



CITY OF
**West
Linn**

ADDENDUM No. 1

**Project Number: PW-10-14
Bland Intertie Pump Station**

Public Works Department
22500 Salamo Road
West Linn, Oregon 97068
Telephone: (503) 722-5500
Fax: (503) 656-4106

Project Description: Bland Intertie Pump Station

Issue Date:

This Addendum forms part of the "Invitation for Bid" and modifies or clarifies the original "Invitation for Bid" for the Project identified above. Prospective Bidders shall acknowledge receipt of the total number the Addenda issued for this Project by signing and returning each Addendum with the Bid. Failure to do so may subject Bidder to disqualification.

The following clarifications are applicable to drawings and specifications for the project referenced above.

See attached documents



EXPIRES: 12-31-15

ACKNOWLEDGEMENT OF ADDENDUM

Inclusion of the above Addendum is hereby acknowledged.

CONTRACTOR:

Contractor: _____
Signature

Date

Company Name

- 1) The project's site address is 23120 SW Bland Circle West Linn, OR 97068
- 2) The Owner will establish and provide five (5) field survey references: four (4) five (5') foot corner offsets for each building corner and one (1) temporary benchmark elevation (TBM) at the site for Contractor's use. Although these references are provided for the convenience and use of the Contractor, any errors in their use and/or interpretation occurring beyond the references shall be the responsibility of the Contractor.
- 3) The Owner shall make allowances for the existing storage tank to be off-line and drained for up to one (1) full day to allow for the revision and switch-over of the valving configuration. The Contractor shall plan and make all appropriate preparations for this change-over in advance of the draining of the reservoir.
- 4) The drain line connection shall be made using an 8" x 2" saddle to the existing drain line.
- 5) The electrical service shall be brought into the site and to the pump station as detailed on the revised and attached drawings for both primary and secondary power circuits.
- 6) Section 04200, Part C.(4)(b) of the specifications (page 8 of Section 04200) shall be amended to read, "Use a 6 mil visqueen vapor barrier under all interior slabs." The use of a geotextile fabric is not required on this project.
- 7) Paper-backed insulation shall be allowed for ceiling insulation.
- 8) Both the gutters and downspouts shall be constructed of 26 gauge (minimum) steel with a baked enamel finish.
- 9) The soffit for the 3' front overhang shall be closed using 1/2" T111 plywood and painted using 2 coats of a flat latex paint, 6 mils minimum D.F.T.
- 10) Re: Section 03480 – Precast Vault System – Part 2: Products – 2.2 Vault Structure, Paragraph I. Amend to read: "The flowmeter vault shall be a Utility Vault model 506-LA or approved equal. (I.D. = 4'2" x 4'2" x 5'2")". RE: Plans – Sheet M-2 – Vault Detail: Amend sump drain rim elevation to read: "527.00±" and I.E. to read: "526.00±". Adjust 2" drainpipe slope and connection to maintain specified fall to 8" pipe. The hatch for the flowmeter vault as detailed in Section 03480, Part 2.2(G) shall be amended to read, "The vault shall be supplied with a single galvanized, lockable deck steel hatch. The hatch shall be capable of a full 180 degree opening and have a recessed opening handle. The vault shall include one (1) hatch".
- 11) A hose bibb and pressure gauge assemblies for the suction and discharge manifolds shall be added as detailed on the attached drawings.
- 12) The yard light shall be a 50W fluorescent weathertight fixture with a rapid-start ballast.
- 13) The motor feeders shall be UL listed, 600 VAC rated cable, and shall consist of XLPE insulated copper cable with three (3) #1 ga.cu power and three (3) #8 ga.cu symmetrical ground conductors. OLFLEX VFD symmetrical or approved equal. Increase conduit sizes from MCC to motors to 2½" (from specified 2").
- 14) The quantity of trees as detailed in Part 4 of Section 02930 of the specifications is the anticipated number of trees for screening. This number shall be used for bidding purposes.
- 15) The total anticipated length of fencing for this project shall be 835 linear feet, not including the single 15' gate (total length of fencing and gate estimated to be 850'). This value shall be used for bidding purposes.

- 16) The 200A generator receptacle shall be a UL certified, 3 phase, 480 VAC, 4W receptacle. Receptacle shall be capable of being locked out from the exterior. Arktite or equivalent.
- 17) To the best knowledge of the Owner and Engineer, there is currently no pump in the well.
- 18) All suction and discharge piping under the pump station slab shall be concrete encased.
- 19) Piping labels shall not be required for this project.
- 20) Electrical Section 16000, subsection 1.06, A: All work, including installation, rough-in, connections, and testing shall be performed by qualified and licensed personnel, working under competent supervision. The Contractor shall be licensed and bonded, as required, to conduct electrical contracting and installation work in the State of Oregon.
- 21) The 2" cleanout for the vault sump shall comply with City of West Linn Standard Construction detail WL-206.
- 22) The Contractor shall coordinate with the City and CenturyLink to intercept the existing phone service to the tank in a new telephone handhole and connect this handhole using a 2" PVC conduit into the pump station. Provide a 2'x2'x3/4" plywood telephone demarcation adjacent to the RTU for telephone service. Install a pull cord inside the 2" conduit for use by the phone company. Prepare for the telephone changeover immediately prior to pump station startup. Revise wire count shown on sheet E-3 for raceway number 1 from 4-#12, 2 pair Cat6 to 4-#12, 2 pair 16 GA. T&S.
- 23) To reroute the existing electrical service to the reservoir, the Contractor shall revise wire count shown on sheet E-3 and end point location for raceway number 2. Revise origin from RTU to MCC SEC 5, revise wire from spare to 5-#12. Supply terminal junction box and GFCI WP 120V outlet with cover. Terminate raceway number 2 at new terminal junction box and locate below existing cathodic protection unit. Route one circuit to cathodic protection and second circuit to outlets. Route GFCI protected wires from outlet to reservoir level enclosure immediately adjacent to cathodic protection unit for heat lamp use.
- 24) Each 75 HP booster pump motor shall be equipped with an integral overheat sensor, capable of monitoring winding temperatures and activating a single pole normally closed switch to a remote circuit (open on temperature increase). A 1/2" underslab conduit with 3 - #12 cu conductors shall be added between each motor and its respective motor controller cabinet to route this circuit to the MCC.
- 25) The Owner will apply for, procure, and pay all costs for the building permit, as well as perform all routine inspections, however, the Contractor shall coordinate and schedule these inspections as required by the Contract Documents, applicable building codes, and West Linn Standards.
- 26) Special inspections shall be required for two (2) specific tasks: 1) verifying the reinforcement size, quantity, placing, cover, and for general compliance with the plans and 2) to verify the CMU block wall material, reinforcement, mortar, and grouting, and for general compliance with the plans. All responsibility for coordinating and scheduling as well as the costs for special inspections shall be borne by the Contractor. Special inspections must be performed by firms and/or individuals that are state certified in the respective class of work. The Contractor shall submit adequate evidence of the required certification(s) as an element of the post-bid submittals.

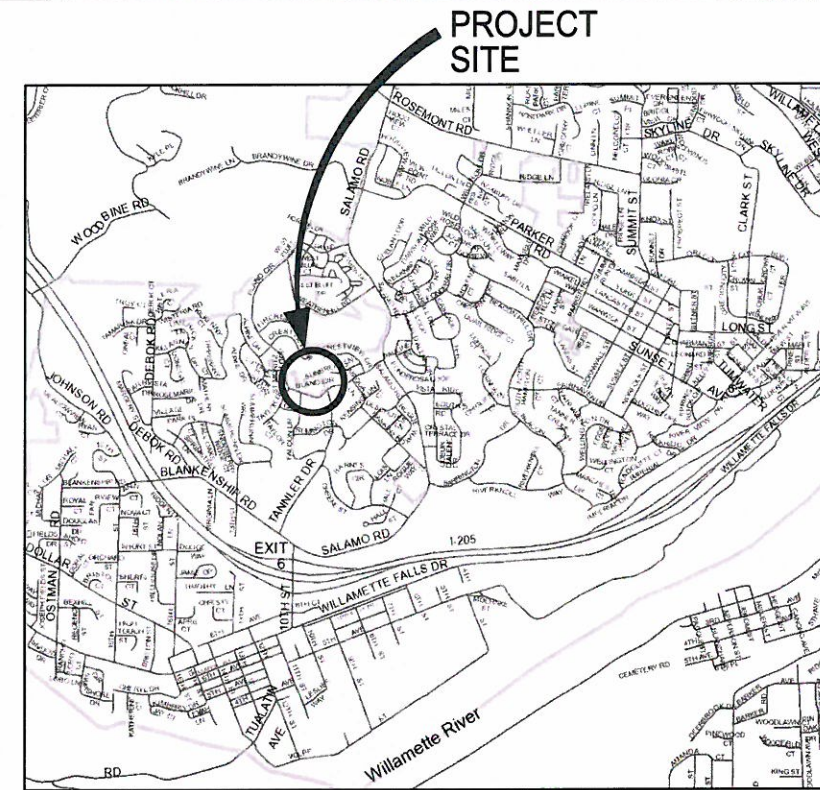


BLAND CIRCLE INTERTIE PUMP STATION

PROJECT NUMBER: PW1014
DECEMBER, 2013

DESIGN ENGINEER:
4B ENGINEERING
EDWARD BUTTS, PE
ADAM BUTTS, E.I.
BROOKE SALTARELLO
3700 RIVER ROAD N
SUITE 2
KEIZER, OREGON 97303

OWNER:
CITY OF WEST LINN
ERICH LAIS, P.E.
ASSISTANT CITY ENGINEER
22500 SALAMO ROAD
WEST LINN, OREGON 97068



WEST LINN, OREGON
VICINITY MAP
NOT TO SCALE

SHEET INDEX

- SHEET C-1: COVER SHEET AND DRAWING INDEX
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- SHEET S-1B: SITE PLAN (1" = 20'-0" SCALE)
- SHEET S-2: SITE DETAILS
- SHEET B-1: PUMP STATION ELEVATIONS
- SHEET B-2: PUMP STATION ROOF PLAN AND DETAILS
- SHEET B-3: PUMP STATION RIDGE AND SKYLIGHT DETAILS
- SHEET M-1: MECHANICAL PLAN VIEW
- SHEET M-2: MECHANICAL ELEVATION VIEW
- SHEET M-3: THRUST BLOCK DETAILS
- SHEET M-4: MECHANICAL DETAILS
- SHEET D-1: DRAIN DETAILS
- SHEET E-1: PUMP STATION ELECTRICAL PLAN VIEW
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- SHEET E-3: ELECTRICAL DETAILS
- SHEET E-4: ONE LINE POWER DIAGRAM
- SHEET E-5: ELECTRICAL DETAILS
- SHEET 1C-1: BLOCK DIAGRAM PUMPING SYSTEMS
- SHEET 1C-2: BLOCK DIAGRAM ANCILLARY SYSTEMS
- SHEET 1C-3: NETWORK DIAGRAM-LOCAL AND WIDE AREA CONNECTIONS
- SHEET 1C-4: P&ID PROCESS CONTROLS
- SHEET 1C-5: PRESENTATION REMOTE TELEMETRY UNIT
- SHEET 1C-6: MOTOR CONTROL CENTER PRESENTATION AND ONE LINE DIAGRAM
- SHEET 1C-7: WIRING DIAGRAM MOTOR CONTROL LOGIC

DESIGN CRITERIA

TYPE OF FACILITY: POTABLE WATER BOOSTER PUMPING STATION
OCCUPANCY CATEGORY: IV
OCCUPANCY CLASS: F1
CONSTRUCTION TYPE: V-B (ACCEPTABLE FOR SINGLE STORY STRUCTURES UP TO 5,500 FT²)
BUILDING AREA: 352 SQUARE FEET (16' X 22')
< 5,500 FT² ALLOWED
NUMBER OF STORIES: 1
DESIGN CATEGORY: CATEGORY IV (ESSENTIAL FACILITIES)
WALL CONSTRUCTION FRAMING: 8" X 8" X 16" HOLLOW CORE MEDIUM WEIGHT CONCRETE MASONRY UNITS; COLOR: DARK GREEN
ROOF CONSTRUCTION: PREFABRICATED TRUSSES @ 24" O.C. SPACING WITH 3/4" EXTERIOR GRADE PLYWOOD SHEATHING, AND STANDING SEAM METAL ROOF.
FLOOR CONSTRUCTION: 6" CAST-IN-PLACE CONCRETE
SEISMIC SITE CLASS: CLASS "D"
NEAREST SETBACK TO PROPERTY LINE: 20' FROM SOUTH PROPERTY LINE

4B ENGINEERING & CONSULTING, LLC
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KEIZER, OREGON 97303
(503) 589-1115

CITY OF WEST LINN
BLAND CIRCLE INTERTIE P.S.
COVER SHEET

PREPARED FOR:
CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
(503) 657-0331

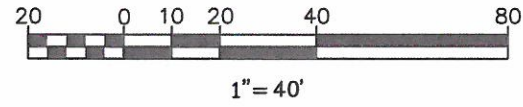
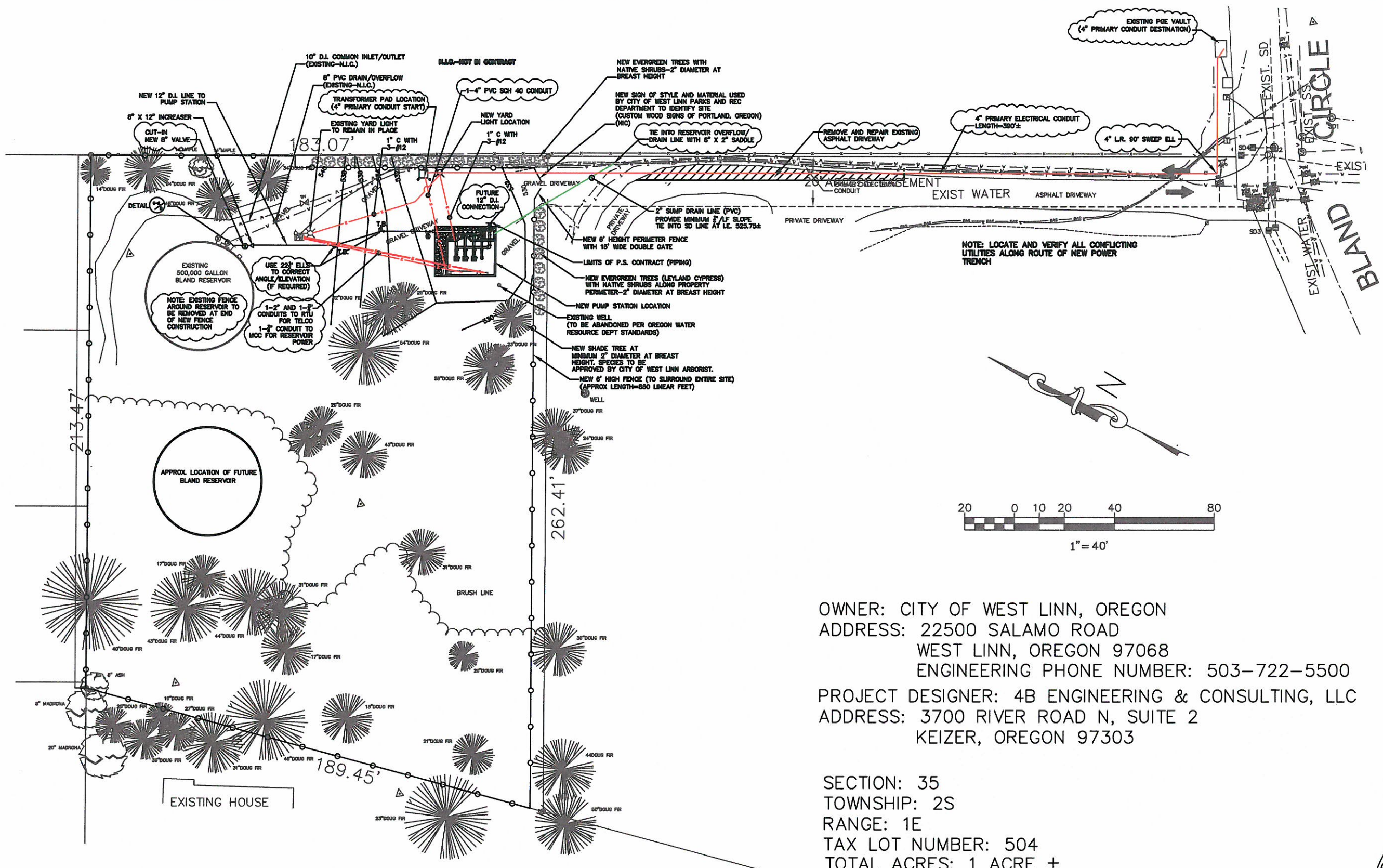
DESIGN: EDWARD P. BUTTS, P.E.
DRAWN: BROOKE SALTARELLO
DATE: AUGUST 19, 2013
DRAWING:
SCALE: AS SHOWN

REVISIONS:		
No.	Date	By
1	JAN 27, 2014	BS

SHEET: C-1



EXPIRES: 12-31-15



OWNER: CITY OF WEST LINN, OREGON
 ADDRESS: 22500 SALAMO ROAD
 WEST LINN, OREGON 97068
 ENGINEERING PHONE NUMBER: 503-722-5500

PROJECT DESIGNER: 4B ENGINEERING & CONSULTING, LLC
 ADDRESS: 3700 RIVER ROAD N, SUITE 2
 KEIZER, OREGON 97303

SECTION: 35
 TOWNSHIP: 2S
 RANGE: 1E
 TAX LOT NUMBER: 504
 TOTAL ACRES: 1 ACRE ±

4B ENGINEERING & CONSULTING, LLC
 3700 RIVER ROAD N, SUITE 2
 KEIZER, OREGON 97303
 (503) 589-1115

CITY OF WEST LINN
 BLAND CIRCLE INTERTIE P.S.
 SITE PLAN

PREPARED FOR:
 CITY OF WEST LINN
 22500 SALAMO ROAD
 WEST LINN, OREGON 97068
 (503) 657-0331

DESIGN: EDWARD P. BUTTS, P.E.
 ADAM F. BUTTS, E
 DRAWN: BROOKE SALTARELLO
 DATE: JUNE 4, 2013
 DRAWING:
 SCALE: AS SHOWN

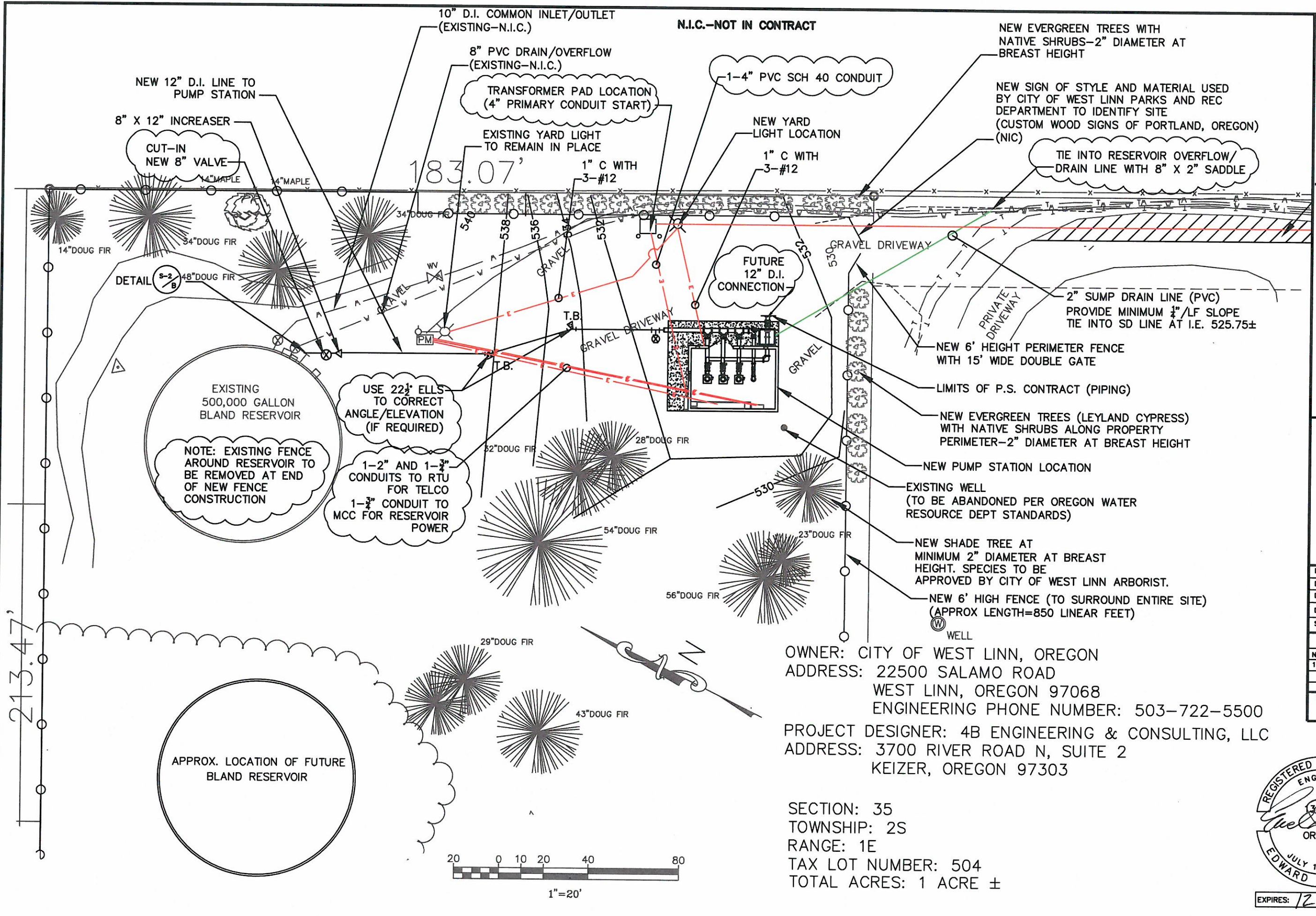
REVISIONS:

No.	Date	By
1	JAN 27, 2014	BS

SHEET:
 S-1A



EXPIRES: 12-31-15



4B ENGINEERING & CONSULTING, LLC
 3700 RIVER ROAD N, SUITE 2
 KEIZER, OREGON 97303
 (503) 569-1115

CITY OF WEST LINN
 BLAND CIRCLE INTERTIE P.S.
 SITE PLAN

PREPARED FOR:
 CITY OF WEST LINN
 22500 SALAMO ROAD
 WEST LINN, OREGON 97068
 (503) 657-0331

DESIGN: EDWARD P. BUTTS, P.E.
 ADAM E. BUTTS, D.
 DRAWN: BROOKE SALTARELLO
 DATE: JUNE 4, 2013
 DRAWING:
 SCALE: AS SHOWN

REVISIONS:		
No.	Date	By
1	JAN 27, 2014	BS

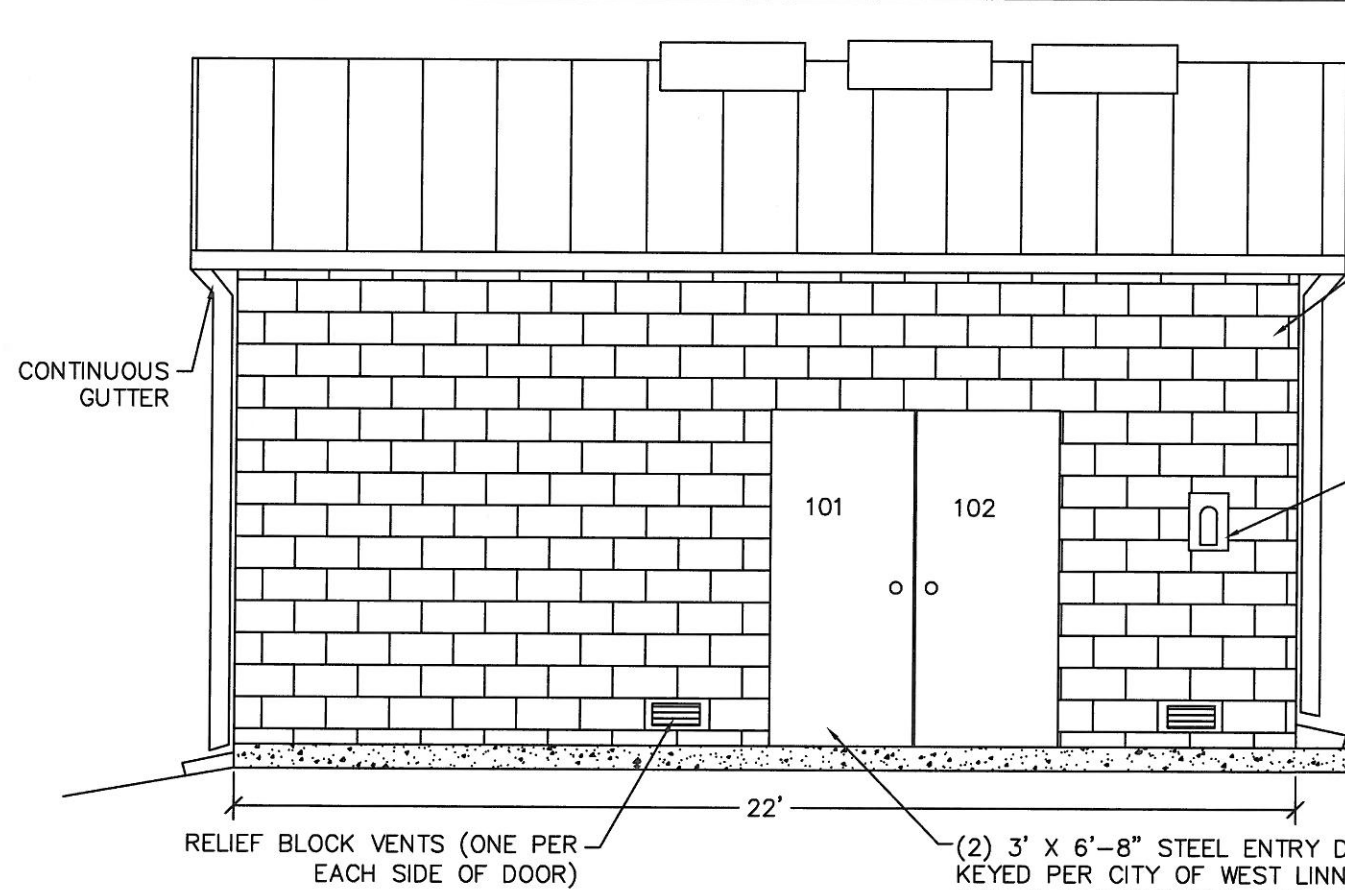
SHEET: S-1B

OWNER: CITY OF WEST LINN, OREGON
 ADDRESS: 22500 SALAMO ROAD
 WEST LINN, OREGON 97068
 ENGINEERING PHONE NUMBER: 503-722-5500
 PROJECT DESIGNER: 4B ENGINEERING & CONSULTING, LLC
 ADDRESS: 3700 RIVER ROAD N, SUITE 2
 KEIZER, OREGON 97303

SECTION: 35
 TOWNSHIP: 2S
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 TAX LOT NUMBER: 504
 TOTAL ACRES: 1 ACRE ±



EXPIRES: 12-31-15



EAST ELEVATION
SCALE: 1" = 4'-0"

USE 24"W 24 GAUGE METAL ROOF PANELS OVER 3/4" CDX PLYWOOD AND ONE (1) LAYER 30# FELT. USE PLYCLIPS AS PER MANUFACTURER RECOMMENDATIONS.

3-34" X 34" SKYLIGHTS CENTERED OVER PUMPS (VELUX FCM3434 OR APPROVED EQUAL)

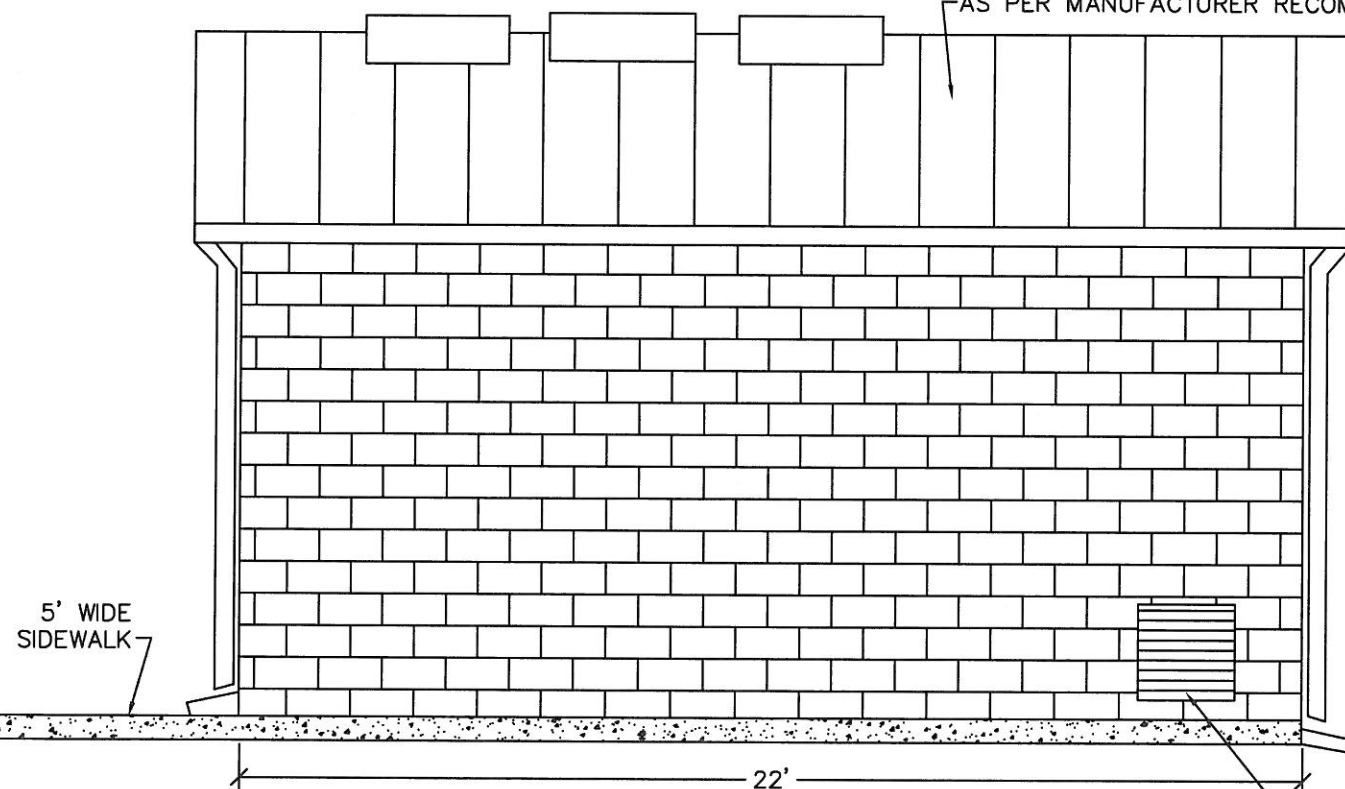
WALLS TO BE BUILT WITH 8" X 8" X 16" H.C. M.W. CMU BLOCK (COLOR: DARK GREEN)

200A, 4P RECEPTACLE WITH LOCKABLE COVER

5' WIDE SIDEWALK

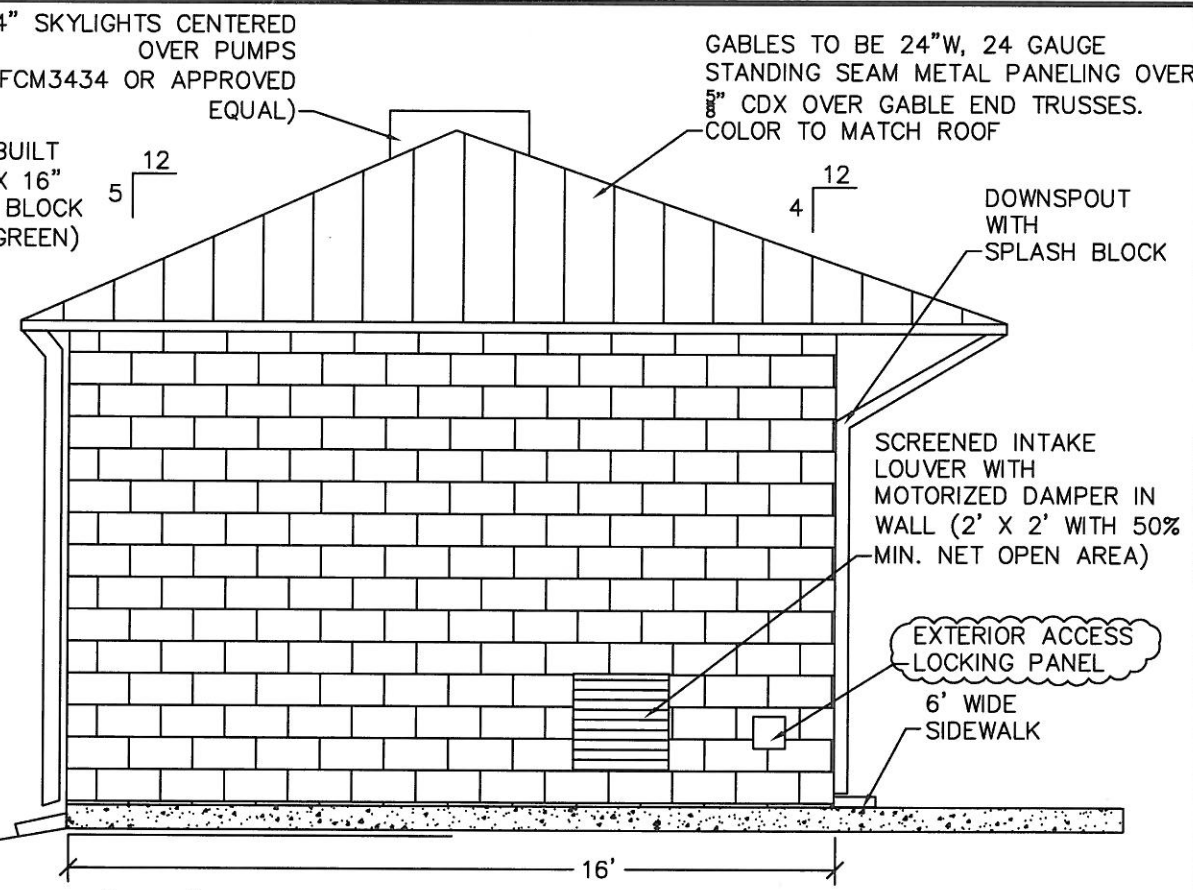
RELIEF BLOCK VENTS (ONE PER EACH SIDE OF DOOR)

(2) 3' X 6'-8" STEEL ENTRY DOORS KEYED PER CITY OF WEST LINN SPECIFICATIONS WITH FLAT THRESHOLD AND WIPER SEAL ON BOTTOM



WEST ELEVATION
SCALE: 1" = 4'-0"

SCREENED INTAKE LOUVER WITH MOTORIZED DAMPER IN WALL (2' X 2' WITH 50% MIN. NET OPEN AREA)



SOUTH ELEVATION
SCALE: 1" = 4'-0"

USE 24"W 24 GAUGE METAL ROOF PANELS OVER 3/4" CDX PLYWOOD AND ONE (1) LAYER 30# FELT. USE PLYCLIPS AT EDGES AS PER MANUFACTURER RECOMMENDATIONS.

3-34" X 34" SKYLIGHTS CENTERED OVER PUMPS (VELUX FCM3434 OR APPROVED EQUAL)

WALLS TO BE BUILT WITH 8" X 8" X 16" H.C. M.W. CMU BLOCK (COLOR: DARK GREEN)

DOWNSPOUT WITH SPLASH BLOCK

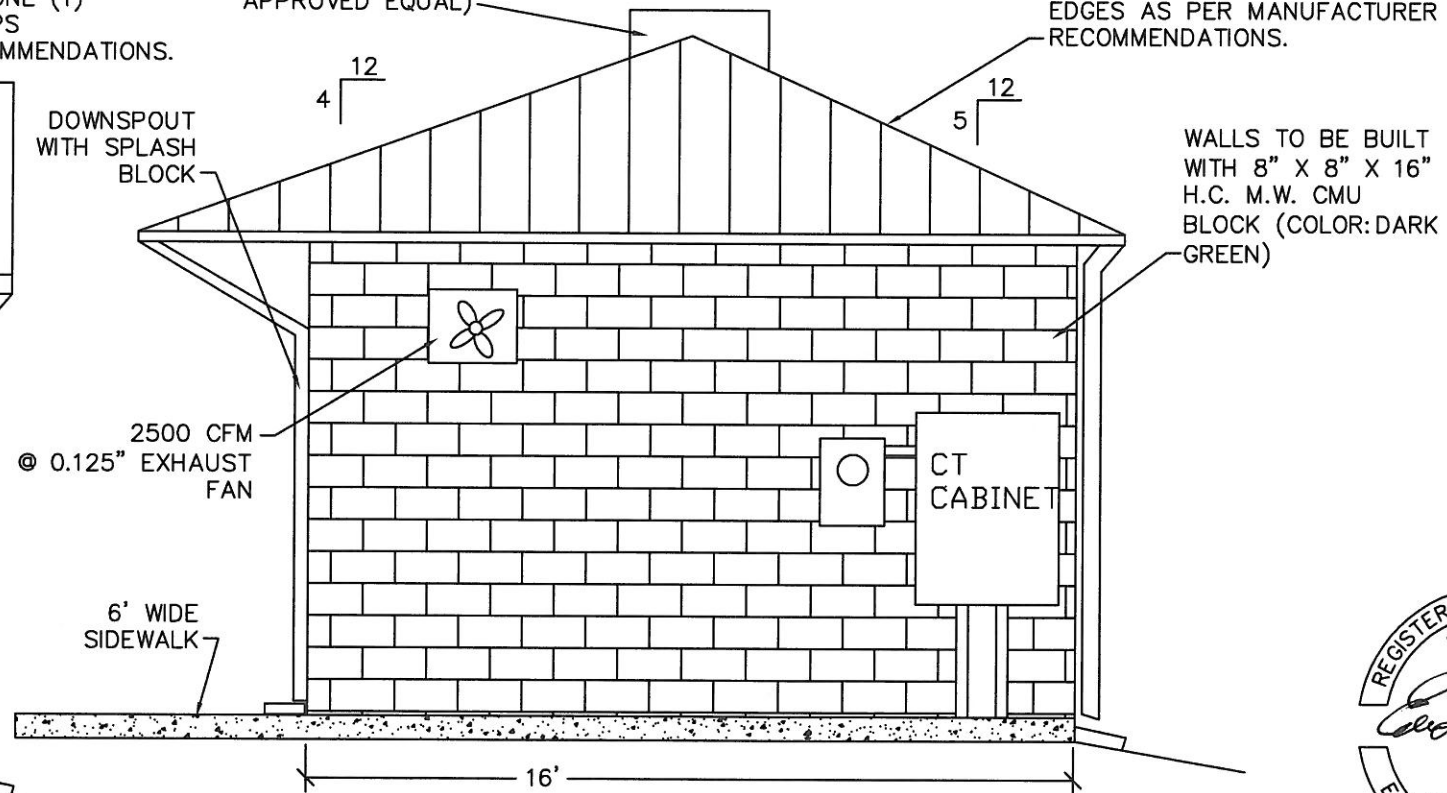
2500 CFM @ 0.125" EXHAUST FAN

6' WIDE SIDEWALK

SCREENED INTAKE LOUVER WITH MOTORIZED DAMPER IN WALL (2' X 2' WITH 50% MIN. NET OPEN AREA)

EXTERIOR ACCESS LOCKING PANEL

6' WIDE SIDEWALK



NORTH ELEVATION
SCALE: 1" = 4'-0"



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CITY OF WEST LINN
BLAND CIRCLE INTERTIE P.S.
EXTERIOR DETAILS

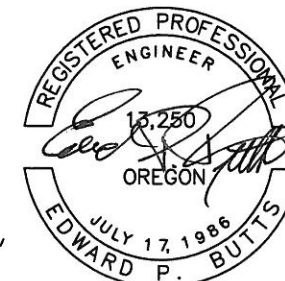
PREPARED FOR:
CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
(503) 657-0331

DESIGN: EDWARD P. BUTTS, P.E.
ADAM E. BUTTS, B
DRAWN: BROCKE SALTARELLO
DATE: AUGUST 18, 2013

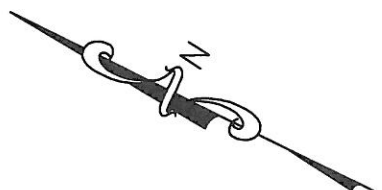
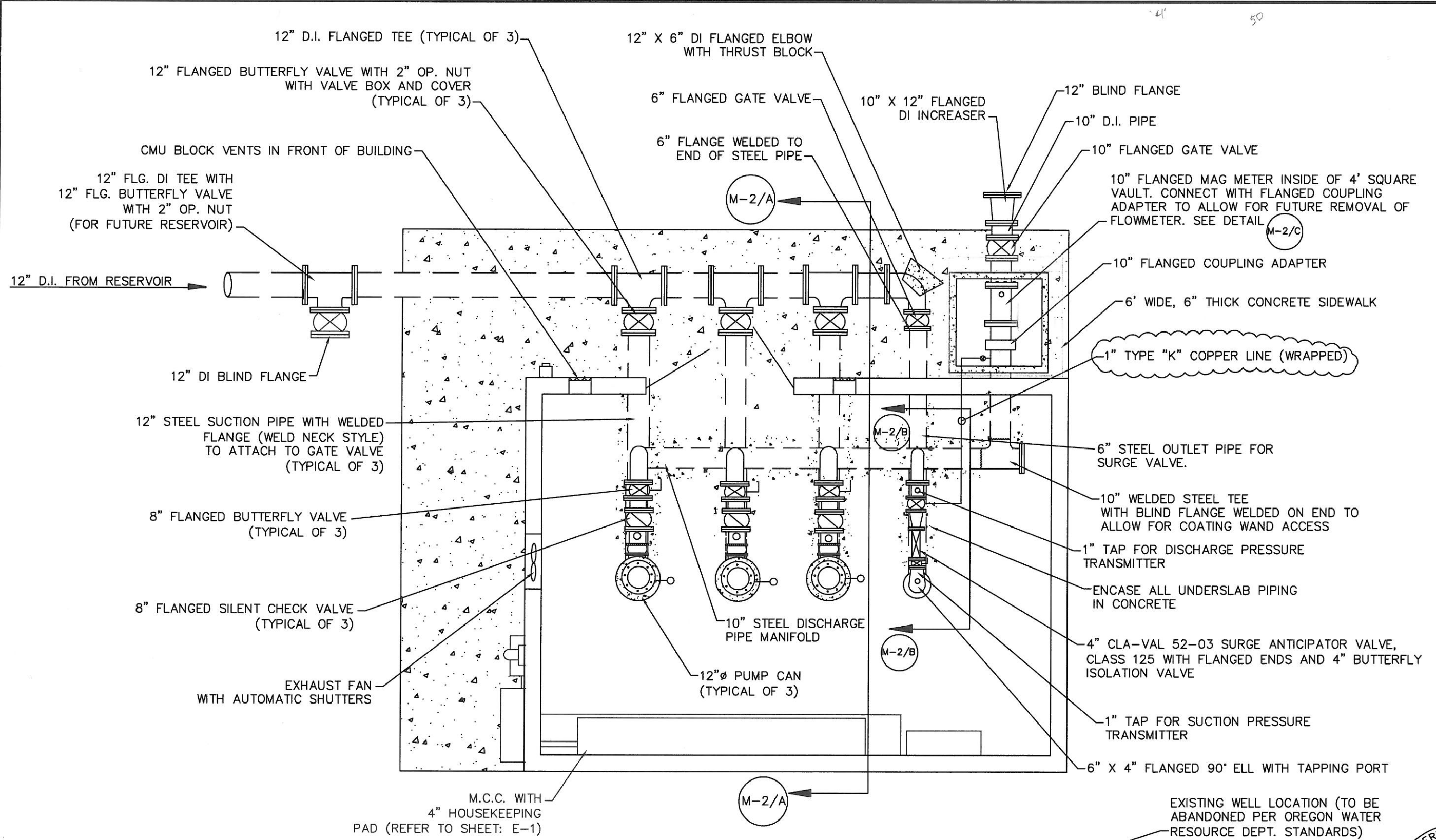
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SCALE: AS SHOWN

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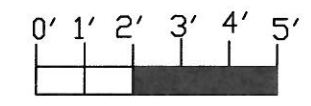
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EXPIRES: 12-13-15



MECHANICAL PIPING
SCALE: 1" = 4'-0"



EXISTING WELL LOCATION (TO BE ABANDONED PER OREGON WATER RESOURCE DEPT. STANDARDS)

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CITY OF WEST LINN
BLAND CIRCLE INTERTIE P.S.
MECHANICAL PLAN VIEW

PREPARED FOR:
CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
(503) 657-0331

DESIGN: EDWARD P. BUTTS, P.E.
DRAWN: BROOKE SALTARELLO
DATE: AUGUST 16, 2013
DRAWING:
SCALE: AS SHOWN

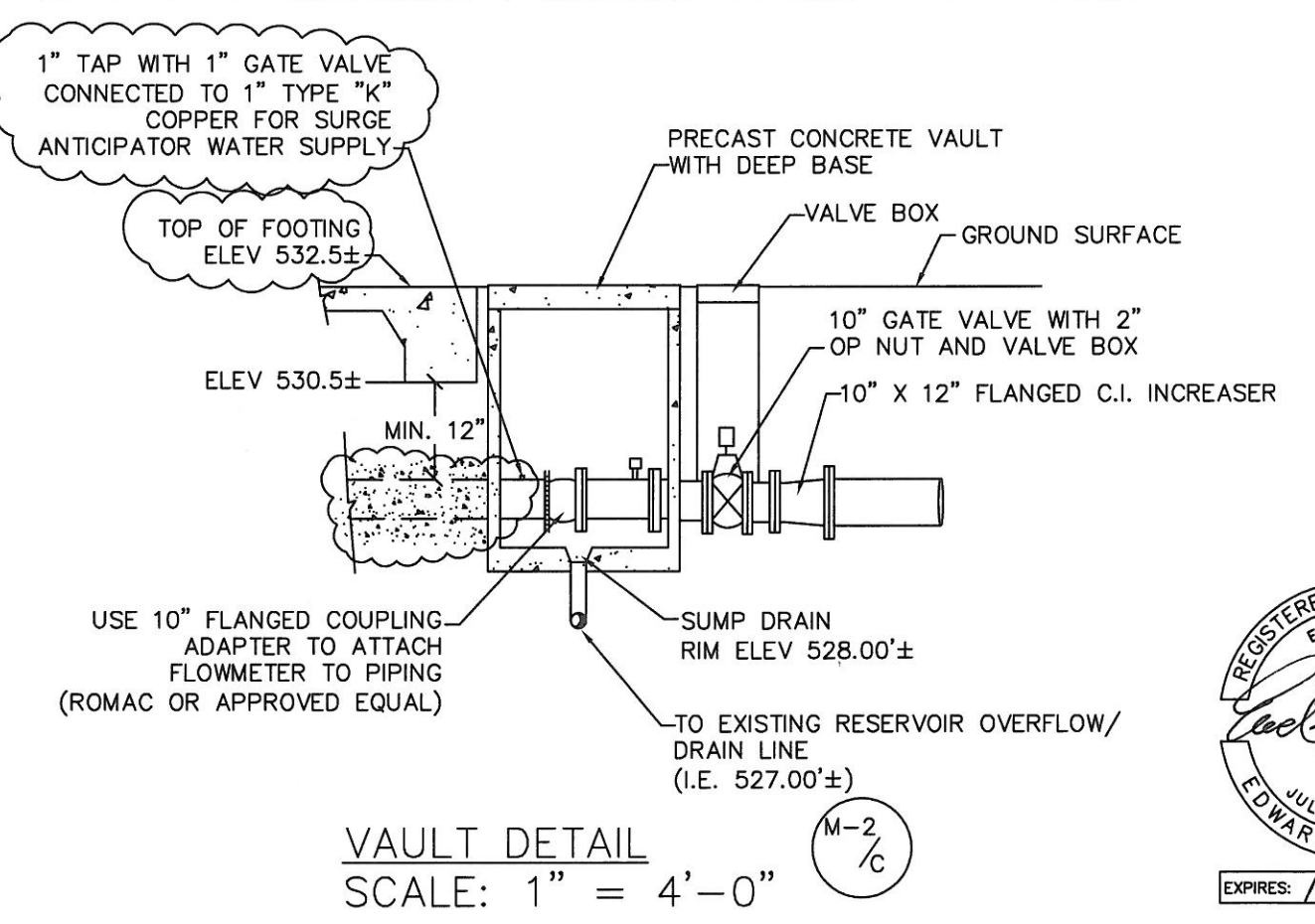
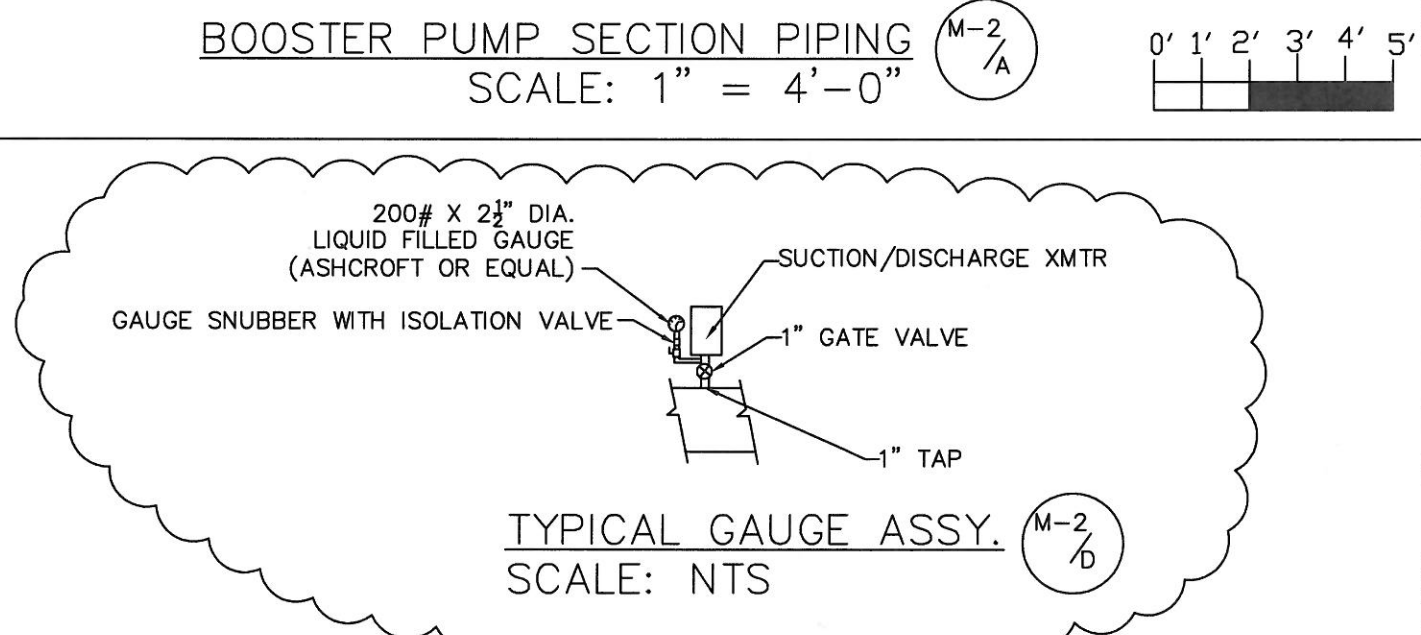
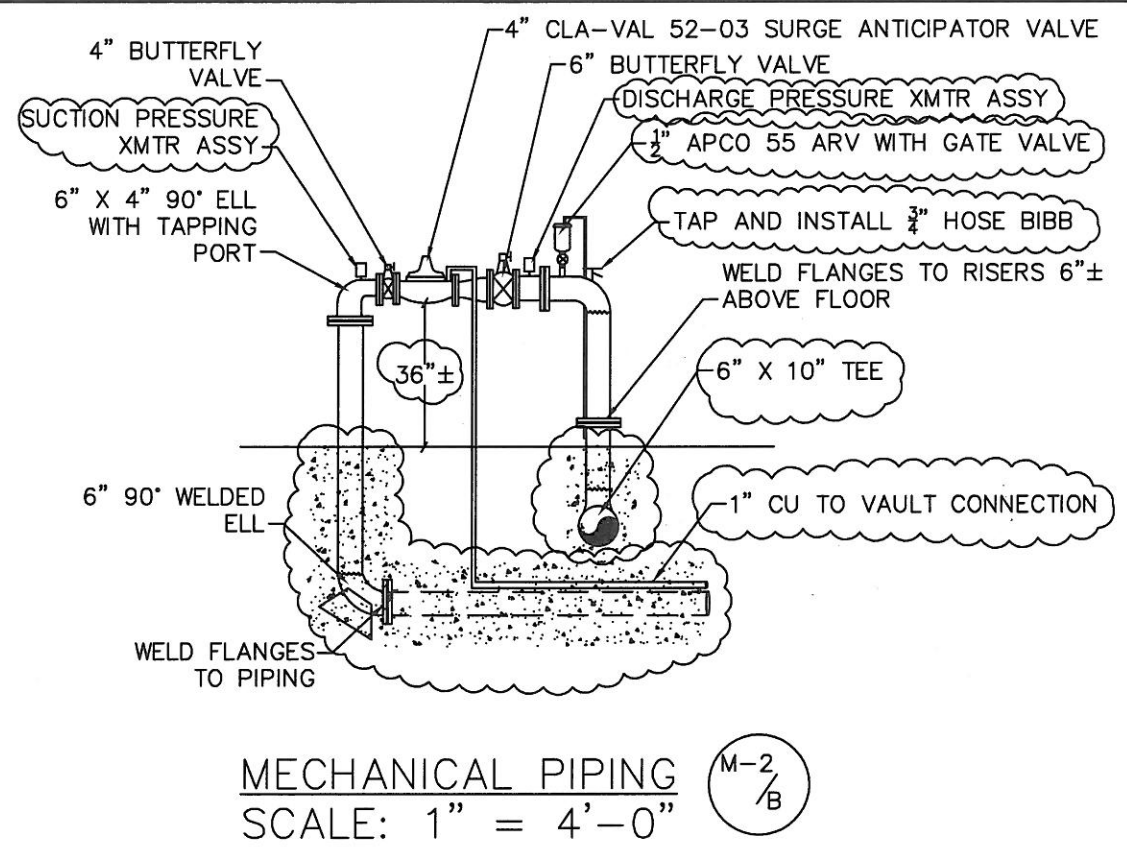
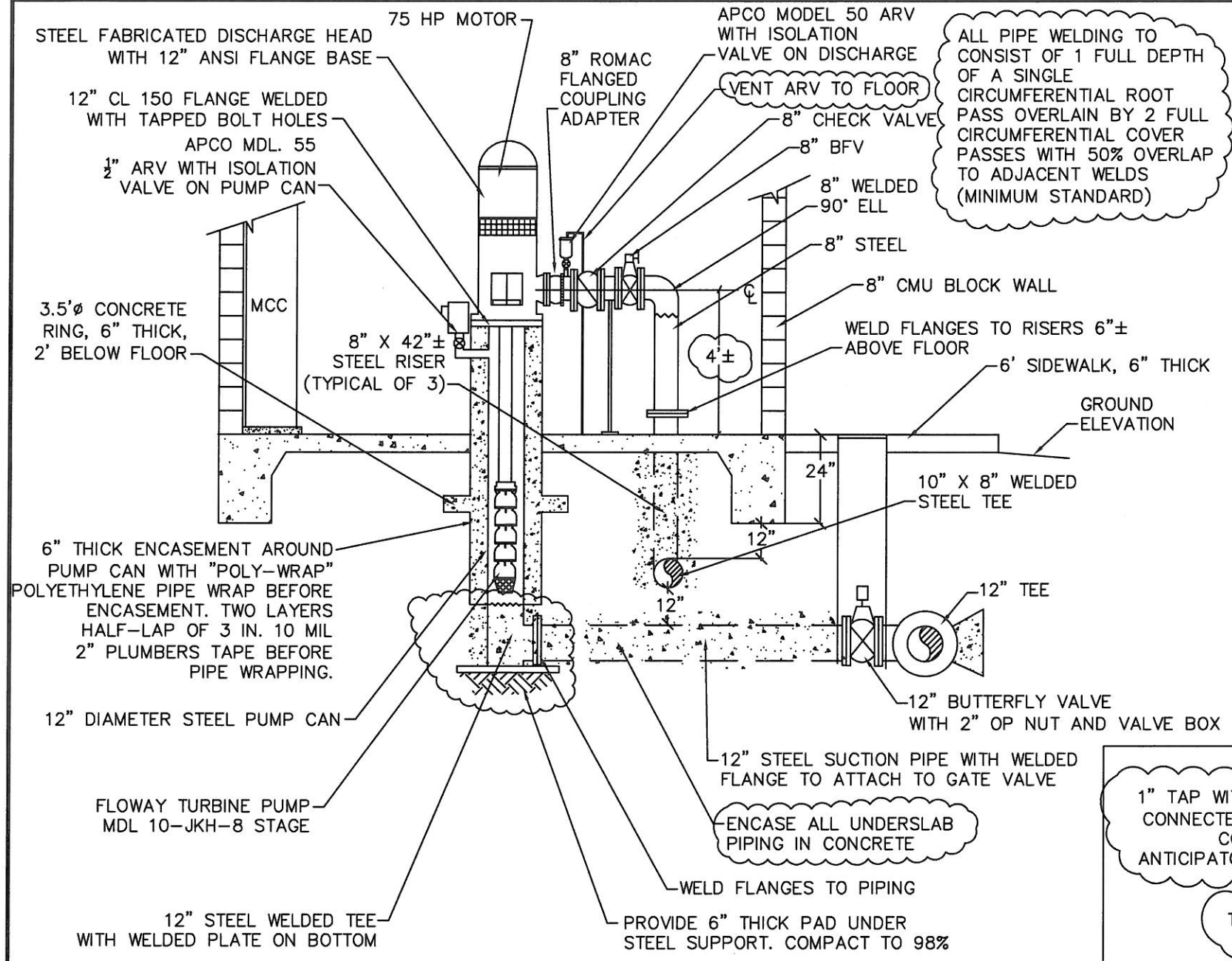
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EXPIRES: 12-31-15



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3700 RIVER ROAD N, SUITE 2
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CITY OF WEST LINN
BLAND CIRCLE INTERTIE P.S.
MECHANICAL ELEV. VIEW

PREPARED FOR:
CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
(503) 657-0331

DESIGN: EDWARD P. BUTTS, P.E.
ADAM E. BUTTS, E

DRAWN: BROOKE SALTARELLO

DATE: AUGUST 18, 2013

DRAWING:

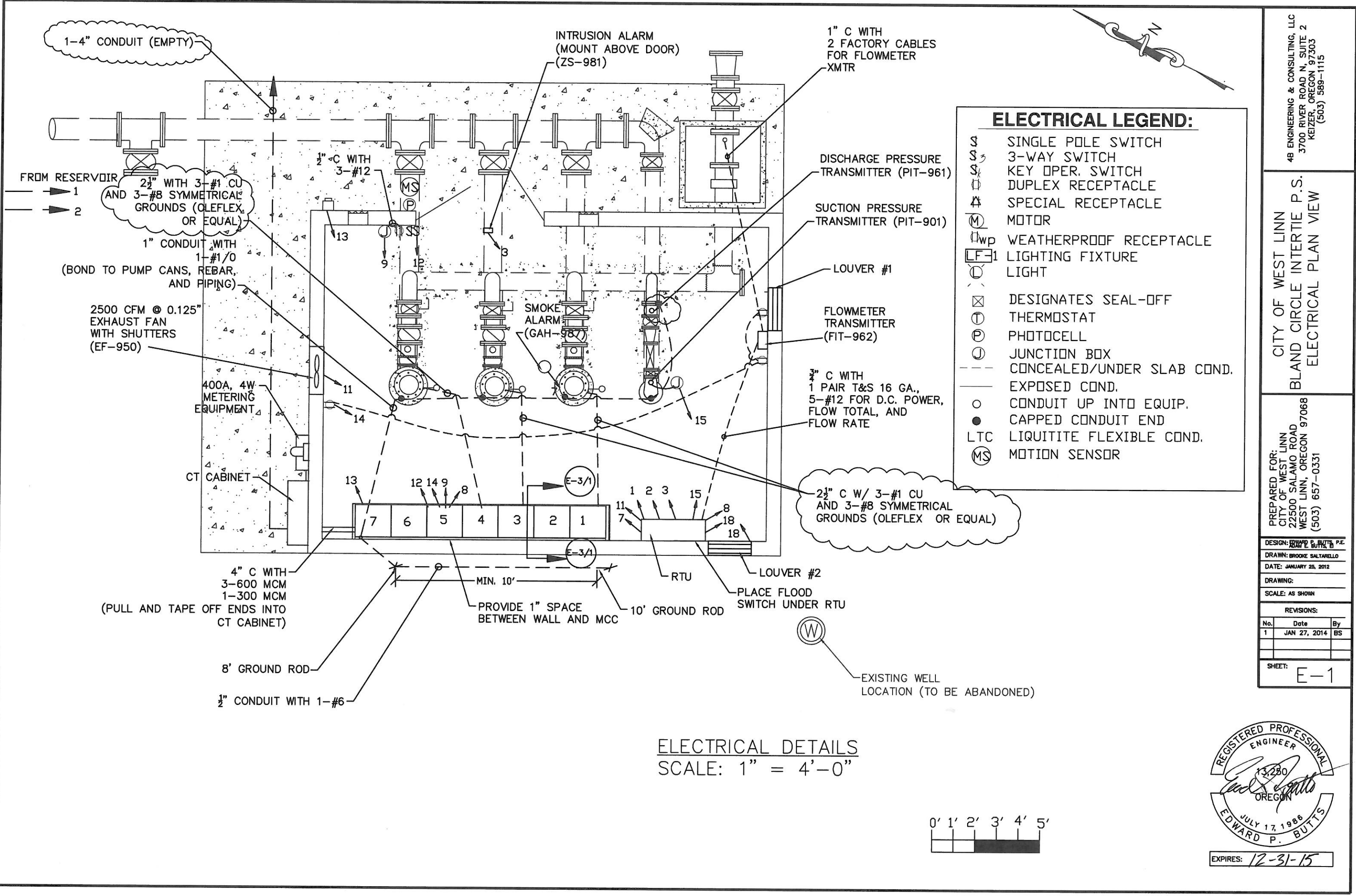
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1-4" CONDUIT (EMPTY)

INTRUSION ALARM (MOUNT ABOVE DOOR) (ZS-981)

1" C WITH 2 FACTORY CABLES FOR FLOWMETER XMTR

ELECTRICAL LEGEND:

- ⌚ SINGLE POLE SWITCH
- ⌚⌚ 3-WAY SWITCH
- ⌚⌚⌚ KEY OPER. SWITCH
- ⌚⌚⌚⌚ DUPLEX RECEPTACLE
- ⌚⌚⌚⌚⌚ SPECIAL RECEPTACLE
- ⌚⌚⌚⌚⌚⌚ MOTOR
- ⌚⌚⌚⌚⌚⌚⌚ WEATHERPROOF RECEPTACLE
- ⌚⌚⌚⌚⌚⌚⌚⌚ LIGHTING FIXTURE
- ⌚⌚⌚⌚⌚⌚⌚⌚ LIGHT
- ⌚⌚⌚⌚⌚⌚⌚⌚⌚ DESIGNATES SEAL-OFF
- ⌚⌚⌚⌚⌚⌚⌚⌚⌚ THERMOSTAT
- ⌚⌚⌚⌚⌚⌚⌚⌚⌚ PHOTOCELL
- ⌚⌚⌚⌚⌚⌚⌚⌚⌚ JUNCTION BOX
- ⌚⌚⌚⌚⌚⌚⌚⌚⌚ CONCEALED/UNDER SLAB COND.
- ⌚⌚⌚⌚⌚⌚⌚⌚⌚ EXPOSED COND.
- CONDUIT UP INTO EQUIP.
- CAPPED CONDUIT END
- LTC LIQUITITE FLEXIBLE COND.
- ⌚⌚⌚⌚⌚⌚⌚ MOTION SENSOR

FROM RESERVOIR
1
2
2 1/2" WITH 3-#1 CU AND 3-#8 SYMMETRICAL GROUNDS (OLEFLEX OR EQUAL)

1" CONDUIT WITH 1-#1/0 (BOND TO PUMP CANS, REBAR, AND PIPING)

2500 CFM @ 0.125" EXHAUST FAN WITH SHUTTERS (EF-950)

400A, 4W METERING EQUIPMENT

CT CABINET

4" C WITH 3-600 MCM 1-300 MCM (PULL AND TAPE OFF ENDS INTO CT CABINET)

8' GROUND ROD

1/2" CONDUIT WITH 1-#6

DISCHARGE PRESSURE TRANSMITTER (PIT-961)

SUCTION PRESSURE TRANSMITTER (PIT-901)

LOUVER #1

FLOWMETER TRANSMITTER (FIT-962)

3/4" C WITH 1 PAIR T&S 16 GA., 5-#12 FOR D.C. POWER, FLOW TOTAL, AND FLOW RATE

2 1/2" C W/ 3-#1 CU AND 3-#8 SYMMETRICAL GROUNDS (OLEFLEX OR EQUAL)

MIN. 10' PROVIDE 1" SPACE BETWEEN WALL AND MCC 10' GROUND ROD

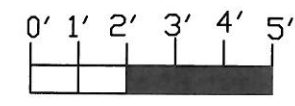
RTU LOUVER #2

PLACE FLOOD SWITCH UNDER RTU

⌚⌚⌚⌚⌚⌚⌚⌚⌚

EXISTING WELL LOCATION (TO BE ABANDONED)

ELECTRICAL DETAILS
SCALE: 1" = 4'-0"



4B ENGINEERING & CONSULTING, LLC
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(503) 589-1115

CITY OF WEST LINN
BLAND CIRCLE INTERTIE P.S.
ELECTRICAL PLAN VIEW

PREPARED FOR:
CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
(503) 657-0331

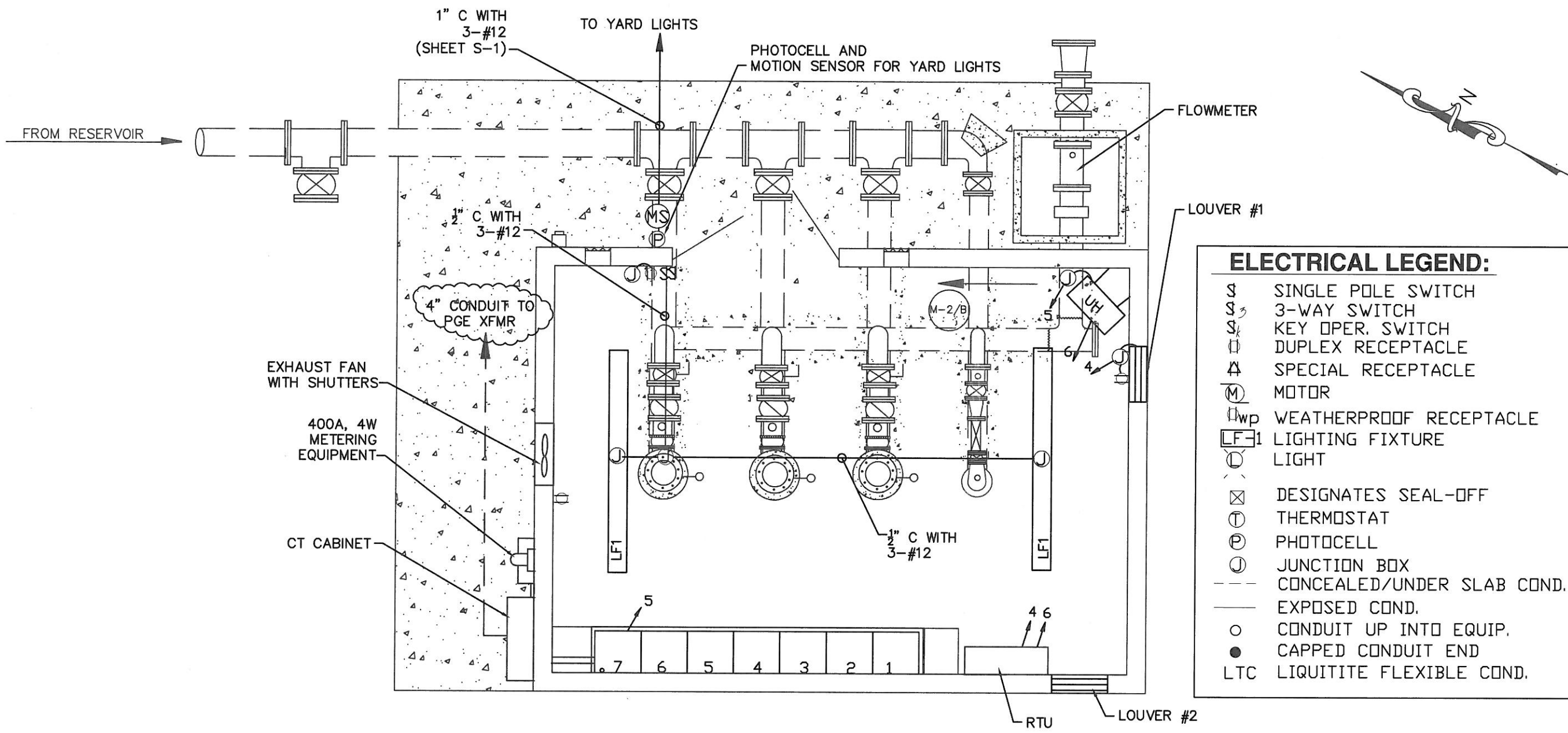
DESIGN: EDWARD P. BUTTS, P.E.
DRAWN: BROOKE SALTARELLO
DATE: JANUARY 25, 2012
DRAWING:
SCALE: AS SHOWN

REVISIONS:			
No.	Date	By	
1	JAN 27, 2014	BS	

SHEET: E-1



EXPIRES: 12-31-15



ELECTRICAL LEGEND:

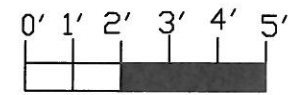
- § SINGLE POLE SWITCH
- § 3-WAY SWITCH
- § KEY OPER. SWITCH
- DUPLEX RECEPTACLE
- △ SPECIAL RECEPTACLE
- Ⓜ MOTOR
- Ⓜwp WEATHERPROOF RECEPTACLE
- LF-1 LIGHTING FIXTURE
- LIGHT
- ⊠ DESIGNATES SEAL-OFF
- Ⓢ THERMOSTAT
- Ⓟ PHOTOCELL
- Ⓝ JUNCTION BOX
- CONCEALED/UNDER SLAB COND.
- EXPOSED COND.
- CONDUIT UP INTO EQUIP.
- CAPPED CONDUIT END
- LTC LIQUITITE FLEXIBLE COND.

LF1: LITHONIA UND-2-96HO
TWO 110W, T12 FIXTURES
8' LINEAR FLUORESCENT

UH: 7.5KW, 3ø, 480 VAC RESISTANCE HEATER

NOTE: REFER TO SHEET E-3
FOR CONDUIT DESCRIPTIONS

LIGHTING DETAILS
SCALE: 1" = 4'-0"



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KEIZER, OREGON 97303
(503) 589-1115

CITY OF WEST LINN
BLAND CIRCLE INTERTIE P.S.
LIGHTING PLAN

PREPARED FOR:
CITY OF WEST LINN
22500 SALAMO ROAD
WEST LINN, OREGON 97068
(503) 657-0331

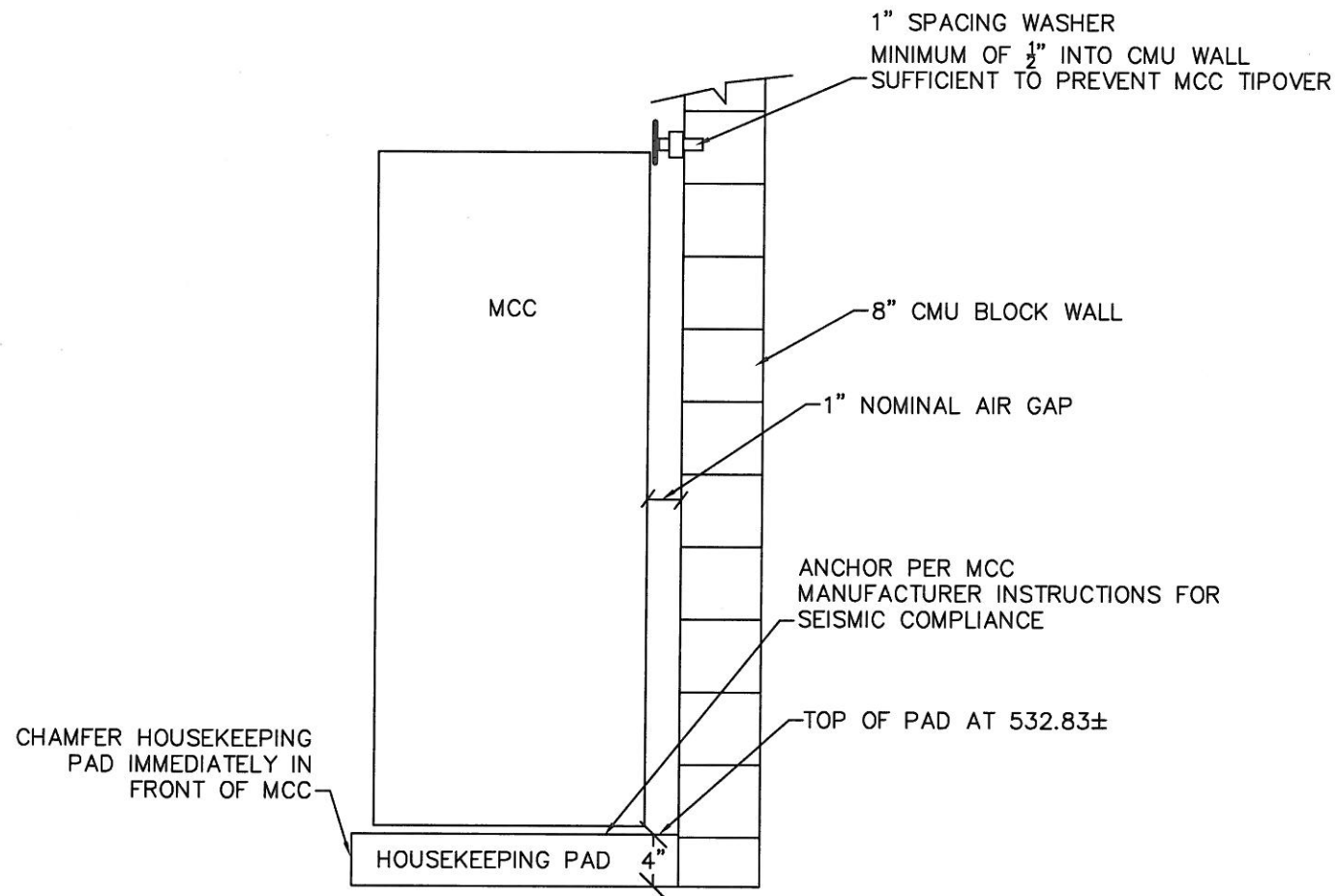
DESIGN: EDWARD P. BUTTS, P.E.
DRAWN: BROOKE SALTARELLO
DATE: JANUARY 23, 2012
DRAWING:
SCALE: AS SHOWN

REVISIONS:		
No.	Date	By
1	JAN 27, 2014	BS

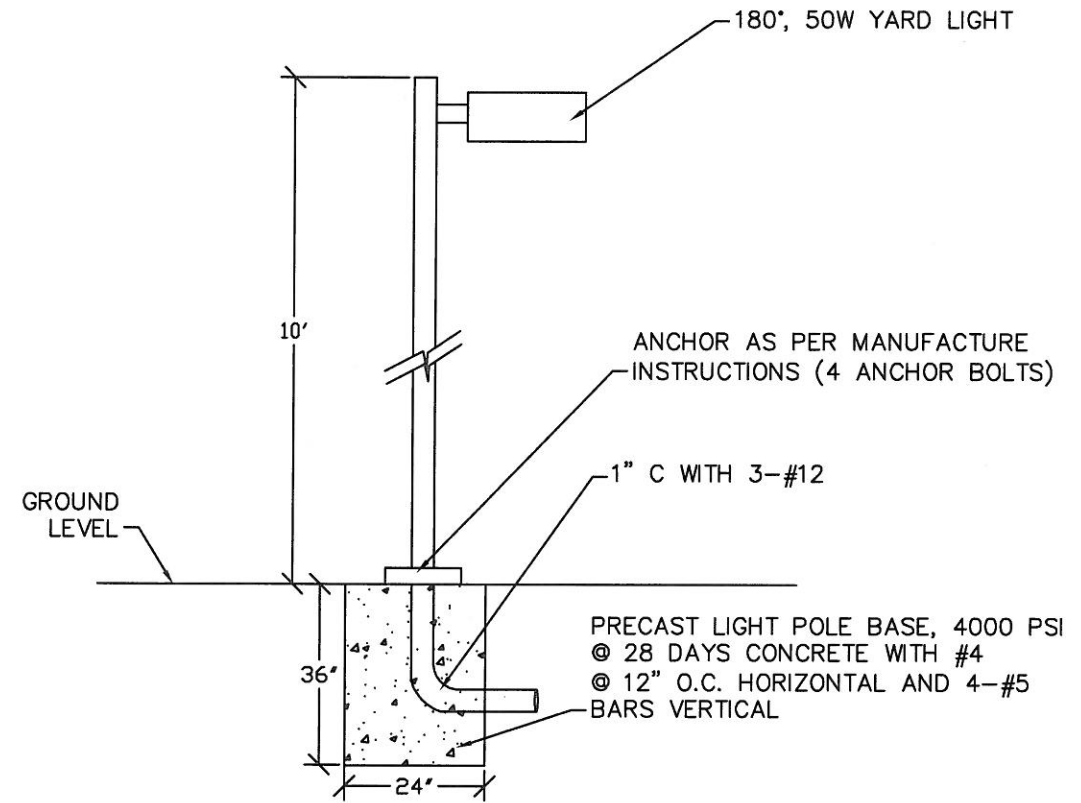
SHEET: E-2



EXPIRES: 12-31-15



PUMP STATION ELECTRICAL ELEVATIONS
SCALE: N.T.S. E-3/A



YARD LIGHT DETAIL
SCALE: N.T.S. E-3/B

RACEWAY NUMBER	ORIGIN	DESTINATION	CONDUIT SIZE	NO. & SIZE OF CONDUCTORS	LOAD DESCRIPTION
1	RTU	RESERVOIR	3/4"	4-#12, 2 PAIR 16 GA. T&S	RESERVOIR OVERFLOW, HATCH LEVEL
2	MCC SEC. 5 (PB)	NEW TERMINAL JUNCTION BOX	3/4"	5-#12	POWER FOR CATHODIC PROTECTION/OUTLET
3	RTU	FRONT DOOR INTRUSION	1/2"	1 PAIR 16 GA. T&S	INTRUSION ALARM
4	RTU	LOUVER 1	1/2"	3-#12	LOUVER POWER AND CONTROL
5	MCC SEC. 7 (CB)	JUNCTION BOX (UH)	1/2"	4-#12	HEATER POWER
6	UH	RTU	1/2"	3-#12	HEATING CONTROL
7	RTU	SMOKE ALARM	1/2"	3-#12	SMOKE ALARM
8	RTU	FIT-962 (FLOWMETER XMTR)	1/2"	1 PAIR 16 GA. T&S	DISCHARGE PRESSURE
9	MCC SEC 5 (PB)	JUNCTION BOX AT FRONT DOOR	1/2"	3-#12	LIGHTING SWITCH AND FRONT DOOR OUTLET
10	MCC SEC 5 (PB)	RTU	1/2"	5-#12	RTU POWER
11	RTU	FAN	1/2"	3-#12	FAN POWER AND CONTROL
12	MCC SEC 5 (PB)	SITE LIGHTING	1"	3-#12	SITE LIGHTING
13	GENERATOR RECPT.	MCC SECTION 7	2-1/2"	3-3/0, 1-#4 GRD, 1-#1 NEU	GENERATOR CONNECTION (200A)
14	MCC SEC 5 (PB)	OUTLETS	1/2"	3-#12	OUTLET POWER
15	RTU	PRESSURE GAUGES	1/2"	2 PAIR 16 GA. T&S	PRESSURE GAUGES
16	RTU	MCC CONTROL	3/4"	PROFIBUS	MCC CONTROL (FACTORY SUPPLIED CABLE)
17	RTU	FLOW SWITCH (LSH-982)	1/2"	2-#12	STATION FLOOD DETECTION
18	RTU	LOUVER 2	1/2"	3-#12	LOUVER POWER AND CONTROL

CONDUIT AND LOAD DESCRIPTIONS
SCALE: N.T.S. E-3/C

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ELECTRICAL DETAILS

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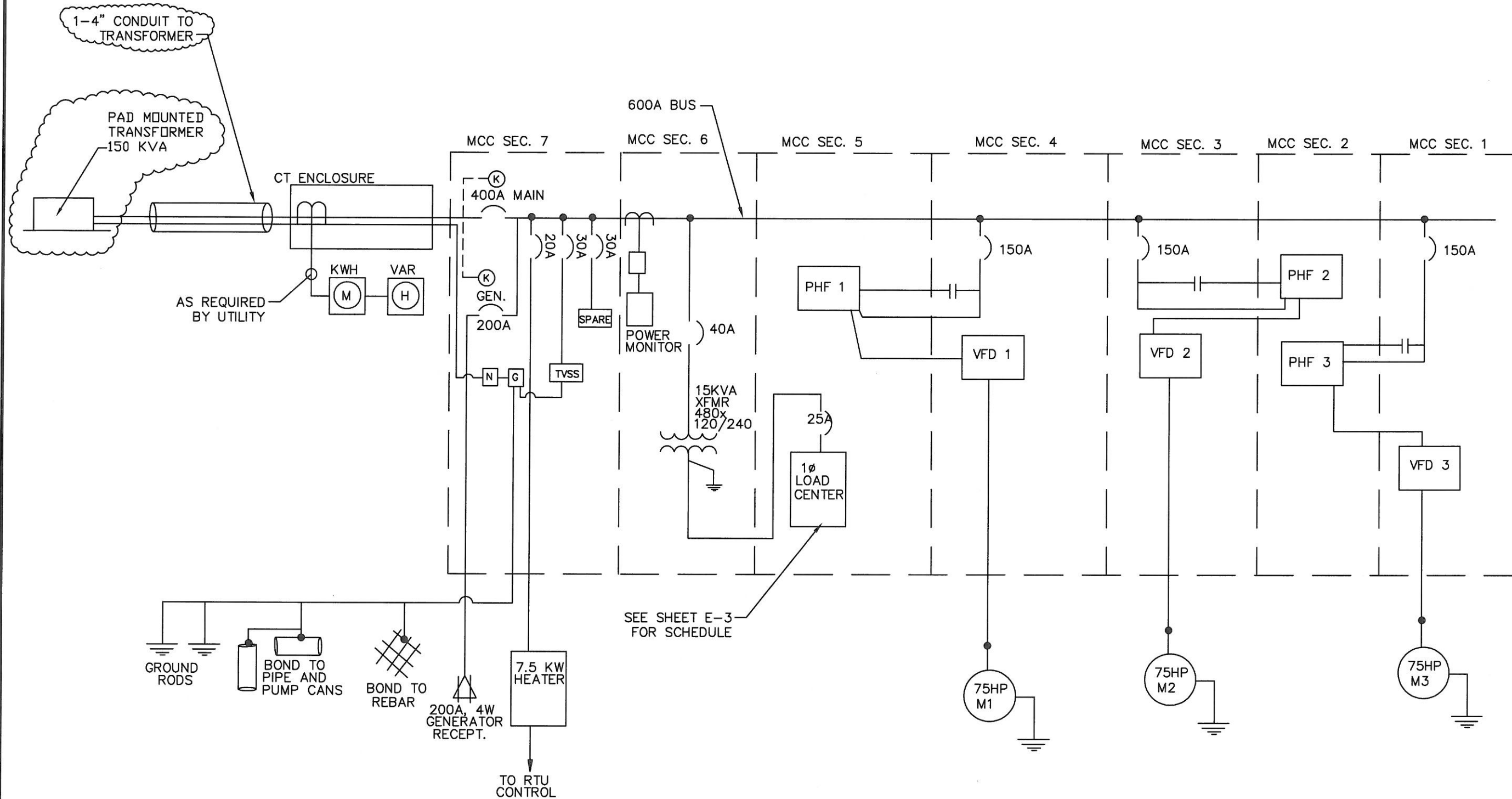
DESIGN: EDWARD P. BUTTS, P.E.
DRAWN: BROOKE SALTARELLO
DATE: JANUARY 25, 2012
DRAWING:
SCALE: AS SHOWN

REVISIONS:		
No.	Date	By
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SHEET: E-3



EXPIRES: 12-31-15



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CITY OF WEST LINN
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 ONE LINE POWER DIAGRAM

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DESIGN: EDWARD P. BUTTS, P.E.
 DRAWN: BROOKE SALTARELLO
 DATE: JANUARY 25, 2012
 DRAWING:
 SCALE: AS SHOWN

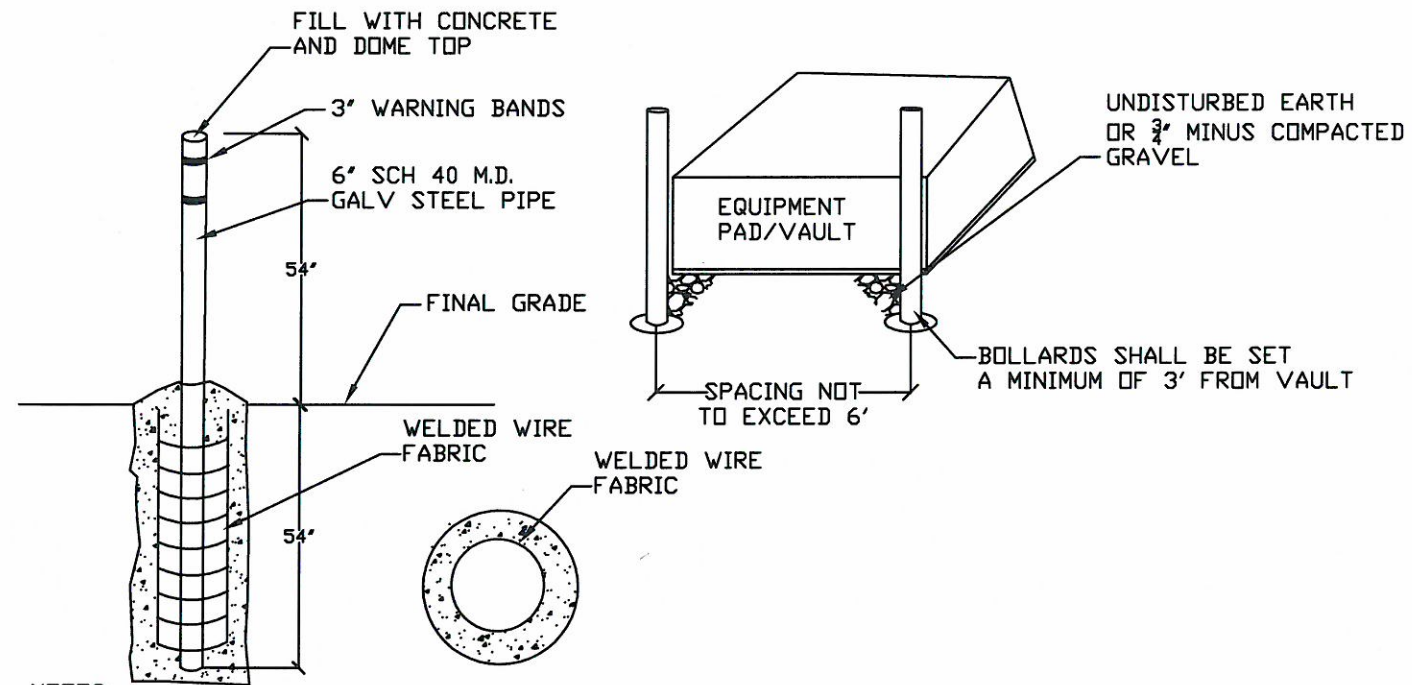
REVISIONS:		
No.	Date	By
1	JAN 27, 2014	BS

SHEET: E-4

ONE-LINE POWER DIAGRAM: 277/480VAC, 400A, 3 PHASE, 4W; 120/240VAC, 25A, 1 PHASE, 3W



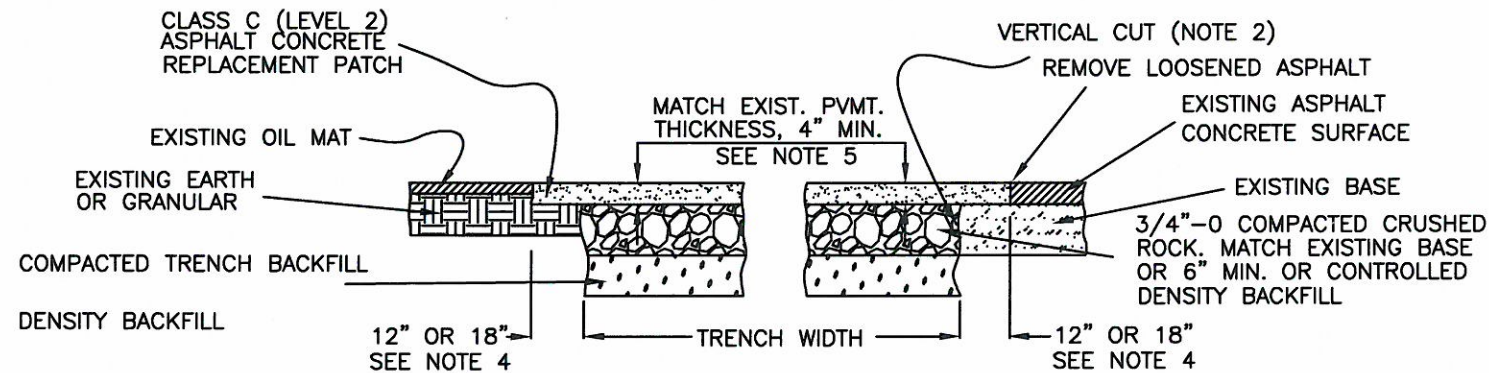
EXPIRES: 12-31-15



- NOTES:**
1. PLACE 6" SCHEDULE 40 M.D. GALVANIZED STEEL POST FILLED WITH CONCRETE A MAXIMUM OF SIX FEET APART ON ALL SIDES EXPOSED TO VEHICLES.
 2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AFTER 28 DAYS.
 3. BARRIER POST INSTALLATION SHALL BE IN UNDISTURBED EARTH. HOWEVER, THE AREA BETWEEN THE VAULT WALL AND BARRIER HOLE MAY BE FILLED WITH 3/4"-0" MINUS COMPACTED GRAVEL IF THREE FEET OF UNDISTURBED AREA IS NOT AVAILABLE AFTER THE VAULT IS SET.
 4. STEEL REINFORCEMENT SHALL BE WELDED WIRE FABRIC (WWF) 6" X 6" GRID OF 6/8 ROUND, FORMED IN A CAGE AS SHOWN ABOVE. REINFORCEMENT NOT REQUIRED FOR AREAS HAVING ONLY CAR TRAFFIC.
 5. POST SHALL BE PAINTED BRIGHT YELLOW. MARK TOP OF POST WITH TWO 3' WARNING BANDS OF CONTRASTING COLORS.

BOLLARD DETAIL FOR ELECTRICAL TRANSFORMER

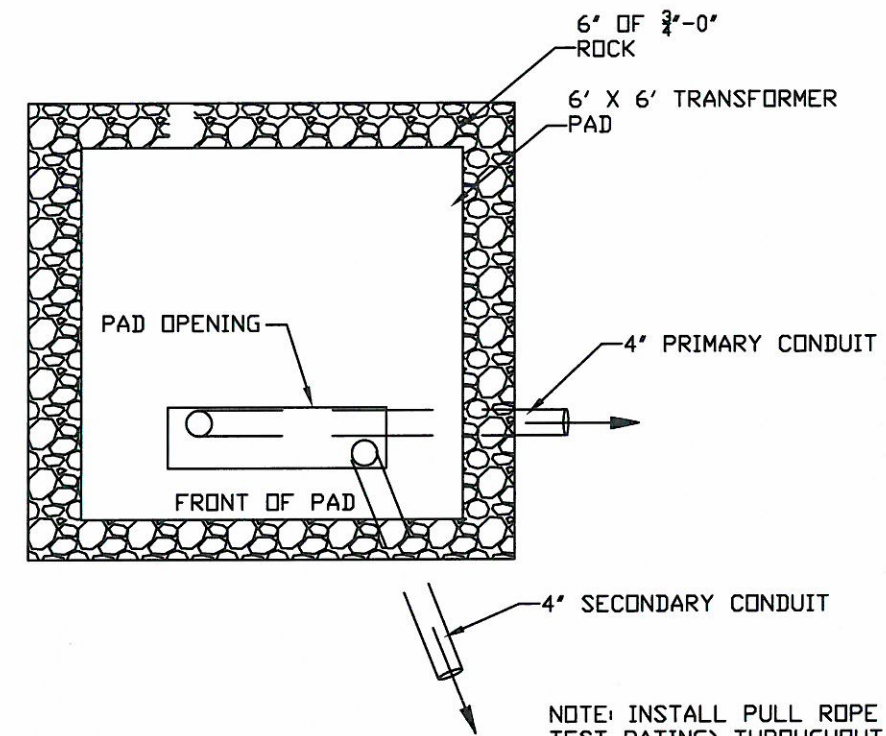
SCALE: NTS



TYPICAL PATCH FOR FLEXIBLE PAVEMENT

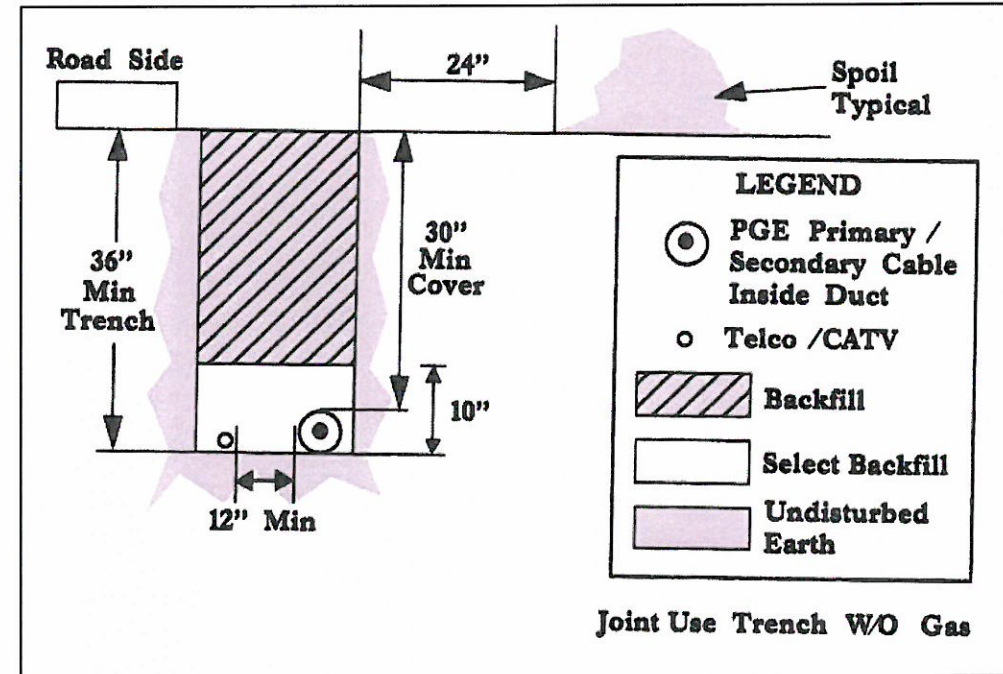
NOTES

1. FINAL CUTS IN A.C. PAVEMENT SHALL BE MADE WITH A CONCRETE SAW, MORE THAN ONE CUT MAY BE REQUIRED IN AC PAVEMENTS.
2. CUTS IN P.C.C. PAVEMENT SHALL BE MADE WITH A CONCRETE SAW.
3. 1"-0 CRUSHED AGGREGATE MAY BE SUBSTITUTED FOR 3/4"-0.
4. PAVEMENT REPLACEMENT WIDTH SHALL BE: TRENCH WIDTH PLUS 12 INCHES ON EACH SIDE FOR CONTROLLED DENSITY BACKFILL, AND TRENCH WIDTH PLUS 18 INCHES ON EACH SIDE FOR ROCK BACKFILL.
5. PAVEMENT REPLACEMENT THICKNESS SHALL MATCH EXISTING OR BE AS SHOWN ABOVE FOR ROCK TRENCH BACKFILL.



PAD MOUNT TRANSFORMER DETAIL

SCALE: NTS



ELECTRICAL TRENCH DETAIL

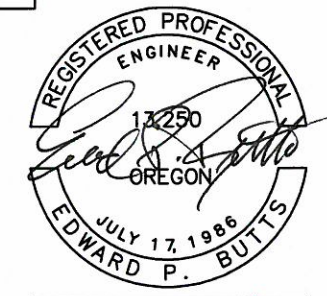
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SHEET: E-5



EXPIRES: 12-31-15