



Gregory L. Geist
Director

Board of County Commissioners
Clackamas County

Members of the Board:

Approval of Contract between Water Environment Services and Jacobs Engineering Group, Inc., for the
Kellogg Creek Water Resource Recovery Facility Aeration Improvements

Purpose/Outcome	Execution of Contract #4040 for engineering design services for the Kellogg Creek Water Resource Recovery Facility Aeration Improvements Project.
Dollar Amount and Fiscal Impact	Total Contract Value of \$239,947 until May 1, 2022
Funding Source	639-01-20100-481020-P632314
Duration	Contract until May 1, 2022
Previous Board Action/Review	Prior discussions related to budget and Capital Improvements Plan. Issue Discussion 6/1/21, approved to move forward to Business Meeting on 6/10/21.
Strategic Plan Alignment	<ol style="list-style-type: none"> 1. This project supports the County's Strategic Plan of building a strong infrastructure that delivers services to customers and honors, utilizes, promotes and invests in our natural resources. 2. This project supports the WES Strategic Plan goal to provide properly functioning infrastructure that supports healthy streams and reduces flooding.
Counsel Review	AK 5/18/21
Procurement Review	Was this project processed through Procurement? Yes.
Contact Person	Steven Rice, Civil Engineering, 971-284-3710
Contract No.	4040

BACKGROUND:

WES has selected Jacobs Engineering Group to provide engineering services for design of the Kellogg Creek Water Resource Recovery Facility (KC WRRF) Aeration Improvements Project. The KC WRRF was constructed as a conventional secondary treatment facility in 1976. The facility recently underwent a project that included, in part, installation of new aeration blowers to provide air to the biological treatment process. To realize the full benefit of the new blowers, downstream aeration system improvements are needed. The project will assess the condition and consider replacement of aeration system components including air piping, air control valves, actuators, flow meters, diffusers, dissolved oxygen sensors, and SCADA programming. An assessment and potential replacement of flow control gates in and around the aeration basins to enhance peak flow treatment is also included in the project.

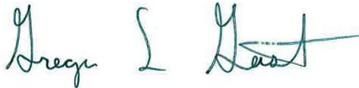
Engineering recommendations will be documented in a preliminary design report, followed by development of bid-ready contract documents. Anticipated services also include support during the bidding phase. Additional services, such as construction administration, inspection, or start-up support may be added by future amendment.

PROCUREMENT PROCESS: This project was advertised in accordance with ORS and LCRB Rules on January 6, 2021. Proposals were opened on February 4, 2021. The District received two (2) proposals: Jacobs Engineering Group, Inc. and HDR Engineering, Inc. The Evaluation Committee selected Jacobs Engineering Group, Inc. as the highest ranking proposer and recommended a contract be awarded. Following award, the Project Manager entered into negotiations with Jacobs Engineering Group, Inc. and developed a final statement of work, along with final billing rates and contract value.

RECOMMENDATION:

Staff recommends that the Board of County Commissioners of Clackamas County, acting as the governing body of Water Environment Services, approve and execute the Contract between Water Environment Services and Jacobs Engineering Group, Inc. for the KC WRRF Aeration Improvements Project.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Greg Geist", with a horizontal line extending to the right.

Greg Geist
Director, WES

Placed on the _____ Agenda by the Procurement Division.



**WATER ENVIRONMENT SERVICES
PERSONAL SERVICES CONTRACT
Contract #4040**

This Personal Services Contract (this “Contract”) is entered into between **Jacobs Engineering Group, Inc.**, (“Contractor”), and Water Environment Services, a political subdivision of the State of Oregon (“District”).

ARTICLE I.

- 1. Effective Date and Duration.** This Contract shall become effective upon signature of both parties. Unless earlier terminated or extended, this Contract shall expire on **May 1, 2022**.
- 2. Scope of Work.** Contractor shall provide the following personal services: **RFP# 2021-02 Kellogg Creek WRRF Aeration System Improvement Design** (“Work”), further described in **Exhibit A**.
- 3. Consideration.** The District agrees to pay Contractor, from available and authorized funds, a sum not to exceed **Two Hundred Thirty-Nine Thousand Nine Hundred Forty-Seven dollars (\$239,947.00)**, for accomplishing the Work required by this Contract. Consideration rates are on a time and materials basis in accordance with the rates and costs specified in Exhibit B. If any interim payments to Contractor are made, such payments shall be made only in accordance with the schedule and requirements in Exhibit B.
- 4. Invoices and Payments.** Unless otherwise specified, Contractor shall submit monthly invoices for Work performed. Invoices shall describe all Work performed with particularity, by whom it was performed, and shall itemize and explain all expenses for which reimbursement is claimed. The invoices shall include the total amount billed to date by Contractor prior to the current invoice. Contractor shall submit invoices in proper form within sixty (60) calendar days after the end of the month in which the services were rendered. Payments to Contractor shall be made within thirty (30) days of invoice receipt. Payments shall be made in accordance with ORS 293.462 to Contractor following the District’s review and approval of invoices submitted by Contractor. Contractor shall not submit invoices for, and the District will not be obligated to pay, any amount in excess of the maximum compensation amount set forth above. If this maximum compensation amount is increased by amendment of this Contract, the amendment must be fully effective before Contractor performs Work subject to the amendment.

Invoices shall reference the above Contract Number and be submitted to: Steven Rice,
SRice@clackamas.us

- 5. Travel and Other Expense.** Authorized: Yes No
If travel expense reimbursement is authorized in this Contract, such expense shall only be reimbursed at the rates in the Clackamas County Contractor Travel Reimbursement Policy, hereby incorporated by reference and found at: <https://www.clackamas.us/finance/terms.html>. Travel expense reimbursement is not in excess of the not to exceed consideration.
- 6. Contract Documents.** This Contract consists of the following documents, which are listed in descending order of precedence and are attached and incorporated by reference, this Contract, Exhibit A, and Exhibit B.

7. Contractor and District Contacts.

Contractor	District
Administrator: Brady Fuller Phone: 541-318-4716 Email: Brady.fuller@jacobs.com	Administrator: Steven Rice Phone: 971-284-3710 Email: SRice@clackamas.us

Payment information will be reported to the Internal Revenue Service (“IRS”) under the name and taxpayer ID number submitted. (See I.R.S. 1099 for additional instructions regarding taxpayer ID numbers.) Information not matching IRS records will subject Contractor payments to backup withholding.

ARTICLE II.

- 1. ACCESS TO RECORDS.** Contractor shall maintain books, records, documents, and other evidence, in accordance with generally accepted accounting procedures and practices, sufficient to reflect properly all costs of whatever nature claimed to have been incurred and anticipated to be incurred in the performance of this Contract. District and their duly authorized representatives shall have access to the books, documents, papers, and records of Contractor, which are directly pertinent to this Contract for the purpose of making audit, examination, excerpts, and transcripts. Contractor shall maintain such books and records for a minimum of six (6) years, or such longer period as may be required by applicable law, following final payment and termination of this Contract, or until the conclusion of any audit, controversy or litigation arising out of or related to this Contract, whichever date is later.
- 2. AVAILABILITY OF FUTURE FUNDS.** Any continuation or extension of this Contract after the end of the fiscal period in which it is written is contingent on a new appropriation for each succeeding fiscal period sufficient to continue to make payments under this Contract, as determined by the District in its sole administrative discretion.
- 3. CAPTIONS.** The captions or headings in this Contract are for convenience only and in no way define, limit, or describe the scope or intent of any provisions of this Contract.
- 4. COMPLIANCE WITH APPLICABLE LAW.** Contractor shall comply with all applicable federal, state and local laws, regulations, executive orders, and ordinances, as such may be amended from time to time.
- 5. COUNTERPARTS.** This Contract may be executed in several counterparts (electronic or otherwise), each of which shall be an original, all of which shall constitute the same instrument.
- 6. GOVERNING LAW.** This Contract, and all rights, obligations, and disputes arising out of it, shall be governed and construed in accordance with the laws of the State of Oregon and the ordinances of Clackamas County without regard to principles of conflicts of law. Any claim, action, or suit between District and Contractor that arises out of or relates to the performance of this Contract shall be brought and conducted solely and exclusively within the Circuit Court for Clackamas County, for the State of Oregon. Provided, however, that if any such claim, action, or suit may be brought in a federal forum, it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the District of any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. Contractor, by execution of this Contract, hereby consents to the personal jurisdiction of the courts referenced in this section.

- 7. RESPONSIBILITY FOR DAMAGES; INDEMNITY.** Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay which may be caused by, or result from, the conduct of Work, to the extent caused by any negligent act or omission of Contractor, its subcontractors, agents, or employees. The Contractor agrees to indemnify, hold harmless and defend Clackamas County and the District, and their officers, elected officials, agents and employees from and against all claims and actions, and all expenses incidental to the investigation and defense thereof, arising out of or based upon damage or injuries to persons or property caused by the errors, omissions, fault or negligence of the Contractor or the Contractor's employees, subcontractors, or agents. However, neither Contractor nor any attorney engaged by Contractor shall defend the claim in the name of District or any department of District, nor purport to act as legal representative of District or any of its departments, without first receiving from the Clackamas County Counsel's Office authority to act as legal counsel for District, nor shall Contractor settle any claim on behalf of District without the approval of the Clackamas County Counsel's Office. District may, at its election and expense, assume its own defense and settlement.
- 8. INDEPENDENT CONTRACTOR STATUS.** The service(s) to be rendered under this Contract are those of an independent contractor. Although the District reserves the right to determine (and modify) the delivery schedule for the Work to be performed and to evaluate the quality of the completed performance, District cannot and will not control the means or manner of Contractor's performance. Contractor is responsible for determining the appropriate means and manner of performing the Work. Contractor is not to be considered an agent or employee of District for any purpose, including, but not limited to: (A) The Contractor will be solely responsible for payment of any Federal or State taxes required as a result of this Contract; and (B) This Contract is not intended to entitle the Contractor to any benefits generally granted to District employees, including, but not limited to, vacation, holiday and sick leave, other leaves with pay, tenure, medical and dental coverage, life and disability insurance, overtime, Social Security, Workers' Compensation, unemployment compensation, or retirement benefits.
- 9. INSURANCE.** Contractor shall secure at its own expense and keep in effect during the term of the performance under this Contract the insurance required and minimum coverage indicated below. The insurance requirements outlined below do not in any way limit the amount of scope of liability of Contractor under this Contract. Contractor shall provide proof of said insurance and name the District and Clackamas County as an additional insureds on all required liability policies except for Workers Compensation, Employers Liability and Professional Liability. Proof of insurance and notice of any material change should be submitted to the following address: Clackamas County Procurement Division, 2051 Kaen Road, Oregon City, OR 97045 or procurement@clackamas.us.

Required - Workers Compensation: Contractor shall comply with the statutory workers' compensation requirements in ORS 656.017, unless exempt under ORS 656.027 or 656.126.
<input checked="" type="checkbox"/> Required – Commercial General Liability: with limits of \$1,000,000 per claim, with an annual aggregate limit of \$2,000,000 for Bodily Injury and Property Damage.
<input checked="" type="checkbox"/> Required – Professional Liability: with limits of \$1,000,000 per claim, with an annual aggregate limit of \$2,000,000 for damages caused by error, omission or negligent acts.
<input checked="" type="checkbox"/> Required – Automobile Liability: with limits of \$1,000,000 combined single limit for Bodily Injury and Property Damage.

The policy(s) shall be primary insurance except for Workers Compensation, Employers Liability and Professional Liability as respects to the District. Any insurance or self-insurance maintained by the District shall be excess and shall not contribute to it except for Workers Compensation, Employers Liability and Professional Liability. Any obligation that District agree to a waiver of subrogation is hereby stricken.

- 10. LIMITATION OF LIABILITIES.** This Contract is expressly subject to the debt limitation of Oregon counties set forth in Article XI, Section 10, of the Oregon Constitution, and is contingent upon funds being appropriated therefore. Any provisions herein which would conflict with law are deemed inoperative to that extent. Except for liability arising under or related to Article II, Section 13 or Section 20 neither party shall be liable for (i) any indirect, incidental, consequential or special damages under this Contract or (ii) any damages of any sort arising solely from the termination of this Contract in accordance with its terms.
- 11. NOTICES.** Except as otherwise provided in this Contract, any required notices between the parties shall be given in writing by personal delivery, email, or mailing the same, to the Contract Administrators identified in Article 1, Section 6. If notice is sent to District, a copy shall also be sent to: Clackamas County Procurement, 2051 Kaen Road, Oregon City, OR 97045, or procurement@clackamas.us. Any communication or notice so addressed and mailed shall be deemed to be given five (5) days after mailing, and immediately upon personal delivery, or within 2 hours after the email is sent during District's normal business hours (Monday – Thursday, 7:00 a.m. to 6:00 p.m.) (as recorded on the device from which the sender sent the email), unless the sender receives an automated message or other indication that the email has not been delivered.
- 12. OWNERSHIP OF WORK PRODUCT.** All work product of Contractor that results from this Contract (the "Work Product") is the exclusive property of District. District and Contractor intend that such Work Product be deemed "work made for hire" of which District shall be deemed the author. If for any reason the Work Product is not deemed "work made for hire," Contractor hereby irrevocably assigns to District all of its right, title, and interest in and to any and all of the Work Product, whether arising from copyright, patent, trademark or trade secret, or any other state or federal intellectual property law or doctrine. Contractor shall execute such further documents and instruments as District may reasonably request in order to fully vest such rights in District. Contractor forever waives any and all rights relating to the Work Product, including without limitation, any and all rights arising under 17 USC § 106A or any other rights of identification of authorship or rights of approval, restriction or limitation on use or subsequent modifications. Notwithstanding the above, District shall have no rights in any pre-existing Contractor intellectual property provided to District by Contractor in the performance of this Contract except to copy, use and re-use any such Contractor intellectual property for District use only.
- 13. REPRESENTATIONS AND WARRANTIES.** Contractor represents and warrants to District that (A) Contractor has the power and authority to enter into and perform this Contract; (B) this Contract, when executed and delivered, shall be a valid and binding obligation of Contractor enforceable in accordance with its terms; (C) Contractor shall at all times during the term of this Contract, be qualified, professionally competent, and duly licensed to perform the Work; (D) Contractor is an independent contractor as defined in ORS 670.600; and (E) the Work under this Contract shall be performed in the same professional skill, care, diligence and standards as other professionals performing similar services under similar conditions. The warranties set forth in this section are in addition to, and not in lieu of, any other warranties provided. The Contractor shall be responsible for the technical accuracy of its services and documents resulting therefrom, and District shall not be responsible for discovering deficiencies therein. The Contractor shall correct such deficiencies without additional compensation except to the extent such action is directly attributable to deficiencies in information furnished by the District.
- 14. SURVIVAL.** All rights and obligations shall cease upon termination or expiration of this Contract, except for the rights and obligations set forth in Article II, Sections 1, 6, 7, 10, 12, 13, 14, 15, 17, 20, 21, 25, 27, and 29, and all other rights and obligations which by their context are intended to survive. However, such expiration shall not extinguish or prejudice the District's right to enforce this Contract with respect to: (a) any breach of a Contractor warranty; or (b) any default or defect in Contractor performance that has not been cured.

15. SEVERABILITY. If any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular term or provision held to be invalid.

16. SUBCONTRACTS AND ASSIGNMENTS. Contractor shall not enter into any subcontracts for any of the Work required by this Contract, or assign or transfer any of its interest in this Contract by operation of law or otherwise, without obtaining prior written approval from the District, which shall be granted or denied in the District's sole discretion. In addition to any provisions the District may require, Contractor shall include in any permitted subcontract under this Contract a requirement that the subcontractor be bound by this Article II, Sections 1, 7, 8, 13, 16, and 27 as if the subcontractor were the Contractor. District's consent to any subcontract shall not relieve Contractor of any of its duties or obligations under this Contract.

17. SUCCESSORS IN INTEREST. The provisions of this Contract shall be binding upon and shall inure to the benefit of the parties hereto, and their respective authorized successors and assigns.

18. TAX COMPLIANCE CERTIFICATION. The Contractor shall comply with all federal, state and local laws, regulation, executive orders and ordinances applicable to this Contract. Contractor represents and warrants that it has complied, and will continue to comply throughout the duration of this Contract and any extensions, with all tax laws of this state or any political subdivision of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317, and 318. Any violation of this section shall constitute a material breach of this Contract and shall entitle District to terminate this Contract, to pursue and recover any and all damages that arise from the breach and the termination of this Contract, and to pursue any or all of the remedies available under this Contract or applicable law.

19. TERMINATIONS. This Contract may be terminated for the following reasons: (A) by mutual agreement of the parties or by the District (i) for convenience upon thirty (30) days written notice to Contractor, or (ii) at any time the District fails to receive funding, appropriations, or other expenditure authority as solely determined by the District; or (B) if contractor breaches any Contract provision or is declared insolvent, District may terminate after thirty (30) days written notice with an opportunity to cure.

Upon receipt of written notice of termination from the District, Contractor shall immediately stop performance of the Work. Upon termination of this Contract, Contractor shall deliver to District all documents, Work Product, information, works-in-progress and other property that are or would be deliverables had the Contract Work been completed. Upon District's request, Contractor shall surrender to anyone District designates, all documents, research, objects or other tangible things needed to complete the Work

20. REMEDIES. If terminated by the District due to a breach by the Contractor, then the District shall have any remedy available to it in law or equity. If this Contract is terminated for any other reason, Contractor's sole remedy is payment for the goods and services delivered and accepted by the District, less any setoff to which the District is entitled.

21. NO THIRD PARTY BENEFICIARIES. District and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

- 22. TIME IS OF THE ESSENCE.** Contractor agrees that time is of the essence in the performance this Contract.
- 23. FOREIGN CONTRACTOR.** If the Contractor is not domiciled in or registered to do business in the State of Oregon, Contractor shall promptly provide to the Oregon Department of Revenue and the Secretary of State, Corporate Division, all information required by those agencies relative to this Contract. The Contractor shall demonstrate its legal capacity to perform these services in the State of Oregon prior to entering into this Contract.
- 24. FORCE MAJEURE.** Neither District nor Contractor shall be held responsible for delay or default caused by events outside the District or Contractor's reasonable control including, but not limited to, fire, terrorism, riot, acts of God, or war. However, Contractor shall make all reasonable efforts to remove or eliminate such a cause of delay or default and shall upon the cessation of the cause, diligently pursue performance of its obligations under this Contract.
- 25. WAIVER.** The failure of District to enforce any provision of this Contract shall not constitute a waiver by District of that or any other provision.
- 26. PUBLIC CONTRACTING REQUIREMENTS.** Pursuant to the public contracting requirements contained in Oregon Revised Statutes ("ORS") Chapter 279B.220 through 279B.235, Contractor shall:
- a. Make payments promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the work provided for in the Contract.
 - b. Pay all contributions or amounts due the Industrial Accident Fund from such Contractor or subcontractor incurred in the performance of the Contract.
 - c. Not permit any lien or claim to be filed or prosecuted against District on account of any labor or material furnished.
 - d. Pay the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.
 - e. As applicable, the Contractor shall pay employees for work in accordance with ORS 279B.235, which is incorporated herein by this reference. The Contractor shall comply with the prohibitions set forth in ORS 652.220, compliance of which is a material element of this Contract, and failure to comply is a breach entitling District to terminate this Contract for cause.
 - f. If the Work involves lawn and landscape maintenance, Contractor shall salvage, recycle, compost, or mulch yard waste material at an approved site, if feasible and cost effective.
- 27. NO ATTORNEY FEES.** In the event any arbitration, action or proceeding, including any bankruptcy proceeding, is instituted to enforce any term of this Contract, each party shall be responsible for its own attorneys' fees and expenses.
- 28. KEY PERSONS.** Contractor acknowledges and agrees that a significant reason the District is entering into this Contract is because of the special qualifications of certain Key Persons set forth in the contract. Under this Contract, the District is engaging the expertise, experience, judgment, and personal attention of such Key Persons. Neither Contractor nor any of the Key Persons shall delegate performance of the management powers and responsibilities each such Key Person is required to provide under this Contract to any other employee or agent of the Contractor unless the District provides prior written consent to such delegation. Contractor shall not reassign or transfer a Key Person to other duties or positions such that the Key Person is no longer available to provide the District with such Key Person's services unless the District provides prior written consent to such reassignment or transfer.

29. MERGER. THIS CONTRACT CONSTITUTES THE ENTIRE AGREEMENT BETWEEN THE PARTIES WITH RESPECT TO THE SUBJECT MATTER REFERENCED THEREIN. THERE ARE NO UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS CONTRACT. NO AMENDMENT, CONSENT, OR WAIVER OF TERMS OF THIS CONTRACT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY ALL PARTIES. ANY SUCH AMENDMENT, CONSENT, OR WAIVER SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. CONTRACTOR, BY THE SIGNATURE HERETO OF ITS AUTHORIZED REPRESENTATIVE, IS AN INDEPENDENT CONTRACTOR, ACKNOWLEDGES HAVING READ AND UNDERSTOOD THIS CONTRACT, AND CONTRACTOR AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

By their signatures below, the parties to this Contract agree to the terms, conditions, and content expressed herein.

Jacobs Engineering Group, Inc.

Water Environment Services

 5/18/2021
 Authorized Signature Date

 Chair Date

Pat Van Duser / Designated Manager
 Name / Title (Printed)

 Recording Secretary

064469-83
 Oregon Business Registry #

Approved as to Form:

FBC/Delaware
 Entity Type / State of Formation

 5/18/2021
 County Counsel Date

**EXHIBIT B
FEE SCHEDULE**

EXHIBIT A
STATEMENT OF WORK
Agreement for Professional Services for the
Kellogg Creek Water Resources Recovery Facility
Aeration Improvements Project

SCOPE OF SERVICES

The following is a scope of services for professional engineering services during the phased design and bid and award services for the Kellogg Creek WRRF Aeration Improvements Project.

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BACKGROUND

Clackamas County Water Environment Services (District) has identified operational and condition-based improvements required to provide improved process performance and increased reliability of the existing facilities. Recent condition assessment performed by the District during the Willamette Facilities Plan recommended certain upgrades to be incorporated into this project.

GENERAL ASSUMPTIONS

The following key assumptions were used when determining the scope, level of effort compensation to the Consultant. These assumptions are in addition to those included in the Scope of Services.

- 1) The design will be based on standards in effect on the effective date of the authorization to proceed.
- 2) Meetings and Workshops will be held virtually.
- 3) Consultant will submit minutes from each workshop not later than 5 working days following each respective workshop.
- 4) Consultant will use the 49 Division format master specifications.
- 5) Consultant will provide Division 1 and technical specifications for project use with District review and comment.
- 6) Where deliverable documents are identified, hereinafter, five (5) hard copies of the deliverable will be provided in addition to electronic version in .PDF and original .DOC format.
- 7) Drawings (11-inch by 17-inch) in .PDF format will be provided for each District internal review.
- 8) The Consultant's standard CAD software (Microstation) will be used to produce the drawings, in conformance with Jacobs CAD drafting standards which are based on US National CAD standard.
- 9) The site is free of any hazardous wastes, asbestos, lead paint or other types of contamination that might require remediation.
- 10) In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the Project, Consultant has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by operating personnel or third parties; and other economic and operational factors that may materially affect the ultimate Project cost or schedule. Therefore, Consultant makes no warranty that District's actual Project costs, financial aspects, economic feasibility, or schedules will not vary from Consultant opinions, analyses, projections, or estimates.

DISTRICT-PROVIDED SERVICES

- 1) District will provide to Consultant all known data in District's possession relating to Consultant's services on the Project. Consultant will reasonably rely upon the accuracy, timeliness, and completeness of the information provided by District.
- 2) District will make its facilities accessible to Consultant as required for Consultant's performance of its services. District will perform such no-cost tests of equipment, machinery,

pipelines, and other components of District's facilities as may be required in connection with Consultant's services.

- 3) District will furnish required information, examine deliverables submitted by Consultant, and render decisions and approvals in a timely manner.
- 4) District will give prompt notice to Consultant when District observes or becomes aware of developments that affect the scope or timing of Consultant's services, or of defects in the work of Consultant.
- 5) District will provide Division 0 specifications.
- 6) District will perform required permitting activities.
- 7) District will pre-purchase select equipment and/or materials to minimize schedule impacts. It is anticipated the select items for pre-purchase will include air flow control valves, primary effluent flow control gates, and associated electric actuators.
- 8) District will send diffusers to existing diffuser manufacturer to evaluate condition.
- 9) District will provide to Consultant a BioWin model used on recent facilities plan work.
- 10) Field investigation of air piping to identify leaks and areas of air piping requiring replacement or repair.

Task 1 - Project Management

The purpose the Project Management task is to establish and monitor compliance with project budget and schedule.

Task 1.1 - Progress Meetings and Updates

The Consultant's project manager will meet with District's project manager weekly to review project progress, schedule, and discuss upcoming work activities.

The Consultant's project manager will provide weekly email summaries of work completed, upcoming activities and unresolved issues.

Task 1.2 - Project Management Plan

The purpose of this task is to prepare a project management plan that will be used during the execution of this project work. Specific elements of the plan will include definition of District and Consultant project organization, communication, project cost control procedures, document control, health and safety plan, change management and other project management requirements.

Task 1.3 - Decision Log

The Consultant's project manager will prepare and keep current a decision log documenting key project decisions.

Task 1.4 - Invoicing, Cost and Schedule Control

The Consultant's project manager will manage, administer, coordinate, and integrate work of the Consultant's team as required to deliver the project within budget and on schedule.

Consultant's project manager will prepare and submit to the District's project manager on a monthly basis, an invoice, a brief cost and schedule status report and updated summary project schedule showing actual versus projected.

Deliverables:

- Project Management Plan
- Weekly Project Management meeting notes
- Decision Log
- Monthly status reports and invoices.

Task 2 – Existing System Evaluation

Task Assumptions:

- 1) Assumes the evaluation will include sixteen (16) sets of valves, valve actuators, and dissolved oxygen meters.
- 2) Assumes the evaluation will include gate replacement as follows:
 - a) Retain four existing (4) influent weir slide gates (1 per basin) WG-1 through WG-4 and electric actuators. Provide remote OPEN/CLOSE capability and position feedback.
 - b) Step Feed Gates:
 - i) Replace existing main step feed gate for each basin, leading to existing 30-inch pipe (4) total. Provide new electric actuator for each gate.
 - ii) Replace existing (3) submerged step feed distribution gates bolted to existing 30-inch pipe, per basin (12 total). Provide new electric actuator for each gate.
 - c) Retain existing four (4) effluent gates, (1) per basin SG-1 through SG-4. No changes.
 - d) Retain existing two (2) existing scum gates at east and west end of primary effluent channel, SG-1 and SG-2. No changes.

Task 2.1 Kickoff Meeting

The Kickoff meeting will be scheduled within two weeks of Notice to Proceed. The objective of the 1-hour meeting is to communicate the schedule, critical path items, and discuss project objectives and key decision points. The kickoff meeting will also include scheduling site visits.

Deliverables:

- Kickoff Meeting Agenda and Minutes
- Action Item Log
- Decision Log

Task 2.2 Data Request and Initial Analysis

The purpose of this task is to collect relevant and available information to develop a basic understanding of the existing equipment as it relates to the objectives of this project. It is anticipated that this will occur prior to the Kickoff Meeting. Consultant shall perform an initial analysis of the District provided information including SCADA historical data and existing documentation relevant to the aeration basins and surrounding areas .

Deliverables:

- Email request for information.

Task 2.3 Site Visits to Operating Facilities

Conduct site visits to WWTP facilities in Portland area with District O&M staff to view alternative instrument and communications systems. Assume one day of site visits plus travel by Consultant, including Project Manager OR Design Manager, and Senior Instrumentation and Controls Engineer.

- Salmon Creek Treatment Plant – YSI probes.
- Vancouver Westside – E+H probes

Task 2.4 Procurement Support of Owner Furnished Equipment and Materials

Prepare equipment specifications (draft and final), and support District procurement of select materials and equipment. This task includes an allowance for submittal review of Owner-furnished equipment and materials.

Deliverables:

- Draft equipment technical specifications
- Final equipment technical specifications

Task 3 – Preliminary Design (30%)

The preliminary design will build on topics discussed during the kickoff meeting along with existing data and site specific knowledge.

Task 3.1 Workshop 1 (Review Vendor and Control Alternatives)

Workshop 1 will be approximately 2 hours and will be attended by Project Manager, Design Manager, Senior Instrumentation and Controls Engineer, and Process Engineer. The goal of the workshop will be to review vendor and control alternatives related to primary effluent flow splitting, RAS piping improvements, Profibus vs Profinet evaluation, air distribution piping improvements and air header piping improvements.

Deliverables:

- Workshop Agenda & Materials
- Workshop 1 Meeting Minutes
- Action Item Log Update
- Decision Log Update

Task 3.2 Workshop 2 (Confirm Equipment, Control Approach, and Basis of Design)

Workshop 2 will be a 2 hour workshop held approximately one week after the 30% design submittal and will be attended by the Project Manager, Design Manager, Corrosion Engineer, Process Engineer, and Senior Instrumentation and Controls Engineer. The workshop will confirm equipment and approach to the project and provide resolution to comments on the basis of design.

Deliverables:

- Workshop Agenda & Materials
- Workshop 2 Meeting Minutes
- Action Item Log Update
- Decision Log Update

Task 3.3 Preliminary Design Report

The purpose of this task is to finalize and document the design approach in preliminary design report. The report will be used as the Basis of Design for the 90% Contract Documents.

Deliverables:

- Draft/Final Preliminary Design Report Summarizing the design approach
 - Final Equipment Selections
 - Final Control Methods Approach
 - Recommendations for
 - Traditional plug flow and wet weather step feed operation control schemes with primary effluent flow triggers for implementing step feed mode.
 - Step Feed Aeration Gates
 - Extent of required repair of leaking aeration piping and replacement of low pressure air piping segments.
 - Features to improve low pressure air system redundancy
 - Replacement spray water piping and nozzles
 - RAS meter, piping improvements.
- Preliminary P&IDs
- Preliminary Control Block Diagram (PLC/HMI Network Diagram)
- Design Review Meeting Agenda & Materials
- Design Review Meeting Minutes
- Action Item Log Update
- Decision Log Update

Task 4 – Draft Contract Documents (90% Deliverables)

Task 4.1 – Mid-Point Design Review

The purpose of the mid-point design review workshop is to address design items typically addressed at the 60% phase of the project without formal review documents.

Deliverables:

- Workshop Agenda & Materials
- Mid-Point Design Workshop Meeting Minutes
- Action Item Log Update
- Decision Log Update

Task 4.2 – Draft Contract Documents (90% Deliverables)

The purpose of the draft contract document task is to finalize the design pending District's review and feedback on the contract. All specifications and drawing will be completed to the 90% level or greater.

Deliverables:

- Stamp/sealed drawings for outside agency permit review, if required
- Process Control Narratives
- Draft Contract Documents
 - Draft Construction Specification Including (Division 00 & 01)
 - Draft Plans and Drawings

Task 4.3 Draft Contract Document Review Workshop

The draft contract review workshop will be held virtually approximately one week after the draft contract documents are submitted and reviewed.

Deliverables:

- Workshop Agenda & Materials
- Contract Document Review Workshop Meeting Minutes
- Action Item Log Update
- Decision Log Update

Task 5 – Final Contract Documents (100% / Bid Deliverables)

The purpose of this task is to incorporate District comments, final bid documents, seal them and deliver them to the District.

Deliverables:

- Bid Contract Documents
 - Bid Specifications
 - Bid Plans and Drawings

Task 6 Quality Management

As part of each design phase, the Consultant will carry out a quality assurance program (QAP). The purpose of this QAP is to monitor the quality of the Project through the use of internal quality assurance/quality control (QA/QC) reviews as described herein. The Consultant will manage multidiscipline internal QA/QC review activities with senior review team. A QC review will be performed on process and cost calculations. A formal internal QA/QC review will be performed prior to the District review of deliverables.

A Quality Management Plan (QMP) will be prepared for the project to serve as a guide for all phases of the project. Key features of the QMP will include:

- A single point of contact responsible for all quality management.
- Independent quality review performed by discipline-specific quality reviewers to provide critical analysis without bias.
- Procedures for engineers; detailed checks of reports, calculations, drawings and specifications.

Audits by QA personnel will be conducted to verify conformance with the approved QMP and confirm that required checking and review functions are completed.

Design quality review documentation will demonstrate that quality review process is complete and review comments are acceptably addressed as a component of the overall records management system. The following documentation will be prepared, collected and properly stored in the project records system:

- Quality review forms used during internal quality reviews and issue tracking forms used to document those issues.
- Design review forms used by the District to document review comments
- Project checklists or milestone checklists, signed by the reviewer and the appropriate project staff
- Review-related correspondence with District staff and other external agencies or entities

- Audit correspondence, including results and corrective action documentation

The level of effort for this task includes preparation of the QMP and QC reviews for each of the design phases.

Deliverables:

- Quality Management Plan
- Written documentation of QC reviews

Task 7 - Bid Phase Services

Consultant shall provide services to assist the District in selection of a single Contractor assigned to construct the project.

The budget and level of effort included herein for this task is an allowance for use as directed by District staff. Consultant will provide services under this task up to the limits of the budget allocated. These services are expected to consist of the following.

Task 7.1 Preparation and Delivery of Bid Documents

Consultant will print hard copies of bid documents and addenda for Consultant and District team to use during the bid period.

Deliverables:

- Ten (10) sets bid documents for use by the District during bidding.

Task 7.2 Respond to Bidder Questions

It is assumed that the Procurement Officer will be the contact for receipt of bidder questions.

Consultant will provide technical interpretation of the Bid Documents and will prepare, for District Project Manager or Procurement Officer approval, proposed responses to all proposers' substantive questions and requests, which may be in the form of addenda. Responses to bidder questions will be provided by District to bidders. Substantive questions will be questions that cannot be answered by referral of proposers to unambiguous Bid Documents and the associated specifications and drawings for resolution and require Consultant's interpretation or clarification by addenda.

Deliverables:

- Log of bid questions with responses in Excel and PDF format.

Task 7.3 Attend Pre-Bid Conference

Consultant will assist the District and Construction Manager in arranging and conducting one pre-bid conference. In consultation with District, Consultant will develop the draft agenda and content of the pre-bid conference. Consultant will take minutes or make other provisions for documenting the results of the pre-bid conference. Also, Consultant will record all questions and requests for additional information and shall assist with responses. District will issue responses and additional information.

Deliverables:

- Preparation of pre-bid conference minutes, and coordinate issuance of responses and additional information.

Task 7.4 Prepare Addenda

Jacobs will prepare all Addenda to the Bid Documents to be issued by the County Procurement Division. A maximum of one addendum is assumed. Addenda will be approved by the District.

Deliverables:

- Addenda during bid period.

Task 7.5 Evaluate Bids

This task is an allowance to support District evaluation of bids.

Deliverables:

- As mutually agreed with District.

Task 7.6 Conformed Documents

Jacobs will incorporate addenda during bidding phase into the contract documents.

Deliverables:

- Two (2) full-size sets and twelve (12) half-size sets of conformed drawings; twelve sets of specifications.
- Two USB flash drives with electronic files (PDF format).

Drawing List

No.	Dwg. No	Drawing Name	Notes
1		Title, Location And Vicinity Maps And Index To Drawings	
2		Abbreviations -1	
3		Abbreviations -2	
4		Overall General Legend And Flow Stream Identification	
5		Design Criteria - 1	
6		Ground Level Process Plan	
7		Concrete coating plan, sections, details 1	
8		Concrete coating plan, sections, details 2	
9		Concrete coating plan, sections, details 3	
10		Mechanical Details	
11		Electrical Legend - 1	
12		Electrical Legend - 2	
13		Electrical Area Classification Plan - 1 (Existing Facilities)	
14		Electrical Room Partial Plan	
15		Cable Block Diagrams	
16		Panel Schedules	
17		Electrical Details	
18		Instrumentation And Control Legend - 1	
19		Instrumentation And Control Legend - 2	
20		Network Diagram	
21		P&ID AB 1	
22		P&ID AB 2	
23		P&ID AB 3	
24		P&ID AB 4	
25		Control Panel Plan/Elevation	

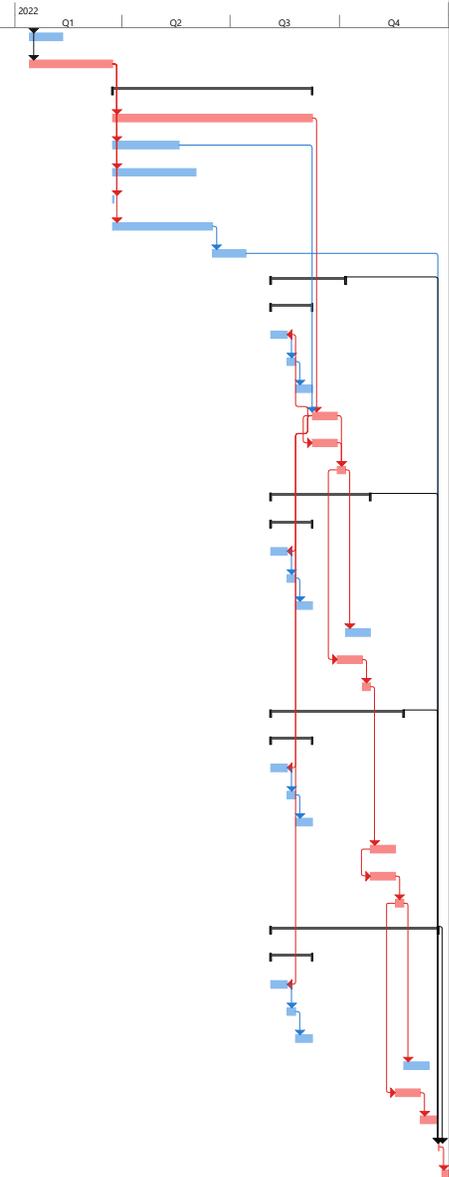
Attachment 2 – Anticipated Specifications List

Division 01—General Requirements	
01 11 00B	Summary of Work
01 31 13B	Project Coordination
01 31 19B	Project Meetings
01 32 00B	Construction Progress Documentation
01 33 00B	Submittal Procedures
01 42 13B	Abbreviations and Acronyms
01 43 33B	Manufacturers' Field Services
01 45 16.13B	Contractor Quality Control
	Special Inspection, Observation, and Testing
01 45 33B	Tables: Special Inspection, Observation, and Testing (2006, 2009, or 2012 IBC)
01 45 36B	Equipment Seismic Certification
01 50 00B	Temporary Facilities and Controls
01 57 13B	Temporary Erosion and Sediment Control
01 64 00B	Owner-Furnished Products
01 77 00B	Closeout Procedures
01 78 23B	Operation and Maintenance Data
01 88 15B	Anchorage and Bracing
01 91 14B	Equipment Testing and Facility Startup
Division 02—Existing Conditions	
02 41 00B	Demolition
Division 03—Concrete	
03 01 32B	Repair of Vertical and Overhead Concrete Surfaces
03 01 33B	Repair of Horizontal Concrete Surfaces
03 15 00B	Concrete Joints and Accessories
03 62 00B	Grouting
Division 09—Finishes	
09 90 00B	Painting and Coating
09 90 01B	Paint System Data Sheet (PSDS)
09 90 02B	Paint Product Data Sheet (PDS)

Division 22—Plumbing	
22 10 01.02B	Polyvinyl Chloride Drain Waste and Vent Pipe and Fittings (Data Sheet)
Division 26—Electrical	
26 05 02B	Basic Electrical Requirements
26 05 33B	Raceway and Boxes
Division 40—Process Interconnections	
40 05 15B	Piping Support Systems
40 27 00B	Process Piping General
40 27 00.01B	Ductile Iron Pipe and Fittings (Data Sheet)
40 27 00.05B	Carbon Steel Pipe and Fittings (Data Sheet)
40 27 01B	Process Piping Specialties
40 27 02B	Process Valves and Operators
40 80 01B	Process Piping Leakage Testing
40 90 00B	Instrumentation and Control for Process Systems
40 91 00B	Instrumentation and Control Components
40 xx xx	Fabricated Slide Gates
44 xx xx	Fine Bubble Aeration Diffuser Systems

**Hood River WWTP Digester Mixing Study
Project Schedule**

ID	Task Name	Duration	Start	Finish	Predecessors	Free Slack	2021				2022								
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
47	Mobilization	20 days	Thu 1/13/22	Wed 2/9/22	46	248 days													
48	Submittals	50 days	Thu 1/13/22	Wed 3/23/22	46	0 days													
49	Equipment and Material Lead Time	120 days?	Thu 3/24/22	Wed 9/7/22		0 days?													
50	Valves and Actuators (16 to 24 week lead time)	120 days	Thu 3/24/22	Wed 9/7/22	48	0 days													
51	Instruments	40 days	Thu 3/24/22	Wed 5/18/22	48	80 days													
52	Electrical and I&C	50 days	Thu 3/24/22	Wed 6/1/22	48	168 days													
53	Diffuser System	1 day?	Thu 3/24/22	Thu 3/24/22	48	217 days?													
54	Piping and valves for blower system discharge piping	60 days	Thu 3/24/22	Wed 6/15/22	48	0 days													
55	Blower Discharge Piping Modifications	20 days	Thu 6/16/22	Wed 7/13/22	54	116 days													
56	Basin 1 Improvements	45 days	Thu 8/4/22	Wed 10/5/22		25 days													
57	Concrete coatings and repair	25 days	Thu 8/4/22	Wed 9/7/22		76 days													
58	surface preparation	10 days	Thu 8/4/22	Thu 8/18/22	61SF-15 days	0 days													
59	coatings	5 days	Thu 8/18/22	Wed 8/24/22	58	0 days													
60	curing and touch up	10 days	Thu 8/25/22	Wed 9/7/22	59	76 days													
61	Mechanical	15 days	Thu 9/8/22	Wed 9/28/22	51,50	0 days													
62	Electrical and I&C	15 days	Thu 9/8/22	Wed 9/28/22	61SS	0 days													
63	Startup and Commissioning	5 days	Thu 9/29/22	Wed 10/5/22	62,61	0 days													
64	Basin 2 Improvements	60 days	Thu 8/4/22	Wed 10/26/22		40 days													
65	Concrete coatings and repair	25 days	Thu 8/4/22	Wed 9/7/22		76 days													
66	surface preparation	10 days	Thu 8/4/22	Thu 8/18/22	61SF-15 days	0 days													
67	coatings	5 days	Thu 8/18/22	Wed 8/24/22	66	0 days													
68	curing and touch up	10 days	Thu 8/25/22	Wed 9/7/22	67	76 days													
69	Mechanical	15 days	Thu 10/6/22	Wed 10/26/22	63	41 days													
70	Electrical and I&C	15 days	Thu 9/29/22	Wed 10/19/22	63SS	0 days													
71	Startup and Commissioning	5 days	Thu 10/20/22	Wed 10/26/22	70	0 days													
72	Basin 3 Improvements	80 days	Thu 8/4/22	Wed 11/23/22		21 days													
73	Concrete coatings and repair	25 days	Thu 8/4/22	Wed 9/7/22		76 days													
74	surface preparation	10 days	Thu 8/4/22	Thu 8/18/22	61SF-15 days	0 days													
75	coatings	5 days	Thu 8/18/22	Wed 8/24/22	74	0 days													
76	curing and touch up	10 days	Thu 8/25/22	Wed 9/7/22	75	76 days													
77	Mechanical	15 days	Thu 10/27/22	Wed 11/16/22	71	0 days													
78	Electrical and I&C	15 days	Thu 10/27/22	Wed 11/16/22	77SS	0 days													
79	Startup and Commissioning	5 days	Thu 11/17/22	Wed 11/23/22	78	0 days													
80	Basin 4 Improvements	101 days	Thu 8/4/22	Thu 12/22/22		0 days													
81	Concrete coatings and repair	25 days	Thu 8/4/22	Wed 9/7/22		76 days													
82	surface preparation	10 days	Thu 8/4/22	Thu 8/18/22	61SF-15 days	0 days													
83	coatings	5 days	Thu 8/18/22	Wed 8/24/22	82	0 days													
84	curing and touch up	10 days	Thu 8/25/22	Wed 9/7/22	83	76 days													
85	Mechanical	15 days	Thu 11/24/22	Wed 12/14/22	79	6 days													
86	Electrical and I&C	15 days	Thu 11/17/22	Wed 12/7/22	79SS	0 days													
87	Startup and Commissioning	11 days	Thu 12/8/22	Thu 12/22/22	86	0 days													
88	Substantial Completion	1 day?	Fri 12/23/22	Fri 12/23/22	55,56,64,72,80	0 days?													
89	Closeout	20 days	Mon 12/26/22	Fri 1/20/23	88	0 days													
90	Final Completion	1 day?	Mon 1/23/23	Mon 1/23/23	89	0 days?													
91		1 day?	Mon 1/23/23	Mon 1/23/23		0 days?													



Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress

**EXHIBIT B
FEE SCHEDULE**



Gregory L. Geist
Director

Board of County Commissioners
Clackamas County

Members of the Board:

Approval of Amendment # 1 to Contract # 4085 between Water Environment Services
and Metro Presort, Inc. for
Utility Bill Printing and Mailing Services

Purpose/Outcome	<i>Execution of the Amendment # 1 for Contract #4085 between Water Environment Services and Metro Presort, Inc. for Utility Bill Printing and Mailing Services</i>
Dollar Amount and Fiscal Impact	<i>Additional compensation of \$350,000 (\$175,000 annually). Total amended contract value of \$1,225,000.</i>
Funding Source	<i>WES Funds (631-01-10300-421110 and 631-01-10300-431600)</i>
Duration	<i>Extends contract through June 30, 2023.</i>
Previous Board Action/Review	<i>Original contract entered November 9, 2016. Board Issues on June 1, 2021.</i>
Strategic Plan Alignment	1. Customers will continue to benefit from a well-managed utility. 2. Build public trust through good government.
Counsel Review	1. <i>Date of Counsel review: 5/12/2021</i> 2. <i>Initials of County Counsel: AK</i>
Procurement Review	1. Was the item processed through Procurement? Yes.
Contact Person	<i>Erin Blue, Financial Administrative Services Manager, (503)742-4585</i>
Contract No.	<i>4085</i>

BACKGROUND:

Clackamas Water Environment Services (“WES”) directly bills approximately 21,000 residential accounts and 1,000 commercial accounts every month. WES currently contracts with Metro Presort for the associated printing and mailing services. The original contract, entered into on November 9, 2016, provided an option for two (2) additional two (2) year renewals. This amendment exercises that option and extends the term of the current contract from June 30, 2021 to June 30, 2023 and adds additional compensation of \$350,000 for monthly bill printing and mailing to continue serving WES’ customers.

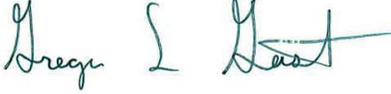
PROCUREMENT PROCESS:

The original contract went through competitive bidding process RFP 2016-02. The resulting contract from this RFP was Contract#4085. The original contract terms was for 5 years through June 30, 2021, with an option for two (2) additional two (2) year renewals thereafter subject to mutual agreement. The parties desire to exercise the first of two two-year renewals provided for in the contract, extending the contract expiration date from June 30, 2021 to June 30, 2023.

RECOMMENDATION:

Staff recommends the Board approve the Amendment to the Contract with Metro Presort, Inc. for utility bill printing and mailing services.

Respectfully submitted,

A handwritten signature in blue ink that reads "Greg Geist". The signature is written in a cursive style with a long horizontal stroke at the end.

Greg Geist
Director, WES

Placed on the _____ Agenda by the Procurement Division.

**AMENDMENT #1
TO THE CONTRACT DOCUMENTS WITH METRO PRESORT, INC. FOR UTILITY
BILLING PRINTING AND MAILING SERVICES
Contract #4085**

This Amendment #1 is entered into between **Metro Presort, Inc.** (“Contractor”) and Water Environment Services (“District”) and shall become part of the Contract documents entered into between both parties on **November 9, 2016** (“Contract”).

The Purpose of this Amendment #1 is to make the following changes to the Contract:

1. ARTICLE I. Term is hereby amended as follows:

The parties desire to exercise the first of two two-year renewals provided for in the Contract. Contract expiration date is changed from June 30, 2021 to **June 30, 2023**.

2. ARTICLE III. Compensation is hereby amended as follows:

The additional compensation for the renewal of two (2) years of service shall not exceed a total contract value of three hundred fifty thousand dollars (**\$350,000.00**). The maximum annual compensation authorized shall not exceed one hundred seventy-five thousand dollars (\$175,000.00) per year.

ORIGINAL CONTRACT	\$ 875,000.00
<u>AMENDMENT #1</u>	<u>\$ 350,000.00 + Time</u>
TOTAL AMENDED CONTRACT	\$ 1,225,000.00

Except as expressly amended above, all other terms and conditions of the Contract shall remain in full force and effect. By signature below, the parties agree to this Amendment #1, effective upon the date of the last signature below.

Metro Presort, Inc.

DocuSigned by:

 5/18/2021
C5D36268E89246B

Authorized Signature Date
 Brad Barton

Printed Name

Water Environment Services

Chair

Recording Secretary

Date

Approved as to form

 5/19/2021

County Counsel Date

4086_Metro_Presort_Inc_Final

Final Audit Report

2021-05-20

Created:	2021-05-19
By:	Qudsia Sediq (QSediq@clackamas.us)
Status:	Signed
Transaction ID:	CBJCHBCAABAAFEy3fmflr__58EzfgUFdt0FyrdsqFvXv

"4086_Metro_Presort_Inc_Final" History

 Document digitally presigned by DocuSign\, Inc. (enterprisesupport@docusign.com)

2021-05-18 - 7:11:29 PM GMT- IP address: 73.37.89.221

 Document created by Qudsia Sediq (QSediq@clackamas.us)

2021-05-19 - 5:00:16 PM GMT- IP address: 73.37.89.221

 Document emailed to Amanda Keller (akeller@clackamas.us) for signature

2021-05-19 - 5:01:02 PM GMT

 Email viewed by Amanda Keller (akeller@clackamas.us)

2021-05-20 - 0:41:11 AM GMT- IP address: 73.25.96.131

 Document e-signed by Amanda Keller (akeller@clackamas.us)

Signature Date: 2021-05-20 - 0:41:38 AM GMT - Time Source: server- IP address: 73.25.96.131

 Agreement completed.

2021-05-20 - 0:41:38 AM GMT



Gregory L. Geist
Director

Board of County Commissioners
Clackamas County

Members of the Board:

Approval of Contract between Water Environment Services and Paul Brothers Inc., for the Tri-City Water Resource Recovery Facility ("WRRF") Mitigation Planting Project

Purpose/Outcome	Execution of Contract #4017 for public improvement services for the Tri-City Water Resource Recovery Facility ("WRRF") Mitigation Planting Project
Dollar Amount and Fiscal Impact	Total Contract Value of \$162,677.00 until 11/1/2021
Funding Source	639-01-20100-481090-P632293
Duration	Contract until November 1, 2021
Previous Board Action/Review	Prior discussions related to budget and Capital Improvements Plan. Issue Discussion 6/1/21.
Strategic Plan Alignment	<ol style="list-style-type: none"> 1. This project supports the County's Strategic Plan of building a strong infrastructure that delivers services to customers and honors, utilizes, promotes and invests in our natural resources. 2. Ensure Safe, Healthy and Secure Communities
Counsel Review	AK 5/17/21
Procurement Review	Was this project processed through Procurement? Yes.
Contact Person	Jeff Stallard, Civil Engineering Supervisor, 503-742-4694
Contract No.	4017

BACKGROUND:

As part of the land use permitting processes for the Tri City Solids Improvements and 82nd Ave Bridge Projects, WES is required to provide mitigation landscaping. This mitigation landscaping requirement is to account for the impacts these projects had on areas within Oregon City's Natural Resource Overlay District and will enhance habitat along the Clackamas River. In addition to this mitigation landscaping, this project also includes plantings for screening along sections of the border of Tri-City Water Resource Recovery Facility (WRRF).

The Work under this Contract will consist of, but is not limited to, furnishing all labor, materials, and equipment necessary to construct the landscaping improvements along the boundary of the Tri-City WRRF. This work includes clearing of invasive species, preparation of planting areas, temporary erosion control, protection of existing trees, installation of the irrigation system, and planting. This work will occur both inside the fenced boundaries of the WRRF and along the adjacent pedestrian and bicycle trail just outside the fence.

PROCUREMENT PROCESS: This project was advertised in accordance with ORS and LCRB Rules on March 18, 2021. Proposals were opened on April 22, 2021. The District received one (1) proposal: Paul Brothers Inc., \$162,677.00. After review of the base bids, Paul Brothers Inc. was determined to be lowest responsive bidder.

RECOMMENDATION:

Staff recommends that the Board of County Commissioners of Clackamas County, acting as the governing body of Water Environment Services, approve and execute the Contract between Water Environment Services and Paul Brothers Inc. for the Tri-City Water Resource Recovery Facility ("WRRF") Mitigation Planting Project.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Greg Geist".

Greg Geist
Director, WES

Placed on the _____ Agenda by the Procurement Division.



WATER ENVIRONMENT SERVICES
PUBLIC IMPROVEMENT CONTRACT
Contract #4017

This Public Improvement Contract (the "Contract"), is made by and between Water Environment Services, a political subdivision of the State of Oregon, hereinafter called "Owner," and Paul Brothers Inc., hereinafter called the "Contractor" (collectively the "Parties"), shall become effective on the date this Contract has been signed by all the Parties and all County approvals have been obtained, whichever is later.

Project Name: #2021-18 Tri-City Water Resource Recovery Facility ("WRRF") Mitigation Planting Project

1. Contract Price, Contract Documents and Work.

The Contractor, in consideration of the sum of One Hundred Sixty-Two Thousand Six Hundred Seventy-Seven Dollars (\$162,677.00) (the "Contract Price"), to be paid to the Contractor by Owner in the manner and at the time hereinafter provided, and subject to the terms and conditions provided for in the Instructions to Bidders and other Contract Documents (as defined in the Clackamas County General Conditions for Public Improvement Contracts (1/1/2020) ("General Conditions") referenced within the Instructions to Bidders), all of which are incorporated herein by reference, hereby agrees to perform all Work described and reasonably inferred from the Contract Documents. The Contract Price is the amount contemplated by the Base Bid as indicated in the accepted Bid.

Also, the following documents are incorporated by reference in this Contract and made a part hereof:

- Notice of Contract Opportunity
• Supplemental Instructions to Bidders
• Bid Form
• Performance Bond and Payment Bond
• Supplemental General Conditions
• Payroll and Certified Statement Form
• Instructions to Bidders
• Bid Bond
• Public Improvement Contract Form
• Clackamas County General Conditions
• Prevailing Wage Rates
• Plans, Specifications and Drawings

2. Representatives.

Contractor has named Peggy Paul as its Authorized Representative to act on its behalf. Owner designates, or shall designate, its Authorized Representative as indicted below (check one):

[X] Unless otherwise specified in the Contract Documents, the Owner designates Jeff Stallard as its Authorized Representative in the administration of this Contract. The above-named individual shall be the initial point of contact for matters related to Contract performance, payment, authorization, and to carry out the responsibilities of the Owner.

[] Name of Owner's Authorized Representative shall be submitted by Owner in a separate writing.

3. Key Persons.

The Contractor's personnel identified below shall be considered Key Persons and shall not be replaced during the project without the written permission of Owner, which shall not be unreasonably withheld. If the Contractor intends to substitute personnel, a request must be given to Owner at least 30 days prior to the intended time of substitution. When replacements have been approved by Owner, the Contractor shall provide a transition period of at least 10 working days during which the original and replacement personnel shall be working on the project concurrently. Once a replacement for any of these staff members is authorized, further replacement shall not occur without the written permission of Owner. The Contractor's project staff shall consist of the following personnel:

Project Executive: Peggy Paul shall be the Contractor's project executive, and will provide oversight and guidance throughout the project term.

Project Manager: Dave Rykken shall be the Contractor's project manager and will participate in all meetings throughout the project term.

Job Superintendent: Bill Kithens shall be the Contractor's on-site job superintendent throughout the project term.

Project Engineer: Joey Paul shall be the Contractor's project engineer, providing assistance to the project manager, and subcontractor and supplier coordination throughout the project term.

4. Contract Dates.

COMMENCEMENT DATE: Upon Issuance of Notice to Proceed

SUBSTANTIAL COMPLETION DATE: 120 days from issuance of NTP

FINAL COMPLETION DATE: 150 days from issuance of NTP

Time is of the essence for this Contract. It is imperative that the Work in this Contract reach Substantial Completion and Final Completion by the above specified dates.

5. Change Order Authorization.

Throughout the performance of the Work under this Agreement, the Owner's Project Manager is hereby granted the authority to verbally authorize change orders in the field for an amount up to \$10,000. As soon as possible following the authorization, the Owner's Project Manager shall complete the change order form provided by Clackamas County Procurement ("Procurement"), obtain the signature of Owner's Director or other authorized signatory, and submit the form to Procurement for processing. As soon as the Director signs off on the change order form, the Project Manager may then authorize another change order in the future for up to \$10,000 following the same procedure above. Each change order should include the cumulative cost of the entire change and may not be artificially broken up into multiple change orders to fall under the dollar threshold listed above. The authority granted to the Project Manager is limited by the Director's authorization to amend the Agreement under Clackamas County's Local Contract Review Board Rules and is subject to the discretion of the Director, who may suspend or restrict the Project Manager's ability to authorize change orders at any time for any reason.

6. Insurance Certificates.

In accordance with Section G.3.5 of the General, Contractor shall furnish proof of the required insurance naming Clackamas County and Water Environment Services as additional insureds. Insurance certificates may be returned with the signed Contract or may emailed to Procurement@clackamas.us.

7. Tax Compliance.

Contractor must, throughout the duration of this Contract and any extensions, comply with all tax laws of this state and all applicable tax laws of any political subdivision of this state. Any violation of this section shall constitute a material breach of this Contract. Further, any violation of Contractor's warranty in this Contract that Contractor has complied with the tax laws of this state and the applicable tax laws of any political subdivision of this state also shall constitute a material breach of this Contract. Any violation shall entitle County to terminate this Contract, to pursue and recover any and all damages that arise from the breach and the termination of this Contract, and to pursue any or all of the remedies available under this Contract, at law, or in equity, including but not limited to: (A) Termination of this Contract, in whole or in part; (B) Exercise of the right of setoff, and withholding of amounts otherwise due and owing to Contractor, in an amount equal to Owner's setoff right, without penalty; and (C) Initiation of an action or proceeding for damages, specific performance, declaratory or injunctive relief. Owner shall be entitled to recover any and all damages suffered as the result of Contractor's breach of this Contract, including but not limited to direct, indirect, incidental and consequential damages, costs of cure, and costs incurred in securing replacement performance. These remedies are cumulative to the extent the remedies are not inconsistent, and Owner may pursue any remedy or remedies singly, collectively, successively, or in any order whatsoever.

The Contractor represents and warrants that, for a period of no fewer than six calendar years preceding the effective date of this Contract, has faithfully complied with: (A) All tax laws of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317, and 318; (B) Any tax provisions imposed by a political subdivision of this state that applied to Contractor, to Contractor's property, operations, receipts, or income, or to

Contractor's performance of or compensation for any work performed by Contractor; (C) Any tax provisions imposed by a political subdivision of this state that applied to Contractor, or to goods, services, or property, whether tangible or intangible, provided by Contractor; and (D) Any rules, regulations, charter provisions, or ordinances that implemented or enforced any of the foregoing tax laws or provisions.

8. Confidential Information.

Contractor acknowledges that it and its employees or agents may, in the course of performing their responsibilities under this Contract, be exposed to or acquire information that is confidential to Owner. Any and all information of any form obtained by Contractor or its employees or agents in the performance of this Contract shall be deemed confidential information of Owner ("Confidential Information"). Contractor agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Contractor uses in maintaining the confidentiality of its own confidential information, and not to copy, reproduce, sell, assign, license, market, transfer or otherwise dispose of, give, or disclose Confidential Information to third parties or use Confidential Information for any purpose unless specifically authorized in writing under this Contract.

9. Counterparts.

This Contract may be executed in several counterparts, all of which when taken together shall constitute an agreement binding on all Parties, notwithstanding that all Parties are not signatories to the same counterpart. Each copy of the Contract so executed shall constitute an original.

10. Integration.

All provisions of state law required to be part of this Contract, whether listed in the General or Special Conditions or otherwise, are hereby integrated and adopted herein. Contractor acknowledges the obligations thereunder and that failure to comply with such terms is a material breach of this Contract.

The Contract Documents constitute the entire agreement between the parties. There are no other understandings, agreements or representations, oral or written, not specified herein regarding this Contract. Contractor, by the signature below of its authorized representative, hereby acknowledges that it has read this Contract, understands it, and agrees to be bound by its terms and conditions.

11. Compliance with Applicable Law. Contractor shall comply with all federal, state, county, and local laws, ordinances, and regulations applicable to the Work to be done under this Contract including, but not limited to, compliance with the prohibitions set forth in ORS 652.220, compliance of which is a material element of this Contract and failure to comply is a material breach that entitles County to exercise any rights and remedies available under this Contract including, but not limited to, termination for default.

12. Responsibility for Taxes. Contractor is solely responsible for payment of any federal, state, or local taxes required as a result of the Contract or the Work including, but not limited, to payment of the corporate activity tax imposed under enrolled HB 3427 (2019 Oregon regular legislative session). Contractor may not include its federal, state, or local tax obligations as part of the cost to perform the Work.

Signature page to follow.



**CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT OPPORTUNITY**

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**CLACKAMAS COUNTY
NOTICE OF PUBLIC IMPROVEMENT CONTRACT OPPORTUNITY**

**INVITATION TO BID #2021-18
Tri-City Water Resource Recovery Facility (“WRRF”) Mitigation Planting
March 18, 2021**

Clackamas County (“County”) on behalf of Water Environment Services through its Board of County Commissioners is accepting sealed bids for the Tri-City Water Resource Recovery Facility (“WRRF”) Mitigation Planting Project until **April 22, 2021, 2:00 PM**, Pacific Time, (“Bid Closing”) at the following location:

DELIVER BIDS TO: Clackamas County Procurement Division via email to procurement@clackamas.us.

Bidding Documents can be downloaded from ORPIN at the following address: <http://orpin.oregon.gov/open.dll/welcome>, Document No.C01010-2021-18-21. Prospective Bidders will need to sign in to download the information and that information will be accumulated for a Plan Holder's List. Prospective Bidders are responsible for obtaining any Addenda from Website listed above.

Contact Information

Procurement Process and Technical Questions: Tralee Whitley, twhitley@clackamas.us

Prevailing Wage

Prevailing Wage Rates requirements apply to this Project because the maximum compensation for all Owner-contracted Work is more than \$50,000. Contractor and all subcontractors shall comply with the provisions of ORS 279C.800 through 279C.870, relative to Prevailing Wage Rates. The Bureau of Labor and Industries (BOLI) wage rates and requirements set forth in the following BOLI booklet (and any listed amendments to that booklet), which are incorporated herein by reference, apply to the Work authorized under this Agreement:

PREVAILING WAGE RATES for Public Works Contracts in Oregon, January 1, 2021, which can be downloaded at the following web address: http://www.oregon.gov/boli/WHD/PWR/Pages/pwr_state.aspx
The Work will take place in Clackamas County, Oregon.

Clackamas County encourages bids from Minority, Women, and Emerging Small Businesses.



CLACKAMAS COUNTY PUBLIC IMPROVEMENT CONTRACT

INSTRUCTIONS TO BIDDERS

Clackamas County Local Contract Review Board Rules (“LCRB Rules”) govern this procurement process. LCRB Rules may be found at: <http://www.clackamas.us/code/documents/appendixc.pdf>. The Instructions to Bidders is applicable to the procurement process for Clackamas County, or any component unit thereof identified on the Notice of Public Improvement Contract Opportunity, herein after referred to as the “Owner.”

Article 1. Scope of Work

The work contemplated under this contract with the Owner, includes all labor, materials, transportation, equipment and services necessary for, and reasonably incidental to, the completion of all construction work in connection with the project described in the Project Manual which includes, but is not necessarily limited to, the Notice of Public Improvement Contract Opportunity, Instructions to Bidders, Supplemental Instructions to Bidders, Bid Form, Bid Bond, Public Improvement Contract Form, Performance Bond, Payment Bond, Clackamas County General Conditions for Public Improvement Contracts (1/1/2020), Supplemental General Conditions, and Plans, Specifications and Drawings.

Article 2. Examination of Site and Conditions

Before making a Bid, the Bidder shall examine the site of the work and ascertain all the physical conditions in relation thereto. The Bidder shall also make a careful examination of the Project Manual including the plans, specifications, and drawings and other contract documents, and shall be fully informed as to the quality and quantity of materials and the sources of supply of the materials. Failure to take these steps will not release the successful Bidder from entering into the contract nor excuse the Bidder from performing the work in strict accordance with the terms of the contract at the

price established by the Bid.

The Owner will not be responsible for any loss or for any unanticipated costs, which may be suffered by the successful Bidder, as a result of such Bidder's failure to be fully informed in advance with regard to all conditions pertaining to the work and the character of the work required, including site conditions. No statement made by an elected official, officer, agent, or employee of the Owner in relation to the physical or other conditions pertaining to the site of the work will be binding on the Owner, unless covered by the Project Manual or an Addendum.

Article 3. Interpretation of Project Manual and Approval of Materials Equal to Those Provided in the Specifications

If any Bidder contemplating submitting a Bid for the proposed contract is in doubt as to the true meaning of any part of the plans, specifications or forms of contract documents, or detects discrepancies or omissions, such Bidder may submit to the Architect (read "Engineer" throughout in lieu of Architect as appropriate) a written request for an interpretation thereof at least ten (10) calendar days prior to the date set for the Bid Closing.

When a prospective Bidder seeks approval of a particular manufacturer's material, process or item of equal value, utility or merit other than that designated by the Architect in the Project Manual, the Bidder may submit to the Architect a written request for approval of such substitute at least ten (10) calendar days prior to the date set for the Bid Closing. The prospective Bidder submitting the request will be responsible for its prompt delivery.

Requests of approval for a substitution from that specified shall be accompanied by samples, records of performance, certified copies of tests by

impartial and recognized laboratories, and such other information as the Architect may request.

To establish a basis of quality, certain processes, types of machinery and equipment or kinds of materials may be specified in the Project Manual either by description of process or by designating a manufacturer by name and referring to a brand or product designation or by specifying a kind of material. Whenever a process is designated or a manufacturer's name, brand or item designation is given, or whenever a process or material covered by patent is designated or described, it shall be understood that the words "or approved equal" follow such name, designation or description, whether in fact they do so or not.

Any interpretation of the Project Manual or approval of manufacturer's material will be made only by an Addendum duly issued. All Addenda will be posted to the ORPIN listing and will become a part of the Project Manual. The Owner will not be responsible for any other explanation or interpretation of the Project Manual nor for any other approval of a particular manufacturer's process or item for any Bidder.

When the Architect approves a substitution by Addendum, it is with the understanding that the Contractor guarantees the substituted article or material to be equal or better than the one specified.

Article 4. Security to Be Furnished by Each Bidder

Each Bid must be accompanied by either 1) a cashier's check or a certified check drawn on a bank authorized to do business in the State of Oregon, or 2) a Bid bond described hereinafter, executed in favor of the Owner, for an amount equal to ten percent (10%) of the total amount Bid as a guarantee that, if awarded the contract, the Bidder will execute the contract and provide a performance bond and payment bond as required. The successful Bidder's check or Bid bond will be retained until the Bidder has entered into a contract satisfactory to Owner and furnished a one hundred percent (100%) performance bond and one hundred percent (100%) payment bond. The Owner

reserves the right to hold the Bid security as described in Article 10 hereof. Should the successful Bidder fail to execute and deliver the contract as provided for in Article 12 hereof, including a satisfactory performance bond and payment bond within twenty (20) calendar days after the Bid has been accepted by the Owner, then the contract award made to such Bidder may be considered canceled and the Bid security may be forfeited as liquidated damages at the option of the Owner. The date of the acceptance of the Bid and the award of the contract as contemplated by the Project Manual shall mean the date of acceptance specified in the Notice of Intent to Award.

Article 5. Execution of Bid Bond

Should the Bidder elect to utilize a Bid bond as described in Article 4 in order to satisfy the Bid security requirements, such form must be completed in the following manner:

- A. Bid bonds must be executed on the County forms, which will be provided to all prospective Bidders by the Owner.
- B. The Bid bond shall be executed on behalf of a bonding company licensed to do business in the State of Oregon.
- C. In the case of a sole individual, the bond need only be executed as principal by the sole individual. In the case of a partnership, the bond must be executed by at least one of the partners. In the case of a corporation, the bond must be executed by stating the official name of the corporation under which is placed the signature of an officer authorized to sign on behalf of the corporation followed by such person's official capacity, such as president, etc. The corporation seal should then be affixed to the bond.
- D. The name of the surety must be stated in the execution over the signature of its duly authorized attorney-in-fact and accompanied by the seal of the surety corporation.

Article 6. Execution of the Bid Form

Each Bid shall be made in accordance with: (i) the sample Bid Form accompanying these instructions; (ii) the appropriate signatures for a sole individual, partnership, corporation or limited liability corporation shall be added as noted in Article 5C above; (iii) numbers pertaining to base Bids shall be stated both in writing and in figures; and (iv) the Bidder's address shall be typed or printed.

The Bid Form relates to Bids on a specific Project Manual. Only the amounts and information asked for on the Bid Form furnished will be considered as the Bid. Each Bidder shall Bid upon the work exactly as specified and provided in the Bid Form. The Bidder shall include in the Bid a sum to cover the cost of all items contemplated by the Contract. The Bidder shall Bid upon all alternates that may be indicated on the Bid Form. When Bidding on an alternate for which there is no charge, the Bidder shall write the words "No Charge" in the space provided on the Bid Form. If one or more alternates are shown on the Bid Form, the Bidder shall indicate whether each is "add" or "deduct."

Article 7. Prohibition of Alterations to Bid

Bids that are incomplete, or contain ambiguities or have differing conditions required by the Bidder, including requested changes or exceptions to the Public Improvement Contract form or other portions of the Project Manual, may be rejected in Owner's sole and absolute discretion.

Article 8. Submission of Bid

Each Bid shall be sealed in an envelope, properly addressed to the Owner, showing on the outside of the envelope the name of the Bidder and the name of the project. Bids will be received at the time and place stated in the Notice of Public Improvement Contract Opportunity.

Article 9. Bid Closing and Opening of Bids

All Bids must be received by the Owner at the place and time set for the Bid Closing. Any Bids received after the scheduled Bid Closing time for

receipt of Bids will be rejected.

At the time of opening and reading of Bids, each Bid received will be publicly opened and read aloud, irrespective of any irregularities or informalities in such Bids.

Generally, Bid results will be posted to the Procurement Website within a couple hours of the opening.

Article 10. Acceptance or Rejection of Bids by Owner

Unless all Bids are rejected, the Owner will award a contract based on the lowest responsive Bid from a responsible Bidder. If that Bidder does not execute the contract, it will be awarded to the next lowest responsible Bidder or Bidders in succession.

The Owner reserves the right to reject all Bids and to waive minor informalities. The procedures for contract awards shall be in compliance with the provisions of the LCRB Rules in effect at that time.

The Owner reserves the right to hold the Bid and Bid security of the three lowest Bidders for a period of thirty (30) calendar days from and after the time of Bid opening pending award of the contract. Following award of the contract the Bid security of the three lowest Bidders may be held twenty (20) calendar days pending execution of the contract. All other Bids will be rejected and Bid security will be returned.

In determining the lowest Bidder, the Owner reserves the right to take into consideration any or all authorized base Bids as well as alternates or combinations indicated in the Bid Form.

If no Bid has been accepted within thirty (30) calendar days after the opening of the Bids, each of the three lowest Bidders may withdraw the Bid submitted and request the return of the Bid security.

Article 11. Withdrawal of Bid

At any time prior to the Bid Closing, a Bidder may withdraw its Bid. This will not preclude the

submission of another Bid by such Bidder prior to the time set for the Bid Closing.

After the time set for the Bid Closing, no Bidder will be permitted to withdraw its Bid within the time frames specified in Article 10 for award and execution, except as provided for in that Article.

Article 12. Execution of Contract, Performance Bond and Payment Bond

The Owner will provide the successful Bidder with contract forms within seven (7) calendar days after the completion of the award protest period. The Bidder is required to execute the contract forms as provided, including a performance bond and a payment bond from a surety company licensed to do surety business in the State of Oregon, within seven (7) calendar days after receipt of the contract forms. The contract forms shall be delivered to the Owner in the number called for and to the location as instructed by the Owner.

Article 13. Recyclable Products

Contractors will use recyclable products to the maximum extent economically feasible in the performance of the Contract.

Article 14. Clarification or Protest of the Solicitation Document or Specifications

Any request for clarification or protest of the solicitation document or specifications must be submitted in the manner provided for in the applicable section of the LCRB Rules to the Procurement Representative referenced in the Notice of Public Improvement Contract Opportunity.

A protest of the Solicitation Document must be received within seven (7) business days of the issuance of the Bid or within three (3) business days of issuance of an addendum.

Requests for clarification may be submitted no less than five (5) business days prior to the Bid Closing Date.

Article 15. Protest of Intent to Award

Owner will name the apparent successful Bidder in a "Notice of Intent to Award" letter. Identification of the apparent successful Bidder is procedural only and creates no right in the named Bidder to the award of the contract. Competing Bidders will be notified by publication of the Notice of Intent to Award on the Clackamas County Procurement Website of the selection of the apparent successful Bidder(s) and Bidders shall be given seven (7) calendar days from the date on the "Notice of Intent to Award" letter to review the file at the Procurement Division office and file a written protest of award, pursuant to C-049-0450. Any award protest must be in writing and must be delivered by hand delivery or mail to the Procurement Division Director at: Procurement Division, 2051 Kaen Road, Oregon City, OR 97045.

Article 16. Disclosure of First-Tier Subcontractors

Within two (2) working hours after the Bid Closing, all Bidders shall submit to the County a disclosure form identifying any first-tier subcontractors (those entities that would be contracting directly with the prime contractor) that will be furnishing labor and materials on the contract, if awarded, whose subcontract value would be equal to or greater than: (a) Five percent (5%) of the total contract price, but at least \$15,000; or (b) \$350,000, regardless of the percentage of the total contract price.

Disclosures may be submitted with the Bid or may be hand delivered to the Bid Closing address or emailed to procurement@clackamas.us.



CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT

SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

Project Name: #2021-18 Tri-City Water Resource Recovery Facility (“WRRF”) Mitigation Planting

The following modify the Clackamas County “Instructions to Bidders” for this Project. Where a portion of the Instructions to Bidders has been modified by these Supplemental Instructions to Bidders, the unaltered portions shall remain in effect.

- 1. Submission of Bids by email:** Due to the COVID-19 Emergency, Clackamas County buildings are closed to the public. The County is requiring all bids for this project to be electronically submitted. Complete Bids (including all attachments) may be emailed and must be electronically received by the closing time and date **2:00 p.m. Pacific Time, April 22, 2021.** If emailed, the Bid must be emailed to the following address: Procurement@clackamas.us. The email subject line must be **“Bid for #2021-18 Tri-City Water Resource Recovery Facility (“WRRF”) Mitigation Planting Project.”** Bidders are ***strongly encouraged*** to telephone and confirm electronic receipt of the complete emailed document(s) before the above time and date deadline. Bids delayed or lost by email system filtering or failures may be considered at Clackamas County’s sole and absolute discretion.

Bids will be publicly read aloud via the computer application, Zoom. Bidders will be allowed to video conference or listen by phone to the bid results. The projects Zoom meeting can be accessed via the information below:

ZOOM MEETING INFO

Join Zoom Meeting

<https://clackamascounty.zoom.us/j/88964106591>

Meeting ID: 889 6410 6591

One tap mobile

+13462487799,,88964106591# US (Houston)

+14086380968,,88964106591# US (San Jose)

Dial by your location

+1 346 248 7799 US (Houston)

+1 408 638 0968 US (San Jose)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

+1 301 715 8592 US (Washington DC)

+1 312 626 6799 US (Chicago)

+1 646 876 9923 US (New York)
Meeting ID: 889 6410 6591
Find your local number: <https://clackamascounty.zoom.us/j/kpM3IZqba>

**The Apparent Low bid results will be posted to the projects OPRIN listing as soon as possible following the bid opening.

- 2. Good Faith Effort:** Clackamas County encourages participation in contracts by Historically Underrepresented Businesses. “Historically Underrepresented Businesses” are State of Oregon-certified and self-identified minority, women and emerging small business as well as firms that are certified federally or by another state or entity with substantially similar requirements as the State of Oregon.

Bidders must perform Good Faith Effort (defined below) and submit **Form 1 and Form 2** for the Bidders Bid to be considered responsive. **Form 1 and Form 2** must be submitted within **two (2) hours** after the Closing Date and Time. Form 1 and Form 2 may be submitted by hand delivery to the location the Bid was due or may email the completed Forms to Procurement@clackamas.us. “Good Faith Effort” is a requirement of a prime contractor to reach out to at least three Historically Underrepresented Business Subcontractors for each division of work that will be subcontracted out and to complete the required forms. If fewer than three Historically Underrepresented Business Subcontractors are reasonably available for a particular division of work, the Bidder must specifically note the reason for there being fewer than three contacts. The outreach should be performed with sufficient time to give the subcontractors at least 5 calendar days to respond to the opportunity. Form 3, which documents the actual amount of subcontractors on the project, must be submitted with the project final pay application. Compliance with the Good Faith Effort and submission of Forms 1, 2 and 3 is a contractual requirement for final payment.

The sufficiency of the documentation or the performance of Good Faith Effort shall be in the sole and absolute determination of Clackamas County. Only those Bidders that Clackamas County has determined have not sufficiently performed Good Faith Effort shall have protest rights of the determination for such Bidder. No Bidder shall have protest rights of the sufficiency of any other Bidder completing Good Faith Effort.

**CLACKAMAS COUNTY
GOOD FAITH EFFORT
SUBCONTRACTOR AND SELF-PERFORMED WORK LIST
(FORM 1)**

Prime Contractor Name: Paul Brothers Inc
Project Name: #2021-18 Tri-City Water Resource Recovery Facility (WRRF) Mitigation Planting

Total Contract Amount: \$1,626,773.00

PRIME SELF-PERFORMING: Identify below ALL GFE Divisions of Work (DOW) to be self-performed. Good Faith Efforts are otherwise required.

DOW BIDDER WILL SELF-PERFORM (GFE not required)	
<u>Landscape</u>	
<u>Mitigation</u>	
<u>Soils</u>	

PRIME CONTRACTOR SHALL DISCLOSE AND LIST ALL SUBCONTRACTORS, including those Minority-owned, Woman-owned, and Emerging Small Businesses ("M/W/ESB") that you intend to use on the project. Hand delivery to Procurement, 2051 Kaen Road, Oregon City, OR 97045 or email to procurement@clackamas.us within 2 hours of the BID/Quote Closing Date/Time

LIST ALL SUBCONTRACTORS BELOW Use correct legal name of Subcontractor (No Assumed Business Names)	Division of Work (Painting, electrical, landscaping, etc.) List ALL DOW performed by Subcontractors	DOLLAR AMOUNT OF SUBCONTRACT	If Certified or self-reporting MBE/WBE/ESB Subcontractor		
			Check box <input checked="" type="checkbox"/>	MBE	WBE
Name <u>Northwest Hydromuclear</u> Address <u>37621 SE Bear Creek Ln</u> City/St/Zip <u>Boring OR</u> Phone# <u>503-668-5531</u> OCCB# <u>97009</u> <u>#6195</u>	<u>Hydroseed</u>	<u>\$3383.00</u> <u>\$1,626,773.00</u> (P)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CLACKAMAS COUNTY
GOOD FAITH EFFORT
M/W/ESB CONTACT / BIDS RECEIVED LOG
(FORM 2)**

Prime Contractor: *Paul Brothers Inc*
Project: #2021-18 Tri-City Water Resource Recovery Facility (WRRF) Mitigation Planting

Prime Contractor must contact or endeavor to contact at least 3 M/W/ESB Subcontractors for each Division of Work. Prime Contractor shall record its contacts with M/W/ESB Subcontractors through use of this log (or equivalent) entering all required information. All columns shall be completed where applicable. Additional forms may be copied if needed.

NAME OF M/W/ESB SUBCONTRACTOR	Divisions of Work (Painting, electrical, landscaping, etc.)	Date Solicitation Letter / Fax Sent	PHONE CONTACT		BID ACTIVITY Check Yes or No			REJECTED BIDS (if bid received & not used)		Notes
			Date of Call	Person Receiving Call	Will Bid	Bid Received	Bid Used	Bid Amount	Reason Not Used (Price, Scope or Other. If Other, explain in Notes>>)	
<i>M/W Hydromulch</i>	<i>Hydroseed</i>	<i>4/15/21</i>	<i>4/18</i>	<i>Sam Cook</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<i>\$3383.00</i>		
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			

FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM
PROJECT: #2021-18 Tri-City Water Resource Recovery Facility ("WRRF") Mitigation Planting

BID OPENING: April 22, 2021, 2:00 PM, Pacific Time

Failure to submit this Form by the disclosure deadline will result in a nonresponsive bid.

INSTRUCTIONS:

This First-Tier Subcontractor Disclosure Form ("Form") must be submitted and received at the location specified in the Notice of Public Improvement Contract Opportunity on the advertised Bid Closing, and within two working hours after the advertised Bid Closing Time.

The Form may be mailed, hand-delivered or emailed to: Procurement@clackamas.us. It is the responsibility of Bidders to submit this Form and any additional sheets with the Project name clearly marked on the envelope or the subject line of the email.

Subcontractor lists may be submitted with the bid in the same envelope or email at the Bid Closing date and time. Subcontractor lists **MUST** be submitted within **two (2) hours** of the Bid Closing date and time.

List below the name of each subcontractor that will be furnishing labor, or labor and materials, for which disclosure is required, the category of work that the subcontractor will be performing, and the dollar value of the subcontract. Enter **"NONE"** if the value of the project bid is less than \$100,000 or there are no subcontractors that need to be disclosed. ATTACH ADDITIONAL SHEETS IF NECESSARY.

	SUBCONTRACTOR NAME	DOLLAR VALUE	CATEGORY OF WORK
1.	NW Hydromulchers	\$ 3383.00	Seeding
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

The above listed first-tier subcontractor(s) are providing labor, or labor and material, with a Dollar Value equal to or greater than:

- a) 5% of the total Contract Price, but at least \$15,000. If the Dollar Value is less than \$15,000 do not list the subcontractor above; or
- b) \$350,000 regardless of the percentage of the total Contract Price.

Firm Name: Paul Brothers Inc

Bidder Signature: [Signature] Phone # 503 663-1220



CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT

BID FORM

PROJECT: #2021-18 Tri-City Water Resource Recovery Facility ("WRRF") Mitigation Planting
BID CLOSING: April 22, 2021, 2:00 PM, Pacific Time
BID OPENING: April 22, 2021, 2:05 PM, Pacific Time

FROM: Paul Brothers Inc
Bidder's Name (must be full legal name, not ABN/DBA)

TO: Clackamas County
Procurement Division procurement@clackamas.us

1. Bidder is (check one of the following and insert information requested):

- a. An individual; or
- b. A partnership registered under the laws of the State of _____; or
- c. A corporation organized under the laws of the State of Oregon; or
- d. A limited liability corporation organized under the laws of the State of _____;

and authorized to do business in the State of Oregon hereby proposes to furnish all material and labor and perform all work hereinafter indicated for the above project in strict accordance with the Contract Documents for the Basic Bid as follows:

One hundred sixty two thousand Dollars (\$ 162,677.00)
Six hundred seventy seven + 900
and the Undersigned agrees to be bound by the following documents:

- Notice of Public Improvement Contract Opportunity
 - Instructions to Bidders
 - Bid Bond
 - Public Improvement Contract Form
 - Clackamas County General Conditions
 - Prevailing Wage Rates
 - Plans, Specifications and Drawings
 - Supplemental Instructions to Bidders
 - Bid Form
 - Performance Bond and Payment Bond
 - Supplemental General Conditions
 - Payroll and Certified Statement Form
- ADDENDA numbered 6 through _____, inclusive (fill in blanks)

2. The Undersigned proposes to add to or deduct from the Base Bid indicated above the items of work relating to the following Alternate(s) as designated in the Specifications: N/A

3. BASIS OF BIDS

3.1 Unit of Measurement and Payment for all items required for Native Planting Area Maintenance shall be based on the Lump Sum or unit prices as set forth in the Contractor's Proposal.

3.2 Unit Price Bid Schedule

3.3 The pay items will be as follows:

	Description	Unit	Item \$
3.3.1	North Planting Area	Lump Sum	115,419.
3.3.2	West Planting Area	Lump Sum	15,917.
	Three Year Maintenance (Lump sum that covers all three years, not a per year value)		
3.3.3	General Inspection and Reporting	Lump Sum	9247.
3.3.4	Temp Irrigation Inspection and Maintenance	Lump Sum	11,047.
3.3.5	Native Plating Area Maintenance	Lump Sum	11,047.
	Basic Bid Total		162,677.00

3.4 Bidder acknowledges that estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all unit price bid items will be based on the actual quantities, determined as provided in the Contract Documents

3.5 The bid item has associated incidental work. Work not listed on bid schedule, but necessary for completion of work specified herein shall be considered incidental and shall not relieve Contractor from the responsibility of completing incidental work.

4. The work shall be completed within the time stipulated and specified in the contract documents.

5. Accompanying herewith is Bid Security which is equal to ten percent (10%) of the total amount of the Basic Bid, plus the total sum of all Alternatives (if any).

6. The Undersigned agrees, if awarded the Contract, to execute and deliver to Clackamas County, within twenty (20) calendar days after receiving the Contract forms, a Contract Form, and a satisfactory Performance Bond and Payment Bond each in an amount equal to one hundred percent (100%) of the Contract sum, using forms provided by the Owner. The surety requested to issue the Performance Bond and Payment Bond will be:

Travelers Surety of America
(name of surety company - not insurance agency)

The Undersigned hereby authorizes said surety company to disclose any information to the Owner concerning the Undersigned's ability to supply a Performance Bond and Payment Bond each in the amount of the Contract.

7. The Undersigned further agrees that the Bid Security accompanying the Bid is left in escrow with Clackamas County; that the amount thereof is the measure of liquidated damages which the Owner will sustain by the failure of the Undersigned to execute and deliver the above-named Contract Form, Performance Bond and Payment Bond, each as published, and that if the Undersigned defaults in either executing the Contract Form or providing the Performance Bond and Payment Bond within twenty (20) calendar days after receiving the Contract forms, then the Bid Security shall become the property of the Owner at the Owner's option; but if the Bid is not accepted within thirty (30) calendar days of the time set for the opening of the Bids, or if the Undersigned executes and timely delivers said Contract Form, Performance Bond and Payment Bond, the Bid Security shall be returned.

8. The Undersigned certifies that: (i) This Bid has been arrived at independently and is being submitted without collusion with and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid designed to limit independent bidding or competition; and (ii) the contents of the Bid have not been communicated by the Undersigned or its employees or agents to any person not an employee or agent of the Undersigned or its surety on any Bond furnished with the Bid and will not be communicated to such person prior to the official opening of the Bid.

9. The undersigned HAS, HAS NOT (check one) paid unemployment or income taxes in Oregon within the past 12 months and DOES, DOES NOT (check one) a business address in Oregon. The undersigned acknowledges that, if the selected bidder, that the undersigned will have to pay all applicable taxes and register to do business in the State of Oregon before executing the Contract Form.

10. The Undersigned agrees, if awarded a contract, to comply with the provisions of ORS 279C.800 through 279C.870 pertaining to the payment of the prevailing rates of wage.

11. Contractor's CCB registration number is 64461. As a condition to submitting a bid, a Contractor must be registered with the Oregon Construction Contractors Board in accordance with ORS 701.035 to 701.055, and disclose the registration number. Failure to register and disclose the number will make the bid unresponsive and it will be rejected, unless contrary to federal law.

12. The successful Bidder hereby certifies that all subcontractors who will perform construction work as described in ORS 701.005(2) were registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time the subcontractor(s) made a bid to work under the contract.

13. The successful Bidder hereby certifies that, in compliance with the Worker's Compensation Law of the State of Oregon, its Worker's Compensation Insurance provider is SAIF, Policy No. 774651, and that Contractor shall submit Certificates of Insurance as required.

14. Contractor's Key Individuals for this project (supply information as applicable):

Project Executive: Regis Paul, Cell Phone: 503 209 2390,
Project Manager: Dave Rylken, Cell Phone: 503 867 4543,
Job Superintendent: Bill Kitchens, Cell Phone: 503 209 1089,
Project Engineer: Joe Paul, Cell Phone: 503 867-4543.

15. The Undersigned certifies that it has not discriminated against minority, women, or emerging small businesses in obtaining any subcontracts for this project.

16. The Undersigned certifies that it has a drug testing program in accordance with ORS 279C.505.

REMINDER: Bidder must submit the below First-Tier Subcontractor Disclosure Form.

By signature below, Contractor agrees to be bound by this Bid.

NAME OF FIRM Paul Brothers Inc
ADDRESS 9601 SE Rowan Rd
Boring OR 97009
TELEPHONE NO 503 663 1220
EMAIL ppaul@paulbrothersinc.com
SIGNATURE 1) _____
Sole Individual
or 2) _____
Partner
or 3) Regis Paul
Authorized Officer or Employee of Corporation

***** END OF BID *****



WATER ENVIRONMENT SERVICES
PUBLIC IMPROVEMENT CONTRACT

PERFORMANCE BOND

Bond No.: 107432880
Solicitation: #2021-18
Project Name: Tri-City Water Resource Recovery Facility ("WRRF") Mitigation Planting Project

Table with 2 columns: Surety information and Bond Amount. Includes entries for Surety #1 (\$162,677.00), Surety #2 (N/A), and Total Penal Sum of Bond (\$162,677.00).

We, Paul Brothers, Inc. as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Water Environment Services ("District"), the sum of (Total Penal Sum of Bond) \$One Hundred Sixty-Two Thousand, Six Hundred* (Provided, that we the Sureties bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety); and *Seventy-Seven & 00/100ths Dollars (\$162,677.00)

WHEREAS, the Principal has entered into a contract with the District, along with the plans, specifications, terms and conditions of which are contained in the above-referenced Project Contract Documents; and

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Performance Bond by reference, whether or not attached to the contract (all hereafter called "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and all authorized modifications of the Contract which increase the amount of the work, the amount of the Contract, or constitute an authorized extension of the time for performance, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal herein shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things undertaken by Contractor to be performed under the Contract, upon the terms set forth therein, and within the time prescribed therein, or as extended as provided in the Contract, with or without notice to the Sureties, and shall defend, indemnify, and save harmless the District and Clackamas County and their elected officials, officers, employees and agents, against any direct or indirect damages or claim of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Principal or its subcontractors, and shall in all respects perform said contract according to law, then this obligation is to be void; otherwise, it shall remain in full force and effect for so long as any term of the Contract remains in effect.

Nonpayment of the bond premium will not invalidate this bond nor shall the District, be obligated for the payment of any premiums.

This bond is given and received under authority of Oregon Revised Statutes Chapter 279C and the Clackamas County Local Contractor Review Board Rules, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES.

Dated this 17th day of May, 2021.

PRINCIPAL: Paul Brothers, Inc.

By: [Signature]

President Signature

Attest: [Signature] Official Capacity

Corporation Secretary

SURETY: Travelers Casualty and Surety Company of America
[Add signatures for each if using multiple bonds]

BY ATTORNEY-IN-FACT:
[Power-of-Attorney must accompany each bond]

Nicholas A Fredrickson

Name

[Signature] Signature

2233 112th Avenue NE

Address

Bellevue WA 98004

City State Zip

(425) 709-3600 (425) 709-7460

Phone Fax



**Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company**

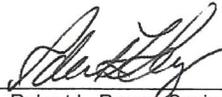
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Nicholas A Fredrickson** of **BELLEVUE Washington**, their true and lawful Attorney-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law. **IN WITNESS WHEREOF**, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **17th** day of **January**, 2019.



State of Connecticut

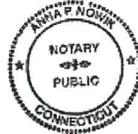
City of Hartford ss.

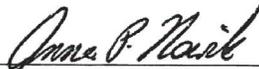
By: 
Robert L. Raney, Senior Vice President

On this the **17th** day of **January**, 2019, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, 2021




Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

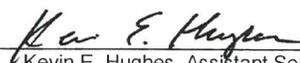
FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this **17th** day of **May**, 2021




Kevin E. Hughes, Assistant Secretary

**To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney-in-Fact and the details of the bond to which this Power of Attorney is attached.**



WATER ENVIRONMENT SERVICES
PUBLIC IMPROVEMENT CONTRACT

PAYMENT BOND

Bond No.: 107432880

Solicitation: #2021-18

Project Name: Tri-City Water Resource Recovery Facility (“WRRF”) Mitigation Planting Project

Travelers Casualty and

Surety Company of America (Surety #1)

N/A (Surety #2)*

* If using multiple sureties

Bond Amount No. 1: \$ 162,677.00

Bond Amount No. 2:* \$ N/A

Total Penal Sum of Bond: \$ 162,677.00

We, Paul Brothers, Inc., as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Water Environment Services (“District”), the sum of (Total Penal Sum of Bond) One Hundred Sixty-Two Thousand, Six Hundred Seventy-Seven & 00/100ths Dollars (\$162,677.00)(Provided, that we the Sureties bind ourselves in such sum “jointly and severally” as well as “severally” only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety); and

WHEREAS, the Principal has entered into a contract with the District, along with the plans, specifications, terms and conditions of which are contained in above-referenced Project Contract Documents; and

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Payment Bond by reference, whether or not attached to the contract (all hereafter called “Contract”); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and schedule of contract prices which are set forth in the Contract and any attachments, and all authorized modifications of the Contract which increase the amount of the work, or the cost of the Contract, or constitute authorized extensions of time for performance of the Contract, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things by it undertaken to be performed under said Contract and any duly authorized modifications that are made, upon the terms set forth therein, and within the time prescribed therein, or as extended therein as provided in the Contract, with or without notice to the Sureties, and shall defend, indemnify, and save harmless the District and Clackamas County and their elected officials, officers, employees and agents, against any claim for direct or indirect damages of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Contractor or its subcontractors, and shall promptly pay all persons supplying labor, materials or both to the Principal or its subcontractors for prosecution of the work provided in the Contract; and shall promptly pay all contributions due the State Industrial Accident Fund and the State Unemployment Compensation Fund from the Principal or its subcontractors in connection with the performance of the Contract; and shall pay over to the Oregon Department of Revenue all sums required to be deducted and retained from the wages of employees of the Principal and its subcontractors pursuant to ORS 316.167, and shall permit no lien nor claim to be filed or prosecuted against the District on account of any labor or materials furnished; and shall do all things required of

the Principal by the laws of this State, then this obligation shall be void; otherwise, it shall remain in full force and effect for so long as any term of the Contract remains in effect.
Nonpayment of the bond premium will not invalidate this bond nor shall the District be obligated for the payment of any premiums.

This bond is given and received under authority of Oregon Revised Statutes Chapter 279C and the Clackamas County Local Contractor Review Board Rules, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES:

Dated this 17th day of May, 2021.

PRINCIPAL: Paul Brothers, Inc.

By: [Signature]
Signature

[Signature]
Official Capacity
Attest: [Signature]
Corporation Secretary

SURETY: Travelers Casualty and Surety Company of America
[Add signatures for each if using multiple bonds]

BY ATTORNEY-IN-FACT:
[Power-of-Attorney must accompany each bond]

Nicholas A Fredrickson
Name

[Signature]
Signature

2233 112th Avenue NE
Address

Bellevue WA 98004
City State Zip

(425) 709-3600 (425) 709-7460
Phone Fax



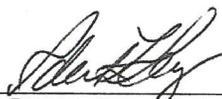
**Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company**

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Nicholas A Fredrickson** of **BELLEVUE Washington**, their true and lawful Attorney-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law. **IN WITNESS WHEREOF**, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **17th** day of **January**, 2019.



State of Connecticut
City of Hartford ss.

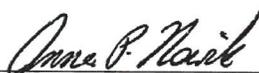
By: 
Robert L. Raney, Senior Vice President

On this the **17th** day of **January**, 2019, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, 2021




Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

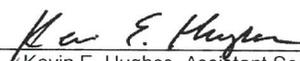
FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this **17th** day of **May**, 2021




Kevin E. Hughes, Assistant Secretary

**To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney-in-Fact and the details of the bond to which this Power of Attorney is attached.**



CLACKAMAS COUNTY GENERAL CONDITIONS FOR PUBLIC IMPROVEMENT CONTRACTS January 1, 2020

INSTRUCTIONS: The attached **Clackamas County General Conditions for Public Improvement Contracts ("County General Conditions")** apply to all designated Public Improvement contracts. Changes to the County General Conditions (including any additions, deletions or substitutions) should only be made by attaching Public Improvement Supplemental General Conditions. The text of these County General Conditions should not otherwise be altered.

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- A.2 SCOPE OF WORK
- A.3 INTERPRETATION OF CONTRACT DOCUMENTS
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- A.5 INDEPENDENT CONTRACTOR STATUS
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- A.7 GOVERNMENT EMPLOYMENT STATUS

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- B.3 MATERIALS AND WORKMANSHIP
- B.4 PERMITS
- B.5 COMPLIANCE WITH GOVERNMENT REGULATIONS
- B.6 SUPERINTENDENCE
- B.7 INSPECTION
- B.8 SEVERABILITY
- B.9 ACCESS TO RECORDS
- B.10 WAIVER
- B.11 SUBCONTRACTS AND ASSIGNMENT
- B.12 SUCCESSORS IN INTEREST
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- B.14 OTHER CONTRACTS
- B.15 GOVERNING LAW
- B.16 LITIGATION
- B.17 ALLOWANCES
- B.18 SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES
- B.19 SUBSTITUTIONS
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- C.2 PAYROLL CERTIFICATION AND FEE REQUIREMENTS, ADDITIONAL RETAINAGE
- C.3 PROMPT PAYMENT AND CONTRACT CONDITIONS
- C.4 PAYMENT FOR MEDICAL CARE
- C.5 HOURS OF LABOR

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- D.2 DELAYS
- D.3 CLAIMS REVIEW PROCESS

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- E.2 APPLICATIONS FOR PAYMENT

- E.3 PAYROLL CERTIFICATION REQUIREMENT
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- E.5 RETAINAGE
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- F.2 PROTECTION OF WORKERS, PROPERTY, AND THE PUBLIC
- F.3 CUTTING AND PATCHING
- F.4 CLEANING UP
- F.5 ENVIRONMENTAL CONTAMINATION
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- G.2 PERFORMANCE AND PAYMENT SECURITY, PUBLIC WORKS BOND
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**CLACKAMAS COUNTY GENERAL CONDITIONS
FOR PUBLIC IMPROVEMENT CONTRACTS
("County General Conditions")**

**SECTION A
GENERAL PROVISIONS**

A.1 DEFINITION OF TERMS

In the Contract Documents the following terms shall be as defined below:

APPLICABLE LAWS, means all federal, state and local laws, codes, rules, regulations and ordinances, as amended applicable to the Work, to the Contract, or to the parties individually.

APPROVED BY CONTRACTING AGENCY, for purposes of ORS 279C.570(2), means the date a progress payment is approved by the Clackamas County Treasurer's office.

ARCHITECT/ENGINEER, means the Person appointed by the Owner to make drawings and specifications and, to provide contract administration of the Work contemplated by the Contract to the extent provided herein or by supplemental instruction of Owner (under which Owner may delegate responsibilities to the Architect/Engineer), in accordance with ORS Chapter 671 (Architects) or ORS Chapter 672 (Engineers) and administrative rules adopted thereunder.

AVOIDABLE DELAYS, mean any delays other than Unavoidable Delays, and include delays that otherwise would be considered Unavoidable Delays but that: (a) Could have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors; (b) Affect only a portion of the Work and do not necessarily prevent or delay the prosecution of other parts of the Work nor the completion of the whole Work within the Contract Time; (c) Do not impact activities on the accepted critical path schedule; and (d) Are associated with the reasonable interference of other contractors employed by the Owner that do not necessarily prevent the completion of the whole Work within the Contract Time.

BIDDER, means a bidder in connection with Instructions to Bidders or a proposer in connection with a Request for Proposals, or Solicitation Document. May also be referenced as "Offeror," "Quoter" or "Proposer" based on the type of Solicitation Document.

CHANGE ORDER, means a written order which, when fully executed by the Parties to the Contract, constitutes a change to the Contract Documents. Change Orders shall be issued in accordance with the changes provisions in Section D and, if applicable, establish a Contract Price or Contract Time adjustment. A Change Order shall not be effective until executed by both parties.

CLAIM, means a demand by Contractor pursuant to Section D.3 for review of the denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, submitted in accordance with the requirements and within the time limits established for review of Claims in these County General Conditions.

CONTRACT, means the written agreement between the Owner and the Contractor comprised of the Contract Documents which describe the Work to be done and the obligations between the parties.

CONTRACT DOCUMENTS, means the Contract, County General Conditions, Supplemental General Conditions if any, Plans, Specifications, the accepted Offer, Solicitation Document and addenda thereto, Instructions to Offerors, and Supplemental Instructions to Offerors.

CONTRACT PERIOD, as set forth in the Contract Documents, means the total period of time beginning with the full execution of a Contract

and, if applicable, the issuance of a Notice to Proceed and concluding upon Final Completion.

CONTRACT PRICE, means the total price reflected in the Contract.

CONTRACT TIME, means any incremental period of time allowed under the Contract to complete any portion of the Work as reflected in the Project schedule.

CONTRACTOR, means the Person awarded the Contract for the Work contemplated.

DAYS, are calendar days, including weekdays, weekends and holidays, unless otherwise specified.

DEFECTIVE WORK, means Work that is not completed in accordance with the Specifications or the requirements of the Contract.

DIRECT COSTS, means, unless otherwise provided in the Contract Documents: the cost of materials, including sales tax and the cost of delivery; cost of labor which shall only include the applicable prevailing wage and fringe benefit (if applicable, and if paid to or on behalf of the employee) rate plus a maximum of a twelve percent (12%) markup on the prevailing wage (but not the fringe benefit) to cover Contractor's labor burden including but not limited to social security, Medicare, unemployment insurance, workers' compensation insurance, sick leave pay; substantiated Project cost increases for specific insurance (including, without limitation, Builder's Risk Insurance and Builder's Risk Installation Floater) or bond premiums; rental cost of equipment, and machinery required for execution of the Work; and the additional costs of field personnel directly attributable to the Work; travel expense reimbursement only if specifically authorized and only to the extent allowable under the County Contractor Travel Reimbursement Policy, hereby incorporated by reference.

FINAL COMPLETION, means the final completion of all requirements under the Contract, including Contract Closeout as described in Section K but excluding Warranty Work as described in Section I.2, and the final payment and release of all retainage, if any.

FORCE MAJEURE, means an act, event or occurrence caused by fire, riot, war, acts of God, terrorism, nature, sovereign, or public enemy, strikes, freight embargoes or any other act, event or occurrence that is beyond the control of the party to the Contract who is asserting Force Majeure.

NOTICE TO PROCEED, means the official written notice from the Owner stating that the Contractor is to proceed with the Work defined in the Contract Documents.

OFFER, means a bid in connection with Instructions to Bidders or a proposal in connection with a Request for Proposals, or Solicitation Document to do the work stated in the Solicitation Document at the price quoted. May also be referenced as "Bid," "Quote," or "Proposal" based on the type of Solicitation Document.

OVERHEAD, means those items which may be included in the Contractor's markup (general and administrative expense and profit) and that shall not be charged as Direct Cost of the Work, including without limitation such Overhead expenses as wages or salary of personnel above the level of foreman (i.e., superintendents and project managers), labor rates and fringe benefits above the applicable prevailing wage and fringe benefit (if applicable, and if paid to or on behalf of the employee), Contractor's labor burden for fringe benefit if paid to the employee, expenses of Contractor's offices and supplies at the Project Site (e.g. job trailer) and at Contractor's principal place of business and including expenses of personnel staffing the Project Site office and Contractor's principal place of business, and Commercial General Liability Insurance and Automobile Liability Insurance.

OWNER, means, Clackamas County or any component unit thereof including Clackamas County Development Agency, Clackamas County Service District No. 1, Surface Water Management Agency of Clackamas County, Tri-City Service District, Water Environment Services, North Clackamas Parks and Recreation District, Clackamas County Extension & 4-H Service District, Library Service District of Clackamas County, Enhanced Law Enforcement District, and Clackamas County Service District No. 5. Owner may elect, by written notice to Contractor, to delegate certain duties to more than one agent, including without limitation, to an Architect/Engineer. However, nothing in these County General Conditions is intended to abrogate the separate design professional responsibilities of Architects under ORS Chapter 671 or of Engineers under ORS Chapter 672.

PERSON, means a natural person or entity doing business as a sole proprietorship, a partnership, a joint venture, a corporation, a limited liability company or partnership, a nonprofit, a trust, or any other entity possessing the legal capacity to contract.

PLANS, means the drawings which show the location, type, dimensions, and details of the Work to be done under the Contract.

PRODUCT DATA, means illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

PROJECT, means the total undertaking to be accomplished for Owner by architects/engineers, contractors, and other others, including planning, study, design, construction, testing, commissioning, start-up, of which the Work to be performed under the Contract Documents is a part.

PROJECT SITE, means the specific real property on which the Work is to be performed, including designated contiguous staging areas, that is identified in the Plans, Specifications and Drawings.

PUNCH LIST, means the list of Work yet to be completed or deficiencies which need to be corrected in order to achieve Final Completion of the Contract.

RECORD DOCUMENT, means the as-built Plans, Specifications, testing and inspection records, product data, samples, manufacturer and distributor/supplier warranties evidencing transfer of ownership to Owner, operational and maintenance manuals, shop drawings, correspondence, certificate(s) of occupancy, and other documents listed in Subsection B.9.1 of these County General Conditions, recording all Services performed.

SAMPLES, means physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

SHOP DRAWINGS, means drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor (including any subsubcontractor), manufacturer, supplier, or distributor to illustrate some portion of the Work.

SOLICITATION DOCUMENT, means an Invitation to Bid, Request for Proposals, Request for Quotes, or other written document issued by Owner that outlines the required Specifications necessary to submit an Offer.

SPECIFICATION, means any description of the physical or functional characteristics of the Work, or of the nature of a supply, service or construction item included in the Solicitation Document. Specifications may include a description of any requirement for inspecting, testing or preparing a supply, service or construction item for delivery and the quantities or qualities of materials to be furnished under the Contract. Specifications generally will state the results or products to be obtained and may, on occasion, describe the method and manner of doing the

Work to be performed. Specifications may be incorporated by reference and/or may be attached to the Contract.

SUBCONTRACTOR, means a Person having a direct contract with the Contractor, or another Subcontractor of any tier, to perform one or more items of the Work.

SUBSTANTIAL COMPLETION, means the date when the Owner accepts in writing the construction, alteration or repair constituting the Work or any designated portion thereof as having reached that state of completion when it may be used or occupied for its intended purpose. Substantial Completion of facilities with operating systems occurs only after thirty (30) continuous Days of successful, trouble-free operation of the operating systems as provided in Section K.3.2.

SUBSTITUTIONS, means items that in function, performance, reliability, quality, and general configuration are the same or better than the product(s) specified. Substitutions also means the performance of the Work by a labor force other than what is submitted in the Offer.

SUPPLEMENTAL GENERAL CONDITIONS, means those conditions that remove from, add to, or modify these County General Conditions. Public Improvement Supplemental General Conditions may be included in the Solicitation Document or may be a separate attachment to the Contract.

UNAVOIDABLE DELAYS, mean delays other than Avoidable Delays that are: (a) to the extent caused by any actions of the Owner, or any other employee or agent of the Owner, or by a separate contractor employed by the Owner; (b) to the extent caused by any Project Site conditions which differ materially from the conditions that would normally be expected to exist and inherent to the construction activities defined in the Contract Documents; or (c) to the extent caused by Force Majeure acts, or events or occurrences.

WORK, means the furnishing of all materials, equipment, labor, transportation, services, incidentals, those permits and regulatory approvals not provided by the owner necessary to successfully complete any individual item or the entire Contract and the carrying out of duties and obligations imposed by the Contract Documents for the Project.

A.2 SCOPE OF WORK

The Work contemplated under the Contract includes all labor, materials, transportation, equipment and services for, and incidental to, the completion of all work in connection with the Project described in the Contract Documents. The Contractor shall perform all Work necessary so that the Project can be legally occupied and fully used for the intended use as set forth in the Contract Documents.

A.3 INTERPRETATION OF CONTRACT DOCUMENTS

A.3.1 Unless otherwise specifically defined in the Contract Documents, words which have well-known technical meanings or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Contract Documents are intended to be complementary. Whatever is called for in one, is interpreted to be called for in all. However, in the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following descending order of precedence:

- (a) The Contract and any amendments thereto, including Change Orders, with those of later date having precedence over those of an earlier date;
- (b) The Supplemental General Conditions;
- (c) County General Conditions;
- (d) Plans and Specifications;
- (e) The Solicitation Document, and any addenda thereto.

A.3.2 In the case of an inconsistency between Plans and Specifications or within either document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Owner's interpretation in writing as determined in Owners sole discretion.

A.3.3 If the Contractor finds discrepancies in, or omissions from the Contract Documents, or if the Contractor is in doubt as to their meaning, the Contractor shall at once notify the Owner. Matters concerning and interpretation of requirements of the Contract Documents will be decided by the Owner in the Owner's sole discretion, who may delegate that duty in some instances to the Architect/Engineer. Responses to Contractor's requests for interpretation of Contract Documents will be made in writing by Owner (or the Architect/Engineer) within any time limits agreed upon or otherwise with reasonable promptness. Contractor shall not proceed without direction in writing from the Owner (or Architect/Engineer).

A.3.4 References to standard specifications, manuals, codes of any technical society, organization or association, to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws or regulations in effect in the jurisdiction where the Project Site is located on the first published date of the Solicitation Document, except as may be otherwise specifically stated.

A.4 EXAMINATION OF PLANS, SPECIFICATIONS, AND PROJECT SITE

A.4.1 It is understood that the Contractor, before submitting an Offer, has made a careful examination of the Contract Documents; has become fully informed as to the quality and quantity of materials and the character of the Work required; and has made a careful examination of the location and conditions of the Work and the sources of supply for materials. The Owner will in no case be responsible for any loss or for any unanticipated costs that may be suffered by the Contractor as a result of the Contractor's failure to acquire full information in advance in regard to all conditions pertaining to the Work. No oral agreement or conversation with any officer, agent, or personnel of the Owner, or with the Architect/Engineer either before or after the execution of the Contract, shall affect or modify any of the terms or obligations herein contained. Contractor shall at all times be responsible for all utility locates regardless of the ownership of such utility infrastructure or service.

A.4.2 Should the Plans or Specifications fail to particularly describe the materials, kind of goods, or details of construction of any aspect of the Work, Contractor shall have the duty to make inquiry of the Owner and Architect/Engineer as to what is required prior to performance of the Work. Absent Specifications to the contrary, the materials or processes that would normally be used to produce first quality finished Work shall be considered a part of the Contract requirements.

A.4.3 Any design errors or omissions noted by the Contractor shall be reported promptly to the Owner, including without limitation, any nonconformity with Applicable Laws.

A.4.4 If the Contractor believes that adjustments to cost or Contract Time are involved because of clarifications or instructions issued by the Owner (or Architect/Engineer) in response to the Contractor's notices or requests for information, the Contractor must submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt by Contractor of the clarifications or instructions issued. If the Owner denies Contractor's request for additional compensation, additional Contract Time, or other relief

that Contractor believes results from the clarifications or instructions, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process. If the Contractor fails to perform the obligations of Sections A.4.1 to A.4.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations.

A.4.5 If the Contractor believes that adjustments to cost or Contract Time are involved because of an Unavoidable Delay caused by differing Project Site conditions, the Contractor shall notify the Owner immediately of differing Project Site conditions before the area has been disturbed. The Owner will investigate the area and make a determination as to whether or not the conditions differ materially from either the conditions stated in the Contract Documents or those which could reasonably be expected in execution of this particular Contract. If Contractor and the Owner agrees that a differing Project Site condition exists, any adjustment to compensation or Contract Time will be determined based on the process set forth in Section D.2.2 for adjustments to or deletions from Work. If the Owner disagrees that a differing Project Site condition exists and denies Contractor's request for additional compensation or Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

A.5 INDEPENDENT CONTRACTOR STATUS

The service or services to be performed under the Contract are those of an independent contractor as defined in ORS 670.600. Contractor represents and warrants that it is not an officer, employee or agent of the Owner as those terms are used in ORS 30.265.

A.6 RETIREMENT SYSTEM STATUS AND TAXES

Contractor represents and warrants that it is not a contributing member of the Public Employees' Retirement System and will be responsible for any federal or state taxes applicable to payment received under the Contract. Contractor will not be eligible for any benefits from these Contract payments of federal Social Security, employment insurance, workers' compensation or the Public Employees' Retirement System, except as a self-employed individual. Unless the Contractor is subject to backup withholding, Owner will not withhold from such payments any amount(s) to cover Contractor's federal or state tax obligations.

A.7 GOVERNMENT EMPLOYMENT STATUS

A.7.1 If this payment is to be charged against federal funds, Contractor represents and warrants that it is not currently employed by the Federal Government. This does not preclude the Contractor from holding another contract with the Federal Government.

SECTION B ADMINISTRATION OF THE CONTRACT

B.1 OWNER'S ADMINISTRATION OF THE CONTRACT

B.1.1 The Owner shall administer the Contract as described in the Contract Documents throughout the term of the Contract, including the one-year period for correction of Work. The Owner will act as provided in the Contract Documents, unless modified in writing in accordance with other provisions of the Contract. In performing these tasks, the Owner may rely on the Architect/Engineer or other agents to perform some or all of these tasks.

B.1.2 The Owner may visit the Project Site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. The Owner will not

make exhaustive or continuous on-Project Site inspections to check the quality or quantity of the Work. Unless otherwise required in a Change Order, the Owner will neither have control over or charge of, nor be responsible for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work.

B.1.3 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized, the Owner and Contractor shall communicate with each other within a reasonable time frame about matters arising out of or relating to the Contract. Communications by and with the Architect/Engineer's consultants shall be through the Architect/Engineer. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

B.1.4 Based upon the Architect/Engineer's evaluations of the Contractor's Application for Payment, or unless otherwise stipulated by the Owner, the Architect/Engineer will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

B.2 CONTRACTOR'S MEANS AND METHODS; MITIGATION OF IMPACTS

B.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the Project Site safety thereof and, except as stated below, shall be fully and solely responsible for the Project Site safety of such means, methods, techniques, sequences or procedures.

B.2.2 The Contractor is responsible to protect and maintain the Work during the course of construction and to mitigate any adverse impacts to the Project, including those caused by authorized changes, which may affect cost, schedule, or quality.

B.2.3 The Contractor is responsible for the actions of all its personnel, laborers, suppliers, agents, and Subcontractors on the Project. The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of persons who are unfit or unskilled for the tasks assigned to them.

B.3 MATERIALS AND WORKMANSHIP

B.3.1 The intent of the Contract Documents is to provide for the construction and completion of every detail of the Work described. All Work shall be performed in a professional manner and, unless the means or methods of performing a task are specified elsewhere in the Contract Documents, Contractor shall employ methods that are generally accepted and used by the industry, in accordance with industry standards.

B.3.2 The Contractor is responsible to perform the Work as required by the Contract Documents. Defective Work shall be corrected at the Contractor's sole expense and within a reasonable time frame.

B.3.3 Work done and materials furnished may be subject to inspection and/or observation and testing by the Owner to determine if they conform to the Contract Documents. Inspection of the Work by the Owner does not relieve the Contractor of responsibility for the Work in accordance with the Contract Documents.

B.3.4 Contractor shall furnish adequate facilities, as required, for the Owner to have safe access to the Work including without limitation walkways, railings, ladders, tunnels, and platforms. Producers, suppliers, and fabricators shall also provide proper facilities and access to their facilities.

B.3.5 The Contractor shall furnish Samples of materials for testing by the Owner and include the cost of the Samples in the Contract Price.

B.4 PERMITS

Contractor shall obtain and pay for all necessary permits, licenses and fees, except for those specifically excluded in the Supplemental General Conditions, as required for the project. Contractor shall be responsible for all violations of the law. Contractor shall give all requisite notices to public authorities.

B.5 COMPLIANCE WITH GOVERNMENT REGULATIONS

B.5.1 Contractor shall comply with Applicable Laws, as amended pertaining to the Work and the Contract. Failure to comply with such requirements shall constitute a breach of Contract and shall be grounds for Contract termination. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with the following, as applicable and as may be amended from time to time: (i) Title VI and VII of Civil Rights Act of 1964, as amended; (ii) Section 503 and 504 of the Rehabilitation Act of 1973, as amended; (iii) the Health Insurance Portability and Accountability Act of 1996; (iv) the Americans with Disabilities Act of 1990, as amended; (v) ORS Chapter 659A; as amended; (vi) all regulations and administrative rules established pursuant to any applicable laws; and (vii) all other applicable requirements of federal, state, county or other local government entity statutes, rules and regulations.

B.5.2 Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations, and

(a) Contractor shall not discriminate against Disadvantaged, Minority, Women or Emerging Small Business enterprises, as those terms are defined in ORS 200.005, or a business enterprise that is owned or controlled by or that employs a disabled veteran, as that term is defined in ORS 408.225, in the awarding of subcontracts.

(b) Contractor shall maintain, in current and valid form, all licenses and certificates required by Applicable Laws or the Contract when performing the Work.

B.5.3 Contractor shall certify that it shall not accept a bid from Subcontractors to perform Work unless such Subcontractors are registered with the Construction Contractors Board in accordance with ORS 701.021 at the time they submit their bids to the Contractor.

B.5.4 Contractor shall certify that each landscape contracting business, as defined in ORS 671.520(2), performing Work under the Contract holds a valid landscape construction professional license issued pursuant to ORS 671.560.

B.5.5 The following notice is applicable to Contractors who perform excavation Work. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center at (877) 668-4001.

B.5.6 Failure to comply with any or all of the requirements of B.5.1 through B.5.5 shall be a material breach of Contract and constitute

grounds for Contract termination. Damages or costs resulting from such noncompliance shall be the responsibility of Contractor.

B.5.7 The Contractor shall include in each subcontract those provisions required under ORS 279C.580.

B.5.8 Contractor shall comply with ORS 652.220, compliance of which is a material element of this Contract and failure to comply is a material breach that entitles County to exercise any rights and remedies available under this Contract including, but not limited to, termination for default.

B.6 SUPERINTENDENCE

Contractor shall keep on the Project Site, during the progress of the Work, a competent superintendent and any necessary assistants who shall be satisfactory to the Owner and who shall represent the Contractor on the Project Site. Directions given to the superintendent by the Owner shall be confirmed in writing to the Contractor.

B.7 INSPECTION

B.7.1 Owner shall have access to the Work at all times.

B.7.2 Inspection of the Work will be made by the Owner at its discretion. The Owner will have authority to reject Work that does not conform to the Contract Documents in the Owner's sole discretion. Any Work found to be not in conformance with the Contract Documents, in the discretion of the Owner, shall be removed and replaced at the Contractor's expense.

B.7.3 Contractor shall make or obtain at the appropriate time all tests, inspections and approvals of portions of the Work required by the Contract Documents or by Applicable Laws or orders of public authorities having jurisdiction. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall give the Owner timely notice of when and where tests and inspections are to be made so that the Owner may be present for such procedures. Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner.

B.7.4 As required by the Contract Documents, Work done or material used without required inspection or testing and/or without providing timely notice to the Owner may be ordered removed at the Contractor's expense.

B.7.5 If directed to do so by Owner or other permitting authority any time before the Work is accepted, the Contractor shall uncover portions of the completed Work for inspection. After inspection, the Contractor shall restore such portions of Work to the standard required by the Contract. If the Work uncovered is unacceptable or was done without required testing or inspection or sufficient notice to the Owner, the uncovering and restoration shall be done at the Contractor's expense. If the Work uncovered is acceptable and was done with sufficient notice to the Owner, the uncovering and restoration will be paid for pursuant to a Change Order.

B.7.6 If any testing or inspection reveals failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Owner's and Architect/Engineer's services and expenses, shall be at the Contractor's expense.

B.7.7 In Owner's sole discretion, it may authorize other interested parties to inspect the Work affecting their interests or property. Their right to inspect shall not make them a party to the Contract and shall not interfere with the rights of the parties of the Contract. Instructions or orders of such parties shall be transmitted to the Contractor, through the Owner.

B.8 SUBCONTRACTS AND ASSIGNMENT

B.8.1 Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound by the terms and conditions of these General Conditions and Supplemental General Conditions, and to assume toward the Contractor all of the obligations and responsibilities which the Contractor assumes toward the Owner thereunder, unless (1) the same are clearly inapplicable to the subcontract at issue because of legal requirements or industry practices, or (2) specific exceptions are requested by Contractor and approved in writing by Owner. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors at any level.

B.8.2 At Owner's request, Contractor shall submit to Owner prior to their execution either Contractor's form of subcontract, or the subcontract to be executed with any particular Subcontractor. If Owner disapproves such form, Contractor shall not execute the form until the matters disapproved are resolved to Owner's satisfaction. Owner's review, comment upon or approval of any such form shall not relieve Contractor of its obligations under this Agreement or be deemed a waiver of such obligations of Contractor.

B.8.3 Contractor shall not assign, sell, or transfer its rights, or delegate its responsibilities under the Contract, in whole or in part, without the prior written approval of the Owner. No such written approval shall relieve Contractor of any obligations of the Contract, and any transferee shall be considered the agent of the Contractor and bound to perform in accordance with the Contract Documents. Contractor shall remain liable as between the original parties to the Contract as if no assignment had occurred.

B.9 OWNER'S RIGHT TO DO WORK

Owner reserves the right to perform other or additional work at or near the Project Site with other agents than those of the Contractor. If such work takes place within or next to the Project Site, Contractor shall coordinate work with the other contractors or agents, cooperate with all other contractors or forces, carry out the Work in a way that will minimize interference and delay for all agents involved, place and dispose of materials being used so as not to interfere with the operations of another, and join the Work with the work of the others in an acceptable manner and perform it in proper sequence to that of the others. The Owner will resolve any disagreements that may arise between or among Contractor and the other contractors over the method or order of doing all work (including the Work). In case of unavoidable interference, the Owner will establish work priority (including the Work) in the Owner's sole discretion.

B.10 OTHER CONTRACTS

In all cases and at any time, the Owner has the right to execute other contracts related to or unrelated to the Work of the Contract. The Contractor of the Contract shall fully cooperate with any and all other contractors without additional cost to the Owner in the manner described in Section B.13.

B.11 ALLOWANCES

B.11.1 The Contractor shall include in the Contract Price all allowances stated in the Contract Documents. Items covered by allowances

shall be supplied for such amounts and by such persons or entities as the Owner may direct.

- B.11.2 Unless otherwise provided in the Contract Documents:
- (a) when finally reconciled, allowances shall cover the cost of the Contractor's materials and equipment delivered at the Project Site and all required taxes, less applicable trade discounts;
 - (b) Contractor's costs for unloading and handling at the Project Site, labor, installation costs, Overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Price but not in the allowances;
 - (c) whenever costs are more than or less than allowances, the Contract Price shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (i) the difference between actual costs and the allowances under Section B.17.2(a) and (ii) changes in Contractor's costs under Section B.17.2(b);
 - (d) Unless Owner requests otherwise, Contractor shall provide to Owner a proposed fixed price for any allowance work prior to its performance.

B.12 SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- B.12.1 The Contractor shall prepare and keep current, for the Architect's/Engineer's approval (or for the approval of Owner if approval authority has not been delegated to the Architect/Engineer), a schedule and list of submittals which is coordinated with the Contractor's construction schedule and allows the Architect/Engineer reasonable time to review submittals. Owner reserves the right to finally approve the schedule and list of submittals. Submittals include, without limitation, Shop Drawings, Product Data, and Samples.
- B.12.2 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review of submittals by the Architect/Engineer is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, or for approval of safety precautions or, unless otherwise specifically stated by the Architect/Engineer, of any construction means, methods, techniques, sequences or procedures, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect/Engineer's review of the Contractor's submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect/Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component. Informational submittals upon which the Architect/Engineer is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect/Engineer without action.
- B.12.3 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect/Engineer Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents

and approved by the Contractor may be returned by the Architect/Engineer without action.

- B.12.4 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- B.12.5 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect/Engineer.
- B.12.6 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect/Engineer's review or approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect/Engineer in writing of such deviation at the time of submittal and (i) the Architect/Engineer has given written approval to the specific deviation as a minor change in the Work, or (ii) a Change Order has been executed by Owner authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect/Engineer's review or approval thereof.
- B.12.7 In the event that Owner elects not to have the obligations and duties described under this Section B.18 performed by the Architect/Engineer, or in the event no Architect/Engineer is employed by Owner on the Project, all obligations and duties assigned to the Architect/Engineer hereunder shall be performed by the Owner.

B.13 SUBSTITUTIONS

The Contractor may make Substitutions only with the written consent of the Owner, after evaluation by the Owner and only in accordance with a Change Order. Substitutions shall be subject to the requirements of the Solicitation Document. By making requests for Substitutions, the Contractor represents that the Contractor has personally investigated the proposed substitute product; represents that the Contractor will provide the same warranty for the Substitution that the Contractor would for the product originally specified unless approved otherwise; certifies that the cost data presented is complete and includes all related costs under the Contract including redesign costs, and waives all claims for additional costs related to the Substitution which subsequently become apparent; and will coordinate the installation of the accepted Substitution, making such changes as may be required for the Work to be completed in all respects.

B.14 USE OF PLANS AND SPECIFICATIONS

Plans, Specifications and related Contract Documents furnished to Contractor by Owner or Owner's Architect/Engineer shall be used solely for the performance of the Work under the Contract. Contractor and its Subcontractors and suppliers are authorized to use and reproduce applicable portions of such documents appropriate to the execution of the Work, but shall not claim any ownership or other interest in them beyond the scope of the Contract, and no such interest shall attach. Unless otherwise indicated, all common law, statutory and other reserved rights, in addition to copyrights, are retained by Owner.

SECTION C
WAGES AND LABOR

C.1 PREVAILING WAGE RATES ON PUBLIC WORKS

Contractor shall comply fully with the provisions of ORS 279C.800 through 279C.870. Pursuant to ORS 279C.830(1)(d), Contractor shall pay workers at not less than the specified minimum hourly rate of wage, and shall include that requirement in all subcontracts. If the Work is subject to both the state prevailing wage rate law and the federal Davis-Bacon Act, Contractor shall pay the higher of the applicable state or federal prevailing rate of wage. Contractor shall provide written notice to all workers of the number of hours per day and days per week such workers may be required to work.

C.2 PAYROLL CERTIFICATION AND FEE REQUIREMENTS

- C.2.1 In accordance with ORS 279C.845, the Contractor and every Subcontractor shall submit written certified statements to the Owner on the form prescribed by the Commissioner of the Bureau of Labor and Industries ("BOLI"), certifying the hourly rate of wage paid each worker which the Contractor or the Subcontractor has employed on the Project and further certifying that no worker employed on the Project has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the Contract, which certificate and statement shall be verified by the oath of the Contractor or the Subcontractor that the Contractor or Subcontractor has read the certified statement, that the Contractor or Subcontractor knows the contents of the certified statement, and, that to the Contractor's or Subcontractor's best knowledge and belief, the certified statement is true. The certified statements shall set out accurately and completely the payroll records for the prior week, including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Certified statements for each week during which the Contractor or Subcontractor has employed a worker on the Project shall be submitted once a month, by the fifth (5th) business day of the following month. The Contractor and Subcontractors shall preserve the certified statements for a period of ten (10) years from the date of completion of the Contract.
- C.2.2 Pursuant to ORS 279C.845(7), the Owner shall retain 25 percent of any amount earned by the Contractor on the Project until the Contractor has filed the certified statements required by section C.2.1. The Owner shall pay to the Contractor the amount retained under this subsection within 14 days after the Contractor files the required certified statements, regardless of whether a Subcontractor has failed to file certified statements.
- C.2.3 Pursuant to ORS 279C.845(8), the Contractor shall retain 25 percent of any amount earned by a first-tier Subcontractor on this Project until the first-tier Subcontractor has filed with the Owner the certified statements required by C.2.1. Before paying any amount retained under this subsection, the Contractor shall verify that the first-tier Subcontractor has filed the certified statement. Within 14 days after the first-tier Subcontractor files the required certified statement the Contractor shall pay the first-tier Subcontractor any amount retained under this subsection.
- C.2.4 In accordance with statutory requirements and administrative rules promulgated by the Commissioner of the Bureau of Labor and Industries, the fee required by ORS 279C.825(1) will be paid by Owner to the Commissioner.

C.3 PROMPT PAYMENT AND CONTRACT CONDITIONS

- C.3.1 As a condition to Owner's performance hereunder, the Contractor shall:
- C.3.1.1 Make payment promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the Work provided for in the Contract.
- C.3.1.2 Pay all contributions or amounts due the State Industrial Accident Fund or successor program from such Contractor or Subcontractor incurred in the performance of the Contract.
- C.3.1.3 Not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished. Contractor will not assign any claims that Contractor has against Owner, or assign any sums due by Owner, to Subcontractors, suppliers, or manufacturers, and will not make any agreement or act in any way to give Subcontractors a claim or standing to make a claim against the Owner.
- C.3.1.4 Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.
- C.3.2 If Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor of a Subcontractor by any person in connection with the Project as such claim becomes due, the proper officer(s) representing the Owner may pay the claim and charge the amount of the payment against funds due or to become due Contractor under the Contract. Payment of claims in this manner shall not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.
- C.3.3 Contractor shall include in each subcontract for property or services entered into by the Contractor and a first-tier subcontractor, including a material supplier, for the purpose of performing a construction contract, a payment clause that obligates the Contractor to pay the first-tier Subcontractor for satisfactory performance under its subcontract within ten (10) Days out of such amounts as are paid to the Contractor by the Owner under such contract.
- C.3.4 If the Contractor or a first-tier subcontractor fails, neglects or refuses to pay a person that provides labor or materials in connection with the Contract within 30 days after receiving payment from the contracting agency or a contractor, the Contractor or first-tier subcontractor owes the person the amount due plus interest charges that begin at the end of the 10-day period within which payment is due under ORS 279C.580 (4) and that end upon final payment, unless payment is subject to a good faith dispute as defined in ORS 279C.580. The rate of interest on the amount due is nine percent per annum. The amount of interest may not be waived.
- C.3.5 If the Contractor or a subcontractor fails, neglects or refuses to make payment to a person furnishing labor or materials in connection with the Contract, the person may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279C.580.
- C.3.6 All employers, including Contractor, that employ subject workers who work under the Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.
- C.3.7 In accordance with ORS 279C.570, for all subcontracts that exceed \$500,000 that the Contractor withholds retainage, the Contractor shall place amounts deducted as retainage into an interest-bearing escrow account. Interest on the retainage amount accrues from the

date the payment request is approved until the date the retainage is paid to the Subcontractor to which it is due.

C.4 PAYMENT FOR MEDICAL CARE

As a condition to Owner's performance hereunder, Contractor shall promptly, as due, make payment to any person, co-partnership, association or corporation furnishing medical, surgical, and hospital care or other needed care and attention, incident to sickness or injury, to the employees of the Contractor, of all sums of which the Contractor agrees to pay for the services and all moneys and sums that the Contractor collected or deducted from the wages of employees under any law, contract or agreement for the purpose of providing or paying for the services.

C.5 HOURS OF LABOR

As a condition to Owner's performance hereunder, no person shall be employed to perform Work under the Contract for more than ten (10) hours in any one day or forty (40) hours in any one week, except in cases of necessity, emergency or where public policy absolutely requires it. In such instances, Contractor shall pay the employee at least time and a half pay:

- (a) For all overtime in excess of eight (8) hours a day or forty (40) hours in any one week when the work week is five consecutive Days, Monday through Friday; or
- (b) For all overtime in excess of ten (10) hours a day or forty (40) hours in any one week when the work week is four consecutive Days, Monday through Friday; and
- (c) For all Work performed on Saturday and on any legal holiday specified in ORS 279C.540.

This Section C.5 will not apply to Contractor's Work under the Contract to the extent Contractor is currently a party to a collective bargaining agreement with any labor organization.

This Section C.5 shall not excuse Contractor from completion of the Work within the time required under the Contract.

**SECTION D
CHANGES IN THE WORK**

D.1 CHANGES IN WORK

D.1.1 The terms of the Contract shall not be waived, altered, modified, supplemented or amended in any manner whatsoever, without prior written agreement and then only after any necessary approvals have been obtained. A Change Order is required to modify the Contract, which shall not be effective until its execution by the parties to the Contract and all approvals required by public contracting laws have been obtained.

D.1.2 It is mutually agreed that changes in Plans, quantities, or details of construction may be necessary or desirable during the course of construction. Within the general scope of the Contract, the Owner may at any time, without notice to the sureties and without impairing the Contract, require changes it deems necessary or desirable within the scope of this Project and consistent with this Section D.1. All changes to the Work shall be documented and Change Orders shall be executed under the conditions of the Contract Documents. Such changes may include, but are not limited to:

- (a) Modification of specifications and design.
- (b) Increases or decreases in quantities.
- (c) Increases or decreases to the amount of Work.
- (d) Addition or elimination of any Work item.
- (e) Change in the duration of the Project.

- (f) Acceleration or delay in performance of Work.
- (g) Deductive changes.

Deductive changes are those that reduce the scope of the Work, and shall be made by mutual agreement whenever feasible. In cases of suspension or partial termination under Section J, Owner reserves the right to unilaterally impose a deductive change and to self-perform such Work, for which the provisions of Section B.13 (Owner's Right to Do Work) shall then apply. Adjustments in compensation shall be made under Section D.1.3, in which costs for deductive changes shall be based upon a Direct Costs adjustment together with the related percentage markup specified for profit, Overhead and other indirect costs, unless otherwise agreed to by Owner.

D.1.3 The Owner and Contractor agree that adjustments to or deletions from the Work shall be administered and compensated according to the following:

- (a) **Unit Pricing:** Unit pricing may be utilized at the Owner's option when unit prices or solicitation alternates were provided that established the cost for adjustments to Work, and a binding obligation exists under the Contract on the parties covering the terms and conditions of the adjustment to Work.
- (b) **Fixed Fee:** If the Owner elects not to utilize unit pricing, or in the event that unit pricing is not available or appropriate, fixed pricing may be used for adjustments to or deletions from the Work. In fixed pricing, the basis of payments or total price shall be agreed upon in writing between the parties to the Contract, and shall be established before the Work is done whenever feasible. Notwithstanding the foregoing, the mark-ups set forth in Section D.1.3(c) shall be utilized in establishing fixed pricing, and such mark-ups shall not be exceeded. Cost and price data relating to adjustments to or deletions from the Work shall be supplied by Contractor to Owner upon request, but Owner shall be under no obligation to make such requests.
- (c) **Time and Material:** In the event that unit pricing and fixed pricing are not utilized, then adjustments to or deletions from the Work shall be performed on a cost reimbursement basis for Direct Costs. Such Work shall be compensated on the basis of the actual, reasonable and allowable cost of labor, equipment, and material furnished on the Work performed. The Contractor or Subcontractor who performs the Work shall be allowed to add up to ten percent (10%) markup to the Direct Costs as full compensation for profit, Overhead and other indirect costs for Work performed with the Contractor's or Subcontractor's own agents

Each ascending tier Subcontractor or the Contractor that did not perform the Work, will be allowed to add up to five percent (5%) supplemental markup on the Direct Costs of the Work (but not the above allowable markups) covered by a Change Order. No additional markup shall be permitted for any third tier or greater descending Subcontractor.

Example: \$20,000 of Direct Costs Work performed by a 2nd Tier Subcontractor

	Markup	Allowed Total Fee Plus Markup
General Contractor	5%	\$1,000.00
1 st Tier Sub Contractor	5%	\$1,000.00
2 nd Tier Sub Contractor	10%	\$22,000.00

- (d) Payments made to the Contractor shall be complete compensation for Overhead, profit, and all costs that were incurred by the Contractor or by other agents furnished by the Contractor, including Subcontractors, for adjustments to or deletions from the Work pursuant to a Change Order. Owner may establish a maximum cost for additional Work under this Section D.1.3, which shall not be exceeded for reimbursement without additional written

authorization from Owner in the form of a Change Order. Contractor shall not be required to complete such additional Work without additional authorization.

- D.1.4 Any necessary adjustment of Contract Time that may be required as a result of adjustments to or deletions from the Work must be agreed upon by the parties before the start of the revised Work unless Owner authorizes Contractor to start the revised Work before agreement on Contract Time adjustment.

Contractor shall submit any request for additional compensation (and additional Contract Time if Contractor was authorized to start Work before an adjustment of Contract Time was approved) as soon as possible but no later than thirty (30) Days after receipt of Owner's request for additional Work. If Contractor's request for additional compensation or adjustment of Contract Time is not made within the thirty (30) Day time limit, Contractor's requests pertaining to that additional Work shall be barred. The thirty (30) Day time limit for making requests shall not be extended for any reason, including without limitation Contractor's claimed inability to determine the amount of additional compensation or adjustment of Contract Time, unless an extension is granted in writing by Owner. If the Owner denies Contractor's request for additional compensation or adjustment of Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process. No other reimbursement, compensation, or payment will be made, except as provided in Section D.1.5 for impact claims.

- D.1.5 If any adjustment to Work under Section D.1.3 causes an increase or decrease in the Contractor's cost of, or the Contract Time required for the performance of any other part of the Work under the Contract, Contractor shall submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt of Owner's request for adjustments to or deletions from the Work by Contractor.

The thirty (30) Day time limit applies to claims of Subcontractors, suppliers, or manufacturers who may be affected by Owner's request for adjustments to or deletions from the Work and who request additional compensation or an extension of Contract Time to perform; Contractor has responsibility for contacting its Subcontractors, suppliers, or manufacturers within the thirty (30) Day time limit, and including their requests with Contractor's requests. If the request involves Work to be completed by Subcontractors, or materials to be furnished by suppliers or manufacturers, such requests shall be submitted to the Contractor in writing with full analysis and justification for the adjustments to compensation and Contract Time requested. The Contractor shall analyze and evaluate the merits of the requests submitted by Subcontractors, suppliers, and manufacturers to Contractor prior to including those requests and Contractor's analysis and evaluation of those requests with Contractor's requests for adjustments to compensation or Contract Time that Contractor submits to the Owner. Failure of Subcontractors, suppliers, manufacturers or others to submit their requests to Contractor for inclusion with Contractor's requests submitted to Owner within the time period and by the means described in this section shall constitute a waiver of these Subcontractor claims. The Owner will not consider direct requests or claims from Subcontractors, suppliers, manufacturers or others not a party to the Contract. The consideration of such requests and claims under this section does not give any Person, not a party to the Contract the right to bring a claim against Owner, whether in this claims process, in litigation, or in any dispute resolution process.

If the Owner denies the Contractor's request for adjustment to compensation or Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

- D.1.6 No request or Claim by the Contractor for additional costs or an adjustment of Contract Time shall be allowed if made after receipt of final payment application under the Contract. Final payment application must be made by Contractor within the time required under Section E.6.4.

- D.1.7 It is understood that changes in the Work are inherent in construction of this type. The number of changes, the scope of those changes, and the effect they have on the progress of the original Work cannot be defined at this time. The Contractor agrees that it will work in good faith with Owner to undertake changes, when agreed upon by execution of a Change Order. Each change will be evaluated for extension of Contract Time and increase or decrease in compensation based on its own merit.

D.2 DELAYS

- D.2.1 Contractor shall not be entitled to additional compensation or additional Contract Time for Avoidable Delays.

- D.2.2 In the event of Unavoidable Delays, Contractor may be entitled to the following:

- (a) Contractor may be entitled to additional compensation or additional Contract Time, or both, for Unavoidable Delays described in Section D.2.1.2 (a) and (b).
- (b) Contractor may be entitled to additional Contract Time for Unavoidable Delays described in Section D.2.1.2(c) and (d).

In the event of any requests for additional compensation or additional Contract Time, or both, as applicable, arising under this Section D.2.2 for Unavoidable Delays, other than requests for differing Project Site conditions for which a review process is established under Section A.4.5, Contractor shall submit a written notification of the delay to the Owner within two (2) Days of the occurrence of the cause of the delay. This written notification shall state the cause of the potential delay, the Project components impacted by the delay, and the anticipated additional Contract Time extension or the additional compensation, or both, as applicable, resulting from the delay. Within seven (7) Days after the cause of the delay has been mitigated, or in no case more than thirty (30) Days after the initial written notification, the Contractor shall submit to the Owner, a complete and detailed request for additional compensation or additional Contract Time, or both, as applicable, resulting from the delay. If the Owner denies Contractor's request for additional compensation or adjustment of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

If Contractor does not timely submit the notices required under this Section D.2, Contractor's Claim shall be barred.

D.3 CLAIMS REVIEW PROCESS

- D.3.1 All Contractor Claims shall be referred to the Owner for review. Contractor's Claims, including Claims for adjustments to compensation or Contract Time, shall be submitted in writing by Contractor to the Owner within five (5) Days after a denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, provided that such initial request has been submitted in accordance with the requirements and within the time limits established in these County General Conditions. Within thirty (30) Days after the initial Claim, Owner shall receive from Contractor a complete and detailed description of the Claim (the "Detailed Notice") that includes all information required by Section D.3.2. Unless the Claim is made in accordance with these time requirements, it shall be barred.

SECTION E
PAYMENTS

D.3.2 The Detailed Notice of the Claim shall be submitted in writing by Contractor and shall include all information, records and documentation necessary for the Owner to properly and completely evaluate the claim, including, but not limited to a detailed, factual statement of the basis of the Claim, pertinent dates, Contract provisions which support or allow the Claim, reference to or copies of any documents which support the Claim, the dollar value of the Claim, and the Contract Time adjustment requested for the Claim. If the Claim involves Work to be completed by Subcontractors, the Contractor will analyze and evaluate the merits of the Subcontractor claim prior to forwarding it and that analysis and evaluation to the Owner. The Owner will not consider direct claims from Subcontractors, suppliers, manufacturers, or others not a party to the Contract. Contractor agrees that it will make no agreement, covenant, or assignment, nor will it commit any other act that will permit or assist any Subcontractor, supplier, manufacturer, or other to directly or indirectly make a claim against Owner.

D.3.3 The Owner, through the Architect/Engineer (or other employee or agent assigned by the Owner) will review all Claims and take one or more of the following preliminary actions within ten (10) Days of receipt of the Detailed Notice of a Claim: (1) request additional supporting information from the Contractor; (2) inform the Contractor and Owner in writing of the time required for adequate review and response; (3) reject the Claim in whole or in part and identify the reasons for rejection; (4) recommend approval of all or part of the Claim; (5) arrange a meeting with the Contractor for formal review of the Claim; or (6) propose an alternate resolution.

D.3.4 Once the Engineer or Project Manager determines the Owner is in receipt of a properly submitted claim, the Engineer or Project Manager may arrange a meeting, as agreed by the parties, with the Contractor in order to present the claim for formal review and discussion. A person authorized by the Contractor to execute Change Orders on behalf of the Contractor must be present and attend all claim meetings.

D.3.5 The Owner's decision, through the Architect/Engineer (or other employee or agent assigned by the Owner), shall be final and binding on the Contractor unless appealed by written notice to the Owner within fifteen (15) Days of receipt of the decision. The Contractor must present written documentation supporting the Claim within fifteen (15) Days of the notice of appeal. After receiving the appeal documentation, the Owner, through the appropriate department director, shall review the materials and render a decision within thirty (30) Days after receiving the appeal documents.

D.3.6 If, at any step in the claim decision or review process, the Contractor fails to promptly submit requested information or documentation that the Owner deems necessary to analyze the claim, the Contractor is deemed to have waived its right to further review, and the Claim will not be considered properly filed and preserved.

D.3.7 Both parties agree to exercise their best efforts in good faith to resolve all disputes within sixty (60) Days of the issuance of the appeal in Section D. 3.4 above. If the parties are unable to resolve their issues through mediation or otherwise, either party may seek redress through all available remedies in equity or in law.

D.3.8 Unless otherwise directed by Owner, Contractor shall proceed with the Work while any Claim, or mediation or litigation arising from a Claim, is pending. Regardless of the review period or the final decision of the Owner, the Contractor shall continue to diligently pursue the Work as identified in the Contract Documents. In no case is the Contractor justified or allowed to cease or delay Work, in whole or in part, without a written stop work order from the Owner.

E.1 SCHEDULE OF VALUES

The Contractor shall submit, by or before the pre-construction conference (as described in Section H.1.3), a schedule of values ("Schedule of Values") for the Contract Work. This schedule shall provide a breakdown of values for the Contract Work and will be the basis for progress payments. The breakdown shall demonstrate reasonable, identifiable, and measurable components of the Work. Unless objected to by the Owner, this schedule shall be used as the basis for reviewing Contractor's applications for payment. If objected to by Owner, Contractor shall revise the schedule of values and resubmit the same for approval of Owner.

E.2 APPLICATIONS FOR PAYMENT

E.2.1 Owner shall make progress payments on the Contract monthly as Work progresses, in accordance with the requirements of this Section E.2 and ORS 279C.570. Applications for payment shall be based upon estimates of Work completed and the Schedule of Values. As a condition precedent to Owner's obligation to pay, all applications for payment shall be approved by the Owner. A progress payment shall not be considered acceptance or approval of any Work or waiver of any defects therein. Owner shall pay to Contractor interest in accordance with ORS 279C.570 for overdue invoices, not including retainage, due the Contractor. Overdue invoices will be those that have not been paid within the earlier of:

- (a) Thirty (30) days after receipt of the invoice; or
- (b) Fifteen (15) days after the payment is approved by the County.

Notwithstanding the foregoing, in instances when an application for payment is filled out incorrectly, or when there is any defect or impropriety in any submitted application or when there is a good faith dispute, Owner shall so notify the Contractor within fifteen (15) Days stating the reason or reasons the application for payment is defective or improper or the reasons for the dispute. A defective or improper application for payment, if corrected by the Contractor within seven (7) Days of being notified by the Owner, shall not cause a payment to be made later than specified in this section unless interest is also paid. Payment of interest will be postponed when payment on the principal is delayed because of disagreement between the Owner and the Contractor.

Owner reserves the right, instead of requiring the Contractor to correct or resubmit a defective or improper application for payment, to reject the defective or improper portion of the application for payment and pay the remainder of the application for such amounts which are correct and proper.

Owner, upon written notice to the Contractor, may elect to make payments to the Contractor only by means of Electronic Funds Transfers ("EFT") through Automated Clearing House ("ACH") payments. If Owner makes this election, the Contractor shall arrange for receipt of the EFT/ACH payments.

E.2.2 Contractor shall submit to the Owner an application for each payment and, if required, receipts or other vouchers showing payments for materials and labor including payments to Subcontractors. Contractor shall include in its application for payment a schedule of the percentages of the various parts of the Work completed, based on the Schedule of Values which shall aggregate to the payment application total, and shall include, on the face of each copy thereof, a certificate in substantially the following form:

"I, the undersigned, hereby certify that the above bill is true and correct, and the payment therefore, has not been received.

Signed: _____
Dated: _____"

E.2.3 Generally, applications for payment will be accepted only for materials that have been installed. Under special conditions, applications for payment for stored materials will be accepted at Owner's sole discretion. Such a payment, if made, will be subject to the following conditions:

- (a) The request for stored material shall be submitted at least thirty (30) Days in advance of the application for payment on which it appears. Applications for payment shall be entertained for major equipment, components or expenditures only.
- (b) The Contractor shall submit applications for payment showing the quantity and cost of the material stored.
- (c) The material shall be stored in a bonded warehouse and Owner shall be granted the right to access the material for the purpose of removal or inspection at any time during the Contract Period.
- (d) The Contractor shall name the Owner as co-insured on the insurance policy covering the full value of the property while in the care and custody of the Contractor until it is installed. A certificate noting this coverage shall be issued to the Owner.
- (e) Payments shall be made for materials and equipment only. The submitted amount in the application for payment shall be reduced by the cost of transportation from the storage site to the Project Site and for the cost of an inspector to verify delivery and condition of the goods at the storage site. The cost of storage and inspection shall be borne solely by the Contractor.
- (f) Within sixty (60) Days of the application for payment, the Contractor shall submit evidence of payment covering the material and/or equipment stored and of payment for the storage site.
- (g) Payment for stored materials and/or equipment shall in no way indicate acceptance of the materials and/or equipment or waive any rights under the Contract for the rejection of the Work or materials and/or equipment not in conformance with the Contract Documents.
- (h) All required documentation shall be submitted with the respective application for payment.

E.2.4 The Owner reserves the right to withhold all or part of a payment, or may nullify in whole or part any payment previously made, to such extent as may be necessary in the Owner's opinion to protect the Owner from loss because of:

- (a) Work that is defective and not remedied, or that has been demonstrated or identified as failing to conform with Applicable Laws or the Contract Documents;
- (b) third party claims filed or evidence reasonably indicating that such claims will likely be filed unless security acceptable to the Owner is provided by the Contractor;
- (c) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment (in which case Owner may issue checks made payable jointly to Contractor and such unpaid persons under this provision, or directly to Subcontractors and suppliers at any level under Section C.3.2);

- (d) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;
- (e) damage to the Work, Owner or Owner's agent;
- (f) reasonable evidence that the Work will not be completed within the Contract Time required by the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- (g) failure to carry out the Work in accordance with the Contract Documents; or
- (h) assessment of liquidated damages, when withholding is made for offset purposes.

E.2.5 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- (a) Take that portion of the Contract Price properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Price allocated to that portion of the Work in the Schedule of Values, less retainage as provided in Section E.5. Pending final determination of cost to the Owner of changes in the Work, no amounts for changes in the Work can be included in applications for payment until the Contract Price has been adjusted by a Change Order;
- (b) Add that portion of the Contract Price properly allocable to materials and equipment delivered and suitably stored at the Project Site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner pursuant to Section E.2.3, suitably stored off the Project Site at a location agreed upon in writing), less retainage as provided in Section E.5;
- (c) Subtract the aggregate of previous payments made by the Owner; and
- (d) Subtract any amounts for which the Owner has withheld or nullified payment as provided in the Contract Documents.

E.2.6 Contractor's applications for payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier.

E.2.7 The Contractor warrants to Owner that title to all Work covered by an application for payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an application for payment all Work for which payments are received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided financing, labor, materials and equipment relating to the Work.

E.2.8 If Contractor disputes any determination by Owner with regard to any application for payment, Contractor nevertheless shall continue to expeditiously perform the Work. No payment made hereunder shall be or be construed to be final acceptance or approval of that portion of the Work to which such partial payment relates or shall relieve Contractor of any of its obligations hereunder.

E.3 PAYROLL CERTIFICATION REQUIREMENT

Owner's receipt of payroll certification pursuant to Section C.2 of the Contract shall be a condition precedent to Owner's obligation to pay any progress payments or final payment otherwise due.

E.4 DUAL PAYMENT SOURCES

Contractor shall not be compensated for Work performed under the Contract from any state agency other than the agency that is a party to the Contract.

E.5 RETAINAGE

E.5.1 Retainage shall be withheld and released in accordance with the requirements set forth in Local Contract Review Board Rules or the applicable County standard.

E.5.1.1 Owner may reserve as retainage from any progress payment an amount not to exceed five percent of the payment. As Work progresses, Owner may reduce the amount of retainage on or may eliminate retainage on any remaining monthly Contract payments after fifty (50) percent of the Work under the Contract is completed if, in the Owner's discretion, such Work is progressing satisfactorily. Elimination or reduction of retainage shall be allowed only upon written application by the Contractor, which application shall include written approval of Contractor's surety; except that when the Work is ninety-seven and a half percent (97.5%) completed in Owner's estimation, the Owner may, at its discretion and without application by the Contractor, reduce the retained amount to hundred (100) percent of the value of the Work remaining to be done. Upon receipt of written application by the Contractor, Owner shall respond in writing within a reasonable time.

E.5.1.2 If retainage is withheld, unless the Contractor requests and the Owner accepts a form of retainage described in options (a) or (b) below, the Owner (except as otherwise provided below for a contract of \$500,000 or less), will deposit the retainage in an interest-bearing escrow account as required by ORS 279C.570(2). The Contractor shall execute such documentation and instructions respecting the interest-bearing escrow account as the Owner may require to protect its interests, including but not limited to a provision that no funds may be paid from the account to anyone without the Owner's advance written authorization. For a Contract over \$500,000, if the Contractor requests that the Owner deposit the retainage in an interest-bearing account under ORS 279C.560(5), the Owner will use an interest-bearing escrow account as stated above. For a Contract of \$500,000 or less, if the Contractor requests that the Owner deposit the retainage in an interest-bearing account under ORS 279C.560(5), the Owner will use an interest-bearing account (in a bank, savings bank, trust company or savings association) as provided under ORS 279C.450(5).

In accordance with the provisions of ORS 279C.560, Local Contract Review Board Rules, or the applicable County standard, unless the Owner finds in writing that accepting bonds, securities or other instruments described in option (a) below or a security bond described in option (b) below poses an extraordinary risk that is not typically associated with the bond, security or instrument, the Owner will approve the Contractor's written request:

- a. to be paid amounts which would otherwise have been retained from progress payments where Contractor has deposited acceptable bonds, securities or other instruments of equal value with Owner or in a custodial account or other mutually-agreed account satisfactory to Owner, with an approved bank or trust company to be held in lieu of the cash retainage for the benefit of Owner. Interest or earnings on the bonds, securities or other instruments shall accrue to the Contractor. The Contractor shall execute and provide such documentation and instructions respecting the bonds, securities and other instruments as the Owner may require to protect its interests. To be permissible, the bonds, securities and other instruments must be of a character approved by Owner; or

- b. that the Contractor be allowed, with the approval of the Owner, Owner allow Contractor to deposit a surety bond for the benefit of Owner, in a form acceptable to Owner, in lieu of all or a portion of funds retained, or to be retained. Such bond and any proceeds therefrom shall be made subject to all claims and liens in the manner and priority as set forth for retainage under ORS 279C.550 to ORS 279C.625.

When the Owner has accepted the Contractor's election of option (a) or (b), Owner may recover from Contractor any additional costs incurred through such election by reducing Contractor's final payment. Where the Owner has agreed to Contractor's request for option (b), Contractor shall accept like bonds from Subcontractors and suppliers on the Project from which Contractor has required retainages.

E. 5.1.3 The retainage held by Owner shall be included in and paid to the Contractor as part of the final payment of the Contract Price. The Owner shall pay to Contractor interest at the rate of two thirds of one percent per month on the final payment due Contractor, interest to commence forty-five (45) Days after the date which Owner receives Contractor's final approved application for payment and Work under the Contract has been completed and accepted and to run until the date when final payment is tendered to Contractor. The Contractor shall notify Owner in writing when the Contractor considers the Work complete and deliver to Owner its final application for payment and Owner shall, within fifteen (15) Days after receiving the written notice and the application for payment, either accept the Work or notify the Contractor of Work yet to be performed on the Contract. If Owner does not within the time allowed notify the Contractor of Work yet to be performed to fulfill contractual obligations, the interest provided by this subsection shall commence to run forty-five (45) Days after the end of the fifteen (15) Day period.

E.5.1.4 Owner will reduce the amount of the retainage if the Contractor notifies the Owner that the Contractor has deposited in an escrow account with a bank or trust company, in a manner authorized by the Owner, bonds and securities of equal value of a kind approved by the Owner and such bonds and securities have in fact been deposited.

E.5.1.5 Contractor agrees that if Contractor elects to reserve a retainage from any progress payment due to any Subcontractor or supplier, such retainage shall not exceed five percent of the payment, and such retainage withheld from Subcontractors and suppliers shall be subject to the same terms and conditions stated in Subsection E.5 as apply to Owner's retainage from any progress payment due to Contractor.

E.5.1.6 The Contractor shall comply with all applicable legal requirements for withholding and releasing retainage and for prompt payments, including but not limited to those in ORS Chapters 279C and 701, and 49 CFR 26.29.

E.6 FINAL PAYMENT

E.6.1 Upon completion of all the Work under the Contract, the Contractor shall notify the Owner, in writing, that Contractor has completed Contractor's obligations under the Contract and shall prepare its application requesting final payment. The amount of final payment will be the difference between the total amount due the Contractor pursuant to the Contract Documents and the sum of all payments previously made. Upon receipt of such notice and application for payment, the Owner will inspect the Work, and, if acceptable, submit to Contractor a recommendation as to acceptance of the completed Work and the final estimate of the amount due the Contractor. If the Work is not acceptable, Owner will notify Contractor within fifteen (15) Days of Contractor's request for final payment. Upon approval of this final application for payment by the Owner and compliance by the Contractor with

provisions in Section K, and Contractor's satisfaction of other provisions of the Contract Documents as may be applicable, the Owner shall pay to the Contractor all monies due under the provisions of these Contract Documents.

- E.6.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Owner (1) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) Days' prior written notice has been given to the Owner, (2) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (3) consent of surety, if any, to final payment and (4), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien.
- E.6.3 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final application for payment.
- E.6.4 Contractor agrees to submit its final payment application within ninety (90) Days after Substantial Completion, unless written extension is granted by Owner. Contractor shall not delay final payment application for any reason, including without limitation nonpayment of Subcontractors, suppliers, manufacturers or others not a party to the Contract, or lack of resolution of a dispute with Owner or any other person of matters arising out of or relating to the Contract. If Contractor fails to submit its final payment application within ninety (90) Days after Substantial Completion, and Contractor has not obtained written extension by Owner, all requests or Claims for additional costs or an extension of Contract Time shall be barred.

SECTION F PROJECT SITE CONDITIONS

F.1 USE OF PREMISES

Contractor shall confine equipment, storage of materials and operation of Work to the limits indicated by Contract Documents, Applicable Laws, permits or directions of the Owner. Contractor shall follow the Owner's instructions regarding use of premises, if any.

F.2 PROTECTION OF WORKERS, PROPERTY AND THE PUBLIC

- F.2.1 Contractor shall maintain continuous and adequate protection of all of the Work from damage and shall protect the Owner, workers and property from injury or loss arising in connection with the Contract. Contractor shall remedy acceptably to the Owner any damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by authorized representatives or personnel of the Owner. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents.
- F.2.2 Contractor shall take all necessary precautions for the safety of all personnel on the Project Site or otherwise engaged in the undertaking of the Work and shall comply with the Contract Documents, best practices and all applicable provisions of federal, state and municipal safety laws and building codes to prevent

accidents or injury to persons on, about or adjacent to the premises where the Work is being performed. Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for protection of workers and the public against any hazards created by construction. Contractor shall designate a responsible employee or associate on the Project Site, whose duty shall be the prevention of accidents. The name and position of the person designated shall be reported to the Owner. The Owner has no responsibility for Project Site safety. Project Site safety shall be the responsibility of the Contractor.

- F.2.3 Contractor shall not enter upon private property without first obtaining permission from the property owner or its duly authorized representative. Contractor shall be responsible for the preservation of all public and private property along and adjacent to the Work contemplated under the Contract and shall use every precaution necessary to prevent damage thereto. In the event the Contractor damages any property, the Contractor shall at once notify the property owner and make, or arrange to make, full restitution. Contractor shall, immediately and in writing, report to the Owner, all pertinent facts relating to such property damage and the ultimate disposition of the claim for damage.
- F.2.4 Contractor shall be responsible for protection of adjacent work areas including impacts brought about by activities, equipment, labor, utilities, vehicles and materials on the Project Site.
- F.2.5 Contractor shall at all times direct its activities in such a manner as to minimize adverse effects on the environment. Handling of all materials shall be conducted so no release will occur that may pollute or become hazardous.
- F.2.6 In an emergency affecting the safety of life or limb or of the Work or of adjoining property, the Contractor, without special instruction or authorization from the Owner, shall act reasonably to prevent threatened loss or injury, and shall so act, without appeal, if instructed by the Owner. Any compensation claimed by the Contractor on account of emergency work shall be determined in accordance with section D.
- F.2.7 Contractor shall comply with all Owner safety rules and regulations, if applicable. Prior to commencement of any Work, Contractor and Subcontractors shall be required to complete an Owner Contractor Safety Orientation and submit all Owner required safety plans.
- F.2.8 Contractor shall demonstrate that an employee drug testing program is in place.

F.3 CUTTING AND PATCHING

- F.3.1 If applicable, Contractor shall be responsible for coordinating all cutting, fitting, or patching of the Work to make its several parts come together properly and fit to receive or be received by work of other contractors or Subcontractors shown upon, or reasonably implied by, the Contract Documents.
- F.3.2 If applicable, Contractor shall be responsible for restoring all cut, fitted, or patched surfaces to an original condition; provided, however, that if a different condition is specified in the Contract Documents, then Contractor shall be responsible for restoring such surfaces to the condition specified in the Contract Documents.

F.4 CLEANING UP

From time to time as may be prudent or ordered by the Owner and, in any event, immediately after completion of the Work, the Contractor shall, at its own expense, clean up and remove all refuse and unused materials of any kind resulting from the Work. If Contractor fails to do so within twenty-four (24) hours after notification by the Owner the work may be

done by others and the cost charged to the Contractor and deducted from payment due the Contractor.

F.5 ENVIRONMENTAL CONTAMINATION

F.5.1. Contractor shall be held responsible for and shall indemnify, defend (with counsel of Owner's choice), and hold harmless Owner from and against any costs, expenses, damages, claims, and causes of action, or any of them, resulting from all spills, releases, discharges, leaks and disposal of environmental pollution, including storage, transportation, and handling during the performance of the Work or Contractor's obligations under the Contract which occur as a result of, or are contributed by, the negligence or actions of Contractor or its personnel, agents, or Subcontractors or any failure to perform in accordance with the Contract Documents (except to the extent otherwise void under ORS 30.140). Nothing in this section F.5.1 shall limit Contractor's responsibility for obtaining insurance coverages required under Section G.3 of the Contract, and Contractor shall take no action that would void or impair such coverages.

F.5.1.1 Contractor agrees to promptly dispose of such spills, releases, discharge or leaks to the satisfaction of Owner and regulatory agencies having jurisdiction in a manner that complies with Applicable Laws. Cleanup shall be at no cost to the Owner and shall be performed by properly qualified and, if applicable, licensed personnel.

F.5.1.2 Unless otherwise approved in the Solicitation Document, Contractor shall obtain the Owner's written consent prior to bringing onto the Project Site any (i) environmental pollutants or (ii) hazardous substances or materials, as the same or reasonably similar terms are used in any Applicable Laws. In any event, Contractor shall provide prior written notice to Owner when hazardous materials are brought on to the Project Site. The Contractor, at all times, shall:

- (a) properly handle, use and dispose of all environmental pollutants and hazardous substances or materials on the Project Site, in accordance with all Applicable Laws;
- (b) be responsible for any and all spills, releases, discharges, or leaks of (or from) environmental pollutants or hazardous substances or materials which Contractor has brought onto the Project Site; and
- (c) promptly clean up and remediate, without cost to the Owner, such spills, releases, discharges, or leaks to the Owner's satisfaction and in compliance with all Applicable Laws.

F.5.2 Contractor shall report all reportable quantity releases, as such releases are defined in Applicable Laws. Upon discovery, regardless of quantity, Contractor must verbally report all releases to the Owner in a prompt manner. A written follow-up report shall be submitted to Owner within 48 hours of the telephonic report. Such written report shall contain, as a minimum:

- (a) Description of items released (identity, quantity, manifest numbers, and any and all other documentation required by law).
- (b) Whether amount of items released is EPA/DEQ reportable, and, if so, when reported.
- (c) Exact time and location of release, including a description of the area involved.
- (d) Containment procedures initiated.

(e) Summary of communications about the release between Contractor and State, local or federal officials other than Owner. Any communication to the press will be done by Owner and Contractor will defer to Owner.

(f) Description of cleanup procedures employed or to be employed at the Project Site, including disposal location of spill residue.

(g) Personal injuries, if any, resulting from, or aggravated by, the release.

F.6 ENVIRONMENTAL CLEAN-UP

F.6.1 Unless disposition of environmental pollution is specifically a part of the Contract, or was caused by the Contractor (reference F.5 Environmental Contamination), Contractor shall immediately notify Owner of any hazardous substance(s) which Contractor discovers or encounters during performance of the Work required by the Contract. "Hazardous substance(s)" means any hazardous, toxic and radioactive materials and those substances defined as "hazardous substances," "hazardous materials," "hazardous wastes," "toxic substances," or other similar designations in any federal, state, or local law, regulation, or ordinance, including without limitation asbestos, polychlorinated biphenyl ("PCB"), or petroleum, and any substances, materials or wastes regulated by 40 CFR, Part 261 and defined as hazardous in 40 CFR S 261.3. In addition to notifying Owner of any hazardous substance(s) discovered or encountered, Contractor shall immediately cease working in any particular area of the Project where a hazardous substance(s) has been discovered or encountered if continued work in such area would present a risk or danger to the health or wellbeing of Contractor's or any Subcontractor's work force, property or the environment.

F.6.2 Upon being notified by Contractor of the presence of hazardous substance(s) on the Project Site, not brought on to the Project Site by Contractor, Owner shall arrange for the proper disposition of such hazardous substance(s).

F.7 DEMOLITION

F.7.1 For demolition tasks, if any, the Contractor shall salvage or recycle construction and demolition debris, if feasible and cost-effective.

SECTION G INDEMNITY, BONDING, AND INSURANCE

G.1 RESPONSIBILITY FOR DAMAGES / INDEMNITY

G.1.1 Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay that may be caused by, or result from, the carrying out of the Work to be done under the Contract, or from any act, omission or neglect of the Contractor, its Subcontractors, employees, guests, visitors, invitees and agents.

G.1.2 To the fullest extent permitted by law, Contractor shall indemnify, defend (with counsel approved by Owner) and hold harmless the Owner and its elected officials, officers, directors, agents, and employees (collectively "Indemnitees") from and against all liabilities, damages, losses, claims, expenses, demands and actions of any nature whatsoever which arise out of, result from or are related to: (a) any damage, injury, loss, expense, inconvenience or delay described in this Section G.1; (b) any accident or occurrence which happens or is alleged to have happened in or about the Project Site or any place where the Work is being performed, or in the vicinity of either, at any time prior to the time the Work is fully completed in all respects; (c) any failure of the Contractor to

observe or perform any duty or obligation under the Contract Documents which is to be observed or performed by the Contractor, or any breach of any agreement, representation or warranty of the Contractor contained in the Contract Documents or in any subcontract; (d) the negligent acts or omissions of the Contractor, a Subcontractor or anyone directly or indirectly employed by them or any one of them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder (except to the extent otherwise void under ORS 30.140); and (e) any lien filed upon the Project or bond claim in connection with the Work. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section G.1.2.

G.1.3 In claims against any person or entity indemnified under Section G.1.2 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section G.1.2 shall not be limited on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

G.2 PERFORMANCE AND PAYMENT SECURITY; PUBLIC WORKS BOND

G.2.1 When the Contract Price is \$50,000 or more, the Contractor shall furnish and maintain in effect at all times during the Contract Period a performance bond in a sum equal to the Contract Price and a separate payment bond also in a sum equal to the Contract Price. Contractor shall furnish such bonds even if the Contract Price is less than the above thresholds if otherwise required by the Contract Documents.

G.2.2 Bond forms furnished by the Owner and notarized by Contractor's surety company authorized to do business in Oregon are the only acceptable forms of performance and payment security, unless otherwise specified in the Contract Documents.

G.2.3 Before execution of the Contract, the Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by Oregon Revised Statutes, Chapter 279C.830 and 279C.836, unless otherwise exempt under those provisions. The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the Construction Contractors Board before starting Work, unless otherwise exempt, and shall verify that the Subcontractor has filed a public works bond before permitting any Subcontractor to start Work.

G.3 INSURANCE

G.3.1 Primary Coverage: Insurance carried by Contractor under the Contract shall be the primary coverage. The coverages indicated are minimums unless otherwise specified in the Contract Documents.

G.3.2 Workers' Compensation: All employers, including Contractor, that employ subject workers who work under the Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. This shall include Employer's Liability Insurance with coverage limits of not less than the minimum amount required by statute for each accident. Contractors who perform the Work without the assistance or labor of any employee need not obtain such coverage if the Contractor certifies so in writing. Contractor shall ensure that each of its Subcontractors complies with these requirements. The Contractor shall require proof of such Workers' Compensation coverage by receiving and keeping on file a certificate of insurance from each

Subcontractor or anyone else directly employed by either the Contractor or its Subcontractors.

G.3.3 Builder's Risk Insurance:

G.3.3.1 Builder's Risk: During the term of the Contract, for new construction the Contractor shall obtain and keep in effect Builder's Risk insurance on an all risk forms, including earthquake and flood, for an amount equal to the full amount of the Contract, plus any changes in values due to modifications, Change Orders and loss of materials added. Such Builder's Risk shall include, in addition to earthquake and flood, theft, vandalism, mischief, collapse, transit, debris removal, and architect's fees "soft costs" associated with delay of Project due to insured peril. Any deductible shall not exceed \$50,000 for each loss, except the earthquake and flood deductible which shall not exceed 2 percent of each loss or \$50,000, whichever is greater. The deductible shall be paid by Contractor. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear.

G.3.3.2 Builder's Risk Installation Floater: For Work other than new construction, Contractor shall obtain and keep in effect during the term of the Contract, a Builder's Risk Installation Floater for coverage of the Contractor's labor, materials and equipment to be used for completion of the Work performed under the Contract. The minimum amount of coverage to be carried shall be equal to the full amount of the Contract. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear. Owner may waive this requirement at its sole and absolute discretion.

G.3.3.3 Such insurance shall be maintained until Owner has occupied the facility.

G.3.3.4 A loss insured under the Builder's Risk insurance shall be adjusted by the Owner and made payable to the Owner as loss payee. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner. The Owner shall have power to adjust and settle a loss with insurers.

G.3.4 General Liability Insurance:

G.3.4.1 Commercial General Liability: Upon execution of a Contract, Contractor shall obtain, and keep in effect at Contractor's expense for the term of the Contract, Commercial General Liability Insurance ("CGL") covering bodily injury and property damage in the amount of not less than \$1,000,000 per claim and \$2,000,000 per occurrence in a form satisfactory to Owner. This insurance shall include personal injury liability, products and completed operations, and contractual liability coverage for the indemnities provided under the Contract (to the extent contractual liability coverage for the indemnity is available in the marketplace), and shall be issued on an occurrence basis written on ISO Form GC 00 01 (12 04 or later) or an equivalent form approved in advance by Owner. The CGL shall provide separation of insured language. The policy or policies obtained by Contractor for purposes of fulfilling the requirements of this section shall be primary insurance with respect to the Owner. Any insurance or self-insurance maintained by the County shall be excess and shall not contribute to it.

G.3.4.2 Automobile Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of the Contract, Automobile Liability Insurance covering owned, and/or hired vehicles, as applicable. The coverage may be written in combination with the Commercial General Liability Insurance. Contractor shall provide proof of insurance of not less than \$1,000,000 per claim and \$2,000,000 per occurrence. Contractor

and its Subcontractors shall be responsible for ensuring that all non-owned vehicles maintain adequate Automobile Liability insurance while on Project Site.

- G.3.4.3 Owner may adjust the insurance amounts required in Section G.3.4.1 and G.3.4.2 based upon institution specific risk assessments through the issuance of Supplemental General Conditions and a Contract.
- G.3.4.4 To the extent that the Contract Documents require the Contractor to provide professional design services, design-build, or certifications related to systems, materials, or equipment, the Contractor shall (1) purchase and maintain professional liability/errors-and-omissions insurance with limits of not less than \$1,000,000 for each claim and \$2,000,000 general annual aggregate and (2) cause those Subcontractors (of any tier) who are providing professional design services including any design-build services to procure and maintain professional liability/errors-and-omissions insurance with limits of not less than \$1,000,000 for each claim and \$2,000,000 general annual aggregate. This policy shall be for the protection of the Owner, its elected officials, officers, agents and employees against liability for damages because of personal injury, bodily injury, death, or damage to property, including loss of use thereof, and damages because of negligent acts, errors and omissions in any way related to the Contract. The Owner, at its option, may require a complete copy of the above policy.
- G.3.4.5 "Tail" Coverage: If any of the required liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of the Contract for a duration of 36 months or the maximum time period available in the marketplace if less than 36 months. Contractor shall furnish certification of "tail" coverage as described or continuous "claims made" liability coverage for 36 months following Final Completion. Continuous "claims made" coverage will be acceptable in lieu of "tail" coverage, provided its retroactive date is on or before the effective date of the Contract. Owner's receipt of the policy endorsement evidencing such coverage shall be a condition precedent to Owner's obligation to make final payment and to Owner's final acceptance of Work or services and related warranty (if any).
- G.3.4.6 Umbrella Liability (if required by Owner through issuance of Supplemental General Conditions): Contractor shall obtain, at Contractor's expense, and keep in effect during the term of the Contract, Umbrella liability Insurance over and above the general liability, automobile liability and workers' compensation coverage if required by Owner in specified limits at time of requirement.
- G.3.4.7 Pollution Liability may be required by Owner through issuance of Supplemental General Conditions.
- G.3.5 Additional Insured: The general liability insurance coverage, automobile liability, umbrella, and pollution liability if required, shall include the Owner as additional insureds but only with respect to the Contractor's activities to be performed under the Contract. The additional-insured endorsement for CGL insurance must be written on ISO Form CG 20 10 (10 01) and CG 20 37 (10 01), or their equivalent, but shall not use either of the following forms: CG 20 10 (10 93) or CG 20 10 (03 94). Proof of insurance must include a copy of the endorsement showing "Clackamas County, its elected officials, agents, officers, and employees" as scheduled insureds.

If Contractor cannot obtain an insurer to name the Owner as additional insureds, Contractor shall obtain at Contractor's expense, and keep in effect during the term of the Contract, Owners and Contractors Protective Liability Insurance, naming the Owner as additional insureds with not less than a \$2,000,000

limit per occurrence. This policy must be kept in effect for 36 months following Final Completion. As evidence of coverage, Contractor shall furnish the actual policy to Owner prior to execution of the Contract.

- G.3.6 Notice of Cancellation or Change: If the Contractor receives a non-renewal or cancellation notice from an insurance carrier affording coverage required herein, or receives notice that coverage no longer complies with the insurance requirements herein, Contractor agrees to notify Owner by fax within five (5) business days with a copy of the non-renewal or cancellation notice, or written specifics as to which coverage is no longer in compliance. When notified by Owner, the Contractor agrees to stop Work pursuant to the Contract at Contractor's expense, unless all required insurance remain in effect. Any failure to comply with the reporting provisions of this insurance, except for the potential exhaustion of aggregate limits, shall not affect the coverages provided to the Owner and its institutions, divisions, officers, and employees.

Owner shall have the right, but not the obligation, of prohibiting Contractor from entering the Project Site until a new certificate(s) of insurance is provided to Owner evidencing the replacement coverage. The Contractor agrees that Owner reserves the right to withhold payment to Contractor until evidence of reinstated or replacement coverage is provided to Owner.

- G.3.7 Certificate(s) of Insurance/Insurance Carrier Qualification: As evidence of the insurance coverage required by the Contract, the Contractor shall furnish certificate(s) of insurance to the Owner prior to execution of the Contract. The certificate(s) will specify all of the parties who are additional insureds or loss payees for the Contract. A renewal certificate shall be sent to Owner at least 10 days prior to coverage expiration. Insurance coverage required under the Contract shall be obtained from insurance companies or entities acceptable to the Owner and that are eligible to provide such insurance under Oregon law. Eligible insurers include admitted insurers that have been issued a certificate of authority from the Oregon Department of Consumer and Business Services authorizing them to conduct an insurance business and issue policies of insurance in the state of Oregon, and certain non-admitted surplus lines insurers that satisfy the requirements of applicable Oregon law and which are subject to approval by the Owner. The Contractor shall be financially responsible for all deductibles, self-insured retentions and/or self-insurance included hereunder. Any deductible, self-insured retention and/or self-insurance in excess of \$50,000 shall be subject to approval by the Owner in writing and shall be a condition precedent to the effectiveness of any Contract.

SECTION H SCHEDULE OF WORK

H.1 CONTRACT PERIOD

- H.1.1 Time is of the essence. The Contractor shall at all times carry on the Work diligently, without delay and punctually fulfill all requirements herein.
- H.1.2 Notice to Proceed. Unless otherwise directed in the Contract Documents, Contractor shall commence Work on the Project Site within fifteen (15) Days of the Notice to Proceed. Notwithstanding the Notice to Proceed, Contractor shall not be authorized to proceed with the Work until all initial Contract requirements, including the Contract, performance bond and payment bond, and certificates of insurance, have been fully executed and submitted in a form acceptable to Owner.
- H.1.3 Unless otherwise not required in the Construction Documents, Contractor shall participate in a pre-construction conference with the Owner's representative and designated design team. The

purpose of this pre-construction conference is to review the Contractor's proposed Schedule of Values and to review any other Project logistics to be coordinated between the parties.

H.1.4 Unless specifically extended by a Change Order, all Work shall be complete by the date contained in the Contract Documents. The Owner shall have the right to accelerate the completion date of the Work, which may require the use of overtime. Such accelerated Work schedule shall be an acceleration in performance of Work under Section D.1.2(f) and shall be subject to the provisions of Section D.1.

H.1.5 The Owner shall not waive any rights under the Contract by permitting the Contractor to continue or complete in whole or in part the Work after the date described in Section H.1.2 above.

H.2 SCHEDULE

H.2.1 Contractor shall provide, by or before the pre-construction conference, the initial as-planned schedule for review and acceptance by the Owner. The submitted schedule must illustrate Work by Project components, labor trades, and long lead items broken down by building and/or floor where applicable. If Owner shall so elect, Contractor shall provide the schedule in CPM format showing the graphical network of planned activities, including i) a reasonably detailed list of all activities required to complete the Work; ii) the time and duration that each activity will take to completion; and iii) the dependencies between the activities. Schedules lacking adequate detail, or unreasonably detailed, will be rejected. The schedule shall include the following: Notice to Proceed or the date the Work commences, if no Notice to Proceed is issued by Owner, Substantial Completion, and Final Completion. Schedules shall be updated monthly, unless otherwise required by the Contract Documents, and submitted with the monthly application for payment. Acceptance of the Schedule by the Owner does not constitute agreement by the Owner as to the Contractor's sequencing, means, methods, or durations. Any positive difference between the Contractor's scheduled completion and the Contract completion date is float owned by the Owner. Owner reserves the right to negotiate the float if it is deemed to be in Owner's best interest to do so. In no case shall the Contractor make a claim for delays if the Work is completed within the Contract Time but after Contractor's scheduled completion.

H.2.2 All Work shall be completed during normal weekdays (Monday through Friday) between the hours of 7:00 a.m. and 5:00 p.m. unless otherwise specified in the Contract Documents. Unless otherwise specified in the Contract Documents, no Work shall be performed during the following holidays:

- New Year's Day
- Martin Luther King Day
- Memorial Day
- Independence Day
- Labor Day
- Veterans Day
- Thanksgiving Day
- Christmas Day
- President's Day

When a holiday falls on a Sunday, the following Monday shall be recognized as a legal holiday. When a holiday falls on Saturday, the preceding Friday shall be recognized as a legal holiday.

H.3 PARTIAL OCCUPANCY OR USE

The Owner may occupy or use any completed or partially completed portion of the Work at any stage, provided such occupancy or use is consented to by public authorities having

jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have reasonably accepted in writing the responsibilities assigned to each of them. Approval by the Contractor to partial occupancy or use shall not be unreasonably withheld. Immediately prior to such partial occupancy or use, the Owner and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work. Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

SECTION I CORRECTION OF WORK

I.1 CORRECTION OF WORK BEFORE FINAL PAYMENT

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects, and that the Work will conform to the requirements of the Contract Documents. Work failing to conform to these requirements shall be deemed defective. Contractor shall promptly remove from the premises and replace all defective materials and equipment as determined by the Owner, whether incorporated in the Work or not. Removal and replacement shall be without loss or expense to the Owner, and Contractor shall bear the cost of repairing all Work destroyed or damaged by such removal or replacement. Contractor shall be allowed a period of no longer than thirty (30) Days after Substantial Completion for completion of defective (Punch List) work. At the end of the thirty-day period, or earlier if requested by the Contractor, Owner shall arrange for inspection of the Work by the Architect/Engineer. Should the work not be complete, and all corrections made, the costs for all subsequent reinspections shall be borne by the Contractor. If Contractor fails to complete the Punch List work within the thirty (30) Day period, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand without affecting Contractor's obligations.

I.2 WARRANTY WORK

I.2.1 Neither the final certificate of payment nor any provision of the Contract Documents shall relieve the Contractor from responsibility for Defective Work and, unless a longer period is specified, Contractor shall correct all defects that appear in the Work within a period of one year from the date of issuance of the written notice of Substantial Completion by the Owner except for latent defects which will be remedied by the Contractor at any time they become apparent. The Owner shall give Contractor notice of defects with reasonable promptness. Contractor shall perform such warranty work within a reasonable time after Owner's demand and at Contractor's sole expense. If Contractor fails to complete the warranty work within such period as Owner determines reasonable, or at any time in the event of warranty work consisting of emergency repairs, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand, without affecting Contractor's obligations. The Contractor shall perform the warranty Work by correcting defects within twenty-four (24) hours of notification by Owner, unless otherwise specified in the Contract Documents. Should the Contractor fail to respond within the specified response time, the Owner may, at its option, complete the necessary repairs using another contractor or its agents. If Owner completes the repairs using Owner's agent, Contractor shall pay Owner at the rate of one and one-half (1½) times the standard hourly rate of Owner's agent, plus related overhead and any direct non-salary costs. If Owner completes the repairs using another contractor, Contractor shall pay Owner the amount of Owner's direct costs billed by the other contractor for the work, plus the direct salary costs and related overhead and direct non-salary expenses of Owner's agents who

are required to monitor that contractor's work. Work performed by Owner using Owner's own agents or those of another contractor shall not affect the Contractor's contractual duties under these provisions, including warranty provisions.

- I.2.2 Nothing in this Section I.2 provision shall negate guarantees or warranties for periods longer than one year including without limitation, such guarantees or warranties required by other sections of the Contract Documents for specific installations, materials, processes, equipment or fixtures.
- I.2.3 In addition to Contractor's warranty, manufacturer's warranties shall pass to the Owner and shall not take effect until such portion of the Work covered by the applicable warranty has been accepted in writing by the Owner.
- I.2.4 The one-year period for correction of Work shall be extended with respect to portions of Work performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work, and shall be extended by corrective Work performed by the Contractor pursuant to this Section, as to the Work corrected. The Contractor shall remove from the Project Site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.
- I.2.5 Nothing contained in this Section I.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the period for correction of Work as described in this Section I.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.
- I.2.6 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Price will be reduced as appropriate and equitable as determined by Owner. Such adjustment shall be effected whether or not final payment has been made.

SECTION J

SUSPENSION AND/OR TERMINATION OF THE WORK

J.1 OWNER'S RIGHT TO SUSPEND THE WORK

- J.1.1 The Owner has the authority to suspend portions or all of the Work due to the following causes:
 - (a) Failure of the Contractor to correct unsafe conditions;
 - (b) Failure of the Contractor to carry out any provision of the Contract;
 - (c) Failure of the Contractor to carry out orders;
 - (d) Conditions, in the opinion of the Owner, which are unsuitable for performing the Work;
 - (e) Time required to investigate differing Project Site conditions; or
 - (f) Any reason considered to be in the public interest.
- J.1.2 The Owner shall notify Contractor and the Contractor's Surety in writing of the effective date and time of the suspension, and Owner shall notify Contractor and Contractor's surety in writing to resume Work.

J.2 CONTRACTOR'S RESPONSIBILITIES

- J.2.1 During the period of the suspension, Contractor is responsible to continue maintenance at the Project just as if the Work were in progress. This includes, but is not limited to, protection of completed Work, maintenance of access, protection of stored materials, temporary facilities, and clean-up.
- J.2.2 When the Work is recommenced after the suspension, the Contractor shall replace or renew any Work damaged during the suspension, remove any materials or facilities used as part of temporary maintenance, and complete the Work in every respect as though its prosecution had been continuous and without suspension.

J.3 COMPENSATION FOR SUSPENSION

Depending on the reason for suspension of the Work, the Contractor or the Owner may be due compensation by the other party. If the suspension was required due to acts or omissions of Contractor, the Owner may assess the Contractor actual costs of the suspension in terms of administration, remedial work by the Owner's agents or another contractor to correct the problem associated with the suspension, rent of temporary facilities, and other actual costs related to the suspension, and any liquidated damages arising from the delay. If the suspension was caused by acts or omissions of the Owner, the Contractor may be due compensation which shall be defined using Section D, Changes in Work. If the suspension was required through no fault of the Contractor or the Owner, neither party shall owe the other for the impact.

J.4 OWNER'S RIGHT TO TERMINATE CONTRACT

- J.4.1 The Owner may, without prejudice to any other right or remedy, and after giving Contractor seven (7) Days' written notice and an opportunity to cure, terminate the Contract in whole or in part under the following conditions:
 - (a) If Contractor should, voluntarily or involuntarily, seek protection under the United States Bankruptcy Code and Contractor as debtor-in-possession or the Trustee for the estate fails to assume the Contract within a reasonable time;
 - (b) If Contractor should make a general assignment for the benefit of Contractor's creditors;
 - (c) If a receiver should be appointed on account of Contractor's insolvency;
 - (d) If Contractor should repeatedly refuse or fail to supply an adequate number of skilled workers or proper materials to carry on the Work as required by the Contract Documents, or otherwise fail to perform the Work in a timely manner;
 - (e) If Contractor should repeatedly fail to make prompt payment to Subcontractors or for material or labor, or should disregard laws, ordinances or the instructions of the Owner;
 - (f) If Contractor is otherwise in breach of any part of the Contract; or
 - (g) If Contractor is in violation of Applicable Laws, either in the conduct of its business or in its performance of the Work.
- J.4.2 At any time that any of the above occurs, Owner may exercise all rights and remedies available to Owner at law or in equity, and, in addition, Owner may take possession of the premises and of all materials and appliances and finish the Work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive further payment until the Work is completed. If

the Owner's cost of finishing the Work exceeds the unpaid balance of the Contract Price, Contractor shall pay the difference to the Owner.

J.5 TERMINATION FOR CONVENIENCE, NON-APPROPRIATION OF FUNDS, OR FORCE MAJEURE

- J.5.1 Owner may terminate the Contract in whole or in part whenever Owner determines: (a) that termination of the Contract is in the best interest of Owner or the public; (b) that the Owner failed to receive funding, appropriations, allocations or other expenditure authority as contemplated by Owner's budget and Owner determines, in its sole determination, and its assessment and ranking of the policy objectives explicit or implicit in Owner's budget, Owner may determine it is necessary to and may terminate the Contract.; or (c) in the event of Force Majeure.
- J.5.2 The Owner shall provide the Contractor with seven (7) Days prior written notice of a termination for Owner's or for public convenience. After such notice, the Contractor shall provide the Owner with immediate and peaceful possession of the premises and materials located on and off the premises for which the Contractor received progress payment under Section E. Compensation for Work terminated by the Owner under this provision will be according to Section E. In no circumstance shall Contractor be entitled to lost profits for Work not performed due to termination. If the Contract is terminated for public convenience, neither the Contractor nor its Surety shall be relieved of liability for damages or losses suffered by the Owner as a result of defective, unacceptable or unauthorized Work completed or performed.

J.6 ACTION UPON TERMINATION

- J.6.1 Upon receiving a notice of termination, and except as directed otherwise by the Owner, Contractor shall immediately cease placing further subcontracts or orders for materials, services, or facilities. In addition, Contractor shall terminate all subcontracts or orders to the extent they relate to the Work terminated and, with the prior written approval of the Owner, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts and orders.
- J.6.2 As directed by the Owner, Contractor shall, upon termination, transfer title and deliver to the Owner all Record Documents, information, and other property that, if the Contract had been completed, would have been required to be furnished to the Owner.
- J.6.3 Upon Owner's notice of termination pursuant to either Section J.4 or J.5, if Owner shall so elect, Contractor shall assign to the Owner such subcontracts and orders as Owner shall specify. In the event Owner elects to take assignment of any such subcontract or order, Contractor shall take such action and shall execute such documents as Owner shall reasonably require for the effectiveness of such assignment and Contractor shall ensure that no contractual arrangement between it and its subcontractors or suppliers of any tier or sub-tier shall prevent such assignment.

SECTION K CONTRACT CLOSE OUT

K.1 RECORD DOCUMENTS

As a condition of final payment (refer also to section E.6), Contractor shall comply with the following: Contractor shall provide Record Documents for the entire Project to Owner. Record Documents shall depict the Project as constructed and shall reflect each and every change, modification, and deletion made during the construction. Record Documents are part of the Work and shall be provided prior to the Owner's issuance of final payment. Record Documents include all modifications to the Contract Documents unless otherwise directed.

K.2 OPERATION AND MAINTENANCE MANUALS

As part of the Work, Contractor shall submit two completed operation and maintenance manuals ("O & M Manuals") for review by the Owner prior to submission of any pay request for more than 75% of the Work. Owner's receipt of the O & M Manuals shall be a condition precedent to any payment thereafter due. The O & M Manuals shall contain a complete set of all submittals, all product data as required by the specifications, training information, telephone list and contact information for all consultants, manufacturers, installer and suppliers, manufacturer's printed data, record and shop drawings, schematic diagrams of systems, appropriate equipment indices, warranties and bonds. The Owner shall review and return one O & M Manual for any modifications or adjustments required. Prior to submission of its final pay request, Contractor shall deliver two (2) complete and approved sets of O & M Manuals in paper form and one (1) complete and approved set in electronic form to the Owner and Owner's receipt of the O & M Manuals shall be a condition precedent to Owner's obligation to make final payment.

K.3 COMPLETION NOTICES

- K.3.1 Contractor shall provide Owner written notice of both Substantial and Final Completion. The certificate of Substantial Completion shall state the date of Substantial Completion, the responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and the time within which the Contractor shall finish all items on the Punch List accompanying the Certificate. Both completion notices must be signed and notarized by the Contractor and signed by the Architect/Engineer (if applicable) and Owner to be valid. The Owner shall provide the final signature on the notices. The notices shall take effect on the date they are signed by the Owner.
- K.3.2 Substantial Completion of a facility with operating systems (e.g., mechanical, electrical, HVAC) shall be that degree of completion that has provided a minimum of thirty (30) continuous Days of successful, trouble-free operation, which period shall begin after all performance and acceptance testing has been successfully demonstrated to the Owner. All equipment contained in the Work, plus all other components necessary to enable the Owner to operate the facility in the manner that was intended, shall be complete on the Substantial Completion date. The Contractor may request that a Punch List be prepared by the Owner with submission of the request for the Substantial Completion notice.

K.4 TRAINING

As part of the Work, and prior to submission of the final application for payment, the Contractor shall schedule with the Owner training sessions for all equipment and systems as required by the Contract Documents. Contractor shall schedule training sessions at least two weeks in advance of the date of training to allow Owner to provide its personnel with adequate notice. If assignments arise because of termination under Section J.4, then such assignments shall not relieve Contractor of liability hereunder. The O & M Manual shall be used as a basis for training. In addition to any off-Project Site training required by the Contract Documents, training shall include a formal session conducted at the Project Site after the equipment and/or system is completely installed and operational in its normal operating environment.

K.5 EXTRA MATERIALS

As part of the Work, Contractor shall provide spare parts, extra maintenance materials, and other materials or products in the quantities specified in the Contract Documents prior to final payment. Delivery point for extra materials shall be designated by the Owner.

K.6 ENVIRONMENTAL CLEAN-UP

As part of the Final Completion notice, or as a separate written notice submitted with or before the notice of Final Completion, the Contractor shall notify the Owner that all environmental and pollution clean-up, remediation and closure have been completed in accordance with all Applicable Laws and pursuant to the authority of all agencies having jurisdiction, and Contractor shall provide Owner with any and all documentation related to the same, including but not limited to directives, orders, letters, certificates and permits related to or arising from such environmental pollution. The notice shall reaffirm the indemnification given under Section F.5.1 above. Contractor's completion of its obligations under this Section K.6 and Owner's receipt of documents evidencing such completion shall be a condition precedent to Owner's obligation to make final payment.

K.7 CERTIFICATE OF OCCUPANCY

Owner's receipt of an unconditioned certificate of occupancy from the appropriate state and/or local building officials shall be a condition precedent to Owner's obligation to make final payment, except to the extent failure to obtain an unconditional certificate of occupancy is due to the fault or neglect of Owner.

K.8 OTHER CONTRACTOR RESPONSIBILITIES

The Contractor shall be responsible for returning to the Owner all property of Owner issued to Contractor during construction such as keys, security passes, Project Site admittance badges, and all other pertinent items. Upon notice from Owner, Contractor shall be responsible for notifying the appropriate utility companies to transfer utility charges from the Contractor to the Owner. The utility transfer date shall not be before Substantial Completion and may not be until Final Completion, if the Owner does not take beneficial use of the facility and the Contractor's agents continue with the Work.

The Owner's property is drug free and weapons free areas and the use of tobacco products is only allowed in designated areas. Contractor shall be required to ensure that its employees, Subcontractors and agents shall comply with these requirements.

SECTION L GENERAL PROVISIONS

L.1 NO THIRD PARTY BENEFICIARIES

Owner and Contractor are the only parties to the Contract and are the only parties entitled to enforce its terms. Nothing in the Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of the Contract.

L.2 SEVERABILITY

If any provision of the Contract is declared by a court to be unenforceable, illegal, or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular provision held to be invalid.

L.3 ACCESS TO RECORDS

L.3.1 Contractor shall keep, at all times on the Project Site, one record copy of the complete Contract Documents, including the Plans, Specifications, addenda, and Change Orders (if any) in good order and marked currently to record field changes and selections made during construction, and one record copy of Shop Drawings, Product Data, Samples and similar submittals, and shall at all times give the Owner access thereto.

L.3.2 Contractor shall retain and the Owner and its duly authorized representatives shall have access, for a period not less than ten (10)

years, to all Record Documents, financial and accounting records, and other books, documents, papers and records of Contractor which are pertinent to the Contract, including records pertaining to Overhead and indirect costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Work or the Contract shall be subject to litigation, Contractor shall retain all such records until all litigation is resolved and Contractor shall continue to provide Owner and/or its agents with full access to such records until such time as all litigation is complete and all periods for appeal have expired and full and final satisfaction of any judgment, order or decree is recorded and Owner receives a record copy of documentation from Contractor.

L.4 WAIVER

Failure of the Owner to enforce any provision of the Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of the Contract.

L.5 SUCCESSORS IN INTEREST

The provisions of the Contract shall be binding upon and shall accrue to the benefit of the parties to the Contract and their respective permitted successors and assigns.

L.6 GOVERNING LAW

The Contract shall be governed by and construed in accordance with the laws of the State of Oregon without giving effect to the conflict of law provisions thereof.

L.7 APPLICABLE LAW

Contractor hereto agrees to comply in all ways with applicable local, state and federal ordinances, statutes, laws and regulations.

L.8 NON-EXCLUSIVE RIGHTS AND REMEDIES

Except as otherwise expressly provided herein, the rights and remedies expressly afforded under the provisions of the Contract shall not be deemed exclusive, and shall be in addition to and cumulative with any and all rights and remedies otherwise available at law or in equity. The exercise by either Party of any one or more of such remedies shall not preclude the exercise by it, at the same or different times, of any other remedies for the same default or breach, or for any other default or breach, by the other Party.

L.9 INTERPRETATION

The titles of the sections of the Contract are inserted for convenience of reference only and shall be disregarded in construing or interpreting any of its provisions.

L.10 DEBT LIMITATION

The Contract is expressly subject to the debt limitation of Oregon counties set forth in Article XI, Section 10, of the Oregon Constitution, and is contingent upon funds being appropriated therefore. Any provisions herein which would conflict with law are deemed inoperative to that extent.

L.11 LITIGATION

Any Claim between Owner and Contractor that arises from or relates to the Contract and that is not resolved through the Claims Review Process in Section D.3 shall be brought and conducted solely and exclusively within the Circuit Court of Clackamas County for the State of Oregon; provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the County of any form of defense or

immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. CONTRACTOR, BY EXECUTION OF THE CONTRACT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF THE COURTS REFERENCED IN THIS SECTION.

L. 12 SURVIVAL

All warranty, indemnification, and record retention provisions of the Contract, and all of Contractor's other obligations under the Contract that are not fully performed by the time of Final Completion or termination, and all other rights and obligations which by their context are intended to survive, shall survive Final Completion or any termination of the Contract.

L.13 SEVERABILITY

If any provision of this Contract is declared by a court to be unenforceable, illegal, or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular provision held to be invalid.

L.14 ACCESS TO RECORDS

L.14.1. Contractor shall keep, at all times on the Work site, one record copy of the complete Contract Documents, including the Plans, Specifications, Construction Change Directives and addenda, in good order and marked currently to record field changes and selections made during construction, and one copy of Shop Drawings, Project Data, Samples and similar submittals, and shall at all times give the Owner access thereto.

L.14.2 Contractor shall retain and the Owner and its duly authorized representatives shall have access, for a period not less than ten (10) years, to all Record Documents, financial and accounting records, and other books, documents, papers and records of Contractor which are pertinent to the Contract, including records pertaining to Overhead and indirect costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Work or this Contract shall be subject to litigation, Contractor shall retain all such records until all litigation is resolved and Contractor shall continue to provide Owner and/or its agents with full access to such records until such time as all litigation is complete and all periods for appeal have expired and full and final satisfaction of any judgment, order or decree is recorded and Owner receives a record copy of documentation from Contractor.

L.15 WAIVER

Failure of the Owner to enforce any provision of this Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of this Contract.

L. 16 NO ATTORNEY FEES.

In the event any arbitration, action or proceeding, including any bankruptcy proceeding, is instituted to enforce any term of this Contract, each party shall be responsible for its own attorneys' fees and expenses.



**CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT
SUPPLEMENTAL GENERAL CONDITIONS**

**PROJECT: #2021-18 Tri-City Water Resource Recovery Facility (“WRRF”)
Mitigation Planting**

The following modifies the January 1, 2020 Clackamas County General Conditions for Public Improvement Contracts (“County General Conditions”) for this Contract. Except as modified below, all other terms and conditions of the County General Conditions shall remain in effect.

The terms used in these Supplemental Conditions have the meanings stated in the Clackamas County General Conditions. Additional terms used in these Supplemental Conditions have the meanings stated below, which are applicable to both the singular and plural thereof. The address system used in these Supplemental Conditions is the same as the address system used in the Clackamas County General Conditions, with the prefix “SC” added thereto.

SC A.3.1(a)

Replace A.3.1 (a) through A.3.1 (e) with the following:

- a) Permits from outside agencies;
- b) The Contract including: exhibits (and addenda and any amendments thereto), Change Orders, engineer’s written interpretation and clarification, and the Notice to Proceed, with those of later date having precedence over those of an earlier date;
- c) Supplemental General Conditions;
- d) Clackamas County General Conditions
- e) Specifications – Division 01;
- f) Specifications Division 02;
- g) Construction Drawings (Construction Plans);
- h) Bonds

Design Details: Figure dimensions and dimensions that can be computed, on plans shall take precedence over scale dimensions. The Drawings with the higher level of detail take precedence over less detailed Drawings.

SC B.4 PERMITS

The contents of Section B.4 - Permits are hereby deleted in its entirety and replaced with the following:

Contractor will be responsible for obtaining all required permits and maintaining compliance with those permits throughout the course of the Work. Owner will pay the cost of obtaining all permits. The Contractor shall be responsible for any penalties or fines that result from Contractor's noncompliance with the terms of the permits. The Contractor will be responsible for compliance with the terms of all permits throughout the performance of the Work.

SC D.1 Changes in Work

The following Section is added to D.1 – Changes in Work:

D.1.7 Change Order Authorization.

Throughout the performance of the Work under this Agreement, the Owner's Project Manager is hereby granted the authority to verbally authorize change orders in the field for an amount up to \$10,000. As soon as possible following the authorization, the Owner's Project Manager shall complete the change order form provided by Clackamas County Procurement ("Procurement"), obtain the signature of Owner's Director or other authorized signatory, and submit the form to Procurement for processing. As soon as the Director signs off on the change order form, the Project Manager may then authorize another change order in the future for up to \$10,000 following the same procedure above. Each change order should include the cumulative cost of the entire change and may not be artificially broken up into multiple change orders to fall under the dollar threshold listed above. The authority granted to the Project Manager is limited by the Director's authorization to amend the Agreement under Clackamas County's Local Contract Review Board Rules and is subject to the discretion of the Director, who may suspend or restrict the Project Manager's ability to authorize change orders at any time for any reason.

E.5.1.1

Delete everything after the first sentence.

F.2 PROTECTION OF WORKERS, PROPERTY AND THE PUBLIC

Add the following after Paragraph F.2.8:

F.2.9 The following notice is applicable to Contractors who perform excavation Work:
ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0090. You may obtain copies of the rules by calling the center at (877) 668-4001.

H.1 CONTRACT PERIOD

Add the following after Paragraph H.1.5:

- H.1.6 As indicated in H.1.1, time is of the essence in the performance of this Contract. If Contractor fails to complete the Work within the Contract time, the actual damage to Owner for the delay will be substantial, but will be difficult or impractical to determine. It is therefore agreed, that Contractor will pay to Owner, not as a penalty, but as liquidated damages, the amount of \$415 each and every day that the date of final completion extends beyond the Contract Time.

Payment of liquidated damages shall not release Contractor from its obligation in respect to the complete performance of the Work, nor shall the payment of liquidated damages constitute a waiver of Owner's right to collect any additional damages that it may sustain by failure of Contractor to fully perform the Work, as it is the intent of the parties that the liquidated damages are a full and complete payment only for failure of Contractor to complete the Work on time. Owner expressly reserves the right to make claims for any and all other damages that Owner may incur due to contractor's failure to perform in strict accordance with this Contract.

K.3 COMPLETION NOTICES

Add the following after Paragraph K.3.2:

- K.3.3 Contractor shall provide Owner completed Certificate of Compliance (attached) at the time of Final Completion and before final payment will be released.

CERTIFICATE OF COMPLIANCE
Water Environment Services
Tri City WRRF Mitigation Planting

TO: Water Environment Services

PROJECT NO: P632293

CONTRACT FOR: _____

CONTRACT DATE: _____

I (We) hereby certify that all work has been performed and materials supplied in accordance with the Plans, Specifications, and Contract Documents for the above work, and that:

- A. No less than prevailing rates of wages as ascertained by the governing body of the contracting agency have been paid to laborers, workmen, and mechanics employed on this work.
- B. There have been neither unauthorized substitutions of subcontractors nor have any subcontracts been entered into without the name of the subcontractors having been submitted to the Engineer prior to the start of such subcontractor work.
- C. No subcontract was assigned or transferred or performed by any subcontractor other than the original subcontractor, without prior notice having been submitted to the Engineer together with the names of all subcontractors.
- D. All claims for material and labor and other services performed in connection with these Specifications have been paid. No further claims will be made and all liens have been satisfied and lifted.
- E. All monies due the State Industrial Accident Funds, the State Unemployment Compensation Trust Fund, the State Tax Commission, hospital associations, and/or others have been paid.

CERTIFIED BY:

CONTRACTOR

DATE

TITLE

Subscribed and sworn to before me this day of _____, 2018

Notary Public for the State of _____

My Commission Expires _____

END OF SECTION



CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT
PROJECT INFORMATION, PLANS, SPECIFICATIONS AND DRAWINGS

PROJECT: #2021-18 Tri-City Water Resource Recovery Facility (“WRRF”)
Mitigation Planting Project

Project Scope:

The Work under this Contract will consist of, but is not limited to furnishing all labor, materials, and equipment necessary to construct the landscaping improvements along the boundary of the Tri-City Water Resource Recovery Facility (“WRRF”). This work includes clearing of invasive species, preparation of planting areas, temporary erosion control, protection of existing trees, installation of the irrigation system, and planting. This work will occur both inside the fenced boundaries of the WRRF (West Planting Area) and along the adjacent trail just outside the fence (North Planting Area). Coordination with Oregon City regarding impacts to adjacent parks will be required for construction of the north planting areas.

Key Dates:

All Basic Bid Work may begin as soon as the Notice to Proceed (“NTP”) is issued
Substantial Completion: 120 days from issuance of NTP
Final Completion: 150 days from issuance of NTP

The Scope further includes the following Plans, Specifications and Drawings:

- Tri-City WRRF Mitigation Planting-Specifications, September 3, 2020
- Tri-City Water Resource Recovery Facility Drawing Set- G0.0, G0.1, L0.0, L0.1, L1.0, L1.1, L1.2, L2.0, L2.1, L2.2, L3.0, L3.1, L3.2

Tri-City WRRF Mitigation Planting

Specifications | September 3, 2020

OWNER:

Clackamas Water Environment Services

PRIME CONSULTANT:

GreenWorks, PC



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SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes general protection and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent construction.
- B. Related Requirements:
 - 1. Section 311000 "Site Clearing" for removing existing trees and shrubs.

1.3 DEFINITIONS

- A. Caliper: Diameter of a trunk measured by a diameter tape at a height 6 inches above the ground for trees up to and including 4-inch size at this height and as measured at a height of 12 inches above the ground for trees larger than 4-inch size.
- B. Caliper (DBH): Diameter breast height; diameter of a trunk as measured by a diameter tape at a height 54 inches above the ground line.
- C. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction and indicated on Drawings.
- D. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction and indicated on Drawings.
- E. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at WES Tri-City Water Resource Recovery Facility 15941 S. Agnes Ave, Oregon city. OR 97045.
 - 1. Review methods and procedures related to temporary tree and plant protection including, but not limited to, the following:
 - a. Owner's representative responsibilities.
 - b. Quality-control program.
 - c. Coordination of Work and equipment movement with the locations of protection zones.

- d. Trenching by hand or with air spade within protection zones.
- e. Field quality control.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each type of the following:
 - 1. Protection-Zone Fencing: Assembled Samples of manufacturer's standard size made from full-size components.
 - 2. Protection-Zone Signage: Full-size Samples of each size and text, ready for installation.

1.6 INFORMATIONAL SUBMITTALS

- A. Existing Conditions: Documentation of existing trees and plantings indicated to remain, which establishes preconstruction conditions that might be misconstrued as damage caused by construction activities.
 - 1. Use sufficiently detailed photographs or video recordings.
 - 2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.
- B. Tree Protection Fencing Plan: It is the responsibility of the contractor to submit a tree protection fencing plan for acceptance by owner's representative prior to beginning work on the site.
- C. Quality-control program.

1.7 QUALITY ASSURANCE

- A. Quality-Control Program: Prepare a written program to systematically demonstrate the ability of personnel to properly follow procedures and handle materials and equipment during the Work without damaging trees and plantings. Include dimensioned diagrams for placement of protection zone fencing and signage, the arborist's and tree-service firm's responsibilities, instructions given to workers on the use and care of protection zones, and enforcement of requirements for protection zones.

1.8 FIELD CONDITIONS

- A. The following practices are prohibited within protection zones:
 - 1. Storage of construction materials, debris, or excavated material.
 - 2. Cleaning of materials or equipment.
 - 3. Moving or parking vehicles or equipment.
 - 4. Erection of sheds or structures.
 - 5. Impoundment of water.
 - 6. Mechanical excavation or other digging unless otherwise it is by hand.
 - 7. Attachment of signs to or wrapping materials around trees or plants.

- B. Do not direct vehicle or equipment exhaust toward protection zones.
- C. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Backfill Soil: Stockpiled soil from project site of suitable moisture content and granular texture for placing around tree; free of stones, roots, plants, sod, clods, clay lumps, pockets of coarse sand, concrete slurry, concrete layers or chunks, cement, plaster, building debris, and other extraneous materials harmful to plant growth.
- B. Protection-Zone Fencing or Sediment Fencing: Fencing fixed in position and meeting one of the following requirements: Previously used materials may be used when approved by Owner's Representative.
 - 1. Plastic Protection-Zone Fencing: Plastic construction fencing constructed of high-density extruded and stretched polyethylene fabric with 2-inch maximum opening in pattern and weighing a minimum of 0.4 lb./ft.; remaining flexible from minus 60 to plus 200 deg F; inert to most chemicals and acids; minimum tensile yield strength of 2000 psi and ultimate tensile strength of 2680 psi; secured with plastic bands or galvanized-steel or stainless-steel wire ties; and supported by tubular or T-shape galvanized-steel posts spaced not more than 96 inches apart.
 - a. Height: 4'
 - b. Color: High-visibility orange, nonfading.
 - 2. Gates: Single swing access gates matching material and appearance of fencing, to allow for maintenance activities within protection zones; leaf width 36 inches.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Erosion and Sedimentation Control: Examine the site to verify that temporary erosion- and sedimentation-control measures are in place. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- B. Prepare written report, endorsed by arborist, listing conditions detrimental to tree and plant protection.

3.2 PREPARATION

- A. Locate and clearly identify trees, shrubs, and other vegetation to remain. Flag each tree trunk at 54 inches above the ground.

- B. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.

3.3 PROTECTION ZONES

- A. Protection-Zone Fencing or Sediment Fencing: Install protection-zone fencing along edges of protection zones before materials or equipment are brought on the site and construction operations begin in a manner that will prevent people from easily entering protected areas except by entrance gates. Construct fencing so as not to obstruct safe passage or visibility at vehicle intersections where fencing is located adjacent to pedestrian walkways or in close proximity to street intersections, drives, or other vehicular circulation.
 - 1. Plastic Fencing: Install to comply with drawings and details
 - 2. Posts: Set or drive posts into ground as shown on the details. Where a post is located on existing paving or concrete to remain, provide appropriate means of post support acceptable to Owner's Representative.
 - 3. Access Gates: Install where indicated on approved tree protection plan; adjust to operate smoothly, easily, and quietly; free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
- B. Protection-Zone Signage: Install protection-zone signage in visibly prominent locations in a manner approved by Owner's Representative. Install one sign spaced approximately 50 feet on protection-zone fencing.
- C. Maintain protection zones free of weeds and trash.
- D. Maintain protection-zone fencing and signage in good condition as acceptable to Owner's Representative and remove when construction operations are complete, and equipment has been removed from the site.
 - 1. Do not remove protection-zone fencing, even temporarily, to allow deliveries or equipment access through the protection zone.
 - 2. Temporary access is permitted subject to preapproval in writing by arborist if a root buffer effective against soil compaction is constructed as directed by arborist. Maintain root buffer so long as access is permitted.

3.4 EXCAVATION.

- A. Trenching within Protection Zones: Where utility trenches are required within protection zones, excavate under or around tree roots by hand or with air spade, or tunnel under the roots by drilling, auger boring, or pipe jacking. Do not cut main lateral tree roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots as required for root pruning. If excavating by hand, use narrow-tine spading forks to comb soil and expose roots.
- B. Redirect roots in backfill areas where possible. If encountering large, main lateral roots, expose roots beyond excavation limits as required to bend and redirect them without breaking. If

encountered immediately adjacent to location of new construction and redirection is not practical, cut roots approximately 3 inches back from new construction and as required for root pruning.

- C. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.

3.5 ROOT PRUNING

- A. Prune tree roots that are affected by temporary and permanent construction. Prune roots per Owner's Representative recommendation and as follows:
 - 1. Cut roots manually by digging a trench and cutting exposed roots with sharp pruning instruments; do not break, tear, chop or slant the cuts. Do not use a backhoe or other equipment that rips, tears, or pulls roots.
 - 2. Cut Ends: Coat cut ends of roots more than 1-1/2 inches in diameter with an emulsified asphalt or other coating formulated for use on damaged plant tissues if required by owner's representative.
 - 3. Temporarily support and protect roots from damage until they are permanently redirected and covered with soil.
 - 4. Cover exposed roots with burlap and water regularly.
 - 5. Backfill as soon as possible.
- B. Root Pruning at Edge of Protection Zone: Prune tree roots 12 inches outside of the protection zone by cleanly cutting all roots to the depth of the required excavation.
- C. Root Pruning within Protection Zone: Clear and excavate by hand or with air spade to the depth of the required excavation to minimize damage to tree root systems. If excavating by hand, use narrow-tine spading forks to comb soil to expose roots. Cleanly cut roots as close to excavation as possible.

3.6 CROWN PRUNING

- A. Prune branches that are affected by temporary and permanent construction. Prune branches as directed by Owner's Representative.
 - 1. Prune to remove only injured, broken, dying, or dead branches unless otherwise indicated. Do not prune for shape unless otherwise indicated.
 - 2. Do not remove or reduce living branches to compensate for root loss caused by damaging or cutting root system.
 - 3. Pruning Standards: Prune trees according to ANSI A300 (Part 1).
 - a. Type of Pruning: Where directed by Owner's Representative.
 - b. Specialty Pruning: Where directed by Owner's Representative.
- B. Unless otherwise directed by arborist and acceptable to Owner's Representative, do not cut tree leaders.

- C. Cut branches with sharp pruning instruments; do not break or chop.
- D. Do not paint or apply sealants to wounds.
- E. Provide subsequent maintenance pruning during Contract period as recommended by arborist.
- F. Chip removed branches and place on site as directed by Owner's Representative.

3.7 FIELD QUALITY CONTROL

- A. Inspections: Engage a qualified arborist to direct plant-protection measures in the vicinity of trees, shrubs, and other vegetation indicated to remain and to prepare inspection reports.

3.8 REPAIR AND REPLACEMENT

- A. General: Repair or replace trees, shrubs, and other vegetation indicated to remain or to be relocated that are damaged by construction operations, in a manner approved by Owner's Representative.
 - 1. Submit details of proposed pruning and repairs.
 - 2. Perform repairs of damaged trunks, branches, and roots within 24 hours according to arborist's written instructions.
 - 3. Replace trees and other plants that cannot be repaired and restored to full-growth status, as determined by Owner's Representative.
- B. Trees: Remove and replace trees damaged during construction operations that were indicated to remain if they are more than 25 percent dead or in an unhealthy condition as determined by the Owner's Representative.
 - 1. Trees: Provide replacement at size and number per "Oregon City Street Tree Planting and Removal Guide".
 - 2. Plant and maintain new trees as specified in Section 329300 "Plants."

3.9 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove excess excavated material, displaced trees, trash, and debris and legally dispose of them off Owner's property.

END OF SECTION 015639

SECTION 311000 - SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

1. Protecting existing vegetation to remain.
2. Removing existing vegetation.
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Removing above- and below-grade site improvements.
6. Disconnecting, capping, or sealing, and.
7. Temporary erosion and sedimentation control.

- B. Related Requirements:

1. Section 015639 "Temporary Tree and Plant Protection"
2. Section 328400 "Planting Irrigation" for connection or repair of existing irrigation system.
3. Section 329113 "Soil Preparation" for reuse of stockpiled topsoil for planting soil media for plants.

1.3 DEFINITIONS

- A. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.
- B. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil," but in disturbed areas such as urban environments, the surface soil can be subsoil.
- C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil; the zone where plant roots grow.
- D. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction and indicated on Drawings.
- E. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction as indicated on Drawings and according to requirements in Section 015639 "Temporary Tree and Plant Protection."

- F. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review methods and procedures related to earthmoving, including, but not limited to, the following:
 - a. Personnel and equipment needed to make progress and avoid delays.
 - b. Coordination of Work with utility locator service.
 - c. Coordination of Work and equipment movement with the locations of tree- and plant-protection zones.
 - d. Field quality control.

1.5 MATERIAL OWNERSHIP

- A. Except for materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.6 INFORMATIONAL SUBMITTALS

- A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.
 - 1. Use sufficiently detailed photographs or video recordings.
 - 2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plant designated to remain.
- B. Weed removal and abatement plan incorporating the County's WeedWise program.
- C. Topsoil stripping and stockpiling program.
- D. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.7 QUALITY ASSURANCE

- A. Topsoil Stripping and Stockpiling Program: Prepare a written program to systematically demonstrate the ability of personnel to properly follow procedures and handle materials and equipment during the Work. Include dimensioned diagrams for placement and protection of stockpiles.
- B. Rock Stockpiling Program: Prepare a written program to systematically demonstrate the ability of personnel to properly follow procedures and handle materials and equipment during the Work. Include dimensioned diagrams for placement and protection of stockpiles.

1.8 FIELD CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed trafficways if required by Owner or authorities having jurisdiction.
- B. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
 - 1. Do not proceed with work on adjoining property until directed by Owner's Representative.
- C. Utility Locator Service: Notify Call Before You Dig for area where Project is located before site clearing.
- D. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.
- E. Tree- and Plant-Protection Zones: Protect according to requirements in Section 015639 "Temporary Tree and Plant Protection."
- F. Soil Stripping, Handling, and Stockpiling: Perform only when the soil is dry or slightly moist.
- G. Verify conditions are acceptable to commence safely and without damage to existing features to be retained.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 312000 "Earth Moving."
 - 1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.

- B. Verify which trees, shrubs, and other vegetation are to remain. or to be relocated have been flagged and that protection zones have been identified and enclosed according to requirements in Section 015639 "Temporary Tree and Plant Protection."
- C. Protect existing site improvements to remain from damage during construction.
 - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 TREE AND PLANT PROTECTION

- A. Protect trees and plants remaining on-site according to requirements in Section 015639 "Temporary Tree and Plant Protection."
- B. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, including staging areas.
- C. Trees and plants outside of the work area, but not indicated to be protected, shall have their driplines remain clear of all construction activities including excavated soil materials and construction equipment staging.

3.4 EXISTING UTILITIES

- A. Owner will arrange for disconnecting and sealing indicated utilities that serve existing structures before site clearing, when requested by Contractor.
 - 1. Verify that utilities have been disconnected and capped before proceeding with site clearing.
- B. Locate, identify, disconnect, and seal or cap utilities indicated to be removed.
 - 1. Owner will arrange to shut off indicated utilities when requested by Contractor.

- C. Locate, identify, and disconnect utilities indicated to be abandoned in place.
- D. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others, unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Owner's Representative not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Owner's Representative's written permission.
- E. Excavate for and remove underground utilities indicated to be removed.

3.5 CLEARING AND GRUBBING

- A. Remove weeds and invasive plants including but not limited to:
 - 1. *Cirsium arvense* (Canadian Thistle)
 - 2. *Clematis vitalba* (Old Man's Beard)
 - 3. *Convolvulus* spp. (Morning Glory)
 - 4. *Crataegus laevigata* (English hawthorn)
 - 5. *Cytisus scoparius* (Scotch Broom)
 - 6. *Dipsacus sylvestris* (Common Teasel)
 - 7. *Festuca arundinaceae* (Tall Fescue)
 - 8. *Hedera helix* (English Ivy)
 - 9. *Holcus lanatus* (Velvet Grass)
 - 10. *Lolium* spp. (Rye Grasses)
 - 11. *Lotus corniculatus* (Bird's Foot Trefoil)
 - 12. *Lythrum salicaria* (Purple Loose Strife)
 - 13. *Melilotus* spp. (Sweet Clover)
 - 14. *Myriophyllum spicatum* (Eurasian Milfoil)
 - 15. *Phalaris arundinaceae* (Reed Canary Grass)
 - 16. *Rubus discolor* (Himalayan Blackberry)
 - 17. *Solanum* spp. (Nightshade)
 - 18. *Trifolium* spp. (Clovers)
- B. Also refer to Clackamas County's "WeedWise" Program for additional information on weeds and their removal.
- C. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction and also remove invasive trees as directed by Owner's Representative
 - 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 - 2. Non-hazardous dead trees or snags to remain.
 - 3. Grind down stumps of invasive dead trees and remove roots larger than 2 inches in diameter, obstructions, and debris to a depth of twelve inches below exposed subgrade.
 - 4. Contact Owner if hazardous trees are identified.
 - 5. Use only hand methods or air spade for clearing and grubbing invasive trees within construction limits, but outside remaining work areas.

6. Chip removed trees and their branches and stockpile in areas approved by Owner's Representative (can be used for organic mulch – see Section 329300).
 7. Remove all weeds, invasive and non-native plants.
- D. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches, compact each layer to a density equal to adjacent original ground.

3.6 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to depth of 6 inches in a manner to prevent intermingling with underlying subsoil or other waste materials.
1. Separate subsoil materials from topsoil. Remove gravel and other organic objects larger than 4 inches in diameter including debris, branches, and roots. Remove all nonsoil or unwanted objects larger than 1 inch in diameter including weeds, trash, or waste materials.
- C. Stockpile topsoil away from edge of excavations without intermixing with subsoil or other materials. Grade and shape to drain. Cover to prevent windblown dust and erosion by water.
1. Limit height of topsoil stockpiles to 72 inches.
 2. Do not stockpile topsoil within protection zones.
 3. Maintain topsoil quality and protect from possible contamination from adjacent weed seed banks, excess runoff, and construction activities that may impact topsoil viability for reuse according to the requirements in Section 329113 "Soil Preparation."
 4. Stockpile surplus topsoil to allow for respreading deeper topsoil.

3.7 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along the line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.
 2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions.

3.8 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 311000

SECTION 328400 - PLANTING IRRIGATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

1. Piping.
2. Valves.
3. Transition fittings.
4. Miscellaneous piping specialties.
5. Sprinklers.
6. Controllers and electrical control wiring connectors.
7. Boxes for irrigation equipment.

- B. Related Sections:

1. Section 329113 "Soil Preparation" for placement of planting soil.
2. Section 329200 "Turf and Grasses" for turf and grass requirements.
3. Section 329300 "Plants" for plant requirements.
4. Section 329310 "Landscape Maintenance"

1.3 DEFINITIONS

- A. ASIC: American Society of Irrigation Consultants.
- B. Controller: Programmable electronic device that operates automatic irrigation systems.
- C. Drain Piping: Downstream from lateral-piping drain valves. Piping is not under pressure.
- D. ET Controllers: EvapoTranspiration Controllers. Irrigation controllers which use some method of weather-based adjustment of irrigation. These adjusting methods include use of historical monthly averages of ET; broadcasting of ET measurements; or use of on-site sensors to track ET.
- E. Evapotranspiration: The process of evaporation from plant and soil surfaces and from within plant tissues; also referred to and abbreviated as "ET."
- F. Flow: The volume of water moving over time through a system as measured in gallons per minute (gpm).

- G. Lateral Line Piping: Downstream from control valves to sprinklers, specialties, and drain valves. Piping is under pressure during flow; also called "laterals" or referred to as "circuit piping."
- H. Low Voltage: As defined in NFPA 70 for circuits and equipment operating at less than 50 V or for remote-control, signaling power-limited circuits.
- I. Mainline Piping: Pressurized pipe that is downstream from point of connection that feeds into remote control valves; also called "mainline" or "main."
- J. Point of Connection: Place where the irrigation system is connected to a water supply; also referred to and abbreviated as "POC."
- K. Water Pressure: Force of water exerted over a given area measured in psi.
- L. Manual Valve: Manually operated device used for controlling water through pipes.
- M. Remote Control Valve: Valve that is activated automatically and regulates water to an irrigation zone; also called "automatic control valve" or "control valve."

1.4 PERFORMANCE REQUIREMENTS

- A. Irrigation zone control shall be automatic operation with controller and automatic remote-control valves.
- B. Location of Sprinklers and Specialties: Design location, as indicated on the Drawings, is approximate. Make minor adjustments necessary to avoid plantings and obstructions such as signs and light standards. Maintain 100 percent irrigation coverage of areas indicated.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.
- B. Wiring Diagrams: For power, signal, and control wiring.

1.6 INFORMATIONAL SUBMITTALS

- A. Irrigation Work Plan: Submit three copies of the proposed irrigation plan to the Owner's Representative for review and approval a minimum of 10 working days prior to commencement of work. The plan must follow the specifications and design criteria as indicated.
- B. Record Copy Drawings: During the irrigation system installation, indicate field changes in red line on a printed irrigation plan. This drawing shall be labeled "Record Copy," and shall be made available for review. The status of the record copy drawing must correlate directly with the percentage of work complete described in the Contractor's Pay Request and may be used as a guide when approving payments.
- C. Qualification Data: For qualified Installer.

- D. Zoning Chart: Show each irrigation zone and its control valve.
- E. Controller Timing Schedule: Indicate timing settings for each automatic controller zone.
- F. Field quality-control reports.
- G. Sample Warranty: For special warranty according to procedures in "Warranty" Article.

1.7 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For sprinklers, controllers, and remote-control valves to include in operation and maintenance manuals. Submit three copies of the following:
 - 1. Catalog product data "cut sheets" of all irrigation products installed.
 - 2. Contractor's name, address, email, and telephone number.
 - 3. The duration of the Guarantee Period.
 - 4. The name and address of the local manufacturer's representative.
 - 5. List and description of routine maintenance procedures, including winterization, start-up, and recommended watering times for each zone.
 - 6. Troubleshooting guide.
- B. Upon completion of the Work of this section and as a condition of its acceptance; submit to the Owner's Representative the following:
 - 1. As-Built Drawings: Submit three prints and one reproducible and/or electronic file of as-built drawings. As-built drawings shall clearly show all original components of the Record Copy and all changes documented in the Record Copy. Main lines, drain valves, valve boxes, and valve markers and other buried equipment shall be positively located by a minimum of two dimensions each from fixed reference points
- C. Controller Reference Chart: Submit one chart for each controller installed on site showing the area covered by each sprinkler zone. The chart shall be a reduced copy of the as-built drawings, color coded to differentiate zone areas, sized to fit the controller door, and hermetically sealed between 20 mil. plastic sheets.
- D. Supplemental Equipment: Submit two key copies for each of the following: quick coupling valves, quick coupling valve lids, valve markers, manual drain valves, valve boxes, and controller cabinets to the Owner's Representative.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers that include a Professional Class member of the American Society of Irrigation Consultants.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C. Proprietary items shown on the Drawings and specified in this section are shown to establish standards of quality, utility, design, and function. Equivalent units by other manufacturers

(substitutions) will be considered provided they are similar in characteristics. They shall be substituted only if approved by the Owner's Representative.

- D. Weather Limitations: Trenching work shall be performed only when weather conditions do not detrimentally affect the quality of work or negatively degrade surface soils, where runoff and compaction will negatively impact existing surface soils or subgrade. See Section 329113 "Soil Preparation" and Section 329300 "Plants". Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.
- E. All local, municipal, and state laws and rules and regulations governing or relating to any portion of this Work are incorporated into and made a part of these specifications and the Contractor shall carry out their provisions. Information contained within this specification shall not be construed to conflict with the above rules, regulations, or requirements.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture.
- B. Store plastic piping protected from direct sunlight. Support to prevent sagging, bending, and from physical damage. Protect from damage due to on-site construction activities.
- C. Store and protect all equipment and appurtenances from adverse weather conditions and physical damage.
- D. Handle all components as directed by the manufacturer's written instructions. Damage from transportation or other handling of materials shall be the responsibility of the Contractor.

1.10 PROJECT CONDITIONS

- A. Interruption of Existing Water Service: Do not interrupt water service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water service according to requirements indicated:
 - 1. Notify Owner's Representative no fewer than two days in advance of proposed interruption of water service.
 - 2. Do not proceed with interruption of water service without Owner's Representative's written permission.
- B. Site Inspection: Inspect the site prior to construction and verify the extent of the work required. Commencement of construction designates acceptance of the site condition.
- C. Verify the locations of all existing utilities, structures, and services before commencing Work. The location of utilities, structures and services shown on the Drawings are approximate. Any discrepancies between the Drawings and the actual field conditions shall be reported to the Owner's Representative immediately.

1.11 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace irrigation piping and equipment that fail in materials or workmanship, within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Pipe breaks or leaks, except for defects resulting from abuse or neglect by Owner and including vandalism or natural disasters.
 - b. Faulty performance of controller control wires and valves.
 - c. Deterioration of piping and other irrigation equipment beyond normal user or weathering.
 - d. Trench failure, grade settlement, and soil erosion resulting from defects in irrigation installation.
- B. Warranty Periods: Three year from date of Substantial Completion.
- C. Upon notice from of failure of the irrigation system during the warranty period due to material or workmanship failures; new replacement parts shall be promptly furnished and installed at no cost to the Owner. Damages to property or adjacent site resulting from remedial actions shall be repaired promptly, at no additional cost to the Owner.
 - a. Provide extended warranty for period equal to original warranty period, for replaced materials.

PART 2 - PRODUCTS

2.1 GENERAL

- A. All irrigation materials not specifically described or otherwise incidental to a complete, functioning irrigation system, shall be new and of working condition and approved of prior to installation.

2.2 PIPES, FITTINGS, AND TUBES

- A. Comply with requirements in the piping schedule for applications of pipe, tube, and fitting materials, and for joining methods for specific services, service locations, and pipe sizes.
- B. Mainlines:
 - 1. PVC Pipe: ASTM D1785, PVC 1120 compound, Schedule as indicated on Drawings. Pipe may be belled on one end according to ASTM D2672.
 - 2. PVC Pipe Pressure Rated: ASTM D2241, PVC 1120 compound, Class and SDR as indicated on Drawings. Pipe may be belled on one end according to ASTM D2672.
- C. Lateral Lines:

1. PVC Pipe Pressure Rated: ASTM D2241, PVC 1120 compound, Class and SDR as indicated on Drawings. Pipe may be belled on one end according to ASTM D2672.
- D. Poly-Pipe: Flexible polyethylene swing pipe, UV resistant, sized according to manufacturer's sprinkler head and fitting requirements.
- E. UV Resistant Pipe: PVC pipes at above-ground conditions as indicated on Drawings.
 1. PVC Pipe: ASTM D1784, PVC1120 compound, Type 1, Grade 1, Schedule 40.
- F. Sleeves:
 1. PVC Pipe: ASTM D1785, PVC 1120 compound, Schedule 40.
- G. Miscellaneous Fittings:
 1. Risers and Nipples: ASTM D2464 and ASTM D1785, PVC Schedule 80 with threaded ends.
 2. Fittings for PVC Pipe: ASTM D 2466, Schedule 80.
 3. Fittings for PVC Pipe Pressure Rated: ASTM D2467, Schedule 80.
 - a. PVC Socket Fittings: ASTM 2467, Schedule 80.
 - b. PVC Socket Unions: Construction similar to MSS SP-107, except both headpiece and tailpiece shall be PVC with socket or threaded ends.
 4. Swing Joint: Manufacturer assembled, 3/4 inch or greater size.
 5. Marlex Street Elbow: Black Marlex brand plastic material, 90-degree elbow, male and female pipe thread connections.
 6. Pipe Caps: PVC Schedule 80.

2.3 PIPING JOINING MATERIALS

- A. Solvent Cements for Joining PVC Piping: ASTM D2564, fast setting, high strength, low VOC. Include primer according to ASTM F656.
- B. Teflon Tape for PVC Threaded Ends: PTFE tape, 3 mil minimum thickness.
- C. Sealant for PVC Threaded Ends: Non-PTFE based, soft setting, slow drying, low VOC, lead free, safe for potable water systems, UL classified. Sealant material shall be safe and non-degrading to use with adjoining PVC materials.
 1. Products: Subject to compliance with requirements, provide the following:
 - a. RectorSeal No. 5.
 - b. Approved equal.

2.4 MANUAL VALVES

- A. Gate Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Valve, Inc.
 - b. Crane; a Crane brand.
 - c. Hammond Valve.
 - d. Jenkins Valves; a Crane brand.
 - e. KITZ Corporation.
 - f. Milwaukee Valve Company.
 - g. NIBCO INC.
 - h. Powell Valves.
 - i. WATTS.
 - j. Zurn Industries, LLC.

2. Description:
 - a. Standard: MSS SP-80.
 - b. Class: 125.
 - c. CWP Rating: 200 psig.
 - d. Body Material: ASTM B62, with integral seat and screw-in bonnet.
 - e. Ends: Threaded.
 - f. Stem: Bronze, rising stem and non-rising stem as indicated on Drawings.
 - g. Disc: Solid wedge; bronze.
 - h. Packing: Asbestos free.
 - i. Handwheel: Malleable iron, bronze, or aluminum; rotary handle or cross-handle as indicated on Drawings.

3. Gate Valve Keys: Standard operating keys as provided for drain valves.

B. Angle Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Crane; a Crane brand.
 - b. Jenkins Valves; a Crane brand.
 - c. Milwaukee Valve Company.
 - d. NIBCO INC.

2. Description:
 - a. Size: 3/4-inch minimum size.
 - b. Standard: MSS SP-80.
 - c. Class: 125.
 - d. CWP Rating: 200 psig.
 - e. Body Material: Bronze, ASTM B62, with integral seat and screw-in or union bonnet.
 - f. Ends: Threaded.
 - g. Stem: Bronze, rising stem.
 - h. Disc: PTFE.
 - i. Packing: Asbestos free.
 - j. Handwheel: Cross handle; malleable iron, bronze, or aluminum.

3. Drain Valve Keys: Three standard operating keys, 30-inch minimum length, fitted to operate valve.

C. Globe Valves: Bronze, threaded ends, non-rising stem.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Valve, Inc.
 - b. Crane; a Crane brand.
 - c. Hammond Valve.
 - d. Jenkins Valves; a Crane brand.
 - e. KITZ Corporation.
 - f. Milwaukee Valve Company.
 - g. NIBCO INC.
 - h. Powell Valves.
 - i. WATTS.
 - j. Zurn Industries, LLC.
2. Description:
 - a. Standard: MSS SP-80.
 - b. Class: 125.
 - c. CWP Rating: 200 psig.
 - d. Body Material: ASTM B62, with integral seat and screw-in bonnet.
 - e. Stem: Bronze.
 - f. Disc: Solid wedge; bronze.
 - g. Packing: Asbestos free.
 - h. Handwheel: Malleable iron, bronze, or aluminum.

2.5 PRESSURE-REDUCING VALVES

A. Water Regulators:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Apollo Flow Controls; Conbraco Industries, Inc.
 - b. Cash Acme, A Division of Reliance Worldwide Corporation.
 - c. Honeywell.
 - d. WATTS.
 - e. Zurn Industries, LLC.
2. Description:
 - a. Standard: ASSE 1003.
 - b. Body Material: Bronze for NPS 2 and smaller; cast iron with interior lining complying with AWWA C550 or that is FDA approved for NPS 2-1/2 and NPS 3.
 - c. Pressure Rating: Initial pressure of 150 psig.

- d. End Connections: Threaded for NPS 2 and smaller; flanged for NPS 2-1/2 and NPS 3.
3. Capacities and Characteristics:
 - a. Size: as required.
 - b. Design Flow Rate: as required.
 - c. Design Inlet Pressure: as required.
 - d. Design Outlet Pressure Setting: as required.

2.6 CONTROL VALVES

A. Remote Control Valves:

1. Products: Subject to compliance with requirements, provide the following:
 - a. Rain Bird Corporation; see drawings for specific model.
2. Description: Molded-plastic body, normally closed, diaphragm type with manual-flow adjustment, and operated by 24-V ac solenoid.

2.7 MISCELLANEOUS VALVES

A. Quick Couplers:

1. Products: Subject to compliance with requirements, provide the following:
 - a. Rain Bird Corporation; 44LRC.
 - b. Approved equal.
2. Description: Factory-fabricated, bronze or brass, two-piece assembly. Include coupler water-seal valve; removable upper body with spring-loaded or weighted, rubber-covered cap; hose swivel with ASME B1.20.7, 3/4-11.5NH threads for garden hose on outlet; and operating key.
3. Locking-Top Option: Vandal-resistant locking feature. Include two matching key(s).

B. In-Line Check Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Hunter Industries Incorporated.
 - b. Netafim USA.
 - c. NIBCO INC.
 - d. Aqualine.
 - e. Approved equal.
2. Body: PVC Schedule 80, bronze, or brass body.
3. Size: Line sized.

2.8 AUTOMATIC DRAIN VALVES

- A. Description: Spring-loaded-ball type of corrosion-resistant construction and designed to open for drainage if line pressure drops below 2-1/2 to 3 psig.

2.9 SPRINKLERS

- A. General Requirements: ABS plastic body material, pressure compensating devices, integral check valve body option at low points, designed for uniform coverage over entire spray area indicated at available water pressure. Manufacturer, product, and sprinkler type as indicated on Drawings
- B. Riser Heights: As indicated on Drawings.
- C. Special Requirements: Bodies shall include an integral check valve body option for sprinklers installed at low points of system.

2.10 CONTROLLERS

- A. Products: Subject to compliance with requirements, provide the following:
 - 1. Rain Bird Corporation; ESP-LXD (Two-Wire).
- B. Description:
 - 1. Controller Stations for Remote Control Valves: Each station is variable from approximately 5 to 60 minutes. Include switch for manual or automatic operation of each station.
 - 2. Control Transformer: 24-V secondary, with primary fuse.
 - 3. Timing Device: Adjustable, 24-hour, 14-day clock, with automatic operations to skip operation any day in timer period, to operate every other day, or to operate two or more times daily.
 - a. Manual or Semiautomatic Operation: Allows this mode without disturbing preset automatic operation.
 - b. Nickel-Cadmium Battery and Trickle Charger: Automatically powers timing device during power outages.
 - c. Surge Protection: Metal-oxide-varistor type on each station and primary power.
 - 4. Smart Controllers: Use ET, tested in accordance with IA SWAT Climatological Based Controllers 8th Draft Testing Protocol and compliant with ASHRAE Standard 189.1.
 - 5. Decoders: Model as recommended by controller manufacturer.

2.11 CONTROLLER ENCLOSURES

- A. Exterior Control Enclosures: NEMA 250, Type 4, weatherproof, front-entry with locking cover and two matching keys; include provision for grounding.
 - 1. Products: Subject to compliance with requirements, provide the following:

- a. Rain Bird Corporation; LXMMSS.
 - b. Approved equal.
2. Body Material: Stainless-steel sheet metal.
 3. Mounting: Surface type for wall.

2.12 ELECTRICAL WIRING AND CONNECTORS

- A. Controller Power Wiring: UL 493, Type UF No. 12 AWG minimum solid-copper conductors, multiconductor or single conductor according to controller manufacturer's instructions; jacket colors according to American Society of Irrigation Consultants, ASIC Guideline 102-2004; between power source and controller.
- B. Valve Wires: UL 493, Type UF or PE; No. 14 AWG minimum solid-copper conductors, single conductor; wiring between controller and to electric solenoid of remote-control valves.
 1. Common Wire: "Grounded" conductor wire, white in color.
 2. Control Wire: "Hot" wire, red in color or approved coloring to differentiate between zones and common wire.
 3. Spare Control Wire: "Hot" wire, black in color, for future irrigation zones.
- C. Valve Wires: Two-wire cable, No. 14, or No. 12 AWG, insulated solid-copper conductors; HDPE loose-tube outer jacket with color as recommended by manufacturer; wire type selection according to manufacturer requirements; between controllers and remote-control valves.
- D. Waterproof Wire Connectors: Splicing kit as recommended by wire and controller manufacturer's specifications, consisting of insulating, spring-type connector, or crimped joint and epoxy resin moisture seal; suitable for direct burial, UL approved.

2.13 IRRIGATION EQUIPMENT VALVE BOXES

- A. Valve Boxes:
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Carson / Old Castle.
 - b. Orbit Irrigation Products, Inc.
 - c. NDS, Inc.
 - d. Rain Bird Corporation.
 - e. MacLean Highline.
 - f. Approved equal.
 2. Description: Box and overlapping lid with locking mechanism, open bottom, and openings slots for piping; designed for installing flush with grade.
 - a. Size: As required for equipment operation and as indicated on Drawings.
 - b. Shape: As indicated on Drawings.
 - c. Lid: Black color, HDPE with UV inhibitors.

- d. Box Enclosure: Black color, HDPE with UV inhibitors.
 - 1) Lettering: " IRRIGATION."
- B. Polymer-Concrete Valve Boxes:
1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Armorcast Products Company;
 - b. Christy Concrete Products;
 - c. Hubbell Incorporated (Power Systems Group - Quazite);
 - d. NewBasis;
 - e. Oldcastle Enclosure Solutions;
 2. Description: Box and cover, with open bottom and openings for piping; designed for installing flush with grade.
 - a. Size: As required for valves and service and as indicated on Drawings.
 - b. Shape: Rectangular.
 - c. Sidewall Material: Polymer concrete with lateral and vertical sidewall design loading of 5000 lb. minimum over 10 by 10 inches square.
 - d. Cover Material: Polymer concrete with cover design loading of 5000 lb. minimum over 10 by 10 inches square.
 - 1) Lettering: " IRRIGATION" or approved equal.

2.14 MISCELLANEOUS PRODUCTS

- A. Drainage Backfill: Cleaned gravel or crushed stone, graded from 3/4 inch minimum to 3 inches maximum.
- B. Concrete: Commercial grade concrete mix, compressive strength not less than 3,000 psi at 28 days.
- C. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored according to APWA "Uniform Color Code".
- D. Tracer Wire: 12-gauge (AWG) stranded solid copper or copper clad steel reinforced, 45-mil thickness high molecular weight polyethylene insulation; detectable by metal detector when wire is buried up to 30 inches deep, UL rated for 140 degrees F; colored according to APWA "Uniform Color Code".
- E. Filter Fabric: Nonwoven geotextile, polypropylene, or polyester fabric, 3 oz./sq. yd. minimum, composed of fibers formed into a stable network so that fibers retain their relative position. Fabric shall be inert to biological degradation and resist naturally encountered chemicals, alkalis, and acids.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Irrigation pipe layout and equipment as indicated on Drawings may be represented schematically and require field adjustment. Do not install any irrigation equipment or pipes if presented with obstructions, grade differences, access issues, or safety problems. Contact Owner's Representative with any issues anticipated or encountered immediately.
- B. Prior to conducting any work of the section, inspect all existing conditions and previously installed components and verify they are complete, installed, and functional for the correct installation and operation of the irrigation system, including but not limited to identifying water source, electrical source, and installed pipe sleeves.
- C. Verify all components and products to be installed and shall be compatible together for the proper operation and durability of the irrigation system.

3.2 EARTHWORK

- A. Excavating, trenching, and backfilling are specified in Section 312000 "Earth Moving."
- B. Install warning tape in center of trench above pressure piping under pavement only, 12 inches below finished grades, except 6 inches below subgrade under pavement and slabs, and above tracer wire.
- C. Install tracer wire in center of trench above all pressure piping and according to manufacturer instructions.
 - 1. Planting Areas: Install tracer wire 1 to 2 inches above the upper-most pressure pipe or non-pressure pipe within trench.
 - 2. Paved Areas: Install tracer wire directly above "pipe zone" backfill.
- D. Drain Pockets: Excavate and backfill with drain rock material as indicated on Drawings, to 12 inches minimum below grade or as indicated on Drawings.
- E. Provide minimum cover over top of underground piping as indicated on Drawings

3.3 PREPARATION

- A. Set stakes to identify locations of proposed irrigation system. Obtain Owner's Representative's approval before excavation.
- B. Installation of any irrigation piping or equipment that connects to potable water sources shall prevent cross connection in accordance with pertinent local jurisdictional code and state law. Refer to "Backflow Prevention Device Installation" Article.
- C. Maintain the performance and proper operation of all existing components including the existing irrigation system, water utilities, electrical utilities, for any proposed irrigation work. The

proposed irrigation equipment shall be functionally integrated into the existing equipment as to function as one complete system.

3.4 PIPING INSTALLATION

- A. Location and Arrangement: Drawings indicate schematic location and arrangement of piping systems. Install piping as indicated unless deviations are approved on Coordination Drawings.
- B. Install piping at minimum uniform slope of 0.5 percent down toward drain valves.
- C. Install piping free of sags and bends.
- D. Install groups of pipes parallel to each other, spaced to permit valve servicing.
- E. Install fittings for changes in direction and branch connections.
- F. Install unions adjacent to valves and to final connections to other components with NPS 2 or smaller pipe connection.
- G. Install flanges adjacent to valves and to final connections to other components with NPS 2-1/2 or larger pipe connection.
- H. Install underground thermoplastic piping according to ASTM D2774.
- I. Install expansion loops in control-valve boxes for plastic piping.
- J. Lay piping on solid subbase, uniformly sloped without humps, depressions, sharp objects, or debris.
- K. Install PVC piping in dry weather when temperature is above 40 deg F. Allow joints to cure at least 24 hours at temperatures above 40 deg F before testing.
- L. Install water regulators with shutoff valve and strainer on inlet and pressure gage on outlet. Install shutoff valve on outlet. Install aboveground or in control-valve boxes.
- M. Install piping in sleeves under parking lots, roadways, and sidewalks as indicated on Drawings.
- N. Install sleeves with socket fittings, and solvent-cemented joints.

3.5 PIPE PULLING

- A. Installation of pipe and wires by means of vibratory plow may be used as an alternate to standard trenching methods if approved by the Owner's Representative.
- B. Vibratory pipe pulling shall only be allowed on 3/4 inch and 1-inch diameter piping only.
- C. Solvent weld joints shall be thoroughly cured prior to pipe pulling.

- D. Ensure, by means of an open pit or trench at the beginning, middle, and the end of pull; that pipe and wire is installed at the specified burial depths throughout the entire length of the pull. Burial depths shall be the same as specified for trenching.
- E. Allow a minimum of five chain links between plow blade and pulling grip/bullet.
- F. Pulling grip/bullet shall be a minimum of two-inch in diameter greater than the combined diameters of pipe joints and wire to be pulled.
- G. Wire pulling shall only occur with proper wire blade feed attachment.

3.6 JOINT CONSTRUCTION

- A. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- B. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- C. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
 - 1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
 - 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds. Do not use solvent cement on threaded joints.
- D. PVC Piping Solvent-Cemented Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:
 - 1. Comply with ASTM F402 for safe-handling practice of cleaners, primers, and solvent cements.
 - 2. PVC Pressure Piping: Join schedule number, ASTM D1785, PVC pipe and PVC socket fittings according to ASTM D2672. Join other-than-schedule-number PVC pipe and socket fittings according to ASTM D2855.
 - 3. PVC Nonpressure Piping: Join according to ASTM D2855.
- E. Soil contaminated by solvents, pipe shavings, or materials that cannot be easily separated shall be excavated out and properly removed from site.

3.7 VALVE INSTALLATION

- A. General Placement: Equipment and valve box locations shall install in a manner as to not interrupt plant massing or groups, hedge lines, or otherwise alter the character of the proposed plantings.
 - 1. Place valves and valve boxes in low growing ground cover areas offset from adjacent paving by a minimum of two times the specified ground cover spacing unless indicated otherwise.

2. In areas where valves or valve boxes may be readily visible, verify location with Owner's Representative prior to installation.
 3. Provide valve box supports, filter fabric, and drainage backfill as indicated on Drawings.
- B. Underground Curb Valves: Install in curb-valve casings with tops flush with grade.
- C. Throttling Valves: Install in underground piping in boxes for remote control valves.
- D. Remote Control Valves: Install in valve boxes as indicated on Drawings and according to manufacturer instructions.
- E. Drain Valves: Install in valve boxes as indicated on Drawings and according to manufacturer instructions. Slope pipe leading to drain valve 1 percent minimum.
- F. Quick Coupling Valves: Install in valve boxes as indicated on Drawings and according to manufacturer instructions.
- G. Wiring: Install required wiring and decoders to match existing system. Provide grounding according to ASIC guidelines.

3.8 SYSTEM FLUSHING AND PRESSURE TEST

- A. System Flushing: After piping, risers, backflow prevention devices and valves are installed but prior to irrigation head installation; flush dirt and debris from piping under full water head.
1. Maintain flushing for five minutes or until water flows clearly.
 2. Cap risers immediately after flushing.
- B. Hydrostatic Test: Perform hydrostatic pressure test after system flushing and after piping, risers, backflow prevention devices and valves are installed but prior to backfilling.
1. Mainlines: Purge all main lines of air and test with static water pressure of at least 125 psi for 60 minutes. Test with one pressure gauge installed on the line. Lines showing loss of pressure exceeding 5 psi at the end of the specified test period will be rejected. Correct rejected installations and retest for leaks.
 2. Lateral Lines: Purge all lateral lines of air and test under operating line pressures with risers capped and drain valves closed. Maintain operating line pressures for 30 minutes through open valves and pressure regulating devices. Lines showing leaks when visually inspected at the end of the specified test periods will be rejected. Correct and retest lateral line installations that have been rejected
 3. Do not backfill trenches until the piping has been inspected and tested. Obtain Owner's Representative's approval prior to backfilling.

3.9 ELECTRICAL WIRING INSTALLATION

- A. Valve wire, General: Install common wire and valve wires to remote control valves. Provide consistent wire jacket colors throughout site system installation; colors shall be typical of irrigation systems.
 - 1. Provide conductors of size not smaller than recommended by controller manufacturer.
 - 2. Bundle wiring at 15-foot intervals, or as necessary, with standard electrical cable ties.
 - 3. Snake wire in trench to provide additional slack along the wire run.
 - 4. Install valve wires to remote control valves as according to manufacturer instructions.
- B. Run valve wires from controller to remote control valves in electrical conduit, from the bottom of controller to outside of enclosure as indicated on Drawings in accordance with state and local requirements.
- C. Wiring in Planting Area Trenches: Install valve wires in same trench as irrigation piping and at least two inches below the bottom-most irrigation pipe. When necessary to run wire separate from the irrigation pipe, place the wire under detectable warning tape.
- D. Wiring Under Paving: Install all valve wires in separate sleeve under paved areas within the same trench as irrigation piping, where feasible. In locations that require a separate trench for wiring; provide a minimum cover of 18 inches to top of sleeve.
- E. Splices: Utilize waterproof splice connectors as installed according to manufacturer's instructions. Provide coils of at least 30 inches minimum length, or as indicated. Splices not occurring within remote control valve boxes shall be installed in a separate valve box.
- F. Spare Wires: Run additional valve wires for three future zones from controller to furthest remote-control valve at each leg of mainline. Provide 18 inches of looped valve wire at each end and label wiring on each side "Spare Wire." Valve wires to remain unconnected in controller enclosure and neatly bundled in valve box.

3.10 SPRINKLER INSTALLATION

- A. Install sprinklers after hydrostatic test is completed.
- B. Install sprinklers according to manufacturer's instructions on flexible risers with swing-joint type as indicated on Drawings.
- C. Install sprinklers according to the dimensions indicated on Drawings.
- D. Locate part-circle sprinklers to maintain a minimum distance of 3 inches from walls and 1 inch from other boundaries unless otherwise indicated.
- E. Install sprinklers with internal check valve at low elevation points of each zone to prevent low head drainage issues. Install
- F. Install inline check valves on lateral pipes indicated on Drawings.

- G. Sprinklers located on slopes which are less than three percent shall be installed plumb. Slopes greater than three percent shall be installed at an angle midway between plumb and perpendicular to the slope.

3.11 CONNECTIONS

- A. Comply with requirements for piping specified in for water supply from exterior water service piping, water meters, protective enclosures, and backflow preventers. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to equipment, valves, and devices to allow service and maintenance.

3.12 IDENTIFICATION

- A. Identify system components.
- B. Equipment Nameplates and Signs: Install engraved plastic-laminate equipment nameplates and signs on each automatic controller.
 - 1. Text: In addition to identifying unit, distinguish between multiple units, inform operator of operational requirements, indicate safety and emergency precautions, and warn of hazards and improper operations.
- C. Detectable Warning Tapes and Tracer Wire: Arrange for installation of continuous, underground, detectable warning tapes and tracer wire over underground piping during backfilling of trenches. See Section 312000 "Earth Moving."

3.13 FIELD QUALITY CONTROL TESTING

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.
- B. Perform tests and inspections in the presence of the Owner's Representative and after all irrigation equipment is installed.
 - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- C. Tests and Inspections:
 - 1. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
 - 2. Operational Test: After electrical circuitry has been energized, operate controllers and remote-control valves to confirm proper system operation.
 - 3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

- D. Any irrigation product will be considered defective if it does not pass tests and inspections.
- E. Prepare test and inspection reports.

3.14 STARTUP SERVICE

- A. Perform startup service.
 - 1. Complete installation and startup check according to manufacturer's written instructions.
 - 2. Verify that controllers are installed and connected according to the Contract Documents.
 - 3. Verify that electrical wiring installation and data communications complies with manufacturer's submittal.

3.15 SYSTEM PROGRAMMING

- A. General: Irrigation zones shall be programmed to provide deep but infrequent irrigation to promote deeply rooted planting growth. System runtimes shall factor regional annual precipitation rates including local historical ET rates; plant type's (zone) seasonal water demand for the region; plant maturation requirements; solar exposure; soil conditions; and topography. Program system runtimes to not cause runoff and not interrupt activities of the site.
- B. Programming: Calculate three irrigation programs for spring to early summer; summer; and late summer to early fall.

3.16 ADJUSTING

- A. Adjust settings of controller as necessary to meet irrigation requirements for plant health and site requirements.
- B. Adjust remote control valves to provide flow rate at rated operating pressure required for each sprinkler circuit.
- C. Adjust sprinklers and devices, except those intended to be mounted aboveground, so they will be flush with, or not more than 1/2 inch above, finish grade.
- D. Modify spray pattern of nozzles to reduce throw of water onto buildings, structures, vehicles, and paved surfaces. Monitor and re-adjust system operation until components operate continually as specified.

3.17 CLEANUP

Upon completion, wash clean all surfaces impacted by irrigation construction. Coordinate with Owner's Representative prior to cleaning.

- A. Repair all grade ruts caused by irrigation system testing.

- B. Repair any planting soils or subgrade that has been compacted, disturbed, or degraded during irrigation system installation.
- C. Remove and properly dispose of excess backfill materials, packaging, and other material brought to the site.

3.18 MAINTENANCE

- A. General: Provide a minimum one-year maintenance period unless otherwise indicated on Contract Documents. The maintenance period shall start on the following date of written acceptance of system installation.
 - 1. Maintain a log of visits with activities performed.
- B. After two weeks of operation, flush lines and remove particulates from system. Adjust and clean all filters or screens twice a month.
- C. Once a month, review site conditions and assess for signs of over or under watering. Inspect plant growth and vigor; adjust watering schedule, as necessary.
 - 1. Inspect controller for proper functioning. Verify zone timing settings at each inspection visit.
 - 2. Repair and adjust system throughout Warranty Period.
- D. Perform seasonal winterization and system start-up services. Demonstrate start-up and winterization, including manual system shut off valve locations, in the presence of the Owner or their personnel representatives.

3.19 DEMONSTRATION

- A. Train Owner's maintenance personnel to adjust, operate, and maintain remote control valves and controllers.
- B. Operate the system in the presence of the Owner's Representative to demonstrate satisfactory performance and coverage.

END OF SECTION 328400

SECTION 329113 - SOIL PREPARATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes planting soils specified by performance requirements.
- B. Related Requirements:
 - 1. Section 311000 "Site Clearing" for topsoil stripping and stockpiling.
 - 2. Section 329200 "Turf and Grasses" for placing planting soil for turf and grasses.
 - 3. Section 329300 "Plants" for placing planting soil for plantings, fertilizers, including biochar and mycorrhizae in backfill soil.
 - 4. Section 329310 "Landscape Maintenance"

1.3 DEFINITIONS

- A. AAPFCO: Association of American Plant Food Control Officials.
- B. Amendment: Physical, chemical, or biological material additive that adjusts the physical and/or chemical structure of base soil. Materials may include sand, compost, fertilizer, biological additives, and pH modifiers.
- C. Backfill: The earth used to replace or the act of replacing earth in an excavation. This can be amended, or unamended soil as indicated.
- D. CEC: Cation exchange capacity.
- E. Coefficient of Uniformity: Numerical expression of distribution of dry weight soil particles in a sample, passed through sieves, that is the ratio between particles that are 60 percent finer and 10 percent finer within the sample (expressed as D60/D10).
- F. Compost: The product resulting from the controlled biological decomposition of organic material that has been sanitized through the generation of heat and stabilized to the point that it is beneficial to plant growth.
- G. Duff Layer: A surface layer of soil, typical of forested areas, that is composed of mostly decayed leaves, twigs, and detritus.
- H. Field Capacity: The amount of water in soil after excess water has drained away and ceased two to three days after a wetted event.

- I. Friable: Crumbly texture of soil where larger clumps of soil can be broken into smaller, crumbly pieces by light rubbing.
- J. Imported Soil: Soil that is transported to Project site for use.
- K. Layered Soil Assembly: A designed series of planting soils, layered on each other, that together produce an environment for plant growth.
- L. Manufactured Soil: Soil produced by blending soils, sand, stabilized organic soil amendments, and other materials to produce planting soil.
- M. NAPT: North American Proficiency Testing Program. An SSSA program to assist soil-, plant-, and water-testing laboratories through interlaboratory sample exchanges and statistical evaluation of analytical data.
- N. Organic Matter: The total of organic materials in soil exclusive of undecayed plant and animal tissues, their partial decomposition products, and the soil biomass; also called "humus" or "soil organic matter."
- O. Planting Area: Areas on site to be planted or seeded within planting soil.
- P. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified as specified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- Q. RCRA Metals: Hazardous metals identified by the EPA under the Resource Conservation and Recovery Act.
- R. Saturated Soils: Water that fills the entirety of soil pores between soil particles.
- S. Scarification/Scarify: Alleviation of compaction and consolidation of soil by any number of methods including loosening, turning, fracturing, or roughening through mechanized or manual means.
- T. SSSA: Soil Science Society of America.
- U. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- V. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.
- W. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil"; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- X. Stormwater Planting Soil: Planting medium used in a vegetated stormwater facility that is suitable for plant growth and vigor manufactured from existing on-site topsoil, imported topsoil, blended soil mix, or a combination thereof that includes necessary amendments and other soil additions further defined in this specification.

- Y. Till: Scarification method, often with mechanized equipment, that turns, digs, or stirs soil to alleviate compaction and mix soil.
- Z. USCC: U.S. Composting Council.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include recommendations for application and use.
 - 2. Include test data substantiating that products comply with requirements.
 - 3. Include sieve analyses for aggregate materials.
 - 4. Material Certificates: For each type of soil amendment and fertilizer before delivery to the site, according to the following:
 - a. Manufacturer's qualified testing agency's certified analysis of standard products.
 - b. Analysis of fertilizers, by a qualified testing agency, made according to AAPFCO methods for testing and labeling and according to AAPFCO's SUIP #25.
 - c. Analysis of nonstandard materials, by a qualified testing agency, made according to SSSA methods, where applicable.
- B. Samples: For each bulk-supplied material, 1-quart volume of each in sealed containers labeled with content, source, and date obtained. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of composition, color, and texture.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For each testing agency.
- B. Preconstruction Test Reports: For preconstruction soil analyses specified in "Preconstruction Testing" Article.
- C. Field quality-control reports.
- D. Soil Work Plan: 90 days prior to planting soil installation, submit a written statement that describes the soil design method(s) that will be utilized including the following:
 - 1. Soil testing locations and timeline.
 - 2. Ability to use existing surface soils for final planting soil design and location of surface soil stockpiles.
 - 3. Location and source of amendments.
 - 4. Soil blending material operations needed to create planting soil including potential equipment desired to use.
 - 5. Responsibility of subgrade preparation.

6. Weed removal and abatement process as required in Section 311000 Site Clearing.

1.7 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent, state-operated, or university-operated laboratory; experienced in soil science, soil testing, and plant nutrition; with the experience and capability to conduct the testing indicated; and that specializes in types of tests to be performed.
 1. Laboratories: Subject to compliance with requirements, provide testing by one of the following:
 - a. Soil and Plant Laboratory, Inc.; www.soilandplantlaboratory.com.
 - b. Western Agricultural Laboratories; www.al-labs-west.com.
 - c. Approved equal.

1.8 PRECONSTRUCTION TESTING

- A. Preconstruction Soil Analyses: For each unamended soil type, perform testing on soil samples and furnish soil analysis and a written report containing soil-amendment and fertilizer recommendations by a qualified testing agency performing the testing according to "Soil-Sampling Requirements" and "Testing Requirements" articles.
 1. Have testing agency identify and label samples and test reports according to sample collection and labeling requirements.

1.9 SOIL-SAMPLING REQUIREMENTS

- A. General: Extract soil samples according to requirements in this article.
- B. Sample Collection and Labeling: Have samples taken and labeled by soil scientist (CPSS) certified by SSSA soil classifier (CPSC) certified by SSSA soil scientist (RPSS) registered by the National Society of Consulting Soil Scientists or state-certified, -licensed, or -registered soil scientist under the direction of the testing agency.
 1. Number and Location of Samples: Minimum of three representative soil samples where directed by Owner's Representative for each soil to be used or amended for landscaping purposes.
 2. Procedures and Depth of Samples: According to USDA-NRCS's "Field Book for Describing and Sampling Soils."
 3. Division of Samples: Split each sample into two, equal parts. Send half to the testing agency and half to Owner for its records.
 4. Labeling: Label each sample with the date, location keyed to a site plan or other location system, visible soil condition, and sampling depth.

1.10 TESTING REQUIREMENTS

- A. General: Perform tests on soil samples according to requirements in this article.

B. Physical Testing:

1. Soil Texture: Soil-particle, size-distribution analysis by one of the following methods according to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods":
 - a. Sieving Method: Report sand-gradation percentages for very coarse, coarse, medium, fine, and very fine sand; and fragment-gradation (gravel) percentages for fine, medium, and coarse fragments; according to USDA sand and fragment sizes.
 - b. Hydrometer Method: Report percentages of sand, silt, and clay.
2. Bulk Density: Analysis according to core method of SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods."
3. Total Porosity: Calculate using particle density and bulk density according to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods."
4. Water Retention: According to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods."
5. Saturated Hydraulic Conductivity: According to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods"; at 85 percent compaction according to ASTM D698 (Standard Proctor).

C. Chemical Testing:

1. CEC: Analysis by sodium saturation at pH 7 according to SSSA's "Methods of Soil Analysis - Part 3- Chemical Methods."
2. Clay Mineralogy: Analysis and estimated percentage of expandable clay minerals using CEC by ammonium saturation at pH 7 according to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods."
3. Metals Hazardous to Human Health: Test for presence and quantities of RCRA metals including aluminum, arsenic, barium, copper, cadmium, chromium, cobalt, lead, lithium, and vanadium. If RCRA metals are present, include recommendations for corrective action.
4. Phytotoxicity: Test for plant-available concentrations of phytotoxic minerals including aluminum, arsenic, barium, cadmium, chlorides, chromium, cobalt, copper, lead, lithium, mercury, nickel, selenium, silver, sodium, strontium, tin, titanium, vanadium, and zinc.

D. Fertility Testing: Soil fertility analysis according to standard laboratory protocol of SSSA NAPT WERA-103, including the following:

1. Percentage of organic matter.
2. CEC, calcium percent of CEC, and magnesium percent of CEC.
3. Soil reaction (acidity/alkalinity pH value).
4. Buffered acidity or alkalinity.
5. Nitrogen ppm.
6. Phosphorous ppm.
7. Potassium ppm.
8. Manganese ppm.
9. Manganese-availability ppm.
10. Zinc ppm.
11. Zinc availability ppm.
12. Copper ppm.
13. Sodium ppm and sodium absorption ratio.

14. Soluble-salts ppm.
 15. Presence and quantities of problem materials including salts and metals cited in the Standard protocol. If such problem materials are present, provide additional recommendations for corrective action.
 16. Other deleterious materials, including their characteristics and content of each.
- E. Organic-Matter Content: Analysis using loss-by-ignition method according to SSSA's "Methods of Soil Analysis - Part 3-Chemical Methods."
- F. Recommendations: Based on the test results, state recommendations for soil treatments and soil amendments to be incorporated to produce satisfactory, riparian, planting soil suitable for healthy, viable plants indicated without impacting adjacent waterways. Include, at a minimum, recommendations for nitrogen, phosphorous, and potassium fertilization, and for micronutrients.
1. Fertilizers and Soil Amendment Rates: State recommendations in weight per 1000 sq. ft. for 6-inch depth of soil.
 2. Soil Reaction: State the recommended liming rates for raising pH or sulfur for lowering pH according to the buffered acidity or buffered alkalinity in weight per 1000 sq. ft. for 6-inch depth of soil.

1.11 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and compliance with state and Federal laws if applicable.
- B. Bulk Materials:
1. Do not dump or store bulk materials near structures, utilities, walkways, and pavements, or on existing turf areas or plants.
 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
 3. Do not move or handle materials when they are wet or frozen.
 4. Accompany each delivery of bulk fertilizers and soil amendments with appropriate certificates.

PART 2 - PRODUCTS

2.1 PLANTING SOILS, GENERAL

- A. Planting soils shall only be created from on-site, existing in place, on-site stockpiled surface soils with the addition of imported inorganic soil amendments, organic soil amendments, and fertilizers as necessary that meets the requirements in "Planting Soils Specified by Composition" Article.

2.2 PLANTING SOILS SPECIFIED BY COMPOSITION

- A. General: Soil amendments, fertilizers, and rates of application specified in this article are guidelines that may need revision based on testing laboratory's recommendations after preconstruction soil analyses are performed.
- B. Planting-Soil Type 1: Existing, on-site surface soil, with the duff layer, if any, retained; and stockpiled on-site; modified to produce viable planting soil. Blend existing, on-site surface soil with the following soil amendments and fertilizers in the following quantities to produce planting soil:
 - 1. Ratio of Loose Compost to Soil: as indicated in soil test report by volume.
 - 2. Weight of Lime: as indicated in soil test report per 1000 sq. ft. per 6 inches of soil depth.
 - 3. Weight of Sulfur: as indicated in soil test report per 1000 sq. ft. per 6 inches of soil depth.
 - 4. Weight of Agricultural Gypsum: as indicated in soil test report per 1000 sq. ft. per 6 inches of soil depth.
 - 5. Weight of Superphosphate: as indicated in soil test report per 1000 sq. ft. per 6 inches of soil depth.
 - 6. Weight of Commercial Fertilizer: as indicated in soil test report per 1000 sq. ft. per 6 inches of soil depth.
 - 7. Weight of Slow-Release Fertilizer: as indicated in soil test report per 1000 sq. ft. per 6 inches of soil depth.

2.3 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:
 - 1. Class: O, with a minimum of 95 percent passing through No. 8 sieve and a minimum of 55 percent passing through a No. 60 sieve.
 - 2. Form: Provide lime in form of ground dolomitic limestone.
- B. Sulfur: Granular, biodegradable, and containing a minimum of 90 percent elemental sulfur, with a minimum of 99 percent passing through a No. 6 sieve and a maximum of 10 percent passing through a No. 40 sieve.
- C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
- D. Agricultural Gypsum: Minimum 90 percent calcium sulfate, finely ground with 90 percent passing through a No. 50 sieve.
- E. Sand: Clean, washed, coarse, and sharp; free of limestone, shale and slate particles; natural or manufactured and free of toxic materials; ASTM C33/C33M; with 100 percent passing a 3/8 inch sieve and zero to 5 percent passing a No. 200 Sieve.

2.4 ORGANIC SOIL AMENDMENTS

- A. Compost: Well-composted, stable, and weed-free organic matter produced by composting feedstock, and bearing USCC's "Seal of Testing Assurance," and as follows:
 - 1. Limited to leaves.
 - 2. Reaction: pH of 5.5 to 8.
 - 3. Soluble-Salt Concentration: Less than 4 dS/m.
 - 4. Primary Plant Nutrients: Reported as percent as-is or dry weight for nitrogen, phosphorus, potassium, calcium, and magnesium.
 - 5. Moisture Content: 35 to 55 percent by weight.
 - 6. Particle Size: Minimum of 98 percent passing through a 3/4-inch sieve.
 - 7. Organic-Matter Content: 30 to 65 percent of dry weight.
 - 8. Stability: Respirometry, equal to or less than 8 CO₂-C per g OM per day.
 - 9. Maturity: Bioassay, minimum 80 percent seed emergence and seedling vigor.
 - 10. Stability: Stable.
 - 11. Inert materials and Foreign Debris: Less than 2 percent by dry weight.
 - 12. Ratio of Carbon to Nitrogen: 25:1 minimum.
 - 13. Meet or exceed US EPA Class A standard, 40 CFR Section 503.13.
 - 14. Meet or exceed US EPA Class A standard, 40 CFR Section 503.32.

2.5 FERTILIZERS

- A. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- B. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - 1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified testing agency.
- C. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified testing agency.
- D. Chelated Iron: Commercial-grade FeEDDHA for dicots and woody plants, and commercial-grade FeDTPA for ornamental grasses and monocots.

PART 3 - EXECUTION

3.1 GENERAL

- A. Place planting soil and fertilizers according to requirements in other Specification Sections. Placing and mixing process may vary based up planting soil approach utilized.

- B. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in planting soil.
- C. Proceed with placement only after unsatisfactory conditions have been corrected.
- D. All materials removed from prepared soil areas shall be legally disposed of from Owner's property.

3.2 PREPARATION OF UNAMENDED, ON-SITE SOIL BEFORE AMENDING

- A. Excavation: Excavate soil from designated area(s) to a depth of 6 inches and stockpile until amended.
- B. Unacceptable Materials: Clean soil of concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
- C. Unsuitable Materials: Clean soil to contain a combined maximum of 8 percent by dry weight of stones, roots, plants, sod, clay lumps, and pockets of coarse sand.

3.3 PLACING AND MIXING PLANTING SOIL OVER EXPOSED SUBGRADE

- A. General: Apply and mix unamended soil with amendments on-site to produce required planting soil. Do not apply materials, scarify, or till if existing soil or subgrade is frozen, muddy, saturated, or excessively wet.
- B. Subgrade Preparation: Scarify subgrade to a minimum depth of 6 inches. Remove organic materials such as sticks, and roots larger than 2 inches in any dimension. Remove all construction debris, trash, rubbish, and other extraneous matter of any dimension from site.
 - 1. Apply, add soil amendments, and mix approximately half the thickness of unamended soil over prepared, loosened subgrade according to "Mixing" Paragraph below. Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil.
- C. Mixing: Spread unamended soil to total depth of 6 inches, but not less than required to meet finish grades after mixing with amendments and natural settlement.
 - 1. Amendments: Apply soil amendments, except compost, and fertilizer, if required, evenly on surface, and thoroughly blend them with unamended soil to produce planting soil.
 - a. Mix lime and sulfur with dry soil before mixing fertilizer.
 - b. Mix fertilizer with planting soil no more than seven days before planting.
 - 2. Lifts: Apply and mix unamended soil and amendments in lifts not exceeding 8 inches in loose depth for material compacted by compaction equipment, and not more than 6 inches in loose depth for material compacted by hand-operated tampers.

- D. **Compaction:** Compact each blended lift of planting soil to 75 to 82 percent of maximum Standard Proctor density according to ASTM D698.
- E. **Finish Grading:** Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.4 BLENDING PLANTING SOIL IN PLACE

- A. **General:** Mix amendments with in-place, unamended soil to produce required planting soil. Do not apply materials, scarify, or till if existing soil or subgrade is frozen, muddy, saturated, or excessively wet.
- B. **Preparation:** Scarify unamended, existing soil in planting areas to a minimum depth of 12 inches. Depth includes scarified layer below planting soil profile. Remove organic materials such as sticks and roots larger than 2 inches in any dimension. Remove all construction debris, trash, rubbish, and other extraneous matter of any dimension from site.
- C. **Mixing:** Apply soil amendments, except compost, and fertilizer, if required, evenly on surface, and thoroughly blend them into full depth of unamended, in-place soil to produce planting soil.
 - 1. Mix lime and sulfur with dry soil before mixing fertilizer.
 - 2. Mix fertilizer with planting soil no more than seven days before planting.
- D. **Compaction:** Compact blended planting soil to 75 to 82 percent of maximum Standard Proctor density according to ASTM D698.
- E. **Finish Grading:** Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.5 APPLYING COMPOST TO PLANTING SOIL

- A. **Application:** Apply compost component of planting-soil mix to surface of in-place planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, saturated, or excessively wet.
- B. **Blending:** Till compost into surface of in-place planting soil and thoroughly incorporate to a depth of 6 inches.
- C. **Planting holes:** Add Compost to existing soil of planting holes if the soil is cobbly or sandy.
- D. **Finish Grading:** Grade surface to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.6 FIELD QUALITY CONTROL

- A. **Testing Agency:** Engage a qualified testing agency to perform tests and inspections.
- B. **Perform the following tests:**

1. Compaction: Test planting-soil compaction after placing each lift and at completion using a densitometer or soil-compaction meter calibrated to a reference test value based on laboratory testing according to ASTM D698. Space tests at no less than one for each 1000 sq. ft. of in-place soil or part thereof.
 2. Performance Testing: For each amended planting-soil type, demonstrating compliance with specified performance requirements. Perform testing according to "Soil-Sampling Requirements" and "Testing Requirements" articles.
- C. Soil will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.
- E. Label each sample and test report with the date, location keyed to a site plan or other location system, visible conditions when and where sample was taken, and sampling depth.

3.7 PROTECTION

- A. Protection Zone: Identify protection zones according to Section 015639 "Temporary Tree and Plant Protection."
- B. Protect areas of in-place soil from additional compaction, disturbance, and contamination. Prohibit the following practices within these areas except as required to perform planting operations:
1. Storage of construction materials, debris, or excavated material.
 2. Parking vehicles or equipment.
 3. Vehicle traffic.
 4. Foot traffic.
 5. Erection of sheds or structures.
 6. Impoundment of water.
 7. Excavation or other digging unless otherwise indicated.
- C. If planting soil or subgrade is over compacted, disturbed, or contaminated by foreign or deleterious materials or liquids, remove the planting soil and contamination; restore the subgrade as directed by Owner's Representative and replace contaminated planting soil with new planting soil.

3.8 CLEANING

- A. Protect areas adjacent to planting-soil preparation and placement areas from contamination. Keep adjacent paving and construction clean and work area in an orderly condition.
- B. Remove surplus soil and waste material including excess subsoil, unsuitable materials, trash, and debris and legally dispose of them off Owner's property unless otherwise indicated.
1. Dispose of excess subsoil and unsuitable materials on-site where directed by Owner.

END OF SECTION 329113

SECTION 329200 - TURF AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Seeding.
 - 2. Hydroseeding.
- B. Related Requirements:
 - 1. Section 329300 "Plants"
 - 2. Section 329113 "Soil Preparation"
 - 3. Section 329310 "Landscape Maintenance"

1.3 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- C. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- D. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 329113 "Soil Preparation" and drawing designations for planting soils.
- E. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For landscape Installer.
- B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture, stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
 - 1. Certification of each seed mixture. Include identification of source and name and telephone number of suppliers.
- C. Product Certificates: For fertilizers, from manufacturer.
- D. Pesticides and Herbicides: Product label and manufacturer's application instructions specific to Project.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: Recommend procedures to be followed by Owner for maintenance of seeded areas during a calendar year after the contractor's maintenance period ends. Submit before expiration of required contractor's maintenance period.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful seeded area establishment.
 - 1. Professional Membership: Installer shall be a member in good standing of either the National Association of Landscape Professionals or AmericanHort.
 - 2. Experience: Five years' experience in turf installation in addition to requirements in Section 014000 "Quality Requirements."
 - 3. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
 - 4. Personnel Certifications: Installer's field supervisor shall have certification in one of the following categories from the National Association of Landscape Professionals:
 - a. Landscape Industry Certified Technician - Exterior.
 - b. Landscape Industry Certified Lawn Care Manager.
 - c. Landscape Industry Certified Lawn Care Technician.
 - 5. Pesticide Applicator: State licensed, commercial.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.

B. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways, and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery of bulk materials with appropriate certificates.

1.9 FIELD CONDITIONS

A. Planting Restrictions: Plant during one of the following periods, unless authorized by the Owner's Representative. Coordinate seeding periods with initial maintenance periods to provide required maintenance from date of seeding completion.

1. Spring Planting: March through April.
2. Fall Planting: September through October 15.

B. Weather Limitations: Proceed with seeding only when existing and forecasted weather conditions, i.e. temperature, wind, and soil moisture conditions, permit seeding to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

PART 2 - PRODUCTS

2.1 SEED

A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Rules for Testing Seeds" for purity and germination tolerances.

B. Seed Species:

1. Quality, State Certified: State-certified seed of grass species as listed below for solar exposure.
2. Quality, Non-State Certified: Seed of grass species as listed below for solar exposure, with not less than 85 percent germination, not less than 95 percent pure seed, and not more than 0.5 percent weed seed:

C. Grass-Seed Mix: Proprietary seed mix as follows:

1. Products: Subject to compliance with requirements, provide the following:

- a. SEED MIX 1 – Sunmark Seeds – Native Riparian Mix .
503-241-7333
info@sunmarkseeds.com
Or approved equal.
Rate \; See drawings for rate of application.
- b. SEED MIX 2 – Sunmark Seeds – Native Upland Mix .

503-241-7333
info@sunmarkseeds.com
Or approved equal.
Rate \; See drawings for rate of application.

2.2 FERTILIZERS

- A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - 1. Composition:
 - a. Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.
- B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition:
 - a. Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

2.3 MULCHES

- A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.
- B. Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic and free of plant-growth or germination inhibitors; with a maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.
- C. Nonasphaltic Tackifier: Colloidal tackifier recommended by fiber-mulch manufacturer for slurry application; nontoxic and free of plant-growth or germination inhibitors.

2.4 PESTICIDES

- A. General: Pesticide, registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
- B. Pre-Emergent Herbicide (Selective and Nonselective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.
- C. Post-Emergent Herbicide (Selective and Nonselective): Effective for controlling weed growth that has already germinated.

2.5 EROSION-CONTROL MATERIALS

- A. Erosion-Control Blankets: Biodegradable wood excelsior, straw, or coconut-fiber mats. Include manufacturer's recommended steel wire staples, 6 inches long.
- B. Erosion-Control Fiber Mesh: Biodegradable burlap or spun-coir mesh, a minimum of 0.92 lb./sq. yd., with 50 to 65 percent open area. Include manufacturer's recommended steel wire staples, 6 inches long.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.
 - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 - 2. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 - 3. Uniformly moisten excessively dry soil that is not workable, or which is dusty.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Owner's Representative and replace with new planting soil.

3.2 PREPARATION

- A. Protect structures; utilities; sidewalks; pavements; and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
 - 1. Protect adjacent and adjoining areas from hydroseeding and hydromulching overspray.
 - 2. Protect grade stakes set by others until directed to remove them.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.3 TURF AREA PREPARATION

- A. General: Prepare planting area for soil placement and mix planting soil according to Section 329113 "Soil Preparation."
- B. Placing Planting Soil: Place and mix planting soil in place over exposed subgrade and or Blend planting soil in place.

- C. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- D. Before planting, obtain Owner's Representative's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.
- E. The contractor has the option of either 3.5 or 3.6 for the seeding operation.

3.4 PREPARATION FOR EROSION-CONTROL MATERIALS

- A. Prepare area as specified in "Turf Area Preparation" Article.
- B. For erosion-control blanket or mesh, install from top of slope, working downward, and as recommended by material manufacturer for site conditions. Fasten as recommended by material manufacturer.
- C. Moisten prepared area before planting if surface is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

3.5 SEEDING

- A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph.
 - 1. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
 - 2. Do not use wet seed or seed that is moldy or otherwise damaged.
 - 3. Do not seed against existing trees. Limit extent of seed to outside edge of planting saucer.
- B. Sow seed at a total rate as indicated on the drawings
- C. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.
- D. Protect seeded areas with slopes exceeding 1:6 with erosion-control fiber mesh installed and stapled according to manufacturer's written instructions.
- E. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre to form a continuous blanket 1-1/2 inches in loose thickness over seeded areas. Spread by hand, blower, or other suitable equipment.
 - 1. Anchor straw mulch by crimping into soil with suitable mechanical equipment.
- F. Protect seeded areas from hot, dry weather or drying winds by applying compost mulch within 24 hours after completing seeding operations. Soak areas, scatter mulch uniformly to a thickness of 3/16 inch, and roll surface smooth.

3.6 HYDROSEEDING

- A. Hydroseeding: Mix specified seed, commercial fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application. Complete clean out machine between different seed mixes.
 - 1. Mix slurry with fiber-mulch manufacturer's recommended tackifier.
 - 2. Spray-apply slurry uniformly to all areas to be seeded in a one-step process. Apply slurry at a rate so that mulch component is deposited at not less than 1500-lb/acre dry weight, and seed component is deposited at not less than the specified seed-sowing rate.

3.7 TURF MAINTENANCE

- A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
 - 1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
 - 2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
 - 3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.
- B. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches.
 - 1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
 - 2. Water turf with fine spray at a minimum rate of 1 inch per week unless rainfall precipitation is adequate.
- C. Turf Postfertilization: Apply slow-release fertilizer after initial mowing and when grass is dry.
 - 1. Use fertilizer that provides actual nitrogen of at least 1 lb./1000 sq. ft. to turf area.

3.8 SATISFACTORY TURF

- A. Turf installations shall meet the following criteria as determined by Owner's Representative:
 - 1. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.

- B. Use specified materials to reestablish turf that does not comply with requirements and continue maintenance until turf is satisfactory.

3.9 PESTICIDE APPLICATION

- A. Apply pesticides and other chemical products and biological control agents according to requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- B. Post-Emergent Herbicides (Selective and Nonselective): Apply only as necessary to treat already-germinated weeds and according to manufacturer's written recommendations.

3.10 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.
- C. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.
- D. Remove nondegradable erosion-control measures after grass establishment period.

3.11 MAINTENANCE SERVICE

- A. Turf Maintenance Service: Provide full maintenance by skilled employees of landscape installer. Maintain as required in "Turf Maintenance" Article. Begin maintenance immediately after each area is planted and continue until acceptable turf is established, but for not less than the following periods:
 - 1. Seeded Turf: 60 days from date of Substantial Completion.
 - a. When initial maintenance period has not elapsed before end of planting season, or if turf is not fully established, continue maintenance during next planting season.

END OF SECTION 329200

SECTION 329300 - PLANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

1. Plants.
2. Fertilizers.
3. Pesticides and herbicides.
4. Mulch.
5. Maintenance during warranty period.

- B. Related Requirements:

1. Section 311000 "Site Clearing" for clearing and preparation of plant beds prior to planting.
2. Section 328400 "Planting Irrigation" for installation of irrigation equipment around trees and shrubs.
3. Section 329113 "Soil Preparation" for preparation of plant bed soil prior to or during planting.
4. Section 329200 "Turf and Grasses" for turf (lawn), hydroseeding, and erosion-control materials.
5. Section 329310 "Landscape Maintenance"

1.3 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Balled and Burlapped Stock: Plants established in the ground and dug with firm, natural balls of earth in which they were grown and wrapped with burlap and twine.
- C. Balled and Potted Stock: Plants established in the ground dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container.
- D. Bare-Root Stock: Plants established in the ground that are dug and delivered with soil or growing medium removed from its roots.
- E. Branch: An outgrowing shoot, stem or twig that grows from the main stem or trunk.
- F. Caliper: The measurement of a nursery stock tree as determined in the latest edition of the ANSI Z60.1.

- G. Container-Grown Stock: Plants established above ground grown in a removable tub or pot container filled with growing medium.
- H. Crown: The portion of a tree consisting of leaves and branches.
- I. Defective Plant: Any plant that fails to meet the plant quality requirements of this Section.
- J. Fabric Bag-Grown Stock: Plant grown within a fabric bag in-ground to manipulate root growth to develop a fibrous root system within the bag. Fabric bags may be used above ground as a container.
- K. Finish Grade: Elevation of finished surface of planting soil.
- L. Healthy: Description of quality related to living plants that are growing in a condition that expresses their leaf size, crown density, color, and annual growth rates typical of their horticultural description in the region.
- M. Included Bark: Ingrown bark tissues that develop where two or more stems grow closely together creating weak stem connections prone to breaking.
- N. Kinked Root: A root within the root package that bends more than 90 degrees.
- O. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant. Some sources classify herbicides separately from pesticides.
- P. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- Q. Plug: Seeding or rooted cuttings grown in a cylinder of planting medium at a nursery. Sometimes referred to as a "tubeling."
- R. Planting Area: Areas to be planted with any combination of groundcovers, shrubs, trees and installed with mulch.
- S. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 329113 "Soil Preparation" for drawing designations for planting soils.
- T. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, plugs, tubelings, ground covers, ornamental grasses, bulbs, corms, tubers, or any herbaceous vegetation.
- U. Root Crown; Root Flare; Root Collar; Trunk Flare: The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots and "flares" away from the tree's trunk; the area of transition between the root system and the stem or trunk.
- V. Root Ball: The mass of roots including any soil or substrate that is shipped with the tree within the root ball package.

- W. Shrub: Wood plants with mature height approximately less than 15 feet.
- X. Stem: Structure and support of a plant connecting the roots and leaves; may be woody or herbaceous.
- Y. Stem Girdling Roots: Roots that encircle the stems (trunks) of trees below the soil surface.
- Z. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- AA. Tree: Single and multi-stemmed plants with mature height approximately greater than 15 feet.
- BB. Trunk: Portion of woody stem or stems of a tree between the roots and the canopy.
- CC. Vine: Woody or herbaceous climbing plant material.
- DD. Whip: A young tree without branches

1.4 COORDINATION

- A. Coordination with Seeded Areas: Plant trees, shrubs, and other plants after finish grades are established and before planting seeded areas unless otherwise indicated.
 - 1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.
 - 2. Coordinate planting installation with planting soil installation according to Section 329113 "Soil Preparation."

1.5 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Plant Materials: Include quantities, sizes, quality, and sources for plant materials. Invoices to be provided a maximum of one month after authorization to proceed. Copies must indicate source of supply by name, address, and phone number.
 - 2. Product Data: For each type of product indicated.
- B. Samples for Verification: For each of the following:
 - 1. Bark and Compost Mulch: 1-quart volume of each mulch required; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup.

1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.
- B. Inspection Certificates: For plant materials furnished. Provide to Owner's Representative inspection certificates required by law for each shipment of plant materials.
- C. Product Certificates: For each type of manufactured product, from manufacturer, and complying with the following:
 - 1. Manufacturer's certified analysis of standard products.
 - 2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
- D. Pesticides and Herbicides: Product label and manufacturer's application instructions specific to Project.
- E. Sample Warranty: For special warranty.

1.8 CLOSEOUT SUBMITTALS

- A. Maintenance Data: Recommend procedures to be followed by Owner for maintenance of plants during a calendar year after the contractor's maintenance period ends. Submit before expiration of required contractor's maintenance period.

1.9 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful establishment of plants.
 - 1. Professional Membership: Installer shall be a member in good standing of either the National Association of Landscape Professionals or AmericanHort.
 - 2. Experience: Five years' experience in landscape installation.
 - 3. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
 - 4. Pesticide and Herbicide Applicator: State licensed, commercial.
 - 5. Personnel Certifications: Installer's field supervisor shall have certification in one of the following categories from the National Association of Landscape Professionals:
 - a. Landscape Industry Certified Technician - Exterior.
 - b. Landscape Industry Certified Interior.
 - c. Landscape Industry Certified Horticultural Technician.
- B. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.
- C. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.

1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container-grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Take caliper measurements 6 inches above the root flare for trees up to 4-inch caliper size, and 12 inches above the root flare for larger sizes.
 2. Other Plants: Measure with stems, petioles, and foliage in their normal position.
- D. Plant Material Observation: Owner's Representative may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Owner's Representative may also observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and may reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.
1. Notify Owner's Representative of sources of planting materials seven days in advance of delivery to site.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws if applicable.
- B. Bulk Materials:
1. Do not dump or store bulk materials near structures, utilities, walkways, and pavements, or on existing turf areas or plants.
 2. Store fertilizers in a dry place and protect from moisture.
 3. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
 4. Accompany each delivery of bulk materials with appropriate certificates.
- C. Deliver bare-root stock plants within 24 hours of digging. Immediately after digging up bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting. Transport in covered, temperature-controlled vehicles, and keep plants cool and protected from sun and wind at all times.
- D. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.
- E. Handle planting stock by root ball.
- F. Store bulbs, corms, and tubers in a dry place at 60 to 65 deg F until planting.
- G. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.

1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.
- H. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.
- I. Deliver plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist. Plant materials showing damage from shipping, storage or handling will be rejected and shall be replaced at the Contractor's expense.
 1. Heel-in bare-root stock. Soak roots that are in less than moist condition in water for two hours. Reject plants with dry roots.
 2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
 3. Do not remove container-grown stock from containers before time of planting.
 4. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly wet condition.

1.11 FIELD CONDITIONS

- A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.
- B. Planting Restrictions: Plant during the following period unless authorized by the Owner's Representative. Coordinate planting period with maintenance period to provide required maintenance from date of planting completion.
 1. West of Cascade Mountains: September 1 through May 15.
 2. Plants with Automatic Irrigation: Installed outside the above planting periods only with prior written approval from Owner's Representative.
- C. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions, i.e. temperature, wind, and soil moisture conditions, permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

1.12 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.
 1. Failures include, but are not limited to, the following:
 - a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner.

- b. Visual presence of plant diseases or insect infestations.
 - c. Structural failures including plantings falling or blowing over.
 - d. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
2. Warranty Periods: From date of Substantial Completion.
 - a. Trees, Shrubs, Vines, and Ornamental Grasses: 36 months.
 - b. Ground Covers, Biennials, Perennials, and Other Plants: 36 months.
 - c. Annuals: Three months.
3. General: The warranty period for plantings will include the healthy survival of 100 percent of the trees; the healthy survival of 100 percent of shrubs, ornamental grasses, and vines; and the healthy survival of 100 percent of groundcovers, plugs, perennials, and biennials.
4. Include the following remedial actions as a minimum:
 - a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
 - b. Replace plants that do not meet the minimum healthy survival percentage requirements at end of warranty period.
 - c. A limit of one replacement of each plant is required except for losses or replacements due to failure to comply with requirements.
 - d. Provide extended warranty for period equal to original warranty period, for replaced plant material.
5. Warranty Guarantee: A financial instrument as a warranty guarantee in the amount of 100 percent of the contract amount (including all labor, equipment, and materials). Acceptable instruments for the warranty guarantee are as follows:
 - a. A warranty guarantee incorporated with the performance guarantee.
 - b. A maintenance bond.
 - c. Cash deposit with Owner.
6. Warranty Exemptions: After Substantial Completion acceptance and during the warranty period, incidents that exempt replacement include: plants removed by others, plants that are lost or damaged, plants impacted due to occupancy of project, plants lost or damaged by a third party, plants lost due to vandalism, or any natural disaster impacting plants.
7. Warranty Period Closure: During and by the end of the warranty period, remove all tree wraps, ties, and guying. All trees that lack sufficient caliper to remain upright or those requiring further anchorage are to remain staked as approved by the Owner's Representative.
8. End of Warranty and Final Acceptance: Upon written request prior to the end of the warranty period date, the Owner's Representative will observe all warranted Work for final acceptance.

1.13 SUBSTITUTION REQUESTS

- A. Size and species of plants that cannot be obtained due to lack of availability can be requested to be substituted. Submit all requests to Owner's Representative with a list of plant sizes, species, and nursery contact information for approval prior to issuing a formal submittal.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL

- A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated on Drawings.
1. All plant materials furnished, including root ball dimensions or container size to trunk caliper ratio, shall comply with ANSI Z60.1 where applicable.
 2. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.
 3. Provide plants of sizes, grades, and ball or container sizes for types and form of plants. Plants of a larger size may be used if acceptable to Owner's Representative, with a proportionate increase in size of roots or balls.
 4. Compliance: All plant materials shall comply with state and Federal laws and regulations for plant diseases, pests, and weeds.
 5. Cold storage plants are not permitted.
- B. Plant Quality: Furnish plants with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, conks, pests, eggs, larvae, and defects such as knots, galls, lesions, sun scald, injuries, abrasions, wood cracks, sap leakage, flush pruning cuts, and disfigurement.
1. Trees: Relatively straight, vertical trunk typical of species, capable of standing upright without supplemental staking, and with a single central leader. Crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); crossing trunks; cut-off limbs more than 3/4 inch in diameter; or with stem girdling roots are unacceptable conditions.
 2. Graft Unions: Unions, where applicable, are completely closed, without signs of rejection, healed, and visible above the root ball soil line.
 3. Root-Ball Quality: Measured from top of root ball, which begins at root flare according to ANSI Z60.1. Root flare shall be visible before planting. Root balls with roots favoring one side of the ball or with kinked roots are subject to be rejected.
 4. Crown: Form and density typical of species, its stage of growth, and time of year.
 5. Leaves: Size, color, and appearance typical of species, its stage of growth, and time of year and be absent of wilted, shriveled, or dead leaves.
 6. Branches: Even distribution of shoot growth throughout the crown typical of species, time of year, and absent of dead, diseased, broken, distorted or injured stems.
 7. Trunk: crooked trunks with wounds, conks, cracks, lesions, or inadequate pruning scars; Relatively straight, vertical typical of species and free of wounds that penetrate to the wood, sunburned areas, conks, wood cracks, sap leakage, signs of boring insects, galls, cankers, girdling ties or lesions.
- C. Balled and Burlapped Plants: Furnish field grown plants dug with firm, natural ball of earth in which they were grown in complying with ANSI Z60.1 for type and size of plant required; wrapped with burlap, tied, rigidly supported, and drum laced with twine and optionally accompanied with a wire basket. Root flare to be visible at the surface of the ball as recommended by ANSI Z60.1. Burlap and twine materials to be natural and fully biodegradable.

- D. Container Plants: Furnish healthy, vigorous, well-rooted plants grown in a removable and recyclable container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container but not root bound. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.
- E. Bare-Root Plants: Furnish plants with a well-branched, fibrous-root system developed by transplanting or root pruning, with soil or growing medium removed, and with not less than the minimum root spread according to ANSI Z60.1 for type and size of plant required. Plants to be harvested while fully dormant and a minimum of 4 weeks before plants leaf out.
- F. Fabric Bag-Grown Stock: Healthy, vigorous, well-rooted plants established and grown in-ground in a porous fabric bag with well-established root system reaching sides of fabric bag. Fabric bag size is not less than diameter, depth, and volume required by ANSI Z60.1 for type and size of plant.
- G. Labeling: Label each individual tree and at least one plant of each variety and size for all other plant types with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant.
- H. If formal arrangements or consecutive order of plants is indicated on Drawings, select stock for uniform height and spread, and number the labels to assure symmetry in planting.
- I. Annuals and Biennials: Provide healthy, disease-free plants of species and variety shown or listed, with well-established root systems reaching to sides of the container to maintain a firm ball, but not with excessive root growth encircling the container. Provide only plants that are acclimated to outdoor conditions before delivery and that are in bud but not yet in bloom.

2.2 FERTILIZERS

- A. Planting Tablets: Tightly compressed chip-type, long-lasting, slow-release, commercial-grade planting fertilizer in tablet form. Tablets shall break down with soil bacteria, converting nutrients into a form that can be absorbed by plant roots. Fertilizers to meet 0-F-241D, "Federal Specification, Fertilizer, Mixed, Commercial."
 - 1. Size: 10-gram tablets.
 - 2. Nutrient Composition: 20 percent nitrogen, 10 percent phosphorous, and 5 percent potassium, by weight plus micronutrients.

2.3 MULCHES

- A. Organic Mulch: Commercially produced, free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of the following:
 - 1. Type: Leaf Mulch and or chipped woody tree material from the site (no blackberries, ivy etc.).
 - 2. Chipped Size Range: 2-inch minus, fine to medium texture.
 - 3. Color: Natural.

- B. Compost Mulch: Commercially produced, well-composted, stable, and weed-free organic matter, pH of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through a 1-1/2 inch sieve; soluble-salt content of 2 to 5 dS/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - 1. Organic Matter Content: 50 to 60 percent of dry weight.
 - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
 - 3. Ratio of Carbon to Nitrogen: 25:1.

2.4 PESTICIDES AND HERBICIDES

- A. General: Pesticide registered and approved by the EPA and state of Oregon, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction. Use of neonicotinoids class of pesticides are prohibited.
- B. Pre-Emergent Herbicide (Selective and Nonselective): Registered and approved by the EPA and state of Oregon. Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.
- C. Post-Emergent Herbicide (Selective and Nonselective): Registered and approved by the EPA and state of Oregon. Effective for controlling weed growth that has already germinated.

2.5 MISCELLANEOUS PRODUCTS

- A. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.
- B. Burlap: Non-synthetic, biodegradable.
- C. Mycorrhizal Fungi: Dry, granular inoculant containing at least 5300 spores per lb. of vesicular-arbuscular mycorrhizal fungi and 95 million spores per lb. of ectomycorrhizal fungi, 33 percent hydrogel, and a maximum of 5.5 percent inert material.
- D. Biochar: Commercially available soil amendment, high carbon fine-grained residue charcoal byproduct of sustainably sourced biomass material via pyrolysis, suitable for plant growth and soil health.
 - 1. Cationic Exchange Capacity: 25 to 45 millieq/l.
 - 2. Carbon: 85 wt. percent C.
 - 3. Moisture: 15 wt. percent H₂O.
 - 4. pH: 7.
- E. Water: Suitable for planting irrigation and free from oil, acid, alkali, salt, or other substances harmful to plant, animal, or aquatic life.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive plants, with Installer present, for compliance with requirements and conditions affecting installation and performance of the Work.
 - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 - 2. Verify that plants and vehicles loaded with plants can travel to planting locations with adequate overhead clearance.
 - 3. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 - 4. Uniformly moisten excessively dry soil that is not workable, or which is dusty.
 - 5. Verify the subgrade and planting soils are at appropriate elevations and meet all quality requirements for areas receiving plants.
- B. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Owner's Representative and replace with new planting soil.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations, outline areas, adjust locations when requested, and obtain Owner's Representative acceptance of layout before excavating or planting. Make minor adjustments as required.
- D. Lay out plants at locations indicated on Drawings. Stake locations of individual trees and shrubs and outline areas for multiple plantings.

3.3 PLANTING AREA ESTABLISHMENT

- A. General: Prepare planting area for soil placement and mix planting soil according to Section 329113 "Soil Preparation."
- B. Placing Planting Soil: Place and mix planting soil in-place over exposed subgrade or Blend planting soil in place.

- C. Before planting, obtain Owner's Representative's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.
- D. Application of Mycorrhizal Fungi: Broadcast dry product uniformly over prepared soil at application rate according to soil test analysis.

3.4 EXCAVATION FOR TREES AND SHRUBS

- A. Planting Pits and Trenches: Excavate circular planting pits.
 - 1. Excavate planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are unacceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.
 - 2. Excavate approximately two times as wide as ball diameter for balled and burlapped balled and potted container-grown stock.
 - 3. Excavate at least 12 inches wider than root spread and deep enough to accommodate vertical roots for bare-root stock.
 - 4. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
 - 5. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.
 - 6. Maintain angles of repose of adjacent materials to ensure stability. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements.
 - 7. Maintain supervision of excavations during working hours.
 - 8. Keep excavations covered or otherwise protected when unattended by Installer's personnel.
- B. Backfill Soil: Subsoil and topsoil removed from excavations may be used as backfill soil unless otherwise indicated.
- C. Backfill Soil: Subsoil and topsoil removed from excavations may only be used if amended according to 329113 "Soil Preparation".
- D. Obstructions: Notify Owner's Representative if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
 - 1. Hardpan Layer: Drill 6-inch-diameter holes, 24 inches apart, into free-draining strata or to a depth of 10 feet, whichever is less, and backfill with free-draining material.
- E. Drainage: Notify Owner's Representative if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.
- F. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

3.5 TREE, SHRUB, AND VINE PLANTING

- A. Inspection: At time of planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.
- B. Roots: Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
- C. Balled and Burlapped Stock: Set each plant plumb and in center of planting pit or trench with root flare above adjacent finish grades as indicated on Drawings.
 - 1. Backfill Method: Backfill around root ball with planting soil.
 - 2. After plant is set in hole, carefully cut, and remove burlap, rope, and metal wire baskets as indicated on Drawings. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked, broken, or compromised where the plant cannot stand upright. Root balls that are cracked but not compromised shall have the burlap cut down to depth indicated on Drawings and loosely retied with twine to stabilize root ball before backfilling.
 - 3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 - 4. Place planting tablets equally distributed around each planting pit when pit is approximately one-half filled. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.
 - a. Quantity: Two per plant.
 - 5. Continue backfilling process. Water again after placing and tamping final layer of soil.
- D. Balled and Potted and Container-Grown Stock: Set each plant plumb and in center of planting pit or trench with root flare above adjacent finish grades as indicated on Drawings.
 - 1. Backfill Method: Backfill around root ball with planting soil.
 - 2. Carefully remove root ball from container without damaging root ball or plant. Loosen root mass as indicated on Drawings.
 - 3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 - 4. Place planting tablets equally distributed around each planting pit when pit is approximately one-half filled. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.
 - a. Quantity: Two per plant.
 - 5. Continue backfilling process. Water again after placing and tamping final layer of soil.
- E. Bare-Root Stock: Set and support each plant in center of planting pit or trench with root flare above adjacent finish grade as indicated on Drawings.
 - 1. Backfill Method: Backfill around root ball with planting soil.

2. Spread roots without tangling or turning toward surface. Plumb before backfilling and maintain plumb while working.
 3. Carefully work backfill in layers around roots by hand. Bring roots into close contact with the soil.
 4. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 5. Place planting tablets equally distributed around each planting pit when pit is approximately one-half filled. Place tablets beside soil-covered roots about 1 inch from root tips; do not place tablets in bottom of the hole or touching the roots.
 - a. Quantity: Two per plant.
 6. Continue backfilling process. Water again after placing and tamping final layer of soil.
- F. Slopes: When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

3.6 TREE, SHRUB, AND VINE PRUNING

- A. Remove only dead, dying, or broken branches as directed by Owner's Representative
- B. Prune and thin trees, shrubs, and vines as directed by Owner's Representative.
- C. Prune and thin trees, shrubs, and vines according to standard professional horticultural and arboricultural practices. Unless otherwise indicated by Owner's Representative, do not cut tree leaders; remove only injured, dying, or dead branches from trees and shrubs; and prune to retain natural character.
- D. Do not apply pruning paint to wounds.

3.7 GROUND COVER AND PLANT PLANTING

- A. Set out and space ground cover and plants other than trees, shrubs, and vines as indicated on Drawings in even rows with triangular spacing.
- B. Use planting soil for backfill.
- C. Dig holes large enough to allow spreading of roots.
- D. For rooted cutting plants supplied in flats, plant each in a manner that minimally disturbs the root system but to a depth not less than two nodes.
- E. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- F. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.

- G. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.8 PLANTING AREA MULCHING

- A. Mulch backfilled surfaces of planting areas and other areas indicated.
 - 1. Mulch in Planting Zone Areas: Apply 3-inch average thickness of mulch around all plants to at least a 3-foot diameter. Do not place mulch directly onto trunks or stems of plants and maintain clear distance as indicated on Drawings.

3.9 PLANT MAINTENANCE (from initial installation until substantial completion)

- A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting, and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.
- B. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
- C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

3.10 PESTICIDE AND HERBICIDE APPLICATION (from initial installation until substantial completion)

- A. Apply pesticides and other chemical products and biological control agents according to authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- B. Pre-Emergent Herbicides (Selective and Nonselective): Apply to tree, shrub, and ground-cover areas according to manufacturer's written recommendations. Do not apply to seeded areas.
- C. Post-Emergent Herbicides (Selective and Nonselective): Apply only as necessary to treat already-germinated weeds and according to manufacturer's written recommendations.

3.11 REPAIR AND REPLACEMENT (through 1-year warranty period)

- A. General: Repair or replace existing or new trees and other plants that are damaged by construction operations, in a manner approved by Owner's Representative.
 - 1. Submit details of proposed pruning and repairs.
 - 2. Perform repairs of damaged trunks, branches, and roots within 24 hours, if approved.

3. Replace trees and other plants that cannot be repaired and restored to full-growth status, as determined by Owner's Representative.
- B. Remove and replace dead or unhealthy plant materials as required in the "Warranty" Article before the end of the corrections period. Replace plants that are damaged during construction operations that the Owner's Representative determines are incapable of restoring to normal growth pattern.
 1. Provide new trees of same size as those being replaced for each tree of 4 inches or smaller in caliper size.
 2. Species of Replacement Trees: Same species being replaced.

3.12 CLEANING AND PROTECTION

- A. During planting, keep adjacent paving and construction clean and work area in an orderly condition. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.
- C. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
- D. After installation and before <Final Acceptance >, remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.

3.13 MAINTENANCE SERVICE (See also Landscape Maintenance - Section 329310)

- A. Maintenance Service for Trees and Shrubs: Provide maintenance by skilled employees of landscape Installer. Maintain as required in "Plant Maintenance" Article. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established, but for not less than maintenance period below:
 1. Warranty Maintenance Period: 36 months from date of Final Acceptance.
- B. Maintenance Service for Ground Cover and Other Plants: Provide maintenance by skilled employees of landscape Installer. Maintain as required in "Plant Maintenance" Article. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established, but for not less than maintenance period below:
 1. Warranty Maintenance Period: Thirty-six months from date of Final Acceptance.

END OF SECTION 329300

SECTION 329310 – LANDSCAPE MAINTENANCE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Furnish labor, material, and equipment required to maintain landscaped areas for three years after date of Substantial Completion. Term of maintenance shall commence only after date of final written approval.
 - 2. Supply landscape maintenance quote as separate line item in construction proposal.
- B. Related Sections include the following:
 - 1. Section 311000; Site Clearing
 - 2. Section 015639; Temporary Plant Protection
 - 3. Section 328400; Planting Irrigation
 - 4. Section 329200; Turf and Grasses
 - 5. Section 329300; Plants

1.3 SUBMITTALS

- A. Upon beginning of maintenance contract, submit a proposed schedule of visit dates and services as outlined herein.
- B. At the beginning of each year, by January 15th, the Contractor shall submit a complete revised yearly schedule of maintenance operations indicating timing of scheduled visits, method of weed control, access, and mobility issues. At the end of each year, by December 1st, the Contractor shall submit a written summary of the year's activities, including: the record of irrigation winterization and start-up; irrigation schedule, repairs and adjustments; herbicide types and applications; water level conditions; repair, replacement, or restoration activities; and any conditions addressed outside of the scheduled tasks specified herein.

1.4 HERBICIDE PROGRAM

- A. Prior to starting herbicide and chemical control programs, submit a monthly herbicide application schedule and application specification as written by manufacturer of herbicide, and a currently licensed herbicide applicator. Notify Owner's Representative of herbicide application type and schedule prior to seasonal application. Submit rates, quantities, and types per Federal, State and Local jurisdictions, per code and submit copies to Owner.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Fertilizer shall be Slow-Release Organic 10-10-5 or 5-15-10 cottonseed meal-based fertilizer or approved equal.
- B. Fertilizer shall be organic base, composed specifically to improve and maintain root and leaf growth in plantings and soil types found on project site.

PART 3 - EXECUTION

3.1 GENERAL

- A. Debris and Trash Removal: Remove all trash and debris from site.

3.2 PLANTING BED MAINTENANCE

- A. Replace all damaged, dead, or dying plants covered by warranty within 30 days of initial identification of condition.
- B. Fertilizing at planting beds: Apply specified organic base commercial fertilizer at manufacturers recommended rate, two times per growing season. First application on March 15 and the final application on June 15. All fertilizer shall be washed off foliage and watered in thoroughly if not watered by normal rainfall. Apply fertilizers specific to acid-loving (ericaceous) plants where appropriate.
- C. Weeding: Maintain clean mulched areas by pulling and removing all weeds. Check weekly during the growing season and at least bi-weekly at other times.
- D. Pruning: Prune to shape plantings as needed or directed to conform to the natural growth patterns. Remove all dead or diseased wood from the plantings.
- E. Retain non-hazardous dead trees or snags. Notify Owner of hazardous dead trees or snags.
- F. Mulching: Keep a three-inch mulch bed of at least a 3-foot diameter around all plants at all times. Rake mulch in early spring before applying new cover to break "crust" of old mulch.
- G. Spraying: Spraying shall occur only by a currently licensed applicator.
- H. Watering: Shall be by specified irrigation program, excepting new plantings or replacement plantings that shall be watered in as planted. Verify balance of watering on new or replacement planting with Owner. Adjust watering schedule or frequency, if evidence of excess puddling or runoff is encountered or if plantings show stress from lack of water.
- I. Winterize or start up irrigation system as specified. Monitor and adjust system as needed.
- J. Remove all debris from site after each visit and dispose legally offsite.

3.3 LAWN REPAIR AREA MAINTENANCE

- A. Start water application as soon as season requires. Apply water in sufficient quantities and at sufficient intervals to maintain lawn in good color and health. Do not allow surface run-off. Cease watering operations when seasonal rains provide ample water to maintain lawn.
- B. Mow at least once per week during the normal growing season to maintain lawn height between 1-1/2 inches (40 mm) to 2-1/2 inches (60 mm). Normal height of cut is 1-1/2 inches (40 mm). Utilize clean, sharp equipment that is cleaned of bacteria, chemicals, fungus etc., prior to use on project site. Remove grass clippings from mowing operations and dispose legally offsite.
- C. Edge beds and lawn perimeters every two weeks, after establishment.
- D. Feed with organic base fertilizer specifically formulated for turf and applying equivalent of four pounds of actual nitrogen per season in a minimum of four applications annually.
- E. Apply herbicide weed control by licensed applicator sufficient to control invasive broadleaf weeds and grasses.

3.4 OTHER SEEDED AREAS

- A. Mow or flail mow areas once yearly.
- B. Until seeded areas are accepted start water application as soon as season requires. Apply water in sufficient quantities and at sufficient intervals to maintain seeded areas in good color and health. Do not allow surface run-off. Cease watering operations when seasonal rains provide ample water to maintain seeded areas.
- C. Do not apply weed control measures in seeded areas.
- D. Re-Seed per original specifications in areas not showing acceptable germination.

3.5 PEDESTRIAN AREAS

- A. Police and sweep pedestrian walkways to maintain clean, safe surfaces, remove accumulated clippings and plant debris from walkways and entrances. Clean all paved surfaces soiled by landscape maintenance operations.

3.6 NATIVE PLANTING MAINTENANCE

- A. Maintain native plantings and seeded areas on an 'as-needed basis' for a period of three years after written approval, per the unit cost bid and included in the contract documents, and per the following task schedule:
 - 1. First Year
 - a. After the site is planted and written approval(s) for plantings has been issued, the Contractor shall conduct weekly visits for the two months after planting, to monitor conditions. The Contractor shall identify detrimental site conditions and

notify the Owner's Representative of such conditions. The contractor shall respond immediately to correct such conditions on an 'hourly time and material' basis.

- b. Each month thereafter, the Contractor shall visit the site once monthly to monitor plantings for the balance of the first year.
- c. Maintenance tasks shall consider, but not be limited to the repair and/or improvement of the following concerns and conditions:
 - 1) Foliage condition
 - 2) Irrigation applications: per specifications
 - 3) Survivability of plants and seeding
 - 4) Animal and fowl
 - 5) Water levels effects: sufficiency, period of inundation, erosion or washing
 - 6) Germination of seeded areas
 - 7) Weed control of invasive plant species. Removal of weed debris and seed sources.
 - 8) Detrimental surface conditions: erosion, slumping, etc.
 - 9) Vandalism.
 - 10) Litter and extraneous debris removal.

2. Second Year

- a. Continue monthly maintenance tasks outlined in first year. Analysis of site and reports shall be consistent with first year methodology.

3. Third Year

- a. Continue monthly maintenance tasks outlined in first year. Analysis of site and reports shall be consistent with first year methodology.

3.7 WEED ERADICATION

- A. Weed Eradication: Shall include eradication by herbicide and non-herbicide methods. Eradication program shall include and is not limited to control of the following noxious species;

Cirsium arvense (Canadian Thistle)
Convolvulus spp. (Morning Glory)
Cytisus scoparius (Scotch Broom)
Dipsacus sylvestris (Common Teasel)
Eichornia crassipes (Water Hyacinth)
Festuca arundinaceae (Tall Fescue)
Hedera helix (English Ivy)
Holcus lanatus (Velvet Grass)
Lolium spp. (Rye Grasses)
Lotus corniculatus (Bird's Foot Trefoil)
Lythrium salicaria (Purple Loose Strife)
Melilotus spp. (Sweet Clover)
Myriophyllum spicatum (Eurasian Milfoil)
Phalaris arundinaceae (Reed Canary Grass)
Rubus discolor (Himalayan Blackberry)

Solanum spp. (Nightshade)
Trifolium spp. (Clovers)
Vicia spp. (Vetches)

Other weeds include:

Clematis. Vitalba (old man's beard)
Crataegus laevigata (English hawthorn)

Herbicide application shall be by manual 'spot spraying', wicking, or backpack methods per manufacturer's specifications. Herbicide in the Water Quality Resource Areas as designated by Oregon City shall be subject to approval and be strictly applied by manufacturer's specifications.

- B. Selective hand removal by non-herbicide methods shall be utilized if herbicide application threatens native plantings. All native plantings indicating damage by herbicide application shall be replaced immediately at no additional cost to the Owner.
- C. Protect the site and the Water Quality Resource Areas as designated by Oregon City at all times from erosion and siltation. Utilize all approved erosion control methods to contain and mitigate erosion. The Contractor shall inspect the site at sufficient intervals throughout the maintenance monitoring program, during wet periods of weather to identify potential erosion problems which shall be brought to the attention of the Owner's Representative immediately. Replace plant and seeding material per directives of the Owner's Representative, damaged by erosion per the original planting and seeded specifications.

3.8 IRRIGATION SYSTEM INSPECTION AND MAINTENANCE

- A. The Contractor shall irrigate to maintain all plantings in a healthy, thriving condition.
- B. Start irrigation when plants require supplemental water due to dry weather, depleting available soil moisture.
- C. Flush and winterize system by November 1, or earlier if weather exhibits threat of freezing. Verify that system is free of water in all components subject to freeze damage.
- D. Provide yearly backflow prevention inspections and certificates to Owner's representative, as required by code.
- E. Adjust nozzles, heads, valves, and controller operation to provide a consistent water application avoiding over-saturation or under watering throughout native planting areas.
- F. Notify Owner's representative of system inadequacies that cannot be addressed by adjustment.

PART 4 - MEASUREMENT AND PAYMENT

4.1 PAYMENT SCHEDULE

- A. Unit of Measurement and Payment for all items required for Native Planting Area Maintenance shall be based on the Lump Sum or unit prices as set forth in the Contractor's Proposal.
- B. The pay items will be as follows:

	Pay Item	Unit of Measurement
(a)	General Inspection and Reporting	LUMP SUM PER YEAR
(b)	Temporary Irrigation System Inspection & Maintenance	LUMP SUM PER YEAR
(c)	Three Year Native Planting Area Maintenance Program	LUMP SUM PER YEAR

- C. The bid item has associated incidental work. Work not listed on bid schedule, but necessary for completion of work specified herein shall be considered incidental and shall not relieve Contractor from the responsibility of completing incidental work.
- D. Payment for (b) & (c) includes any work, materials, tools, and labor not listed separately in the Contractor's Proposal.

END OF SECTION 329310

WATER ENVIRONMENT SERVICES

Tri-City Water Resource Recover Facility

100% DESIGN
DATE: SEPT 3, 2020

PROJECT DIRECTORY

OWNER/CONTACT

Clackamas WES
150 Beavercreek Rd.
Oregon City, OR 972045
PHONE: 503-742-4597
PROJECT CONTACT: Jeff Stallard
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LANDSCAPE ARCHITECT

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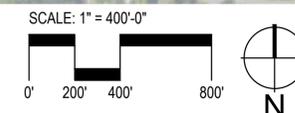
SURVEY

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SHEET INDEX

SHEET NO.	SHEET TITLE
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L0.1	DEMOLITION PLAN
L1.0	MASTER PLANT LIST AND NOTES
L1.1	PLANTING PLAN - NORTH
L1.2	PLANTING PLAN - WEST
L2.0	IRRIGATION SCHEDULE AND NOTES
L2.1	IRRIGATION PLAN - NORTH
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L3.0	DETAILS - PLANTING
L3.1	DETAILS - IRRIGATION

VICINITY MAP



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Landscape Architecture
Environmental Design
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Email: info@greenworkspc.com



Project:
Tri-City WRRF Planting Mitigation
Water Environment Services
150 Beavercreek Road
Oregon City, OR 97045
Phone #
Email

Submital: Bid Set
Sheet Title:
COVER SHEET

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Date: 09/03/2020
Revisions:

Drawn By: VS
Checked By: JD, DW
Job No. 200011.1
Approved: MF

G0.0
Sheet No. 1 of 13

GENERAL NOTES

- SURVEY INFORMATION:
HORIZONTAL DATUM: NAD83 (2011), EPOCH 2010, GRS 80, INT'L FEET.
VERTICAL DATUM: GEOID 12A, NAVD 88, US FEET.
PROJECTION: THE OREGON STATE PLANE COORDINATE SYSTEM (NORTH).
- ALL WORK PERFORMED IN CONNECTION WITH THE CONTRACT DOCUMENTS, INCLUDING MATERIALS FURNISHED, WORKMANSHIP, AND MEANS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE LATEST STANDARDS, PRACTICES AND REQUIREMENTS OF THE APPLICABLE FEDERAL, STATE AND LOCAL AUTHORITIES.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS, DEPTHS AND ELEVATIONS PRIOR TO CONSTRUCTION AND ARRANGE FOR THE RELOCATION OF ANY IN CONFLICT WITH ALL CONSTRUCTION ACTIVITIES. THE LOCATIONS AND IDENTIFICATION OF UTILITIES WITHIN THIS DOCUMENT IS FOR INFORMATION ONLY AND IS NOT GUARANTEED TO BE ACCURATE. ANY DISCREPANCIES BETWEEN SURVEY INFORMATION AND FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE IMMEDIATELY.
- IT SHALL BE UNDERSTOOD THAT THE IMPROVEMENTS SHOWN ON THE DRAWINGS AND SPECIFICATIONS ARE MEANT TO COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES. MODIFICATIONS, CONFLICTS, OR ISSUES THAT ARISE THAT WOULD CONTRADICT RELEVANT CODES AND ORDINANCES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE IMMEDIATELY.
- COMPLY WITH OREGON LAW REQUIRING ADHERENCE TO THE RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. NOTIFY THE OREGON UTILITY NOTIFICATION CENTER AT LEAST 2 BUSINESS DAYS, BUT NOT MORE THAN 10 BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090 AND ORS 757.541 TO 757.57. PHONE CONTACT FOR THE OREGON UTILITY NOTIFICATION CENTER IS 1-800-332-2344 (or 811).
- REPAIR AT OWN EXPENSE ANY DAMAGE DONE TO UTILITY SYSTEMS, SURFACE PAVEMENTS, SITE FEATURES, AND STRUCTURES, WHETHER INSIDE OR OUTSIDE OF THE PROJECT LIMITS, THAT ARE NOT DIRECTLY INDICATED TO BE REMOVED OR RELOCATED AS PART OF THE PROJECT CONSTRUCTION.
- ALL QUANTITIES SHOWN ON THE DRAWINGS OR SPECIFICATIONS ARE FOR CONVENIENCE ONLY.
- UPON PROJECT COMPLETION, THE PROJECT AREA AND ADJACENT SPACES SHALL BE FREE AND CLEAR OF ALL CONSTRUCTION MATERIALS, WASTE AND DEBRIS. CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL MATERIALS AS INDICATED IN THE PROJECT CONTRACT DOCUMENTS AND MUST MEET ALL APPLICABLE REGULATIONS OVERSEEING WASTE DISPOSAL.

GENERAL LEGEND

- PROJECT LIMIT OF WORK
- WATER QUALITY RESOURCE AREA (WQRA) 200-FT BUFFER
- CHAINLINK FENCE
- OVERHEAD POWER LINE
- ELECTRIC LINE
- STORM DRAIN LINE
- DITCH
- 1-FT CONTOUR
- CONCRETE PAVING
- ASPHALT
- GRAVEL
- RIPRAP
- EXISTING DECIDUOUS TREE
- EXISTING CONIFER TREE
- EXISTING CONIFER TREE - DEAD
- EXISTING SNAG OR STUMP
- EXISTING IRRIGATION HEAD
- EXISTING IRRIGATION VAULT
- UTILITY POLE

TABLE OF ABBREVIATIONS

NOTE: NOT ALL ABBREVIATIONS REFERENCED IN DRAWINGS. ABBREVIATIONS MAY BE SHOWN WITH OR WITHOUT PERIODS.

@	ALUM	APPROX	ARCH	AC	BC	B&B	BLDG	BM	BPRD	BS	BR	BOW	BW	CB	CF	CAL	CJ	CLR	CIP	CONT	CL / €	CP	CT	DIM	DIA	DEMO	DOM	(E)	EA	EJ	ELC	ELEV	ENG	EOP	EQ	EST	FB	FD	FG	FL	FOC	FTG	GALV	GA	GFI	GB	GND	HDG	HMAC	MHMAC	HORIZ	HP	HSS	ID	IE	INT	IR	JT	LT	LF	LP	AT	ALUMINUM	APPROXIMATE	ARCHITECT	ASPHALT CONCRETE	BOTTOM OF CURB	BALLED AND BURLAP	BUILDING	BENCHMARK	BEND PARKS & RECREATION DISTRICT	BOTTOM OF STAIR	BOTTOM OF RAMP	BOTTOM OF WALL (ELEV. BELOW FINISH GRADE)	BOTTOM OF WALL (ELEV. AT FINISH GRADE)	CATCH BASIN	CUBIC FEET	CALIPER	CONTRACTION JOINT	CLEAR	CAST-IN-PLACE	CONTAINER / CONTINUOUS	CENTER LINE	CENTER POINT	CURRENT TRANSFORMER	DIMENSION	DIAMETER	DEMOLISH	DOMESTIC WATER LINE	EXISTING	EACH	EXPANSION JOINT	EXTERIOR LIGHTING CONTROL	ELEVATION	ENGINEER	EDGE OF PAVEMENT	EQUAL	ESTIMATE	FLAT BAR	FIELD DRAIN	FINISH GRADE	FLOW LINE	FACE OF CURB	FOOTING	GALVANIZED	GAUGE	GROUND FAULT INTERRUPTER	GROUND BREAK	GROUND	HOT DIP GALVANIZED	HOT MIX ASPHALT CONCRETE	MINOR HOT MIX ASPHALT CONCRETE	HORIZONTAL	HIGH POINT	HOLLOW STRUCTURAL SECTION	INSIDE DIAMETER	INVERT ELEVATION	INTERMEDIATE	IRON ROD	JOINT	LEFT	LINEAR FEET	LOW POINT	MAX	MINIMUM	MH	NIC	NOM	NPS	NTS	OH	OC	OD	OFCI	PA	PC	PCC	PI	PIP	PL	PLS	POT	PT	PERF	PK	PP	PVC	R	REF	REINF	REQ'D	ROW	RPZ	RT	SAN	SD	SEC	SIM	SS	SSTL	STA	STD	STR	TD	TEL	THK	TOPO	TC	TR	TS	TPZ	TYP	TW	UG	VAR	VOL	W/	W/O	WM	WP	WT	WWM	YD	MAXIMUM	MINIMUM	MANHOLE	NOT IN CONTRACT	NOMINAL	NOMINAL PIPE SIZE	NOT TO SCALE	OVER HEAD	ON CENTER	OUTSIDE DIAMETER	OWNER FURNISHED CONTRACTOR INSTALLED	PLANTING AREA	POINT OF CURVATURE	POINT OF COMPOUND CURVATURE / PORTLAND CEMENT CONCRETE	POINT OF INTERSECTION	POURED-IN-PLACE	PLATE	PURE LIVE SEED	POINT OF TANGENCY	PRESSURE TREATED	PERFERATED	POINT KNOWN	POWER POLE	POLYVINYL CHLORIDE PIPE	RADIUS	REFERENCE	REINFORCED / REINFORCEMENT	REQUIRED	RIGHT-OF-WAY	ROOT PROTECTION ZONE	RIGHT	SANITARY	STORM DRAIN	SECONDARY	SIMILAR	SANITARY SEWER	STAINLESS STEEL	STATION	STANDARD	STRUCTURAL	TRENCH DRAIN	TELEPHONE	THICK	TOPOGRAPHY	TOP OF CURB	TOP OF RAMP	TOP OF STAIR	TREE PROTECTION ZONE	TYPICAL	TOP OF WALL	UNDERGROUND	VARIES	VOLUME	WITH	WITHOUT	WATER METER	WORK POINT	WEIGHT	WELDED WIRE MESH	YARD
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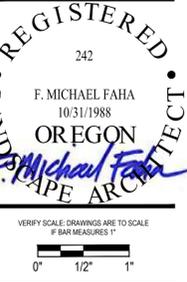
SYMBOLS LEGEND

- LEADER LABEL
- REFERENCE KEYNOTE
- DETAIL REFERENCE
- ELEVATION DETAIL REFERENCE
- SECTION DETAIL REFERENCE
- SECTION REFERENCE (WITHIN DETAIL)
- ELEVATION REFERENCE (WITHIN DETAIL)
- ENLARGEMENT REFERENCE
- LINEAR DIMENSION
- RADIUS DIMENSION
- ANGLE DIMENSION
- SHEET MATCHLINE
- SCALE BAR
- NORTH ARROW
- REVISION TRIANGLE AND CLOUD
- LIMIT OF WORK LINE

DETAIL FRAME LEGEND



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Email: info@greenworkspc.com



Project: **Tri-City WRRF Planting Mitigation**

Water Environment Services
130 Beavercreek Road
Oregon City, OR 97145
Phone #
Email

Submitted: Bid Set

Sheet Title: **GENERAL NOTES AND LEGEND**

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Date: 09/03/2020

Revisions:

Drawn By: VS
Checked By: JD, DW
Job No. 200011.1
Approved: MF

G0.1
Sheet No. 2 of 13

3:\PROJECTS\200011.1\WES_TRI-CITY_WWRF02_PRODUCTION\01_CAD\01_PLOT_SHEETS\200011.1_EXIST_COND.DWG



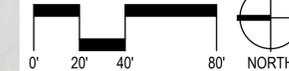
LEGEND

- PROJECT LIMIT OF WORK
- WATER QUALITY RESOURCE AREA (WQRA) 200-FT BUFFER
- x-x-x- CHAINLINK FENCE
- OP OVERHEAD POWER LINE
- E ELECTRIC LINE
- ST STORM DRAIN LINE
- < DITCH
- 1-FT CONTOUR
- [Pattern] CONCRETE PAVING
- [Pattern] GRAVEL
- [Pattern] EXISTING RIPRAP
- [Pattern] EXISTING UNDERSTORY VEGETATION AT WEST SIDE
- (•) EXISTING DECIDUOUS TREE
- (*) EXISTING CONIFER TREE
- (*) EXISTING CONIFER TREE - DEAD
- (X) EXISTING SNAG OR STUMP

EXISTING CONDITIONS KEYNOTES

- ① PUBLIC RECREATION TRAIL
- ② DETENTION POND
- ③ PGE MARKERS - TO REMAIN
- ④ IRRIGATION VAULT
- ⑤ GATE, WIDTH VARIES
- ⑥ STORMWATER DRAIN
- ⑦ IRRIGATION HEAD
- ⑧ UTILITY POLE
- ⑨ GRAVEL ACCESS ROAD

SCALE: 1" = 40'-0"



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VERIFY SCALE: DRAWINGS ARE TO SCALE
IF BAR MEASURES 1"
0" 1/2" 1"



Project:
Tri-City WRRF Planting Mitigation

Water Environment Services
130 Beechcreek Road
Portland, OR 97045
Phone #
Email

Submital: Bid Set

Sheet Title:

**EXISTING
CONDITIONS
PLAN**

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Date: 09/03/2020

Revisions:

Drawn By: VS
Checked By: JD, DW
Job No. 200011.1
Approved: MF

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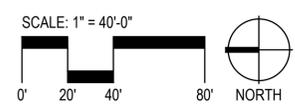
Sheet No. 3 of 13

LEGEND

- PROJECT LIMIT OF WORK
- WATER QUALITY RESOURCE AREA (WQRA) 200-FT BUFFER
- x-x-x- EXISTING CHAINLINK FENCE
- SEDIMENT FENCE SEE DETAIL 1/L3.0
- OP OVERHEAD POWER LINE
- E ELECTRIC LINE
- ST STORM DRAIN LINE
- [Cross-hatch pattern] WEED ERADICATION AREA SEE SPECIFICATIONS
- [Diagonal line pattern] STAGING AND SOIL STOCKPILE AREA SEE SPECIFICATIONS
- [Stippled pattern] EXISTING RIPRAP
- EXISTING TREES TO PROTECT
- ★ EXISTING CONIFER TREE - DEAD
- ⊗ EXISTING SNAG OR STUMP SEE SPECIFICATIONS
- ✕ EXISTING TREE TO BE REMOVED SEE SPECIFICATIONS

DEMOLITION KEYNOTES

- ① MAINTAIN 6-FT SEEDED LAWN AREA ALONG FENCE LINE. REPAIR TO EXISTING CONDITION IF DISTURBED.
- ② PGE MARKERS TO BE PROTECTED
- ③ EXISTING IRRIGATION EQUIPMENT TO BE PROTECTED SEE SPECIFICATIONS
- ④ STORM DRAIN TO BE PROTECTED



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VERIFY SCALE: DRAWINGS ARE TO SCALE
IF BAR MEASURES 1"



Project: **Tri-City WRRF Planting Mitigation**
 Water Environment Services
 130 Beavercreek Road
 Oregon City, OR 97146
 Phone #
 Email

Submit: **Bid Set**
 Sheet Title: **PLANTING SCHEDULE AND NOTES**

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Date: 09/03/2020

Revisions:

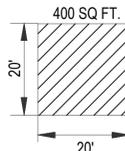
Drawn By: VS
Checked By: JD, DW
Job No. 200011.1
Approved: MF

L1.0

Sheet No. 5 of 13

PLANTING SCHEDULE

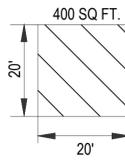
2 L3.0 3 L3.0 4 L3.0 5 L3.0 6 L3.0



ZONE 1: MIXED DECIDUOUS-CONIFER FOREST (15,100 SQUARE FEET = 38 PLOTS)

BOTANICAL NAME	COMMON NAME	SIZE & TYPE	QTY./PLOT	QTY.	NOTES
OVERSTORY:					
PSEUDOTSUGA MENZIESII	DOUGLAS FIR	5' HT. B&B	1	38	
RHAMNUS PURSHIANA	CASCARA	1.5" CAL B&B	1	38	
TSUGA HETEROPHYLLA	WESTERN HEMLOCK	5' HT. B&B	1	38	
UNDERSTORY:					
CORNUS SERICEA	RED OSIER DOGWOOD	2 GAL CONT.	2	76	
OEMLERIA CERASIFORMIS	INDIAN PLUM	2 GAL CONT.	3	114	
PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	2 GAL CONT.	2	76	
RIBES SANGUINEUM	RED CURRANT	2 GAL CONT.	4	152	
SAMBUCUS RACEMOSA	RED ELDERBERRY	2 GAL CONT.	2	76	
SYMPHORICARPOS MOLLIS	CREEPING SNOWBERRY	2 GAL CONT.	4	152	

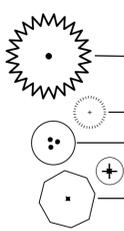
BOTANICAL NAME	COMMON NAME	TYPE	LBS/1000SF	QTY.
GROUND LAYER:				
SEED MIX 1 - SUNMARK NATIVE SEED MIX 'NATIVE RIPARIAN'			1.0	16 LBS
* TO BE APPLIED BETWEEN ALL PLANTS IN PLANTING ZONE 1 TO ACHIEVE FULL COVERAGE.				
BROMUS CARINATUS	CALIFORNIA BROME	SEED		
ELYMUS GLAUCUS	BLUE WILDRYE	SEED		
HORDEUM BRACHYANTHERUM	MEADOW BARLEY	SEED		



ZONE 2: WEED ERADICATION EROSION CONTROL SEEDING (25,000 SQUARE FEET = 63 PLOTS)

BOTANICAL NAME	COMMON NAME	TYPE	LBS/1000SF	QTY.
GROUND LAYER:				
SEED MIX 1 - SUNMARK NATIVE SEED MIX 'NATIVE RIPARIAN'			1.0	25 LBS
* TO BE APPLIED BETWEEN ALL PLANTS IN PLANTING ZONE 2 TO ACHIEVE FULL COVERAGE.				
BROMUS CARINATUS	CALIFORNIA BROME	SEED		
ELYMUS GLAUCUS	BLUE WILDRYE	SEED		
HORDEUM BRACHYANTHERUM	MEADOW BARLEY	SEED		

EVERGREEN SCREENING (8,140 SF)



BOTANICAL NAME	COMMON NAME	SIZE & TYPE	QTY.	NOTES
OVERSTORY:				
PSEUDOTSUGA MENZIESII	DOUGLAS FIR	5' HT. B&B	6	
UNDERSTORY:				
CORNUS SERICEA	RED OSIER DOGWOOD	2 GAL CONT.	8	
GARRYA FREMONTII	MOUNTAIN SILK TASSEL	2 GAL CONT.	29	
MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	2 GAL CONT.	35	
MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	2 GAL CONT.	16	
GROUND LAYER:				
SEED MIX 2 - SUNMARK NATIVE SEED MIX 'NATIVE UPLAND'			1.0	9 LBS
* TO BE APPLIED BETWEEN ALL PLANTS IN SCREENING AREA TO ACHIEVE FULL COVERAGE.				
AGROSTIS EXARATA	SPIKE BENTGRASS	SEED		
BROMUS CARINATUS	CALIFORNIA BROME	SEED		
ELYMUS GLAUCUS	BLUE WILDRYE	SEED		
FESTUCA RUBRA RUBRA	NATIVE RED FESCUE	SEED		

REQUIRED AND PROPOSED MITIGATION PLANTINGS

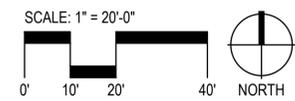
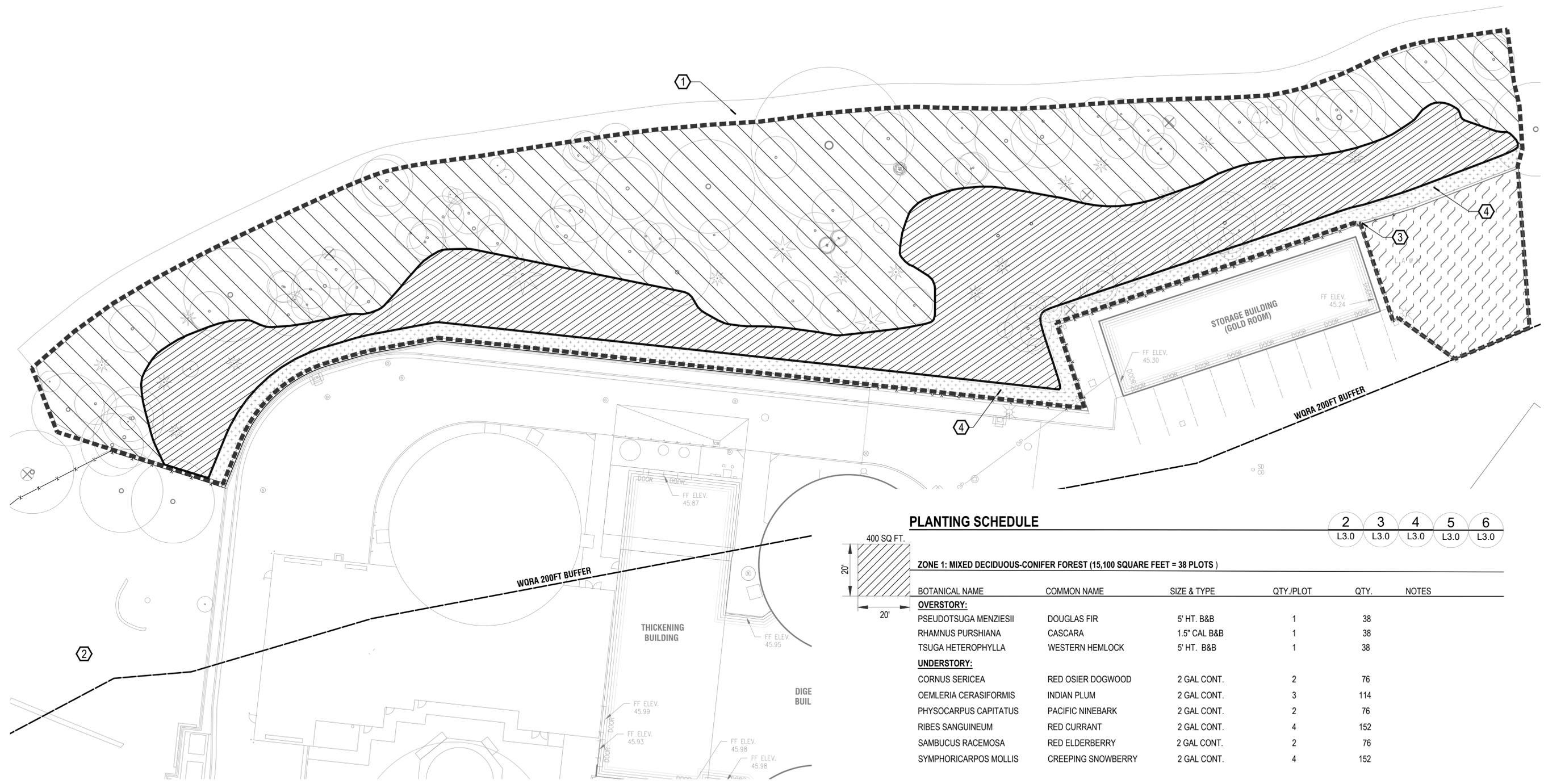
	REQUIRED MITIGATION	PROPOSED MITIGATION
SF	11,309 SF	15,100 SF
TREE	Oregon City - 79 City of Gladstone - 21 Total - 100	114
SHRUB	Oregon City - 395 City of Gladstone - 105 Total - 500	646

MASTER PLANT LIST

BOTANICAL NAME	COMMON NAME	SIZE & TYPE	QTY.	NOTES
CANOPY:				
PSEUDOTSUGA MENZIESII	DOUGLAS FIR	5' HT. B&B	44	
RHAMNUS PURSHIANA	CASCARA	1.5" CAL. B&B	38	
TSUGA HETEROPHYLLA	WESTERN HEMLOCK	5' HT. B&B	38	
UNDERSTORY:				
CORNUS SERICEA	RED OSIER DOGWOOD	2 GAL CONT.	84	
GARRYA FREMONTII	MOUNTAIN SILK TASSEL	2 GAL CONT.	29	
MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	2 GAL CONT.	35	
MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	2 GAL CONT.	16	
OEMLERIA CERASIFORMIS	INDIAN PLUM	2 GAL CONT.	114	
PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	2 GAL CONT.	76	
RIBES SANGUINEUM	RED CURRANT	2 GAL CONT.	152	
SAMBUCUS RACEMOSA	RED ELDERBERRY	2 GAL CONT.	76	
SYMPHORICARPOS MOLLIS	CREEPING SNOWBERRY	2 GAL CONT.	152	
GROUND LAYER:				
SEED MIX #1	SUNMARK 'NATIVE RIPARIAN'		41 LBS	
SEED MIX #2	SUNMARK 'NATIVE UPLANDS'		9 LBS	

PLANTING NOTES

- PRIOR TO INSTALLATION OF PLANT MATERIAL, ALL INVASIVE VEGETATION WITHIN THE SELECTED PROJECT AREAS SHALL BE REMOVED BY MANUAL METHODS (CUT, MOW, SHADE, SMOTHER, HAND PULL) OR CHEMICAL (SPOT OR AREA APPLICATION). DURING REMOVAL OF INVASIVE VEGETATION CARE SHALL BE TAKEN TO MINIMIZE IMPACTS TO EXISTING NATIVE TREES AND SHRUBS.
- ZONE 2 PLANTING AREA TO RECEIVE TEMPORARY EROSION CONTROL SEED. SEE SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE MULCH TO THE COMPOSITION AND DEPTHS IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS OF THE CONTRACT DOCUMENTS.
- ALL PLANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS AND THE SPECIFICATIONS PROVIDED AS PART OF THE CONTRACT DOCUMENTS.
- QUANTITIES ARE LISTED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL COUNTS MUST BE VERIFIED BY THE CONTRACTOR. IN THE CASE OF A DISCREPANCY BETWEEN THE LEGEND AND THE PLAN, PLANTS INDICATED ON THE PLAN SHALL SUPERCEDE QUANTITIES LISTED IN THE LEGEND.
- UTILITY LOCATIONS SHOWN ON PLANS MAY DIFFER FROM FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY ALL UTILITIES BEFORE INSTALLATION. CONFLICTS BETWEEN ANY EXISTING AND PROPOSED UTILITIES ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE IMMEDIATELY.
- ALL TREES AND SHRUBS PLANTED IN THE UPLAND AREA ARE TO BE MULCHED A MINIMUM OF THREE INCHES IN DEPTH. APPROPRIATE MULCHES INCLUDE THOSE MADE FROM COMPOSTED LEAVES OR BARK THAT HAVE NOT BEEN CHEMICALLY TREATED.



KEY NOTES

- 1 PUBLIC RECREATION TRAIL
- 2 DETENTION POND
- 3 GATE - WIDTH VARIES
- 4 PRESERVE LAWN ALONG EXISTING FENCE LINE AND RESTORE IF DAMAGED.

SHEET NOTES

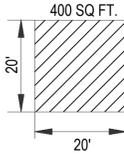
1. SEE SHEET G0.1 FOR GENERAL LEGEND AND NOTES
2. SEE SHEET L1.0 FOR PLANTING PLAN LEGEND AND NOTES
3. ALL TREES AND SHRUBS ARE TO BE MULCHED A MINIMUM OF THREE INCHES IN DEPTH AND THREE FEET IN DIAMETER.

LEGEND

- PROJECT LIMIT OF WORK
- ZONE 1: MIXED DECIDUOUS-CONIFER FOREST
- ZONE 2: WEED ERADICATION EROSION CONTROL SEEDING
- EXISTING LAWN TO REMAIN. REPAIR TO PREVIOUS CONDITION IF DISTURBED.
- STAGING AND SOIL STOCKPILE AREA
- EXISTING TREES
- SNAG OR STUMP

PLANTING SCHEDULE

2	3	4	5	6
L3.0	L3.0	L3.0	L3.0	L3.0



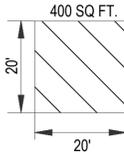
ZONE 1: MIXED DECIDUOUS-CONIFER FOREST (15,100 SQUARE FEET = 38 PLOTS)

BOTANICAL NAME	COMMON NAME	SIZE & TYPE	QTY./PLOT	QTY.	NOTES
OVERSTORY:					
PSEUDOTSUGA MENZIESII	DOUGLAS FIR	5' HT. B&B	1	38	
RHAMNUS PURSHIANA	CASCARA	1.5" CAL B&B	1	38	
TSUGA HETEROPHYLLA	WESTERN HEMLOCK	5' HT. B&B	1	38	
UNDERSTORY:					
CORNUS SERICEA	RED OSIER DOGWOOD	2 GAL CONT.	2	76	
OEMLERIA CERASIFORMIS	INDIAN PLUM	2 GAL CONT.	3	114	
PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	2 GAL CONT.	2	76	
RIBES SANGUINEUM	RED CURRANT	2 GAL CONT.	4	152	
SAMBUCUS RACEMOSA	RED ELDERBERRY	2 GAL CONT.	2	76	
SYMPHORICARPOS MOLLIS	CREEPING SNOWBERRY	2 GAL CONT.	4	152	

BOTANICAL NAME	COMMON NAME	TYPE	LBS/1000SF	QTY.
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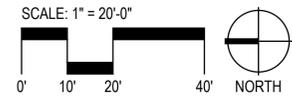
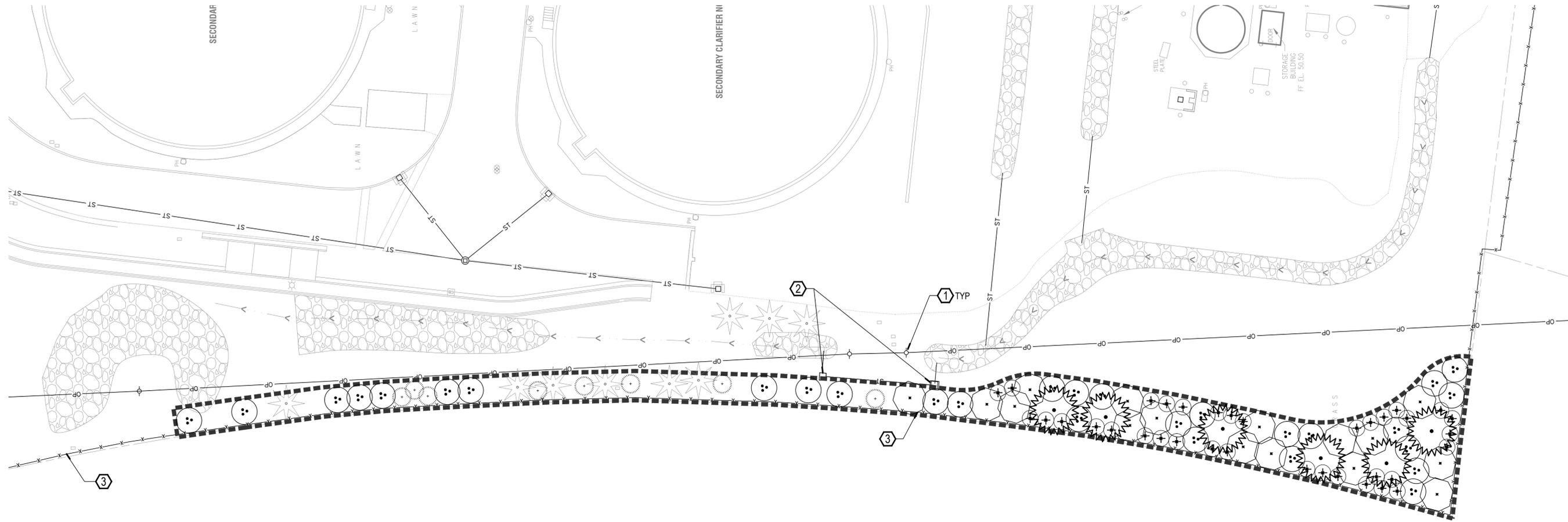
GROUND LAYER:

SEED MIX 1 - SUNMARK NATIVE SEED MIX 'NATIVE RIPARIAN'				
* TO BE APPLIED BETWEEN ALL PLANTS IN PLANTING ZONE 1 TO ACHIEVE FULL COVERAGE.			1.0	16 LBS
BROMUS CARINATUS	CALIFORNIA BROME	SEED		
ELYMUS GLAUCUS	BLUE WILDRYE	SEED		
HORDEUM BRACHYANTHERUM	MEADOW BARLEY	SEED		



ZONE 2: WEED ERADICATION EROSION CONTROL SEEDING (25,000 SQUARE FEET = 63 PLOTS)

BOTANICAL NAME	COMMON NAME	TYPE	LBS/1000SF	QTY.
GROUND LAYER:				
SEED MIX 1 - SUNMARK NATIVE SEED MIX 'NATIVE RIPARIAN'			1.0	25 LBS
* TO BE APPLIED BETWEEN ALL PLANTS IN PLANTING ZONE 2 TO ACHIEVE FULL COVERAGE.				
BROMUS CARINATUS	CALIFORNIA BROME	SEED		
ELYMUS GLAUCUS	BLUE WILDRYE	SEED		
HORDEUM BRACHYANTHERUM	MEADOW BARLEY	SEED		



KEY NOTES

- ① UTILITY POLE
- ② STORMWATER DRAIN
- ③ GATE - WIDTH VARIES

SHEET NOTES

1. SEE SHEET G0.1 FOR GENERAL LEGEND AND NOTES
2. SEE SHEET L1.0 FOR PLANTING PLAN LEGEND AND NOTES
3. ALL TREES AND SHRUBS ARE TO BE MULCHED A MINIMUM OF THREE INCHES IN DEPTH AND THREE FEET IN DIAMETER.

LEGEND

- PROJECT LIMIT OF WORK
- OP OVERHEAD POWER LINE
- ST STORM DRAIN LINE
- < DITCH
- [RIPRAP] EXISTING RIPRAP
- [TREE] EXISTING TREES

PLANTING SCHEDULE

EVERGREEN SCREENING (8,140 SF)

BOTANICAL NAME	COMMON NAME	SIZE & TYPE	QTY.	NOTES
OVERSTORY:				
PSEUDOTSUGA MENZIESII	DOUGLAS FIR	5' HT. B&B	6	
UNDERSTORY:				
CORNUS SERICEA	RED OSIER DOGWOOD	2 GAL CONT.	8	
GARRYA FREMONTII	MOUNTAIN SILK TASSEL	2 GAL CONT.	29	
MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	2 GAL CONT.	35	
MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	2 GAL CONT.	16	

BOTANICAL NAME	COMMON NAME	TYPE	LBS/1000SF	QTY.
GROUND LAYER:				
SEED MIX 2 - SUNMARK NATIVE SEED MIX 'NATIVE UPLAND'			1.0	9 LBS

* TO BE APPLIED BETWEEN ALL PLANTS IN SCREENING AREA TO ACHIEVE FULL COVERAGE.

AGROSTIS EXARATA	SPIKE BENTGRASS	SEED
BROMUS CARINATUS	CALIFORNIA BROME	SEED
ELYMUS GLAUCUS	BLUE WILD RYE	SEED
FESTUCA RUBRA RUBRA	NATIVE RED FESCUE	SEED

2
L3.0

5
L3.0

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REGISTERED
 LANDSCAPE ARCHITECT
 242
 F. MICHAEL FAHA
 10/31/1988
 OREGON
 P. Michael Fahha
 VERIFY SCALE: DRAWINGS ARE TO SCALE
 IF BAR MEASURES 1"
 0" 1/2" 1"

CLACKAMAS
 WATER ENVIRONMENT
 SERVICES

Project: **Tri-City WRRF Planting Mitigation**

Water Environment Services
 130 Beaver Creek Road
 Oregon City, OR 97145
 Phone #
 Email

Submital: Bid Set

Sheet Title:
PLANTING PLAN - WEST

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Date: 09/03/2020
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Drawn By: VS
 Checked By: JD, DW
 Job No. 200011.1
 Approved: MF

L1.2
 Sheet No. 7 of 13

3:\PROJECTS\200011.1\WEB_TRI-CITY_WRRF02_PRODUCTION\01_CAD\01_PLOT_SHEET\200011.1_PLANT_PLAN.DWG

IRRIGATION GENERAL NOTES

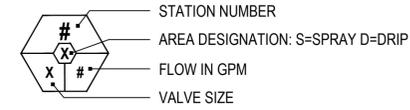
1. CALL UTILITIES TO LOCATE EXISTING SERVICES PRIOR TO EXCAVATION.
2. SYSTEM OPERATION AND DESIGN IS BASED ON 75 POUNDS OF PRESSURE AND 400 GALLONS AT THE POINT OF CONNECTION. VERIFY THE DESIGN PRESSURE AND VOLUME BEFORE INSTALLATION AND NOTIFY OWNER'S REPRESENTATIVE IF THERE IS A DISCREPANCY.
3. REFERENCE PLANTING PLAN(S) PRIOR TO INSTALLATION OF VALVES. LOCATE VALVES IN PLANTING BEDS WHEREVER POSSIBLE. ADJUST VALVE LOCATIONS TO ELIMINATE CONFLICT WITH PROPOSED PLANTINGS AND PLANTING PATTERNS.
4. VALVE LOCATIONS TO BE STAKED AND APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION OF NEW IRRIGATION SYSTEM.
5. VERIFY THE DIMENSIONS AND LAYOUT OF ALL NEW PLANTING AND SEEDING AREAS ON SITE BEFORE STARTING WORK AND IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE OF ANY DEVIATIONS FROM PLAN.
6. STAKE PROPOSED TREE LOCATIONS AND OBTAIN APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION OF NEW IRRIGATION SYSTEM.
7. INSTALL QUICK COUPLING VALVES AS SHOWN ON PLANS AND DETAILS.
8. MAIN AND LATERAL LINES MAY BE SHOWN DIAGRAMMATICALLY FOR CLARITY. MAIN AND LATERAL LINES SHOWN IN PAVED AREAS SHALL BE PLACED IN ADJACENT PLANTING BEDS UNLESS SPECIFICALLY SHOWN AS PASSING UNDER PAVING IN SLEEVING (SEE SCHEDULE FOR SLEEVE SYMBOL). OBTAIN THE OWNER'S REPRESENTATIVE'S APPROVAL BEFORE MAKING CHANGES IN ROUTING OF PIPE OR LOCATION OF VALVES.
9. THE CONTRACTOR SHALL PROTECT THE EXISTING SYSTEM AND MAINTAIN ITS PERFORMANCE AT ALL TIMES DURING THE WORK OF THIS SECTION UNLESS OTHERWISE APPROVED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL REPAIR ALL LINES THAT ARE CUT BY NEW CONSTRUCTION AND RE-ROUTE TO MAINTAIN SYSTEM PERFORMANCE.
10. WHEN NECESSARY DURING CONSTRUCTION THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR IRRIGATION SHUTOFF THROUGH THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL PROVIDE COMPLETE TEMPORARY IRRIGATION TO ALL LANDSCAPE AREAS AFFECTED BY THE SHUT-OFF, DURING NORMAL WATERING SEASONS.
11. THE CONTRACTOR SHALL MAINTAIN, REPAIR OR REPLACE CONTROLLER WIRING AFFECTED BY CONSTRUCTION AND INTEGRATE NEW SYSTEM REQUIREMENTS INTO THE EXISTING CONTROLLER.

IRRIGATION SCHEDULE

IRRIGATION HEADS				5	6	7
				L3.01	L3.01	L3.01
SYMBOL	DESCRIPTION	MANUFACTURER / MODEL	PSI	RAD.		
Ⓜ	ROTATOR	HUNTER MP1000 PROS-12-PRS40-CV-F-R	40	14'		
Ⓝ	ROTATOR	HUNTER MP2000 PROS-12-PRS40-CV-F-R	40	19'		
Ⓜ	ROTATOR	HUNTER MP3000 PROS-12-PRS40-CV-F-R	40	30'		
Ⓝ	ROTATOR	HUNTER MP3000 PROS-12-PRS40-CV-F-R	40	30'		
Ⓜ	ROTATOR	HUNTER MP3000 PROS-12-PRS40-CV-F-R	40	30'		
Ⓝ	ROTATOR	HUNTER MP3500 PROS-12-PRS40-CV-F-R	40	35'		
△	EXISTING	HUNTER				

IRRIGATION EQUIPMENT AND PIPING				1	2	3	4	1	4	5	6
				L3.1	L3.1	L3.1	L3.1	L3.2	L3.2	L3.2	L3.2
SYMBOL	DESCRIPTION	MANUFACTURER	MODEL								
⊕	REMOTE CONTROL VALVE	RAINBIRD	PESBR-PRS-D								
⊗	ISOLATION VALVE	NIBCO	T-113-K								
Ⓜ	CONTROLLER - WALL MOUNT	RAINBIRD	ESP-LXD								
POC	POINT OF CONNECTION 2-1/2"										
—	IRRIGATION LATERAL LINE	PVC CLASS 200 SDR 21									
— — — —	IRRIGATION MAINLINE	PVC SCHEDULE 40									
— — — —	EXISTING IRRIGATION MAINLINE (LOCATION APPROXIMATE - CONTRACTOR TO VERIFY IN FIELD)										
— — — —	PIPE SLEEVE: PVC SCHEDULE 40										
□	EXISTING IRRIGATION RCV (LOCATION APPROXIMATE - CONTRACTOR TO VERIFY IN FIELD)										

CONTROL VALVE TARGET



GPM	PIPE SIZING
0-10	3/4"
11-16	1"
17-35	1.5"
36-55	2"



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VERIFY SCALE: DRAWINGS ARE TO SCALE
IF BAR MEASURES 1"
0" 1/2" 1"



Project: **Tri-City WRRF Planting Mitigation**
Water Environment Services
130 Beavercreek Road
Oregon City, OR 97045
Phone #
Email

Submittal: Bid Set

Sheet Title:

IRRIGATION SCHEDULE AND NOTES

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Date: 09/03/2020

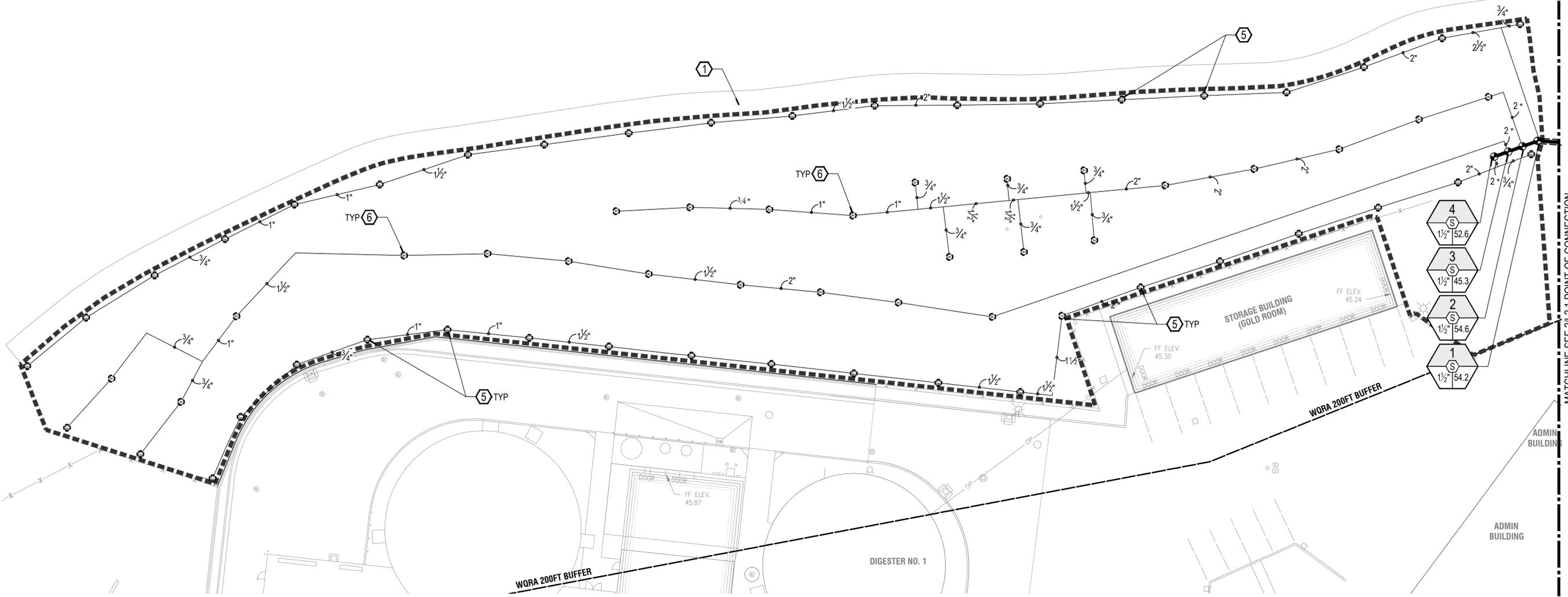
Revisions:

Drawn By: VS
Checked By: JD, DW
Job No. 200011.1
Approved: MF

L2.0

Sheet No. 8 of 13





1 MITIGATION_AREA

KEY NOTES

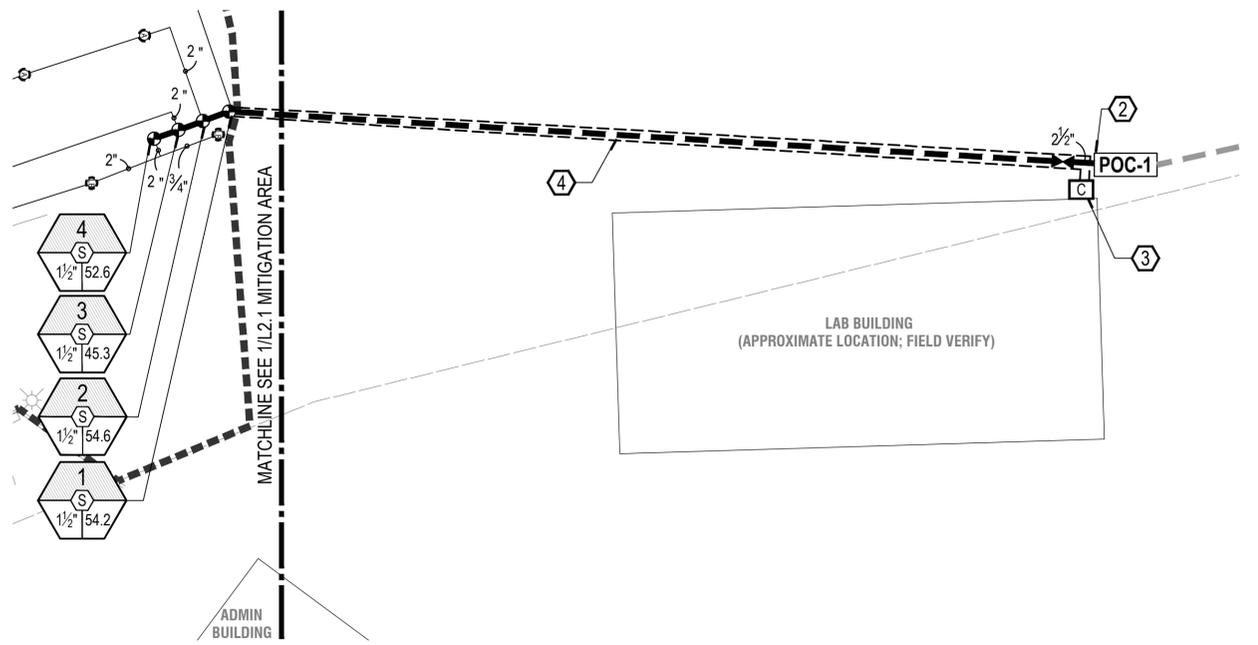
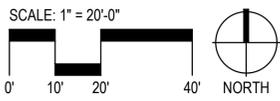
- 1 PUBLIC RECREATION TRAIL
- 2 POINT OF CONNECTION - CONNECT TO EXISTING IRRIGATION MAINLINE (FIELD VERIFY LOCATION). CONTRACTOR TO REPAIR LAWN AS NEEDED.
- 3 EXTEND POWER AND CONTROL WIRING FROM NEW CONTROLLER LOCATED INSIDE FENCE AREA.
- 4 PROVIDE MIN 1" SLEEVE OR TWICE THE DIAMETER OF BUNDLED WIRES TO NEW CONTROLLER.
- 5 ALL SPRAY HEADS ADJACENT TO PAVED OR GRAVEL SURFACING TO BE BELOW GRADE SWING JOINT ASSEMBLY. SEE DETAIL 5/L3.1.
- 6 ALL SPRAY HEADS WITHIN PLANTING AREA NOT ADJACENT TO PAVED OR GRAVEL SURFACING TO BE ON GRADE PVC SWING JOINT ASSEMBLY. SEE DETAIL 6/L3.1.

LEGEND

--- PROJECT LIMIT OF WORK

SHEET NOTES

- 1. SEE SHEET G0.1 FOR GENERAL LEGEND AND NOTES
- 2. SEE SHEET L2.0 FOR IRRIGATION SCHEDULE AND GENERAL NOTES



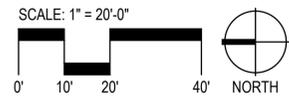
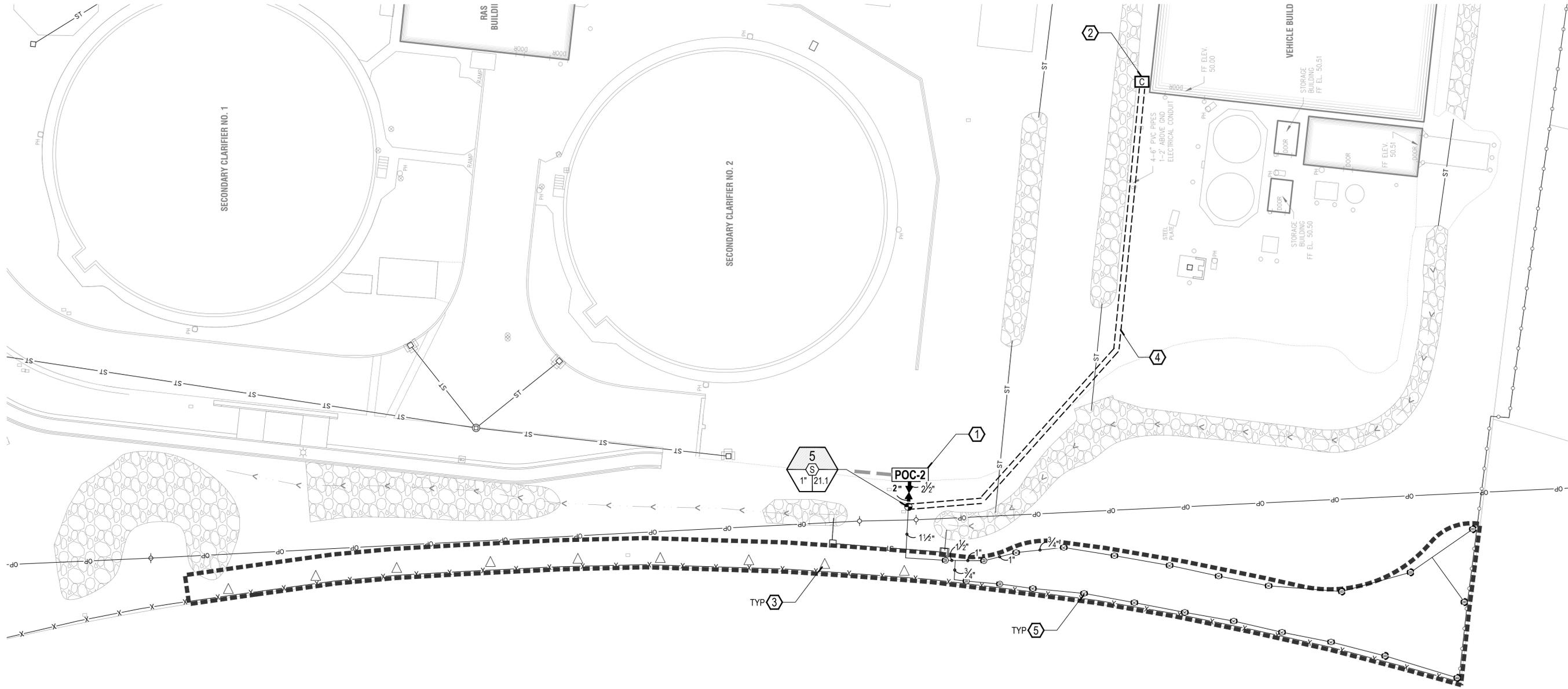
2 POINT_OF_CONNECTION

Submital: Bid Set
Sheet Title: **IRRIGATION PLAN - NORTH**

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Checked By: JD, DW
Job No. 200011.1
Approved: MF

L2.1
Sheet No. 9 of 13



- SHEET NOTES**
- SEE SHEET G0.1 FOR GENERAL LEGEND AND NOTES
 - SEE SHEET L2.0 FOR IRRIGATION SCHEDULE AND GENERAL NOTES

- KEY NOTES**
- POINT OF CONNECTION - CONNECT TO EXISTING IRRIGATION MAINLINE (FIELD VERIFY LOCATION). CONTRACTOR TO REPAIR LAWN AS NEEDED.
 - EXTEND POWER AND CONTROL WIRING FROM NEW CONTROLLER.
 - EXISTING PLANTING AND IRRIGATION EQUIPMENT TO REMAIN UNDISTURBED.
 - PROVIDE MIN 1" SLEEVE OR TWICE THE DIAMETER OF BUNDLED WIRES TO NEW CONTROLLER.
 - ALL SPRAY HEADS IN SCREENING BUFFER AREA TO BE BELOW GRADE PVC SWING JOINT ASSEMBLY. SEE DETAIL 7/L3.1.

- LEGEND**
- PROJECT LIMIT OF WORK
 - EXISTING RIPRAP
 - EXISTING IRRIGATION VAULT
 - EXISTING IRRIGATION HEAD

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REGISTERED
 LANDSCAPE ARCHITECT
 242
 F. MICHAEL FAHA
 10/31/1988
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F. Michael Fahha
 LANDSCAPE ARCHITECT
 VERIFY SCALE: DRAWINGS ARE TO SCALE
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CLACKAMAS
WATER ENVIRONMENT SERVICES

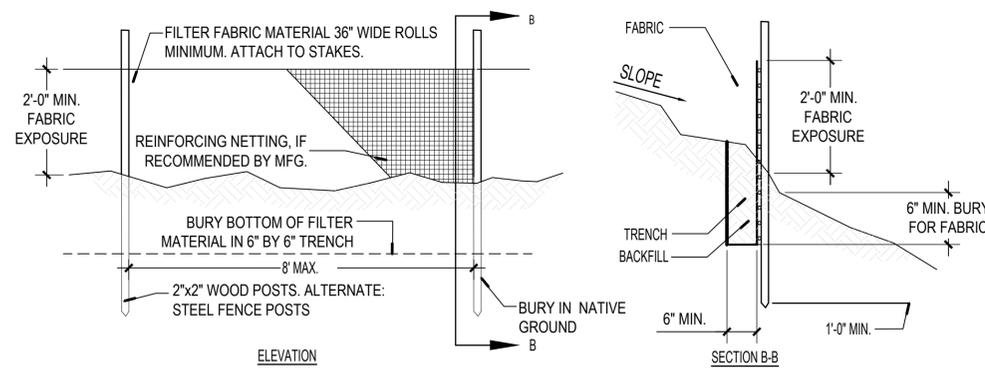
Project: **Tri-City WRRF Planting Mitigation**
 Water Environment Services
 130 Beavercreek Road
 Oregon City, OR 97145
 Phone #
 Email

Submittal: **Bid Set**
 Sheet Title: **IRRIGATION PLAN - WEST**

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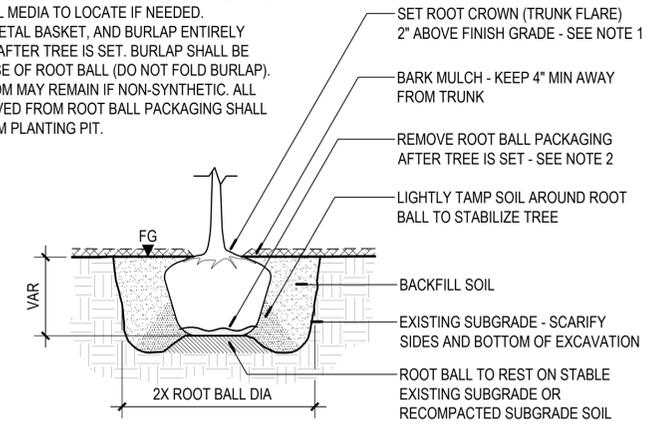
L2.2
 Sheet No. 10 of 13

3:\PROJECTS\200011.1\WEB_TRI-CITY_WRRF\02_PRODUCTION\01_CAD\01_PLOT_SHEET\200011.1_IRR_PLAN.DWG



- NOTES:
1. INSTALLATION SHALL FOLLOW THE MANUFACTURERS RECOMMENDATIONS.
 2. POSTS SHALL BE INSTALLED SO THAT A MIN. OF 3'-0\"/>

- NOTES:
1. ROOT CROWN TO BE VISIBLE BEFORE TREE IS SET. REMOVE TOP OF ROOT BALL MEDIA TO LOCATE IF NEEDED.
 2. REMOVE TWINE, METAL BASKET, AND BURLAP ENTIRELY FROM ROOT BALL AFTER TREE IS SET. BURLAP SHALL BE CUT DOWN TO BASE OF ROOT BALL (DO NOT FOLD BURLAP). BURLAP ON BOTTOM MAY REMAIN IF NON-SYNTHETIC. ALL MATERIALS REMOVED FROM ROOT BALL PACKAGING SHALL BE REMOVED FROM PLANTING PIT.



1 SEDIMENT FENCE
Section

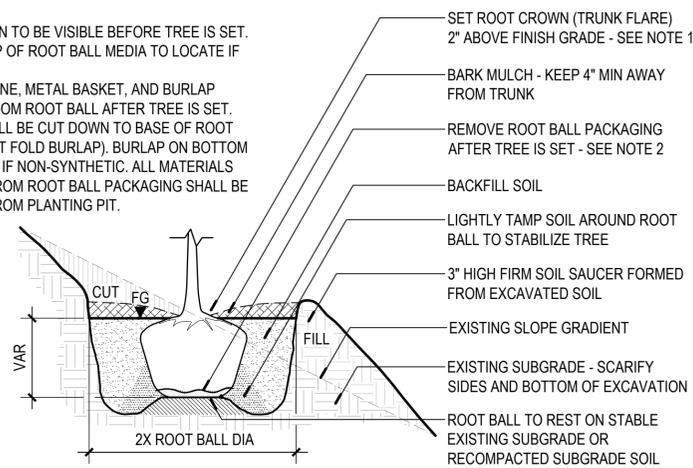
NOT TO SCALE

2 TREE PLANTING - B&B
SECTION

NOT TO SCALE

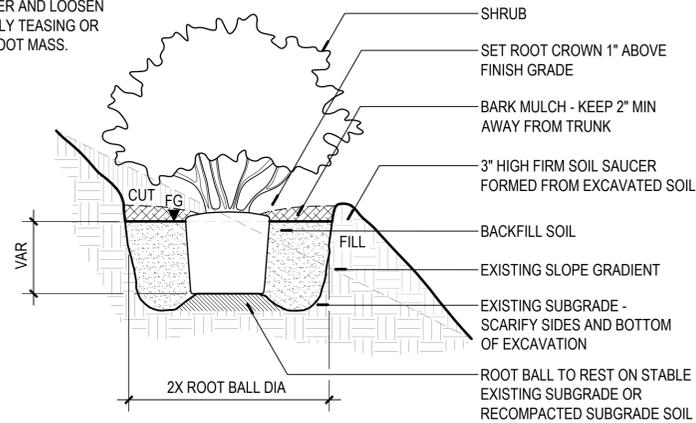
NOTES:

1. ROOT CROWN TO BE VISIBLE BEFORE TREE IS SET. REMOVE TOP OF ROOT BALL MEDIA TO LOCATE IF NEEDED.
2. REMOVE TWINE, METAL BASKET, AND BURLAP ENTIRELY FROM ROOT BALL AFTER TREE IS SET. BURLAP SHALL BE CUT DOWN TO BASE OF ROOT BALL (DO NOT FOLD BURLAP). BURLAP ON BOTTOM MAY REMAIN IF NON-SYNTHETIC. ALL MATERIALS REMOVED FROM ROOT BALL PACKAGING SHALL BE REMOVED FROM PLANTING PIT.



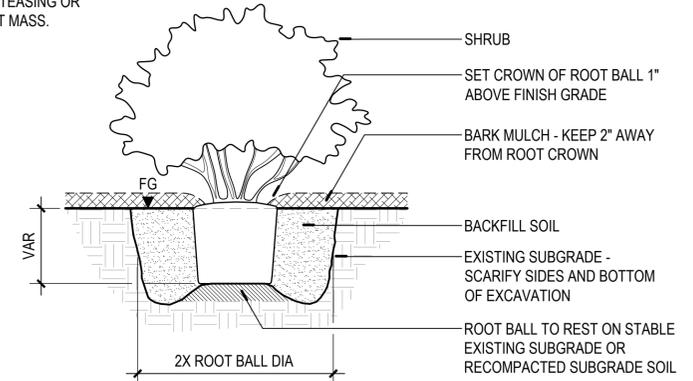
NOTE:

PRIOR TO PLANTING, REMOVE SHRUB FROM CONTAINER AND LOOSEN SIDES BY LIGHTLY TEASING OR SCRATCHING ROOT MASS.



NOTE:

PRIOR TO PLANTING, REMOVE SHRUB FROM CONTAINER AND LOOSEN SIDES BY LIGHTLY TEASING OR SCRATCHING ROOT MASS.



3 TREE PLANTING - B&B ON SLOPE
SECTION

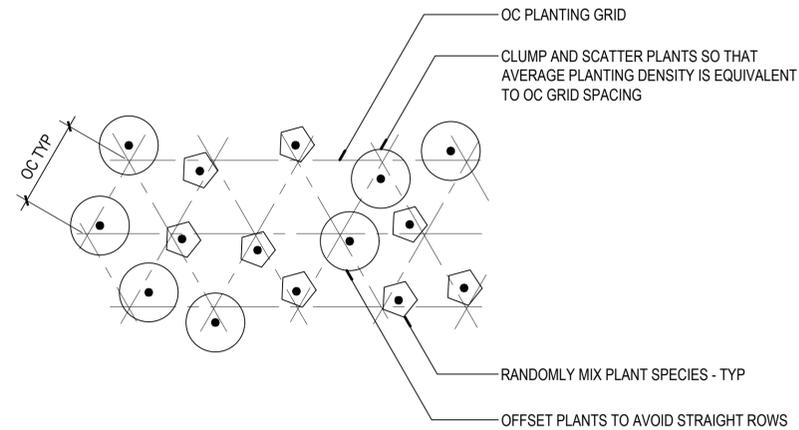
NOT TO SCALE

4 SHRUB CONTAINER PLANTING ON SLOPE
SECTION

NOT TO SCALE

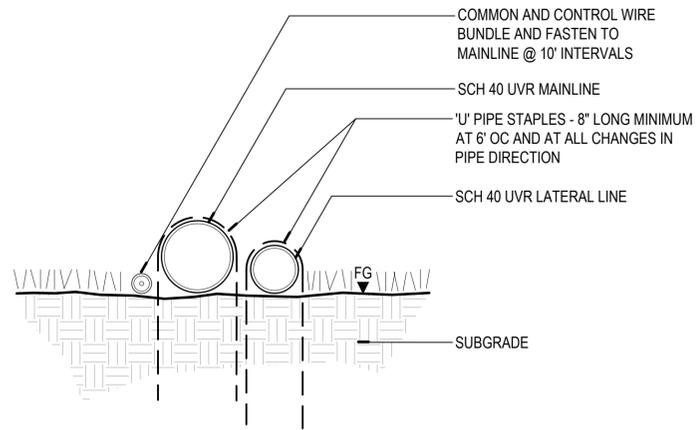
5 SHRUB CONTAINER PLANTING
SECTION

NOT TO SCALE

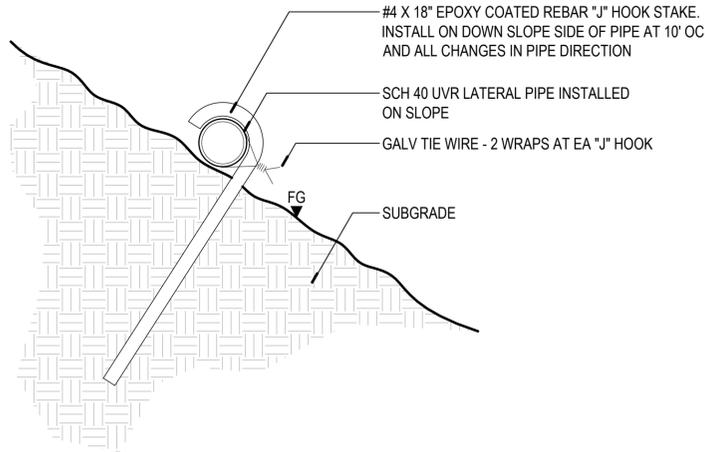


6 RANDOM PLANTING PATTERN
PLAN

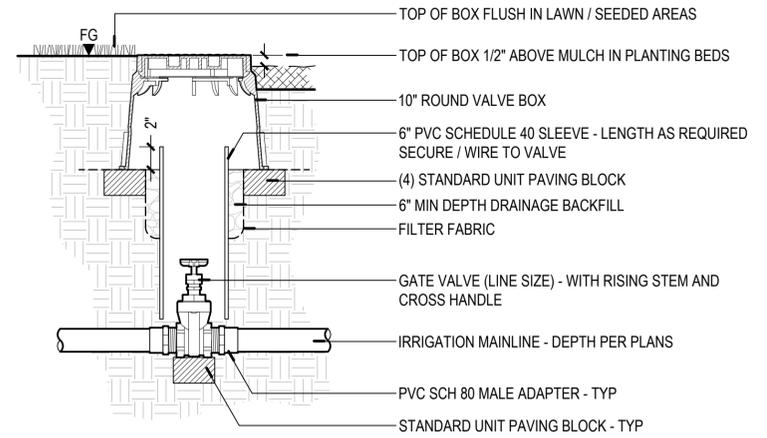
NOT TO SCALE



1 PIPE - ON GRADE (TEMP IRRIGATION) SECTION NOT TO SCALE



2 PIPE - ON SLOPED GRADE (TEMP IRRIGATION) SECTION NOT TO SCALE



3 ISOLATION VALVE ASSEMBLY SECTION NOT TO SCALE

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REGISTERED LANDSCAPE ARCHITECT
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 10/31/1988
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VERIFY SCALE: DRAWINGS ARE TO SCALE
 IF BAR MEASURES 1"
 0" 1/2" 1"

CLACKAMAS
WATER ENVIRONMENT SERVICES

Project: **Tri-City WRRF Planting Mitigation**
 Water Environment Services
 130 Beavercreek Road
 Clackamas, OR 97045
 Phone #
 Email

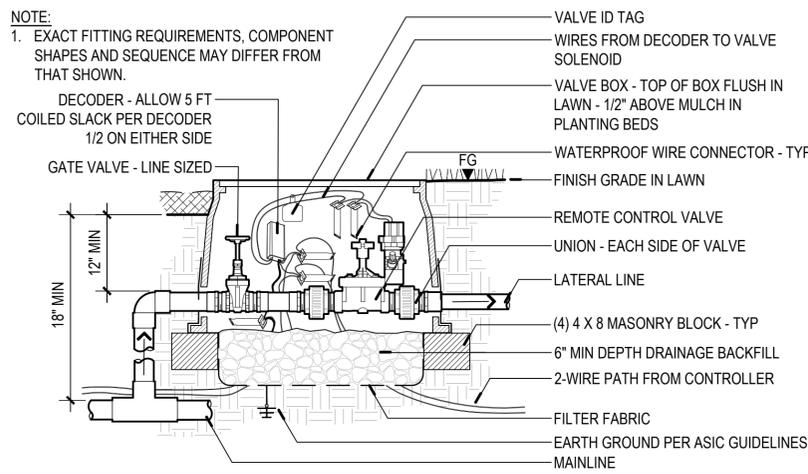
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 Sheet Title: **DETAILS - IRRIGATION**

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Date: 09/03/2020
 Revisions:

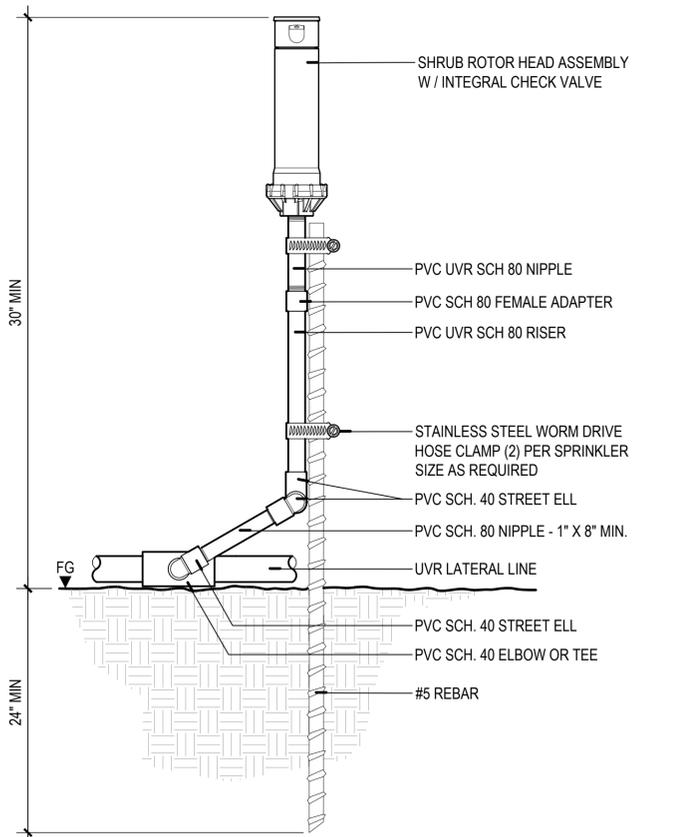
Drawn By: VS
 Checked By: JD, DW
 Job No. 200011.1
 Approved: MF

L3.1
 Sheet No. 12 of 13



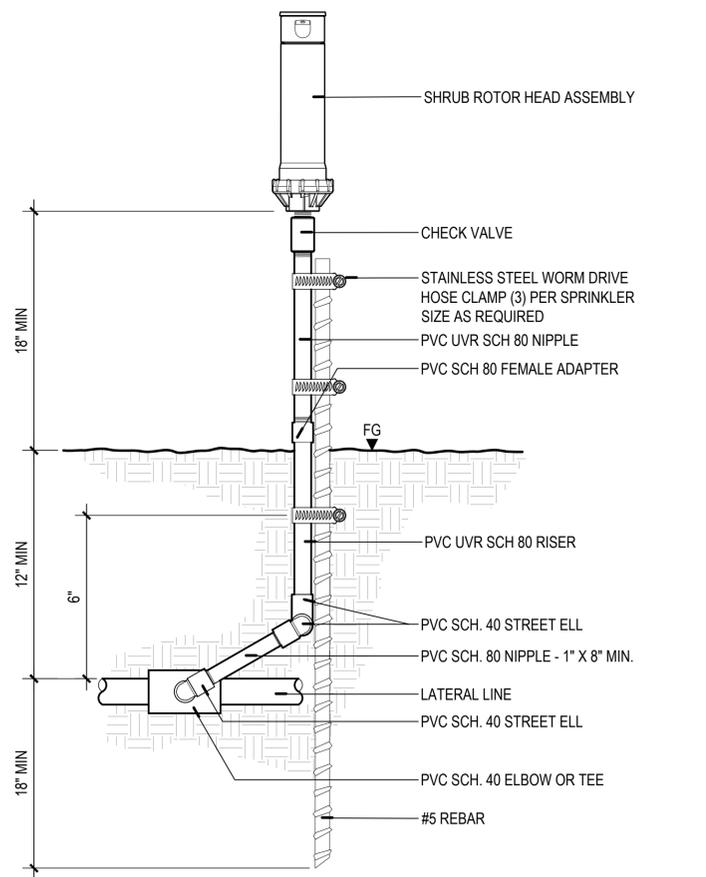
4 REMOTE CONTROL VALVE / DECODER ASSEMBLY SECTION NOT TO SCALE

NOTE:
 DO NOT LOCATE HEADS ON RISERS CLOSER THAN 8 FEET TO TURF, SIDEWALKS, CURB, ROADWAY OR OTHER PEDESTRIAN SURFACES



5 SPRAY HEAD - SWING JOINT ASSEMBLY SECTION NOT TO SCALE

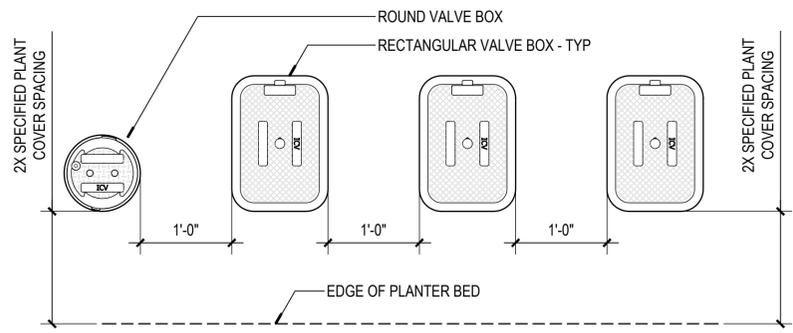
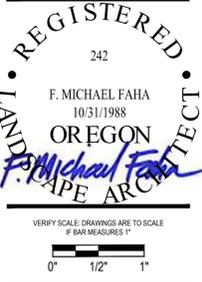
NOTES:
 1. LOCATE CHECK VALVES IN FIELD TO ELIMINATE ALL LOW HEAD DRAINAGE.
 2. DO NOT LOCATE HEADS ON RISERS CLOSER THAN 8 FEET TO TURF, SIDEWALKS, CURB, ROADWAY OR OTHER PEDESTRIAN SURFACES



6 SHRUB ROTOR HEAD - PVC SWING JOINT ASSEMBLY ON GRADE (TEMPORARY IRRIGATION) SECTION NOT TO SCALE

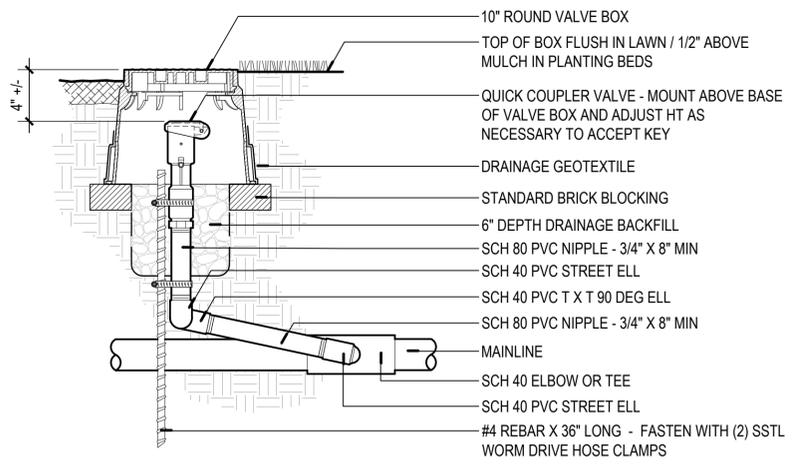
7 ROTOR HEAD - PVC SWING JOINT ASSEMBLY SECTION NOT TO SCALE

3:PROJECTS\200011.1_LINES_TRI-CITY_WRRF\02_PRODUCION\01_CAD\01_PLOT_SHEET\200011.1_DET.DWG

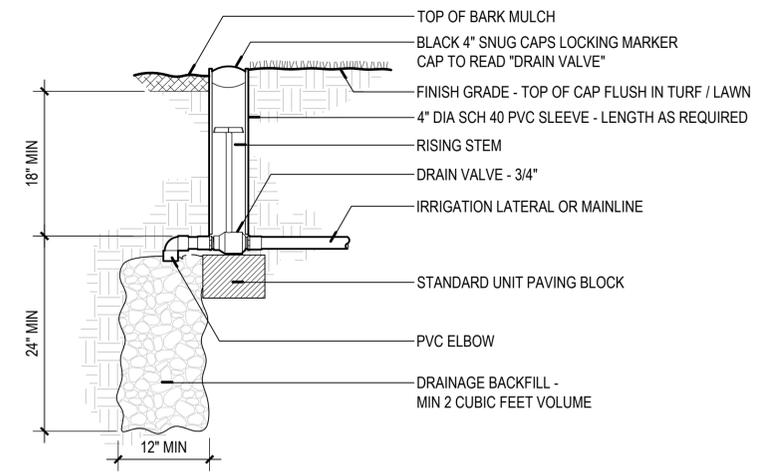


- NOTES:**
1. VALVE BOX LID COLOR SHALL BE PER IRRIGATION SPECIFICATIONS.
 2. VALVE BOXES TO BE INSTALLED TO ALLOW FOR ORDERLY ARRANGEMENT.
 3. LOCATION OF VALVE ASSEMBLIES SHALL BE STAKED FOR APPROVAL BY OWNER'S REPRESENTATIVE.
 4. CENTER VALVE BOXES OVER VALVE ASSEMBLIES.
 5. SET VALVE BOXES WITH TOPS AT EQUAL ELEVATIONS UNLESS STATED OTHERWISE.

1 VALVE BOX LAYOUT
PLAN NOT TO SCALE

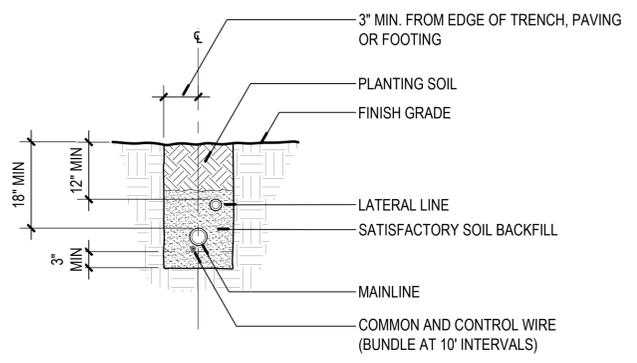


2 QUICK COUPLER VALVE ASSEMBLY
SECTION NOT TO SCALE



3 MANUAL DRAIN VALVE
SECTION NOT TO SCALE

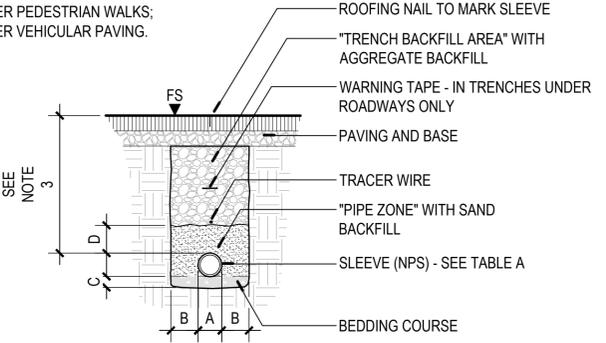
- NOTE:**
REPAIR TRENCH SETTLEMENT AND RESTORE FINISH GRADES PRIOR TO SEEDING OR PLANTING.



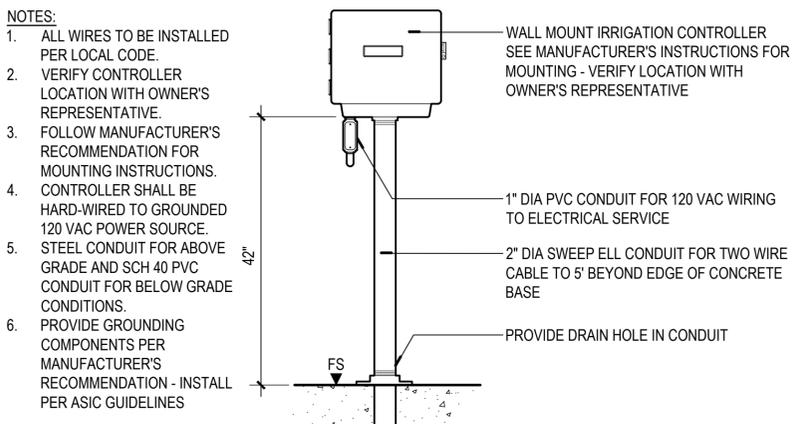
4 TRENCHING IN PLANTING AREAS
SECTION NOT TO SCALE

- NOTES:**
1. EXTEND IRRIGATION SLEEVES 24" BEYOND EACH SIDE OF PAVING.
 2. SLEEVE PIPE DIAMETER TO BE A MINIMUM OF TWO TIMES PIPE DIAMETER(S) IT CONTAINS.
 3. 24" MINIMUM DEPTH UNDER PEDESTRIAN WALKS; 36" MINIMUM DEPTH UNDER VEHICULAR PAVING.

TABLE A			
A (NPS)	B	C	D
<4"	6"	4"	8"
4"	10"	4"	8"
6"	10"	4"	8"
8"	10"	6"	10"
10"	10"	6"	10"
12"	12"	6"	10"



5 TRENCHING - SLEEVE UNDER PAVEMENT
SECTION NOT TO SCALE



6 CONTROLLER - WALL MOUNT (TWO WIRE)
ELEVATION NOT TO SCALE

This page has been left blank intentionally.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

GENERAL LIABILITY ULTRA PLUS ENDORSEMENT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SUMMARY OF COVERAGE EXTENSIONS

Provision	Name Of Coverage Extension	Included or Limit of Insurance
A.	Miscellaneous Additional Insureds	Included
B.	Expected Or Intended Injury Or Damage	Included
C.	Knowledge Of Occurrence	Included
D.	Legal Liability – Damage To Premises Rented To You (Fire, Lightning, Explosion, Smoke, Or Leakage From Automatic Fire Protective Systems)	\$300,000
E.	Medical Payments	See Declarations
F.	Mobile Equipment Redefined	Included
G.	Newly Formed Or Acquired Organization, Partnership Or Limited Liability Company And Extended Period Of Coverage	Included
H.	Who Is An Insured – Amendment	Included
I.	Non-Owned Watercraft (Increased to maximum length of less than 51 feet)	Included
J.	Supplementary Payments – Increased Limits	
	1. Bail Bonds	\$ 3,000
	2. Loss Of Earnings	\$ 1,000
K.	Unintentional Omission Or Unintentional Error In Disclosure	Included
L.	Waiver Of Transfer Of Rights Of Recovery Against Others	Included
M.	Liberalization Clause	Included
N.	Incidental Medical Malpractice	Included

The above is a summary only. Please consult the specific provisions that follow for complete information on the extensions provided.

The provisions of the Commercial General Liability Coverage Part apply except as otherwise provided in this endorsement. This endorsement applies only if such Coverage Part is included in this policy.

A. MISCELLANEOUS ADDITIONAL INSUREDS

- 1. Section II – Who Is An Insured** is amended to include as an insured any person or organization (referred to as an additional insured below) described in Paragraphs **A.1.c.(1)** through **A.1.c.(9)** below when you and such person or organization have agreed

in writing in a contract or agreement that such person or organization be added as an additional insured on your policy, provided that:

- a.** The written contract or written agreement is:
 - (1)** Currently in effect or becoming effective during the term of this policy; and
 - (2)** Fully executed by you and the additional insured prior to the "bodily

injury", "property damage" or "personal and advertising injury".

- b. The insurance afforded by this provision does not apply to any person or organization included as an additional insured by a separate endorsement issued by us and made a part of this policy or coverage part.
- c. Only the following persons or organizations are additional insureds under this provision, with coverage for such additional insureds limited as provided herein:

(1) Persons or Organizations For Whom Operations Are Performed

- (a) Any person or organization for whom you are performing operations when you and such person or organization have agreed in writing in a contract or agreement that such person or organization be added as an additional insured to your policy; and
- (b) Any other person or organization you are required to add as an additional insured under the contract or agreement described in paragraph (a) above.
- (c) Such person(s) or organization(s) is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:
 - (i) Your acts or omissions; or
 - (ii) The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured.

- (d) With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to:

- (i) "Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:

- (1.1) The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or

- (1.2) Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of, or the failure to render, any professional architectural, engineering or surveying services.

- (ii) "Bodily injury" or "property damage" occurring after:

- (1.1) All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or

- (1.2) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

(2) Managers Or Lessors Of Premises

A manager or lessor of premises but only with respect to liability arising out of the ownership, maintenance or use of that part of the premises leased to

you and subject to the following additional exclusions:

This insurance does not apply to:

- (a) Any "occurrence" which takes place after you cease to be a tenant in that premises.
- (b) Structural alterations, new construction or demolition operations performed by or on behalf of such additional insured.

(3) Mortgagee, Assignee Or Receiver

A mortgagee, assignee, or receiver but only with respect to their liability as mortgagee, assignee, or receiver and arising out of the ownership, maintenance, or use of a covered premises by you.

This insurance does not apply to structural alterations, new construction or demolition operations performed by or on behalf of such additional insured.

(4) Owners Or Other Interests From Whom Land Has Been Leased

An owner or other interest from whom land has been leased to you but only with respect to liability arising out of the ownership, maintenance or use of that part of the land leased to you and subject to the following additional exclusions:

This insurance does not apply to:

- (a) Any "occurrence" which takes place after you cease to lease that land.
- (b) Structural alterations, new construction or demolition operations performed by or on behalf of such additional insured.

(5) Lessor Of Leased Equipment

Any person(s) or organization(s) from whom you lease equipment but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your maintenance, operation or use of equipment leased to you by such person(s) or organization(s).

A person's or organization's status as an additional insured under this endorsement ends when their written

contract or written agreement with you for such leased equipment ends.

This insurance does not apply to any "occurrence" which takes place after the equipment lease expires.

(6) State, Municipality, Governmental Agency Or Subdivision Or Other Political Subdivision – Permits Or Authorizations Relating To Premises

Any state, municipality, governmental agency or subdivision or other political subdivision subject to the following additional provisions:

(a) This insurance applies only with respect to:

(i) The following hazards for which the state, municipality, governmental agency or subdivision or other political subdivision has issued a permit or authorization in connection with premises you own, rent or control and to which this insurance applies:

(1.1) The existence, maintenance, repair, construction, erection or removal of advertising signs, awnings, canopies, cellar entrances, coal holes, driveways, manholes, marquees, hoist away openings, sidewalk vaults, street banners or decorations and similar exposures; or

(1.2) The construction, erection or removal of elevators; or

(1.3) The ownership, maintenance or use of any elevators covered by this insurance.

(ii) Operations performed by you or on your behalf for which the state, municipality, governmental agency or subdivision or other political subdivision has issued a permit or authorization.

- (b) This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of operations performed for the state, municipality, governmental agency or subdivision or other political subdivision.

(7) Controlling Interest

Any person(s) or organization(s) with a controlling interest in the Named Insured but only with respect to their liability arising out of:

- (a) Their financial control of you; or
- (b) Premises they own, maintain or control while you lease or occupy these premises.

This insurance does not apply to structural alterations, new construction or demolition operations performed by or for such person(s) or organization(s).

(8) Co-Owner Of Insured Premises

A co-owner of a premises co-owned by you and covered under this insurance but only with respect to the co-owner's liability as co-owner of such premises.

(9) Vendors

- (a) Any person(s) or organization(s) (referred to as vendor), but only with respect to "bodily injury" or "property damage" arising out of "your products" which are distributed or sold in the regular course of the vendor's business.

The insurance afforded the vendor does not apply to:

- (i) "Bodily injury" or "property damage" for which the vendor is obligated to pay damages by reason of the assumption of liability in a written contract or written agreement. This exclusion does not apply to liability for damages that the vendor would have in the absence of the written contract or written agreement;
- (ii) Any express warranty unauthorized by you;

- (iii) Any physical or chemical change in the product made intentionally by the vendor;

- (iv) Repackaging, except when unpacked solely for the purpose of inspection, demonstration, testing, or the substitution of parts under instructions from the manufacturer, and then repackaged in the original container;

- (v) Any failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products;

- (vi) Demonstration, installation, servicing or repair operations, except such operations performed at the vendor's premises in connection with the sale of the product;

- (vii) Products which, after distribution or sale by you, have been labeled or relabeled or used as a container, part or ingredient of any other thing or substance by or for the vendor; or

- (viii) "Bodily injury" or "property damage" arising out of the sole negligence of the vendor for its own acts or omissions or those of its employees or anyone else acting on its behalf. However, this exclusion does not apply to:

- (1.1) The exceptions contained in Sub-paragraphs (iv) or (vi); or

- (1.2) Such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make

in the usual course of business, in connection with the distribution or sale of the products.

- (b) This insurance does not apply to any insured person or organization, from whom you have acquired products, or any ingredient, part or container, entering into, accompanying or containing such products.

2. With respect to coverage provided by this Provision **A. Miscellaneous Additional Insureds**, the following additional provisions apply:

- a. Any insurance provided to an additional insured designated under Paragraphs **A.1.c.(1)** through **A.1.c.(8)** above does not apply:

- (1) To "bodily injury" or "property damage" included within the "products-completed operations hazard"; or

- (2) To "bodily injury", "property damage" or "personal and advertising injury" arising out of the sole negligence of such additional insured.

- b. The insurance afforded to such additional insured only applies to the extent permitted by law.

- c. The insurance afforded to such additional insured will not be broader than that which you are required to provide by the written contract or written agreement.

3. With respect to the insurance afforded to the additional insureds within this Provision **A. Miscellaneous Additional Insureds**, the following is added to **Section III – Limits Of Insurance**:

The most we will pay on behalf of the additional insured is the amount of insurance:

- a. Required by the written contract or written agreement; or
- b. Available under the applicable Limits Of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits Of Insurance shown in the Declarations.

B. EXPECTED OR INTENDED INJURY OR DAMAGE

Exclusion **2.a. Expected Or Intended Injury of Section I – Coverage A – Bodily Injury And Property Damage Liability** is deleted and replaced by the following:

a. Expected Or Intended Injury Or Damage

"Bodily injury" or "property damage" expected or intended from the standpoint of the insured. This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

C. KNOWLEDGE OF OCCURRENCE

Paragraph **2.a. Duties In The Event Of Occurrence, Offense, Claim Or Suit of Section IV – Commercial General Liability Conditions** is deleted and replaced by the following:

- a. You must see to it that we are notified as soon as practicable of an "occurrence" or an offense which may result in a claim only when the "occurrence" or offense is known to:

- (1) You, if you are an individual;

- (2) A partner, if you are a partnership;

- (3) A manager, if you are a limited liability company; or

- (4) An "executive officer" or the "employee" designated by you to give such notice, if you are an organization other than a partnership or a limited liability company.

To the extent possible, notice should include:

- (i) How, when and where the "occurrence" or offense took place;

- (ii) The names and addresses of any injured persons and witnesses; and

- (iii) The nature and location of any injury or damage arising out of the "occurrence" or offense.

D. LEGAL LIABILITY – DAMAGE TO PREMISES RENTED TO YOU (Fire, Lightning, Explosion, Smoke, Or Leakage From Automatic Fire Protective Systems)

If damage to premises rented to you is not otherwise excluded from this policy or coverage part, then the following provisions apply:

- 1. Under **Section I – Coverage A – Bodily Injury And Property Damage Liability**, the last paragraph (after the exclusions) is deleted and replaced by the following:

Exclusions **c.** through **n.** do not apply to damage by fire, lightning, explosion, "smoke", or leakage from automatic fire protective systems to premises while rented to you or temporarily occupied by you with the permission of the owner. A separate limit of insurance applies to this coverage as described in **Section III – Limits Of Insurance**.

2. The paragraph immediately after Sub-paragraph **j.(6)** of Paragraph **2. Exclusions of Section I – Coverage A – Bodily Injury And Property Damage Liability** is deleted and replaced by the following:

Paragraphs **(1)**, **(3)** and **(4)** of this exclusion do not apply to "property damage" (other than damage by fire, lightning, explosion, "smoke", or leakage from automatic fire protective systems) to premises, including the contents of such premises, rented to you for a period of seven or fewer consecutive days. A separate limit of insurance applies to Damage To Premises Rented To You as described in **Section III – Limits Of Insurance**.

3. Paragraph **6.** of **Section III – Limits Of Insurance** is deleted and replaced by the following:

6. Subject to Paragraph **5.** above, the greater of:

- a. \$300,000; or
- b. The Damage To Premises Rented To You Limit shown in the Declarations, is the most we will pay under **Coverage A** for damages because of "property damage" to premises while rented to you, or in the case of damage by fire, lightning, explosion, "smoke", or leakage from automatic fire protective systems, while rented to you or temporarily occupied by you with permission of the owner.

This limit will apply to all damage proximately caused by the same event, whether such damage results from fire, lightning, explosion, "smoke", leakage from automatic fire protective systems, or other covered causes of loss or any combination thereof.

4. Subparagraph **b.(1)(a)(ii)** of Paragraph **4. Other Insurance of Section IV – Commercial General Liability Conditions** is deleted and replaced by the following:

- (ii) That is fire, lightning, explosion, "smoke" or leakage from automatic fire protective systems insurance for premises rented to

you or temporarily occupied by you with permission of the owner;

5. Subparagraph **a.** of Definition **9.** "Insured contract" of **Section V – Definitions** is deleted and replaced by the following:

- a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for damage by fire, lightning, explosion, "smoke" or leakage from automatic fire protective systems to premises while rented to you or temporarily occupied by you with permission of the owner is not an "insured contract".

6. As used in this Provision **D. Legal Liability – Damage To Premises Rented To You:**

"Smoke" does not include smoke from agricultural smudging, industrial operations or "hostile fire".

E. MEDICAL PAYMENTS

The Medical Expense Limit is changed, subject to the terms of **Section III – Limits Of Insurance**, to the Medical Expense Limit shown in the Declarations.

F. MOBILE EQUIPMENT REDEFINED

Subparagraph **f.(1)** of Definition **12.** "Mobile equipment" of **Section V – Definitions** is deleted and replaced by the following:

- (1) Equipment with a gross vehicle weight of 1,000 pounds or more and designed primarily for:
 - (a) Snow removal;
 - (b) Road maintenance, but not construction or resurfacing; or
 - (c) Street cleaning;

G. NEWLY FORMED OR ACQUIRED ORGANIZATION, PARTNERSHIP OR LIMITED LIABILITY COMPANY AND EXTENDED PERIOD OF COVERAGE

Paragraph **3.** of **Section II – Who Is An Insured** is deleted and replaced by the following:

3. Any organization you newly acquire or form, other than a joint venture, and over which you maintain ownership or:
 - a. Majority interest of more than 50% if you are a corporation;
 - b. Majority interest of more than 50% as a general partner of a newly acquired or formed partnership; and/or

- c. Majority interest of more than 50% as an owner of a newly acquired or formed limited liability company;

will qualify as a Named Insured if there is no other similar insurance available to that organization. However, for these organizations:

- (i) Coverage under this provision is afforded only until the next anniversary date of this policy's effective date after you acquire or form the organization, partnership or limited liability company, or the end of the policy period, whichever is earlier;
- (ii) **Section I – Coverage A – Bodily Injury And Property Damage Liability** does not apply to "bodily injury" or "property damage" that occurred before you acquired or formed the organization, partnership or limited liability company;
- (iii) **Section I – Coverage B – Personal And Advertising Injury Liability** does not apply to "personal and advertising injury" arising out of an offense committed before you acquired or formed the organization, partnership or limited liability company;
- (iv) Coverage applies only when operations of the newly acquired organization, partnership or limited liability company are the same or similar to the operations of insureds already covered under this insurance;
- (v) Coverage only applies for those limited liability companies who have established a date of formation as recorded within the filed state articles of organization, certificates of formation or certificates of organization; and
- (vi) Coverage only applies for those partnerships who have established a date of formation as recorded within a written partnership agreement or partnership certificate.

H. WHO IS AN INSURED – AMENDMENT

The last paragraph of **Section II – Who Is An Insured** is deleted and replaced by the following:

No person or organization is an insured with respect to the conduct of any:

- a. Current partnership or limited liability company, unless otherwise provided for under Paragraph 3. of **Section II – Who Is An Insured**;
- b. Current joint venture; or

- c. Past partnership, joint venture or limited liability company;

that is not shown as a Named Insured in the Declarations.

I. NON-OWNED WATERCRAFT

Subparagraph (2) of **Exclusion 2.g. Aircraft, Auto Or Watercraft of Section I – Coverage A – Bodily Injury And Property Damage Liability** is deleted and replaced by the following:

- (2) A watercraft you do not own that is:

- (a) Less than 51 feet long; and
- (b) Not being used to carry persons or property for a charge.

J. SUPPLEMENTARY PAYMENTS – INCREASED LIMITS

Section I – Supplementary Payments – Coverages A And B is changed as follows:

1. The limit shown in Paragraph 1.b. for the cost of bail bonds is changed from \$250 to \$3,000; and
2. The limit shown in Paragraph 1.d. for loss of earnings because of time off from work is changed from \$250 a day to \$1,000 a day.

K. UNINTENTIONAL OMISSION OR UNINTENTIONAL ERROR IN DISCLOSURE

The following provision is added to Paragraph 6. **Representations of Section IV – Commercial General Liability Conditions**:

However, the unintentional omission of, or unintentional error in, any information given or provided by you shall not prejudice your rights under this insurance.

This provision does not affect our right to collect additional premium or to exercise our right of cancellation or non-renewal.

L. WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS

The following is added to Paragraph 8. **Transfer Of Rights Of Recovery Against Others To Us of Section IV – Commercial General Liability Conditions**:

We waive any right of recovery we may have against any person or organization because of payments we make for injury or damage arising out of your ongoing operations or "your work" and included in the "products-completed operations hazard" when you have agreed in a written contract or written agreement that any right of recovery is waived for such person or organization. This waiver applies only to the

person(s) or organization(s) agreed to in the written contract or written agreement and is subject to those provisions.

This waiver does not apply unless the written contract or written agreement has been executed prior to the "bodily injury" or "property damage".

However, if any person or organization is separately scheduled on a separate waiver of transfer of rights of recovery which is attached to this policy, then this waiver does not apply.

M. LIBERALIZATION CLAUSE

The following is added to **Section IV – Commercial General Liability Conditions:**

If we adopt a mandatory attachment form change which broadens coverage under this edition of the Commercial General Liability CG0001 for no additional charge, and those changes are intended to apply to all insureds under this edition of CG0001, that change will automatically apply to your insurance as of the date we implement the change in your state. This liberalization clause does not apply to changes implemented through introduction of a subsequent edition of the Commercial General Liability form CG0001.

N. INCIDENTAL MEDICAL MALPRACTICE

1. Paragraph **2.a.(1)(d)** of **Section II – Who Is An Insured** does not apply to a physician, nurse practitioner, physician assistant, nurse, emergency medical technician or paramedic employed by you if you are not in the business or occupation of providing medical, paramedical, surgical, dental, x-ray or nursing services.
2. This provision is excess over any other valid and collectible insurance whether such insurance is primary, excess, contingent or on any other basis. Any payments by us will follow Paragraph **4.b.** of **Section IV – Commercial General Liability Conditions.**

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

GENERAL LIABILITY ULTRA PLATINUM ENHANCEMENT COVERAGES

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM
CONTRACTORS' COMMERCIAL GENERAL LIABILITY ENHANCEMENT ENDORSEMENT
GENERAL LIABILITY ULTRA PLUS ENDORSEMENT

A. General Liability Ultra Plus Endorsement CL CG 04 92, Provision A. Miscellaneous Additional Insureds,
is revised as follows:

1. The following is added to **(1) Persons or Organizations For Whom Operations Are Performed, c.(1)**:
 - a. If the written contract specifically requires you to provide additional insured coverage via the 10/01 edition of **CG 20 10** (aka **CG 20 10 10 01**) or via the 11/85 edition of **CG 20 10** (aka **CG 20 10 11 85**), then in paragraph **1.c.(1)(c)**., the words *caused in whole or in part by*, are replaced by the words *arising out of*.
 - b. For purposes of this additional insured coverage, the terms "you" and "your" refer to the Named Insured shown in the Declarations.

B. CONTRACTUAL LIABILITY - RAILROADS

The following coverage is added:

1. With respect to operations performed for a Railroad within 50 feet of railroad property, the definition of "insured contract" in **Section V - Definitions** is replaced by the following:

9. "Insured Contract" means:

- a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for damage by fire to premises while rented to you or temporarily occupied by you with permission of the owner is not an "insured contract";
- b. A sidetrack agreement;
- c. Any easement or license agreement;
- d. An obligation, as required by ordinance, to indemnify a municipality, except in connection with work for a municipality;
- e. An elevator maintenance agreement;
- f. That part of any other contract or agreement pertaining to your business (including an indemnification of a municipality in connection with work performed for a municipality) under

which you assume the tort liability of another party to pay for "bodily injury" or property damage" to a third person or organization. Tort liability means a liability that would be imposed by law in the absence of any contract or agreement.

Paragraph **f.** does not include that part of any contract or agreement:

- (1) That indemnifies an architect, engineer or surveyor for injury or damage arising out of:
 - (a) Preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
 - (b) Giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage;
- (2) Under which the insured, if an architect, engineer or surveyor, assumes liability for an injury or damage arising out of the insured's rendering or failure to render professional services, including

those listed in Paragraph (1) above and supervisory, inspection, architectural or engineering activities.

2. Other Insurance

For purposes of this endorsement, the following is added to the **Section IV - Commercial General Liability Conditions, 4 Other Insurance** condition and supersedes any provision to the contrary.

This insurance is excess of all other insurance that is Railroad Protective Liability or similar coverage for "your work" performed for a Railroad. But, if required by a written contract or written agreement to be primary and noncontributory, this insurance will be primary to and will not seek contribution from any insurance on which the Railroad is a Named Insured.

No other coverage or limit in the policy applies to loss or damage insured by this coverage.

C. AGGREGATE LIMITS OF INSURANCE

The following is added to **COMMERCIAL GENERAL LIABILITY COVERAGE FORM CG 00 01**, General Aggregate Limit under **SECTION III – LIMITS OF INSURANCE**:

The General Aggregate Limit under **SECTION III - LIMITS OF INSURANCE** applies separately to each of your

1. Projects away from premises owned by or rented to you.
2. "Locations" owned by or rented to you.

"Location" means premises involving the same or connecting lots, or premises whose connection is interrupted only by a street, roadway, waterway or right-of-way of a railroad.

When paragraph **B. Construction Project General Aggregate Limit** on form **CL CG 00 20** is a part of this policy, then this endorsement **CL CG 05 29** paragraph **C. Aggregate Limits Of Insurance** does not apply.

D. BODILY INJURY REDEFINED

The definition of "Bodily injury" in the **Definitions** section of the **COMMERCIAL GENERAL LIABILITY COVERAGE FORM CG 00 01** is replaced by the following:

"Bodily injury" means bodily injury, disability, sickness or disease sustained by a person, including death resulting from any of these at any time. "Bodily injury" includes mental anguish or other mental injury resulting from "bodily injury".

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**PRIMARY AND NONCONTRIBUTORY –
OTHER INSURANCE CONDITION
(ADDITIONAL INSURED)**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

Paragraph (v) is added to Paragraph (1)(a) of Paragraph b. **Excess Insurance** under Paragraph 4. **Other Insurance of Section IV – Commercial General Liability Conditions**, as follows:

(1) This insurance is excess over:

(a) Any of the other insurance, whether primary, excess, contingent or on any other basis:

(v) That is available to any person or organization who has been added as an additional insured to this policy by endorsement.

However, with respect to an additional insured added by endorsement for liability caused, in whole or in part:

1. By your acts or omissions, or the acts or omissions of those acting on your behalf:

(a) In the performance of your ongoing operations; or

(b) In connection with your premises;

2. By your maintenance, operation or use of equipment leased to you by such person or organization; or

3. By "your work" performed for that additional insured and included in the "products-completed operations hazard";

this insurance shall be primary to and will not seek contribution from the additional insured's own insurance if you and such additional insured have agreed prior to loss in a written contract or written agreement, in effect during this policy period, that this insurance be primary and noncontributory as respects liability described in Subparagraph (1)(a)(v)1., (1)(a)(v)2. or (1)(a)(v)3. above. However, this insurance, in all cases, is excess over any other liability insurance available to the additional insured to which such person or organization has been added as an additional insured.

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED - OWNERS, LESSEES,
CONTRACTORS OR OTHERS - COMPLETED OPERATIONS
- AUTOMATIC STATUS, INCLUDING PRIMARY
NONCONTRIBUTORY**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. SECTION II - WHO IS AN INSURED is amended to include as an additional insured any person(s) or organization(s) when you are obligated by virtue of a written contract or agreement that such person or organization(s) be added as an additional insured to your policy.

Such person(s) or organization(s) is an additional insured only with respect to liability for "bodily injury" or "property damage" or "personal and advertising injury" caused, in whole or in part by:

- (1) Acts or omissions of the Named Insured; or
- (2) The acts or omissions of those acting on behalf of the Named Insured;

and included in the "products-completed operations hazard"

This insurance applies only when you are required to add the additional insured by virtue of a written contract or agreement, provided the contract or agreement is:

1. Currently in effect or becomes effective during the term of this policy; and
2. Was executed prior to the "bodily injury" or "property damage" or "personal and advertising injury".

However:

- a. The insurance afforded to such additional insured only applies to the extent permitted by law; and
- b. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

For purposes of this endorsement, throughout the policy, the terms "you" and "your" refer to the Named Insured shown in the Declarations.

B. Exclusions

With respect to the insurance afforded to these additional insureds, the following additional exclusions apply to "bodily injury" and "property damage" arising out of:

1. The rendering of or failure to render any professional services by you or on your behalf, but only with respect to either or both of the following operations:
 - a. Providing engineering, architectural or surveying services to others in your capacity as an engineer, architect or surveyor; and
 - b. Providing, or hiring independent professionals to provide, engineering, architectural or surveying services in connection with construction work you perform.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of, or the failure to render, any professional architectural, engineering or surveying services.

2. Subject to Paragraph 3. below, professional services include:
 - a. Preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders, or drawings and specifications; and

b. Supervisory or inspection activities performed as part of any related architectural or engineering activities.

3. Professional services do not include services within construction means, methods, techniques, sequences and procedures employed by you or performed by or for the construction manager, its employees or its subcontractors in connection with your ongoing operations.

C. Limits of Insurance

With respect to the insurance afforded to these additional insureds, the following is added to **Section III - Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

D. Other Insurance

For purposes of this endorsement, the following is added to the **Section IV - Commercial General Liability Conditions, 4. Other Insurance** condition and supersedes any provision to the contrary:

This insurance is excess of all other insurance available to an additional insured whether on a primary, excess, contingent or any other basis. But, if required by a written contract or written agreement to be primary and noncontributory, this insurance will be primary to and will not seek contribution from any insurance on which the additional insured is a Named Insured.

No other coverage or limit in the policy applies to loss or damage insured by this coverage.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

COMMERCIAL AUTOMOBILE EXPANSION ENDORSEMENT - PLATINUM

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

With respect to the coverages provided by this endorsement, the provisions of the Business Auto Coverage Form apply unless modified by this endorsement.

A. NEWLY ACQUIRED OR FORMED ORGANIZATIONS

The following is added to Paragraph **A.1. Who Is An Insured of Section II - Covered Autos Liability Coverage**:

Any organization you newly acquire or form, other than a partnership, joint venture or limited liability company or any organization excluded either by this Coverage Part or by endorsement, and over which you maintain ownership or majority interest of more than 50 percent will qualify as a Named Insured. However:

1. This insurance does not apply to any newly acquired or formed organization that is an "insured" under any other automobile policy or would be an "insured" under such policy but for its termination or the exhaustion of its Limit of Insurance.
2. Coverage does not apply to "bodily injury" or "property damage" that occurred before you acquired or formed the organization.
3. Coverage under this provision is afforded only until the 180th day after you acquire or form the organization or the end of the policy period, whichever is earlier.

B. ADDITIONAL INSURED BY CONTRACT OR AGREEMENT

The following is added to Paragraph **A.1., Who Is An Insured of Section II - Covered Autos Liability Coverage**:

When you have agreed in a written contract or agreement to include a person or organization as an additional "insured", such person or organization is included as an "insured" subject to the following:

1. Such person or organization is an additional "insured" only to the extent such person or organization is liable for "bodily injury" or

"property damage": because of the conduct of an "insured" under Paragraphs **a.** or **b.** under Paragraph **A.1. Who Is An Insured of Section II - Covered Autos Liability Coverage**, caused by an "accident" and resulting from the ownership, maintenance or use of a covered "auto";

2. The written contract or agreement described above must have been executed prior to the "accident" that caused the "bodily injury" or "property damage" and be in effect at the time of such "accident";
3. The insurance afforded to any such additional "insured" does not apply to any "accident" beyond the period of time required by the written contract or agreement described above;
4. The most we will pay on behalf of such additional "insured(s)" is the lesser of:
 - a. The Limits of Insurance specified in the written contract or agreement described above; or
 - b. The Limits of Insurance shown in the Declarations.

This provision shall not increase the Limit of Insurance shown in the Declarations in this policy or coverage part; and

5. The following changes are made to Paragraph **5. Other Insurance of B. General Conditions under Section IV - Business Auto Conditions**:
 - a. The following is added to Paragraph **5.a.**:

If required by the written contract or agreement described above, the insurance afforded to the additional insured under this provision will be primary to, and will not seek contribution from, the additional insured's own insurance.

b. Paragraph 5.c. is deleted in its entirety.

6. Paragraph A.1.c. under Section II - Covered Autos Liability Coverage is deleted in its entirety.

7. The definition of "insured contract" under Section V - Definitions is amended to add the following:

An "insured contract" does not include that part of any contract or agreement:

That pertains to the ownership, maintenance or use of an "auto" and which indemnifies a person or organization for other than the vicarious liability of such person or organization for "bodily injury" or "property damage" caused by your operation or use of a covered "auto".

However, a person or organization is an additional "insured" under this provision only to the extent such person or organization is not named as an "insured" by separate endorsement to this policy.

C. EMPLOYEES AS INSURED

The following is added to Paragraph A.1. Who Is An Insured Section II - Covered Autos Liability Coverage:

Any "employee" of yours is an "insured" while using a covered "auto" you don't own, hire or borrow in your business or your personal affairs.

D. INCREASED COVERAGE - BAIL BONDS

The Supplementary Payments Coverage Extension of Section II - Covered Autos Liability Coverage is amended as follows:

The Limit of Insurance in paragraph A.2.a.(2) is increased to \$5,000.

E. INCREASED COVERAGE - LOSS OF EARNINGS

The Supplementary Payments Coverage Extension of Section II - Covered Autos Liability Coverage is amended as follows:

The Limit of Insurance in paragraph A.2.a.(4) is increased to \$1,000.

F. FELLOW EMPLOYEE COVERAGE

The Fellow Employee Exclusion contained in Section II - Covered Autos Liability Coverage does not apply. This coverage is excess over any other collectable insurance.

G. COVERAGE EXTENSION - TRANSPORTATION EXPENSES

Paragraph A.4.a. Transportation Expenses of Section III - Physical Damage Coverage is amended as follows:

1. The Limits of Insurance are increased to \$75 per day to a maximum of \$2,500.

2. We will also pay reasonable and necessary expenses to facilitate the return of the stolen "auto" to you.

3. It is agreed and understood and it is our stated intent that expenses incurred by you under the Transportation Expenses Coverage Extension will not also be covered or paid under the Rental Reimbursement Coverage provided by this endorsement or any rental reimbursement coverage added by separate endorsement to this policy.

H. EXTENDED COVERAGE - AIRBAGS

The following is added to Exclusion B.3.a. of Section III - Physical Damage Coverage:

However, this exclusion does not apply to the unintended discharge of an airbag.

This coverage is excess over any other collectible insurance or warranty providing such airbag coverage.

I. AUTO LOAN/LEASE GAP COVERAGE

The following is added to Section III - Physical Damage Coverage, Paragraph C. Limits of Insurance.

4. In the event of a total "loss" to a covered "auto", we will pay the lesser of:

a. Any unpaid amount due on the lease or loan for a covered "auto", less:

(1) The amount under the Physical Damage Coverage section of the policy; and

(2) Any:

(a) Overdue lease/loan payments at the time of the "loss";

(b) Financial penalties imposed under a lease for excessive use, abnormal wear and tear or high mileage;

(c) Security deposits not returned by the lessor;

(d) Costs for extended warranties, Credit Life Insurance, Health, Accident or Disability Insurance purchased with the loan or lease; and

(e) Carry-over balances from previous loans or leases; or

b. \$5,000.

However, this provision does not apply to the extent loan/lease gap coverage has been provided by separate endorsement to this policy.

J. GLASS REPAIR - NO DEDUCTIBLE

The following is added to Paragraph **D.** Deductible of Section **III** - Physical Damage Coverage:

Any Comprehensive Coverage deductible shown in the Declarations does not apply to "loss" to glass when you elect to patch or repair rather than replace the glass.

K. INCREASED COVERAGE - ELECTRONIC EQUIPMENT

The \$1,000 limit indicated in Paragraph **C.1.b.** under Section **III** - Physical Damage Coverage is increased to \$2,500.

L. EXTENDED COVERAGE - PERSONAL PROPERTY

The following is added to Paragraph **A.4.** Coverage Extensions of Section **III** - Physical Damage Coverage:

Physical Damage Coverage on a covered "auto" may be extended to "loss" to your personal property or, if you are an individual, the personal property of a family member, that is in the covered "auto" at the time of "loss" and caused by an "accident" and resulting from the ownership, maintenance or use of a covered "auto".

The insurance provided by this coverage extension is excess over any other collectible insurance. The most we will pay for any one "loss" under this coverage extension is \$500. However, our payment for "loss" to personal property will only be for the account of the owner of the property.

Under this provision, personal property does not include and we will not pay for "loss" of currency, coins, securities or contraband.

No deductible applies to this coverage extension.

M. TOWING

Paragraph **A.2.** Towing of Section **III** - Physical Damage Coverage, is replaced by the following:

If a private passenger type "auto" or light truck "auto" (0-10,000 Lbs. GVW) is provided both Comprehensive and Collision Coverage, we will pay up to \$150 for towing and labor costs incurred each time such "auto" is disabled. If a medium, heavy or extra-heavy truck or extra-heavy Truck-tractor "auto" (greater than 10,000 Lbs. GVW) is provided both Comprehensive and Collision Coverage, we will pay up to \$250 for towing and labor costs incurred each time such "auto" is disabled. However, the labor must be performed at the place of disablement.

N. FIRE EXTINGUISHER RECHARGE

The following is added to Paragraph **A.4.** Coverage Extensions of Section **IV** - Physical Damage Coverage:

When fire extinguishers are kept in your covered "auto" and any are discharged in an attempt to extinguish a fire, we will pay the lesser of the actual cost of recharging or replacing such fire extinguisher(s).

No deductible applies to this coverage.

O. HIRED AUTO PHYSICAL DAMAGE COVERAGE

The following is added to Paragraph **A.4.** Coverage Extensions of Section **III** - Physical Damage Coverage:

If hired "autos" are covered "autos" for Covered Autos Liability Coverage and if Physical Damage Coverage is provided for any "auto" you own, then the Physical Damage coverages provided are extended to "autos" you lease, rent, hire or borrow from someone other than your "employees", partners or members of their households subject to the following:

1. The most we will pay in any one "loss" is the lesser of:
 - a. The actual cash value of the "auto";
 - b. The cost to repair or replace the "auto"; or
 - c. \$100,000.
2. Paragraph 1. above is subject to a deductible. The deductible shall be equal to the amount of the highest deductible shown for any owned "auto" of the same classification for that coverage. In the event there is no owned "auto" of the same classification, the highest deductible for any owned "auto" will apply for that coverage.

No deductible will apply to "loss" caused by fire or lightning.
3. Hired Auto Physical Damage Coverage is subject to the following:
 - a. If symbol 8 is shown in the Covered Auto section of the Declarations page for any of the Physical Damage coverages, then the Hired Auto Physical Damage coverage described in this endorsement does not apply.
 - b. Other than indicated in Paragraphs a. directly above, coverage provided under this provision will be excess over any other collectible insurance or coverage.
4. In addition to the limit set forth in Paragraph 1. above we will pay up to \$500 per day, to a maximum of \$3,500 per "loss" for:
 - a. Any costs or fees associated with the "loss" to a hired "auto"; and
 - b. Loss of use of the hired "auto", provided it is the consequence of an "accident" for which you are legally liable, and as a

result of which a monetary loss is sustained by the leasing or rental concern.

However, Paragraph **A.4.b.** Loss of Use Expenses under Section III - Physical Damage Coverage of the Business Auto Coverage Form does not apply.

P. RENTAL REIMBURSEMENT COVERAGE

We will pay for rental reimbursement expenses incurred by you for the rental of an "auto" because of "loss" to a covered "auto".

1. Payment applies in addition to the otherwise applicable amount of each coverage you have on the covered "auto".
2. No deductible applies to this coverage.
3. We will pay only for those expenses incurred during the policy period beginning 24 hours after the "loss" and ending, regardless of the expiration date of the policy, with the lesser of the following number of days:
 - a. The number of days when the covered "auto" has been repaired or replaced, or
 - b. 45 days.
4. Our payment is limited to the lesser of the following amounts:
 - a. Necessary and actual expenses incurred; or
 - b. Not more than \$75 for any one day;
5. We will pay up to an additional \$300 for the reasonable and necessary expenses you incur to remove your materials and equipment from the covered "auto" and replace such materials and equipment on the rental "auto".
6. This coverage does not apply while there are spare or reserve "autos" available to you for your operations.
7. If "loss" results from the total theft of a covered "auto" of the "private passenger type", we will pay under this coverage only that amount of your rental reimbursement expenses which is not already provided for under the Physical Damage Coverage Extension of the Business Auto Coverage Form or any endorsements thereto.

However, this provision does not apply to the extent that rental reimbursement is provided by separate endorsement to this policy.

Q. DRIVE OTHER CAR COVERAGE

1. The following is added to Section II - Covered Autos Liability Coverage:
 - a. Any "auto" you don't own, hire or borrow is a covered "auto" for Liability Coverage while being used by:

- (1) You, if you are designated in the Declarations as an individual;
- (2) Your partners or members, if you are designated in the Declarations as a partnership or joint venture;
- (3) Your members or managers, if you are designated in the Declarations as a limited liability company;
- (4) Your executive officers if you are designated in the Declarations as an organization other than an individual, partnership, joint venture or limited liability company; and
- (5) The spouse of any person named in Paragraphs **1.a.(1)** through **1.a.(4)** while a resident of the same household;

Except:

- (a) Any "auto" owned by that individual or by any member of his or her household.
- (b) Any "auto" used by that individual or his or her spouse while working in a business of selling, servicing, repairing or parking "autos".

2. Changes in Auto Medical Payments And Uninsured And Underinsured Motorists Coverages

The following is added to **Who Is An Insured**:

Any individual named in **1.a** above and his or her "family members" are "insured" while "occupying" or while a pedestrian when being struck by any "auto" you don't own except:

Any "auto" owned by that individual or by any "family member".

3. Changes In Physical Damage Coverage

Any private passenger type "auto" you don't own, hire or borrow is a covered "auto" while in the care, custody or control of any individual named in **Q.1.a.** above or his or her spouse while a resident of the same house-hold except:

- a. Any "auto" owned by that individual or by any member of his or her household; or
- b. Any "auto" used by that individual or his or her spouse while working in a business of selling, servicing, repairing or parking "autos".

4. The most we will pay for the total of all damages under Covered Autos Liability Uninsured Motorists Coverage and Underinsured Motorists Coverage is the Limit Of Insurance shown in the Declarations as applicable to owned "autos".

5. Our obligation to pay for, repair, return or replace damaged or stolen property under Physical Damage Coverage, will be reduced by a deductible equal to the amount of the highest deductible shown for any owned private passenger type "auto" applicable to that coverage. If there are no owned private passenger type "autos", the deductible shall be \$250 for Comprehensive Coverage and \$500 for Collision Coverage. No deductible will apply to "loss" caused by fire or lightning.

6. Additional Definition

As used in this **DRIVE OTHER CAR** Provision:

"Family member" means a person related to the individual named in 1.a. by blood, marriage or adoption who is a resident of the individual's household, including a ward or foster child.

R. KNOWLEDGE OF AN ACCIDENT, CLAIM, SUIT OR LOSS

The following is added to Paragraph **A.2.** of Section **IV** - Business Auto Conditions:

Your obligation to provide prompt notice of an "accident", claim, "suit" or "loss" is satisfied if you or a person designated by you to be responsible for insurance matters is notified of, or in any manner made aware of an "accident", claim, "suit" or "loss" and provides us such notice as soon as practicable

S. WAIVER OF SUBROGATION BY CONTRACT OR AGREEMENT

The following is added to Paragraph **A.5** of Section **IV** - Business Auto Conditions:

We waive any right of recovery we may have against a person or organization because of payments we make for "bodily injury" or "property damage" when you and such person or organization have agreed in writing in a contract or agreement to waive such right of recovery, provided:

1. Such written contract or agreement was:
 - a. Made prior to the "accident" or "loss" resulting in the covered "bodily injury" or "property damage"; and
 - b. Was in effect at the time of the covered "bodily injury" or "property damage".
2. The covered "bodily injury" or "property damage" must arise out of the operations specified in such written contract or agreement.
3. At our request you must provide us with a copy of the aforementioned written contract or agreement.

T. UNINTENTIONAL OMISSIONS

The following is added Paragraph **B.2.** of Section **IV** - Business Auto Conditions:

If you fail to disclose any hazards existing at the inception date of this policy, such failure will not prejudice the coverage provided to you. However, this provision does not affect our right to collect additional premium or exercise our right of cancellation or nonrenewal.

U. LIBERALIZATION

If we revise this endorsement to provide greater coverage without additional premium charge, we will automatically provide the additional coverage to all endorsement holders as of the day the revision is effective in your state.

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Carrier no: 20001

Endorsement no: WC000313

SAIF policy: 774651 Paul Brothers Inc

Waiver of Our Right to Recover from Others Endorsement

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule.

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

Description: ALL OPERATIONS

Contractor name: Persons and/or organizations with whom the insured-employer is required by written contract to waive subrogation rights.

This endorsement does not alter the rights of an injured worker to pursue recovery from another party or SAIF to receive a statutory share of recoveries by an injured worker, even from the party listed in the schedule.

The premium charge for this endorsement is based on one (1) percent of your manual premium.

Effective date: October 01, 2020

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

Countersigned September 16, 2020 at Salem, Oregon



Kerry Barnett
President and Chief Executive Officer

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

GENERAL LIABILITY ULTRA PLUS ENDORSEMENT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SUMMARY OF COVERAGE EXTENSIONS

Provision	Name Of Coverage Extension	Included or Limit of Insurance
A.	Miscellaneous Additional Insureds	Included
B.	Expected Or Intended Injury Or Damage	Included
C.	Knowledge Of Occurrence	Included
D.	Legal Liability – Damage To Premises Rented To You (Fire, Lightning, Explosion, Smoke, Or Leakage From Automatic Fire Protective Systems)	\$300,000
E.	Medical Payments	See Declarations
F.	Mobile Equipment Redefined	Included
G.	Newly Formed Or Acquired Organization, Partnership Or Limited Liability Company And Extended Period Of Coverage	Included
H.	Who Is An Insured – Amendment	Included
I.	Non-Owned Watercraft (Increased to maximum length of less than 51 feet)	Included
J.	Supplementary Payments – Increased Limits	
	1. Bail Bonds	\$ 3,000
	2. Loss Of Earnings	\$ 1,000
K.	Unintentional Omission Or Unintentional Error In Disclosure	Included
L.	Waiver Of Transfer Of Rights Of Recovery Against Others	Included
M.	Liberalization Clause	Included
N.	Incidental Medical Malpractice	Included

The above is a summary only. Please consult the specific provisions that follow for complete information on the extensions provided.

The provisions of the Commercial General Liability Coverage Part apply except as otherwise provided in this endorsement. This endorsement applies only if such Coverage Part is included in this policy.

A. MISCELLANEOUS ADDITIONAL INSUREDS

- 1. Section II – Who Is An Insured** is amended to include as an insured any person or organization (referred to as an additional insured below) described in Paragraphs **A.1.c.(1)** through **A.1.c.(9)** below when you and such person or organization have agreed

in writing in a contract or agreement that such person or organization be added as an additional insured on your policy, provided that:

- a.** The written contract or written agreement is:
 - (1)** Currently in effect or becoming effective during the term of this policy; and
 - (2)** Fully executed by you and the additional insured prior to the "bodily

injury", "property damage" or "personal and advertising injury".

- b. The insurance afforded by this provision does not apply to any person or organization included as an additional insured by a separate endorsement issued by us and made a part of this policy or coverage part.
- c. Only the following persons or organizations are additional insureds under this provision, with coverage for such additional insureds limited as provided herein:

(1) Persons or Organizations For Whom Operations Are Performed

- (a) Any person or organization for whom you are performing operations when you and such person or organization have agreed in writing in a contract or agreement that such person or organization be added as an additional insured to your policy; and
- (b) Any other person or organization you are required to add as an additional insured under the contract or agreement described in paragraph (a) above.
- (c) Such person(s) or organization(s) is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:
 - (i) Your acts or omissions; or
 - (ii) The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured.

- (d) With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to:

- (i) "Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:

- (1.1) The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or

- (1.2) Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of, or the failure to render, any professional architectural, engineering or surveying services.

- (ii) "Bodily injury" or "property damage" occurring after:

- (1.1) All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or

- (1.2) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

(2) Managers Or Lessors Of Premises

A manager or lessor of premises but only with respect to liability arising out of the ownership, maintenance or use of that part of the premises leased to

you and subject to the following additional exclusions:

This insurance does not apply to:

- (a) Any "occurrence" which takes place after you cease to be a tenant in that premises.
- (b) Structural alterations, new construction or demolition operations performed by or on behalf of such additional insured.

(3) Mortgagee, Assignee Or Receiver

A mortgagee, assignee, or receiver but only with respect to their liability as mortgagee, assignee, or receiver and arising out of the ownership, maintenance, or use of a covered premises by you.

This insurance does not apply to structural alterations, new construction or demolition operations performed by or on behalf of such additional insured.

(4) Owners Or Other Interests From Whom Land Has Been Leased

An owner or other interest from whom land has been leased to you but only with respect to liability arising out of the ownership, maintenance or use of that part of the land leased to you and subject to the following additional exclusions:

This insurance does not apply to:

- (a) Any "occurrence" which takes place after you cease to lease that land.
- (b) Structural alterations, new construction or demolition operations performed by or on behalf of such additional insured.

(5) Lessor Of Leased Equipment

Any person(s) or organization(s) from whom you lease equipment but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your maintenance, operation or use of equipment leased to you by such person(s) or organization(s).

A person's or organization's status as an additional insured under this endorsement ends when their written

contract or written agreement with you for such leased equipment ends.

This insurance does not apply to any "occurrence" which takes place after the equipment lease expires.

(6) State, Municipality, Governmental Agency Or Subdivision Or Other Political Subdivision – Permits Or Authorizations Relating To Premises

Any state, municipality, governmental agency or subdivision or other political subdivision subject to the following additional provisions:

(a) This insurance applies only with respect to:

(i) The following hazards for which the state, municipality, governmental agency or subdivision or other political subdivision has issued a permit or authorization in connection with premises you own, rent or control and to which this insurance applies:

(1.1) The existence, maintenance, repair, construction, erection or removal of advertising signs, awnings, canopies, cellar entrances, coal holes, driveways, manholes, marquees, hoist away openings, sidewalk vaults, street banners or decorations and similar exposures; or

(1.2) The construction, erection or removal of elevators; or

(1.3) The ownership, maintenance or use of any elevators covered by this insurance.

(ii) Operations performed by you or on your behalf for which the state, municipality, governmental agency or subdivision or other political subdivision has issued a permit or authorization.

- (b) This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of operations performed for the state, municipality, governmental agency or subdivision or other political subdivision.

(7) Controlling Interest

Any person(s) or organization(s) with a controlling interest in the Named Insured but only with respect to their liability arising out of:

- (a) Their financial control of you; or
- (b) Premises they own, maintain or control while you lease or occupy these premises.

This insurance does not apply to structural alterations, new construction or demolition operations performed by or for such person(s) or organization(s).

(8) Co-Owner Of Insured Premises

A co-owner of a premises co-owned by you and covered under this insurance but only with respect to the co-owner's liability as co-owner of such premises.

(9) Vendors

- (a) Any person(s) or organization(s) (referred to as vendor), but only with respect to "bodily injury" or "property damage" arising out of "your products" which are distributed or sold in the regular course of the vendor's business.

The insurance afforded the vendor does not apply to:

- (i) "Bodily injury" or "property damage" for which the vendor is obligated to pay damages by reason of the assumption of liability in a written contract or written agreement. This exclusion does not apply to liability for damages that the vendor would have in the absence of the written contract or written agreement;
- (ii) Any express warranty unauthorized by you;

- (iii) Any physical or chemical change in the product made intentionally by the vendor;

- (iv) Repackaging, except when unpacked solely for the purpose of inspection, demonstration, testing, or the substitution of parts under instructions from the manufacturer, and then repackaged in the original container;

- (v) Any failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products;

- (vi) Demonstration, installation, servicing or repair operations, except such operations performed at the vendor's premises in connection with the sale of the product;

- (vii) Products which, after distribution or sale by you, have been labeled or relabeled or used as a container, part or ingredient of any other thing or substance by or for the vendor; or

- (viii) "Bodily injury" or "property damage" arising out of the sole negligence of the vendor for its own acts or omissions or those of its employees or anyone else acting on its behalf. However, this exclusion does not apply to:

- (1.1) The exceptions contained in Sub-paragraphs (iv) or (vi); or

- (1.2) Such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make

in the usual course of business, in connection with the distribution or sale of the products.

- (b) This insurance does not apply to any insured person or organization, from whom you have acquired products, or any ingredient, part or container, entering into, accompanying or containing such products.

2. With respect to coverage provided by this Provision **A. Miscellaneous Additional Insureds**, the following additional provisions apply:

- a. Any insurance provided to an additional insured designated under Paragraphs **A.1.c.(1)** through **A.1.c.(8)** above does not apply:

- (1) To "bodily injury" or "property damage" included within the "products-completed operations hazard"; or

- (2) To "bodily injury", "property damage" or "personal and advertising injury" arising out of the sole negligence of such additional insured.

- b. The insurance afforded to such additional insured only applies to the extent permitted by law.

- c. The insurance afforded to such additional insured will not be broader than that which you are required to provide by the written contract or written agreement.

3. With respect to the insurance afforded to the additional insureds within this Provision **A. Miscellaneous Additional Insureds**, the following is added to **Section III – Limits Of Insurance**:

The most we will pay on behalf of the additional insured is the amount of insurance:

- a. Required by the written contract or written agreement; or
- b. Available under the applicable Limits Of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits Of Insurance shown in the Declarations.

B. EXPECTED OR INTENDED INJURY OR DAMAGE

Exclusion **2.a. Expected Or Intended Injury of Section I – Coverage A – Bodily Injury And Property Damage Liability** is deleted and replaced by the following:

a. Expected Or Intended Injury Or Damage

"Bodily injury" or "property damage" expected or intended from the standpoint of the insured. This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

C. KNOWLEDGE OF OCCURRENCE

Paragraph **2.a. Duties In The Event Of Occurrence, Offense, Claim Or Suit of Section IV – Commercial General Liability Conditions** is deleted and replaced by the following:

- a. You must see to it that we are notified as soon as practicable of an "occurrence" or an offense which may result in a claim only when the "occurrence" or offense is known to:

- (1) You, if you are an individual;

- (2) A partner, if you are a partnership;

- (3) A manager, if you are a limited liability company; or

- (4) An "executive officer" or the "employee" designated by you to give such notice, if you are an organization other than a partnership or a limited liability company.

To the extent possible, notice should include:

- (i) How, when and where the "occurrence" or offense took place;

- (ii) The names and addresses of any injured persons and witnesses; and

- (iii) The nature and location of any injury or damage arising out of the "occurrence" or offense.

D. LEGAL LIABILITY – DAMAGE TO PREMISES RENTED TO YOU (Fire, Lightning, Explosion, Smoke, Or Leakage From Automatic Fire Protective Systems)

If damage to premises rented to you is not otherwise excluded from this policy or coverage part, then the following provisions apply:

- 1. Under **Section I – Coverage A – Bodily Injury And Property Damage Liability**, the last paragraph (after the exclusions) is deleted and replaced by the following:

Exclusions **c.** through **n.** do not apply to damage by fire, lightning, explosion, "smoke", or leakage from automatic fire protective systems to premises while rented to you or temporarily occupied by you with the permission of the owner. A separate limit of insurance applies to this coverage as described in **Section III – Limits Of Insurance**.

2. The paragraph immediately after Sub-paragraph **j.(6)** of Paragraph **2. Exclusions of Section I – Coverage A – Bodily Injury And Property Damage Liability** is deleted and replaced by the following:

Paragraphs **(1)**, **(3)** and **(4)** of this exclusion do not apply to "property damage" (other than damage by fire, lightning, explosion, "smoke", or leakage from automatic fire protective systems) to premises, including the contents of such premises, rented to you for a period of seven or fewer consecutive days. A separate limit of insurance applies to Damage To Premises Rented To You as described in **Section III – Limits Of Insurance**.

3. Paragraph **6.** of **Section III – Limits Of Insurance** is deleted and replaced by the following:

6. Subject to Paragraph **5.** above, the greater of:

- a. \$300,000; or
- b. The Damage To Premises Rented To You Limit shown in the Declarations,

is the most we will pay under **Coverage A** for damages because of "property damage" to premises while rented to you, or in the case of damage by fire, lightning, explosion, "smoke", or leakage from automatic fire protective systems, while rented to you or temporarily occupied by you with permission of the owner.

This limit will apply to all damage proximately caused by the same event, whether such damage results from fire, lightning, explosion, "smoke", leakage from automatic fire protective systems, or other covered causes of loss or any combination thereof.

4. Subparagraph **b.(1)(a)(ii)** of Paragraph **4. Other Insurance of Section IV – Commercial General Liability Conditions** is deleted and replaced by the following:

- (ii) That is fire, lightning, explosion, "smoke" or leakage from automatic fire protective systems insurance for premises rented to

you or temporarily occupied by you with permission of the owner;

5. Subparagraph **a.** of Definition **9.** "Insured contract" of **Section V – Definitions** is deleted and replaced by the following:

- a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for damage by fire, lightning, explosion, "smoke" or leakage from automatic fire protective systems to premises while rented to you or temporarily occupied by you with permission of the owner is not an "insured contract".

6. As used in this Provision **D. Legal Liability – Damage To Premises Rented To You:**

"Smoke" does not include smoke from agricultural smudging, industrial operations or "hostile fire".

E. MEDICAL PAYMENTS

The Medical Expense Limit is changed, subject to the terms of **Section III – Limits Of Insurance**, to the Medical Expense Limit shown in the Declarations.

F. MOBILE EQUIPMENT REDEFINED

Subparagraph **f.(1)** of Definition **12.** "Mobile equipment" of **Section V – Definitions** is deleted and replaced by the following:

- (1) Equipment with a gross vehicle weight of 1,000 pounds or more and designed primarily for:

- (a) Snow removal;
- (b) Road maintenance, but not construction or resurfacing; or
- (c) Street cleaning;

G. NEWLY FORMED OR ACQUIRED ORGANIZATION, PARTNERSHIP OR LIMITED LIABILITY COMPANY AND EXTENDED PERIOD OF COVERAGE

Paragraph **3.** of **Section II – Who Is An Insured** is deleted and replaced by the following:

- 3. Any organization you newly acquire or form, other than a joint venture, and over which you maintain ownership or:
 - a. Majority interest of more than 50% if you are a corporation;
 - b. Majority interest of more than 50% as a general partner of a newly acquired or formed partnership; and/or

- c. Majority interest of more than 50% as an owner of a newly acquired or formed limited liability company;

will qualify as a Named Insured if there is no other similar insurance available to that organization. However, for these organizations:

- (i) Coverage under this provision is afforded only until the next anniversary date of this policy's effective date after you acquire or form the organization, partnership or limited liability company, or the end of the policy period, whichever is earlier;
- (ii) **Section I – Coverage A – Bodily Injury And Property Damage Liability** does not apply to "bodily injury" or "property damage" that occurred before you acquired or formed the organization, partnership or limited liability company;
- (iii) **Section I – Coverage B – Personal And Advertising Injury Liability** does not apply to "personal and advertising injury" arising out of an offense committed before you acquired or formed the organization, partnership or limited liability company;
- (iv) Coverage applies only when operations of the newly acquired organization, partnership or limited liability company are the same or similar to the operations of insureds already covered under this insurance;
- (v) Coverage only applies for those limited liability companies who have established a date of formation as recorded within the filed state articles of organization, certificates of formation or certificates of organization; and
- (vi) Coverage only applies for those partnerships who have established a date of formation as recorded within a written partnership agreement or partnership certificate.

H. WHO IS AN INSURED – AMENDMENT

The last paragraph of **Section II – Who Is An Insured** is deleted and replaced by the following:

No person or organization is an insured with respect to the conduct of any:

- a. Current partnership or limited liability company, unless otherwise provided for under Paragraph 3. of **Section II – Who Is An Insured**;
- b. Current joint venture; or

- c. Past partnership, joint venture or limited liability company;

that is not shown as a Named Insured in the Declarations.

I. NON-OWNED WATERCRAFT

Subparagraph (2) of **Exclusion 2.g. Aircraft, Auto Or Watercraft** of **Section I – Coverage A – Bodily Injury And Property Damage Liability** is deleted and replaced by the following:

- (2) A watercraft you do not own that is:

- (a) Less than 51 feet long; and
- (b) Not being used to carry persons or property for a charge.

J. SUPPLEMENTARY PAYMENTS – INCREASED LIMITS

Section I – Supplementary Payments – Coverages A And B is changed as follows:

1. The limit shown in Paragraph 1.b. for the cost of bail bonds is changed from \$250 to \$3,000; and
2. The limit shown in Paragraph 1.d. for loss of earnings because of time off from work is changed from \$250 a day to \$1,000 a day.

K. UNINTENTIONAL OMISSION OR UNINTENTIONAL ERROR IN DISCLOSURE

The following provision is added to Paragraph 6. **Representations** of **Section IV – Commercial General Liability Conditions**:

However, the unintentional omission of, or unintentional error in, any information given or provided by you shall not prejudice your rights under this insurance.

This provision does not affect our right to collect additional premium or to exercise our right of cancellation or non-renewal.

L. WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS

The following is added to Paragraph 8. **Transfer Of Rights Of Recovery Against Others To Us** of **Section IV – Commercial General Liability Conditions**:

We waive any right of recovery we may have against any person or organization because of payments we make for injury or damage arising out of your ongoing operations or "your work" and included in the "products-completed operations hazard" when you have agreed in a written contract or written agreement that any right of recovery is waived for such person or organization. This waiver applies only to the

person(s) or organization(s) agreed to in the written contract or written agreement and is subject to those provisions.

This waiver does not apply unless the written contract or written agreement has been executed prior to the "bodily injury" or "property damage".

However, if any person or organization is separately scheduled on a separate waiver of transfer of rights of recovery which is attached to this policy, then this waiver does not apply.

M. LIBERALIZATION CLAUSE

The following is added to **Section IV – Commercial General Liability Conditions:**

If we adopt a mandatory attachment form change which broadens coverage under this edition of the Commercial General Liability CG0001 for no additional charge, and those changes are intended to apply to all insureds under this edition of CG0001, that change will automatically apply to your insurance as of the date we implement the change in your state. This liberalization clause does not apply to changes implemented through introduction of a subsequent edition of the Commercial General Liability form CG0001.

N. INCIDENTAL MEDICAL MALPRACTICE

1. Paragraph **2.a.(1)(d)** of **Section II – Who Is An Insured** does not apply to a physician, nurse practitioner, physician assistant, nurse, emergency medical technician or paramedic employed by you if you are not in the business or occupation of providing medical, paramedical, surgical, dental, x-ray or nursing services.
2. This provision is excess over any other valid and collectible insurance whether such insurance is primary, excess, contingent or on any other basis. Any payments by us will follow Paragraph **4.b.** of **Section IV – Commercial General Liability Conditions.**

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

GENERAL LIABILITY ULTRA PLATINUM ENHANCEMENT COVERAGES

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM
CONTRACTORS' COMMERCIAL GENERAL LIABILITY ENHANCEMENT ENDORSEMENT
GENERAL LIABILITY ULTRA PLUS ENDORSEMENT

A. General Liability Ultra Plus Endorsement CL CG 04 92, Provision A. Miscellaneous Additional Insureds,
is revised as follows:

1. The following is added to **(1) Persons or Organizations For Whom Operations Are Performed, c.(1)**:
 - a. If the written contract specifically requires you to provide additional insured coverage via the 10/01 edition of **CG 20 10** (aka **CG 20 10 10 01**) or via the 11/85 edition of **CG 20 10** (aka **CG 20 10 11 85**), then in paragraph **1.c.(1)(c)**., the words *caused in whole or in part by*, are replaced by the words *arising out of*.
 - b. For purposes of this additional insured coverage, the terms "you" and "your" refer to the Named Insured shown in the Declarations.

B. CONTRACTUAL LIABILITY - RAILROADS

The following coverage is added:

1. With respect to operations performed for a Railroad within 50 feet of railroad property, the definition of "insured contract" in **Section V - Definitions** is replaced by the following:

9. "Insured Contract" means:

- a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for damage by fire to premises while rented to you or temporarily occupied by you with permission of the owner is not an "insured contract";
- b. A sidetrack agreement;
- c. Any easement or license agreement;
- d. An obligation, as required by ordinance, to indemnify a municipality, except in connection with work for a municipality;
- e. An elevator maintenance agreement;
- f. That part of any other contract or agreement pertaining to your business (including an indemnification of a municipality in connection with work performed for a municipality) under

which you assume the tort liability of another party to pay for "bodily injury" or property damage" to a third person or organization. Tort liability means a liability that would be imposed by law in the absence of any contract or agreement.

Paragraph f. does not include that part of any contract or agreement:

- (1) That indemnifies an architect, engineer or surveyor for injury or damage arising out of:
 - (a) Preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
 - (b) Giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage;
- (2) Under which the insured, if an architect, engineer or surveyor, assumes liability for an injury or damage arising out of the insured's rendering or failure to render professional services, including

those listed in Paragraph (1) above and supervisory, inspection, architectural or engineering activities.

2. Other Insurance

For purposes of this endorsement, the following is added to the **Section IV - Commercial General Liability Conditions, 4 Other Insurance** condition and supersedes any provision to the contrary.

This insurance is excess of all other insurance that is Railroad Protective Liability or similar coverage for "your work" performed for a Railroad. But, if required by a written contract or written agreement to be primary and noncontributory, this insurance will be primary to and will not seek contribution from any insurance on which the Railroad is a Named Insured.

No other coverage or limit in the policy applies to loss or damage insured by this coverage.

C. AGGREGATE LIMITS OF INSURANCE

The following is added to **COMMERCIAL GENERAL LIABILITY COVERAGE FORM CG 00 01**, General Aggregate Limit under **SECTION III – LIMITS OF INSURANCE**:

The General Aggregate Limit under **SECTION III - LIMITS OF INSURANCE** applies separately to each of your

1. Projects away from premises owned by or rented to you.
2. "Locations" owned by or rented to you.

"Location" means premises involving the same or connecting lots, or premises whose connection is interrupted only by a street, roadway, waterway or right-of-way of a railroad.

When paragraph **B. Construction Project General Aggregate Limit** on form **CL CG 00 20** is a part of this policy, then this endorsement **CL CG 05 29** paragraph **C. Aggregate Limits Of Insurance** does not apply.

D. BODILY INJURY REDEFINED

The definition of "Bodily injury" in the **Definitions** section of the **COMMERCIAL GENERAL LIABILITY COVERAGE FORM CG 00 01** is replaced by the following:

"Bodily injury" means bodily injury, disability, sickness or disease sustained by a person, including death resulting from any of these at any time. "Bodily injury" includes mental anguish or other mental injury resulting from "bodily injury".

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**PRIMARY AND NONCONTRIBUTORY –
OTHER INSURANCE CONDITION
(ADDITIONAL INSURED)**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

Paragraph (v) is added to Paragraph (1)(a) of Paragraph b. **Excess Insurance** under Paragraph 4. **Other Insurance of Section IV – Commercial General Liability Conditions**, as follows:

(1) This insurance is excess over:

(a) Any of the other insurance, whether primary, excess, contingent or on any other basis:

(v) That is available to any person or organization who has been added as an additional insured to this policy by endorsement.

However, with respect to an additional insured added by endorsement for liability caused, in whole or in part:

1. By your acts or omissions, or the acts or omissions of those acting on your behalf:

(a) In the performance of your ongoing operations; or

(b) In connection with your premises;

2. By your maintenance, operation or use of equipment leased to you by such person or organization; or

3. By "your work" performed for that additional insured and included in the "products-completed operations hazard";

this insurance shall be primary to and will not seek contribution from the additional insured's own insurance if you and such additional insured have agreed prior to loss in a written contract or written agreement, in effect during this policy period, that this insurance be primary and noncontributory as respects liability described in Subparagraph (1)(a)(v)1., (1)(a)(v)2. or (1)(a)(v)3. above. However, this insurance, in all cases, is excess over any other liability insurance available to the additional insured to which such person or organization has been added as an additional insured.

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED - OWNERS, LESSEES,
CONTRACTORS OR OTHERS - COMPLETED OPERATIONS
- AUTOMATIC STATUS, INCLUDING PRIMARY
NONCONTRIBUTORY**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. SECTION II - WHO IS AN INSURED is amended to include as an additional insured any person(s) or organization(s) when you are obligated by virtue of a written contract or agreement that such person or organization(s) be added as an additional insured to your policy.

Such person(s) or organization(s) is an additional insured only with respect to liability for "bodily injury" or "property damage" or "personal and advertising injury" caused, in whole or in part by:

- (1) Acts or omissions of the Named Insured; or
- (2) The acts or omissions of those acting on behalf of the Named Insured;

and included in the "products-completed operations hazard"

This insurance applies only when you are required to add the additional insured by virtue of a written contract or agreement, provided the contract or agreement is:

1. Currently in effect or becomes effective during the term of this policy; and
2. Was executed prior to the "bodily injury" or "property damage" or "personal and advertising injury".

However:

- a. The insurance afforded to such additional insured only applies to the extent permitted by law; and
- b. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

For purposes of this endorsement, throughout the policy, the terms "you" and "your" refer to the Named Insured shown in the Declarations.

B. Exclusions

With respect to the insurance afforded to these additional insureds, the following additional exclusions apply to "bodily injury" and "property damage" arising out of:

1. The rendering of or failure to render any professional services by you or on your behalf, but only with respect to either or both of the following operations:
 - a. Providing engineering, architectural or surveying services to others in your capacity as an engineer, architect or surveyor; and
 - b. Providing, or hiring independent professionals to provide, engineering, architectural or surveying services in connection with construction work you perform.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of, or the failure to render, any professional architectural, engineering or surveying services.

2. Subject to Paragraph 3. below, professional services include:
 - a. Preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders, or drawings and specifications; and

b. Supervisory or inspection activities performed as part of any related architectural or engineering activities.

3. Professional services do not include services within construction means, methods, techniques, sequences and procedures employed by you or performed by or for the construction manager, its employees or its subcontractors in connection with your ongoing operations.

C. Limits of Insurance

With respect to the insurance afforded to these additional insureds, the following is added to **Section III - Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

D. Other Insurance

For purposes of this endorsement, the following is added to the **Section IV - Commercial General Liability Conditions, 4. Other Insurance** condition and supersedes any provision to the contrary:

This insurance is excess of all other insurance available to an additional insured whether on a primary, excess, contingent or any other basis. But, if required by a written contract or written agreement to be primary and noncontributory, this insurance will be primary to and will not seek contribution from any insurance on which the additional insured is a Named Insured.

No other coverage or limit in the policy applies to loss or damage insured by this coverage.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

COMMERCIAL AUTOMOBILE EXPANSION ENDORSEMENT - PLATINUM

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

With respect to the coverages provided by this endorsement, the provisions of the Business Auto Coverage Form apply unless modified by this endorsement.

A. NEWLY ACQUIRED OR FORMED ORGANIZATIONS

The following is added to Paragraph **A.1. Who Is An Insured of Section II - Covered Autos Liability Coverage**:

Any organization you newly acquire or form, other than a partnership, joint venture or limited liability company or any organization excluded either by this Coverage Part or by endorsement, and over which you maintain ownership or majority interest of more than 50 percent will qualify as a Named Insured. However:

1. This insurance does not apply to any newly acquired or formed organization that is an "insured" under any other automobile policy or would be an "insured" under such policy but for its termination or the exhaustion of its Limit of Insurance.
2. Coverage does not apply to "bodily injury" or "property damage" that occurred before you acquired or formed the organization.
3. Coverage under this provision is afforded only until the 180th day after you acquire or form the organization or the end of the policy period, whichever is earlier.

B. ADDITIONAL INSURED BY CONTRACT OR AGREEMENT

The following is added to Paragraph **A.1., Who Is An Insured of Section II - Covered Autos Liability Coverage**:

When you have agreed in a written contract or agreement to include a person or organization as an additional "insured", such person or organization is included as an "insured" subject to the following:

1. Such person or organization is an additional "insured" only to the extent such person or organization is liable for "bodily injury" or

"property damage": because of the conduct of an "insured" under Paragraphs **a.** or **b.** under Paragraph **A.1. Who Is An Insured of Section II - Covered Autos Liability Coverage**, caused by an "accident" and resulting from the ownership, maintenance or use of a covered "auto";

2. The written contract or agreement described above must have been executed prior to the "accident" that caused the "bodily injury" or "property damage" and be in effect at the time of such "accident";
3. The insurance afforded to any such additional "insured" does not apply to any "accident" beyond the period of time required by the written contract or agreement described above;
4. The most we will pay on behalf of such additional "insured(s)" is the lesser of:
 - a. The Limits of Insurance specified in the written contract or agreement described above; or
 - b. The Limits of Insurance shown in the Declarations.

This provision shall not increase the Limit of Insurance shown in the Declarations in this policy or coverage part; and

5. The following changes are made to Paragraph **5. Other Insurance of B. General Conditions under Section IV - Business Auto Conditions**:
 - a. The following is added to Paragraph **5.a.**:

If required by the written contract or agreement described above, the insurance afforded to the additional insured under this provision will be primary to, and will not seek contribution from, the additional insured's own insurance.

b. Paragraph 5.c. is deleted in its entirety.

6. Paragraph A.1.c. under Section II - Covered Autos Liability Coverage is deleted in its entirety.

7. The definition of "insured contract" under Section V - Definitions is amended to add the following:

An "insured contract" does not include that part of any contract or agreement:

That pertains to the ownership, maintenance or use of an "auto" and which indemnifies a person or organization for other than the vicarious liability of such person or organization for "bodily injury" or "property damage" caused by your operation or use of a covered "auto".

However, a person or organization is an additional "insured" under this provision only to the extent such person or organization is not named as an "insured" by separate endorsement to this policy.

C. EMPLOYEES AS INSURED

The following is added to Paragraph A.1. Who Is An Insured Section II - Covered Autos Liability Coverage:

Any "employee" of yours is an "insured" while using a covered "auto" you don't own, hire or borrow in your business or your personal affairs.

D. INCREASED COVERAGE - BAIL BONDS

The Supplementary Payments Coverage Extension of Section II - Covered Autos Liability Coverage is amended as follows:

The Limit of Insurance in paragraph A.2.a.(2) is increased to \$5,000.

E. INCREASED COVERAGE - LOSS OF EARNINGS

The Supplementary Payments Coverage Extension of Section II - Covered Autos Liability Coverage is amended as follows:

The Limit of Insurance in paragraph A.2.a.(4) is increased to \$1,000.

F. FELLOW EMPLOYEE COVERAGE

The Fellow Employee Exclusion contained in Section II - Covered Autos Liability Coverage does not apply. This coverage is excess over any other collectable insurance.

G. COVERAGE EXTENSION - TRANSPORTATION EXPENSES

Paragraph A.4.a. Transportation Expenses of Section III - Physical Damage Coverage is amended as follows:

1. The Limits of Insurance are increased to \$75 per day to a maximum of \$2,500.

2. We will also pay reasonable and necessary expenses to facilitate the return of the stolen "auto" to you.

3. It is agreed and understood and it is our stated intent that expenses incurred by you under the Transportation Expenses Coverage Extension will not also be covered or paid under the Rental Reimbursement Coverage provided by this endorsement or any rental reimbursement coverage added by separate endorsement to this policy.

H. EXTENDED COVERAGE - AIRBAGS

The following is added to Exclusion B.3.a. of Section III - Physical Damage Coverage:

However, this exclusion does not apply to the unintended discharge of an airbag.

This coverage is excess over any other collectible insurance or warranty providing such airbag coverage.

I. AUTO LOAN/LEASE GAP COVERAGE

The following is added to Section III - Physical Damage Coverage, Paragraph C. Limits of Insurance.

4. In the event of a total "loss" to a covered "auto", we will pay the lesser of:

a. Any unpaid amount due on the lease or loan for a covered "auto", less:

(1) The amount under the Physical Damage Coverage section of the policy; and

(2) Any:

(a) Overdue lease/loan payments at the time of the "loss";

(b) Financial penalties imposed under a lease for excessive use, abnormal wear and tear or high mileage;

(c) Security deposits not returned by the lessor;

(d) Costs for extended warranties, Credit Life Insurance, Health, Accident or Disability Insurance purchased with the loan or lease; and

(e) Carry-over balances from previous loans or leases; or

b. \$5,000.

However, this provision does not apply to the extent loan/lease gap coverage has been provided by separate endorsement to this policy.

J. GLASS REPAIR - NO DEDUCTIBLE

The following is added to Paragraph **D.** Deductible of Section **III** - Physical Damage Coverage:

Any Comprehensive Coverage deductible shown in the Declarations does not apply to "loss" to glass when you elect to patch or repair rather than replace the glass.

K. INCREASED COVERAGE - ELECTRONIC EQUIPMENT

The \$1,000 limit indicated in Paragraph **C.1.b.** under Section **III** - Physical Damage Coverage is increased to \$2,500.

L. EXTENDED COVERAGE - PERSONAL PROPERTY

The following is added to Paragraph **A.4.** Coverage Extensions of Section **III** - Physical Damage Coverage:

Physical Damage Coverage on a covered "auto" may be extended to "loss" to your personal property or, if you are an individual, the personal property of a family member, that is in the covered "auto" at the time of "loss" and caused by an "accident" and resulting from the ownership, maintenance or use of a covered "auto".

The insurance provided by this coverage extension is excess over any other collectible insurance. The most we will pay for any one "loss" under this coverage extension is \$500. However, our payment for "loss" to personal property will only be for the account of the owner of the property.

Under this provision, personal property does not include and we will not pay for "loss" of currency, coins, securities or contraband.

No deductible applies to this coverage extension.

M. TOWING

Paragraph **A.2.** Towing of Section **III** - Physical Damage Coverage, is replaced by the following:

If a private passenger type "auto" or light truck "auto" (0-10,000 Lbs. GVW) is provided both Comprehensive and Collision Coverage, we will pay up to \$150 for towing and labor costs incurred each time such "auto" is disabled. If a medium, heavy or extra-heavy truck or extra-heavy Truck-tractor "auto" (greater than 10,000 Lbs. GVW) is provided both Comprehensive and Collision Coverage, we will pay up to \$250 for towing and labor costs incurred each time such "auto" is disabled. However, the labor must be performed at the place of disablement.

N. FIRE EXTINGUISHER RECHARGE

The following is added to Paragraph **A.4.** Coverage Extensions of Section **IV** - Physical Damage Coverage:

When fire extinguishers are kept in your covered "auto" and any are discharged in an attempt to extinguish a fire, we will pay the lesser of the actual cost of recharging or replacing such fire extinguisher(s).

No deductible applies to this coverage.

O. HIRED AUTO PHYSICAL DAMAGE COVERAGE

The following is added to Paragraph **A.4.** Coverage Extensions of Section **III** - Physical Damage Coverage:

If hired "autos" are covered "autos" for Covered Autos Liability Coverage and if Physical Damage Coverage is provided for any "auto" you own, then the Physical Damage coverages provided are extended to "autos" you lease, rent, hire or borrow from someone other than your "employees", partners or members of their households subject to the following:

1. The most we will pay in any one "loss" is the lesser of:
 - a. The actual cash value of the "auto";
 - b. The cost to repair or replace the "auto"; or
 - c. \$100,000.
2. Paragraph 1. above is subject to a deductible. The deductible shall be equal to the amount of the highest deductible shown for any owned "auto" of the same classification for that coverage. In the event there is no owned "auto" of the same classification, the highest deductible for any owned "auto" will apply for that coverage.

No deductible will apply to "loss" caused by fire or lightning.
3. Hired Auto Physical Damage Coverage is subject to the following:
 - a. If symbol 8 is shown in the Covered Auto section of the Declarations page for any of the Physical Damage coverages, then the Hired Auto Physical Damage coverage described in this endorsement does not apply.
 - b. Other than indicated in Paragraphs a. directly above, coverage provided under this provision will be excess over any other collectible insurance or coverage.
4. In addition to the limit set forth in Paragraph 1. above we will pay up to \$500 per day, to a maximum of \$3,500 per "loss" for:
 - a. Any costs or fees associated with the "loss" to a hired "auto"; and
 - b. Loss of use of the hired "auto", provided it is the consequence of an "accident" for which you are legally liable, and as a

result of which a monetary loss is sustained by the leasing or rental concern.

However, Paragraph **A.4.b.** Loss of Use Expenses under Section III - Physical Damage Coverage of the Business Auto Coverage Form does not apply.

P. RENTAL REIMBURSEMENT COVERAGE

We will pay for rental reimbursement expenses incurred by you for the rental of an "auto" because of "loss" to a covered "auto".

1. Payment applies in addition to the otherwise applicable amount of each coverage you have on the covered "auto".
2. No deductible applies to this coverage.
3. We will pay only for those expenses incurred during the policy period beginning 24 hours after the "loss" and ending, regardless of the expiration date of the policy, with the lesser of the following number of days:
 - a. The number of days when the covered "auto" has been repaired or replaced, or
 - b. 45 days.
4. Our payment is limited to the lesser of the following amounts:
 - a. Necessary and actual expenses incurred; or
 - b. Not more than \$75 for any one day;
5. We will pay up to an additional \$300 for the reasonable and necessary expenses you incur to remove your materials and equipment from the covered "auto" and replace such materials and equipment on the rental "auto".
6. This coverage does not apply while there are spare or reserve "autos" available to you for your operations.
7. If "loss" results from the total theft of a covered "auto" of the "private passenger type", we will pay under this coverage only that amount of your rental reimbursement expenses which is not already provided for under the Physical Damage Coverage Extension of the Business Auto Coverage Form or any endorsements thereto.

However, this provision does not apply to the extent that rental reimbursement is provided by separate endorsement to this policy.

Q. DRIVE OTHER CAR COVERAGE

1. The following is added to Section II - Covered Autos Liability Coverage:
 - a. Any "auto" you don't own, hire or borrow is a covered "auto" for Liability Coverage while being used by:

- (1) You, if you are designated in the Declarations as an individual;
- (2) Your partners or members, if you are designated in the Declarations as a partnership or joint venture;
- (3) Your members or managers, if you are designated in the Declarations as a limited liability company;
- (4) Your executive officers if you are designated in the Declarations as an organization other than an individual, partnership, joint venture or limited liability company; and
- (5) The spouse of any person named in Paragraphs **1.a.(1)** through **1.a.(4)** while a resident of the same household;

Except:

- (a) Any "auto" owned by that individual or by any member of his or her household.
- (b) Any "auto" used by that individual or his or her spouse while working in a business of selling, servicing, repairing or parking "autos".

2. Changes In Auto Medical Payments And Uninsured And Underinsured Motorists Coverages

The following is added to **Who Is An Insured**:

Any individual named in **1.a** above and his or her "family members" are "insured" while "occupying" or while a pedestrian when being struck by any "auto" you don't own except:

Any "auto" owned by that individual or by any "family member".

3. Changes In Physical Damage Coverage

Any private passenger type "auto" you don't own, hire or borrow is a covered "auto" while in the care, custody or control of any individual named in **Q.1.a.** above or his or her spouse while a resident of the same house-hold except:

- a. Any "auto" owned by that individual or by any member of his or her household; or
- b. Any "auto" used by that individual or his or her spouse while working in a business of selling, servicing, repairing or parking "autos".

4. The most we will pay for the total of all damages under Covered Autos Liability Uninsured Motorists Coverage and Underinsured Motorists Coverage is the Limit Of Insurance shown in the Declarations as applicable to owned "autos".

5. Our obligation to pay for, repair, return or replace damaged or stolen property under Physical Damage Coverage, will be reduced by a deductible equal to the amount of the highest deductible shown for any owned private passenger type "auto" applicable to that coverage. If there are no owned private passenger type "autos", the deductible shall be \$250 for Comprehensive Coverage and \$500 for Collision Coverage. No deductible will apply to "loss" caused by fire or lightning.

6. Additional Definition

As used in this **DRIVE OTHER CAR** Provision:

"Family member" means a person related to the individual named in 1.a. by blood, marriage or adoption who is a resident of the individual's household, including a ward or foster child.

R. KNOWLEDGE OF AN ACCIDENT, CLAIM, SUIT OR LOSS

The following is added to Paragraph **A.2.** of Section **IV** - Business Auto Conditions:

Your obligation to provide prompt notice of an "accident", claim, "suit" or "loss" is satisfied if you or a person designated by you to be responsible for insurance matters is notified of, or in any manner made aware of an "accident", claim, "suit" or "loss" and provides us such notice as soon as practicable

S. WAIVER OF SUBROGATION BY CONTRACT OR AGREEMENT

The following is added to Paragraph **A.5** of Section **IV** - Business Auto Conditions:

We waive any right of recovery we may have against a person or organization because of payments we make for "bodily injury" or "property damage" when you and such person or organization have agreed in writing in a contract or agreement to waive such right of recovery, provided:

1. Such written contract or agreement was:
 - a. Made prior to the "accident" or "loss" resulting in the covered "bodily injury" or "property damage"; and
 - b. Was in effect at the time of the covered "bodily injury" or "property damage".
2. The covered "bodily injury" or "property damage" must arise out of the operations specified in such written contract or agreement.
3. At our request you must provide us with a copy of the aforementioned written contract or agreement.

T. UNINTENTIONAL OMISSIONS

The following is added Paragraph **B.2.** of Section **IV** - Business Auto Conditions:

If you fail to disclose any hazards existing at the inception date of this policy, such failure will not prejudice the coverage provided to you. However, this provision does not affect our right to collect additional premium or exercise our right of cancellation or nonrenewal.

U. LIBERALIZATION

If we revise this endorsement to provide greater coverage without additional premium charge, we will automatically provide the additional coverage to all endorsement holders as of the day the revision is effective in your state.

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Carrier no: 20001

Endorsement no: WC000313

SAIF policy: 774651 Paul Brothers Inc

Waiver of Our Right to Recover from Others Endorsement

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule.

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

Description: ALL OPERATIONS

Contractor name: Persons and/or organizations with whom the insured-employer is required by written contract to waive subrogation rights.

This endorsement does not alter the rights of an injured worker to pursue recovery from another party or SAIF to receive a statutory share of recoveries by an injured worker, even from the party listed in the schedule.

The premium charge for this endorsement is based on one (1) percent of your manual premium.

Effective date: October 01, 2020

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

Countersigned September 16, 2020 at Salem, Oregon



Kerry Barnett
President and Chief Executive Officer

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