

SWEET HOME, OREGON SWEET HOME WATER TREATMENT PLANT FINISHED WATER AND BACKWASH PUMPING SYSTEMS IMPROVEMENTS NOVEMBER 2021

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INDEX OF DRAWINGS

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S001 STRUCTURAL NOTES

S601 BW PUMP - STRUCTURAL DETAILS

ELECTRICAL

E003

ELECTRICAL ABBREVIATIONS, NOTES, AND LEGEND E001 E002

ELECTRICAL SYMBOL LEGEND

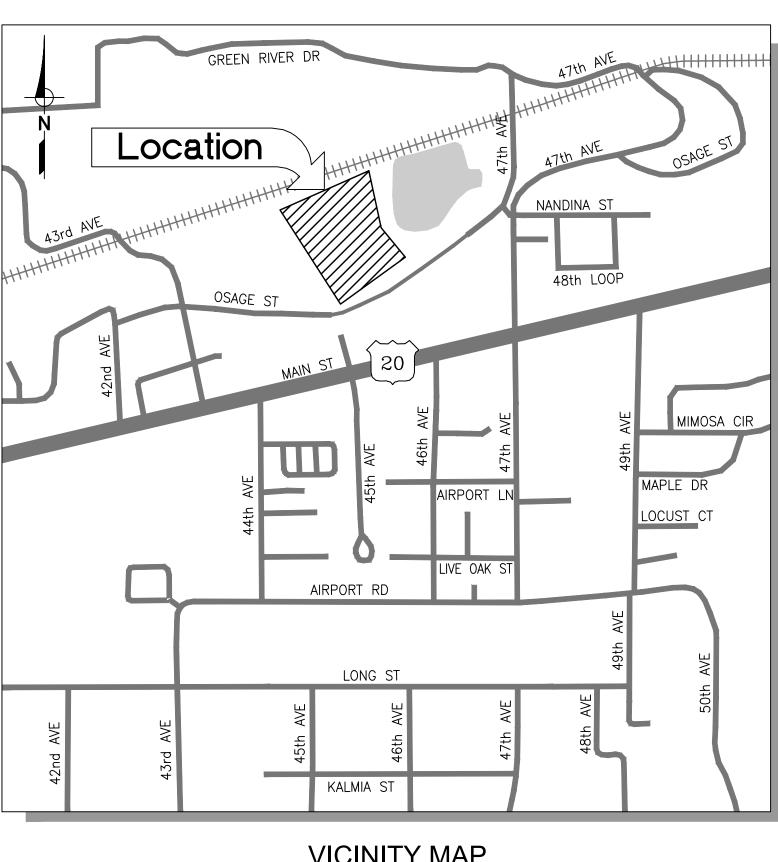
ELECTRICAL DETAILS

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VICINITY MAP NOT TO SCALE

LOCATION MAP NOT TO SCALE

THIS LINE IS 1 INCH AT FULL SCALE IF NOT SCALE ACCORDINGLY ANK DESIGNED BY BY DATE **REVISIONS**

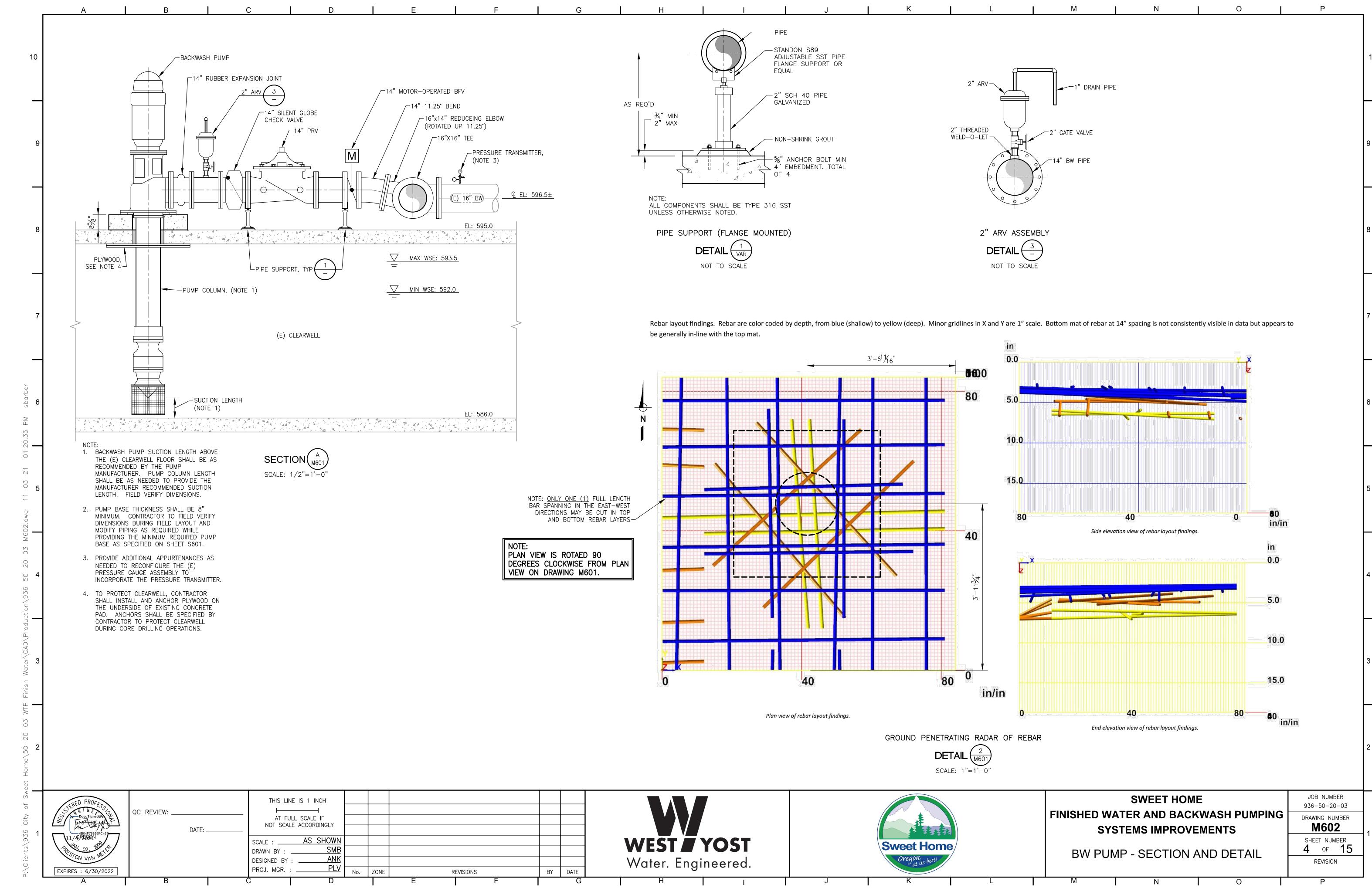
WEST YOST Water. Engineered.



SWEET HOME FINISHED WATER AND BACKWASH PUMPING **SYSTEMS IMPROVEMENTS**

TITLE SHEET, LOCATION AND VICINITY MAPS, DRAWING INDEX

JOB NUMBER 936-50-20-03 DRAWING NUMBER G001 SHEET NUMBER 1 of 15 REVISION



ABBREVIATIONS: STRUCTURAL SPECIFICATIONS: **GENERAL NOTES:** BRACING AND SHORING NOTES: ARCHITECT 1. DURING CONSTRUCTION, THE STABILITY AND INTEGRITY OF THE EXISTING 1. PLANS AND CALCULATIONS FOR THE STRUCTURAL DESIGN WERE ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT STRUCTURE SHALL BE MAINTAINED AT LEVELS GENERALLY ACCPETABLE BASED UPON: CJ CONSTRUCTION JOINT OR CONTROL JOINT GOVERNING EDITION OF THE OREGON STRUCTURAL SPECIALTY CODE. WITHIN THE CONSTRUCITON INDUSTRY BY THE USE OF BRACING, SHORING - THE 2019 OREGON STRUCTURAL SPECIALTY CODE (2018 IBC) CLR CLEAR AND UNDERPINNING UNTIL THE PROPOSED STRUCTURAL MODIFICATIONS CLG CEILING CONCRETE ARE COMPLETED. IN NO CASE SHALL THE EXISITNG STRUCTURE BE 2. DESIGN LOADS ARE AS FOLLOWS: COL COLUMN CONCRETE SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 301 & ALLOWED TO BECOME UNSAFE DURING CONSTRUCTION. **VERTICAL:** 318 CURRENT EDITION. CONCRETE SHALL BE READY MIXED IN CONCRETE FLOOR DEAD LOAD: 150 PSF CONC CONN CONNECTION ACCORDANCE WITH ASTM C94. BRACING AND SHORING SYSTEMS REQUIRED TO PROVIDE TEMPORARY FLOOR LIVE LOAD: 100 PSF CONSTRUCTION CONST SUPPORT OF THE EXISITNG STRUCTURE DURING CONSTRUCTION SHALL BE CONT CONTINUOUS CONCRETE SHALL BE HAVE A MINIMUM 28 DAY COMPRESSIVE DESIGNED TO SUPPORT THE DEAD, LIVE, SOIL, EARTHQUAKE AND WIND SEISMIC: RISK CATEGORY: IV, SITE CLASS: D, IE=1.5, LOADS THAT MAY BE IMPOSED ON THE STRUCTURE DURING CONSTRUCTION STRENGTH OF 4000 PSI WITH A MAXIMUM SLUMP OF 5". Ss=0.628, S1=0.340, SDS=0.543, SD1=0.400, DBL DOUBLE IN ACCORDANCE WITH INDUSTRY STANDARDS AND GENERALLY ACCEPTED 104 MPH, EXPOSURE B, GCpi=+/-0.18MAXIMUM WATER-CEMENT RATIO, BY WEIGHT SHALL BE 0.50. DIAGONAL ENGINEERING PRINCIPLES. SPECIAL INSPECTIONS: DOWN CONCRETE: DO DITTO AN AIR ENTRAINING ADMIXTURE CONFORMING TO THE LATEST REVISION 3. THE CONTRACTOR SHALL SUBMIT PROPOSED SHORING AND BRACING CONTINUOUS: PRIOR TO CONCRETE PLACEMENT, FABRICATE DWG DRAWING OF ASTM SPECIFICATION C260 MAY BE ADDED TO THE CONCRETE TO SPECIMENS FOR STRENGTH TESTS, PERFORM SYSTEMS TO THE ENGINEER OF RECORD FOR REVIEW. PROVIDE 4% + /- 1.5% ENTRAINED AIR FOR SLABS, WALKS & CURBS THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUCCESSFUL SLUMP AND AIR CONTENT TEST, DETERMINE TEMPERATURE OF THE CONCRETE. **EXISTING** EXPOSED TO WEATHER COMPLETION OF THE WORK. EACH VERIFY CONCRETE PLACEMENT FOR PROPER EACH FACE CEMENT SHALL BE IN ACCORDANCE WITH THE STANDARD 4. NO CONSTRUCTION OF THE BRACING AND SHORING SYSTEMS, DEMOLITION APPLICATION TECHNIQUES. **ELEVATION** SPECIFICATIONS FOR PORTLAND CEMENT PER ASTM C150, TYPE II. FOR ITS CONSTRUCTION OR ORDERING MATERIALS TAKE PLACE UNTIL THE ANCHORS INSTALLED IN CONCRETE, VERIFY MIX DESIGN, ELEV **ELEVATOR** CONTRACTOR HAS RECEIVED APPROVED SUBMITTALS BY THE ENGINEER OF VERIFY MAINTENANCE OF SPECIFIED CURING ALL CONCRETE SHALL BE PLACED WITH MECHANICAL VIBRATION, EQ EQUAL RECORD. TEMPERATURE AND TECHNIQUES. UNLESS NOTED OTHERWISE. INSPECT FORMWORK FOR SHAPE, LOCATION AND EW EACH WAY DIMENSIONS OF CONCRETE MEMBER BEING FORMED. 5. THE SUBMITTALS SHALL SHOW LAYOUT, SIZE OF MEMBERS, CONNECTION REINFORCING STEEL FOUNDATION DETAILS AND CONSTRUCTION SEQUENCE. FOC FACE OF CONCRETE REINFORCING STEEL SHALL BE GRADE 60 DEFORMED BARS CONFORMING TO ASTM A615 OR A706, UNLESS NOTED OTHERWISE. FOM FACE OF MASONRY FOS FACE OF STUD BARS TO BE WELDED OR FIELD BENT SHALL BE ASTM A706. FS FAR SIDE FOOTING NON-SHRINK GROUT NON-SHRINK GROUT SHALL BE NON-METALLIC GROUT CONFORMING GΑ GAUGE TO ASTM C827 AND C1107. THE NON-SHRINK GROUT SHALL GALV GALVANIZED DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT GLUE LAMINATED BEAM AT 28 DAYS. SLUMP SHALL NOT EXCEED 8 INCHES. HEADER ADHESIVE ANCHORING HORIZ HORIZONTAL ADHESIVE ANCHORING SHALL BE SIMPSON AT-XP SYSTEM WHEN HIGH STRENGTH BOLT THE BASE MATERIAL IS LESS THAN 50°F OR SIMPSON SET-XP HOLLOW STRUCTURAL SECTION SYSTEM WHEN THE BASE MATERIAL IS GREATER THAN 50°F OR APPROVED EQUAL. INSTALLATION OF ANCHOR AND ADHESIVE INSIDE DIAMETER INCLUDING DRILLING AND CLEANING OF HOLES SHALL BE IN ACCORDANCE WITH THE CURRENT EVALUATION REPORT. ADHESIVES LAG BOLT SHALL BE USED ONLY IN APPLICATIONS PERMITTED BY THE ADHESIVE'S EVALUATION REPORT. LLBB LONG LEG BACK TO BACK LONG LEG HORIZONTAL LLV LONG LEG VERTICAL <u>STRUCTURAL STEEL & MISCELLANEOUS IRON</u> LOC LOCATION STRUCTURAL STEEL AND MISCELLANEOUS IRON SHALL BE CONSTRUCTED IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE -OUTSIDE DIAMETER CURRENT EDITION. ОН OPPOSITE HAND 1. WIDE FLANGE & STRUCTURAL TEE SHAPES SHALL CONFORM TO OPP **OPPOSITE** ASTM A992. OPEN WEB STEEL JOIST 2. CHANNELS & ANGLES SHALL CONFORM TO ASTM A36. 3. STRUCTURAL PLATE SHALL CONFORM TO ASTM A36 OR ASTM A572. POWDER DRIVEN FASTENER ALL STRUCTURAL STEEL & MISCELLANEOUS IRON SHALL RECEIVE A SHOP PRIME COAT, EXCEPT ON SURFACES RECEIVING WELDS, PLY PLYWOOD PARTIAL JOINT PENETRATION EMBEDDED IN CONCRETE OR AT SLIP CRITICAL HIGH STRENGTH POUNDS PER SQUARE FOOT BOLTED SURFACES, WHICH SHALL BE TOUCHED UP AFTER CONNECTION PSI POUNDS PER SQUARE INCH IS COMPLETE. STRUCTURAL STEEL PERMANENTLY EXPOSED TO WEATHER PRESSURE TREATED SHALL RECEIVE TWO COATS OF SEMI-GLOSS ALKYD ENAMEL COMPATIBLE WITH PRIMER. REINF REINFORCING REQD REQUIRED HOLLOW STRUCTURAL SECTIONS HOLLOW STRUCTURAL SECTIONS (HSS OR TS) SHALL CONFORM TO **SCHEDULE** ASTM A500, GRADE B. SHT SHEET SIM SIMILAR STEEL PIPE STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE B. SHEET METAL SMS SHEET METAL SCREW SPECIFICATIONS ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS IN SQ SQUARE STANDARD ACCORDANCE WITH AWS 'STANDARD QUALIFICATION PROCEDURE' STL TO PERFORM THE TYPE OF WORK REQUIRED. ALL WELDING SHALL BE SELF TAPPING SCREW IN ACCORDANCE WITH THE CURRENT AWS WELDING CODE. ARC WELDING STRUCT STRUCTURAL ELECTRODES SHALL BE E70xx SERIES FOR A36, A572 & A992 MATERIAL. SYMETRICAL MACHINE BOLTS, ANCHOR BOLTS, STUDS & THREADED RODS T&G TONGUE AND GROOVE BOLTS AND RODS SHALL CONFORM TO ASTM A307 GRADE A OR B TOP OF TO OR A36. TOP OF FOOTING TOF NUTS SHALL BE ASTM A563-A HEX WITH FINISH TO MATCH TOP TOP OF PLATE FASTENER. HEADED STUDS AND WELDING SHALL CONFORM TO TOP OF SLAB OR STEEL AWS D1.1-CURRENT EDITION, TYPE B STUDS. TOW TOP OF WALL TYP TYPICAL UNLESS NOTED OTHERWISE VERTICAL WIDE FLANGE WORK POINT WEIGHT WELDED WIRE FABRIC JOB NUMBER **SWEET HOME** THIS LINE IS 1 INCH 936-50-20-03 QC REVIEW: FINISHED WATER AND BACKWASH PUMPING DRAWING NUMBER AT FULL SCALE IF NOT SCALE ACCORDINGLY **S001** SYSTEMS IMPROVEMENTS DATE: ____ NO SCALE WEST YOST SHEET NUMBER SCALE **Sweet Home** 5 of 15 ATG DRAWN BY: STRUCTURAL NOTES ATG Water. Engineered. DESIGNED BY: REVISION PROJ. MGR. EXPIRES 6/30/2023

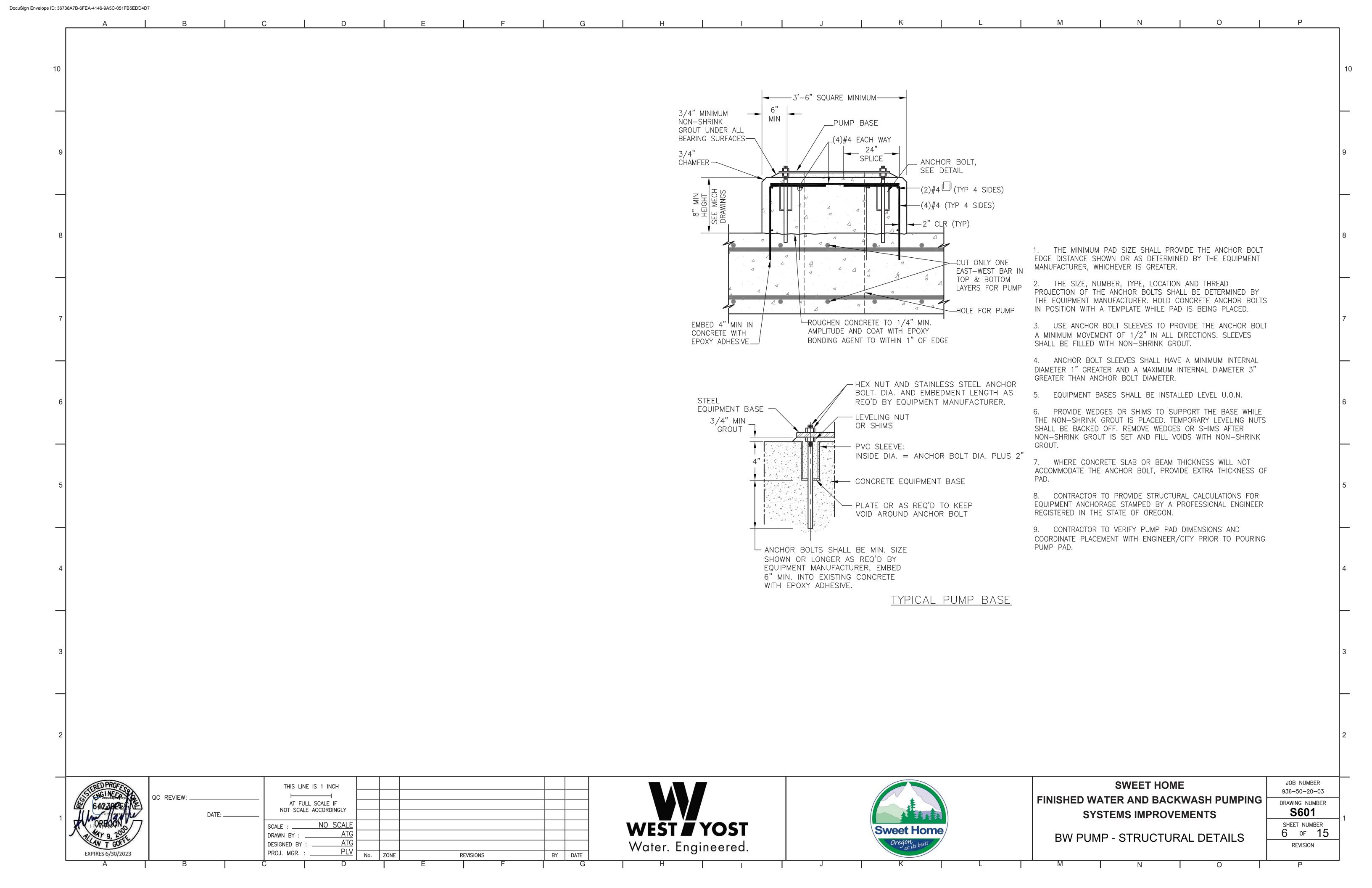
No.

ZONE

REVISIONS

BY DATE

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Abbreviations

٨	AMPERE	NACA	MINIMUM CIDCLUT AMDACITY
A		MCA	MINIMUM CIRCUIT AMPACITY
AC	ALTERNATING CURRENT, AIR CONDITIONING UNIT	MCC	MOTOR CONTROL CENTER
AHJ	AUTHORITY HAVING JURISDICTION	MCP	MOTOR CIRCUIT PROTECTOR
Al	ANALOG INPUT	MDF	MAIN DISTRIBUTION FRAME
AIC	AVAILABLE INTERRUPTING CAPACITY	MHz	MEGAHERTZ
AF	AMPERE FRAME / AMPERE FUSED	MISC	MISCELLANEOUS
AFC	ABOVE FINISHED CEILING	MLO	MAIN LUGS ONLY
AFF	ABOVE FINISHED FLOOR	MOCP	MAXIMUM OVERCURRENT PROTECTION
AFG	ABOVE FINISHED GRADE		
		N I	NEUTDAL
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	N	NEUTRAL
AO	ANALOG OUTPUT	NAC	NOTIFICATION APPLIANCE CIRCUIT
ARMS	ARC FLASH REDUCTION MAINTENANCE SYSTEM	N/A	NOT APPLICABLE
AT	AMPERE TRIP	NC	NORMALLY CLOSED
AV	AUDIO / VIDEO	NEC	NATIONAL ELECTRICAL CODE
AWG	AMERICAN WIRE GAUGE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
		NEX	REPLACE EXISTING WIRING DEVICE AND FACEPLATE WITH NEW.
BAS	BUILDING AUTOMATION SYSTEM		BACK BOX AND CONDUIT SHALL REMAIN.
BFG	BELOW FINISHED GRADE	NL	NIGHT LIGHT
BLDG	BUILDING	NO	NORMALLY OPEN
BLDG	DOILDING		
		NTS	NOT TO SCALE
С	CONDUIT		
CAT	CATEGORY	OC	ON CENTER
СВ	CIRCUIT BREAKER	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	OFOI	OWNER FURNISHED, OWNER INSTALLED
	·	OFOI	OWNER FURNISHED, OWNER INSTALLED
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED		
CKT	CIRCUIT	Ø	PHASE
CPT	CONTROL POWER TRANSFORMER		
CR	CONTROL RELAY	PB	PULL BOX, PANIC BUTTON, PUSH BUTTON
CU	COPPER	PE	PHOTO EYE
CO	COPPER		
		PNL	PANEL
dB	DECIBAL	POE	POWER OVER ETHERNET
DC	DIRECT CURRENT	PTZ	PAN, TILT, ZOOM
DI	DIGITAL INPUT		,
DIM	DIMENSION	RF	RADIO FREQUENCY
DIV	DIVISION	RFI	REQUEST FOR INFORMATION
DO	DIGITAL OUTPUT		
DTL	DETAIL	SLC	SIGNALING LINE CIRCUIT
DWG	DRAWING	SPD	SURGE PROTECTION DEVICE
5		STD	STANDARD
EID			
EIP	ETHERNET IP	SW	SWITCH
EL	ELEVATION		
EMT	ELECTRICAL METALLIC TUBING	T/M	THERMAL MAGNETIC CIRCUIT BREAKER
EOLR	END OF LINE RESISTOR	TBD	TO BE DETERMINED
		TV	TELEVISION / MONITOR OUTLET
	FIDE ALADM CONTDOL DANIEL		
FACP	FIRE ALARM CONTROL PANEL	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
FF	FINISH FLOOR	TYP	TYPICAL
FLA	FULL LOAD AMPERES		
FT	FOOT, FEET	UH	UNIT HEATER
FBO	FURNISHED BY OTHERS	UG	UNDERGROUND
טם ו	I GIMMONED DI CINENO		
<u> </u>		UL	UNDERWRITERS LABORATORIES
G, GND	GROUND	UPS	UNINTERRUPTIBLE POWER SUPPLY
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	UON	UNLESS OTHERWISE NOTED
		USB	UNIVERSAL SERIAL BUS
11111	LIAND LIOLE	505	

General Electrical Notes

- 1. ALL LIGHTING BRANCH CIRCUITS SHALL BE 2#10, 1#10G IN 3/4" CONDUIT, UON.
- 2. ALL 20-AMP RECEPTACLE AND HARDWIRED BRANCH CIRCUITS SHALL BE 2#12, 1#12G IN 3/4" CONDUIT, UON.
- 3. ALL EXIT SIGNS SHALL BE WIRED TO THE LOCAL LIGHTING BRANCH CIRCUIT AHEAD OF ALL SWITCHING.
- 4. PROVIDE 0-10V DIMMING CONDUCTORS TO ALL LUMINAIRES WHICH ARE CONTROLLED BY 0-10V DIMMERS SHOWN ON THE DRAWINGS.

Annotation

- INDICATES NEW EQUIPMENT.
- INDICATES EXISTING EQUIPMENT TO REMAIN.
- INDICATES EXISTING EQUIPMENT TO BE
- INDICATED EXISTING EQUIPMENT OR DEVICE TO BE

REMOVED AND REINSTALLED.

- - CONDUIT & CONDUCTOR CALLOUT. REFER TO **CONDUIT & CONDUCTOR SCHEDULE.**
- KEYED NOTE CALLOUT. REFER TO CORRESPONDING SHEET KEYNOTES

 - KEYED NOTE CALLOUT. REFER TO CORRESPONDING SHEET KEYNOTES
 - KEYED NOTE CALLOUT. REFER TO CORRESPONDING SHEET KEYNOTES
- MECHANICAL EQUIPMENT CALLOUT. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE DETAIL CALLOUT. REFER TO DETAIL AND SHEET AS
 - INDICATED ON CALLOUT.
- XX'-XX" FIXTURE MOUNTING CALLOUT. HEIGHT ABOVE
- FINISHED FLOOR (A.F.F.) -XXXXX EQUIPMENT CALLOUT. REFER TO NEMA
- CONNECTION SCHEDULE.
- SECTION CALLOUT. REFER TO SECTION AND SHEET AS INDICATED ON CALLOUT.

ELEVATION CALLOUT. REFER TO ELEVATION AND SHEET AS INDICATED ON CALLOUT.

EQUIPMENT	OWNER FURNISHED	INTALLED BY OITHERS	CONTRACTOR INSTALLED
50A ACTIVE HARMONIC FILTER	Х		Х
50A ACTIVE HARMONIC FILTER CT'S	Х		Х
100A ACTIVE HARMONIC FILTER	Χ		Х
100A ACTIVE HARMONIC FILTER CT'S	Х		Х
FWP401 VFD	Х	Х	
FWP402 VFD	Х	Х	
FWP403 VFD	Х	Х	
BACKWASH PUMP SOFT START	Х	Х	
BACKWASH PUMP MCC SECTION	Х		Х

SEISMIC BRACING - REFER TO SECTION 16070 FOR REQUIREMENTS **50A ACTIVE HARMONIC FILTER** 100A ACTIVE HARMONIC FILTER BACKWASH PUMP MCC SECTION

Beggespung \ Digital⁵Signature EXPIRES: 12-31-2022

ID

IDC

HAND HOLE **HORSEPOWER**

IDENTIFICATION

ISOLATED GROUND

JUNCTION BOX

KILOVOLT-AMPERE

LOCAL AREA NETWORK

LIGHT EMITTING DIODE

DELAY, INSTANTANEOUS TRIP

KILOWATT

LIMIT SWITCH

LOW VOLTAGE

INITIATING DEVICE CIRCUIT

INFORMATION TECHNOLOGY

THOUSAND CIRCULAR MILS

INTERMEDIATE DISTRIBUTION FRAME

THOUSAND AMPS INTERRUPTING CURRENT

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

ELECTRONIC TRIP UNIT ADJUSTABLE LONG TIME DELAY, SHORT TIME

DELAY, INSTANTANEOUS TRIP, AND GROUND FAULT

ELECTRONIC TRIP UNIT WITH ADJUSTABLE LONG TIME DELAY, SHORT TIME

THIS LINE IS 1 INCH QC REVIEW: AT FULL SCALE IF NOT SCALE ACCORDINGLY DRAWN BY: DESIGNED BY PROJ. MGR. BY DATE ZONE REVISIONS

VOLTS, VOLTAGE **VOLT-AMPERE**

WIDE AREA NETWORK

WIRELESS FIDELITY

TRANSFORMER

WIRELESS ACCESS POINT

WATT, WIRE

WITH WITHOUT

WYE

ONE POLE

TWO POLE

THREE POLE

FOUR POLE

W/O

VARIABLE FREQUENCY DRIVE

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SWEET HOME FINISHED WATER AND BACKWASH PUMPING **SYSTEMS IMPROVEMENTS**

> **ELECTRICAL ABBREVIATIONS,** NOTES, AND LEGEND

JOB NUMBER 936-50-20-03 DRAWING NUMBER E001 SHEET NUMBER 7 of 15 REVISION

Electrical Symbol Legend

Power Distribution

UON.

- DUPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON. SIMPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
- QUADPLEX RECEPTACLE, MOUNTED AT 18" AFF,
- GFCI DUPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
- GFCI QUADPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
- TAMPERPROOF DUPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
- TAMPERPROOF QUADPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
- SWITCHED DUPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
- NEMA SPECIAL RECEPTACLE. MOUNTED AT 18" AFF. UON. NEMA CONFIGURATION AS INDICATED.
- CENTER HATCHED RECEPTACLE TO BE WIRED TO **EMERGENCY CIRCUIT.**
- RECEPTACLE MOUNTED ON CEILING
- RECEPTACLE MOUNTED IN-COUNTER.
- DISCONNECT SWITCH.
- **FUSED DISCONNECT SWITCH**
- ENCLOSED CIRCUIT BREAKER.
- COMBINATION STARTER.
- FLOORBOX COMBINATION POWER & DATA.
- FLOORBOX POWER.
- POKETHRU COMBINATION POWER & DATA.
- POKETHRU POWER.
- POWER/DATA POLE.
- PANELBOARD SURFACE MOUNT.
 - PANELBOARD FLUSH MOUNT
- MAIN DISTRIBUTION PANEL.
- UTILITY CT METER.

UTILITY TRANSFORMER.

Drawing Symbol Variables

- THREE WAY SWITCH. FOUR WAY SWITCH.
- QUANTITY OF JACKS AND HORIZONTAL CABLES.
- J = CAT6, JA = CAT6A, JE = CAT5EMOUNTING UNITS EXPRESSED IN INCHES TO +XX
- CENTERLINE ABOVE FINISHED FLOOR OR GRADE.
- MOUNTED HORIZONTALLY AT 4" ABOVE COUNTERTOP.
- CLOCK.
- DR DUAL RELAY.
- RED EMERGENCY SWITCH **ELEVATOR RECALL**
- ETR EXISTING DEVICE SHALL REMAIN.
- GLASS BREAK SENSOR.
- KEYED SWITCH.
- LOW FREQUENCY
- LOW VOLTAGE SWITCH. LV MOTOR RATED TOGGLE SWITCH
- NEX REPLACE EXISTING WIRING DEVICE AND FACEPLATE
- WITH NEW. BACK BOX AND CONDUIT SHALL REMAIN.
- 0 INTEGRAL OCCUPANCY SENSOR.
- ADA PHONE, VERIFY HEIGHT WITH ARCHITECT / OWNER.
- REMOVE EXISTING DEVICE / EQUIPMENT
- MOUNTED IN TOE KICK OF CASEWORK. MOUNTED ADJACENT TO TV AT 60" AFF, UON.
- VANDAL RESISTANT.
- WG WIREGUARD.
 - WEATHERPROOF.

Lighting

- TROFFER LUMINAIRE, SURFACE OR RECESS MOUNTED AS INDICATED ON THE DRAWINGS.
- DOWNLIGHT LUMINAIRE, SURFACE, RECESS, OR PENDANT MOUNTED AS INDICATED ON THE DRAWINGS.
- UNDERCABINET LUMINAIRE.
- EMERGENCY BATTERY PACK LUMINAIRE, WALL OR CEILING MOUNTED.
- LINEAR PENDANT MOUNTED LUMINAIRE.
- LINEAR WALL MOUNTED LUMINAIRE
- **BOLLARD LUMINAIRE.**
- SITE LUMINAIRE POLE MOUNTED. NUMBER OF HEADS AS SHOWN.
- TRACK LUMINAIRE

 \bigcirc

- WALL MOUNTED LUMINAIRE.

ON DRAWINGS.

SPOT LUMINAIRE.

- EXIT SIGN, WALL OR CEILING MOUNTED, SINGLE FACE WITH DIRECTIONAL CHEVRONS AS INDICATED
- EXIT SIGN, WALL OR CEILING MOUNTED, DOUBLE FACE WITH DIRECTIONAL CHEVRONS AS INDICATED
- ON DRAWINGS. HALF HATCHED LUMINAIRE TO BE WIRED TO EMERGENCY CIRCUIT.
- FULL HATCHED LUMINAIRE TO BE WIRED TO NIGHTLIGHT CIRCUIT.
- WALL WASH LUMINAIRE POINTED IN DIRECTION AS **SHOWN**

Raceways

- CONDUIT AND/OR CONDUCTORS INSTALLED ABOVE GRADE. CONCEALED IN WALL OR CEILING SPACE. CONDUIT AND/OR CONDUCTORS INSTALLED BELOW GRADE, BELOW SLAB. CONDUIT TURNED DOWN.
- CONDUIT TURNED UP.
 - CONDUIT STUBBED AND CAPPED.
- CONDUIT DIRECT CONNECTION TO EQUIPMENT
- FLEXIBLE CONNECTION TO EQUIPMENT
- **CONDUIT / WIRING CONTINUATION** HOMERUN TO PANELBOARD.
- CABLE TRAY. SIZE AND TYPE AS INDICATED ON **DRAWINGS**

Switches

- SINGLE POLE SWITCH MOUNTED AT 42" AFF, UON.
- LOW VOLTAGE 0-10 VOLT DIMMING SWITCH -MOUNTED AT 42" AFF, UON.

EMERGENCY STOP SWITCH, MUSHROOM HEAD

- OCCUPANCY SENSOR CEILING OR WALL MOUNTED.
- OCCUPANCY SENSOR POWER PACK.
- PHOTOCELL CEILING OR WALL MOUNTED.
- ADA DOOR PUSHPLATE.
- PUSHBUTTON, SINGLE OR DOUBLE

One-Line Diagram

- CIRCUIT BREAKER.
- DRAWOUT CIRCUIT BREAKER. **ENCLOSED CIRCUIT BREAKER**
- 0-XX-10 MOTOR STARTER CONTACT DISCONNECT SWITCH.
- **ENCLOSED DISCONNECT SWITCH**
- ~~--FUSED DISCONNECT SWITCH.
 - **CURRENT TRANSFORMER METER**

ENCLOSED FUSED DISCONNECT SWITCH.

- FUSE, RATING AS SHOWN ON DRAWINGS. GENERATOR, CONFIGURATION AS INDICATED ON
- GROUND ROD.
 - **EQUIPMENT GROUND** MOTOR, RATED AS INDICATED ON DRAWINGS.
 - NEMA CONNECTION
 - PANEL.
- MINI POWER CENTER.
- ST)— SHUNT TRIP.
- HTR HEATER.
- REMOTE ANNUNCIATOR.
- BATTERY CHARGER
- SURGE SUPPRESSION DEVICE.
- DIGITAL METER.
- VARIABLE FREQUENCY DRIVE. SOFT STARTER.
- TRANSFER SWITCH, WITH FUSES OR BREAKERS AS
- SHOWN ON DRAWINGS **TRANSFORMER**

Miscellaneous

- JUNCTION BOX (ROUND, SQUARE).
- THERMOSTAT.
- RELAY.
- CORD REEL
- MOTOR / EXHAUST FAN
- CEILING FAN.
- UTILITY POLE.
- WEATHERHEAD.

BY DATE

- GROUND ROD. GROUND ROD WITH TEST WELL.
- SURFACE RACEWAY / WIREMOLD
 - FIRE RATED BACKBOARD. GROUND BUS BAR.

- **Access Control & Security**
 - ACCESS CONTROL DOOR CONTACT. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
 - ACCESS CONTROL CARD READER. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
 - ACCESS CONTROL ELECTRIC STRIKE. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
 - ACCESS CONTROL KEY PAD. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
 - ACCESS CONTROL MAGNETIC LOCK. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS
 - ACCESS CONTROL REQUEST TO EXIT. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
 - ACCESS CONTROL ELECTRIFIED PANIC BAR. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
 - ACCESS CONTROL SECURITY JUNCTION BOX. SIZED AS RECOMMENDED BY SECURITY SYSTEM MANUFACTURER.
 - ACCESS CONTROL CAMERA / INTERCOM.
 - ACCESS CONTROL PANIC BUTTON.
 - SECURITY CAMERA CEILING MOUNTED. PROVIDE ONE (1) CAT6.
 - SECURITY CAMERA WALL MOUNTED. PROVIDE ONE (1) CAT6.

INTRUSION SENSOR - WALL MOUNTED

- INTRUSION SENSOR CEILING MOUNTED.
- INTRUSION KEYPAD.

Low Voltage

- ETHERNET OUTLET MOUNTED AT 18" AFF, UON
- COAXIAL OUTLET MOUNTED AT 18" AFF, UON.
- PHONE OUTLET MOUNTED AT 18" AFF, UON.
- LOW VOLTAGE OUTLET CEILING MOUNTED.
- WIRELESS ACCESS POINT CEILING MOUNTED

WIRELESS ACCESS POINT WALL MOUNTED.

- DIGITAL CLOCK.
- FLOORBOX DATA.
- POKETHRU DATA. IT RACK.
- VERTICAL WIRE MANAGEMENT

SWEET HOME FINISHED WATER AND BACKWASH PUMPING **SYSTEMS IMPROVEMENTS**

936-50-20-03 DRAWING NUMBER E002 SHEET NUMBER 8 of 15

JOB NUMBER

Digital. Signature

EXPIRES: 12-31-2022

QC REVIEW:

DATE: .

DRAWN BY: DESIGNED BY PROJ. MGR.

MH

THIS LINE IS 1 INCH

AT FULL SCALE IF

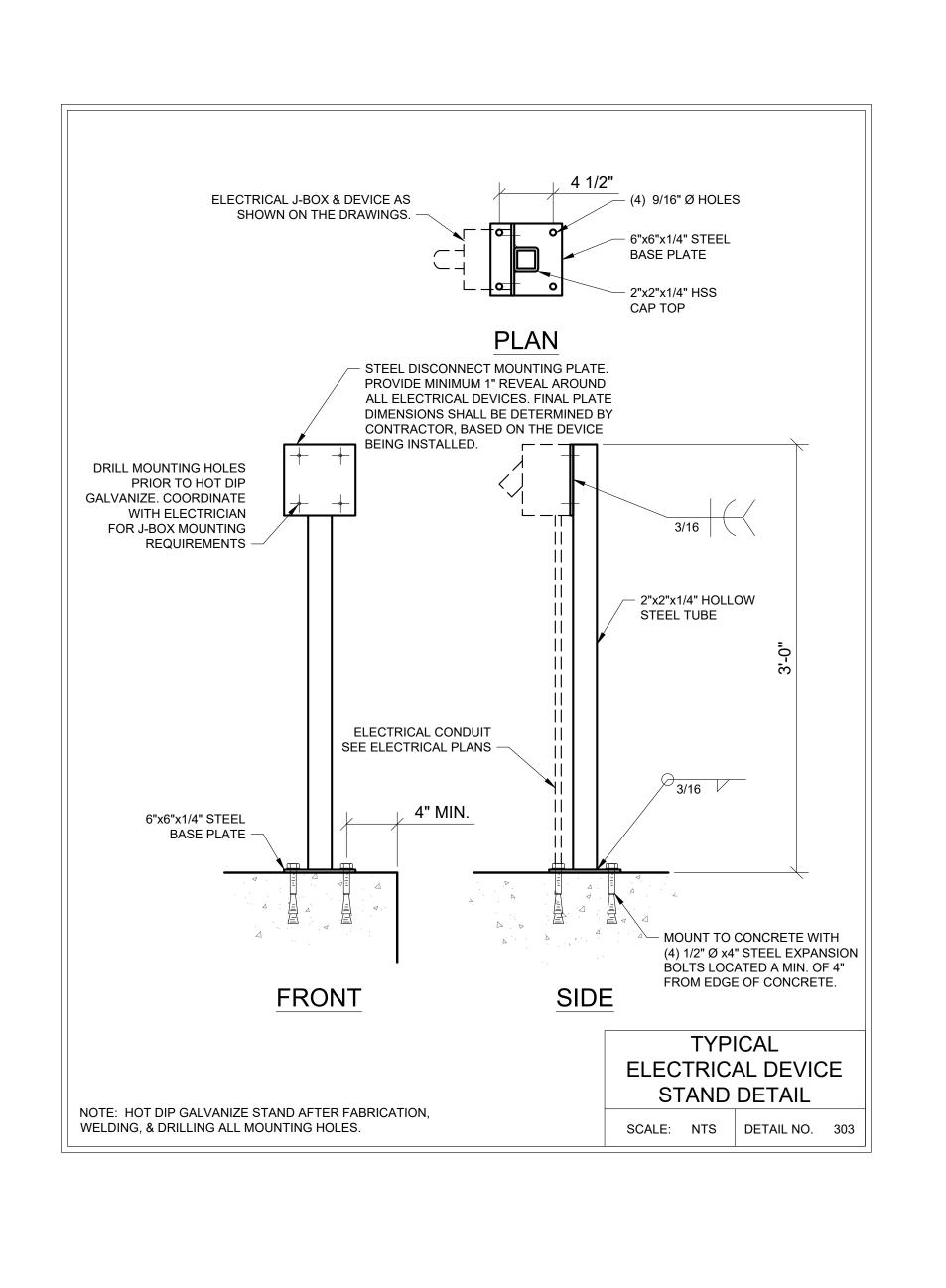
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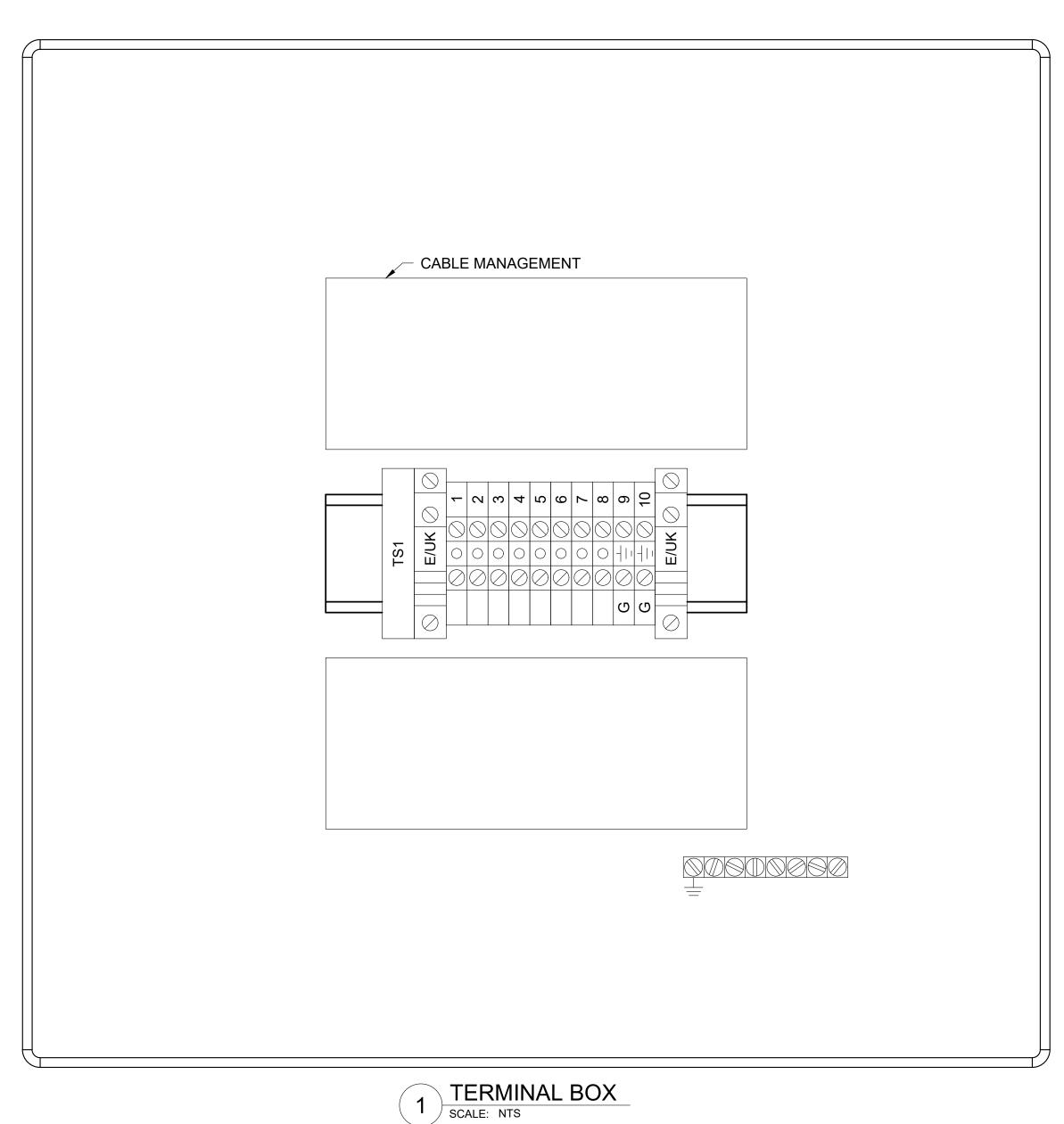
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ELECTRICAL SYMBOL LEGEND

REVISION





SCALE: NTS

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OR 1 / 4/2021

OR 2 / 4/2021

EXPIRES: 12-31-2022

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SWEET HOME
FINISHED WATER AND BACKWASH PUMPING
SYSTEMS IMPROVEMENTS

ELECTRICAL DETAILS

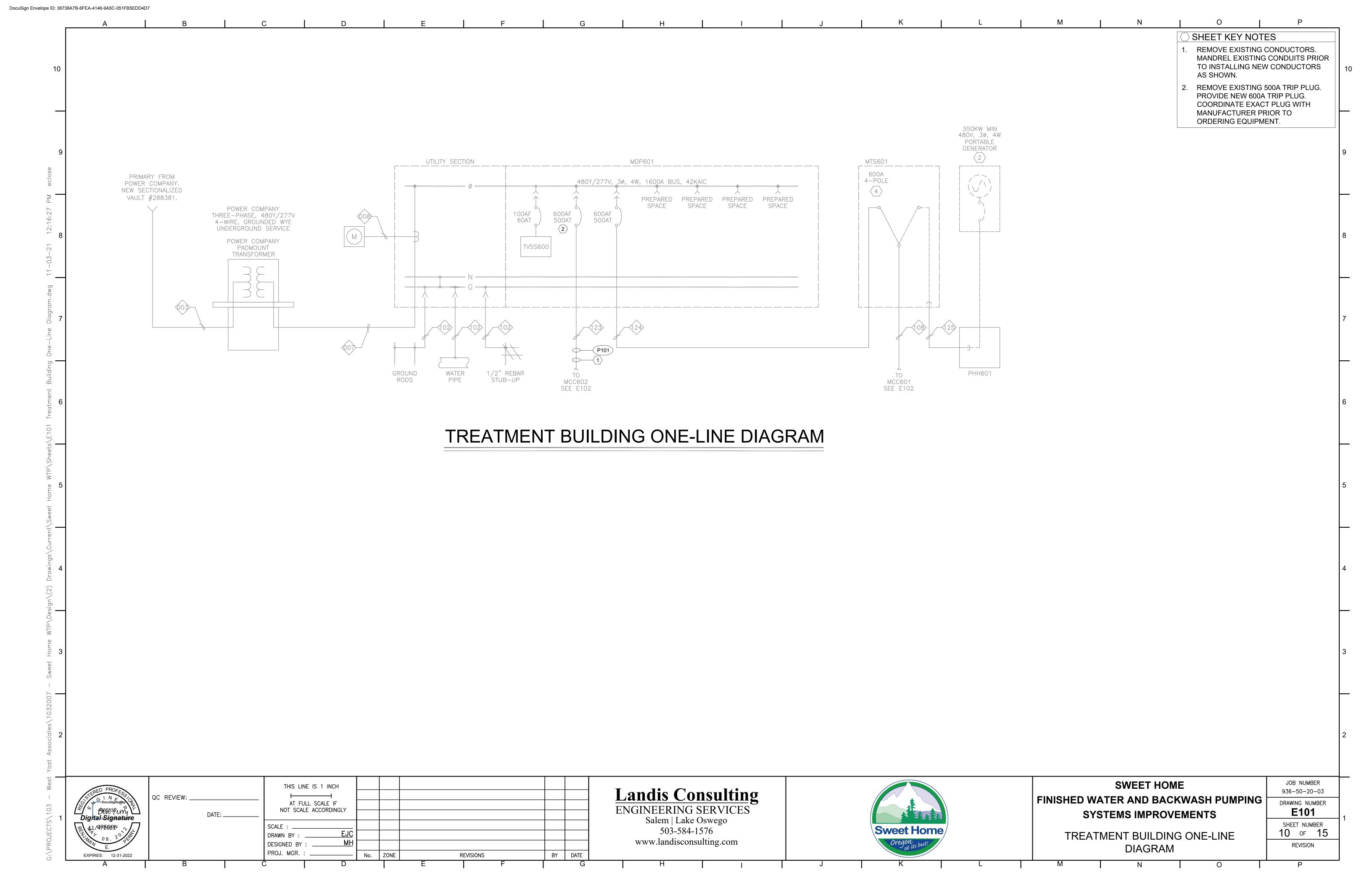
JOB NUMBER
936-50-20-03

DRAWING NUMBER

E003

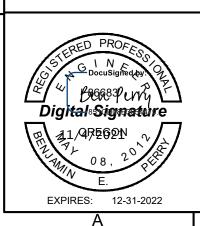
SHEET NUMBER
9 OF 15

REVISION



172 137 KVA 165 A 207 A Subtotal Continuous Load 416 A 413 496 A TOTAL CONNECTED LOAD:

- ACTIVE HARMONIC FILTER.
- 3. EXISTING SOFT STARTER SHALL BE REPLACED WITH NEW VFD BY INTEGRATOR OF RECORD. DISCONNECT AND RECONNECT EXISTING CONDUCTORS AS REQUIRED, COORDINATE WORK WITH INTEGRATOR OF RECORD.
- RECORD. CONTRACTOR SHALL INSTALL NEW MCC SECTION. PROVIDE ALL CONDUCTORS AND CONDUIT AS SHOWN FOR A COMPLETE SYSTEM. COORDINATE WORK WITH INTEGRATOR OF RECORD.



THIS LINE IS 1 INCH QC REVIEW: AT FULL SCALE IF NOT SCALE ACCORDINGLY DATE: ___ SCALE : DRAWN BY: MH DESIGNED BY PROJ. MGR. ZONE REVISIONS BY DATE No.

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SWEET HOME FINISHED WATER AND BACKWASH PUMPING **SYSTEMS IMPROVEMENTS**

> MCC601 AND MCC602 ONE-LINE DIAGRAMS

JOB NUMBER 936-50-20-03 DRAWING NUMBER E102 SHEET NUMBER 11 of 15 REVISION

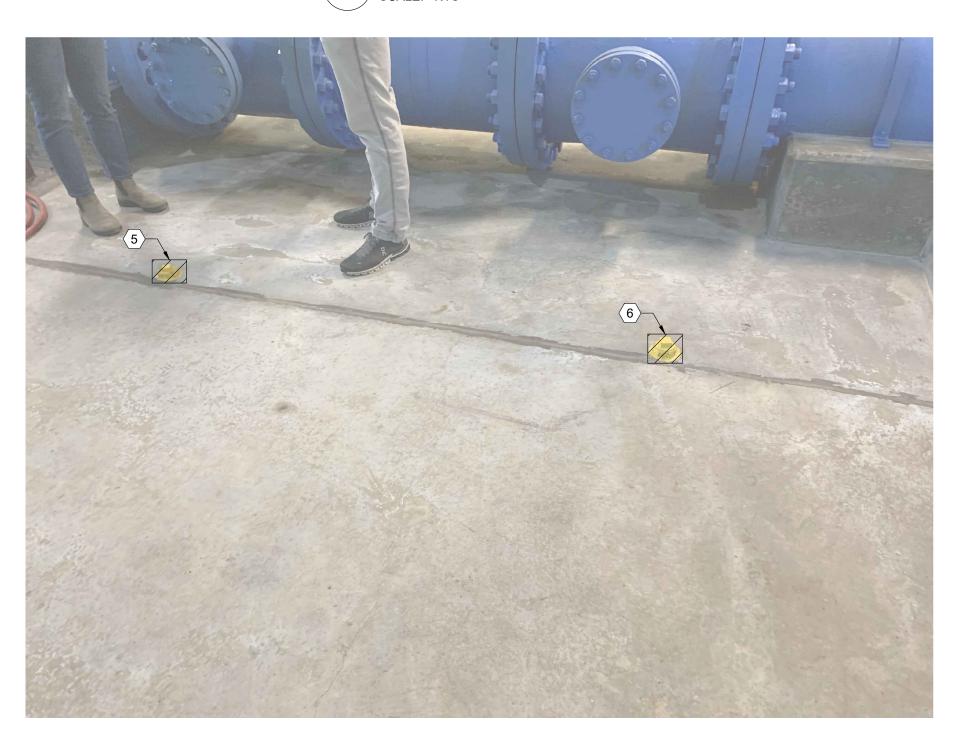
MCC 601 ELEVATION



3 NEW MCC ELEVATION
SCALE: NTS



MCC 602 ELEVATION
SCALE: NTS



4 SPARE CONDUITS

SCALE: NTS

GENERAL SHEET NOTES

1. THE AUTOMATION GROUP (TAG) IS THE INTEGRATOR OF RECORD. CONTACT IS GARY JENKS, PHONE # (541) 359-3755.

SHEET KEY NOTES

- . FINISHED WATER PUMP FWP401
 BUCKET. DISCONNECT EXISTING
 POWER CONDUCTORS FROM PUMP
 TO EXISTING SOFT STARTER.
 RECONNECT POWER CONDUCTORS
 TO NEW VFD. EXISTING SOFT
 STARTER SHALL BE REMOVED BY
 INTEGRATOR OF RECORD. NEW VFD
 SHALL BE PROVIDED AND INSTALLED
 BY INTEGRATOR OF RECORD. SEE
 SHEET E102 FOR ADDITIONAL
 INFORMATION.
- 2. FINISHED WATER PUMP FWP402
 BUCKET. DISCONNECT EXISTING
 POWER CONDUCTORS FROM PUMP
 TO EXISTING SOFT STARTER.
 RECONNECT POWER CONDUCTORS
 TO NEW VFD. EXISTING SOFT
 STARTER SHALL BE REMOVED BY
 INTEGRATOR OF RECORD. NEW VFD
 SHALL BE PROVIDED AND INSTALLED
 BY INTEGRATOR OF RECORD. SEE
 SHEET E102 FOR ADDITIONAL
 INFORMATION.
- 3. FINISHED WATER PUMP FWP403
 BUCKET. DISCONNECT EXISTING
 POWER CONDUCTORS FROM PUMP
 TO EXISTING SOFT STARTER.
 RECONNECT POWER CONDUCTORS
 TO NEW VFD. EXISTING SOFT
 STARTER SHALL BE REMOVED BY
 INTEGRATOR OF RECORD. NEW VFD
 SHALL BE PROVIDED AND INSTALLED
 BY INTEGRATOR OF RECORD. SEE
 SHEET E102 FOR ADDITIONAL
 INFORMATION.
- 4. NEW MCC SECTION AND SOFT STARTER SHALL BE PROVIDED BY INTEGRATOR OF RECORD. CONTRACTOR SHALL INSTALL NEW MCC SECTION. CONNECT NEW POWER CONDUCTORS TO SOFT START AS SHOWN SHEET E102.
- 5. UTILIZE EXISTING 2" CONDUIT FOR POWER TO NEW BACKWASH PUMP. SEE SHEET E601 FOR ADDITIONAL INFORMATION.
 6. UTILIZE EXISTING 2" CONDUIT FOR
- CONTROL CABLES TO NEW BACK
 WASH PUMP. SEE SHEET E601 FOR
 ADDITIONAL INFORMATION.
- 7. NEW CIRCUIT BREAKER SHALL BE PROVIDED AND INSTALLED BY INTEGRATOR OF RECORD. CONNECT NEW POWER CONDUCTORS TO CIRCUIT BREAKER AS SHOWN ON E101.
- 8. EXISTING MCC BUCKET SHALL BE REARRANGED FOR TWIN CIRCUIT BREAKERS BY INTEGRATOR OF RECORD. DISCONNECT AND RECONNECT EXISTING CONDUCTORS TO EXISTING CIRCUIT BREAKER. CONNECT NEW POWER CONDUCTORS TO NEW CIRCUIT BREAKER AS SHOWN E101.

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EXPIRES: 12-31-2022

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NOT SCALE ACCORDINGLY

SCALE:

DRAWN BY:

EJC
DESIGNED BY:

MH
PROJ. MGR.:

No. ZONE

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BY DATE

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SWEET HOME
FINISHED WATER AND BACKWASH PUMPING
SYSTEMS IMPROVEMENTS

MCC ELEVATIONS & ELECTRICAL PHOTOS

JOB NUMBER
936-50-20-03

DRAWING NUMBER
E103

E103

SHEET NUMBER
12 OF 15

REVISION

PROJ. MGR.

EXPIRES: 12-31-2022

ZONE

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BY DATE

LOCATION: XXX PANEL NAME: VOLT/PHASE: 208/120V, 3Ø FED FROM: MCC 601 VIA XFMR 602 NUM. POLES: BREAKER MOUNTING: BOLTED **AIC RATING:** 42,000 MAIN BREAKER AMPS: 175 BUS RATING AMPS: 225 **EXISTING PANEL** REF. KEY NOTE #: NO CIRCUIT | CIRCUIT LOAD **RATING** NOTES LOAD DESCRIPTION **RATING** LOAD DESCRIPTION NOTES **TYPE** L1 L3 NUMBER | NUMBER L2 L3 TYPE **AMPS AMPS** CU-1 25 SPARE POWER CONDUIT / CONDUCTOR SCHEDULE SPARE 30 CONDUIT **CONDUCTORS PER CONDUIT** CONDUIT ID DESCRIPTION QUANTITY SIZE UNGROUNDED GROUNDED GROUNDING CABLE SPARE SPARE 10 UTILIZE EXISTING CONDUITS. CU-2 40 3.0 INCH MDP601 THERE ARE THREE CONDUITS. 3 - #350 1 - # 1/0 MCC602 12 11 ONE SHALL REMAIN SPARE. MCC601 50A AHF 1.25 INCH RCPT: P201 13 14 20 20 EWH-2 1.25 INCH MCC602 100A AHF RCPT: P202 CP101 2.0 INCH 3 - #2/0 MCC602 (N) BACKWASH PUMP 1 - #6 (N) CONTROL PANEL 0.75 INCH 1 - #12 1 - #12 PANEL L602 1 - #12 RCPT: ACH201 20 17 18 20 CP210 (N) MOTORIZED VALVE P106 PANEL L602 0.75 INCH 1 - #12 1 - #12 1 - #12 500 POLYMER MIX UNIT 20 19 20 20 [1] (N) CONTROL PANEL PXXX RCPT: CL201 20 21 22 20 500 (N) MOTORIZED VALVE NOTES: RCPT: SA201 20 23 24 20 SPARE RCPT: F201 20 25 26 20 SPARE CONTROL CONDUIT / CONDUCTOR SCHEDULE CONDUCTORS PER CONDUIT CONDUIT RCPT: PROCESS AREA CONDUIT ID 20 28 EWH-1 TO DESCRIPTION NOTES NO. QUANTITY SIZE UNGROUNDED GROUNDED GROUNDING CABLE RCPT: PROCESS AREA 20 UH-1, 2, 4, 6 & 10 50A AHF C101 1.0 INCH 3 - TSP MCC601 CT'S C102 3 - TSP MCC602 CT'S 100A AHF 1.0 INCH RCPT: FILTER 2 20 32 20 F-2 INSTRUMENTATION MOTORIZED VALVE AND TWO C103 2.5 INCH 3 - CAT6 (N) CONTROL PANEL JUNCTION BOX PRESSURE TRANSMITTERS SPARE 20 NEW CONDUIT TO CABLE TRAY. FC-1 C104 1.0 INCH 1 - CAT6 MCC601 FWP601 VFD (N) CONTROL PANEL UTILIZE CABLE TRAY FOR CAT6 SPARE 20 35 HOMERUN. MCC602 FWP402 VFD NEW CONDUIT TO CABLE TRAY. 37 RCPT: PROCESS AREA 20 EF-1 38 20 MCC602 FWP403 VFD (N) CONTROL PANEL C105 1.0 INCH 3 - CAT6 UTILIZE CABLE TRAY FOR CAT6 (N) BACKWASH PUMP HOMERUN. RCPT: PROCESS AREA RCPT: SCM AIT012 / 022 20 39 40 20 PRESSURE (N) INSTRUMENTATION 1 - CAT6 C106 0.75 INCH **TRANSMITTER** JUNCTION BOX RCPT: CHEM AREA RCPT: CHEM AREA PRESSURE (N) INSTRUMENTATION C107 0.75 INCH 1 - CAT6 TRANSMITTER JUNCTION BOX INSTRUMENTATION C108 0.75 INCH 1 - CAT6 MOTORIZED VALVE JUNCTION BOX TOTAL LOAD: C109 C110 C111 CONNECTED LOAD: 1,000 500 500 DEMAND LOAD: COMBINED LOAD: C112 -C113 **DEMAND AMPS:** C115 -C116 -NOTES: Load Type Key Demand Factor **Demand Load** Connected Load 100% First 10kVA, 50% thereafter General Purpose Receptacle 125% Load 125% Load Largest Motor 100% Load 100% Load 100% Load 6 - Units of Equipment - See NEC Table 220.56 65% Load Equipment 100% Load 100% Load Transformer 100% Load XX - RV Sites - See NEC Table 551.71 (A) XX% Load Recreational Vehicle NOTES: [1] CONNECT TO EXISTING SPARE 20A, 120V, 1-PHASE CIRCUIT BREAKER FOR NEW LOAD AS SHOWN. **SWEET HOME** JOB NUMBER THIS LINE IS 1 INCH **Landis Consulting** 936-50-20-03 QC REVIEW: FINISHED WATER AND BACKWASH PUMPING DRAWING NUMBER AT FULL SCALE IF ENGINEERING SERVICES NOT SCALE ACCORDINGLY E106 **SYSTEMS IMPROVEMENTS** DATE: ____ Salem | Lake Oswego SHEET NUMBER **Sweet Home** 503-584-1576 13 of 15 DRAWN BY: www.landisconsulting.com CONDUIT AND PANEL SCHEDULES DESIGNED BY

REVISION

