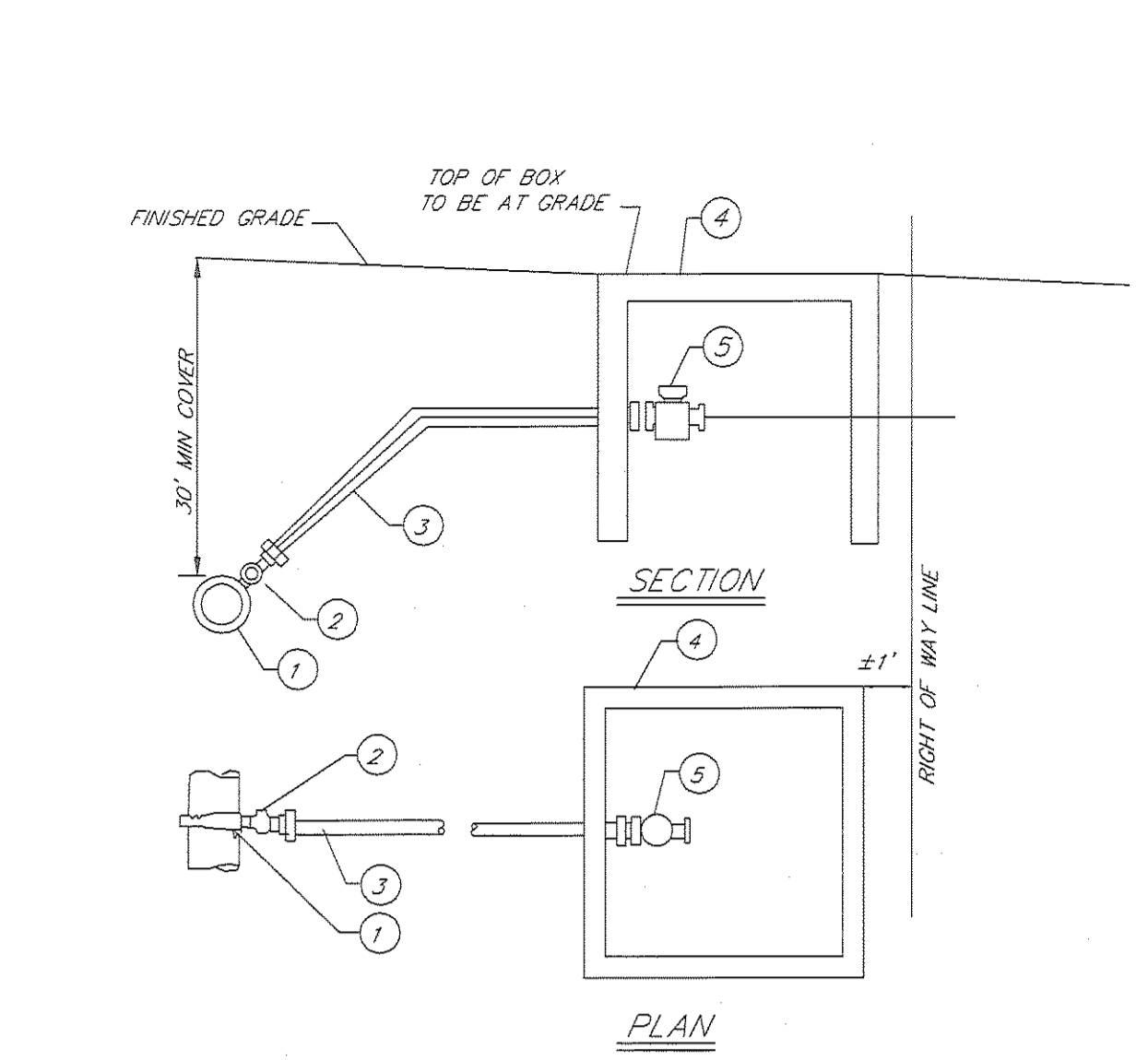
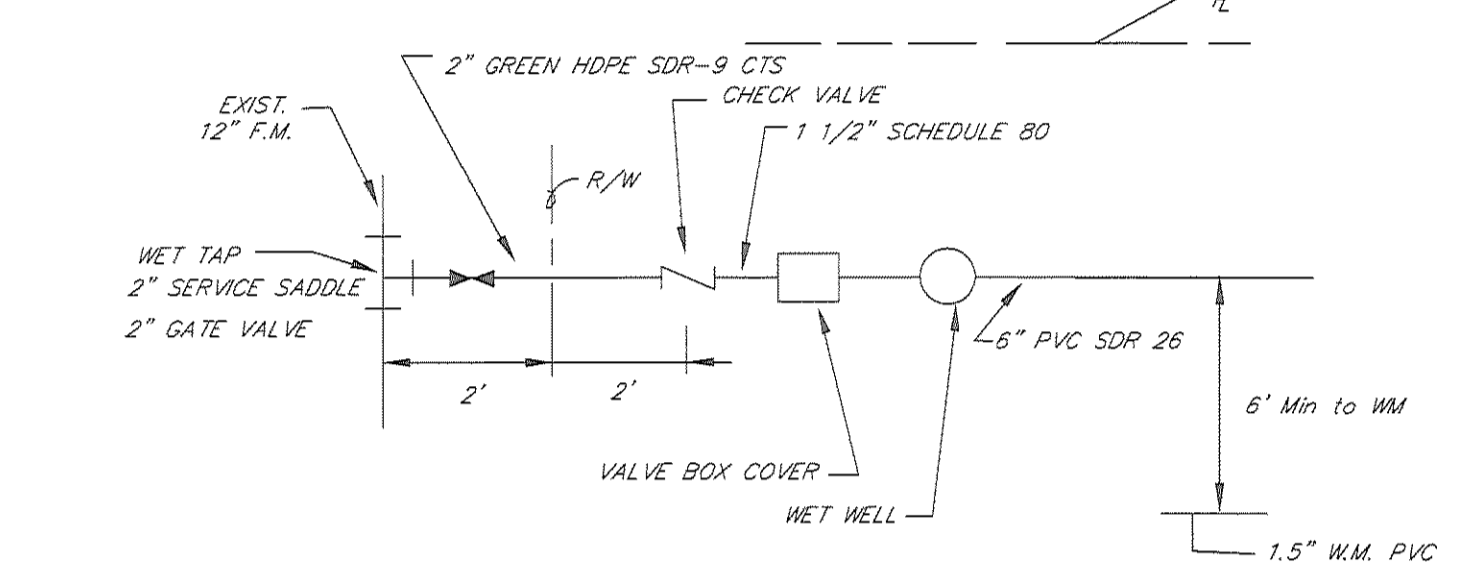


DETAIL A (WATER MAIN SERVICE AND FIRE HYDRANT CONNECTION DETAIL)

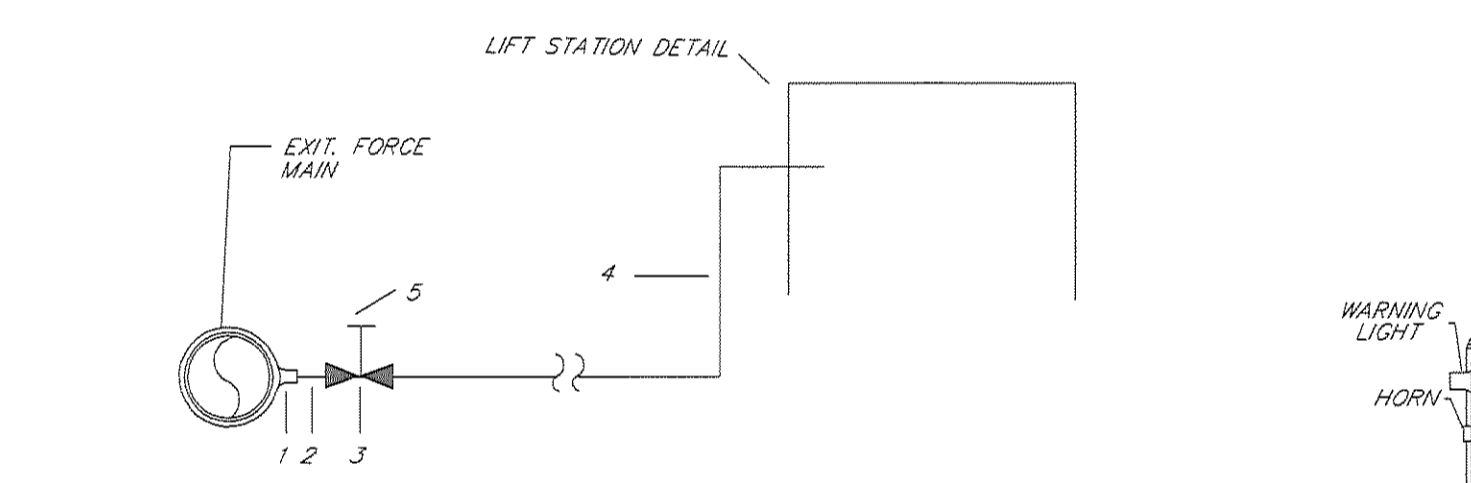


NO.	ITEM	PRODUCT
1	TAPPING SADDLE	FORD FC202-1075 X CC3 OR EQUIVALENT
2	CORPORATION STOP	FORD: FB1000-67 2" OR EQUIVALENT (CC AWWA) x 2" (CTS PACK JOINT)
3	SERVICE PIPING	2" HDPE SDR-9 CTS
4	METER BOX WITH COVER	BOX: DFW 3612-SST-TR OR EQUIVALENT
5	BALL YOKE VALVE	(1.5") STRAIGHT BALL FLANGED MV BF43-666W OR EQUIVALENT

1.5" SINGLE WATER SERVICE

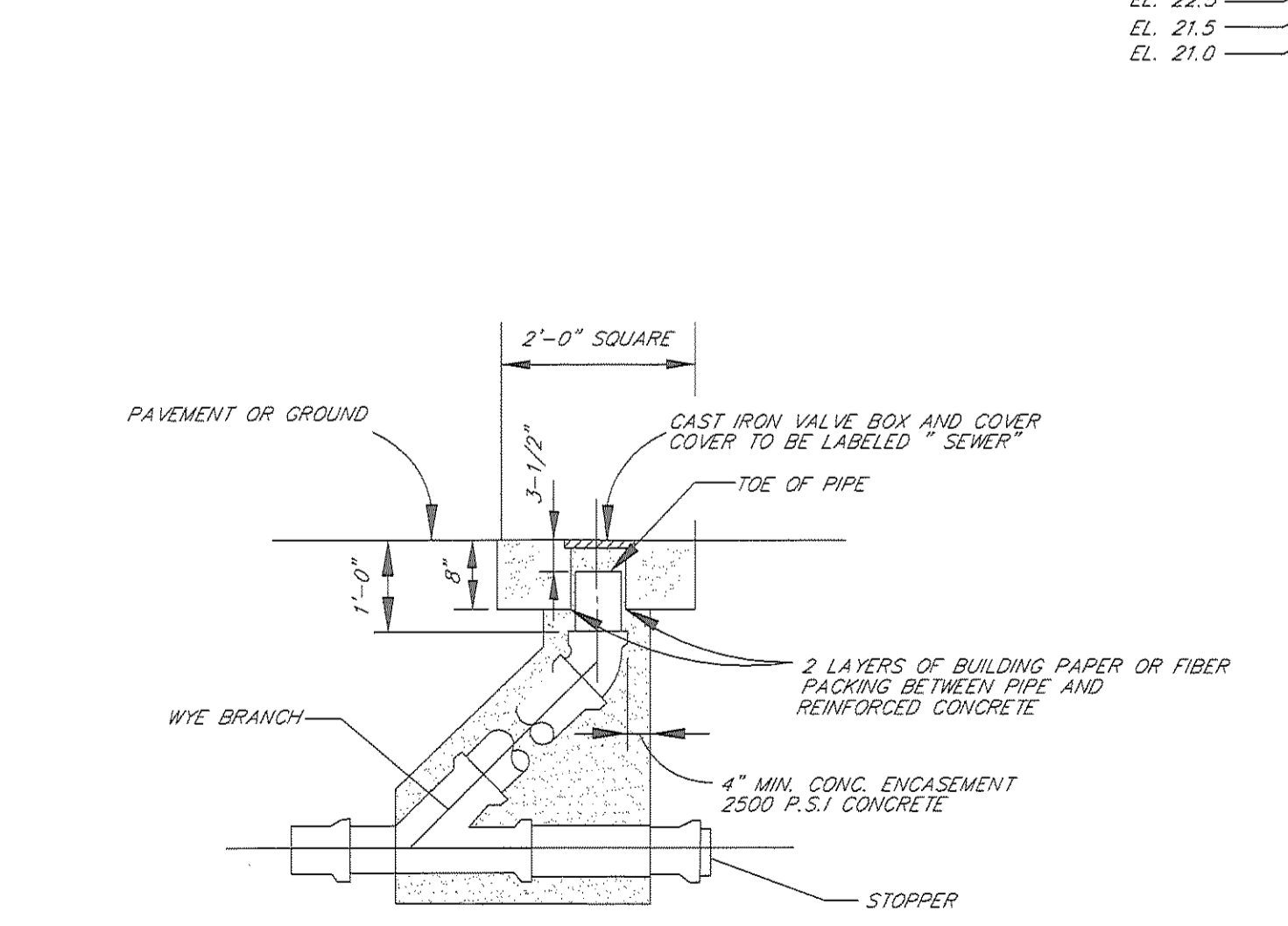


DETAIL B (FORCE MAIN AND LIFT STATION PLAN LOCATION)

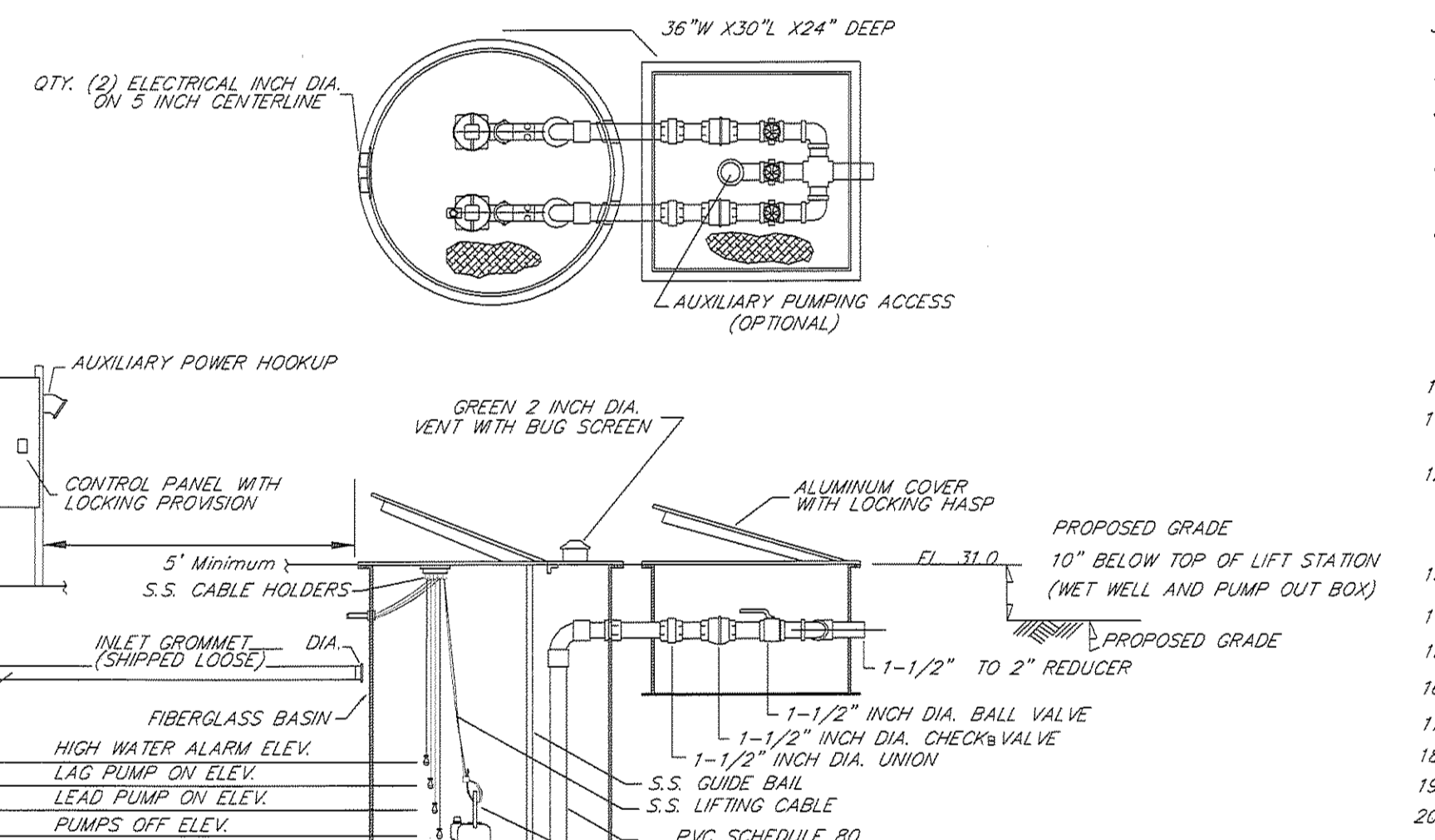


1. 2" STAINLESS STEEL TAPPING SADDLE
2. 2" x 3" STAINLESS STEEL NIPPLE
3. RESILIENT SEAT GATE VALVE
4. 2" HDPE SDR-9 CTS POLYPIPE
5. VALVE COVER ACCESS TO FINAL SURFACE GRADE (CONCRETE RING)

DETAIL C (LIFT STATION DETAIL)

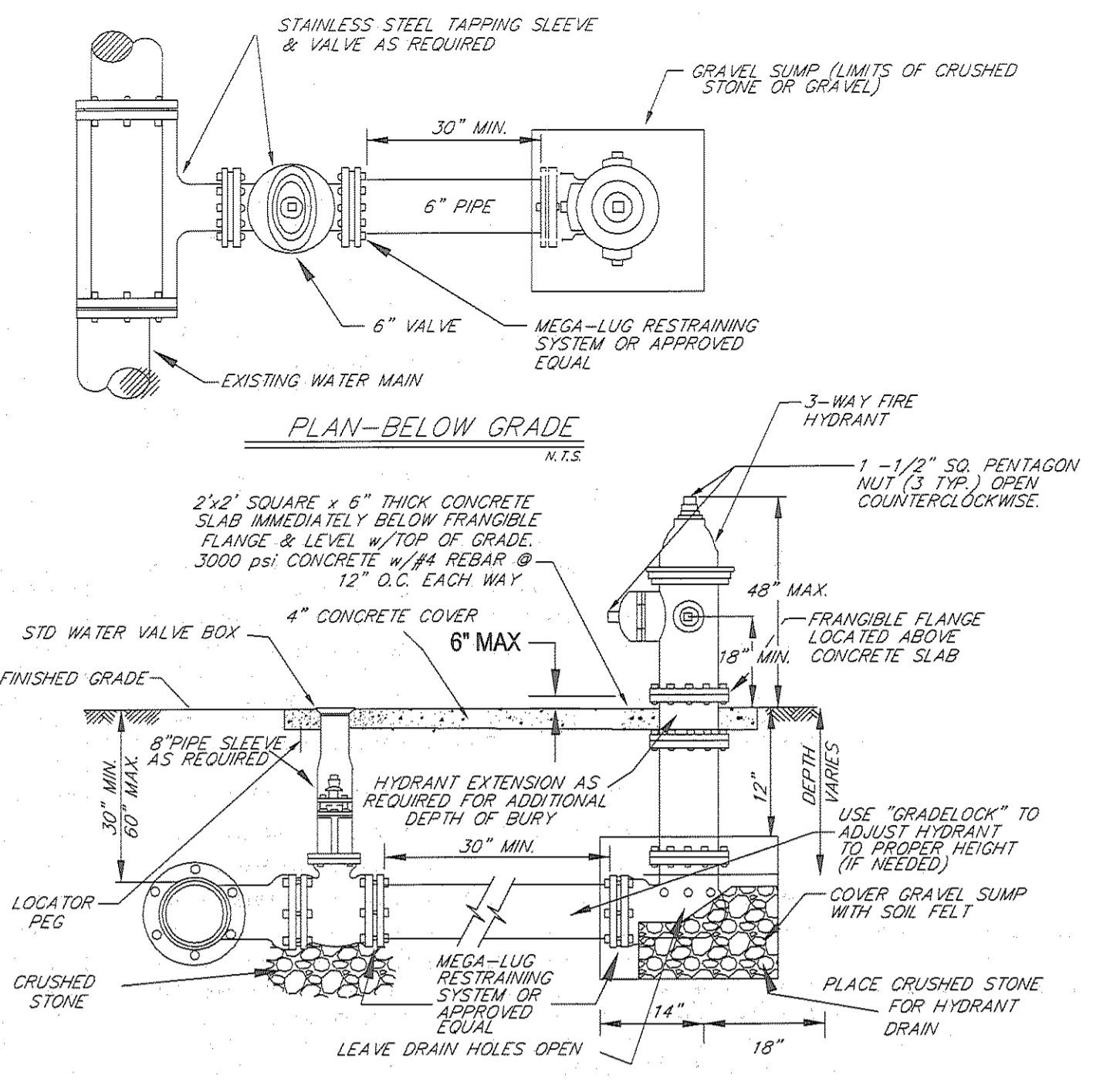


REDUCED PRESSURE TYPICAL CLEAN-OUT



PUMP SPECIFICATIONS	
PUMPS REQUIRED	2
MANUFACTURER	HYDROMATIC
MODEL NUMBER	HPD200
PUMP SIZE	2HP, 1750RPM
CAPACITY EACH (GPM)	15
TOTAL HEAD (FEET)	60 FT
IMPELLER DIAMETER	
MOTOR HP REQUIRED	
SPEED (RPM)	
ELECTRICAL	SINGLE PHASE 230V

TANK	
A (DIA.)	B (HEIGHT)
36"	72"
48"	84"
60"	96"
OTHER	108"
	120"
	OTHER 144"

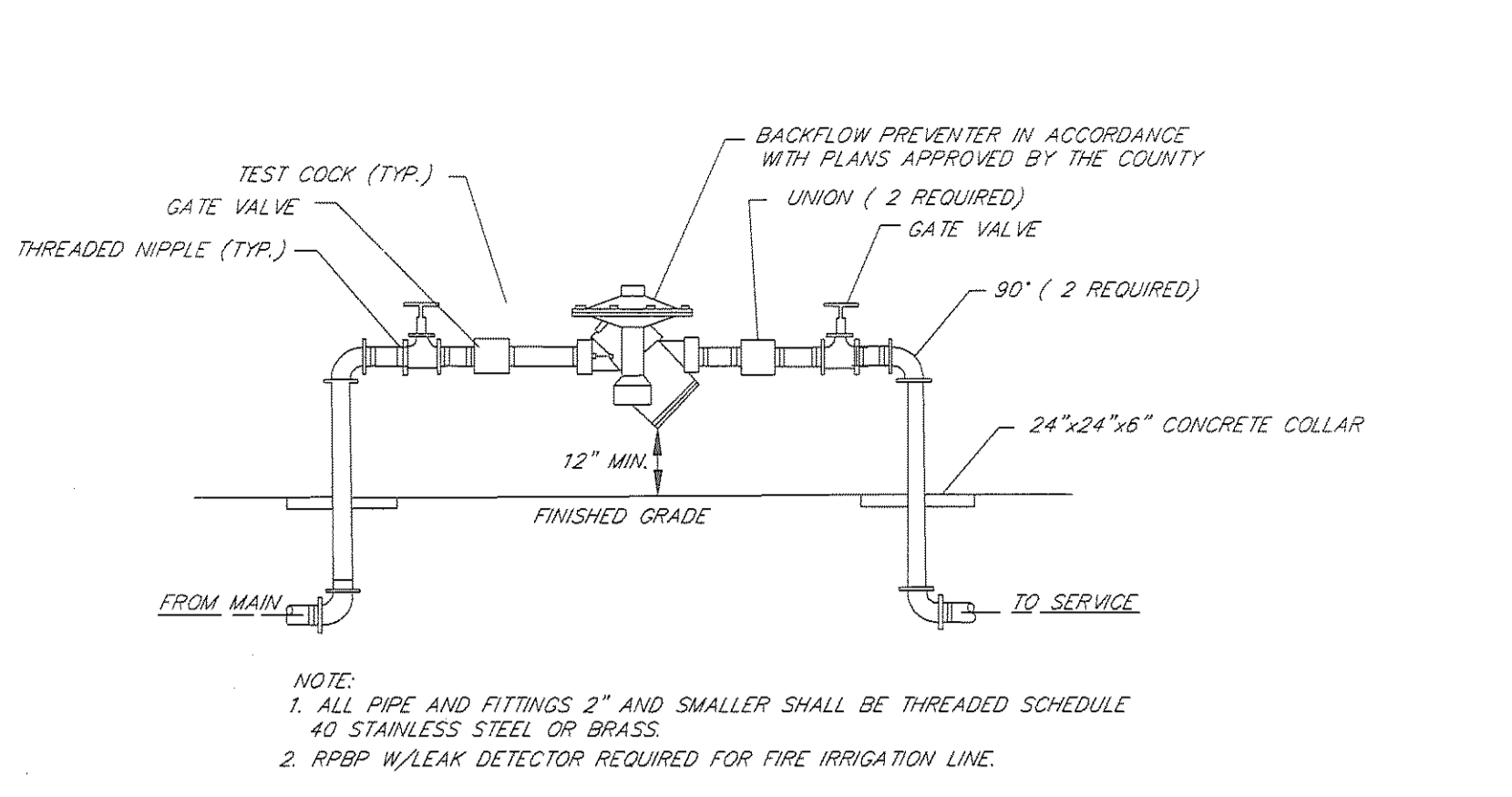


- NOTES:
- 1) FIRE HYDRANT SHALL HAVE 5 1/4" VALVE OPENING AND SHALL BE NON-MODERN CENTURION
 - 2) BLUE TRAFFIC SPOTTERS AS PER LOCAL FIRE CODE REQUIREMENTS.
 - 3) FIRE HYDRANT SHALL BE PAINTED YELLOW WITH REFLECTIVE WHITE TOPS AND CAPS.
 - 4) ALL FITTINGS/JOINTS MUST BE MECHANICALLY RESTRAINED.

FIRE HYDRANT DETAIL

GENERAL NOTES:

1. FIRE HYDRANT TO BE PAINTED YELLOW WITH REFLECTIVE TOP AND CAPS.
2. REFERENCE TO FIRE HYDRANT DETAIL: CONTRACTOR TO INCLUDE 90 DEGREE BEND FOR FIRE HYDRANT PLACEMENT IN ISLAND.
3. CONTRACTOR TO PROVIDE SINGLE 1.5" WATER SERVICE TO BUILDING AT PROPERTY LINE AS REQUIRED BY ST. JOHNS COUNTY UTILITY DEPARTMENT.
4. 6" WATER MAIN TO BE INSTALLED A MINIMUM OF 36" BELOW PROPOSED GRADE.
5. CONTRACTOR IS RESPONSIBLE FOR COORDINATION, ADJUSTMENTS AND COST ASSOCIATED WITH LOCATING EXISTING UTILITIES AND PROPOSED CONNECTIONS.
6. GRAVITY FLOW SEWER WILL BE 6" PVC SDR 35.
7. 2" AND BELOW WATER MAIN AND FORCE MAIN WILL BE PVC SDR 26.
8. WATER SEWER AS-BUILT DRAWING SUBMITTAL TO ST. JOHNS COUNTY UTILITY DEPARTMENT SHALL INCLUDE 2 COPIES (SIGNED AND SEALED), 1 MYLAR (SIGNED), ELECTRONIC FILE ON DISK AND ELECTRONIC DRAWING FILE SUBMITTAL FORM.
9. ALL REQUIREMENTS BY TO ST. JOHNS COUNTY UTILITY DEPARTMENT, FINAL INSPECTIONS, PUNCH LIST ITEMS AS-BUILTS, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION CERTIFICATION OF COMPLETIONS, ETC., MUST BE SATISFIED PRIOR TO ISSUANCE OF CERTIFICATES OF OCCUPANCY.
10. FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION WASTEWATER PERMIT REQUIRED.
11. ST. JOHNS COUNTY UTILITY DEPARTMENT TO BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO ANY CONNECTIONS, TAPS, FLUSHING, PRESSURE TESTS, ETC.
12. WATER AND SEWER SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL. THE ENGINEER WILL THEN SUBMIT A MINIMUM OF 2 COPIES (SIGNED AND SEALED BY THE ENGINEER) TO ST. JOHNS COUNTY UTILITY DEPARTMENT FOR REVIEW PRIOR TO SCHEDULING THE REQUIRED PRE-CONSTRUCTION CONFERENCE.
13. CONTRACTOR TO CONSTRUCT IFT THICK BY 1.5FT DEEP CONCRETE RING AROUND WET WELL.
14. LIFT STATION CONTROL PANEL TO BE INSTALLED A MINIMUM OF 5FT FROM WET WELL.
15. CONTRACTOR TO REVIEW FDEP PERMIT FOR COMPLIANCE.
16. CONTRACTOR TO PROVIDE PLAQUE W/ EMERGENCY MAINTENANCE CONTACT ON LIFT STATION CONTROL PANEL.
17. LIFT STATION CONTROL PANEL REQUIRES ELAPSED TIME METERS AND LIGHTNING ARRESTOR (UTILIZE ECS DEP SERIES OR EQUIVALENT)
18. CONTRACTOR TO LOCATE WM AND FM TO DETERMINE CONNECTION DEPTHS.
19. CONTRACTOR TO INSTALL A HOSE BIBB CLOSE TO LIFT STATION (EXTEND OFF OF 2"WM WITH "T" FITTING AND CORPORATION STOP).
20. CONTRACTOR TO ADJUST UTILITIES UNDER PROPOSED STORM DRAINS AS REQUIRED TO MAINTAIN 18 INCHES OF SEPARATION IS REQUIRED. IF THIS IS IMPRACTICAL AND EXISTING UTILITY MAIN IS C900, C905 OR D.I. PIPE SEPARATION CAN BE REDUCED TO 6-INCHES. A FULL LENGTH OF PIPE SHALL BE CENTERED UNDER PROPOSED STORM DRAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSINGS. ADJUSTMENT OF UTILITY OVER STORM DRAINS WITHIN EXPOSED GROUND SURFACE WILL REQUIRE 4" CONCRETE CAP AND IF UNDER PAVED SURFACE WILL REQUIRE 6" CLEARANCE TO PAVEMENT.



REDUCED PRESSURE BACKFLOW PREVENTOR

FIRE PROTECTION

1. Fire Protection for the purpose of these plans is any underground water line not owned and maintained by a public utility as well as any private fire service main and pipe and its appurtenances on private property (1) between a source of water and the base of the system riser for water-based fire protection systems, (2) between a source of water and inlets to foam-making systems, (3) between a source of water and the base elbow of private hydrants or monitor nozzles and (4) used as fire pump suction and discharge piping, (5) beginning at the inlet side of the check valve on a gravity or pressure tank.
2. This shall also apply to combined service mains used to carry water for fire service and other uses. i.e. domestic.
3. Standards to be referenced:
 - NFPA 24, (2002 ed) Installation of Private Fire Service Mains & Their Appurtenances
 - NFPA 20, (1999 ed) Standard for Installation of Stationary Pumps for Fire Protection
 - NFPA 22, (1999 ed) Standard for Water Tanks for Private Fire Protection
 - NFPA 16, (1999 ed) Standard on Deluge Foam-Water Sprinkler & Foam-Water Spray Systems
 - NFPA 1963 (1998 ed) Standard for Fire Hose Connections
4. Items on the Construction plans shall include but not limited to scale drawings and details and to include the following items when they are applicable to the system being installed:
 1. Name of owner and occupant.
 2. Location, including street address.
 3. Point of compass.
 4. A graphic representation of the scale used on all plans.
 5. Name and address of contractor.
 6. Size and location of all water supplies.
 7. Size and location of all piping, indicating, where possible, the class and type and depth of 8. existing pipe, the class and type of new pipe to be installed, and the depth to which it is 9. to be buried.
 10. Size, type, and location of valves. Indicate if located in pit or if operation is by post indicator or key wrench through a curb box.
 11. Location of fire department connections, if part of private fire service main system, including detail of connections.
 12. Sprinkler and standpipe risers and monitor nozzles to be supplied by the system.
 13. Location of fire department connections, if part of private fire service main system, including detail of connections.
 14. ALL components must have listing with Fire Protection per NFPA 24.
 15. All fire hydrants installed in St. Johns County must have a single 4.5 inch hose outlet, and two (2.5) inch house outlets, all with male NH standard threads, in accordance with NFPA 1963.
5. A copy these approved engineered plans shall accompany a required Fire Marshal Underground Permit submitted by a certified contractor. This Underground Permit will require additional details and specs at the time of submittal to the Fire Marshals' Office.
6. Contractors installing the underground piping in accordance with the above reference standards for a fire protection system using water as the extinguishing agent beginning at the point at which the piping is used exclusively for fire protection and ending no more than 1 foot above the floor shall be required to have a Class I, II, or V Fire Protection Contractors license pursuant to Chapter 63J, Florida Statutes. General contractors are reminded that they are responsible for verifying that their subcontractors hold the required licenses. Contractors found to be violating this requirement may be reported to the Department of Business and Professional Regulation and/or the State Fire Marshal's Regulatory Licensing Section.
7. The Contractor shall be responsible for obtaining a permit from the Fire Marshal's office prior to the start of site construction in accordance with the above referenced standards.
8. Note: Minimum working pressure of the underground piping shall be 150 psi. NFPA 24 requires specific PVC piping to meet Table C-900 with manufacturing listing for fire protection.
9. All fire lines must be inspected by the Fire Marshal's office prior to backfill. The code requires all joints exposed for inspection with fill in-between joints. All piping and attached appurtenances subjected to system working pressure shall be hydrostatically tested at 200 psi or 50 psi in excess of the system working pressure, whichever is greater, and shall maintain that pressure without loss for 2 hours.
10. Building Contractor Note: Proposed Conopy requires a minimum of 13.5 ft of vertical clearance.
11. Building Contractor Note: Building requires fire sprinkling. Fire sprinkler to be connected adjacent to fire hydrant location.

REVISIONS	SURVEY DATA:	BOOK NO.	DESIGNER:	DESIGN ENGINEER	OWNER	PROJECT NO.	LIGHT HOUSE MEDICAL BUILDING		NO. SHEETS
	SURVEYED	BY	RFH	RONALD F. HOOGLAND	KP MEIRING COMPANY	km-001	UTILITY DETAILS		6
	GRADES CHECKED	DATE	DATE:	FLORIDA REGISTRATION NO.	1715 Lakeside Ave #5	DATE: 2/27/07			SHEET NO.
	BENCHMARKS		DATE:	45247	ST. AUGUSTINE FL. 32084	SCALE: 1"=20'			6
									DRAWING NO.