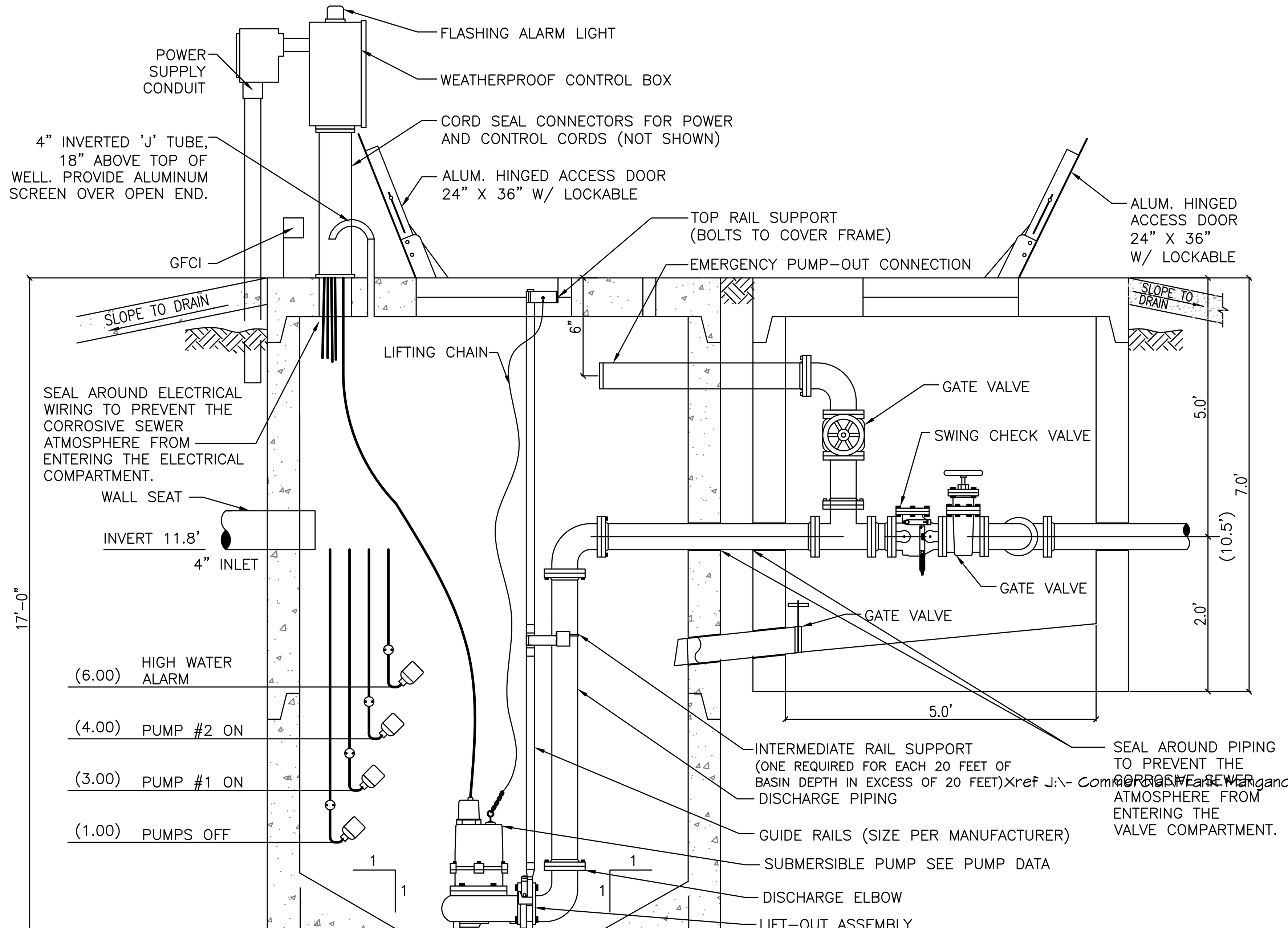
FILE NAME: J:\- Commercial\2436 - Frank Mangano RV site MS\Current Drawings\C104 - Sewage & Drainage plan.dwg PLOT DATE & TIME: Monday, March 21, 2022 11:06:03 AM

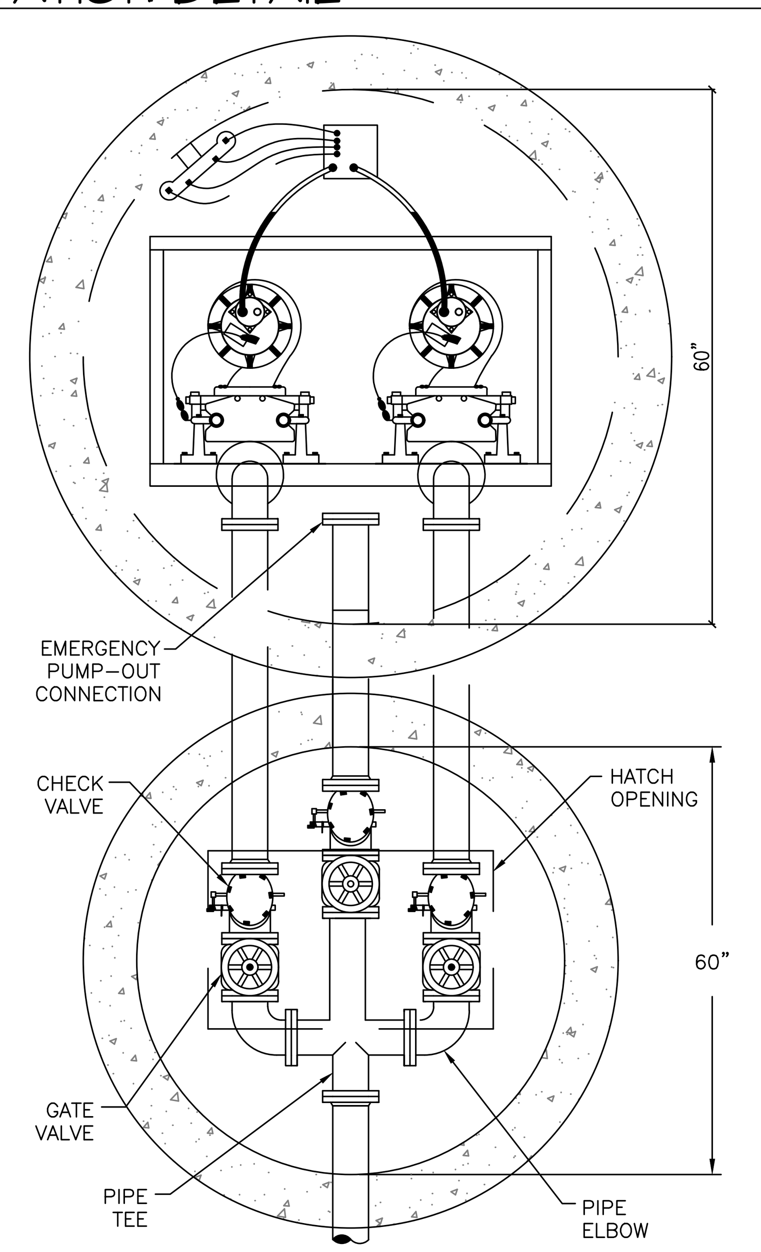


CONCRETE NOTES:
1. CONCRETE STRENGTH IS 4,800 PSI @ 28 DAYS
2. STRUCTURE JOINTS TO BE SEALED WITH FLAT BUTYL SEALANT (CONSEAL)
3. REINFORCEMENT STEEL MEETS HS-20 LOADING REQUIREMENTS

PUMP DATA
DUPLEX GRINDER PUMPS
40 GPM @ 40 TDH
WITH 2 H.P. 3750 R.P.M. MOTORS
ZOELLER 840

NOTE:
1. CALC FOR SIZING:
PUMP 20 GAL/EMPLOYEE
OCCUPANT LOAD 95 EMPLOYEES
2000 GAL/DAY 4.2 GAL/MIN
PUMP + ADD IN 30 GAL/MIN FROM GREASE
THEN X 10% = 38 GAL/MIN
2. REFER TO LIFT STATION SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

LIFT STATION DETAIL
SCALE: N.T.S. TYPICAL



LIFT STATION DETAIL
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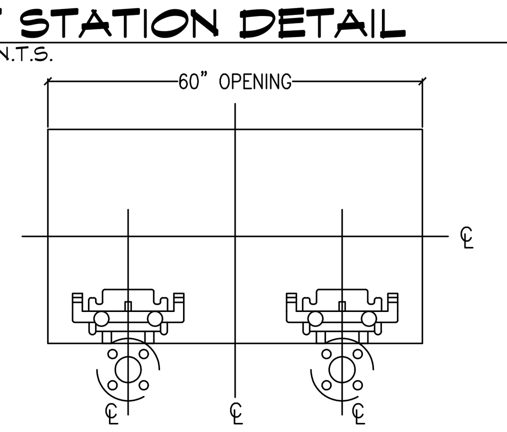

LIFT STATION DETAIL
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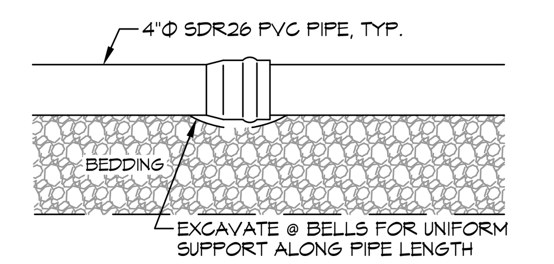
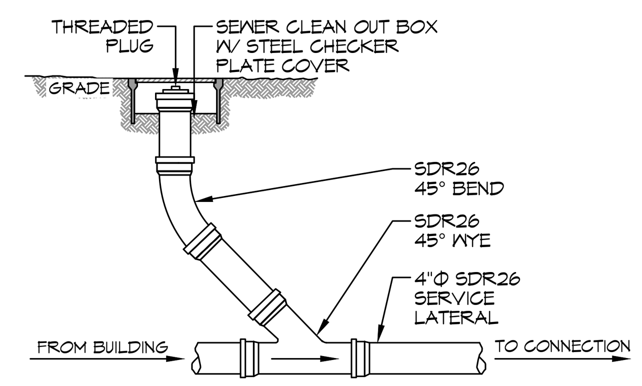
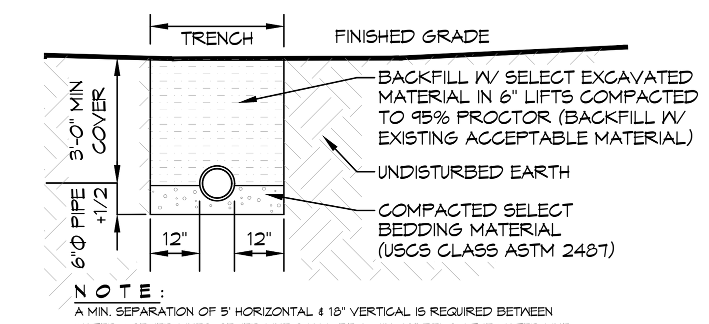


PIPE BEDDING
SCALE: N.T.S. TYPICAL



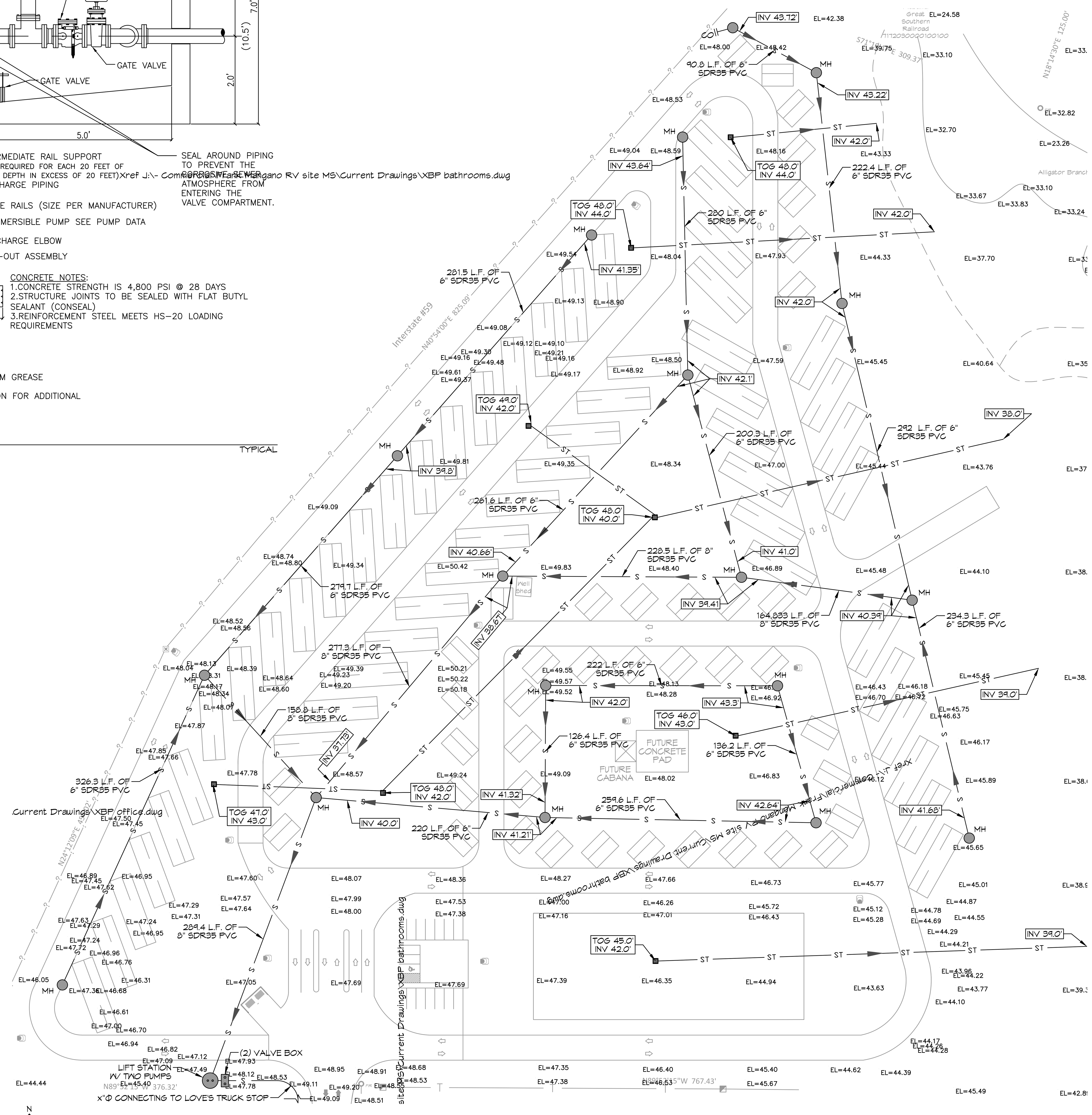
SEWER CLEAN OUT
SCALE: N.T.S. TYPICAL



SEWER & WATER SEPERATION
SCALE: N.T.S. TYPICAL

LEGEND

—— ST ——	STORM WATER PIPE
—— S ——	SEWER PIPE



1 SEWAGE & DRAINAGE PLAN
SCALE: 1" = 60'-0"

GENERAL NOTES

1. PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT FOR A COMPLETE OPERATING SYSTEM. CONTRACTOR IS TO FIELD VERIFY ALL EXISTING UTILITY LOCATIONS, ELEVATIONS, AND INVERTS PRIOR TO COMMENCING ANY WORK. CONTRACTOR SHALL PAY NECESSARY FEES FOR THE UTILITIES CONNECTIONS.
2. CONTRACTOR TO BE RESPONSIBLE TO VERIFY ANY INVERTS AND SET NEW INVERTS OF SEWAGE AND DRAINAGE PIPES.
3. ALL WORK AND MATERIAL TO COMPLY STRICTLY TO THE LATEST LOCAL CITY PARISH, STATE, AND NATIONAL GOVERNING CODES.
4. SEWAGE LINES 3" AND SMALLER SHALL BE SLOPED 1/4" PER FOOT AND LINES THAT ARE 4" AND LARGER SHALL BE SLOPED 1/8" PER FOOT.

THE GENERAL CONTRACTOR SHALL:
1. PROVIDE ALL NEW MATERIAL, LABOR, TOOLS, EQUIPMENT, INSURANCE, TEMPORARY UTILITIES, TRANSPORTATION, PERMITS, FEES, TAX, SUPERINTENDANT, TEMPORARY CONSTRUCTION AND ALL OTHER SERVICES OR FACILITIES NECESSARY TO COMPLETE AND DELIVER THE FINISHED PROJECT TO THE OWNER.
2. TAKE OUT PERMITS AND ARRANGE FOR ALL INSPECTIONS REQUIRED BY ALL GOVERNMENTAL AGENCIES.
3. VERIFY ALL GRADES, LINES, LEVELS AND DIMENSIONS AS SHOWN ON THE DRAWINGS.
4. TAKE NECESSARY PRECAUTIONS FOR THE SAFETY OF EMPLOYEES ON THE JOB, TO PREVENT ACCIDENTS OR INJURY TO PERSONNEL PERFORMING THE WORK, AND PREVENT OTHER UNAUTHORIZED PERSONNEL FROM BEING ON THE JOB SITE.
5. EMPLOY AND KEEP ON THE JOB AT ALL TIMES A COMPETENT GENERAL SUPERINTENDENT AS HIS REPRESENTATIVE: IN THE ABSENCE OF THE CONTRACTOR, INSTRUCTIONS GIVEN TO THE SUPERINTENDENT SHALL BE BINDING UPON THE CONTRACTOR.
6. MAINTAIN ADEQUATE PROTECTION OF ALL WORK FROM DAMAGE AND PROTECT THE OWNER'S PROPERTY.

CONTRACT DOCUMENTS:
THE CONTRACT DOCUMENTS CONSIST OF THE EXECUTED CONTRACT AGREEMENT GENERAL CONDITIONS, THE DRAWINGS, THE SPECIFICATIONS AND ALL ADDENDA INCORPORATED IN THE DOCUMENT PRIOR TO EXECUTION. THE CONTRACT DOCUMENTS SHALL BE SIGNED IN DUPLICATE BY THE OWNER AND THE CONTRACTOR, WHICH SHALL CONSTITUTE AN AGREEMENT BETWEEN THEM TO ALL OF THE CONTRACT DOCUMENTS, AND WHAT IS CALLED FOR BY ANY ONE DOCUMENT SHALL BE BINDING AS IF CALLED FOR BY ALL OF THEM.

CONTRACTOR'S UNDERSTANDING:
IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR AND EACH SUB-CONTRACTOR, BY CAREFUL EXAMINATION, SATISFIED HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK, THE CHARACTER, QUALITY AND QUANTITY OF THE MATERIAL TO BE ENCOUNTERED, THE CHARACTER OF EQUIPMENT AND FACILITIES NEEDED, THE GENERAL AND LOCAL CONDITIONS, AND ALL ETHER MATTERS WHICH CAN IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT.

ERRORS & OMISSIONS:
IF THE CONTRACTOR FINDS ANY DISCREPANCY BETWEEN THE DRAWINGS AND THE PHYSICAL CONDITIONS AT THE SITE OR ANY ERROR OR OMISSIONS IN THE DRAWINGS OR SPECIFICATIONS IT SHALL BE HIS RESPONSIBILITY TO INFORM THE ENGINEER IMMEDIATELY. ANY WORK DONE TO CORRECT ANY DISCREPANCY, UNTIL AUTHORIZED BY CHANGE ORDER, WILL BE DONE AT THE CONTRACTOR'S RISK.

ENGINEER'S AUTHORITY:
ALL WORK SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ENGINEER OR HIS REPRESENTATIVE TO INSURE STRICT COMPLIANCE WITH THE PLANS AND SPECIFICATIONS AND TERMS OF THE CONTRACT. THE ENGINEER SHALL HAVE AUTHORITY TO STOP WORK WHENEVER SUCH STOPPAGE MAY BE NECESSARY TO INSURE THE PROPER EXECUTION OF THE CONTRACT. HE SHALL ALSO HAVE AUTHORITY TO REJECT ALL WORK AND MATERIALS WHICH DOES NOT CONFORM TO THE CONTRACT. HE SHALL DECIDE QUESTIONS WHICH ARISE IN THE EXECUTION OF THE WORK. THE ENGINEER SHALL, WITHIN A REASONABLE TIME AFTER THEIR PRESENTATION TO HIM, MAKE DECISIONS IN WRITING ON ALL QUESTIONS OF THE CONTRACTOR AND ON ALL OTHER MATTERS RELATING TO THE EXECUTION AND PROGRESS OF THE WORK OR THE INTERPRETATION OF THE CONTRACT DOCUMENTS. ALL DISPUTES CONCERNING QUESTIONS OF FACT WHICH MAY ARISE UNDER THIS CONTRACT, AND WHICH ARE NOT DISPOSED OF BY MUTUAL AGREEMENT, SHALL BE DECIDED BY THE ENGINEER SUBJECT TO WRITTEN APPEAL BY THE CONTRACTOR OR THE OWNER.

GUARANTY:
ALL WORK UNDER THIS CONTRACT SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL PAYMENT. WHENEVER GUARANTEED WORK IS FOUND FAULTY, THE CONTRACTOR MUST REPAIR OR REPLACE IT IN A SATISFACTORY CONDITION. UPON THE CONTRACTOR'S FAILURE TO PROCEED PROMPTLY TO COMPLY WITH THE TERMS OF ANY GUARANTY UNDER THIS CONTRACT, THE OWNER MAY HAVE SUCH WORK PERFORMED ECONOMICALLY AND THE CONTRACTOR SHALL PROMPTLY REIMBURSE THE OWNER FOR THE COST OF THE LABOR, MATERIALS, OR EQUIPMENT USED IN THE REPAIR. WEAR AND TEAR AND THE RESULT OF ACCIDENTS, WHICH ARE NOT THE FAULT OF THE CONTRACTOR OR HIS AGENTS, ARE EXCLUDED FROM THE GUARANTEE.

"OR EQUAL" CLAUSE:
IF AN ITEM IS SPECIFIED BY USING THE TRADE NAME OF A PRODUCT OR A PARTICULAR MANUFACTURER, OR TYPE OF MATERIAL OR EQUIPMENT, AND THE CONTRACTOR WISHES TO MAKE AN "OR EQUAL" SUBSTITUTION, HE MUST OBTAIN PRIOR WRITTEN APPROVAL OF THE SUBSTITUTION , BY THE ENGINEER.

HORIZONTAL SEPARATION: WHENEVER POSSIBLE, SEWERS SHOULD BE LAID AT LEAST 10 FEET, HORIZONTALLY, FROM ANY EXISTING OR PROPOSED WATER MAIN. SHOULD LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET, A SEWER MAY BE LAID CLOSER THAN 10 FEET TO A WATER MAIN IF:
A. IT IS LAID IN A SEPARATE TRENCH.
B. IT IS LAID IN THE SAME TRENCH WITH THE WATER MAINS LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTHS.
C. IN EITHER CASE THE ELEVATION OF THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN.

VERTICAL SEPARATION: WHENEVER SEWERS MUST CROSS UNDER WATER MAINS, SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. WHEN THE ELEVATION OF THE SEWER CANNOT BE BURIED TO MEET THE ABOVE REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR RECONSTRUCTED WITH SLIP-ON OR MECHANICAL-JOINT CAST IRON PIPE, ASBESTOS OR CEMENT PRESSURE PIPE OR PRESTRESSED CONCRETE CYLINDER PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHOULD BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.

GOVERNMENTAL AUTHORITIES:
THIS CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS REQUIRED. HE SHALL ARRANGE FOR ALL FIELD TESTS REQUIRED AND SECURE ALL CERTIFICATES OF APPROVAL. PERFORM ALL WORK IN ACCORDANCE WITH THE RULES AND REGULATIONS OF LOCAL AND NATIONAL CODES, PUBLIC HEALTH DEPARTMENT, AIR AND WATER POLLUTION CONTROL COMMISSION:, AND ANY OTHER APPLICABLE GOVERNING AUTHORITIES.

GUARANTEES:
1. EXCEPT WHERE LONGER WARRANTY PERIODS ARE SPECIFIED OR ARE PROVIDED BY PRODUCT MANUFACTURERS, ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FREE FROM DEFECTS FOR THE PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF THE WORK BY THE ENGINEER.
2. THE CONTRACTOR, WHEN NOTIFIED IN WRITING BY THE ENGINEER OR OWNER, SHALL PROMPTLY REMEDY, WITHOUT COST TO THE OWNER, ANY DEFECTS WHICH DEVELOP WITHIN THE GUARANTEE PERIOD.

CLEANING UP:
UPON COMPLETION, REMOVE ALL EXCESS MATERIALS, EQUIPMENT, TEMPORARY STRUCTURES AND DEBRIS, LEAVING THE COMPLETED PROJECT IN A NEAT AND CLEAN CONDITION THROUGHOUT.

FORCE MAIN TESTING

PRESSURE PIPELINES:
1. PRESSURE TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM F 2164, FIELD LEAK TESTING OF POLYETHYLENE
2. PRESSURE PIPING SYSTEMS USING HYDROSTATIC PRESSURE. THE HDPE PIPE SHALL BE FILLED WITH WATER, RAISED TO TEST PRESSURE AND ALLOWED TO STABILIZE.
3. THE TEST PRESSURE SHALL BE 1.5 TIMES THE OPERATING PRESSURE AT THE LOWEST POINT IN THE SYSTEM. IN ACCORDANCE WITH SECTION 9.8, THE PIPE SHALL PASS IF THE FINAL PRESSURE IS WITH 5% OF THE TEST PRESSURE FOR 1 HOUR. FOR SAFETY
4. REASONS, HYDROSTATIC TESTING ONLY WILL BE USED.
5. CONTRACTOR SHALL INSURE THAT THE FORCE MAIN AND ALL CONNECTIONS ARE LEAK FREE ACCORDING TO TESTING.
6. IF NECESSARY, CONTRACTOR SHALL VIDEO CAMERA THE INSIDE OF THE 6" FORCE MAIN TO DETERMINE OBSTRUCTIONS THAT MAY IMPEDE THE INSERTION AND INSTALLATION OF THE 3" HDPE LINE.
7. CONTRACTOR SHALL DETERMINE THE CONDITION OF THE CONNECTING POINT, AND VIABILITY OF THE EXISTING FORCE MAIN INTERCONNECTING WITH THE WHISPERWOOD TREATMENT COLLECTION SYSTEM. CONTRACTOR SHALL COORDINATE WITH THE PELICAN POINT APARTMENTS UTILITY SUPERVISOR TO SCHEDULE THE INTERCONNECTION TIME. CONTRACTOR SHALL INSURE THE CONNECTION IS VIABLE AND ACCESSIBLE. ANY CONFLICTS WITH INSTALLATION SHALL BE SHARED WITH OWNER AND ENGINEER TO RESOLVE.

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#	DESCRIPTION	DATE
REVISIONS		

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NEW RECREATIONAL R/V SITE
EXIT 1 R.V. RESORT, LLC.
CLYDE MEITZIER ROAD
NICHOLSON MS MISSISSIPPI 39466

JOB No:	2436	DATE:	03-21-2022
DRAWN BY:	CKD	CHECKED BY:	CKD

SHEET TITLE:
SITE UTILITY PLAN

DRAWING NUMBER:
C104

SHEET No: 1 of 1