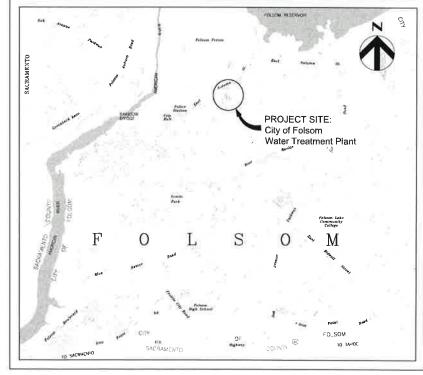


Contract Drawings For

City of Folsom Water Treatment Plant **BACKWASH AND RECYCLED WATER CAPACITY PROJECT**

CITY OF DISTINCTIVE BY NATURE



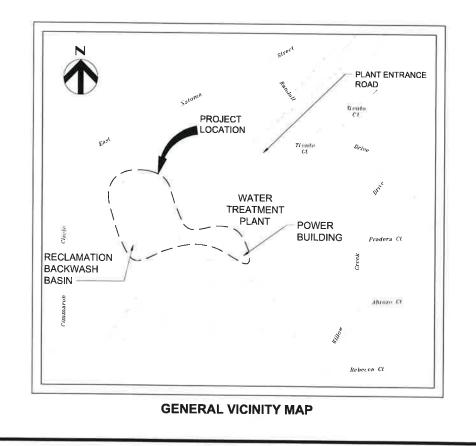
LOCATION MAP

ISSUED FOR BIDS FEBRUARY 2022 City Of Folsom

Project No. WA2103







HDR

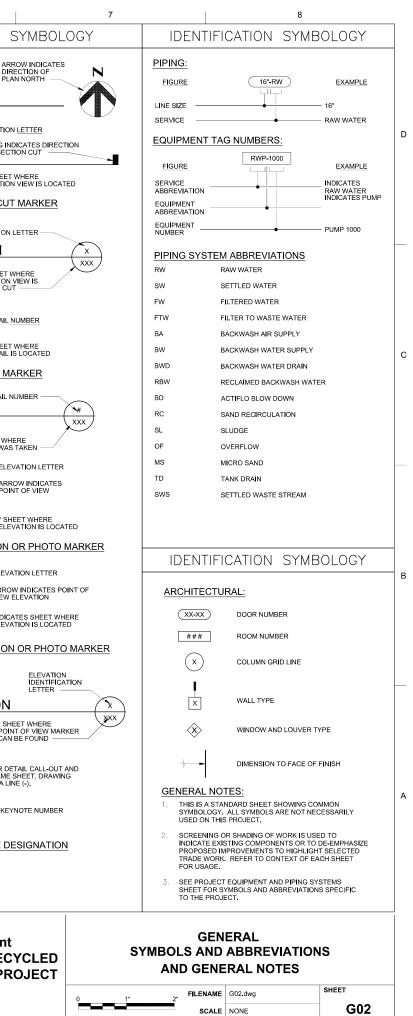
DRAWING INDEX

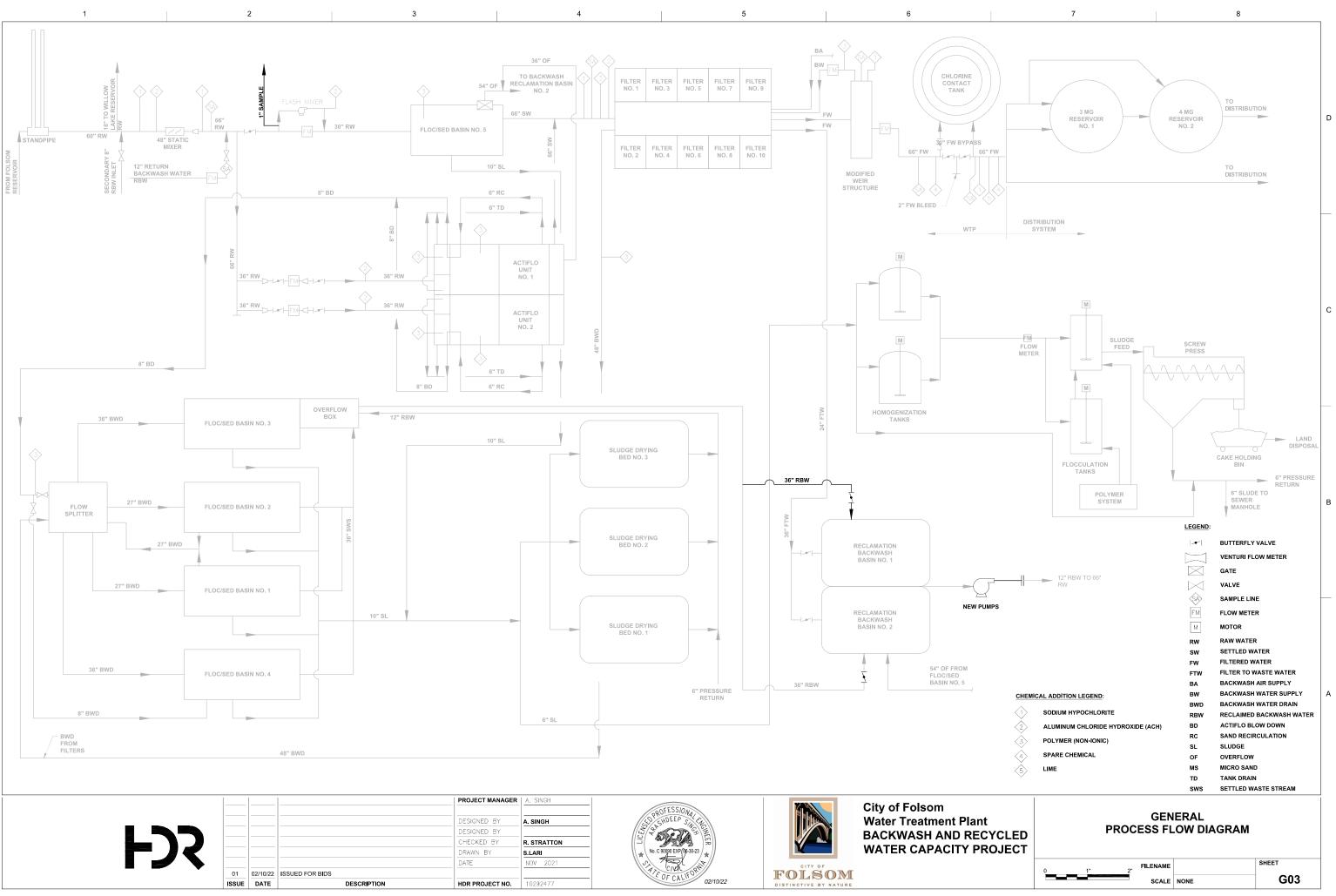
| 3 | E | Ν | E | R | A | ۱L | |
|---|---|---|---|---|---|----|--|
| | | | | | | | |

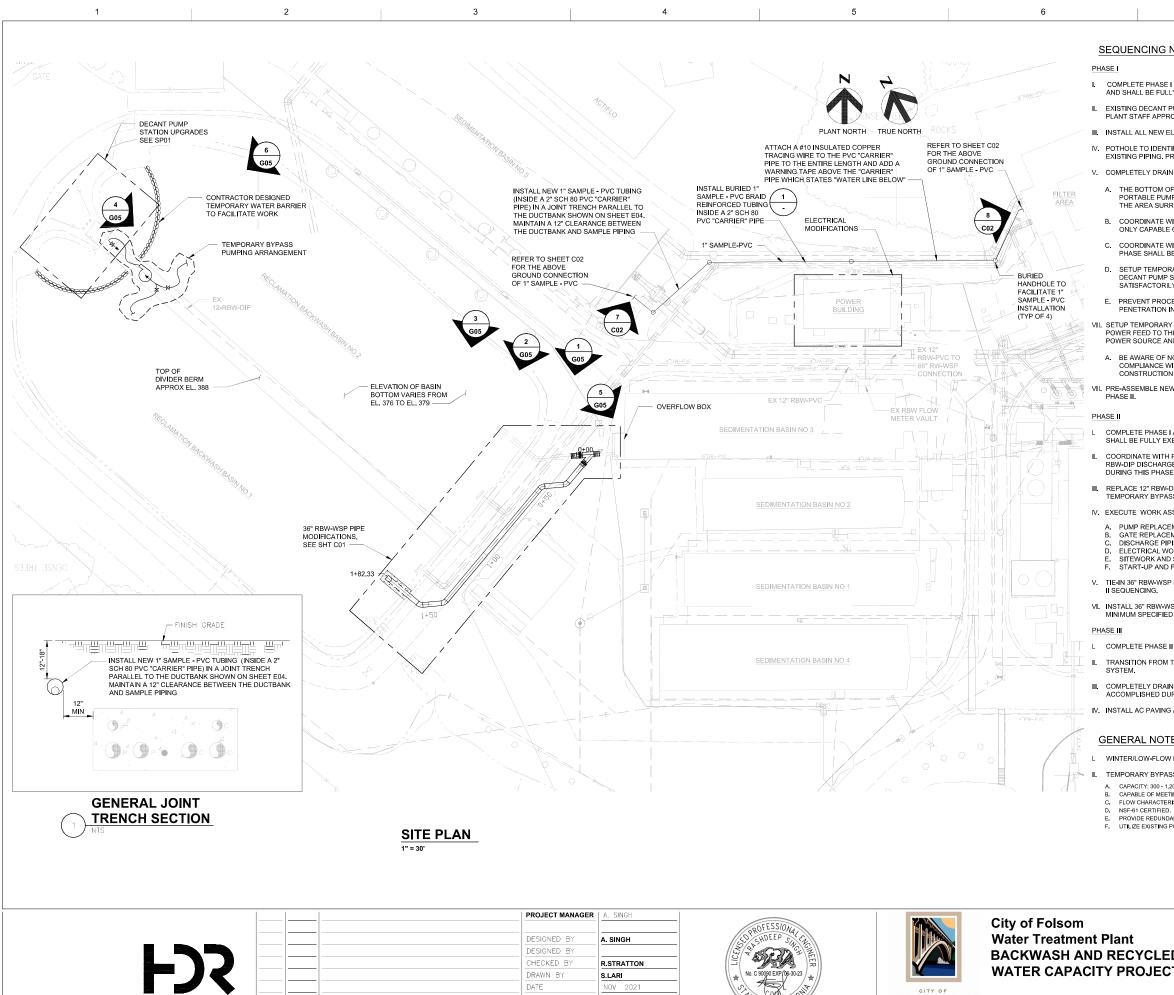
| 1. 2. | G01 G02 | COVER SHEET, LOCATION MAPS AND DRAWING INDEX SYMBOLS AND ABBREVIATIONS AND GENERAL NOTES |
|----------|------------|---|
| З. | G03 | PROCESS FLOW DIAGRAM |
| 4. | G04 | SITE PLAN AND SEQUENCING NOTES |
| 5. | G05 | SITE PHOTOS |
| DEM | OLITION | |
| 6 | D01 | DEMOLITION PLAN AND SECTIONS |
| | : | |
| 7. | C01 | ENLARGED 36" RBW-WSP PIPING PLAN |
| 8. | C02 | STANDARD DETAILS |
| STR | JCTURAL F | PROCESS |
| 9_ | SP01 | DECANT PUMP STATION PLAN AND SECTION |
| 10 | SP02 | STANDARD DETAILS |
| ELEC | TRICAL | |
| 11. | E01 | LEGEND, SYMBOLS, AND ABBREVIATIONS |
| 12 | E02 | EXISTING MCC 1A ONE LINE DIAGRAM - DEMOLITION |
| 13 | E03 | RECLAMATION PUMP STATION - DEMOLITION |
| 14 | E04 | OVERALL SITE PLAN |
| 15 | E05 | EXISTING MCC 1A ONE LINE DIAGRAM - MODIFIED |
| 16 | E06 | POWER BUILDING PLAN |
| 17. | E07 | RECLAMATION PUMP STATION |
| 18. | E08 | VFD CONTROL DIAGRAM RECLAMATION BACKWASH PUMPS |
| 19 | E09 | DETAILS |
| DDC | | |
| PRO | JESS AND | INSTRUMENTATION |

| 0 | 01 | LEGEND, SYMBOLS AND ABBREVIATIONS |
|---|----|-----------------------------------|
| 1 | 02 | DECANT PUMP STATION P&ID |

| | 1 | 2 | 3 | | 4 | | 5 | 6 |
|--------------|--|--------------|--|-------------------|--|--|---|--|
| | ABB | REVIATION | | | PIPING SYMB | OLOGY | | GENERAL |
| A/E | ARCHITECT/ENGINEER | ID | INSIDE DIAMETER, INTERIOR DIMENSION | SYMBOLOGY SHOW | N IS FOR SINGLE LINE PIPING. DOUBLE | | EOUS (CONTINUED) | |
| ABAN ABC | ABANDON AGGREGATE BASE COURSE | IE IN | INVERT ELEVATION INCH | LINE PIPING SYMBO | | | | A |
| AGGR | AGGREGATE | INV | INVERT | VALVES | | 0 | | P |
| ALIG APRX | ALIGNMENT APPROXIMATE | TL | JOINT | | | Į Ž | PRESSURE GAGE (W/COCK) | |
| APVD | APPROVED | 51 | | | GATE VALVE | | | PLAN |
| AVE AVG | AVENUE AVERAGE | L LATL | LEFT LATERAL | | GLOBE VALVE | | TRAP | 1/4" = 1'-0" |
| AWG | AMERICAN WIRE GAGE | LP | LOW POINT | | | 0 | | SECTI |
| BF | BLIND FLANGE | LOTO | LOCK OUT TAG OUT | | BALL VALVE | C | QUICK DISCONNECT CAM & GROOVE COUPLING | FLAG |
| BFV | BUTTERFLY VALVE | MAX | MAXIMUM | | CHECK VALVE | | | OF SE |
| BLDG BM | BUILDING BENCHMARK | MECH MFR | MECHANICAL MANUFACTURER | | |] | CAP or PLUG | |
| BPS | BOOSTER PUMP STATION | MH MIN | MANHOLE MINIMUM | | DOUBLE DISK CHECK VALVE | | INTERIOR CLEANOUT | * SHEE |
| СВ | CATCH BASIN | MIN | MINIMOM MECHANICAL JOINT | KO | BALL CHECK VALVE | HB-X | | SECT |
| CF CIP | CUBIC FEET (FOOT) CAST-IN-PLACE | N | NORTH | | | ⊗ | HOSE VALVE, HOSE BIBB OR FLUSHING CONNECTION | SECTION CL |
| CL | CENTERLINE | NTS | NOT TO SCALE | | BUTTERFLY VALVE | | FLOSHING CONNECTION | |
| CMU CMLC | CONCRETE MANSONRY UNIT CEMENT MORTAR LINED AND COATED | ос | ON CENTER | | DIAPHRAGM VALVE | HR-X | HOSE RACK | 05070 |
| со | CLEANOUT, CONCRETE OPENING | OD | OUTSIDE DIAMETER | | | | | SECTIO |
| COMB CONC | COMBINATION CONCRETE | OF | OVERFLOW OVERHEAD | | PINCH VALVE | FD-X | FLOOR DRAIN | SECTION |
| CONST | CONSTRUCTION | | | | KNIFE GATE VALVE | | | 3/8" = 1'-0" |
| CP CPLG | CONTROL POINT COUPLING | PB PE | PULL BOX PLANE END | | | X = TYPE DES | IGNATED IN SPECIFICATIONS | * SHEE |
| | | PL | PROPERTY LINE | -12 OR -124- | PRESSURE RELIEF VALVE | | | SECTIO FIRST C |
| DG DEG | DEGENERATED GRANITE DEGREE | PP PROP | POWER POLE PROPERTY, PROPOSED | | PLUG VALVE | | PIPE IN SECTION | |
| DEMO | DEMOLITION | PVC | POLYVINYL CHLORIDE | | NEEDLE VALVE | | | |
| DET DI | DETAIL DROP INLET, DUCTILE IRON | PVMT PS | PAVEMENT PUMP STATION | | NEEDLE VALVE | OBU | BELL UP (PLAN) | DETAI |
| DIA | DIAMETER | | | I X | PRESSURE REDUCING VALVE | Υ _{BU} | BELL UP (SECTION OR SCHEMATIC) | |
| DIM DIP | DIMENSION DUCTILE IRON PIPE | QTY | QUANTITY | | PRESSURE REDUCING VALVE | | bee of (deonion of contempting) | * SHEE DETA |
| DIST DWG | DISTANCE, DISTRIBUTION | R RED | RIGHT REDUCER | 1 1 | AIR RELEASE / VACUUM VALVE | D | DRAIN (SECTION OR SCHEMATIC) | DEIN |
| DwG | DRAWING | RED | REMOVE | ↓ ↓× | A = AIR RELEASE | | | DETAIL |
| E EL | EAST ELBOW. ELEVATION | REQD RFCA | REQUIRED RESTRAINED FLANGE COUPLING ADAPTOR | <u> </u> | V = VACUUM C = COMBINATION | ATA | AIR TOOL ASSEMBLY | |
| EMH | ELECTRICAL MANHOLE | ROW | RIGHT-OF-WAY | | C - COMBINATION | | | DETAIL |
| ENGR EOP | ENGINEER EDGE OF PAVEMENT | s | SOUTH | | PRESSURE REGULATING VALVE | AVS | AUTOMATIC VALVE STATION | DETAIL |
| ESEW | EMERGENCY SHOWER AND EYE WASH | SAM | SAMPLE LINE | | | PRS | PRESSURE REDUCING STATION | 1" = 1'-0" |
| EX EXT | EXISTING EXTERIOR, EXTERNAL, EXTENSION | SCH SECT | SCHEDULE SECTION | — | THREE WAY BALL VALVE | | | * SHEET V |
| | | SHT | SHEET | 1 | | PLUMBING I | <u>PIPING:</u> | DETAIL W |
| FBO FCA | FURNISHED BY OWNER FLANGED COUPLING ADAPTER | SL SLV | SLOPE SLEEVE | | THREE WAY PLUG VALVE | | VT VENT (VT) | |
| FDC | FIRE DEPARTMENT CONNECTION | SPEC | SPECIFICATION | | THREE WAY BALL VALVE | | | EL |
| FE FG | FLANGED END FINISHED GRADE | ST STA | STREET STATION | 6-0 | | | POTABLE WATER, COLD (PWC) | AF PC |
| FH FL | FIRE HYDRANT FLOW, FLOW LINE | STD SYM | STANDARD SYMBOL | MISCELLANEO | us | | POTABLE WATER, HOT (PWH) | |
| FLG | FLOW, FLOW LINE FLANGE | STM | | MICOLLEANED | | | FOTABLE WATER, HOT (FWII) | |
| FN FRP | FENCE FIBER-REINFORCED PLASTIC | TYP | TYPICAL | | VARIABLE AREA METER | | | EL EL |
| FT | FEET, FOOT | UG | UNDERGROUND | | UNION | | | |
| FTG FUT | FITTING FUTURE | UNO | UNLESS NOTED OTHERWISE | - Li - Li | | | | SINGLE ELEVATION |
| | | VT | VENT | | Y-STRAINER | | | |
| G GR | GAS GRADE | VTR | VENT THROUGH ROOF | | | | | ELE |
| GV | GATE VALVE | W/ | WITH | | FLEXIBLE HOSE OR TUBING | | | |
| GVL | GRAVEL | W/O W | WITHOUT WEST, WATER MAIN | | FLEXIBLE PIPING CONNECTION | | | |
| Н | HEIGHT | WS | WATERSTOP, WATER SURFACE | | TELABLE THING CONNECTION | | | - <(×;;;×) |
| HP | HIGH POINT | WSP | WELDED STEEL PIPE | | LINE SIZE CHANGE (CONCENTRIC REDUCER) | MATERIA | ALS IN PLAN/SECTION | |
| | | XSECT | CROSS SECTION | | LINE SIZE CHANGE (ECCENTRIC REDUCER) | | , | - × A-11 × |
| | | | | | | | DEMOLITION | MULTIPLE ELEVATIO |
| | SITE DI A | N SYMBOLO | GY | - C+ | LINE TURNING DOWN | | BEMOEINON | |
| | JIL I LA | | 01 | - • | LINE TURNING UP | 4 | CONCRETE | |
| | | NOTES | | | | V77777 | | |
| | | | = | | BLIND FLANGE | | MASONRY (CMU) | |
| 50.5 _ | CONTOUR | T | TELEPHONE LINE | | COMPRESSION SLEEVE COUPLING | | ASPHALT LANDSCAPE MATERIAL/DRAIN ROCK (PLAN) | ELEVATION |
| \cap | VEGETATION | ——Е | ELECTRIC LINE | ++ | | | | 1/4" = 1'-0" |
| • 0 | O CLEAN OUT | _ | | | FLANGED COUPLING ADAPTER (FCA) | 65656 | GRANULAR FILL (SECTION) | PC |
| | | | FIBER OPTIC | | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 | SAND (SECTION), | C. |
| | P | c | COMMUNICATION | | FLEXIBLE CONNECTION OR EXPANSION JOINT | | CRUSHED ROCK (PLAN), | |
| | STORM DRAIN CATCH BASIN | | HANDRAIL | Ŭ, | | | EARTH | * IF PLAN AND SECTION, OR |
| | JV UTILITY VAULT | | PIPELINE | | HARNESSED MECHANICAL COUPLING | | | DETAIL ARE SHOWN ON SAM NUMBER IS REPLACED BY A |
| ۴ PF | POWER POLE | | LARGE PIPELINE (> 10"±) | | | | METAL (SECTION) | |
| , € TF | | | | | WELDED CONNECTION | | GRATING (PLAN) | K |
| ∕ IF ● F | | | | | | | | |
| Ý Y | | | | | WELDING NECK CONNECTION | | CHECKERED PLATE | |
| \times 75 | 5.5 EXISTING SPOT ELEVATION | X | | | GROOVED COUPLING | | WOOD - CONTINUOUS | KEYNOTE |
| • _75 | | | | | FLANGED JOINT | | | |
| | | | CENTERLINE | | | | WOOD - NON CONTINUOUS | |
| á c | | | EASEMENT | | MECHANICAL OR PUSH ON JOINT | | | |
| | | | LIMITS OF CONSTRUCTION | | | <u> </u> | GYPSUM BOARD | |
| ۲ | BENCHMARK | <u> </u> | ROW | | PVC JOINT | | | |
| | | | | PROJECT MANAGE | R A. SINGH | | | · · - · |
| | | | | | | ROFESSIONA | | y of Folsom |
| | _ | | | DESIGNED BY | A. SINGH | SHDEEP SUCH | W: | ater Treatment Plan |
| | | | | DESIGNED BY | | E E | | CKWASH AND RE |
| | | | | CHECKED BY | R. STRATTON | | | |
| | FSS | | | DRAWN BY | S.LARI | C 90090 EXP (06-30-23 | | ATER CAPACITY P |
| | · · · · · | | | DATE | NOV 2021 | | CITY OF | |
| | • | 01 02/10/22 | ISSUED FOR BIDS | | | E OF CALIFOR | FOLSOM | |
| | | ISSUE DATE | DESCRIPTION | HDR PROJECT NO. | 10292477 | 02/10/2 | 2 DISTINCTIVE BY NATURE | |







DRAWN BY

HDR PROJECT NO.

DATE

02/10/22 ISSUED FOR BIDS

DESCRIPTION

01

ISSUE DATE

S.LARI

NOV 202

10292477

C 90090 EXP (06-3)

OFCAL

02/10/22

FOLSOM

ISTINCTIVE BY NATUR

| ENCING NOTES: | |
|--|---|
| | |
| LETE PHASE I ACTIVITIES PRIOR TO START OF PHASE II ACTIVITIES. ALL PHASE I ACTIVITIES SHALL OCCUR DURING HALL BE FULLY EXECUTED WITHIN THE WINTER/LOW-FLOW SEASON. | |
| ING DECANT PUMPS SHALL BE CONTINUOUSLY OPERATIONAL THROUGHOUT PHASE I WITH THE EXCEPTION OF A, " STAFF APPROVED, 24 HOUR TEMPORARY SHUTDOWN. | |
| LL ALL NEW ELECTRICAL REQUIRED FOR NEW DECANT PUMPS. | D |
| DLE TO IDENTIFY UTILITY CROSSINGS IMPACTING THE NEW 36 IN RBW-WSP PIPE AND TO VERIFY ELEVATION OF ING PIPING. PROCURE AND PRE-ASSEMBLE PIPING AND VALVE IN PREPARATION FOR A TIE-IN DURING PHASE II. | |
| LETELY DRAIN THE RECLAMATION BACKWASH BASIN (RBB) NO. 1 AND 2 AND SETUP TEMPORARY WATER BARRIER. | |
| HE BOTTOM OF THE RBB CONTAINS SLUDGE WHICH SHALL BE PUMPED OUT BY THE CONTRACTOR, USING A DRTABLE PUMP, TO A, PLANT STAFF APPROVED, ONSITE SLUDGE DRYING BED IN ORDER TO COMPLETELY CLEAN HE AREA SURROUNDING THE DECANT PS TO FACILITATE WORK. | |
| OORDINATE WITH PLANT STAFF TO DRAIN THE RBB USING THE EXISTING DECANT PUMPS. THE DECANT PUMPS ARE NLY CAPABLE OF DRAINING THE BASIN DOWN TO THE TOP OF SETTLED SLUDGE. | |
| CORDINATE WITH PLANT STAFF TO TEMPORARILY SHUTDOWN THE RBW SYSTEM. SHUTDOWN PERIOD DURING THIS HASE SHALL BE LIMITED TO 24 CONSECUTIVE HOURS. | |
| ETUP TEMPORARY PIPING TO CONVEY PROCESS FLOW FROM DOWNSTREAM OF THE WATER BARRIER TO THE ECANT PUMP STATION TO MAKE THE DECANT PUMP STATION OPERATIONAL AGAIN AFTER THE WATER BARRIER IS ATISFACTORILY INSTALLED. | |
| REVENT PROCESS FLOW FROM ENTERING RBB NO.1 TO FACILITATE INSTALLATION OF 36" RBW-WSP PIPE ENETRATION INTO RBB NO. 1. | |
| P TEMPORARY BYPASS PUMPING SYSTEM TO BYPASS THE DECANT PS. CONTRACTOR MAY UTILIZE EXISTING R FEED TO THE EXISTING DECANT PUMPS. HOWEVER, CONTRACTOR MUST PROVIDE A BACK-UP, REDUNDANT, R SOURCE AND PUMPING SYSTEM TO MA'INTAIN CONTINUOUS PUMPING THROUGHOUT THE BYPASS PERIOD. | |
| EAWARE OF NOISE ORDINANCES IN THE NEIGHBORHOOD SURROUNDING THE WATER TREATMENT PLANT. OMPLIANCE WITH NOISE RESTRICTIONS IS REQUIRED. SATURDAY, SUNDAY, AND NIGHT WORK ARE NOT PERMITTED. DNSTRUCTION EQUIPMENT SHALL BE MUFFLED AND SHROUDED TO SATISFY NOISE LEVELS REQUIREMENTS. | С |
| SSEMBLE NEW RBW/DECANT PS DISCHARGE PIPING IN PREPARATION FOR AN EXPEDITED REPLACEMENT DURING EII. | |
| | |
| LETE PHASE I ACTIVITIES PRIOR TO START OF PHASE II. ALL PHASE II ACTIVITIES SHALL OCCUR DURING AND BE FULLY EXECUTED WITHIN THE WINTER/LOW-FLOW SEASON. | |
| DINATE WITH PLANT STAFF FOR A TEMPORARY SHUTDOWN OF DECANT PS TO FACILITATE REPLACEMENT OF 12" DIP DISCHARGE PIPING AND IMPLEMENTATION OF TEMPORARY BYPASS PUMPING SYSTEM. SHUTDOWN PERIOD IG THIS PHASE SHALL BE LIMITED TO 24 CONSECUTIVE HOURS, UNLESS OTHERWISE APPROVED BY PLANT STAFF. | |
| ACE 12" RBW-DIP DISCHARGE PIPING AND MAKE TEMPORARY BYPASS PUMPING SYSTEM OPERATIONAL. ORARY BYPASS PUMPING SHALL REMAIN IN CONTINUOUS OPERATION THROUGHOUT PHASE II. | |
| JTE WORK ASSOCIATED WITH DECANT PS WHICH INCLUDES BUT IS NOT LIMITED TO: | |
| JMP REPLACEMENT. ATE REPLACEMENT. SCHARGE PIPING REPLACEMENT AND ASSOCIATED COATING. LECTRICAL WORK. TEWORK AND STRUCTURAL WORK. TART-UP AND FUNCTIONAL TESTING. | |
| 36" RBW-WSP PIPING AND ASSOCIATED VALVING DURING THE SAME SHUTDOWN MENTIONED IN LINE 2 OF PHASE LENCING. | В |
| LL 36" RBW-WSP PIPE PENETRATION AND ALLOW THE NEW CONCRETE TO ADEQUATELY CURE AND REACH UM SPECIFIED COMPRESSIVE STRENGTH PRIOR TO ALLOWING PROCESS FLOW BACK INTO RBB NO. 1. | |
| LETE PHASE II ACTIVITIES PRIOR TO START OF PHASE III. | |
| SITION FROM TEMPORARY BYPASS PUMPING TO NEW DECANT PS. REMOVE TEMPORARY BYPASS PUMPING M. | |
| LETELY DRAIN THE RBB TO FACILITATE REMOVAL OF TEMPORARY WATER BARRIER. THIS WORK SHALL BE MPLISHED DURING A 24 HOUR PLANT SHUTDOWN COORDINATE WITH PLANT STAFF. | |
| LL AC PAVING AND OTHER WORK. | |

[

8

GENERAL NOTES:

WINTER/LOW-FLOW PERIOD: NOVEMBER TO APRIL

II. TEMPORARY BYPASS PUMPING REQUIREMENTS

CAPACITY: 300 - 1,200 GPM
 CAPABLE OF MEETING SPECIFIED FLOW RANGE WITH A THROTTLING VALVE.
 FLOW CHARACITERISTIC: GRITTY BACKWASH WATER.

7

FROUDE REDUNDANT PUMP AND POWER SOURCE.
 UTILIZE EXISTING POWER FEED TO DECANT PUMP STATION AS PRIMARY POWER SOURCE.

| City of Folsom Water Treatment Plant BACKWASH AND RECYCLED WATER CAPACITY PROJECT | | | | |
|--|-------------------------|-------------|---|--|
| | 0 1" 2" FILENAME | SHEET | | |
| | SCALE | 1" = 30' GO | 4 | |







3



NO WORK SHOW FOR CLARITY **大学的学生的**

EX 36" RBW-WSP

5 G04

PHOTOGRAPH



2

1

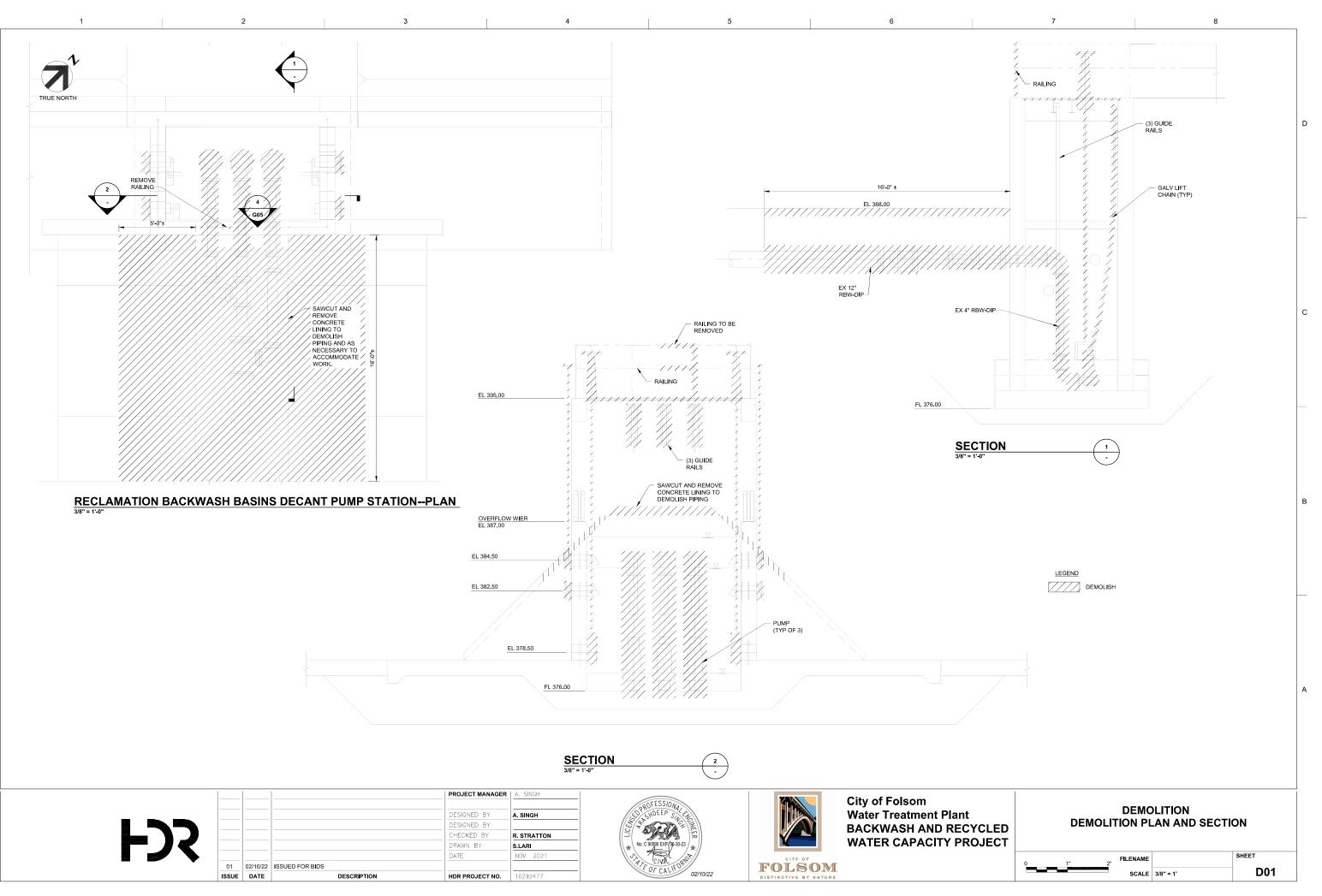


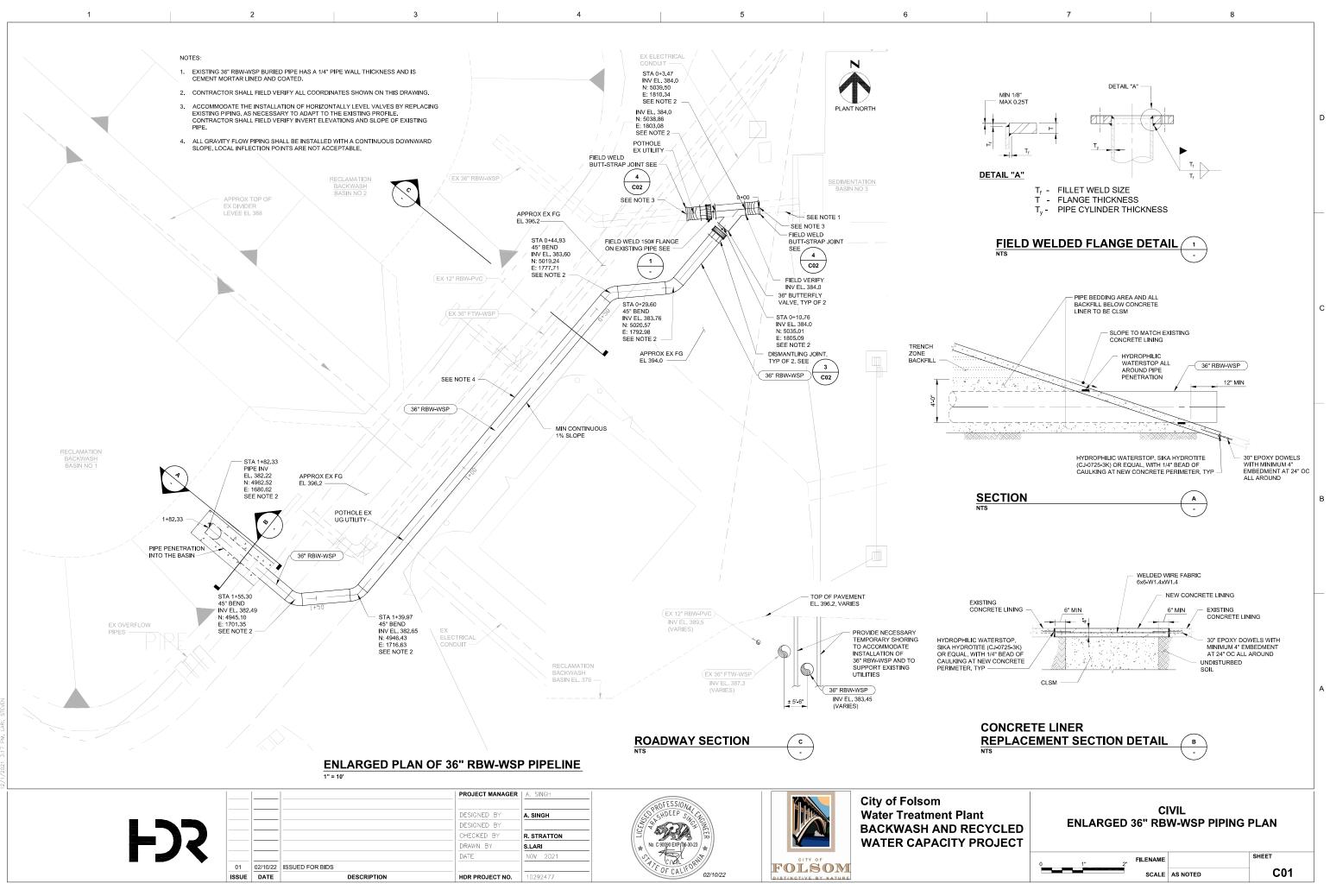
H



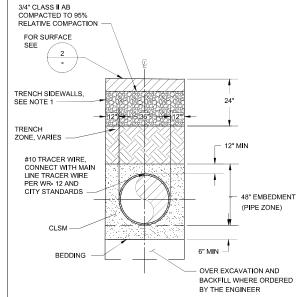










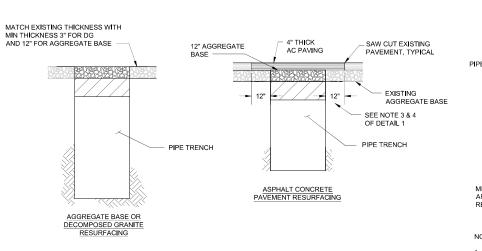


1. TRENCH SIDEWALLS SHALL BE VERTICAL IN ORDER TO MINIMIZE DISTURBANCE ON EXISTING FINISH GRADE. PROVIDE SHORING TO SUPPORT TRENCH SIDEWALLS TO ACCOMMODATE CONSTRUCTION AND TO SATISFY APPLICABLE TRENCH SAFETY REGULATIONS.

2. A.C. THICKNESS: 4" MINIMUM.

- 3. SAW CUT 12" BEYOND THE WIDTH OF THE TRENCH. 4. T-GRIND REQUIRED FOR ALL PAVEMENTS (12" MINIMUM WIDTH 1 1/2" DEEP GRIND AND PAVE TO THE LIP OF GUTTER (IF APPLICABLE)
- 5. BACKFILL SHALL BE MECHANICALLY CONSOLIDATED, SEE CITY SPECIFICATIONS FOR BACKFILL AND COMPACTION REQUIREMENTS.
- 6. 3" WIDE (MINIMUM) MARKING TAPE, 18" ABOVE PIPE, TAPE SHOULD READ "CAUTION BURIED PIPELINE BELOW"
- 7. PIPE ZONE COVER OVER THE TOP OF PIPELINES SHALL BE MINIMUM OF 12".
- 8. SEE SPECIFICATIONS FOR MATERIAL REQUIRED FOR BEDDING, EMBEDMENT AND TRENCH ZONE BACKFILL: COMPACTION AND OTHER TRENCHING REQUIREMENTS.
- 9. IN AREAS OF FLOWING GROUNDWATER, FILER FABRIC SHALL BE PLACED AROUND THE PIPE ZONE BEDDING AND SHALING IN ACCORDANCE WITH THE ON-SITE GEOTECHNICAL ENGINEER, AS WELL AS METHODS FOR COLLECTING AND CONVEYING GROUNDWATER AWAY FROM UNDERGROUND ROADWAY AND INFRASTRUCTURE PER GEOTECHNICAL ENGINEER.

໌ 1 ີ



2

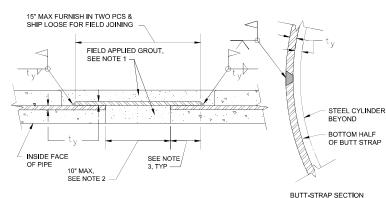
-

G04

NOTES:

TYPICAL PIPE TRENCH RESURFACING NTS

NTS



NOTES

NTS

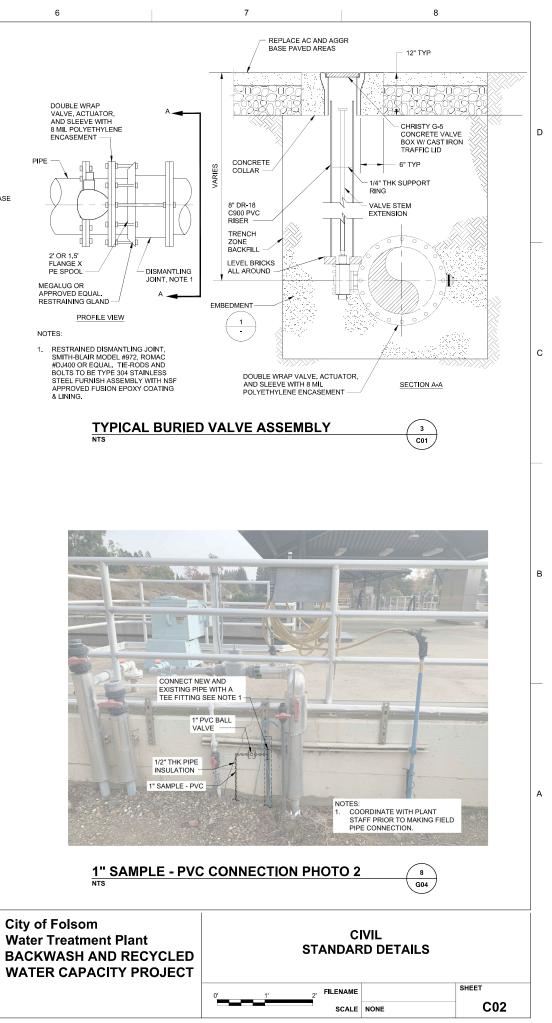
1. FIELD APPLIED REINFORCED JOINT GROUT, INSIDE AND OUTSIDE, REINFORCED WITH 2x4 12 GAUGE WELDED WIRE FABRIC ON OUTSIDE ONLY. SPOT WELD FABRIC TO STEEL BUTT STRAP

TRENCH SECTION FOR PIPE INSTALLATION

- 2. DISTANCE BETWEEN FILLET WELDS SHALL BE MINIMUM OF 10 ty OR 4", WHICHEVER IS GREATEST
- 3. LAP DISTANCE SHALL BE MINIMUM OF 5 x ty OR 2" WHICHEVER IS GREATEST
- 4. PROVIDE 4" THREADED OPENING HAND HOLES FOR ACCESS FOR GROUTING PER AWWA C200 AS NECESSARY
- 5. CONTRACTOR TO POTHOLE AND CONFIRM EX PIPE MATERIAL AND DIMENSIONS PRIOR TO ORDERING PIPE, ELBOWS AND BUTT STRAPS.
- 6. FOLLOW AWWA C602 FOR FIELD APPLICATION OF CEMENT MORTAR LINING AND COATING.
- 7. ALL FIELD WELDS SHALL BE MAGNETIC PARTICLE TESTED PER AWS D1.1.

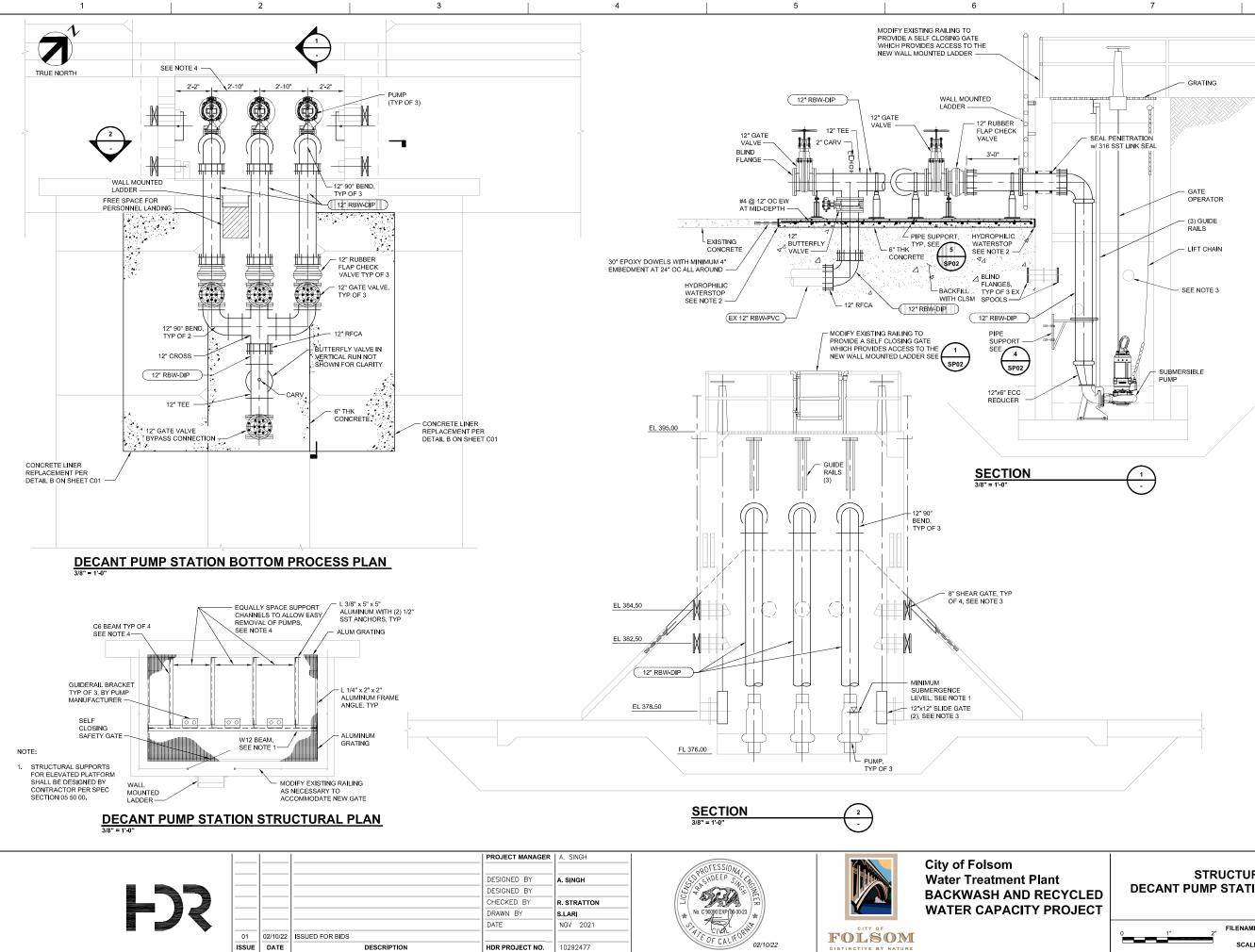
BUTT STRAP FOR STEEL PIPE DETAIL





| | | | | PROJECT MANAGER | A. SINGH | | |
|---|-------|----------|-----------------|-----------------|-------------|-------------------------------|-----------------------|
| | | | | DESIGNED BY | | PROFESSIONAL | |
| | | | | | A. SINGH | 2 at Should Shell | |
| | | | | DESIGNED BY | | (J) マイン F) 活 | |
| | | | | CHECKED BY | R. STRATTON | | |
| | | | | DRAWN BY | S.LARI | No. C 90090 EXP (06-30-23 / ★ | |
| | | | | DATE | NOV 2021 | S. Tomas | CITY OF |
| • | 01 | 02/10/22 | ISSUED FOR BIDS | | | ATE OF CALLEOR | FOLSOM |
| | ISSUE | DATE | DESCRIPTION | HDR PROJECT NO. | 10292477 | 02/10/22 | DISTINCTIVE BY NATURE |

NTS





1. VERIFY WITH PUMP MANUFACTURER.

- 2. HYDROPHILIC WATERSTOP, SIKA HYDROTILE (CJ-0725-3K) OR EQUAL, WITH 1/4" BEAD OF CAULKING AT NEW CONCRETE PERIMETER, TYP.
- ALL THE EXISTING GATES IN THE DECANT PUMP STATION WET WELL SHALL BE REPLACED. AFTER REPLACEMENT, ALL GATES SHALL UNDERGO FIELD LEAKAGE TESTING PER AWWA STANDARDS. UNDER THE OPERATING HEAD. SEATING OR UNSEATING, THE ALLOWABLE LEAKAGE SHALL NOT EXCEED 0.10 GPM/FT OF SEATING PERIMETER. CONTRACTOR SHALL ASSUME THAT ALL OF THE EXISTING CONCRETE PENETRATIONS RELATED TO THE GATES LEAK, THEREFORE, NEED TO BE REPAIRED. REPAIR LEAKS IN CONCRETE PENETRATIONS USING XYPEX PATCH'N PLUG, A HYDRAULIC CEMENT COMPOUND.
- 4. PUMP SPACING MAY REQUIRE ADJUSTMENT BASED ON DIMENSIONS OF SELECTED PUMP.

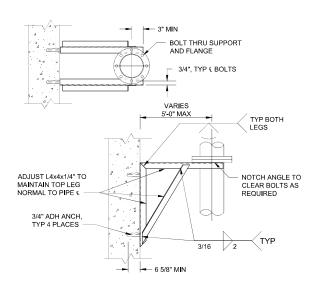


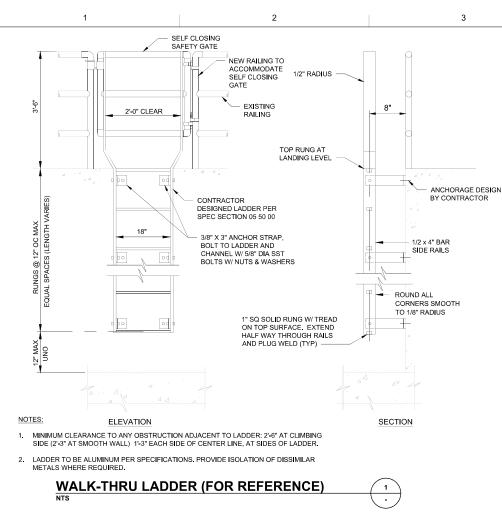
| ant ECYCLED PROJECT | STRUCTUR DECANT PUMP STATIC | AL PROCESS IN PLAN AND SI | ECTIONS |
|---------------------------|--------------------------------|------------------------------|---------|
| | FILENAME | | SHEET |
| | SCALE | NONE | SP01 |

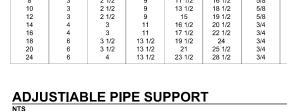
| | _ | | PROJECT MANAGER | A. SINGH | | | City of Folsom |
|-------|----------|-----------------|-----------------|-------------|---|-----------------------|-----------------|
| | - | | DESIGNED BY | A. SINGH | - SHDEEP SALE | | Water Treatment |
| | | | DESIGNED BY | | The second se | | BACKWASH ANI |
| | | | CHECKED BY | R. STRATTON | | | |
| | | | DRAWN BY | S.LARI | No. C 90090 EXP (06-30-23 | × | WATER CAPACI |
| | | | DATE | NOV 2021 | | CITY OF | |
| 01 | 02/10/22 | ISSUED FOR BIDS | | | A CIVEL PR | FOLSOM | |
| ISSUE | DATE | DESCRIPTION | HDR PROJECT NO. | 10292477 | 02/10/22 | DISTINCTIVE BY NATURE | |

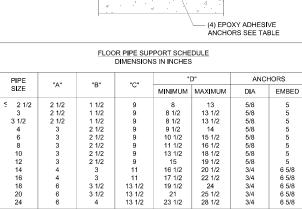


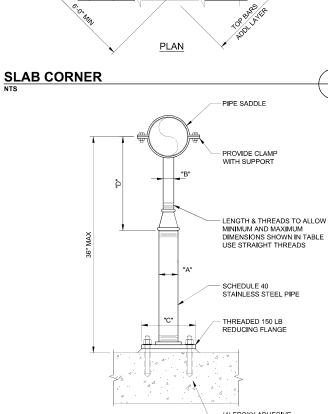












MIN

TOP AND BOTTOM SAME

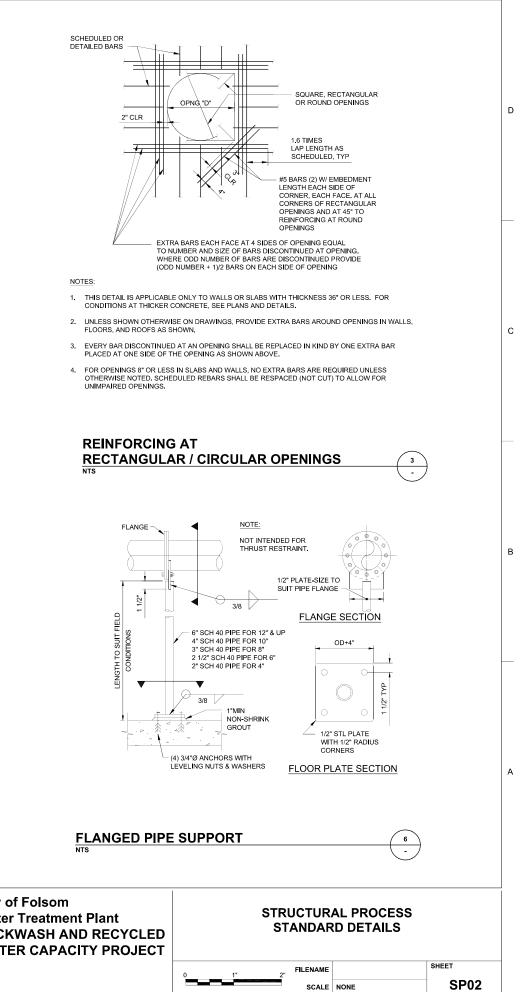
SIZE AND SPACING AS THE GREATER TRANSVERSE OR LONGITUDINAL REINF

2

-

5

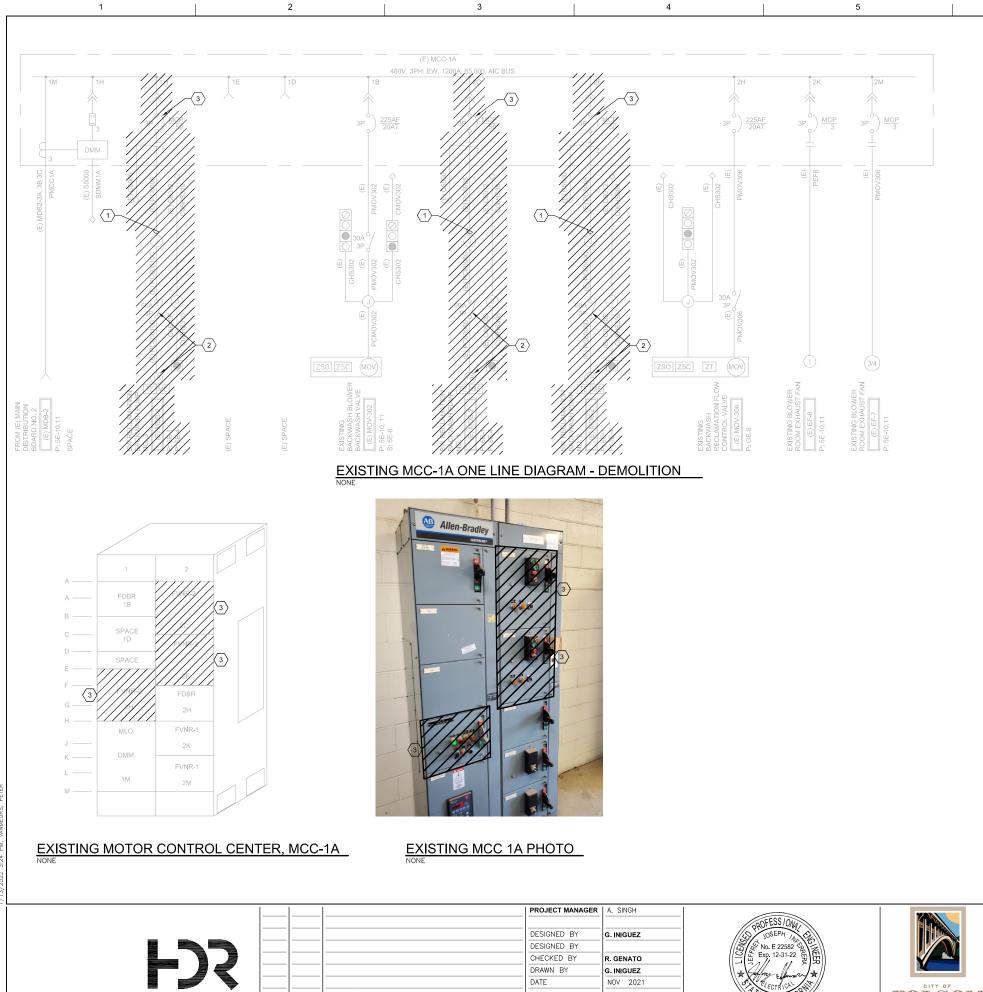
NOTES:



| 1 | 2 | | 3 | | 4 | 5 | | 6 |
|--------------------------------------|--|-----------------------|---|---------------------------------|---|---|------------------------------|--|
| °) 200A OR 0 200A OR 0 80AT | LOW - VOLTAGE CIRCUIT BREAKER (CB). RATINGS AND NO. OF POLES AS SHOWN. | 100 KVA | NON-MOTOR LOAD WITH DESI | GN KVA, KW, OR AMP | $\neg \vdash$ | NORMALLY OPEN CONTACT (N.O.) | PC | PHOTOCELL |
| 0/3P 0/3P | WHEN SPECIFIC TYPE IS REQUIRED, X INDICATES TYPE. TYPES: | | CONTROL POWER TRANSFOR | MER (CPT) | | NORMALLY CLOSED CONTACT (N.C.) | \$ [×] _x | TOGGLE SWITCH <u>SUBSCRIPTS:</u> |
| | MCCB - MOLDED CASE ICCB - INSULATED CASE LVP - LOW - VOLTAGE POWER | | VOLTAGE TRANSFORMER (VT | OR PT) | | INTERLOCK; X INDICATES TYPE TYPES: | | X - INDICATES TYPE NONE - SINGLE POLE 3 - THREE-WAY |
| | MCP - MOTOR CIRCUIT PROTECTOR (RATING PER CONNECTED LOAD) | E | CURRENT TRANSFORMER (CT |) | | E - ELECTRICAL M - MECHANICAL K - KEY | | 4 - FOUR-WAY HP - TOGGLE SWITCH, HORSEPOWEF K - KEY SWITCH TE - MANUAL MOTOR STARTER W/ TH |
| СВ | SEPARATELY MOUNTED CIRCUIT BREAKER; SEE ELECTRICAL ONE - LINE DIAGRAM OR SCHEDULE FC DESCRIPTION | R DMP | DIGITAL METERING PACKAGE | | | 3 POSITION SELECTOR SWITCH, MAINTAINED CONTA | ACTS; | P - PILOT LIGHT L - LIGHTED HANDLE Y - INDICATES CONTROLLING SWITCH |
| GFP | GROUND FAULT PROTECTION | RTM | RUN TIME METER | | | UNLESS OTHERWISE NOTED, 2-POSITION SIMILAR | Т | TRANSFORMER |
| 52 | MEDIUM - VOLTAGE CIRCUIT BREAKER | N | NEUTRAL BUS | | | NORMALLY OPEN PUSHBUTTON, MOMENTARY CONTACT UNLESS OTHERWISE NOTED | CS | CONTROL STATION |
| | FUSE, SIZE, AND NUMBER OF FUSES AS NOTED | | GROUND | | 010 | NORMALLY CLOSED PUSHBUTTON, MOMENTARY CONTACT UNLESS OTHERWISE NOTED | HS | HAND SWITCH |
| _& | FUSED CUTOUT, CURRENT RATING, FUSE SIZE, AND NUMBER OF POLES AS NOTED | ļ | LIGHTNING ARRESTER | | | INDICATING LIGHT, X INDICATES LENS COLOR | PB | SELECTOR SWITCH PUSHBUTTON |
| | FUSIBLE SWITCH, CURRENT RATING, FUSE SIZE, AN | | | | -2(x) | PUSH TO TEST INDICATING LIGHT, X INDICATES LENS | | INSTRUMENTATION/CONTROL DEVICE |
| _~_ | QUANTITY AS NOTED NON-FUSED SWITCH, CURRENT RATING, AND | SPD | LOW VOLTAGE SURGE PROTE | CTIVE DEVICE | - 0 ~~ | COLOR LENS COLORS: | S | NETWORK SWITCH |
| ~ | NUMBER OF POLES AS NOTED | | ELECTRICAL CONNECTION | | | R - RED Y - YELLOW G - GREEN W - WHITE | SD | NETWORK SWITCH/DIMMER |
| | DISCONNECT OR DRAWOUT CONNECTION | | | | | B - BLUE A - AMBER ELECTRICAL MONITORING DEVICE | so | NETWORK SWITCH/OCCUPANCY SENS |
| | MAGNETIC MOTOR STARTER AND SEPARATELY MOUNTED COMBINATION MAGNETIC MOTOR STARTER | | - NO ELECTRICAL CONNECTION | J | | TYPES: | 0 | CEILING MOUNTED NETWORK OCCUP |
| | MOTOR CONTROLLER AND | | | | | WHM - UTILITY WATT-HOUR METER PER UTILITY REQUIREMENTS AS - CURRENT SENSOR | | |
| | SEPARATELY MOUNTED MOTOR CONTROLLER WITH SHORT CIRCUIT PROTECTION AND DISCONNECT | SV OR O | SOLENOID VALVE | | | AM - AMP METER WM - WATT METER | | SPECIAL-PURPOSE RECEPTACLE AS I |
| | MOTOR STARTER AND CONTROLLER SUBSCRIPTS: | x | CONTROL/RELAY COIL; X INDI Y INDICATES LOOP NO. WHEN | | | VS - VOLT SENSOR VM - VOLT METER | |] PLUG-IN RECEPTACLE STRIP, QUANTI RECEPTACLES AS NOTED OR SPECIFI |
| | A - MAGNETIC STARTER NEMA SIZE B - STARTER TYPE | Y | TYPES: | USED | | CONTROL PANEL INTEGRAL OR PROVIDED WITH ASS EQUIPMENT | | TELECOMMUNICATIONS OUTLET JUNC |
| | NONE - FULL VOLTAGE NON-REVERSING (FVNR) FVR - FULL VOLTAGE REVERSING | | CR - CONTROL RELAY DP - DEFINITE PURPOSE RELA LC - LIGHTING CONTACTOR | Υ | | CONTROL PANEL WITH DISCONNECT SWITCH INTEG | RALOR | PORTS SHOWN, RUN EQUAL NUMBER COMMUNICATIONS BACKBOARD |
| | 2S - TWO SPEED RVAT - REDUCED VOLTAGE AUTO TRANSFORMER | | M - MOTOR STARTER PC - PHOTO CELL TC - TIME CLOCK | | | PROVIDED WITH ASSOCIATED EQUIPMENT | | FLOOR MOUNTED TELECOMMUNICATION |
| | C - CONTROL DIAGRAM OR CONTROLS SCHEDULE NUMBER (IF REQUIRED) | | TD - TIME DELAY RELAY TR - TIMING RELAY | | | PANELBOARD (250V TO 600V) | ⊨⊕ × | QUAD-DUPLEX RECEPTACLE, TWO NE |
| | D - CONTROLLER TYPE VFD - VARIABLE FREQUENCY DRIVE SS - SOLID STATE | \sim | NORMALLY OPEN TIME DELAY TIME DELAY ON CLOSING AFT | | | PANELBOARD (LESS THAN 250V) | ⊨⇔ [×] _Y | UNDER COMMON COVER PLATE DUPLEX RECEPTACLE, NEMA 5-20R |
| Ц | MOTOR CONTROLLER | oto | NORMALLY CLOSED TIME DEL WITH TIME DELAY ON OPENIN ENERGIZED | | | ELECTRICAL EQUIPMENT ENCLOSURE: SWITCHBOAF MOTOR CONTROL CENTER, CONTROL PANEL, OR OT | | FLOOR MOUNTED DUPLEX RECEPTAC |
| -~~- | THERMAL OVERLOAD ELEMENT | \sim | NORMALLY OPEN TIME DELAY TIME DELAY ON OPENING AFT DE-ENERGIZED | | Z X | EQUIPMENT AS INDICATED | $\vdash \ominus_{Y}^{X}$ | SIMPLEX RECEPTACLE, NEMA 5-20R SUBSCRIPTS: |
| | THERMAL OVERLOAD RELAY CONTACT | oto | NORMALLY CLOSED TIME DEL WITH TIME DELAY ON CLOSIN | | HZ X | WALL-MOUNTED LED LUMINAIRE | | X - INDICATES TYPE GFCI - GROUND FAULT CIRCUIT INTI Y - INDICATES CIRCUIT NUMBER FROM |
| Ц | DISCONNECT OR SAFETY SWITCH, 30A, 3P, NON-FUSED UNLESS OTHERWISE NOTED | ~~~° | DE-ENERGIZED NORMALLY OPEN TEMPERATU CLOSE ON RISING TEMPERAT | | z O Y | CEILING/PENDANT-MOUNTED LED FIXTURE | | PEDESTAL |
| |) | | NORMALLY CLOSED TEMPERA | | ≥♀ × | WALL-MOUNTED LED FIXTURE | | CONDUIT TURNING DOWN |
| | MOTOR WITH DESIGN HORSEPOWER (WHEN INDICATED) | ч с с | OPEN ON RISING TEMPERATU | RE | z X Y | CEILING/PENDANT-MOUNTED LED FIXTURE NORMAL/EMERGENCY | | |
| | | 0-0 | CLOSE ON INCREASING FLOW | 1 | Z C X | WALL-MOUNTED LED FIXTURE NORMAL/EMERGENCY | | HOME RUN TO PANEL, 2 #12, 1 #12G IN OTHERWISE NOTED |
| G | GENERATOR | | NORMALLY CLOSED FLOW SW OPEN ON INCREASING FLOW | ЛГСН; | × × × | DOUBLE-FACED CEILING OR WALL-MOUNTED EXIT LIGHT; DIRECTIONAL ARROWS (IF REQUIRED) AS | | - CIRCUIT RUN BETWEEN DEVICES EXP |
| 0 0 | TRANSFER SWITCH, CURRENT RATING, AND NUMBER OF POLES AS NOTED | \sim | NORMALLY OPEN LEVEL SWIT CLOSE ON RISING LEVEL | CH, | | INDICATED ON PLANS SINGLE-FACED CEILING OR WALL-MOUNTED EXIT | | NON-ARCHITECTURALLY FINISHED AR CONCEALED IN ARCHITECTURALLY FI CONDUIT AND CONDUCTOR SIZES SH |
| ATS | ATS - AUTOMATIC MTS - MANUAL | oLo | NORMALLY CLOSED LEVEL SV OPEN ON RISING LEVEL | VITCH, | $\bigotimes_{\mathbf{Y}}^{\mathbf{X}} + \bigotimes_{\mathbf{Y}}^{\mathbf{X}}$ | LIGHT; DIRECTIONAL ARROWS (IF REQUIRED) AS INDICATED ON PLANS | | SAME AS THE HOMERUN FOR THE CIR |
| | TRANSFORMER | Š | NORMALLY OPEN PRESSURE CLOSE ON INCREASING PRES | | •,Q_Y^X | AREA OR ROADWAY LIGHT - POLE-MOUNTED LIGHTING FIXTURE SUBSCRIPTS: | | BURIED, OR UNDER FLOOR SLAB. CON CONDUCTOR SIZES SHALL BE THE SA |
| Ι | 3-PHASE, 3-WIRE BELTA COUNDED WYE CONNECTION | °To | NORMALLY CLOSED PRESSUF OPEN ON INCREASING PRESS | | | X - INDICATES FIXTURE TYPE PER LIGHTING FIXTURE SCHEDULE Y - INDICATES CIRCUIT NUMBER FROM PANELBOARE | | HOMERUN FOR THE CIRCUIT. CIRCUIT HASH MARKS (WHEN INDICAT SHORT, SINGLE DOT, AND DOUBLE DC |
| LP100 208/120V | SWITCHBOARD OR PANELBOARD; NAME, VOLTAGE, PHASE, NUMBER OF WIRES WHEN INDICATED | \sim | NORMALLY OPEN LIMIT SWITC CLOSE ON REACHING LIMIT | CH, | ▼ ▼× | z - INDICATES CONTROLLING SWITCH (IF REQUIRED) EMERGENCY LIGHT FIXTURE, 2 ATTACHED HEADS AS | | PHASE, NEUTRAL, EQUIPMENT GROUN ISOLATED EQUIPMENT GROUND, RESI IN 3/4" CONDUIT UNLESS OTHERWISE |
| 3Ø, 4W | | 0~ D | NORMALLY CLOSED LIMIT SW OPEN ON REACHING LIMIT | ITCH, | ⊥ v ▼× | SHOWN EMERGENCY LIGHT, REMOTE MOUNTED HEAD | • | MLO; MAIN LUGS ONLY |
| | UTILITY METER | PM-# | POWER MONITOR | | | | | |
| | | | | PROJECT MANAGER A. S | SINGH | | | City of Falaam |
| | | | | DESIGNED BY G.IN | IGUEZ | ES PROFESS/OWAL | | City of Folsom Water Treatment Plant |
| | | | | DESIGNED BY CHECKED BY R. GI | ΕΝΑΤΟ | No. E 22582 C | | BACKWASH AND REC |
| | | | | DRAWN BY G. IN | IGUEZ | × Afry almore * | | WATER CAPACITY PR |
| | | 10/22 ISSUED FOR BIDS | | DATE NOV | 2021 | ATE OF CALLED | FOLSOM | |
| | ISSUE D | ATE DE | SCRIPTION | HDR PROJECT NO. 102 | 92477 | 07 CALI 02/10/22 | DISTINCTIVE BY NATURE | |

HDR PROJECT NO. 10292477

| | 7 | | ĺ | | 8 | |
|--|----|---|---|---|---|--------------|
| VER RATED V THERMAL ELEMENT TCH (IF REQUIRED) ICE ENSOR UPANCY SENSOR WING PHOTOCELL AS DEFINED ON PLANS WITTY AND SPACING O SIFIED INCTION BOX, NUMBER ER OF CAT 6 CABLES T ATIONS OUTLET NEMA 5-20R | F | G G G G G G G G G G G G G G G G G G G | CONE CONE CONE CONE CONE CONE CONE CONE | UIT SIZE AS SPECI P: POWER C: CONTROL S: SIGNAL IND CABLE IND CABLE IND CABLE IND CABLE IND CABLE IND CABLE IND CABLE IND CONTACT ALARM CONTROL P. ALARM CONTROL P. ALARM CONTROL P. ALARM CONTROL P. ALARM CONTACT, F ALARM CONTACT, F IND | AND CAPPED T NUMBER - WIRE AND TED: ANEL LL STATION ELAY LOW SWITCH RESSURE SWITCH RESSURE SWITCH ELAY LON SWITCH | С |
| ATIONS OUTLET | 10 | N N N N N N N N N N N N N N N N N N N | SUBS R/C - 1 R/F - (C - 1 ALAR ALAR ALAR ALAR ALAR ALAR ALAR COME | CRIPT: RATE COMPENSATI COMBINATION RATE ID FIXED TEMP TE OF RISE | OF RISE | В |
| S IN 3/4°C UNLESS EXPOSED IN AREAS; / FINISHED AREAS. SHALL BE THE CIRCUIT. CONCEALED IN AREAS, DIRECT 20NDUIT AND | | NOT BE 2. IN GENE CONTR. INCLUD SPECIF ROUTIN | NONE F - FIE CONDU OTES: A STANDARD EL USED ON THIS F ERAL CONDUIT R ACTOR SHALL BE ING THOSE SHO! IGATIONS FOR C IGATIONS FOR C IGA ND STUB-UJ | - GENERAL ALARM E ALARM DEVICE JLET ECTRICAL SYMBOL ROJECT. OUTING IS NOT SHI RESPONSIBLE FO WN ON ONE-LINES. ONDUIT INSTALLAT J LOCATIONS THAT | S SHEET. ALL SYMBOLS I DWN ON THE PLANS. THE R ROUTING ALL CONDUIT NID HOME RUNS. SEE ION REQUIREMENTS. CO ARE SHOWN ARE | = rs |
| CATED): LONG, CATED): LONG, DOT REPRESENT DUND, AND ESPECTIVELY. #12 SE INDICATED. | LE | EQUIPM 3. WHEN I CONTR CONDU THE SA 4. SCREEI COMPC HIGHLI DRAWN 5. SEE PR AND AB | IENT FURNISHED BRANCH CIRCUIT ACTOR SHALL FL CTORS REQUIRE ME AS THE HOMI NING OR SHADIN NENTS OR TO DI HT SELECTED T IG FOR USAGE. OJECT EQUIPME BREVIATIONS SF ELECO YMBOLS | A FREE OF ANY INT S ARE NOT SHOWN IRNISH AND INSTAL D. CONDUIT AND C ERUN FOR THE BRA G OF WORK IS USE E-EMPHASIZE PROF RADE WORK. REFE NT AND PIPING SYS FECIFIC TO THE PRO CTRICAL AND ABB | ON THE PLANS THE LALL CONDUITS AND ONDUCTOR SIZES SHALL NCH CIRCUIT. D TO INDICATE EXISTING OSED IMPROVEMENTS T R TO CONTEXT OF EACH TEMS DRAWING FOR SY |) ГО I |
| | 0 | 1" | 2" FILENAME | NONE | внеет ЕО | 1 |
| | | | | | | |



DATE

PROJECT NUMBER

01 02/10/22 ISSUED FOR BIDS

DESCRIPTION

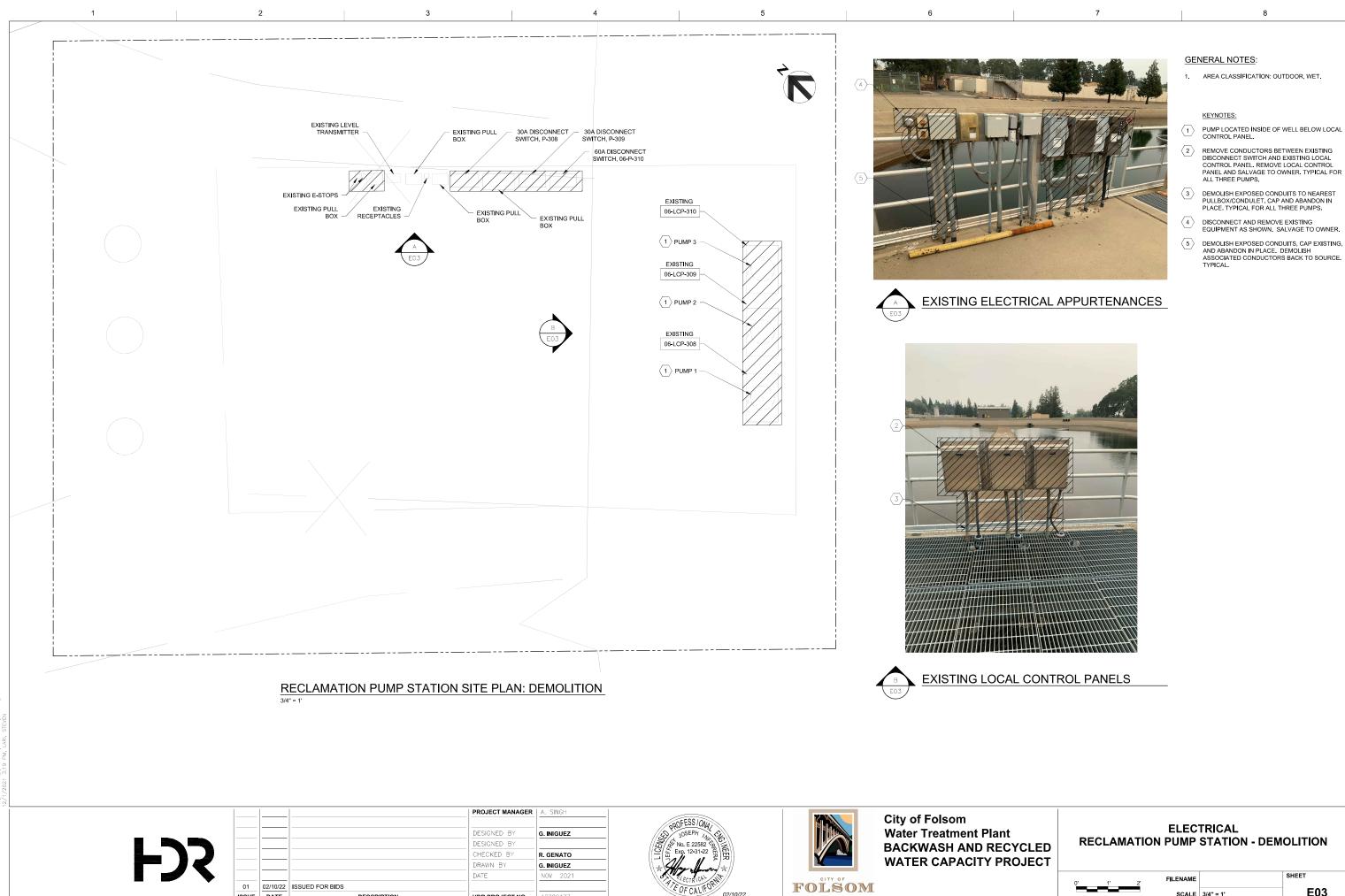
NOV 2021

10292477

02/10/22

City of Folsom Water Treatment Plant BACKWASH AND RECYCLED WATER CAPACITY PROJECT FOLSOM DISTINCTIVE BY NATURE

| 7 | | 8 | | |
|---------------------|------|--|--|---|
| | | KEYNOTES: DEMOLISH CONDUCTORS BE UMPS P-308, P-309, AND P-3 DEMOLISH EXPOSED CONDUI ABANDON EXISTING EMBEDD REMOVE EXISTING 18 HP REC NUD 60A DISCONNECT SWITC DWNER. REMOVE EXISTING RECLAMA STARTER BUCKETS FROM MC DWNER. | 10 AND MCC A1. ITS. CAP AND ED CONDUITS. CLAMATION PUMP H. SALVAGE TO TION PUMP MOTOR | D |
| | | | | с |
| | | | | |
| | | | | В |
| | | | | |
| | | | | А |
| EXISTING MCC 1A ONE | | TRICAL NE DIAGRAM - I | SHEET | |
| | CALE | NONE | E02 | |
| | | 1 | | l |



02/10/22

ISTINCTIVE BY NATUR

ISSUE DATE

DESCRIPTION

HDR PROJECT NO.

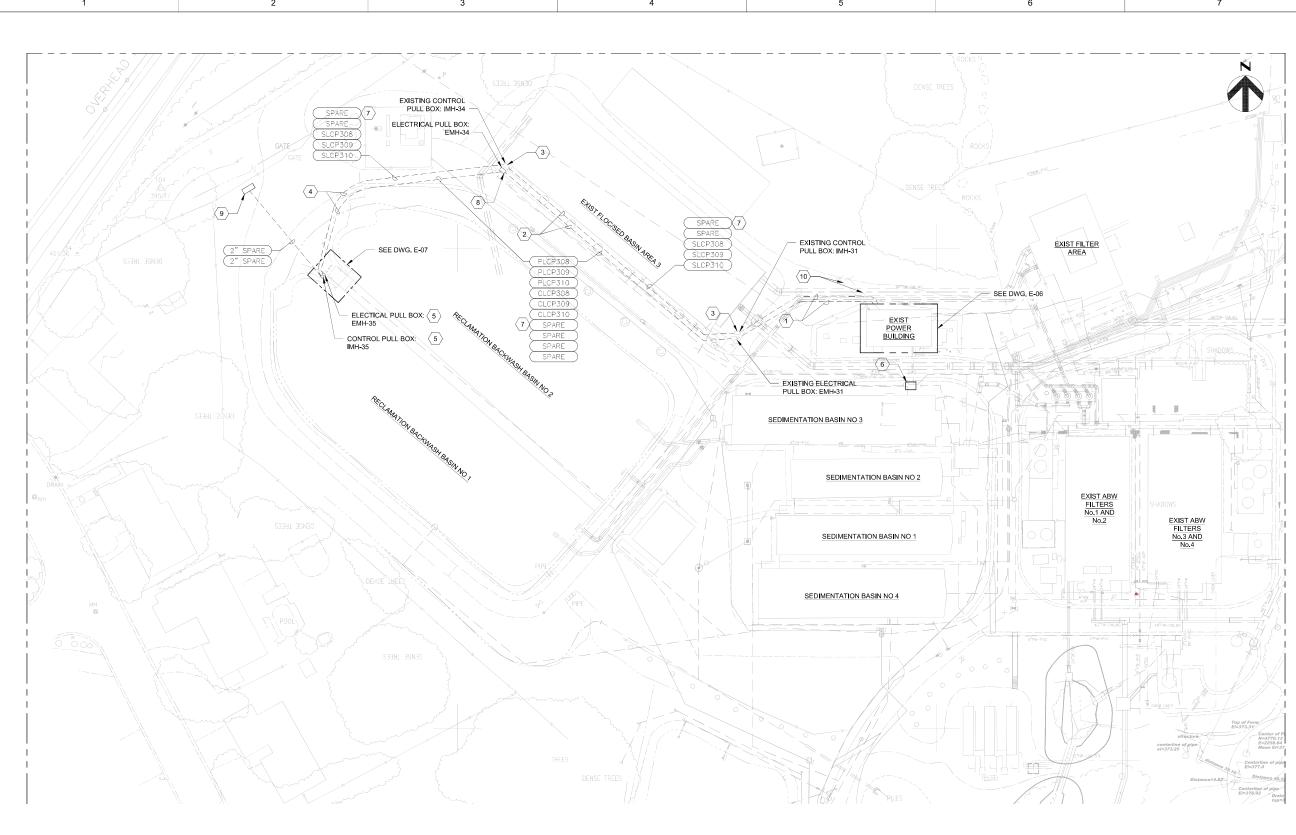
10292477

RECLAMATION PUMP STATION - DEMOLITION

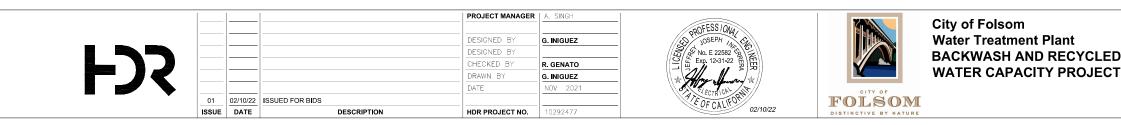
SCALE 3/4" = 1'

SHEET E03 D

С



OVERALL ELECTRICAL SITE PLAN



pwworking\west01\d2063692\E04.dwg

GENERAL NOTES: 1. AREA CLASSIFICATION: OUTDOOR, WET. 1. INSTALL DUCT BANK PER DETAIL 1 ON DWG, E09. CONTRACTOR TO FIELD ROUTE DUCT BANKS FROM POWER BUILDING TO EXISTING PULL BOXES IMH-31 AND EMH-31. REFILL AND REPAIR GROUND TO MATCH EXISTING PULL BOXES IMH-31 AND EMH-31 TO EXISTING PULL BOXES IMH-31 AND EMH-31 TO EXISTING PULL BOXES IMH-34 AND EMH-34 TO EXISTING AS REQUIRED INSTALL PER DETAIL 2 ON DWG. E09. 3 DUCTBANK TO INTERCEPT EXISTING ASPHALT PER DETAIL 2 ON DWG. C02. MATCH EXISTING PAVING. SAW CUT EXISTING ASPHALT PAVING TO INSTALL PULCED ASF TO EXISTING ASPHALT PER DETAIL 2 ON DWG. E09. SAW CUT EXISTING ASPHALT PAVING TO INSTALL PULCED ASF TO EXISTING ASPHALT PAVING TO INSTALL PULCED ASF TO EXISTING ASPHALT PER DETAIL 5 ON DWG. E09.

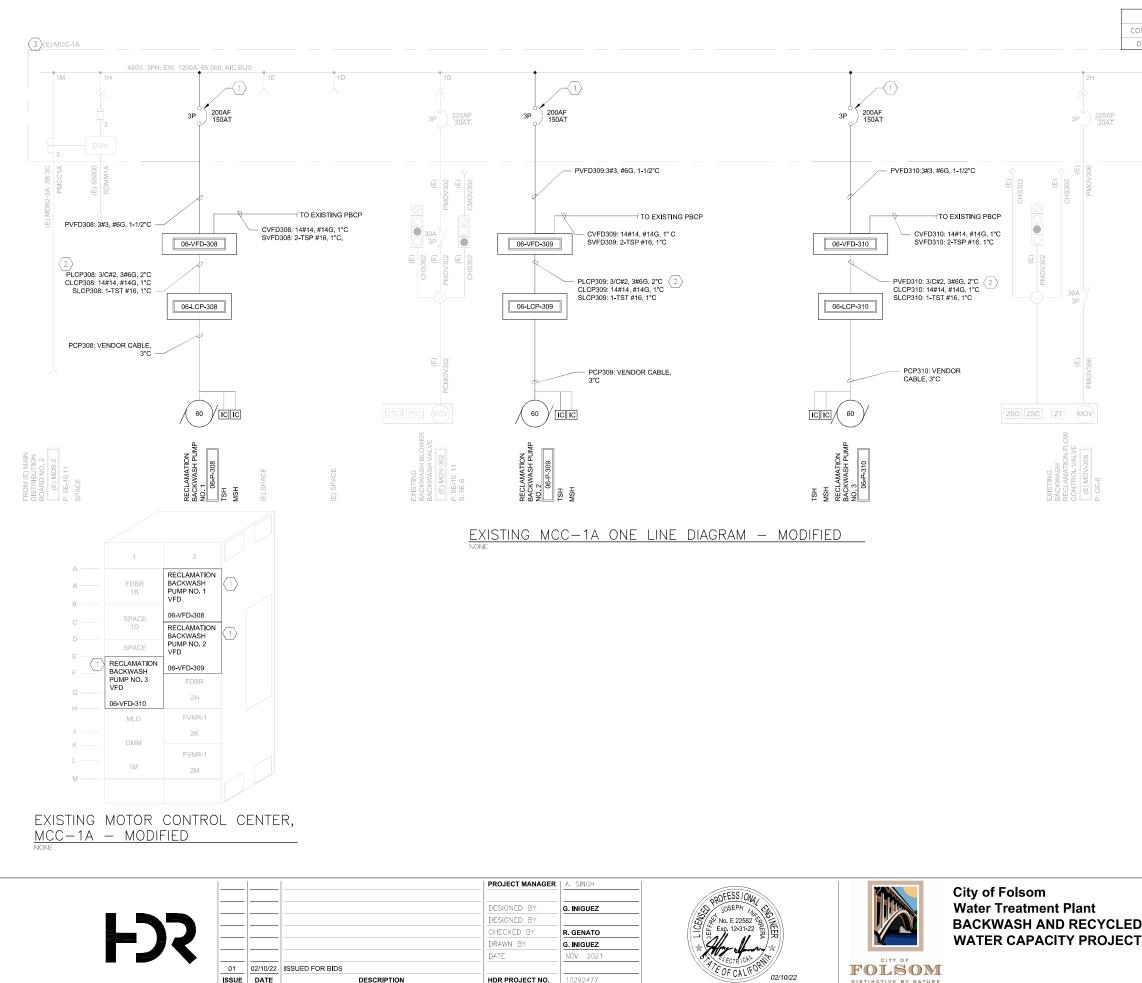
D

С

- 6 LOCATION OF EXISTING MAG FLOW METER. REFER TO DRAWING 102 FOR INSTRUCTION ON WORK TO BE DONE ON THE FLOW METER.
- PROVIDE TWO 2" SPARE CONDUITS FOR SIGNALS, TWO 2" SPARE CONDUITS FOR CONTROL, AND TWO 2" SPARE CONDUITS FOR POWER. ROUTE SPARE CONDUITS FOM POWER. ROUTE SPARE CONDUITS FROM POWER SUILDING TO PULL BOXES IMH-35 AND EMH-35. PROVIDE PULL TAPE, CAP CONDUITS AT EVERY PULL POX.
- (8)
 REMOVE EXISTING ELECTRICAL PULL BOX, EMH-34 AND SALVAGE TO OWNER. PROTECT EXISTING CONDUITS AND CONDUCTORS. INSTALL IN THE SAME LOCATION WITH A 36°WX36°L MINIMUM PRECAST CONCRETE PULL BOX. PROVIDE STEEL COVER. STEEL COVER SHALL BE ENGRAVED WITH THE WORD "ELECTRICAL". MATCH DEPTH OF PULL BOX TO EXISTING CONTROL PULL BOX IMH-34. INSTALL PER DETAIL 6 ON DWG, E09.
- (9) INSTALL A N17 CHRISTY BOX 12" FROM THE FENCE POST.
- (10) EXISTING DUCTBANKS MAY BE PRESENT IN THIS AREA, CONTRACTOR TO FIELD VERIFY.

A

nt CYCLED PROJECT

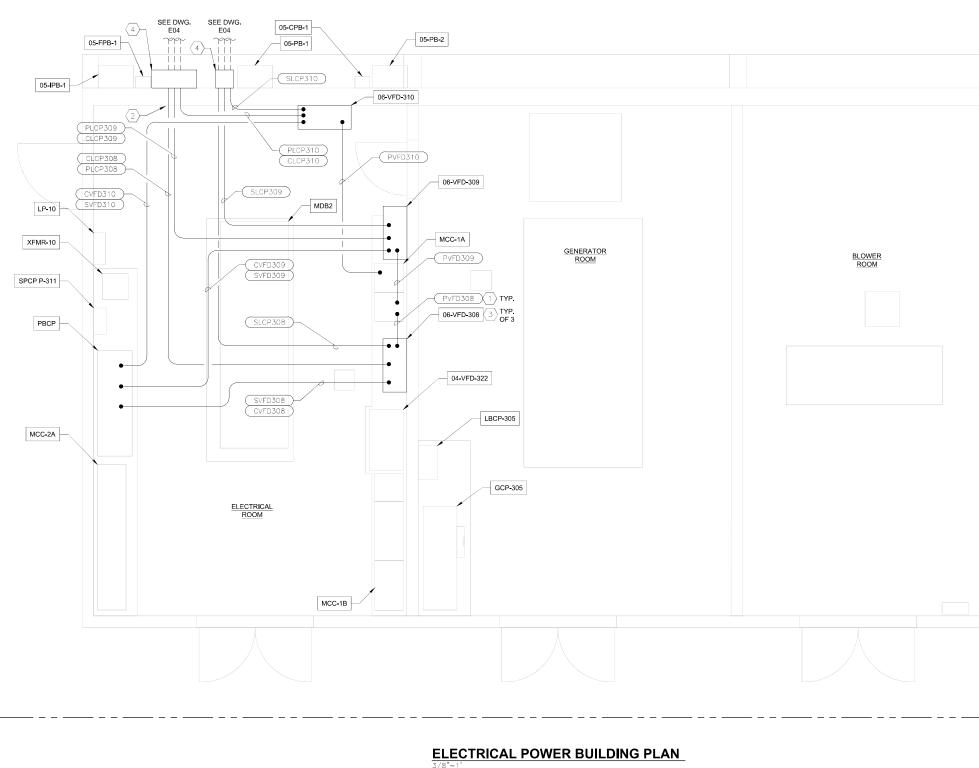


3

1

8 KVA AMPS 204.3 245.7 CONNECTED 204.3 DEMAND 245.7 KEYNOTES: PROVIDE 200AF/150AT CIRCUIT BREAKERS AND INSTALL IN THE SAME LOCATION AS EXISTING (1) D MOTOR STARTER. MCP 3 MCF PROVIDE VFD CABLE FROM VFD TO LOCAL CONTROL PANEL. TYPICAL FOR ALL THREE $\langle 2 \rangle$ PUMPS. EXISTING MCC-A1 IS A ALLEN-BRADLEY, CENTERLINE SERIES. CONTRACTOR TO PROVIDE CIRCUIT BREAKERS THAT ARE COMPATIBLE WITH EXISTING MCC. $\langle 3 \rangle$ E S С (3/4) в А ELECTRICAL **EXISTING MCC 1A ONE LINE DIAGRAM - MODIFIED** SHEET FILENAME E05 SCALE NONE

| | | | | PROJECT MANAGER | A. SINGH | | | |
|---|-------|----------|-----------------|-----------------|------------|--|-----------------------|-------------------------|
| | | | | | | PROFESS / ON4 | | City of Folsom |
| | | | | DESIGNED BY | G. INIGUEZ | JOSEPH NO CONTRACT | | Water Treatment Plan |
| | | | | DESIGNED BY | | No. E 22582 B | | BACKWASH AND REC |
| | | | | CHECKED BY | R. GENATO | ())()()()()()()()()()()()()()()()()()(| | |
| | | | | DRAWN BY | G. INIGUEZ | the for the start of the second start of the s | K | WATER CAPACITY PR |
| | | | | DATE | NOV 2021 | SA ELECTRICA SIT | CITY OF | |
| • | 01 | 02/10/22 | ISSUED FOR BIDS | | | EOECALIFOR | FOLSOM | |
| | ISSUE | DATE | DESCRIPTION | HDR PROJECT NO. | 10292477 | 02/10/22 | DISTINCTIVE BY NATURE | |
| | | | | | | | | |



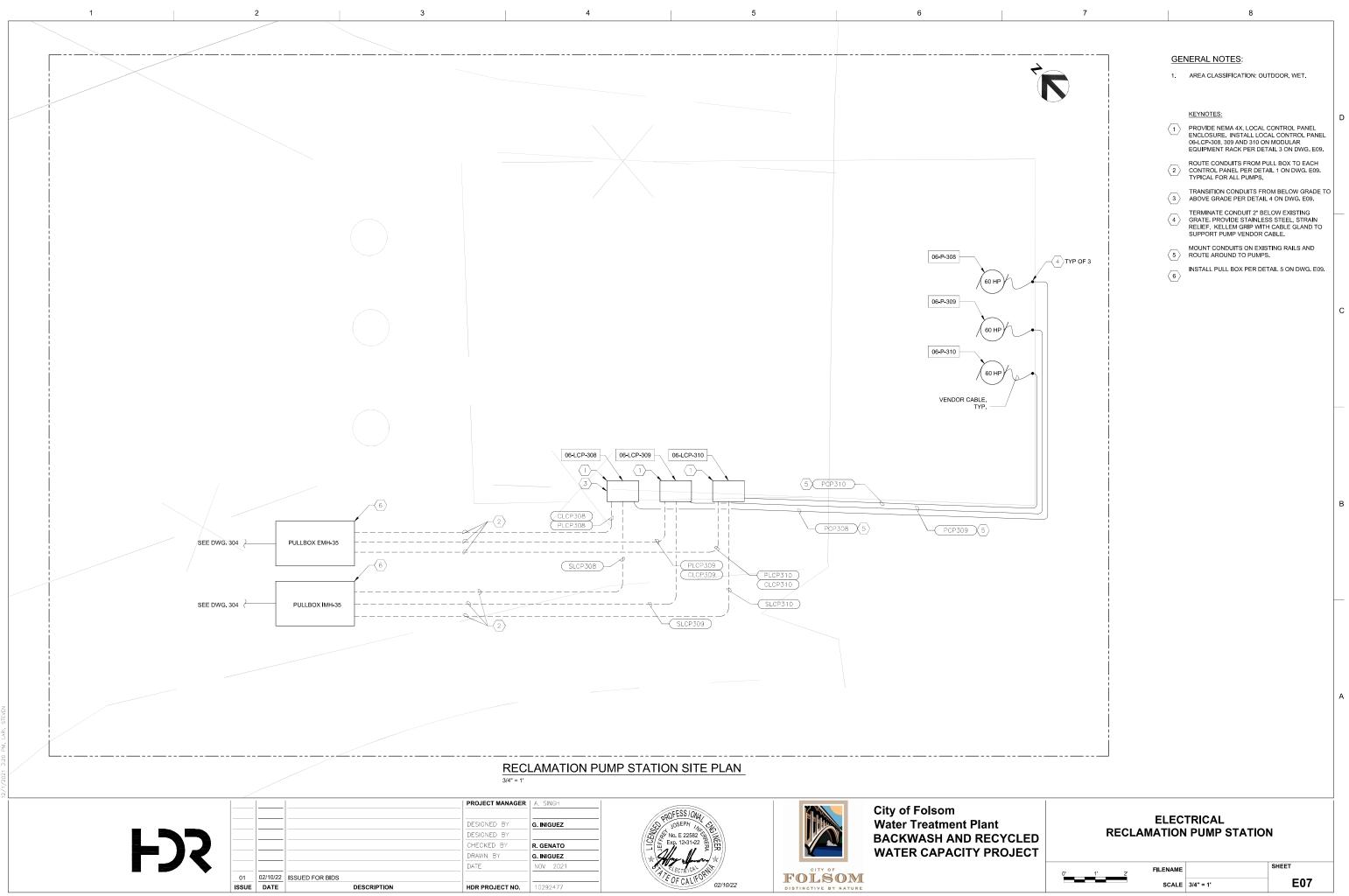
5

6

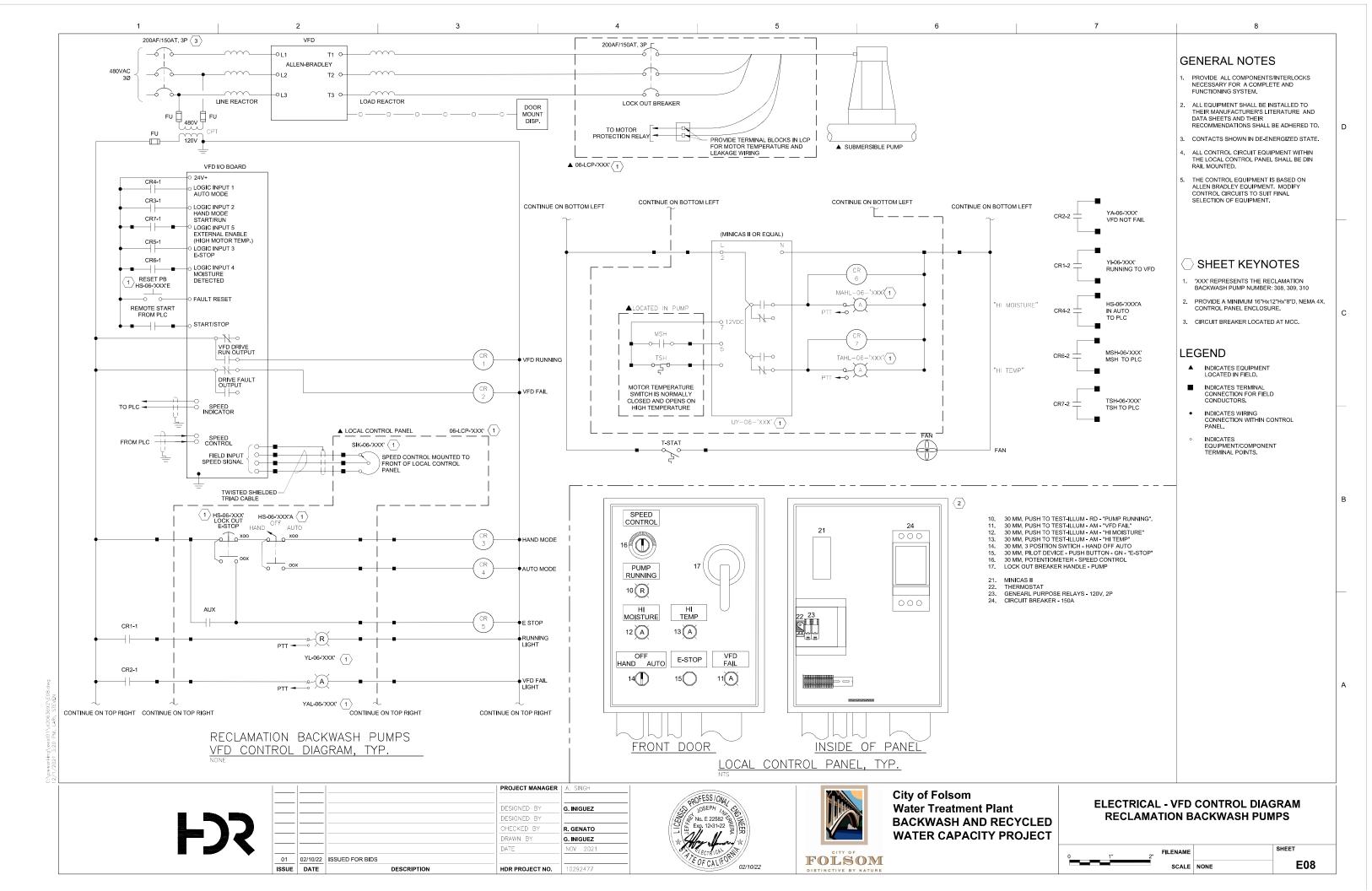
1

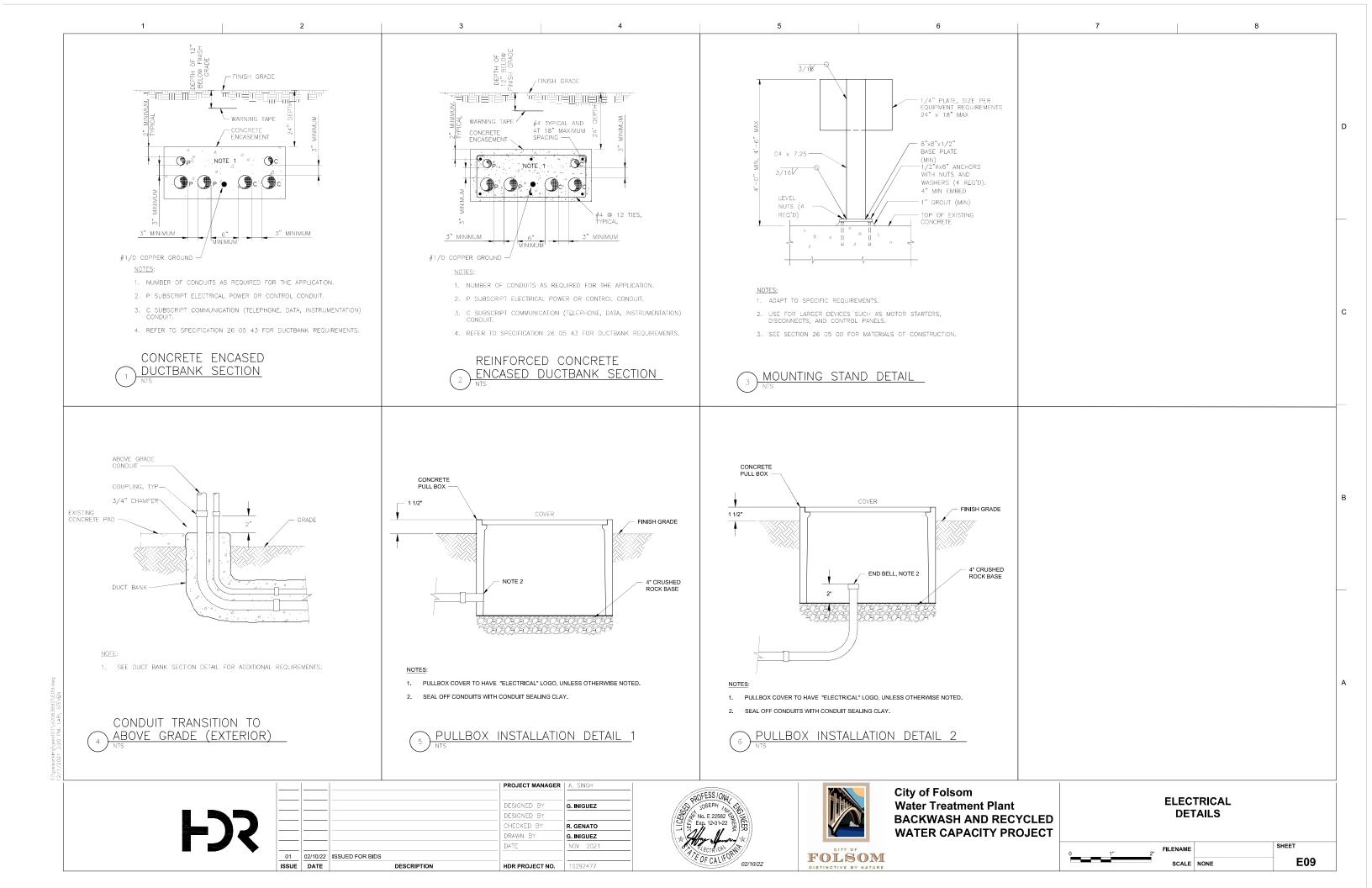
2

| | 7 | | 8 | |
|-------|---|---|---|--|
| | | | GENERAL NOTES: | |
| | N | | 1. AREA CLASSIFICATION: IN | IDOOR, DRY. |
| | | | KEYNOTES: 1 ROUTE ALL CONDUITS INSI OVERHEAD. 2 CORE DRILL AND ROUTE C OUTSIDE. CORE DRILL FOR AND CAP CONDUTS, SEAL CONDUITS, WITH NON-SHR OUTSIDE AND INSIDE OF W EXISTING. TYPICAL FOR AL 3 WALL MOUNT VFD SUCH TI A MIN OF 48 IN ABOVE FINI MOUNT VFD PER MANUFAC RECOMMENDATIONS. TYPI 309, AND 310. | ONDUITS TO PULL BOX SPARE CONDUITS GAP AROUND INK GROUT. PAINT ALL TO MATCH L CONDUITS. HAT CENTER OF VFD IS SHED FLOOR. WALL JTURER'S |
| | | | INSTALL A 30"L X 30"W X 12 POWER AND CONTROLS AI 12"D FOR SIGNAL. PULL BO 4X. INSTALL AT SAME HEIG BOXES. PULL BOXES SHAL FRONT COVER. | ND A 12"L X 12"W X DXES SHALL BE NEMA SHT OF EXISTING PULL |
| | | | | |
| | | 1 | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| YCLED | | | | |









| Γ | IN | | | | | | -RS | | 5 L SWITCH NOT | | | ⁶ PROCESS A |
|-------------------|------------------------------|--|---------------------------------------|---------------------------------|-----------------------------------|--|-------------------------------------|---------------------|---|-----------|-------------|---|
| F | \frown | | | | | | | | BREVIATIONS | ATION | 3W | |
| | \bigcirc | LOCALLY MOUNTED FIELD INSTRUMENTATION | MEASURED OR INITIATING VARIABLE | MODIFIER | READOUT OR PASSIVE FUNCTION | | | | ACKNOWLEDGE | | ABI AI | NON-CHLORINATED PLANT WATE AERATION BASIN INFLUENT ANALOG INPUT |
| | \bigcirc | MOUNTED ON PANEL FRONT | A ANALYSIS BURNER, | | ALARM | | | FAIL FOR FR | FAILURE FORWARD-OFF- FORWARD-REVI | REVERSE | BNR BSCR B | ANALOG OUTPUT BIOLOGICAL NITROGEN REMOVAI BANDSCREEN |
| | () | MOUNTED INSIDE PANEL | B COMBUSTION | | | | | FS | FAST-SLOW HAND-AUTO | | CA | BYPASS COMPRESSED AIR |
| | \bigcirc | | C | DIFFERENTIAL | | CONTROL | CLOSED | HOA | HAND-OFF-AUTO HAND-OFF-REM | | CL2 0 | CHEMICAL DRAIN CHLORINE (ANALYZER MODIFIER) |
| | $\left(\rightarrow \right)$ | FRONT PANEL MOUNTED ON AUXILIARY PANEL (SUBSCRIPT INDICATES PANEL) | | DIFFERENTIAL | | | | HOR HSE | EMERGENCY ST | | CMP | CHLORINE SOLUTION COMPACTOR |
| | | | E VOLTAGE | | SENSOR (PRIMAF ELEMENT) | <y< td=""><td></td><td>LL LLS</td><td>LEAD-LAG LEAD-LAG-STAN</td><td>IDBY</td><td>COND</td><td>CONDENSER CONDUCTIVITY (ANALYZER MODI</td></y<> | | LL LLS | LEAD-LAG LEAD-LAG-STAN | IDBY | COND | CONDENSER CONDUCTIVITY (ANALYZER MODI |
| | | MOUNTED INSIDE AUXILIARY PANEL | F FLOW RATE | RATIO (FRACTION) | | | | LOR LR | LOCAL-OFF-REN LOCAL-REMOTE | | CSL | CONTACT STABILIZATION CAUSTIC SOLUTION |
| | \searrow | | G | | GLASS, VIEWING DEVICE | | | LS MA | LEAD-STANDBY MANUAL-AUTO | | D [| CITY WATER DRAIN |
| | \square | PILOT LIGHT | H HAND | | DEVICE | | HIGH | OAC | OPEN-AUTO-CLO OPEN-CLOSE | OSE | DG I | DENSITY DIGESTER GAS |
| | \bigcirc | INSTRUMENT FUNCTIONS SHARING COMMON | CURRENT (ELECTRICAL) | | INDICATE | | | 00 OSC | ON-OFF OPEN-STOP-CLO | 085 | DO I | DIGITAL INPUT DIGITAL OUTPUT |
| | \bigcirc | HOUSING | J POWER | SCAN | | | | RJ | RUN-JOG | | DS I | DISSOLVED OXYGEN (ANALYZER DIGESTED SLUDGE |
| | $\langle 1 \rangle$ | COMPLEX INTERLOCK AS DEFINED IN CONTROL DIAGRAM OR IN SPECIFICATIONS | TIME, TIME | TIME; RATE OF | | CONTROL STATIO | N | RJR SIL | RUN-JOG-REVEI SILENCE | RSE | FA F | VOLTAGE TO PNEUMATIC FOUL AIR |
| | \sim | DIAGRAM OR IN SELCEICA HONS | SCHEDULE | CHANGE | | CONTROL STATIO | | VALVE AN | ND GATE SYMBO | OLOGY | FE | FLOOR DRAIN FILTER EFFLUENT FILTER FEED |
| | | SHARED DISPLAY, SHARED CONTROL, FIELD MOUNTED | L LEVEL | | LIGHT | | LOW | Ū,× | | | FO | FUEL OIL FEED WATER |
| | | | м | MOMENTARY | | | MIDDLE, INTERMEDIATE | Yot | AIR-RELEASE VACUUM VAL ARV = AIR RELEASE VALVE | LVE | GR | GRIT GRAVITY THICKENED SLUDGE |
| | \square | SHARED DISPLAY, SHARED CONTROL AT PRIMARY LOCATION - NORMALLY ACCESSIBLE | N | | | | | | VAC = VACUUM | | HPA | HIGH PRESSURE AIR HOT WATER |
| | | TO OPERATOR (SCADA WORKSTATION) | 0 | | ORIFICE, RESTRICTION | | | | BV - BALL VALVE | | HWR | HOT WATER HOT WATER RETURN HOT WATER SUPPLY |
| | \square | SHARED DISPLAY, SHARED CONTROL AT AUXILLIARY LOCATION - NORMALLY ACCESSIBLE | P PRESSURE, VACUUM | | POINT (TEST) CONNECTION | | | / _ | BFV - BUTTERFLY VALVE | | I /O | INPUT/OUTPUT CURRENT TO PNEUMATIC |
| | | TO OPERATOR (IPC, HMI) | | INTEGRATE, | CONNECTION | | | | CNV - CONE VALVE | | IA | INSTRUMENT AIR LOCAL CONTROL PANEL |
| | | PROGRAMMABLE LOGIC CONTROL, PRIMARY | | TOTALIZE | RECORD | | | | | | LO | LUBE OIL LIQUID OXYGEN |
| | | LOCATION - NORMALLY INACCESSIBLE TO OPERATOR | SPEED | 0.557 | RECORD | 0.000 | | | CV - CHECK VALVE | | LPDG | LOW PRESSURE AIR LOW PRESSURE DIGESTER AIR |
| - | | | S FREQUENCY | SAFETY | | SWITCH | | -K $ $ | DDCV - DOUBLE-DISK CHEC | CK VALVE | MA | LOW PRESSURE SLUDGE GAS MURIATIC ACID |
| - | PRIM | IARY ELEMENT SYMBOLOG | Y T TEMPERATURE | | MULTIFUNCTION | TRANSMIT | MULTIFUNCTION | | BCV - BALL CHECK VALVE | | MXR | MIXED LIQUOR MIXER |
| | —— M —— | MAGNETIC FLOWMETER | VIBRATION, MECH. | | MOETHONCTION | VALVE DAMPER, | MOLTH ONCTION | | | | NC | NITROGEN GAS NORMALLY CLOSE |
| | \sim | | V ANALYSIS | | | LOUVER | | | DV - DIAPHRAGM VALVE | | NO | NATURAL GAS NORMALLY OPEN |
| | \frown | FLUME | W WEIGHT, FORCE | X-AXIS | WELL | | | \longrightarrow | GV - GATE VALVE | | OF | OVERFLOW |
| | TE | | Y EVENT, STATE OR | Y-AXIS | | RELAY, COMPUTE | | | GLV - GLOBE VALVE | | | LINE TYPES |
| | | TEMPERATURE ELEMENT WITH THERMOWELL | PRESENCE | | | CONVERT DRIVER, | | | KGV - KNIFE GATE VALVE | | | - MAIN PROCESS LINE |
| | - (FG)- | SIGHT FLOW GLASS | z POSITION, DIMENSION | Z-AXIS | | ACTUATOR UNCLASSIFIED FINAL CONTROL | | | NV - NEEDLE VALVE | | | - SECONDARY PROCESS LI |
| | \bigcirc | | | | | ELEMENT | | × | PNV - PINCH VALVE | | | - AUXILIARY PROCESS LINE |
| | \bigvee | CHEMICAL SEAL | ACTUATOR | SYMBOLO | GY TYPE | ES OF POW | ER SUPPLY | \ > | PV - PLUG VALVE | | - | DIRECTION OF FLOW |
| | | | | | A | PLANT C | OMPRESSED AIR | | | | | PNEUMATIC SIGNAL |
| | | SUBMERSIBLE PUMP | 屮 N | ERATOR ABBREVIATI M = MOTOR | DNS: IA ES | INSTRUM | | | PRV - PRESSURE-REDUCIN | IG VALVE | | ELECTRICAL SIGNAL |
| | | | 5 | P = PNEUMATIC S = SOLENOID | NG | NATURA | GAS | | PRV - PRESSURE-REGULAT | ING VALVE | P | - 480V POWER |
| | _ i | | FLC | OAT OPERATOR | HYD | HYDRAU | LIC | -DX OR -DX- | PRV - PRESSURE-RELIEF V | ALVE | L | HYDRAULIC SIGNAL |
| | | | | RING-OPPOSED | | AC - 120VAC I | POWER | -12/0R-122- | | | oo | - SOFTWARE OR DATA LINK |
| | | د. | | IGLE-ACTING EUMATIC CYLINDER | | 480 - 480VAC I | POWER | | TWCV - THREE-WAY CONT | ROL VALVE | | - SIGNAL CONNECTION |
| | () | CENTRIFUGAL PUMP | | UBLE-ACTING EUMATIC CYLINDER | | DC — 24VDC P | OWER | | | | | - CROSSOVER - NO CONNE |
| _ | | | | | F | PLC INTERF | ACES | —— 2 | Y-STRAINER | | | |
| 01.dw | Π | | | EUMATIC DIAPHRAGN | | | | -+~~ - | FLEX COUPLING | | x | CAPILLARY |
| SEVE STEVE | | VERTICAL TURBINE PUMP | | EUMATIC DIAPHRAGN | • | ANALOG | ANALOG | .↓_ | | | ••• | |
| d2063 LARI, | u r | | | TH POSITIONER | | INPUT (4-20mA DC) | OUTPUT (4-20mA DC) | Ď | DRAIN | | — E — E — | - ETHERNET I/O DATA LINK |
| est01 5 PM, | | METERING PUMP | | | | | | S | SOLENOID VALVE | | — D — D — | DEVICENET DATA LINK SERIAL RS232 LINK |
| ing\w 1 3:28 | Ļ | | | | <u></u> | DISCRETE | DISCRETE | \bowtie | ROTAMETER WITH BALL | | ss | |
| \pwwork /1/202 | \bowtie | GATE | | | | INPUT (24VDC) 7 | OUTPUT (DRY CONTACT 7 120VAC) | | INDICATOR AND FLOW ADJUSTMENT | | — FO — FO — | - FIBER OPTIC |
| 1 2 Ci | | | | | | PROJECT MANAGER | A. SINGH | _ | | | City of | Folsom |
| | | | | | | DESIGNED BY | G. INIGUEZ | | DIONAL EA | | | Foison |
| | | | | | | DESIGNED BY | _ | | 22582 12 3 | | | VASH AND RECY |
| | | FSS | | | | DRAWN BY | R. GENATO G. INIGUEZ | | R R | | | R CAPACITY PRO |
| | | | | | | DATE | NOV 2021 | | RICAL | | | |
| | | | 01 02/10/22 ISSUED FOR BIDS | DESCRIPTION | | HDR PROJECT NO. | 10292477 | - EOFC | 02/10/22 | FOLSO | | |
| | | | | | | | | | | | | |

| | 7 8 | |
|-------------------------------|---|----------|
| S AND INS | TRUMENTATION ABBREVIATIONS | |
| TER T WATER T EMOVAL | OF OVERFLOW OG OFF GAS OI OPERATOR INTERFACE P&ID PROCESS AND INSTRUMENTATION DIAGRAM PD PLANT DRAIN PE PRIMARY EFFLUENT PERM PERMEATE PI PRIMARY INFLUENT PSC PRIMARY SCUM | |
| DIFIER) | PMP PUMP POL POLYMER POTW POTABLE WATER PS PRIMARY SLUDGE PW PLANT WATER | D |
| R MODIFIER) | RAS RETURN ACTIVATED SLUDGE REC RECIRCULATION RS RAW SEWAGE RW RECLAIMED WATER SAM SAMPLE SBS SODIUM BISULFATE SC SCUM SCR SCREENINGS | |
| LYZER MODIFIER) | SD SANITARY DRAIN SE SECONDARY EFFLUENT SEW SEWER SHC SODIUM HYPOCHLORITE SI SECONDARY INFLUENT SLG SLIDE GATE, SLUICE GATE SN SUPERNATANT SOD SLOPE OIL SOD SLOPE OIL DRAIN SS SUSPENDED SOLIDS (ANALYZER MODIFIER) SWR SOFTENED WATER | |
| DGE | T TANK TS THICKENED SLUDGE TURB TURBIDITY (ANALYZER MODIFIER) TWAS THICKENED WASTE ACTIVATED SLUDGE V VENT VCP VENDOR CONTROL PANEL WAS WASTE ACTIVATED SLUDGE WW WASH WATER | c |
| R AIR GAS | | |
| | | |
| ES | CROSS REFERENCE SYMBOLOG | |
| NE CESS LINE | P1 CONTINUATION FROM | B |
| SS LINE | | |
| L | - SEQUENCE NUMBER | |
| 4L | P1 A CONTINUATION TO DRAWING | |
| L | GENERAL NOTES | |
| TA LINK ION | THIS IS A STANDARD INSTRUMENTATION SYMBOLOGY AND ABBREVIATIONS SHEET. LISTING OF SYMBOLS AND ABBREVIA DOES NOT IMPLY ALL SYMBOLS AND ABBREVIATIONS HAVE BI UP OF CHEMIC OF CHEMICAL SYMBOLS. | |
| CONNECTION | USED ON THIS PROJECT. 2. SEE PROCESS, MECHANICAL AND PLUMBING LEGEND DRAWIT FOR MISCELLANEOUS PIPING SYMBOLS. | ıgs |
| | SCREENING OR SHADING OF WORK IS USED TO INDICATE EXI COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEME TO HIGHLIGHT SELECTED TRADE WORK, REFER TO CONTEXT EACH DRAWING FOR USAGE. | INTS |
| A LINK | VALVE SYMBOLS SHOWN HERE ARE APPLICABLE ONLY TO INSTRUMENTATION DIAGRAMS. SEE PROCESS, MECHANICAL / | |
| LINK K | PLUMBING LEGEND SHEET FOR VALVE SYMBOLS USED ELSEWHERE ON THE DRAWINGS. | |
| | INSTRUMENTATION | |
| nt CYCLED PROJECT | LEGEND, SYMBOLS, AND ABBREVIATIONS | ; |
| | 0 1" 2" FILENAME 101.dwg SHEET | |
| | | 1 |

