MWH Kiewit
A JOINT VENTURE

May 10, 2023

David Peters, P.E., Bull Run Program Director
Program Director, Bull Run Treatment Program
Portland Water Bureau
1120 S.W. 5th Avenue, Suite 600
Portland, Oregon 97204-1926

Subject: Filtration Facility Project
Revision 2 to GMP 1 Early Works

Dear Mr. Peters,

MWH-Kiewit is pleased to submit this Early Works Guaranteed Maximum Price (GMP) proposal addressing critical path activities benefiting from an early start as outlined below. ***This GMP proposal is based on negotiation of mutually agreeable contract terms and conditions.***

Site preparation activities and construction of temporary features such as:

- Construction of temporary access roads,
- Installation of temporary fencing,
- Development of temporary construction power system,
- Establishment of SWPPP/erosion control measures,
- Establishment of Owner's offices

Construction support activities such as:

- Site security services,
- Traffic control services,
- Stockpile maintenance and loadout,
- Trucking,
- Survey,
- Waste management and recycling services,
- Janitorial services
- 3rd party quality control testing,
- Street sweeping, and
- Portable toilets.

Construction of several permanent project features including:

- Structural excavation at Areas 21, 30, 40, and 91 (partial)
- Raw water pipeline,
- Under slab and/or just off slab underdrain systems at Areas 20, 30, and 40,
- Under slab and/or just off slab buried piping at Areas 20, 30, and 40,

- Purchase of select long-lead equipment as noted below.
- Miscellaneous concrete activities necessary to allow advancement of the foundation slab subgrade preparation, and
- Off-site improvements to SE Carpenter Lane and at the intersection of SE Cottrell Road/SE Dodge Park Blvd.

This proposal is submitted for the purposes of:

- Securing City Council approval of a project funding request covering these Early Works activities. The balance of project funding is anticipated to be secured via a second GMP proposal (i.e., GMP 2 Balance of Plant) to be submitted separately later.
- Engaging Portland Water Bureau (Bureau) staff in a detailed review of Early Works scope, schedule, and pricing.
- Review and confirmation of MWH-Kiewit self-perform pricing by the Bureau's third-party cost estimator.

Pricing in this proposal was developed using the 90% design deliverable documents as detailed in **Attachment A**. Changes made to the documents identified in **Attachment A** will be considered out of scope work and shall be addressed via change order(s) to MWH-Kiewit's GMP. Within 45 days of receipt of the "Issued for Construction" documents, MWH-Kiewit JV will submit a Change Order Request to PWB for all cost changes between the 90PCT documents (i.e., the basis of this proposal) and the "Issued for Construction" drawings (i.e., the basis for construction).

GMP Approval and Notice-to-Proceed

For purposes of preparing this Early Works proposal, MWH-Kiewit's pricing is based on execution of the entirety of the Scope of Services described in this GMP document including the identified clarifications and exclusions. The complete scope is integral to our proposed pricing. *If the PWB elects to modify the scope of services to be provided in the Early Works from what is described in this proposal, MWH-Kiewit will work with the Bureau to address the impacts of the changed scope of work through modification of this proposal or through a contract change order.*

For purposes of preparing this Early Works proposal, MWH-Kiewit has assumed a construction Notice-To-Proceed (NTP) for the entire Early Works scope will be issued on or before September 1, 2023. Beginning work on September 1, 2023, is integral to our planned means and methods priced herein. *If an NTP for the complete scope of work is not authorized on or before September 1, 2023, MWH-Kiewit will work with the Bureau to address the impacts of the changed start date through a modification of this proposal or through a contract change order.*

GMP 2 - Balance of Plant (BOP): Furthermore, pursuant to the Pre-Construction Services Agreement, the CM/GC will provide the Owner with a proposal at a later date to perform GMP 2 Balance Of Plant (BOP) Services. In the event the Owner and the CM/GC mutually agree upon terms and conditions associated with the performance of BOP Services, it is the intention of the parties that the CM/GC Construction Services Contract be amended and restated to integrate the terms and conditions associated with the GMP 2 Balance of Plant Services. Notwithstanding the intent of the parties to negotiate and execute an

Amendment, the Owner has no obligation to negotiate with the CM/GC to enter a GMP 2 BOP Amendment.

Details regarding the scope, schedule, and pricing of this Early Works GMP proposal are included below. This work is subject to the assumptions, clarifications, and exclusions shown in **Attachment B**.

Scope of Work

This Early Works GMP proposal includes self-performed work to be completed by the MWH-Kiewit Joint Venture, work to be completed by our named Opportunity Contractors, and work to be completed by subcontractors as detailed below. With the exception of packages SP-01, SP-05, and S-25 written scope documents for each of the packages included in this Early Works GMP are provided in **Attachment C**.

Self-Perform Packages

Self-performed work to be completed by the MWH-Kiewit Joint Venture includes work packages:

- SP-01 - General Conditions
- SP-02 - Site Preparation and Earthwork
- SP-03 – Site Support Services

Self-Perform package SP-01 (General Conditions) includes the MWH-Kiewit CM/GC staffing for the period of time beginning September 1, 2023 and running for a period of one year ending on August 31, 2024. The basis for the labor pricing is the Early Works organization chart included as **Attachment D**.

Detailed estimates for the two self-perform packages SP-02 (Site Preparation and Earthwork) and SP-03 (Site Support Services) are included as **Attachment E**.

Notwithstanding the definition of the term "owner allowance" as defined in the current Specification 007200 (General Conditions), and exclusively for purposes of this proposal, the term "owner allowance" shall mean:

> i. *"Owner Allowance" means the amount that the Owner has included in the Contract Price to address specified scopes of work and/or risks. The Guaranteed Maximum Price shall be equitably and reasonably increased by Change Order to account for reasonable costs incurred by the CM/GC for Owner Allowance items identified in this Proposal after the Owner Allowance has been exhausted.*

Opportunity Contractor Packages

Work to be completed by our named Opportunity Contractors includes work packages:

- OPP-01 Temporary Construction Power System
- OPP-02 Stockpile Management and Loadout
- OPP-03 Traffic Control

An Owner's Allowance has been included for each of these Opportunity Contractor packages. These Owner's Allowances will be replaced with GMP proposals from our Opportunity Contractors, based on the

Bid Set design documents, following negotiation of the Prime Contract agreement between City of Portland and MWH-Kiewit.

Subcontractor Packages

Work to be completed by Subcontractors includes work packages:

- S-01 - Trucking to Contractor-Designated Off-Site Disposal Facility
- S-02 - Temporary Utilities
- S-03 – Temporary Roads and Laydown Areas
- S-04 – Temporary Fencing and Gates
- S-05 – Surveying
- S-06 – Waste Management and Recycling
- S-07 – Security Services
- S-08 – Owner Janitorial Services
- S-09 - Quality Control Testing Services
- S-10 – Street Sweeping
- S-11 – Off-Site Road Improvements
- S-12 – Erosion Control
- S-14 – Portable Toilets
- S-15 – Owner Field Offices
- S-16 – Raw Water Pipelines
- S-17 – Area 20, Area 30, and Area 40 Structural Concrete (Partial Scope)
- S-24 – Balance of Plant Mechanical (Partial Scope)
- S-25 – Plant Electrical (Partial Scope)

An Owner's Allowance has been included for each of these Subcontractor packages. These Owner Allowances will be replaced with as-bid proposals, based on the Bid Set design documents, following negotiation of the Prime Contract agreement between City of Portland and MWH-Kiewit.

Schedule

This Early Works proposal is based on:

- Approval and release of MWH-Kiewit's construction planning proposal (submitted to the Bureau under separate cover on February 10, 2023) no later than May 8, 2023.
- Receipt of a notice-to-proceed for the entire Early Works scope on or before September 1, 2023.
- Release of the entire Early Works GMP scope of work.

Delays to approval of the construction planning proposal, receipt of the Early Work NTP date, or release of a partial scope of work will necessitate a revised schedule and pricing which may include changes to our proposed means and methods and/or activity sequencing. *If delays occur, MWH-Kiewit will work with the Bureau to address these impacts through modification of this proposal or through a contract change order.*

Additional schedule assumptions and clarifications are included in **Attachment B**.

Pricing Summary

Pricing of this Early Works GMP is summarized as follows:

Row No.	Work Package	GMP or Owner Allowance	Price
1	SP-01 – General Conditions See Note 1	GMP	$20,833,463
2	SP-02 – Site Preparation and Earthwork	GMP	$58,463,705
3	SP-03 – Site Support Services See Note 1	GMP	$12,896,155
4	CM/GC Contingency	GMP	$18,725,000
5	CM/GC Extraordinary Material Escalation Contingency See Note 2	See Note 2	See Note 2
6	CM/GC Bonds See Note 3	See Note 3	$2,075,257
7	Corporate Activity Tax See Note 4	See Note 4	$1,517,837
8	CMGC Fee See Note 5	See Note 5	$13,455,092
9		**Subtotal 1** See Note 6 **=**	**$127,966,509**
10	**OWNER ALLOWANCES**		
11	OPP-01 – Temporary Construction Power System See Note 1	Owner Allowance	$7,020,000
12	OPP-02 – Stockpile Management and Loadout	Owner Allowance	$6,480,000
13	OPP-03 – Traffic Control See Note 1	Owner Allowance	$540,000
14	S-01 – Trucking to Contractor-Designated Off-Site Disposal Facility	Owner Allowance	$21,600,000
15	S-02 – Temporary Utilities	Owner Allowance	$2,483,901
16	S-03 – Temporary Road and Laydown Areas	Owner Allowance	$13,001,968
17	S-04 – Temporary Fencing and Gates	Owner Allowance	$3,980,340
18	S-05 – Surveying	Owner Allowance	$1,080,000
19	S-06 – Waste Management and Recycling See Note 1	Owner Allowance	$648,000
20	S-07 – Security Services See Note 1	Owner Allowance	$801,965
21	S-08 – Owner Janitorial Services See Note 1	Owner Allowance	$216,000
22	S-09 – Quality Control Testing	Owner Allowance	$6,567,382
23	S-10 – Street Sweeping See Note 1	Owner Allowance	$1,080,000
24	S-11 – Off-Site Road Improvements	Owner Allowance	$1,467,427
25	S-12 – Erosion Control See Note 1	Owner Allowance	$4,736,937
26	S-14 – Portable Toilets See Note 1	Owner Allowance	$158,388
27	S-15 – Owner Field Offices See Note 1	Owner Allowance	$577,752
28	S-16 – Raw Water Pipelines	Owner Allowance	$12,028,463
29	S-17 – Area 20, Area 30, and Area 40 Concrete (Partial Scope)	Owner Allowance	$8,640,000
30	S-24 – Balance of Plant Mechanical (Partial Scope)	Owner Allowance	$12,000,000
31	S-25 – Plant Electrical (Partial Scope)	Owner Allowance	$20,000,000
32	Owner Allowance for GM/GC Permit Fees	Owner Allowance	$32,500
32	Owner Contingency	Owner Allowance	$15,000,000
33	Owner Material Escalation Contingency	Owner Allowance	$1,500,000

34	CM/GC Fee on Owner Allowances	Owner Allowance	$16,638,812
35		**Subtotal 2 =**	**$158,278,867**
36			
37		**TOTAL COST =**	**$286,245,376**

Pricing Notes:

1. This work packages above are priced for a one-year period beginning on September 1, 2023 and ending on August 31, 2024. Costs for this work beyond August 31, 2024, will be included in GMP2 (Balance of Plant).
2. CM/GC Extraordinary Material Escalation Contingency line item does not apply to self-perform work. CM/GC Extraordinary Material Escalation Contingency for subcontract packages is currently carried in Owner Allowance numbers below. CM/GC Material Escalation Contingency, applicable to subcontract packages, to be funded from Owner Allowances and established once subcontractor bidding is complete.
3. CM/GC bonds are included based on "Cost of Work' inclusive of CM/GC self-perform packages, CM/GC Contingency, Corporate Activity Tax, CM/GC Fee, and Owner Allowances. CM/GC bond amount to be adjusted via Change Order, either upwards or down, following conversion of Owner Allowances to GMP pricing.
4. The "estimated" Corporate Activity Tax to be invoiced monthly based on a mutually agreeable rate not to exceed 0.57% of the "Cost of Work". The "actual" Corporate Activity Tax to be reconciled annually per Contract Documents.
5. CM/GC Fee is included at a rate of 11.75% of "Cost of Work' inclusive of CM/GC self-perform packages, CM/GC Contingency, Corporate Activity Tax, and CM/GC Bonds.
6. GMP pricing (i.e., Subtotal 1) represents a GMP for the scope of work provided in this proposal for SP-01, SP-02, and SP-03 considered as a whole. Reimbursable costs are not limited to the specific bid package but will be paid until the total GMP is met regardless of which bid package the costs are associated (i.e., this is NOT a line item GMP).

MWH-Kiewit appreciates the opportunity to submit this Early Works GMP proposal. We look forward to working closely with Bureau staff to review and discuss the associated scope, schedule, and pricing.

Sincerely,

Ben McGeachy
Preconstruction Manager
MWH-Kiewit Joint Venture

Attachments :

- A Proposal Source Documents
- B Assumptions/Clarifications/Exclusions
- C Scope of Work Documents (by package)
- D Early Works Organizational Chart
- E Early Works Self-Perform Pricing Detail
- F Risk/Contingency Log
- G RFI Log

ATTACHMENT A
Proposal Source Documents

MWH-Kiewit utilized the documents shown below to prepare this Early Works GMP proposal. MWH-Kiewit understands that these documents will be replaced, prior to beginning construction, with the "Issued for Construction" documents. Within 45 days of receipt of the "Issued for Construction" documents, MWH-Kiewit JV will submit a Change Order Request to PWB for all cost changes between the 90PCT documents (i.e., the basis of this proposal) and the "Issued for Construction" drawings (i.e., the basis for construction).

MWH-Kiewit utilized the following documents in preparation of this Early Works GMP proposal:

1. Bull Run Filtration Facility Specifications Divisions 01-46, Stantec, September 2, 2022 See Note 1 below
2. Division 0 Specifications, Portland Water Bureau, September 2022. Please note, MWH-Kiewit acknowledges receipt and agreement with the Division 0 Specifications dated April 2023. These updated Division 0 Specifications will be incorporated into our Opportunity Contractor and Subcontractor bidding packages (i.e., Opportunity Contractor and Subcontractor bid pricing will be based on the April 2023 Division 0 Specifications). Changes to MWH-Kiewit self-perform packages SP-01 (General Conditions), SP-02 (Site Preparation and Earthwork), and SP-03 (Site Support Services), if any, resulting from the updated Division 0 Specifications will be incorporated into the "Issued for Construction" change process outlined above.
3. Bull Run Filtration Facility Second Intermediate Design – 90PCT Submittal - Stantec, September 2022 (i.e., 90PCT drawings) See Note 1 below
4. Geotechnical Data Report (McMillian Jacobs, October 5, 2021)
5. Technical memorandum re: Preliminary Groundwater Seepage Quantity Estimate (McMillian Jacobs, May 10, 2022)
6. Technical memorandum re: Construction Stormwater (Emerio, April 1, 2022)
7. Technical memorandum re: Draft 90% Stormwater Drainage Report (Emerio, June 17, 2022). MWH-Kiewit acknowledges the Draft Stormwater Drainage Report is not a contract document.
8. Request for Information No. 93 (Underdrain System).
9. Request for Information Nos. 100 through 156 (**Attachment G**)
10. Regional Workforce Equity Agreement (City of Portland, May 17, 2022)
11. Construction Diversity and Inclusion Policy (City of Portland, August 2022)
12. Written Scope of Work documents (MWH-Kiewit) (**Attachment C**)
13. CM/GC staff labor rates (MWH-Kiewit) (**Attachment A-1**)
14. CM/GC equipment rates (MWH-Kiewit) (**Attachment A-2**). MWH-Kiewit acknowledges that Attachment A-2 is not a contract document, and that equipment will be invoiced per Contract Documents.
15. Craft labor rates (MWH-Kiewit) (**Attachment A-3** MWH-Kiewit acknowledges that Attachment A-3 is not a contract document, and that craft labor will be invoiced per the Contract Documents.

Notes:

1. See **Attachment B** (Assumptions/Clarifications/Exclusions) for specific deviations from the 90PCT Design Deliverable including, but not limited to, assumptions regarding topsoil removal during site preparation, construction of the underdrain systems, construction of the concrete retaining

wall at the intersection of SE Cottrell and SE Dodge Parkway Blvd, and the thickness and zone backfill of the raw water pipelines.

Attachments:

	A-1	CM/GC Staff Labor Rates
	A-2	CM/GC Equipment Rates
	A-3	CM/GC Craft Labor Rates

ATTACHMENT B
Assumptions/Clarifications/Exclusions

ASSUMPTIONS and CLARIFICATIONS

1. This proposal is based on achieving a mutually agreeable Prime Contract between City of Portland and MWH-Kiewit.
2. For purposes of preparing this Early Works proposal, MWH-Kiewit pricing is based on execution of the entirety of the Scope of Services described in this GMP document including the identified clarifications and exclusions. The complete scope is integral to our proposed pricing. *If the PWB elects to modify the scope of services to be provided in the Early Works from what is described in this proposal, MWH-Kiewit will work with the Bureau to address the impacts of the changed scope of work through modification of this proposal or through a contract change order.* If actual conditions or requirements are contrary to any of the stated clarifications or exclusions, the JV reserves the right to adjust estimated costs and schedule.
3. For purposes of preparing this Early Works proposal, MWH-Kiewit has assumed an NTP for the entire Early Works scope will be issued on or before September 1, 2023. Beginning work on September 1, 2023, is integral to our planned means and methods priced herein. *If an NTP for the complete scope of work is not authorized on or before September 1, 2023, MWH-Kiewit will work with the Bureau to address the impacts of the changed start date through a modification of this proposal or through a contract change order.*
4. This proposal is based on authorization to begin construction planning and submittals no later than May 8, 2023. This work will be added as a change order to MWH-Kiewit's existing Preconstruction contract. This Early Works proposal is based on approval and release of MWH-Kiewit's Construction Planning Proposal, as a change order to our existing preconstruction contract, no later than May 8, 2023. Please note this planning proposal requires that Engineer (Stantec) be available to review and approve construction submittals beginning May 8, 2023. *If PWB does not approve and release the Construction Planning Proposal on or before May 8, 2023, MWH-Kiewit will work with the Bureau to modify this Early Works GMP proposal addressing the impacts of the change.*
5. MWH-Kiewit's GMP 1 Early Works proposal includes pricing for several "time based" work packages beginning on September 1, 2023 and ending on August 31, 2024 (see Pricing Summary on Page 5 of this proposal). This proposal also includes several "scope based" work packages that are not able to be priced on time-based (one year) duration. If MWH-Kiewit is not awarded GMP 2 Balance of Plant, PWB and MWH-Kiewit agree to negotiate a change order to GMP 1 Early Works that includes 1) revision of the project's Substantial Completion date to August 31, 2024, and 2) de-scoping and reassignment of the remaining "scope based" work effective August 31, 2024, and 3) relief of any/all liability for work that is complete and/or reassigned. Contract work that is deemed Substantially Complete during the Early Works contract will be warrantied according to the requirements of the contract.
6. At the direction of Portland Water Bureau, MWH-Kiewit's project schedule has been developed inclusive of both GMP 1 Early Works and GMP 2 Balance of Plant schedule activities which corresponds with the Substantial Completion date as shown in 007300 Supplementary Conditions (i.e., March 31, 2028). However, the GMP 2 Balance of Plant scope is not part of the GMP 1 Early Works proposal and therefore such activities shall not be included in the GMP 1 Early Works baseline schedule required for submittal following NTP 1. The baseline schedule

will only represent activities for Work under contract which will result in a significant amount of float to achieve a Substantial Completion Milestone intended for both GMP 1 and GMP 2. The GMP 1 Early Works proposal is based on a one-year work period from September 1, 2023, to August 31, 2024, and therefore the CMGC will include an interim milestone of 8/31/24 for GMP 1 Early Works Completion.

7. Contingency is available as a total amount to the project. Exclusive of the Extraordinary Material Escalation line item, Individual risk and contingency line-item totals are for identification and tracking only. The Extraordinary Material Escalation line item is exclusively for use to cover extraordinary escalation items according to the contract. The value of the Extraordinary Escalation will be established after Bid Packages have been awarded to best evaluate the escalation risk.
8. PWB will supply Owner-furnished permits needed for the scope of this Early Works GMP proposal on or before September 1, 2023, including but not limited to Building Permit, Grading Permit, Demolition Permit, and Multnomah County Utility Placement Permit.
9. This Early Works GMP proposal was developed based on the scope of work documents included as **Attachment C**. This Early Works GMP proposal does not include all the work shown on Stantec's 90% design deliverable. Where differences exist between the scope of work shown in **Attachment C** and the scope of work shown on Stantec's 90% design deliverable, then the scope of work shown in **Attachment C** shall govern.
10. CM/GC will have access to the project site either via the northern entrance off SE Carpenter Lane or the southern access off SE Bluff Road beginning on September 1, 2023. Access to both north and south access will be available no later than April 1, 2024.
11. This proposal includes an allowance of $32,500 for the following CM/GC permit fees: temporary office building permits (City of Gresham), Hazardous Material Storage (e.g., fuel), and Temporary Stationary Generators for Offices and Dewatering (DEQ Air Quality). This allowance amount will be adjusted, upwards or down, based on actual cost of permits.
12. CM/GC's submittals will be provided in electronic format only. Hard copies will not be required unless specifically called out in the specifications.
13. CM/GC will be provided with a copy of the project's Masterworks (PMIS) database at project completion specifically including, but not limited to, copies of all submittals, RFIs, design clarifications, change orders, etc.
14. CM/GC will be allowed to work six days per week, 10 hours per day, for select operations including, but not limited to, earthwork and mass excavation.
15. This proposal is based on receipt of the 1200-C permit no later than September 1, 2023.
16. This proposal is based on receipt of the necessary Owner-supplied permits no later than September 1, 2023.
17. This proposal includes the cost of the Payment and Performance bonds for GMP 1 Early Works (only). Separate Payment and Performance bonds will be provided for GMP 2 Balance of Plant.
18. MWH-Kiewit may elect to provide a Retainage Bond in lieu of the specified 5% retention.
19. Progress payments will be made off a mutually agreed upon Schedule of Values to include a reasonable mobilization payment.

EXCLUSIONS (i.e., items not included in this Early Works GMP proposal)

1. Changes and/or additions to design documents made after the 90% design deliverable. Changes and/or additions to the design documents made after the 90% design deliverable will be

reconciled via a Change Order to this Early Works GMP.. See "Work Package Specific Assumptions/Clarifications/Exclusions" below for specific deviations from the 90PCT design deliverable.

2. Off-site disposal of collected groundwater. This estimate assumes that collected water will be discharged to Johnson Creek at a discharge rate that can be accommodated utilizing detention capabilities currently considered in the site plan.
3. Off-site parking and/or busing of craft to jobsite if ordered by Owner or imposed by permit requirements. This estimate assumes that there is sufficient area onsite to accommodate all craft to park at the site.
4. Apprenticeship for trucking.
5. Repair and/or replacement of public roadways beyond that specifically shown in the 90% drawings.
6. Re-routing of existing utilities unless specifically shown in contract documents unless performed for contractor convenience.
7. Preconstruction costs.
8. Cost of the raw water pipelines beyond the limits shown on the 90% design drawings.
9. The cost of PGE power feeds beyond the tie in on the north side of Carpenter Lane across from the Filtration Facility site.
10. The cost of water (potable and non-potable) in accordance with the contract documents, is assumed to be provided by Owner at no cost to CM/GC.
11. Third-party utility hook-up fees and/or meter fees.
12. Contaminated and/or hazardous material, and/or groundwater, remediation or disposal.
13. All disinfection activities. Disinfection activities will be included in GMP 2 (Balance of Plant).
14. All commissioning and start-up activities. Commissioning and start-up activities will be included in GMP 2 (Balance of Plant).
15. All costs associated with LEED certification, Envision certification, and/or project sustainability requirements not specifically defined within the source documents detailed in **Attachment A**.
16. Supply of trailers for Conveyance Pipelines project.
17. Noise control associated with the Conveyance Pipelines project.
18. Owner's costs during construction, such as staff and/or Owner's contingency.
19. Special inspection fees and third-party testing related to special inspections.
20. Application for, and securing of, all Owner-supplied permits required for construction specifically including the land use permit, building permits (excluding trade permits), demolition permit, grading/fill permit.
21. Engineering services during construction not specifically stated in the contract documents.
22. Warranty bond for GMP 1 Early Works. Warranty bond for the entire project will be included in GMP 2 Balance of Plant.

WORK PACKAGE SPECIFIC ASSUMPTIONS/CLARIFICATIONS/EXCLUSIONS

Unless stated otherwise below, work shall comply with the written "Scope of Work" documents included as **Attachment C** to this proposal. Assumptions/clarifications/exclusions specific to certain work packages are as follows:

Package SP-01 – General Conditions

1. This work package is priced for a one-year period beginning on September 1, 2023, and ending on August 31, 2024. Costs for this work beyond August 31, 2024, will be included in GMP2 (Balance of Plant).
2. This package includes PGE power consumption invoicing for the period of April 1, 2024, through August 31, 2024 (reference response to RFI 78). This proposal includes costs associated with supply and operation of temporary generator power for a period up to 6 months, until the PGE power feed is established.

Package SP-02 - Site Preparation and Earthwork

The following assumptions/clarifications/exclusions apply to MWH-Kiewit's SP-02 work package. MWH-Kiewit understands the basis of our pricing may change from what is described below to what will be shown in the "Issued for Construction" documents. Within 45 days of receipt of the "Issued for Construction" documents, MWH-Kiewit will submit a Change Order Request to PWB for all cost changes between the 90PCT documents (i.e., the basis of this proposal) and the "Issued for Construction" drawings (i.e., the basis for construction).

1. The dewatering system and stormwater/groundwater treatment systems included in this package are based on the flow rates provided in:
   - Technical memorandum re: Preliminary Groundwater Seepage Quantity Estimate (McMillian Jacobs, May 10, 2022)
   - Technical memorandum re: Construction Stormwater (Emerio, April 1, 2022)
   - Technical memorandum re: Draft 90% Stormwater Drainage Report (Emerio, June 17, 2022). MWH-Kiewit acknowledges the Draft Stormwater Drainage Report is not a contract document.

   Changes to these flowrates may result in a differing site condition change order.
2. This package includes receiving, detaining as needed, and discharging of up to 250 gallons per minute (from November through April) and up to 75 gallons per minute (from May thru October) of treated groundwater from the Conveyance Pipelines project. This proposal excludes pumping and treating of groundwater from the Conveyance Partners.
3. The pricing of this package is based, in part, on model information provided by Stantec and incorporated into our Excavation Plan. In our excavation plan, no adjustments were made to the top and bottom of saprolite surfaces modeled by McMillian Jacobs and provided as a source document. These surfaces have been used to aid the further development of our dewatering, shoring, and excavation schemes as well as the planning that derives from those schemes including site logistics, temporary drainage etc. The surface information provided by McMillian Jacobs was received via a September 3, 2021 email sent from Devin Roth (McMillian Jacobs Associates) to various members of MWH-Kiewit, Stantec, and PWB.
4. Sheet pile and/or soldier pile and lagging support of excavation will be installed at the locations shown on our Excavation Plan. Pile will be cut off 5 feet below finished grade or structure and abandoned in place. The tension in any associated tiebacks will be released at the pile and the tieback will also be abandoned in place. Changes to the soldier pile and lagging made for CM/GC's convenience are included in CM/GC's contingency.

5. The excavation limits described in the SP-02 scope of work document (Attachment C) are the basis of the SP-02 work included in this Early Works GMP. Changes to these limits made for CM/GC's convenience are included in CM/GC's contingency.
6. Excavation slopes are assumed at 1.5:1. Changes to these excavation slopes made for CM/GC's convenience are included in CM/GC's contingency.
7. Based on previous discussions with PWB and Stantec, this package includes stripping of the existing site surface soil to a depth required to generate the volume required to be temporarily stockpiled onsite and returned as topsoil to the landscaped areas. ***This proposal differs from the 90PCT design specification.***
8. This package includes a negligible amount of "backfill". "Under-structure backfill" refers to the imported aggregates upon which the structures' slabs will be constructed including associated underdrainage aggregates. The limited structural backfill included in this estimate is solely associated with wet wells and sumps that depress below the slab. Backfill not included in this Early Works GMP proposal will be included in GMP 2.
9. Based on previous discussions with PWB and Stantec on November 18, 2022, MWH-Kiewit has included excavation of subgrades at a constant 2 feet below the bottom of slab (to accommodate 18 inches of underdrain rock – with the underdrain piping system assumed encapsulated within that underdrain rock layer - and six inches of AB). ***This proposal differs from the underdrain systems shown in the 90PCT design.*** MWH-Kiewit understands that Stantec intends to optimize the underdrain design. Once the underdrain system design is finalized, the adjustments from this assumption will be quantified and reconciled as a change order.
10. Once installed, the permanent underdrain system will be used during the construction phase to support groundwater dewatering.
11. It is assumed that subgrade of the excavation for the structures' foundation slabs at areas 20, 30, and 40 are above the top of the saprolite layer. This is based on the elevation of the layer as depicted in the model provided by Stantec. Some under slab encased piping and structural concrete sumps/wetwells are anticipated to extend into the saprolite which forms the basis for our base of excavation shoring scheme.
12. This Early Works GMP excludes discharge of treated stormwater and/or groundwater to any other location - including off-site trucking and disposal – other than Johnson Creek.
13. This package excludes mobilizing and erecting the temporary warehouse indicated on the Site Logistics Plan. The cost of the temporary warehouse will be included in GMP 2.
14. CM/GC's schedule for this package assumes the necessary tree removal and/or trimming can be completed without impact by bird nesting regulations. If the tree removal and/or trimming is delayed by bird nesting regulations, and these delays impact work on the critical path, CM/GC will submit these delays as "Excusable Delays" per the Contract Documents.
15. This package assumes no presence of constituents of concern (i.e., contaminants) onsite, nor in the groundwater. Pricing does not include any provisions for managing contaminants, nor for treating the groundwater or surface water for contaminants prior to discharge. Pricing does include detaining and treating groundwater and surface runoff to support monitoring discharge pH and turbidity in compliance with 1200-C Permit. All other monitoring, sampling, and testing for other potential constituents of concern (e.g., CAM-17, pesticides, hydrocarbons, etc.) is excluded.

16. Pricing intends that the permanent stormwater discharge facilities (e.g., flow spreader) may be installed in the early phases of construction and used for the 1200C permitted discharges throughout the construction period.
17. Insulation (e.g., slab insulation board) is excluded from this proposal. The cost for insulation will be included in GMP 2.
18. Pricing is based upon construction of a temporary material stockpile roughly 40+ feet higher than the existing grades. Reducing the height of the material stockpile would require a larger footprint for the stockpile and would impact other site logistics such as access, laydown area, temporary utility infrastructure, existing utility protection, etc.
19. Pricing is based on readily available aggregate products produced in the area which do not comply with the specification as currently written. All aggregates are per ODOT Specifications and will not meet a <5% P200 spec for base rock.
20. All work described in this scope may not be completed prior to 8/31/2024. Should the 8/31/2024 date not be extended by change order, work related to this scope will cease prior to the 8/31/2024 date to allow the CMGC to secure the site, demobilize, and transfer responsibility and any/all liability of the site to PWB.

Package SP-03 – Site Support Services

1. Pricing includes mobilization, demobilization and operation of the forklifts and integrated tool carrier (aka IT with forks, bucket, and boom) from September 1, 2023 to August 31, 2024.
2. Pricing includes mobilization, demobilization and assembly of four cranes. Two of the cranes will be assembled for use prior to June 1, 2024. The remaining two cranes will be assembled just prior to beginning work on GMP 2 Balance of Plant.
3. Operation of equipment provided in this package assumes a 45-hour working week (i.e. 5 – 9s). Operation of equipment beyond 45-hours per week for CM/GC's convenience is included in CM/GC's Contingency.
4. This package includes mobilizing and erecting the maintenance and fuel storage facilities indicated on the Site Logistics Plan.

The following bid packages are included as Owner Allowance items. These packages will be priced, or bid based on the Bid Set documents. The following assumptions were used to estimate the Owner's Allowance values for these packages.

Package SP-05 – Direct Purchase of Key Long Lead Equipment

1. All work described in this scope may not be completed prior to 8/31/2024. Should the 8/31/2024 date not be extended by change order, work related to this scope will cease prior to the 8/31/2024 date to allow the CMGC to secure the site, demobilize, and transfer responsibility and any/all liability of the site to PWB.

Package OPP - 01 – Temporary Construction Power

1. This package assumes that the required temporary power feed(s) will be available at the site boundary, for use by CM/GC, no later than April 1, 2024.
2. This package assumes a power drop will be provided as coordinated with PWB and PGE consistent with the detailed temporary plan provided and the Permit Application shared with PGE.

3. This package includes $100,000 for Ziply charges to establish (overhead) fiberoptic service to the project's temporary office complexes for Contractor use.
4. All work described in this scope may not be completed prior to 8/31/2024. Should the 8/31/2024 date not be extended by change order, work related to this scope will cease prior to the 8/31/2024 date to allow the CMGC to secure the site, demobilize, and transfer responsibility and any/all liability of the site to PWB.

Package OPP-02 – Stockpile Management and Loadout

1. Estimate for this Allowance includes the first 5 months of stockpile management and loadout (April 1, 2024 through August 31 of 2024). Disposal of excess soil, beyond this initial 5 months 300,000 CY, will be priced in GMP 2.

   All work described in this scope may not be completed prior to 8/31/2024. Should the 8/31/2024 date not be extended by change order, work related to this scope will cease prior to the 8/31/2024 date to allow the CMGC to secure the site, demobilize, and transfer responsibility and any/all liability of the site to PWB.

Package OPP-03 – Traffic Control

1. This package includes engagement of a Traffic Control Supervisor, development of Traffic Control Plans, and implementation of offsite Construction Area Signage (and maintenance of same) and other traffic management practices to comply with the specified Construction Constraints and Counties' permitting requirements.
2. Flagging and traffic control will be needed during Carpenter Lane improvements, and as-needed bases for specific events such as heavy equipment mobilization and when necessary to support heavier haul days (export + import).
3. This package includes a full-time onsite traffic flow facilitator.

Package S-01 – Trucking to Contractor-Designated Off-Site Disposal Facility

1. Estimate for this Allowance includes the first 300,000 CY of loadout (which is the estimated quantity to be exported from 6/1/23 to 5/31/24 at ~100 loads per day). Trucking of excess soil, beyond this initial 300,000 CY, will be priced in GMP 2.
2. All work described in this scope may not be completed prior to 8/31/2024. Should the 8/31/2024 date not be extended by change order, work related to this scope will cease prior to the 8/31/2024 date to allow the CMGC to secure the site, demobilize, and transfer responsibility and any/all liability of the site to PWB.

Package S-02 – Temporary Utilities

1. This package includes the initial concept for temporary fire protection that has been developed in consideration of the Oregon Fire Code requirements but has not yet been vetted through the Fire Marshall. As the system design is vetted through the Fire Marshall and its design progresses, the allowance estimate pricing will be updated accordingly.
2. This package includes developing centrally located potable water feeds to support drawing water in support of concrete water cure activities.
3. This package includes developing potable water feeds to the temporary office complexes. (Owner Field Offices Package S-15 would include any provisions for bottled water service.)
4. This package assumes the Pleasant Home Water District will meet the onsite potable water demand for the temporary fire water supply, cure water supply, and water to the temporary

offices. This package assumes that Pleasant Home usage/consumption fee, if any, is paid by the Owner).

5. The package excludes provisions for a temporary onsite sanitary sewer system. Portable Toilets Package S-14 would address the sanitary services needs for the craft via portable sanitary facilities and Owner Field Offices Package S-15 would include the installation of black water holding tank that would be serviced in conjunction with the onsite portable sanitary facilities.

Package S-03 - Temporary Roads

1. Temporary roads, laydown yards and crane pads will be constructed according to the temporary designs included in the scope of work provided previously to PWB. Maintenance beyond August 31, 2024, and/or removal of the constructed facilities are excluded.
2. MWH-Kiewit will provide unimproved space for Conveyance Pipelines CM/GC as follows:
   - 2 acres of working space at the tunnel shaft in the southeast corner of the jobsite.
   - Space for 3 double-wide trailers (for use by Conveyance Pipeline CM/GC).
   - Space for 8 single-wide trailers or equivalent sized double-wides (for use by Conveyance Pipeline subcontractors).
   - 60 parking spaces for use by Conveyance Pipelines project.
   - The Conveyance Pipelines project shall be responsible for any improvements to the space provided.
3. All work described in this scope may not be completed prior to 8/31/2024. Should the 8/31/2024 date not be extended by change order, work related to this scope will cease prior to the 8/31/2024 date to allow the CMGC to secure the site, demobilize, and transfer responsibility and any/all liability of the site to PWB.

Package S-04 – Temporary Fencing and Gates

- Temporary fencing will be 6' "No Climb" fencing as described in RFI 81.

Package S-05 – Survey

1. Includes site pre-construction survey to verify site elevations before construction but does not include the post-construction survey. Cost for the post-construction survey will be included in GMP 2.
2. Survey includes survey staking for all work included in GMP 1.

Package S-07 – Security Services

1. Estimate of Allowance includes weekday working hours security personnel at the Carpenter Lane (northern) site entrance and the SE Bluff Road (southern) site entrance. Hours are included for security personnel to be present during night and weekend hours.

Package S-09 – 3rd Party Quality Control Testing

1. Structural Observation Special Inspector to be employed by the Owner per CBC Chapter 17, Section 1704 is not included.
2. This package includes:
   - Early Works CQC staffing as follows:
     - Structural/Civil (single individual, combined assignment)

        - Mechanical
        - Environmental
        - Geotechnical/Civil Grading/Soils (single individual, combined assignment)
        - Electrical
    - ACI tech for onsite ready-mix testing and sampling
    - Laboratory shrinkage testing (and, as necessary, cylinder breaks in supplement to City's laboratory cylinder breaks)
    - Compaction testing (and pounding curves, as necessary, to support that)
    - Aggregate gradations
    - Welding Procedures' Prequalifications
    - CWI weld inspection
    - Source control testing listed in the Specifications (e.g. batch plant, quarries)

Package S-11 – Off-Site Road Improvements

1. Carpenter Lane improvements may commence only when the existing power poles have been relocated (by Others).
2. This proposal includes pricing of the concrete retaining wall at the intersection of SE Cottrell Road and SE Dodge Parkway. This proposal excludes any temporary shoring and/or sheet piling that may be required to construct the concrete retaining wall. MWH-Kiewit understands that design of the concrete retaining wall has not been finalized.
3. This scope of work is contingent upon relocation of poles no later than April 1, 2024
4. All work described in this scope may not be completed prior to 8/31/2024. Should the 8/31/2024 date not be extended by change order, work related to this scope will cease prior to the 8/31/2024 date to allow the CMGC to secure the site, demobilize, and transfer responsibility and any/all liability of the site to PWB.

Package S-16 – Raw Water Pipelines

1. The Raw Water pipelines - wall thickness and supporting backfill – have been priced per the details per Aaron Eder's (Stantec's) email of November 16th, 2023 (i.e. 7/16" pipe wall, CLSM backfill for the indicated deeper segment of the pipelines, and shoring support at the pipe zone trench wall to allow an OSHA-compliant ~7.5' vertical excavation at the base of the trench). ***This proposal differs from the 90PCT design deliverable.***
2. All work described in this scope may not be completed prior to 8/31/2024. Should the 8/31/2024 date not be extended by change order, work related to this scope will cease prior to the 8/31/2024 date to allow the CMGC to secure the site, demobilize, and transfer responsibility and any/all liability of the site to PWB.

Package S-17 – Areas 20, Area 30, and Area 40 Concrete

1. An allowance value is included to perform the concrete needed to complete the scope of SP-02 to subgrade of concrete foundation slab including any below grade sumps drains and pipe encasements.
2. All work described in this scope may not be completed prior to 8/31/2024. Should the 8/31/2024 date not be extended by change order, work related to this scope will cease prior to the 8/31/2024 date to allow the CMGC to secure the site, demobilize, and transfer responsibility and any/all liability of the site to PWB.

Package S-24 – Balance of Plant Mechanical

1. An allowance is included to purchase long-lead process equipment such as Ozone Generating and Feed Equipment, Soda Ash Storage and Feed Equipment, Onsite Sodium Hypochlorite Generator System, and Dewatering Centrifuges.
2. All work described in this scope may not be completed prior to 8/31/2024. Should the 8/31/2024 date not be extended by change order, work related to this scope will cease prior to the 8/31/2024 date to allow the CMGC to secure the site, demobilize, and transfer responsibility and any/all liability of the site to PWB.

Package S-25 – Plant Electrical

3. An allowance is included to purchase the long-lead electrical gear including the transformers, gear, and stand-by generators. This allowance includes shop drawing development and submittal.
4. All work described in this scope may not be completed prior to 8/31/2024. Should the 8/31/2024 date not be extended by change order, work related to this scope will cease prior to the 8/31/2024 date to allow the CMGC to secure the site, demobilize, and transfer responsibility and any/all liability of the site to PWB.

MWH-KIEWIT JOINT VENTURE

GMP1 PACKAGE SP-02 SITE PREPARATION AND EARTHWORK

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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1.0 GENERAL

The intent of this Scope of Work is to provide Contractor an outline of the type of work to be performed hereunder. Contractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Contractor shall perform structural excavation and subgrade preparation at Areas 20, 30, 40, and 91 (partial) as shown on the civil-series drawings included in Attachment 1, whole and complete, unless expressly excluded herein.**

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 CONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Contractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Contractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Contractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The Regional Workforce Equity Agreement
- Construction Diversity Inclusion Policy
- The Clean Air Construction Standard
- Inadvertent Discovery Plan

3.1.3 Contractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Contractor's Quality Control Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan
- Site Logistics Plan
- KIE Dewatering System Design
- KIE Support of Excavation System Design

3.1.4 Contractor's Scope of Work includes coordination of their work with subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Contractor's Scope of Work includes site-wide preparation as detailed in Specification 31 10 00 (Site Preparation).

- This work includes stripping sufficient quantity to provide the required quantity of topsoil.
- Stockpiled topsoil will be returned from the on-site stockpile to landscaped areas in a succeeding GMP.

3.1.6 Contractor's Scope of Work includes structural excavation for the cast-in-place concrete structures at Area 20, Area 30, Area 40, and Area 91 (partial) as detailed in **Attachment 1** and as described in Specification 31 30 00 (Earthwork).

- The excavation at Area 91 will only be made to top of concrete grade. See MWH-Kiewit Excavation Plan (included in **Attachment 3**). This is to support interim use of the basins for stormwater and dewatering discharge detention without fouling the basins' subgrade. Completing the excavation to grade and constructing the overflow basins (Area 91) including underdrain piping and concrete lining by others in GMP 2.

3.1.7 Contractor's Scope of Work includes furnishing and installing the underslab and/or just off slab drainage systems at Areas 20, Area 30, Area 40. (Reference Basis of Estimate for further discussion surrounding the assumption of a 2' thickness only.)

3.1.8 Contractor's scope of work includes placement and finish of rock materials beneath structures to subgrade elevations beneath concrete structure slabs. (Reference Basis of Estimate for further discussion surrounding the assumption of a 2' thickness only.)

3.1.9 Contractor's Scope of Work includes furnishing and installing the buried underslab and/or just off slab piping at Area 20 (none), Area 30, Area 40, and Area 91 (none) specifically including:

- 4"-8" DR (A32)
- 6-12" OZW (A32)
- 4"-12" DR (A33)
- 4"-6" DR (A35)
- 30"-72" FE (A35) – up to 5' past the end of its encasement
- 36"-72" OF (A35) – up to 5' past the end of its encasement
- 30"-36" FTW (A35) – up to 5' past the end of its encasement
- 30"-36" OF (A37 Basin #1 to A35)
- 30"-36" OF (A37 Basin #2 to A35)
- 14" UW (A40)
- 48" FE (A40)
- 66" FW spools (A40)
- 18"-36" FW (A40 to A45)

Reference attached drawing markups for more precise scope inclusion limits for this piping.

3.1.10 Contractor's Scope of Work includes a minimal amount of backfilling, as necessary to support completion of subgrade up to elevation for construction of the cast-in-place slabs at Area 20, Area 30, Area 40. The limited structural backfill included in this package is solely associated with wetwells and sumps that depress below the slab.

3.1.11 Contractor's Scope of Work includes transport of excess native soils to an on-site stockpile. Stockpile management and truck load out will be completed by the OPP-02 Subcontractor.

3.1.12 Contractor's Scope of Work includes supply and installation of temporary shoring systems, as necessary, to complete Contractor's work. Temporary shoring shall comply with the requirements of Specification 31 30 01 (Shoring and Sheeting). The locations and limits of shoring included in GMP 1 is shown in **Attachment 3**.

- At completion of the work, temporary shoring/sheet piling will be cut off two feet below grade or structure and abandoned in place.

3.1.13 Contractor's Scope of Work includes supply, installation, operation, and maintenance of a groundwater dewatering system in support of this Scope of Work beginning May 1, 2024. Dewatering shall comply with the requirements of Specification 31 23 19 (Dewatering).

- Contractor's Scope of Work includes detention of stormwater and/or groundwater received from others and of suitable quality for discharge to Johnson Creek (i.e., received from the Conveyance Pipelines Project) resulting from construction of the raw water pipeline shaft in the southeast corner of the project site.

3.1.14 Contractor's Scope of Work includes construction of a site-wide stormwater management system including collection, treatment (as necessary), and discharge of collected stormwater beginning on May 1, 2024.

3.1.15 Contractor's Scope of work includes layout from survey staking by Others (i.e., by S-05 Subcontractor).

3.1.16 Contractor's Scope of Work includes minimizing track-out of site soils onto local paved roadways. Where track-out does occur, Contractor shall cause the prompt removal.

3.1.17 Contractor's Scope of Work includes segregating debris onsite in accordance with the project's Construction Waste Management and Recycling Plan.

3.1.18 Contractor's Scope of Work includes supply and installation of an on-site fuel farm to service the above listed equipment.

3.2 Clarifications.

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.2.2 Collected and treated stormwater and groundwater shall be discharged to Johnson Creek.

3.3 Exclusions

3.3.1 Contractor's Scope of Work excludes traffic control as provided by the OPP-03 Subcontractor.

3.3.2 Contractor's Scope of Work excludes construction of the Area 91 underdrain system and cast-in-place concrete as provided by the OPP-04 Subcontractor.

3.3.3 Contractor's Scope of Work excludes off-site trucking as provided by the S-01 Subcontractor.

3.3.4 Contractor's Scope of Work excludes construction of site utilities as provided by the S-02 Subcontractor.

3.3.5 Contractor's Scope of Work excludes construction of temporary roadways, laydown areas, warehouse area, and parking area as provided by the S-03 Subcontractor.

3.3.6 Contractor's Scope of Work excludes the survey services provided by the S-05 Subcontractor.

3.3.7 Contractor's Scope of Work excludes third party quality control "testing" services provided by either the Owner or the S-09 Subcontractor.

3.3.8 Contractor's Scope of Work excludes street sweeping services provided by the S-10 Subcontractor.

3.3.9 Contractor's Scope of Work excludes off-site road improvements provided by the S-11 Subcontractor.

3.3.10 Contractor's Scope of Work excludes stormwater pollution prevention plan (SWPPP) services provided by the S-12 Subcontractor.

3.3.11 Contractor's Scope of Work excludes construction of the cast-in-place concrete structures at Area 30 and Area 40 provided by the S-17 Subcontractor.

3.3.12 Contractor's Scope of Work excludes all backfill of structures (except as specifically stated in item 3.1.11 above. A minor amount of backfill will be necessary to complete subgrade to the structure subgrade elevation.

3.3.13 Contractor's Scope of Work excludes the maintenance facilities shown on the Site Logistics Plan (**Attachment 6**).

3.3.14 Strict conformance of aggregates and geotextiles to the Project Specifications.

- Geotextile shall be Mirafi S1200.
- All aggregates are per ODOT Specifications and will not meet a <5% P200 spec for base rock.

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Contractor by others at no additional cost to Contractor:

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Contractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its Contractors and vendors of every tier in accordance with the requirements in this

Agreement. Contractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
2.		
3.		
4.	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	

5.2 **Submittals** ☒ Applicable ☐ Not Applicable

Contractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Contractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Contractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90PCT Construction Deliverable (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Regional Workforce Equity Agreement
   - Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
   - Inadvertent Discovery Plan
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
   - Contractor's Quality Control Plan
   - Construction Management Plan
   - Waste Management Plan
   - Storm Water Pollution Prevention Plan
   - Erosion Control Plan
   - KIE Dewatering System Design
   - KIE Support of Excavation System Design

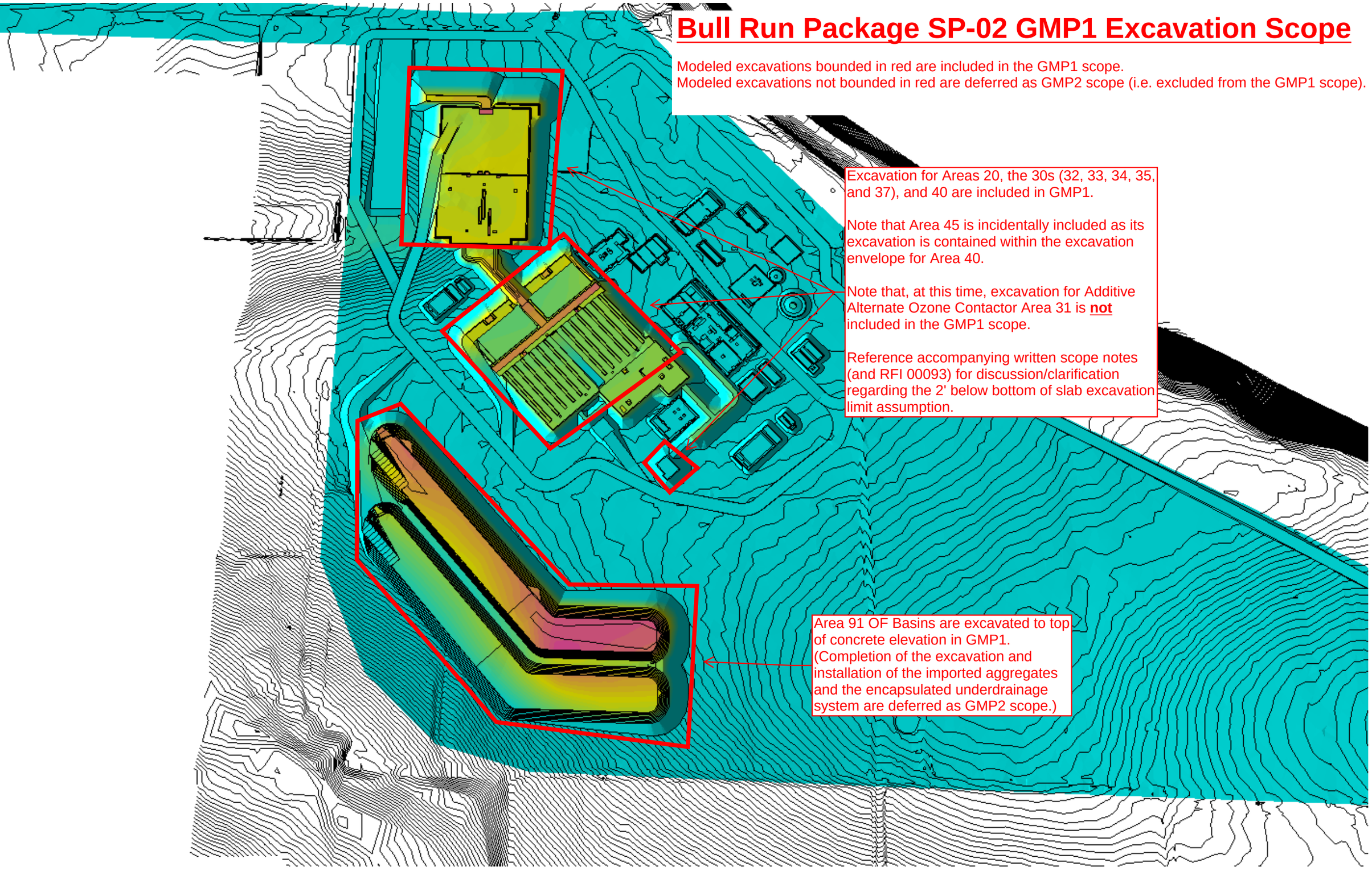
- KIE Tower Crane Foundation Design
- Excavation Plan with elevations of Finish rock grade.

4) Site Vicinity Map
5) Site Logistics Plan

Note to Leland Saylor Associates: For purposes of estimating the Early Works GMP, work associated with the "ozone contact basin" shall be called out as a separate line item (in case this work is bid alternate).

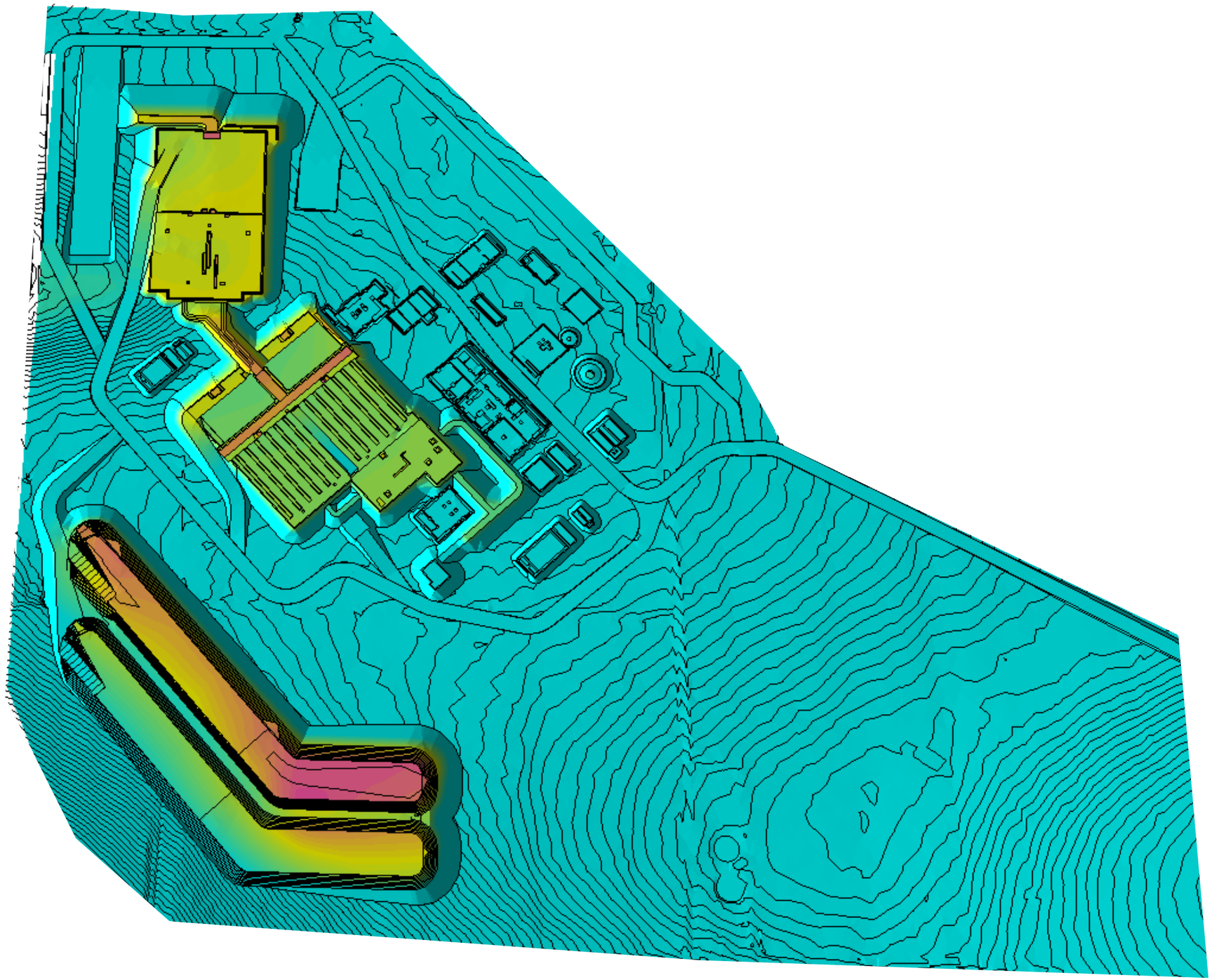
Bull Run Package SP-02 GMP1 Excavation Scope

Modeled excavations bounded in red are included in the GMP1 scope.
Modeled excavations not bounded in red are deferred as GMP2 scope (i.e. excluded from the GMP1 scope).



Kiewit

Bull Run - SAPROLITE EXCAVATION 3D



MWH-KIEWIT JOINT VENTURE

GMP1 PACKAGE SP-03 – HOISTING SERVICES

EXHIBIT C – SCOPE OF WORK

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DRAFT

1.0 GENERAL

The intent of this Scope of Work is to provide Contractor an outline of the type of work to be performed hereunder. Contractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Contractor shall provide hoisting services, whole and complete, unless expressly excluded herein.**

This Scope completed over the first calendar year of the project, from September 1, 2023 through August 31, 2024 is apportioned to GMP1. (Thereafter, through the end of the project, the Scope will be apportioned to GMP 2.)

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 CONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Contractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 **Inclusions.**

3.1.1 Contractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Contractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The Regional Workforce Equity Agreement
- Construction Diversity Inclusion Policy
- The Clean Air Construction Standard
- Inadvertent Discovery Plan

3.1.3 Contractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Contractor's Quality Control Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan
- Project Schedule
- Site Logistics Plan

DRAFT

3.1.4 Contractor's Scope of Work includes coordination of their work with Contractor, Contractor's other Contractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Contractor's Scope of Work includes supply, mobilize, operate, and maintain the following:

- Four (4) 330-Ton Crawler Cranes
  - The first two (2) will be erected and available for use by March 1, 2024.
  - The remaining (2) will be erected and available for use by September 1, 2024.
- Two (2) 100-Ton Rough Terrain Cranes, available for use by April 1, 2024.
- One (1) 276 hp Integrated Tool Carrier
- One (1) 10,000-lb Extendable Rough Terrain Forklifts, available for use by April 1, 2024
- Ten (10) tow-behind light plants
- Two (2) 35 Ton capacity towable flat-deck trailer
- One (1) interim temp 800kW (to feed temp office complexes) from December 1, 2023 through March 31, 2024 (representing the date by which our proposal assumes that temp PGE service is energized and available for use)
- Two (2) Generators on Standby (1 EA at 400kW and 1 EA at 800kW) to provide backup to the Dewatering System, available for use by April 1, 2024.
- One (1) 10,000 gallon water tank.
- One and a half (1.5) water trucks (assumes half the time, only 1 water truck is used and the other half 2 water trucks are used).
- One (1) motor grader for haul road maintenance, available for use by April 1, 2024.
- One (1) standby Active Treatment System (ATS) available for use by April 1, 2024 in the event stormwater runoff and/or dewatering discharge is unable to achieve the required turbidity without its use.

3.1.6 Contractor's Scope of Work includes preparing and executing "move permits" to relocate mobile cranes about the site.

3.1.7 Contractor's Scope of Work includes the supervision of safe hoisting and material handling procedures including crane setup, lift plan verification and inspection of safe rigging practices.

3.1.8 Contractor's Scope of Work includes coordinating and scheduling use of the above listed equipment amongst Contractor and all Subcontractors working at project site.

3.1.9 Contractor's Scope of Work includes establishment of Maintenance Facilities onsite in order to effectively maintain the equipment.

3.1.10 Contractor's Scope of Work includes operation and maintenance of Security Package S-07 provided towable Security Camera Towers (4 EA).

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is

bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.2.2 Contractor supplied equipment to be limited to those items identified in 3.1.5 above.

3.3 **Exclusions**

3.3.1 Contractor's Scope of Work excludes rigging "below the hook".

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Contractor by others at no additional cost to Contractor:

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Contractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its Contractors and vendors of every tier in accordance with the requirements in this Agreement. Contractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Mobilization	5/1/23
2.	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	
3.		
4.		

5.2 **Submittals** ☐ Applicable ☐ Not Applicable

Contractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Contractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Contractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
    - Regional Workforce Equity Agreement
    - Construction Diversity Inclusion Policy
    - The Clean Air Construction Standard
    - Inadvertent Discovery Plan
3) MWH-Kiewit Planning Documents
    - Site Specific Health & Safety Plan
    - Contractor's Quality Control Plan
    - Construction Management Plan
    - Waste Management Plan
    - Storm Water Pollution Prevention Plan
    - Erosion Control Plan
    - Project Schedule
    - Site Logistics Plan
4) Site Vicinity Map
5) Site Conditions Document

NOTE to Leland Saylor Associates: For purposes of estimating the Early Works GMP, price this Scope of Work for the period beginning on September 1, 2023 and ending on August 31, 2024.

DRAFT

MWH-KIEWIT JOINT VENTURE

GMP1 OPP-01 TEMPORARY CONSTRUCTION POWER

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

Table of Contents

1.0 GENERAL

2.0 PROJECT OVERVIEW

3.0 SUBCONTRACTOR'S SCOPE OF WORK

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

6.0 ATTACHMENTS

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall supply and construct the temporary construction power system as detailed in Attachments 6 through 10 whole and complete, unless expressly excluded herein.**

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Draft Construction Diversity Inclusion Policy
- The Clean Air Construction Standard

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes supply and installation of the temporary construction power system as detailed in **Attachments 6 through 10**.

3.1.6 Subcontractor's Scope of Work includes all necessary trade permits to complete Subcontractor's work.

3.1.7 Subcontractor's Scope of Work includes connection of temporary power system to the following:

- Owner's field offices including three (3) double-wide office trailers
- Filtration Facility CM/GCs staff field offices including approximately 16,500 SF of office trailers in a TBD configuration
- Filtration Facility CM/GCs Contractor Quality Control (CQC) field offices including approximately 2,750 SF of office trailers in a TBD configuration
- Filtration Facility CM/GCs Superintendence field offices including approximately 6,250 SF of office trailers in a TBD configuration
- Pipeline CM/GCs field offices including three (3) double wide office trailers.
- Pipeline CM/GCs subcontractor field offices including eight (8) single wide office trailers (or equivalent SF of single/double wide complexes).
- Security Subcontractor's Kiosk at the project entrance on Carpenter Lane.
- Security Subcontractor's Kiosk at the project entrance on Bluff Road.

3.1.8 Subcontractor's Scope of Work includes interim connection of the aforementioned office complexes' to a Contractor-provided 800kV Generator in advance of anticipated PGE energization. (Contractor will fuel, operate, and maintain the Generator.)

3.1.9 Subcontractor's Scope of Work includes supply and installation of exterior/yard lighting at the following locations:

- Office trailer complexes
- Parking lot(s) – as indicated on Site Layout Attachment 6
- Equipment Maintenance Facilities
- Warehouse
- Laydown yard(s) – as indicated on Site Layout Attachment 6
- Shaft

3.1.10 Subcontractor's Scope of Work includes system modifications/maintenance. Because the scope of modifications/maintenance cannot be physically defined at this time, modification/maintenance will be compensated as cost reimbursable with an agreed upon fee. This Scope completed over the first calendar year of the project, from September 1, 2023 through August 31, 2024, is apportioned to GMP1. (Thereafter, through the end of the project, the Scope will be apportioned to GMP2.)

3.1.11 Subcontractor's Scope of Work includes survey staking and layout.

3.1.12 Subcontractor's Scope of Work includes Quality Control, including 3rd Party Testing.

3.1.13 Subcontractor's Scope of Work includes submission of MV Distribution Switchboard, Transformers, and Product Data for Contractor approval.

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by

agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.2.2 Materials and workmanship shall comply with the Project Documents. Where no distinction is made between temporary and permanent work in the Project Documents, temporary work shall comply with the requirements for the permanent facilities. Particularly attention is drawn to Temporary Utilities and Construction Specification Section 01 51 00.

3.2.3 Subcontractor shall coordinate with PGE and complete the indicated scope of work to the satisfaction of PGE and PGE's standards.

3.3 **Exclusions**

3.3.1 PGE fees by Others. (PGE charges to establish and energize service paid direct by Owner. PGE consumption charges also paid by Owner.

3.3.2 System removal (to be left in place).

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services, if any, to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Mobilization	9/5/23
2.	Furnish Submittal(s)	9/30/23
3.	Connect Office Complexes – those available - to interim Generator	11/1/23
4.	Complete Temporary Power Infrastructure – Ready to Energize	4/1/24
	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	

5.2 **Submittals** ☒ Applicable ☐ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address

Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - The Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
   - Quality Plan
   - Construction Management Plan
   - Waste Management Plan
   - Storm Water Pollution Prevention Plan
   - Erosion Control Plan
4) Site Vicinity Map
5) Not Used
6) Temporary Construction Power Attachment – Site Layout
7) Temporary Construction Power Attachment - Single Line
8) Temporary Construction Power Attachment – MV Metering Switchboard submission to PGE
9) Temporary Construction Power Attachment – MV Distribution Switchboard Spec
10) Temporary Construction Power Attachment – Transformers Spec

NOTES:

1. NOT USED
2. NOT USED
3. NOT USED

12.47 kV From PGE OH/UG Service

2-6" PVC Sch 40 - Empty

PGE

SCOPE BREAK

CONTRACTOR

TEMP-12-PGE-SWG-01
12.47 KV, 600 A, 37 KAIC

600 A
LOAD
BREAK

(2) 6" PVC Sch 40
(2) 4-#500 w/#1/0 GND
15 kV EPR Copper

TEMP-12-MVB-SWG-01
12.47 KV, 1200 A, 37 KAIC

600 AT
1200 AF

600 AT
600 AF

4" PVC Sch 40
4-#1/0 w/#6 GND
15 kV EPR Copper

207 LF

TEMP-XFMR-05
12.47 KV - 480 V
1500 KVA

(4) 4" PVC Sch 40
(4) 3-#500 w/ #250 GND
600V XHHW-2 Copper

60 LF

PWR-DIST-CONT-05
480 V, 1600 A, 65 KAIC

1600 AT
2000 AF

50 AT
125 AF

1200 AT
1200 AF

150 AT
250 AF

2" PVC Sch 40
3-#8 w/#10 GND
600V XHHW-2 Copper

145 LF

(4) 4" PVC Sch 40
(4) 3-#500 w/ #3/0 GND
600V XHHW-2 Copper

83 LF

2" PVC Sch 40
3-#2/0 w/#6 GND
600V XHHW-2 Copper

421 LF

GUARD SHACK 1
480 V - 120 V, 50 A, 65 KAIC

GUARD-SHACK-XFMR-01
480V-120V/240V
25 KVA

40 AT
125 AF

2" PVC Sch 40
3-#6 w/#10 GND
600V XHHW-2 Copper

50A

1200A

Power Station #5
480 V/120 V, 200 A, 65 KAIC

PWR-STATION-5-XFMR-01
480V-120V/240V
50 KVA

2" PVC Sch 40
3-#4/0 w/#6 GND
600V XHHW-2 Copper

200A

Guard Shack with Mini-Power Center with Transformer

Trenchless Pipe Contractor

Power Station #1

600 AT
600 AF

4" PVC Sch 40
4-#1/0 w/#6 GND
15 kV EPR Copper

1283 LF

TEMP-XFMR-01
12.47 KV - 480 V
500 KVA

(3) 4" PVC Sch 40
(3) 3-#4/0 w/ #1/0 GND
600V XHHW-2 Copper

60 LF

PWR-DIST-CONT-01
480 V, 600 A, 18 KAIC

600 AT
600 AF

150 AT
250 AF

2" PVC Sch 40
3-#2/0 w/#6 GND
600V XHHW-2 Copper

269 LF

Power Station #1
480 V/120 V, 200 A, 18 KAIC

PWR-STATION-1-XFMR-01
480V-120V/240V
50 KVA

2" PVC Sch 40
3-#4/0 w/#6 GND
600V XHHW-2 Copper

200A

Power Station #1

600 AT
600 AF

4" PVC Sch 40
4-#1/0 w/#6 GND
15 kV EPR Copper

1690 LF

TEMP-XFMR-02
12.47 KV - 480 V
500 KVA

(3) 4" PVC Sch 40
(3) 3-#4/0 w/ #1/0 GND
600V XHHW-2 Copper

60 LF

PWR-DIST-CONT-2
480 V, 600 A, 18 KAIC

600 AT
600 AF

150 AT
250 AF

2" PVC Sch 40
3-#2/0 w/#6 GND
600V XHHW-2 Copper

707 LF

Power Station #3
480 V/120 V, 200 A, 18 KAIC

PWR-STATION-2-XFMR-01
480V-120V/240V
50 KVA

2" PVC Sch 40
3-#4/0 w/#6 GND
600V XHHW-2 Copper

200A

Power Station #3

150 AT
250 AF

2" PVC Sch 40
3-#2/0 w/#6 GND
600V XHHW-2 Copper

621 LF

Power Station #2
480 V/120 V, 200 A, 18 KAIC

PWR-STATION-2-XFMR-01
480V-120V/240V
50 KVA

2" PVC Sch 40
3-#4/0 w/#6 GND
600V XHHW-2 Copper

200A

Power Station #2

150 AT
250 AF

2" PVC Sch 40
3-#2/0 w/#6 GND
600V XHHW-2 Copper

353 LF

Power Station #4
480 V/120 V, 200 A, 18 KAIC

PWR-STATION-4-XFMR-01
480V-120V/240V
50 KVA

2" PVC Sch 40
3-#4/0 w/#6 GND
600V XHHW-2 Copper

200A

Power Station #4

20 AT
125 AF

2" PVC Sch 40
3-#10 w/#10 GND
600V XHHW-2 Copper

122 LF

5A

Laydown Power

50 AT
125 AF

2" PVC Sch 40
3-#6 w/ #10 GND
600V XHHW-2 Copper

479 LF

50A

Warehouse power

50 AT
125 AF

2" PVC Sch 40
3-#6 w/ #10 GND
600V XHHW-2 Copper

110 LF

50A

Maintenance Facility Power

20 AT
125 AF

2" PVC Sch 40
3-#10 w/#10 GND
600V XHHW-3 Copper

574 LF

10A

Structures Laydown Power

600 AT
600 AF

4" PVC Sch 40
4-#1/0 w/#6 GND
15 kV EPR Copper

3007 LF

TEMP-XFMR-03
12.47 KV - 480 V
1500 KVA

(4) 4" PVC Sch 40
(4) 3-#750 w/ #4/0 GND
600V XHHW-2 Copper

60 LF

PWR-DIST-CONT-03
480 V, 1600 A, 65 KAIC

1600 AT
1600 AF

1200 AT
1200 AF

400 AT
400 AF

(3) 4" PVC Sch 40
(3) 3-#750 w/ #2/0 GND
600V XHHW-2 Copper

177 LF

1000A

(2) 4" PVC Sch 40
(2) 3-#350 w/ #3 GND
600V XHHW-2 Copper

159 LF

360A

Office and Main Yard Power

Pipeline Shaft Contractor

600 AT
600 AF

4" PVC Sch 40
4-#1/0 w/#6 GND
15 kV EPR Copper

1113 LF

TEMP-XFMR-04
12.47 KV - 480 V
500 KVA

(3) 4" PVC Sch 40
(3) 3-#4/0 w/ #1 GND
600V XHHW-2 Copper

60 LF

PWR-DIST-CONT-04
480 V, 600 A, 18 KAIC

600 AT
600 AF

600 AT
600 AF

(3) 2" PVC Sch 40
(3) 3-#350 w/ #1/0 GND
600V XHHW-2 Copper

230 LF

600A

Dewatering

TEMP-12-MVB-SWG-01
12.47 KV, 1200 A, 65 KAIC

600 AT
600 AF

4" PVC Sch 40
4-#1/0 w/#6 GND
15 kV EPR Copper

3241 LF

TEMP-XFMR-06
12.47 KV - 480 V
1000 KVA

(4) 4" PVC Sch 40
(4) 3-#500 w/ #1/0 GND
600V XHHW-2 Copper

60 LF

PWR-DIST-CONT-06
480 V, 1200 A, 65 KAIC

1200 AT
1200 AF

20 AT
125 AF

2" PVC Sch 40
3-#10 w/#10 GND
600V XHHW-2 Copper

620 LF

10A

ATS System

600 AT
600 AF

(3) 4" PVC Sch 40
(3) 3-#350 w/#1 GND
600V XHHW-2 Copper

208 LF

600A

Dewatering

50 AT
125 AF

2" PVC Sch 40
3-#1/0 w/#10 GND
600V XHHW-2 Copper

947 LF

50A

Dewatering

From Utility Pole Bluff Rd.

4-6" PVC Sch 40
Empty

PGE-UTILITY-XFMR
12.47 KV - 240 V
15 kVA

4" PVC Sch 40
#3 w/ #10 GND
600V XHHW-2 Copper

25 LF

50AT
125 AF

PGE Metering Panel w/ Breakers

2" PVC Sch 40
#3 w/ #10 GND
600V XHHW-2 Copper

50 LF

50AT
125 AF

50A

Guard Shack 2

- PRELIMINARY -
NOT FOR CONSTRUCTION

REV	DESIGN BY	CHECKED BY	DATE
A	ISSUED FOR REVIEW		
	I. PALMER	N. RANDALL	3/2/2023

PORTLAND WATER BUREAU

BULL RUN FILTRATION FACILITY

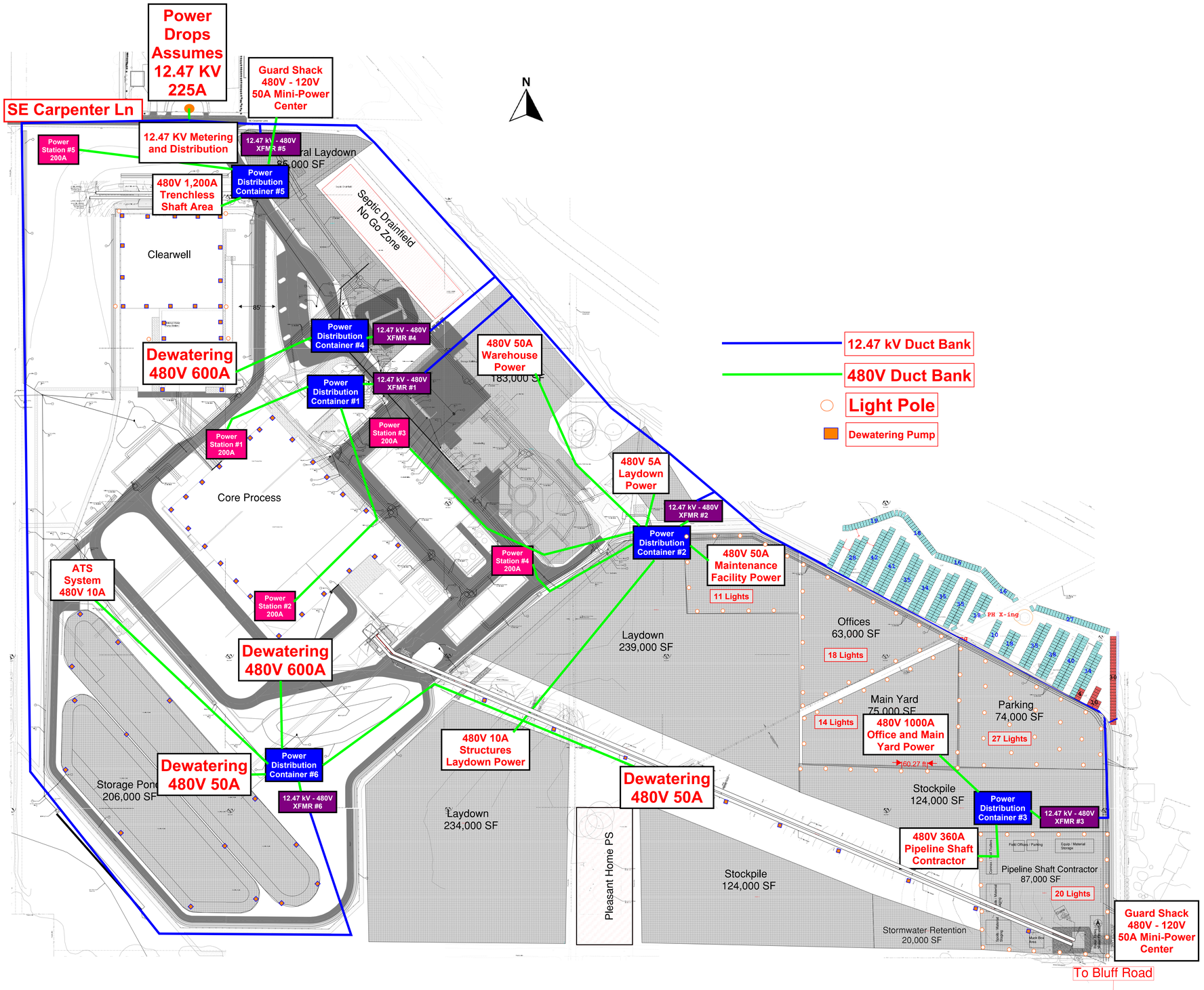
Kiewit

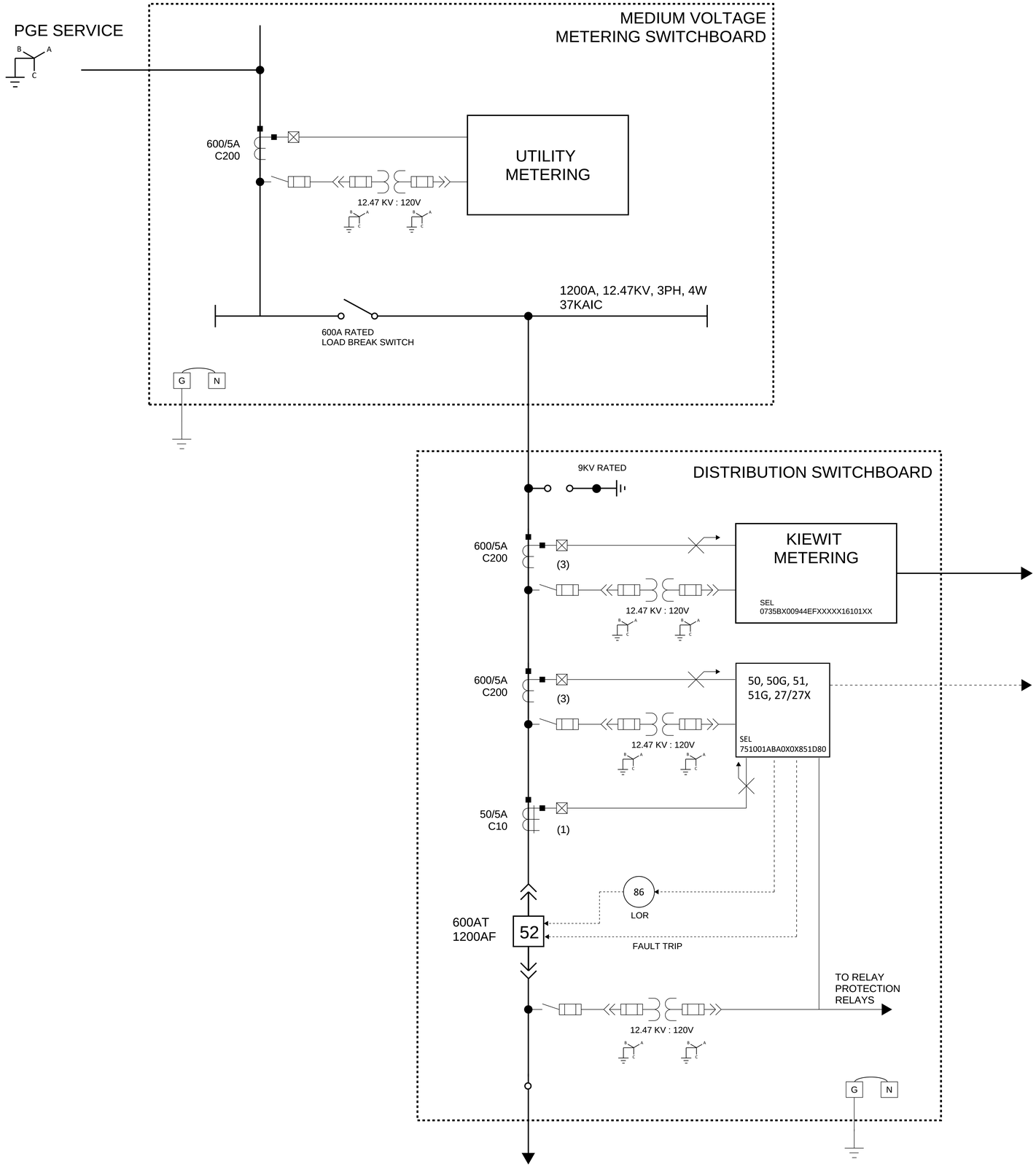
ELECTRICAL ONE LINE DIAGRAM
TEMPORARY POWER FEED

ENGINEER/DESIGN ORIGINATOR	N. RANDALL
LEAD ENG	A. REAB
ENG MGR	M. PUSKAS
PROJ MGR	L. REGULAR

DRAWING NUMBER

101025306-EO-201


Power Drops Assumes 12.47 KV 225A
Guard Shack 480V - 120V 50A Mini-Power Center
SE Carpenter Ln
12.47 KV Metering and Distribution
12.47 kV - 480V XFMR #5
Power Station #5 200A
Power Distribution Container #5
480V 1,200A Trenchless Shaft Area
Laydown 85,000 SF
Septic Drainfield No Go Zone
Clearwell
85'
Power Distribution Container #4
12.47 kV - 480V XFMR #4
Dewatering 480V 600A
480V 50A Warehouse Power
183,000 SF
Power Distribution Container #1
12.47 kV - 480V XFMR #1
Power Station #3 200A
Power Station #1 200A
480V 5A Laydown Power
Core Process
12.47 kV - 480V XFMR #2
Power Distribution Container #2
Power Station #4 200A
480V 50A Maintenance Facility Power
11 Lights
ATS System 480V 10A
Power Station #2 200A
Dewatering 480V 600A
Laydown 239,000 SF
Offices 63,000 SF
18 Lights
Main Yard 75,000 SF
14 Lights
480V 1000A Office and Main Yard Power
Parking 74,000 SF
27 Lights
Power Distribution Container #6
Dewatering 480V 50A
Storage Pond 206,000 SF
12.47 kV - 480V XFMR #6
480V 10A Structures Laydown Power
Laydown 234,000 SF
Dewatering 480V 50A
Pleasant Home PS
Stockpile 124,000 SF
Power Distribution Container #3
12.47 kV - 480V XFMR #3
480V 360A Pipeline Shaft Contractor
Pipeline Shaft Contractor 87,000 SF
20 Lights
Stockpile 124,000 SF
Stormwater Retention 20,000 SF
Guard Shack 480V - 120V 50A Mini-Power Center
To Bluff Road
N
12.47 kV Duct Bank
480V Duct Bank
Light Pole
Dewatering Pump



NOTES:

1. SOLIDLY GROUNDED.
2. RESISTANCE RATED XXX A FOR 10 SECONDS.
3. XXX V HIGH RESISTANCE GROUND SYSTEM LIMITS LINE TO GROUND FAULTS TO 5 A.
4. PGE UTILITY ASSUMED TO MATCH PG&E SYSTEM ROTATION A-C-B COUNTERCLOCKWISE

REFERENCE DRAWINGS:

EE-002	ELECTRICAL ENGINEERING STANDARDS AND SYMBOLS LEGEND

RELAY LEGEND:

50	INSTANTANEOUS OVERCURRENT REALY
50G	GROUND INSTANTANEOUS OVERCURRENT
51	AC TIME OVERCURRENT RELAY
51G	GROUND TIME OVERCURRENT
27/27X	BUS/LINE UNDERVOLTAGE

- PRELIMINARY -
NOT FOR CONSTRUCTION

REV	DESIGN BY	CHECKED BY	DATE
A	ISSUED FOR REVIEW		
	N. GUIDA	A. REAB	-OPEN-

PORTLAND WATER BUREAU

BULL RUN FILTRATION FACILITY

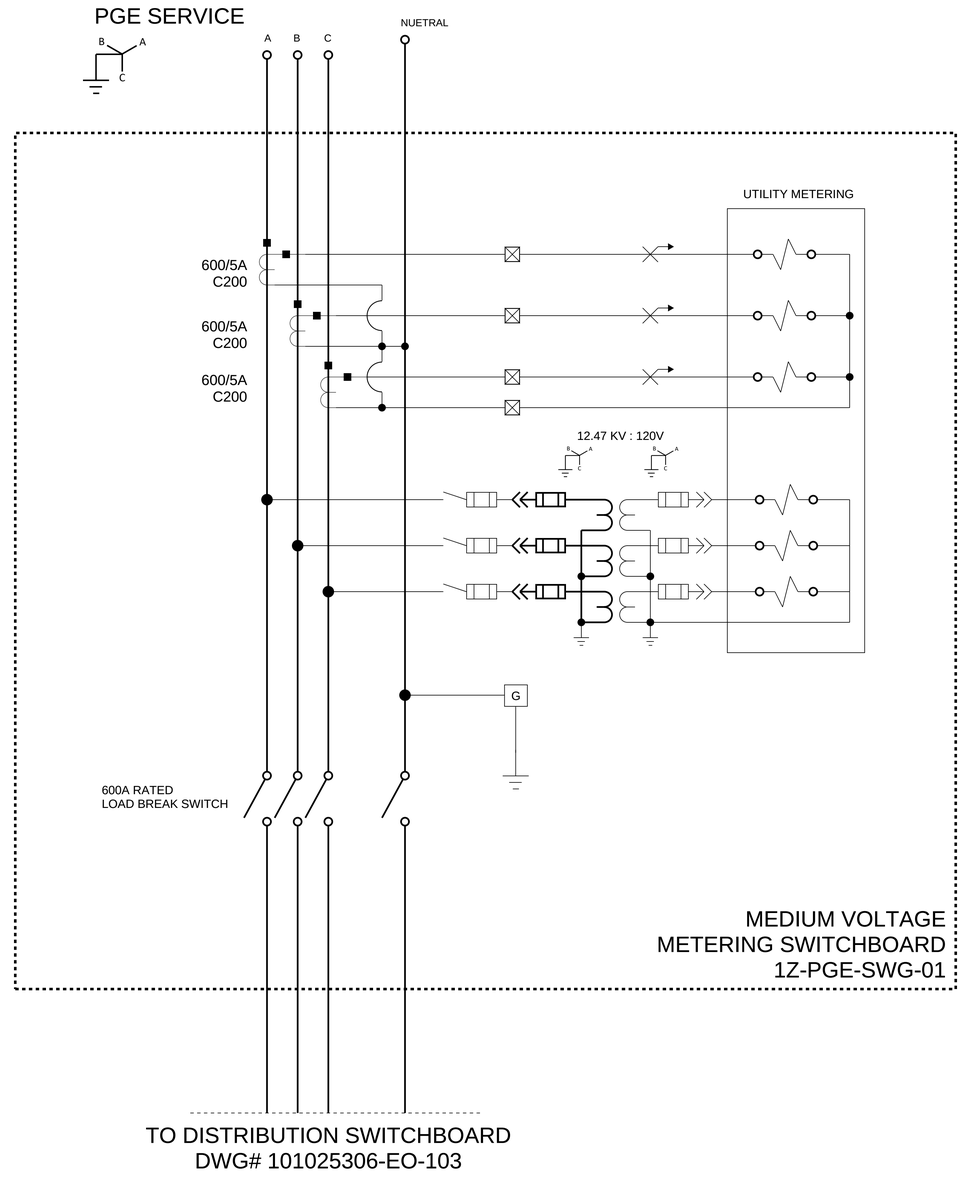
Kiewit

ELECTRICAL ONE LINE DIAGRAM
PGE OVERALL ONE LINE

ENGINEER/DESIGN ORIGINATOR	N. GUIDA
LEAD ENG	A. REAB
ENG MGR	M. PUSKAS
PROJ MGR	L. REGULAR

DRAWING NUMBER

101025306-EO-101



NOTES:

1. SOLIDLY GROUNDED.
2. RESISTANCE RATED XXX A FOR 10 SECONDS.
3. XXX V HIGH RESISTANCE GROUND SYSTEM LIMITS LINE TO GROUND FAULTS TO 5 A.
4. PGE UTILITY ASSUMED TO MATCH PG&E SYSTEM ROTATION A-C-B COUNTERCLOCKWISE

REFERENCE DRAWINGS:

EE-002	ELECTRICAL ENGINEERING STANDARDS AND SYMBOLS LEGEND

- PRELIMINARY -
NOT FOR CONSTRUCTION

REV	DESIGN BY	CHECKED BY	DATE
A	N. GUIDA	A. REAB	-OPEN-

ISSUED FOR REVIEW

PORTLAND WATER BUREAU

BULL RUN FILTRATION FACILITY

Kiewit

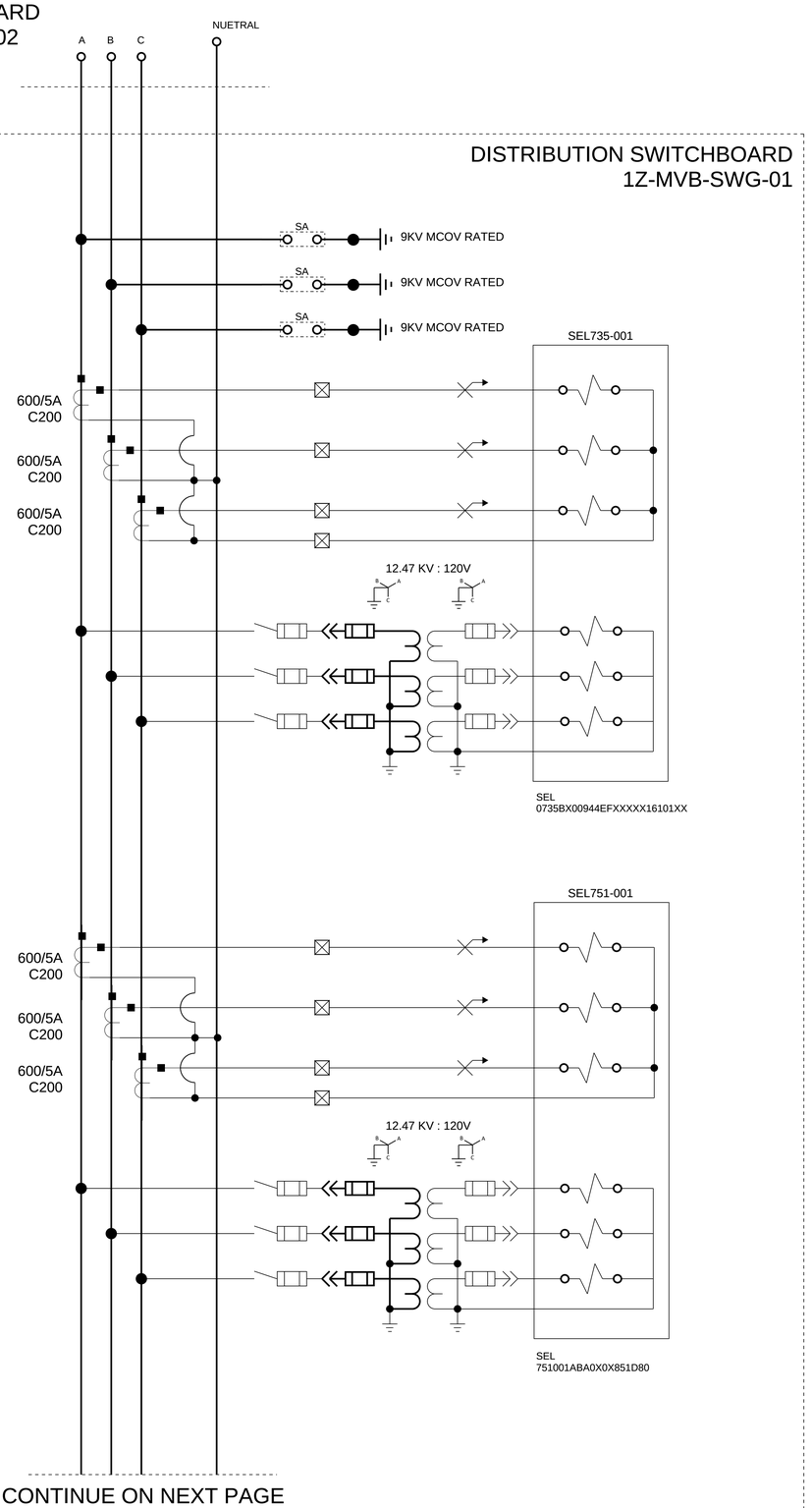
ELECTRICAL THREE LINE DIAGRAM
PGE OVERALL THREE LINE

ENGINEER/DESIGN ORIGINATOR	N. GUIDA
LEAD ENG	A. REAB
ENG MGR	M. PUSKAS
PROJ MGR	L. REGULAR

DRAWING NUMBER

101025306-EO-102

FROM MEDIUM VOLTAGE
METERING SWITCHBOARD
DWG# 101025306-EO-102



CONTINUE ON NEXT PAGE
DWG# 101025306-EO-104

NOTES:

1. SOLIDLY GROUNDED.
2. RESISTANCE RATED XXX A FOR 10 SECONDS.
3. XXX V HIGH RESISTANCE GROUND SYSTEM LIMITS LINE TO GROUND FAULTS TO 5 A.
4. PGE UTILITY ASSUMED TO MATCH PG&E SYSTEM ROTATION A-C-B COUNTERCLOCKWISE

REFERENCE DRAWINGS:

EE-002	ELECTRICAL ENGINEERING STANDARDS AND SYMBOLS LEGEND

- PRELIMINARY -
NOT FOR CONSTRUCTION

REV	DESIGN BY	CHECKED BY	DATE
A	ISSUED FOR REVIEW		
	N. GUIDA	A. REAB	-OPEN-

PORTLAND WATER BUREAU

BULL RUN FILTRATION FACILITY

Kiewit

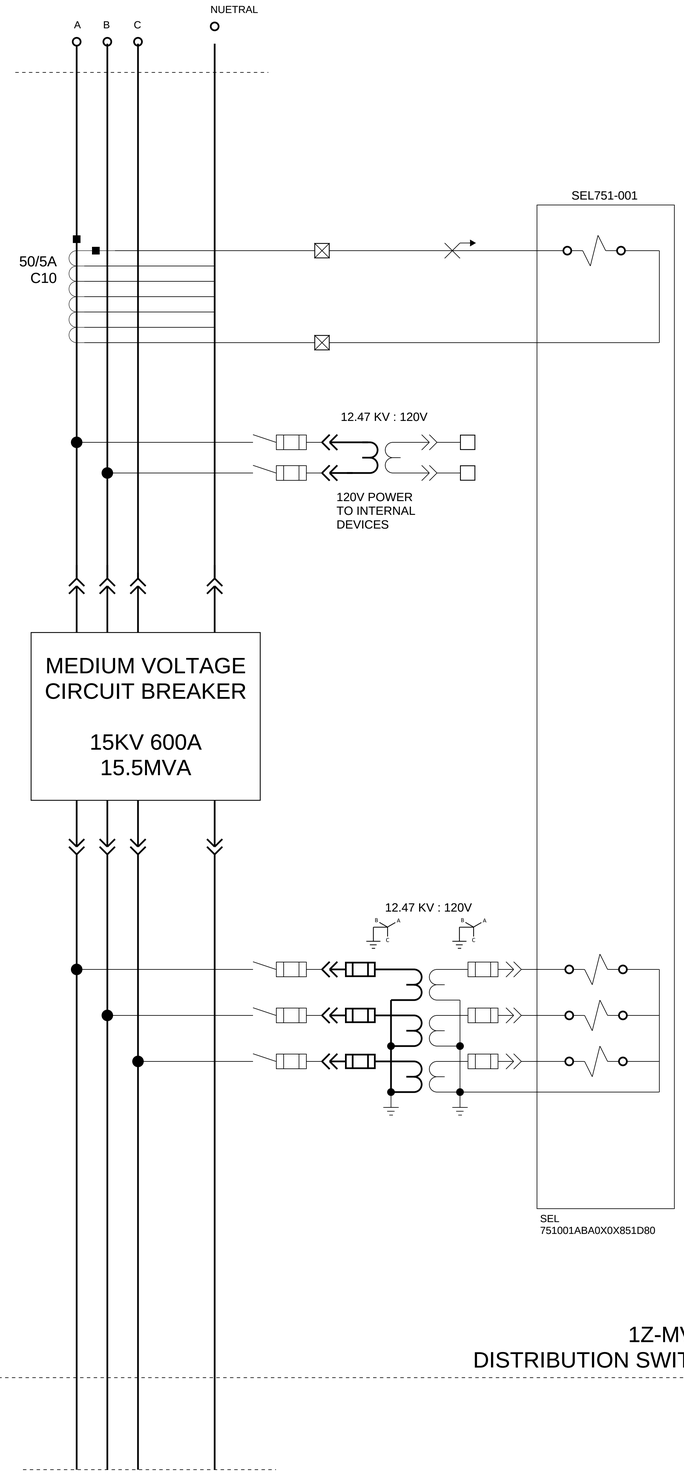
ELECTRICAL THREE LINE DIAGRAM
PGE OVERALL THREE LINE

ENGINEER/DESIGN ORIGINATOR	N. GUIDA
LEAD ENG	A. REAB
ENG MGR	M. PUSKAS
PROJ MGR	L. REGULAR

DRAWING NUMBER

101025306-EO-103

FROM PREVIOUS PAGE
DWG# 101025306-EO-103



NOTES:

1. SOLIDLY GROUNDED.
2. RESISTANCE RATED XXX A FOR 10 SECONDS.
3. XXX V HIGH RESISTANCE GROUND SYSTEM LIMITS LINE TO GROUND FAULTS TO 5 A.
4. PGE UTILITY ASSUMED TO MATCH PG&E SYSTEM ROTATION A-C-B COUNTERCLOCKWISE

REFERENCE DRAWINGS:

EE-002	ELECTRICAL ENGINEERING STANDARDS AND SYMBOLS LEGEND

- PRELIMINARY -
NOT FOR CONSTRUCTION

REV	DESIGN BY	CHECKED BY	DATE
A	ISSUED FOR REVIEW		
	N. GUIDA	A. REAB	-OPEN-

PORTLAND WATER BUREAU

BULL RUN FILTRATION FACILITY

Kiewit

ELECTRICAL THREE LINE DIAGRAM
PGE OVERALL THREE LINE

ENGINEER/DESIGN ORIGINATOR	N. GUIDA
LEAD ENG	A. REAB
ENG MGR	M. PUSKAS
PROJ MGR	L. REGULAR

DRAWING NUMBER

101025306-EO-104

MWH-KIEWIT JOINT VENTURE

GMP1 OPP-02 STOCKPILE MANAGEMENT AND LOAD OUT

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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1.0 GENERAL

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5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

6.0 ATTACHMENTS

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall shape and manage the on-site stockpiles and load out trucks, whole and complete, unless expressly excluded herein.**

This Scope completed over the first 109 loadout shifts is apportioned to GMP1. (Thereafter, through the end of the project, the Scope will be apportioned to GMP 2.)

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Draft Construction Diversity Inclusion Policy
- The Clean Air Construction Standard

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes management of the on-site excess soils stockpile and the soil stripping stockpile.

- Subcontractor's Work includes knocking down and grading the dumped piles of each stockpile lift to encourage drainage, discourage saturation, promote drying of the material, and enable offroad dumptruck access to continue dumping the succeeding lifts.

- Subcontractor's Work includes covering/uncovering portions of the stockpiles, as necessary, in order to eliminate, as best as possible, exposure to precipitation.

- Subcontractor's Work includes planting of ground cover, as necessary, to minimize erosion of the stockpiles during the fall, winter, and spring seasons.

- Subcontractor's Work includes supply, installation, and maintenance of erosion control measures associated with the stockpiles per the Erosion and Sediment Control Plan.

3.1.6 Subcontractor's Scope of Work includes loading out trucks for transport of the excess soil materials to an off-site disposal facility.

- Subcontractor's work excludes supply of trucks.
- Subcontractor's work excludes off-site disposal fees.
- The second stockpile, containing the site strippings, remains onsite through the duration of the project for reuse (by Others) at the end as topsoil for landscape plantings.

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.2.2 Subcontractor shall assume load out of approximately 1,250 BCY/shift. (For a fleet of 14 BCY/load trucks, this would be 90 loads/day.) Subcontract shall set up for, and coordinate truck flow (by Others) to maintain a safe and efficient operations at the stockpile(s). For example, excavator shall not swing over truck cabs.

3.2.3 The majority of the excess soil stockpile will be developed in 2024 via the mass excavations on the project, which is anticipated to generate a peak stockpile height of over 40'. The stockpile will continue to be fed throughout 2024, 2025, and 2026 with smaller quantities generated from smaller structure excavations, underground pipe trenching, and ductbank trenching.

3.2.4 The full complement of site strippings is anticipated to be stockpiled in 2024 and is not anticipated to be returned as topsoil until 2027.

3.2.5 Access shall be maintained on the dirt road at the southern property line at all times, for use by the neighboring property owner, the Pleasant Home Water District, and the City of Gresham Fire Department.

3.2.6 Access shall be maintained on Road B at all times, for use by project personnel and emergency vehicles.

3.2.7 2+ acres site at the southeast corner of the project is reserved for occupancy by MWH-Fowler. No entry will be permitted (unless expressly permitted by MWH-Fowler.)

3.2.8 The fenced Pleasant Home Water District tanks' area to the west of the stockpile is not accessible to the project. No entry will be permitted and access must be maintained.

3.2.9 Protect-in-place the existing Pleasant Home Water District water supply line within the easement at proposed northwest limit of the stockpile.

3.2.10 Protect-in-place temporary surface drainage Pond E (by Others) adjacent to the southeast corner of the stockpile and the associated pumping, pump header, and temporary surface drainage ditch/culvert facilities along the southern property line.

3.2.11 Wetter season weather conditions may yield muddy conditions that challenge trucks' ability to negotiate the project site and/or the dump site. Where such conditions present, Subcontractor and CM/GC Contractor will confer to discuss options - which could include suspending work and demobilizing until more amenable conditions persist.

3.2.12 Stockpile loadout shall generally proceed from south to north, with the intent to clear the stockpile from the Raw Water Pipelines Package S-16 (by Others) work area by April 1, 2024.

3.3 **Exclusions**

3.3.1 Hauling:

- Hauling material to the stockpiles (to be performed via Site Prep and Earthwork Package SP-02.
- Hauling material from the excess material stockpile to an offsite disposal facility and the associated disposal facilities fees (to be performed by the Offhaul Trucking Package S-01).
- Hauling material from the strippings stockpile for return to areas to be planted (to be performed via Site Prep and Earthwork Package SP-02)

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services to be provided, if any, by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this

Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Fall Mobilization, if any	9/5/23
2.	Spring Mobilization	4/1/24
3.	Clear Stockpile from Raw Water Pipelines Package S-17 Workzone	4/1/26
	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	

5.2 **Submittals** ☐ Applicable ☒ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

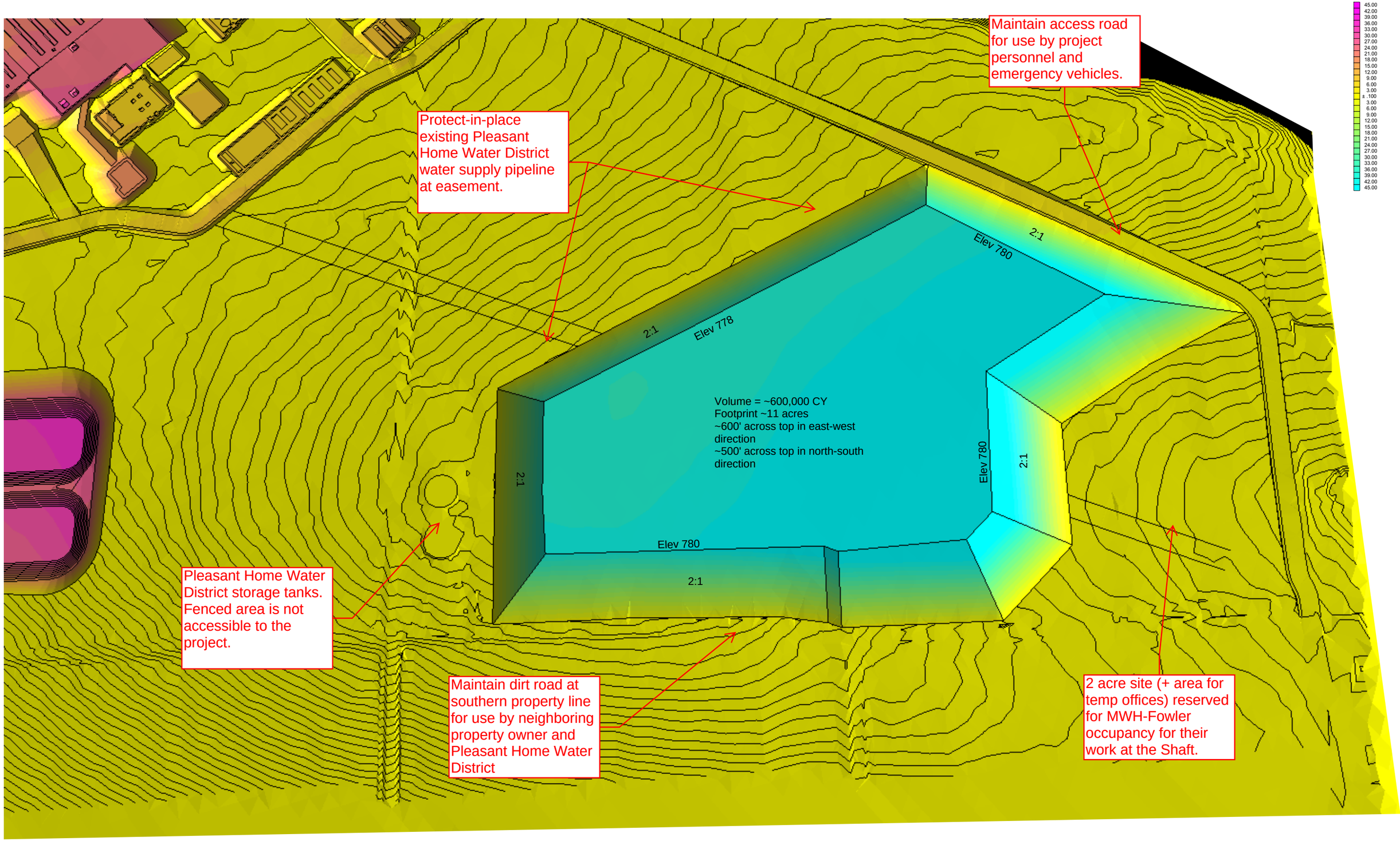
Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
   - Quality Plan
   - Construction Management Plan
   - Waste Management Plan
   - Storm Water Pollution Prevention Plan
   - Erosion Control Plan

4) Site Vicinity Map
5) Site Conditions Document
6) Stockpile Management and Loadout Attachment – Approximate Configuration
7) Temporary Drainage Plan
8) Site Logistics Plan

EXCESS STOCKPILE - APPROXIMATE CONFIGURATION



MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE OPP-03 – TRAFFIC CONTROL

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

6.0 ATTACHMENTS

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall perform traffic control services as detailed in Attachment 1 Specification 01 55 26 (Temporary Traffic Control) and Specification 01 55 26.13 (Accommodations for Public Traffic), whole and complete, unless expressly excluded herein.**

This Scope completed over the first calendar year of the project, from September 1, 2023 through August 31, 2024 is apportioned to GMP1. (Thereafter, through the end of the project, the Scope will be apportioned to GMP 2.)

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Draft Construction Diversity Inclusion Policy
- The Clean Air Construction Standard

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes the requirements of Specification 01 55 26 (Temporary Traffic Control) and Specification 01 55 26.13 (Accommodations for Public Traffic) (included within **Attachment 1** to this Scope of Work).

3.1.6 Subcontractor's Scope of Work includes the trained Traffic Control Supervisor (TCS), their equiped vehicle, and duties as specified.

3.1.7 Subcontractor's Scope of work includes development of all required traffic control plans.

3.1.8 Subcontractor's Scope of Work includes securing all required traffic control permits, including encroachment permits, from Authority Having Jurisdiction (e.g., Multnomah County, City of Gresham, Clackamas County, etc.).

3.1.9 Subcontractor's Scope of Work includes payment of traffic control permit fees.

3.1.10 Subcontractor's Scope of Work includes development of an ***offsite*** Construction Area Signage Plan and the implementation (installation) of the associated ***offsite*** Construction Area Signage.

3.1.11 Subcontractor's Scope of Work includes providing temporary traffic control measures and furnishings, installing, moving, operating, maintaining, inspecting, and removing traffic control devices throughout the project site and public right-of-way (i.e. offsite) in support of the following construction activities:

- Export of excess soils materials to Contractor's designated off-site disposal facility(s) as detailed in the Construction Management Plan (included in **Attachment 3** to this Scope of Work).
- Import of aggregate materials to the project site for purposes of constructing site access roadways as shown on the Contractor's Temporary Facilities and Site Layout drawing (included in **Attachment 3** to this Scope of Work).
- Delivery of steel process piping.
- Fifty (50) days of miscellaneous traffic control.

3.2 Clarifications

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.3 Exclusions

3.3.1 Subcontractor's Scope of Work excludes traffic control for the off-site road improvements shown on **Attachment 1** Drawings 02-C-301 thru 02-C-305 (as the traffic control for that scope of work will be performed by the Package S-11 Offsite Road Improvements Subcontractor).

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services, if any, to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Mobilization	9/5/23
2.	Provide Submittals	10/1/23
3.	Secure Encroachment Permits	10/1/23
	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	

5.2 **Submittals** ☒ Applicable ☐ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - The Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Documents

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

4) Site Vicinity Map
5) Site Conditions Document

MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE S-01 - TRUCKING TO CONTRACTOR-DESIGNATED OFF-SITE DISPOSAL FACILITY

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE

FILTRATION FACILITY PROJECT

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1.0 GENERAL

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5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

6.0 ATTACHMENTS

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall provide trucking of excess spoils materials from the Filtration Facility project site to a Contractor-designated off-site disposal facility(s), whole and complete, unless expressly excluded herein.**

This scope completed over the first 455,000[1] TN is apportioned to GMP1. (Thereafter, through the end of the project, the Scope will be apportioned to GMP2.)

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Draft Construction Diversity and Inclusion Policy
- The Clean Air Construction Standard

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan

1.0 [1] 300,000 CY weighs 455,000 TN at 112.4 pcf in situ wet density. Reference in-situ density testing per Filtration Facility Test Pit Excavation Observations by Lacamas Consulting dated January 11, 2022.

- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes making a minimum of 4 trips per truck per day from Filtration Facility project site to Contractor's designated off-site disposal facility. Contractor's designated off-site disposal locations, as shown in the Construction Management Plan in **Attachment 3** to this Scope of Work, include:

- Knife River Gresham facility (approximately 9.8 miles one-way from the Filtration Facility jobsite)
- Lehigh Hanson Disposal facility (approximately 12.4 miles one-way from Filtration Facility jobsite)
- Eagle Creek Rock Products facility (approximately 15.4 miles from the Filtration Facility jobsite)

3.1.6 Subcontractor's Scope of Work includes payment of dump fees at Contractor's designated off-site disposal facility.

3.1.7 Subcontractor's Scope of Work includes following the approved haul routes to/from Contractor's designated off-site disposal facility as detailed in the Construction Management Plan included in **Attachment 3** to this Scope of Work.

3.1.8 Subcontractor's Scope of Work includes covering/tarping all loads.

3.1.9 Subcontractor's Scope of Work includes supply of trucking meeting the requirements of the City of Portland's Clean Air Construction Standard as included in **Attachment 2** to this Scope of Work.

3.1.10 Subcontractor's Scope of work includes supply of trucks capable of carrying a **minimum** of 8 cubic yards per trip. Subcontractor's trucks shall be **no larger than** a double bottom dump truck.

3.1.11 Subcontractor's Scope of Work includes collection of paperwork documenting disposal of each load at Contractor's designated off-site disposal facility. Collected paperwork shall be submitted to Contractor no later than 8:00a.m. the following business day. Failure to provide paperwork may result in loss of payment for those loads without documentation.

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.2.2 Measurement for payment will be made based upon weight. For this purpose, a truck scale will be established, by Others, on the jobsite (via the SP-03 Site Support Package).

3.2.3 **The Filtration Facility project site is in and around residential neighborhoods and an operating elementary school. The safety of the public along the**

designated haul routes, as well as workers engaged in construction of the Filtration Facilities project, is our highest priority. Drivers operating above the posted speed limits and/or driving in an unsafe manner will be immediately terminated from the project.

3.2.4 Truck drivers shall remain in their trucks while being loaded.

3.3 **Exclusions**

3.3.1 Subcontractor's Scope of Work excludes loading of subcontractor's trucks at Filtration Facility jobsite. Loading of Subcontractor's trucks at the Filtration Facility project site will be completed by OPP-02 subcontractor. .

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

See Site Conditions document, included as **Attachment 4** to this Scope of Work, for services, if any, to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Mobilization	9/5/23
2.		
3.		
4.	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	

5.2 **Submittals** ☒ Applicable ☐ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
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   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - The Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
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   - Construction Management Plan
   - Waste Management Plan
   - Storm Water Pollution Prevention Plan
   - Erosion Control Plan
4) Site Vicinity Map
5) Site Conditions Document

~~*NOTE TO LSA: For purposes of pricing the Early Works GMP, price this Scope of Work for the period beginning on September 1, 2023, and ending on August 31, 2024.*~~

MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE S-02 – TEMPORARY UTILITIES

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall supply and install temporary utilities as shown on Attachment 6 (Utility excerpt of Site Logistics Plan), whole and complete, unless expressly excluded herein.**

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The Regional Workforce Equity Agreement
- The Construction Diversity Inclusion Policy
- The Clean Air Construction Standard
- Inadvertent Discovery Plan

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Contractor's Quality Control Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

- Daily inspection of Subcontractor's Scope of Work will be completed by the City of Gresham Fire Department, the City of Gresham Building Department, and/or the Pleasant Home Water District.

3.1.5 Subcontractor's Scope of Work includes furnishing and installing the temporary fire water supply systems shown on **Attachment 6**.

- Tie-ins to the existing Pleasant Home distribution system piping must be accomplished by hot tap. Tie-in via backflow preventer approved for use by Pleasant Home Water District, housed in a precast vault.
- Fire water piping shall be either C-900 or Ductile Iron in compliance with the Project Specifications and National Fire Protection Association Standards. Hydrants shall be City of Gresham Fire Department standand. (Approved materials available via website.)
- Trench bedding, pipe zone, and backfill materials shall be in accordance with the Standard Trench Section in the Project Drawings. Native will not be allowed for either bedding nor pipe zone.
- Thrust restraint may be accomplished by either thrust blocks, restrained pipe, or both.
- Piping shall be pressure tested, disinfected, and flushed prior to tie-in.
- Fire flow to be demonstrated at all hydrants. Coordinate witness testing with City of Gresham Fire Marshall.
- Tracer wire shall be tested to confirm no discontinuities.

3.1.6 Subcontractor's Scope of Work includes submitting Product Data for City of Gresham Fire Department approval.

3.1.7 Subcontractor's Scope of Work includes furnishing and installing (and making the connections for) the domestic water supply system to the temporary jobsite offices.

- Tie-ins to the existing Pleasant Home distribution system piping must be accomplished by hot tap. Tie-in via backflow preventer approved for use by Pleasant Home Water District, housed in a precast vault.
- Domestic water piping shall be C-900 or Schedule 80 PVC in compliance with the Project Specifications.
- Piping shall be pressure tested, disinfected, and flushed prior to tie-in.

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.2.2 Temporary piping materials shall be the same as permanent piping materials (as detailed in the pipe schedule and specifications).

3.2.3 Construction water for dust control, moisture conditioning of backfill materials, and hydrotesting will be made available by Contractor in the vicinity of the existing

Pleasant Home Water District tanks at no charge to Subcontractor. Subcontractor responsible for neutralizing and disposing of hydrotest/disinfection water ***offsite*** in accordance with all governing regulations.

3.3 **Exclusions**

3.3.1 None

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

N/A

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Mobilization	9/5/23
2.	Provide submittals	9/15/23
3.	Complete Temporary Fire Water Supply System to Fuel Storage Area	9/30/23
4.	Complete Temporary Domestic Water System to Office Trailers	11/1/23
5.	Complete balance of Temporary Fire Water Supply System	4/1/23
	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	

5.2 **Submittals** ☒ Applicable ☐ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90PCT Design Deliverable (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Regional Workforce Equity Agreement
   - Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
   - Inadvertent Discovery Plan
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
   - Contractor's Quality Control Plan
   - Construction Management Plan
   - Waste Management Plan
   - Storm Water Pollution Prevention Plan
   - Erosion Control Plan
4) Site Vicinity Map
5) Site Conditions Document
6) Utility Excerpt of Site Logistic Plan

Tie-in to existing Pleasant Home Waterline

Tie-in to existing Pleasant Home Waterline

Tie-in to existing Pleasant Home Waterline

Legend

- Temp Fire Protection (10" C-900). Hydrants at terminations.
- Temp Office Water Supply (1.5" Schedule 40 PVC)
- Fire Hydrant

MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE S-03 – TEMPORARY ROADS AND DRAINAGE

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

6.0 ATTACHMENTS

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall construct the temporary roads, crane pad, laydown areas, and surface drainage features as shown on Attachments 6 through 10, whole and complete, unless expressly excluded herein.**

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The Regional Workforce Equity Agreement
- The Construction Diversity Inclusion Policy
- The Clean Air Construction Standard
- Inadvertent Discovery Plan

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Contractor's Quality Control Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan
- Site Logistics Plan
- Crane Pad Design by KIE
- Access (Haul) Road Design by KIE

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes subgrade prep and finish including:

- Cut/fill to subgrade per the attached Site Logistics Plan.
- Moisture condition and compact the top 12" to 95% of Modified Proctor.
- Finish subgrade to within +/- 0.2' per the attached Site Logistics Plan

3.1.6 Subcontractor's Scope of Work includes furnishing and installing fabrics, aggregates, and asphalt as indicated on **Attachment 7**. Specifically, Subcontractor shall construct the following features indicated on Attachment 7:

- Temp Paved Road (subgrade, fabric, aggregate, asphalt pavement).
- Access Roads (subgrade, fabric, aggregate). Access Road is unpaved.
- Temp Haul Roads (subgrade, fabric, aggregate).
- Ramps (subgrade, fabric, aggregate).
- Crane Pads (subgrade, fabric, aggregate, timber crane mats).
- Pipeline Contractor's Work Area, Office Area, and Parking Area (subgrade, fabric, aggregate).
- Laydown Areas (subgrade, fabric, aggregate)
- Maintenance and Warehouse Yard (subgrade, fabric, aggregate)
- Employee Parking Areas (subgrade, fabric, aggregate)
- Temp Offices Area (subgrade, fabric, aggregate)

3.1.7 Subcontractor's scope includes furnishing 3" – 0 Crushed aggregates (i.e. not ¾" or 1" ODOT roadbase).

3.1.8 Subcontractor's scope includes submitting Product Data for aggregates, fabric/geotextile, and timber crane mats for Contractor approval.

3.1.9 Subcontractor's scope includes Survey staking and layout from Contractor-provided Control staking.

3.1.10 Subcontractor's scope includes 3rd Party compaction testing per the frequencies indicated in the Project Specifications.

3.1.11 Subcontractor's scope includes grading the crane pads to a max slope of 1%. Subcontractor's scope includes furnishing and installing timber crane mats on the crane pads.

3.1.12 Subcontractor's scope includes furnishing and installing the surface drainage features as indicated on Attachment 8. Specifically, Subcontractor shall construct the following features indicated on Attachment 8:

- Drainage ditches/swales (including any liner and/or riprap lining indicated)
- Drainage culverts
- Drainage Ponds A through E
- Drainage conveyance piping (i.e. pond pump discharge piping)

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.2.2 This scope will generally be completed at the tail end of the dry season and extending into the wet season to the extent feasible. Pending the onset of extended unsuitable conditions, Subcontractor shall confer with Contractor to coordinate activities, if any, that may be temporarily deferred until the onset of more suitable conditions.

3.2.3 Finish graded areas shall be covered with geotextile and rock within 24 hours to preserve the integrity of the grade from rain. Robust stormwater detention and treatment facilities will not yet be in place and functional at the time Subcontractor's scope of work. Consequently, Subcontractor must:

- Install the temporary drainage facilities in concurrence with the road and laydown area work so as not to inhibit positive drainage throughout the site.
- Limit ground disturbance to areas that can covered (either with the geotextile/rock or with temporary plastic sheeting) when rainfall is anticipated. Ground disturbance beyond the limits of work (i.e. that won't be rocked), must be promptly hydroseeded.

3.2.4 Construction water for dust control and moisture conditioning will be available in the vicinity of the Pleasant Home Water District tanks at no charge to Subcontractor.

3.2.5 Removal of temporary site features will be completed by others at completion of the project.

3.2.6 No entry to areas staked for exclusion fencing is allowed. (Areas will be fenced off by the S-04 Temp Fencing Subcontractor.)

3.2.7 Subcontractor shall assume a second mobilization in Spring, 2024 to address areas that may not yet be available at the beginning of the project (i.e. excavation ramps)

3.3 **Exclusions**

3.3.1 Subcontractor's Scope of Work excludes installation and maintenance of linear BMPs (i.e. silt fence, wattles). These will be completed by the S-12 Erosion and Sediment Control Package Subcontractor. However, Subcontractor is responsible for protecting these features in place – Subcontractor shall reset/replace any of the facilities that are removed/damaged by Subcontractor.

3.3.2 Subcontractor's Scope of Work excludes supply and installation of temporary fence (by S-04 Temporary Fencing Subcontractor).

3.3.3 Subcontractor's Scope of Work excludes temporary utilities (by S-02 Temporary Utilities Subcontractor).

3.3.4 Subcontractor's Scope of Work excludes maintenance of the facilities constructed after the initial work is completed and accepted (to be completed via Site Services SP-03 Package).

3.3.5 Subcontractor's Scope of Work excludes the surface water pumps at Ponds A through E (to be provided via Site Services SP-03 Package).

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

N/A

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Mobilization	9/5/23
2.	Provide submittals	9/15/23
3.	Complete work at Temporary Office Complexes' yard area, and the access to it from Carpenter Lane	9/30/23
4.	Complete Laydown areas adjacent Carpenter Lane	9/30/23
5.	Complete work at Equipment Maintenance Facility yard area, and the access to it from Carpenter Lane	10/15/23
6.	Complete Emergency Access Road (Road B)	4/1/24
7.	Complete balance of Work	6/1/24
	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	

5.2 **Submittals** ☒ Applicable ☐ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90PCT Design Deliverable (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
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    - The Clean Air Construction Standard
    - Inadvertent Discovery Plan
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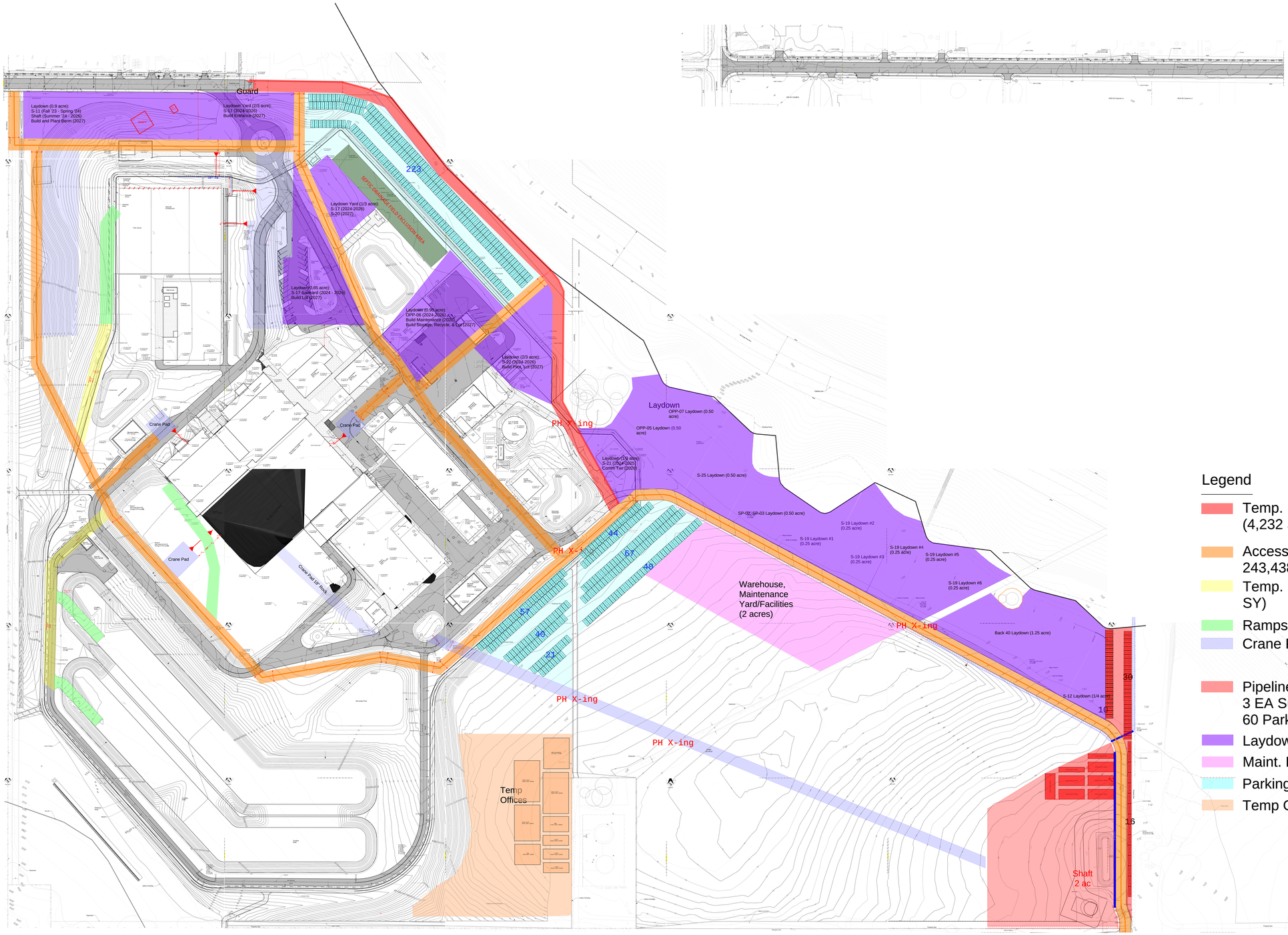
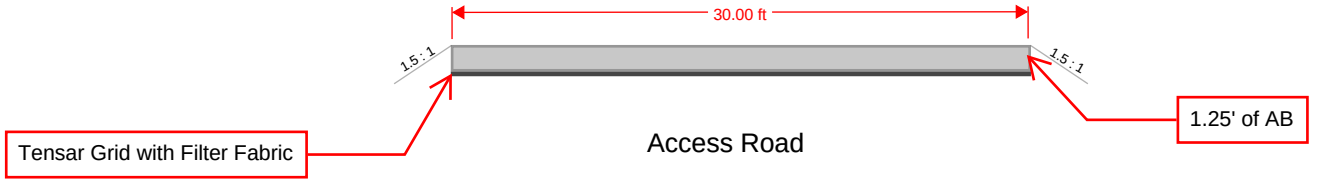
    - Site Specific Health & Safety Plan
    - Contractor's Quality Control Plan
    - Construction Management Plan
    - Waste Management Plan
    - Storm Water Pollution Prevention Plan
    - Erosion Control Plan
4) Site Vicinity Map
5) Site Conditions Document
6) Site Logistics Plan
7) Temporary Roads and Drainage Attachment – roads and laydown scope detail
8) Temporary Roads and Drainage Attachment – surface drainage scope detail
9) Crane Pad Design by KIE
10) Access (Haul) Road Design by KIE

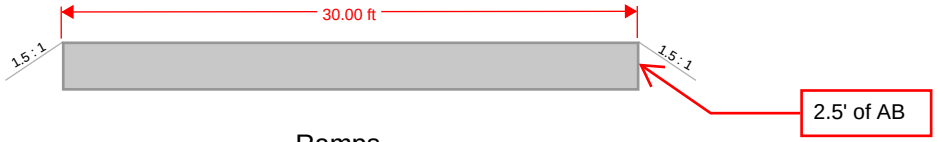


Legend

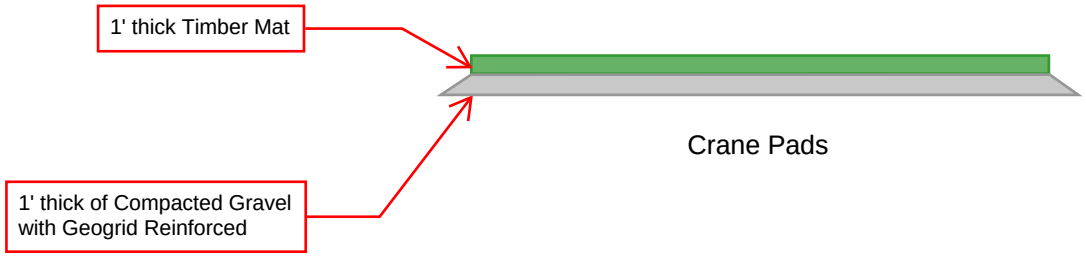
- Temp. Paved Road (1,465' * 26' = 38,090SF) (4,232 SY)
- Access Road (6,850' * 26' + 2,513' * 26' = 243,438 SF) (27,049 SY)
- Temp. Haul Road (725' * 26' = 18,850SF) (2,094 SY)
- Ramps(24,227 SF)
- Crane Pads (121,983 SF)
- Pipeline 2 AC Yard, 3 EA CM/GC Double-wides, 3 EA Sub Double-wides + 2 EA Sub Single-wide , & 60 Parking Spots (123,828 SF)
- Laydown area (433,045 SF)
- Maint. Facility, Warehouse (87,963 SF)
- Parking (155,389 SF)
- Temp Offices area (113,724 SF)



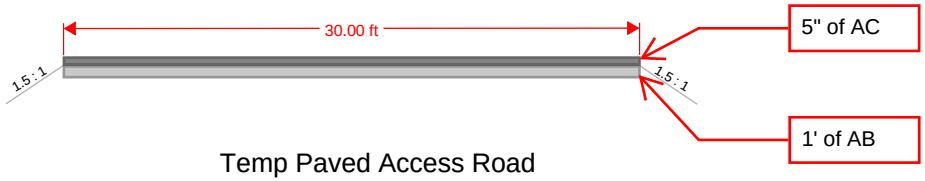
Access Road



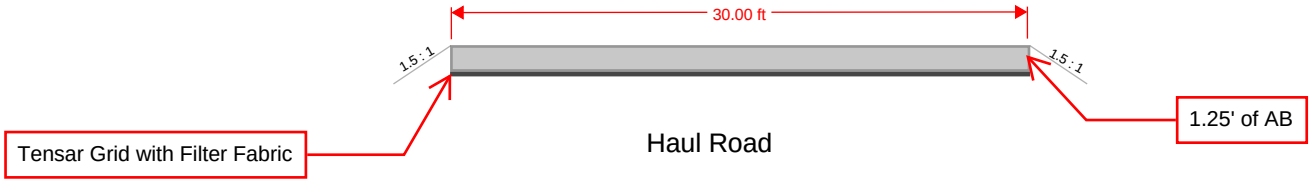
Ramps



Crane Pads

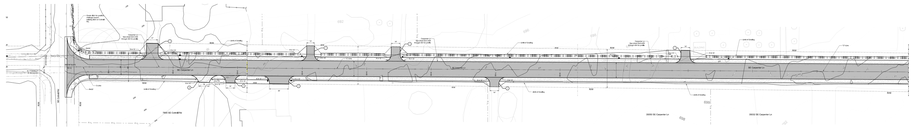


Temp Paved Access Road



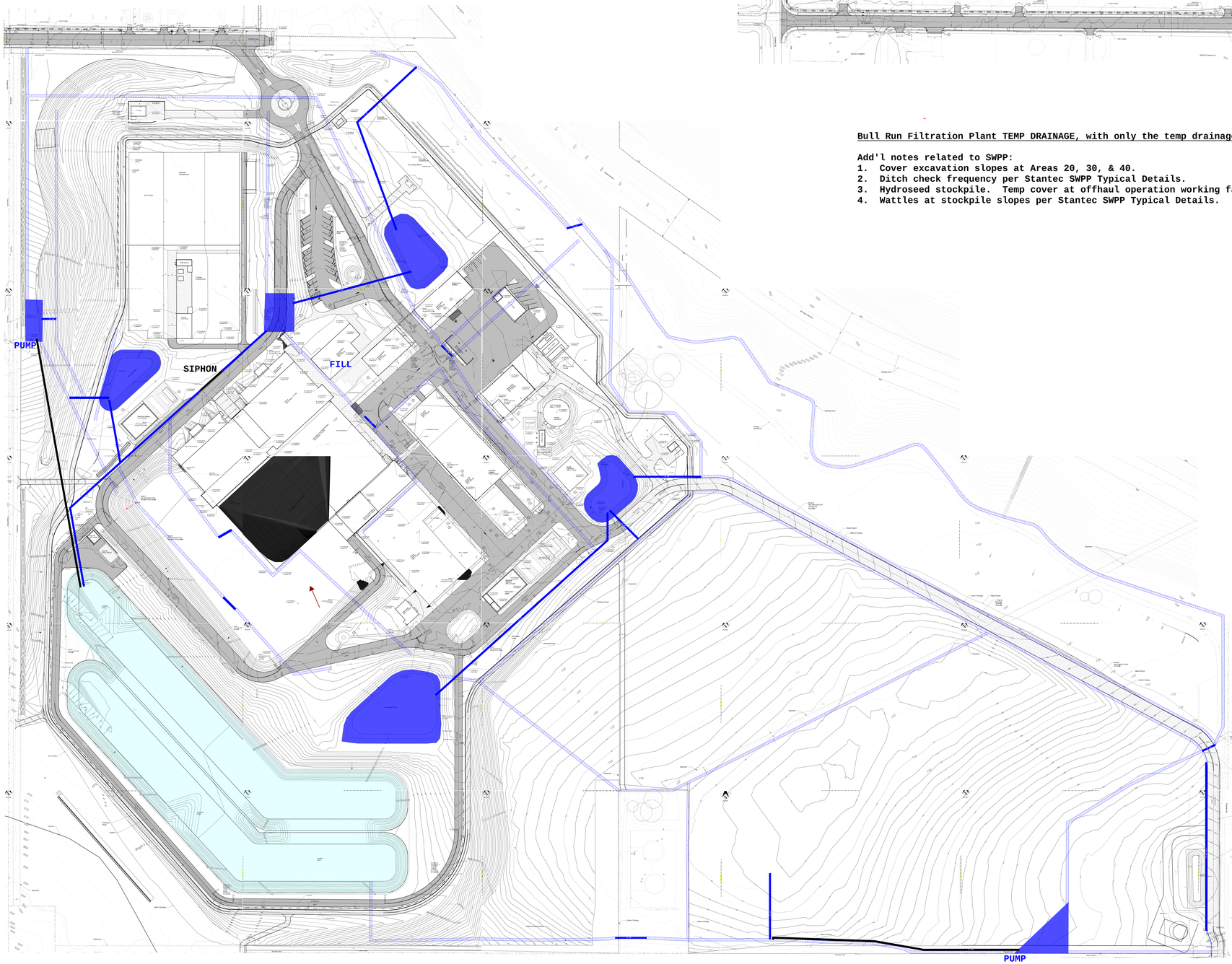
Haul Road

Staging Areas



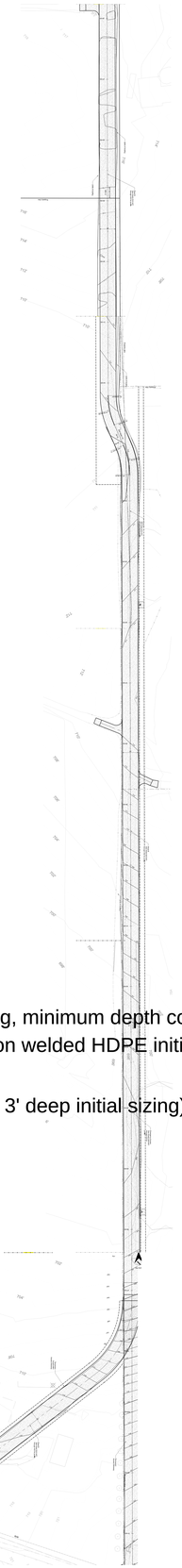
Bull Run Filtration Plant TEMP DRAINAGE, with only the temp drainage shown

Add'l notes related to SWPP:
1. **Cover excavation slopes at Areas 20, 30, & 40.**
2. **Ditch check frequency per Stantec SWPP Typical Details.**
3. **Hydroseed stockpile. Temp cover at offhaul operation working face.**
4. **Wattles at stockpile slopes per Stantec SWPP Typical Details.**



Legend

- Culvert (nominal 18" CMP initial sizing, minimum depth cover)
- Pumped discharge (nominal 12" fusion welded HDPE initial sizing, minimum depth cover
- Gravel lined v-ditch (nominal 6' wide, 3' deep initial sizing). No significance to color differences.



MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE S-04 – TEMPORARY FENCING AND GATES

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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6.0 ATTACHMENTS

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall supply and install temporary fencing and gates as shown on Attachment 6 (Temp Fencing excerpt from Site Logistics Plan), whole and complete, unless expressly excluded herein.**

2.0 PROJECT OVERVIEW

The Filtration Facility Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Clean Air Construction Standard

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes supply and installation of temporary fencing, posts, gates, and appurtenances as shown on **Attachment 6** to this Scope of Work.

Fencing to be 8' tall galvanized chainlink (2" x 9 ga. mesh) fencing with 3 strands of barbed wire. Embed 10' long x 1-7/8" diameter posts 2' into the ground at 8' spacing. Fencing shall include a top rail, mid rail, and bottom rail. Top rail, middle rail, and bottom rail shall be 1-5/8" O.D. Post caps shall be dome style. Terminal/corner/gate posts shall be 12' long x 4" diameter embedded 4' deep in 3000 psi concrete.

Vehicle gates shall be 30ft wide, chain link fence double leaf rolling gates. Pedestrian gates shall be 4' wide swing gates. Reference Attachment 6 for gate locations.

3.1.6 Subcontractor's Scope of Work includes off-site disposal of excess concrete materials (i.e., excess concrete materials will not be allowed to remain at site).

3.1.7 Subcontractor's Scope of Work includes collection and transport of all excess soil materials to contractor's designated on-site stockpile.

3.1.8 Subcontractor's Scope of Work includes review of existing utility information (to be provided by Contractor) and coordinating fencing and gate post locations to avoid existing utilities. Where necessary, Subcontractor's Scope of Work includes potholing to confirm location of existing utilities.

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.2.2 Prior to Subcontractor beginning work, the Contractor and Subcontractor shall walk the alignment of the fencing and gates. Any conflicts regarding the condition of the work areas shall be resolved prior to Subcontractor beginning work.

3.2.3 Subcontractor's work may not be completed at one time and is expected to require multiple mobilizations. Subcontractor shall include pricing for up to 3 separate mobilizations as directed by Contractor.

3.3 **Exclusions**

3.3.1 Removal of temporary fencing and gates (to be addressed via GMP2).

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this

Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	
2.		
3.		
4.		

5.2 **Submittals** ☒ Applicable ☐ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

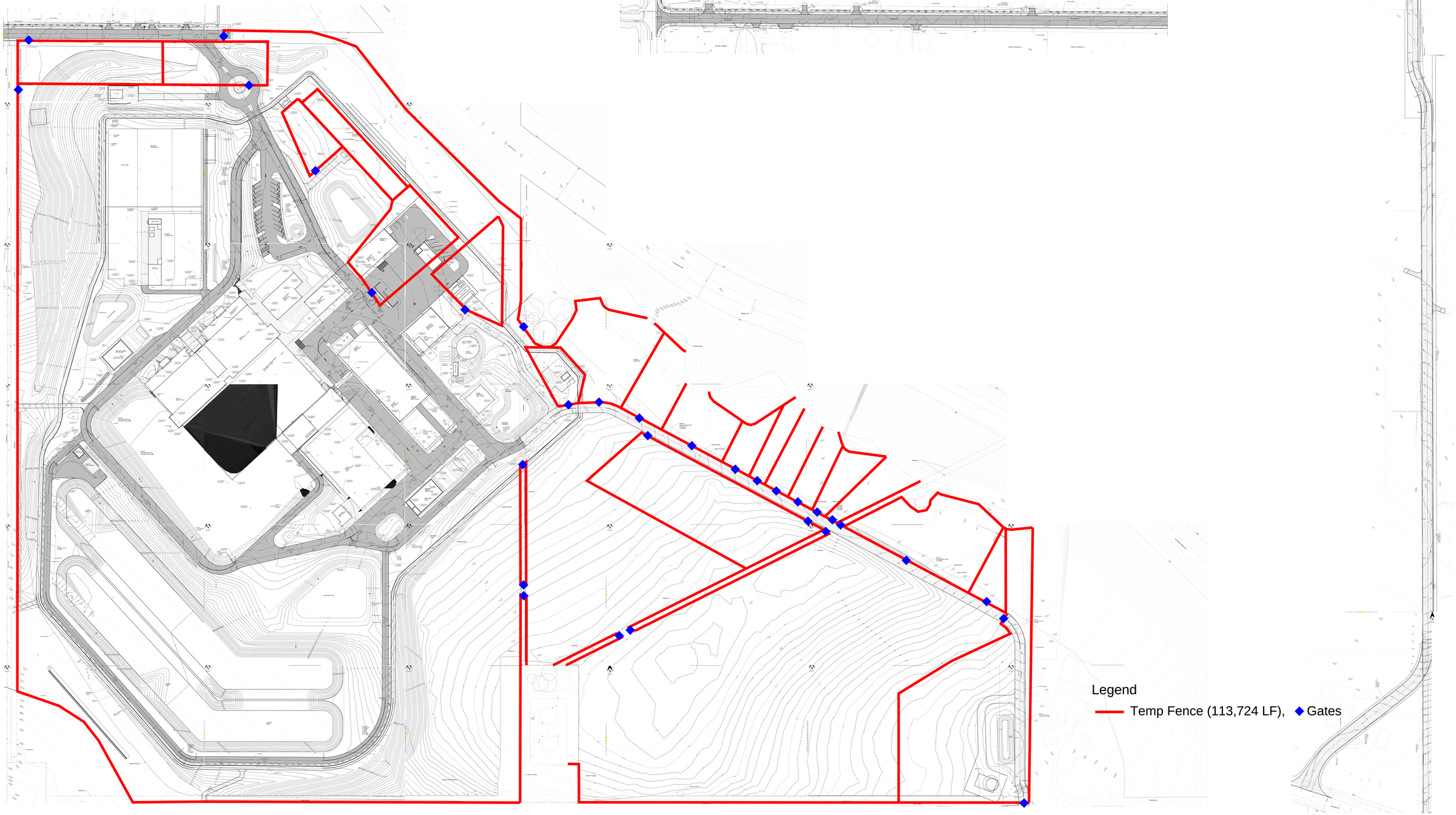
5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

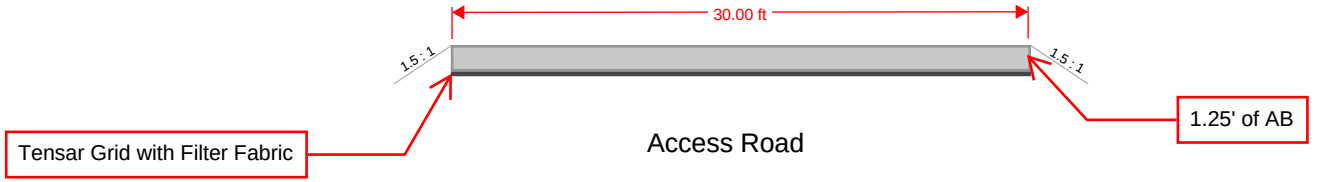
Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

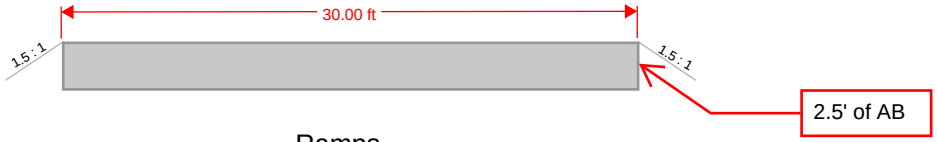
1) 90% Design Documents (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - The Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
   - Quality Plan
   - Construction Management Plan
   - Waste Management Plan
   - Storm Water Pollution Prevention Plan
   - Erosion Control Plan
4) Site Vicinity Map
5) Site Conditions Document

6) Site Logistics Plan

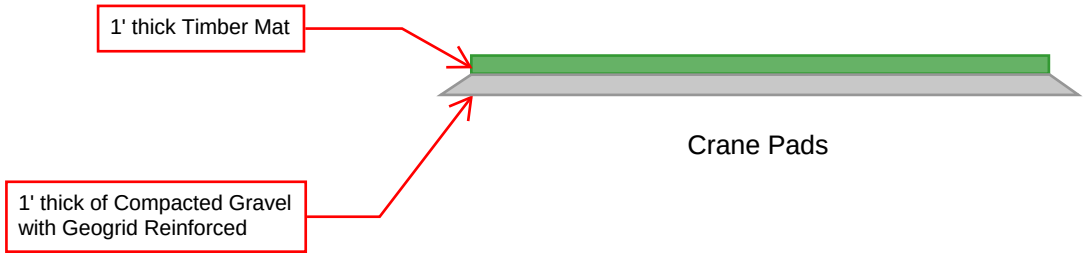

Legend
Temp Fence (113,724 LF),
Gates



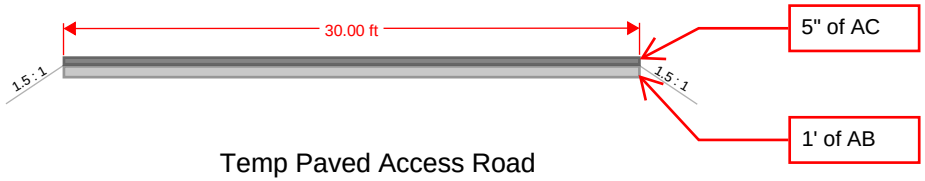
Access Road



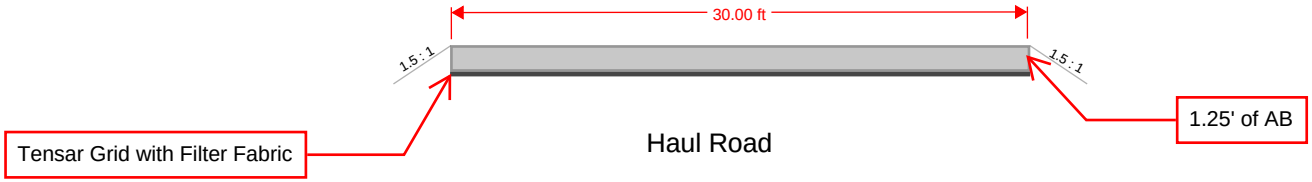
Ramps



Crane Pads



Temp Paved Access Road



Haul Road

Staging Areas

MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE S-05 - SURVEYING

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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1.0 GENERAL

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5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

6.0 ATTACHMENTS

DRAFT

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall perform all surveying as shown on Attachment 6 (Dimensional Control Plan), whole and complete, unless expressly excluded herein.**

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Draft Construction Diversity Inclusion Policy
- The Clean Air Construction Standard

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes re-establishing the monumentation on Carpenter Lane.

3.1.6 Subcontractor's Scope of Work includes establishing onsite control.

3.1.7 Subcontractor's Scope of Work includes the construction staking referenced on the attached detail and completed per the requirements provided in Specification Section 01 71 23. Reference the SP-02 and S-17 package scopes for the grading, structures, and underground pipe work to be completed in GMP1 that will require staking.

3.1.8 Subcontractor's Scope of Work includes collecting and submitting as-built survey information per Spec Sections 10 71 23 and 01 78 39, including, but not limited to, underground piping and ductbanks.

3.1.9 Subcontractor's Scope of work includes pre-construction site conditions survey as detailed in Specification 02 22 00 (Site Conditions Survey).

3.1.10 Subcontractor's Scope of Work includes development of the initial excavation model for Machine Control.

3.1.11 Subcontractor's Scope of Work includes providing drafting services for maintenance of the project Record Documents as described in Spec Section 01 78 39. This Scope completed over the first calendar year of the project, from September 1, 2023 through August 31, 2024 is apportioned to GMP1, (Thereafter, through the end of the project, the Scope will be apportioned to GMP2.)

3.1.12 Subcontractor's Scope of Work includes LIDAR scanning or project facilities prior to covering. Reference the SP-02 and S-17 package scopes for the structures and underground pipe work to be covered in GMP1 that will require scanning.

3.1.13 Subcontractor's Scope includes 15 days of yet-to-be-identified staking and/or restaking.

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.3 **Exclusions**

3.3.1 Subcontractor's Scope of Work excludes non-destructive radiography testing.

3.3.2 Subcontractor's Scope of Work excludes survey manager (by SP-01 CM/GC General Conditions).

3.3.3 Subcontractor's Scope of Work excludes post-construction site conditions survey as detailed in Specification 02 22 00 (Site Conditions Survey).

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Mobilization	5/1/23
2.	All Subcontract Work Complete	12/31/27
3.	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	
4.		

5.2 **Submittals** ☐ Applicable ☐ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☐ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - The Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Document
   - Site Specific Health & Safety Plan
   - Quality Plan
   - Construction Management Plan
   - Waste Management Plan

- Storm Water Pollution Prevention Plan
- Erosion Control Plan

4) Site Vicinity Map
5) Site Conditions Document
6) Dimensional Control Plan

NOTE TO LSA: For purposes of pricing the Early Works GMP, price this Scope of Work for the period beginning on September 1, 2023, and ending on August 31, 2024.

DRAFT

MWH Kiewit
A JOINT VENTURE

Bull Run Filtration Plant GMP 1 Dimensional Control Plan outline
Saturday, March 4, 2023

0. Staffing
    a. One Survey Manager to develop and implement the Dimensional Control Plan including:
        i. Performing staking calculations
        ii. Managing DTM(s)
        iii. Directing craft survey crew
        iv. Managing Record Documents
    b. One 2-man craft Survey Crew
        i. Total Station to for structural staking (+/-0.01')
        ii. GPS for earthwork and underground staking (+/-0.1')
1. Control
    a. Article 1.09.D.2 of Spec Section 00 72 00 (dated September 2, 2022): "The Owner will provide survey control points spanning the limits of the Project, which are on a Local Datum Plane projection that has been applied to Oregon State Plane Coordinates - North Zone (NAD 83/91). The vertical control is based on the City of Portland datum.
    b. Establish control staking.
    c. Re-establish monument(s) on SE Carpenter Lane.
2. Documentary Basis
    a. In addition to the project drawings, the associated CAD files will be required in order facilitate staking calculations, DTM development, etc.
3. Site Condition Surveys
    a. Article 1.01.A of Spec Section 02 22 00 (dated September 2, 2022): "The CONTRACTOR shall conduct thorough pre-construction and post-construction Site Condition Survey of the entire Project. Site Condition Survey shall consist of photographs, videotape recordings, and topographic mapping.
    b. Article 3.02.D of Spec Section 02 22 00 (dated September 2, 2022): "All pre- and post-construction topographic mapping and other data, including spot elevations, shall be prepared and sealed by a Professional Land Surveyor."
4. Staking
    a. Article 1.09.D.3 of Spec Section 00 72 00 (dated September 2, 2022): "The Owner will provide staking for the limits of Easements and Rights-of-Way."
    b. Article 1.09.D.6 of Spec Section 00 72 00 (dated September 2, 2022): "The CM/GC will furnish all staking notes electronically in Adobe PDF format to the Owner for review within seven (7) days of the staking, including survey notes with stationing, maps of referenced point numbers utilized and elevations for all facilities, pipes, structures, appurtenances, etc."
    c. Staking Scope (in complement to Machine Control):
        i. Clearing limits (20' o.c. per Article 3.01.A.1 of Spec Section 01 71 23)
        ii. Easement limits (30' o.c. per Article 3.01.A.2 of Spec Section 01 71 23)
        iii. ESA limits (per Article 3.01.A.2 of Spec Section 01 71 23)
        iv. Roads' Centerline for rough grading (100' o.c.)
        v. Mass Grading edge condition slope stakes (50' o.c.)
        vi. Structure corners – 2 sets
            1. First set at OG. (Offsets to be set beyond catch point of excavations.)
            2. Second set at prepared structure subgrade (for batter boards).

vii. Underground piping and ductbanks (50' o.c.) (Offsets to be set beyond catch point of trenches.)
viii. Roadways (3' offsets to EP, 50 o.c., BCs, ECs, BVCs, EVCs, & 25' o.c. through curves/returns)

5. Machine Control
    a. Initial model development and as-needed modifications completed offsite.
    b. Units to plumb:
        i. 4 EA Motor graders (GPS, sonar)
        ii. 2 EA Skip Loaders
        iii. 1 EA Backhoe
        iv. 7 EA Excavators
        v. 6 EA Dozers
6. Quantifying
    a. Article 1.09.D.4 of Spec Section 00 72 00 (dated September 2, 2022): "CM/GC shall also survey the Project Site excavation to determine the quantity of excavated, imported and select material and provide data to the Owner with the good faith estimate and monthly invoice."
7. Monitoring
    a. Dewatering
    b. SOE
    c. Existing Utilities
    d. Neighboring Homes
8. Non-Destructive Testing
    a. Radiographic scanning for rebar and other concrete embedded items prior to coring and/or drilling for penetrations, post-installed anchors, or dowels
9. Record Documents (Spec Section 01 78 39)
    a. Article 1.04.B of Spec Section 01 71 23: "Contractor shall collect and submit GPS or surveyed points of all installed facilities identified in the Construction Survey Schedule…"
10. Client Expectations
    a. Article 1.03.E of Spec Section 01 29 00 (dated September 2, 2022): "The scheduled values of the activities listed are limited as indicated. The limit is the percent of the Total GMP Amount." The limit indicated for the Project Record Documents is a *minimum* of 1.3%.

Bull Run 90 GMP 1 Surveying

	Scope Element	Qty	Unit
1	Survey Manager	52	Wk
2	Establish Control	1	LS
3	Re-establish Monuments	2	EA
4	Pre-construction Survey	1	LS
	Post-construction Survey	GMP2	
5	Construction Survey, Monitoring, and As-builting	52	Wk
	Clearing limits (20' o.c.)		
	Easement limits (20' o.c.)		
	ESA limits		
	Roads' Centerline for rough grading (100' o.c.)		
	Mass Grading edge condition slope stakes (50' o.c.)		
	Structure corners – 2 sets		
	First set at OG. (Offsets to be set beyond catch point of excavations.)		
	Second set at prepared structure subgrade (for batter boards).		
	Underground piping and ductbanks (50' o.c.) (Offsets to be set beyond catch point of trenches.)		
	Roadways (3' offsets to EP, 50 o.c., BCs, ECs, BVCs, EVCs, & 25' o.c. through curves/returns)	GMP2	
	As-built excavations and import backfill for monthly submission		
	As-built permanent facilities		
	Monitoring		
	Dewatering Monitoring Wells		
	SOE deflection		
	PHWD waterline potential settlement		
	Neighboring home potential settlement		
6	Restaking Contingency		DAY
	Non-destructive Testing (NDT) - Radiographic scanning for rebar and other embedded items	GMP2	
7	LIDAR As-built Scanning	52	Wk
8	Record Document Drafting	52	Wk
	Plot Record Documents Full Size	GMP2	

MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE S-06 – WASTE MANAGEMENT AND RECYCLING

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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1.0 GENERAL

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4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

6.0 ATTACHMENTS

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall perform waste management and recycling services including reporting requirements, as detailed in Attachment 1 Specification 01 35 45 (Construction Waste Management) and Attachment 6 (Contractor's Waste Management and Recycling Plan), whole and complete, unless expressly excluded herein.**

This Scope completed over the first calendar year of the project, from September 1, 2023 through August 31, 2024 is apportioned to GMP1. (Thereafter, through the end of the project, the Scope will be apportioned to GMP 2.)

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Draft Construction Diversity Inclusion Policy
- The Clean Air Construction Standard

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes supply of waste management and recycling bins as detailed in Contractor's Waste Management Plan (included in **Attachment 3** to this Scope of Work).

3.1.6 Subcontractor's Scope of work includes collection and disposal of the waste management and recycling bins on an "as-called" basis.

- The material in the trash bin shall be disposed of at an approved landfill facility.
- The material in all other bins shall be recycled as detailed in the Contractor's Waste Management Plan.

3.1.7 Subcontractor's Scope of Work includes preparation and submittal of documentation detailing recycling efforts as detailed in Contractor's Waste Management Plan.

3.1.8 Proceeds from salvage (i.e. from recycleable metals), shall be credited, in full, back to the CM/GC Contractor.

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.3 **Exclusions**

3.3.1 Subcontractor's Scope of Work excludes removal and disposal of contaminated and/or hazardous waste materials.

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this

Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	
2.		
3.		
4.		

5.2 **Submittals** ☒ Applicable ☐ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
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   - Site Specific Health & Safety Plan
   - Quality Plan
   - Construction Management Plan
   - Storm Water Pollution Prevention Plan
   - Erosion Control Plan
4) Site Vicinity Map
5) Site Conditions Document
6) Contractor's Waste Management and Recycling Plan

NOTE TO LSA: For purposes of pricing the Early Works GMP, price this Scope of Work for the period beginning on September 1, 2023, and ending on August 31, 2024.

MWH Kiewit

A JOINT VENTURE

FILTRATION FACILITY

Construction Waste Management and Recycling Plan

6.24.2022

1. Overview

This *Construction Waste Management & Recycling Plan* fulfills the requirements of MWH-Kiewit's preconstruction service task No. 19. This plan will be adhered to by all subcontractors, along with MWH-Kiewit and other jobsite personnel during the construction of this project. MWH-Kiewit will implement, discuss goals and issues as part of subcontractor coordination meetings, and document this plan through the course of construction activities.

2. Project Goals

This *Construction Waste Management & Recycling Plan* meets the requirements set forth by City of Portland/Portland Water Bureau to recycle or salvage a minimum of 85% (by weight) of non-hazardous construction waste. To help achieve this goal, MWH-Kiewit will divert 85% from landfills or incineration. MWH-Kiewit is aware the market for recyclable material is very fluid. Alternate recycling markets will need to be continually explored by our waste subcontractor. Recyclables will be separated by our Waste Management & Recycling Subcontractor and sold to processors as markets allow.

3. Separation and Disposal Methods

Recyclable materials are put in color-coded containers and metal drop containers. The Waste Management & Recycling Subcontractor separates this waste at their waste separation site and markets the products. Recyclables will provide operational savings by reducing the volume of waste material taken to the landfill. Recycling also reduces landfill emissions and the associated effects on climate. Records of total waste weight, recyclable weight, and non-recyclable waste weight will be maintained to determine recycling success for the project. A successful recycling program requires support and participation at all levels of the organization.

4. City Requirements

The recycling for construction of the Filtration Facility will meet or exceed the City of Portland Green Building Policy for City-owned Facilities, specifically Section 3: Construction waste prevention, preservation, restoration, salvage, reuse, and recycling. Additionally, any subcontracted service employed exclusively to collect and transport construction wastes, is required to be a current commercial permittee and subject to all fees associated with waste hauling in the City of Portland.

5. Recycling and Recovery of the following Discarded Materials

This plan addresses recycling and/or recovery of the following discarded materials:

- Aggregate: Concrete – precast or cast-in-place concrete, block, asphalt, terrazzo, plaster, brick, clay tile, quarry tile and ceramic tile, marble, and stone, etc.
- Asphalt Shingles: Asphalt shingles, tar paper, roof vents, eave and valley tin, etc.

- Carpet/Padding: Carpet and carpet base determined to be recyclable shall be separated on-site and placed in a separate dumpster for removal and recycling.
- “Clean” Wood: Unpainted, untreated dimensional lumber, timber beams & engineered wood products, wood shipping pallets, crates, etc.
- “Dirty” Wood: Painted wood and trim, plywood, particle board, oriented strand board, masonite, adhesive containing wood doors, wood cabinets and furniture, etc.
- Fiber: Cardboard – clean, corrugated cardboard used for packaging. Paper – clean paper from packaging, etc.
- Metals: Metal scrap - Iron, steel, copper, brass, and aluminum from the following sources – Structural members, piping, fasteners, steel studs, siding, wiring, ductwork, and sheet metal goods, etc.
- Plastics: High-density polyethylene (HDPE), light density polyethylene (LDPE), mixed ridged (MRP), polypropylene (PP), and polymerized vinyl chloride (PVC)
- Gypsum Wallboard: Drywall, Sheetrock – clean non painted, uncontaminated, pre-consumer calcium sulfate sealed with paper.
- Flattened cardboard (empty & flat)
- Newspapers, magazines, catalogs
- White paper
- Phone books, paperback books
- Junk mail, envelops (including window envelopes)
- Chip-board, (cereal boxes, shoeboxes, etc.)
- Shredded paper (Bag in clear bags)
- Tin cans & Empty spray cans
- Aluminum cans
- Glass containers (Clear, green, and brown)
- Plastic containers, bottles and jugs (#1-7 plastic only)
- Small metal items (pots, pans, etc.)
- Non-Recyclable Material: resilient flooring, post-consumer plastics, wet waste, municipal solid waste, and all other waste materials not listed above, will be handled as general refuse and discarded at a licensed and permitted disposal facility, etc.

MWH-Kiewit will work with the successful Waste Management & Recycling subcontractor to identify the appropriate waste/recycling containers for placement on project site.

6. IMPLEMENTATION

This *Construction Waste Management and Recycling Plan* will be distributed to all subcontractors working on this project. MWH-Kiewit will discuss goals and handling procedures of the waste generated

with its subcontractors during coordination meetings. The project's first coordination meeting will provide an orientation discussion of the *Construction Waste Management & Recycling Plan*. Items that will be discussed at this orientation would be as follows:

- Plan requirements
- A review of waste handling procedures
- Location of dumpsters/bins
- Waste segregation requirements
- Discussion regarding cross-contamination of waste
- Discussion regarding the responsibility of moving the waste from the building to applicable bins
- Enforcement requirements
- Open discussion for suggestions/comments regarding the effectiveness of the plan and feedback to the MWH-Kiewit.

During future coordination meetings, MWH-Kiewit staff will determine what type of waste will most likely be generated in the immediate future and instruct the subcontractors as to where it shall be placed for recycling, co-mingle, salvaged, or to be disposed of. A waste management log or cost analysis can also be maintained monthly by MWH-Kiewit. It will list the materials recycled, the weight of these materials, and potential cost analysis from reusing or recycling materials on site. This log will be submitted to the owner at the conclusion of the project if required.

Plan Responsibilities

- MWH-Kiewit: All construction waste to be placed in commingled and/or source-separated dumpsters. Supervision and implementation of the waste plan are in the field, and coordination of box removal.
- All project subcontractors: Compliance with this *Construction Waste Management Plan*.
- Waste Management & Recycling Subcontractor: Transport all construction debris to an off-site recycling facility. Provide all scale tickets and report(s) to MWH-Kiewit by approximately the 10th day of the following month.

Procedures for Off-Site Source Separation (assuring at least 85% recycling):

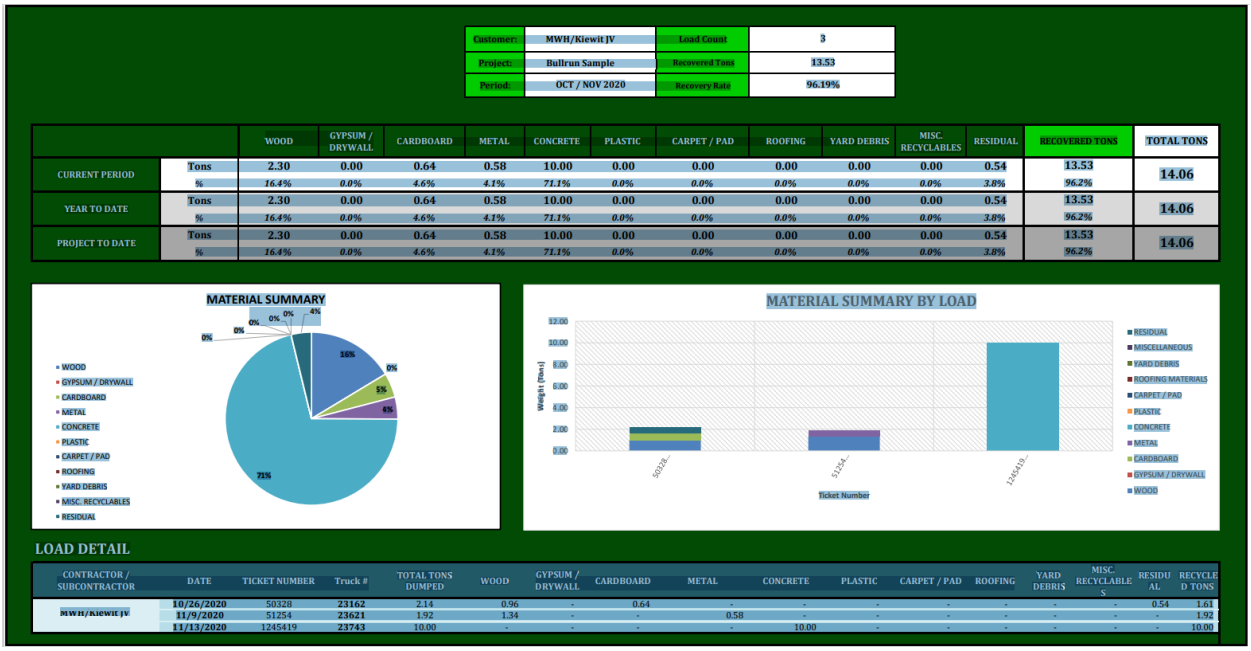
a) On-site workforce places construction waste into the commingled or source-separated dumpster(s)
b) When the dumpster is full, MWH-Kiewit calls the Waste Management & Recycling subcontractor for a pick-up.
c) Waste Management & Recycling Subcontractor goes to the site and completes work order (project, date, contractor, dumpster size, etc.)
d) Waste Management & Recycling Subcontractor hauls load to Subcontractor's designated recycling material recovery facility or other facilities as needed.
e) Load is weighed and recorded.
f) Driver dumps load onto the tipping floor.
g) Construction waste goes through the respective recycling/sorting process.
h) Monthly, Waste Management & Recycling Subcontractor to submit construction waste and recycling report showing current rate of recycling and project-to-date rate of recycling.

Record Keeping

The Waste Management & Recycling Subcontractor shall keep a record of all loads hauled off-site (both on-site source-separated and off-site source-separated). Records will include the date, dumpster size, material type (construction waste, metal, etc.), weight of the load, and receiving entity. Records for the recycling facility will include all outbound construction waste and all outbound recycled material, showing dates, weights of loads, and receiving entity. The recycling percentage will be calculated as follows: the total recycled tons divided by the total project tons (both on-site source-separated and off-site source-separated).

Reporting

At approximately the 10th of the following month, the Waste Management & Recycling Subcontractor will provide the monthly summary reports to MWH-Kiewit. The Waste Management & Recycling Subcontractor may send up to 15% of the total material to a residential landfill (Non-Recycled Materials). Table 1 (below) illustrates a sample reporting.



Customer:	MWH/Kiewit JV	Load Count	3
Project:	Bullrun Sample	Recovered Tons	13.53
Period:	OCT / NOV 2020	Recovery Rate	96.19%

		WOOD	GYPSUM / DRYWALL	CARDBOARD	METAL	CONCRETE	PLASTIC	CARPET / PAD	ROOFING	YARD DEBRIS	MISC. RECYCLABLES	RESIDUAL	RECOVERED TONS	TOTAL TONS
CURRENT PERIOD	Tons	2.30	0.00	0.64	0.58	10.00	0.00	0.00	0.00	0.00	0.00	0.54	13.53	14.06
	%	16.4%	0.0%	4.6%	4.1%	71.1%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	96.2%	
YEAR TO DATE	Tons	2.30	0.00	0.64	0.58	10.00	0.00	0.00	0.00	0.00	0.00	0.54	13.53	14.06
	%	16.4%	0.0%	4.6%	4.1%	71.1%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	96.2%	
PROJECT TO DATE	Tons	2.30	0.00	0.64	0.58	10.00	0.00	0.00	0.00	0.00	0.00	0.54	13.53	14.06
	%	16.4%	0.0%	4.6%	4.1%	71.1%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	96.2%	

LOAD DETAIL

CONTRACTOR / SUBCONTRACTOR	DATE	TICKET NUMBER	Truck #	TOTAL TONS DUMPED	WOOD	GYPSUM / DRYWALL	CARDBOARD	METAL	CONCRETE	PLASTIC	CARPET / PAD	ROOFING	YARD DEBRIS	MISC. RECYCLABLES	RESIDUAL	RECYCLED TONS
MWH/Kiewit JV	10/26/2020	50328	23162	2.14	0.96	-	0.64	-	-	-	-	-	-	-	0.54	1.61
	11/9/2020	51254	23621	1.92	1.34	-	-	0.58	-	-	-	-	-	-	-	1.92
	11/13/2020	1245419	23743	10.00	-	-	-	-	10.00	-	-	-	-	-	-	10.00

MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE S-07 – SECURITY SERVICES

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall perform security services as detailed in Attachment 1 Specification 01 35 53 (Site Security), whole and complete, unless expressly excluded herein.**

This Scope completed over the first calendar year of the project, from September 1, 2023 through August 31, 2024 is apportioned to GMP1. (Thereafter, through the end of the project, the Scope will be apportioned to GMP 2.)

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

- **Inclusions.**

3..1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3..2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Draft Construction Diversity Inclusion Policy
- The Clean Air Construction Standard

3..3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3..4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3..5 Subcontractor's Scope of Work includes supply of:

- Two security officers Monday thru Friday, excluding holidays, from 6 a.m. to 5:15 p.m.
- One security officer at all times otherwise (I.e. overnight, weekends, and holidays)
- See Article 3.1.6 below for posting instructions.

3..6 Subcontractor's Scope of Work includes providing 2 EA Security Kiosks for use by its Security personnel. One kiosk shall be placed and reside at the project entrance at Carpenter Lane. The second kiosk shall be placed and reside at the Emergency Access Road (aka Road B) at Bluff Road.

- Power for the Security Kiosk on Road B will be provided via a PGE metered service drop. Infrastructure from this metered service drop and kiosk hookup will be provided by Others (the OPP-01 Package Subcontractor).
- Power for the Security Kiosk on Carpenter Lane will also be provided via a PGE metered service drop. Infrastructure from this metered service drop and kiosk hookup will be provided by Others (the OPP-01 Package Subcontractor). This service is not anticipated to be energized until approximately April 1, 2024. Prior to April 1, 2024, Subcontractor shall provide its own temporary power for the Carpenter Lane Security Kiosk.
- PGE consumption charges by Others (via the SP-01 Package CM/GC Services)
- Contractor will provide a portable toilet (a.k.a. porta potty) near each guard booth for Subcontractors use at no cost to Subcontractor.
- The Road B Security Kiosk shall be manned by a Security Guard on weekdays (excluding holidays) from 6 am to 5:15 pm.
    - This allows project access via 2 entrances 1 hour prior to a 7 am start of shift and provides access to a second exit as follows:
        - Craft working 5 x 9s from 7 am to 4:30 pm.
        - Staff working 5 x 8s from 8 am to 5:00 pm.
- The Carpenter Lane Security Kiosk shall be manned by a Security Guard Monday through Saturday (excluding holidays and holiday weekend Saturdays) from 6 am to 6:30 pm.
    - This provides exit access as follows:
        - Craft working 6 x 10s from 7 am to 5:30 pm
        - Staff working till 6:30 pm
- Officers shall check and approve all entrants to the jobsite. Entrants showing a site approved badge shall be allowed to enter without stopping. Entrants without a site approved badge shall be stopped and asked to complete the site visitors log detailing name, date, time, company, and reason for visit. Copies of the site visitors log shall be submitted to Contractor by 8:00a.m. the following business day.

- Except during the kiosk manning hours indicated above, entrances and gates to the jobsite shall remain locked and no one shall be allowed to enter without approval from the Contractor. Security officer shall make regular patrols of the jobsite looking for unauthorized entrants and/or unusual behavior. If unauthorized entrants are discovered, security officer shall call the Gresham Police Department (first) and Contactor (second).

3..7 Subcontractor's Scope of Work includes furnishing 4 EA towable Security Camera Towers (equivalent to Larson Electronics 45' Portable Solar Security Tower – 7.5' Trailer – 2 IP Cameras – 2 TB NVR – Router/4G Hotspot). Subcontractor to provide initial setup, training of Contractor personnel, and onsite relocation of units as directed by Contractor. Fuel, operation, and maintenance by Contractor.

- **Clarifications.**

3..1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3..2 Holidays shall include New Year's Day, Martin Luther King Day, Washington's Birthday, Memorial Day, Juneteenth, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, and Christmas Day.

3..3 Security officers shall be uniformed and equipped with a cellular phone (at Subcontractor's expense).

3..4 Security officers shall NOT carry a firearm or other weapon. Firearms and/or other weapons are NOT allowed on project site.

- **Exclusions**

3..1 Subcontractor's Scope of Work excludes supply and installation of the temporary metal security fence as called out in Specification 01 35 53, Part 1.01, Item A.6

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

- Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this

Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	
2.		
3.		
4.		

- **Submittals** ☐ Applicable ☒ Not Applicable

  Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

  MWH-Kiewit Joint venture
  Attention: Enter name
  Enter jobsite address
  Email: Enter email address

  Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

  The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

- **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

  Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - The Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
   - Quality Plan
   - Construction Management Plan
   - Waste Management Plan
   - Storm Water Pollution Prevention Plan
   - Erosion Control Plan
4) Site Vicinity Map
5) Site Conditions Document

NOTE TO LSA: For purposes of pricing the Early Works GMP, price this Scope of Work for the period beginning on September 1, 2023, and ending on August 31, 2024.

MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE S-08 – JANITORIAL SERVICES

EXHIBIT C – SCOPE OF WORK

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6.0 ATTACHMENTS

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall perform janitorial services for Owner's field offices, whole and complete, unless expressly excluded herein.**

This Scope completed over the first calendar year of the project, from September 1, 2023 through August 31, 2024 is apportioned to GMP1. (Thereafter, through the end of the project, the Scope will be apportioned to GMP 2.)

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Draft Construction Diversity Inclusion Policy

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan

3.1.4 Subcontractor's Scope of Work includes weekly janitorial services for: Owner's field offices (3 EA double-wide office). Reference Spec Section 01 52 00 for Owner's intended use of the provided space.

- Owner's field offices (3 EA double-wide offices. Reference Spec Section 01 52 00 for Owner's intended use of the provided space.)
- CM/GC's staff field offices (~16,500 SF of office trailers in a TBD configuration)
- CM/GC's Contractor Quality Control (CQC) field offices (~2,750 SF of office trailers in a TBD configuration)

- CM/GC's superintendence field offices (~6,250 SF of office trailers in a TBD configuration)

- The weekly janitorial services shall include:
  - Sweep and vacuum floors, and floor mats. Use sweeping dust abatement compound to control dust while sweeping.
  - Empty trash cans and remove other clearly marked trash.
  - Clean, sanitize, and service bathroom toilets, sinks, and floors.
  - Clean, sanitize, and service kitchenette microwave, refrigerator, coffee pot, sink, and countertops.
  - Provide a continuous supply of toilet paper.
  - Provide continuous handwashing supplies including hand washing soap and paper towels.
  - Dust all surfaces that are cleared of paper.
  - Wash windows on a monthly basis.
  - Replenish as needed paper cups and first-aid kit supplies.

3.1.5 Subcontractor's Scope of Work includes a monthly comprehensive cleaning including windows.

3.1.6 Subcontractor's Scope of Work includes supply of all cleaning supplies and consumables including, but not limited to, environmentally friendly cleaning products, trash bags, toilet paper, paper towels, etc.

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.3 **Exclusions**

3.3.1 Subcontractor's Scope of Work excludes pumping and disposal of the black water (septic) tanks.

3.3.2 Subcontractor's Scope of Work excludes covid protocols not in effect at the time of bidding.

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all

its subcontractors and vendors of every tier in accordance with the requirements in this Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	
2.		
3.		
4.		

5.2 **Submittals** ☐ Applicable ☒ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - The Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
   - Quality Plan (Not Applicable to this Scope of Work)
   - Construction Management Plan
   - Waste Management Plan
   - Storm Water Pollution Prevention Plan
   - Erosion Control Plan
4) Site Vicinity Map

5) Site Conditions Document

NOTE TO LSA: For purposes of pricing the Early Works GMP, price this Scope of Work for the period beginning on September 1, 2023, and ending on August 31, 2024.

MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE S-09 – CONTRACTOR QUALITY CONTROL (CQC)

EXHIBIT C – SCOPE OF WORK

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1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall perform all Contractor Quality Control as detailed in Attachment 1 Specification 01 45 00 (Quality Control and Assurance), whole and complete, unless expressly excluded herein.**

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Draft Construction Diversity Inclusion Policy
- The Clean Air Construction Standard

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes the testing and inspection per the attached scope detail, and not otherwise addressed by the Owner (Portland Water Bureau).

3.1.6 Subcontractor's Scope of work includes all associated CQC recordkeeping to ISO 9001:2015 standards.

3.1.7 Subcontractor's Scope of Work includes a 10% Allowance to address Quality Control Scope not yet identified, payable at the unit rates established for the various Quality Control activities.

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.2.2 CQC Staffmembers, if qualified in more than one Discipline, may simultaneous serve more in more than one CQC Discipline Staffmember role, as approved by the Owner.

3.3 **Exclusions**

3.3.1 Subcontractor's Scope of Work excludes Quality Control Manager (by Contractor).

3.3.2 Subcontractor's Scope of Work excludes Manufacturer Quality Control (by Manufacturers)

3.3.3 Subcontractor's Scope of Work excludes Factory Testing (by Manufacturers)

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this

Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Mobilization	5/1/23
2.	All Subcontract Work Complete	12/31/27
3.	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	
4.		

5.2 **Submittals** ☐ Applicable ☐ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☐ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - The Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
   - Quality Plan
   - Construction Management Plan
   - Waste Management Plan
   - Storm Water Pollution Prevention Plan
   - Erosion Control Plan
4) Site Vicinity Map
5) Site Conditions Document

~~*NOTE TO LSA: For purposes of pricing the Early Works GMP, price this Scope of Work for the period beginning on September 1, 2023, and ending on August 31, 2024.*~~

Bull Run 90 CQC

	Scope Element	ASTM	AKA	Spec Reference(s)	Frequency	GMP1 Qty	Unit
STRUCTURES	Structural Observation (not included because CBC requires this Special Inspection be provided by Owner)			Response to RFI 082 (8/2/22): "Contractor shall provide all Quality Control testing for the project except for the testing required to be performed by the Owner hired Special Inspector per building code."	Per CBC Chapter 17 Section 1704, the Owner shall employ a licensed engineer …		
BUILDINGS	CQC Architectural Staffmember			RFP 01 45 16 - 3.03.B.5	… be physically present at the construction site during Work on their areas of responsibility … An individual may cover more than one discipline provided they are qualified to perform QC activities designated and workload allows. Individuals performing QC activities shall be independent from, not employed by, the Contractor…	22	SHIFTS
CONCRETE	Independent Testing Laboratory - Mix Design Check			03300-1.04.B 03300-1.04.C	The Contractor shall submit mix designs from a minimum of two qualified batch plants for review… The mix designs shall be checked by an independent testing laboratory acceptable to the Owner. All costs related to such checking shall be borne by the Contractor…	8	MIX DESIGNS
	Independent Testing Laboratory - Mix Design Trial Batching	ASTM C685		03300-1.04.B 03300-1.04.C	The Contractor shall submit mix designs from a minimum of two qualified batch plants for review… The mix designs shall be checked by an independent testing laboratory acceptable to the Owner. All costs related to such checking shall be borne by the Contractor…	8	MIXES BATCHED
	Independent Testing Laboratory - Mix Design Cylinder Breaks	ASTM C39		03300-1.04.B 03300-1.04.C 03300-2.07.A	The Contractor shall submit mix designs from a minimum of two qualified batch plants for review… The mix designs shall be checked by an independent testing laboratory acceptable to the Owner. All costs related to such checking shall be borne by the Contractor… …The trial batch materials shall be of a quantity such that the testing laboratory can obtain 3 drying shrinkage, and 6 compression test specimens from each batch. Trial batch testing required shall be performed at the expense of the Contractor	48	CYLINDER BREAKS
	Independent Testing Laboratory - Mix Design Shrinkage Drying	ASTM C157		03300-1.04.B 03300-1.04.C 03300-2.07.A	The Contractor shall submit mix designs from a minimum of two qualified batch plants for review… The mix designs shall be checked by an independent testing laboratory acceptable to the Owner. All costs related to such checking shall be borne by the Contractor… …The trial batch materials shall be of a quantity such that the testing laboratory can obtain 3 drying shrinkage, and 6 compression test specimens from each batch. Trial batch testing required shall be performed at the expense of the Contractor	24	SHRINKAGE SAMPLES
	Independent Testing Laboratory - Sieve Analysis of Combined Aggregate	ASTM C136		03300-2.07.C	A sieve analysis of the combined aggregate for each trial batch shall be performed…	8	SIEVE ANALYSES
	Structural CQC Staffmember			RFP 01 45 16 - 3.03.B.5	… be physically present at the construction site during Work on their areas of responsibility … An individual may cover more than one discipline provided they are qualified to perform QC activities designated and workload allows. Individuals performing QC activities shall be independent from, not employed by, the Contractor…	104	SHIFTS
	Civil Concrete CQC Staffmember			RFP 01 45 16 - 3.03.B.5	… be physically present at the construction site during Work on their areas of responsibility … An individual may cover more than one discipline provided they are qualified to perform QC activities designated and workload allows. Individuals performing QC activities shall be independent from, not employed by, the Contractor…	104	SHIFTS
	ACI Tech	ASTM C31, C143	Concrete Materials Technician	03 31 00-1.04		41	POURS
	Cylinder Breaks	ASTM C39		03 31 00-1.04.B.5.a	One test cylinder shall be tested at 7 Days, and three test cylinders tested at 28 Days. Compression test specimens shall be taken during construction from the first placement of each type of concrete and at intervals no less frequent than: 1) At least once a day. 2) At least once for each 150 cubic yards…	164	BREAKS
	Shrinkage Tests	ASTM C157		03 31 00-1.04.B.5.c	Drying shrinkage tests shall be performed for the trial batches indicated in the Article below entitled "Trial Batch and Laboratory Tests," for the first placement of each class of structural concrete, and during placement at the option of the OWNER'S REPRESENTATIVE to determine continued compliance.		not likely engaged between initial testing and GMP2 scope
	Laboratory Tests on Cement, Aggregate, and Concrete						by Ready Mix Supplier
	Onsite Fab Cylinder Curing Box					3	BOXES

Bull Run 90 CQC

	Scope Element	ASTM	AKA	Spec Reference(s)	Frequency	GMP1 Qty	Unit
WELDING	Mechanical CQC Staffmember			RFP 01 45 16 - 3.03.B.5	… be physically present at the construction site during Work on their areas of responsibility … An individual may cover more than one discipline provided they are qualified to perform QC activities designated and workload allows. Individuals performing QC activities shall be independent from, not employed by, the Contractor…	104	SHIFTS
	CWI UT Inspection			33 92 15 - 3.02.D.1	100% of field welds shall be inspected using ultrasonic or radiographic weld inspection methods, performed by an independent qualified weld inspector.	104	SHIFTS
	Welder Qualifications			33 92 15 - 3.02		5	EA
EARTHWORK	Geotechnical/Civil Grading/Soils CQC Staffmember			RFP 01 45 16 - 3.03.B.5	… be physically present at the construction site during Work on their areas of responsibility … An individual may cover more than one discipline provided they are qualified to perform QC activities designated and workload allows. Individuals performing QC activities shall be independent from, not employed by, the Contractor…	313	SHIFTS
	Geotechnical/Civil Grading/Soils CQC Staffmember			RFP 01 45 16 - 3.03.B.5	… be physically present at the construction site during Work on their areas of responsibility … An individual may cover more than one discipline provided they are qualified to perform QC activities designated and workload allows. Individuals performing QC activities shall be independent from, not employed by, the Contractor…	313	SHIFTS
	Geotechnical/Civil Grading/Soils CQC Staffmember			RFP 01 45 16 - 3.03.B.5	… be physically present at the construction site during Work on their areas of responsibility … An individual may cover more than one discipline provided they are qualified to perform QC activities designated and workload allows. Individuals performing QC activities shall be independent from, not employed by, the Contractor…	313	SHIFTS
	Environmental CQC Staffmember			RFP 01 45 16 - 3.03.B.5	… be physically present at the construction site during Work on their areas of responsibility … An individual may cover more than one discipline provided they are qualified to perform QC activities designated and workload allows. Individuals performing QC activities shall be independent from, not employed by, the Contractor…	313	SHIFTS
	Gradations	ASTM C136		31 30 00 - 2.03.A.1	Gradation tests by the CONTRACTOR shall be made on samples taken at the place of production prior to shipment. Samples of the finished product for gradation testing shall be taken from each 1,500 tons of prepared materials or more often as determined by the OWNER'S REPRESENTATIVE	154	SIEVE ANALYSES
	Moisture Density Curves	ASTM D698	Standard Proctor	31 30 00 - 3.08.A		5	CURVES
	Moisture Density Curves	ASTM D4253		02300 - 2.03.C.2 02300 - 3.11.E	Prepare moisture-density curves for use in determining the optimum moisture content and in-place density of the compacted backfill. Where compaction of cohesionless, free draining soil is specified as a percentage of relative density, determine relative density by laboratory testing in accordance with ASTM D4253 and D4254.	2	CURVES
	Moisture Density Curves	ASTM D4254		02300 - 2.03.C.2 02300 - 3.11.E	Prepare moisture-density curves for use in determining the optimum moisture content and in-place density of the compacted backfill. Where compaction of cohesionless, free draining soil is specified as a percentage of relative density, determine relative density by laboratory testing in accordance with ASTM D4253 and D4254.	2	CURVES
	Hazardous Materials Battery (TPH, CAM-17, VOCs, SVOCs, Organochlorides)					35	EA
	Chloride and Sulfates					35	EA
	Resistivity and pH					35	EA
	Compaction Testing	ASTM D698	Standard Proctor	31 30 00 - 3.09.A.2	Cost of originally scheduled field tests resulting in passing conditions shall be paid by the OWNER.	104	SHIFTS
ELECTRICAL	Electrical CQC Staffmember			RFP 01 45 16 - 3.03.B.5	… be physically present at the construction site during Work on their areas of responsibility … An individual may cover more than one discipline provided they are qualified to perform QC activities designated and workload allows. Individuals performing QC activities shall be independent from, not employed by, the Contractor…	104	SHIFTS

MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE S-010 – STREET SWEEPING

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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6.0 ATTACHMENTS

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall perform all street sweeping, whole and complete, unless expressly excluded herein.**

This Scope completed over the first calendar year of the project, from September 1, 2023 through August 31, 2024 is apportioned to GMP1. (Thereafter, through the end of the project, the Scope will be apportioned to GMP 2.)

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Draft Construction Diversity Inclusion Policy
- The Clean Air Construction Standard

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes power sweeping asphalt paved streets in the project vicinity at the direction of the Contractor.

3.1.6 Subcontractor's Scope of Work includes the ability to engage a second sweeper, as necessary, particularly during the especially muddy season (November through April).

3.1.7 Subcontractor's Scope of Work includes removal and disposal of debris from the sweeper. Contaminants and contaminated debris may not be disposed of on the project site.

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.2.2 Water shall be made available to Subontractor adjacent the Pleasant Home Water District tanks at no cost to Subcontractor.

3.3 **Exclusions**

3.3.1 None

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this

Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Mobilization	5/1/23
2.	All Subcontract Work Complete	12/31/27
3.	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	
4.		

5.2 **Submittals** ☐ Applicable ☐ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☐ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - The Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
   - Quality Plan
   - Construction Management Plan
   - Waste Management Plan
   - Storm Water Pollution Prevention Plan
   - Erosion Control Plan
4) Site Vicinity Map
5) Site Conditions Document

NOTE TO LSA: For purposes of pricing the Early Works GMP, price this Scope of Work for the period beginning on September 1, 2023, and ending on August 31, 2024.

MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE S-011 – OFF-SITE ROAD IMPROVEMENTS

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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6.0 ATTACHMENTS

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall perform all improvements to SE Carpenter Lane, SE Cottrell Road, and SE Dodge Park Blvd. and these roads' shoulders, whole and complete, unless expressly excluded herein.**

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Draft Construction Diversity Inclusion Policy
- The Clean Air Construction Standard

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes all traffic control in compliance with **Attachment 1** Specification 01 55 26 (Temporary Traffic Control) and Specification 01 55 26.13 (Accommodations for Public Traffic).

3.1.6 Subcontractor's Scope of Work includes coordinating and maintaining local vehicle, commercial vehicle (i.e. trucks to/from nursery), and Emergency vehicle access to and from Carpenter Lane residences and businesses during working and non-working hours.

3.1.7 Subcontractor's Scope of Work includes clearing, grubbing and stripping.

3.1.8 Subcontractor's Scope of Work includes shoring, as necessary, to not encroach upon the private property to the southwest of the intersection of SE Cottrell Road and SE Dodge Park Blvd (e.g. to allow excavation for the retaining wall construction in this vicinity).

3.1.9 Subcontractor's Scope of Work includes offhaul and disposal of excess materials.

3.1.10 Subcontractor's Scope of Work includes Survey staking and layout from Contractor-provided Survey Control staking.

3.1.11 Subcontractor's Scope of Work includes location of existing utilities and protecting-in-place existing utilities.

3.1.12 Subcontractor's Scope of Work includes Quality Control and 3rd Party Testing.

3.1.13 Subcontractor's Scope of Work includes furnishing and installing the fiberoptic ductbank, the associated pullboxes and vaults, and installing the Owner-provided fiberoptic cable.

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.2.2 1/2 acre in the northwest corner of the Filtration Facility site may be made available for Subcontractor's temporary staging and laydown.

3.2.3 Touch up of SE Carpenter Lane, following construction activities, will be addressed in a future bid package.

3.3 **Exclusions**

3.3.1 Subcontractor's Scope of Work excludes touch up of SE Carpenter Lane following construction activites.

3.3.2 Subcontractor's Scope of Work excludes relocation of utility poles (by PGE).

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Mobilization	6/1/23
2.	All Subcontract Work Complete	10/1/23
3.	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	
4.		

5.2 **Submittals** ☒ Applicable ☐ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - The Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
   - Quality Plan
   - Construction Management Plan
   - Waste Management Plan

- Storm Water Pollution Prevention Plan
- Erosion Control Plan

4) Site Vicinity Map
5) Site Conditions Document
6) Additional Work at SE Carpenter Lane

MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE S-012 – EROSION CONTROL

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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6.0 ATTACHMENTS

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall install and maintain all erosion control as shown on the Erosion Control Plan and as further enhanced on the Erosion and Sediment Control Plan attachment to the DEQ 1200C Appplication, whole and complete, unless expressly excluded herein.**

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 **Inclusions.**

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Draft Construction Diversity Inclusion Policy
- The Clean Air Construction Standard

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes securing Contractor's approval of proper installation, a requirement of Subcontractor invoicing.

3.1.6 Subcontractor's Scope of Work includes supply and installation of the tree protection fencing as shown in Attachment 1 Drawings 00-C-301 and 00-C-903.

3.1.7 Subcontractor's Scope of Work includes BMP maintenance which could include full replacement as dictated by the level of degradation and/or effectiveness of the subject BMP. This Scope completed over the first calendar year of the project, from September 1, 2023 through August 31, 2024 is apportioned to GMP1. (Thereafter, through the end of the project, the Scope will be apportioned to GMP2.)

3.1.8 Subcontractor's GMP1 Scope of Work will not include removal of erosion control elements. (Once Contractor provides written confirmation the elements are no longer required, this scope element will be addressed as GMP2 scope.)

3.1.9 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.2 **Exclusions**

3.2.1 Subcontractor's Scope of Work excludes temporary drainage (by S-03 Temporary Roads Package Subcontractor).

3.2.2 Subcontractor's Scope of Work excludes stormwater treatment.

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this

Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Mobilization	5/1/23
2.	Installation of Initial Phase of Erosion and Sediment Control Plan elements	5/14/23
3.	Installation of remainder of First Season Erosion and Sediment Control Plan elements	10/15/23
4.	Installation of Subsequent Season Erosion and Sediment Control Plan elements	10/15/XX
5.	All Subcontract Work Complete	12/31/27
6.	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	

5.2 **Submittals** ☐ Applicable ☐ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☐ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - The Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
   - Quality Plan
   - Construction Management Plan

- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

4) Site Vicinity Map
5) Site Conditions Document
6) Erosion and Sediment Control Plan, and subsequent Amendments

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~~*NOTE TO LSA: For purposes of pricing the Early Works GMP, price this Scope of Work for the period beginning on September 1, 2023, and ending on August 31, 2024.*~~

MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE S-014 – PORTABLE TOILETS

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

6.0 ATTACHMENTS

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall provide and service portable toilets (a.k.a. porta pottys), whole and complete, unless expressly excluded herein.**

This Scope completed over the first calendar year of the project, from September 1, 2023 through August 31, 2024 is apportioned to GMP1. (Thereafter, through the end of the project, the Scope will be apportioned to GMP 2.)

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 **Inclusions.**

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Draft Construction Diversity Inclusion Policy
- The Clean Air Construction Standard

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes providing and weekly servicing portable toilets (a.k.a. porta pottys) and hand washing stations on an "as-called" basis by the Contractor for an average of 8 toilet units and 6 hand washing stations at time. Servicing shall include cleaning, pump out, and proper disposal of pumped materials.

- Women's porta pottys shall be labeled "women only" and shall be lockable.

3.1.6 Subcontractor's Scope of Work includes weekly pump out of the black water (septic) tanks at the following onsite temporary office complexes:

- Owner's field offices (3 EA double-wide offices. Reference Spec Section 01 52 00 for Owner's intended use of the provided space.)
- CM/GC's staff field offices (~16,500 SF of office trailers in a TBD configuration)
- CM/GC's Contractor Quality Control (CQC) field offices (~2,750 SF of office trailers in a TBD configuration)
- CM/GC's superintendence field offices (~6,250 SF of office trailers in a TBD configuration)

3.2 Clarifications.

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.3 **Exclusions**

3.3.1 None

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this

Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	
2.		
3.		
4.		

5.2 **Submittals** ☐ Applicable ☒ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - The Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
   - Quality Plan
   - Construction Management Plan
   - Waste Management Plan
   - Storm Water Pollution Prevention Plan
   - Erosion Control Plan
4) Site Vicinity Map
5) Site Conditions Document

NOTE TO LSA: For purposes of pricing the Early Works GMP, price this Scope of Work for the period beginning on September 1, 2023, and ending on August 31, 2024.

MWH-KIEWIT JOINT VENTURE

GMP1 BID PACKAGE S-15 – OWNER FIELD OFFICES

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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6.0 ATTACHMENTS

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall provide Owner field offices, and associated furnishings and appliances as detailed in Attachment 1 Specification 01 52 00, whole and complete, unless expressly excluded herein.**

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- The Draft Construction Diversity Inclusion Policy
- The Clean Air Construction Standard

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, Contractor's other subcontractors, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes supply of Owner's field offices as detailed in **Attachment 1** Specification 01 52 00.

- Subcontractor's Scope of Work includes all necessary permitting and engineering associated with supply and installation of Owner's field offices.

3.1.6 Subcontractor's Scope of Work includes mobilization and setup of Owner's field offices.

- Subcontractor's Scope of Work includes construction of raised and roofed platform between the three double-wide units as detailed in Specification 01 52 00, Part 2.01, Item B.
- Subcontractor's GMP1 Scope of Work excludes demobilization and removal of Owner's field offices and raised and roofed platforms which will be addressed as GMP2 scope.

3.1.7 Subcontractor's Scope includes rental of the units. This Scope completed over the first 9 months of rental, from December 1, 2023 through August 31, 2024 is apportioned to GMP1. (Thereafter, through the end of the project in 2027/2028, the Scope will be apportioned to GMP2.)

3.1.8 Subcontractor's Scope of Work includes supply and connection of black water (septic) tank at Owner's field office.

3.1.9 Subcontractor's Scope of Work includes the installation of a commercial security system and engagement of security monitoring services for the security system.

3.1.10 Subcontractor's Scope of Work includes disassembly and demobilization of the provided facilities.

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.3 **Exclusions**

3.3.1 Subcontractor's Scope of Work excludes the work detailed in Specification 01 52 00, Part 3.01, Items D, E, and F.

3.3.2 Subcontractor's Scope of Work excludes power and fiber hookups (by OPP-01 Temporary Electrical Subcontractor)

3.3.3 Subcontractor's Scope of Work excludes janitorial services and consumables (by S-08 Janitorial Subcontractor).

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its subcontractors and vendors of every tier in accordance with the requirements in this Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Mobilization	9/5/23
2.	Facilities complete – Ready for Occupancy	11/30/23
3.		
	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	

5.2 **Submittals** ☒ Applicable ☐ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Contractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Contractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☒ Not Applicable

Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) 90% Design Documents (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - The Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
   - Quality Plan
   - Construction Management Plan

- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

4) Site Vicinity Map
5) Site Conditions Document

MWH-KIEWIT JOINT VENTURE

GMP1 PACKAGE S-16 RAW WATER PIPELINES

EXHIBIT C – SCOPE OF WORK

OF THE ENTER SUBCONTRACT TIERFOR THE
FILTRATION FACILITY PROJECT

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6.0 ATTACHMENTS

1.0 GENERAL

The intent of this Scope of Work is to provide Subcontractor an outline of the type of work to be performed hereunder. Subcontractor shall examine all applicable plans, specifications, and other technical data incorporated into this Subcontract to determine the extent of the Subcontract Work. **Subcontractor shall supply, install, and backfill of the two 72-inch diameter raw water pipelines as detailed in Attachment 1, whole and complete, unless expressly excluded herein.**

2.0 PROJECT OVERVIEW

The **Filtration Facility** Project ("Project') consists of construction of a new water treatment facility capable of producing up to 135 million gallons per day.

3.0 SUBCONTRACTOR'S SCOPE OF WORK

Subject to the terms and conditions of this Subcontract, Subcontractor shall provide all supervision, labor, construction equipment and tools, permanent materials, consumable supplies, material and equipment handling, installation, testing, safety supplies and personnel-protection equipment, insurance, bonds, and any other items of expense necessary to completely perform the Subcontract Work. Any item inferable from, or relating to the intent of, the Subcontract Documents and obviously necessary for a complete and operable item of work, shall be considered incidental to the Work, and all related costs shall be deemed included in the Subcontract Price, unless such work is expressly excluded in this Scope of Work.

3.1 Inclusions.

3.1.1 Subcontractor's Scope of Work shall include compliance with the requirements of the Division 0 and Division 1 specifications included as **Attachment 1** to this Scope of Work.

3.1.2 Subcontractor's Scope of Work shall include compliance with the City of Portland documents included in **Attachment 2** to this Scope of Work, including:

- The terms and conditions of the Sample Construction Services Contract as applicable to Subcontractor's work
- The Regional Workforce Equity Agreement
- Draft Construction Diversity Inclusion Policy
- The Clean Air Construction Standard

3.1.3 Subcontractor's Scope of Work shall include compliance with the requirements of MWH-Kiewit planning documents included as **Attachment 3** to this Scope of Work, including:

- Site Specific Health & Safety Plan
- Quality Plan
- Construction Management Plan
- Waste Management Plan
- Storm Water Pollution Prevention Plan
- Erosion Control Plan

3.1.4 Subcontractor's Scope of Work includes coordination of their work with Contractor, third party inspectors, and Authority Having Jurisdiction.

3.1.5 Subcontractor's Scope of Work includes excavation, bedding, and backfill for the raw water pipelines. Excavation, bedding, and backfill shall meet the requirements of **Attachment 1** Specification 31 23 33 (Trench Excavation, Bedding, and Backfill), and

Specification 31 30 00 (Earthwork) and Specification 03 34 00 (Controlled Low Strength Material).

- Subcontractor's Scope of Work includes importing of all material required to complete Subcontractor's scope.

3.1.6 Subcontractor's Scope of Work includes transport of excess native soils to an on-site stockpile. Stockpile management and truck load out will be completed by the OPP-02 Subcontractor. Trucking of excess materials will be completed by S-01 Subcontractor.

3.1.7 Subcontractor's Scope of Work Subcontractor's Scope of Work includes temporary shoring and/or sheeting of the excavation, as necessary, to install the raw water pipelines. Shoring and/or sheeting shall comply with the requirements of Attachment 1 Specification 31 30 01 (Shoring and Sheeting).

3.1.8 Subcontractor's Scope of Work includes supply, installation, operation, maintenance, and removal of a groundwater dewatering system in support of this Scope of Work. Dewatering shall comply with the requirements of **Attachment 1** Specification 31 23 19 (Dewatering).

3.1.9 Subcontractor's Scope of Work includes protection of existing underground utilities. Prior to construction, Subcontractor is responsible for identifying and locating all underground utilities. Subcontractor is liable to repair any damage to existing utilities.

3.1.10 Subcontractor's Scope of Work includes the design and construction of utility temporary support for the Pleasant Home Water District water supply pipeline and water distribution pipeline that intersect the proposed Raw Water Pipelines' alignment. Temporary support shall be designed and constructed in compliance with the City of Portand Water Bureau Guidelines from Utility Protection.

3.1.11 Subcontractor's Scope of Work includes cleaning of the installed piping prior to pressure testing.

3.1.12 Subcontractor's Scope of Work includes pressure testing of the completed pipeline.

- Subcontractor's Scope of Work includes supply and installation of plugs, blind flanges, bulkheads, hardware, etc. to complete specified pressure testing.
- Subcontractor shall submit, for Contractor approval, a pressure testing plan.

3.1.13 Following completion of successful pressure testing, Subcontractor's Scope of Work includes tie-in of the raw water pipelines at Area 20 (Inlet Structure) as well as the pipeline shaft located in the southeast corner of the project site.

- Subcontractor's Work includes removal and disposal of test water from within the raw water pipeline. For clarity, this extent of this test water removal and disposal is limited to the limits of the pipeline installed within this Scope (i.e. it does not extend to the segments of the Raw Water Pipelines to the east installed by other via the MWH-Fowler Pipelines Project.)
- Subcontractor's Work includes supply and installation of wall spools at Area 20. This work will be required to be completed before the remainder of the right-of-way is available for Raw Water Pipelines' installation (i.e. requiring a separate, advance mobilization)

3.1.14 Subcontractor's Scope of work includes Survey staking and layout from Contractor-provided Survey Control.

3.1.15 Subcontractor's Scope of work includes Quality Control and 3rd Party Testing including, but no limited to, compaction testing and CWI.

3.1.16 Subcontractor's Scope of Work includes the Combination Air Valve Assemblies and Accessway Vaults, whole and complete.

3.1.17 Subcontractor's Scope of Work includes cathodic protection of the raw water pipeline, including isolation joints, monitoring/test station(s), deep well anode(s) and rectifier(s), whole and complete. Power to the rectifier is excluded from this Scope (and will be completed by the S-25 Electrical Package Subcontractor).

3.2 **Clarifications.**

3.2.1 The Filtration Facility project site is located east of Gresham, Oregon. The site is bordered on the north by SE Carpenter Lane and SE Dodge Park Boulevard. It is bordered to the east by a steep slope down to SE Dodge Park Boulevard and SE Lusted Road, and down to the Sandy River. It is located on the south and west by agricultural fields. The southern property line is also the county line between Multnomah and Clackamas Counties. The nearest road to the south is the SE Bluff Road. A site vicinity map is included as **Attachment 4** to this Scope of Work.

3.2.2 Collected and treated groundwater shall be discharged to Johnson Creek in compliance with the project's DEQ 1200C permit. Test water shall be disposed of – test water may not be discharged to Johnson Creek.

3.2.3 Reference Aaron Eder email (attached) for information that supersedes information provided in the 90% documents. In particular, attention is drawn to (1) pipe wall thickness, (2) CLSM backfill limits, and (3) the requirement to ensure that trenching for the pipe zone be excavated to the indicated width and be maintained VERTICAL. As necessary, include trench sheeting and/or shoring to ensure this vertical is achieved.

3.2.4 The site's temporary power infrastructure will *not* extend to the Raw Water Pipeline alignment. Accordingly, Subcontractor must provide its own means of temporary power to support its scope of work (e.g. welder power).

3.3 **Exclusions**

3.3.1 Subcontractor's Scope of Work excludes quality control testing provided by Owner.

3.3.2 Subcontractor's Scope of Work excludes disinfection of the raw water pipelines. Disinfection of the raw water pipelines to be completed by others under a future bid package.

4.0 MATERIAL, EQUIPMENT, OR SERVICES FURNISHED BY OTHERS

The following item(s) will be furnished to Subcontractor by others at no additional cost to Subcontractor:

See Site Conditions document, included as **Attachment 5** to this Scope of Work, for services to be provided by MWH-Kiewit to Subcontractor at no additional cost to Subcontractor.

5.0 COMMENCEMENT, PROGRESS AND COMPLETION OF THE SUBCONTRACT WORK

5.1 Subcontractor shall diligently perform the Work in accordance with good construction practices and all other terms and conditions of this Agreement and shall secure the performance of all its Subcontractors and vendors of every tier in accordance with the requirements in this

Agreement. Subcontractor shall complete the Subcontract Work to meet the following Subcontract Milestone dates:

Item No.	Subcontract Milestones	Date
1.	Mobilization	5/1/23
2.	Install Area 20 Inlet Structure Wall Spools	2024
3.	Install Raw Water Pipelines, complete	2026
4.	Enter applicable milestones, typically including Commence Preparation of Pre-Construction Document Submittals, Mobilization, Mobilization, All Pre-Construction Document Submittals Complete, All Subcontract Work Complete, etc.	

5.2 **Submittals** ☐ Applicable ☐ Not Applicable

Subcontractor shall furnish all required submittals to Seller for review, subject to the applicable provisions of this Agreement:

MWH-Kiewit Joint venture
Attention: Enter name
Enter jobsite address
Email: Enter email address

Subcontractor shall allow up to Enter # days or "N/A" business days for review of each submittal. If any corrections are required by the Subcontractor or Engineer, Subcontractor shall promptly make such corrections and resubmit the document to Subcontractor.

The time required following approval of submittals for fabrication, factory test (if required), and delivery of equipment and/or material Enter lead time or "N/A".

5.3 **Operations and Maintenance (O & M) Manuals** ☐ Applicable ☐ Not Applicable

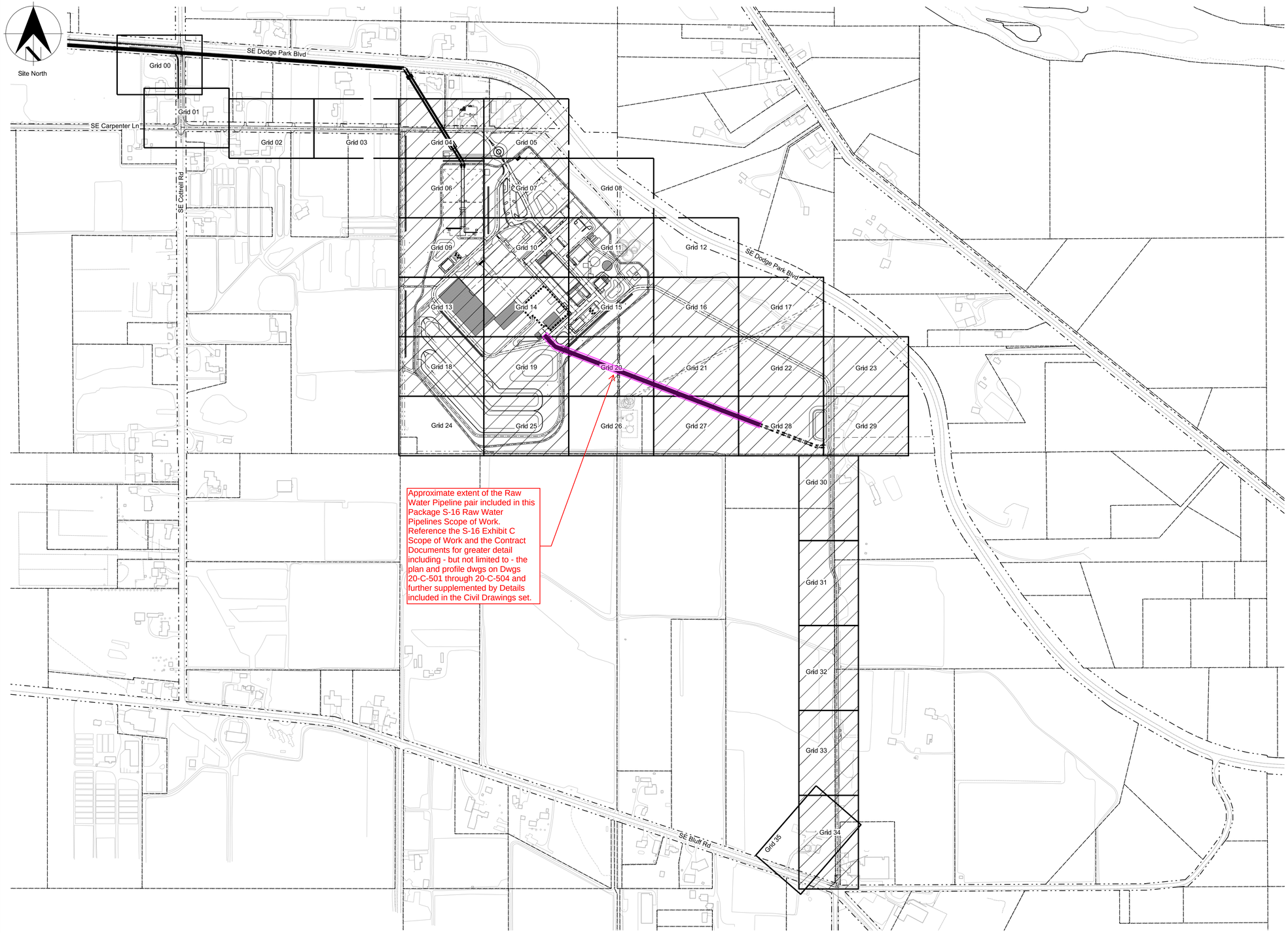
Preliminary and/or Final O&M Manuals must be submitted in accordance with the Project specifications prior to or with the delivery of the materials and equipment.

6.0 ATTACHMENTS

1) Stantec 90PCT Design Deliverable (Stantec, September 2022) Enter Date
2) City of Portland Project Documents
   - Sample Construction Services Contract
   - Regional Workforce Equity Agreement
   - Draft Construction Diversity Inclusion Policy
   - The Clean Air Construction Standard
3) MWH-Kiewit Planning Documents
   - Site Specific Health & Safety Plan
   - Quality Plan
   - Construction Management Plan
   - Waste Management Plan
   - Storm Water Pollution Prevention Plan
   - Erosion Control Plan
   - Site Logistics Plan

- KIE Dewatering System Design
- KIE Support of Excavation System Design

4) Site Vicinity Map
5) Site Conditions Document
6) Email from Aaron Eder dated November 16, 2022



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SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER
55529PE
OREGON
JULY 15, 2003
RAFAEL GAETA
EXPIRES 6-30-23

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User: stanpw111cs04$
1/10/2023

No	Date	Description	Appd
D	01/2023	Final Design - 100% Submittal	MRG
C	09/2022	Second Intermediate Design and BCOE Review - 90% Submittal	MRG
B	01/2022	Intermediate Design - 60% Submittal	MRG
A	07/2021	Initial Design - 30% Submittal	MRG

Revision

Survey

Stantec
EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	BYS	Design Mgr	LSH
Drawn By	NBT	Const Mgr	TG
Checked By	LCS	Const Supvr	RM
Project Mgr	MRG	Date 1/13/2023	

Warning
0 ½ 1
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Facility

Civil

Yard Piping
Overall Plan

SAP Project No
W02229
1/4 Section
3765 / 3766
Sheet No
03-C-300
X of X
159 2402

Lance.Regular

From: Eder, Aaron <aaron.eder@stantec.com>
Sent: Wednesday, November 16, 2022 4:38 PM
To: Ben McGeachy; Lance.Regular
Cc: Graham, Mark
Subject: [EXTERNAL] BRFF - Pipe Wall Thickness Update

Hi Ben and Lance – here is an update on where things stand on the wall thickness topic. The intent is to match wall thickness to the wall thickness shown in Jacobs' design and the transition points between the Pipelines contract and the BRFF contract.

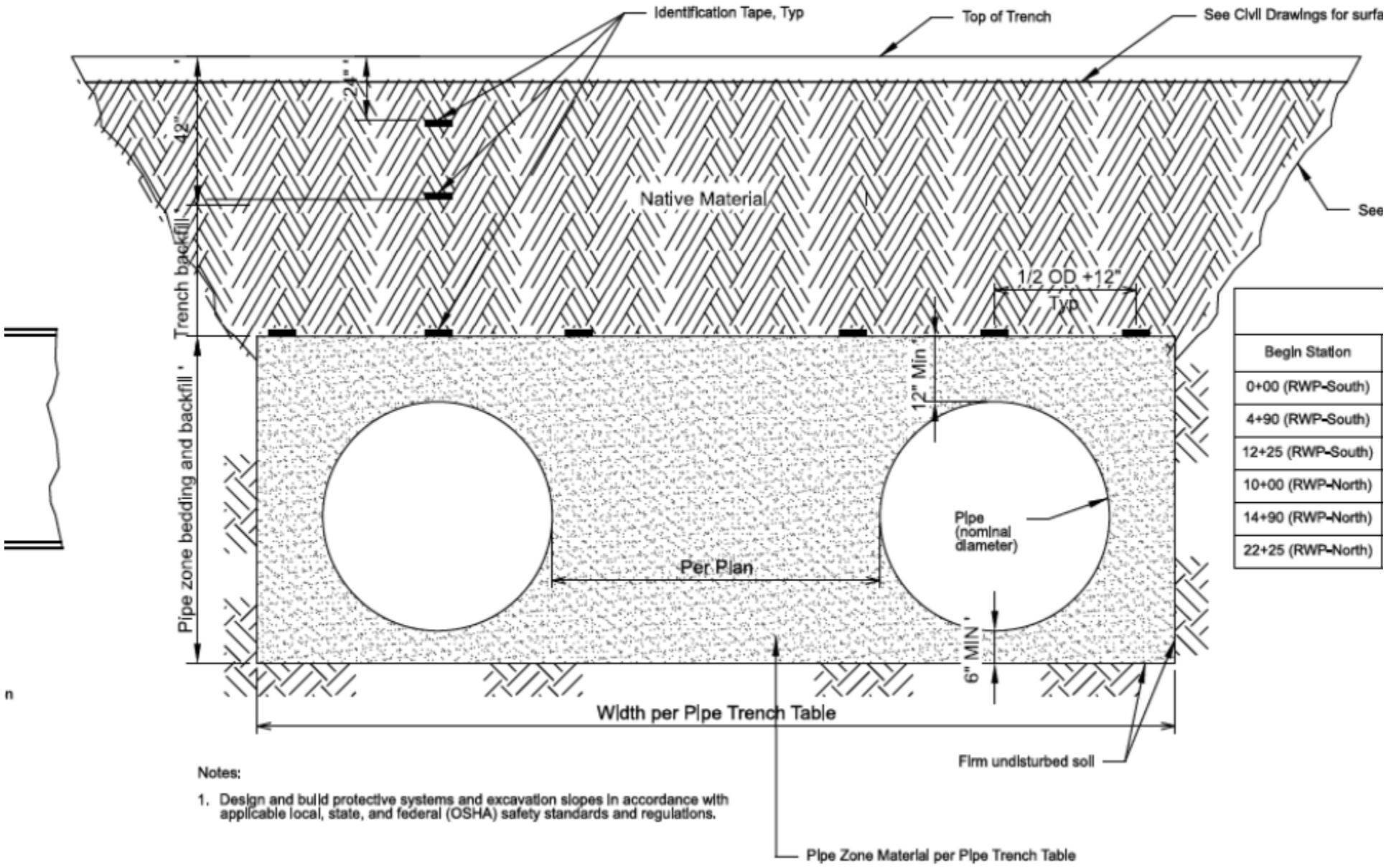
72" Raw Water Pipe (RWP)

1. Jacobs is currently (or will be in their next deliverable) showing a RWP thickness of 7/16" at the termination of their RWP.
2. Our updated calculations show that a wall thickness of 7/16" can accommodate up to 20 feet of cover, with imported granular fill and 2' between trench wall and outermost pipe wall (total bottom trench width of 21' for a dual pipe trench – see graphic below)
3. There is about 735 feet of this pipe trench that will have more than 20' of cover, as shown in the station-to-station limits in the Pipe Trench Table below. 7/16" wall does not appear to be feasible with imported granular fill for Pipe Zone Bedding and Backfill.
4. You previously provided the following alternatives to imported granular fill in blue (in order to reduce the wall thickness from what was previously proposed), in order of increasing cost:

    a. Pugmill to develop a cement-treated native mix (we would need to know the % cement content if you would like us to pursue this option).
    b. commercially supplied CDF/CLSM (per the Pipe Trench Table below, this is our current design approach – wall thickness can likely be reduced to 5/16")
    c. unreinforced ready-mix concrete (we have not pursued this further in our design, pending your thoughts on a and b above)
    d. reinforced ready-mix concrete. (we have not pursued this further in our design, pending your thoughts on a and b above)

66" Finished Water Pipe (FWP)

1. Jacob's current approach is to connect to the BRFF FWP nominally 8' outside of the clearwell, meaning there will now only be a short stub of 66" FWP in the BRFF scope.
2. Jacobs is currently (or will be in their next deliverable) showing a FWP thickness of 1/2" at the termination of their FWP.
3. There will be approximately 32' of cover over the FWP outside of the clearwell.
4. Similar to above, our approach is to use CLSM for the Pipe Zone Bedding and Backfill due to the depth. Wall thickness will be ½" to match Jacobs' FWP thickness.



Notes:

1. Design and build protective systems and excavation slopes in accordance with applicable local, state, and federal (OSHA) safety standards and regulations.

C-601 Pipe Trench Section (72" RWP AND 66" FWP)

Scale: NTS

Thanks,
Aaron

Aaron Eder, P.E.
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Cell: +1 (503) 724-1509
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Bull Run Filtration Facility
MWH – Kiewit Organizational Chart
GMP 1 – Early Works

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

Organization Chart Key

- Project Title *Labor Rate Title (*if different from Project Title)*
- Hours Adjusted for Schedule Acceleration
- Partial Duration Resource (< 52 weeks)
- Remote Resource

- Project Executive
  - Deputy Project Manager
  - Project Manager
    - Administrative Assistant *Clerk*
    - Commissioning & Startup Manager
      - Deputy C&SU MGR. *Project Engineer*
    - Project Construction Superintendent
      - General Superintendent
        - Concrete Lead Superintendent *General Superintendent*
          - Concrete/Civil Superintendent *Superintendent*
            - Concrete Field Engineer
        - Civil Lead Superintendent *Self Perform CM*
          - Civil Superintendent
            - Field Engineer
        - Electrical I&C Lead Superintendent *General Superintendent*
        - Mechanical Lead Superintendent *General Superintendent*
          - Mechanical Superintendent
            - Non-Process Mech Field Engineer
        - Equity Contractors General Superintendent
          - Architectural Superintendent
            - Architectural Field Engineer
        - Site Wide Services Superintendent *Superintendent*
          - Field Engineer
        - Survey Manager Superintendent *Superintendent*
      - Operations Manager *Sr. Project Engineer II*
        - Concrete Sr. Project Engineer II
          - Concrete Project Engineer
        - Civil Sr. Project Engineer II
          - Civil Project Engineer
        - Electrical I&C Sr. Project Engineer II
        - Mechanical Sr. Project Engineer II
          - Mechanical Project Engineer
        - Equity Contractors Project Engineer
        - Building/Architecture Project Engineer
        - Document Controls *Clerk*
          - Document Controls *Clerk*
    - Safety Manager
      - Safety Engineer *Field Engineer*
      - Safety Engineer *Field Engineer*
    - Quality Manager
      - Inspector *Project Engineer*
      - Inspector *Project Engineer*
      - Inspector *Field Engineer*
    - Project Scheduler
      - Scheduler *Business Manager*
      - Synchro- Schedule *Sr. Business Manager*
      - VDC Manager
      - BIM Coordinator *BIM Support*
    - HR *Business Manager*
    - Commercial & Risk Manager *Deputy Project Manager*
      - Project Reporting *Sr. Business Manager*
        - Project Reporting *Procurement Specialist*
      - Accounts Manager *Sr. Business Manager*
        - Accounts Payable *Business Manager*
          - Accounts Payable Business Manager
            - Accounts Payable – Time and Materials *Clerk*
            - Accounts Payable – Time and Materials *Clerk*
            - Accounts Payable – Time and Materials *Clerk*
            - Accounts Payable – Time and Materials *Clerk*
      - Assistant Controls MGR. *Sr. Project Engineer I*
      - Project Controls MGR. *Sr. Project Engineer I*
        - Cost Controls *Sr. Business Manager*
          - Cost Controls *Business Manager*
        - Project Systems *Sr. Business Manager*
          - Project Systems *Business Manager*
        - Environmental Manager
        - Sustainability Office Engineer
        - COBID Liaison Consultant
        - Sustainability Consultant

MWH Kiewit
A JOINT VENTURE

Cost Breakdown Structure

MWH-KIEWIT JV
Bull Run Filtration Plant (Precon) - Early Works GMP 1
3/17/2022

MWH Kiewit
A JOINT VENTURE

CBS Position Code	Description	Quantity	UOM	$/UOM	Total Cost	Manhours
01	**OPP-01 Construction Power**	**1**	**PLS**	**$7,020,000**	**$7,020,000**	**0**
02	**OPP-02 Stockpile and Load Out**	**1**	**PLS**	**$6,480,000**	**$6,480,000**	**0**
03	**OPP-03 Traffic Control**	**1**	**PLS**	**$540,000**	**$540,000**	**0**
04	**S-01 Offhaul Trucking and Disposal**	**1**	**PLS**	**$21,600,000**	**$21,600,000**	**0**
05	**S-02 Temporary Wet Utilities**	**1**	**PLS**	**$2,483,901**	**$2,483,901**	**0**
06	**S-03 Temporary Roads, Drainage, Laydown, Crane Pads**	**1**	**PLS**	**$13,001,968**	**$13,001,968**	**0**
07	**S-04 Temporary Fencing**	**1**	**PLS**	**$3,980,340**	**$3,980,340**	**0**
08	**S-05 Surveying**	**1**	**PLS**	**$1,080,000**	**$1,080,000**	**0**
09	**S-06 Waste Management**	**1**	**PLS**	**$648,000**	**$648,000**	**0**
10	**S-07 Security**	**1**	**PLS**	**$801,965**	**$801,965**	**0**
11	**S-08 Janitorial Services**	**1**	**PLS**	**$216,000**	**$216,000**	**0**
12	**S-09 3rd Party Quality Control**	**1**	**PLS**	**$6,567,382**	**$6,567,382**	**0**
13	**S-10 Street Sweeping**	**1**	**PLS**	**$1,080,000**	**$1,080,000**	**0**
14	**S-11 Offsite Road Improvements**	**1**	**PLS**	**$1,467,427**	**$1,467,427**	**0**
15	**S-12 Erosion and Sediment Control**	**1**	**PLS**	**$4,736,937**	**$4,736,937**	**0**
16	**S-14 Portable Toilets**	**1**	**PLS**	**$158,388**	**$158,388**	**0**
17	**S-15 Owner Offices**	**1**	**PLS**	**$577,752**	**$577,752**	**0**
18	**S-16 Raw Water Pipelines**	**1**	**PLS**	**$12,028,463**	**$12,028,463**	**0**
19	**S-17 Areas 20, 30, 41, 42, and 92 Concrete**	**1**	**PLS**	**$8,640,000**	**$8,640,000**	**0**
20	**S-25 Electrical**	**1**	**PLS**	**$20,000,000**	**$20,000,000**	**0**
				Subtotal Allowances	**$113,108,522**	
21	**SP-01 CM/GC General Conditions**	**1**	**PLS**	**$20,833,463**	**$20,833,463**	**114,600**
21.11	Sitewide	1	PLS	$530,490.01	$530,490	2,800
21.11.1	01 General Requirements	1	PLS	$115,384.62	$115,385	0
21.11.2	26 Electrical	1	PLS	$129,930.00	$129,930	0
21.11.6	Craft Safety Advisor - Sitewide	70	MWk	$4,073.93	$285,175	2,800
21.12	General Requirements	1	PLS	$757,515.45	$757,515	0
21.12.1	Licenses, Permits, Taxes and Fees	25	K$	$1,000.00	$25,000	0
21.12.2	Operational Support	1	PLS	$686,320.02	$686,320	0
21.12.3	Engineering	1	PLS	$46,195.43	$46,195	0
21.13	General Conditions	1	PLS	$19,545,457.16	$19,545,457	111,800
21.13.1	Job Related Overhead	1,545	MWk	$8,376.41	$12,941,556	64,120
21.13.2	Operational Support	1	PLS	$6,603,900.88	$6,603,901	47,680
22	**SP-02 Site Preparation and Earthwork**	**1**	**PLS**	**$58,463,705**	**$58,463,705**	**136,573**
22.1	00 Site Utilities	1	PLS	$35,446,756.55	$35,446,757	66,320
22.1.1	Site Civil	1	PLS	$8,119,771.36	$8,119,771	26,891
22.1.2	Site Piping (All UG Yard + Underslab Process)	1	PLS	$27,286,673.41	$27,286,673	39,407
22.1.4	05 Stormwater Facilities	1	PLS	$40,311.78	$40,312	22

CBS Position Code	Description	Quantity	UOM	$/UOM	Total Cost	Manhours
22.3	20 Raw Water	1	PLS	$143,365.80	$143,366	652
22.3.5	31 Earthwork	1	PLS	$143,365.80	$143,366	652
22.4	30 Treatment Process Complex	1	PLS	$6,966,605.86	$6,966,606	19,460
22.4.2	32 Flash Mix (aka 31 Flash Mix)	1	PLS	$947,434.43	$947,434	5,852
22.4.3	33 Flocculation and Sedimentation	1	PLS	$1,651,258.42	$1,651,258	4,736
22.4.4	35 Filters	1	PLS	$3,281,784.25	$3,281,784	5,648
22.4.5	37 Waste Washwater Equalization	1	PLS	$1,086,128.76	$1,086,129	3,224
22.5	40 Finished Water Complex	1	PLS	$4,621,544.20	$4,621,544	14,961
22.5.1	40 CT Basin/Clearwell	1	PLS	$4,588,334.95	$4,588,335	14,941
22.5.2	45 Fire Water PS	1	PLS	$33,209.25	$33,209	20
22.10	90 Overflow Basins	1	PLS	$3,295,038.28	$3,295,038	10,140
22.10.1	91 Overflow Basins	1	PLS	$3,295,038.28	$3,295,038	10,140
22.11	Sitewide	1	PLS	$4,244,077.38	$4,244,077	24,320
22.11.3	31 Earthwork	1	PLS	$4,244,077.38	$4,244,077	24,320
22.11.3.5	Environmental	1	PLS	$460,000.00	$460,000	0
22.11.3.8	Direct Supervision	608	MWk	$6,223.81	$3,784,077	24,320
22.12	General Requirements	1	PLS	$3,746,316.85	$3,746,317	720
22.12.1	Licenses, Permits, Taxes and Fees	5	K$	$1,000.00	$5,000	0
22.12.2	Operational Support	1	PLS	$3,337,512.28	$3,337,512	720
22.12.3	Engineering	1	PLS	$403,804.57	$403,805	0
23	**SP-03 Site Services**	**1**	**PLS**	**$12,896,155**	**$12,896,155**	**39,735**
23.1	00 Site Utilities	1	PLS	$16.34	$16	0
23.1.1	Site Civil - Rebar Installation Sub Support	0.25	Ton	$65.35	$16	0
23.4	30 Treatment Process Complex	1	PLS	$230,255.39	$230,255	1,809
23.4.2	32 Flash Mix (aka 31 Flash Mix) - Rebar Installation Sub Support	3.88	Ton	$65.35	$254	3
23.4.3	33 Flocculation and Sedimentation - Rebar Installation Sub Support	19.07	Ton	$65.35	$1,246	12
23.4.4	35 Filters - Rebar Installation Sub Support	192.61	Ton	$65.35	$12,588	125
23.4.5	37 Waste Washwater Equalization - Rebar Installation Sub Support	7.98	Ton	$65.35	$522	5
23.4.6	30 Temporary Scaffold	240	VF	$898.53	$215,646	1,664
23.5	40 Finished Water Complex	1	PLS	$217,008.56	$217,009	1,678
23.5.1	40 CT Basin/Clearwell - Sub Support Rebar Installation	28.35	Ton	$48.06	$1,363	14
23.5.2	40 Temporary Scaffold	240	VF	$898.53	$215,646	1,664
23.11	Sitewide	1	PLS	$8,744,999.01	$8,744,999	30,292
23.11.1	01 General Requirements	1	PLS	$7,586,927.66	$6,941,175	24,915
23.11.2	26 Electrical	1	PLS	$643,201.89	$643,202	0
23.11.3	31 Earthwork	1	PLS	$1,160,622.13	$1,160,622	5,377
23.12	General Requirements	1	PLS	$3,703,876.05	$3,703,876	5,956
23.12.1	Licenses, Permits, Taxes and Fees	2.5	K$	$1,000.00	$2,500	0
23.12.2	Operational Support	1	PLS	$3,701,376.05	$3,701,376	5,956
24	**SP-05 Purchase Long Lead Process Equipment**	**1**	**PLS**	**$12,000,000**	**$12,000,000**	**0**
				Subtotal Direct Costs	**$104,193,323**	

CBS Position Code	Description	Quantity	UOM	$/UOM	Total Cost	Manhours
25	Contingency	1	PLS	$18,725,000	$18,725,000	0
26	Bond (0.775%)	1	PLS	$2,075,257	$2,075,257	0
27	GRT (0.57%)	1	PLS	$1,517,837	$1,517,837	0
				Subtotal Cost of Work	$239,619,940	
28	Fee (11.75%)	1	PLS	$28,155,154	$28,155,154	0

Total Early Works GMP **$267,775,094**

ATTACHMENT E
RISK AND CONTINGENCY LOG

Item #	Risk Description	Effect	CMGC Contingency (SEE NOTEs 1, 2)	Contingency Uses
1	Scope Gaps Subcontractor Procurement Scope Gaps.	Scope gaps.	$1,000,000	Missed scope in GMP that is shown in contract documents.
2	Subcontractor Performance Subcontractor performance impacts to Project cost and schedule.	Subcontractors performance or other project factors may require acceleration of trades or need to add resources to maintain the project schedule resulting from CM/GC caused delays.	$2,000,000	Costs for subcontractor overtime and acceleration costs to achieve schedule. Added CMGC staff to manage subcontractor scopes including assisting in submittals, procurement or field supervision.
3	General Conditions Increased General Conditions Costs	Increased general conditions staffing costs to support the Work, including but not limited to the need to add staff to manage compliance reporting, cost reimbursable billing, etc.	$375,000	Added support staff to provide billing, reporting, etc. required by the Prime Contract.
4	Productivity Self-Perform Labor and Equipment production risk.	Labor and equipment production losses, including estimating errors, work complexity, and labor production overage.	$2,500,000	Self perform costs exceed estimated costs.
5	Construction Equipment Site Services equipment	Additional crane and operator hours to meet site service demand to achieve schedule.	$250,000	Self perform costs exceed estimated costs.
8	CMGC Directed Changes to Subcontractors Planned sequence of work.	Added cost for field adjustments to piping, building work or other scopes at CMGC's discretion to address schedule/resequence impacts or access improvements.	$500,000	Subcontractor de-mobilization/re-mobilization costs. Subcontractor inefficiencies due to resequencing of planned work.
9	Additional Shoring for Excavation/Trenching	Shoring required at trenches not contemplated in GMP due to access or other considerations.	$500,000	Rent and installation of trench shoring.
10	Labor Availability Availability of Skilled Labor.	The demand for skilled craft in the Portland area will likely exceed availability for certain crafts. This will require higher wages necessary to attract and retain qualified craft labor.	$3,000,000	Overscale wages.
12	Dewatering Means/Methods **(SEE NOTE 3)** Dewatering / Control of Ground Water.	MWH-Kiewit's dewatering plan anticipates handling the amount of water described in the Contract documents. This item includes sosts to modify our plan to successfully handle the baseline groundwater and/or stormwater flows described in the Contract documents. Costs to handle seasonal peaks in water flows.	$3,000,000	Additional pumps and piping installation from original dewatering plan. Added sumps inside excavations. Dewatering in trenches based on time of year of excavation.
13	Winter work impacts	Costs exceeding what was estimated in MWH-Kiewit's site plan for temporary site improvements.	$1,000,000	Production inefficiencies working in wet conditions. Labor, equipment and rock costs for additional winterization.
14	CM/GC Estimate Errors and Omissions	Costs to cover scope that should reasonably be expected to be present. This covers scope within the definition of Standard of Care in Section 007200 1.06.C. that has not previously be identified during precon.	$850,000	Additional cost to address estimate errors that should have reasonably been included based on the CM/GC Standard of Care.
15	Temp Power Extended temp power service needed	Delays in PGE power delivery for site construction use will create cost increases for generator rental and fuel usage. The impacts of those costs increase are unknown depending on construction stage and activities being performed.	$1,250,000	CM/GC Line Item Contingency includes up to $1.25M in additional generator temporary power. Total generator costs not-to-exceed $6.25M (i.e., $5M carried in base proposal + $1.25M Contingency).

16	Schedule Contingency If project gets behind schedule and needs to accelerate the work with second shifts, overtime costs, added equipmewnt and material resources and other costs for all subcontractors and JV.	1% of $100M is subcontractor costs. = $1M. Second shift costs of Self-Perform work = 20% * $50m = $10m.	$2,500,000	Subcontractor overtime and supervision for schedule acceleration. Acceleration costs for equipment deliveries to meet schedule. Second shift or Saturadu work not considered in estimate to meet project schedule.
CM/GC Contingency Total			**$18,725,000**	

Notes

1. MWH-Kiewit assumes the CM/GC Contingency is available as a total amount to be used by the CM/GC as needed and is not limited to the individual risk and/or contingency line item totals shown above.

2. CM/GC Contingency includes costs for schedule related impacts that are caused by CM/GC. CM/GC contingency excludes costs resulting from Owner caused delays. MWH-Kiewit assumes that costs resulting from owner caused delays will be paid by Change Order in accordance with the Contract documents.

3. MWH-Kiewit assumes that CM/GC will be allowed to rely upon geotechnical information provided by the Engineer. MWH-Kiewit assumes that differing site conditions - as established by the gotechnical information provided by the Engineer - will be addressed as a Contract Change order (and not utilized from CM/GC Contingency).

Attachment G - Early Works RFI Log

Name	Modified	Modified By
RFI 100 Project Schedule (PWB).docx	10/1/2022 10:09	Bull Run Treatment Program PMIS Admin
RFI 101 Trench Detail (PWB Stantec).docx	12/20/2022 8:49	Espinoza, Stephanie
RFI 102 Area 18 Antenna Tower DOR (PWB Stantec).docx	10/10/2022 12:28	Espinoza, Stephanie
RFI 103 Offsite Fiber (PWB).docx	10/31/2022 14:20	Bull Run Treatment Program PMIS Admin
RFI 103 Offsite Fiber_Attachment.pdf	10/11/2022 10:44	Bull Run Treatment Program PMIS Admin
RFI 103 Offsite Fiber_Response Attachment_design documents.pdf	10/10/2022 13:50	Bull Run Treatment Program PMIS Admin
RFI 104 - Irrigation Supply (Stantec).docx	10/1/2022 12:02	Bull Run Treatment Program PMIS Admin
RFI 105 Conduit Schedules (Stantec).docx	9/26/2022 14:17	Espinoza, Stephanie
RFI 106 Pleasant Home Pump Station.docx	11/16/2022 10:11	Bull Run Treatment Program PMIS Admin
RFI 107 - Anvil Fire - Sample Pump House Brochure.pdf	10/11/2022 9:24	Espinoza, Stephanie
RFI 107 - Anvil_As-Built Pump Station_220623.pdf	10/11/2022 9:24	Espinoza, Stephanie
RFI 107 - Portland Water Treatment - PRELIM Fire Pump Materials.pdf	10/11/2022 9:24	Espinoza, Stephanie
RFI 107 Fire Water Pump Station.docx	10/25/2022 10:26	Bull Run Treatment Program PMIS Admin
RFI 108 - Response IMP- 1 Formawall Tech Data Sheet.pdf	10/18/2022 8:14	Bull Run Treatment Program PMIS Admin
RFI 108 Insulated Metal Wall Panels.docx	10/1/2022 12:12	Bull Run Treatment Program PMIS Admin
RFI 108_Attachment_DS60 Tech Data Sheet.pdf	10/11/2022 11:33	Bull Run Treatment Program PMIS Admin
RFI 109 Drawing 11-A-311.docx	10/1/2022 12:18	Bull Run Treatment Program PMIS Admin
RFI 110 Baseline Stormwater and Groundwater Rates.docx	3/13/2023 10:01	Graham, Mark
RFI 110_Attachment 1.pdf	10/3/2022 10:01	Bull Run Treatment Program PMIS Admin
RFI 111 - Attachment 12-S-903.pdf	10/18/2022 8:15	Bull Run Treatment Program PMIS Admin
RFI 111 Miscellaneous Site Concrete.docx	10/18/2022 7:32	Bull Run Treatment Program PMIS Admin
RFI 112 Radon.docx	11/28/2022 7:51	Bull Run Treatment Program PMIS Admin
RFI 113 Area 40 Details.docx	1/13/2023 11:30	Harry Dean
RFI 114 Area 65 Doors and Hardware.docx	10/18/2022 7:53	Bull Run Treatment Program PMIS Admin
RFI 114_12_A 107 - Door and Window Schedules.pdf	1/24/2023 18:37	Bull Run Treatment Program PMIS Admin
RFI 114_65_A - 104 - Door and Window Schedules.pdf	10/18/2022 8:10	Bull Run Treatment Program PMIS Admin
RFI 115 Vaccinium Ovatum.docx	10/5/2022 13:53	Bull Run Treatment Program PMIS Admin
RFI 116 Area 35 Architectural Details.docx	10/11/2022 9:08	Bull Run Treatment Program PMIS Admin
RFI 117 Area 16 Finishes.docx	10/11/2022 9:20	Bull Run Treatment Program PMIS Admin
RFI 118 Specification 007300 (Supplementary Conditions).docx	10/4/2022 13:14	Bull Run Treatment Program PMIS Admin
RFI 118_Table 1.docx	10/14/2022 14:01	Gilman, Thomas
RFI 119 Area 30 Louver Schedule.docx	10/11/2022 9:09	Bull Run Treatment Program PMIS Admin
RFI 120 Door Security Systems.docx	11/16/2022 10:11	Bull Run Treatment Program PMIS Admin
RFI 121 Additional Manufacturer Request.docx	10/25/2022 10:26	Bull Run Treatment Program PMIS Admin
RFI 121 Attachment 1.pdf	11/14/2022 10:32	Bull Run Treatment Program PMIS Admin
RFI 121 Attachment 2.pdf	11/14/2022 10:33	Bull Run Treatment Program PMIS Admin
RFI 122 Sealed Concrete.docx	10/13/2022 7:52	Bull Run Treatment Program PMIS Admin
RFI 123 - PWB ES 11-16-2022.pdf	11/17/2022 15:10	Bull Run Treatment Program PMIS Admin
RFI 123 Security Drawings.docx	11/17/2022 15:09	Bull Run Treatment Program PMIS Admin
RFI 124 Sole Sourcing Electrical Equipment.docx	11/7/2022 10:48	Bull Run Treatment Program PMIS Admin
RFI 125 Missing Specification 01 60 01.docx	10/12/2022 11:32	Bull Run Treatment Program PMIS Admin
RFI 126 Fire Alarm.docx	10/18/2022 7:56	Bull Run Treatment Program PMIS Admin
RFI 127 Datasheet for Vertical Non-Clog Pumps.docx	11/15/2022 16:56	Bull Run Treatment Program PMIS Admin
RFI 127 response - Attachment A.pdf	11/15/2022 16:54	Gilman, Thomas
RFI 128 OSHGS Equipment.docx	11/15/2022 16:58	Bull Run Treatment Program PMIS Admin
RFI 129 40 05 59 Hydraulic Gates.docx	11/15/2022 17:04	Bull Run Treatment Program PMIS Admin
RFI 130 43 20 00 Pumps.docx	11/15/2022 17:06	Bull Run Treatment Program PMIS Admin
RFI 131 43 22 93 Submersible Non-Clog Pumps.docx	11/15/2022 17:08	Bull Run Treatment Program PMIS Admin
RFI 132 43 23 02 Horizontal ANSI End Suction Pumps.docx	11/15/2022 17:09	Bull Run Treatment Program PMIS Admin
RFI 133 43 23 13 Horizontal Non-Clog Centrifugal Pumps.docx	11/15/2022 17:12	Bull Run Treatment Program PMIS Admin
RFI 133_Attachment Taperbore Plus Bulletin.pdf	11/15/2022 17:13	Bull Run Treatment Program PMIS Admin
RFI 134 43 23 21 Horizontal Split-Case Pumps.docx	11/15/2022 17:14	Bull Run Treatment Program PMIS Admin
RFI 134_Attachment 3498 CI-316SS Cross-Sectional BOM.pdf	11/15/2022 17:15	Bull Run Treatment Program PMIS Admin
RFI 135 43 23 31 Vertical Inline (Potable Water Pumps).docx	11/15/2022 17:16	Bull Run Treatment Program PMIS Admin
RFI 136 43 40 10 Fiberglass Reinforced Plastic Tanks.docx	11/14/2022 9:55	Bull Run Treatment Program PMIS Admin
RFI 137 DIP Material Groups.docx	11/14/2022 9:57	Bull Run Treatment Program PMIS Admin
RFI 138 OFPS Elevations.docx	11/15/2022 17:18	Bull Run Treatment Program PMIS Admin
RFI 139 43 21 49 Vertical Non-Clog Pumps.docx	10/25/2022 10:26	Bull Run Treatment Program PMIS Admin
RFI 140 Small OFPS.docx	12/20/2022 8:42	Espinoza, Stephanie
RFI 141 46 41 34 Vertical Shaft Flocculator Mixers.docx	11/15/2022 17:25	Bull Run Treatment Program PMIS Admin
RFI 142 40 05 59 48X48 Hydraulic Gates.docx	11/15/2022 17:27	Bull Run Treatment Program PMIS Admin
RFI 143 AIS Clarification.docx	11/14/2022 10:13	Bull Run Treatment Program PMIS Admin
RFI 143_Attachment 1.pdf	10/27/2022 14:36	Bull Run Treatment Program PMIS Admin
RFI 144 DIP Bonded Dielectric Coating.docx	11/22/2022 12:55	Bull Run Treatment Program PMIS Admin
RFI 145 DIP Fittings.docx	11/22/2022 12:56	Bull Run Treatment Program PMIS Admin
RFI 146 DIP Joint Restraint System.docx	11/22/2022 12:57	Bull Run Treatment Program PMIS Admin
RFI 147 Gravity Pipe Joints.docx	11/22/2022 12:59	Bull Run Treatment Program PMIS Admin
RFI 148 NSF 61 Compliant Substitute for Macropoxy 646.docx	11/22/2022 10:07	Bull Run Treatment Program PMIS Admin

RFI 149 Resilient-Seated Gate Valves.docx	11/14/2022 8:48	Bull Run Treatment Program PMIS Admin
RFI 150 T-Bolts.docx	11/15/2022 11:10	Bull Run Treatment Program PMIS Admin
RFI 151 - Bull Run SIte Plan and DBs.pdf	12/2/2022 14:11	Gilman, Thomas
RFI 151 Attachment 1 - Notes 11282022.xlsx	12/2/2022 14:09	Bull Run Treatment Program PMIS Admin
RFI 151 Attachment 1.xlsx	12/2/2022 14:08	Bull Run Treatment Program PMIS Admin
RFI 151 Conduit-Cable vs Ductbank Design.docx	12/2/2022 14:08	Bull Run Treatment Program PMIS Admin
RFI 152 - Response attachment.pdf	11/17/2022 14:49	Bull Run Treatment Program PMIS Admin
RFI 152 Attachment 1.xlsx	11/17/2022 14:48	Bull Run Treatment Program PMIS Admin
RFI 152 Pole Lighting.docx	11/17/2022 14:47	Bull Run Treatment Program PMIS Admin
RFI 153 DIP Cathodic Protection.docx	11/22/2022 14:52	Bull Run Treatment Program PMIS Admin
RFI 154 Geofoam Spec Section 31 05 20.docx	11/15/2022 16:48	Bull Run Treatment Program PMIS Admin
RFI 155 Response Attachment - Site Security Forms.doc	11/28/2022 10:42	Bull Run Treatment Program PMIS Admin
RFI 155 Specification 01 35 53.docx	3/27/2023 13:48	Lance.Regular
RFI 156 Corrosive Area Conduit Type.docx	1/4/2023 9:57	Bull Run Treatment Program PMIS Admin