Development Services

From Concept to Construction

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More Contact Info (http://www.portlandoregon.gov//bds/article/519984)

APPEAL SUMMARY

Status: Decision Rendered - Held over from ID 20667 (7/24/19) for additional information

Appeal ID: 21972	**Project Address:** 151 SW 1st Ave
Hearing Date: 10/9/19	**Appellant Name:** Luke Hendricks
Case No.: P-001	**Appellant Phone:** 5035420562
Appeal Type: Plumbing	**Plans Examiner/Inspector:** McKenzie James, Joe Blanco
Project Type: commercial	**Stories:** 5 **Occupancy:** B, M, S-1 **Construction Type:** III-A
Building/Business Name:	**Fire Sprinklers:** Yes - Fully Sprinklered
Appeal Involves: Reconsideration of appeal	**LUR or Permit Application No.:** 19-185198-CO
Plan Submitted Option: pdf [File 1] [File 2]	**Proposed use:** Office Building, Ground Floor Retail

APPEAL INFORMATION SHEET

Appeal item 1

Code Section	2017 OPSC 418.3 Location of Floor Drains
Requires	Floor drains shall be installed in the following areas: (1) Toilet rooms containing two or more water closets or a combination of one water closet and one urinal, except in a dwelling unit. Floor mounted urinals may be used as a floor drain to meet the requirement of this section.
Proposed Design	The building restroom core is comprised of four single occupant restrooms per floor on levels 2-5 and two single occupant restrooms on level 1. Each restroom is equipped with the following fixtures: low flow lavatory (0.35 GPM), a hybrid waterless urinal (1 gallon flushed every 72 hours via timer), and a low flow vacuum assisted water closet (0.12 GPF). A floor drain has been indicated in each restroom on the submitted drawings to meet the plumbing code. Waterless urinals were initially provided in each single occupant restroom as a means to collect and divert as much urine as possible away from the composting system. The quantity of urinals initially proposed is above the building code minimum fixture quantity requirements based on occupancy load calculations. Additional urinals are beneficial to the operation of the composting system as it helps to reduce liquid in the system but is not a mandatory requirement. As a savings to the project, urinals will be removed from two of the restrooms on each floor. Removal of the urinals will also remove the plumbing code requirement to provide floor drains in those restrooms. This change will be implemented via a forthcoming addendum to the submitted drawings. The proposed design is to remove the floor drains from the remaining single occupancy restrooms on levels 2-5 which is an exception to the plumbing code because they will be equipped with a lavatory, water closet, and waterless urinal. Floor drains will be provided in ground floor level 1 restrooms and mechanical room to provide low point drainage for the building.

Reason for alternative	Under the current code, a single occupant, single flush fixture restroom does not require a floor drain. Waterless urinals are not technically a flush fixture. An exception to the code should be considered to not include the waterless urinal in the “two or more water closets or a combination of one water closet and one urinal” that triggers the requirement for a floor drain. Due to the aggressive goals for water savings in this project, the proposed water closets and waterless urinals have a much lower flowrate than typical restroom flush fixtures. The proposed hybrid waterless urinals flush only 1 gallon every 3 days and proposed water closets flush only 0.12 Gallon per flush (GPF). This is over a 90 percent water reduction compared to low flow flush urinals (0.125-0.5 GPF) and water closets (1.28-1.6 GPF). The proposed plumbing fixtures only require a 1/2-inch water supply connection compared to 1-inch to 1-1/4-inch for standard flush fixtures. Additionally, the water connections are located within the fixtures where any leak or malfunction would send water into the fixture. A typical flush valve is exposed above the fixture with the potential to leak a higher quantity of water onto the floor. The code required floor drain is intended for emergency use due to the presence of multiple flush valves in commercial restrooms that are intended for more than a single user. The proposed fixtures have flow rates and water connection sizes similar to those found in a dwelling unit and therefore do not pose a high risk of flooding compared to a restroom with multiple exposed flush valves. In the event of a fixture overflow, the flow rates of fixtures are so low, that the volume of water would be minimal in comparison to a standard flush valve. Removal of the floor drain is proposed due to the lowered risk of flooding by the proposed fixtures. A typical use for the floor drains in larger commercial restrooms is for cleaning or hosing down the floors. The proposed single use restrooms will be cleaned using a mop and bucket therefore the floor drain will not be needed for cleaning or sanitary purposes. For this reason, removal of the floor drain will provide equivalent health to the code required floor drain. Trap primers are required for floor drains and utilize water to maintain the trap seal. An additional water savings can be achieved by removal of the code required floor drains and trap primers because water will not be required to maintain the seal in the floor drain traps. An energy savings can also be achieved by removal of the electronic trap priming manifolds which require an electrical connection for operation.

Appeal item 2

Code Section	2017 OPSC Appendix K 101.1
Requires	K101.1 Applicability: The provisions of this appendix shall apply to the installation, construction, alteration, and repair of potable rainwater catchment systems in single family dwellings.
Proposed Design	The proposed design will follow the provisions of Appendix K for potable rainwater catchment system in a commercial office building.
Reason for alternative	In the absence of a commercial code for potable rainwater catchment systems, the alternate is required to provide equivalent health and life safety in a commercial office building as the code requires for a single-family dwelling.

APPEAL DECISION

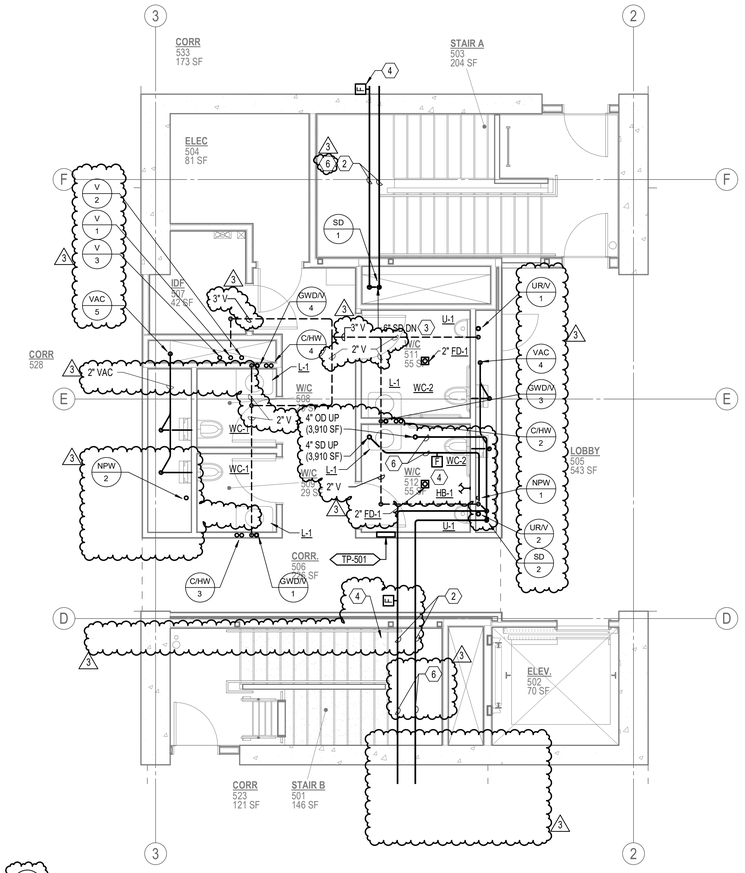
1. Omission of floor drains: Denied. Proposal does not provide equivalent sanitary facilities.

2. Use of the provisions of 2017 OPSC Appendix K for potable rainwater catchment system in a

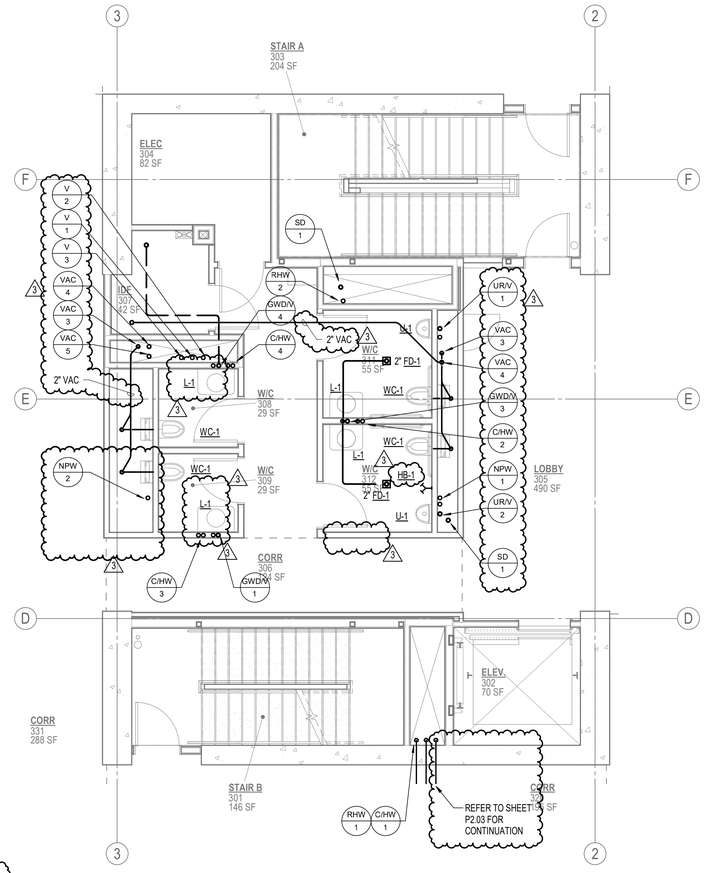
commercial office building: Granted as proposed.
Appellant may contact McKenzie James (503-823-7317) with questions.

For the item granted, the Administrative Appeal Board finds that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

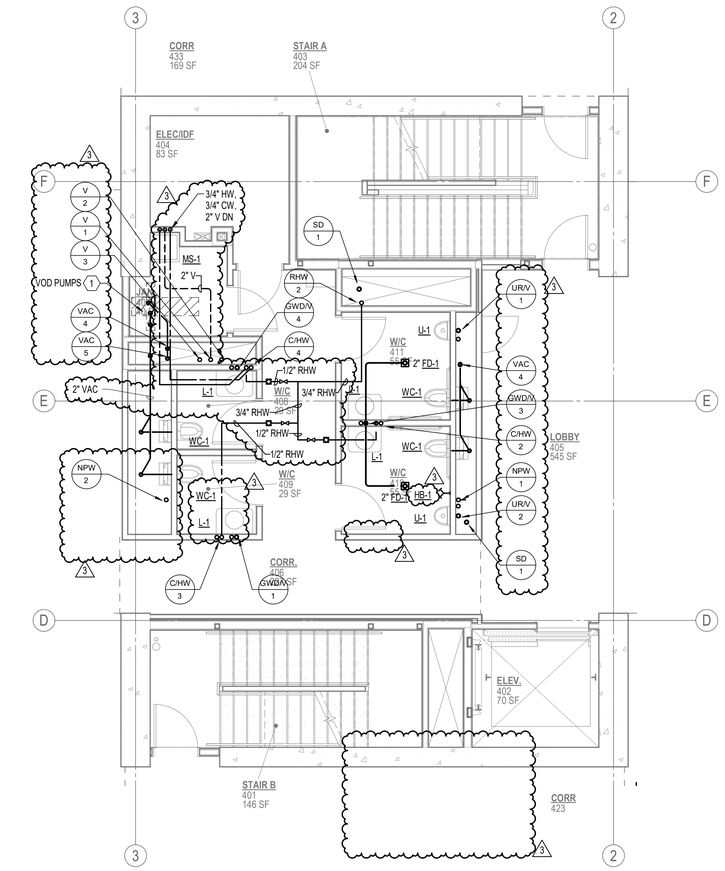
Pursuant to City Code Chapter 24.10, you may appeal this decision to the Plumbing Code Board of Appeal within 90 calendar days of the date this decision is published. For information on the appeals process, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.



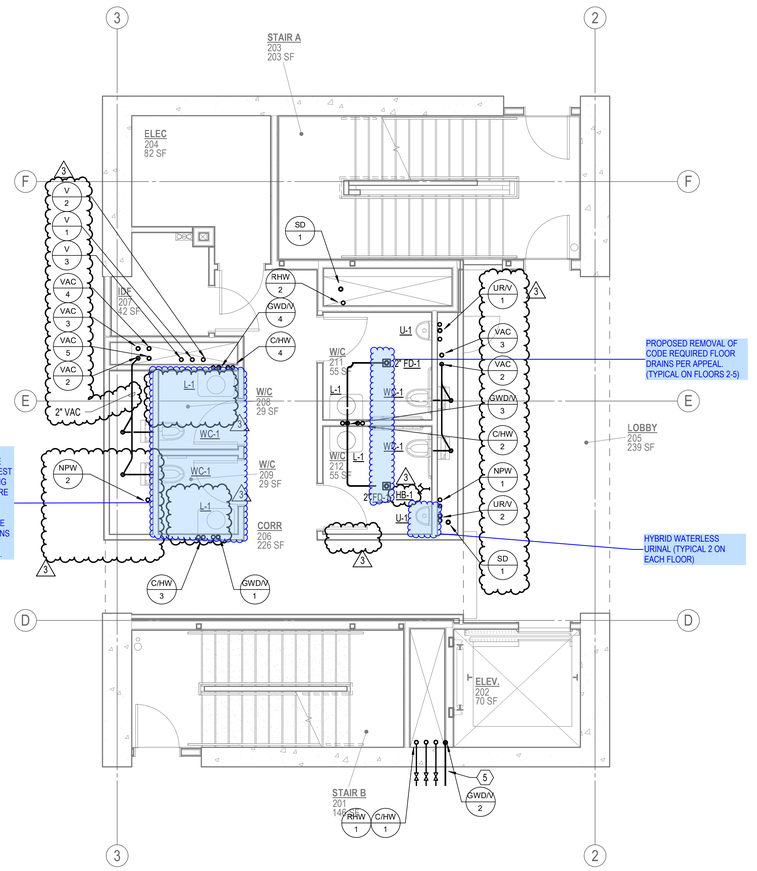
3 PLAN, FLOOR - LEVEL 05 - PLUMBING
1/4" = 1'-0"



1 PLAN, FLOOR - LEVEL 03 - PLUMBING
1/4" = 1'-0"



4 PLAN, FLOOR - LEVEL 04 - PLUMBING
1/4" = 1'-0"



2 PLAN, FLOOR - LEVEL 02 - PLUMBING
1/4" = 1'-0"

GENERAL NOTES:

A. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.

B. COORDINATE WORK WITH ALL OTHER TRADES.

C. VERIFY EXACT SIZES, LOCATIONS, INVERTS AND ELEVATIONS PRIOR TO RUNNING ANY PIPING. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ALL FIXTURES AND EQUIPMENT.

D. REFER TO RISER DIAGRAMS ON P-600 SERIES SHEETS FOR ADDITIONAL INFORMATION.

E. PROVIDE SHOCK ARRESTORS SIZED AND LOCATED PER PDI STANDARDS.

NOTES:

1. EQUIPMENT ZONE SHOWN FOR REFERENCE AND SPACE COORDINATION ONLY. REFER TO WATER SERIES DRAWINGS FOR EQUIPMENT LAYOUT AND ADDITIONAL INFORMATION.

2. STORM DRAINS ROUTED ABOVE FIRE RATED ENCLOSURE WHERE PASSING THROUGH STAIRWELL. REFER TO ARCHITECTURAL FOR ADDITIONAL INFO.

3. 4" ROOF DRAIN AND 4" OVERFLOW DRAIN COMBINE IN VERTICAL INTO A SINGLE 6" ROOF DRAIN PIPE.

4. FLOW SENSOR IN HORIZONTAL SECTION OF OVERFLOW DRAIN PIPE.

5. CAP FOR FUTURE CONNECTION TO TENANT FIXTURES.

3 6. HORIZONTAL STORM AND OVERFLOW FROM DRAIN TO VERTICAL RISER TO BE WRAPPED WITH ACOUSTICAL WRAP INSULATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

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Revisions

1	ISSUE FOR PERMIT	07/01/19
2	ISSUE FOR BID	08/09/19
3	PERMIT REVISION 1	10/04/19

PAE

SW 1ST AVE & SW PINE ST
PORTLAND, OREGON 97204

Drawing Title

PLAN, ENLARGED - PLUMBING

Date:	2019-09-27
Job No:	P24130, P24696
Drawn By:	RD
Checked By:	RLH

Drawing No.

P4.02

PERMIT SET

DRAFT

PROJECT NORTH

10/1/2019 10:43:38 PM

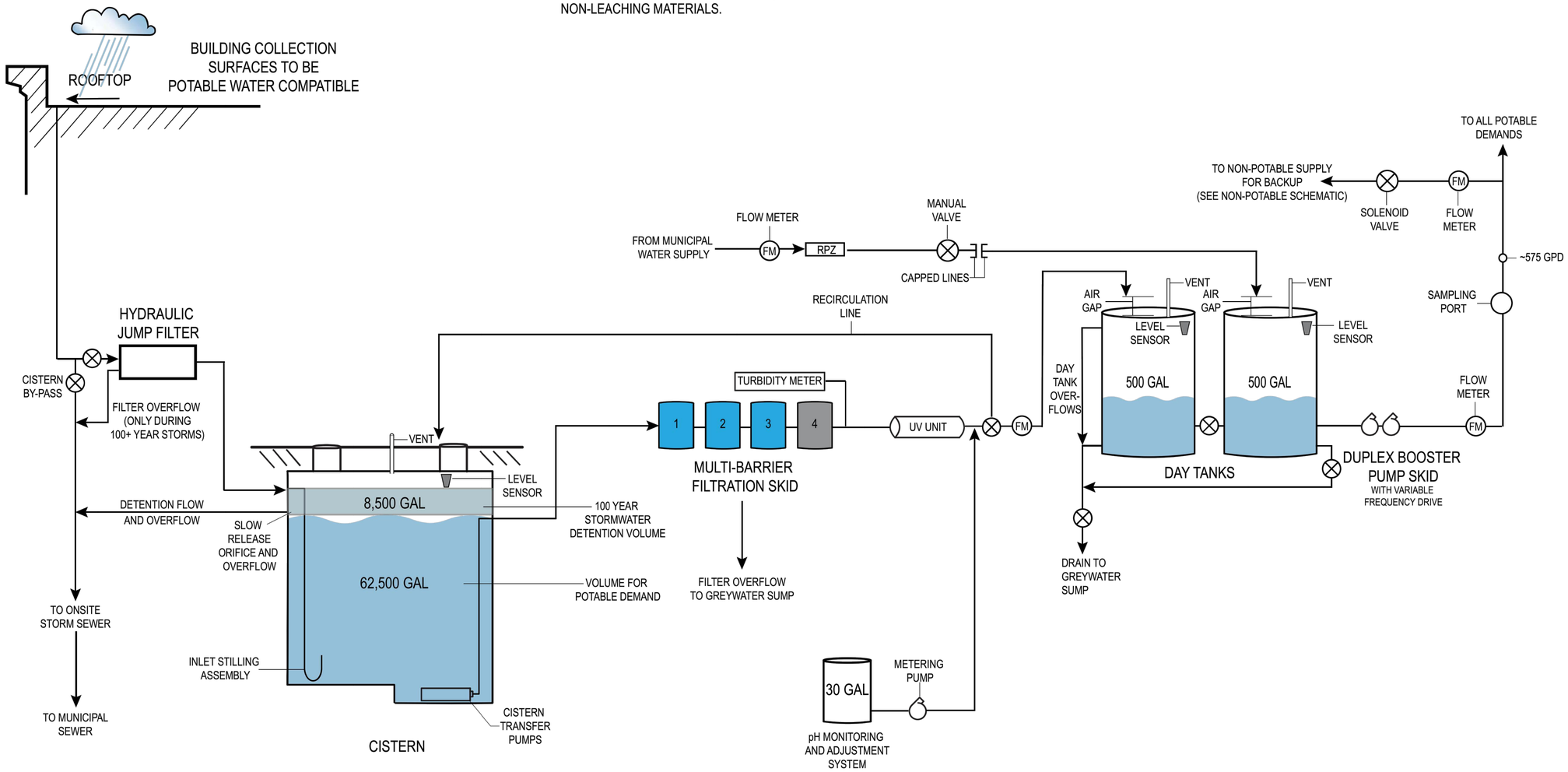
NOTES:
1. ALL EQUIPMENT AND MATERIALS SHALL BE RATED FOR AND COMPATIBLE WITH POTABLE USE.
2. LBC RED LIST MATERIALS SHALL BE AVOIDED.
3. POTABLE WATER FROM MUNICIPAL (OFF SITE) SUPPLY IS PROVIDED ONLY AS AN EMERGENCY CONTINGENCY. PIPING AND BACKFLOW PREVENTION SHALL BE INSTALLED BUT NOT UTILIZED. OWNER MAY CAP SUPPLY LINE AND/OR INSTALL A MANUAL SHUT OFF VALVE. USE OF BACKUP IS NOT PERMITTED BY LBC TO MEET BUILDING DEMANDS. USE OF SUPPLY DURING 1 YEAR VERIFICATION WILL NEGATE OR PAUSE LBC CERTIFICATION.
4. FLOOR DRAIN IN MECHANICAL SPACE TO BE DIRECTED TO GREYWATER SUMP.
5. RAIN COLLECTION, RAIN TREATMENT, OR POTABLE DISTRIBUTION SYSTEMS SHALL USE NON-LEACHING MATERIALS.

FM = FLOW METER

= PUMP

= VALVE

RPZ = REDUCED PRESSURE BACKFLOW PREVENTOR



1 W0.02 POTABLE SUPPLY FLOW SCHEMATIC

SCALE: NONE

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Revisions

1 ISSUE FOR PERMIT 07/01/19

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Portland, OR 97209 / 800.220.0919 tel
www.biohabitats.com
Restore the Earth and Inspire Ecological Stewardship

Drawing Title

POTABLE SUPPLY - FLOW SCHEMATIC

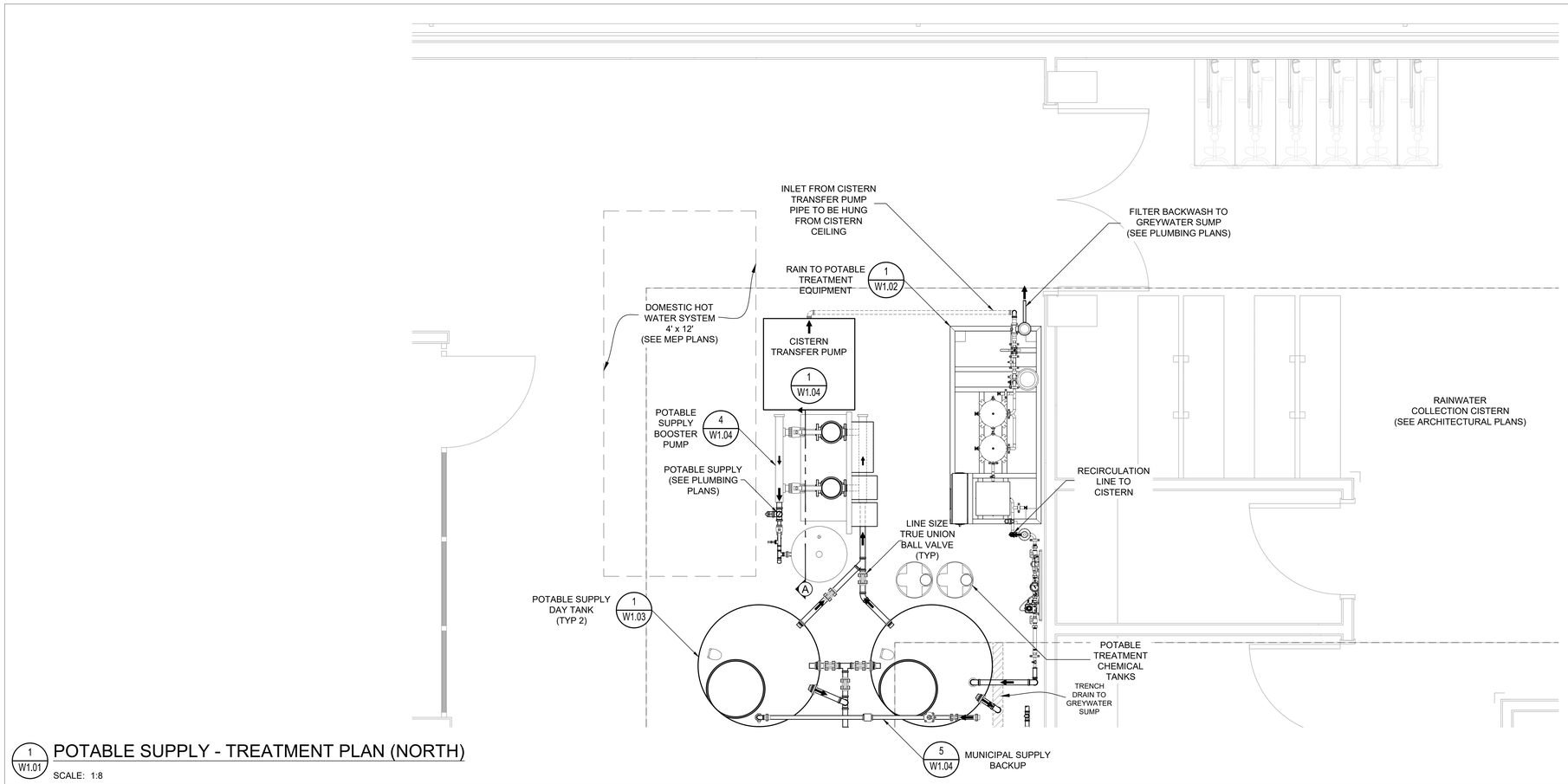
REGISTERED PROFESSIONAL ENGINEER
85274PE
OREGON
APRIL 13, 2011
PETE MUNOZ

Date: 2019-07-01
Job No: P24130, P24696
Drawn By: RS
Checked By: PM

Drawing No.

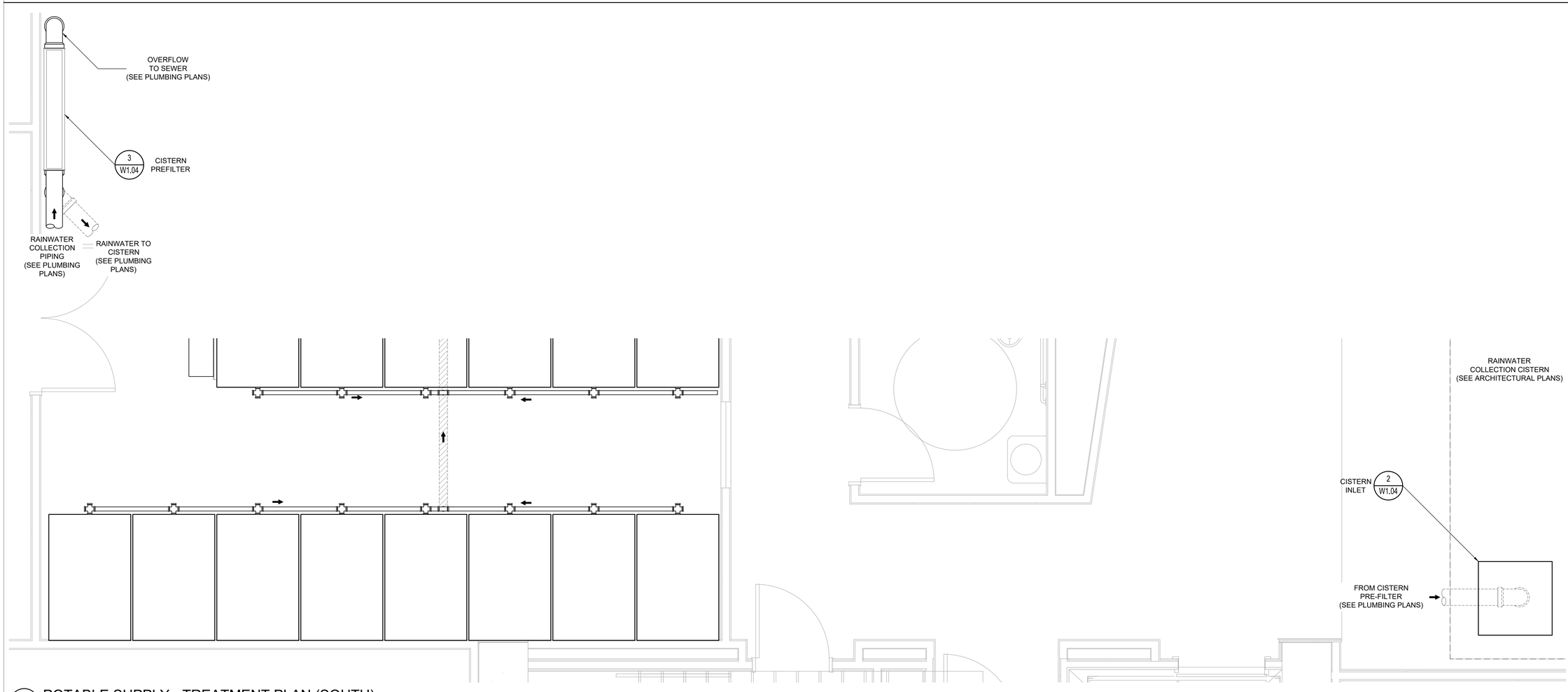
W0.02

PERMIT SET



1 W1.01 POTABLE SUPPLY - TREATMENT PLAN (NORTH)

SCALE: 1:8



2 W1.01 POTABLE SUPPLY - TREATMENT PLAN (SOUTH)

SCALE: 1:8

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Drawing Title

POTABLE SUPPLY - TREATMENT PLAN

REGISTERED PROFESSIONAL ENGINEER
85274PE
OREGON
APRIL 13, 2011
PETE MUNOZ

Date:	2019-07-01
Job No:	P24130, P24696
Drawn By:	RS
Checked By:	PM

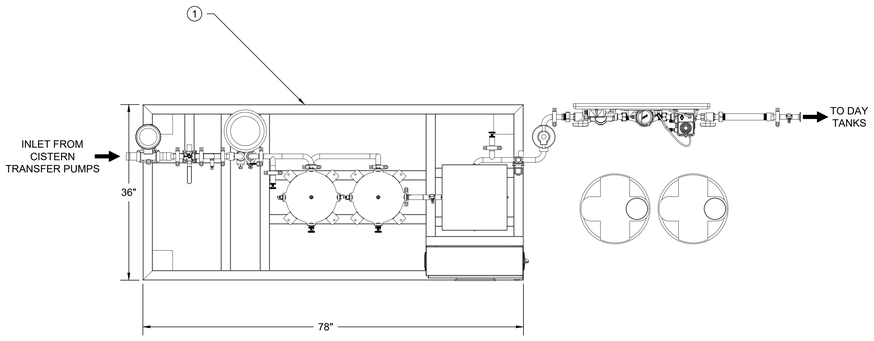
Drawing No.

W1.01

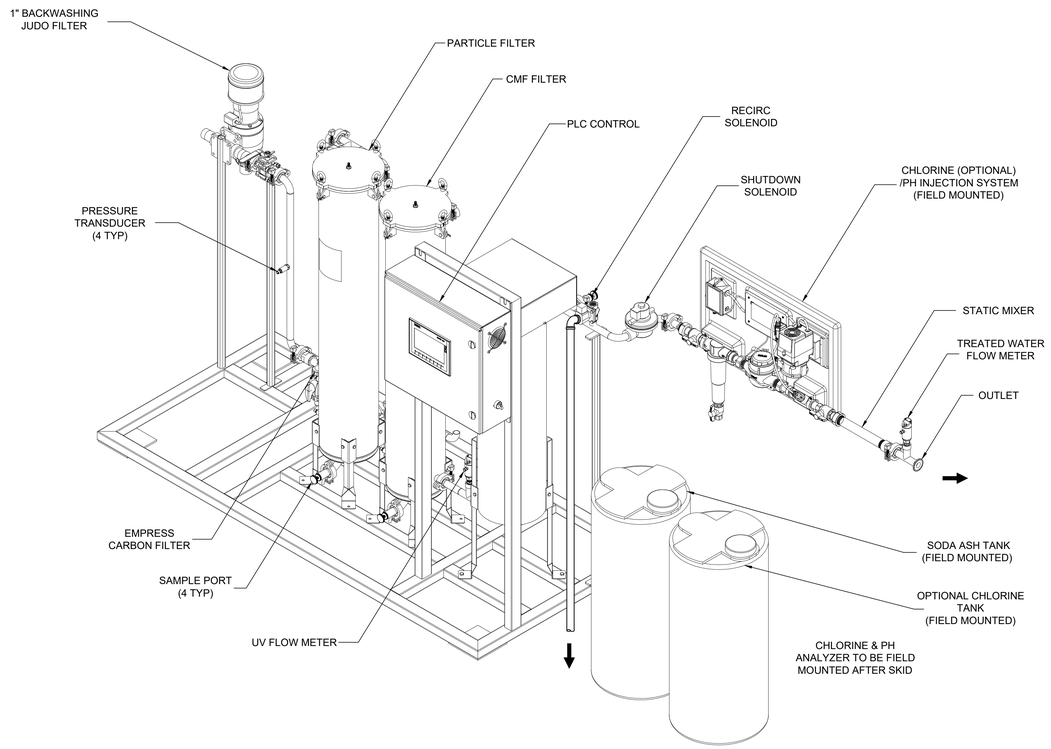
PERMIT SET

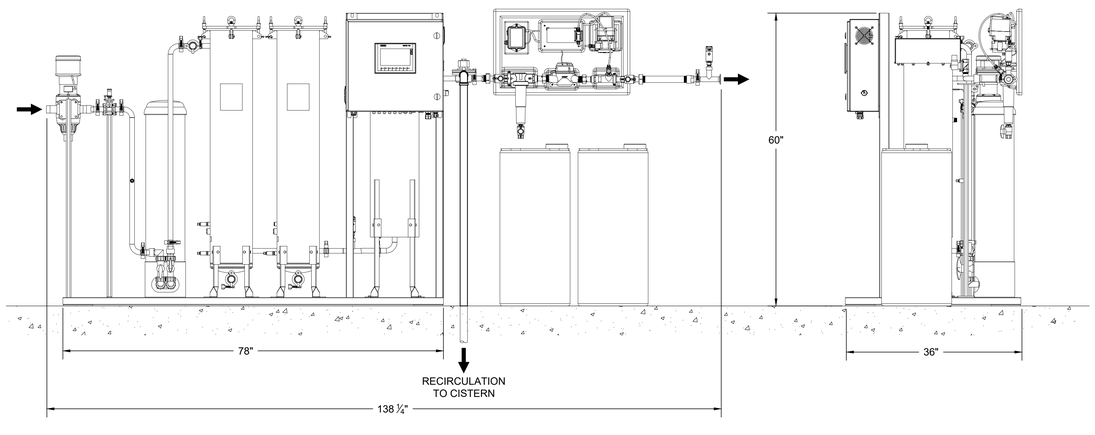
PART TABLE

1. POTABLE WATER TREATMENT SKID
   MODEL: xxxxx
   AVAILABLE FROM: ECOVIE
   SEE SPEC. 223230



PLAN VIEW





SIDE VIEW

END VIEW

1 W1.02 POTABLE SUPPLY - TREATMENT EQUIPMENT

SCALE: NONE

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Drawing Title

POTABLE SUPPLY - TREATMENT EQUIPMENT

REGISTERED PROFESSIONAL ENGINEER
85274PE
OREGON
APRIL 13, 2011
PETE MUNOZ
renewal 6/30/19

Date: 2019-07-01
Job No: P24130, P24696
Drawn By: RS
Checked By: PM

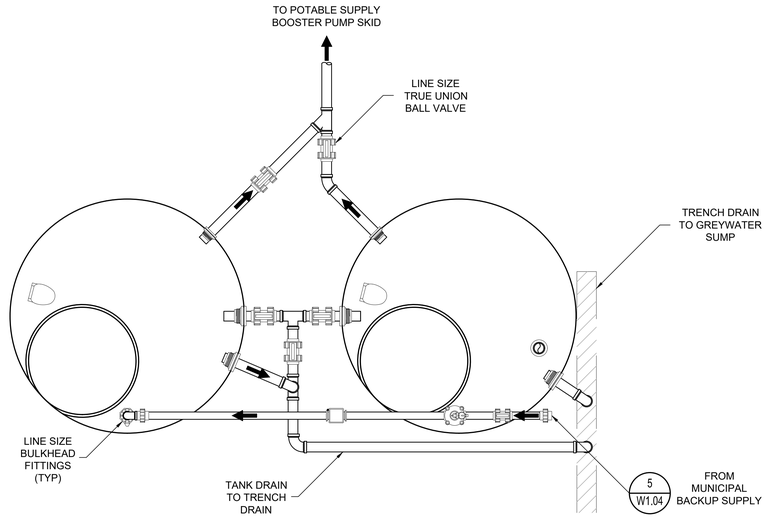
Drawing No.

W1.02

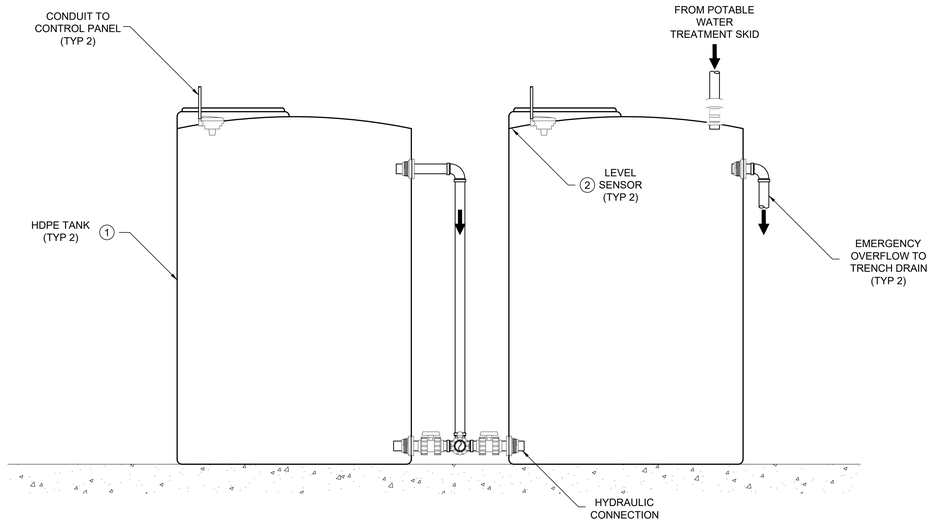
PERMIT SET

PART TABLE

1. HDPE TANK
   500 GALLON
   48" DIAMETER x 73" HEIGHT
   AVAILABLE FROM: NORWESCO
   SEE SPEC. 223230
2. ULTRASONIC LEVEL SENSOR
   MODEL: FLOWLINE ECHOSONIC LU27-40
   AVAILABLE FROM: ECOVIE
   SEE SPEC. 409123.36



PLAN VIEW



SECTION VIEW

1 W1.03 POTABLE SUPPLY - DAY TANK

SCALE: NONE

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Drawing Title

POTABLE SUPPLY
- DAY TANK

REGISTERED PROFESSIONAL ENGINEER
85274PE
OREGON
APRIL 13, 2011
PETE MUNOZ
renewal 6/30/19

Date: 2019-07-01
Job No: P24130, P24696
Drawn By: RS
Checked By: PM

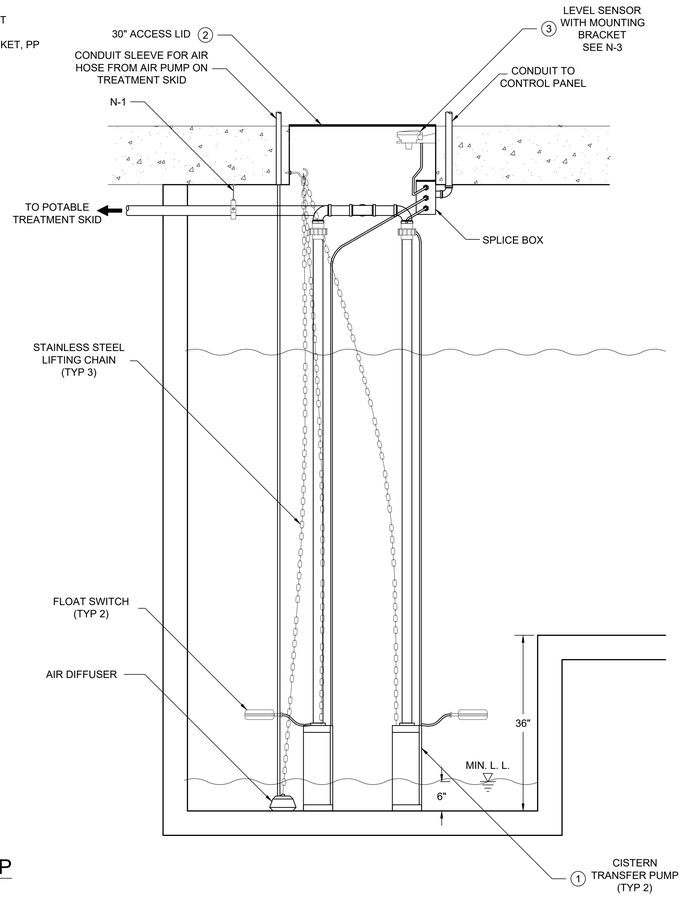
Drawing No.

W1.03

PERMIT SET

PART TABLE
1. CISTERN TRANSFER PUMP (ALTERNATING DUPLEX)
   (INCLUDES INTEGRAL FLOAT SWITCH)
   2 HP, 208 V, 6.0 A, 3 PHASE,
   15 GPM @ 184 TDH MIN.
   MODEL: PEDROLO UP 4/4
   AVAILABLE FROM: ECOVIE
   SEE SPEC. 223230
2. 30" x 30" FIBERGLASS ACCESS LID
   MODEL: FL76-LD
   AVAILABLE FROM: FIBERLITE
   SEE SPEC. 083113
3. ULTRASONIC LEVEL SENSOR WITH MOUNTING BRACKET
   FLOWLINE ECHOSONIC LU27-40
   MOUNTING BRACKET MODEL: LM50-1001-1 1" NPT BRACKET, PP
   AVAILABLE FROM: ECOVIE
   SEE SPEC. 409123.36
4. AIR DIFFUSER
   SEE SPEC. 409123.36

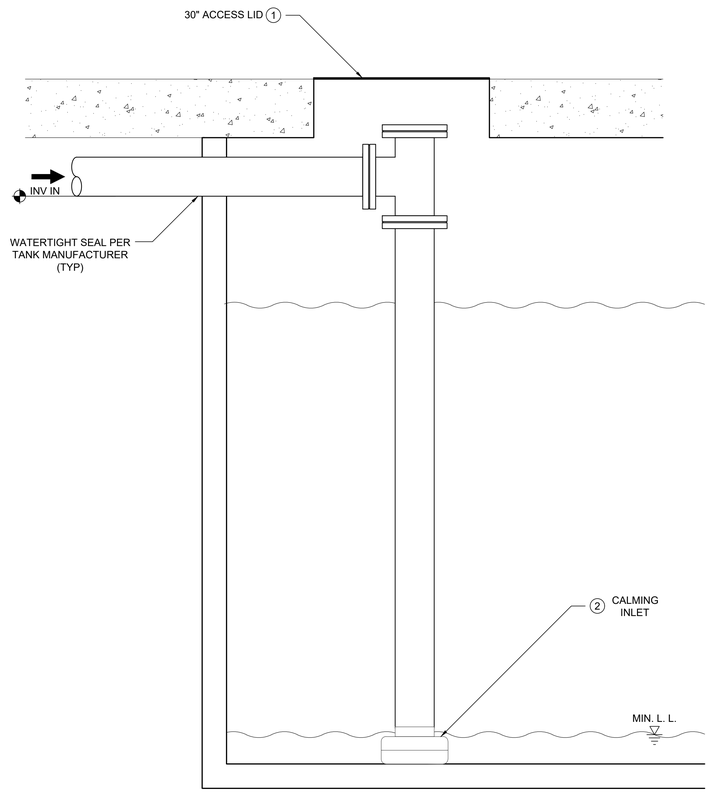
NOTES:
N-1. USE 304 STAINLESS STEEL PIPE HANGERS TO HOLD PIPE TO THE TOP OF TANK. THE HANGERS MUST BE STAINLESS STEEL ANCHOR BOLTS. SUPPORT ALL PIPES PER UPC AND LOCAL CODES. SEE PLUMBING PLANS.
N-2. ALL COMPONENTS SHALL BE FREE OF "RED LIST" MATERIALS AS DEFINED WITHIN THE LIVING BUILDING CHALLENGE.
N-3. LOW VOLTAGE SIGNAL WIRE FROM LEVEL SENSOR MUST RUN IN ITS OWN CONDUIT.



1 W1.04 CISTERN TRANSFER PUMP
SCALE: NONE

PART TABLE
1. 36" x 36" FIBERGLASS ACCESS LID
   AIRTIGHT
   MODEL: FL76-LD
   AVAILABLE FROM: FIBERLITE
   SEE SPEC. 083113
2. CALMING INLET
   MODEL: PLURAFIT DN200
   AVAILABLE FROM: ECOVIE WATER MANAGEMENT
   SEE SPEC. 223230

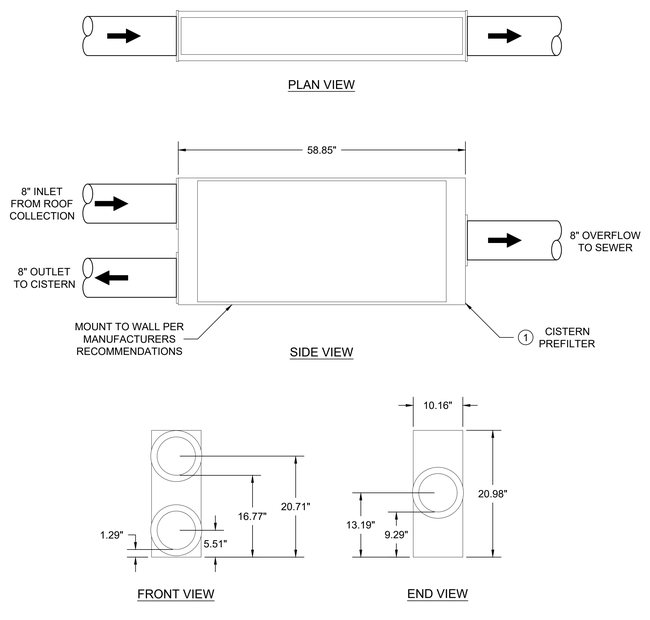
NOTES:
N-1. USE 304 STAINLESS STEEL PIPE HANGERS TO HOLD PIPE TO THE TOP OF TANK. THE HANGERS MUST BE STAINLESS STEEL ANCHOR BOLTS. SUPPORT ALL PIPES PER UPC AND LOCAL CODES. SEE PLUMBING PLANS.
N-2. ALL COMPONENTS SHALL BE FREE OF "RED LIST" MATERIALS AS DEFINED WITHIN THE LIVING BUILDING CHALLENGE.



2 W1.04 CISTERN CALMING INLET
SCALE: NONE

PART TABLE
1. CISTERN PRE-FILTER
   MODEL: DN200
   AVAILABLE FROM: ECOVIE WATER MANAGEMENT
   SEE SPEC. 223230

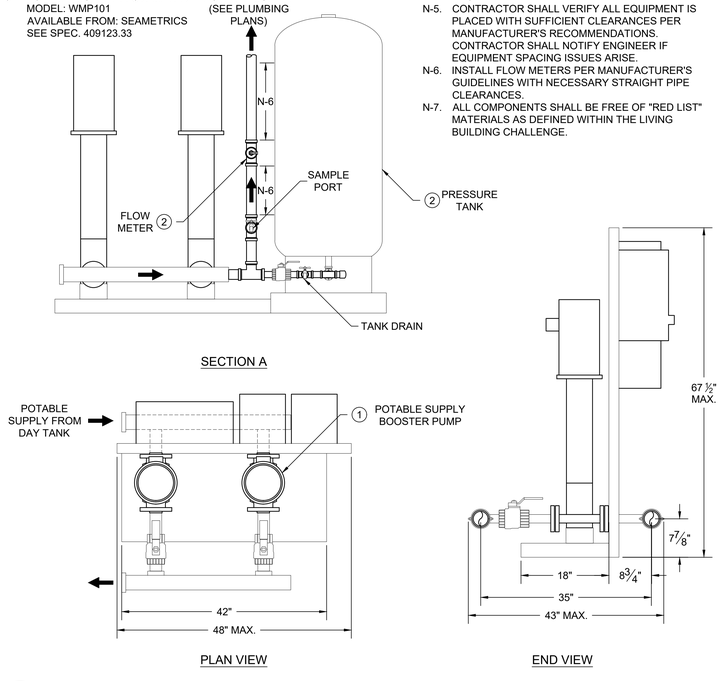
NOTES:
N-1. SUPPORT ALL PIPES AND EQUIPMENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
N-2. ALL COMPONENTS SHALL BE FREE OF "RED LIST" MATERIALS AS DEFINED WITHIN THE LIVING BUILDING CHALLENGE.



3 W1.04 CISTERN PRE-FILTER
SCALE: NONE

PART TABLE
1. BOOSTER PUMP SKID
   1.5 HP, 208 VAC, 16 A, 3 PHASE, 24 GPM @ 77 PSI
   MODEL: GOULDS AQUAFORCE e-MT 3SV6ND4F60N
   AVAILABLE FROM: MECHANICAL SALES
   SEE SPEC. 223230
2. PRESSURE TANK
   MODEL:XXX
   AVAILABLE FROM: AMTROL
   SEE SPEC. 220517
3. POTABLE SUPPLY FLOW METER
   MODEL: WMP101
   AVAILABLE FROM: SEAMETRICS
   SEE SPEC. 409123.33

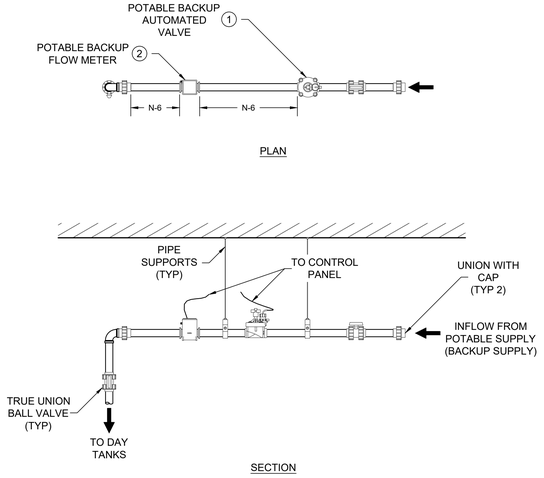
NOTES:
N-1. SUPPORT ALL PIPES AND EQUIPMENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
N-2. ALL FITTINGS AND EQUIPMENT MUST BE SPACED AT A MINIMUM OF 3" INCHES APART.
N-3. SEE MEP AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING BUILDING LAYOUT, PLUMBING, AND ELECTRICAL INFORMATION.
N-4. ALL WIRING SHALL CONFORM TO LOCAL CODE AND NEC.
N-5. CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS PLACED WITH SUFFICIENT CLEARANCES PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL NOTIFY ENGINEER IF EQUIPMENT SPACING ISSUES ARISE.
N-6. INSTALL FLOW METERS PER MANUFACTURER'S GUIDELINES WITH NECESSARY STRAIGHT PIPE CLEARANCES.
N-7. ALL COMPONENTS SHALL BE FREE OF "RED LIST" MATERIALS AS DEFINED WITHIN THE LIVING BUILDING CHALLENGE.



4 W1.04 POTABLE SUPPLY BOOSTER PUMP SKID
SCALE: NONE

PART TABLE
1. AUTOMATED VALVE
   MODEL: 560216C
   AVAILABLE FROM: VALWORX
   SEE SPEC. 220524
2. POTABLE BACKUP FLOW METER
   MODEL: WMP101.200-HF
   AVAILABLE FROM: SEAMETRICS
   SEE SPEC. 409123.33

NOTES:
N-1. SUPPORT ALL PIPES AND EQUIPMENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
N-2. ALL FITTINGS AND EQUIPMENT MUST BE SPACED AT A MINIMUM OF 3" INCHES APART.
N-3. SEE MEP AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING BUILDING LAYOUT, PLUMBING, AND ELECTRICAL INFORMATION.
N-4. ALL WIRING SHALL CONFORM TO LOCAL CODE AND NEC.
N-5. CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS PLACED WITH SUFFICIENT CLEARANCES PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL NOTIFY ENGINEER IF EQUIPMENT SPACING ISSUES ARISE.
N-6. INSTALL FLOW METERS PER MANUFACTURER'S GUIDELINES WITH NECESSARY STRAIGHT PIPE CLEARANCES.
N-7. ALL COMPONENTS SHALL BE FREE OF "RED LIST" MATERIALS AS DEFINED WITHIN THE LIVING BUILDING CHALLENGE.



5 W1.04 MUNICIPAL BACKUP SUPPLY
SCALE: NONE

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Revisions
1 ISSUE FOR PERMIT 07/01/19

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Restore the Earth and Inspire Ecological Stewardship

Drawing Title
POTABLE SUPPLY MISCELLANEOUS DETAILS

REGISTERED PROFESSIONAL ENGINEER
85274PE
OREGON
APRIL 13, 2011
PETE MUNOZ

Date: 2019-07-01
Job No: P24130, P24696
Drawn By: RS
Checked By: PM

Drawing No.
W1.04

PERMIT SET