

CITY OF NAPLES PUBLIC WORKS PUMP STATION IMPROVEMENTS

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BILL BARNETT

CITY MANAGER

A. WILLIAM MOSS

STREETS AND STORMWATER DIRECTOR

GREGG STRAKALUSE, P.E.

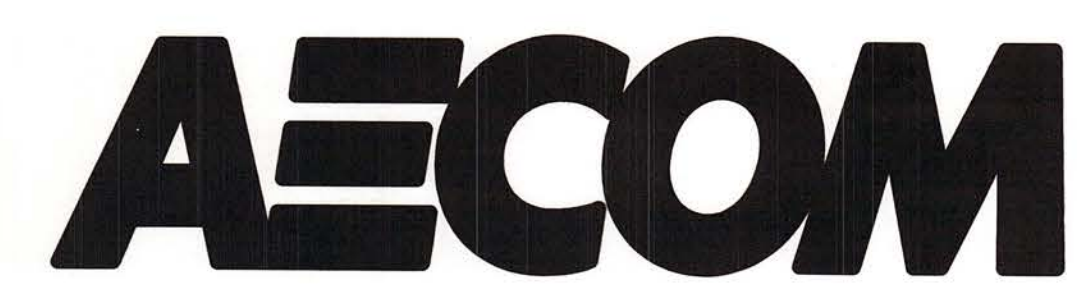


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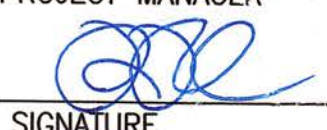


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ISSUED FOR BIDDING
 SEPTEMBER 2013

RONALD R. CAVALIERI, P.E. #65850
 PROJECT MANAGER

 SIGNATURE
 9/20/2013
 DATE

GENERAL NOTES

- IT IS THE INTENT OF THE CONTRACT DRAWINGS TO PRESCRIBE A COMPLETE WORK OR IMPROVEMENT. THE CONTRACT DRAWINGS ARE COMPLEMENTARY, AND REFERENCE TO CONTRACT DOCUMENTS IS MADE TO DETERMINE HIERARCHY ORDER OF PRECEDENCE OF ALL CONTRACT DOCUMENTS, TO WHICH THE DRAWINGS ARE PART OF.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATION, SIZE, AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES AND SHALL PROVIDE ALL NECESSARY CONTINUOUS BARRIERS AND/OR STEEL PLATES OF SUFFICIENT TYPE, SIZE AND STRENGTH TO PREVENT ACCESS TO ALL OPEN EXCAVATIONS AT THE COMPLETION OF EACH DAYS WORK.
- INTERRUPTION TO WATER AND OTHER EXISTING UTILITIES SHALL BE REQUESTED IN WRITING BY THE CONTRACTOR 3 DAYS IN ADVANCE OF THE WORK.
- ALL LAYOUT DIMENSIONS REFER TO OUTSIDE EDGE OF WALL AT GRADE LINE, UNLESS OTHERWISE INDICATED.
- ALL SIGNAGE, HEADWALLS, GUARD RAILS, GUARD POSTS, FENCES, CURBS, ROADWAYS, SIDEWALKS, LANDSCAPING AND ANY OTHER OBJECTS DISTURBED BY CONTRACTOR ACTIVITIES SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- ALL UTILITY BOXES, FRAMES, GRATES, ETC. DISTURBED BY CONTRACTOR AND NOT TO BE ABANDONED SHALL BE RESET TO THE PROPER GRADE.
- UNPAVED AREAS DISTURBED BY THE CONTRACTOR SHALL BE CLEARED AND GRUBBED AND RESTORED WITH SOD.
- THE CONTRACTOR SHALL PROVIDE SUFFICIENT ADVANCE NOTICE TO NOTIFY THE OWNER TO ACCOMPLISH LINE RELOCATIONS AS NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
- ALL CONCRETE AND ASPHALT PAVEMENT SHALL BE SAW-CUT PRIOR TO EXCAVATION.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST APPLICABLE FEDERAL, STATE, AND LOCAL AGENCY STANDARDS.
- MAINTAIN A FLUENT ENGLISH SPEAKING SUPERINTENDENT ON SITE AT ALL TIMES.
- THE CONTRACTOR SHALL COMPLY WITH THE "TRENCH SAFETY ACT", CHAPTER 90-96, FLORIDA STATUTES.
- ANY DISCREPANCIES ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATION FROM DESIGN ARE TO BE MADE WITHOUT PRIOR WRITTEN APPROVAL BY THE OWNER AND THE ENGINEER.
- PROVIDE AT LEAST 48 HOURS NOTICE TO AFFECTED UTILITY COMPANIES IN ORDER TO ALLOW THE LOCATION OF THE EXISTING UNDERGROUND UTILITIES IN ADVANCE OF CONSTRUCTION.
- TREES, SHRUBS AND OTHER LANDSCAPING SHALL BE PROTECTED DURING CONSTRUCTION AS IDENTIFIED ON THE PROJECT DOCUMENTS.
- COORDINATE WITH UTILITY OWNER TO PROVIDE SUPPORT FOR UTILITY POLES WHERE CONSTRUCTION MAY CAUSE LOSS OF SUPPORT.
- CONTRACTOR SHALL NOTIFY SUNSHINE STATE ONE CALL SERVICE (1-800-432-4770) 48 HOURS PRIOR TO COMMENCING EXCAVATION/TRENCHING. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS BETWEEN THESE DRAWINGS AND ACTUAL FIELD CONDITIONS ARE DISCOVERED.
- EROSION CONTROL
 - EMPLOY EVERY POSSIBLE MEANS TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT MATERIALS TO THE INLETS, SURFACE DRAINS, WETLANDS AND LAKE AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTORATION EFFORTS THAT MAY BE REQUIRED.
 - MAINTAIN ALL EROSION CONTROL IN COMPLIANCE WITH THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS THROUGHOUT THE DURATION OF THE PROJECT.
 - INSPECT EROSION CONTROL DAILY AND WITHIN 24 HOURS AFTER EACH RAINFALL EVENT OF 1 INCH OR GREATER. ALL NECESSARY MAINTENANCE SHALL BE PERFORMED WITHIN 24 HOURS AFTER INSPECTION. PREPARE AND MAINTAIN A BEST MANAGEMENT PLAN FOR SEDIMENT AND EROSION CONTROL AND MAINTAIN A COPY ON SITE WITH THE SUPERINTENDENT AT ALL TIMES.
- CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS APPROVED.
- ALL UNIMPROVED AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS. THIS SHALL INCLUDE SCARIFYING, GRADING, ROLLING, AND SODDING OR SEEDING. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING TEMPORARY IRRIGATION FACILITIES FOR 6 WEEKS. SOD OR SEEDDED AREAS NOT FULLY RESTORED AT THIS TIME SHALL BE RESODDED OR SEEDDED AND THE MAINTENANCE PERIOD RESET.
- TEST PRESSURE FOR ALL PIPING IS INDICATED ON THE PIPING SCHEDULE.
- THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH WILL BE ENCOUNTERED DURING THE COURSE OF THE WORK. THE CONTRACTORS ARE DIRECTED, PRIOR TO CONSTRUCTION TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED.
- WORK SHALL BE SCHEDULED FROM 7 A.M. TO 3:30 P.M. MONDAY THROUGH FRIDAY. NO WORK SHALL BE PERFORMED ON WEEKENDS OR HOLIDAYS OR OUTSIDE OF SPECIFIED HOURS WITHOUT NOTICE AND WRITTEN AUTHORIZATION FROM THE OWNER.

EXISTING STATION NOTES

- THE STRUCTURAL AND MECHANICAL BASE WAS CREATED USING AS-BUILT DRAWINGS DATED OCTOBER 1999. ACCURACY OF THE STRUCTURES, PIPING, EQUIPMENT LOCATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.

GRADING AND DRAINAGE NOTES

- TOPSOIL SHALL BE "STRIPPED" AND STOCKPILED. TOPSOIL SHALL BE USED TO ACHIEVE THE LAST 4"-6" OF FINISHED GRADE AS FINAL GRADING OPERATIONS PROGRESS. SEE SPECIFICATIONS.
- CONTOURS & FINISHED SPOT ELEVATIONS REPRESENT FINISHED GRADE, TOP OF CONCRETE, PAVEMENT, GRASSED AREAS, ETC.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS NOT PREVIOUSLY OBTAINED BY THE OWNER TO CONSTRUCT THIS PROJECT AS GOVERNED BY STATE & LOCAL AGENCIES, PRIOR TO STARTING CONSTRUCTION.
- EARTH EXCAVATION AND/OR EMBANKMENT SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS.

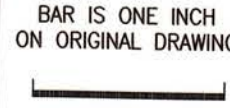
MECHANICAL / PIPING

- EQUIPMENT AND SYSTEMS DIMENSIONS, LOCATIONS AND PIPING SYSTEM LAYOUTS ARE BASED ON EQUIPMENT SELECTED BY THE ENGINEER. IF CONTRACTOR PROPOSES TO PROVIDE EQUIPMENT THAT REQUIRES AN ARRANGEMENT OR SPACING DIFFERING FROM THAT INDICATED OR SPECIFIED, THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER FOR REVIEW DETAILED ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, INSTRUMENTATION HVAC AND ELECTRICAL DRAWINGS AND EQUIPMENT LISTS SHOWING ALL NECESSARY CHANGES AND EMBODYING ALL FEATURES OF THE EQUIPMENT AND/OR PROCESS SYSTEMS PROPOSED. THIS INFORMATION SHALL INCLUDE BUT NOT BE LIMITED TO PLANS, SECTIONS DETAILS AND SCHEMATICS OF ALL PIPING SYSTEMS AND APPURTENANCES REQUIRED, ELECTRICAL CONTROLS, ETC.. SUCH CHANGES IF APPROVED BY THE ENGINEER SHALL BE AT NO ADDITIONAL COST TO THE OWNER AND NO TIME EXTENSION TO THE CONTRACT TIME TO COMPLETION. THE CONTRACTOR SHALL ASSUME THE COST OF AND THE RESPONSIBILITY FOR ACCOMPLISHING ALL THE NECESSARY CHANGES CORRESPONDING TO THE DIMENSIONS AND CHARACTERISTICS OF THE EQUIPMENT SUBMITTED AND APPROVED BY THE ENGINEER. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
- THE CONTRACTOR SHALL MAKE ALL REQUIRED FIELD MEASUREMENTS TO VERIFY EXISTING AND CONTRACT INTERFACE DIMENSIONS, LOCATIONS, AND OTHER CONDITIONS.
- ALL DIMENSIONS LOCATING EQUIPMENT ARE FROM FINISHED WALL SURFACES OR COLUMN CENTERLINES.
- REFER TO INSTRUMENTATION DRAWINGS FOR INSTRUMENTATION AND CONTROL SYSTEMS. INSTRUMENT LOCATIONS ARE INDICATED ON MECHANICAL-PROCESS DRAWINGS IN APPROXIMATE LOCATION ONLY.
- SLEEVE OR GROOVED COUPLINGS MAY BE USED WHERE NECESSARY, AND AS APPROVED, TO FACILITATE PIPING INSTALLATION.
- FOR FLANGED SYSTEMS PROVIDE FLEXIBLE CONNECTORS WHERE NECESSARY, AND AS APPROVED TO FACILITATE PIPING INSTALLATION AND VALVE AND EQUIPMENT REMOVAL.
- ALL FLEXIBLE CONNECTORS, INCLUDING EXPANSION JOINTS AND SLEEVE COUPLINGS SHALL BE RESTRAINED AS INDICATED OR AS REQUIRED FOR EXPANSION AND FOR FLEXIBILITY.
- PROVIDE ALL LIQUID PIPING 24" AND SMALLER WITH 3/4" LOW POINT DRAINS AND 3/4" HIGH POINT VENTS. PROVIDE ALL LIQUID PIPING 30" AND LARGER WITH 1 1/2" LOW POINT DRAINS AND 1 1/2" HIGH POINT VENTS. DRAINS AND VENTS TO INCLUDE BALL VALVE AND CAP, UNLESS OTHERWISE SPECIFIED OR INDICATED.

SURVEY NOTES

- TOPOGRAPHIC AND EXISTING CONDITION SURVEY AND MAPPING PREPARED BY: E.F. GAINES SURVEYING SERVICES, INC. 5235 RAMSEY WAY, SUITE 10 FORT MYERS, FLORIDA 33907.
- HORIZONTAL CONTROL FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83) UTILIZING RTK GPS EQUIPMENT OPERATING ON THE TRIMBLE VRS NETWORK, U.S. SURVEY FEET.
- ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND WERE DERIVED FROM A PROJECT BENCHMARK SHOWN ON A MAP OF AS-BUILT SURVEY PREPARED BY DAGOSTINO & WOOD, DATED MARCH 9, 2011 (FOUND IRON ROD AT 10+00, ELEVATION 6.35 FEET).
- THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A PROFESSIONAL SURVEYOR REGISTERED IN THE STATE OF FLORIDA TO ESTABLISH RIGHT-OF-WAY LINES, EASEMENTS, BASELINES, BENCHMARKS AND STATIONING AS REQUIRED TO CONSTRUCT THIS PROJECT.
- THE CONTRACTOR IS RESPONSIBLE FOR STAKING THE RIGHT-OF-WAYS, EASEMENT LIMITS, AND CENTERLINE OF THE PIPE PRIOR TO CONSTRUCTION.
- ANY PUBLIC LAND CORNER, PROPERTY OR BENCHMARK WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY. ANY CORNER MONUMENT DESTROYED OR DISTURBED SHALL BE RESET AND CERTIFIED BY A PROFESSIONAL SURVEYOR AND MAPPER REGISTERED IN THE STATE OF FLORIDA AT THE CONTRACTOR'S EXPENSE.

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CITY OF NAPLES
PUBLIC WORKS PUMP STATION

GENERAL NOTES

DRAWING G-002
SHEET 2
OF -- SHEETS

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A	AB AREA/AMP/AIR ANCHOR BOLT/AGGREGATE BASE/AUGER BORING ABAN ABANDON/ABANDONED ABS ACRYLONITRILE-BUTADIENE-STYRENE AC ALTERNATING CURRENT/ACTIVATED CARBON/ACRE/ASPHALTIC CONCRETE/ASBESTOS CEMENT ASBESTOS ASBESTOS CEMENT PIPE ACSR ALUMINUM CONDUCTOR STEEL REINFORCED ADDL ADDITIONAL AF AMP FRAME AFF ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE A.G. ALLEY GRATE AHD AHEAD AHDR AIR HEADER AHH ANALOG HANDHOLE AICS AMPERE INTERRUPTING CAPACITY SYMMETRICAL AL ALUMINUM/ALUM(CONCENTRATED) ALUM ALUMINUM ANCH ANCHOR ANG ANGLE APPROX APPROXIMATE ARCH ARCHITECTURE/ARCHITECTURAL ARV AIR-RELEASE VALVE ARVV AIR-RELEASE VACUUM VALVE ASP ASPHALT ASSY ASSEMBLY AT AMP TRIP ATS AUTOMATIC TRANSFER SWITCH AVE AVENUE AWG AMERICAN WIRE GAGE	D	DBL DEGREE OF CURVATURE DBI DOUBLE DCLR DITCH BOTTOM INLET DEF DECELERATE DEF DEFLECTION/DEFECTIVE DELTA DEFLECTION ANGLE DEPT DEPARTMENT DET DETAIL/DETOUR DF DRINKING FOUNTAIN/DEMAND FACTOR DI HOUR/HANDRAIL DIA DIAMETER DIAG DIAGONAL DIM DIMENSION DIP DUCTILE IRON PIPE DISCH DISCHARGE DMH DROP MANHOLE/RAINAGE MANHOLE DN DOWN DR DRIVE/DOOR/RAIN/DRIVEWAY DRWY DRIVEWAY DWG DRAWING DWL DOWEL DESIGN WATER LEVEL DWV DRAIN/WASTE AND VENT PIPING DWY DRIVEWAY	H	HB HOSE BIBB HC HEATING COIL/HOLDING COIL/HIGH CURE HD HEAVY DUTY HOPE HIGH DENSITY POLYETHYLENE PIPE HH HANDHOLE HGT HEIGHT HOA HAND-OFF-AUTOMATIC HORIZ HORIZONTAL HP HORSEPOWER/HIGH PRESSURE HPS HIGH PRESSURE SODIUM HR HOUR/HANDRAIL HS HIGH STRENGTH HSA HEADED STUD ANCHOR HV HOSE VALVE/HIGH VOLTAGE HVAC HEATING, VENTILATING AND AIR CONDITIONING HW HEADWALL/HOT WATER(DOMESTIC) HWL HIGH WATER LEVEL HWY HIGHWAY HYD HYDRAULIC HZ HERTZ	N	N NORTH/NEUTRAL N&C NAIL AND CAP N/L NIGHT LIGHT NA NOT APPLICABLE/NOT AVAILABLE NC NORMALLY CLOSED NE NORTHEAST NEC NATIONAL ELECTRIC CODE NFDS NON-FUSED DISCONNECT SWITCH NFPA NATIONAL FIRE PROTECTION ASSOCIATION NIC NOT IN CONTRACT NO NUMBER/NORMALLY OPEN NOM NOMINAL NPT NATIONAL PIPE THREAD NRS NON-RISING STEAM NS NEAR SIDE NTS NOT TO SCALE NW NORTHWEST NY NYLON TUBING	Q	Q FLOW RATE/PEAK DISCHARGE R RADIUS R/R RADIUS/RIGHT/RELAY R/W RIGHT OF WAY RC REINFORCED CONCRETE RCP REINFORCED CONCRETE PIPE RCPA REINFORCED CONCRETE PIPE ARCH RD ROAD/ROOF DRAIN/ROUND RDC REDUCER RECP RECEPTACLE REF REFERENCE REINF REINFORCE/REINFORCED REM REMOVE/REMOVABLE REQD REQUIRED REQT REQUIREMENT RGS RIGID GALVANIZED STEEL RJ RESTRAINED JOINT RM ROOM RMS ROOT MEAN SQUARE RND ROUND RP RELAY PANEL RPM REVOLUTIONS PER MINUTE RPMP REINFORCED PLASTIC MORTAR PIPE RPT RADIUS POINT RR RAILROAD RT RIGHT RTU REMOTE TERMINAL UNIT RV RELIEF VALVE RVS REVERSE RVT RIVETED RWM RAIN WATER LEADER R/W RIGHT OF WAY	T	T TON/TEE/THERMOSTAT T&B TOP & BOTTOM T/B TOP OF BEAM T/O TOP OF T/P TOP OF PIPE TAN TANGENT TB TOP OF BANK/TERMINAL BOARD/TERMINAL BENCH TBM TEMPORARY BENCH MARK TC TOP OF CURB/TEMPERATURE CONTROL/THERMOCOUPLE/TRIP COIL TCB TIE CIRCUIT BREAKER TE THERMAL ELEMENT TEFC TOTALLY ENCLOSED, FAN COOLED TEL TELEPHONE TEMP TEMPERATURE/TEMPORARY TENV TOTALLY ENCLOSED, NON-VENTILATED THD THREAD/THREADED THK THICK TINNED TINNED TL TANGENT LENGTH TO TURNOUT TOF TOP OF FOOTING TOS TOP OF STEEL TOT TOTAL TOW TOP OF WALL TP TELEPHONE POLE TR TREAD/TELEPHONE RISER TRA TIE ROD ASSEMBLY TS TUBE STEEL/THICKENED SLUDGE TSP TWISTED SHIELDED PAIR TST TWISTED SHIELDED TRIAD TYP TYPICAL												
B	BC BACK OF CURB/BEGINNING OF CURVE/BOTTOM OF CURVE/BACK CONNECTED/BARE COPPER BF BLIND FLANGE BFV BUTTERFLY VALVE BK BACK/BRAKE/BLACK BKR BREAKER B/L BASE LINE BLU BLUE BLDG BUILDING BLK BLOCK BLVD BOULEVARD BM BENCH MARK/BEAM BO BLOW OFF BOT BOTTOM BOT BEARING BT BURIED TELEPHONE BUR BURIED CABLE BUR CBL BURIED CABLE CB BALL VALVE BW BLOCK WALL/BACKWASH	E	E EAST/EXTERNAL DISTANCE E/L EASEMENT LINE EA EACH ECC ECCENTRIC ED EQUIPMENT DRAIN EE EACH END EF EACH FACE/EXHAUST FAN EFF EFFLUENT EL ELEVATION/EACH LEVEL ELEC ELECTRIC/ELECTRICAL ELP ELLIPTICAL EMB EMBEDMENT ENC ENCASEMENT/ENCASED ENG ENGINE ENGR ENGINEER EOP EDGE OF PAVEMENT EQ EQUATION EQL EQUAL EQUIP EQUIPMENT ERCP ELLIPTICAL REINFORCED CONCRETE PIPE ESMT EASEMENT EST ESTIMATE/ESTIMATED ETM ELAPSED TIME METER EW EACH WAY/ENDWALL EX EXPLOSION PROOF EXCAV EXCAVATE/EXCAVATION EXP JT EXPANSION JOINT EXT EXISTING EXT EXTERIOR/EXTENSION/EXTERNAL	I	ID INTERSECTION ANGLE IF INSIDE DIAMETER IG INSIDE FACE IG ISOLATED GROUND IN INCHES INF INFLUENT INL INLET INS INSULATE/INSULATION INSTL INSTALL/INSULATE/INSTALLATION INT INTERIOR INV INVERT IP IRON PIPE/INTERFACE PANEL IRR IRRIGATION	J	J JOIST J-BOX JUNCTION BOX JT JOINT J.W.W. JACKSONVILLE WATER WORKS	K	KVA KILOVOLT-AMPERE KCMIL THOUSAND CIRCULAR MILLS KV KILOVOLT KW KILOWATT KWH KILOWATT-HOUR	L	LA LENGTH OF CURVE/LEFT/LONG/LAMP LAM LAMINATE LATL LATERAL LAV LAVATORY LB LOUND LCP LIGHTING CONTROL PANEL LF LINEAR FEET/LOW FREQUENCY LG LENGTH/LONG LLH LONG LEG HORIZONTAL LLV LONG LEG VERTICAL LNTL LUNTEL LOS LOCKOUT STOP LP LIGHT POLE/LIQUID PROPANE/LIGHTING PANEL LPT LOW POINT LS LIFT STATION/LIMIT SWITCH LT LEFT/LIGHT LTG LIGHTING LTNG LIGHTNING PROTECTION PROT PROTECT LVR LOUVER LWL LOW WATER LEVEL LWR LOWER	M	MATL MATERIAL MAX MAXIMUM MB MACHINE BOLT/MIXING BOX/MAILBOX/MOP BASIN/MEGABYTE/MAILBOX MC METAL CHANNEL/MOMENTARY CONTACT MCB MAIN CIRCUIT BREAKER MCC MOTOR CONTROL CENTER MCP MAIN CONTROL PANEL ME MITERED END MECH MECHANICAL MFR MANUFACTURER MGD MILLION GALLONS PER DAY MH MANHOLE/METAL HALIDE MI MALLEABLE IRON/MILE MIN MINIMUM/MINUTE MISC MISCELLANEOUS MJ MECHANICAL JOINT MO MASONRY OPENING MOD MODIFY/MODIFIED MON MONUMENT/MOTOR OPERATOR MPC MINI-POWER CENTER MTD MOUNTED MTR MOTOR/METER MTU MASTER TERMINAL UNIT MV MERCURY VAPOR MW MANWAY	O	O/O ON/OFF OC ON CENTER/OVERCURRENT OCA OPEN/CLOSE/AUTO OD OUTSIDE DIAMETER/OVERFLOW DRAIN OE OR EQUAL/OVERHEAD ELECTRIC OF OUTSIDE FACE OHP OVERHEAD POWER OHT OVERHEAD TELEPHONE OL OPERATOR OPFR OPENING OPNG OPPOSITE/OPPOSED OPP OPTIONAL OSC OPEN/STOP/CLOSE OT OVERHEAD TELEPHONE OVFL OVERFLOW OVHD OVERHEAD	P	P/L POLE PAV PAVING PB PULL BOX/PANIC BUTTON PC POINT OF CURVATURE/ PROGRAMMABLE CONTROLLER PCC POINT OF COMPOUND CURVATURE PCCP PRESTRESSED CONCRETE CYLINDER PIPE PCM PERMANENT CONTROL MONUMENT PE POLYETHYLENE TUBING/PRIMARY EFFLUENT/ PLAIN END PEP POLYETHYLENE PIPE PG PRESSURE GAUGE/PROFILE GRADE PHH POWER HANDHOLE PI POINT OF INTERSECTION /PRESSURE INDICATOR/PRIMARY INFLUENT PL PLATE/PLUG/PLACE/PLANT PLC PROGRAMMABLE LOGIC CONTROLLER PLDI POLYETHYLENE-LINED DUCTILE IRON PIPE PMS PAD MOUNTED SWITCH PANEL PANEL POB POINT OF BEGINNING POJ PUSH ON JOINT PP POWER PANEL/POLYPROPYLENE P/P POWER POLE PPLS POLYPROPYLENE -LINED STEEL PR PAIR PRC POINT OF REVERSE CURVATURE PRESS PRESSURE PRM PERMANENT REFERENCE MONUMENT PRV PRESSURE REDUCING VALVE PRVC POINT OF REVERSE VERTICAL CURVE PSF POUNDS PER SQUARE FOOT PSI POUNDS PER SQUARE INCH PSIA POUNDS PER SQUARE INCH ABSOLUTE PT POINT OF TANGENCY/POINT/PART POTENTIAL TRANSFORMER/PRESSURE TREATED PV PLUG VALVE PVC POLYVINYL CHLORIDE PVDF POLYVINYLIDENE FLUORIDE (KYNAR) PIPE PVDFLS POLYVINYLIDENE FLUORIDE LINED STEEL PIPE PVI POINT OF VERTICAL INTERSECTION PVMT PAVEMENT PW PER WALL PWR POWER	S	S SOUTH/SIGN /SLOPE(UNIT/UNIT) S.B.T. SOUTHERN BELL TELEPHONE S/S START/STOP S/W SIDEWALK SAN SANITARY SCHED SCHEDULE SE SOUTH/EAST/SECONDARY EFFLUENT SECT SECTION SEW SEWER SF SUPPLY FAN SGL SINGLE SH SHEET/SHEETING/SHUNT SHLD SHIELD/SHIELDED SHLDR SHOULDER SIG SIGNAL SIM SIMILAR SLV SLEEVE SM SHEET METAL/STATUTE MILE SMH STORM MANHOLE SOF SOFT SOLV SOLENOID VALVE SP SPACE/SOIL PIPE/STEEL PIPE SP SET POINT/STATIC PRESSURE SPEC SPECIFICATION SPRT SUPPORT SQ SQUARE SS SANITARY SEWER/SERVICE SINK/ SUSPENDED SOLIDS SST STAINLESS STEEL ST STREET/SURFACE TREATMENT/ SHUNT TRIP STA STATION (100 FT) STD STANDARD STK STAKE STL STEEL STP STEEL PIPE STR STRAIGHT/STRENGTH STS STORM SEWER SURF SURFACE SW SOUTHWEST/SURFACE WASH/ SIDEWALK SWB SWITCHBOARD SYM SYMMETRICAL	U	UCTV UNDERDRAIN CABLE TELEVISION UD UNDERDRAIN UG UNDERGROUND ELECTRIC UGND UNDERGROUND UGP UNDERGROUND POWER CABLE/CONDUIT UGT UNDERGROUND TELEPHONE UL UNDERWRITERS' LABORATORIES, INC. ULT ULTIMATE UNG UNDERGROUND UON UNLESS OTHERWISE NOTED UPS UNINTERRUPTIBLE POWER SYSTEM USC&GS UNITED STATES COASTAL & GEODETIC SURVEY UTC UNDERGROUND TELEPHONE CABLE	V	V VENT/VALVE/VOLT VAC VACUUM/VOLT/ALTERNATING CURRENT VAR VARIATION VC VEHICLE CURVE /MITRIFIED CLAY VCP VITRIFIED CLAY PIPE VEL VELOCITY VERT VERTICAL VFD VARIABLE FREQUENCY DRIVE VPC VERTICAL POINT OF CURVE VPI VERTICAL POINT OF INTERSECTION VPT VERTICAL POINT OF TANGENCY VTR VENT THROUGH ROOF
C	C CONDUIT/CUT C&G CURB & GUTTER C CONDUCTOR C/L CENTER LINE CAP CAPACITY CB CATCH BASIN/CIRCUIT BREAKER C-C CENTER TO CENTER CCP CONCRETE CYLINDER PIPE CD CROSS DRAIN/CONDENSATION DRAIN/ CORO/CEILING DIFFUSER CE CURB EDGE CEM CEMENT CFM CUBIC FEET PER MINUTE C.E.P. CITY ELECTRIC POLE CFS CUBIC FEET PER SECOND CHAM CHAMFER CHH COMMUNICATIONS HANDHOLE CI/CIP CAST IRON PIPE CIPL CAST IN PLACE CISP CAST IRON SOIL PIPE CJ CONSTRUCTION JOINT CKT CIRCUIT CL CENTER LINE/CHAIN LINK CLDI CEMENT LINED DUCTILE IRON CLF CHAIN LINK FENCE CLR CLEAR/CLEARANCE CL2 CHLORINE CM CONCRETE MONUMENT CM&C CEMENT MORTAR LINED AND COATED (STEEL PIPE) CMP CORRUGATED METAL PIPE CMPA CORRUGATED METAL PIPE ARCH CMU CONCRETE MASONRY UNIT CO CLEAN OUT/CONDUIT ONLY/ CUT OUT/CHANGE ORDER/COUNTY	F	F FILL F&I FINISH AND INSTALL FAB FABRICATE FB FUSE BLOCK/FLAT BAR FBC FLORIDA BUILDING CODE FCA FLANGED COUPLING ADAPTER FCO FLOOR CLEAN OUT FCV FLOW CONTROL VALVE FD FLOOR DRAIN/FIRE DAMPER FDEP FL DEPT OF ENVIRONMENTAL PROTECTION FDN FOUNDATION FDOT FL DEPT OF TRANSPORTATION FG FINISHED FLOOR/FLAT FACE/FAR FACE FG FINISHED GRADE FH FIRE HYDRANT/FUME HOOD FHD FIRE HYDRANT FIG FIGURE FI FITTING/FLOW INDICATING TRANSMITTER FL FLOOR/FLOW LINE/FLIGHT LEVEL/FLORIDA FLEX FLEXIBLE FLG FLANGE FM FORCE MAIN/FACTORY MUTUAL FMH FLEXIBLE METAL HOSE FNH FINISH FOC FACE OF CONCRETE/FIBER OPTIC CABLE FPC FLEXIBLE PIPE COUPLING FPM FEET PER MINUTE FPS FEET PER SECOND FS FLOW SWITCH FT FEET/FOOT FTG FOOTING/FITTING FUT FUTURE FV FUEL VENT/FACE VELOCITY FWD FORWARD FWL FUSION BONDED EPOXY-LINED AND COATED STEEL PIPE	J	J JOIST J-BOX JUNCTION BOX JT JOINT J.W.W. JACKSONVILLE WATER WORKS	K	KVA KILOVOLT-AMPERE KCMIL THOUSAND CIRCULAR MILLS KV KILOVOLT KW KILOWATT KWH KILOWATT-HOUR	L	LA LENGTH OF CURVE/LEFT/LONG/LAMP LAM LAMINATE LATL LATERAL LAV LAVATORY LB LOUND LCP LIGHTING CONTROL PANEL LF LINEAR FEET/LOW FREQUENCY LG LENGTH/LONG LLH LONG LEG HORIZONTAL LLV LONG LEG VERTICAL LNTL LUNTEL LOS LOCKOUT STOP LP LIGHT POLE/LIQUID PROPANE/LIGHTING PANEL LPT LOW POINT LS LIFT STATION/LIMIT SWITCH LT LEFT/LIGHT LTG LIGHTING LTNG LIGHTNING PROTECTION PROT PROTECT LVR LOUVER LWL LOW WATER LEVEL LWR LOWER	M	MATL MATERIAL MAX MAXIMUM MB MACHINE BOLT/MIXING BOX/MAILBOX/MOP BASIN/MEGABYTE/MAILBOX MC METAL CHANNEL/MOMENTARY CONTACT MCB MAIN CIRCUIT BREAKER MCC MOTOR CONTROL CENTER MCP MAIN CONTROL PANEL ME MITERED END MECH MECHANICAL MFR MANUFACTURER MGD MILLION GALLONS PER DAY MH MANHOLE/METAL HALIDE MI MALLEABLE IRON/MILE MIN MINIMUM/MINUTE MISC MISCELLANEOUS MJ MECHANICAL JOINT MO MASONRY OPENING MOD MODIFY/MODIFIED MON MONUMENT/MOTOR OPERATOR MPC MINI-POWER CENTER MTD MOUNTED MTR MOTOR/METER MTU MASTER TERMINAL UNIT MV MERCURY VAPOR MW MANWAY	O	O/O ON/OFF OC ON CENTER/OVERCURRENT OCA OPEN/CLOSE/AUTO OD OUTSIDE DIAMETER/OVERFLOW DRAIN OE OR EQUAL/OVERHEAD ELECTRIC OF OUTSIDE FACE OHP OVERHEAD POWER OHT OVERHEAD TELEPHONE OL OPERATOR OPFR OPENING OPNG OPPOSITE/OPPOSED OPP OPTIONAL OSC OPEN/STOP/CLOSE OT OVERHEAD TELEPHONE OVFL OVERFLOW OVHD OVERHEAD	P	P/L POLE PAV PAVING PB PULL BOX/PANIC BUTTON PC POINT OF CURVATURE/ PROGRAMMABLE CONTROLLER PCC POINT OF COMPOUND CURVATURE PCCP PRESTRESSED CONCRETE CYLINDER PIPE PCM PERMANENT CONTROL MONUMENT PE POLYETHYLENE TUBING/PRIMARY EFFLUENT/ PLAIN END PEP POLYETHYLENE PIPE PG PRESSURE GAUGE/PROFILE GRADE PHH POWER HANDHOLE PI POINT OF INTERSECTION /PRESSURE INDICATOR/PRIMARY INFLUENT PL PLATE/PLUG/PLACE/PLANT PLC PROGRAMMABLE LOGIC CONTROLLER PLDI POLYETHYLENE-LINED DUCTILE IRON PIPE PMS PAD MOUNTED SWITCH PANEL PANEL POB POINT OF BEGINNING POJ PUSH ON JOINT PP POWER PANEL/POLYPROPYLENE P/P POWER POLE PPLS POLYPROPYLENE -LINED STEEL PR PAIR PRC POINT OF REVERSE CURVATURE PRESS PRESSURE PRM PERMANENT REFERENCE MONUMENT PRV PRESSURE REDUCING VALVE PRVC POINT OF REVERSE VERTICAL CURVE PSF POUNDS PER SQUARE FOOT PSI POUNDS PER SQUARE INCH PSIA POUNDS PER SQUARE INCH ABSOLUTE PT POINT OF TANGENCY/POINT/PART POTENTIAL TRANSFORMER/PRESSURE TREATED PV PLUG VALVE PVC POLYVINYL CHLORIDE PVDF POLYVINYLIDENE FLUORIDE (KYNAR) PIPE PVDFLS POLYVINYLIDENE FLUORIDE LINED STEEL PIPE PVI POINT OF VERTICAL INTERSECTION PVMT PAVEMENT PW PER WALL PWR POWER	S	S SOUTH/SIGN /SLOPE(UNIT/UNIT) S.B.T. SOUTHERN BELL TELEPHONE S/S START/STOP S/W SIDEWALK SAN SANITARY SCHED SCHEDULE SE SOUTH/EAST/SECONDARY EFFLUENT SECT SECTION SEW SEWER SF SUPPLY FAN SGL SINGLE SH SHEET/SHEETING/SHUNT SHLD SHIELD/SHIELDED SHLDR SHOULDER SIG SIGNAL SIM SIMILAR SLV SLEEVE SM SHEET METAL/STATUTE MILE SMH STORM MANHOLE SOF SOFT SOLV SOLENOID VALVE SP SPACE/SOIL PIPE/STEEL PIPE SP SET POINT/STATIC PRESSURE SPEC SPECIFICATION SPRT SUPPORT SQ SQUARE SS SANITARY SEWER/SERVICE SINK/ SUSPENDED SOLIDS SST STAINLESS STEEL ST STREET/SURFACE TREATMENT/ SHUNT TRIP STA STATION (100 FT) STD STANDARD STK STAKE STL STEEL STP STEEL PIPE STR STRAIGHT/STRENGTH STS STORM SEWER SURF SURFACE SW SOUTHWEST/SURFACE WASH/ SIDEWALK SWB SWITCHBOARD SYM SYMMETRICAL	W	W WEST/WIDTH/WATT/WATER /WIDE/WHITE/WIRE W/O WITHOUT WC WATER COLUMN/WATER CLOSET WCO WALL CLEANOUT WDF WOOD FENCE WF WIDE FLANGE WG WATER GAUGE WHC WELDED HALF COUPLING WL WATER LINE WLP WOODEN LIGHT POLE WM WATER MAIN/WATER METER/WIRE MESH WMP WATERPROOF/WEATHER PROOF/WORKING POINT WATT WATT METER WPP WOODEN POWER POLE WS WATER SURFACE/WEATHER SERVICE WSE WATER SURFACE ELEVATION WSP WELDED STEEL PIPE/WATER STOP WT WEIGHT/WATER TABLE WTP WOOD TELEPHONE POLE WV WATER VALVE WWF WELDED WIRE FABRIC WWW WELDED WIRE MESH	X	X COORDINATE DISTANCE (EAST-WEST)/CROSS XFMR TRANSFORMER X-MTR TRANSMITTER X-SEC CROSS SECTION	Y	Y COORDINATE DISTANCE (NORTH-SOUTH) YD YARD

DESIGNED BY	JRR	PROJECT ENGINEER	RONALD R. CAVALIERI, P.E.
DRAWN BY	MPL	REG NUMBER	65850
CHECKED BY	DMJ	PROJECT NUMBER	60289240
DATE	SEPT 2013		

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CITY OF NAPLES		DRAWING
PUBLIC WORKS PUMP STATION		G-003
ABBREVIATIONS		SHEET
		3
		OF -- SHEETS

PUMP STATION CONSTRUCTION

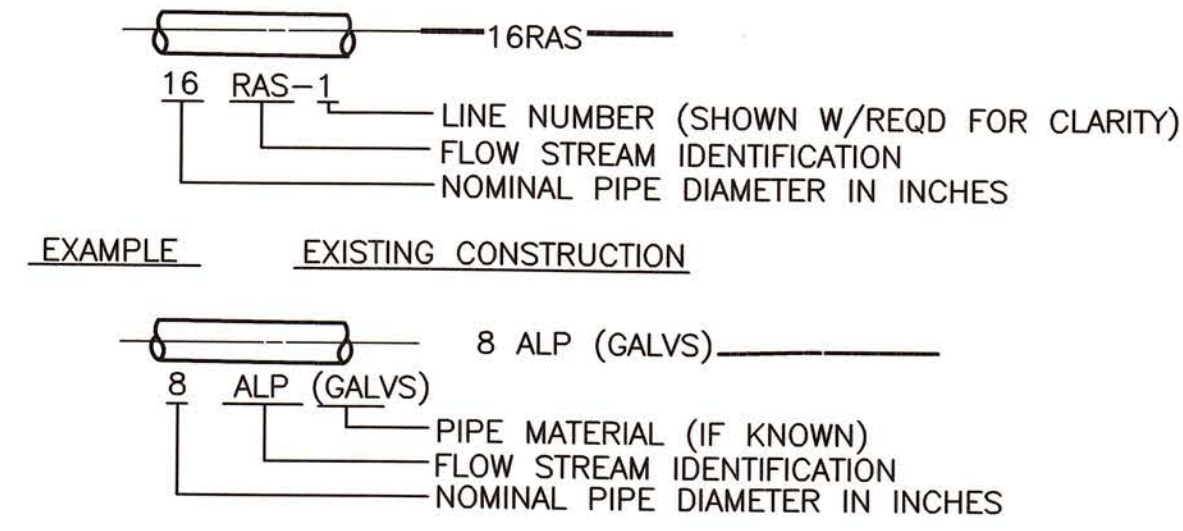
CIVIL CONSTRUCTION

PIPING DESIGNATIONS

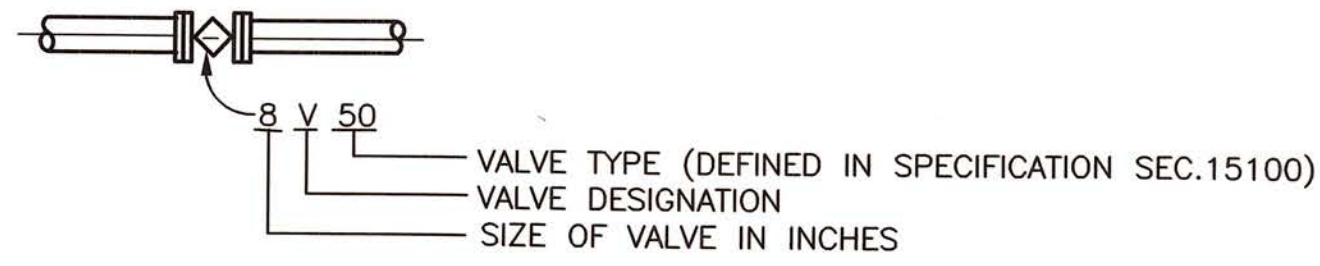
PIPE AND FITTING SYSTEM

EXISTING

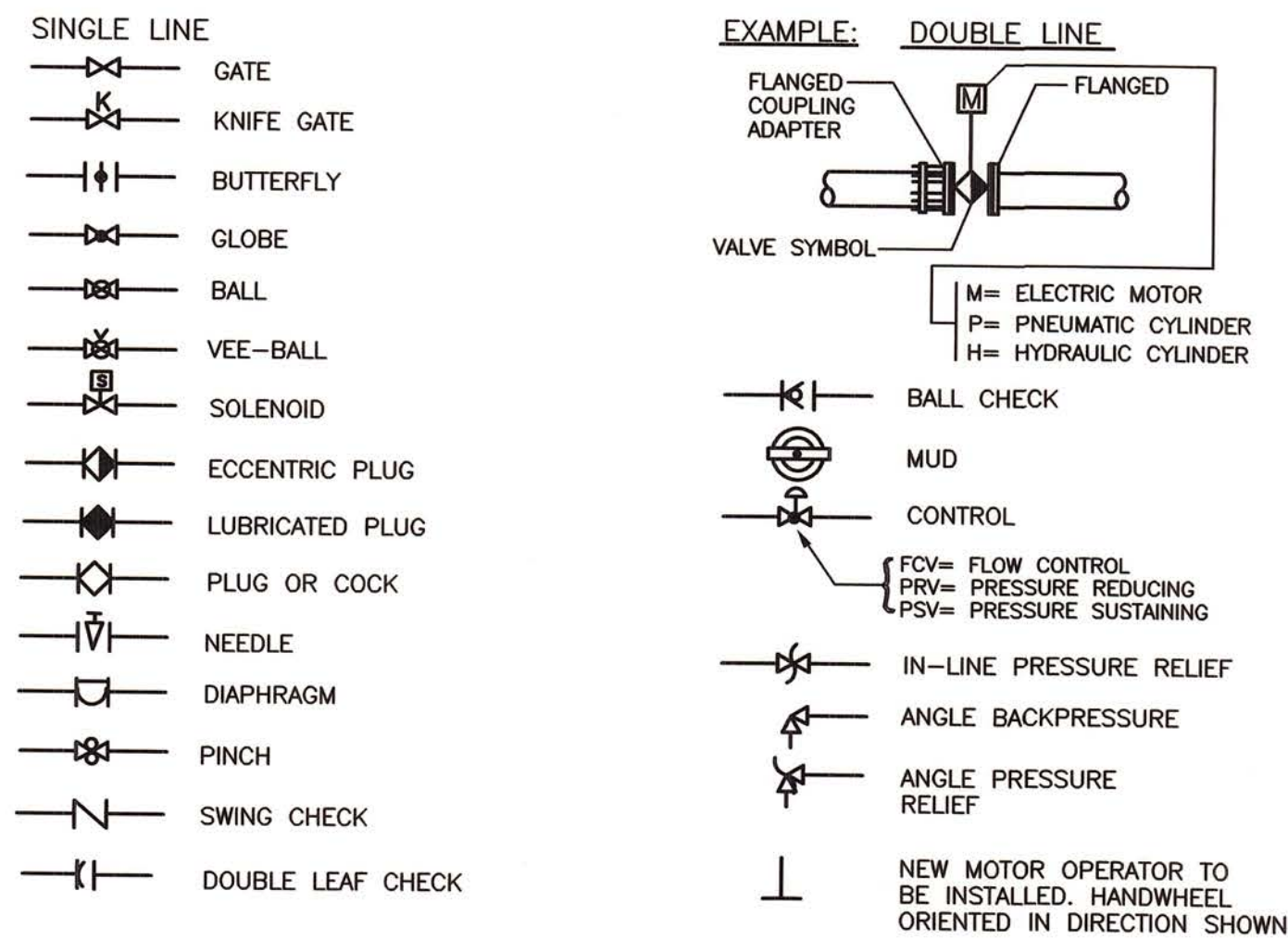
NEW



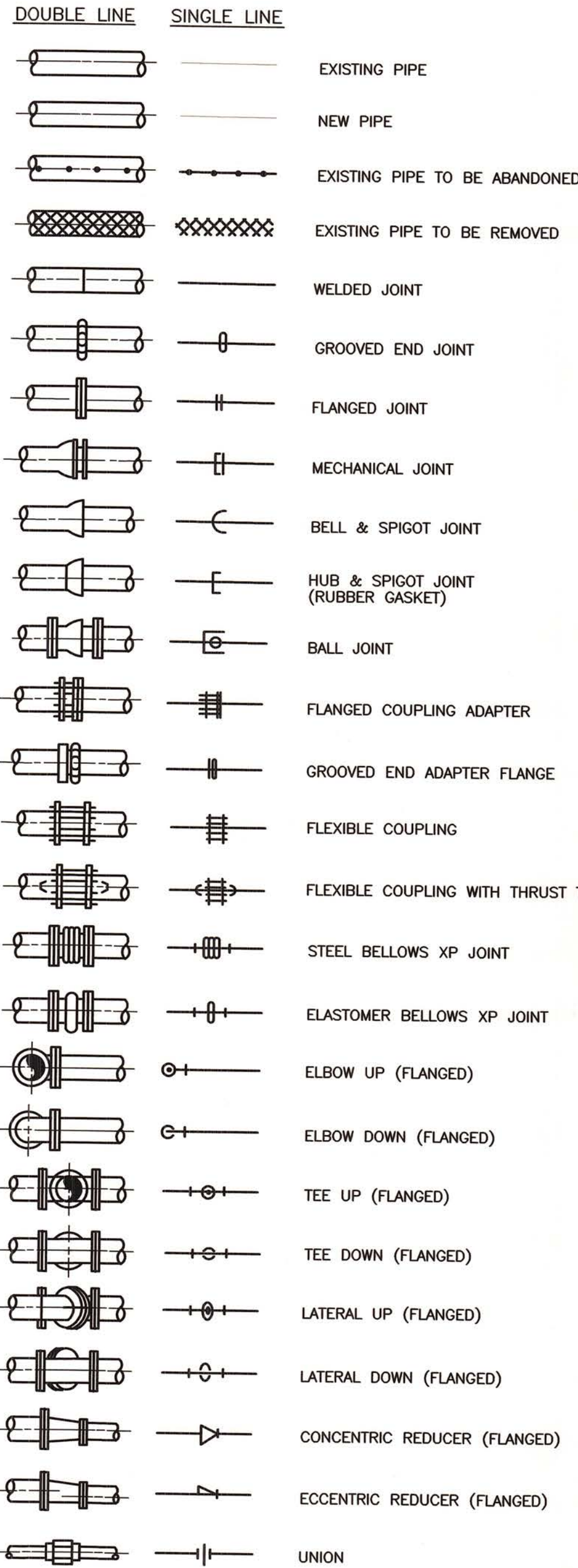
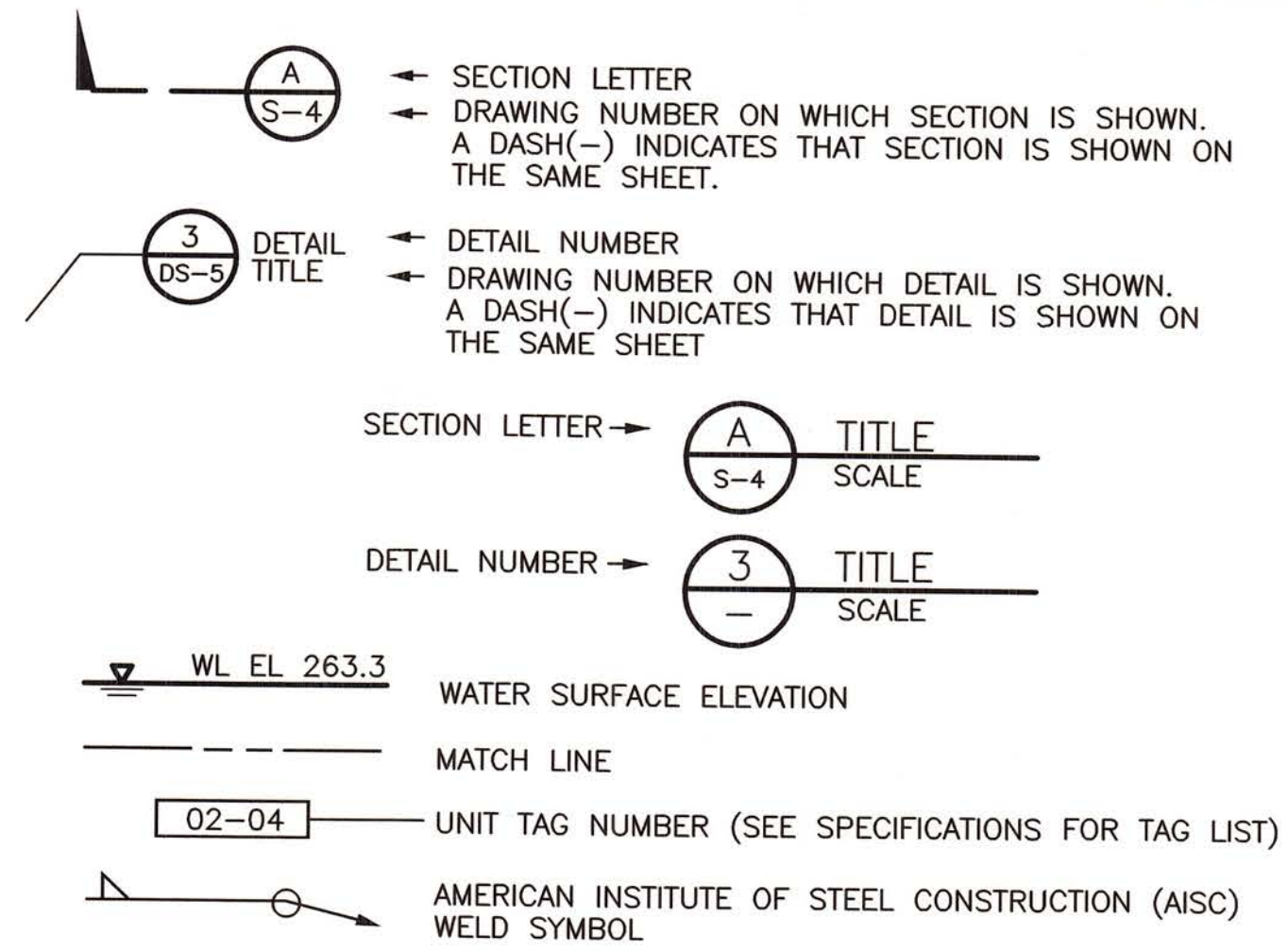
VALVE DESIGNATIONS



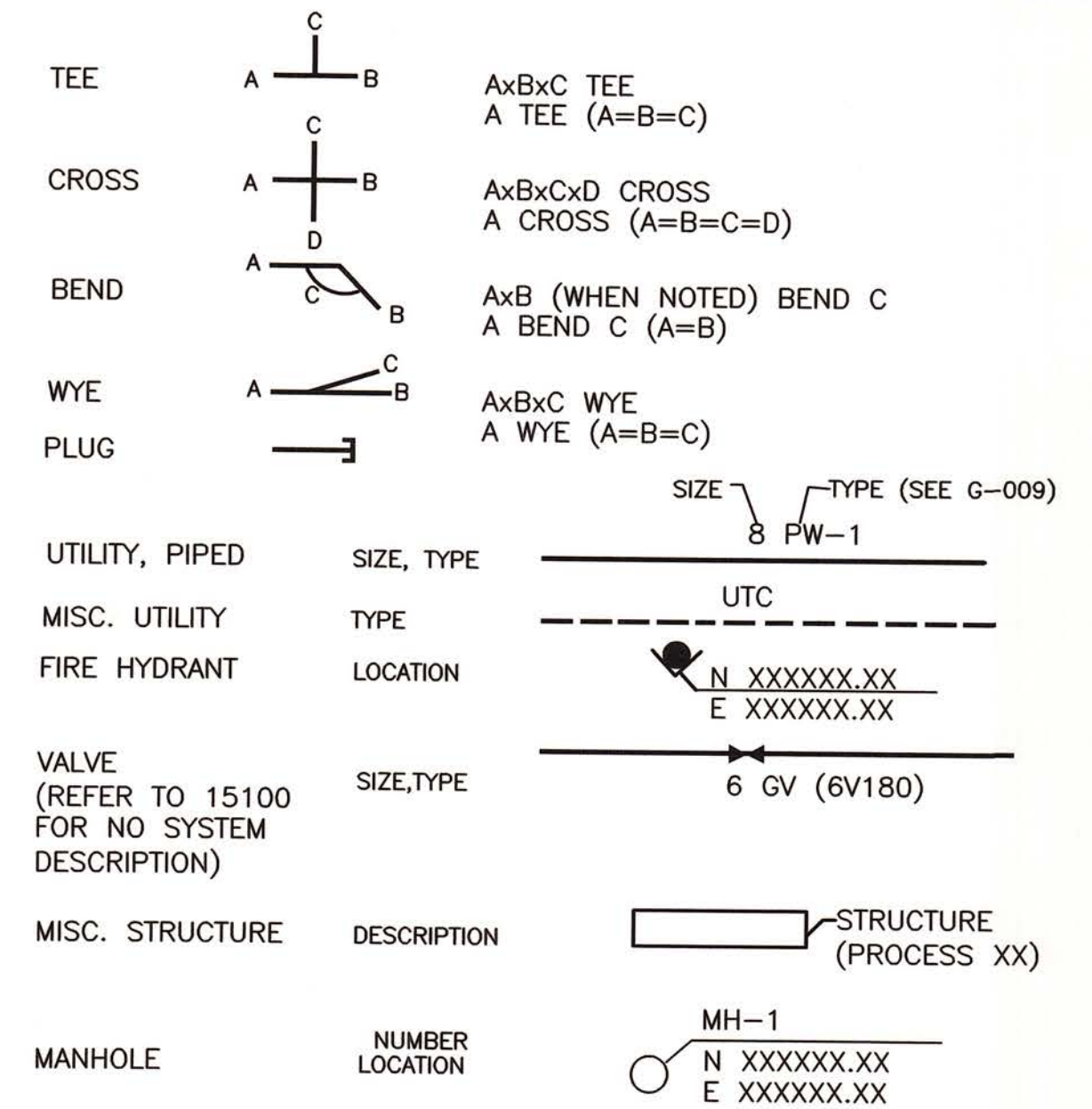
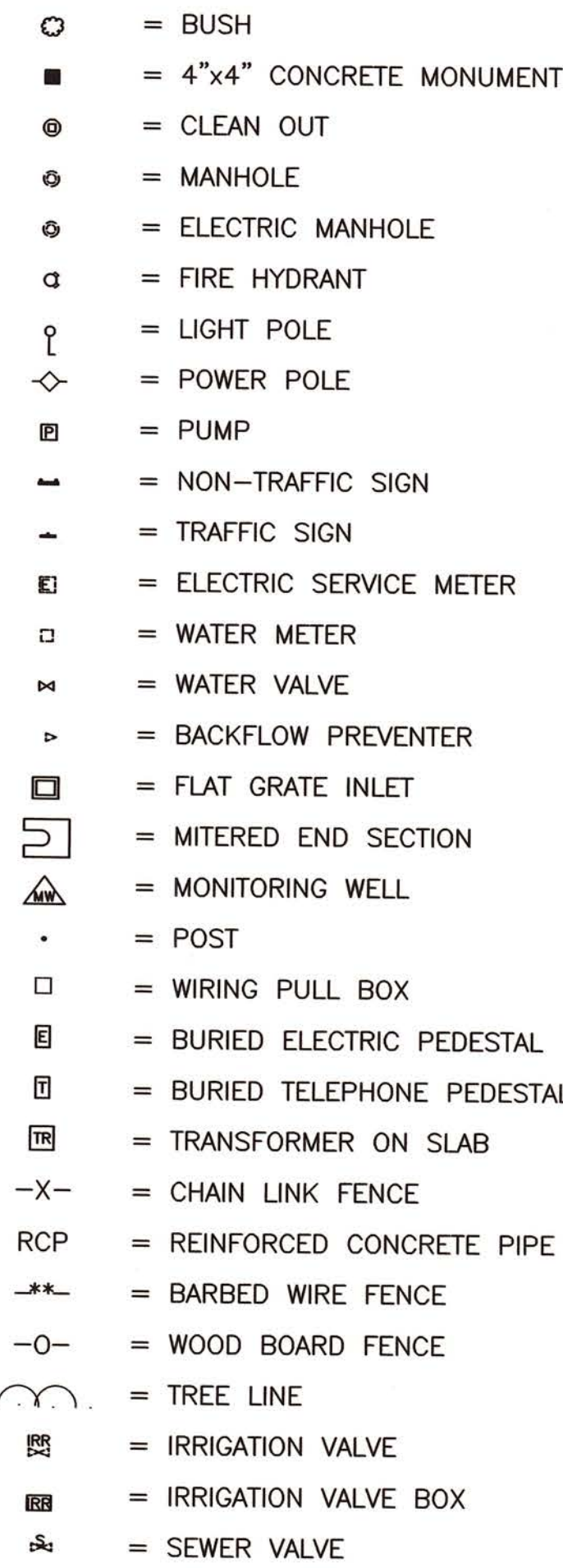
VALVE SYMBOLS



DRAFTING LEGEND



NOTES:
 1. FLANGED FITTINGS ARE SHOWN IN THIS LEGEND. REFER TO THE DRAWINGS AND SPECIFICATIONS FOR REQUIRED END CONNECTIONS.
 2. MATCH THE DIAMETER OF THE FITTING'S END CONNECTIONS TO THE DIAMETER OF THE CONNECTING PIPE, FITTINGS OR VALVES.
 3. THE SIZE AND TYPE OF FITTINGS MAY BE INDICATED ON THE DRAWINGS. USE THIS LEGEND UNLESS OTHERWISE SHOWN ON THE DRAWINGS.



DMC: X:\Projects\City of Naples\60289240-Port Royal and Public Works Pump Stations\000 CAD\Public_Merica\Sheets\G-004.dwg Layout: Name: G-004 - Plotted by: Laterza, Mike Date: 9/19/2013 - 1:59 PM XREFS: C-BD WAGES:

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CITY OF NAPLES
 PUBLIC WORKS PUMP STATION
 DRAFTING LEGEND

DRAWING
G-004
 SHEET
4
 OF - SHEETS

PROCESS PIPING SCHEDULE

LEGEND	SYSTEM	TEMP. (DEG. F)				PRESSURE (PSI)		PIPING				VALVING			TEST REQUIREMENTS			SPECS. SECTION NUMBER	PIPE COLOR (PER AWWA)	REMARKS		
		OPER.		MAX.		WORK.	MAX.	MATERIAL	DIAMETER RANGE	SCH./CLASS	LINING/COATING	JOINT TYPE	BLOCK	CHECK	THROTTLING	PRESSURE (PSI)	MEDIUM				TEST DURATION (SPEC)	LEAKAGE ALLOWANCE (SPEC)
STS-1	STORMWATER	75	90	G	10	DIP	4-36"	CLASS 53	SEE SPECS	FLANGED	---	---	---	25	WATER	400515	400515	402040	LIGHT GRAY	NOTES 1, 2, 5, 7		
ASR-1	ASR WATER	75	90	50	125	DIP	8-12"	CLASS 53	SEE SPECS	FLANGED/MJ	GATE	SWING	---	125	WATER	400515	400515	402040	LIGHT GRAY	NOTES 1, 2, 5, 7		
ASR-2	ASR WATER	75	90	50	125	HDPE	8-12"	DR 11	---	FUSION/FLANGED/MJ	GATE	SILENT	---	125	WATER	400515	400515	402097	LIGHT GRAY	NOTES 1, 3, 4, 6		
PW-1	POTABLE WATER	75	90	50	125	HDPE	1-2"	DR 11	---	FUSION/THREADED	CORP	---	---	125	WATER	400515	400515	402097	BLUE	NOTES 1, 2, 4		
PW-2	POTABLE WATER	75	90	50	125	SST	0.125-.75"	---	---	COMPRESSION	BALL	---	---	125	WATER	400515	400515	402078	---	NOTES 1, 2, 9		
PW-3	POTABLE WATER	75	90	50	125	SST	0.25-3"	SCH 80	---	THREADED	BALL	---	---	125	WATER	400515	400515	402076	---	NOTES 1, 2, 9		

PROCESS PUMP SCHEDULE

TAG NO.	NUMBER OF UNITS	NAME	TYPE	RATING POINT				MIN. SUCTION/DISCHARGE SIZE (IN.)	PUMP RPM MAX.	SEAL TYPE	MOTOR DATA				DRIVE TYPE	SPEC. SECTION	BASIS OF DESIGN	REMARKS
				CAPACITY (GPM)	HEAD (FEET)	MIN. EFF. %	SHUTOFF HEAD FT.				HP	VOLTAGE	RPM (MAX.)	ENCL. TYPE				
P-1 & P-2	2	MAIN PUMP	VERTICAL MIXED FLOW	21,000	16	88	25	- / 36	505	TYPE F	125	460	505	TEFC	VFD	432150	PEERLESS	
P-3	1	JOCKEY PUMP	VERTICAL MIXED FLOW	5625	11	81	18	- / 16	1175	TYPE F	25	460	1175	TEFC	VFD	432150	PEERLESS	
P-4	1	ASR PUMP	SUBMERSIBLE	1390	148	70	240	- / 8	1760	TYPE H	88	460	1160	SUB	VFD	432140	FLYGT CP3300	

SLIDE GATE SCHEDULE

TAG NO.	NUMBER OF UNITS	GATE SIZE W(IN.) x H(IN.)	GATE TYPE	MOUNTING CONFIGURATION	SEATED HEAD	UNSEATED HEAD	GATE INVERT (ELEV)	DECK HEIGHT (ELEV)	CHANNEL WIDTH (IN)	SLIDE HEIGHT (IN)	OPERATOR TYPE	MOTOR DATA			SPEC. SECTION	REMARKS
												HP	VOLTAGE	ENCL. TYPE		
SG-1, SG-3	2	54 x 168	SELF CONTAINED	SURFACE	17.0	13	-10.60	8.33	54	168	ELECTRIC	1	460	NEMA4X	400580	NOTE 11,12
SG-2, SG-4	2	54 x 180	SELF CONTAINED	SURFACE	18.0	14	-11.07	8.33	54	180	ELECTRIC	1	460	NEMA4X	400580	NOTE 11,12

SCREEN SCHEDULE

TAG NO.	NUMBER OF UNITS	NAME	TYPE	RATING POINT			CHANNEL WIDTH (INCH)	CHANNEL INVERT TO DECK (INCH)	LIFT (INCH)	MOTOR DATA				DRIVE TYPE	SPEC. SECTION	BASIS OF DESIGN	REMARKS
				CAPACITY (MGD)	HEAD LOSS (INCH)	BAR SPACING (INCH)				HP	VOLTAGE	RPM (MAX.)	ENCL. TYPE				
SCR-1, SCR-2	2	BAR SCREEN	VERTICAL	36	9	1	54	233	281	1	460	---	TEFC	GEAR	444333	JOHN MEUNIER	

CONVEYOR SCHEDULE

TAG NO.	NUMBER OF UNITS	NAME	TYPE	CONVEYER DATA					CONVEYER SETTING	CONVEYER DISCHARGE	MOTOR DATA				DRIVE TYPE	SPEC. SECTION NUMBER	NUMBER	
				MATERIAL CONVEYED	LOADING CF/HR	DIA. OR WIDTH (IN)	LENGTH (FEET)	CENTERLINE CONVEYER ABOVE FLOOR (FEET)			CONVEYER SPEED (FPM)	HP	VOLTAGE	RPM (MAX)				ENCL. TYPE
CNV-1	1	SCREENINGS CONVEYOR	BELT	SCREENING	875	24	21	2.5	80	FLOOR	1	3	460	1800	TEFC	GEAR	412123	

STRAINER SCHEDULE

TAG NO.	NUMBER OF UNITS	NAME	TYPE	RATING POINT				INLET/DISCHARGE SIZE (IN.)	BACKWASH OUTLET SIZE (IN.)	MOTOR DATA				DRIVE TYPE	SPEC. SECTION	BASIS OF DESIGN	REMARKS
				CAPACITY (GPM)	OPERATING PRESSURE (PSI)	SCREEN SIZE (MICRON)	BACKWASH SETTING (DPSI)			HP	VOLTAGE	RPM (MAX.)	ENCL. TYPE				
FLT-1, FLT-2	2	STRAINER	AUTOMATIC	1340	50	200	7	10	10	0.5	460	---	---	GEAR	44331	AMIAD ESB 10000	

NOTES:

- TEST PIPING IN ACCORDANCE WITH SPEC SECTION 400515, UNLESS OTHERWISE NOTED.
- LABEL PIPING IN ACCORDANCE SPEC SECTION 400775.
- ALL PIPING IS TO HAVE A CONSTANT SLOPE BETWEEN THE INVERT OR CENTERLINE SHOWN ON THE DRAWINGS.
- ALL BURIED JOINTS ARE TO BE MECHANICALLY RESTRAINED UNLESS OTHERWISE NOTED.
- COORDINATE CONNECTIONS AND ELEVATIONS AT STRUCTURES WITH PROCESS AND STRUCTURAL DRAWINGS.
- PROVIDE MINIMUM SEPARATION OF PIPING AS IDENTIFIED ON DETAIL 4, DRAWING C-502.
- PROVIDE COATING SYSTEM PER SPEC SECTION 099000, UNLESS OTHERWISE NOTED.
- WORKING PRESSURES REPORTED AS "G" INDICATES GRAVITY LINE.
- DO NOT COAT STAINLESS STEEL PIPE.
- COAT VENT PIPE THE COLOR OF THE SERVICE THAT IS VENTED.
- CONTRACTOR SHALL CONFIRM INVERT AND DECK ELEVATIONS PRIOR TO ORDERING GATES.
- NOTE THAT MAXIMUM HEAD IS GREATER THAN THE HEIGHT OF THE SLIDE GATE. WHEN WATER LEVEL IS HIGH, GATE ACTS AS A WEIR. HOWEVER, GATE MUST BE ABLE TO OPEN UPWARDS UNDER THIS CONDITION.

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
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DESIGNED BY: JRR
 PROJECT ENGINEER: RONALD R. CAVALIERI, P.E.
 DRAWN BY: MPL
 REG NUMBER: 65850
 CHECKED BY: DMJ
 PROJECT NUMBER: 60289240
 DATE: SEPT 2013

DMJ
 4-20-2013



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**CITY OF NAPLES
 PUBLIC WORKS PUMP STATION**

EQUIPMENT SCHEDULE

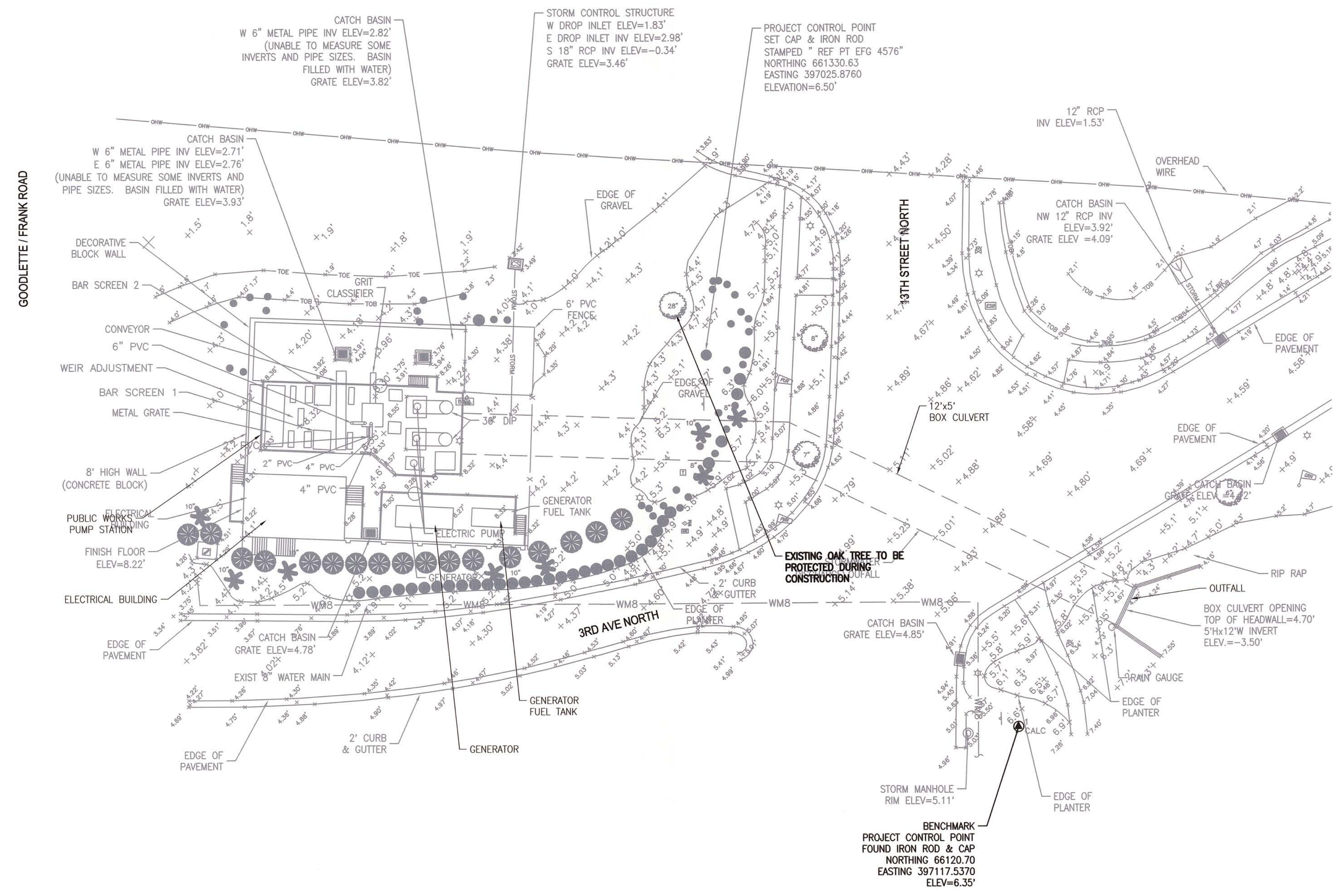
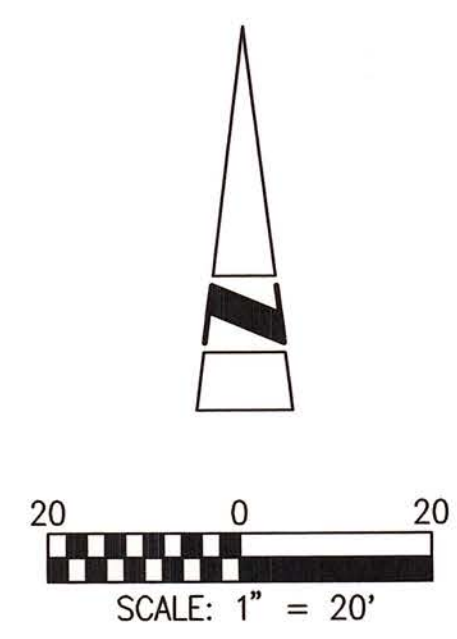
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G-005

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OF -- SHEETS

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 PLOTTED BY: LATERZA, MIKE
 LAYOUT NAME: C-101
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REV	DATE	DESCRIPTION	APPR

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 DRAWN BY: **MPL**
 CHECKED BY: **DMJ**
 DATE: **SEPT 2013**

PROJECT ENGINEER: **RONALD R. CAVALIERI, P.E.**
 REG NUMBER: **65850**
 PROJECT NUMBER: **60289240**

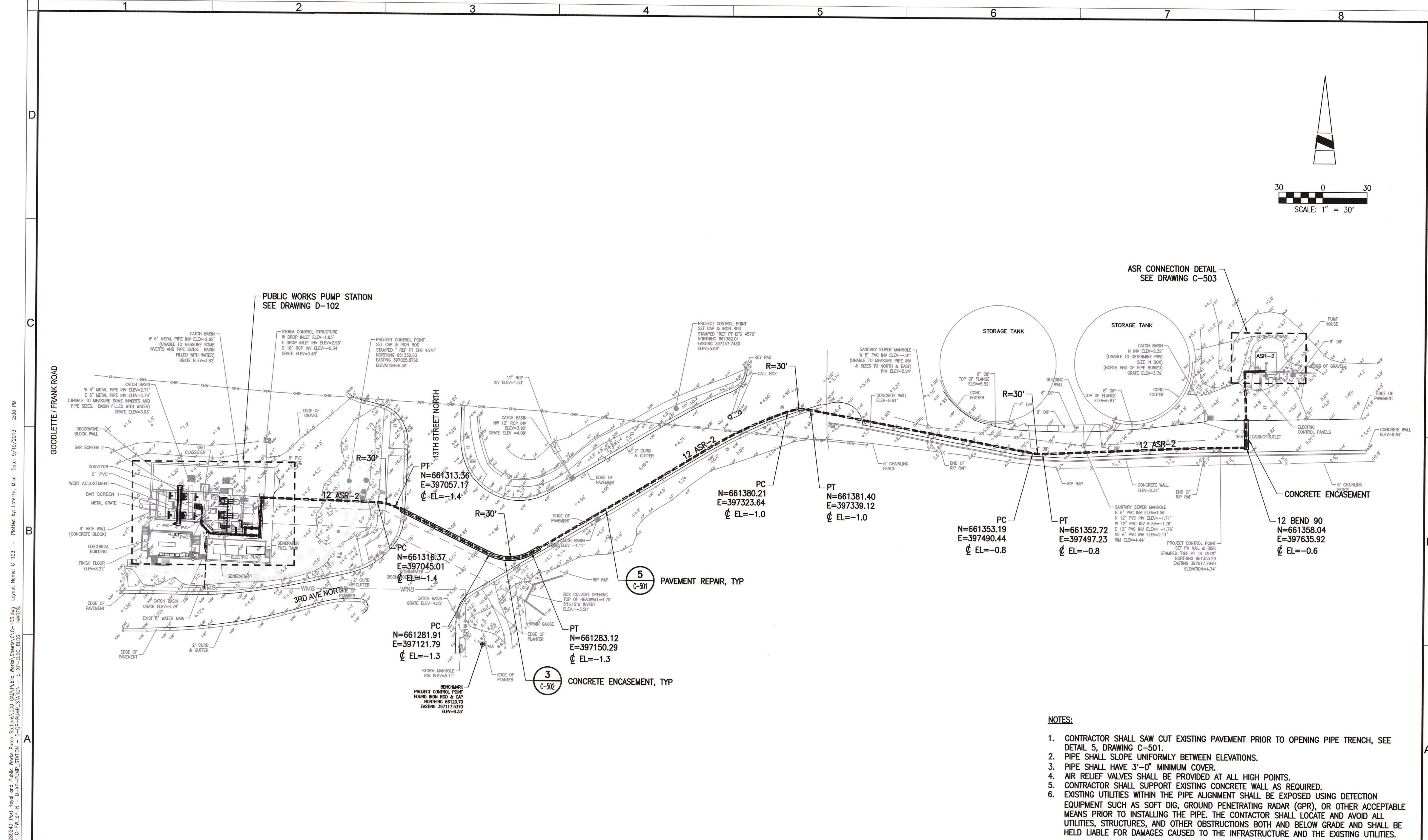

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CITY OF NAPLES
 PUBLIC WORKS PUMP STATION
EXISTING SITE PLAN PUMP STATION

DRAWING: **C-101**
 SHEET: **6**
 OF SHEETS: **6**

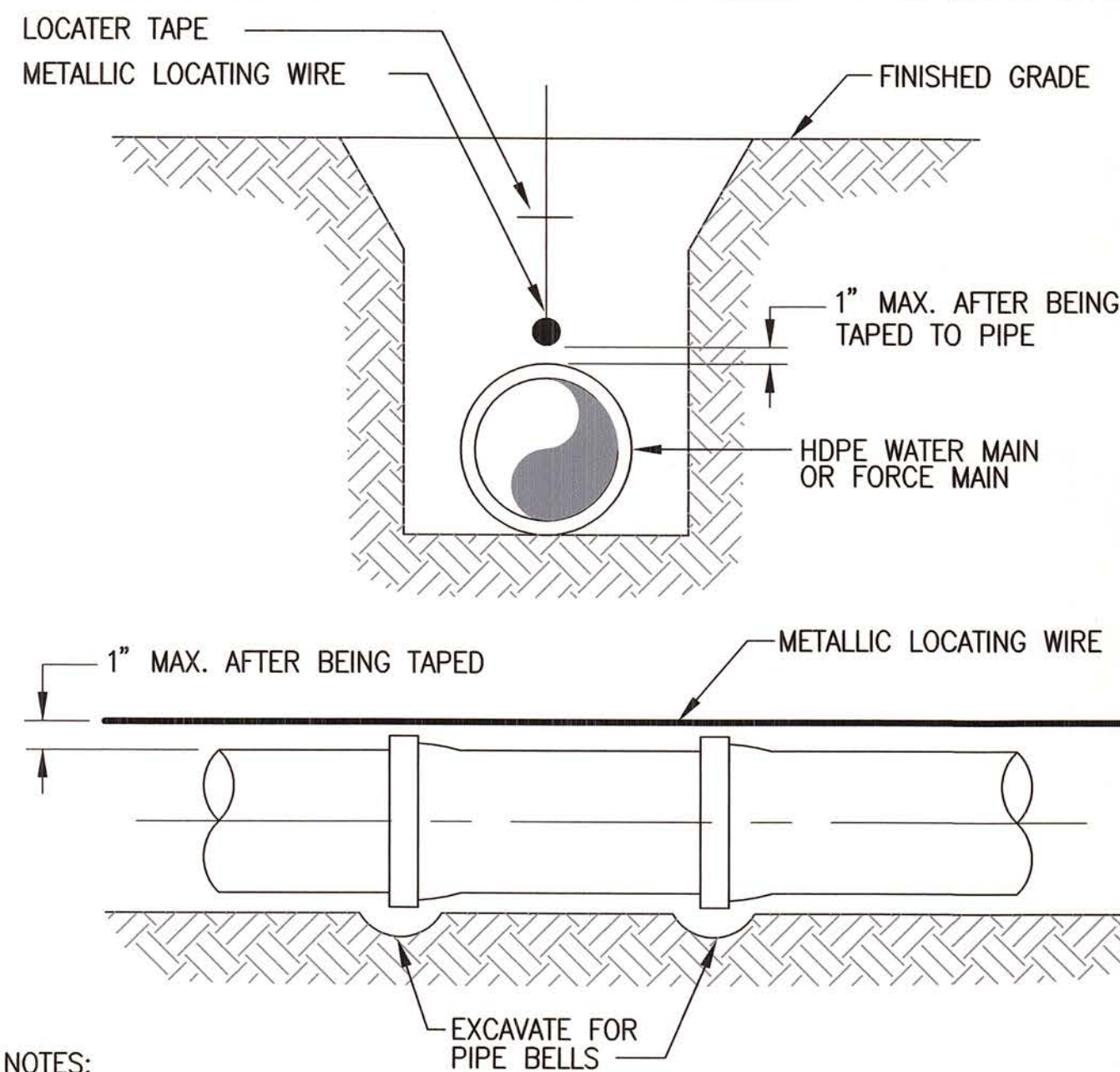


- NOTES:**
1. CONTRACTOR SHALL SAW CUT EXISTING PAVEMENT PRIOR TO OPENING PIPE TRENCH, SEE DETAIL 5, DRAWING C-501.
 2. PIPE SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS.
 3. PIPE SHALL HAVE 3'-0" MINIMUM COVER.
 4. AIR RELIEF VALVES SHALL BE PROVIDED AT ALL HIGH POINTS.
 5. CONTRACTOR SHALL SUPPORT EXISTING CONCRETE WALL AS REQUIRED.
 6. EXISTING UTILITIES WITHIN THE PIPE ALIGNMENT SHALL BE EXPOSED USING DETECTION EQUIPMENT SUCH AS SOFT DIG, GROUND PENETRATING RADAR (GPR), OR OTHER ACCEPTABLE MEANS PRIOR TO INSTALLING THE PIPE. THE CONTRACTOR SHALL LOCATE AND AVOID ALL UTILITIES, STRUCTURES, AND OTHER OBSTRUCTIONS BOTH ABOVE AND BELOW GRADE AND SHALL BE HELD LIABLE FOR DAMAGES CAUSED TO THE INFRASTRUCTURE AND THE EXISTING UTILITIES.

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY		DESIGNED BY JRR	PROJECT ENGINEER RONALD R. CAVALIERI, P.E.		CITY OF NAPLES STREETS AND STORMWATER DEPARTMENT 295 INVERSIDE CIRCLE NAPLES, FLORIDA 34102 PHONE: 239-213-5000 FAX: 239-213-5010	DRAWING C-103
DRAWN BY MPL	REG NUMBER 65850	CHECKED BY DMJ	PROJECT NUMBER 60289240			
DATE SEPT 2013	APPR	DATE 9-20-2013		CITY OF NAPLES ON THE GULF	ASR TRANSMISSION MAIN - PLAN	OF -- SHEETS

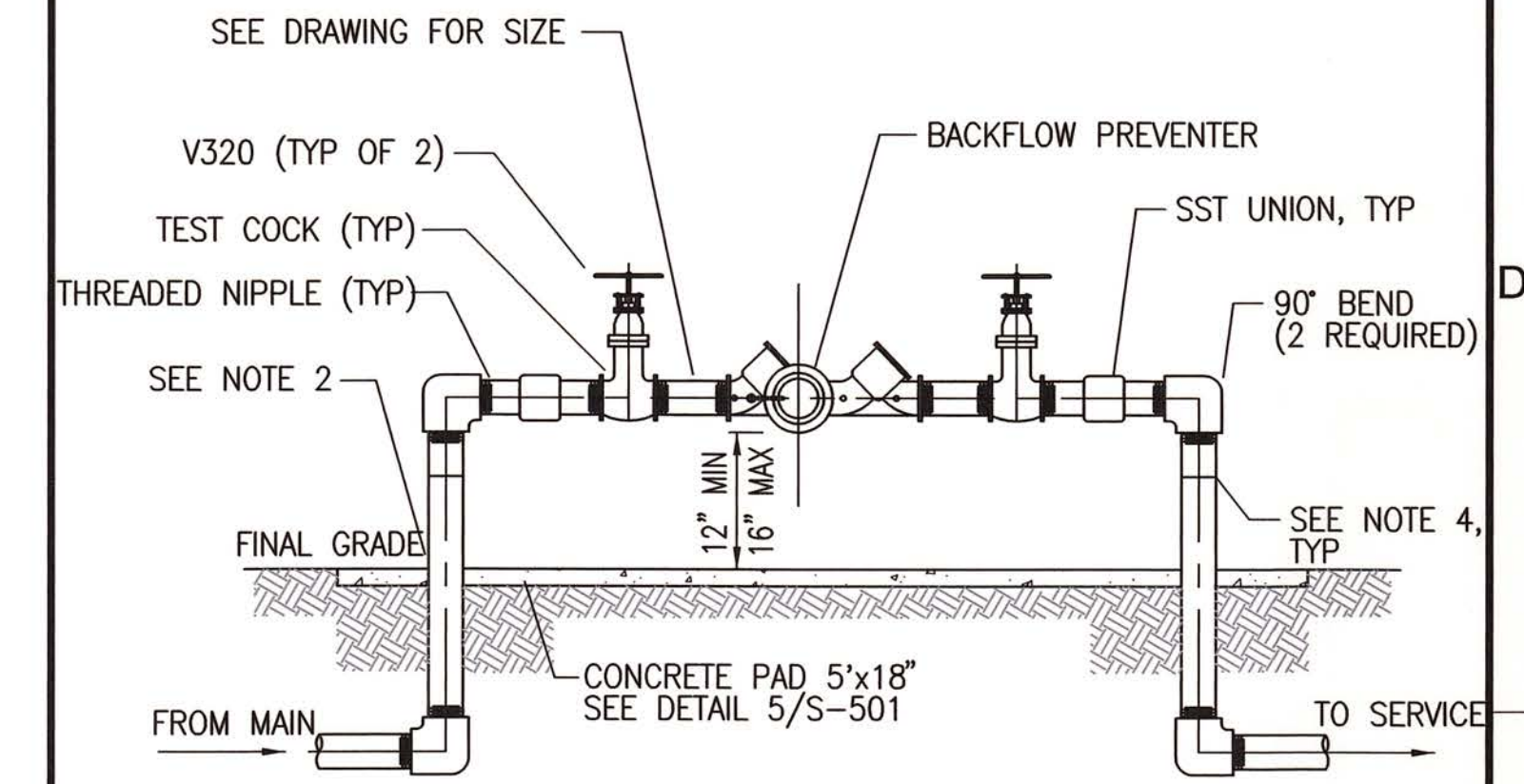
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DWG: X:\Projects\City of Naples\60289240-Port Royal and Public Works Pump Station\000 CAD\Public Works\Sheets\C-C-501.dwg Layout Name: C-501 - Plotted by: Laterza, Mike Date: 9/19/2013 - 2:00 PM
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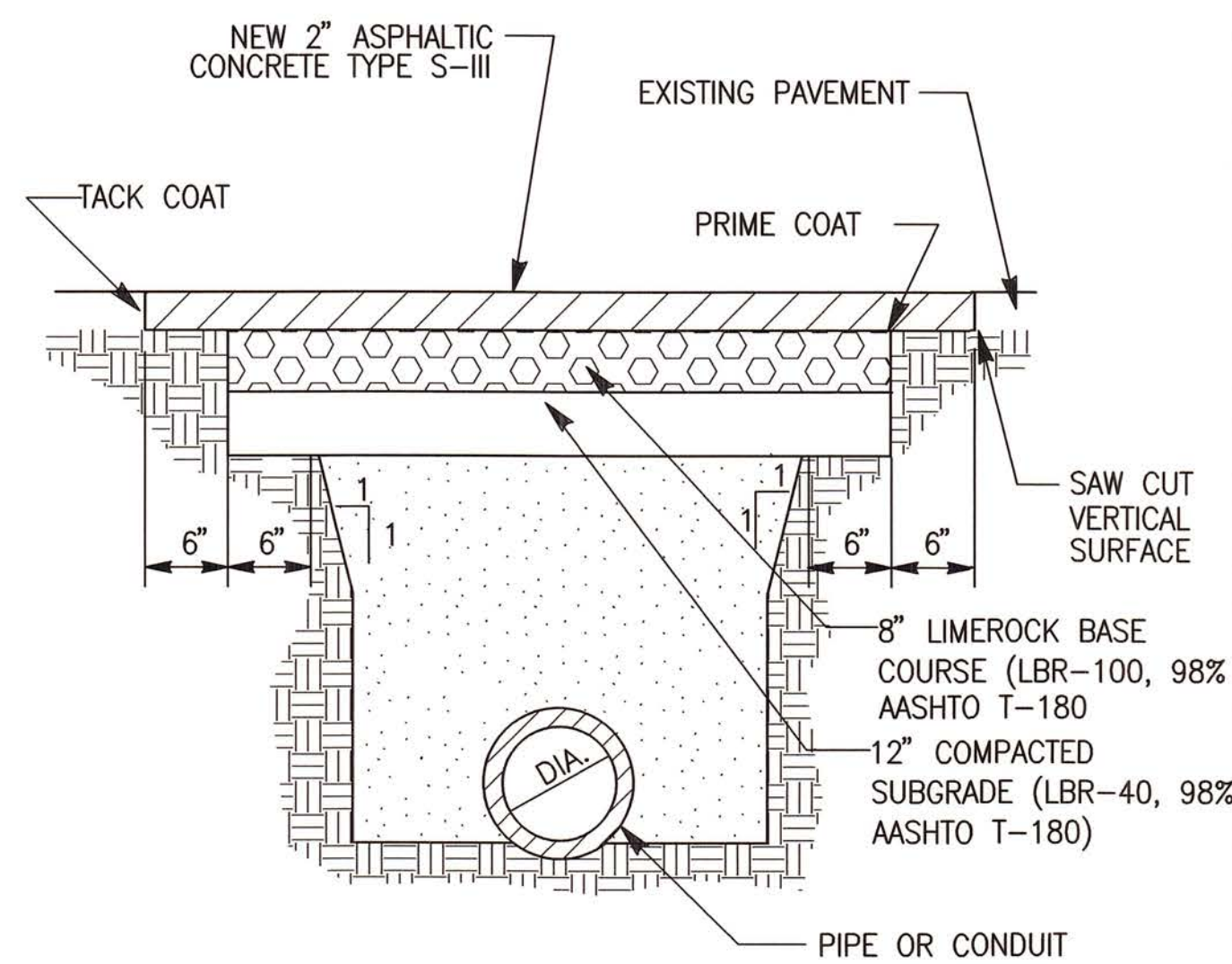
- NOTES:**
- PVC PIPE SHALL REQUIRE INSULATED METALLIC LOCATING WIRE (14 GAUGE CCS) CAPABLE OF DETECTION BY A CABLE LOCATOR.
 - AND SHALL BE BURIED DIRECTLY ABOVE THE CENTERLINE OF THE PIPE. LOCATING WIRE SHALL TERMINATE AT THE TOP OF EACH VALVE BOX.
 - AND BE CAPABLE OF EXTENDING 12" ABOVE TOP OF BOX IN SUCH A MANNER SO AS NOT TO INTERFERE WITH VALVE OPERATION. USE DUCT TAPE AS NECESSARY TO HOLD WIRE DIRECTLY ON THE TOP OF THE PIPE.

2 HDPE PIPE LOCATING WIRE DETAIL
SCALE: NONE



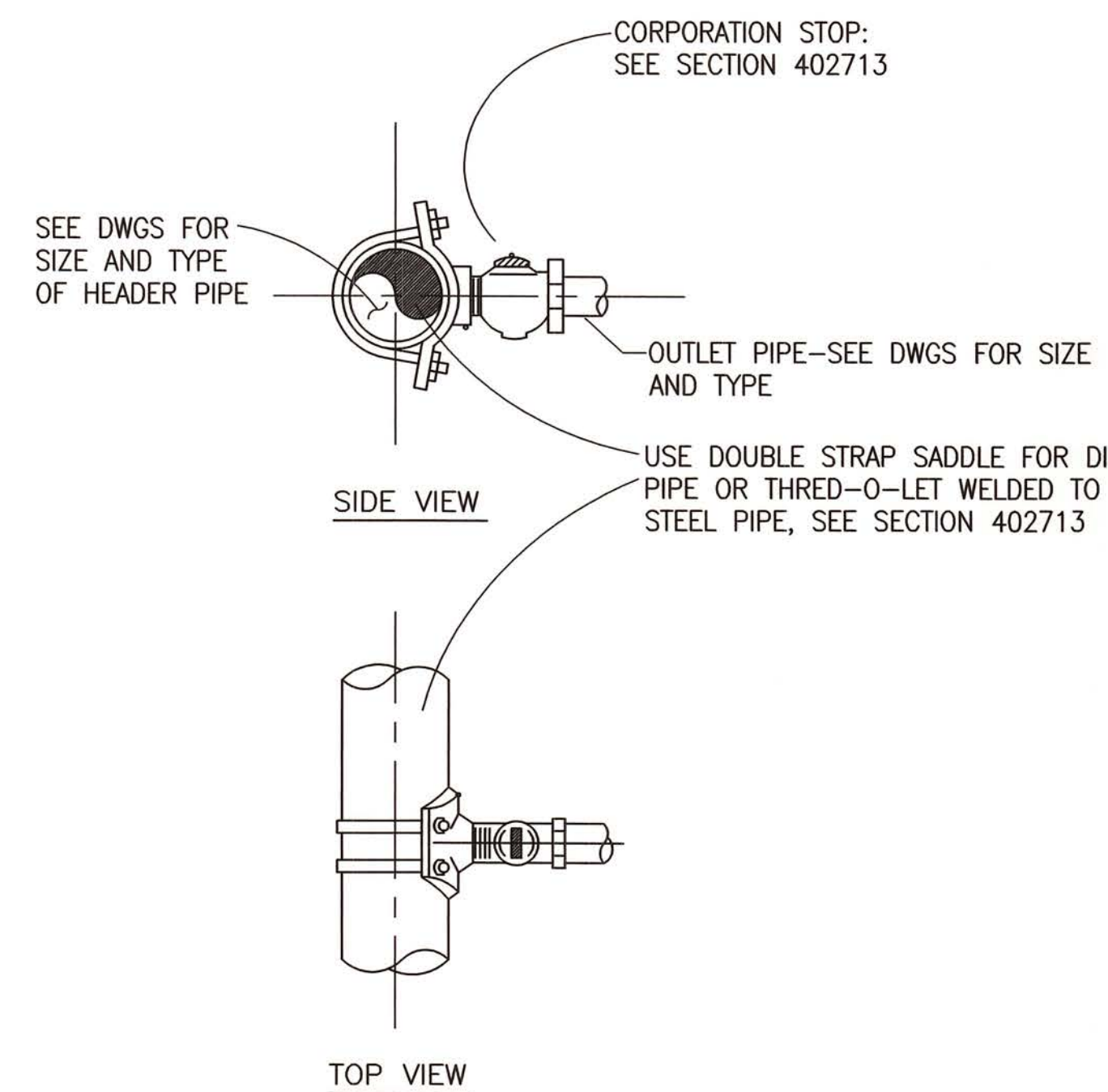
- NOTE:**
- ALL PIPE AND FITTINGS SHALL BE THREADED SST BRASS.
 - PROVIDE 1/2" JOINT MATERIAL BETWEEN THE PIPE AND CONCRETE SLAB (TYP)
 - REDUCED PRESSURE DEVICE SUPPLIED WITH AMMONIA AND CHLORINE RESISTANCE SEALS. DEVICE MUST BE APPROVED BY USC FCCCHR AND AWWA. APPROVED DEVICES: AMES, CONBRACO, WILKINS-ZURN, AND WATTS.
 - TRANSITION FROM HDPE TO NPT W/ISCO STAINLESS STEEL THREADED TRANSITION FITTING.

4 BACKFLOW PREVENTER
SCALE: NONE

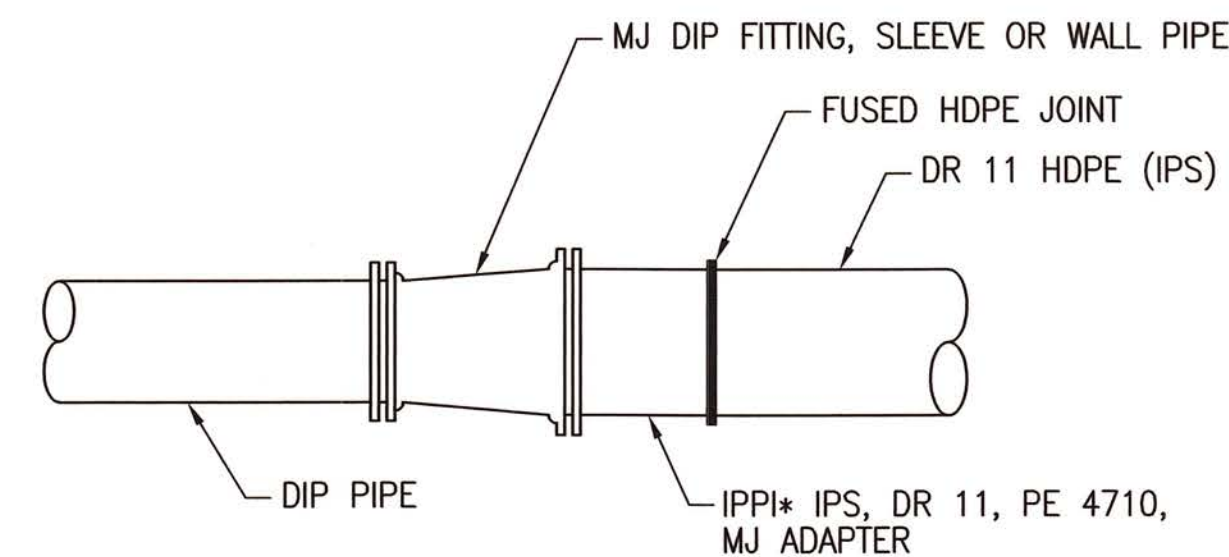


- NOTES:**
- ASPHALTIC CONCRETE TO BE PLACED AND COMPACTED IN ONE 2" COURSE.

5 PAVEMENT REPAIR
SCALE: NONE

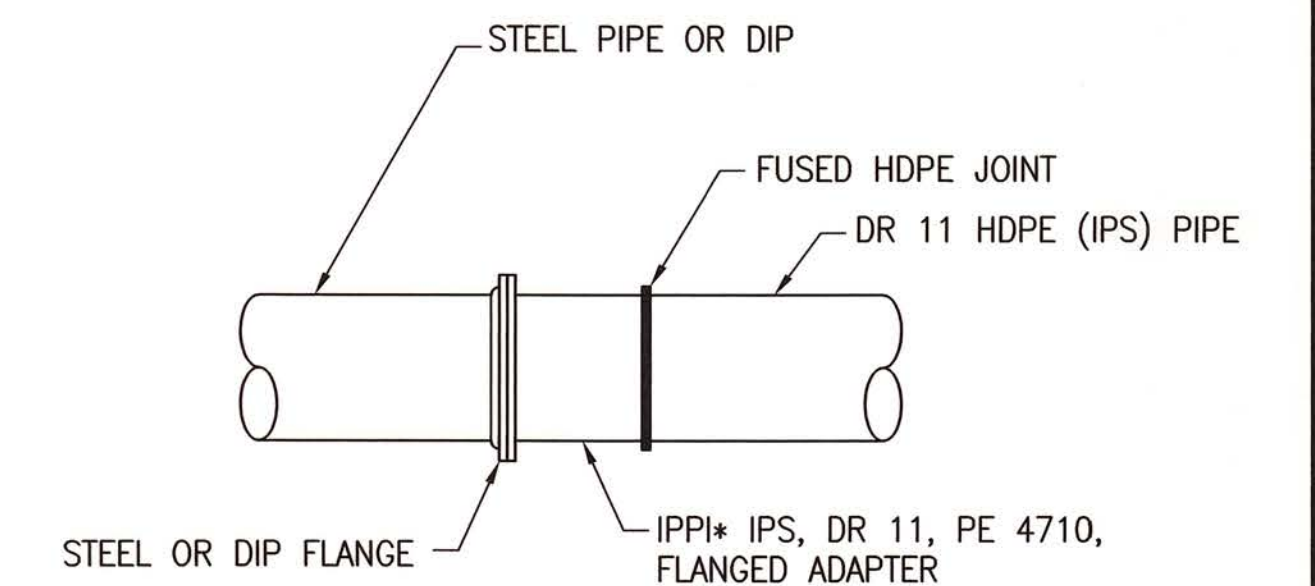


6 SERVICE SADDLE CONNECTION
SCALE: NONE



- NOTES:**
- MJ ADAPTER SHALL BE IPPI (INDEPENDENT PIPE PRODUCTS, INC) OR ENGINEER APPROVED EQUAL.
 - PROVIDE INTERNAL STAINLESS STEEL STIFFENER ON ALL TRANSITIONS REGARDLESS OF SIZE.
 - MJ ADAPTER MANUFACTURER SHALL PROVIDE HDPE ANCHOR FITTING, RUBBER GASKET, T-BOLTS AND NUTS, INTERNAL STAINLESS STEEL STIFFENER, AND DUCTILE IRON GLAND RING.
 - FOR BURIED MJ BUTTERFLY VALVES, CONTRACTOR SHALL SUBMIT VALVE INFORMATION TO MJ ADAPTER MANUFACTURER TO PRIOR ORDERING ADAPTER TO INSURE PROPER CLEARANCE OF THE VALVE. PROVIDE VALVE SPACERS OR BEVELED NOSED ANCHOR AS NEEDED. CONTRACTOR SHALL TEST FIT HDPE ANCHORS WITH BUTTERFLY VALVE (FULLY OPEN) TO CONFIRM CLEARANCE BEFORE FUSION AND INSTALLATION.

7 HDPE TO MJ TRANSITION
SCALE: NONE



- NOTES:**
- FLANGE ADAPTER SHALL BE IPPI (INDEPENDENT PIPE PRODUCTS, INC) OR ENGINEER APPROVED EQUAL.
 - FLANGE ADAPTER MANUFACTURER SHALL PROVIDE IPS SIZED FLANGE ADAPTER AND MATING BOLT RING.
 - BOLT RING SHALL BE 316 STAINLESS STEEL A351-CF8M.
 - CONTRACTOR TO PROVIDE BOLTS AND NUT PER SECTION XXXXX.

8 HDPE / FLANGE TRANSITION
SCALE: NONE

REV	DATE	DESCRIPTION	APPR

DESIGNED BY JRR	PROJECT ENGINEER RONALD R. CAVALIERI, P.E.
DRAWN BY MPL	REG NUMBER 65850
CHECKED BY DMJ	PROJECT NUMBER 60289240
DATE SEPT 2013	

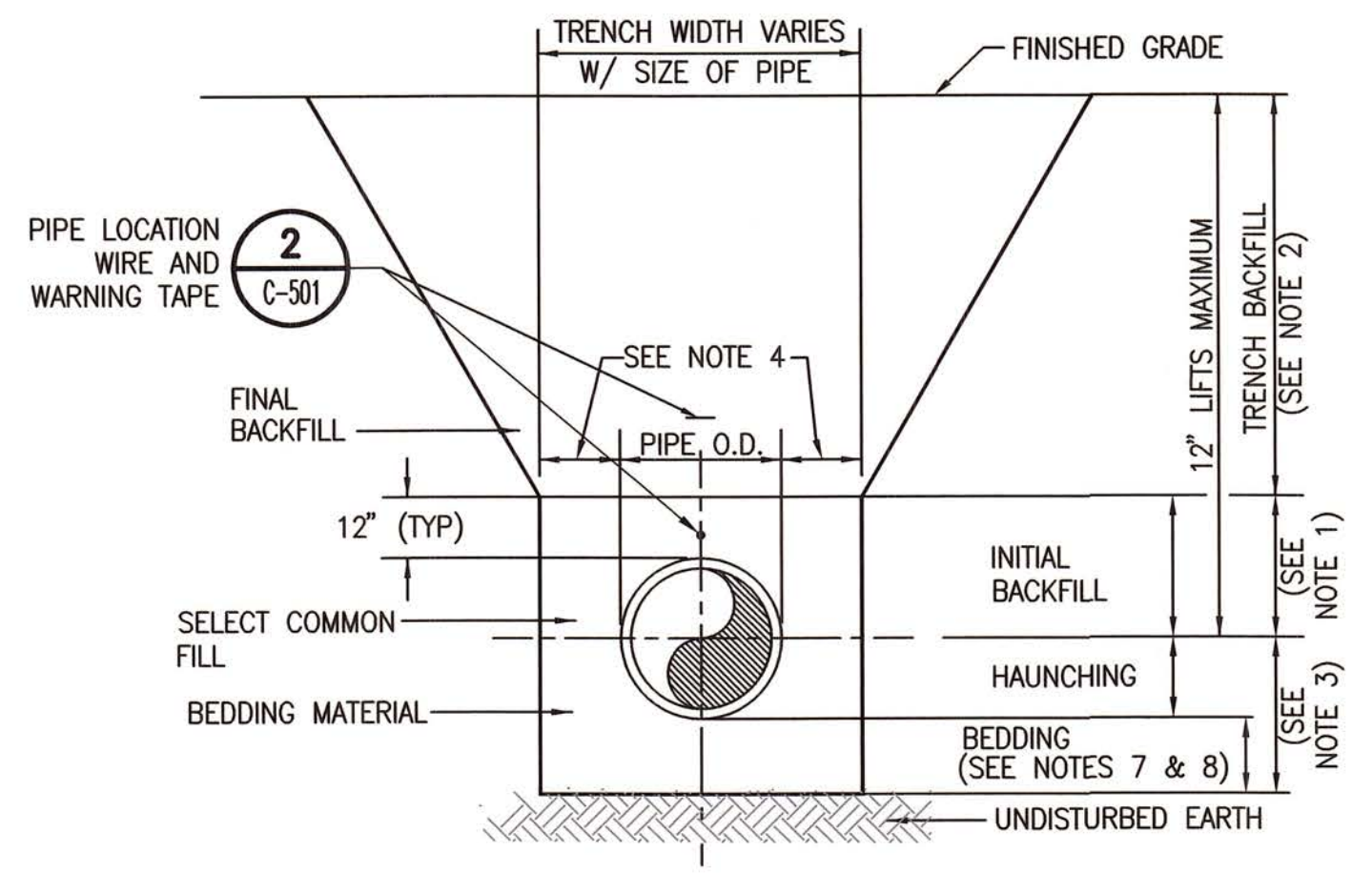
AECOM Technical Services, Inc.
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CITY OF NAPLES PUBLIC WORKS PUMP STATION	
CIVIL DETAILS	

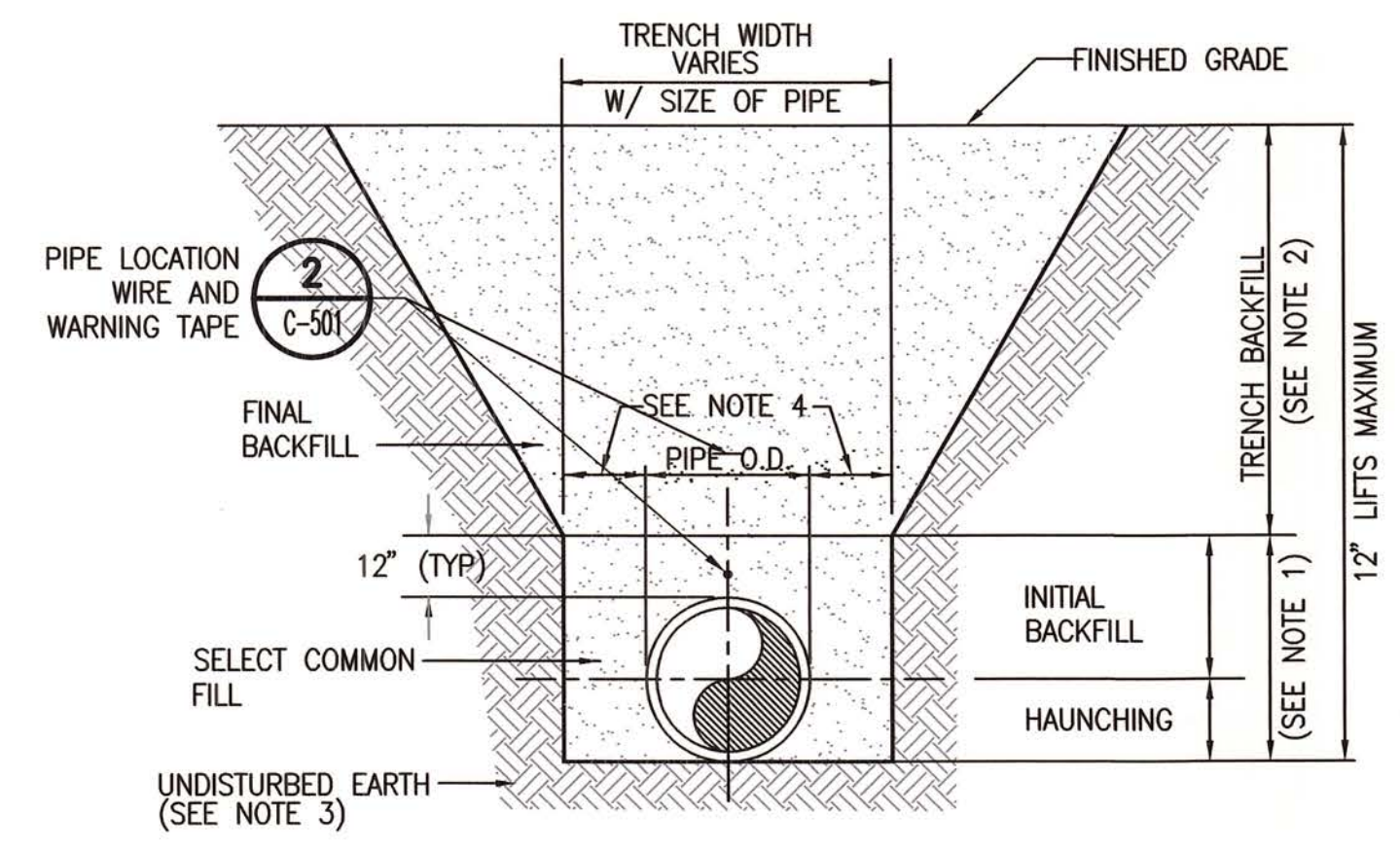
DRAWING C-501
SHEET 9
OF - SHEETS

P:\GIS\Projects\City of Naples\60289240-Port Royal and Public Works Pump Station\00 CAD\Public Works\Sheets\C-502.dwg Layout Name: C-502 Date: 9/19/2013 2:01 PM
 Plotted by: Laterra, Mike
 XREFS: C-8B



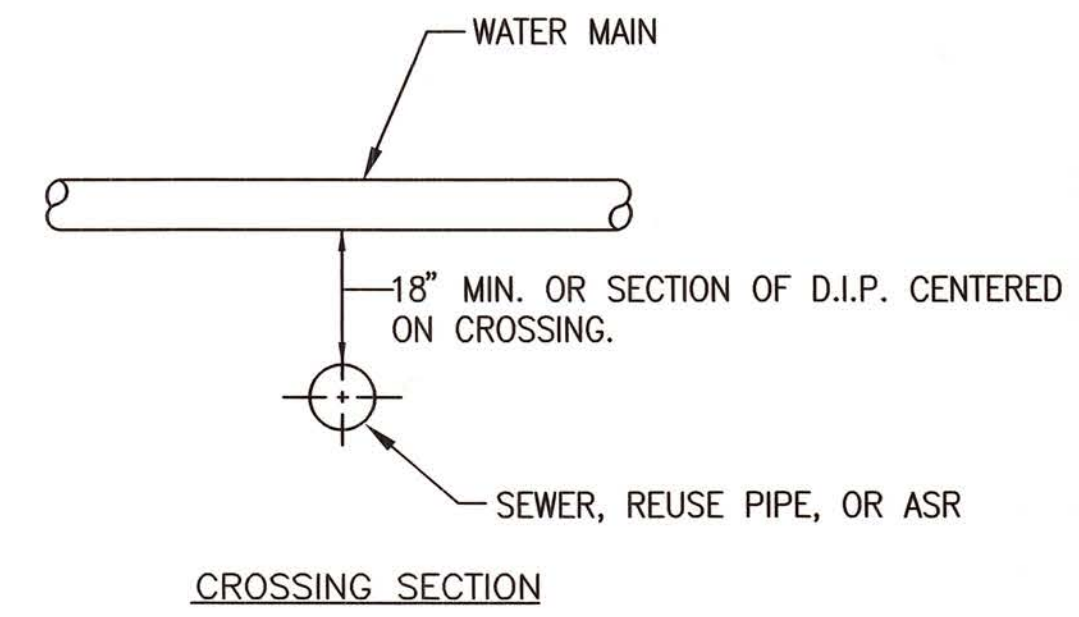
- NOTES:**
- INITIAL BACKFILL: SELECT COMMON FILL COMPACTED TO 98% OF THE MAXIMUM DENSITY AS PER ASTM D1557.
 - TRENCH BACKFILL/BACKFILL COMPACTION: SELECT COMMON FILL UNDER & WITHIN 6 FEET OF ANY PAVED SURFACE SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 98% OF MAX DENSITY PER ASTM D1557. BACKFILL IN AREAS OUTSIDE ROADWAY SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 95% MAX DENSITY PER ASTM D1557.
 - TYPE A BEDDING MATERIAL SHALL CONFORM TO FDOT NO. 57 AGGREGATE.
 - 15" MAX (12" MIN) FOR PIPE DIAMETER LESS THAN 24" AND 24" MAX (12" MIN) FOR PIPE DIAMETER 24" AND LARGER.
 - WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
 - ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
 - BEDDING DEPTH SHALL BE 4" MINIMUM FOR PIPE DIAMETER UP TO 12" AND 6" MINIMUM FOR PIPE DIAMETER 16" AND LARGER.
 - DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. OWNER SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.
 - FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES.

1 TYPE A BEDDING AND TRENCHING DETAIL
SCALE: NONE



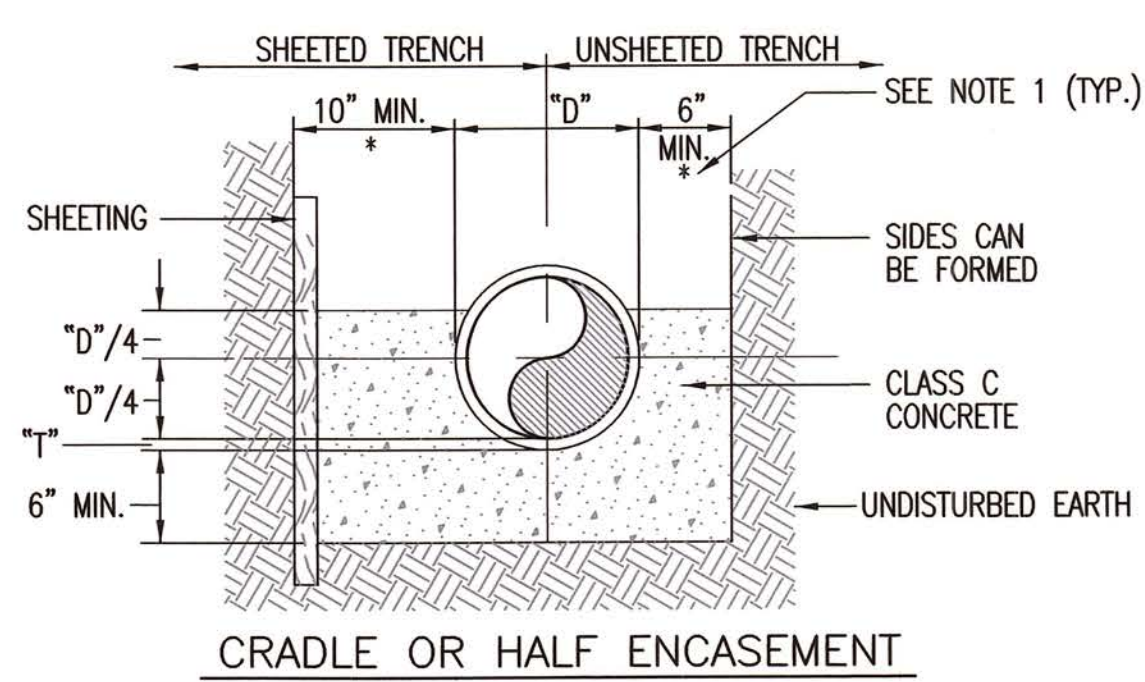
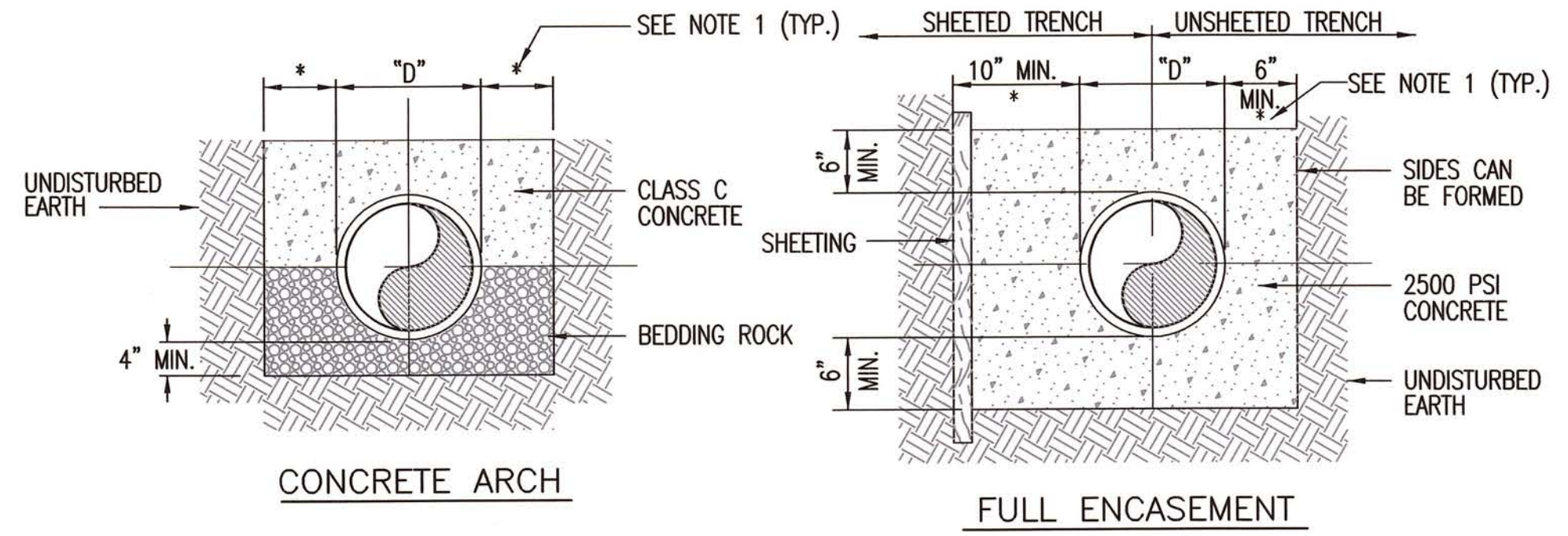
- NOTES:**
- INITIAL BACKFILL AND HAUNCHING: SELECT COMMON FILL COMPACTED TO 98% OF THE MAXIMUM DENSITY AS PER ASTM D1557.
 - TRENCH BACKFILL/BACKFILL COMPACTION: SELECT COMMON FILL UNDER & WITHIN 6 FEET OF ANY PAVED SURFACE SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 98% OF MAX DENSITY PER ASTM D1557. BACKFILL IN AREAS OUTSIDE ROADWAY SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 95% MAX DENSITY PER ASTM D1557.
 - PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE A BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY OWNER.
 - 15" MAX (12" MIN) FOR PIPE DIAMETER LESS THAN 24" AND 24" MAX (12" MIN) FOR PIPE DIAMETER 24" AND LARGER.
 - WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
 - ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
 - FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES.

2 TYPE B BEDDING AND TRENCHING DETAIL
SCALE: NONE



- NOTES:**
- IF WATERMAIN IS LESS THAN 18" ABOVE SEWER OR REUSE PIPE AT A CROSSING, THEN CENTER ONE JOINT OF D.I.P. ON CROSSING POINT.
 - MAINTAIN 10' MINIMUM SEPARATION BETWEEN PARALLEL WATER AND SEWER PIPES. 5' BETWEEN WATER AND REUSE PIPES.
 - DO NOT ENCASE SEWER IN CONCRETE UNLESS SPECIFICALLY AUTHORIZED.
 - ALL PIPING SHALL CLEAR OTHER CONSTRUCTION BY 6" MINIMUM.
 - DUCTILE IRON PIPE WITHIN 10' OF GAS MAIN SHALL BE POLYETHYLENE ENCASED.

4 PIPING CLEARANCES
SCALE: NONE



- NOTES:**
- (*) 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIA. 24" AND OVER.
 - "D" REFERS TO THE DIAMETER OF THE PIPE.
 - "T" REFERS TO THE THICKNESS OF THE PIPE.
 - USE OF CONCRETE ARCH HALF ENCASEMENT OR FULL ENCASEMENT TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CITY.

3 CONCRETE ARCH AND ENCASEMENT DETAILS
SCALE: NONE

REV	DATE	DESCRIPTION	APPR

DESIGNED BY	JRR
DRAWN BY	MPL
CHECKED BY	DMJ
DATE	SEPT 2013

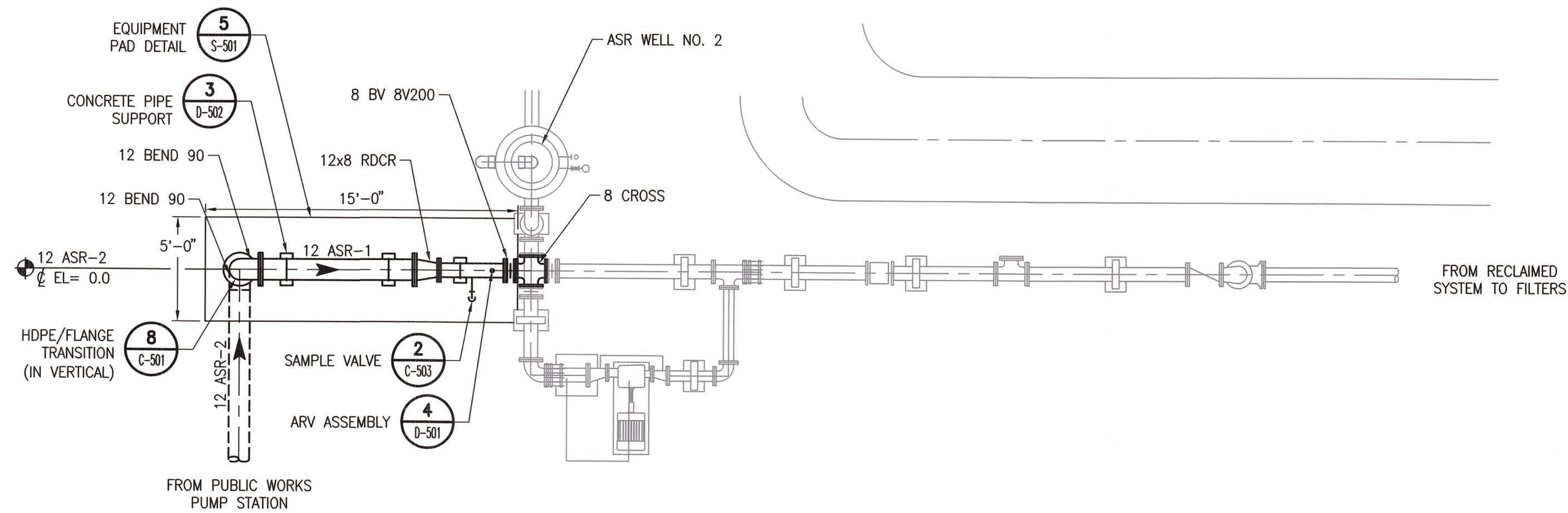
PROJECT ENGINEER	RONALD R. CAVALIERI, P.E.
REG NUMBER	65850
PROJECT NUMBER	60289240

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CITY OF NAPLES PUBLIC WORKS PUMP STATION	
CIVIL DETAILS	

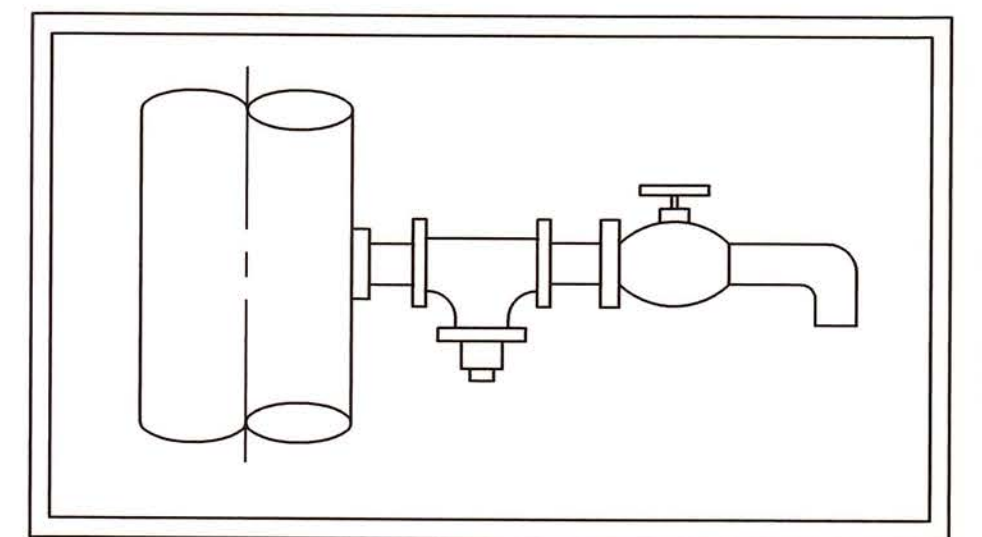
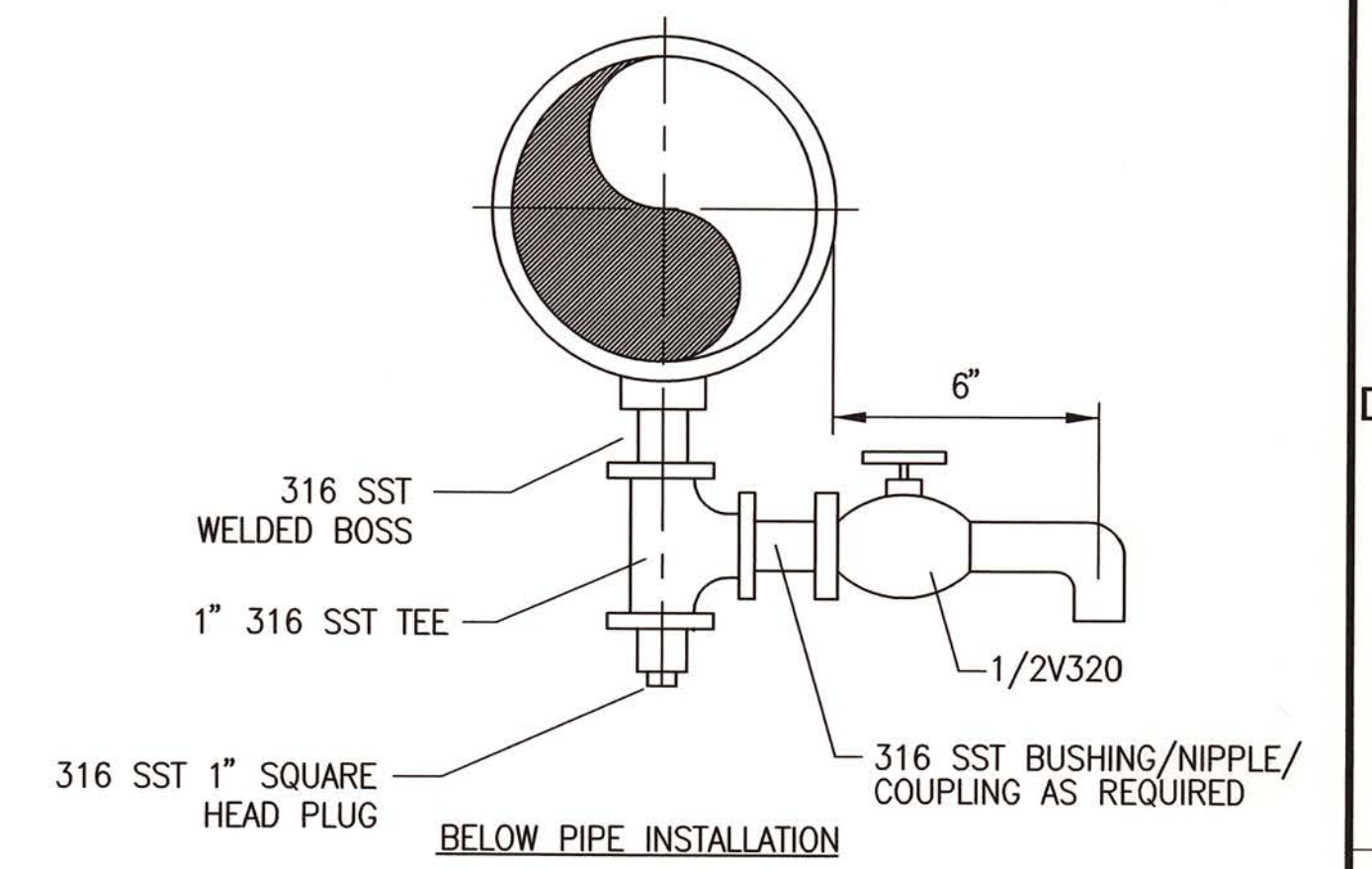
DRAWING	C-502
SHEET	10
OF SHEETS	10



1 ASR 2 ENLARGED PLAN
SCALE: 1/4" = 1'-0"

NOTES:

1. CONTRACTOR SHALL COORDINATE TIE IN TO ASR NO. 2 WELL HEAD WITH CITY OF NAPLES WWTP STAFF.
2. REMOVE EXISTING 8 TEE AND REPLACE WITH 8 CROSS.
3. CONTRACTOR SHALL RELOCATE INSTRUMENTS IF NECESSARY TO AVOID CONFLICT WITH NEW ASR PIPING.
4. COAT PIPE PER THE PIPING SCHEDULE. COLOR SHALL MATCH EXISTING ASR PIPING.
5. CONTRACTOR TO CONFIRM PIPE ELEVATION AT WELL CONNECTION.




VERTICAL PIPE INSTALLATION

2 SAMPLE VALVE
SCALE: NONE

DWG: X:\Projects\City of Naples\60289240-Port Royal and Public Works Pump Stations\000 CAD\Public_Works\Sheets\C\C-503.dwg Layout Name: C-503 - Plotted by: Iaterza, Mike Date: 9/19/2013 2:01 PM
 XREFS: C-BD IMAGES: ASR2.png

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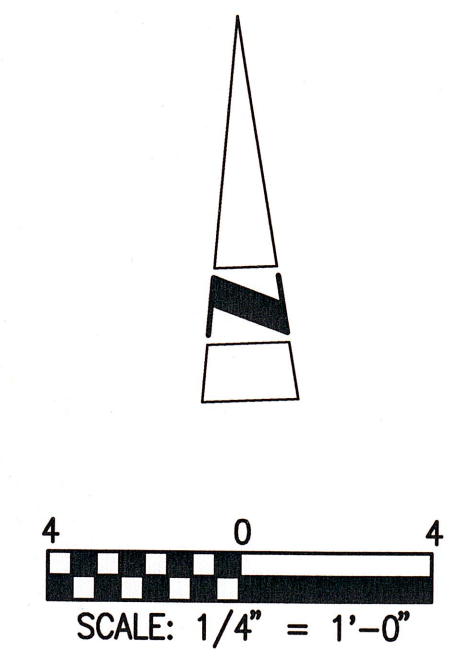
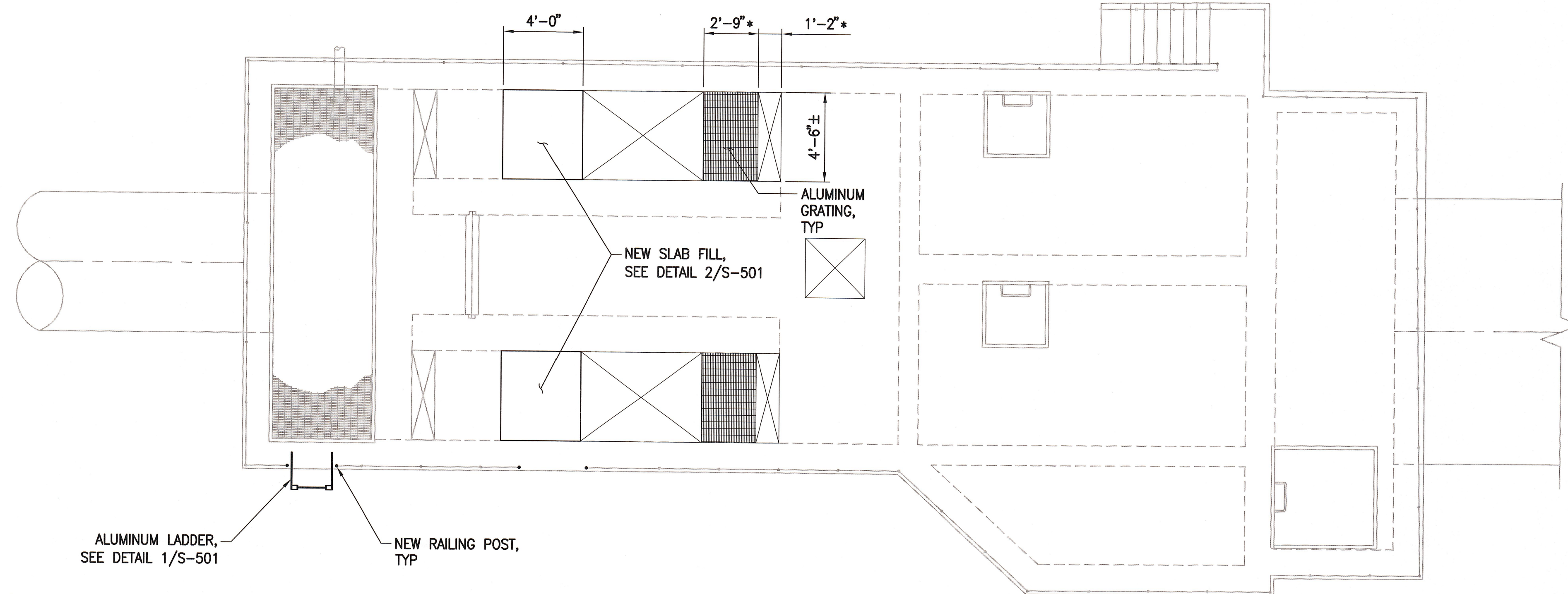
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY		DESIGNED BY JRR	PROJECT ENGINEER RONALD R. CAVALIERI, P.E.
DRAWN BY MPL		REG NUMBER 65850	 9-20-2013
CHECKED BY DMJ		PROJECT NUMBER 60289240	
DATE SEPT 2013			

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CITY OF NAPLES PUBLIC WORKS PUMP STATION		DRAWING C-503
CIVIL DETAILS		SHEET 11 OF - SHEETS



NEW CONSTRUCTION PLAN
SCALE: 1/4" = 1'-0"



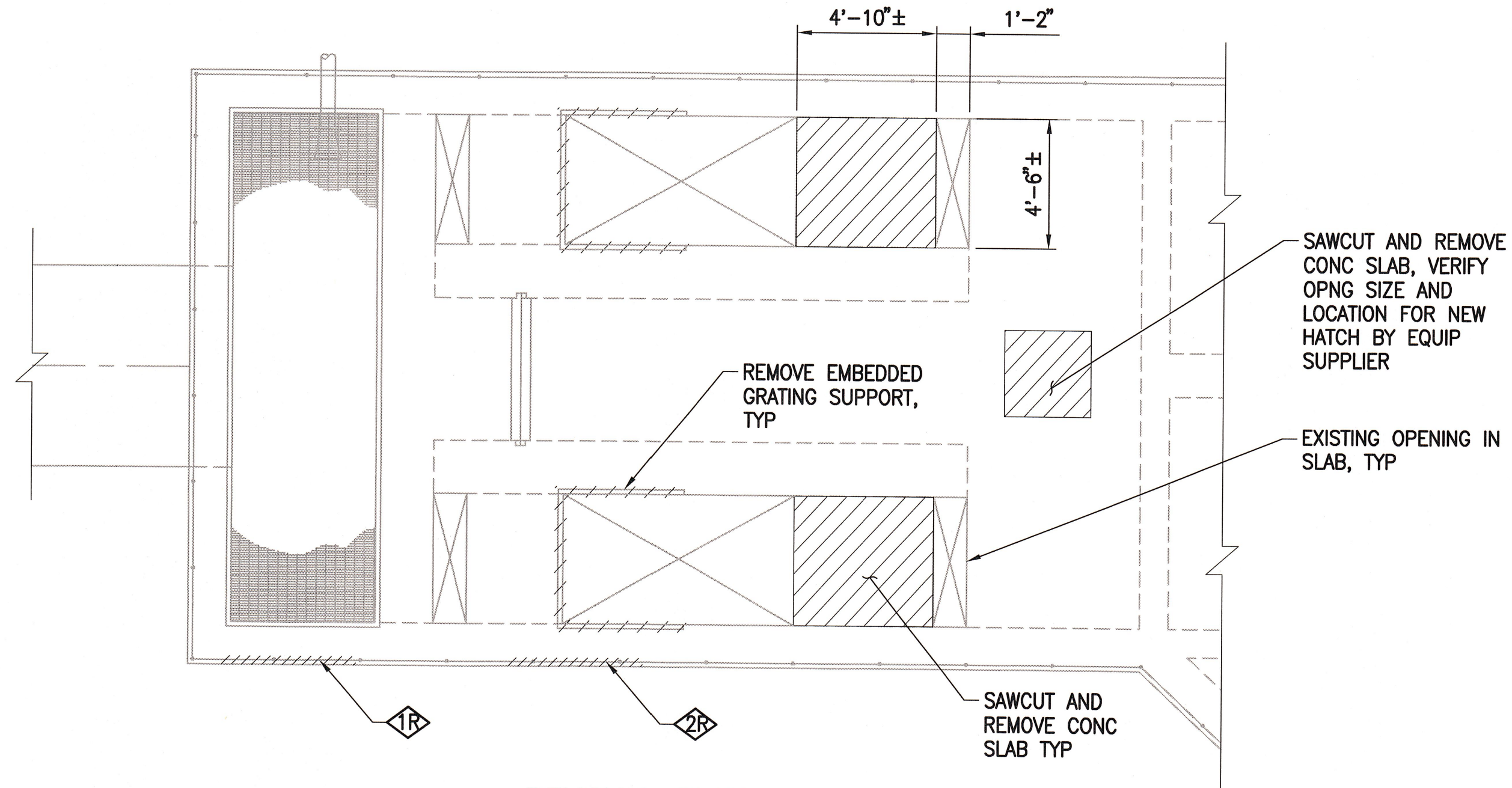
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SCALE: NONE

REMOVAL NOTES :

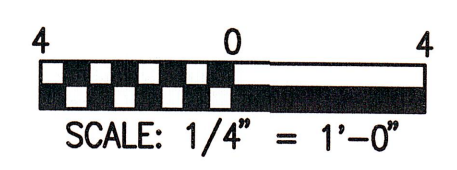
1. REMOVE AND MODIFY PORTION OF EXISTING RAILING AS REQUIRED FOR NEW LADDER ACCESS. PROVIDE NEW RAILING POSTS AS REQUIRED TO MATCH EXISTING. CONNECT NEW RAILING TO LADDER EXTENSION. SEE PHOTO 1 THIS SHEET.
2. REMOVE AND MODIFY PORTION OF EXISTING RAILING AS REQUIRED FOR NEW CONVEYOR BELT EQUIP. PROVIDE NEW RAILING POSTS AS REQUIRED TO MATCH EXISTING.

GENERAL NOTES:

1. FIELD VERIFY ALL EXISTING DIMENSIONS AND ELEVATIONS
2. REMOVE REINFORCEMENT, CONC ANCHORS, ANCHOR BOLTS, AND EMBEDMENTS 1" MIN BEYOND FINISHED SURFACE AND PATCH WITH NON-SHRINK GROUT TO MATCH EXISTING SURFACE.
3. DIMENSIONS WITH AN * ARE TO BE VERIFIED WITH EQUIP SUPPLIER.



REMOVAL PLAN
SCALE: 1/4" = 1'-0"

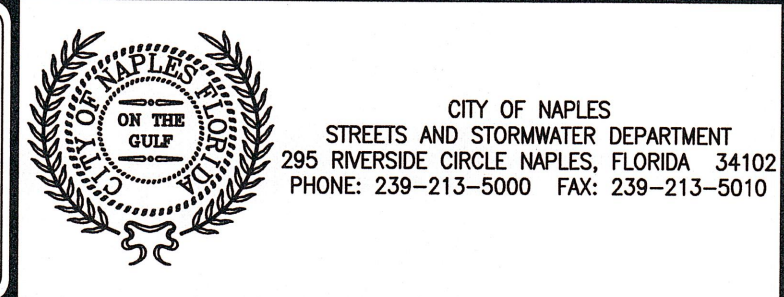
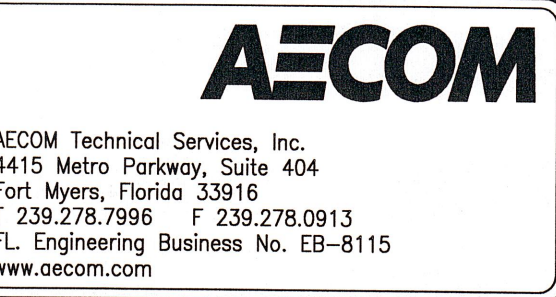
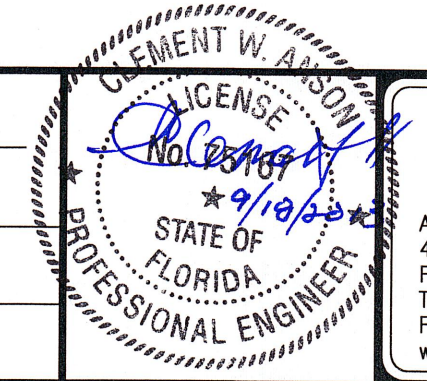


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REV	DATE	DESCRIPTION	APPR

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY CWA	PROJECT ENGINEER CLEMENT ANSON, P.E.
DRAWN BY MDW	REG NUMBER 75167
CHECKED BY KM	PROJECT NUMBER 60289240
DATE SEPT 2013	



**CITY OF NAPLES
PUBLIC WORKS PUMP STATION**

PUMP STATION STRUCTURAL PLAN

DRAWING
S-101

SHEET
12
OF - SHEETS

STRUCTURAL NOTES

A. DESIGN CRITERIA

1. FLORIDA BUILDING CODE: FBC 2010.
2. ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
3. AISC MANUAL OF STEEL CONSTRUCTION, THIRTEENTH EDITION.
4. ACI 318-08, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, BY THE AMERICAN CONCRETE INSTITUTE.

B. WIND LOAD

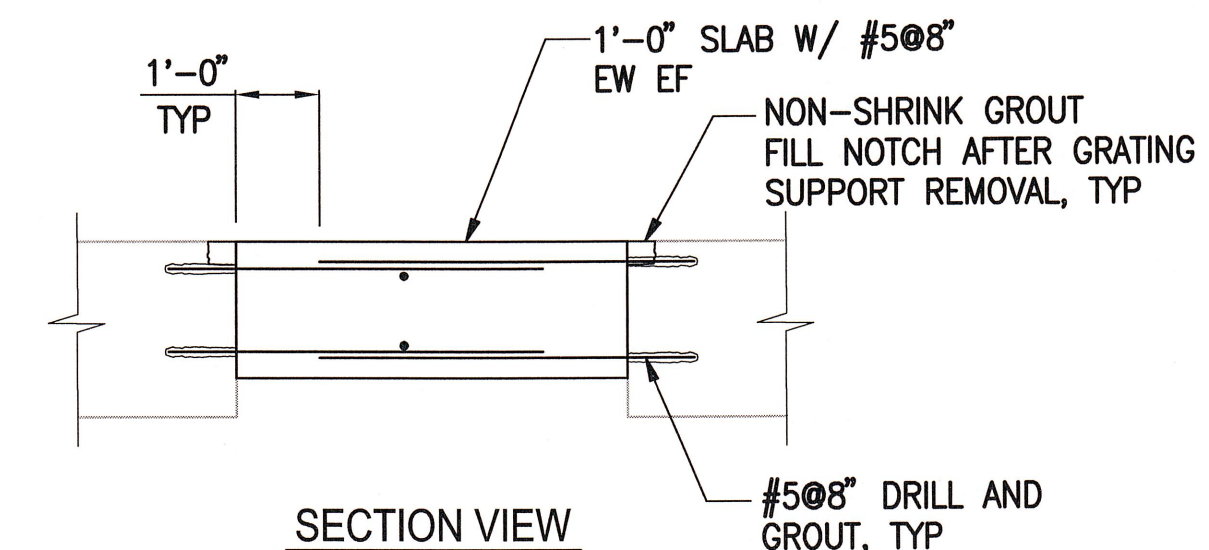
1. WIND LOADING PER FBC 2010
2. ULTIMATE WIND SPEED = 175 MPH
3. EXPOSURE C
4. RISK CATEGORY III

C. GENERAL REQUIREMENTS

1. ALL DETAILS ARE TYPICAL. INCORPORATE INTO PROJECT AT APPROPRIATE LOCATIONS WHERE CONDITIONS ARE SIMILAR.
2. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO START OF CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS FOUND IN CONTRACT DOCUMENTS AND/OR FIELD CONDITIONS.
3. COORDINATE ALL REQUIRED OPENINGS WITH MECHANICAL, ELECTRICAL, AND PLUMBING CONTRACTORS. COORDINATE FINAL SIZE AND LOCATION OF ALL OPENINGS WITH THE ACTUAL EQUIPMENT SUPPLIED, PROJECT REQUIREMENTS, AND WITH FIELD CONDITIONS.

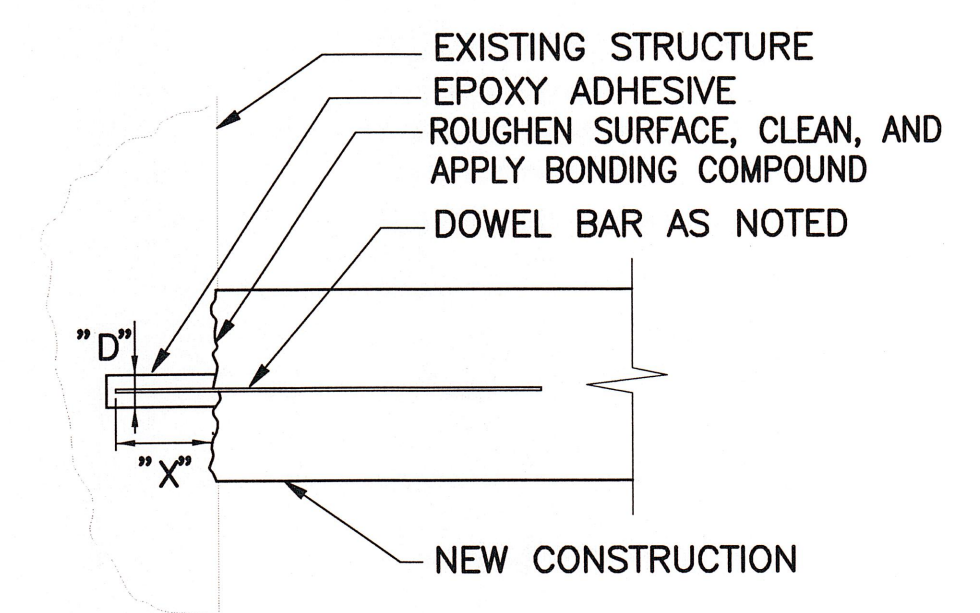
D. CONCRETE AND REINFORCING

1. CAST-IN-PLACE CONCRETE $f_c = 4000$ PSI @ 28 DAYS
2. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.
3. CONCRETE COVER:
 - A. SHALL BE 2", UNLESS OTHERWISE NOTED.
 - B. 3" CAST AGAINST GRADE.



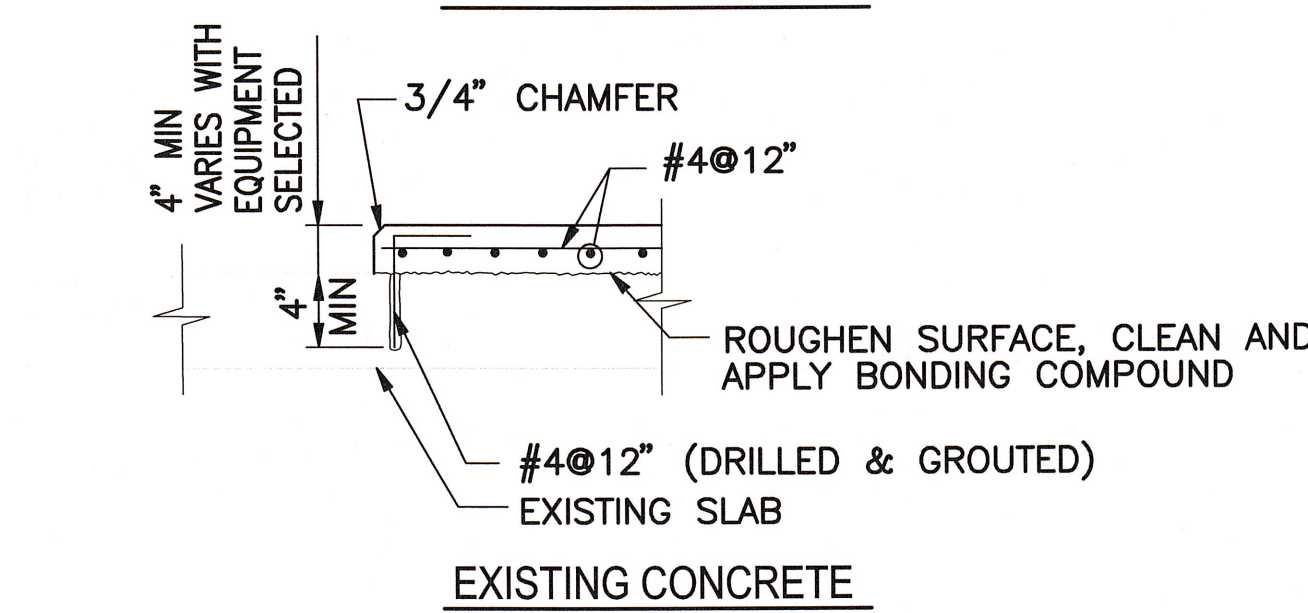
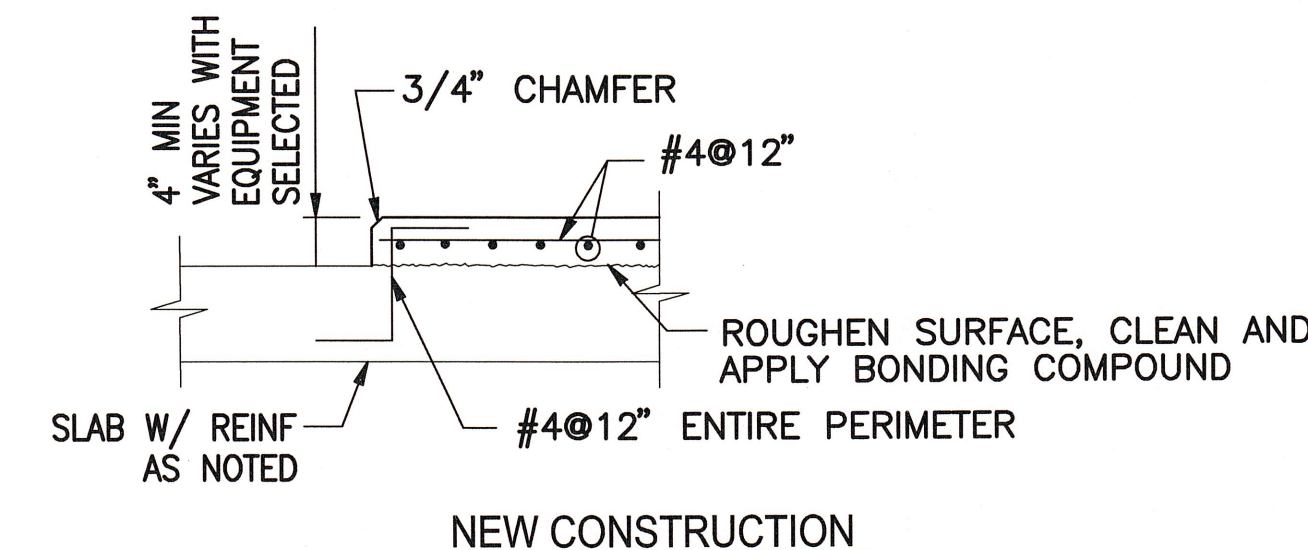
NOTES:
1. AT CONTRACTOR'S OPTION MAY POUR SLAB THICKNESS TO MATCH EXISTING.

2 NEW SLAB FILL DETAIL
SCALE: NONE

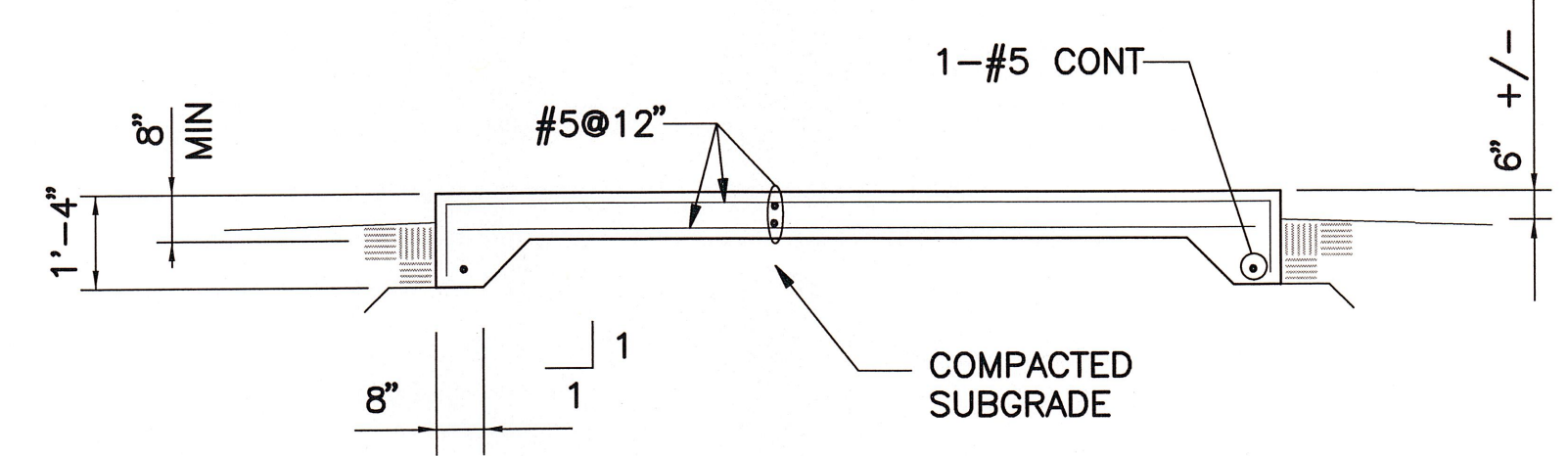


NOTES:
1. EMBEDMENT "X" = 16 BAR DIAMETERS MIN.
2. HOLD DIAMETER "D" = AS RECOMMENDED BY EPOXY GROUT MFR.
3. EPOXY ADHESIVE SHALL BE HIT-RE 500-SD BY HILTI CORP. OR EQUAL.

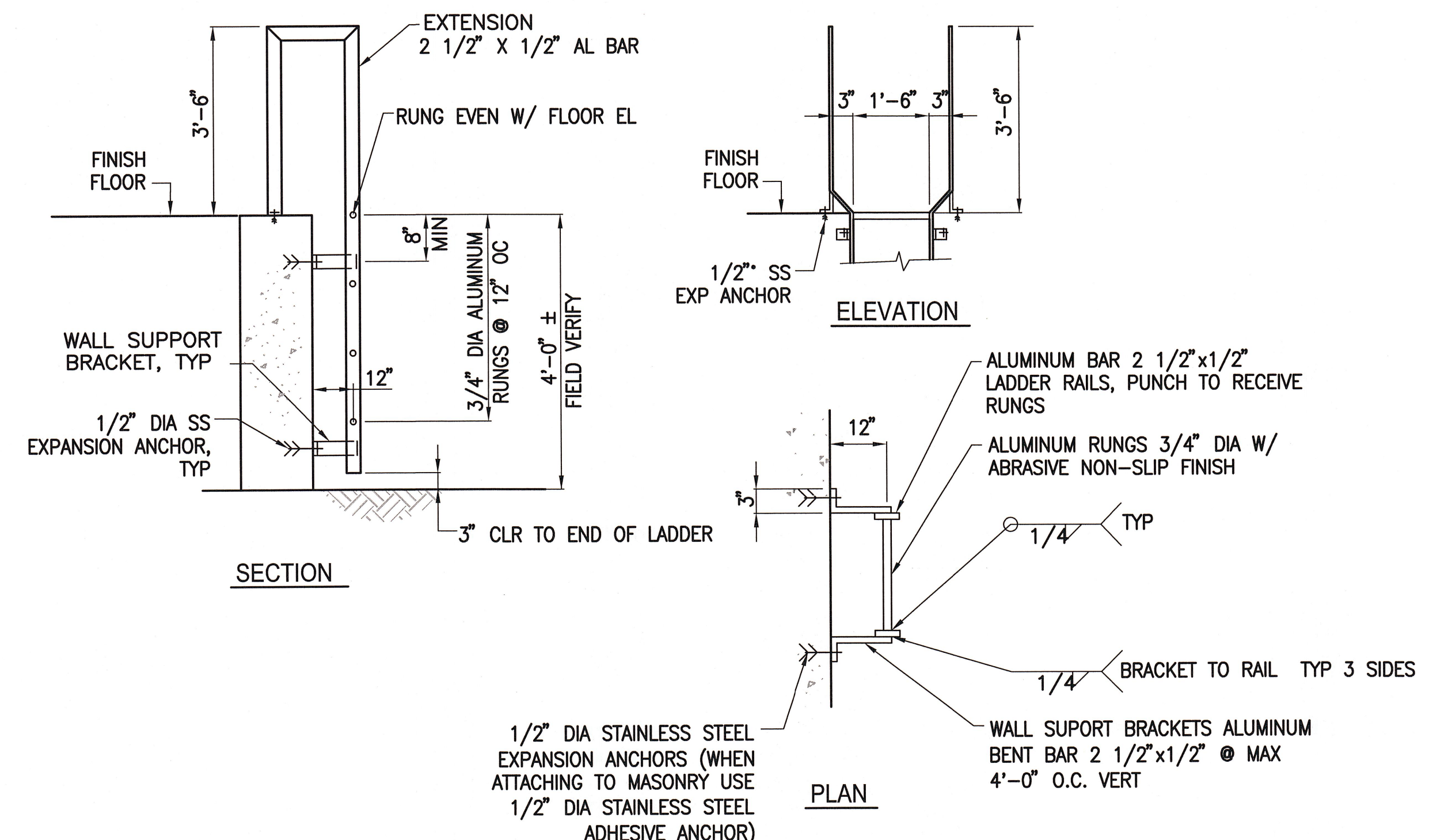
3 DRILL IN DOWEL DETAIL
SCALE: NONE



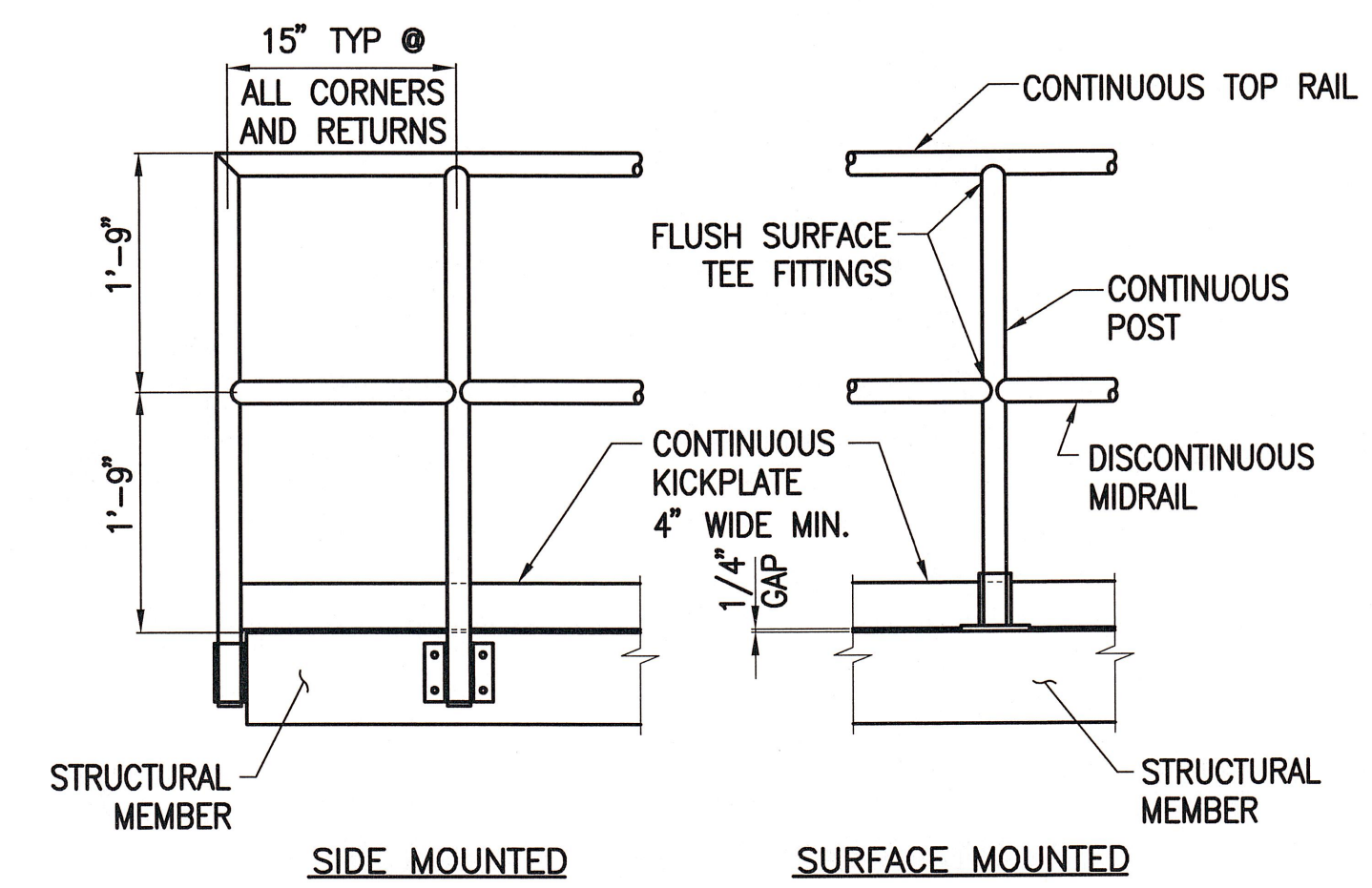
4 EQUIPMENT PAD DETAIL
SCALE: NONE



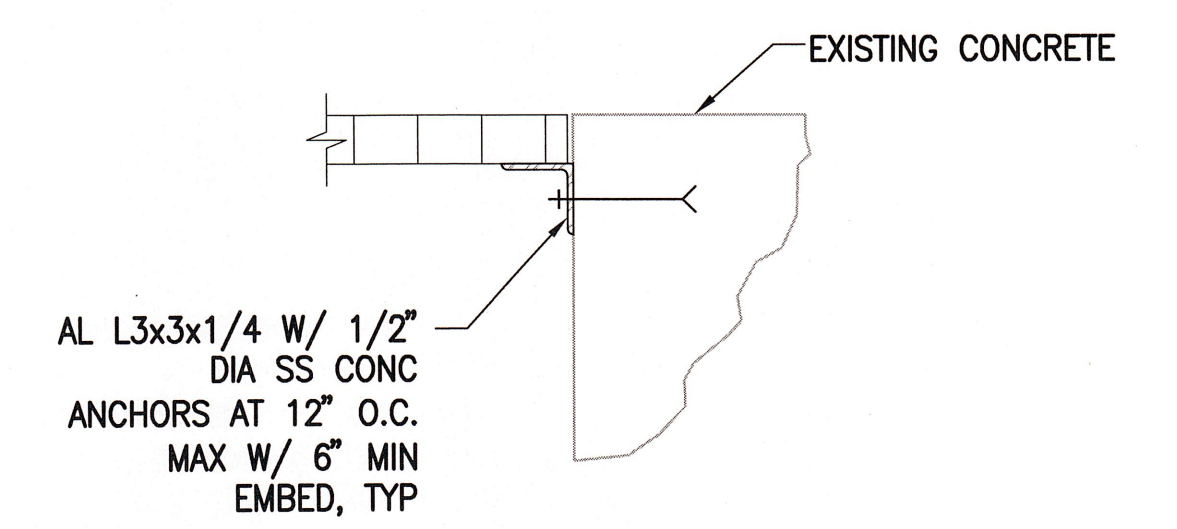
5 EQUIPMENT PAD DETAIL
SCALE: NONE



1 ALUMINUM LADDER DETAIL
SCALE: NONE



6 ALUMINUM RAILING DETAIL
SCALE: NONE



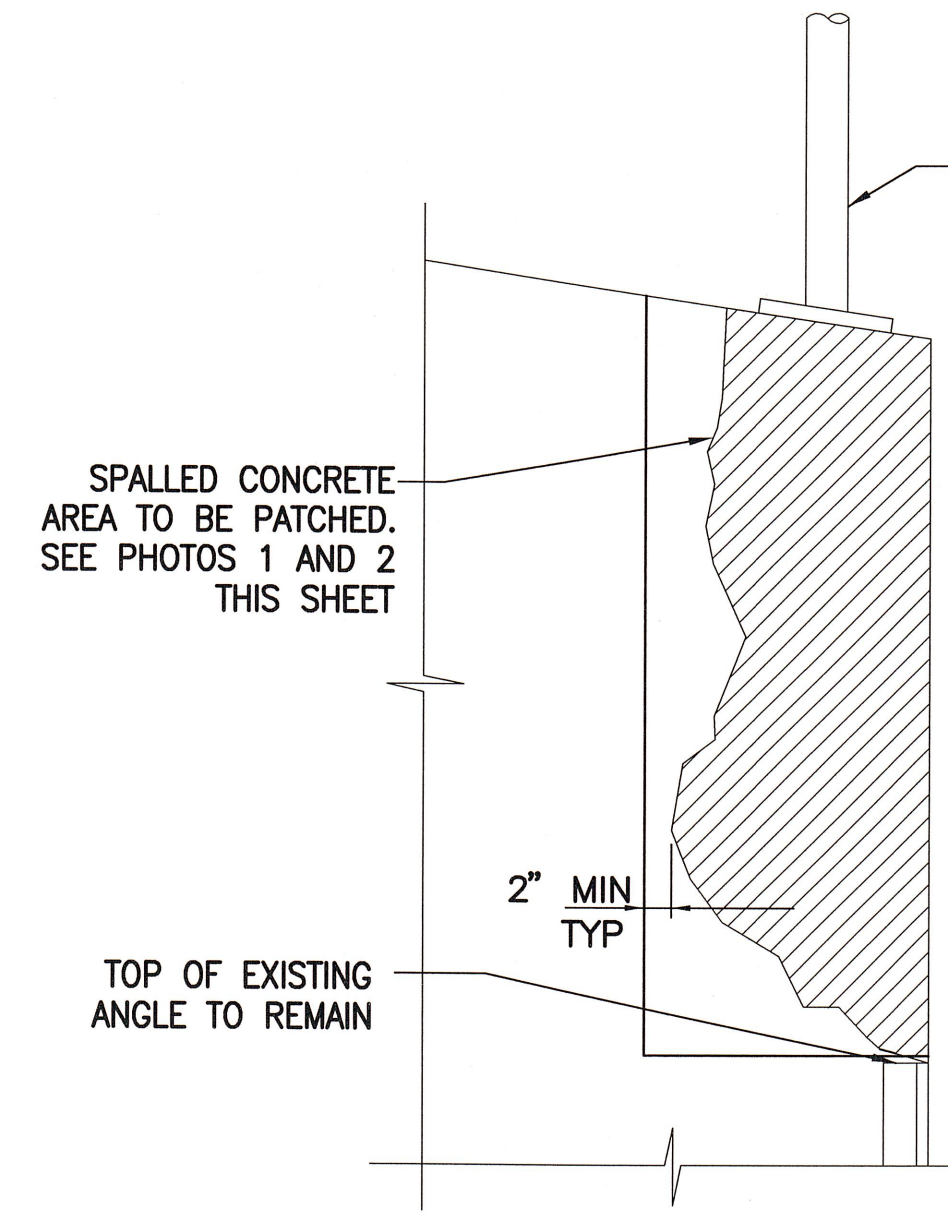
7 GRATING SUPPORT DETAIL
SCALE: NONE

D:\C:\city of naples\60289240-port royal and public works pump stations\000 C:\public_works\Sheets\515-501.dwg Layout Name: S-501 - Plotted by: Reed, John Date: 9/18/2013 - 2:05 PM XREFS: S-BD

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REV	DATE	DESCRIPTION	APPR																					
DESIGNED BY CWA	PROJECT ENGINEER CLEMANT ANSON, P.E.																							
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CHECKED BY KM	PROJECT NUMBER 60289240																							
DATE SEPT 2013																								
DRAWING S-501																								
SHEET 13																								
OF SHEETS																								



1 PHOTO
SCALE: NONE



ELEVATION VIEW

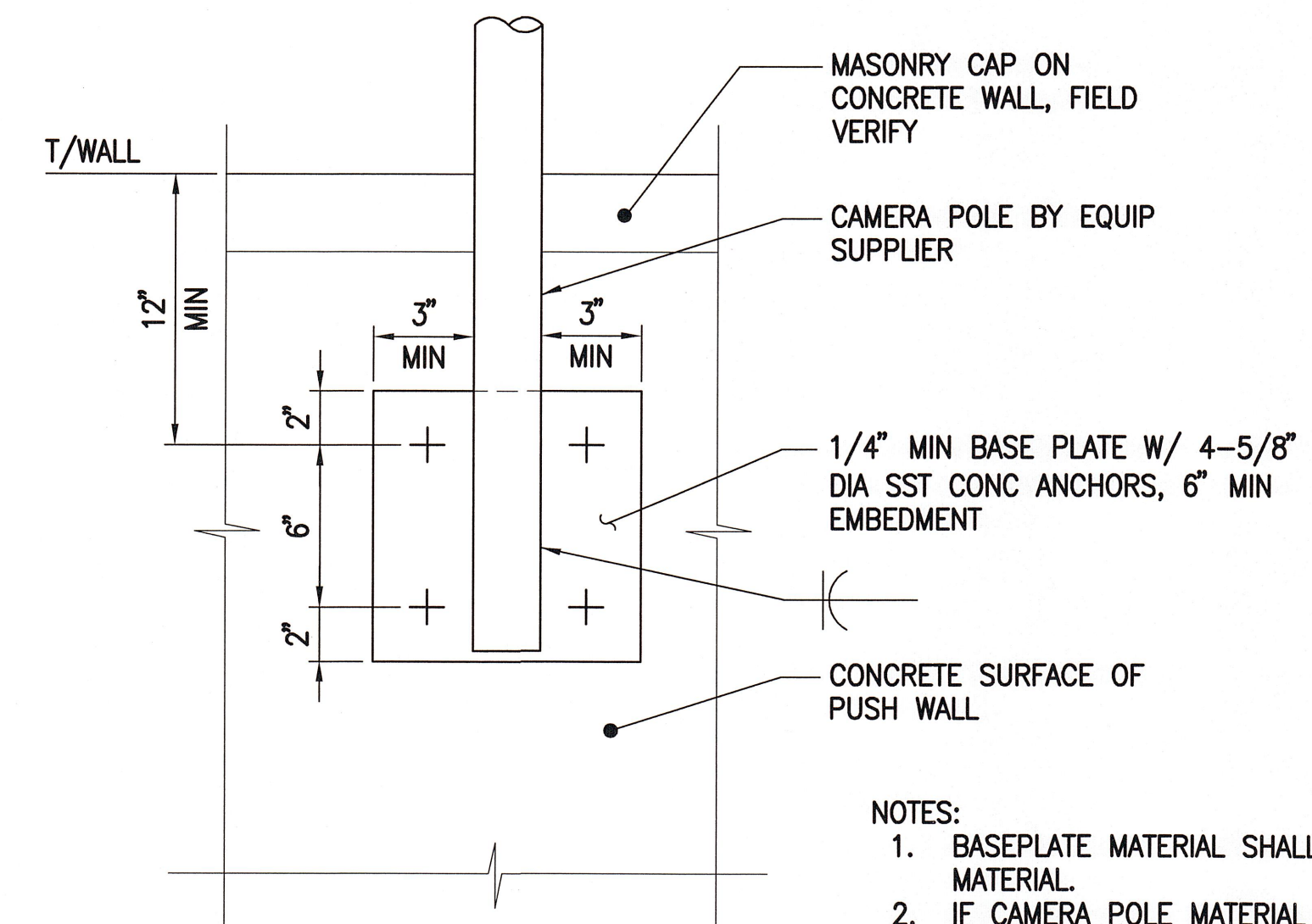
NOTES:

1. SAWCUT MINIMUM 1 INCH DEEP AROUND SPALLED AND/OR DETERIORATED CONCRETE.
2. MAKE SAWCUTS IN STRAIGHT LINES.
3. REMOVE SPALLED AND/OR DETERIORATED CONCRETE TO SOUND CONCRETE.
4. PRESERVE EXISTING REINFORCING.
5. EXPOSED EXISTING REINFORCEMENT SHALL BE MECHANICALLY CLEANED TO REMOVE LOOSE RUST.
6. COAT EXPOSED REINFORCEMENT WITH ANTI-CORROSION COATING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SIKKA ARMATEC 110 EPOCEM OR EQUAL.
7. APPLY BONDING COMPOUND TO EXPOSED SOUND CONCRETE SURFACES AND PATCH TO MATCH EXISTING SURFACE WITH PATCHING MORTAR IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



2 PHOTO
SCALE: NONE

1 CONCRETE PATCHING DETAIL FOR HEADWALL
SCALE: NONE



ELEVATION VIEW

NOTES:

1. BASEPLATE MATERIAL SHALL MATCH CAMERA POLE MATERIAL.
2. IF CAMERA POLE MATERIAL IS STEEL, BASEPLATE SHALL BE HOT DIP GALVANIZED.

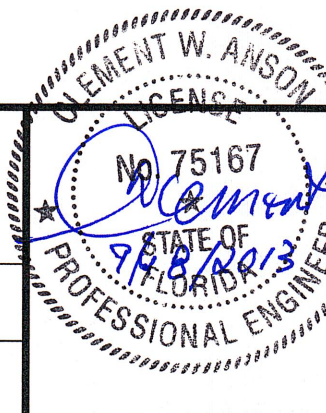
2 CAMERA MOUNTING DETAIL
SCALE: NONE

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REV	DATE	DESCRIPTION	APPR

VERIFY SCALES	
BAR IS ONE INCH ON ORIGINAL DRAWING	
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

DESIGNED BY CWA	PROJECT ENGINEER CLEMENT ANSON, P.E.
DRAWN BY MDW	REG NUMBER 75167
CHECKED BY KM	PROJECT NUMBER 60289240
DATE SEPT 2013	



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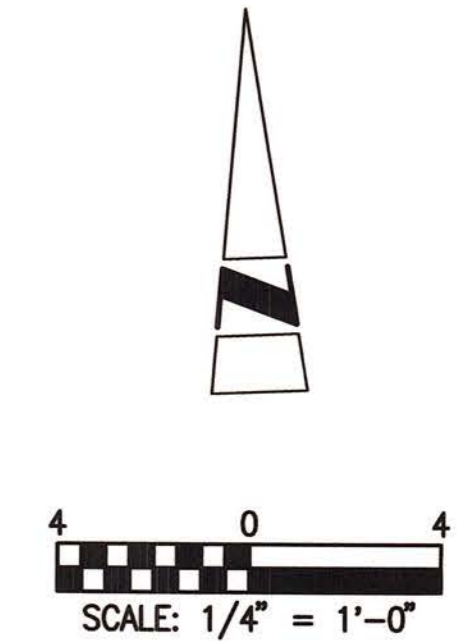
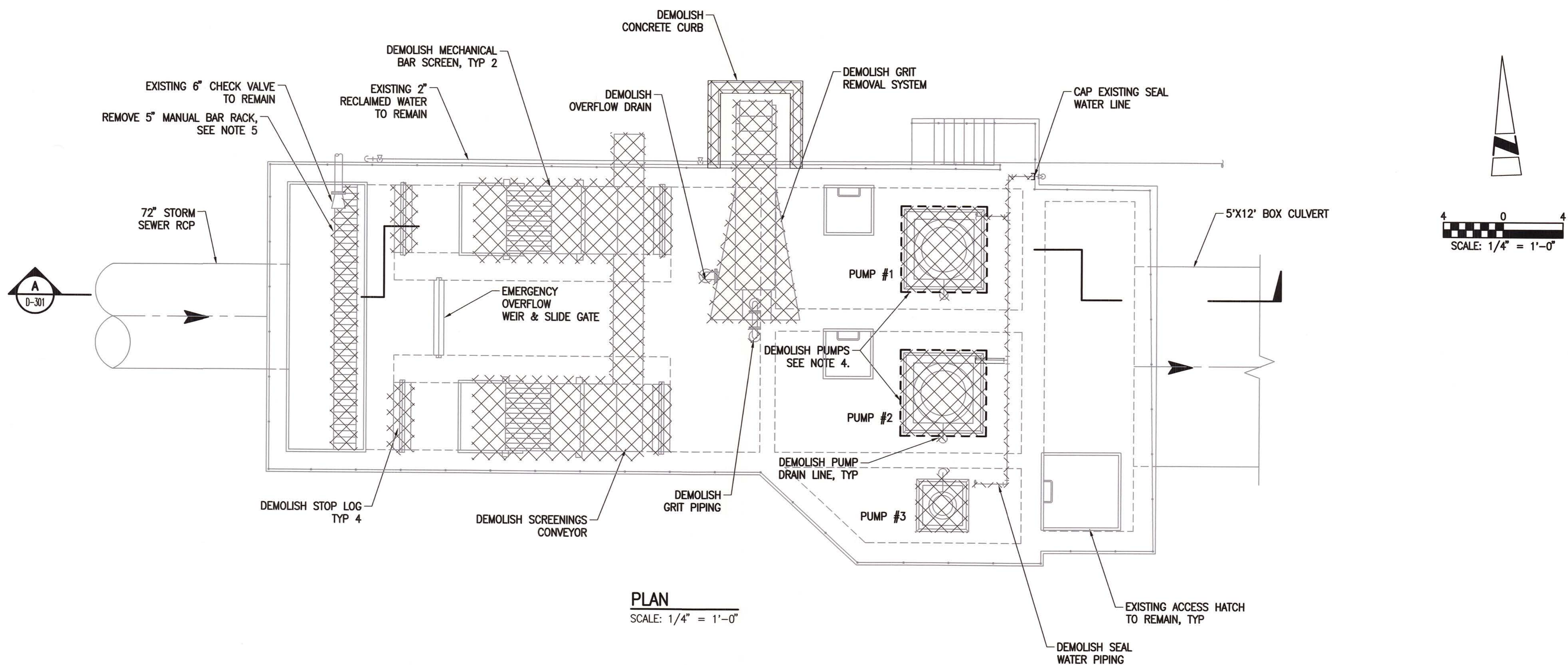
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CITY OF NAPLES
PUBLIC WORKS PUMP STATION

STRUCTURAL DETAILS

DRAWING S-502
SHEET 14
OF — SHEETS



PLAN
SCALE: 1/4" = 1'-0"

- NOTES:**
1. THIS DRAWING WAS CREATED USING AS-BUILT DRAWINGS DATED OCTOBER 1999. ACCURACY OF PIPING AND EQUIPMENT LOCATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
 2. FOR CONTINUATION OF OUTSIDE PIPING SEE CIVIL DRAWINGS.
 3. DEMOLISH EXISTING EQUIPMENT PER SECTION 024100.
 4. DEMOLISH PUMPS PER CONSTRUCTION SEQUENCE REQUIREMENTS SET FORTH IN SECTION 010100.
 5. REMOVE MANUAL BAR RACK AND RETURN TO OWNER. CARE SHALL BE TAKEN DURING REMOVAL AS OWNER WILL RE-INSTALL BAR RACK AS NEEDED.

D:\Projects\City of Naples\60289240-Port Royal and Public Works Pump Stations\000 CAD\Public Works\Sheets\0-D-101.dwg
 Date: 9/19/2013 2:01 PM
 Plotted by: Laterra, Mike
 Layout Name: D-101
 Scale: 1/4" = 1'-0"
 Project Number: 60289240

REV	DATE	DESCRIPTION	APPR

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY		DESIGNED BY JRR	PROJECT ENGINEER RONALD R. CAVALIERI, P.E.
DRAWN BY MPL		REG NUMBER 65850	DATE SEPT 2013
CHECKED BY DMJ		PROJECT NUMBER 60289240	

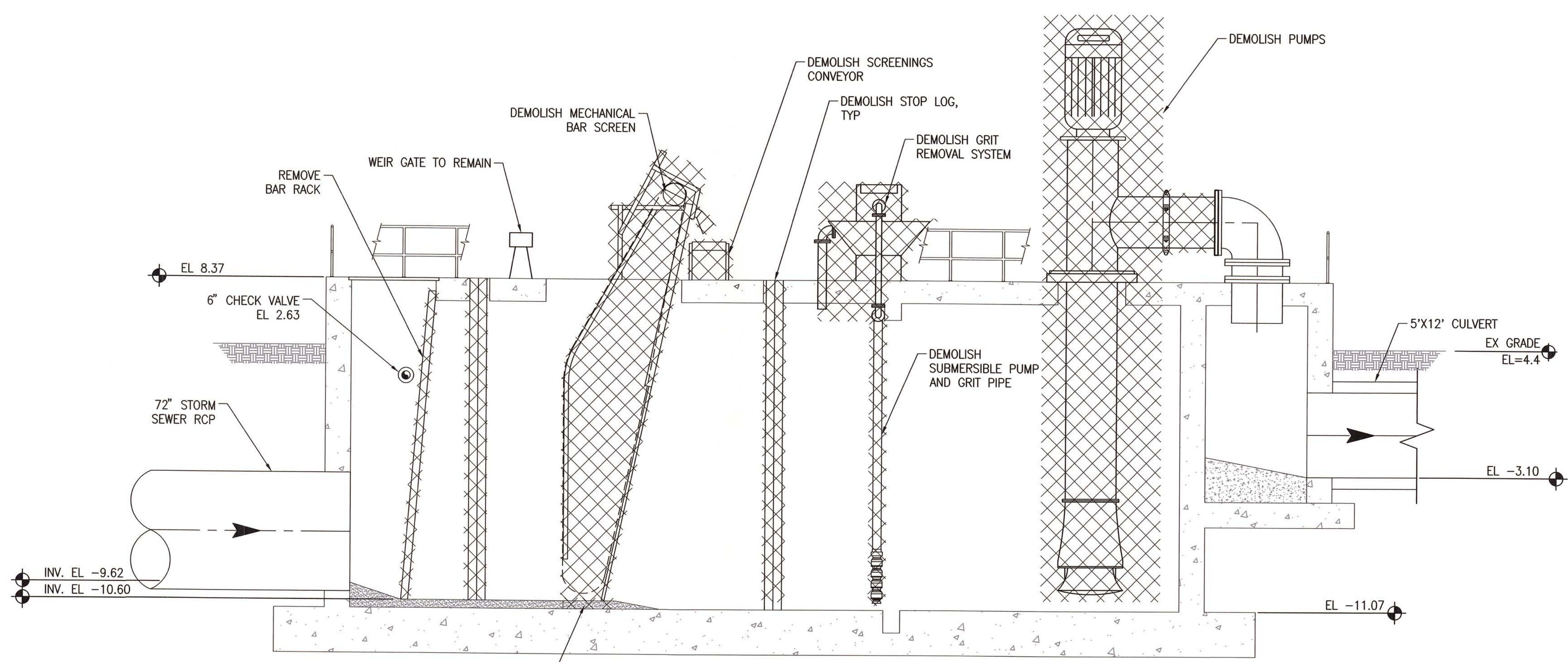

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CITY OF NAPLES
PUBLIC WORKS PUMP STATION
EXISTING PUMP STATION
DEMOLITION PLAN

DRAWING	D-101
SHEET	15
OF SHEETS	

DWG: X:\Projects\City of Naples\60289240-Port Royal and Public Works Pump Stations\000 CAD\Public Works\Sheets\A\A-D-301.dwg
 PLOTTED BY: Laterra, Mike
 DATE: 9/19/2013 2:01 PM
 LAYOUT NAME: D-301
 REF: G-BD - D-AS-PUMP-STATION IMAGES:



A SECTION
 SCALE: 1/4" = 1'-0"
 SCALE: 1/4" = 1'-0"

REV	DATE	DESCRIPTION	APPR

VERIFY SCALES		DESIGNED BY	PROJECT ENGINEER
BAR IS ONE INCH ON ORIGINAL DRAWING		JRR	RONALD R. CAVALIERI, P.E.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY		DRAWN BY	REG NUMBER
		MPL	65850
		CHECKED BY	PROJECT NUMBER
		DMJ	60289240
		DATE	
		SEPT 2013	

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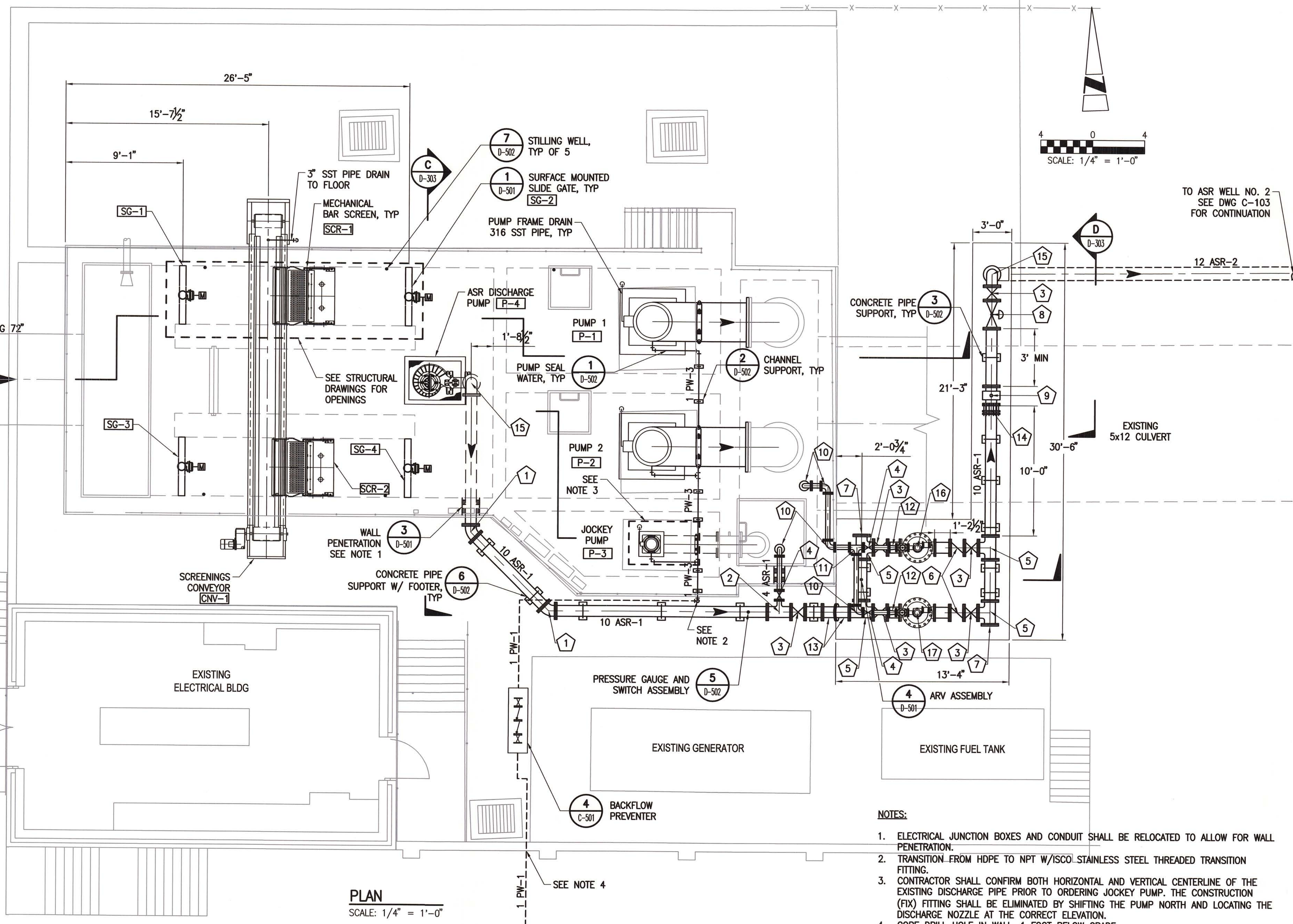
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CITY OF NAPLES
 PUBLIC WORKS PUMP STATION
 EXISTING PUMP STATION
 DEMOLITION SECTION

DRAWING	D-301
SHEET	16
OF SHEETS	

FITTING AND VALVE/EQUIPMENT TAG LIST

NO.	DESC
1	10 BEND 45
2	10x4 TEE
3	10 GATE VALVE (10V190)
4	4 GATE VALVE (4V190)
5	10 TEE
6	10 CHECK VALVE (10V790)
7	10 BLIND FLANGE
8	10 PRESSURE SUSTAINING VALVE (10V1312)
9	10 FLOWMETER
10	4 BEND 90
11	4 TEE
12	4x3 RDCR
13	10 BEND 22.5
14	10 FLANGE COUPLING ADAPTER
15	10 BEND 90
16	FLT-1
17	FLT-2



PLAN
SCALE: 1/4" = 1'-0"

- NOTES:**
- ELECTRICAL JUNCTION BOXES AND CONDUIT SHALL BE RELOCATED TO ALLOW FOR WALL PENETRATION.
 - TRANSITION FROM HDPE TO NPT W/ISCO STAINLESS STEEL THREADED TRANSITION FITTING.
 - CONTRACTOR SHALL CONFIRM BOTH HORIZONTAL AND VERTICAL CENTERLINE OF THE EXISTING DISCHARGE PIPE PRIOR TO ORDERING JOCKEY PUMP. THE CONSTRUCTION (FIX) FITTING SHALL BE ELIMINATED BY SHIFTING THE PUMP NORTH AND LOCATING THE DISCHARGE NOZZLE AT THE CORRECT ELEVATION.
 - CORE DRILL HOLE IN WALL, 1 FOOT BELOW GRADE.

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REV	DATE	DESCRIPTION	APPR

DESIGNED BY JRR	PROJECT ENGINEER RONALD R. CAVALIERI, P.E.
DRAWN BY MPL	REG NUMBER 65850
CHECKED BY DMJ	PROJECT NUMBER 60289240
DATE SEPT 2013	

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9-20-2013

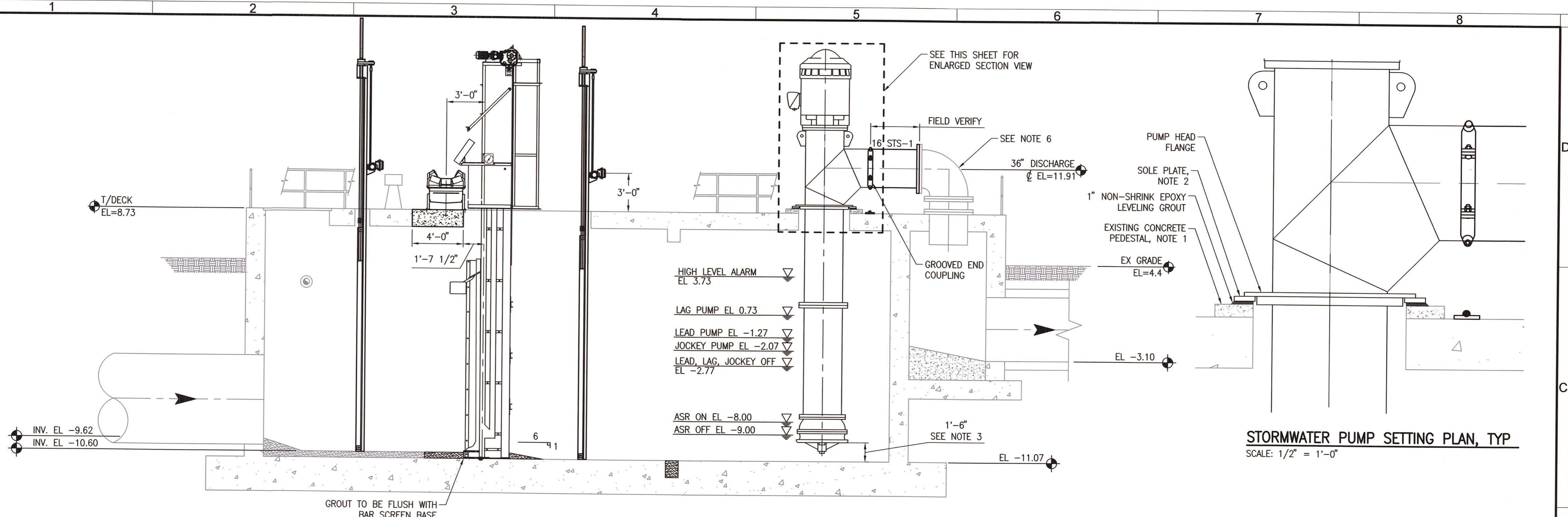
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CITY OF NAPLES
PUBLIC WORKS PUMP STATION

PUMP STATION PLAN

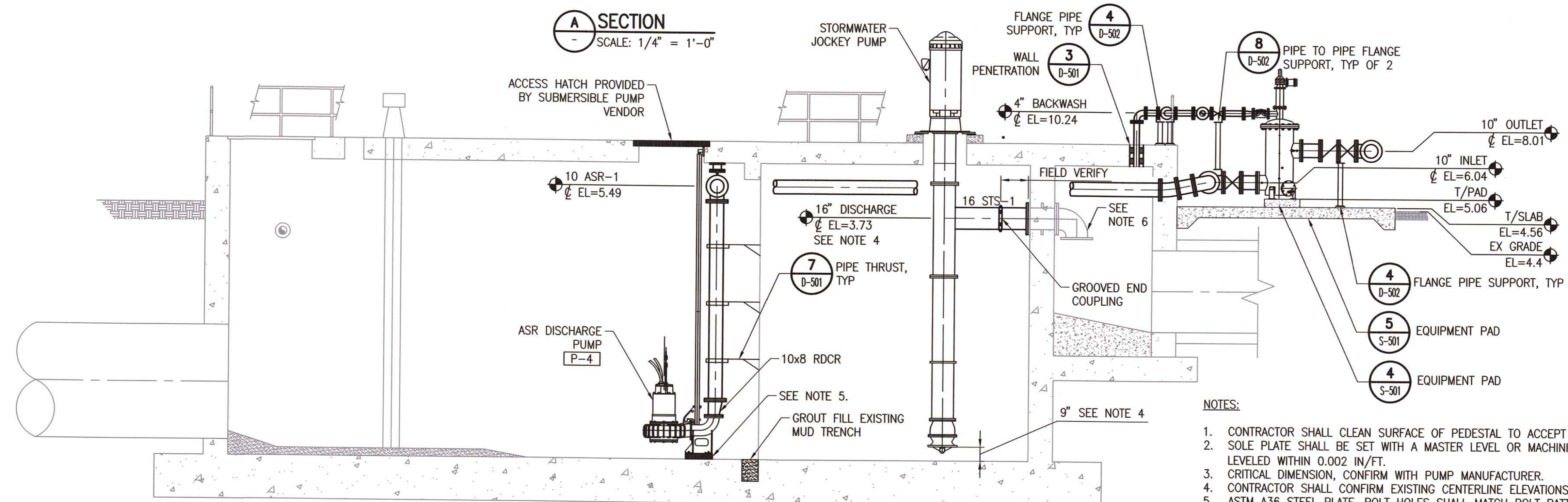
DRAWING D-102
SHEET 17
OF SHEETS

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STORMWATER PUMP SETTING PLAN, TYP
SCALE: 1/2" = 1'-0"

A SECTION
SCALE: 1/4" = 1'-0"



B SECTION
SCALE: 1/4" = 1'-0"

- NOTES:**
1. CONTRACTOR SHALL CLEAN SURFACE OF PEDESTAL TO ACCEPT NEW GROUT, REFER TO SECTION 4432150.
 2. SOLE PLATE SHALL BE SET WITH A MASTER LEVEL OR MACHINIST'S LEVEL. THE SOLE PLATE SHALL BE LEVELED WITHIN 0.002 IN/FT.
 3. CRITICAL DIMENSION, CONFIRM WITH PUMP MANUFACTURER.
 4. CONTRACTOR SHALL CONFIRM EXISTING CENTERLINE ELEVATIONS, PRIOR TO ORDERING PUMPS.
 5. ASTM A36 STEEL PLATE, BOLT HOLES SHALL MATCH BOLT PATTERN ON BASE ELBOW; COAT WITH FUSION BONDED EPOXY PER SECTION 099761. COORDINATE WITH PUMP MANUFACTURER FOR PLATE(S) THICKNESS TO PROVIDE CORRECT DISTANCE FROM FLOOR.
 6. CONTRACTOR'S OPTION TO REPLACE EXISTING DIP SPOOLS AND FITTINGS WITH STS-1 PIPE OR REFURBISH BY SAND BLASTING TO SSPC SP-10 AND LINE AND COAT WITH SYSTEMS NO. 7 AND NO. 10, RESPECTIVELY, PER SECTION 099000. ADJUST SPOOL LENGTHS AS NEEDED FOR NEW PUMP.

REV	DATE	DESCRIPTION	APPR

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DRAWN BY MPL	REG NUMBER 65850	
CHECKED BY DMJ	PROJECT NUMBER 60289240	
DATE SEPT 2013		

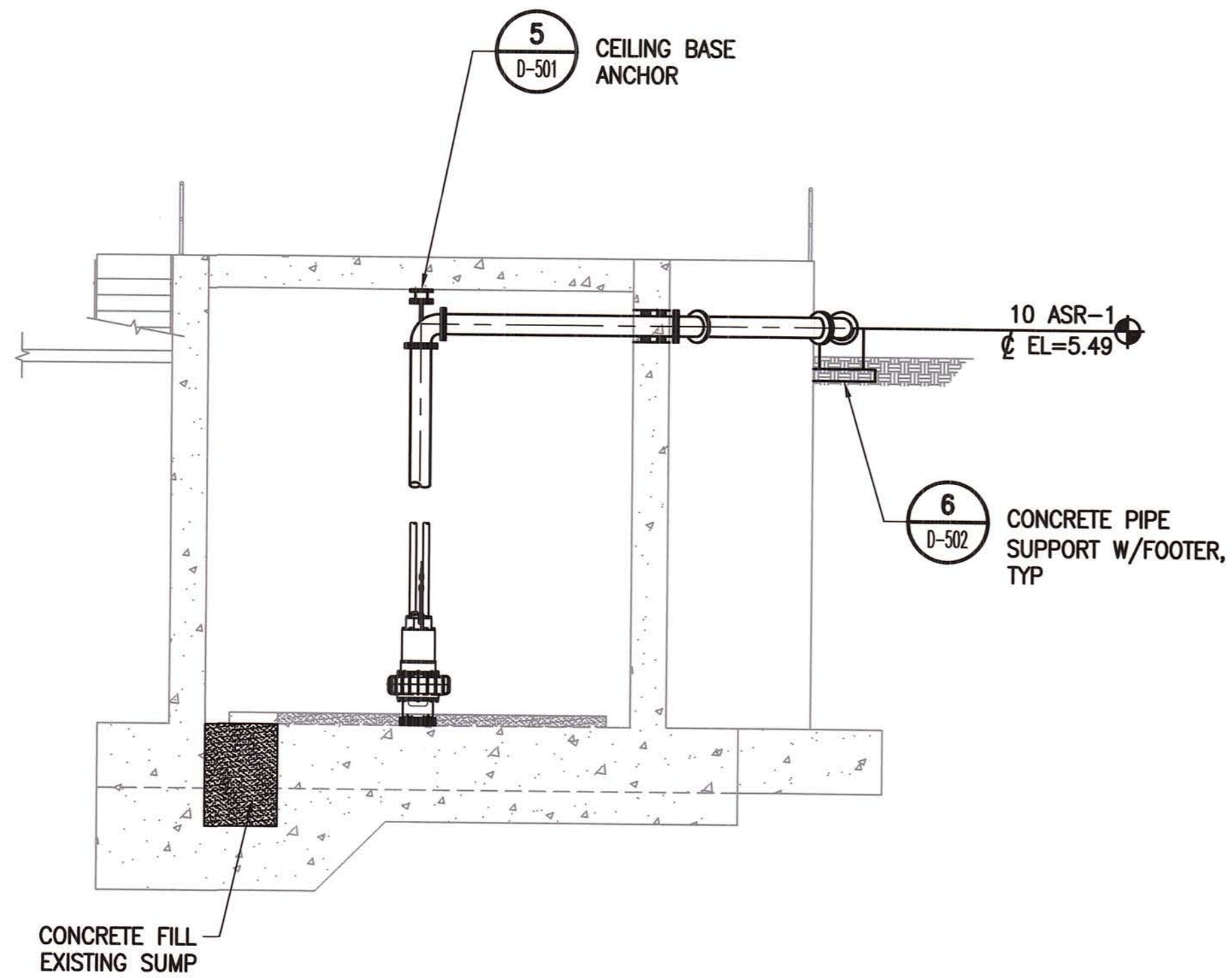
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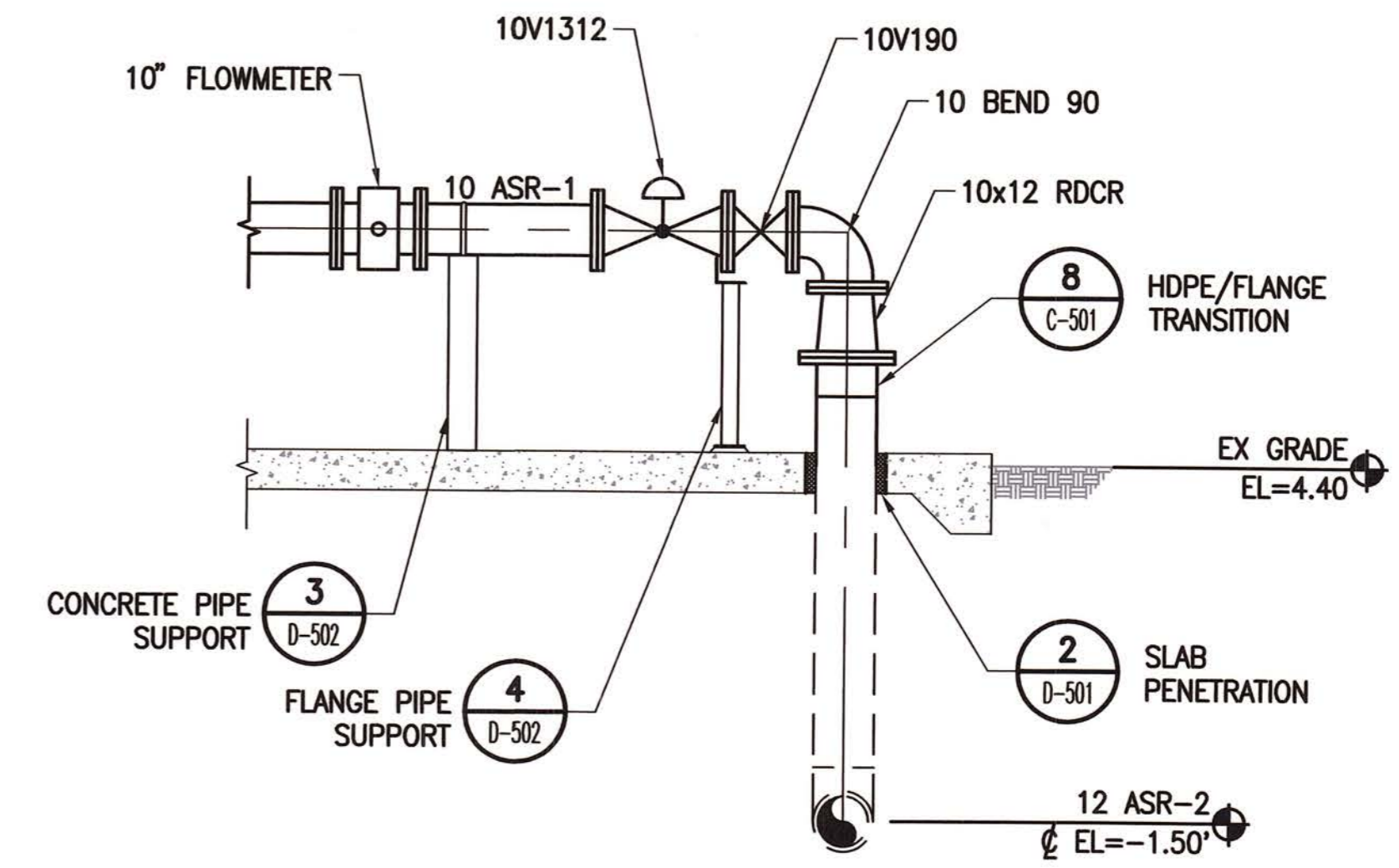
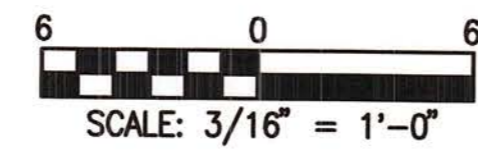
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CITY OF NAPLES
PUBLIC WORKS PUMP STATION
PUMP STATION SECTION

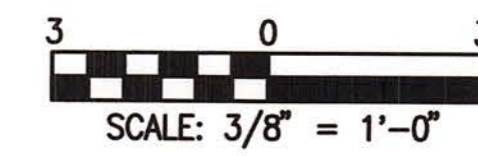
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SHEET 18
OF — SHEETS



C SECTION
SCALE: 3/16" = 1'-0"



D SECTION
SCALE: 3/8" = 1'-0"



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REV	DATE	DESCRIPTION	APPR

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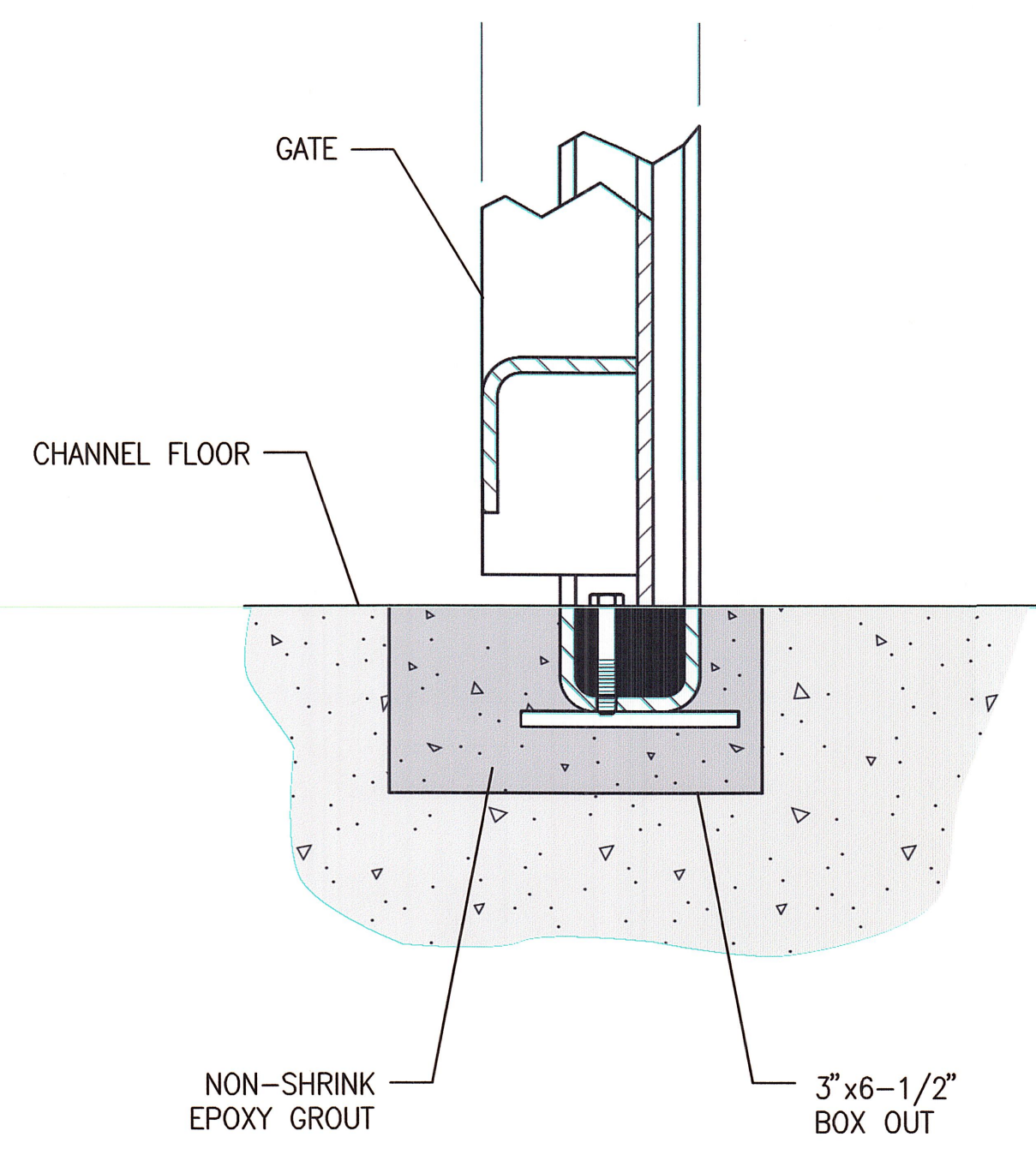
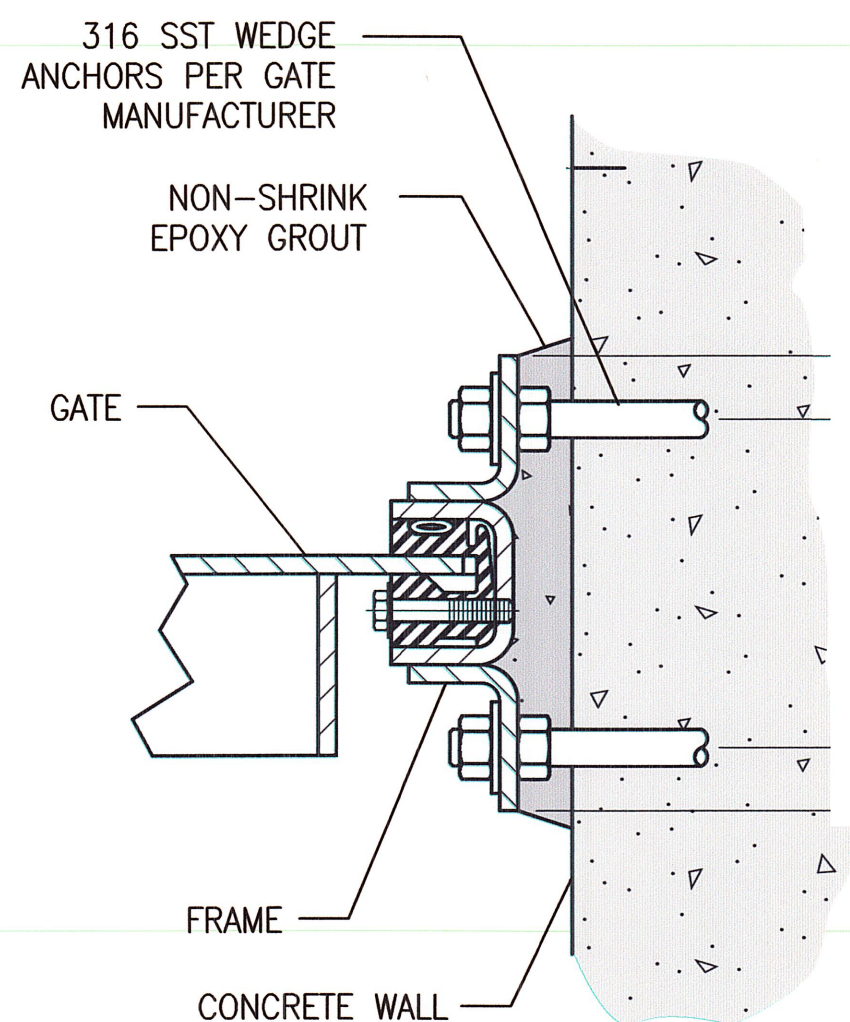


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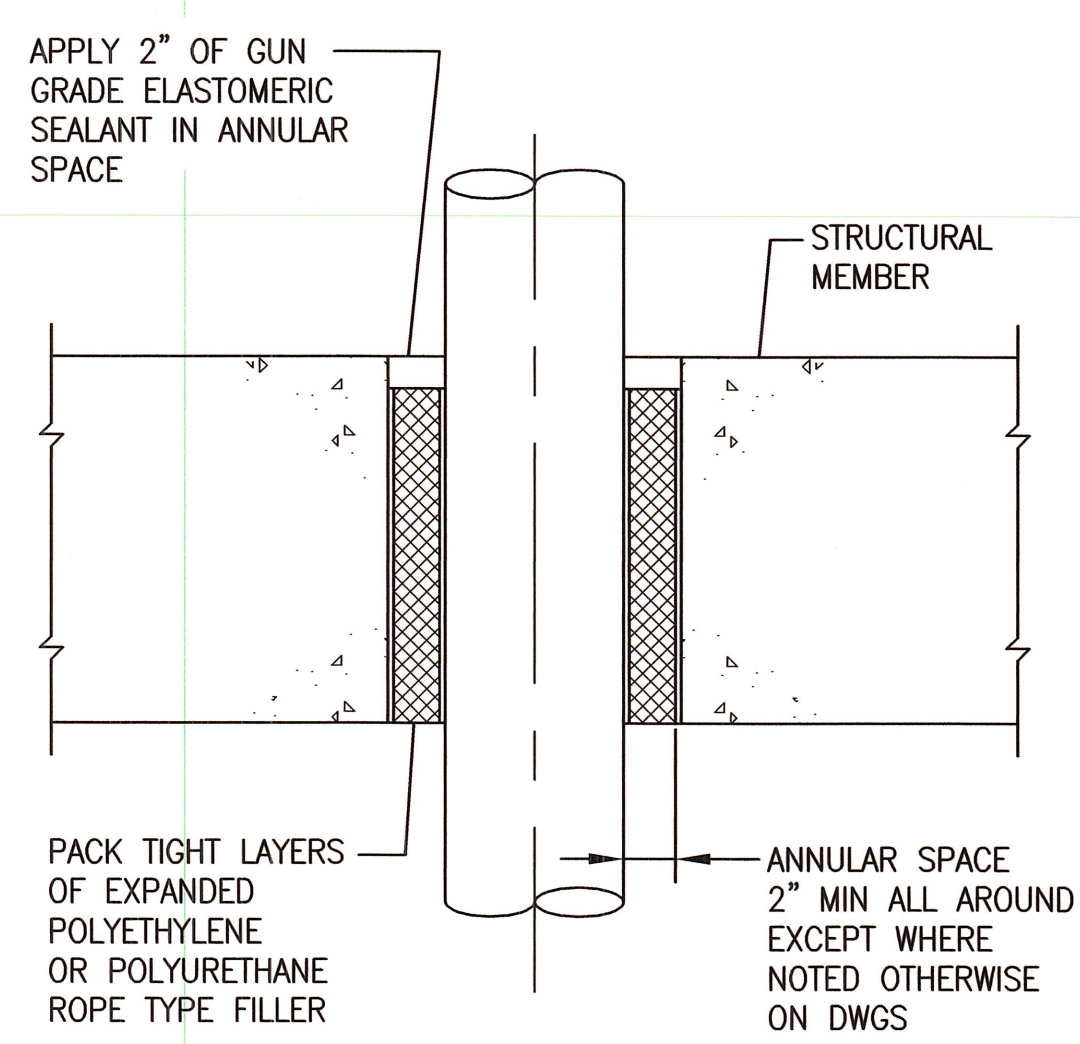
CITY OF NAPLES
PUBLIC WORKS PUMP STATION

PUMP STATION SECTIONS

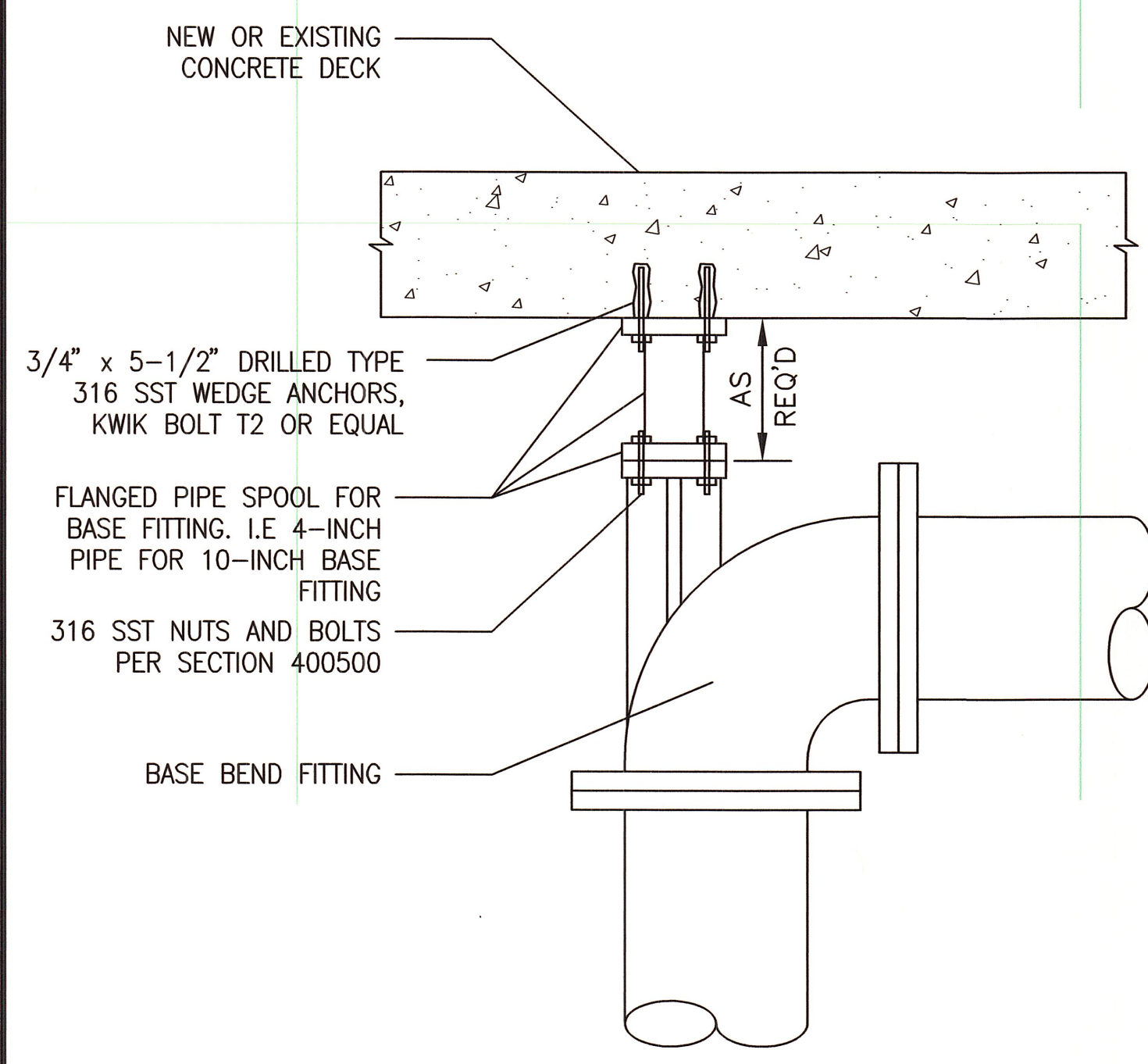
DRAWING
D-303
SHEET
19
OF — SHEETS



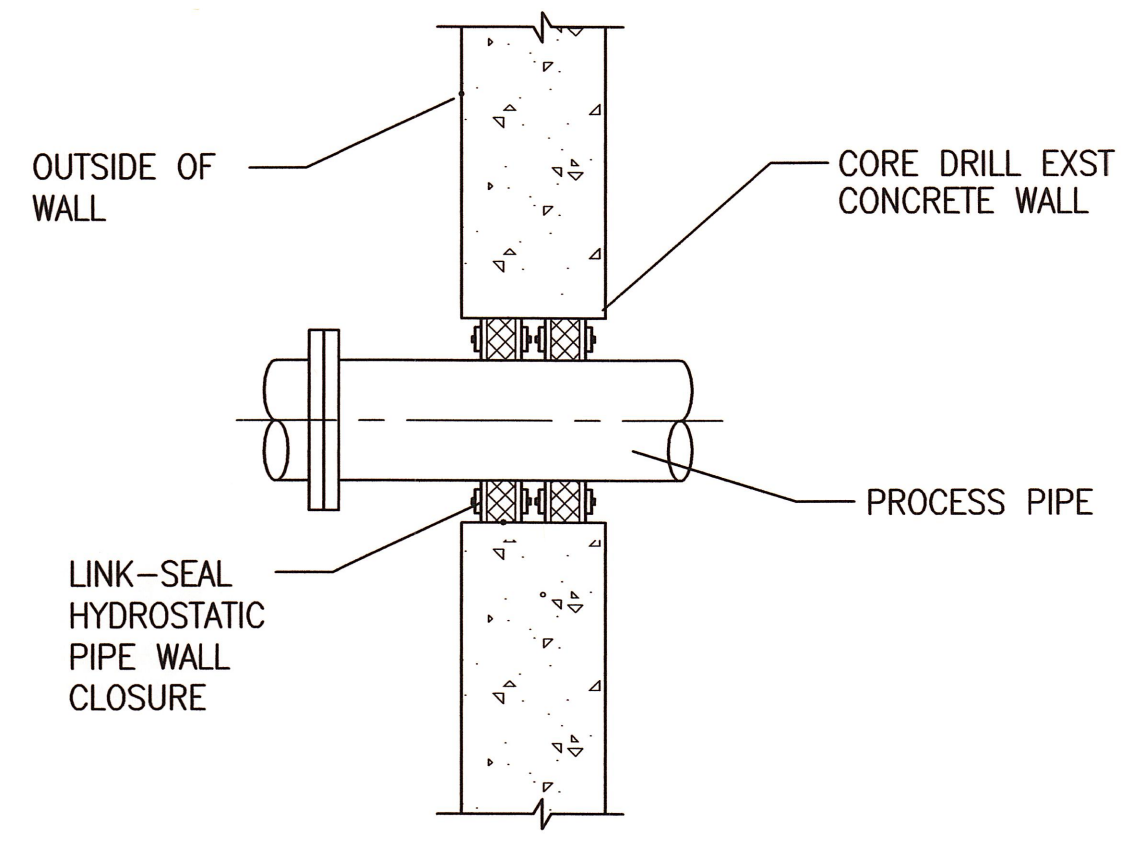
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SCALE: NONE



2 SLAB PENETRATION
SCALE: NONE

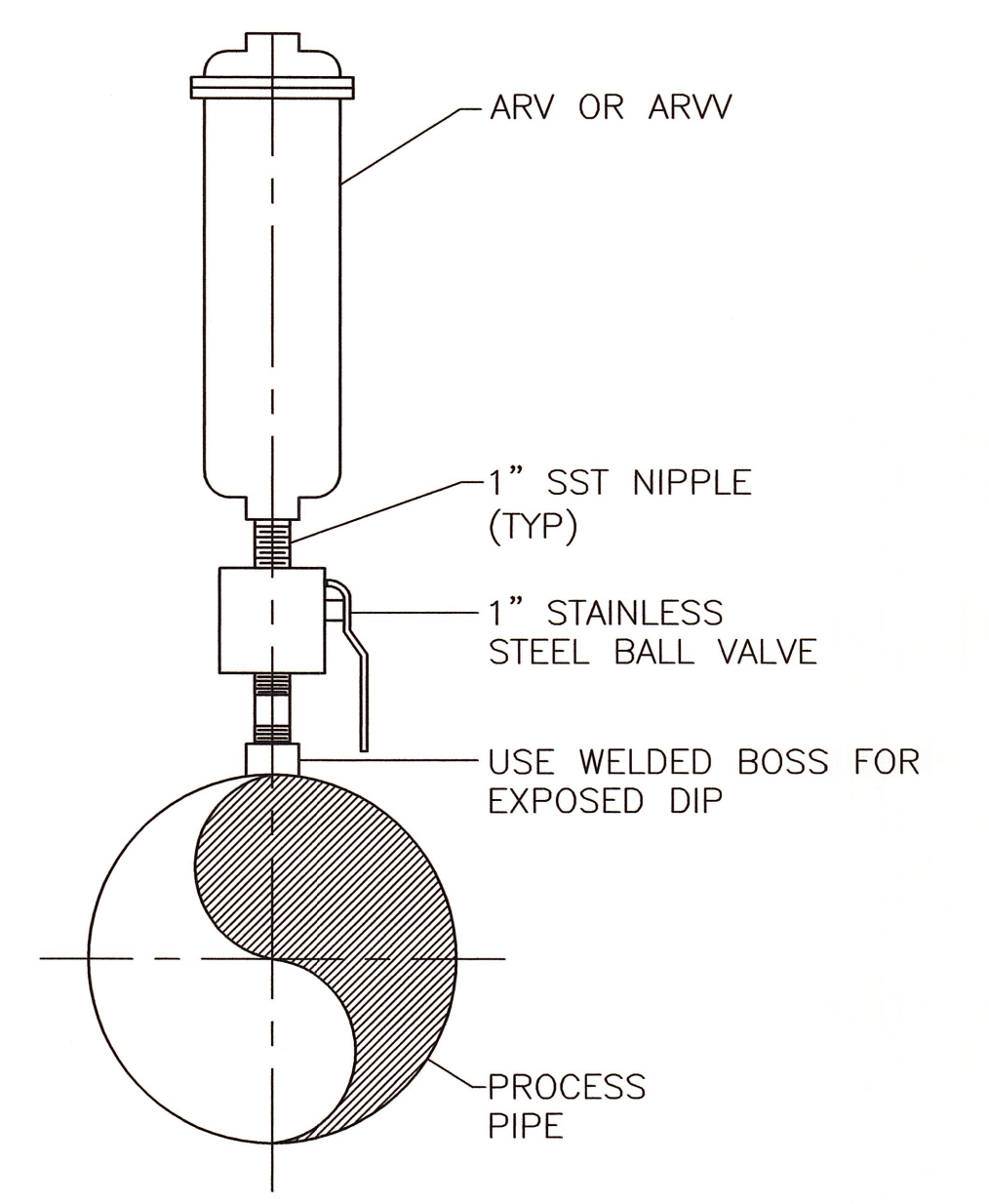


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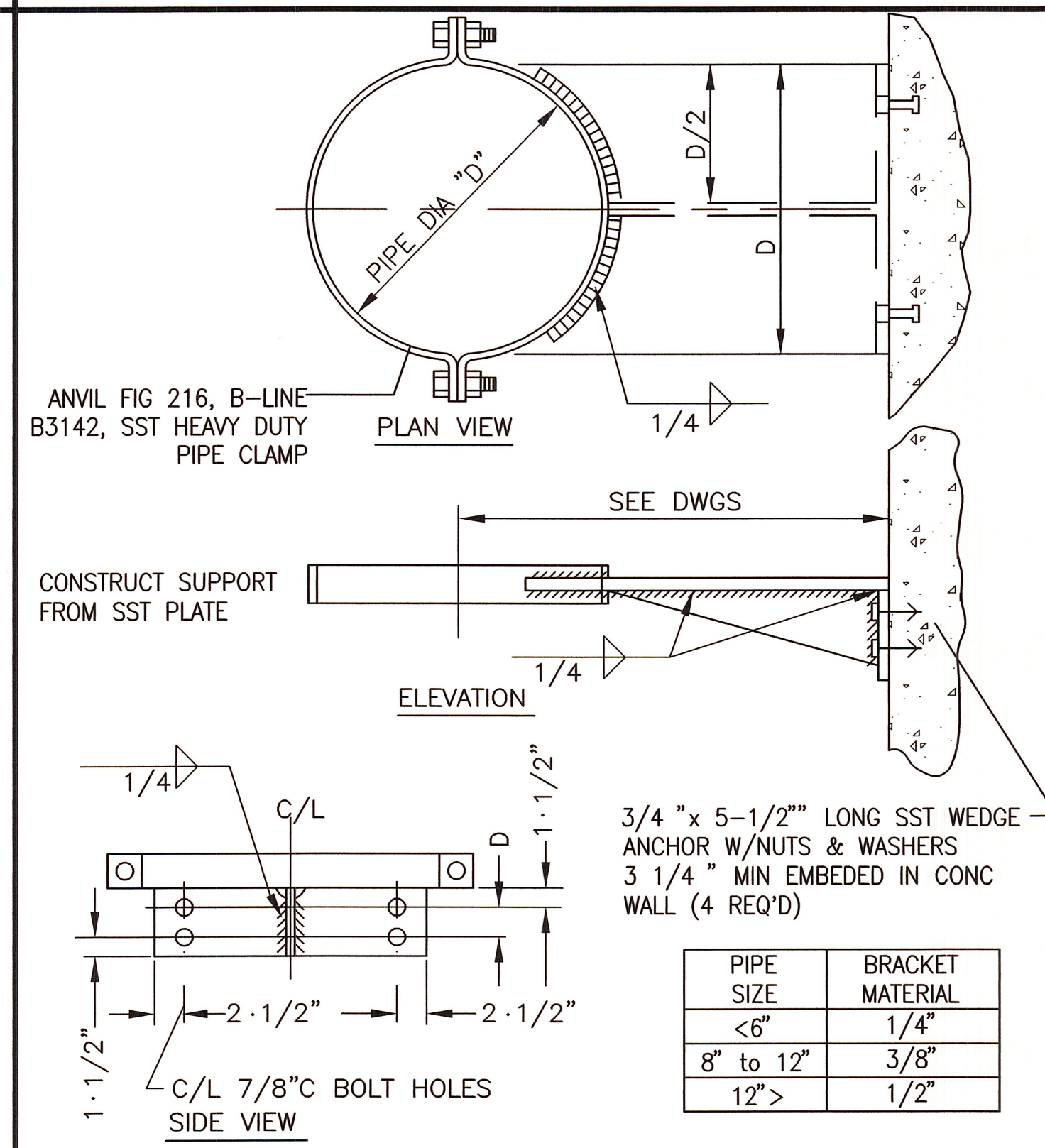


- NOTES:
1. PROVIDE A SINGLE RUBBER ANNULAR SEAL WHEN THE WALL IS 8 INCHES THICK OR LESS. PROVIDE TWO RUBBER ANNULAR SEALS (ONE AT EACH END) WHEN THE WALL IS MORE THAT 8 INCHES THICK.
 2. COORDINATE THE DIAMETER OF THE CORE OPENING PER LINK SEAL MANUFACTURER.
 3. LINK SEAL SHALL HAVE 316 SST NUTS AND BOLTS.

3 WALL PENETRATION
SCALE: NONE



4 ARV ASSEMBLY
SCALE: NONE



PIPE SIZE	BRACKET MATERIAL
<6"	1/4"
8" to 12"	3/8"
12">	1/2"

7 PIPE THRUST SUPPORT
SCALE: NONE

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CHECKED BY DMJ	PROJECT NUMBER 60289240
DATE SEPT 2013	

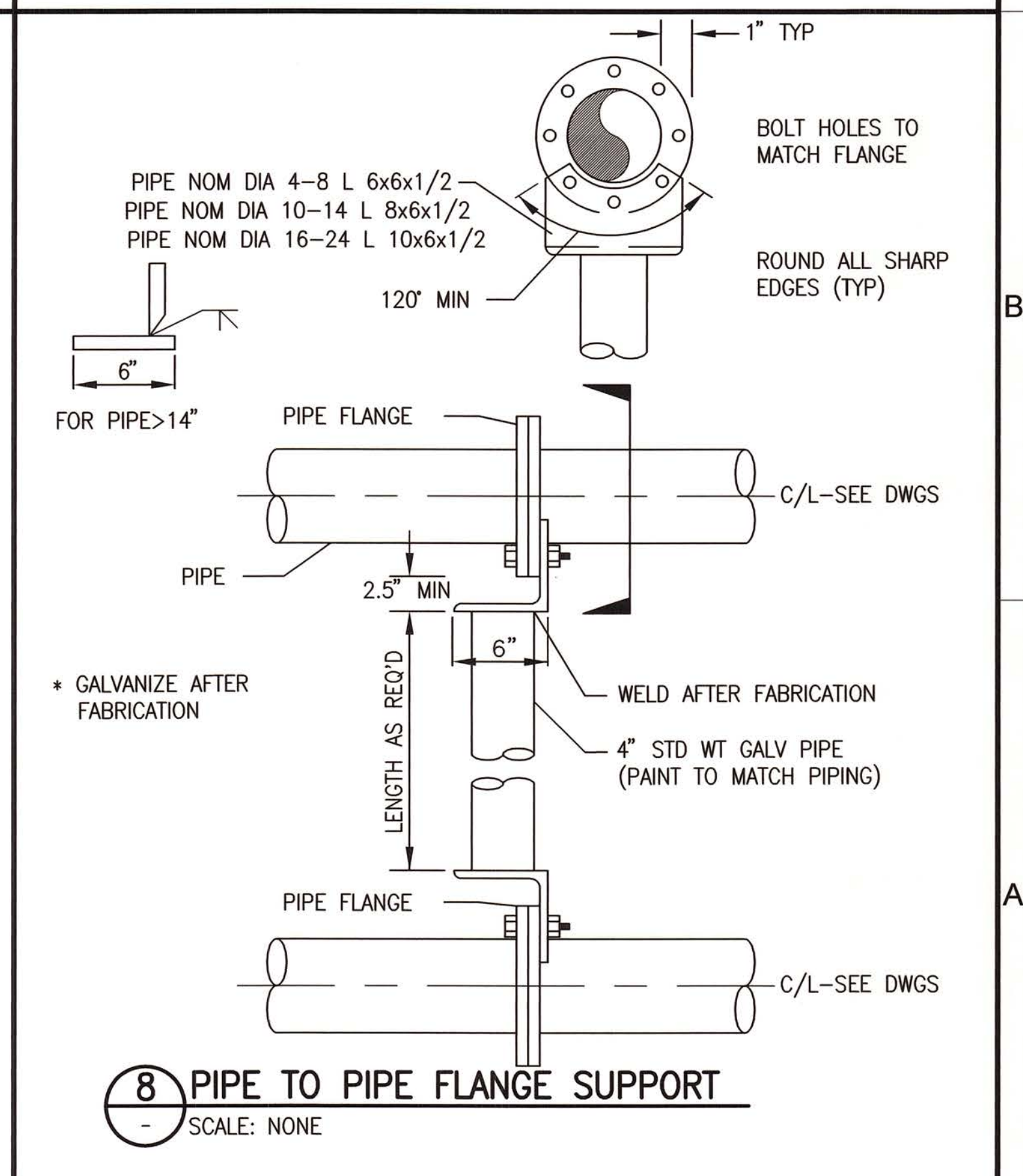
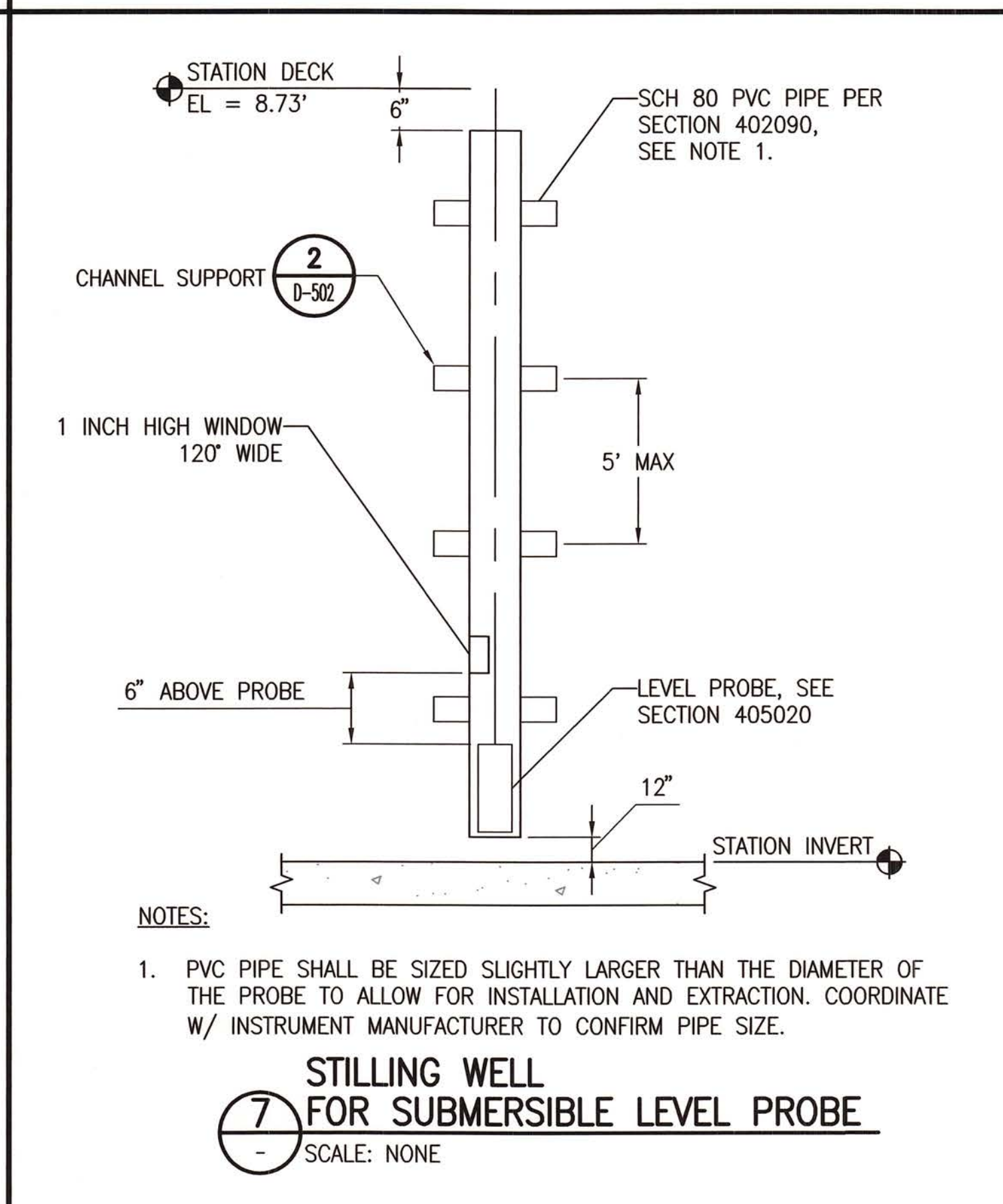
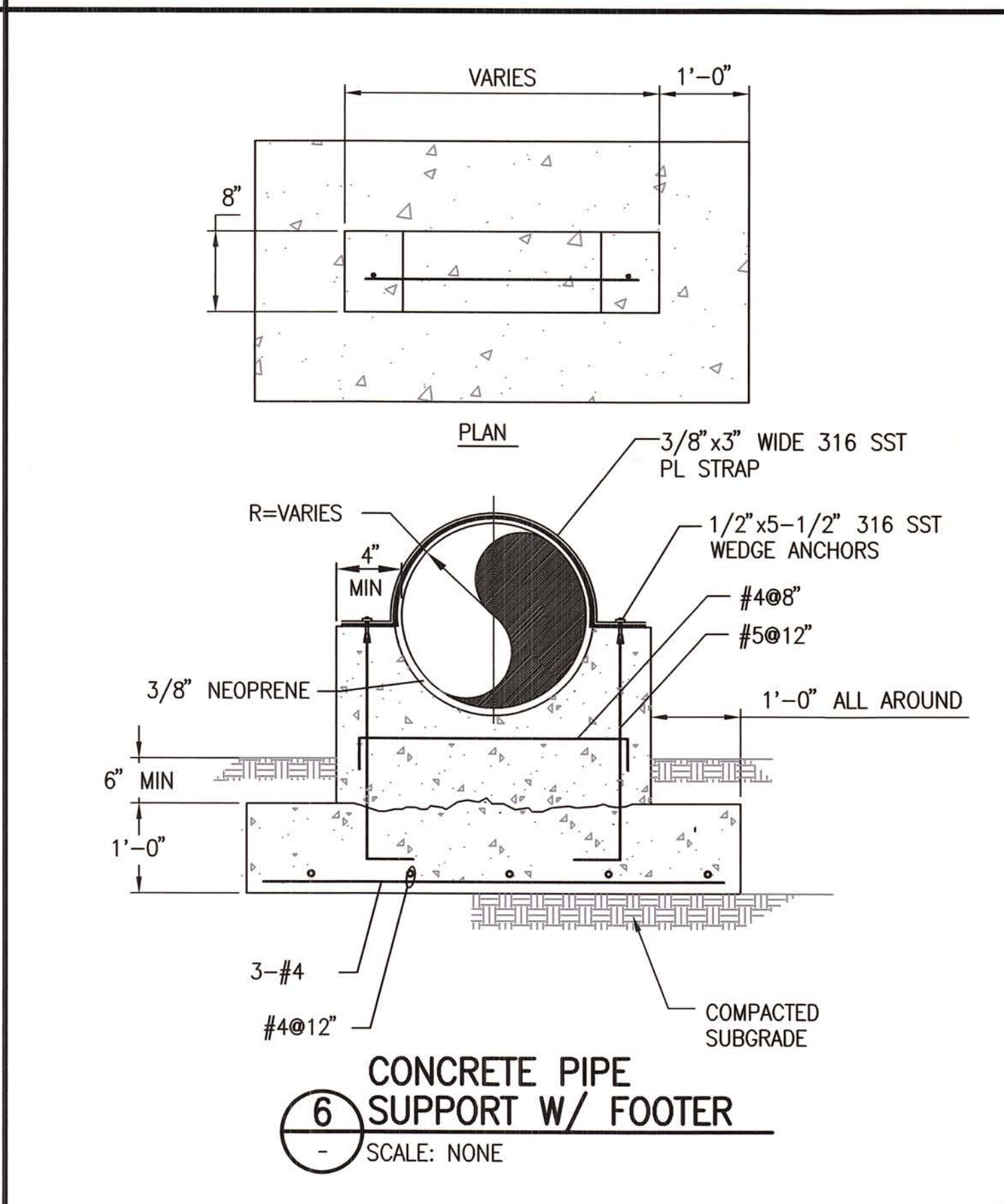
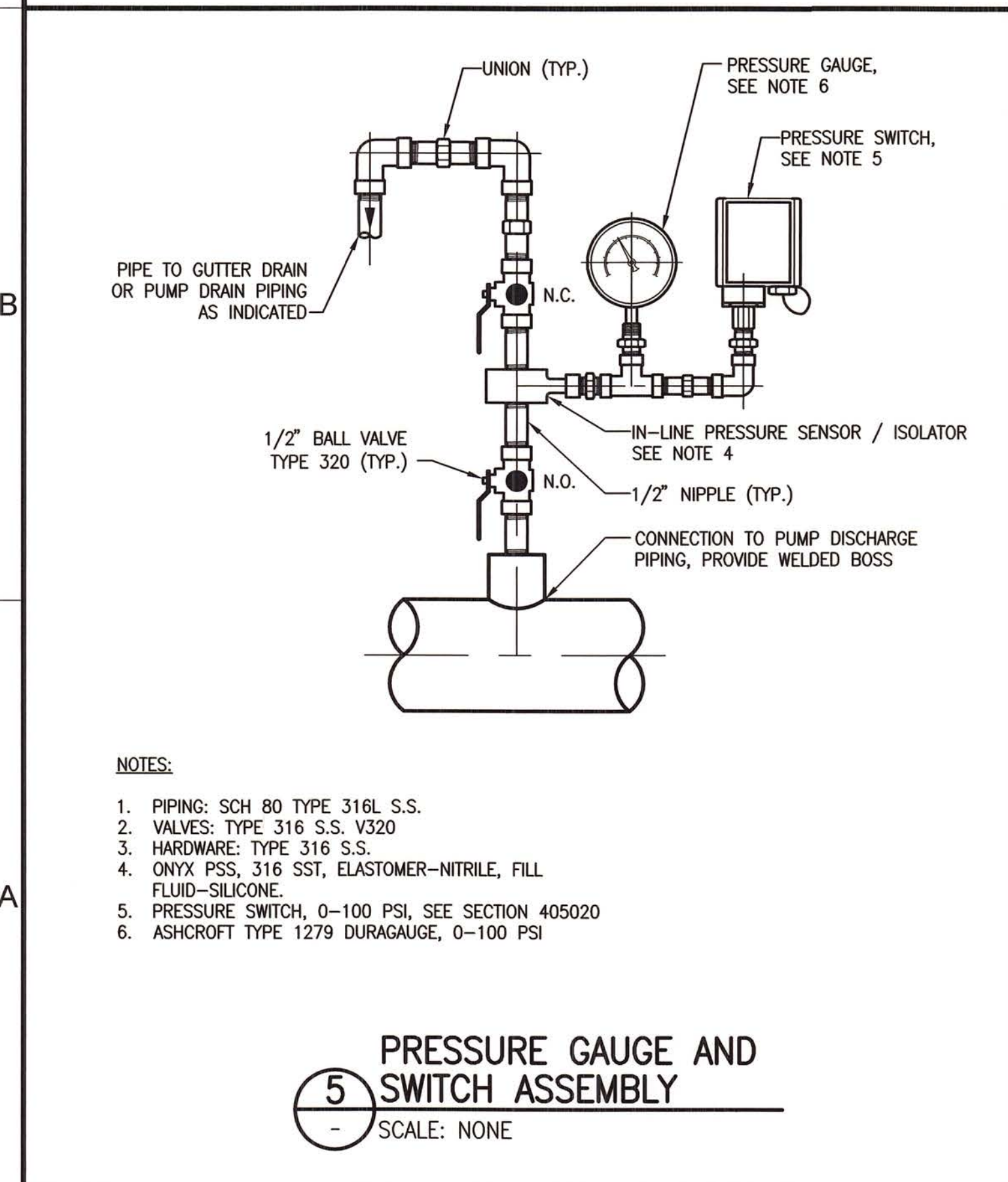
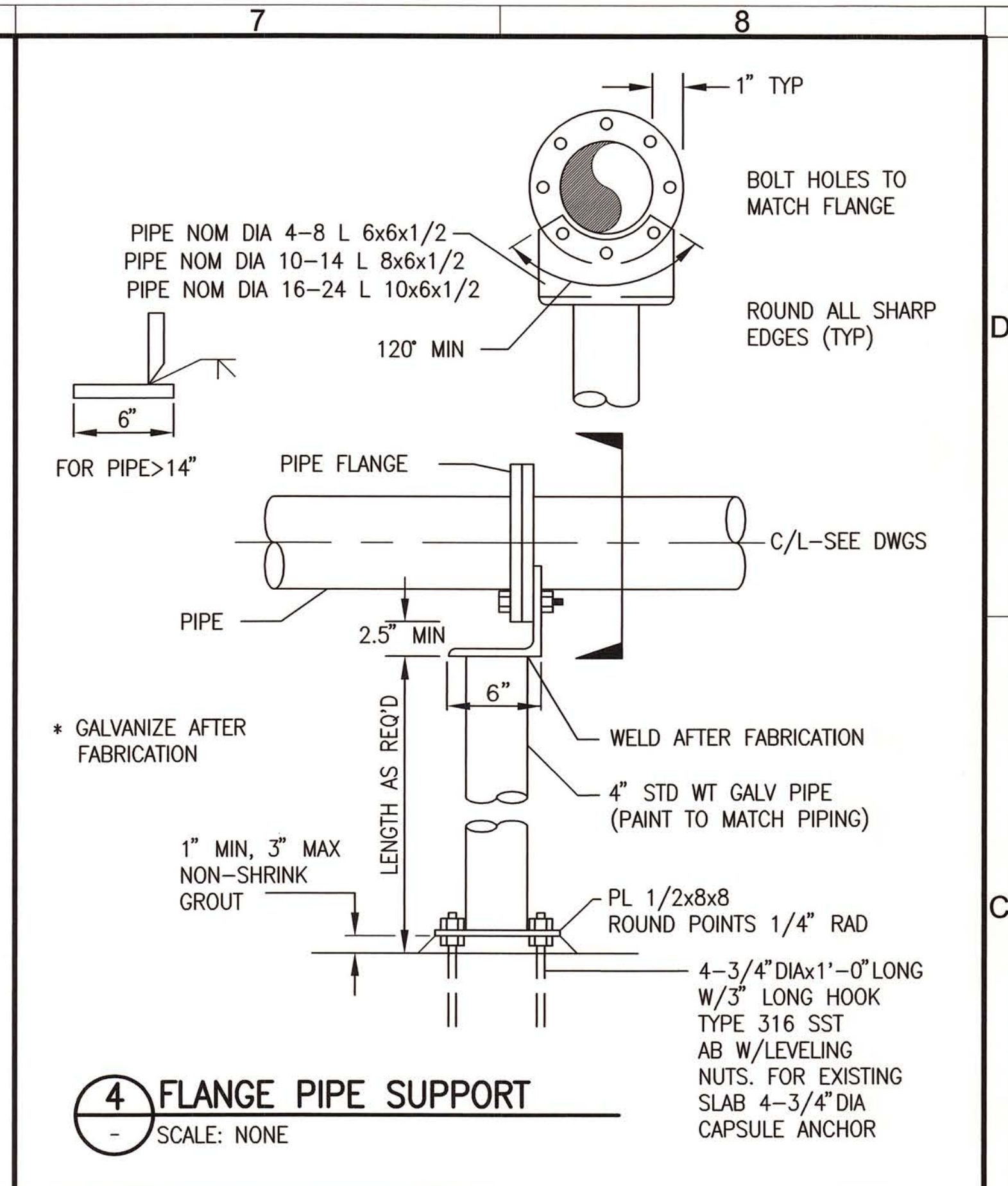
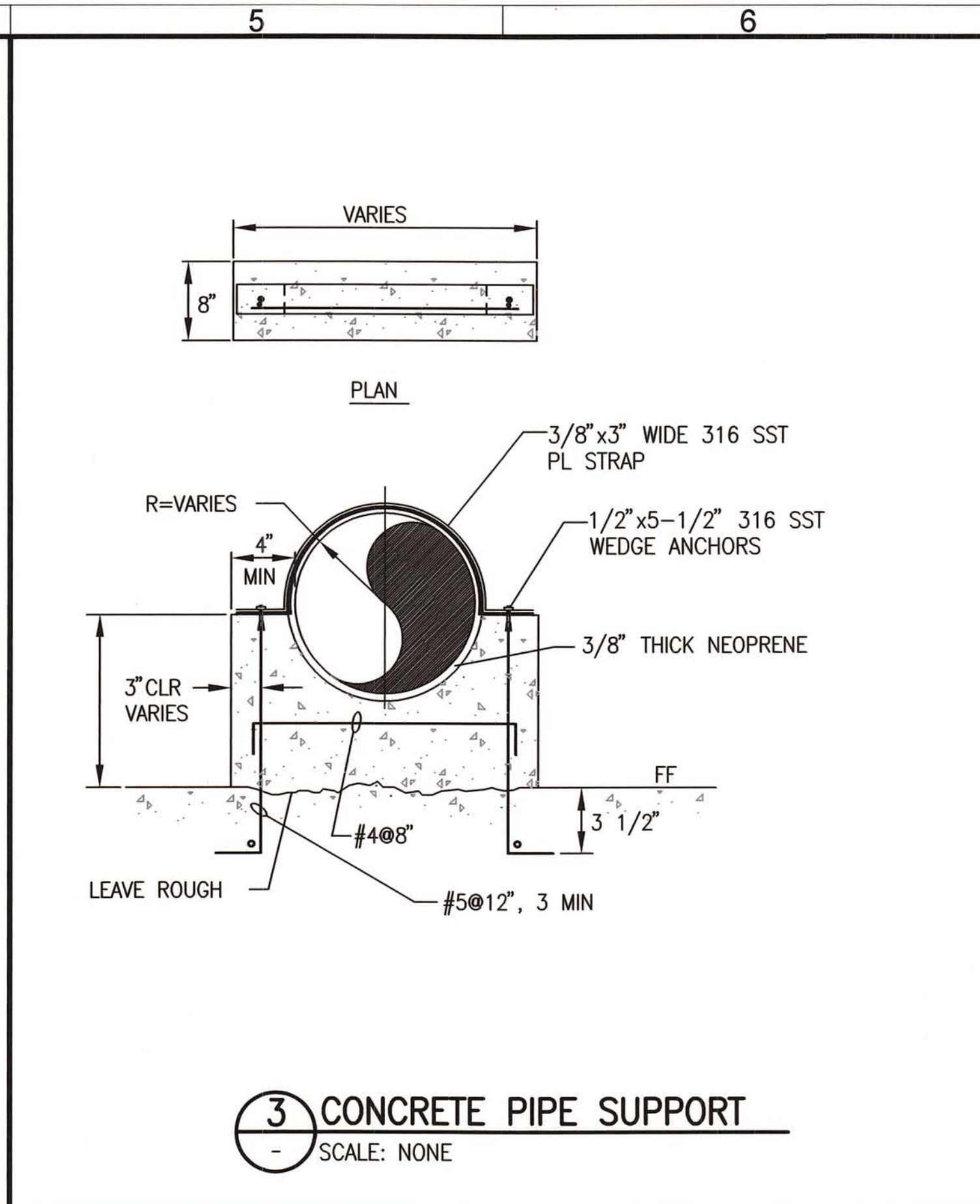
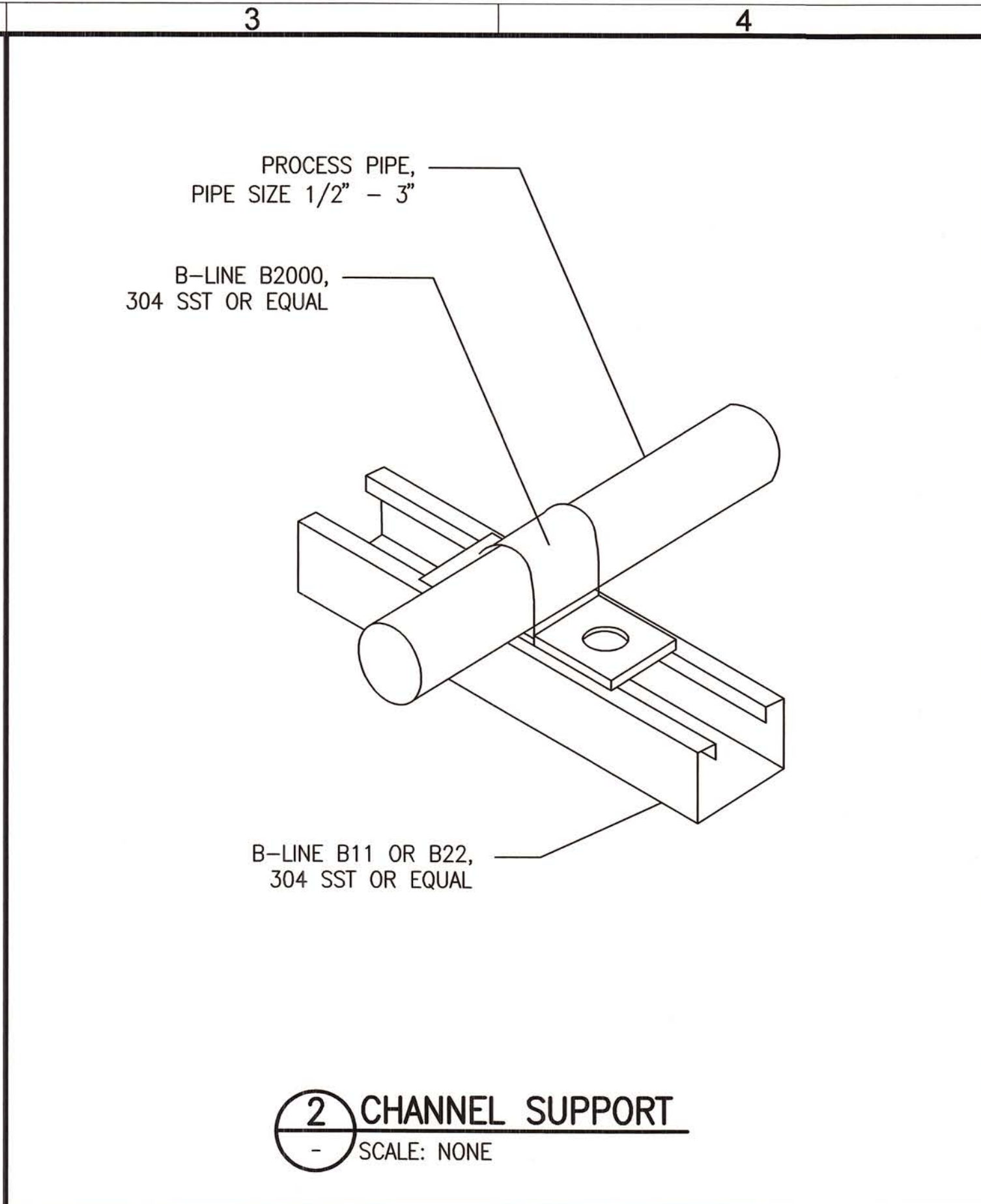
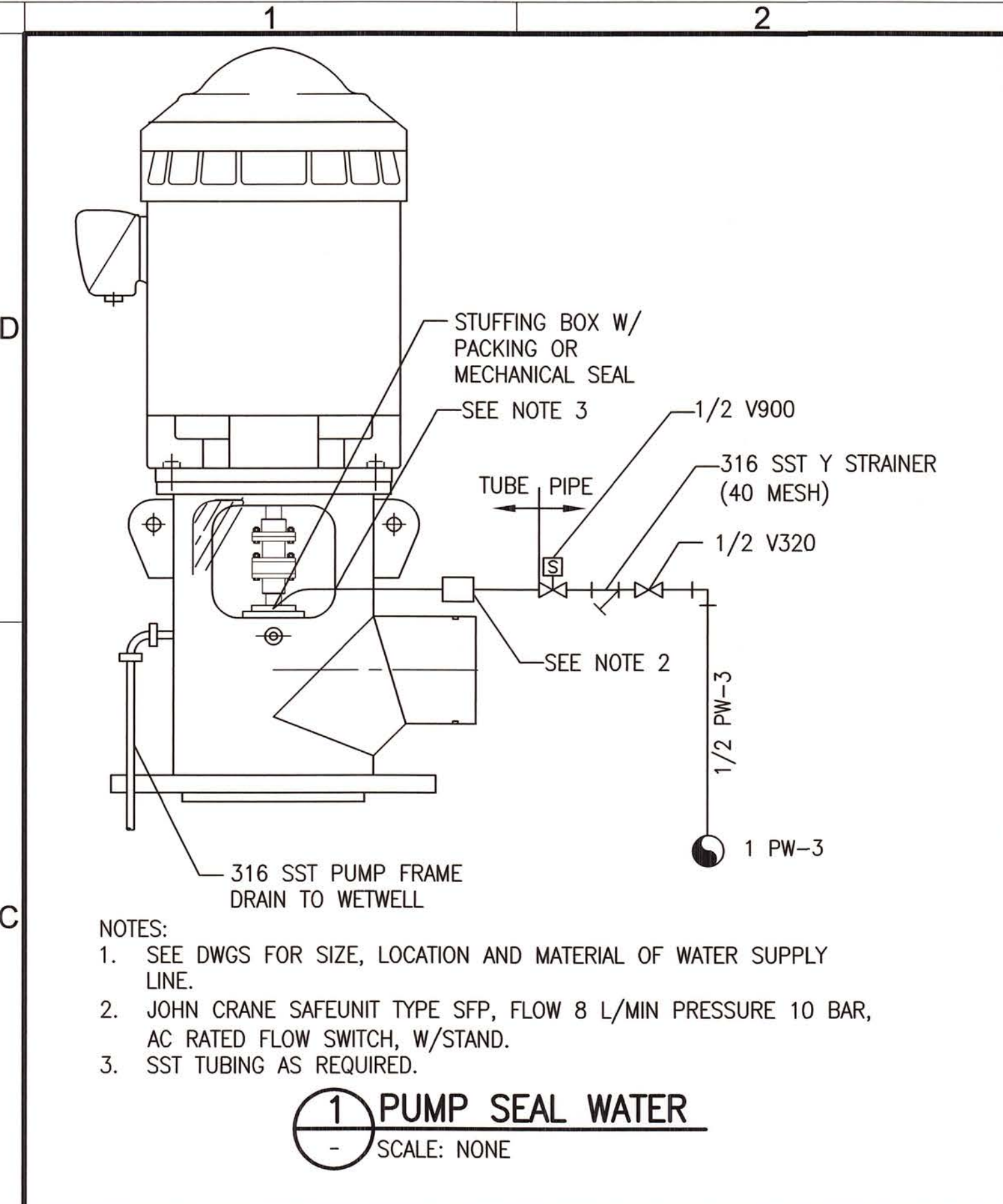
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PUBLIC WORKS PUMP STATION
PROCESS DETAILS

DRAWING
D-501
SHEET
20
OF -- SHEETS

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CITY OF NAPLES PUBLIC WORKS PUMP STATION		DRAWING D-502
PROCESS DETAILS		SHEET 21
		OF — SHEETS

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ELECTRICAL SYMBOLS – PLAN				ELECTRICAL SYMBOLS – PLAN				ELECTRICAL SYMBOLS – SCHEMATIC DIAGRAM/ SINGLE LINE DIAGRAM – CONT'D				ELECTRICAL ABBREVIATIONS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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1 2 3 4 5 6 7 8

LEGEND
 — NEW
 — EXISTING

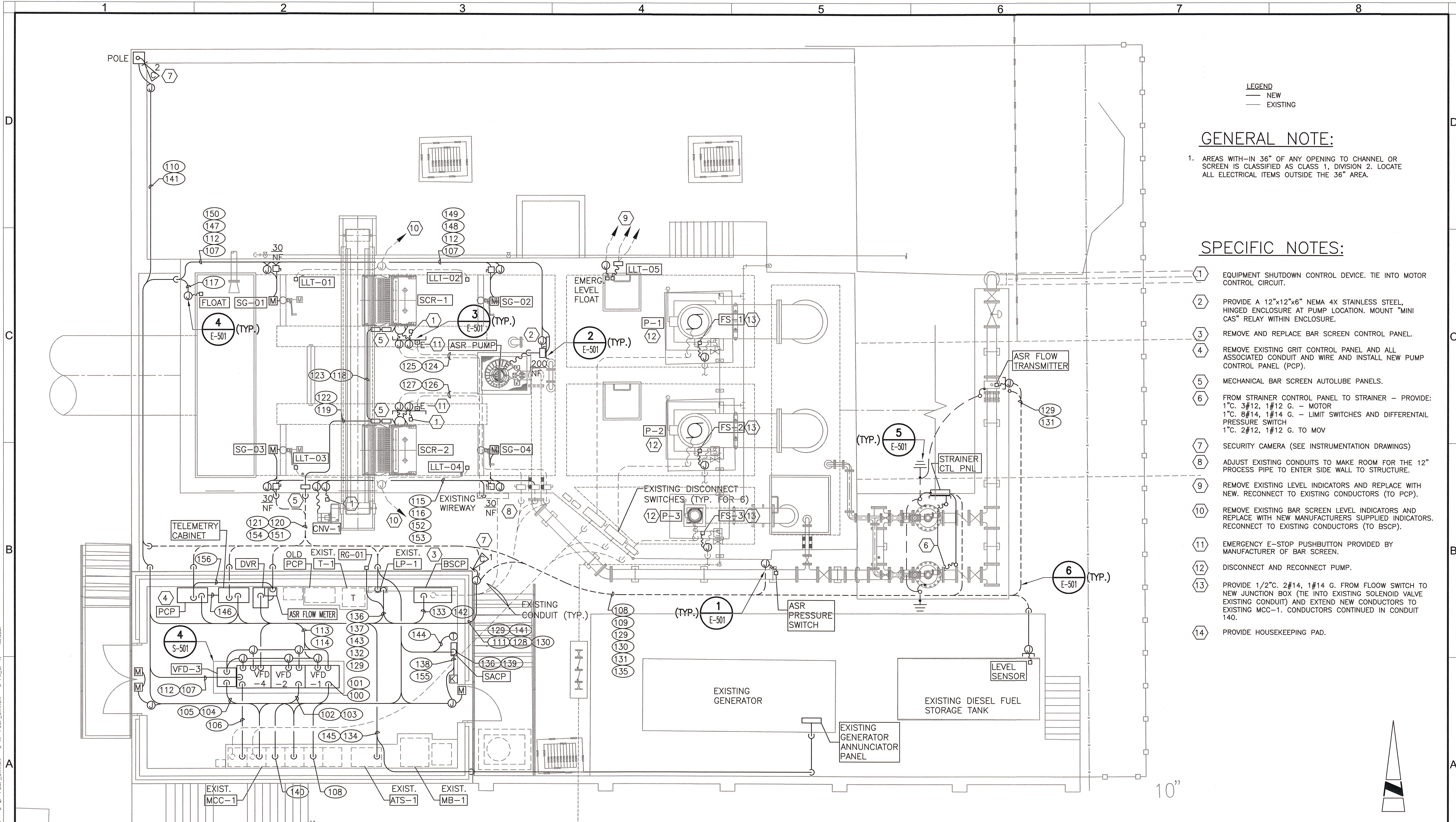
GENERAL NOTE:

- AREAS WITH-IN 36" OF ANY OPENING TO CHANNEL OR SCREEN IS CLASSIFIED AS CLASS 1, DIVISION 2. LOCATE ALL ELECTRICAL ITEMS OUTSIDE THE 36" AREA.

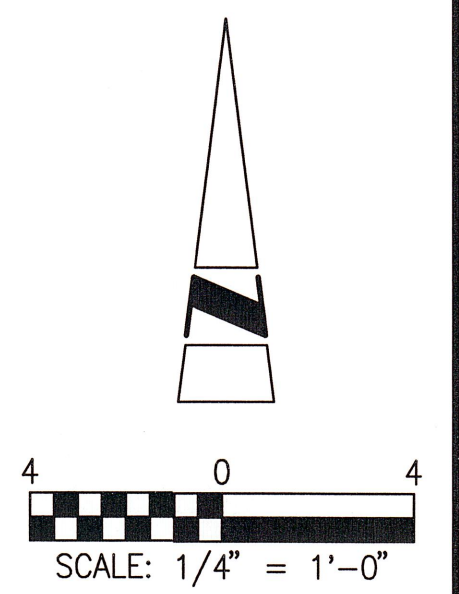
SPECIFIC NOTES:

- EQUIPMENT SHUTDOWN CONTROL DEVICE. TIE INTO MOTOR CONTROL CIRCUIT.
- PROVIDE A 12"x12"x6" NEMA 4X STAINLESS STEEL, HINGED EXISTING AT PUMP LOCATION. MOUNT "MINI CAS" RELAY WITHIN ENCLOSURE.
- REMOVE AND REPLACE BAR SCREEN CONTROL PANEL.
- REMOVE EXISTING GRIT CONTROL PANEL AND ALL ASSOCIATED CONDUIT AND WIRE AND INSTALL NEW PUMP CONTROL PANEL (PCP).
- MECHANICAL BAR SCREEN AUTOLUBE PANELS.
- FROM STRAINER CONTROL PANEL TO STRAINER - PROVIDE: 1" C. 3#12, 1#12 G. - MOTOR 1" C. 8#14, 1#14 G. - LIMIT SWITCHES AND DIFFERENTIAL PRESSURE SWITCH 1" C. 2#12, 1#12 G. TO MOV
- SECURITY CAMERA (SEE INSTRUMENTATION DRAWINGS)
- ADJUST EXISTING CONDUITS TO MAKE ROOM FOR THE 12" PROCESS PIPE TO ENTER SIDE WALL TO STRUCTURE.
- REMOVE EXISTING LEVEL INDICATORS AND REPLACE WITH NEW. RECONNECT TO EXISTING CONDUCTORS (TO PCP).
- REMOVE EXISTING BAR SCREEN LEVEL INDICATORS AND REPLACE WITH NEW MANUFACTURERS SUPPLIED INDICATORS. RECONNECT TO EXISTING CONDUCTORS (TO BSCP).
- EMERGENCY E-STOP PUSHBUTTON PROVIDED BY MANUFACTURER OF BAR SCREEN.
- DISCONNECT AND RECONNECT PUMP.
- PROVIDE 1/2" C. 2#14, 1#14 G. FROM FLOW SWITCH TO NEW JUNCTION BOX (TIE INTO EXISTING SOLENOID VALVE EXISTING CONDUIT) AND EXTEND NEW CONDUCTORS TO EXISTING MCC-1. CONDUCTORS CONTINUED IN CONDUIT 140.
- PROVIDE HOUSEKEEPING PAD.

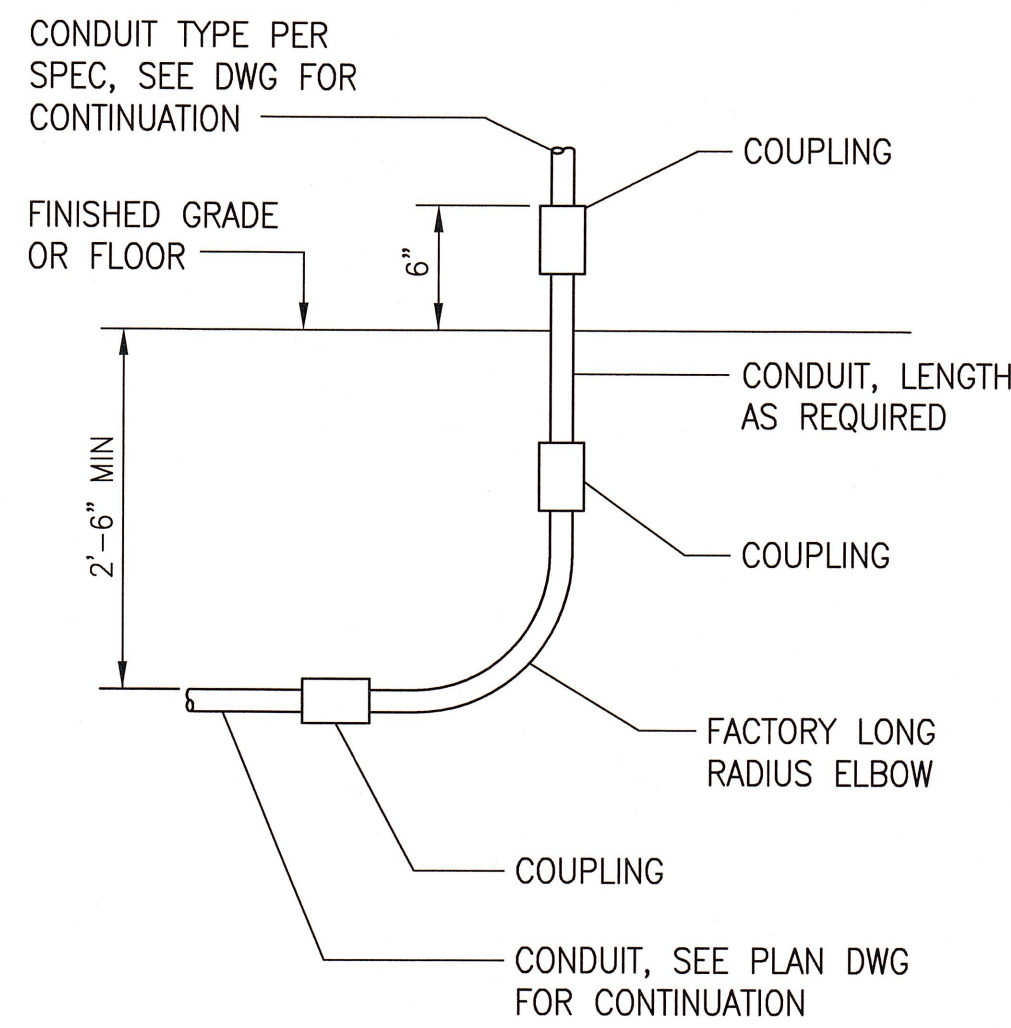
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 XREFS: C-BD - E-XP-ELEC-BLOC - C-SP-0488-001 - D-OP-PUMP-STATION - C-PW-SP-N IMAGES:



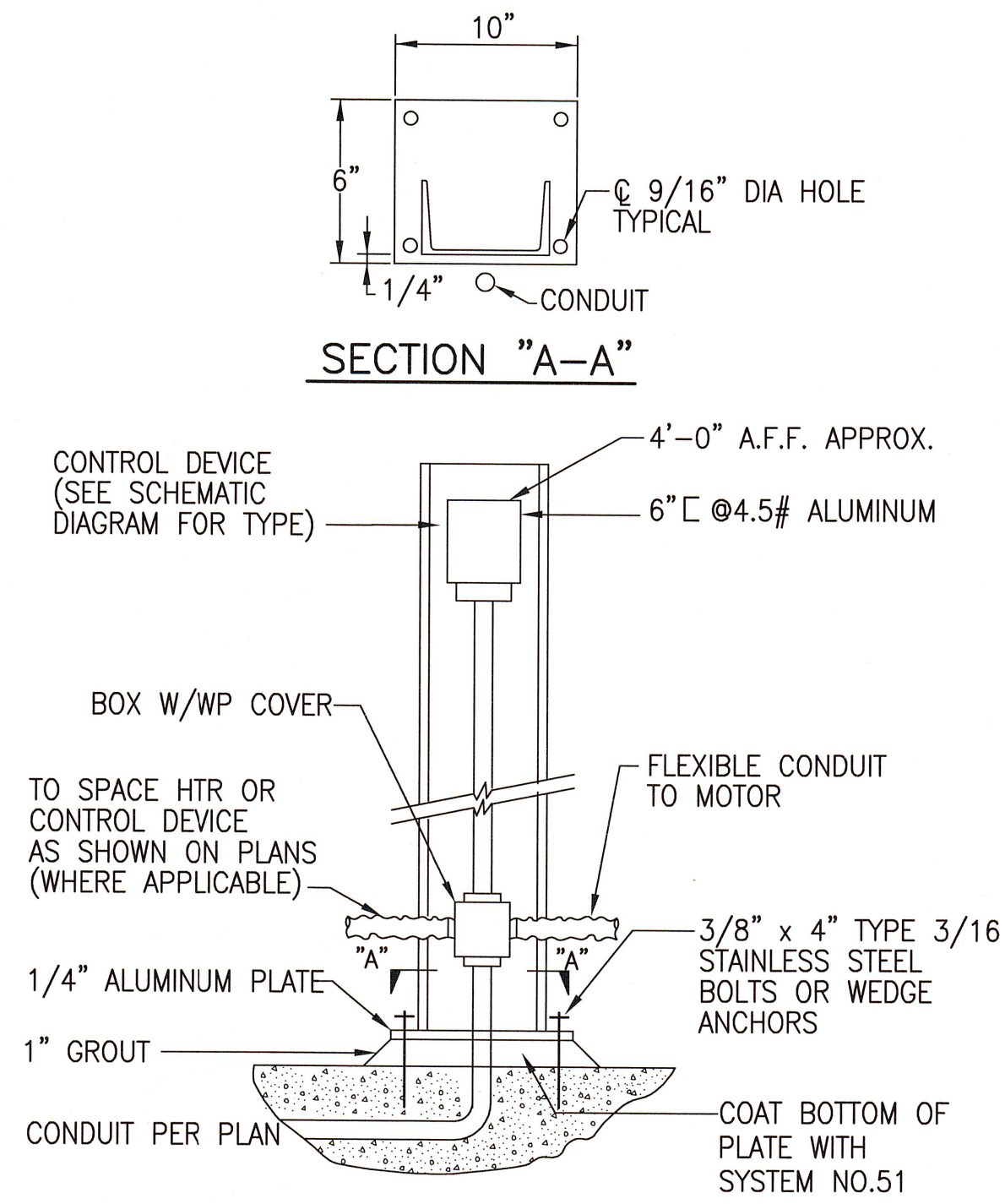
ELECTRICAL PLAN
 SCALE: 1/4" = 1'-0"



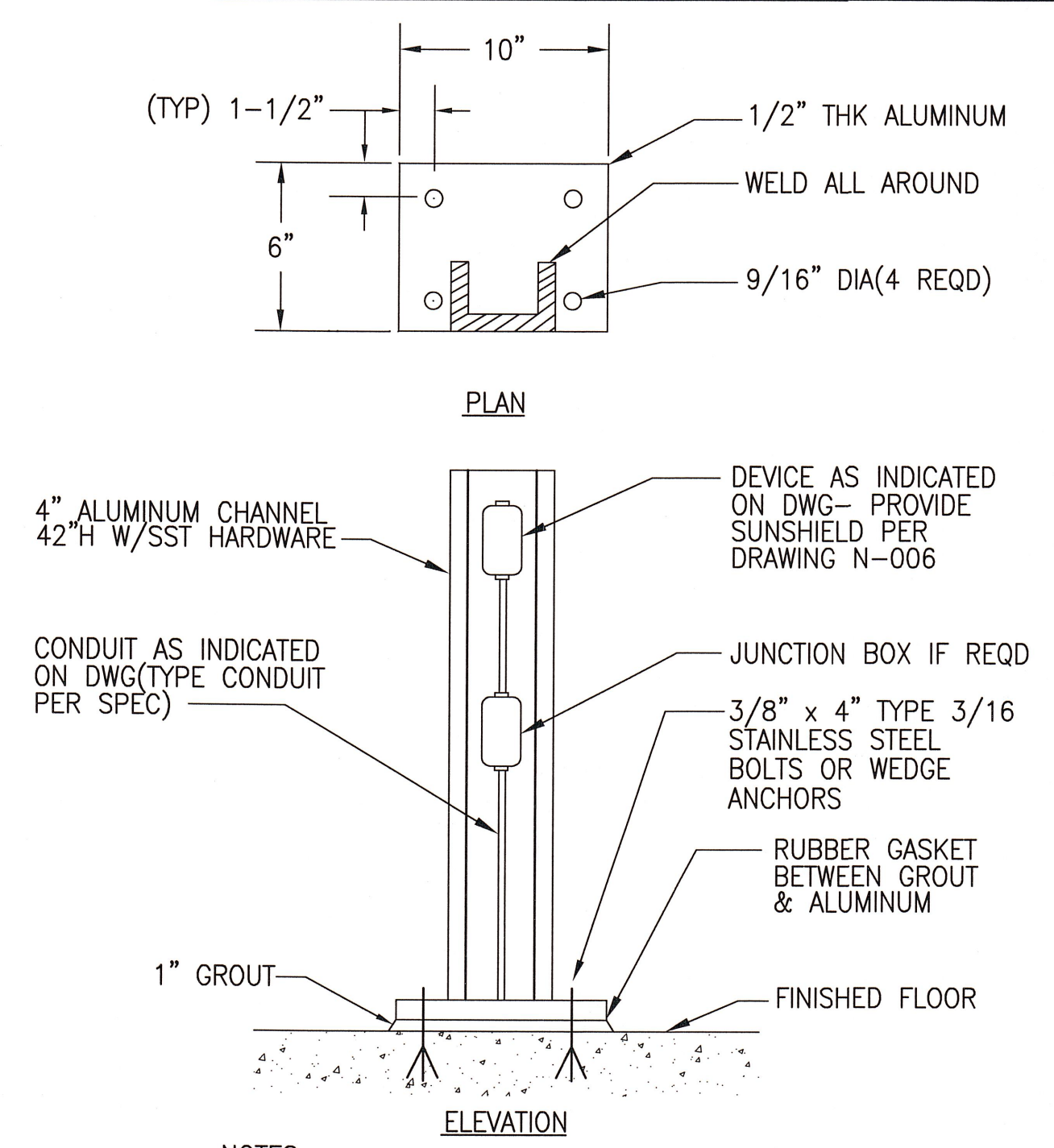
DESIGNED BY DK DRAWN BY DK CHECKED BY MAP DATE SEPT 2013	PROJECT ENGINEER MARK A. PELLISH P.E. REG NUMBER 46906 PROJECT NUMBER 60289240				CITY OF NAPLES STREETS AND STORMWATER DEPARTMENT 285 RIVERSIDE CIRCLE NAPLES, FLORIDA 34102 PHONE: 239-215-5000 FAX: 239-215-5010	DRAWING E-101 SHEET 23 OF SHEETS
DATE 1 DESCRIPTION 2 APPR 3	4 5 6 7 8					



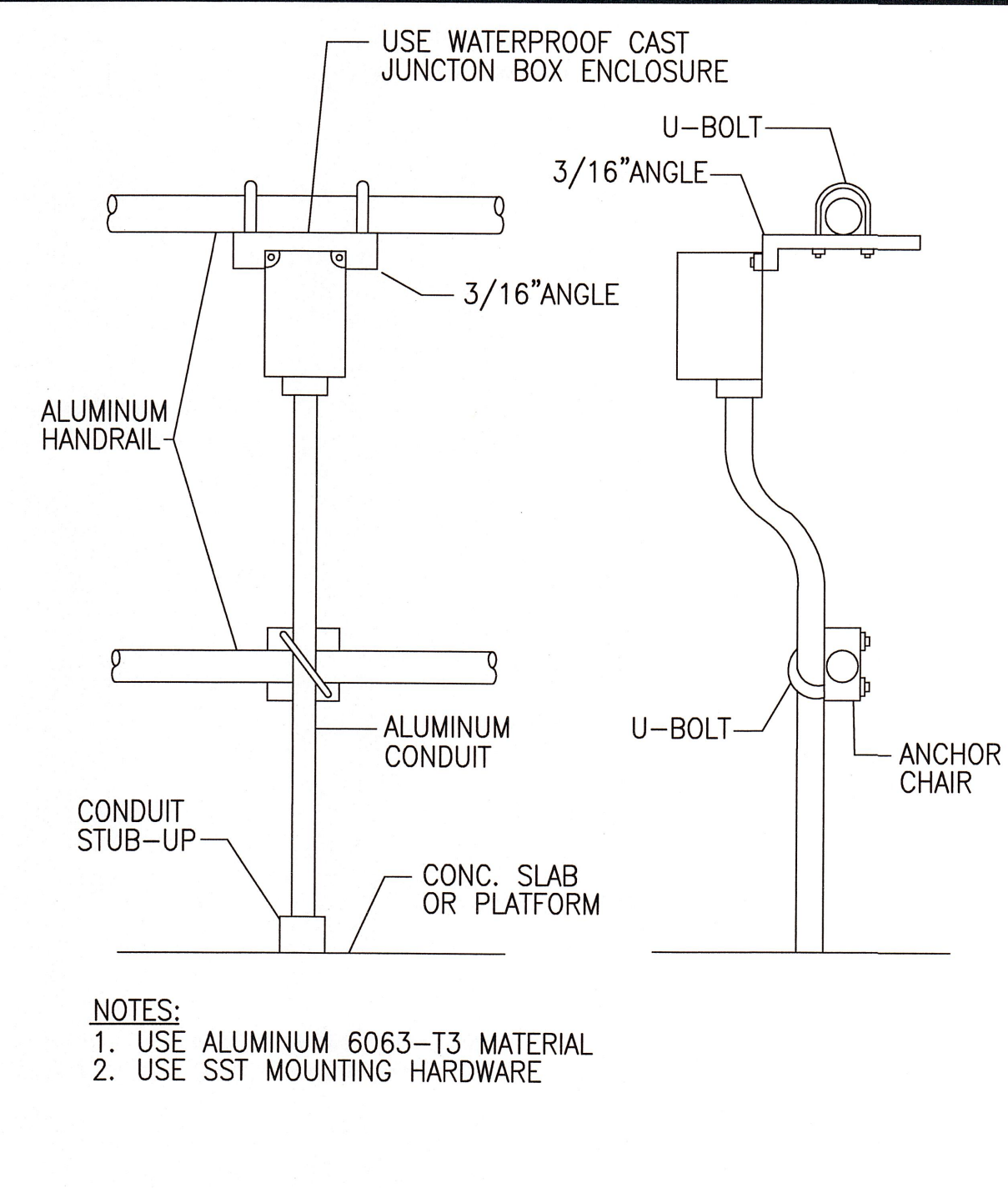
1 CONDUIT TRANSITION DETAILS
SCALE: NONE



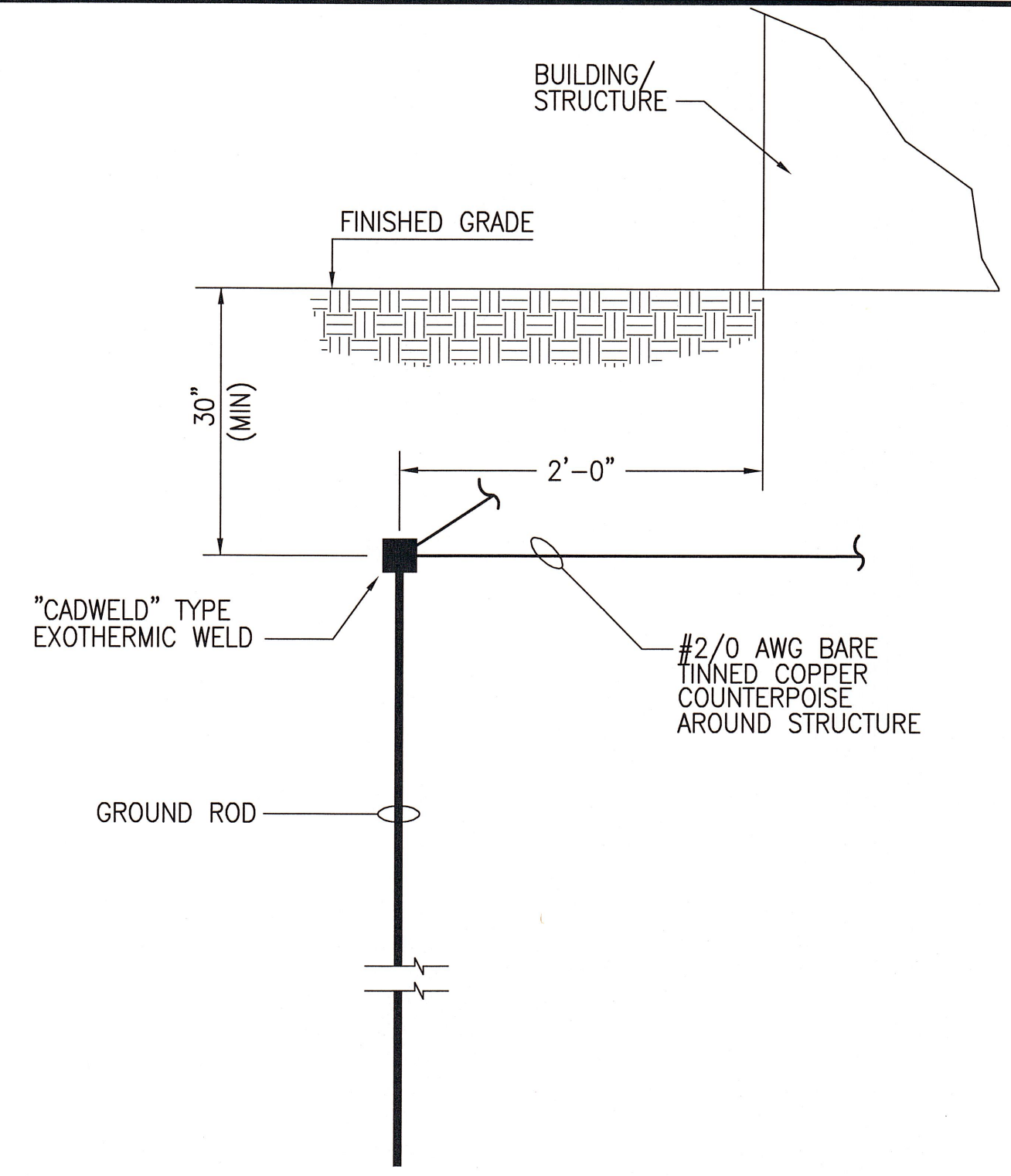
2 CONTROL STATION MOUNTING
SCALE: NONE



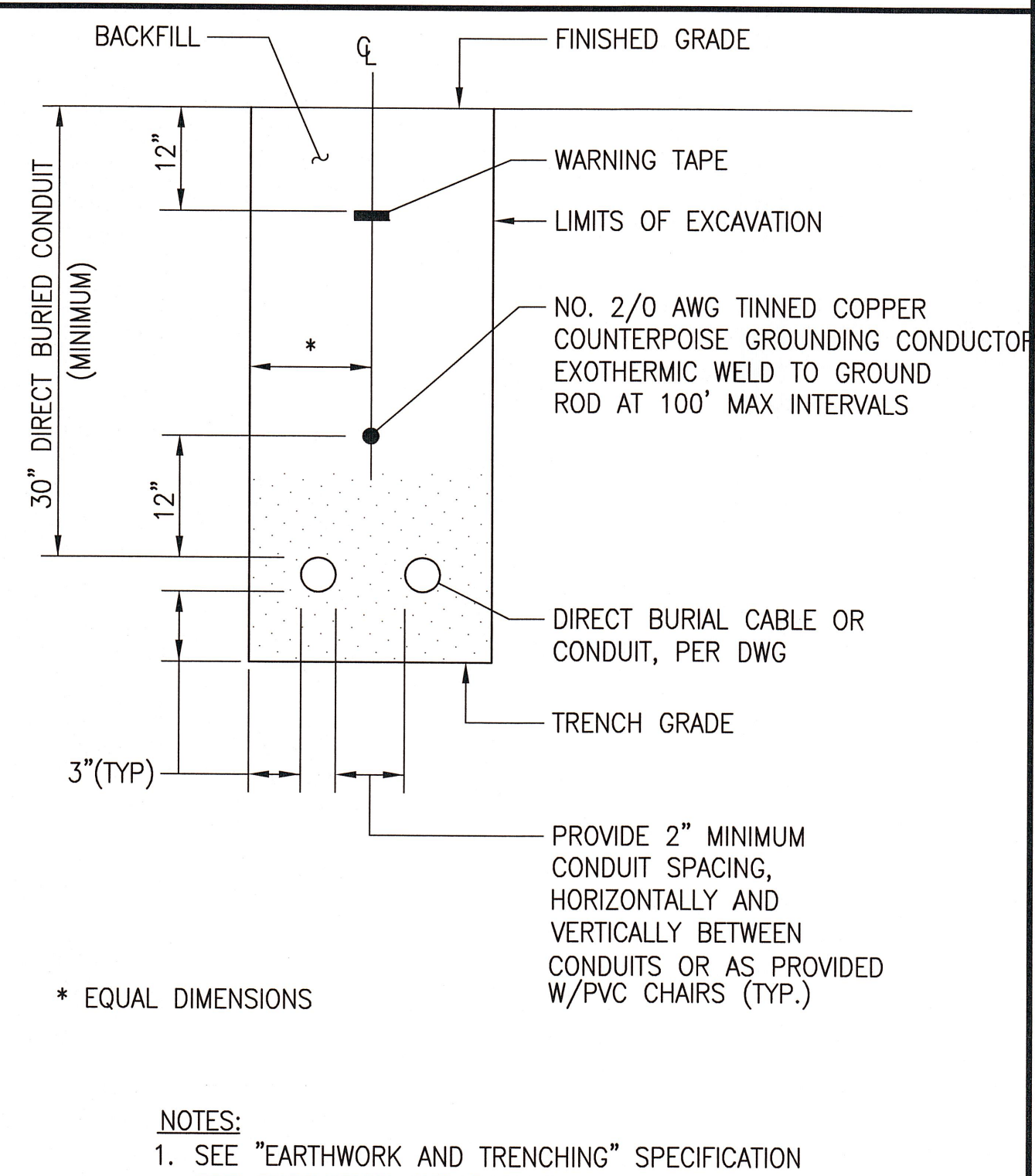
3 PEDESTAL MOUNTED DEVICE DETAIL
SCALE: NONE



4 DEVICE MOUNTING
SCALE: NONE



5 TYPICAL COUNTERPOISE/GROUND ROD INSTALLATION DETAIL
SCALE: NONE



6 DIRECT BURIAL INSTALLATION
SCALE: NONE

DWG: X:\City of Naples\60289240-Port Royal and Public Works Pump Stations\000 CAD\Public Works\Sheets\E-E-501.dwg Layout Name: E-501 - Plotted by: Koppelman, Doug Date: 9/18/2013 1:50 PM XREFS: G-BD IMAGES:

REV	DATE	DESCRIPTION	APPR

DESIGNED BY	DK	PROJECT ENGINEER	MARK A. PELLISH P.E.
DRAWN BY	DK	REG NUMBER	46906
CHECKED BY	MAP	PROJECT NUMBER	60289240
DATE	SEPT 2013		

VERIFY SCALES	BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

AECOM

AECOM Technical Services, Inc.
4415 Metro Parkway, Suite 404
Fort Myers, Florida 33916
T 239.278.7996 F 239.278.0913
FL Engineering Business No. EB-8115
www.aecom.com

CITY OF NAPLES
STREETS AND STORMWATER DEPARTMENT
295 RIVERSIDE CIRCLE NAPLES, FLORIDA 34102
PHONE: 239-213-5000 FAX: 239-213-5010

CITY OF NAPLES
PUBLIC WORKS PUMP STATION

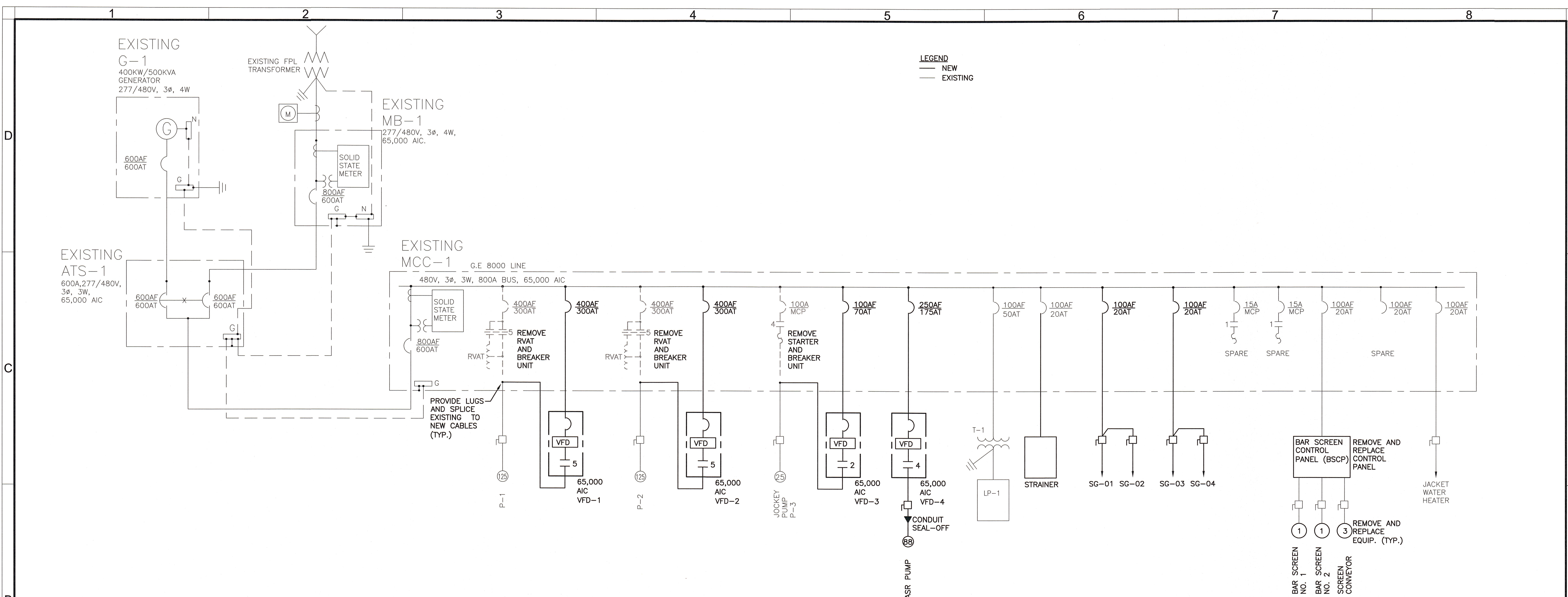
ELECTRICAL DETAILS

DRAWING
E-501

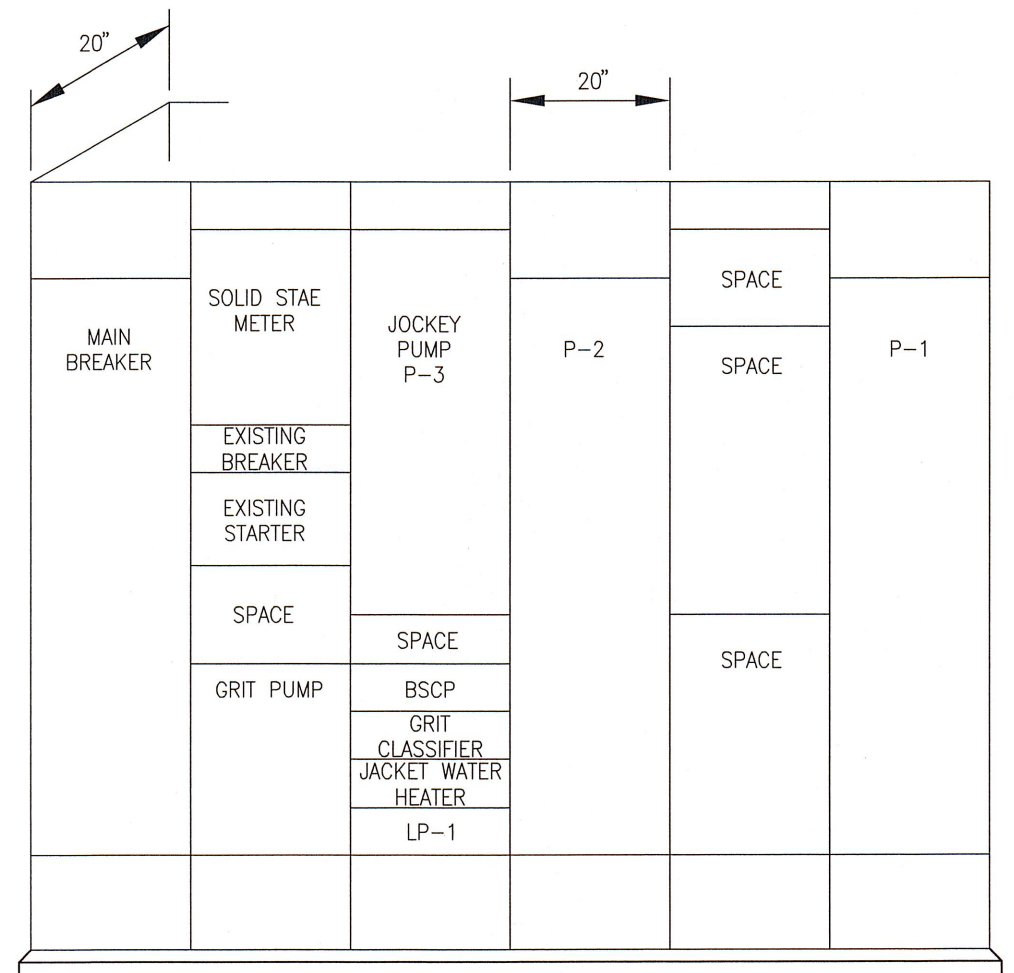
SHEET
25

OF — SHEETS

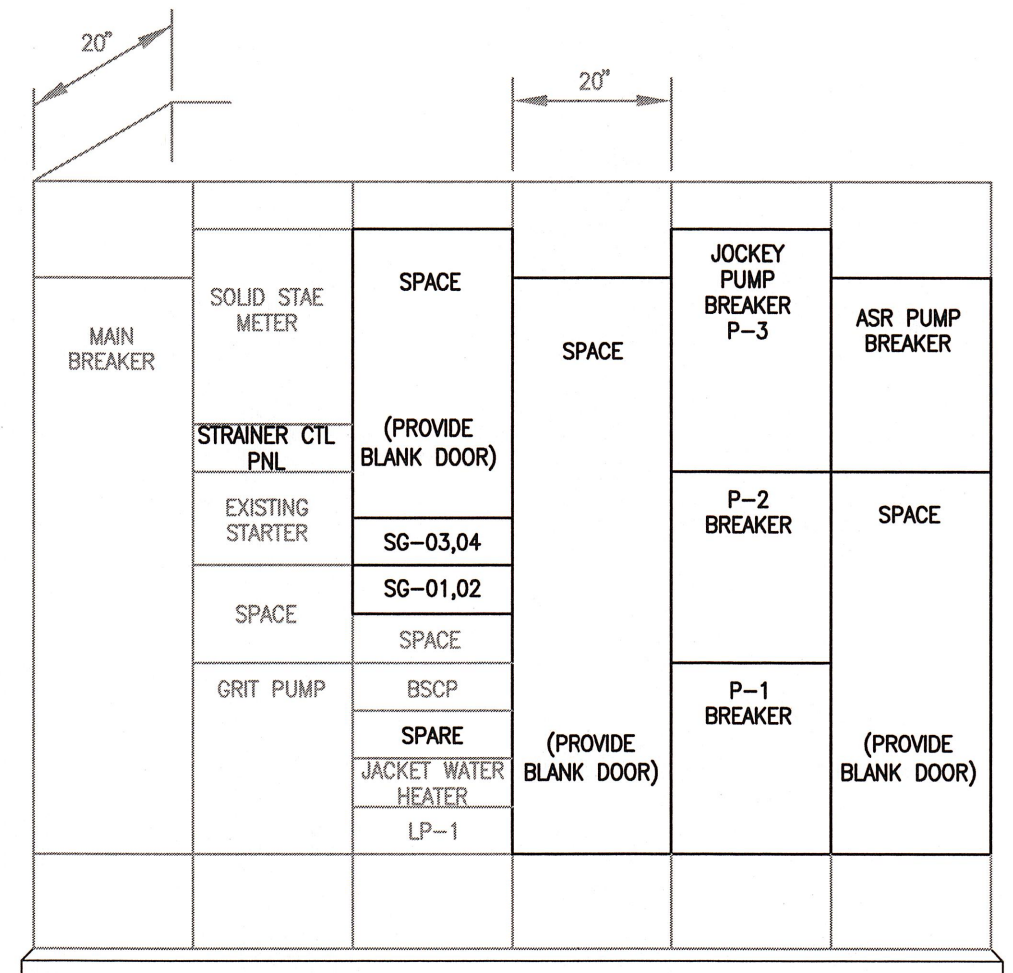
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 XREFS: G-BD



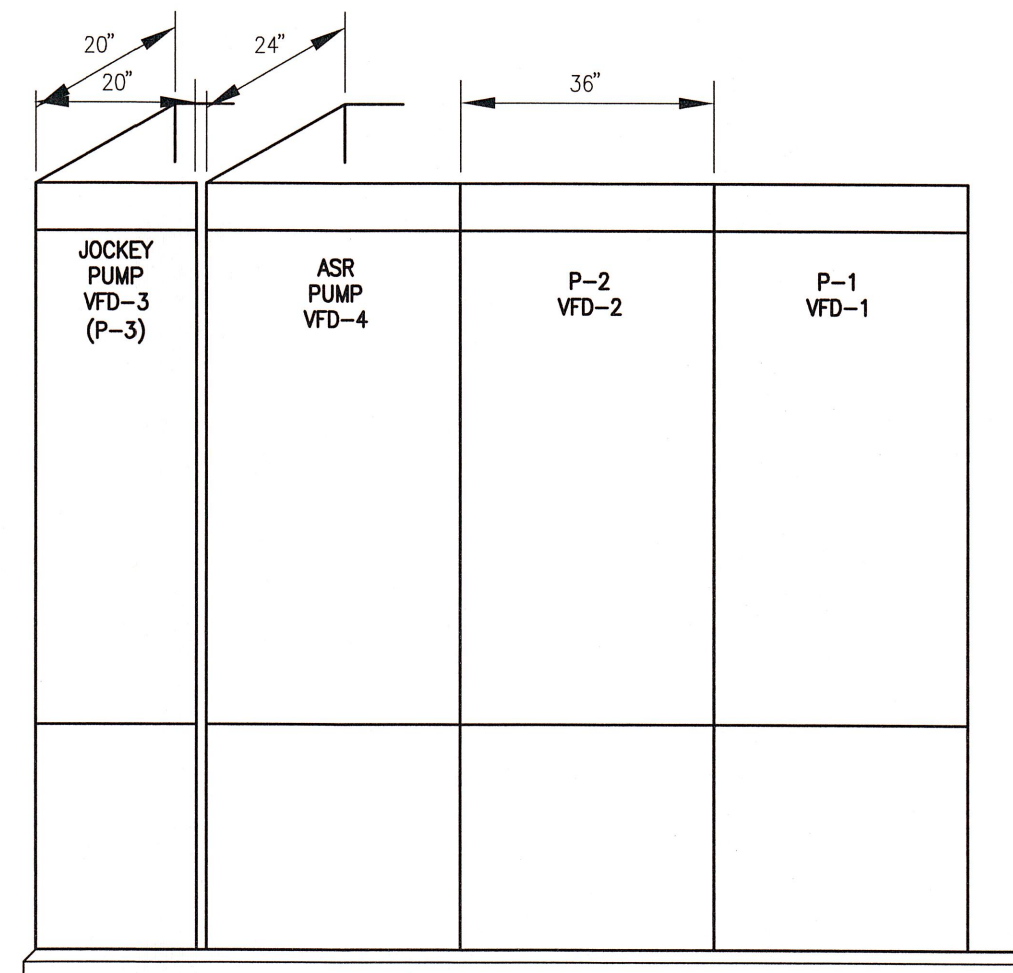
SINGLE LINE DIAGRAM



EXISTING MCC-1 ELEVATION



EXISTING MCC-1 MODIFIED ELEVATION



VFD ELEVATION

Tag No.	Description	Connected HP	Connected FLA	Connected VA	Demand HP	Demand VA	Source	Future Load	Generator Load
VFD P-1	Pump 1	125	156	129696	125	129696	MCC		1
VFD P-2	Pump 2	125	156	129696	125	129696	MCC		1
VFD P-3	Jockey Pump	25	34	28267			MCC		
VFD ASR PUMP	ASR Pump	88	96	79813			MCC		
STRAINER 1	Strainer	1	1.8	1496	0.5	1496	MCC		1
STRAINER 2	Strainer	1	1.8	1496	0.5	1496	MCC		1
SNV-1	Screen Conveyor	3	4.8	3991	3	3991	MCC		1
SCR-1	Bar Screen Drive 1	1	1.8	1496	1	1496	MCC		1
SCR-2	Bar Screen Drive 2	1	1.8	1496			MCC		
LP-1	Generator Jacket Water Heater			10000		10000	MCC		
SG-01	Motorized Slide Gate	1	1.8	1496	1	1496	MCC		1
SG-02	Motorized Slide Gate	1	1.8	1496	1	1496	MCC		1
SG-03	Motorized Slide Gate	1	1.8	1496	1	1496	MCC		1
SG-04	Motorized Slide Gate	1	1.8	1496	1	1496	MCC		1

Connected Load		
TOTAL -	KVA	A
	417	502

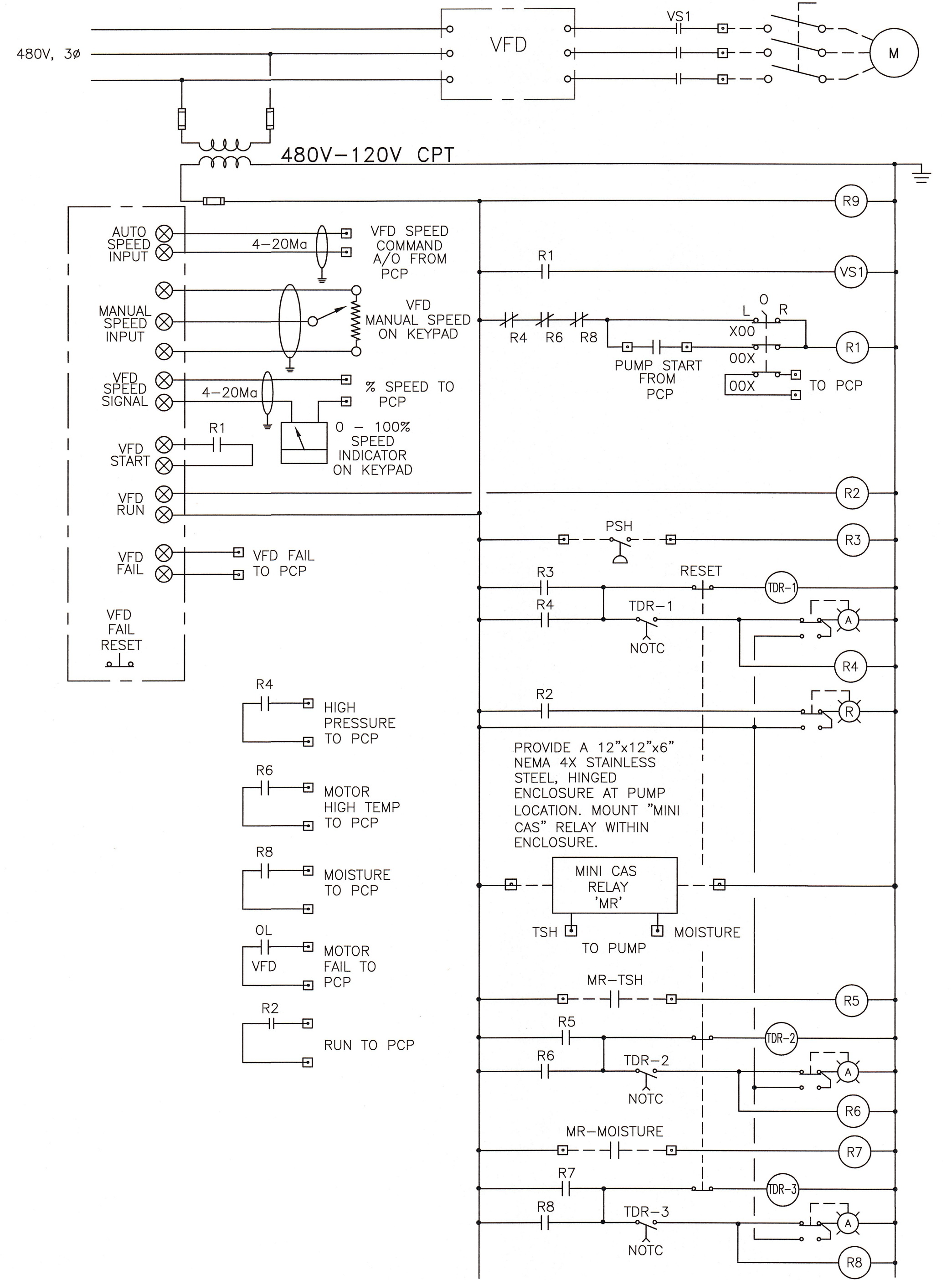
Demand Load		
TOTAL -	KVA	A
	302	363

Generator Load		
TOTAL -	KVA	A
	292	351

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>APPR</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	REV	DATE	DESCRIPTION	APPR					<p>VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY</p>	<p>DESIGNED BY: DK DRAWN BY: DK CHECKED BY: MAP DATE: SEPT 2013</p>	<p>PROJECT ENGINEER: MARK A. PELLUSH P.E. REG NUMBER: 46906 PROJECT NUMBER: 60289240</p>		<p>AECOM Technical Services, Inc. 4415 Metro Parkway, Suite 404 Fort Myers, Florida 33916 T 239.278.7996 F 239.278.0913 FL Engineering Business No. EB-8115 www.aecom.com</p>	<p>CITY OF NAPLES STREETS AND STORMWATER DEPARTMENT 295 RIVERSIDE CIRCLE NAPLES, FLORIDA 34102 PHONE: 239-213-5000 FAX: 239-213-5010</p>	<p>CITY OF NAPLES PUBLIC WORKS PUMP STATION</p> <p>SINGLE LINE DIAGRAM</p>	<p>DRAWING: E-601 SHEET: 26 OF SHEETS: </p>
REV	DATE	DESCRIPTION	APPR													

CONDUIT		CONDUCTORS	FROM	TO	REMARKS
NUMBER	SIZE	POWER, GROUND, & CONTROL			
100	3"	3#250kcmil, 1#4 G.	EXISTING MCC-1 (P-1)	VFD-1	
101	3"	3#250kcmil, 1#4 G.	VFD-1	EXISTING MCC-1 (P-1)	PROVIDE LUGS AND SPLICE TO EXISTING CABLES
102	3"	3#250kcmil, 1#4 G.	EXISTING MCC-1 (P-2)	VFD-2	
103	3"	3#250kcmil, 1#4 G.	VFD-2	EXISTING MCC-1 (P-2)	PROVIDE LUGS AND SPLICE TO EXISTING CABLES
104	1"	3#6, 1#8 G.	EXISTING MCC-1 (P-3)	VFD-3	
105	1"	3#6, 1#8 G.	VFD-3	EXISTING MCC-1 (P-3)	PROVIDE LUGS AND SPLICE TO EXISTING CABLES
106	1-1/2"	3#20, 1#6 G.	EXISTING MCC-1 (ASR PUMP)	VFD-4	
107	1-1/2"	3#20, 1#6 G.	VFD-4	ASR PUMP	
108	1"	3#12, 1#12 G.	EXISTING MCC-1	STRAINER CTL PNL	
109	1"	12#14, 1#14 G.	STRAINER CTL PNL	TELEMETRY CABINET	
110	1"	RS 485, COAX CABLE	CAMERA 2	CAMERA 1	CONT. IN C. 111
111	1-1/4"	RS 485, (2)COAX CABLE	CAMERA 1	DVR RECORDER	
112	1"	8#14, 1#14 G.	ASR PUMP CTL	VFD-4	
113	1-1/2"	18#14, 1#14 G.	VFD-1	PCP	
		18#14, 1#14 G.	VFD-2		
		18#14, 1#14 G.	VFD-3		
		18#14, 1#14 G.	VFD-4		
114	1-1/4"	(2)2/C #18 TSP	VFD-1	PCP	
		(2)2/C #18 TSP	VFD-2		
		(2)2/C #18 TSP	VFD-3		
		(2)2/C #18 TSP	VFD-4		
115	1"	3#12, 1#12 G.	EXISTING SCREEN CONVEYOR DISCONNECT SWITCH	SCREEN CONVEYOR	
116	1"	10#14, 1#14 G.	SCREEN CONVEYOR CTL	EXISTING WIREWAY	CONNECT TO EXISTING CONTROL WIRES
117	1"	4#14, 1#14 G.	FLOAT	TELEMETRY CABINET	
118	1"	4#14, 1#14 G.	AUTOLUBE PNL 1,2	AUTOLUBE PNL 3,4	CONT. IN C. 119
119	1"	8#14, 1#14 G.	AUTOLUBE PNL 3,4	SCREEN CONVEYOR AUTOLUBE	CONT. IN C. 120
120	1"	10#14, 1#14 G.	CONVEYOR AUTOLUBE	TELEMETRY CABINET	
121	1"	2#12, 1#12 G.	EXISTING PANEL LP-1-15	SCREEN CONVEYOR AUTOLUBE	CONT. IN C. 122, 1P-.20A SPARE BREAKER
122	1"	2#12, 1#12 G.	SCREEN CONVEYOR AUTOLUBE	AUTOLUBE PNL 3,4	CONT. IN C. 123
123	1"	2#12, 1#12 G.	AUTOLUBE PNL 3,4	AUTOLUBE PNL 1,2	
124	1"	3#12, 1#12 G.	BSCP	BAR SCREEN 1	EXISTING CONDUIT AND WIRE, VIA DISC. SW.
125	1"	18#14, 1#14 G.	BSCP	BAR SCREEN 1 CTL	EXISTING CONDUIT, VIA WIREWAY
126	1"	3#12, 1#12 G.	BSCP	BAR SCREEN 2	EXISTING CONDUIT AND WIRE, VIA DISC. SW.
127	1"	18#14, 1#14 G.	BSCP	BAR SCREEN 2 CTL	EXISTING CONDUIT, VIA WIREWAY
128	1"	2#12, 1#12 G.	EXISTING PANEL LP-1-17	CAMERA 1	1P-.20A SPARE BREAKER, CONT. IN C. 129
129	1"	C.O.	EXISTING PANEL LP-1	STUB-UP & CAP AT ASR FLOW TRANSMITTER	
130	1"	4#14, 1#14 G.	PRESSURE SWITCH	VFD-4	
131	1"	FLOW METER TRANSMITTER CABLE	FLOW METER	FLOW TRANSMITTER	
132	1"	2#14, 1#14 G.	RG-01	TELEMETRY CABINET	
133	1"	16#14, 1#14 G.	BSCP	TELEMETRY CABINET	
134	1"	6#14, 1#14 G.	EXISTING ATS-1	TELEMETRY CABINET	
135	1"	2/C #18 TSP	DIESEL FUEL STORAGE TANK LEVEL SENSOR	TELEMETRY CABINET	
136	1"	2#12, 1#12 G.	EXISTING PANEL LP-1-21	SACP, DVR, FLOW METER	PROVIDE GE BREAKER
137	1"	2#12, 1#12 G.	EXISTING PANEL LP-1-22	PCP	PROVIDE GE BREAKER
138	1"	4#14, 1#14 G.	SACP	DOOR INTRUSION SWITCHES	
139	1"	4#14, 1#14 G.	SACP	TELEMETRY CABINET	
140	1"	2#14, 1#14 G.	EXISTING MCC-1 (FS-1)	VFD-1	
		2#14, 1#14 G.	EXISTING MCC-1 (FS-2)	VFD-2	
		2#14, 1#14 G.	EXISTING MCC-1 (FS-3)	VFD-3	
141	1"	2#10, 1#10 G.	CAMERA 1	CAMERA 2	
142	1"	4#14, 1#14 G.	BSCP	PCP	
143	1"	2#12, 1#12 G.	EXISTING PANEL LP-1-23	TELEMETRY CABINET	PROVIDE GE BREAKER
144	1"	2/C #18 TSP	THERMOSTAT	TELEMETRY CABINET	
145	1-1/4"	32#14, 1#14 G.	EXISTING GENERATOR ANNUNCIATOR PNL	TELEMETRY CABINET	
146	1"	CAT 5 CABLE	PCP	TELEMETRY CABINET	
147	1"	2#12, 1#12 G.	EXISTING MCC-1	SG-01	
148	1"	2#12, 1#12 G.	SG-01	SG-02	

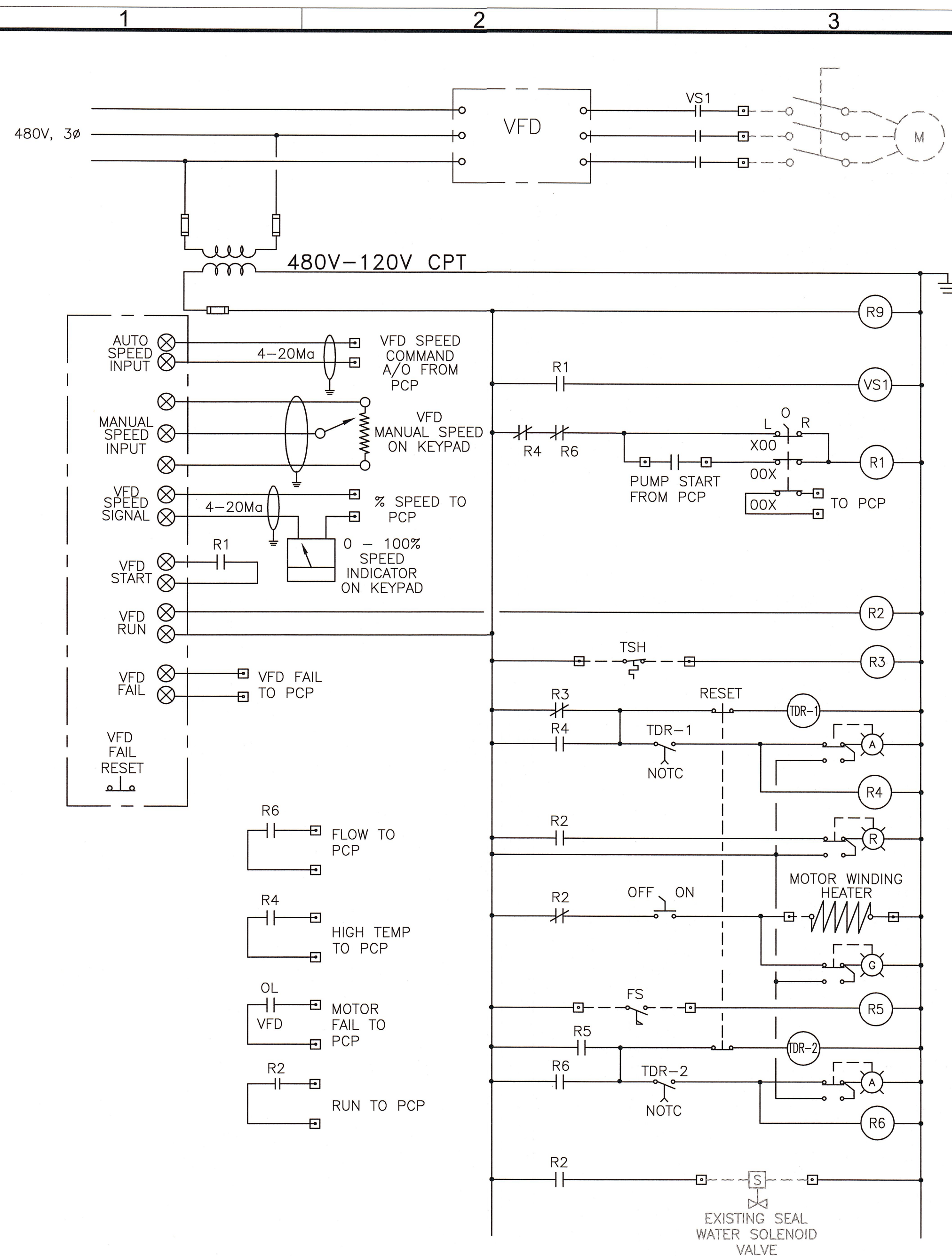
CONDUIT		CONDUCTORS	FROM	TO	REMARKS
NUMBER	SIZE	POWER, GROUND, & CONTROL			
149	1"	12#14, 1#14 G.	SG-02	SG-01	
150	1"	24#14, 1#14 G.	SG-01	TELEMETRY CABINET	
151	1"	2#12, 1#12 G.	EXISTING MCC-1	SG-03	
152	1"	2#12, 1#12 G.	SG-03	SG-04	
153	1"	12#14, 1#14 G.	SG-04	SG-03	
154	1"	24#14, 1#14 G.	SG-03	TELEMETRY CABINET	
155	1"	CAT 5 CABLE	SACP	KEY PAD	
156	1"	2/C #18 TSP	FLOW METER	PCP	



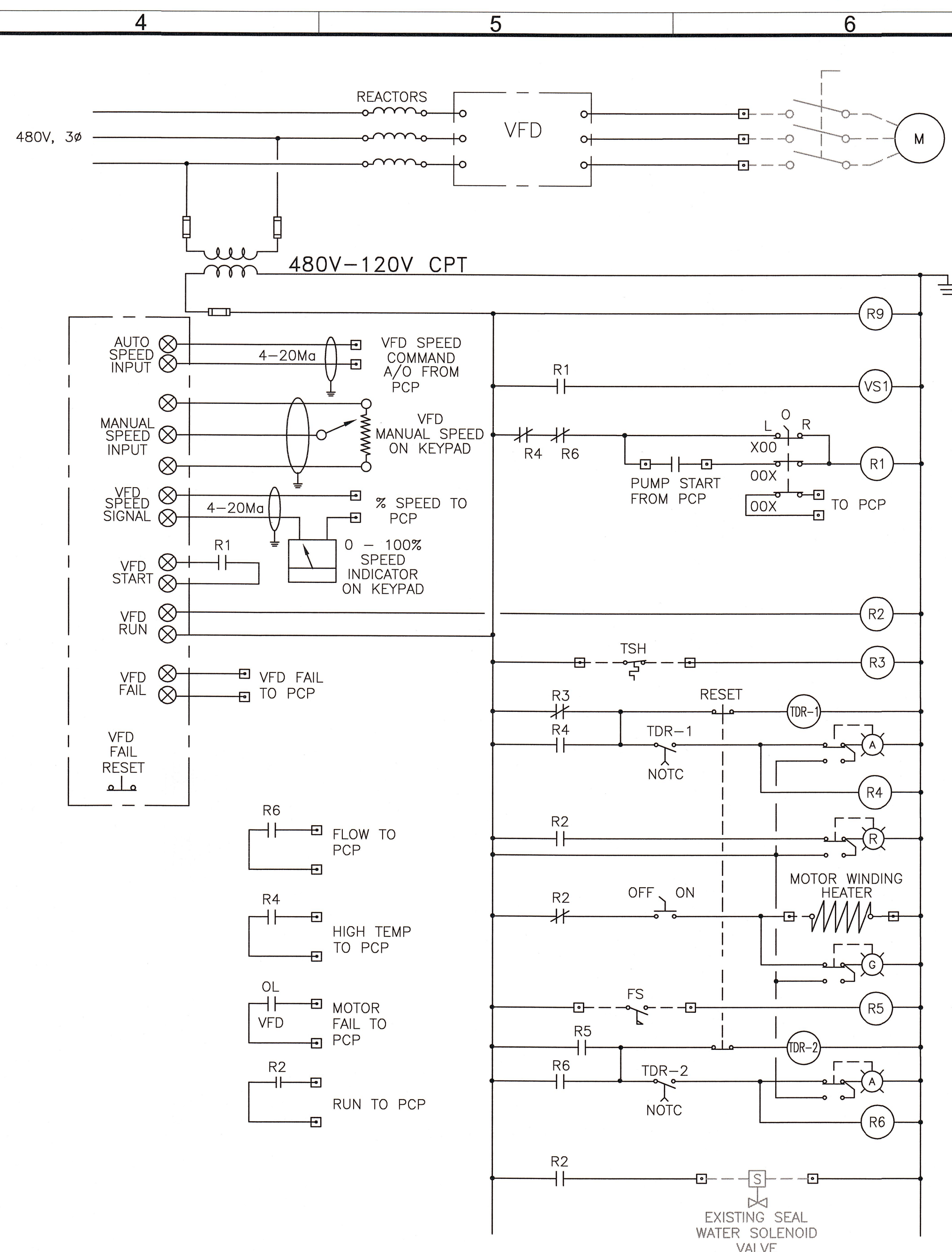
TYPICAL VFD CONTROL SCHEMATIC DIAGRAM
TYPICAL FOR: ASR PUMP

DMS: X:\City of Naples\60289240-Fort Royal and Public Works Pump Station\000 CAD\Public Works\Works\Sheets\E-602.dwg
 XREFS: C-BD
 Layout Name: E-602 - Plotted by: Koppalamm, Doug Date: 9/18/2013 - 1:50 PM

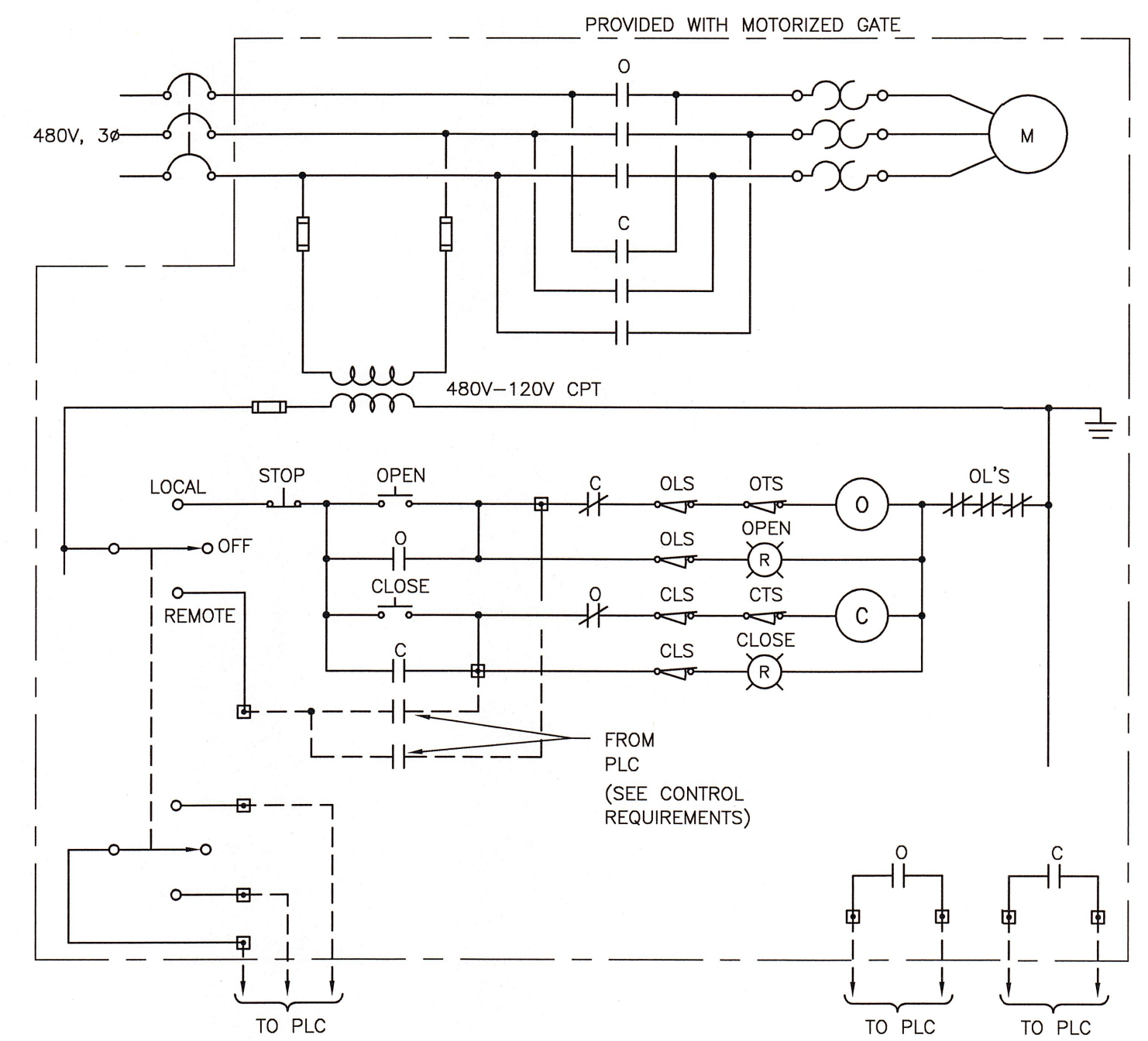
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DESIGNED BY: DK DRAWN BY: DK CHECKED BY: MAP DATE: SEPT 2013	PROJECT ENGINEER: MARK A. PELLISH P.E. REG NUMBER: 46906 PROJECT NUMBER: 60289240				CITY OF NAPLES PUBLIC WORKS PUMP STATION CONDUIT SCHEDULE AND MOTOR CONTROL SCHEMATIC WIRING DIAGRAM	DRAWING: E-602 SHEET: 27 OF: SHEETS
	AECOM Technical Services, Inc. 4415 Metro Parkway, Suite 404 Fort Myers, Florida 33916 T: 239-278-7996 F: 239-278-0913 FL Engineering Business No. EB-8115 www.aecom.com	CITY OF NAPLES STREETS AND STORMWATER DEPARTMENT 295 RIVERSIDE CIRCLE NAPLES, FLORIDA 34102 PHONE: 239-213-5000 FAX: 239-213-5010					



TYPICAL VFD CONTROL SCHEMATIC DIAGRAM
TYPICAL FOR: PUMP NO. 1 & 2



TYPICAL VFD CONTROL SCHEMATIC DIAGRAM
TYPICAL FOR: JOCKEY PUMP



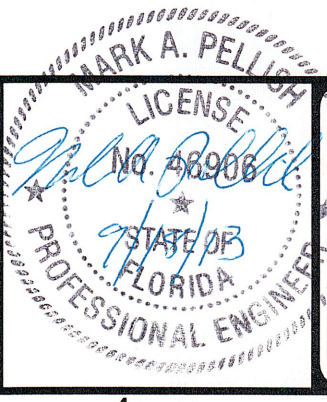
MOTORIZED GATE CONTROL SCHEMATIC DIAGRAM
TYPICAL FOR: SG-01, 02, 03, 04

DWG: A:\City of Naples\60289240-Port Royal and Public Works Pump Station\CAD\Public Works\Sheets\E-E-603.dwg Layout Name: E-603 - Plotted by: Koppalamm, Doug Date: 9/18/2013 - 1:50 PM
 XREFS: G-BD

REV	DATE	DESCRIPTION	APPR

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

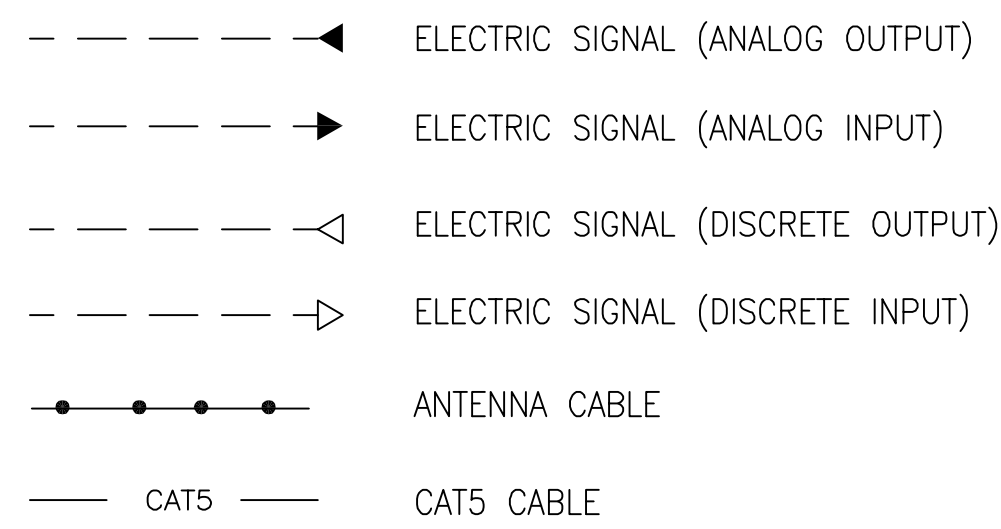
DESIGNED BY: DK
 PROJECT ENGINEER: MARK A. PELLISH P.E.
 DRAWN BY: DK
 REG NUMBER: 46906
 CHECKED BY: MAP
 PROJECT NUMBER: 60289240
 DATE: SEPT 2013



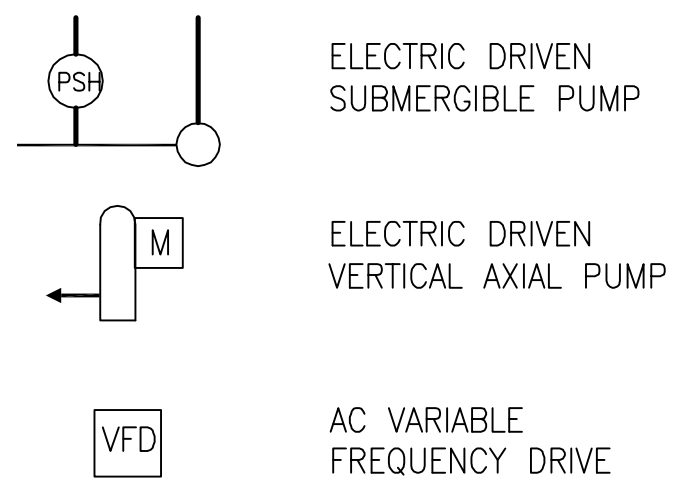
CITY OF NAPLES
PUBLIC WORKS PUMP STATION
MOTOR CONTROL SCHEMATIC WIRING DIAGRAM

DRAWING: E-603
 SHEET: 28
 OF SHEETS: 28

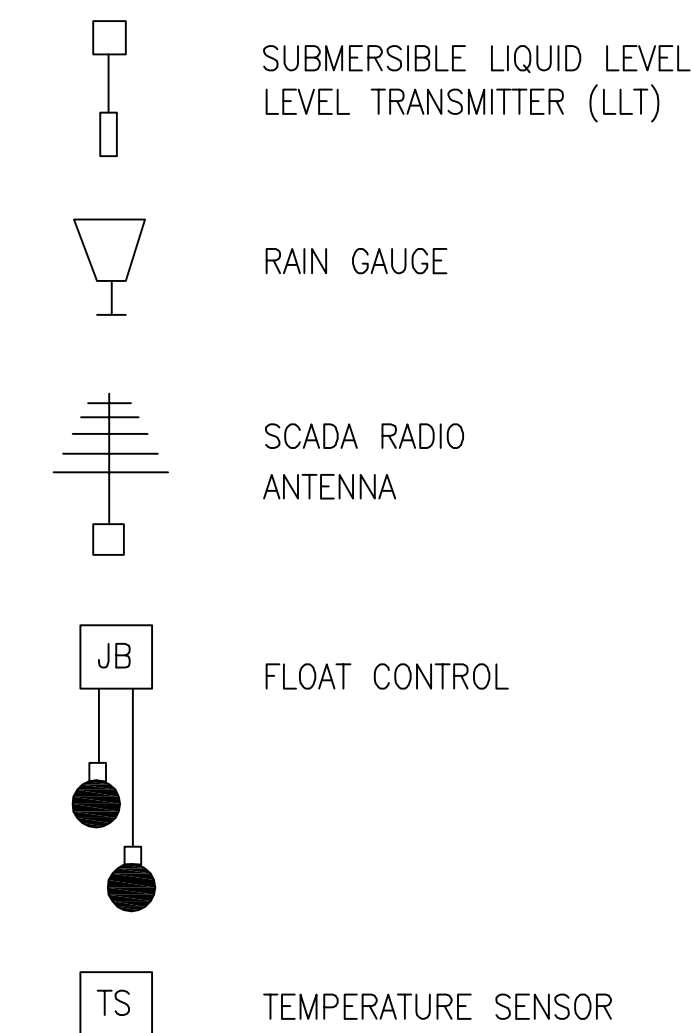
INSTRUMENT LINE SYMBOLS



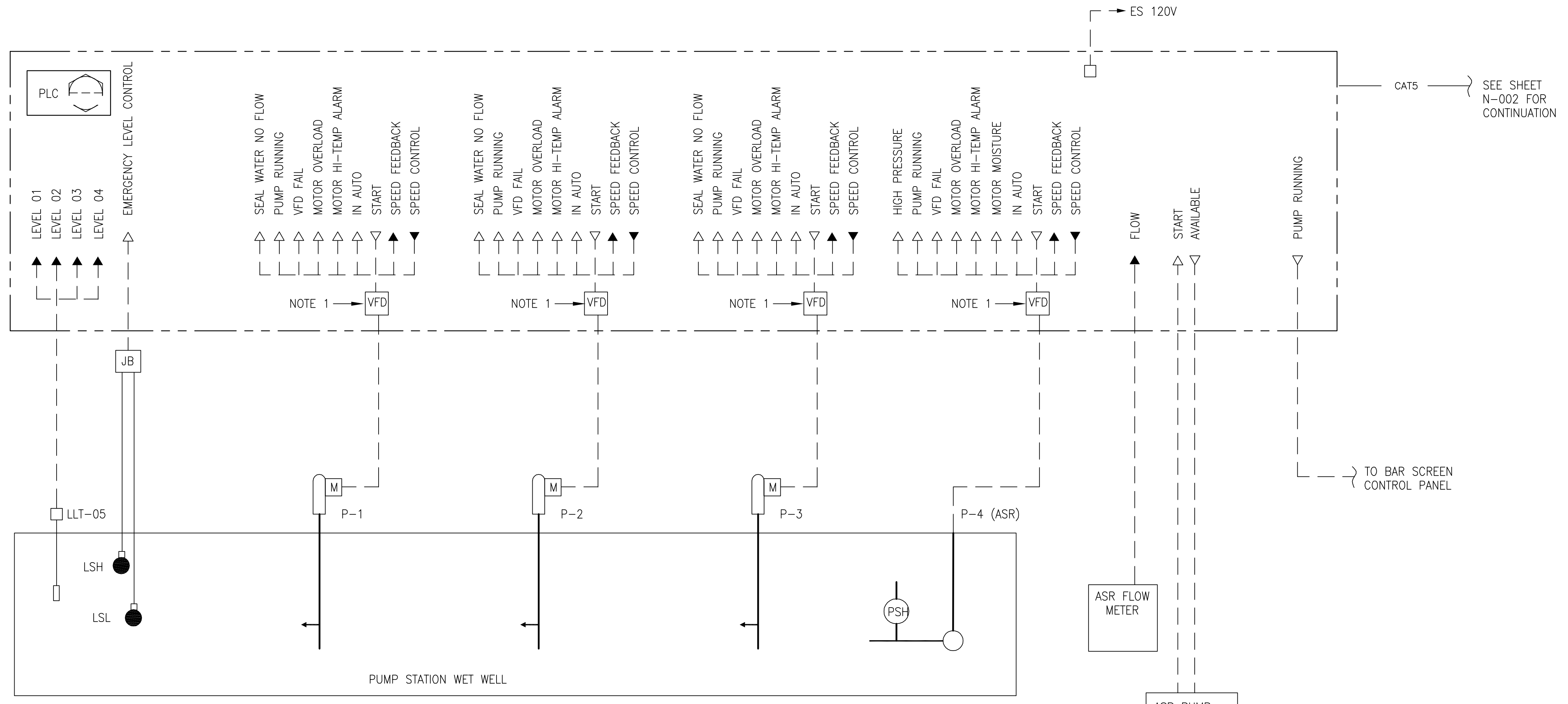
PUMPS MOTORS & DRIVES



PRIMARY ELEMENTS



CONTROL & INSTRUMENTATION DIAGRAM
PUMP CONTROL PANEL (PCP)



SCHEDULE 'A' P-1 INPUTS FROM PUMP P-1	
A	SEAL WATER NO FLOW
B	PUMP RUNNING
C	VFD FAIL
D	MOTOR OVERLOAD
E	MOTOR HI-TEMP ALARM
F	IN AUTO

SCHEDULE 'B' P-2 INPUTS FROM PUMP P-2	
A	SEAL WATER NO FLOW
B	PUMP RUNNING
C	VFD FAIL
D	MOTOR OVERLOAD
E	MOTOR HI-TEMP ALARM
F	IN AUTO

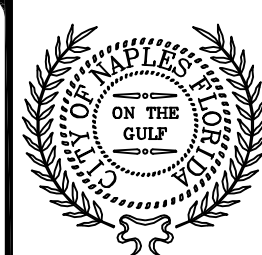
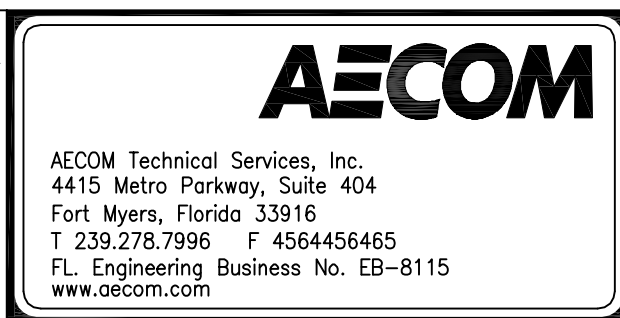
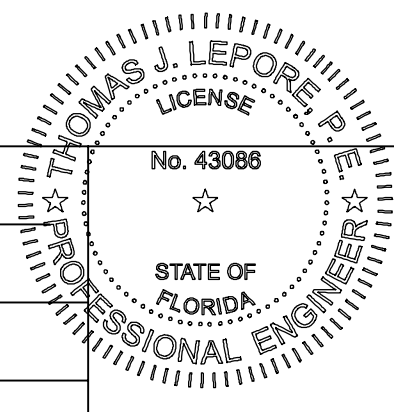
SCHEDULE 'C' P-3 INPUTS FROM PUMP P-3	
A	SEAL WATER NO FLOW
B	PUMP RUNNING
C	VFD FAIL
D	MOTOR OVERLOAD
E	MOTOR HI-TEMP ALARM
F	IN AUTO

SCHEDULE 'D' P-4 INPUTS FROM PUMP P-4	
A	HIGH PRESSURE
B	PUMP RUNNING
C	VFD FAIL
D	MOTOR OVERLOAD
E	MOTOR HI-TEMP ALARM
F	MOTOR MOISTURE
G	IN AUTO

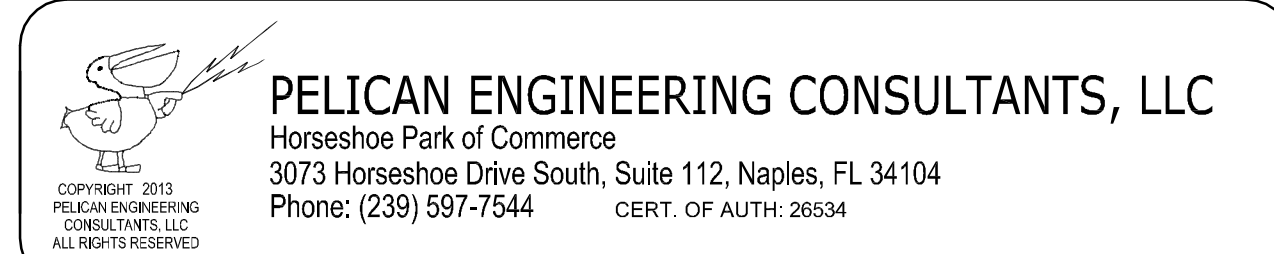
NOTES:

- FOR CONTROL WIRING SCHEMATIC SEE DRAWING E-602 & E-603

DWG: T:\Projects\2012 Projects\121104 CITY OF NAPLES AECOM\DRAWINGS\CITY OF NAPLES AECOM (99.95)\121104A N-001-29 CONTROL AND INSTRUMENTATION AND INST DIA 9-12-2013.dwg
 Layout Name: N-001-29 - Plotted by: 6 Date: 9/18/2013 - 3:56 PM



CITY OF NAPLES
STREETS AND STORMWATER DEPARTMENT
295 RIVERSIDE DRIVE NAPLES, FLORIDA 34102
PHONE: 239-213-5016 FAX: 239-213-5010



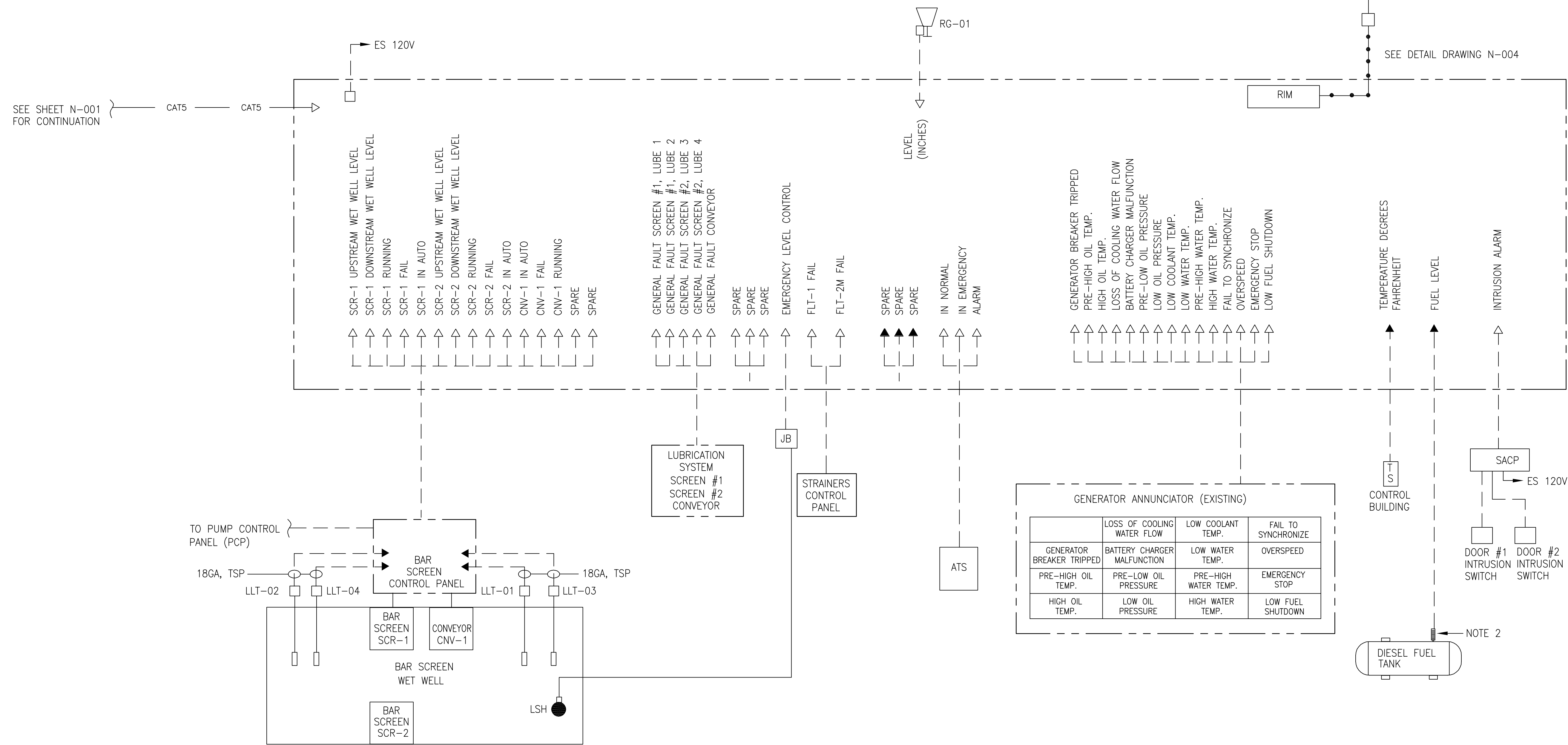
REV	DATE	DESCRIPTION	APPR

DESIGNED BY JS
PROJECT ENGINEER THOMAS J. LEPORE, P.E.
DRAWN BY LM
REG NUMBER 43086
CHECKED BY TJL
PROJECT NUMBER 121104A
DATE SEPT 2013

VERIFY SCALES
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CITY OF NAPLES PUBLIC WORKS PUMP STATION		DRAWING N-001
CONTROL & INSTRUMENTATION DIAGRAM		SHEET 29 OF - SHEETS

CONTROL & INSTRUMENTATION DIAGRAM REMOTE TERMINAL UNIT (RTU-1)



NOTES:

- FOR CONTROL WIRING SCHEMATIC SEE DRAWING E-602 & E-603
- PROVIDE FUEL TANK LEVEL SENSOR AS SPECIFIED SECTION 405020 INSTRUMENTATION EQUIPMENT.

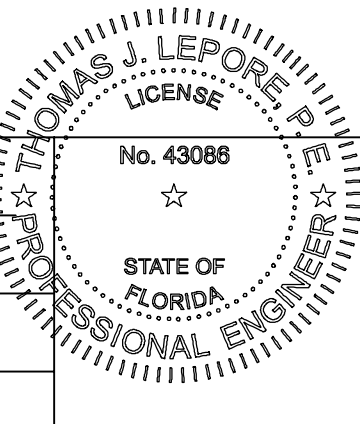
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REV	DATE	DESCRIPTION	APPR

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

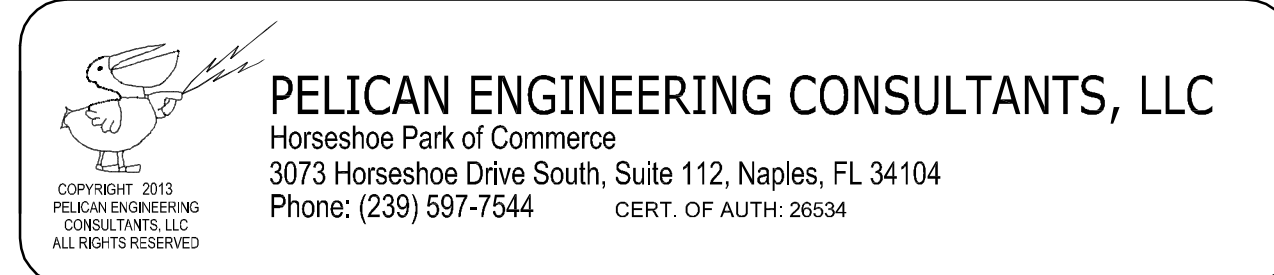
DESIGNED BY: JDS
 DRAWN BY: LM
 CHECKED BY: TJL
 DATE: SEPT 2013

PROJECT ENGINEER: THOMAS J. LEPORE, P.E.
 REG NUMBER: 43086
 PROJECT NUMBER: 121104A



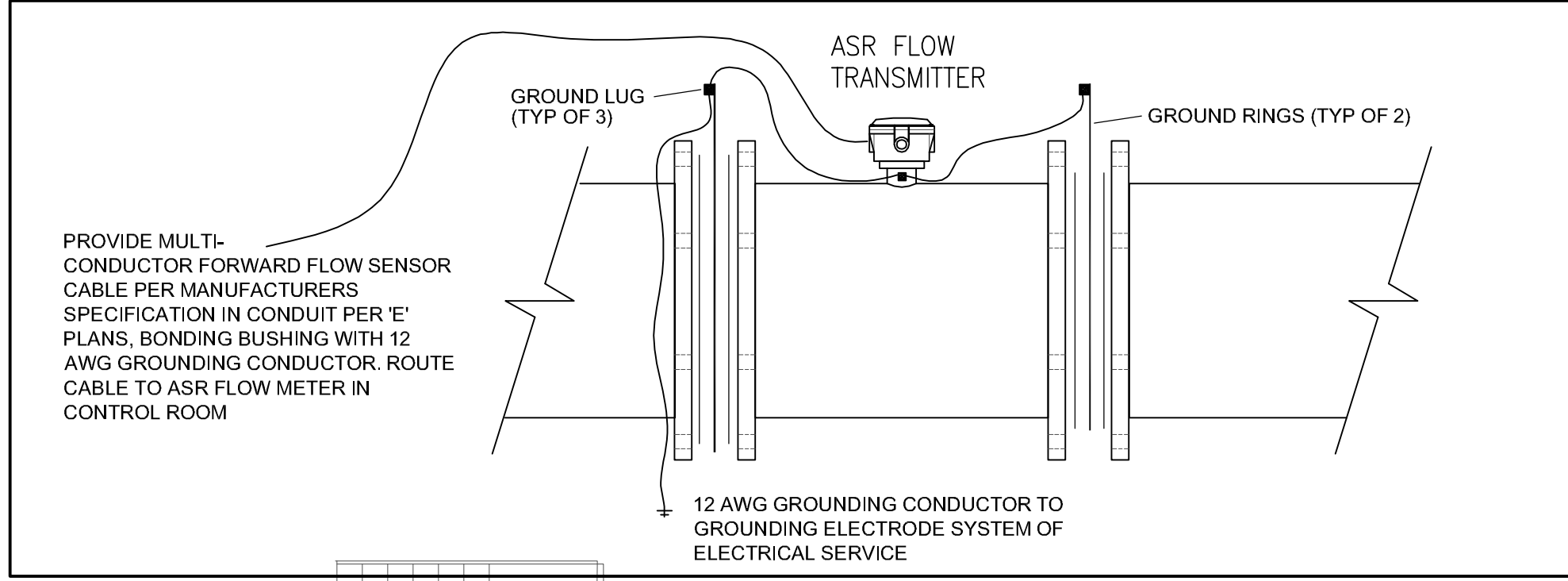
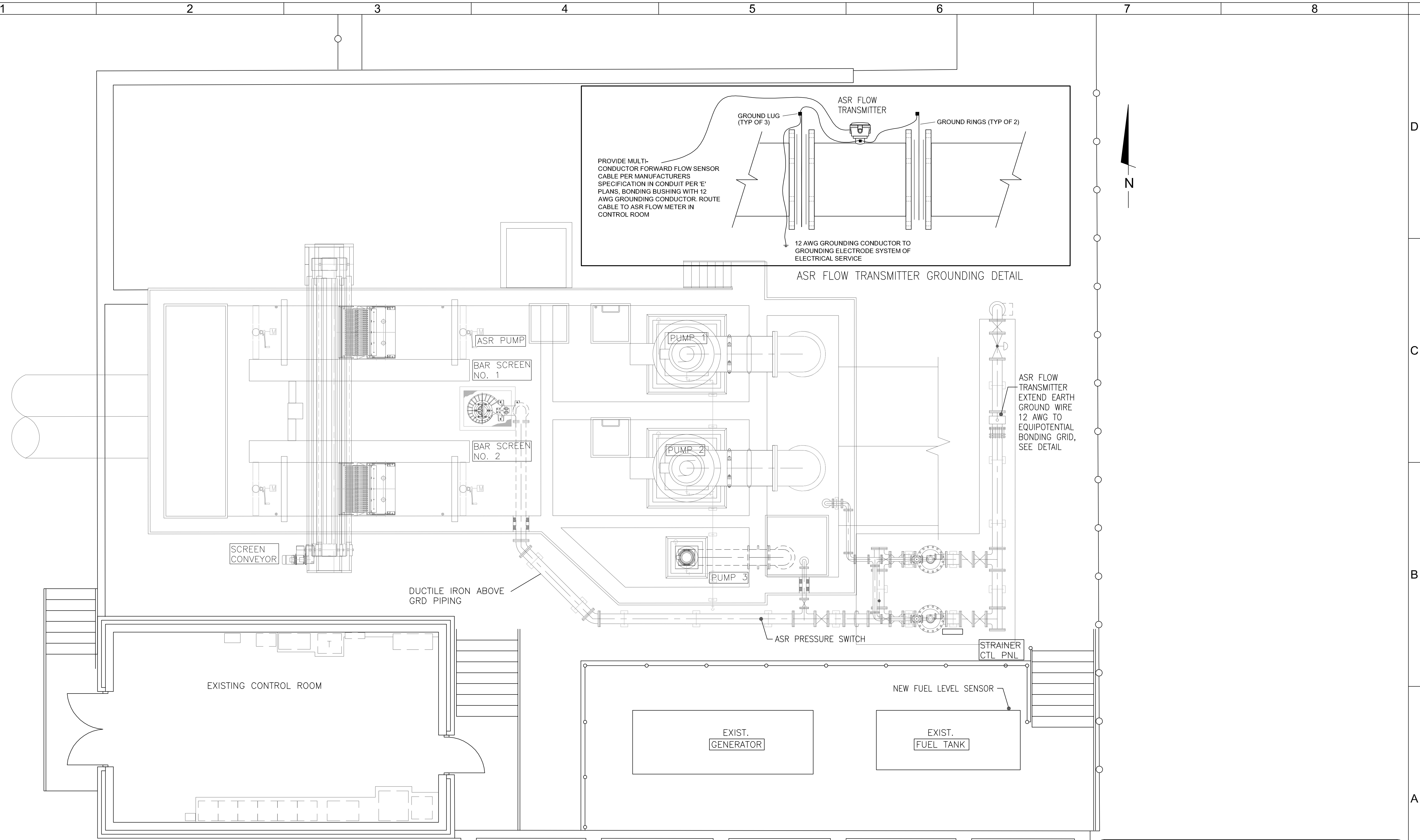
**CITY OF NAPLES
PUBLIC WORKS PUMP STATION**

CONTROL & INSTRUMENTATION DIAGRAM




DRAWING: N-002
 SHEET: 30
 OF SHEETS: 30

DWG: T:\a\Projects\121104A_City of Naples AECOM Drawings\CITY OF NAPLES AECOM (99.97)\121104A_N-003-31 OVERALL PLANS.dwg Layout Name: N-003-31 - Plotted by: 6 Date: 9/18/2013 - 4:23 PM
 PLOT: 121104A_XREF 0-BD - Building - pec



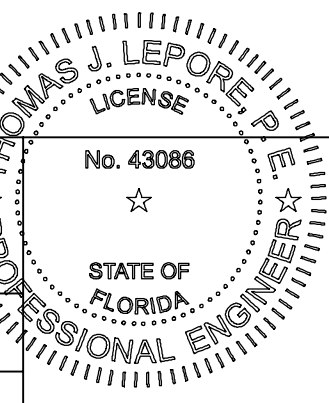
ASR FLOW TRANSMITTER EXTEND EARTH GROUND WIRE 12 AWG TO EQUIPOTENTIAL BONDING GRID, SEE DETAIL

PUMP STATION PLAN
SCALE: 1/4" = 1'-0"


PELICAN ENGINEERING CONSULTANTS, LLC
 Horseshoe Park of Commerce
 3073 Horseshoe Drive South, Suite 112, Naples, FL 34104
 Phone: (239) 597-7544 CERT. OF AUTH: 26534

REV	DATE	DESCRIPTION	APPR

DESIGNED BY JDS	PROJECT ENGINEER THOMAS J. LEPORE, PE
DRAWN BY LM	REG NUMBER 43086
CHECKED BY TJL	PROJECT NUMBER 121104A
DATE SEPT 2013	




 AECOM Technical Services, Inc.
 4415 Metro Parkway, Suite 404
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 www.aecom.com



CITY OF NAPLES
 STREETS AND STORMWATER DEPARTMENT
 295 RIVERSIDE CIRCLE NAPLES, FLORIDA 34102
 PHONE: 239-213-5000 FAX: 239-213-5010

CITY OF NAPLES PUBLIC WORKS PUMP STATION PROPOSED OVERALL PLAN		DRAWING N-003
NEW FUEL LEVEL SENSOR		SHEET 31 OF -- SHEETS

LEGEND

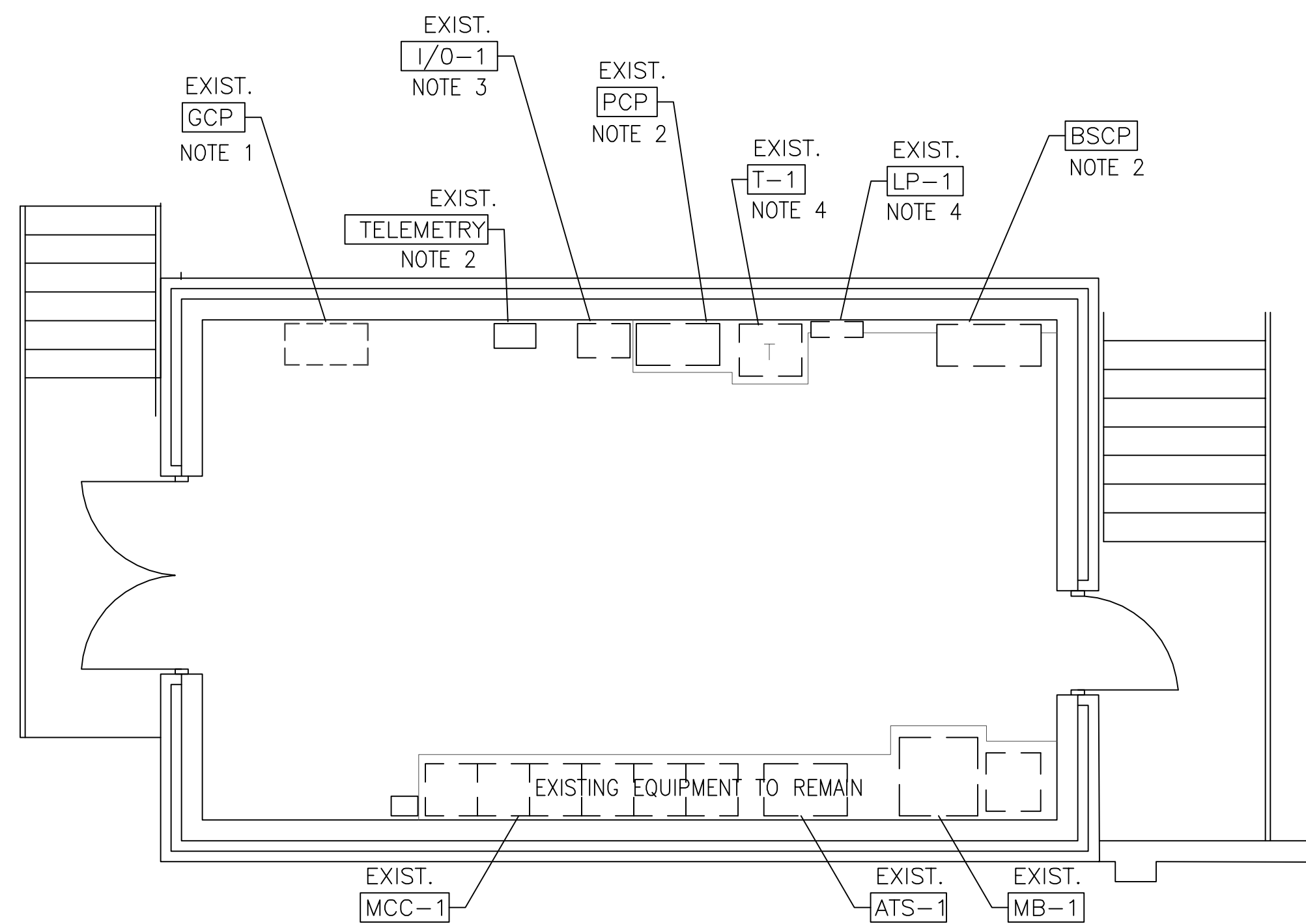
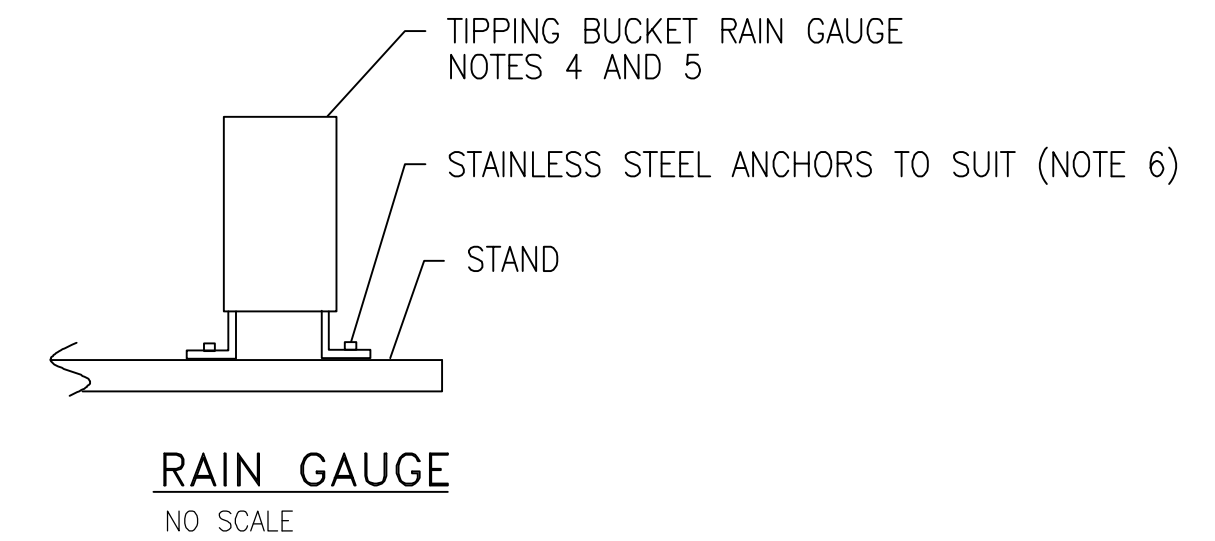
EXISTING - - - - -
 PROPOSED - - - - -

NOTES:

1. TO BE REMOVED. NOT IN USE
2. REMOVE AND REPLACE WITH NEW CABINET
3. REMAIN AND REUSE
4. NO CHANGE IN SCOPE OF WORK

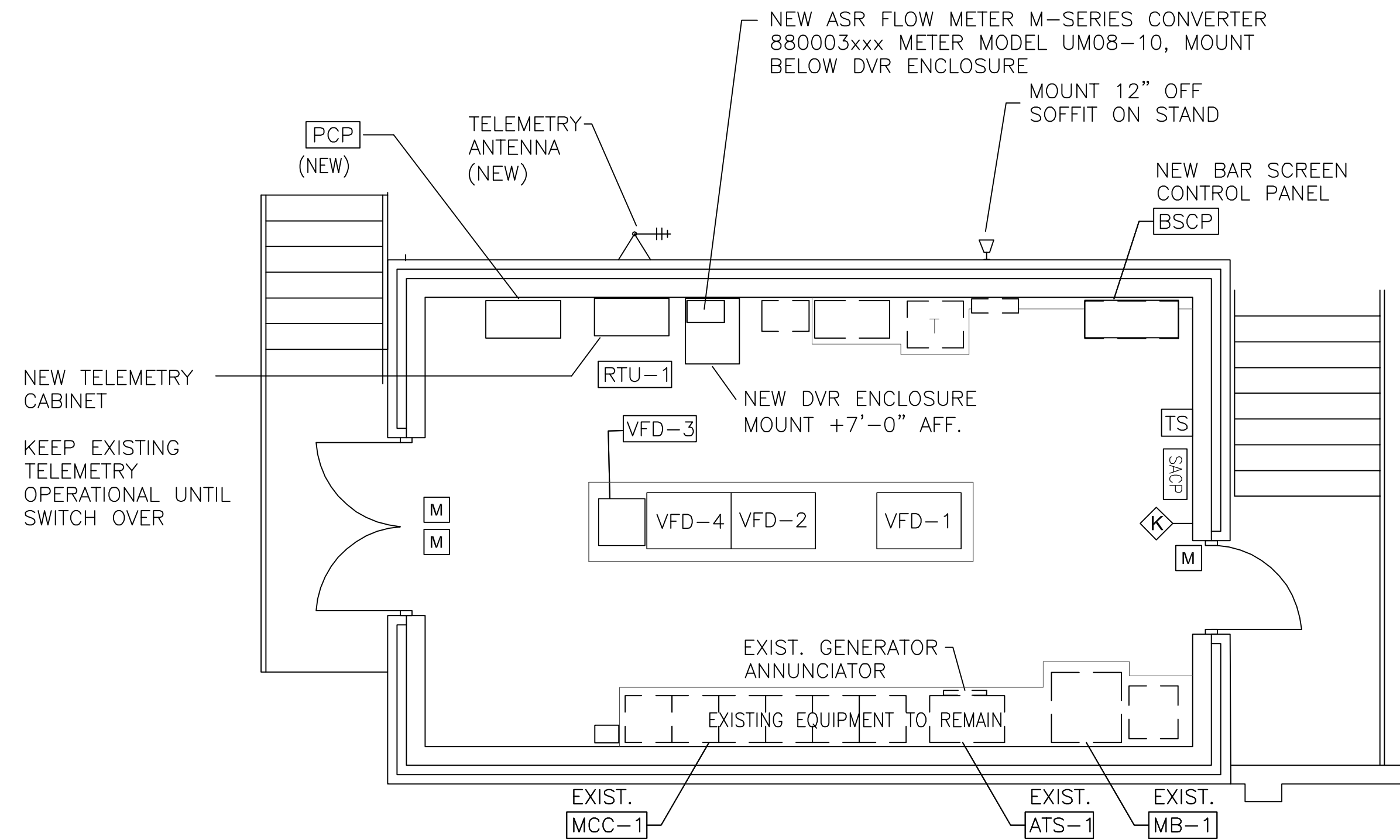
NOTES:

1. MOUNTING STANDOFF PVC PIPE SUPPORT SHALL BE MADE ENTIRELY OF 316 STAINLESS STEEL. PROVIDE ANGLE, U-BOLTS, WALL PLATE, WALL ANCHORS AND FITTINGS SHALL BE STAINLESS STEEL.
2. JUNCTION BOX SHALL BE NEMA 4X, 316 STAINLESS STEEL WITH SCREW COVER, GASKET AND BACK MOUNTING PLATE TO SUIT. PROVIDE (2) 6 POINT 30A TERMINAL BLOCKS FOR WIRING TERMINATIONS.
3. PROVIDE 316 STAINLESS STEEL UNISTRUT SUPPORTS AS REQUIRED. ALL FITTINGS SHALL BE STAINLESS STEEL.
4. TIPPING BUCKET RAIN GAUGE LOCATION SHALL BE DETERMINED BY ENGINEER. PROVIDE ELECTRICAL CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
5. TIPPING BUCKET RAIN GAUGE SHALL BE ANCHORED TO RESIST 140 MPH WINDS.
6. ANCHORS AND BOLTS SHALL BE SEALED WITH APPROVED WATER AND WEATHERPROOF SEALANT.



DEMOLITION PLAN

SCALE: 1/4" = 1'-0"



PROPOSED PLAN

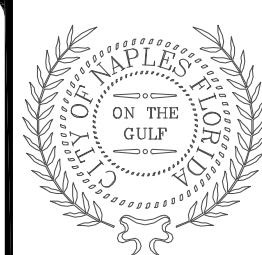
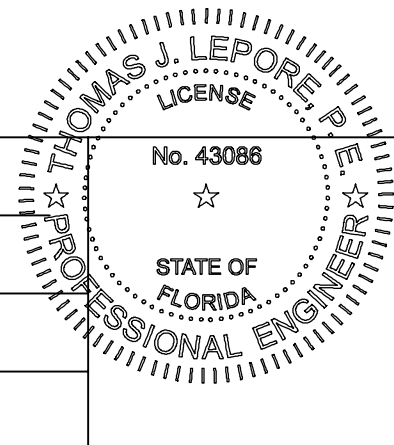
SCALE: 1/4" = 1'-0"

SECURITY SYSTEM LEGEND

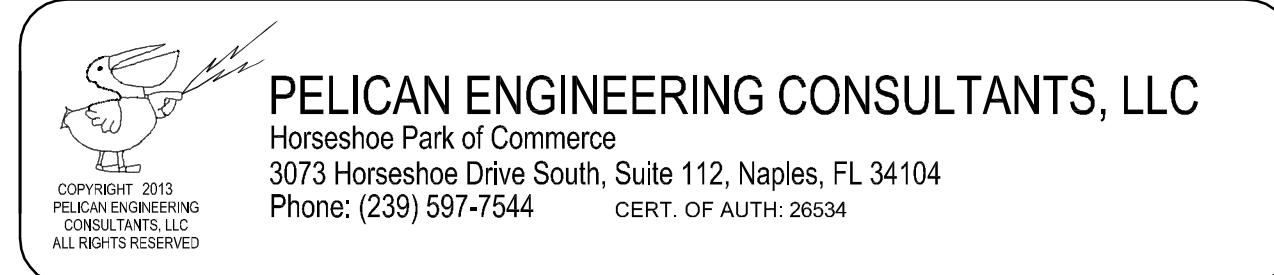
- SECURITY ALARM CONTROL PANEL
- SECURITY ALARM DOOR SWITCH 18/2 STR TO SECURITY CONTROL PANEL
- SECURITY ALARM KEY PAD WITH 18/4 STR TO SECURITY CONTROL PANEL



DWG: T:\a\Projects\121104_City of Naples Recom\Drawings\CITY OF NAPLES RECOM (98197)\121104_N-004-32_PLANS.dwg Layout Name: N-004-32 - Plotted by: 6 Date: 9/16/2013 - 4:24 PM
 PLOT: 121104_XREF_0-BD - Building - pec



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 STREETS AND STORMWATER DEPARTMENT
 295 RIVERSIDE CIRCLE NAPLES, FLORIDA 34102
 PHONE: 239-213-5000 FAX: 239-213-5010



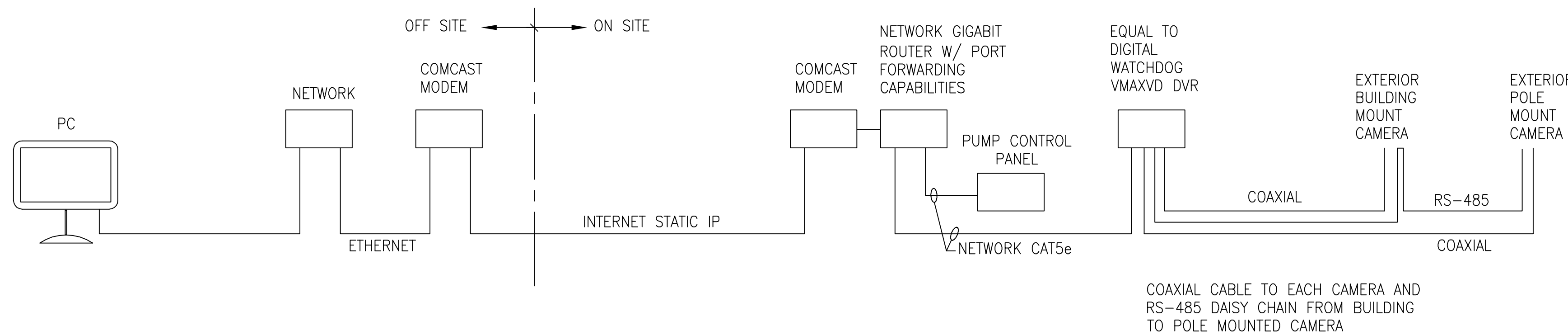
**CITY OF NAPLES
 PUBLIC WORKS PUMP STATION
 DEMOLITION PLAN AND PROPOSED
 CONTROL EQUIPMENT PLAN**

DRAWING
N-004
 SHEET
32
 OF -- SHEETS

REV	DATE	DESCRIPTION	APPR

DESIGNED BY JDS	PROJECT ENGINEER THOMAS J. LEPORE, PE
DRAWN BY LM	REG NUMBER 43086
CHECKED BY TJL	PROJECT NUMBER 121104A
DATE SEPT 2013	

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VIDEO SURVEILLANCE SYSTEM

NOT TO SCALE

COORDINATE INTERNET INSTALLATION AND SETUP WITH COMCAST AND CITY OF NAPLES IT DEPARTMENT.

PROVIDE 120VAC TO 12VDC RECTIFIER AND L-COM CAT # AL-D15P12DW, WITH RS-485 CONTROL + 12VDC POWER LINE PROTECTION, LOCATE AS CLOSE TO CAMERA AS POSSIBLE.

PROVIDE COAXIAL CABLE SURGE PROTECTION DEVICE LEA INTERNATIONAL BASE-BAND COAXIAL PROTECTOR CAT # IS-75BB/18, INSTALL INSIDE BUILDING FOR BOTH CAMERAS AND IN A WEATHERPROOF JUNCTION BOX FOR POLE MOUNT CAMERA.

COAXIAL CABLE TO EACH CAMERA AND RS-485 DAISY CHAIN FROM BUILDING TO POLE MOUNTED CAMERA

NETWORK ROUTER SPECIFICATIONS

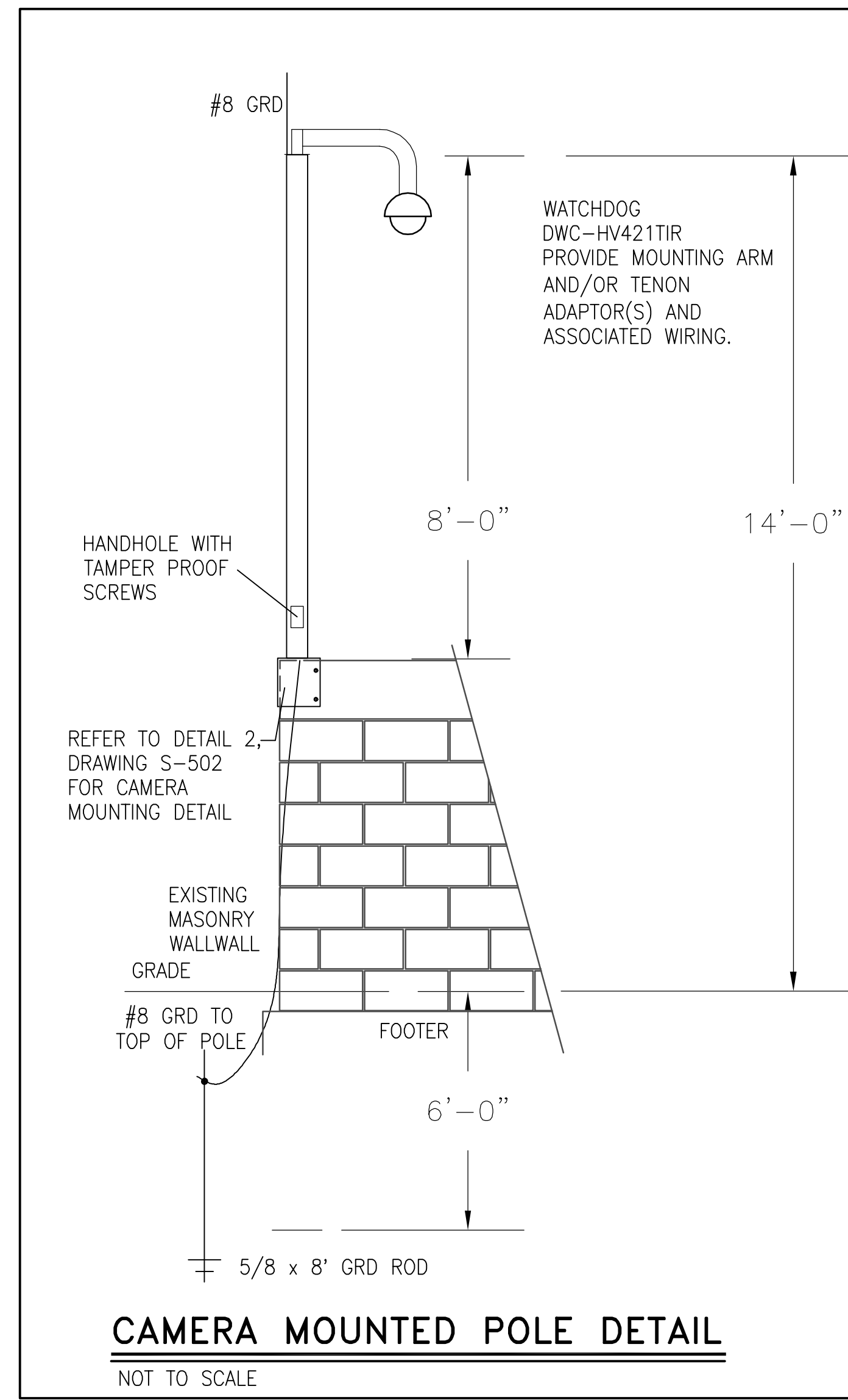
HARDWARE FEATURES:
 WAN: GIGABIT ETHERNET (10/100/1000) WAN PORT
 LAN: 4-PORT, FULL-DUPLEX 10/100/1000 ETHERNET SWITCH

SOFTWARE FEATURES:
 WAN TYPE: DYNAMIC/STATIC IP/PPPOE
 ROUTING: STATIC ROUTING, ROUTING INFORMATION PROTOCOL (RIPv1 & RIPv2)
 NETWORK: DHCP SERVER, DHCP CLIENT, DHCP ADDRESS RESERVATION, NETWORK ADDRESS TRANSLATION (NAT)
 QUALITY OF SERVICE: IP/PORT-BASED BANDWIDTH CONTROL
 PORT FORWARDING: VIRTUAL SERVER, PORT TRIGGERING, UPNP, DMZ
 ACCESS CONTROL LIST: IP/MAC/DOMAIN NAME FILTERING
 SECURITY: SPI FIREWALL, VPN PASSTHROUGH, DOS DEFENSE, IP/MAC ADDRESS BINDING

DVR VMAXHD, 1080p	
OPERATING SYSTEM	LINUX
VIDEO INPUT	4CH HD-SDI
VIDEO LIVE	FRAME RATE = 1~30fps, RESOLUTION 1920X1080/1280X720
VIDEO OUTPUT	HDMI, VGA, CVBS
AUDIO OUTPUT	INPUT 4CH LINE INPUT, 1CH LINE OUTPUT, AUDIO CODE G.711
ALARM SENSOR INPUT	4CH INPUT, NO/NC
ALARM OUT	1CH OUTPUT, ACTIVATED BY MOTION DETECTION OR VIDEO LOSS
SERIAL	(2) RS485 CONNECTORS FOR PTZ & CONTROLLER
RECORDING	COMPRESSION - H.264, RATE - UP TO 60 FPS @ 1920X1080
PLAYBACK	FAST FORWARD - X1/4, X1/2, X2, X4, X8, X16, FRAME BY FRAME REWIND - X2, X4, X8, X16, X32, FRAME BY FRAME
STORAGE	HDD INTERFACE, INTERNAL HDDs (4)
NETWORK CONNECTION	RJ-45, 10/100/1000 BASE-T, AUTO MDI-MDX
STREAMING	TRANSMISSION SPEED LIVE, 1280X720 @ 120fps, 640X360 @ 100fps
SEARCH	TRANSMISSION SPEED PLAYBACK, H.248 @ 120/100fps
PROTOCOLS	HTTP, DDNS, NTP, SMTP
ACCESS	WEB VIEWER - LIVE, SEARCH/PLAYBACK, BACKUP, PTZ CONTROL REMOTE MONITORING SOFTWARE - REMOTE SETUP & UPGRADE
ELECTRICAL (VOLTAGE)	AC 100 ~ 120V
WEIGHT	14.6 LBS
DIMENSIONS	17" X 16.92" X 3.86"
WARRANTY (LIMITED)	FIVE (5) YEAR LIMITED

DIGITAL WATCHDOG DWC-HV421TIR

IMAGE DEVICE	1/2.8
IMAGE PIXELS TOTAL	2000 (H) 1241 (W)
MIN. SCENE ILLUMINATION	F1.6 (301RE): 0.1 LUX [COLOR], 0.01 LUX [B/W]
IR DISTANCE	70 FEET
FUNCTIONS	BLC, AGC, WDR, AWB, MIRROR, MOTION DETECTION, 3D-DMR, HME, DIGITAL ZOOM, RS485, TDN, AUTO ZOOM, MIRROR IMAGE, DSS
LENS	3.5 ~ 16MM
HORIZONTAL RESOLUTION	2.1 MEGAPIXELS (1920X1080) @30FPS
VIDEO OUTPUT	HD-SDI
OPERATING TEMPERATURE	-10°C ~ 50°C (14°F ~ 122°F)
POWER REQUIREMENTS	DC12V ONLY (10V ~ 16V)
POWER CONSUMPTION	2.0W, 166.7mA / LED ON 3.5W, 291.7mA
DIMENSIONS (W x H)	139 X 118.8mm (5.47 X 4.7 in.)
WARRANTY	TWO (2) YEAR
WEIGHT	2.05 LBS

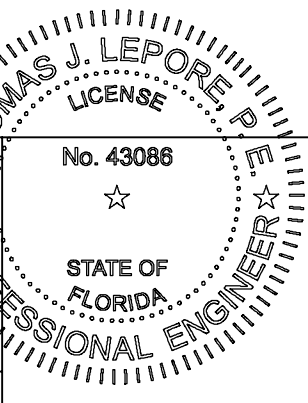


DWG: T:\Projects\2012 PROJECTS\121104A CITY OF NAPLES RECOM\DRAWINGS\CITY OF NAPLES RECOM\DRAWINGS\SYSTEMS\VIDEO SURVEILLANCE SYSTEM.dwg Layout Name: N-005-33 - Plotted by: 6 Date: 9/18/2013 - 4:25 PM

REV	DATE	DESCRIPTION	APPR

DESIGNED BY	JDS
DRAWN BY	LM
CHECKED BY	TJL
DATE	SEPT 2013

PROJECT ENGINEER	THOMAS J. LEPORE, P.E.
REG NUMBER	43086
PROJECT NUMBER	121104A



AECOM

AECOM Technical Services, Inc.
 4415 Metro Parkway, Suite 404
 Fort Myers, Florida 33916
 T 239.278.7996 F 456.445.6465
 FL Engineering Business No. EB-8115
 www.aecom.com



CITY OF NAPLES
 STREETS AND STORMWATER DEPARTMENT
 295 RIVERSIDE DRIVE NAPLES, FLORIDA 34102
 PHONE: 239-213-5016 FAX: 239-213-5010

**CITY OF NAPLES
 PUBLIC WORKS PUMP STATION**

VIDEO SURVEILLANCE SYSTEM

PELICAN ENGINEERING CONSULTANTS, LLC
 Horseshoe Park of Commerce
 3073 Horseshoe Drive South, Suite 112, Naples, FL 34104
 Phone: (239) 597-7544 CERT. OF AUTH: 26534

DRAWING	N-005
SHEET	33
OF SHEETS	


1 2 3 4 5 6 7 8

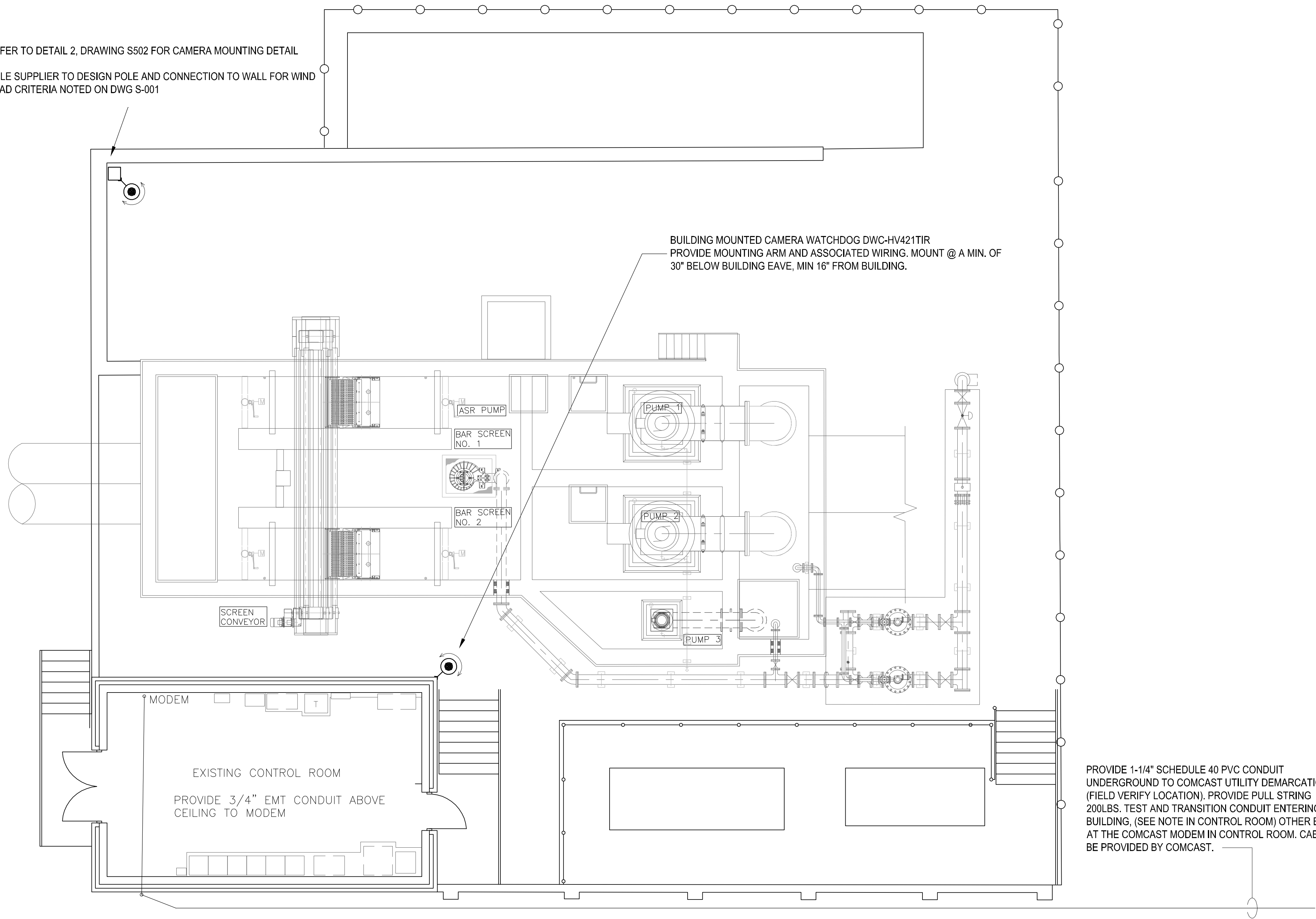
D
C
B
A

REFER TO DETAIL 2, DRAWING S502 FOR CAMERA MOUNTING DETAIL
POLE SUPPLIER TO DESIGN POLE AND CONNECTION TO WALL FOR WIND LOAD CRITERIA NOTED ON DWG S-001

BUILDING MOUNTED CAMERA WATCHDOG DWC-HV421TIR
PROVIDE MOUNTING ARM AND ASSOCIATED WIRING. MOUNT @ A MIN. OF 30" BELOW BUILDING EAVE, MIN 16" FROM BUILDING.

VIDEO LEGEND

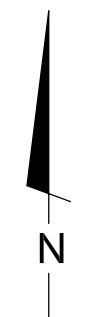
 VIDEO CAMERA



PROVIDE 1-1/4" SCHEDULE 40 PVC CONDUIT UNDERGROUND TO COMCAST UTILITY DEMARCATION (FIELD VERIFY LOCATION). PROVIDE PULL STRING 200LBS. TEST AND TRANSITION CONDUIT ENTERING BUILDING. (SEE NOTE IN CONTROL ROOM) OTHER END AT THE COMCAST MODEM IN CONTROL ROOM. CABLE TO BE PROVIDED BY COMCAST.

EQUIPMENT YARD PLAN

SCALE: 3/16" = 1'-0"

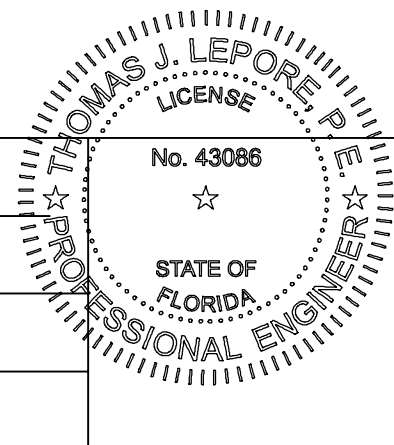


P:\GIS_Team\Projects\2017\PROJECTS\121104\CITY OF NAPLES AECOM\DRAWINGS\CITY OF NAPLES AECOM\99\99\121104\N006-S3\VIDEO SITE PLAN.dwg Layout Name: N006-S3 - Plotted by: G. Date: 9/18/2013 4:28 PM XREFS: Job.dwg; paces

REV	DATE	DESCRIPTION	APPR

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY: JS
PROJECT ENGINEER: THOMAS J. LEPORE, PE
DRAWN BY: LM
REG NUMBER: 43086
CHECKED BY: TJL
PROJECT NUMBER: 121104A
DATE: SEPT 2013



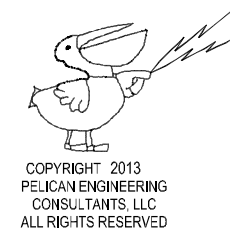
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**CITY OF NAPLES
PUBLIC WORKS PUMP STATION**

VIDEO SYSTEM SITE PLAN

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SHEET: 34
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