

COMMUNITY OF MILNER  
WASTEWATER TREATMENT IMPROVEMENT PROJECT  
FINAL DESIGN  
OCTOBER 2023



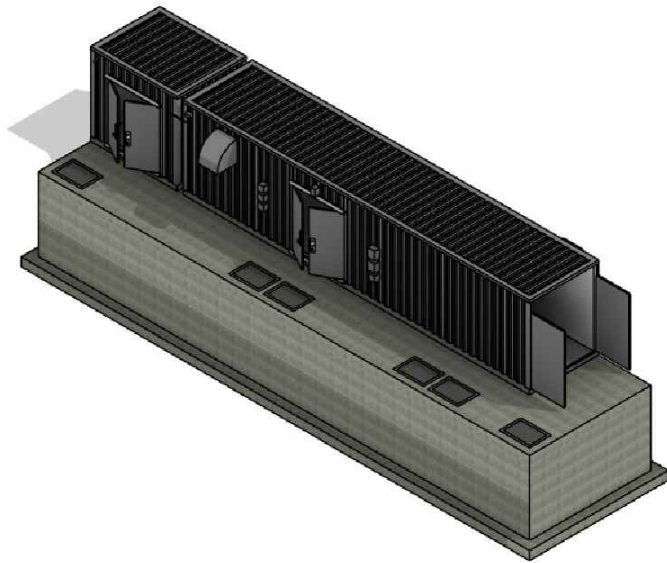
VICINITY MAP  
NOT TO SCALE



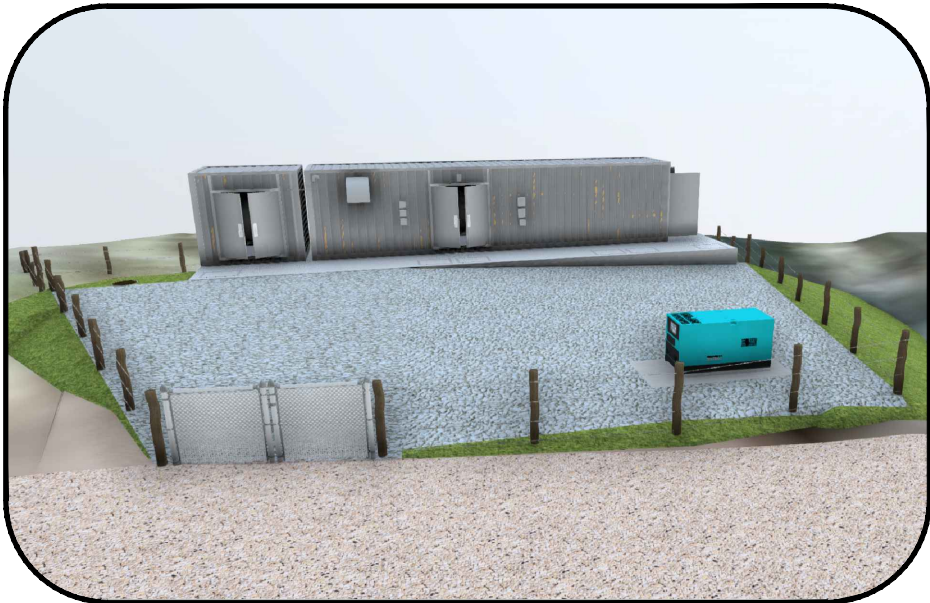
LOCATION MAP  
NOT TO SCALE

| SHEET INDEX  |   |
|--------------|---|
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| GENERAL      |   |
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| C7.4         | EXISTING EFFLUENT LINE PLAN & PROFILE     |
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





















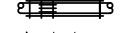

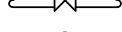



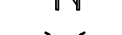
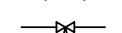
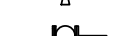


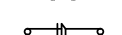
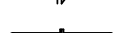
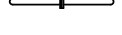


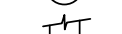




















































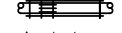

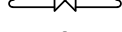



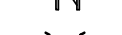
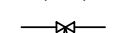
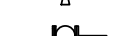


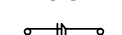
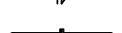
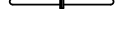


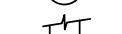





























PROJECT ISOMETRIC  
NTS



SITE PLAN  
NTS



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|---|--|---|--|---|--|--|--|---|--|---|--|---|--|---|--|---|--|---|--|--|--|
| 1   |  | 2   |  | 3   |  | 4  |  | 5   |  | 6   |  | 7   |  | 8   |  | 9   |  | 10  |  |  |  |
| AB ANCHOR BOLT<br>ABC AGGREGATE BASE COURSE<br>AC AIR CONDITIONING<br>ACOUS ACOUSTICAL<br>ACP ASPHALTIC CONCRETE<br>ACTR ACTUATOR<br>AD AREA DRAIN OR ACCESS DOOR<br>ADDM ADDENDUM<br>ADJ ADJUSTABLE<br>AFF ABOVE FINISHED FLOOR<br>AFG ABOVE FINISHED GRADE<br>AHU AIR HANDLING UNIT<br>AL ALUMINUM<br>ALT ALTERNATE<br>AMT AMOUNT<br>APPROX APPROXIMATE<br>ARV AIR RELIEF VALVE<br>ASME AMERICAN SOCIETY OF MECHANICAL ENGINEERS<br>ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS<br>ASPH ASPHALT<br>ASSY ASSEMBLY<br>ATS AUTOMATIC TRANSFER SWITCH<br>AVG AVERAGE<br>AVS AUTOMATIC VALVE STATION                                       |  | F/F FACE TO FACE<br>FCA FLANGE COUPLING ADAPTER<br>FD FLOOR DRAIN<br>FDN FOUNDATION<br>FED FEDERAL<br>FES FLARED END SECTION<br>FFE FINISH FLOOR ELEVATION<br>FIN FINISH<br>FL FLANGE<br>FLL FLOW LINE<br>FLR FLOOR<br>FNC FENCE<br>FOC FACE OF CONCRETE<br>FPM FEET PER MINUTE<br>FPS FEET PER SECOND<br>FPW FIRE PROTECTION WATER SUPPLY<br>FR FRAME<br>FRP FIBERGLASS REINFORCED PLASTIC<br>FSTNR FASTENER<br>FT FEET<br>FTG FOOTING OR FITTING<br>FUR FURNACE |  | MG MILLION GALLONS OR MILLIGRAMS<br>MGD MILLION GALLONS PER DAY<br>MGMT MANAGEMENT<br>MH MANHOLE<br>MIN MINIMUM<br>MISC MISCELLANEOUS<br>MJ MECHANICAL JOINTS<br>MO MASONRY OPENING<br>MRGYB MOISTURE RESISTANT GYPSUM WALL BOARD<br>MTG MOUNTING   |  | N NITROGEN<br>NA NOT APPLICABLE<br>NAOCL SODIUM HYPOCHLORITE<br>NF NEAR FACE<br>NIC NOT IN CONTRACT<br>NP NO PAINT<br>NPL NAME PLATE<br>NPT NATIONAL PIPE THREAD<br>NPW NON-POTABLE WATER<br>NRS NON-RISING STEM<br>NS NEAR SIDE<br>NTS NOT TO SCALE |  | SA SALV<br>SAN SANITARY<br>SB SPLASH BLOCK<br>SCFM STANDARD CUBIC FEET PER MINUTE<br>SCH SCHEDULE<br>SCRN SCREEN<br>SD STORM DRAIN<br>SDR STANDARD DIMENSION RATIO<br>SECT SECTION<br>SHLDR SHOULDER<br>SHT SHEETING<br>SHTHG SHEATHING<br>SIM SIMILAR<br>SLV SLEEVE<br>SM SMOOTH<br>SP SPACING<br>SPEC SPECIFICATION<br>SQ SQUARE<br>SQ FT SQUARE FEET<br>SQ IN SQUARE INCH<br>SQ YD SQUARE YARD<br>SS SANITARY SEWER<br>SST STAINLESS STEEL<br>SST BT STAINLESS STEEL BOLT<br>ST STREET<br>STA STATION<br>STD STANDARD<br>STL STEEL<br>STL JST STEEL JOIST<br>STL PL STEEL PLATE<br>SUPP SUPPLY<br>SUSP CLG SUSPENDED CEILING<br>SV SOLENOID VALVE<br>SVC SERVICE<br>SW SIDEWALK<br>SWMP STORM WATER MANAGEMENT PLAN<br>SYMM SYMMETRICAL<br>SYS SYSTEM  |  | WTR WATER<br>WTRPRF WATERPROOF(ING)<br>X-SECT CROSS SECTION   |  | YCO YARD CLEANOUT<br>YD YARD DRAIN<br>YH YARD HYDRANT   |  |  |  | <br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br> |  | <br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br> |  | <br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br> |  |
| B BLOWER<br>B&F BELL & FLANGE<br>BB BOND BEAM<br>BAF BAFFLE<br>BC BACK OF CURB<br>BE BELL END<br>BF BOTTOM FACE<br>BFV BUTTERFLY VALVE<br>BLDG BUILDING<br>BLK BLOCK<br>BM BENCHMARK<br>BMPS BEST MANAGEMENT PRACTICES<br>BOD BIOCHEMICAL OXYGEN DEMAND<br>BOT BOTTOM OR BOTTOM OF TANK<br>BP BOOSTER PUMP<br>BS BACKSIGHT<br>BSMT BASEMENT<br>BU BELL UP<br>BV BALL VALVE<br>BCV BUTTERFLY CHECK VALVE<br>BWL BOTTOM WATER LEVEL   |  | G GAS<br>GA GAUGE<br>GAL GALLON<br>GALV GALVANIZED<br>GIP GALVANIZED IRON PIPE<br>GRND GROUND<br>GPD GALLONS PER DAY<br>GPM GALLONS PER MINUTE<br>GR BM GRADE BEAM<br>GRC GALVANIZED RIGID CONDUIT<br>GRTG GRATING<br>GSP GALVANIZED STEEL PIPE<br>GV GATE VALVE<br>GWB GYPSUM WALL BOARD   |  | H HIGH<br>HB HOSE BIB<br>HDWL HEAD WALL<br>HNDRL HAND RAIL<br>HNDWL HANDWHEEL<br>HORIZ HORIZONTAL<br>HP HORSEPOWER<br>HPT HYDRO-PNEUMATIC PRESSURE TANK<br>HR HOUR<br>HS HIGH STRENGTH<br>HVAC HEATING, VENTILATION, AIR CONDITIONING<br>HW HOT WATER<br>HWL HIGH WATER LEVEL<br>HWY HIGHWAY<br>HYD HYDRANT |  | OC ON CENTER<br>OD OUTSIDE DIAMETER<br>OF OVER FLOW<br>OPNG OPENING<br>OPP OPPOSITE<br>OPT OPTIONAL  |  | P PUMP<br>PA PIPE ANCHOR<br>PAR PARALLEL<br>PC PORTLAND CEMENT<br>PCO PRESSURE CLEAN OUT<br>PCP PROGRESSING CAVITY PUMP<br>PD PUMP DISCHARGE LINE<br>PE PLAIN END<br>PERM PERMANENT<br>PERP PERPENDICULAR<br>PG PRESSURE GAGE<br>PL PLATE OR PROPERTY LINE<br>PLBG PLUMBING<br>PLYWD PLYWOOD<br>PNT PAINT<br>POLY POLYETHYLENE<br>PORT PORTABLE<br>POS POSITIVE<br>PPM PARTS PER MILLION<br>PRCST PRECAST<br>PREFAB PREFABRICATED<br>PREFIN PREFINISHED<br>PRELIM PRELIMINARY<br>PREP PREPARATION<br>PROJ PROJECT<br>PROP PROPERTY<br>PRS PRESSURE REDUCING STATION<br>PRTV PRESSURE / TEMPERATURE RELIEF VALVE<br>PRV PRESSURE REDUCING VALVE<br>PS PIPE SUPPORT<br>PSF POUNDS PER SQUARE FOOT<br>PSI POUNDS PER SQUARE INCH<br>PSIA POUNDS PER SQUARE INCH ABSOLUTE<br>PSIG POUNDS PER SQUARE INCH GAGE<br>PV PLUG VALVE<br>PVMT PAVEMENT<br>PW POTABLE WATER |  | T TEE<br>T&B TOP AND BOTTOM<br>T&G TONGUE AND GROOVE<br>T&P TEMPERATURE AND PRESSURE<br>TB TOP OF BEAM<br>TBM TEMPORARY BENCH MARK<br>TE TOP ELEVATION<br>TEMP TEMPORARY<br>TF TOP OF FOOTING<br>TFA TO FLOOR ABOVE<br>TFB TO FLOOR BELOW<br>TFF TOP OF FINISH FLOOR<br>THD THREAD(ED)<br>THK THICK<br>TJ TOP OF JOIST<br>TOB TOP OF BANK<br>TOC TOP OF CONCRETE<br>TOE THREADED ONE END<br>TOF TOP OF FOOTING<br>TOT TOTAL<br>TP TOP OF PAVEMENT<br>TR TOP OF RIM<br>TSL TOP OF SLAB<br>TST TOP OF STEEL<br>TW TOP OF WALL<br>TWM TOP WATER LEVEL<br>TYP TYPICAL |  | UBC UNIFORM BUILDING CODE<br>UE UNDERGROUND ELECTRIC<br>UG UNDERGROUND<br>ULT ULTIMATE<br>UN UNION<br>UNG UNDERGROUND NATURAL GAS<br>UNFIN UNFINISHED<br>UNIF UNIFORM<br>UV ULTRAVIOLET |  | VAC VACUUM<br>VB VALVE BOX<br>VCP VITRIFIED CLAY PIPE<br>VTR VENT THROUGH ROOF      |  | W WIDE OR WIDTH<br>W/ WITHOUT<br>W/O WALL TO WALL<br>WC WATER CLOSET<br>WCO WALL CLEANOUT<br>WD WOOD<br>WDW WINDOW<br>WF WIDE FLANGE<br>WH WALL HYDRANT<br>WHSE WAREHOUSE<br>WI WROUGHT IRON<br>WL WATER LINE OR WIND LOAD<br>WP WASTE PIPE<br>WPR WORKING PRESSURE<br>WS WETTED SURFACE<br>WT WEIGHT   |  |   |  |  |  |
| C/C CENTER TO CENTER<br>CB CATCH BASIN<br>CCW COUNTER CLOCKWISE<br>CDOT COLORADO DEPARTMENT OF TRANSPORTATION<br>CEB CONCRETE EQUIPMENT BASE<br>CIP CAST IRON PIPE<br>CIMJ CAST IRON MECHANICAL JOINT<br>CISP CAST IRON SOIL PIPE<br>CJ CONSTRUCTION JOINT<br>CL CENTER LINE OR CHAIN LINK<br>CLG CEILING<br>CLR CLEAR<br>CMP CORRUGATED METAL PIPE<br>CMU CONCRETE MASONRY UNIT<br>CO CLEAN OUT<br>CONSTR CONSTRUCTION<br>CONT CONTINUOUS<br>COR CORNER<br>CP CENTRIFUGAL PUMP<br>CPLG COUPLING<br>CR CONCRETE REDUCER<br>CTJ CONTROL JOINT<br>CTR CENTER<br>CS CAUSTIC SODA<br>CW COLD WATER<br>CWL CONTROL WATER LEVEL<br>CY CUBIC YARDS |  | INCL INCLUDED<br>INCR INCREASER<br>ID INSIDE DIAMETER<br>IF INSIDE FACE<br>INL INLET<br>INSTL INSTALLATION<br>INSTR INSTRUMENT<br>INSUL INSULATION<br>INTR INTERIOR<br>INV INVERT<br>INV EL INVERT ELEVATION<br>ISA INSTRUMENT SOCIETY OF AMERICA<br>ISO ISOMETRIC  |  | JST JOIST<br>JTS JOINTS   |  | KO KNOCKOUT<br>KPL KICK PLATE<br>KWY KEYWAY  |  | L LEFT OR LITER<br>LAB LABORATORY<br>LATL LATERAL<br>LAV LAVATORY<br>LB(S) POUND(S)<br>LCMU LIGHTWEIGHT CONCRETE MASONRY UNIT<br>LF LINEAR FOOT<br>LKR LOCKER<br>LL LIVE LOAD OR LOW LEVEL<br>LNG LENGTH<br>LOC LOCATION<br>LP LOW PRESSURE OR LIGHT POLE<br>LRG LARGE<br>LT LIGHT<br>LT WT LIGHT WEIGHT<br>LWC LIGHT WEIGHT CONCRETE<br>LWL LOW WATER LEVEL  |  | MAINT MAINTENANCE<br>MAN MANUAL<br>MATL MATERIAL<br>MAX MAXIMUM<br>MCC MOTOR CONTROL CENTER<br>MECH MECHANICAL<br>MED MEDIUM<br>MFM MAGNETIC FLOW METER<br>MFR MANUFACTURER   |  |   |  |   |  |   |  |   |  |  |  |
| DEMO DEMOLITION<br>DI DEIONIZATION<br>DIA DIAMETER<br>DIAG DIAGONAL<br>DIM DIMENSION<br>DIP DUCTILE IRON PIPE<br>DIS DISCHARGE<br>DISP DISPENSER<br>DL DEAD LOAD<br>DMJ DUCTILE MECHANICAL JOINT<br>DN DOWN<br>DR DRAIN<br>DWG DRAWING<br>DWL DOWEL<br>DWN DRAIN<br>DWV DRAIN WASTE AND VENT  |  | L LEFT OR LITER<br>LAB LABORATORY<br>LATL LATERAL<br>LAV LAVATORY<br>LB(S) POUND(S)<br>LCMU LIGHTWEIGHT CONCRETE MASONRY UNIT<br>LF LINEAR FOOT<br>LKR LOCKER<br>LL LIVE LOAD OR LOW LEVEL<br>LNG LENGTH<br>LOC LOCATION<br>LP LOW PRESSURE OR LIGHT POLE<br>LRG LARGE<br>LT LIGHT<br>LT WT LIGHT WEIGHT<br>LWC LIGHT WEIGHT CONCRETE<br>LWL LOW WATER LEVEL  |  | JST JOIST<br>JTS JOINTS   |  | KO KNOCKOUT<br>KPL KICK PLATE<br>KWY KEYWAY  |  | L LEFT OR LITER<br>LAB LABORATORY<br>LATL LATERAL<br>LAV LAVATORY<br>LB(S) POUND(S)<br>LCMU LIGHTWEIGHT CONCRETE MASONRY UNIT<br>LF LINEAR FOOT<br>LKR LOCKER<br>LL LIVE LOAD OR LOW LEVEL<br>LNG LENGTH<br>LOC LOCATION<br>LP LOW PRESSURE OR LIGHT POLE<br>LRG LARGE<br>LT LIGHT<br>LT WT LIGHT WEIGHT<br>LWC LIGHT WEIGHT CONCRETE<br>LWL LOW WATER LEVEL  |  | MAINT MAINTENANCE<br>MAN MANUAL<br>MATL MATERIAL<br>MAX MAXIMUM<br>MCC MOTOR CONTROL CENTER<br>MECH MECHANICAL<br>MED MEDIUM<br>MFM MAGNETIC FLOW METER<br>MFR MANUFACTURER   |  |   |  |   |  |   |  |   |  |  |  |
| EA EACH<br>ECC ECCENTRIC<br>EF EACH FACE OR ELECTRICAL FAN<br>EFF EFFLUENT<br>EJ EXPANSION JOINT<br>EL ELEVATION<br>EXIST OR (E) EXISTING<br>EXIST GR EXISTING GRADE<br>EXT EXTERIOR<br>EXTN EXTENSION  |  | F/F FACE TO FACE<br>FCA FLANGE COUPLING ADAPTER<br>FD FLOOR DRAIN<br>FDN FOUNDATION<br>FED FEDERAL<br>FES FLARED END SECTION<br>FFE FINISH FLOOR ELEVATION<br>FIN FINISH<br>FL FLANGE<br>FLL FLOW LINE<br>FLR FLOOR<br>FNC FENCE<br>FOC FACE OF CONCRETE<br>FPM FEET PER MINUTE<br>FPS FEET PER SECOND<br>FPW FIRE PROTECTION WATER SUPPLY<br>FR FRAME<br>FRP FIBERGLASS REINFORCED PLASTIC<br>FSTNR FASTENER<br>FT FEET<br>FTG FOOTING OR FITTING<br>FUR FURNACE |  | MG MILLION GALLONS OR MILLIGRAMS<br>MGD MILLION GALLONS PER DAY<br>MGMT MANAGEMENT<br>MH MANHOLE<br>MIN MINIMUM<br>MISC MISCELLANEOUS<br>MJ MECHANICAL JOINTS<br>MO MASONRY OPENING<br>MRGYB MOISTURE RESISTANT GYPSUM WALL BOARD<br>MTG MOUNTING   |  | N NITROGEN<br>NA NOT APPLICABLE<br>NAOCL SODIUM HYPOCHLORITE<br>NF NEAR FACE<br>NIC NOT IN CONTRACT<br>NP NO PAINT<br>NPL NAME PLATE<br>NPT NATIONAL PIPE THREAD<br>NPW NON-POTABLE WATER<br>NRS NON-RISING STEM<br>NS NEAR SIDE<br>NTS NOT TO SCALE |  | SA SALV<br>SAN SANITARY<br>SB SPLASH BLOCK<br>SCFM STANDARD CUBIC FEET PER MINUTE<br>SCH SCHEDULE<br>SCRN SCREEN<br>SD STORM DRAIN<br>SDR STANDARD DIMENSION RATIO<br>SECT SECTION<br>SHLDR SHOULDER<br>SHT SHEETING<br>SHTHG SHEATHING<br>SIM SIMILAR<br>SLV SLEEVE<br>SM SMOOTH<br>SP SPACING<br>SPEC SPECIFICATION<br>SQ SQUARE<br>SQ FT SQUARE FEET<br>SQ IN SQUARE INCH<br>SQ YD SQUARE YARD<br>SS SANITARY SEWER<br>SST STAINLESS STEEL<br>SST BT STAINLESS STEEL BOLT<br>ST STREET<br>STA STATION<br>STD STANDARD<br>STL STEEL<br>STL JST STEEL JOIST<br>STL PL STEEL PLATE<br>SUPP SUPPLY<br>SUSP CLG SUSPENDED CEILING<br>SV SOLENOID VALVE<br>SVC SERVICE<br>SW SIDEWALK<br>SWMP STORM WATER MANAGEMENT PLAN<br>SYMM SYMMETRICAL<br>SYS SYSTEM  |  | WTR WATER<br>WTRPRF WATERPROOF(ING)<br>X-SECT CROSS SECTION   |  | YCO YARD CLEANOUT<br>YD YARD DRAIN<br>YH YARD HYDRANT   |  |  |  | <br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br> |  | <br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br> |  | <br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br> |  |
| REV. No:  |  | DATE:   |  | BY:   |  | REVISION DESCRIPTION:  |  | DRAWN BY: AS  |  | PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO  |  | SHEET TITLE:<br>ABBREVIATIONS & SYMBOLS   |  | PROJECT NUMBER:<br>7829   |  | SCALE:<br>NOT TO SCALE  |  | SHEET:<br>G2  |  |  |  |
|   |  |   |  |   |  |  |  | DESIGNED BY: AS   |  | ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915   |  |   |  |   |  |   |  |   |  |  |  |
|   |  |   |  |   |  |  |  | FILE PRINTED ON: 10/13/2023 12:50:26 PM   |  |   |  |   |  |   |  |   |  |   |  |  |  |
|   |  |   |  |   |  |  |  | COPYRIGHT: AQUAWORKS DBO, INC.  |  |   |  |   |  |   |  |   |  |   |  |  |  |
|   |  |   |  |   |  |  |  | 0 1 IF THIS BAR DOES NOT READ 1" DRAWING IS NOT LABELED TO SCALE  |  |   |  |   |  |   |  |   |  |   |  |  |  |
|   |  |   |  |   |  |  |  |   |  |   |  |   |  |   |  |   |  |   |  |  |  |



**A**

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## C

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## NTS

MR. SCOTT SMITH  
PO BOX 1078  
CLARK, CO 80428  
(970) 846-9732


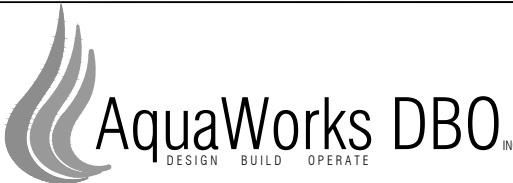


AquaWorks DBO  
DESIGN BUILD OPERATE

ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

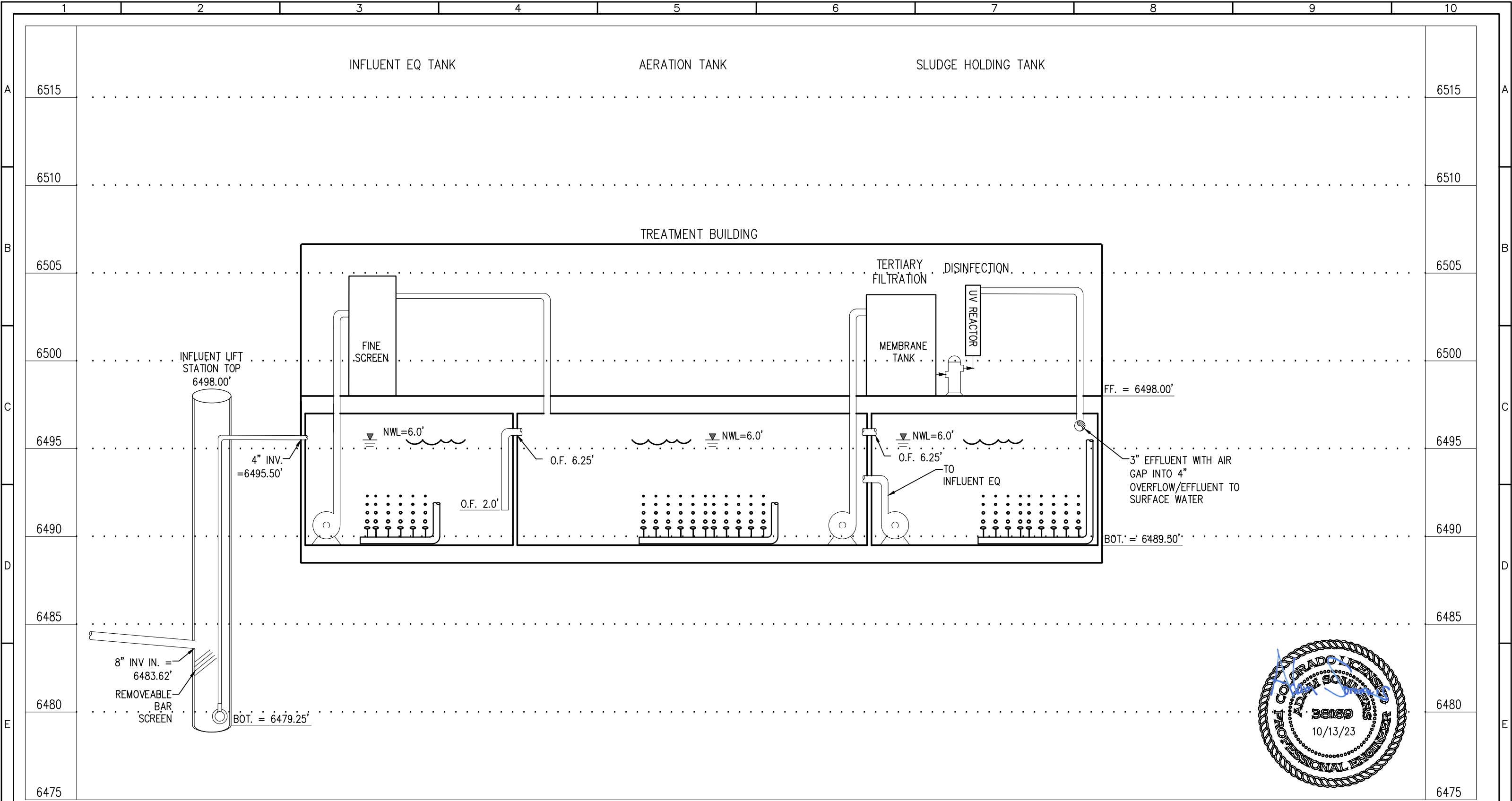
|                 |              |        |
|-----------------|--------------|--------|
| PROJECT NUMBER: | SCALE:       | SHEET: |
| 7829            | NOT TO SCALE | G3     |



|   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|----|
|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| DESIGN CRITERIA SUMMARY:  |   |   |   |   |   |   |   |   |   |    |
| DESIGN FLOWS:   |   |   |   |   |   |   |   |   |   |    |
| MAX MONTH (DESIGN) FLOW: 32,500 GPD   |   |   |   |   |   |   |   |   |   |    |
| PEAK DAILY FLOW: 54,167 GPD   |   |   |   |   |   |   |   |   |   |    |
| PEAK INSTANTANEOUS FLOW: 68 GPM   |   |   |   |   |   |   |   |   |   |    |
| DESIGN INFLUENT CONCENTRATIONS & LOADING:   |   |   |   |   |   |   |   |   |   |    |
| AVERAGE BOD: 240 MG/L   |   |   |   |   |   |   |   |   |   |    |
| AVERAGE TSS: 240 MG/L   |   |   |   |   |   |   |   |   |   |    |
| AVERAGE TKN: 50 MG/L  |   |   |   |   |   |   |   |   |   |    |
| AVERAGE TP: 10 MG/L   |   |   |   |   |   |   |   |   |   |    |
| DESIGN EFFLUENT QUALITY/LIMITS:   |   |   |   |   |   |   |   |   |   |    |
| BOD: 5 MG/L   |   |   |   |   |   |   |   |   |   |    |
| TSS: 1 MG/L   |   |   |   |   |   |   |   |   |   |    |
| NH3-N: 50 MG/L  |   |   |   |   |   |   |   |   |   |    |
| PH: 7-9   |   |   |   |   |   |   |   |   |   |    |
| ACTIVATED SLUDGE DESIGN CRITERIA:   |   |   |   |   |   |   |   |   |   |    |
| SITE ELEVATION: 6,520 FEET  |   |   |   |   |   |   |   |   |   |    |
| MLSS TEMPERATURE: 10 CELSIUS  |   |   |   |   |   |   |   |   |   |    |
| HYDRAULIC RETENTION TIME: 8.3 HOURS @ MMF   |   |   |   |   |   |   |   |   |   |    |
| SRT: 16.0 DAYS  |   |   |   |   |   |   |   |   |   |    |
| F:M RATIO: 0.042 (OR 0.062 FOR F:MLVSS)   |   |   |   |   |   |   |   |   |   |    |
| MAJOR EQUIPMENT SUMMARY:  |   |   |   |   |   |   |   |   |   |    |
| AEROBIC PROCESS BLOWERS:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1 DUTY, 1 STANDBY   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: B-0501 & B-0502  |   |   |   |   |   |   |   |   |   |    |
| TYPE: POSITIVE DISPLACEMENT   |   |   |   |   |   |   |   |   |   |    |
| MRF/MODEL: SUTORBILT 4L-RHC   |   |   |   |   |   |   |   |   |   |    |
| MOTOR: 15 HP  |   |   |   |   |   |   |   |   |   |    |
| POWER: 460V/3P/60HZ   |   |   |   |   |   |   |   |   |   |    |
| SPEED CONTROL: VFD  |   |   |   |   |   |   |   |   |   |    |
| DESIGN FLOW: 310.4 SCFM   |   |   |   |   |   |   |   |   |   |    |
| DESIGN PRESSURE: 4.2 PSI  |   |   |   |   |   |   |   |   |   |    |
| INFLUENT EQ BLOWER:   |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1 DUTY, 1 SHARED STANDBY  |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: B-0301 & B-3901  |   |   |   |   |   |   |   |   |   |    |
| TYPE: REGENERATIVE  |   |   |   |   |   |   |   |   |   |    |
| MRF/MODEL: FPZ, SCL R30-MD-3  |   |   |   |   |   |   |   |   |   |    |
| MOTOR: 3 HP   |   |   |   |   |   |   |   |   |   |    |
| POWER: 115/208-230/1PH/60HZ   |   |   |   |   |   |   |   |   |   |    |
| SPEED CONTROL: CONSTANT SPEED   |   |   |   |   |   |   |   |   |   |    |
| DESIGN FLOW: 26.2 SCFM  |   |   |   |   |   |   |   |   |   |    |
| DESIGN PRESSURE: 6.5 PSIG   |   |   |   |   |   |   |   |   |   |    |
| SLUDGE BLOWER:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1 DUTY, 1 SHARED STANDBY  |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: B-0901 & B-3901  |   |   |   |   |   |   |   |   |   |    |
| TYPE: REGENERATIVE  |   |   |   |   |   |   |   |   |   |    |
| MRF/MODEL: FPZ, SCL R30-MD-3  |   |   |   |   |   |   |   |   |   |    |
| MOTOR: 3 HP   |   |   |   |   |   |   |   |   |   |    |
| POWER: 115/208-230/1PH/60HZ   |   |   |   |   |   |   |   |   |   |    |
| SPEED CONTROL: CONSTANT SPEED   |   |   |   |   |   |   |   |   |   |    |
| DESIGN FLOW: 26.2 SCFM  |   |   |   |   |   |   |   |   |   |    |
| DESIGN PRESSURE: 6.5 PSIG   |   |   |   |   |   |   |   |   |   |    |
| MAJOR EQUIPMENT SUMMARY:  |   |   |   |   |   |   |   |   |   |    |
| MEMBRANE BASIN BLOWERS:   |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 2 DUTY, 1 SHELF SPARE   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: B-0601 & B-0603  |   |   |   |   |   |   |   |   |   |    |
| TYPE: REGENERATIVE  |   |   |   |   |   |   |   |   |   |    |
| MRF/MODEL: FPZ SCL R30-MD-3   |   |   |   |   |   |   |   |   |   |    |
| MOTOR: 3.0 HP   |   |   |   |   |   |   |   |   |   |    |
| POWER: 115/208-230/1PH/60HZ   |   |   |   |   |   |   |   |   |   |    |
| SPEED CONTROL: CONSTANT SPEED   |   |   |   |   |   |   |   |   |   |    |
| DESIGN FLOW: 29.8 SCFM  |   |   |   |   |   |   |   |   |   |    |
| DESIGN PRESSURE: 6.0 PSIG   |   |   |   |   |   |   |   |   |   |    |
| COARSE BARSCREEN (LIFT STATION):  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1 DUTY  |   |   |   |   |   |   |   |   |   |    |
| MRF/MODEL: REE PRODUCTS INC., STATION GUARD   |   |   |   |   |   |   |   |   |   |    |
| BAR SPACING: ADJUSTABLE 1/2 TO 1-INCH   |   |   |   |   |   |   |   |   |   |    |
| SIZE: MOUNTS TO 8-INCH INF PIPELINE   |   |   |   |   |   |   |   |   |   |    |
| INFLUENT LIFT STATION WETWELL:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: TNK-101  |   |   |   |   |   |   |   |   |   |    |
| BASIN SIZE: 6 FT DIA, 20.75 FT DEEP   |   |   |   |   |   |   |   |   |   |    |
| INFLUENT LIFT STATION PUMPS:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1 DUTY, 1 STANDBY   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: P-0101 & P-0102  |   |   |   |   |   |   |   |   |   |    |
| TYPE: SUBMERSIBLE   |   |   |   |   |   |   |   |   |   |    |
| MRF/MODEL: ZOELLER EX611  |   |   |   |   |   |   |   |   |   |    |
| CAPACITY: 60 GPM @ 16 FT  |   |   |   |   |   |   |   |   |   |    |
| MOTOR: 1.0 HP   |   |   |   |   |   |   |   |   |   |    |
| SPEED CONTROL: CONSTANT SPEED   |   |   |   |   |   |   |   |   |   |    |
| POWER: 230V/1PH   |   |   |   |   |   |   |   |   |   |    |
| INFLUENT EQUALIZATION BASIN:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: TNK-301  |   |   |   |   |   |   |   |   |   |    |
| BASIN SIZE: 23.42 FT L X 12.00 FT W   |   |   |   |   |   |   |   |   |   |    |
| SIDE WATER DEPTH: 6.0 FT  |   |   |   |   |   |   |   |   |   |    |
| WORKING VOLUME: 12,618 GALLONS  |   |   |   |   |   |   |   |   |   |    |
| INFLUENT EQUALIZATION TRANSFER PUMPS:   |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1 DUTY, 1 STANDBY   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: P-0301 & P-0302  |   |   |   |   |   |   |   |   |   |    |
| TYPE: SUBMERSIBLE   |   |   |   |   |   |   |   |   |   |    |
| MRF/MODEL: ZOELLER NX282  |   |   |   |   |   |   |   |   |   |    |
| CAPACITY: 37.6 GPM @ 20.0 FT  |   |   |   |   |   |   |   |   |   |    |
| MOTOR: 0.5 HP   |   |   |   |   |   |   |   |   |   |    |
| SPEED CONTROL: CONSTANT SPEED   |   |   |   |   |   |   |   |   |   |    |
| POWER: 115V/1PH/60HZ  |   |   |   |   |   |   |   |   |   |    |
| AUTOMATIC FINE SCREEN:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1 DUTY  |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: SCR-0201   |   |   |   |   |   |   |   |   |   |    |
| MRF/MODEL: MARATHON, NEWTERRA SCR-100   |   |   |   |   |   |   |   |   |   |    |
| SCREEN/PERFORATION SIZE: 2 MM   |   |   |   |   |   |   |   |   |   |    |
| CAPACITY: 100 GPM   |   |   |   |   |   |   |   |   |   |    |
| MOTOR SIZE: 0.5 HP  |   |   |   |   |   |   |   |   |   |    |
| POWER: 115/208-230/1PH/60HZ   |   |   |   |   |   |   |   |   |   |    |
| MAJOR EQUIPMENT SUMMARY:  |   |   |   |   |   |   |   |   |   |    |
| AEROBIC BASIN:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1   |   |   |   |   |   |   |   |   |   |    |
| ZONE TAG NO.: TNK-501   |   |   |   |   |   |   |   |   |   |    |
| BASIN SIZE: 18.0 FT L X 12.0 FT W   |   |   |   |   |   |   |   |   |   |    |
| SIDE WATER DEPTH: 6.0 FT  |   |   |   |   |   |   |   |   |   |    |
| WORKING VOLUME: 9,697 GALLONS   |   |   |   |   |   |   |   |   |   |    |
| MEMBRANE FEED PUMPS:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 2 DUTY, 1 SHARED SHELF SPARE  |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: P-0501, P-0502   |   |   |   |   |   |   |   |   |   |    |
| MFR/MODEL: BARNES 2SEV524L  |   |   |   |   |   |   |   |   |   |    |
| CAPACITY: 56.4 GPM @ 21 FT  |   |   |   |   |   |   |   |   |   |    |
| MOTOR SIZE: 0.75 HP   |   |   |   |   |   |   |   |   |   |    |
| SPEED CONTROL: CONSTANT SPEED   |   |   |   |   |   |   |   |   |   |    |
| POWER: 230V/1PH/60HZ  |   |   |   |   |   |   |   |   |   |    |
| MBR REACTOR BASIN:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 2   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: TNK-601 & TNK-602  |   |   |   |   |   |   |   |   |   |    |
| BASIN SIZE: 3.35 FT L X 5.39 FT W   |   |   |   |   |   |   |   |   |   |    |
| SIDE WATER DEPTH: 6.89 FT   |   |   |   |   |   |   |   |   |   |    |
| WORKING VOLUME: 862 GALLONS   |   |   |   |   |   |   |   |   |   |    |
| MEMBRANES:  |   |   |   |   |   |   |   |   |   |    |
| MEMBRANE TYPE: ZEEWEED 500S   |   |   |   |   |   |   |   |   |   |    |
| MEMBRANE SURFACE AREA: 300 FT² (PER MODULE)   |   |   |   |   |   |   |   |   |   |    |
| MODULES/MEMBRANE TANK: 6  |   |   |   |   |   |   |   |   |   |    |
| FLUX: 15.0 GFD  |   |   |   |   |   |   |   |   |   |    |
| MBR PERMEATE PUMPS:   |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 2 DUTY, 2 STANDBY   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: P-0701 & P-0702; P-0704 & P-0705   |   |   |   |   |   |   |   |   |   |    |
| GOULDS 1ST1D9F4   |   |   |   |   |   |   |   |   |   |    |
| CAPACITY: 20.9 GPM @ 48 FT  |   |   |   |   |   |   |   |   |   |    |
| MOTOR SIZE: 0.75 HP   |   |   |   |   |   |   |   |   |   |    |
| SPEED CONTROL: VFD  |   |   |   |   |   |   |   |   |   |    |
| POWER: 230/460V/3PH/60HZ  |   |   |   |   |   |   |   |   |   |    |
| SLUDGE HOLDING TANK:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: TNK-901  |   |   |   |   |   |   |   |   |   |    |
| BASIN SIZE: 11.25 FT L X 12.00 FT W   |   |   |   |   |   |   |   |   |   |    |
| SIDE WATER DEPTH: 6.0 FT  |   |   |   |   |   |   |   |   |   |    |
| WORKING VOLUME: 6,061 GALLONS   |   |   |   |   |   |   |   |   |   |    |
| SLUDGE DECANT PUMP:   |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 2 DUTY  |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: P-0901 & P-0902  |   |   |   |   |   |   |   |   |   |    |
| TYPE: SUBMERSIBLE   |   |   |   |   |   |   |   |   |   |    |
| MFR/MODEL: BARNES 2SEV524L  |   |   |   |   |   |   |   |   |   |    |
| CAPACITY: 25 GPM @ 20 FT  |   |   |   |   |   |   |   |   |   |    |
| MOTOR SIZE: 0.75 HP   |   |   |   |   |   |   |   |   |   |    |
| SPEED CONTROL: CONSTANT SPEED   |   |   |   |   |   |   |   |   |   |    |
| VOLTAGE/PHASE: 230V/1PH/60HZ  |   |   |   |   |   |   |   |   |   |    |
| MEMBRANE BACKWASH TANK:   |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: TNK-801  |   |   |   |   |   |   |   |   |   |    |
| TANK SIZE: 43 INCH DIA X 50 INCH TALL   |   |   |   |   |   |   |   |   |   |    |
| VOLUME: 240 GALLONS   |   |   |   |   |   |   |   |   |   |    |
| MAJOR EQUIPMENT SUMMARY:  |   |   |   |   |   |   |   |   |   |    |
| MEMBRANE BACKPULSE PUMP:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1 DUTY, 1 STANDBY   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: P-0801 & P-0802  |   |   |   |   |   |   |   |   |   |    |
| MFR/MODEL: GOULDS 1ST2C9D4  |   |   |   |   |   |   |   |   |   |    |
| CAPACITY: 12.5 GPM @ 18 FT  |   |   |   |   |   |   |   |   |   |    |
| MOTOR SIZE: 0.5 HP  |   |   |   |   |   |   |   |   |   |    |
| SPEED CONTROL: VFD  |   |   |   |   |   |   |   |   |   |    |
| POWER: 208-230V/460V/3P/60HZ  |   |   |   |   |   |   |   |   |   |    |
| CIP SODIUM HYPOCHLORITE FEED SYSTEM:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: P-6104   |   |   |   |   |   |   |   |   |   |    |
| MFR/MODEL: SHURFLO 2088-394-144   |   |   |   |   |   |   |   |   |   |    |
| CAPACITY: 4.5 GPH UP TO 45 PSI  |   |   |   |   |   |   |   |   |   |    |
| VOLTAGE & PHASE: 115V/1P/60HZ   |   |   |   |   |   |   |   |   |   |    |
| TANK CAPACITY: 55 GALLONS   |   |   |   |   |   |   |   |   |   |    |
| CIP CITRIC ACID FEED SYSTEM:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: P-6105   |   |   |   |   |   |   |   |   |   |    |
| MFR/MODEL: SHURFLO 2088-394-144   |   |   |   |   |   |   |   |   |   |    |
| CAPACITY: 4.5 GPH UP TO 45 PSI  |   |   |   |   |   |   |   |   |   |    |
| VOLTAGE & PHASE: 115V/1P/60HZ   |   |   |   |   |   |   |   |   |   |    |
| TANK CAPACITY: 55 GALLONS   |   |   |   |   |   |   |   |   |   |    |
| ALUMINUM SULFATE CHEMICAL FEED SYSTEM:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: P-6101   |   |   |   |   |   |   |   |   |   |    |
| MFR/MODEL: PROMINENT  |   |   |   |   |   |   |   |   |   |    |
| BT4B1602PVT2000UD010A01   |   |   |   |   |   |   |   |   |   |    |
| CAPACITY: 0.58 GPH @ 232 PSI MAX  |   |   |   |   |   |   |   |   |   |    |
| POWER: 17 W   |   |   |   |   |   |   |   |   |   |    |
| VOLTAGE/PHASE: 100-240V/60HZ  |   |   |   |   |   |   |   |   |   |    |
| FEED TANK CAPACITY: 55 GALLONS  |   |   |   |   |   |   |   |   |   |    |
| CAUSTIC SODA FEED SYSTEM:   |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: P-6102   |   |   |   |   |   |   |   |   |   |    |
| MFR/MODEL: PROMINENT  |   |   |   |   |   |   |   |   |   |    |
| BT4B1602PVT2000UD010A01   |   |   |   |   |   |   |   |   |   |    |
| CAPACITY: 0.58 GPH @ 232 PSI MAX  |   |   |   |   |   |   |   |   |   |    |
| POWER: 17 W   |   |   |   |   |   |   |   |   |   |    |
| VOLTAGE/PHASE: 100-240V/60HZ  |   |   |   |   |   |   |   |   |   |    |
| FEED TANK CAPACITY: 55 GALLONS  |   |   |   |   |   |   |   |   |   |    |
| MICRO-C CHEMICAL FEED SYSTEM:   |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: P-6103   |   |   |   |   |   |   |   |   |   |    |
| MFR/MODEL: PROMINENT  |   |   |   |   |   |   |   |   |   |    |
| BT4B1602PVT2000UD010A01   |   |   |   |   |   |   |   |   |   |    |
| CAPACITY: 0.58 GPH @ 232 PSI MAX  |   |   |   |   |   |   |   |   |   |    |
| POWER: 17 W   |   |   |   |   |   |   |   |   |   |    |
| VOLTAGE/PHASE: 100-240V/60HZ  |   |   |   |   |   |   |   |   |   |    |
| TANK CAPACITY: 55 GALLONS   |   |   |   |   |   |   |   |   |   |    |
| UV DISINFECTION SYSTEM:   |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1 DUTY, 1 STANDBY   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: UV-0701 & UV-0702  |   |   |   |   |   |   |   |   |   |    |
| MFR/MODEL: UVPURE HALLETT 1000W   |   |   |   |   |   |   |   |   |   |    |
| CAPACITY: 41.8 GPM  |   |   |   |   |   |   |   |   |   |    |
| POWER: 120V/1P/60HZ   |   |   |   |   |   |   |   |   |   |    |
| INFLUENT FLOW MEASUREMENT:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: FIT-0201   |   |   |   |   |   |   |   |   |   |    |
| MFR/MODEL: ENDRESS + HAUSER LTD.  |   |   |   |   |   |   |   |   |   |    |
| 5W4C40-C6DLHA0DUA120A+L4  |   |   |   |   |   |   |   |   |   |    |
| SIZE: 1.5 INCH  |   |   |   |   |   |   |   |   |   |    |
| EFFLUENT FLOW MEASUREMENT:  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1   |   |   |   |   |   |   |   |   |   |    |
| TAG NO.: FIT-0702   |   |   |   |   |   |   |   |   |   |    |
| MFR/MODEL: IFM EFECTOR SM2601   |   |   |   |   |   |   |   |   |   |    |
| SIZE: 2 INCH  |   |   |   |   |   |   |   |   |   |    |
| PORTABLE HOIST:   |   |   |   |   |   |   |   |   |   |    |
| MFR/MODEL: HALLIDAY PRODUCTS D1A24C   |   |   |   |   |   |   |   |   |   |    |
| W/36" REACH   |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1   |   |   |   |   |   |   |   |   |   |    |
| HOIST SOCKET: HALLIDAY PRODUCTS EMBED SOCKET  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 3   |   |   |   |   |   |   |   |   |   |    |
| WALL SOCKET: HALLIDAY PRODUCTS WALL SOCKET  |   |   |   |   |   |   |   |   |   |    |
| QUANTITY: 1   |   |   |   |   |   |   |   |   |   |    |
| AUTODIALER/ALARMS:  |   |   |   |   |   |   |   |   |   |    |
| ETHERNET CONNECTION TO CELLULAR HOTSPOT   |   |   |   |   |   |   |   |   |   |    |
| PRIMARY POWER:  |   |   |   |   |   |   |   |   |   |    |
| PRIMARY POWER: XCEL   |   |   |   |   |   |   |   |   |   |    |
| SERVICE: 240V/1PH   |   |   |   |   |   |   |   |   |   |    |
| PRIMARY SOURCE: EXISTING BURIED POWER LINES   |   |   |   |   |   |   |   |   |   |    |
|  |   |   |   |   |   |   |   |   |   |    |
| REV. No: DATE: BY: REVISION DESCRIPTION: DRAWN BY: NM                                 |   |   |   |   |   |   |   |   |   |    |
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| COMMUNITY OF MILNER   |   |   |   |   |   |   |   |   |   |    |
| ROUTT COUNTY, COLORADO  |   |   |   |   |   |   |   |   |   |    |
| ENGINEER: AQUAWORKS DBO, INC.   |   |   |   |   |   |   |   |   |   |    |
| 3252 WILLIAMS STREET  |   |   |   |   |   |   |   |   |   |    |
| DENVER, COLORADO 80205  |   |   |   |   |   |   |   |   |   |    |
| (303) 477-5915  |   |   |   |   |   |   |   |   |   |    |
| SHEET TITLE:  |   |   |   |   |   |   |   |   |   |    |
| DESIGN CRITERIA & MAJOR EQUIPMENT SUMMARY   |   |   |   |   |   |   |   |   |   |    |
| PROJECT NUMBER: 7829  |   |   |   |   |   |   |   |   |   |    |
| SCALE: NOT TO SCALE   |   |   |   |   |   |   |   |   |   |    |
| SHEET: G4   |   |   |   |   |   |   |   |   |   |    |
| 1 2 3 4 5 6 7 8 9 10  |   |   |   |   |   |   |   |   |   |    |

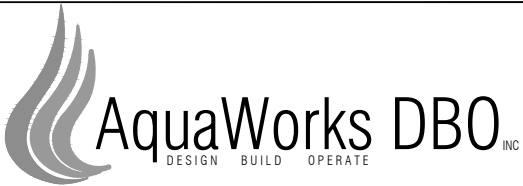






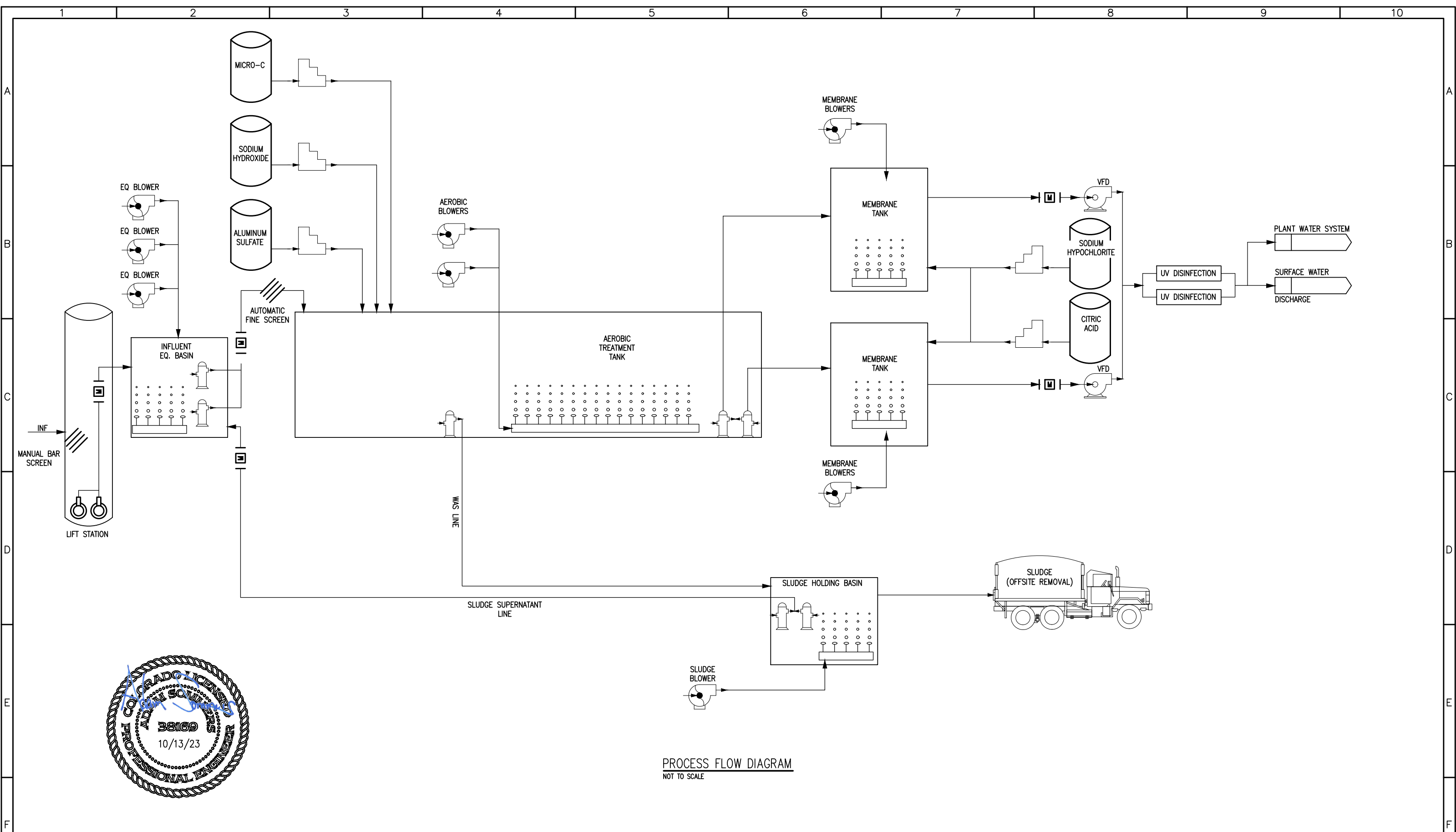
HYDRAULIC PROFILE  
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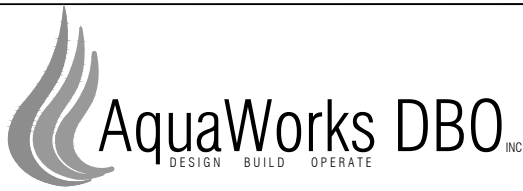
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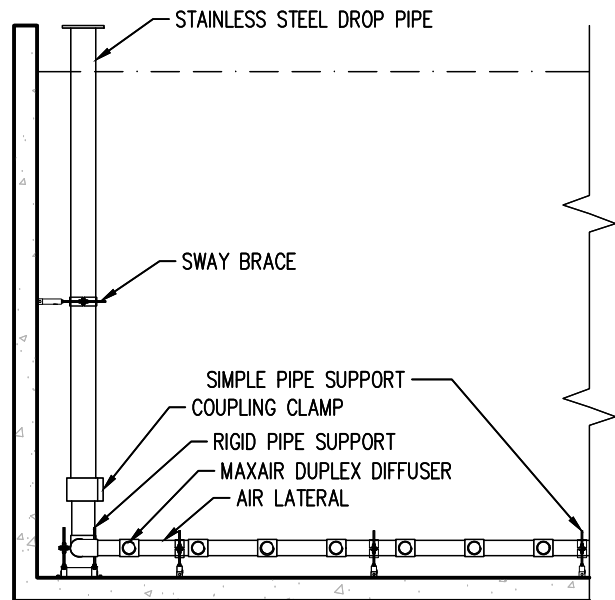
|   |  |  |                                   |                        |              |
|---|--|--|-----------------------------------|------------------------|--------------|
| PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    |  |  | SHEET TITLE:<br>HYDRAULIC PROFILE |                        |              |
| ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |  |  | PROJECT NUMBER:<br>7829           | SCALE:<br>NOT TO SCALE | SHEET:<br>G5 |





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|          |       |     |                       | DESIGNED BY: AS  |   | ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |  | PROJECT NUMBER:                      | SCALE:       | SHEET: |
|          |       |     |                       | FILE PRINTED ON: 10/13/2023 12:50:33 PM                          |   |   |  | 7829                                 | NOT TO SCALE | G6     |
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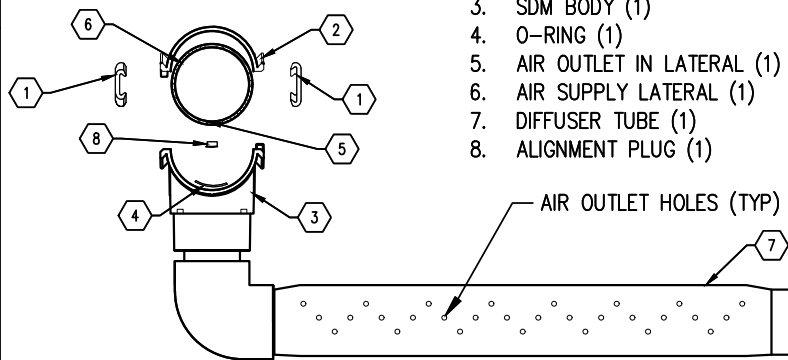




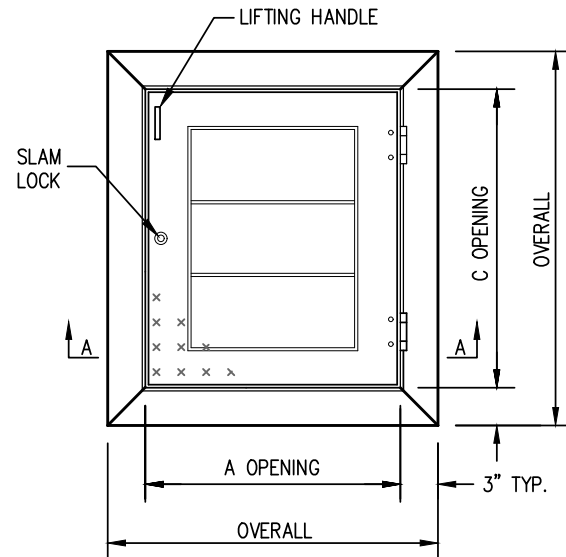
DIFFUSER ASSEMBLY DETAIL  
NTS

DIFFUSER INSTALLATION LEGEND:

1. LOCKING WEDGE (2)
2. LOCKING LUG
3. SDM BODY (1)
4. O-RING (1)
5. AIR OUTLET IN LATERAL (1)
6. AIR SUPPLY LATERAL (1)
7. DIFFUSER TUBE (1)
8. ALIGNMENT PLUG (1)



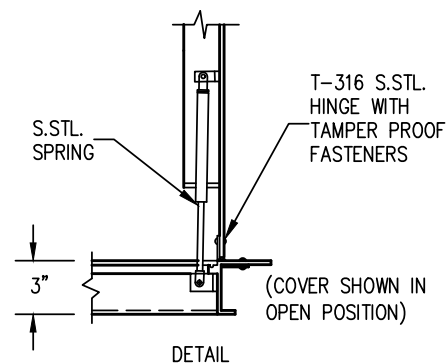
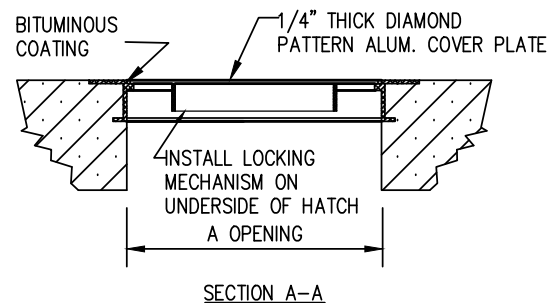
DIFFUSER INSTALLATION DETAIL  
NTS



SERIES S1S ACCESS DOOR

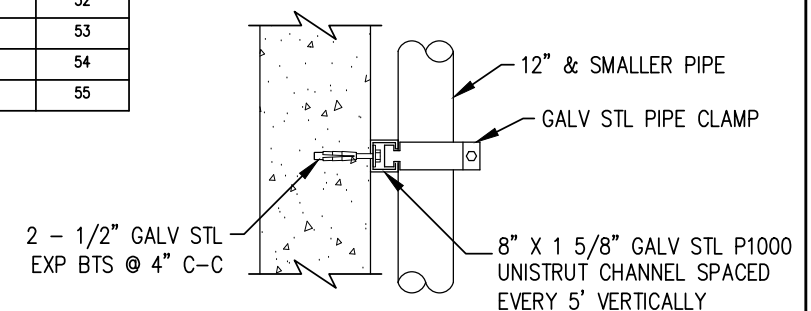
STANDARD FEATURES:

- 300 LBS. PER SQ. FT. LOAD RATING
- EXTRUDED ALUMINUM ANGLE FRAME
- SINGLE LEAF CONSTRUCTION
- AUTO-LOCK T-316 STAINLESS STEEL HOLD OPEN ARM WITH RELEASE HANDLE
- T-316 STAINLESS STEEL HINGES AND ATTACHING HARDWARE
- T-316 STAINLESS STEEL SLAM LOCK WITH REMOVABLE KEY
- STAINLESS STEEL COMPRESSION SPRING ASSIST
- BUILT-IN EPDM CUSHION/GASKET
- NON-OZONE DEPLETING BITUMINOUS COATING
- RECESSED LIFTING HANDLE
- LIFETIME GUARANTEE

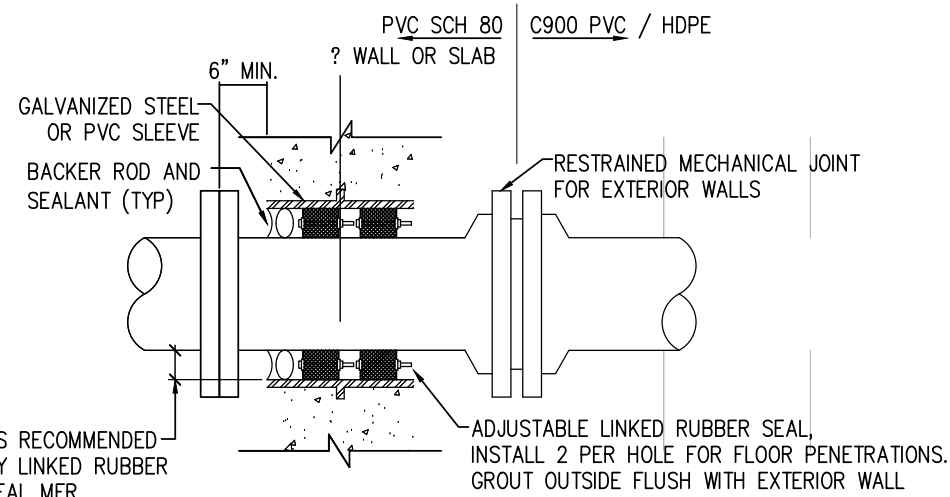


HATCH DETAIL  
NTS

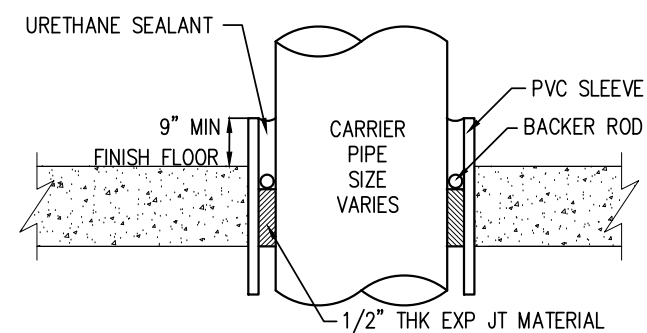
| STANDARD SIZES |           |               |               |               |
|----------------|-----------|---------------|---------------|---------------|
| QTY.           | MODEL NO. | A DIM. INCHES | C DIM. INCHES | UNIT WT. LBS. |
|                | S1S2424   | 24            | 24            | 37            |
|                | S1S2430   | 24            | 30            | 38            |
| 6              | S1S2436   | 24            | 36            | 39            |
|                | S1S2442   | 24            | 42            | 40            |
|                | S1S2448   | 24            | 48            | 41            |
|                | S1S3030   | 30            | 30            | 42            |
|                | S1S3036   | 30            | 36            | 43            |
|                | S1S3042   | 30            | 42            | 44            |
|                | S1S3048   | 30            | 48            | 45            |
|                | S1S3054   | 30            | 54            | 46            |
|                | S1S3060   | 30            | 60            | 47            |
|                | S1S3636   | 36            | 36            | 48            |
|                | S1S3642   | 36            | 42            | 49            |
|                | S1S3648   | 36            | 48            | 50            |
|                | S1S3654   | 36            | 54            | 51            |
|                | S1S3660   | 36            | 60            | 52            |
|                | S1S3666   | 36            | 66            | 53            |
|                | S1S3672   | 36            | 72            | 54            |
|                | S1S4242   | 42            | 42            | 55            |



TYPICAL PIPE SUPPORT DETAIL  
NTS



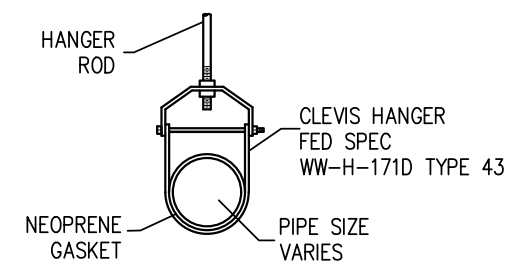
WALL PENETRATION DETAIL  
NTS



NOTE:

1. FOR FOUNDATION WALL PENETRATION PROVIDE 1" ANNULAR SPACE AROUND CARRIER PIPE AND SEAL WITH URETHANE SEALANT ONLY TO PERMIT MOVEMENT

FLOOR PENETRATION DETAIL  
NTS

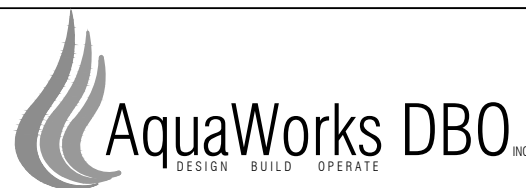


| PIPE SIZE    | HANGER ROD DIA |
|--------------|----------------|
| 2" & SMALLER | 3/8"           |
| 2 1/2"       | 1/2"           |
| 3" & 4"      | 5/8"           |
| 6" THRU 12"  | 3/4"           |

PIPE HANGER SUPPORT DETAIL  
NTS



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COMMUNITY OF MILNER  
ROUTT COUNTY, COLORADO

ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

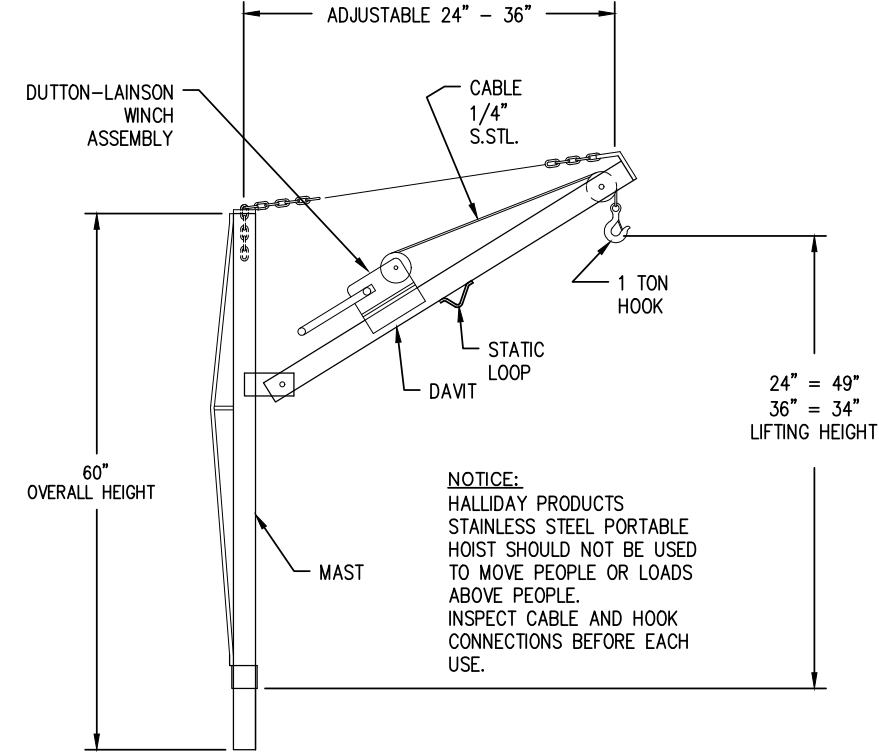
SHEET TITLE:  
PROCESS DETAILS

| PROJECT NUMBER: | SCALE: | SHEET: |
|-----------------|--------|--------|
| 7829            | NTS    | G7     |


SERIES DB PORTABLE HOIST

- STANDARD FEATURES:
- TYPE-304 STAINLESS STEEL CONSTRUCTION
  - 30 FEET (9 METERS) OF 1/4" (7 MM) STAINLESS STEEL CABLE
  - GALVANIZED 1 TON HOOK
  - DUTTON-LAINSON MARINE GRADE BRAKE WINCH
  - ADJUSTABLE REACH IN 1" (25 MM) INCREMENTS
  - 3 YEAR GUARANTEE

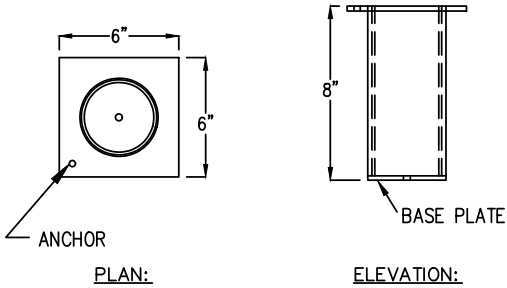
- OPTIONS:
- TYPE-316 CONSTRUCTION
  - ADDITIONAL CABLE AVAILABLE (SPECIFY LENGTH)
  - STAINLESS STEEL WINCH
  - STAINLESS STEEL HOOK
  - OTHER REACHES AVAILABLE UPON REQUEST (CONSULT FACTORY)



PORTABLE HOIST  
NTS

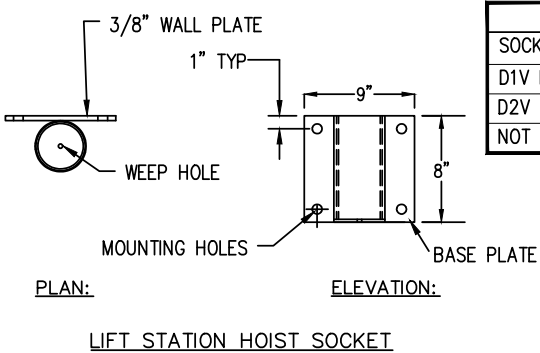
|  <div>www.HallidayProducts.com<br/>Phone 800-298-1027<br/>Fax 407-298-4534<br/>Sales@HallidayProducts.com</div> |           |                      |                     |
|--|-----------|----------------------|---------------------|
| STANDARD SIZES:  |           |                      |                     |
| QTY.   | MODEL NO. | MAX .LOAD LBS. (KG.) | UNIT WT. LBS. (KG.) |
|  | D1B36C    | 300 (136)            | 73 (33)             |

|  |  |  |  |
|--|--|--|--|
|  <div>www.HallidayProducts.com<br/>Phone 800-298-1027<br/>Fax 407-298-4534<br/>Sales@HallidayProducts.com</div> |  |  |  |
|--|--|--|--|



| EMBED STYLE HOIST SOCKETS |                  |
|---------------------------|------------------|
| SOCKET MODEL #            | FOR HOIST MODELS |
| D1S LINED                 | D1A AND D1B      |
| D2S LINED                 | D2A AND D2B      |
| D3S LINED                 | D3A AND D3B      |

EMBED STYLE HOIST SOCKETS



HOIST BASE  
NTS

EMBED STYLE BASE LOCATIONS:

- 1) INFLUENT EQ PUMPS
- 2) SLUDGE TANK PUMPS
- 3) MBR FEED FORWARD PUMPS

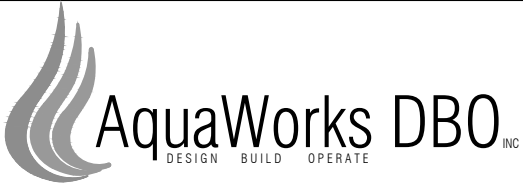
SOCKET (LIFT STATION) STYLE BASE LOCATIONS:

- 1) LIFT STATION PUMPS

| WALL STYLE HOIST SOCKETS |                  |
|--------------------------|------------------|
| SOCKET MODEL #           | FOR HOIST MODELS |
| D1V LINED                | D1A AND D1B      |
| D2V LINED                | D2A AND D2B      |
| NOT AVAILABLE            | D3A AND D3B      |



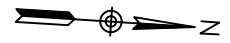
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| PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    |  |  | SHEET TITLE:<br>METALS DETAILS |               |              |
| ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |  |  | PROJECT NUMBER:<br>7829        | SCALE:<br>NTS | SHEET:<br>G8 |

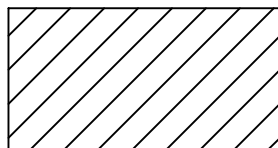







0 90 180  
FEET

LEGEND

|   |                                 |
|---|---------------------------------|
| ---   | PARCEL BOUNDARY                 |
| SS  | EXISTING SEWER LINE             |
| OHE   | EXISTING OVERHEAD ELECTRIC LINE |
|  | TEMPORARY CONSTRUCTION EASEMENT |



|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
|----------|--|--|--|-------|--|--|--|-----|--|--|--|-----------------------|--|--|--|---|--|--|--|
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PROJECT: MILNER COLORADO WWTP  
COMMUNITY OF MILNER  
ROUTT COUNTY, COLORADO

ENGINEER: AQUAWORKS DBO, INC.  
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(303) 477-5915

|                   |  |                 |  |        |  |        |  |
|-------------------|--|-----------------|--|--------|--|--------|--|
| SHEET TITLE:      |  | PROJECT NUMBER: |  | SCALE: |  | SHEET: |  |
| OVERALL SITE PLAN |  | 7829            |  | 1"=90' |  | C1     |  |

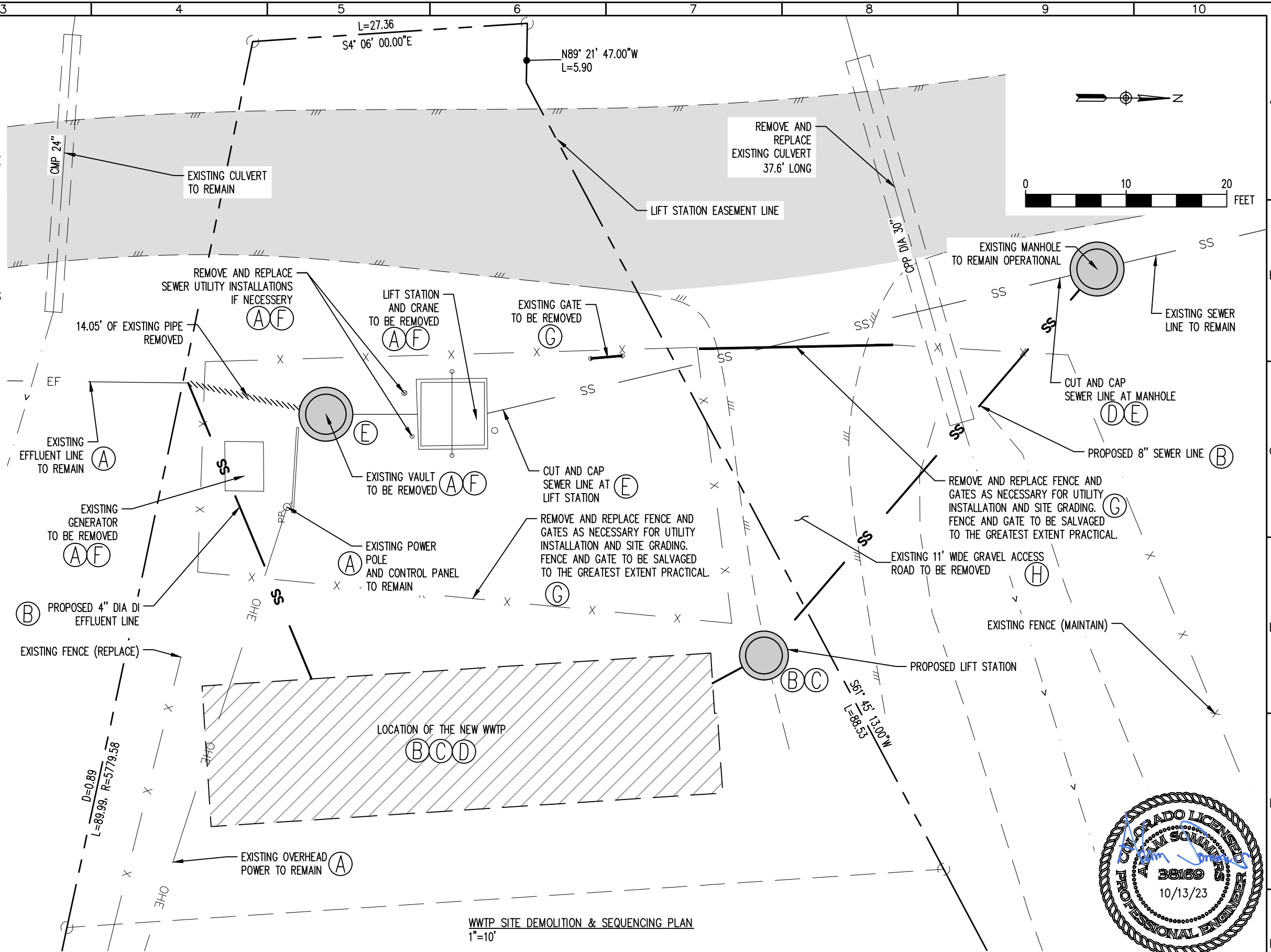


DEMOLITION NOTES:

1. SITE DEMOLITION TO BE COORDINATED WITH ENGINEER AND OWNER WITH RESPECT TO EQUIPMENT OR FACILITIES TO REMAIN IN SERVICE, TO BE REMOVED, OR TO BE ABANDONED IN PLACE.
2. THE CONTRACTOR IS NOT TO DAMAGE CURBS, WALKS OR PAVING WHICH IS NOT INCLUDED IN THE SITE PREPARATION OR DEMOLITION SHOWN ON THE PLANS. THE COST TO REPAIR ANY SUCH DAMAGE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. REMOVE AND DISPOSE OF ALL PAVING MATERIALS PROPERLY, INCLUDING BASE COURSE AND ANY OTHER DEBRIS ENCOUNTERED.
4. CONCRETE OR ASPHALT SAWCUTS SHALL BE CRISP CLEAN CUTS THAT ARE NEAT IN APPEARANCE. LOCATE ALL SAWCUTS AS REQUIRED PER DIRECTION OF THE ENGINEER.
5. ALL EXISTING SITE TREES AND VEGETATION ARE TO BE PROTECTED IN PLACE, UNLESS SPECIFICALLY NOTED FOR REMOVAL ON THE PLANS.
6. SITE REVEGETATION SHALL COMPLY WITH THE MUNICIPAL/COUNTY STANDARDS AND THE PROJECT REVEGETATION SPECIFICATION, AND LANDSCAPE PLAN, AS APPLICABLE.
7. THE CONTRACTOR SHALL REPLACE TO ORIGINAL CONDITION OR BETTER AT HIS EXPENSE ALL VEGETATION THAT IS DAMAGED BY CONSTRUCTION OPERATIONS.
8. THE CONTRACTOR IS TO ADHERE TO SPOT ELEVATIONS AND CONTOURS AS INDICATED ON THE GRADING PLAN. SPOT ELEVATIONS TAKE PRECEDENCE OVER CONTOURS WHERE CONFLICTING INFORMATION IS SHOWN.
9. ALL GRADES ARE TO BE APPROVED BY THE ENGINEER PRIOR TO PERMANENT PLANTING, SEEDING, AND FLAT WORK.
10. ALL AREAS SHALL BE GRADED TO ACHIEVE POSITIVE DRAINAGE, AS DEFINED IN THE SPECIFICATIONS.
11. EXCAVATIONS INCLUDES ALL MATERIAL ENCOUNTERED TO THE DEPTH INDICATED ON THE PLANS. EXCAVATE TO ALLOW FOR PROPER FILL MATERIAL, SLABS, VOIDS, FORMS, AND FOUNDATIONS, AND FOR THE REMOVAL OF UNSUITABLE MATERIALS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION REGARDING GRADING AND EXCAVATION.
12. ALL BEDDING, BACKFILL SUBGRADE CONSTRUCTION, AND EMBANKMENT SHALL BE CONSTRUCTED ACCORDING TO THE SPECIFICATIONS AND GEOTECHNICAL REPORT.
13. REFER TO GRADING PLAN FOR ALL SITE ELEVATIONS AND GRADING REQUIREMENTS.
14. REFER TO CIVIL DETAIL SHEETS FOR SITE DETAILS.
15. CONTRACTOR AND OWNER TO COORDINATE WITH UTILITY PROVIDERS FOR RELOCATION OF EXISTING INFRASTRUCTURE.

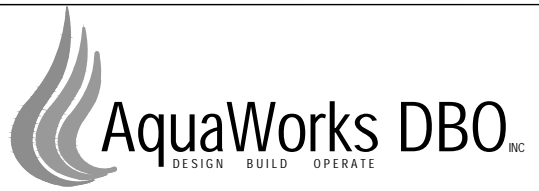
SEQUENCING NOTES (NOT INCLUSIVE OF ALL ACTIVITIES):

- A. EXISTING WWTP AND LIFT STATION TO REMAIN IN OPERATION UNTIL NEW WWTP HAS COMPLETED CLEAN WATER TESTING AND IS READY TO RECIVE INFLUENT WASTEWATER. MAINTAIN EXISTING 8" INFLUENT LINE AND 4" DISCHARGE LINE DURING CONSTRUCTION.
- B. CONSTRUCT NEW WWTP AND LIFT STATION. INSTALL SITE PIPING.
- C. CLEAN WATER TEST NEW WWTP AND LIFT STATION IN ACCORDANCE WITH CONTRACT DOCUMENTS.
- D. COMMENCE WASTEWATER TREATMENT AT NEW FACILITY.
- E. ABANDON IN PLACE EXISTING WASTEWATER LINES PLUG AND CAP.
- F. REMOVE EXISTING VAULT, EXISTING GENERATOR, EXISTING LIFT STATION, AND EXISTING CRANE.
- G. REMOVE AND REPLACE EXISTING FENCING AS SHOWN.
- H. REMOVE EXISTING GRAVEL ACCESS.
- I. LAGOON SITE TO BE DECOMMISSIONED ONCE ABOUT ACTIVITIES HAVE BEEN COMPLETED



| REV. No: | DATE: | BY: | REVISION DESCRIPTION: |
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|          |       |     |                       |
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ROUTT COUNTY, COLORADO

ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

|  |                  |              |
|--|------------------|--------------|
| SHEET TITLE:<br>WWTP SITE DEMOLITION & SEQUENCING PLAN |                  |              |
| PROJECT NUMBER:<br>7829                                | SCALE:<br>1"=10' | SHEET:<br>C2 |



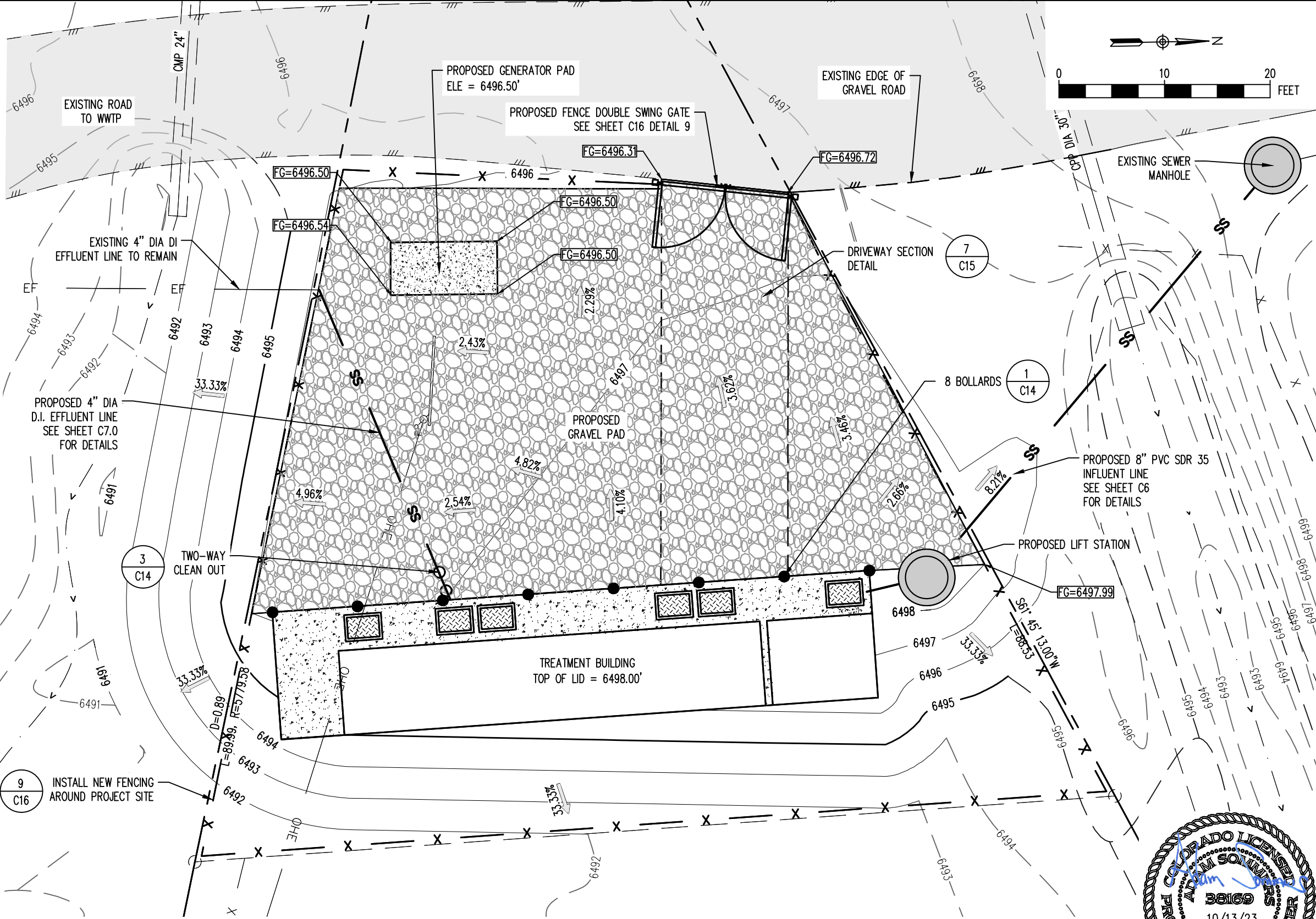


GRADING NOTES:

1. TOPSOIL WITHIN THE DESIGNATED PROJECT LIMITS OF DISTURBANCE SHALL BE SALVAGED PRIOR TO BEGINING OF HAULING, EXCAVATING, OR FILL OPERATIONS.
2. TOPSOIL SHALL BE REPLACED TO DISTURBED AREAS AND SHALL BE PLACED DIRECTLY UPON COMPLETED CUT AND FILL SLOPES WHENEVER CONDITIONS AND THE PROGRESS OF CONSTRUCTION PERMIT.
3. CONTRACTOR TO INSTALL FINISH GRADE ACCORDING TO PLAN GRADES, SLOPES, SPOTS, NOTES AND SPECIFICATIONS. PROVIDE A SMOOTH FINISH BY RAKING IN TOPSOILED AREAS. PROVIDE SMOOTH TRANSITIONS AT TOP OF BANKS AND TOE OF SLOPES.
4. ALL EXCAVATIONS AND EMBANKMENTS SHALL BE FINISHED TO SMOOTH AND UNIFORM SURFACES CONFORMING WITH PLANS AND TYPICAL SECTIONS DETAILED AND SPECIFIED HERE.
5. WHEN EMBANKMENT IS PLACED ON BOTH SIDES OF A CONCRETE WALL OR BOX TYPE STRUCTURE, THE EMBANKMENT SHALL BE BROUGHT UP EQUALLY ON BOTH SIDES OF THE STRUCTURE UNLESS NOTED OTHERWISE ON THE PLANS.
6. EMBANKMENT SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 8 INCHES LOOSE MEASUREMENT AND SHALL BE COMPACTED AS SPECIFIED BEFORE THE NEXT LAYER IS PLACED.
7. SURFACE WATER SHALL NOT BE ALLOWED TO POND ANYWHERE AND SHALL DRAIN AWAY FROM BUILDING AT ALL TIMES. ALL DRAINAGE IS SHOWN DRAINING AWAY FROM BUILDING ON THESE PLANS.

NOTES:

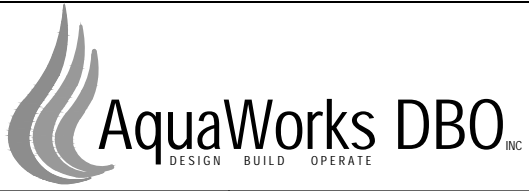
INFORMATION SHOWN ON THIS SHEET WAS OBTAINED FROM:  
E&F ASSOCIATES SITE SURVEY WITH TOPOGRAPHY  
DATE : 6-23-22



WWTP SITE GRADING PLAN  
1"=10'

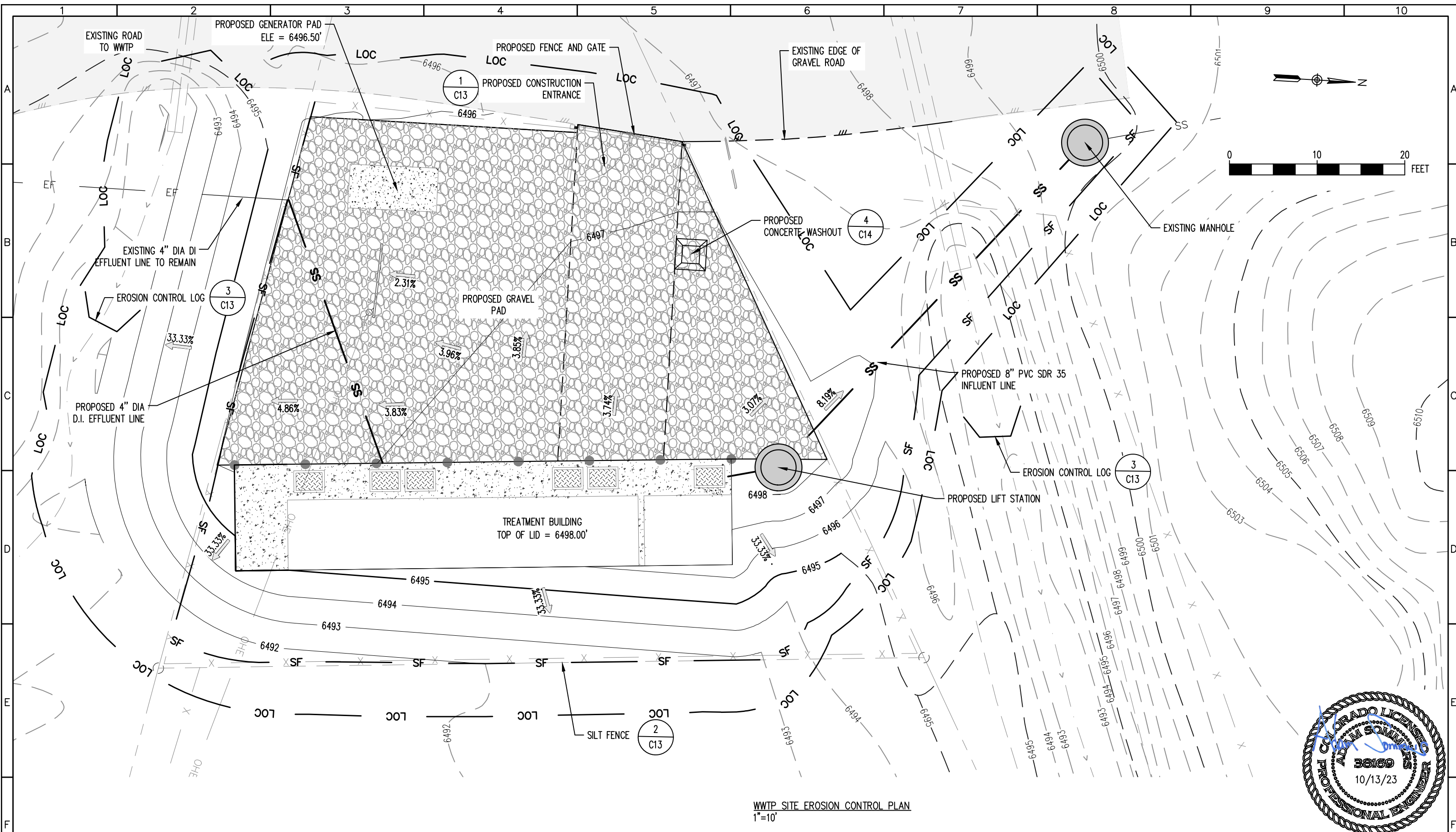


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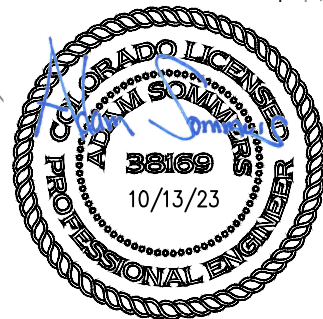



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| PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    |  | SHEET TITLE:<br>WWTP SITE GRADING PLAN |                  |              |
| ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |  | PROJECT NUMBER:<br>7829                | SCALE:<br>1"=10' | SHEET:<br>C4 |

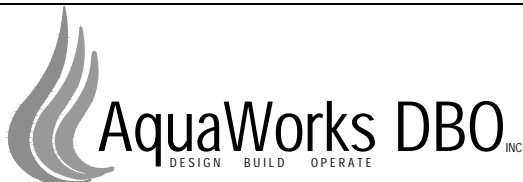




WWTP SITE EROSION CONTROL PLAN  
1"=10'



|          |       |     |                       |   |
|----------|-------|-----|-----------------------|---|
| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY: MC  |
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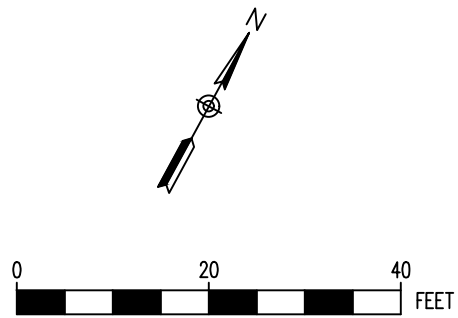
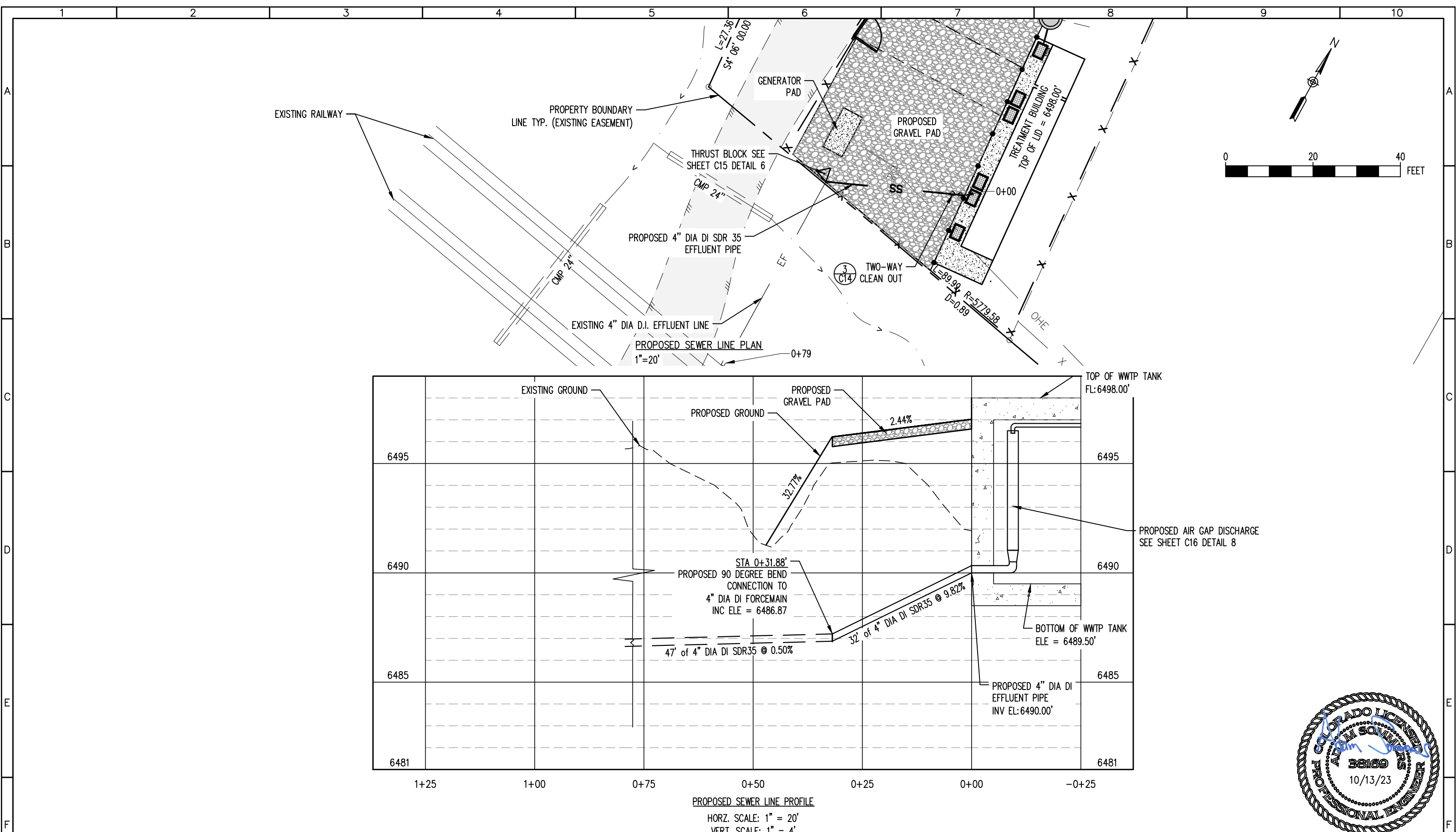
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|-----------|---|
| PROJECT:  | MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                   |
| ENGINEER: | AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |

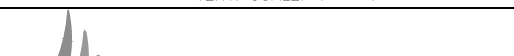

SHEET TITLE:  
WWTP SITE EROSION CONTROL PLAN

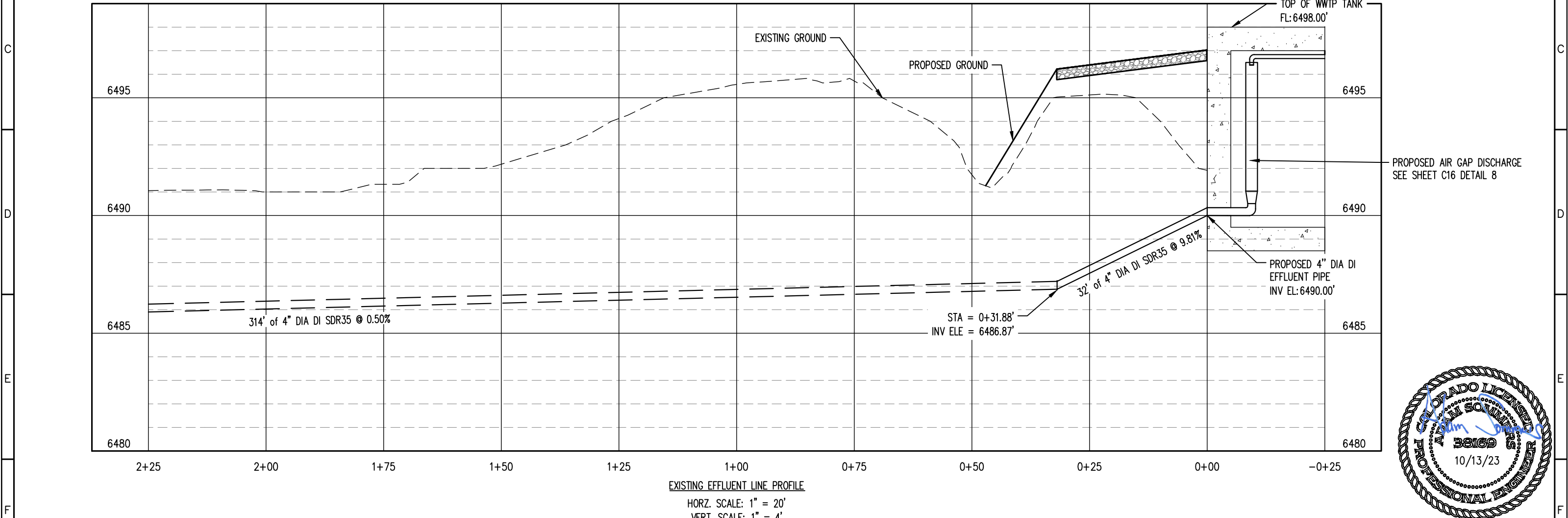
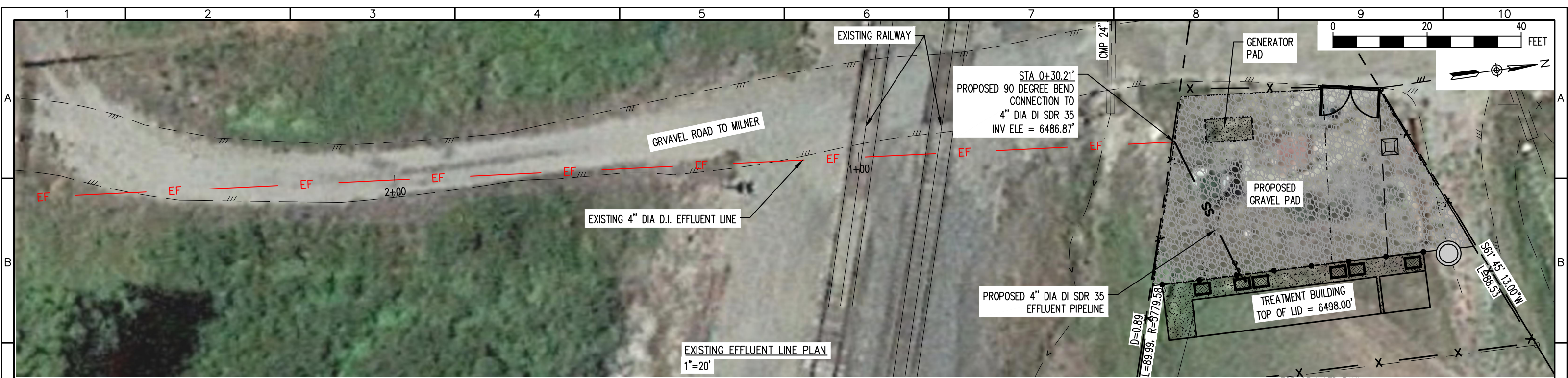
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| PROJECT NUMBER: | SCALE: | SHEET: |
| 7829            | 1"=10' | C5     |

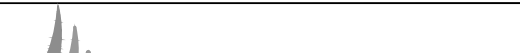





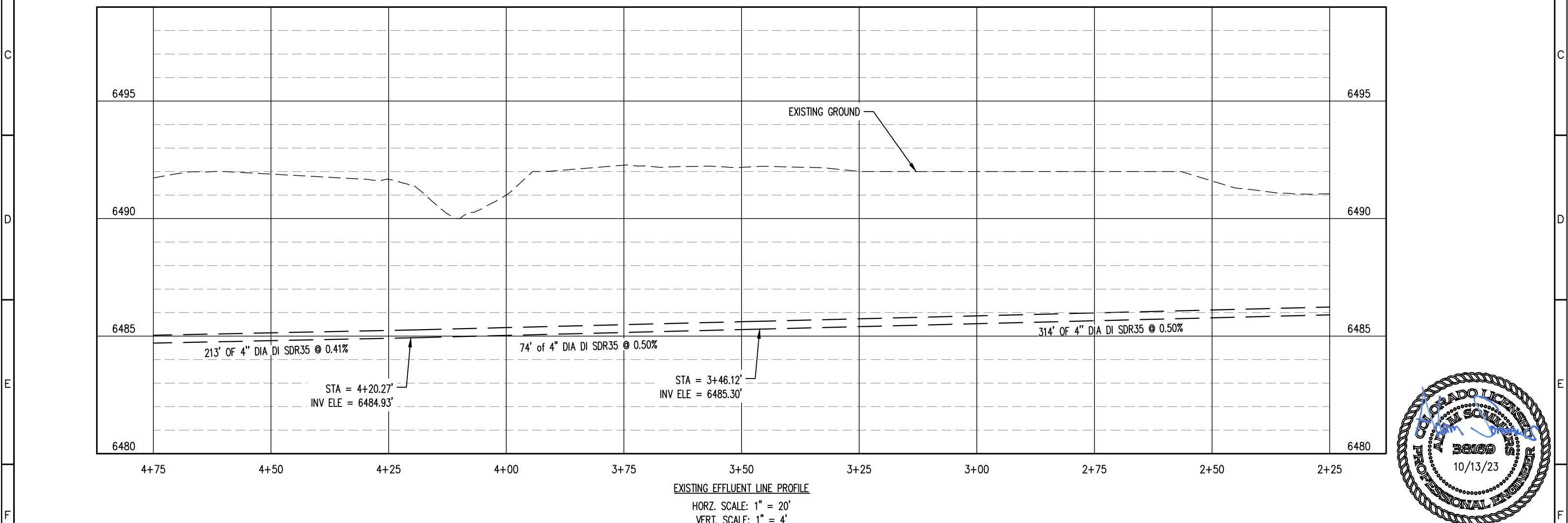
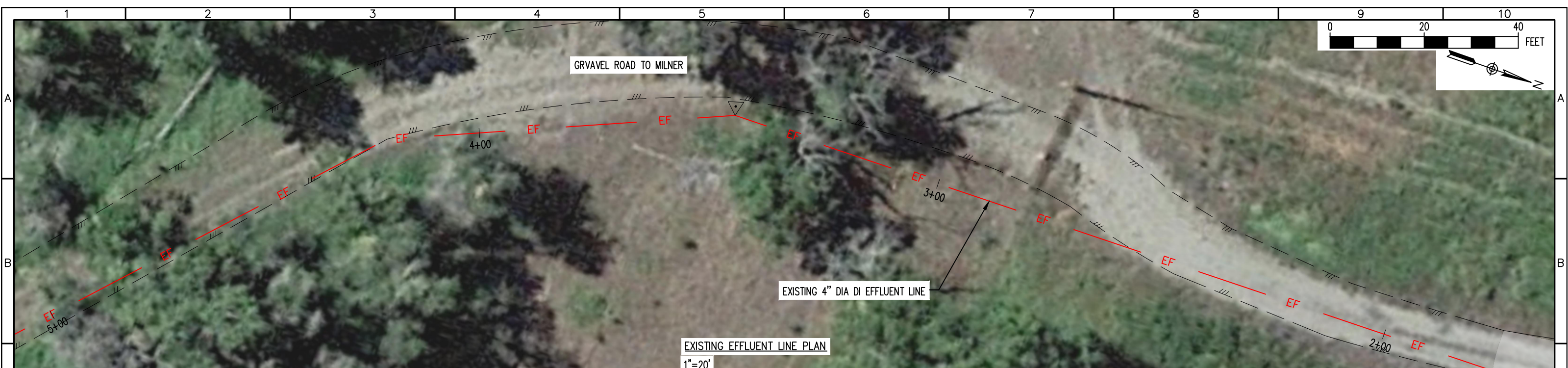



|          |       |     |                       |   |   |   |  |                                       |                    |   |  |   |  |   |  |   |  |    |  |
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| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY: MG  |  | PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    | SHEET TITLE:<br>PROPOSED SEWER LINE PLAN AND PROFILE |                                       |                    |   |  |   |  |   |  |   |  |    |  |
|          |       |     |                       | DESIGNED BY: AS   |   | ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 | PROJECT NUMBER:<br><br>7829                          | SCALE:<br><br>H:1" = 20'<br>V:1" = 4' | SHEET:<br><br>C7.0 |   |  |   |  |   |  |   |  |    |  |
|          |       |     |                       | FILE PRINTED ON: 10/13/2023 10:10:23 AM   |   |   |  |                                       |                    |   |  |   |  |   |  |   |  |    |  |
|          |       |     |                       | COPYRIGHT: AQUAWORKS DBO, INC.  |   |   |  |                                       |                    |   |  |   |  |   |  |   |  |    |  |
|          |       |     |                       | 0 1 IF THIS BAR DOES NOT READ 1"  |   |   |  |                                       |                    |   |  |   |  |   |  |   |  |    |  |
|          |       |     |                       |  DRAWING IS NOT LABELED TO SCALE |   |   |  |                                       |                    |   |  |   |  |   |  |   |  |    |  |
| 1        |       | 2   |                       | 3   |   | 4   |  | 5                                     |                    | 6 |  | 7 |  | 8 |  | 9 |  | 10 |  |



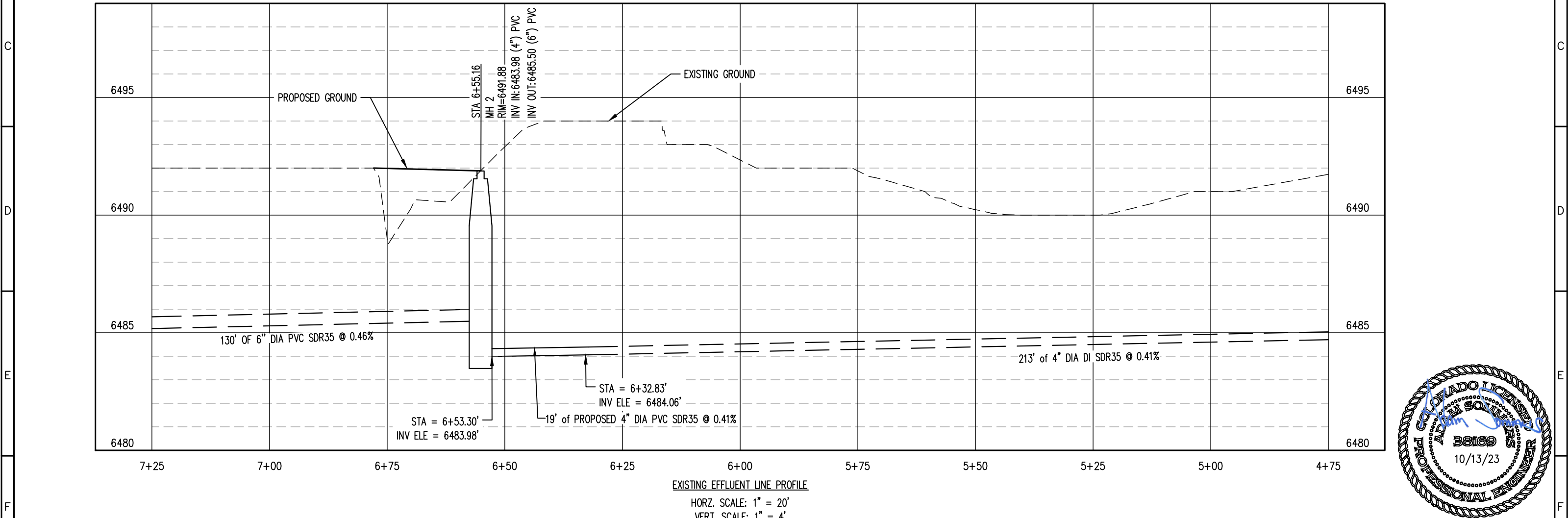
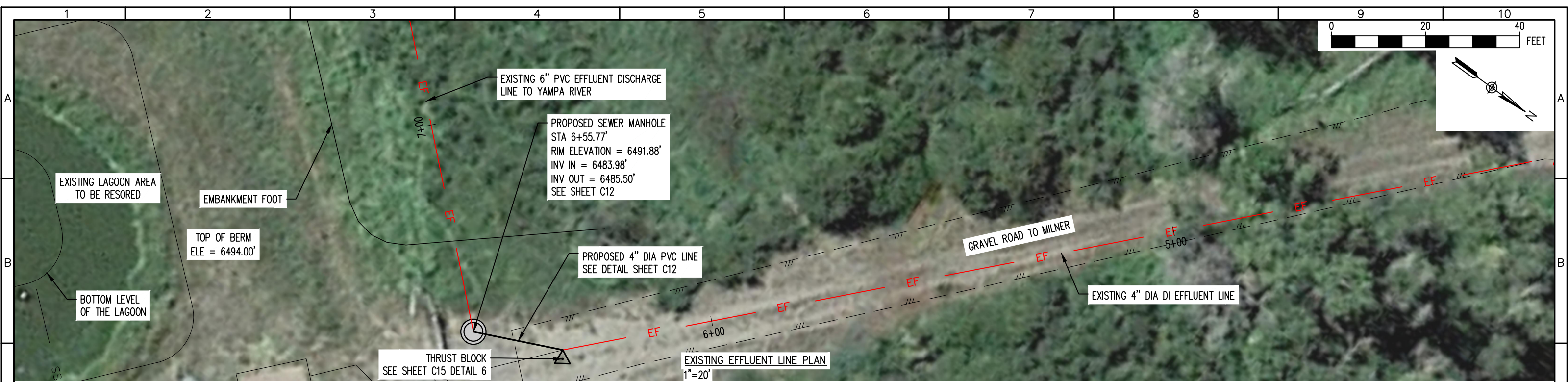
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| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY: MG  |  | PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    | SHEET TITLE:<br>CONNECTION TO EXISTING EFFLUENT LINE P&P |                                       |                    |
|          |       |     |                       | DESIGNED BY: AS   |   | ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 | PROJECT NUMBER:<br><br>7829                              | SCALE:<br><br>H:1" = 20'<br>V:1" = 4' | SHEET:<br><br>C7.1 |
|          |       |     |                       | FILE PRINTED ON: 10/13/2023 10:14:30 AM   |   |   |  |                                       |                    |
|          |       |     |                       | COPYRIGHT: AQUAWORKS DBO, INC.  |   |   |  |                                       |                    |
|          |       |     |                       | 0 1 IF THIS BAR DOES NOT READ 1"  |   |   |  |                                       |                    |
|          |       |     |                       |  DRAWING IS NOT LABELED TO SCALE |   |   |  |                                       |                    |
| 1        | 2     | 3   | 4                     | 5   | 6   | 7   | 8  | 9                                     | 10                 |






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|----------|-------|-----|-----------------------|--|---|---|---|-----------------------------------|----------------|
| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY: MG   |  | PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO<br>ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 | SHEET TITLE:<br>EXISTING EFFLUENT LINE PLAN & PROFILE |                                   |                |
|          |       |     |                       | DESIGNED BY: AS  |   |   | PROJECT NUMBER:<br>7829                               | SCALE:<br>H:1" = 20'<br>V:1" = 4' | SHEET:<br>C7.2 |
|          |       |     |                       | FILE PRINTED ON: 10/13/2023 10:16:40 AM                          |   |   |   |                                   |                |
|          |       |     |                       | COPYRIGHT: AQUAWORKS DBO, INC.                                   |   |   |   |                                   |                |
|          |       |     |                       | 0 1 IF THIS BAR DOES NOT READ 1" DRAWING IS NOT LABELED TO SCALE |   |   |   |                                   |                |





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| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY: MG   |
|          |       |     |                       | DESIGNED BY: AS  |
|          |       |     |                       | FILE PRINTED ON: 10/13/2023 10:17:55 AM                          |
|          |       |     |                       | COPYRIGHT: AQUAWORKS DBO, INC.                                   |
|          |       |     |                       | 0 1 IF THIS BAR DOES NOT READ 1" DRAWING IS NOT LABELED TO SCALE |



**AquaWorks DBO**  
DESIGN BUILD OPERATE

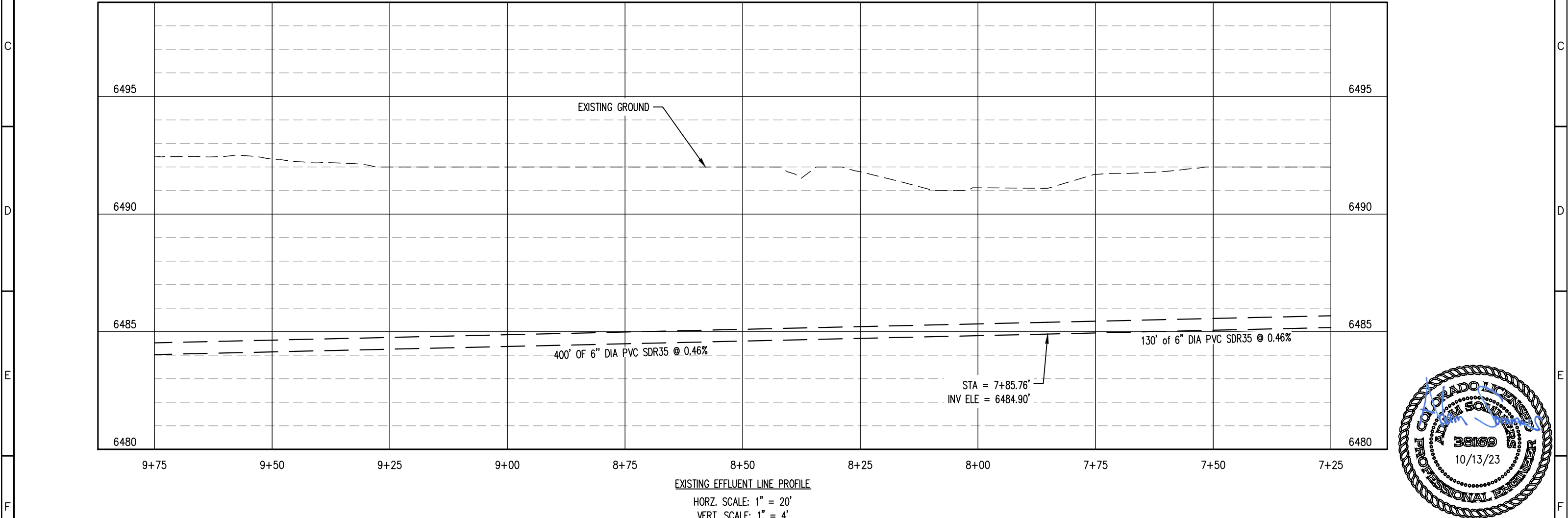
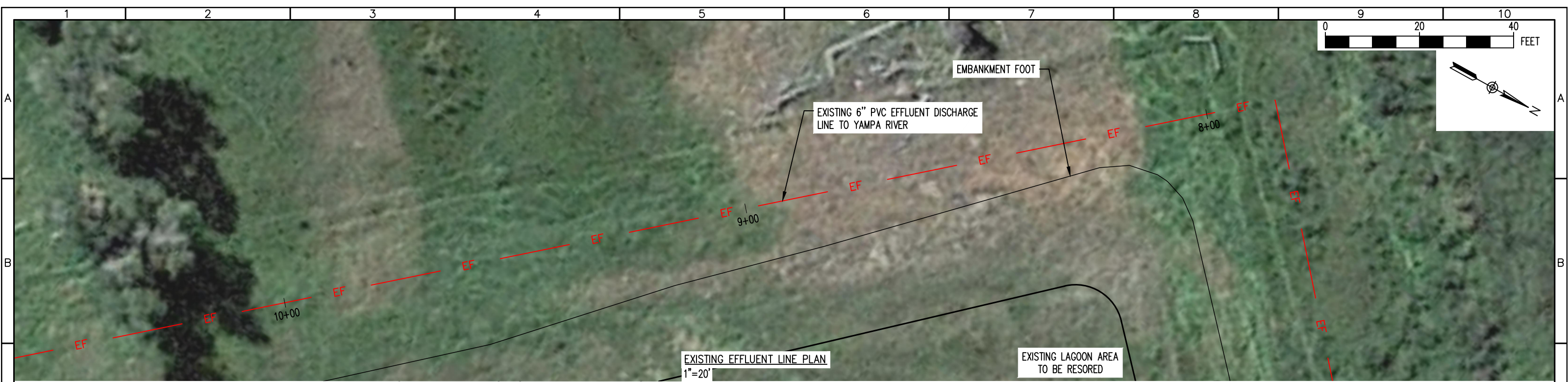
PROJECT: MILNER COLORADO WWTP  
COMMUNITY OF MILNER  
ROUTT COUNTY, COLORADO

ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

SHEET TITLE:  
EXISTING EFFLUENT LINE PLAN & PROFILE

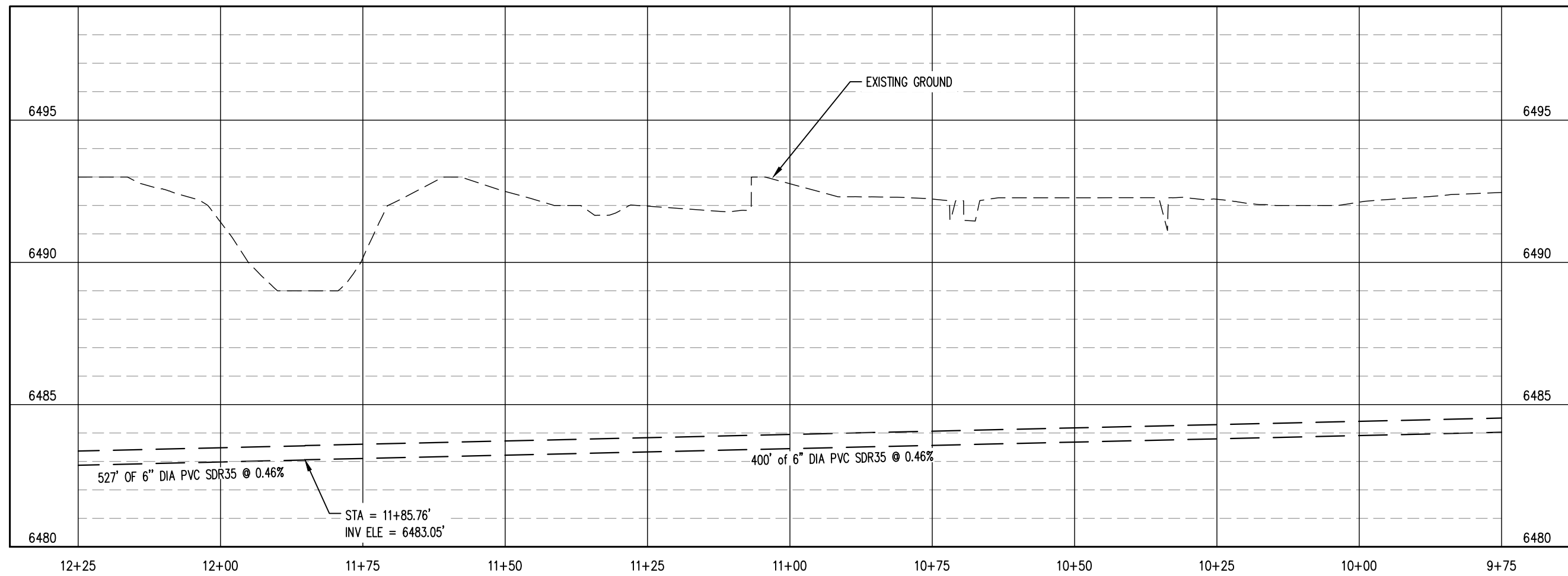
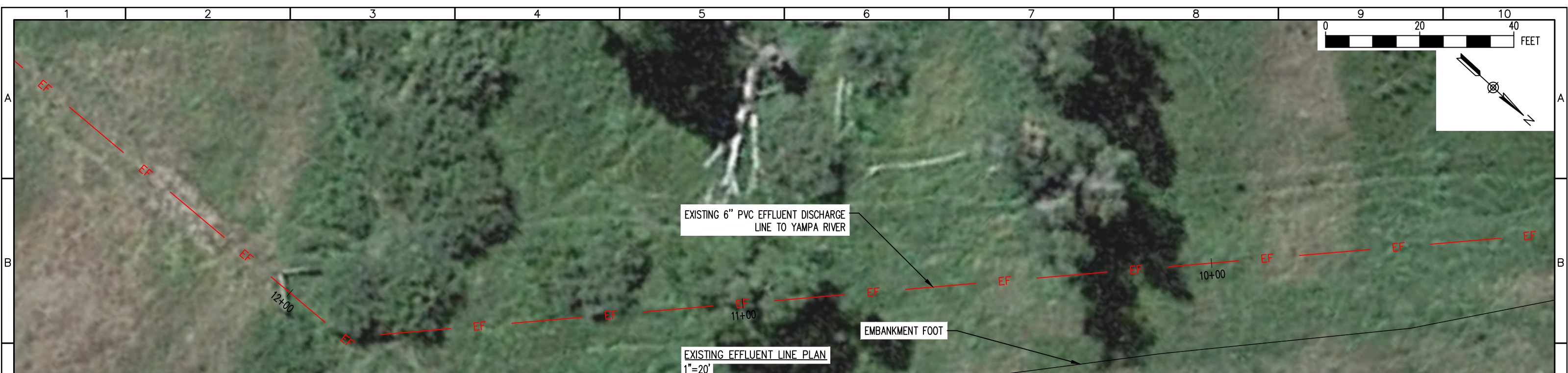
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| PROJECT NUMBER:<br>7829 | SCALE:<br>H: 1" = 20'<br>V: 1" = 4' | SHEET:<br>C7.3 |
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| REV. No: |  |  |  | DATE: |  |  |  | BY: |  |  |  | REVISION DESCRIPTION: |  |  |  | DRAWN BY: MG                            |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  | DESIGNED BY: AS                         |  |  |  |
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|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  | COPYRIGHT: AQUAWORKS DBO, INC.          |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  | 0                                       |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  | 1 IF THIS BAR DOES NOT READ 1"          |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  | DRAWING IS NOT LABELED TO SCALE         |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
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|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
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|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
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|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
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|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  |                       |  |  |  |   |  |  |  |
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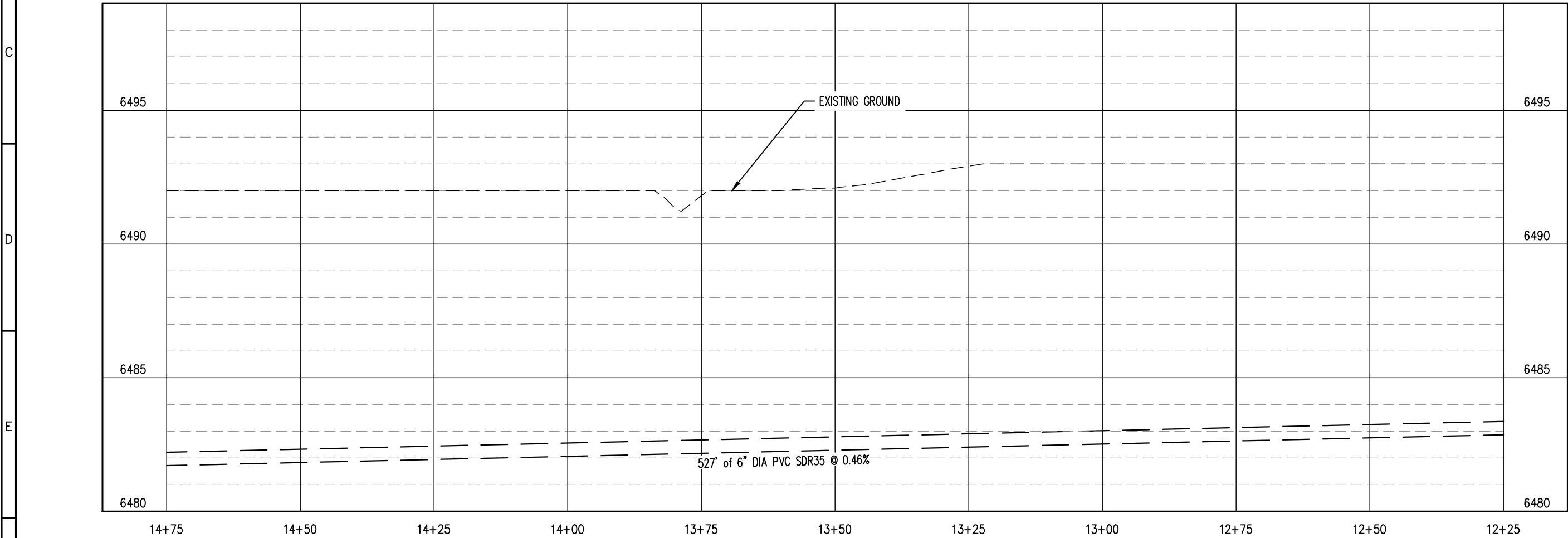
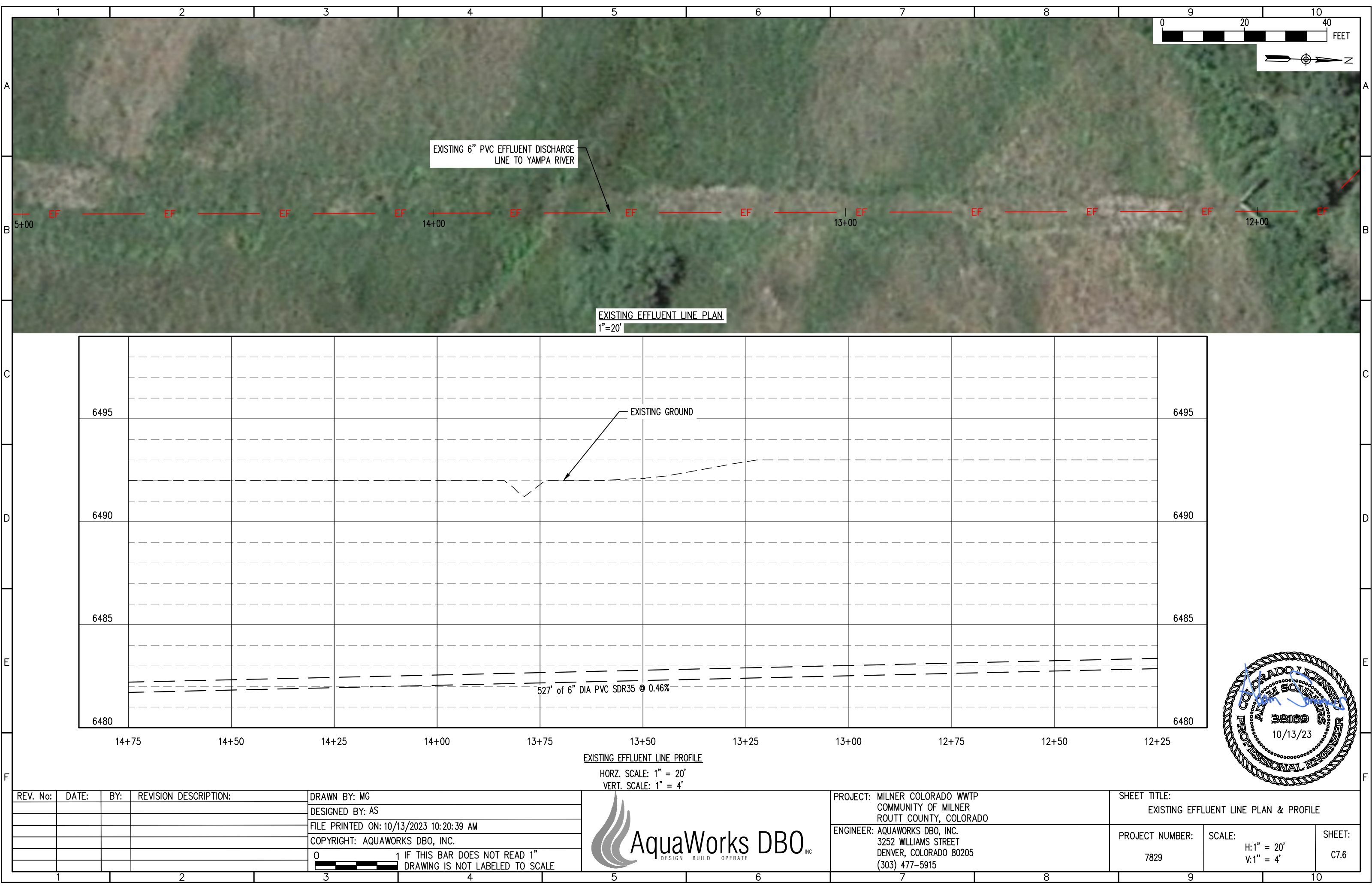


EXISTING EFFLUENT LINE PROFILE  
HORZ. SCALE: 1" = 20'  
VERT. SCALE: 1" = 4'



|          |  |  |  |       |  |  |  |     |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |  |  |                                       |  |   |  |  |  |   |  |  |  |    |  |  |  |
|----------|--|--|--|-------|--|--|--|-----|--|--|--|---|--|--|--|---|--|--|--|---|--|--|--|--|--|---------------------------------------|--|---|--|--|--|---|--|--|--|----|--|--|--|
| REV. No: |  |  |  | DATE: |  |  |  | BY: |  |  |  | REVISION DESCRIPTION:   |  |  |  | DRAWN BY: MG  |  |  |  | <div><div>VERT. SCALE: 1" = 4'</div></div> |  |  |  | PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO |  |                                       |  | SHEET TITLE:<br>EXISTING EFFLUENT LINE PLAN & PROFILE |  |  |  |   |  |  |  |    |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  | DESIGNED BY: AS   |  |  |  | ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |  |  |  |   |  |  |  | PROJECT NUMBER:<br><br>7829  |  | SCALE:<br><br>H:1" = 20'<br>V:1" = 4' |  | SHEET:<br><br>C7.5                                    |  |  |  |   |  |  |  |    |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  | FILE PRINTED ON: 10/13/2023 10:19:42 AM   |  |  |  |   |  |  |  |   |  |  |  |  |  |                                       |  |   |  |  |  |   |  |  |  |    |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  | COPYRIGHT: AQUAWORKS DBO, INC.  |  |  |  |   |  |  |  |   |  |  |  |  |  |                                       |  |   |  |  |  |   |  |  |  |    |  |  |  |
|          |  |  |  |       |  |  |  |     |  |  |  | 0 1 IF THIS BAR DOES NOT READ 1"<br> DRAWING IS NOT LABELED TO SCALE |  |  |  |   |  |  |  |   |  |  |  |  |  |                                       |  |   |  |  |  |   |  |  |  |    |  |  |  |
| 1        |  |  |  | 2     |  |  |  | 3   |  |  |  | 4   |  |  |  | 5   |  |  |  | 6   |  |  |  | 7  |  |                                       |  | 8   |  |  |  | 9 |  |  |  | 10 |  |  |  |

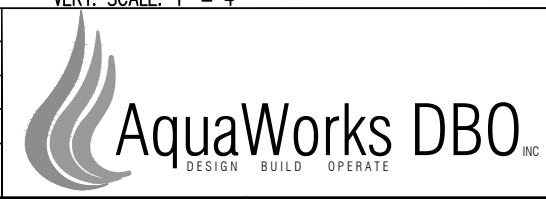




EXISTING EFFLUENT LINE PROFILE

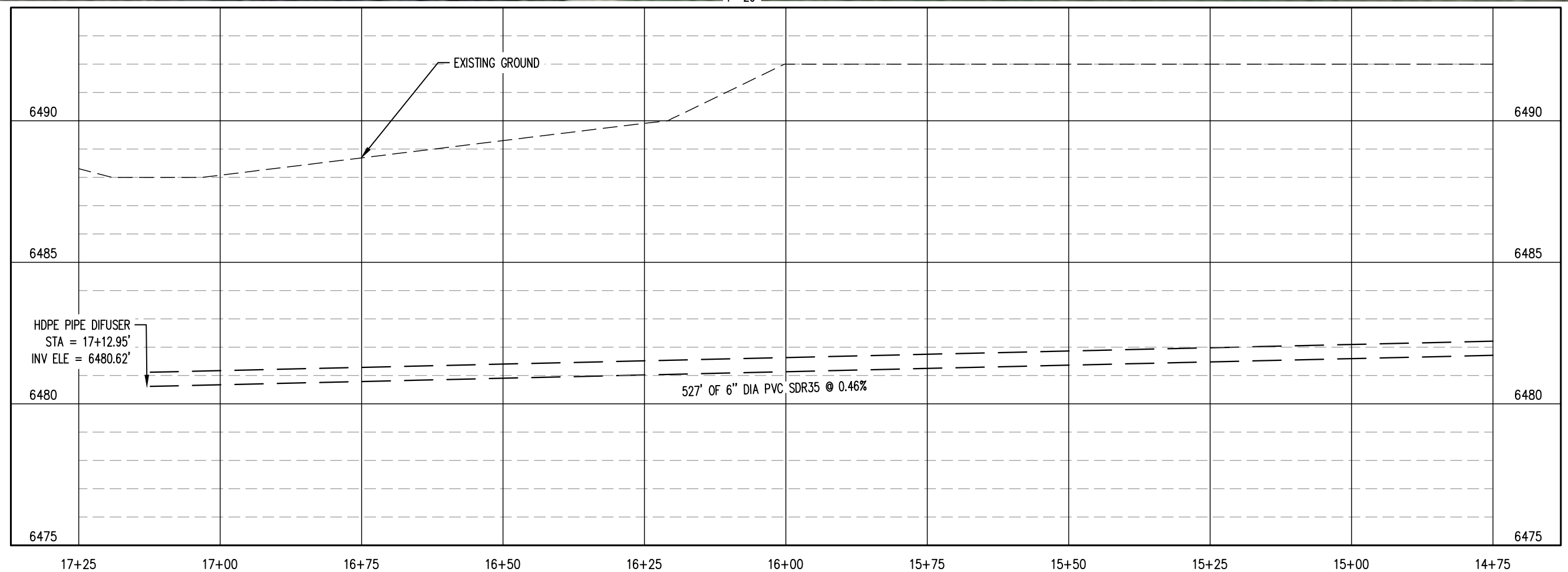
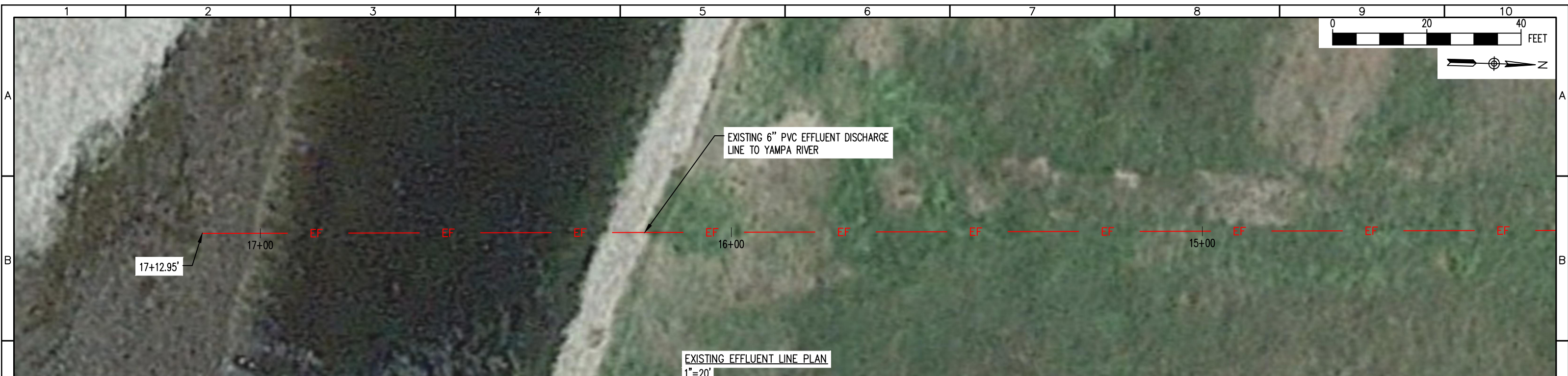
HORZ. SCALE: 1" = 20'  
VERT. SCALE: 1" = 4'

| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY: MG   |
|----------|-------|-----|-----------------------|--|
|          |       |     |                       | DESIGNED BY: AS  |
|          |       |     |                       | FILE PRINTED ON: 10/13/2023 10:20:39 AM                          |
|          |       |     |                       | COPYRIGHT: AQUAWORKS DBO, INC.                                   |
|          |       |     |                       | 0 1 IF THIS BAR DOES NOT READ 1" DRAWING IS NOT LABELED TO SCALE |




|   |  |   |                                   |                |
|---|--|---|-----------------------------------|----------------|
| PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    |  | SHEET TITLE:<br>EXISTING EFFLUENT LINE PLAN & PROFILE |                                   |                |
| ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |  | PROJECT NUMBER:<br>7829                               | SCALE:<br>H:1" = 20'<br>V:1" = 4' | SHEET:<br>C7.6 |

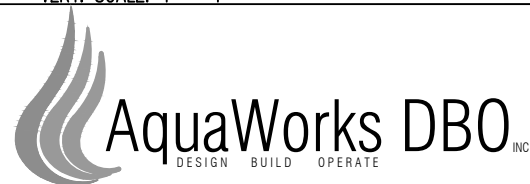




### EXISTING EFFLUENT LINE PROFILE

HORZ. SCALE: 1" = 20'  
VERT. SCALE: 1" = 4'

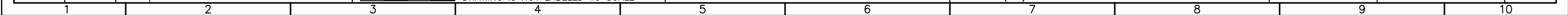
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|          |       |     |                       | DESIGNED BY: AS   |
|          |       |     |                       | FILE PRINTED ON: 10/13/2023 10:21:39 AM   |
|          |       |     |                       | COPYRIGHT: AQUAWORKS DBO, INC.  |
|          |       |     |                       | 0 1 IF THIS BAR DOES NOT READ 1"  |
|          |       |     |                       |  DRAWING IS NOT LABELED TO SCALE |



|           |   |
|-----------|---|
| PROJECT:  | MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                   |
| ENGINEER: | AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |

|              |                                       |
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| SHEET TITLE: | EXISTING EFFLUENT LINE PLAN & PROFILE |
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| PROJECT NUMBER:<br><br>7829 | SCALE:<br><br>H: 1" = 20'<br>V: 1" = 4' | SHEET:<br><br>C7.7 |
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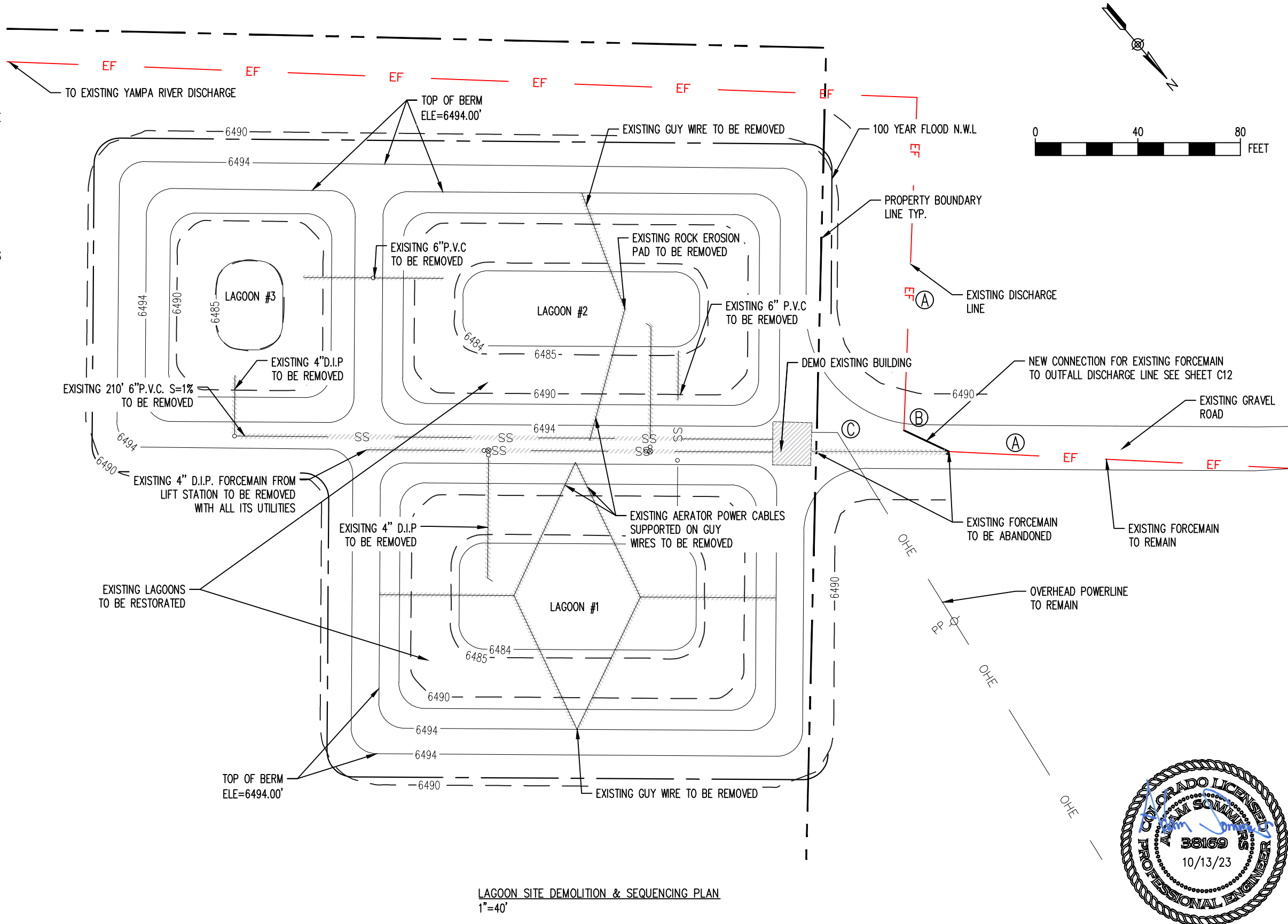


DEMOLITION NOTES:

1. SITE DEMOLITION TO BE COORDINATED WITH ENGINEER AND OWNER WITH RESPECT TO EQUIPMENT OR FACILITIES TO REMAIN IN SERVICE, TO BE REMOVED, OR TO BE ABANDONED IN PLACE.
2. THE CONTRACTOR IS NOT TO DAMAGE CURBS, WALKS OR PAVING WHICH IS NOT INCLUDED IN THE SITE PREPARATION OR DEMOLITION SHOWN ON THE PLANS. THE COST TO REPAIR ANY SUCH DAMAGE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. REMOVE AND DISPOSE OF ALL PAVING MATERIALS PROPERLY, INCLUDING BASE COURSE AND ANY OTHER DEBRIS ENCOUNTERED.
4. CONCRETE OR ASPHALT SAWCUTS SHALL BE CRISP CLEAN CUTS THAT ARE NEAT IN APPEARANCE. LOCATE ALL SAWCUTS AS REQUIRED PER DIRECTION OF THE ENGINEER.
5. ALL EXISTING SITE TREES AND VEGETATION ARE TO BE PROTECTED IN PLACE, UNLESS SPECIFICALLY NOTED FOR REMOVAL ON THE PLANS.
6. SITE REVEGETATION SHALL COMPLY WITH THE MUNICIPAL/COUNTY STANDARDS AND THE PROJECT REVEGETATION SPECIFICATION, AND LANDSCAPE PLAN, AS APPLICABLE.
7. THE CONTRACTOR SHALL REPLACE TO ORIGINAL CONDITION OR BETTER AT HIS EXPENSE ALL VEGETATION THAT IS DAMAGED BY CONSTRUCTION OPERATIONS.
8. THE CONTRACTOR IS TO ADHERE TO SPOT ELEVATIONS AND CONTOURS AS INDICATED ON THE GRADING PLAN. SPOT ELEVATIONS TAKE PRECEDENCE OVER CONTOURS WHERE CONFLICTING INFORMATION IS SHOWN.
9. ALL GRADES ARE TO BE APPROVED BY THE ENGINEER PRIOR TO PERMANENT PLANTING, SEEDING, AND FLAT WORK.
10. ALL AREAS SHALL BE GRADED TO ACHIEVE POSITIVE DRAINAGE, AS DEFINED IN THE SPECIFICATIONS.
11. EXCAVATIONS INCLUDES ALL MATERIAL ENCOUNTERED TO THE DEPTH INDICATED ON THE PLANS. EXCAVATE TO ALLOW FOR PROPER FILL MATERIAL, SLABS, VOIDS, FORMS, AND FOUNDATIONS, AND FOR THE REMOVAL OF UNSUITABLE MATERIALS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION REGARDING GRADING AND EXCAVATION.
12. ALL BEDDING, BACKFILL SUBGRADE CONSTRUCTION, AND EMBANKMENT SHALL BE CONSTRUCTED ACCORDING TO THE SPECIFICATIONS AND GEOTECHNICAL REPORT.
13. REFER TO GRADING PLAN FOR ALL SITE ELEVATIONS AND GRADING REQUIREMENTS.
14. REFER TO CIVIL DETAIL SHEETS FOR SITE DETAILS.
15. CONTRACTOR AND OWNER TO COORDINATE WITH UTILITY PROVIDERS FOR RELOCATION OF EXISTING INFRASTRUCTURE.

SEQUENCING NOTES (NOT INCLUSIVE OF ALL ACTIVITIES):

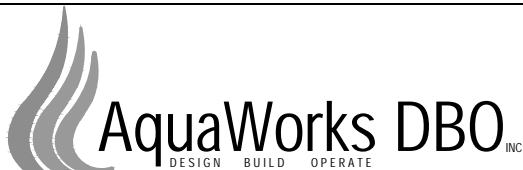
- A. MAINTAIN EXISTING 4" INFLUENT LINE AND 6" DISCHARGE LINE DURING CONSTRUCTION ON NEW WWTP. INSTALL CONNECTION FOR EXISTING FORCEMAIN TO THE EXISTING DISCHARGE 6" PVC PIPE WIDTH 45 DEGREE DI BENDS AND 4' PROPOSED SEWER MANHOLE.
- B. ABANDON IN PLACE EXISTING WASTEWATER LINES.
- C. PLUG AND CAP LINE.



LAGOON SITE DEMOLITION & SEQUENCING PLAN  
1"=40'



| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY: MG   |
|----------|-------|-----|-----------------------|--|
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| PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER ROUTT<br>COUNTY, COLORADO                    |  | SHEET TITLE:<br>LAGOON SITE DEMOLITION & SEQUENCING PLAN |                  |              |
| ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |  | PROJECT NUMBER:<br>7829                                  | SCALE:<br>1"=40' | SHEET:<br>C8 |

GRADING NOTES:

1. TOPSOIL WITHIN THE DESIGNATED PROJECT LIMITS OF DISTRUBANCE SHALL BE SALVAGED PRIOR TO BEGINING OF HAULING, EXCAVATING, OR FILL OPERATIONS.
2. TOPSOIL SHALL BE REPLACED TO DISTURBED AREAS AND SHALL BE PLACED DIRECTLY UPON COMPLETED CUT AND FILL SLOPES WHENEVER CONDITIONS AND THE PROGRESS OF CONSTRUCTION PERMIT.
3. CONTRACTOR TO INSTALL FINISH GRADE ACCORDING TO PLAN GRADES, SLOPES, SPOTS, NOTES AND SPECIFICATIONS. PROVIDE A SMOOTH FINISH BY RAKING IN TOPSOILED AREAS. PROVIDE SMOOTH TRANSITIONS AT TOP OF BANKS AND TOE OF SLOPES.
4. ALL EXCAVATIONS AND EMBANKMENTS SHALL BE FINISHED TO SMOOTH AND UNIFORM SURFACES CONFORMING WITH PLANS AND TYPICAL SECTIONS DETAILED AND SPECIFIED HERE.
5. WHEN EMBANKMENT IS PLACED ON BOTH SIDES OF A CONCRETE WALL OR BOX TYPE STRUCTURE, THE EMBANKMENT SHALL BE BROUGHT UP EQUALLY ON BOTH SIDES OF THE STRUCTURE UNLESS NOTED OTHERWISE ON THE PLANS.
6. EMBANKMENT SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 8 INCHES LOOSE MEASUREMENT AND SHALL BE COMPACTED AS SPECIFIED BEFORE THE NEXT LAYER IS PLACED.
7. SURFACE WATER SHALL NOT BE ALLOWED TO POND ANYWHERE AND SHALL DRAIN AWAY FROM BUILDINGS AT ALL TIMES. ALL DRAINAGE IS SHOWN DRAINING AWAY FROM BUILDINGS ON THESE PLANS.
8. THIS AREA IS WITHIN ZONE OF THE YAMPA RIVER FIRM PANEL NUMBER 08107C0835D. NO PROPOSED CHANGE IN NET FILL ON THIS SITE IS PROPOSED.

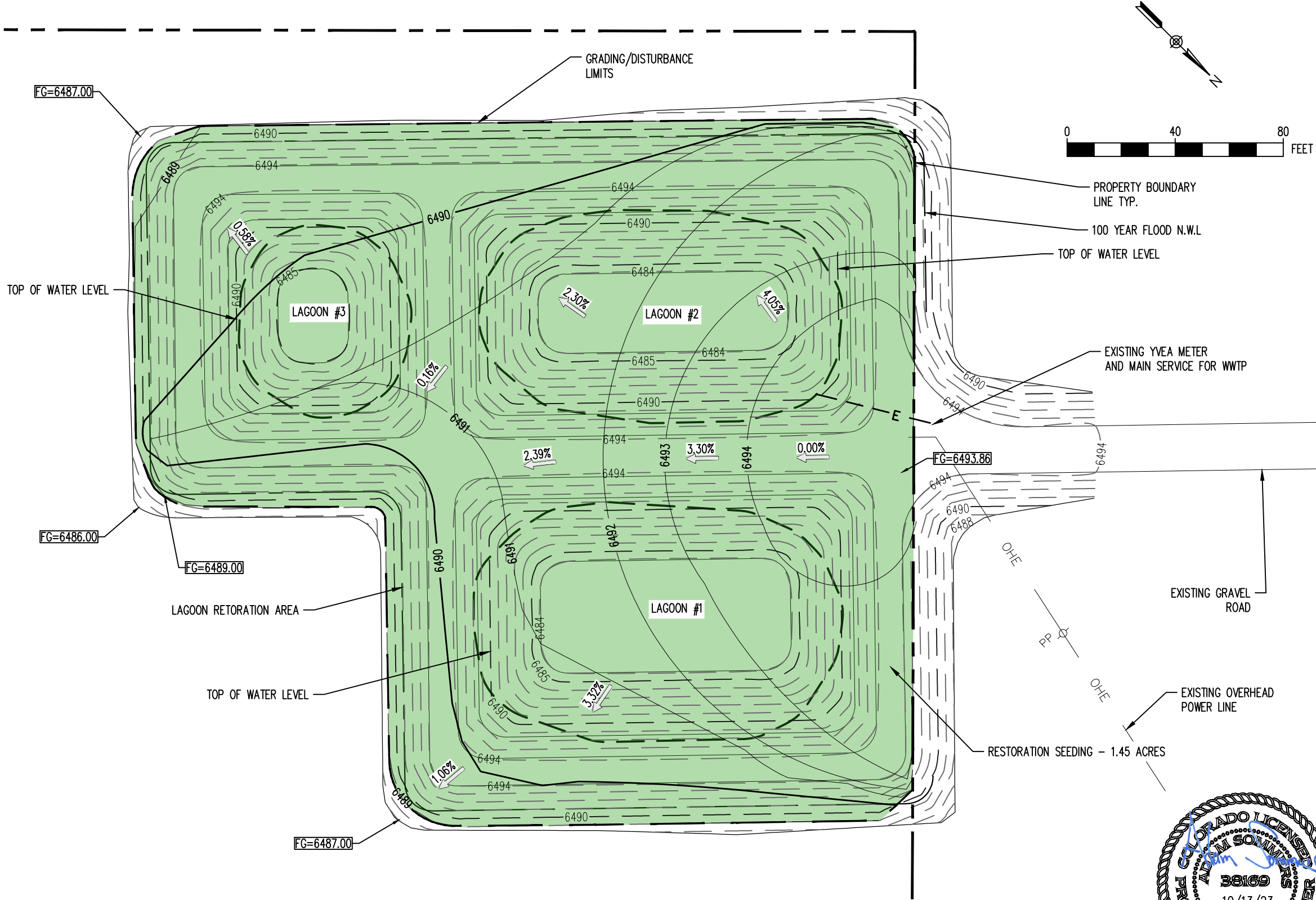
NOTES:

INFORMATION SHOWN ON THIS SHEET WAS OBTAINED FROM:  
COMMUNITY OF MILNER SEWAGE TREATMENT FACILITY SITE  
PLAN BY DISMUKE & DISMUKE, INC. CONSULTING ENGINEERS & SURVEYORS  
DATED JUNE 1982

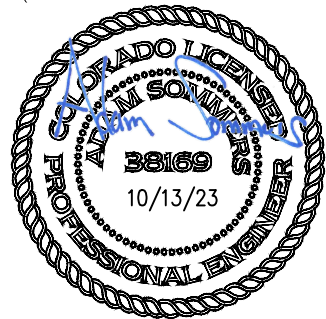
RESTORATION SEEDING SPECIFICATIONS:

REFER TO PROJECT SPECIFICATION MANUAL SECTION 32 92 00 FOR THE FOLLOWING ITEMS:

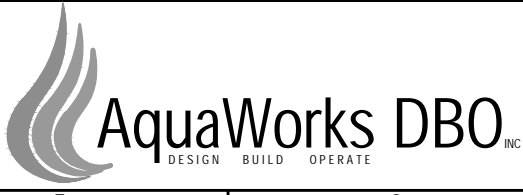
1. SOIL ANALYSIS
2. SEED AND MULCH SUBMITTALS
3. SITE PREPARATION AND PROTECTION
4. SOIL PREPARATION
5. SEEDING AND MULCHING
6. WARRANTY AND CONDITIONS



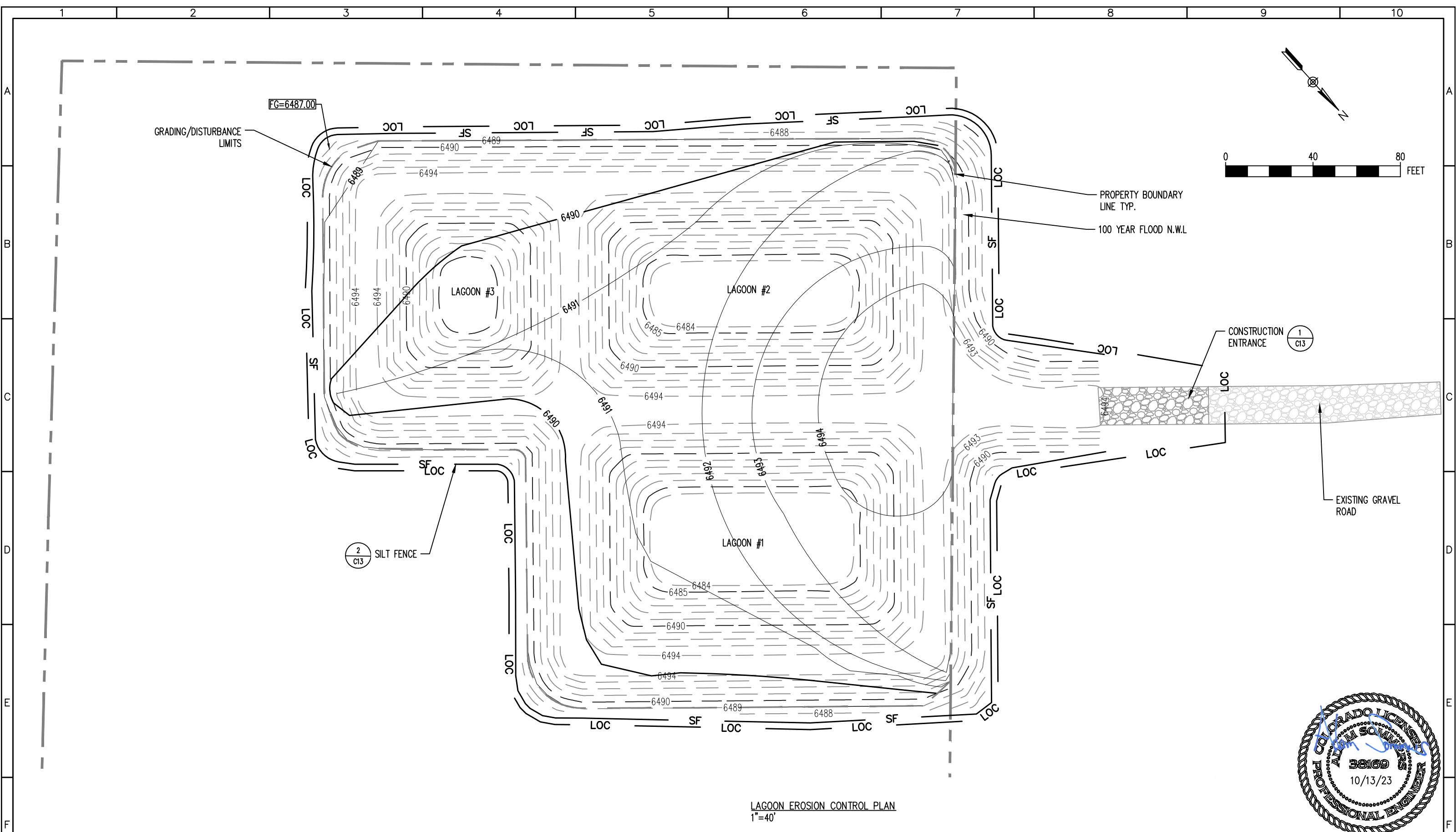
LAGOON GRADING AND RESTORATION PLAN  
1" = 40'



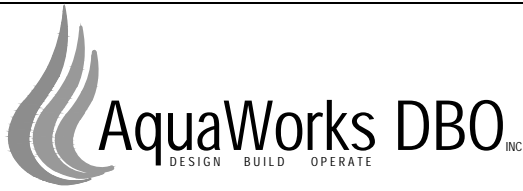
| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY: MG   | PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER ROUTT<br>COUNTY, COLORADO                    | SHEET TITLE:<br>LAGOON GRADING AND RESTORATION PLAN |                    |              |
|----------|-------|-----|-----------------------|--|---|---|--------------------|--------------|
|          |       |     |                       | DESIGNED BY: AS  | ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 | PROJECT NUMBER:<br>7829                             | SCALE:<br>1" = 40' | SHEET:<br>C9 |
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LAGOON EROSION CONTROL PLAN  
1"=40'

|          |       |     |                       |  |   |   |   |                  |               |
|----------|-------|-----|-----------------------|--|---|---|---|------------------|---------------|
| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY: MG   |  | PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    | SHEET TITLE:<br>LAGOON EROSION CONTROL PLAN |                  |               |
|          |       |     |                       | DESIGNED BY: AS  |   |   |   |                  |               |
|          |       |     |                       | FILE PRINTED ON: 10/13/2023 10:12:24 AM                          |   | ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 | PROJECT NUMBER:<br>7829                     | SCALE:<br>1"=40' | SHEET:<br>C10 |
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BIOSOLIDS REMOVAL REQUIREMENTS:


- APPLICABLE REGULATIONS:  
ALL OF THE WORK REFORMED BY CONTRACTOR SHALL COMPLY WITH APPLICABLE LAWS, RULES, REGULATIONS, AND CODES OF UNITED STATES AND THE STATE OF COLORADO AND WITH THE ORDINANCES, AND RULES AND REGULATIONS, REGULATORY AGENCIES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
1. U.S. – ENVIRONMENTAL PROTECTION AGENCY (EPA)
  2. STATE OF COLORADO – DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE)
  3. OCCUPATIONAL SAFETY AND HEALTH AGENCY – OSHA
  4. ROUTT COUNTY

BIOSOLIDS MANAGEMENT AND DISPOSAL:  
BIOSOLIDS MUST BE COMPLETELY REMOVED FROM THE DECOMMISSIONED LAGOONS AND MANAGED IN ACCORDANCE WITH FEDERAL REQUIREMENTS IN 40 CFR 503 AND COLORADO BIOSOLIDS REGULATION 5 CCR 1002-64 (REGULATION 64). DISPOSAL OPTIONS FOR REMOVED BIOSOLIDS MUST ALSO CONFORM WITH FEDERAL REQUIREMENTS 40 CFR 503, 40 CFR 258, AND THE REQUIREMENTS OF THE COLORADO REGULATIONS PERTAINING THE SOLID WASTE SITES AND FACILITIES 6 CCR 1007-2, AS APPLICABLE. CONTRACTOR SHALL PERFORM AND PASS TENORM AND PFAS TESTING PRIOR TO HAULING BIOSOLIDS OFFSITE.

SOLID WASTE MANAGEMENT AND DISPOSAL:  
WASTE MATERIALS AT A DECOMMISSIONED LAGOONS (E.G., CONCRETE, SITE PIPING, ETC.) MUST BE PROPERLY MANAGED IN ACCORDANCE WITH REGULATIONS PERTAINING TO THE SOLID WASTE SITES AND FACILITIES 6 CCR 1007-2 (SOLID WASTE REGULATIONS) AND THE SOLID WASTES DISPOSAL SITES AND FACILITIES ACT, TITLE 30, ARTICLE 20, PART 1, COLORADO REVISED STATUES (CRS), AS AMENDED.

BIOSOLIDS DISPOSAL REQUIREMENTS:  
OWNER TO REMOVE ALL FLUID FROM PONDS AND LEGALLY DISPOSE OF LIQUID BY PROCESSING IT THROUGH THE EXISTING LAGOON SYSTEM. THE REMAINING BIOSOLIDS SHALL BE DEWATERED ON SITE OR HAULED OFFSITE BY THE CONTRACTOR. IF LIQUID IS HAULED OFFSITE, ONE CUBIC YARD IS EQUAL TO 202 GALLONS. BIOSOLIDS CAKE TO BE HAULED OFFSITE. ESTIMATE VOLUME OF BIOSOLIDS IS 4,500 CUBIC YARDS.  
PRIOR TO COMPLETION, CONTRACTOR TO PROVIDE OWNER RECORDS OF ALL THE PERMITS, TESTING RESULTS, AND CONSTRUCTION LOGS. CONTRACTOR TO CERTIFY THAT PROJECT WAS COMPLETED AS SPECIFIED AND CONFORMS TO APPLICABLE LAWS, RULES, AND REGULATIONS.

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PROJECT: MILNER COLORADO WWTP  
COMMUNITY OF MILNER  
ROUTT COUNTY, COLORADO

ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

SHEET TITLE:  
LAGOON CLOSURE PLAN

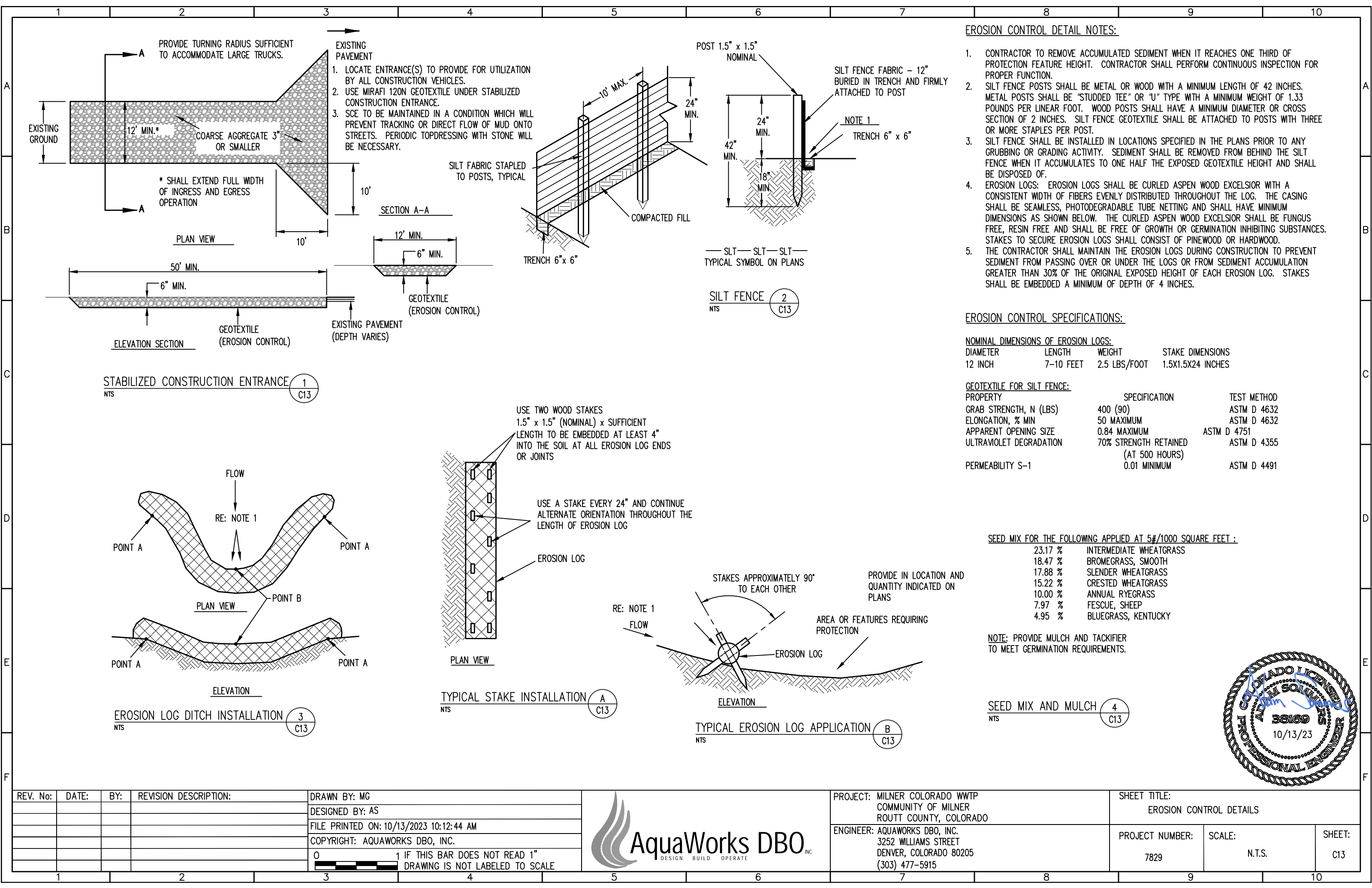
PROJECT NUMBER:  
7829

SCALE:  
1"=40'

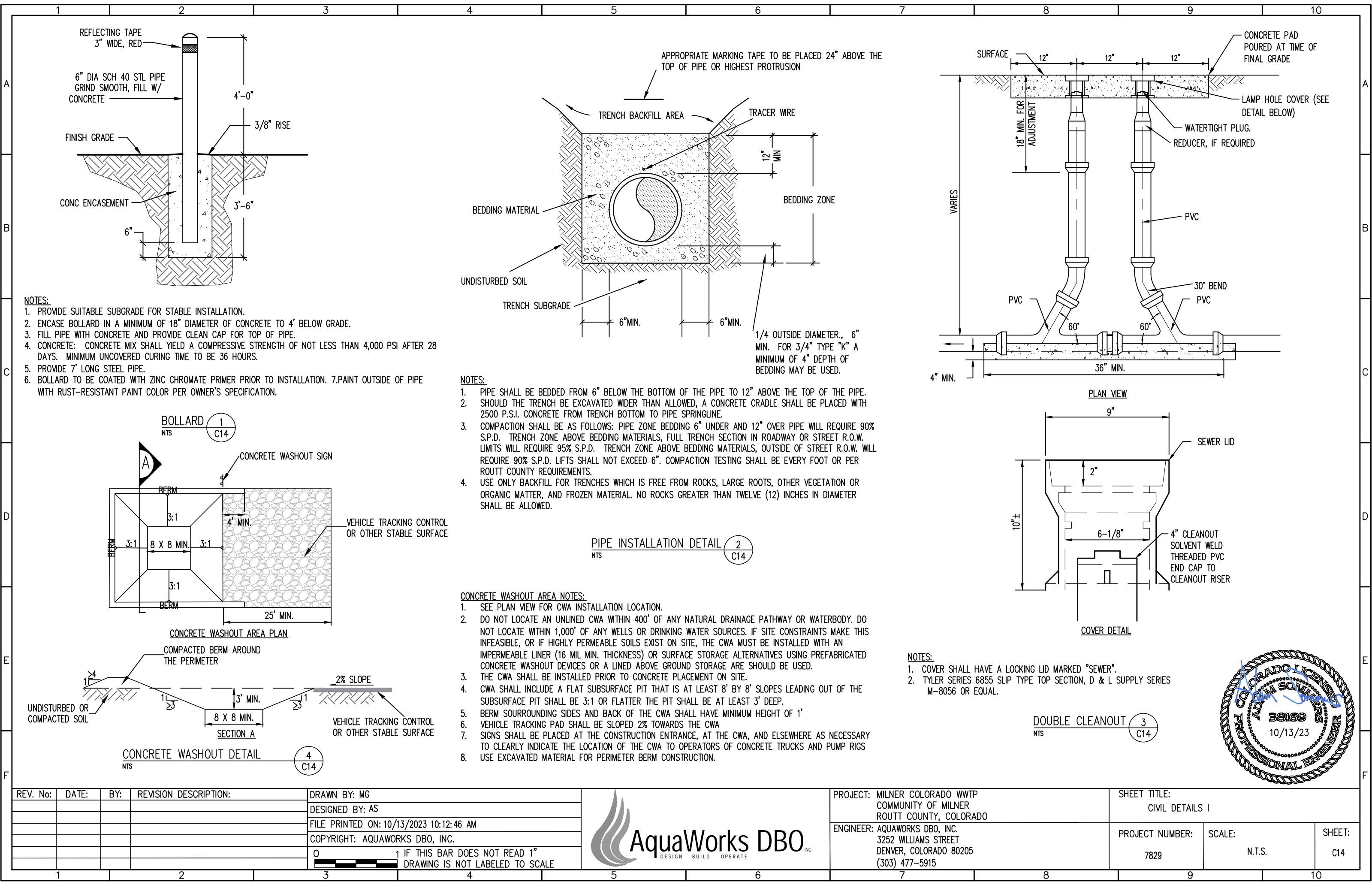
SHEET:  
C11

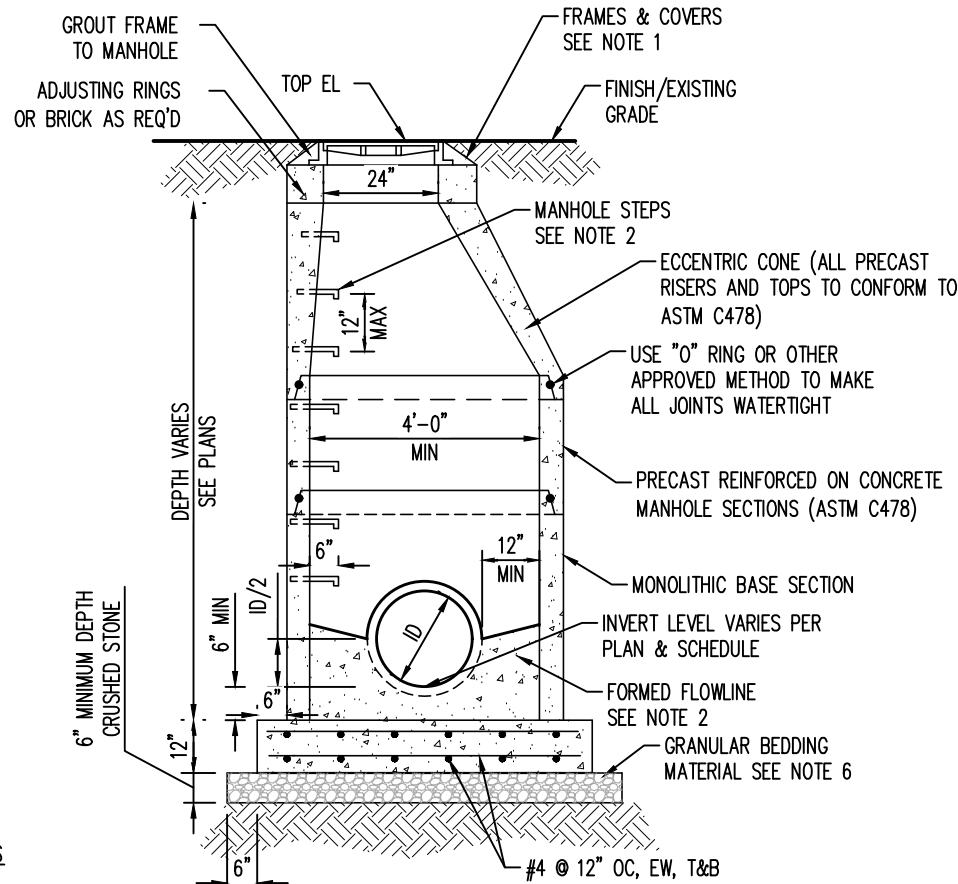










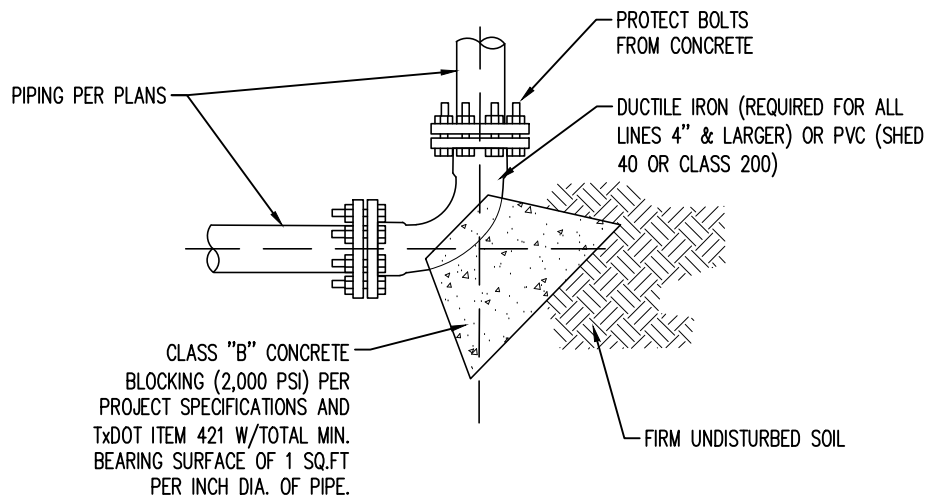


NOTES

- SANITARY MANHOLE COVERS SHALL HAVE "SANITARY SEWER" CAST ON THE COVER AND SHALL BE NEENAH R-1688 OR ENGINEER APPROVED EQUIVALENT. STORM MANHOLE COVERS SHALL HAVE "STORM SEWER" CAST ON THE COVER AND SHALL BE NEENAH R-1678 OR ENGINEER APPROVED EQUIVALENT.
- MANHOLE STEPS TO BE M.A. INDUSTRIES 004-501-DF OR ENGINEER APPROVED EQUIVALENT. PROVIDED TO WITHIN 12" OF TOP OF CONE.
- FLOWLINE OF MANHOLE MAY BE FORMED IN CONCRETE; BUILT UP WITH MORTAR; OR BY LAYING A PIPE THROUGH MANHOLE, THE TOP BEING BROKEN OUT LATER.
- GROUT ANNULAR SPACE BETWEEN WALL AND PIPE WITH NON-SHRINK MORTAR TO INSURE WATERTIGHT SEAL.
- ALL CONCRETE TO COMPLY WITH ACI 318 AND SHALL BE A MINIMUM STRENGTH OF 3000 PSI AT 28 DAY TEST.
- ALL MANHOLES AND SPECIAL STRUCTURES TO BE PLACED ON SUITABLE SUBGRADE MATERIAL. IF SUBGRADE CONDITIONS WARRANT, UNSUITABLE FOUNDATION MATERIAL WILL BE OVEREXCAVATED, AND SELECT SUBGRADE MATERIAL WILL BE PLACED AS PER SECTION 5.00 OF THE WCPM STANDARD CONSTRUCTION SPECIFICATIONS.
- GRANULAR BEDDING MATERIAL SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY IN ACCORDANCE WITH AASHTO T-180.

CONCRETE MANHOLE DETAIL  
N.T.S.

5  
C15



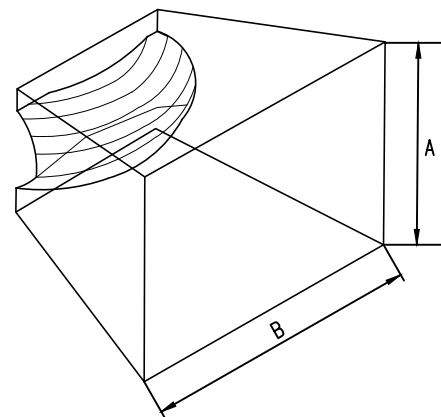
DIMENSIONS FOR CONCRETE THRUST BLOCKS

| PIPE DIA. SIZE (INCHES) | MINIMUM SOIL BEARING AREA REQUIRED (SQUARE FEET) | TYPICAL DIMENSIONS OF BEARING AREA IN INCHES (A X B) | TYPICAL VOLUME OF CONC. REQUIRED (CUBIC FEET)* |
|-------------------------|--|--|--|
| 2                       | 2.0  | 12" X 24"  | 3.0  |
| 2 1/2                   | 2.5  | 15" X 24"  | 4.0  |
| 3                       | 3.0  | 16" X 27"  | 4.5  |
| 4                       | 4.0  | 18" X 32"  | 6.0  |
| 6                       | 6.0  | 24" X 36"  | 9.0  |
| 8                       | 8.0  | 29" X 40"  | 12.0   |
| 10                      | 10.0   | 30" X 48"  | 15.0   |
| 12                      | 12.0   | 36" X 48"  | 18.0   |
| 14                      | 14.0   | 36" X 56"  | 21.0   |
| 16                      | 16.0   | 39" X 59"  | 24.0   |
| 18                      | 18.0   | 42" X 62"  | 27.0   |

\* VARIES CONSIDERABLY W/DISTANCE BETWEEN PIPE AND BEARING POINT

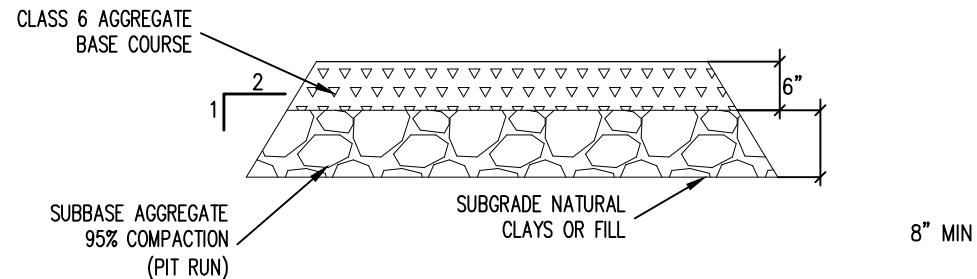
TYPICAL BLOCKING DETAILS  
N.T.S.

6  
C15



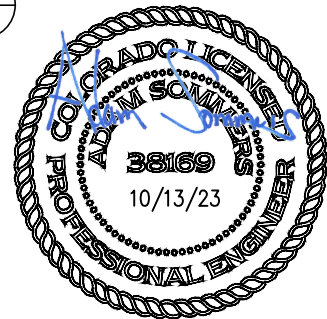
NOTES

BLOCKING REQUIRED ON ALL FITTINGS 2" & LARGER. ALL REQUIRED BENDS & FITTINGS MAY NOT BE LABELLED ON THE PLANS. PIPE MAY BE CURVED UP TO 75% OF MANUFACTURERS RECOMENED MAXIMUM CURVATURE WITHOUT A BEND AS APPROVED BY OWNER & ENGINEER. PVC FITTINGS TO BE PROTECTED FROM CONCRETE WITH A WRAPPING OF 30" ROOFING FELT.

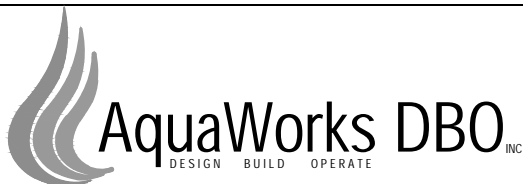


DRIVEWAY SECTION DETAIL  
NTS

7  
C15



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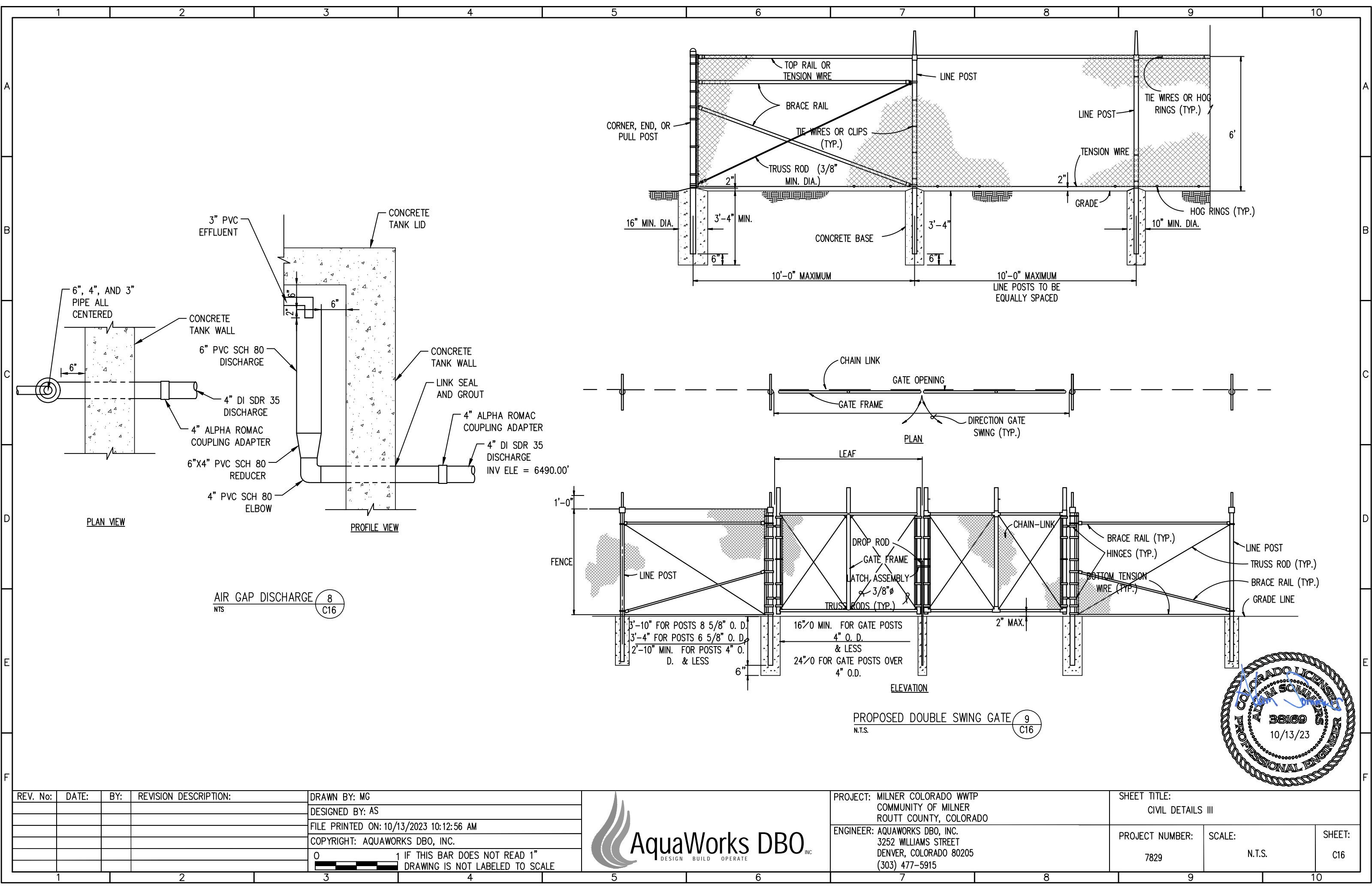


PROJECT: MILNER COLORADO WWTP  
COMMUNITY OF MILNER  
ROUTT COUNTY, COLORADO  
ENGINEER: AQUAWORKS DBO, INC.  
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(303) 477-5915

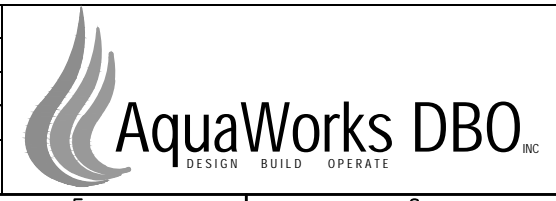
SHEET TITLE:  
CIVIL DETAILS II

|                         |                  |               |
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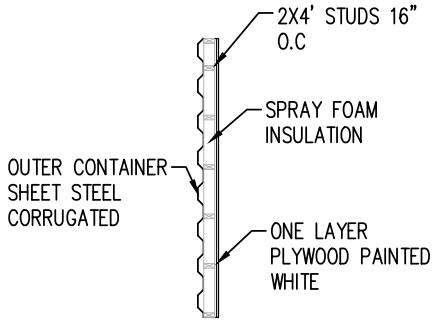
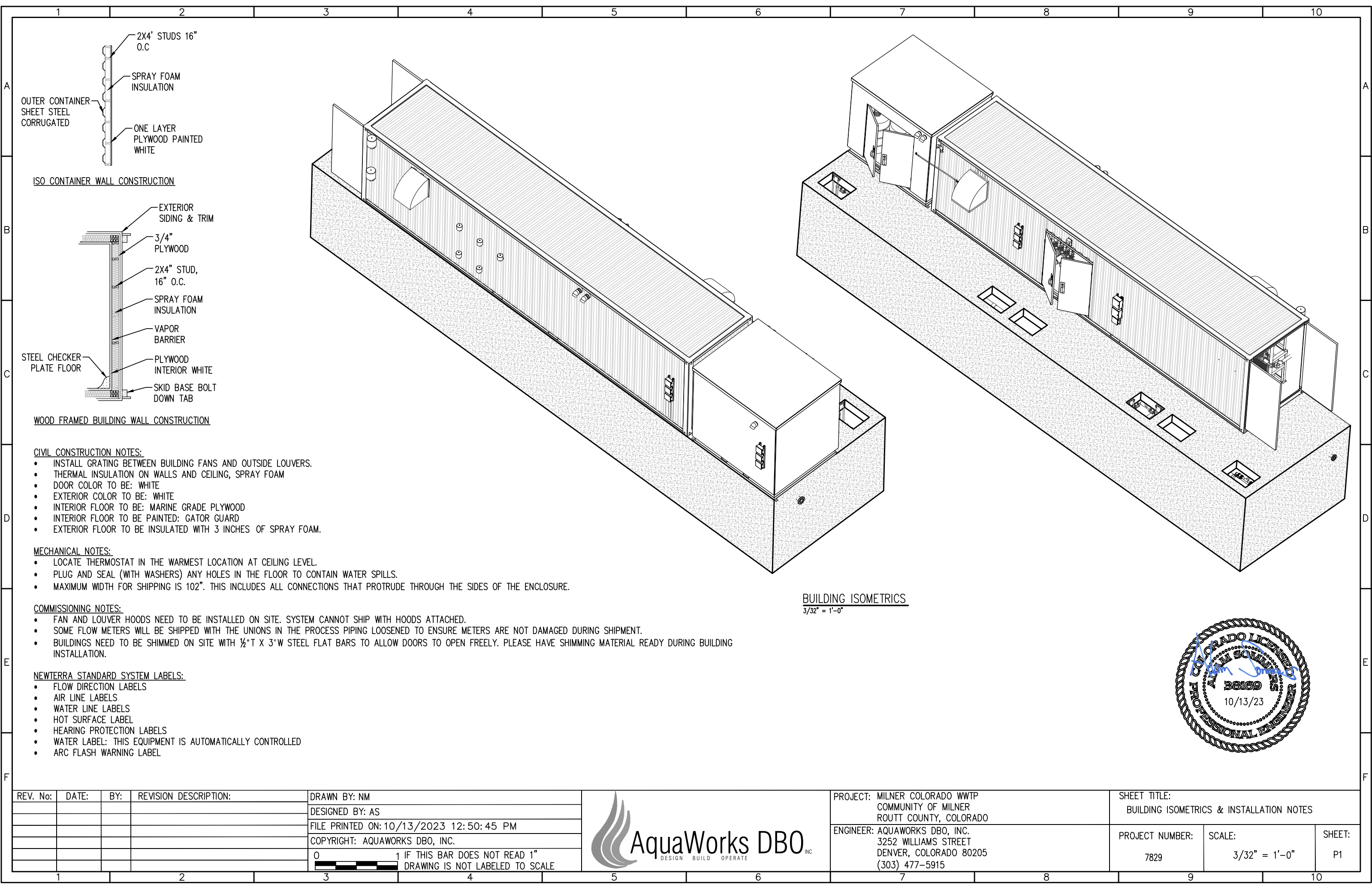




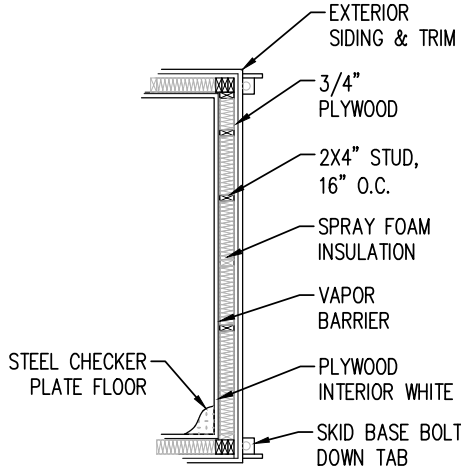
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| PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    |                         | SHEET TITLE:<br>CIVIL DETAILS III |               |
| ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 | PROJECT NUMBER:<br>7829 | SCALE:<br>N.T.S.                  | SHEET:<br>C16 |



ISO CONTAINER WALL CONSTRUCTION



WOOD FRAMED BUILDING WALL CONSTRUCTION

CIVIL CONSTRUCTION NOTES:

- INSTALL GRATING BETWEEN BUILDING FANS AND OUTSIDE LOUVERS.
- THERMAL INSULATION ON WALLS AND CEILING, SPRAY FOAM
- DOOR COLOR TO BE: WHITE
- EXTERIOR COLOR TO BE: WHITE
- INTERIOR FLOOR TO BE: MARINE GRADE PLYWOOD
- INTERIOR FLOOR TO BE PAINTED: GATOR GUARD
- EXTERIOR FLOOR TO BE INSULATED WITH 3 INCHES OF SPRAY FOAM.

MECHANICAL NOTES:

- LOCATE THERMOSTAT IN THE WARMEST LOCATION AT CEILING LEVEL.
- PLUG AND SEAL (WITH WASHERS) ANY HOLES IN THE FLOOR TO CONTAIN WATER SPILLS.
- MAXIMUM WIDTH FOR SHIPPING IS 102". THIS INCLUDES ALL CONNECTIONS THAT PROTRUDE THROUGH THE SIDES OF THE ENCLOSURE.

COMMISSIONING NOTES:

- FAN AND LOUVER HOODS NEED TO BE INSTALLED ON SITE. SYSTEM CANNOT SHIP WITH HOODS ATTACHED.
- SOME FLOW METERS WILL BE SHIPPED WITH THE UNIONS IN THE PROCESS PIPING LOOSENED TO ENSURE METERS ARE NOT DAMAGED DURING SHIPMENT.
- BUILDINGS NEED TO BE SHIMMED ON SITE WITH 1/2" T X 3" W STEEL FLAT BARS TO ALLOW DOORS TO OPEN FREELY. PLEASE HAVE SHIMMING MATERIAL READY DURING BUILDING INSTALLATION.

NEWTERRA STANDARD SYSTEM LABELS:

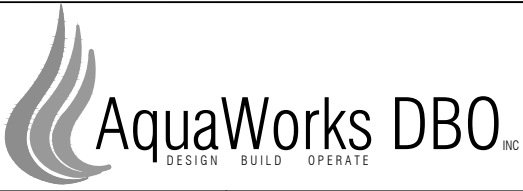
- FLOW DIRECTION LABELS
- AIR LINE LABELS
- WATER LINE LABELS
- HOT SURFACE LABEL
- HEARING PROTECTION LABELS
- WATER LABEL: THIS EQUIPMENT IS AUTOMATICALLY CONTROLLED
- ARC FLASH WARNING LABEL

BUILDING ISOMETRICS

3/32" = 1'-0"

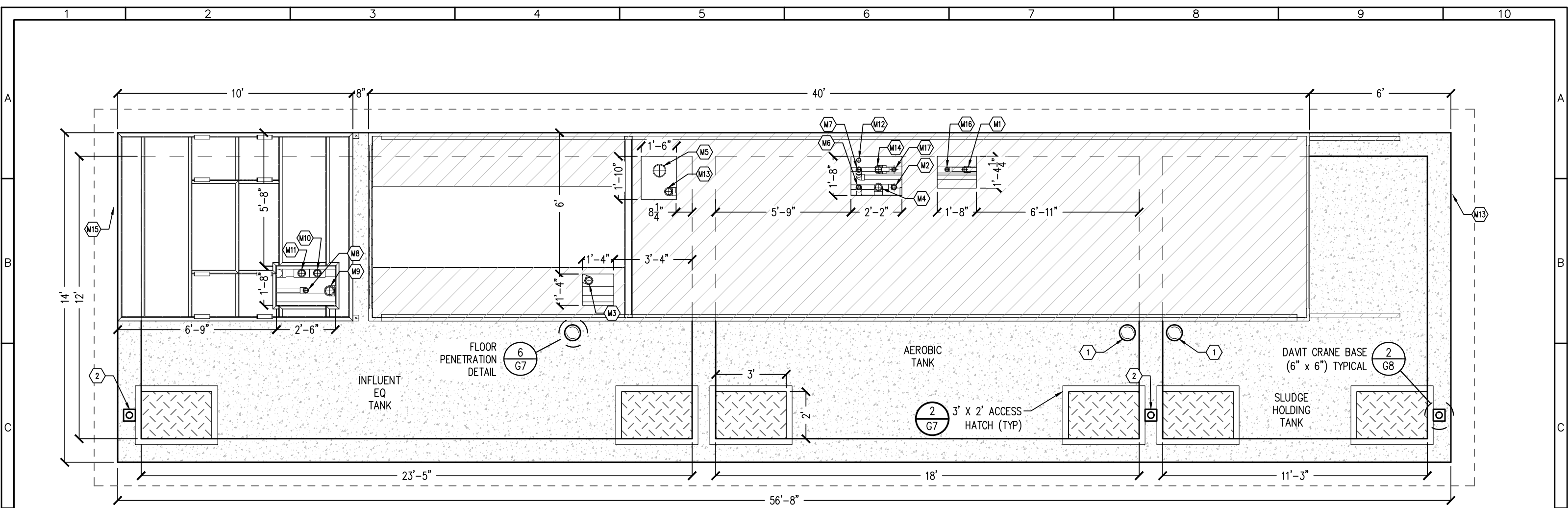


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| PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    |  |  | SHEET TITLE:<br>BUILDING ISOMETRICS & INSTALLATION NOTES |                         |              |
| ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |  |  | PROJECT NUMBER:<br>7829                                  | SCALE:<br>3/32" = 1'-0" | SHEET:<br>P1 |





CONCRETE TANK LID PLAN  
1/4" = 1'-0"

PROCESS NOTES:

- 1 4" VENT
- 2 DAVIT CRANE BASE

PIPING CONNECTION NOTES:

- M1 2" AIR TO SLUDGE DIGESTION
- M2 2" AIR TO INF EQ TANK
- M3 3" OVERFLOW TO INF EQ TANK (FLOOR DRAIN)
- M4 3" AIR TO AEROBIC TANK
- M5 6" MBR TANK OVERFLOW TO INFLUENT EQ TANK
- M6 2" AEROBIC TANK PUMP 1 TO MBR TANK 1
- M7 2" AEROBIC TANK PUMP 2 TO MBR TANK 2
- M8 2" INFLUENT EQ PUMP TO BARSCREEN
- M9 4" FINE SCREEN TO AEROBIC TANK
- M10 3" OVERFLOW TO INF EQ TANK (FLOOR DRAIN)
- M11 3" OVERFLOW TO INF EQ TANK (SCREEN OVERFLOW)
- M12 2" CHEMICAL SLEEVE PIPE TO AEROBIC TANK
- M13 3" SYSTEM EFFLUENT
- M14 3" OVERFLOW TO SLUDGE TANK
- M15 4" INFLUENT FROM LIFT STATION
- M16 1.5" SUPERNATANT SLUDGE PUMPS TO FLOW METER
- M17 1.5" SUPERNATANT FLOW METER TO EQ TANK

GENERAL NOTES:

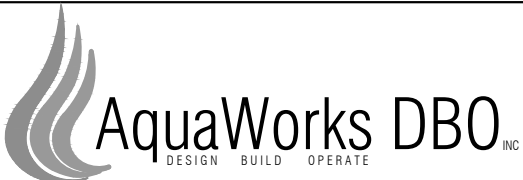
- ALL PIPING SCH 80 PVC UNLESS NOTED OTHERWISE
- INSTALL GREEN DRAIN ONE WAY VALVE OR EQUAL OVER ALL FLOOR DRAINS
- CONTRACTOR TO FILL ALL FOUR VOIDS IN THE NEWTERRA FLOOR WITH GROUT. GROUT AROUND FLOOR DRAINS M3 & M10.

TANK COATINGS  
COAT INFLUENT EQUALIZATION TANK INTERIOR WALLS AND UNDERSIDE OF LID. SYSTEM TYPE: EPOXY, SHERWIN WILLIAMS OR EQUAL.

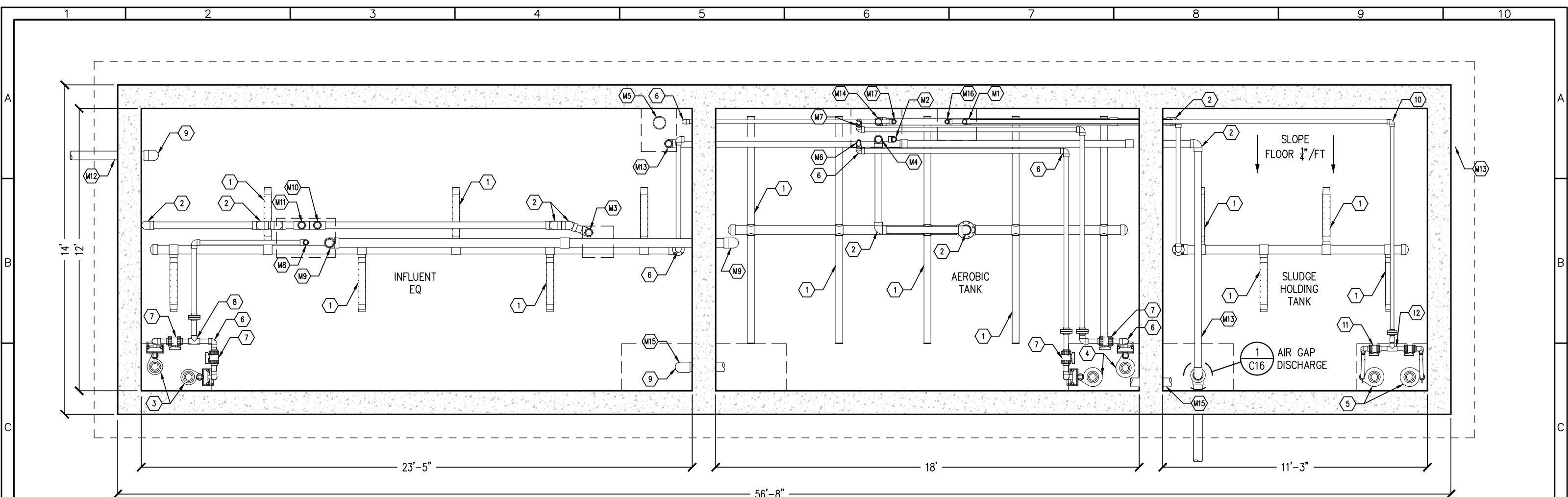
- SURFACE PREPARATION: SSPC-SP 13/NACE 6 WITH A SURFACE PROFILE OF ICRI CSP 2 OR 3.
- FILLER: FILL BUG HOLES, AIR POCKETS AND OTHER VOIDS WITH STEEL-SEAM FT910.
- FINISH: DURA-PLATE 6000 REINFORCED EPOXY. DFT 60.0 TO 80.0 MILS.



| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY: NM   |
|----------|-------|-----|-----------------------|--|
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|---|--|--|--|------------------------|--------------|
| PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    |  |  | SHEET TITLE:<br>CONCRETE TANK LID PLAN |                        |              |
| ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |  |  | PROJECT NUMBER:<br>7829                | SCALE:<br>1/4" = 1'-0" | SHEET:<br>P2 |



CONCRETE TANK EQUIPMENT PLAN  
1/4" = 1'-0"

PROCESS NOTES:

- 1 DIFFUSER
- 2 3" 90 ELBOW
- 3 INFLUENT EQ PUMPS
- 4 MBR FEED FORWARD PUMPS
- 5 SLUDGE SUPERNATANT PUMPS
- 6 2" 90 ELBOW
- 7 2" BALL VALVE
- 8 2" TEE
- 9 4" 90 ELBOW

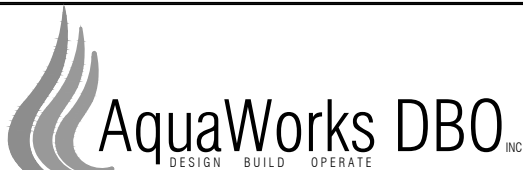
PIPING CONNECTION NOTES:

- M1 2" AIR TO SLUDGE DIGESTION
- M2 2" AIR TO INF EQ TANK
- M3 3" OVERFLOW TO INF EQ TANK (FLOOR DRAIN)
- M4 3" AIR TO AEROBIC TANK
- M5 6" MBR TANK OVERFLOW TO INFLUENT EQ TANK
- M6 2" AEROBIC TANK PUMP 1 TO MBR TANK 1
- M7 2" AEROBIC TANK PUMP 2 TO MBR TANK 2
- M8 2" INFLUENT EQ PUMP TO BARSCREEN
- M9 4" FINE SCREEN TO AEROBIC TANK
- M10 3" OVERFLOW TO INF EQ TANK (FLOOR DRAIN)
- M11 3" OVERFLOW TO INF EQ TANK (SCREEN OVERFLOW)
- M12 4" INFLUENT FROM LIFT STATION
- M13 3" SYSTEM EFFLUENT
- M14 3" OVERFLOW TO SLUDGE TANK
- M15 4" BASIN OVERFLOW
- M16 1.5" SUPERNATANT SLUDGE PUMPS TO FLOW METER
- M17 1.5" SUPERNATANT FLOW METER TO EQ TANK

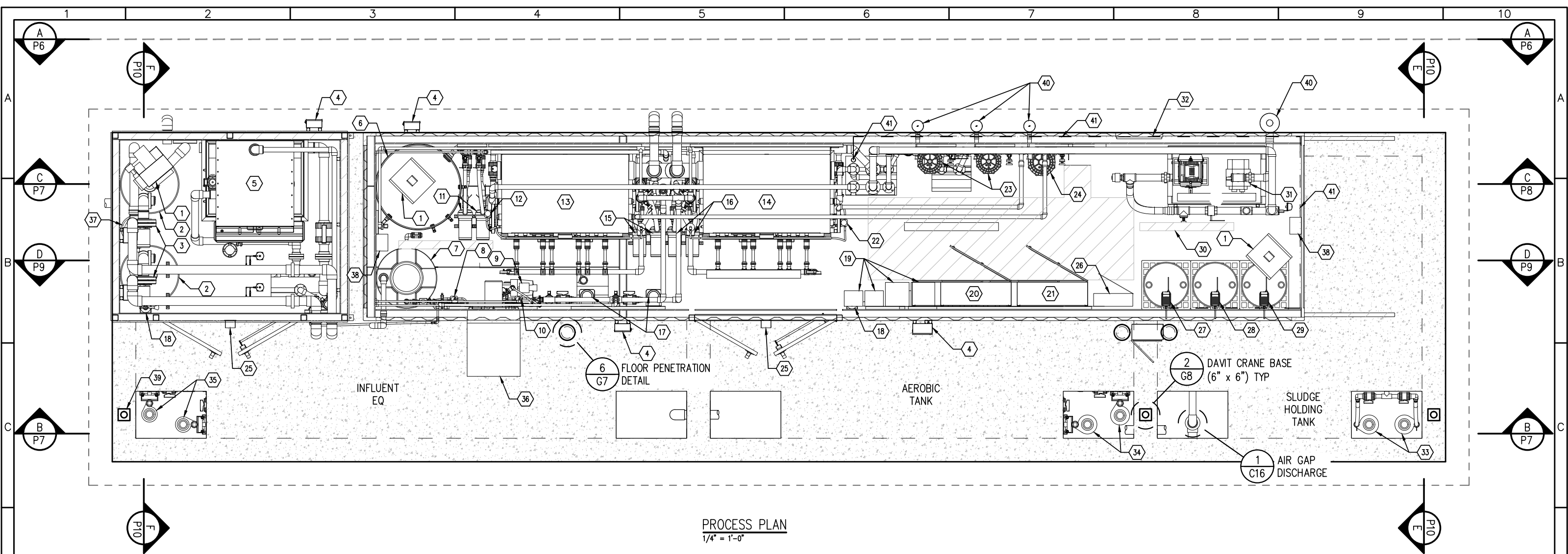
GENERAL NOTES:

- 1) ALL PIPING SCH 80 PVC UNLESS NOTED OTHERWISE
  - 2) INSTALL GREEN DRAIN ONE WAY VALVE OR EQUAL OVER ALL FLOOR DRAINS
  - 3) CONTRACTOR TO FILL ALL FOUR VOIDS IN THE NEWTERRA FLOOR WITH GROUT. GROUT AROUND FLOOR DRAINS M3 & M10.
- TANK COATINGS
- COAT INFLUENT EQUALIZATION TANK INTERIOR WALLS AND UNDERSIDE OF LID. SYSTEM TYPE: EPOXY, SHERWIN WILLIAMS OR EQUAL.
- 1. SURFACE PREPARATION: SSPC-SP 13/NACE 6 WITH A SURFACE PROFILE OF ICRI CSP 2 OR 3.
  - 2. FILLER: FILL BUG HOLES, AIR POCKETS AND OTHER VOIDS WITH STEEL-SEAM FT910.
  - 3. FINISH: DURA-PLATE 6000 REINFORCED EPOXY. DFT 60.0 TO 80.0 MILS.



|          |       |     |                       |  |   |  |   |                        |              |
|----------|-------|-----|-----------------------|--|---|--|---|------------------------|--------------|
| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY:NM  |  | PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO | SHEET TITLE:<br>CONCRETE TANK EQUIPMENT |                        |              |
|          |       |     |                       | DESIGNED BY: AS  |   |  | PROJECT NUMBER:<br>7829                 | SCALE:<br>1/4" = 1'-0" | SHEET:<br>P3 |
|          |       |     |                       | FILE PRINTED ON: 10/13/2023 12:50:52 PM                          |   |  |   |                        |              |
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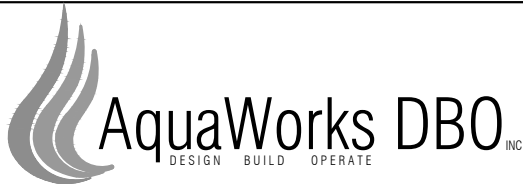
PROCESS PLAN  
1/4" = 1'-0"

PROCESS NOTES:

- |  |                                     |  |
|--|-------------------------------------|--|
| 1 HEATER                               | 15 PERMEATE PUMPS FOR MBR 1         | 29 ALUM CHEM FEED SYSTEM                     |
| 2 ODOR CONTROL VESSEL                  | 16 PERMEATE PUMPS FOR MBR 2         | 30 BUILDING INTERIOR LIGHTS (TYP 4)          |
| 3 VENTILATION BLOWER                   | 17 UV REACTORS                      | 31 AERATION TANK BLOWERS                     |
| 4 ELECTRICAL JUNCTION BOX              | 18 FIRE EXTINGUISHER                | 32 24" LOUVER                                |
| 5 INLET FINE SCREEN (2MM)              | 19 VARIABLE FREQUENCY DRIVES        | 33 SUPERNATANT TRANSFER PUMPS                |
| 6 BACKWASH TANK                        | 20 MASTER POWER PANEL               | 34 MEMBRANE FEED PUMPS                       |
| 7 HOUSE WATER STORAGE TANK             | 21 MASTER CONTROL PANEL             | 35 EQ TRANSFER PUMPS                         |
| 8 SODIUM HYPOCHLORITE CHEM FEED SYSTEM | 22 PRIME/AIR BLEED PUMP             | 36 24" FAN & HOOD                            |
| 9 HOUSE WATER SUPPLY PUMP              | 23 EQ & SLUDGE HOLDING TANK BLOWERS | 37 LIQUID SEPERATOR                          |
| 10 CITRIC ACID CHEM FEED SYSTEM        | 24 MBR BLOWERS                      | 38 EYEWASH STATION WALL MOUNT MAASTERS 8 GAL |
| 11 BACKWASH PUMPS                      | 25 EXTERIOR LIGHTS                  | 39 DAVIT CRANE BASE (TYP)                    |
| 12 PRIME AIR/BLEED PUMP                | 26 PANELBOARD                       | 40 BLOWER MUFFLER                            |
| 13 MEMBRANE (MBR) TANK 1               | 27 MICRO-C CHEM FEED SYSTEM         | 41 CHEM FEED CONDUIT (2" SCH 80 PVC)         |
| 14 MEMBRANE (MBR) TANK 2               | 28 CAUSTIC CHEM FEED SYSTEM         |  |



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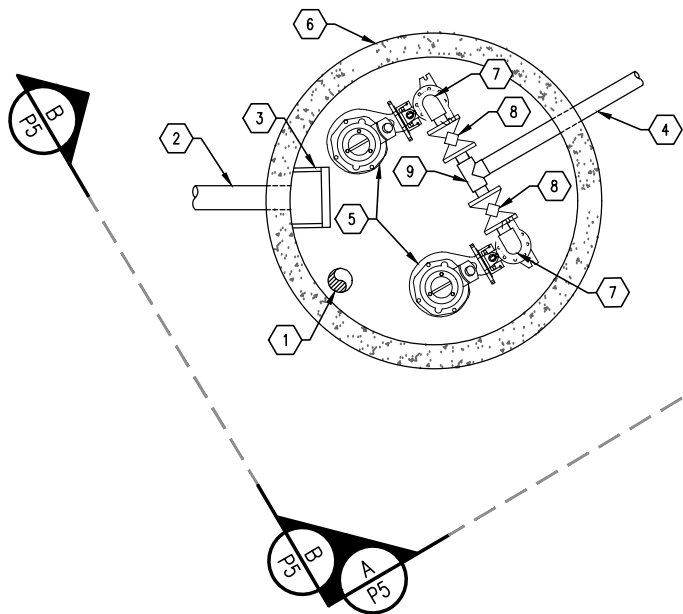
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| PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    |  |  | SHEET TITLE:<br>PROCESS PLAN |                        |              |
| ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |  |  | PROJECT NUMBER:<br>7829      | SCALE:<br>1/4" = 1'-0" | SHEET:<br>P4 |

PROCESS NOTES:

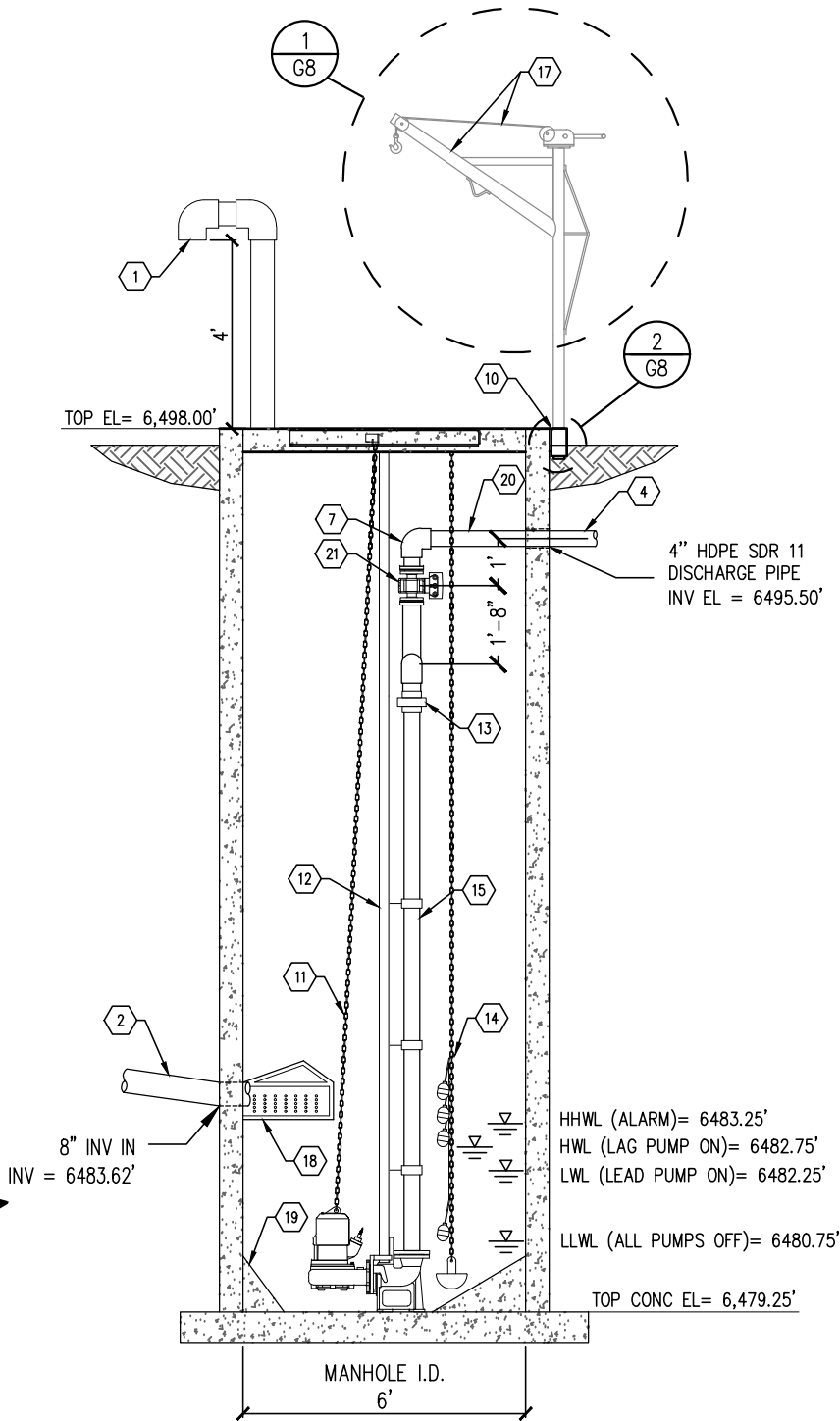
- 1 4" VENT IN LID W/#4 MESH SCREEN  
2 INFLUENT 8" GRAVITY SEWER  
3 LADDER RUNGS  
4 4" HDPE SDR 11  
5 1.0 HP SUBMERSIBLE PUMPS  
6 6' I.D. CONCRETE MANHOLE  
7 4" PVC 90 ELBOW  
8 4" PLUG VALVE  
9 4" TEE  
10 WALL STYLE HOIST SOCKET (RE: DETAIL 2/G8)  
11 LIFTING CHAIN  
12 PUMP GUIDE RAILS  
13 4" CHECK VALVE  
14 MECHANICAL FLOAT SWITCHES  
15 4" PVC  
16 PRESSURE TRANSDUCER  
17 DAVIT CRANE (STORED AT WWTP)  
18 8" STATIONGUARD REMOVEABLE BAR SCREEN (REE PRODUCTS INC.)  
19 CONCRETE FILLET  
20 SLOPE PIPE AT 1% TOWARDS INFLUENT EQ TANK  
21 4" MAGNETIC FLOW METER

NOTES:

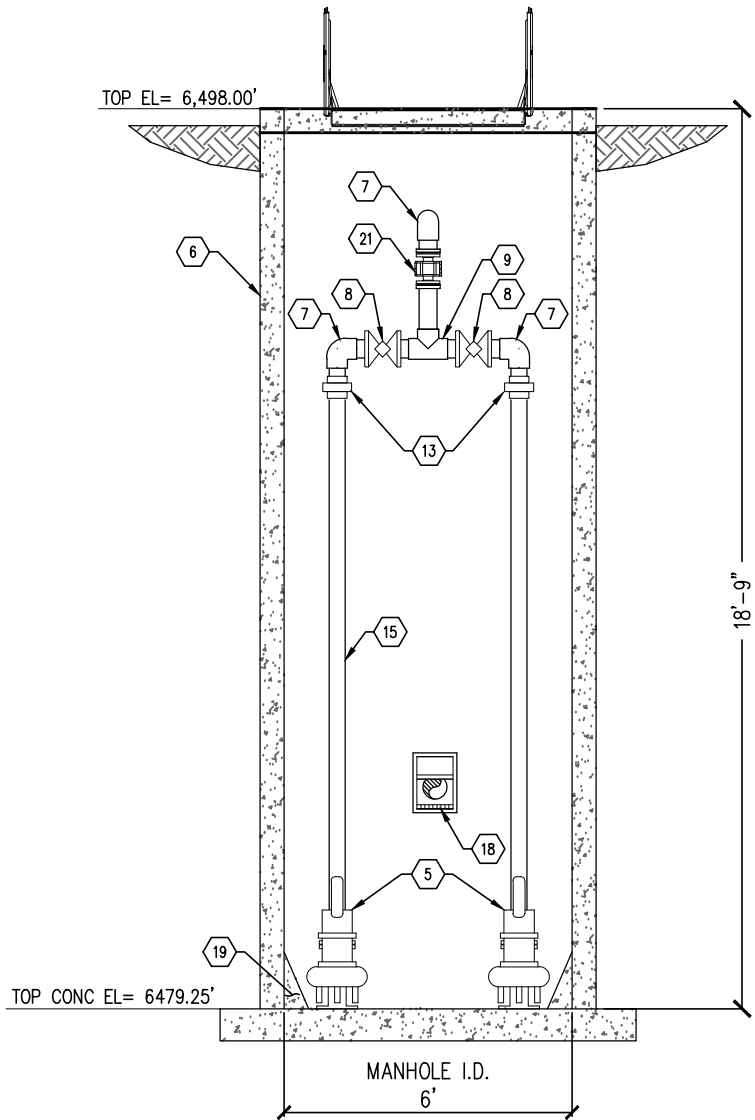
- 1) ALL PIPING SCH 80 PVC UNLESS NOTED OTHERWISE



LIFT STATION PLAN  
1/4" = 1'-0"



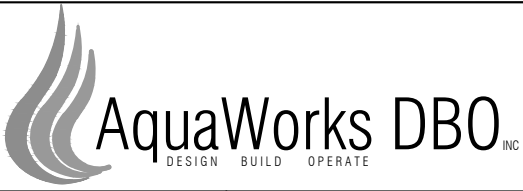
SECTION A  
1/4" = 1'-0"



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



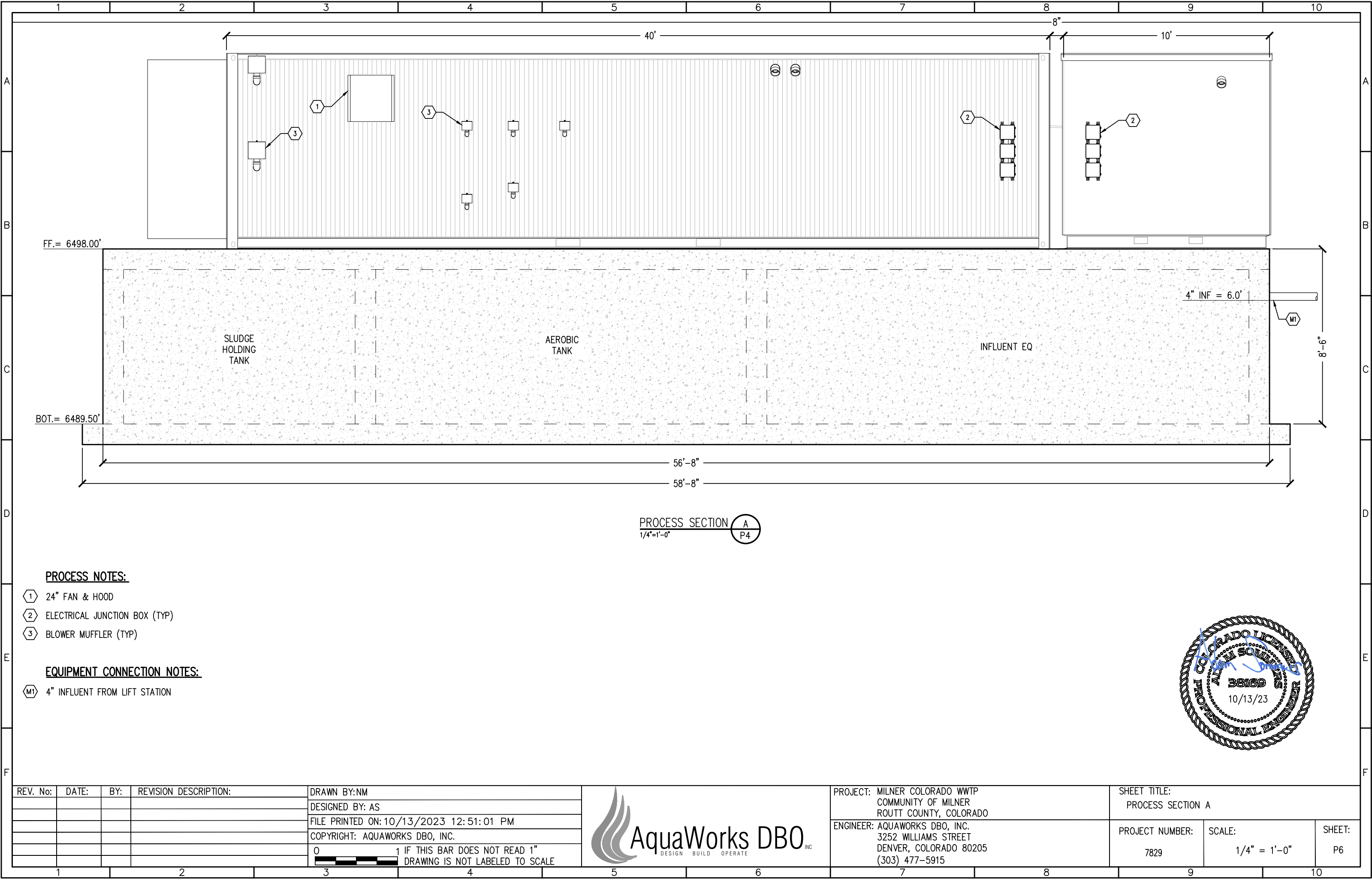
| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY: NM   |
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|---|
| PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    |
| ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |

|                                   |                        |              |
|-----------------------------------|------------------------|--------------|
| SHEET TITLE:<br>LIFT STATION PLAN |                        |              |
| PROJECT NUMBER:<br>7829           | SCALE:<br>1/4" = 1'-0" | SHEET:<br>P5 |





PROCESS NOTES:

- 1 24" FAN & HOOD
- 2 ELECTRICAL JUNCTION BOX (TYP)
- 3 BLOWER MUFFLER (TYP)

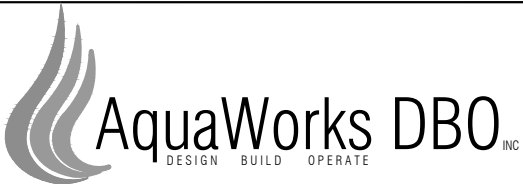
EQUIPMENT CONNECTION NOTES:

- M1 4" INFLUENT FROM LIFT STATION

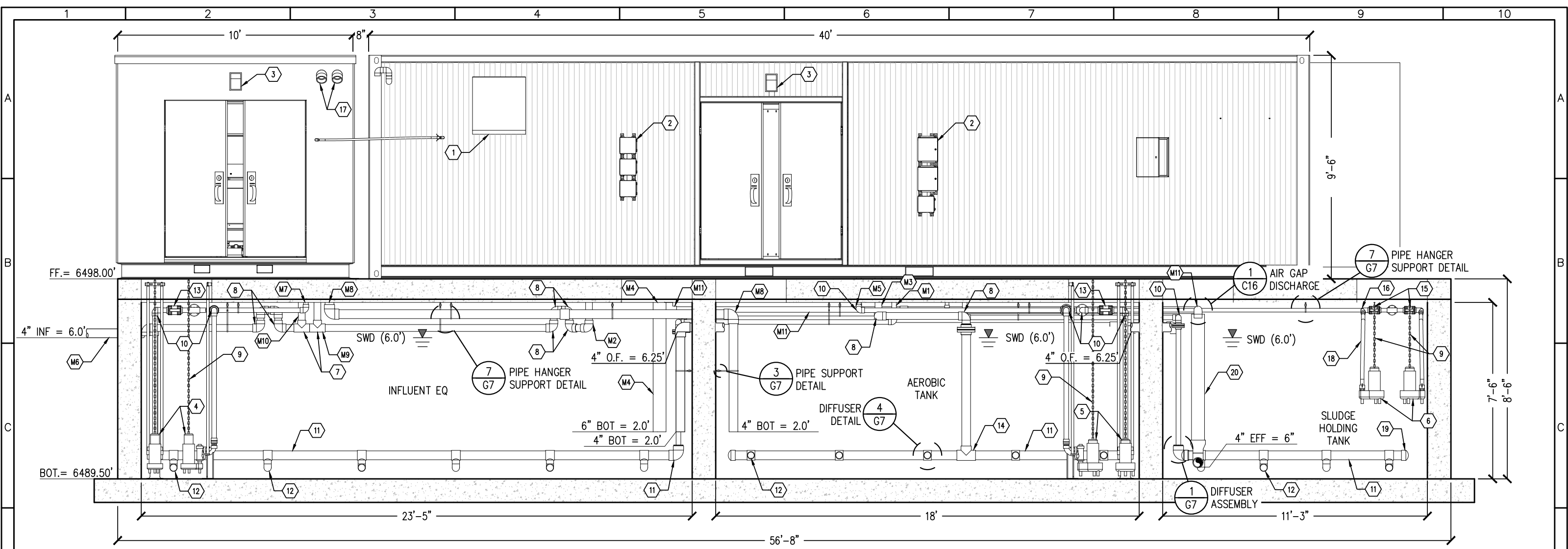
PROCESS SECTION A  
1/4"=1'-0" P4



| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY:NM  |
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|---|--|--|-----------------------------------|------------------------|--------------|
| PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    |  |  | SHEET TITLE:<br>PROCESS SECTION A |                        |              |
| ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |  |  | PROJECT NUMBER:<br>7829           | SCALE:<br>1/4" = 1'-0" | SHEET:<br>P6 |



PROCESS SECTION B  
1/4"=1'-0"

PROCESS NOTES:

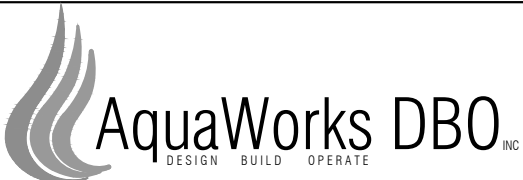
- |                                 |                           |
|---------------------------------|---------------------------|
| 1 24" FAN & HOOD                | 11 4" DIFFUSER HEADER     |
| 2 ELECTRICAL JUNCTION BOX (TYP) | 12 DIFFUSER               |
| 3 EXTERIOR LIGHT                | 13 2" BALL VALVE          |
| 4 EQ TRANSFER PUMPS             | 14 4" TEE                 |
| 5 MEMBRANE BIOREACTOR FEED PUMP | 15 1.5" BALL VALVE        |
| 6 SUPERNATANT TRANSFER PUMP     | 16 1.5" 90 ELBOW          |
| 7 3" TEE                        | 17 EXTERIOR VENT          |
| 8 3" 90 ELBOW                   | 18 1.5" FLEXIBLE TUBING   |
| 9 LIFTING CHAIN                 | 19 4" DIFFUSER HEADER CAP |
| 10 2" 90 ELBOW                  | 20 6"x4" REDUCER          |

PIPING CONNECTION NOTES:

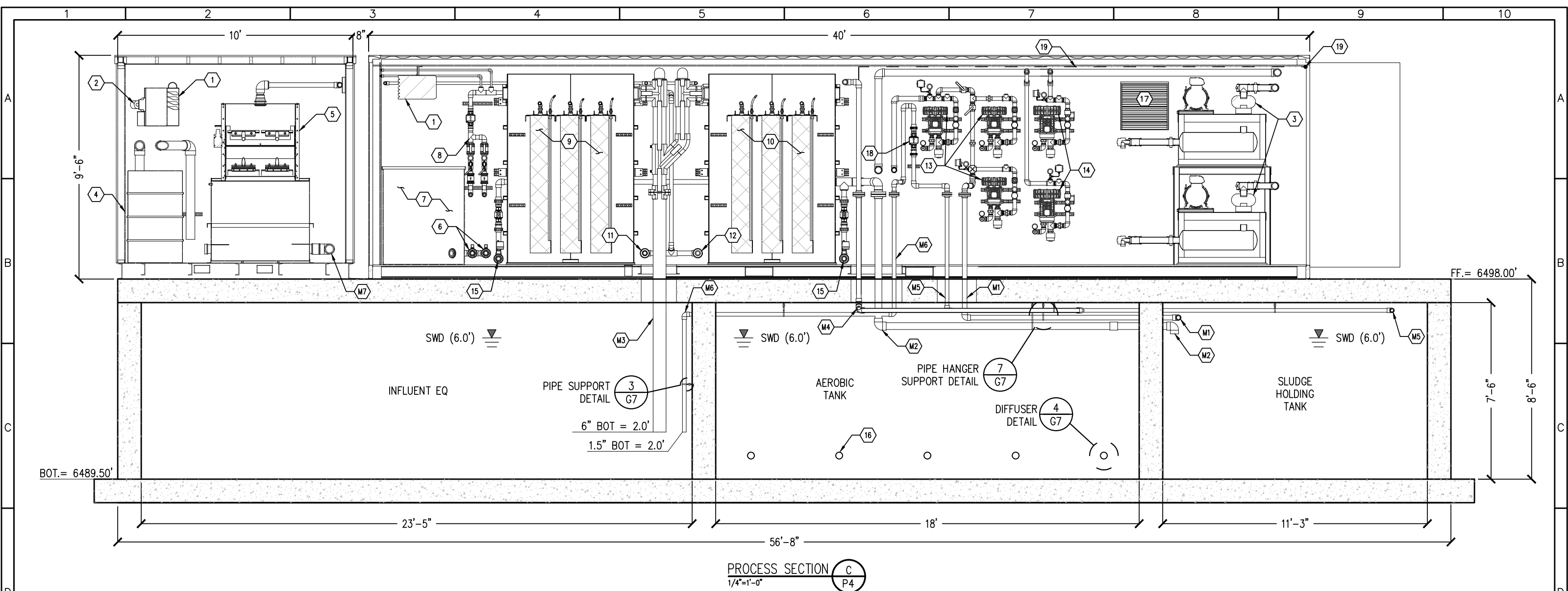
- |   |  |
|---|--|
| M1 2" AIR TO INFLUENT EQ TANK               | M9 3" OVERFLOW TO EQ TANK (FLOOR DRAIN)      |
| M2 3" OVERFLOW TO EQ TANK (FLOOR DRAIN)     | M10 3" OVERFLOW TO EQ TANK (SCREEN OVERFLOW) |
| M3 3" AIR TO AEROBIC TANK                   | M11 3" SYSTEM EFFLUENT TO AIR GAP ASSEMBLY   |
| M4 6" MBR TANK OVERFLOW TO INFLUENT EQ TANK |  |
| M5 2" AEROBIC TANK PUMP 1 TO MBR TANK 1     |  |
| M6 4" INFLUENT FROM LIFT STATION            |  |
| M7 2" INFLUENT EQ PUMP TO BARSCREEN         |  |
| M8 4" FINE SCREEN TO AEROBIC TANK           |  |



|          |       |     |                       |   |   |                                   |
|----------|-------|-----|-----------------------|---|---|-----------------------------------|
| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY: NM  | PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    | SHEET TITLE:<br>PROCESS SECTION B |
|          |       |     |                       | DESIGNED BY: AS   | ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 | PROJECT NUMBER:<br>7829           |
|          |       |     |                       | FILE PRINTED ON: 10/13/2023 12:51:04 PM                             | SCALE:<br>1/4" = 1'-0"  | SHEET:<br>P7                      |
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**PROCESS NOTES:**

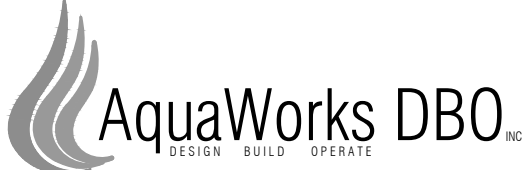
- 1 HEATER
- 2 VENTILATION BLOWER
- 3 AEROBIC TANK BLOWERS
- 4 ODOR CONTROL VESSEL
- 5 INLET FINE SCREEN (2MM)
- 6 BACKWASH PUMPS
- 7 BACKWASH TANK
- 8 PRIME AIR/BLEED SYSTEM
- 9 MEMBRANE BIOREACTOR (MBR) TANK 1
- 10 MEMBRANE BIOREACTOR (MBR) TANK 2
- 11 PERMEATE PUMPS FOR MBR 1
- 12 PERMEATE PUMPS FOR MBR 2
- 13 EQ/SLUDGE HOLDING TANK BLOWERS
- 14 MBR BLOWERS

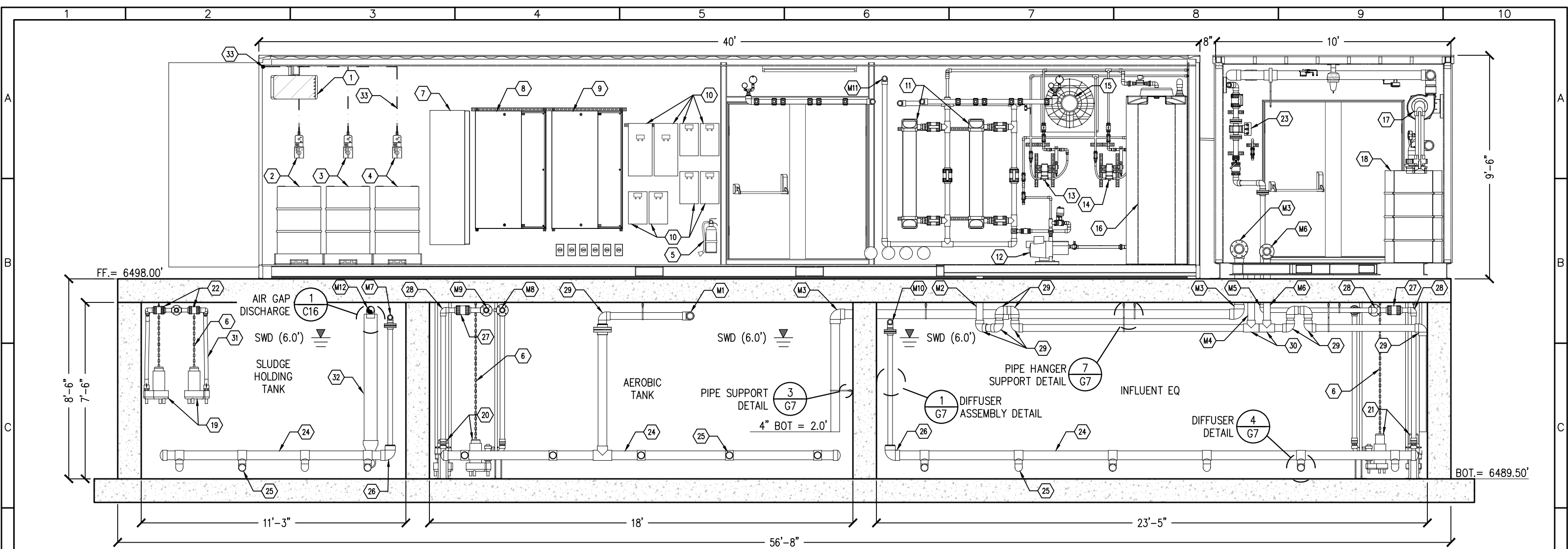
**PIPING CONNECTION NOTES:**

- M1 2" AIR TO SLUDGE DIGESTION
- M2 3" AIR TO AEROBIC TANK
- M3 6" MBR TANK OVERFLOW TO INFLUENT EQ TANK
- M4 2" AEROBIC TANK PUMP 2 TO MBR TANK 2
- M5 1.5" SUPERNATANT SLUDGE PUMPS TO FLOW METER
- M6 1.5" SUPERNATANT FLOW METER TO EQ TANK
- M7 4" FINE SCREEN TO AEROBIC TANK

- 15 PRIME/AIR BLEED PUMP
- 16 DIFFUSER
- 17 24" LOUVER & HOOD
- 18 SUPERNATANT FLOW METER
- 19 CHEM FEED CONDUIT (2" SCH 80 PVC)



|          |  |       |     |                       |  |   |   |  |                                   |                        |              |
|----------|--|-------|-----|-----------------------|--|---|---|--|-----------------------------------|------------------------|--------------|
| REV. No: |  | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY: NM   |  | PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    |  | SHEET TITLE:<br>PROCESS SECTION C |                        |              |
|          |  |       |     |                       | DESIGNED BY: AS  |   | ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |  | PROJECT NUMBER:<br>7829           | SCALE:<br>1/4" = 1'-0" | SHEET:<br>P8 |
|          |  |       |     |                       | FILE PRINTED ON: 10/13/2023 12:51:08 PM                          |   |   |  |                                   |                        |              |
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PROCESS SECTION **D**  
1/4"=1'-0" P4

**PROCESS NOTES:**

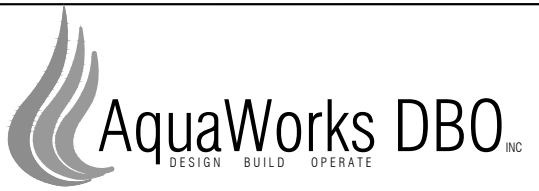
- |   |                                     |                                      |
|---|-------------------------------------|--------------------------------------|
| 1 HEATER                                | 15 24" FAN & HOOD                   | 28 2" 90 ELBOW                       |
| 2 ALUM CHEM FEED SYSTEM                 | 16 HOUSE WATER STORAGE TANK         | 29 3" 90 ELBOW                       |
| 3 CAUSTIC CHEM FEED SYSTEM              | 17 VENTILATION BLOWER               | 30 3" 90 TEE                         |
| 4 MICRO-C CHEM FEED SYSTEM              | 18 ODOR CONTROL VESSEL              | 31 1.5" FLEX TUBE                    |
| 5 FIRE EXTINGUISHER                     | 19 SUPERNATANT TRANSFER PUMPS       | 32 6"X4" REDUCER                     |
| 6 LIFTING CHAIN                         | 20 MEMBRANE BIOREACTOR FEED PUMPS   | 33 CHEM FEED CONDUIT (2" SCH 80 PVC) |
| 7 PANELBOARD                            | 21 EQ TRANSFER PUMPS                |                                      |
| 8 MASTER CONTROL PANEL                  | 22 1.5" BALL VALVE                  |                                      |
| 9 MASTER POWER PANEL                    | 23 INFLUENT EQ FLOW METER TO SCREEN |                                      |
| 10 VARIABLE FREQUENCY DRIVES (TYP 6)    | 24 4" DIFFUSER HEADER               |                                      |
| 11 UV REACTORS                          | 25 DIFFUSER (DETAIL 4/G7)           |                                      |
| 12 HOUSE WATER SUPPLY PUMP              | 26 4" 90 ELBOW                      |                                      |
| 13 CITRIC ACID CHEM FEED SYSTEM         | 27 2" BALL VALVE                    |                                      |
| 14 SODIUM HYPOCHLORITE CHEM FEED SYSTEM |                                     |                                      |

**PIPING CONNECTION NOTES:**

- |   |
|---|
| M1 3" AIR TO AEROBIC TANK                     |
| M2 3" OVERFLOW TO EQ TANK (FLOOR DRAIN)       |
| M3 4" FINE SCREEN TO AEROBIC TANK             |
| M4 3" OVERFLOW TO EQ TANK (FLOOR DRAIN)       |
| M5 2" INFLUENT EQ PUMP TO BARSCREEN           |
| M6 3" OVERFLOW TO EQ TANK (SCREEN OVERFLOW)   |
| M7 2" AIR TO SLUDGE DIGESTION                 |
| M8 2" AEROBIC TANK PUMP 1 TO MBR TANK 1       |
| M9 2" AEROBIC TANK PUMP 2 TO MBR TANK 2       |
| M10 2" AIR TO INFLUENT EQ TANK                |
| M11 2" FROM PERMEATE PUMPS TO UV DISINFECTION |
| M12 3" SYSTEM EFFLUENT TO AIR GAP ASSEMBLY    |

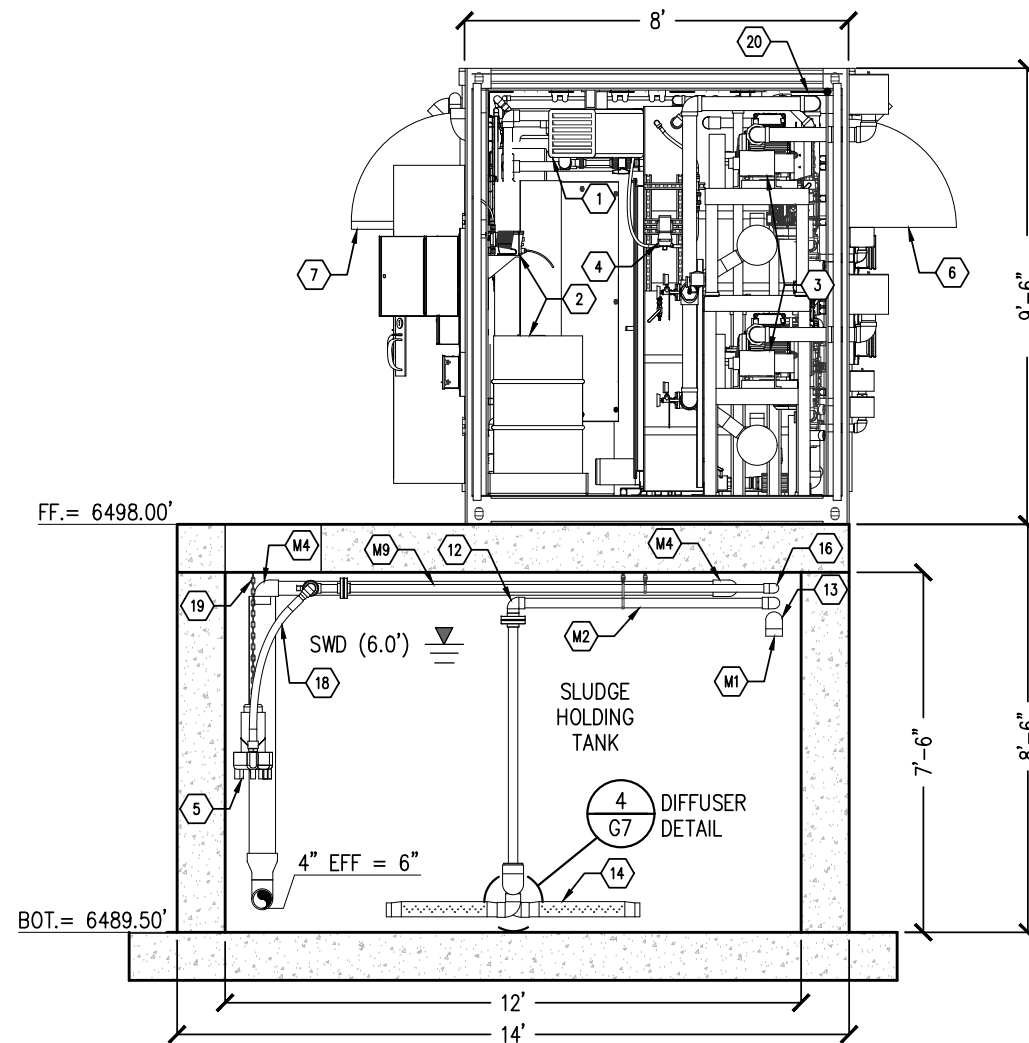


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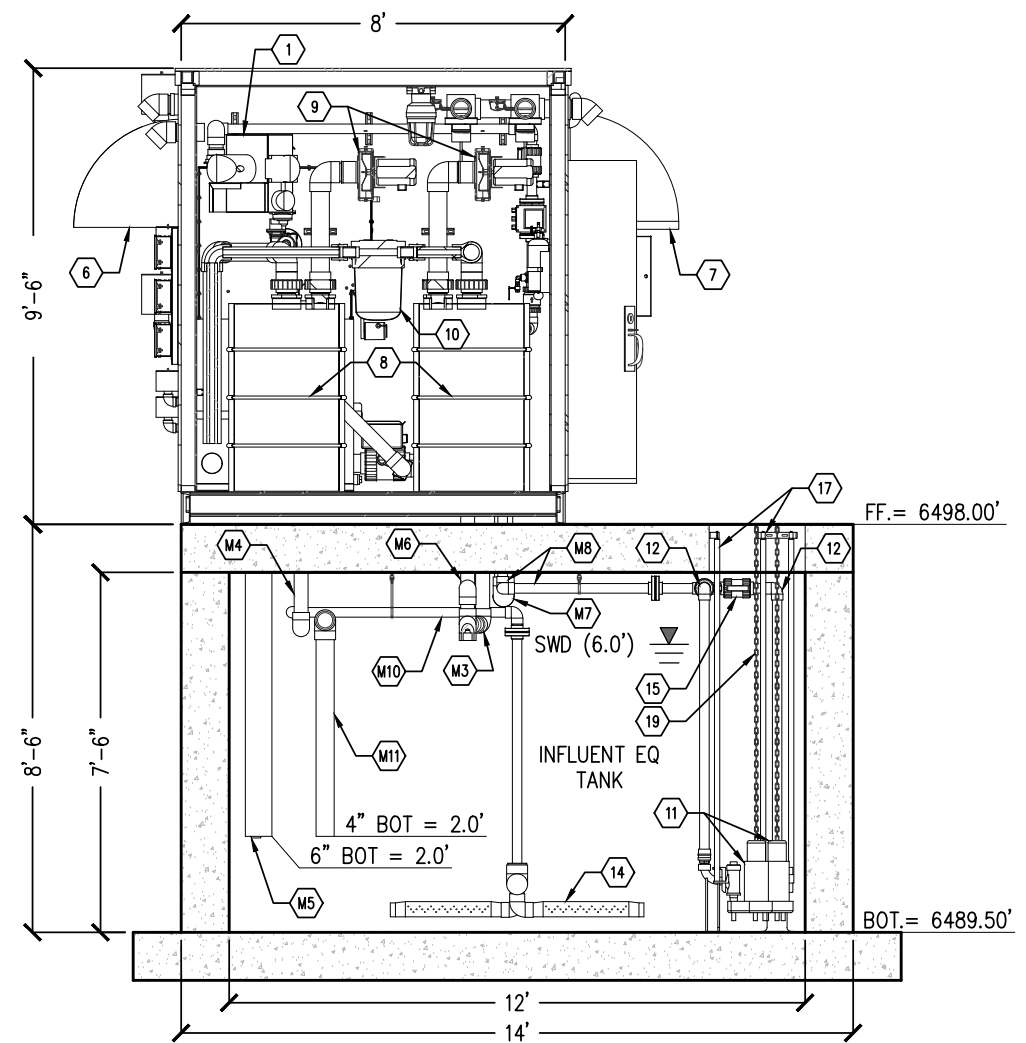


|   |  |                                    |                        |              |
|---|--|------------------------------------|------------------------|--------------|
| PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    |  | SHEET TITLE:<br>PROCESS SECTIONS D |                        |              |
| ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |  | PROJECT NUMBER:<br>7829            | SCALE:<br>1/4" = 1'-0" | SHEET:<br>P9 |





PROCESS SECTION E  
1/4"=1'-0"



PROCESS SECTION F  
1/4"=1'-0"

PROCESS NOTES:

- 1 HEATER
- 2 ALUM CHEM FEED SYSTEM
- 3 AERATION BLOWERS
- 4 PRIME/AIR BLEED PUMP
- 5 SUPERNATANT PUMP
- 6 24" LOUVER & HOOD
- 7 24" FAN & HOOD
- 8 ODOR CONTROL VESSELS
- 9 VENTILATION BLOWER
- 10 LIQUID SEPARATOR

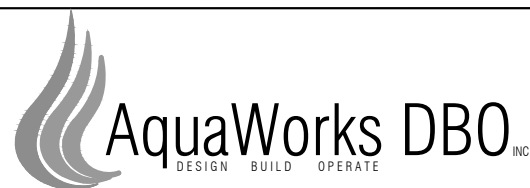
- 11 EQ TRANSFER PUMPS
- 12 2" 90 ELBOW
- 13 3" 90 ELBOW
- 14 DIFFUSER
- 15 2" BALL VALVE
- 16 1.5" 90 ELBOW
- 17 GUIDE RAILS
- 18 1.5" FLEX TUBE
- 19 LIFTING CHAIN
- 20 CHEM FEED CONDUIT (2" SCH 80 PVC)

PIPING CONNECTION NOTES:

- M1 3" OVERFLOW TO SLUDGE TANK
- M2 2" AIR TO SLUDGE HOLDING TANK
- M3 3" OVERFLOW TO EQ TANK (FLOOR DRAIN)
- M4 3" SYSTEM EFFLUENT TO AIR GAP ASSEMBLY
- M5 6" MBR TANK OVERFLOW TO INFLUENT EQ TANK
- M6 3" OVERFLOW TO EQ TANK (SCREEN OVERFLOW)
- M7 4" SCREEN TO AERATION TANK
- M8 2" INFLUENT EQ PUMP TO INLET SCREEN
- M9 1.5" SUPERNATANT SLUDGE TO FLOW METER
- M10 2" AIR TO INFLUENT EQ TANK
- M11 3" OVERFLOW TO EQ TANK



| REV. No: | DATE: | BY: | REVISION DESCRIPTION: | DRAWN BY: NM   |
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|   |  |  |                                       |                        |               |
|---|--|--|---------------------------------------|------------------------|---------------|
| PROJECT: MILNER COLORADO WWTP<br>COMMUNITY OF MILNER<br>ROUTT COUNTY, COLORADO                    |  |  | SHEET TITLE:<br>PROCESS SECTION E & F |                        |               |
| ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 |  |  | PROJECT NUMBER:<br>7829               | SCALE:<br>1/4" = 1'-0" | SHEET:<br>P10 |

VALVES AND PIPING

BALL VALVE - NO NC

GATE VALVE -

GLOBE VALVE -

NEEDLE VALVE -

SLIDE VALVE -

SOLENOID VALVE -

BUTTERFLY VALVE -

SWING CHECK VALVE -

WAFER CHECK VALVE -

SPRING CHECK VALVE -

WYE STRAINER -

SAMPLE PORT -

PRESSURE RELIEF VALVE -

VACUUM RELIEF VALVE -

CAMLOCK CONNECTION -

FLEXIBLE CONNECTION -

FLANGED CONNECTION -

REDUCER -

UNION -

ADSORBENT FILTER -

COALESCING FILTER -

PARTICULATE FILTER -

FILTER, SILENCER -

PRESSURE REGULATOR -

REGULATOR W/ FILTER -

EQUIPMENT

AIR STRIPPER

OIL WATER SEPARATOR

SEAL FLUID SEPARATOR

BAG FILTER

CARBON VESSEL

OXIDIZER

PRODUCT STORAGE DRUM, TANK

STANDARD, CONICAL BOTTOM TANK

EQUIPMENT

CLOSED TOP TANK

OPEN TOP TANK

OPEN TOP TANK WITH LID

AIR DIFFUSER ASSEMBLY

STRAINER/FILTER

MEMBRANE CASSETTE

NO CLOG SPRAYER ASSEMBLY

ULTRA VIOLET LIGHT

ROTARY SCREEN

FILTER PRESS

EQUIPMENT

CENTRIFUGAL PUMP -

PROGRESSIVE-CAVITY PUMP -

CHEMICAL-INJECTION PUMP -

CENTRIFUGAL, REGENERATIVE BLOWER -

POSITIVE DISPLACEMENT BLOWER -

ROTARY-CLAW BLOWER -

LINEAR BLOWER -

LIQUID-RING PUMP -

ROTARY-VANE COMPRESSOR -

RECIPROCATING COMPRESSOR -

PASSIVE COOLING FINS -

EDUCTOR -

MAGNETIC FLOW METER -

VENTURI -

ROTOMETER -

AS - AIR STRIPPER

BLD - BUILDING, TRAILER, OR SKID

FLT - FILTER VELLEL

LPC - LIQUID-PHASE CARBON VESSEL

MFD - MANIFOLD

OWS - OIL/WATER SEPARATOR

OX - OXIDIZER

PST - PRODUCT STORAGE TANK

SOS - SEAL OIL SEPARATOR

SWS - SEAL WATER SEPARATOR

TNK - TANK

VLS - VAPOR/LIQUID SEPARATOR

VPC - VAPOR-PHASE CARBON VESSEL

INSTRUMENTATION IDENTIFIERS

| FIRST LETTERS |  | SUCCEEDING LETTERS                 |                                 |  |                   |
|---------------|--|------------------------------------|---------------------------------|--|-------------------|
|               | MEASURED/INITIATING VARIABLE           | VARIABLE MODIFIER                  | READOUT/PASSIVE FUNCTION        | OUTPUT/ACTIVE FUNCTION                         | FUNCTION MODIFIER |
| A             | ANALYSIS                               |                                    | ALARM                           |  |                   |
| B             | BURNER, COMBUSTION                     |                                    |                                 |  |                   |
| C             | CYCLE                                  | CONTROL                            |                                 | CONTROL  | CLOSE             |
| D             |  | DIFFERENCE, DIFFERENTIAL           |                                 |  | DEVIATION         |
| E             | VOLTAGE                                |                                    | SENSOR, PRIMARY ELEMENT         |  |                   |
| F             | FLOW, FLOW RATE                        | RATIO                              |                                 |  |                   |
| G             | GAS (LEL)                              |                                    | GLASS, GAUGE, VIEWING DEVICE    |  |                   |
| H             | HAND                                   |                                    |                                 | HAND   | HIGH              |
| I             | CURRENT                                |                                    | INDICATE                        |  |                   |
| J             | POWER                                  |                                    | SCAN                            |  |                   |
| K             | TIME, SCHEDULE                         | TIME RATE OF CHANGE                |                                 | CONTROL STATION                                |                   |
| L             | LEVEL                                  |                                    | LIGHT                           |  | LOW               |
| M             | MONITOR                                |                                    |                                 | MOTORIZED                                      | MIDDLE, INTERMED  |
| N             |  |                                    |                                 |  |                   |
| O             |  |                                    | ORIFICE, RESTRICTION            |  | OPEN              |
| P             | PRESSURE                               |                                    | TEST CONNECTION                 | PNEUMATIC                                      |                   |
| Q             | QUANTITY                               | INTEGRATE, TOTALIZE                | INTEGRATE TOTALIZE              |  |                   |
| R             | RADIATION                              |                                    | RECORD                          |  | RUN               |
| S             | SPEED, FREQUENCY                       | SAFETY                             |                                 | SWITCH, SOLENOID                               | STOP              |
| T             | TEMPERATURE                            |                                    |                                 | TRANSMIT                                       |                   |
| U             | MULTIVARIABLE                          |                                    | MULTIFUNCTION                   | MULTIFUNCTION                                  |                   |
| V             | VIBRATION, MECHANICAL ANALYSIS, VACUUM |                                    |                                 | VALVE, DAMPER, LOUVER                          |                   |
| W             | WEIGHT, FORCE                          |                                    | WELL, PROBE                     |  |                   |
| X             | UNCLASSIFIED                           | X-AXIS                             | ACCESSORY DEVICES, UNCLASSIFIED | UNCLASSIFIED                                   | UNCLASSIFIED      |
| Y             | EVENT, STATE, PRESENCE                 | Y-AXIS                             |                                 | AUXILIARY DEVICES                              |                   |
| Z             | POSITION, DIMENSION                    | Z-AXIS, SAFETY INSTRUMENTED SYSTEM |                                 | DRIVER, ACTUATOR, UNCLASSIFIED CONTROL ELEMENT |                   |

GENERAL NOTES:

1. WATER FLOW METERS: INSTALL AS PER MANUFACTURES' RECOMMENDATIONS. ENSURE THAT THROTTLING VALVES ARE NOT IN DIRECT LINE OF THE METER.

2. PITOT AIR FLOW METERS: PROVIDE 8 DIA. OF STRAIGHT PIPE BEFORE AND 3 DIA. OF STRAIGHT PIPE AFTER METERS. AVOID TEES AND ELBOWS BEFORE AND AFTER METERS.

3. MATERIALS OF VALVES AND PIPING IS TO BE AS SPECIFIED ON THE DIAGRAM.

4. THERE ARE NO SPECIAL PIPING REQUIREMENTS OUTSIDE OF NEWTERRA'S STANDARDS UNLESS SPECIFIED ON THE DIAGRAM.

5. FLEXIBLE HOSE IS TO BE AS SPECIFIED ON THE DIAGRAM. IF A FLEXIBLE CONNECTION IS PREFERRED PLEASE CONSULT ENGINEERING TO ENSURE SELECTED HOSE IS RATED FOR THE OPERATING CONDITIONS.

6. DO NOT USE PVC PIPE ON AIR LINES OVER 5 PSIG.

7. ALL FEMALE PVC THREADED ADAPTORS MUST BE RE-ENFORCED FEMALE ADAPTORS.

8. NO DISSIMILAR METALS ARE TO BE IN DIRECT CONTACT ON WATER LINES. FOLLOW ENG.SOP.010

9. ALL PVC MUST BE SCHEDULE 80

10. ALL STAINLESS STEEL THREADED CONNECTIONS ARE TO UTILIZE GRAY TEFLON TAPE DESIGNED FOR SS FITTINGS.

11. ALL MECHANICAL BALL FLOAT LEVEL SWITCHES ARE TO BE INSTALLED WITH THEIR CABLES TIE WRAPPED, CABLES ARE NOT TO BE SHORTENED.

INDICATING INSTRUMENT

DIGITAL INPUT TO CONTROL PANEL

DIGITAL INPUT CAUSING ALARM

DIGITAL INPUT CAUSING SYSTEM SHUTDOWN ALARM

ANALOG INPUT TO CONTROL PANEL

ANALOG OUTPUT FROM CONTROL PANEL

PROJECT: MILNER COLORADO WWTP

COMMUNITY OF MILNER

ROUTT COUNTY, COLORADO

ENGINEER: AQUAWORKS DBO, INC.

3252 WILLIAMS STREET

DENVER, COLORADO 80205

(303) 477-5915

SHEET TITLE:

P&ID LEGEND

PROJECT NUMBER:

7829

SCALE:

NTS

SHEET:

P11

REV. No:

DATE:

BY:

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DESIGNED BY: AS

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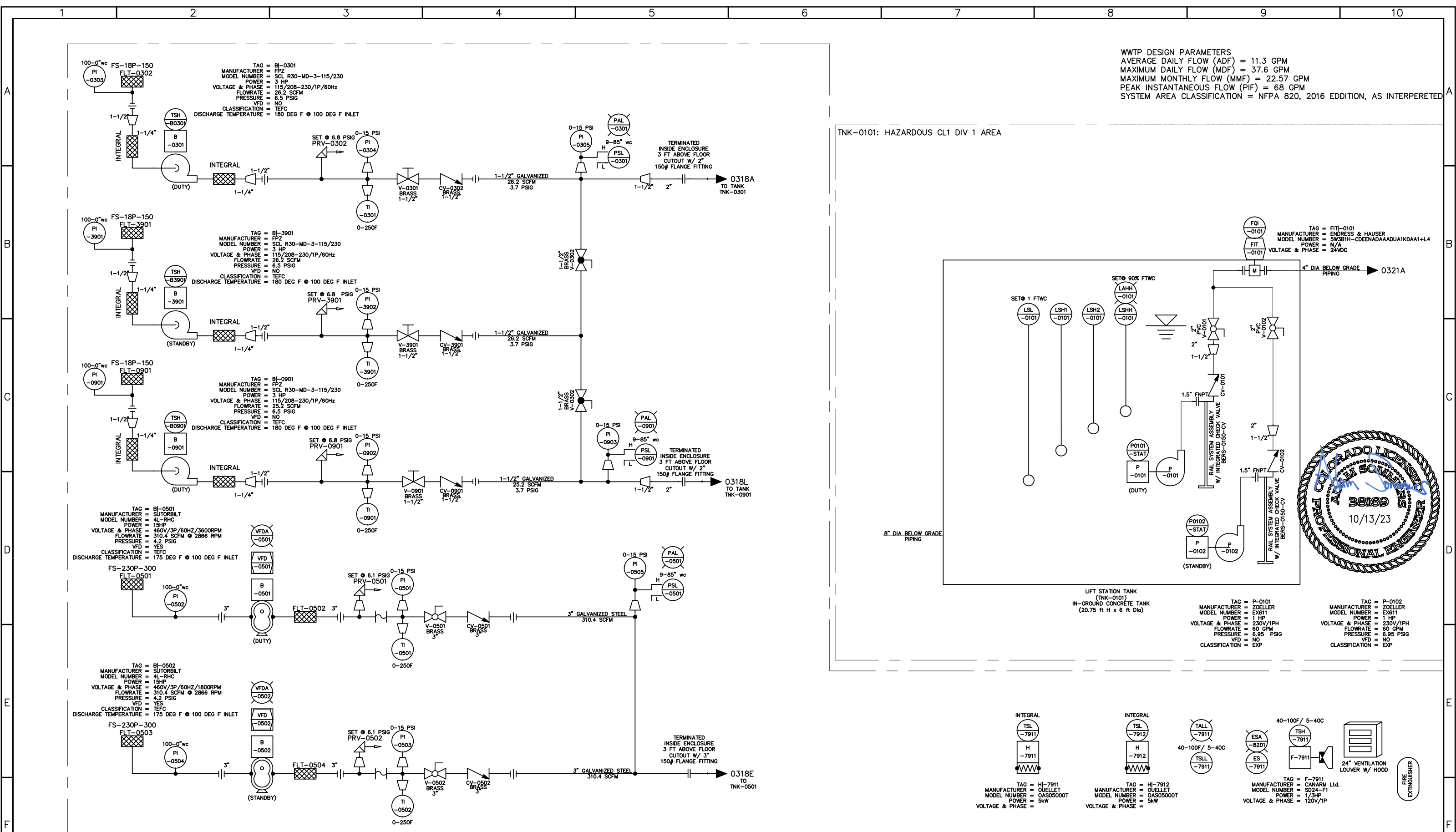
DESIGN BUILD OPERATE

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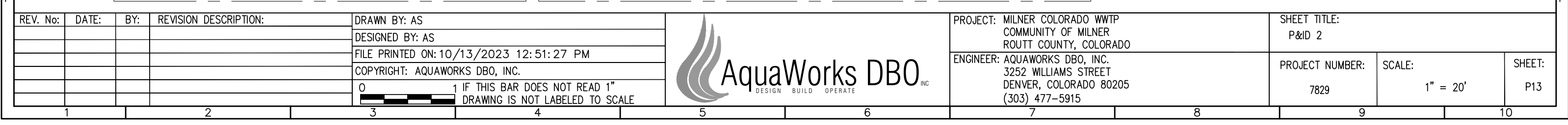
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PROFESSIONAL ENGINEER





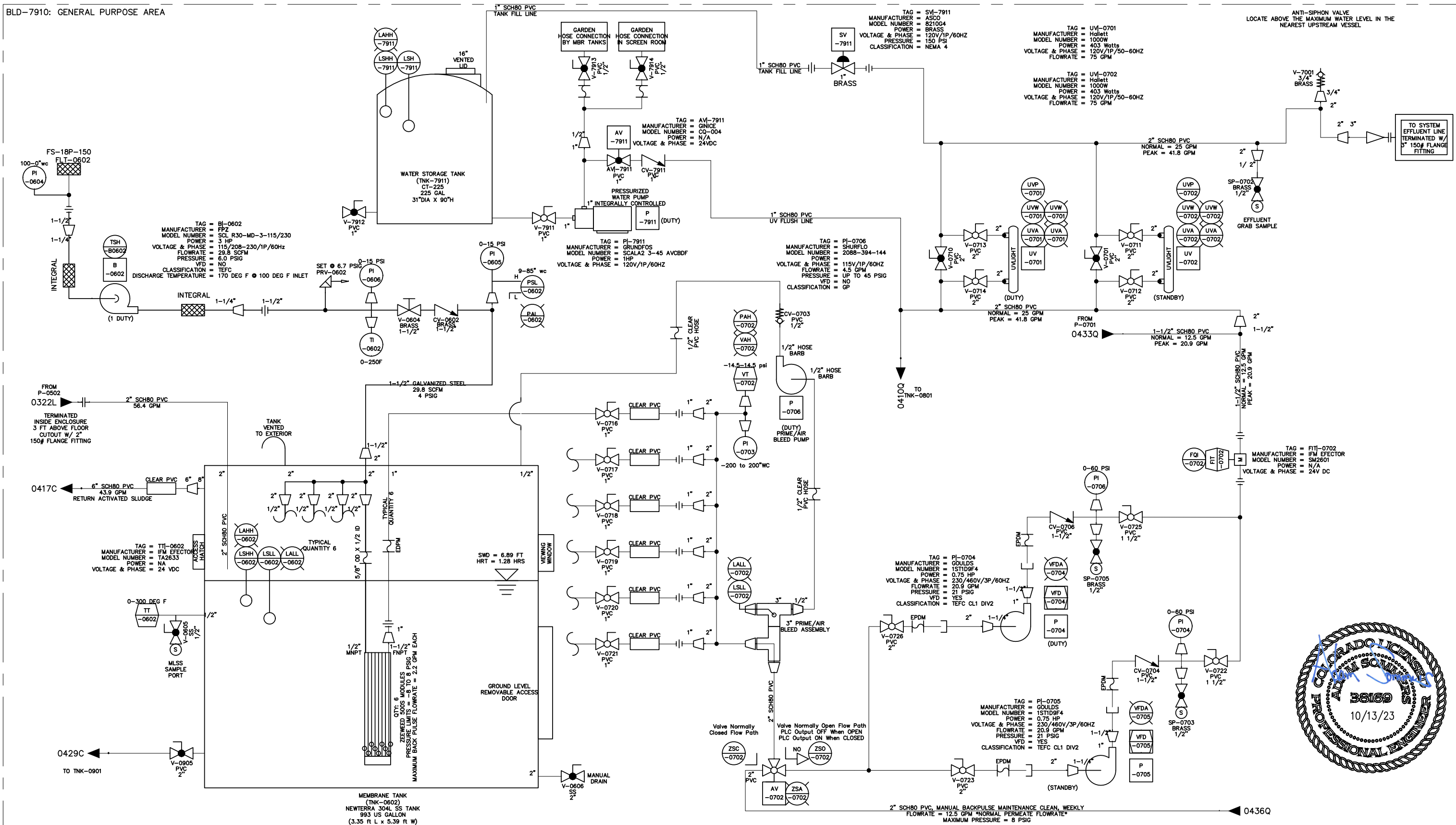
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|          |       |     |                       | DESIGNED BY: AS  | ENGINEER: AQUAWORKS DBO, INC.<br>3252 WILLIAMS STREET<br>DENVER, COLORADO 80205<br>(303) 477-5915 | PROJECT NUMBER:<br>7829 |
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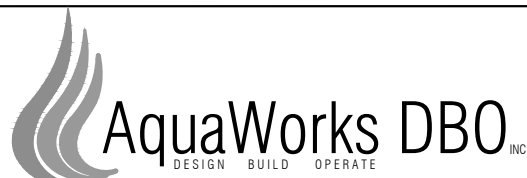




BLD-7910: GENERAL PURPOSE AREA



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COMMUNITY OF MILNER  
ROUTT COUNTY, COLORADO  
ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

SHEET TITLE:  
P&ID 4

PROJECT NUMBER:  
7829

SCALE:  
1" = 20'

SHEET:  
P15