

Cascade Groundwater Alliance Package 3 and 4

Permitting Between Design and Construction

May 8, 2025

Benedicte Diakubama
Jacobs
Water Treatment Engineer



Agenda

- **Acknowledgements**
 - **Project Overview**
 - **Package 3**
 - **Background**
 - **Schedule**
 - **Design**
 - **Permitting**
 - **Construction**
 - **Package 4**
 - **Background**
 - **Schedule**
 - **Design**
 - **Permitting**
 - **Construction**
 - **Lessons Learned**
-

Acknowledgement

- Rockwood Water P.U.D
 - Jeremy Hudson
 - Kari Duncan
- Jacobs
 - Pat Van Duser, PM
 - Robert White. DM
 - Erika Louie, Package 4 Permitting
 - All the engineering team
- Consor
 - Justing Ford
 - Joseph Golichnik
 - All the engineering team

Background



Key Deliverables Schedule

PRELIMINARY DESIGN (30%)	5/23/2023
60% DESIGN	1/5/2024
90% DESIGN	4/5/2024
100% DESIGN	5/21/2024
CONSTRUCTION	7/25/2024
FINAL COMPLETION	3/12/2026

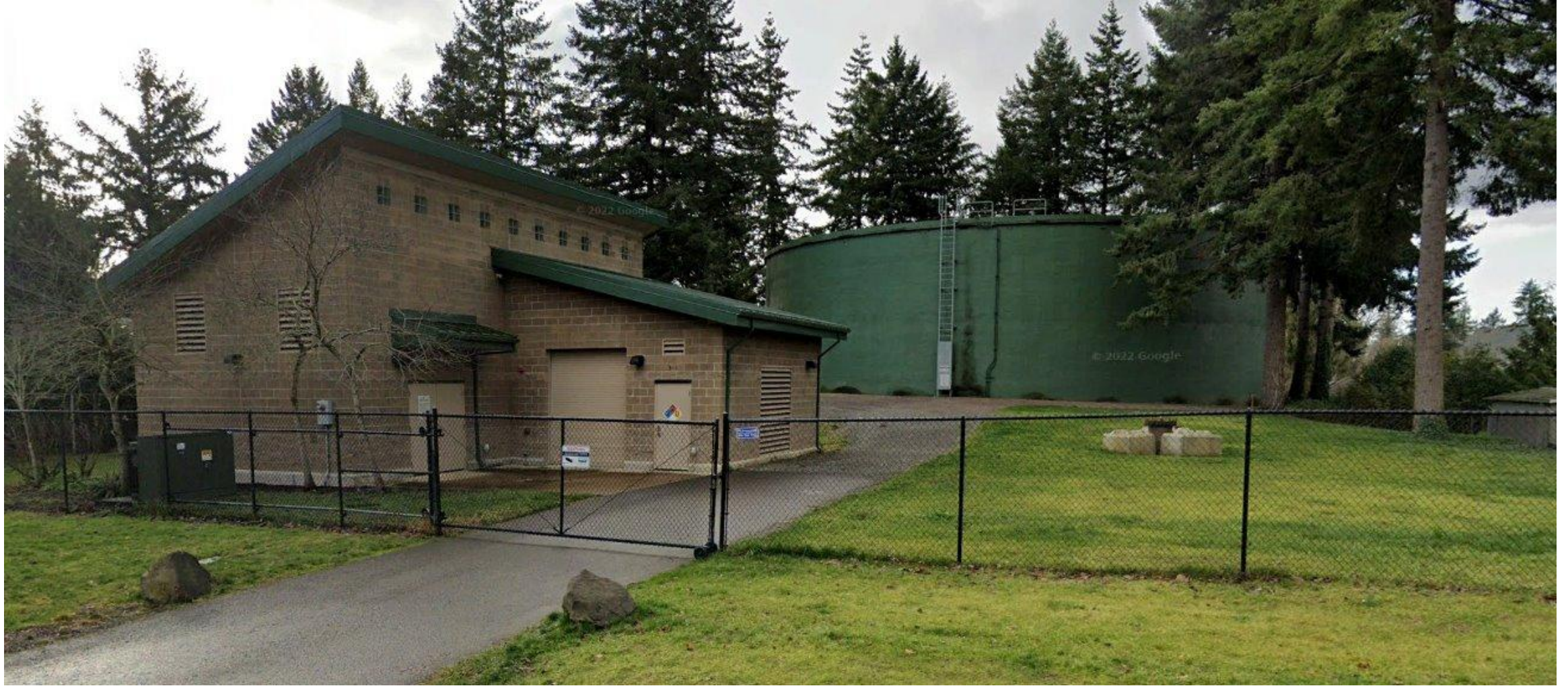
Key Deliverables Schedule

PRELIMINARY DESIGN (30%)	4/26/2023
60% DESIGN	7/24/2023
90% DESIGN	9/26/2023
100% DESIGN	12/15/2023
CONSTRUCTION	7/25/2024
FINAL COMPLETION	12/11/2025
EMERGENCY GENERATOR INSTALLATION	9/29/2026

Package 3

Cascade Groundwater Alliance



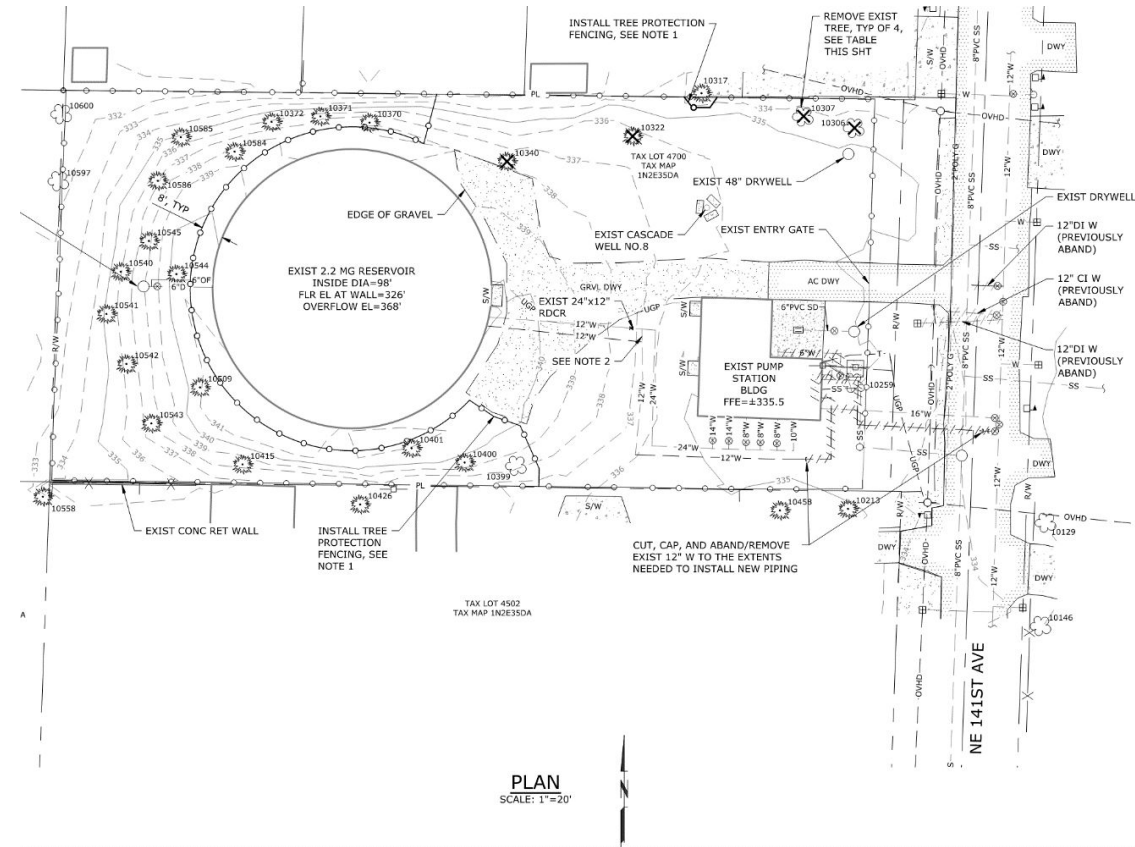
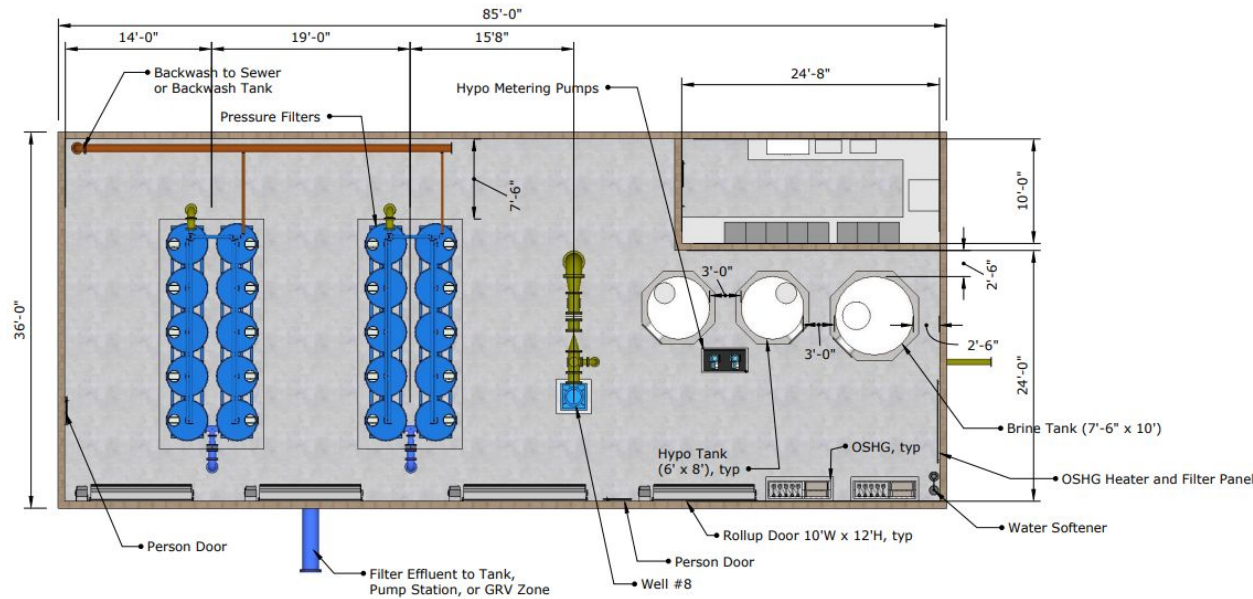


Key Deliverable Schedule

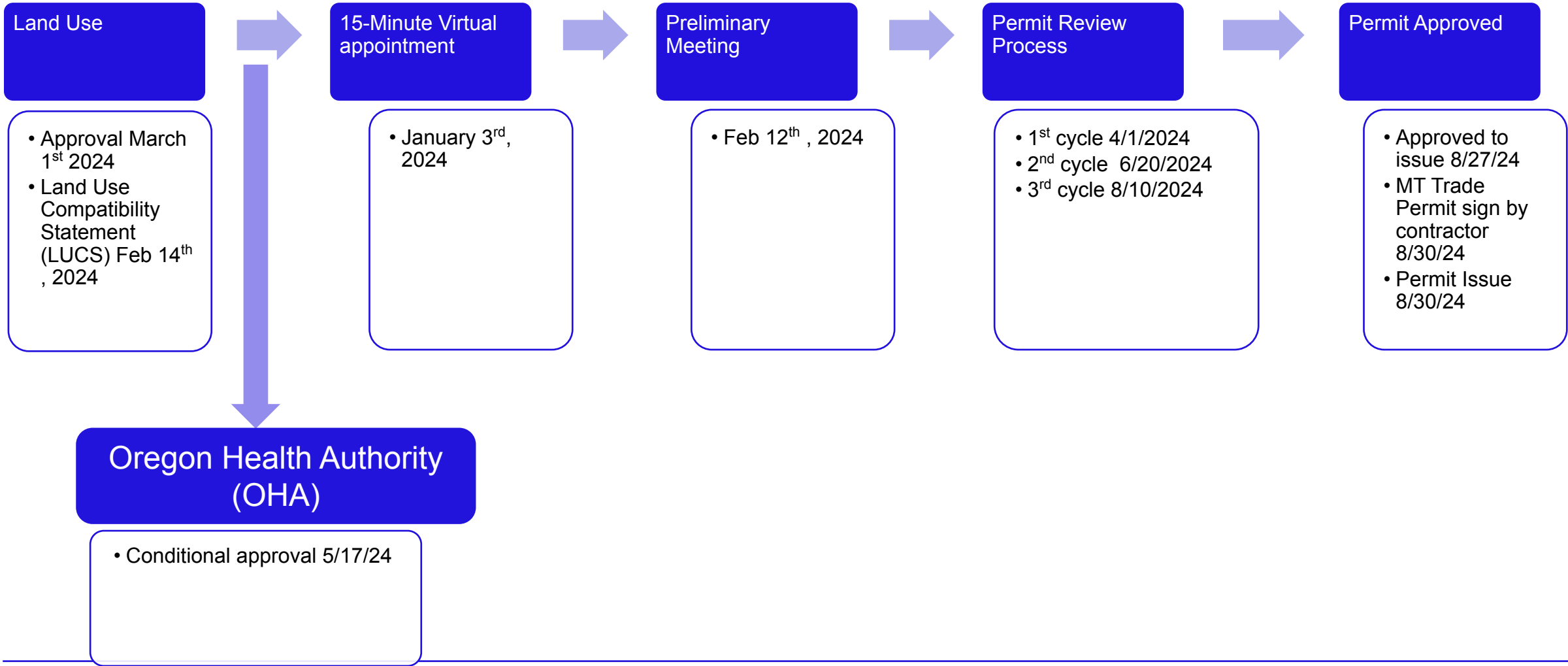
PERMIT INITIAL PROCESS	1/3/2024
100% DESIGN	5/21/2024
CONSTRUCTION	7/25/2024
FINAL COMPLETION	3/12/2026

Design

- Major scope Components
 - Replace existing reservoir
 - Design 3,060 sqft groundwater filtration facility
 - Upgrade existing Pump Station
 - Site Improvements
 - BW tank
 - Backup generator



Permitting Timeline



Preliminary Meeting Outcome-Location

- Distribution located in a residential neighborhood

Permitting Impact

- Submit noise variance application



City of Portland, Oregon
Portland Permitting & Development
Noise Program

Presentation last saved: Just now

David Kuhnhausen, Interim Director
Phone: (503) 823-7300
TTY: 711
www.portland.gov/ppd

NOISE VARIANCE APPLICATION

This is an application for a Noise Variance from the City of Portland Noise Code Title 18. **Please read all pages and fill them out carefully. All details must be clear and legible. Your application will not be considered unless all information and the required documentation are provided.**

Questions? Email variances@portlandoregon.gov or schedule an appointment to talk with us [here](#).

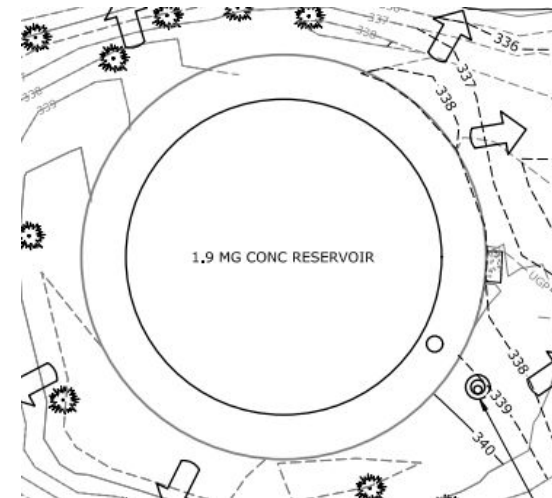
(NOISE OFFICE USE ONLY)
Date submitted:
IVR #:
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Preliminary Meeting Outcome-Reservoir

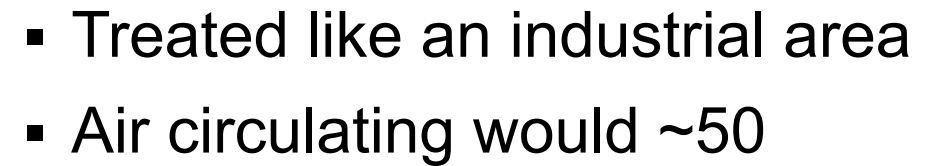
- Existing 2.2-million-gallon reservoir
 - Seismically deficient
- Building the new 1.9-million-gallon reservoir inside the existing footprint

Permitting Impact

- Provide proof that the retaining wall will provide adequate strength for retaining wall purposes
- Providing shoring calculation (could not be a deferral submittal)



- Semi-heated space
- Heat loss
- Process space
 - can't be conditioned in Pacific NW
- Heat exceed energy code limit
- No code appeal allowed



- Use of residence on the adjacent lot at 335 NE141St Ave as construction office



Construction Office/Performance Bond

Collect 3 contractors
estimate

Register
bond



City of
Portland, Oregon
Bureau of Development Services
FROM CONCEPT TO CONSTRUCTION

Carmen Rubio, Commissioner
David Kuhnhausen, Interim Director
Phone: (503) 823-7300
TTY: 711
www.portland.gov/bds

Permit No.:

PERFORMANCE BOND

KNOW ALL PERSON BY THESE PRESENTS That, we _____ as principal, and _____ a corporation organized and existing under the laws of the State of _____, and duly authorized to transact a surety business in the State of Oregon, as Surety, are held and firmly bound unto the CITY OF PORTLAND, a municipal corporation of the State of Oregon, in the penal sum of five million six hundred thirty-seven thousand six hundred forty-eight and thirteen hundredths dollars () lawful money of the United States of America, for the payment whereof well and truly to be made, we and each of us, jointly and severally, bind ourselves, our and each our heirs, executors, administrators, successors and assigns firmly by these presents.

THE CONDITION OF THIS BOND IS SUCH:

That whereas the above named Principal herein, per permit numbers _____, entered into an agreement with the City of Portland on _____, to complete the improvements specified in said agreement. A copy of said agreement is attached hereto and hereby made a part of this bond to the same extent and effect as if written herein.

NOW THEREFORE, the condition of this obligation is such, that if the above Principal shall well and truly perform said agreement or agreements during the original term thereof or of any extension of

Construction Office/Performance Guarantee Agreement

Performance Guarantee Agreement

Legal Description: BATEY ADD, LOT 8 (Tax Account: [REDACTED])
also known as [REDACTED]

Recitals

THIS AGREEMENT is made and entered into this [REDACTED] day of May, 2024 between ROCKWOOD WATER PEOPLE'S UTILITY DISTRICT, herein termed "Owner," and the City of Portland acting by and through its Bureau of Development Services, herein termed "City."

Purpose

This agreement is to allow for temporary construction parking, temporary use of existing house as construction office, and temporary construction staging area on the property legally described as BATEY ADD, LOT 8 (Tax Account [REDACTED]), while construction occurs on the adjacent lot ([REDACTED]) per permits [REDACTED]. The home and property must be restored to the condition it was in before the development of the temporary construction parking, temporary construction office, and temporary construction staging area unless an alternative development has been approved for the location. Upon completion of this agreement the owner will be in compliance with 33.296.040 of the City Code.

Agreement

Terms and Conditions:

A THE OWNER AGREES:

1. To file with the City Auditor, pursuant to section 33.700.050 of the municipal Code of the City of Portland, a Performance Guarantee in the amount of \$ [REDACTED] (average of 3 bids provided by applicant):
 - a. The Performance Guarantee will provide funds to pay for removal of the temporary parking area, temporary staging area, and restore the site and home back to its original condition if the owner fails to comply with this agreement.
 - b. The Performance Guarantee shall be in the form of a performance bond payable to the City in cash, by certified check, cashiers

Attorney to provide changes



City attorney will look over the requested changes

Submit the recorded document

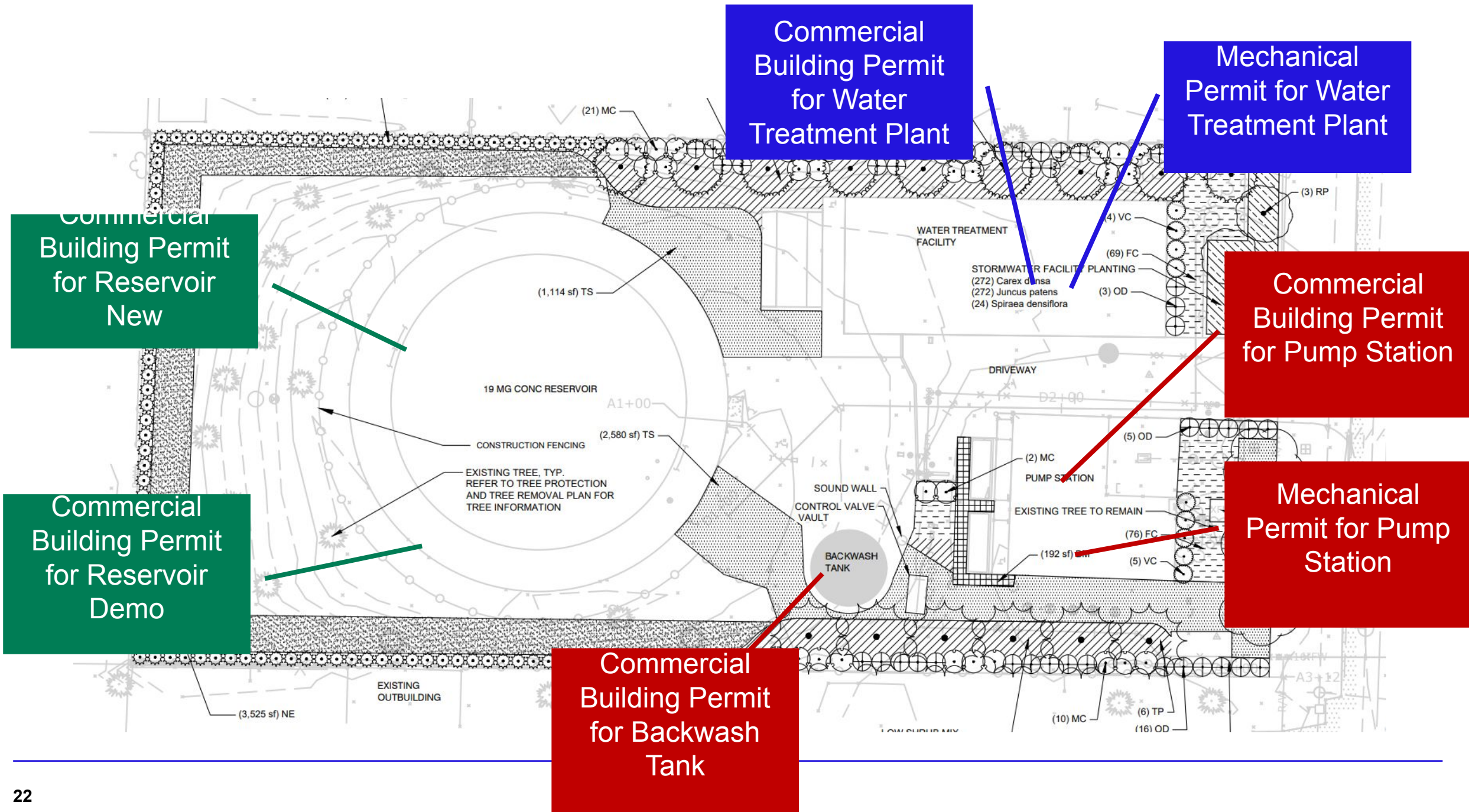
Construction Office/Staging and Sequencing



The bond will be used as a reimbursement to the city for improvements work if the house is not returned to residential state.

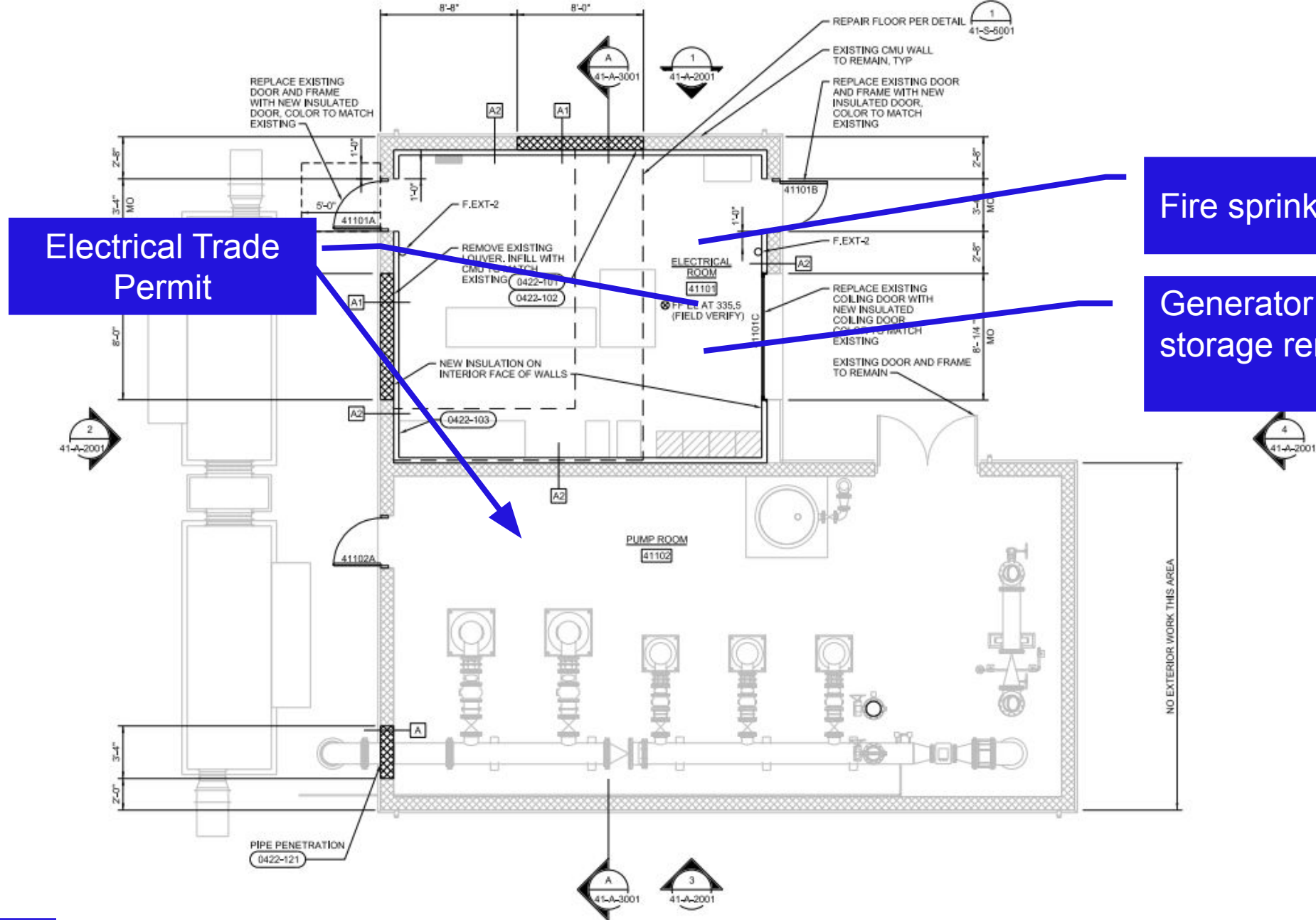
Document Requirement

- Permitting Preliminary Meeting
 - Building code summary narrative
 - Preliminary site plan
 - Completed project information sheet: Water Treatment and Pump Station
- OHA
 - Site plan
 - Project Narrative and Basis of Design Report
 - LUCS
 - Specifications
 - Geotechnical Report
 - Water Quality Analysis for the well water source



Deferred Submittals

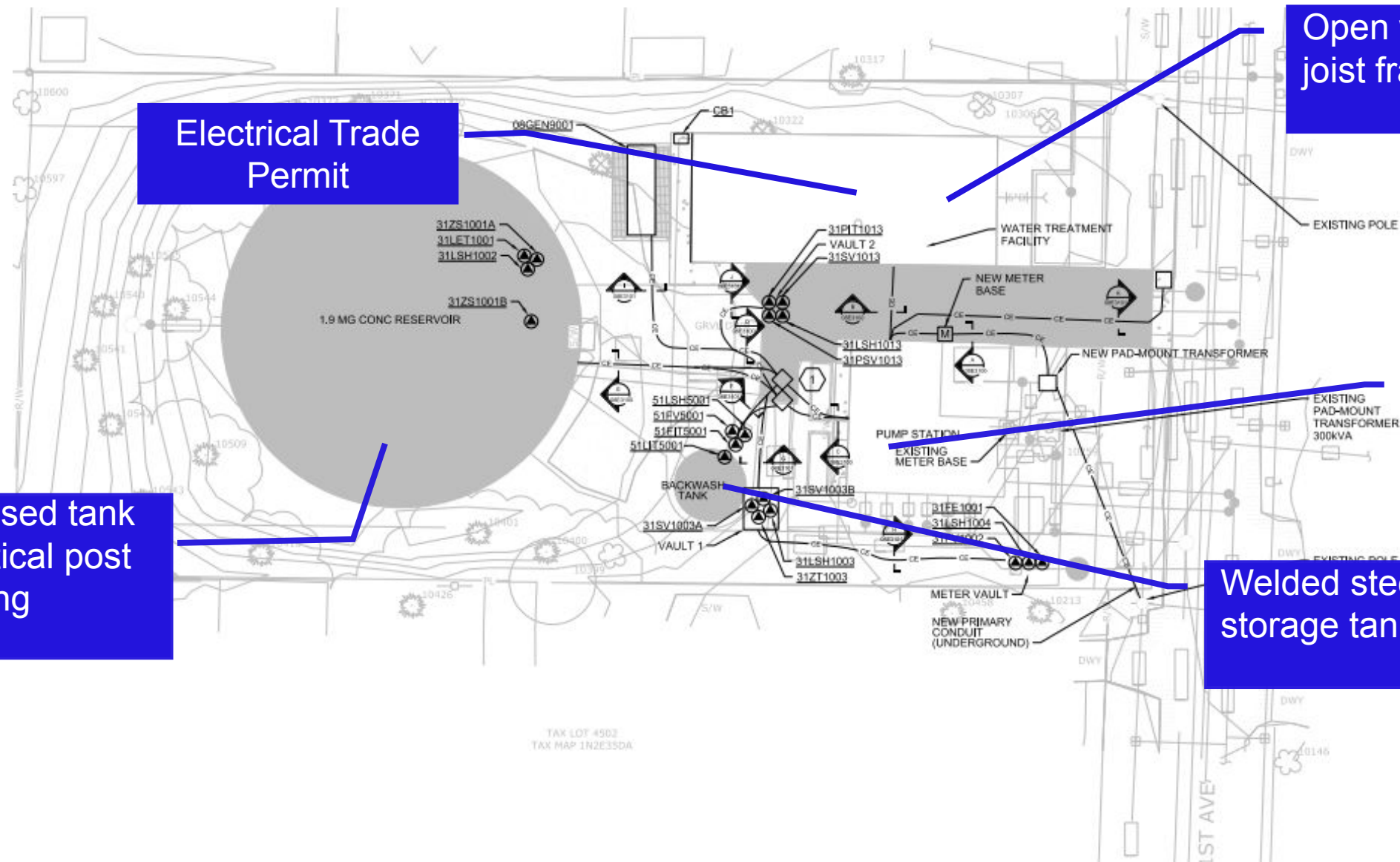
- Electrical
- Anchorage and bracing
- Open web steel joist framing
- Welded steel storage tank
- Prestressed tank with vertical post tensioning
- Piping support system
- Fire sprinkler
- Generator and fuel storage removal



Electrical Trade Permit

Fire sprinkler

Generator and fuel storage removal



Permitting

Supplemental information:

- Structural calculations
- Storm Drainage report
- SDC Form
- Temporary Shoring Calculations
- Street & Storm Waiver
- Soil Special Inspection Program
- Electrical Comcheck
- Geotechnical Report
- Hazardous Materials
- Hydrant Flow Test

City Specificity

- Drawings:
 - Naming each drawing sheet: **153 PM18 Process Mechanical Standard Details**

1

51 - BACKWASH TANK		
139	51-S-1100	STRUCTURAL FLOOR PLAN AND ELEVATION
140	51-S-5001	STRUCTURAL DETAILS
141	51-D-1100	PROCESS MECHANICAL FOUNDATION PLAN
142	51-D-3001	PROCESS MECHANICAL SECTIONS

99 - DETAILS		
143	99-A-5501	ARCHITECTURAL STANDARD DETAILS
144	99-A-5502	ARCHITECTURAL STANDARD DETAILS
145	99-A-5503	ARCHITECTURAL STANDARD DETAILS
146	99-S-5501	STRUCTURAL STANDARD DETAILS
147	99-S-5502	STRUCTURAL STANDARD DETAILS
148	99-S-5503	STRUCTURAL STANDARD DETAILS
149	99-S-5504	STRUCTURAL STANDARD DETAILS
150	99-S-5505	STRUCTURAL STANDARD DETAILS
151	99-S-5506	STRUCTURAL STANDARD DETAILS
152	99-S-5507	STRUCTURAL STANDARD DETAILS
153	99-D-5501	PROCESS MECHANICAL STANDARD DETAILS
154	99-D-5502	PROCESS MECHANICAL STANDARD DETAILS
155	99-D-5503	PROCESS MECHANICAL STANDARD DETAILS
156	99-M-5501	MECHANICAL STANDARD DETAILS
157	99-M-5502	MECHANICAL STANDARD DETAILS
158	99-E-5501	ELECTRICAL STANDARD DETAILS
159	99-E-5502	ELECTRICAL STANDARD DETAILS

3

2

4

4005-500

CASCADE GROUNDWATER ALLIANCE
GROUNDWATER DEVELOPMENT
PROJECT PACKAGE NO. 3
GRESHAM, OREGON
DESIGN

NO. 1

DATE: MARCH 2024

PROJ: D3722000

DWG: 99-D-5501

SHEET: 1 of 1

PLOT DATE: 3/13/2024

PLOT TIME: 4:48:37 PM

BUILDING PERMIT SET

Below is the required format for acceptable file names, which include the following 4 data elements:

1

Leading numbers

2

First letter of discipline

3

Sheet number

4

Description

Life Safety

- HVAC design of the water treatment plant includes electric heat in excess of limits indicated in the OSSC for a semi-heated space.
- Heat above ASHRAE limits to prevent freezing conditions
- No insulation would be provided

Permitting Impact

- Code requires insulation
- The design would require appealing the code

Construction Office/Performance Guarantee Agreement

- The City provide a draft
- Client attorney will look through it and make changes using track changes in word
- City attorney will look over the requested changes whether acceptable or not
- Once everyone agrees on the language, owner to sign
- Provide documentation that authorizes the signer to sign
- The BDS director and city attorney will sign

Performance Guarantee Agreement

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 - b. The Performance Guarantee shall be in the form of a performance bond payable to the City in cash, by certified check, cashiers check, time certificate of deposit, irrevocable letter of credit, or

Construction Office/Staging and Sequencing

- Use of residence on the adjacent lot at 335 NE141St Ave as construction office

Permitting Impact

- To use as temporary construction requires city approval
- City approval requires performance bond and performance guarantee agreement



Construction Office/Performance Bond

- A guarantee to allow the City to feel confident to sign the performance guarantee
- 110% of the average estimate provided by 3 contractors: all materials, labor, and other costs
- Can be used as a reimbursement to the city for improvements work if the house is not returned to residential state.



Permit No.:

PERFORMANCE BOND

KNOW ALL PERSON BY THESE PRESENTS That, we _____ as principal, and _____ a corporation organized and existing under the laws of the State of _____, and duly authorized to transact a surety business in the State of Oregon, as Surety, are held and firmly bound unto the CITY OF PORTLAND, a municipal corporation of the State of Oregon, in the penal sum of five million six hundred thirty-seven thousand six hundred forty-eight and thirteen hundredths dollars () lawful money of the United States of America, for the payment whereof well and truly to be made, we and each of us, jointly and severally, bind ourselves, our and each our heirs, executors, administrators, successors and assigns firmly by these presents.

THE CONDITION OF THIS BOND IS SUCH:

That whereas the above named Principal herein, per permit numbers _____, entered into an agreement with the City of Portland on _____, to complete the improvements specified in said agreement. A copy of said agreement is attached hereto and hereby made a part of this bond to the same extent and effect as if written herein.

NOW THEREFORE, the condition of this obligation is such, that if the above Principal shall well and truly perform said agreement or agreements during the original term thereof or of any extension of

Construction

- All permits were under one umbrella
- Permit stays active for 180 days
 - Pass Inspections will lengthen the permit up to 180 days
 - Pay for extension
- Deferred submittal permits were completed by the contractor.



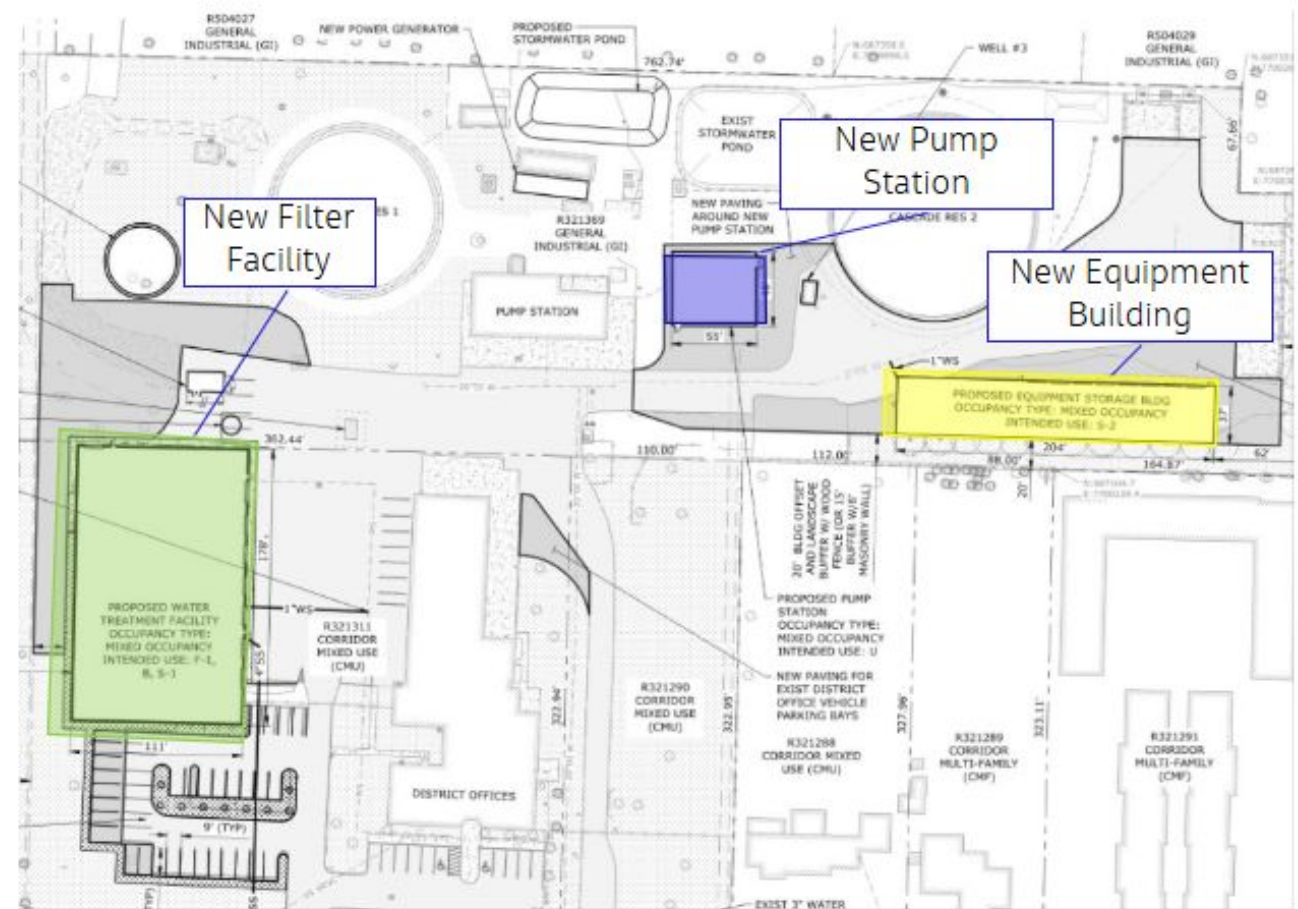
Package 4

Cascade Groundwater Alliance



Package 4 Project Background

- 74,000 Customers Gresham
- New iron and Manganese removal WTP
- Well No. 4 design
- Located on Halsey Street and 196th Avenue



Key Deliverable Schedule

		PRELIMINARY DESIGN (30%)	4/26/2023
		60% DESIGN	7/24/2023
		90% DESIGN	9/26/2023
		100% DESIGN	12/15/2023
		CONSTRUCTION	7/25/2024
		FINAL COMPLETION	12/11/2025
		EMERGENCY GENERATOR INSTALLATION	9/29/2026
Kickoff meeting	11		
Workshop 1: Concept confirmation	12		
Workshop 2: Site Planning	12/19/2022		
Workshop 3: Water Quality & Treatment	1/4/2023		
Workshop 4: Operations and System Controls	3/7/2023		
Basis of design report	4/7/2023		
30% design	4/26/2023		
Early procurement evaluation	7/21/2023		
Final TMs	7/21/2023		
60% design	7/24/2023		
Workshop 5: Distribution Supply Planning & Transition	8/8/2023		
90% design	9/26/2023		
100% design bid set	12/15/2023		
Permitting	2/7/2024		
Building permits submittal	2/21/2024		

Key Deliverable Schedule

PERMIT INITIAL PROCESS	2/21/2024
100% DESIGN	12/15/2023
CONSTRUCTION	7/25/2024
FINAL COMPLETION	12/11/2025
EMERGENCY GENERATOR INSTALLATION	9/29/2026

Design

- Major scope Components
 - 28 MGD Water Treatment Plant
 - Iron and Manganese removal using Pyrolox® Advantage, an engineered filter media
 - New Finished Water Pump Station
 - Five 5.8 MGD pumps with place for a future pump
 - New 3000 gpm deep well No. 4
 - 100,000 Gallon welded steel backwash water storage tank
 - 7700 sf PEMB equipment storage building
 - Site Improvements



Permitting

- 100% Online at the City of Gresham Permits website 2-week initial permit review. Follow-up reviews 1 to 2 weeks

Permitting documents:

- Demolition of existing storage shed and pump station
- Commercial building permits for WTP, pump station, well 4 and site:
 - Building permit
 - Electrical permit
 - Fire protection permit
 - Mechanical permit
 - Plumbing interior permit
- Supplemental information:
 - Structural calculations
 - Electrical calculations
 - Fire flow calculations
 - HVAC Heat load calculations
 - COMcheck energy calculator

Mechanical Permit Application-Commercial

Gresham/East Multnomah County
1333 NW Eastman Parkway Gresham, OR 97030
Phone: 503-618-2845 Fax: 503-618-2224
www.GreshamOregon.gov

TYPE OF WORK
☒ New Construction
☐ Addition/Alteration/Replacement
☐ Garage/Carport
☐ Other:

CATEGORY OF CONSTRUCTION
☒ 1 & 2 Family Dwelling/Accessory
☐ Commercial/Industrial
☐ Multi-Family (Apts or Condos)
☐ Other:

JOB SITE INFORMATION AND LOCATION
Job Site Address: 19601 NE Halley St., Gresham, OR 97230
Suite #: Bldg./Apt.#:
Project Name: Cascade Groundwater Alliance, Groundwater Develop. Ph
Subdivision: Lot #:
Description of Work: WTP: includes ductwork, 1 heat duct heater, 2 electric unit heaters, 1 exhaust fan, 7 split indo units, and associated dampers

PROPERTY OWNER
Name: Cascade Groundwater Alliance, Gresham, OR 97230
Address: 19601 NE Halley St.
City/State/Zip: Gresham, OR 97230
Phone: 503-618-2845 Fax: 503-618-2224
Email: info@cdawalliance.org

APPLICANT
Name: Cascade Engineering, Jeff Fuchs
Address: One 980 Columbia St., Suite 1100
City/State/Zip: Portland, OR 97208
Phone: 503-544-788-0021 Fax: 503-544-788-0021
Email: jfuchs@cascadeeng.com

CONTRACTOR OR OWNER
Business Name: Cascade Engineering, Jeff Fuchs
Address: One 980 Columbia St., Suite 1100
City/State/Zip: Portland, OR 97208
Phone: 503-544-788-0021 Fax: 503-544-788-0021
Email: jfuchs@cascadeeng.com
*CCB Lic. #:
*A valid CCB is Required for all Contractors.
Owner/Authorized Signature: [Signature]
Print Signer's Name: [Name]
Date: [Date]

Building Permit Application

Gresham/East Multnomah County
1333 NW Eastman Parkway Gresham, OR 97030
Phone: 503-618-2845 Fax: 503-618-2224
www.GreshamOregon.gov

TYPE OF WORK
☒ New Construction
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Job Site Address: 19601 NE Halley St., Gresham, OR 97230
Suite #: Bldg./Apt.#:
Project Name: Cascade Groundwater Alliance, Groundwater Develop. Ph
Subdivision: Lot #:
Description of Work: Water Treatment Plant Building: Single-story building with concrete foundation, load bear CMU walls, and metal roof framing housing Process/Industrial and business space.

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Owner/Authorized Signature: [Signature]
Print Signer's Name: [Name]
Date: [Date]

Electrical Permit Application

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1333 NW Eastman Parkway Gresham, OR 97030
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Subdivision: Lot #:
Description of Work: WTP: includes water, sanitary sewer, kitchen and bathroom fixtures, water heater, 3 backflow preventers, water for a chemical system

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Owner/Authorized Signature: [Signature]
Print Signer's Name: [Name]
Date: [Date]

Plumbing Permit Application-Commercial Interior

Gresham/East Multnomah County
1333 NW Eastman Parkway Gresham, OR 97030
Phone: 503-618-2845 Fax: 503-618-2224
www.GreshamOregon.gov

TYPE OF WORK
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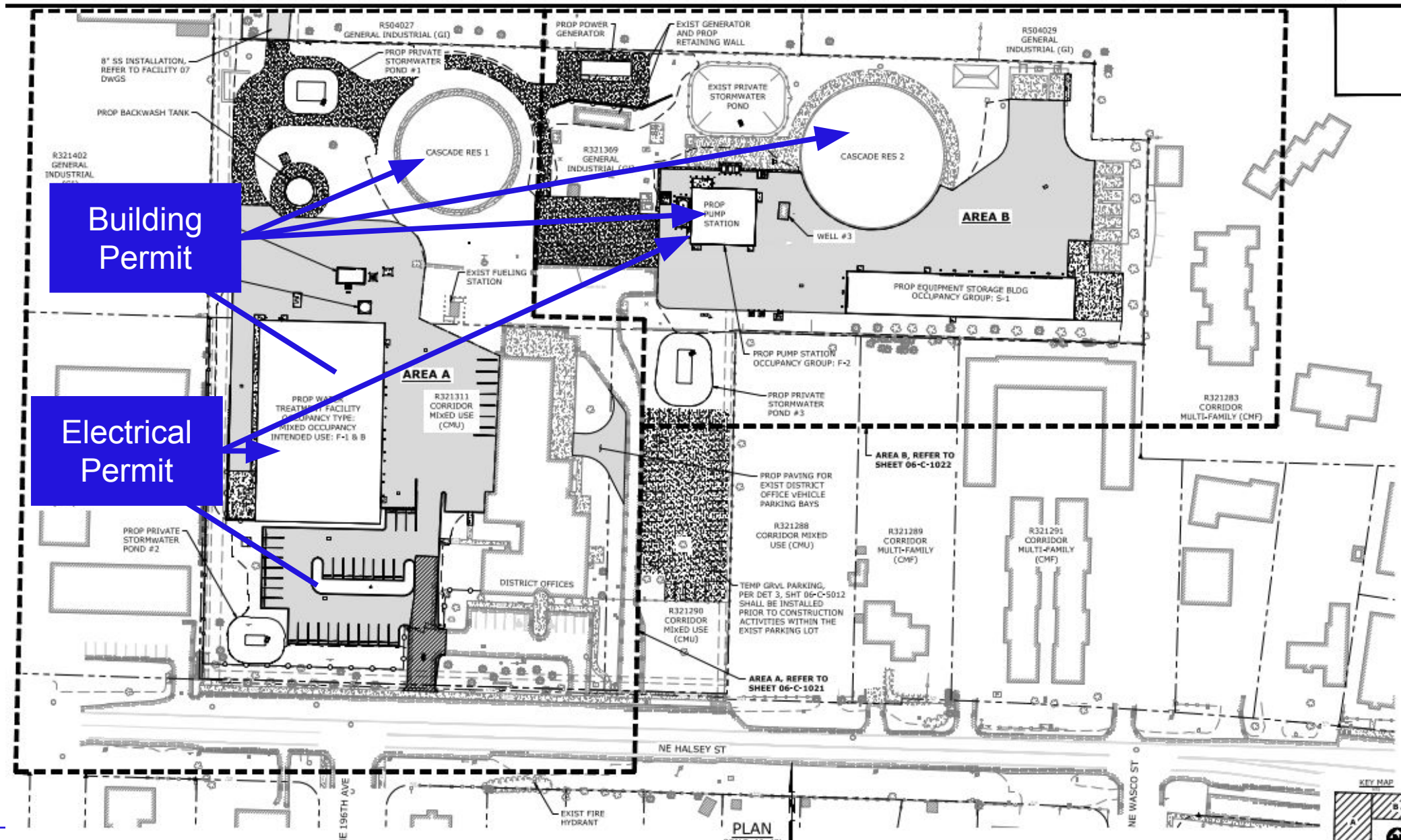
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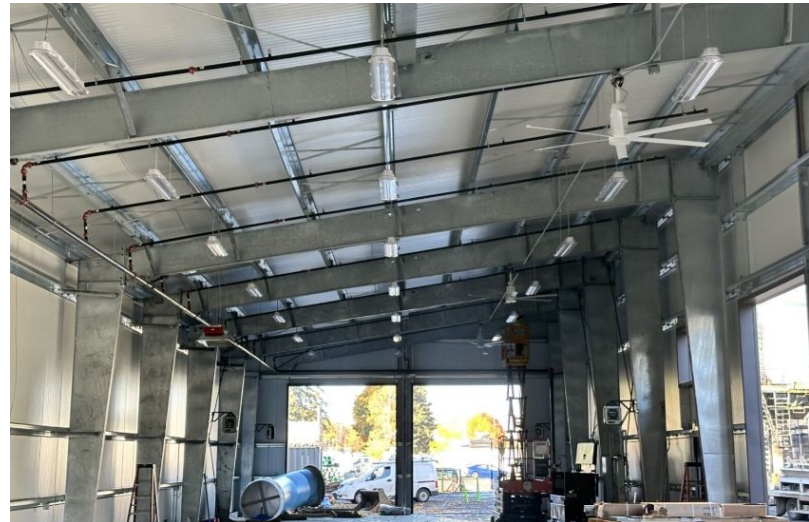
FOR OFFICE USE ONLY			
Item	Description	Qty	Fee (\$)
1	Plan Review Required for Complex Structures: \$18,750 (one-time fee)		
2	Plan Review Required for all other structures: \$1,500 (one-time fee)		
3	Plan Review Required for all other structures: \$1,500 (one-time fee)		
4	Plan Review Required for all other structures: \$1,500 (one-time fee)		
5	Plan Review Required for all other structures: \$1,500 (one-time fee)		
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Construction

- Deferred submittal permits were completed by the contractor.
- City of Gresham was flexible with the construction of the fire safety standpipe.

Contractor was able to add a blockout and pour the slab and complete it later.



Lessons Learned

Permitting

Conclusion

- Schedule a meeting with the permit department ahead of applying for permits.
- Keep an open communication with the permit department
- Be mindful of the permit department schedule and the timing that it takes to review each permit.
- Understand permit submittal rules for each city before you start.
- Assume 3 rounds minimum of reviews.
- Permit fee is based on the value of the project
- If the contractor's valuation is different than the permitted valuation, you can ask for the fees to be recalculated.



Challenging today.
Reinventing tomorrow.

Thank You!