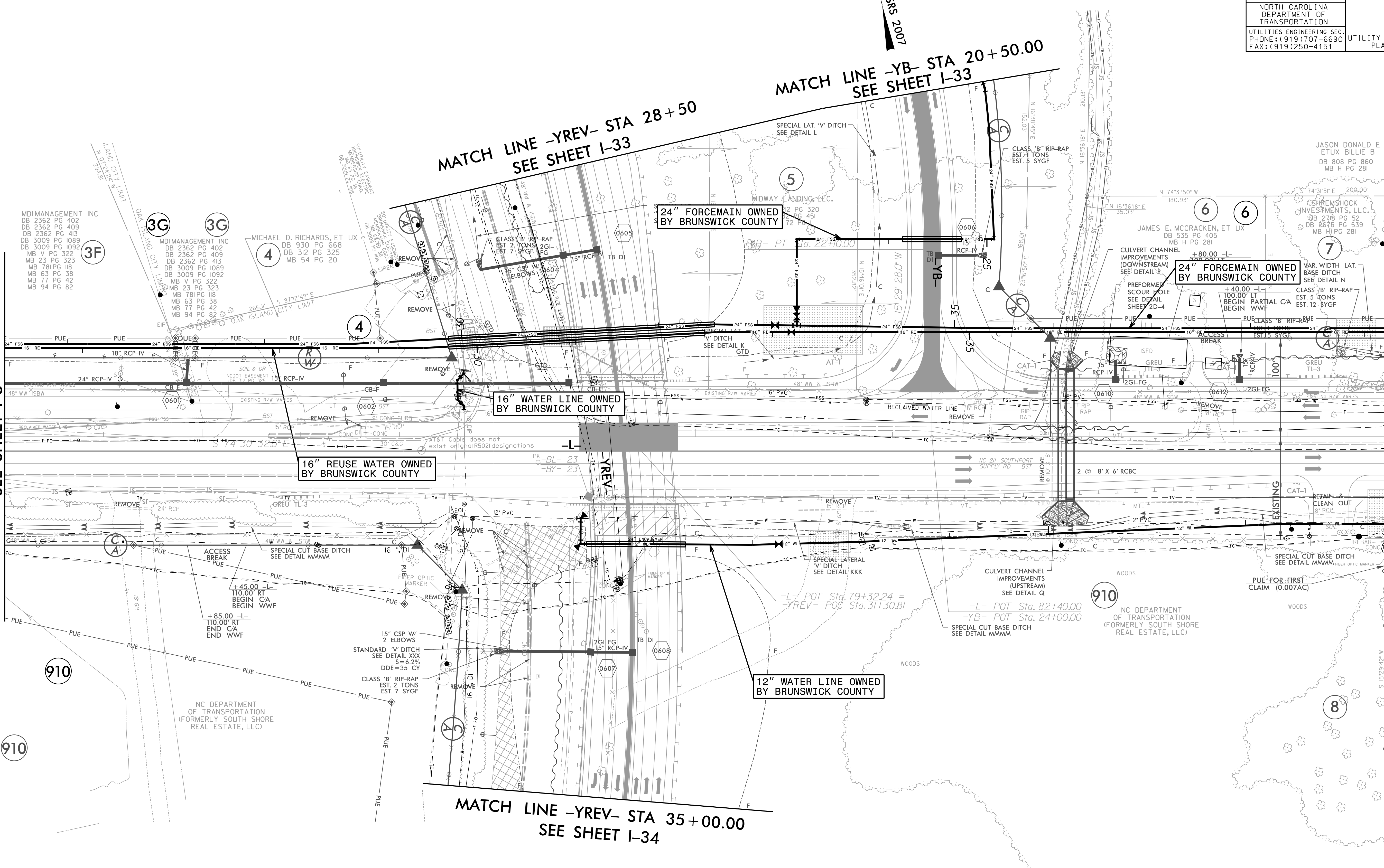
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9/22/2021  
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FOR INFORMATION ONLY  
SEE UC-6 FOR CONSTRUCTION DETAILS

PROJECT REFERENCE NO.	SHEET NO.
R-5021	I-6
DESIGNED BY: JXL	
DRAWN BY: JXL	
CHECKED BY: BMB	
APPROVED BY: BMB	
REVISED:	
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MATCH LINE -L- STA 73+00  
SEE SHEET I-5



MATCH LINE -YB- STA 20+50.00  
SEE SHEET I-33

MATCH LINE -YREV- STA 28+50  
SEE SHEET I-33

16" WATER LINE OWNED BY BRUNSWICK COUNTY

16" REUSE WATER OWNED BY BRUNSWICK COUNTY

24" FORCEMAIN OWNED BY BRUNSWICK COUNTY

24" FORCEMAIN OWNED BY BRUNSWICK COUNTY

12" WATER LINE OWNED BY BRUNSWICK COUNTY

MATCH LINE -YREV- STA 35+00.00  
SEE SHEET I-34

MATCH LINE -L- STA 87+00  
SEE SHEET I-7

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N 82°08'35" E  
80.21'

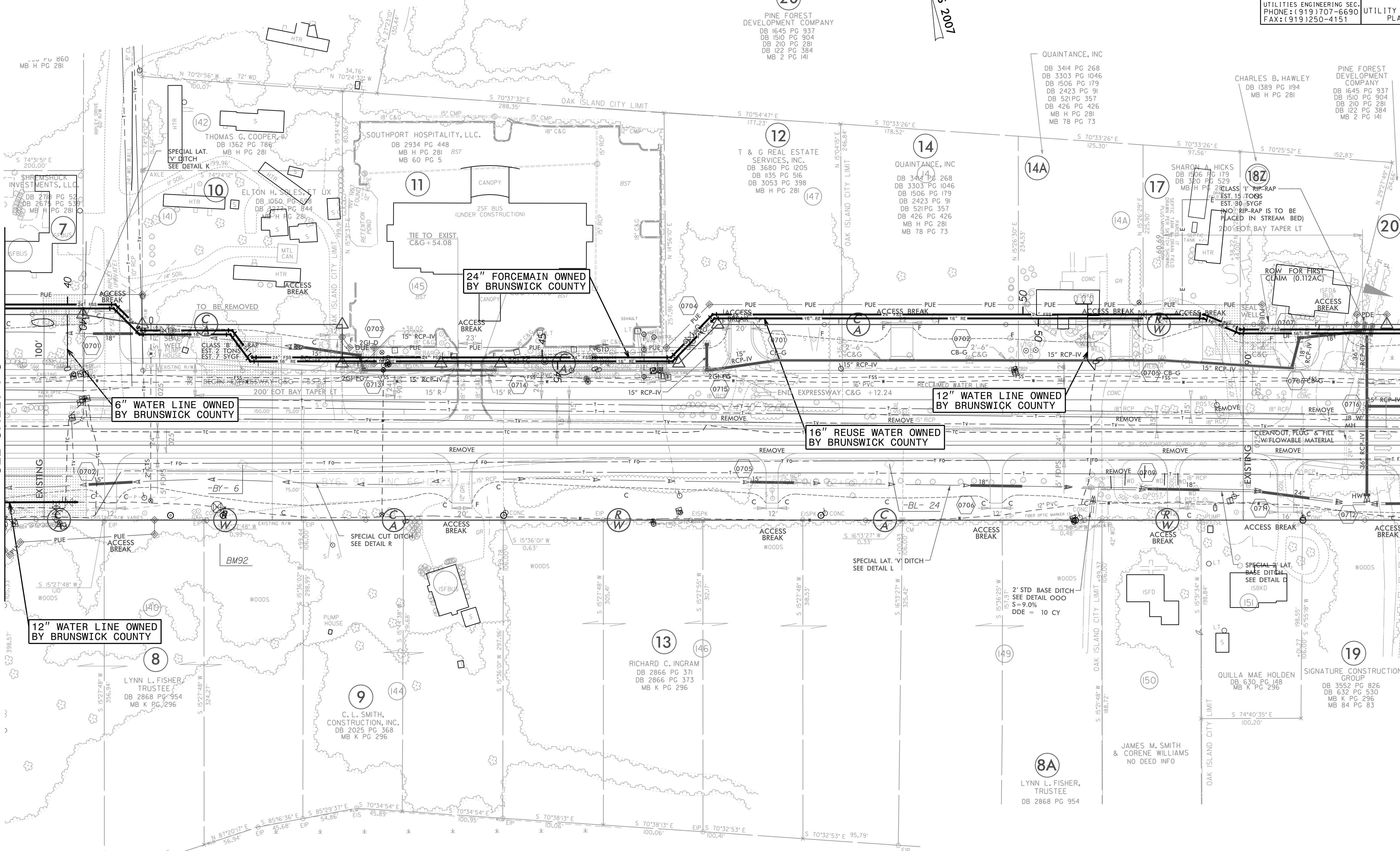
FOR INFORMATION ONLY  
SEE UC-7 FOR CONSTRUCTION DETAILS

PROJECT REFERENCE NO.	SHEET NO.
R-5021	I-7
DESIGNED BY: JXL	UTILITY CONSTRUCTION PLANS ONLY
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MAD 8/31/SSS 2007

MATCH LINE -L- STA 87+00.00  
SEE SHEET I-6

MATCH LINE -L- STA 101+00.00  
SEE SHEET I-8



6" WATER LINE OWNED BY BRUNSWICK COUNTY

24" FORCE MAIN OWNED BY BRUNSWICK COUNTY

12" WATER LINE OWNED BY BRUNSWICK COUNTY

16" REUSE WATER OWNED BY BRUNSWICK COUNTY

12" WATER LINE OWNED BY BRUNSWICK COUNTY

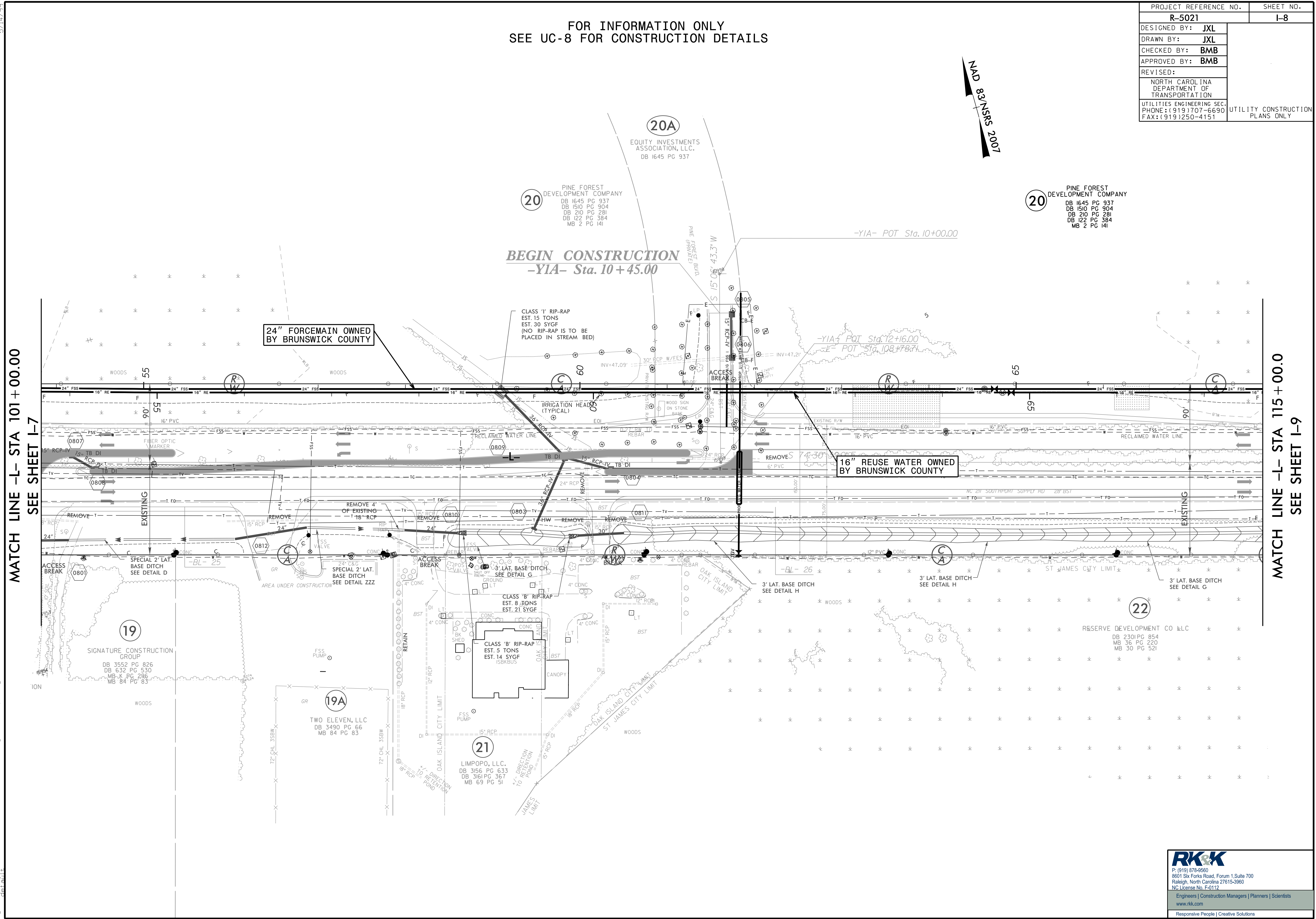
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PROJECT REFERENCE NO.	SHEET NO.
R-5021	I-8
DESIGNED BY: JXL	
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MAD 8/11/SSS 2007



MATCH LINE -L- STA 101+00.00  
SEE SHEET I-7

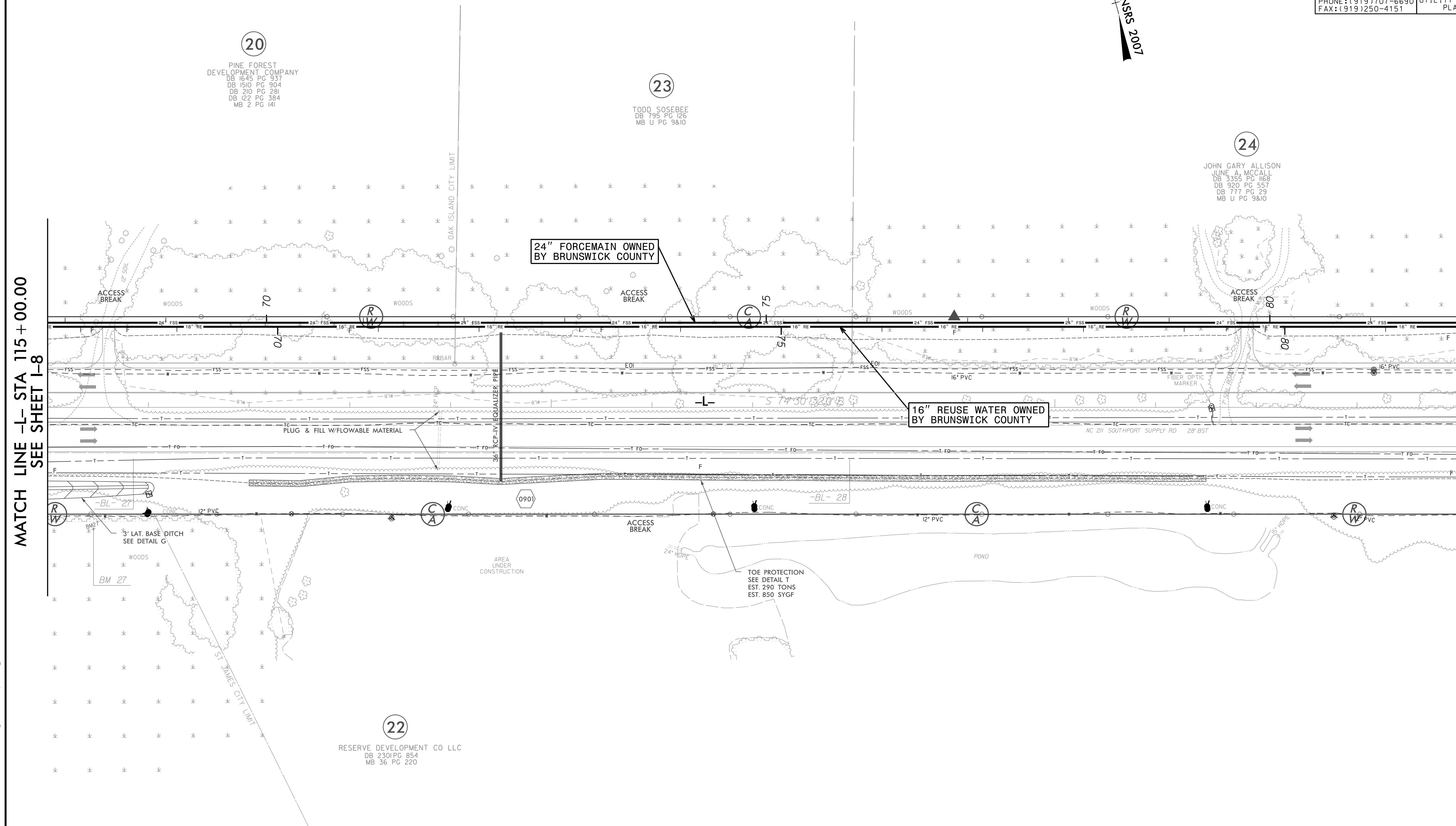
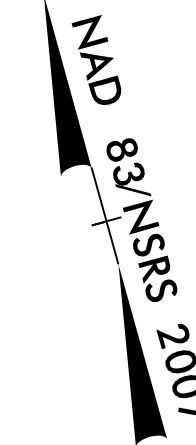
MATCH LINE -L- STA 115+00.00  
SEE SHEET I-9

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SEE UC-9 FOR CONSTRUCTION DETAILS

PROJECT REFERENCE NO.	SHEET NO.
R-5021	I-9
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MATCH LINE -L- STA 115 + 00.00  
SEE SHEET I-8

MATCH LINE -L- STA 129 + 00.00  
SEE SHEET I-10

20  
PINE FOREST  
DEVELOPMENT COMPANY  
DB 1645 PG 537  
DB 1510 PG 904  
DB 210 PG 281  
DB 122 PG 384  
MB 2 PG 141

23  
TODD SOSEBEE  
DB 795 PG 126  
MB U PG 9810

24  
JOHN GARY ALLISON  
JUNE A. MCCALL  
DB 3355 PG 1163  
DB 920 PG 557  
DB 777 PG 29  
MB U PG 9810

22  
RESERVE DEVELOPMENT CO LLC  
DB 2301 PG 854  
MB 36 PG 220

24" FORCE MAIN OWNED  
BY BRUNSWICK COUNTY

16" REUSE WATER OWNED  
BY BRUNSWICK COUNTY

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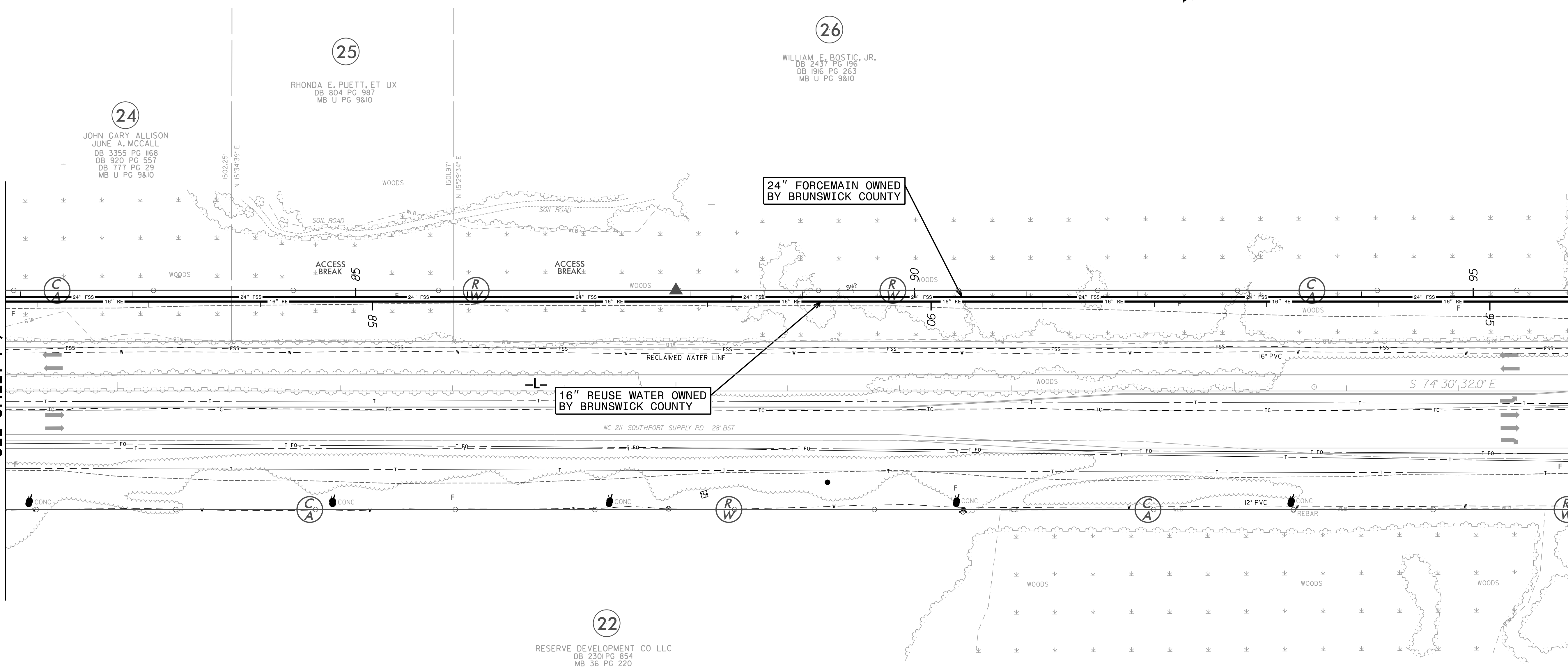
FOR INFORMATION ONLY  
SEE UC-10 FOR CONSTRUCTION DETAILS

PROJECT REFERENCE NO.	SHEET NO.
R-5021	I-10
DESIGNED BY: JXL	
DRAWN BY: JXL	
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APPROVED BY: BMB	
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MATCH LINE -L- STA 129 + 00.00  
SEE SHEET I-9

MATCH LINE -L- STA 143 + 00.00  
SEE SHEET I-11



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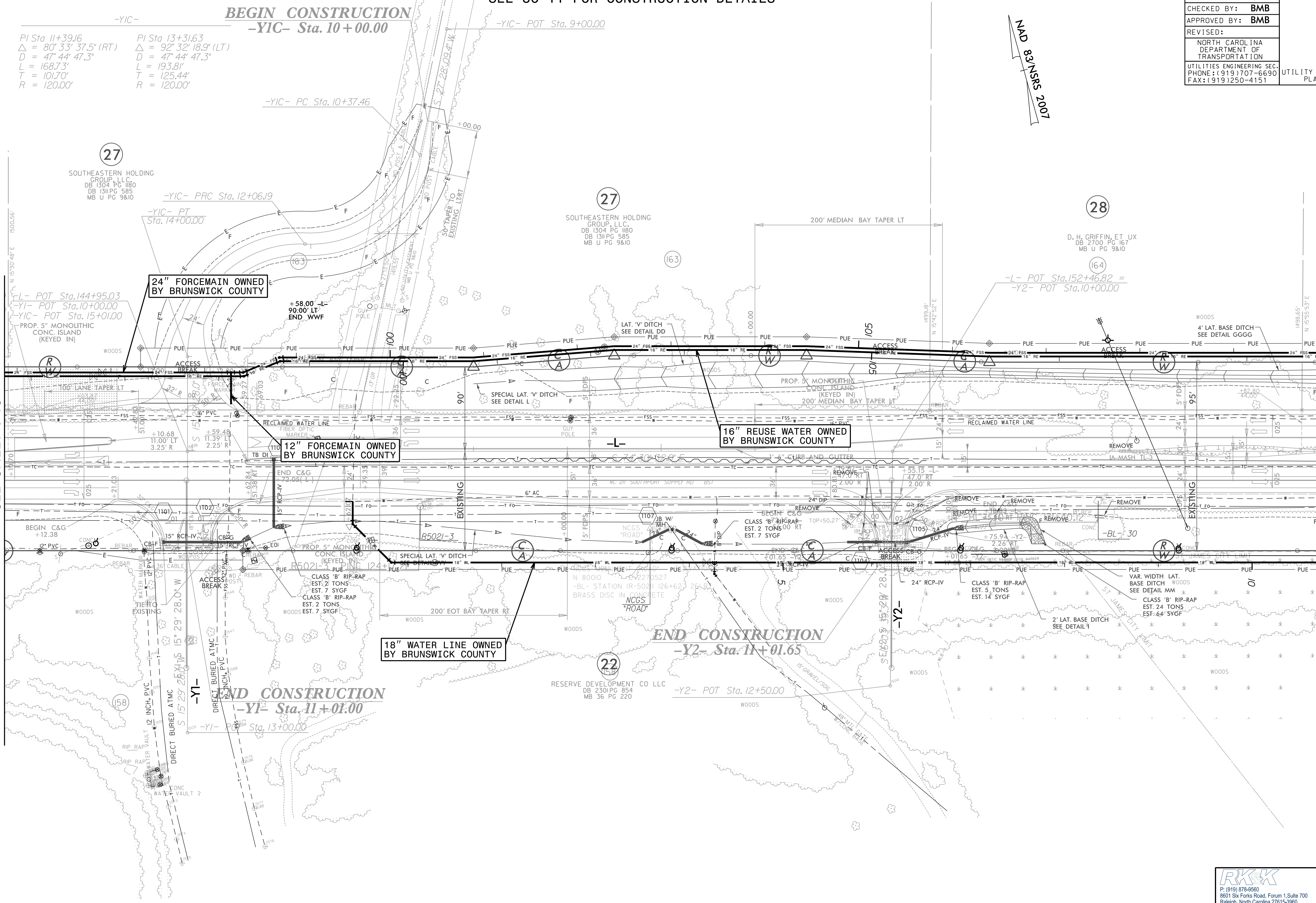
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FOR INFORMATION ONLY  
SEE UC-11 FOR CONSTRUCTION DETAILS

PROJECT REFERENCE NO.	SHEET NO.
R-5021	I-11
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DRAWN BY: JXL	
CHECKED BY: BMB	
APPROVED BY: BMB	
REVISED:	
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MATCH LINE -L- STA 143+00.00  
SEE SHEET I-10

MATCH LINE -L- STA 157+00.00  
SEE SHEET I-12



-YIC-  
PI Sta 11+39.16  
 $\Delta = 80^\circ 33' 37.5''$  (RT)  
D = 47' 44" 47.3"  
L = 168.73'  
T = 101.70'  
R = 120.00'

PI Sta 13+31.63  
 $\Delta = 92^\circ 32' 18.9''$  (LT)  
D = 47' 44" 47.3"  
L = 193.81'  
T = 125.44'  
R = 120.00'

(27)  
SOUTHEASTERN HOLDING GROUP, L.L.C.  
DB 1304 PG 1180  
DB 1311 PG 585  
MB U PG 9&10

(27)  
SOUTHEASTERN HOLDING GROUP, L.L.C.  
DB 1304 PG 1180  
DB 1311 PG 585  
MB U PG 9&10

(28)  
D. H. GRIFFIN, ET UX  
DB 2700 PG 167  
MB U PG 9&10

(22)  
RESERVE DEVELOPMENT CO LLC  
DB 2301 PG 854  
MB 36 PG 220

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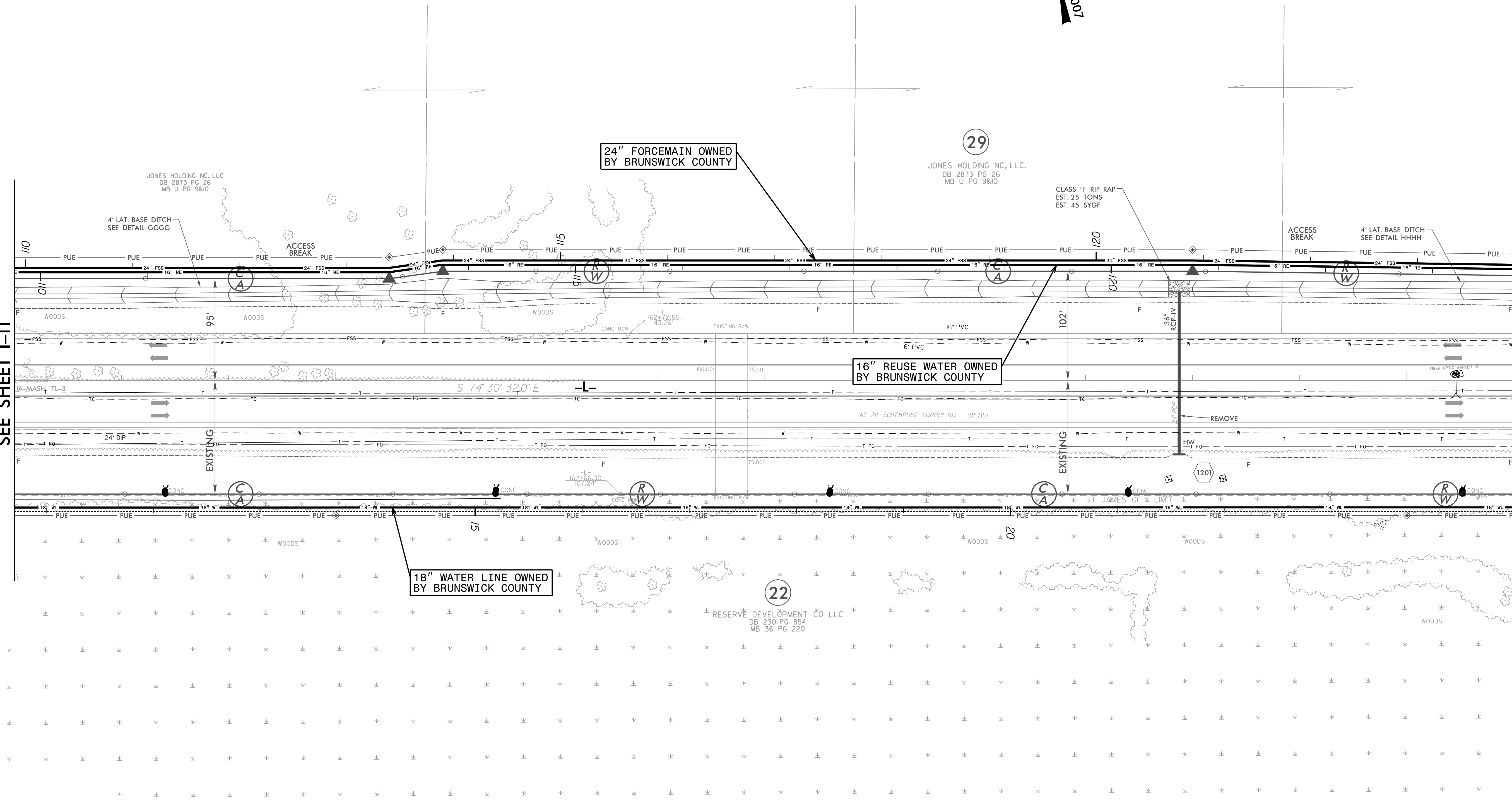
FOR INFORMATION ONLY  
SEE UC-12 FOR CONSTRUCTION DETAILS

PROJECT REFERENCE NO.	SHEET NO.
R-5021	I-12
DESIGNED BY: JXL	
DRAWN BY: JXL	
CHECKED BY: BMB	
APPROVED BY: BMB	
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MATCH LINE -L- STA 157 + 00.00  
SEE SHEET I-11

MATCH LINE -L- STA 171 + 00.00  
SEE SHEET I-13



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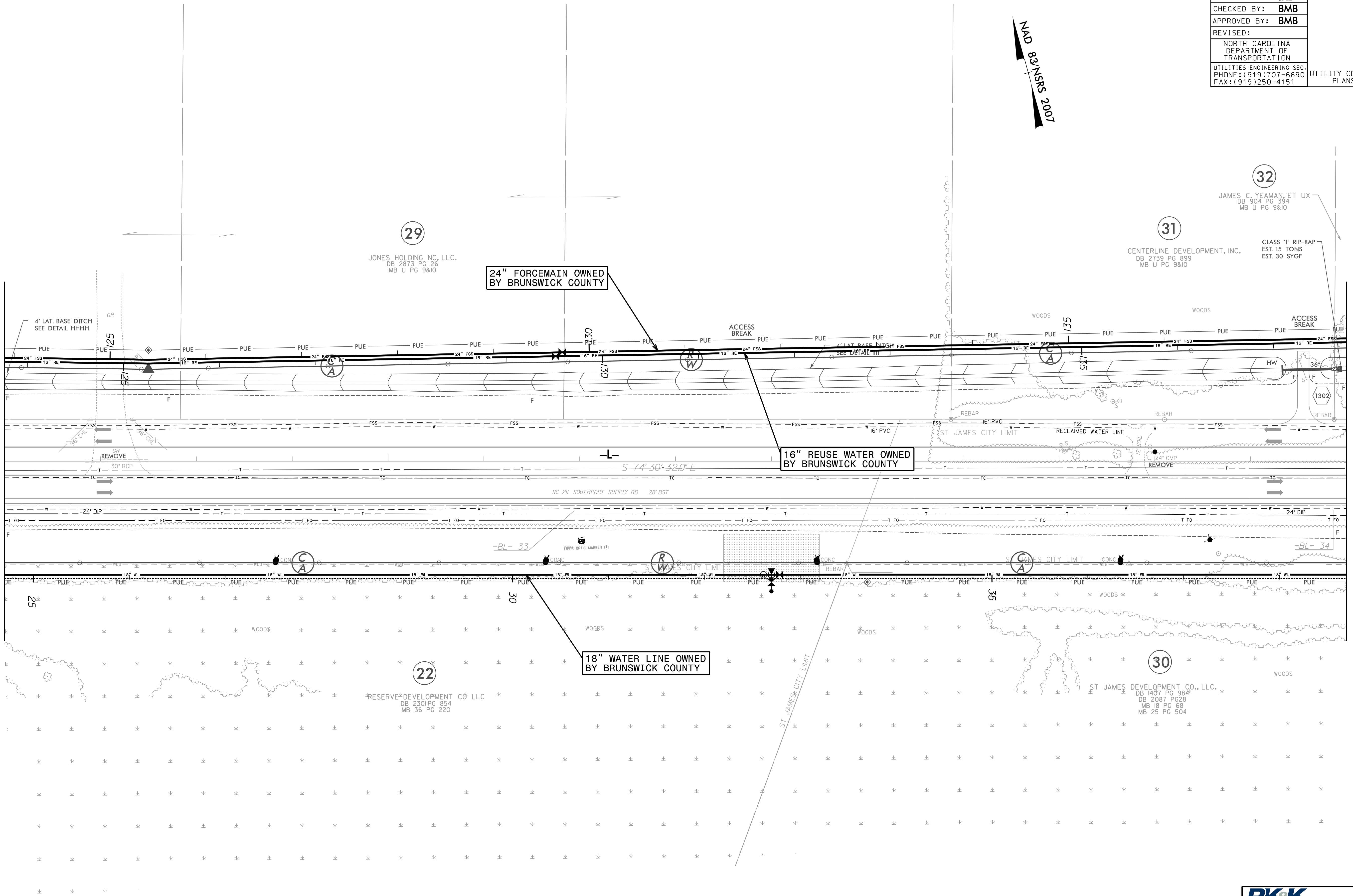
FOR INFORMATION ONLY  
SEE UC-13 FOR CONSTRUCTION DETAILS

PROJECT REFERENCE NO.	SHEET NO.
R-5021	I-13
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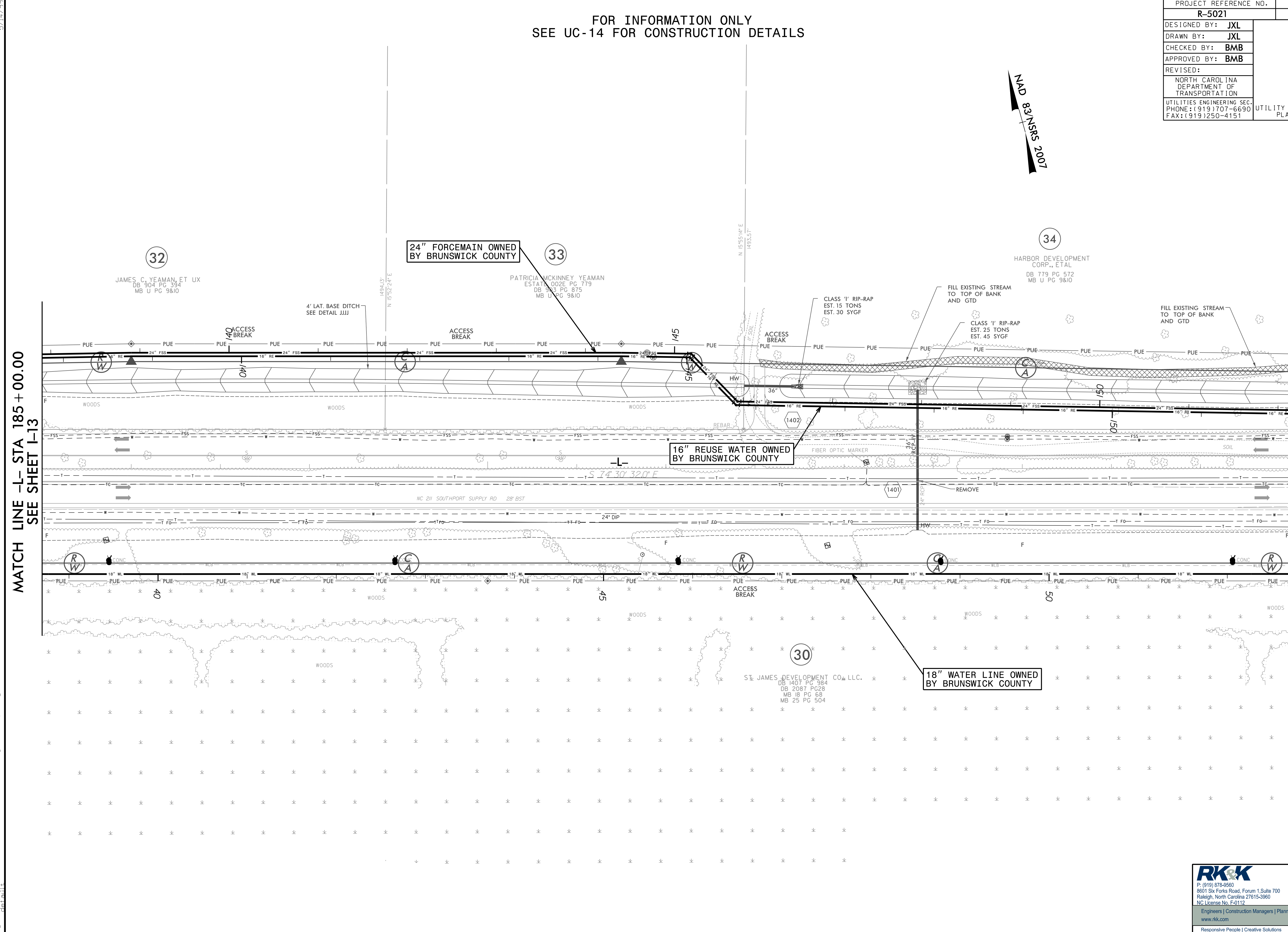
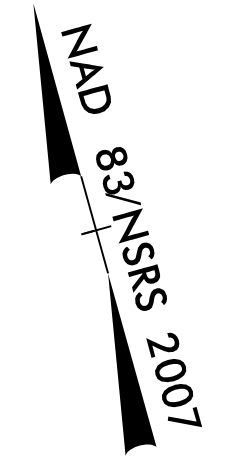
MATCH LINE -L- STA 171 + 00.00  
SEE SHEET I-12

MATCH LINE -L- STA 185 + 00.00  
SEE SHEET I-14



FOR INFORMATION ONLY  
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PROJECT REFERENCE NO.	SHEET NO.
R-5021	I-14
DESIGNED BY: JXL	
DRAWN BY: JXL	
CHECKED BY: BMB	
APPROVED BY: BMB	
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MATCH LINE -L- STA 185 + 00.00  
SEE SHEET I-13

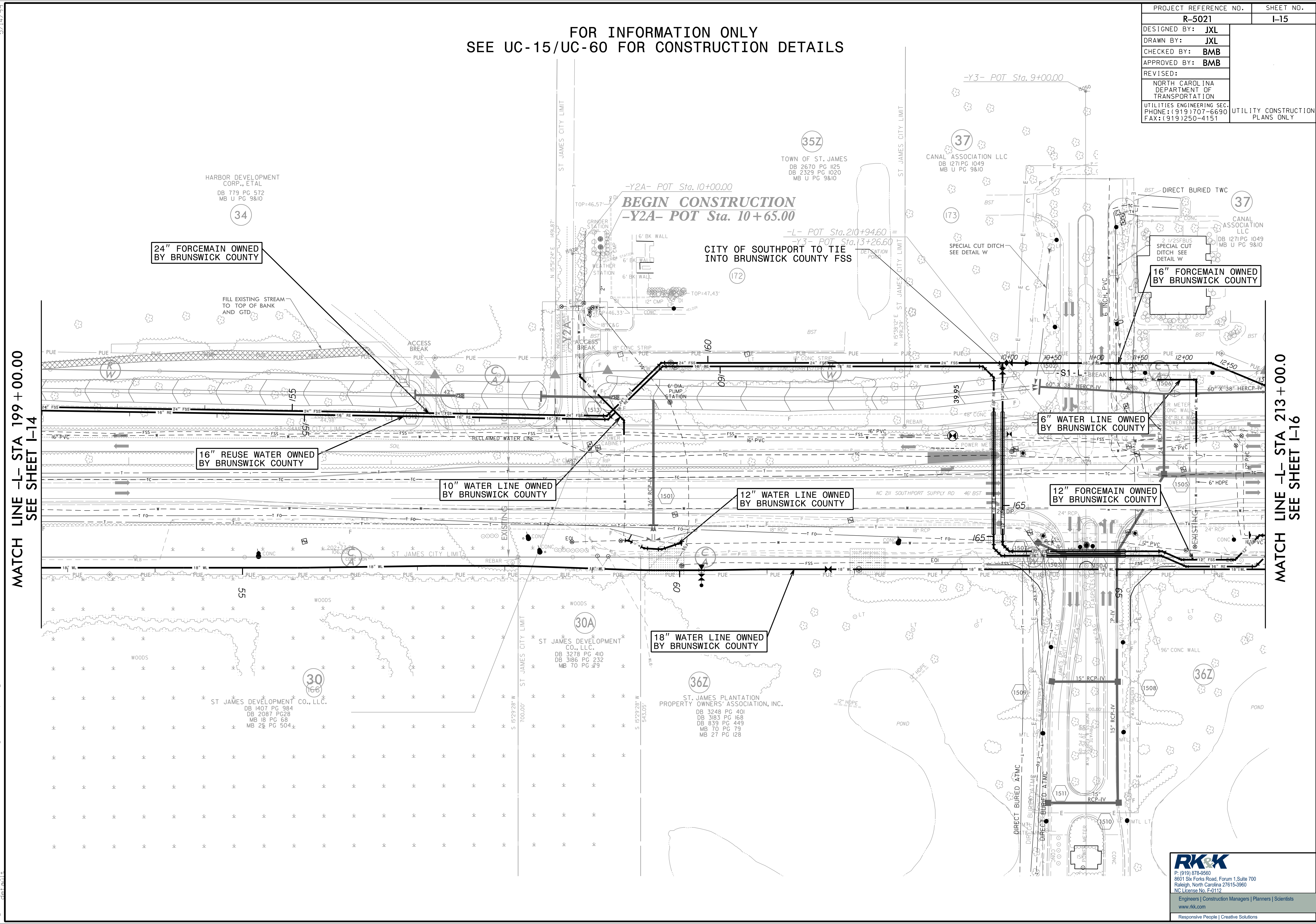
MATCH LINE -L- STA 199 + 00.00  
SEE SHEET I-15

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PROJECT REFERENCE NO.	R-5021	SHEET NO.	I-15
DESIGNED BY:	JXL	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
DRAWN BY:	JXL		
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MATCH LINE -L- STA 199+00.00  
SEE SHEET I-14

MATCH LINE -L- STA 213+00.00  
SEE SHEET I-16

24" FORCEMAIN OWNED  
BY BRUNSWICK COUNTY

16" REUSE WATER OWNED  
BY BRUNSWICK COUNTY

10" WATER LINE OWNED  
BY BRUNSWICK COUNTY

12" WATER LINE OWNED  
BY BRUNSWICK COUNTY

6" WATER LINE OWNED  
BY BRUNSWICK COUNTY

12" FORCEMAIN OWNED  
BY BRUNSWICK COUNTY

18" WATER LINE OWNED  
BY BRUNSWICK COUNTY

16" FORCEMAIN OWNED  
BY BRUNSWICK COUNTY

BEGIN CONSTRUCTION  
-Y2A- POT Sta. 10+65.00

CITY OF SOUTHPORT TO TIE  
INTO BRUNSWICK COUNTY FSS

5/14/99

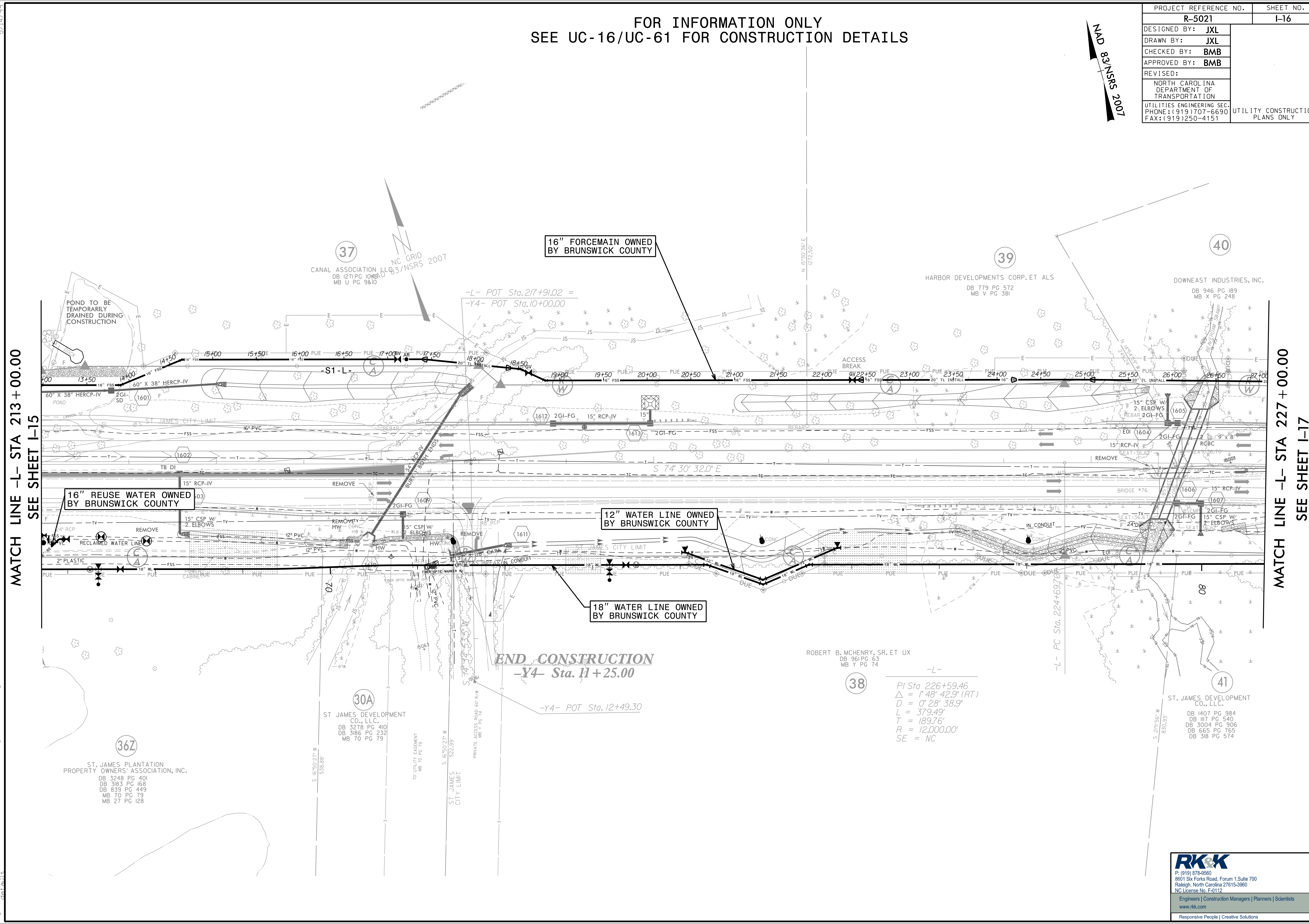
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PROJECT REFERENCE NO.	SHEET NO.
R-5021	I-16
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DRAWN BY: JXL	
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MATCH LINE -L- STA 213+00.00  
SEE SHEET I-15

MATCH LINE -L- STA 227+00.00  
SEE SHEET I-17

**END CONSTRUCTION**  
-Y4- Sta. 11+25.00

ROBERT B. MCHENRY, SR. ET UX  
DB 961 PG 63  
MB Y PG 74

38  
-L-  
PI Sta 226+59.46  
Δ = 1' 48" 42.9" (RT)  
D = 0' 28" 38.9"  
L = 379.49'  
T = 189.76'  
R = 12,000.00'  
SE = NC

41  
ST. JAMES DEVELOPMENT CO., LLC.  
DB 1407 PG 984  
DB III PG 540  
DB 3004 PG 906  
DB 665 PG 765  
DB 318 PG 574

36Z  
ST. JAMES PLANTATION PROPERTY OWNERS' ASSOCIATION, INC.  
DB 3248 PG 401  
DB 3163 PG 168  
DB 333 PG 448  
MB 70 PG 79  
MB 27 PG 128

30A  
ST. JAMES DEVELOPMENT CO., LLC.  
DB 3278 PG 410  
DB 3186 PG 232  
MB 70 PG 79

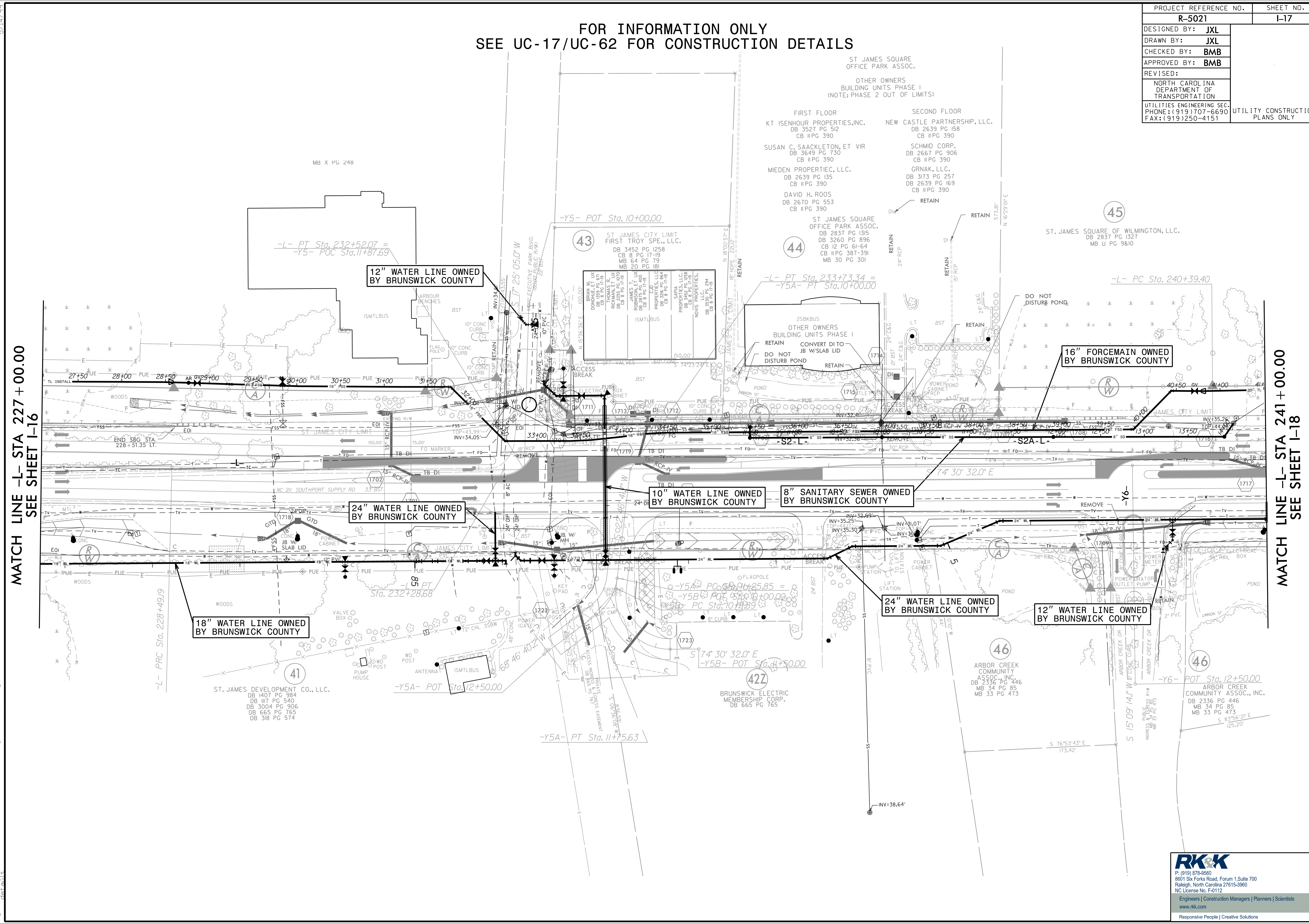
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PROJECT REFERENCE NO.	R-5021	SHEET NO.	I-17
DESIGNED BY:	JXL		
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MATCH LINE -L- STA 227 + 00.00  
SEE SHEET I-16

MATCH LINE -L- STA 241 + 00.00  
SEE SHEET I-18

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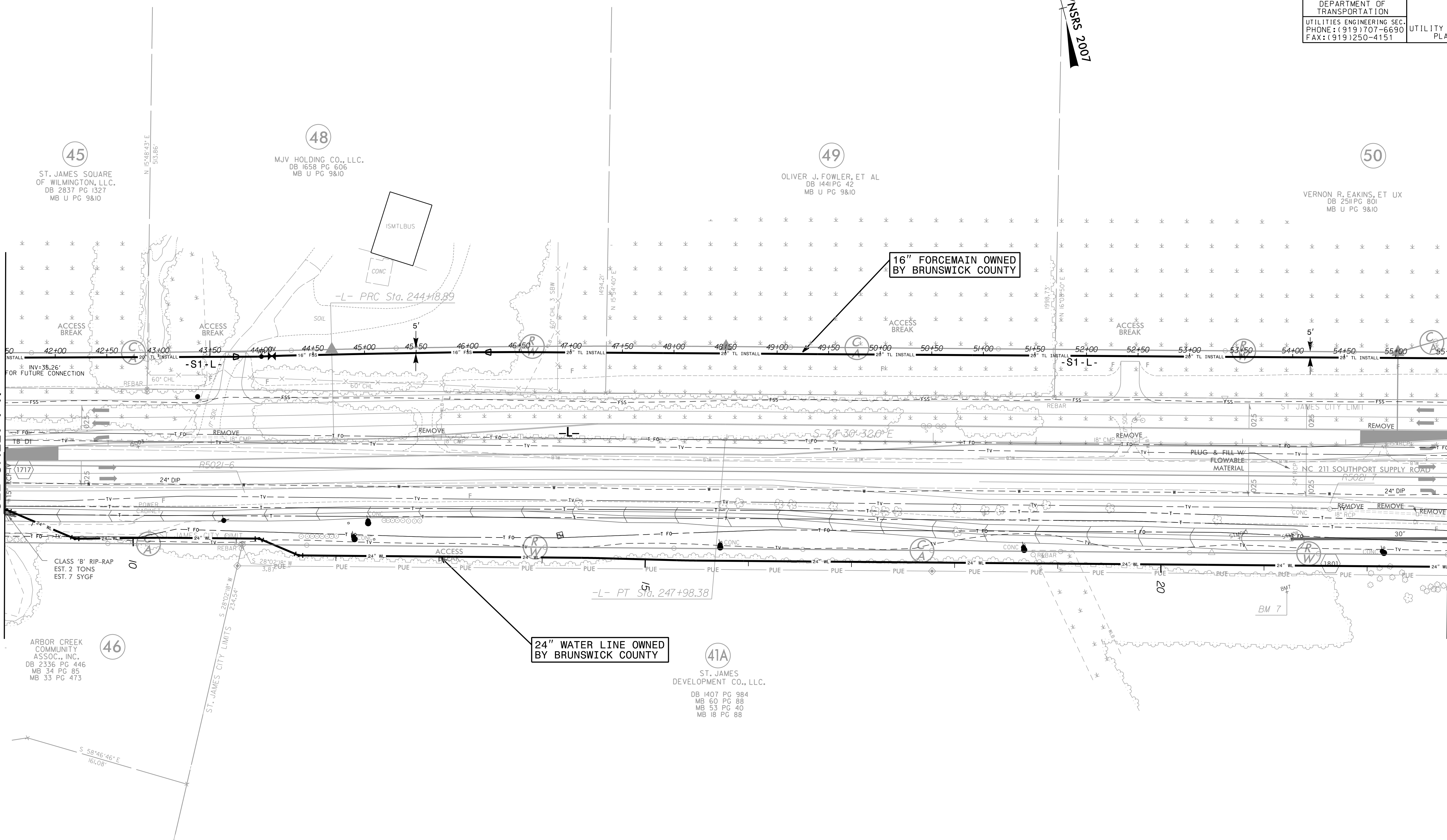
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SEE UC-18/UC-63 FOR CONSTRUCTION ONLY

PROJECT REFERENCE NO.	SHEET NO.
R-5021	I-18
DESIGNED BY: JXL	
DRAWN BY: JXL	
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MATCH LINE -L- STA 241 + 00.00  
SEE SHEET I-17

MATCH LINE -L- STA 255 + 00.00  
SEE SHEET I-19



45  
ST. JAMES SQUARE  
OF WILMINGTON, LLC.  
DB 2837 PG 1327  
MB U PG 9&10

48  
MJV HOLDING CO., LLC.  
DB 1658 PG 606  
MB U PG 9&10

49  
OLIVER J. FOWLER, ET AL  
DB 1441 PG 42  
MB U PG 9&10

50  
VERNON R. EAKINS, ET UX  
DB 2511 PG 801  
MB U PG 9&10

46  
ARBOR CREEK  
COMMUNITY  
ASSOC., INC.  
DB 2336 PG 446  
MB 34 PG 85  
MB 33 PG 473

24" WATER LINE OWNED  
BY BRUNSWICK COUNTY

41A  
ST. JAMES  
DEVELOPMENT CO., LLC.  
DB 1407 PG 984  
MB 60 PG 88  
MB 53 PG 40  
MB 18 PG 88

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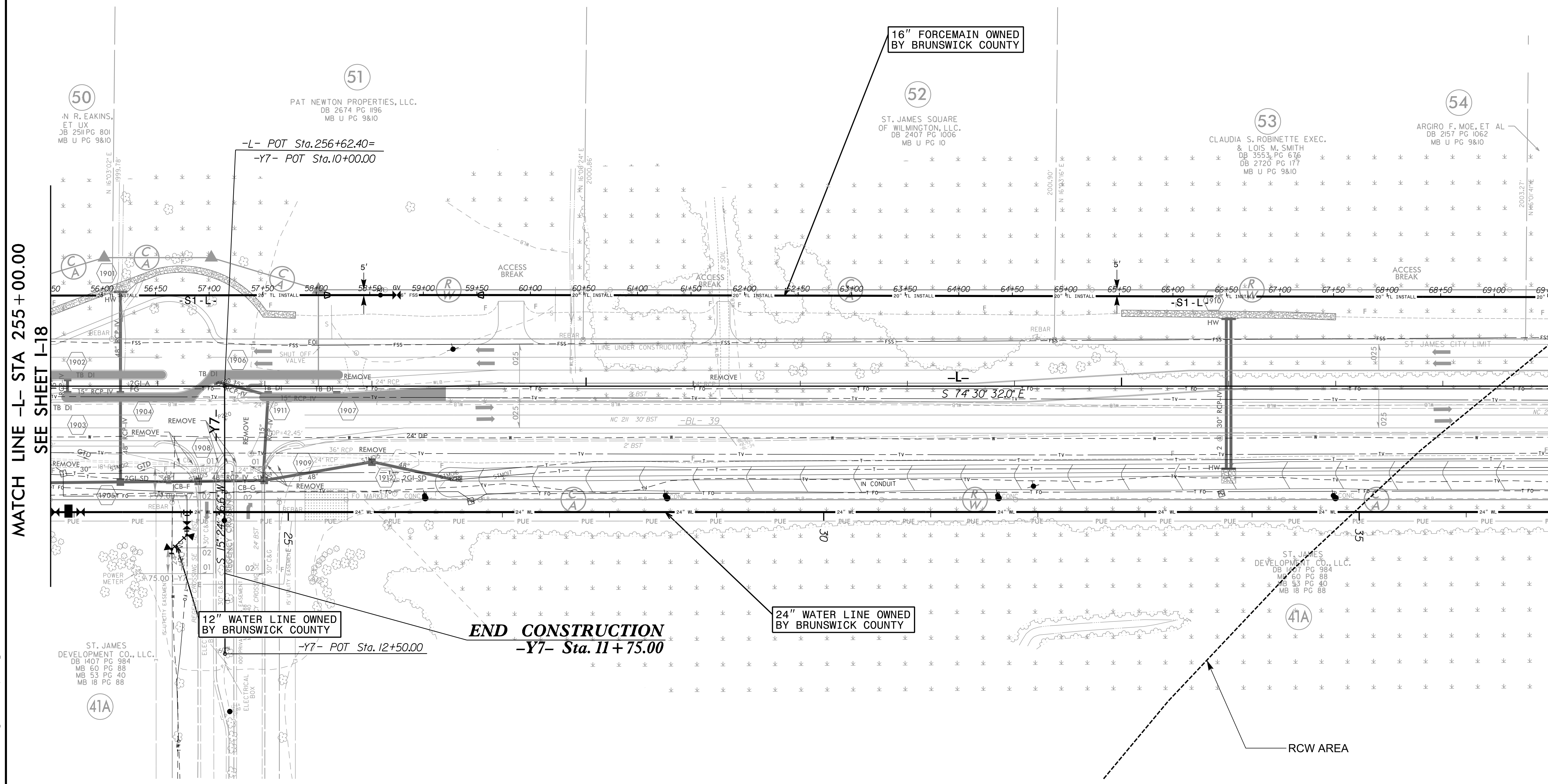
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PROJECT REFERENCE NO.	SHEET NO.
R-5021	1-19
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NAD 83 NSRS 2007



MATCH LINE -L- STA 255 + 00.00  
SEE SHEET I-18

MATCH LINE -L- STA 269 + 00.00  
SEE SHEET I-20

-L- POT Sta. 256+62.40=  
-Y7- POT Sta. 10+00.00

-Y7- POT Sta. 12+50.00

END CONSTRUCTION  
-Y7- Sta. 11+75.00

16" FORCEMAIN OWNED BY BRUNSWICK COUNTY

24" WATER LINE OWNED BY BRUNSWICK COUNTY

12" WATER LINE OWNED BY BRUNSWICK COUNTY

RCW AREA

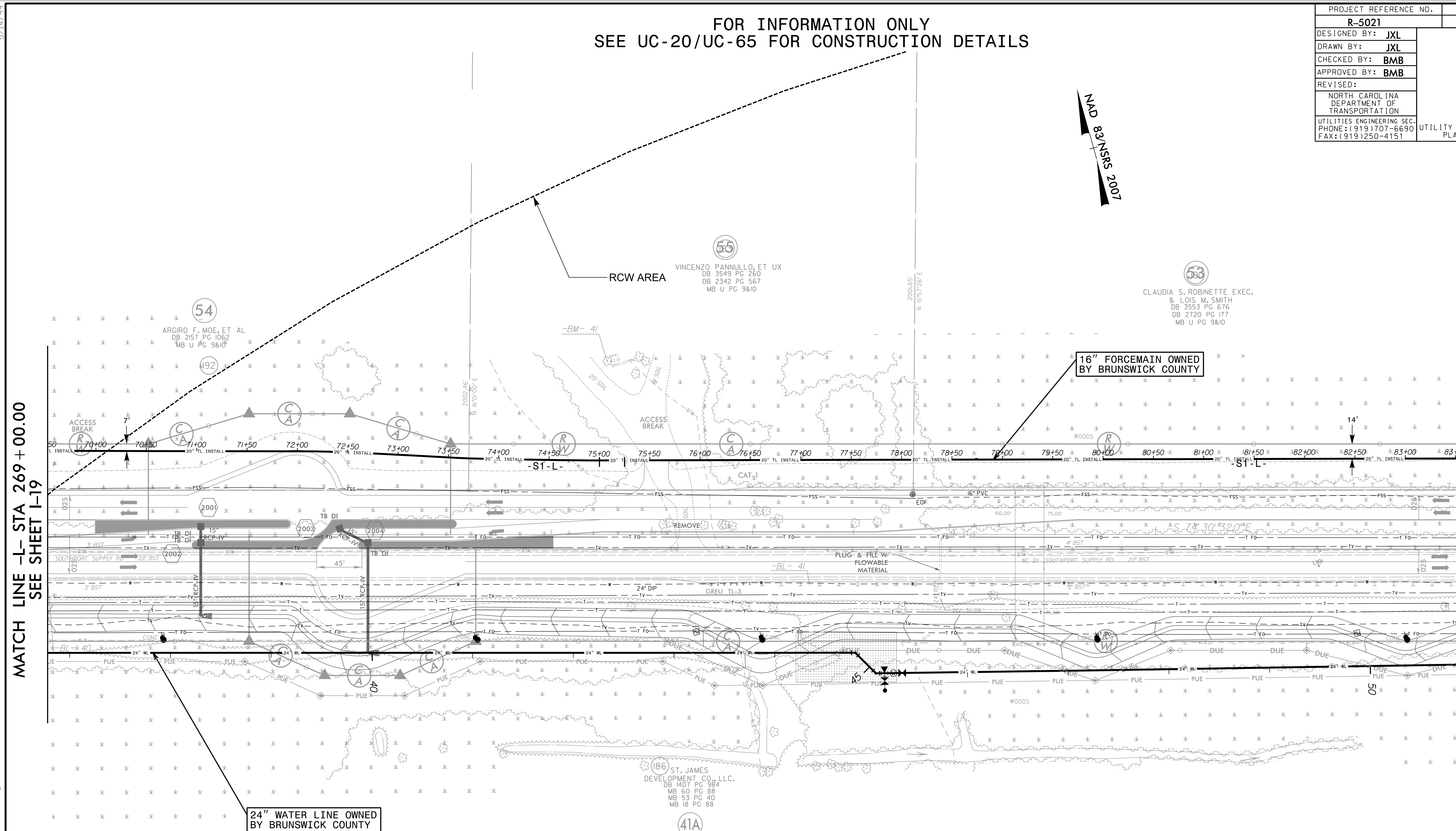
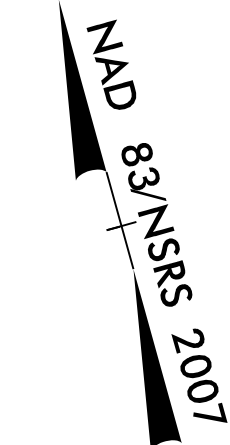
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PROJECT REFERENCE NO.	SHEET NO.
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DESIGNED BY: JXL	
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APPROVED BY: BMB	
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MATCH LINE -L- STA 269 + 00.00  
SEE SHEET I-19

MATCH LINE -L- STA 283 + 00.00  
SEE SHEET I-21

24" WATER LINE OWNED BY BRUNSWICK COUNTY

16" FORCEMAIN OWNED BY BRUNSWICK COUNTY

VINCENZO PANNULLO, ET UX  
DB 3549 PG 260  
DB 2342 PG 567  
MB U PG 9&10

CLAUDIA S. ROBINETTE EXEC.  
& LOIS M. SMITH  
DB 3553 PG 676  
DB 2720 PG 177  
MB U PG 9&10

ST. JAMES DEVELOPMENT CO., LLC.  
DB 1407 PG 984  
MB 60 PG 88  
MB 53 PG 40  
MB 18 PG 88

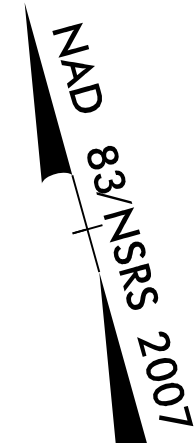
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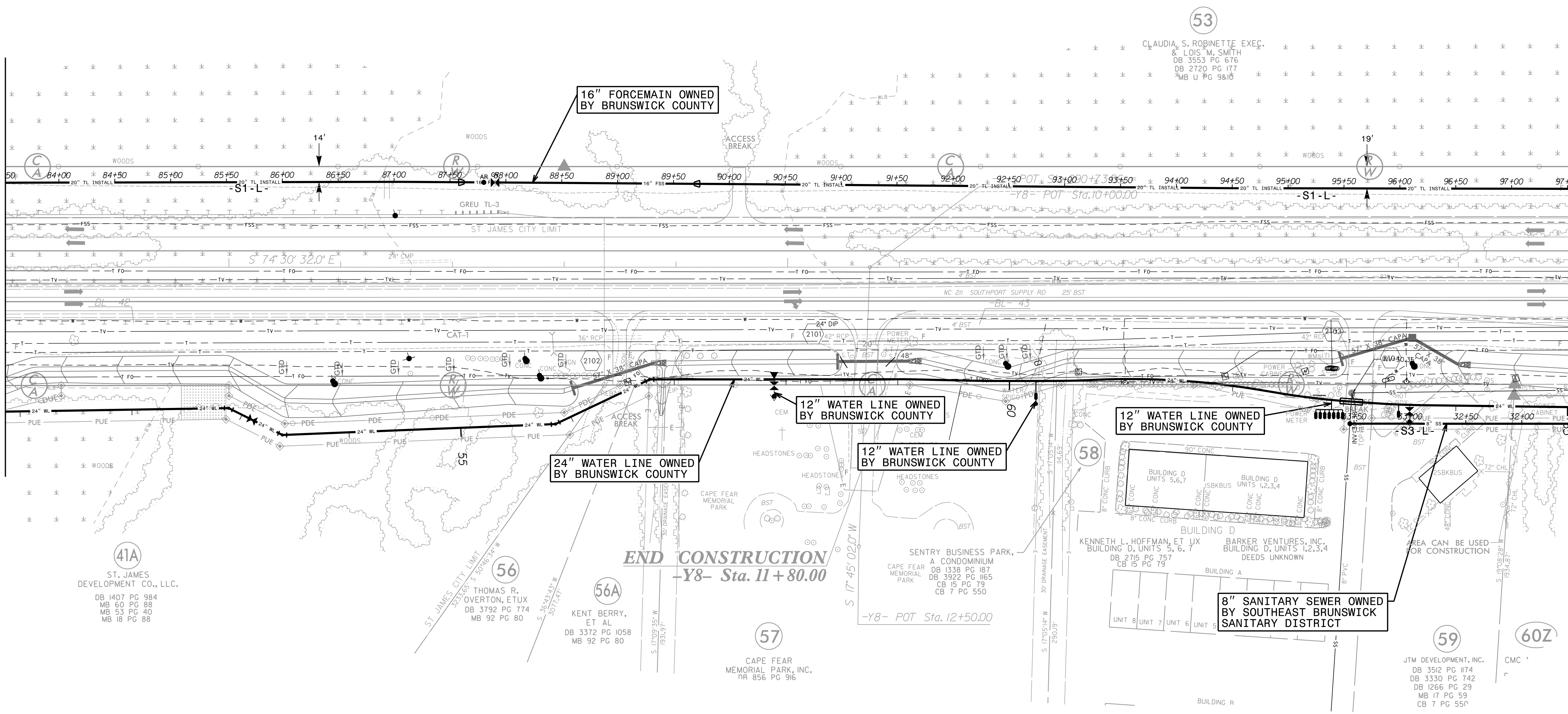
PROJECT REFERENCE NO.	SHEET NO.
R-5021	I-21
DESIGNED BY: JXL	
DRAWN BY: JXL	
CHECKED BY: BMB	
APPROVED BY: BMB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY



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MATCH LINE -L- STA 283 + 00.00  
SEE SHEET I-20

MATCH LINE -L- STA 297 + 00.00  
SEE SHEET I-22



41A  
ST. JAMES DEVELOPMENT CO., LLC.  
DB 1407 PG 884  
MB 60 PG 88  
MB 53 PG 40  
MB 18 PG 88

56  
THOMAS R. OVERTON, ETUX  
DB 3792 PG 774  
MB 92 PG 80

56A  
KENT BERRY, ET AL  
DB 3372 PG 1058  
MB 92 PG 80

57  
CAPE FEAR MEMORIAL PARK, INC.  
DB 856 PG 916

SENTRY BUSINESS PARK, A CONDOMINIUM  
CAPE FEAR MEMORIAL PARK  
DB 1338 PG 187  
DB 3922 PG 1165  
CB 15 PG 79  
CB 7 PG 550

KENNETH L. HOFFMAN, ET UX  
BUILDING D, UNITS 5, 6, 7  
DB 2715 PG 757  
CB 15 PG 79

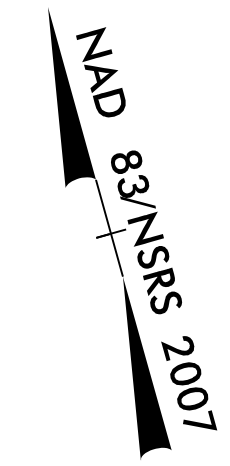
BARKER VENTURES, INC.  
BUILDING D, UNITS 1, 2, 3, 4  
DEEDS UNKNOWN

JTM DEVELOPMENT, INC.  
DB 3512 PG 1174  
DB 3330 PG 742  
DB 1266 PG 29  
MB 17 PG 59  
CB 7 PG 550

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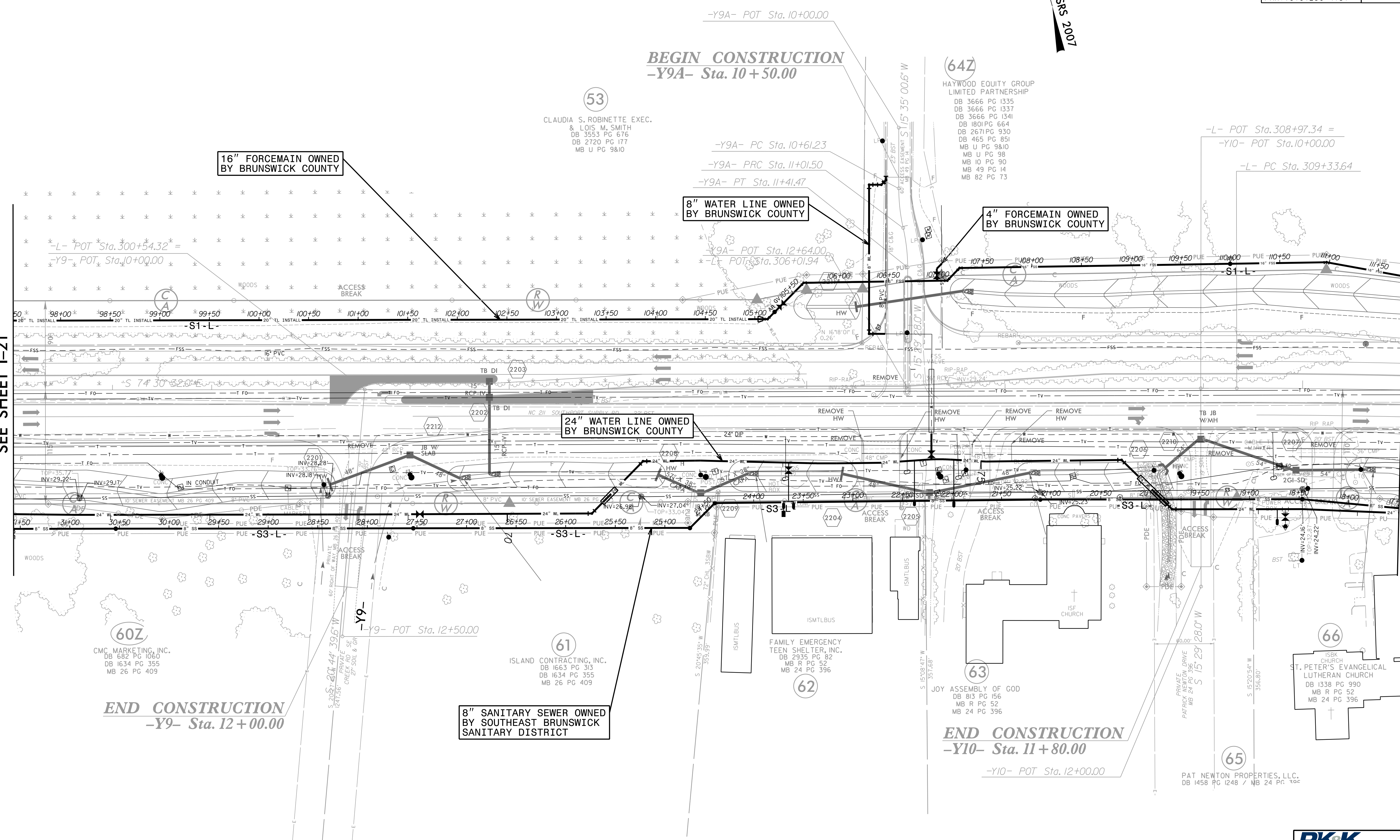
PROJECT REFERENCE NO.	SHEET NO.
R-5021	I-22
DESIGNED BY: JXL	
DRAWN BY: JXL	
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9/22/2021 Index of UC Sheets \R-5021-ut-rdy-22-UC67\_psh.dgn

MATCH LINE -L- STA 297 + 00.00  
SEE SHEET I-21

MATCH LINE -L- STA 311 + 00.00  
SEE SHEET I-23



16" FORCEMAIN OWNED BY BRUNSWICK COUNTY

8" WATER LINE OWNED BY BRUNSWICK COUNTY

4" FORCEMAIN OWNED BY BRUNSWICK COUNTY

24" WATER LINE OWNED BY BRUNSWICK COUNTY

8" SANITARY SEWER OWNED BY SOUTHEAST BRUNSWICK SANITARY DISTRICT

BEGIN CONSTRUCTION  
-Y9A- Sta. 10 + 50.00

END CONSTRUCTION  
-Y9- Sta. 12 + 00.00

END CONSTRUCTION  
-Y10- Sta. 11 + 80.00

53  
CLAUDIA S. ROBINETTE EXEC.  
& LOIS M. SMITH  
DB 3553 PG 676  
DB 2720 PG 177  
MB U PG 9&10

64Z  
HAYWOOD EQUITY GROUP  
LIMITED PARTNERSHIP  
DB 3666 PG 1335  
DB 3666 PG 1337  
DB 3666 PG 1341  
DB 1801 PG 664  
DB 2671 PG 930  
DB 465 PG 851  
MB U PG 9&10  
MB U PG 98  
MB 10 PG 90  
MB 49 PG 14  
MB 82 PG 73

60Z  
CMC MARKETING, INC.  
DB 1682 PG 1060  
DB 1634 PG 355  
MB 26 PG 409

61  
ISLAND CONTRACTING, INC.  
DB 1663 PG 313  
DB 1634 PG 355  
MB 26 PG 409

62  
FAMILY EMERGENCY  
TEEN SHELTER, INC.  
DB 2935 PG 82  
MB R PG 52  
MB 24 PG 396

63  
JOY ASSEMBLY OF GOD  
DB 813 PG 156  
MB R PG 52  
MB 24 PG 396

66  
ST. PETER'S EVANGELICAL  
LUTHERAN CHURCH  
DB 1338 PG 990  
MB R PG 52  
MB 24 PG 396

65  
PAT NEWTON PROPERTIES, LLC.  
DB 1458 PG 1248 / MB 24 PG 306

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